

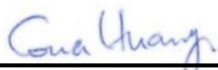
FCC SAR TEST REPORT

FCC ID : E2KT99W640
Equipment : 5G WWAN Module
Brand Name : DELL
Model Name : DP25-42843-47
Applicant : Dell Inc.
One Dell Way Round Rock, Texas 78682
United States
Manufacturer : Dell Inc.
One Dell Way Round Rock, Texas 78682
United States
Standard : FCC 47 CFR Part 2 (2.1093)

The product was installed into Portable Computer (Brand Name: DELL, Model Name: P142F) during test.

The product was received on Dec. 28, 2024 and testing was started from Dec. 28, 2024 and completed on Jan. 04, 2025. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample provide by manufacturer and the test data has been evaluated in accordance with the test procedures given in 47 CFR Part 2.1093 and FCC KDB and has been pass the FCC requirement.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC. Laboratory, the test report shall not be reproduced except in full.



Approved by: Cona Huang / Deputy Manager



Sporton International Inc. EMC & Wireless Communications Laboratory
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History of this test report

Report No.	Version	Description	Issued Date
FA4D0509	01	Initial issue of report	Feb. 25, 2025



1. Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) for Dell Inc., 5G WWAN Module, DP25-42843-47, are as follows.

Equipment Class	Frequency Band	Highest SAR Summary	Highest Simultaneous Transmission 1g SAR (W/kg)
		Body	
		1g SAR (W/kg)	
Licensed	LTE Band 7	0.49	1.14
	LTE Band 2/25	0.91	
	LTE Band 30	0.40	
	LTE Band 38/41	0.52	
	LTE Band 42	1.14	
	LTE Band 43	1.03	
	LTE Band 48	0.71	
	LTE Band 4/66	0.74	
	LTE Band 70	0.42	
	FR1 n7	0.58	
	FR1 n2/n25	0.78	
	FR1 n30	0.41	
	FR1 n38/n41	0.90	
	FR1 n48	0.82	
	FR1 n66	0.42	
	FR1 n70	0.45	
	FR1 n77/n78	1.10	
Date of Testing:		2024/12/28 ~ 2025/01/04	

Sporton Lab is accredited to ISO 17025 by Taiwan Accreditation Foundation and the FCC designation No. TW1190 under the FCC 2.948(e) by Mutual Recognition Agreement (MRA) in FCC test. This device is in compliance with Specific Absorption Rate (SAR) for general population/uncontrolled exposure limits (1.6 W/kg for Partial-Body 1g SAR) specified in FCC 47 CFR part 2 (2.1093) and ANSI/IEEE C95.1-1992, and had been tested in accordance with the measurement methods and procedures specified in IEEE 1528-2013 and FCC KDB publications.

Reviewed by: Jason Wang
Report Producer: Paula Chen

2. Guidance Applied

The Specific Absorption Rate (SAR) testing specification, method, and procedure for this device is in accordance with the following standards, the below KDB standard may not including in the TAF code without accreditation.

- FCC 47 CFR Part 2 (2.1093)
- ANSI/IEEE C95.1-1992
- IEEE 1528-2013
- FCC KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz v01r04
- FCC KDB 865664 D02 SAR Reporting v01r02
- FCC KDB 447498 D01 General RF Exposure Guidance v06
- FCC KDB 616217 D04 SAR for laptop and tablets v01r02
- FCC KDB 941225 D01 3G SAR Procedures v03r01
- FCC KDB 941225 D05 SAR for LTE Devices v02r05
- FCC KDB 941225 D05A Rel.10 LTE SAR Test Guidance v01r02

3. Equipment Under Test (EUT) Information

3.1 General Information

Product Feature & Specification	
Equipment Name	5G WWAN Module
Brand Name	DELL
Model Name	DP25-42843-47
FCC ID	E2KT99W640
Wireless Technology and Frequency Range	WCDMA Band II: 1850 MHz ~ 1910 MHz WCDMA Band IV: 1710 MHz ~ 1755 MHz WCDMA Band V: 824 MHz ~ 849 MHz LTE Band 2: 1850 MHz ~ 1910 MHz LTE Band 4: 1710 MHz ~ 1755 MHz LTE Band 5: 824 MHz ~ 849 MHz LTE Band 7: 2500 MHz ~ 2570 MHz LTE Band 12: 699 MHz ~ 716 MHz LTE Band 13: 777 MHz ~ 787 MHz LTE Band 14: 788 MHz ~ 798 MHz LTE Band 17: 704 MHz ~ 716 MHz LTE Band 25: 1850 MHz ~ 1915 MHz LTE Band 26: 814 MHz ~ 849 MHz LTE Band 30: 2305 MHz ~ 2315 MHz LTE Band 38: 2570 MHz ~ 2620 MHz LTE Band 41: 2496 MHz ~ 2690 MHz LTE Band 42: 3450 MHz ~ 3550 MHz LTE Band 43: 3700 MHz ~ 3800 MHz LTE Band 48: 3550 MHz ~ 3700 MHz LTE Band 66: 1710 MHz ~ 1780 MHz LTE Band 70: 1695 MHz ~ 1710 MHz LTE Band 71: 663 MHz ~ 698 MHz 5G NR n2: 1850 MHz ~ 1910 MHz 5G NR n5: 824 MHz ~ 849 MHz 5G NR n7: 2500 MHz ~ 2570 MHz 5G NR n12: 699 MHz ~ 716 MHz 5G NR n13: 777 MHz ~ 787 MHz 5G NR n14: 788 MHz ~ 798 MHz 5G NR n25: 1850 MHz ~ 1915 MHz 5G NR n26: 814 MHz ~ 849 MHz 5G NR n30: 2305 MHz ~ 2315 MHz 5G NR n38: 2570 MHz ~ 2620 MHz 5G NR n41: 2496 MHz ~ 2690 MHz 5G NR n48: 3550 MHz ~ 3700 MHz 5G NR n66: 1710 MHz ~ 1780 MHz 5G NR n70: 1695 MHz ~ 1710 MHz 5G NR n71: 663 MHz ~ 698 MHz 5G NR n77: 3700 MHz ~ 3980 MHz, 3450 MHz ~ 3550 MHz 5G NR n78: 3700 MHz ~ 3800 MHz, 3450 MHz ~ 3550 MHz
Mode	RMC 12.2Kbps HSDPA HSUPA LTE: QPSK, 16QAM, 64QAM, 256QAM 5G NR: DFT-s-OFDM/CP-OFDM, Pi/2 BPSK/QPSK/16QAM/64QAM/256QAM
Remark: 1. This device has two antenna vendors; RF exposure evaluation selects Auden as the main test, WNC will spot check worst case found in Auden. 2. The WWAN Foxconn DP25-42843-47 module integrated into this model. Main/Aux antenna is located at the top of the panel which the distance is larger than 20 cm from the human body (refer to section13). SAR exemption is applied for these transmitters. 3. This device support UL MIMO mode for 5G NR bands. and also PC1.5, PC2 and PC3 implemented to n41, n77 and n78. Since the output power from each antenna will be 3dB reduced when UL MIMO activated and hence SAR were performed with the UL SISO mode for worst case. Besides the simultaneous transmission are directly evaluated from SAR performed with SISO mode as most conservative.	

Host Information	
Equipment Name	Portable Computer
Brand Name	DELL
Model Name	P142F
Integrated WLAN Module	Brand Name: Intel® Model Name: BE200NGW
Integrated RFID Module	Brand Name: DELL Model Name: DWRFID2404
Wireless Technology and Frequency Range	WLAN 2.4 GHz Band: 2400 MHz ~ 2483.5 MHz WLAN 5.2 GHz Band: 5150 MHz ~ 5250 MHz WLAN 5.3 GHz Band: 5250 MHz ~ 5350 MHz WLAN 5.6 GHz Band: 5470 MHz ~ 5725 MHz WLAN 5.8 GHz Band: 5725 MHz ~ 5850 MHz WLAN 5.9 GHz Band: 5850 MHz ~ 5895 MHz WLAN 6GHz Band: 5925 MHz ~ 6425 MHz, 6425 MHz ~ 6525 MHz, 6525 MHz ~ 6875 MHz, 6875 MHz ~ 7125 MHz Bluetooth: 2400 MHz ~ 2483.5 MHz RFID : 13.56 MHz
Mode	WLAN: 802.11a/b/g/n/ac/ax/be HT20/HT40/VHT20/VHT40/VHT80/VHT160/HE20/HE40/HE80/HE160/EHT20/EHT40/EHT80/EHT160/EHT320 Bluetooth BR/EDR/LE RFID: ASK, BPSK
Remark: - The Intel BE200NGW WLAN/BT module is integrated into this host. The WLAN/BT SAR results are referenced from the test report No.: FA4D0218-01, FCC ID: E2KBE200NG and results are used simultaneous transmission analysis. - The DELL DWRFID2404 RFID module is also integrated into this host, RFID SAR testing data, which can be referred to Test Report No.: FA4D0218, FCC ID: E2K-DWRFID2404 and results are used simultaneous transmission analysis.	

Communication System	Band	Frequency(MHz) from low to high spectrum		1A Cable Assembly Part Number and Information	1B Antenna Manufacturer Name	1C Description of Antenna Type	1D * Peak Gain W/ Cable loss (dBi)
WCDMA/ LTE/5G NR FR1	1	1920	1980	(1) Cable P/N: SY113L/50-146 (2)Cable length: 524.5 mm diameter: 1.13 mm 50 ohm Coaxial (3)Connector P/N: 20565-001R-13	Auden Techno Corp	Monopole	2.65
WCDMA/ LTE/5G NR FR1	2	1850	1910				2.15
LTE/5G NR FR1	3	1710	1785				1.11
WCDMA/ LTE	4	1710	1755				0.84
WCDMA/ LTE/5G NR FR1	5	824	849				-0.25
LTE/5G NR FR1	7	2500	2570				1.52
WCDMA/ LTE/5G NR FR1	8	880	915				-0.36
LTE/5G NR FR1	12	699	716				0.99
LTE/5G NR FR1	13	777	787				0.26
LTE/5G NR FR1	14	788	798				-0.44
LTE	17	704	716				0.99
LTE/5G NR FR1	18	815	830				-0.28
LTE	19	830	845				-0.25
LTE/5G NR FR1	20	832	862				-0.25
LTE/5G NR FR1	25	1850	1915				2.17
LTE/5G NR FR1	26	814	849				-0.25
LTE/5G NR FR1	28	703	748				1.61
LTE/5G NR FR1	30	2305	2315				0.44
LTE	34	2010	2050				1.64
LTE/5G NR FR1	38	2570	2620				0.73
LTE	39	1880	1920				2.34
LTE/5G NR FR1	40	2300	2400				2.37
LTE/5G NR FR1	41	2496	2690				1.52
LTE	42	3400	3600				0.85
LTE	43	3600	3800				-0.51
LTE	46	5150	5925				-1.51
LTE/5G NR FR1	48	3550	3700				-0.10
LTE/5G NR FR1	66	1710	1780				1.07
LTE	68	698	728				1.61
LTE/5G NR FR1	70	1695	1710				0.69
LTE/5G NR FR1	71	663	698				-1.40
5G NR FR1	77	3300	4200				0.85
5G NR FR1	78	3300	3800				0.85
5G NR FR1	79	4400	5000				-0.78
5G NR FR1	91	832	862				-0.25
5G NR FR1	92	832	862				-0.25
5G NR FR1	93	880	915				-0.36
5G NR FR1	94	880	915				-0.36

Communication System	Band	Frequency(MHz) from low to high spectrum		1A Cable Assembly Part Number and Information	1B Antenna Manufact urer Name	1C Description of Antenna Type	1D * Peak Gain W/ Cable loss (dBi)
WCDMA/ LTE/5G NR FR1	1	1920	1980	(1) Cable P/N: SY113L/50-160 (2)Cable length: 207.5 mm diameter: 1.13 mm 50 ohm Coaxial (3)Connector P/N: 20565-001R-13	Auden Techno Corp	Monopole	2.61
WCDMA/ LTE/5G NR FR1	2	1850	1910				2.30
LTE/5G NR FR1	3	1710	1785				2.30
WCDMA/ LTE	4	1710	1755				2.30
LTE/5G NR FR1	7	2500	2570				2.63
LTE/5G NR FR1	25	1850	1915				2.30
LTE/5G NR FR1	30	2305	2315				0.82
LTE	34	2010	2050				2.17
LTE/5G NR FR1	38	2570	2620				1.70
LTE	39	1880	1920				2.40
LTE/5G NR FR1	40	2300	2400				2.40
LTE/5G NR FR1	41	2496	2690				2.63
LTE	42	3400	3600				0.62
LTE	43	3600	3800				1.03
LTE	46	5150	5925				2.84
LTE/5G NR FR1	48	3550	3700				0.96
LTE/5G NR FR1	66	1710	1780				2.30
LTE/5G NR FR1	70	1695	1710				2.21
5G NR FR1	77	3300	4200				2.00
5G NR FR1	78	3300	3800				2.00
5G NR FR1	79	4400	5000				2.32

Communication System	Band	Frequency(MHz) from low to high spectrum		1A Cable Assembly Part Number and Information	1B Antenna Manufacturer Name	1C Description of Antenna Type	1D * Peak Gain W/ Cable loss (dBi)
WCDMA/ LTE/5G NR FR1	1	1920	1980	(1)Cable P/N: SY113L/50-146 (2)Cable length: 524.5 mm diameter: 1.13 mm 50 ohm Coaxial (3)Connector P/N: 20565001R-13	WNC	Monopole	2.67
WCDMA/ LTE/5G NR FR1	2	1850	1910				2.44
LTE/5G NR FR1	3	1710	1785				1.45
WCDMA/ LTE	4	1710	1755				1.18
WCDMA/ LTE/5G NR FR1	5	824	849				-0.14
LTE/5G NR FR1	7	2500	2570				1.59
WCDMA/ LTE/5G NR FR1	8	880	915				-0.34
LTE/5G NR FR1	12	699	716				1.31
LTE/5G NR FR1	13	777	787				0.34
LTE/5G NR FR1	14	788	798				0.04
LTE	17	704	716				1.31
LTE/5G NR FR1	18	815	830				-0.22
LTE	19	830	845				-0.14
LTE/5G NR FR1	20	832	862				-0.14
LTE/5G NR FR1	25	1850	1915				2.54
LTE/5G NR FR1	26	814	849				-0.14
LTE/5G NR FR1	28	703	748				1.75
LTE/5G NR FR1	30	2305	2315				0.86
LTE	34	2010	2050				2.12
LTE/5G NR FR1	38	2570	2620				0.79
LTE	39	1880	1920				2.67
LTE/5G NR FR1	40	2300	2400				2.48
LTE/5G NR FR1	41	2496	2690				1.66
LTE	42	3400	3600				0.88
LTE	43	3600	3800				-0.07
LTE	46	5150	5925				-1.04
LTE/5G NR FR1	48	3550	3700				0.05
LTE/5G NR FR1	66	1710	1780				1.45
LTE	68	698	728				1.75
LTE/5G NR FR1	70	1695	1710				1.18
LTE/5G NR FR1	71	663	698				-1.36
5G NR FR1	77	3300	4200				0.88
5G NR FR1	78	3300	3800				0.88
5G NR FR1	79	4400	5000				-0.76
5G NR FR1	91	832	862				-0.14
5G NR FR1	92	832	862				-0.14
5G NR FR1	93	880	915				-0.34
5G NR FR1	94	880	915				-0.34

Communication System	Band	Frequency(MHz) from low to high spectrum		1A Cable Assembly Part Number and Information	1B Antenna Manufacturer Name	1C Description of Antenna Type	1D * Peak Gain W/ Cable loss (dBi)
WCDMA/ LTE/5G NR FR1	1	1920	1980	(1)Cable P/N: SY113L/50-160 (2)Cable length: 207.5 mm diameter: 1.13 mm 50 ohm Coaxial (3)Connector P/N: 20565001R-13	WNC	Monopole	2.67
WCDMA/ LTE/5G NR FR1	2	1850	1910				2.31
LTE/5G NR FR1	3	1710	1785				2.51
WCDMA/ LTE	4	1710	1755				2.51
LTE/5G NR FR1	7	2500	2570				2.9
LTE/5G NR FR1	25	1850	1915				2.47
LTE/5G NR FR1	30	2305	2315				0.86
LTE	34	2010	2050				2.38
LTE/5G NR FR1	38	2570	2620				2
LTE	39	1880	1920				2.54
LTE/5G NR FR1	40	2300	2400				2.85
LTE/5G NR FR1	41	2496	2690				2.98
LTE	42	3400	3600				0.87
LTE	43	3600	3800				1.19
LTE	46	5150	5925				3.09
LTE/5G NR FR1	48	3550	3700				0.97
LTE/5G NR FR1	66	1710	1780				2.51
LTE/5G NR FR1	70	1695	1710				2.51
5G NR FR1	77	3300	4200				2.49
5G NR FR1	78	3300	3800				2.49
5G NR FR1	79	4400	5000				2.44

3.2 General LTE SAR Test and Reporting Considerations

Summarized necessary items addressed in KDB 941225 D05 v02r05																																																																													
FCC ID	E2KT99W640																																																																												
Equipment Name	5G WWAN Module																																																																												
Operating Frequency Range of each LTE transmission band	LTE Band 2: 1850 MHz ~ 1910 MHz LTE Band 4: 1710 MHz ~ 1755 MHz LTE Band 5: 824 MHz ~ 849 MHz LTE Band 7: 2500 MHz ~ 2570 MHz LTE Band 12: 699 MHz ~ 716 MHz LTE Band 13: 777 MHz ~ 787 MHz LTE Band 14: 788 MHz ~ 798 MHz LTE Band 17: 704 MHz ~ 716 MHz LTE Band 25: 1850 MHz ~ 1915 MHz LTE Band 26: 814 MHz ~ 849 MHz LTE Band 30: 2305 MHz ~ 2315 MHz LTE Band 38: 2570 MHz ~ 2620 MHz LTE Band 41: 2496 MHz ~ 2690 MHz LTE Band 42: 3450 MHz ~ 3550 MHz LTE Band 43: 3700 MHz ~ 3800 MHz LTE Band 48: 3550 MHz ~ 3700 MHz LTE Band 66: 1710 MHz ~ 1780 MHz LTE Band 70: 1695 MHz ~ 1710 MHz LTE Band 71: 663 MHz ~ 698 MHz																																																																												
Channel Bandwidth	LTE Band 2:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz LTE Band 4:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz LTE Band 5:1.4MHz, 3MHz, 5MHz, 10MHz LTE Band 7: 5MHz, 10MHz, 15MHz, 20MHz LTE Band 12:1.4MHz, 3MHz, 5MHz, 10MHz LTE Band 13: 5MHz, 10MHz LTE Band 14: 5MHz, 10MHz LTE Band 17: 5MHz, 10MHz LTE Band 25:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz LTE Band 26:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz LTE Band 30: 5MHz, 10MHz LTE Band 38: 5MHz, 10MHz, 15MHz, 20MHz LTE Band 41: 5MHz, 10MHz, 15MHz, 20MHz LTE Band 42: 5MHz, 10MHz, 15MHz, 20MHz LTE Band 43: 5MHz, 10MHz, 15MHz, 20MHz LTE Band 48: 5MHz, 10MHz, 15MHz, 20MHz LTE Band 66:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz LTE Band 70: 5MHz, 10MHz, 15MHz LTE Band 71: 5MHz, 10MHz, 15MHz, 20MHz																																																																												
uplink modulations used	QPSK / 16QAM / 64QAM / 256QAM																																																																												
LTE Voice / Data requirements	Data only																																																																												
LTE MPR permanently built-in by design	<table><tr><th colspan="8">Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 1, 2 and 3</th></tr><tr><th rowspan="2">Modulation</th><th colspan="6">Channel bandwidth / Transmission bandwidth (N_{RB})</th><th rowspan="2">MPR (dB)</th></tr><tr><th>1.4 MHz</th><th>3.0 MHz</th><th>5 MHz</th><th>10 MHz</th><th>15 MHz</th><th>20 MHz</th></tr><tr><td>QPSK</td><td>> 5</td><td>> 4</td><td>> 8</td><td>> 12</td><td>> 16</td><td>> 18</td><td>≤ 1</td></tr><tr><td>16 QAM</td><td>≤ 5</td><td>≤ 4</td><td>≤ 8</td><td>≤ 12</td><td>≤ 16</td><td>≤ 18</td><td>≤ 1</td></tr><tr><td>16 QAM</td><td>> 5</td><td>> 4</td><td>> 8</td><td>> 12</td><td>> 16</td><td>> 18</td><td>≤ 2</td></tr><tr><td>64 QAM</td><td>≤ 5</td><td>≤ 4</td><td>≤ 8</td><td>≤ 12</td><td>≤ 16</td><td>≤ 18</td><td>≤ 2</td></tr><tr><td>64 QAM</td><td>> 5</td><td>> 4</td><td>> 8</td><td>> 12</td><td>> 16</td><td>> 18</td><td>≤ 3</td></tr><tr><td>256 QAM</td><td colspan="6">≥ 1</td><td>≤ 5</td></tr></table>							Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 1, 2 and 3								Modulation	Channel bandwidth / Transmission bandwidth (N _{RB})						MPR (dB)	1.4 MHz	3.0 MHz	5 MHz	10 MHz	15 MHz	20 MHz	QPSK	> 5	> 4	> 8	> 12	> 16	> 18	≤ 1	16 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 1	16 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 2	64 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 2	64 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 3	256 QAM	≥ 1						≤ 5
Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 1, 2 and 3																																																																													
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QPSK	> 5	> 4	> 8	> 12	> 16	> 18	≤ 1																																																																						
16 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 1																																																																						
16 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 2																																																																						
64 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 2																																																																						
64 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 3																																																																						
256 QAM	≥ 1						≤ 5																																																																						
LTE A-MPR	In the base station simulator configuration, Network Setting value is set to NS_01 to disable A-MPR during SAR testing and the LTE SAR tests was transmitting on all TTI frames (Maximum TTI)																																																																												
Spectrum plots for RB configuration	A properly configured base station simulator was used for the SAR and power measurement; therefore, spectrum plots for each RB allocation and offset configuration are not included in the SAR report.																																																																												
Power reduction applied to satisfy SAR compliance	Yes, Proximity Sensor.																																																																												
LTE Carrier Aggregation Combinations	Intra-Band UL CA combinations and the detail power measurement please referred to section 12.																																																																												
LTE Carrier Aggregation Additional Information	This device supports maximum of 2 carriers in the uplink. Additional following LTE Release features are not supported: Relay, HetNet, Enhanced MIMO, eICI, WiFi Offloading, MDH, eMBMA, Cross-Carrier Scheduling, Enhanced SC-FDMA.																																																																												

Transmission (H, M, L) channel numbers and frequencies in each LTE band														
LTE Band 2														
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz			
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)		
L	18607	1850.7	18615	1851.5	18625	1852.5	18650	1855	18675	1857.5	18700	1860		
M	18900	1880	18900	1880	18900	1880	18900	1880	18900	1880	18900	1880		
H	19193	1909.3	19185	1908.5	19175	1907.5	19150	1905	19125	1902.5	19100	1900		
LTE Band 4														
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz			
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)		
L	19957	1710.7	19965	1711.5	19975	1712.5	20000	1715	20025	1717.5	20050	1720		
M	20175	1732.5	20175	1732.5	20175	1732.5	20175	1732.5	20175	1732.5	20175	1732.5		
H	20393	1754.3	20385	1753.5	20375	1752.5	20350	1750	20325	1747.5	20300	1745		
LTE Band 5														
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz							
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)		
L	20407	824.7	20415	825.5	20425	826.5	20450	829						
M	20525	836.5	20525	836.5	20525	836.5	20525	836.5						
H	20643	848.3	20635	847.5	20625	846.5	20600	844						
LTE Band 7														
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz							
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)		
L	20775	2502.5	20800	2505	20825	2507.5	20850	2510						
M	21100	2535	21100	2535	21100	2535	21100	2535						
H	21425	2567.5	21400	2565	21375	2562.5	21350	2560						
LTE Band 12														
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz							
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)		
L	23017	699.7	23025	700.5	23035	701.5	23060	704						
M	23095	707.5	23095	707.5	23095	707.5	23095	707.5						
H	23173	715.3	23165	714.5	23155	713.5	23130	711						
LTE Band 13														
	Bandwidth 5 MHz				Bandwidth 10 MHz									
	Channel #		Freq.(MHz)		Channel #		Freq.(MHz)							
L	23205		779.5		23230		782							
M	23230		782											
H	23255		784.5											
LTE Band 14														
	Bandwidth 5 MHz				Bandwidth 10 MHz									
	Channel #		Channel #		Channel #		Freq.(MHz)							
L	23305		790.5		23330		793							
M	23330		793											
H	23355		795.5											
LTE Band 17														
	Bandwidth 5 MHz				Bandwidth 10 MHz									
	Channel #		Freq.(MHz)		Channel #		Freq. (MHz)							
L	23755		706.5		23780		709							
M	23790		710		23790		710							
H	23825		713.5		23800		711							

LTE Band 25												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	26047	1850.7	26055	1851.5	26065	1852.5	26090	1855	26115	1857.5	26140	1860
M	26340	1880	26340	1880	26340	1880	26340	1880	26340	1880	26340	1880
H	26683	1914.3	26675	1913.5	26665	1912.5	26640	1910	26615	1907.5	26590	1905
LTE Band 26												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz			
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	26697	814.7	26705	815.5	26715	816.5	26740	819	26765	821.5	26765	821.5
M	26865	831.5	26865	831.5	26865	831.5	26865	831.5	26865	831.5	26865	831.5
H	27033	848.3	27025	847.5	27015	846.5	26990	844	26965	841.5	26965	841.5
LTE Band 30												
	Bandwidth 5 MHz					Bandwidth 10 MHz						
	Channel #			Freq.(MHz)		Channel #				Freq.(MHz)		
L	27685			2307.5		27710				2310		
M	27710			2310								
H	27735			2312.5								
LTE Band 38												
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz					
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	37775	2572.5	37800	2575	37825	2577.5	37850	2580	37850	2580	37850	2580
M	38000	2595	38000	2595	38000	2595	38000	2595	38000	2595	38000	2595
H	38225	2617.5	38200	2615	38175	2612.5	38150	2610	38150	2610	38150	2610
LTE Band 41												
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz					
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	39675	2498.5	39700	2501	39725	2503.5	39750	2506	39750	2506	39750	2506
L	40148	2545.8	40160	2547	40173	2548.3	40185	2549.5	40185	2549.5	40185	2549.5
M	40620	2593	40620	2593	40620	2593	40620	2593	40620	2593	40620	2593
H	41093	2640.3	41080	2639	41068	2637.8	41055	2636.5	41055	2636.5	41055	2636.5
H	41565	2687.5	41540	2685	41515	2682.5	41490	2680	41490	2680	41490	2680
LTE Band 42 (3450 MHz ~ 3550 MHz)												
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz					
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	42115	3452.5	42140	3455	42165	3457.5	42190	3460	42190	3460	42190	3460
M	42590	3500	42590	3500	42590	3500	42590	3500	42590	3500	42590	3500
H	43065	3547.5	43040	3545	43015	3542.5	42990	3540	42990	3540	42990	3540
LTE Band 43 (3700 MHz ~ 3800 MHz)												
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz					
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	44615	3702.5	44640	3705	44665	3707.5	44690	3710	44690	3710	44690	3710
M	45090	3750	45090	3750	45090	3750	45090	3750	45090	3750	45090	3750
H	45565	3797.5	45540	3795	45515	3792.5	45490	3790	45490	3790	45490	3790

LTE Band 48												
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz					
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)				
L	55265	3552.5	55290	3555	55315	3557.5	55340	3560				
L M	55810	3607	55815	3607.5	55820	3608	55830	3609				
M H	56170	3643	56165	3642.5	56160	3642	56150	3641				
H	56715	3697.5	56690	3695	56665	3692.5	56640	3690				
LTE Band 66												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	131979	1710.7	131987	1711.5	131997	1712.5	132022	1715	132047	1717.5	132072	1720
M	132322	1745	132322	1745	132322	1745	132322	1745	132322	1745	132322	1745
H	132665	1779.3	132657	1778.5	132647	1777.5	132622	1775	132597	1772.5	132572	1770
LTE Band 70												
	Bandwidth 5 MHz		Bandwidth 10 MHz				Bandwidth 15 MHz					
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)		
L	132997	1697.5	133022		1700		133047		1702.5			
M	133047	1702.5	133047		1702.5							
H	133097	1707.5	133072		1705							
LTE Band 71												
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz					
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)				
L	133147	665.5	133172	668	133197	670.5	133222	673				
M	133297	680.5	133297	680.5	133297	680.5	133297	680.5				
H	133447	695.5	133422	693	133397	690.5	133372	688				



3.3 General 5G NR SAR Test and Reporting Considerations

5G NR Information																
FCC ID	E2KT99W640															
Equipment Name	5G WWAN Module															
Operating Frequency Range of each 5G NR transmission band	5G NR n2: 1850 MHz ~ 1910 MHz 5G NR n5: 824 MHz ~ 849 MHz 5G NR n7: 2500 MHz ~ 2570 MHz 5G NR n12: 699 MHz ~ 716 MHz 5G NR n13: 777 MHz ~ 787 MHz 5G NR n14: 788 MHz ~ 798 MHz 5G NR n25: 1850 MHz ~ 1915 MHz 5G NR n26: 814 MHz ~ 849 MHz 5G NR n30: 2305 MHz ~ 2315 MHz 5G NR n38: 2570 MHz ~ 2620 MHz 5G NR n41: 2496 MHz ~ 2690 MHz 5G NR n48: 3550 MHz ~ 3700 MHz 5G NR n66: 1710 MHz ~ 1780 MHz 5G NR n70: 1695 MHz ~ 1710 MHz 5G NR n71: 663 MHz ~ 698 MHz 5G NR n77: 3700 MHz ~ 3980 MHz, 3450 MHz ~ 3550 MHz 5G NR n78: 3700 MHz ~ 3800 MHz, 3450 MHz ~ 3550 MHz															
Channel Bandwidth	5G NR n2: 5MHz, 10MHz, 15MHz, 20MHz, 25 MHz, 30MHz, 35MHz, 40MHz 5G NR n5: 5MHz, 10MHz, 15MHz, 20MHz 5G NR n7: 5MHz, 10MHz, 15MHz, 20MHz, 25 MHz, 30MHz, 35MHz, 40MHz 5G NR n12: 5MHz, 10MHz, 15MHz 5G NR n13: 5MHz, 10MHz, 5G NR n14: 5MHz, 10MHz 5G NR n25: 5MHz, 10MHz, 15MHz, 20MHz, 25 MHz, 30MHz, 35MHz, 40MHz 5G NR n26: 5MHz, 10MHz, 15MHz, 20MHz 5G NR n30: 5MHz, 10MHz 5G NR n38: 10MHz, 15MHz, 20MHz, 25 MHz, 30MHz, 40MHz 5G NR n41: 10MHz, 15MHz, 20MHz, 25 MHz, 30MHz, 40MHz, 50MHz, 60MHz, 70MHz, 80MHz, 90MHz, 100MHz 5G NR n48: 5MHz, 10MHz, 15MHz, 20MHz, 30MHz, 40MHz 5G NR n66: 5MHz, 10MHz, 15MHz, 20MHz, 25 MHz, 30MHz, 35MHz, 40MHz 5G NR n70: 5MHz, 10MHz, 15MHz 5G NR n71: 5MHz, 10MHz, 15MHz, 20MHz 5G NR n77: 10MHz, 15MHz, 20MHz, 25 MHz, 30MHz, 40MHz, 50MHz, 60MHz, 70MHz, 80MHz, 90MHz, 100MHz 5G NR n78: 10MHz, 15MHz, 20MHz, 25 MHz, 30MHz, 40MHz, 50MHz, 60MHz, 70MHz, 80MHz, 90MHz, 100MHz															
SCS	FDD: SCS15KHz, TDD: SCS30KHz															
uplink modulations used	DFT-s-OFDM: PI/2 BPSK / QPSK / 16QAM / 64QAM / 256QAM CP-OFDM QPSK / 16QAM / 64QAM / 256QAM															
A-MPR (Additional MPR) disabled for SAR Testing?	Yes															
LTE Anchor Bands for n2	LTE B5/12/14/30/66/71															
LTE Anchor Bands for n5	LTE B2/5/7/12/30/48/66															
LTE Anchor Bands for n7	LTE B5/12/13/66/71															
LTE Anchor Bands for n12	LTE B2/30/66															
LTE Anchor Bands for n25	LTE B2/7/12/26/48/66/71															
LTE Anchor Bands for n38	LTE B2/4/5/12/66/71															
LTE Anchor Bands for n41	LTE B2/5/7/12/25/26/66/71															
LTE Anchor Bands for n66	LTE B2/5/12/13/14/30/48/66/71															
LTE Anchor Bands for n71	LTE B2/7/66															
LTE Anchor Bands for n77	LTE B7/41															
LTE Anchor Bands for n78	LTE B7/38/41															
NR Band 2																
	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 35MHz		Bandwidth 40MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	370500	1852.5	371000	1855	371500	1857.5	372000	1860	372500	1862.5	373000	1865	373500	1867.5	374000	1870
M	376000	1880	376000	1880	376000	1880	376000	1880	376000	1880	376000	1880	376000	1880	376000	1880
H	381500	1907.5	381000	1905	380500	1902.5	380000	1900	379500	1897.5	379000	1895	378500	1892.5	378000	1890
NR Band 5																
	Bandwidth 5MHz			Bandwidth 10MHz			Bandwidth 15MHz			Bandwidth 20MHz						
	Ch. #		Freq. (MHz)	Ch. #		Freq. (MHz)	Ch. #		Freq. (MHz)	Ch. #		Freq. (MHz)	Ch. #		Freq. (MHz)	
L	165300		826.5	165800		829	166300		831.5	166800		834				
M	167300		836.5	167300		836.5	167300		836.5	167300		836.5				
H	169300		846.5	168800		844	168300		841.5	167800		839				



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NR Band 7																								
	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 35MHz		Bandwidth 40MHz									
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)								
L	500500	2502.5	501000	2505	501500	2507.5	502000	2510	502500	2512.5	503000	2515	503500	2517.5	504000	2520								
M	507000	2535	507000	2535	507000	2535	507000	2535	507000	2535	507000	2535	507000	2535	507000	2535								
H	513500	2567.5	513000	2565	512500	2562.5	512000	2560	511500	2557.5	511000	2555	510500	2552.5	510000	2550								
NR Band 12																								
	Bandwidth 5MHz				Bandwidth 10MHz				Bandwidth 15MHz															
	Ch. #		Freq. (MHz)		Ch. #		Freq. (MHz)		Ch. #				Freq. (MHz)											
L	140300		701.5		140800		704		141300				706.5											
M	141500		707.5		141500		707.5		141500				707.5											
H	142700		713.5		142200		711		141700				708.5											
NR Band 13																								
	Bandwidth 5MHz						Bandwidth 10MHz																	
	Ch. #		Freq. (MHz)				Ch. #				Freq. (MHz)													
L	155900		779.5				156400				782													
M	156400		782																					
H	156900		784.5																					
NR Band 14																								
	Bandwidth 5MHz						Bandwidth 10MHz																	
	Ch. #		Freq. (MHz)				Ch. #				Freq. (MHz)													
L	158100		790.5				158600				793													
M	158600		793																					
H	159100		795.5																					
NR Band 25																								
	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 35MHz		Bandwidth 40MHz									
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)								
L	370500	1852.5	371000	1855	371500	1857.5	372000	1860	372500	1862.5	373000	1865	373500	1867.5	374000	1870								
M	376500	1882.5	376500	1882.5	376500	1882.5	376500	1882.5	376500	1882.5	376500	1882.5	376500	1882.5	376500	1882.5								
H	382500	1912.5	382000	1910	381500	1907.5	381000	1905	380500	1902.5	380000	1900	379500	1897.5	379000	1895								
NR Band 26																								
	Bandwidth 5MHz				Bandwidth 10MHz				Bandwidth 15MHz				Bandwidth 20MHz											
	Ch. #		Freq. (MHz)		Ch. #		Freq. (MHz)		Ch. #		Freq. (MHz)		Ch. #		Freq. (MHz)									
L	163300		816.5		163800		819		164300		821.5		164800		824									
M	166300		831.5		166300		831.5		166300		831.5		166300		831.5									
H	169300		846.5		168800		844		168300		841.5		167800		839									
NR Band 30																								
	Bandwidth 5MHz						Bandwidth 10MHz																	
	Ch. #		Freq. (MHz)				Ch. #				Freq. (MHz)													
L	461500		2307.5				462000				2310													
M	462000		2310																					
H	462500		2312.5																					
NR Band 38																								
	Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 40MHz													
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)								
L	515004	2575.02	515502	2577.51	516000	2580	516504	2582.52	517002	2585.01	518004	2590.02												
M	519000	2595	519000	2595	519000	2595	519000	2595	519000	2595	519000	2595												
H	522996	2614.98	522498	2612.49	522000	2610	521496	2607.48	520998	2604.99	519996	2599.98												
NR Band 41																								
	Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 40MHz		Bandwidth 50MHz		Bandwidth 60MHz		Bandwidth 70MHz		Bandwidth 80MHz		Bandwidth 90MHz		Bandwidth 100MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	500202	2501.01	500700	2503.5	501204	2506.02	501702	2508.51	502200	2511	503202	2516.01	504204	2521.02	505200	2526	506202	2531.01	507204	2536.02	508200	2541	509202	2546.01
M	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99
H	537000	2685	536496	2682.48	535998	2679.99	535500	2677.5	534996	2674.98	534000	2670	532998	2664.99	531996	2659.98	531000	2655	529998	2649.99	528996	2644.98	528000	2640



NR Band 48																								
	Bandwidth5MHz		Bandwidth10MHz		Bandwidth 15MHz		Bandwidth20MHz		Bandwidth30MHz		Bandwidth 40MHz													
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)												
L	636834	3552.51	637000	3555	637168	3557.52	637334	3560.01	637668	3565.02	638000	3570												
M	641666	3624.99	641666	3624.99	641666	3624.99	641666	3624.99	641666	3624.99	641666	3624.99												
H	646500	3697.5	646332	3694.98	646166	3692.49	646000	3690	645666	3684.99	645332	3679.98												
NR Band 66																								
	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 35MHz		Bandwidth 40MHz									
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)								
L	342500	1712.5	343000	1715	343500	1717.5	344000	1720	344500	1722.5	345000	1725	345500	1727.5	346000	1730								
M	349000	1745	349000	1745	349000	1745	349000	1745	349000	1745	349000	1745	349000	1745	349000	1745								
H	355500	1777.5	355000	1775	354500	1772.5	354000	1770	353500	1767.5	353000	1765	352500	1762.5	352000	1760								
NR Band 70																								
	Bandwidth 5MHz				Bandwidth 10MHz				Bandwidth 15MHz															
	Ch. #		Freq. (MHz)		Ch. #		Freq. (MHz)		Ch. #		Freq. (MHz)													
L	339500		1697.5		340000		1700		340500		1702.5													
M	340500		1702.5		340500		1702.5																	
H	341500		1707.5		341000		1705																	
NR Band 71																								
	Bandwidth 5MHz				Bandwidth 10MHz				Bandwidth 15MHz				Bandwidth 20MHz											
	Ch. #		Freq. (MHz)		Ch. #		Freq. (MHz)		Ch. #		Freq. (MHz)		Ch. #		Freq. (MHz)									
L	133100		665.5		133600		668		13410		670.5		134600		673									
M	136100		680.5		136100		680.5		136100		680.5		136100		680.5									
H	139100		695.5		138600		693		13810		690.5		137600		688									
NR Band 77_Part 270																								
	Bandwidth10MHz		Bandwidth15MHz		Bandwidth 20MHz		Bandwidth25MHz		Bandwidth30MHz		Bandwidth 40MHz		Bandwidth 50MHz		Bandwidth 60MHz		Bandwidth 70MHz		Bandwidth 80MHz		Bandwidth 90MHz		Bandwidth100MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	647000	3705	647168	3707.52	647334	3710.01	647500	3712.5	647668	3715.02	648000	3720	648334	3725.01	648668	3730.02	649000	3735	649334	3740.01	649668	3745.02	650000	3750
M	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840
H	665000	3975	664832	3972.48	664666	3969.99	664500	3967.50	664332	3964.98	664000	3960	663666	3954.99	663332	3949.98	663000	3945	662666	3939.99	662332	3934.98	662000	3930
NR Band 78_Part 270																								
	Bandwidth10MHz		Bandwidth15MHz		Bandwidth 20MHz		Bandwidth25MHz		Bandwidth30MHz		Bandwidth 40MHz		Bandwidth 50MHz		Bandwidth 60MHz		Bandwidth 70MHz		Bandwidth 80MHz		Bandwidth 90MHz		Bandwidth100MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	647000	3705	647168	3707.52	647334	3710.01	647500	3712.5	647668	3715.02	648000	3720	648334	3725.01	648668	3730.02	649000	3735	649334	3740.01	649668	3745.02	650000	3750
M	650000	3750	650000	3750	650000	3750	650000	3750	650000	3750	650000	3750	650000	3750	650000	3750	650000	3750	650000	3750	650000	3750		
H	653000	3795	652832	3792.48	652666	3789.99	652500	3787.50	652332	3784.98	652000	3780	651666	3774.99	651332	3769.98	651000	3765	650666	3759.99	650332	3754.98		
NR Band 77/78_Part 27Q																								
	Bandwidth10MHz		Bandwidth15MHz		Bandwidth 20MHz		Bandwidth25MHz		Bandwidth30MHz		Bandwidth 40MHz		Bandwidth 50MHz		Bandwidth 60MHz		Bandwidth 70MHz		Bandwidth 80MHz		Bandwidth 90MHz		Bandwidth100MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	630334	3455.01	630500	3457.5	630668	3460.02	630834	3462.51	631000	3465	631334	3470.01	631668	3475.02	632000	3480	632334	3485.01	632668	3490.02	633000	3495	633332	3499.98
M	633332	3499.98	633332	3499.98	633332	3499.98	633332	3499.98	633332	3499.98	633332	3499.98	633332	3499.98	633332	3499.98	633332	3499.98	633332	3499.98	633332	3499.98		
H	636332	3544.98	636166	3542.49	636000	3540	635832	3537.48	635666	3534.99	635332	3529.98	635000	3525	634666	3519.99	634332	3514.98	634000	3510	633666	3504.99		

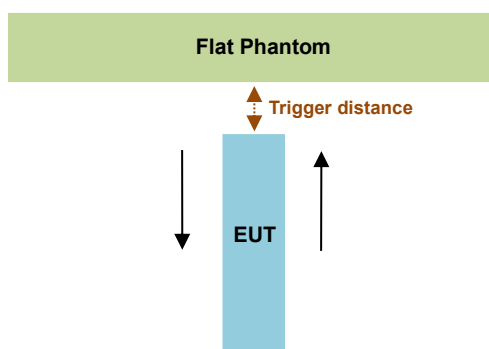
4. Proximity Sensor Triggering Test

<Proximity Sensor Triggering Distance (KDB 616217 D04 section 6.2)>:

For the device is fully integrated, touch sensing capacitive sensor. It uses a charge transfer capacitive acquisition method that is capable of near range proximity detection. In this device offers a state of the art capacitive sensing engine with an embedded sampling capacitor and voltage regulator allowing the overall solution cost to be reduced and improving system immunity in noisy environments.

Proximity sensor triggering distance testing was performed according to the procedures outlined in KDB 616217 D04 section 6.2, and EUT moving further away from the flat phantom and EUT moving toward the flat phantom were both assessed. The details are illustrated as following, and the shortest triggering distances were reported and used for SAR assessment.

In the preliminary triggering distance testing, the tissue-equivalent medium for different frequency bands were used for verification; no other frequency bands tissue-equivalent medium was found to result in shortest triggering distance than that for 1900MHz, and the tissue-equivalent medium for 1900MHz was used for formal proximity sensor triggering testing.



<MIMO2>

Proximity Sensor Trigger Distance (mm)		
Bottom Side		
Position	moving toward	moving away
Minimum	11	11

<Proximity Sensor Triggering Coverage (KDB 616217 D04 section 6.3)>:

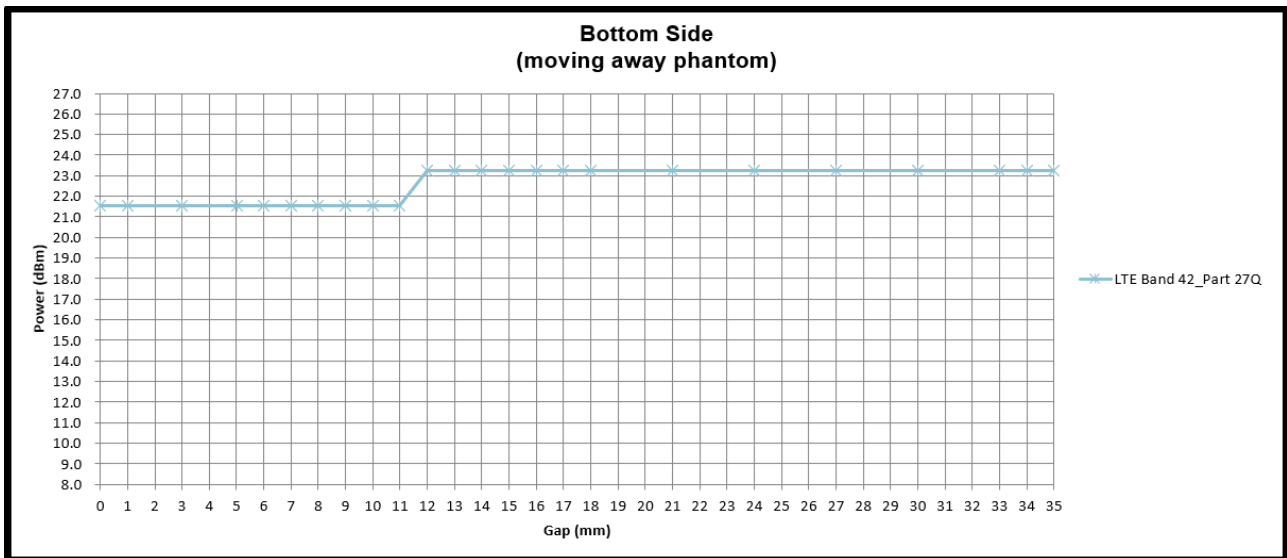
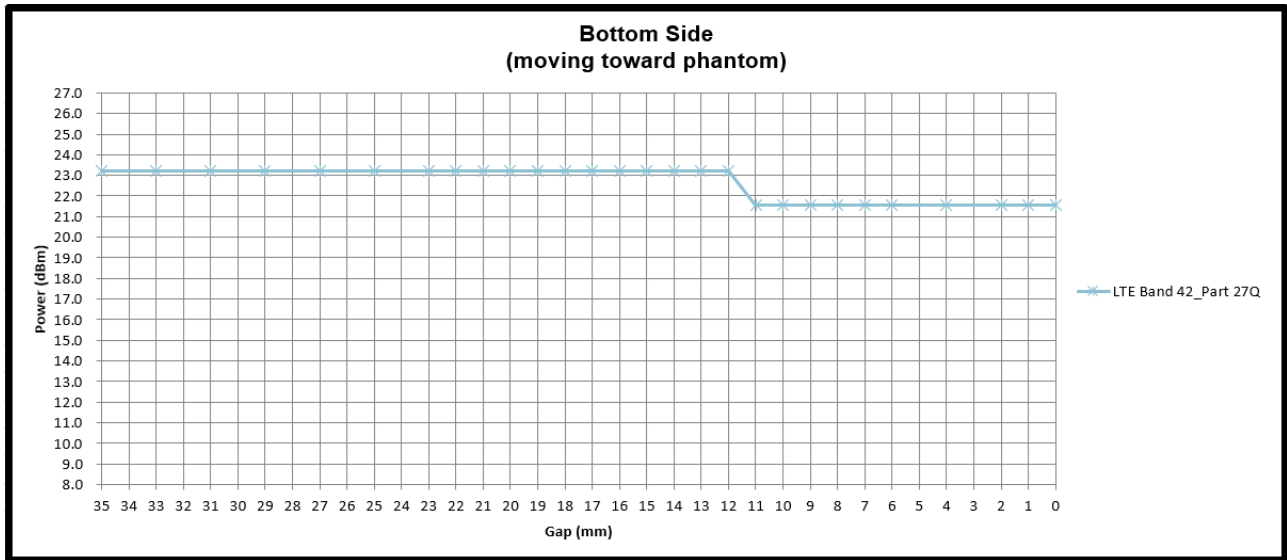
Since the antenna and sensor are collocated and all of the peak SAR location is overlapping with the sensor pad for this device, therefore, According to KDB 616217 section6.3, these procedures do not apply and are not required for this device. due to the antenna and sensor are collocated and the peak SAR location is overlapping with the sensor on this device.

Proximity sensor power reduction

Exposure Position / wireless mode		Antenna	Bottom Side ⁽¹⁾
LTE	B42	MIMO2	2.5 dB
NR	n77_PC3	MIMO2	4.6 dB
NR	n77_PC2	MIMO2	2.5 dB
NR	n78_PC3	MIMO2	4.6 dB
NR	n78_PC2	MIMO2	2.5 dB

Remark:

- ⁽¹⁾: Reduced maximum limit applied by activation of proximity sensor.
- Tests were performed in accordance with KDB 616217 D04 section 6.1, 6.2, 6.3, 6.4 and 6.5 and compliant results are shown as below.
- For verification of compliance of power reduction scheme, additional SAR testing with EUT transmitting at full RF power at a conservative trigger distance was performed:
<MIMO2>
 - Bottom Side: [10 mm](#)

Power Measurement during Sensor Trigger distance testing
<MIMO2>


5. RF Exposure Limits

5.1 Uncontrolled Environment

Uncontrolled Environments are defined as locations where there is the exposure of individuals who have no knowledge or control of their exposure. The general population/uncontrolled exposure limits are applicable to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Members of the general public would come under this category when exposure is not employment-related; for example, in the case of a wireless transmitter that exposes persons in its vicinity.

5.2 Controlled Environment

Controlled Environments are defined as locations where there is exposure that may be incurred by persons who are aware of the potential for exposure, (i.e. as a result of employment or occupation). In general, occupational/controlled exposure limits are applicable to situations in which persons are exposed as a consequence of their employment, who have been made fully aware of the potential for exposure and can exercise control over their exposure. The exposure category is also applicable when the exposure is of a transient nature due to incidental passage through a location where the exposure levels may be higher than the general population/uncontrolled limits, but the exposed person is fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

Limits for Occupational/Controlled Exposure (W/kg)

Whole-Body	Partial-Body	Hands, Wrists, Feet and Ankles
0.4	8.0	20.0

Limits for General Population/Uncontrolled Exposure (W/kg)

Whole-Body	Partial-Body	Hands, Wrists, Feet and Ankles
0.08	1.6	4.0

1. Whole-Body SAR is averaged over the entire body, partial-body SAR is averaged over any 1gram of tissue defined as a tissue volume in the shape of a cube. SAR for hands, wrists, feet and ankles is averaged over any 10 grams of tissue defined as a tissue volume in the shape of a cube.

5.3 RF Exposure limit for above 6GHz

According to ANSI/IEEE C95.1-1992, the criteria listed in Table 1 shall be used to evaluate the environmental impact of human exposure to radio frequency (RF) radiation as specified in §1.1310.

Peak Spatially Averaged Power Density was evaluated over a circular area of 4cm² per interim FCC Guidance for near-field power density evaluations per October 2018 TCB Workshop notes

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3-3.0	614	1.63	*(100)	6
3.0-30	1842/f	4.89/f	*(900/f ²)	6
30-300	61.4	0.163	1.0	6
300-1500			f/300	6
1500-100,000			5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f ²)	30
30-300	27.5	0.073	0.2	30
300-1500			f/1500	30
1500-100,000			1.0	30

6. Specific Absorption Rate (SAR)

6.1 Introduction

SAR is related to the rate at which energy is absorbed per unit mass in an object exposed to a radio field. The SAR distribution in a biological body is complicated and is usually carried out by experimental techniques or numerical modeling. The standard recommends limits for two tiers of groups, occupational/controlled and general population/uncontrolled, based on a person's awareness and ability to exercise control over his or her exposure. In general, occupational/controlled exposure limits are higher than the limits for general population/uncontrolled.

6.2 SAR Definition

The SAR definition is the time derivative (rate) of the incremental energy (dW) absorbed by (dissipated in) an incremental mass (dm) contained in a volume element (dv) of a given density (ρ). The equation description is as below:

$$SAR = \frac{d}{dt} \left(\frac{dW}{dm} \right) = \frac{d}{dt} \left(\frac{dW}{\rho dv} \right)$$

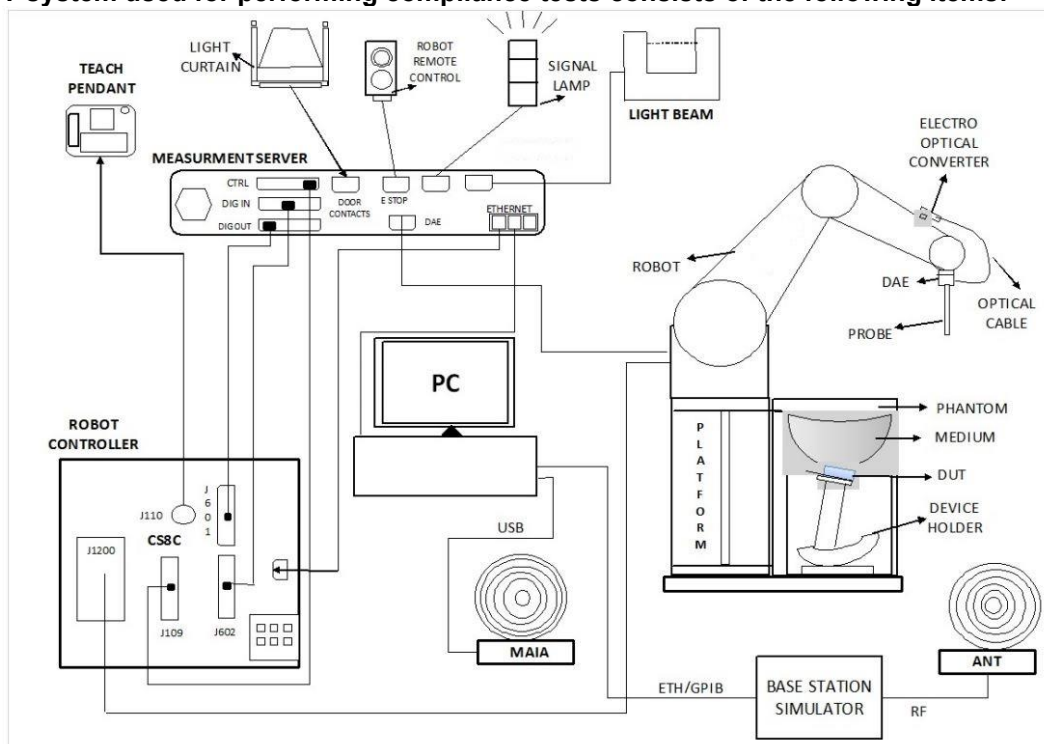
SAR is expressed in units of Watts per kilogram (W/kg)

$$SAR = \frac{\sigma |E|^2}{\rho}$$

Where: σ is the conductivity of the tissue, ρ is the mass density of the tissue and E is the RMS electrical field strength.

7. System Description and Setup

The DASY system used for performing compliance tests consists of the following items:



- The DASY system in SAR Configuration is shown above
- A standard high precision 6-axis robot with controller, teach pendant and software. An arm extension for accommodating the data acquisition electronics (DAE).
- An isotropic Field probe optimized and calibrated for the targeted measurement.
- A data acquisition electronics (DAE) which performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.
- The Electro-optical converter (EOC) performs the conversion from optical to electrical signals for the digital communication to the DAE. To use optical surface detection, a special version of the EOC is required. The EOC signal is transmitted to the measurement server.
- The function of the measurement server is to perform the time critical tasks such as signal filtering, control of the robot operation and fast movement interrupts.
- The Light Beam used is for probe alignment. This improves the (absolute) accuracy of the probe positioning.
- A computer running windows software and the DASY software.
- Remote control and teach pendant as well as additional circuitry for robot safety such as warning lamps, etc.
- The phantom, the device holder and other accessories according to the targeted measurement.

7.1 Test Site Location

The SAR measurement facilities used to collect data are within both Sporton Lab list below test site location are accredited to ISO 17025 by Taiwan Accreditation Foundation (TAF code: 1190 and 3786) and the FCC designation No. TW1190 and TW3786 under the FCC 2.948(e) by Mutual Recognition Agreement (MRA) in FCC test.

Laboratory	EMC & Wireless Communications Laboratory		Wensan Laboratory				
Test Site Location	TW1190		TW3786				
	No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333, Taiwan		No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City 333010, Taiwan				
Test Site No.	SAR01-HY	SAR03-HY	SAR08-HY	SAR09-HY	SAR15-HY	SAR18-HY	SAR21-HY
	SAR04-HY	SAR05-HY	SAR11-HY	SAR12-HY	SAR16-HY	SAR19-HY	SAR22-HY
	SAR06-HY	SAR10-HY	SAR13-HY	SAR14-HY	SAR17-HY	SAR20-HY	

7.2 E-Field Probe

The SAR measurement is conducted with the dosimetric probe (manufactured by SPEAG). The probe is specially designed and calibrated for use in liquid with high permittivity. The dosimetric probe has special calibration in liquid at different frequency. This probe has a built in optical surface detection system to prevent from collision with phantom.

<ES3DV3 Probe>

Construction	Symmetric design with triangular core Interleaved sensors Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE)	
Frequency	4 MHz – 4 GHz; Linearity: ± 0.2 dB (30 MHz – 4 GHz)	
Directivity	± 0.2 dB in TSL (rotation around probe axis) ± 0.3 dB in TSL (rotation normal to probe axis)	
Dynamic Range	5 μ W/g – >100 mW/g; Linearity: ± 0.2 dB	
Dimensions	Overall length: 337 mm (tip: 20 mm) Tip diameter: 3.9 mm (body: 12 mm) Distance from probe tip to dipole centers: 3.0 mm	

<EX3DV4 Probe>

Construction	Symmetric design with triangular core Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE)	
Frequency	4 MHz – >6 GHz Linearity: ± 0.2 dB (30 MHz – 6 GHz)	
Directivity	± 0.3 dB in TSL (rotation around probe axis) ± 0.5 dB in TSL (rotation normal to probe axis)	
Dynamic Range	10 μ W/g – >100 mW/g Linearity: ± 0.2 dB (noise: typically <1 μ W/g)	
Dimensions	Overall length: 337 mm (tip: 20 mm) Tip diameter: 2.5 mm (body: 12 mm) Typical distance from probe tip to dipole centers: 1 mm	

7.3 Data Acquisition Electronics (DAE)

The data acquisition electronics (DAE) consists of a highly sensitive electrometer-grade preamplifier with auto-zeroing, a channel and gain-switching multiplexer, a fast 16 bit AD-converter and a command decoder and control logic unit. Transmission to the measurement server is accomplished through an optical downlink for data and status information as well as an optical uplink for commands and the clock.

The input impedance of the DAE is 200 MOhm; the inputs are symmetrical and floating. Common mode rejection is above 80 dB.



Fig 5.1 Photo of DAE

7.4 Phantom

<SAM Twin Phantom>

Shell Thickness	2 ± 0.2 mm; Center ear point: 6 ± 0.2 mm	
Filling Volume	Approx. 25 liters	
Dimensions	Length: 1000 mm; Width: 500 mm; Height: adjustable feet	
Measurement Areas	Left Hand, Right Hand, Flat Phantom	

The bottom plate contains three pair of bolts for locking the device holder. The device holder positions are adjusted to the standard measurement positions in the three sections. A white cover is provided to tap the phantom during off-periods to prevent water evaporation and changes in the liquid parameters. On the phantom top, three reference markers are provided to identify the phantom position with respect to the robot.

<ELI Phantom>

Shell Thickness	2 ± 0.2 mm (sagging: <1%)	
Filling Volume	Approx. 30 liters	
Dimensions	Major ellipse axis: 600 mm Minor axis: 400 mm	

The ELI phantom is intended for compliance testing of handheld and body-mounted wireless devices in the frequency range of 30 MHz to 6 GHz. ELI4 is fully compatible with standard and all known tissue simulating liquids.

7.5 Device Holder

<Mounting Device for Hand-Held Transmitter>

In combination with the Twin SAM V5.0/V5.0c or ELI phantoms, the Mounting Device for Hand-Held Transmitters enables rotation of the mounted transmitter device to specified spherical coordinates. At the heads, the rotation axis is at the ear opening. Transmitter devices can be easily and accurately positioned according to IEC 62209-1, IEEE 1528, FCC, or other specifications. The device holder can be locked for positioning at different phantom sections (left head, right head, flat). And upgrade kit to Mounting Device to enable easy mounting of wider devices like big smart-phones, e-books, small tablets, etc. It holds devices with width up to 140 mm.



Mounting Device for Hand-Held Transmitters



Mounting Device Adaptor for Wide-Phones

<Mounting Device for Laptops and other Body-Worn Transmitters>

The extension is lightweight and made of POM, acrylic glass and foam. It fits easily on the upper part of the mounting device in place of the phone positioned. The extension is fully compatible with the SAM Twin and ELI phantoms.



Mounting Device for Laptops

8. Measurement Procedures

The measurement procedures are as follows:

- (a) Use base station simulator to configure EUT WWAN transmission in radiated connection, and engineering software to configure EUT WLAN/BT continuously transmission, at maximum RF power, in the highest power channel.
- (b) Place the EUT in the positions as Appendix D demonstrates.
- (c) Set scan area, grid size and other setting on the DASY software.
- (d) Measure SAR results for the highest power channel on each testing position.
- (e) Find out the largest SAR result on these testing positions of each band
- (f) Measure SAR results for other channels in worst SAR testing position if the reported SAR of highest power channel is larger than 0.8 W/kg

According to the test standard, the recommended procedure for assessing the peak spatial-average SAR value consists of the following steps:

- (a) Power reference measurement
- (b) Area scan
- (c) Zoom scan
- (d) Power drift measurement

8.1 Spatial Peak SAR Evaluation

The procedure for spatial peak SAR evaluation has been implemented according to the test standard. It can be conducted for 1g and 10g, as well as for user-specific masses. The DASY software includes all numerical procedures necessary to evaluate the spatial peak SAR value.

The base for the evaluation is a "cube" measurement. The measured volume must include the 1g and 10g cubes with the highest averaged SAR values. For that purpose, the center of the measured volume is aligned to the interpolated peak SAR value of a previously performed area scan.

The entire evaluation of the spatial peak values is performed within the post-processing engine (SEMCAD). The system always gives the maximum values for the 1g and 10g cubes. The algorithm to find the cube with highest averaged SAR is divided into the following stages:

- (a) Extraction of the measured data (grid and values) from the Zoom Scan
- (b) Calculation of the SAR value at every measurement point based on all stored data (A/D values and measurement parameters)
- (c) Generation of a high-resolution mesh within the measured volume
- (d) Interpolation of all measured values from the measurement grid to the high-resolution grid
- (e) Extrapolation of the entire 3-D field distribution to the phantom surface over the distance from sensor to surface
- (f) Calculation of the averaged SAR within masses of 1g and 10g

8.2 Power Reference Measurement

The Power Reference Measurement and Power Drift Measurements are for monitoring the power drift of the device under test in the batch process. The minimum distance of probe sensors to surface determines the closest measurement point to phantom surface. This distance cannot be smaller than the distance of sensor calibration points to probe tip as defined in the probe properties.

8.3 Area Scan

The area scan is used as a fast scan in two dimensions to find the area of high field values, before doing a fine measurement around the hot spot. The sophisticated interpolation routines implemented in DASY software can find the maximum found in the scanned area, within a range of the global maximum. The range (in dB0) is specified in the standards for compliance testing. For example, a 2 dB range is required in IEEE standard 1528 and IEC 62209 standards, whereby 3 dB is a requirement when compliance is assessed in accordance with the ARIB standard (Japan), if only one zoom scan follows the area scan, then only the absolute maximum will be taken as reference. For cases where multiple maximums are detected, the number of zoom scans has to be increased accordingly.

Area scan parameters extracted from FCC KDB 865664 D01v01r04 SAR measurement 100 MHz to 6 GHz.

	≤ 3 GHz	> 3 GHz
Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface	5 ± 1 mm	$\frac{1}{2} \cdot \delta \cdot \ln(2) \pm 0.5$ mm
Maximum probe angle from probe axis to phantom surface normal at the measurement location	$30^\circ \pm 1^\circ$	$20^\circ \pm 1^\circ$
Maximum area scan spatial resolution: Δx_{Area} , Δy_{Area}	≤ 2 GHz: ≤ 15 mm $2 - 3$ GHz: ≤ 12 mm	$3 - 4$ GHz: ≤ 12 mm $4 - 6$ GHz: ≤ 10 mm
	When the x or y dimension of the test device, in the measurement plane orientation, is smaller than the above, the measurement resolution must be $\leq$ the corresponding x or y dimension of the test device with at least one measurement point on the test device.	

8.4 Zoom Scan

Zoom scans are used to assess the peak spatial SAR values within a cubic averaging volume containing 1 gram and 10 gram of simulated tissue. The zoom scan measures points (refer to table below) within a cube whose base faces are centered on the maxima found in a preceding area scan job within the same procedure. When the measurement is done, the zoom scan evaluates the averaged SAR for 1 gram and 10 gram and displays these values next to the job's label.

Zoom scan parameters extracted from FCC KDB 865664 D01v01r04 SAR measurement 100 MHz to 6 GHz.

			≤ 3 GHz	> 3 GHz
Maximum zoom scan spatial resolution: $\Delta x_{\text{Zoom}}, \Delta y_{\text{Zoom}}$			≤ 2 GHz: ≤ 8 mm 2 – 3 GHz: ≤ 5 mm*	3 – 4 GHz: ≤ 5 mm* 4 – 6 GHz: ≤ 4 mm*
Maximum zoom scan spatial resolution, normal to phantom surface	uniform grid: $\Delta z_{\text{Zoom}}(n)$		≤ 5 mm	3 – 4 GHz: ≤ 4 mm 4 – 5 GHz: ≤ 3 mm 5 – 6 GHz: ≤ 2 mm
	graded grid	$\Delta z_{\text{Zoom}}(1)$: between 1 st two points closest to phantom surface	≤ 4 mm	3 – 4 GHz: ≤ 3 mm 4 – 5 GHz: ≤ 2.5 mm 5 – 6 GHz: ≤ 2 mm
		$\Delta z_{\text{Zoom}}(n>1)$: between subsequent points	$\leq 1.5 \cdot \Delta z_{\text{Zoom}}(n-1)$	
Minimum zoom scan volume	x, y, z		≥ 30 mm	3 – 4 GHz: ≥ 28 mm 4 – 5 GHz: ≥ 25 mm 5 – 6 GHz: ≥ 22 mm
Note: δ is the penetration depth of a plane-wave at normal incidence to the tissue medium; see draft standard IEEE P1528-2011 for details.				
* When zoom scan is required and the <i>reported</i> SAR from the <i>area scan based 1-g SAR estimation</i> procedures of KDB 447498 is ≤ 1.4 W/kg, ≤ 8 mm, ≤ 7 mm and ≤ 5 mm zoom scan resolution may be applied, respectively, for 2 GHz to 3 GHz, 3 GHz to 4 GHz and 4 GHz to 6 GHz.				

8.5 Volume Scan Procedures

The volume scan is used to assess overlapping SAR distributions for antennas transmitting in different frequency bands. It is equivalent to an oversized zoom scan used in standalone measurements. The measurement volume will be used to enclose all the simultaneous transmitting antennas. For antennas transmitting simultaneously in different frequency bands, the volume scan is measured separately in each frequency band. In order to sum correctly to compute the 1g aggregate SAR, the EUT remain in the same test position for all measurements and all volume scan use the same spatial resolution and grid spacing. When all volume scan were completed, the software, SEMCAD postprocessor can combine and subsequently superpose these measurement data to calculating the multiband SAR.

8.6 Power Drift Monitoring

All SAR testing is under the EUT install full charged battery and transmit maximum output power. In DASy measurement software, the power reference measurement and power drift measurement procedures are used for monitoring the power drift of EUT during SAR test. Both these procedures measure the field at a specified reference position before and after the SAR testing. The software will calculate the field difference in dB. If the power drifts more than 5%, the SAR will be retested.

9. Test Equipment List

Manufacturer	Name of Equipment	Type/Model	Serial Number	Calibration	
				Last Cal.	Due Date
SPEAG	750MHz System Validation Kit ⁽²⁾	D750V3	1117	Mar. 24, 2022	Mar. 21, 2025
SPEAG	835MHz System Validation Kit ⁽²⁾	D835V2	4d060	Mar. 24, 2022	Mar. 21, 2025
SPEAG	1750MHz System Validation Kit ⁽²⁾	D1750V2	1068	Nov. 21, 2022	Nov. 18, 2025
SPEAG	1900MHz System Validation Kit	D1900V2	5d041	Aug. 15, 2024	Aug. 14, 2025
SPEAG	2300MHz System Validation Kit	D2300V2	1088	Jul. 10, 2024	Jul. 09, 2025
SPEAG	2600MHz System Validation Kit ⁽²⁾	D2600V2	1078	Jun. 23, 2022	Jun. 20, 2025
SPEAG	3500MHz System Validation Kit ⁽²⁾	D3500V2	1036	Mar. 23, 2022	Mar. 20, 2025
SPEAG	3700MHz System Validation Kit ⁽²⁾	D3700V2	1006	Jun. 20, 2022	Jun. 17, 2025
SPEAG	3900MHz System Validation Kit ⁽²⁾	D3900V2	1017	Apr. 22, 2022	Apr. 19, 2025
SPEAG	Data Acquisition Electronics	DAE4	854	Aug. 14, 2024	Aug. 13, 2025
SPEAG	Data Acquisition Electronics	DAE4	1326	Jul. 15, 2024	Jul. 14, 2025
SPEAG	Dosimetric E-Field Probe	EX3DV4	7306	Aug. 21, 2024	Aug. 20, 2025
SPEAG	Dosimetric E-Field Probe	EX3DV4	7791	Feb. 21, 2024	Feb. 20, 2025
Testo	Hygro meter	608-H1	45196600	Oct. 28, 2024	Oct. 27, 2025
Anritsu	Radio Communication Analyzer	MT8821C	6201341950	Nov. 12, 2024	Nov. 11, 2025
Keysight	5G Wireless Test Platform	E7515B	MY58300712	Apr. 22, 2024	Apr. 21, 2025
SPEAG	Device Holder	N/A	N/A	N/A	N/A
Anritsu	Signal Generator	MG3710A	6201502524	Sep. 24, 2024	Sep. 23, 2025
Keysight	ENA Network Analyzer	E5071C	MY46104758	Oct. 20, 2024	Oct. 19, 2025
SPEAG	Dielectric Probe Kit	DAK-3.5	1126	Sep. 17, 2024	Sep. 16, 2025
LINE SEIKI	Digital Thermometer	DTM3000-spezial	3690	Aug. 07, 2024	Aug. 06, 2025
Anritsu	Power Meter	ML2495A	1419002	Aug. 13, 2024	Aug. 12, 2025
Anritsu	Power Sensor	MA2411B	1911176	Aug. 13, 2024	Aug. 12, 2025
Anritsu	Spectrum Analyzer	MS2830A	6201396378	Jul. 09, 2024	Jul. 08, 2025
Mini-Circuits	Power Amplifier	ZVE-8G+	6418	Oct. 23, 2024	Oct. 22, 2025
ATM	Dual Directional Coupler	C122H-10	P610410z-02	Note 1	
Warison	Directional Coupler	WCOU-10-50S-10	WR889BMC4B1	Note 1	
Woken	Attenuator 1	WK0602-XX	N/A	Note 1	
PE	Attenuator 2	PE7005-10	N/A	Note 1	
PE	Attenuator 3	PE7005- 3	N/A	Note 1	

General Note:

1. Prior to system verification and validation, the path loss from the signal generator to the system check source and the power meter, which includes the amplifier, cable, attenuator and directional coupler, was measured by the network analyzer. The reading of the power meter was offset by the path loss difference between the path to the power meter and the path to the system check source to monitor the actual power level fed to the system check source.
2. The dipole calibration interval can be extended to 3 years with justification according to KDB 865664 D01. The dipoles are also not physically damaged, or repaired during the interval. The justification data in appendix C can be found which the return loss is < -20dB, within 20% of prior calibration, the impedance is within 5 ohm of prior calibration for each dipole.

10. System Verification

10.1 Tissue Verification

The tissue dielectric parameters of tissue-equivalent media used for SAR measurements must be characterized within a temperature range of 18°C to 25°C, measured with calibrated instruments and apparatuses, such as network analyzers and temperature probes. The temperature of the tissue-equivalent medium during SAR measurement must also be within 18°C to 25°C and within $\pm 2^\circ\text{C}$ of the temperature when the tissue parameters are characterized. The tissue dielectric measurement system must be calibrated before use. The dielectric parameters must be measured before the tissue-equivalent medium is used in a series of SAR measurements.

The liquid tissue depth was at least 15cm in the phantom for all SAR testing

<Tissue Dielectric Parameter Check Results>

<Tissue Dielectric Parameter Check Results>

Frequency (MHz)	Liquid Temp. (°C)	Conductivity (σ)	Permittivity (ϵ_r)	Conductivity Target (σ)	Permittivity Target (ϵ_r)	Delta (σ) (%)	Delta (ϵ_r) (%)	Limit (%)	Date
750	22.5	0.884	41.600	0.89	41.90	-0.67	-0.72	± 5	2024/12/28
835	22.5	0.917	41.300	0.90	41.50	1.89	-0.48	± 5	2024/12/28
1750	22.7	1.350	40.400	1.37	40.10	-1.46	0.75	± 5	2024/12/29
1750	22.8	1.370	40.633	1.37	40.10	0.00	1.33	± 5	2025/1/3
1900	22.7	1.420	38.800	1.40	40.00	1.43	-3.00	± 5	2024/12/29
1900	22.8	1.385	40.380	1.40	40.00	-1.07	0.95	± 5	2025/1/3
2300	22.6	1.620	40.700	1.67	39.50	-2.99	3.04	± 5	2024/12/30
2300	22.3	1.657	40.014	1.67	39.50	-0.78	1.30	± 5	2025/1/2
2600	22.6	1.970	39.600	1.96	39.00	0.51	1.54	± 5	2024/12/30
2600	22.3	1.998	38.800	1.96	39.00	1.94	-0.51	± 5	2025/1/2
3500	22.3	2.870	37.700	2.91	37.90	-1.37	-0.53	± 5	2024/12/31
3500	22.5	2.870	37.800	2.91	37.90	-1.37	-0.26	± 5	2025/1/1
3500	22.5	2.994	38.417	2.91	37.90	2.89	1.36	± 5	2025/1/4
3700	22.3	3.060	37.600	3.12	37.70	-1.92	-0.27	± 5	2024/12/31
3700	22.5	3.060	37.500	3.12	37.70	-1.92	-0.53	± 5	2025/1/1
3700	22.5	3.208	38.215	3.12	37.70	2.82	1.37	± 5	2025/1/4
3900	22.3	3.240	37.500	3.33	37.51	-2.70	-0.03	± 5	2024/12/31
3900	22.5	3.250	37.500	3.33	37.51	-2.40	-0.03	± 5	2025/1/1
3900	22.5	3.421	38.027	3.33	37.51	2.73	1.38	± 5	2025/1/4

10.2 System Performance Check Results

Comparing to the original SAR value provided by SPEAG, the verification data should be within its specification of 10 %. Below table shows the target SAR and measured SAR after normalized to 1W input power. The table below indicates the system performance check can meet the variation criterion and the plots can be referred to Appendix A of this report.

Test Site	Date	Frequency (MHz)	Input Power (mW)	Dipole S/N	Probe S/N	DAE S/N	Measured 1g SAR (W/kg)	Targeted 1g SAR (W/kg)	Normalized 1g SAR (W/kg)	Deviation (%)
SAR-01	2024/12/28	750	50	D750V3-1117	EX3DV4 - SN7791	DAE4 Sn854	0.396	8.520	7.92	-7.04
SAR-01	2024/12/28	835	50	D835V2-4d060	EX3DV4 - SN7791	DAE4 Sn854	0.461	9.730	9.22	-5.24
SAR-01	2024/12/29	1750	50	D1750V2-1068	EX3DV4 - SN7791	DAE4 Sn854	1.730	36.700	34.6	-5.72
SAR-05	2025/1/3	1750	50	D1750V2-1068	EX3DV4 - SN7306	DAE4 Sn1326	1.870	36.700	37.4	1.91
SAR-01	2024/12/29	1900	50	D1900V2-5d041	EX3DV4 - SN7791	DAE4 Sn854	1.790	39.200	35.8	-8.67
SAR-05	2025/1/3	1900	50	D1900V2-5d041	EX3DV4 - SN7306	DAE4 Sn1326	1.950	39.200	39	-0.51
SAR-01	2024/12/30	2300	50	D2300V2-1088	EX3DV4 - SN7791	DAE4 Sn854	2.230	48.200	44.6	-7.47
SAR-05	2025/1/2	2300	50	D2300V2-1088	EX3DV4 - SN7306	DAE4 Sn1326	2.440	48.200	48.8	1.24
SAR-01	2024/12/30	2600	50	D2600V2-1078	EX3DV4 - SN7791	DAE4 Sn854	2.650	55.400	53	-4.33
SAR-05	2025/1/2	2600	50	D2600V2-1078	EX3DV4 - SN7306	DAE4 Sn1326	2.800	55.400	56	1.08
SAR-01	2024/12/31	3500	50	D3500V2-1036	EX3DV4 - SN7791	DAE4 Sn854	3.290	67.400	65.8	-2.37
SAR-01	2025/1/1	3500	50	D3500V2-1036	EX3DV4 - SN7791	DAE4 Sn854	3.270	67.400	65.4	-2.97
SAR-05	2025/1/4	3500	50	D3500V2-1036	EX3DV4 - SN7306	DAE4 Sn1326	3.290	67.400	65.8	-2.37
SAR-01	2024/12/31	3700	50	D3700V2-1006	EX3DV4 - SN7791	DAE4 Sn854	3.170	65.600	63.4	-3.35
SAR-01	2025/1/1	3700	50	D3700V2-1006	EX3DV4 - SN7791	DAE4 Sn854	3.190	65.600	63.8	-2.74
SAR-05	2025/1/4	3700	50	D3700V2-1006	EX3DV4 - SN7306	DAE4 Sn1326	3.270	65.600	65.4	-0.30
SAR-01	2024/12/31	3900	50	D3900V2-1017-3900	EX3DV4 - SN7791	DAE4 Sn854	3.270	68.700	65.4	-4.80
SAR-01	2025/1/1	3900	50	D3900V2-1017-3900	EX3DV4 - SN7791	DAE4 Sn854	3.250	68.700	65	-5.39
SAR-05	2025/1/4	3900	50	D3900V2-1017-3900	EX3DV4 - SN7306	DAE4 Sn1326	3.330	68.700	66.6	-3.06

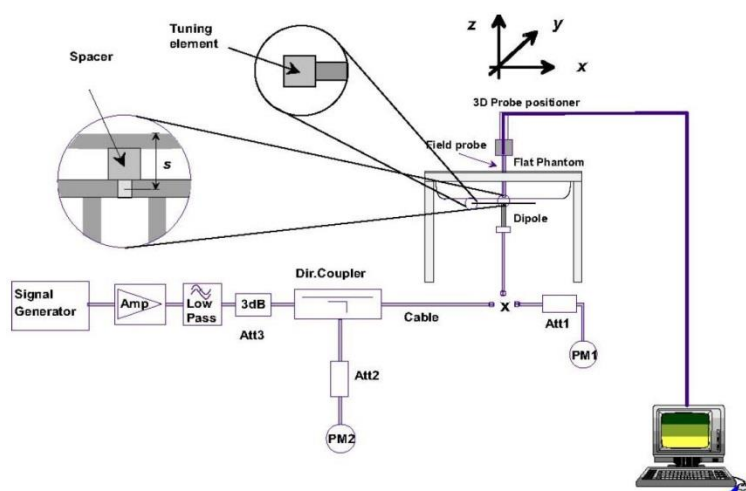


Fig 8.3.1 System Performance Check Setup



Fig 8.3.2 Setup Photo

11. LTE Output Power (Unit: dBm)

<LTE Conducted Power>

General Note:

1. A Base station simulator was used to setup the connection with EUT; the frequency band, channel bandwidth, RB allocation configuration, modulation type are set in the base station simulator to configure EUT transmitting at maximum power and at different configurations which are requested to be reported to FCC, for conducted power measurement and SAR testing.
2. Per KDB 941225 D05v02r05, when a properly configured base station simulator is used for the SAR and power measurements, spectrum plots for each RB allocation and offset configuration is not required.
3. Per KDB 941225 D05v02r05, start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel.
4. Per KDB 941225 D05v02r05, 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure.
5. Per KDB 941225 D05v02r05, For QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.
6. Per KDB 941225 D05v02r05, 16QAM output power for each RB allocation configuration is $>$ not $\frac{1}{2}$ dB higher than the same configuration in QPSK and the reported SAR for the QPSK configuration is ≤ 1.45 W/kg; Per KDB 941225 D05v02r05, 16QAM SAR testing is not required.
7. Per KDB 941225 D05v02r05, Smaller bandwidth output power for each RB allocation configuration is $>$ not $\frac{1}{2}$ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg; Per KDB 941225 D05v02r05, smaller bandwidth SAR testing is not required.
8. For LTE B4/B5/B12/B17/B26/B38/B71 the maximum bandwidth does not support three non-overlapping channels, per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.
9. LTE band 2/4/5/17/38 SAR test was covered by Band 25/66/26/12/41; according to April 2015 TCB workshop, SAR test for overlapping LTE bands can be reduced if
 - a. the maximum output power, including tolerance, for the smaller band is $\leq$ the larger band to qualify for the SAR test exclusion
 - b. the channel bandwidth and other operating parameters for the smaller band are fully supported by the larger band



<LTE Band 7_Ant Main_Sensor OFF>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				20850	21100	21350	
Frequency (MHz)				2510	2535	2560	
20	QPSK	1	0	23.29	23.36	23.17	
20	QPSK	1	49	23.25	23.33	23.12	24.5
20	QPSK	1	99	23.26	23.31	23.09	
20	QPSK	50	0	22.38	22.39	22.17	
20	QPSK	50	24	22.37	22.29	22.15	23.5
20	QPSK	50	50	22.25	22.30	22.11	
20	QPSK	100	0	22.28	22.33	22.16	
20	16QAM	1	0	22.53	22.53	22.30	23.5
20	16QAM	1	49	22.57	22.62	22.35	
20	16QAM	1	99	22.68	22.63	22.44	
20	16QAM	50	0	21.29	21.31	21.20	22.5
20	16QAM	50	24	21.43	21.33	21.22	
20	16QAM	50	50	21.39	21.32	21.14	
20	16QAM	100	0	21.41	21.32	21.17	22.5
20	64QAM	1	0	21.48	21.44	21.26	
20	64QAM	1	49	21.55	21.58	21.38	
20	64QAM	1	99	21.56	21.52	21.38	21.5
20	64QAM	50	0	20.30	20.32	20.20	
20	64QAM	50	24	20.42	20.37	20.22	
20	64QAM	50	50	20.43	20.36	20.16	19.5
20	64QAM	100	0	20.42	20.32	20.20	
20	256QAM	1	0	18.13	18.46	18.12	
20	256QAM	1	49	18.20	18.60	18.01	19.5
20	256QAM	1	99	18.00	18.32	17.84	
20	256QAM	50	0	18.16	18.37	17.99	
20	256QAM	50	24	18.23	18.36	18.00	19.5
20	256QAM	50	50	18.11	18.26	18.02	
20	256QAM	100	0	18.19	18.32	18.01	
Channel				20825	21100	21375	Tune-up limit (dBm)
Frequency (MHz)				2507.5	2535	2562.5	
15	QPSK	1	0	23.22	23.29	23.08	
15	QPSK	1	37	23.17	23.24	23.03	24.5
15	QPSK	1	74	23.20	23.25	23.03	
15	QPSK	36	0	22.28	22.29	22.10	
15	QPSK	36	20	22.29	22.20	22.05	23.5
15	QPSK	36	39	22.16	22.22	22.04	
15	QPSK	75	0	22.19	22.26	22.10	
15	16QAM	1	0	22.47	22.47	22.23	23.5
15	16QAM	1	37	22.51	22.52	22.26	
15	16QAM	1	74	22.60	22.54	22.36	
15	16QAM	36	0	21.21	21.24	21.12	22.5
15	16QAM	36	20	21.33	21.24	21.13	
15	16QAM	36	39	21.29	21.22	21.09	
15	16QAM	75	0	21.31	21.25	21.11	22.5
15	64QAM	1	0	21.43	21.36	21.17	
15	64QAM	1	37	21.49	21.51	21.31	
15	64QAM	1	74	21.48	21.43	21.31	21.5
15	64QAM	36	0	20.25	20.25	20.11	
15	64QAM	36	20	20.34	20.27	20.17	
15	64QAM	36	39	20.35	20.29	20.08	19.5
15	64QAM	75	0	20.35	20.22	20.10	
15	256QAM	1	0	18.03	18.36	18.06	
15	256QAM	1	37	18.12	18.50	17.94	19.5
15	256QAM	1	74	17.92	18.24	17.79	
15	256QAM	36	0	18.06	18.27	17.90	
15	256QAM	36	20	18.16	18.28	17.93	19.5
15	256QAM	36	39	18.04	18.20	17.93	



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15	256QAM	75	0	18.09	18.22	17.96	Tune-up limit (dBm)
Channel				20800	21100	21400	
Frequency (MHz)				2505	2535	2565	
10	QPSK	1	0	23.24	23.26	23.09	24.5
10	QPSK	1	25	23.17	23.27	23.04	
10	QPSK	1	49	23.17	23.24	23.02	
10	QPSK	25	0	22.30	22.33	22.08	23.5
10	QPSK	25	12	22.28	22.22	22.07	
10	QPSK	25	25	22.17	22.24	22.05	
10	QPSK	50	0	22.20	22.26	22.11	
10	16QAM	1	0	22.48	22.44	22.25	23.5
10	16QAM	1	25	22.48	22.57	22.27	
10	16QAM	1	49	22.61	22.53	22.36	
10	16QAM	25	0	21.19	21.23	21.10	22.5
10	16QAM	25	12	21.33	21.28	21.15	
10	16QAM	25	25	21.30	21.22	21.04	
10	16QAM	50	0	21.31	21.27	21.12	
10	64QAM	1	0	21.42	21.34	21.17	22.5
10	64QAM	1	25	21.49	21.52	21.28	
10	64QAM	1	49	21.46	21.45	21.31	
10	64QAM	25	0	20.23	20.27	20.11	21.5
10	64QAM	25	12	20.37	20.27	20.14	
10	64QAM	25	25	20.34	20.26	20.10	
10	64QAM	50	0	20.37	20.24	20.12	
10	256QAM	1	0	18.06	18.40	18.02	19.5
10	256QAM	1	25	18.11	18.54	17.95	
10	256QAM	1	49	17.91	18.25	17.78	
10	256QAM	25	0	18.11	18.27	17.90	19.5
10	256QAM	25	12	18.17	18.27	17.92	
10	256QAM	25	25	18.03	18.18	17.96	
10	256QAM	50	0	18.14	18.23	17.92	
Channel				20775	21100	21425	Tune-up limit (dBm)
Frequency (MHz)				2502.5	2535	2567.5	
5	QPSK	1	0	23.20	23.28	23.08	24.5
5	QPSK	1	12	23.16	23.23	23.04	
5	QPSK	1	24	23.16	23.22	23.04	
5	QPSK	12	0	22.33	22.34	22.10	23.5
5	QPSK	12	7	22.29	22.23	22.10	
5	QPSK	12	13	22.19	22.24	22.06	
5	QPSK	25	0	22.18	22.25	22.06	
5	16QAM	1	0	22.43	22.46	22.24	23.5
5	16QAM	1	12	22.50	22.55	22.30	
5	16QAM	1	24	22.62	22.57	22.36	
5	16QAM	12	0	21.22	21.26	21.14	22.5
5	16QAM	12	7	21.35	21.27	21.12	
5	16QAM	12	13	21.30	21.27	21.07	
5	16QAM	25	0	21.32	21.22	21.09	
5	64QAM	1	0	21.38	21.35	21.17	22.5
5	64QAM	1	12	21.47	21.52	21.28	
5	64QAM	1	24	21.51	21.45	21.30	
5	64QAM	12	0	20.22	20.23	20.14	21.5
5	64QAM	12	7	20.35	20.31	20.17	
5	64QAM	12	13	20.35	20.26	20.09	
5	64QAM	25	0	20.33	20.24	20.11	
5	256QAM	1	0	18.03	18.38	18.03	19.5
5	256QAM	1	12	18.14	18.53	17.92	
5	256QAM	1	24	17.95	18.23	17.78	
5	256QAM	12	0	18.07	18.27	17.90	19.5
5	256QAM	12	7	18.15	18.28	17.91	
5	256QAM	12	13	18.06	18.18	17.97	
5	256QAM	25	0	18.11	18.26	17.92	



<LTE Band 7_Ant MIMO2_Sensor OFF>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				20850	21100	21350	
Frequency (MHz)				2510	2535	2560	
20	QPSK	1	0	23.50	23.69	23.02	
20	QPSK	1	49	23.16	23.22	22.95	24.5
20	QPSK	1	99	23.09	23.16	22.86	
20	QPSK	50	0	22.24	22.43	22.01	
20	QPSK	50	24	22.25	22.29	21.98	23.5
20	QPSK	50	50	22.10	22.20	21.88	
20	QPSK	100	0	22.18	22.24	21.90	
20	16QAM	1	0	22.26	22.33	22.05	23.5
20	16QAM	1	49	22.40	22.48	22.13	
20	16QAM	1	99	22.17	22.23	21.96	
20	16QAM	50	0	21.18	21.30	21.04	22.5
20	16QAM	50	24	21.28	21.38	21.09	
20	16QAM	50	50	21.19	21.28	20.93	
20	16QAM	100	0	21.15	21.24	20.88	22.5
20	64QAM	1	0	20.99	21.10	20.78	
20	64QAM	1	49	20.86	20.94	20.59	
20	64QAM	1	99	20.98	21.01	20.69	21.5
20	64QAM	50	0	20.18	20.25	19.91	
20	64QAM	50	24	20.20	20.25	19.93	
20	64QAM	50	50	20.10	20.23	19.88	19.5
20	64QAM	100	0	20.17	20.24	19.92	
20	256QAM	1	0	18.12	18.17	17.91	
20	256QAM	1	49	18.09	18.15	17.80	19.5
20	256QAM	1	99	17.97	18.08	17.72	
20	256QAM	50	0	18.21	18.29	17.94	
20	256QAM	50	24	18.26	18.30	18.01	19.5
20	256QAM	50	50	18.15	18.22	17.91	
20	256QAM	100	0	18.21	18.27	17.99	
Channel				20825	21100	21375	Tune-up limit (dBm)
Frequency (MHz)				2507.5	2535	2562.5	
15	QPSK	1	0	23.30	23.57	22.92	
15	QPSK	1	37	22.97	23.10	22.80	24.5
15	QPSK	1	74	22.94	23.06	22.66	
15	QPSK	36	0	22.04	22.23	21.84	
15	QPSK	36	20	22.07	22.14	21.83	23.5
15	QPSK	36	39	21.96	22.07	21.75	
15	QPSK	75	0	22.01	22.14	21.70	
15	16QAM	1	0	22.12	22.17	21.94	23.5
15	16QAM	1	37	22.24	22.28	21.94	
15	16QAM	1	74	21.98	22.04	21.86	
15	16QAM	36	0	21.08	21.20	20.86	22.5
15	16QAM	36	20	21.16	21.21	20.91	
15	16QAM	36	39	21.03	21.10	20.78	
15	16QAM	75	0	20.96	21.11	20.70	22.5
15	64QAM	1	0	20.86	21.00	20.58	
15	64QAM	1	37	20.76	20.75	20.71	
15	64QAM	1	74	20.82	20.84	20.50	21.5
15	64QAM	36	0	20.03	20.07	19.73	
15	64QAM	36	20	20.05	20.09	19.74	
15	64QAM	36	39	19.93	20.12	19.72	19.5
15	64QAM	75	0	19.98	20.09	19.79	
15	256QAM	1	0	17.98	18.07	17.76	
15	256QAM	1	37	17.93	17.99	17.65	19.5
15	256QAM	1	74	17.87	17.96	17.56	
15	256QAM	36	0	18.07	18.18	17.83	
15	256QAM	36	20	18.09	18.12	17.82	19.5
15	256QAM	36	39	18.01	18.09	17.81	



FCC SAR TEST REPORT

Report No. : FA4D0509

15	256QAM	75	0	18.11	18.10	17.89	Tune-up limit (dBm)
Channel				20800	21100	21400	
Frequency (MHz)				2505	2535	2565	
10	QPSK	1	0	23.30	23.49	22.82	24.5
10	QPSK	1	25	23.02	23.04	22.83	
10	QPSK	1	49	22.93	23.05	22.70	
10	QPSK	25	0	22.05	22.25	21.84	23.5
10	QPSK	25	12	22.09	22.16	21.87	
10	QPSK	25	25	21.91	22.00	21.69	
10	QPSK	50	0	22.06	22.08	21.70	23.5
10	16QAM	1	0	22.16	22.18	21.88	
10	16QAM	1	25	22.21	22.31	22.01	
10	16QAM	1	49	22.02	22.13	21.85	22.5
10	16QAM	25	0	21.03	21.11	20.90	
10	16QAM	25	12	21.12	21.18	20.90	
10	16QAM	25	25	21.08	21.17	20.83	22.5
10	16QAM	50	0	20.95	21.12	20.68	
10	64QAM	1	0	20.87	20.91	20.61	
10	64QAM	1	25	20.69	20.78	20.88	22.5
10	64QAM	1	49	20.83	20.83	20.54	
10	64QAM	25	0	20.03	20.07	19.76	
10	64QAM	25	12	20.04	20.15	19.76	21.5
10	64QAM	25	25	19.95	20.10	19.75	
10	64QAM	50	0	19.97	20.07	19.76	
10	256QAM	1	0	18.00	18.06	17.74	19.5
10	256QAM	1	25	17.95	18.01	17.69	
10	256QAM	1	49	17.80	17.95	17.54	
10	256QAM	25	0	18.03	18.09	17.81	19.5
10	256QAM	25	12	18.13	18.11	17.90	
10	256QAM	25	25	18.03	18.02	17.75	
10	256QAM	50	0	18.10	18.13	17.82	Tune-up limit (dBm)
Channel				20775	21100	21425	
Frequency (MHz)				2502.5	2535	2567.5	
5	QPSK	1	0	23.39	23.58	22.90	24.5
5	QPSK	1	12	23.06	23.03	22.82	
5	QPSK	1	24	22.91	23.05	22.76	
5	QPSK	12	0	22.08	22.27	21.85	23.5
5	QPSK	12	7	22.07	22.13	21.87	
5	QPSK	12	13	21.95	22.10	21.71	
5	QPSK	25	0	22.03	22.05	21.73	23.5
5	16QAM	1	0	22.07	22.22	21.92	
5	16QAM	1	12	22.21	22.35	21.98	
5	16QAM	1	24	22.04	22.05	21.85	22.5
5	16QAM	12	0	21.01	21.10	20.92	
5	16QAM	12	7	21.16	21.19	20.90	
5	16QAM	12	13	21.06	21.14	20.74	22.5
5	16QAM	25	0	20.96	21.12	20.70	
5	64QAM	1	0	20.80	20.90	20.64	
5	64QAM	1	12	20.70	20.84	20.82	22.5
5	64QAM	1	24	20.78	20.87	20.51	
5	64QAM	12	0	19.98	20.06	19.74	
5	64QAM	12	7	20.10	20.05	19.73	21.5
5	64QAM	12	13	19.96	20.05	19.74	
5	64QAM	25	0	20.06	20.13	19.72	
5	256QAM	1	0	17.99	18.06	17.72	19.5
5	256QAM	1	12	17.91	18.04	17.66	
5	256QAM	1	24	17.77	17.89	17.58	
5	256QAM	12	0	18.03	18.10	17.74	19.5
5	256QAM	12	7	18.14	18.12	17.83	
5	256QAM	12	13	17.96	18.09	17.76	
5	256QAM	25	0	18.08	18.14	17.83	



<LTE Band 25_Ant Main_Sensor OFF>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				26140	26340	26590	
Frequency (MHz)				1860	1880	1905	
20	QPSK	1	0	23.54	23.46	23.29	
20	QPSK	1	49	23.52	23.45	23.26	24.5
20	QPSK	1	99	23.49	23.35	23.16	
20	QPSK	50	0	22.59	22.54	22.33	
20	QPSK	50	24	22.55	22.46	22.32	23.5
20	QPSK	50	50	22.53	22.48	22.19	
20	QPSK	100	0	22.55	22.47	22.29	
20	16QAM	1	0	22.96	22.80	22.60	23.5
20	16QAM	1	49	22.85	22.81	22.54	
20	16QAM	1	99	22.77	22.62	22.54	
20	16QAM	50	0	21.57	21.46	21.34	22.5
20	16QAM	50	24	21.62	21.52	21.34	
20	16QAM	50	50	21.55	21.47	21.21	
20	16QAM	100	0	21.58	21.51	21.32	22.5
20	64QAM	1	0	21.81	21.74	21.59	
20	64QAM	1	49	21.78	21.73	21.47	
20	64QAM	1	99	21.69	21.60	21.45	21.5
20	64QAM	50	0	20.57	20.49	20.35	
20	64QAM	50	24	20.60	20.54	20.33	
20	64QAM	50	50	20.54	20.49	20.22	19.5
20	64QAM	100	0	20.58	20.51	20.32	
20	256QAM	1	0	18.57	18.64	18.61	
20	256QAM	1	49	18.66	18.83	18.66	19.5
20	256QAM	1	99	18.48	18.65	18.65	
20	256QAM	50	0	18.46	18.55	18.51	
20	256QAM	50	24	18.60	18.60	18.48	19.5
20	256QAM	50	50	18.55	18.58	18.50	
20	256QAM	100	0	18.56	18.64	18.60	
Channel				26115	26340	26615	
Frequency (MHz)				1857.5	1880	1907.5	
15	QPSK	1	0	23.47	23.39	23.22	
15	QPSK	1	37	23.45	23.36	23.18	24.5
15	QPSK	1	74	23.42	23.27	23.09	
15	QPSK	36	0	22.53	22.45	22.25	
15	QPSK	36	20	22.47	22.40	22.22	23.5
15	QPSK	36	39	22.45	22.38	22.13	
15	QPSK	75	0	22.46	22.42	22.23	
15	16QAM	1	0	22.88	22.72	22.53	23.5
15	16QAM	1	37	22.78	22.73	22.45	
15	16QAM	1	74	22.67	22.57	22.48	
15	16QAM	36	0	21.50	21.37	21.29	22.5
15	16QAM	36	20	21.54	21.43	21.24	
15	16QAM	36	39	21.49	21.39	21.16	
15	16QAM	75	0	21.49	21.45	21.26	22.5
15	64QAM	1	0	21.75	21.68	21.51	
15	64QAM	1	37	21.69	21.66	21.40	
15	64QAM	1	74	21.64	21.51	21.40	21.5
15	64QAM	36	0	20.50	20.39	20.26	
15	64QAM	36	20	20.51	20.44	20.23	
15	64QAM	36	39	20.48	20.39	20.15	19.5
15	64QAM	75	0	20.49	20.46	20.27	
15	256QAM	1	0	18.51	18.55	18.55	
15	256QAM	1	37	18.58	18.78	18.56	19.5
15	256QAM	1	74	18.42	18.58	18.60	
15	256QAM	36	0	18.37	18.50	18.44	
15	256QAM	36	20	18.51	18.51	18.41	19.5



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Report No. : FA4D0509

15	256QAM	36	39	18.48	18.49	18.41	Tune-up limit (dBm)
15	256QAM	75	0	18.46	18.59	18.52	
Channel				26090	26340	26640	Tune-up limit (dBm)
Frequency (MHz)				1855	1880	1910	
10	QPSK	1	0	23.46	23.41	23.21	24.5
10	QPSK	1	25	23.43	23.38	23.17	
10	QPSK	1	49	23.42	23.30	23.11	
10	QPSK	25	0	22.49	22.49	22.25	23.5
10	QPSK	25	12	22.48	22.41	22.23	
10	QPSK	25	25	22.46	22.42	22.12	
10	QPSK	50	0	22.45	22.42	22.22	
10	16QAM	1	0	22.89	22.75	22.51	23.5
10	16QAM	1	25	22.80	22.73	22.44	
10	16QAM	1	49	22.69	22.52	22.48	
10	16QAM	25	0	21.49	21.41	21.26	22.5
10	16QAM	25	12	21.52	21.47	21.26	
10	16QAM	25	25	21.46	21.41	21.16	
10	16QAM	50	0	21.49	21.44	21.22	
10	64QAM	1	0	21.73	21.64	21.53	22.5
10	64QAM	1	25	21.72	21.64	21.42	
10	64QAM	1	49	21.61	21.52	21.36	
10	64QAM	25	0	20.51	20.42	20.30	21.5
10	64QAM	25	12	20.50	20.46	20.27	
10	64QAM	25	25	20.49	20.43	20.13	
10	64QAM	50	0	20.49	20.42	20.23	
10	256QAM	1	0	18.48	18.58	18.52	19.5
10	256QAM	1	25	18.57	18.73	18.61	
10	256QAM	1	49	18.39	18.56	18.57	
10	256QAM	25	0	18.36	18.49	18.42	19.5
10	256QAM	25	12	18.53	18.53	18.38	
10	256QAM	25	25	18.46	18.48	18.41	
10	256QAM	50	0	18.47	18.57	18.52	
Channel				26065	26340	26665	Tune-up limit (dBm)
Frequency (MHz)				1852.5	1880	1912.5	
5	QPSK	1	0	23.45	23.37	23.24	24.5
5	QPSK	1	12	23.46	23.36	23.19	
5	QPSK	1	24	23.41	23.27	23.09	
5	QPSK	12	0	22.52	22.46	22.24	23.5
5	QPSK	12	7	22.47	22.37	22.23	
5	QPSK	12	13	22.43	22.42	22.13	
5	QPSK	25	0	22.45	22.37	22.22	
5	16QAM	1	0	22.88	22.70	22.51	23.5
5	16QAM	1	12	22.80	22.71	22.47	
5	16QAM	1	24	22.71	22.55	22.44	
5	16QAM	12	0	21.48	21.39	21.29	22.5
5	16QAM	12	7	21.55	21.42	21.24	
5	16QAM	12	13	21.47	21.38	21.14	
5	16QAM	25	0	21.50	21.42	21.25	
5	64QAM	1	0	21.75	21.66	21.52	22.5
5	64QAM	1	12	21.72	21.64	21.39	
5	64QAM	1	24	21.59	21.51	21.36	
5	64QAM	12	0	20.48	20.40	20.28	21.5
5	64QAM	12	7	20.55	20.45	20.25	
5	64QAM	12	13	20.48	20.44	20.16	
5	64QAM	25	0	20.50	20.44	20.23	
5	256QAM	1	0	18.51	18.56	18.55	19.5
5	256QAM	1	12	18.61	18.78	18.61	
5	256QAM	1	24	18.43	18.60	18.57	
5	256QAM	12	0	18.41	18.45	18.43	19.5
5	256QAM	12	7	18.54	18.52	18.38	
5	256QAM	12	13	18.48	18.49	18.41	
5	256QAM	25	0	18.48	18.58	18.52	



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Channel				26055	26340	26675	Tune-up limit (dBm)
Frequency (MHz)				1851.5	1880	1913.5	
3	QPSK	1	0	23.45	23.42	23.21	24.5
3	QPSK	1	8	23.43	23.42	23.21	
3	QPSK	1	14	23.43	23.27	23.13	
3	QPSK	8	0	22.49	22.45	22.25	23.5
3	QPSK	8	4	22.48	22.40	22.26	
3	QPSK	8	7	22.47	22.43	22.09	
3	QPSK	15	0	22.45	22.44	22.21	23.5
3	16QAM	1	0	22.90	22.77	22.52	
3	16QAM	1	8	22.77	22.77	22.44	
3	16QAM	1	14	22.69	22.55	22.48	22.5
3	16QAM	8	0	21.51	21.40	21.29	
3	16QAM	8	4	21.54	21.46	21.24	
3	16QAM	8	7	21.48	21.43	21.14	22.5
3	16QAM	15	0	21.48	21.48	21.22	
3	64QAM	1	0	21.73	21.66	21.51	
3	64QAM	1	8	21.71	21.63	21.44	21.5
3	64QAM	1	14	21.60	21.57	21.35	
3	64QAM	8	0	20.51	20.39	20.26	
3	64QAM	8	4	20.52	20.49	20.28	19.5
3	64QAM	8	7	20.44	20.46	20.12	
3	64QAM	15	0	20.49	20.46	20.26	
3	256QAM	1	0	18.47	18.55	18.55	19.5
3	256QAM	1	8	18.59	18.74	18.63	
3	256QAM	1	14	18.39	18.59	18.61	
3	256QAM	8	0	18.40	18.50	18.47	19.5
3	256QAM	8	4	18.54	18.57	18.42	
3	256QAM	8	7	18.51	18.52	18.42	
3	256QAM	15	0	18.52	18.60	18.52	
Channel				26047	26340	26683	Tune-up limit (dBm)
Frequency (MHz)				1850.7	1880	1914.3	
1.4	QPSK	1	0	23.41	23.39	23.16	24.5
1.4	QPSK	1	3	23.39	23.37	23.18	
1.4	QPSK	1	5	23.40	23.23	23.09	
1.4	QPSK	3	0	23.40	23.39	23.17	23.5
1.4	QPSK	3	1	23.39	23.39	23.18	
1.4	QPSK	3	3	23.38	23.22	23.08	
1.4	QPSK	6	0	22.45	22.40	22.20	23.5
1.4	16QAM	1	0	22.45	22.35	22.21	
1.4	16QAM	1	3	22.44	22.40	22.05	
1.4	16QAM	1	5	22.40	22.39	22.18	22.5
1.4	16QAM	3	0	22.87	22.72	22.48	
1.4	16QAM	3	1	22.72	22.74	22.40	
1.4	16QAM	3	3	22.66	22.52	22.44	22.5
1.4	16QAM	6	0	21.46	21.35	21.26	
1.4	64QAM	1	0	21.50	21.43	21.21	
1.4	64QAM	1	3	21.45	21.39	21.11	22.5
1.4	64QAM	1	5	21.45	21.44	21.18	
1.4	64QAM	3	0	21.69	21.61	21.47	
1.4	64QAM	3	1	21.67	21.58	21.39	21.5
1.4	64QAM	3	3	21.57	21.54	21.30	
1.4	64QAM	6	0	20.49	20.45	20.23	
1.4	256QAM	1	0	18.42	18.50	18.51	19.5
1.4	256QAM	1	3	18.56	18.71	18.59	
1.4	256QAM	1	5	18.34	18.54	18.56	
1.4	256QAM	3	0	18.36	18.46	18.42	19.5
1.4	256QAM	3	1	18.49	18.53	18.39	
1.4	256QAM	3	3	18.46	18.47	18.37	
1.4	256QAM	6	0	18.48	18.57	18.48	19.5



<LTE Band 25_Ant MIMO2_Sensor OFF>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				26140	26340	26590	
Frequency (MHz)				1860	1880	1905	
20	QPSK	1	0	24.00	23.60	23.68	
20	QPSK	1	49	23.69	23.53	23.58	24.5
20	QPSK	1	99	23.72	23.61	23.63	
20	QPSK	50	0	22.98	22.81	22.81	
20	QPSK	50	24	22.86	22.68	22.72	23.5
20	QPSK	50	50	22.92	22.72	22.80	
20	QPSK	100	0	22.92	22.79	22.80	
20	16QAM	1	0	22.68	22.52	22.52	23.5
20	16QAM	1	49	22.67	22.57	22.56	
20	16QAM	1	99	22.64	22.49	22.51	
20	16QAM	50	0	21.96	21.78	21.83	22.5
20	16QAM	50	24	21.93	21.76	21.81	
20	16QAM	50	50	21.92	21.81	21.84	
20	16QAM	100	0	21.88	21.71	21.72	22.5
20	64QAM	1	0	21.50	21.36	21.36	
20	64QAM	1	49	21.46	21.33	21.34	
20	64QAM	1	99	21.43	21.30	21.26	21.5
20	64QAM	50	0	20.95	20.79	20.86	
20	64QAM	50	24	20.93	20.74	20.80	
20	64QAM	50	50	20.92	20.74	20.78	19.5
20	64QAM	100	0	20.97	20.85	20.85	
20	256QAM	1	0	18.48	18.30	18.32	
20	256QAM	1	49	18.46	18.31	18.29	19.5
20	256QAM	1	99	18.43	18.31	18.32	
20	256QAM	50	0	18.52	18.42	18.41	
20	256QAM	50	24	18.47	18.36	18.36	19.5
20	256QAM	50	50	18.43	18.30	18.26	
20	256QAM	100	0	18.37	18.27	18.35	
Channel				26115	26340	26615	
Frequency (MHz)				1857.5	1880	1907.5	
15	QPSK	1	0	23.76	23.50	23.47	
15	QPSK	1	37	23.49	23.40	23.33	24.5
15	QPSK	1	74	23.48	23.49	23.42	
15	QPSK	36	0	22.84	22.71	22.65	
15	QPSK	36	20	22.75	22.56	22.58	23.5
15	QPSK	36	39	22.76	22.61	22.70	
15	QPSK	75	0	22.72	22.66	22.67	
15	16QAM	1	0	22.49	22.30	22.30	23.5
15	16QAM	1	37	22.52	22.32	22.44	
15	16QAM	1	74	22.49	22.28	22.32	
15	16QAM	36	0	21.73	21.57	21.59	22.5
15	16QAM	36	20	21.75	21.63	21.63	
15	16QAM	36	39	21.77	21.68	21.71	
15	16QAM	75	0	21.75	21.56	21.62	22.5
15	64QAM	1	0	21.26	21.25	21.18	
15	64QAM	1	37	21.27	21.23	21.23	
15	64QAM	1	74	21.19	21.13	21.06	21.5
15	64QAM	36	0	20.76	20.57	20.71	
15	64QAM	36	20	20.68	20.58	20.61	
15	64QAM	36	39	20.67	20.62	20.57	19.5
15	64QAM	75	0	20.83	20.63	20.64	
15	256QAM	1	0	18.24	18.06	18.12	
15	256QAM	1	37	18.31	18.09	18.06	19.5
15	256QAM	1	74	18.24	18.10	18.08	
15	256QAM	36	0	18.34	18.31	18.31	
15	256QAM	36	20	18.31	18.13	18.21	19.5



FCC SAR TEST REPORT

Report No. : FA4D0509

15	256QAM	36	39	18.23	18.15	18.02	
15	256QAM	75	0	18.19	18.10	18.13	
Channel				26090	26340	26640	Tune-up limit (dBm)
Frequency (MHz)				1855	1880	1910	
10	QPSK	1	0	23.76	23.42	23.51	24.5
10	QPSK	1	25	23.45	23.29	23.43	
10	QPSK	1	49	23.62	23.41	23.48	
10	QPSK	25	0	22.78	22.61	22.63	23.5
10	QPSK	25	12	22.61	22.49	22.51	
10	QPSK	25	25	22.70	22.51	22.63	
10	QPSK	50	0	22.76	22.54	22.63	
10	16QAM	1	0	22.48	22.39	22.29	23.5
10	16QAM	1	25	22.52	22.36	22.40	
10	16QAM	1	49	22.50	22.30	22.31	
10	16QAM	25	0	21.76	21.63	21.73	22.5
10	16QAM	25	12	21.77	21.59	21.64	
10	16QAM	25	25	21.70	21.61	21.67	
10	16QAM	50	0	21.69	21.48	21.57	
10	64QAM	1	0	21.34	21.15	21.26	22.5
10	64QAM	1	25	21.30	21.09	21.20	
10	64QAM	1	49	21.22	21.12	21.03	
10	64QAM	25	0	20.82	20.64	20.75	21.5
10	64QAM	25	12	20.69	20.51	20.61	
10	64QAM	25	25	20.71	20.59	20.62	
10	64QAM	50	0	20.77	20.61	20.73	
10	256QAM	1	0	18.24	18.09	18.08	19.5
10	256QAM	1	25	18.24	18.18	18.15	
10	256QAM	1	49	18.19	18.10	18.21	
10	256QAM	25	0	18.33	18.17	18.25	19.5
10	256QAM	25	12	18.26	18.23	18.20	
10	256QAM	25	25	18.31	18.13	18.13	
10	256QAM	50	0	18.25	18.06	18.17	
Channel				26065	26340	26665	Tune-up limit (dBm)
Frequency (MHz)				1852.5	1880	1912.5	
5	QPSK	1	0	23.75	23.48	23.54	24.5
5	QPSK	1	12	23.54	23.42	23.46	
5	QPSK	1	24	23.56	23.49	23.50	
5	QPSK	12	0	22.77	22.56	22.64	23.5
5	QPSK	12	7	22.65	22.55	22.51	
5	QPSK	12	13	22.74	22.55	22.58	
5	QPSK	25	0	22.73	22.55	22.57	
5	16QAM	1	0	22.51	22.39	22.40	23.5
5	16QAM	1	12	22.53	22.47	22.31	
5	16QAM	1	24	22.50	22.27	22.41	
5	16QAM	12	0	21.81	21.56	21.69	22.5
5	16QAM	12	7	21.68	21.51	21.66	
5	16QAM	12	13	21.72	21.70	21.69	
5	16QAM	25	0	21.71	21.54	21.55	
5	64QAM	1	0	21.32	21.21	21.13	22.5
5	64QAM	1	12	21.36	21.18	21.20	
5	64QAM	1	24	21.29	21.13	21.04	
5	64QAM	12	0	20.81	20.60	20.62	21.5
5	64QAM	12	7	20.80	20.59	20.63	
5	64QAM	12	13	20.71	20.64	20.61	
5	64QAM	25	0	20.73	20.61	20.75	
5	256QAM	1	0	18.38	18.09	18.14	19.5
5	256QAM	1	12	18.35	18.17	18.09	
5	256QAM	1	24	18.19	18.11	18.08	
5	256QAM	12	0	18.31	18.17	18.27	19.5
5	256QAM	12	7	18.32	18.17	18.25	
5	256QAM	12	13	18.32	18.07	18.08	
5	256QAM	25	0	18.20	18.05	18.16	



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Channel				26055	26340	26675	Tune-up limit (dBm)
Frequency (MHz)				1851.5	1880	1913.5	
3	QPSK	1	0	23.76	23.50	23.58	24.5
3	QPSK	1	8	23.54	23.38	23.36	
3	QPSK	1	14	23.50	23.47	23.50	
3	QPSK	8	0	22.77	22.62	22.69	23.5
3	QPSK	8	4	22.66	22.56	22.61	
3	QPSK	8	7	22.71	22.54	22.64	
3	QPSK	15	0	22.80	22.67	22.63	23.5
3	16QAM	1	0	22.48	22.40	22.41	
3	16QAM	1	8	22.52	22.37	22.37	
3	16QAM	1	14	22.39	22.33	22.37	22.5
3	16QAM	8	0	21.85	21.65	21.72	
3	16QAM	8	4	21.68	21.65	21.71	
3	16QAM	8	7	21.68	21.61	21.73	22.5
3	16QAM	15	0	21.66	21.48	21.59	
3	64QAM	1	0	21.26	21.15	21.20	
3	64QAM	1	8	21.28	21.14	21.14	22.5
3	64QAM	1	14	21.31	21.06	21.04	
3	64QAM	8	0	20.84	20.59	20.71	
3	64QAM	8	4	20.82	20.53	20.58	21.5
3	64QAM	8	7	20.76	20.54	20.66	
3	64QAM	15	0	20.77	20.67	20.75	
3	256QAM	1	0	18.38	18.20	18.09	19.5
3	256QAM	1	8	18.26	18.09	18.11	
3	256QAM	1	14	18.33	18.15	18.14	
3	256QAM	8	0	18.33	18.19	18.17	19.5
3	256QAM	8	4	18.24	18.17	18.12	
3	256QAM	8	7	18.27	18.20	18.15	
3	256QAM	15	0	18.11	18.10	18.11	
Channel				26047	26340	26683	Tune-up limit (dBm)
Frequency (MHz)				1850.7	1880	1914.3	
1.4	QPSK	1	0	23.56	23.28	23.30	24.5
1.4	QPSK	1	3	23.34	23.11	23.09	
1.4	QPSK	1	5	23.29	23.21	23.25	
1.4	QPSK	3	0	23.47	23.29	23.36	23.5
1.4	QPSK	3	1	23.32	23.14	23.13	
1.4	QPSK	3	3	23.28	23.18	23.20	
1.4	QPSK	6	0	22.60	22.42	22.54	23.5
1.4	16QAM	1	0	22.52	22.40	22.49	
1.4	16QAM	1	3	22.56	22.38	22.47	
1.4	16QAM	1	5	22.63	22.57	22.52	22.5
1.4	16QAM	3	0	22.31	22.20	22.30	
1.4	16QAM	3	1	22.37	22.22	22.26	
1.4	16QAM	3	3	22.19	22.20	22.26	22.5
1.4	16QAM	6	0	21.61	21.54	21.59	
1.4	64QAM	1	0	21.48	21.55	21.52	
1.4	64QAM	1	3	21.49	21.49	21.58	22.5
1.4	64QAM	1	5	21.56	21.33	21.43	
1.4	64QAM	3	0	21.16	20.99	21.00	
1.4	64QAM	3	1	21.10	21.01	21.03	21.5
1.4	64QAM	3	3	21.18	20.91	20.90	
1.4	64QAM	6	0	20.64	20.36	20.53	
1.4	256QAM	1	0	18.20	18.08	17.93	19.5
1.4	256QAM	1	3	18.07	17.89	17.98	
1.4	256QAM	1	5	18.17	18.04	17.99	
1.4	256QAM	3	0	18.15	18.06	17.98	19.5
1.4	256QAM	3	1	18.12	18.04	17.95	
1.4	256QAM	3	3	18.14	18.07	17.96	
1.4	256QAM	6	0	17.92	17.92	17.96	19.5



<LTE Band 30_Ant Main_Sensor OFF>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				27710			
Frequency (MHz)				2310			
10	QPSK	1	0		22.19		23
10	QPSK	1	25		22.15		
10	QPSK	1	49		22.12		
10	QPSK	25	0		21.25		22
10	QPSK	25	12		21.15		
10	QPSK	25	25		21.11		
10	QPSK	50	0		21.21		22
10	16QAM	1	0		21.40		
10	16QAM	1	25		21.45		
10	16QAM	1	49		21.42		21
10	16QAM	25	0		20.14		
10	16QAM	25	12		20.22		
10	16QAM	25	25		20.25		21
10	16QAM	50	0		20.22		
10	64QAM	1	0		20.34		
10	64QAM	1	25		20.43		21
10	64QAM	1	49		20.36		
10	64QAM	25	0		19.17		
10	64QAM	25	12		19.21		20
10	64QAM	25	25		19.23		
10	64QAM	50	0		19.24		
10	256QAM	1	0		17.31		18
10	256QAM	1	25		17.29		
10	256QAM	1	49		17.12		
10	256QAM	25	0		17.18		18
10	256QAM	25	12		17.23		
10	256QAM	25	25		17.07		
10	256QAM	50	0		17.11		
Channel				27685	27710	27735	Tune-up limit (dBm)
Frequency (MHz)				2307.5	2310	2312.5	
5	QPSK	1	0	22.09	22.15	22.13	23
5	QPSK	1	12	22.10	22.10	22.05	
5	QPSK	1	24	22.02	22.07	22.08	
5	QPSK	12	0	21.20	21.16	21.16	22
5	QPSK	12	7	21.06	21.06	21.07	
5	QPSK	12	13	21.07	21.01	21.05	
5	QPSK	25	0	21.14	21.12	21.16	22
5	16QAM	1	0	21.36	21.37	21.30	
5	16QAM	1	12	21.40	21.39	21.39	
5	16QAM	1	24	21.39	21.35	21.37	21
5	16QAM	12	0	20.08	20.11	20.04	
5	16QAM	12	7	20.14	20.13	20.13	
5	16QAM	12	13	20.17	20.20	20.16	21
5	16QAM	25	0	20.12	20.18	20.18	
5	64QAM	1	0	20.28	20.24	20.27	
5	64QAM	1	12	20.34	20.38	20.35	21
5	64QAM	1	24	20.33	20.30	20.28	
5	64QAM	12	0	19.08	19.14	19.12	
5	64QAM	12	7	19.14	19.18	19.16	20
5	64QAM	12	13	19.17	19.19	19.13	
5	64QAM	25	0	19.18	19.14	19.18	
5	256QAM	1	0	17.27	17.26	17.28	18
5	256QAM	1	12	17.21	17.19	17.23	
5	256QAM	1	24	17.02	17.02	17.06	
5	256QAM	12	0	17.12	17.09	17.13	18
5	256QAM	12	7	17.14	17.13	17.19	
5	256QAM	12	13	17.00	17.04	17.03	
5	256QAM	25	0	17.06	17.08	17.08	



<LTE Band 30_Ant MIMO2_Sensor OFF>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				27710			
Frequency (MHz)				2310			
10	QPSK	1	0		22.03		23
10	QPSK	1	25		21.92		
10	QPSK	1	49		21.96		
10	QPSK	25	0		21.00		22
10	QPSK	25	12		20.94		
10	QPSK	25	25		20.88		
10	QPSK	50	0		20.87		22
10	16QAM	1	0		20.70		
10	16QAM	1	25		20.78		
10	16QAM	1	49		20.68		21
10	16QAM	25	0		19.97		
10	16QAM	25	12		19.90		
10	16QAM	25	25		19.83		21
10	16QAM	50	0		19.91		
10	64QAM	1	0		19.68		
10	64QAM	1	25		19.75		21
10	64QAM	1	49		19.71		
10	64QAM	25	0		19.09		
10	64QAM	25	12		18.98		20
10	64QAM	25	25		18.95		
10	64QAM	50	0		18.86		
10	256QAM	1	0		16.73		18
10	256QAM	1	25		16.68		
10	256QAM	1	49		16.43		
10	256QAM	25	0		17.03		18
10	256QAM	25	12		17.01		
10	256QAM	25	25		16.90		
10	256QAM	50	0		16.94		
Channel				27685	27710	27735	Tune-up limit (dBm)
Frequency (MHz)				2307.5	2310	2312.5	
5	QPSK	1	0	21.86	21.85	21.85	23
5	QPSK	1	12	21.82	21.77	21.75	
5	QPSK	1	24	21.80	21.81	21.79	
5	QPSK	12	0	20.80	20.89	20.87	22
5	QPSK	12	7	20.80	20.78	20.80	
5	QPSK	12	13	20.77	20.70	20.77	
5	QPSK	25	0	20.73	20.77	20.71	22
5	16QAM	1	0	20.59	20.59	20.60	
5	16QAM	1	12	20.65	20.58	20.60	
5	16QAM	1	24	20.54	20.51	20.56	21
5	16QAM	12	0	19.79	19.81	19.78	
5	16QAM	12	7	19.77	19.78	19.71	
5	16QAM	12	13	19.73	19.65	19.72	21
5	16QAM	25	0	19.75	19.75	19.80	
5	64QAM	1	0	19.51	19.57	19.48	
5	64QAM	1	12	19.57	19.60	19.56	21
5	64QAM	1	24	19.61	19.51	19.52	
5	64QAM	12	0	18.99	18.94	18.97	
5	64QAM	12	7	18.85	18.88	18.84	20
5	64QAM	12	13	18.83	18.76	18.84	
5	64QAM	25	0	18.69	18.72	18.74	
5	256QAM	1	0	16.55	16.63	16.56	18
5	256QAM	1	12	16.48	16.57	16.52	
5	256QAM	1	24	16.23	16.32	16.26	
5	256QAM	12	0	16.84	16.88	16.87	18
5	256QAM	12	7	16.87	16.81	16.82	
5	256QAM	12	13	16.74	16.70	16.75	
5	256QAM	25	0	16.79	16.83	16.77	



<LTE Band 66_Ant Main_Sensor OFF>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				132072	132322	132572	
Frequency (MHz)				1720	1745	1770	
20	QPSK	1	0	23.28	23.24	23.29	
20	QPSK	1	49	23.26	23.22	23.24	24.5
20	QPSK	1	99	23.14	23.07	23.07	
20	QPSK	50	0	22.24	22.26	22.30	
20	QPSK	50	24	22.22	22.24	22.29	23.5
20	QPSK	50	50	22.17	22.18	22.27	
20	QPSK	100	0	22.22	22.18	22.29	
20	16QAM	1	0	22.54	22.59	22.61	23.5
20	16QAM	1	49	22.54	22.54	22.52	
20	16QAM	1	99	22.34	22.37	22.47	
20	16QAM	50	0	21.31	21.25	21.27	22.5
20	16QAM	50	24	21.36	21.29	21.24	
20	16QAM	50	50	21.30	21.20	21.25	
20	16QAM	100	0	21.31	21.25	21.20	22.5
20	64QAM	1	0	21.51	21.43	21.49	
20	64QAM	1	49	21.54	21.51	21.52	
20	64QAM	1	99	21.36	21.32	21.35	21.5
20	64QAM	50	0	20.31	20.25	20.25	
20	64QAM	50	24	20.37	20.28	20.22	
20	64QAM	50	50	20.30	20.20	20.22	19.5
20	64QAM	100	0	20.34	20.26	20.21	
20	256QAM	1	0	18.44	18.50	18.49	
20	256QAM	1	49	18.57	18.70	18.68	19.5
20	256QAM	1	99	18.50	18.56	18.71	
20	256QAM	50	0	18.45	18.44	18.42	
20	256QAM	50	24	18.44	18.41	18.57	19.5
20	256QAM	50	50	18.45	18.43	18.52	
20	256QAM	100	0	18.46	18.51	18.54	
Channel				132047	132322	132597	
Frequency (MHz)				1717.5	1745	1772.5	
15	QPSK	1	0	23.23	23.15	23.19	
15	QPSK	1	37	23.19	23.14	23.18	24.5
15	QPSK	1	74	23.09	23.01	23.00	
15	QPSK	36	0	22.15	22.16	22.21	
15	QPSK	36	20	22.14	22.18	22.19	23.5
15	QPSK	36	39	22.09	22.09	22.20	
15	QPSK	75	0	22.14	22.12	22.19	
15	16QAM	1	0	22.44	22.52	22.52	23.5
15	16QAM	1	37	22.45	22.44	22.46	
15	16QAM	1	74	22.24	22.28	22.39	
15	16QAM	36	0	21.26	21.20	21.18	22.5
15	16QAM	36	20	21.31	21.23	21.15	
15	16QAM	36	39	21.25	21.13	21.15	
15	16QAM	75	0	21.24	21.16	21.15	22.5
15	64QAM	1	0	21.41	21.34	21.44	
15	64QAM	1	37	21.44	21.41	21.42	
15	64QAM	1	74	21.29	21.24	21.28	21.5
15	64QAM	36	0	20.23	20.17	20.19	
15	64QAM	36	20	20.29	20.20	20.17	
15	64QAM	36	39	20.21	20.13	20.17	19.5
15	64QAM	75	0	20.26	20.16	20.16	
15	256QAM	1	0	18.37	18.42	18.40	
15	256QAM	1	37	18.47	18.60	18.62	19.5
15	256QAM	1	74	18.41	18.48	18.63	
15	256QAM	36	0	18.38	18.37	18.33	
15	256QAM	36	20	18.39	18.35	18.48	19.5



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15	256QAM	36	39	18.38	18.38	18.43	
15	256QAM	75	0	18.41	18.45	18.49	
Channel				132022	132322	132622	Tune-up limit (dBm)
Frequency (MHz)				1715	1745	1775	
10	QPSK	1	0	23.21	23.16	23.22	24.5
10	QPSK	1	25	23.16	23.14	23.14	
10	QPSK	1	49	23.06	22.99	23.01	
10	QPSK	25	0	22.19	22.21	22.23	23.5
10	QPSK	25	12	22.15	22.14	22.19	
10	QPSK	25	25	22.09	22.09	22.21	
10	QPSK	50	0	22.17	22.13	22.23	
10	16QAM	1	0	22.44	22.51	22.56	23.5
10	16QAM	1	25	22.45	22.46	22.45	
10	16QAM	1	49	22.24	22.31	22.39	
10	16QAM	25	0	21.25	21.17	21.19	22.5
10	16QAM	25	12	21.31	21.19	21.15	
10	16QAM	25	25	21.20	21.14	21.16	
10	16QAM	50	0	21.26	21.16	21.11	
10	64QAM	1	0	21.43	21.38	21.41	22.5
10	64QAM	1	25	21.47	21.45	21.47	
10	64QAM	1	49	21.30	21.25	21.25	
10	64QAM	25	0	20.24	20.17	20.18	21.5
10	64QAM	25	12	20.29	20.20	20.13	
10	64QAM	25	25	20.21	20.14	20.13	
10	64QAM	50	0	20.28	20.16	20.12	
10	256QAM	1	0	18.37	18.43	18.39	19.5
10	256QAM	1	25	18.49	18.60	18.59	
10	256QAM	1	49	18.45	18.46	18.62	
10	256QAM	25	0	18.36	18.36	18.32	19.5
10	256QAM	25	12	18.38	18.34	18.52	
10	256QAM	25	25	18.38	18.36	18.46	
10	256QAM	50	0	18.37	18.43	18.45	
Channel				131997	132322	132647	Tune-up limit (dBm)
Frequency (MHz)				1712.5	1745	1777.5	
5	QPSK	1	0	23.22	23.15	23.21	24.5
5	QPSK	1	12	23.21	23.14	23.14	
5	QPSK	1	24	23.06	22.99	23.01	
5	QPSK	12	0	22.15	22.16	22.25	23.5
5	QPSK	12	7	22.13	22.19	22.22	
5	QPSK	12	13	22.10	22.11	22.17	
5	QPSK	25	0	22.17	22.09	22.22	
5	16QAM	1	0	22.49	22.50	22.51	23.5
5	16QAM	1	12	22.45	22.49	22.47	
5	16QAM	1	24	22.28	22.29	22.39	
5	16QAM	12	0	21.22	21.20	21.22	22.5
5	16QAM	12	7	21.31	21.24	21.18	
5	16QAM	12	13	21.21	21.11	21.20	
5	16QAM	25	0	21.24	21.16	21.14	
5	64QAM	1	0	21.45	21.34	21.39	22.5
5	64QAM	1	12	21.47	21.41	21.42	
5	64QAM	1	24	21.28	21.23	21.26	
5	64QAM	12	0	20.24	20.18	20.17	21.5
5	64QAM	12	7	20.30	20.21	20.14	
5	64QAM	12	13	20.25	20.11	20.13	
5	64QAM	25	0	20.26	20.20	20.14	
5	256QAM	1	0	18.39	18.45	18.40	19.5
5	256QAM	1	12	18.48	18.63	18.61	
5	256QAM	1	24	18.41	18.47	18.63	
5	256QAM	12	0	18.36	18.35	18.32	19.5
5	256QAM	12	7	18.37	18.34	18.52	
5	256QAM	12	13	18.40	18.37	18.47	
5	256QAM	25	0	18.37	18.41	18.47	



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Channel				131987	132322	132657	Tune-up limit (dBm)
Frequency (MHz)				1711.5	1745	1778.5	
3	QPSK	1	0	23.18	23.16	23.24	24.5
3	QPSK	1	8	23.20	23.16	23.19	
3	QPSK	1	14	23.05	23.01	22.97	
3	QPSK	8	0	22.15	22.21	22.23	23.5
3	QPSK	8	4	22.16	22.16	22.20	
3	QPSK	8	7	22.10	22.08	22.18	
3	QPSK	15	0	22.14	22.11	22.19	23.5
3	16QAM	1	0	22.47	22.50	22.56	
3	16QAM	1	8	22.46	22.49	22.42	
3	16QAM	1	14	22.28	22.30	22.41	22.5
3	16QAM	8	0	21.21	21.15	21.20	
3	16QAM	8	4	21.30	21.22	21.17	
3	16QAM	8	7	21.24	21.11	21.19	22.5
3	16QAM	15	0	21.22	21.19	21.14	
3	64QAM	1	0	21.42	21.33	21.40	
3	64QAM	1	8	21.47	21.44	21.42	21.5
3	64QAM	1	14	21.30	21.22	21.27	
3	64QAM	8	0	20.21	20.18	20.20	
3	64QAM	8	4	20.32	20.20	20.17	19.5
3	64QAM	8	7	20.24	20.13	20.13	
3	64QAM	15	0	20.27	20.17	20.14	
3	256QAM	1	0	18.38	18.45	18.41	19.5
3	256QAM	1	8	18.51	18.62	18.59	
3	256QAM	1	14	18.44	18.51	18.66	
3	256QAM	8	0	18.38	18.39	18.32	19.5
3	256QAM	8	4	18.34	18.33	18.50	
3	256QAM	8	7	18.38	18.35	18.42	
3	256QAM	15	0	18.38	18.42	18.46	Tune-up limit (dBm)
Channel				131979	132322	132665	
Frequency (MHz)				1710.7	1745	1779.3	Tune-up limit (dBm)
1.4	QPSK	1	0	23.19	23.19	23.21	24.5
1.4	QPSK	1	3	23.17	23.12	23.14	
1.4	QPSK	1	5	23.07	23.02	22.97	
1.4	QPSK	3	0	23.20	23.14	23.21	23.5
1.4	QPSK	3	1	23.21	23.13	23.17	
1.4	QPSK	3	3	23.07	22.98	23.02	
1.4	QPSK	6	0	22.10	22.18	22.18	23.5
1.4	16QAM	1	0	22.12	22.12	22.15	
1.4	16QAM	1	3	22.07	22.04	22.13	
1.4	16QAM	1	5	22.10	22.07	22.14	22.5
1.4	16QAM	3	0	22.42	22.45	22.53	
1.4	16QAM	3	1	22.41	22.45	22.38	
1.4	16QAM	3	3	22.24	22.25	22.38	22.5
1.4	16QAM	6	0	21.17	21.12	21.17	
1.4	64QAM	1	0	21.27	21.18	21.13	
1.4	64QAM	1	3	21.19	21.06	21.14	21.5
1.4	64QAM	1	5	21.17	21.15	21.11	
1.4	64QAM	3	0	21.39	21.28	21.35	
1.4	64QAM	3	1	21.43	21.41	21.37	19.5
1.4	64QAM	3	3	21.26	21.19	21.24	
1.4	64QAM	6	0	20.17	20.14	20.15	
1.4	256QAM	1	0	18.35	18.40	18.36	19.5
1.4	256QAM	1	3	18.47	18.59	18.56	
1.4	256QAM	1	5	18.41	18.46	18.63	
1.4	256QAM	3	0	18.34	18.34	18.28	19.5
1.4	256QAM	3	1	18.29	18.28	18.45	
1.4	256QAM	3	3	18.33	18.30	18.38	
1.4	256QAM	6	0	18.33	18.38	18.41	19.5



<LTE Band 66_Ant MIMO2_Sensor OFF>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				132072	132322	132572	
Frequency (MHz)				1720	1745	1770	
20	QPSK	1	0	23.65	23.72	23.61	
20	QPSK	1	49	23.63	23.70	23.49	24.5
20	QPSK	1	99	23.54	23.66	23.40	
20	QPSK	50	0	22.72	22.81	22.55	
20	QPSK	50	24	22.58	22.75	22.43	23.5
20	QPSK	50	50	22.64	22.78	22.49	
20	QPSK	100	0	22.60	22.74	22.40	
20	16QAM	1	0	22.59	22.70	22.45	23.5
20	16QAM	1	49	22.62	22.74	22.50	
20	16QAM	1	99	22.87	22.97	22.65	
20	16QAM	50	0	21.73	21.80	21.49	22.5
20	16QAM	50	24	21.71	21.78	21.49	
20	16QAM	50	50	21.65	21.82	21.51	
20	16QAM	100	0	21.77	21.87	21.54	22.5
20	64QAM	1	0	21.48	21.57	21.33	
20	64QAM	1	49	21.42	21.56	21.28	
20	64QAM	1	99	21.40	21.50	21.18	21.5
20	64QAM	50	0	20.78	20.85	20.58	
20	64QAM	50	24	20.68	20.80	20.55	
20	64QAM	50	50	20.82	20.89	20.65	19.5
20	64QAM	100	0	20.76	20.85	20.60	
20	256QAM	1	0	18.61	18.68	18.39	
20	256QAM	1	49	18.70	18.79	18.49	19.5
20	256QAM	1	99	18.42	18.58	18.26	
20	256QAM	50	0	18.67	18.84	18.57	
20	256QAM	50	24	18.70	18.79	18.48	19.5
20	256QAM	50	50	18.70	18.79	18.53	
20	256QAM	100	0	18.70	18.86	18.53	
Channel				132047	132322	132597	
Frequency (MHz)				1717.5	1745	1772.5	
15	QPSK	1	0	23.45	23.56	23.41	
15	QPSK	1	37	23.46	23.52	23.34	24.5
15	QPSK	1	74	23.43	23.51	23.21	
15	QPSK	36	0	22.62	22.71	22.36	
15	QPSK	36	20	22.43	22.56	22.27	23.5
15	QPSK	36	39	22.47	22.66	22.29	
15	QPSK	75	0	22.50	22.58	22.30	
15	16QAM	1	0	22.43	22.57	22.27	23.5
15	16QAM	1	37	22.43	22.57	22.35	
15	16QAM	1	74	22.71	22.85	22.46	
15	16QAM	36	0	21.59	21.63	21.38	22.5
15	16QAM	36	20	21.54	21.64	21.36	
15	16QAM	36	39	21.52	21.64	21.32	
15	16QAM	75	0	21.67	21.67	21.40	22.5
15	64QAM	1	0	21.32	21.44	21.15	
15	64QAM	1	37	21.29	21.41	21.13	
15	64QAM	1	74	21.28	21.31	21.06	21.5
15	64QAM	36	0	20.61	20.74	20.47	
15	64QAM	36	20	20.52	20.70	20.39	
15	64QAM	36	39	20.64	20.72	20.54	19.5
15	64QAM	75	0	20.56	20.68	20.44	
15	256QAM	1	0	18.50	18.54	18.22	
15	256QAM	1	37	18.54	18.59	18.30	19.5
15	256QAM	1	74	18.24	18.48	18.08	
15	256QAM	36	0	18.49	18.72	18.44	
15	256QAM	36	20	18.59	18.60	18.28	19.5



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15	256QAM	36	39	18.52	18.60	18.33	
15	256QAM	75	0	18.59	18.71	18.37	
Channel				132022	132322	132622	Tune-up limit (dBm)
Frequency (MHz)				1715	1745	1775	
10	QPSK	1	0	23.53	23.62	23.43	24.5
10	QPSK	1	25	23.52	23.58	23.31	
10	QPSK	1	49	23.34	23.54	23.22	
10	QPSK	25	0	22.54	22.70	22.37	23.5
10	QPSK	25	12	22.45	22.57	22.29	
10	QPSK	25	25	22.47	22.62	22.30	
10	QPSK	50	0	22.46	22.61	22.28	
10	16QAM	1	0	22.44	22.54	22.27	
10	16QAM	1	25	22.44	22.63	22.31	23.5
10	16QAM	1	49	22.70	22.87	22.49	
10	16QAM	25	0	21.62	21.70	21.38	
10	16QAM	25	12	21.52	21.61	21.30	22.5
10	16QAM	25	25	21.51	21.68	21.37	
10	16QAM	50	0	21.58	21.73	21.34	
10	64QAM	1	0	21.32	21.38	21.18	22.5
10	64QAM	1	25	21.32	21.37	21.16	
10	64QAM	1	49	21.20	21.39	21.00	
10	64QAM	25	0	20.68	20.69	20.46	21.5
10	64QAM	25	12	20.52	20.65	20.38	
10	64QAM	25	25	20.71	20.69	20.52	
10	64QAM	50	0	20.66	20.72	20.45	
10	256QAM	1	0	18.43	18.58	18.27	19.5
10	256QAM	1	25	18.57	18.61	18.30	
10	256QAM	1	49	18.22	18.43	18.15	
10	256QAM	25	0	18.52	18.65	18.47	19.5
10	256QAM	25	12	18.50	18.64	18.33	
10	256QAM	25	25	18.57	18.64	18.35	
10	256QAM	50	0	18.55	18.72	18.36	
Channel				131997	132322	132647	Tune-up limit (dBm)
Frequency (MHz)				1712.5	1745	1777.5	
5	QPSK	1	0	23.55	23.54	23.43	24.5
5	QPSK	1	12	23.53	23.57	23.29	
5	QPSK	1	24	23.40	23.52	23.29	
5	QPSK	12	0	22.52	22.67	22.38	23.5
5	QPSK	12	7	22.41	22.61	22.23	
5	QPSK	12	13	22.52	22.66	22.38	
5	QPSK	25	0	22.45	22.61	22.30	
5	16QAM	1	0	22.43	22.56	22.35	23.5
5	16QAM	1	12	22.52	22.60	22.36	
5	16QAM	1	24	22.69	22.86	22.54	
5	16QAM	12	0	21.53	21.67	21.38	22.5
5	16QAM	12	7	21.55	21.68	21.29	
5	16QAM	12	13	21.45	21.70	21.34	
5	16QAM	25	0	21.62	21.74	21.41	
5	64QAM	1	0	21.37	21.42	21.14	22.5
5	64QAM	1	12	21.22	21.40	21.17	
5	64QAM	1	24	21.24	21.30	21.08	
5	64QAM	12	0	20.59	20.74	20.46	21.5
5	64QAM	12	7	20.53	20.63	20.40	
5	64QAM	12	13	20.71	20.71	20.49	
5	64QAM	25	0	20.66	20.70	20.45	
5	256QAM	1	0	18.48	18.50	18.25	19.5
5	256QAM	1	12	18.53	18.68	18.38	
5	256QAM	1	24	18.32	18.40	18.13	
5	256QAM	12	0	18.55	18.64	18.47	19.5
5	256QAM	12	7	18.50	18.61	18.28	
5	256QAM	12	13	18.51	18.67	18.42	
5	256QAM	25	0	18.52	18.70	18.43	



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Channel				131987	132322	132657	Tune-up limit (dBm)
Frequency (MHz)				1711.5	1745	1778.5	
3	QPSK	1	0	23.55	23.58	23.41	24.5
3	QPSK	1	8	23.44	23.55	23.33	
3	QPSK	1	14	23.34	23.46	23.21	
3	QPSK	8	0	22.61	22.67	22.44	23.5
3	QPSK	8	4	22.47	22.63	22.30	
3	QPSK	8	7	22.45	22.68	22.32	
3	QPSK	15	0	22.49	22.63	22.28	
3	16QAM	1	0	22.39	22.50	22.30	23.5
3	16QAM	1	8	22.48	22.60	22.40	
3	16QAM	1	14	22.68	22.85	22.53	
3	16QAM	8	0	21.53	21.61	21.30	22.5
3	16QAM	8	4	21.60	21.62	21.37	
3	16QAM	8	7	21.48	21.71	21.35	
3	16QAM	15	0	21.63	21.72	21.34	
3	64QAM	1	0	21.36	21.39	21.13	22.5
3	64QAM	1	8	21.22	21.42	21.16	
3	64QAM	1	14	21.21	21.32	21.07	
3	64QAM	8	0	20.61	20.73	20.39	21.5
3	64QAM	8	4	20.54	20.63	20.39	
3	64QAM	8	7	20.64	20.70	20.55	
3	64QAM	15	0	20.62	20.65	20.48	
3	256QAM	1	0	18.51	18.57	18.24	19.5
3	256QAM	1	8	18.55	18.67	18.38	
3	256QAM	1	14	18.22	18.47	18.06	
3	256QAM	8	0	18.55	18.74	18.38	19.5
3	256QAM	8	4	18.60	18.68	18.33	
3	256QAM	8	7	18.60	18.60	18.34	
3	256QAM	15	0	18.58	18.72	18.38	
Channel				131979	132322	132665	Tune-up limit (dBm)
Frequency (MHz)				1710.7	1745	1779.3	
1.4	QPSK	1	0	23.54	23.49	23.32	24.5
1.4	QPSK	1	3	23.42	23.47	23.28	
1.4	QPSK	1	5	23.25	23.38	23.13	
1.4	QPSK	3	0	23.50	23.48	23.40	
1.4	QPSK	3	1	23.36	23.48	23.30	
1.4	QPSK	3	3	23.28	23.36	23.17	
1.4	QPSK	6	0	22.45	22.48	22.27	23.5
1.4	16QAM	1	0	22.33	22.48	22.11	23.5
1.4	16QAM	1	3	22.30	22.55	22.13	
1.4	16QAM	1	5	22.31	22.49	22.08	
1.4	16QAM	3	0	22.19	22.31	22.12	
1.4	16QAM	3	1	22.35	22.49	22.22	
1.4	16QAM	3	3	22.56	22.70	22.39	22.5
1.4	16QAM	6	0	21.35	21.43	21.20	
1.4	64QAM	1	0	21.41	21.46	21.27	22.5
1.4	64QAM	1	3	21.31	21.52	21.17	
1.4	64QAM	1	5	21.47	21.58	21.17	
1.4	64QAM	3	0	21.18	21.26	20.95	
1.4	64QAM	3	1	21.08	21.29	21.06	
1.4	64QAM	3	3	21.05	21.19	20.97	
1.4	64QAM	6	0	20.35	20.43	20.20	21.5
1.4	256QAM	1	0	18.31	18.43	18.14	19.5
1.4	256QAM	1	3	18.40	18.49	18.28	
1.4	256QAM	1	5	18.04	18.33	17.95	
1.4	256QAM	3	0	18.36	18.59	18.21	
1.4	256QAM	3	1	18.41	18.53	18.14	
1.4	256QAM	3	3	18.50	18.47	18.21	19.5
1.4	256QAM	6	0	18.38	18.52	18.20	



<LTE Band 70_Ant MIMO2_Sensor OFF>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				133047	133047	133047	
Frequency (MHz)				1702.5	1702.5	1702.5	
15	QPSK	1	0		23.01		24.5
15	QPSK	1	37		22.92		
15	QPSK	1	74		22.85		
15	QPSK	36	0		21.99		23.5
15	QPSK	36	20		21.88		
15	QPSK	36	39		21.92		
15	QPSK	75	0		21.89		23.5
15	16QAM	1	0		22.04		
15	16QAM	1	37		21.85		
15	16QAM	1	74		21.87		22.5
15	16QAM	36	0		21.01		
15	16QAM	36	20		20.98		
15	16QAM	36	39		20.96		22.5
15	16QAM	75	0		20.93		
15	64QAM	1	0		20.81		
15	64QAM	1	37		20.75		21.5
15	64QAM	1	74		20.63		
15	64QAM	36	0		19.98		
15	64QAM	36	20		19.90		19.5
15	64QAM	36	39		20.00		
15	64QAM	75	0		20.05		
15	256QAM	1	0		17.78		19.5
15	256QAM	1	37		17.99		
15	256QAM	1	74		17.73		
15	256QAM	36	0		17.98		19.5
15	256QAM	36	20		17.93		
15	256QAM	36	39		17.91		
15	256QAM	75	0		17.99		
Channel				133022	133047	133072	Tune-up limit (dBm)
Frequency (MHz)				1700	1702.5	1705	
10	QPSK	1	0	22.73	22.73	22.75	24.5
10	QPSK	1	25	22.69	22.68	22.64	
10	QPSK	1	49	22.56	22.57	22.59	
10	QPSK	25	0	21.77	21.72	21.79	23.5
10	QPSK	25	12	21.58	21.68	21.58	
10	QPSK	25	25	21.68	21.70	21.69	
10	QPSK	50	0	21.68	21.65	21.60	23.5
10	16QAM	1	0	21.82	21.83	21.84	
10	16QAM	1	25	21.57	21.56	21.59	
10	16QAM	1	49	21.67	21.63	21.62	22.5
10	16QAM	25	0	20.77	20.73	20.76	
10	16QAM	25	12	20.77	20.69	20.76	
10	16QAM	25	25	20.70	20.74	20.67	22.5
10	16QAM	50	0	20.69	20.73	20.68	
10	64QAM	1	0	20.56	20.55	20.53	
10	64QAM	1	25	20.52	20.49	20.52	21.5
10	64QAM	1	49	20.38	20.38	20.39	
10	64QAM	25	0	19.74	19.71	19.68	
10	64QAM	25	12	19.65	19.63	19.68	19.5
10	64QAM	25	25	19.76	19.75	19.76	
10	64QAM	50	0	19.81	19.77	19.81	
10	256QAM	1	0	17.48	17.58	17.52	19.5
10	256QAM	1	25	17.75	17.78	17.79	
10	256QAM	1	49	17.46	17.51	17.43	
10	256QAM	25	0	17.72	17.70	17.68	19.5
10	256QAM	25	12	17.73	17.64	17.72	



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10	256QAM	25	25	17.71	17.71	17.69	
10	256QAM	50	0	17.75	17.71	17.75	
Channel				132997	133047	133097	Tune-up limit (dBm)
Frequency (MHz)				1697.5	1702.5	1707.5	
5	QPSK	1	0	22.79	22.74	22.71	24.5
5	QPSK	1	12	22.68	22.68	22.66	
5	QPSK	1	24	22.59	22.56	22.55	
5	QPSK	12	0	21.71	21.78	21.77	23.5
5	QPSK	12	7	21.58	21.61	21.68	
5	QPSK	12	13	21.70	21.70	21.71	
5	QPSK	25	0	21.61	21.69	21.64	
5	16QAM	1	0	21.84	21.82	21.74	23.5
5	16QAM	1	12	21.55	21.57	21.57	
5	16QAM	1	24	21.61	21.66	21.67	
5	16QAM	12	0	20.79	20.76	20.78	22.5
5	16QAM	12	7	20.74	20.69	20.78	
5	16QAM	12	13	20.67	20.75	20.66	
5	16QAM	25	0	20.66	20.71	20.68	
5	64QAM	1	0	20.51	20.59	20.59	22.5
5	64QAM	1	12	20.45	20.46	20.47	
5	64QAM	1	24	20.36	20.37	20.38	
5	64QAM	12	0	19.68	19.74	19.72	21.5
5	64QAM	12	7	19.61	19.68	19.64	
5	64QAM	12	13	19.75	19.72	19.70	
5	64QAM	25	0	19.76	19.77	19.78	
5	256QAM	1	0	17.51	17.49	17.58	19.5
5	256QAM	1	12	17.69	17.77	17.72	
5	256QAM	1	24	17.46	17.51	17.49	
5	256QAM	12	0	17.70	17.73	17.77	19.5
5	256QAM	12	7	17.63	17.71	17.73	
5	256QAM	12	13	17.65	17.71	17.65	
5	256QAM	25	0	17.74	17.71	17.79	

<TDD LTE SAR Measurement>

TDD LTE configuration setup for SAR measurement

SAR was tested with a fixed periodic duty factor according to the highest transmission duty factor implemented for the device and supported by 3GPP.

- 3GPP TS 36.211 section 4.2 for Type 2 Frame Structure and Table 4.2-2 for uplink-downlink configurations
- “special subframe S” contains both uplink and downlink transmissions, it has been taken into consideration to determine the transmission duty factor according to the worst case uplink and downlink cyclic prefix requirements for UpPTS
- Establishing connections with base station simulators ensure a consistent means for testing SAR and recommended for evaluating SAR. The Base station simulator was used for LTE output power measurements and SAR testing.

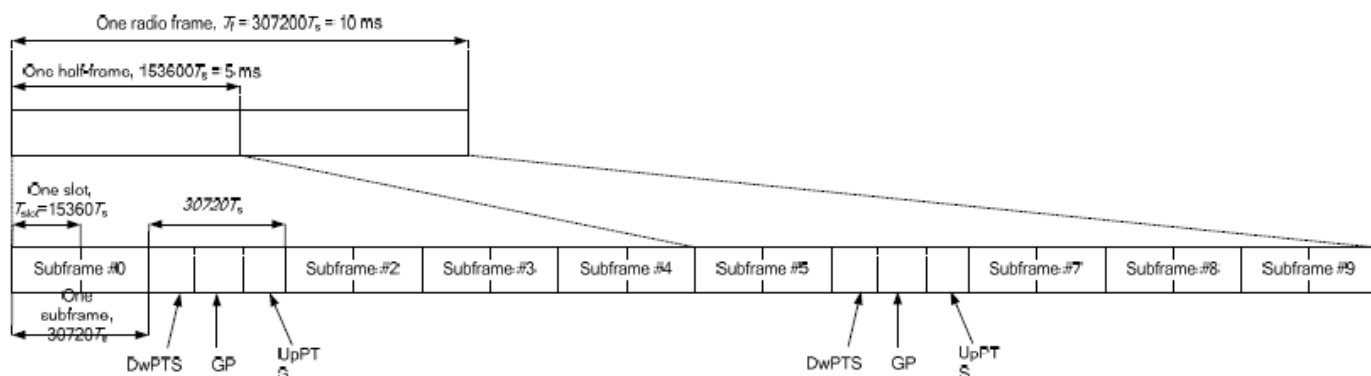


Figure 4.2-1: Frame structure type 2 (for 5 ms switch-point periodicity).

Table 4.2-2: Uplink-downlink configurations.

Uplink-downlink configuration	Downlink-to-Uplink Switch-point periodicity	Subframe number									
		0	1	2	3	4	5	6	7	8	9
0	5 ms	D	S	U	U	U	D	S	U	U	U
1	5 ms	D	S	U	U	D	D	S	U	U	D
2	5 ms	D	S	U	D	D	D	S	U	D	D
3	10 ms	D	S	U	U	U	D	D	D	D	D
4	10 ms	D	S	U	U	D	D	D	D	D	D
5	10 ms	D	S	U	D	D	D	D	D	D	D
6	5 ms	D	S	U	U	U	D	S	U	U	D

Table 4.2-1: Configuration of special subframe (lengths of DwPTS/GP/UpPTS).

Special subframe configuration	Normal cyclic prefix in downlink			Extended cyclic prefix in downlink		
	DwPTS	UpPTS		DwPTS	UpPTS	
		Normal cyclic prefix in uplink	Extended cyclic prefix in uplink		Normal cyclic prefix in uplink	Extended cyclic prefix in uplink
0	$6592 \cdot T_s$	$2192 \cdot T_s$	$2560 \cdot T_s$	$7680 \cdot T_s$	$2192 \cdot T_s$	$2560 \cdot T_s$
1	$19760 \cdot T_s$			$20480 \cdot T_s$		
2	$21952 \cdot T_s$			$23040 \cdot T_s$		
3	$24144 \cdot T_s$			$25600 \cdot T_s$		
4	$26336 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$	$7680 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$
5	$6592 \cdot T_s$			$20480 \cdot T_s$		
6	$19760 \cdot T_s$			$23040 \cdot T_s$		
7	$21952 \cdot T_s$			$12800 \cdot T_s$	-	-
8	$24144 \cdot T_s$			-		
9	$13168 \cdot T_s$			-		

Special subframe (30720·T _s): Normal cyclic prefix in downlink (UpPTS)			
	Special subframe configuration	Normal cyclic prefix in uplink	Extended cyclic prefix in uplink
Uplink duty factor in one special subframe	0~4	7.13%	8.33%
	5~9	14.3%	16.7%

Special subframe(30720·T _s): Extended cyclic prefix in downlink (UpPTS)			
	Special subframe configuration	Normal cyclic prefix in uplink	Extended cyclic prefix in uplink
Uplink duty factor in one special subframe	0~3	7.13%	8.33%
	4~7	14.3%	16.7%

The highest duty factor is resulted from:

- i. Uplink-downlink configuration: 0. In a half-frame consisted of 5 subframes, uplink operation is in 3 uplink subframes and 1 special subframe.
- ii. special subframe configuration: 5-9 for normal cyclic prefix in downlink, 4-7 for extended cyclic prefix in downlink
- iii. for special subframe with extended cyclic prefix in uplink, the total uplink duty factor in one half-frame is: $(3+0.167)/5 = 63.3\%$
- iv. for special subframe with normal cyclic prefix in uplink, the total uplink duty factor in one half-frame is: $(3+0.143)/5 = 62.9\%$
- v. For TDD LTE SAR measurement, the duty cycle 1:1.59 (62.9 %) was used perform testing and considering the theoretical duty cycle of 63.3% for extended cyclic prefix in the uplink, and the theoretical duty cycle of 62.9% for normal cyclic prefix in uplink, a scaling factor of extended cyclic prefix $63.3\%/62.9\% = 1.006$ is applied to scale-up the measured SAR result. The scaled TDD LTE SAR = measured SAR (W/kg)* Tune-up Scaling Factor* scaling factor for extended cyclic prefix.
- vi. The device supports Power Class 3 uplink-downlink configurations 0 and 6, and Power Class 2 uplink-downlink configurations 1 to 5 operations for LTE Band 41.
- vii. The highest available duty cycle for Power Class 2 operation is 43.3% using UL-DL configuration 1, for Power Class 3 operation is 63.3% using UL-DL configuration 0. Per FCC Guidance, all SAR tests were performed using Power Class 3. SAR with Power Class 2 at the available duty factor was additionally performed for the Power Class 3 configuration with the highest SAR among all exposure condition.



<LTE Band 38_Ant Main_Sensor OFF>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				37850	38000	38150	
Frequency (MHz)				2580	2595	2610	
20	QPSK	1	0	23.00	22.89	22.86	24.5
20	QPSK	1	49	22.94	22.82	22.79	
20	QPSK	1	99	22.91	22.81	22.77	
20	QPSK	50	0	22.00	21.92	21.84	23.5
20	QPSK	50	24	21.95	21.90	21.81	
20	QPSK	50	50	21.87	21.89	21.80	
20	QPSK	100	0	21.96	21.87	21.77	23.5
20	16QAM	1	0	21.98	21.80	21.92	
20	16QAM	1	49	21.97	21.93	21.92	
20	16QAM	1	99	21.94	21.94	21.85	22.5
20	16QAM	50	0	21.00	20.92	20.79	
20	16QAM	50	24	21.01	20.93	20.83	
20	16QAM	50	50	20.91	20.92	20.89	22.5
20	16QAM	100	0	20.97	20.91	20.79	
20	64QAM	1	0	20.93	20.81	20.73	22.5
20	64QAM	1	49	20.93	20.87	20.88	
20	64QAM	1	99	20.95	20.94	20.84	
20	64QAM	50	0	20.04	19.93	19.83	21.5
20	64QAM	50	24	20.07	19.93	19.83	
20	64QAM	50	50	19.92	19.91	19.88	
20	64QAM	100	0	19.99	19.90	19.79	19.5
20	256QAM	1	0	18.16	18.09	17.91	
20	256QAM	1	49	18.11	17.99	17.84	
20	256QAM	1	99	17.83	17.54	17.55	19.5
20	256QAM	50	0	18.08	17.91	17.69	
20	256QAM	50	24	18.05	17.81	17.62	
20	256QAM	50	50	17.81	17.67	17.51	19.5
20	256QAM	100	0	17.99	17.72	17.59	
Channel				37825	38000	38175	Tune-up limit (dBm)
Frequency (MHz)				2577.5	2595	2612.5	
15	QPSK	1	0	22.90	22.69	22.72	
15	QPSK	1	37	22.76	22.69	22.67	24.5
15	QPSK	1	74	22.71	22.70	22.66	
15	QPSK	36	0	21.89	21.77	21.67	23.5
15	QPSK	36	20	21.76	21.78	21.68	
15	QPSK	36	39	21.77	21.73	21.60	
15	QPSK	75	0	21.76	21.73	21.58	23.5
15	16QAM	1	0	21.83	21.68	21.81	
15	16QAM	1	37	21.83	21.82	21.78	
15	16QAM	1	74	21.84	21.81	21.69	22.5
15	16QAM	36	0	20.82	20.73	20.68	
15	16QAM	36	20	20.89	20.74	20.67	
15	16QAM	36	39	20.75	20.82	20.70	22.5
15	16QAM	75	0	20.78	20.75	20.69	
15	64QAM	1	0	20.77	20.68	20.59	
15	64QAM	1	37	20.81	20.72	20.74	22.5
15	64QAM	1	74	20.82	20.75	20.70	
15	64QAM	36	0	19.89	19.74	19.66	21.5
15	64QAM	36	20	19.93	19.73	19.71	
15	64QAM	36	39	19.82	19.78	19.75	
15	64QAM	75	0	19.86	19.79	19.60	19.5
15	256QAM	1	0	18.05	17.90	17.71	
15	256QAM	1	37	17.98	17.83	17.74	
15	256QAM	1	74	17.66	17.54	17.55	19.5
15	256QAM	36	0	17.92	17.81	17.51	
15	256QAM	36	20	17.89	17.63	17.52	
15	256QAM	36	39	17.66	17.55	17.51	



FCC SAR TEST REPORT

Report No. : FA4D0509

15	256QAM	75	0	17.83	17.58	17.53	Tune-up limit (dBm)
Channel				37800	38000	38200	
Frequency (MHz)				2575	2595	2615	
10	QPSK	1	0	22.82	22.69	22.71	24.5
10	QPSK	1	25	22.76	22.63	22.64	
10	QPSK	1	49	22.81	22.67	22.65	
10	QPSK	25	0	21.88	21.77	21.65	23.5
10	QPSK	25	12	21.75	21.73	21.65	
10	QPSK	25	25	21.77	21.77	21.66	
10	QPSK	50	0	21.80	21.68	21.60	23.5
10	16QAM	1	0	21.85	21.66	21.72	
10	16QAM	1	25	21.79	21.73	21.75	
10	16QAM	1	49	21.82	21.77	21.70	22.5
10	16QAM	25	0	20.83	20.77	20.59	
10	16QAM	25	12	20.89	20.82	20.64	
10	16QAM	25	25	20.79	20.81	20.79	22.5
10	16QAM	50	0	20.82	20.71	20.65	
10	64QAM	1	0	20.83	20.67	20.61	
10	64QAM	1	25	20.81	20.71	20.74	22.5
10	64QAM	1	49	20.81	20.80	20.69	
10	64QAM	25	0	19.88	19.75	19.68	
10	64QAM	25	12	19.97	19.80	19.71	21.5
10	64QAM	25	25	19.75	19.75	19.75	
10	64QAM	50	0	19.80	19.80	19.64	
10	256QAM	1	0	18.06	17.98	17.80	19.5
10	256QAM	1	25	17.92	17.79	17.66	
10	256QAM	1	49	17.69	17.55	17.52	
10	256QAM	25	0	17.94	17.73	17.50	19.5
10	256QAM	25	12	17.87	17.69	17.51	
10	256QAM	25	25	17.63	17.50	17.51	
10	256QAM	50	0	17.86	17.56	17.50	Tune-up limit (dBm)
Channel				37775	38000	38225	
Frequency (MHz)				2572.5	2595	2617.5	
5	QPSK	1	0	22.80	22.73	22.73	24.5
5	QPSK	1	12	22.84	22.71	22.62	
5	QPSK	1	24	22.72	22.66	22.61	
5	QPSK	12	0	21.86	21.82	21.73	23.5
5	QPSK	12	7	21.75	21.72	21.62	
5	QPSK	12	13	21.75	21.69	21.70	
5	QPSK	25	0	21.80	21.71	21.66	23.5
5	16QAM	1	0	21.78	21.64	21.77	
5	16QAM	1	12	21.79	21.75	21.80	
5	16QAM	1	24	21.79	21.76	21.70	22.5
5	16QAM	12	0	20.86	20.82	20.60	
5	16QAM	12	7	20.84	20.73	20.71	
5	16QAM	12	13	20.75	20.78	20.74	22.5
5	16QAM	25	0	20.87	20.71	20.59	
5	64QAM	1	0	20.74	20.63	20.53	
5	64QAM	1	12	20.82	20.77	20.71	22.5
5	64QAM	1	24	20.80	20.79	20.69	
5	64QAM	12	0	19.86	19.80	19.68	
5	64QAM	12	7	19.88	19.83	19.72	21.5
5	64QAM	12	13	19.79	19.73	19.76	
5	64QAM	25	0	19.85	19.70	19.69	
5	256QAM	1	0	18.05	17.96	17.75	19.5
5	256QAM	1	12	17.97	17.79	17.72	
5	256QAM	1	24	17.63	17.53	17.55	
5	256QAM	12	0	17.96	17.77	17.54	19.5
5	256QAM	12	7	17.87	17.69	17.52	
5	256QAM	12	13	17.68	17.50	17.51	
5	256QAM	25	0	17.87	17.57	17.51	



<LTE Band 38_Ant MIMO2_Sensor OFF>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				37850	38000	38150	
Frequency (MHz)				2580	2595	2610	
20	QPSK	1	0	23.25	23.12	23.09	
20	QPSK	1	49	23.23	23.11	23.04	24.5
20	QPSK	1	99	23.10	22.90	22.92	
20	QPSK	50	0	22.36	22.26	22.21	
20	QPSK	50	24	22.34	22.18	22.16	23.5
20	QPSK	50	50	22.17	22.06	21.98	
20	QPSK	100	0	22.30	22.16	22.14	
20	16QAM	1	0	22.52	22.40	22.34	23.5
20	16QAM	1	49	22.37	22.20	22.17	
20	16QAM	1	99	22.30	22.20	22.11	
20	16QAM	50	0	21.43	21.26	21.32	22.5
20	16QAM	50	24	21.38	21.23	21.22	
20	16QAM	50	50	21.22	21.06	21.07	
20	16QAM	100	0	21.33	21.22	21.16	22.5
20	64QAM	1	0	21.24	21.12	21.08	
20	64QAM	1	49	21.13	21.03	21.02	
20	64QAM	1	99	20.96	20.76	20.84	21.5
20	64QAM	50	0	20.41	20.21	20.25	
20	64QAM	50	24	20.38	20.25	20.19	
20	64QAM	50	50	20.26	20.14	20.16	19.5
20	64QAM	100	0	20.33	20.19	20.18	
20	256QAM	1	0	18.34	18.18	18.21	
20	256QAM	1	49	18.29	18.11	18.18	19.5
20	256QAM	1	99	17.90	17.75	17.71	
20	256QAM	50	0	18.41	18.25	18.22	
20	256QAM	50	24	18.37	18.25	18.22	19.5
20	256QAM	50	50	18.19	18.07	18.03	
20	256QAM	100	0	18.33	18.15	18.17	
Channel				37825	38000	38175	Tune-up limit (dBm)
Frequency (MHz)				2577.5	2595	2612.5	
15	QPSK	1	0	23.05	22.97	22.92	
15	QPSK	1	37	23.05	22.98	22.92	24.5
15	QPSK	1	74	22.95	22.77	22.82	
15	QPSK	36	0	22.26	22.16	22.11	23.5
15	QPSK	36	20	22.16	22.05	22.02	
15	QPSK	36	39	22.02	21.96	21.84	
15	QPSK	75	0	22.14	22.01	21.94	23.5
15	16QAM	1	0	22.37	22.26	22.24	
15	16QAM	1	37	22.19	22.07	22.05	
15	16QAM	1	74	22.20	22.07	21.99	22.5
15	16QAM	36	0	21.25	21.07	21.18	
15	16QAM	36	20	21.22	21.13	21.06	
15	16QAM	36	39	21.08	20.88	20.97	22.5
15	16QAM	75	0	21.20	21.05	20.98	
15	64QAM	1	0	21.11	20.93	20.90	
15	64QAM	1	37	21.00	20.92	20.90	21.5
15	64QAM	1	74	20.79	20.61	20.68	
15	64QAM	36	0	20.21	20.02	20.08	
15	64QAM	36	20	20.23	20.07	20.00	19.5
15	64QAM	36	39	20.16	19.97	20.04	
15	64QAM	75	0	20.21	20.08	20.01	
15	256QAM	1	0	18.18	17.99	18.02	19.5
15	256QAM	1	37	18.14	18.00	18.05	
15	256QAM	1	74	17.70	17.59	17.53	
15	256QAM	36	0	18.31	18.11	18.04	19.5
15	256QAM	36	20	18.20	18.14	18.05	
15	256QAM	36	39	18.06	17.89	17.91	



FCC SAR TEST REPORT

Report No. : FA4D0509

15	256QAM	75	0	18.22	17.98	17.97	Tune-up limit (dBm)
Channel				37800	38000	38200	
Frequency (MHz)				2575	2595	2615	
10	QPSK	1	0	23.09	22.93	22.91	24.5
10	QPSK	1	25	23.12	22.98	22.86	
10	QPSK	1	49	22.90	22.78	22.76	
10	QPSK	25	0	22.26	22.07	22.03	23.5
10	QPSK	25	12	22.21	22.04	21.99	
10	QPSK	25	25	21.97	21.90	21.82	
10	QPSK	50	0	22.16	21.96	22.00	23.5
10	16QAM	1	0	22.36	22.24	22.15	
10	16QAM	1	25	22.27	22.10	22.04	
10	16QAM	1	49	22.11	22.08	21.93	22.5
10	16QAM	25	0	21.27	21.11	21.20	
10	16QAM	25	12	21.26	21.09	21.03	
10	16QAM	25	25	21.08	20.88	20.92	22.5
10	16QAM	50	0	21.17	21.08	20.99	
10	64QAM	1	0	21.07	20.99	20.96	
10	64QAM	1	25	21.03	20.91	20.86	22.5
10	64QAM	1	49	20.80	20.61	20.74	
10	64QAM	25	0	20.31	20.02	20.11	21.5
10	64QAM	25	12	20.23	20.06	20.04	
10	64QAM	25	25	20.09	20.00	20.00	
10	64QAM	50	0	20.20	20.03	20.08	19.5
10	256QAM	1	0	18.14	18.00	18.07	
10	256QAM	1	25	18.17	17.96	18.05	
10	256QAM	1	49	17.79	17.57	17.53	19.5
10	256QAM	25	0	18.25	18.14	18.05	
10	256QAM	25	12	18.22	18.13	18.10	
10	256QAM	25	25	18.09	17.89	17.91	19.5
10	256QAM	50	0	18.17	17.96	17.97	
Channel				37775	38000	38225	Tune-up limit (dBm)
Frequency (MHz)				2572.5	2595	2617.5	
5	QPSK	1	0	23.08	22.95	22.90	24.5
5	QPSK	1	12	23.07	22.93	22.94	
5	QPSK	1	24	23.00	22.73	22.80	
5	QPSK	12	0	22.26	22.12	22.10	23.5
5	QPSK	12	7	22.19	22.03	22.00	
5	QPSK	12	13	22.06	21.86	21.81	
5	QPSK	25	0	22.17	22.00	21.96	23.5
5	16QAM	1	0	22.36	22.24	22.17	
5	16QAM	1	12	22.24	22.10	22.05	
5	16QAM	1	24	22.19	22.09	21.92	22.5
5	16QAM	12	0	21.25	21.12	21.12	
5	16QAM	12	7	21.19	21.09	21.04	
5	16QAM	12	13	21.12	20.86	20.97	22.5
5	16QAM	25	0	21.13	21.04	21.00	
5	64QAM	1	0	21.11	20.97	20.94	
5	64QAM	1	12	20.99	20.88	20.83	22.5
5	64QAM	1	24	20.85	20.65	20.74	
5	64QAM	12	0	20.30	20.02	20.12	21.5
5	64QAM	12	7	20.18	20.13	20.02	
5	64QAM	12	13	20.11	20.02	19.97	
5	64QAM	25	0	20.13	20.06	19.99	19.5
5	256QAM	1	0	18.17	18.01	18.06	
5	256QAM	1	12	18.17	17.96	18.06	
5	256QAM	1	24	17.72	17.64	17.57	19.5
5	256QAM	12	0	18.23	18.13	18.11	
5	256QAM	12	7	18.22	18.11	18.03	
5	256QAM	12	13	18.06	17.95	17.86	19.5
5	256QAM	25	0	18.13	18.00	18.00	



<LTE Band 41_Ant Main_Sensor OFF>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Low Middle Ch. / Freq.	Power Middle Ch. / Freq.	Power High Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				39750	40185	40620	41055	41490	
Frequency (MHz)				2506	2549.5	2593	2636.5	2680	
20	QPSK	1	0	23.46	23.13	23.27	23.16	23.17	25
20	QPSK	1	49	23.41	23.11	23.24	23.33	23.23	
20	QPSK	1	99	23.38	23.07	23.16	23.23	23.17	
20	QPSK	50	0	22.47	22.36	22.37	22.26	22.29	24
20	QPSK	50	24	22.46	22.27	22.30	22.24	22.29	
20	QPSK	50	50	22.38	22.19	22.27	22.21	22.16	
20	QPSK	100	0	22.44	22.51	22.32	22.29	22.25	24
20	16QAM	1	0	22.52	22.60	22.17	22.12	22.15	
20	16QAM	1	49	22.55	22.58	22.30	22.27	22.34	
20	16QAM	1	99	22.37	22.48	22.24	22.24	22.16	23
20	16QAM	50	0	21.47	21.60	21.36	21.21	21.22	
20	16QAM	50	24	21.49	21.61	21.39	21.36	21.32	
20	16QAM	50	50	21.36	21.54	21.38	21.37	21.30	23
20	16QAM	100	0	21.44	21.54	21.36	21.30	21.25	
20	64QAM	1	0	21.44	21.47	21.17	21.02	21.07	
20	64QAM	1	49	21.39	21.50	21.32	21.28	21.22	22
20	64QAM	1	99	21.36	21.48	21.22	21.26	21.12	
20	64QAM	50	0	20.46	20.60	20.36	20.23	20.21	
20	64QAM	50	24	20.49	20.64	20.38	20.39	20.36	20
20	64QAM	50	50	20.40	20.52	20.37	20.37	20.30	
20	64QAM	100	0	20.43	20.54	20.35	20.29	20.30	
20	256QAM	1	0	18.41	18.95	18.64	18.32	18.37	20
20	256QAM	1	49	18.72	18.97	18.73	18.52	18.40	
20	256QAM	1	99	18.55	18.77	18.51	18.37	18.24	
20	256QAM	50	0	18.49	18.90	18.69	18.30	18.25	20
20	256QAM	50	24	18.45	18.88	18.64	18.34	18.35	
20	256QAM	50	50	18.52	18.86	18.51	18.32	18.33	
20	256QAM	100	0	18.45	18.89	18.64	18.32	18.33	
Channel				39725	40173	40620	41068	41515	Tune-up limit (dBm)
Frequency (MHz)				2503.5	2548.3	2593	2637.8	2682.5	
15	QPSK	1	0	23.26	23.41	23.09	23.14	23.00	25.00
15	QPSK	1	37	23.24	23.36	23.14	23.14	23.04	
15	QPSK	1	74	23.22	23.31	23.11	23.06	23.02	
15	QPSK	36	0	22.37	22.41	22.18	23.20	22.09	24
15	QPSK	36	20	22.30	22.45	22.18	23.18	22.18	
15	QPSK	36	39	22.28	22.32	22.08	23.08	22.11	
15	QPSK	75	0	22.26	22.38	22.19	22.18	22.08	24
15	16QAM	1	0	22.40	22.50	22.02	22.02	22.11	
15	16QAM	1	37	22.41	22.39	22.17	22.13	22.16	
15	16QAM	1	74	22.23	22.31	22.04	22.08	22.04	23
15	16QAM	36	0	21.30	21.50	21.16	21.05	21.09	
15	16QAM	36	20	21.38	21.43	21.19	21.20	21.21	
15	16QAM	36	39	21.22	21.37	21.20	21.26	21.15	23
15	16QAM	75	0	21.32	21.40	21.20	21.14	21.14	
15	64QAM	1	0	21.28	21.32	21.05	21.09	21.05	
15	64QAM	1	37	21.24	21.40	21.20	21.09	21.08	22
15	64QAM	1	74	21.17	21.36	21.10	21.12	21.03	
15	64QAM	36	0	20.32	20.46	20.21	20.12	20.04	
15	64QAM	36	20	20.33	20.44	20.20	20.22	20.16	20
15	64QAM	36	39	20.29	20.37	20.19	20.20	20.13	
15	64QAM	75	0	20.30	20.44	20.17	20.09	20.20	
15	256QAM	1	0	18.22	18.77	18.44	18.17	18.19	20
15	256QAM	1	37	18.53	18.83	18.61	18.41	18.27	
15	256QAM	1	74	18.39	18.64	18.41	18.25	18.10	
15	256QAM	36	0	18.39	18.78	18.54	18.17	18.06	20
15	256QAM	36	20	18.34	18.70	18.53	18.15	18.15	
15	256QAM	36	39	18.33	18.67	18.34	18.12	18.21	
15	256QAM	75	0	18.26	18.78	18.46	18.22	18.22	



FCC SAR TEST REPORT

Report No. : FA4D0509

Channel				39700	40160	40620	41080	41540	Tune-up limit
Frequency (MHz)				2501	2547	2593	2639	2685	(dBm)
10	QPSK	1	0	23.33	23.43	23.17	23.12	23.11	25.00
10	QPSK	1	25	23.30	23.30	23.10	23.22	23.08	
10	QPSK	1	49	23.24	23.35	23.10	23.10	23.07	
10	QPSK	25	0	22.32	22.46	22.20	23.25	22.16	24
10	QPSK	25	12	22.31	22.46	22.17	23.17	22.09	
10	QPSK	25	25	22.23	22.33	22.14	23.11	22.01	
10	QPSK	50	0	22.27	22.40	22.13	22.17	22.12	24
10	16QAM	1	0	22.32	22.42	22.01	22.10	22.11	
10	16QAM	1	25	22.40	22.38	22.16	22.17	22.24	
10	16QAM	1	49	22.18	22.34	22.07	22.13	22.05	23
10	16QAM	25	0	21.29	21.42	21.18	21.05	21.09	
10	16QAM	25	12	21.37	21.41	21.20	21.19	21.22	
10	16QAM	25	25	21.18	21.40	21.26	21.27	21.13	23
10	16QAM	50	0	21.26	21.39	21.20	21.20	21.10	
10	64QAM	1	0	21.27	21.32	21.02	21.20	21.10	
10	64QAM	1	25	21.24	21.39	21.13	21.18	21.09	22
10	64QAM	1	49	21.25	21.34	21.07	21.10	21.03	
10	64QAM	25	0	20.36	20.49	20.21	20.06	20.04	
10	64QAM	25	12	20.34	20.45	20.20	20.22	20.26	20
10	64QAM	25	25	20.26	20.39	20.21	20.25	20.12	
10	64QAM	50	0	20.23	20.42	20.25	20.16	20.20	
10	256QAM	1	0	18.21	18.83	18.50	18.14	18.27	20
10	256QAM	1	25	18.54	18.81	18.61	18.40	18.28	
10	256QAM	1	49	18.45	18.67	18.40	18.25	18.06	
10	256QAM	25	0	18.37	18.77	18.54	18.11	18.11	20
10	256QAM	25	12	18.25	18.68	18.52	18.23	18.25	
10	256QAM	25	25	18.32	18.75	18.40	18.17	18.17	
10	256QAM	50	0	18.35	18.77	18.54	18.21	18.17	
Channel				39675	40148	40620	41093	41565	Tune-up limit
Frequency (MHz)				2498.5	2545.8	2593	2640.30	2687.5	(dBm)
5	QPSK	1	0	23.28	23.36	23.17	23.02	23.02	25.00
5	QPSK	1	12	23.24	23.35	23.09	23.23	23.10	
5	QPSK	1	24	23.24	23.34	23.06	23.11	23.00	
5	QPSK	12	0	22.27	22.40	22.22	23.20	22.13	24
5	QPSK	12	7	22.31	22.44	22.10	23.22	22.13	
5	QPSK	12	13	22.28	22.33	22.15	23.12	22.05	
5	QPSK	25	0	22.27	22.39	22.18	22.11	22.11	24
5	16QAM	1	0	22.32	22.43	22.05	22.01	22.01	
5	16QAM	1	12	22.44	22.43	22.12	22.17	22.22	
5	16QAM	1	24	22.23	22.34	22.04	22.04	22.01	23
5	16QAM	12	0	21.36	21.46	21.16	21.02	21.04	
5	16QAM	12	7	21.38	21.44	21.26	21.22	21.15	
5	16QAM	12	13	21.22	21.35	21.25	21.23	21.20	23
5	16QAM	25	0	21.30	21.35	21.19	21.11	21.12	
5	64QAM	1	0	21.25	21.29	21.01	21.10	21.11	
5	64QAM	1	12	21.25	21.31	21.15	21.15	21.10	22
5	64QAM	1	24	21.23	21.30	21.02	21.07	21.05	
5	64QAM	12	0	20.35	20.40	20.19	20.13	20.05	
5	64QAM	12	7	20.34	20.49	20.28	20.22	20.25	20
5	64QAM	12	13	20.24	20.39	20.24	20.17	20.14	
5	64QAM	25	0	20.29	20.44	20.24	20.09	20.14	
5	256QAM	1	0	18.23	18.75	18.50	18.17	18.26	20
5	256QAM	1	12	18.61	18.82	18.56	18.37	18.28	
5	256QAM	1	24	18.36	18.63	18.32	18.17	18.05	
5	256QAM	12	0	18.31	18.72	18.52	18.17	18.10	20
5	256QAM	12	7	18.29	18.71	18.52	18.24	18.19	
5	256QAM	12	13	18.41	18.76	18.32	18.12	18.18	
5	256QAM	25	0	18.32	18.78	18.53	18.20	18.16	



FCC SAR TEST REPORT

Report No. : FA4D0509

<LTE Band 41_Ant MIMO2_Sensor OFF>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Low Middle Ch. / Freq.	Power Middle Ch. / Freq.	Power High Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				39750	40185	40620	41055	41490	
Frequency (MHz)				2506	2549.5	2593	2636.5	2680	
20	QPSK	1	0	23.48	23.43	23.13	23.12	23.35	25
20	QPSK	1	49	23.45	23.41	23.03	23.10	23.11	
20	QPSK	1	99	23.42	23.40	23.01	23.09	23.07	
20	QPSK	50	0	22.55	22.54	22.36	22.11	22.15	24
20	QPSK	50	24	22.49	22.53	22.26	22.10	22.07	
20	QPSK	50	50	22.49	22.50	22.31	22.10	22.09	
20	QPSK	100	0	22.51	22.62	22.29	22.13	22.17	24
20	16QAM	1	0	22.59	22.62	22.35	22.13	22.12	
20	16QAM	1	49	22.51	22.60	22.26	22.17	22.12	
20	16QAM	1	99	22.56	22.58	22.29	22.09	22.15	23
20	16QAM	50	0	21.56	21.66	21.31	21.16	21.21	
20	16QAM	50	24	21.53	21.56	21.22	21.07	21.04	
20	16QAM	50	50	21.52	21.63	21.33	21.11	21.14	23
20	16QAM	100	0	21.50	21.62	21.29	21.14	21.20	
20	64QAM	1	0	21.51	21.58	21.24	21.12	21.16	
20	64QAM	1	49	21.43	21.53	21.19	21.05	21.01	22
20	64QAM	1	99	21.42	21.49	21.21	21.01	21.03	
20	64QAM	50	0	20.61	20.65	20.38	20.16	20.19	
20	64QAM	50	24	20.51	20.55	20.25	20.02	20.07	20
20	64QAM	50	50	20.51	20.62	20.34	20.16	20.13	
20	64QAM	100	0	20.49	20.58	20.31	20.06	20.11	
20	256QAM	1	0	18.51	18.62	18.35	18.16	18.11	20
20	256QAM	1	49	18.50	18.59	18.25	18.08	18.10	
20	256QAM	1	99	18.40	18.46	18.11	18.15	18.17	
20	256QAM	50	0	18.51	18.61	18.35	18.08	18.15	20
20	256QAM	50	24	18.46	18.58	18.22	18.11	18.16	
20	256QAM	50	50	18.62	18.66	18.34	18.23	18.17	
20	256QAM	100	0	18.61	18.63	18.34	18.18	18.17	
Channel				39725	40173	40620	41068	41515	Tune-up limit (dBm)
Frequency (MHz)				2503.5	2548.3	2593	2637.8	2682.5	
15	QPSK	1	0	23.30	23.34	23.09	23.02	23.19	25.00
15	QPSK	1	37	23.30	23.32	23.02	23.02	23.04	
15	QPSK	1	74	23.30	23.33	23.00	23.08	23.01	
15	QPSK	36	0	22.38	22.49	22.23	22.02	22.15	24
15	QPSK	36	20	22.39	22.38	22.13	22.10	22.09	
15	QPSK	36	39	22.32	22.46	22.16	22.09	22.08	
15	QPSK	75	0	22.34	22.51	22.18	22.06	22.09	24
15	16QAM	1	0	22.46	22.51	22.24	22.12	22.05	
15	16QAM	1	37	22.34	22.40	22.13	22.14	22.08	
15	16QAM	1	74	22.43	22.38	22.17	22.05	22.07	23
15	16QAM	36	0	21.39	21.50	21.14	21.09	21.11	
15	16QAM	36	20	21.33	21.42	21.07	21.07	21.02	
15	16QAM	36	39	21.32	21.47	21.18	21.03	21.10	23
15	16QAM	75	0	21.32	21.43	21.13	21.08	21.19	
15	64QAM	1	0	21.41	21.48	21.14	21.03	21.16	
15	64QAM	1	37	21.31	21.42	21.06	21.01	21.05	22
15	64QAM	1	74	21.31	21.31	21.04	21.03	21.02	
15	64QAM	36	0	20.43	20.51	20.24	20.16	20.09	
15	64QAM	36	20	20.36	20.39	20.12	20.02	20.07	20
15	64QAM	36	39	20.35	20.46	20.21	20.08	20.13	
15	64QAM	75	0	20.29	20.45	20.11	20.08	20.09	
15	256QAM	1	0	18.37	18.42	18.15	18.12	18.02	20
15	256QAM	1	37	18.33	18.42	18.05	18.06	18.09	
15	256QAM	1	74	18.22	18.28	18.03	18.03	18.09	
15	256QAM	36	0	18.32	18.42	18.23	18.04	18.05	20
15	256QAM	36	20	18.26	18.41	18.05	18.01	18.04	
15	256QAM	36	39	18.49	18.54	18.14	18.05	18.04	
15	256QAM	75	0	18.42	18.48	18.16	18.08	18.07	



FCC SAR TEST REPORT

Report No. : FA4D0509

Channel				39700	40160	40620	41080	41540	Tune-up limit
Frequency (MHz)				2501	2547	2593	2639	2685	(dBm)
10	QPSK	1	0	23.33	23.34	23.07	23.09	23.24	25.00
10	QPSK	1	25	23.33	23.38	23.07	23.06	23.06	
10	QPSK	1	49	23.26	23.37	23.08	23.00	23.00	
10	QPSK	25	0	22.36	22.46	22.18	22.05	22.08	24
10	QPSK	25	12	22.31	22.41	22.14	22.09	22.07	
10	QPSK	25	25	22.38	22.43	22.20	22.09	22.06	
10	QPSK	50	0	22.38	22.52	22.13	22.09	22.08	24
10	16QAM	1	0	22.45	22.44	22.19	22.12	22.06	
10	16QAM	1	25	22.34	22.48	22.09	22.07	22.12	
10	16QAM	1	49	22.37	22.42	22.10	22.06	22.11	23
10	16QAM	25	0	21.40	21.47	21.13	21.12	21.20	
10	16QAM	25	12	21.43	21.37	21.04	21.00	21.03	
10	16QAM	25	25	21.38	21.51	21.19	21.09	21.12	23
10	16QAM	50	0	21.32	21.44	21.19	21.13	21.12	
10	64QAM	1	0	21.32	21.45	21.07	21.11	21.15	
10	64QAM	1	25	21.30	21.33	21.08	21.01	21.01	22
10	64QAM	1	49	21.31	21.30	21.04	21.02	21.07	
10	64QAM	25	0	20.41	20.51	20.27	20.11	20.17	
10	64QAM	25	12	20.35	20.39	20.13	20.01	20.03	20
10	64QAM	25	25	20.40	20.48	20.22	20.13	20.08	
10	64QAM	50	0	20.36	20.42	20.12	20.02	20.08	
10	256QAM	1	0	18.41	18.46	18.22	18.14	18.01	20
10	256QAM	1	25	18.31	18.49	18.10	18.03	18.10	
10	256QAM	1	49	18.26	18.29	18.02	18.07	18.05	
10	256QAM	25	0	18.40	18.42	18.25	18.03	18.15	20
10	256QAM	25	12	18.30	18.48	18.06	18.05	18.09	
10	256QAM	25	25	18.45	18.50	18.16	18.13	18.10	
10	256QAM	50	0	18.46	18.46	18.22	18.08	18.07	
Channel				39675	40148	40620	41093	41565	Tune-up limit
Frequency (MHz)				2498.5	2545.8	2593	2640.30	2687.5	(dBm)
5	QPSK	1	0	23.38	23.38	23.08	23.04	23.19	25.00
5	QPSK	1	12	23.35	23.32	23.06	23.02	23.09	
5	QPSK	1	24	23.26	23.35	23.01	23.03	23.04	
5	QPSK	12	0	22.38	22.51	22.25	22.08	22.05	24
5	QPSK	12	7	22.39	22.41	22.06	22.05	22.06	
5	QPSK	12	13	22.33	22.49	22.18	22.00	22.03	
5	QPSK	25	0	22.33	22.42	22.16	22.02	22.07	24
5	16QAM	1	0	22.47	22.46	22.22	22.00	22.01	
5	16QAM	1	12	22.35	22.46	22.14	22.13	22.04	
5	16QAM	1	24	22.41	22.41	22.17	22.01	22.05	23
5	16QAM	12	0	21.37	21.51	21.21	21.14	21.16	
5	16QAM	12	7	21.40	21.38	21.09	21.00	21.04	
5	16QAM	12	13	21.42	21.43	21.13	21.05	21.05	23
5	16QAM	25	0	21.30	21.46	21.16	21.10	21.13	
5	64QAM	1	0	21.36	21.38	21.04	21.08	21.15	
5	64QAM	1	12	21.27	21.40	21.00	21.01	21.02	22
5	64QAM	1	24	21.25	21.33	21.03	21.08	21.06	
5	64QAM	12	0	20.42	20.50	20.21	20.13	20.12	
5	64QAM	12	7	20.40	20.41	20.14	20.04	20.06	20
5	64QAM	12	13	20.39	20.51	20.16	20.15	20.11	
5	64QAM	25	0	20.32	20.40	20.11	20.04	20.06	
5	256QAM	1	0	18.33	18.51	18.18	18.11	18.05	20
5	256QAM	1	12	18.30	18.46	18.13	18.04	18.01	
5	256QAM	1	24	18.26	18.29	18.09	18.04	18.08	
5	256QAM	12	0	18.36	18.51	18.23	18.05	18.15	20
5	256QAM	12	7	18.28	18.40	18.08	18.01	18.06	
5	256QAM	12	13	18.44	18.49	18.15	18.12	18.04	
5	256QAM	25	0	18.44	18.49	18.18	18.07	18.07	



FCC SAR TEST REPORT

Report No. : FA4D0509

<LTE Band 41_HPUE_Ant Main_Sensor OFF>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Low Middle Ch. / Freq.	Power Middle Ch. / Freq.	Power High Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				39750	40185	40620	41055	41490	
Frequency (MHz)				2506	2549.5	2593	2636.5	2680	
20	QPSK	1	0	25.55	25.25	25.20	25.15	25.18	27
20	QPSK	1	49	25.53	25.24	25.12	25.11	25.03	
20	QPSK	1	99	25.52	25.23	25.10	25.06	25.01	
20	QPSK	50	0	24.65	24.34	24.26	24.25	24.20	26
20	QPSK	50	24	24.63	24.33	24.26	24.22	24.17	
20	QPSK	50	50	24.51	24.24	24.24	24.12	24.09	
20	QPSK	100	0	24.56	24.28	24.19	24.18	24.16	26
20	16QAM	1	0	24.88	24.49	24.36	24.31	24.36	
20	16QAM	1	49	24.89	24.67	24.44	24.56	24.47	
20	16QAM	1	99	24.86	24.53	24.42	24.50	24.36	25
20	16QAM	50	0	23.66	23.36	23.23	23.15	23.12	
20	16QAM	50	24	23.65	23.40	23.32	23.29	23.25	
20	16QAM	50	50	23.54	23.31	23.28	23.29	23.21	25
20	16QAM	100	0	23.61	23.36	23.25	23.21	23.19	
20	64QAM	1	0	23.71	23.49	23.30	23.20	23.22	
20	64QAM	1	49	23.75	23.54	23.45	23.47	23.39	24
20	64QAM	1	99	23.64	23.45	23.33	23.36	23.24	
20	64QAM	50	0	22.65	22.39	22.28	22.14	22.11	
20	64QAM	50	24	22.69	22.40	22.30	22.26	22.24	22
20	64QAM	50	50	22.56	22.28	22.31	22.24	22.20	
20	64QAM	100	0	22.62	22.35	22.23	22.19	22.18	
20	256QAM	1	0	20.51	20.71	20.45	20.07	20.08	22
20	256QAM	1	49	20.67	20.71	20.46	20.16	20.28	
20	256QAM	1	99	20.68	20.63	20.18	20.12	20.03	
20	256QAM	50	0	20.53	20.59	20.42	20.00	20.06	22
20	256QAM	50	24	20.65	20.58	20.35	20.13	20.09	
20	256QAM	50	50	20.66	20.52	20.20	20.04	20.02	
20	256QAM	100	0	20.56	20.59	20.34	20.06	20.06	
Channel				39725	40173	40620	41068	41515	Tune-up limit (dBm)
Frequency (MHz)				2503.5	2548.3	2593	2637.8	2682.5	
15	QPSK	1	0	25.51	25.20	25.16	25.10	25.15	27.00
15	QPSK	1	37	25.50	25.21	25.07	25.08	25.00	
15	QPSK	1	74	25.49	25.19	25.05	25.01	25.03	
15	QPSK	36	0	24.62	24.31	24.21	24.22	24.17	26
15	QPSK	36	20	24.60	24.28	24.21	24.18	24.14	
15	QPSK	36	39	24.46	24.21	24.20	24.08	24.05	
15	QPSK	75	0	24.53	24.23	24.16	24.14	24.13	26
15	16QAM	1	0	24.85	24.46	24.31	24.26	24.31	
15	16QAM	1	37	24.86	24.64	24.40	24.53	24.42	
15	16QAM	1	74	24.83	24.49	24.37	24.47	24.32	25
15	16QAM	36	0	23.62	23.32	23.18	23.12	23.08	
15	16QAM	36	20	23.62	23.35	23.28	23.25	23.22	
15	16QAM	36	39	23.49	23.28	23.25	23.25	23.18	25
15	16QAM	75	0	23.56	23.32	23.22	23.16	23.15	
15	64QAM	1	0	23.67	23.46	23.27	23.17	23.17	
15	64QAM	1	37	23.70	23.49	23.41	23.44	23.35	24
15	64QAM	1	74	23.61	23.42	23.28	23.31	23.21	
15	64QAM	36	0	22.62	22.35	22.24	22.10	22.08	
15	64QAM	36	20	22.65	22.37	22.27	22.21	22.21	22
15	64QAM	36	39	22.52	22.25	22.26	22.21	22.17	
15	64QAM	75	0	22.58	22.30	22.18	22.15	22.15	
15	256QAM	1	0	20.48	20.66	20.41	20.03	20.04	22
15	256QAM	1	37	20.64	20.66	20.43	20.13	20.24	
15	256QAM	1	74	20.64	20.59	20.15	20.09	20.00	
15	256QAM	36	0	20.50	20.56	20.39	20.10	20.02	22
15	256QAM	36	20	20.62	20.54	20.32	20.09	20.04	
15	256QAM	36	39	20.61	20.48	20.17	20.00	20.03	
15	256QAM	75	0	20.53	20.56	20.29	20.01	20.01	



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Channel				39700	40160	40620	41080	41540	Tune-up limit
Frequency (MHz)				2501	2547	2593	2639	2685	(dBm)
10	QPSK	1	0	25.52	25.20	25.15	25.10	25.15	27.00
10	QPSK	1	25	25.50	25.21	25.07	25.08	25.11	
10	QPSK	1	49	25.48	25.19	25.07	25.02	25.06	
10	QPSK	25	0	24.60	24.31	24.21	24.22	24.16	26
10	QPSK	25	12	24.60	24.28	24.23	24.19	24.13	
10	QPSK	25	25	24.48	24.20	24.20	24.08	24.06	
10	QPSK	50	0	24.53	24.24	24.16	24.14	24.11	26
10	16QAM	1	0	24.85	24.45	24.31	24.26	24.33	
10	16QAM	1	25	24.85	24.63	24.41	24.52	24.42	
10	16QAM	1	49	24.82	24.48	24.38	24.45	24.33	25
10	16QAM	25	0	23.63	23.31	23.18	23.11	23.08	
10	16QAM	25	12	23.60	23.36	23.27	23.26	23.22	
10	16QAM	25	25	23.51	23.26	23.24	23.24	23.17	25
10	16QAM	50	0	23.58	23.32	23.20	23.16	23.16	
10	64QAM	1	0	23.66	23.45	23.25	23.16	23.18	
10	64QAM	1	25	23.70	23.49	23.40	23.44	23.36	25
10	64QAM	1	49	23.60	23.40	23.28	23.33	23.21	
10	64QAM	25	0	22.61	22.34	22.25	22.09	22.07	
10	64QAM	25	12	22.64	22.35	22.27	22.22	22.20	24
10	64QAM	25	25	22.51	22.24	22.28	22.20	22.15	
10	64QAM	50	0	22.59	22.31	22.19	22.16	22.15	
10	256QAM	1	0	20.47	20.67	20.41	20.02	20.03	22
10	256QAM	1	25	20.63	20.67	20.43	20.13	20.25	
10	256QAM	1	49	20.63	20.58	20.14	20.08	20.00	
10	256QAM	25	0	20.50	20.56	20.37	20.05	20.02	22
10	256QAM	25	12	20.61	20.53	20.32	20.08	20.05	
10	256QAM	25	25	20.62	20.48	20.16	20.00	20.09	
10	256QAM	50	0	20.52	20.55	20.30	20.03	20.03	
Channel				39675	40148	40620	41093	41565	Tune-up limit
Frequency (MHz)				2498.5	2545.8	2593	2640.30	2687.5	(dBm)
5	QPSK	1	0	25.52	25.21	25.17	25.10	25.14	27.00
5	QPSK	1	12	25.50	25.19	25.08	25.07	25.04	
5	QPSK	1	24	25.49	25.20	25.06	25.03	25.09	
5	QPSK	12	0	24.62	24.30	24.21	24.22	24.16	26
5	QPSK	12	7	24.59	24.29	24.21	24.19	24.13	
5	QPSK	12	13	24.48	24.20	24.21	24.09	24.06	
5	QPSK	25	0	24.51	24.24	24.14	24.13	24.13	26
5	16QAM	1	0	24.85	24.44	24.32	24.28	24.32	
5	16QAM	1	12	24.85	24.63	24.41	24.53	24.42	
5	16QAM	1	24	24.81	24.50	24.38	24.46	24.32	25
5	16QAM	12	0	23.62	23.32	23.20	23.10	23.07	
5	16QAM	12	7	23.62	23.36	23.27	23.24	23.21	
5	16QAM	12	13	23.49	23.26	23.24	23.26	23.17	25
5	16QAM	25	0	23.58	23.33	23.21	23.17	23.14	
5	64QAM	1	0	23.68	23.44	23.27	23.16	23.19	
5	64QAM	1	12	23.72	23.50	23.42	23.44	23.34	25
5	64QAM	1	24	23.59	23.40	23.30	23.32	23.19	
5	64QAM	12	0	22.61	22.35	22.24	22.11	22.08	
5	64QAM	12	7	22.64	22.36	22.27	22.23	22.21	24
5	64QAM	12	13	22.52	22.23	22.27	22.20	22.16	
5	64QAM	25	0	22.59	22.30	22.20	22.14	22.15	
5	256QAM	1	0	20.47	20.66	20.41	20.04	20.03	22
5	256QAM	1	12	20.62	20.66	20.43	20.12	20.25	
5	256QAM	1	24	20.63	20.58	20.13	20.09	20.13	
5	256QAM	12	0	20.48	20.56	20.37	20.06	20.03	22
5	256QAM	12	7	20.60	20.53	20.32	20.09	20.06	
5	256QAM	12	13	20.63	20.49	20.17	20.09	20.10	
5	256QAM	25	0	20.53	20.54	20.31	20.03	20.01	



<LTE Band 41_HPUE_Ant MIMO2_Sensor OFF>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Low Middle Ch. / Freq.	Power Middle Ch. / Freq.	Power High Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				39750	40185	40620	41055	41490	
Frequency (MHz)				2506	2549.5	2593	2636.5	2680	
20	QPSK	1	0	25.44	25.40	25.25	25.13	25.10	27
20	QPSK	1	49	25.42	25.39	25.22	25.11	25.07	
20	QPSK	1	99	25.30	25.33	25.07	25.09	25.06	
20	QPSK	50	0	24.54	24.66	24.36	24.15	24.15	26
20	QPSK	50	24	24.30	24.45	24.26	24.12	24.10	
20	QPSK	50	50	24.45	24.59	24.31	24.08	24.09	
20	QPSK	100	0	24.51	24.59	24.23	24.05	24.01	26
20	16QAM	1	0	24.54	24.62	24.26	24.07	24.12	
20	16QAM	1	49	24.38	24.52	24.16	24.03	24.02	
20	16QAM	1	99	24.40	24.55	24.20	24.09	24.06	25
20	16QAM	50	0	23.55	23.68	23.33	23.19	23.14	
20	16QAM	50	24	23.33	23.48	23.16	23.09	23.08	
20	16QAM	50	50	23.46	23.57	23.30	23.08	23.05	25
20	16QAM	100	0	23.45	23.59	23.30	23.09	23.05	
20	64QAM	1	0	23.40	23.50	23.23	23.09	23.06	25
20	64QAM	1	49	23.36	23.48	23.14	23.08	23.04	
20	64QAM	1	99	23.42	23.51	23.17	23.05	23.02	
20	64QAM	50	0	22.51	22.64	22.31	22.19	22.06	24
20	64QAM	50	24	22.41	22.52	22.18	22.06	22.02	
20	64QAM	50	50	22.50	22.58	22.29	22.10	22.08	
20	64QAM	100	0	22.51	22.58	22.26	22.04	22.02	22
20	256QAM	1	0	20.54	20.62	20.35	20.09	20.07	
20	256QAM	1	49	20.42	20.59	20.23	20.07	20.04	
20	256QAM	1	99	20.30	20.38	20.09	20.03	20.07	22
20	256QAM	50	0	20.47	20.63	20.35	20.15	20.13	
20	256QAM	50	24	20.42	20.59	20.23	20.08	20.05	
20	256QAM	50	50	20.44	20.58	20.23	20.06	20.08	22
20	256QAM	100	0	20.44	20.59	20.29	20.14	20.02	
Channel				39725	40173	40620	41068	41515	Tune-up limit (dBm)
Frequency (MHz)				2503.5	2548.3	2593	2637.8	2682.5	
15	QPSK	1	0	25.41	25.35	25.20	25.10	25.05	27.00
15	QPSK	1	37	25.37	25.40	25.19	25.07	25.03	
15	QPSK	1	74	25.26	25.40	25.03	25.04	25.03	
15	QPSK	36	0	24.50	24.61	24.32	24.10	24.12	26
15	QPSK	36	20	24.25	24.40	24.21	24.09	24.06	
15	QPSK	36	39	24.42	24.54	24.28	24.05	24.04	
15	QPSK	75	0	24.48	24.56	24.18	24.00	24.03	26
15	16QAM	1	0	24.49	24.59	24.22	24.04	24.09	
15	16QAM	1	37	24.34	24.47	24.13	24.00	24.03	
15	16QAM	1	74	24.36	24.51	24.16	24.05	24.01	25
15	16QAM	36	0	23.51	23.64	23.28	23.16	23.09	
15	16QAM	36	20	23.30	23.45	23.11	23.05	23.05	
15	16QAM	36	39	23.43	23.54	23.25	23.04	23.01	25
15	16QAM	75	0	23.40	23.56	23.27	23.04	23.00	
15	64QAM	1	0	23.35	23.47	23.18	23.06	23.03	25
15	64QAM	1	37	23.31	23.45	23.11	23.04	23.00	
15	64QAM	1	74	23.38	23.48	23.13	23.01	23.03	
15	64QAM	36	0	22.47	22.60	22.28	22.14	22.03	24
15	64QAM	36	20	22.38	22.49	22.14	22.02	22.02	
15	64QAM	36	39	22.47	22.54	22.24	22.06	22.03	
15	64QAM	75	0	22.46	22.53	22.23	22.00	22.00	22
15	256QAM	1	0	20.51	20.59	20.30	20.04	20.03	
15	256QAM	1	37	20.38	20.56	20.20	20.02	20.01	
15	256QAM	1	74	20.27	20.35	20.04	20.00	20.04	22
15	256QAM	36	0	20.44	20.60	20.32	20.12	20.10	
15	256QAM	36	20	20.39	20.55	20.18	20.05	20.00	
15	256QAM	36	39	20.40	20.53	20.19	20.01	20.05	



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15	256QAM	75	0	20.41	20.55	20.25	20.09	20.04	Tune-up limit (dBm)
Channel				39700	40160	40620	41080	41540	
Frequency (MHz)				2501	2547	2593	2639	2685	
10	QPSK	1	0	25.40	25.35	25.21	25.09	25.07	27.00
10	QPSK	1	25	25.37	25.40	25.18	25.06	25.03	
10	QPSK	1	49	25.26	25.40	25.02	25.06	25.01	
10	QPSK	25	0	24.51	24.61	24.31	24.11	24.10	26
10	QPSK	25	12	24.26	24.40	24.22	24.08	24.06	
10	QPSK	25	25	24.40	24.54	24.28	24.03	24.06	
10	QPSK	50	0	24.47	24.55	24.20	24.01	24.05	
10	16QAM	1	0	24.49	24.58	24.22	24.03	24.08	26
10	16QAM	1	25	24.35	24.47	24.11	24.00	24.02	
10	16QAM	1	49	24.36	24.51	24.16	24.04	24.01	
10	16QAM	25	0	23.51	23.65	23.28	23.14	23.10	25
10	16QAM	25	12	23.30	23.45	23.12	23.05	23.03	
10	16QAM	25	25	23.43	23.54	23.26	23.04	23.02	
10	16QAM	50	0	23.41	23.56	23.27	23.04	23.01	
10	64QAM	1	0	23.35	23.47	23.19	23.04	23.01	25
10	64QAM	1	25	23.33	23.43	23.11	23.03	23.05	
10	64QAM	1	49	23.37	23.47	23.13	23.02	23.00	
10	64QAM	25	0	22.46	22.61	22.27	22.15	22.01	24
10	64QAM	25	12	22.36	22.48	22.13	22.03	22.00	
10	64QAM	25	25	22.47	22.55	22.24	22.06	22.03	
10	64QAM	50	0	22.48	22.53	22.21	22.00	22.10	
10	256QAM	1	0	20.51	20.57	20.32	20.04	20.04	22
10	256QAM	1	25	20.38	20.54	20.18	20.03	20.09	
10	256QAM	1	49	20.27	20.33	20.06	20.00	20.03	
10	256QAM	25	0	20.43	20.58	20.30	20.10	20.10	22
10	256QAM	25	12	20.39	20.55	20.18	20.03	20.01	
10	256QAM	25	25	20.40	20.55	20.19	20.02	20.03	
10	256QAM	50	0	20.40	20.54	20.26	20.09	20.07	
Channel				39675	40148	40620	41093	41565	Tune-up limit (dBm)
Frequency (MHz)				2498.5	2545.8	2593	2640.30	2687.5	
5	QPSK	1	0	25.39	25.43	25.20	25.08	25.05	27.00
5	QPSK	1	12	25.38	25.42	25.18	25.06	25.02	
5	QPSK	1	24	25.25	25.40	25.04	25.04	25.02	
5	QPSK	12	0	24.50	24.61	24.32	24.10	24.11	26
5	QPSK	12	7	24.26	24.41	24.23	24.09	24.06	
5	QPSK	12	13	24.41	24.56	24.28	24.04	24.06	
5	QPSK	25	0	24.48	24.55	24.19	24.02	24.05	
5	16QAM	1	0	24.51	24.59	24.22	24.04	24.08	26
5	16QAM	1	12	24.34	24.48	24.13	24.00	24.07	
5	16QAM	1	24	24.37	24.50	24.16	24.04	24.03	
5	16QAM	12	0	23.51	23.64	23.28	23.16	23.11	25
5	16QAM	12	7	23.30	23.45	23.13	23.05	23.05	
5	16QAM	12	13	23.43	23.53	23.26	23.05	23.01	
5	16QAM	25	0	23.42	23.55	23.26	23.06	23.00	
5	64QAM	1	0	23.36	23.46	23.20	23.06	23.03	25
5	64QAM	1	12	23.32	23.44	23.11	23.03	23.00	
5	64QAM	1	24	23.37	23.46	23.14	23.00	23.07	
5	64QAM	12	0	22.48	22.61	22.27	22.16	22.03	24
5	64QAM	12	7	22.37	22.48	22.13	22.03	22.09	
5	64QAM	12	13	22.47	22.53	22.25	22.05	22.04	
5	64QAM	25	0	22.47	22.54	22.21	22.00	22.10	
5	256QAM	1	0	20.49	20.58	20.31	20.06	20.02	22
5	256QAM	1	12	20.38	20.54	20.18	20.02	20.00	
5	256QAM	1	24	20.26	20.33	20.06	20.00	20.02	
5	256QAM	12	0	20.44	20.60	20.31	20.10	20.08	22
5	256QAM	12	7	20.38	20.54	20.19	20.04	20.02	
5	256QAM	12	13	20.39	20.55	20.20	20.02	20.05	
5	256QAM	25	0	20.39	20.56	20.26	20.11	20.01	



<LTE Band 42_Ant Main_Sensor OFF>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				42190	42590	42990	
Frequency (MHz)				3460	3500	3540	
20	QPSK	1	0	22.60	22.74	22.88	
20	QPSK	1	49	22.55	22.73	22.82	24.5
20	QPSK	1	99	22.59	22.63	22.76	
20	QPSK	50	0	21.68	21.72	21.96	
20	QPSK	50	24	21.59	21.68	21.90	23.5
20	QPSK	50	50	21.58	21.65	21.87	
20	QPSK	100	0	21.64	21.62	21.93	
20	16QAM	1	0	21.64	21.73	21.95	23.5
20	16QAM	1	49	21.53	21.74	21.88	
20	16QAM	1	99	21.51	21.62	21.83	
20	16QAM	50	0	20.61	20.72	20.92	22.5
20	16QAM	50	24	20.67	20.78	20.98	
20	16QAM	50	50	20.62	20.76	20.92	
20	16QAM	100	0	20.58	20.64	20.95	22.5
20	64QAM	1	0	20.52	20.69	20.85	
20	64QAM	1	49	20.58	20.66	20.80	
20	64QAM	1	99	20.56	20.61	20.72	21.5
20	64QAM	50	0	19.59	19.71	19.90	
20	64QAM	50	24	19.68	19.75	19.97	
20	64QAM	50	50	19.61	19.79	19.87	19.5
20	64QAM	100	0	19.64	19.71	19.91	
20	256QAM	1	0	18.16	18.36	18.09	
20	256QAM	1	49	18.37	18.46	18.21	19.5
20	256QAM	1	99	18.28	18.35	18.17	
20	256QAM	50	0	18.17	18.27	18.04	
20	256QAM	50	24	18.27	18.30	18.12	19.5
20	256QAM	50	50	18.28	18.31	18.06	
20	256QAM	100	0	18.18	18.29	18.14	
Channel				42165	42590	43015	Tune-up limit (dBm)
Frequency (MHz)				3457.5	3500	3542.5	
15	QPSK	1	0	22.52	22.67	22.83	
15	QPSK	1	37	22.50	22.68	22.76	24.5
15	QPSK	1	74	22.52	22.56	22.69	
15	QPSK	36	0	21.63	21.65	21.91	23.5
15	QPSK	36	20	21.50	21.61	21.82	
15	QPSK	36	39	21.51	21.58	21.79	
15	QPSK	75	0	21.59	21.55	21.86	23.5
15	16QAM	1	0	21.54	21.64	21.90	
15	16QAM	1	37	21.52	21.68	21.79	
15	16QAM	1	74	21.50	21.53	21.78	22.5
15	16QAM	36	0	20.55	20.64	20.84	
15	16QAM	36	20	20.61	20.69	20.93	
15	16QAM	36	39	20.57	20.70	20.86	22.5
15	16QAM	75	0	20.55	20.55	20.88	
15	64QAM	1	0	20.51	20.59	20.77	
15	64QAM	1	37	20.50	20.58	20.70	22.5
15	64QAM	1	74	20.50	20.56	20.66	
15	64QAM	36	0	20.51	19.64	19.81	
15	64QAM	36	20	19.63	19.68	19.91	21.5
15	64QAM	36	39	19.51	19.70	19.79	
15	64QAM	75	0	19.54	19.61	19.81	
15	256QAM	1	0	18.10	18.30	18.04	19.5
15	256QAM	1	37	18.29	18.41	18.16	
15	256QAM	1	74	18.22	18.26	18.12	
15	256QAM	36	0	18.11	18.19	17.98	19.5
15	256QAM	36	20	18.19	18.20	18.07	
15	256QAM	36	39	18.22	18.21	18.00	



FCC SAR TEST REPORT

Report No. : FA4D0509

15	256QAM	75	0	18.10	18.23	18.06	Tune-up limit (dBm)
Channel				42140	42590	43040	
Frequency (MHz)				3455	3500	3545	
10	QPSK	1	0	22.55	22.68	22.78	24.5
10	QPSK	1	25	22.54	22.68	22.75	
10	QPSK	1	49	22.50	22.55	22.68	
10	QPSK	25	0	21.59	21.63	21.86	23.5
10	QPSK	25	12	21.55	21.60	21.85	
10	QPSK	25	25	21.53	21.59	21.81	
10	QPSK	50	0	21.56	21.53	21.83	
10	16QAM	1	0	21.54	21.65	21.90	23.5
10	16QAM	1	25	21.51	21.64	21.81	
10	16QAM	1	49	21.51	21.57	21.76	
10	16QAM	25	0	20.53	20.67	20.86	22.5
10	16QAM	25	12	20.60	20.70	20.92	
10	16QAM	25	25	20.55	20.70	20.82	
10	16QAM	50	0	20.52	20.58	20.86	
10	64QAM	1	0	20.52	20.60	20.76	22.5
10	64QAM	1	25	20.51	20.56	20.72	
10	64QAM	1	49	20.50	20.52	20.65	
10	64QAM	25	0	19.53	19.61	19.84	21.5
10	64QAM	25	12	19.61	19.70	19.87	
10	64QAM	25	25	19.54	19.74	19.78	
10	64QAM	50	0	19.56	19.61	19.86	
10	256QAM	1	0	18.07	18.28	18.00	19.5
10	256QAM	1	25	18.31	18.40	18.12	
10	256QAM	1	49	18.21	18.25	18.10	
10	256QAM	25	0	18.09	18.22	17.98	19.5
10	256QAM	25	12	18.19	18.24	18.02	
10	256QAM	25	25	18.20	18.25	17.96	
10	256QAM	50	0	18.08	18.22	18.07	
Channel				42115	42590	43065	Tune-up limit (dBm)
Frequency (MHz)				3452.5	3500	3547.5	
5	QPSK	1	0	22.50	22.69	22.81	24.5
5	QPSK	1	12	22.51	22.67	22.74	
5	QPSK	1	24	22.54	22.58	22.67	
5	QPSK	12	0	21.59	21.62	21.88	23.5
5	QPSK	12	7	21.51	21.61	21.82	
5	QPSK	12	13	21.53	21.57	21.82	
5	QPSK	25	0	21.59	21.52	21.84	
5	16QAM	1	0	21.58	21.64	21.87	23.5
5	16QAM	1	12	21.53	21.64	21.80	
5	16QAM	1	24	21.52	21.56	21.74	
5	16QAM	12	0	20.56	20.65	20.83	22.5
5	16QAM	12	7	20.60	20.71	20.88	
5	16QAM	12	13	20.53	20.68	20.85	
5	16QAM	25	0	20.52	20.55	20.88	
5	64QAM	1	0	20.51	20.59	20.75	22.5
5	64QAM	1	12	20.52	20.56	20.72	
5	64QAM	1	24	20.53	20.51	20.63	
5	64QAM	12	0	19.51	19.65	19.80	
5	64QAM	12	7	19.62	19.70	19.91	21.5
5	64QAM	12	13	19.52	19.71	19.77	
5	64QAM	25	0	19.57	19.63	19.85	
5	256QAM	1	0	18.10	18.30	18.01	
5	256QAM	1	12	18.31	18.41	18.13	19.5
5	256QAM	1	24	18.21	18.27	18.07	
5	256QAM	12	0	18.11	18.22	17.99	
5	256QAM	12	7	18.21	18.20	18.02	19.5
5	256QAM	12	13	18.18	18.21	17.96	
5	256QAM	25	0	18.13	18.20	18.05	



<LTE Band 42_Ant MIMO2_Sensor OFF>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				42190	42590	42990	
Frequency (MHz)				3460	3500	3540	
20	QPSK	1	0	23.24	23.12	23.15	
20	QPSK	1	49	23.15	23.06	23.07	24.5
20	QPSK	1	99	23.18	23.07	23.02	
20	QPSK	50	0	22.89	22.78	22.86	
20	QPSK	50	24	22.86	22.75	22.76	23.5
20	QPSK	50	50	22.87	22.73	22.79	
20	QPSK	100	0	22.85	22.77	22.79	
20	16QAM	1	0	22.92	22.77	22.83	23.5
20	16QAM	1	49	22.87	22.75	22.73	
20	16QAM	1	99	22.87	22.67	22.72	
20	16QAM	50	0	21.90	21.77	21.84	22.5
20	16QAM	50	24	21.89	21.78	21.78	
20	16QAM	50	50	21.82	21.72	21.75	
20	16QAM	100	0	21.88	21.77	21.74	22.5
20	64QAM	1	0	21.98	21.78	21.93	
20	64QAM	1	49	21.93	21.74	21.88	
20	64QAM	1	99	21.86	21.67	21.73	21.5
20	64QAM	50	0	20.96	20.83	20.90	
20	64QAM	50	24	20.94	20.76	20.82	
20	64QAM	50	50	20.92	20.77	20.80	19.5
20	64QAM	100	0	20.95	20.79	20.80	
20	256QAM	1	0	18.95	18.84	18.84	
20	256QAM	1	49	18.92	18.74	18.77	19.5
20	256QAM	1	99	18.93	18.83	18.85	
20	256QAM	50	0	18.87	18.69	18.77	19.5
20	256QAM	50	24	18.88	18.69	18.74	
20	256QAM	50	50	18.90	18.74	18.80	
20	256QAM	100	0	18.86	18.70	18.78	
Channel				42165	42590	43015	Tune-up limit (dBm)
Frequency (MHz)				3457.5	3500	3542.5	
15	QPSK	1	0	23.14	23.00	22.96	
15	QPSK	1	37	23.00	22.94	22.92	24.5
15	QPSK	1	74	22.99	22.97	22.87	
15	QPSK	36	0	22.76	22.61	22.74	23.5
15	QPSK	36	20	22.70	22.62	22.66	
15	QPSK	36	39	22.68	22.63	22.64	
15	QPSK	75	0	22.66	22.58	22.59	23.5
15	16QAM	1	0	22.78	22.58	22.65	
15	16QAM	1	37	22.70	22.55	22.57	
15	16QAM	1	74	22.76	22.54	22.62	22.5
15	16QAM	36	0	21.75	21.61	21.73	
15	16QAM	36	20	21.72	21.67	21.62	
15	16QAM	36	39	21.64	21.58	21.59	22.5
15	16QAM	75	0	21.69	21.66	21.54	
15	64QAM	1	0	21.82	21.59	21.74	
15	64QAM	1	37	21.79	21.59	21.73	22.5
15	64QAM	1	74	21.69	21.48	21.53	
15	64QAM	36	0	20.78	20.73	20.77	
15	64QAM	36	20	20.83	20.65	20.70	21.5
15	64QAM	36	39	20.76	20.66	20.64	
15	64QAM	75	0	20.79	20.65	20.63	
15	256QAM	1	0	18.76	18.69	18.74	19.5
15	256QAM	1	37	18.74	18.57	18.66	
15	256QAM	1	74	18.76	18.69	18.68	
15	256QAM	36	0	18.77	18.49	18.67	19.5
15	256QAM	36	20	18.68	18.54	18.56	
15	256QAM	36	39	18.78	18.57	18.64	



FCC SAR TEST REPORT

Report No. : FA4D0509

15	256QAM	75	0	18.73	18.54	18.58	Tune-up limit (dBm)
Channel				42140	42590	43040	
Frequency (MHz)				3455	3500	3545	
10	QPSK	1	0	23.05	22.95	22.96	24.5
10	QPSK	1	25	22.97	22.86	22.95	
10	QPSK	1	49	23.00	22.91	22.90	
10	QPSK	25	0	22.73	22.61	22.69	23.5
10	QPSK	25	12	22.75	22.63	22.59	
10	QPSK	25	25	22.67	22.55	22.68	
10	QPSK	50	0	22.74	22.64	22.67	23.5
10	16QAM	1	0	22.75	22.64	22.63	
10	16QAM	1	25	22.70	22.62	22.53	
10	16QAM	1	49	22.72	22.50	22.54	22.5
10	16QAM	25	0	21.77	21.67	21.70	
10	16QAM	25	12	21.77	21.63	21.58	
10	16QAM	25	25	21.63	21.58	21.65	22.5
10	16QAM	50	0	21.73	21.65	21.56	
10	64QAM	1	0	21.88	21.67	21.77	
10	64QAM	1	25	21.83	21.62	21.75	22.5
10	64QAM	1	49	21.72	21.53	21.59	
10	64QAM	25	0	20.85	20.64	20.80	
10	64QAM	25	12	20.82	20.65	20.64	21.5
10	64QAM	25	25	20.76	20.58	20.60	
10	64QAM	50	0	20.85	20.59	20.69	
10	256QAM	1	0	18.83	18.74	18.71	19.5
10	256QAM	1	25	18.74	18.60	18.58	
10	256QAM	1	49	18.80	18.73	18.73	
10	256QAM	25	0	18.71	18.49	18.67	19.5
10	256QAM	25	12	18.72	18.50	18.57	
10	256QAM	25	25	18.70	18.63	18.61	
10	256QAM	50	0	18.69	18.59	18.58	Tune-up limit (dBm)
Channel				42115	42590	43065	
Frequency (MHz)				3452.5	3500	3547.5	
5	QPSK	1	0	23.08	22.92	22.98	24.5
5	QPSK	1	12	23.01	22.93	22.90	
5	QPSK	1	24	23.05	22.92	22.84	
5	QPSK	12	0	22.72	22.62	22.68	23.5
5	QPSK	12	7	22.74	22.60	22.58	
5	QPSK	12	13	22.74	22.56	22.65	
5	QPSK	25	0	22.69	22.60	22.63	23.5
5	16QAM	1	0	22.80	22.58	22.72	
5	16QAM	1	12	22.73	22.57	22.56	
5	16QAM	1	24	22.73	22.54	22.55	22.5
5	16QAM	12	0	21.78	21.67	21.71	
5	16QAM	12	7	21.71	21.65	21.59	
5	16QAM	12	13	21.63	21.60	21.56	22.5
5	16QAM	25	0	21.77	21.65	21.62	
5	64QAM	1	0	21.82	21.58	21.74	
5	64QAM	1	12	21.80	21.54	21.75	22.5
5	64QAM	1	24	21.73	21.50	21.59	
5	64QAM	12	0	20.86	20.70	20.76	
5	64QAM	12	7	20.84	20.56	20.64	21.5
5	64QAM	12	13	20.80	20.57	20.68	
5	64QAM	25	0	20.82	20.59	20.63	
5	256QAM	1	0	18.78	18.73	18.73	19.5
5	256QAM	1	12	18.75	18.59	18.66	
5	256QAM	1	24	18.79	18.64	18.65	
5	256QAM	12	0	18.67	18.54	18.65	19.5
5	256QAM	12	7	18.72	18.50	18.62	
5	256QAM	12	13	18.75	18.61	18.67	
5	256QAM	25	0	18.67	18.53	18.66	



<LTE Band 42_Ant MIMO2_Sensor ON>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				42190	42590	42990	
Frequency (MHz)				3460	3500	3540	
20	QPSK	1	0	21.54	21.24	21.18	
20	QPSK	1	49	21.50	21.20	21.08	22
20	QPSK	1	99	21.47	21.23	21.02	
20	QPSK	50	0	20.76	20.48	20.38	
20	QPSK	50	24	20.65	20.34	20.29	22
20	QPSK	50	50	20.70	20.46	20.31	
20	QPSK	100	0	20.68	20.44	20.28	
20	16QAM	1	0	20.79	20.54	20.41	22
20	16QAM	1	49	20.73	20.43	20.29	
20	16QAM	1	99	20.71	20.43	20.27	
20	16QAM	50	0	20.72	20.40	20.33	21
20	16QAM	50	24	20.70	20.45	20.33	
20	16QAM	50	50	20.62	20.31	20.19	
20	16QAM	100	0	20.65	20.43	20.23	21
20	64QAM	1	0	20.89	20.58	20.47	
20	64QAM	1	49	20.75	20.49	20.40	
20	64QAM	1	99	20.66	20.43	20.24	20
20	64QAM	50	0	19.96	19.69	19.59	
20	64QAM	50	24	19.83	19.60	19.48	
20	64QAM	50	50	19.90	19.67	19.54	18
20	64QAM	100	0	19.80	19.57	19.38	
20	256QAM	1	0	17.42	17.19	17.03	
20	256QAM	1	49	17.45	17.22	17.05	18
20	256QAM	1	99	17.53	17.27	17.08	
20	256QAM	50	0	17.94	17.63	17.59	18
20	256QAM	50	24	17.65	17.42	17.25	
20	256QAM	50	50	17.72	17.49	17.34	
20	256QAM	100	0	17.80	17.51	17.42	
Channel				42165	42590	43015	Tune-up limit (dBm)
Frequency (MHz)				3457.5	3500	3542.5	
15	QPSK	1	0	21.44	21.09	20.98	
15	QPSK	1	37	21.39	21.09	20.94	22
15	QPSK	1	74	21.29	21.09	20.83	
15	QPSK	36	0	20.63	20.31	20.23	22
15	QPSK	36	20	20.47	20.20	20.17	
15	QPSK	36	39	20.55	20.28	20.11	
15	QPSK	75	0	20.54	20.29	20.12	22
15	16QAM	1	0	20.67	20.39	20.24	
15	16QAM	1	37	20.63	20.28	20.09	
15	16QAM	1	74	20.53	20.24	20.13	21
15	16QAM	36	0	20.58	20.30	20.19	
15	16QAM	36	20	20.60	20.34	20.13	
15	16QAM	36	39	20.51	20.21	19.99	21
15	16QAM	75	0	20.50	20.28	20.07	
15	64QAM	1	0	20.76	20.44	20.36	
15	64QAM	1	37	20.58	20.31	20.24	21
15	64QAM	1	74	20.54	20.26	20.13	
15	64QAM	36	0	19.82	19.57	19.40	20
15	64QAM	36	20	19.65	19.45	19.32	
15	64QAM	36	39	19.73	19.51	19.35	
15	64QAM	75	0	19.67	19.47	19.24	18
15	256QAM	1	0	17.24	16.99	16.83	
15	256QAM	1	37	17.25	17.04	16.87	
15	256QAM	1	74	17.39	17.11	16.92	18
15	256QAM	36	0	17.79	17.52	17.49	
15	256QAM	36	20	17.50	17.26	17.10	
15	256QAM	36	39	17.54	17.33	17.18	



FCC SAR TEST REPORT

Report No. : FA4D0509

15	256QAM	75	0	17.62	17.41	17.28	Tune-up limit (dBm)
Channel				42140	42590	43040	
Frequency (MHz)				3455	3500	3545	
10	QPSK	1	0	21.44	21.08	21.06	22
10	QPSK	1	25	21.32	21.08	20.98	
10	QPSK	1	49	21.29	21.08	20.87	
10	QPSK	25	0	20.63	20.35	20.28	22
10	QPSK	25	12	20.45	20.19	20.19	
10	QPSK	25	25	20.57	20.31	20.21	
10	QPSK	50	0	20.54	20.28	20.11	22
10	16QAM	1	0	20.66	20.43	20.27	
10	16QAM	1	25	20.63	20.28	20.11	
10	16QAM	1	49	20.60	20.25	20.12	21
10	16QAM	25	0	20.56	20.27	20.20	
10	16QAM	25	12	20.58	20.29	20.23	
10	16QAM	25	25	20.42	20.19	19.99	21
10	16QAM	50	0	20.54	20.25	20.04	
10	64QAM	1	0	20.74	20.47	20.34	
10	64QAM	1	25	20.62	20.29	20.27	21
10	64QAM	1	49	20.54	20.31	20.06	
10	64QAM	25	0	19.80	19.53	19.47	
10	64QAM	25	12	19.73	19.43	19.37	20
10	64QAM	25	25	19.74	19.52	19.40	
10	64QAM	50	0	19.64	19.44	19.19	
10	256QAM	1	0	17.24	17.04	16.86	18
10	256QAM	1	25	17.26	17.08	16.91	
10	256QAM	1	49	17.41	17.13	16.91	
10	256QAM	25	0	17.78	17.46	17.49	18
10	256QAM	25	12	17.52	17.22	17.07	
10	256QAM	25	25	17.56	17.35	17.21	
10	256QAM	50	0	17.67	17.31	17.25	Tune-up limit (dBm)
Channel				42115	42590	43065	
Frequency (MHz)				3452.5	3500	3547.5	
5	QPSK	1	0	21.43	21.08	20.99	22
5	QPSK	1	12	21.37	21.00	20.92	
5	QPSK	1	24	21.37	21.10	20.84	
5	QPSK	12	0	20.59	20.28	20.20	22
5	QPSK	12	7	20.45	20.16	20.12	
5	QPSK	12	13	20.57	20.31	20.13	
5	QPSK	25	0	20.49	20.33	20.10	22
5	16QAM	1	0	20.63	20.41	20.27	
5	16QAM	1	12	20.61	20.27	20.12	
5	16QAM	1	24	20.54	20.23	20.13	21
5	16QAM	12	0	20.62	20.30	20.13	
5	16QAM	12	7	20.53	20.32	20.15	
5	16QAM	12	13	20.51	20.19	20.05	21
5	16QAM	25	0	20.52	20.29	20.12	
5	64QAM	1	0	20.77	20.40	20.32	
5	64QAM	1	12	20.58	20.38	20.22	21
5	64QAM	1	24	20.50	20.23	20.12	
5	64QAM	12	0	19.80	19.56	19.43	
5	64QAM	12	7	19.72	19.42	19.36	20
5	64QAM	12	13	19.71	19.57	19.35	
5	64QAM	25	0	19.69	19.38	19.18	
5	256QAM	1	0	17.27	17.09	16.92	18
5	256QAM	1	12	17.34	17.05	16.85	
5	256QAM	1	24	17.38	17.08	16.97	
5	256QAM	12	0	17.82	17.45	17.39	18
5	256QAM	12	7	17.45	17.29	17.12	
5	256QAM	12	13	17.58	17.31	17.24	
5	256QAM	25	0	17.63	17.31	17.30	



FCC SAR TEST REPORT

Report No. : FA4D0509

<LTE Band 43_Ant Main_Sensor OFF>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				44690	45090	45490	
Frequency (MHz)				3710	3750	3790	
20	QPSK	1	0	22.91	23.00	23.07	
20	QPSK	1	49	22.79	22.93	22.99	24.5
20	QPSK	1	99	22.65	22.76	22.84	
20	QPSK	50	0	21.88	21.98	22.06	
20	QPSK	50	24	21.81	21.94	22.02	23.5
20	QPSK	50	50	21.81	21.90	22.01	
20	QPSK	100	0	21.81	21.90	21.98	
20	16QAM	1	0	21.81	22.03	22.10	23.5
20	16QAM	1	49	21.87	22.05	22.06	
20	16QAM	1	99	21.66	21.73	21.93	
20	16QAM	50	0	20.89	20.98	21.06	22.5
20	16QAM	50	24	20.80	20.94	21.03	
20	16QAM	50	50	20.84	20.88	21.00	
20	16QAM	100	0	20.83	20.89	20.99	22.5
20	64QAM	1	0	20.90	20.96	20.94	
20	64QAM	1	49	20.81	20.77	20.92	
20	64QAM	1	99	20.71	20.76	20.86	21.5
20	64QAM	50	0	19.86	19.99	20.05	
20	64QAM	50	24	19.85	19.92	20.00	
20	64QAM	50	50	19.84	19.88	19.99	19.5
20	64QAM	100	0	19.81	19.85	19.98	
20	256QAM	1	0	17.95	17.77	17.91	
20	256QAM	1	49	18.03	18.04	17.96	19.5
20	256QAM	1	99	17.86	17.88	17.88	
20	256QAM	50	0	17.88	17.82	17.89	
20	256QAM	50	24	17.87	17.76	17.88	19.5
20	256QAM	50	50	17.78	17.89	17.86	
20	256QAM	100	0	17.78	17.77	17.85	
Channel				44665	45090	45515	Tune-up limit (dBm)
Frequency (MHz)				3707.5	3750	3792.5	
15	QPSK	1	0	22.85	22.90	22.97	
15	QPSK	1	37	22.74	22.86	22.91	24.5
15	QPSK	1	74	22.55	22.67	22.75	
15	QPSK	36	0	21.80	21.90	21.96	
15	QPSK	36	20	21.74	21.85	21.93	23.5
15	QPSK	36	39	21.75	21.83	21.94	
15	QPSK	75	0	21.74	21.85	21.89	
15	16QAM	1	0	21.73	21.95	22.00	23.5
15	16QAM	1	37	21.79	21.97	22.01	
15	16QAM	1	74	21.61	21.63	21.86	
15	16QAM	36	0	20.81	20.88	20.98	22.5
15	16QAM	36	20	20.75	20.88	20.98	
15	16QAM	36	39	20.76	20.82	20.90	
15	16QAM	75	0	20.77	20.83	20.94	22.5
15	64QAM	1	0	20.80	20.91	20.89	
15	64QAM	1	37	20.72	20.67	20.84	
15	64QAM	1	74	20.61	20.66	20.80	21.5
15	64QAM	36	0	19.76	19.89	19.95	
15	64QAM	36	20	19.75	19.82	19.92	
15	64QAM	36	39	19.75	19.80	19.89	19.5
15	64QAM	75	0	19.75	19.76	19.92	
15	256QAM	1	0	17.89	17.67	17.86	
15	256QAM	1	37	17.97	17.98	17.89	19.5
15	256QAM	1	74	17.81	17.78	17.78	
15	256QAM	36	0	17.80	17.76	17.84	
15	256QAM	36	20	17.78	17.66	17.83	19.5
15	256QAM	36	39	17.70	17.84	17.76	



FCC SAR TEST REPORT

Report No. : FA4D0509

15	256QAM	75	0	17.73	17.67	17.78	Tune-up limit (dBm)
Channel				44640	45090	45540	
Frequency (MHz)				3705	3750	3795	
10	QPSK	1	0	22.81	22.92	23.02	24.5
10	QPSK	1	25	22.69	22.86	22.89	
10	QPSK	1	49	22.55	22.66	22.75	
10	QPSK	25	0	21.79	21.90	21.97	23.5
10	QPSK	25	12	21.73	21.85	21.95	
10	QPSK	25	25	21.75	21.85	21.91	
10	QPSK	50	0	21.76	21.82	21.89	
10	16QAM	1	0	21.72	21.94	22.03	23.5
10	16QAM	1	25	21.79	21.97	21.97	
10	16QAM	1	49	21.60	21.68	21.84	
10	16QAM	25	0	20.79	20.90	20.99	22.5
10	16QAM	25	12	20.73	20.86	20.94	
10	16QAM	25	25	20.78	20.81	20.91	
10	16QAM	50	0	20.74	20.84	20.90	
10	64QAM	1	0	20.80	20.86	20.86	22.5
10	64QAM	1	25	20.72	20.67	20.87	
10	64QAM	1	49	20.63	20.71	20.77	
10	64QAM	25	0	19.80	19.94	19.99	21.5
10	64QAM	25	12	19.76	19.87	19.90	
10	64QAM	25	25	19.76	19.81	19.91	
10	64QAM	50	0	19.76	19.79	19.90	
10	256QAM	1	0	17.90	17.69	17.83	19.5
10	256QAM	1	25	17.95	17.99	17.89	
10	256QAM	1	49	17.77	17.81	17.82	
10	256QAM	25	0	17.82	17.73	17.83	19.5
10	256QAM	25	12	17.82	17.68	17.83	
10	256QAM	25	25	17.73	17.79	17.76	
10	256QAM	50	0	17.71	17.71	17.76	
Channel				44615	45090	45565	Tune-up limit (dBm)
Frequency (MHz)				3702.5	3750	3797.5	
5	QPSK	1	0	22.81	22.90	22.99	24.5
5	QPSK	1	12	22.73	22.87	22.91	
5	QPSK	1	24	22.56	22.66	22.74	
5	QPSK	12	0	21.79	21.91	21.99	23.5
5	QPSK	12	7	21.72	21.87	21.97	
5	QPSK	12	13	21.73	21.80	21.94	
5	QPSK	25	0	21.75	21.83	21.90	
5	16QAM	1	0	21.73	21.97	22.01	23.5
5	16QAM	1	12	21.80	22.00	21.96	
5	16QAM	1	24	21.59	21.68	21.84	
5	16QAM	12	0	20.84	20.90	21.00	22.5
5	16QAM	12	7	20.70	20.85	20.95	
5	16QAM	12	13	20.79	20.78	20.93	
5	16QAM	25	0	20.75	20.83	20.91	
5	64QAM	1	0	20.83	20.87	20.89	22.5
5	64QAM	1	12	20.72	20.71	20.85	
5	64QAM	1	24	20.66	20.67	20.81	
5	64QAM	12	0	19.76	19.92	19.95	21.5
5	64QAM	12	7	19.76	19.87	19.94	
5	64QAM	12	13	19.79	19.80	19.91	
5	64QAM	25	0	19.74	19.79	19.91	
5	256QAM	1	0	17.87	17.72	17.81	19.5
5	256QAM	1	12	17.96	17.94	17.91	
5	256QAM	1	24	17.79	17.82	17.78	
5	256QAM	12	0	17.79	17.77	17.80	19.5
5	256QAM	12	7	17.77	17.66	17.82	
5	256QAM	12	13	17.70	17.80	17.81	
5	256QAM	25	0	17.71	17.72	17.78	



<LTE Band 43_Ant MIMO2_Sensor OFF>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				44690	45090	45490	
Frequency (MHz)				3710	3750	3790	
20	QPSK	1	0	23.46	23.15	23.47	
20	QPSK	1	49	23.02	23.05	23.26	24.5
20	QPSK	1	99	23.00	23.00	23.21	
20	QPSK	50	0	22.70	22.74	22.91	
20	QPSK	50	24	22.57	22.72	22.87	23.5
20	QPSK	50	50	22.62	22.69	22.85	
20	QPSK	100	0	22.57	22.73	22.86	
20	16QAM	1	0	22.31	22.43	22.60	23.5
20	16QAM	1	49	22.25	22.37	22.56	
20	16QAM	1	99	22.26	22.33	22.52	
20	16QAM	50	0	21.73	21.78	21.95	22.5
20	16QAM	50	24	21.73	21.79	21.94	
20	16QAM	50	50	21.65	21.74	21.86	
20	16QAM	100	0	21.66	21.73	21.87	22.5
20	64QAM	1	0	21.57	21.66	21.81	
20	64QAM	1	49	21.47	21.54	21.72	
20	64QAM	1	99	21.42	21.54	21.70	21.5
20	64QAM	50	0	20.81	20.85	20.95	
20	64QAM	50	24	20.74	20.83	20.93	
20	64QAM	50	50	20.71	20.83	21.00	19.5
20	64QAM	100	0	20.79	20.86	20.91	
20	256QAM	1	0	18.68	18.77	18.92	
20	256QAM	1	49	18.60	18.71	18.90	19.5
20	256QAM	1	99	18.60	18.68	18.86	
20	256QAM	50	0	18.62	18.75	18.91	
20	256QAM	50	24	18.66	18.78	18.94	19.5
20	256QAM	50	50	18.55	18.65	18.86	
20	256QAM	100	0	18.62	18.74	18.87	
Channel				44665	45090	45515	Tune-up limit (dBm)
Frequency (MHz)				3707.5	3750	3792.5	
15	QPSK	1	0	23.31	22.95	23.35	
15	QPSK	1	37	22.89	22.89	23.06	24.5
15	QPSK	1	74	22.90	22.88	23.04	
15	QPSK	36	0	22.54	22.56	22.74	
15	QPSK	36	20	22.42	22.62	22.71	23.5
15	QPSK	36	39	22.52	22.58	22.67	
15	QPSK	75	0	22.37	22.55	22.70	
15	16QAM	1	0	22.17	22.29	22.49	23.5
15	16QAM	1	37	22.12	22.21	22.46	
15	16QAM	1	74	22.12	22.19	22.39	
15	16QAM	36	0	21.54	21.62	21.75	22.5
15	16QAM	36	20	21.56	21.59	21.84	
15	16QAM	36	39	21.46	21.64	21.70	
15	16QAM	75	0	21.52	21.61	21.74	22.5
15	64QAM	1	0	21.44	21.53	21.69	
15	64QAM	1	37	21.31	21.43	21.60	
15	64QAM	1	74	21.30	21.34	21.52	21.5
15	64QAM	36	0	20.61	20.71	20.80	
15	64QAM	36	20	20.55	20.64	20.76	
15	64QAM	36	39	20.52	20.68	20.81	19.5
15	64QAM	75	0	20.64	20.71	20.75	
15	256QAM	1	0	18.58	18.59	18.79	
15	256QAM	1	37	18.43	18.54	18.74	19.5
15	256QAM	1	74	18.44	18.51	18.75	
15	256QAM	36	0	18.46	18.57	18.78	
15	256QAM	36	20	18.56	18.66	18.77	19.5
15	256QAM	36	39	18.43	18.52	18.69	



FCC SAR TEST REPORT

Report No. : FA4D0509

15	256QAM	75	0	18.52	18.60	18.75	Tune-up limit (dBm)
Channel				44640	45090	45540	
Frequency (MHz)				3705	3750	3795	
10	QPSK	1	0	23.27	22.96	23.32	24.5
10	QPSK	1	25	22.86	22.91	23.09	
10	QPSK	1	49	22.87	22.90	23.06	
10	QPSK	25	0	22.51	22.60	22.74	23.5
10	QPSK	25	12	22.43	22.58	22.69	
10	QPSK	25	25	22.51	22.57	22.74	
10	QPSK	50	0	22.45	22.63	22.70	23.5
10	16QAM	1	0	22.21	22.27	22.50	
10	16QAM	1	25	22.13	22.25	22.38	
10	16QAM	1	49	22.10	22.21	22.38	22.5
10	16QAM	25	0	21.62	21.60	21.81	
10	16QAM	25	12	21.54	21.64	21.83	
10	16QAM	25	25	21.46	21.58	21.71	22.5
10	16QAM	50	0	21.46	21.57	21.72	
10	64QAM	1	0	21.38	21.54	21.66	
10	64QAM	1	25	21.36	21.37	21.52	22.5
10	64QAM	1	49	21.22	21.35	21.53	
10	64QAM	25	0	20.63	20.72	20.79	
10	64QAM	25	12	20.54	20.63	20.78	21.5
10	64QAM	25	25	20.58	20.68	20.83	
10	64QAM	50	0	20.67	20.69	20.76	
10	256QAM	1	0	18.49	18.59	18.75	19.5
10	256QAM	1	25	18.41	18.55	18.80	
10	256QAM	1	49	18.40	18.51	18.69	
10	256QAM	25	0	18.47	18.62	18.74	19.5
10	256QAM	25	12	18.50	18.62	18.83	
10	256QAM	25	25	18.38	18.54	18.67	
10	256QAM	50	0	18.52	18.60	18.71	Tune-up limit (dBm)
Channel				44615	45090	45565	
Frequency (MHz)				3702.5	3750	3797.5	
5	QPSK	1	0	23.36	22.96	23.28	24.5
5	QPSK	1	12	22.88	22.92	23.10	
5	QPSK	1	24	22.80	22.90	23.09	
5	QPSK	12	0	22.50	22.59	22.76	23.5
5	QPSK	12	7	22.42	22.53	22.72	
5	QPSK	12	13	22.43	22.56	22.66	
5	QPSK	25	0	22.38	22.54	22.72	23.5
5	16QAM	1	0	22.15	22.24	22.45	
5	16QAM	1	12	22.07	22.20	22.42	
5	16QAM	1	24	22.12	22.17	22.34	22.5
5	16QAM	12	0	21.63	21.63	21.85	
5	16QAM	12	7	21.61	21.69	21.76	
5	16QAM	12	13	21.47	21.60	21.71	22.5
5	16QAM	25	0	21.48	21.53	21.67	
5	64QAM	1	0	21.46	21.50	21.67	
5	64QAM	1	12	21.31	21.44	21.53	22.5
5	64QAM	1	24	21.24	21.41	21.58	
5	64QAM	12	0	20.67	20.68	20.80	
5	64QAM	12	7	20.57	20.65	20.78	21.5
5	64QAM	12	13	20.56	20.68	20.90	
5	64QAM	25	0	20.63	20.67	20.71	
5	256QAM	1	0	18.54	18.60	18.81	19.5
5	256QAM	1	12	18.42	18.58	18.76	
5	256QAM	1	24	18.41	18.54	18.70	
5	256QAM	12	0	18.45	18.57	18.79	19.5
5	256QAM	12	7	18.54	18.61	18.77	
5	256QAM	12	13	18.45	18.51	18.67	
5	256QAM	25	0	18.45	18.59	18.72	

**<LTE Band 48_Ant Main_Sensor OFF>**

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Low Middle Ch. / Freq.	Power High Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				55340	55830	56150	56640	
Frequency (MHz)				3560	3609	3641	3690	
20	QPSK	1	0	20.40	20.54	20.53	20.58	21.8
20	QPSK	1	49	20.38	20.53	20.47	20.56	
20	QPSK	1	99	20.31	20.44	20.33	20.39	
20	QPSK	50	0	19.44	19.58	19.58	19.63	20.8
20	QPSK	50	24	19.39	19.43	19.51	19.60	
20	QPSK	50	50	19.38	19.48	19.47	19.53	
20	QPSK	100	0	19.38	19.53	19.52	19.60	20.8
20	16QAM	1	0	19.38	19.61	19.65	19.64	
20	16QAM	1	49	19.34	19.54	19.52	19.50	
20	16QAM	1	99	19.31	19.45	19.40	19.43	19.8
20	16QAM	50	0	18.38	18.52	18.51	18.60	
20	16QAM	50	24	18.48	18.62	18.55	18.64	
20	16QAM	50	50	18.39	18.49	18.46	18.55	19.8
20	16QAM	100	0	18.40	18.52	18.51	18.57	
20	64QAM	1	0	18.36	18.57	18.47	18.53	
20	64QAM	1	49	18.36	18.50	18.44	18.50	19.8
20	64QAM	1	99	18.30	18.39	18.41	18.38	
20	64QAM	50	0	17.40	17.52	17.52	17.58	
20	64QAM	50	24	17.45	17.58	17.57	17.64	18.8
20	64QAM	50	50	17.37	17.47	17.44	17.54	
20	64QAM	100	0	17.41	17.52	17.51	17.58	
20	256QAM	1	0	15.49	15.69	15.87	15.67	16.8
20	256QAM	1	49	15.60	15.94	15.95	15.81	
20	256QAM	1	99	15.64	15.90	15.77	15.72	
20	256QAM	50	0	15.43	15.83	15.81	15.69	16.8
20	256QAM	50	24	15.53	15.86	15.83	15.67	
20	256QAM	50	50	15.50	15.85	15.74	15.62	
20	256QAM	100	0	15.54	15.74	15.75	15.63	Tune-up limit (dBm)
Channel				55315	55820	56160	56665	
Frequency (MHz)				3557.5	3608	3642	3692.5	
15	QPSK	1	0	20.31	20.47	20.47	20.50	21.8
15	QPSK	1	37	20.30	20.47	20.41	20.51	
15	QPSK	1	74	20.22	20.36	20.24	20.30	
15	QPSK	36	0	19.35	19.53	19.50	19.58	20.8
15	QPSK	36	20	19.34	19.35	19.44	19.50	
15	QPSK	36	39	19.30	19.41	19.38	19.44	
15	QPSK	75	0	19.29	19.47	19.47	19.53	20.8
15	16QAM	1	0	19.28	19.55	19.60	19.57	
15	16QAM	1	37	19.25	19.47	19.43	19.41	
15	16QAM	1	74	19.25	19.37	19.35	19.38	19.8
15	16QAM	36	0	18.31	18.45	18.41	18.55	
15	16QAM	36	20	18.42	18.53	18.50	18.56	
15	16QAM	36	39	18.34	18.41	18.40	18.46	19.8
15	16QAM	75	0	18.34	18.45	18.46	18.50	
15	64QAM	1	0	18.30	18.47	18.42	18.47	
15	64QAM	1	37	18.27	18.45	18.38	18.43	19.8
15	64QAM	1	74	18.20	18.30	18.31	18.31	
15	64QAM	36	0	17.35	17.43	17.43	17.53	
15	64QAM	36	20	17.39	17.52	17.48	17.57	18.8
15	64QAM	36	39	17.29	17.37	17.38	17.47	
15	64QAM	75	0	17.31	17.45	17.43	17.53	
15	256QAM	1	0	15.39	15.63	15.82	15.59	16.8
15	256QAM	1	37	15.54	15.88	15.88	15.72	
15	256QAM	1	74	15.57	15.82	15.71	15.62	
15	256QAM	36	0	15.34	15.74	15.71	15.62	16.8
15	256QAM	36	20	15.48	15.80	15.78	15.62	
15	256QAM	36	39	15.40	15.78	15.69	15.52	
15	256QAM	75	0	15.49	15.67	15.65	15.55	



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Channel				55290	55815	56165	56690	Tune-up limit (dBm)
Frequency (MHz)				3555	3607.5	3642.5	3695	
10	QPSK	1	0	20.31	20.45	20.43	20.50	21.8
10	QPSK	1	25	20.31	20.44	20.40	20.46	
10	QPSK	1	49	20.22	20.39	20.24	20.33	
10	QPSK	25	0	19.37	19.49	19.48	19.54	20.8
10	QPSK	25	12	19.33	19.36	19.44	19.55	
10	QPSK	25	25	19.33	19.43	19.39	19.43	
10	QPSK	50	0	19.31	19.44	19.42	19.52	20.8
10	16QAM	1	0	19.33	19.55	19.58	19.55	
10	16QAM	1	25	19.28	19.48	19.47	19.40	
10	16QAM	1	49	19.23	19.40	19.34	19.38	19.8
10	16QAM	25	0	18.32	18.46	18.41	18.52	
10	16QAM	25	12	18.43	18.53	18.49	18.56	
10	16QAM	25	25	18.32	18.39	18.39	18.46	19.8
10	16QAM	50	0	18.35	18.43	18.46	18.52	
10	64QAM	1	0	18.31	18.48	18.37	18.47	
10	64QAM	1	25	18.31	18.42	18.37	18.42	19.8
10	64QAM	1	49	18.22	18.34	18.31	18.33	
10	64QAM	25	0	17.34	17.45	17.43	17.49	
10	64QAM	25	12	17.37	17.50	17.52	17.59	18.8
10	64QAM	25	25	17.30	17.39	17.35	17.45	
10	64QAM	50	0	17.36	17.47	17.45	17.52	
10	256QAM	1	0	15.43	15.59	15.79	15.62	16.8
10	256QAM	1	25	15.50	15.89	15.90	15.71	
10	256QAM	1	49	15.57	15.81	15.72	15.62	
10	256QAM	25	0	15.37	15.76	15.74	15.62	16.8
10	256QAM	25	12	15.47	15.81	15.78	15.62	
10	256QAM	25	25	15.40	15.78	15.65	15.53	
10	256QAM	50	0	15.44	15.64	15.68	15.58	
Channel				55265	55810	56170	56715	Tune-up limit (dBm)
Frequency (MHz)				3552.5	3607	3643	3697.5	
5	QPSK	1	0	20.33	20.45	20.48	20.50	21.8
5	QPSK	1	12	20.32	20.45	20.40	20.47	
5	QPSK	1	24	20.23	20.36	20.25	20.33	
5	QPSK	12	0	19.38	19.49	19.52	19.55	20.8
5	QPSK	12	7	19.34	19.35	19.45	19.52	
5	QPSK	12	13	19.31	19.42	19.42	19.47	
5	QPSK	25	0	19.31	19.47	19.43	19.54	20.8
5	16QAM	1	0	19.28	19.51	19.59	19.57	
5	16QAM	1	12	19.25	19.47	19.42	19.40	
5	16QAM	1	24	19.26	19.36	19.33	19.35	19.8
5	16QAM	12	0	18.33	18.43	18.41	18.50	
5	16QAM	12	7	18.42	18.52	18.47	18.55	
5	16QAM	12	13	18.32	18.42	18.38	18.47	19.8
5	16QAM	25	0	18.31	18.47	18.42	18.47	
5	64QAM	1	0	18.30	18.47	18.41	18.48	
5	64QAM	1	12	18.26	18.40	18.35	18.40	19.8
5	64QAM	1	24	18.23	18.30	18.33	18.29	
5	64QAM	12	0	17.33	17.46	17.42	17.53	
5	64QAM	12	7	17.38	17.53	17.49	17.57	18.8
5	64QAM	12	13	17.29	17.39	17.38	17.47	
5	64QAM	25	0	17.36	17.45	17.44	17.53	
5	256QAM	1	0	15.42	15.61	15.78	15.60	16.8
5	256QAM	1	12	15.54	15.86	15.85	15.71	
5	256QAM	1	24	15.55	15.84	15.72	15.63	
5	256QAM	12	0	15.33	15.74	15.74	15.63	16.8
5	256QAM	12	7	15.45	15.76	15.77	15.57	
5	256QAM	12	13	15.45	15.80	15.64	15.55	
5	256QAM	25	0	15.46	15.66	15.68	15.53	



<LTE Band 48_Ant MIMO2_Sensor OFF>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Low Middle Ch. / Freq.	Power High Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				55340	55830	56150	56640	
Frequency (MHz)				3560	3609	3641	3690	
20	QPSK	1	0	20.91	20.78	20.84	20.77	21.8
20	QPSK	1	49	20.83	20.75	20.79	20.75	
20	QPSK	1	99	20.74	20.69	20.62	20.61	
20	QPSK	50	0	19.44	19.41	19.40	19.29	20.8
20	QPSK	50	24	19.43	19.37	19.32	19.34	
20	QPSK	50	50	19.39	19.28	19.35	19.28	
20	QPSK	100	0	19.41	19.29	19.32	19.26	20.8
20	16QAM	1	0	19.16	19.09	19.10	19.07	
20	16QAM	1	49	19.13	19.07	19.07	19.03	
20	16QAM	1	99	19.10	19.05	19.05	19.02	19.8
20	16QAM	50	0	18.45	18.41	18.42	18.38	
20	16QAM	50	24	18.43	18.37	18.33	18.36	
20	16QAM	50	50	18.38	18.31	18.26	18.25	19.8
20	16QAM	100	0	18.38	18.26	18.31	18.28	
20	64QAM	1	0	18.23	18.11	18.15	18.11	
20	64QAM	1	49	18.17	18.07	18.07	18.05	19.8
20	64QAM	1	99	18.21	18.11	18.19	18.12	
20	64QAM	50	0	17.53	17.48	17.49	17.47	
20	64QAM	50	24	17.52	17.43	17.40	17.45	18.8
20	64QAM	50	50	17.50	17.37	17.43	17.35	
20	64QAM	100	0	17.51	17.42	17.47	17.39	
20	256QAM	1	0	15.43	15.37	15.33	15.30	16.8
20	256QAM	1	49	15.42	15.34	15.31	15.31	
20	256QAM	1	99	15.38	15.35	15.31	15.22	
20	256QAM	50	0	15.44	15.33	15.38	15.38	16.8
20	256QAM	50	24	15.40	15.30	15.37	15.34	
20	256QAM	50	50	15.41	15.38	15.35	15.29	
20	256QAM	100	0	15.39	15.27	15.30	15.26	Tune-up limit (dBm)
Channel				55315	55820	56160	56665	
Frequency (MHz)				3557.5	3608	3642	3692.5	
15	QPSK	1	0	20.89	20.75	20.82	20.74	21.8
15	QPSK	1	37	20.81	20.74	20.77	20.73	
15	QPSK	1	74	20.73	20.66	20.61	20.59	
15	QPSK	36	0	19.41	19.40	19.38	19.26	20.8
15	QPSK	36	20	19.41	19.36	19.29	19.33	
15	QPSK	36	39	19.38	19.27	19.33	19.27	
15	QPSK	75	0	19.38	19.26	19.31	19.25	20.8
15	16QAM	1	0	19.14	19.08	19.08	19.06	
15	16QAM	1	37	19.10	19.05	19.06	19.01	
15	16QAM	1	74	19.09	19.04	19.04	19.00	19.8
15	16QAM	36	0	18.42	18.40	18.39	18.36	
15	16QAM	36	20	18.42	18.34	18.32	18.35	
15	16QAM	36	39	18.36	18.30	18.23	18.22	19.8
15	16QAM	75	0	18.36	18.24	18.30	18.25	
15	64QAM	1	0	18.21	18.10	18.12	18.10	
15	64QAM	1	37	18.16	18.05	18.06	18.04	19.8
15	64QAM	1	74	18.20	18.10	18.17	18.11	
15	64QAM	36	0	17.51	17.47	17.46	17.44	
15	64QAM	36	20	17.49	17.40	17.37	17.42	18.8
15	64QAM	36	39	17.49	17.36	17.40	17.32	
15	64QAM	75	0	17.48	17.41	17.46	17.38	
15	256QAM	1	0	15.41	15.34	15.30	15.28	16.8
15	256QAM	1	37	15.40	15.31	15.29	15.29	
15	256QAM	1	74	15.37	15.33	15.28	15.20	
15	256QAM	36	0	15.41	15.30	15.35	15.35	16.8
15	256QAM	36	20	15.38	15.28	15.35	15.33	
15	256QAM	36	39	15.39	15.36	15.34	15.28	



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15	256QAM	75	0	15.36	15.24	15.27	15.25	Tune-up limit (dBm)
Channel				55290	55815	56165	56690	
Frequency (MHz)				3555	3607.5	3642.5	3695	
10	QPSK	1	0	20.90	20.76	20.82	20.75	21.8
10	QPSK	1	25	20.80	20.72	20.77	20.72	
10	QPSK	1	49	20.73	20.66	20.59	20.58	
10	QPSK	25	0	19.41	19.40	19.38	19.27	20.8
10	QPSK	25	12	19.40	19.35	19.31	19.31	
10	QPSK	25	25	19.38	19.25	19.32	19.26	
10	QPSK	50	0	19.38	19.28	19.30	19.25	20.8
10	16QAM	1	0	19.13	19.07	19.09	19.06	
10	16QAM	1	25	19.11	19.05	19.06	19.02	
10	16QAM	1	49	19.09	19.03	19.04	19.00	19.8
10	16QAM	25	0	18.42	18.40	18.40	18.35	
10	16QAM	25	12	18.42	18.36	18.32	18.34	
10	16QAM	25	25	18.37	18.30	18.24	18.22	19.8
10	16QAM	50	0	18.35	18.24	18.29	18.25	
10	64QAM	1	0	18.20	18.08	18.13	18.10	
10	64QAM	1	25	18.15	18.05	18.06	18.03	19.8
10	64QAM	1	49	18.20	18.09	18.16	18.11	
10	64QAM	25	0	17.51	17.47	17.46	17.46	
10	64QAM	25	12	17.49	17.42	17.38	17.42	18.8
10	64QAM	25	25	17.47	17.36	17.42	17.34	
10	64QAM	50	0	17.50	17.40	17.45	17.38	
10	256QAM	1	0	15.41	15.35	15.31	15.29	16.8
10	256QAM	1	25	15.39	15.31	15.28	15.29	
10	256QAM	1	49	15.35	15.33	15.29	15.20	
10	256QAM	25	0	15.42	15.31	15.36	15.35	16.8
10	256QAM	25	12	15.39	15.27	15.36	15.33	
10	256QAM	25	25	15.38	15.36	15.32	15.26	
10	256QAM	50	0	15.37	15.25	15.27	15.23	Tune-up limit (dBm)
Channel				55265	55810	56170	56715	
Frequency (MHz)				3552.5	3607	3643	3697.5	
5	QPSK	1	0	20.90	20.75	20.82	20.75	21.8
5	QPSK	1	12	20.82	20.74	20.76	20.73	
5	QPSK	1	24	20.72	20.68	20.60	20.60	
5	QPSK	12	0	19.43	19.38	19.37	19.28	20.8
5	QPSK	12	7	19.42	19.36	19.30	19.31	
5	QPSK	12	13	19.38	19.26	19.32	19.25	
5	QPSK	25	0	19.40	19.28	19.29	19.23	20.8
5	16QAM	1	0	19.13	19.06	19.08	19.05	
5	16QAM	1	12	19.10	19.05	19.04	19.01	
5	16QAM	1	24	19.08	19.03	19.04	19.00	19.8
5	16QAM	12	0	18.43	18.40	18.41	18.36	
5	16QAM	12	7	18.40	18.34	18.32	18.35	
5	16QAM	12	13	18.36	18.29	18.25	18.23	19.8
5	16QAM	25	0	18.35	18.23	18.30	18.26	
5	64QAM	1	0	18.22	18.08	18.13	18.09	
5	64QAM	1	12	18.15	18.06	18.04	18.04	19.8
5	64QAM	1	24	18.20	18.09	18.16	18.09	
5	64QAM	12	0	17.52	17.45	17.47	17.46	
5	64QAM	12	7	17.51	17.40	17.37	17.44	18.8
5	64QAM	12	13	17.49	17.36	17.41	17.32	
5	64QAM	25	0	17.49	17.39	17.44	17.37	
5	256QAM	1	0	15.42	15.36	15.32	15.29	16.8
5	256QAM	1	12	15.41	15.32	15.29	15.28	
5	256QAM	1	24	15.37	15.32	15.30	15.19	
5	256QAM	12	0	15.42	15.32	15.35	15.36	16.8
5	256QAM	12	7	15.37	15.29	15.36	15.31	
5	256QAM	12	13	15.38	15.35	15.33	15.26	
5	256QAM	25	0	15.38	15.26	15.28	15.23	

12. UL/DL Carrier aggregation

<LTE DL Carrier Aggregation>

General Note:

1. According to 202410 TCB workshop, the downlink (DL) pertains to receiver functionality, thus it is not related to RF exposure compliance limits related to cumulative effects of different transmitters.
2. According to 202410 TCB workshop, equipment authorization applications shall refer to the worst-case UL powers resulting from all the possible modes of operations. Accordingly, CA-DL cases do not need to be analyzed separately, unless pertinent to establishing UL power setting.
3. This device supports LTE carrier aggregation in the downlink. All uplink maximum output power with downlink carrier aggregation active does not show more than ¼ dB higher than the maximum output power without downlink carrier aggregation active, therefore SAR evaluation with downlink carrier aggregation active can be excluded

<LTE UL carrier aggregation>

General Note:

1. The device supports intra-band uplink carrier aggregation with a maximum of two 20MHz component carriers. For intra band contiguous carrier aggregation scenarios, 3GPP 36.101 table 6.2.2A-1 specifies that the aggregate maximum allowed output power is equivalent to the single carrier scenario. 3GPP 36.101 6.2.3A allows for several dB of MPR to be applied when not-contiguous RB allocation is implemented. The conducted power and MPR setting in this device are permanently implemented pre 3GPP requirement.
2. The device supports uplink carrier aggregation with a maximum of two 20MHz component carriers. For intra band contiguous carrier aggregation scenarios, 3GPP 36.101 table 6.2.2A-1 specifies that the aggregate maximum allowed output power is equivalent to the single carrier scenario. 3GPP 36.101 6.2.3A allows for several dB of MPR to be applied when not-contiguous RB allocation is implemented. The conducted power and MPR setting in this device are permanently implemented pre the 3GPP requirement.
3. According TCB workshop, the output power with uplink CA active was measured for the configuration with the highest reported SAR with single carrier for each exposure condition. The power was measured with wideband signal integration over both component carriers.
4. According TCB workshop, the output power with uplink CA active was measured for the configuration with the highest reported SAR with single carrier for each exposure condition. The power was measured with wideband signal integration over both component carriers.
5. Additional SAR measurement for LTE UL CA whit other DL CA combinations active were not required since the maximum output power for this configuration was not > 0.25dB higher than the maximum output power for UL CA active.

2CC Uplink Carrier Aggregation	
Number	Combination
1	2C
2	7B
3	7C
4	66B
5	66C
6	38C
7	41C
8	42C
9	43C
10	48B
11	48C

Main Sensor OFF

CA_2C										
Combination 20MHz+20MHz (100RB+100RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dBm)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
18700	18898	QPSK	1	0	0	0	1	0	23.48	24.5
18900	18702	QPSK	1	0	0	0	1	0	23.59	24.5
19100	18902	QPSK	1	0	0	0	1	0	23.44	24.5

CA_7B										
Combination 15MHz+5MHz (75RB+25RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dBm)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
20825	20918	QPSK	1	0	0	0	1	0	23.19	24.5
21076	21169	QPSK	1	0	0	0	1	0	23.28	24.5
21327	21420	QPSK	1	0	0	0	1	0	23.15	24.5

CA_7C										
Combination 20MHz+20MHz (100RB+100RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dBm)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
20850	21048	QPSK	1	0	0	0	1	0	23.19	24.5
21100	20902	QPSK	1	0	0	0	1	0	23.29	24.5
21350	21152	QPSK	1	0	0	0	1	0	23.13	24.5

CA_66B										
Combination 15MHz+5MHz (75RB+25RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dBm)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
132047	132140	QPSK	1	0	0	0	1	0	23.18	24.5
132322	132229	QPSK	1	0	0	0	1	0	23.11	24.5
132597	132504	QPSK	1	0	0	0	1	0	23.22	24.5

CA_66C										
Combination 20MHz+20MHz (100RB+100RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dBm)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
132072	132270	QPSK	1	0	0	0	1	0	23.19	24.5
132322	132124	QPSK	1	0	0	0	1	0	23.1	24.5
132572	132374	QPSK	1	0	0	0	1	0	23.25	24.5

CA_38C										
Combination 20MHz+20MHz (100RB+100RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dBm)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
37850	38048	QPSK	1	0	0	0	1	0	22.91	24.5
37901	38099	QPSK	1	0	0	0	1	0	22.83	24.5
38150	37952	QPSK	1	0	0	0	1	0	22.81	24.5

CA_41C										
Combination 20MHz+20MHz (100RB+100RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dBm)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
39750	39948	QPSK	1	0	0	0	1	0	23.35	25
40185	39987	QPSK	1	0	0	0	1	0	23.07	25
40620	40422	QPSK	1	0	0	0	1	0	23.18	25
41055	40857	QPSK	1	0	0	0	1	0	23.1	25
41490	41292	QPSK	1	0	0	0	1	0	23.13	25

CA_42C										
Combination 20MHz+20MHz (100RB+100RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dBm)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
42190	42388	QPSK	1	0	0	0	1	0	22.51	24
42590	42788	QPSK	1	0	0	0	1	0	22.76	24
42990	42792	QPSK	1	0	0	0	1	0	22.81	24

CA_43C										
Combination 20MHz+20MHz (100RB+100RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dBm)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
44690	44888	QPSK	1	0	0	0	1	0	22.89	24.5
45090	44689	QPSK	1	0	0	0	1	0	22.93	24.5
45490	45292	QPSK	1	0	0	0	1	0	22.99	24.5

CA_48B										
Combination 10MHz+10MHz (50RB+50RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dBm)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
55340	55439	QPSK	1	0	0	0	1	0	20.33	21.8
55830	55731	QPSK	1	0	0	0	1	0	20.4	21.8
56150	56051	QPSK	1	0	0	0	1	0	20.41	21.8
56640	56441	QPSK	1	0	0	0	1	0	20.46	21.8

CA_48C										
Combination 20MHz+20MHz (100RB+100RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dBm)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
55340	55538	QPSK	1	0	0	0	1	0	20.35	21.8
55830	55632	QPSK	1	0	0	0	1	0	20.37	21.8
56150	55952	QPSK	1	0	0	0	1	0	20.42	21.8
56640	56442	QPSK	1	0	0	0	1	0	20.39	21.8

MIMO2 Sensor OFF

CA_7B										
Combination 15MHz+5MHz (75RB+25RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dBm)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
20825	20918	QPSK	1	0	0	0	1	0	23.29	24.5
21076	21169	QPSK	1	0	0	0	1	0	23.47	24.5
21327	21420	QPSK	1	0	0	0	1	0	23.01	24.5

CA_7C										
Combination 20MHz+20MHz (100RB+100RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dBm)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
20850	21048	QPSK	1	0	0	0	1	0	23.38	24.5
21100	20902	QPSK	1	0	0	0	1	0	23.51	24.5
21350	21152	QPSK	1	0	0	0	1	0	22.95	24.5

CA_66B										
Combination 15MHz+5MHz (75RB+25RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dBm)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
132047	132140	QPSK	1	0	0	0	1	0	23.53	24.5
132322	132229	QPSK	1	0	0	0	1	0	23.61	24.5
132597	132504	QPSK	1	0	0	0	1	0	23.48	24.5

CA_66C										
Combination 20MHz+20MHz (100RB+100RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dBm)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
132072	132270	QPSK	1	0	0	0	1	0	23.51	24.5
132322	132124	QPSK	1	0	0	0	1	0	23.6	24.5
132572	132374	QPSK	1	0	0	0	1	0	23.47	24.5

CA_38C										
Combination 20MHz+20MHz (100RB+100RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dBm)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
37850	38048	QPSK	1	0	0	0	1	0	23.11	24.5
37901	38099	QPSK	1	0	0	0	1	0	22.93	24.5
38150	37952	QPSK	1	0	0	0	1	0	22.85	24.5

CA_41C										
Combination 20MHz+20MHz (100RB+100RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dBm)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
39750	39948	QPSK	1	0	0	0	1	0	23.3	25
40185	39987	QPSK	1	0	0	0	1	0	23.24	25
40620	40422	QPSK	1	0	0	0	1	0	22.97	25
41055	40857	QPSK	1	0	0	0	1	0	22.91	25
41490	41292	QPSK	1	0	0	0	1	0	23.15	25

CA_42C										
Combination 20MHz+20MHz (100RB+100RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dBm)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
42190	42388	QPSK	1	0	0	0	1	0	23.09	24.5
42590	42788	QPSK	1	0	0	0	1	0	22.95	24.5
42990	42792	QPSK	1	0	0	0	1	0	22.97	24.5

CA_43C										
Combination 20MHz+20MHz (100RB+100RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dBm)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
44690	44888	QPSK	1	0	0	0	1	0	23.35	24.5
45090	44689	QPSK	1	0	0	0	1	0	23.08	24.5
45490	45292	QPSK	1	0	0	0	1	0	23.4	24.5

CA_48B										
Combination 10MHz+10MHz (50RB+50RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dBm)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
55340	55439	QPSK	1	0	0	0	1	0	20.75	21.8
55830	55731	QPSK	1	0	0	0	1	0	20.59	21.8
56150	56051	QPSK	1	0	0	0	1	0	20.63	21.8
56640	56441	QPSK	1	0	0	0	1	0	20.55	21.8

CA_48C										
Combination 20MHz+20MHz (100RB+100RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dBm)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
55340	55538	QPSK	1	0	0	0	1	0	20.77	21.8
55830	55632	QPSK	1	0	0	0	1	0	20.6	21.8
56150	55952	QPSK	1	0	0	0	1	0	20.62	21.8
56640	56442	QPSK	1	0	0	0	1	0	20.51	21.8

MIMO2 Sensor ON

CA_42C										
Combination 20MHz+20MHz (100RB+100RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dBm)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
42190	42388	QPSK	1	0	0	0	1	0	21.34	22
42590	42788	QPSK	1	0	0	0	1	0	21.11	22
42990	42792	QPSK	1	0	0	0	1	0	21.02	22

13. 5G NR Output Power (Unit: dBm)

General Note:

1. Referencing the procedure in KDB 941225, the test procedures are outlined as below
 - a. For DFT-OFDM output power measurement, full measurement was done for PI/2 BPSK and QPSK and for the largest supported bandwidth, repeat test for 16QAM/64QAM/256QAM under 1RB 1Offset configuration. For smaller bandwidth, measure conducted power for PI/2 BPSK and 1RB 1Offset configuration.
 - b. According to the tune-up, CP-OFDM output power is not ½ dB higher than DFT-OFDM mode, and the reported SAR of DFT-OFDM mode reported SAR is ≤ 1.45 W/kg, SAR test and thus conducted power for CP-OFDM mode is not required.
 - c. To start SAR test for the largest channel bandwidth for PI/2 BPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel. Also do SAR test for 50% RB allocation for PI/2 BPSK SAR testing using 1RB PI/2 BPSK allocation procedure
 - d. For PI/2 BPSK with 100% RB allocation, SAR test is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.
 - e. For higher modulation QPSK/16QAM/64QAM/256QAM, according to tune-up document the power level is not ½ dB higher than the same configuration in PI/2 BPSK, also reported SAR for the PI/2 BPSK configuration is less than 1.45 W/kg, QPSK/16QAM/64QAM/256QAM SAR testing are not required.
 - f. Smaller bandwidth output power for each RB allocation configuration for this device is not ½ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg, smaller bandwidth SAR testing is not required for this device
2. Due to test setup limitations, SAR testing for NR TDD Power class 3 was performed using Factory Test Mode software to establish the connection and perform SAR with 100% transmission. For NR TDD power class2 was performed using Factory Test Mode software to establish the connection and perform SAR with 50% transmission.
3. For NR FDD was establishing connections via a base station simulator to use for output power measurement and SAR testing

<3GPP 38.101 MPR for EN-DC>
Table 6.2.2-1 Maximum power reduction (MPR) for power class 3

Modulation		MPR (dB)		
		Edge RB allocations	Outer RB allocations	Inner RB allocations
DFT-s-OFDM	Pi/2 BPSK	$\leq 3.5^1$	$\leq 1.2^1$	$\leq 0.2^1$
		$\leq 0.5^2$	$\leq 0.5^2$	0 ²
	QPSK	≤ 1		0
	16 QAM	≤ 2		≤ 1
	64 QAM	≤ 2.5		
CP-OFDM	256 QAM	≤ 4.5		
	QPSK	≤ 3		≤ 1.5
	16 QAM	≤ 3		≤ 2
	64 QAM	≤ 3.5		
	256 QAM	≤ 6.5		

NOTE 1: Applicable for UE operating in TDD mode with Pi/2 BPSK modulation and UE indicates support for UE capability *powerBoosting-pi2BPSK* and if the IE *powerBoostPi2BPSK* is set to 1 and 40 % or less slots in radio frame are used for UL transmission for bands n40, n41, n77, n78 and n79. The reference power of 0 dB MPR is 26 dBm.

NOTE 2: Applicable for UE operating in FDD mode, or in TDD mode in bands other than n40, n41, n77, n78 and n79 with Pi/2 BPSK modulation and if the IE *powerBoostPi2BPSK* is set to 0 and if more than 40 % of slots in radio frame are used for UL transmission for bands n40, n41, n77, n78 and n79.

Table 6.2.2-2 Maximum power reduction (MPR) for power class 2

Modulation		MPR (dB)		
		Edge RB allocations	Outer RB allocations	Inner RB allocations
DFT-s-OFDM	Pi/2 BPSK	≤ 3.5	≤ 0.5	0
	QPSK	≤ 3.5	≤ 1	0
	16 QAM	≤ 3.5	≤ 2	≤ 1
	64 QAM	≤ 3.5	≤ 2.5	
	256 QAM	≤ 4.5		
CP-OFDM	QPSK	≤ 3.5	≤ 3	≤ 1.5
	16 QAM	≤ 3.5	≤ 3	≤ 2
	64 QAM	≤ 3.5		
	256 QAM	≤ 6.5		



<FR1 n2_Ant Main_Sensor OFF>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				373500	376000	378500	24.6
Frequency (MHz)				1867.5	1880	1892.5	
35	PI/2 BPSK	1	1	23.68	23.71	23.66	
35	PI/2 BPSK	1	90	23.44	23.57	23.43	24.1
35	PI/2 BPSK	1	186	23.46	23.57	23.33	
35	PI/2 BPSK	90	0	23.11	23.17	23.01	
35	PI/2 BPSK	90	45	23.47	23.58	23.38	24.1
35	PI/2 BPSK	90	90	23.09	23.18	23.04	
35	PI/2 BPSK	180	0	23.11	23.26	23.05	
35	QPSK	1	1	23.50	23.59	23.39	24.6
35	QPSK	1	90	23.43	23.56	23.40	
35	QPSK	1	186	23.42	23.55	23.40	
35	QPSK	90	0	22.58	22.67	22.47	23.6
35	QPSK	90	45	23.37	23.50	23.31	24.6
35	QPSK	90	90	22.59	22.71	22.50	23.6
35	QPSK	180	0	22.70	22.76	22.58	
35	16QAM	1	1	22.59	22.71	22.50	
35	64QAM	1	1	21.11	21.26	21.05	22.1
35	256QAM	1	1	19.08	19.21	19.04	20.1
Channel				373000	376000	379000	24.6
Frequency (MHz)				1865	1880	1895	
30	PI/2 BPSK	1	1	23.42	23.41	23.40	
Channel				372500	376000	379500	24.6
Frequency (MHz)				1862.5	1880	1897.5	
25	PI/2 BPSK	1	1	23.41	23.42	23.39	
Channel				372000	376000	380000	24.6
Frequency (MHz)				1860	1880	1900	
20	PI/2 BPSK	1	1	23.35	23.40	23.35	
Channel				371500	376000	380500	24.6
Frequency (MHz)				1857.5	1880	1902.5	
15	PI/2 BPSK	1	1	23.42	23.41	23.39	
Channel				371000	376000	381000	24.6
Frequency (MHz)				1855	1880	1905	
10	PI/2 BPSK	1	1	23.35	23.33	23.36	
Channel				370500	376000	381500	24.6
Frequency (MHz)				1852.5	1880	1907.5	
5	PI/2 BPSK	1	1	23.41	23.39	23.41	



<FR1 n2_Ant MIMO2_Sensor OFF>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				373500	376000	378500	24.6
Frequency (MHz)				1867.5	1880	1892.5	
35	PI/2 BPSK	1	1	23.34	23.47	23.61	
35	PI/2 BPSK	1	90	23.26	23.31	23.38	24.1
35	PI/2 BPSK	1	186	23.29	23.27	23.36	
35	PI/2 BPSK	90	0	22.64	22.76	22.78	
35	PI/2 BPSK	90	45	23.29	23.34	23.38	24.1
35	PI/2 BPSK	90	90	22.72	22.71	22.81	
35	PI/2 BPSK	180	0	22.72	22.77	22.84	
35	QPSK	1	1	23.17	23.23	23.34	24.6
35	QPSK	1	90	23.21	23.21	23.29	
35	QPSK	1	186	23.17	23.21	23.24	
35	QPSK	90	0	22.13	22.17	22.28	23.6
35	QPSK	90	45	23.20	23.21	23.31	24.6
35	QPSK	90	90	22.19	22.19	22.26	23.6
35	QPSK	180	0	22.20	22.35	22.37	
35	16QAM	1	1	22.11	22.09	22.20	
35	64QAM	1	1	20.57	20.67	20.70	22.1
35	256QAM	1	1	18.50	18.66	18.67	20.1
Channel				373000	376000	379000	24.6
Frequency (MHz)				1865	1880	1895	
30	PI/2 BPSK	1	1	23.30	23.41	23.56	
Channel				372500	376000	379500	24.6
Frequency (MHz)				1862.5	1880	1897.5	
25	PI/2 BPSK	1	1	23.26	23.43	23.56	
Channel				372000	376000	380000	24.6
Frequency (MHz)				1860	1880	1900	
20	PI/2 BPSK	1	1	23.32	23.39	23.55	
Channel				371500	376000	380500	24.6
Frequency (MHz)				1857.5	1880	1902.5	
15	PI/2 BPSK	1	1	23.30	23.47	23.56	
Channel				371000	376000	381000	24.6
Frequency (MHz)				1855	1880	1905	
10	PI/2 BPSK	1	1	23.32	23.42	23.59	
Channel				370500	376000	381500	24.6
Frequency (MHz)				1852.5	1880	1907.5	
5	PI/2 BPSK	1	1	23.29	23.38	23.60	



<FR1 n5_Ant Main_Sensor OFF>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				166800	167300	167800	
Frequency (MHz)				834	836.5	839	
20	PI/2 BPSK	1	1	23.17	23.21	23.19	
20	PI/2 BPSK	1	53	22.95	23.05	22.83	24.5
20	PI/2 BPSK	1	104	22.82	23.00	22.76	
20	PI/2 BPSK	50	0	22.77	22.95	22.81	
20	PI/2 BPSK	50	28	23.37	23.53	23.35	24.5
20	PI/2 BPSK	50	56	22.82	22.96	22.78	24.0
20	PI/2 BPSK	100	0	22.82	22.96	22.76	
20	QPSK	1	1	23.37	23.52	23.30	
20	QPSK	1	53	23.23	23.41	23.26	24.5
20	QPSK	1	104	23.33	23.51	23.31	
20	QPSK	50	0	22.32	22.42	22.26	
20	QPSK	50	28	23.32	23.45	23.29	24.5
20	QPSK	50	56	22.28	22.46	22.29	23.5
20	QPSK	100	0	22.34	22.44	22.26	
20	16QAM	1	1	22.31	22.44	22.23	
20	64QAM	1	1	20.91	21.06	20.83	22.0
20	256QAM	1	1	18.84	18.97	18.78	20.0
Channel				166300	167300	168300	Tune-up limit (dBm)
Frequency (MHz)				831.5	836.5	841.5	
15	PI/2 BPSK	1	1	23.31	23.31	23.36	
Channel				165800	167300	168800	Tune-up limit (dBm)
Frequency (MHz)				829	836.5	844	
10	PI/2 BPSK	1	1	23.41	23.40	23.34	
Channel				165300	167300	169300	Tune-up limit (dBm)
Frequency (MHz)				826.5	836.5	846.5	
5	PI/2 BPSK	1	1	23.36	23.31	23.33	



<FR1 n7_Ant Main_Sensor OFF>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				504000	507000	510000	
Frequency (MHz)				2520	2535	2550	
40	PI/2 BPSK	1	1	23.38	23.47	23.40	
40	PI/2 BPSK	1	108	23.07	23.36	23.32	24.5
40	PI/2 BPSK	1	214	23.05	23.31	23.24	
40	PI/2 BPSK	108	0	23.06	23.28	23.19	
40	PI/2 BPSK	108	54	23.20	23.45	23.34	24.5
40	PI/2 BPSK	108	108	22.83	23.08	22.98	24.0
40	PI/2 BPSK	216	0	22.88	23.11	23.03	
40	QPSK	1	1	23.27	23.28	23.38	
40	QPSK	1	108	23.04	23.34	23.22	24.5
40	QPSK	1	214	22.99	23.23	23.16	
40	QPSK	108	0	22.51	22.79	22.71	
40	QPSK	108	54	23.12	23.42	23.38	24.5
40	QPSK	108	108	22.35	22.58	22.45	23.5
40	QPSK	216	0	22.36	22.59	22.47	
40	16QAM	1	1	22.49	22.73	22.68	
40	64QAM	1	1	21.02	21.25	21.12	22.0
40	256QAM	1	1	18.97	19.26	19.12	20.0
Channel				503500	507000	510500	Tune-up limit (dBm)
Frequency (MHz)				2517.5	2535	2552.5	
35	PI/2 BPSK	1	1	23.29	23.41	23.33	
Channel				503000	507000	511000	Tune-up limit (dBm)
Frequency (MHz)				2515	2535	2555	
30	PI/2 BPSK	1	1	23.33	23.41	23.35	
Channel				502500	507000	511500	Tune-up limit (dBm)
Frequency (MHz)				2512.5	2535	2557.5	
25	PI/2 BPSK	1	1	23.33	23.38	23.32	
Channel				502000	507000	512000	Tune-up limit (dBm)
Frequency (MHz)				2510	2535	2560	
20	PI/2 BPSK	1	1	23.28	23.40	23.31	
Channel				501500	507000	512500	Tune-up limit (dBm)
Frequency (MHz)				2507.5	2535	2562.5	
15	PI/2 BPSK	1	1	23.33	23.40	23.30	
Channel				501000	507000	513000	Tune-up limit (dBm)
Frequency (MHz)				2505	2535	2565	
10	PI/2 BPSK	1	1	23.31	23.37	23.35	
Channel				500500	507000	513500	Tune-up limit (dBm)
Frequency (MHz)				2502.5	2535	2567.5	
5	PI/2 BPSK	1	1	23.28	23.40	23.33	



<FR1 n7_Ant MIMO2_Sensor OFF>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				504000	507000	510000	
Frequency (MHz)				2520	2535	2550	
40	PI/2 BPSK	1	1	23.41	23.45	23.15	
40	PI/2 BPSK	1	108	23.00	23.10	23.01	24.5
40	PI/2 BPSK	1	214	22.78	22.86	22.75	
40	PI/2 BPSK	108	0	22.72	22.77	22.70	24.0
40	PI/2 BPSK	108	54	23.04	23.10	22.98	24.5
40	PI/2 BPSK	108	108	22.39	22.48	22.40	24.0
40	PI/2 BPSK	216	0	22.43	22.53	22.40	
40	QPSK	1	1	23.28	23.37	23.30	24.5
40	QPSK	1	108	22.89	22.97	22.84	
40	QPSK	1	214	22.77	22.86	22.79	
40	QPSK	108	0	22.23	22.24	22.14	23.5
40	QPSK	108	54	23.02	23.07	22.94	24.5
40	QPSK	108	108	21.88	21.94	21.81	23.5
40	QPSK	216	0	21.99	22.06	22.00	
40	16QAM	1	1	22.34	22.35	22.24	23.5
40	64QAM	1	1	20.76	20.85	20.81	22.0
40	256QAM	1	1	18.83	18.87	18.75	20.0
Channel				503500	507000	510500	Tune-up limit (dBm)
Frequency (MHz)				2517.5	2535	2552.5	
35	PI/2 BPSK	1	1	23.36	23.40	23.12	24.5
Channel				503000	507000	511000	Tune-up limit (dBm)
Frequency (MHz)				2515	2535	2555	
30	PI/2 BPSK	1	1	23.37	23.35	23.12	24.5
Channel				502500	507000	511500	Tune-up limit (dBm)
Frequency (MHz)				2512.5	2535	2557.5	
25	PI/2 BPSK	1	1	23.37	23.35	23.05	24.5
Channel				502000	507000	512000	Tune-up limit (dBm)
Frequency (MHz)				2510	2535	2560	
20	PI/2 BPSK	1	1	23.32	23.44	23.15	24.5
Channel				501500	507000	512500	Tune-up limit (dBm)
Frequency (MHz)				2507.5	2535	2562.5	
15	PI/2 BPSK	1	1	23.38	23.39	23.15	24.5
Channel				501000	507000	513000	Tune-up limit (dBm)
Frequency (MHz)				2505	2535	2565	
10	PI/2 BPSK	1	1	23.39	23.40	23.09	24.5
Channel				500500	507000	513500	Tune-up limit (dBm)
Frequency (MHz)				2502.5	2535	2567.5	
5	PI/2 BPSK	1	1	23.35	23.36	23.10	24.5

<FR1 n12_Ant Main_Sensor OFF>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				141300	141500	141700	
Frequency (MHz)				706.5	707.5	708.5	
15	PI/2 BPSK	1	1	23.31	23.37	23.34	
15	PI/2 BPSK	1	40	23.18	23.31	23.21	24.5
15	PI/2 BPSK	1	77	23.19	23.32	23.19	
15	PI/2 BPSK	36	0	23.19	23.29	23.20	
15	PI/2 BPSK	36	22	23.26	23.34	23.18	24.5
15	PI/2 BPSK	36	43	23.19	23.29	23.13	24.0
15	PI/2 BPSK	75	0	23.18	23.31	23.18	
15	QPSK	1	1	23.25	23.25	23.27	
15	QPSK	1	40	23.23	23.29	23.10	24.5
15	QPSK	1	77	23.22	23.31	23.16	
15	QPSK	36	0	22.77	22.87	22.77	
15	QPSK	36	22	23.17	23.21	23.12	24.5
15	QPSK	36	43	22.77	22.81	22.70	23.5
15	QPSK	75	0	22.73	22.82	22.73	
15	16QAM	1	1	22.81	22.94	22.76	
15	64QAM	1	1	21.35	21.44	21.25	22.0
	256QAM	1	1	19.31	19.39	19.28	20.0
Channel				140800	141500	142200	Tune-up limit (dBm)
Frequency (MHz)				704	707.5	711	
10	PI/2 BPSK	1	1	23.25	23.28	23.29	
Channel				140300	141500	142700	Tune-up limit (dBm)
Frequency (MHz)				701.5	707.5	713.5	
5	PI/2 BPSK	1	1	23.21	23.28	23.28	

<FR1 n13_Ant Main_Sensor OFF>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					156400		
Frequency (MHz)					782		
10	PI/2 BPSK	1	1		23.24		
10	PI/2 BPSK	1	26		23.18		24.5
10	PI/2 BPSK	1	50		23.15		
10	PI/2 BPSK	25	0		22.89		
10	PI/2 BPSK	25	14		23.23		24.5
10	PI/2 BPSK	25	27		22.88		24.0
10	PI/2 BPSK	50	0		22.87		
10	QPSK	1	1		23.20		
10	QPSK	1	26		23.17		24.5
10	QPSK	1	50		23.09		
10	QPSK	25	0		22.31		
10	QPSK	25	14		22.76		24.5
10	QPSK	25	27		22.43		23.5
10	QPSK	50	0		22.36		
10	16QAM	1	1		22.26		
10	64QAM	1	1		20.82		22.0
10	256QAM	1	1		18.85		20.0
Channel				155900	156400	156900	Tune-up limit (dBm)
Frequency (MHz)				779.5	782	784.5	
5	PI/2 BPSK	1	1	23.22	23.21	23.15	



<FR1 n14_Ant Main_Sensor OFF>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					158600		
Frequency (MHz)					793		
10	PI/2 BPSK	1	1		23.40		24.5
10	PI/2 BPSK	1	26		23.00		
10	PI/2 BPSK	1	50		22.98		
10	PI/2 BPSK	25	0		22.99		24.0
10	PI/2 BPSK	25	14		23.17		24.5
10	PI/2 BPSK	25	27		22.92		24.0
10	PI/2 BPSK	50	0		22.97		
10	QPSK	1	1		23.06		24.5
10	QPSK	1	26		22.89		
10	QPSK	1	50		22.95		
10	QPSK	25	0		22.56		23.5
10	QPSK	25	14		22.91		24.5
10	QPSK	25	27		22.49		23.5
10	QPSK	50	0		22.52		
10	16QAM	1	1		22.55		23.5
10	64QAM	1	1		21.04		22.0
10	256QAM	1	1		19.07		20.0
Channel				158100	158600	159100	Tune-up limit (dBm)
Frequency (MHz)				790.5	793	795.5	
5	PI/2 BPSK	1	1	23.20	23.27	23.16	24.5



<FR1 n25_Ant Main_Sensor OFF>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				374000	376500	379000	24.6
Frequency (MHz)				1870	1882.5	1895	
40	PI/2 BPSK	1	1	23.75	23.80	23.77	
40	PI/2 BPSK	1	108	23.59	23.71	23.62	24.1
40	PI/2 BPSK	1	214	23.41	23.59	23.47	
40	PI/2 BPSK	108	0	23.11	23.31	23.24	
40	PI/2 BPSK	108	54	23.50	23.68	23.53	24.1
40	PI/2 BPSK	108	108	23.11	23.28	23.18	
40	PI/2 BPSK	216	0	23.14	23.30	23.16	
40	QPSK	1	1	23.51	23.68	23.60	24.6
40	QPSK	1	108	23.47	23.62	23.55	
40	QPSK	1	214	23.45	23.61	23.54	
40	QPSK	108	0	22.61	22.76	22.68	24.6
40	QPSK	108	54	23.40	23.58	23.46	
40	QPSK	108	108	22.65	22.81	22.73	
40	QPSK	216	0	22.62	22.82	22.74	23.6
40	16QAM	1	1	22.66	22.79	22.65	
40	64QAM	1	1	21.04	21.23	21.18	
40	256QAM	1	1	19.03	19.18	19.06	20.1
Channel				373500	376500	379500	Tune-up limit (dBm)
Frequency (MHz)				1867.5	1882.5	1897.5	
35	PI/2 BPSK	1	1	23.67	23.70	23.70	24.6
Channel				373000	376500	380000	Tune-up limit (dBm)
Frequency (MHz)				1865	1882.5	1900	
30	PI/2 BPSK	1	1	23.67	23.70	23.68	24.6
Channel				372500	376500	380500	Tune-up limit (dBm)
Frequency (MHz)				1862.5	1882.5	1902.5	
25	PI/2 BPSK	1	1	23.70	23.75	23.69	24.6
Channel				372000	376500	381000	Tune-up limit (dBm)
Frequency (MHz)				1860	1882.5	1905	
20	PI/2 BPSK	1	1	23.68	23.70	23.68	24.6
Channel				371500	376500	381500	Tune-up limit (dBm)
Frequency (MHz)				1857.5	1882.5	1907.5	
15	PI/2 BPSK	1	1	23.69	23.73	23.67	24.6
Channel				371000	376500	382000	Tune-up limit (dBm)
Frequency (MHz)				1855	1882.5	1910	
10	PI/2 BPSK	1	1	23.67	23.73	23.71	24.6
Channel				370500	376500	382500	Tune-up limit (dBm)
Frequency (MHz)				1852.5	1882.5	1912.5	
5	PI/2 BPSK	1	1	23.66	23.72	23.70	24.6

<FR1 n25_Ant MIMO2_Sensor OFF>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				374000	376500	379000	24.6
Frequency (MHz)				1870	1882.5	1895	
40	PI/2 BPSK	1	1	23.88	23.95	23.85	
40	PI/2 BPSK	1	108	23.61	23.76	23.58	24.1
40	PI/2 BPSK	1	214	23.72	23.80	23.60	
40	PI/2 BPSK	108	0	23.07	23.20	22.99	
40	PI/2 BPSK	108	54	23.61	23.72	23.53	24.1
40	PI/2 BPSK	108	108	23.16	23.26	23.07	
40	PI/2 BPSK	216	0	23.03	23.18	23.03	
40	QPSK	1	1	23.61	23.72	23.53	24.6
40	QPSK	1	108	23.57	23.70	23.46	
40	QPSK	1	214	23.61	23.72	23.57	
40	QPSK	108	0	22.49	22.64	22.47	24.6
40	QPSK	108	54	23.60	23.67	23.53	
40	QPSK	108	108	22.53	22.67	22.45	
40	QPSK	216	0	22.62	22.72	22.55	23.6
40	16QAM	1	1	22.48	22.55	22.39	
40	64QAM	1	1	21.00	21.07	20.89	
40	256QAM	1	1	18.92	19.07	18.92	20.1
Channel				373500	376500	379500	24.6
Frequency (MHz)				1867.5	1882.5	1897.5	
35	PI/2 BPSK	1	1	23.87	23.91	23.84	
Channel				373000	376500	380000	24.6
Frequency (MHz)				1865	1882.5	1900	
30	PI/2 BPSK	1	1	23.86	23.91	23.85	
Channel				372500	376500	380500	24.6
Frequency (MHz)				1862.5	1882.5	1902.5	
25	PI/2 BPSK	1	1	23.87	23.94	23.83	
Channel				372000	376500	381000	24.6
Frequency (MHz)				1860	1882.5	1905	
20	PI/2 BPSK	1	1	23.81	23.86	23.85	
Channel				371500	376500	381500	24.6
Frequency (MHz)				1857.5	1882.5	1907.5	
15	PI/2 BPSK	1	1	23.87	23.94	23.85	
Channel				371000	376500	382000	24.6
Frequency (MHz)				1855	1882.5	1910	
10	PI/2 BPSK	1	1	23.82	23.90	23.83	
Channel				370500	376500	382500	24.6
Frequency (MHz)				1852.5	1882.5	1912.5	
5	PI/2 BPSK	1	1	23.81	23.90	23.77	



<FR1 n26_Ant Main_Sensor OFF>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				164800	166300	167800	
Frequency (MHz)				824	831.5	839	
20	PI/2 BPSK	1	1	23.12	23.18	23.17	
20	PI/2 BPSK	1	53	23.08	23.15	23.07	24.5
20	PI/2 BPSK	1	104	23.12	23.12	23.08	
20	PI/2 BPSK	50	0	22.74	22.92	22.81	
20	PI/2 BPSK	50	28	23.09	23.13	23.09	24.5
20	PI/2 BPSK	50	56	22.65	22.85	22.73	24.0
20	PI/2 BPSK	100	0	22.70	22.87	22.74	
20	QPSK	1	1	23.08	23.09	23.12	24.5
20	QPSK	1	53	23.02	23.10	23.06	
20	QPSK	1	104	23.06	23.09	23.07	
20	QPSK	50	0	22.23	22.43	22.35	23.5
20	QPSK	50	28	23.10	23.11	23.07	24.5
20	QPSK	50	56	22.21	22.40	22.28	23.5
20	QPSK	100	0	22.15	22.32	22.24	
20	16QAM	1	1	22.12	22.31	22.23	23.5
20	64QAM	1	1	20.74	20.92	20.80	22.0
20	256QAM	1	1	18.72	18.87	18.72	20.0
Channel				164300	166300	168300	Tune-up limit (dBm)
Frequency (MHz)				821.5	831.5	841.5	
15	PI/2 BPSK	1	1	23.08	23.08	23.10	24.5
Channel				163800	166300	168800	Tune-up limit (dBm)
Frequency (MHz)				819	831.5	844	
10	PI/2 BPSK	1	1	23.09	23.11	23.12	24.5
Channel				163300	166300	169300	Tune-up limit (dBm)
Frequency (MHz)				816.5	831.5	846.5	
5	PI/2 BPSK	1	1	23.09	23.14	23.12	24.5

**<FR1 n30_Ant Main_Sensor OFF>**

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					462000		
Frequency (MHz)					2310		
10	PI/2 BPSK	1	1		22.40		
10	PI/2 BPSK	1	26		22.33		23.0
10	PI/2 BPSK	1	50		22.34		
10	PI/2 BPSK	25	0		21.87		
10	PI/2 BPSK	25	14		22.30		22.5
10	PI/2 BPSK	25	27		21.83		23.0
10	PI/2 BPSK	50	0		21.75		
10	QPSK	1	1		22.30		
10	QPSK	1	26		22.27		23.0
10	QPSK	1	50		22.26		
10	QPSK	25	0		21.28		
10	QPSK	25	14		22.16		22.0
10	QPSK	25	27		21.26		23.0
10	QPSK	50	0		21.26		
10	16QAM	1	1		21.33		
10	64QAM	1	1		19.77		20.5
10	256QAM	1	1		17.77		18.5
Channel				461500	462000	462500	Tune-up limit (dBm)
Frequency (MHz)				2307.5	2310	2312.5	
5	PI/2 BPSK	1	1	22.27	22.16	22.11	

<FR1 n30_Ant MIMO2_Sensor OFF>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					462000		
Frequency (MHz)					2310		
10	PI/2 BPSK	1	1		21.65		
10	PI/2 BPSK	1	26		21.44		23.0
10	PI/2 BPSK	1	50		21.39		
10	PI/2 BPSK	25	0		20.88		
10	PI/2 BPSK	25	14		21.37		22.5
10	PI/2 BPSK	25	27		20.87		23.0
10	PI/2 BPSK	50	0		20.90		
10	QPSK	1	1		21.43		
10	QPSK	1	26		21.40		23.0
10	QPSK	1	50		21.39		
10	QPSK	25	0		20.42		
10	QPSK	25	14		21.32		22.0
10	QPSK	25	27		20.38		23.0
10	QPSK	50	0		20.39		
10	16QAM	1	1		20.40		
10	64QAM	1	1		18.87		20.5
10	256QAM	1	1		16.85		18.5
Channel				461500	462000	462500	Tune-up limit (dBm)
Frequency (MHz)				2307.5	2310	2312.5	
5	PI/2 BPSK	1	1	21.60	21.63	21.60	



<FR1 n66_Ant Main_Sensor OFF>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				346000	349000	352000	
Frequency (MHz)				1730	1745	1760	
40	PI/2 BPSK	1	1	23.39	23.43	23.47	
40	PI/2 BPSK	1	108	23.26	23.34	23.39	24.5
40	PI/2 BPSK	1	214	23.18	23.18	23.30	
40	PI/2 BPSK	108	0	22.88	22.96	23.06	24.0
40	PI/2 BPSK	108	54	23.27	23.24	23.35	24.5
40	PI/2 BPSK	108	108	22.95	22.98	23.03	24.0
40	PI/2 BPSK	216	0	22.89	22.96	23.00	
40	QPSK	1	1	23.29	23.33	23.40	24.5
40	QPSK	1	108	23.20	23.27	23.34	
40	QPSK	1	214	23.14	23.26	23.32	
40	QPSK	108	0	22.42	22.43	22.55	23.5
40	QPSK	108	54	23.15	23.19	23.27	24.5
40	QPSK	108	108	22.41	22.44	22.57	23.5
40	QPSK	216	0	22.34	22.45	22.51	
40	16QAM	1	1	22.38	22.46	22.52	23.5
40	64QAM	1	1	20.92	20.94	21.03	22.0
40	256QAM	1	1	18.87	18.95	18.99	20.0
Channel				345500	349000	352500	Tune-up limit (dBm)
Frequency (MHz)				1727.5	1745	1762.5	
35	PI/2 BPSK	1	1	23.24	23.30	23.41	24.5
Channel				345000	349000	353000	Tune-up limit (dBm)
Frequency (MHz)				1725	1745	1765	
30	PI/2 BPSK	1	1	23.24	23.31	23.30	24.5
Channel				344500	349000	353500	Tune-up limit (dBm)
Frequency (MHz)				1722.5	1745	1767.5	
25	PI/2 BPSK	1	1	23.25	23.25	23.29	24.5
Channel				344000	349000	354000	Tune-up limit (dBm)
Frequency (MHz)				1720	1745	1770	
20	PI/2 BPSK	1	1	23.32	23.26	23.31	24.5
Channel				343500	349000	354500	Tune-up limit (dBm)
Frequency (MHz)				1717.5	1745	1772.5	
15	PI/2 BPSK	1	1	23.22	23.38	23.36	24.5
Channel				343000	349000	355000	Tune-up limit (dBm)
Frequency (MHz)				1715	1745	1775	
10	PI/2 BPSK	1	1	23.34	23.29	23.37	24.5
Channel				342500	349000	355500	Tune-up limit (dBm)
Frequency (MHz)				1712.5	1745	1777.5	
5	PI/2 BPSK	1	1	23.34	23.34	23.29	24.5



<FR1 n66_Ant MIMO2_Sensor OFF>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				346000	349000	352000	24.5
Frequency (MHz)				1730	1745	1760	
40	PI/2 BPSK	1	1	23.92	24.00	23.83	
40	PI/2 BPSK	1	108	23.80	23.90	23.76	24.0
40	PI/2 BPSK	1	214	23.85	23.92	23.75	
40	PI/2 BPSK	108	0	23.27	23.36	23.16	
40	PI/2 BPSK	108	54	23.87	23.97	23.81	24.0
40	PI/2 BPSK	108	108	23.32	23.40	23.21	
40	PI/2 BPSK	216	0	23.20	23.33	23.12	
40	QPSK	1	1	23.89	23.98	23.79	24.5
40	QPSK	1	108	23.71	23.85	23.65	
40	QPSK	1	214	23.87	23.94	23.80	
40	QPSK	108	0	22.77	22.87	22.67	23.5
40	QPSK	108	54	23.71	23.79	23.61	24.5
40	QPSK	108	108	22.73	22.89	22.73	23.5
40	QPSK	216	0	22.75	22.84	22.67	
40	16QAM	1	1	22.67	22.82	22.67	
40	64QAM	1	1	21.21	21.32	21.10	22.0
40	256QAM	1	1	19.17	19.28	19.12	20.0
Channel				345500	349000	352500	24.5
Frequency (MHz)				1727.5	1745	1762.5	
35	PI/2 BPSK	1	1	23.83	23.90	23.77	
Channel				345000	349000	353000	24.5
Frequency (MHz)				1725	1745	1765	
30	PI/2 BPSK	1	1	23.86	23.97	23.76	
Channel				344500	349000	353500	24.5
Frequency (MHz)				1722.5	1745	1767.5	
25	PI/2 BPSK	1	1	23.84	23.95	23.78	
Channel				344000	349000	354000	24.5
Frequency (MHz)				1720	1745	1770	
20	PI/2 BPSK	1	1	23.85	23.94	23.78	
Channel				343500	349000	354500	24.5
Frequency (MHz)				1717.5	1745	1772.5	
15	PI/2 BPSK	1	1	23.89	23.93	23.82	
Channel				343000	349000	355000	24.5
Frequency (MHz)				1715	1745	1775	
10	PI/2 BPSK	1	1	23.90	23.90	23.78	
Channel				342500	349000	355500	24.5
Frequency (MHz)				1712.5	1745	1777.5	
5	PI/2 BPSK	1	1	23.89	23.95	23.80	

**<FR1 n70_Ant Main_Sensor OFF>**

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					340500		
Frequency (MHz)					1702.5		
15	PI/2 BPSK	1	1		23.51		24.6
15	PI/2 BPSK	1	40		23.46		
15	PI/2 BPSK	1	77		23.49		
15	PI/2 BPSK	36	0		23.22		24.1
15	PI/2 BPSK	36	22		23.36		24.6
15	PI/2 BPSK	36	43		23.34		24.1
15	PI/2 BPSK	75	0		23.25		
15	QPSK	1	1		23.46		24.6
15	QPSK	1	40		23.37		
15	QPSK	1	77		23.35		
15	QPSK	36	0		22.76		23.6
15	QPSK	36	22		23.50		24.6
15	QPSK	36	43		22.74		23.6
15	QPSK	75	0		22.73		
15	16QAM	1	1		22.74		23.6
15	64QAM	1	1		21.26		22.1
15	256QAM	1	1		19.16		20.1
Channel				340000	340500	341000	Tune-up limit (dBm)
Frequency (MHz)				1700	1702.5	1705	
10	PI/2 BPSK	1	1	23.35	23.46	23.33	24.6
Channel				339500	340500	341500	Tune-up limit (dBm)
Frequency (MHz)				1697.5	1702.5	1707.5	
5	PI/2 BPSK	1	1	23.22	23.37	23.30	24.6

<FR1 n70_Ant MIMO2_Sensor OFF>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					340500		
Frequency (MHz)					1702.5		
15	PI/2 BPSK	1	1		23.29		24.6
15	PI/2 BPSK	1	40		23.24		
15	PI/2 BPSK	1	77		23.20		
15	PI/2 BPSK	36	0		22.74		24.1
15	PI/2 BPSK	36	22		23.19		24.6
15	PI/2 BPSK	36	43		22.67		24.1
15	PI/2 BPSK	75	0		22.74		
15	QPSK	1	1		23.20		24.6
15	QPSK	1	40		23.22		
15	QPSK	1	77		23.22		
15	QPSK	36	0		22.17		23.6
15	QPSK	36	22		23.19		24.6
15	QPSK	36	43		22.22		23.6
15	QPSK	75	0		22.25		
15	16QAM	1	1		21.83		23.6
15	64QAM	1	1		20.44		22.1
15	256QAM	1	1		18.77		20.1
Channel				340000	340500	341000	Tune-up limit (dBm)
Frequency (MHz)				1700	1702.5	1705	
10	PI/2 BPSK	1	1	23.24	23.21	23.22	24.6
Channel				339500	340500	341500	Tune-up limit (dBm)
Frequency (MHz)				1697.5	1702.5	1707.5	
5	PI/2 BPSK	1	1	23.20	23.26	23.19	24.6



<FR1 n71_Ant Main_Sensor OFF>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				134600	136100	137600	Tune-up limit (dBm)
Frequency (MHz)				673	680.5	688	
20	PI/2 BPSK	1	1	23.32	23.50	23.28	24.5
20	PI/2 BPSK	1	53	22.97	23.07	22.93	
20	PI/2 BPSK	1	104	23.00	23.11	22.91	
20	PI/2 BPSK	50	0	22.95	23.03	22.88	24.0
20	PI/2 BPSK	50	28	23.03	23.13	23.03	24.5
20	PI/2 BPSK	50	56	22.91	23.05	22.88	24.0
20	PI/2 BPSK	100	0	22.99	23.08	22.98	
20	QPSK	1	1	23.10	23.16	23.04	24.5
20	QPSK	1	53	22.83	22.98	22.87	
20	QPSK	1	104	23.02	23.09	22.93	
20	QPSK	50	0	22.53	22.65	22.48	23.5
20	QPSK	50	28	22.91	23.02	22.91	24.5
20	QPSK	50	56	22.52	22.59	22.41	23.5
20	QPSK	100	0	22.46	22.57	22.38	
20	16QAM	1	1	22.52	22.58	22.39	23.5
20	64QAM	1	1	20.91	21.07	20.97	22.0
20	256QAM	1	1	19.01	19.12	19.02	20.0
Channel				134100	136100	138100	Tune-up limit (dBm)
Frequency (MHz)				670.5	680.5	690.5	
15	PI/2 BPSK	1	1	23.17	23.36	23.22	24.5
Channel				133600	136100	138600	Tune-up limit (dBm)
Frequency (MHz)				668	680.5	693	
10	PI/2 BPSK	1	1	23.27	23.41	23.10	24.5
Channel				133100	136100	139100	Tune-up limit (dBm)
Frequency (MHz)				665.5	680.5	695.5	
5	PI/2 BPSK	1	1	23.26	23.36	23.17	24.5



<FR1 n38_Ant Main_Sensor OFF>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				518000	519000	520000	
Frequency (MHz)				2590	2595	2600	
40	PI/2 BPSK	1	1	23.28	23.35	23.33	
40	PI/2 BPSK	1	53	23.22	23.30	23.24	24.7
40	PI/2 BPSK	1	104	23.15	23.26	23.18	
40	PI/2 BPSK	50	0	23.09	23.16	23.05	
40	PI/2 BPSK	50	28	23.27	23.29	23.21	24.7
40	PI/2 BPSK	50	56	22.74	22.79	22.76	24.2
40	PI/2 BPSK	100	0	22.96	22.99	22.96	
40	QPSK	1	1	23.27	23.28	23.26	
40	QPSK	1	53	23.10	23.20	23.16	24.7
40	QPSK	1	104	22.82	22.90	22.84	
40	QPSK	50	0	22.59	22.61	22.56	
40	QPSK	50	28	23.24	23.29	23.16	24.7
40	QPSK	50	56	22.24	22.34	22.30	23.7
40	QPSK	100	0	22.42	22.51	22.41	
40	16QAM	1	1	22.59	22.68	22.62	
40	64QAM	1	1	21.13	21.20	21.14	22.2
40	256QAM	1	1	19.15	19.18	19.15	20.2
Channel				517000	519000	521000	Tune-up limit (dBm)
Frequency (MHz)				2585	2595	2605	
30	PI/2 BPSK	1	1	23.25	23.18	23.20	
Channel				516500	519000	521500	Tune-up limit (dBm)
Frequency (MHz)				2582.5	2595	2607.5	
25	PI/2 BPSK	1	1	23.23	23.17	23.20	
Channel				516000	519000	522000	Tune-up limit (dBm)
Frequency (MHz)				2580	2595	2610	
20	PI/2 BPSK	1	1	23.17	23.31	23.20	
Channel				515500	519000	522500	Tune-up limit (dBm)
Frequency (MHz)				2577.5	2595	2612.5	
15	PI/2 BPSK	1	1	23.10	23.22	23.14	
Channel				515000	519000	523000	Tune-up limit (dBm)
Frequency (MHz)				2575	2595	2615	
10	PI/2 BPSK	1	1	23.09	23.27	23.30	



<FR1 n38_Ant MIMO2_Sensor OFF>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				518000	519000	520000	24.7
Frequency (MHz)				2590	2595	2600	
40	PI/2 BPSK	1	1	23.67	23.50	23.46	
40	PI/2 BPSK	1	53	23.26	23.17	23.11	24.2
40	PI/2 BPSK	1	104	22.84	22.72	22.72	
40	PI/2 BPSK	50	0	23.17	23.01	23.08	
40	PI/2 BPSK	50	28	23.36	23.30	23.18	24.2
40	PI/2 BPSK	50	56	22.81	22.74	22.66	
40	PI/2 BPSK	100	0	22.99	22.88	22.81	
40	QPSK	1	1	23.53	23.38	23.37	24.7
40	QPSK	1	53	23.22	23.09	23.08	
40	QPSK	1	104	22.81	22.70	22.70	
40	QPSK	50	0	22.60	22.53	22.49	23.7
40	QPSK	50	28	23.27	23.13	23.18	24.7
40	QPSK	50	56	22.26	22.12	22.16	23.7
40	QPSK	100	0	22.48	22.32	22.39	
40	16QAM	1	1	22.66	22.58	22.56	
40	64QAM	1	1	21.18	21.08	21.05	22.2
40	256QAM	1	1	19.18	19.10	19.04	20.2
Channel				517000	519000	521000	24.7
Frequency (MHz)				2585	2595	2605	
30	PI/2 BPSK	1	1	23.57	23.45	23.42	
Channel				516500	519000	521500	24.7
Frequency (MHz)				2582.5	2595	2607.5	
25	PI/2 BPSK	1	1	23.64	23.49	23.41	
Channel				516000	519000	522000	24.7
Frequency (MHz)				2580	2595	2610	
20	PI/2 BPSK	1	1	23.61	23.46	23.46	
Channel				515500	519000	522500	24.7
Frequency (MHz)				2577.5	2595	2612.5	
15	PI/2 BPSK	1	1	23.58	23.43	23.41	
Channel				515000	519000	523000	24.7
Frequency (MHz)				2575	2595	2615	
10	PI/2 BPSK	1	1	23.58	23.42	23.39	



<FR1 n41_Ant Main_Sensor OFF>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				509202	518598	528000	25.0
Frequency (MHz)				2546.01	2592.99	2640	
100	PI/2 BPSK	1	1	23.55	23.61	23.41	
100	PI/2 BPSK	1	137	23.24	23.36	23.15	24.5
100	PI/2 BPSK	1	271	23.40	23.42	23.39	
100	PI/2 BPSK	135	0	23.01	23.14	22.91	
100	PI/2 BPSK	135	69	23.22	23.33	23.16	24.5
100	PI/2 BPSK	135	138	22.95	23.10	22.88	
100	PI/2 BPSK	270	0	22.96	23.04	22.81	
100	QPSK	1	1	23.39	23.26	23.35	25.0
100	QPSK	1	137	23.24	23.31	23.11	
100	QPSK	1	271	23.32	23.43	23.30	
100	QPSK	135	0	22.52	22.63	22.43	24.0
100	QPSK	135	69	23.17	23.28	23.05	
100	QPSK	135	138	22.42	22.49	22.31	
100	QPSK	270	0	22.43	22.53	22.34	24.0
100	16QAM	1	1	22.50	22.66	22.43	
100	64QAM	1	1	21.12	21.18	21.02	
100	256QAM	1	1	19.05	19.15	18.95	20.5
Channel				508200	518598	528996	25.0
Frequency (MHz)				2541	2592.99	2644.98	
90	PI/2 BPSK	1	1	23.06	23.20	23.19	
Channel				507204	518598	529998	25.0
Frequency (MHz)				2536.02	2592.99	2649.99	
80	PI/2 BPSK	1	1	23.13	23.16	23.11	
Channel				506202	518598	531000	25.0
Frequency (MHz)				2531.01	2592.99	2655	
70	PI/2 BPSK	1	1	23.13	23.11	23.14	
Channel				505200	518598	531996	25.0
Frequency (MHz)				2526	2592.99	2659.98	
60	PI/2 BPSK	1	1	23.08	23.20	23.00	
Channel				504204	518598	532998	25.0
Frequency (MHz)				2521.02	2592.99	2664.99	
50	PI/2 BPSK	1	1	23.06	23.17	23.10	
Channel				503202	518598	534000	25.0
Frequency (MHz)				2516.01	2592.99	2670	
40	PI/2 BPSK	1	1	23.10	23.17	23.02	
Channel				502200	518598	534996	25.0
Frequency (MHz)				2511	2592.99	2674.98	
30	PI/2 BPSK	1	1	23.14	23.19	23.09	
Channel				501702	518598	535500	25.0
Frequency (MHz)				2508.51	2592.99	2677.5	
25	PI/2 BPSK	1	1	23.05	23.13	23.00	
Channel				501204	518598	535998	25.0
Frequency (MHz)				2506.02	2592.99	2679.99	
20	PI/2 BPSK	1	1	23.12	23.14	23.01	
Channel				500700	518598	536496	25.0
Frequency (MHz)				2503.5	2592.99	2682.48	
15	PI/2 BPSK	1	1	23.10	23.18	23.08	
Channel				500202	518598	537000	25.0
Frequency (MHz)				2501.01	2592.99	2685	
10	PI/2 BPSK	1	1	23.10	23.20	23.03	



<FR1 n41_Ant MIMO2_Sensor OFF>

BW [MHz]	Modulation			Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				509202	518598	528000	
Frequency (MHz)				2546.01	2592.99	2640	
100	PI/2 BPSK	1	1	23.31	23.77	23.63	25.0
100	PI/2 BPSK	1	137	23.21	23.16	23.21	
100	PI/2 BPSK	1	271	23.14	23.29	23.19	
100	PI/2 BPSK	135	0	23.02	22.96	22.72	24.5
100	PI/2 BPSK	135	69	23.17	23.24	23.12	25.0
100	PI/2 BPSK	135	138	22.90	22.83	22.52	24.5
100	PI/2 BPSK	270	0	22.80	22.99	22.66	
100	QPSK	1	1	23.23	23.45	23.21	25.0
100	QPSK	1	137	23.14	23.18	23.12	
100	QPSK	1	271	23.21	23.23	23.11	
100	QPSK	135	0	22.44	22.51	22.20	24.0
100	QPSK	135	69	23.21	23.13	23.11	25.0
100	QPSK	135	138	22.39	22.28	22.12	24.0
100	QPSK	270	0	22.39	22.42	22.11	
100	16QAM	1	1	22.35	22.59	22.34	24.0
100	64QAM	1	1	20.87	21.10	20.88	22.5
100	256QAM	1	1	18.84	19.08	18.79	20.5
Channel				508200	518598	528996	Tune-up limit (dBm)
Frequency (MHz)				2541	2592.99	2644.98	
90	PI/2 BPSK	1	1	23.30	23.73	23.53	25.0
Channel				507204	518598	529998	Tune-up limit (dBm)
Frequency (MHz)				2536.02	2592.99	2649.99	
80	PI/2 BPSK	1	1	23.30	23.72	23.63	25.0
Channel				506202	518598	531000	Tune-up limit (dBm)
Frequency (MHz)				2531.01	2592.99	2655	
70	PI/2 BPSK	1	1	23.22	23.75	23.57	25.0
Channel				505200	518598	531996	Tune-up limit (dBm)
Frequency (MHz)				2526	2592.99	2659.98	
60	PI/2 BPSK	1	1	23.23	23.76	23.55	25.0
Channel				504204	518598	532998	Tune-up limit (dBm)
Frequency (MHz)				2521.02	2592.99	2664.99	
50	PI/2 BPSK	1	1	23.29	23.73	23.59	25.0
Channel				503202	518598	534000	Tune-up limit (dBm)
Frequency (MHz)				2516.01	2592.99	2670	
40	PI/2 BPSK	1	1	23.26	23.76	23.60	25.0
Channel				502200	518598	534996	Tune-up limit (dBm)
Frequency (MHz)				2511	2592.99	2674.98	
30	PI/2 BPSK	1	1	23.23	23.76	23.56	25.0
Channel				501702	518598	535500	Tune-up limit (dBm)
Frequency (MHz)				2508.51	2592.99	2677.5	
25	PI/2 BPSK	1	1	23.22	23.67	23.60	25.0
Channel				501204	518598	535998	Tune-up limit (dBm)
Frequency (MHz)				2506.02	2592.99	2679.99	
20	PI/2 BPSK	1	1	23.01	23.41	23.25	25.0
Channel				500700	518598	536496	Tune-up limit (dBm)
Frequency (MHz)				2503.5	2592.99	2682.48	
15	PI/2 BPSK	1	1	23.31	23.71	23.55	25.0
Channel				500202	518598	537000	Tune-up limit (dBm)
Frequency (MHz)				2501.01	2592.99	2685	
10	PI/2 BPSK	1	1	23.23	23.69	23.54	25.0



<FR1 n41_Ant Aux_Sensor OFF>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				509202	518598	528000	25.0
Frequency (MHz)				2546.01	2592.99	2640	
100	PI/2 BPSK	1	1	23.65	23.81	23.73	
100	PI/2 BPSK	1	137	23.36	23.53	23.27	24.5
100	PI/2 BPSK	1	271	23.56	23.63	23.52	
100	PI/2 BPSK	135	0	23.15	23.24	23.06	
100	PI/2 BPSK	135	69	23.41	23.49	23.34	24.5
100	PI/2 BPSK	135	138	23.09	23.21	23.03	
100	PI/2 BPSK	270	0	23.07	23.17	22.91	
100	QPSK	1	1	23.61	23.76	23.51	25.0
100	QPSK	1	137	23.42	23.43	23.27	
100	QPSK	1	271	23.49	23.53	23.42	
100	QPSK	135	0	22.64	22.79	22.56	24.0
100	QPSK	135	69	23.37	23.47	23.23	
100	QPSK	135	138	22.56	22.66	22.46	
100	QPSK	270	0	22.58	22.72	22.52	24.0
100	16QAM	1	1	22.66	22.82	22.57	
100	64QAM	1	1	21.30	21.34	21.13	
100	256QAM	1	1	19.21	19.34	19.13	20.5
Channel				508200	518598	528996	25.0
Frequency (MHz)				2541	2592.99	2644.98	
90	PI/2 BPSK	1	1	23.38	23.54	23.45	
Channel				507204	518598	529998	25.0
Frequency (MHz)				2536.02	2592.99	2649.99	
80	PI/2 BPSK	1	1	23.37	23.58	23.52	
Channel				506202	518598	531000	25.0
Frequency (MHz)				2531.01	2592.99	2655	
70	PI/2 BPSK	1	1	23.37	23.52	23.50	
Channel				505200	518598	531996	25.0
Frequency (MHz)				2526	2592.99	2659.98	
60	PI/2 BPSK	1	1	23.41	23.60	23.50	
Channel				504204	518598	532998	25.0
Frequency (MHz)				2521.02	2592.99	2664.99	
50	PI/2 BPSK	1	1	23.41	23.57	23.49	
Channel				503202	518598	534000	25.0
Frequency (MHz)				2516.01	2592.99	2670	
40	PI/2 BPSK	1	1	23.38	23.53	23.46	
Channel				502200	518598	534996	25.0
Frequency (MHz)				2511	2592.99	2674.98	
30	PI/2 BPSK	1	1	23.38	23.54	23.43	
Channel				501702	518598	535500	25.0
Frequency (MHz)				2508.51	2592.99	2677.5	
25	PI/2 BPSK	1	1	23.40	23.60	23.49	
Channel				501204	518598	535998	25.0
Frequency (MHz)				2506.02	2592.99	2679.99	
20	PI/2 BPSK	1	1	23.41	23.58	23.52	
Channel				500700	518598	536496	25.0
Frequency (MHz)				2503.5	2592.99	2682.48	
15	PI/2 BPSK	1	1	23.41	23.54	23.44	
Channel				500202	518598	537000	25.0
Frequency (MHz)				2501.01	2592.99	2685	
10	PI/2 BPSK	1	1	23.39	23.51	23.43	



<FR1 n41_Ant MIMO3_Sensor OFF>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				509202	518598	528000	25.0
Frequency (MHz)				2546.01	2592.99	2640	
100	PI/2 BPSK	1	1	23.64	23.65	23.54	
100	PI/2 BPSK	1	137	23.16	23.27	23.04	24.5
100	PI/2 BPSK	1	271	23.36	23.42	23.24	
100	PI/2 BPSK	135	0	22.89	23.02	22.81	
100	PI/2 BPSK	135	69	23.17	23.29	23.12	24.5
100	PI/2 BPSK	135	138	22.85	23.01	22.80	
100	PI/2 BPSK	270	0	22.86	22.91	22.68	
100	QPSK	1	1	23.40	23.53	23.24	25.0
100	QPSK	1	137	23.18	23.22	23.04	
100	QPSK	1	271	23.28	23.30	23.14	
100	QPSK	135	0	22.46	22.59	22.35	24.0
100	QPSK	135	69	23.10	23.27	23.04	
100	QPSK	135	138	22.35	22.47	22.27	
100	QPSK	270	0	22.37	22.52	22.26	24.0
100	16QAM	1	1	22.39	22.54	22.34	
100	64QAM	1	1	21.09	21.09	20.85	
100	256QAM	1	1	18.93	19.16	18.94	20.5
Channel				508200	518598	528996	25.0
Frequency (MHz)				2541	2592.99	2644.98	
90	PI/2 BPSK	1	1	23.06	23.13	23.01	
Channel				507204	518598	529998	25.0
Frequency (MHz)				2536.02	2592.99	2649.99	
80	PI/2 BPSK	1	1	23.08	23.10	23.03	
Channel				506202	518598	531000	25.0
Frequency (MHz)				2531.01	2592.99	2655	
70	PI/2 BPSK	1	1	23.06	23.05	23.01	
Channel				505200	518598	531996	25.0
Frequency (MHz)				2526	2592.99	2659.98	
60	PI/2 BPSK	1	1	23.01	23.14	23.12	
Channel				504204	518598	532998	25.0
Frequency (MHz)				2521.02	2592.99	2664.99	
50	PI/2 BPSK	1	1	23.03	23.11	23.08	
Channel				503202	518598	534000	25.0
Frequency (MHz)				2516.01	2592.99	2670	
40	PI/2 BPSK	1	1	23.01	23.07	23.08	
Channel				502200	518598	534996	25.0
Frequency (MHz)				2511	2592.99	2674.98	
30	PI/2 BPSK	1	1	23.11	23.07	23.02	
Channel				501702	518598	535500	25.0
Frequency (MHz)				2508.51	2592.99	2677.5	
25	PI/2 BPSK	1	1	23.02	23.08	23.08	
Channel				501204	518598	535998	25.0
Frequency (MHz)				2506.02	2592.99	2679.99	
20	PI/2 BPSK	1	1	23.12	23.14	23.02	
Channel				500700	518598	536496	25.0
Frequency (MHz)				2503.5	2592.99	2682.48	
15	PI/2 BPSK	1	1	23.02	23.13	23.07	
Channel				500202	518598	537000	25.0
Frequency (MHz)				2501.01	2592.99	2685	
10	PI/2 BPSK	1	1	23.07	23.15	23.10	



<FR1 n41_HPUE_Ant Main_Sensor OFF>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				509202	518598	528000	
Frequency (MHz)				2546.01	2592.99	2640	
100	PI/2 BPSK	1	1	25.65	25.74	25.54	
100	PI/2 BPSK	1	137	25.26	25.34	25.20	27.0
100	PI/2 BPSK	1	271	25.38	25.41	25.28	
100	PI/2 BPSK	135	0	24.85	24.93	24.76	
100	PI/2 BPSK	135	69	25.12	25.22	25.13	27.0
100	PI/2 BPSK	135	138	24.77	24.83	24.67	26.5
100	PI/2 BPSK	270	0	24.82	24.84	24.72	
100	QPSK	1	1	25.43	25.46	25.31	
100	QPSK	1	137	25.07	25.19	25.07	27.0
100	QPSK	1	271	25.39	25.43	25.30	
100	QPSK	135	0	24.29	24.32	24.24	
100	QPSK	135	69	25.11	25.18	25.08	27.0
100	QPSK	135	138	24.18	24.30	24.19	26.0
100	QPSK	270	0	24.35	24.39	24.24	
100	16QAM	1	1	24.36	24.39	24.31	
100	64QAM	1	1	22.81	22.89	22.72	24.5
100	256QAM	1	1	20.85	20.88	20.73	22.5
Channel				508200	518598	528996	Tune-up limit (dBm)
Frequency (MHz)				2541	2592.99	2644.98	
90	PI/2 BPSK	1	1	25.59	25.67	25.53	
Channel				507204	518598	529998	Tune-up limit (dBm)
Frequency (MHz)				2536.02	2592.99	2649.99	
80	PI/2 BPSK	1	1	25.58	25.73	25.52	
Channel				506202	518598	531000	Tune-up limit (dBm)
Frequency (MHz)				2531.01	2592.99	2655	
70	PI/2 BPSK	1	1	25.65	25.66	25.50	
Channel				505200	518598	531996	Tune-up limit (dBm)
Frequency (MHz)				2511	2592.99	2659.98	
60	PI/2 BPSK	1	1	25.64	25.71	25.50	
Channel				504204	518598	532998	Tune-up limit (dBm)
Frequency (MHz)				2521.02	2592.99	2664.99	
50	PI/2 BPSK	1	1	25.55	25.73	25.47	
Channel				503202	518598	534000	Tune-up limit (dBm)
Frequency (MHz)				2516.01	2592.99	2670	
40	PI/2 BPSK	1	1	25.63	25.64	25.53	
Channel				502200	518598	534996	Tune-up limit (dBm)
Frequency (MHz)				2511	2592.99	2674.98	
30	PI/2 BPSK	1	1	25.60	25.68	25.50	
Channel				501702	518598	535500	Tune-up limit (dBm)
Frequency (MHz)				2508.51	2592.99	2677.5	
25	PI/2 BPSK	1	1	25.60	25.70	25.52	
Channel				501204	518598	535998	Tune-up limit (dBm)
Frequency (MHz)				2506.02	2592.99	2679.99	
20	PI/2 BPSK	1	1	25.59	25.70	25.53	
Channel				500700	518598	536496	Tune-up limit (dBm)
Frequency (MHz)				2503.5	2592.99	2682.48	
15	PI/2 BPSK	1	1	25.56	25.66	25.46	
Channel				500202	518598	537000	Tune-up limit (dBm)
Frequency (MHz)				2501.01	2592.99	2685	
10	PI/2 BPSK	1	1	25.57	25.65	25.44	



<FR1 n41_HPUE_Ant MIMO2_Sensor OFF>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				509202	518598	528000	27.0
Frequency (MHz)				2546.01	2592.99	2640	
100	PI/2 BPSK	1	1	25.47	26.52	26.28	
100	PI/2 BPSK	1	137	25.61	25.85	25.56	26.5
100	PI/2 BPSK	1	271	25.72	25.98	25.75	
100	PI/2 BPSK	135	0	25.28	25.48	25.24	
100	PI/2 BPSK	135	69	25.67	25.85	25.58	27.0
100	PI/2 BPSK	135	138	25.15	25.37	25.12	26.5
100	PI/2 BPSK	270	0	25.16	25.41	25.18	
100	QPSK	1	1	25.87	26.16	25.86	
100	QPSK	1	137	25.64	25.88	25.66	27.0
100	QPSK	1	271	25.57	25.81	25.59	
100	QPSK	135	0	24.78	24.98	24.74	
100	QPSK	135	69	25.60	25.82	25.54	26.0
100	QPSK	135	138	24.65	24.85	24.54	27.0
100	QPSK	270	0	24.70	24.91	24.66	
100	16QAM	1	1	24.84	25.06	24.83	
100	64QAM	1	1	23.36	23.55	23.32	26.0
100	256QAM	1	1	21.33	21.54	21.28	24.5
Channel				508200	518598	528996	22.5
Frequency (MHz)				2541	2592.99	2644.98	
90	PI/2 BPSK	1	1	25.39	26.44	26.27	
Channel				507204	518598	529998	27.0
Frequency (MHz)				2536.02	2592.99	2649.99	
80	PI/2 BPSK	1	1	25.39	26.51	26.18	
Channel				506202	518598	531000	27.0
Frequency (MHz)				2531.01	2592.99	2655	
70	PI/2 BPSK	1	1	25.46	26.48	26.27	
Channel				505200	518598	531996	27.0
Frequency (MHz)				2526	2592.99	2659.98	
60	PI/2 BPSK	1	1	25.45	26.44	26.21	
Channel				504204	518598	532998	27.0
Frequency (MHz)				2521.02	2592.99	2664.99	
50	PI/2 BPSK	1	1	25.43	26.50	26.25	
Channel				503202	518598	534000	27.0
Frequency (MHz)				2516.01	2592.99	2670	
40	PI/2 BPSK	1	1	25.38	26.47	26.20	
Channel				502200	518598	534996	27.0
Frequency (MHz)				2511	2592.99	2674.98	
30	PI/2 BPSK	1	1	25.44	26.50	26.21	
Channel				501702	518598	535500	27.0
Frequency (MHz)				2508.51	2592.99	2677.5	
25	PI/2 BPSK	1	1	25.46	26.49	26.21	
Channel				501204	518598	535998	27.0
Frequency (MHz)				2506.02	2592.99	2679.99	
20	PI/2 BPSK	1	1	25.43	26.42	26.21	
Channel				500700	518598	536496	27.0
Frequency (MHz)				2503.5	2592.99	2682.48	
15	PI/2 BPSK	1	1	25.39	26.44	26.21	
Channel				500202	518598	537000	27.0
Frequency (MHz)				2501.01	2592.99	2685	
10	PI/2 BPSK	1	1	25.43	26.43	26.24	



<FR1 n41_HPUE_Ant Aux_Sensor OFF>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				509202	518598	528000	27.0
Frequency (MHz)				2546.01	2592.99	2640	
100	PI/2 BPSK	1	1	25.79	25.88	25.53	
100	PI/2 BPSK	1	137	25.69	25.76	25.59	26.5
100	PI/2 BPSK	1	271	25.76	25.80	25.43	
100	PI/2 BPSK	135	0	25.29	25.33	25.15	
100	PI/2 BPSK	135	69	25.52	25.61	25.50	27.0
100	PI/2 BPSK	135	138	25.16	25.20	25.08	26.5
100	PI/2 BPSK	270	0	25.21	25.21	25.09	
100	QPSK	1	1	25.73	25.85	25.43	
100	QPSK	1	137	25.42	25.60	25.48	27.0
100	QPSK	1	271	25.73	25.80	25.44	
100	QPSK	135	0	24.72	24.77	24.33	
100	QPSK	135	69	25.56	25.58	25.46	26.0
100	QPSK	135	138	24.60	24.74	24.56	27.0
100	QPSK	270	0	24.78	24.77	24.65	
100	16QAM	1	1	24.71	24.80	24.66	
100	64QAM	1	1	23.19	23.25	23.08	26.0
100	256QAM	1	1	21.25	21.32	21.09	24.5
Channel				508200	518598	528996	22.5
Frequency (MHz)				2541	2592.99	2644.98	
90	PI/2 BPSK	1	1	25.50	25.65	25.31	
Channel				507204	518598	529998	27.0
Frequency (MHz)				2536.02	2592.99	2649.99	
80	PI/2 BPSK	1	1	25.56	25.63	25.32	
Channel				506202	518598	531000	27.0
Frequency (MHz)				2531.01	2592.99	2655	
70	PI/2 BPSK	1	1	25.57	25.68	25.28	
Channel				505200	518598	531996	27.0
Frequency (MHz)				2511	2592.99	2659.98	
60	PI/2 BPSK	1	1	25.52	25.64	25.26	
Channel				504204	518598	532998	27.0
Frequency (MHz)				2521.02	2592.99	2664.99	
50	PI/2 BPSK	1	1	25.59	25.65	25.30	
Channel				503202	518598	534000	27.0
Frequency (MHz)				2516.01	2592.99	2670	
40	PI/2 BPSK	1	1	25.53	25.65	25.28	
Channel				502200	518598	534996	27.0
Frequency (MHz)				2511	2592.99	2674.98	
30	PI/2 BPSK	1	1	25.56	25.65	25.32	
Channel				501702	518598	535500	27.0
Frequency (MHz)				2508.51	2592.99	2677.5	
25	PI/2 BPSK	1	1	25.55	25.67	25.29	
Channel				501204	518598	535998	27.0
Frequency (MHz)				2506.02	2592.99	2679.99	
20	PI/2 BPSK	1	1	25.59	25.67	25.24	
Channel				500700	518598	536496	27.0
Frequency (MHz)				2503.5	2592.99	2682.48	
15	PI/2 BPSK	1	1	25.58	25.67	25.26	
Channel				500202	518598	537000	27.0
Frequency (MHz)				2501.01	2592.99	2685	
10	PI/2 BPSK	1	1	25.56	25.66	25.28	



<FR1 n41_HPUE_Ant MIMO3_Sensor OFF>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				509202	518598	528000	27.0
Frequency (MHz)				2546.01	2592.99	2640	
100	PI/2 BPSK	1	1	26.24	26.31	26.23	
100	PI/2 BPSK	1	137	25.98	25.97	25.89	26.5
100	PI/2 BPSK	1	271	26.07	26.05	25.67	
100	PI/2 BPSK	135	0	25.55	25.59	25.36	
100	PI/2 BPSK	135	69	25.79	25.90	25.76	26.5
100	PI/2 BPSK	135	138	25.38	25.47	25.29	
100	PI/2 BPSK	270	0	25.43	25.51	25.33	
100	QPSK	1	1	26.01	26.09	25.68	27.0
100	QPSK	1	137	25.66	25.89	25.79	
100	QPSK	1	271	25.99	26.01	25.68	
100	QPSK	135	0	24.98	25.02	24.63	26.0
100	QPSK	135	69	25.86	25.88	25.71	
100	QPSK	135	138	24.85	25.02	24.83	
100	QPSK	270	0	25.08	25.01	24.95	26.0
100	16QAM	1	1	24.99	25.05	24.95	
100	64QAM	1	1	23.44	23.55	23.34	
100	256QAM	1	1	21.49	21.56	21.31	22.5
Channel				508200	518598	528996	27.0
Frequency (MHz)				2541	2592.99	2644.98	
90	PI/2 BPSK	1	1	26.02	26.04	25.98	
Channel				507204	518598	529998	27.0
Frequency (MHz)				2536.02	2592.99	2649.99	
80	PI/2 BPSK	1	1	25.98	26.03	26.08	
Channel				506202	518598	531000	27.0
Frequency (MHz)				2531.01	2592.99	2655	
70	PI/2 BPSK	1	1	25.94	26.02	25.96	
Channel				505200	518598	531996	27.0
Frequency (MHz)				2526	2592.99	2659.98	
60	PI/2 BPSK	1	1	25.96	26.04	26.11	
Channel				504204	518598	532998	27.0
Frequency (MHz)				2521.02	2592.99	2664.99	
50	PI/2 BPSK	1	1	25.99	26.07	26.03	
Channel				503202	518598	534000	27.0
Frequency (MHz)				2516.01	2592.99	2670	
40	PI/2 BPSK	1	1	26.03	25.95	26.07	
Channel				502200	518598	534996	27.0
Frequency (MHz)				2511	2592.99	2674.98	
30	PI/2 BPSK	1	1	25.95	26.06	25.97	
Channel				501702	518598	535500	27.0
Frequency (MHz)				2508.51	2592.99	2677.5	
25	PI/2 BPSK	1	1	25.97	26.02	26.08	
Channel				501204	518598	535998	27.0
Frequency (MHz)				2506.02	2592.99	2679.99	
20	PI/2 BPSK	1	1	26.04	26.03	25.99	
Channel				500700	518598	536496	27.0
Frequency (MHz)				2503.5	2592.99	2682.48	
15	PI/2 BPSK	1	1	25.99	25.99	26.09	
Channel				500202	518598	537000	27.0
Frequency (MHz)				2501.01	2592.99	2685	
10	PI/2 BPSK	1	1	26.07	26.03	25.95	



<FR1 n48_Ant Main_Sensor OFF>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				638000	641666	645332	Tune-up limit (dBm)
Frequency (MHz)				3570	3624.99	3679.98	
40	PI/2 BPSK	1	1	20.33	20.49	20.69	21.8
40	PI/2 BPSK	1	53	20.18	20.39	20.50	
40	PI/2 BPSK	1	104	20.20	20.43	20.48	
40	PI/2 BPSK	50	0	20.26	20.44	20.52	21.8
40	PI/2 BPSK	50	28	20.32	20.48	20.64	21.8
40	PI/2 BPSK	50	56	20.30	20.47	20.56	21.8
40	PI/2 BPSK	100	0	20.25	20.41	20.52	
40	QPSK	1	1	20.17	20.33	20.48	21.8
40	QPSK	1	53	20.22	20.40	20.52	
40	QPSK	1	104	20.23	20.40	20.47	
40	QPSK	50	0	20.22	20.44	20.52	21.8
40	QPSK	50	28	20.17	20.38	20.47	21.8
40	QPSK	50	56	20.22	20.38	20.53	21.8
40	QPSK	100	0	20.27	20.39	20.52	
40	16QAM	1	1	20.15	20.32	20.43	21.8
40	64QAM	1	1	19.69	19.78	19.91	21.3
40	256QAM	1	1	17.64	17.84	17.94	19.3
Channel				637668	641666	645666	Tune-up limit (dBm)
Frequency (MHz)				3565.02	3624.99	3684.99	
30	PI/2 BPSK	1	1	20.23	20.45	20.60	21.8
Channel				637334	641666	646000	Tune-up limit (dBm)
Frequency (MHz)				3560.01	3624.99	3690	
20	PI/2 BPSK	1	1	20.25	20.46	20.59	21.8
Channel				637168	641666	646166	Tune-up limit (dBm)
Frequency (MHz)				3557.52	3624.99	3692.49	
15	PI/2 BPSK	1	1	20.27	20.46	20.64	21.8
Channel				637000	641666	646332	Tune-up limit (dBm)
Frequency (MHz)				3555	3624.99	3694.98	
10	PI/2 BPSK	1	1	20.27	20.44	20.62	21.8



<FR1 n48_Ant MIMO2_Sensor OFF>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				638000	641666	645332	Tune-up limit (dBm)
Frequency (MHz)				3570	3624.99	3679.98	
40	PI/2 BPSK	1	1	20.13	20.24	20.36	21.8
40	PI/2 BPSK	1	53	20.13	20.21	20.10	
40	PI/2 BPSK	1	104	20.11	20.20	20.17	
40	PI/2 BPSK	50	0	20.10	20.25	20.12	21.8
40	PI/2 BPSK	50	28	20.23	20.30	20.22	21.8
40	PI/2 BPSK	50	56	20.13	20.26	20.23	21.8
40	PI/2 BPSK	100	0	20.20	20.27	20.22	
40	QPSK	1	1	20.06	20.17	20.12	21.8
40	QPSK	1	53	20.10	20.19	20.09	
40	QPSK	1	104	20.07	20.21	20.17	
40	QPSK	50	0	20.16	20.29	20.20	21.8
40	QPSK	50	28	20.14	20.22	20.12	21.8
40	QPSK	50	56	20.10	20.22	20.17	21.8
40	QPSK	100	0	20.10	20.24	20.13	
40	16QAM	1	1	20.04	20.08	20.03	21.8
40	64QAM	1	1	19.54	19.64	19.60	21.3
40	256QAM	1	1	17.53	17.62	17.59	19.3
Channel				637668	641666	645666	Tune-up limit (dBm)
Frequency (MHz)				3565.02	3624.99	3684.99	
30	PI/2 BPSK	1	1	20.07	20.22	20.31	21.8
Channel				637334	641666	646000	Tune-up limit (dBm)
Frequency (MHz)				3560.01	3624.99	3690	
20	PI/2 BPSK	1	1	20.09	20.17	20.31	21.8
Channel				637168	641666	646166	Tune-up limit (dBm)
Frequency (MHz)				3557.52	3624.99	3692.49	
15	PI/2 BPSK	1	1	20.10	20.19	20.32	21.8
Channel				637000	641666	646332	Tune-up limit (dBm)
Frequency (MHz)				3555	3624.99	3694.98	
10	PI/2 BPSK	1	1	20.11	20.15	20.33	21.8



<FR1 n77_Ant Main_Sensor OFF>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				650000	656000	662000	25.1
Frequency (MHz)				3750	3840	3930	
100	PI/2 BPSK	1	1	23.25	23.43	23.20	
100	PI/2 BPSK	1	137	23.19	23.26	23.17	24.6
100	PI/2 BPSK	1	271	23.18	23.36	23.24	
100	PI/2 BPSK	135	0	22.84	22.96	22.88	
100	PI/2 BPSK	135	69	23.13	23.25	23.16	24.6
100	PI/2 BPSK	135	138	23.00	23.03	22.98	
100	PI/2 BPSK	270	0	22.86	22.98	22.89	
100	QPSK	1	1	23.35	23.40	23.37	25.1
100	QPSK	1	137	23.19	23.29	23.15	
100	QPSK	1	271	23.34	23.42	23.32	
100	QPSK	135	0	22.38	22.50	22.42	24.1
100	QPSK	135	69	23.16	23.22	23.16	
100	QPSK	135	138	22.47	22.50	22.44	
100	QPSK	270	0	22.47	22.52	22.41	24.1
100	16QAM	1	1	22.40	22.52	22.46	
100	64QAM	1	1	20.96	21.00	20.87	
100	256QAM	1	1	18.88	18.95	18.83	20.6
Channel				649668	656000	662332	25.1
Frequency (MHz)				3745.02	3840	3934.98	
90	PI/2 BPSK	1	1	23.15	23.39	23.12	
Channel				649334	656000	662666	25.1
Frequency (MHz)				3740.01	3840	3939.99	
80	PI/2 BPSK	1	1	23.20	23.40	23.14	
Channel				649000	656000	663000	25.1
Frequency (MHz)				3735	3840	3945	
70	PI/2 BPSK	1	1	23.24	23.41	23.19	
Channel				648668	656000	663332	25.1
Frequency (MHz)				3730.02	3840	3949.98	
60	PI/2 BPSK	1	1	23.20	23.36	23.13	
Channel				648334	656000	663666	25.1
Frequency (MHz)				3725.01	3840	3954.99	
50	PI/2 BPSK	1	1	23.19	23.41	23.19	
Channel				648000	656000	664000	25.1
Frequency (MHz)				3720	3840	3960	
40	PI/2 BPSK	1	1	23.25	23.34	23.18	
Channel				647668	656000	664332	25.1
Frequency (MHz)				3715.02	3840.00	3964.98	
30	PI/2 BPSK	1	1	23.24	23.39	23.17	
Channel				647500	656000	664500	25.1
Frequency (MHz)				3712.5	3840.00	3967.50	
25	PI/2 BPSK	1	1	23.15	23.40	23.19	
Channel				647334	656000	664666	25.1
Frequency (MHz)				3710.01	3840	3969.99	
20	PI/2 BPSK	1	1	23.22	23.36	23.14	
Channel				647168	656000	664832	25.1
Frequency (MHz)				3707.52	3840	3972.48	
15	PI/2 BPSK	1	1	23.15	23.36	23.17	
Channel				647000	656000	665000	25.1
Frequency (MHz)				3705	3840	3975	
10	PI/2 BPSK	1	1	23.23	23.34	23.11	



<FR1 n77_Ant MIMO2_Sensor OFF>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				650000	656000	662000	25.1
Frequency (MHz)				3750	3840	3930	
100	PI/2 BPSK	1	1	23.10	23.43	23.39	
100	PI/2 BPSK	1	137	23.15	23.23	23.10	24.6
100	PI/2 BPSK	1	271	23.23	23.27	23.11	
100	PI/2 BPSK	135	0	22.86	22.91	22.76	
100	PI/2 BPSK	135	69	23.17	23.19	23.10	24.6
100	PI/2 BPSK	135	138	22.90	22.92	22.79	
100	PI/2 BPSK	270	0	22.82	22.82	22.71	
100	QPSK	1	1	23.29	23.32	23.19	25.1
100	QPSK	1	137	23.14	23.12	23.10	
100	QPSK	1	271	23.28	23.26	23.24	
100	QPSK	135	0	22.35	22.39	22.25	24.1
100	QPSK	135	69	23.11	23.11	23.14	
100	QPSK	135	138	22.38	22.40	22.29	
100	QPSK	270	0	22.32	22.30	22.22	24.1
100	16QAM	1	1	22.34	22.32	22.24	
100	64QAM	1	1	20.84	20.85	20.73	
100	256QAM	1	1	18.87	18.92	18.74	20.6
Channel				649668	656000	662332	25.1
Frequency (MHz)				3745.02	3840	3934.98	
90	PI/2 BPSK	1	1	23.14	23.41	23.37	
Channel				649334	656000	662666	25.1
Frequency (MHz)				3740.01	3840	3939.99	
80	PI/2 BPSK	1	1	23.12	23.42	23.30	
Channel				649000	656000	663000	25.1
Frequency (MHz)				3735	3840	3945	
70	PI/2 BPSK	1	1	23.11	23.38	23.34	
Channel				648668	656000	663332	25.1
Frequency (MHz)				3730.02	3840	3949.98	
60	PI/2 BPSK	1	1	23.16	23.37	23.37	
Channel				648334	656000	663666	25.1
Frequency (MHz)				3725.01	3840	3954.99	
50	PI/2 BPSK	1	1	23.14	23.39	23.36	
Channel				648000	656000	664000	25.1
Frequency (MHz)				3720	3840	3960	
40	PI/2 BPSK	1	1	23.11	23.33	23.30	
Channel				647668	656000	664332	25.1
Frequency (MHz)				3715.02	3840.00	3964.98	
30	PI/2 BPSK	1	1	23.12	23.42	23.30	
Channel				647500	656000	664500	25.1
Frequency (MHz)				3712.5	3840.00	3967.50	
25	PI/2 BPSK	1	1	23.16	23.39	23.32	
Channel				647334	656000	664666	25.1
Frequency (MHz)				3710.01	3840	3969.99	
20	PI/2 BPSK	1	1	23.15	23.36	23.31	
Channel				647168	656000	664832	25.1
Frequency (MHz)				3707.52	3840	3972.48	
15	PI/2 BPSK	1	1	23.10	23.36	23.34	
Channel				647000	656000	665000	25.1
Frequency (MHz)				3705	3840	3975	
10	PI/2 BPSK	1	1	23.11	23.33	23.38	



<FR1 n77_Ant Aux_Sensor OFF>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				650000	656000	662000	25.1
Frequency (MHz)				3750	3840	3930	
100	PI/2 BPSK	1	1	23.12	23.41	23.47	
100	PI/2 BPSK	1	137	23.13	23.14	23.12	24.6
100	PI/2 BPSK	1	271	23.27	23.16	23.14	
100	PI/2 BPSK	135	0	22.81	22.71	22.77	
100	PI/2 BPSK	135	69	23.14	23.11	23.24	24.6
100	PI/2 BPSK	135	138	22.97	22.91	22.92	
100	PI/2 BPSK	270	0	22.88	22.71	22.75	
100	QPSK	1	1	23.37	23.30	23.32	25.1
100	QPSK	1	137	23.14	23.14	23.12	
100	QPSK	1	271	23.30	23.20	23.27	
100	QPSK	135	0	22.38	22.33	22.29	24.1
100	QPSK	135	69	23.13	23.11	23.13	
100	QPSK	135	138	22.36	22.33	22.39	
100	QPSK	270	0	22.37	22.39	22.36	24.1
100	16QAM	1	1	22.41	22.33	22.34	
100	64QAM	1	1	20.95	20.85	20.76	
100	256QAM	1	1	18.82	18.74	18.78	20.6
Channel				649668	656000	662332	25.1
Frequency (MHz)				3745.02	3840	3934.98	
90	PI/2 BPSK	1	1	23.12	23.15	23.26	
Channel				649334	656000	662666	25.1
Frequency (MHz)				3740.01	3840	3939.99	
80	PI/2 BPSK	1	1	23.13	23.17	23.18	
Channel				649000	656000	663000	25.1
Frequency (MHz)				3735	3840	3945	
70	PI/2 BPSK	1	1	23.14	23.18	23.26	
Channel				648668	656000	663332	25.1
Frequency (MHz)				3730.02	3840	3949.98	
60	PI/2 BPSK	1	1	23.12	23.19	23.19	
Channel				648334	656000	663666	25.1
Frequency (MHz)				3725.01	3840	3954.99	
50	PI/2 BPSK	1	1	23.14	23.17	23.26	
Channel				648000	656000	664000	25.1
Frequency (MHz)				3720	3840	3960	
40	PI/2 BPSK	1	1	23.13	23.13	23.22	
Channel				647668	656000	664332	25.1
Frequency (MHz)				3715.02	3840.00	3964.98	
30	PI/2 BPSK	1	1	23.14	23.21	23.17	
Channel				647500	656000	664500	25.1
Frequency (MHz)				3712.5	3840.00	3967.50	
25	PI/2 BPSK	1	1	23.11	23.15	23.19	
Channel				647334	656000	664666	25.1
Frequency (MHz)				3710.01	3840	3969.99	
20	PI/2 BPSK	1	1	23.12	23.14	23.11	
Channel				647168	656000	664832	25.1
Frequency (MHz)				3707.52	3840	3972.48	
15	PI/2 BPSK	1	1	23.12	23.18	23.27	
Channel				647000	656000	665000	25.1
Frequency (MHz)				3705	3840	3975	
10	PI/2 BPSK	1	1	23.11	23.15	23.19	



<FR1 n77_Ant MIMO3_Sensor OFF>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				650000	656000	662000	25.1
Frequency (MHz)				3750	3840	3930	
100	PI/2 BPSK	1	1	23.30	23.75	23.82	
100	PI/2 BPSK	1	137	23.11	23.23	23.12	24.6
100	PI/2 BPSK	1	271	23.22	23.36	23.24	
100	PI/2 BPSK	135	0	22.84	22.90	22.83	
100	PI/2 BPSK	135	69	23.10	23.18	23.33	25.1
100	PI/2 BPSK	135	138	22.94	23.03	22.94	
100	PI/2 BPSK	270	0	22.78	22.91	22.95	
100	QPSK	1	1	23.35	23.38	23.28	24.1
100	QPSK	1	137	23.13	23.20	23.13	
100	QPSK	1	271	23.28	23.35	23.28	
100	QPSK	135	0	22.28	22.40	22.37	25.1
100	QPSK	135	69	23.11	23.18	23.16	
100	QPSK	135	138	22.41	22.41	22.42	
100	QPSK	270	0	22.38	22.44	22.41	24.1
100	16QAM	1	1	22.36	22.46	22.41	
100	64QAM	1	1	20.88	21.00	20.85	
100	256QAM	1	1	18.87	18.89	18.75	20.6
Channel				649668	656000	662332	25.1
Frequency (MHz)				3745.02	3840	3934.98	
90	PI/2 BPSK	1	1	23.12	23.47	23.52	
Channel				649334	656000	662666	25.1
Frequency (MHz)				3740.01	3840	3939.99	
80	PI/2 BPSK	1	1	23.10	23.55	23.56	
Channel				649000	656000	663000	25.1
Frequency (MHz)				3735	3840	3945	
70	PI/2 BPSK	1	1	23.14	23.54	23.59	
Channel				648668	656000	663332	25.1
Frequency (MHz)				3730.02	3840	3949.98	
60	PI/2 BPSK	1	1	23.11	23.48	23.58	
Channel				648334	656000	663666	25.1
Frequency (MHz)				3725.01	3840	3954.99	
50	PI/2 BPSK	1	1	23.12	23.49	23.55	
Channel				648000	656000	664000	25.1
Frequency (MHz)				3720	3840	3960	
40	PI/2 BPSK	1	1	23.14	23.47	23.54	
Channel				647668	656000	664332	25.1
Frequency (MHz)				3715.02	3840.00	3964.98	
30	PI/2 BPSK	1	1	23.12	23.47	23.54	
Channel				647500	656000	664500	25.1
Frequency (MHz)				3712.5	3840.00	3967.50	
25	PI/2 BPSK	1	1	23.10	23.49	23.52	
Channel				647334	656000	664666	25.1
Frequency (MHz)				3710.01	3840	3969.99	
20	PI/2 BPSK	1	1	23.12	23.49	23.56	
Channel				647168	656000	664832	25.1
Frequency (MHz)				3707.52	3840	3972.48	
15	PI/2 BPSK	1	1	23.12	23.51	23.59	
Channel				647000	656000	665000	25.1
Frequency (MHz)				3705	3840	3975	
10	PI/2 BPSK	1	1	23.10	23.46	23.61	



<FR1 n77_Ant MIMO2_Sensor ON>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				650000	656000	662000	20.5
Frequency (MHz)				3750	3840	3930	
100	PI/2 BPSK	1	1	19.69	19.88	19.74	
100	PI/2 BPSK	1	137	19.63	19.78	19.72	20.5
100	PI/2 BPSK	1	271	19.52	19.69	19.56	
100	PI/2 BPSK	135	0	19.60	19.71	19.64	
100	PI/2 BPSK	135	69	19.65	19.75	19.72	20.5
100	PI/2 BPSK	135	138	19.58	19.68	19.65	20.5
100	PI/2 BPSK	270	0	19.55	19.72	19.63	
100	QPSK	1	1	19.60	19.76	19.66	
100	QPSK	1	137	19.61	19.71	19.69	20.5
100	QPSK	1	271	19.57	19.69	19.67	
100	QPSK	135	0	19.62	19.82	19.66	
100	QPSK	135	69	19.63	19.76	19.73	20.5
100	QPSK	135	138	19.54	19.66	19.65	20.5
100	QPSK	270	0	19.54	19.64	19.65	
100	16QAM	1	1	19.58	19.71	19.72	
100	64QAM	1	1	19.49	19.60	19.60	20.5
100	256QAM	1	1	18.16	18.36	18.21	19.0
Channel				649668	656000	662332	Tune-up limit (dBm)
Frequency (MHz)				3745.02	3840	3934.98	
90	PI/2 BPSK	1	1	19.47	19.58	19.45	
Channel				649334	656000	662666	Tune-up limit (dBm)
Frequency (MHz)				3740.01	3840	3939.99	
80	PI/2 BPSK	1	1	19.46	19.53	19.53	
Channel				649000	656000	663000	Tune-up limit (dBm)
Frequency (MHz)				3735	3840	3945	
70	PI/2 BPSK	1	1	19.43	19.60	19.46	
Channel				648668	656000	663332	Tune-up limit (dBm)
Frequency (MHz)				3730.02	3840	3949.98	
60	PI/2 BPSK	1	1	19.45	19.64	19.49	
Channel				648334	656000	663666	Tune-up limit (dBm)
Frequency (MHz)				3725.01	3840	3954.99	
50	PI/2 BPSK	1	1	19.46	19.68	19.45	
Channel				648000	656000	664000	Tune-up limit (dBm)
Frequency (MHz)				3720	3840	3960	
40	PI/2 BPSK	1	1	19.45	19.44	19.54	
Channel				647668	656000	664332	Tune-up limit (dBm)
Frequency (MHz)				3715.02	3840.00	3964.98	
30	PI/2 BPSK	1	1	19.51	19.54	19.50	
Channel				647500	656000	664500	Tune-up limit (dBm)
Frequency (MHz)				3712.5	3840.00	3967.50	
25	PI/2 BPSK	1	1	19.49	19.52	19.45	
Channel				647334	656000	664666	Tune-up limit (dBm)
Frequency (MHz)				3710.01	3840	3969.99	
20	PI/2 BPSK	1	1	19.49	19.61	19.50	
Channel				647168	656000	664832	Tune-up limit (dBm)
Frequency (MHz)				3707.52	3840	3972.48	
15	PI/2 BPSK	1	1	19.43	19.59	19.45	
Channel				647000	656000	665000	Tune-up limit (dBm)
Frequency (MHz)				3705	3840	3975	
10	PI/2 BPSK	1	1	19.39	19.65	19.52	



<FR1 n77_HPUE_Ant Main_Sensor OFF>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				650000	656000	662000	26.0
Frequency (MHz)				3750	3840	3930	
100	PI/2 BPSK	1	1	25.73	26.01	25.67	
100	PI/2 BPSK	1	137	25.58	25.67	25.61	25.5
100	PI/2 BPSK	1	271	25.73	25.76	25.64	
100	PI/2 BPSK	135	0	25.08	25.13	25.02	
100	PI/2 BPSK	135	69	25.57	25.64	25.58	25.5
100	PI/2 BPSK	135	138	25.16	25.18	25.13	
100	PI/2 BPSK	270	0	25.06	25.16	25.06	
100	QPSK	1	1	25.75	25.77	25.70	26.0
100	QPSK	1	137	25.61	25.64	25.53	
100	QPSK	1	271	25.67	25.77	25.66	
100	QPSK	135	0	24.58	24.63	24.53	25.0
100	QPSK	135	69	25.56	25.57	25.50	
100	QPSK	135	138	24.56	24.65	24.55	
100	QPSK	270	0	24.59	24.64	24.57	25.0
100	16QAM	1	1	24.59	24.67	24.61	
100	64QAM	1	1	23.13	23.17	23.11	
100	256QAM	1	1	21.08	21.12	21.00	21.5
Channel				649668	656000	662332	26.0
Frequency (MHz)				3745.02	3840	3934.98	
90	PI/2 BPSK	1	1	25.65	25.94	25.66	
Channel				649334	656000	662666	26.0
Frequency (MHz)				3740.01	3840	3939.99	
80	PI/2 BPSK	1	1	25.66	25.98	25.66	
Channel				649000	656000	663000	26.0
Frequency (MHz)				3735	3840	3945	
70	PI/2 BPSK	1	1	25.71	25.91	25.59	
Channel				648668	656000	663332	26.0
Frequency (MHz)				3730.02	3840	3949.98	
60	PI/2 BPSK	1	1	25.63	25.97	25.61	
Channel				648334	656000	663666	26.0
Frequency (MHz)				3725.01	3840	3954.99	
50	PI/2 BPSK	1	1	25.64	25.99	25.59	
Channel				648000	656000	664000	26.0
Frequency (MHz)				3720	3840	3960	
40	PI/2 BPSK	1	1	25.70	25.96	25.65	
Channel				647668	656000	664332	26.0
Frequency (MHz)				3715.02	3840.00	3964.98	
30	PI/2 BPSK	1	1	25.70	25.96	25.62	
Channel				647500	656000	664500	26.0
Frequency (MHz)				3712.5	3840.00	3967.50	
25	PI/2 BPSK	1	1	25.66	25.95	25.58	
Channel				647334	656000	664666	26.0
Frequency (MHz)				3710.01	3840	3969.99	
20	PI/2 BPSK	1	1	25.63	25.92	25.66	
Channel				647168	656000	664832	26.0
Frequency (MHz)				3707.52	3840	3972.48	
15	PI/2 BPSK	1	1	25.65	26.00	25.63	
Channel				647000	656000	665000	26.0
Frequency (MHz)				3705	3840	3975	
10	PI/2 BPSK	1	1	25.72	25.93	25.63	



<FR1 n77_HPUE_Ant MIMO2_Sensor OFF>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				650000	656000	662000	26.0
Frequency (MHz)				3750	3840	3930	
100	PI/2 BPSK	1	1	25.53	25.76	25.68	
100	PI/2 BPSK	1	137	25.46	25.49	25.55	25.5
100	PI/2 BPSK	1	271	25.45	25.57	25.44	
100	PI/2 BPSK	135	0	25.03	25.06	25.04	
100	PI/2 BPSK	135	69	25.52	25.54	25.53	25.5
100	PI/2 BPSK	135	138	24.99	25.07	25.04	
100	PI/2 BPSK	270	0	24.97	25.03	24.95	
100	QPSK	1	1	25.52	25.61	25.53	26.0
100	QPSK	1	137	25.45	25.52	25.46	
100	QPSK	1	271	25.50	25.49	25.47	
100	QPSK	135	0	24.44	24.54	24.43	25.0
100	QPSK	135	69	25.47	25.44	25.38	
100	QPSK	135	138	24.51	24.49	24.51	
100	QPSK	270	0	24.52	24.52	24.56	25.0
100	16QAM	1	1	24.42	24.51	24.43	
100	64QAM	1	1	23.06	23.10	23.06	
100	256QAM	1	1	20.96	20.98	20.96	21.5
Channel				649668	656000	662332	26.0
Frequency (MHz)				3745.02	3840	3934.98	
90	PI/2 BPSK	1	1	25.44	25.74	25.58	
Channel				649334	656000	662666	26.0
Frequency (MHz)				3740.01	3840	3939.99	
80	PI/2 BPSK	1	1	25.48	25.69	25.62	
Channel				649000	656000	663000	26.0
Frequency (MHz)				3735	3840	3945	
70	PI/2 BPSK	1	1	25.50	25.71	25.67	
Channel				648668	656000	663332	26.0
Frequency (MHz)				3730.02	3840	3949.98	
60	PI/2 BPSK	1	1	25.50	25.73	25.66	
Channel				648334	656000	663666	26.0
Frequency (MHz)				3725.01	3840	3954.99	
50	PI/2 BPSK	1	1	25.50	25.72	25.66	
Channel				648000	656000	664000	26.0
Frequency (MHz)				3720	3840	3960	
40	PI/2 BPSK	1	1	25.50	25.69	25.58	
Channel				647668	656000	664332	26.0
Frequency (MHz)				3715.02	3840.00	3964.98	
30	PI/2 BPSK	1	1	25.52	25.72	25.58	
Channel				647500	656000	664500	26.0
Frequency (MHz)				3712.5	3840.00	3967.50	
25	PI/2 BPSK	1	1	25.50	25.69	25.64	
Channel				647334	656000	664666	26.0
Frequency (MHz)				3710.01	3840	3969.99	
20	PI/2 BPSK	1	1	25.46	25.69	25.61	
Channel				647168	656000	664832	26.0
Frequency (MHz)				3707.52	3840	3972.48	
15	PI/2 BPSK	1	1	25.53	25.71	25.61	
Channel				647000	656000	665000	26.0
Frequency (MHz)				3705	3840	3975	
10	PI/2 BPSK	1	1	25.43	25.69	25.63	



<FR1 n77_HPUE_Ant Aux_Sensor OFF>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				650000	656000	662000	26.0
Frequency (MHz)				3750	3840	3930	
100	PI/2 BPSK	1	1	25.43	25.55	25.61	
100	PI/2 BPSK	1	137	25.33	25.42	25.42	25.5
100	PI/2 BPSK	1	271	25.24	25.43	25.51	
100	PI/2 BPSK	135	0	24.83	24.78	24.87	
100	PI/2 BPSK	135	69	25.35	25.37	25.38	25.5
100	PI/2 BPSK	135	138	24.95	24.93	25.00	
100	PI/2 BPSK	270	0	24.83	24.85	24.99	
100	QPSK	1	1	25.38	25.53	25.60	26.0
100	QPSK	1	137	25.34	25.26	25.47	
100	QPSK	1	271	25.40	25.49	25.56	
100	QPSK	135	0	24.41	24.32	24.44	25.0
100	QPSK	135	69	25.37	25.28	25.30	
100	QPSK	135	138	24.39	24.32	24.47	
100	QPSK	270	0	24.39	24.35	24.38	25.0
100	16QAM	1	1	24.33	24.36	24.40	
100	64QAM	1	1	22.86	22.89	22.99	
100	256QAM	1	1	20.88	20.81	20.85	21.5
Channel				649668	656000	662332	26.0
Frequency (MHz)				3745.02	3840	3934.98	
90	PI/2 BPSK	1	1	25.16	25.35	25.39	
Channel				649334	656000	662666	26.0
Frequency (MHz)				3740.01	3840	3939.99	
80	PI/2 BPSK	1	1	25.21	25.25	25.38	
Channel				649000	656000	663000	26.0
Frequency (MHz)				3735	3840	3945	
70	PI/2 BPSK	1	1	25.17	25.26	25.37	
Channel				648668	656000	663332	26.0
Frequency (MHz)				3730.02	3840	3949.98	
60	PI/2 BPSK	1	1	25.17	25.30	25.34	
Channel				648334	656000	663666	26.0
Frequency (MHz)				3725.01	3840	3954.99	
50	PI/2 BPSK	1	1	25.16	25.34	25.36	
Channel				648000	656000	664000	26.0
Frequency (MHz)				3720	3840	3960	
40	PI/2 BPSK	1	1	25.16	25.32	25.34	
Channel				647668	656000	664332	26.0
Frequency (MHz)				3715.02	3840.00	3964.98	
30	PI/2 BPSK	1	1	25.20	25.35	25.38	
Channel				647500	656000	664500	26.0
Frequency (MHz)				3712.5	3840.00	3967.50	
25	PI/2 BPSK	1	1	25.14	25.32	25.39	
Channel				647334	656000	664666	26.0
Frequency (MHz)				3710.01	3840	3969.99	
20	PI/2 BPSK	1	1	25.21	25.29	25.36	
Channel				647168	656000	664832	26.0
Frequency (MHz)				3707.52	3840	3972.48	
15	PI/2 BPSK	1	1	25.16	25.28	25.37	
Channel				647000	656000	665000	26.0
Frequency (MHz)				3705	3840	3975	
10	PI/2 BPSK	1	1	25.19	25.32	25.36	



FCC SAR TEST REPORT

Report No. : FA4D0509

<FR1 n77_HPUE_Ant MIMO3_Sensor OFF>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				650000	656000	662000	26.0
Frequency (MHz)				3750	3840	3930	
100	PI/2 BPSK	1	1	25.53	25.69	25.86	
100	PI/2 BPSK	1	137	25.28	25.35	25.36	25.5
100	PI/2 BPSK	1	271	25.48	25.44	25.33	
100	PI/2 BPSK	135	0	24.78	24.83	24.73	
100	PI/2 BPSK	135	69	25.35	25.36	25.47	25.5
100	PI/2 BPSK	135	138	24.91	24.93	24.84	
100	PI/2 BPSK	270	0	24.75	24.89	24.75	
100	QPSK	1	1	25.52	25.50	25.46	26.0
100	QPSK	1	137	25.30	25.32	25.28	
100	QPSK	1	271	25.45	25.47	25.38	
100	QPSK	135	0	24.26	24.36	24.24	25.0
100	QPSK	135	69	25.25	25.35	25.21	
100	QPSK	135	138	24.24	24.43	24.31	
100	QPSK	270	0	24.28	24.32	24.34	25.0
100	16QAM	1	1	24.34	24.35	24.32	
100	64QAM	1	1	22.87	22.93	22.84	
100	256QAM	1	1	20.83	20.80	20.78	21.5
Channel				649668	656000	662332	26.0
Frequency (MHz)				3745.02	3840	3934.98	
90	PI/2 BPSK	1	1	25.27	25.44	25.66	
Channel				649334	656000	662666	26.0
Frequency (MHz)				3740.01	3840	3939.99	
80	PI/2 BPSK	1	1	25.28	25.45	25.65	
Channel				649000	656000	663000	26.0
Frequency (MHz)				3735	3840	3945	
70	PI/2 BPSK	1	1	25.27	25.45	25.64	
Channel				648668	656000	663332	26.0
Frequency (MHz)				3730.02	3840	3949.98	
60	PI/2 BPSK	1	1	25.31	25.39	25.66	
Channel				648334	656000	663666	26.0
Frequency (MHz)				3725.01	3840	3954.99	
50	PI/2 BPSK	1	1	25.33	25.48	25.63	
Channel				648000	656000	664000	26.0
Frequency (MHz)				3720	3840	3960	
40	PI/2 BPSK	1	1	25.26	25.43	25.59	
Channel				647668	656000	664332	26.0
Frequency (MHz)				3715.02	3840.00	3964.98	
30	PI/2 BPSK	1	1	25.27	25.48	25.56	
Channel				647500	656000	664500	26.0
Frequency (MHz)				3712.5	3840.00	3967.50	
25	PI/2 BPSK	1	1	25.30	25.45	25.62	
Channel				647334	656000	664666	26.0
Frequency (MHz)				3710.01	3840	3969.99	
20	PI/2 BPSK	1	1	25.25	25.46	25.60	
Channel				647168	656000	664832	26.0
Frequency (MHz)				3707.52	3840	3972.48	
15	PI/2 BPSK	1	1	25.28	25.42	25.62	
Channel				647000	656000	665000	26.0
Frequency (MHz)				3705	3840	3975	
10	PI/2 BPSK	1	1	25.26	25.45	25.59	



<FR1 n77_HPUE_Ant MIMO2_Sensor ON>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				650000	656000	662000	23.5
Frequency (MHz)				3750	3840	3930	
100	PI/2 BPSK	1	1	22.60	22.78	22.71	
100	PI/2 BPSK	1	137	22.53	22.67	22.50	23.5
100	PI/2 BPSK	1	271	22.44	22.54	22.36	
100	PI/2 BPSK	135	0	22.44	22.59	22.50	
100	PI/2 BPSK	135	69	22.54	22.68	22.59	23.5
100	PI/2 BPSK	135	138	22.51	22.61	22.51	23.5
100	PI/2 BPSK	270	0	22.41	22.56	22.41	
100	QPSK	1	1	22.51	22.67	22.48	
100	QPSK	1	137	22.49	22.65	22.50	23.5
100	QPSK	1	271	22.49	22.61	22.46	
100	QPSK	135	0	22.51	22.71	22.56	
100	QPSK	135	69	22.48	22.68	22.55	23.5
100	QPSK	135	138	22.47	22.51	22.43	23.5
100	QPSK	270	0	22.38	22.55	22.44	
100	16QAM	1	1	22.46	22.58	22.48	
100	64QAM	1	1	22.43	22.49	22.33	23.5
100	256QAM	1	1	20.90	21.22	21.18	22.0
Channel				649668	656000	662332	Tune-up limit (dBm)
Frequency (MHz)				3745.02	3840	3934.98	
90	PI/2 BPSK	1	1	22.35	22.49	22.42	
Channel				649334	656000	662666	Tune-up limit (dBm)
Frequency (MHz)				3740.01	3840	3939.99	
80	PI/2 BPSK	1	1	22.35	22.53	22.49	
Channel				649000	656000	663000	Tune-up limit (dBm)
Frequency (MHz)				3735	3840	3945	
70	PI/2 BPSK	1	1	22.33	22.55	22.49	
Channel				648668	656000	663332	Tune-up limit (dBm)
Frequency (MHz)				3730.02	3840	3949.98	
60	PI/2 BPSK	1	1	22.37	22.50	22.47	
Channel				648334	656000	663666	Tune-up limit (dBm)
Frequency (MHz)				3725.01	3840	3954.99	
50	PI/2 BPSK	1	1	22.40	22.53	22.47	
Channel				648000	656000	664000	Tune-up limit (dBm)
Frequency (MHz)				3720	3840	3960	
40	PI/2 BPSK	1	1	22.33	22.58	22.43	
Channel				647668	656000	664332	Tune-up limit (dBm)
Frequency (MHz)				3715.02	3840.00	3964.98	
30	PI/2 BPSK	1	1	22.35	22.49	22.47	
Channel				647500	656000	664500	Tune-up limit (dBm)
Frequency (MHz)				3712.5	3840.00	3967.50	
25	PI/2 BPSK	1	1	22.30	22.54	22.43	
Channel				647334	656000	664666	Tune-up limit (dBm)
Frequency (MHz)				3710.01	3840	3969.99	
20	PI/2 BPSK	1	1	22.30	22.55	22.47	
Channel				647168	656000	664832	Tune-up limit (dBm)
Frequency (MHz)				3707.52	3840	3972.48	
15	PI/2 BPSK	1	1	22.39	22.48	22.49	
Channel				647000	656000	665000	Tune-up limit (dBm)
Frequency (MHz)				3705	3840	3975	
10	PI/2 BPSK	1	1	22.34	22.50	22.42	



<FR1 n77_Ant Main_Sensor OFF>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					633332		
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		23.16		
100	PI/2 BPSK	1	137		23.11		25.1
100	PI/2 BPSK	1	271		23.15		
100	PI/2 BPSK	135	0		22.80		
100	PI/2 BPSK	135	69		23.10		24.6
100	PI/2 BPSK	135	138		22.72		25.1
100	PI/2 BPSK	270	0		22.78		
100	QPSK	1	1		23.11		
100	QPSK	1	137		23.10		25.1
100	QPSK	1	271		23.12		
100	QPSK	135	0		22.22		
100	QPSK	135	69		23.10		24.1
100	QPSK	135	138		22.23		25.1
100	QPSK	270	0		22.27		
100	16QAM	1	1		22.33		
100	64QAM	1	1		20.81		24.1
100	256QAM	1	1		18.81		22.6
Channel				633000	633332	633666	20.6
Frequency (MHz)				3495	3499.98	3504.99	
90	PI/2 BPSK	1	1	23.11	23.15	23.12	
Channel				632668	633332	634000	25.1
Frequency (MHz)				3490.02	3499.98	3510	
80	PI/2 BPSK	1	1	23.14	23.13	23.11	
Channel				632334	633332	634332	25.1
Frequency (MHz)				3485.01	3499.98	3514.98	
70	PI/2 BPSK	1	1	23.15	23.14	23.11	
Channel				632000	633332	634666	25.1
Frequency (MHz)				3480	3499.98	3519.99	
60	PI/2 BPSK	1	1	23.10	23.12	23.14	
Channel				631668	633332	635000	25.1
Frequency (MHz)				3475.02	3499.98	3525	
50	PI/2 BPSK	1	1	23.12	23.14	23.10	
Channel				631334	633332	635332	25.1
Frequency (MHz)				3470.01	3499.98	3529.98	
40	PI/2 BPSK	1	1	23.13	23.15	23.15	
Channel				631000	633332	635666	25.1
Frequency (MHz)				3465	3499.98	3534.99	
30	PI/2 BPSK	1	1	23.13	23.12	23.10	
Channel				630834	633332	635832	25.1
Frequency (MHz)				3462.51	3499.98	3537.48	
25	PI/2 BPSK	1	1	23.13	23.12	23.12	
Channel				630668	633332	636000	25.1
Frequency (MHz)				3460.02	3499.98	3540	
20	PI/2 BPSK	1	1	23.10	23.11	23.13	
Channel				630500	633332	636166	25.1
Frequency (MHz)				3457.5	3499.98	3542.49	
15	PI/2 BPSK	1	1	23.12	23.14	23.15	
Channel				630334	633332	636332	25.1
Frequency (MHz)				3455.01	3499.98	3544.98	
10	PI/2 BPSK	1	1	23.12	23.12	23.11	



<FR1 n77_Ant MIMO2_Sensor OFF>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					633332		25.1
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		23.26		
100	PI/2 BPSK	1	137		23.16		24.6
100	PI/2 BPSK	1	271		23.20		
100	PI/2 BPSK	135	0		22.81		
100	PI/2 BPSK	135	69		23.16		25.1
100	PI/2 BPSK	135	138		22.85		24.6
100	PI/2 BPSK	270	0		22.82		
100	QPSK	1	1		23.17		
100	QPSK	1	137		23.12		24.1
100	QPSK	1	271		23.11		
100	QPSK	135	0		22.31		
100	QPSK	135	69		23.10		25.1
100	QPSK	135	138		22.36		24.1
100	QPSK	270	0		22.35		
100	16QAM	1	1		22.36		
100	64QAM	1	1		20.78		22.6
100	256QAM	1	1		18.82		20.6
Channel				633000	633332	633666	Tune-up limit (dBm)
Frequency (MHz)				3495	3499.98	3504.99	
90	PI/2 BPSK	1	1	23.20	23.18	23.17	
Channel				632668	633332	634000	Tune-up limit (dBm)
Frequency (MHz)				3490.02	3499.98	3510	
80	PI/2 BPSK	1	1	23.17	23.20	23.23	
Channel				632334	633332	634332	Tune-up limit (dBm)
Frequency (MHz)				3485.01	3499.98	3514.98	
70	PI/2 BPSK	1	1	23.17	23.24	23.20	
Channel				632000	633332	634666	Tune-up limit (dBm)
Frequency (MHz)				3480	3499.98	3519.99	
60	PI/2 BPSK	1	1	23.17	23.17	23.24	
Channel				631668	633332	635000	Tune-up limit (dBm)
Frequency (MHz)				3475.02	3499.98	3525	
50	PI/2 BPSK	1	1	23.24	23.24	23.16	
Channel				631334	633332	635332	Tune-up limit (dBm)
Frequency (MHz)				3470.01	3499.98	3529.98	
40	PI/2 BPSK	1	1	23.23	23.25	23.21	
Channel				631000	633332	635666	Tune-up limit (dBm)
Frequency (MHz)				3465	3499.98	3534.99	
30	PI/2 BPSK	1	1	23.19	23.16	23.19	
Channel				630834	633332	635832	Tune-up limit (dBm)
Frequency (MHz)				3462.51	3499.98	3537.48	
25	PI/2 BPSK	1	1	23.23	23.16	23.17	
Channel				630668	633332	636000	Tune-up limit (dBm)
Frequency (MHz)				3460.02	3499.98	3540	
20	PI/2 BPSK	1	1	23.20	23.17	23.16	
Channel				630500	633332	636166	Tune-up limit (dBm)
Frequency (MHz)				3457.5	3499.98	3542.49	
15	PI/2 BPSK	1	1	23.16	23.24	23.23	
Channel				630334	633332	636332	Tune-up limit (dBm)
Frequency (MHz)				3455.01	3499.98	3544.98	
10	PI/2 BPSK	1	1	23.19	23.23	23.16	



<FR1 n77_Ant Aux_Sensor OFF>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					633332		
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		23.38		
100	PI/2 BPSK	1	137		23.17		25.1
100	PI/2 BPSK	1	271		23.29		
100	PI/2 BPSK	135	0		22.89		
100	PI/2 BPSK	135	69		23.17		24.6
100	PI/2 BPSK	135	138		22.77		25.1
100	PI/2 BPSK	270	0		22.85		
100	QPSK	1	1		23.27		
100	QPSK	1	137		23.13		24.1
100	QPSK	1	271		23.25		
100	QPSK	135	0		22.34		
100	QPSK	135	69		23.12		25.1
100	QPSK	135	138		22.34		24.1
100	QPSK	270	0		22.39		
100	16QAM	1	1		22.41		
100	64QAM	1	1		20.86		22.6
100	256QAM	1	1		19.36		20.6
Channel				633000	633332	633666	Tune-up limit (dBm)
Frequency (MHz)				3495	3499.98	3504.99	
90	PI/2 BPSK	1	1	23.18	23.14	23.10	
Channel				632668	633332	634000	Tune-up limit (dBm)
Frequency (MHz)				3490.02	3499.98	3510	
80	PI/2 BPSK	1	1	23.13	23.11	23.16	
Channel				632334	633332	634332	Tune-up limit (dBm)
Frequency (MHz)				3485.01	3499.98	3514.98	
70	PI/2 BPSK	1	1	23.15	23.10	23.13	
Channel				632000	633332	634666	Tune-up limit (dBm)
Frequency (MHz)				3480	3499.98	3519.99	
60	PI/2 BPSK	1	1	23.14	23.15	23.16	
Channel				631668	633332	635000	Tune-up limit (dBm)
Frequency (MHz)				3475.02	3499.98	3525	
50	PI/2 BPSK	1	1	23.17	23.10	23.11	
Channel				631334	633332	635332	Tune-up limit (dBm)
Frequency (MHz)				3470.01	3499.98	3529.98	
40	PI/2 BPSK	1	1	23.13	23.11	23.15	
Channel				631000	633332	635666	Tune-up limit (dBm)
Frequency (MHz)				3465	3499.98	3534.99	
30	PI/2 BPSK	1	1	23.15	23.15	23.17	
Channel				630834	633332	635832	Tune-up limit (dBm)
Frequency (MHz)				3462.51	3499.98	3537.48	
25	PI/2 BPSK	1	1	23.17	23.17	23.13	
Channel				630668	633332	636000	Tune-up limit (dBm)
Frequency (MHz)				3460.02	3499.98	3540	
20	PI/2 BPSK	1	1	23.12	23.14	23.18	
Channel				630500	633332	636166	Tune-up limit (dBm)
Frequency (MHz)				3457.5	3499.98	3542.49	
15	PI/2 BPSK	1	1	23.17	23.16	23.13	
Channel				630334	633332	636332	Tune-up limit (dBm)
Frequency (MHz)				3455.01	3499.98	3544.98	
10	PI/2 BPSK	1	1	23.14	23.13	23.10	



<FR1 n77_Ant MIMO3_Sensor OFF>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					633332		
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		23.51		
100	PI/2 BPSK	1	137		23.41		25.1
100	PI/2 BPSK	1	271		23.34		
100	PI/2 BPSK	135	0		23.07		
100	PI/2 BPSK	135	69		23.43		24.6
100	PI/2 BPSK	135	138		23.18		25.1
100	PI/2 BPSK	270	0		23.11		
100	QPSK	1	1		23.45		
100	QPSK	1	137		23.35		25.1
100	QPSK	1	271		23.50		
100	QPSK	135	0		22.55		
100	QPSK	135	69		23.34		24.1
100	QPSK	135	138		22.66		25.1
100	QPSK	270	0		22.69		
100	16QAM	1	1		22.70		
100	64QAM	1	1		21.19		24.1
100	256QAM	1	1		19.06		22.6
Channel				633000	633332	633666	20.6
Frequency (MHz)				3495	3499.98	3504.99	
90	PI/2 BPSK	1	1	23.23	23.29	23.31	
Channel				632668	633332	634000	25.1
Frequency (MHz)				3490.02	3499.98	3510	
80	PI/2 BPSK	1	1	23.31	23.27	23.26	
Channel				632334	633332	634332	25.1
Frequency (MHz)				3485.01	3499.98	3514.98	
70	PI/2 BPSK	1	1	23.30	23.29	23.24	
Channel				632000	633332	634666	25.1
Frequency (MHz)				3480	3499.98	3519.99	
60	PI/2 BPSK	1	1	23.24	23.25	23.28	
Channel				631668	633332	635000	25.1
Frequency (MHz)				3475.02	3499.98	3525	
50	PI/2 BPSK	1	1	23.25	23.31	23.29	
Channel				631334	633332	635332	25.1
Frequency (MHz)				3470.01	3499.98	3529.98	
40	PI/2 BPSK	1	1	23.31	23.29	23.28	
Channel				631000	633332	635666	25.1
Frequency (MHz)				3465	3499.98	3534.99	
30	PI/2 BPSK	1	1	23.23	23.31	23.30	
Channel				630834	633332	635832	25.1
Frequency (MHz)				3462.51	3499.98	3537.48	
25	PI/2 BPSK	1	1	23.22	23.29	23.23	
Channel				630668	633332	636000	25.1
Frequency (MHz)				3460.02	3499.98	3540	
20	PI/2 BPSK	1	1	23.27	23.27	23.22	
Channel				630500	633332	636166	25.1
Frequency (MHz)				3457.5	3499.98	3542.49	
15	PI/2 BPSK	1	1	23.26	23.24	23.27	
Channel				630334	633332	636332	25.1
Frequency (MHz)				3455.01	3499.98	3544.98	
10	PI/2 BPSK	1	1	23.24	23.27	23.27	



<FR1 n77_Ant MIMO2_Sensor ON>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					633332		
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		19.74		
100	PI/2 BPSK	1	137		19.56		20.5
100	PI/2 BPSK	1	271		19.50		
100	PI/2 BPSK	135	0		19.54		
100	PI/2 BPSK	135	69		19.60		20.5
100	PI/2 BPSK	135	138		19.52		20.5
100	PI/2 BPSK	270	0		19.54		
100	QPSK	1	1		19.57		
100	QPSK	1	137		19.55		20.5
100	QPSK	1	271		19.50		
100	QPSK	135	0		19.66		
100	QPSK	135	69		19.59		20.5
100	QPSK	135	138		19.47		20.5
100	QPSK	270	0		19.47		
100	16QAM	1	1		19.54		
100	64QAM	1	1		19.42		20.5
100	256QAM	1	1		18.14		19.0
Channel				633000	633332	633666	Tune-up limit (dBm)
Frequency (MHz)				3495	3499.98	3504.99	
90	PI/2 BPSK	1	1	19.54	19.53	19.45	
Channel				632668	633332	634000	Tune-up limit (dBm)
Frequency (MHz)				3490.02	3499.98	3510	
80	PI/2 BPSK	1	1	19.51	19.46	19.44	
Channel				632334	633332	634332	Tune-up limit (dBm)
Frequency (MHz)				3485.01	3499.98	3514.98	
70	PI/2 BPSK	1	1	19.53	19.53	19.45	
Channel				632000	633332	634666	Tune-up limit (dBm)
Frequency (MHz)				3480	3499.98	3519.99	
60	PI/2 BPSK	1	1	19.53	19.49	19.47	
Channel				631668	633332	635000	Tune-up limit (dBm)
Frequency (MHz)				3475.02	3499.98	3525	
50	PI/2 BPSK	1	1	19.44	19.47	19.46	
Channel				631334	633332	635332	Tune-up limit (dBm)
Frequency (MHz)				3470.01	3499.98	3529.98	
40	PI/2 BPSK	1	1	19.45	19.48	19.48	
Channel				631000	633332	635666	Tune-up limit (dBm)
Frequency (MHz)				3465	3499.98	3534.99	
30	PI/2 BPSK	1	1	19.53	19.44	19.51	
Channel				630834	633332	635832	Tune-up limit (dBm)
Frequency (MHz)				3462.51	3499.98	3537.48	
25	PI/2 BPSK	1	1	19.45	19.47	19.50	
Channel				630668	633332	636000	Tune-up limit (dBm)
Frequency (MHz)				3460.02	3499.98	3540	
20	PI/2 BPSK	1	1	19.46	19.50	19.53	
Channel				630500	633332	636166	Tune-up limit (dBm)
Frequency (MHz)				3457.5	3499.98	3542.49	
15	PI/2 BPSK	1	1	19.46	19.52	19.51	
Channel				630334	633332	636332	Tune-up limit (dBm)
Frequency (MHz)				3455.01	3499.98	3544.98	
10	PI/2 BPSK	1	1	19.53	19.45	19.47	



<FR1 n77_HPUE_Ant Main_Sensor OFF>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					633332		
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		25.60		
100	PI/2 BPSK	1	137		25.51		26.0
100	PI/2 BPSK	1	271		25.52		
100	PI/2 BPSK	135	0		25.00		
100	PI/2 BPSK	135	69		25.41		25.5
100	PI/2 BPSK	135	138		25.02		26.0
100	PI/2 BPSK	270	0		24.96		
100	QPSK	1	1		25.58		
100	QPSK	1	137		25.35		25.0
100	QPSK	1	271		25.55		
100	QPSK	135	0		24.49		
100	QPSK	135	69		25.35		26.0
100	QPSK	135	138		24.40		
100	QPSK	270	0		24.47		
100	16QAM	1	1		24.49		25.0
100	64QAM	1	1		22.98		23.5
100	256QAM	1	1		21.08		21.5
Channel				633000	633332	633666	Tune-up limit (dBm)
Frequency (MHz)				3495	3499.98	3504.99	
90	PI/2 BPSK	1	1	25.50	25.58	25.53	
Channel				632668	633332	634000	Tune-up limit (dBm)
Frequency (MHz)				3490.02	3499.98	3510	
80	PI/2 BPSK	1	1	25.56	25.58	25.50	
Channel				632334	633332	634332	Tune-up limit (dBm)
Frequency (MHz)				3485.01	3499.98	3514.98	
70	PI/2 BPSK	1	1	25.57	25.54	25.57	
Channel				632000	633332	634666	Tune-up limit (dBm)
Frequency (MHz)				3480	3499.98	3519.99	
60	PI/2 BPSK	1	1	25.51	25.57	25.51	
Channel				631668	633332	635000	Tune-up limit (dBm)
Frequency (MHz)				3475.02	3499.98	3525	
50	PI/2 BPSK	1	1	25.59	25.54	25.56	
Channel				631334	633332	635332	Tune-up limit (dBm)
Frequency (MHz)				3470.01	3499.98	3529.98	
40	PI/2 BPSK	1	1	25.55	25.51	25.51	
Channel				631000	633332	635666	Tune-up limit (dBm)
Frequency (MHz)				3465	3499.98	3534.99	
30	PI/2 BPSK	1	1	25.52	25.52	25.57	
Channel				630834	633332	635832	Tune-up limit (dBm)
Frequency (MHz)				3462.51	3499.98	3537.48	
25	PI/2 BPSK	1	1	25.59	25.54	25.53	
Channel				630668	633332	636000	Tune-up limit (dBm)
Frequency (MHz)				3460.02	3499.98	3540	
20	PI/2 BPSK	1	1	25.55	25.55	25.54	
Channel				630500	633332	636166	Tune-up limit (dBm)
Frequency (MHz)				3457.5	3499.98	3542.49	
15	PI/2 BPSK	1	1	25.57	25.52	25.50	
Channel				630334	633332	636332	Tune-up limit (dBm)
Frequency (MHz)				3455.01	3499.98	3544.98	
10	PI/2 BPSK	1	1	25.53	25.56	25.55	



<FR1 n77_HPUE_Ant MIMO2_Sensor OFF>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					633332		26.0
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		25.30		
100	PI/2 BPSK	1	137		25.17		25.5
100	PI/2 BPSK	1	271		25.12		
100	PI/2 BPSK	135	0		24.66		
100	PI/2 BPSK	135	69		25.20		25.5
100	PI/2 BPSK	135	138		24.68		
100	PI/2 BPSK	270	0		24.68		
100	QPSK	1	1		25.22		26.0
100	QPSK	1	137		25.10		
100	QPSK	1	271		25.17		
100	QPSK	135	0		24.20		25.0
100	QPSK	135	69		25.13		26.0
100	QPSK	135	138		24.19		25.0
100	QPSK	270	0		24.18		
100	16QAM	1	1		24.13		
100	64QAM	1	1		22.76		23.5
100	256QAM	1	1		20.63		21.5
Channel				633000	633332	633666	Tune-up limit (dBm)
Frequency (MHz)				3495	3499.98	3504.99	
90	PI/2 BPSK	1	1	25.26	25.24	25.28	26.0
Channel				632668	633332	634000	Tune-up limit (dBm)
Frequency (MHz)				3490.02	3499.98	3510	
80	PI/2 BPSK	1	1	25.25	25.24	25.21	26.0
Channel				632334	633332	634332	Tune-up limit (dBm)
Frequency (MHz)				3485.01	3499.98	3514.98	
70	PI/2 BPSK	1	1	25.30	25.23	25.29	26.0
Channel				632000	633332	634666	Tune-up limit (dBm)
Frequency (MHz)				3480	3499.98	3519.99	
60	PI/2 BPSK	1	1	25.29	25.20	25.27	26.0
Channel				631668	633332	635000	Tune-up limit (dBm)
Frequency (MHz)				3475.02	3499.98	3525	
50	PI/2 BPSK	1	1	25.29	25.24	25.27	26.0
Channel				631334	633332	635332	Tune-up limit (dBm)
Frequency (MHz)				3470.01	3499.98	3529.98	
40	PI/2 BPSK	1	1				26.0
Channel				631000	633332	635666	Tune-up limit (dBm)
Frequency (MHz)				3465	3499.98	3534.99	
30	PI/2 BPSK	1	1	25.20	25.21	25.21	26.0
Channel				630834	633332	635832	Tune-up limit (dBm)
Frequency (MHz)				3462.51	3499.98	3537.48	
25	PI/2 BPSK	1	1	25.26	25.27	25.22	26.0
Channel				630668	633332	636000	Tune-up limit (dBm)
Frequency (MHz)				3460.02	3499.98	3540	
20	PI/2 BPSK	1	1	25.22	25.26	25.25	26.0
Channel				630500	633332	636166	Tune-up limit (dBm)
Frequency (MHz)				3457.5	3499.98	3542.49	
15	PI/2 BPSK	1	1	25.22	25.24	25.26	26.0
Channel				630334	633332	636332	Tune-up limit (dBm)
Frequency (MHz)				3455.01	3499.98	3544.98	
10	PI/2 BPSK	1	1	25.29	25.27	25.20	26.0



<FR1 n77_HPUE_Ant Aux_Sensor OFF>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					633332		26.0
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		25.74		
100	PI/2 BPSK	1	137		25.62		25.5
100	PI/2 BPSK	1	271		25.67		
100	PI/2 BPSK	135	0		25.13		
100	PI/2 BPSK	135	69		25.49		25.5
100	PI/2 BPSK	135	138		25.08		
100	PI/2 BPSK	270	0		25.07		
100	QPSK	1	1		25.66		26.0
100	QPSK	1	137		25.40		
100	QPSK	1	271		25.62		
100	QPSK	135	0		24.61		25.0
100	QPSK	135	69		25.43		
100	QPSK	135	138		24.45		
100	QPSK	270	0		24.56		25.0
100	16QAM	1	1		24.61		
100	64QAM	1	1		23.05		
100	256QAM	1	1		21.70		21.5
Channel				633000	633332	633666	Tune-up limit (dBm)
Frequency (MHz)				3495	3499.98	3504.99	
90	PI/2 BPSK	1	1	25.47	25.45	25.54	26.0
Channel				632668	633332	634000	Tune-up limit (dBm)
Frequency (MHz)				3490.02	3499.98	3510	
80	PI/2 BPSK	1	1	25.48	25.50	25.44	26.0
Channel				632334	633332	634332	Tune-up limit (dBm)
Frequency (MHz)				3485.01	3499.98	3514.98	
70	PI/2 BPSK	1	1	25.52	25.45	25.52	26.0
Channel				632000	633332	634666	Tune-up limit (dBm)
Frequency (MHz)				3480	3499.98	3519.99	
60	PI/2 BPSK	1	1	25.44	25.50	25.47	26.0
Channel				631668	633332	635000	Tune-up limit (dBm)
Frequency (MHz)				3475.02	3499.98	3525	
50	PI/2 BPSK	1	1	25.44	25.45	25.44	26.0
Channel				631334	633332	635332	Tune-up limit (dBm)
Frequency (MHz)				3470.01	3499.98	3529.98	
40	PI/2 BPSK	1	1	25.50	25.52	25.53	26.0
Channel				631000	633332	635666	Tune-up limit (dBm)
Frequency (MHz)				3465	3499.98	3534.99	
30	PI/2 BPSK	1	1	25.45	25.51	25.53	26.0
Channel				630834	633332	635832	Tune-up limit (dBm)
Frequency (MHz)				3462.51	3499.98	3537.48	
25	PI/2 BPSK	1	1	25.54	25.52	25.49	26.0
Channel				630668	633332	636000	Tune-up limit (dBm)
Frequency (MHz)				3460.02	3499.98	3540	
20	PI/2 BPSK	1	1	25.47	25.44	25.54	26.0
Channel				630500	633332	636166	Tune-up limit (dBm)
Frequency (MHz)				3457.5	3499.98	3542.49	
15	PI/2 BPSK	1	1	25.53	25.45	25.52	26.0
Channel				630334	633332	636332	Tune-up limit (dBm)
Frequency (MHz)				3455.01	3499.98	3544.98	
10	PI/2 BPSK	1	1	25.50	25.54	25.49	26.0



<FR1 n77_HPUE_Ant MIMO3_Sensor OFF>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					633332		
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		25.92		
100	PI/2 BPSK	1	137		25.87		26.0
100	PI/2 BPSK	1	271		25.87		
100	PI/2 BPSK	135	0		25.30		
100	PI/2 BPSK	135	69		25.87		25.5
100	PI/2 BPSK	135	138		25.46		26.0
100	PI/2 BPSK	270	0		25.40		
100	QPSK	1	1		25.73		
100	QPSK	1	137		25.81		25.0
100	QPSK	1	271		25.74		
100	QPSK	135	0		24.90		
100	QPSK	135	69		25.88		26.0
100	QPSK	135	138		24.92		25.0
100	QPSK	270	0		24.85		
100	16QAM	1	1		24.83		
100	64QAM	1	1		23.44		23.5
100	256QAM	1	1		21.32		21.5
Channel				633000	633332	633666	Tune-up limit (dBm)
Frequency (MHz)				3495	3499.98	3504.99	
90	PI/2 BPSK	1	1	25.67	25.72	25.68	
Channel				632668	633332	634000	Tune-up limit (dBm)
Frequency (MHz)				3490.02	3499.98	3510	
80	PI/2 BPSK	1	1	25.66	25.62	25.63	
Channel				632334	633332	634332	Tune-up limit (dBm)
Frequency (MHz)				3485.01	3499.98	3514.98	
70	PI/2 BPSK	1	1	25.68	25.69	25.63	
Channel				632000	633332	634666	Tune-up limit (dBm)
Frequency (MHz)				3480	3499.98	3519.99	
60	PI/2 BPSK	1	1	25.69	25.65	25.66	
Channel				631668	633332	635000	Tune-up limit (dBm)
Frequency (MHz)				3475.02	3499.98	3525	
50	PI/2 BPSK	1	1	25.68	25.65	25.62	
Channel				631334	633332	635332	Tune-up limit (dBm)
Frequency (MHz)				3470.01	3499.98	3529.98	
40	PI/2 BPSK	1	1	25.72	25.72	25.63	
Channel				631000	633332	635666	Tune-up limit (dBm)
Frequency (MHz)				3465	3499.98	3534.99	
30	PI/2 BPSK	1	1	25.62	25.64	25.67	
Channel				630834	633332	635832	Tune-up limit (dBm)
Frequency (MHz)				3462.51	3499.98	3537.48	
25	PI/2 BPSK	1	1	25.62	25.70	25.72	
Channel				630668	633332	636000	Tune-up limit (dBm)
Frequency (MHz)				3460.02	3499.98	3540	
20	PI/2 BPSK	1	1	25.71	25.64	25.71	
Channel				630500	633332	636166	Tune-up limit (dBm)
Frequency (MHz)				3457.5	3499.98	3542.49	
15	PI/2 BPSK	1	1	25.65	25.62	25.64	
Channel				630334	633332	636332	Tune-up limit (dBm)
Frequency (MHz)				3455.01	3499.98	3544.98	
10	PI/2 BPSK	1	1	25.71	25.71	25.66	



<FR1 n77_HPUE_Ant MIMO2_Sensor ON>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					633332		
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		22.67		
100	PI/2 BPSK	1	137		22.43		23.5
100	PI/2 BPSK	1	271		22.35		
100	PI/2 BPSK	135	0		22.37		
100	PI/2 BPSK	135	69		22.46		23.5
100	PI/2 BPSK	135	138		22.39		23.5
100	PI/2 BPSK	270	0		22.38		
100	QPSK	1	1		22.43		
100	QPSK	1	137		22.47		23.5
100	QPSK	1	271		22.35		
100	QPSK	135	0		22.57		
100	QPSK	135	69		22.43		23.5
100	QPSK	135	138		22.40		23.5
100	QPSK	270	0		22.33		
100	16QAM	1	1		22.41		
100	64QAM	1	1		22.32		23.5
100	256QAM	1	1		21.03		22.0
Channel				633000	633332	633666	Tune-up limit (dBm)
Frequency (MHz)				3495	3499.98	3504.99	
90	PI/2 BPSK	1	1	22.41	22.37	22.41	
Channel				632668	633332	634000	Tune-up limit (dBm)
Frequency (MHz)				3490.02	3499.98	3510	
80	PI/2 BPSK	1	1	22.47	22.43	22.42	
Channel				632334	633332	634332	Tune-up limit (dBm)
Frequency (MHz)				3485.01	3499.98	3514.98	
70	PI/2 BPSK	1	1	22.39	22.38	22.45	
Channel				632000	633332	634666	Tune-up limit (dBm)
Frequency (MHz)				3480	3499.98	3519.99	
60	PI/2 BPSK	1	1	22.39	22.43	22.38	
Channel				631668	633332	635000	Tune-up limit (dBm)
Frequency (MHz)				3475.02	3499.98	3525	
50	PI/2 BPSK	1	1	22.40	22.43	22.40	
Channel				631334	633332	635332	Tune-up limit (dBm)
Frequency (MHz)				3470.01	3499.98	3529.98	
40	PI/2 BPSK	1	1	22.41	22.44	22.42	
Channel				631000	633332	635666	Tune-up limit (dBm)
Frequency (MHz)				3465	3499.98	3534.99	
30	PI/2 BPSK	1	1	22.42	22.39	22.47	
Channel				630834	633332	635832	Tune-up limit (dBm)
Frequency (MHz)				3462.51	3499.98	3537.48	
25	PI/2 BPSK	1	1	22.42	22.39	22.39	
Channel				630668	633332	636000	Tune-up limit (dBm)
Frequency (MHz)				3460.02	3499.98	3540	
20	PI/2 BPSK	1	1	22.40	22.44	22.38	
Channel				630500	633332	636166	Tune-up limit (dBm)
Frequency (MHz)				3457.5	3499.98	3542.49	
15	PI/2 BPSK	1	1	22.46	22.45	22.46	
Channel				630334	633332	636332	Tune-up limit (dBm)
Frequency (MHz)				3455.01	3499.98	3544.98	
10	PI/2 BPSK	1	1	22.42	22.37	22.39	



<FR1 n78_Ant Main_Sensor OFF>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					650000		
Frequency (MHz)					3750		
100	PI/2 BPSK	1	1		23.32		
100	PI/2 BPSK	1	137		23.24		25.1
100	PI/2 BPSK	1	271		23.18		
100	PI/2 BPSK	135	0		23.10		
100	PI/2 BPSK	135	69		23.27		24.6
100	PI/2 BPSK	135	138		23.08		25.1
100	PI/2 BPSK	270	0		23.08		
100	QPSK	1	1		23.28		
100	QPSK	1	137		23.25		24.1
100	QPSK	1	271		23.16		
100	QPSK	135	0		22.56		
100	QPSK	135	69		23.27		25.1
100	QPSK	135	138		22.56		24.1
100	QPSK	270	0		22.57		
100	16QAM	1	1		22.60		
100	64QAM	1	1		21.08		22.6
100	256QAM	1	1		19.04		20.6
Channel				649668	650000	650332	Tune-up limit (dBm)
Frequency (MHz)				3745.02	3750	3754.98	
90	PI/2 BPSK	1	1	23.31	23.25	23.23	
Channel				649334	650000	650666	Tune-up limit (dBm)
Frequency (MHz)				3740.01	3750	3759.99	
80	PI/2 BPSK	1	1	23.25	23.30	23.31	
Channel				649000	650000	651000	Tune-up limit (dBm)
Frequency (MHz)				3735	3750	3765	
70	PI/2 BPSK	1	1	23.29	23.24	23.31	
Channel				648668	650000	651332	Tune-up limit (dBm)
Frequency (MHz)				3730.02	3750	3769.98	
60	PI/2 BPSK	1	1	23.22	23.31	23.27	
Channel				648334	650000	651666	Tune-up limit (dBm)
Frequency (MHz)				3725.01	3750	3774.99	
50	PI/2 BPSK	1	1	23.23	23.27	23.27	
Channel				648000	650000	652000	Tune-up limit (dBm)
Frequency (MHz)				3720	3750	3780	
40	PI/2 BPSK	1	1	23.24	23.22	23.25	
Channel				647668	650000	652332	Tune-up limit (dBm)
Frequency (MHz)				3715.02	3750.00	3784.98	
30	PI/2 BPSK	1	1	23.30	23.31	23.24	
Channel				647500	650000	652500	Tune-up limit (dBm)
Frequency (MHz)				3712.5	3750.00	3787.50	
25	PI/2 BPSK	1	1	23.31	23.27	23.22	
Channel				647334	650000	652666	Tune-up limit (dBm)
Frequency (MHz)				3710.01	3750	3789.99	
20	PI/2 BPSK	1	1	23.31	23.27	23.26	
Channel				647168	650000	652832	Tune-up limit (dBm)
Frequency (MHz)				3707.52	3750	3792.48	
15	PI/2 BPSK	1	1	23.25	23.24	23.28	
Channel				647000	650000	653000	Tune-up limit (dBm)
Frequency (MHz)				3705	3750	3795	
10	PI/2 BPSK	1	1	23.25	23.22	23.25	



<FR1 n78_Ant MIMO2_Sensor OFF>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					650000		
Frequency (MHz)					3750		
100	PI/2 BPSK	1	1		23.49		
100	PI/2 BPSK	1	137		23.35		25.1
100	PI/2 BPSK	1	271		23.36		
100	PI/2 BPSK	135	0		23.07		
100	PI/2 BPSK	135	69		23.31		24.6
100	PI/2 BPSK	135	138		23.01		25.1
100	PI/2 BPSK	270	0		22.93		
100	QPSK	1	1		23.39		
100	QPSK	1	137		23.28		24.1
100	QPSK	1	271		23.32		
100	QPSK	135	0		22.54		
100	QPSK	135	69		23.17		25.1
100	QPSK	135	138		22.52		24.1
100	QPSK	270	0		22.45		
100	16QAM	1	1		22.63		
100	64QAM	1	1		21.15		22.6
100	256QAM	1	1		19.12		20.6
Channel				649668	650000	650332	Tune-up limit (dBm)
Frequency (MHz)				3745.02	3750	3754.98	
90	PI/2 BPSK	1	1	23.45	23.45	23.47	
Channel				649334	650000	650666	Tune-up limit (dBm)
Frequency (MHz)				3740.01	3750	3759.99	
80	PI/2 BPSK	1	1	23.41	23.42	23.41	
Channel				649000	650000	651000	Tune-up limit (dBm)
Frequency (MHz)				3735	3750	3765	
70	PI/2 BPSK	1	1	23.46	23.44	23.39	
Channel				648668	650000	651332	Tune-up limit (dBm)
Frequency (MHz)				3730.02	3750	3769.98	
60	PI/2 BPSK	1	1	23.43	23.39	23.42	
Channel				648334	650000	651666	Tune-up limit (dBm)
Frequency (MHz)				3725.01	3750	3774.99	
50	PI/2 BPSK	1	1	23.47	23.48	23.40	
Channel				648000	650000	652000	Tune-up limit (dBm)
Frequency (MHz)				3720	3750	3780	
40	PI/2 BPSK	1	1	23.47	23.39	23.47	
Channel				647668	650000	652332	Tune-up limit (dBm)
Frequency (MHz)				3715.02	3750.00	3784.98	
30	PI/2 BPSK	1	1	23.43	23.42	23.47	
Channel				647500	650000	652500	Tune-up limit (dBm)
Frequency (MHz)				3712.5	3750.00	3787.50	
25	PI/2 BPSK	1	1	23.48	23.46	23.45	
Channel				647334	650000	652666	Tune-up limit (dBm)
Frequency (MHz)				3710.01	3750	3789.99	
20	PI/2 BPSK	1	1	23.46	23.47	23.44	
Channel				647168	650000	652832	Tune-up limit (dBm)
Frequency (MHz)				3707.52	3750	3792.48	
15	PI/2 BPSK	1	1	23.40	23.39	23.48	
Channel				647000	650000	653000	Tune-up limit (dBm)
Frequency (MHz)				3705	3750	3795	
10	PI/2 BPSK	1	1	23.42	23.40	23.39	



<FR1 n78_Ant Aux_Sensor OFF>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					650000		
Frequency (MHz)					3750		
100	PI/2 BPSK	1	1		23.42		
100	PI/2 BPSK	1	137		23.31		25.1
100	PI/2 BPSK	1	271		23.39		
100	PI/2 BPSK	135	0		23.09		
100	PI/2 BPSK	135	69		23.36		24.6
100	PI/2 BPSK	135	138		22.93		25.1
100	PI/2 BPSK	270	0		23.02		
100	QPSK	1	1		23.41		
100	QPSK	1	137		23.28		24.1
100	QPSK	1	271		23.37		
100	QPSK	135	0		22.53		
100	QPSK	135	69		23.32		25.1
100	QPSK	135	138		22.49		24.1
100	QPSK	270	0		22.58		
100	16QAM	1	1		22.55		
100	64QAM	1	1		21.04		22.6
100	256QAM	1	1		19.49		20.6
Channel				649668	650000	650332	Tune-up limit (dBm)
Frequency (MHz)				3745.02	3750	3754.98	
90	PI/2 BPSK	1	1	23.22	23.18	23.13	
Channel				649334	650000	650666	Tune-up limit (dBm)
Frequency (MHz)				3740.01	3750	3759.99	
80	PI/2 BPSK	1	1	23.20	23.16	23.21	
Channel				649000	650000	651000	Tune-up limit (dBm)
Frequency (MHz)				3735	3750	3765	
70	PI/2 BPSK	1	1	23.18	23.18	23.18	
Channel				648668	650000	651332	Tune-up limit (dBm)
Frequency (MHz)				3730.02	3750	3769.98	
60	PI/2 BPSK	1	1	23.14	23.14	23.20	
Channel				648334	650000	651666	Tune-up limit (dBm)
Frequency (MHz)				3725.01	3750	3774.99	
50	PI/2 BPSK	1	1	23.16	23.21	23.12	
Channel				648000	650000	652000	Tune-up limit (dBm)
Frequency (MHz)				3720	3750	3780	
40	PI/2 BPSK	1	1	23.13	23.17	23.18	
Channel				647668	650000	652332	Tune-up limit (dBm)
Frequency (MHz)				3715.02	3750.00	3784.98	
30	PI/2 BPSK	1	1	23.17	23.13	23.15	
Channel				647500	650000	652500	Tune-up limit (dBm)
Frequency (MHz)				3712.5	3750.00	3787.50	
25	PI/2 BPSK	1	1	23.19	23.19	23.18	
Channel				647334	650000	652666	Tune-up limit (dBm)
Frequency (MHz)				3710.01	3750	3789.99	
20	PI/2 BPSK	1	1	23.12	23.17	23.12	
Channel				647168	650000	652832	Tune-up limit (dBm)
Frequency (MHz)				3707.52	3750	3792.48	
15	PI/2 BPSK	1	1	23.15	23.13	23.13	
Channel				647000	650000	653000	Tune-up limit (dBm)
Frequency (MHz)				3705	3750	3795	
10	PI/2 BPSK	1	1	23.18	23.17	23.18	



<FR1 n78_Ant MIMO3_Sensor OFF>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					650000		
Frequency (MHz)					3750		
100	PI/2 BPSK	1	1		23.24		
100	PI/2 BPSK	1	137		23.21		25.1
100	PI/2 BPSK	1	271		23.13		
100	PI/2 BPSK	135	0		23.03		
100	PI/2 BPSK	135	69		23.17		24.6
100	PI/2 BPSK	135	138		23.08		25.1
100	PI/2 BPSK	270	0		22.92		
100	QPSK	1	1		23.13		
100	QPSK	1	137		23.16		25.1
100	QPSK	1	271		23.11		
100	QPSK	135	0		22.42		
100	QPSK	135	69		23.13		24.1
100	QPSK	135	138		22.51		25.1
100	QPSK	270	0		22.52		
100	16QAM	1	1		22.51		
100	64QAM	1	1		21.06		24.1
100	256QAM	1	1		18.97		22.6
Channel				649668	650000	650332	20.6
Frequency (MHz)				3745.02	3750	3754.98	
90	PI/2 BPSK	1	1	23.01	22.94	23.02	
Channel				649334	650000	650666	24.0
Frequency (MHz)				3740.01	3750	3759.99	
80	PI/2 BPSK	1	1	22.95	22.97	23.00	
Channel				649000	650000	651000	24.0
Frequency (MHz)				3735	3750	3765	
70	PI/2 BPSK	1	1	23.13	23.12	23.11	
Channel				648668	650000	651332	25.1
Frequency (MHz)				3730.02	3750	3769.98	
60	PI/2 BPSK	1	1	23.10	23.11	23.12	
Channel				648334	650000	651666	25.1
Frequency (MHz)				3725.01	3750	3774.99	
50	PI/2 BPSK	1	1	23.17	23.11	23.14	
Channel				648000	650000	652000	25.1
Frequency (MHz)				3720	3750	3780	
40	PI/2 BPSK	1	1	23.16	23.12	23.14	
Channel				647668	650000	652332	25.1
Frequency (MHz)				3715.02	3750.00	3784.98	
30	PI/2 BPSK	1	1	23.11	23.14	23.16	
Channel				647500	650000	652500	25.1
Frequency (MHz)				3712.5	3750.00	3787.50	
25	PI/2 BPSK	1	1	23.15	23.20	23.11	
Channel				647334	650000	652666	25.1
Frequency (MHz)				3710.01	3750	3789.99	
20	PI/2 BPSK	1	1	23.15	23.14	23.14	
Channel				647168	650000	652832	25.1
Frequency (MHz)				3707.52	3750	3792.48	
15	PI/2 BPSK	1	1	23.13	23.12	23.16	
Channel				647000	650000	653000	25.1
Frequency (MHz)				3705	3750	3795	
10	PI/2 BPSK	1	1	23.14	23.15	23.11	



<FR1 n78_Ant MIMO2_Sensor ON>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					650000		
Frequency (MHz)					3750		
100	PI/2 BPSK	1	1		19.66		
100	PI/2 BPSK	1	137		19.63		20.5
100	PI/2 BPSK	1	271		19.49		
100	PI/2 BPSK	135	0		19.60		
100	PI/2 BPSK	135	69		19.56		20.5
100	PI/2 BPSK	135	138		19.48		20.5
100	PI/2 BPSK	270	0		19.55		
100	QPSK	1	1		19.50		
100	QPSK	1	137		19.59		20.5
100	QPSK	1	271		19.51		
100	QPSK	135	0		19.61		
100	QPSK	135	69		19.53		20.5
100	QPSK	135	138		19.46		20.5
100	QPSK	270	0		19.53		
100	16QAM	1	1		19.48		
100	64QAM	1	1		19.40		20.5
100	256QAM	1	1		18.15		19.0
Channel				649668	650000	650332	Tune-up limit (dBm)
Frequency (MHz)				3745.02	3750	3754.98	
90	PI/2 BPSK	1	1	19.45	19.44	19.46	
Channel				649334	650000	650666	Tune-up limit (dBm)
Frequency (MHz)				3740.01	3750	3759.99	
80	PI/2 BPSK	1	1	19.45	19.37	19.45	
Channel				649000	650000	651000	Tune-up limit (dBm)
Frequency (MHz)				3735	3750	3765	
70	PI/2 BPSK	1	1	19.42	19.44	19.43	
Channel				648668	650000	651332	Tune-up limit (dBm)
Frequency (MHz)				3730.02	3750	3769.98	
60	PI/2 BPSK	1	1	19.43	19.40	19.37	
Channel				648334	650000	651666	Tune-up limit (dBm)
Frequency (MHz)				3725.01	3750	3774.99	
50	PI/2 BPSK	1	1	19.37	19.43	19.37	
Channel				648000	650000	652000	Tune-up limit (dBm)
Frequency (MHz)				3720	3750	3780	
40	PI/2 BPSK	1	1	19.46	19.36	19.36	
Channel				647668	650000	652332	Tune-up limit (dBm)
Frequency (MHz)				3715.02	3750.00	3784.98	
30	PI/2 BPSK	1	1	19.39	19.43	19.45	
Channel				647500	650000	652500	Tune-up limit (dBm)
Frequency (MHz)				3712.5	3750.00	3787.50	
25	PI/2 BPSK	1	1	19.43	19.41	19.45	
Channel				647334	650000	652666	Tune-up limit (dBm)
Frequency (MHz)				3710.01	3750	3789.99	
20	PI/2 BPSK	1	1	19.39	19.40	19.43	
Channel				647168	650000	652832	Tune-up limit (dBm)
Frequency (MHz)				3707.52	3750	3792.48	
15	PI/2 BPSK	1	1	19.37	19.41	19.43	
Channel				647000	650000	653000	Tune-up limit (dBm)
Frequency (MHz)				3705	3750	3795	
10	PI/2 BPSK	1	1	19.44	19.43	19.41	



<FR1 n78_HPUE_Ant Main_Sensor OFF>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					650000		
Frequency (MHz)					3750		
100	PI/2 BPSK	1	1		25.90		
100	PI/2 BPSK	1	137		25.71		26.0
100	PI/2 BPSK	1	271		25.71		
100	PI/2 BPSK	135	0		25.41		
100	PI/2 BPSK	135	69		25.76		25.5
100	PI/2 BPSK	135	138		25.37		26.0
100	PI/2 BPSK	270	0		25.40		
100	QPSK	1	1		25.75		
100	QPSK	1	137		25.75		26.0
100	QPSK	1	271		25.71		
100	QPSK	135	0		24.83		
100	QPSK	135	69		25.66		25.0
100	QPSK	135	138		24.81		26.0
100	QPSK	270	0		24.82		
100	16QAM	1	1		24.86		
100	64QAM	1	1		23.46		25.0
100	256QAM	1	1		21.30		23.5
Channel				649668	650000	650332	21.5
Frequency (MHz)				3745.02	3750	3754.98	
90	PI/2 BPSK	1	1	25.80	25.85	25.85	
Channel				649334	650000	650666	26.0
Frequency (MHz)				3740.01	3750	3759.99	
80	PI/2 BPSK	1	1	25.85	25.85	25.89	
Channel				649000	650000	651000	26.0
Frequency (MHz)				3735	3750	3765	
70	PI/2 BPSK	1	1	25.86	25.83	25.85	
Channel				648668	650000	651332	26.0
Frequency (MHz)				3730.02	3750	3769.98	
60	PI/2 BPSK	1	1	25.81	25.89	25.80	
Channel				648334	650000	651666	26.0
Frequency (MHz)				3725.01	3750	3774.99	
50	PI/2 BPSK	1	1	25.83	25.87	25.81	
Channel				648000	650000	652000	26.0
Frequency (MHz)				3720	3750	3780	
40	PI/2 BPSK	1	1	25.85	25.86	25.81	
Channel				647668	650000	652332	26.0
Frequency (MHz)				3715.02	3750.00	3784.98	
30	PI/2 BPSK	1	1	25.82	25.89	25.85	
Channel				647500	650000	652500	26.0
Frequency (MHz)				3712.5	3750.00	3787.50	
25	PI/2 BPSK	1	1	25.84	25.85	25.87	
Channel				647334	650000	652666	26.0
Frequency (MHz)				3710.01	3750	3789.99	
20	PI/2 BPSK	1	1	25.89	25.83	25.80	
Channel				647168	650000	652832	26.0
Frequency (MHz)				3707.52	3750	3792.48	
15	PI/2 BPSK	1	1	25.88	25.85	25.80	
Channel				647000	650000	653000	26.0
Frequency (MHz)				3705	3750	3795	
10	PI/2 BPSK	1	1	25.88	25.80	25.88	



<FR1 n78_HPUE_Ant MIMO2_Sensor OFF>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					650000		
Frequency (MHz)					3750		
100	PI/2 BPSK	1	1		25.48		
100	PI/2 BPSK	1	137		25.28		26.0
100	PI/2 BPSK	1	271		25.25		
100	PI/2 BPSK	135	0		24.62		
100	PI/2 BPSK	135	69		25.16		25.5
100	PI/2 BPSK	135	138		24.64		26.0
100	PI/2 BPSK	270	0		24.65		
100	QPSK	1	1		25.31		
100	QPSK	1	137		25.10		25.0
100	QPSK	1	271		25.20		
100	QPSK	135	0		24.13		
100	QPSK	135	69		25.09		26.0
100	QPSK	135	138		24.02		25.0
100	QPSK	270	0		24.11		
100	16QAM	1	1		24.27		
100	64QAM	1	1		22.76		23.5
100	256QAM	1	1		20.65		21.5
Channel				649668	650000	650332	Tune-up limit (dBm)
Frequency (MHz)				3745.02	3750	3754.98	
90	PI/2 BPSK	1	1	25.40	25.38	25.39	
Channel				649334	650000	650666	Tune-up limit (dBm)
Frequency (MHz)				3740.01	3750	3759.99	
80	PI/2 BPSK	1	1	25.44	25.44	25.46	
Channel				649000	650000	651000	Tune-up limit (dBm)
Frequency (MHz)				3735	3750	3765	
70	PI/2 BPSK	1	1	25.38	25.42	25.39	
Channel				648668	650000	651332	Tune-up limit (dBm)
Frequency (MHz)				3730.02	3750	3769.98	
60	PI/2 BPSK	1	1	25.46	25.40	25.42	
Channel				648334	650000	651666	Tune-up limit (dBm)
Frequency (MHz)				3725.01	3750	3774.99	
50	PI/2 BPSK	1	1	25.44	25.40	25.47	
Channel				648000	650000	652000	Tune-up limit (dBm)
Frequency (MHz)				3720	3750	3780	
40	PI/2 BPSK	1	1	25.42	25.45	25.40	
Channel				647668	650000	652332	Tune-up limit (dBm)
Frequency (MHz)				3715.02	3750.00	3784.98	
30	PI/2 BPSK	1	1	25.43	25.46	25.45	
Channel				647500	650000	652500	Tune-up limit (dBm)
Frequency (MHz)				3712.5	3750.00	3787.50	
25	PI/2 BPSK	1	1	25.45	25.47	25.44	
Channel				647334	650000	652666	Tune-up limit (dBm)
Frequency (MHz)				3710.01	3750	3789.99	
20	PI/2 BPSK	1	1	25.47	25.38	25.38	
Channel				647168	650000	652832	Tune-up limit (dBm)
Frequency (MHz)				3707.52	3750	3792.48	
15	PI/2 BPSK	1	1	25.38	25.44	25.46	
Channel				647000	650000	653000	Tune-up limit (dBm)
Frequency (MHz)				3705	3750	3795	
10	PI/2 BPSK	1	1	25.38	25.46	25.47	



<FR1 n78_HPUE_Ant Aux_Sensor OFF>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					650000		
Frequency (MHz)					3750		
100	PI/2 BPSK	1	1		25.67		
100	PI/2 BPSK	1	137		25.39		26.0
100	PI/2 BPSK	1	271		25.31		
100	PI/2 BPSK	135	0		25.09		
100	PI/2 BPSK	135	69		25.21		25.5
100	PI/2 BPSK	135	138		25.06		26.0
100	PI/2 BPSK	270	0		25.10		
100	QPSK	1	1		25.27		
100	QPSK	1	137		25.50		25.0
100	QPSK	1	271		25.28		
100	QPSK	135	0		24.49		
100	QPSK	135	69		25.46		26.0
100	QPSK	135	138		24.53		25.0
100	QPSK	270	0		24.54		
100	16QAM	1	1		24.62		
100	64QAM	1	1		23.02		25.0
100	256QAM	1	1		20.96		23.5
Channel				649668	650000	650332	21.5
Frequency (MHz)				3745.02	3750	3754.98	
90	PI/2 BPSK	1	1	25.38	25.43	25.46	
Channel				649334	650000	650666	26.0
Frequency (MHz)				3740.01	3750	3759.99	
80	PI/2 BPSK	1	1	25.41	25.38	25.40	
Channel				649000	650000	651000	26.0
Frequency (MHz)				3735	3750	3765	
70	PI/2 BPSK	1	1	25.46	25.37	25.40	
Channel				648668	650000	651332	26.0
Frequency (MHz)				3730.02	3750	3769.98	
60	PI/2 BPSK	1	1	25.39	25.40	25.46	
Channel				648334	650000	651666	26.0
Frequency (MHz)				3725.01	3750	3774.99	
50	PI/2 BPSK	1	1	25.44	25.43	25.40	
Channel				648000	650000	652000	26.0
Frequency (MHz)				3720	3750	3780	
40	PI/2 BPSK	1	1	25.46	25.38	25.51	
Channel				647668	650000	652332	26.0
Frequency (MHz)				3715.02	3750.00	3784.98	
30	PI/2 BPSK	1	1	25.40	25.38	25.48	
Channel				647500	650000	652500	26.0
Frequency (MHz)				3712.5	3750.00	3787.50	
25	PI/2 BPSK	1	1	25.40	25.41	25.54	
Channel				647334	650000	652666	26.0
Frequency (MHz)				3710.01	3750	3789.99	
20	PI/2 BPSK	1	1	25.46	25.46	25.48	
Channel				647168	650000	652832	26.0
Frequency (MHz)				3707.52	3750	3792.48	
15	PI/2 BPSK	1	1	25.40	25.40	25.53	
Channel				647000	650000	653000	26.0
Frequency (MHz)				3705	3750	3795	
10	PI/2 BPSK	1	1	25.37	25.40	25.41	



FCC SAR TEST REPORT

Report No. : FA4D0509

<FR1 n78_HPUE_Ant MIMO3_Sensor OFF>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					650000		
Frequency (MHz)					3750		
100	PI/2 BPSK	1	1		25.91		
100	PI/2 BPSK	1	137		25.88		26.0
100	PI/2 BPSK	1	271		25.80		
100	PI/2 BPSK	135	0		25.36		
100	PI/2 BPSK	135	69		25.81		25.5
100	PI/2 BPSK	135	138		25.38		26.0
100	PI/2 BPSK	270	0		25.32		
100	QPSK	1	1		25.70		
100	QPSK	1	137		25.82		25.0
100	QPSK	1	271		25.69		
100	QPSK	135	0		24.89		
100	QPSK	135	69		25.85		26.0
100	QPSK	135	138		24.82		
100	QPSK	270	0		24.76		
100	16QAM	1	1		24.77		25.0
100	64QAM	1	1		23.38		23.5
100	256QAM	1	1		21.25		21.5
Channel				649668	650000	650332	Tune-up limit (dBm)
Frequency (MHz)				3745.02	3750	3754.98	
90	PI/2 BPSK	1	1	25.69	25.62	25.65	
Channel				649334	650000	650666	Tune-up limit (dBm)
Frequency (MHz)				3740.01	3750	3759.99	
80	PI/2 BPSK	1	1	25.70	25.71	25.67	
Channel				649000	650000	651000	Tune-up limit (dBm)
Frequency (MHz)				3735	3750	3765	
70	PI/2 BPSK	1	1	25.65	25.65	25.66	
Channel				648668	650000	651332	Tune-up limit (dBm)
Frequency (MHz)				3730.02	3750	3769.98	
60	PI/2 BPSK	1	1	25.69	25.64	25.67	
Channel				648334	650000	651666	Tune-up limit (dBm)
Frequency (MHz)				3725.01	3750	3774.99	
50	PI/2 BPSK	1	1	25.67	25.68	25.71	
Channel				648000	650000	652000	Tune-up limit (dBm)
Frequency (MHz)				3720	3750	3780	
40	PI/2 BPSK	1	1	25.62	25.65	25.67	
Channel				647668	650000	652332	Tune-up limit (dBm)
Frequency (MHz)				3715.02	3750.00	3784.98	
30	PI/2 BPSK	1	1	25.67	25.65	25.63	
Channel				647500	650000	652500	Tune-up limit (dBm)
Frequency (MHz)				3712.5	3750.00	3787.50	
25	PI/2 BPSK	1	1	25.67	25.61	25.63	
Channel				647334	650000	652666	Tune-up limit (dBm)
Frequency (MHz)				3710.01	3750	3789.99	
20	PI/2 BPSK	1	1	25.61	25.63	25.62	
Channel				647168	650000	652832	Tune-up limit (dBm)
Frequency (MHz)				3707.52	3750	3792.48	
15	PI/2 BPSK	1	1	25.64	25.67	25.65	
Channel				647000	650000	653000	Tune-up limit (dBm)
Frequency (MHz)				3705	3750	3795	
10	PI/2 BPSK	1	1	25.69	25.63	25.71	



<FR1 n78_HPUE_Ant MIMO2_Sensor ON>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					650000		
Frequency (MHz)					3750		
100	PI/2 BPSK	1	1		22.50		
100	PI/2 BPSK	1	137		22.48		23.5
100	PI/2 BPSK	1	271		22.35		
100	PI/2 BPSK	135	0		22.34		
100	PI/2 BPSK	135	69		22.47		23.5
100	PI/2 BPSK	135	138		22.43		23.5
100	PI/2 BPSK	270	0		22.31		
100	QPSK	1	1		22.49		
100	QPSK	1	137		22.41		23.5
100	QPSK	1	271		22.45		
100	QPSK	135	0		22.45		
100	QPSK	135	69		22.44		23.5
100	QPSK	135	138		22.47		23.5
100	QPSK	270	0		22.34		
100	16QAM	1	1		22.42		
100	64QAM	1	1		22.43		23.5
100	256QAM	1	1		20.82		22.0
Channel				649668	650000	650332	Tune-up limit (dBm)
Frequency (MHz)				3745.02	3750	3754.98	
90	PI/2 BPSK	1	1	22.30	22.29	22.30	
Channel				649334	650000	650666	Tune-up limit (dBm)
Frequency (MHz)				3740.01	3750	3759.99	
80	PI/2 BPSK	1	1	22.20	22.25	22.25	
Channel				649000	650000	651000	Tune-up limit (dBm)
Frequency (MHz)				3735	3750	3765	
70	PI/2 BPSK	1	1	22.25	22.27	22.21	
Channel				648668	650000	651332	Tune-up limit (dBm)
Frequency (MHz)				3730.02	3750	3769.98	
60	PI/2 BPSK	1	1	22.26	22.26	22.27	
Channel				648334	650000	651666	Tune-up limit (dBm)
Frequency (MHz)				3725.01	3750	3774.99	
50	PI/2 BPSK	1	1	22.26	22.27	22.29	
Channel				648000	650000	652000	Tune-up limit (dBm)
Frequency (MHz)				3720	3750	3780	
40	PI/2 BPSK	1	1	22.30	22.22	22.21	
Channel				647668	650000	652332	Tune-up limit (dBm)
Frequency (MHz)				3715.02	3750.00	3784.98	
30	PI/2 BPSK	1	1	22.24	22.25	22.20	
Channel				647500	650000	652500	Tune-up limit (dBm)
Frequency (MHz)				3712.5	3750.00	3787.50	
25	PI/2 BPSK	1	1	22.21	22.30	22.21	
Channel				647334	650000	652666	Tune-up limit (dBm)
Frequency (MHz)				3710.01	3750	3789.99	
20	PI/2 BPSK	1	1	22.24	22.20	22.26	
Channel				647168	650000	652832	Tune-up limit (dBm)
Frequency (MHz)				3707.52	3750	3792.48	
15	PI/2 BPSK	1	1	22.29	22.22	22.25	
Channel				647000	650000	653000	Tune-up limit (dBm)
Frequency (MHz)				3705	3750	3795	
10	PI/2 BPSK	1	1	22.27	22.21	22.30	



<FR1 n78_Ant Main_Sensor OFF>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					633332		25.1
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		23.16		
100	PI/2 BPSK	1	137		23.11		24.6
100	PI/2 BPSK	1	271		23.10		
100	PI/2 BPSK	135	0		22.91		
100	PI/2 BPSK	135	69		23.10		25.1
100	PI/2 BPSK	135	138		22.89		
100	PI/2 BPSK	270	0		22.95		
100	QPSK	1	1		23.12		24.1
100	QPSK	1	137		23.10		
100	QPSK	1	271		23.11		
100	QPSK	135	0		22.38		25.1
100	QPSK	135	69		23.15		
100	QPSK	135	138		22.35		
100	QPSK	270	0		22.42		24.1
100	16QAM	1	1		22.45		
100	64QAM	1	1		20.89		
100	256QAM	1	1		18.84		20.6
Channel				633000	633332	633666	Tune-up limit (dBm)
Frequency (MHz)				3495	3499.98	3504.99	
90	PI/2 BPSK	1	1	23.15	23.07	23.13	
Channel				632668	633332	634000	Tune-up limit (dBm)
Frequency (MHz)				3490.02	3499.98	3510	
80	PI/2 BPSK	1	1	23.15	23.14	23.11	
Channel				632334	633332	634332	Tune-up limit (dBm)
Frequency (MHz)				3485.01	3499.98	3514.98	
70	PI/2 BPSK	1	1	23.07	23.06	23.15	
Channel				632000	633332	634666	Tune-up limit (dBm)
Frequency (MHz)				3480	3499.98	3519.99	
60	PI/2 BPSK	1	1	23.12	23.11	23.14	
Channel				631668	633332	635000	Tune-up limit (dBm)
Frequency (MHz)				3475.02	3499.98	3525	
50	PI/2 BPSK	1	1	23.09	23.15	23.10	
Channel				631334	633332	635332	Tune-up limit (dBm)
Frequency (MHz)				3470.01	3499.98	3529.98	
40	PI/2 BPSK	1	1	23.12	23.13	23.14	
Channel				631000	633332	635666	Tune-up limit (dBm)
Frequency (MHz)				3465	3499.98	3534.99	
30	PI/2 BPSK	1	1	23.12	23.06	23.11	
Channel				630834	633332	635832	Tune-up limit (dBm)
Frequency (MHz)				3462.51	3499.98	3537.48	
25	PI/2 BPSK	1	1	23.15	23.15	23.13	
Channel				630668	633332	636000	Tune-up limit (dBm)
Frequency (MHz)				3460.02	3499.98	3540	
20	PI/2 BPSK	1	1	23.11	23.13	23.08	
Channel				630500	633332	636166	Tune-up limit (dBm)
Frequency (MHz)				3457.5	3499.98	3542.49	
15	PI/2 BPSK	1	1	23.13	23.10	23.07	
Channel				630334	633332	636332	Tune-up limit (dBm)
Frequency (MHz)				3455.01	3499.98	3544.98	
10	PI/2 BPSK	1	1	23.11	23.12	23.10	



<FR1 n78_Ant MIMO2_Sensor OFF>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					633332		25.1
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		23.26		
100	PI/2 BPSK	1	137		23.11		24.6
100	PI/2 BPSK	1	271		23.11		
100	PI/2 BPSK	135	0		22.81		
100	PI/2 BPSK	135	69		23.12		24.6
100	PI/2 BPSK	135	138		22.74		
100	PI/2 BPSK	270	0		22.71		
100	QPSK	1	1		23.14		25.1
100	QPSK	1	137		23.11		
100	QPSK	1	271		23.10		
100	QPSK	135	0		22.28		24.1
100	QPSK	135	69		23.13		
100	QPSK	135	138		22.30		
100	QPSK	270	0		22.23		24.1
100	16QAM	1	1		22.41		
100	64QAM	1	1		20.86		
100	256QAM	1	1		18.82		20.6
Channel				633000	633332	633666	Tune-up limit (dBm)
Frequency (MHz)				3495	3499.98	3504.99	
90	PI/2 BPSK	1	1	23.21	23.17	23.16	25.1
Channel				632668	633332	634000	Tune-up limit (dBm)
Frequency (MHz)				3490.02	3499.98	3510	
80	PI/2 BPSK	1	1	23.25	23.21	23.20	25.6
Channel				632334	633332	634332	Tune-up limit (dBm)
Frequency (MHz)				3485.01	3499.98	3514.98	
70	PI/2 BPSK	1	1	23.22	23.21	23.22	25.1
Channel				632000	633332	634666	Tune-up limit (dBm)
Frequency (MHz)				3480	3499.98	3519.99	
60	PI/2 BPSK	1	1	23.20	23.21	23.18	25.1
Channel				631668	633332	635000	Tune-up limit (dBm)
Frequency (MHz)				3475.02	3499.98	3525	
50	PI/2 BPSK	1	1	23.20	23.20	23.19	25.1
Channel				631334	633332	635332	Tune-up limit (dBm)
Frequency (MHz)				3470.01	3499.98	3529.98	
40	PI/2 BPSK	1	1	23.19	23.17	23.22	25.1
Channel				631000	633332	635666	Tune-up limit (dBm)
Frequency (MHz)				3465	3499.98	3534.99	
30	PI/2 BPSK	1	1	23.18	23.22	23.23	25.1
Channel				630834	633332	635832	Tune-up limit (dBm)
Frequency (MHz)				3462.51	3499.98	3537.48	
25	PI/2 BPSK	1	1	23.19	23.24	23.25	25.1
Channel				630668	633332	636000	Tune-up limit (dBm)
Frequency (MHz)				3460.02	3499.98	3540	
20	PI/2 BPSK	1	1	23.19	23.20	23.16	25.1
Channel				630500	633332	636166	Tune-up limit (dBm)
Frequency (MHz)				3457.5	3499.98	3542.49	
15	PI/2 BPSK	1	1	23.22	23.16	23.17	25.1
Channel				630334	633332	636332	Tune-up limit (dBm)
Frequency (MHz)				3455.01	3499.98	3544.98	
10	PI/2 BPSK	1	1	23.18	23.17	23.24	25.1



<FR1 n78_Ant Aux_Sensor OFF>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					633332		25.1
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		23.32		
100	PI/2 BPSK	1	137		23.21		24.6
100	PI/2 BPSK	1	271		23.12		
100	PI/2 BPSK	135	0		22.83		
100	PI/2 BPSK	135	69		23.12		25.1
100	PI/2 BPSK	135	138		22.71		24.6
100	PI/2 BPSK	270	0		22.78		
100	QPSK	1	1		23.14		
100	QPSK	1	137		23.11		24.1
100	QPSK	1	271		23.16		
100	QPSK	135	0		22.28		
100	QPSK	135	69		23.12		25.1
100	QPSK	135	138		22.26		24.1
100	QPSK	270	0		22.36		
100	16QAM	1	1		22.27		
100	64QAM	1	1		20.81		22.6
100	256QAM	1	1		19.26		20.6
Channel				633000	633332	633666	Tune-up limit (dBm)
Frequency (MHz)				3495	3499.98	3504.99	
90	PI/2 BPSK	1	1	23.05	23.03	23.11	
Channel				632668	633332	634000	Tune-up limit (dBm)
Frequency (MHz)				3490.02	3499.98	3510	
80	PI/2 BPSK	1	1	23.08	23.02	23.09	
Channel				632334	633332	634332	Tune-up limit (dBm)
Frequency (MHz)				3485.01	3499.98	3514.98	
70	PI/2 BPSK	1	1	23.03	23.02	23.10	
Channel				632000	633332	634666	Tune-up limit (dBm)
Frequency (MHz)				3480	3499.98	3519.99	
60	PI/2 BPSK	1	1	23.11	23.12	23.05	
Channel				631668	633332	635000	Tune-up limit (dBm)
Frequency (MHz)				3475.02	3499.98	3525	
50	PI/2 BPSK	1	1	23.11	23.10	23.12	
Channel				631334	633332	635332	Tune-up limit (dBm)
Frequency (MHz)				3470.01	3499.98	3529.98	
40	PI/2 BPSK	1	1	23.07	23.11	23.03	
Channel				631000	633332	635666	Tune-up limit (dBm)
Frequency (MHz)				3465	3499.98	3534.99	
30	PI/2 BPSK	1	1	23.12	23.12	23.09	
Channel				630834	633332	635832	Tune-up limit (dBm)
Frequency (MHz)				3462.51	3499.98	3537.48	
25	PI/2 BPSK	1	1	23.06	23.08	23.12	
Channel				630668	633332	636000	Tune-up limit (dBm)
Frequency (MHz)				3460.02	3499.98	3540	
20	PI/2 BPSK	1	1	23.07	23.02	23.06	
Channel				630500	633332	636166	Tune-up limit (dBm)
Frequency (MHz)				3457.5	3499.98	3542.49	
15	PI/2 BPSK	1	1	23.06	23.05	23.02	
Channel				630334	633332	636332	Tune-up limit (dBm)
Frequency (MHz)				3455.01	3499.98	3544.98	
10	PI/2 BPSK	1	1	23.05	23.07	23.12	



<FR1 n78_Ant MIMO3_Sensor OFF>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					633332		25.1
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		23.43		
100	PI/2 BPSK	1	137		23.22		24.6
100	PI/2 BPSK	1	271		23.12		
100	PI/2 BPSK	135	0		22.67		
100	PI/2 BPSK	135	69		23.15		24.6
100	PI/2 BPSK	135	138		22.69		
100	PI/2 BPSK	270	0		22.68		
100	QPSK	1	1		23.12		25.1
100	QPSK	1	137		23.11		
100	QPSK	1	271		23.13		
100	QPSK	135	0		22.21		24.1
100	QPSK	135	69		23.18		
100	QPSK	135	138		22.14		
100	QPSK	270	0		22.11		24.1
100	16QAM	1	1		22.12		
100	64QAM	1	1		20.70		
100	256QAM	1	1		18.67		20.6
Channel				633000	633332	633666	Tune-up limit (dBm)
Frequency (MHz)				3495	3499.98	3504.99	
90	PI/2 BPSK	1	1	23.14	23.20	23.19	
Channel				632668	633332	634000	Tune-up limit (dBm)
Frequency (MHz)				3490.02	3499.98	3510	
80	PI/2 BPSK	1	1	23.23	23.15	23.17	
Channel				632334	633332	634332	Tune-up limit (dBm)
Frequency (MHz)				3485.01	3499.98	3514.98	
70	PI/2 BPSK	1	1	23.22	23.22	23.23	
Channel				632000	633332	634666	Tune-up limit (dBm)
Frequency (MHz)				3480	3499.98	3519.99	
60	PI/2 BPSK	1	1	23.19	23.13	23.15	
Channel				631668	633332	635000	Tune-up limit (dBm)
Frequency (MHz)				3475.02	3499.98	3525	
50	PI/2 BPSK	1	1	23.15	23.13	23.14	
Channel				631334	633332	635332	Tune-up limit (dBm)
Frequency (MHz)				3470.01	3499.98	3529.98	
40	PI/2 BPSK	1	1	23.14	23.13	23.22	
Channel				631000	633332	635666	Tune-up limit (dBm)
Frequency (MHz)				3465	3499.98	3534.99	
30	PI/2 BPSK	1	1	23.14	23.15	23.16	
Channel				630834	633332	635832	Tune-up limit (dBm)
Frequency (MHz)				3462.51	3499.98	3537.48	
25	PI/2 BPSK	1	1	23.13	23.21	23.14	
Channel				630668	633332	636000	Tune-up limit (dBm)
Frequency (MHz)				3460.02	3499.98	3540	
20	PI/2 BPSK	1	1	23.22	23.22	23.14	
Channel				630500	633332	636166	Tune-up limit (dBm)
Frequency (MHz)				3457.5	3499.98	3542.49	
15	PI/2 BPSK	1	1	23.18	23.23	23.16	
Channel				630334	633332	636332	Tune-up limit (dBm)
Frequency (MHz)				3455.01	3499.98	3544.98	
10	PI/2 BPSK	1	1	23.15	23.22	23.19	



<FR1 n78_Ant MIMO2_Sensor ON>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					633332		
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		19.59		
100	PI/2 BPSK	1	137		19.56		20.5
100	PI/2 BPSK	1	271		19.44		
100	PI/2 BPSK	135	0		19.58		
100	PI/2 BPSK	135	69		19.57		20.5
100	PI/2 BPSK	135	138		19.53		20.5
100	PI/2 BPSK	270	0		19.52		
100	QPSK	1	1		19.52		
100	QPSK	1	137		19.58		20.5
100	QPSK	1	271		19.51		
100	QPSK	135	0		19.58		
100	QPSK	135	69		19.57		20.5
100	QPSK	135	138		19.54		20.5
100	QPSK	270	0		19.51		
100	16QAM	1	1		19.57		
100	64QAM	1	1		19.42		20.5
100	256QAM	1	1		18.12		19.0
Channel				633000	633332	633666	Tune-up limit (dBm)
Frequency (MHz)				3495	3499.98	3504.99	
90	PI/2 BPSK	1	1	19.30	19.38	19.38	
Channel				632668	633332	634000	Tune-up limit (dBm)
Frequency (MHz)				3490.02	3499.98	3510	
80	PI/2 BPSK	1	1	19.30	19.29	19.34	
Channel				632334	633332	634332	Tune-up limit (dBm)
Frequency (MHz)				3485.01	3499.98	3514.98	
70	PI/2 BPSK	1	1	19.30	19.38	19.29	
Channel				632000	633332	634666	Tune-up limit (dBm)
Frequency (MHz)				3480	3499.98	3519.99	
60	PI/2 BPSK	1	1	19.32	19.35	19.35	
Channel				631668	633332	635000	Tune-up limit (dBm)
Frequency (MHz)				3475.02	3499.98	3525	
50	PI/2 BPSK	1	1	19.32	19.37	19.38	
Channel				631334	633332	635332	Tune-up limit (dBm)
Frequency (MHz)				3470.01	3499.98	3529.98	
40	PI/2 BPSK	1	1	19.38	19.36	19.32	
Channel				631000	633332	635666	Tune-up limit (dBm)
Frequency (MHz)				3465	3499.98	3534.99	
30	PI/2 BPSK	1	1	19.31	19.36	19.30	
Channel				630834	633332	635832	Tune-up limit (dBm)
Frequency (MHz)				3462.51	3499.98	3537.48	
25	PI/2 BPSK	1	1	19.29	19.31	19.33	
Channel				630668	633332	636000	Tune-up limit (dBm)
Frequency (MHz)				3460.02	3499.98	3540	
20	PI/2 BPSK	1	1	19.30	19.31	19.32	
Channel				630500	633332	636166	Tune-up limit (dBm)
Frequency (MHz)				3457.5	3499.98	3542.49	
15	PI/2 BPSK	1	1	19.38	19.38	19.39	
Channel				630334	633332	636332	Tune-up limit (dBm)
Frequency (MHz)				3455.01	3499.98	3544.98	
10	PI/2 BPSK	1	1	19.37	19.38	19.38	



<FR1 n78_HPUE_Ant Main_Sensor OFF>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					633332		
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		25.64		
100	PI/2 BPSK	1	137		25.50		26.0
100	PI/2 BPSK	1	271		25.50		
100	PI/2 BPSK	135	0		25.23		
100	PI/2 BPSK	135	69		25.61		25.5
100	PI/2 BPSK	135	138		25.15		26.0
100	PI/2 BPSK	270	0		25.22		
100	QPSK	1	1		25.57		
100	QPSK	1	137		25.57		25.0
100	QPSK	1	271		25.56		
100	QPSK	135	0		24.64		
100	QPSK	135	69		25.52		26.0
100	QPSK	135	138		24.68		25.0
100	QPSK	270	0		24.69		
100	16QAM	1	1		24.67		
100	64QAM	1	1		23.26		25.0
100	256QAM	1	1		21.13		23.5
Channel				633000	633332	633666	21.5
Frequency (MHz)				3495	3499.98	3504.99	
90	PI/2 BPSK	1	1	25.60	25.56	25.59	
Channel				632668	633332	634000	26.0
Frequency (MHz)				3490.02	3499.98	3510	
80	PI/2 BPSK	1	1	25.57	25.58	25.56	
Channel				632334	633332	634332	26.0
Frequency (MHz)				3485.01	3499.98	3514.98	
70	PI/2 BPSK	1	1	25.60	25.58	25.57	
Channel				632000	633332	634666	26.0
Frequency (MHz)				3480	3499.98	3519.99	
60	PI/2 BPSK	1	1	25.62	25.54	25.63	
Channel				631668	633332	635000	26.0
Frequency (MHz)				3475.02	3499.98	3525	
50	PI/2 BPSK	1	1	25.58	25.58	25.62	
Channel				631334	633332	635332	26.0
Frequency (MHz)				3470.01	3499.98	3529.98	
40	PI/2 BPSK	1	1	25.61	25.59	25.55	
Channel				631000	633332	635666	26.0
Frequency (MHz)				3465	3499.98	3534.99	
30	PI/2 BPSK	1	1	25.63	25.61	25.61	
Channel				630834	633332	635832	26.0
Frequency (MHz)				3462.51	3499.98	3537.48	
25	PI/2 BPSK	1	1	25.60	25.55	25.59	
Channel				630668	633332	636000	26.0
Frequency (MHz)				3460.02	3499.98	3540	
20	PI/2 BPSK	1	1	25.57	25.63	25.57	
Channel				630500	633332	636166	26.0
Frequency (MHz)				3457.5	3499.98	3542.49	
15	PI/2 BPSK	1	1	25.58	25.63	25.57	
Channel				630334	633332	636332	26.0
Frequency (MHz)				3455.01	3499.98	3544.98	
10	PI/2 BPSK	1	1	25.58	25.55	25.54	



<FR1 n78_HPUE_Ant MIMO2_Sensor OFF>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					633332		
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		25.22		
100	PI/2 BPSK	1	137		25.09		26.0
100	PI/2 BPSK	1	271		25.12		
100	PI/2 BPSK	135	0		24.55		
100	PI/2 BPSK	135	69		25.01		25.5
100	PI/2 BPSK	135	138		24.58		26.0
100	PI/2 BPSK	270	0		24.57		
100	QPSK	1	1		25.10		
100	QPSK	1	137		25.03		26.0
100	QPSK	1	271		25.06		
100	QPSK	135	0		24.05		
100	QPSK	135	69		25.06		25.0
100	QPSK	135	138		24.09		26.0
100	QPSK	270	0		24.04		
100	16QAM	1	1		24.10		
100	64QAM	1	1		22.60		25.0
100	256QAM	1	1		20.54		23.5
Channel				633000	633332	633666	21.5
Frequency (MHz)				3495	3499.98	3504.99	
90	PI/2 BPSK	1	1	25.20	25.18	25.12	
Channel				632668	633332	634000	26.0
Frequency (MHz)				3490.02	3499.98	3510	
80	PI/2 BPSK	1	1	25.18	25.15	25.21	
Channel				632334	633332	634332	26.0
Frequency (MHz)				3485.01	3499.98	3514.98	
70	PI/2 BPSK	1	1	25.16	25.19	25.13	
Channel				632000	633332	634666	26.0
Frequency (MHz)				3480	3499.98	3519.99	
60	PI/2 BPSK	1	1	25.14	25.20	25.16	
Channel				631668	633332	635000	26.0
Frequency (MHz)				3475.02	3499.98	3525	
50	PI/2 BPSK	1	1	25.14	25.15	25.14	
Channel				631334	633332	635332	26.0
Frequency (MHz)				3470.01	3499.98	3529.98	
40	PI/2 BPSK	1	1	25.19	25.13	25.14	
Channel				631000	633332	635666	26.0
Frequency (MHz)				3465	3499.98	3534.99	
30	PI/2 BPSK	1	1	25.20	25.20	25.14	
Channel				630834	633332	635832	26.0
Frequency (MHz)				3462.51	3499.98	3537.48	
25	PI/2 BPSK	1	1	25.19	25.15	25.19	
Channel				630668	633332	636000	26.0
Frequency (MHz)				3460.02	3499.98	3540	
20	PI/2 BPSK	1	1	25.17	25.18	25.16	
Channel				630500	633332	636166	26.0
Frequency (MHz)				3457.5	3499.98	3542.49	
15	PI/2 BPSK	1	1	25.13	25.15	25.18	
Channel				630334	633332	636332	26.0
Frequency (MHz)				3455.01	3499.98	3544.98	
10	PI/2 BPSK	1	1	25.19	25.14	25.12	



<FR1 n78_HPUE_Ant Aux_Sensor OFF>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					633332		
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		25.33		
100	PI/2 BPSK	1	137		25.19		26.0
100	PI/2 BPSK	1	271		25.16		
100	PI/2 BPSK	135	0		24.97		
100	PI/2 BPSK	135	69		25.21		25.5
100	PI/2 BPSK	135	138		24.90		26.0
100	PI/2 BPSK	270	0		24.89		
100	QPSK	1	1		25.05		
100	QPSK	1	137		25.24		25.0
100	QPSK	1	271		25.07		
100	QPSK	135	0		24.41		
100	QPSK	135	69		25.30		26.0
100	QPSK	135	138		24.40		
100	QPSK	270	0		24.47		
100	16QAM	1	1		24.42		25.0
100	64QAM	1	1		22.84		23.5
100	256QAM	1	1		20.85		21.5
Channel				633000	633332	633666	Tune-up limit (dBm)
Frequency (MHz)				3495	3499.98	3504.99	
90	PI/2 BPSK	1	1	25.03	25.03	25.13	
Channel				632668	633332	634000	Tune-up limit (dBm)
Frequency (MHz)				3490.02	3499.98	3510	
80	PI/2 BPSK	1	1	25.13	25.07	25.10	
Channel				632334	633332	634332	Tune-up limit (dBm)
Frequency (MHz)				3485.01	3499.98	3514.98	
70	PI/2 BPSK	1	1	25.07	25.08	25.09	
Channel				632000	633332	634666	Tune-up limit (dBm)
Frequency (MHz)				3480	3499.98	3519.99	
60	PI/2 BPSK	1	1	25.12	25.05	25.09	
Channel				631668	633332	635000	Tune-up limit (dBm)
Frequency (MHz)				3475.02	3499.98	3525	
50	PI/2 BPSK	1	1	25.12	25.07	25.03	
Channel				631334	633332	635332	Tune-up limit (dBm)
Frequency (MHz)				3470.01	3499.98	3529.98	
40	PI/2 BPSK	1	1	25.13	25.11	25.13	
Channel				631000	633332	635666	Tune-up limit (dBm)
Frequency (MHz)				3465	3499.98	3534.99	
30	PI/2 BPSK	1	1	25.10	25.08	25.12	
Channel				630834	633332	635832	Tune-up limit (dBm)
Frequency (MHz)				3462.51	3499.98	3537.48	
25	PI/2 BPSK	1	1	25.09	25.12	25.12	
Channel				630668	633332	636000	Tune-up limit (dBm)
Frequency (MHz)				3460.02	3499.98	3540	
20	PI/2 BPSK	1	1	25.09	25.05	25.13	
Channel				630500	633332	636166	Tune-up limit (dBm)
Frequency (MHz)				3457.5	3499.98	3542.49	
15	PI/2 BPSK	1	1	25.03	25.09	25.10	
Channel				630334	633332	636332	Tune-up limit (dBm)
Frequency (MHz)				3455.01	3499.98	3544.98	
10	PI/2 BPSK	1	1	25.12	25.07	25.03	



<FR1 n78_HPUE_Ant MIMO3_Sensor OFF>

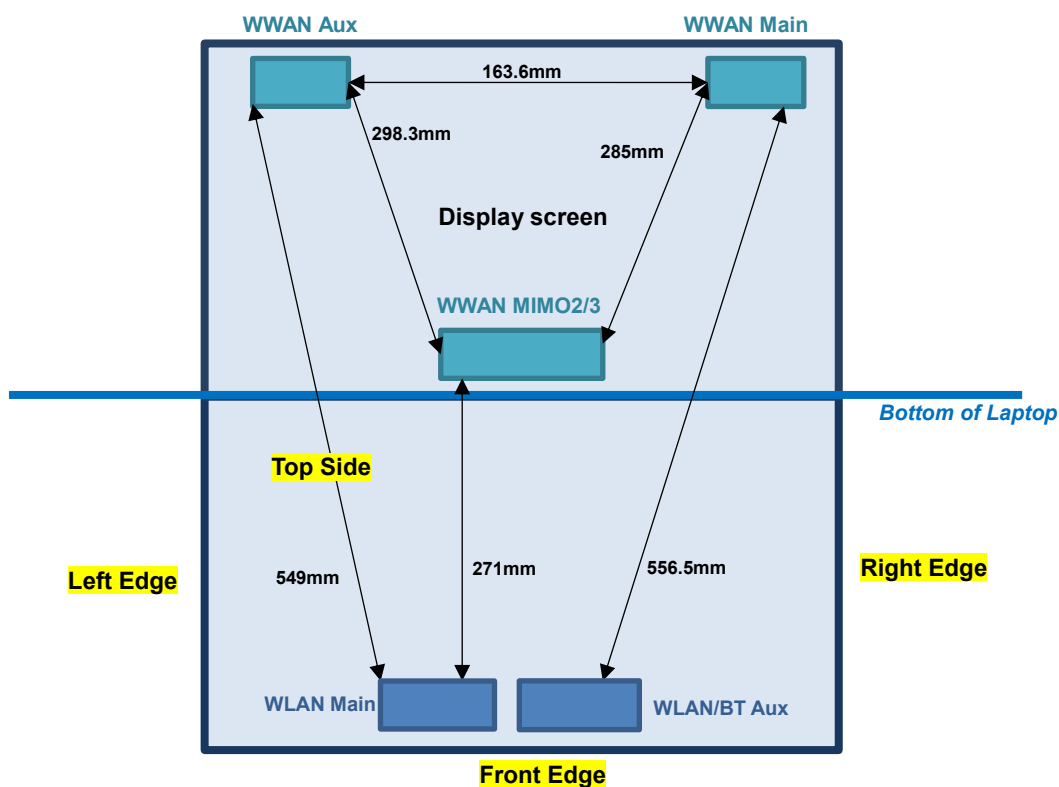
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					633332		26.0
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		25.99		
100	PI/2 BPSK	1	137		25.83		25.5
100	PI/2 BPSK	1	271		25.71		
100	PI/2 BPSK	135	0		25.26		
100	PI/2 BPSK	135	69		25.78		26.0
100	PI/2 BPSK	135	138		25.30		25.5
100	PI/2 BPSK	270	0		25.26		
100	QPSK	1	1		25.60		
100	QPSK	1	137		25.72		26.0
100	QPSK	1	271		25.56		
100	QPSK	135	0		24.84		
100	QPSK	135	69		25.73		25.0
100	QPSK	135	138		24.75		26.0
100	QPSK	270	0		24.70		
100	16QAM	1	1		24.68		
100	64QAM	1	1		23.28		25.0
100	256QAM	1	1		21.15		23.5
Channel				633000	633332	633666	21.5
Frequency (MHz)				3495	3499.98	3504.99	
90	PI/2 BPSK	1	1	25.69	25.79	25.70	
Channel				632668	633332	634000	26.0
Frequency (MHz)				3490.02	3499.98	3510	
80	PI/2 BPSK	1	1	25.70	25.74	25.76	
Channel				632334	633332	634332	26.0
Frequency (MHz)				3485.01	3499.98	3514.98	
70	PI/2 BPSK	1	1	25.71	25.74	25.75	
Channel				632000	633332	634666	26.0
Frequency (MHz)				3480	3499.98	3519.99	
60	PI/2 BPSK	1	1	25.79	25.75	25.78	
Channel				631668	633332	635000	26.0
Frequency (MHz)				3475.02	3499.98	3525	
50	PI/2 BPSK	1	1	25.74	25.79	25.71	
Channel				631334	633332	635332	26.0
Frequency (MHz)				3470.01	3499.98	3529.98	
40	PI/2 BPSK	1	1	25.72	25.71	25.70	
Channel				631000	633332	635666	26.0
Frequency (MHz)				3465	3499.98	3534.99	
30	PI/2 BPSK	1	1	25.70	25.73	25.76	
Channel				630834	633332	635832	26.0
Frequency (MHz)				3462.51	3499.98	3537.48	
25	PI/2 BPSK	1	1	25.70	25.70	25.71	
Channel				630668	633332	636000	26.0
Frequency (MHz)				3460.02	3499.98	3540	
20	PI/2 BPSK	1	1	25.76	25.75	25.71	
Channel				630500	633332	636166	26.0
Frequency (MHz)				3457.5	3499.98	3542.49	
15	PI/2 BPSK	1	1	25.72	25.75	25.69	
Channel				630334	633332	636332	26.0
Frequency (MHz)				3455.01	3499.98	3544.98	
10	PI/2 BPSK	1	1	25.75	25.71	25.69	



<FR1 n78_HPUE_Ant MIMO2_Sensor ON>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					633332		
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		22.54		
100	PI/2 BPSK	1	137		22.43		23.5
100	PI/2 BPSK	1	271		22.34		
100	PI/2 BPSK	135	0		22.39		
100	PI/2 BPSK	135	69		22.50		23.5
100	PI/2 BPSK	135	138		22.42		23.5
100	PI/2 BPSK	270	0		22.37		
100	QPSK	1	1		22.44		
100	QPSK	1	137		22.42		23.5
100	QPSK	1	271		22.42		
100	QPSK	135	0		22.51		
100	QPSK	135	69		22.39		23.5
100	QPSK	135	138		22.42		23.5
100	QPSK	270	0		22.31		
100	16QAM	1	1		22.45		
100	64QAM	1	1		22.34		23.5
100	256QAM	1	1		20.85		22.0
Channel				633000	633332	633666	Tune-up limit (dBm)
Frequency (MHz)				3495	3499.98	3504.99	
90	PI/2 BPSK	1	1	22.34	22.29	22.31	
Channel				632668	633332	634000	Tune-up limit (dBm)
Frequency (MHz)				3490.02	3499.98	3510	
80	PI/2 BPSK	1	1	22.31	22.31	22.25	
Channel				632334	633332	634332	Tune-up limit (dBm)
Frequency (MHz)				3485.01	3499.98	3514.98	
70	PI/2 BPSK	1	1	22.27	22.33	22.34	
Channel				632000	633332	634666	Tune-up limit (dBm)
Frequency (MHz)				3480	3499.98	3519.99	
60	PI/2 BPSK	1	1	22.27	22.31	22.32	
Channel				631668	633332	635000	Tune-up limit (dBm)
Frequency (MHz)				3475.02	3499.98	3525	
50	PI/2 BPSK	1	1	22.26	22.33	22.25	
Channel				631334	633332	635332	Tune-up limit (dBm)
Frequency (MHz)				3470.01	3499.98	3529.98	
40	PI/2 BPSK	1	1	22.29	22.25	22.33	
Channel				631000	633332	635666	Tune-up limit (dBm)
Frequency (MHz)				3465	3499.98	3534.99	
30	PI/2 BPSK	1	1	22.25	22.25	22.34	
Channel				630834	633332	635832	Tune-up limit (dBm)
Frequency (MHz)				3462.51	3499.98	3537.48	
25	PI/2 BPSK	1	1	22.24	22.27	22.25	
Channel				630668	633332	636000	Tune-up limit (dBm)
Frequency (MHz)				3460.02	3499.98	3540	
20	PI/2 BPSK	1	1	22.29	22.25	22.24	
Channel				630500	633332	636166	Tune-up limit (dBm)
Frequency (MHz)				3457.5	3499.98	3542.49	
15	PI/2 BPSK	1	1	22.32	22.30	22.33	
Channel				630334	633332	636332	Tune-up limit (dBm)
Frequency (MHz)				3455.01	3499.98	3544.98	
10	PI/2 BPSK	1	1	22.27	22.33	22.32	

14. Antenna Location



The separation distance for antenna to edge :

Antenna	To Bottom Side (mm)
WWAN Main	275.54
WWAN Aux	275.54
WWAN MIMO2/3	29.6
WLAN Main	10
WLAN/BT Aux	10

<SAR test exclusion table>
General Note:

- The below table, when the distance is < 50 mm exclusion threshold is "Ratio", when the distance is > 50 mm exclusion threshold is "mW"
- Maximum power is the source-based time-average power and represents the maximum RF output power among production units
- Per KDB 447498 D01v06, for larger devices, the test separation distance of adjacent edge configuration is determined by the closest separation between the antenna and the user.
- Per KDB 447498 D01v06, standalone SAR test exclusion threshold is applied; If the test separation distance is < 5mm, 5mm is used to determine SAR exclusion threshold.
- Per KDB 447498 D01v06, the 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at *test separation distances* ≤ 50 mm are determined by:

$$[(\text{max. power of channel, including tune-up tolerance, mW})/(\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0 \text{ for 1-g SAR and } \leq 7.5 \text{ for 10-g extremity SAR}$$
 - f(GHz) is the RF channel transmit frequency in GHz
 - Power and distance are rounded to the nearest mW and mm before calculation
 - The result is rounded to one decimal place for comparison
- Per KDB 447498 D01v06, at 100 MHz to 6 GHz and for *test separation distances* > 50 mm, the SAR test exclusion threshold is determined according to the following
 - [Threshold at 50 mm in step 1) + (test separation distance - 50 mm) · (f(MHz)/150)] mW, at 100 MHz to 1500 MHz
 - [Threshold at 50 mm in step 1) + (test separation distance - 50 mm) · 10] mW at > 1500 MHz and ≤ 6 GHz

<Main Ant>

	Wireless Interface	WCDMA Band V	WCDMA Band IV	WCDMA Band II	LTE/NR Band 71/n71	LTE/NR Band 12/n12	LTE/NR Band 13/n13	LTE/NR Band 14/n14	LTE Band 17	LTE/NR Band 5/n5	LTE/NR Band 26/n26	LTE Band 4	LTE/NR Band 66/n66	LTE/NR Band 2/n2	LTE/NR Band 25/n25	LTE/NR Band 30/n30	LTE/NR Band 7/n7	LTE/NR Band 38/n38	LTE/NR Band 41/n41	LTE Band 42	LTE Band 43	LTE/NR Band 48/n48	LTE/NR Band 70/n70	LTE Band n77	LTE Band n78
Exposure Position	Calculated Frequency (MHz)	846	1750	1907	695	715	784	795	713	848	848	1754	1779	1909	1914	2312	2567	2617	2687	3597	3797	3697	1707	3650	3650
	Maximum power (dBm)	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	23.0	24.5	24.5	25.0	24.5	24.5	21.8	24.5	25.1	25.1
	Maximum rated power(mW)	281.84	281.84	281.84	281.84	281.84	281.84	281.84	281.84	281.84	281.84	281.84	281.84	281.84	281.84	199.53	281.84	281.84	316.23	281.84	281.84	151.36	281.84	323.59	323.59
	Separation distance(mm)	275.5																							
Bottom Side	exclusion threshold	1435.0	2369.0	2364.0	1225.0	1252.0	1348.0	1364.0	1250.0	1438.0	1438.0	2369.0	2368.0	2364.0	2364.0	2354.0	2349.0	2348.0	2347.0	2334.0	2332.0	2333.0	2370.0	2334.0	2334.0
	Testing required?	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No

<MIMO2 Ant>

	Wireless Interface	LTE Band 4	LTE/NR Band 66/n66	LTE/NR Band 2/n2	LTE/NR Band 25/n25	LTE/NR Band 30/n30	LTE/NR Band 7/n7	LTE/NR Band 38/n38	LTE/NR Band 41/n41	LTE Band 42	LTE Band 43	LTE/NR Band 48/n48	LTE/NR Band 70/n70	LTE Band n77	LTE Band n78
Exposure Position	Calculated Frequency (MHz)	1754	1779	1909	1914	2312	2567	2617	2687	3597	3797	3697	1707	3650	3650
	Maximum power (dBm)	24.5	24.5	24.5	24.5	23.0	24.5	24.7	27.0	24.5	24.5	21.8	24.6	26.0	26.0
	Maximum rated power(mW)	281.84	281.84	281.84	281.84	199.53	281.84	295.12	501.19	281.84	281.84	151.36	288.40	398.11	398.11
	Separation distance(mm)	29.6													
Bottom Side	exclusion threshold	12.6	12.7	13.2	13.2	10.3	15.3	16.1	27.8	18.1	18.6	9.8	12.7	25.7	25.7
	Testing required?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

<MIMO3 Ant>

Exposure Position	Wireless Interface	LTE Band n41	LTE Band n77	LTE Band n78
	Calculated Frequency (MHz)	2687	3650	3650
	Maximum power (dBm)	27.0	26.0	26.0
	Maximum rated power(mW)	501.19	398.11	398.11
Bottom Side	Separation distance(mm)	29.6		
	exclusion threshold	27.8	25.7	25.7
	Testing required?	Yes	Yes	Yes

<Aux Ant>

Exposure Position	Wireless Interface	LTE Band n41	LTE Band n77	LTE Band n78
	Calculated Frequency (MHz)	2687	3650	3650
	Maximum power (dBm)	27.0	26.0	26.0
	Maximum rated power(mW)	501.19	398.11	398.11
Bottom Face	Separation distance(mm)	275.5		
	exclusion threshold	2347.0	2334.0	2334.0
	Testing required?	No	No	No

15. SAR Test Results

General Note:

1. Per KDB 447498 D01v06, the reported SAR is the measured SAR value adjusted for maximum tune-up tolerance.
 - a. Tune-up scaling Factor = tune-up limit power (mW) / EUT RF power (mW), where tune-up limit is the maximum rated power among all production units.
 - b. For WWAN: Reported SAR(W/kg)= Measured SAR(W/kg)*Tune-up Scaling Factor
 - c. For TDD LTE SAR measurement, the duty cycle 1:1.59 (62.9 %) was used perform testing and considering the theoretical duty cycle of 63.3% for extended cyclic prefix in the uplink, and the theoretical duty cycle of 62.9% for normal cyclic prefix in uplink, a scaling factor of extended cyclic prefix $63.3\%/62.9\% = 1.006$ is applied to scale-up the measured SAR result. The Reported TDD LTE SAR = measured SAR (W/kg)* Tune-up Scaling Factor* scaling factor for extended cyclic prefix.
2. Per KDB 447498 D01v06, for each exposure position, testing of other required channels within the operating mode of a frequency band is not required when the *reported* 1-g or 10-g SAR for the mid-band or highest output power channel is:
 - ≤ 0.8 W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≤ 100 MHz
 - ≤ 0.6 W/kg or 1.5 W/kg, for 1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz
 - ≤ 0.4 W/kg or 1.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≥ 200 MHz
3. Per KDB 865664 D01v01r04, for each frequency band, repeated SAR measurement is required only when the measured SAR is ≥ 0.8 W/kg.

UMTS Note:

1. Per KDB 941225 D01v03r01, for SAR testing is measured using a 12.2 kbps RMC with TPC bits configured to all "1's".
2. Per KDB 941225 D01v03r01, RMC 12.2kbps setting is used to evaluate SAR. The maximum output power and tune-up tolerance specified for production units in HSDPA / HSUPA is $\leq \frac{1}{4}$ dB higher than RMC 12.2Kbps or when the highest reported SAR of the RMC12.2Kbps is scaled by the ratio of specified maximum output power and tune-up tolerance of HSDPA / HSUPA to RMC12.2Kbps and the adjusted SAR is ≤ 1.2 W/kg, SAR measurement is not required for HSDPA / HSUPA, and according to the following RF output power, the output power results of the secondary modes (HSUPA, HSDPA, DC-HSDPA) are less than $\frac{1}{4}$ dB higher than the primary modes; therefore, SAR measurement is not required for HSDPA / HSUPA.

LTE Note:

1. Per KDB 941225 D05v02r05, start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel.
2. Per KDB 941225 D05v02r05, 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure.
3. Per KDB 941225 D05v02r05, For QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.
4. Per KDB 941225 D05v02r05, 16QAM output power for each RB allocation configuration is $> \text{not } \frac{1}{2}$ dB higher than the same configuration in QPSK and the reported SAR for the QPSK configuration is ≤ 1.45 W/kg; Per KDB 941225 D05v02r05, 16QAM SAR testing is not required.
5. Per KDB 941225 D05v02r05, Smaller bandwidth output power for each RB allocation configuration is $> \text{not } \frac{1}{2}$ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg; Per KDB 941225 D05v02r05, smaller bandwidth SAR testing is not required.
6. For LTE B4/B5/B12/B17/B26/B38/B71 the maximum bandwidth does not support three non-overlapping channels, per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.
7. LTE band 2/4/5/17/38 SAR test was covered by Band 25/66/26/12/41; according to April 2015 TCB workshop, SAR test for overlapping LTE bands can be reduced if
 - c. the maximum output power, including tolerance, for the smaller band is $\leq$ the larger band to qualify for the SAR test exclusion
 - d. the channel bandwidth and other operating parameters for the smaller band are fully supported by the larger band

5G NR Note:

1. Referencing the procedure in KDB 941225, the test procedures are outlined as below:
 - a. To start SAR test for the largest channel bandwidth for PI/2 BPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel. Also do SAR test for 50% RB allocation for PI/2 BPSK SAR testing using 1RB PI/2 BPSK allocation procedure
 - b. For PI/2 BPSK with 100% RB allocation, SAR test is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.
 - c. For higher modulation QPSK/16QAM/64QAM/256QAM, according to tune-up document the power level is not $\frac{1}{2}$ dB higher than the same configuration in PI/2 BPSK, also reported SAR for the PI/2 BPSK configuration is less than 1.45 W/kg, QPSK/16QAM/64QAM/256QAM SAR testing are not required.
 - d. Smaller bandwidth output power for each RB allocation configuration for this device is not $\frac{1}{2}$ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg, smaller bandwidth SAR testing is not required for this device
 - e. For 5G FR1 n5/n12/n41/n71/n77, the maximum channel bandwidth does not support three non-overlapping channels in the frequency band, the middle channel of the group of overlapping channels were selected for testing.
 - f. Due to test setup limitations, SAR testing for NR was performed using Factory Test Mode software to establish the connection and perform SAR with 100% transmission. And only for TDD power class2 was performed using Factory Test Mode software to establish the connection and perform SAR with 50% transmission

**15.1 Body SAR****<LTE SAR>**

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Antenna	Power Reduction	Ch.	Freq. (MHz)	Antenna Vendor	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
01	LTE Band 7	20M	QPSK	1	0	Bottom Side	0mm	MIMO2	OFF	21100	2535	WNC	23.69	24.50	1.205			-0.01	0.404	0.487
	LTE Band 7	20M	QPSK	50	0	Bottom Side	0mm	MIMO2	OFF	21100	2535	WNC	22.43	23.50	1.279			-0.16	0.301	0.385
	LTE Band 7C	20M	QPSK	1	0	Bottom Side	0mm	MIMO2	OFF	21100+20902	2535	WNC	23.51	24.50	1.256			0.05	0.356	0.447
	LTE Band 7B	20M	QPSK	1	0	Bottom Side	0mm	MIMO2	OFF	21076+21169	2535	WNC	23.47	24.50	1.268			0.06	0.337	0.427
	LTE Band 7	20M	QPSK	1	0	Bottom Side	0mm	MIMO2	OFF	21100	2535	Auden	23.69	24.50	1.205			0.07	0.372	0.448
02	LTE Band 25	20M	QPSK	1	0	Bottom Side	0mm	MIMO2	OFF	26140	1860	WNC	24.00	24.50	1.122			0.01	0.807	0.905
	LTE Band 25	20M	QPSK	1	0	Bottom Side	0mm	MIMO2	OFF	26340	1880	WNC	23.60	24.50	1.230			0.08	0.733	0.902
	LTE Band 25	20M	QPSK	1	0	Bottom Side	0mm	MIMO2	OFF	26590	1905	WNC	23.68	24.50	1.208			0.01	0.725	0.876
	LTE Band 25	20M	QPSK	50	0	Bottom Side	0mm	MIMO2	OFF	26140	1860	WNC	22.98	23.50	1.127			0.11	0.635	0.716
	LTE Band 25	20M	QPSK	100	0	Bottom Side	0mm	MIMO2	OFF	26140	1860	WNC	22.92	23.50	1.143			0.03	0.612	0.699
	LTE Band 2C	20M	QPSK	1	0	Bottom Side	0mm	MIMO2	OFF	18900+18702	1880	WNC	23.85	24.50	1.161			-0.07	0.757	0.879
	LTE Band 2C	20M	QPSK	1	0	Bottom Side	0mm	MIMO2	OFF	18700+18898	1860	WNC	23.76	24.50	1.186			0.01	0.709	0.841
	LTE Band 2C	20M	QPSK	1	0	Bottom Side	0mm	MIMO2	OFF	19100+18902	1900	WNC	23.72	24.50	1.197			0	0.695	0.832
	LTE Band 25	20M	QPSK	1	0	Bottom Side	0mm	MIMO2	OFF	26140	1860	Auden	24.00	24.50	1.122			-0.03	0.732	0.821
	LTE Band 25	20M	QPSK	1	0	Bottom Side	0mm	MIMO2	OFF	26340	1880	Auden	23.60	24.50	1.230			0.08	0.704	0.866
	LTE Band 25	20M	QPSK	1	0	Bottom Side	0mm	MIMO2	OFF	26590	1905	Auden	23.68	24.50	1.208			0.01	0.711	0.859
03	LTE Band 30	10M	QPSK	1	0	Bottom Side	0mm	MIMO2	OFF	27710	2310	WNC	22.03	23.00	1.250			-0.03	0.322	0.403
	LTE Band 30	10M	QPSK	25	0	Bottom Side	0mm	MIMO2	OFF	27710	2310	WNC	21.00	22.00	1.259			0.17	0.254	0.320
	LTE Band 30	10M	QPSK	1	0	Bottom Side	0mm	MIMO2	OFF	27710	2310	Auden	22.03	23.00	1.250			0.04	0.313	0.391
04	LTE Band 41	20M	QPSK	1	0	Bottom Side	0mm	MIMO2	OFF	39750	2506	WNC	23.48	25.00	1.419	62.9	1.006	-0.06	0.365	0.521
	LTE Band 41	20M	QPSK	50	0	Bottom Side	0mm	MIMO2	OFF	39750	2506	WNC	22.55	24.00	1.396	62.9	1.006	-0.06	0.296	0.416
	LTE Band 41C	20M	QPSK	1	0	Bottom Side	0mm	MIMO2	OFF	39750+39948	2506	WNC	23.30	25.00	1.479	62.9	1.006	0.05	0.322	0.479
	LTE Band 38C	20M	QPSK	1	0	Bottom Side	0mm	MIMO2	OFF	37850+38048	2580	WNC	23.11	24.50	1.377	62.9	1.006	0.01	0.319	0.442
	LTE Band 41_HPUE	20M	QPSK	1	0	Bottom Side	0mm	MIMO2	OFF	39750	2506	WNC	25.44	27.00	1.432	42.9	1.009	-0.01	0.354	0.512
	LTE Band 41	20M	QPSK	1	0	Bottom Side	0mm	MIMO2	OFF	39750	2506	Auden	23.48	25.00	1.419	62.9	1.006	-0.09	0.357	0.510
	LTE Band 42	20M	QPSK	1	0	Bottom Side	10mm	MIMO2	OFF	42190	3460	WNC	23.24	24.50	1.337	62.9	1.006	0.04	0.305	0.410
	LTE Band 42	20M	QPSK	50	0	Bottom Side	10mm	MIMO2	OFF	42190	3460	WNC	22.89	23.50	1.151	62.9	1.006	-0.03	0.279	0.323
05	LTE Band 42	20M	QPSK	1	0	Bottom Side	0mm	MIMO2	ON	42190	3460	WNC	21.54	22.00	1.112	62.9	1.006	-0.02	1.020	1.141
	LTE Band 42	20M	QPSK	1	0	Bottom Side	0mm	MIMO2	ON	42590	3500	WNC	21.24	22.00	1.191	62.9	1.006	0.03	0.876	1.050
	LTE Band 42	20M	QPSK	1	0	Bottom Side	0mm	MIMO2	ON	42990	3540	WNC	21.18	22.00	1.208	62.9	1.006	-0.15	0.763	0.927
	LTE Band 42	20M	QPSK	50	0	Bottom Side	0mm	MIMO2	ON	42190	3460	WNC	20.76	22.00	1.330	62.9	1.006	-0.17	0.803	1.075
	LTE Band 42	20M	QPSK	50	0	Bottom Side	0mm	MIMO2	ON	42590	3500	WNC	20.48	22.00	1.419	62.9	1.006	-0.08	0.769	1.098
	LTE Band 42	20M	QPSK	50	0	Bottom Side	0mm	MIMO2	ON	42990	3540	WNC	20.38	22.00	1.452	62.9	1.006	-0.04	0.728	1.063
	LTE Band 42	20M	QPSK	100	0	Bottom Side	0mm	MIMO2	ON	42190	3460	WNC	20.68	22.00	1.355	62.9	1.006	-0.04	0.800	1.091
	LTE Band 42C	20M	QPSK	1	0	Bottom Side	0mm	MIMO2	ON	42190+42388	3460	WNC	21.34	22.00	1.164	62.9	1.006	-0.06	0.917	1.074
	LTE Band 42	20M	QPSK	1	0	Bottom Side	0mm	MIMO2	ON	42190	3460	Auden	21.54	22.00	1.112	62.9	1.006	0.11	0.910	1.018
06	LTE Band 43	20M	QPSK	1	0	Bottom Side	0mm	MIMO2	OFF	45490	3790	WNC	23.47	24.50	1.268	62.9	1.006	-0.11	0.804	1.025
	LTE Band 43	20M	QPSK	1	0	Bottom Side	0mm	MIMO2	OFF	44690	3710	WNC	23.46	24.50	1.271	62.9	1.006	0.02	0.793	1.014
	LTE Band 43	20M	QPSK	1	0	Bottom Side	0mm	MIMO2	OFF	45090	3750	WNC	23.15	24.50	1.365	62.9	1.006	-0.1	0.725	0.995
	LTE Band 43	20M	QPSK	50	0	Bottom Side	0mm	MIMO2	OFF	45490	3790	WNC	22.91	23.50	1.146	62.9	1.006	-0.1	0.697	0.803
	LTE Band 43	20M	QPSK	50	0	Bottom Side	0mm	MIMO2	OFF	44690	3710	WNC	22.70	23.50	1.202	62.9	1.006	0.01	0.639	0.773
	LTE Band 43	20M	QPSK	50	0	Bottom Side	0mm	MIMO2	OFF	45090	3750	WNC	22.74	23.50	1.191	62.9	1.006	-0.15	0.654	0.784
	LTE Band 43	20M	QPSK	100	0	Bottom Side	0mm	MIMO2	OFF	45490	3790	WNC	22.86	23.50	1.159	62.9	1.006	-0.18	0.622	0.725
	LTE Band 43C	20M	QPSK	1	0	Bottom Side	0mm	MIMO2	OFF	45490	3790	WNC	23.40	24.50	1.288	62.9	1.006	0.02	0.710	0.920
	LTE Band 43	20M	QPSK	1	0	Bottom Side	0mm	MIMO2	OFF	45490	3790	Auden	23.47	24.50	1.268	62.9	1.006	-0.06	0.767	0.978
07	LTE Band 48	20M	QPSK	1	0	Bottom Side	0mm	MIMO2	OFF	55340	3560	WNC	20.91	21.80	1.227	62.9	1.006	-0.07	0.574	0.709
	LTE Band 48	20M	QPSK	1	0	Bottom Side	0mm	MIMO2	OFF	55830	3609	WNC	20.78	21.80	1.265	62.9	1.006	0.05	0.552	0.702
	LTE Band 48	20M	QPSK	1	0	Bottom Side	0mm	MIMO2	OFF	56150	3641	WNC	20.84	21.80	1.247	62.9	1.006	0.05	0.549	0.689
	LTE Band 48	20M	QPSK	1	0	Bottom Side	0mm	MIMO2	OFF	56640	3690	WNC	20.77	21.80	1.268	62.9	1.006	0.03	0.525	0.670
	LTE Band 48	20M	QPSK	50	0	Bottom Side	0mm	MIMO2	OFF	55340	3560	WNC	19.44	20.80	1.368	62.9	1.006	0.18	0.407	0.560



FCC SAR TEST REPORT

Report No. : FA4D0509

	LTE Band 48C	20M	QPSK	1	0	Bottom Side	0mm	MIMO2	OFF	55340+55538	3560	WNC	20.77	21.80	1.268	62.9	1.006	-0.17	0.531	0.677
	LTE Band 48C	20M	QPSK	1	0	Bottom Side	0mm	MIMO2	OFF	55830+55632	3609	WNC	20.60	21.80	1.318	62.9	1.006	-0.02	0.510	0.676
	LTE Band 48C	20M	QPSK	1	0	Bottom Side	0mm	MIMO2	OFF	56150+55952	3641	WNC	20.62	21.80	1.312	62.9	1.006	0.03	0.497	0.656
	LTE Band 48C	20M	QPSK	1	0	Bottom Side	0mm	MIMO2	OFF	56640+56442	3690	WNC	20.51	21.80	1.346	62.9	1.006	0.15	0.483	0.654
	LTE Band 48B	10M	QPSK	1	0	Bottom Side	0mm	MIMO2	OFF	55340+55439	3560	WNC	20.75	21.80	1.274	62.9	1.006	-0.06	0.520	0.666
	LTE Band 48B	10M	QPSK	1	0	Bottom Side	0mm	MIMO2	OFF	55830+55731	3609	WNC	20.59	21.80	1.321	62.9	1.006	0.1	0.504	0.670
	LTE Band 48B	10M	QPSK	1	0	Bottom Side	0mm	MIMO2	OFF	56150+56051	3641	WNC	20.63	21.80	1.309	62.9	1.006	0.07	0.500	0.659
	LTE Band 48B	10M	QPSK	1	0	Bottom Side	0mm	MIMO2	OFF	56640+56441	3690	WNC	20.55	21.80	1.334	62.9	1.006	0.16	0.473	0.635
	LTE Band 48	20M	QPSK	1	0	Bottom Side	0mm	MIMO2	OFF	55340	3560	Auden	20.91	21.80	1.227	62.9	1.006	0.11	0.538	0.664
	LTE Band 48	20M	QPSK	1	0	Bottom Side	0mm	MIMO2	OFF	55830	3609	Auden	20.78	21.80	1.265	62.9	1.006	0.03	0.527	0.671
	LTE Band 48	20M	QPSK	1	0	Bottom Side	0mm	MIMO2	OFF	56150	3641	Auden	20.84	21.80	1.247	62.9	1.006	-0.06	0.529	0.664
	LTE Band 48	20M	QPSK	1	0	Bottom Side	0mm	MIMO2	OFF	56640	3690	Auden	20.77	21.80	1.268	62.9	1.006	-0.09	0.499	0.636
08	LTE Band 66	20M	QPSK	1	0	Bottom Side	0mm	MIMO2	OFF	132322	1745	WNC	23.72	24.50	1.197			-0.01	0.622	0.744
	LTE Band 66	20M	QPSK	50	0	Bottom Side	0mm	MIMO2	OFF	132322	1745	WNC	22.81	23.50	1.172			-0.09	0.505	0.592
	LTE Band 66C	20M	QPSK	1	0	Bottom Side	0mm	MIMO2	OFF	132322+132124	1745	WNC	23.60	24.50	1.230			-0.14	0.581	0.715
	LTE Band 66B	20M	QPSK	1	0	Bottom Side	0mm	MIMO2	OFF	132322+132229	1745	WNC	23.61	24.50	1.227			0.18	0.552	0.678
	LTE Band 66	20M	QPSK	1	0	Bottom Side	0mm	MIMO2	OFF	132322	1745	Auden	23.72	24.50	1.197			0.07	0.597	0.714
09	LTE Band 70	15M	QPSK	1	0	Bottom Side	0mm	MIMO2	OFF	133047	1702.5	WNC	23.01	24.00	1.256			0.01	0.336	0.422
	LTE Band 70	15M	QPSK	36	0	Bottom Side	0mm	MIMO2	OFF	133047	1702.5	WNC	21.99	23.00	1.262			-0.05	0.269	0.339
	LTE Band 70	15M	QPSK	1	0	Bottom Side	0mm	MIMO2	OFF	133047	1702.5	Auden	23.01	24.00	1.256			-0.08	0.331	0.416

<5G NR SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Antenna	Power Reduction	Ch.	Freq. (MHz)	Antenna Vendor	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
10	FR1 n7	40M	BPSK	1	1	Bottom Side	0mm	MIMO2	OFF	507000	2535	WNC	23.45	24.50	1.274	0.01	0.453	0.577
	FR1 n7	40M	BPSK	108	54	Bottom Side	0mm	MIMO2	OFF	507000	2535	WNC	23.10	24.00	1.230	0.11	0.409	0.503
	FR1 n7	40M	BPSK	1	1	Bottom Side	0mm	MIMO2	OFF	507000	2535	Auden	23.45	24.50	1.274	-0.05	0.402	0.512
11	FR1 n25	40M	BPSK	1	1	Bottom Side	0mm	MIMO2	OFF	376500	1882.5	WNC	23.95	24.60	1.161	0.01	0.670	0.778
	FR1 n25	40M	BPSK	108	54	Bottom Side	0mm	MIMO2	OFF	376500	1882.5	WNC	23.72	24.60	1.225	-0.11	0.622	0.762
	FR1 n25	40M	BPSK	1	1	Bottom Side	0mm	MIMO2	OFF	376500	1882.5	Auden	23.95	24.60	1.161	0	0.637	0.740
12	FR1 n30	10M	BPSK	1	1	Bottom Side	0mm	MIMO2	OFF	462000	2310	WNC	21.65	23.00	1.365	-0.19	0.301	0.411
	FR1 n30	10M	BPSK	25	14	Bottom Side	0mm	MIMO2	OFF	462000	2310	WNC	21.37	23.00	1.455	0.08	0.275	0.400
	FR1 n30	10M	BPSK	1	1	Bottom Side	0mm	MIMO2	OFF	462000	2310	Auden	21.65	23.00	1.365	0.01	0.286	0.390
13	FR1 n66	40M	BPSK	1	1	Bottom Side	0mm	MIMO2	OFF	349000	1745	WNC	24.00	24.50	1.122	-0.03	0.371	0.416
	FR1 n66	40M	BPSK	108	54	Bottom Side	0mm	MIMO2	OFF	349000	1745	WNC	23.97	24.50	1.130	-0.13	0.367	0.415
	FR1 n66	40M	BPSK	1	1	Bottom Side	0mm	MIMO2	OFF	349000	1745	Auden	24.00	24.50	1.122	0.18	0.355	0.398
14	FR1 n70	15M	BPSK	1	1	Bottom Side	0mm	MIMO2	OFF	340500	1702.5	WNC	23.29	24.60	1.352	0.01	0.334	0.452
	FR1 n70	15M	BPSK	36	22	Bottom Side	0mm	MIMO2	OFF	340500	1702.5	WNC	23.19	24.60	1.384	-0.08	0.303	0.419
	FR1 n70	15M	BPSK	1	1	Bottom Side	0mm	MIMO2	OFF	340500	1702.5	Auden	23.29	24.60	1.352	0.04	0.299	0.404
	FR1 n41	100M	BPSK	1	1	Bottom Side	0mm	MIMO2	OFF	518598	2592.99	WNC	23.77	25.00	1.327	-0.04	0.380	0.504
	FR1 n41	100M	BPSK	135	69	Bottom Side	0mm	MIMO2	OFF	518598	2592.99	WNC	23.24	25.00	1.500	-0.15	0.327	0.490
	FR1 n41_HPUE	100M	BPSK	1	1	Bottom Side	0mm	MIMO2	OFF	518598	2592.99	WNC	26.52	27.00	1.117	-0.15	0.351	0.392
	FR1 n41	100M	BPSK	1	1	Bottom Side	0mm	MIMO2	OFF	518598	2592.99	Auden	23.77	25.00	1.327	0	0.364	0.483
15	FR1 n41	100M	BPSK	1	1	Bottom Side	0mm	MIMO3	OFF	518598	2592.99	WNC	23.65	25.00	1.365	-0.1	0.657	0.897
	FR1 n41	100M	BPSK	135	69	Bottom Side	0mm	MIMO3	OFF	518598	2592.99	WNC	23.29	25.00	1.483	0.01	0.523	0.775
	FR1 n41	100M	BPSK	270	0	Bottom Side	0mm	MIMO3	OFF	518598	2592.99	WNC	22.91	24.50	1.442	0.01	0.579	0.835
	FR1 n41_HPUE	100M	BPSK	1	1	Bottom Side	0mm	MIMO3	OFF	518598	2592.99	WNC	26.31	27.00	1.172	-0.15	0.620	0.727
	FR1 n41	100M	BPSK	1	1	Bottom Side	0mm	MIMO3	OFF	518598	2592.99	Auden	23.65	25.00	1.365	0.01	0.579	0.790
16	FR1 n48	40M	BPSK	1	1	Bottom Side	0mm	MIMO2	OFF	645332	3679.98	WNC	20.36	21.80	1.393	-0.01	0.585	0.815
	FR1 n48	40M	BPSK	1	1	Bottom Side	0mm	MIMO2	OFF	638000	3570	WNC	20.13	21.80	1.469	-0.1	0.524	0.770
	FR1 n48	40M	BPSK	1	1	Bottom Side	0mm	MIMO2	OFF	641666	3624.99	WNC	20.24	21.80	1.432	0.06	0.552	0.791
	FR1 n48	40M	BPSK	50	28	Bottom Side	0mm	MIMO2	OFF	641666	3624.99	WNC	20.30	21.80	1.413	0.13	0.565	0.798
	FR1 n48	40M	BPSK	50	28	Bottom Side	0mm	MIMO2	OFF	645332	3679.98	WNC	20.22	21.80	1.439	-0.09	0.546	0.786
	FR1 n48	40M	BPSK	50	28	Bottom Side	0mm	MIMO2	OFF	638000	3570	WNC	20.23	21.80	1.435	-0.08	0.560	0.804



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	FR1 n48	40M	BPSK	100	0	Bottom Side	0mm	MIMO2	OFF	645332	3679.98	WNC	20.22	21.80	1.439	0.12	0.530	0.763
	FR1 n48	40M	BPSK	1	1	Bottom Side	0mm	MIMO2	OFF	645332	3679.98	Auden	20.36	21.80	1.393	-0.04	0.569	0.793
	FR1 n48	40M	BPSK	1	1	Bottom Side	0mm	MIMO2	OFF	638000	3570	Auden	20.13	21.80	1.469	-0.08	0.502	0.737
	FR1 n48	40M	BPSK	1	1	Bottom Side	0mm	MIMO2	OFF	641666	3624.99	Auden	20.24	21.80	1.432	0.1	0.515	0.738
	FR1 n77	100M	BPSK	1	1	Bottom Side	10mm	MIMO2	OFF	656000	3840	WNC	23.43	25.10	1.469	-0.02	0.434	0.638
	FR1 n77	100M	BPSK	135	69	Bottom Side	10mm	MIMO2	OFF	656000	3840	WNC	23.19	25.10	1.552	0.15	0.401	0.623
	FR1 n77	100M	BPSK	1	1	Bottom Side	0mm	MIMO2	ON	656000	3840	WNC	19.88	20.50	1.153	0.13	0.905	1.044
	FR1 n77	100M	BPSK	135	69	Bottom Side	0mm	MIMO2	ON	656000	3840	WNC	19.75	20.50	1.189	0.12	0.877	1.042
	FR1 n77	100M	BPSK	270	0	Bottom Side	0mm	MIMO2	ON	656000	3840	WNC	19.72	20.50	1.197	0.05	0.853	1.021
	FR1 n77_HPUE	100M	BPSK	1	1	Bottom Side	0mm	MIMO2	ON	656000	3840	WNC	22.78	23.50	1.180	0.03	0.812	0.958
	FR1 n77	100M	BPSK	1	1	Bottom Side	0mm	MIMO2	ON	656000	3840	Auden	19.88	20.50	1.153	-0.01	0.839	0.968
	FR1 n77	100M	BPSK	1	1	Bottom Side	10mm	MIMO2	OFF	633332	3499.98	WNC	23.26	25.10	1.528	0.08	0.434	0.663
	FR1 n77	100M	BPSK	135	69	Bottom Side	10mm	MIMO2	OFF	633332	3499.98	WNC	23.16	25.10	1.563	-0.08	0.397	0.621
17	FR1 n77	100M	BPSK	1	1	Bottom Side	0mm	MIMO2	ON	633332	3499.98	WNC	19.74	20.50	1.191	0.01	0.927	1.104
	FR1 n77	100M	BPSK	135	69	Bottom Side	0mm	MIMO2	ON	633332	3499.98	WNC	19.60	20.50	1.230	-0.09	0.893	1.099
	FR1 n77	100M	BPSK	270	0	Bottom Side	0mm	MIMO2	ON	633332	3499.98	WNC	19.54	20.50	1.247	0.04	0.873	1.089
	FR1 n77_HPUE	100M	BPSK	1	1	Bottom Side	0mm	MIMO2	ON	633332	3499.98	WNC	22.67	23.50	1.211	-0.08	0.825	0.999
	FR1 n77	100M	BPSK	1	1	Bottom Side	0mm	MIMO2	ON	633332	3499.98	Auden	19.74	20.50	1.191	0.01	0.887	1.057
	FR1 n77	100M	BPSK	1	1	Bottom Side	0mm	MIMO3	OFF	662000	3930	WNC	23.82	25.10	1.343	0.14	0.513	0.689
	FR1 n77	100M	BPSK	135	69	Bottom Side	0mm	MIMO3	OFF	662000	3930	WNC	23.33	25.10	1.503	0.11	0.447	0.672
	FR1 n77_HPUE	100M	BPSK	1	1	Bottom Side	0mm	MIMO3	OFF	662000	3930	WNC	25.86	26.00	1.033	-0.05	0.463	0.478
	FR1 n77	100M	BPSK	1	1	Bottom Side	0mm	MIMO3	OFF	662000	3930	Auden	23.82	25.10	1.343	-0.15	0.488	0.655
	FR1 n77	100M	BPSK	1	1	Bottom Side	0mm	MIMO3	OFF	633332	3499.98	WNC	23.51	25.10	1.442	0.08	0.555	0.800
	FR1 n77	100M	BPSK	135	69	Bottom Side	0mm	MIMO3	OFF	633332	3499.98	WNC	23.43	25.10	1.469	-0.17	0.534	0.784
	FR1 n77	100M	BPSK	270	0	Bottom Side	0mm	MIMO3	OFF	633332	3499.98	WNC	23.11	24.60	1.409	-0.17	0.451	0.636
	FR1 n77_HPUE	100M	BPSK	1	1	Bottom Side	0mm	MIMO3	OFF	633332	3499.98	WNC	25.92	26.00	1.019	-0.03	0.526	0.536
	FR1 n77	100M	BPSK	1	1	Bottom Side	0mm	MIMO3	OFF	633332	3499.98	Auden	23.51	25.10	1.442	-0.19	0.529	0.763

15.2 Repeated SAR Measurement

No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Antenna	Power Reduction	Ch.	Freq. (MHz)	Antenna Vendor	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Ratio	Reported 1g SAR (W/kg)
1st	LTE Band 25	20M	QPSK	1	0	Bottom Side	0mm	MIMO2	OFF	26140	1860	WNC	24.00	24.50	1.122			0.01	0.807	-	0.905
2nd	LTE Band 25	20M	QPSK	1	0	Bottom Side	0mm	MIMO2	OFF	26140	1860	WNC	24.00	24.50	1.122			0.06	0.768	1.051	0.862
1st	LTE Band 42	20M	QPSK	1	0	Bottom Side	0mm	MIMO2	ON	42190	3460	WNC	21.54	22.00	1.112	62.9	1.006	-0.02	1.020	-	1.141
2nd	LTE Band 42	20M	QPSK	1	0	Bottom Side	0mm	MIMO2	ON	42190	3460	WNC	21.54	22.00	1.112	62.9	1.006	0.05	0.997	1.023	1.115
1st	LTE Band 43	20M	QPSK	1	0	Bottom Side	0mm	MIMO2	OFF	45490	3790	WNC	23.47	24.50	1.268	62.9	1.006	-0.11	0.804	-	1.025
2nd	LTE Band 43	20M	QPSK	1	0	Bottom Side	0mm	MIMO2	OFF	45490	3790	WNC	23.47	24.50	1.268	62.9	1.006	0.03	0.789	1.019	1.006
1st	FR1 n77	100M	BPSK	1	1	Bottom Side	0mm	MIMO2	ON	656000	3840	WNC	19.88	20.50	1.153			0.13	0.905	-	1.044
2nd	FR1 n77	100M	BPSK	1	1	Bottom Side	0mm	MIMO2	ON	656000	3840	WNC	19.88	20.50	1.153			0.15	0.901	1.004	1.039

General Note:

1. Per KDB 865664 D01v01r04, for each frequency band, repeated SAR measurement is required only when the measured SAR is $\geq 0.8\text{W/kg}$.
2. Per KDB 865664 D01v01r04, if the ratio among the repeated measurement is ≤ 1.2 and the measured SAR $< 1.45\text{W/kg}$, only one repeated measurement is required.
3. The ratio is the difference in percentage between original and repeated *measured SAR*.
4. All measurement SAR result is scaled-up to account for tune-up tolerance and is compliant.

15.3 Power Class 2 and Power Class 3 Linearity

General Note:

This device support Power Class 2 and Power Class 3 operations. Per FCC Guidance based on the device behavior, all SAR tests were performed using Power Class 3. Power Class 2 is tested using the highest SAR test configuration in Power Class 3 for each LTE and FR1 configuration and exposure condition combination, according to the highest time averaged power for Power Class 2. When the reported SAR vs. output power is linearly scaled with < 10% discrepancy between power classes and all reported SAR are < 1.4 W/kg, Separate SAR testing for Power Class 2 is not required. Use PC3 power level and SAR to estimated PC2 SAR linearly, and check if the deviation from the measured PC2 SAR is <10%

	LTE Band 41_Ant MIMO2	LTE Band 41_Ant MIMO2
	(Power Class 3)	(Power Class 2)
Maximum Tune up Power (dBm)	25	27
Reported 1g SAR (W/kg)	0.521	0.512
Duty Cycle	63.30%	43.30%
Frame Averaged (mW)	200.17	217.01
Linearity SAR(W/kg)	0.56	
% deviation from expected linearity		-9.35%

	FR1 n41_Ant MIMO2	FR1 n41_Ant MIMO2
	(Power Class 3)	(Power Class 2)
Maximum Tune up Power (dBm)	25	27
Reported 1g SAR (W/kg)	0.504	0.392
Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	316.23	250.59
Linearity SAR(W/kg)	0.40	
% deviation from expected linearity		-1.85%

	FR1 n77_Ant MIMO2 (27Q)	FR1 n77_Ant MIMO2 (27Q)
	(Power Class 3)	(Power Class 2)
Maximum Tune up Power (dBm)	20.5	23.5
Reported 1g SAR (W/kg)	1.104	0.999
Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	112.20	111.94
Linearity SAR(W/kg)	1.10	
% deviation from expected linearity		-9.30%

	FR1 n41_Ant MIMO3	FR1 n41_Ant MIMO3
	(Power Class 3)	(Power Class 2)
Maximum Tune up Power (dBm)	25	27
Reported 1g SAR (W/kg)	0.897	0.727
Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	316.23	250.59
Linearity SAR(W/kg)	0.71	
% deviation from expected linearity		2.28%

	FR1 n77_Ant MIMO3 (27Q)	FR1 n77_Ant MIMO3 (27Q)
	(Power Class 3)	(Power Class 2)
Maximum Tune up Power (dBm)	25.1	26
Reported 1g SAR (W/kg)	0.8	0.536
Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	323.59	199.05
Linearity SAR(W/kg)	0.49	
% deviation from expected linearity		8.92%

16. Simultaneous Transmission Analysis

NO.	Simultaneous Transmission Configurations	Body
1.	WWAN Main + WWAN MIMO2 + WLAN2.4GHz Main + Bluetooth Aux + RFID	Yes
2.	WWAN Main + WWAN MIMO2 + WLAN5/6GHz Main / WLAN5/6GHz Aux + Bluetooth Aux + RFID	Yes
3.	WWAN Main + WWAN MIMO2 + WLAN2.4GHz MIMO + RFID	Yes
4.	WWAN Main + WWAN MIMO2 + WLAN5/6GHz MIMO + Bluetooth Aux + RFID	Yes
5.	WWAN Aux + WWAN MIMO3 + WLAN2.4GHz Main + Bluetooth Aux + RFID	Yes
6.	WWAN Aux + WWAN MIMO3 + WLAN5/6GHz Main / WLAN5/6GHz Aux + Bluetooth Aux + RFID	Yes
7.	WWAN Aux + WWAN MIMO3 + WLAN2.4GHz MIMO + RFID	Yes
8.	WWAN Aux + WWAN MIMO3 + WLAN5/6GHz MIMO + Bluetooth Aux + RFID	Yes

General Note:

- The worst case WLAN reported SAR for each configuration was used for SAR summation. Therefore, the following summations represent the absolute worst cases for simultaneous transmission with WLAN.
- WLAN RF exposure assessment of MIMO mode simultaneous transmission exclusion analysis was performed with SAR test results of each antenna in SISO mode. Therefore SPLSR calculation was choose worst case with SAR test results of each antenna in SISO mode perform evaluation.
- The Scaled SAR summation is calculated based on the same configuration and test position.
- Per KDB 447498 D01v06, simultaneous transmission SAR is compliant if,
 - Scalar SAR summation < 1.6W/kg.
 - $SPLSR = (SAR1 + SAR2)^{1.5} / (\text{min. separation distance, mm})$, and the peak separation distance is determined from the square root of $[(x1-x2)^2 + (y1-y2)^2 + (z1-z2)^2]$, where (x1, y1, z1) and (x2, y2, z2) are the coordinates of the extrapolated peak SAR locations in the zoom scan.
 - If $SPLSR \leq 0.04$, simultaneously transmission SAR measurement is not necessary.
 - Simultaneously transmission SAR measurement, and the reported multi-band SAR < 1.6W/kg.
 - The SPLSR calculated results please refer to section 16.2.

16.1 Body Exposure Conditions

Exposure Position	1	2	3	4	5	6	7	8	9	10	1+2+3+7+10 Summed 1g SAR (W/kg)	1+2+5+7+10 Summed 1g SAR (W/kg)	1+2+8+10 Summed 1g SAR (W/kg)	1+2+7+9+10 Summed 1g SAR (W/kg)	1+2+6+7+10 Summed 1g SAR (W/kg)	SPLSR	Case No.
	WWAN Main	WWAN MIMO2	WLAN 2.4GHz Main	WLAN 2.4GHz Aux	WLAN 5/6GHz Main	WLAN 5/6GHz Aux	Bluetooth Aux	WLAN 2.4GHz Main+Aux	WLAN 5/6GHz Main+Aux	RFID							
	Estimated 1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)							
Bottom Side at 0mm	0.400	1.141	0.628	0.591	0.449	0.207	0.120	0.427	0.189	0.001	2.290	2.111	1.969	1.851	1.869	0.010	Case 1,2,3,4,5

Exposure Position	1	2	3	4	5	6	7	8	9	10	1+2+3+7+10 Summed 1g SAR (W/kg)	1+2+5+7+10 Summed 1g SAR (W/kg)	1+2+8+10 Summed 1g SAR (W/kg)	1+2+7+9+10 Summed 1g SAR (W/kg)	1+2+6+7+10 Summed 1g SAR (W/kg)	SPLSR	Case No.
	WWAN Aux	WWAN MIMO3	WLAN 2.4GHz Main	WLAN 2.4GHz Aux	WLAN 5/6GHz Main	WLAN 5/6GHz Aux	Bluetooth Aux	WLAN 2.4GHz Main+Aux	WLAN 5/6GHz Main+Aux	RFID							
	Estimated 1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)							
Bottom Side at 0mm	0.400	0.897	0.628	0.591	0.449	0.207	0.120	0.427	0.189	0.001	2.046	1.867	1.725	1.607	1.625	0.010	Case 6,7,8,9,10

16.2 SPLSR Evaluation and Analysis

General Note:

- According to antenna location the minimum distance between each transmit antenna is using for SPLSR analysis
- Simultaneous transmission SAR test exclusion is determined for each operating configuration and exposure condition according to the reported standalone SAR of each applicable simultaneously transmitting antenna. When the sum of 1-g or 10-g SAR of all simultaneously transmitting antennas in an operating mode and exposure condition combination is within the SAR limit, SAR test exclusion applies to that simultaneous transmission configuration. Therefore, the adjacent transmit antennas will be summed first, and then the SPLSR calculation will be evaluated with the farther transmitted antennas.
- $SPLSR = (SAR_1 + SAR_2)^{1.5} / (\text{min. separation distance, mm})$. If $SPLSR \leq 0.04$, simultaneously transmission SAR measurement is not necessary.

Plot No.	Band	Position	SAR (W/kg)	Gap (mm)	Minimum distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
Case 1	WWAN Main+MIMO2	Bottom Side	1.541	0	250.1	2.29	0.01	Not required
	WLAN2.4G Main+Bluetooth+RFID		0.749	0				
Plot No.	Band	Position	SAR (W/kg)	Gap (mm)	Minimum distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
Case 2	WWAN Main+MIMO2	Bottom Side	1.541	0	250.1	2.11	0.01	Not required
	WLAN5G Main+Bluetooth+RFID		0.57	0				
Plot No.	Band	Position	SAR (W/kg)	Gap (mm)	Minimum distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
Case 3	WWAN Main+MIMO2	Bottom Side	1.541	0	250.1	1.97	0.01	Not required
	WLAN2.4GHz MIMO+RFID		0.428	0				
Plot No.	Band	Position	SAR (W/kg)	Gap (mm)	Minimum distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
Case 5	WWAN Main+MIMO2	Bottom Side	1.541	0	250.1	1.87	0.01	Not required
	WLAN5/6G Aux+BT+RFID		0.328	0				
Plot No.	Band	Position	SAR (W/kg)	Gap (mm)	Minimum distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
Case 4	WWAN Main+MIMO2	Bottom Side	1.541	0	250.1	1.85	0.01	Not required
	WLAN5/6G MIMO+BT+RFID		0.31	0				
Plot No.	Band	Position	SAR (W/kg)	Gap (mm)	Minimum distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
Case 6	WWAN Aux+MIMO3	Bottom Side	1.297	0	250.1	2.05	0.01	Not required
	WLAN2.4G Main+Bluetooth+RFID		0.749	0				
Plot No.	Band	Position	SAR (W/kg)	Gap (mm)	Minimum distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
Case 7	WWAN Aux+MIMO3	Bottom Side	1.297	0	250.1	1.87	0.01	Not required
	WLAN5G Main+Bluetooth+RFID		0.57	0				
Plot No.	Band	Position	SAR (W/kg)	Gap (mm)	Minimum distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
Case 8	WWAN Aux+MIMO3	Bottom Side	1.297	0	250.1	1.73	0.01	Not required
	WLAN2.4GHz MIMO+RFID		0.428	0				
Plot No.	Band	Position	SAR (W/kg)	Gap (mm)	Minimum distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
Case 9	WWAN Aux+MIMO3	Bottom Side	1.297	0	250.1	1.63	0.01	Not required
	WLAN5/6G Aux+BT+RFID		0.328	0				
Plot No.	Band	Position	SAR (W/kg)	Gap (mm)	Minimum distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
Case 10	WWAN Aux+MIMO3	Bottom Side	1.297	0	250.1	1.61	0.01	Not required
	WLAN5/6G MIMO+BT+RFID		0.31	0				

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17. Uncertainty Assessment

Per KDB 865664 D01 SAR measurement 100MHz to 6GHz, when the highest measured 1-g SAR within a frequency band is < 1.5 W/kg and the measured 10-g SAR within a frequency band is < 3.75 W/kg. The expanded SAR measurement uncertainty must be $\leq 30\%$, for a confidence interval of $k = 2$. If these conditions are met, extensive SAR measurement uncertainty analysis described in IEEE Std 1528-2013 is not required in SAR reports submitted for equipment approval. For this device, the highest measured 1-g SAR is less 1.5W/kg. Therefore, the measurement uncertainty table is not required in this report.

Declaration of Conformity:

The test results with all measurement uncertainty excluded is presented in accordance with the regulation limits or requirements declared by manufacturers.

Comments and Explanations:

The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

18. References

- [1] FCC 47 CFR Part 2 "Frequency Allocations and Radio Treaty Matters; General Rules and Regulations"
- [2] ANSI/IEEE Std. C95.1-1992, "IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz", September 1992
- [3] IEEE Std. 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", Sep 2013
- [4] SPEAG DASY System Handbook
- [5] FCC KDB 447498 D01 v06, "Mobile and Portable Device RF Exposure Procedures and Equipment Authorization Policies", Oct 2015
- [6] FCC KDB 941225 D01 v03r01, "3G SAR MEAUREMENT PROCEDURES", Oct 2015
- [7] FCC KDB 941225 D05 v02r05, "SAR Evaluation Considerations for LTE Devices", Dec 2015
- [8] FCC KDB 941225 D05A v01r02, "Rel. 10 LTE SAR Test Guidance and KDB Inquiries", Oct 2015
- [9] FCC KDB 616217 D04 v01r02, "SAR Evaluation Considerations for Laptop, Notebook, Netbook and Tablet Computers", Oct 2015
- [10] FCC KDB 865664 D01 v01r04, "SAR Measurement Requirements for 100 MHz to 6 GHz", Aug 2015.
- [11] FCC KDB 865664 D02 v01r02, "RF Exposure Compliance Reporting and Documentation Considerations" Oct 2015.