FCC REPORT
(LTE)

Applicant:	SKY PHONE LLC
Address of Applicant:	1348 Washington Av. Suite 350, Miami Beach, FL 33139
Equipment Under Test (EUT)	
Product Name:	4G Smart Phone
Model No.:	Elite T55
Trade mark:	SKY DEVICES
FCC ID:	2ABOSSKYELITET55
Applicable standards:	FCC CFR Title 47 Part 2 FCC CFR Title 47 Part 22 Subpart H FCC CFR Title 47 Part 24 Subpart E
Date of sample receipt:	20 Dec., 2018
Date of Test:	20 Dec., 2018 to 21 Jan., 2019
Date of report issued:	21 Jan., 2019
Test Result:	PASS*

*In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:

Bruce Zhang
Laboratory Manager

2. Version

Version No.	Date	Description
00	*21 Jan., 2019*	*Original*

Tested by:  ***Date:*** *21 Jan., 2019*

Test Engineer

Reviewed by:  ***Date:*** *21 Jan., 2019*

Project Engineer

3. Contents

4. Test Summary

Test Items	Section in CFR 47	Result
RF Exposure (SAR)	Part 1.1307 Part 2.1093	Passed (Please refer to SAR Report)
RF Output Power	Part 2.1046 Part 22.913 (a)(2) Part 24.232 (c)	Pass
Peak-to-Average Ratio	Part 24.232 (d)	Pass
Modulation Characteristics	Part 2.1047	Pass
99% & -26 dB Occupied Bandwidth	Part 2.1049 Part 22.917(b) Part 24.238(b)	Pass
Out of band emission at antenna terminals	Part 2.1053 Part 22.917(a) Part 24.238 (a)	Pass
Field strength of spurious radiation	Part 22.917(a) Part 24.238 (a)	Pass
Frequency stability vs. temperature	Part 22.355 Part 24.235 Part 2.1055(a)(1)(b)	Pass
Frequency stability vs. voltage	Part 22.355 Part 24.235 Part 2.1055(d)(2)	Pass
Pass: The EUT complies with the essential requirements in the standard.		

5. General Information

5.1 Client Information

Applicant:	SKY PHONE LLC
Address:	1348 Washington Av. Suite 350, Miami Beach, FL 33139
Manufacturer:	SKY PHONE LLC
Address:	1348 Washington Av. Suite 350, Miami Beach, FL 33139

5.2 General Description of E.U.T.

Product Name:	4G Smart Phone
Model No.:	Elite T55
Operation Frequency range:	LTE Band 2: TX: 1850MHz-1910MHz, RX: 1930MHz-1990MHz LTE Band 5: 824MHz-849MHz, RX: 869MHz-894MHz
Modulation type:	QPSK, 16QAM
Antenna type:	Internal Antenna
Antenna gain:	LTE Band 2: 1.1dBi LTE Band 5: 0.8dBi
Power supply:	Rechargeable Li-ion Battery DC3.8V-2500mAh
AC adapter:	Model: Elite T55 Input: AC100-240V 50/60Hz 0.2A Output: DC 5.0V, 1A
Test Sample Condition:	The applicant provided engineering samples for staying in continuously transmitting for testing.

Operation Frequency List:

LTE Band 2 (1.4MHz)		LTE Band 2 (3MHz)	
Channel	Frequency (MHz)	Channel	Frequency (MHz)
18607	1850.70	18615	1851.50
18608	1850.80	18616	1851.60
….	….	….	….
18899	1879.90	18899	1879.90
18900	1880.00	18900	1880.00
18901	1880.10	18901	1880.10
…	…	…	…
19193	1909.20	19185	1908.40
19194	1909.30	19186	1908.50
LTE Band 2 (5MHz)		LTE Band 2 (10MHz)	
Channel	Frequency (MHz)	Channel	Frequency (MHz)
18625	1852.50	18650	1855.00
18626	1852.60	18651	1855.10
….	….	….	….
18899	1879.90	18899	1879.90
18900	1880.00	18900	1880.00
18901	1880.10	18901	1880.10
…	…	…	…
19175	1907.40	19150	1904.90
19176	1907.50	19151	1905.00
LTE Band 2 (15MHz)		LTE Band 2 (20MHz)	
Channel	Frequency (MHz)	Channel	Frequency (MHz)
18675	1857.50	18700	1860.00
18676	1857.60	18701	1860.10
….	….	….	….
18899	1879.90	18899	1879.90
18900	1880.00	18900	1880.00
18901	1880.10	18901	1880.10
…	…	…	…
19125	1902.40	19100	1899.90
19126	1902.50	19101	1900.00

LTE Band 5 (1.4MHz)		LTE Band 5 (3MHz)	
Channel	Frequency (MHz)	Channel	Frequency (MHz)
20407	824.70	20415	825.50
20408	824.80	20416	825.60
….	….	….	….
20524	836.40	20524	836.40
20525	836.50	20525	836.50
20526	836.60	20526	836.60
…	…	…	…
20642	848.20	20634	847.40
20643	848.30	20635	847.50
LTE Band 5 (5MHz)		LTE Band 5 (10MHz)	
Channel	Frequency (MHz)	Channel	Frequency (MHz)
20425	826.50	20450	829.00
20426	826.60	20451	829.10
….	….	….	….
20524	836.40	20524	836.40
20525	836.50	20525	836.50
20526	836.60	20526	836.60
…	…	…	…
20624	846.40	20599	839.90
20625	846.50	20600	844.00

Regards to the operating frequency range, the lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channels as below:

LTE Band 2 (1.4MHz)			LTE Band 2 (3MHz)		
Channel		Frequency (MHz)	Channel		Frequency (MHz)
Lowest channel	18607	1850.70	Lowest channel	18615	1851.50
Middle channel	18900	1880.00	Middle channel	18900	1880.00
Highest channel	19193	1909.30	Highest channel	19185	1908.50
LTE Band 2 (5MHz)			LTE Band 2 (10MHz)		
Channel		Frequency (MHz)	Channel		Frequency (MHz)
Lowest channel	18625	1852.50	Lowest channel	18650	1855.00
Middle channel	18900	1880.00	Middle channel	18900	1880.00
Highest channel	19175	1907.50	Highest channel	19150	1905.00
LTE Band 2 (15MHz)			LTE Band 2 (20MHz)		
Channel		Frequency (MHz)	Channel		Frequency (MHz)
Lowest channel	18675	1857.50	Lowest channel	18700	1860.00
Middle channel	18900	1880.00	Middle channel	18900	1880.00
Highest channel	19125	1902.50	Highest channel	19100	1900.00

LTE Band 5 (1.4MHz)			LTE Band 5 (3MHz)		
Channel:		Frequency (MHz)	Channel		Frequency (MHz)
Lowest channel	20407	824.70	Lowest channel	20415	825.50
Middle channel	20525	836.50	Middle channel	20525	836.50
Highest channel	20643	848.30	Highest channel	20635	847.50
LTE Band 5 (5MHz)			LTE Band 5 (10MHz)		
Channel		Frequency (MHz)	Channel		Frequency (MHz)
Lowest channel	20425	826.50	Lowest channel	20450	829.00
Middle channel	20525	836.50	Middle channel	20525	836.50
Highest channel	20625	846.50	Highest channel	20600	844.00

5.3 Test environment and mode

Operating Environment:	
Temperature:	Normal: 15℃ ~ 35℃, Extreme: -30℃ ~ +50℃
Humidity:	20 % ~ 75 % RH
Atmospheric Pressure:	1008 mbar
Voltage:	Nominal: 3.8Vdc, Extreme: Low 3.5Vdc, High 4.35Vdc
Test mode:	
LTE QPSK mode	Keep the EUT communication with simulated station in QPSK mode
LTE 16-QAM mode	Keep the EUT communication with simulated station in 16-QAM mode
Remark: The EUT has been tested under continuous transmitting mode. Channel Low, Mid and High for each type band with rated data rate were chosen for full testing. The field strength of spurious radiation emission was measured as EUT stand-up position (H mode) and lie down position (E1, E2 mode) for these modes with power adaptor, earphone and Data cable. Just the worst case position (H mode) shown in report.	

5.4 Description of Support Units

Test Equipment	Manufacturer	Model No.	Serial No.
Simulated Station	Anritsu	MT8820C	6201026545

5.5 Measurement Uncertainty

Parameters	Expanded Uncertainty
Radiated Emission (9kHz ~ 30MHz)	±2.76 dB (k=2)
Radiated Emission (30MHz ~ 1000MHz)	±4.28 dB (k=2)
Radiated Emission (1GHz ~ 18GHz)	±5.72 dB (k=2)
Radiated Emission (18GHz ~ 40GHz)	±2.88 dB (k=2)

5.6 Related Submittal(s) / Grant (s)

This is an original grant, no related submittals and grants.

5.7 Laboratory Facility

The test facility is recognized, certified, or accredited by the following organizations:

- **FCC - Registration No.: 727551**

Shenzhen Zhongjian Nanfang Testing Co., Ltd. has been accredited as a testing laboratory by FCC (Federal Communications Commission). The Registration No. is 727551.

- **IC - Registration No.: 10106A-1**

The 3m Semi-anechoic chamber of Shenzhen Zhongjian Nanfang Testing Co., Ltd. has been Registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 10106A-1.

- **CNAS - Registration No.: CNAS L6048**

Shenzhen Zhongjian Nanfang Testing Co., Ltd. is accredited to ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration laboratories for the competence of testing. The Registration No. is CNAS L6048.

- **A2LA - Registration No.: 4346.01**

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005 General requirements for the competence of testing and calibration laboratories. The test scope can be found as below link: https://portal.a2la.org/scopepdf/4346-01.pdf

5.8 Laboratory Location

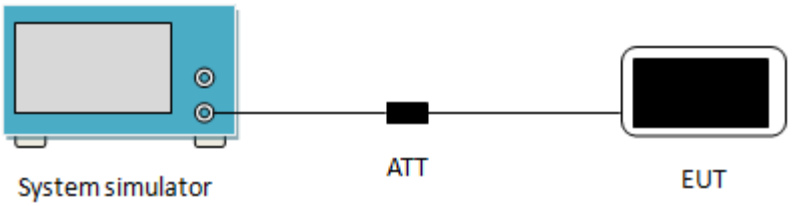
Shenzhen Zhongjian Nanfang Testing Co., Ltd.
Address: No. B-C, 1/F., Building 2, Laodong No.2 Industrial Park, Xixiang Road,
Bao'an District, Shenzhen, Guangdong, China
Tel: +86-755-23118282, Fax: +86-755-23116366
Email: info@ccis-cb.com, Website: http://www.ccis-cb.com

5.9 Test Instruments list

Test Equipment	Manufacturer	Model No.	Serial No.	Cal. Date (mm-dd-yy)	Cal. Due date (mm-dd-yy)
3m SAC	SAEMC	9m*6m*6m	966	07-22-2017	07-21-2020
BiConiLog Antenna	SCHWARZBECK	VULB9163	497	03-16-2018	03-15-2019
Biconical Antenna	SCHWARZBECK	VUBA9117	359	06-22-2017	06-21-2020
Horn Antenna	SCHWARZBECK	BBHA9120D	916	03-16-2018	03-15-2019
Horn Antenna	SCHWARZBECK	BBHA9120D	1805	06-22-2017	06-21-2020
Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170582	11-21-2018	11-20-2019
EMI Test Software	AUDIX	E3	Version: 6.110919b		
Pre-amplifier	HP	8447D	2944A09358	03-07-2018	03-06-2019
Pre-amplifier	CD	PAP-1G18	11804	03-07-2018	03-06-2019
Spectrum analyzer	Rohde & Schwarz	FSP30	101454	03-07-2018	03-06-2019
EMI Test Receiver	Rohde & Schwarz	ESRP7	101070	03-07-2018	03-06-2019
Spectrum Analyzer	Agilent	N9020A	MY50510123	10-29-2018	10-28-2019
Signal Generator	Rohde & Schwarz	SMX	835454/016	03-07-2018	03-06-2019
Signal Generator	R&S	SMR20	1008100050	03-07-2018	03-06-2019
RF Switch Unit	MWRFTEST	MW200	N/A	N/A	N/A
Test Software	MWRFTEST	MTS8200	Version: 2.0.0.0		
Cable	ZDECL	Z108-NJ-NJ-81	1608458	03-07-2018	03-06-2019
Cable	MICRO-COAX	MFR64639	K10742-5	03-07-2018	03-06-2019
Cable	SUHNER	SUCOFLEX100	58193/4PE	03-07-2018	03-06-2019
DC Power Supply	XinNuoEr	WYK-10020K	1409050110020	10-31-2018	10-30-2019
Temperature Humidity Chamber	HengPu	HPGDS-500	20140828008	09-24-2018	09-23-2019
Simulated Station	Rohde & Schwarz	CMW500	140493	07-16-2018	07-15-2019

6. Test results

6.1 Conducted Output Power, ERP and EIRP

Test Requirement:	Part 22.913(a)(2), Part 24.232(c)
Test Method:	ANSI/TIA-603-D 2010
Limit:	LTE Band 2: 2W, LTE Band 5: 7W
Test Setup:	
Test Procedure:	The transmitter output was connected to a calibrated attenuator, the other end of which was connected to the CMW500. Transmitter output power was read off in dBm.
Test Instruments:	Refer to section 5.9 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed

Measurement Data:

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					18607	18900	19193
					1850.7MHz	1880.0MHz	1909.3MHz
2	1.4	QPSK	1	0	22.89	22.98	22.82
			1	2	22.95	22.79	22.90
			1	5	22.81	22.69	22.88
			3	0	22.47	22.44	22.22
			3	1	22.58	22.61	22.40
			3	2	22.45	22.56	22.36
			6	0	22.41	22.28	22.61
		Antenna Gain (dBi):			1.1		
		Max. EIRP (dBm):			24.08		
		EIRP Limit (dBm):			33.00		
		16QAM	1	0	22.55	22.61	23.01
			1	2	22.68	22.52	23.02
			1	5	22.41	22.57	23.07
			3	0	22.54	22.83	22.79
			3	1	22.58	22.81	22.82
			3	2	22.56	22.70	22.90
			6	0	21.67	21.81	21.84
		Antenna Gain (dBi):			1.1		
		Max. EIRP (dBm):			24.17		
		EIRP Limit (dBm):			33.00		

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					18615	18900	19185
					1851.5MHz	1880.0MHz	1908.5MHz
2	3	QPSK	1	0	22.78	23.01	22.80
			1	7	22.97	22.99	22.88
			1	14	22.81	22.98	22.88
			8	0	22.55	22.47	22.55
			8	4	22.50	22.59	22.56
			8	7	22.53	22.58	22.54
			15	0	22.54	22.58	22.62
		Antenna Gain (dBi):			1.1		
		Max. EIRP (dBm):			24.11		
		EIRP Limit (dBm):			33.00		
		16QAM	1	0	22.73	22.64	23.01
			1	7	22.50	22.93	22.91
			1	14	22.98	22.40	23.06
			8	0	21.76	21.75	21.75
			8	4	21.59	21.70	21.67
			8	7	21.68	21.65	21.72
			15	0	21.89	21.80	21.84
		Antenna Gain (dBi):			1.1		
		Max. EIRP (dBm):			24.16		
		EIRP Limit (dBm):			33.00		

Note: EIRP (dBm) = Average power (dBm) + Antenna Gain (dBi).

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					18625	18900	19175
					1852.5MHz	1880.0MHz	1907.5MHz
2	5	QPSK	1	0	22.72	23.03	22.91
			1	12	22.86	23.01	22.87
			1	24	22.87	23.10	22.88
			12	0	22.52	22.65	22.61
			12	6	22.58	22.63	22.52
			12	11	22.53	22.68	22.55
			25	0	22.49	22.51	22.52
		Antenna Gain (dBi):			1.1		
		Max. EIRP (dBm):			24.13		
		EIRP Limit (dBm):			33.00		
		16QAM	1	0	22.75	23.05	22.99
			1	12	22.69	23.12	23.09
			1	24	22.54	23.05	22.06
			12	0	21.66	21.96	21.81
			12	6	21.71	22.04	21.92
			12	11	21.71	21.87	21.55
			25	0	21.76	22.02	21.71
		Antenna Gain (dBi):			1.1		
		Max. EIRP (dBm):			24.22		
		EIRP Limit (dBm):			33.00		

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					18650	18900	19150
					1855.0MHz	1880.0MHz	1905.0MHz
2	10	QPSK	1	0	23.21	22.63	22.84
			1	24	22.78	22.80	22.82
			1	49	22.87	22.82	22.84
			25	0	22.75	22.54	22.62
			25	12	22.51	22.49	22.53
			25	24	22.53	22.59	22.62
			50	0	22.52	22.60	22.49
		Antenna Gain (dBi):			1.1		
		Max. EIRP (dBm):			24.31		
		EIRP Limit (dBm):			33.00		
		16QAM	1	0	23.10	22.61	22.59
			1	24	22.79	22.74	22.83
			1	49	23.02	22.81	23.07
			25	0	22.10	21.80	21.77
			25	12	22.02	21.84	21.81
			25	24	21.97	21.80	21.81
			50	0	21.79	21.76	21.82
		Antenna Gain (dBi):			1.1		
		Max. EIRP (dBm):			24.20		
		EIRP Limit (dBm):			33.00		

Note: EIRP (dBm) = Average power (dBm) + Antenna Gain (dBi).

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					18675	18900	19125
					1857.5MHz	1880.0MHz	1902.5MHz
2	15	QPSK	1	0	22.84	22.66	22.84
			1	37	22.84	22.96	22.75
			1	74	22.85	22.71	22.78
			36	0	22.51	22.70	22.50
			36	16	22.57	22.54	22.54
			36	35	22.47	22.54	22.48
			75	0	22.53	22.43	22.56
		Antenna Gain (dBi):			1.1		
		Max. EIRP (dBm):			24.06		
		EIRP Limit (dBm):			33.00		
		16QAM	1	0	22.71	23.08	22.95
			1	37	23.12	22.68	22.74
			1	74	22.98	22.95	22.89
			36	0	21.79	21.89	21.67
			36	16	21.76	21.79	21.68
			36	35	21.74	21.83	21.62
			75	0	21.72	21.76	21.76
		Antenna Gain (dBi):			1.1		
		Max. EIRP (dBm):			24.22		
		EIRP Limit (dBm):			33.00		

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					18700	18900	19100
					1860.0MHz	1880.0MHz	1900.0MHz
2	20	QPSK	1	0	22.92	23.12	22.82
			1	49	22.83	22.88	22.82
			1	99	22.82	22.80	22.84
			50	0	22.50	22.66	22.44
			50	24	22.51	22.49	22.44
			50	49	22.57	22.50	22.45
			100	0	22.42	22.43	22.48
		Antenna Gain (dBi):			1.1		
		Max. EIRP (dBm):			24.22		
		EIRP Limit (dBm):			33.00		
		16QAM	1	0	22.40	22.17	22.47
			1	49	22.19	21.93	21.82
			1	99	22.32	22.77	22.59
			50	0	21.67	21.66	21.93
			50	24	21.78	21.84	21.72
			50	49	21.65	21.69	21.69
			100	0	21.72	21.64	21.64
		Antenna Gain (dBi):			1.1		
		Max. EIRP (dBm):			23.87		
		EIRP Limit (dBm):			33.00		

Note: EIRP (dBm) = Average power (dBm) + Antenna Gain (dBi).

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					20407	20525	20643
					824.7MHz	836.5MHz	848.3MHz
5	1.4	QPSK	1	0	22.15	22.04	21.92
			1	2	22.18	22.05	22.07
			1	5	22.25	22.12	22.15
			3	0	22.29	22.25	22.33
			3	1	22.37	22.27	22.38
			3	2	22.33	22.26	22.38
			6	0	22.33	22.21	22.21
		Antenna Gain(dBi):			0.8		
		Max. ERP (dBm):			21.03		
		ERP Limit (dBm):			38.45		
		16QAM	1	0	21.85	22.19	22.14
			1	2	21.83	22.34	22.35
			1	5	21.93	21.99	21.99
			3	0	22.33	22.40	22.22
			3	1	22.23	22.29	22.25
			3	2	22.26	22.37	22.35
			6	0	21.37	21.28	21.30
		Antenna Gain(dBi):			0.8		
		Max. ERP (dBm):			21.05		
		ERP Limit (dBm):			38.45		

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					20415	20525	20635
					825.5MHz	836.5MHz	847.50MHz
5	3	QPSK	1	0	22.24	21.97	22.07
			1	7	22.20	22.08	22.01
			1	14	22.12	22.03	22.12
			8	0	22.20	22.22	22.13
			8	4	22.26	22.25	22.17
			8	7	22.25	22.19	22.18
			15	0	22.23	22.21	22.15
		Antenna Gain(dBi):			0.8		
		Max. ERP (dBm):			20.91		
		ERP Limit (dBm):			38.45		
		16QAM	1	0	22.28	22.01	22.04
			1	7	22.34	22.20	22.16
			1	14	22.26	22.16	21.97
			8	0	21.25	21.22	21.25
			8	4	21.25	21.14	21.42
			8	7	21.18	21.22	21.52
			15	0	21.37	21.34	21.32
		Antenna Gain(dBi):			0.8		
		Max. ERP (dBm):			20.99		
		ERP Limit (dBm):			38.45		

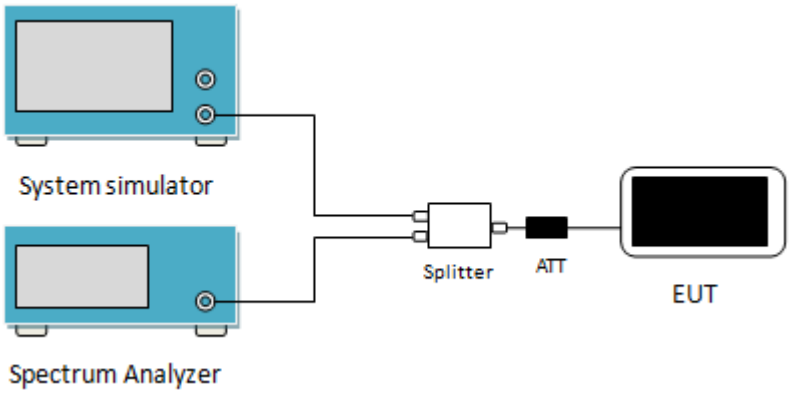
Note: EIRP (dBm) = Average power (dBm) + Antenna Gain (dBi).
ERP (dBm) = EIRP (dBm) - 2.15 (dB).

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					20425	20525	20625
					826.5MHz	836.5MHz	846.5MHz
5	5	QPSK	1	0	22.23	22.19	22.14
			1	12	22.17	22.11	22.19
			1	24	22.15	22.09	22.23
			12	0	22.24	22.29	22.17
			12	6	22.14	22.20	22.14
			12	11	22.18	22.10	22.23
			25	0	22.11	22.26	22.17
		Antenna Gain(dBi):			0.8		
		Max. ERP (dBm):			20.94		
		ERP Limit (dBm):			38.45		
		16QAM	1	0	22.25	22.21	22.21
			1	12	22.22	22.35	22.26
			1	24	22.24	22.38	22.29
			12	0	21.22	21.36	21.12
			12	6	21.19	21.36	21.05
			12	11	21.13	21.45	21.12
			25	0	21.39	21.39	21.20
		Antenna Gain(dBi):			0.8		
		Max. ERP (dBm):			21.03		
		ERP Limit (dBm):			38.45		

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					20450	20525	20600
					829.0MHz	836.5MHz	844.0MHz
5	10	QPSK	1	0	22.22	22.31	22.23
			1	24	22.13	22.03	22.05
			1	49	22.01	22.10	22.04
			25	0	22.12	22.29	22.22
			25	12	22.20	22.28	22.18
			25	24	22.26	22.09	22.24
			50	0	22.07	22.13	22.21
		Antenna Gain(dBi):			0.8		
		Max. ERP (dBm):			20.96		
		ERP Limit (dBm):			38.45		
		16QAM	1	0	22.03	22.16	22.19
			1	24	22.13	22.38	22.13
			1	49	21.94	22.16	22.26
			25	0	21.09	21.30	21.27
			25	12	21.46	21.21	21.21
			25	24	21.35	21.36	21.29
			50	0	21.30	21.38	21.23
		Antenna Gain(dBi):			0.8		
		Max. ERP (dBm):			21.03		
		ERP Limit (dBm):			38.45		

Note: EIRP (dBm) = Average power (dBm) + Antenna Gain (dBi).
ERP (dBm) = EIRP (dBm) - 2.15 (dB).

6.2 Peak-to-Average Ratio

Test Requirement:	Part 24.232 (d)
Test Method:	ANSI/TIA-603-D 2010
Limit:	The peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.
Test Setup:	
Test Procedure:	1 The RF output of the transceiver was connected to a spectrum analyzer through appropriate attenuation. 2 Set the CCDF option in spectrum analyzer, RBW ≥ OBW, 3 Set the EUT working in highest power level, measured and recorded the 0.1% as PAPR level. 4 Repeat step 1~3 at other frequency and modulations.
Test Instruments:	Refer to section 5.9 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed

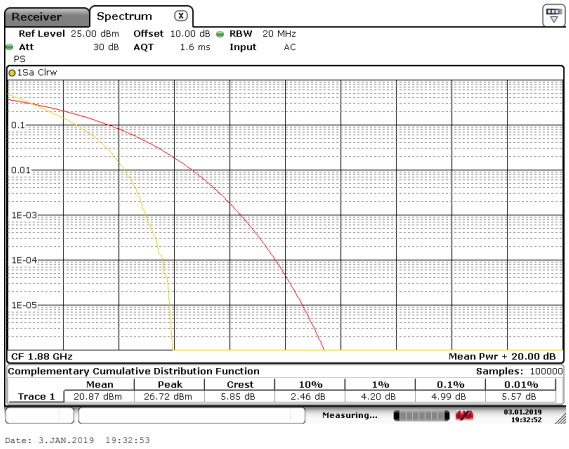
Measurement Data (Worst case):

Bandwidth	Modulation	RB Size	RB Offset	PAPR
LTE Band 2 (Middle Channel)				
20MHz	QPSK	100	0	4.99
	16QAM	100	0	5.77
LTE Band 5 (Middle Channel)				
10MHz	QPSK	50	0	5.10
	16QAM	50	0	5.91

Test plots as below:

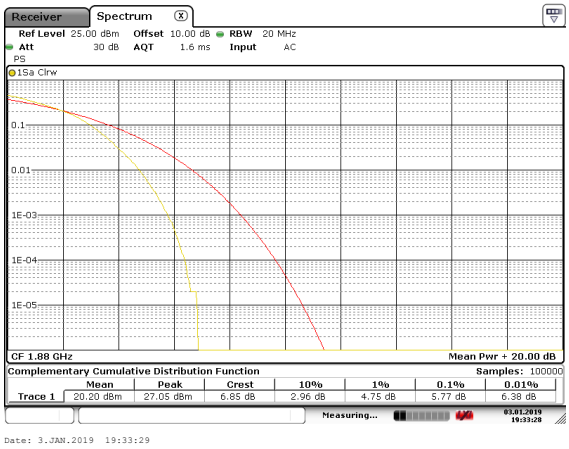
LTE Band 2 Middle channel

Modulation: QPSK



Date: 3.JAN.2019 19:32:53

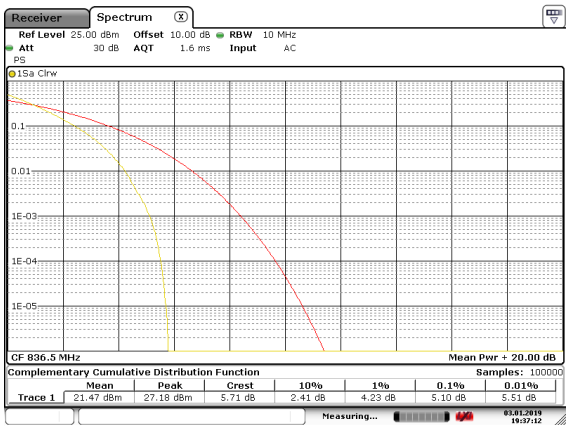
Modulation:16QAM



Date: 3.JAN.2019 19:33:29

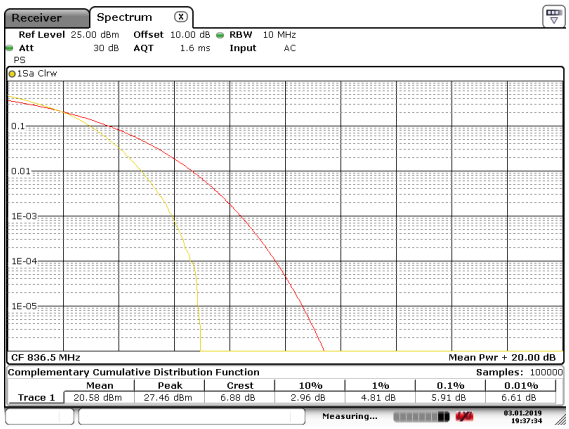
LTE Band 5 Middle channel

Modulation: QPSK



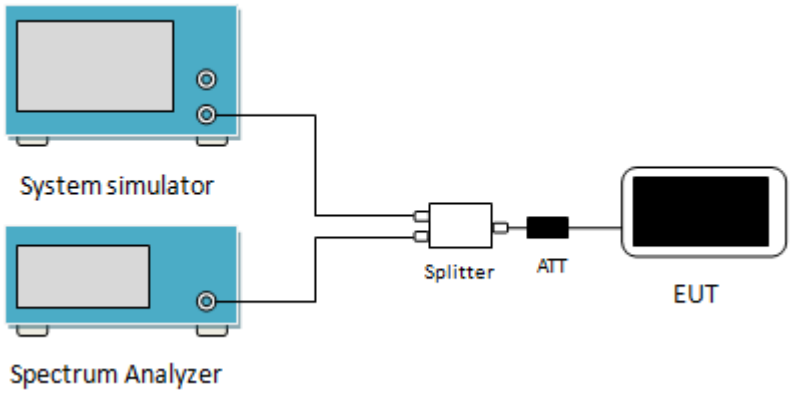
Date: 3.JAN.2019 19:37:13

Modulation:16QAM



Date: 3.JAN.2019 19:37:34

6.3 Occupy Bandwidth

Test Requirement:	Part 22.917(b), Part 24.238(b)
Test Method:	ANSI/TIA-603-D 2010
Test Setup:	
Test Procedure:	1. The EUT's output RF connector was connected with a short cable to the spectrum analyzer 2. RBW was set to about 1% ~ 5% of emission BW, VBW= 3 times RBW. 3. -26dBc display line was placed on the screen (or 99% bandwidth), the occupied bandwidth is the delta frequency between the two points where the display line intersects the signal trace.
Test Instruments:	Refer to section 5.9 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed

Measurement Data:

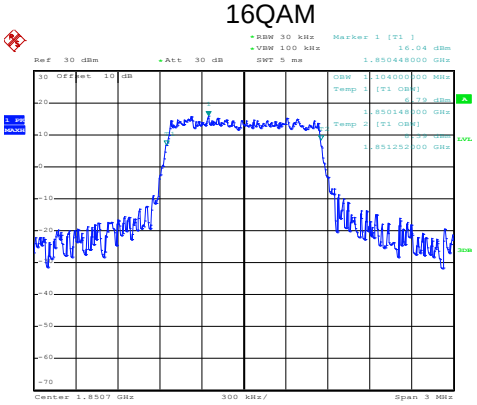
LTE Band 2					
Bandwidth	Channel	Frequency (MHz)	Modulation	99% OBW (kHz)	-26dBcEBW (kHz)
1.4MHz	18607	1850.70	16QAM	1104	1296
			QPSK	1104	1308
	18900	1880.00	16QAM	1104	1296
			QPSK	1104	1302
	19193	1909.30	16QAM	1098	1260
			QPSK	1104	1266
3MHz	18615	1851.50	16QAM	2748	3096
			QPSK	2796	3360
	18900	1880.00	16QAM	2748	3132
			QPSK	2784	3192
	19185	1908.50	16QAM	2736	3132
			QPSK	2760	3168
5MHz	18625	1852.50	16QAM	4480	4940
			QPSK	4500	5000
	18900	1880.00	16QAM	4500	4920
			QPSK	4520	5000
	19175	1907.50	16QAM	4480	4920
			QPSK	4520	4980
10MHz	18650	1855.00	16QAM	9080	10000
			QPSK	9120	10200
	18900	1880.00	16QAM	9120	10200
			QPSK	9120	10400
	19150	1905.00	16QAM	9040	10040
			QPSK	9040	10240
15MHz	18675	1857.50	16QAM	13560	14940
			QPSK	13680	15120
	18900	1880.00	16QAM	13560	14760
			QPSK	13560	15060
	19125	1902.50	16QAM	13500	15120
			QPSK	13500	15120
20MHz	18700	1860.00	16QAM	18000	19440
			QPSK	18000	19840
	18900	1880.00	16QAM	17920	19680
			QPSK	18000	19680
	19100	1900.00	16QAM	17920	19680
			QPSK	18000	19600

TE Band 5					
Bandwidth	Channel	Frequency (MHz)	Modulation	99% OBW (kHz)	-26dBcEBW (kHz)
1.4MHz	20407	824.7	16QAM	1092	1290
			QPSK	1098	1266
	20525	836.5	16QAM	1104	1308
			QPSK	1098	1296
	20643	848.3	16QAM	1104	1302
			QPSK	1098	1314
3MHz	20415	825.5	16QAM	2748	3084
			QPSK	2760	3276
	20525	836.50	16QAM	2736	3120
			QPSK	2784	3168
	20635	847.50	16QAM	2748	3084
			QPSK	2784	3444
5MHz	20425	826.50	16QAM	4500	4980
			QPSK	4540	5060
	20525	836.50	16QAM	4480	4920
			QPSK	4520	5000
	20625	846.50	16QAM	4480	4920
			QPSK	4500	5040
10MHz	20450	829.00	16QAM	9080	10160
			QPSK	9120	10240
	20525	836.50	16QAM	9120	10240
			QPSK	9120	10280
	20600	844.00	16QAM	9080	10200
			QPSK	9160	10480

Test plot as follows:
LTE Band 2 part:

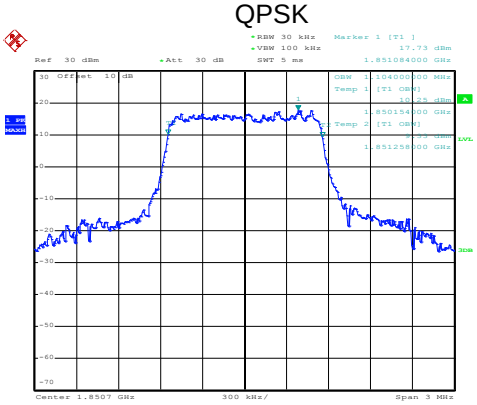
LTE Band 2: 99% Occupy bandwidth
BW: 1.4MHz

16QAM



Date: 19.DEC.2018 05:22:08

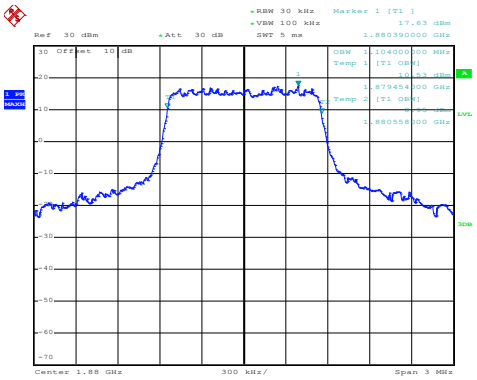
QPSK



Date: 19.DEC.2018 05:22:03

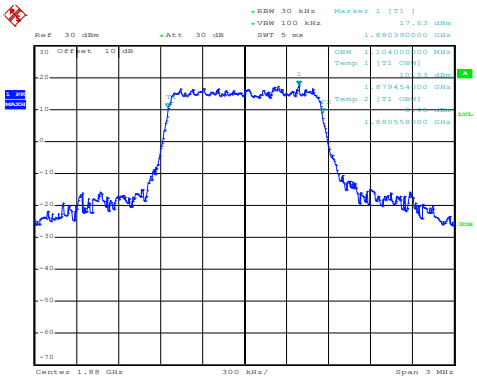
Lowest channel

16QAM



Date: 19.DEC.2018 05:23:02

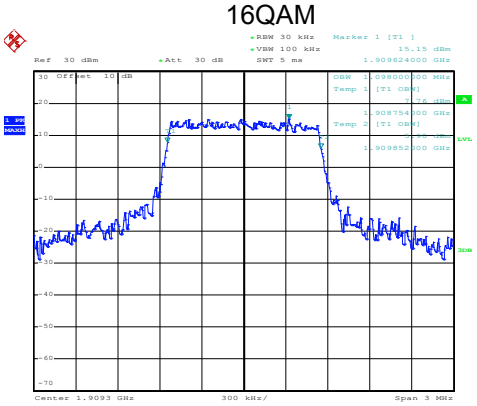
QPSK



Date: 19.DEC.2018 05:22:37

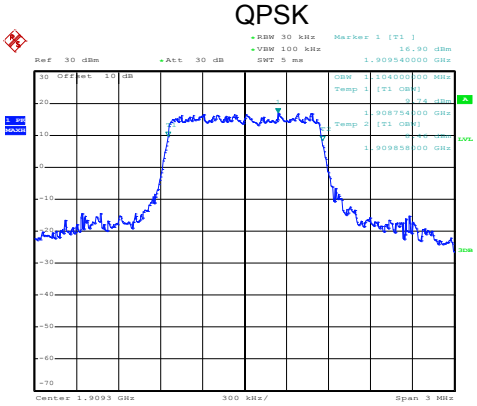
Middle channel

16QAM



Date: 19.DEC.2018 05:24:11

QPSK

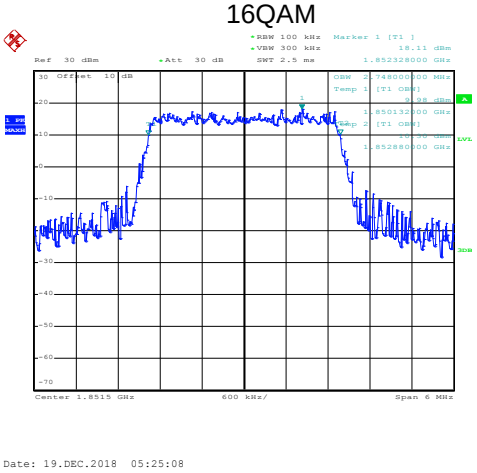


Date: 19.DEC.2018 05:24:05

Highest channel

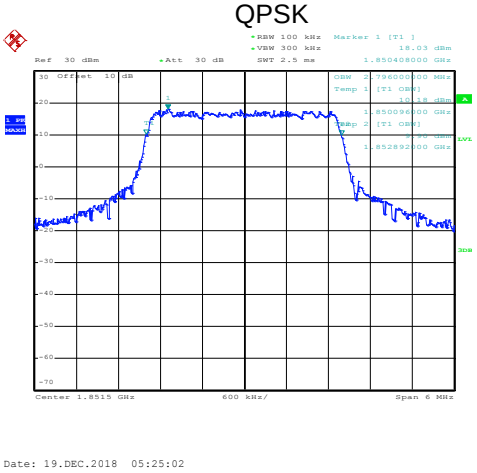
LTE Band 2: 99% Occupy bandwidth
BW: 3MHz

16QAM



Date: 19.DEC.2018 05:25:08

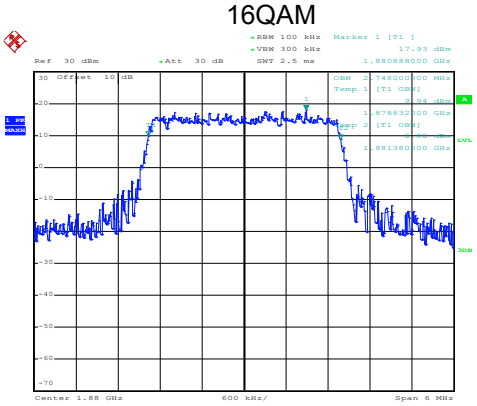
QPSK



Date: 19.DEC.2018 05:25:02

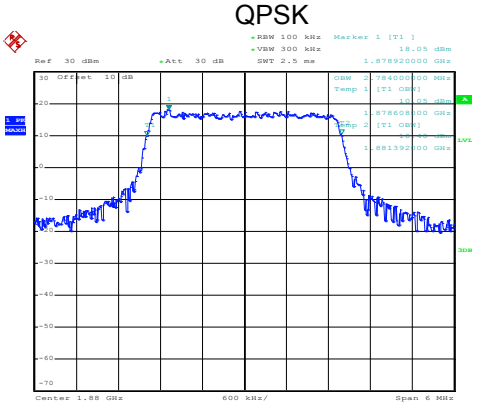
Lowest channel

16QAM



Date: 19.DEC.2018 05:26:15

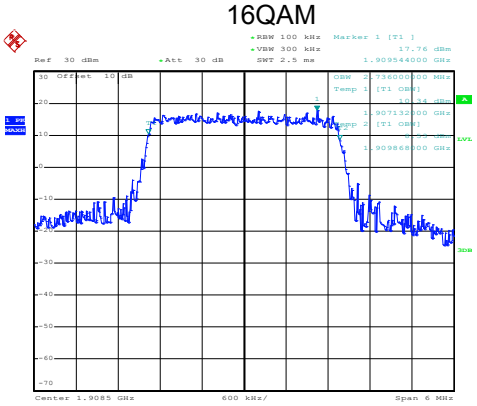
QPSK



Date: 19.DEC.2018 05:26:10

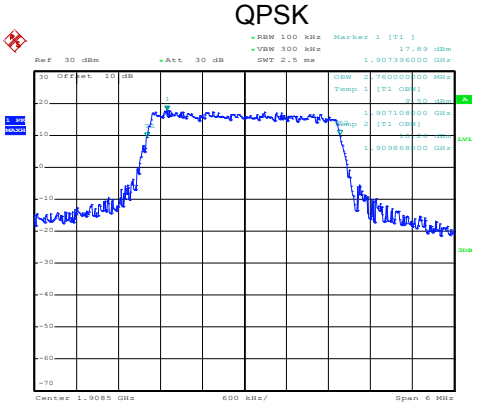
Middle channel

16QAM



Date: 19.DEC.2018 05:26:40

QPSK

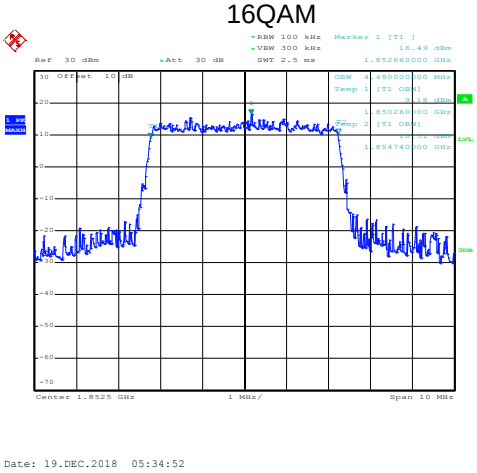


Date: 19.DEC.2018 05:26:34

Highest channel

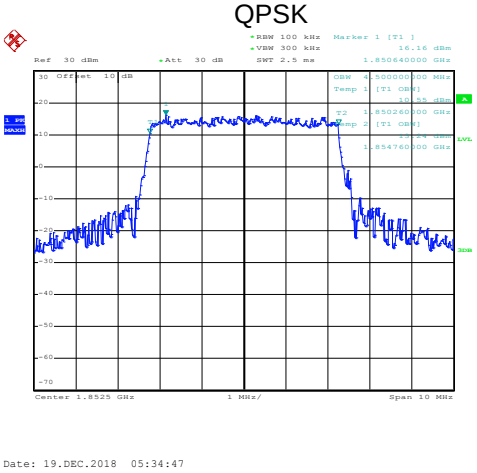
LTE Band 2: 99% Occupy bandwidth
BW: 5MHz

16QAM



Date: 19.DEC.2018 05:34:52

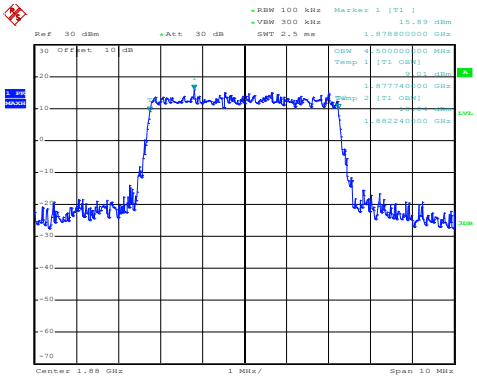
QPSK



Date: 19.DEC.2018 05:34:47

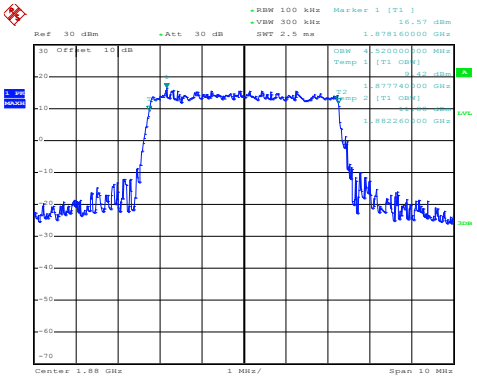
Lowest channel

16QAM



Date: 19.DEC.2018 05:35:23

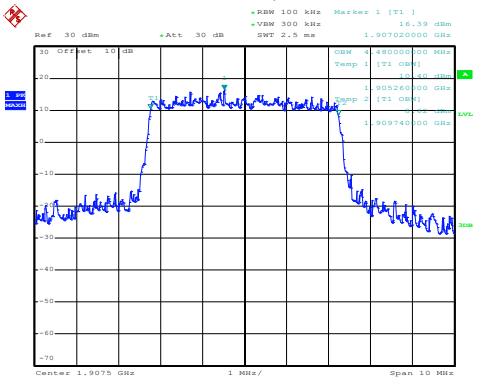
QPSK



Date: 19.DEC.2018 05:35:16

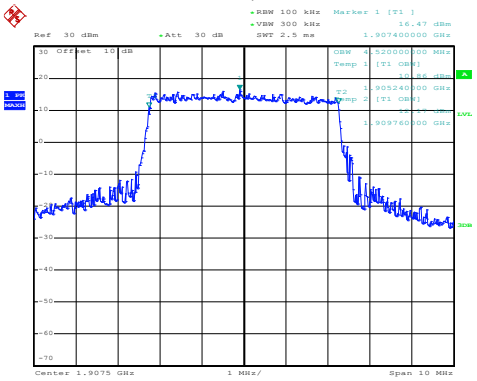
Middle channel

16QAM



Date: 19.DEC.2018 05:36:32

QPSK

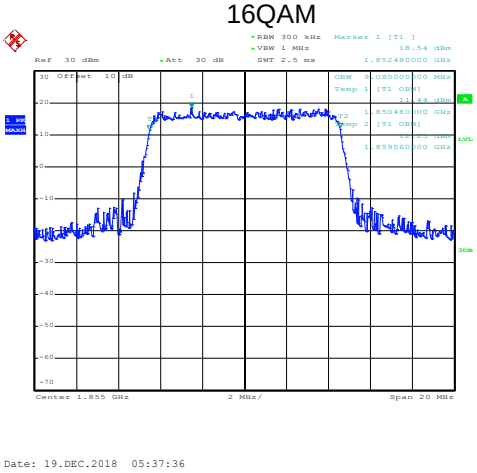


Date: 19.DEC.2018 05:36:27

Highest channel

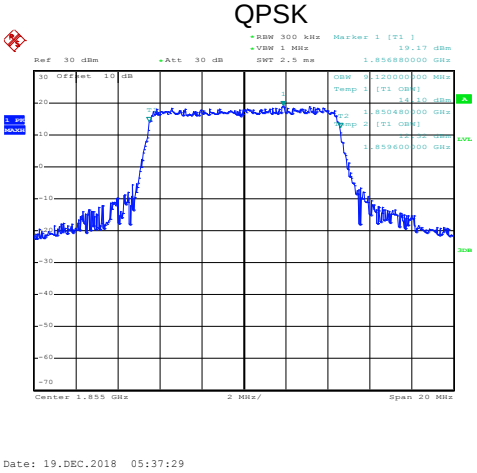
LTE Band 2: 99% Occupy bandwidth
BW: 10MHz

16QAM



Date: 19.DEC.2018 05:37:36

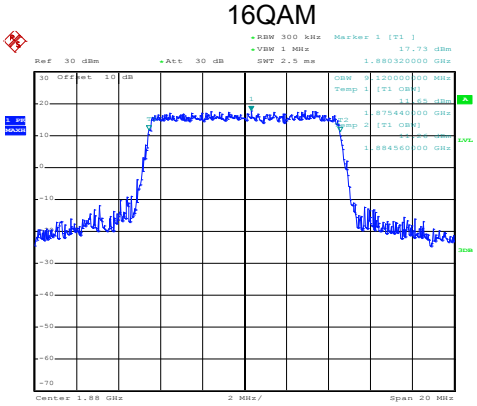
QPSK



Date: 19.DEC.2018 05:37:29

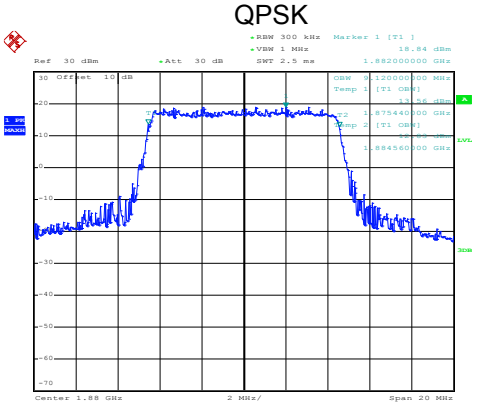
Lowest channel

16QAM



Date: 19.DEC.2018 05:38:37

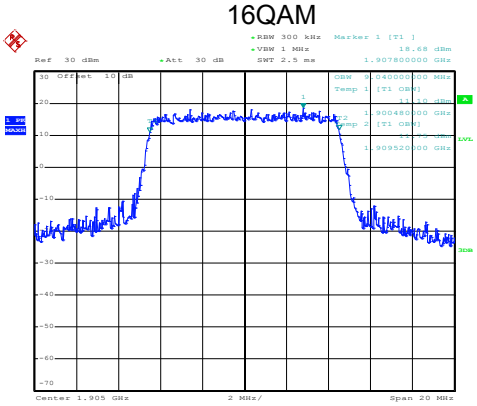
QPSK



Date: 19.DEC.2018 05:38:32

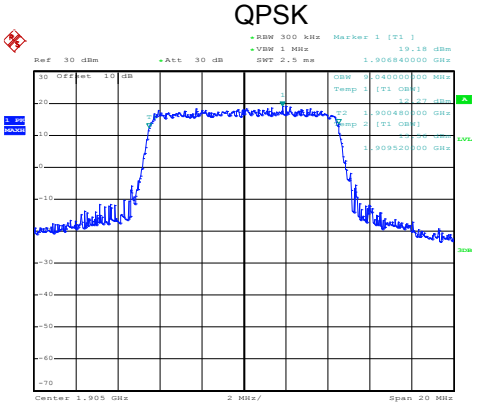
Middle channel

16QAM



Date: 19.DEC.2018 05:38:59

QPSK

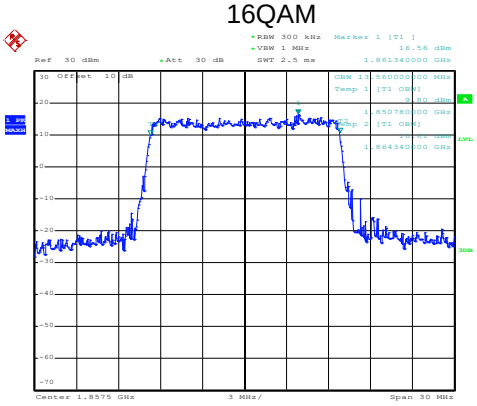


Date: 19.DEC.2018 05:38:54

Highest channel

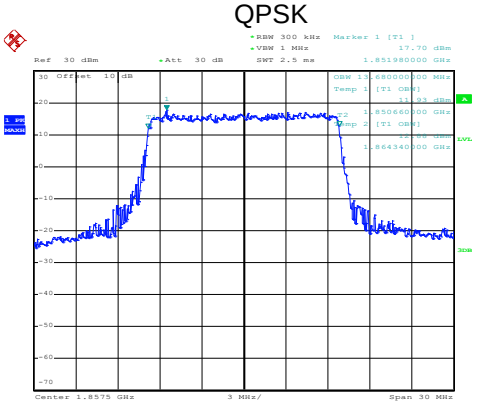
LTE Band 2: 99% Occupy bandwidth
BW: 15MHz

16QAM



Date: 19.DEC.2018 05:39:50

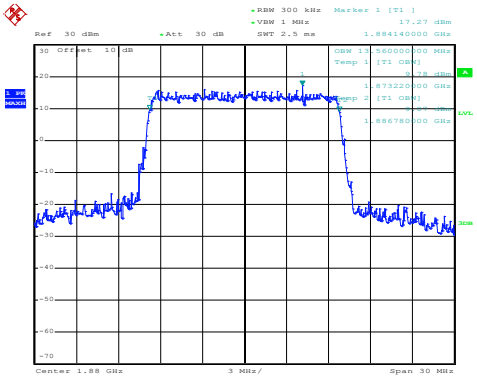
QPSK



Date: 19.DEC.2018 05:39:45

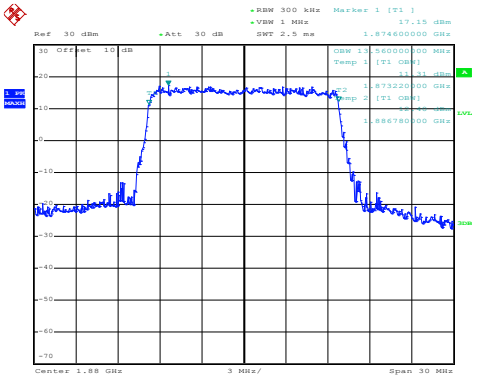
Lowest channel

16QAM



Date: 19.DEC.2018 05:41:06

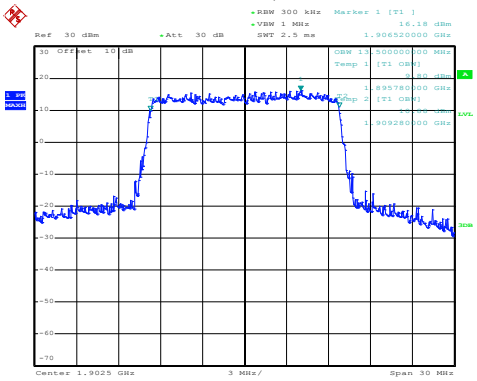
QPSK



Date: 19.DEC.2018 05:41:02

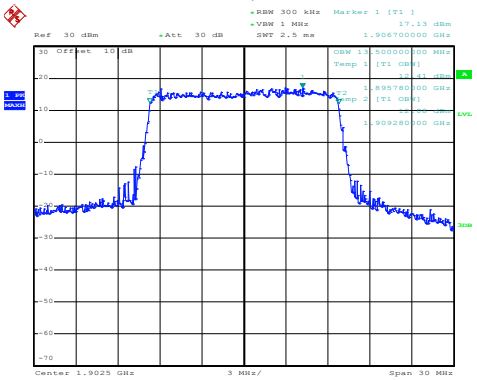
Middle channel

16QAM



Date: 19.DEC.2018 05:41:31

QPSK

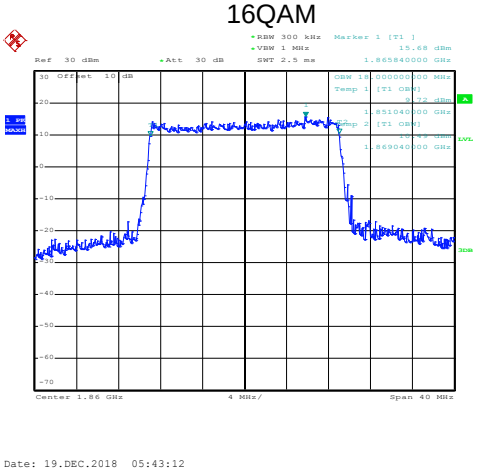


Date: 19.DEC.2018 05:41:25

Highest channel

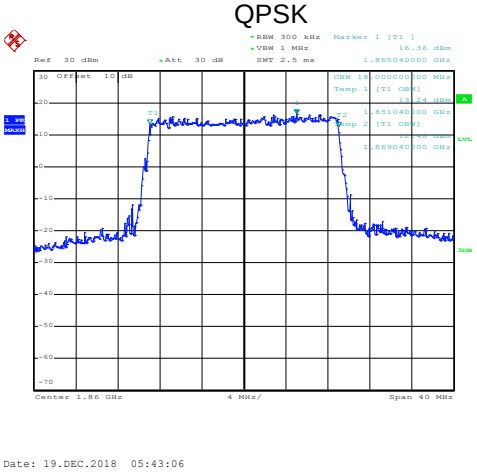
LTE Band 2: 99% Occupy bandwidth
BW: 20MHz

16QAM



Date: 19.DEC.2018 05:43:12

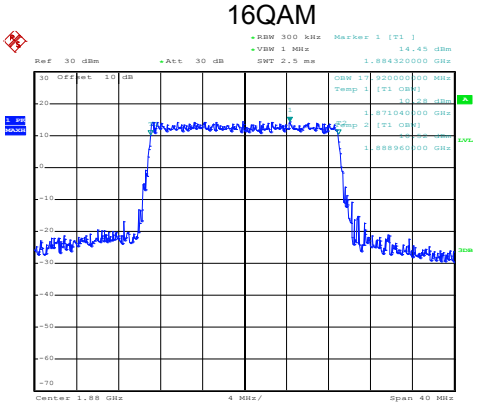
QPSK



Date: 19.DEC.2018 05:43:06

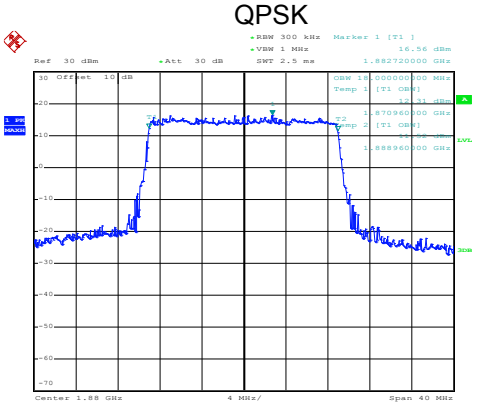
Lowest channel

16QAM



Date: 19.DEC.2018 05:43:42

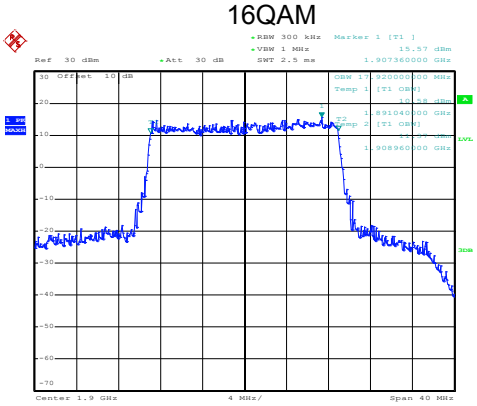
QPSK



Date: 19.DEC.2018 05:43:37

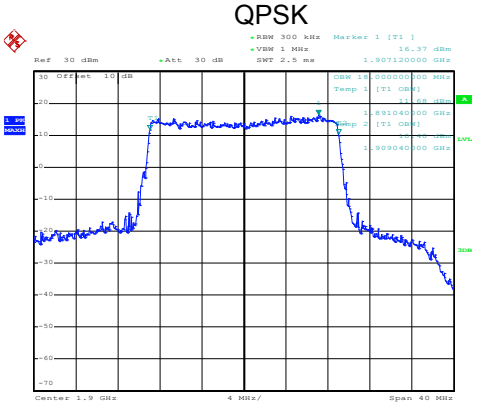
Middle channel

16QAM



Date: 19.DEC.2018 05:44:51

QPSK

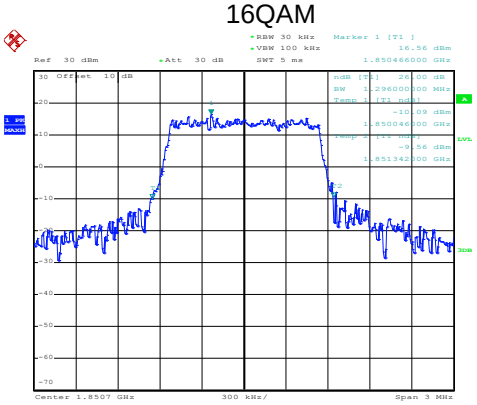


Date: 19.DEC.2018 05:44:44

Highest channel

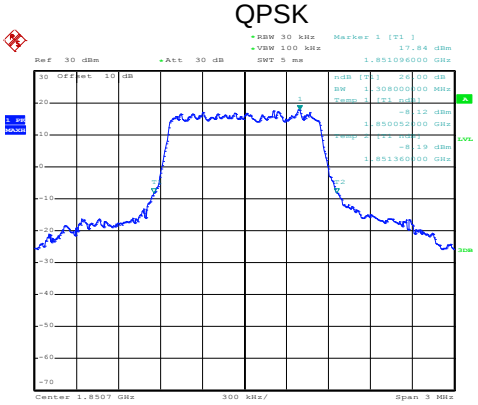
LTE Band 2: -26dBc bandwidth
BW: 1.4MHz

16QAM



Date: 19.DEC.2018 05:21:46

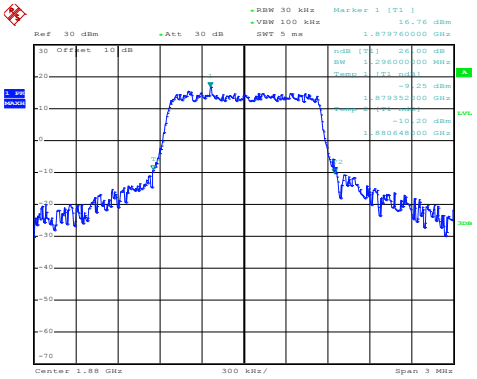
QPSK



Date: 19.DEC.2018 05:21:37

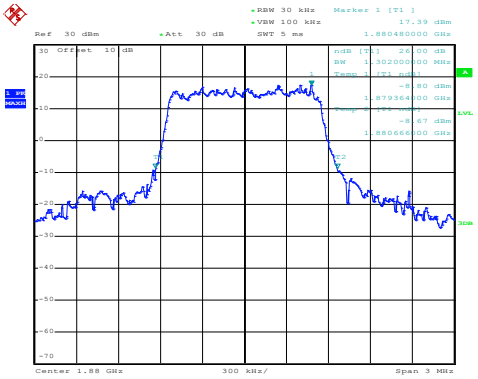
Lowest channel

16QAM



Date: 19.DEC.2018 05:23:23

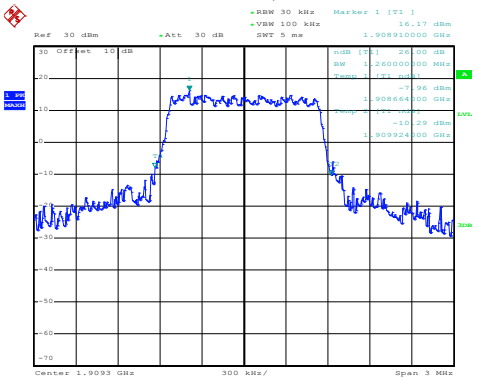
QPSK



Date: 19.DEC.2018 05:23:16

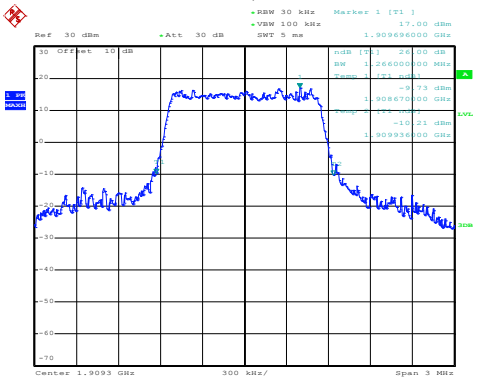
Middle channel

16QAM



Date: 19.DEC.2018 05:23:48

QPSK

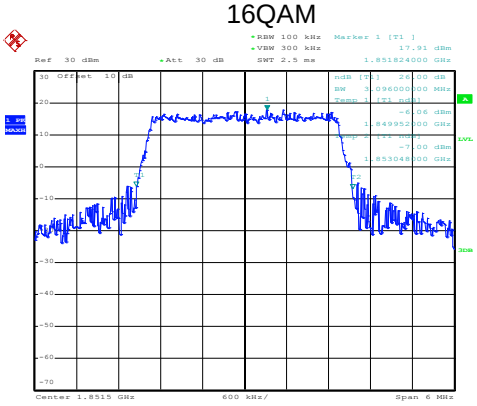


Date: 19.DEC.2018 05:23:42

Highest channel

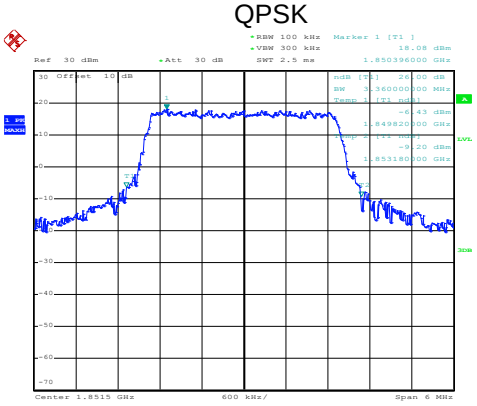
LTE Band 2: -26dBc bandwidth
BW: 3MHz

16QAM



Date: 19.DEC.2018 05:25:31

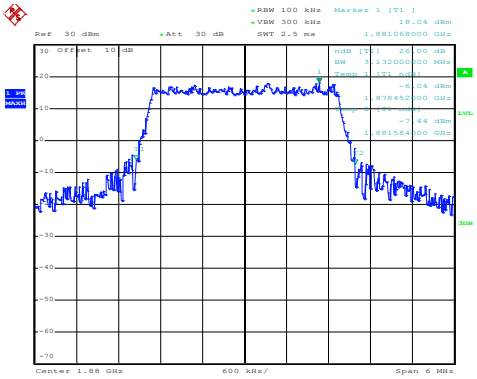
QPSK



Date: 19.DEC.2018 05:25:23

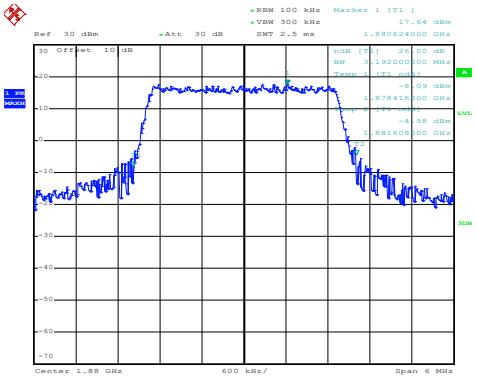
Lowest channel

16QAM



Date: 19.DEC.2018 05:25:57

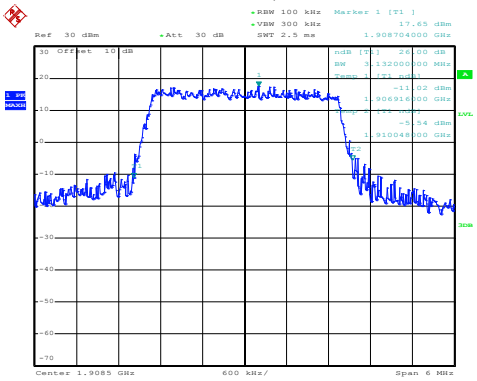
QPSK



Date: 19.DEC.2018 05:25:48

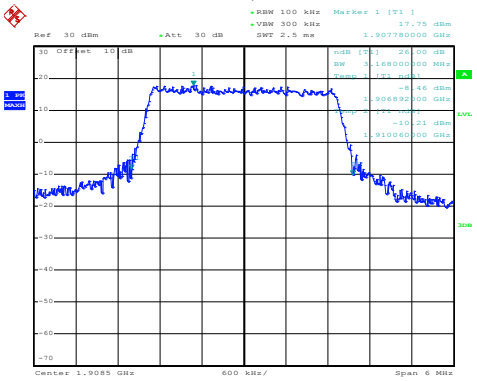
Middle channel

16QAM



Date: 19.DEC.2018 05:27:00

QPSK

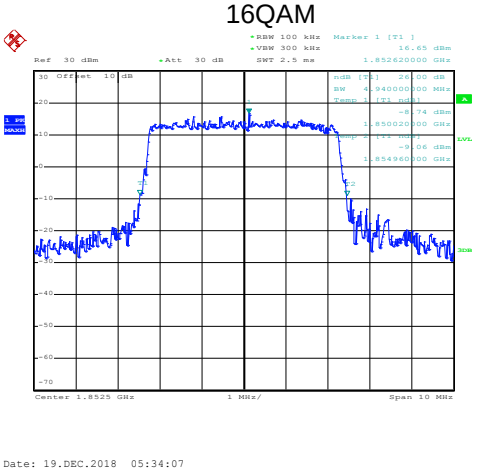


Date: 19.DEC.2018 05:26:54

Highest channel

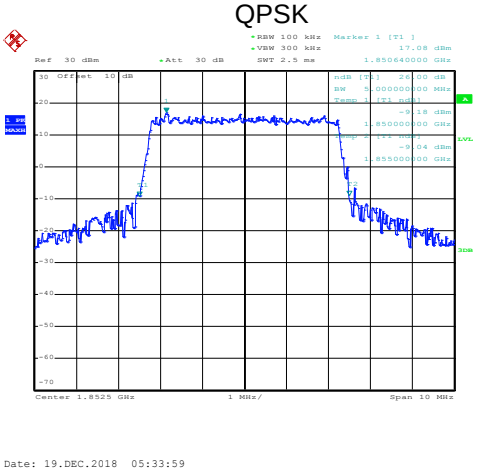
LTE Band 2: -26dBc bandwidth
BW: 5MHz

16QAM



Date: 19.DEC.2018 05:34:07

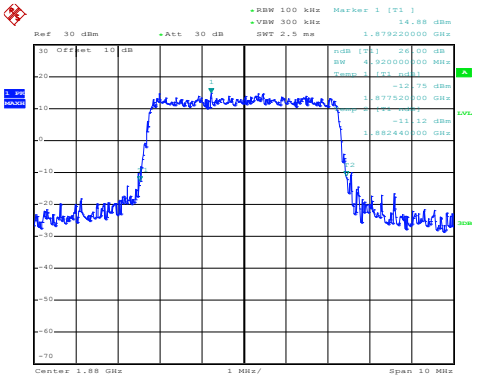
QPSK



Date: 19.DEC.2018 05:33:59

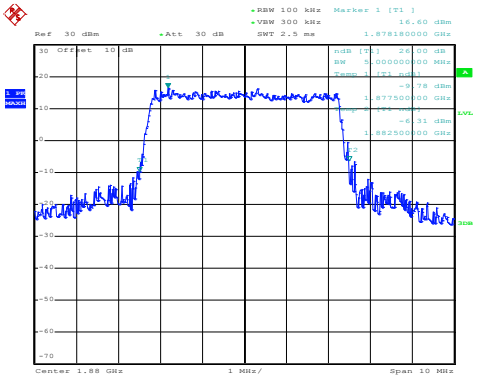
Lowest channel

16QAM



Date: 19.DEC.2018 05:35:40

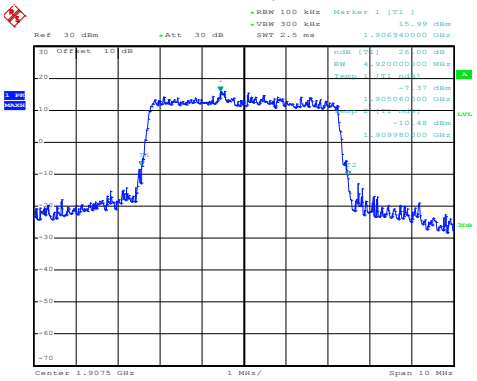
QPSK



Date: 19.DEC.2018 05:35:35

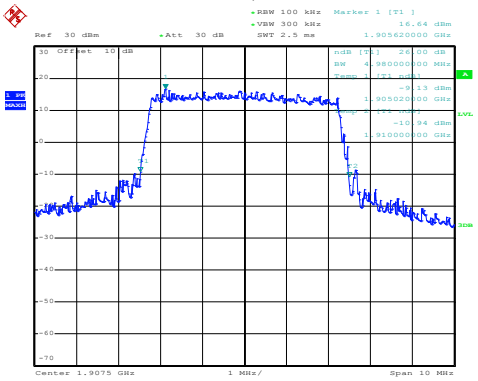
Middle channel

16QAM



Date: 19.DEC.2018 05:36:15

QPSK

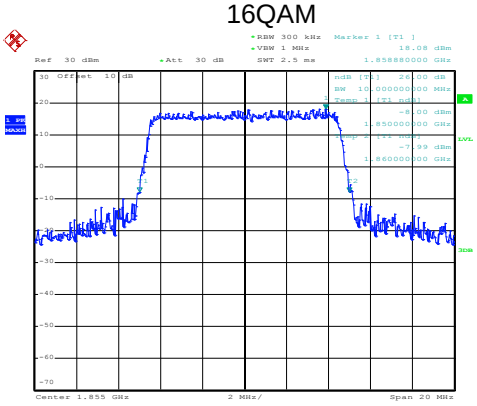


Date: 19.DEC.2018 05:36:09

Highest channel

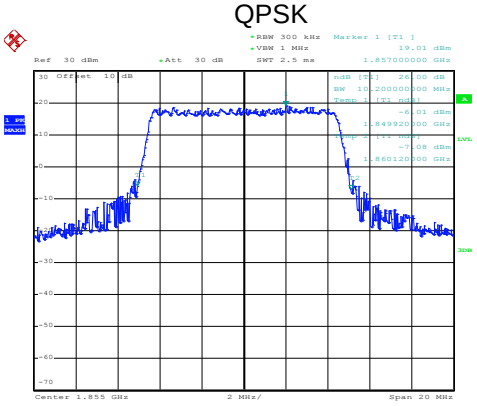
LTE Band 2: -26dBc bandwidth
BW: 10MHz

16QAM



Date: 19.DEC.2018 05:37:56

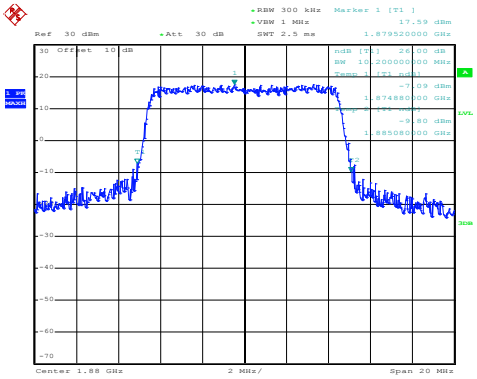
QPSK



Date: 19.DEC.2018 05:37:50

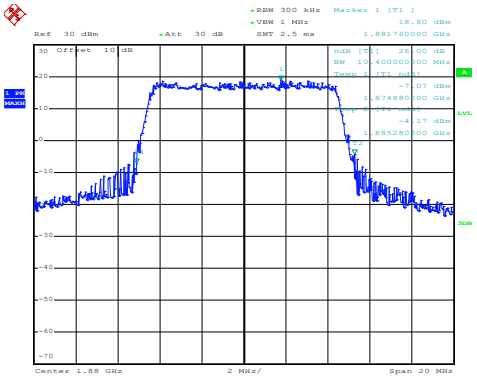
Lowest channel

16QAM



Date: 19.DEC.2018 05:38:20

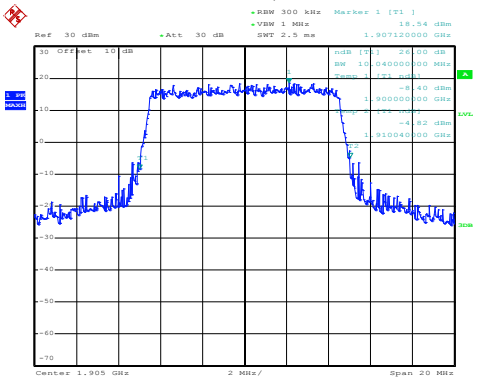
QPSK



Date: 19.DEC.2018 05:38:15

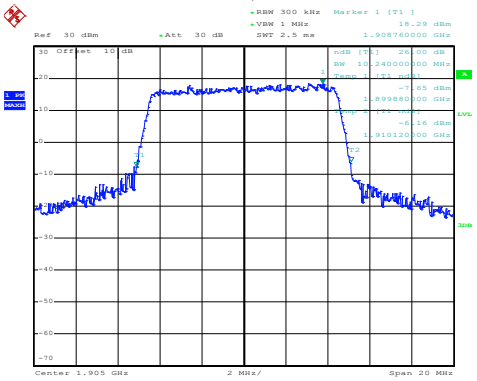
Middle channel

16QAM



Date: 19.DEC.2018 06:05:50

QPSK

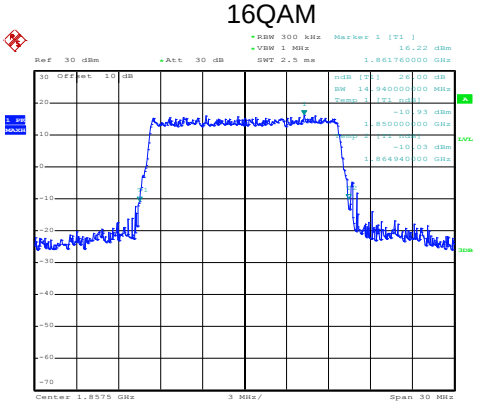


Date: 19.DEC.2018 06:05:43

Highest channel

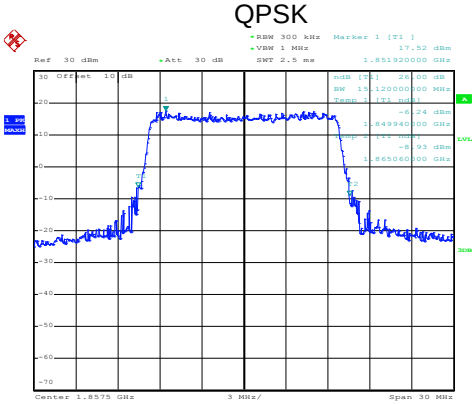
LTE Band 2: -26dBc bandwidth
BW: 15MHz

16QAM



Date: 19.DEC.2018 05:40:07

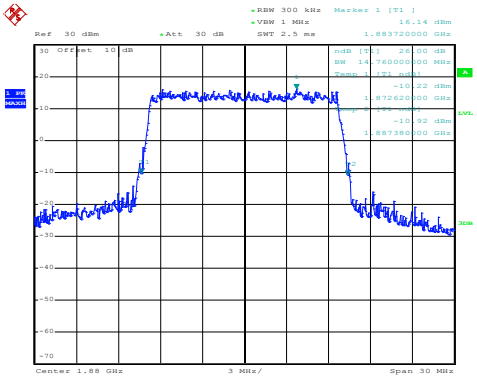
QPSK



Date: 19.DEC.2018 05:40:01

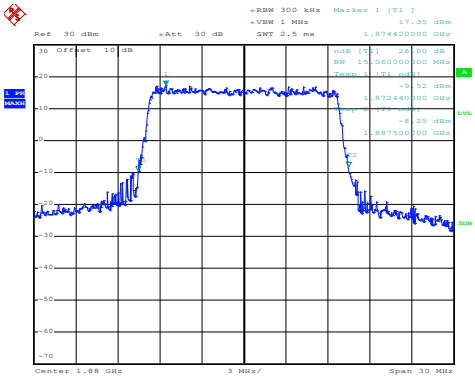
Lowest channel

16QAM



Date: 19.DEC.2018 05:40:52

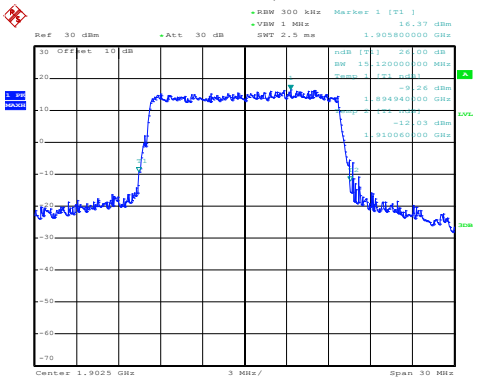
QPSK



Date: 19.DEC.2018 05:40:46

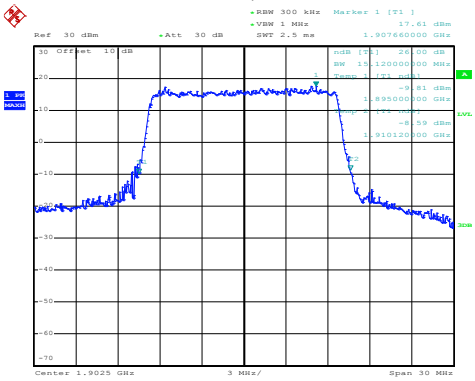
Middle channel

16QAM



Date: 19.DEC.2018 05:41:58

QPSK

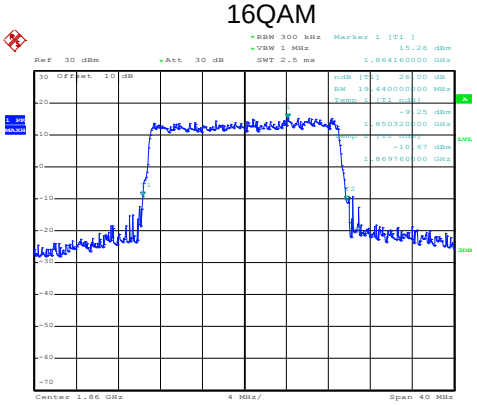


Date: 19.DEC.2018 05:41:49

Highest channel

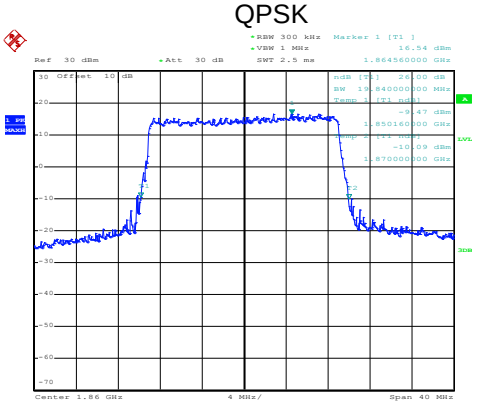
LTE Band 2: -26dBc bandwidth
BW: 20MHz

16QAM



Date: 19.DEC.2018 05:42:55

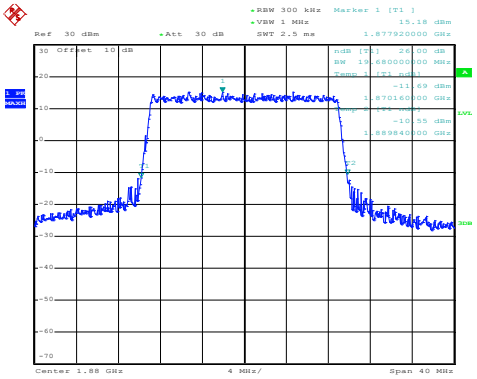
QPSK



Date: 19.DEC.2018 05:42:46

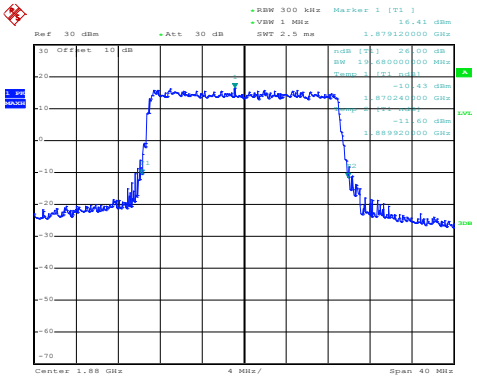
Lowest channel

16QAM



Date: 19.DEC.2018 05:44:05

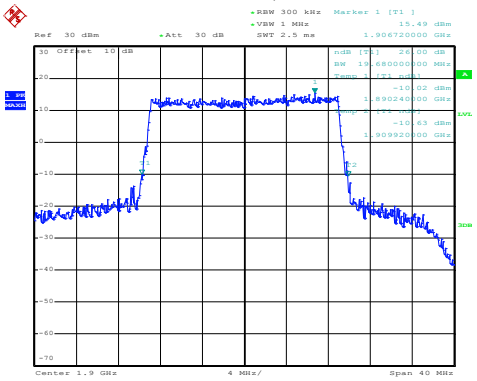
QPSK



Date: 19.DEC.2018 05:43:55

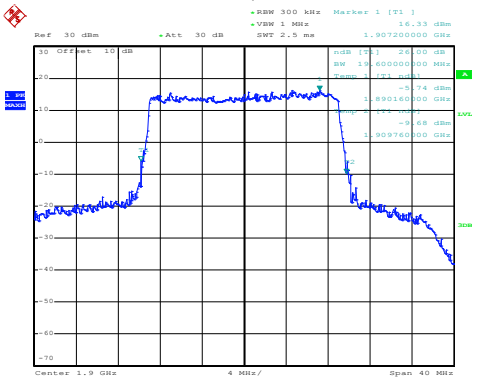
Middle channel

16QAM



Date: 19.DEC.2018 05:44:31

QPSK



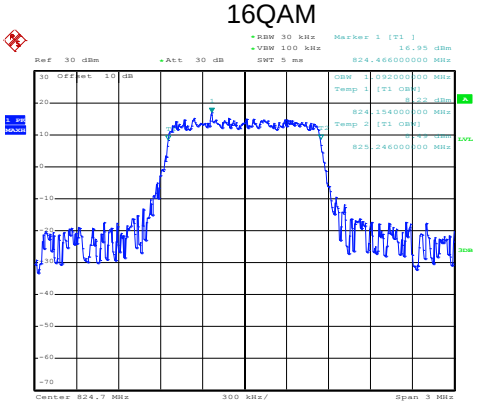
Date: 19.DEC.2018 05:44:24

Highest channel

LTE Band 5 part:

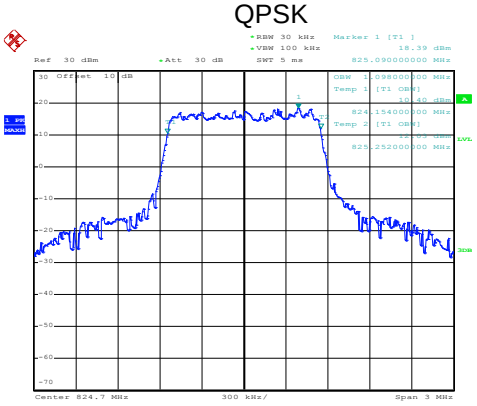
LTE Band 5: 99% Occupy bandwidth
BW: 1.4MHz

16QAM



Date: 19.DEC.2018 05:55:45

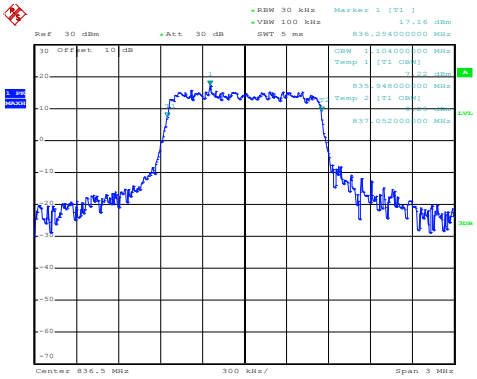
QPSK



Date: 19.DEC.2018 05:55:40

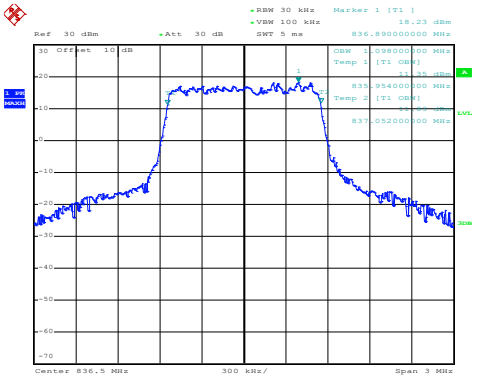
Lowest channel

16QAM



Date: 19.DEC.2018 05:57:03

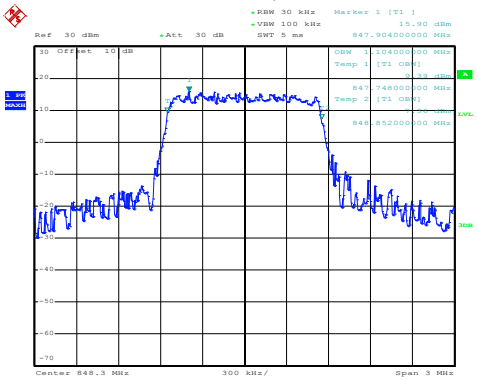
QPSK



Date: 19.DEC.2018 05:56:55

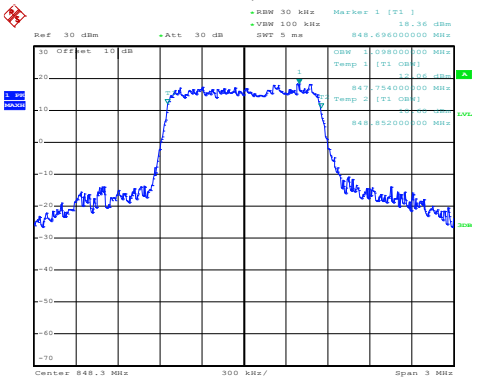
Middle channel

16QAM



Date: 19.DEC.2018 05:57:34

QPSK

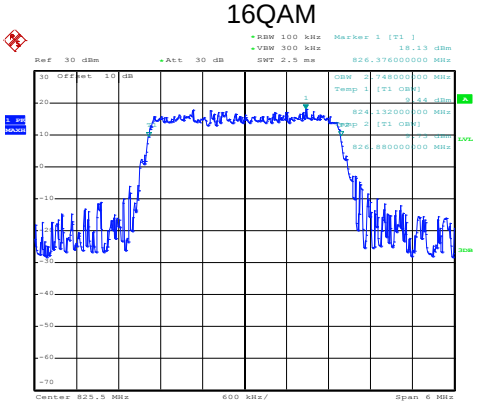


Date: 19.DEC.2018 05:57:28

Highest channel

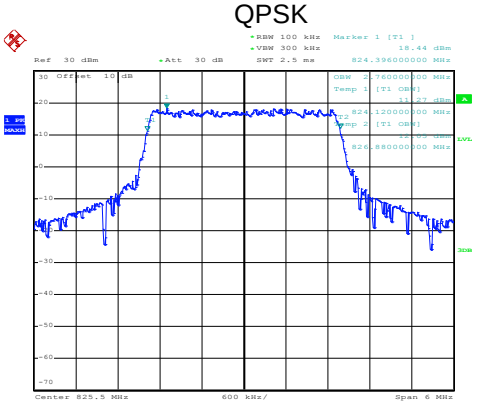
LTE Band 5: 99% Occupy bandwidth
BW: 3MHz

16QAM



Date: 19.DEC.2018 05:52:41

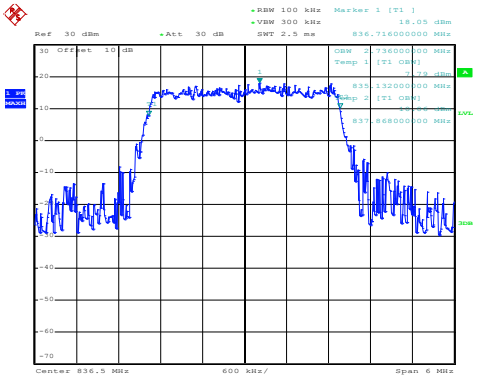
QPSK



Date: 19.DEC.2018 05:52:34

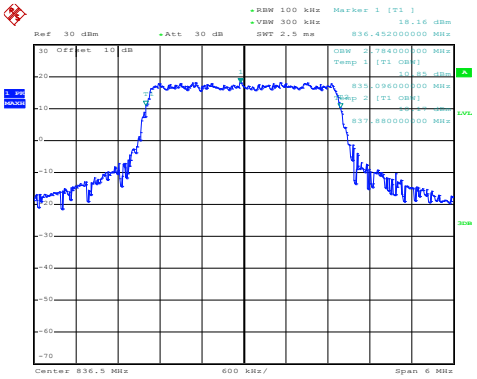
Lowest channel

16QAM



Date: 19.DEC.2018 05:53:47

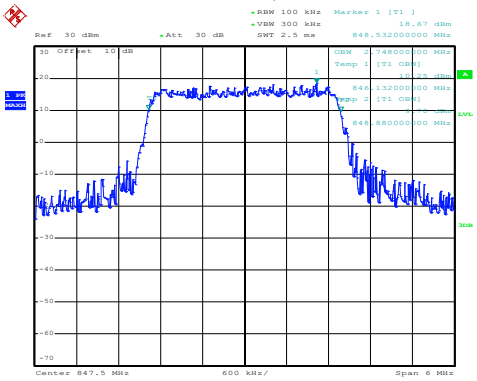
QPSK



Date: 19.DEC.2018 05:53:42

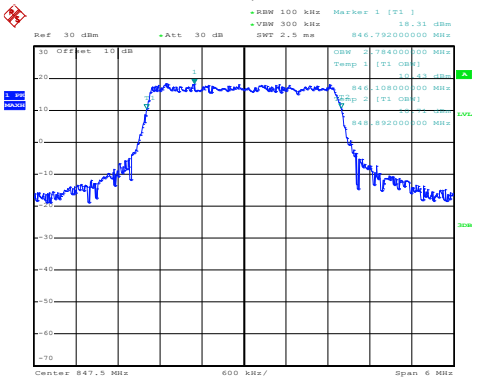
Middle channel

16QAM



Date: 19.DEC.2018 05:54:12

QPSK

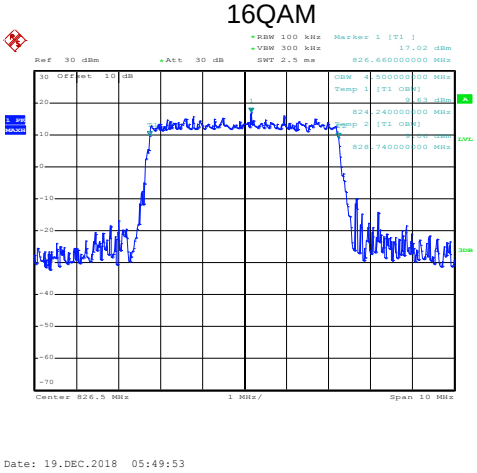


Date: 19.DEC.2018 05:54:57

Highest channel

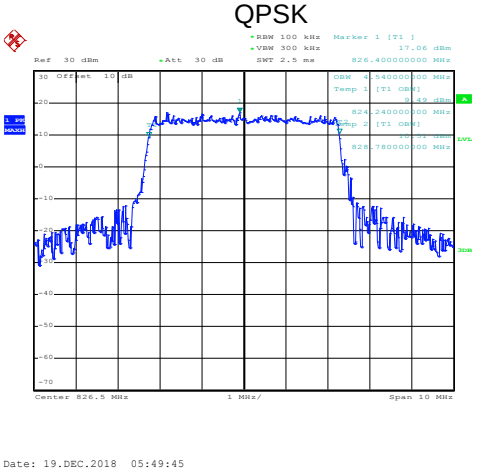
LTE Band 5: 99% Occupy bandwidth
BW: 5MHz

16QAM



Date: 19.DEC.2018 05:49:53

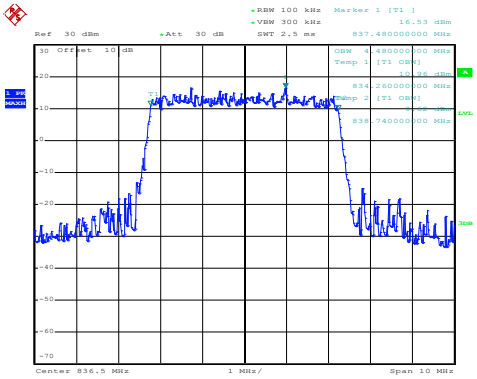
QPSK



Date: 19.DEC.2018 05:49:45

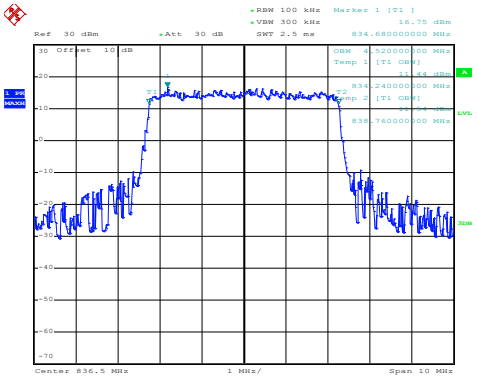
Lowest channel

16QAM



Date: 19.DEC.2018 05:50:19

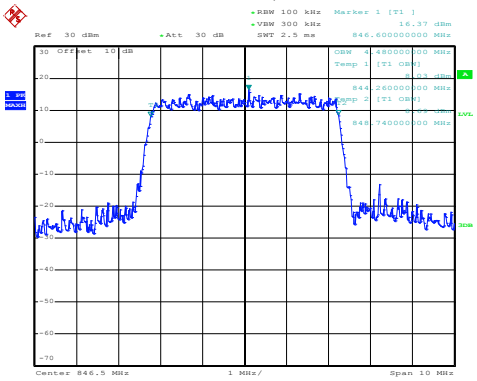
QPSK



Date: 19.DEC.2018 05:50:15

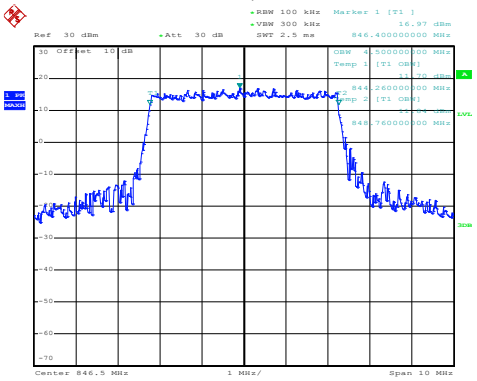
Middle channel

16QAM



Date: 19.DEC.2018 05:51:20

QPSK

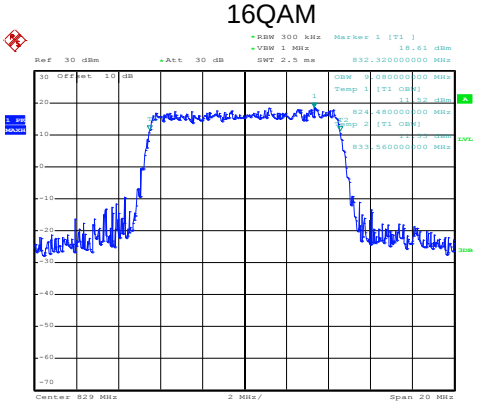


Date: 19.DEC.2018 05:51:16

Highest channel

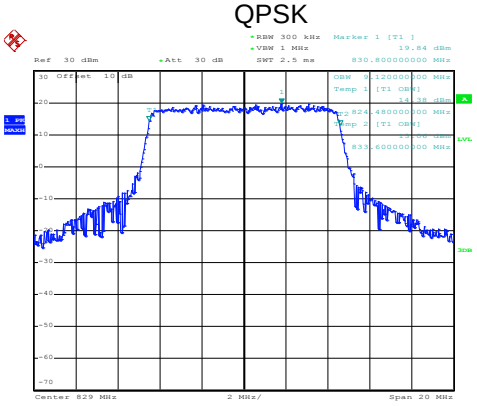
LTE Band 5: 99% Occupy bandwidth
BW: 10MHz

16QAM



Date: 19.DEC.2018 05:46:01

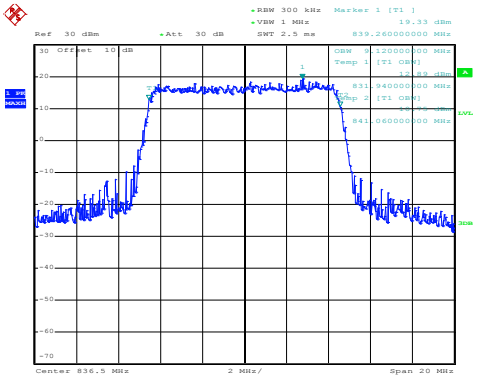
QPSK



Date: 19.DEC.2018 05:45:56

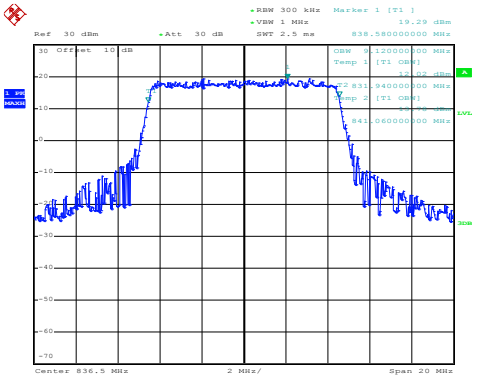
Lowest channel

16QAM



Date: 19.DEC.2018 05:47:00

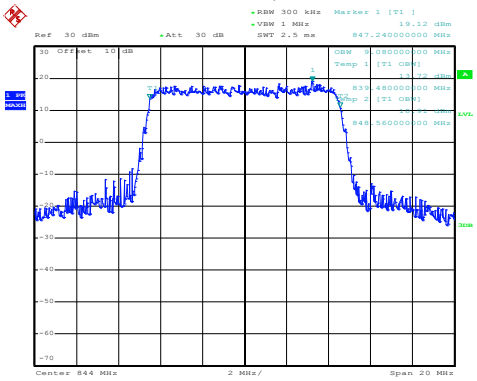
QPSK



Date: 19.DEC.2018 05:46:54

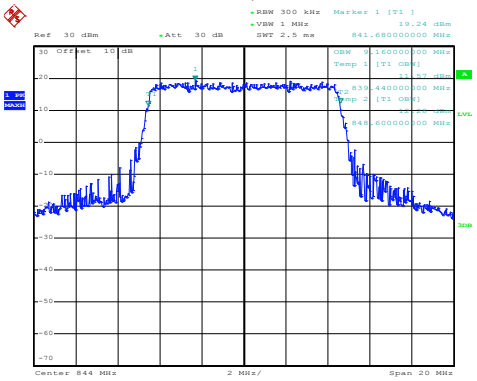
Middle channel

16QAM



Date: 19.DEC.2018 05:47:22

QPSK

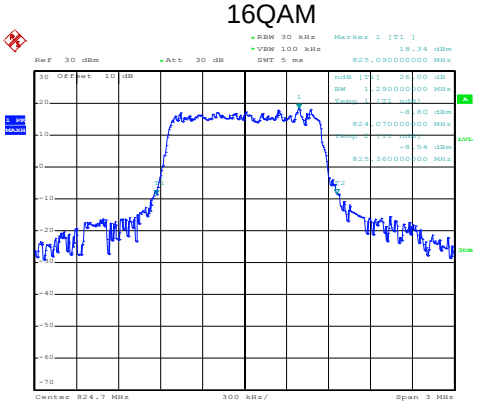


Date: 19.DEC.2018 05:47:16

Highest channel

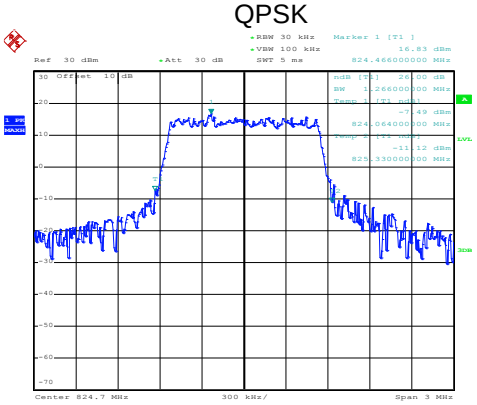
LTE Band 5: -26dBc bandwidth
BW: 1.4MHz

16QAM



Date: 19.DEC.2018 05:55:58

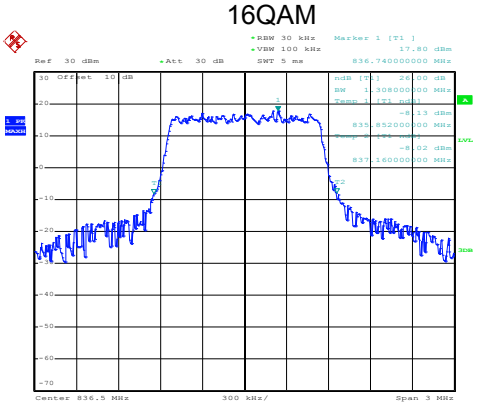
QPSK



Date: 19.DEC.2018 05:56:05

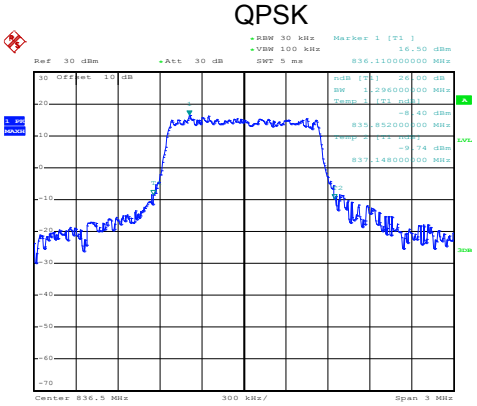
Lowest channel

16QAM



Date: 19.DEC.2018 05:56:28

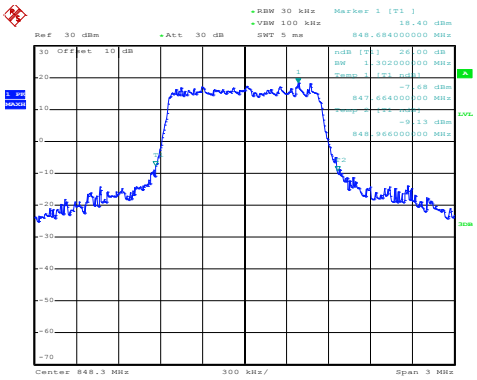
QPSK



Date: 19.DEC.2018 05:56:36

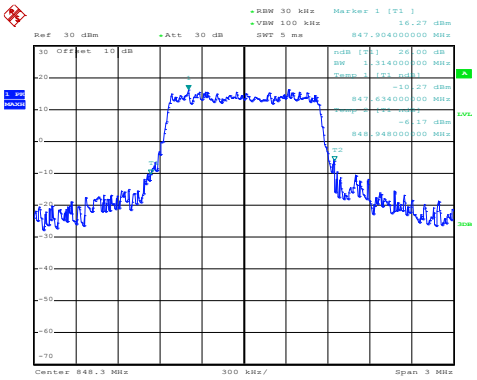
Middle channel

16QAM



Date: 19.DEC.2018 05:57:47

QPSK

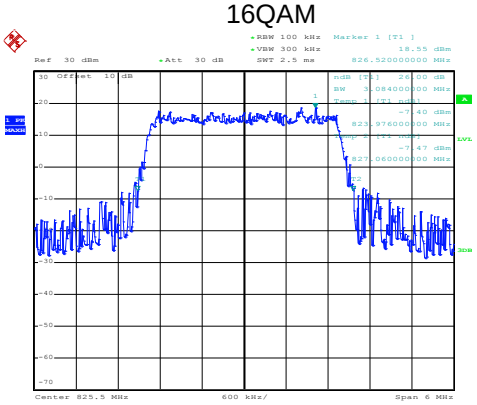


Date: 19.DEC.2018 05:57:53

Highest channel

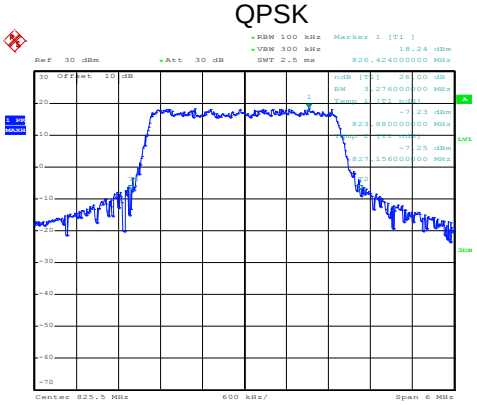
LTE Band 5: -26dBc bandwidth
BW: 3MHz

16QAM



Date: 19.DEC.2018 05:52:59

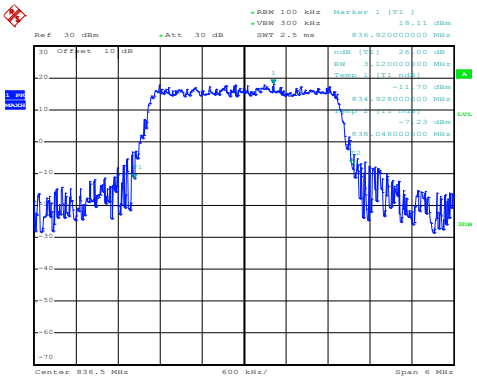
QPSK



Date: 19.DEC.2018 05:52:54

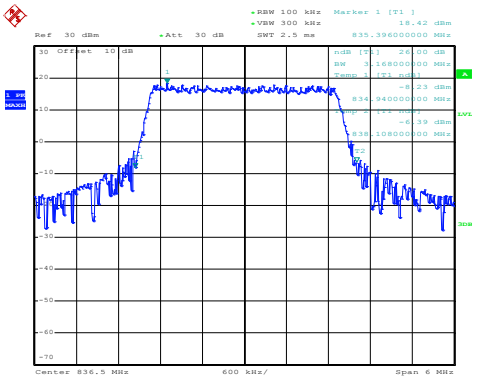
Lowest channel

16QAM



Date: 19.DEC.2018 05:53:26

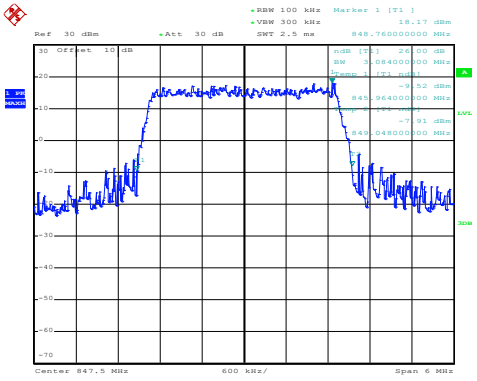
QPSK



Date: 19.DEC.2018 05:53:19

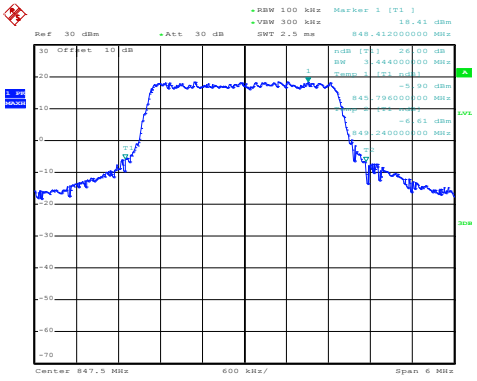
Middle channel

16QAM



Date: 19.DEC.2018 05:54:39

QPSK

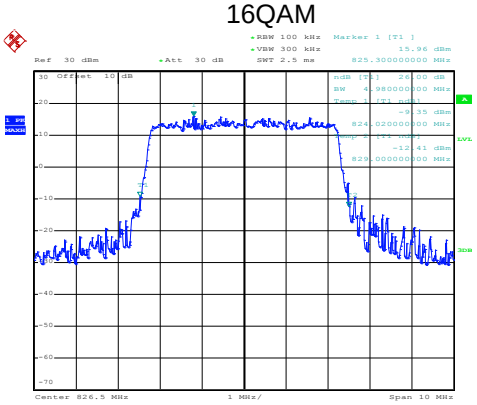


Date: 19.DEC.2018 05:54:34

Highest channel

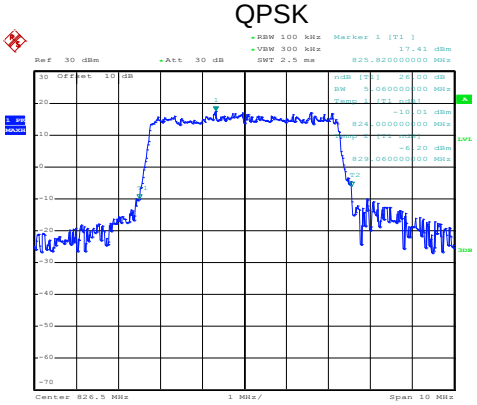
LTE Band 5: -26dBc bandwidth
BW: 5MHz

16QAM



Date: 19.DEC.2018 05:49:31

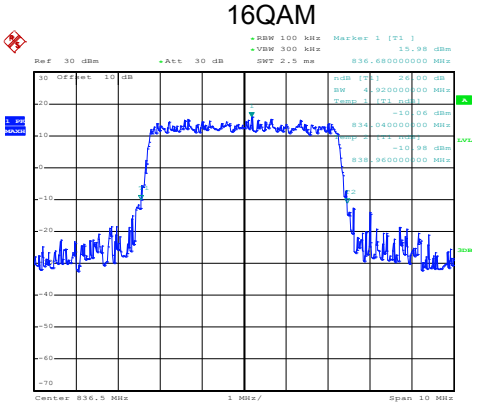
QPSK



Date: 19.DEC.2018 05:49:23

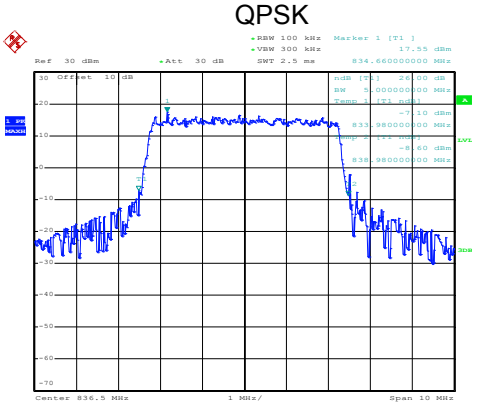
Lowest channel

16QAM



Date: 19.DEC.2018 05:50:36

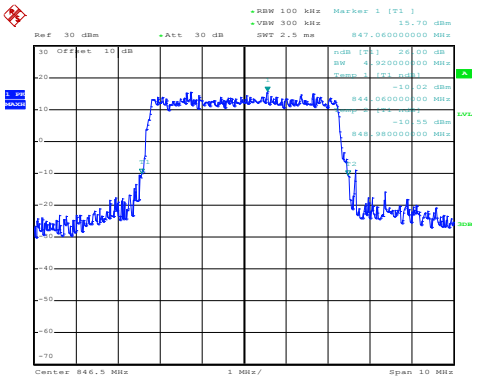
QPSK



Date: 19.DEC.2018 05:50:31

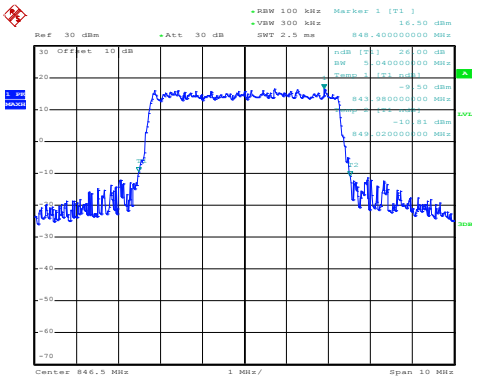
Middle channel

16QAM



Date: 19.DEC.2018 05:51:01

QPSK

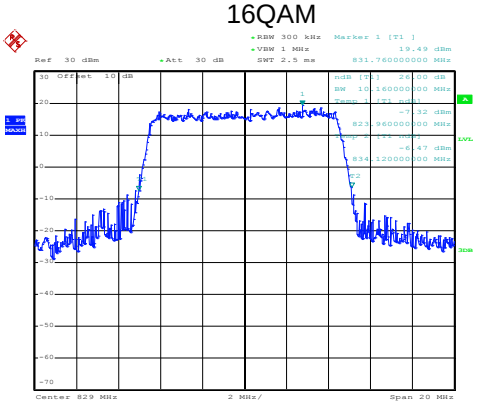


Date: 19.DEC.2018 05:50:57

Highest channel

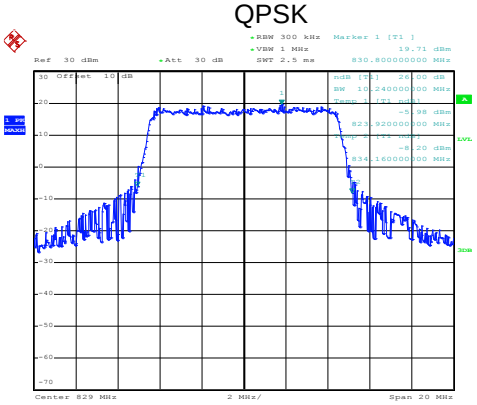
LTE Band 5: -26dBc bandwidth
BW: 10MHz

16QAM



Date: 19.DEC.2018 05:46:18

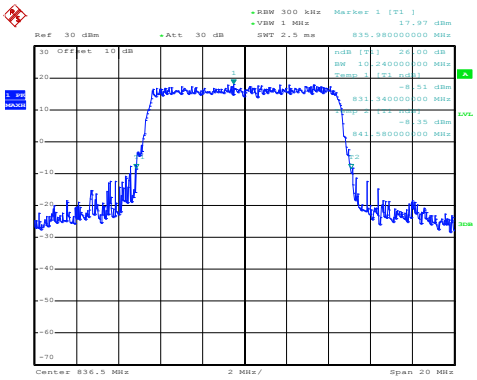
QPSK



Date: 19.DEC.2018 05:46:12

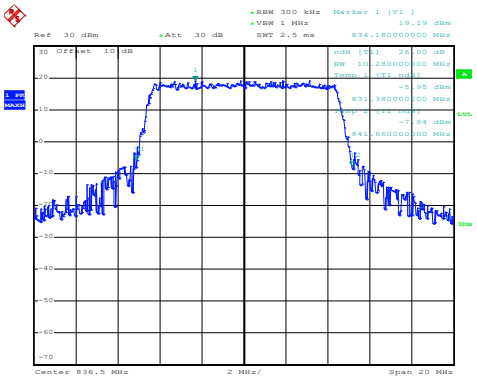
Lowest channel

16QAM



Date: 19.DEC.2018 05:46:43

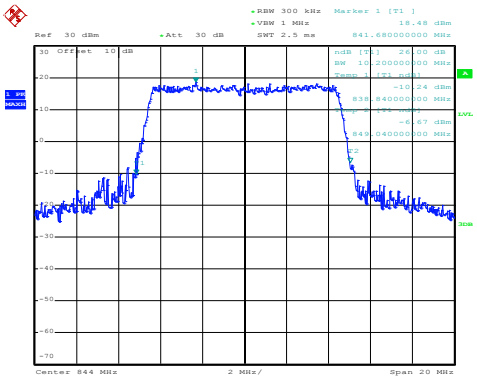
QPSK



Date: 19.DEC.2018 05:46:38

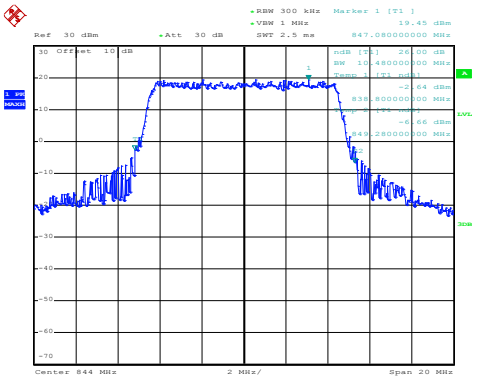
Middle channel

16QAM



Date: 19.DEC.2018 05:47:40

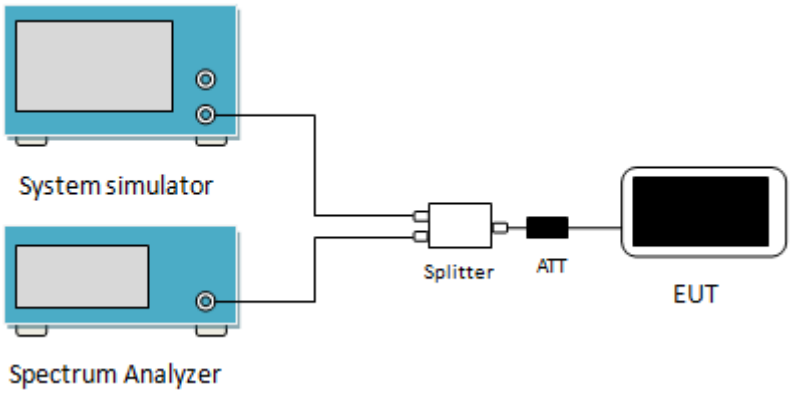
QPSK



Date: 19.DEC.2018 05:47:33

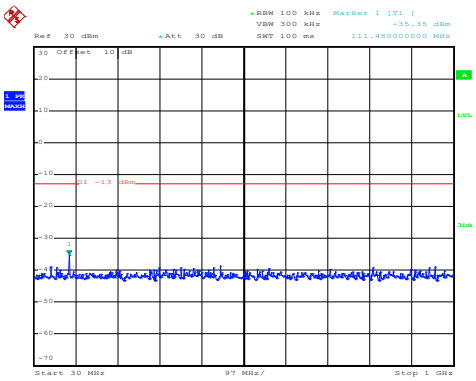
Highest channel

6.4 Out of band emission at antenna terminals

Test Requirement:	Part 22.917(b), Part 24.238 (a)
Test Method:	ANSI/TIA-603-D 2010
Limit:	LTE Band 2 & 5: The power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least 43 + 10 $\log_{10}$(P) dB (-13 dBm).
Test Setup:	
Test Procedure:	1 The RF output of the transceiver was connected to a spectrum analyzer through appropriate attenuation. 2 The resolution bandwidth of the spectrum analyzer was set at 100 kHz when below 1GHz, 1MHz when above 1 GHz; sufficient scans were taken to show the out of band Emissions if any up to 10th harmonic. 3 For the out of band: Set the RBW=100 kHz, VBW=300 kHz when below 1 GHz, RBW =1 MHz, VBW=3 MHz when above 1 GHz, Start=30MHz, Stop= 10th harmonic. 4 Band Edge Requirements: In the 1 MHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of at least 1 percent of the emission bandwidth of the fundamental emission of the transmitter may be employed to measure the out of band Emissions.
Test Instruments:	Refer to section 5.9 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed
Remark:	Pre-scan all RB Size and offset, and found the RB Size and offset of worst case, so the report shows only the worst case test data.

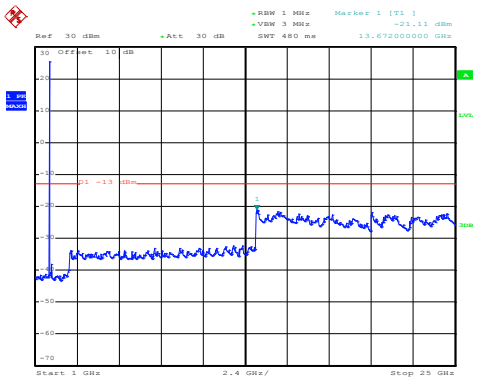
Test plots as follows (Conducted spurious emission) (worst case):
LTE Band 2 part:

LTE Band 2: 16 QAM & RB Size 1
BW: 1.4MHz
Lowest channel



Date: 19.DEC.2018 03:38:51

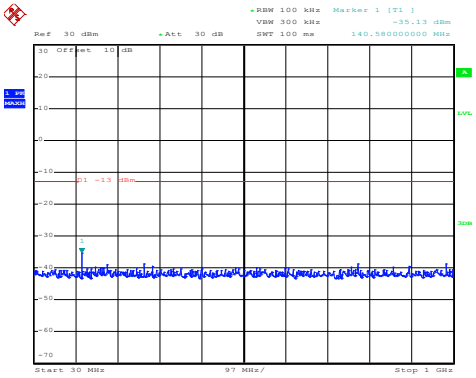
30MHz~1GHz



Date: 19.DEC.2018 04:38:29

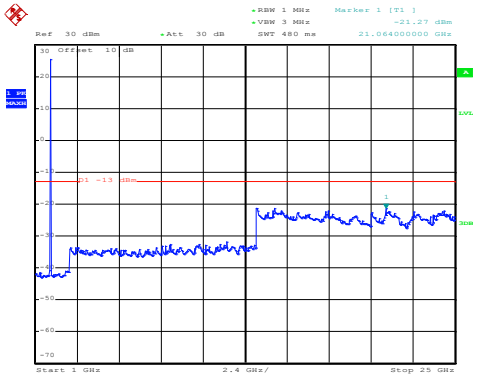
1GHz~25GHz

Middle channel



Date: 19.DEC.2018 03:39:37

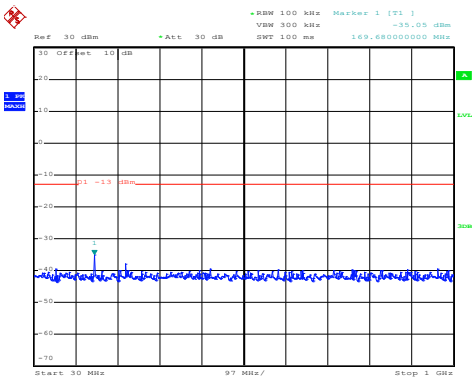
30MHz~1GHz



Date: 19.DEC.2018 04:39:35

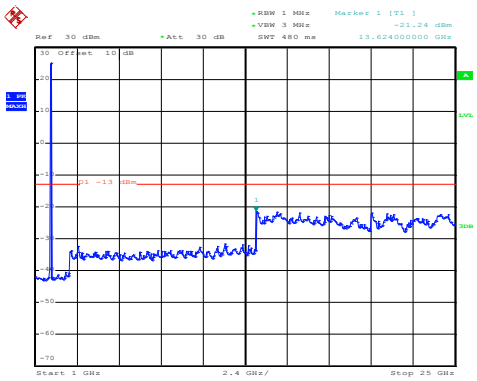
1GHz~25GHz

High channel



Date: 19.DEC.2018 03:40:23

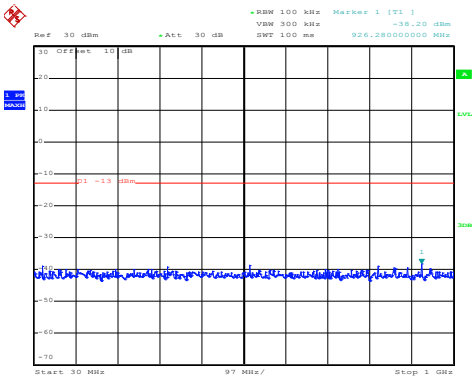
30MHz~1GHz



Date: 19.DEC.2018 04:41:36

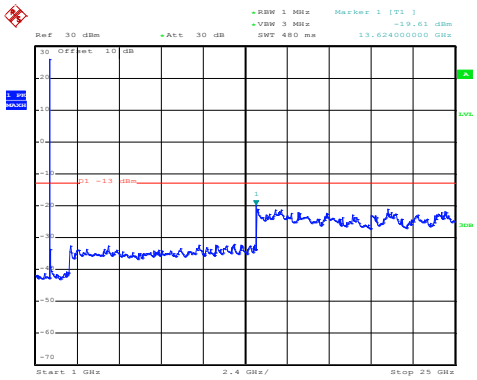
1GHz~25GHz

LTE Band 2: 16 QAM & RB Size 6
BW: 1.4MHz
Lowest channel



Date: 19.DEC.2018 03:39:09

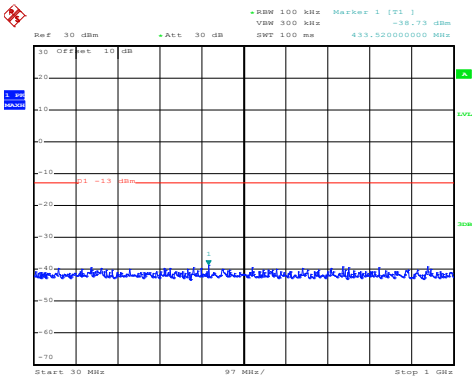
30MHz~1GHz



Date: 19.DEC.2018 04:38:57

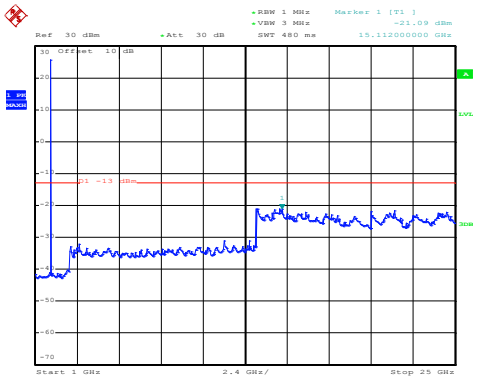
1GHz~25GHz

Middle channel



Date: 19.DEC.2018 03:39:56

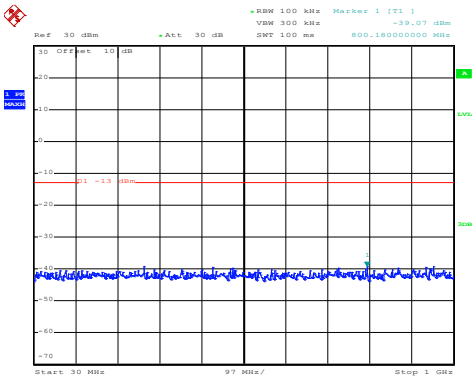
30MHz~1GHz



Date: 19.DEC.2018 04:40:11

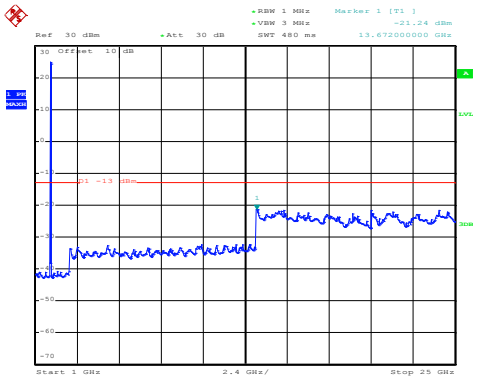
1GHz~25GHz

High channel



Date: 19.DEC.2018 03:40:40

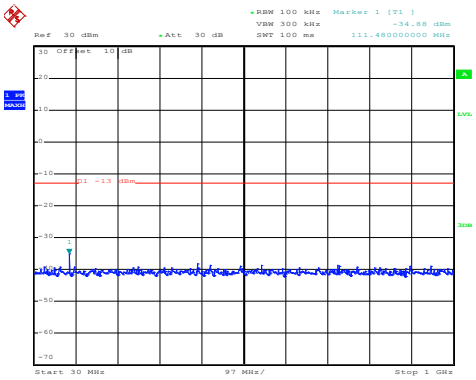
30MHz~1GHz



Date: 19.DEC.2018 04:41:07

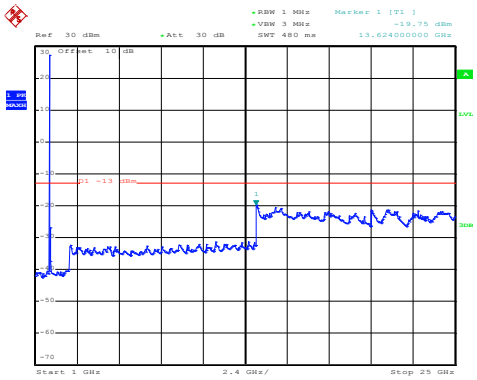
1GHz~25GHz

LTE Band 2: QPSK & RB Size 1
BW: 1.4MHz
Lowest channel



Date: 19.DEC.2018 03:38:45

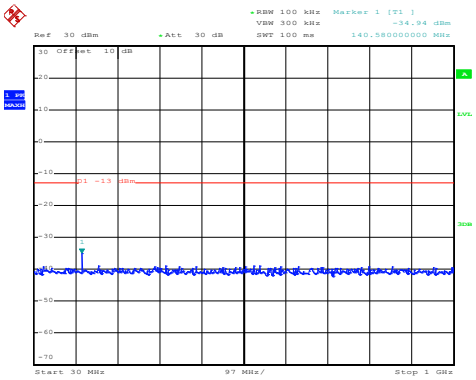
30MHz~1GHz



Date: 19.DEC.2018 04:38:18

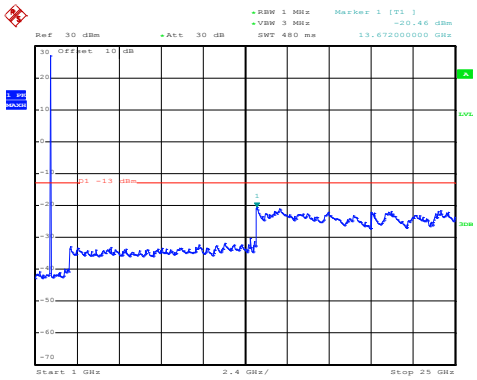
1GHz~25GHz

Middle channel



Date: 19.DEC.2018 03:39:31

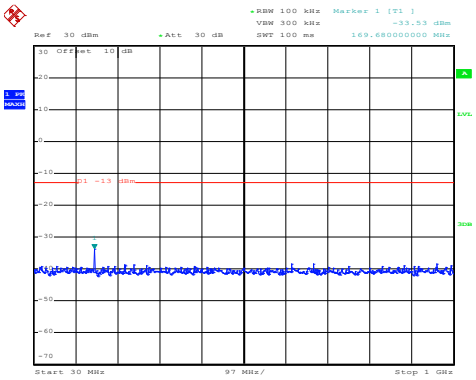
30MHz~1GHz



Date: 19.DEC.2018 04:39:25

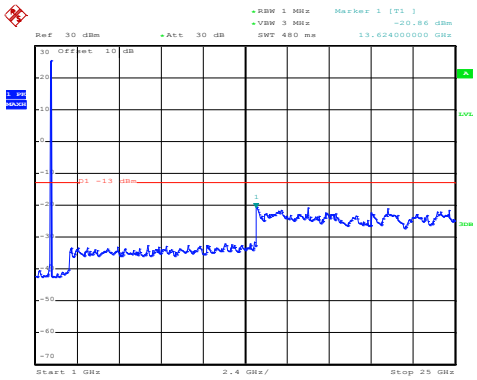
1GHz~25GHz

High channel



Date: 19.DEC.2018 03:40:17

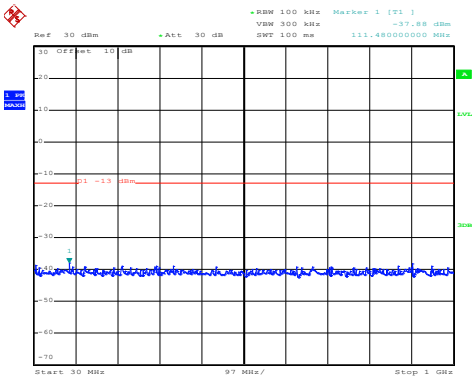
30MHz~1GHz



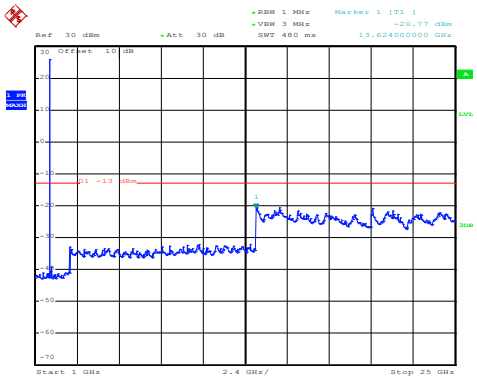
Date: 19.DEC.2018 04:41:27

1GHz~25GHz

LTE Band 2: QPSK & RB Size 6
BW: 1.4MHz
Lowest channel

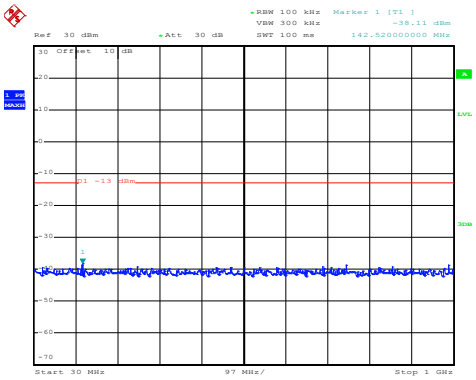


30MHz~1GHz

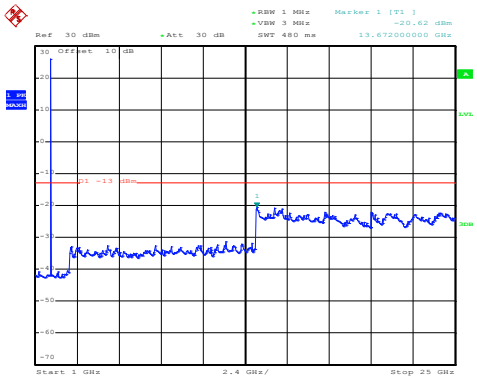


1GHz~25GHz

Middle channel

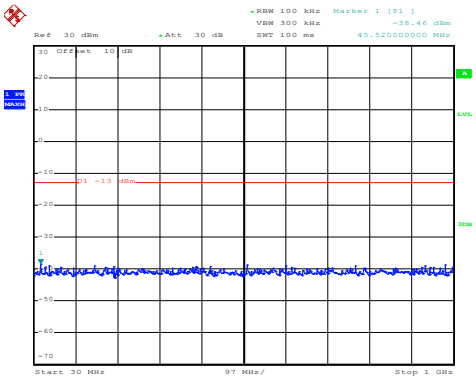


30MHz~1GHz

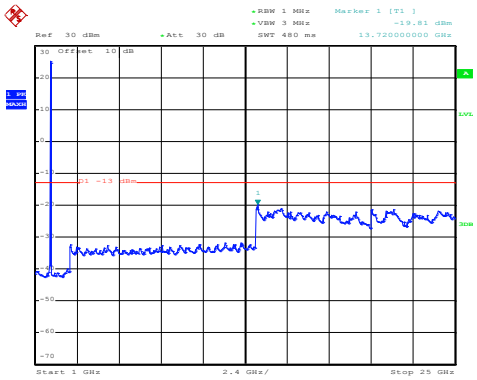


1GHz~25GHz

High channel

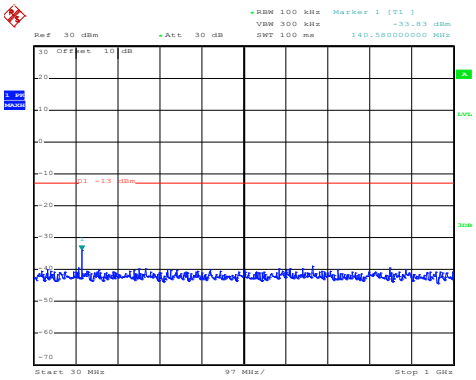


30MHz~1GHz

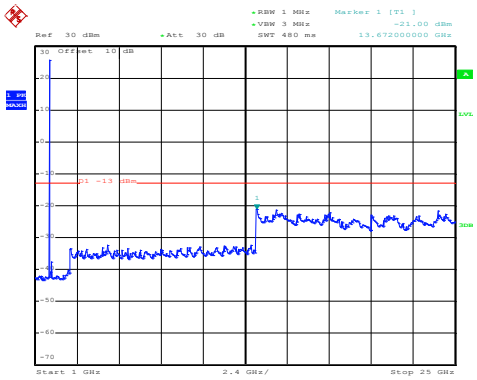


1GHz~25GHz

LTE Band 2: 16 QAM & RB Size 1
BW: 3MHz
Lowest channel

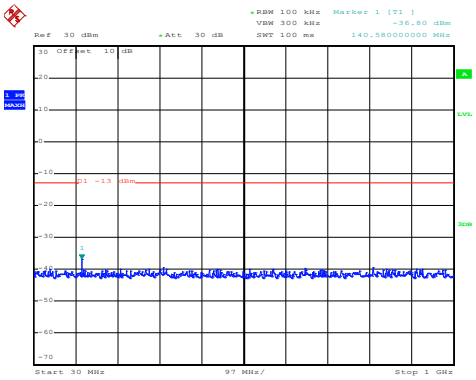


30MHz~1GHz

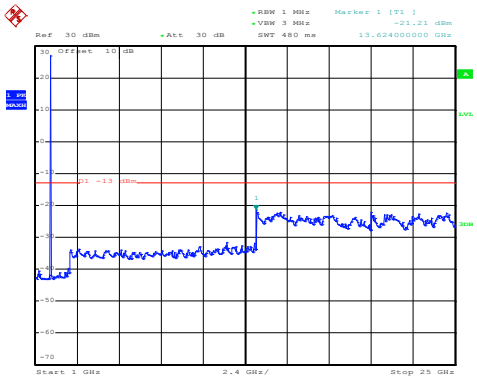


1GHz~25GHz

Middle channel

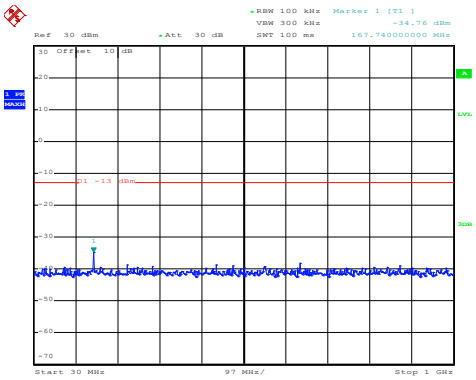


30MHz~1GHz

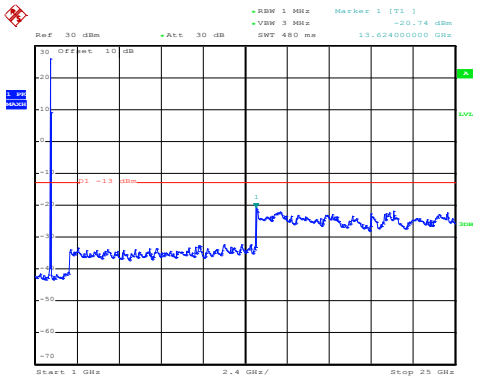


1GHz~25GHz

High channel

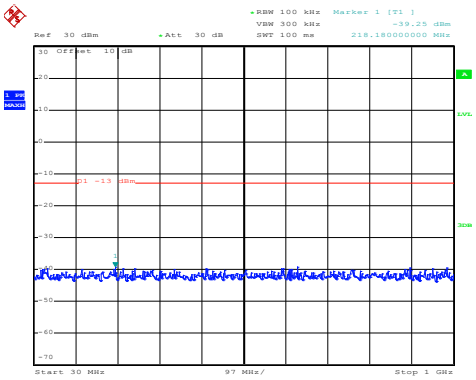


30MHz~1GHz



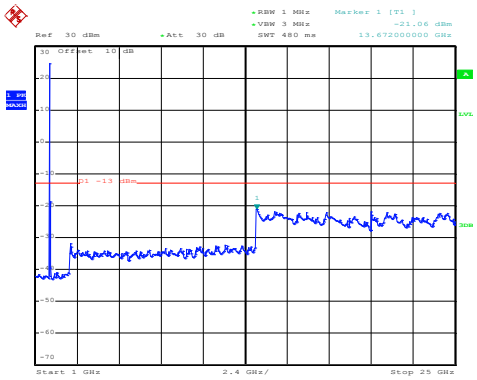
1GHz~25GHz

LTE Band 2: 16 QAM & RB Size 15
BW: 3MHz
Lowest channel



Date: 19.DEC.2018 03:43:42

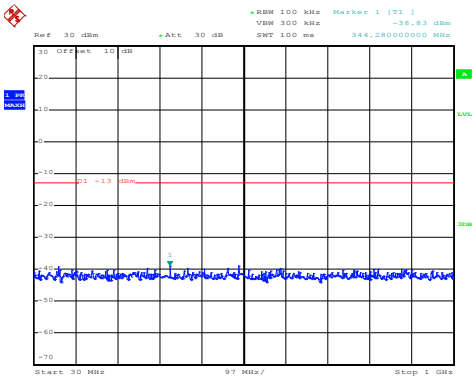
30MHz~1GHz



Date: 19.DEC.2018 04:42:39

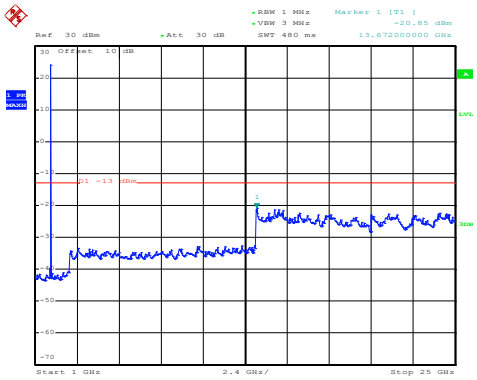
1GHz~25GHz

Middle channel



Date: 19.DEC.2018 03:44:03

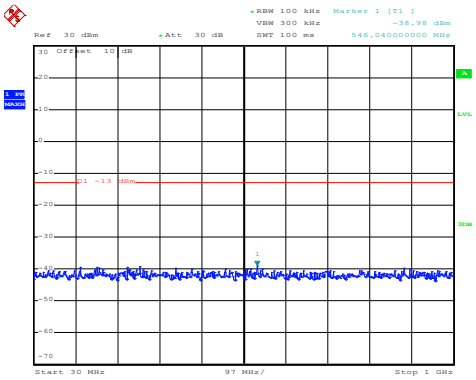
30MHz~1GHz



Date: 19.DEC.2018 04:43:42

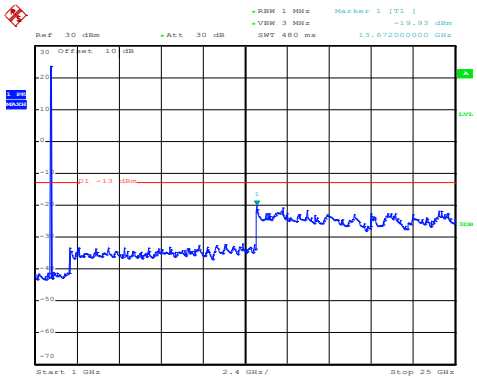
1GHz~25GHz

High channel



Date: 19.DEC.2018 03:46:14

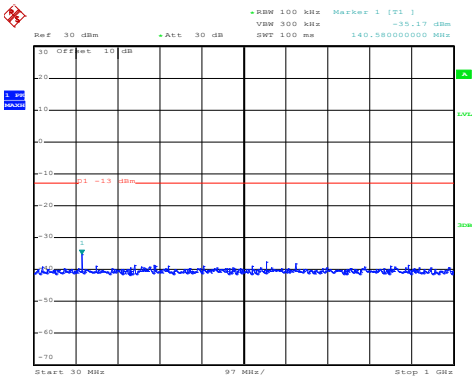
30MHz~1GHz



Date: 19.DEC.2018 04:44:41

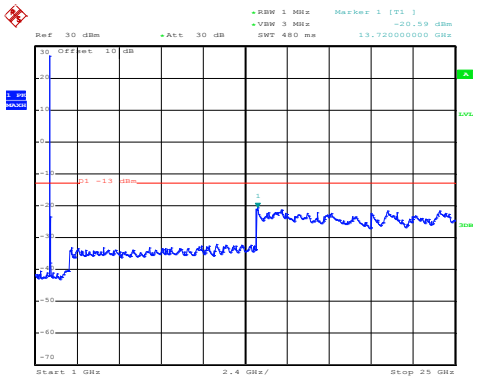
1GHz~25GHz

LTE Band 2: QPSK & RB Size 1
BW: 3MHz
Lowest channel



Date: 19.DEC.2018 03:45:18

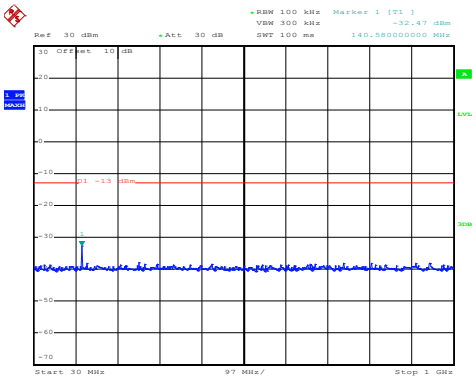
30MHz~1GHz



Date: 19.DEC.2018 04:42:08

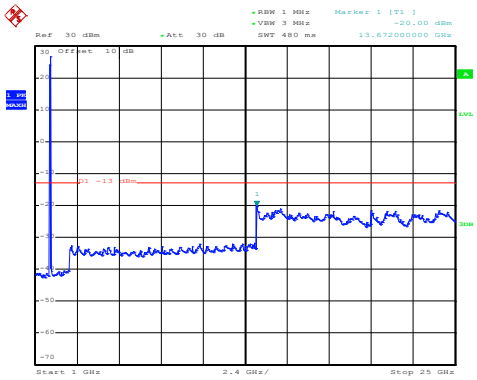
1GHz~25GHz

Middle channel



Date: 19.DEC.2018 04:34:16

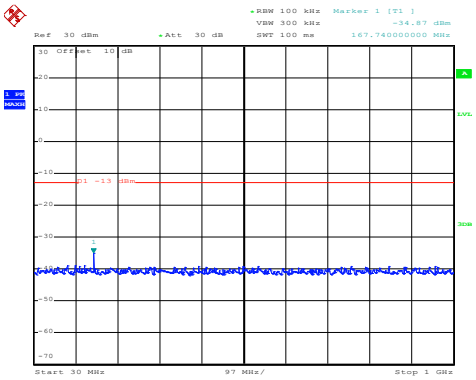
30MHz~1GHz



Date: 19.DEC.2018 04:43:11

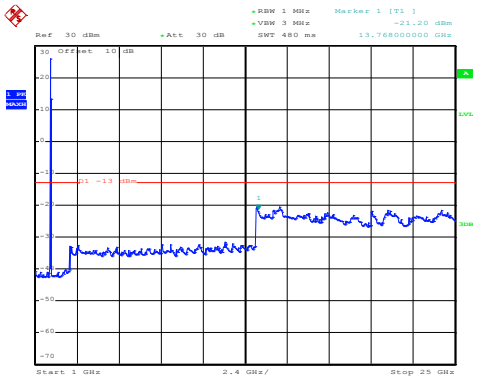
1GHz~25GHz

High channel



Date: 19.DEC.2018 03:45:44

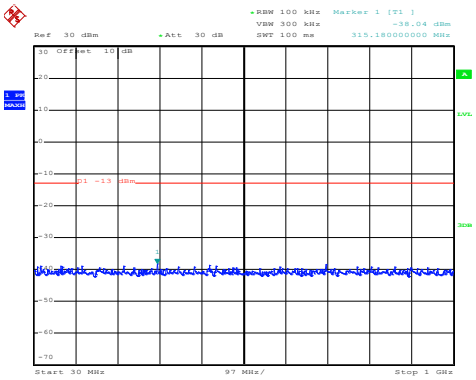
30MHz~1GHz



Date: 19.DEC.2018 04:44:12

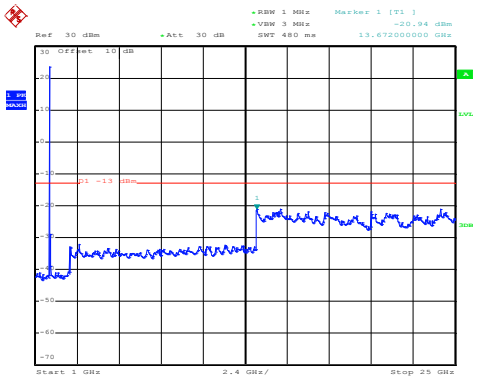
1GHz~25GHz

LTE Band 2: QPSK & RB Size 15
BW: 3MHz
Lowest channel



Date: 19.DEC.2018 03:43:37

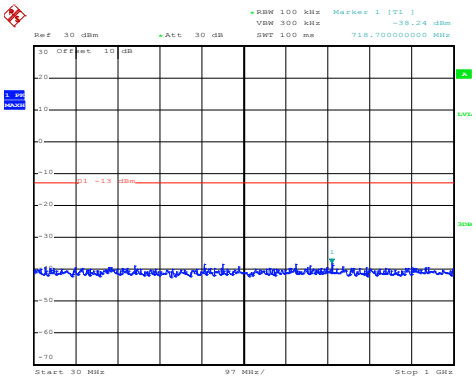
30MHz~1GHz



Date: 19.DEC.2018 04:42:29

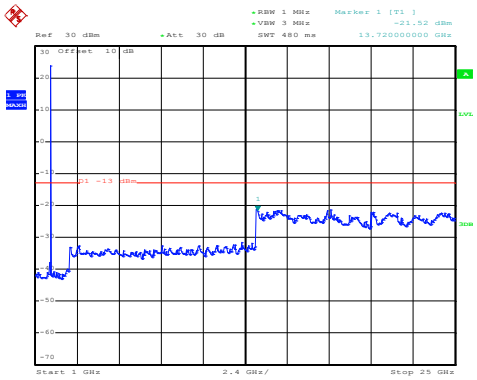
1GHz~25GHz

Middle channel



Date: 19.DEC.2018 03:43:58

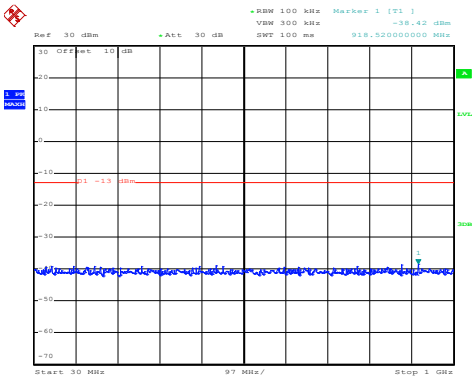
30MHz~1GHz



Date: 19.DEC.2018 04:43:35

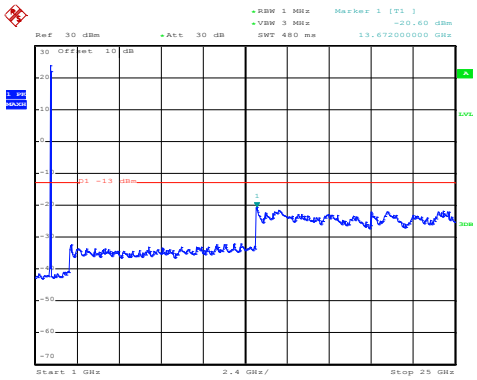
1GHz~25GHz

High channel



Date: 19.DEC.2018 03:46:07

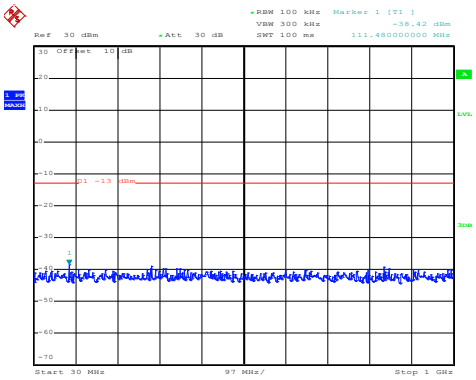
30MHz~1GHz



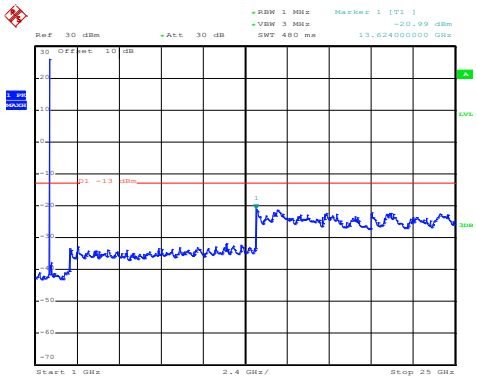
Date: 19.DEC.2018 04:44:33

1GHz~25GHz

LTE Band 2: 16 QAM & RB Size 1
BW: 5MHz
Lowest channel

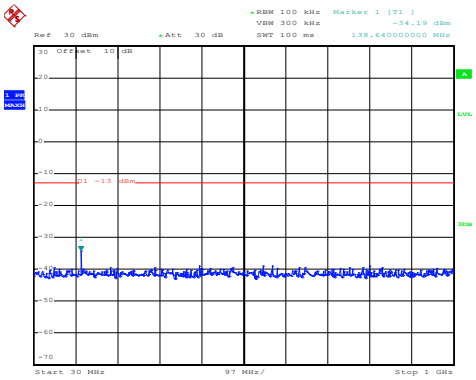


30MHz~1GHz

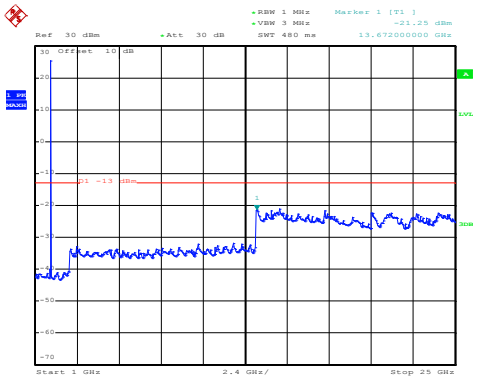


1GHz~25GHz

Middle channel

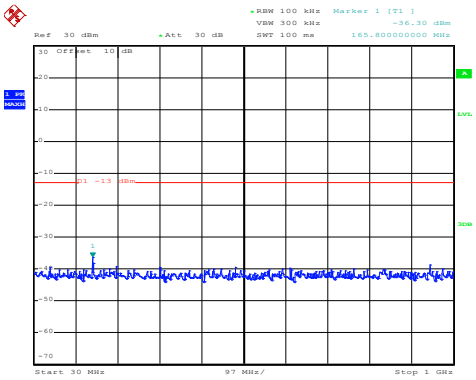


30MHz~1GHz

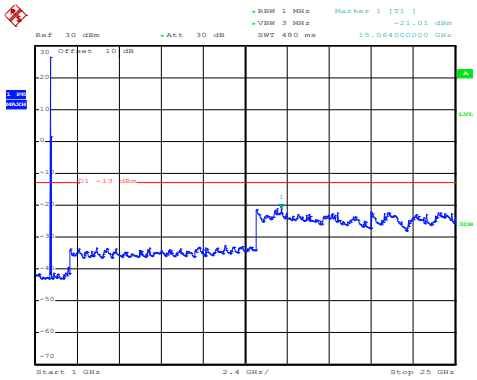


1GHz~25GHz

High channel

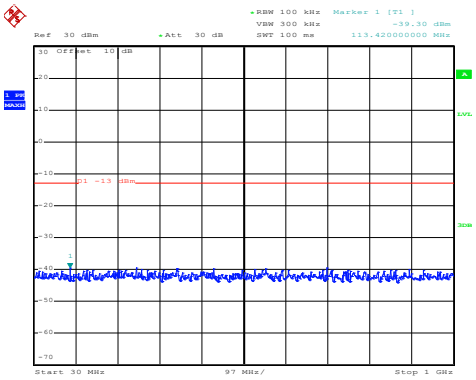


30MHz~1GHz



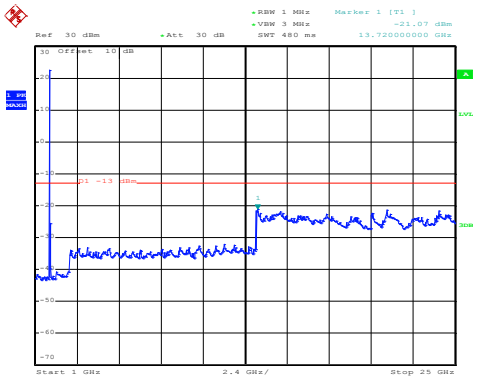
1GHz~25GHz

LTE Band 2: 16 QAM & RB Size 25
BW: 5MHz
Lowest channel



Date: 19.DEC.2018 03:47:14

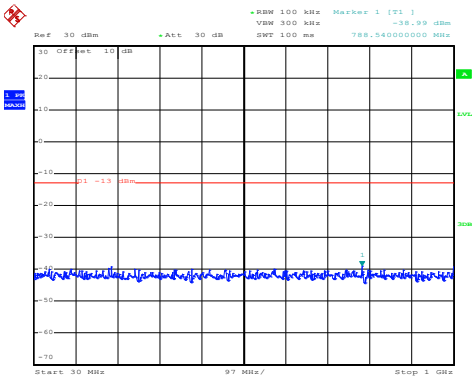
30MHz~1GHz



Date: 19.DEC.2018 04:46:24

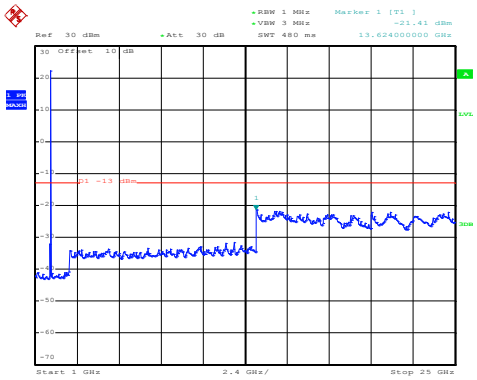
1GHz~25GHz

Middle channel



Date: 19.DEC.2018 03:48:01

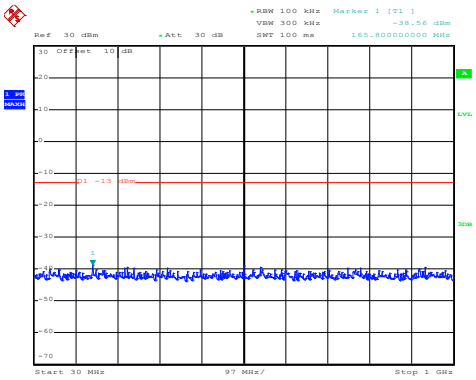
30MHz~1GHz



Date: 19.DEC.2018 04:47:24

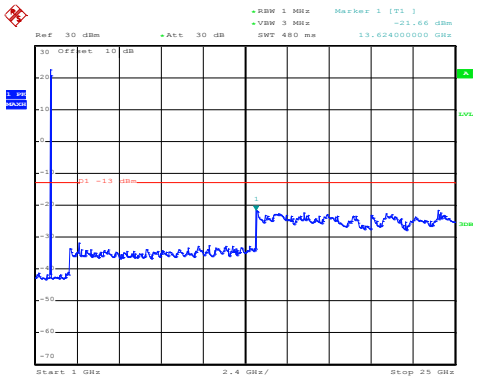
1GHz~25GHz

High channel



Date: 19.DEC.2018 03:48:23

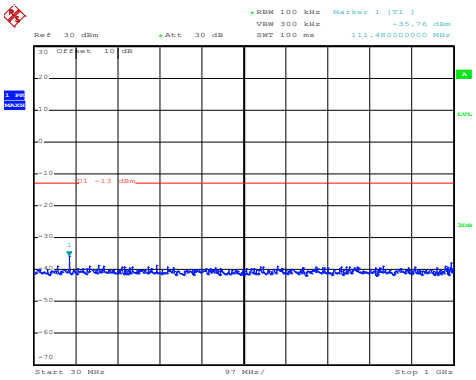
30MHz~1GHz



Date: 19.DEC.2018 04:48:36

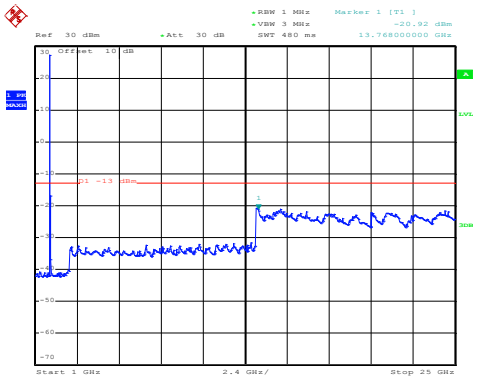
1GHz~25GHz

LTE Band 2: QPSK & RB Size 1
BW: 5MHz
Lowest channel



Date: 19.DEC.2018 03:46:51

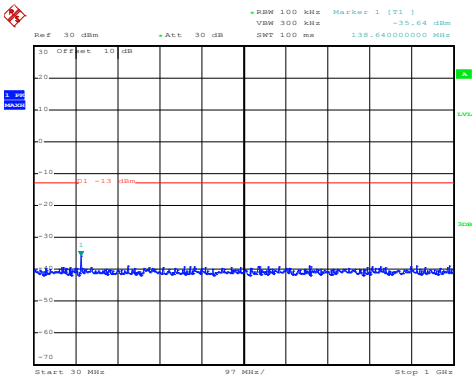
30MHz~1GHz



Date: 19.DEC.2018 04:45:46

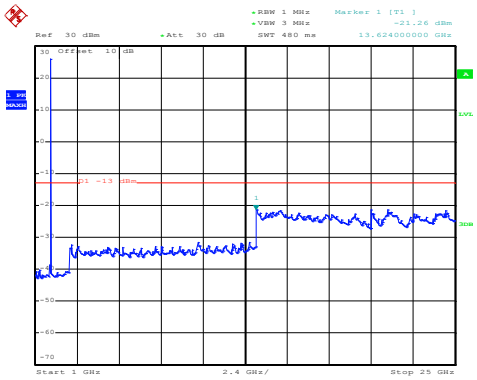
1GHz~25GHz

Middle channel



Date: 19.DEC.2018 03:47:36

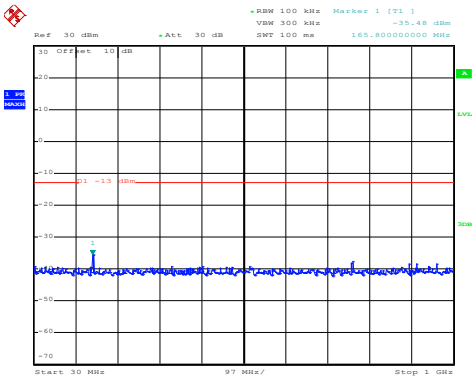
30MHz~1GHz



Date: 19.DEC.2018 04:46:49

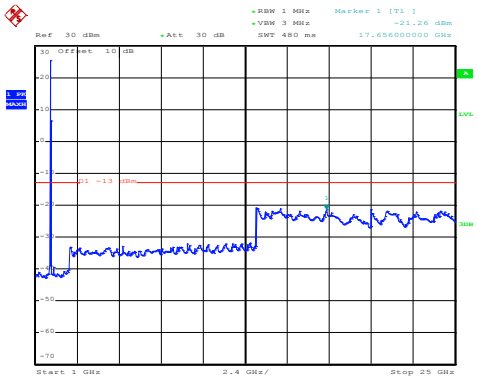
1GHz~25GHz

High channel



Date: 19.DEC.2018 03:48:35

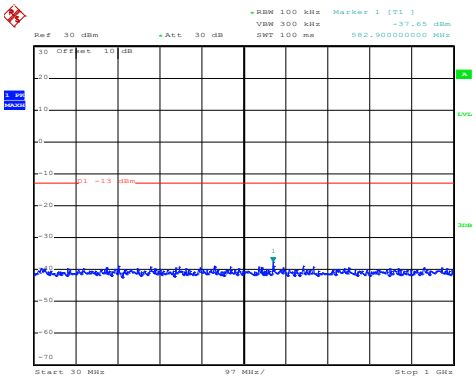
30MHz~1GHz



Date: 19.DEC.2018 04:47:58

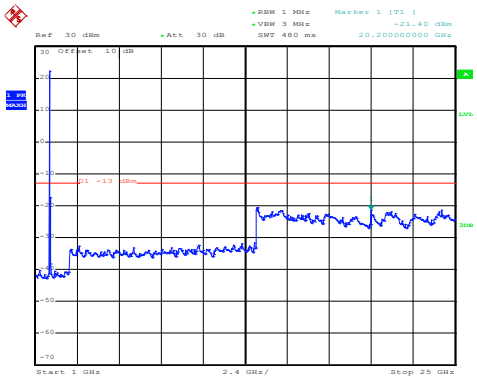
1GHz~25GHz

LTE Band 2: QPSK & RB Size 25
BW: 5MHz
Lowest channel



Date: 19.DEC.2018 03:47:09

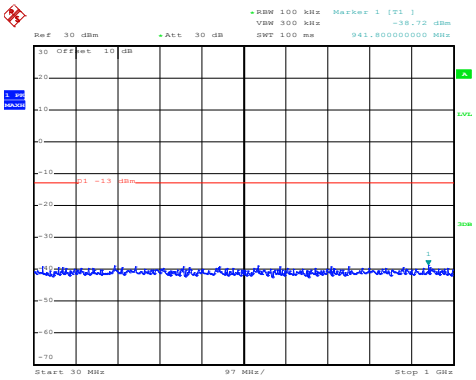
30MHz~1GHz



Date: 19.DEC.2018 04:46:14

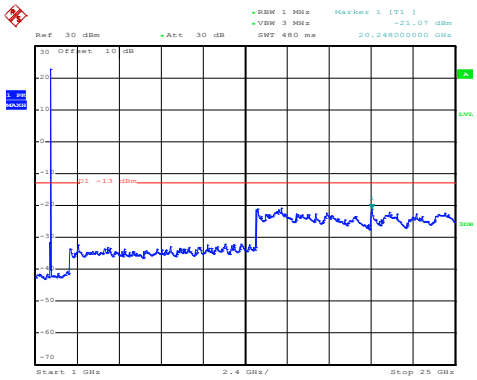
1GHz~25GHz

Middle channel



Date: 19.DEC.2018 03:47:57

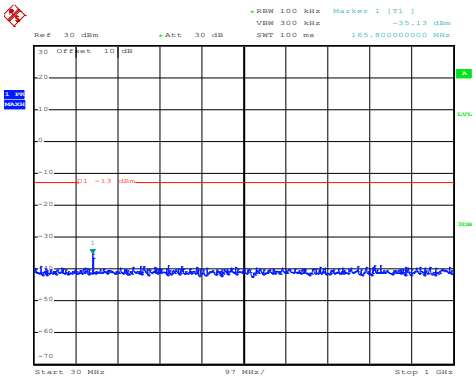
30MHz~1GHz



Date: 19.DEC.2018 04:47:15

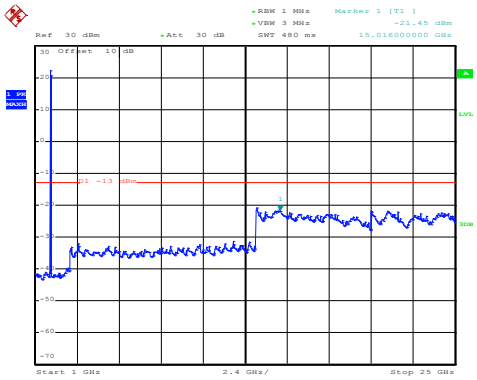
1GHz~25GHz

High channel



Date: 19.DEC.2018 03:48:18

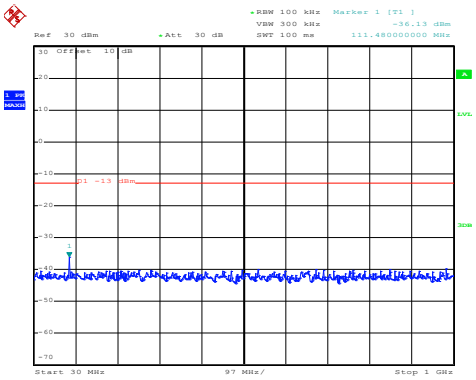
30MHz~1GHz



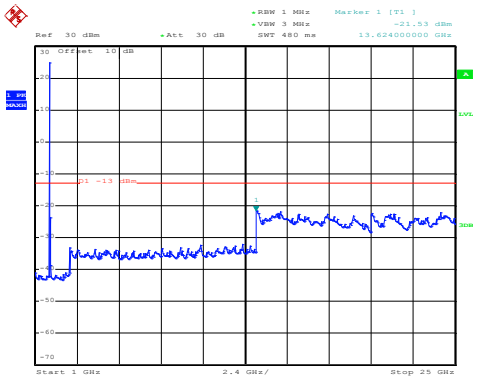
Date: 19.DEC.2018 04:48:29

1GHz~25GHz

LTE Band 2: 16 QAM & RB Size 1
BW: 10MHz
Lowest channel

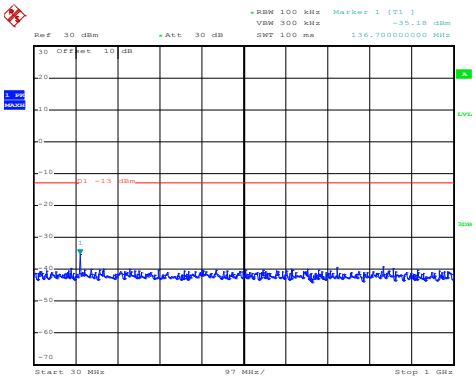


30MHz~1GHz

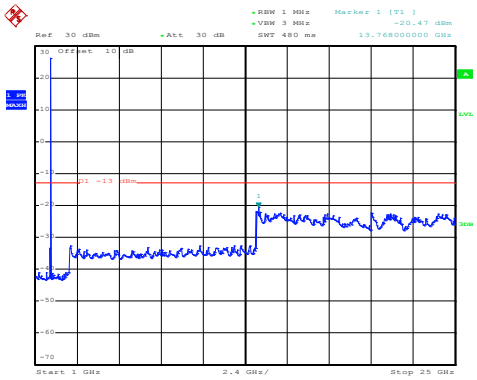


1GHz~25GHz

Middle channel

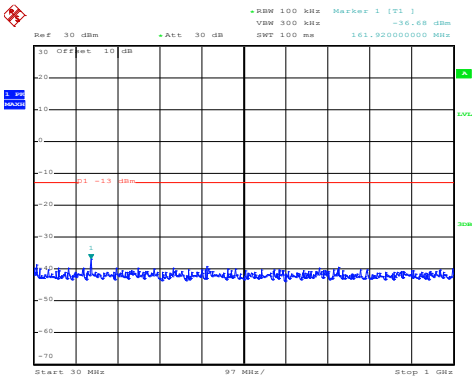


30MHz~1GHz

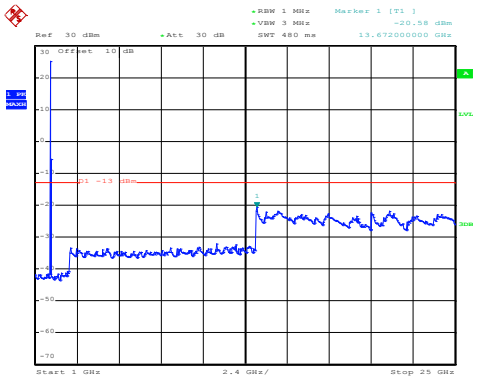


1GHz~25GHz

High channel

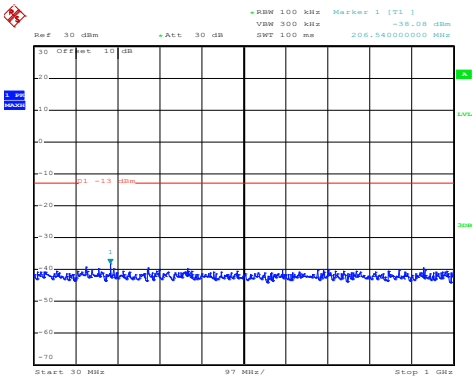


30MHz~1GHz



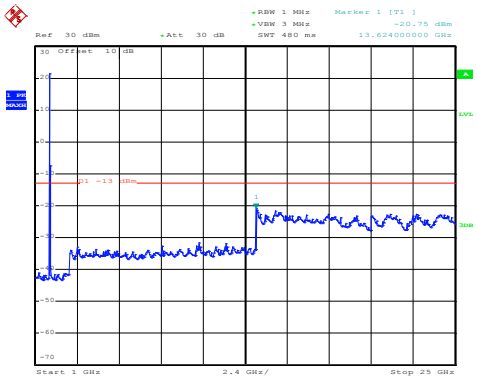
1GHz~25GHz

LTE Band 2: 16 QAM & RB Size 50
BW: 10MHz
Lowest channel



Date: 19.DEC.2018 03:49:35

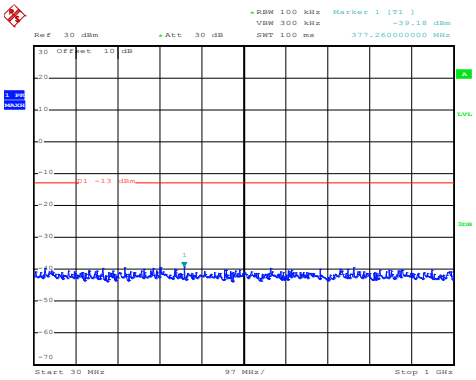
30MHz~1GHz



Date: 19.DEC.2018 04:49:47

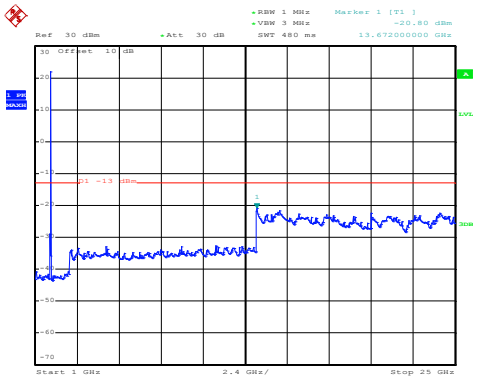
1GHz~25GHz

Middle channel



Date: 19.DEC.2018 03:50:19

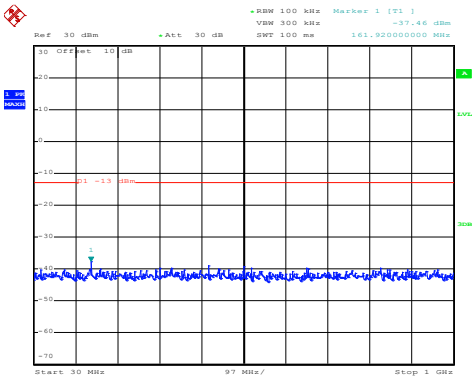
30MHz~1GHz



Date: 19.DEC.2018 04:50:43

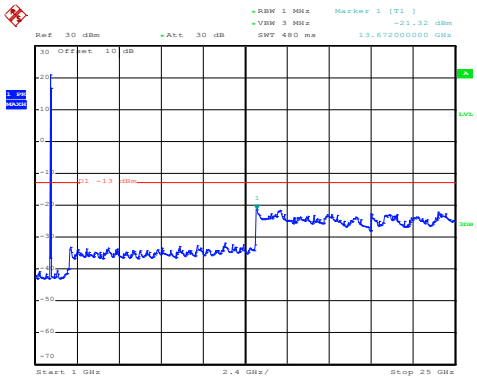
1GHz~25GHz

High channel



Date: 19.DEC.2018 03:50:40

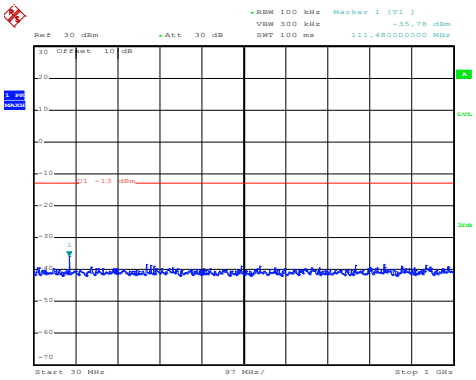
30MHz~1GHz



Date: 19.DEC.2018 04:51:44

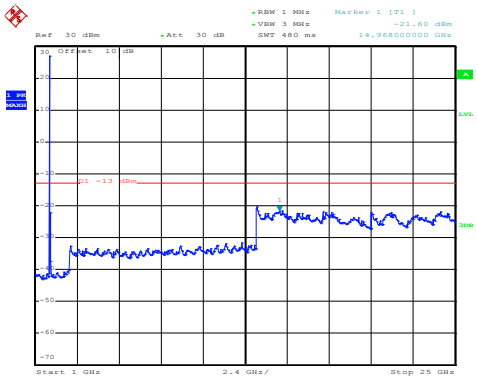
1GHz~25GHz

LTE Band 2: QPSK & RB Size 1
BW: 10MHz
Lowest channel



Date: 19.DEC.2018 03:49:13

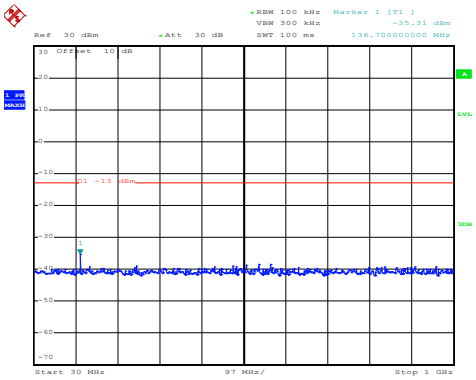
30MHz~1GHz



Date: 19.DEC.2018 04:49:11

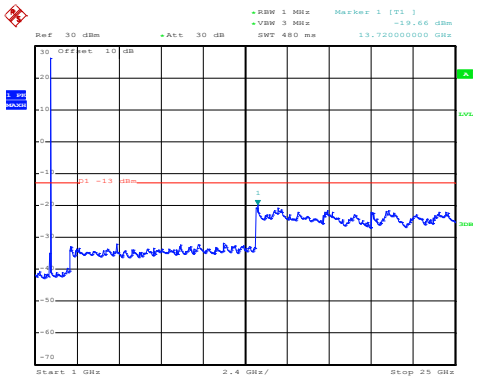
1GHz~25GHz

Middle channel



Date: 19.DEC.2018 03:49:56

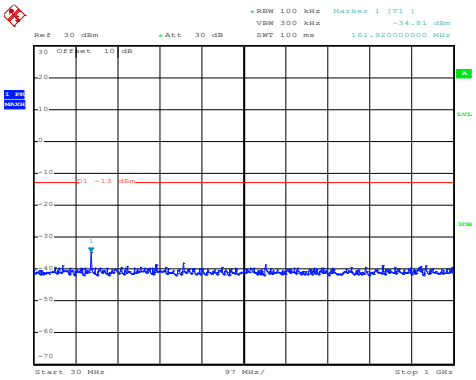
30MHz~1GHz



Date: 19.DEC.2018 04:50:14

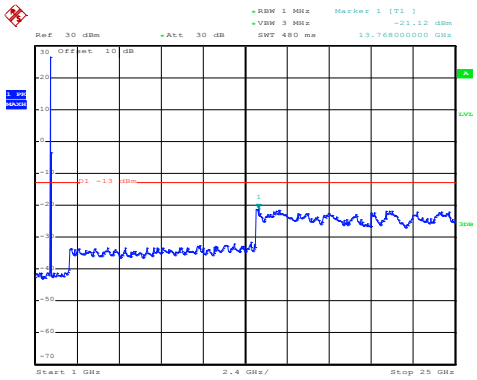
1GHz~25GHz

High channel



Date: 19.DEC.2018 03:50:52

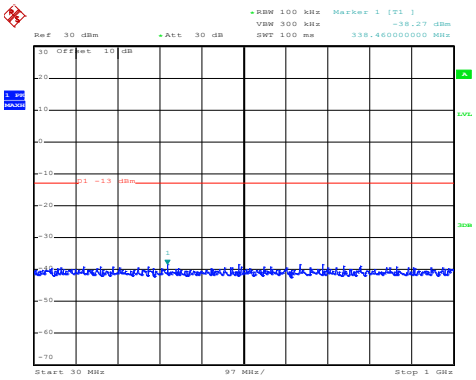
30MHz~1GHz



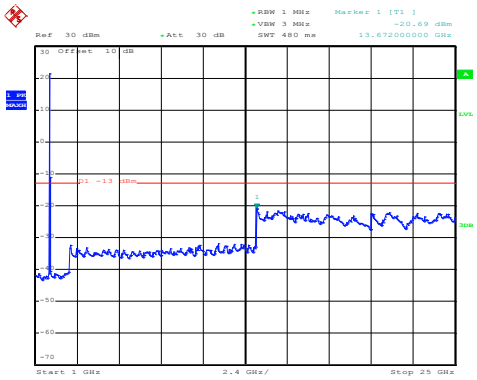
Date: 19.DEC.2018 04:51:10

1GHz~25GHz

LTE Band 2: QPSK & RB Size 50
BW: 10MHz
Lowest channel

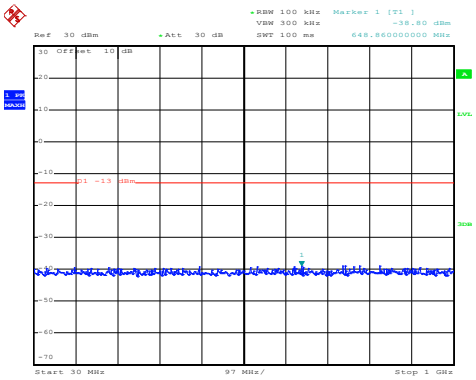


30MHz~1GHz

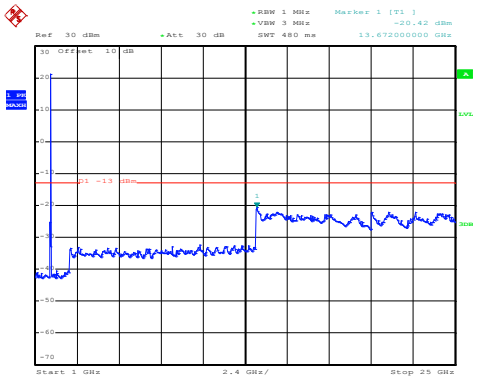


1GHz~25GHz

Middle channel

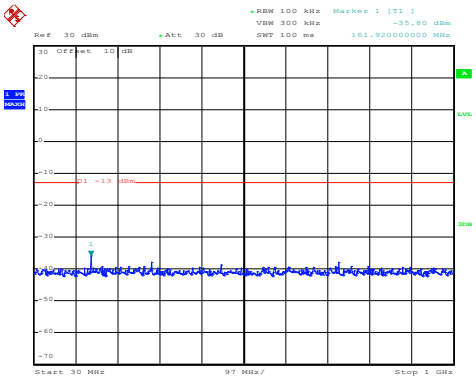


30MHz~1GHz

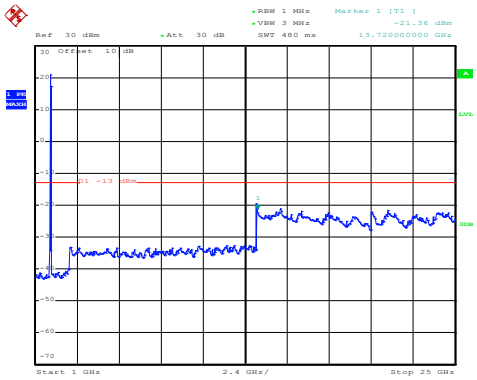


1GHz~25GHz

High channel

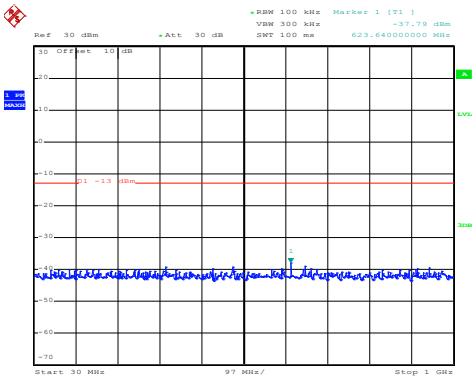


30MHz~1GHz



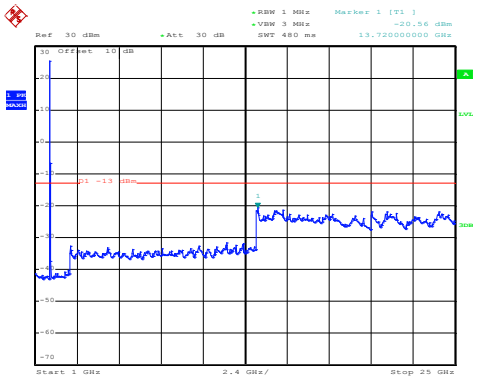
1GHz~25GHz

LTE Band 2: 16 QAM & RB Size 1
BW: 15MHz
Lowest channel



Date: 19.DEC.2018 03:51:41

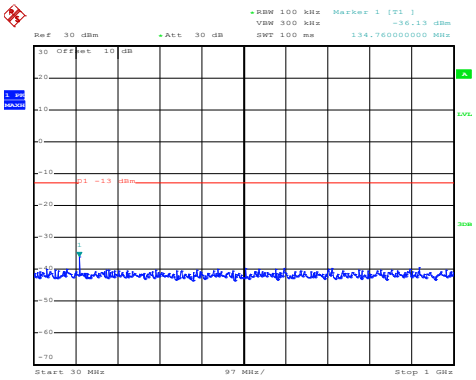
30MHz~1GHz



Date: 19.DEC.2018 04:52:33

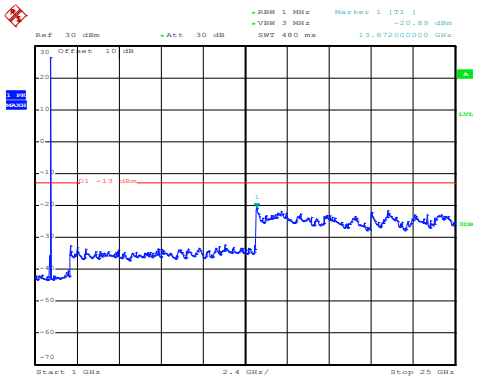
1GHz~25GHz

Middle channel



Date: 19.DEC.2018 03:52:37

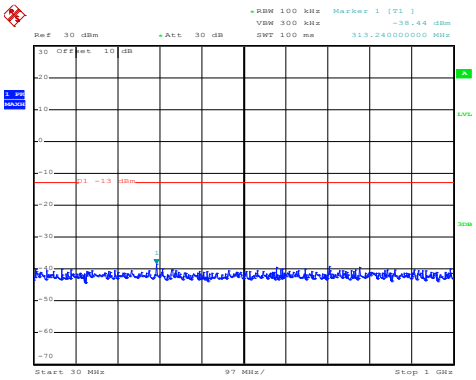
30MHz~1GHz



Date: 19.DEC.2018 04:53:24

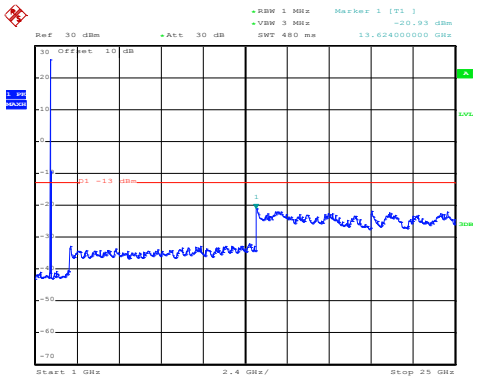
1GHz~25GHz

High channel



Date: 19.DEC.2018 03:53:39

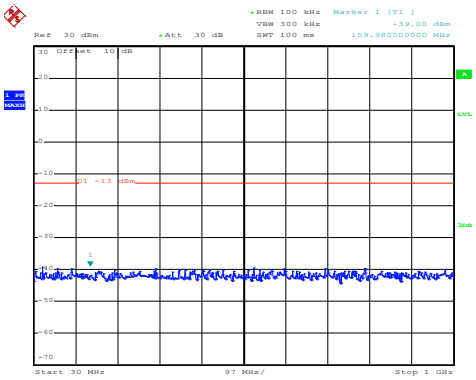
30MHz~1GHz



Date: 19.DEC.2018 04:54:19

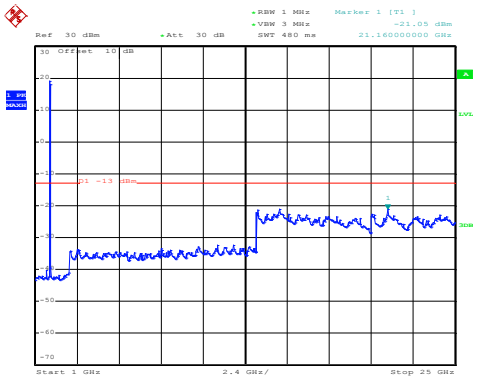
1GHz~25GHz

LTE Band 2: 16 QAM & RB Size 75
BW: 15MHz
Lowest channel



Date: 19.DEC.2018 03:52:04

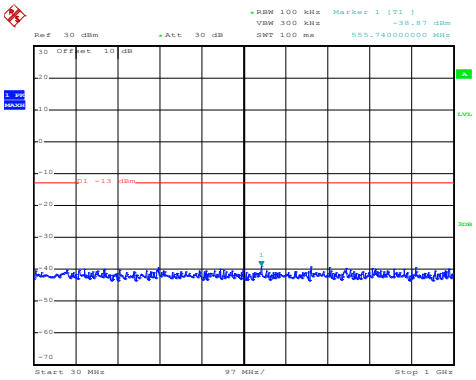
30MHz~1GHz



Date: 19.DEC.2018 04:52:54

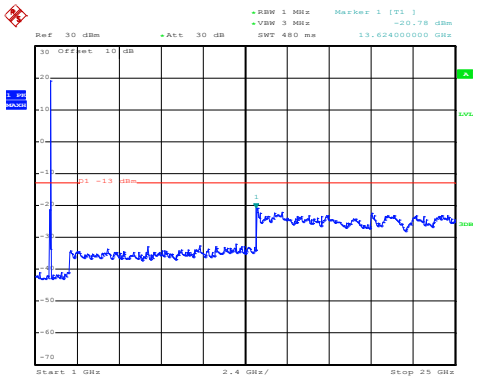
1GHz~25GHz

Middle channel



Date: 19.DEC.2018 03:52:57

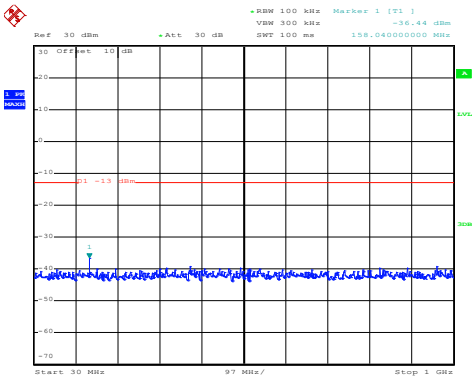
30MHz~1GHz



Date: 19.DEC.2018 04:53:43

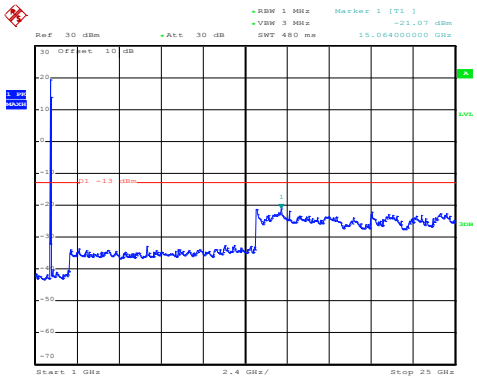
1GHz~25GHz

High channel



Date: 19.DEC.2018 03:53:22

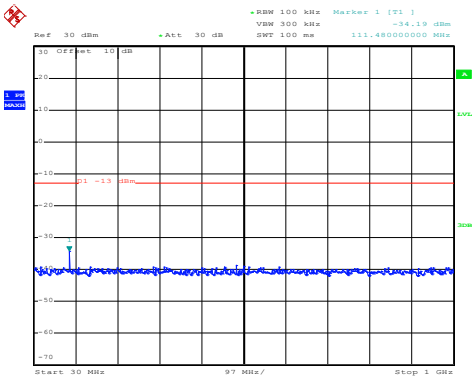
30MHz~1GHz



Date: 19.DEC.2018 04:54:41

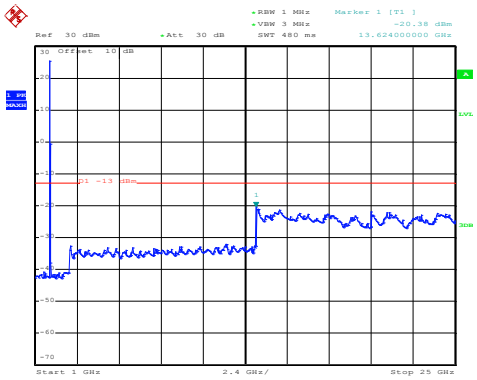
1GHz~25GHz

LTE Band 2: QPSK & RB Size 1
BW: 15MHz
Lowest channel



Date: 19.DEC.2018 03:51:35

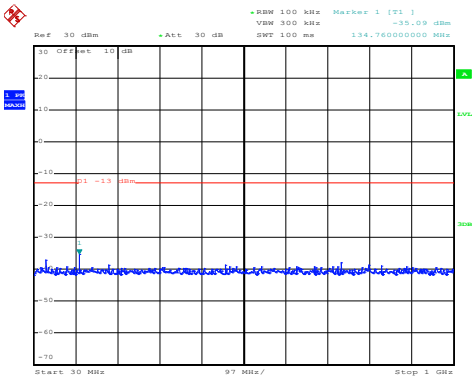
30MHz~1GHz



Date: 19.DEC.2018 04:52:21

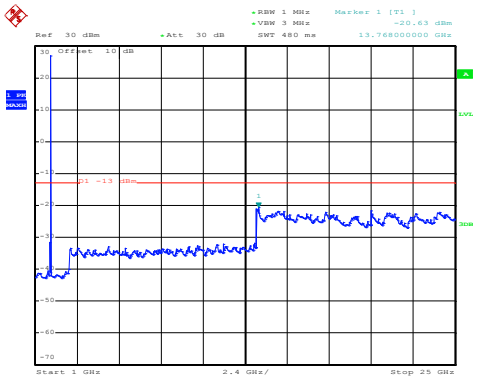
1GHz~25GHz

Middle channel



Date: 19.DEC.2018 03:52:32

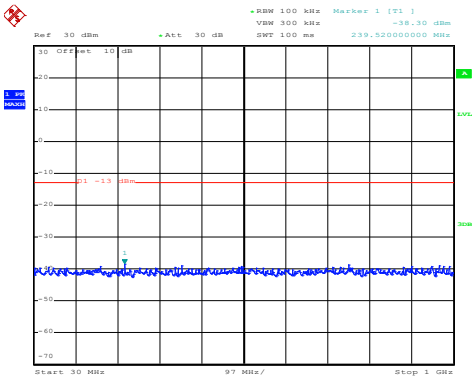
30MHz~1GHz



Date: 19.DEC.2018 04:53:18

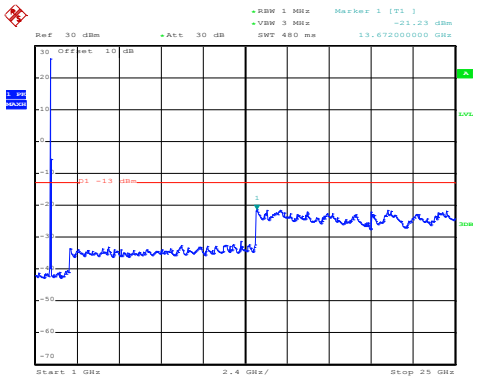
1GHz~25GHz

High channel



Date: 19.DEC.2018 03:53:34

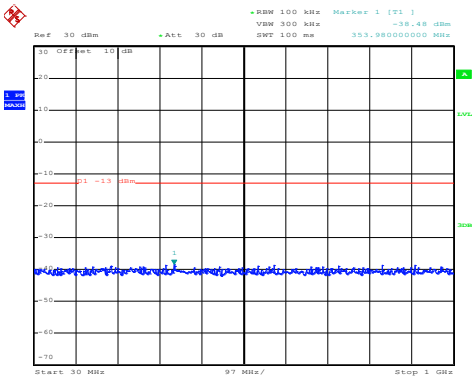
30MHz~1GHz



Date: 19.DEC.2018 04:54:08

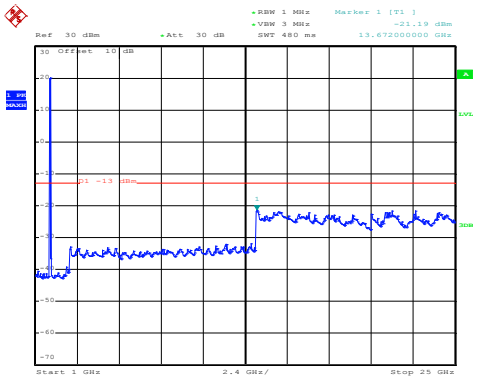
1GHz~25GHz

LTE Band 2: QPSK & RB Size 75
BW: 15MHz
Lowest channel



Date: 19.DEC.2018 03:51:58

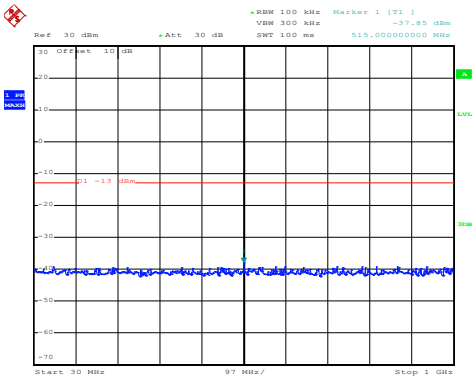
30MHz~1GHz



Date: 19.DEC.2018 04:52:47

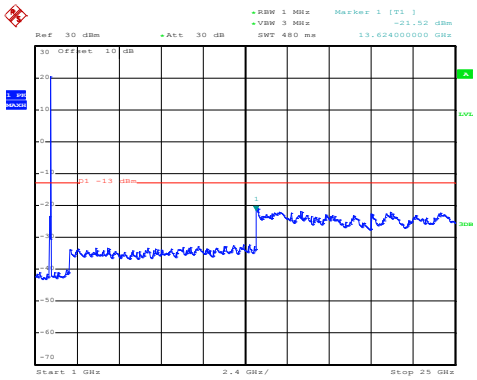
1GHz~25GHz

Middle channel



Date: 19.DEC.2018 03:52:51

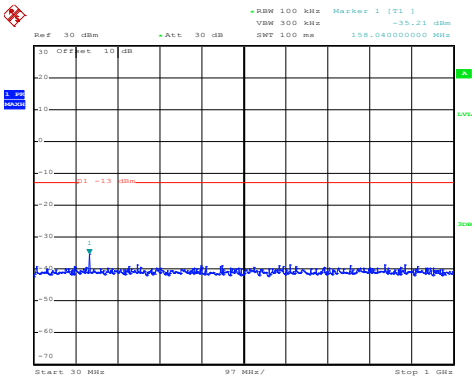
30MHz~1GHz



Date: 19.DEC.2018 04:53:37

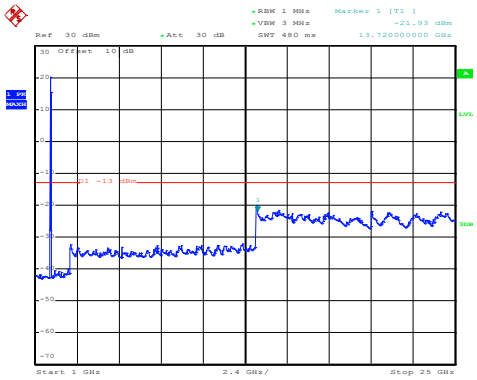
1GHz~25GHz

High channel



Date: 19.DEC.2018 03:53:17

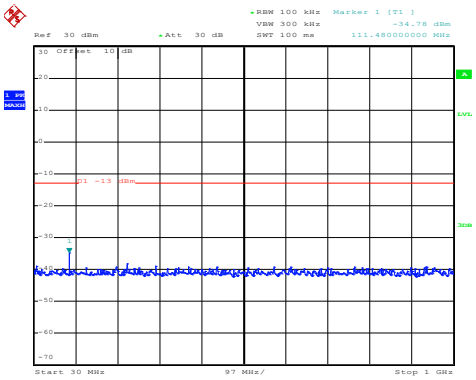
30MHz~1GHz



Date: 19.DEC.2018 04:54:33

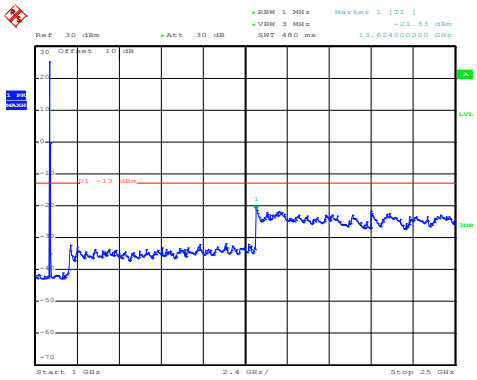
1GHz~25GHz

LTE Band 2: 16 QAM & RB Size 1
BW: 20MHz
Lowest channel



Date: 19.DEC.2018 03:54:48

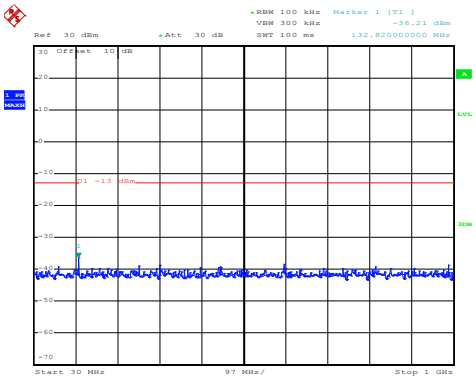
30MHz~1GHz



Date: 19.DEC.2018 04:55:27

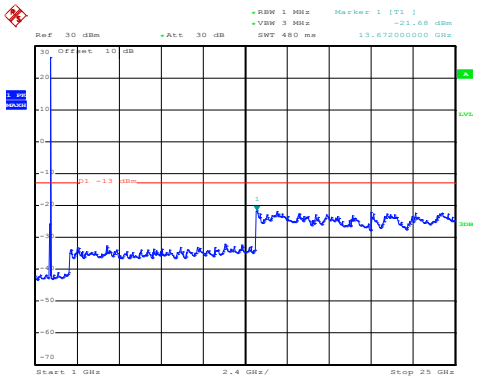
1GHz~25GHz

Middle channel



Date: 19.DEC.2018 03:56:24

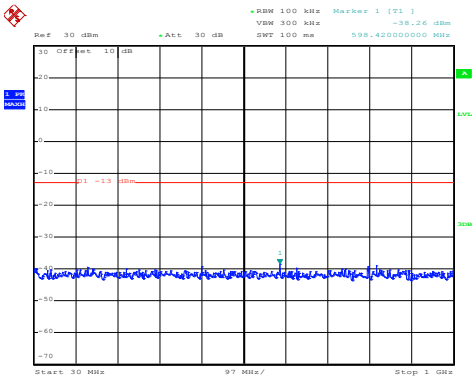
30MHz~1GHz



Date: 19.DEC.2018 04:56:23

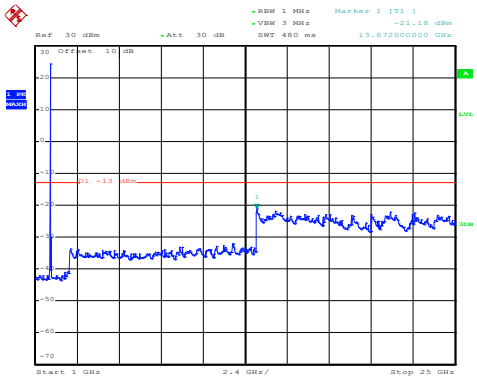
1GHz~25GHz

High channel



Date: 19.DEC.2018 03:57:19

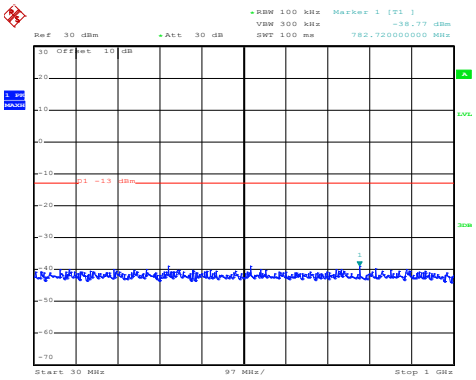
30MHz~1GHz



Date: 19.DEC.2018 04:57:22

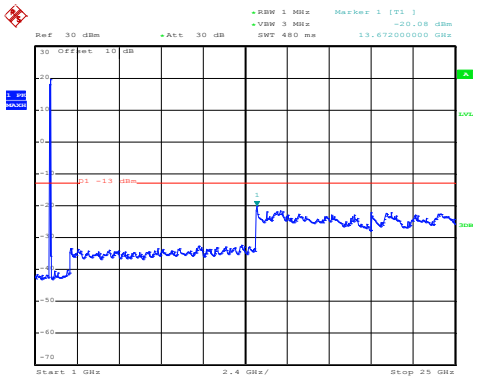
1GHz~25GHz

LTE Band 2: 16 QAM & RB Size 100
BW: 20MHz
Lowest channel



Date: 19.DEC.2018 03:38:26

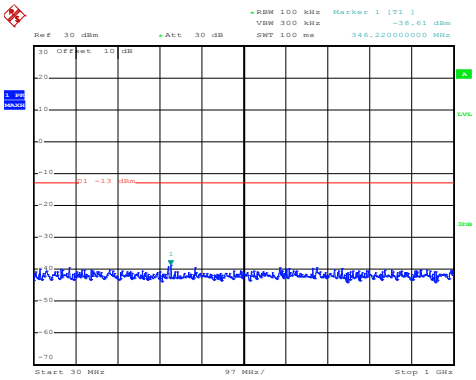
30MHz~1GHz



Date: 19.DEC.2018 04:55:52

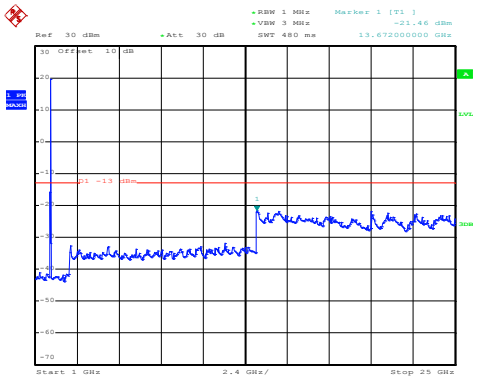
1GHz~25GHz

Middle channel



Date: 19.DEC.2018 03:56:43

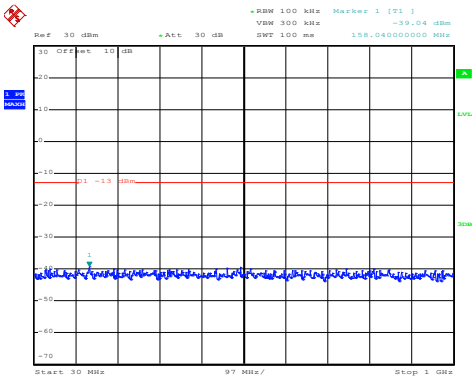
30MHz~1GHz



Date: 19.DEC.2018 04:56:52

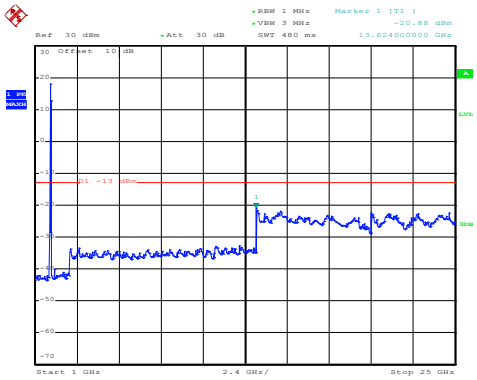
1GHz~25GHz

High channel



Date: 19.DEC.2018 03:57:36

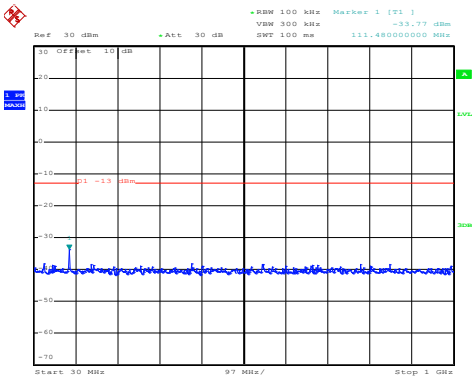
30MHz~1GHz



Date: 19.DEC.2018 04:57:45

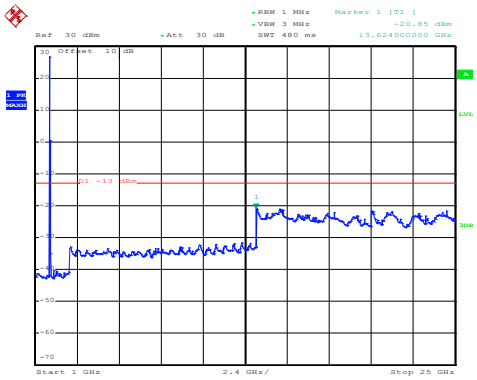
1GHz~25GHz

LTE Band 2: QPSK & RB Size 1
BW: 20MHz
Lowest channel



Date: 19.DEC.2018 03:54:36

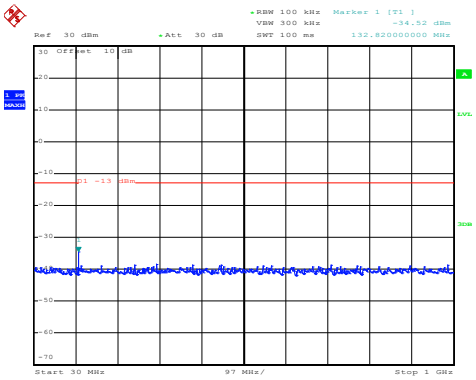
30MHz~1GHz



Date: 19.DEC.2018 04:55:16

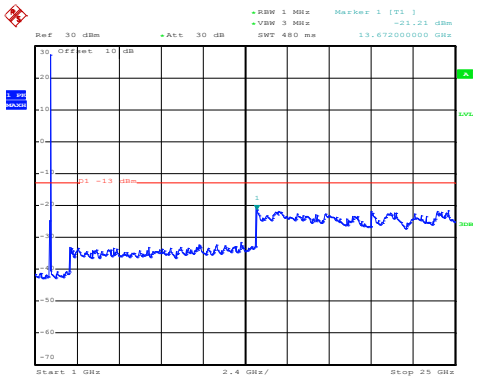
1GHz~25GHz

Middle channel



Date: 19.DEC.2018 03:56:17

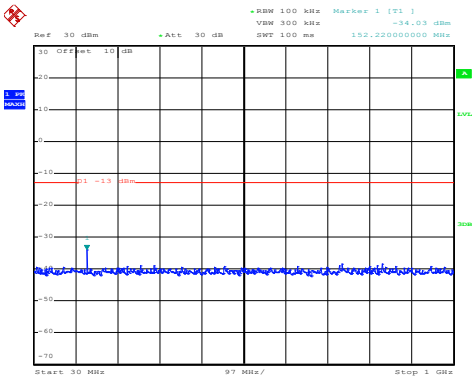
30MHz~1GHz



Date: 19.DEC.2018 04:56:13

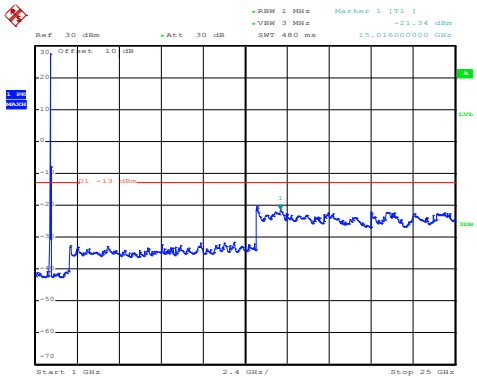
1GHz~25GHz

High channel



Date: 19.DEC.2018 03:57:12

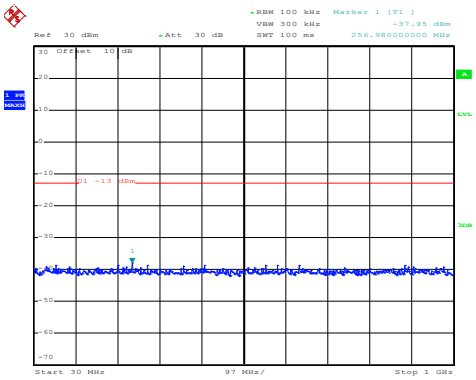
30MHz~1GHz



Date: 19.DEC.2018 04:57:15

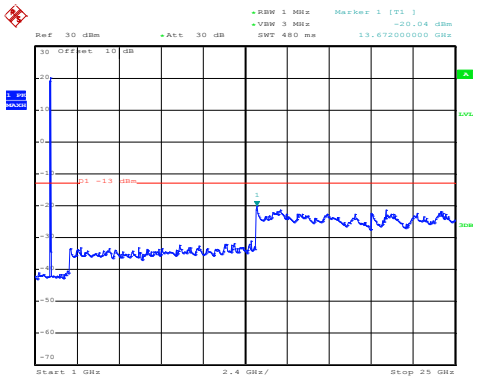
1GHz~25GHz

LTE Band 2: QPSK & RB Size 100
BW: 20MHz
Lowest channel



Date: 19.DEC.2018 03:38:22

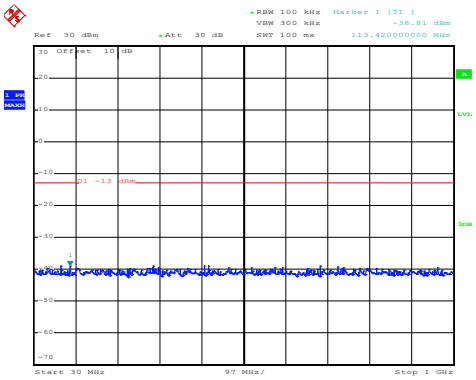
30MHz~1GHz



Date: 19.DEC.2018 04:55:41

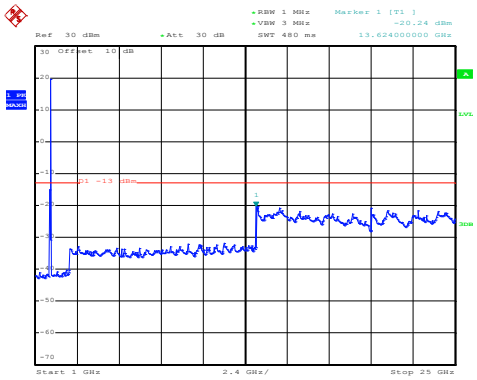
1GHz~25GHz

Middle channel



Date: 19.DEC.2018 03:56:37

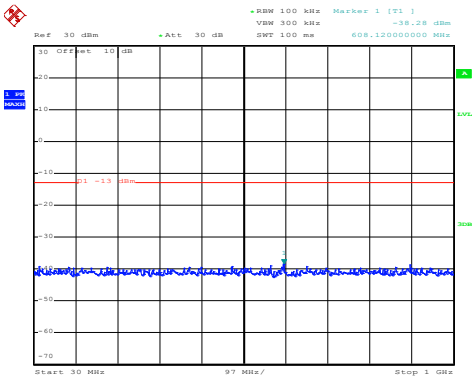
30MHz~1GHz



Date: 19.DEC.2018 04:56:45

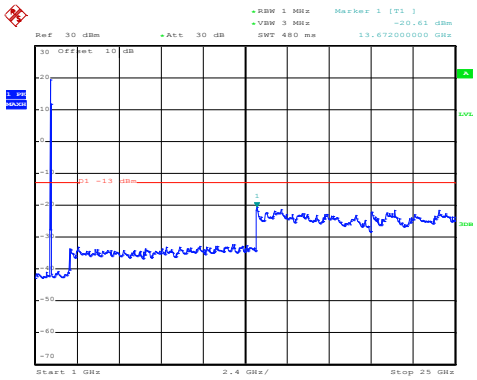
1GHz~25GHz

High channel



Date: 19.DEC.2018 03:57:29

30MHz~1GHz

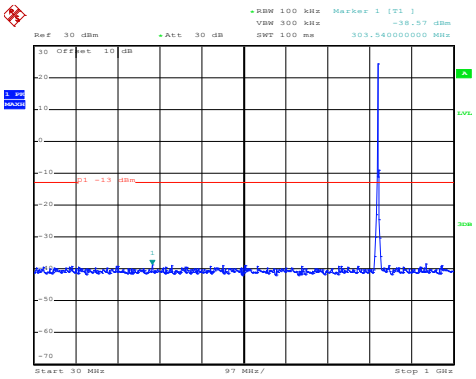


Date: 19.DEC.2018 04:57:38

1GHz~25GHz

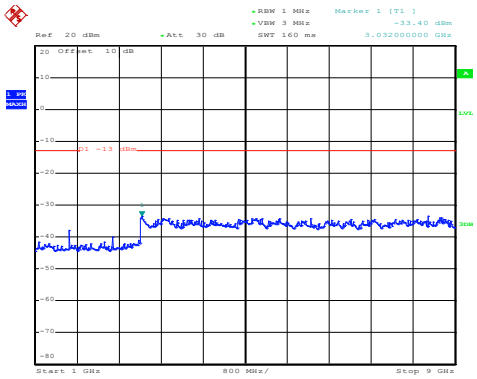
LTE Band 5 part:

LTE Band 5: 16 QAM & RB Size 1
BW: 1.4MHz
Lowest channel



Date: 19.DEC.2018 03:58:53

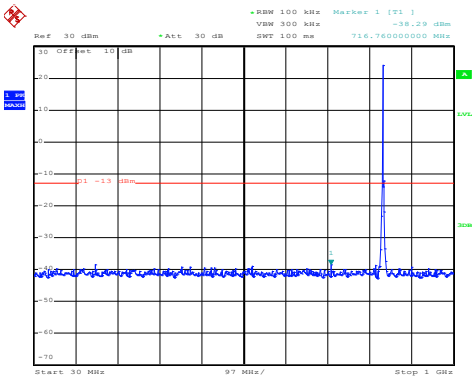
30MHz~1GHz



Date: 19.DEC.2018 05:02:24

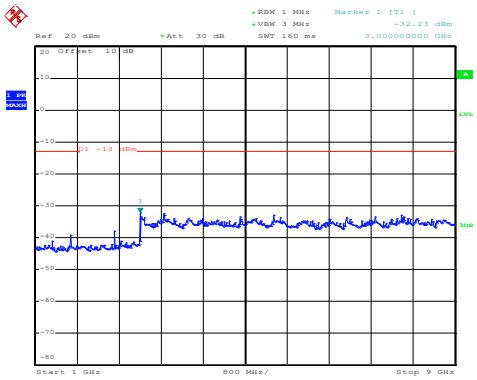
1GHz~9GHz

Middle channel



Date: 19.DEC.2018 04:00:03

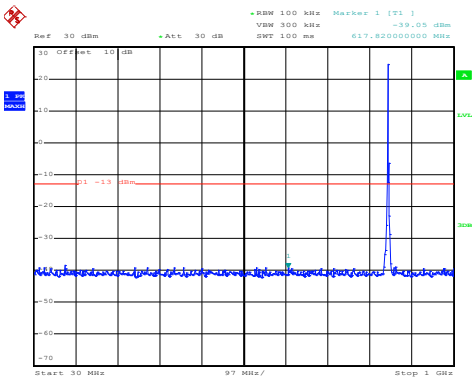
30MHz~1GHz



Date: 19.DEC.2018 05:03:20

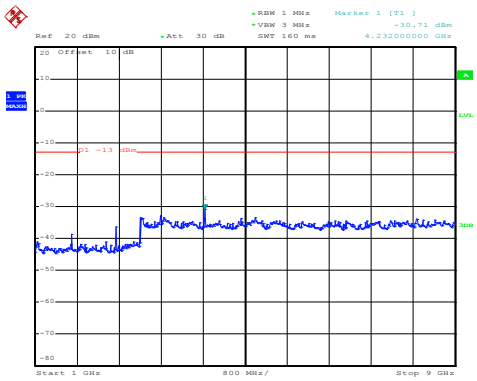
1GHz~9GHz

High channel



Date: 19.DEC.2018 04:01:18

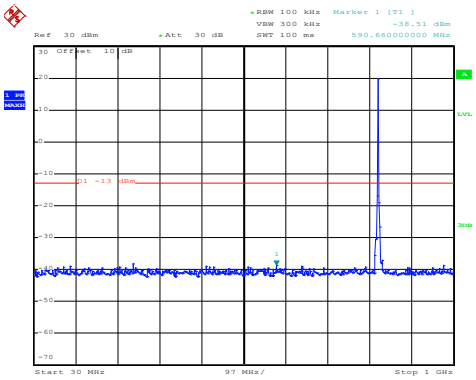
30MHz~1GHz



Date: 19.DEC.2018 05:04:18

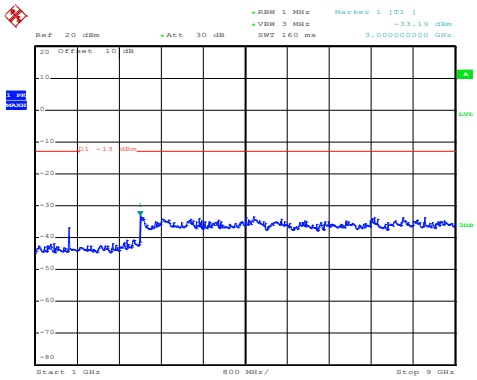
1GHz~9GHz

LTE Band 5: 16 QAM & RB Size 6
BW: 1.4MHz
Lowest channel



Date: 19.DEC.2018 03:59:27

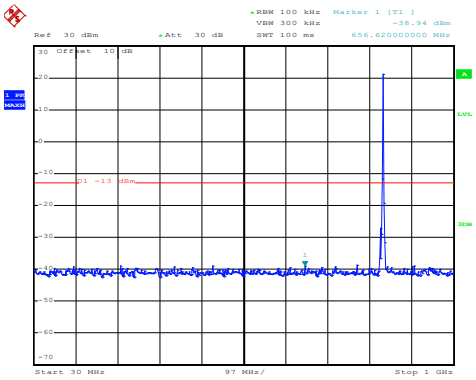
30MHz~1GHz



Date: 19.DEC.2018 05:02:46

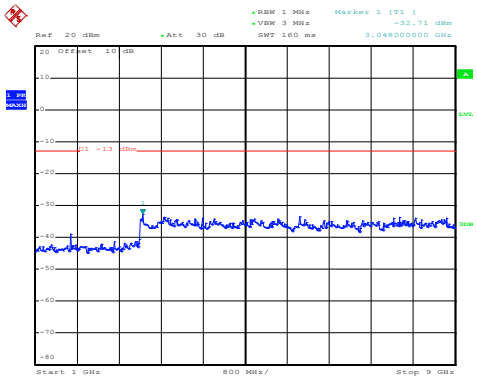
1GHz~9GHz

Middle channel



Date: 19.DEC.2018 04:00:34

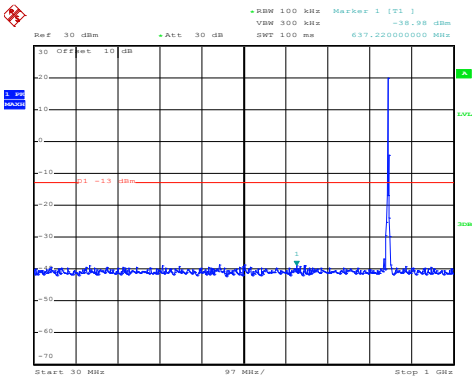
30MHz~1GHz



Date: 19.DEC.2018 05:03:46

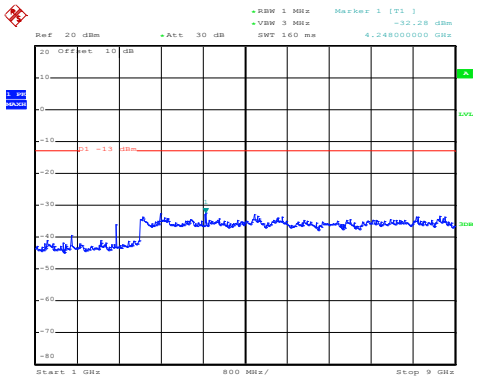
1GHz~9GHz

High channel



Date: 19.DEC.2018 04:01:53

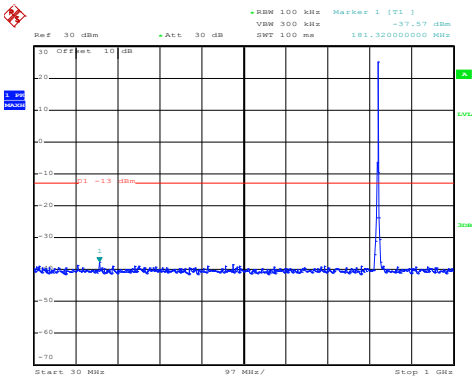
30MHz~1GHz



Date: 19.DEC.2018 05:04:47

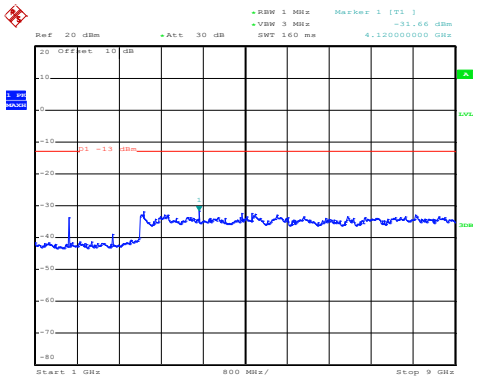
1GHz~9GHz

LTE Band 5: QPSK & RB Size 1
BW: 1.4MHz
Lowest channel



Date: 19.DEC.2018 03:58:35

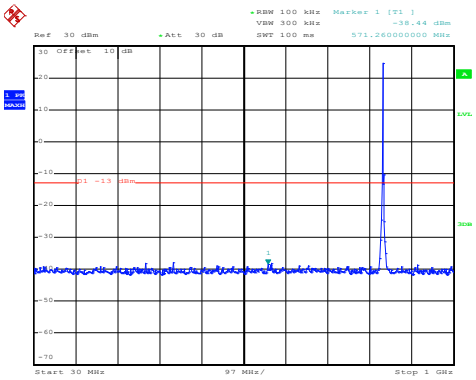
30MHz~1GHz



Date: 19.DEC.2018 05:02:11

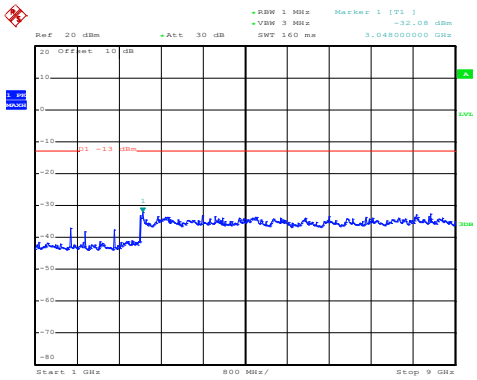
1GHz~9GHz

Middle channel



Date: 19.DEC.2018 03:59:54

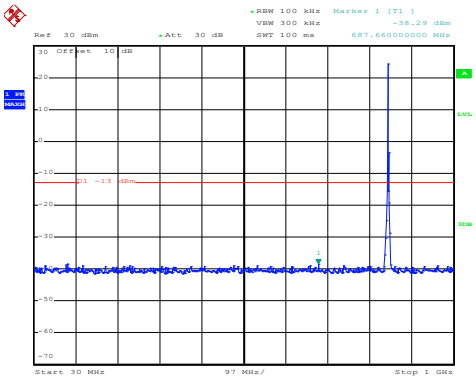
30MHz~1GHz



Date: 19.DEC.2018 05:03:09

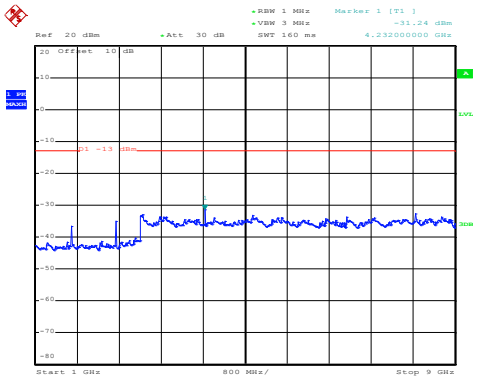
1GHz~9GHz

High channel



Date: 19.DEC.2018 04:01:06

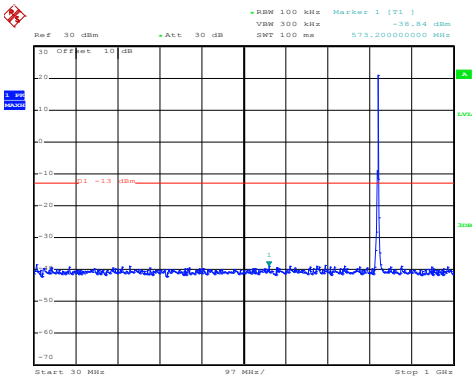
30MHz~1GHz



Date: 19.DEC.2018 05:04:09

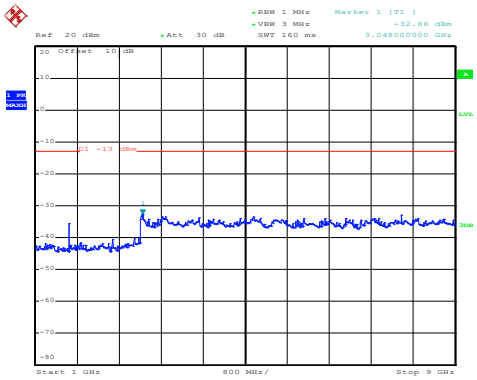
1GHz~9GHz

LTE Band 5: QPSK & RB Size 6
BW: 1.4MHz
Lowest channel



Date: 19.DEC.2018 03:59:13

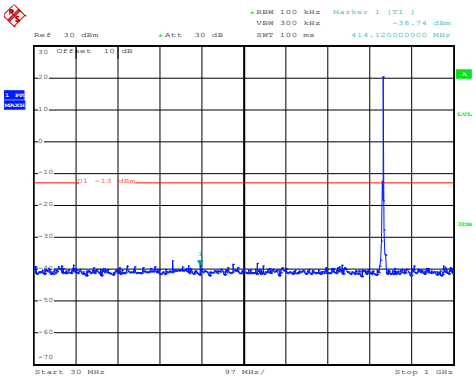
30MHz~1GHz



Date: 19.DEC.2018 05:02:39

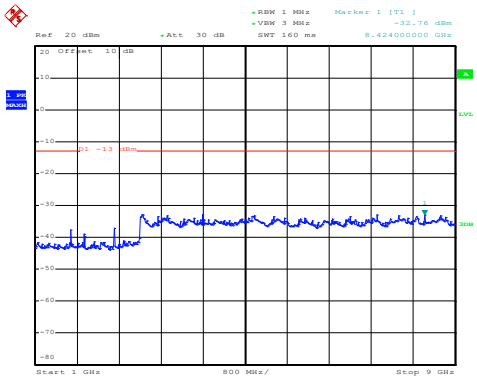
1GHz~9GHz

Middle channel



Date: 19.DEC.2018 04:00:21

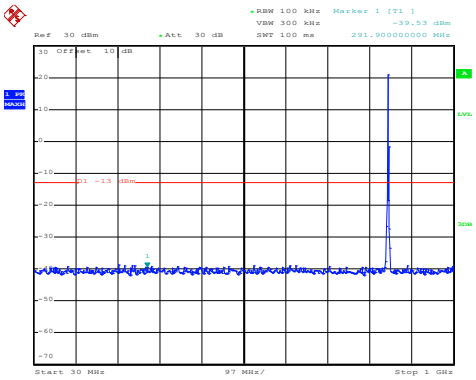
30MHz~1GHz



Date: 19.DEC.2018 05:03:37

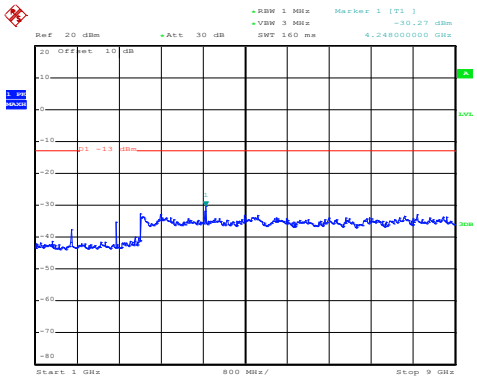
1GHz~9GHz

High channel



Date: 19.DEC.2018 04:01:39

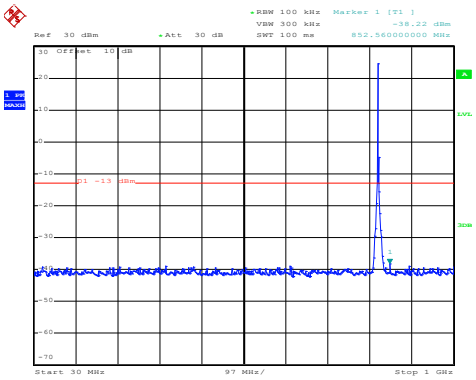
30MHz~1GHz



Date: 19.DEC.2018 05:04:37

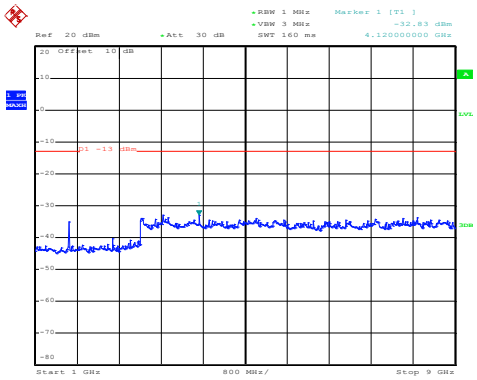
1GHz~9GHz

LTE Band 5: 16 QAM & RB Size 1
BW: 3MHz
Lowest channel



Date: 19.DEC.2018 04:02:59

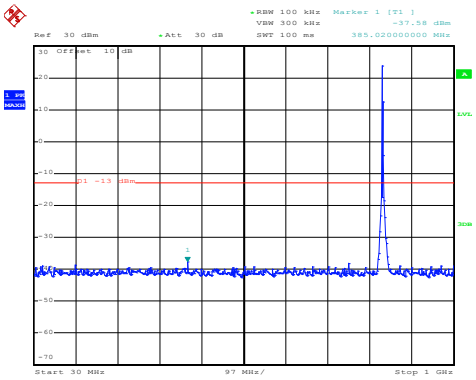
30MHz~1GHz



Date: 19.DEC.2018 05:05:39

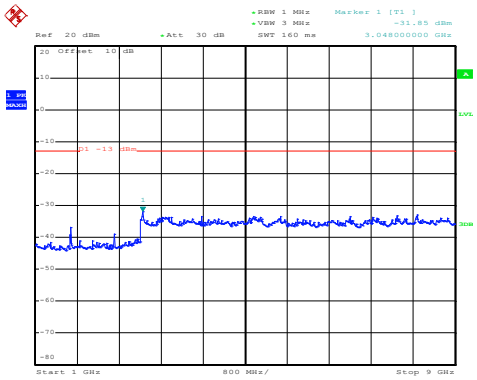
1GHz~9GHz

Middle channel



Date: 19.DEC.2018 04:04:04

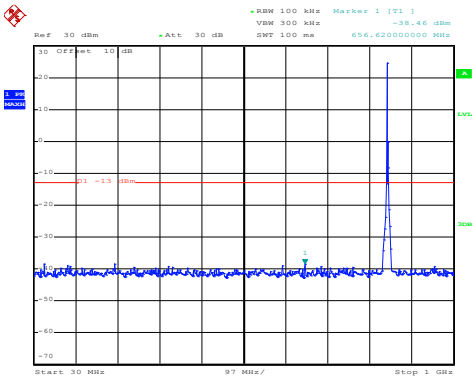
30MHz~1GHz



Date: 19.DEC.2018 05:06:35

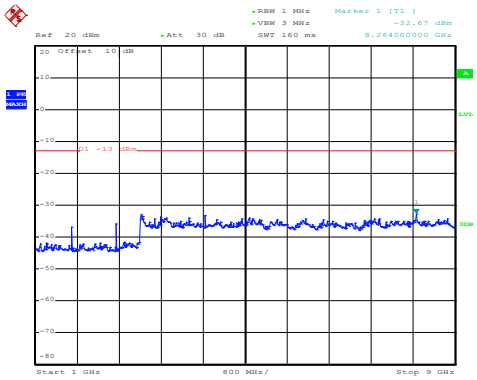
1GHz~9GHz

High channel



Date: 19.DEC.2018 04:05:24

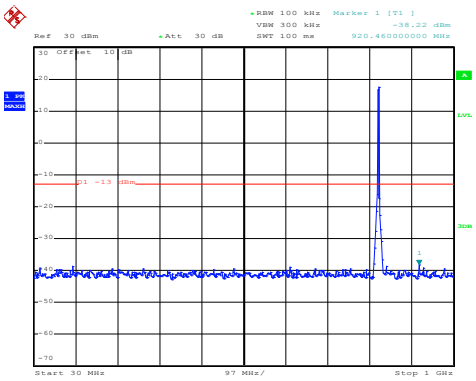
30MHz~1GHz



Date: 19.DEC.2018 05:07:31

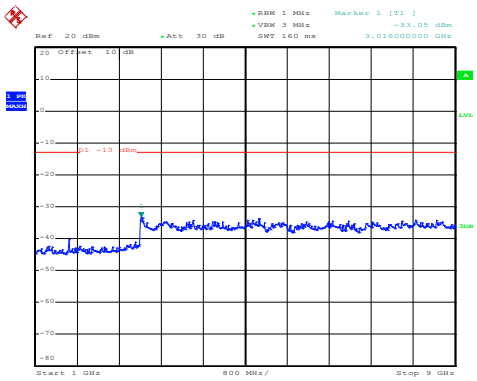
1GHz~9GHz

LTE Band 5: 16 QAM & RB Size 15
BW: 3MHz
Lowest channel



Date: 19.DEC.2018 04:03:23

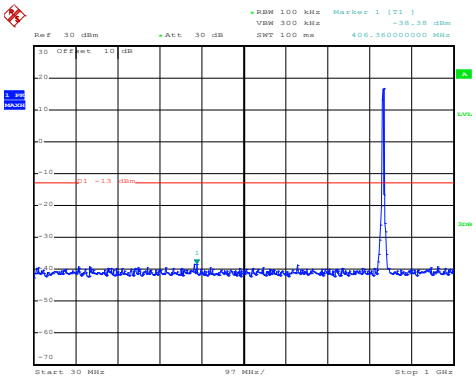
30MHz~1GHz



Date: 19.DEC.2018 05:05:57

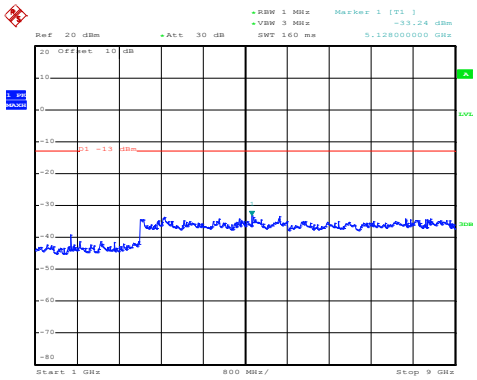
1GHz~9GHz

Middle channel



Date: 19.DEC.2018 04:04:37

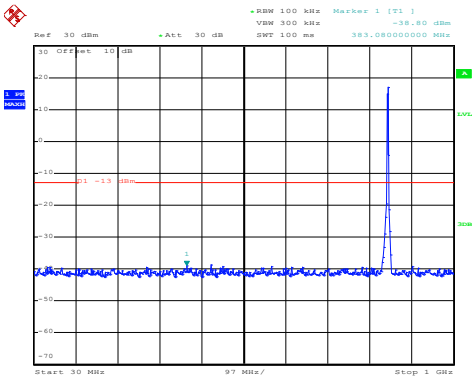
30MHz~1GHz



Date: 19.DEC.2018 05:06:59

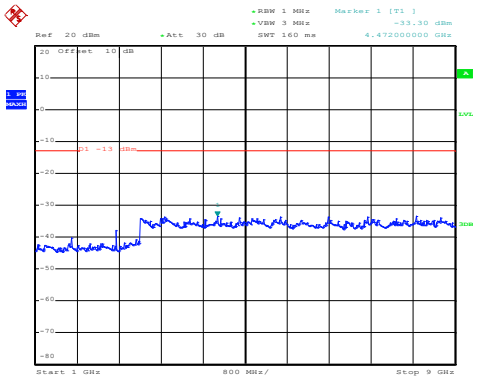
1GHz~9GHz

High channel



Date: 19.DEC.2018 04:05:51

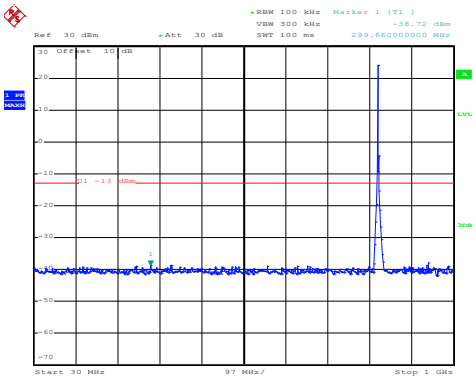
30MHz~1GHz



Date: 19.DEC.2018 05:08:29

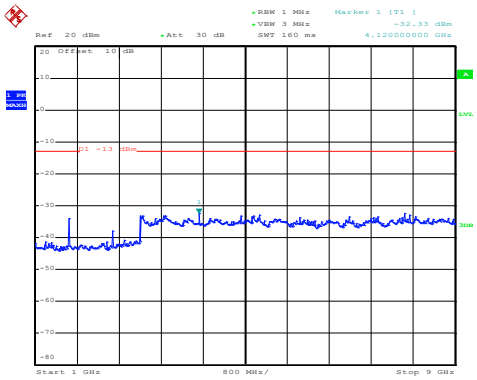
1GHz~9GHz

LTE Band 5: QPSK & RB Size 1
BW: 3MHz
Lowest channel



Date: 19.DEC.2018 04:02:44

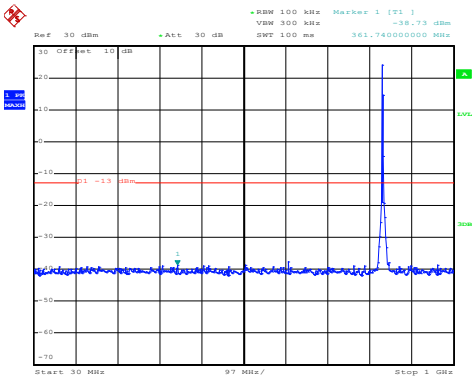
30MHz~1GHz



Date: 19.DEC.2018 05:05:31

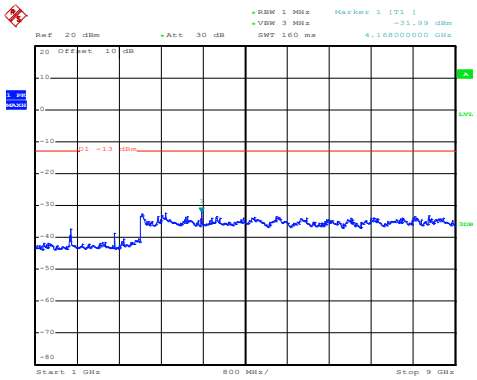
1GHz~9GHz

Middle channel



Date: 19.DEC.2018 04:03:50

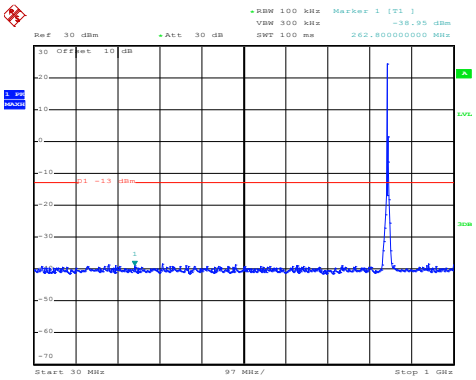
30MHz~1GHz



Date: 19.DEC.2018 05:06:19

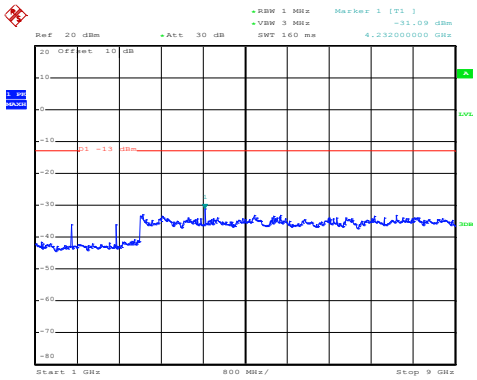
1GHz~9GHz

High channel



Date: 19.DEC.2018 04:05:15

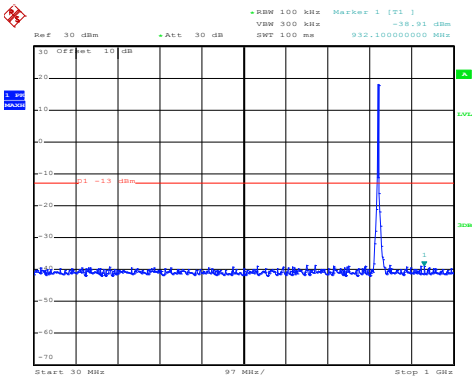
30MHz~1GHz



Date: 19.DEC.2018 05:07:24

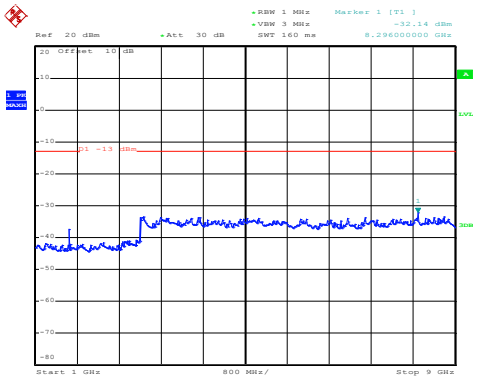
1GHz~9GHz

LTE Band 5: QPSK & RB Size 15
BW: 3MHz
Lowest channel



Date: 19.DEC.2018 04:03:14

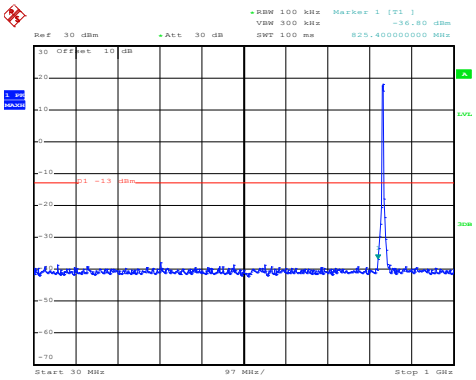
30MHz~1GHz



Date: 19.DEC.2018 05:05:51

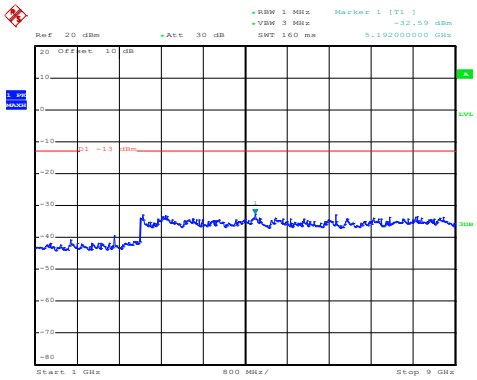
1GHz~9GHz

Middle channel



Date: 19.DEC.2018 04:04:25

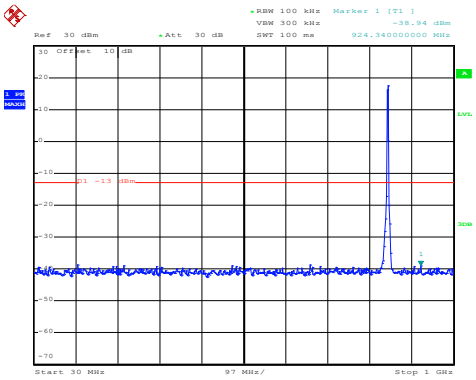
30MHz~1GHz



Date: 19.DEC.2018 05:06:53

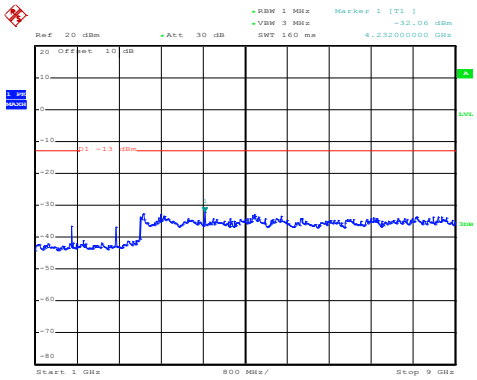
1GHz~9GHz

High channel



Date: 19.DEC.2018 04:05:41

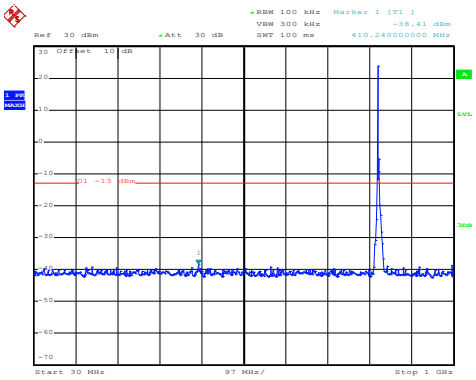
30MHz~1GHz



Date: 19.DEC.2018 05:08:18

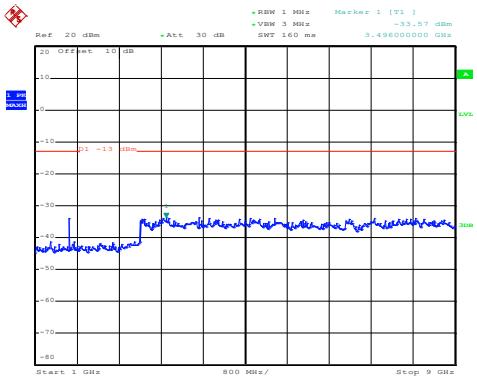
1GHz~9GHz

LTE Band 5: 16 QAM & RB Size 1
BW: 5MHz
Lowest channel



Date: 19.DEC.2018 04:06:48

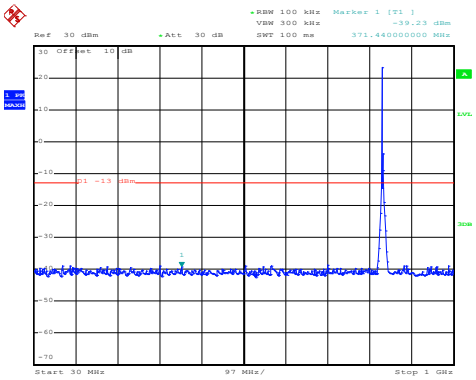
30MHz~1GHz



Date: 19.DEC.2018 05:09:08

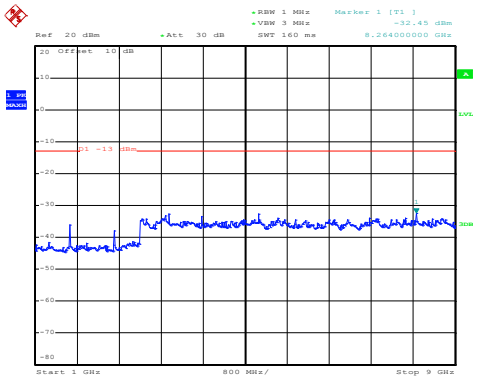
1GHz~9GHz

Middle channel



Date: 19.DEC.2018 04:08:04

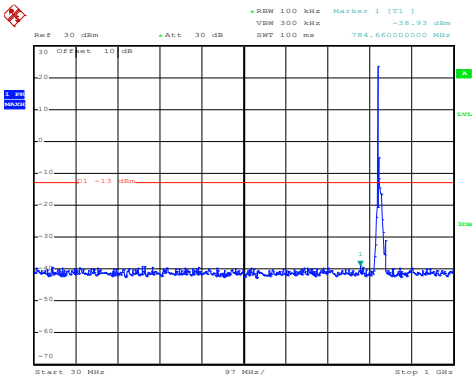
30MHz~1GHz



Date: 19.DEC.2018 05:10:09

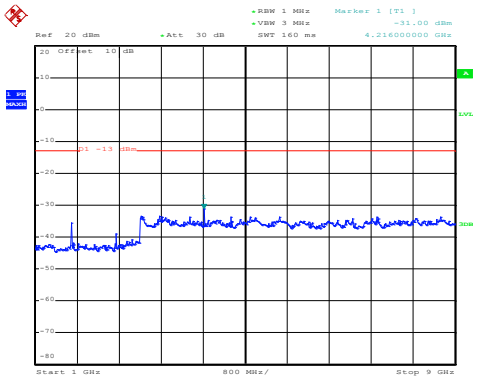
1GHz~9GHz

High channel



Date: 19.DEC.2018 04:10:06

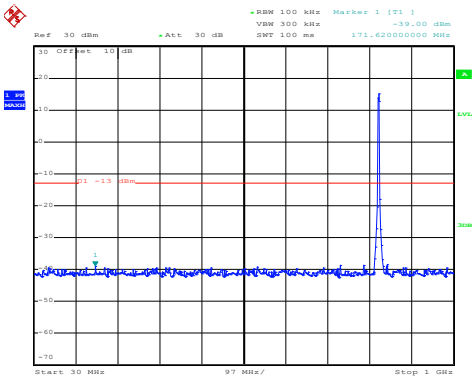
30MHz~1GHz



Date: 19.DEC.2018 05:11:45

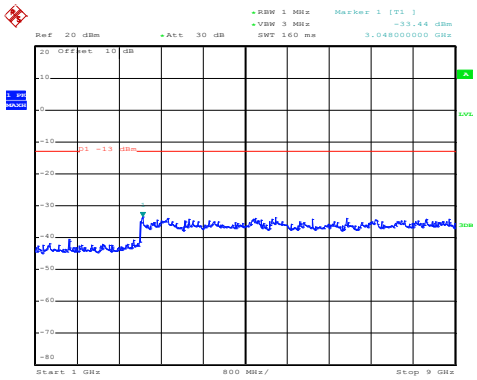
1GHz~9GHz

LTE Band 5: 16 QAM & RB Size 25
BW: 5MHz
Lowest channel



Date: 19.DEC.2018 04:07:16

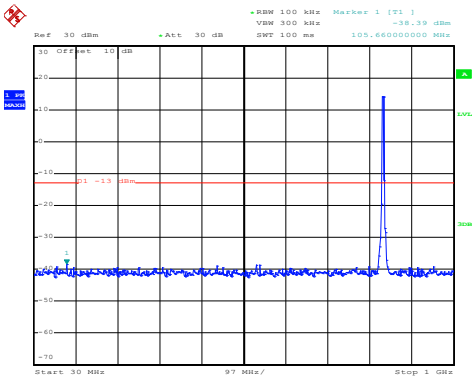
30MHz~1GHz



Date: 19.DEC.2018 05:09:32

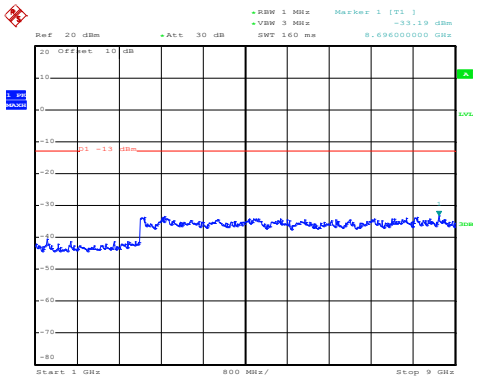
1GHz~9GHz

Middle channel



Date: 19.DEC.2018 04:08:36

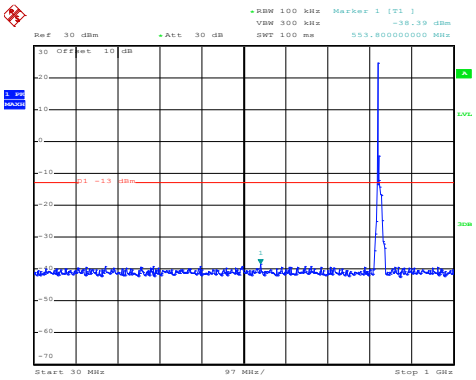
30MHz~1GHz



Date: 19.DEC.2018 05:10:50

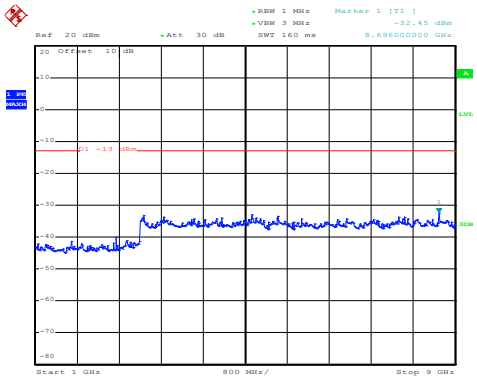
1GHz~9GHz

High channel



Date: 19.DEC.2018 04:09:39

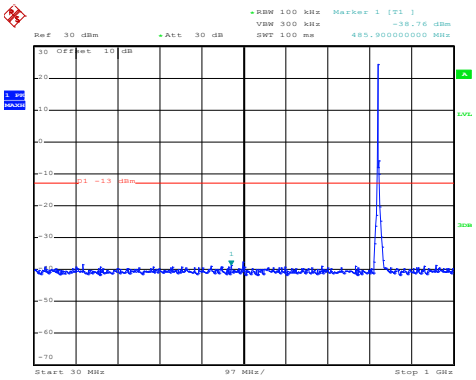
30MHz~1GHz



Date: 19.DEC.2018 05:12:17

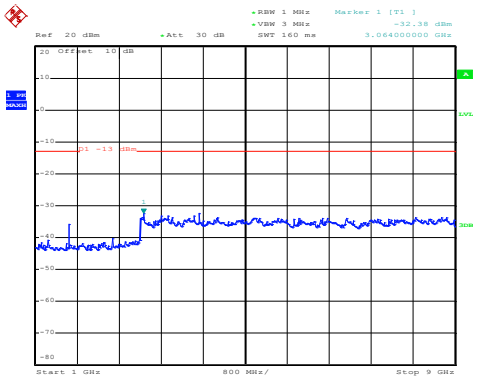
1GHz~9GHz

LTE Band 5: QPSK & RB Size 1
BW: 5MHz
Lowest channel



Date: 19.DEC.2018 04:06:37

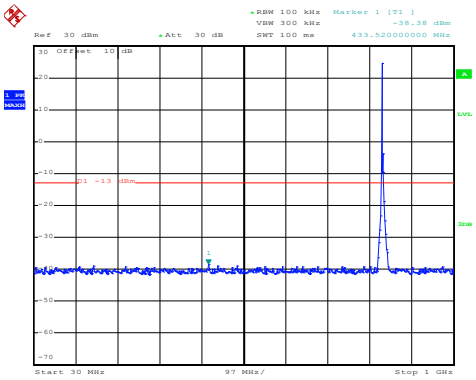
30MHz~1GHz



Date: 19.DEC.2018 05:09:01

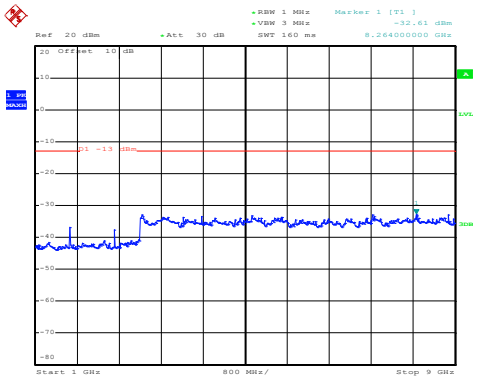
1GHz~9GHz

Middle channel



Date: 19.DEC.2018 04:07:52

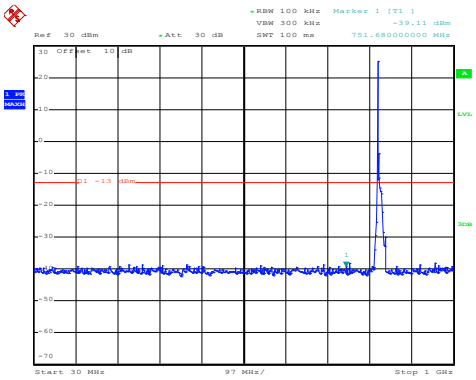
30MHz~1GHz



Date: 19.DEC.2018 05:10:01

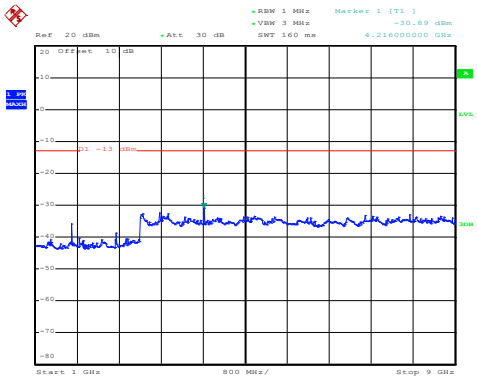
1GHz~9GHz

High channel



Date: 19.DEC.2018 04:09:57

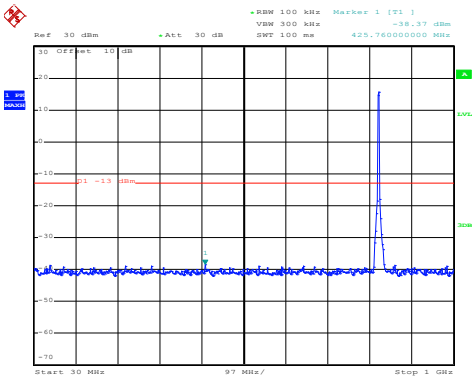
30MHz~1GHz



Date: 19.DEC.2018 05:11:33

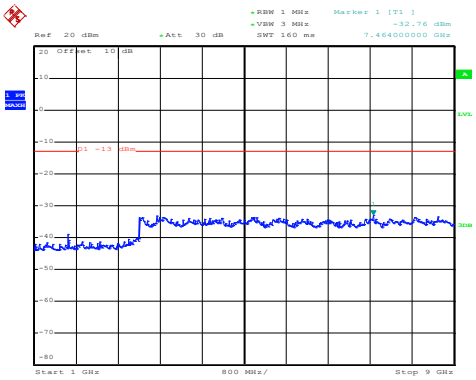
1GHz~9GHz

LTE Band 5: QPSK & RB Size 25
BW: 5MHz
Lowest channel



Date: 19.DEC.2018 04:07:04

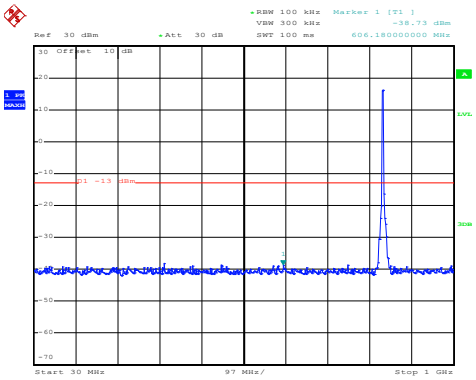
30MHz~1GHz



Date: 19.DEC.2018 05:09:26

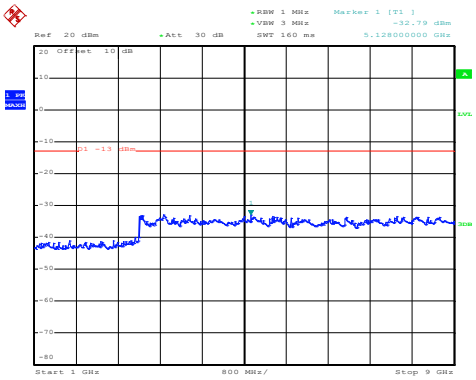
1GHz~9GHz

Middle channel



Date: 19.DEC.2018 04:08:23

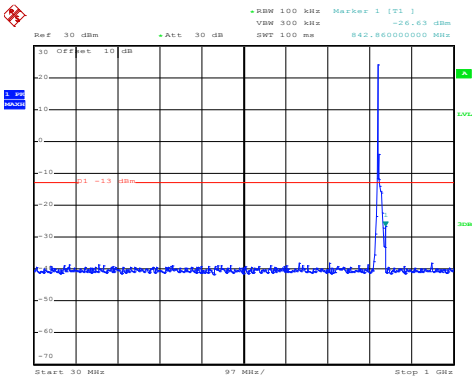
30MHz~1GHz



Date: 19.DEC.2018 05:10:39

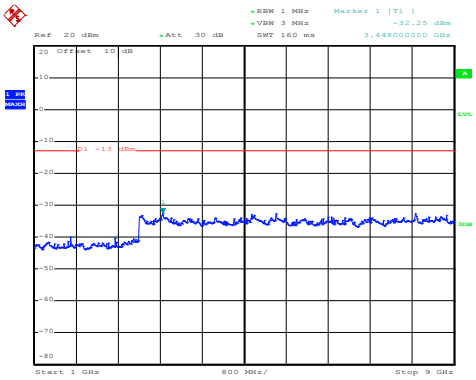
1GHz~9GHz

High channel



Date: 19.DEC.2018 04:09:27

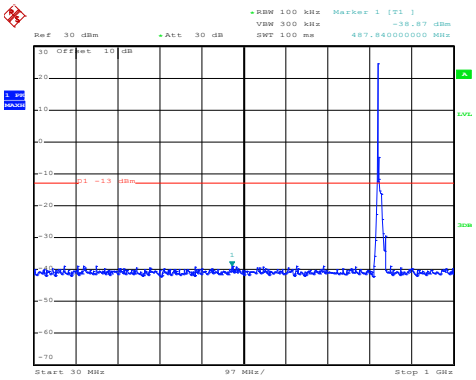
30MHz~1GHz



Date: 19.DEC.2018 05:12:10

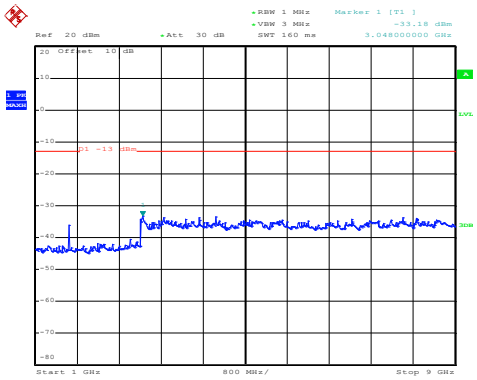
1GHz~9GHz

LTE Band 5: 16 QAM & RB Size 1
BW: 10MHz
Lowest channel



Date: 19.DEC.2018 04:10:42

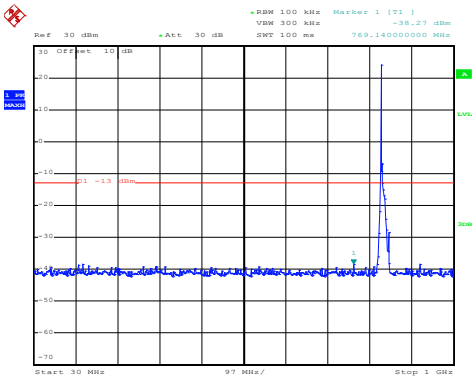
30MHz~1GHz



Date: 19.DEC.2018 05:13:28

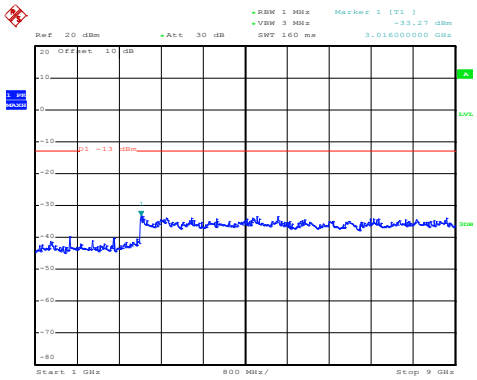
1GHz~9GHz

Middle channel



Date: 19.DEC.2018 04:17:09

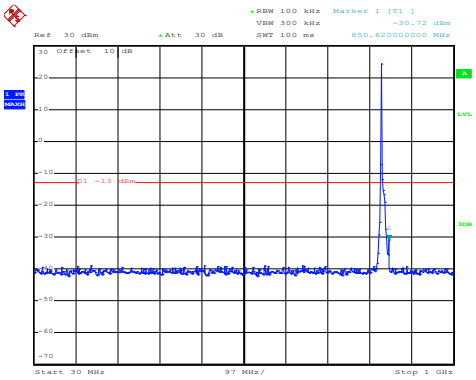
30MHz~1GHz



Date: 19.DEC.2018 05:14:45

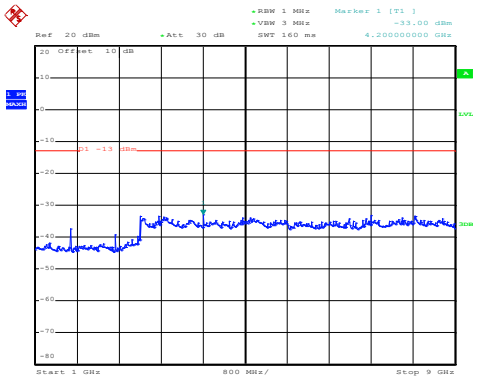
1GHz~9GHz

High channel



Date: 19.DEC.2018 04:12:17

30MHz~1GHz



Date: 19.DEC.2018 05:15:43

1GHz~9GHz