FCC SAR TEST REPORT

FCC ID	:	**PY7-60551T**
Equipment	:	**GSM/WCDMA/LTE/5G Phone with BT, DTS/UNII a/b/g/n/ac/ax, GPS and NFC**
Applicant	:	**Sony Corporation 1-7-1 Konan Minato-ku Tokyo, 108-0075 Japan**
Manufacturer	:	**Sony Corporation 1-7-1 Konan Minato-ku Tokyo, 108-0075 Japan**
Standard	:	**FCC 47 CFR Part 2 (2.1093)**

The product was received on Mar 31, 2021 and testing was started from Apr 13, 2021 and completed on May 11, 2021, 2021. 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. EMC & Wireless Communications Laboratory, the test report shall not be reproduced except in full.

Approved by: Cona Huang / Deputy Manager

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History of this test report

Report No.	Version	Description	Issued Date
FA133117A	01	Initial issue of report	May 14, 2021
FA133117A	02	Update section 15	May 25, 2021

1. Statement of Compliance

Applicant Name	Sony Corporation			
EUT Description	GSM/WCDMA/LTE/5G Phone with BT, DTS/UNII a/b/g/n/ac/ax, GPS and NFC			
FCC ID	PY7-60551T			
HW Version	A			
SW Version	0.747 0.325			
RF Exposure Conditions	**Equipment Class**			
	Licensed	**DTS**	**NII**	**DSS**
Head (1g SAR W/kg)	0.56	0.54	0.45	0.23
Body-Worn (1g SAR W/kg)	0.55	0.19	0.05	0.07
Wireless Router (1g SAR W/kg)	0.77	0.21	0.08	0.08
Product Specific (10g SAR W/kg)			0.31	
Highest Simultaneous Transmission (1g SAR W/kg)	Head: 1.32 Hotspot: 0.79 Body-worn: 0.79	Head: 1.32 Hotspot: 0.79 Body-worn: 0.79	Head: 1.32 Hotspot: 0.77 Body-worn: 0.76	Head: 1.14 Hotspot: 0.77 Body-worn: 0.72
Highest Simultaneous Transmission (10g SAR W/kg)			Product Specific: 0.46	
Date Tested	2021/4/13 ~ 2021/5/11			
Test Result	Pass			

Remark:

1. This device 2.4/5.2/5.8GHz WLAN support Hotspot operation and Bluetooth support tethering applications.
2. This device (FCC ID: PY7-60551T) is identical in hardware to the device original(FCC ID: PY7-45256F), the bands where the operating conditions are unchanged are not tested. Therefore the GSM850/1900, WCDMA II/IV/V, LTEB12/17, WLAN/Bluetooth, LTE B5/13 head mode and LTE B41 hotspot/body-worn mode SAR and output power are refer FCC ID: PY7-45256F. Sporton SAR report no.:FA132425.
3. This device utilizes a proprietary mechanism to set output power for cellular operations in head mode (audio routed to the earpiece), body mode or hot spot mode. The device operates at its maximum power in all bands in head mode and power is reduced in some bands for body mode and for hot spot mode. The mechanism is described in detail in the operational description and has been reviewed and approved by FCC via manufacturer KDB inquiry.

Sporton Lab is accredited to ISO 17025 by Taiwan Accreditation Foundation (TAF code: 1190) 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) 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: Carlie Tsai

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 648474 D04 SAR Evaluation Considerations for Wireless Handsets v01r03
- 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
- FCC KDB 941225 D06 Hotspot Mode SAR v02r01
- FCC KDB 941225 D07 UMPC Mini Tablet v01r02

3. Equipment Under Test (EUT) Information

3.1 General Information

Wireless Technologies	Frequency	Operating Mode	
GSM	850 1900	· GSM Voice · GPRS (GMSK) · EDGE (8PSK)	Multi-Slot Class: Class 33
	Does device support dual transfer mode? (Yes)		
W-CDMA (UMTS)	Band 2 Band 4 Band 5	· AMR / RMC 12.2Kbps · HSDPA · HSUPA · DC-HSDPA	
LTE (FDD)	Band 2 Band 4 Band 5 Band 12 Band 13 Band 17 Band 25 Band 66 Band 71	· QPSK · 16QAM · 64QAM	
LTE (TDD)	Band 41 Band 48		
5G NR (FDD)	n2 n5 n66 n71	· DFT-s-OFDM · · CP-OFDM · Pi/2 BPSK · QPSK · 16QAM · 64QAM · 256QAM	
5G NR (TDD)	n41		
WiFi	2.4GHz: 2412 MHz ~ 2462 MHz	· 11b · 11g · 11n (HT20) · 11ax (HE20)	
	5GHz: 5.2GHz: 5180 MHz ~ 5240 MHz 5.3GHz: 5260 MHz ~ 5320 MHz 5.5GHz: 5500 MHz ~ 5720 MHz 5.8GHz: 5745 MHz ~ 5825 MHz	· 11a · 11n (HT20) · 11n (HT40) · 11ac (VHT20) · 11ac (VHT40) · 11ac (VHT80) · 11ac (VHT160) · 11ax (HE20) · 11ax (HE40) · 11ax (HE80) · 11ax (HE160)	
Bluetooth	2.4GHz	· BR / EDR / LE	
NFC	13.56MHz	· ASK	

3.2 Device Serial Number

Band	SN
WWAN	QV7200387E
	QV72001Z7E
	QV7200S07E
	QV7200AL7E
	QV7200KT7E
WLAN	QV7200KA7E
	QV7200177E
	QV7200297E

Note: Several samples were used with identical hardware to support SAR testing. The manufacturer has confirmed that the device tested gave the same physical, mechanical and thermal characteristics and are within operational tolerances expected for production units.

3.3 General LTE SAR Test and Reporting Considerations

Summarized necessary items addressed in KDB 941225 D05 v02r05	
FCC ID	PY7-60551T
Equipment Name	GSM/WCDMA/LTE/5G Phone with BT, DTS/UNII a/b/g/n/ac/ax, GPS and NFC
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 12: 699 MHz ~ 716 MHz LTE Band 13: 777 MHz ~ 787 MHz LTE Band 17: 704 MHz ~ 716 MHz LTE Band 25: 1850 MHz ~ 1915 MHz LTE Band 41: 2496 MHz ~ 2690 MHz LTE Band 48: 3550 MHz ~ 3700 MHz LTE Band 66: 1710 MHz ~ 1780 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 12:1.4MHz, 3MHz, 5MHz, 10MHz LTE Band 13: 5MHz, 10MHz LTE Band 17: 5MHz, 10MHz LTE Band 25:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz LTE Band 41: 5MHz, 10MHz, 15MHz, 20MHz LTE Band 48: 5MHz, 10MHz, 15MHz, 20MHz LTE Band 66:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz LTE Band 71: 5MHz, 10MHz, 15MHz, 20MHz
uplink modulations used	QPSK / 16QAM / 64QAM
LTE Voice / Data requirements	Voice and Data
LTE MPR permanently built-in by design	**Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 1, 2 and 3**
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.
LTE Carrier Aggregation Combinations	Inter-Band and Intra-Band possible combinations and the detail power measurement please referred to section 12.
LTE Carrier Aggregation Additional Information	This device supports maximum of 6 carriers in the downlink. Additional following LTE Release features are not supported: Relay, HetNet, Enhanced MIMO, eICI, WiFi Offloading, MDH, eMBMA, Cross-Carrier Scheduling, Enhanced SC-FDMA.

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

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)
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 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)
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 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 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)
L	39675	2498.5	39700	2501	39725	2503.5	39750	2506
L M	40148	2545.8	40160	2547	40173	2548.3	40185	2549.5
M	40620	2593	40620	2593	40620	2593	40620	2593
H M	41093	2640.3	41080	2639	41068	2637.8	41055	2636.5
H	41565	2687.5	41540	2685	41515	2682.5	41490	2680

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
LM	55810	3607	55815	3607.5	55820	3608	55830	3609
MH	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 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

3.4 General 5G NR SAR Test and Reporting Considerations

5G NR Information	
FCC	PY7-60551T
Equipment Name	GSM/WCDMA/LTE/5G Phone with BT, DTS/UNII a/b/g/n/ac/ax, GPS and NFC
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 n41: 2496 MHz ~ 2690 MHz 5G NR n66: 1710 MHz ~ 1780 MHz 5G NR n71: 663 MHz ~ 698 MHz
Channel Bandwidth	5G NR n2: 5MHz, 10MHz, 15MHz, 20MHz 5G NR n5: 5MHz, 10MHz, 15MHz, 20MHz 5G NR n41: 20MHz, 30MHz, 40MHz, 50MHz, 60MHz, 80MHz, 90MHz, 100MHz 5G NR n66: 5MHz, 10MHz, 15MHz, 20MHz, 30MHz, 40MHz 5G NR n71: 5MHz, 10MHz, 15MHz, 20MHz
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 B5/13
LTE Anchor Bands for n5	LTE B2/48/66
LTE Anchor Bands for n41	LTE B66
LTE Anchor Bands for n66	LTE B5/13/48
LTE Anchor Bands for n71	LTE B2/66

Transmission (H, M, L) channel numbers and frequencies in each 5G NR band

NR Band 2

	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	370500	1852.5	371000	1855	371500	1857.5	372000	1860
M	376000	1880	376000	1880	376000	1880	376000	1880
H	381500	1907.5	381000	1905	380500	1902.5	380000	1900

NR Band 5

	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz	
	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

NR Band 41

	Bandwidth 20MHz		Bandwidth 30MHz		Bandwidth 40MHz		Bandwidth 50MHz		Bandwidth 60MHz		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)
L	501204	2506.02	502200	2511	503202	2516.01	504204	2521.02	505200	2526	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
H	535998	2679.99	534996	2674.98	534000	2670	532998	2664.99	531996	2659.98	529998	2649.99	528996	2644.98	528000	2640

NR Band 66

	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 30MHz		Bandwidth 40MHz	
	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	345000	1725	346000	1730
M	349000	1745	349000	1745	349000	1745	349000	1745	349000	1745	349000	1745
H	355500	1777.5	355000	1775	354500	1772.5	354000	1770	353000	1765	352000	1760

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

4. Smart Transmit feature for RF Exposure compliance

The FCC RF exposure limit is defined based on time-averaged RF exposure. The product implements Qualcomm Smart Transmit feature which controls the instantaneous transmitting power for WWAN transmitter sto ensure the product in compliance with FCC RF exposure limit over a defined time window, for SAR (transmit frequency ≤ 6GHz). To control and manage transmitting power in real time and to ensure at all times the time-averaged RF exposure is compliant to the regulation requirement. Cannot operate without SAR characterization at the device level, beforehand.

This report describes the procedures for the SAR char generation, and the parameters obtained from SAR characterization (referred to as SAR char, respectively) will be used as input for Smart Transmit. SAR char will be entered via the Embedded File System (EFS) to enable the Smart Transmit Feature.

<Terminologies in this report>

P_{limit}	The time-averaged RF power which corresponds to SAR_design_targer.
P_{max}	Maximum target power level
SAR_design_target:	The design target for SAR compliance. It should be less than regulatory power density limit to account for all device design related uncertainties.
SAR char	P_{limit} for all the technologies/bands for all applicable DSI

<SAR Characterization>

SAR char must be generated to cover all radio configurations and usage scenarios that the wireless device supports for operating at 6 GHz or below. It will then be used as input for Smart Transmit to control and manage RF exposure for f < 6 GHz.

Note that the EUT has a multiple DSI states to manage power for different RF exposure conditions, detail DSI states, trigger conditions refer to operation description.

<SAR design target and uncertainty>

Wireless technology	Exposure conditions	DSI	SAR design target	W/kg
LTE/5G FR1	Head	2	1g SAR design target	0.95
	Body Worn	3	1g SAR design target	0.95
	Hotspot	3	1g SAR design target	0.95

Wireless technology	Exposure conditions	DSI	SAR design target	W/kg
GSM/WCDMA	Head	2	1g SAR design target	1.02
	Body Worn	3	1g SAR design target	1.02
	Hotspot	3	1g SAR design target	1.02

	Wireless technology	Uncertainty dB (k=2)
Total uncertainty	WCDMA/LTE/FR1	1.0
	GSM	0.7

To account for total uncertainty, SAR_design_target should be determined as:

$$SAR\_design\_target < SAR_{regulatory\_limit} \times 10^{\frac{-total\ uncertainty}{10}}$$

The Smart Transmit algorithm maintains the time-averaged transmit power, in turn, time-averaged RF exposure of SAR_design_target, below the predefined time-averaged power limit, for each characterized technology and band.

Smart Transmit allows the device to transmit at higher power instantaneously, as high as Pmax, when needed, but enforces power limiting to maintain time-averaged transmit power to Plimit. Below table shows calculated Plimit corresponding SAR design target and implementation Plimit in EFS file, and maximum output power Pmax configured for this EUT for various transmit conditions (Device State Index DSI).

The implementation Plimit in EFS file is lower than the calculated Plimit corresponding to SAR design target, and this power level will be implemented for SAR testing, it is more conservative for RF exposure evaluation.

GSM, WCDMA and LTE Band 7 would not use smart transmit time average feature of dynamic power varying, the power will be fixed at the static reduce power level at different exposure conditions for RF exposure compliance.

<P_{limit} for supported technologies and bands (P_{limit} corresponding to SAR design target)>

Band	Antenna	TDD duty cycle	Calculated Plimit (dBm)			P Max*
			Head	Body Worn	Hotspot	
			DSI 2	DSI 3	DSI 3	
GSM850(GPRS 4 Tx slots)**	Main	50.00%	32.3	31.9	31.9	23.5
GSM1900(GPRS 4 Tx slots)**	Main	50.00%	33.8	21.9	21.9	18.0
WCDMA B2	Main	100.00%	32.5	20.9	20.9	19.0
WCDMA B4	Main	100.00%	32.1	21.4	21.4	19.0
WCDMA B5	Main	100.00%	30.6	29.9	29.9	24.0
LTE B12/17	Main	100.00%	31.0	28.5	28.5	24.0
LTE B13	Main	100.00%	32.7	30.6	30.6	24.0
LTE B25/2	Main	100.00%	31.0	20.5	20.5	24.0
LTE B5	Main	100.00%	30.6	30.8	30.8	24.0
LTE B41**	Main	63.30%	33.9	22.4	22.4	22.0
LTE B48**	Main	63.30%	34.2	24.0	24.0	22.0
LTE B66/4	Main	100.00%	33.1	21.7	21.7	24.0
LTE B71	Main	100.00%	34.8	30.1	30.1	24.0
5G FR1 n2	Main	100.00%	31.1	20.5	20.5	24.0
5G FR1 n5	Main	100.00%	31.1	30.4	30.4	24.0
5G FR1 n66	Main	100.00%	31.2	21.5	21.5	24.0
5G FR1 n71	Main	100.00%	37.3	33.0	33.0	24.0
LTE B5	Sub	100.00%	disable	28.7	28.7	21.5
LTE B13	Sub	100.00%	disable	28.0	28.0	21.5
5G FR1 n5	Sub	100.00%	disable	27.9	27.9	21.5
5G FR1 n41	Sub	100.00%	18.3	26.3	26.3	19.0

<P_{limit} for supported technologies and bands (P_{limit} in EFS file)>

Band	Antenna	TDD duty cycle	Plimit in EFS file (dBm)			P Max*
			Head	Body Worn	Hotspot	
			DSI 2	DSI 3	DSI 3	
GSM850(GPRS 4 Tx slots)**	Main	50.00%	23.5	23.5	23.5	23.5
GSM1900(GPRS 4 Tx slots)**	Main	50.00%	18.0	18.0	18.0	18.0
WCDMA B2	Main	100.00%	19.0	19.0	19.0	19.0
WCDMA B4	Main	100.00%	19.0	19.0	19.0	19.0
WCDMA B5	Main	100.00%	24.0	24.0	24.0	24.0
LTE B12/17	Main	100.00%	24.0	24.0	24.0	24.0
LTE B13	Main	100.00%	24.0	22.0	22.0	24.0
LTE B25/2	Main	100.00%	24.0	18.0	18.0	24.0
LTE B5	Main	100.00%	24.0	22.0	22.0	24.0
LTE B41**	Main	63.30%	22.0	17.0	17.0	22.0
LTE B48**	Main	63.30%	22.0	18.0	18.0	22.0
LTE B66/4	Main	100.00%	24.0	18.0	18.0	24.0
LTE B71	Main	100.00%	24.0	24.0	24.0	24.0
5G FR1 n2	Main	100.00%	24.0	18.0	18.0	24.0
5G FR1 n5	Main	100.00%	24.0	22.0	22.0	24.0
5G FR1 n66	Main	100.00%	24.0	18.0	18.0	24.0
5G FR1 n71	Main	100.00%	24.0	24.0	24.0	24.0
LTE B5	Sub	100.00%	disable	21.5	21.5	21.5
LTE B13	Sub	100.00%	disable	21.5	21.5	21.5
5G FR1 n5	Sub	100.00%	disable	21.5	21.5	21.5
5G FR1 n41	Sub	100.00%	15.0	15.0	15.0	15.0

*P_{max} is used for RF tune up procedure. The maximum allowed output power is equal to Pmax + 1dB uncertainty.

**All P_{limit} power levels entered in the Table correspond to average power levels after accounting for duty cycle in the case TDD modulation schemes (for e.g., GSM & LTE TDD & NR TDD).

The max allowed output power is the P_{limit} + device uncertainty, and if P_{limit} is higher than P_{max}, the device output power will be P_{max} instead.

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.

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:

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

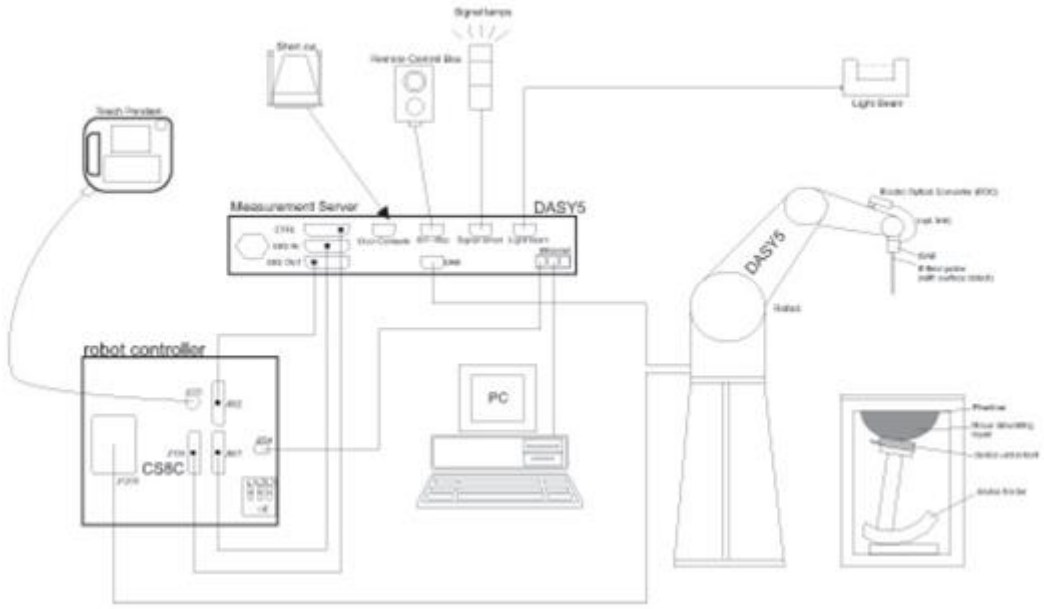
SAR is expressed in units of Watts per kilogram (W/kg)

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

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:



- 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 WinXP or Win7 and the DASY5 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.

Test Site	EMC & Wireless Communications Laboratory		Wensan Laboratory		
Test Site Location	TW1190 No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333, Taiwan		TW3786 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
	SAR04-HY	SAR05-HY	SAR11-HY	SAR12-HY	
	SAR06-HY	SAR10-HY	SAR13-HY	SAR14-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	10 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 µW/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	10 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 µW/g – >100 mW/g Linearity: ±0.2 dB (noise: typically <1 µW/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.

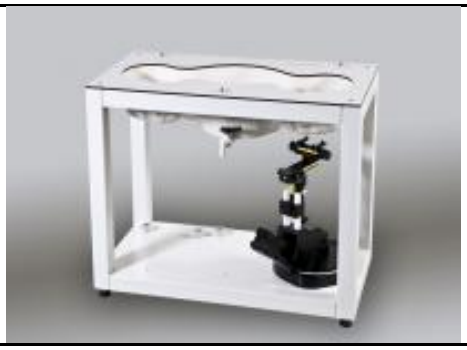
The input impedance of the DAE is 200 MOhm; the inputs are symmetrical and floating. Common mode rejection is above 80 dB.

Fig 5.1 Photo of DAE

7.4 Phantom

<SAM Twin Phantom>

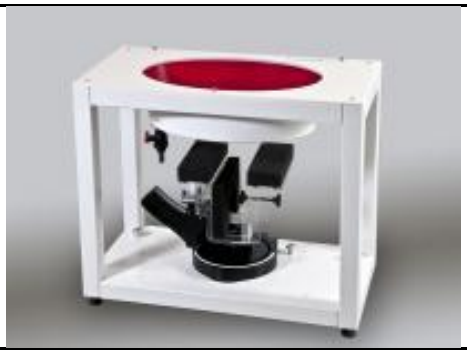
Shell Thickness	2 ± 0.2 mm; Center ear point: 6 ± 0.2 mm
Filling Volume	Approx. 25 liters
Dimensions	Length: 1000 mm; Width: 500 mm; Height: adjustable feet
Measurement Areas	Left Hand, Right Hand, Flat Phantom



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:

<Conducted power measurement>

(a) For WWAN power measurement, use base station simulator to configure EUT WWAN transmission in conducted connection with RF cable, at maximum power in each supported wireless interface and frequency band.
(b) Read the WWAN RF power level from the base station simulator.
(c) For WLAN/BT power measurement, use engineering software to configure EUT WLAN/BT continuously transmission, at maximum RF power in each supported wireless interface and frequency band
(d) Connect EUT RF port through RF cable to the power meter, and measure WLAN/BT output power

<SAR measurement>

(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 form 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	½·δ·ln(2) ± 0.5 mm
Maximum probe angle from probe axis to phantom surface normal at the measurement location	30° ± 1°	20° ± 1°
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 ≤ 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 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 shoes 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: Δx_{Zoom}, Δy_{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: $\Delta z_{Zoom}(n)$		≤ 5 mm	3 – 4 GHz: ≤ 4 mm 4 – 5 GHz: ≤ 3 mm 5 – 6 GHz: ≤ 2 mm
	graded grid	$\Delta z_{Zoom}(1)$: between 1st two points closest to phantom surface	≤ 4 mm	3 – 4 GHz: ≤ 3 mm 4 – 5 GHz: ≤ 2.5 mm 5 – 6 GHz: ≤ 2 mm
		$\Delta z_{Zoom}(n>1)$: between subsequent points	≤ 1.5·$\Delta z_{Zoom}(n-1)$	
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 *reported* SAR from the *area scan based 1-g SAR estimation* 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 for 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	1107	Mar. 08, 2019	Mar. 05, 2022
SPEAG	835MHz System Validation Kit(2)	D835V2	4d167	Nov. 25, 2019	Nov. 23, 2021
SPEAG	1750MHz System Validation Kit(2)	D1750V2	1112	Mar. 07, 2019	Mar. 04, 2022
SPEAG	1900MHz System Validation Kit(2)	D1900V2	5d185	Mar. 07, 2019	Mar. 04, 2022
SPEAG	2600MHz System Validation Kit(2)	D2600V2	1078	Mar. 06, 2019	Mar. 03, 2022
SPEAG	3500MHz System Validation Kit(2)	D3500V2	1014	Jan. 29, 2019	Jan. 26, 2022
SPEAG	3700MHz System Validation Kit(2)	D3700V2	1006	Mar. 05, 2019	Mar. 02, 2022
SPEAG	Data Acquisition Electronics	DAE4	316	Jan. 19, 2021	Jan. 18, 2022
SPEAG	Data Acquisition Electronics	DAE4	376	Nov. 23, 2020	Nov. 22, 2021
SPEAG	Data Acquisition Electronics	DAE4	1399	Feb. 16, 2021	Feb. 15, 2022
SPEAG	Data Acquisition Electronics	DAE4	1647	Jan. 07, 2021	Jan. 06, 2022
SPEAG	Dosimetric E-Field Probe	ES3DV3	3270	Sep. 23, 2020	Sep. 22, 2021
SPEAG	Dosimetric E-Field Probe	EX3DV4	3931	Oct. 22, 2020	Oct. 21, 2021
SPEAG	Dosimetric E-Field Probe	EX3DV4	7351	Jul. 06, 2020	Jul. 05, 2021
RCPTWN	Thermometer	HTC-1	TM685-1	Nov. 10, 2020	Nov. 09, 2021
RCPTWN	Thermometer	HTC-1	TM560-2	Nov. 10, 2020	Nov. 09, 2021
Anritsu	Radio Communication Analyzer	MT8821C	6201341950	Nov. 10, 2020	Nov. 09, 2021
SPEAG	Device Holder	N/A	N/A	N/A	N/A
Anritsu	Signal Generator	MG3710A	6201502524	Nov. 11, 2020	Nov. 10, 2021
Keysight	ENA Network Analyzer	E5071C	MY46101588	Jun. 10, 2020	Jun. 09, 2021
SPEAG	Dielectric Probe Kit	DAK-3.5	1126	Sep. 16, 2020	Sep. 15, 2021
LINE SEIKI	Digital Thermometer	DTM3000-spezial	2942	Nov. 06, 2020	Nov. 05, 2021
Anritsu	Power Meter	ML2495A	1419002	Aug. 19, 2020	Aug. 18, 2021
Anritsu	Power Sensor	MA2411B	1911176	Aug. 18, 2020	Aug. 17, 2021
Anritsu	Power Meter	ML2495A	1804003	Oct. 21, 2020	Oct. 20, 2021
Anritsu	Power Sensor	MA2411B	1726150	Oct. 21, 2020	Oct. 20, 2021
Anritsu	Spectrum Analyzer	MS2830A	6201396378	Jun. 30, 2020	Jun. 29, 2021
Anritsu	Spectrum Analyzer	N9010A	MY53470118	Jan. 15, 2021	Jan. 14, 2022
Mini-Circuits	Power Amplifier	ZVE-8G+	6418	Oct. 21, 2020	Oct. 20, 2021
Mini-Circuits	Power Amplifier	ZVE-8G+	479102029	Aug. 26, 2020	Aug. 25, 2021
ATM	Dual Directional Coupler	C122H-10	P610410z-02	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℃ to 25℃, 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℃ to 25℃ and within ± 2℃ 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>

Frequency (MHz)	Liquid Temp. (℃)	Conductivity (σ)	Permittivity (ε_r)	Conductivity Target (σ)	Permittivity Target (ε_r)	Delta (σ) (%)	Delta (ε_r) (%)	Limit (%)	Date
750	22.3	0.880	42.713	0.89	41.90	-1.12	1.94	±5	2021/4/13
750	22.6	0.875	43.029	0.89	41.90	-1.69	2.69	±5	2021/4/19
835	22.7	0.922	42.422	0.90	41.50	2.44	2.22	±5	2021/4/15
835	22.5	0.920	43.340	0.90	41.50	2.22	4.43	±5	2021/4/21
835	22.6	0.882	42.696	0.90	41.50	-2.00	2.88	±5	2021/5/11
1750	22.4	1.359	40.629	1.37	40.10	-0.80	1.32	±5	2021/4/16
1900	22.5	1.455	41.508	1.40	40.00	3.93	3.77	±5	2021/4/17
2600	22.6	1.917	39.253	1.96	39.00	-2.19	0.65	±5	2021/4/14
2600	22.6	1.995	38.039	1.96	39.00	1.79	-2.46	±5	2021/5/11
3500	22.7	2.879	36.938	2.91	37.90	-1.07	-2.54	±5	2021/4/20
3700	22.7	3.024	36.656	3.12	37.70	-3.08	-2.77	±5	2021/4/20

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 Location	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 11	2021/4/13	750	250	D750V3-1107	ES3DV3 - SN3270	DAE4 Sn316	2.21	8.32	8.84	6.25
SAR 11	2021/4/19	750	250	D750V3-1107	ES3DV3 - SN3270	DAE4 Sn316	2.20	8.32	8.8	5.77
SAR 11	2021/4/15	835	250	D835V2-4d167	ES3DV3 - SN3270	DAE4 Sn316	2.54	9.55	10.16	6.39
SAR 14	2021/4/21	835	50	D835V2-4d167	EX3DV4 - SN7351	DAE4 Sn376	0.443	9.55	8.86	-7.23
SAR 09	2021/5/11	835	250	D835V2-4d167	ES3DV3 - SN3270	DAE4 Sn1399	2.43	9.55	9.72	1.78
SAR 11	2021/4/16	1750	250	D1750V2-1112	ES3DV3 - SN3270	DAE4 Sn316	9.26	36.70	37.04	0.93
SAR 11	2021/4/17	1900	250	D1900V2-5d185	ES3DV3 - SN3270	DAE4 Sn316	9.82	39.40	39.28	-0.30
SAR 11	2021/4/14	2600	250	D2600V2-1078	ES3DV3 - SN3270	DAE4 Sn316	13.80	57.60	55.2	-4.17
SAR 09	2021/5/11	2600	250	D2600V2-1078	ES3DV3 - SN3270	DAE4 Sn1399	15.60	57.60	62.4	8.33
SAR 12	2021/4/20	3500	50	D3500V2-1014	EX3DV4 - SN3931	DAE4 Sn1647	3.45	67.90	69	1.62
SAR 12	2021/4/20	3700	50	D3700V2-1006	EX3DV4 - SN3931	DAE4 Sn1647	3.24	67.30	64.8	-3.71

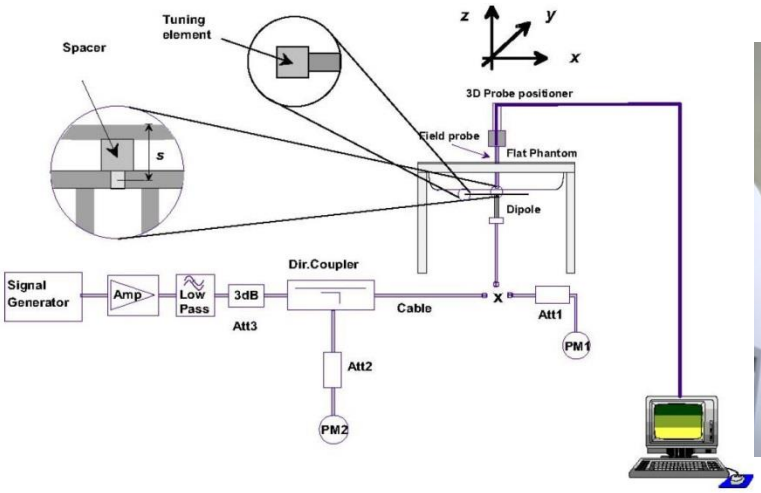


Fig 8.3.1 System Performance Check Setup

Fig 8.3.2 Setup Photo

11. RF Exposure Positions

11.1 Ear and handset reference point

Figure 9.1.1 shows the front, back, and side views of the SAM phantom. The center-of-mouth reference point is labeled “M,” the left ear reference point (ERP) is marked “LE,” and the right ERP is marked “RE.” Each ERP is 15 mm along the B-M (back-mouth) line behind the entrance-to-ear-canal (EEC) point, as shown in Figure 9.1.2 The Reference Plane is defined as passing through the two ear reference points and point M. The line N-F (neck-front), also called the reference pivoting line, is normal to the Reference Plane and perpendicular to both a line passing through RE and LE and the B-M line (see Figure 9.1.3). Both N-F and B-M lines should be marked on the exterior of the phantom shell to facilitate handset positioning. Posterior to the N-F line the ear shape is a flat surface with 6 mm thickness at each ERP, and forward of the N-F line the ear is truncated, as illustrated in Figure 9.1.2. The ear truncation is introduced to preclude the ear lobe from interfering with handset tilt, which could lead to unstable positioning at the cheek.

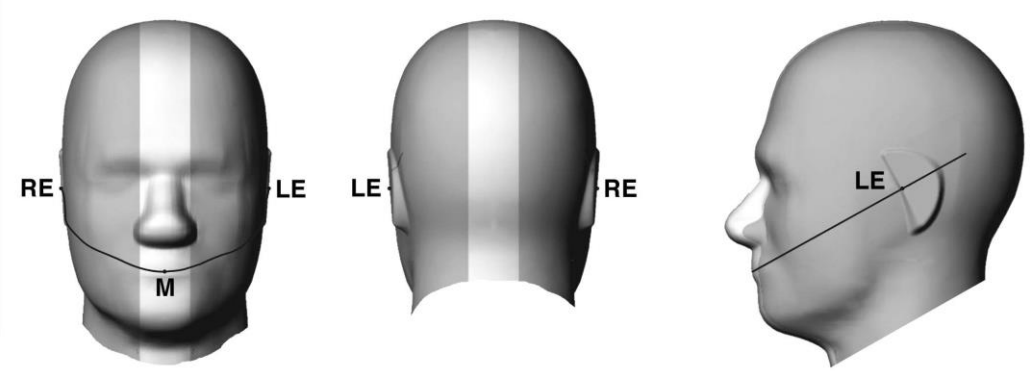


Fig 9.1.1 Front, back, and side views of SAM twin phantom

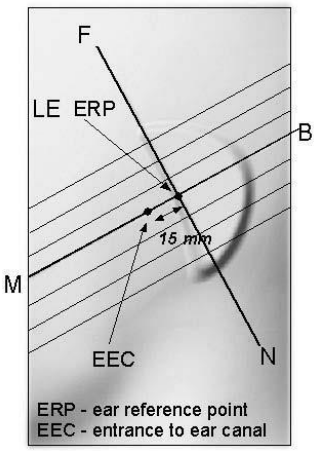


Fig 9.1.2 Close-up side view of phantom showing the ear region.

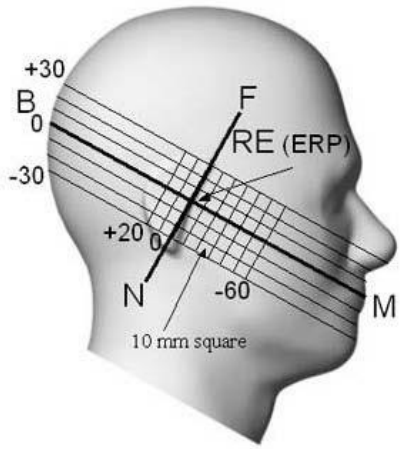


Fig 9.1.3 Side view of the phantom showing relevant markings and seven cross-sectional plane locations

11.2 Definition of the cheek position

1. Ready the handset for talk operation, if necessary. For example, for handsets with a cover piece (flip cover), open the cover. If the handset can transmit with the cover closed, both configurations must be tested.
2. Define two imaginary lines on the handset—the vertical centerline and the horizontal line. The vertical centerline passes through two points on the front side of the handset—the midpoint of the width wt of the handset at the level of the acoustic output (point A in Figure 9.2.1 and Figure 9.2.2), and the midpoint of the width wb of the bottom of the handset (point B). The horizontal line is perpendicular to the vertical centerline and passes through the center of the acoustic output (see Figure 9.2.1). The two lines intersect at point A. Note that for many handsets, point A coincides with the center of the acoustic output; however, the acoustic output may be located elsewhere on the horizontal line. Also note that the vertical centerline is not necessarily parallel to the front face of the handset (see Figure 9.2.2), especially for clamshell handsets, handsets with flip covers, and other irregularly-shaped handsets.
3. Position the handset close to the surface of the phantom such that point A is on the (virtual) extension of the line passing through points RE and LE on the phantom (see Figure 9.2.3), such that the plane defined by the vertical centerline and the horizontal line of the handset is approximately parallel to the sagittal plane of the phantom.
4. Translate the handset towards the phantom along the line passing through RE and LE until handset point A touches the pinna at the ERP.
5. While maintaining the handset in this plane, rotate it around the LE-RE line until the vertical centerline is in the plane normal to the plane containing B-M and N-F lines, i.e., the Reference Plane.
6. Rotate the handset around the vertical centerline until the handset (horizontal line) is parallel to the N-F line.
7. While maintaining the vertical centerline in the Reference Plane, keeping point A on the line passing through RE and LE, and maintaining the handset contact with the pinna, rotate the handset about the N-F line until any point on the handset is in contact with a phantom point below the pinna on the cheek. See Figure 9.2.3. The actual rotation angles should be documented in the test report.

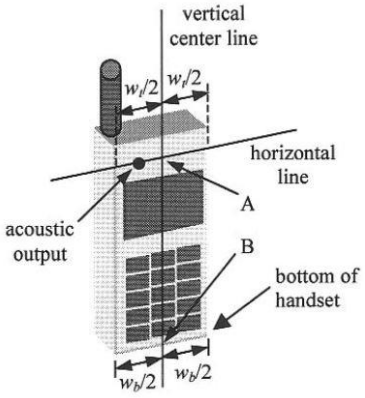


Fig 9.2.1 Handset vertical and horizontal reference lines—"fixed case

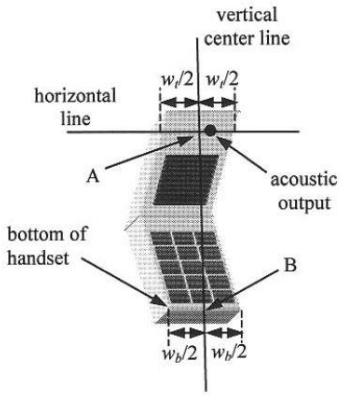


Fig 9.2.2 Handset vertical and horizontal reference lines—"clam-shell case"

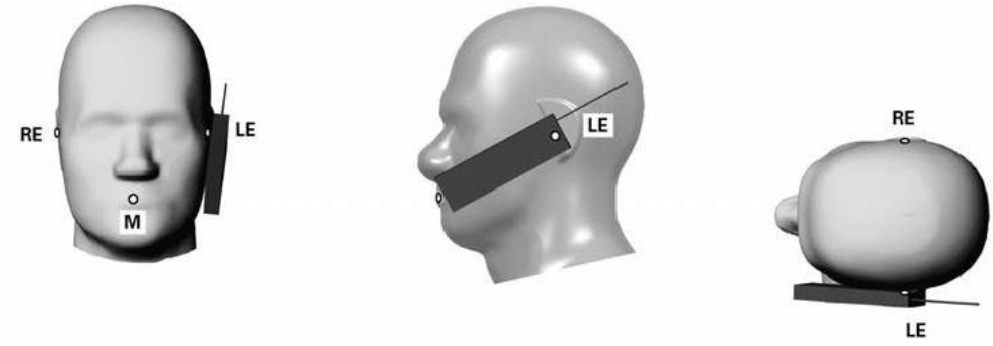


Fig 9.2.3 cheek or touch position. The reference points for the right ear (RE), left ear (LE), and mouth (M), which establish the Reference Plane for handset positioning, are indicated.

11.3 Definition of the tilt position

1. Ready the handset for talk operation, if necessary. For example, for handsets with a cover piece (flip cover), open the cover. If the handset can transmit with the cover closed, both configurations must be tested.
2. While maintaining the orientation of the handset, move the handset away from the pinna along the line passing through RE and LE far enough to allow a rotation of the handset away from the cheek by 15°.
3. Rotate the handset around the horizontal line by 15°.
4. While maintaining the orientation of the handset, move the handset towards the phantom on the line passing through RE and LE until any part of the handset touches the ear. The tilt position is obtained when the contact point is on the pinna. See Figure 9.3.1. If contact occurs at any location other than the pinna, e.g., the antenna at the back of the phantom head, the angle of the handset should be reduced. In this case, the tilt position is obtained if any point on the handset is in contact with the pinna and a second point

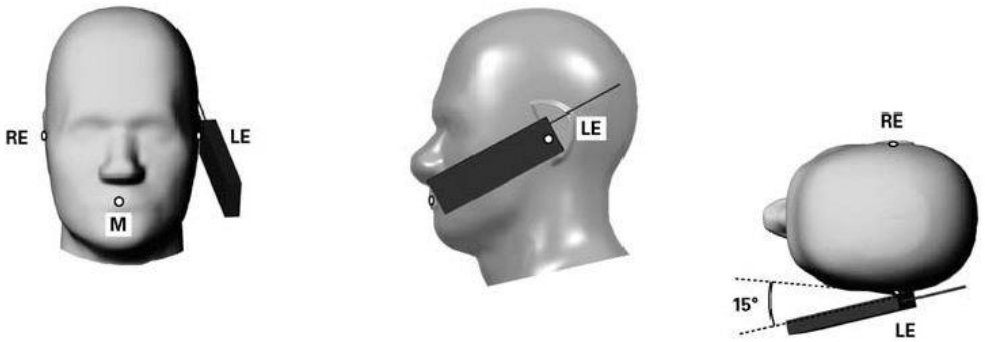


Fig 9.3.1 Tilt position. The reference points for the right ear (RE), left ear (LE), and mouth (M), which define the Reference Plane for handset positioning, are indicated.

11.4 Body Worn Accessory

Body-worn operating configurations are tested with the belt-clips and holsters attached to the device and positioned against a flat phantom in a normal use configuration (see Figure 9.4). Per KDB648474 D04v01r03, body-worn accessory exposure is typically related to voice mode operations when handsets are carried in body-worn accessories. The body-worn accessory procedures in FCC KDB 447498 D01v06 should be used to test for body-worn accessory SAR compliance, without a headset connected to it. This enables the test results for such configuration to be compatible with that required for hotspot mode when the body-worn accessory test separation distance is greater than or equal to that required for hotspot mode, when applicable. When the reported SAR for body-worn accessory, measured without a headset connected to the handset is > 1.2 W/kg, the highest reported SAR configuration for that wireless mode and frequency band should be repeated for that body-worn accessory with a handset attached to the handset.

Accessories for body-worn operation configurations are divided into two categories: those that do not contain metallic components and those that do contain metallic components and those that do contain metallic components. When multiple accessories that do not contain metallic components are supplied with the device, the device is tested with only the accessory that dictates the closest spacing to the body. Then multiple accessories that contain metallic components are test with the device with each accessory. If multiple accessories share an identical metallic component (i.e. the same metallic belt-chip used with different holsters with no other metallic components) only the accessory that dictates the closest spacing to the body is tested.

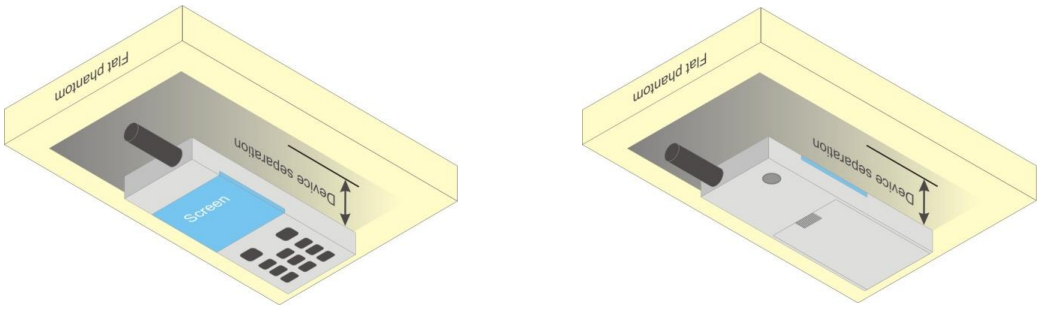


Fig 9.4 Body Worn Position

11.5 Product Specific Exposure

For smart phones with a display diagonal dimension > 15.0 cm or an overall diagonal dimension > 16.0 cm that provide similar mobile web access and multimedia support found in mini-tablets or UMPC mini-tablets that support voice calls next to the ear, According to KDB648474 D04v01r03, the following phablet procedures should be applied to evaluate SAR compliance for each applicable wireless modes and frequency band. Devices marketed as phablets, regardless of form factors and operating characteristics must be tested as a phablet to determine SAR compliance

1. The normally required head and body-worn accessory SAR test procedures for handsets, including hotspot mode, must be applied.

2. The UMPC mini-tablet procedures must also be applied to test the SAR of all surfaces and edges with an antenna located at ≤ 25 mm from that surface or edge, in direct contact with a flat phantom, for 10-g extremity SAR according to the body-equivalent tissue dielectric parameters in KDB 865664 to address interactive hand use exposure conditions.6 The UMPC mini-tablet 1-g SAR at 5 mm is not required. When hotspot mode applies, 10-g extremity SAR is required only for the surfaces and edges with hotspot mode 1-g reported SAR > 1.2 W/kg.

11.6 Wireless Router

Some battery-operated handsets have the capability to transmit and receive user through simultaneous transmission of WIFI simultaneously with a separate licensed transmitter. The FCC has provided guidance in FCC KDB Publication 941225 D06 v02r01 where SAR test considerations for handsets (L x W ≥ 9 cm x 5 cm) are based on a composite test separation distance of 10mm from the front, back and edges of the device containing transmitting antennas within 2.5cm of their edges, determined form general mixed use conditions for this type of devices. Since the hotspot SAR results may overlap with the body-worn accessory SAR requirements, the more conservative configurations can be considered, thus excluding some body-worn accessory SAR tests.

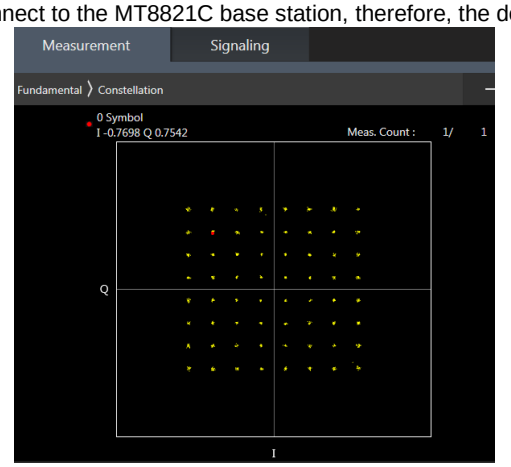
When the user enables the personal wireless router functions for the handset, actual operations include simultaneous transmission of both the WIFI transmitter and another licensed transmitter. Both transmitters often do not transmit at the same transmitting frequency and thus cannot be evaluated for SAR under actual use conditions due to the limitations of the SAR assessment probes. Therefore, SAR must be evaluated for each frequency transmission and mode separately and spatially summed with the WIFI transmitter according to FCC KDB Publication 447498 D01v06 publication procedures. The “Portable Hotspot” feature on the handset was NOT activated during SAR assessments, to ensure the SAR measurements were evaluated for a single transmission frequency RF signal at a time.

12. LTE Output Power (Unit: dBm)

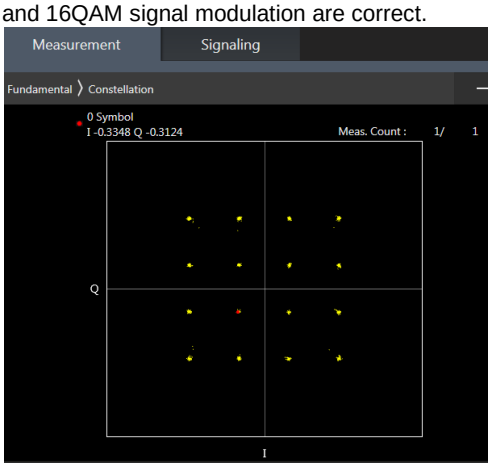
<LTE Conducted Power>

General Note:

1. Anritsu MT8820C 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 ½ 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 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; Per KDB 941225 D05v02r05, smaller bandwidth SAR testing is not required.
8. For LTE B4/B5/B12/B17/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 2/4/17 SAR test was covered by Band 25/66/12; 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 ≤ 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
10. According to 2017 TCB workshop, for 64 QAM and 16 QAM should be verified by checking the signal constellation with a call box to avoid incorrect maximum power levels due to MPR and other requirements associated with signal modulation, and the following figure is taken from the "Fundamental Measurement >> Modulation Analysis >> constellation" mode of the device connect to the MT8821C base station, therefore, the device 64QAM and 16QAM signal modulation are correct.



64QAM



16QAM

<DSI2_Main Ant>

<LTE Band 2>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				18700	18900	19100		
Frequency (MHz)				1860	1880	1900		
20	QPSK	1	0	23.99	23.98	23.94	25	0
20	QPSK	1	49	23.96	24.04	23.86		
20	QPSK	1	99	23.93	23.93	23.84		
20	QPSK	50	0	23.06	23.06	23.04	24	1
20	QPSK	50	24	23.13	23.10	23.05		
20	QPSK	50	50	23.12	23.08	23.06		
20	QPSK	100	0	23.14	23.07	23.06		
20	16QAM	1	0	23.11	23.15	23.09	24	1
20	16QAM	1	49	23.05	23.17	23.05		
20	16QAM	1	99	23.03	23.03	22.98		
20	16QAM	50	0	22.05	22.08	22.06	23	2
20	16QAM	50	24	22.16	22.12	22.07		
20	16QAM	50	50	22.15	22.10	22.06		
20	16QAM	100	0	22.13	22.08	22.06		
20	64QAM	1	0	22.20	22.18	22.19	23	2
20	64QAM	1	49	22.20	22.25	22.13		
20	64QAM	1	99	22.13	22.15	22.02		
20	64QAM	50	0	21.07	21.10	21.06	22	3
20	64QAM	50	24	21.18	21.15	21.11		
20	64QAM	50	50	21.16	21.13	21.09		
20	64QAM	100	0	21.14	21.10	21.08		
Channel				18675	18900	19125	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1857.5	1880	1902.5		
15	QPSK	1	0	23.93	23.99	23.90	25	0
15	QPSK	1	37	23.96	24.03	23.86		
15	QPSK	1	74	23.95	23.98	23.88		
15	QPSK	36	0	23.03	23.06	23.02	24	1
15	QPSK	36	20	23.17	23.10	23.03		
15	QPSK	36	39	23.13	23.09	23.05		
15	QPSK	75	0	23.10	23.07	23.03		
15	16QAM	1	0	23.03	23.12	23.06	24	1
15	16QAM	1	37	23.06	23.12	23.01		
15	16QAM	1	74	23.10	23.09	23.04		
15	16QAM	36	0	22.03	22.06	22.02	23	2
15	16QAM	36	20	22.12	22.10	22.07		
15	16QAM	36	39	22.11	22.13	22.04		
15	16QAM	75	0	22.11	22.10	22.03		
15	64QAM	1	0	22.12	22.18	22.17	23	2
15	64QAM	1	37	22.19	22.27	22.10		
15	64QAM	1	74	22.19	22.16	22.13		
15	64QAM	36	0	21.08	21.11	21.07	22	3
15	64QAM	36	20	21.22	21.16	21.10		
15	64QAM	36	39	21.20	21.14	21.10		
15	64QAM	75	0	21.12	21.11	21.05		
Channel				18650	18900	19150	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1855	1880	1905		
10	QPSK	1	0	23.93	23.93	23.87	25	0
10	QPSK	1	25	23.91	23.99	23.85		
10	QPSK	1	49	23.88	23.92	23.84		

10	QPSK	25	0	23.05	23.03	22.97	24	1
10	QPSK	25	12	23.10	23.07	22.99		
10	QPSK	25	25	23.11	23.09	23.02		
10	QPSK	50	0	23.08	23.07	23.00		
10	16QAM	1	0	23.12	23.13	23.05	24	1
10	16QAM	1	25	23.10	23.15	22.99		
10	16QAM	1	49	23.13	23.18	23.04		
10	16QAM	25	0	22.06	22.06	21.98	23	2
10	16QAM	25	12	22.10	22.07	22.02		
10	16QAM	25	25	22.09	22.09	22.03		
10	16QAM	50	0	22.07	22.06	22.02		
10	64QAM	1	0	22.22	22.11	22.13	23	2
10	64QAM	1	25	22.23	22.27	22.14		
10	64QAM	1	49	22.18	22.17	22.12		
10	64QAM	25	0	21.10	21.05	21.01	22	3
10	64QAM	25	12	21.13	21.12	21.04		
10	64QAM	25	25	21.12	21.11	21.05		
10	64QAM	50	0	21.13	21.08	21.05		
Channel				18625	18900	19175	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1852.5	1880	1907.5		
5	QPSK	1	0	23.90	23.96	23.81	25	0
5	QPSK	1	12	23.93	24.01	23.82		
5	QPSK	1	24	23.94	24.01	23.89		
5	QPSK	12	0	23.04	23.02	22.93	24	1
5	QPSK	12	7	23.12	23.09	22.99		
5	QPSK	12	13	23.05	23.13	22.97		
5	QPSK	25	0	23.05	22.99	22.93		
5	16QAM	1	0	22.99	23.02	22.97	24	1
5	16QAM	1	12	23.09	23.13	22.99		
5	16QAM	1	24	23.06	23.09	23.04		
5	16QAM	12	0	22.01	22.01	21.96	23	2
5	16QAM	12	7	22.11	22.10	21.99		
5	16QAM	12	13	22.06	22.12	21.96		
5	16QAM	25	0	22.10	22.06	21.97		
5	64QAM	1	0	22.19	22.19	22.12	23	2
5	64QAM	1	12	22.21	22.27	22.13		
5	64QAM	1	24	22.26	22.34	22.17		
5	64QAM	12	0	21.09	21.08	20.99	22	3
5	64QAM	12	7	21.13	21.12	21.05		
5	64QAM	12	13	21.14	21.21	21.02		
5	64QAM	25	0	21.07	21.03	20.99		
Channel				18615	18900	19185	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1851.5	1880	1908.5		
3	QPSK	1	0	23.98	24.00	23.85	25	0
3	QPSK	1	8	24.01	24.03	23.94		
3	QPSK	1	14	24.02	24.02	23.95		
3	QPSK	8	0	23.08	23.06	22.96	24	1
3	QPSK	8	4	23.11	23.17	23.01		
3	QPSK	8	7	23.12	23.16	22.96		
3	QPSK	15	0	23.09	23.08	23.00		
3	16QAM	1	0	23.06	23.05	22.97	24	1
3	16QAM	1	8	23.12	23.21	23.03		
3	16QAM	1	14	23.10	23.15	23.00		
3	16QAM	8	0	22.10	22.07	21.99	23	2
3	16QAM	8	4	22.17	22.25	22.07		
3	16QAM	8	7	22.10	22.16	22.02		

3	16QAM	15	0	22.12	22.09	21.98		
3	64QAM	1	0	22.19	22.23	22.16	23	2
3	64QAM	1	8	22.34	22.40	22.23		
3	64QAM	1	14	22.31	22.34	22.19		
3	64QAM	8	0	21.12	21.13	21.03	22	3
3	64QAM	8	4	21.18	21.24	21.07		
3	64QAM	8	7	21.14	21.21	21.07		
3	64QAM	15	0	21.15	21.11	21.05		
Channel				18607	18900	19193	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1850.7	1880	1909.3		
1.4	QPSK	1	0	23.90	23.96	23.81	25	0
1.4	QPSK	1	3	23.97	24.02	23.86		
1.4	QPSK	1	5	23.91	24.00	23.81		
1.4	QPSK	3	0	23.82	23.89	23.74		
1.4	QPSK	3	1	24.00	24.01	23.82		
1.4	QPSK	3	3	23.88	23.90	23.80		
1.4	QPSK	6	0	23.03	23.08	22.93	24	1
1.4	16QAM	1	0	22.98	23.09	22.90	24	1
1.4	16QAM	1	3	23.20	23.21	22.97		
1.4	16QAM	1	5	23.00	23.11	22.94		
1.4	16QAM	3	0	22.86	22.93	22.75		
1.4	16QAM	3	1	22.90	22.91	22.78		
1.4	16QAM	3	3	22.85	22.92	22.75		
1.4	16QAM	6	0	22.10	22.14	21.99	23	2
1.4	64QAM	1	0	22.16	22.22	22.05	23	2
1.4	64QAM	1	3	22.23	22.25	22.06		
1.4	64QAM	1	5	22.12	22.22	22.05		
1.4	64QAM	3	0	22.21	22.25	22.05		
1.4	64QAM	3	1	22.26	22.26	22.13		
1.4	64QAM	3	3	22.21	22.25	22.09		
1.4	64QAM	6	0	21.03	21.07	20.92	22	3

<LTE Band 4>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				20050	20175	20300		
Frequency (MHz)				1720	1732.5	1745		
20	QPSK	1	0	24.03	24.06	24.05	25	0
20	QPSK	1	49	23.89	23.92	23.87		
20	QPSK	1	99	23.93	23.94	23.86		
20	QPSK	50	0	23.05	23.10	23.07	24	1
20	QPSK	50	24	23.09	23.04	22.99		
20	QPSK	50	50	23.02	23.03	23.01		
20	QPSK	100	0	23.05	23.05	22.99		
20	16QAM	1	0	23.16	23.23	23.16	24	1
20	16QAM	1	49	23.05	23.09	23.04		
20	16QAM	1	99	23.05	23.06	23.05		
20	16QAM	50	0	22.05	22.12	22.10	23	2
20	16QAM	50	24	22.09	22.07	22.01		
20	16QAM	50	50	22.02	22.05	22.01		
20	16QAM	100	0	22.05	22.04	21.99		
20	64QAM	1	0	22.18	22.24	22.22	23	2
20	64QAM	1	49	22.09	22.18	22.09		
20	64QAM	1	99	22.15	22.15	22.10		
20	64QAM	50	0	21.07	21.13	21.10	22	3

20	64QAM	50	24	21.11	21.09	21.03		
20	64QAM	50	50	21.06	21.06	21.01		
20	64QAM	100	0	21.11	21.06	21.00		
Channel				20025	20175	20325	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1717.5	1732.5	1747.5		
15	QPSK	1	0	24.03	24.04	24.02	25	0
15	QPSK	1	37	23.91	23.95	23.91		
15	QPSK	1	74	23.93	23.91	23.92		
15	QPSK	36	0	23.01	23.12	23.05	24	1
15	QPSK	36	20	23.03	23.04	23.06		
15	QPSK	36	39	23.02	23.05	23.01		
15	QPSK	75	0	23.06	23.05	22.98		
15	16QAM	1	0	23.20	23.22	23.15	24	1
15	16QAM	1	37	22.99	23.06	23.01		
15	16QAM	1	74	23.06	23.11	23.04		
15	16QAM	36	0	22.05	22.11	22.05	23	2
15	16QAM	36	20	22.07	22.04	22.06		
15	16QAM	36	39	22.06	22.05	22.02		
15	16QAM	75	0	22.09	22.05	22.01		
15	64QAM	1	0	22.22	22.27	22.23	23	2
15	64QAM	1	37	22.17	22.19	22.14		
15	64QAM	1	74	22.12	22.17	22.14		
15	64QAM	36	0	21.07	21.17	21.08	22	3
15	64QAM	36	20	21.07	21.10	21.10		
15	64QAM	36	39	21.07	21.12	21.04		
15	64QAM	75	0	21.09	21.09	21.00		
Channel				20000	20175	20350	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1715	1732.5	1750		
10	QPSK	1	0	23.92	23.95	23.90	25	0
10	QPSK	1	25	23.91	23.98	23.93		
10	QPSK	1	49	23.89	23.96	23.91		
10	QPSK	25	0	23.01	23.03	22.99	24	1
10	QPSK	25	12	23.06	23.05	23.04		
10	QPSK	25	25	23.08	23.15	23.12		
10	QPSK	50	0	23.06	23.05	23.03		
10	16QAM	1	0	23.11	23.22	23.13	24	1
10	16QAM	1	25	23.09	23.18	23.14		
10	16QAM	1	49	23.13	23.19	23.13		
10	16QAM	25	0	22.04	22.02	22.02	23	2
10	16QAM	25	12	22.07	22.05	22.06		
10	16QAM	25	25	22.07	22.09	22.12		
10	16QAM	50	0	22.07	22.03	22.03		
10	64QAM	1	0	22.18	22.13	22.11	23	2
10	64QAM	1	25	22.24	22.30	22.24		
10	64QAM	1	49	22.17	22.28	22.19		
10	64QAM	25	0	21.06	21.06	21.05	22	3
10	64QAM	25	12	21.10	21.11	21.09		
10	64QAM	25	25	21.10	21.15	21.17		
10	64QAM	50	0	21.10	21.10	21.07		
Channel				19975	20175	20375	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1712.5	1732.5	1752.5		
5	QPSK	1	0	23.97	23.95	23.93	25	0
5	QPSK	1	12	23.94	23.99	23.91		
5	QPSK	1	24	23.94	24.00	24.00		
5	QPSK	12	0	22.98	22.99	23.07	24	1
5	QPSK	12	7	23.07	23.06	23.15		

5	QPSK	12	13	23.03	23.10	23.09		
5	QPSK	25	0	23.02	23.00	23.08		
5	16QAM	1	0	23.03	23.01	23.05	24	1
5	16QAM	1	12	23.10	23.04	22.97		
5	16QAM	1	24	23.11	23.15	23.01		
5	16QAM	12	0	22.04	22.02	22.09	23	2
5	16QAM	12	7	22.11	22.04	22.16		
5	16QAM	12	13	22.06	22.11	22.10		
5	16QAM	25	0	22.05	22.02	22.09		
5	64QAM	1	0	22.22	22.20	22.20	23	2
5	64QAM	1	12	22.19	22.29	22.24		
5	64QAM	1	24	22.24	22.29	22.30		
5	64QAM	12	0	21.10	21.08	21.16	22	3
5	64QAM	12	7	21.14	21.12	21.17		
5	64QAM	12	13	21.13	21.15	21.14		
5	64QAM	25	0	21.08	21.05	21.11		
Channel				19965	20175	20385	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1711.5	1732.5	1753.5		
3	QPSK	1	0	24.01	24.00	23.95	25	0
3	QPSK	1	8	24.04	24.05	24.01		
3	QPSK	1	14	24.00	24.05	24.00		
3	QPSK	8	0	23.06	23.01	23.08	24	1
3	QPSK	8	4	23.08	23.04	23.09		
3	QPSK	8	7	23.08	23.08	23.08		
3	QPSK	15	0	23.10	23.03	23.09		
3	16QAM	1	0	23.08	23.04	23.15	24	1
3	16QAM	1	8	23.16	23.21	23.22		
3	16QAM	1	14	23.11	23.08	23.12		
3	16QAM	8	0	22.08	22.01	22.14	23	2
3	16QAM	8	4	22.13	22.11	22.17		
3	16QAM	8	7	22.08	22.15	22.15		
3	16QAM	15	0	22.12	22.05	22.13		
3	64QAM	1	0	22.24	22.22	22.20	23	2
3	64QAM	1	8	22.32	22.37	22.34		
3	64QAM	1	14	22.29	22.34	22.29		
3	64QAM	8	0	21.13	21.06	21.13	22	3
3	64QAM	8	4	21.16	21.09	21.18		
3	64QAM	8	7	21.11	21.19	21.13		
3	64QAM	15	0	21.11	21.08	21.14		
Channel				19957	20175	20393	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1710.7	1732.5	1754.3		
1.4	QPSK	1	0	23.93	23.98	23.87	25	0
1.4	QPSK	1	3	23.98	23.99	23.92		
1.4	QPSK	1	5	23.96	23.95	23.91		
1.4	QPSK	3	0	23.82	23.87	23.77		
1.4	QPSK	3	1	24.02	24.01	24.03		
1.4	QPSK	3	3	23.90	23.93	23.84		
1.4	QPSK	6	0	23.02	23.05	23.02	24	1
1.4	16QAM	1	0	23.08	23.10	23.00	24	1
1.4	16QAM	1	3	23.23	23.21	23.13		
1.4	16QAM	1	5	23.09	23.10	23.00		
1.4	16QAM	3	0	22.88	22.87	22.85		
1.4	16QAM	3	1	22.87	22.93	22.83		
1.4	16QAM	3	3	22.86	22.91	22.81		
1.4	16QAM	6	0	22.09	22.09	22.04	23	2
1.4	64QAM	1	0	22.14	22.22	22.09	23	2

1.4	64QAM	1	3	22.20	22.24	22.15		
1.4	64QAM	1	5	22.17	22.21	22.16		
1.4	64QAM	3	0	22.18	22.25	22.13		
1.4	64QAM	3	1	22.24	22.26	22.21		
1.4	64QAM	3	3	22.21	22.25	22.16		
1.4	64QAM	6	0	21.05	21.08	21.04	22	3

<LTE Band 25>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				26140	26340	26590		
Frequency (MHz)				1860	1880	1905		
20	QPSK	1	0	24.04	24.07	23.95	25	0
20	QPSK	1	49	23.99	24.06	23.91		
20	QPSK	1	99	23.92	24.02	23.83		
20	QPSK	50	0	23.05	23.10	23.05	24	1
20	QPSK	50	24	23.14	23.17	23.08		
20	QPSK	50	50	23.08	23.14	23.02		
20	QPSK	100	0	23.13	23.07	23.07		
20	16QAM	1	0	23.16	23.19	23.09	24	1
20	16QAM	1	49	23.14	23.19	23.04		
20	16QAM	1	99	23.07	23.15	22.95		
20	16QAM	50	0	22.06	22.10	22.08	23	2
20	16QAM	50	24	22.14	22.22	22.05		
20	16QAM	50	50	22.08	22.15	22.03		
20	16QAM	100	0	22.10	22.06	22.05		
20	64QAM	1	0	22.23	22.24	22.22	23	2
20	64QAM	1	49	22.24	22.32	22.14		
20	64QAM	1	99	22.16	22.28	22.03		
20	64QAM	50	0	21.10	21.12	21.08	22	3
20	64QAM	50	24	21.15	21.22	21.09		
20	64QAM	50	50	21.13	21.17	21.05		
20	64QAM	100	0	21.13	21.09	21.07		
Channel				26115	26340	26615	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1857.5	1880	1907.5		
15	QPSK	1	0	24.00	24.03	23.94	25	0
15	QPSK	1	37	24.02	24.06	23.89		
15	QPSK	1	74	24.00	24.06	23.91		
15	QPSK	36	0	23.07	23.12	23.05	24	1
15	QPSK	36	20	23.14	23.20	23.05		
15	QPSK	36	39	23.08	23.15	23.02		
15	QPSK	75	0	23.09	23.18	23.03		
15	16QAM	1	0	23.11	23.17	23.06	24	1
15	16QAM	1	37	23.10	23.21	23.04		
15	16QAM	1	74	23.12	23.20	23.02		
15	16QAM	36	0	22.08	22.12	22.07	23	2
15	16QAM	36	20	22.14	22.20	22.06		
15	16QAM	36	39	22.08	22.15	21.99		
15	16QAM	75	0	22.12	22.18	22.05		
15	64QAM	1	0	22.18	22.24	22.22	23	2
15	64QAM	1	37	22.22	22.31	22.17		
15	64QAM	1	74	22.22	22.28	22.12		
15	64QAM	36	0	21.11	21.16	21.07	22	3
15	64QAM	36	20	21.18	21.25	21.07		
15	64QAM	36	39	21.13	21.20	21.07		

15	64QAM	75	0	21.12	21.19	21.05		
Channel				26090	26340	26640	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1855	1880	1910		
10	QPSK	1	0	24.00	24.04	23.89	25	0
10	QPSK	1	25	23.99	24.06	23.92		
10	QPSK	1	49	23.93	24.05	23.89		
10	QPSK	25	0	23.11	23.10	23.03	24	1
10	QPSK	25	12	23.14	23.21	23.09		
10	QPSK	25	25	23.13	23.21	23.08		
10	QPSK	50	0	23.13	23.21	23.06		
10	16QAM	1	0	23.19	23.25	23.09	24	1
10	16QAM	1	25	23.15	23.23	23.05		
10	16QAM	1	49	23.14	23.26	23.10		
10	16QAM	25	0	22.13	22.11	22.02	23	2
10	16QAM	25	12	22.13	22.23	22.07		
10	16QAM	25	25	22.12	22.19	22.08		
10	16QAM	50	0	22.11	22.22	22.06		
10	64QAM	1	0	22.25	22.31	22.13	23	2
10	64QAM	1	25	22.30	22.34	22.23		
10	64QAM	1	49	22.24	22.31	22.20		
10	64QAM	25	0	21.14	21.10	21.04	22	3
10	64QAM	25	12	21.19	21.24	21.11		
10	64QAM	25	25	21.17	21.24	21.09		
10	64QAM	50	0	21.17	21.25	21.09		
Channel				26065	26340	26665	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1852.5	1880	1912.5		
5	QPSK	1	0	23.99	24.03	23.93	25	0
5	QPSK	1	12	23.99	24.05	23.90		
5	QPSK	1	24	24.00	24.06	23.94		
5	QPSK	12	0	23.10	23.04	22.95	24	1
5	QPSK	12	7	23.16	23.23	23.05		
5	QPSK	12	13	23.13	23.22	23.03		
5	QPSK	25	0	23.10	23.17	23.00		
5	16QAM	1	0	23.12	23.17	23.01	24	1
5	16QAM	1	12	23.02	23.08	22.86		
5	16QAM	1	24	23.14	23.27	23.00		
5	16QAM	12	0	22.09	22.06	21.96	23	2
5	16QAM	12	7	22.16	22.23	22.03		
5	16QAM	12	13	22.14	22.23	22.02		
5	16QAM	25	0	22.15	22.19	21.98		
5	64QAM	1	0	22.27	22.28	22.18	23	2
5	64QAM	1	12	22.28	22.35	22.19		
5	64QAM	1	24	22.31	22.39	22.20		
5	64QAM	12	0	21.11	21.11	21.02	22	3
5	64QAM	12	7	21.19	21.26	21.10		
5	64QAM	12	13	21.19	21.26	21.09		
5	64QAM	25	0	21.09	21.18	21.02		
Channel				26055	26340	26675	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1851.5	1880	1913.5		
3	QPSK	1	0	23.99	24.02	23.86	25	0
3	QPSK	1	8	24.04	24.05	23.97		
3	QPSK	1	14	24.03	24.06	23.98		
3	QPSK	8	0	23.09	23.14	22.93	24	1
3	QPSK	8	4	23.11	23.18	23.01		
3	QPSK	8	7	23.16	23.25	23.04		
3	QPSK	15	0	23.13	23.20	23.03		

3	16QAM	1	0	23.04	23.09	22.91	24	1
3	16QAM	1	8	23.24	23.26	23.12		
3	16QAM	1	14	23.20	23.26	23.07		
3	16QAM	8	0	22.05	22.16	21.95	23	2
3	16QAM	8	4	22.21	22.26	22.07		
3	16QAM	8	7	22.16	22.25	22.02		
3	16QAM	15	0	22.13	22.23	22.01		
3	64QAM	1	0	22.25	22.20	22.14	23	2
3	64QAM	1	8	22.40	22.47	22.25		
3	64QAM	1	14	22.36	22.40	22.22		
3	64QAM	8	0	21.13	21.18	20.97	22	3
3	64QAM	8	4	21.21	21.25	21.03		
3	64QAM	8	7	21.20	21.29	21.08		
3	64QAM	15	0	21.17	21.22	21.02		
Channel				26047	26340	26683	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1850.7	1880	1914.3		
1.4	QPSK	1	0	23.93	23.97	23.79	25	0
1.4	QPSK	1	3	23.98	24.04	23.87		
1.4	QPSK	1	5	24.02	24.06	23.85		
1.4	QPSK	3	0	23.85	23.94	23.76		
1.4	QPSK	3	1	24.05	24.04	23.89		
1.4	QPSK	3	3	23.95	24.00	23.86		
1.4	QPSK	6	0	23.07	23.15	22.94	24	1
1.4	16QAM	1	0	23.08	23.09	22.98	24	1
1.4	16QAM	1	3	23.28	23.31	23.09		
1.4	16QAM	1	5	23.17	23.20	22.98		
1.4	16QAM	3	0	22.88	22.96	22.74		
1.4	16QAM	3	1	22.94	23.03	22.80		
1.4	16QAM	3	3	22.91	23.00	22.80		
1.4	16QAM	6	0	22.12	22.19	22.00	23	2
1.4	64QAM	1	0	22.19	22.17	22.06	23	2
1.4	64QAM	1	3	22.24	22.33	22.10		
1.4	64QAM	1	5	22.24	22.31	22.12		
1.4	64QAM	3	0	22.20	22.29	22.05		
1.4	64QAM	3	1	22.26	22.31	22.14		
1.4	64QAM	3	3	22.25	22.33	22.17		
1.4	64QAM	6	0	21.04	21.12	20.94	22	3

<LTE Band 66>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				132072	132322	132572		
Frequency (MHz)				1720	1745	1770		
20	QPSK	1	0	23.95	24.00	24.06	25	0
20	QPSK	1	49	23.92	23.91	24.11		
20	QPSK	1	99	23.89	23.98	24.04		
20	QPSK	50	0	22.98	23.01	23.17	24	1
20	QPSK	50	24	23.06	23.10	23.16		
20	QPSK	50	50	23.02	23.05	23.20		
20	QPSK	100	0	22.99	23.06	23.15		
20	16QAM	1	0	23.13	23.13	23.21	24	1
20	16QAM	1	49	23.05	23.10	23.21		
20	16QAM	1	99	23.00	23.11	23.20		
20	16QAM	50	0	21.99	22.04	22.20	23	2
20	16QAM	50	24	22.06	22.11	22.18		

20	16QAM	50	50	22.01	22.06	22.21		
20	16QAM	100	0	22.03	22.06	22.17		
20	64QAM	1	0	22.18	22.20	22.27	23	2
20	64QAM	1	49	22.13	22.17	22.27		
20	64QAM	1	99	22.10	22.25	22.28		
20	64QAM	50	0	21.01	21.03	21.19	22	3
20	64QAM	50	24	21.07	21.11	21.18		
20	64QAM	50	50	21.04	21.07	21.20		
20	64QAM	100	0	21.06	21.08	21.14		
Channel				132047	132322	132597	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1717.5	1745	1772.5		
15	QPSK	1	0	23.90	23.95	24.10	25	0
15	QPSK	1	37	23.93	24.00	24.09		
15	QPSK	1	74	23.87	23.92	24.08		
15	QPSK	36	0	22.97	23.03	23.14	24	1
15	QPSK	36	20	23.04	23.10	23.17		
15	QPSK	36	39	23.03	23.04	23.20		
15	QPSK	75	0	23.03	23.06	23.13		
15	16QAM	1	0	23.00	23.08	23.28	24	1
15	16QAM	1	37	22.98	23.09	23.22		
15	16QAM	1	74	22.99	23.07	23.20		
15	16QAM	36	0	21.98	22.01	22.15	23	2
15	16QAM	36	20	22.07	22.09	22.17		
15	16QAM	36	39	22.02	22.08	22.21		
15	16QAM	75	0	22.04	22.10	22.14		
15	64QAM	1	0	22.13	22.15	22.35	23	2
15	64QAM	1	37	22.16	22.25	22.36		
15	64QAM	1	74	22.09	22.18	22.30		
15	64QAM	36	0	21.01	21.08	21.22	22	3
15	64QAM	36	20	21.09	21.15	21.20		
15	64QAM	36	39	21.06	21.10	21.22		
15	64QAM	75	0	21.05	21.09	21.16		
Channel				132022	132322	132622	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1715	1745	1775		
10	QPSK	1	0	23.95	23.91	24.10	25	0
10	QPSK	1	25	23.89	23.95	24.10		
10	QPSK	1	49	23.82	23.91	24.04		
10	QPSK	25	0	23.04	23.01	23.16	24	1
10	QPSK	25	12	23.06	23.11	23.16		
10	QPSK	25	25	23.01	23.04	23.19		
10	QPSK	50	0	23.04	23.08	23.16		
10	16QAM	1	0	23.13	23.13	23.32	24	1
10	16QAM	1	25	23.05	23.11	23.27		
10	16QAM	1	49	23.06	23.11	23.23		
10	16QAM	25	0	22.06	22.01	22.15	23	2
10	16QAM	25	12	22.08	22.10	22.21		
10	16QAM	25	25	22.00	22.06	22.19		
10	16QAM	50	0	22.04	22.07	22.17		
10	64QAM	1	0	22.25	22.16	22.33	23	2
10	64QAM	1	25	22.20	22.23	22.39		
10	64QAM	1	49	22.12	22.19	22.34		
10	64QAM	25	0	21.10	21.06	21.20	22	3
10	64QAM	25	12	21.10	21.14	21.23		
10	64QAM	25	25	21.04	21.08	21.22		
10	64QAM	50	0	21.07	21.11	21.22		
Channel				131997	132322	132647	Tune-up limit	MPR

Frequency (MHz)				1712.5	1745	1777.5	(dBm)	(dB)
5	QPSK	1	0	23.95	23.95	24.10	25	0
5	QPSK	1	12	23.93	23.95	24.09		
5	QPSK	1	24	23.87	23.94	24.08		
5	QPSK	12	0	23.03	23.00	23.22	24	1
5	QPSK	12	7	23.07	23.11	23.30		
5	QPSK	12	13	23.02	23.03	23.21		
5	QPSK	25	0	23.02	23.02	23.17		
5	16QAM	1	0	23.11	23.07	23.26	24	1
5	16QAM	1	12	23.14	23.15	23.18		
5	16QAM	1	24	23.12	23.07	23.17		
5	16QAM	12	0	22.08	22.02	22.25	23	2
5	16QAM	12	7	22.10	22.10	22.26		
5	16QAM	12	13	22.03	22.07	22.19		
5	16QAM	25	0	22.07	22.09	22.25		
5	64QAM	1	0	22.25	22.19	22.42	23	2
5	64QAM	1	12	22.25	22.25	22.43		
5	64QAM	1	24	22.18	22.22	22.42		
5	64QAM	12	0	21.13	21.08	21.31	22	3
5	64QAM	12	7	21.14	21.18	21.32		
5	64QAM	12	13	21.10	21.11	21.28		
5	64QAM	25	0	21.07	21.08	21.23		
Channel				131987	132322	132657	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1711.5	1745	1778.5		
3	QPSK	1	0	23.97	23.97	24.09	25	0
3	QPSK	1	8	24.03	24.04	24.10		
3	QPSK	1	14	23.92	24.00	24.08		
3	QPSK	8	0	23.05	23.00	23.23	24	1
3	QPSK	8	4	23.07	23.10	23.23		
3	QPSK	8	7	23.02	23.03	23.24		
3	QPSK	15	0	23.04	23.09	23.24		
3	16QAM	1	0	23.09	23.11	23.31	24	1
3	16QAM	1	8	23.08	23.21	23.26		
3	16QAM	1	14	23.06	23.10	23.20		
3	16QAM	8	0	22.07	21.97	22.26	23	2
3	16QAM	8	4	22.14	22.17	22.30		
3	16QAM	8	7	22.06	22.05	22.23		
3	16QAM	15	0	22.11	22.11	22.28		
3	64QAM	1	0	22.26	22.20	22.45	23	2
3	64QAM	1	8	22.32	22.34	22.51		
3	64QAM	1	14	22.22	22.27	22.46		
3	64QAM	8	0	21.13	21.10	21.30	22	3
3	64QAM	8	4	21.17	21.17	21.33		
3	64QAM	8	7	21.11	21.13	21.31		
3	64QAM	15	0	21.12	21.13	21.29		
Channel				131979	132322	132665	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1710.7	1745	1779.3		
1.4	QPSK	1	0	23.95	23.93	24.08	25	0
1.4	QPSK	1	3	23.96	23.98	24.08		
1.4	QPSK	1	5	23.91	23.98	24.09		
1.4	QPSK	3	0	23.86	23.84	24.03		
1.4	QPSK	3	1	24.10	24.04	24.07		
1.4	QPSK	3	3	23.89	23.88	24.06		
1.4	QPSK	6	0	23.01	23.04	23.19	24	1
1.4	16QAM	1	0	23.06	23.05	23.18	24	1
1.4	16QAM	1	3	23.16	23.18	23.31		

1.4	16QAM	1	5	23.03	23.12	23.19		
1.4	16QAM	3	0	22.91	22.91	23.02		
1.4	16QAM	3	1	22.89	22.91	23.08		
1.4	16QAM	3	3	22.86	22.90	23.03		
1.4	16QAM	6	0	22.06	22.07	22.25	23	2
1.4	64QAM	1	0	22.18	22.18	22.34		
1.4	64QAM	1	3	22.21	22.20	22.35		
1.4	64QAM	1	5	22.16	22.16	22.30	23	2
1.4	64QAM	3	0	22.18	22.22	22.38		
1.4	64QAM	3	1	22.24	22.26	22.40		
1.4	64QAM	3	3	22.21	22.22	22.35		
1.4	64QAM	6	0	21.04	21.03	21.17	22	3

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BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				133222	133322	133372		
Frequency (MHz)				673	683	688		
20	QPSK	1	0	23.86	23.98	23.99		
20	QPSK	1	49	24.05	24.01	23.98	25	0
20	QPSK	1	99	24.08	24.06	24.02		
20	QPSK	50	0	23.10	23.15	23.15		
20	QPSK	50	24	23.21	23.17	23.12	24	1
20	QPSK	50	50	23.21	23.16	23.12		
20	QPSK	100	0	23.17	23.12	23.09		
20	16QAM	1	0	23.41	23.33	23.38		
20	16QAM	1	49	23.39	23.43	23.36	24	1
20	16QAM	1	99	23.42	23.35	23.33		
20	16QAM	50	0	22.08	22.14	22.17		
20	16QAM	50	24	22.22	22.18	22.13	23	2
20	16QAM	50	50	22.21	22.17	22.12		
20	16QAM	100	0	22.19	22.12	22.09		
20	64QAM	1	0	21.39	22.12	22.24		
20	64QAM	1	49	22.22	22.29	22.30	23	2
20	64QAM	1	99	22.29	22.21	22.21		
20	64QAM	50	0	20.69	21.13	21.07		
20	64QAM	50	24	21.17	21.17	21.16	22	3
20	64QAM	50	50	21.20	21.15	21.16		
20	64QAM	100	0	21.15	21.11	21.12		
Channel				133197	133297	133397	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				670.5	680.5	690.5		
15	QPSK	1	0	23.95	24.00	24.03		
15	QPSK	1	37	23.97	23.98	23.99	25	0
15	QPSK	1	74	23.96	23.95	23.88		
15	QPSK	36	0	23.09	23.12	23.10		
15	QPSK	36	20	23.13	23.16	23.09	24	1
15	QPSK	36	39	23.15	23.16	23.06		
15	QPSK	75	0	23.15	23.13	23.05		
15	16QAM	1	0	23.41	23.32	23.35		
15	16QAM	1	37	23.32	23.45	23.29	24	1
15	16QAM	1	74	23.42	23.38	23.27		
15	16QAM	36	0	22.13	22.12	22.12		
15	16QAM	36	20	22.14	22.14	22.06	23	2
15	16QAM	36	39	22.15	22.17	22.07		

15	16QAM	75	0	22.16	22.14	22.06		
15	64QAM	1	0	21.26	22.19	21.86	23	2
15	64QAM	1	37	21.99	22.33	22.22		
15	64QAM	1	74	22.32	22.29	22.10		
15	64QAM	36	0	20.34	21.17	21.14	22	3
15	64QAM	36	20	20.87	21.18	21.13		
15	64QAM	36	39	21.18	21.15	21.13		
15	64QAM	75	0	21.00	21.15	21.08		
Channel				133172	133272	133422	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				668	678	693		
10	QPSK	1	0	23.88	23.97	23.97	25	0
10	QPSK	1	25	23.95	23.96	23.94		
10	QPSK	1	49	23.96	23.95	23.86		
10	QPSK	25	0	23.06	23.12	23.04	24	1
10	QPSK	25	12	23.13	23.21	23.06		
10	QPSK	25	25	23.09	23.21	23.07		
10	QPSK	50	0	23.14	23.21	23.04		
10	16QAM	1	0	23.17	23.37	23.34	24	1
10	16QAM	1	25	23.28	23.36	23.26		
10	16QAM	1	49	23.36	23.42	23.26		
10	16QAM	25	0	22.07	22.13	22.05	23	2
10	16QAM	25	12	22.16	22.22	22.07		
10	16QAM	25	25	22.11	22.20	22.07		
10	16QAM	50	0	22.15	22.21	22.06		
10	64QAM	1	0	21.01	22.16	22.19	23	2
10	64QAM	1	25	21.62	22.32	22.18		
10	64QAM	1	49	22.22	22.36	22.15		
10	64QAM	25	0	20.15	21.14	21.09	22	3
10	64QAM	25	12	20.46	21.28	21.12		
10	64QAM	25	25	20.66	21.19	21.12		
10	64QAM	50	0	20.43	21.14	21.10		
Channel				133147	133247	133447	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				665.5	675.5	695.5		
5	QPSK	1	0	23.63	23.98	23.97	25	0
5	QPSK	1	12	23.72	23.97	23.91		
5	QPSK	1	24	23.98	23.96	23.87		
5	QPSK	12	0	22.83	23.10	23.01	24	1
5	QPSK	12	7	22.83	23.16	23.00		
5	QPSK	12	13	23.00	23.07	22.99		
5	QPSK	25	0	22.87	23.11	22.93		
5	16QAM	1	0	22.84	23.38	23.25	24	1
5	16QAM	1	12	22.99	23.23	23.14		
5	16QAM	1	24	23.28	23.25	23.12		
5	16QAM	12	0	21.90	22.13	22.05	23	2
5	16QAM	12	7	22.02	22.18	21.98		
5	16QAM	12	13	22.07	22.09	21.97		
5	16QAM	25	0	21.91	22.14	21.97		
5	64QAM	1	0	20.84	22.22	22.11	23	2
5	64QAM	1	12	21.08	22.29	22.19		
5	64QAM	1	24	21.44	22.25	22.02		
5	64QAM	12	0	20.06	21.16	21.06	22	3
5	64QAM	12	7	20.24	21.23	21.04		
5	64QAM	12	13	20.28	21.14	20.96		
5	64QAM	25	0	20.06	21.14	20.96		

<DSI3_Main Ant>

<LTE Band 2>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				18700	18900	19100		
Frequency (MHz)				1860	1880	1900		
20	QPSK	1	0	18.15	18.15	18.13	19	0
20	QPSK	1	49	18.12	18.17	18.01		
20	QPSK	1	99	18.08	18.09	18.02		
20	QPSK	50	0	18.20	18.21	18.20	19	0
20	QPSK	50	24	18.35	18.24	18.21		
20	QPSK	50	50	18.26	18.28	18.19		
20	QPSK	100	0	18.28	18.21	18.21		
20	16QAM	1	0	17.99	17.98	18.01	19	0
20	16QAM	1	49	17.96	17.97	17.87		
20	16QAM	1	99	17.93	17.93	17.88		
20	16QAM	50	0	17.69	17.71	17.70	19	0
20	16QAM	50	24	17.81	17.74	17.71		
20	16QAM	50	50	17.77	17.79	17.71		
20	16QAM	100	0	17.76	17.70	17.71		
20	64QAM	1	0	17.88	17.85	17.89	19	0
20	64QAM	1	49	17.84	17.88	17.78		
20	64QAM	1	99	17.81	17.85	17.79		
20	64QAM	50	0	17.72	17.74	17.72	19	0
20	64QAM	50	24	17.81	17.77	17.74		
20	64QAM	50	50	17.80	17.82	17.73		
20	64QAM	100	0	17.79	17.74	17.70		
Channel				18675	18900	19125	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1857.5	1880	1902.5		
15	QPSK	1	0	18.17	18.19	18.10	19	0
15	QPSK	1	37	18.18	18.23	18.05		
15	QPSK	1	74	18.15	18.18	18.08		
15	QPSK	36	0	18.22	18.23	18.18	19	0
15	QPSK	36	20	18.34	18.26	18.19		
15	QPSK	36	39	18.33	18.32	18.19		
15	QPSK	75	0	18.31	18.26	18.20		
15	16QAM	1	0	17.98	18.05	17.98	19	0
15	16QAM	1	37	17.94	17.99	17.89		
15	16QAM	1	74	18.06	18.01	17.89		
15	16QAM	36	0	17.75	17.75	17.69	19	0
15	16QAM	36	20	17.82	17.77	17.69		
15	16QAM	36	39	17.83	17.84	17.71		
15	16QAM	75	0	17.81	17.77	17.70		
15	64QAM	1	0	17.86	17.90	17.88	19	0
15	64QAM	1	37	17.89	17.93	17.76		
15	64QAM	1	74	17.91	17.93	17.80		
15	64QAM	36	0	17.79	17.79	17.74	19	0
15	64QAM	36	20	17.87	17.81	17.76		
15	64QAM	36	39	17.88	17.89	17.76		
15	64QAM	75	0	17.83	17.79	17.73		
Channel				18650	18900	19150	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1855	1880	1905		
10	QPSK	1	0	18.11	18.13	18.05	19	0
10	QPSK	1	25	18.14	18.16	17.97		
10	QPSK	1	49	18.12	18.12	17.99		

10	QPSK	25	0	18.27	18.21	18.10	19	0
10	QPSK	25	12	18.31	18.23	18.11		
10	QPSK	25	25	18.32	18.33	18.15		
10	QPSK	50	0	18.32	18.25	18.14		
10	16QAM	1	0	18.00	18.05	17.88	19	0
10	16QAM	1	25	18.05	18.02	17.83		
10	16QAM	1	49	18.05	18.06	17.89		
10	16QAM	25	0	17.80	17.74	17.60	19	0
10	16QAM	25	12	17.83	17.77	17.64		
10	16QAM	25	25	17.81	17.84	17.63		
10	16QAM	50	0	17.81	17.76	17.64		
10	64QAM	1	0	17.94	17.86	17.80	19	0
10	64QAM	1	25	17.99	17.97	17.77		
10	64QAM	1	49	17.92	17.91	17.80		
10	64QAM	25	0	17.83	17.72	17.64	19	0
10	64QAM	25	12	17.89	17.76	17.70		
10	64QAM	25	25	17.86	17.84	17.70		
10	64QAM	50	0	17.86	17.78	17.65		
Channel				18625	18900	19175	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1852.5	1880	1907.5		
5	QPSK	1	0	18.09	18.12	17.97	19	0
5	QPSK	1	12	18.10	18.14	17.96		
5	QPSK	1	24	18.18	18.18	18.01		
5	QPSK	12	0	18.21	18.15	18.06	19	0
5	QPSK	12	7	18.29	18.21	18.14		
5	QPSK	12	13	18.25	18.27	18.11		
5	QPSK	25	0	18.23	18.13	18.09		
5	16QAM	1	0	17.86	17.95	17.75	19	0
5	16QAM	1	12	17.83	17.86	17.70		
5	16QAM	1	24	17.92	18.04	17.80		
5	16QAM	12	0	17.75	17.67	17.58	19	0
5	16QAM	12	7	17.80	17.72	17.65		
5	16QAM	12	13	17.76	17.76	17.62		
5	16QAM	25	0	17.77	17.71	17.64		
5	64QAM	1	0	17.94	17.86	17.82	19	0
5	64QAM	1	12	17.95	17.97	17.81		
5	64QAM	1	24	18.02	17.92	17.85		
5	64QAM	12	0	17.83	17.75	17.67	19	0
5	64QAM	12	7	17.87	17.81	17.73		
5	64QAM	12	13	17.84	17.86	17.67		
5	64QAM	25	0	17.76	17.70	17.62		
Channel				18615	18900	19185	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1851.5	1880	1908.5		
3	QPSK	1	0	18.02	18.07	17.89	19	0
3	QPSK	1	8	18.04	18.05	17.90		
3	QPSK	1	14	18.18	18.18	18.00		
3	QPSK	8	0	18.20	18.07	18.01	19	0
3	QPSK	8	4	18.23	18.12	18.10		
3	QPSK	8	7	18.25	18.17	18.10		
3	QPSK	15	0	18.20	18.04	18.08		
3	16QAM	1	0	17.76	17.94	17.72	19	0
3	16QAM	1	8	17.75	17.82	17.64		
3	16QAM	1	14	17.91	18.01	17.70		
3	16QAM	8	0	17.72	17.67	17.48	19	0
3	16QAM	8	4	17.76	17.69	17.64		
3	16QAM	8	7	17.74	17.66	17.57		

3	16QAM	15	0	17.75	17.68	17.55		
3	64QAM	1	0	17.86	17.77	17.74	19	0
3	64QAM	1	8	17.89	17.93	17.74		
3	64QAM	1	14	17.95	17.91	17.75		
3	64QAM	8	0	17.77	17.67	17.66	19	0
3	64QAM	8	4	17.78	17.73	17.68		
3	64QAM	8	7	17.74	17.80	17.58		
3	64QAM	15	0	17.72	17.62	17.58		
Channel				18607	18900	19193	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1850.7	1880	1909.3		
1.4	QPSK	1	0	18.05	18.07	17.88	19	0
1.4	QPSK	1	3	18.11	18.12	17.97		
1.4	QPSK	1	5	18.08	18.09	17.92		
1.4	QPSK	3	0	18.00	17.99	17.84		
1.4	QPSK	3	1	18.10	18.13	17.91		
1.4	QPSK	3	3	17.99	18.00	17.88		
1.4	QPSK	6	0	18.17	18.19	18.01	19	0
1.4	16QAM	1	0	17.89	17.93	17.70	19	0
1.4	16QAM	1	3	17.98	18.05	17.82		
1.4	16QAM	1	5	17.96	17.93	17.72		
1.4	16QAM	3	0	17.69	17.70	17.53		
1.4	16QAM	3	1	17.73	17.73	17.57		
1.4	16QAM	3	3	17.69	17.70	17.53		
1.4	16QAM	6	0	17.74	17.73	17.56	19	0
1.4	64QAM	1	0	17.80	17.73	17.68	19	0
1.4	64QAM	1	3	17.91	17.83	17.68		
1.4	64QAM	1	5	17.81	17.82	17.67		
1.4	64QAM	3	0	17.85	17.87	17.71		
1.4	64QAM	3	1	17.89	17.89	17.75		
1.4	64QAM	3	3	17.86	17.86	17.70		
1.4	64QAM	6	0	17.70	17.70	17.54	19	0

<LTE Band 4>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				20050	20175	20300		
Frequency (MHz)				1720	1732.5	1745		
20	QPSK	1	0	18.14	18.17	18.21	19	0
20	QPSK	1	49	18.00	18.13	18.08		
20	QPSK	1	99	18.10	17.99	17.90		
20	QPSK	50	0	18.18	18.27	18.32	19	0
20	QPSK	50	24	18.21	18.22	18.20		
20	QPSK	50	50	18.16	18.12	18.08		
20	QPSK	100	0	18.18	18.24	18.19		
20	16QAM	1	0	18.12	18.05	18.10	19	0
20	16QAM	1	49	17.90	18.03	17.91		
20	16QAM	1	99	17.94	17.95	17.80		
20	16QAM	50	0	17.74	17.85	17.84	19	0
20	16QAM	50	24	17.77	17.78	17.74		
20	16QAM	50	50	17.70	17.67	17.65		
20	16QAM	100	0	17.74	17.75	17.71		
20	64QAM	1	0	17.87	17.89	17.96	19	0
20	64QAM	1	49	17.75	17.88	17.75		
20	64QAM	1	99	17.87	17.73	17.63		

20	64QAM	50	0	17.72	17.82	17.84	19	0
20	64QAM	50	24	17.75	17.77	17.73		
20	64QAM	50	50	17.69	17.66	17.65		
20	64QAM	100	0	17.75	17.72	17.72		
Channel				20025	20175	20325	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1717.5	1732.5	1747.5		
15	QPSK	1	0	18.18	18.26	18.15	19	0
15	QPSK	1	37	18.05	18.14	17.96		
15	QPSK	1	74	18.04	18.05	17.96		
15	QPSK	36	0	18.20	18.31	18.25	19	0
15	QPSK	36	20	18.23	18.25	18.16		
15	QPSK	36	39	18.19	18.18	18.11		
15	QPSK	75	0	18.23	18.23	18.16		
15	16QAM	1	0	18.08	18.13	18.10	19	0
15	16QAM	1	37	17.89	18.03	17.81		
15	16QAM	1	74	17.96	18.01	17.85		
15	16QAM	36	0	17.76	17.87	17.82	19	0
15	16QAM	36	20	17.78	17.78	17.71		
15	16QAM	36	39	17.74	17.69	17.66		
15	16QAM	75	0	17.79	17.79	17.73		
15	64QAM	1	0	17.91	17.97	17.94	19	0
15	64QAM	1	37	17.82	17.88	17.74		
15	64QAM	1	74	17.78	17.79	17.70		
15	64QAM	36	0	17.78	17.88	17.80	19	0
15	64QAM	36	20	17.74	17.80	17.69		
15	64QAM	36	39	17.73	17.74	17.65		
15	64QAM	75	0	17.75	17.77	17.71		
Channel				20000	20175	20350	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1715	1732.5	1750		
10	QPSK	1	0	18.07	18.19	18.09	19	0
10	QPSK	1	25	18.04	18.20	18.05		
10	QPSK	1	49	18.02	18.08	18.02		
10	QPSK	25	0	18.19	18.25	18.15	19	0
10	QPSK	25	12	18.20	18.27	18.17		
10	QPSK	25	25	18.17	18.28	18.15		
10	QPSK	50	0	18.19	18.26	18.19		
10	16QAM	1	0	17.97	18.07	17.94	19	0
10	16QAM	1	25	17.93	18.04	17.87		
10	16QAM	1	49	17.93	17.98	17.90		
10	16QAM	25	0	17.70	17.76	17.68	19	0
10	16QAM	25	12	17.73	17.76	17.69		
10	16QAM	25	25	17.74	17.73	17.67		
10	16QAM	50	0	17.73	17.74	17.69		
10	64QAM	1	0	17.82	17.85	17.78	19	0
10	64QAM	1	25	17.86	17.98	17.78		
10	64QAM	1	49	17.78	17.82	17.77		
10	64QAM	25	0	17.72	17.76	17.68	19	0
10	64QAM	25	12	17.75	17.79	17.71		
10	64QAM	25	25	17.71	17.77	17.67		
10	64QAM	50	0	17.75	17.73	17.70		
Channel				19975	20175	20375	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1712.5	1732.5	1752.5		
5	QPSK	1	0	18.10	18.22	18.00	19	0
5	QPSK	1	12	18.09	18.27	18.06		
5	QPSK	1	24	18.07	18.24	18.12		
5	QPSK	12	0	18.17	18.21	18.10	19	0

5	QPSK	12	7	18.22	18.27	18.15		
5	QPSK	12	13	18.17	18.31	18.11		
5	QPSK	25	0	18.17	18.23	18.10		
5	16QAM	1	0	17.90	17.95	17.79	19	0
5	16QAM	1	12	17.88	17.98	17.77		
5	16QAM	1	24	17.91	17.97	17.73		
5	16QAM	12	0	17.71	17.69	17.58	19	0
5	16QAM	12	7	17.73	17.74	17.66		
5	16QAM	12	13	17.72	17.78	17.63		
5	16QAM	25	0	17.75	17.71	17.64		
5	64QAM	1	0	17.89	17.91	17.79	19	0
5	64QAM	1	12	17.84	17.97	17.63		
5	64QAM	1	24	17.86	18.00	17.83		
5	64QAM	12	0	17.74	17.76	17.66	19	0
5	64QAM	12	7	17.78	17.77	17.69		
5	64QAM	12	13	17.77	17.84	17.68		
5	64QAM	25	0	17.73	17.74	17.60		
Channel				19965	20175	20385	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1711.5	1732.5	1753.5		
3	QPSK	1	0	18.07	18.13	17.91	19	0
3	QPSK	1	8	17.99	18.24	18.01		
3	QPSK	1	14	17.97	18.24	18.12		
3	QPSK	8	0	18.15	18.13	18.06	19	0
3	QPSK	8	4	18.21	18.21	18.12		
3	QPSK	8	7	18.09	18.23	18.07		
3	QPSK	15	0	18.07	18.21	18.02		
3	16QAM	1	0	17.87	17.91	17.71	19	0
3	16QAM	1	8	17.87	17.95	17.68		
3	16QAM	1	14	17.86	17.87	17.63		
3	16QAM	8	0	17.63	17.66	17.58	19	0
3	16QAM	8	4	17.72	17.67	17.59		
3	16QAM	8	7	17.69	17.72	17.58		
3	16QAM	15	0	17.74	17.70	17.64		
3	64QAM	1	0	17.81	17.89	17.77	19	0
3	64QAM	1	8	17.83	17.91	17.61		
3	64QAM	1	14	17.82	17.98	17.82		
3	64QAM	8	0	17.66	17.75	17.66	19	0
3	64QAM	8	4	17.72	17.76	17.66		
3	64QAM	8	7	17.71	17.77	17.59		
3	64QAM	15	0	17.72	17.71	17.55		
Channel				19957	20175	20393	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1710.7	1732.5	1754.3		
1.4	QPSK	1	0	18.07	18.12	17.99	19	0
1.4	QPSK	1	3	18.06	18.19	18.01		
1.4	QPSK	1	5	18.06	18.15	17.97		
1.4	QPSK	3	0	17.94	17.99	17.82		
1.4	QPSK	3	1	18.07	18.27	18.02		
1.4	QPSK	3	3	17.96	18.09	17.89		
1.4	QPSK	6	0	18.13	18.15	18.03	19	0
1.4	16QAM	1	0	17.87	17.95	17.80	19	0
1.4	16QAM	1	3	17.95	18.03	17.88		
1.4	16QAM	1	5	17.85	17.97	17.80		
1.4	16QAM	3	0	17.68	17.70	17.52		
1.4	16QAM	3	1	17.72	17.77	17.57		
1.4	16QAM	3	3	17.70	17.72	17.54		
1.4	16QAM	6	0	17.73	17.67	17.61	19	0

1.4	64QAM	1	0	17.75	17.74	17.64	19	0
1.4	64QAM	1	3	17.82	17.89	17.67		
1.4	64QAM	1	5	17.78	17.82	17.61		
1.4	64QAM	3	0	17.80	17.80	17.66		
1.4	64QAM	3	1	17.85	17.94	17.74		
1.4	64QAM	3	3	17.81	17.89	17.67		
1.4	64QAM	6	0	17.66	17.67	17.53	19	0

<LTE Band 5>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				20450	20525	20600		
Frequency (MHz)				829	836.5	844		
10	QPSK	1	0	22.30	22.28	22.27	23	0
10	QPSK	1	25	22.23	22.26	22.23		
10	QPSK	1	49	22.21	22.15	22.14		
10	QPSK	25	0	22.34	22.38	22.35	23	0
10	QPSK	25	12	22.42	22.37	22.44		
10	QPSK	25	25	22.38	22.40	22.36		
10	QPSK	50	0	22.41	22.36	22.33		
10	16QAM	1	0	22.19	22.14	22.18	23	0
10	16QAM	1	25	22.08	22.15	22.05		
10	16QAM	1	49	22.14	22.12	22.04		
10	16QAM	25	0	21.83	21.87	21.85	23	0
10	16QAM	25	12	21.93	21.87	21.90		
10	16QAM	25	25	21.87	21.91	21.85		
10	16QAM	50	0	21.91	21.88	21.84		
10	64QAM	1	0	22.05	21.94	22.02	23	0
10	64QAM	1	25	21.99	22.09	21.99		
10	64QAM	1	49	22.01	21.98	21.91		
10	64QAM	25	0	20.85	20.89	20.87	22	1
10	64QAM	25	12	20.93	20.89	20.99		
10	64QAM	25	25	20.92	20.92	20.89		
10	64QAM	50	0	20.92	20.91	20.86		
Channel				20425	20525	20625	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				826.5	836.5	846.5		
5	QPSK	1	0	22.30	22.32	22.29	23	0
5	QPSK	1	12	22.14	22.20	22.17		
5	QPSK	1	24	22.09	22.14	22.18		
5	QPSK	12	0	22.36	22.35	22.27	23	0
5	QPSK	12	7	22.35	22.40	22.25		
5	QPSK	12	13	22.25	22.31	22.24		
5	QPSK	25	0	22.30	22.24	22.22		
5	16QAM	1	0	22.06	22.13	22.12	23	0
5	16QAM	1	12	22.05	22.00	21.88		
5	16QAM	1	24	22.05	21.98	21.95		
5	16QAM	12	0	21.91	21.81	21.79	23	0
5	16QAM	12	7	21.86	21.88	21.76		
5	16QAM	12	13	21.78	21.83	21.76		
5	16QAM	25	0	21.83	21.78	21.71		
5	64QAM	1	0	22.11	22.09	22.02	23	0
5	64QAM	1	12	21.96	22.02	21.94		
5	64QAM	1	24	21.93	22.00	21.92		
5	64QAM	12	0	20.95	20.87	20.83	22	1

5	64QAM	12	7	20.90	20.94	20.80		
5	64QAM	12	13	20.81	20.85	20.80		
5	64QAM	25	0	20.86	20.81	20.74		
Channel				20415	20525	20635	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				825.5	836.5	847.5		
3	QPSK	1	0	22.31	22.29	22.27	23	0
3	QPSK	1	8	22.23	22.31	22.19		
3	QPSK	1	14	22.16	22.20	22.14		
3	QPSK	8	0	22.37	22.30	22.31	23	0
3	QPSK	8	4	22.33	22.35	22.26		
3	QPSK	8	7	22.28	22.31	22.25		
3	QPSK	15	0	22.34	22.26	22.29		
3	16QAM	1	0	22.11	22.09	22.03	23	0
3	16QAM	1	8	22.07	22.11	22.05		
3	16QAM	1	14	22.00	22.09	21.93		
3	16QAM	8	0	21.88	21.80	21.85	23	0
3	16QAM	8	4	21.95	21.94	21.84		
3	16QAM	8	7	21.82	21.82	21.75		
3	16QAM	15	0	21.83	21.80	21.82		
3	64QAM	1	0	22.09	22.02	22.04	23	0
3	64QAM	1	8	22.02	22.04	21.97		
3	64QAM	1	14	21.96	21.98	21.86		
3	64QAM	8	0	20.91	20.84	20.87	22	1
3	64QAM	8	4	20.90	20.93	20.86		
3	64QAM	8	7	20.87	20.89	20.82		
3	64QAM	15	0	20.86	20.80	20.80		
Channel				20407	20525	20643	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				824.7	836.5	848.3		
1.4	QPSK	1	0	22.19	22.19	22.14	23	0
1.4	QPSK	1	3	22.19	22.22	22.13		
1.4	QPSK	1	5	22.14	22.15	22.07		
1.4	QPSK	3	0	22.09	22.09	21.98		
1.4	QPSK	3	1	22.32	22.21	22.17		
1.4	QPSK	3	3	22.16	22.06	22.04		
1.4	QPSK	6	0	22.29	22.23	22.18	23	0
1.4	16QAM	1	0	22.09	22.06	21.96	23	0
1.4	16QAM	1	3	22.13	22.16	21.99		
1.4	16QAM	1	5	22.10	22.00	21.86		
1.4	16QAM	3	0	21.82	21.79	21.75		
1.4	16QAM	3	1	21.86	21.84	21.76		
1.4	16QAM	3	3	21.81	21.81	21.74		
1.4	16QAM	6	0	21.82	21.72	21.77	23	0
1.4	64QAM	1	0	21.96	21.88	21.87	23	0
1.4	64QAM	1	3	21.93	21.95	21.81		
1.4	64QAM	1	5	21.89	21.94	21.75		
1.4	64QAM	3	0	21.98	21.89	21.86		
1.4	64QAM	3	1	21.96	21.88	21.91		
1.4	64QAM	3	3	21.92	21.93	21.85		
1.4	64QAM	6	0	20.81	20.73	20.71	22	1

<LTE Band 13>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel					23230			
Frequency (MHz)					782			
10	QPSK	1	0		22.19		23	0
10	QPSK	1	25		22.24			
10	QPSK	1	49		22.17			
10	QPSK	25	0		22.35		23	0
10	QPSK	25	12		22.32			
10	QPSK	25	25		22.40			
10	QPSK	50	0		22.35			
10	16QAM	1	0		22.03		23	0
10	16QAM	1	25		22.14			
10	16QAM	1	49		22.04			
10	16QAM	25	0		21.85		23	0
10	16QAM	25	12		21.88			
10	16QAM	25	25		21.87			
10	16QAM	50	0		21.86			
10	64QAM	1	0		21.87		23	0
10	64QAM	1	25		22.04			
10	64QAM	1	49		21.97			
10	64QAM	25	0		20.89		22	1
10	64QAM	25	12		20.90			
10	64QAM	25	25		20.92			
10	64QAM	50	0		20.88			
Channel				23205	23230	23255	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				779.5	782	784.5		
5	QPSK	1	0	22.21	22.24	22.15	23	0
5	QPSK	1	12	22.16	22.19	22.14		
5	QPSK	1	24	22.21	22.17	22.12		
5	QPSK	12	0	22.28	22.27	22.27	23	0
5	QPSK	12	7	22.36	22.28	22.32		
5	QPSK	12	13	22.33	22.30	22.30		
5	QPSK	25	0	22.31	22.22	22.30		
5	16QAM	1	0	21.97	21.95	21.96	23	0
5	16QAM	1	12	21.88	21.99	21.95		
5	16QAM	1	24	21.95	21.93	21.92		
5	16QAM	12	0	21.78	21.84	21.78	23	0
5	16QAM	12	7	21.87	21.81	21.81		
5	16QAM	12	13	21.83	21.84	21.77		
5	16QAM	25	0	21.87	21.78	21.84		
5	64QAM	1	0	21.90	21.95	21.95	23	0
5	64QAM	1	12	21.93	21.98	21.95		
5	64QAM	1	24	22.00	21.94	21.97		
5	64QAM	12	0	20.84	20.87	20.82	22	1
5	64QAM	12	7	20.76	20.84	20.88		
5	64QAM	12	13	20.89	20.92	20.85		
5	64QAM	25	0	20.82	20.80	20.84		

<LTE Band 25>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				26140	26340	26590		
Frequency (MHz)				1860	1880	1905		
20	QPSK	1	0	18.20	18.17	18.11	19	0
20	QPSK	1	49	18.16	18.18	18.09		
20	QPSK	1	99	18.11	18.13	18.06		
20	QPSK	50	0	18.23	18.24	18.13	19	0
20	QPSK	50	24	18.30	18.35	18.24		
20	QPSK	50	50	18.23	18.28	18.20		
20	QPSK	100	0	18.30	18.28	18.24		
20	16QAM	1	0	18.00	18.04	17.96	19	0
20	16QAM	1	49	17.96	17.95	17.89		
20	16QAM	1	99	17.93	17.95	17.88		
20	16QAM	50	0	17.76	17.78	17.72	19	0
20	16QAM	50	24	17.84	17.84	17.75		
20	16QAM	50	50	17.78	17.82	17.73		
20	16QAM	100	0	17.79	17.79	17.73		
20	64QAM	1	0	17.89	17.87	17.87	19	0
20	64QAM	1	49	17.88	17.92	17.84		
20	64QAM	1	99	17.81	17.92	17.83		
20	64QAM	50	0	17.80	17.79	17.77	19	0
20	64QAM	50	24	17.84	17.87	17.79		
20	64QAM	50	50	17.82	17.85	17.76		
20	64QAM	100	0	17.81	17.84	17.80		
Channel				26115	26340	26615	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1857.5	1880	1907.5		
15	QPSK	1	0	18.19	18.19	18.10	19	0
15	QPSK	1	37	18.14	18.19	18.12		
15	QPSK	1	74	18.14	18.18	18.07		
15	QPSK	36	0	18.25	18.26	18.16	19	0
15	QPSK	36	20	18.34	18.31	18.17		
15	QPSK	36	39	18.26	18.28	18.22		
15	QPSK	75	0	18.29	18.30	18.15		
15	16QAM	1	0	18.02	18.02	17.93	19	0
15	16QAM	1	37	18.00	17.98	17.88		
15	16QAM	1	74	18.05	18.01	17.94		
15	16QAM	36	0	17.76	17.77	17.68	19	0
15	16QAM	36	20	17.80	17.86	17.67		
15	16QAM	36	39	17.76	17.80	17.71		
15	16QAM	75	0	17.81	17.83	17.68		
15	64QAM	1	0	17.92	17.91	17.84	19	0
15	64QAM	1	37	17.93	17.95	17.88		
15	64QAM	1	74	17.91	17.93	17.83		
15	64QAM	36	0	17.83	17.82	17.74	19	0
15	64QAM	36	20	17.89	17.88	17.71		
15	64QAM	36	39	17.83	17.85	17.78		
15	64QAM	75	0	17.83	17.84	17.69		
Channel				26090	26340	26640	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1855	1880	1910		
10	QPSK	1	0	18.12	18.10	18.04	19	0
10	QPSK	1	25	18.12	18.12	18.03		
10	QPSK	1	49	18.09	18.08	18.03		
10	QPSK	25	0	18.24	18.17	18.16	19	0
10	QPSK	25	12	18.29	18.30	18.21		

10	QPSK	25	25	18.27	18.28	18.22		
10	QPSK	50	0	18.28	18.28	18.22		
10	16QAM	1	0	18.07	18.05	17.93	19	0
10	16QAM	1	25	17.98	18.01	17.92		
10	16QAM	1	49	17.98	18.05	17.96		
10	16QAM	25	0	17.77	17.68	17.69	19	0
10	16QAM	25	12	17.80	17.83	17.71		
10	16QAM	25	25	17.78	17.78	17.71		
10	16QAM	50	0	17.79	17.81	17.70		
10	64QAM	1	0	17.93	17.82	17.81	19	0
10	64QAM	1	25	17.93	17.97	17.86		
10	64QAM	1	49	17.91	17.88	17.83		
10	64QAM	25	0	17.82	17.74	17.74	19	0
10	64QAM	25	12	17.85	17.84	17.76		
10	64QAM	25	25	17.83	17.84	17.73		
10	64QAM	50	0	17.83	17.85	17.73		
Channel				26065	26340	26665	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1852.5	1880	1912.5		
5	QPSK	1	0	18.11	18.11	18.03	19	0
5	QPSK	1	12	18.11	18.13	17.99		
5	QPSK	1	24	18.16	18.12	18.04		
5	QPSK	12	0	18.20	18.19	18.08	19	0
5	QPSK	12	7	18.28	18.29	18.20		
5	QPSK	12	13	18.28	18.28	18.18		
5	QPSK	25	0	18.19	18.23	18.17		
5	16QAM	1	0	17.95	17.94	17.88	19	0
5	16QAM	1	12	17.88	17.85	17.92		
5	16QAM	1	24	17.93	18.00	17.83		
5	16QAM	12	0	17.70	17.74	17.63	19	0
5	16QAM	12	7	17.79	17.82	17.69		
5	16QAM	12	13	17.78	17.82	17.71		
5	16QAM	25	0	17.77	17.79	17.67		
5	64QAM	1	0	17.94	17.90	17.87	19	0
5	64QAM	1	12	17.92	17.95	17.85		
5	64QAM	1	24	17.94	17.98	17.90		
5	64QAM	12	0	17.77	17.79	17.67	19	0
5	64QAM	12	7	17.83	17.86	17.74		
5	64QAM	12	13	17.85	17.86	17.76		
5	64QAM	25	0	17.74	17.76	17.70		
Channel				26055	26340	26675	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1851.5	1880	1913.5		
3	QPSK	1	0	18.06	18.10	17.96	19	0
3	QPSK	1	8	18.03	18.11	17.94		
3	QPSK	1	14	18.09	18.04	17.94		
3	QPSK	8	0	18.18	18.17	18.02	19	0
3	QPSK	8	4	18.27	18.24	18.14		
3	QPSK	8	7	18.27	18.27	18.11		
3	QPSK	15	0	18.10	18.15	18.13		
3	16QAM	1	0	17.86	17.89	17.85	19	0
3	16QAM	1	8	17.83	17.78	17.84		
3	16QAM	1	14	17.92	18.00	17.73		
3	16QAM	8	0	17.65	17.64	17.63	19	0
3	16QAM	8	4	17.69	17.76	17.62		
3	16QAM	8	7	17.72	17.77	17.68		
3	16QAM	15	0	17.68	17.71	17.61		
3	64QAM	1	0	17.90	17.85	17.77	19	0

3	64QAM	1	8	17.85	17.86	17.79		
3	64QAM	1	14	17.94	17.92	17.83		
3	64QAM	8	0	17.69	17.73	17.63	19	0
3	64QAM	8	4	17.82	17.86	17.66		
3	64QAM	8	7	17.77	17.80	17.69		
3	64QAM	15	0	17.74	17.67	17.60		
Channel				26047	26340	26683	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1850.7	1880	1914.3		
1.4	QPSK	1	0	18.04	18.04	17.94	19	0
1.4	QPSK	1	3	18.12	18.10	18.00		
1.4	QPSK	1	5	18.13	18.13	18.00		
1.4	QPSK	3	0	17.95	17.98	17.83		
1.4	QPSK	3	1	18.10	18.24	18.01		
1.4	QPSK	3	3	18.06	18.07	17.96		
1.4	QPSK	6	0	18.17	18.19	18.06	19	0
1.4	16QAM	1	0	17.91	17.86	17.75	19	0
1.4	16QAM	1	3	18.03	18.03	17.90		
1.4	16QAM	1	5	17.91	17.94	17.83		
1.4	16QAM	3	0	17.74	17.72	17.57		
1.4	16QAM	3	1	17.76	17.75	17.67		
1.4	16QAM	3	3	17.72	17.76	17.64		
1.4	16QAM	6	0	17.74	17.75	17.63	19	0
1.4	64QAM	1	0	17.78	17.81	17.70	19	0
1.4	64QAM	1	3	17.86	17.86	17.77		
1.4	64QAM	1	5	17.83	17.86	17.77		
1.4	64QAM	3	0	17.82	17.84	17.74		
1.4	64QAM	3	1	17.91	17.89	17.80		
1.4	64QAM	3	3	17.88	17.89	17.80		
1.4	64QAM	6	0	17.70	17.71	17.61	19	0

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BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				132072	132322	132572		
Frequency (MHz)				1720	1745	1770		
20	QPSK	1	0	17.98	17.93	17.95	19	0
20	QPSK	1	49	17.75	17.81	17.85		
20	QPSK	1	99	17.75	17.79	17.81		
20	QPSK	50	0	17.87	17.93	17.99	19	0
20	QPSK	50	24	17.94	17.98	18.11		
20	QPSK	50	50	17.92	17.95	17.94		
20	QPSK	100	0	17.92	17.96	17.98		
20	16QAM	1	0	17.77	17.80	17.87	19	0
20	16QAM	1	49	17.63	17.68	17.76		
20	16QAM	1	99	17.53	17.62	17.62		
20	16QAM	50	0	17.43	17.46	17.52	19	0
20	16QAM	50	24	17.49	17.54	17.57		
20	16QAM	50	50	17.41	17.44	17.48		
20	16QAM	100	0	17.43	17.47	17.50		
20	64QAM	1	0	17.63	17.64	17.69	19	0
20	64QAM	1	49	17.54	17.57	17.67		
20	64QAM	1	99	17.54	17.57	17.59		
20	64QAM	50	0	17.44	17.49	17.58	19	0
20	64QAM	50	24	17.50	17.55	17.61		

20	64QAM	50	50	17.48	17.48	17.53		
20	64QAM	100	0	17.49	17.48	17.50		
Channel				132047	132322	132597	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1717.5	1745	1772.5		
15	QPSK	1	0	17.91	17.97	18.04	19	0
15	QPSK	1	37	17.89	17.90	17.93		
15	QPSK	1	74	17.89	17.85	17.89		
15	QPSK	36	0	18.10	18.01	18.08	19	0
15	QPSK	36	20	18.05	18.10	18.04		
15	QPSK	36	39	18.02	18.02	18.00		
15	QPSK	75	0	18.07	18.06	17.97		
15	16QAM	1	0	17.81	17.83	17.87	19	0
15	16QAM	1	37	17.71	17.72	17.79		
15	16QAM	1	74	17.68	17.70	17.77		
15	16QAM	36	0	17.58	17.52	17.57	19	0
15	16QAM	36	20	17.57	17.58	17.54		
15	16QAM	36	39	17.52	17.52	17.54		
15	16QAM	75	0	17.58	17.58	17.53		
15	64QAM	1	0	17.68	17.68	17.80	19	0
15	64QAM	1	37	17.69	17.68	17.73		
15	64QAM	1	74	17.66	17.60	17.64		
15	64QAM	36	0	17.66	17.58	17.65	19	0
15	64QAM	36	20	17.62	17.62	17.61		
15	64QAM	36	39	17.58	17.58	17.60		
15	64QAM	75	0	17.59	17.59	17.58		
Channel				132022	132322	132622	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1715	1745	1775		
10	QPSK	1	0	17.95	17.97	18.01	19	0
10	QPSK	1	25	17.89	17.93	17.96		
10	QPSK	1	49	17.81	17.84	17.87		
10	QPSK	25	0	18.05	17.99	18.03	19	0
10	QPSK	25	12	18.06	18.08	18.03		
10	QPSK	25	25	18.03	18.05	18.04		
10	QPSK	50	0	18.08	18.05	18.02		
10	16QAM	1	0	17.87	17.87	17.87	19	0
10	16QAM	1	25	17.77	17.84	17.81		
10	16QAM	1	49	17.77	17.79	17.81		
10	16QAM	25	0	17.61	17.53	17.59	19	0
10	16QAM	25	12	17.59	17.59	17.55		
10	16QAM	25	25	17.54	17.52	17.58		
10	16QAM	50	0	17.59	17.57	17.58		
10	64QAM	1	0	17.80	17.70	17.72	19	0
10	64QAM	1	25	17.70	17.79	17.79		
10	64QAM	1	49	17.63	17.67	17.69		
10	64QAM	25	0	17.62	17.58	17.60	19	0
10	64QAM	25	12	17.65	17.63	17.61		
10	64QAM	25	25	17.58	17.62	17.63		
10	64QAM	50	0	17.61	17.63	17.59		
Channel				131997	132322	132647	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1712.5	1745	1777.5		
5	QPSK	1	0	17.99	17.91	18.01	19	0
5	QPSK	1	12	17.92	17.92	17.95		
5	QPSK	1	24	17.88	17.85	17.94		
5	QPSK	12	0	18.09	18.00	18.06	19	0
5	QPSK	12	7	18.07	18.10	18.08		
5	QPSK	12	13	18.04	18.01	18.03		

5	QPSK	25	0	18.04	18.03	18.03		
5	16QAM	1	0	17.79	17.76	17.78	19	0
5	16QAM	1	12	17.74	17.88	17.79		
5	16QAM	1	24	17.75	17.64	17.72		
5	16QAM	12	0	17.62	17.47	17.60	19	0
5	16QAM	12	7	17.64	17.58	17.61		
5	16QAM	12	13	17.58	17.54	17.52		
5	16QAM	25	0	17.62	17.57	17.57		
5	64QAM	1	0	17.80	17.67	17.83	19	0
5	64QAM	1	12	17.80	17.74	17.68		
5	64QAM	1	24	17.72	17.66	17.76		
5	64QAM	12	0	17.71	17.57	17.67	19	0
5	64QAM	12	7	17.70	17.68	17.69		
5	64QAM	12	13	17.64	17.62	17.63		
5	64QAM	25	0	17.61	17.58	17.56		
Channel				131987	132322	132657	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1711.5	1745	1778.5		
3	QPSK	1	0	17.93	17.84	17.96	19	0
3	QPSK	1	8	17.86	17.82	17.88		
3	QPSK	1	14	17.88	17.75	17.87		
3	QPSK	8	0	18.07	17.99	17.96	19	0
3	QPSK	8	4	18.02	18.10	18.06		
3	QPSK	8	7	18.00	17.95	17.99		
3	QPSK	15	0	17.94	18.02	17.95		
3	16QAM	1	0	17.76	17.75	17.77	19	0
3	16QAM	1	8	17.68	17.87	17.70		
3	16QAM	1	14	17.75	17.63	17.71		
3	16QAM	8	0	17.53	17.47	17.53	19	0
3	16QAM	8	4	17.64	17.56	17.52		
3	16QAM	8	7	17.55	17.46	17.45		
3	16QAM	15	0	17.61	17.55	17.49		
3	64QAM	1	0	17.73	17.59	17.80	19	0
3	64QAM	1	8	17.73	17.68	17.59		
3	64QAM	1	14	17.68	17.62	17.74		
3	64QAM	8	0	17.69	17.56	17.57	19	0
3	64QAM	8	4	17.67	17.64	17.59		
3	64QAM	8	7	17.55	17.60	17.57		
3	64QAM	15	0	17.55	17.48	17.52		
Channel				131979	132322	132665	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1710.7	1745	1779.3		
1.4	QPSK	1	0	17.97	17.90	17.91	19	0
1.4	QPSK	1	3	17.95	17.94	17.94		
1.4	QPSK	1	5	17.92	17.86	17.89		
1.4	QPSK	3	0	17.87	17.80	17.83		
1.4	QPSK	3	1	17.95	18.03	18.09		
1.4	QPSK	3	3	17.90	17.84	17.88		
1.4	QPSK	6	0	18.04	17.99	18.01	19	0
1.4	16QAM	1	0	17.75	17.84	17.73	19	0
1.4	16QAM	1	3	17.80	17.81	17.94		
1.4	16QAM	1	5	17.76	17.84	17.75		
1.4	16QAM	3	0	17.52	17.50	17.62		
1.4	16QAM	3	1	17.60	17.55	17.59		
1.4	16QAM	3	3	17.58	17.53	17.54		
1.4	16QAM	6	0	17.65	17.59	17.58	19	0
1.4	64QAM	1	0	17.70	17.67	17.69	19	0
1.4	64QAM	1	3	17.72	17.66	17.70		

1.4	64QAM	1	5	17.67	17.65	17.64		
1.4	64QAM	3	0	17.76	17.69	17.72		
1.4	64QAM	3	1	17.75	17.76	17.77		
1.4	64QAM	3	3	17.71	17.68	17.69		
1.4	64QAM	6	0	17.58	17.57	17.55	19	0

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BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				133222	133322	133372		
Frequency (MHz)				673	683	688		
20	QPSK	1	0	23.86	23.98	23.99	25	0
20	QPSK	1	49	24.05	24.01	23.98		
20	QPSK	1	99	24.08	24.06	24.02		
20	QPSK	50	0	23.10	23.15	23.15	24	1
20	QPSK	50	24	23.21	23.17	23.12		
20	QPSK	50	50	23.21	23.16	23.12		
20	QPSK	100	0	23.17	23.12	23.09		
20	16QAM	1	0	23.41	23.33	23.38	24	1
20	16QAM	1	49	23.39	23.43	23.36		
20	16QAM	1	99	23.42	23.35	23.33		
20	16QAM	50	0	22.08	22.14	22.17	23	2
20	16QAM	50	24	22.22	22.18	22.13		
20	16QAM	50	50	22.21	22.17	22.12		
20	16QAM	100	0	22.19	22.12	22.09		
20	64QAM	1	0	21.39	22.12	22.24	23	2
20	64QAM	1	49	22.22	22.29	22.30		
20	64QAM	1	99	22.29	22.21	22.21		
20	64QAM	50	0	20.69	21.13	21.07	22	3
20	64QAM	50	24	21.17	21.17	21.16		
20	64QAM	50	50	21.20	21.15	21.16		
20	64QAM	100	0	21.15	21.11	21.12		
Channel				133197	133297	133397	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				670.5	680.5	690.5		
15	QPSK	1	0	23.95	24.00	24.03	25	0
15	QPSK	1	37	23.97	23.98	23.99		
15	QPSK	1	74	23.96	23.95	23.88		
15	QPSK	36	0	23.09	23.12	23.10	24	1
15	QPSK	36	20	23.13	23.16	23.09		
15	QPSK	36	39	23.15	23.16	23.06		
15	QPSK	75	0	23.15	23.13	23.05		
15	16QAM	1	0	23.41	23.32	23.35	24	1
15	16QAM	1	37	23.32	23.45	23.29		
15	16QAM	1	74	23.42	23.38	23.27		
15	16QAM	36	0	22.13	22.12	22.12	23	2
15	16QAM	36	20	22.14	22.14	22.06		
15	16QAM	36	39	22.15	22.17	22.07		
15	16QAM	75	0	22.16	22.14	22.06		
15	64QAM	1	0	21.26	22.19	21.86	23	2
15	64QAM	1	37	21.99	22.33	22.22		
15	64QAM	1	74	22.32	22.29	22.10		
15	64QAM	36	0	20.34	21.17	21.14	22	3
15	64QAM	36	20	20.87	21.18	21.13		
15	64QAM	36	39	21.18	21.15	21.13		

15	64QAM	75	0	21.00	21.15	21.08		
Channel				133172	133272	133422	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				668	678	693		
10	QPSK	1	0	23.88	23.97	23.97	25	0
10	QPSK	1	25	23.95	23.96	23.94		
10	QPSK	1	49	23.96	23.95	23.86		
10	QPSK	25	0	23.06	23.12	23.04	24	1
10	QPSK	25	12	23.13	23.21	23.06		
10	QPSK	25	25	23.09	23.21	23.07		
10	QPSK	50	0	23.14	23.21	23.04		
10	16QAM	1	0	23.17	23.37	23.34	24	1
10	16QAM	1	25	23.28	23.36	23.26		
10	16QAM	1	49	23.36	23.42	23.26		
10	16QAM	25	0	22.07	22.13	22.05	23	2
10	16QAM	25	12	22.16	22.22	22.07		
10	16QAM	25	25	22.11	22.20	22.07		
10	16QAM	50	0	22.15	22.21	22.06		
10	64QAM	1	0	21.01	22.16	22.19	23	2
10	64QAM	1	25	21.62	22.32	22.18		
10	64QAM	1	49	22.22	22.36	22.15		
10	64QAM	25	0	20.15	21.14	21.09	22	3
10	64QAM	25	12	20.46	21.28	21.12		
10	64QAM	25	25	20.66	21.19	21.12		
10	64QAM	50	0	20.43	21.14	21.10		
Channel				133147	133247	133447	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				665.5	675.5	695.5		
5	QPSK	1	0	23.63	23.98	23.97	25	0
5	QPSK	1	12	23.72	23.97	23.91		
5	QPSK	1	24	23.98	23.96	23.87		
5	QPSK	12	0	22.83	23.10	23.01	24	1
5	QPSK	12	7	22.83	23.16	23.00		
5	QPSK	12	13	23.00	23.07	22.99		
5	QPSK	25	0	22.87	23.11	22.93		
5	16QAM	1	0	22.84	23.38	23.25	24	1
5	16QAM	1	12	22.99	23.23	23.14		
5	16QAM	1	24	23.28	23.25	23.12		
5	16QAM	12	0	21.90	22.13	22.05	23	2
5	16QAM	12	7	22.02	22.18	21.98		
5	16QAM	12	13	22.07	22.09	21.97		
5	16QAM	25	0	21.91	22.14	21.97		
5	64QAM	1	0	20.84	22.22	22.11	23	2
5	64QAM	1	12	21.08	22.29	22.19		
5	64QAM	1	24	21.44	22.25	22.02		
5	64QAM	12	0	20.06	21.16	21.06	22	3
5	64QAM	12	7	20.24	21.23	21.04		
5	64QAM	12	13	20.28	21.14	20.96		
5	64QAM	25	0	20.06	21.14	20.96		

<DSI3_Sub Ant>

<LTE Band 5>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				20450	20525	20600		
Frequency (MHz)				829	836.5	844		
10	QPSK	1	0	21.86	21.85	21.85	22.5	0
10	QPSK	1	25	21.77	21.84	21.77		
10	QPSK	1	49	21.77	21.73	21.68		
10	QPSK	25	0	21.89	21.95	21.90	22.5	0
10	QPSK	25	12	21.94	21.94	21.89		
10	QPSK	25	25	21.91	21.98	21.88		
10	QPSK	50	0	21.92	21.95	21.87		
10	16QAM	1	0	21.70	21.73	21.70	22.5	0
10	16QAM	1	25	21.61	21.73	21.64		
10	16QAM	1	49	21.71	21.71	21.58		
10	16QAM	25	0	21.40	21.45	21.37	22.5	0
10	16QAM	25	12	21.49	21.45	21.37		
10	16QAM	25	25	21.48	21.48	21.39		
10	16QAM	50	0	21.50	21.45	21.38		
10	64QAM	1	0	21.60	21.55	21.59	22.5	0
10	64QAM	1	25	21.66	21.66	21.61		
10	64QAM	1	49	21.64	21.54	21.46		
10	64QAM	25	0	20.49	20.48	20.44	21.5	1
10	64QAM	25	12	20.58	20.49	20.44		
10	64QAM	25	25	20.52	20.50	20.42		
10	64QAM	50	0	20.56	20.47	20.41		
Channel				20425	20525	20625	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				826.5	836.5	846.5		
5	QPSK	1	0	21.90	21.97	21.92	22.5	0
5	QPSK	1	12	21.76	21.89	21.74		
5	QPSK	1	24	21.76	21.74	21.71		
5	QPSK	12	0	21.96	21.97	21.86	22.5	0
5	QPSK	12	7	21.91	21.95	21.83		
5	QPSK	12	13	21.85	21.94	21.84		
5	QPSK	25	0	21.89	21.87	21.77		
5	16QAM	1	0	21.72	21.71	21.66	22.5	0
5	16QAM	1	12	21.50	21.56	21.51		
5	16QAM	1	24	21.57	21.61	21.56		
5	16QAM	12	0	21.46	21.49	21.37	22.5	0
5	16QAM	12	7	21.42	21.44	21.34		
5	16QAM	12	13	21.36	21.44	21.34		
5	16QAM	25	0	21.48	21.45	21.34		
5	64QAM	1	0	21.72	21.73	21.63	22.5	0
5	64QAM	1	12	21.65	21.69	21.47		
5	64QAM	1	24	21.63	21.55	21.47		
5	64QAM	12	0	20.61	20.55	20.45	21.5	1
5	64QAM	12	7	20.54	20.50	20.38		
5	64QAM	12	13	20.48	20.50	20.39		
5	64QAM	25	0	20.50	20.46	20.33		
Channel				20415	20525	20635	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				825.5	836.5	847.5		
3	QPSK	1	0	21.94	21.91	21.83	22.5	0
3	QPSK	1	8	21.91	21.92	21.79		

3	QPSK	1	14	21.80	21.81	21.71		
3	QPSK	8	0	21.96	21.95	21.88	22.5	0
3	QPSK	8	4	21.97	21.93	21.88		
3	QPSK	8	7	21.94	21.92	21.84		
3	QPSK	15	0	21.97	21.89	21.86		
3	16QAM	1	0	21.77	21.73	21.63	22.5	0
3	16QAM	1	8	21.75	21.68	21.64		
3	16QAM	1	14	21.56	21.66	21.54		
3	16QAM	8	0	21.50	21.41	21.38	22.5	0
3	16QAM	8	4	21.57	21.51	21.45		
3	16QAM	8	7	21.43	21.47	21.34		
3	16QAM	15	0	21.51	21.43	21.38		
3	64QAM	1	0	21.69	21.69	21.64	22.5	0
3	64QAM	1	8	21.72	21.73	21.56		
3	64QAM	1	14	21.65	21.57	21.45		
3	64QAM	8	0	20.56	20.52	20.46	21.5	1
3	64QAM	8	4	20.58	20.48	20.44		
3	64QAM	8	7	20.53	20.52	20.41		
3	64QAM	15	0	20.53	20.46	20.41		
Channel				20407	20525	20643	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				824.7	836.5	848.3		
1.4	QPSK	1	0	21.83	21.82	21.73	22.5	0
1.4	QPSK	1	3	21.87	21.85	21.69		
1.4	QPSK	1	5	21.79	21.80	21.66		
1.4	QPSK	3	0	21.76	21.73	21.58		
1.4	QPSK	3	1	21.85	21.84	21.86		
1.4	QPSK	3	3	21.79	21.76	21.62		
1.4	QPSK	6	0	21.91	21.84	21.78	22.5	0
1.4	16QAM	1	0	21.72	21.61	21.52	22.5	0
1.4	16QAM	1	3	21.73	21.77	21.65		
1.4	16QAM	1	5	21.60	21.61	21.51		
1.4	16QAM	3	0	21.48	21.44	21.33		
1.4	16QAM	3	1	21.50	21.46	21.33		
1.4	16QAM	3	3	21.44	21.44	21.29		
1.4	16QAM	6	0	21.47	21.39	21.36	22.5	0
1.4	64QAM	1	0	21.25	21.50	21.41	22.5	0
1.4	64QAM	1	3	21.57	21.59	21.46		
1.4	64QAM	1	5	21.56	21.55	21.39		
1.4	64QAM	3	0	21.62	21.51	21.42		
1.4	64QAM	3	1	21.64	21.57	21.48		
1.4	64QAM	3	3	21.59	21.62	21.41		
1.4	64QAM	6	0	20.46	20.35	20.32	21.5	1

<LTE Band 13>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel					23230			
Frequency (MHz)					782			
10	QPSK	1	0		21.46		22.5	0
10	QPSK	1	25		21.52			
10	QPSK	1	49		21.50			
10	QPSK	25	0		21.58		22.5	0
10	QPSK	25	12		21.61			
10	QPSK	25	25		21.69			

10	QPSK	50	0		21.63			
10	16QAM	1	0		21.28		22.5	0
10	16QAM	1	25		21.32			
10	16QAM	1	49		21.38			
10	16QAM	25	0		21.08		22.5	0
10	16QAM	25	12		21.12			
10	16QAM	25	25		21.18			
10	16QAM	50	0		21.11			
10	64QAM	1	0		21.17		22.5	0
10	64QAM	1	25		21.32			
10	64QAM	1	49		21.28			
10	64QAM	25	0		20.11		21.5	1
10	64QAM	25	12		20.17			
10	64QAM	25	25		20.20			
10	64QAM	50	0		20.13			
Channel				23205	23230	23255	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				779.5	782	784.5		
5	QPSK	1	0	21.53	21.55	21.52	22.5	0
5	QPSK	1	12	21.55	21.54	21.55		
5	QPSK	1	24	21.57	21.59	21.55		
5	QPSK	12	0	21.59	21.61	21.62	22.5	0
5	QPSK	12	7	21.66	21.65	21.68		
5	QPSK	12	13	21.66	21.68	21.64		
5	QPSK	25	0	21.61	21.59	21.67		
5	16QAM	1	0	21.25	21.30	21.29	22.5	0
5	16QAM	1	12	21.26	21.33	21.31		
5	16QAM	1	24	21.34	21.32	21.27		
5	16QAM	12	0	21.10	21.15	21.10	22.5	0
5	16QAM	12	7	21.19	21.18	21.18		
5	16QAM	12	13	21.13	21.17	21.17		
5	16QAM	25	0	21.15	21.12	21.20		
5	64QAM	1	0	21.19	21.22	21.23	22.5	0
5	64QAM	1	12	21.23	21.33	21.36		
5	64QAM	1	24	21.32	21.35	21.33		
5	64QAM	12	0	20.21	20.22	20.21	21.5	1
5	64QAM	12	7	20.23	20.26	20.23		
5	64QAM	12	13	20.21	20.25	20.21		
5	64QAM	25	0	20.16	20.11	20.21		

<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.

a. 3GPP TS 36.211 section 4.2 for Type 2 Frame Structure and Table 4.2-2 for uplink-downlink configurations
b. "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
c. Establishing connections with base station simulators ensure a consistent means for testing SAR and recommended for evaluating SAR. The Anritsu MT8820C (firmware: #22.52#004) was used for LTE output power measurements and SAR testing.

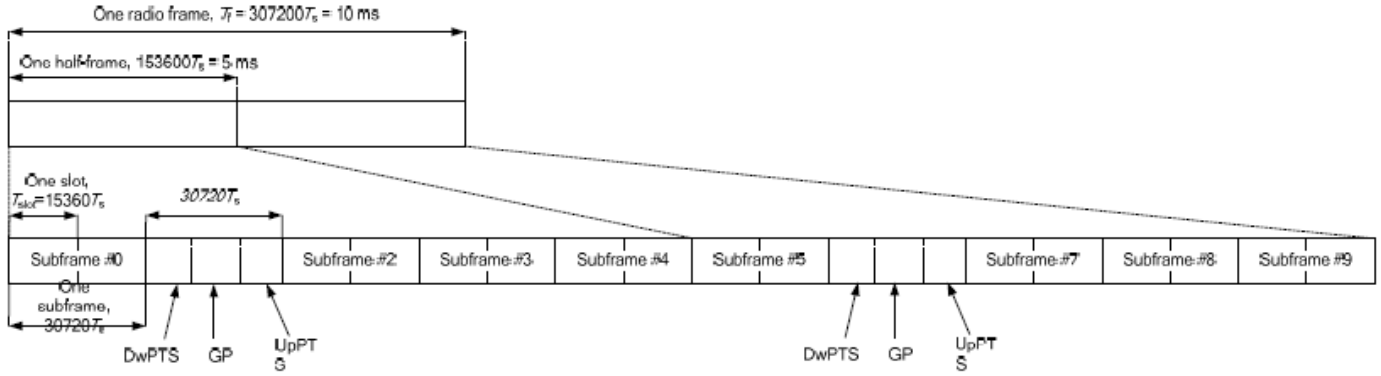

Figure 4.2-1: Frame structure type 2 (for 5 ms switch-point periodicity).

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	$26336 \cdot T_s$			$7680 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$
5	$6592 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$	$20480 \cdot T_s$		
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 subfames, 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.

<DSI2_Main Ant>

<LTE Band 41>

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)	MPR (dB)
Channel				39750	40185	40620	41055	41490		
Frequency (MHz)				2506	2549.5	2593	2636.5	2680		
20	QPSK	1	0	24.00	24.14	24.33	24.34	24.21	25	0
20	QPSK	1	49	24.00	24.15	24.31	24.21	24.01		
20	QPSK	1	99	24.01	24.17	24.40	24.25	24.00		
20	QPSK	50	0	23.13	23.27	23.39	23.43	23.27	24	1
20	QPSK	50	24	23.21	23.37	23.48	23.42	23.25		
20	QPSK	50	50	23.20	23.36	23.48	23.39	23.18		
20	QPSK	100	0	23.20	23.36	23.47	23.43	23.23		
20	16QAM	1	0	22.90	23.08	23.27	23.23	23.13	24	1
20	16QAM	1	49	22.90	23.04	23.23	23.15	22.94		
20	16QAM	1	99	22.89	23.11	23.25	23.16	22.91		
20	16QAM	50	0	22.14	22.30	22.43	22.48	22.28	23	2
20	16QAM	50	24	22.24	22.39	22.52	22.46	22.25		
20	16QAM	50	50	22.21	22.39	22.50	22.44	22.20		
20	16QAM	100	0	22.22	22.37	22.48	22.44	22.23		
20	64QAM	1	0	21.87	21.93	22.14	22.17	22.05	23	2
20	64QAM	1	49	21.84	21.97	22.18	22.16	21.88		
20	64QAM	1	99	21.82	22.04	22.16	22.12	21.77		
20	64QAM	50	0	21.17	21.30	21.41	21.46	21.29	22	3
20	64QAM	50	24	21.26	21.38	21.51	21.49	21.30		
20	64QAM	50	50	21.19	21.37	21.49	21.43	21.19		
20	64QAM	100	0	21.22	21.37	21.49	21.46	21.25		
Channel				39725	40173	40620	41068	41515	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2503.5	2548.3	2593	2637.8	2682.5		
15	QPSK	1	0	24.01	24.18	24.32	24.27	24.09	25	0
15	QPSK	1	37	24.02	24.17	24.33	24.22	24.00		
15	QPSK	1	74	24.00	24.30	24.39	24.33	24.06		
15	QPSK	36	0	23.14	23.28	23.41	23.36	23.22	24	1
15	QPSK	36	20	23.20	23.35	23.49	23.42	23.18		
15	QPSK	36	39	23.18	23.32	23.45	23.39	23.14		
15	QPSK	75	0	23.19	23.34	23.49	23.41	23.19		
15	16QAM	1	0	22.92	23.10	23.25	23.18	23.03	24	1
15	16QAM	1	37	22.88	23.02	23.19	23.09	22.90		
15	16QAM	1	74	22.94	23.18	23.30	23.25	22.95		
15	16QAM	36	0	22.09	22.24	22.37	22.32	22.18	23	2
15	16QAM	36	20	22.17	22.32	22.45	22.39	22.13		
15	16QAM	36	39	22.14	22.33	22.43	22.34	22.10		
15	16QAM	75	0	22.21	22.37	22.49	22.43	22.23		
15	64QAM	1	0	21.83	21.94	22.14	22.10	21.97	23	2
15	64QAM	1	37	21.87	22.03	22.18	22.14	21.84		
15	64QAM	1	74	21.84	22.14	22.26	22.19	21.86		
15	64QAM	36	0	21.14	21.28	21.42	21.38	21.27	22	3
15	64QAM	36	20	21.19	21.35	21.48	21.41	21.18		
15	64QAM	36	39	21.20	21.36	21.48	21.43	21.17		
15	64QAM	75	0	21.21	21.36	21.49	21.44	21.22		
Channel				39700	40160	40620	41080	41540	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2501	2547	2593	2639	2685		
10	QPSK	1	0	24.10	24.24	24.37	24.34	24.09	25	0
10	QPSK	1	25	24.10	24.27	24.39	24.33	24.10		
10	QPSK	1	49	24.11	24.28	24.36	24.31	24.05		

10	QPSK	25	0	23.21	23.27	23.43	23.37	23.20	24	1
10	QPSK	25	12	23.23	23.38	23.53	23.45	23.22		
10	QPSK	25	25	23.19	23.36	23.50	23.43	23.19		
10	QPSK	50	0	23.21	23.36	23.51	23.44	23.19		
10	16QAM	1	0	23.01	23.13	23.31	23.28	23.05	24	1
10	16QAM	1	25	22.98	23.14	23.34	23.22	23.00		
10	16QAM	1	49	22.97	23.19	23.32	23.24	22.99		
10	16QAM	25	0	22.25	22.30	22.45	22.37	22.22	23	2
10	16QAM	25	12	22.27	22.42	22.56	22.51	22.24		
10	16QAM	25	25	22.22	22.37	22.51	22.44	22.20		
10	16QAM	50	0	22.25	22.38	22.54	22.48	22.22		
10	64QAM	1	0	22.06	22.10	22.26	22.19	22.06	23	2
10	64QAM	1	25	22.05	22.24	22.38	22.28	21.91		
10	64QAM	1	49	22.01	22.14	22.30	22.21	21.93		
10	64QAM	25	0	21.27	21.35	21.53	21.45	21.29	22	3
10	64QAM	25	12	21.31	21.46	21.62	21.54	21.32		
10	64QAM	25	25	21.23	21.46	21.57	21.49	21.27		
10	64QAM	50	0	21.22	21.39	21.54	21.48	21.22		
Channel				39675	40148	40620	41093	41565	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2498.5	2545.8	2593	2640.30	2687.5		
5	QPSK	1	0	24.08	24.17	24.29	24.26	24.02	25	0
5	QPSK	1	12	24.09	24.25	24.38	24.32	24.09		
5	QPSK	1	24	24.01	24.19	24.34	24.26	23.97		
5	QPSK	12	0	23.20	23.29	23.37	23.38	23.14	24	1
5	QPSK	12	7	23.24	23.36	23.50	23.45	23.18		
5	QPSK	12	13	23.18	23.31	23.42	23.38	23.11		
5	QPSK	25	0	23.15	23.29	23.42	23.36	23.12		
5	16QAM	1	0	22.94	23.04	23.16	23.09	22.90	24	1
5	16QAM	1	12	22.91	23.06	23.24	23.11	22.93		
5	16QAM	1	24	22.93	23.08	23.21	23.13	22.88		
5	16QAM	12	0	22.17	22.28	22.37	22.35	22.14	23	2
5	16QAM	12	7	22.21	22.38	22.50	22.43	22.18		
5	16QAM	12	13	22.12	22.27	22.44	22.34	22.10		
5	16QAM	25	0	22.18	22.34	22.50	22.44	22.14		
5	64QAM	1	0	22.02	22.01	22.17	22.12	21.89	23	2
5	64QAM	1	12	21.86	22.12	22.29	22.07	21.93		
5	64QAM	1	24	21.98	22.13	22.29	22.17	21.86		
5	64QAM	12	0	21.18	21.33	21.40	21.36	21.14	22	3
5	64QAM	12	7	21.25	21.40	21.53	21.43	21.19		
5	64QAM	12	13	21.15	21.33	21.46	21.39	21.13		
5	64QAM	25	0	21.22	21.38	21.50	21.43	21.20		

<LTE Band 48>

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)	MPR (dB)
Channel				55340	55830	56150	56640		
Frequency (MHz)				3560	3609	3641	3690		
20	QPSK	1	0	24.03	24.09	24.05	23.85	25	0
20	QPSK	1	49	23.82	23.84	23.79	23.60		
20	QPSK	1	99	23.80	23.84	23.70	23.50		
20	QPSK	50	0	23.05	23.04	23.09	22.89	24	1
20	QPSK	50	24	23.02	23.07	23.02	22.82		
20	QPSK	50	50	22.93	22.98	22.91	22.72		
20	QPSK	100	0	22.98	23.04	22.99	22.76		
20	16QAM	1	0	22.88	22.97	22.93	22.80	24	1
20	16QAM	1	49	22.75	22.72	22.74	22.52		
20	16QAM	1	99	22.61	22.69	22.59	22.38		
20	16QAM	50	0	22.07	22.04	22.08	21.91	23	2
20	16QAM	50	24	22.02	22.07	22.03	21.82		
20	16QAM	50	50	21.94	22.01	21.94	21.74		
20	16QAM	100	0	22.02	22.08	21.99	21.79		
20	64QAM	1	0	21.69	21.72	21.79	21.57	23	2
20	64QAM	1	49	21.53	21.56	21.52	21.31		
20	64QAM	1	99	21.49	21.54	21.36	21.14		
20	64QAM	50	0	21.09	21.07	21.11	20.76	22	3
20	64QAM	50	24	21.05	21.10	21.04	20.75		
20	64QAM	50	50	20.96	20.99	20.95	20.68		
20	64QAM	100	0	21.01	21.07	21.00	20.75		
Channel				55315	55820	56160	56665	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				3557.5	3608	3642	3692.5		
15	QPSK	1	0	23.89	24.02	24.01	23.83	25	0
15	QPSK	1	37	23.79	23.82	23.79	23.51		
15	QPSK	1	74	23.77	23.88	23.78	23.54		
15	QPSK	36	0	23.03	23.11	23.06	22.83	24	1
15	QPSK	36	20	22.96	23.03	22.98	22.76		
15	QPSK	36	39	22.89	22.98	22.91	22.65		
15	QPSK	75	0	22.98	23.05	22.99	22.79		
15	16QAM	1	0	22.79	22.86	22.83	22.61	24	1
15	16QAM	1	37	22.65	22.69	22.64	22.35		
15	16QAM	1	74	22.66	22.73	22.66	22.43		
15	16QAM	36	0	21.99	22.04	22.02	21.76	23	2
15	16QAM	36	20	21.90	21.99	21.94	21.71		
15	16QAM	36	39	21.87	21.95	21.85	21.60		
15	16QAM	75	0	21.98	22.04	21.99	21.76		
15	64QAM	1	0	21.59	21.65	21.71	21.47	23	2
15	64QAM	1	37	21.57	21.63	21.61	21.35		
15	64QAM	1	74	21.52	21.59	21.44	21.30		
15	64QAM	36	0	21.03	21.11	21.07	20.85	22	3
15	64QAM	36	20	20.98	21.02	20.98	20.75		
15	64QAM	36	39	20.91	20.97	20.93	20.67		
15	64QAM	75	0	21.00	21.05	21.00	20.78		
Channel				55290	55815	56165	56690	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				3555	3607.5	3642.5	3695		
10	QPSK	1	0	23.81	23.98	23.92	23.80	25	0
10	QPSK	1	25	23.75	23.72	23.78	23.48		
10	QPSK	1	49	23.76	23.88	23.76	23.54		
10	QPSK	25	0	23.03	23.02	22.97	22.77	24	1
10	QPSK	25	12	22.91	22.96	22.93	22.71		

10	QPSK	25	25	22.89	22.98	22.83	22.60		
10	QPSK	50	0	22.92	23.03	22.97	22.72		
10	16QAM	1	0	22.72	22.76	22.81	22.51	24	1
10	16QAM	1	25	22.62	22.61	22.62	22.29		
10	16QAM	1	49	22.66	22.70	22.60	22.38		
10	16QAM	25	0	21.92	21.94	21.99	21.74	23	2
10	16QAM	25	12	21.88	21.91	21.92	21.66		
10	16QAM	25	25	21.86	21.90	21.81	21.55		
10	16QAM	50	0	21.90	22.00	21.89	21.67		
10	64QAM	1	0	21.52	21.59	21.68	21.37	23	2
10	64QAM	1	25	21.48	21.53	21.59	21.29		
10	64QAM	1	49	21.50	21.54	21.42	21.22		
10	64QAM	25	0	21.01	21.03	21.05	20.76	22	3
10	64QAM	25	12	20.92	21.00	20.89	20.65		
10	64QAM	25	25	20.91	20.96	20.87	20.58		
10	64QAM	50	0	20.96	21.03	20.91	20.73		
Channel				55265	55810	56170	56715	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				3552.5	3607	3643	3697.5		
5	QPSK	1	0	23.83	23.92	23.86	23.58	25	0
5	QPSK	1	12	23.80	23.87	23.85	23.57		
5	QPSK	1	24	23.78	23.86	23.81	23.51		
5	QPSK	12	0	22.93	23.01	22.98	22.70	24	1
5	QPSK	12	7	22.97	23.04	23.00	22.71		
5	QPSK	12	13	22.90	23.01	22.93	22.66		
5	QPSK	25	0	22.91	22.99	22.97	22.71		
5	16QAM	1	0	22.75	22.84	22.82	22.51	24	1
5	16QAM	1	12	22.71	22.80	22.77	22.50		
5	16QAM	1	24	22.72	22.74	22.70	22.49		
5	16QAM	12	0	22.02	22.01	22.03	21.72	23	2
5	16QAM	12	7	21.99	22.09	22.05	21.76		
5	16QAM	12	13	21.93	22.04	21.98	21.69		
5	16QAM	25	0	21.96	22.05	22.01	21.72		
5	64QAM	1	0	21.80	21.93	21.92	21.42	23	2
5	64QAM	1	12	21.64	21.73	21.58	21.36		
5	64QAM	1	24	21.76	21.87	21.81	21.39		
5	64QAM	12	0	20.96	21.02	20.98	20.56	22	3
5	64QAM	12	7	20.95	21.02	20.99	20.60		
5	64QAM	12	13	20.92	20.97	20.94	20.56		
5	64QAM	25	0	20.96	21.07	21.04	20.60		

<DSI3_Main Ant>

<LTE Band 48>

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)	MPR (dB)
Channel				55340	55830	56150	56640		
Frequency (MHz)				3560	3609	3641	3690		
20	QPSK	1	0	19.85	19.91	19.87	19.81	21	0
20	QPSK	1	49	19.64	19.65	19.62	19.45		
20	QPSK	1	99	19.62	19.61	19.55	19.40		
20	QPSK	50	0	19.95	19.98	19.91	19.78	21	0
20	QPSK	50	24	19.92	19.90	19.86	19.74		
20	QPSK	50	50	19.80	19.81	19.74	19.61		
20	QPSK	100	0	19.90	19.90	19.81	19.69		
20	16QAM	1	0	19.51	19.54	19.51	19.40	21	0
20	16QAM	1	49	19.34	19.34	19.22	19.15		
20	16QAM	1	99	19.24	19.25	19.15	19.02		
20	16QAM	50	0	19.47	19.48	19.41	19.31	21	0
20	16QAM	50	24	19.41	19.42	19.35	19.22		
20	16QAM	50	50	19.33	19.33	19.25	19.12		
20	16QAM	100	0	19.39	19.42	19.32	19.22		
20	64QAM	1	0	19.11	19.16	19.20	19.08	21	0
20	64QAM	1	49	18.94	18.98	18.92	18.74		
20	64QAM	1	99	18.93	18.92	18.82	18.69		
20	64QAM	50	0	19.49	19.49	19.43	19.34	21	0
20	64QAM	50	24	19.42	19.44	19.38	19.23		
20	64QAM	50	50	19.32	19.35	19.26	19.15		
20	64QAM	100	0	19.40	19.42	19.34	19.24		
Channel				55315	55820	56160	56665	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				3557.5	3608	3642	3692.5		
15	QPSK	1	0	19.78	19.87	19.82	19.81	21	0
15	QPSK	1	37	19.63	19.55	19.61	19.40		
15	QPSK	1	74	19.61	19.57	19.55	19.37		
15	QPSK	36	0	19.88	19.92	19.89	19.70	21	0
15	QPSK	36	20	19.91	19.81	19.77	19.67		
15	QPSK	36	39	19.70	19.78	19.68	19.61		
15	QPSK	75	0	19.84	19.82	19.75	19.62		
15	16QAM	1	0	19.46	19.44	19.44	19.38	21	0
15	16QAM	1	37	19.30	19.33	19.22	19.11		
15	16QAM	1	74	19.22	19.25	19.08	19.01		
15	16QAM	36	0	19.40	19.40	19.32	19.27	21	0
15	16QAM	36	20	19.37	19.32	19.33	19.19		
15	16QAM	36	39	19.29	19.27	19.16	19.05		
15	16QAM	75	0	19.35	19.39	19.22	19.19		
15	64QAM	1	0	19.04	19.07	19.18	19.02	21	0
15	64QAM	1	37	18.93	18.96	18.89	18.73		
15	64QAM	1	74	18.87	18.87	18.78	18.66		
15	64QAM	36	0	19.46	19.44	19.33	19.31	21	0
15	64QAM	36	20	19.41	19.41	19.35	19.14		
15	64QAM	36	39	19.26	19.33	19.19	19.15		
15	64QAM	75	0	19.35	19.40	19.30	19.14		
Channel				55290	55815	56165	56690	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				3555	3607.5	3642.5	3695		
10	QPSK	1	0	19.81	19.83	19.80	19.73	21	0
10	QPSK	1	25	19.54	19.62	19.61	19.41		
10	QPSK	1	49	19.55	19.52	19.49	19.37		
10	QPSK	25	0	19.92	19.88	19.89	19.69	21	0

10	QPSK	25	12	19.89	19.83	19.81	19.73		
10	QPSK	25	25	19.79	19.77	19.72	19.52		
10	QPSK	50	0	19.84	19.81	19.81	19.67		
10	16QAM	1	0	19.49	19.49	19.50	19.35		
10	16QAM	1	25	19.25	19.34	19.17	19.15	21	0
10	16QAM	1	49	19.16	19.19	19.05	18.93		
10	16QAM	25	0	19.40	19.42	19.34	19.30		
10	16QAM	25	12	19.32	19.33	19.29	19.13	21	0
10	16QAM	25	25	19.33	19.32	19.24	19.11		
10	16QAM	50	0	19.35	19.40	19.32	19.15		
10	64QAM	1	0	19.08	19.11	19.19	19.00		
10	64QAM	1	25	18.86	18.96	18.83	18.71	21	0
10	64QAM	1	49	18.87	18.90	18.80	18.65		
10	64QAM	25	0	19.39	19.41	19.43	19.25		
10	64QAM	25	12	19.39	19.41	19.31	19.22	21	0
10	64QAM	25	25	19.23	19.28	19.25	19.12		
10	64QAM	50	0	19.32	19.38	19.33	19.16		
Channel				55265	55810	56170	56715	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				3552.5	3607	3643	3697.5		
5	QPSK	1	0	19.76	19.81	19.84	19.74		
5	QPSK	1	12	19.62	19.56	19.61	19.37	21	0
5	QPSK	1	24	19.60	19.51	19.45	19.32		
5	QPSK	12	0	19.86	19.97	19.90	19.78		
5	QPSK	12	7	19.91	19.86	19.82	19.68	21	0
5	QPSK	12	13	19.73	19.73	19.72	19.56		
5	QPSK	25	0	19.83	19.90	19.81	19.62		
5	16QAM	1	0	19.42	19.49	19.42	19.32		
5	16QAM	1	12	19.32	19.27	19.15	19.06	21	0
5	16QAM	1	24	19.17	19.16	19.11	18.94		
5	16QAM	12	0	19.41	19.44	19.38	19.29		
5	16QAM	12	7	19.34	19.36	19.35	19.14	21	0
5	16QAM	12	13	19.28	19.33	19.25	19.06		
5	16QAM	25	0	19.36	19.32	19.28	19.20		
5	64QAM	1	0	19.05	19.08	19.16	19.05		
5	64QAM	1	12	18.87	18.88	18.88	18.71	21	0
5	64QAM	1	24	18.91	18.85	18.77	18.61		
5	64QAM	12	0	19.43	19.44	19.34	19.28		
5	64QAM	12	7	19.36	19.36	19.38	19.18	21	0
5	64QAM	12	13	19.27	19.30	19.21	19.07		
5	64QAM	25	0	19.32	19.38	19.31	19.14		

13. DL carrier aggregation

<LTE Carrier Aggregation combinations>

General Note:

1. This device supports Carrier Aggregation on downlink only for inter and intra band. For the device supports combination bands and configurations are according to 3GPP.
2. In applying the existing power measurement procedure of KDB 941225 D05A for DL CA SAR test exclusion, only the subset with the largest number of combinations of the frequency band and CCs in each row need consideration, and that configurations require power measurement should be highlighted in the below table.

FCC DL 2CA				FCC DL 3CA				FCC DL 4CA			
NO.	Combination	Restriction	Covered by measuremend superset	NO.	Combination	Restriction	Covered by measuremend superset	NO.	Combination	Restriction	Covered by measuremend superset
1	CA_12A-66A		3CC-1	1	CA_12A-66A-66A		4CC-2	1	CA_13A-46D	46 only RX	5CC-1
2	CA_12B		3CC-1	2	CA_12A-66C		4CC-2	2	CA_2A-12A-66A-66A		5CC-4
3	CA_13A-46A		3CC-4	3	CA_12B-66A		4CC-2	3	CA_2A-12A-66C		5CC-4
4	CA_13A-66A		3CC-4	4	CA_13A-46A-66A	46 only RX	5CC-1	4	CA_2A-13A-46C	46 only RX	5CC-3
5	CA_29A-66A	29 Only RX		5	CA_13A-46C	46 only RX	3CC-4	5	CA_2A-13A-66A-66A		5CC-5
6	CA_2A-12A		3CC-10	6	CA_13A-46C-66A	46 only RX	3CC-4	6	CA_2A-13A-66B		5CC-5
7	CA_2A-13A		3CC-11	7	CA_13A-66A-66A	46 only RX	3CC-4	7	CA_2A-13A-66C		5CC-5
8	CA_2A-29A	29 Only RX		8	CA_13A-66B		3CC-4	8	CA_2A-2A-12A-66A		5CC-4
9	CA_2A-2A		3CC-11	9	CA_13A-66C		3CC-4	9	CA_2A-2A-13A-66A		5CC-5
10	CA_2A-46A	46 only RX	3CC-11	10	CA_2A-12A-66A		4CC-2	10	CA_2A-2A-46C	46 only RX	5CC-10
11	CA_2A-4A		3CC-22	11	CA_2A-13A-46A	46 only RX	4CC-4	11	CA_2A-2A-4A-4A		4CC-12
12	CA_2A-5A		3CC-21	12	CA_2A-13A-66A		4CC-5	12	CA_2A-2A-4A-5A		
13	CA_2A-66A		3CC-10	13	CA_2A-2A-12A		4CC-2	13	CA_2A-2A-5A-66A		5CC-7
14	CA_2C		3CC-10	14	CA_2A-2A-13A		4CC-4	14	CA_2A-2A-66A-66A		5CC-7
15	CA_41A-46A	46 only RX	3CC-35	15	CA_2A-2A-46A	46 only RX	4CC-4	15	CA_2A-2A-66B		5CC-7
16	CA_41C		3CC-35	16	CA_2A-2A-4A		4CC-21	16	CA_2A-2A-66C		5CC-7
17	CA_46A-66A	46 only RX	3CC-35	17	CA_2A-2A-5A		4CC-21	17	CA_2A-46A-46A-66A	46 only RX	5CC-10
18	CA_4A-12A		3CC-39	18	CA_2A-2A-66A		4CC-24	18	CA_2A-46A-46C	46 only RX	5CC-10
19	CA_4A-13A	29 Only RX	3CC-44	19	CA_2A-46A-46A	46 only RX	4CC-17	19	CA_2A-46C-66A	46 only RX	5CC-10
20	CA_4A-29A	29 Only RX		20	CA_2A-46A-66A	46 only RX	4CC-17	20	CA_2A-46D	46 only RX	5CC-10
21	CA_4A-46A	46 only RX	3CC-40	21	CA_2A-46C	46 only RX	4CC-17	21	CA_2A-4A-4A-5A		4CC-12
22	CA_4A-4A		3CC-40	22	CA_2A-4A-12A			22	CA_2A-4A-5B		4CC-12
23	CA_4A-5A		3CC-45	23	CA_2A-4A-13A			23	CA_2A-5A-46C	46 only RX	5CC-15
24	CA_5A-46A	46 only RX	3CC-46	24	CA_2A-4A-4A		3CC-22	24	CA_2A-5A-66A-66A		5CC-16
25	CA_5A-5A		3CC-46	25	CA_2A-4A-5A		4CC-21	25	CA_2A-5A-66B		5CC-16
26	CA_5A-66A		3CC-46	26	CA_2A-5A-46A	46 only RX	4CC-23	26	CA_2A-5A-66C		5CC-16
27	CA_5B		3CC-46	27	CA_2A-5A-66A		4CC-24	27	CA_2A-5B-66A		5CC-16
28	CA_66A-66A		3CC-46	28	CA_2A-5B		4CC-24	28	CA_2A-66A-66A-66A		5CC-16
29	CA_66B		3CC-46	29	CA_2A-66A-66A		4CC-24	29	CA_2C-66A-66A		5CC-16
30	CA_66C		3CC-46	30	CA_2A-66B		4CC-24	30	CA_41A-46D	46 only RX	5CC-19
31	CA_13A-48A		3CC-58	31	CA_2A-66C		4CC-24	31	CA_46A-46C-66A	46 only RX	5CC-20
32	CA_2A-48A		3CC-61	32	CA_2C-66A		4CC-24	32	CA_46A-66A-66A-66A	46 only RX	5CC-20
33	CA_2A-71A		3CC-62	33	CA_41A-46C	46 only RX	4CC-30	33	CA_46C-66A-66A	46 only RX	5CC-20
34	CA_48A-48A		3CC-59	34	CA_41D		4CC-30	34	CA_46C-66A-66A-66A	46 only RX	5CC-20
35	CA_48A-66A		3CC-59	35	CA_46A-46A-66A	46 only RX	4CC-31	35	CA_46D-66A	46 only RX	5CC-20
36	CA_48C		3CC-59	36	CA_46A-66A-66A	46 only RX	4CC-31	36	CA_4A-46A-46C	46 only RX	5CC-24
37	CA_4A-48A		3CC-77	37	CA_46A-66C	46 only RX	4CC-31	37	CA_4A-46D	46 only RX	5CC-24
38	CA_4A-71A		3CC-78	38	CA_46C-66A	46 only RX	4CC-31	38	CA_4A-4A-5B		4CC-12
39	CA_5A-48A		3CC-79	39	CA_4A-12B		3CC-22	39	CA_5A-46C-66A	46 only RX	5CC-25
40	CA_66A-71A		3CC-82	40	CA_4A-46A-46A	46 only RX	4CC-36	40	CA_5A-46D	46 only RX	5CC-25
				41	CA_4A-46C	46 only RX	4CC-36	41	CA_5A-5A-66A-66A		5CC-25
				42	CA_4A-4A-12A		3CC-22	42	CA_5A-5A-66B		5CC-25
				43	CA_4A-4A-13A		3CC-23	43	CA_5A-5A-66C		5CC-25

				44	CA_4A-4A-5A		4CC-38	44	CA_5B-46C	46 only RX	5CC-25
				45	CA_4A-5B		4CC-38	45	CA_5B-66A-66A		5CC-25
				46	CA_5A-46A-66A	46 only RX	4CC-39	46	CA_5B-66B		5CC-25
				47	CA_5A-46C	46 only RX	4CC-39	47	CA_5B-66C		5CC-25
				48	CA_5A-5A-66A		4CC-39	48	CA_13A-48A-48A-66A		5CC-28
				49	CA_5A-66A-66A		4CC-39	49	CA_13A-48A-48C		5CC-28
				50	CA_5A-66B		4CC-39	50	CA_13A-48A-66B		5CC-28
				51	CA_5A-66C		4CC-39	51	CA_13A-48A-66C		5CC-28
				52	CA_5B-46A	46 only RX	4CC-39	52	CA_13A-48C-66A		5CC-28
				53	CA_5B-66A		4CC-39	53	CA_13A-48D		5CC-28
				54	CA_66A-66A-66A		4CC-39	54	CA_2A-13A-48A-48A		5CC-35
				55	CA_66A-66B		4CC-39	55	CA_2A-13A-48A-66A		5CC-35
				56	CA_66A-66C		4CC-39	56	CA_2A-13A-48C		5CC-35
				57	CA_66D		4CC-39	57	CA_2A-2A-4A-71A		
				58	CA_13A-48A-48A		4CC-48	58	CA_2A-2A-66A-71A		
				59	CA_13A-48A-66A		4CC-48	59	CA_2A-46A-48C	46 only RX	5CC-39
				60	CA_13A-48C		4CC-48	60	CA_2A-46C-48A	46 only RX	5CC-39
				61	CA_2A-13A-48A		4CC-55	61	CA_2A-48A-48A-66A		5CC-35
				62	CA_2A-2A-71A		4CC-57	62	CA_2A-48A-48C		5CC-35
				63	CA_2A-46A-48A	46 only RX	4CC-59	63	CA_2A-48C-66A		5CC-35
				64	CA_2A-48A-48A		4CC-59	64	CA_2A-48D		5CC-35
				65	CA_2A-48A-66A		4CC-55	65	CA_2A-5A-48A-48A		5CC-47
				66	CA_2A-48C		4CC-55	66	CA_2A-5A-48A-66A		5CC-47
				67	CA_2A-4A-71A		4CC-57	67	CA_2A-5A-48C		5CC-47
				68	CA_2A-5A-48A		4CC-66	68	CA_2A-66A-66A-71A		4CC-58
				69	CA_2A-66A-71A		4CC-58	69	CA_2A-66C-71A		4CC-58
				70	CA_46A-48A-66A		4CC-66	70	CA_46A-48C-66A		5CC-51
				71	CA_48A-48A-66A		4CC-66	71	CA_46C-48A-66A		5CC-51
				72	CA_48A-48C		4CC-66	72	CA_48A-48A-66A-66A		5CC-28
				73	CA_48A-66A-66A		4CC-66	73	CA_48A-48A-66B		5CC-28
				74	CA_48A-66C		4CC-66	74	CA_48A-48A-66C		5CC-28
				75	CA_48C-66A		4CC-66	75	CA_48A-48C-66A		5CC-28
				76	CA_48D		4CC-66	76	CA_48A-48D		5CC-28
				77	CA_4A-48C		4CC-85	77	CA_48A-66A-66A-66A		5CC-28
				78	CA_4A-4A-71A		4CC-57	78	CA_48C-48C		5CC-28
				79	CA_5A-48A-48A		4CC-86	79	CA_48C-66A-66A		5CC-28
				80	CA_5A-48A-66A		4CC-86	80	CA_48C-66B		5CC-28
				81	CA_5A-48C		4CC-86	81	CA_48C-66C		5CC-28
				82	CA_66A-66A-71A		4CC-68	82	CA_48D-66A		5CC-28
				83	CA_66C-71A		4CC-68	83	CA_48E		5CC-28
				84	CA_48B-66A		4CC-86	84	CA_48E-66A		5CC-28
				85	CA_13A-48B		4CC-90	85	CA_4A-48D		5CC-61
								86	CA_5A-48A-48A-66A		5CC-47
								87	CA_5A-48A-48C		5CC-47
								88	CA_5A-48C-66A		5CC-47
								89	CA_5A-48D		5CC-47
								90	CA_13A-48A-66A-66A		5CC-28
								91	CA_5A-48A-66A-66A		5CC-47
								92	CA_48D-66A-66A		5CC-28

FCC DL 5CA				FCC DL 6CA			
NO.	Combination	Restriction	Covered by measuremend superset	NO.	Combination	Restriction	Covered by measuremend superset
1	CA_13A-46D-66A	46 only RX		1	CA_2A-46E-66A	46 only RX	
2	CA_13A-46E	46 only RX	5CC-1	2	CA_2A-46E-48A	46 only RX	
3	CA_2A-13A-46D	46 only RX		3	CA_2A-13A-48D-66A		
4	CA_2A-2A-12A-66A-66A			4	CA_13A-48D-66A-66A		6CC-3
5	CA_2A-2A-13A-66A-66A			5	CA_2A-5A-48D-66A		
6	CA_2A-2A-46D	46 only RX	5CC-3	6	CA_2A-48D-66A-66A		6CC-5
7	CA_2A-2A-5A-66A-66A			7	CA_5A-48D-66A-66A		6CC-5
8	CA_2A-2A-5A-66B		5CC-7				
9	CA_2A-2A-5A-66C		5CC-7				
10	CA_2A-46A-46C-66A	46 only RX	6CC-1				
11	CA_2A-46A-46D	46 only RX	6CC-1				
12	CA_2A-46C-46C	46 only RX	6CC-1				
13	CA_2A-46D-66A	46 only RX	6CC-1				
14	CA_2A-46E	46 only RX	6CC-1				
15	CA_2A-5A-46D	46 only RX					
16	CA_2A-5B-66A-66A		5CC-7				
17	CA_2A-5B-66B		5CC-16				
18	CA_2A-5B-66C		5CC-16				
19	CA_41A-46E	46 only RX					
20	CA_46A-46D-66A	46 only RX	6CC-1				
21	CA_46C-46C-66A	46 only RX	6CC-1				
22	CA_46D-66A-66A	46 only RX	6CC-1				
23	CA_46E-66A	46 only RX	6CC-1				
24	CA_4A-46A-46D	46 only RX					
25	CA_5A-46D-66A	46 only RX					
26	CA_5A-46E	46 only RX	5CC-25				
27	CA_5B-46D	46 only RX	5CC-25				
28	CA_13A-48A-48C-66A		6CC-3				
29	CA_13A-48A-48D		6CC-3				
30	CA_13A-48C-48C		6CC-3				
31	CA_13A-48C-66B		6CC-3				
32	CA_13A-48C-66C		6CC-3				
33	CA_13A-48D-66A		6CC-3				
34	CA_13A-48E		6CC-3				
35	CA_2A-13A-48A-48A-66A		6CC-3				
36	CA_2A-13A-48A-48C		6CC-3				
37	CA_2A-13A-48C-66A		6CC-3				
38	CA_2A-13A-48D		6CC-3				
39	CA_2A-46A-48D	46 only RX	6CC-2				
40	CA_2A-46C-48C	46 only RX	6CC-2				
41	CA_2A-46D-48A	46 only RX	6CC-2				
42	CA_2A-48A-48C-66A		6CC-3				
43	CA_2A-48A-48D		6CC-3				
44	CA_2A-48C-48C		6CC-3				
45	CA_2A-48D-66A		6CC-3				
46	CA_2A-48E		6CC-3				
47	CA_2A-5A-48A-48A-66A		6CC-5				
48	CA_2A-5A-48A-48C		6CC-5				
49	CA_2A-5A-48C-66A		6CC-5				
50	CA_2A-5A-48D		6CC-5				
51	CA_46A-48D-66A	46 only RX					
52	CA_46C-48C-66A	46 only RX	5CC-51				

53	CA_46D-48A-66A	46 only RX	5CC-51				
54	CA_48A-48C-66B		6CC-3				
55	CA_48A-48C-66C		6CC-3				
56	CA_48A-48D-66A		6CC-3				
57	CA_48A-48E		6CC-3				
58	CA_48C-48C-66A		6CC-3				
59	CA_48C-48D		6CC-3				
60	CA_48C-66A-66A-66A		6CC-3				
61	CA_4A-48E						
62	CA_5A-48A-48C-66A		6CC-5				
63	CA_5A-48A-48D		6CC-5				
64	CA_5A-48C-48C		6CC-5				
65	CA_5A-48D-66A		6CC-5				
66	CA_5A-48E		6CC-5				
67	CA_2A-13A-48A-66A-66A		6CC-3				
68	CA_2A-5A-48A-66A-66A		6CC-5				

<Power verification when LTE Carrier Aggregation Active>

General Note:

i. According to KDB941225 D05A v01r02, Uplink maximum output power measurement with downlink carrier aggregation active should be measured, using the highest output channel measured without downlink carrier aggregation, to confirm that uplink maximum output power with downlink carrier aggregation active remains within the specified tune-up tolerance limits and not more than ¼ dB higher than the maximum output measured without downlink carrier aggregation active.

ii. 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.

iii. The device supports downlink two carrier aggregation. For power measurement were control and acknowledge data is sent on uplink channels that operate identical to specifications when downlink carrier aggregation is inactive.

iv. Selected highest measured power when downlink carrier aggregation is inactive for conducted power comparison with downlink carrier aggregation is active, to confirm that when downlink carrier aggregation is active uplink maximum output power remains within the specified tune-up tolerance limits and not more than ¼ dB higher than the maximum output power measured when downlink carrier aggregation inactive.

v. For non-contiguous intra-band CA, the SCC selected to provide maximum separation from the PCC and must remain fully within the downlink transmission band.

vi. For Intra-band, contiguous CA, the downlink channels selected to perform the uplink power measurement must satisfy 3GPP channel spacing (5.4.1A of 3GPP TS 36.521 or equivalent) and channel bandwidth (5.4.2A) requirements.

$$\text{Nominal channel spacing} = \left\lfloor \frac{BW_{Channel(1)} + BW_{Channel(2)} - 0.1\left|BW_{Channel(1)} - BW_{Channel(2)}\right|}{0.6} \right\rfloor 0.3 \ \ [\text{MHz}]$$

<Two Carrier power verification>

Configure	CA Configuration (BCS)	PCC							SCC				Power	
		LTE Band	BW (MHz)	UL Freq. (MHz)	UL Channel	Mod.	UL# RB	UL RB Offset	LTE Band	BW (MHz)	DL Freq. (MHz)	DL Channel	With CA Tx.Power (dBm)	W/O CA Tx.Power (dBm)
Inter-Band	CA_29A-66A	66	20	1770	132572	QPSK	1	49	29	10	722.5	9715	24.04	24.11
	CA_2A-29A	2	20	1880	18900	QPSK	1	49	29	10	722.5	9715	23.99	24.04
	CA_4A-29A	4	20	1732.5	20175	QPSK	1	0	29	10	722.5	9715	23.98	24.06

<Three Carrier power verification>

Configure	CA Configuration (BCS)	PCC							SCC1				SCC2				Power	
		LTE Band	BW (MHz)	UL Freq. (MHz)	UL Channel	Mod.	UL# RB	UL RB Offset	LTE Band	BW (MHz)	DL Freq. (MHz)	DL Channel	LTE Band	BW (MHz)	DL Freq. (MHz)	DL Channel	With CA Tx.Power (dBm)	W/O CA Tx.Power (dBm)
Inter-Band	CA_2A-4A-12A	2	20	1880	18900	QPSK	1	49	4	20	2132.5	2175	12	10	737.5	5095	23.99	24.04
	CA_2A-4A-13A	2	20	1880	18900	QPSK	1	49	4	20	2132.5	2175	13	10	751	5230	23.99	24.04

<Four Carrier power verification>

Configure	CA Configuration (BCS)	PCC							SCC1				SCC2				SCC3				Power	
		LTE Band	BW (MHz)	UL Freq. (MHz)	UL Channel	Mod.	UL# RB	UL RB Offset	LTE Band	BW (MHz)	DL Freq. (MHz)	DL Channel	LTE Band	BW (MHz)	DL Freq. (MHz)	DL Channel	LTE Band	BW (MHz)	DL Freq. (MHz)	DL Channel	With CA Tx.Power (dBm)	W/O CA Tx.Power (dBm)
Inter-Band	CA_2A-2A-4A-5A	2	20	1880	18900	QPSK	1	49	2	5	1987.5	1175	4	20	2132.5	2175	5	10	881.5	2525	23.99	24.04
	CA_2A-2A-4A-71A	2	20	1880	18900	QPSK	1	49	2	5	1987.5	1175	4	20	2132.5	2175	71	20	634.5	68761	23.99	24.04
	CA_2A-2A-66A-71A	2	20	1880	18900	QPSK	1	49	2	5	1987.5	1175	66	20	2155	66886	71	20	634.5	68761	23.99	24.04

<Five Carrier power verification>

Configure	CA Configuration (BCS)	PCC							SCC1				SCC2				SCC3				SCC4				Power	
		LTE Band	BW (MHz)	UL Freq. (MHz)	UL Channel	Mod.	UL# RB	UL RB Offset	LTE Band	BW (MHz)	DL Freq. (MHz)	DL Channel	LTE Band	BW (MHz)	DL Freq. (MHz)	DL Channel	LTE Band	BW (MHz)	DL Freq. (MHz)	DL Channel	LTE Band	BW (MHz)	DL Freq. (MHz)	DL Channel	With CA Tx.Power (dBm)	W/O CA Tx.Power (dBm)
Inter-Band	CA_13A-46D-66A	13	10	782	23230	QPSK	1	0	46	20	5537.5	50665	46	20	5557.3	50863	46	20	5577.1	51061	66	20	2155	66886	23.91	24.00
	CA_2A-13A-46D	2	20	1880	18900	QPSK	1	49	13	10	751	5230	46	20	5537.5	50665	46	20	5557.3	50863	46	20	5577.1	51061	23.99	24.04
	CA_2A-2A-12A-66A-66A	2	20	1880	18900	QPSK	1	49	2	5	1987.5	1175	12	10	737.5	5095	66	20	2155	66886	66	5	2197.5	67311	23.99	24.04
	CA_2A-2A-13A-66A-66A	2	20	1880	18900	QPSK	1	49	2	5	1987.5	1175	13	10	751	5230	66	20	2155	66886	66	5	2197.5	67311	23.99	24.04
	CA_2A-2A-5A-66A-66A	2	20	1880	18900	QPSK	1	49	2	5	1987.5	1175	5	10	881.5	2525	66	20	2155	66886	66	5	2197.5	67311	23.99	24.04
	CA_2A-5A-46D	2	20	1880	18900	QPSK	1	49	5	10	881.5	2525	46	20	5537.5	50665	46	20	5557.3	50863	46	20	5577.1	51061	23.99	24.04
	CA_41A-46E	41	20	2593	40620	QPSK	1	99	46	20	5537.5	50665	46	20	5557.3	50863	46	20	5577.1	51061	46	20	5596.9	51259	24.33	24.40
	CA_4A-46A-46D	4	20	1732.5	20175	QPSK	1	0	46	20	5537.5	50665	46	5	5549.2	50782	46	20	5560.9	50899	46	20	5572.6	51016	23.98	24.06
	CA_5A-46D-66A	5	10	829	20450	QPSK	1	0	46	20	5537.5	50665	46	20	5557.3	50863	46	20	5577.1	51061	66	20	2155	66886	23.83	23.98
	CA_46A-48D-66A	66	20	1770	132572	QPSK	1	49	46	20	5537.5	50665	48	20	3625	55990	48	20	3644.8	56188	48	20	3664.6	56386	24.04	24.11
	CA_4A-48E	4	20	1732.5	20175	QPSK	1	0	48	20	3625	55990	48	20	3644.8	56188	48	20	3664.6	56386	48	20	3684.4	56584	23.98	24.06

<Six Carrier power verification>

Configure	CA Configuration (BCS)	PCC							SCC1				SCC2				SCC3				SCC4				SCC5				Power	
		LTE Band	BW (MHz)	UL Freq. (MHz)	UL Channel	Mod.	UL# RB	UL RB Offset	LTE Band	BW (MHz)	DL Freq. (MHz)	DL Channel	LTE Band	BW (MHz)	DL Freq. (MHz)	DL Channel	LTE Band	BW (MHz)	DL Freq. (MHz)	DL Channel	LTE Band	BW (MHz)	DL Freq. (MHz)	DL Channel	LTE Band	BW (MHz)	DL Freq. (MHz)	DL Channel	With CA Tx.Power (dBm)	W/O CA Tx.Power (dBm)
Inter-Band	CA_2A-46E-66A	2	20	1880	18900	QPSK	1	49	46	20	5537.5	50665	46	20	5557.3	50863	46	20	5577.1	51061	46	20	5596.9	51259	66	20	2155	66886	23.99	24.04
	CA_2A-46E-48A	2	20	1880	18900	QPSK	1	49	46	20	5537.5	50665	46	20	5557.3	50863	46	20	5577.1	51061	46	20	5596.9	51259	48	20	3625	55990	23.99	24.04
	CA_2A-13A-48D-66A	2	20	1880	18900	QPSK	1	49	13	10	751	5230	48	20	3625	55990	48	20	3644.8	56188	48	20	3664.6	56386	66	20	2155	66886	23.99	24.04
	CA_2A-5A-48D-66A	2	20	1880	18900	QPSK	1	49	5	10	881.5	2525	48	20	3625	55990	48	20	3644.8	56188	48	20	3664.6	56386	66	20	2155	66886	23.99	24.04

14. 5G NR Output Power (Unit: dBm)

General Note:

1. For 5G NR test procedure was following step similar FCC KDB 941225 D05:
   a. For DFT-OFDM output power measurement reduction, full measurement on Pi/2 BPSK and QPSK, for16QAM/64QMA/256QAM spot check 1RB 1offset configuration to ensure the output power will not ½ dB higher than Pi/2 BPSK and QPSK, for smaller bandwidth output power will spot check 1RB 1offset configuration at Pi/2 BPSK to ensure output power will not ½ dB higher than largest supported bandwidth.
   b. The high order modulations for CP-OFDM maximum power according to tune-up document will not ½ dB higher than DFT-OFDM mode, also DFT-OFDM mode reported SAR is ≤ 1.45 W/kg for this device, for CP-OFDM mode output power and SAR measurement is not necessary.
   c. SAR testing start with the largest channel bandwidth and measure SAR 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.
   d. 50% RB allocation for PI/2 BPSK SAR testing follows 1RB PI/2 BPSK allocation procedure
   e. PI/2 BPSK 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.
   f. QPSK/16QAM/64QAM/256QAM output powers according to 3GPP MPR will 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.
   g. Smaller bandwidth output power for each RB allocation configuration for this device will 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 was performed using Factory Test Mode software to establish the connection and perform SAR with 100% transmission.

<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	≤ 3.5[1]	≤ 1.2[1]	≤ 0.2[1]
		≤ 0.5[2]	≤ 0.5[2]	0[2]
	QPSK	≤ 1		0
	16 QAM	≤ 2		≤ 1
	64 QAM	≤ 2.5		
	256 QAM	≤ 4.5		
CP-OFDM	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		

<DSI2_Main Ant>

<n2>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				372000	376000	380000		
Frequency (MHz)				1860	1880	1900		
20	PI/2 BPSK	1	1	24.34	24.29	24.17	25.0	0.0
20	PI/2 BPSK	1	53	24.30	24.18	24.18		
20	PI/2 BPSK	1	104	24.25	24.14	24.14		
20	PI/2 BPSK	50	0	23.06	23.69	23.62	24.5	0.5
20	PI/2 BPSK	50	28	24.31	24.23	24.15	25.0	0.0
20	PI/2 BPSK	50	56	23.84	23.17	23.64	24.5	0.5
20	PI/2 BPSK	100	0	23.74	23.68	23.66		
20	QPSK	1	1	24.25	24.21	24.17	25.0	0.0
20	QPSK	1	53	24.24	24.16	24.08		
20	QPSK	1	104	24.30	24.11	24.05		
20	QPSK	50	0	23.26	23.15	23.16	24.0	1.0
20	QPSK	50	28	24.29	24.19	24.15	25.0	0.0
20	QPSK	50	56	23.27	23.14	23.14	24.0	1.0
20	QPSK	100	0	23.26	23.14	23.16		
20	16QAM	1	1	23.36	23.49	23.30	24.0	1.0
20	64QAM	1	1	22.23	22.18	22.11	22.5	2.5
20	256QAM	1	1	19.79	19.94	19.69	20.5	4.5
Channel				371500	376000	380500	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1857.5	1880	1902.5		
15	PI/2 BPSK	1	1	24.31	24.22	24.15	25.0	0.0
Channel				371000	376000	381000	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1855	1880	1905		
10	PI/2 BPSK	1	1	24.29	24.18	24.05	25.0	0.0
Channel				370500	376000	381500	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1852.5	1880	1907.5		
5	PI/2 BPSK	1	1	24.25	24.23	24.01	25.0	0.0

<n5>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				166800	167300	167800		
Frequency (MHz)				834	836.5	839		
20	PI/2 BPSK	1	1	24.18	24.15	24.10	25.0	0.0
20	PI/2 BPSK	1	53	24.07	24.03	23.72		
20	PI/2 BPSK	1	104	23.37	23.01	23.00		
20	PI/2 BPSK	50	0	23.50	23.51	23.53	24.5	0.5
20	PI/2 BPSK	50	28	24.02	24.00	23.96	25.0	0.0
20	PI/2 BPSK	50	56	23.44	23.43	23.38	24.5	0.5
20	PI/2 BPSK	100	0	23.54	23.48	23.43		
20	QPSK	1	1	24.12	24.10	23.94	25.0	0.0
20	QPSK	1	53	23.95	23.97	23.58		
20	QPSK	1	104	23.38	22.56	22.67		
20	QPSK	50	0	23.11	23.21	23.14	24.0	1.0
20	QPSK	50	28	24.03	24.01	23.91	25.0	0.0
20	QPSK	50	56	23.07	23.03	22.97	24.0	1.0
20	QPSK	100	0	23.18	23.11	23.12		
20	16QAM	1	1	22.95	23.39	22.89	24.0	1.0
20	64QAM	1	1	21.72	21.68	21.65	22.5	2.5
20	256QAM	1	1	19.55	19.55	19.50	20.5	4.5
Channel				166300	167300	168300	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				831.5	836.5	841.5		
15	PI/2 BPSK	1	1	24.15	24.13	24.04	25.0	0.0
Channel				165800	167300	168800	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				829	836.5	844		
10	PI/2 BPSK	1	1	24.17	24.05	24.07	25.0	0.0
Channel				165300	167300	169300	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				826.5	836.5	846.5		
5	PI/2 BPSK	1	1	24.15	24.12	24.06	25.0	0.0

<n66>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				344000	349000	354000		
Frequency (MHz)				1720	1745	1770		
20	PI/2 BPSK	1	1	24.23	24.15	24.10	25.0	0.0
20	PI/2 BPSK	1	53	24.16	24.02	24.05		
20	PI/2 BPSK	1	104	24.12	24.07	24.03		
20	PI/2 BPSK	50	0	23.58	23.51	23.53	24.5	0.5
20	PI/2 BPSK	50	28	24.05	24.00	24.07	25.0	0.0
20	PI/2 BPSK	50	56	23.48	23.39	23.50	24.5	0.5
20	PI/2 BPSK	100	0	23.57	23.44	23.44		
20	QPSK	1	1	24.22	24.09	24.08	25.0	0.0
20	QPSK	1	53	24.12	24.06	24.15		
20	QPSK	1	104	24.13	24.09	24.09		
20	QPSK	50	0	23.16	23.04	23.08	24.0	1.0
20	QPSK	50	28	24.05	23.98	24.02	25.0	0.0
20	QPSK	50	56	23.04	22.95	23.03	24.0	1.0
20	QPSK	100	0	23.11	22.99	23.01		
20	16QAM	1	1	23.27	23.06	23.17	24.0	1.0
20	64QAM	1	1	22.10	22.00	21.94	22.5	2.5
20	256QAM	1	1	19.76	19.69	19.64	20.5	4.5
Channel				343500	349000	354500	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1717.5	1745	1772.5		
15	PI/2 BPSK	1	1	24.21	24.13	24.05	25.0	0.0
Channel				343000	349000	355000	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1715	1745	1775		
10	PI/2 BPSK	1	1	24.02	24.01	24.08	25.0	0.0
Channel				342500	349000	355500	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1712.5	1745	1777.5		
5	PI/2 BPSK	1	1	23.95	23.92	23.94	25.0	0.0

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BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				134600	136100	137600		
Frequency (MHz)				673	680.5	688		
20	PI/2 BPSK	1	1	24.43	24.26	24.22	25.0	0.0
20	PI/2 BPSK	1	53	24.20	24.14	24.08		
20	PI/2 BPSK	1	104	24.13	24.01	23.86		
20	PI/2 BPSK	50	0	23.88	23.79	23.68	24.5	0.5
20	PI/2 BPSK	50	28	24.24	24.17	24.03	25.0	0.0
20	PI/2 BPSK	50	56	23.47	23.54	23.55	24.5	0.5
20	PI/2 BPSK	100	0	23.42	23.67	23.40		
20	QPSK	1	1	24.41	24.22	24.21	25.0	0.0
20	QPSK	1	53	24.32	24.23	24.14		
20	QPSK	1	104	24.19	24.15	23.95		
20	QPSK	50	0	23.34	23.20	23.12	24.0	1.0
20	QPSK	50	28	24.31	24.19	24.04	25.0	0.0
20	QPSK	50	56	23.18	23.01	22.98	24.0	1.0
20	QPSK	100	0	23.21	23.18	23.02		
20	16QAM	1	1	23.37	23.20	23.15	24.0	1.0
20	64QAM	1	1	21.77	21.58	21.55	22.5	2.5
20	256QAM	1	1	19.79	19.57	19.55	20.5	4.5
Channel				134100	136100	138100	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				670.5	680.5	690.5		
15	PI/2 BPSK	1	1	24.41	24.21	24.12	25.0	0.0
Channel				133600	136100	138600	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				668	680.5	693		
10	PI/2 BPSK	1	1	24.29	24.09	24.15	25.0	0.0
Channel				133100	136100	139100	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				665.5	680.5	695.5		
5	PI/2 BPSK	1	1	24.28	24.17	24.07	25.0	0.0

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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	14.65	14.57	14.48	
100	PI/2 BPSK	1	137	14.68	14.34	14.57	16.0
100	PI/2 BPSK	1	271	14.71	14.33	14.34	
100	PI/2 BPSK	135	0	14.67	14.51	14.51	16.0
100	PI/2 BPSK	135	69	14.71	14.49	14.58	16.0
100	PI/2 BPSK	135	138	14.75	14.41	14.49	16.0
100	PI/2 BPSK	270	0	14.74	14.46	14.49	
100	QPSK	1	1	14.67	14.55	14.49	
100	QPSK	1	137	14.77	14.39	14.61	16.0
100	QPSK	1	271	14.72	14.40	14.35	
100	QPSK	135	0	14.67	14.55	14.46	
100	QPSK	135	69	14.73	14.44	14.59	16.0
100	QPSK	135	138	14.69	14.38	14.45	
100	QPSK	270	0	14.74	14.46	14.45	16.0
100	16QAM	1	1	14.89	14.71	14.62	16.0
100	64QAM	1	1	14.67	14.57	14.42	16.0
100	256QAM	1	1	14.48	14.34	14.24	16.0
Channel				508200	518598	528996	Tune-up limit (dBm)
Frequency (MHz)				2541	2592.99	2644.98	
90	PI/2 BPSK	1	1	14.76	14.85	14.55	16.0
Channel				507204	518598	529998	Tune-up limit (dBm)
Frequency (MHz)				2536.02	2592.99	2649.99	
80	PI/2 BPSK	1	1	14.76	14.76	14.76	16.0
Channel				505200	518598	531996	Tune-up limit (dBm)
Frequency (MHz)				2526	2592.99	2659.98	
60	PI/2 BPSK	1	1	14.69	14.84	14.51	16.0
Channel				504204	518598	532998	Tune-up limit (dBm)
Frequency (MHz)				2521.02	2592.99	2664.99	
50	PI/2 BPSK	1	1	14.67	14.81	14.55	16.0
Channel				503202	518598	534000	Tune-up limit (dBm)
Frequency (MHz)				2516.01	2592.99	2670	
40	PI/2 BPSK	1	1	14.71	14.76	14.45	16.0
Channel				502200	518598	534996	Tune-up limit (dBm)
Frequency (MHz)				2511	2592.99	2674.98	
30	PI/2 BPSK	1	1	14.73	14.85	14.47	16.0
Channel				501204	518598	535998	Tune-up limit (dBm)
Frequency (MHz)				2506.02	2592.99	2679.99	
20	PI/2 BPSK	1	1	14.71	14.78	14.51	16.0

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<n2>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				372000	376000	380000		
Frequency (MHz)				1860	1880	1900		
20	PI/2 BPSK	1	1	18.02	17.96	17.86	19.0	0.0
20	PI/2 BPSK	1	53	17.91	17.89	17.81		
20	PI/2 BPSK	1	104	17.99	17.91	17.84		
20	PI/2 BPSK	50	0	18.01	17.92	17.84	19.0	0.0
20	PI/2 BPSK	50	28	17.96	17.98	17.85	19.0	0.0
20	PI/2 BPSK	50	56	18.05	17.95	17.88	19.0	0.0
20	PI/2 BPSK	100	0	17.98	17.91	17.82		
20	QPSK	1	1	17.97	17.92	17.85	19.0	0.0
20	QPSK	1	53	17.86	17.88	17.76		
20	QPSK	1	104	17.96	17.88	17.74		
20	QPSK	50	0	17.94	17.90	17.89	19.0	0.0
20	QPSK	50	28	18.01	17.94	17.87	19.0	0.0
20	QPSK	50	56	18.01	17.93	17.82	19.0	0.0
20	QPSK	100	0	18.00	17.96	17.88		
20	16QAM	1	1	18.26	18.19	18.12	19.0	0.0
20	64QAM	1	1	18.32	18.21	18.17	19.0	0.0
20	256QAM	1	1	17.92	17.91	17.86	19.0	0.0
Channel				371500	376000	380500	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1857.5	1880	1902.5		
15	PI/2 BPSK	1	1	18.00	17.91	17.83	19.0	0.0
Channel				371000	376000	381000	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1855	1880	1905		
10	PI/2 BPSK	1	1	17.89	17.95	17.80	19.0	0.0
Channel				370500	376000	381500	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1852.5	1880	1907.5		
5	PI/2 BPSK	1	1	17.80	17.88	17.67	19.0	0.0

<n5>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				166800	167300	167800		
Frequency (MHz)				834	836.5	839		
20	PI/2 BPSK	1	1	22.34	22.25	22.28	23.0	0.0
20	PI/2 BPSK	1	53	22.22	22.17	22.12		
20	PI/2 BPSK	1	104	22.08	22.12	21.97		
20	PI/2 BPSK	50	0	22.23	22.12	22.15	23.0	0.0
20	PI/2 BPSK	50	28	22.18	22.08	22.04	23.0	0.0
20	PI/2 BPSK	50	56	22.07	22.02	21.96	23.0	0.0
20	PI/2 BPSK	100	0	22.19	22.09	22.06		
20	QPSK	1	1	22.32	22.25	22.21	23.0	0.0
20	QPSK	1	53	22.13	22.08	22.11		
20	QPSK	1	104	22.03	21.93	21.93		
20	QPSK	50	0	22.25	22.17	22.12	23.0	0.0
20	QPSK	50	28	22.18	22.12	22.07	23.0	0.0
20	QPSK	50	56	22.06	22.00	22.01	23.0	0.0
20	QPSK	100	0	22.19	22.12	22.08		
20	16QAM	1	1	22.03	21.96	21.94	23.0	0.0
20	64QAM	1	1	21.66	21.60	21.58	22.5	0.5
20	256QAM	1	1	19.88	19.83	19.78	20.5	2.5
Channel				166300	167300	168300	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				831.5	836.5	841.5		
15	PI/2 BPSK	1	1	22.33	22.23	22.16	23.0	0.0
Channel				165800	167300	168800	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				829	836.5	844		
10	PI/2 BPSK	1	1	22.28	22.15	22.14	23.0	0.0
Channel				165300	167300	169300	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				826.5	836.5	846.5		
5	PI/2 BPSK	1	1	22.31	22.21	22.10	23.0	0.0

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BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				344000	349000	354000		
Frequency (MHz)				1720	1745	1770		
20	PI/2 BPSK	1	1	17.95	17.79	17.81	19.0	0.0
20	PI/2 BPSK	1	53	17.87	17.69	17.81		
20	PI/2 BPSK	1	104	17.76	17.74	17.80		
20	PI/2 BPSK	50	0	18.02	17.81	17.83	19.0	0.0
20	PI/2 BPSK	50	28	17.98	17.73	17.76	19.0	0.0
20	PI/2 BPSK	50	56	17.87	17.81	17.82	19.0	0.0
20	PI/2 BPSK	100	0	17.88	17.70	17.76		
20	QPSK	1	1	17.89	17.72	17.76	19.0	0.0
20	QPSK	1	53	17.78	17.63	17.74		
20	QPSK	1	104	17.73	17.67	17.65		
20	QPSK	50	0	18.00	17.81	17.86	19.0	0.0
20	QPSK	50	28	17.89	17.69	17.77	19.0	0.0
20	QPSK	50	56	17.85	17.72	17.79	19.0	0.0
20	QPSK	100	0	17.94	17.75	17.79		
20	16QAM	1	1	18.24	17.97	18.08	19.0	0.0
20	64QAM	1	1	18.26	18.08	18.18	19.0	0.0
20	256QAM	1	1	17.94	17.76	17.81	19.0	0.0
Channel				343500	349000	354500	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1717.5	1745	1772.5		
15	PI/2 BPSK	1	1	17.93	17.78	17.80	19.0	0.0
Channel				343000	349000	355000	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1715	1745	1775		
10	PI/2 BPSK	1	1	17.90	17.70	17.80	19.0	0.0
Channel				342500	349000	355500	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1712.5	1745	1777.5		
5	PI/2 BPSK	1	1	17.86	17.66	17.74	19.0	0.0

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BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				134600	136100	137600		
Frequency (MHz)				673	680.5	688		
20	PI/2 BPSK	1	1	24.43	24.26	24.22	25.0	0.0
20	PI/2 BPSK	1	53	24.20	24.14	24.08		
20	PI/2 BPSK	1	104	24.13	24.01	23.86		
20	PI/2 BPSK	50	0	23.88	23.79	23.68	24.5	0.5
20	PI/2 BPSK	50	28	24.24	24.17	24.03	25.0	0.0
20	PI/2 BPSK	50	56	23.47	23.54	23.55	24.5	0.5
20	PI/2 BPSK	100	0	23.42	23.67	23.40		
20	QPSK	1	1	24.41	24.22	24.21	25.0	0.0
20	QPSK	1	53	24.32	24.23	24.14		
20	QPSK	1	104	24.19	24.15	23.95		
20	QPSK	50	0	23.34	23.20	23.12	24.0	1.0
20	QPSK	50	28	24.31	24.19	24.04	25.0	0.0
20	QPSK	50	56	23.18	23.01	22.98	24.0	1.0
20	QPSK	100	0	23.21	23.18	23.02		
20	16QAM	1	1	23.37	23.20	23.15	24.0	1.0
20	64QAM	1	1	21.77	21.58	21.55	22.5	2.5
20	256QAM	1	1	19.79	19.57	19.55	20.5	4.5
Channel				134100	136100	138100	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				670.5	680.5	690.5		
15	PI/2 BPSK	1	1	24.41	24.21	24.12	25.0	0.0
Channel				133600	136100	138600	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				668	680.5	693		
10	PI/2 BPSK	1	1	24.29	24.09	24.15	25.0	0.0
Channel				133100	136100	139100	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				665.5	680.5	695.5		
5	PI/2 BPSK	1	1	24.28	24.17	24.07	25.0	0.0

<DSI3_Sub Ant>

<n5>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				166800	167300	167800		
Frequency (MHz)				834	836.5	839		
20	PI/2 BPSK	1	1	21.50	21.48	21.43	22.5	0.0
20	PI/2 BPSK	1	53	21.38	21.28	21.35		
20	PI/2 BPSK	1	104	21.23	21.18	21.18		
20	PI/2 BPSK	50	0	21.40	21.36	21.36	22.5	0.0
20	PI/2 BPSK	50	28	21.33	21.27	21.28	22.5	0.0
20	PI/2 BPSK	50	56	21.24	21.18	21.19	22.5	0.0
20	PI/2 BPSK	100	0	21.32	21.24	21.28		
20	QPSK	1	1	21.47	21.45	21.42	22.5	0.0
20	QPSK	1	53	21.40	21.35	21.35		
20	QPSK	1	104	21.21	21.16	21.18		
20	QPSK	50	0	21.35	21.28	21.24	22.5	0.0
20	QPSK	50	28	21.23	21.18	21.18	22.5	0.0
20	QPSK	50	56	21.16	21.12	21.12	22.5	0.0
20	QPSK	100	0	21.21	21.16	21.15		
20	16QAM	1	1	21.40	21.35	21.36	22.5	0.0
20	64QAM	1	1	21.39	21.38	21.38	22.0	0.5
20	256QAM	1	1	19.25	19.16	19.17	20.0	2.5
Channel				166300	167300	168300	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				831.5	836.5	841.5		
15	PI/2 BPSK	1	1	21.43	21.40	21.37	22.5	0.0
Channel				165800	167300	168800	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				829	836.5	844		
10	PI/2 BPSK	1	1	21.47	21.39	21.43	22.5	0.0
Channel				165300	167300	169300	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				826.5	836.5	846.5		
5	PI/2 BPSK	1	1	21.42	21.41	21.33	22.5	0.0

<n41>

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	14.65	14.57	14.48	
100	PI/2 BPSK	1	137	14.68	14.34	14.57	16.0
100	PI/2 BPSK	1	271	14.71	14.33	14.34	
100	PI/2 BPSK	135	0	14.67	14.51	14.51	16.0
100	PI/2 BPSK	135	69	14.71	14.49	14.58	16.0
100	PI/2 BPSK	135	138	14.75	14.41	14.49	16.0
100	PI/2 BPSK	270	0	14.74	14.46	14.49	
100	QPSK	1	1	14.67	14.55	14.49	
100	QPSK	1	137	14.77	14.39	14.61	16.0
100	QPSK	1	271	14.72	14.40	14.35	
100	QPSK	135	0	14.67	14.55	14.46	
100	QPSK	135	69	14.73	14.44	14.59	16.0
100	QPSK	135	138	14.69	14.38	14.45	
100	QPSK	270	0	14.74	14.46	14.45	16.0
100	16QAM	1	1	14.89	14.71	14.62	16.0
100	64QAM	1	1	14.67	14.57	14.42	16.0
100	256QAM	1	1	14.48	14.34	14.24	16.0
Channel				508200	518598	528996	Tune-up limit (dBm)
Frequency (MHz)				2541	2592.99	2644.98	
90	PI/2 BPSK	1	1	14.76	14.85	14.55	16.0
Channel				507204	518598	529998	Tune-up limit (dBm)
Frequency (MHz)				2536.02	2592.99	2649.99	
80	PI/2 BPSK	1	1	14.76	14.76	14.76	16.0
Channel				505200	518598	531996	Tune-up limit (dBm)
Frequency (MHz)				2526	2592.99	2659.98	
60	PI/2 BPSK	1	1	14.69	14.84	14.51	16.0
Channel				504204	518598	532998	Tune-up limit (dBm)
Frequency (MHz)				2521.02	2592.99	2664.99	
50	PI/2 BPSK	1	1	14.67	14.81	14.55	16.0
Channel				503202	518598	534000	Tune-up limit (dBm)
Frequency (MHz)				2516.01	2592.99	2670	
40	PI/2 BPSK	1	1	14.71	14.76	14.45	16.0
Channel				502200	518598	534996	Tune-up limit (dBm)
Frequency (MHz)				2511	2592.99	2674.98	
30	PI/2 BPSK	1	1	14.73	14.85	14.47	16.0
Channel				501204	518598	535998	Tune-up limit (dBm)
Frequency (MHz)				2506.02	2592.99	2679.99	
20	PI/2 BPSK	1	1	14.71	14.78	14.51	16.0

15. RF Exposure Conditions

Distance of the Antenna to the EUT surface/edge						
Antennas	Back	Front	Top Side	Bottom Side	Right Side	Left Side
WWAN Main	≤ 25mm	≤ 25mm	>25mm	≤ 25mm	≤ 25mm	≤ 25mm
WWAN Sub	≤ 25mm	≤ 25mm	≤ 25mm	>25mm	≤ 25mm	≤ 25mm
BT & 2.4GHz & 5GHz WLAN Chain 0	≤ 25mm	≤ 25mm	≤ 25mm	>25mm	>25mm	≤ 25mm
2.4GHz WLAN Chain 1	≤ 25mm	≤ 25mm	>25mm	>25mm	>25mm	≤ 25mm
5GHz WLAN Chain 1	≤ 25mm	≤ 25mm	≤ 25mm	>25mm	>25mm	≤ 25mm

Positions for SAR tests; Hotspot mode						
Antennas	Back	Front	Top Side	Bottom Side	Right Side	Left Side
WWAN Main	Yes	Yes	No	Yes	Yes	Yes
WWAN Sub	Yes	Yes	Yes	No	Yes	Yes
BT & 2.4GHz & 5GHz WLAN Chain 0	Yes	Yes	Yes	No	No	Yes
2.4GHz WLAN Chain 1	Yes	Yes	No	No	No	Yes
5GHz WLAN Chain 1	Yes	Yes	Yes	No	No	Yes

General Note:

Referring to KDB 941225 D06 v02r01, when the overall device length and width are ≥ 9cm*5cm, the test distance is 10 mm. SAR must be measured for all sides and surfaces with a transmitting antenna located within 25mm from that surface or edge, The detail antenna location please refers to Appendix D.

16. 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 ≥0.8W/kg.
4. Per KDB 648474 D04v01r03, when the reported SAR for a body-worn accessory measured without a headset connected to the handset is ≤ 1.2 W/kg, SAR testing with a headset connected to the handset is not required.
5. For 5.3GHz / 5.5GHz WLAN product specific SAR is necessary too, due to an overall diagonal dimension is > 16cm.
6. When the device operate on the head, the LTE B13/26 and 5G FR1 n5 is inactive for WWAN Ant2.

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 > not ½ 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 > 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; Per KDB 941225 D05v02r05, smaller bandwidth SAR testing is not required.
6. For LTE B4/B5/B12/B17/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 2/4/17 SAR test was covered by Band 25/66/12; according to TCB workshop, SAR test for overlapping LTE bands can be reduced if
   a. The maximum output power, including tolerance, for the smaller band is ≤ 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.

5G NR Note:

1. For 5G NR test procedure was following step similar FCC KDB 941225 D05:
   a. SAR testing start with the largest channel bandwidth and measure SAR 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.
   b. 50% RB allocation for PI/2 BPSK SAR testing follows 1RB PI/2 BPSK allocation procedure
   c. PI/2 BPSK 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.
   d. QPSK/16QAM/64QAM/256QAM output powers according to 3GPP MPR will 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.
   e. Smaller bandwidth output power for each RB allocation configuration for this device will 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
   f. For 5G FR1 n5/n41/n71 the maximum bandwidth does not support three non-overlapping channels, 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.

16.1 Head SAR

<FDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
01	LTE Band 25	20M	QPSK	1	0	Right Cheek	0mm	DSI2_Main Ant	26340	1880	24.07	25.00	1.239	0	0.190	0.235
	LTE Band 25	20M	QPSK	50	24	Right Cheek	0mm	DSI2_Main Ant	26340	1880	23.17	24.00	1.211	0.06	0.159	0.192
	LTE Band 25	20M	QPSK	1	0	Right Tilted	0mm	DSI2_Main Ant	26340	1880	24.07	25.00	1.239	0.05	0.115	0.142
	LTE Band 25	20M	QPSK	50	24	Right Tilted	0mm	DSI2_Main Ant	26340	1880	23.17	24.00	1.211	-0.03	0.087	0.105
	LTE Band 25	20M	QPSK	1	0	Left Cheek	0mm	DSI2_Main Ant	26340	1880	24.07	25.00	1.239	-0.14	0.121	0.150
	LTE Band 25	20M	QPSK	50	24	Left Cheek	0mm	DSI2_Main Ant	26340	1880	23.17	24.00	1.211	0.16	0.101	0.122
	LTE Band 25	20M	QPSK	1	0	Left Tilted	0mm	DSI2_Main Ant	26340	1880	24.07	25.00	1.239	0.06	0.100	0.124
	LTE Band 25	20M	QPSK	50	24	Left Tilted	0mm	DSI2_Main Ant	26340	1880	23.17	24.00	1.211	0.06	0.078	0.094
	LTE Band 66	20M	QPSK	1	49	Right Cheek	0mm	DSI2_Main Ant	132572	1770	24.11	25.00	1.227	-0.04	0.118	0.145
	LTE Band 66	20M	QPSK	50	50	Right Cheek	0mm	DSI2_Main Ant	132572	1770	23.20	24.00	1.202	0.01	0.095	0.114
	LTE Band 66	20M	QPSK	1	49	Right Tilted	0mm	DSI2_Main Ant	132572	1770	24.11	25.00	1.227	0.13	0.071	0.087
	LTE Band 66	20M	QPSK	50	50	Right Tilted	0mm	DSI2_Main Ant	132572	1770	23.20	24.00	1.202	0.14	0.057	0.069
02	LTE Band 66	20M	QPSK	1	49	Left Cheek	0mm	DSI2_Main Ant	132572	1770	24.11	25.00	1.227	0.02	0.119	0.146
	LTE Band 66	20M	QPSK	50	50	Left Cheek	0mm	DSI2_Main Ant	132572	1770	23.20	24.00	1.202	0.07	0.097	0.117
	LTE Band 66	20M	QPSK	1	49	Left Tilted	0mm	DSI2_Main Ant	132572	1770	24.11	25.00	1.227	0.07	0.062	0.076
	LTE Band 66	20M	QPSK	50	50	Left Tilted	0mm	DSI2_Main Ant	132572	1770	23.20	24.00	1.202	0.18	0.051	0.061
	LTE Band 71	20M	QPSK	1	99	Right Cheek	0mm	DSI2_Main Ant	133322	683	24.06	25.00	1.242	0.05	0.065	0.081
	LTE Band 71	20M	QPSK	50	24	Right Cheek	0mm	DSI2_Main Ant	133322	683	23.17	24.00	1.211	0.04	0.061	0.074
	LTE Band 71	20M	QPSK	1	99	Right Tilted	0mm	DSI2_Main Ant	133322	683	24.06	25.00	1.242	0.08	0.033	0.041
	LTE Band 71	20M	QPSK	50	24	Right Tilted	0mm	DSI2_Main Ant	133322	683	23.17	24.00	1.211	0.08	0.032	0.039
03	LTE Band 71	20M	QPSK	1	99	Left Cheek	0mm	DSI2_Main Ant	133322	683	24.06	25.00	1.242	0.09	0.080	0.099
	LTE Band 71	20M	QPSK	50	24	Left Cheek	0mm	DSI2_Main Ant	133322	683	23.17	24.00	1.211	0.08	0.069	0.084
	LTE Band 71	20M	QPSK	1	99	Left Tilted	0mm	DSI2_Main Ant	133322	683	24.06	25.00	1.242	0.05	0.039	0.048
	LTE Band 71	20M	QPSK	50	24	Left Tilted	0mm	DSI2_Main Ant	133322	683	23.17	24.00	1.211	0.07	0.036	0.044

<TDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Output Power State	Ch.	Freq. (MHz)	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)
	LTE Band 41	20M	QPSK	1	99	Right Cheek	0mm	DSI2_Main Ant	40620	2593	24.40	25.00	1.148	62.9	1.006	0.07	0.033	0.038
	LTE Band 41	20M	QPSK	50	24	Right Cheek	0mm	DSI2_Main Ant	40620	2593	23.48	24.00	1.127	62.9	1.006	0.02	0.028	0.032
	LTE Band 41	20M	QPSK	1	99	Right Tilted	0mm	DSI2_Main Ant	40620	2593	24.40	25.00	1.148	62.9	1.006	0.05	0.050	0.058
	LTE Band 41	20M	QPSK	50	24	Right Tilted	0mm	DSI2_Main Ant	40620	2593	23.48	24.00	1.127	62.9	1.006	0.04	0.039	0.044
04	LTE Band 41	20M	QPSK	1	99	Left Cheek	0mm	DSI2_Main Ant	40620	2593	24.40	25.00	1.148	62.9	1.006	-0.07	0.066	0.076
	LTE Band 41	20M	QPSK	50	24	Left Cheek	0mm	DSI2_Main Ant	40620	2593	23.48	24.00	1.127	62.9	1.006	-0.04	0.052	0.059
	LTE Band 41	20M	QPSK	1	99	Left Tilted	0mm	DSI2_Main Ant	40620	2593	24.40	25.00	1.148	62.9	1.006	0.06	0.029	0.033
	LTE Band 41	20M	QPSK	50	24	Left Tilted	0mm	DSI2_Main Ant	40620	2593	23.48	24.00	1.127	62.9	1.006	0.1	0.023	0.026
05	LTE Band 48	20M	QPSK	1	0	Right Cheek	0mm	DSI2_Main Ant	55830	3609	24.09	25.00	1.233	62.9	1.006	-0.09	0.058	0.072
	LTE Band 48	20M	QPSK	50	0	Right Cheek	0mm	DSI2_Main Ant	56150	3641	23.09	24.00	1.233	62.9	1.006	-0.06	0.049	0.061
	LTE Band 48	20M	QPSK	1	0	Right Tilted	0mm	DSI2_Main Ant	55830	3609	24.09	25.00	1.233	62.9	1.006	0.02	0.022	0.027
	LTE Band 48	20M	QPSK	50	0	Right Tilted	0mm	DSI2_Main Ant	56150	3641	23.09	24.00	1.233	62.9	1.006	-0.06	0.016	0.020
	LTE Band 48	20M	QPSK	1	0	Left Cheek	0mm	DSI2_Main Ant	55830	3609	24.09	25.00	1.233	62.9	1.006	0.06	0.057	0.071
	LTE Band 48	20M	QPSK	50	0	Left Cheek	0mm	DSI2_Main Ant	56150	3641	23.09	24.00	1.233	62.9	1.006	0.06	0.035	0.043
	LTE Band 48	20M	QPSK	1	0	Left Tilted	0mm	DSI2_Main Ant	55830	3609	24.09	25.00	1.233	62.9	1.006	-0.07	0.005	0.006
	LTE Band 48	20M	QPSK	50	0	Left Tilted	0mm	DSI2_Main Ant	56150	3641	23.09	24.00	1.233	62.9	1.006	0.18	0.001	0.001

<5G NR SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
06	FR1 n2	20M	BPSK	1	1	Right Cheek	0mm	DSI2_Main Ant	372000	1860	24.34	25.00	1.164	-0.06	0.197	0.229
	FR1 n2	20M	BPSK	50	28	Right Cheek	0mm	DSI2_Main Ant	372000	1860	24.31	25.00	1.172	0.11	0.149	0.175
	FR1 n2	20M	BPSK	1	1	Right Tilted	0mm	DSI2_Main Ant	372000	1860	24.34	25.00	1.164	-0.11	0.116	0.135
	FR1 n2	20M	BPSK	50	28	Right Tilted	0mm	DSI2_Main Ant	372000	1860	24.31	25.00	1.172	0.06	0.097	0.114
	FR1 n2	20M	BPSK	1	1	Left Cheek	0mm	DSI2_Main Ant	372000	1860	24.34	25.00	1.164	-0.1	0.114	0.133
	FR1 n2	20M	BPSK	50	28	Left Cheek	0mm	DSI2_Main Ant	372000	1860	24.31	25.00	1.172	0.1	0.102	0.120
	FR1 n2	20M	BPSK	1	1	Left Tilted	0mm	DSI2_Main Ant	372000	1860	24.34	25.00	1.164	-0.08	0.092	0.107
	FR1 n2	20M	BPSK	50	28	Left Tilted	0mm	DSI2_Main Ant	372000	1860	24.31	25.00	1.172	0.02	0.112	0.131
	FR1 n5	20M	BPSK	1	1	Right Cheek	0mm	DSI2_Main Ant	167300	836.5	24.15	25.00	1.216	-0.05	0.168	0.204
	FR1 n5	20M	BPSK	50	28	Right Cheek	0mm	DSI2_Main Ant	167300	836.5	24.00	25.00	1.259	-0.07	0.178	0.224
	FR1 n5	20M	BPSK	1	1	Right Tilted	0mm	DSI2_Main Ant	167300	836.5	24.15	25.00	1.216	0.18	0.059	0.072
	FR1 n5	20M	BPSK	50	28	Right Tilted	0mm	DSI2_Main Ant	167300	836.5	24.00	25.00	1.259	0.16	0.062	0.078
	FR1 n5	20M	BPSK	1	1	Left Cheek	0mm	DSI2_Main Ant	167300	836.5	24.15	25.00	1.216	-0.06	0.176	0.214
07	FR1 n5	20M	BPSK	50	28	Left Cheek	0mm	DSI2_Main Ant	167300	836.5	24.00	25.00	1.259	-0.05	0.182	0.229
	FR1 n5	20M	BPSK	1	1	Left Tilted	0mm	DSI2_Main Ant	167300	836.5	24.15	25.00	1.216	0.17	0.057	0.069
	FR1 n5	20M	BPSK	50	28	Left Tilted	0mm	DSI2_Main Ant	167300	836.5	24.00	25.00	1.259	0.16	0.060	0.076
	FR1 n41	100M	BPSK	1	1	Right Cheek	0mm	DSI2_Sub Ant	518598	2592.99	14.57	16.00	1.390	0.07	0.109	0.152
	FR1 n41	100M	BPSK	135	0	Right Cheek	0mm	DSI2_Sub Ant	518598	2592.99	14.51	16.00	1.409	0.01	0.073	0.103
	FR1 n41	100M	BPSK	1	1	Right Tilted	0mm	DSI2_Sub Ant	518598	2592.99	14.57	16.00	1.390	0.07	0.107	0.149
	FR1 n41	100M	BPSK	135	0	Right Tilted	0mm	DSI2_Sub Ant	518598	2592.99	14.51	16.00	1.409	0.13	0.076	0.107
08	FR1 n41	100M	BPSK	1	1	Left Cheek	0mm	DSI2_Sub Ant	518598	2592.99	14.57	16.00	1.390	-0.01	0.401	0.557
	FR1 n41	100M	BPSK	135	0	Left Cheek	0mm	DSI2_Sub Ant	518598	2592.99	14.51	16.00	1.409	-0.07	0.341	0.481
	FR1 n41	100M	BPSK	270	0	Left Cheek	0mm	DSI2_Sub Ant	518598	2592.99	14.57	16.00	1.390	-0.11	0.304	0.423
	FR1 n41	100M	BPSK	1	1	Left Tilted	0mm	DSI2_Sub Ant	518598	2592.99	14.51	16.00	1.409	-0.05	0.252	0.355
09	FR1 n66	20M	BPSK	1	1	Right Cheek	0mm	DSI2_Main Ant	344000	1720	24.23	25.00	1.194	0.01	0.188	0.224
	FR1 n66	20M	BPSK	50	28	Right Cheek	0mm	DSI2_Main Ant	354000	1770	24.07	25.00	1.239	0.12	0.122	0.151
	FR1 n66	20M	BPSK	1	1	Right Tilted	0mm	DSI2_Main Ant	344000	1720	24.23	25.00	1.194	0.08	0.075	0.090
	FR1 n66	20M	BPSK	50	28	Right Tilted	0mm	DSI2_Main Ant	354000	1770	24.07	25.00	1.239	0.09	0.072	0.089
	FR1 n66	20M	BPSK	1	1	Left Cheek	0mm	DSI2_Main Ant	344000	1720	24.23	25.00	1.194	-0.17	0.119	0.142
	FR1 n66	20M	BPSK	50	28	Left Cheek	0mm	DSI2_Main Ant	354000	1770	24.07	25.00	1.239	0.1	0.127	0.157
	FR1 n66	20M	BPSK	1	1	Left Tilted	0mm	DSI2_Main Ant	344000	1720	24.23	25.00	1.194	0.15	0.077	0.092
	FR1 n66	20M	BPSK	50	28	Left Tilted	0mm	DSI2_Main Ant	354000	1770	24.07	25.00	1.239	0.14	0.074	0.092
	FR1 n71	20M	BPSK	1	1	Right Cheek	0mm	DSI2_Main Ant	136100	680.5	24.26	25.00	1.186	-0.14	0.036	0.043
	FR1 n71	20M	BPSK	50	28	Right Cheek	0mm	DSI2_Main Ant	136100	680.5	24.17	25.00	1.211	0.11	0.036	0.044
	FR1 n71	20M	BPSK	1	1	Right Tilted	0mm	DSI2_Main Ant	136100	680.5	24.26	25.00	1.186	0.08	0.017	0.020
	FR1 n71	20M	BPSK	50	28	Right Tilted	0mm	DSI2_Main Ant	136100	680.5	24.17	25.00	1.211	0.03	0.018	0.022
	FR1 n71	20M	BPSK	1	1	Left Cheek	0mm	DSI2_Main Ant	136100	680.5	24.26	25.00	1.186	-0.02	0.045	0.053
10	FR1 n71	20M	BPSK	50	28	Left Cheek	0mm	DSI2_Main Ant	136100	680.5	24.17	25.00	1.211	0	0.046	0.056
	FR1 n71	20M	BPSK	1	1	Left Tilted	0mm	DSI2_Main Ant	136100	680.5	24.26	25.00	1.186	0.07	0.020	0.024
	FR1 n71	20M	BPSK	50	28	Left Tilted	0mm	DSI2_Main Ant	136100	680.5	24.17	25.00	1.211	0.07	0.021	0.025

16.2 Hotspot SAR

<FDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 5	10M	QPSK	1	0	Front	10mm	DSI3_Main Ant	20525	836.5	22.28	23.00	1.180	-0.03	0.100	0.118
	LTE Band 5	10M	QPSK	25	25	Front	10mm	DSI3_Main Ant	20525	836.5	22.40	23.00	1.148	-0.11	0.112	0.129
	LTE Band 5	10M	QPSK	1	0	Back	10mm	DSI3_Main Ant	20525	836.5	22.28	23.00	1.180	-0.07	0.121	0.143
	LTE Band 5	10M	QPSK	25	25	Back	10mm	DSI3_Main Ant	20525	836.5	22.40	23.00	1.148	-0.06	0.136	0.156
	LTE Band 5	10M	QPSK	1	0	Left Side	10mm	DSI3_Main Ant	20525	836.5	22.28	23.00	1.180	-0.11	0.110	0.130
	LTE Band 5	10M	QPSK	25	25	Left Side	10mm	DSI3_Main Ant	20525	836.5	22.40	23.00	1.148	-0.1	0.110	0.126
	LTE Band 5	10M	QPSK	1	0	Right Side	10mm	DSI3_Main Ant	20525	836.5	22.28	23.00	1.180	-0.1	0.097	0.114
	LTE Band 5	10M	QPSK	25	25	Right Side	10mm	DSI3_Main Ant	20525	836.5	22.40	23.00	1.148	-0.1	0.105	0.121
	LTE Band 5	10M	QPSK	1	0	Bottom Side	10mm	DSI3_Main Ant	20525	836.5	22.28	23.00	1.180	-0.07	0.022	0.026
	LTE Band 5	10M	QPSK	25	25	Bottom Side	10mm	DSI3_Main Ant	20525	836.5	22.40	23.00	1.148	-0.15	0.024	0.028
	LTE Band 5	10M	QPSK	1	0	Front	10mm	DSI3_Sub Ant	20525	836.5	21.85	22.50	1.161	0	0.157	0.182
	LTE Band 5	10M	QPSK	25	25	Front	10mm	DSI3_Sub Ant	20525	836.5	21.98	22.50	1.127	-0.04	0.170	0.192
	LTE Band 5	10M	QPSK	1	0	Back	10mm	DSI3_Sub Ant	20525	836.5	21.85	22.50	1.161	-0.11	0.187	0.217
11	LTE Band 5	10M	QPSK	25	25	Back	10mm	DSI3_Sub Ant	20525	836.5	21.98	22.50	1.127	-0.04	0.198	0.223
	LTE Band 5	10M	QPSK	1	0	Left Side	10mm	DSI3_Sub Ant	20525	836.5	21.85	22.50	1.161	-0.13	0.106	0.123
	LTE Band 5	10M	QPSK	25	25	Left Side	10mm	DSI3_Sub Ant	20525	836.5	21.98	22.50	1.127	-0.04	0.114	0.129
	LTE Band 5	10M	QPSK	1	0	Right Side	10mm	DSI3_Sub Ant	20525	836.5	21.85	22.50	1.161	-0.09	0.159	0.185
	LTE Band 5	10M	QPSK	25	25	Right Side	10mm	DSI3_Sub Ant	20525	836.5	21.98	22.50	1.127	-0.09	0.182	0.205
	LTE Band 5	10M	QPSK	1	0	Top Side	10mm	DSI3_Sub Ant	20525	836.5	21.85	22.50	1.161	0.06	0.034	0.039
	LTE Band 5	10M	QPSK	25	25	Top Side	10mm	DSI3_Sub Ant	20525	836.5	21.98	22.50	1.127	0.05	0.031	0.035
	LTE Band 13	10M	QPSK	1	25	Front	10mm	DSI3_Main Ant	23230	782	22.24	23.00	1.191	-0.15	0.101	0.120
	LTE Band 13	10M	QPSK	25	25	Front	10mm	DSI3_Main Ant	23230	782	22.40	23.00	1.148	0.02	0.107	0.123
	LTE Band 13	10M	QPSK	1	25	Back	10mm	DSI3_Main Ant	23230	782	22.24	23.00	1.191	-0.14	0.126	0.150
	LTE Band 13	10M	QPSK	25	25	Back	10mm	DSI3_Main Ant	23230	782	22.40	23.00	1.148	-0.13	0.131	0.150
	LTE Band 13	10M	QPSK	1	25	Left Side	10mm	DSI3_Main Ant	23230	782	22.24	23.00	1.191	-0.03	0.132	0.157
	LTE Band 13	10M	QPSK	25	25	Left Side	10mm	DSI3_Main Ant	23230	782	22.40	23.00	1.148	-0.06	0.141	0.162
	LTE Band 13	10M	QPSK	1	25	Right Side	10mm	DSI3_Main Ant	23230	782	22.24	23.00	1.191	-0.06	0.091	0.108
	LTE Band 13	10M	QPSK	25	25	Right Side	10mm	DSI3_Main Ant	23230	782	22.40	23.00	1.148	-0.03	0.101	0.116
	LTE Band 13	10M	QPSK	1	25	Bottom Side	10mm	DSI3_Main Ant	23230	782	22.24	23.00	1.191	-0.03	0.032	0.038
	LTE Band 13	10M	QPSK	25	25	Bottom Side	10mm	DSI3_Main Ant	23230	782	22.40	23.00	1.148	0.05	0.032	0.037
	LTE Band 13	10M	QPSK	1	25	Front	10mm	DSI3_Sub Ant	23230	782	21.52	22.50	1.253	-0.08	0.180	0.226
	LTE Band 13	10M	QPSK	25	25	Front	10mm	DSI3_Sub Ant	23230	782	21.69	22.50	1.205	-0.09	0.183	0.221
	LTE Band 13	10M	QPSK	1	25	Back	10mm	DSI3_Sub Ant	23230	782	21.52	22.50	1.253	-0.14	0.202	0.253
	LTE Band 13	10M	QPSK	25	25	Back	10mm	DSI3_Sub Ant	23230	782	21.69	22.50	1.205	-0.15	0.207	0.249
	LTE Band 13	10M	QPSK	1	25	Left Side	10mm	DSI3_Sub Ant	23230	782	21.52	22.50	1.253	-0.03	0.181	0.227
	LTE Band 13	10M	QPSK	25	25	Left Side	10mm	DSI3_Sub Ant	23230	782	21.69	22.50	1.205	-0.04	0.186	0.224
12	LTE Band 13	10M	QPSK	1	25	Right Side	10mm	DSI3_Sub Ant	23230	782	21.52	22.50	1.253	-0.02	0.212	0.266
	LTE Band 13	10M	QPSK	25	25	Right Side	10mm	DSI3_Sub Ant	23230	782	21.69	22.50	1.205	-0.08	0.216	0.260
	LTE Band 13	10M	QPSK	1	25	Top Side	10mm	DSI3_Sub Ant	23230	782	21.52	22.50	1.253	0.1	0.036	0.045
	LTE Band 13	10M	QPSK	25	25	Top Side	10mm	DSI3_Sub Ant	23230	782	21.69	22.50	1.205	0.13	0.039	0.047
	LTE Band 25	20M	QPSK	1	0	Front	10mm	DSI3_Main Ant	26140	1860	18.20	19.00	1.202	-0.14	0.303	0.364
	LTE Band 25	20M	QPSK	50	24	Front	10mm	DSI3_Main Ant	26340	1880	18.35	19.00	1.161	-0.13	0.362	0.420
	LTE Band 25	20M	QPSK	1	0	Back	10mm	DSI3_Main Ant	26140	1860	18.20	19.00	1.202	0.02	0.347	0.417
	LTE Band 25	20M	QPSK	50	24	Back	10mm	DSI3_Main Ant	26340	1880	18.35	19.00	1.161	0.06	0.408	0.474
	LTE Band 25	20M	QPSK	1	0	Left Side	10mm	DSI3_Main Ant	26140	1860	18.20	19.00	1.202	0.04	0.040	0.048
	LTE Band 25	20M	QPSK	50	24	Left Side	10mm	DSI3_Main Ant	26340	1880	18.35	19.00	1.161	0.03	0.051	0.059
	LTE Band 25	20M	QPSK	1	0	Right Side	10mm	DSI3_Main Ant	26140	1860	18.20	19.00	1.202	0.1	0.052	0.063
	LTE Band 25	20M	QPSK	50	24	Right Side	10mm	DSI3_Main Ant	26340	1880	18.35	19.00	1.161	0.01	0.066	0.077
	LTE Band 25	20M	QPSK	1	0	Bottom Side	10mm	DSI3_Main Ant	26140	1860	18.20	19.00	1.202	0.11	0.478	0.575
13	LTE Band 25	20M	QPSK	50	24	Bottom Side	10mm	DSI3_Main Ant	26340	1880	18.35	19.00	1.161	0.05	0.570	0.662

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 66	20M	QPSK	1	0	Front	10mm	DSI3_Main Ant	132072	1720	17.98	19.00	1.265	-0.08	0.268	0.339
	LTE Band 66	20M	QPSK	50	24	Front	10mm	DSI3_Main Ant	132572	1770	18.11	19.00	1.227	-0.1	0.268	0.329
	LTE Band 66	20M	QPSK	1	0	Back	10mm	DSI3_Main Ant	132072	1720	17.98	19.00	1.265	0.15	0.293	0.371
	LTE Band 66	20M	QPSK	50	24	Back	10mm	DSI3_Main Ant	132572	1770	18.11	19.00	1.227	0.13	0.299	0.367
	LTE Band 66	20M	QPSK	1	0	Left Side	10mm	DSI3_Main Ant	132072	1720	17.98	19.00	1.265	-0.14	0.029	0.037
	LTE Band 66	20M	QPSK	50	24	Left Side	10mm	DSI3_Main Ant	132572	1770	18.11	19.00	1.227	-0.09	0.032	0.039
	LTE Band 66	20M	QPSK	1	0	Right Side	10mm	DSI3_Main Ant	132072	1720	17.98	19.00	1.265	-0.05	0.052	0.066
	LTE Band 66	20M	QPSK	50	24	Right Side	10mm	DSI3_Main Ant	132572	1770	18.11	19.00	1.227	-0.1	0.044	0.054
	LTE Band 66	20M	QPSK	1	0	Bottom Side	10mm	DSI3_Main Ant	132072	1720	17.98	19.00	1.265	0.07	0.391	0.495
14	LTE Band 66	20M	QPSK	50	24	Bottom Side	10mm	DSI3_Main Ant	132572	1770	18.11	19.00	1.227	0.17	0.413	0.507
	LTE Band 71	20M	QPSK	1	99	Front	10mm	DSI3_Main Ant	133322	683	24.06	25.00	1.242	-0.14	0.116	0.144
	LTE Band 71	20M	QPSK	50	24	Front	10mm	DSI3_Main Ant	133322	683	23.17	24.00	1.211	-0.12	0.129	0.156
	LTE Band 71	20M	QPSK	1	99	Back	10mm	DSI3_Main Ant	133322	683	24.06	25.00	1.242	-0.1	0.128	0.159
	LTE Band 71	20M	QPSK	50	24	Back	10mm	DSI3_Main Ant	133322	683	23.17	24.00	1.211	-0.14	0.159	0.192
	LTE Band 71	20M	QPSK	1	99	Left Side	10mm	DSI3_Main Ant	133322	683	24.06	25.00	1.242	-0.05	0.159	0.197
15	LTE Band 71	20M	QPSK	50	24	Left Side	10mm	DSI3_Main Ant	133322	683	23.17	24.00	1.211	-0.07	0.189	0.229
	LTE Band 71	20M	QPSK	1	99	Right Side	10mm	DSI3_Main Ant	133322	683	24.06	25.00	1.242	-0.02	0.115	0.143
	LTE Band 71	20M	QPSK	50	24	Right Side	10mm	DSI3_Main Ant	133322	683	23.17	24.00	1.211	-0.05	0.132	0.160
	LTE Band 71	20M	QPSK	1	99	Bottom Side	10mm	DSI3_Main Ant	133322	683	24.06	25.00	1.242	0.13	0.057	0.071
	LTE Band 71	20M	QPSK	50	24	Bottom Side	10mm	DSI3_Main Ant	133322	683	23.17	24.00	1.211	0.11	0.068	0.082

<TDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Output Power State	Ch.	Freq. (MHz)	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)
	LTE Band 48	20M	QPSK	1	0	Front	10mm	DSI3_Main Ant	55830	3609	19.91	21.00	1.285	62.9	1.006	-0.17	0.103	0.133
	LTE Band 48	20M	QPSK	50	0	Front	10mm	DSI3_Main Ant	55830	3609	19.98	21.00	1.265	62.9	1.006	-0.12	0.101	0.129
	LTE Band 48	20M	QPSK	1	0	Back	10mm	DSI3_Main Ant	55830	3609	19.91	21.00	1.285	62.9	1.006	-0.08	0.150	0.194
	LTE Band 48	20M	QPSK	50	0	Back	10mm	DSI3_Main Ant	55830	3609	19.98	21.00	1.265	62.9	1.006	-0.09	0.149	0.190
	LTE Band 48	20M	QPSK	1	0	Left Side	10mm	DSI3_Main Ant	55830	3609	19.91	21.00	1.285	62.9	1.006	-0.09	0.021	0.027
	LTE Band 48	20M	QPSK	50	0	Left Side	10mm	DSI3_Main Ant	55830	3609	19.98	21.00	1.265	62.9	1.006	-0.08	0.021	0.027
	LTE Band 48	20M	QPSK	1	0	Right Side	10mm	DSI3_Main Ant	55830	3609	19.91	21.00	1.285	62.9	1.006	-0.17	0.073	0.094
	LTE Band 48	20M	QPSK	50	0	Right Side	10mm	DSI3_Main Ant	55830	3609	19.98	21.00	1.265	62.9	1.006	-0.05	0.073	0.093
16	LTE Band 48	20M	QPSK	1	0	Bottom Side	10mm	DSI3_Main Ant	55830	3609	19.91	21.00	1.285	62.9	1.006	-0.06	0.230	0.297
	LTE Band 48	20M	QPSK	50	0	Bottom Side	10mm	DSI3_Main Ant	55830	3609	19.98	21.00	1.265	62.9	1.006	0.05	0.230	0.293

<5G NR SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	FR1 n2	20M	BPSK	1	1	Front	10mm	DSI3_Main Ant	372000	1860	18.02	19.00	1.253	-0.16	0.322	0.404
	FR1 n2	20M	BPSK	50	56	Front	10mm	DSI3_Main Ant	372000	1860	18.05	19.00	1.245	-0.04	0.338	0.421
	FR1 n2	20M	BPSK	1	1	Back	10mm	DSI3_Main Ant	372000	1860	18.02	19.00	1.253	0.04	0.377	0.472
	FR1 n2	20M	BPSK	50	56	Back	10mm	DSI3_Main Ant	372000	1860	18.05	19.00	1.245	0.01	0.392	0.488
	FR1 n2	20M	BPSK	1	1	Left Side	10mm	DSI3_Main Ant	372000	1860	18.02	19.00	1.253	-0.02	0.038	0.048
	FR1 n2	20M	BPSK	50	56	Left Side	10mm	DSI3_Main Ant	372000	1860	18.05	19.00	1.245	0.15	0.041	0.051
	FR1 n2	20M	BPSK	1	1	Right Side	10mm	DSI3_Main Ant	372000	1860	18.02	19.00	1.253	0.13	0.053	0.066
	FR1 n2	20M	BPSK	50	56	Right Side	10mm	DSI3_Main Ant	372000	1860	18.05	19.00	1.245	0.03	0.057	0.071
	FR1 n2	20M	BPSK	1	1	Bottom Side	10mm	DSI3_Main Ant	372000	1860	18.02	19.00	1.253	0.03	0.500	0.627
17	FR1 n2	20M	BPSK	50	56	Bottom Side	10mm	DSI3_Main Ant	372000	1860	18.05	19.00	1.245	0.02	0.532	0.662

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	FR1 n5	20M	BPSK	1	1	Front	10mm	DSI3_Main Ant	167300	836.5	22.25	23.00	1.189	-0.1	0.113	0.134
	FR1 n5	20M	BPSK	50	0	Front	10mm	DSI3_Main Ant	167300	836.5	22.12	23.00	1.225	-0.07	0.115	0.141
	FR1 n5	20M	BPSK	1	1	Back	10mm	DSI3_Main Ant	167300	836.5	22.25	23.00	1.189	-0.11	0.140	0.166
	FR1 n5	20M	BPSK	50	0	Back	10mm	DSI3_Main Ant	167300	836.5	22.12	23.00	1.225	-0.19	0.139	0.170
	FR1 n5	20M	BPSK	1	1	Left Side	10mm	DSI3_Main Ant	167300	836.5	22.25	23.00	1.189	-0.04	0.133	0.158
	FR1 n5	20M	BPSK	50	0	Left Side	10mm	DSI3_Main Ant	167300	836.5	22.12	23.00	1.225	-0.02	0.116	0.142
	FR1 n5	20M	BPSK	1	1	Right Side	10mm	DSI3_Main Ant	167300	836.5	22.25	23.00	1.189	-0.02	0.121	0.144
	FR1 n5	20M	BPSK	50	0	Right Side	10mm	DSI3_Main Ant	167300	836.5	22.12	23.00	1.225	0.04	0.106	0.130
	FR1 n5	20M	BPSK	1	1	Bottom Side	10mm	DSI3_Main Ant	167300	836.5	22.25	23.00	1.189	0.04	0.023	0.027
	FR1 n5	20M	BPSK	50	0	Bottom Side	10mm	DSI3_Main Ant	167300	836.5	22.12	23.00	1.225	0.1	0.024	0.029
	FR1 n5	20M	BPSK	1	1	Front	10mm	DSI3_Sub Ant	167300	836.5	21.48	22.50	1.265	-0.11	0.168	0.212
	FR1 n5	20M	BPSK	50	0	Front	10mm	DSI3_Sub Ant	167300	836.5	21.36	22.50	1.300	-0.07	0.162	0.211
	FR1 n5	20M	BPSK	1	1	Back	10mm	DSI3_Sub Ant	167300	836.5	21.48	22.50	1.265	-0.13	0.194	0.245
18	FR1 n5	20M	BPSK	50	0	Back	10mm	DSI3_Sub Ant	167300	836.5	21.36	22.50	1.300	-0.19	0.207	0.269
	FR1 n5	20M	BPSK	1	1	Left Side	10mm	DSI3_Sub Ant	167300	836.5	21.48	22.50	1.265	-0.03	0.123	0.156
	FR1 n5	20M	BPSK	50	0	Left Side	10mm	DSI3_Sub Ant	167300	836.5	21.36	22.50	1.300	-0.03	0.119	0.155
	FR1 n5	20M	BPSK	1	1	Right Side	10mm	DSI3_Sub Ant	167300	836.5	21.48	22.50	1.265	-0.06	0.161	0.204
	FR1 n5	20M	BPSK	50	0	Right Side	10mm	DSI3_Sub Ant	167300	836.5	21.36	22.50	1.300	-0.04	0.162	0.211
	FR1 n5	20M	BPSK	1	1	Top Side	10mm	DSI3_Sub Ant	167300	836.5	21.48	22.50	1.265	-0.05	0.037	0.047
	FR1 n5	20M	BPSK	50	0	Top Side	10mm	DSI3_Sub Ant	167300	836.5	21.36	22.50	1.300	-0.03	0.033	0.043
	FR1 n41	100M	BPSK	1	1	Front	10mm	DSI3_Sub Ant	518598	2592.99	14.57	16.00	1.390	-0.06	0.038	0.053
	FR1 n41	100M	BPSK	135	0	Front	10mm	DSI3_Sub Ant	518598	2592.99	14.51	16.00	1.409	0.13	0.032	0.045
	FR1 n41	100M	BPSK	1	1	Back	10mm	DSI3_Sub Ant	518598	2592.99	14.57	16.00	1.390	-0.04	0.036	0.050
	FR1 n41	100M	BPSK	135	0	Back	10mm	DSI3_Sub Ant	518598	2592.99	14.51	16.00	1.409	-0.06	0.029	0.041
	FR1 n41	100M	BPSK	1	1	Left Side	10mm	DSI3_Sub Ant	518598	2592.99	14.57	16.00	1.390	-0.19	0.001	0.001
	FR1 n41	100M	BPSK	135	0	Left Side	10mm	DSI3_Sub Ant	518598	2592.99	14.51	16.00	1.409	-0.19	0.001	0.001
19	FR1 n41	100M	BPSK	1	1	Right Side	10mm	DSI3_Sub Ant	518598	2592.99	14.57	16.00	1.390	0.02	0.063	0.088
	FR1 n41	100M	BPSK	135	0	Right Side	10mm	DSI3_Sub Ant	518598	2592.99	14.51	16.00	1.409	-0.11	0.054	0.076
	FR1 n41	100M	BPSK	1	1	Top Side	10mm	DSI3_Sub Ant	518598	2592.99	14.57	16.00	1.390	-0.06	0.024	0.033
	FR1 n41	100M	BPSK	135	0	Top Side	10mm	DSI3_Sub Ant	518598	2592.99	14.51	16.00	1.409	0.15	0.018	0.025
	FR1 n66	20M	BPSK	1	1	Front	10mm	DSI3_Main Ant	344000	1720	17.95	19.00	1.274	-0.16	0.260	0.331
	FR1 n66	20M	BPSK	50	0	Front	10mm	DSI3_Main Ant	344000	1720	18.02	19.00	1.253	-0.16	0.302	0.378
	FR1 n66	20M	BPSK	1	1	Back	10mm	DSI3_Main Ant	344000	1720	17.95	19.00	1.274	0.02	0.307	0.391
	FR1 n66	20M	BPSK	50	0	Back	10mm	DSI3_Main Ant	344000	1720	18.02	19.00	1.253	-0.12	0.310	0.388
	FR1 n66	20M	BPSK	1	1	Left Side	10mm	DSI3_Main Ant	344000	1720	17.95	19.00	1.274	-0.07	0.031	0.039
	FR1 n66	20M	BPSK	50	0	Left Side	10mm	DSI3_Main Ant	344000	1720	18.02	19.00	1.253	-0.04	0.031	0.039
	FR1 n66	20M	BPSK	1	1	Right Side	10mm	DSI3_Main Ant	344000	1720	17.95	19.00	1.274	-0.16	0.056	0.071
	FR1 n66	20M	BPSK	50	0	Right Side	10mm	DSI3_Main Ant	344000	1720	18.02	19.00	1.253	-0.04	0.056	0.070
20	FR1 n66	20M	BPSK	1	1	Bottom Side	10mm	DSI3_Main Ant	344000	1720	17.95	19.00	1.274	0.06	0.418	0.532
	FR1 n66	20M	BPSK	50	0	Bottom Side	10mm	DSI3_Main Ant	344000	1720	18.02	19.00	1.253	0.07	0.412	0.516
	FR1 n71	20M	BPSK	1	1	Front	10mm	DSI3_Main Ant	136100	680.5	24.26	25.00	1.186	-0.17	0.067	0.079
	FR1 n71	20M	BPSK	50	28	Front	10mm	DSI3_Main Ant	136100	680.5	24.17	25.00	1.211	-0.1	0.071	0.086
	FR1 n71	20M	BPSK	1	1	Back	10mm	DSI3_Main Ant	136100	680.5	24.26	25.00	1.186	0.1	0.093	0.110
	FR1 n71	20M	BPSK	50	28	Back	10mm	DSI3_Main Ant	136100	680.5	24.17	25.00	1.211	0.19	0.095	0.115
	FR1 n71	20M	BPSK	1	1	Left Side	10mm	DSI3_Main Ant	136100	680.5	24.26	25.00	1.186	-0.02	0.114	0.135
21	FR1 n71	20M	BPSK	50	28	Left Side	10mm	DSI3_Main Ant	136100	680.5	24.17	25.00	1.211	-0.07	0.124	0.150
	FR1 n71	20M	BPSK	1	1	Right Side	10mm	DSI3_Main Ant	136100	680.5	24.26	25.00	1.186	-0.19	0.048	0.057
	FR1 n71	20M	BPSK	50	28	Right Side	10mm	DSI3_Main Ant	136100	680.5	24.17	25.00	1.211	-0.1	0.052	0.063
	FR1 n71	20M	BPSK	1	1	Bottom Side	10mm	DSI3_Main Ant	136100	680.5	24.26	25.00	1.186	0.05	0.036	0.043
	FR1 n71	20M	BPSK	50	28	Bottom Side	10mm	DSI3_Main Ant	136100	680.5	24.17	25.00	1.211	0.09	0.033	0.040

16.3 Body Worn Accessory SAR

<FDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 5	10M	QPSK	1	0	Front	10mm	DSI3_Main Ant	20525	836.5	22.28	23.00	1.180	-0.03	0.100	0.118
	LTE Band 5	10M	QPSK	25	25	Front	10mm	DSI3_Main Ant	20525	836.5	22.40	23.00	1.148	-0.11	0.112	0.129
	LTE Band 5	10M	QPSK	1	0	Back	10mm	DSI3_Main Ant	20525	836.5	22.28	23.00	1.180	-0.07	0.121	0.143
	LTE Band 5	10M	QPSK	25	25	Back	10mm	DSI3_Main Ant	20525	836.5	22.40	23.00	1.148	-0.06	0.136	0.156
	LTE Band 5	10M	QPSK	1	0	Front	10mm	DSI3_Sub Ant	20525	836.5	22.28	23.00	1.180	0	0.157	0.182
	LTE Band 5	10M	QPSK	25	25	Front	10mm	DSI3_Sub Ant	20525	836.5	22.40	23.00	1.148	-0.04	0.170	0.192
	LTE Band 5	10M	QPSK	1	0	Back	10mm	DSI3_Sub Ant	20525	836.5	22.28	23.00	1.180	-0.11	0.187	0.217
22	LTE Band 5	10M	QPSK	25	25	Back	10mm	DSI3_Sub Ant	20525	836.5	22.40	23.00	1.148	-0.04	0.198	0.223
	LTE Band 13	10M	QPSK	1	25	Front	10mm	DSI3_Main Ant	23230	782	22.24	23.00	1.191	-0.15	0.101	0.120
	LTE Band 13	10M	QPSK	25	25	Front	10mm	DSI3_Main Ant	23230	782	22.40	23.00	1.148	0.02	0.107	0.123
	LTE Band 13	10M	QPSK	1	25	Back	10mm	DSI3_Main Ant	23230	782	22.24	23.00	1.191	-0.14	0.126	0.150
	LTE Band 13	10M	QPSK	25	25	Back	10mm	DSI3_Main Ant	23230	782	22.40	23.00	1.148	-0.13	0.131	0.150
	LTE Band 13	10M	QPSK	1	25	Front	10mm	DSI3_Sub Ant	23230	782	21.52	22.50	1.253	-0.08	0.180	0.226
	LTE Band 13	10M	QPSK	25	25	Front	10mm	DSI3_Sub Ant	23230	782	21.69	22.50	1.205	-0.09	0.183	0.221
23	LTE Band 13	10M	QPSK	1	25	Back	10mm	DSI3_Sub Ant	23230	782	21.52	22.50	1.253	-0.14	0.202	0.253
	LTE Band 13	10M	QPSK	25	25	Back	10mm	DSI3_Sub Ant	23230	782	21.69	22.50	1.205	-0.15	0.207	0.249
	LTE Band 25	20M	QPSK	1	0	Front	10mm	DSI3_Main Ant	26140	1860	18.20	19.00	1.202	-0.14	0.303	0.364
	LTE Band 25	20M	QPSK	50	24	Front	10mm	DSI3_Main Ant	26340	1880	18.35	19.00	1.161	-0.13	0.362	0.420
	LTE Band 25	20M	QPSK	1	0	Back	10mm	DSI3_Main Ant	26140	1860	18.20	19.00	1.202	0.02	0.347	0.417
24	LTE Band 25	20M	QPSK	50	24	Back	10mm	DSI3_Main Ant	26340	1880	18.35	19.00	1.161	0.06	0.408	0.474
	LTE Band 66	20M	QPSK	1	0	Front	10mm	DSI3_Main Ant	132072	1720	17.98	19.00	1.265	-0.08	0.268	0.339
	LTE Band 66	20M	QPSK	50	24	Front	10mm	DSI3_Main Ant	132572	1770	18.11	19.00	1.227	-0.1	0.268	0.329
25	LTE Band 66	20M	QPSK	1	0	Back	10mm	DSI3_Main Ant	132072	1720	17.98	19.00	1.265	0.15	0.293	0.371
	LTE Band 66	20M	QPSK	50	24	Back	10mm	DSI3_Main Ant	132572	1770	18.11	19.00	1.227	0.13	0.299	0.367
	LTE Band 71	20M	QPSK	1	99	Front	10mm	DSI3_Main Ant	133322	683	24.06	25.00	1.242	-0.14	0.116	0.144
	LTE Band 71	20M	QPSK	50	24	Front	10mm	DSI3_Main Ant	133322	683	23.17	24.00	1.211	-0.12	0.129	0.156
	LTE Band 71	20M	QPSK	1	99	Back	10mm	DSI3_Main Ant	133322	683	24.06	25.00	1.242	-0.1	0.128	0.159
26	LTE Band 71	20M	QPSK	50	24	Back	10mm	DSI3_Main Ant	133322	683	23.17	24.00	1.211	-0.14	0.159	0.192

<TDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Output Power State	Ch.	Freq. (MHz)	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)
	LTE Band 48	20M	QPSK	1	0	Front	10mm	DSI3_Main Ant	55830	3609	19.91	21.00	1.285	62.9	1.006	-0.17	0.103	0.133
	LTE Band 48	20M	QPSK	50	0	Front	10mm	DSI3_Main Ant	55830	3609	19.98	21.00	1.265	62.9	1.006	-0.12	0.101	0.129
27	LTE Band 48	20M	QPSK	1	0	Back	10mm	DSI3_Main Ant	55830	3609	19.91	21.00	1.285	62.9	1.006	-0.08	0.150	0.194
	LTE Band 48	20M	QPSK	50	0	Back	10mm	DSI3_Main Ant	55830	3609	19.98	21.00	1.265	62.9	1.006	-0.09	0.149	0.190

<5G NR SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	FR1 n2	20M	BPSK	1	1	Front	10mm	DSI3_Main Ant	372000	1860	18.02	19.00	1.253	-0.16	0.322	0.404
	FR1 n2	20M	BPSK	50	56	Front	10mm	DSI3_Main Ant	372000	1860	18.05	19.00	1.245	-0.04	0.338	0.421
	FR1 n2	20M	BPSK	1	1	Back	10mm	DSI3_Main Ant	372000	1860	18.02	19.00	1.253	0.04	0.377	0.472
28	FR1 n2	20M	BPSK	50	56	Back	10mm	DSI3_Main Ant	372000	1860	18.05	19.00	1.245	0.01	0.392	0.488
	FR1 n5	20M	BPSK	1	1	Front	10mm	DSI3_Main Ant	167300	836.5	22.25	23.00	1.189	-0.1	0.113	0.134
	FR1 n5	20M	BPSK	50	0	Front	10mm	DSI3_Main Ant	167300	836.5	22.12	23.00	1.225	-0.07	0.115	0.141
	FR1 n5	20M	BPSK	1	1	Back	10mm	DSI3_Main Ant	167300	836.5	22.25	23.00	1.189	-0.11	0.140	0.166
	FR1 n5	20M	BPSK	50	0	Back	10mm	DSI3_Main Ant	167300	836.5	22.12	23.00	1.225	-0.19	0.139	0.170
	FR1 n5	20M	BPSK	1	1	Front	10mm	DSI3_Sub Ant	167300	836.5	21.48	22.50	1.265	-0.11	0.168	0.212
	FR1 n5	20M	BPSK	50	0	Front	10mm	DSI3_Sub Ant	167300	836.5	21.36	22.50	1.300	-0.07	0.162	0.211
	FR1 n5	20M	BPSK	1	1	Back	10mm	DSI3_Sub Ant	167300	836.5	21.48	22.50	1.265	-0.13	0.194	0.245
29	FR1 n5	20M	BPSK	50	0	Back	10mm	DSI3_Sub Ant	167300	836.5	21.36	22.50	1.300	-0.19	0.207	0.269
30	FR1 n41	100M	BPSK	1	1	Front	10mm	DSI3_Sub Ant	518598	2592.99	14.57	16.00	1.390	-0.06	0.038	0.053
	FR1 n41	100M	BPSK	135	0	Front	10mm	DSI3_Sub Ant	518598	2592.99	14.51	16.00	1.409	0.13	0.032	0.045
	FR1 n41	100M	BPSK	1	1	Back	10mm	DSI3_Sub Ant	518598	2592.99	14.57	16.00	1.390	-0.04	0.036	0.050
	FR1 n41	100M	BPSK	135	0	Back	10mm	DSI3_Sub Ant	518598	2592.99	14.51	16.00	1.409	-0.06	0.029	0.041
	FR1 n66	20M	BPSK	1	1	Front	10mm	DSI3_Main Ant	344000	1720	17.95	19.00	1.274	-0.16	0.260	0.331
	FR1 n66	20M	BPSK	50	0	Front	10mm	DSI3_Main Ant	344000	1720	18.02	19.00	1.253	-0.16	0.302	0.378
31	FR1 n66	20M	BPSK	1	1	Back	10mm	DSI3_Main Ant	344000	1720	17.95	19.00	1.274	0.02	0.307	0.391
	FR1 n66	20M	BPSK	50	0	Back	10mm	DSI3_Main Ant	344000	1720	18.02	19.00	1.253	-0.12	0.310	0.388
	FR1 n71	20M	BPSK	1	1	Front	10mm	DSI3_Main Ant	136100	680.5	24.26	25.00	1.186	-0.17	0.067	0.079
	FR1 n71	20M	BPSK	50	28	Front	10mm	DSI3_Main Ant	136100	680.5	24.17	25.00	1.211	-0.1	0.071	0.086
	FR1 n71	20M	BPSK	1	1	Back	10mm	DSI3_Main Ant	136100	680.5	24.26	25.00	1.186	0.1	0.093	0.110
32	FR1 n71	20M	BPSK	50	28	Back	10mm	DSI3_Main Ant	136100	680.5	24.17	25.00	1.211	0.19	0.095	0.115

17. Simultaneous Transmission Analysis

Case	Cellular (GSM/UMTS/LTE)	Cellular (5G Sub6)	WLAN 2.4GHz		WLAN 5GHz		Bluetooth	
			Chain 0	Chain 1	Chain 0	Chain 1	Chain 0	Chain 1
1	-	-	Y	Y				
2					Y	Y		
3			Y	Y	Y	Y		
4							Y	
5								Y
6					Y	Y	Y	
7					Y	Y		Y
8	GSM UMTS LTE	-	Y	Y				
9					Y	Y		
10			Y	Y	Y	Y		
11							Y	
12								Y
13					Y	Y	Y	
14					Y	Y		Y

Case	Cellular (GSM/UMTS/LTE)	Cellular (5G Sub6)	WLAN 2.4GHz		WLAN 5GHz		Bluetooth	
			Chain 0	Chain 1	Chain 0	Chain 1	Chain 0	Chain 1
15	LTE	5G Sub6	Y	Y				
16					Y	Y		
17			Y	Y	Y	Y		
18							Y	
19								Y
20					Y	Y	Y	
21					Y	Y		Y

General Note:

1. This device 2.4/5.2/5.8GHz WLAN supports Hotspot operation and Bluetooth support tethering applications.
2. For MIMO SAR compliance is tested at each single chain and Per KDB 248227 D01v02r02, the simultaneous SAR provisions in KDB publication 447498 should be applied to determine simultaneous transmission SAR for WiFi MIMO. If the sum of 1g single transmission chain SAR measurements is < 1.6W/kg and SAR peak to location ratio ≤ 0.04.
3. The Scaled SAR summation is calculated based on the same configuration and test position.
4. Per KDB 447498 D01v06, simultaneous transmission SAR is compliant if,
   i) Scalar SAR summation < 1.6W/kg.
   ii) SPLSR = (SAR1 + SAR2)^1.5 / (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.
   iii) If SPLSR ≤ 0.04, simultaneously transmission SAR measurement is not necessary.
   iv) Simultaneously transmission SAR measurement, and the reported multi-band SAR < 1.6W/kg.

17.1 Head Exposure Conditions

<2.4GHz WLAN State 1>

WWAN Band	Exposure Position	1	2	3	4	5	6	7	1+2+3 Summed 1g SAR (W/kg)	1+4+5 Summed 1g SAR (W/kg)	1+6 Summed 1g SAR (W/kg)	1+7 Summed 1g SAR (W/kg)	1+4+5+6 Summed 1g SAR (W/kg)	1+4+5+7 Summed 1g SAR (W/kg)
		WWAN	2.4GHz WLAN Chain 0	2.4GHz WLAN Chain 1	5GHz WLAN Chain 0	5GHz WLAN Chain 1	Bluetooth Chain 0	Bluetooth Chain 1						
		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)						
GSM850	Right Cheek	0.143	0.535	0.220	0.216	0.452	0.230	0.121	**0.898**	**0.811**	**0.373**	**0.264**	**1.041**	**0.932**
	Right Tilted	0.063	0.106	0.055	0.110	0.337	0.040	0.029	**0.224**	**0.510**	**0.103**	**0.092**	**0.550**	**0.539**
	Left Cheek	0.156	0.204	0.130	0.048	0.170	0.082	0.065	**0.490**	**0.374**	**0.238**	**0.221**	**0.456**	**0.439**
	Left Tilted	0.056	0.038	0.032	0.042	0.152	0.018	0.018	**0.126**	**0.250**	**0.074**	**0.074**	**0.268**	**0.268**
GSM1900	Right Cheek	0.031	0.535	0.220	0.216	0.452	0.230	0.121	**0.786**	**0.699**	**0.261**	**0.152**	**0.929**	**0.820**
	Right Tilted	0.018	0.106	0.055	0.110	0.337	0.040	0.029	**0.179**	**0.465**	**0.058**	**0.047**	**0.505**	**0.494**
	Left Cheek	0.020	0.204	0.130	0.048	0.170	0.082	0.065	**0.354**	**0.238**	**0.102**	**0.085**	**0.320**	**0.303**
	Left Tilted	0.017	0.038	0.032	0.042	0.152	0.018	0.018	**0.087**	**0.211**	**0.035**	**0.035**	**0.229**	**0.229**
WCDMA II	Right Cheek	0.053	0.535	0.220	0.216	0.452	0.230	0.121	**0.808**	**0.721**	**0.283**	**0.174**	**0.951**	**0.842**
	Right Tilted	0.031	0.106	0.055	0.110	0.337	0.040	0.029	**0.192**	**0.478**	**0.071**	**0.060**	**0.518**	**0.507**
	Left Cheek	0.041	0.204	0.130	0.048	0.170	0.082	0.065	**0.375**	**0.259**	**0.123**	**0.106**	**0.341**	**0.324**
	Left Tilted	0.030	0.038	0.032	0.042	0.152	0.018	0.018	**0.100**	**0.224**	**0.048**	**0.048**	**0.242**	**0.242**
WCDMA IV	Right Cheek	0.058	0.535	0.220	0.216	0.452	0.230	0.121	**0.813**	**0.726**	**0.288**	**0.179**	**0.956**	**0.847**
	Right Tilted	0.036	0.106	0.055	0.110	0.337	0.040	0.029	**0.197**	**0.483**	**0.076**	**0.065**	**0.523**	**0.512**
	Left Cheek	0.041	0.204	0.130	0.048	0.170	0.082	0.065	**0.375**	**0.259**	**0.123**	**0.106**	**0.341**	**0.324**
	Left Tilted	0.029	0.038	0.032	0.042	0.152	0.018	0.018	**0.099**	**0.223**	**0.047**	**0.047**	**0.241**	**0.241**
WCDMA V	Right Cheek	0.238	0.535	0.220	0.216	0.452	0.230	0.121	**0.993**	**0.906**	**0.468**	**0.359**	**1.136**	**1.027**
	Right Tilted	0.134	0.106	0.055	0.110	0.337	0.040	0.029	**0.295**	**0.581**	**0.174**	**0.163**	**0.621**	**0.610**
	Left Cheek	0.259	0.204	0.130	0.048	0.170	0.082	0.065	**0.593**	**0.477**	**0.341**	**0.324**	**0.559**	**0.542**
	Left Tilted	0.143	0.038	0.032	0.042	0.152	0.018	0.018	**0.213**	**0.337**	**0.161**	**0.161**	**0.355**	**0.355**
LTE Band 5	Right Cheek	0.204	0.535	0.220	0.216	0.452	0.230	0.121	**0.959**	**0.872**	**0.434**	**0.325**	**1.102**	**0.993**
	Right Tilted	0.066	0.106	0.055	0.110	0.337	0.040	0.029	**0.227**	**0.513**	**0.106**	**0.095**	**0.553**	**0.542**
	Left Cheek	0.199	0.204	0.130	0.048	0.170	0.082	0.065	**0.533**	**0.417**	**0.281**	**0.264**	**0.499**	**0.482**
	Left Tilted	0.063	0.038	0.032	0.042	0.152	0.018	0.018	**0.133**	**0.257**	**0.081**	**0.081**	**0.275**	**0.275**
LTE Band 12	Right Cheek	0.156	0.535	0.220	0.216	0.452	0.230	0.121	**0.911**	**0.824**	**0.386**	**0.277**	**1.054**	**0.945**
	Right Tilted	0.081	0.106	0.055	0.110	0.337	0.040	0.029	**0.242**	**0.528**	**0.121**	**0.110**	**0.568**	**0.557**
	Left Cheek	0.187	0.204	0.130	0.048	0.170	0.082	0.065	**0.521**	**0.405**	**0.269**	**0.252**	**0.487**	**0.470**
	Left Tilted	0.086	0.038	0.032	0.042	0.152	0.018	0.018	**0.156**	**0.280**	**0.104**	**0.104**	**0.298**	**0.298**
LTE Band 13	Right Cheek	0.088	0.535	0.220	0.216	0.452	0.230	0.121	**0.843**	**0.756**	**0.318**	**0.209**	**0.986**	**0.877**
	Right Tilted	0.051	0.106	0.055	0.110	0.337	0.040	0.029	**0.212**	**0.498**	**0.091**	**0.080**	**0.538**	**0.527**
	Left Cheek	0.127	0.204	0.130	0.048	0.170	0.082	0.065	**0.461**	**0.345**	**0.209**	**0.192**	**0.427**	**0.410**
	Left Tilted	0.056	0.038	0.032	0.042	0.152	0.018	0.018	**0.126**	**0.250**	**0.074**	**0.074**	**0.268**	**0.268**
LTE Band 25	Right Cheek	0.235	0.535	0.220	0.216	0.452	0.230	0.121	**0.990**	**0.903**	**0.465**	**0.356**	**1.133**	**1.024**
	Right Tilted	0.142	0.106	0.055	0.110	0.337	0.040	0.029	**0.303**	**0.589**	**0.182**	**0.171**	**0.629**	**0.618**
	Left Cheek	0.150	0.204	0.130	0.048	0.170	0.082	0.065	**0.484**	**0.368**	**0.232**	**0.215**	**0.450**	**0.433**
	Left Tilted	0.124	0.038	0.032	0.042	0.152	0.018	0.018	**0.194**	**0.318**	**0.142**	**0.142**	**0.336**	**0.336**
LTE Band 41	Right Cheek	0.038	0.535	0.220	0.216	0.452	0.230	0.121	**0.793**	**0.706**	**0.268**	**0.159**	**0.936**	**0.827**
	Right Tilted	0.058	0.106	0.055	0.110	0.337	0.040	0.029	**0.219**	**0.505**	**0.098**	**0.087**	**0.545**	**0.534**
	Left Cheek	0.076	0.204	0.130	0.048	0.170	0.082	0.065	**0.410**	**0.294**	**0.158**	**0.141**	**0.376**	**0.359**
	Left Tilted	0.033	0.038	0.032	0.042	0.152	0.018	0.018	**0.103**	**0.227**	**0.051**	**0.051**	**0.245**	**0.245**
LTE Band 48	Right Cheek	0.072	0.535	0.220	0.216	0.452	0.230	0.121	**0.827**	**0.740**	**0.302**	**0.193**	**0.970**	**0.861**
	Right Tilted	0.027	0.106	0.055	0.110	0.337	0.040	0.029	**0.188**	**0.474**	**0.067**	**0.056**	**0.514**	**0.503**
	Left Cheek	0.071	0.204	0.130	0.048	0.170	0.082	0.065	**0.405**	**0.289**	**0.153**	**0.136**	**0.371**	**0.354**
	Left Tilted	0.006	0.038	0.032	0.042	0.152	0.018	0.018	**0.076**	**0.200**	**0.024**	**0.024**	**0.218**	**0.218**
LTE Band 66	Right Cheek	0.145	0.535	0.220	0.216	0.452	0.230	0.121	**0.900**	**0.813**	**0.375**	**0.266**	**1.043**	**0.934**
	Right Tilted	0.087	0.106	0.055	0.110	0.337	0.040	0.029	**0.248**	**0.534**	**0.127**	**0.116**	**0.574**	**0.563**
	Left Cheek	0.146	0.204	0.130	0.048	0.170	0.082	0.065	**0.480**	**0.364**	**0.228**	**0.211**	**0.446**	**0.429**
	Left Tilted	0.076	0.038	0.032	0.042	0.152	0.018	0.018	**0.146**	**0.270**	**0.094**	**0.094**	**0.288**	**0.288**

LTE Band 71	Right Cheek	0.081	0.535	0.220	0.216	0.452	0.230	0.121	**0.836**	**0.749**	**0.311**	**0.202**	**0.979**	**0.870**
	Right Tilted	0.041	0.106	0.055	0.110	0.337	0.040	0.029	**0.202**	**0.488**	**0.081**	**0.070**	**0.528**	**0.517**
	Left Cheek	0.099	0.204	0.130	0.048	0.170	0.082	0.065	**0.433**	**0.317**	**0.181**	**0.164**	**0.399**	**0.382**
	Left Tilted	0.048	0.038	0.032	0.042	0.152	0.018	0.018	**0.118**	**0.242**	**0.066**	**0.066**	**0.260**	**0.260**
FR1 n2	Right Cheek	0.229	0.535	0.220	0.216	0.452	0.230	0.121	**0.984**	**0.897**	**0.459**	**0.350**	**1.127**	**1.018**
	Right Tilted	0.135	0.106	0.055	0.110	0.337	0.040	0.029	**0.296**	**0.582**	**0.175**	**0.164**	**0.622**	**0.611**
	Left Cheek	0.133	0.204	0.130	0.048	0.170	0.082	0.065	**0.467**	**0.351**	**0.215**	**0.198**	**0.433**	**0.416**
	Left Tilted	0.131	0.038	0.032	0.042	0.152	0.018	0.018	**0.201**	**0.325**	**0.149**	**0.149**	**0.343**	**0.343**
FR1 n5	Right Cheek	0.224	0.535	0.220	0.216	0.452	0.230	0.121	**0.979**	**0.892**	**0.454**	**0.345**	**1.122**	**1.013**
	Right Tilted	0.078	0.106	0.055	0.110	0.337	0.040	0.029	**0.239**	**0.525**	**0.118**	**0.107**	**0.565**	**0.554**
	Left Cheek	0.229	0.204	0.130	0.048	0.170	0.082	0.065	**0.563**	**0.447**	**0.311**	**0.294**	**0.529**	**0.512**
	Left Tilted	0.076	0.038	0.032	0.042	0.152	0.018	0.018	**0.146**	**0.270**	**0.094**	**0.094**	**0.288**	**0.288**
FR1 n66	Right Cheek	0.224	0.535	0.220	0.216	0.452	0.230	0.121	**0.979**	**0.892**	**0.454**	**0.345**	**1.122**	**1.013**
	Right Tilted	0.090	0.106	0.055	0.110	0.337	0.040	0.029	**0.251**	**0.537**	**0.130**	**0.119**	**0.577**	**0.566**
	Left Cheek	0.157	0.204	0.130	0.048	0.170	0.082	0.065	**0.491**	**0.375**	**0.239**	**0.222**	**0.457**	**0.440**
	Left Tilted	0.092	0.038	0.032	0.042	0.152	0.018	0.018	**0.162**	**0.286**	**0.110**	**0.110**	**0.304**	**0.304**
FR1 n71	Right Cheek	0.044	0.535	0.220	0.216	0.452	0.230	0.121	**0.799**	**0.712**	**0.274**	**0.165**	**0.942**	**0.833**
	Right Tilted	0.022	0.106	0.055	0.110	0.337	0.040	0.029	**0.183**	**0.469**	**0.062**	**0.051**	**0.509**	**0.498**
	Left Cheek	0.056	0.204	0.130	0.048	0.170	0.082	0.065	**0.390**	**0.274**	**0.138**	**0.121**	**0.356**	**0.339**
	Left Tilted	0.025	0.038	0.032	0.042	0.152	0.018	0.018	**0.095**	**0.219**	**0.043**	**0.043**	**0.237**	**0.237**

WWAN Band	Exposure Position	1	2	3	4	5	6	7	**1+2+3 Summed 1g SAR (W/kg)**	**1+4+5 Summed 1g SAR (W/kg)**	**1+6 Summed 1g SAR (W/kg)**	**1+7 Summed 1g SAR (W/kg)**	**1+4+5+6 Summed 1g SAR (W/kg)**	**1+4+5+7 Summed 1g SAR (W/kg)**
		WWAN	2.4GHz WLAN Chain 0	2.4GHz WLAN Chain 1	5GHz WLAN Chain 0	5GHz WLAN Chain 1	Bluetooth Chain 0	Bluetooth Chain 1						
		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)						
FR1 n41 Sub Ant	Right Cheek	0.152	0.535	0.220	0.216	0.452	0.230	0.121	**0.907**	**0.820**	**0.382**	**0.273**	**1.050**	**0.941**
	Right Tilted	0.149	0.106	0.055	0.110	0.337	0.040	0.029	**0.310**	**0.596**	**0.189**	**0.178**	**0.636**	**0.625**
	Left Cheek	0.557	0.204	0.130	0.048	0.170	0.082	0.065	**0.891**	**0.775**	**0.639**	**0.622**	**0.857**	**0.840**
	Left Tilted	0.423	0.038	0.032	0.042	0.152	0.018	0.018	**0.493**	**0.617**	**0.441**	**0.441**	**0.635**	**0.635**

<2.4GHz WLAN State 2>

WWAN Band	Exposure Position	1	2	3	4	5	1+2+3+4+5 Summed 1g SAR (W/kg)
		WWAN	2.4GHz WLAN Chain 0	2.4GHz WLAN Chain 1	5GHz WLAN Chain 0	5GHz WLAN Chain 1	
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	
GSM850	Right Cheek	0.143	0.248	0.166	0.216	0.452	**1.225**
	Right Tilted	0.063	0.044	0.031	0.110	0.337	**0.585**
	Left Cheek	0.156	0.082	0.086	0.048	0.170	**0.542**
	Left Tilted	0.056	0.015	0.018	0.042	0.152	**0.283**
GSM1900	Right Cheek	0.031	0.248	0.166	0.216	0.452	**1.113**
	Right Tilted	0.018	0.044	0.031	0.110	0.337	**0.540**
	Left Cheek	0.020	0.082	0.086	0.048	0.170	**0.406**
	Left Tilted	0.017	0.015	0.018	0.042	0.152	**0.244**
WCDMA II	Right Cheek	0.053	0.248	0.166	0.216	0.452	**1.135**
	Right Tilted	0.031	0.044	0.031	0.110	0.337	**0.553**
	Left Cheek	0.041	0.082	0.086	0.048	0.170	**0.427**
	Left Tilted	0.030	0.015	0.018	0.042	0.152	**0.257**
WCDMA IV	Right Cheek	0.058	0.248	0.166	0.216	0.452	**1.140**
	Right Tilted	0.036	0.044	0.031	0.110	0.337	**0.558**
	Left Cheek	0.041	0.082	0.086	0.048	0.170	**0.427**
	Left Tilted	0.029	0.015	0.018	0.042	0.152	**0.256**
WCDMA V	Right Cheek	0.238	0.248	0.166	0.216	0.452	**1.320**
	Right Tilted	0.134	0.044	0.031	0.110	0.337	**0.656**
	Left Cheek	0.259	0.082	0.086	0.048	0.170	**0.645**
	Left Tilted	0.143	0.015	0.018	0.042	0.152	**0.370**
LTE Band 5	Right Cheek	0.204	0.248	0.166	0.216	0.452	**1.286**
	Right Tilted	0.066	0.044	0.031	0.110	0.337	**0.588**
	Left Cheek	0.199	0.082	0.086	0.048	0.170	**0.585**
	Left Tilted	0.063	0.015	0.018	0.042	0.152	**0.290**
LTE Band 12	Right Cheek	0.156	0.248	0.166	0.216	0.452	**1.238**
	Right Tilted	0.081	0.044	0.031	0.110	0.337	**0.603**
	Left Cheek	0.187	0.082	0.086	0.048	0.170	**0.573**
	Left Tilted	0.086	0.015	0.018	0.042	0.152	**0.313**
LTE Band 13	Right Cheek	0.088	0.248	0.166	0.216	0.452	**1.170**
	Right Tilted	0.051	0.044	0.031	0.110	0.337	**0.573**
	Left Cheek	0.127	0.082	0.086	0.048	0.170	**0.513**
	Left Tilted	0.056	0.015	0.018	0.042	0.152	**0.283**
LTE Band 25	Right Cheek	0.235	0.248	0.166	0.216	0.452	**1.317**
	Right Tilted	0.142	0.044	0.031	0.110	0.337	**0.664**
	Left Cheek	0.150	0.082	0.086	0.048	0.170	**0.536**
	Left Tilted	0.124	0.015	0.018	0.042	0.152	**0.351**
LTE Band 41	Right Cheek	0.038	0.248	0.166	0.216	0.452	**1.120**
	Right Tilted	0.058	0.044	0.031	0.110	0.337	**0.580**
	Left Cheek	0.076	0.082	0.086	0.048	0.170	**0.462**
	Left Tilted	0.033	0.015	0.018	0.042	0.152	**0.260**
LTE Band 48	Right Cheek	0.072	0.248	0.166	0.216	0.452	**1.154**
	Right Tilted	0.027	0.044	0.031	0.110	0.337	**0.549**
	Left Cheek	0.071	0.082	0.086	0.048	0.170	**0.457**
	Left Tilted	0.006	0.015	0.018	0.042	0.152	**0.233**
LTE Band 66	Right Cheek	0.145	0.248	0.166	0.216	0.452	**1.227**
	Right Tilted	0.087	0.044	0.031	0.110	0.337	**0.609**
	Left Cheek	0.146	0.082	0.086	0.048	0.170	**0.532**
	Left Tilted	0.076	0.015	0.018	0.042	0.152	**0.303**
LTE Band 71	Right Cheek	0.081	0.248	0.166	0.216	0.452	**1.163**
	Right Tilted	0.041	0.044	0.031	0.110	0.337	**0.563**
	Left Cheek	0.099	0.082	0.086	0.048	0.170	**0.485**

	Left Tilted	0.048	0.015	0.018	0.042	0.152	**0.275**
FR1 n2	Right Cheek	0.229	0.248	0.166	0.216	0.452	**1.311**
	Right Tilted	0.135	0.044	0.031	0.110	0.337	**0.657**
	Left Cheek	0.133	0.082	0.086	0.048	0.170	**0.519**
	Left Tilted	0.131	0.015	0.018	0.042	0.152	**0.358**
FR1 n5	Right Cheek	0.224	0.248	0.166	0.216	0.452	**1.306**
	Right Tilted	0.078	0.044	0.031	0.110	0.337	**0.600**
	Left Cheek	0.229	0.082	0.086	0.048	0.170	**0.615**
	Left Tilted	0.076	0.015	0.018	0.042	0.152	**0.303**
FR1 n66	Right Cheek	0.224	0.248	0.166	0.216	0.452	**1.306**
	Right Tilted	0.090	0.044	0.031	0.110	0.337	**0.612**
	Left Cheek	0.157	0.082	0.086	0.048	0.170	**0.543**
	Left Tilted	0.092	0.015	0.018	0.042	0.152	**0.319**
FR1 n71	Right Cheek	0.044	0.248	0.166	0.216	0.452	**1.126**
	Right Tilted	0.022	0.044	0.031	0.110	0.337	**0.544**
	Left Cheek	0.056	0.082	0.086	0.048	0.170	**0.442**
	Left Tilted	0.025	0.015	0.018	0.042	0.152	**0.252**

WWAN Band	Exposure Position	1	2	3	4	5	**1+2+3+4+5 Summed 1g SAR (W/kg)**
		WWAN	2.4GHz WLAN Chain 0	2.4GHz WLAN Chain 1	5GHz WLAN Chain 0	5GHz WLAN Chain 1	
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	
FR1 n41 Sub Ant	Right Cheek	0.152	0.248	0.166	0.216	0.452	**1.234**
	Right Tilted	0.149	0.044	0.031	0.110	0.337	**0.671**
	Left Cheek	0.557	0.082	0.086	0.048	0.170	**0.943**
	Left Tilted	0.423	0.015	0.018	0.042	0.152	**0.650**

17.2 Hotspot Exposure Conditions

<2.4GHz WLAN State 1>

WWAN Band	Exposure Position	1	2	3	4	5	6	7	1+2+3 Summed 1g SAR (W/kg)	1+4+5 Summed 1g SAR (W/kg)	1+6 Summed 1g SAR (W/kg)	1+7 Summed 1g SAR (W/kg)	1+4+5+6 Summed 1g SAR (W/kg)	1+4+5+7 Summed 1g SAR (W/kg)
		WWAN	2.4GHz WLAN Chain 0	2.4GHz WLAN Chain 1	5GHz WLAN Chain 0	5GHz WLAN Chain 1	Bluetooth Chain 0	Bluetooth Chain 1						
		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)						
GSM850	Front	0.142	0.078	0.034	0.025	0.020	0.036	0.018	**0.254**	**0.187**	**0.178**	**0.160**	**0.223**	**0.205**
	Back	0.158	0.187	0.051	0.048	0.051	0.072	0.029	**0.396**	**0.257**	**0.230**	**0.187**	**0.329**	**0.286**
	Left side	0.170	0.206	0.065	0.076	0.014	0.079	0.034	**0.441**	**0.260**	**0.249**	**0.204**	**0.339**	**0.294**
	Right side	0.163							**0.163**	**0.163**	**0.163**	**0.163**	**0.163**	**0.163**
	Top side		0.002		0.012	0.015	0.002		**0.002**	**0.027**	**0.002**	**0.000**	**0.029**	**0.027**
	Bottom side	0.024							**0.024**	**0.024**	**0.024**	**0.024**	**0.024**	**0.024**
GSM1900	Front	0.310	0.078	0.034	0.025	0.020	0.036	0.018	**0.422**	**0.355**	**0.346**	**0.328**	**0.391**	**0.373**
	Back	0.362	0.187	0.051	0.048	0.051	0.072	0.029	**0.600**	**0.461**	**0.434**	**0.391**	**0.533**	**0.490**
	Left side	0.039	0.206	0.065	0.076	0.014	0.079	0.034	**0.310**	**0.129**	**0.118**	**0.073**	**0.208**	**0.163**
	Right side	0.050							**0.050**	**0.050**	**0.050**	**0.050**	**0.050**	**0.050**
	Top side		0.002		0.012	0.015	0.002		**0.002**	**0.027**	**0.002**	**0.000**	**0.029**	**0.027**
	Bottom side	0.484							**0.484**	**0.484**	**0.484**	**0.484**	**0.484**	**0.484**
WCDMA II	Front	0.445	0.078	0.034	0.025	0.020	0.036	0.018	**0.557**	**0.490**	**0.481**	**0.463**	**0.526**	**0.508**
	Back	0.530	0.187	0.051	0.048	0.051	0.072	0.029	**0.768**	**0.629**	**0.602**	**0.559**	**0.701**	**0.658**
	Left side	0.056	0.206	0.065	0.076	0.014	0.079	0.034	**0.327**	**0.146**	**0.135**	**0.090**	**0.225**	**0.180**
	Right side	0.080							**0.080**	**0.080**	**0.080**	**0.080**	**0.080**	**0.080**
	Top side		0.002		0.012	0.015	0.002		**0.002**	**0.027**	**0.002**	**0.000**	**0.029**	**0.027**
	Bottom side	0.765							**0.765**	**0.765**	**0.765**	**0.765**	**0.765**	**0.765**
WCDMA IV	Front	0.490	0.078	0.034	0.025	0.020	0.036	0.018	**0.602**	**0.535**	**0.526**	**0.508**	**0.571**	**0.553**
	Back	0.554	0.187	0.051	0.048	0.051	0.072	0.029	**0.792**	**0.653**	**0.626**	**0.583**	**0.725**	**0.682**
	Left side	0.041	0.206	0.065	0.076	0.014	0.079	0.034	**0.312**	**0.131**	**0.120**	**0.075**	**0.210**	**0.165**
	Right side	0.097							**0.097**	**0.097**	**0.097**	**0.097**	**0.097**	**0.097**
	Top side		0.002		0.012	0.015	0.002		**0.002**	**0.027**	**0.002**	**0.000**	**0.029**	**0.027**
	Bottom side	0.683							**0.683**	**0.683**	**0.683**	**0.683**	**0.683**	**0.683**
WCDMA V	Front	0.268	0.078	0.034	0.025	0.020	0.036	0.018	**0.380**	**0.313**	**0.304**	**0.286**	**0.349**	**0.331**
	Back	0.301	0.187	0.051	0.048	0.051	0.072	0.029	**0.539**	**0.400**	**0.373**	**0.330**	**0.472**	**0.429**
	Left side	0.304	0.206	0.065	0.076	0.014	0.079	0.034	**0.575**	**0.394**	**0.383**	**0.338**	**0.473**	**0.428**
	Right side	0.295							**0.295**	**0.295**	**0.295**	**0.295**	**0.295**	**0.295**
	Top side		0.002		0.012	0.015	0.002		**0.002**	**0.027**	**0.002**	**0.000**	**0.029**	**0.027**
	Bottom side	0.042							**0.042**	**0.042**	**0.042**	**0.042**	**0.042**	**0.042**
LTE Band 5	Front	0.129	0.078	0.034	0.051	0.041	0.036	0.018	**0.241**	**0.221**	**0.165**	**0.147**	**0.257**	**0.239**
	Back	0.156	0.187	0.051	0.090	0.084	0.072	0.029	**0.394**	**0.330**	**0.228**	**0.185**	**0.402**	**0.359**
	Left side	0.130	0.206	0.065	0.120	0.022	0.079	0.034	**0.401**	**0.272**	**0.209**	**0.164**	**0.351**	**0.306**
	Right side	0.121							**0.121**	**0.121**	**0.121**	**0.121**	**0.121**	**0.121**
	Top side		0.002		0.020	0.021	0.002		**0.002**	**0.041**	**0.002**	**0.000**	**0.043**	**0.041**
	Bottom side	0.028							**0.028**	**0.028**	**0.028**	**0.028**	**0.028**	**0.028**
LTE Band 12	Front	0.251	0.078	0.034	0.025	0.020	0.036	0.018	**0.363**	**0.296**	**0.287**	**0.269**	**0.332**	**0.314**
	Back	0.287	0.187	0.051	0.048	0.051	0.072	0.029	**0.525**	**0.386**	**0.359**	**0.316**	**0.458**	**0.415**
	Left side	0.331	0.206	0.065	0.076	0.014	0.079	0.034	**0.602**	**0.421**	**0.410**	**0.365**	**0.500**	**0.455**
	Right side	0.221							**0.221**	**0.221**	**0.221**	**0.221**	**0.221**	**0.221**
	Top side		0.002		0.012	0.015	0.002		**0.002**	**0.027**	**0.002**	**0.000**	**0.029**	**0.027**
	Bottom side	0.059							**0.059**	**0.059**	**0.059**	**0.059**	**0.059**	**0.059**
LTE Band 13	Front	0.123	0.078	0.034	0.025	0.020	0.036	0.018	**0.235**	**0.168**	**0.159**	**0.141**	**0.204**	**0.186**
	Back	0.150	0.187	0.051	0.048	0.051	0.072	0.029	**0.388**	**0.249**	**0.222**	**0.179**	**0.321**	**0.278**
	Left side	0.162	0.206	0.065	0.076	0.014	0.079	0.034	**0.433**	**0.252**	**0.241**	**0.196**	**0.331**	**0.286**
	Right side	0.116							**0.116**	**0.116**	**0.116**	**0.116**	**0.116**	**0.116**
	Top side		0.002		0.012	0.015	0.002		**0.002**	**0.027**	**0.002**	**0.000**	**0.029**	**0.027**
	Bottom side	0.038							**0.038**	**0.038**	**0.038**	**0.038**	**0.038**	**0.038**

LTE Band 25	Front	0.420	0.078	0.034	0.025	0.020	0.036	0.018	**0.532**	**0.465**	**0.456**	**0.438**	**0.501**	**0.483**
	Back	0.474	0.187	0.051	0.048	0.051	0.072	0.029	**0.712**	**0.573**	**0.546**	**0.503**	**0.645**	**0.602**
	Left side	0.059	0.206	0.065	0.076	0.014	0.079	0.034	**0.330**	**0.149**	**0.138**	**0.093**	**0.228**	**0.183**
	Right side	0.077							**0.077**	**0.077**	**0.077**	**0.077**	**0.077**	**0.077**
	Top side		0.002		0.012	0.015	0.002		**0.002**	**0.027**	**0.002**	**0.000**	**0.029**	**0.027**
	Bottom side	0.662							**0.662**	**0.662**	**0.662**	**0.662**	**0.662**	**0.662**
LTE Band 41	Front	0.150	0.078	0.034	0.025	0.020	0.036	0.018	**0.262**	**0.195**	**0.186**	**0.168**	**0.231**	**0.213**
	Back	0.165	0.187	0.051	0.048	0.051	0.072	0.029	**0.403**	**0.264**	**0.237**	**0.194**	**0.336**	**0.293**
	Left side	0.060	0.206	0.065	0.076	0.014	0.079	0.034	**0.331**	**0.150**	**0.139**	**0.094**	**0.229**	**0.184**
	Right side	0.028							**0.028**	**0.028**	**0.028**	**0.028**	**0.028**	**0.028**
	Top side		0.002		0.012	0.015	0.002		**0.002**	**0.027**	**0.002**	**0.000**	**0.029**	**0.027**
	Bottom side	0.341							**0.341**	**0.341**	**0.341**	**0.341**	**0.341**	**0.341**
LTE Band 48	Front	0.133	0.078	0.034	0.025	0.020	0.036	0.018	**0.245**	**0.178**	**0.169**	**0.151**	**0.214**	**0.196**
	Back	0.194	0.187	0.051	0.048	0.051	0.072	0.029	**0.432**	**0.293**	**0.266**	**0.223**	**0.365**	**0.322**
	Left side	0.027	0.206	0.065	0.076	0.014	0.079	0.034	**0.298**	**0.117**	**0.106**	**0.061**	**0.196**	**0.151**
	Right side	0.094							**0.094**	**0.094**	**0.094**	**0.094**	**0.094**	**0.094**
	Top side		0.002		0.012	0.015	0.002		**0.002**	**0.027**	**0.002**	**0.000**	**0.029**	**0.027**
	Bottom side	0.297							**0.297**	**0.297**	**0.297**	**0.297**	**0.297**	**0.297**
LTE Band 66	Front	0.339	0.078	0.034	0.025	0.020	0.036	0.018	**0.451**	**0.384**	**0.375**	**0.357**	**0.420**	**0.402**
	Back	0.371	0.187	0.051	0.048	0.051	0.072	0.029	**0.609**	**0.470**	**0.443**	**0.400**	**0.542**	**0.499**
	Left side	0.039	0.206	0.065	0.076	0.014	0.079	0.034	**0.310**	**0.129**	**0.118**	**0.073**	**0.208**	**0.163**
	Right side	0.066							**0.066**	**0.066**	**0.066**	**0.066**	**0.066**	**0.066**
	Top side		0.002		0.012	0.015	0.002		**0.002**	**0.027**	**0.002**	**0.000**	**0.029**	**0.027**
	Bottom side	0.507							**0.507**	**0.507**	**0.507**	**0.507**	**0.507**	**0.507**
LTE Band 71	Front	0.156	0.078	0.034	0.025	0.020	0.036	0.018	**0.268**	**0.201**	**0.192**	**0.174**	**0.237**	**0.219**
	Back	0.192	0.187	0.051	0.048	0.051	0.072	0.029	**0.430**	**0.291**	**0.264**	**0.221**	**0.363**	**0.320**
	Left side	0.229	0.206	0.065	0.076	0.014	0.079	0.034	**0.500**	**0.319**	**0.308**	**0.263**	**0.398**	**0.353**
	Right side	0.160							**0.160**	**0.160**	**0.160**	**0.160**	**0.160**	**0.160**
	Top side		0.002		0.012	0.015	0.002		**0.002**	**0.027**	**0.002**	**0.000**	**0.029**	**0.027**
	Bottom side	0.082							**0.082**	**0.082**	**0.082**	**0.082**	**0.082**	**0.082**
FR1 n2	Front	0.421	0.078	0.034	0.025	0.020	0.036	0.018	**0.533**	**0.466**	**0.457**	**0.439**	**0.502**	**0.484**
	Back	0.488	0.187	0.051	0.048	0.051	0.072	0.029	**0.726**	**0.587**	**0.560**	**0.517**	**0.659**	**0.616**
	Left side	0.051	0.206	0.065	0.076	0.014	0.079	0.034	**0.322**	**0.141**	**0.130**	**0.085**	**0.220**	**0.175**
	Right side	0.071							**0.071**	**0.071**	**0.071**	**0.071**	**0.071**	**0.071**
	Top side		0.002		0.012	0.015	0.002		**0.002**	**0.027**	**0.002**	**0.000**	**0.029**	**0.027**
	Bottom side	0.662							**0.662**	**0.662**	**0.662**	**0.662**	**0.662**	**0.662**
FR1 n5	Front	0.141	0.078	0.034	0.025	0.020	0.036	0.018	**0.253**	**0.186**	**0.177**	**0.159**	**0.222**	**0.204**
	Back	0.170	0.187	0.051	0.048	0.051	0.072	0.029	**0.408**	**0.269**	**0.242**	**0.199**	**0.341**	**0.298**
	Left side	0.158	0.206	0.065	0.076	0.014	0.079	0.034	**0.429**	**0.248**	**0.237**	**0.192**	**0.327**	**0.282**
	Right side	0.144							**0.144**	**0.144**	**0.144**	**0.144**	**0.144**	**0.144**
	Top side		0.002		0.012	0.015	0.002		**0.002**	**0.027**	**0.002**	**0.000**	**0.029**	**0.027**
	Bottom side	0.029							**0.029**	**0.029**	**0.029**	**0.029**	**0.029**	**0.029**
FR1 n66	Front	0.378	0.078	0.034	0.025	0.020	0.036	0.018	**0.490**	**0.423**	**0.414**	**0.396**	**0.459**	**0.441**
	Back	0.391	0.187	0.051	0.048	0.051	0.072	0.029	**0.629**	**0.490**	**0.463**	**0.420**	**0.562**	**0.519**
	Left side	0.039	0.206	0.065	0.076	0.014	0.079	0.034	**0.310**	**0.129**	**0.118**	**0.073**	**0.208**	**0.163**
	Right side	0.071							**0.071**	**0.071**	**0.071**	**0.071**	**0.071**	**0.071**
	Top side		0.002		0.012	0.015	0.002		**0.002**	**0.027**	**0.002**	**0.000**	**0.029**	**0.027**
	Bottom side	0.532							**0.532**	**0.532**	**0.532**	**0.532**	**0.532**	**0.532**
FR1 n71	Front	0.086	0.078	0.034	0.025	0.020	0.036	0.018	**0.198**	**0.131**	**0.122**	**0.104**	**0.167**	**0.149**
	Back	0.115	0.187	0.051	0.048	0.051	0.072	0.029	**0.353**	**0.214**	**0.187**	**0.144**	**0.286**	**0.243**
	Left side	0.150	0.206	0.065	0.076	0.014	0.079	0.034	**0.421**	**0.240**	**0.229**	**0.184**	**0.319**	**0.274**
	Right side	0.063							**0.063**	**0.063**	**0.063**	**0.063**	**0.063**	**0.063**
	Top side		0.002		0.012	0.015	0.002		**0.002**	**0.027**	**0.002**	**0.000**	**0.029**	**0.027**
	Bottom side	0.043							**0.043**	**0.043**	**0.043**	**0.043**	**0.043**	**0.043**

WWAN Band	Exposure Position	1	2	3	4	5	6	7	1+2+3 Summed 1g SAR (W/kg)	1+4+5 Summed 1g SAR (W/kg)	1+6 Summed 1g SAR (W/kg)	1+7 Summed 1g SAR (W/kg)	1+4+5+6 Summed 1g SAR (W/kg)	1+4+5+7 Summed 1g SAR (W/kg)
		WWAN	2.4GHz WLAN Chain 0	2.4GHz WLAN Chain 1	5GHz WLAN Chain 0	5GHz WLAN Chain 1	Bluetooth Chain 0	Bluetooth Chain 1						
		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)						
LTE Band 5 Sub Ant	Front	0.192	0.035	0.023	0.027	0.031	0.036	0.018	**0.250**	**0.250**	**0.228**	**0.210**	**0.286**	**0.268**
	Back	0.223	0.071	0.033	0.048	0.051	0.072	0.029	**0.327**	**0.322**	**0.295**	**0.252**	**0.394**	**0.351**
	Left side	0.129	0.082	0.044	0.076	0.014	0.079	0.034	**0.255**	**0.219**	**0.208**	**0.163**	**0.298**	**0.253**
	Right side	0.205							**0.205**	**0.205**	**0.205**	**0.205**	**0.205**	**0.205**
	Top side	0.039	0.002		0.012	0.015	0.002		**0.041**	**0.066**	**0.041**	**0.039**	**0.068**	**0.066**
LTE Band 13 Sub Ant	Front	0.226	0.078	0.034	0.025	0.020	0.036	0.018	**0.338**	**0.271**	**0.262**	**0.244**	**0.307**	**0.289**
	Back	0.253	0.187	0.051	0.048	0.051	0.072	0.029	**0.491**	**0.352**	**0.325**	**0.282**	**0.424**	**0.381**
	Left side	0.227	0.206	0.065	0.076	0.014	0.079	0.034	**0.498**	**0.317**	**0.306**	**0.261**	**0.396**	**0.351**
	Right side	0.266							**0.266**	**0.266**	**0.266**	**0.266**	**0.266**	**0.266**
	Top side	0.047	0.002		0.012	0.015	0.002		**0.049**	**0.074**	**0.049**	**0.047**	**0.076**	**0.074**
FR1 n5 Sub Ant	Front	0.212	0.078	0.034	0.025	0.020	0.036	0.018	**0.324**	**0.257**	**0.248**	**0.230**	**0.293**	**0.275**
	Back	0.269	0.187	0.051	0.048	0.051	0.072	0.029	**0.507**	**0.368**	**0.341**	**0.298**	**0.440**	**0.397**
	Left side	0.156	0.206	0.065	0.076	0.014	0.079	0.034	**0.427**	**0.246**	**0.235**	**0.190**	**0.325**	**0.280**
	Right side	0.211							**0.211**	**0.211**	**0.211**	**0.211**	**0.211**	**0.211**
	Top side	0.047	0.002		0.012	0.015	0.002		**0.049**	**0.074**	**0.049**	**0.047**	**0.076**	**0.074**
FR1 n41 Sub Ant	Front	0.053	0.078	0.034	0.025	0.020	0.036	0.018	**0.165**	**0.098**	**0.089**	**0.071**	**0.134**	**0.116**
	Back	0.050	0.187	0.051	0.048	0.051	0.072	0.029	**0.288**	**0.149**	**0.122**	**0.079**	**0.221**	**0.178**
	Left side	0.001	0.206	0.065	0.076	0.014	0.079	0.034	**0.272**	**0.091**	**0.080**	**0.035**	**0.170**	**0.125**
	Right side	0.088							**0.088**	**0.088**	**0.088**	**0.088**	**0.088**	**0.088**
	Top side	0.033	0.002		0.012	0.015	0.002		**0.035**	**0.060**	**0.035**	**0.033**	**0.062**	**0.060**

<2.4GHz WLAN State 2>

WWAN Band	Exposure Position	1	2	3	4	5	1+2+3+4+5 Summed 1g SAR (W/kg)
		WWAN	2.4GHz WLAN Chain 0	2.4GHz WLAN Chain 1	5GHz WLAN Chain 0	5GHz WLAN Chain 1	
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	
GSM850	Front	0.142	0.035	0.023	0.027	0.031	**0.258**
	Back	0.158	0.071	0.033	0.048	0.051	**0.361**
	Left side	0.170	0.082	0.044	0.076	0.014	**0.386**
	Right side	0.163					**0.163**
	Top side		0.002		0.012	0.015	**0.029**
	Bottom side	0.024					**0.024**
GSM1900	Front	0.310	0.035	0.023	0.027	0.031	**0.426**
	Back	0.362	0.071	0.033	0.048	0.051	**0.565**
	Left side	0.039	0.082	0.044	0.076	0.014	**0.255**
	Right side	0.050					**0.050**
	Top side		0.002		0.012	0.015	**0.029**
	Bottom side	0.484					**0.484**
WCDMA II	Front	0.445	0.035	0.023	0.027	0.031	**0.561**
	Back	0.530	0.071	0.033	0.048	0.051	**0.733**
	Left side	0.056	0.082	0.044	0.076	0.014	**0.272**
	Right side	0.080					**0.080**
	Top side		0.002		0.012	0.015	**0.029**
	Bottom side	0.765					**0.765**
WCDMA IV	Front	0.490	0.035	0.023	0.027	0.031	**0.606**
	Back	0.554	0.071	0.033	0.048	0.051	**0.757**
	Left side	0.041	0.082	0.044	0.076	0.014	**0.257**
	Right side	0.097					**0.097**
	Top side		0.002		0.012	0.015	**0.029**
	Bottom side	0.683					**0.683**

WCDMA V	Front	0.268	0.035	0.023	0.027	0.031	**0.384**
	Back	0.301	0.071	0.033	0.048	0.051	**0.504**
	Left side	0.304	0.082	0.044	0.076	0.014	**0.520**
	Right side	0.295					**0.295**
	Top side		0.002		0.012	0.015	**0.029**
	Bottom side	0.042					**0.042**
LTE Band 5	Front	0.129	0.035	0.023	0.027	0.031	**0.245**
	Back	0.156	0.071	0.033	0.048	0.051	**0.359**
	Left side	0.130	0.082	0.044	0.076	0.014	**0.346**
	Right side	0.121					**0.121**
	Top side		0.002		0.012	0.015	**0.029**
	Bottom side	0.028					**0.028**
LTE Band 12	Front	0.251	0.035	0.023	0.027	0.031	**0.367**
	Back	0.287	0.071	0.033	0.048	0.051	**0.490**
	Left side	0.331	0.082	0.044	0.076	0.014	**0.547**
	Right side	0.221					**0.221**
	Top side		0.002		0.012	0.015	**0.029**
	Bottom side	0.059					**0.059**
LTE Band 13	Front	0.123	0.035	0.023	0.027	0.031	**0.239**
	Back	0.150	0.071	0.033	0.048	0.051	**0.353**
	Left side	0.162	0.082	0.044	0.076	0.014	**0.378**
	Right side	0.116					**0.116**
	Top side		0.002		0.012	0.015	**0.029**
	Bottom side	0.038					**0.038**
LTE Band 25	Front	0.420	0.035	0.023	0.027	0.031	**0.536**
	Back	0.474	0.071	0.033	0.048	0.051	**0.677**
	Left side	0.059	0.082	0.044	0.076	0.014	**0.275**
	Right side	0.077					**0.077**
	Top side		0.002		0.012	0.015	**0.029**
	Bottom side	0.662					**0.662**
LTE Band 41	Front	0.150	0.035	0.023	0.027	0.031	**0.266**
	Back	0.165	0.071	0.033	0.048	0.051	**0.368**
	Left side	0.060	0.082	0.044	0.076	0.014	**0.276**
	Right side	0.028					**0.028**
	Top side		0.002		0.012	0.015	**0.029**
	Bottom side	0.341					**0.341**
LTE Band 48	Front	0.133	0.035	0.023	0.027	0.031	**0.249**
	Back	0.194	0.071	0.033	0.048	0.051	**0.397**
	Left side	0.027	0.082	0.044	0.076	0.014	**0.243**
	Right side	0.094					**0.094**
	Top side		0.002		0.012	0.015	**0.029**
	Bottom side	0.297					**0.297**
LTE Band 66	Front	0.339	0.035	0.023	0.027	0.031	**0.455**
	Back	0.371	0.071	0.033	0.048	0.051	**0.574**
	Left side	0.039	0.082	0.044	0.076	0.014	**0.255**
	Right side	0.066					**0.066**
	Top side		0.002		0.012	0.015	**0.029**
	Bottom side	0.507					**0.507**
LTE Band 71	Front	0.156	0.035	0.023	0.027	0.031	**0.272**
	Back	0.192	0.071	0.033	0.048	0.051	**0.395**
	Left side	0.229	0.082	0.044	0.076	0.014	**0.445**
	Right side	0.160					**0.160**
	Top side		0.002		0.012	0.015	**0.029**
	Bottom side	0.082					**0.082**
FR1 n2	Front	0.421	0.035	0.023	0.027	0.031	**0.537**
	Back	0.488	0.071	0.033	0.048	0.051	**0.691**

	Left side	0.051	0.082	0.044	0.076	0.014	**0.267**
	Right side	0.071					**0.071**
	Top side		0.002		0.012	0.015	**0.029**
	Bottom side	0.662					**0.662**
FR1 n5	Front	0.141	0.035	0.023	0.027	0.031	**0.257**
	Back	0.170	0.071	0.033	0.048	0.051	**0.373**
	Left side	0.158	0.082	0.044	0.076	0.014	**0.374**
	Right side	0.144					**0.144**
	Top side		0.002		0.012	0.015	**0.029**
	Bottom side	0.029					**0.029**
FR1 n66	Front	0.378	0.035	0.023	0.027	0.031	**0.494**
	Back	0.391	0.071	0.033	0.048	0.051	**0.594**
	Left side	0.039	0.082	0.044	0.076	0.014	**0.255**
	Right side	0.071					**0.071**
	Top side		0.002		0.012	0.015	**0.029**
	Bottom side	0.532					**0.532**
FR1 n71	Front	0.086	0.035	0.023	0.027	0.031	**0.202**
	Back	0.115	0.071	0.033	0.048	0.051	**0.318**
	Left side	0.150	0.082	0.044	0.076	0.014	**0.366**
	Right side	0.063					**0.063**
	Top side		0.002		0.012	0.015	**0.029**
	Bottom side	0.043					**0.043**

WWAN Band	Exposure Position	1 WWAN 1g SAR (W/kg)	2 2.4GHz WLAN Chain 0 1g SAR (W/kg)	3 2.4GHz WLAN Chain 1 1g SAR (W/kg)	4 5GHz WLAN Chain 0 1g SAR (W/kg)	5 5GHz WLAN Chain 1 1g SAR (W/kg)	**1+2+3+4+5 Summed 1g SAR (W/kg)**
LTE Band 5 Sub Ant	Front	0.192	0.035	0.023	0.027	0.031	**0.228**
	Back	0.223	0.071	0.033	0.048	0.051	**0.295**
	Left side	0.129	0.082	0.044	0.076	0.014	**0.208**
	Right side	0.205					**0.205**
	Top side	0.039	0.002		0.012	0.015	**0.041**
LTE Band 13 Sub Ant	Front	0.226	0.035	0.023	0.027	0.031	**0.342**
	Back	0.253	0.071	0.033	0.048	0.051	**0.456**
	Left side	0.227	0.082	0.044	0.076	0.014	**0.443**
	Right side	0.266					**0.266**
	Top side	0.047	0.002		0.012	0.015	**0.076**
FR1 n5 Sub Ant	Front	0.212	0.035	0.023	0.027	0.031	**0.328**
	Back	0.269	0.071	0.033	0.048	0.051	**0.472**
	Left side	0.156	0.082	0.044	0.076	0.014	**0.372**
	Right side	0.211					**0.211**
	Top side	0.047	0.002		0.012	0.015	**0.076**
FR1 n41 Sub Ant	Front	0.053	0.035	0.023	0.027	0.031	**0.169**
	Back	0.050	0.071	0.033	0.048	0.051	**0.253**
	Left side	0.001	0.082	0.044	0.076	0.014	**0.217**
	Right side	0.088					**0.088**
	Top side	0.033	0.002		0.012	0.015	**0.062**

17.3 Body-Worn Accessory Exposure Conditions

<2.4GHz WLAN State 1>

WWAN Band	Exposure Position	1	2	3	4	5	6	7	1+2+3 Summed 1g SAR (W/kg)	1+4+5 Summed 1g SAR (W/kg)	1+6 Summed 1g SAR (W/kg)	1+7 Summed 1g SAR (W/kg)	1+4+5+6 Summed 1g SAR (W/kg)	1+4+5+7 Summed 1g SAR (W/kg)
		WWAN	2.4GHz WLAN Chain 0	2.4GHz WLAN Chain 1	5GHz WLAN Chain 0	5GHz WLAN Chain 1	Bluetooth Chain 0	Bluetooth Chain 1						
		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)						
GSM850	Front	0.142	0.078	0.034	0.027	0.031	0.036	0.018	**0.254**	**0.200**	**0.178**	**0.160**	**0.236**	**0.218**
	Back	0.158	0.187	0.051	0.048	0.049	0.072	0.029	**0.396**	**0.255**	**0.230**	**0.187**	**0.327**	**0.284**
GSM1900	Front	0.310	0.078	0.034	0.027	0.031	0.036	0.018	**0.422**	**0.368**	**0.346**	**0.328**	**0.404**	**0.386**
	Back	0.362	0.187	0.051	0.048	0.049	0.072	0.029	**0.600**	**0.459**	**0.434**	**0.391**	**0.531**	**0.488**
WCDMA II	Front	0.445	0.078	0.034	0.027	0.031	0.036	0.018	**0.557**	**0.503**	**0.481**	**0.463**	**0.539**	**0.521**
	Back	0.530	0.187	0.051	0.048	0.049	0.072	0.029	**0.768**	**0.627**	**0.602**	**0.559**	**0.699**	**0.656**
WCDMA IV	Front	0.490	0.078	0.034	0.027	0.031	0.036	0.018	**0.602**	**0.548**	**0.526**	**0.508**	**0.584**	**0.566**
	Back	0.554	0.187	0.051	0.048	0.049	0.072	0.029	**0.792**	**0.651**	**0.626**	**0.583**	**0.723**	**0.680**
WCDMA V	Front	0.268	0.078	0.034	0.027	0.031	0.036	0.018	**0.380**	**0.326**	**0.304**	**0.286**	**0.362**	**0.344**
	Back	0.301	0.187	0.051	0.048	0.049	0.072	0.029	**0.539**	**0.398**	**0.373**	**0.330**	**0.470**	**0.427**
LTE Band 5	Front	0.129	0.078	0.034	0.043	0.052	0.036	0.018	**0.241**	**0.224**	**0.165**	**0.147**	**0.260**	**0.242**
	Back	0.156	0.187	0.051	0.090	0.073	0.072	0.029	**0.394**	**0.319**	**0.228**	**0.185**	**0.391**	**0.348**
LTE Band 12	Front	0.251	0.078	0.034	0.027	0.031	0.036	0.018	**0.363**	**0.309**	**0.287**	**0.269**	**0.345**	**0.327**
	Back	0.287	0.187	0.051	0.048	0.049	0.072	0.029	**0.525**	**0.384**	**0.359**	**0.316**	**0.456**	**0.413**
LTE Band 13	Front	0.123	0.078	0.034	0.027	0.031	0.036	0.018	**0.235**	**0.181**	**0.159**	**0.141**	**0.217**	**0.199**
	Back	0.150	0.187	0.051	0.048	0.049	0.072	0.029	**0.388**	**0.247**	**0.222**	**0.179**	**0.319**	**0.276**
LTE Band 25	Front	0.420	0.078	0.034	0.027	0.031	0.036	0.018	**0.532**	**0.478**	**0.456**	**0.438**	**0.514**	**0.496**
	Back	0.474	0.187	0.051	0.048	0.049	0.072	0.029	**0.712**	**0.571**	**0.546**	**0.503**	**0.643**	**0.600**
LTE Band 41	Front	0.150	0.078	0.034	0.027	0.031	0.036	0.018	**0.262**	**0.208**	**0.186**	**0.168**	**0.244**	**0.226**
	Back	0.165	0.187	0.051	0.048	0.049	0.072	0.029	**0.403**	**0.262**	**0.237**	**0.194**	**0.334**	**0.291**
LTE Band 48	Front	0.133	0.078	0.034	0.027	0.031	0.036	0.018	**0.245**	**0.191**	**0.169**	**0.151**	**0.227**	**0.209**
	Back	0.194	0.187	0.051	0.048	0.049	0.072	0.029	**0.432**	**0.291**	**0.266**	**0.223**	**0.363**	**0.320**
LTE Band 66	Front	0.339	0.078	0.034	0.027	0.031	0.036	0.018	**0.451**	**0.397**	**0.375**	**0.357**	**0.433**	**0.415**
	Back	0.371	0.187	0.051	0.048	0.049	0.072	0.029	**0.609**	**0.468**	**0.443**	**0.400**	**0.540**	**0.497**
LTE Band 71	Front	0.156	0.078	0.034	0.027	0.031	0.036	0.018	**0.268**	**0.214**	**0.192**	**0.174**	**0.250**	**0.232**
	Back	0.192	0.187	0.051	0.048	0.049	0.072	0.029	**0.430**	**0.289**	**0.264**	**0.221**	**0.361**	**0.318**
FR1 n2	Front	0.421	0.078	0.034	0.027	0.031	0.036	0.018	**0.533**	**0.479**	**0.457**	**0.439**	**0.515**	**0.497**
	Back	0.488	0.187	0.051	0.048	0.049	0.072	0.029	**0.726**	**0.585**	**0.560**	**0.517**	**0.657**	**0.614**
FR1 n5	Front	0.141	0.078	0.034	0.027	0.031	0.036	0.018	**0.253**	**0.199**	**0.177**	**0.159**	**0.235**	**0.217**
	Back	0.170	0.187	0.051	0.048	0.049	0.072	0.029	**0.408**	**0.267**	**0.242**	**0.199**	**0.339**	**0.296**
FR1 n66	Front	0.378	0.078	0.034	0.027	0.031	0.036	0.018	**0.490**	**0.436**	**0.414**	**0.396**	**0.472**	**0.454**
	Back	0.391	0.187	0.051	0.048	0.049	0.072	0.029	**0.629**	**0.488**	**0.463**	**0.420**	**0.560**	**0.517**
FR1 n71	Front	0.086	0.078	0.034	0.027	0.031	0.036	0.018	**0.198**	**0.144**	**0.122**	**0.104**	**0.180**	**0.162**
	Back	0.115	0.187	0.051	0.048	0.049	0.072	0.029	**0.353**	**0.212**	**0.187**	**0.144**	**0.284**	**0.241**

WWAN Band	Exposure Position	1	2	3	4	5	6	7	1+2+3 Summed 1g SAR (W/kg)	1+4+5 Summed 1g SAR (W/kg)	1+6 Summed 1g SAR (W/kg)	1+7 Summed 1g SAR (W/kg)	1+4+5+6 Summed 1g SAR (W/kg)	1+4+5+7 Summed 1g SAR (W/kg)
		WWAN	2.4GHz WLAN Chain 0	2.4GHz WLAN Chain 1	5GHz WLAN Chain 0	5GHz WLAN Chain 1	Bluetooth Chain 0	Bluetooth Chain 1						
		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)						
LTE Band 5 Sub Ant	Front	0.192	0.035	0.023	0.027	0.031	0.036	0.018	**0.250**	**0.250**	**0.228**	**0.210**	**0.286**	**0.268**
	Back	0.223	0.071	0.033	0.048	0.051	0.072	0.029	**0.327**	**0.322**	**0.295**	**0.252**	**0.394**	**0.351**
LTE Band 13 Sub Ant	Front	0.226	0.078	0.034	0.027	0.031	0.036	0.018	**0.338**	**0.284**	**0.262**	**0.244**	**0.320**	**0.302**
	Back	0.253	0.187	0.051	0.048	0.049	0.072	0.029	**0.491**	**0.350**	**0.325**	**0.282**	**0.422**	**0.379**
FR1 n5 Sub Ant	Front	0.212	0.078	0.034	0.027	0.031	0.036	0.018	**0.324**	**0.270**	**0.248**	**0.230**	**0.306**	**0.288**
	Back	0.269	0.187	0.051	0.048	0.049	0.072	0.029	**0.507**	**0.366**	**0.341**	**0.298**	**0.438**	**0.395**
FR1 n41 Sub Ant	Front	0.053	0.078	0.034	0.027	0.031	0.036	0.018	**0.165**	**0.111**	**0.089**	**0.071**	**0.147**	**0.129**
	Back	0.050	0.187	0.051	0.048	0.049	0.072	0.029	**0.288**	**0.147**	**0.122**	**0.079**	**0.219**	**0.176**

<2.4GHz WLAN State 2>

WWAN Band	Exposure Position	1	2	3	4	5	1+2+3+4+5 Summed 1g SAR (W/kg)
		WWAN	2.4GHz WLAN Chain 0	2.4GHz WLAN Chain 1	5GHz WLAN Chain 0	5GHz WLAN Chain 1	
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	
GSM850	Front	0.142	0.035	0.023	0.027	0.031	**0.258**
	Back	0.158	0.071	0.033	0.048	0.049	**0.359**
GSM1900	Front	0.310	0.035	0.023	0.027	0.031	**0.426**
	Back	0.362	0.071	0.033	0.048	0.049	**0.563**
WCDMA II	Front	0.445	0.035	0.023	0.027	0.031	**0.561**
	Back	0.530	0.071	0.033	0.048	0.049	**0.731**
WCDMA IV	Front	0.490	0.035	0.023	0.027	0.031	**0.606**
	Back	0.554	0.071	0.033	0.048	0.049	**0.755**
WCDMA V	Front	0.268	0.035	0.023	0.027	0.031	**0.384**
	Back	0.301	0.071	0.033	0.048	0.049	**0.502**
LTE Band 5	Front	0.129	0.035	0.023	0.027	0.031	**0.245**
	Back	0.156	0.071	0.033	0.048	0.051	**0.359**
LTE Band 12	Front	0.251	0.035	0.023	0.027	0.031	**0.367**
	Back	0.287	0.071	0.033	0.048	0.049	**0.488**
LTE Band 13	Front	0.123	0.035	0.023	0.027	0.031	**0.239**
	Back	0.150	0.071	0.033	0.048	0.049	**0.351**
LTE Band 25	Front	0.420	0.035	0.023	0.027	0.031	**0.536**
	Back	0.474	0.071	0.033	0.048	0.049	**0.675**
LTE Band 41	Front	0.150	0.035	0.023	0.027	0.031	**0.266**
	Back	0.165	0.071	0.033	0.048	0.049	**0.366**
LTE Band 48	Front	0.133	0.035	0.023	0.027	0.031	**0.249**
	Back	0.194	0.071	0.033	0.048	0.049	**0.395**
LTE Band 66	Front	0.339	0.035	0.023	0.027	0.031	**0.455**
	Back	0.371	0.071	0.033	0.048	0.049	**0.572**
LTE Band 71	Front	0.156	0.035	0.023	0.027	0.031	**0.272**
	Back	0.192	0.071	0.033	0.048	0.049	**0.393**
FR1 n2	Front	0.421	0.035	0.023	0.027	0.031	**0.537**
	Back	0.488	0.071	0.033	0.048	0.049	**0.689**
FR1 n5	Front	0.141	0.035	0.023	0.027	0.031	**0.257**
	Back	0.170	0.071	0.033	0.048	0.049	**0.371**
FR1 n66	Front	0.378	0.035	0.023	0.027	0.031	**0.494**
	Back	0.391	0.071	0.033	0.048	0.049	**0.592**
FR1 n71	Front	0.086	0.035	0.023	0.027	0.031	**0.202**
	Back	0.115	0.071	0.033	0.048	0.049	**0.316**

WWAN Band	Exposure Position	1	2	3	4	5	1+2+3+4+5 Summed 1g SAR (W/kg)
		WWAN	2.4GHz WLAN Chain 0	2.4GHz WLAN Chain 1	5GHz WLAN Chain 0	5GHz WLAN Chain 1	
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	
LTE Band 5 Sub Ant	Front	0.192	0.035	0.023	0.027	0.031	**0.228**
	Back	0.223	0.071	0.033	0.048	0.049	**0.295**
LTE Band 13 Sub Ant	Front	0.226	0.035	0.023	0.027	0.031	**0.342**
	Back	0.253	0.071	0.033	0.048	0.049	**0.454**
FR1 n5 Sub Ant	Front	0.212	0.035	0.023	0.027	0.031	**0.328**
	Back	0.269	0.071	0.033	0.048	0.049	**0.470**
FR1 n41 Sub Ant	Front	0.053	0.035	0.023	0.027	0.031	**0.169**
	Back	0.050	0.071	0.033	0.048	0.049	**0.251**

17.4 Product Specific Exposure Conditions

Exposure Position	1 2.4GHz WLAN Chain 0 10g SAR (W/kg)	2 2.4GHz WLAN Chain 1 10g SAR (W/kg)	3 5GHz WLAN Chain 0 10g SAR (W/kg)	4 5GHz WLAN Chain 1 10g SAR (W/kg)	5 Bluetooth Chain 0 10g SAR (W/kg)	6 Bluetooth Chain 1 10g SAR (W/kg)	1+2+3+4 Summed 10g SAR (W/kg)	3+4+5 Summed 10g SAR (W/kg)	3+4+6 Summed 10g SAR (W/kg)
Front			0.150	0.280			**0.430**	**0.430**	**0.430**
Back			0.146	0.310			**0.456**	**0.456**	**0.456**
Left side			0.196	0.032			**0.228**	**0.228**	**0.228**
Right side							**0.000**	**0.000**	**0.000**
Top side			0.030	0.031			**0.061**	**0.061**	**0.061**
Bottom side							**0.000**	**0.000**	**0.000**

Test Engineer： Murphy Lee, Jeff Tsao, White Huang and Shane Song

18. 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 ≤ 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 and highest measured 10-g SAR is less 3.75W/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.

19. 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 648474 D04 v01r03, “SAR Evaluation Considerations for Wireless Handsets”, Oct 2015.

[7] FCC KDB 941225 D01 v03r01, “3G SAR MEAUREMENT PROCEDURES”, Oct 2015

[8] FCC KDB 941225 D05 v02r05, “SAR Evaluation Considerations for LTE Devices”, Dec 2015

[9] FCC KDB 941225 D05A v01r02, “Rel. 10 LTE SAR Test Guidance and KDB Inquiries”, Oct 2015

[10] FCC KDB 941225 D06 v02r01, "SAR Evaluation Procedures for Portable Devices with Wireless Router Capabilities", Oct 2015.

[11] FCC KDB 941225 D07 v01r02, " SAR Evaluation Procedures for UMPC Mini-Tablet Devices", Oct 2015.

[12] FCC KDB 865664 D01 v01r04, "SAR Measurement Requirements for 100 MHz to 6 GHz", Aug 2015.

[13] FCC KDB 865664 D02 v01r02, “RF Exposure Compliance Reporting and Documentation Considerations” Oct 2015.