FCC REPORT
(LTE)

Applicant:	Neutron Holdings, Inc.
Address of Applicant:	85 2nd St, San Francisco, CA 94105 USA

Equipment Under Test (EUT)

Product Name:	Central controller
Model No.:	Lime-4.0-US
Trade mark:	Lime
FCC ID:	2APB2-LIME40US
Applicable standards:	FCC CFR Title 47 Part 2 FCC CFR Title 47 Part 24 Subpart E FCC CFR Title 47 Part 27 Subpart L FCC CFR Title 47 Part 27 Subpart F FCC CFR Title 47 Part 27 Subpart H
Date of sample receipt:	21 Feb., 2021
Date of Test:	21 Feb., to 30 Mar., 2021
Date of report issued:	30 Mar., 2021
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	*30 Mar., 2021*	*Original*

Tested by: YT Yang ***Date:*** *30 Mar., 2021*

Test Engineer

Reviewed by: Winner Zhang ***Date:*** *30 Mar., 2021*

Project Engineer

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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 24.232 (c) Part 27.50 (c)(10) Part 27.50 (d)(4)	Pass
Peak-to-Average Ratio	Part 24.232 (d) Part 27.50(d)(5)	Pass
Modulation Characteristics	Part 2.1047	Pass
99% & -26 dB Occupied Bandwidth	Part 2.1049 Part 24.238(b) Part 27.53(g) Part 27.53(h)	Pass
Out of band emission at antenna terminals	Part 2.1053 Part 24.238 (a) Part 27.53 (g) Part 27.53 (h)	Pass
Field strength of spurious radiation	Part 24.238 (a) Part 27.53 (g) Part 27.53 (h)	Pass
Frequency stability vs. temperature	Part 22.355 Part 24.235 Part 27.54 Part 2.1055(a)(1)(b)	Pass
Frequency stability vs. voltage	Part 22.355 Part 24.235 Part 27.54 Part 2.1055(d)(2)	Pass

Remark:

1. *Pass: The EUT complies with the essential requirements in the standard.*
2. *The cable insertion loss used by "RF Output Power" and other conduction measurement items is 0.5dB(Fundamental Frequency below 1GHz)/1.0dB(Fundamental Frequency above 1GHz) (provided by the customer).*

Test Method:	*ANSI/TIA-603-E-2016* *ANSI C63.26-2015*

5. General Information

5.1 Client Information

Applicant:	Neutron Holdings, Inc.
Address:	85 2nd St, San Francisco, CA 94105 USA
Manufacturer/Factory:	MeiG Smart Technology Co., Ltd.
Address:	1/2/3F A, Building A, B, No.5 Lingxia Road, 4th Fenghuang Industrial Park, Fuyong Street, Baoan District, Shenzhen, Guangdong, China

5.2 General Description of E.U.T.

Product Name:	Central controller		
Model No.:	Lime-4.0-US		
Operation Frequency range:	LTE Band 2: TX: 1850MHz-1910MHz RX: 1930MHz-1990MHz LTE Band 4: TX: 1710MHz-1755MHz RX: 2110MHz-2155MHz LTE Band 12: TX: 699MHz-716MHz RX: 729MHz-746MHz LTE Band 13: TX: 777 MHz-787 MHz RX: 746 MHz-756 MHz LTE Band 17: TX: 704MHz-716MHz RX: 734MHz-746MHz		
Modulation type:	☒QPSK	☒16QAM	☒64QAM
Antenna type:	Internal Antenna		
Antenna gain:	LTE Band 2: 2 dBi(declare by Applicant) LTE Band 4: 2 dBi(declare by Applicant) LTE Band 12: 2 dBi(declare by Applicant) LTE Band 13: 2 dBi(declare by Applicant) LTE Band 17: 2 dBi(declare by Applicant)		
Power supply:	Rechargeable Li-ion Battery DC3.7V, 1250mAh		
External power supply	DC 36V		
Test Sample Condition:	The applicant provided engineering samples for staying in continuously transmitting for testing.		
Remark: This product belongs to CAT1			

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 4 (1.4MHz)		LTE Band 4 (3MHz)	
Channel	Frequency (MHz)	Channel	Frequency (MHz)
19957	1710.70	19965	1711.50
19958	1710.80	19966	1711.60
….	….	….	….
20174	1732.40	20174	1732.40
20175	1732.50	20175	1732.50
20176	1732.60	20176	1732.60
…	…	…	…
20392	1754.20	20384	1753.40
20393	1754.30	20385	1753.50
LTE Band 4 (5MHz)		LTE Band 4 (10MHz)	
Channel	Frequency (MHz)	Channel	Frequency (MHz)
19975	1712.50	20000	1715.00
19976	1712.60	20001	1715.10
….	….	….	….
20174	1732.40	20174	1732.40
20175	1732.50	20175	1732.50
20176	1732.60	20176	1732.60
…	…	…	…
20374	1752.40	20349	1749.90
20375	1752.50	20350	1750.00
LTE Band 4 (15MHz)		LTE Band 4 (20MHz)	
Channel	Frequency (MHz)	Channel	Frequency (MHz)
20025	1717.50	20050	1720.00
20026	1717.60	20051	1720.10
….	….	….	….
20174	1732.40	20174	1732.40
20175	1732.50	20175	1732.50
20176	1732.60	20176	1732.60
…	…	…	…
20324	1747.40	20299	1744.90
20325	1747.50	20300	1745.00

LTE Band 12 (1.4MHz)		LTE Band 12 (3MHz)	
Channel	Frequency (MHz)	Channel	Frequency (MHz)
23017	699.70	23025	700.50
23756	699.80	23026	700.60
….	….	….	….
23094	707.40	23094	707.40
23095	707.50	23095	707.50
23096	707.60	23096	707.60
…	…	…	…
23172	715.20	23164	714.40
23173	715.30	23165	714.50
LTE Band 12 (5MHz)		LTE Band 12 (10MHz)	
Channel	Frequency (MHz)	Channel	Frequency (MHz)
23035	701.50	23060	704.00
23036	701.60	23061	704.10
….	….	….	….
23094	707.40	23094	707.40
23095	707.50	23095	707.50
23096	707.60	23096	707.60
…	…	…	…
23154	713.40	23129	710.90
23155	713.50	23130	711.00

LTE Band 13 (5MHz)		LTE Band 13 (10MHz)	
Channel	Frequency (MHz)	Channel	Frequency (MHz)
23205	779.50	/	/
23206	779.60	/	/
….	….	/	/
23229	781.90	/	/
23230	782.00	23230	782
23231	782.10	/	/
…	…	/	/
23255	784.50	/	/
23256	784.60	/	/

LTE Band 17 (5MHz)		LTE Band 17 (10MHz)	
Channel	Frequency (MHz)	Channel	Frequency (MHz)
23755	706.50	23780	709.00
23756	706.60	23781	709.10
….	….	….	….
23789	709.90	23789	709.90
23790	710.00	23790	710.00
23791	710.10	23791	710.10
…	…	…	…
23824	713.40	23799	710.90
23825	713.50	23800	711.00

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 4 (1.4MHz)			LTE Band 4 (3MHz)		
Channel:		Frequency (MHz)	Channel		Frequency (MHz)
Lowest channel	19957	1710.70	Lowest channel	19965	1711.50
Middle channel	20175	1732.50	Middle channel	20175	1732.50
Highest channel	20393	1754.30	Highest channel	20385	1753.50
LTE Band 4 (5MHz)			LTE Band 4 (10MHz)		
Channel		Frequency (MHz)	Channel		Frequency (MHz)
Lowest channel	19975	1712.50	Lowest channel	20000	1715.00
Middle channel	20175	1732.50	Middle channel	20175	1732.50
Highest channel	20375	1752.50	Highest channel	20350	1750.00
LTE Band 4 (15MHz)			LTE Band 4 (20MHz)		
Channel		Frequency (MHz)	Channel		Frequency (MHz)
Lowest channel	20025	1717.50	Lowest channel	20050	1720.00
Middle channel	20175	1732.50	Middle channel	20175	1732.50
Highest channel	20325	1747.50	Highest channel	20300	1745.00

LTE Band 12(1.4MHz)			LTE Band 12(3MHz)		
Channel		Frequency (MHz)	Channel		Frequency (MHz)
Lowest channel	23017	699.70	Lowest channel	23025	700.50
Middle channel	23095	707.50	Middle channel	23095	707.50
Highest channel	23173	715.30	Highest channel	23165	714.50
LTE Band 12(5MHz)			LTE Band 12(10MHz)		
Channel		Frequency (MHz)	Channel		Frequency (MHz)
Lowest channel	23035	701.50	Lowest channel	23060	704.00
Middle channel	23095	707.50	Middle channel	23095	707.50
Highest channel	23155	713.50	Highest channel	23130	711.00

LTE Band 13(5MHz)			LTE Band 13(10MHz)		
Channel		Frequency (MHz)	Channel		Frequency (MHz)
Lowest channel	23205	779.50	Lowest channel	/	/
Middle channel	23230	782.00	Middle channel	23230	782
Highest channel	23255	784.50	Highest channel	/	/

LTE Band 17(5MHz)			LTE Band 17(10MHz)		
Channel		Frequency (MHz)	Channel		Frequency (MHz)
Lowest channel	23755	706.50	Lowest channel	23780	709.00
Middle channel	23790	710.00	Middle channel	23790	710.00
Highest channel	23825	713.50	Highest channel	23800	711.00

5.3 Test environment and mode, and test samples plans

Operating Environment:	
Temperature:	Normal: 15℃ ~ 35℃, Extreme: -30℃ ~ +50℃
Humidity:	20 % ~ 75 % RH
Atmospheric Pressure:	1008 mbar
Voltage:	Nominal: 3.7Vdc, Extreme: Low 3.5Vdc, High 4.2Vdc
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. Just the worst case position (H mode) shown in report.	
Test Samples Plans:	
Samples Number	**Used for Test Items**
1#	Conducted measurements test method
2#	Radiated measurements test method
3#	EUT constructional details
Remark: *JianYan Testing Group Shenzhen Co., Ltd. is only responsible for the test project data of the above samples, and will keep the above samples for a month.*	

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)	±3.12 dB (k=2)
Radiated Emission (30MHz ~ 1000MHz)	±4.32 dB (k=2)
Radiated Emission (1GHz ~ 18GHz)	±5.16 dB (k=2)
Radiated Emission (18GHz ~ 40GHz)	±3.20 dB (k=2)

5.6 Related Submittal(s) / Grant (s)

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

5.7 Additions to, deviations, or exclusions from the method

No

5.8 Laboratory Facility

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

- **FCC - Designation No.: CN1211**

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

- **ISED – CAB identifier.: CN0021**

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

- **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

5.9 Laboratory Location

JianYan Testing Group Shenzhen Co., Ltd.
Address: No.101, Building 8, Innovation Wisdom Port, No.155 Hongtian Road, Huangpu Community, Xinqiao Street, Bao'an District, Shenzhen, Guangdong, People's Republic of China.
Tel: +86-755-23118282, Fax: +86-755-23116366
Email: info@ccis-cb.com, Website: http://www.ccis-cb.com

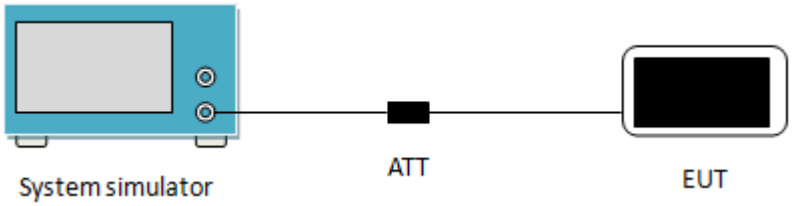
5.10 Test Instruments list

Test Equipment	Manufacturer	Model No.	Serial No.	Cal. Date (mm-dd-yy)	Cal. Due date (mm-dd-yy)
3m SAC	ETS	9m*6m*6m	966	01-19-2021	01-18-2024
BiConiLog Antenna	SCHWARZBECK	VULB9163	497	03-03-2020	03-02-2021
				03-03-2021	03-02-2022
Biconical Antenna	SCHWARZBECK	VUBA9117	359	06-18-2020	06-17-2021
Horn Antenna	SCHWARZBECK	BBHA9120D	916	03-03-2020	03-02-2021
				03-03-2021	03-02-2022
Horn Antenna	SCHWARZBECK	BBHA9120D	1805	06-18-2020	06-17-2021
Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170582	11-18-2020	11-17-2021
EMI Test Software	AUDIX	E3	Version: 6.110919b		
Pre-amplifier	HP	8447D	2944A09358	03-03-2020	03-02-2021
				03-03-2021	03-02-2022
Pre-amplifier	CD	PAP-1G18	11804	03-03-2020	03-02-2021
				03-03-2021	03-02-2022
Spectrum analyzer	Rohde & Schwarz	FSP30	101454	03-03-2020	03-02-2021
				03-03-2021	03-02-2022
Spectrum analyzer	Rohde & Schwarz	FSP40	100363	11-18-2020	11-17-2021
EMI Test Receiver	Rohde & Schwarz	ESRP7	101070	03-03-2020	03-02-2021
				03-03-2021	03-02-2022
Spectrum Analyzer	Agilent	N9020A	MY50510123	11-18-2020	11-17-2021
Signal Generator	Rohde & Schwarz	SMX	835454/016	03-03-2020	03-02-2021
				03-03-2021	03-02-2022
Signal Generator	R&S	SMR20	1008100050	03-03-2020	03-02-2021
				03-03-2021	03-02-2022
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	03-03-2020	03-02-2021
				03-03-2021	03-02-2022
Cable	MICRO-COAX	MFR64639	K10742-5	03-03-2020	03-02-2021
				03-03-2021	03-02-2022
Cable	SUHNER	SUCOFLEX100	58193/4PE	03-03-2020	03-02-2021
				03-03-2021	03-02-2022

DC Power Supply	XinNuoEr	WYK-10020K	1409050110020	09-25-2020	09-24-2021
Temperature Humidity Chamber	HengPu	HPGDS-500	20140828008	11-01-2020	10-31-2021
Simulated Station	Rohde & Schwarz	CMW500	140493	07-22-2020	07-21-2021

6. Test results

6.1 Conducted Output Power, ERP and EIRP

Test Requirement:	Part 24.232(c), part 27.50(c)(10), Part 27.50(d)(4)
Limit:	LTE Band 2: 2W, LTE Band 4: 1W, LTE Band 12: 3W, LTE Band 13: 3W, LTE Band 17: 3W
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 5.10 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	22.84	22.65	22.63
			1	2	22.66	22.59	22.64
			1	5	22.45	22.41	22.40
			3	0	22.13	22.36	22.25
			3	1	22.23	22.35	22.34
			3	2	22.25	22.18	22.09
			6	0	21.48	21.53	21.44
		Antenna Gain (dBi):			2.0		
		Max. EIRP (dBm):			24.84		
		EIRP Limit (dBm):			33.00		
		16QAM	1	0	22.44	22.36	22.16
			1	2	22.35	22.24	22.37
			1	5	22.31	22.29	22.05
			3	0	22.10	21.87	21.46
			3	1	21.16	21.68	21.62
			3	2	21.33	21.66	21.37
			6	0	20.89	20.47	20.59
		Antenna Gain (dBi):			2.0		
		Max. EIRP (dBm):			24.44		
		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	22.49	22.63	22.26
			1	7	22.23	22.23	22.34
			1	14	22.14	22.15	22.29
			8	0	22.26	22.43	22.31
			8	4	22.13	22.29	22.09
			8	7	22.27	22.60	22.16
			15	0	22.19	22.17	22.24
		Antenna Gain (dBi):			2.0		
		Max. EIRP (dBm):			24.63		
		EIRP Limit (dBm):			33.00		
		16QAM	1	0	21.84	21.89	21.74
			1	7	21.86	21.86	21.85
			1	14	21.74	21.74	21.86
			8	0	21.87	21.63	21.44
			8	4	21.56	21.65	21.23
			8	7	21.69	21.74	21.26
			15	0	20.78	20.79	20.84
		Antenna Gain (dBi):			2.0		
		Max. EIRP (dBm):			23.89		
		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	22.55	22.56	22.64
			1	12	22.43	22.34	22.38
			1	24	22.39	22.65	22.46
			12	0	22.63	22.41	22.29
			12	6	22.35	22.32	22.26
			12	11	22.25	22.29	22.19
			25	0	21.87	21.47	22.34
		Antenna Gain (dBi):			2.0		
		Max. EIRP (dBm):			24.65		
		EIRP Limit (dBm):			33.00		
		16QAM	1	0	21.65	21.63	21.58
			1	12	21.48	21.42	21.43
			1	24	21.57	21.53	21.26
			12	0	21.53	21.43	21.34
			12	6	21.36	21.29	21.25
			12	11	21.22	21.48	21.22
			25	0	20.74	20.71	20.58
		Antenna Gain (dBi):			2.0		
		Max. EIRP (dBm):			23.65		
		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	22.51	22.49	22.84
			1	24	22.26	22.35	22.56
			1	49	22.39	22.26	22.53
			25	0	22.58	22.19	22.13
			25	12	22.46	22.29	22.26
			25	24	22.34	22.24	22.14
			50	0	22.06	22.18	22.09
		Antenna Gain (dBi):			2.0		
		Max. EIRP (dBm):			24.84		
		EIRP Limit (dBm):			33.00		
		16QAM	1	0	21.56	21.46	21.56
			1	24	21.74	21.39	21.34
			1	49	21.69	21.53	21.32
			12	0	21.43	21.22	21.26
			12	19	21.39	21.25	21.28
			12	38	21.57	21.45	21.24
			50	0	/	/	/
		Antenna Gain (dBi):			2.0		
		Max. EIRP (dBm):			23.74		
		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	22.56	22.71	22.23
			1	37	22.49	22.48	22.19
			1	74	22.51	22.68	22.41
			1	0	22.23	22.16	22.03
			36	16	22.24	22.23	22.20
			36	35	22.26	22.21	22.13
			75	0	21.34	21.69	21.47
		Antenna Gain (dBi):			2.0		
		Max. EIRP (dBm):			24.71		
		EIRP Limit (dBm):			33.00		
		16QAM	1	0	21.74	21.56	21.44
			1	37	21.56	21.43	21.23
			1	74	21.58	21.55	21.36
			16	0	21.36	21.34	21.35
			16	30	21.41	21.39	21.32
			16	59	21.47	21.15	21.09
			75	0	/	/	/
		Antenna Gain (dBi):			2.0		
		Max. EIRP (dBm):			23.74		
		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	22.16	22.29	22.41
			1	49	22.34	22.31	22.33
			1	99	22.26	22.45	22.29
			50	0	22.24	22.57	22.48
			50	24	22.19	22.23	22.46
			50	49	22.08	22.29	22.13
			100	0	21.67	21.58	21.76
		Antenna Gain (dBi):			2.0		
		Max. EIRP (dBm):			24.57		
		EIRP Limit (dBm):			33.00		
		16QAM	1	0	22.23	22.16	22.87
			1	49	22.16	22.24	22.53
			1	99	22.43	22.47	22.16
			18	0	21.87	21.39	21.44
			18	41	21.44	21.58	21.37
			18	82	21.56	21.34	21.32
			100	0	/	/	/
		Antenna Gain (dBi):			2.0		
		Max. EIRP (dBm):			24.87		
		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)		
					19957	20175	20393
					1710.7MHz	1732.5MHz	1754.3MHz
4	1.4	QPSK	1	0	22.49	22.41	22.69
			1	2	22.36	22.35	22.71
			1	5	22.35	22.26	22.25
			3	0	22.26	22.21	22.64
			3	1	22.31	22.58	22.53
			3	2	22.25	22.19	22.15
			6	0	22.29	22.34	21.87
		Antenna Gain (dBi):			2.0		
		Max. EIRP (dBm):			24.71		
		EIRP Limit (dBm):			30.00		
		16QAM	1	0	21.78	21.45	21.79
			1	2	21.46	21.36	21.53
			1	5	21.53	21.28	21.46
			3	0	21.65	21.29	21.57
			3	1	21.35	21.48	21.52
			3	2	21.98	21.22	21.26
			6	0	21.47	21.19	21.11
		Antenna Gain (dBi):			2.0		
		Max. EIRP (dBm):			23.98		
		EIRP Limit (dBm):			30.00		

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					19965	20175	20385
					1711.5MHz	1732.5MHz	1753.5MHz
4	3	QPSK	1	0	22.53	22.46	22.56
			1	7	22.46	22.53	22.43
			1	14	22.26	22.27	22.25
			8	0	22.34	22.24	22.16
			8	4	22.59	22.26	22.26
			8	7	22.41	22.31	22.47
			15	0	22.03	22.10	22.25
		Antenna Gain (dBi):			2.0		
		Max. EIRP (dBm):			24.59		
		EIRP Limit (dBm):			30.00		
		16QAM	1	0	22.14	22.16	22.19
			1	7	21.84	21.47	21.64
			1	14	21.62	21.46	21.22
			8	0	21.35	21.35	21.26
			8	4	21.40	21.26	21.58
			8	7	21.32	21.28	21.34
			15	0	21.13	21.14	21.16
		Antenna Gain (dBi):			2.0		
		Max. EIRP (dBm):			24.19		
		EIRP Limit (dBm):			30.00		

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

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					19975	20175	20375
					1712.5MHz	1732.5MHz	1752.5MHz
4	5	QPSK	1	0	22.65	22.46	22.24
			1	12	22.21	22.36	22.16
			1	24	22.46	22.34	22.21
			12	0	22.34	22.16	22.18
			12	6	22.13	22.14	22.32
			12	11	22.26	22.18	22.47
			25	0	22.19	22.06	22.13
		Antenna Gain (dBi):			2.0		
		Max. EIRP (dBm):			24.65		
		EIRP Limit (dBm):			30.00		
		16QAM	1	0	22.19	22.10	22.26
			1	12	21.78	21.49	21.34
			1	24	21.63	21.56	21.49
			12	0	21.26	21.52	21.43
			12	6	21.54	21.33	21.24
			12	11	21.34	21.24	21.32
			25	0	21.22	21.43	21.39
		Antenna Gain (dBi):			2.0		
		Max. EIRP (dBm):			24.26		
		EIRP Limit (dBm):			30.00		

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					20000	20175	20350
					1715.0MHz	1732.5MHz	1750.0MHz
4	10	QPSK	1	0	22.56	22.37	22.36
			1	24	22.41	22.21	22.14
			1	49	22.36	22.13	22.23
			25	0	22.24	22.12	22.15
			25	12	22.29	22.19	22.21
			25	24	22.11	22.06	22.03
			50	0	21.87	21.74	21.48
		Antenna Gain (dBi):			2.0		
		Max. EIRP (dBm):			24.56		
		EIRP Limit (dBm):			30.00		
		16QAM	1	0	21.53	21.46	21.33
			1	24	21.46	21.33	21.35
			1	49	21.33	21.35	21.22
			12	0	21.26	21.36	21.34
			12	19	21.44	21.44	21.41
			12	38	21.26	21.23	21.06
			50	0	/	/	/
		Antenna Gain (dBi):			2.0		
		Max. EIRP (dBm):			23.53		
		EIRP Limit (dBm):			30.00		

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

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					20025	20175	20325
					1717.5MHz	1732.5MHz	1747.5MHz
4	15	QPSK	1	0	22.46	22.30	22.23
			1	37	22.33	22.14	22.43
			1	74	22.44	22.16	22.21
			36	0	22.23	22.16	22.25
			36	16	22.16	22.19	22.71
			36	35	22.24	22.23	22.16
			75	0	22.17	21.27	22.34
		Antenna Gain (dBi):			2.0		
		Max. EIRP (dBm):			24.71		
		EIRP Limit (dBm):			30.00		
		16QAM	1	0	21.46	21.58	21.43
			1	37	21.55	21.33	21.22
			1	74	21.26	21.36	21.62
			16	0	21.33	21.52	21.24
			16	30	21.25	21.13	21.34
			16	59	21.10	21.15	21.08
			75	0	/	/	/
		Antenna Gain (dBi):			2.0		
		Max. EIRP (dBm):			23.62		
		EIRP Limit (dBm):			30.00		

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					20050	20175	20300
					1720.0MHz	1732.5MHz	1745.0MHz
4	20	QPSK	1	0	22.56	22.67	22.48
			1	49	22.13	22.54	22.65
			1	99	22.14	22.52	22.23
			50	0	22.26	22.23	22.21
			50	24	22.43	22.14	22.43
			50	49	22.26	22.19	22.08
			100	0	22.10	22.09	22.23
		Antenna Gain (dBi):			2.0		
		Max. EIRP (dBm):			24.67		
		EIRP Limit (dBm):			30.00		
		16QAM	1	0	21.84	21.77	21.92
			1	49	21.46	21.56	21.43
			1	99	21.55	21.54	21.22
			18	0	21.56	21.34	21.36
			18	41	21.23	21.41	21.24
			18	82	21.24	21.22	21.09
			100	0	/	/	/
		Antenna Gain (dBi):			2.0		
		Max. EIRP (dBm):			23.92		
		EIRP Limit (dBm):			30.00		

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

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					23017	23095	23173
					699.7MHz	707.5MHz	715.3MHz
12	1.4	QPSK	1	0	22.48	22.41	22.66
			1	2	22.43	22.36	22.35
			1	5	22.16	22.26	22.34
			3	0	22.26	22.49	22.26
			3	1	22.34	22.19	22.14
			3	2	22.18	22.06	22.01
			6	0	21.56	21.29	21.49
		Antenna Gain(dBi):			2.0		
		Max. ERP (dBm):			22.51		
		ERP Limit (dBm):			34.77		
		16QAM	1	0	21.85	21.74	21.44
			1	2	21.84	21.32	21.46
			1	5	21.56	21.36	21.39
			3	0	21.35	21.56	21.35
			3	1	21.33	21.44	21.32
			3	2	21.46	21.42	21.25
			6	0	21.25	21.23	21.22
		Antenna Gain(dBi):			2.0		
		Max. ERP (dBm):			21.70		
		ERP Limit (dBm):			34.77		

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					23025	23095	23165
					700.5MHz	707.5MHz	714.5MHz
12	3	QPSK	1	0	21.80	21.46	21.44
			1	7	21.75	21.33	21.59
			1	14	21.73	21.26	21.23
			8	0	21.22	21.17	21.16
			8	4	21.46	21.45	21.23
			8	7	21.59	21.36	21.25
			15	0	21.46	21.29	21.22
		Antenna Gain(dBi):			2.0		
		Max. ERP (dBm):			21.65		
		ERP Limit (dBm):			34.77		
		16QAM	1	0	21.56	21.44	21.26
			1	7	21.43	21.39	21.22
			1	14	21.49	21.25	21.43
			8	0	21.33	21.43	21.13
			8	4	21.25	21.24	21.15
			8	7	21.43	21.22	21.25
			15	0	21.09	21.13	21.09
		Antenna Gain(dBi):			2.0		
		Max. ERP (dBm):			21.41		
		ERP Limit (dBm):			34.77		

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)		
					23035	23095	23155
					701.5MHz	707.5MHz	713.5MHz
12	5	QPSK	1	0	22.79	22.69	22.65
			1	12	22.55	22.54	22.26
			1	24	22.13	22.23	22.16
			12	0	22.16	22.32	22.34
			12	6	22.09	22.16	22.09
			12	11	22.13	22.34	22.13
			25	0	21.89	21.87	21.36
		Antenna Gain(dBi):			2.0		
		Max. ERP (dBm):			22.64		
		ERP Limit (dBm):			34.77		
		16QAM	1	0	22.44	22.23	22.16
			1	12	22.36	22.19	22.32
			1	24	22.25	22.26	22.14
			12	0	22.21	22.24	22.13
			12	6	22.26	22.21	22.07
			12	11	22.19	22.19	22.13
			25	0	22.20	22.26	22.20
		Antenna Gain(dBi):			2.0		
		Max. ERP (dBm):			22.29		
		ERP Limit (dBm):			34.77		

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					23060	23095	23130
					704.0MHz	707.5MHz	711.0MHz
12	10	QPSK	1	0	22.62	22.59	22.16
			1	24	22.36	22.23	22.32
			1	49	22.13	22.10	22.10
			25	0	22.03	22.13	22.18
			25	12	22.03	22.10	22.13
			25	24	22.15	22.26	22.02
			50	0	22.10	22.19	22.10
		Antenna Gain(dBi):			2.0		
		Max. ERP (dBm):			22.47		
		ERP Limit (dBm):			34.77		
		16QAM	1	0	22.46	22.47	22.36
			1	24	22.25	22.13	22.26
			1	49	22.23	22.26	22.23
			12	0	22.13	22.06	22.31
			12	19	22.16	22.09	22.03
			12	38	22.16	22.13	22.00
			50	0	/	/	/
		Antenna Gain(dBi):			2.0		
		Max. ERP (dBm):			22.32		
		ERP Limit (dBm):			34.77		

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)		
					23205	23230	23255
					779.5MHz	782.0MHz	784.5MHz
13	5	QPSK	1	0	22.65	22.68	22.16
			1	12	22.43	22.32	22.15
			1	24	22.23	22.16	22.34
			12	0	22.26	22.14	22.16
			12	6	22.16	22.28	22.24
			12	11	22.11	22.46	22.23
			25	0	21.87	21.83	21.84
		Antenna Gain(dBi):			2.0		
		Max. ERP (dBm):			22.53		
		ERP Limit (dBm):			34.77		
		16QAM	1	0	21.74	21.89	21.66
			1	12	21.65	21.43	21.53
			1	24	21.53	21.55	21.54
			12	0	21.22	21.23	21.59
			12	6	21.32	21.19	21.60
			12	11	21.19	21.05	21.43
			25	0	21.11	21.13	21.24
		Antenna Gain(dBi):			2.0		
		Max. ERP (dBm):			21.74		
		ERP Limit (dBm):			34.77		

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					/	23230	/
					/	782.0MHz	/
13	10	QPSK	1	0	/	21.69	/
			1	24	/	21.44	/
			1	49	/	21.59	/
			25	0	/	21.24	/
			25	12	/	21.29	/
			25	24	/	21.55	/
			50	0	/	21.23	/
		Antenna Gain(dBi):			2.0		
		Max. ERP (dBm):			21.23		
		ERP Limit (dBm):			34.77		
		16QAM	1	0	/	21.46	/
			1	24	/	21.22	/
			1	49	/	21.23	/
			12	0	/	21.25	/
			12	19	/	21.22	/
			12	38	/	21.16	/
			50	0	/	/	/
		Antenna Gain(dBi):			2.0		
		Max. ERP (dBm):			21.31		
		ERP Limit (dBm):			34.77		

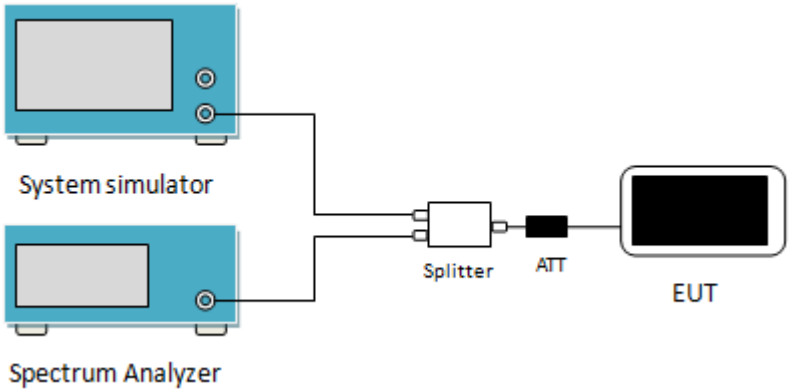
Note: EIRP (dBm) = Average power (dBm) + Antenna Gain (dBi).
ERP (dBm) = EIRP (dBm) - 2.15 (dB).

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					23755	23790	23825
					706.5MHz	710.0MHz	713.5MHz
17	5	QPSK	1	0	22.65	22.36	22.46
			1	12	22.64	22.31	22.15
			1	24	22.36	22.25	22.26
			12	0	22.39	22.29	22.39
			12	6	22.21	22.40	22.45
			12	11	22.19	22.17	22.32
			25	0	22.23	22.10	22.17
		Antenna Gain(dBi):			2.0		
		Max. ERP (dBm):			22.50		
		ERP Limit (dBm):			34.77		
		16QAM	1	0	22.69	22.59	22.46
			1	12	22.78	22.41	22.35
			1	24	22.74	22.46	22.36
			12	0	22.68	22.32	22.32
			12	6	22.26	22.25	22.19
			12	11	22.16	22.26	22.25
			25	0	21.89	21.47	22.26
		Antenna Gain(dBi):			2.0		
		Max. ERP (dBm):			22.63		
		ERP Limit (dBm):			34.77		

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					23780	23790	23800
					709.0MHz	710.0MHz	711.0MHz
17	10	QPSK	1	0	22.49	22.46	22.41
			1	24	22.51	22.32	22.16
			1	49	22.22	22.26	22.23
			25	0	22.36	22.21	22.09
			25	12	22.15	22.20	22.16
			25	24	22.19	22.10	22.43
			50	0	22.26	22.13	22.10
		Antenna Gain(dBi):			2.0		
		Max. ERP (dBm):			22.36		
		ERP Limit (dBm):			34.77		
		16QAM	1	0	21.56	21.74	21.44
			1	24	21.87	21.65	21.46
			1	49	21.44	21.33	21.23
			12	0	21.23	21.35	21.26
			12	19	21.26	21.30	21.22
			12	38	21.19	21.32	21.33
			50	0	/	/	/
		Antenna Gain(dBi):			2.0		
		Max. ERP (dBm):			21.72		
		ERP Limit (dBm):			34.77		

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), Part 27.50(d)(5)
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 5.10 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed

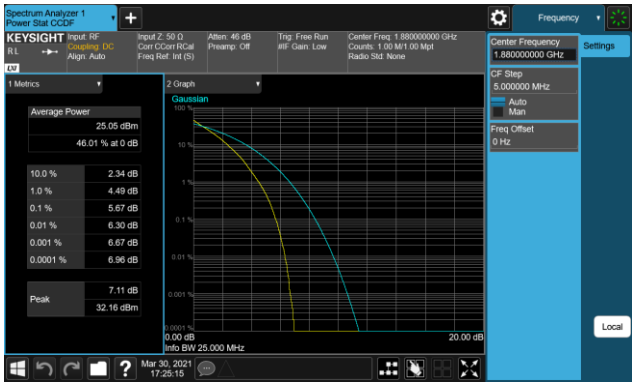
Measurement Data (Worst case):

Bandwidth	Modulation	RB Size	RB Offset	PAPR
LTE Band 2 (Middle Channel)				
20MHz	QPSK	100	0	5.67
	16QAM	18	82	6.33
LTE Band 4 (Middle Channel)				
20MHz	QPSK	100	0	5.73
	16QAM	18	82	5.59
LTE Band 12 (Middle Channel)				
10MHz	QPSK	50	0	4.74
	16QAM	12	38	5.40
LTE Band 13 (Middle Channel)				
10MHz	QPSK	50	0	4.33
	16QAM	12	38	5.18
LTE Band 17 (Middle Channel)				
10MHz	QPSK	50	0	4.81
	16QAM	12	38	5.19

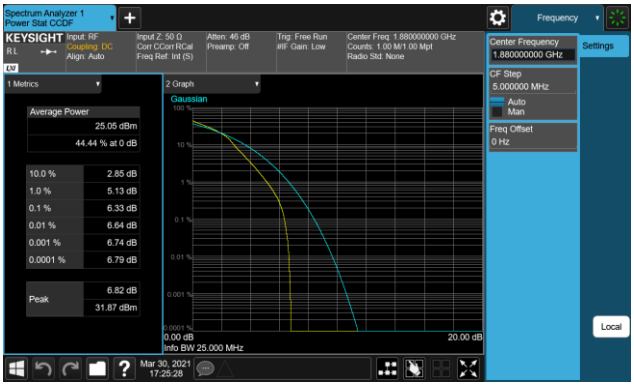
Test plots as below:

LTE Band 2 Middle channel

Modulation: QPSK

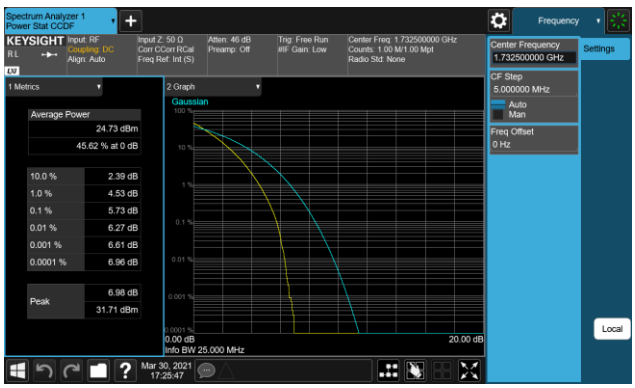


Modulation:16QAM

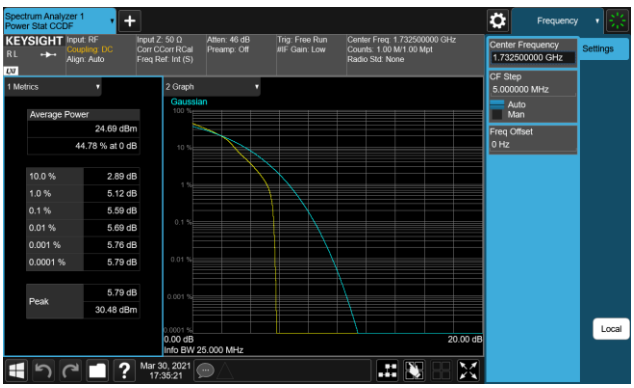


LTE Band 4 Middle channel

Modulation: QPSK

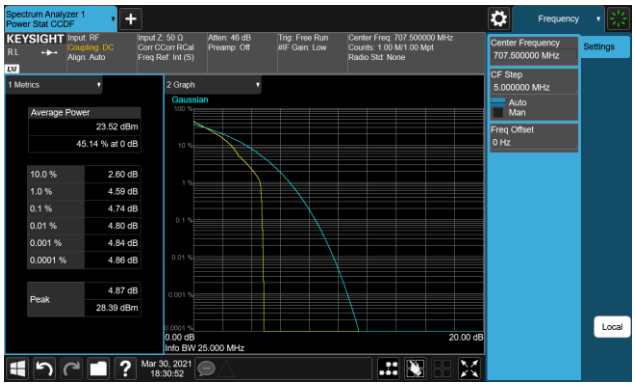


Modulation:16QAM

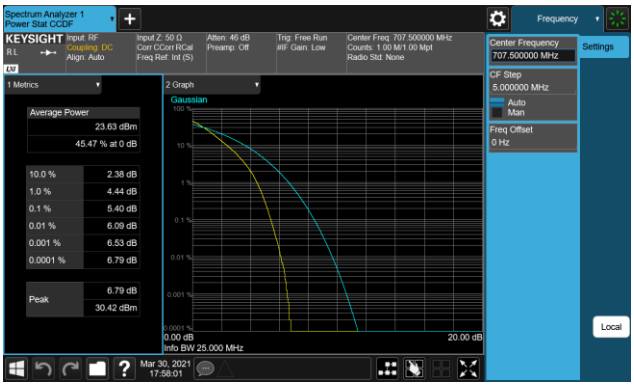


LTE Band 12 Middle channel

Modulation: QPSK

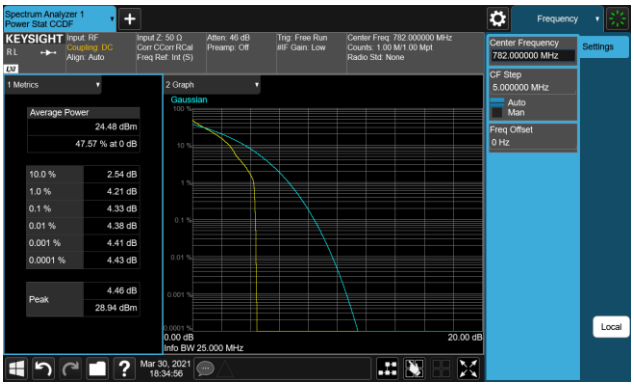


Modulation:16QAM

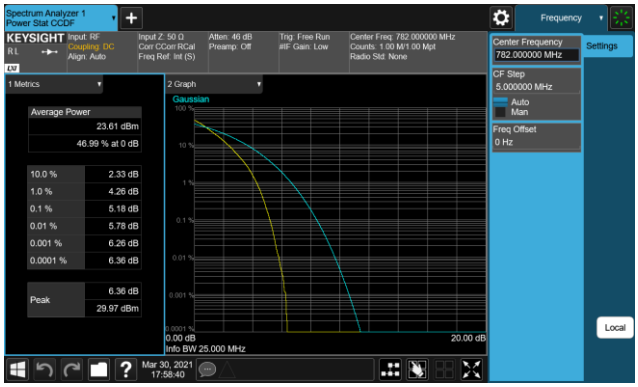


LTE Band 13 Middle channel

Modulation: QPSK

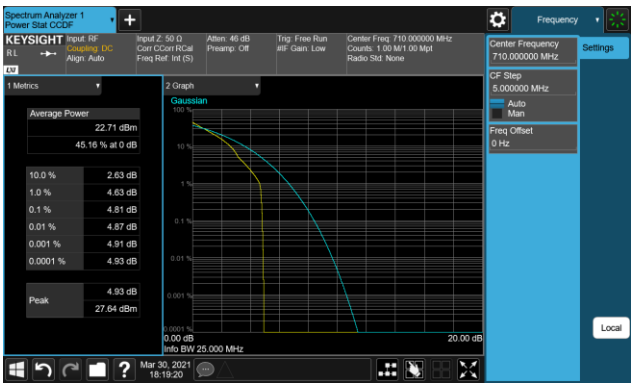


Modulation:16QAM

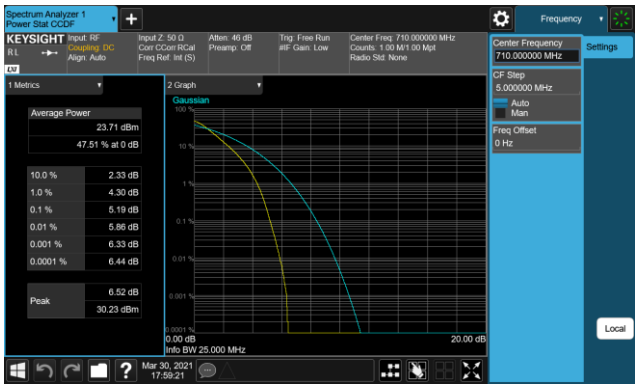


LTE Band 17 Middle channel

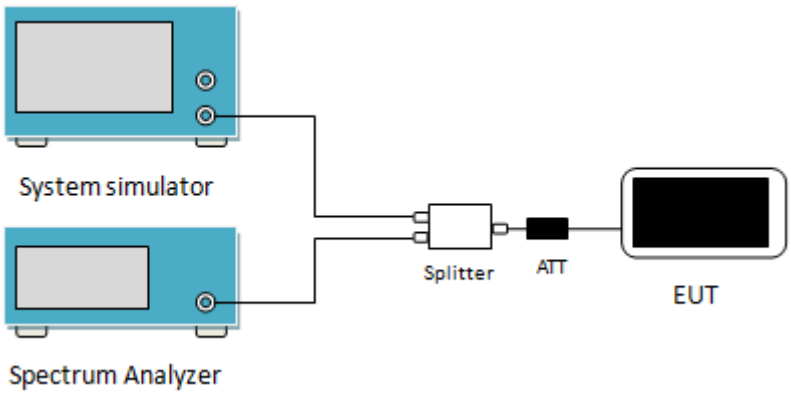
Modulation: QPSK



Modulation:16QAM



6.3 Occupy Bandwidth

Test Requirement:	Part 24.238(b), Part 27.53(g), Part 27.53(h)
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 5.10 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	1284
			QPSK	1104	1296
	18900	1880.00	16QAM	1098	1296
			QPSK	1098	1296
	19193	1909.30	16QAM	1092	1302
			QPSK	1098	1296
3MHz	18615	1851.50	16QAM	2748	3024
			QPSK	2736	3024
	18900	1880.00	16QAM	2736	3036
			QPSK	2736	3072
	19185	1908.50	16QAM	2736	3036
			QPSK	2736	3060
5MHz	18625	1852.50	16QAM	4520	4940
			QPSK	4500	4960
	18900	1880.00	16QAM	4520	4960
			QPSK	4520	4960
	19175	1907.50	16QAM	4520	4980
			QPSK	4520	4980
10MHz	18650	1855.00	16QAM	2200	2640
			QPSK	9040	10200
	18900	1880.00	16QAM	2200	2600
			QPSK	9120	10240
	19150	1905.00	16QAM	2200	2640
			QPSK	9080	10200
15MHz	18675	1857.50	16QAM	2940	3360
			QPSK	13500	14700
	18900	1880.00	16QAM	2880	3420
			QPSK	13560	14700
	19125	1902.50	16QAM	2940	3300
			QPSK	13500	14760
20MHz	18700	1860.00	16QAM	3280	3760
			QPSK	18000	19440
	18900	1880.00	16QAM	3280	3840
			QPSK	17920	19360
	19100	1900.00	16QAM	3280	3840
			QPSK	17840	19120

LTE Band 4					
Bandwidth	Channel	Frequency (MHz)	Modulation	99% OBW (kHz)	-26dBcEBW (kHz)
1.4MHz	19957	1710.7	16QAM	1104	1296
			QPSK	1104	1314
	20175	1732.5	16QAM	1098	1278
			QPSK	1098	1296
	20393	1754.3	16QAM	1098	1272
			QPSK	1098	1278
3MHz	19965	1711.5	16QAM	2736	3024
			QPSK	2736	3036
	20175	1732.5	16QAM	2736	3048
			QPSK	2736	3060
	20385	1750.5	16QAM	2748	3024
			QPSK	2736	3048
5MHz	19975	1712.5	16QAM	4500	4960
			QPSK	4520	4940
	20175	1732.5	16QAM	4500	4960
			QPSK	4500	5020
	20375	1752.5	16QAM	4500	4920
			QPSK	4520	5020
10MHz	20000	1715.0	16QAM	2160	2600
			QPSK	9120	10240
	20175	1732.5	16QAM	2200	2760
			QPSK	9080	10160
	20350	1750.0	16QAM	2200	2680
			QPSK	9080	10120
15MHz	20025	1717.5	16QAM	2880	3360
			QPSK	13560	14880
	20175	1732.5	16QAM	2880	3420
			QPSK	13560	14820
	20325	1747.5	16QAM	2940	3360
			QPSK	13440	14700
20MHz	20050	1720.0	16QAM	3280	3920
			QPSK	17920	19520
	20175	1732.5	16QAM	3280	3840
			QPSK	17920	19440
	20300	1745.0	16QAM	3280	3760
			QPSK	17920	19360

LTE Band 12					
Bandwidth	Channel	Frequency (MHz)	Modulation	99% OBW (kHz)	-26dBcEBW (kHz)
1.4MHz	23017	699.7	16QAM	1290	1260
			QPSK	1302	1284
	23095	707.5	16QAM	1266	1302
			QPSK	1284	1302
	23173	715.3	16QAM	1290	1254
			QPSK	1248	1284
3MHz	23025	700.5	16QAM	3012	3012
			QPSK	3048	3036
	23095	707.5	16QAM	3048	3060
			QPSK	3036	3048
	23165	714.5	16QAM	3012	3024
			QPSK	3036	3036
5MHz	23035	701.5	16QAM	4900	4940
			QPSK	4940	4900
	23095	707.5	16QAM	5020	4960
			QPSK	4880	4980
	23155	713.5	16QAM	4980	4940
			QPSK	4900	5000
10MHz	23060	704.0	16QAM	2600	2640
			QPSK	10120	10120
	23095	707.5	16QAM	2560	2640
			QPSK	10200	10000
	23130	711.0	16QAM	2560	2640
			QPSK	10120	10040

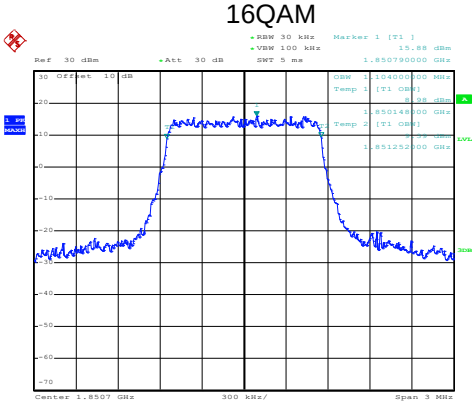
LTE Band 13					
Bandwidth	Channel	Frequency (MHz)	Modulation	99% OBW (kHz)	-26dBcEBW (kHz)
5MHz	23205	779.5	16QAM	4500	4980
			QPSK	4480	4880
	23230	782.0	16QAM	4480	5000
			QPSK	4520	4900
	23255	784.5	16QAM	4500	4900
			QPSK	4500	4980
10MHz	23230	782.0	16QAM	2200	2520
			QPSK	9080	10000

LTE Band 17					
Bandwidth	Channel	Frequency (MHz)	Modulation	99% OBW (kHz)	-26dBcEBW (kHz)
5MHz	23755	706.5	16QAM	4520	4980
			QPSK	4500	4980
	23790	710.0	16QAM	4520	4940
			QPSK	4500	4980
	23825	713.5	16QAM	4500	4940
			QPSK	4500	4960
10MHz	23780	709.0	16QAM	2200	2560
			QPSK	9080	10160
	23790	710.0	16QAM	2200	2640
			QPSK	9080	10040
	23130	711.0	16QAM	2200	2600
			QPSK	9040	10160

Test plot as follows:
LTE Band 2 part:

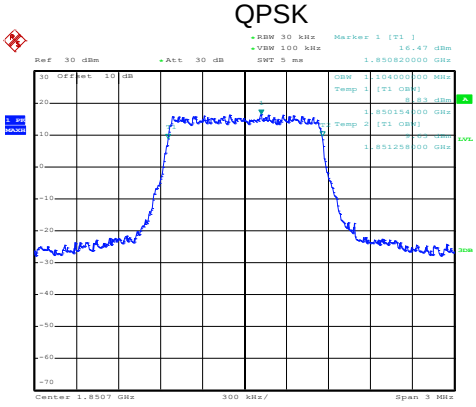
LTE Band 2: 99% Occupy bandwidth
BW: 1.4MHz

16QAM



Date: 27.MAR.2021 15:51:31

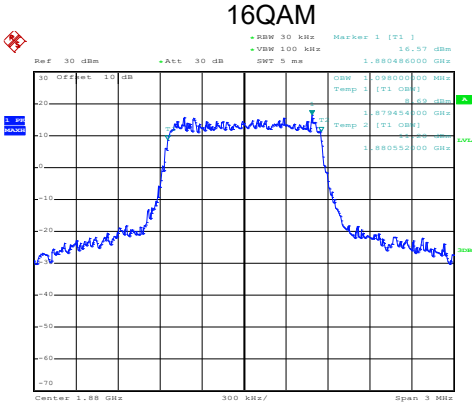
QPSK



Date: 27.MAR.2021 15:51:26

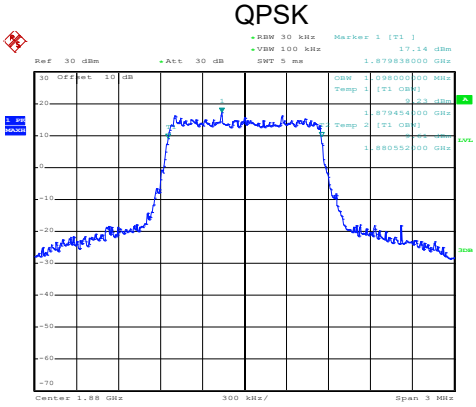
Lowest channel

16QAM



Date: 27.MAR.2021 15:52:07

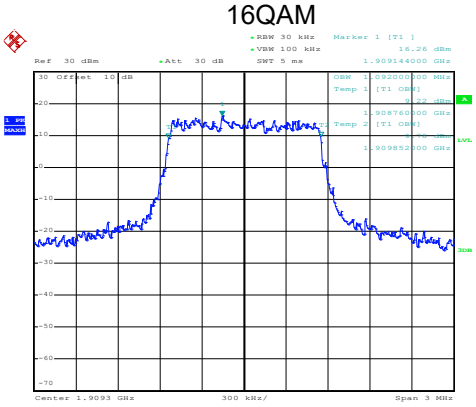
QPSK



Date: 27.MAR.2021 15:52:04

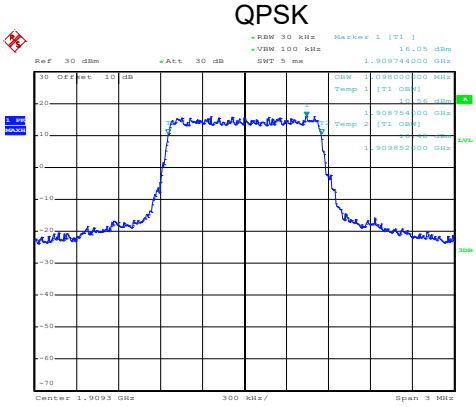
Middle channel

16QAM



Date: 27.MAR.2021 15:53:25

QPSK

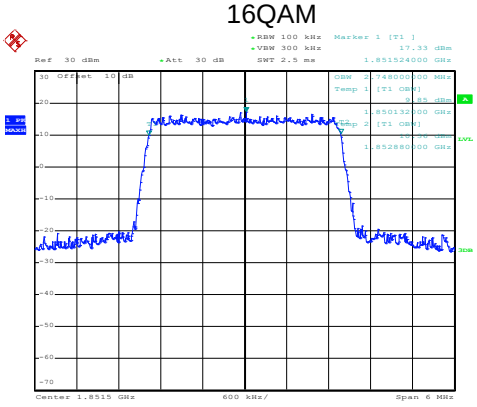


Date: 27.MAR.2021 15:53:21

Highest channel

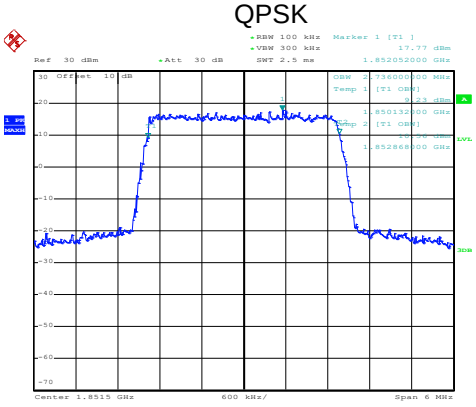
LTE Band 2: 99% Occupy bandwidth
BW: 3MHz

16QAM



Date: 27.MAR.2021 15:54:29

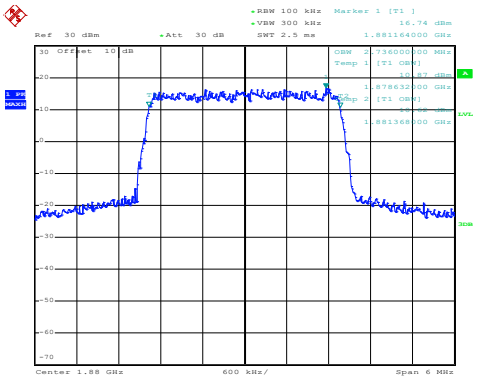
QPSK



Date: 27.MAR.2021 15:54:26

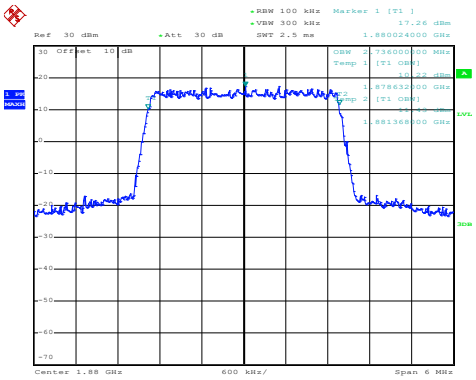
Lowest channel

16QAM



Date: 27.MAR.2021 15:54:53

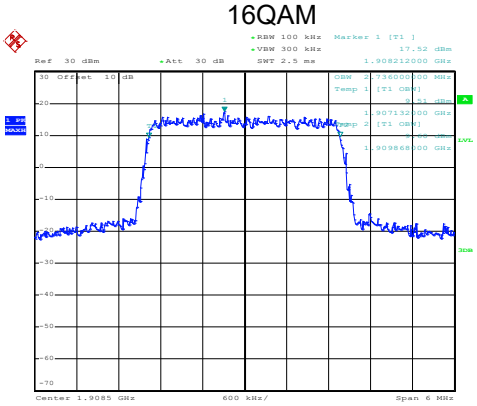
QPSK



Date: 27.MAR.2021 15:54:49

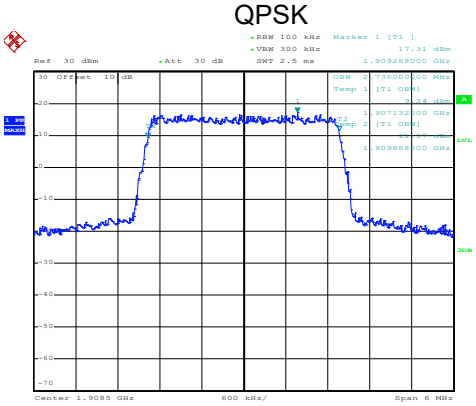
Middle channel

16QAM



Date: 27.MAR.2021 15:56:27

QPSK

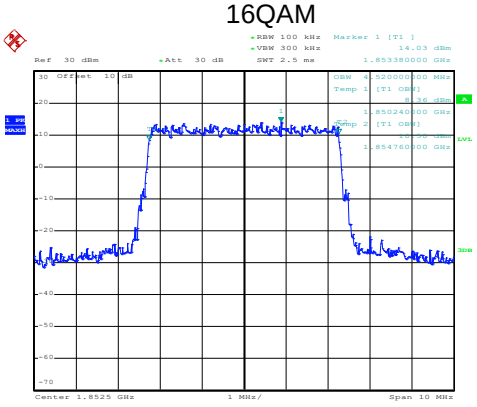


Date: 27.MAR.2021 15:56:24

Highest channel

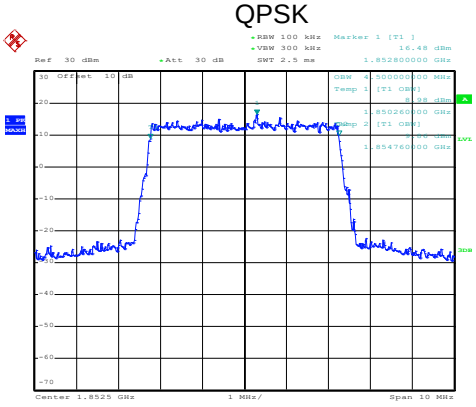
LTE Band 2: 99% Occupy bandwidth
BW: 5MHz

16QAM



Date: 27.MAR.2021 15:57:20

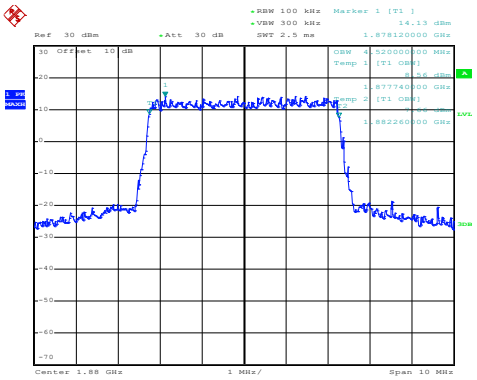
QPSK



Date: 27.MAR.2021 15:57:17

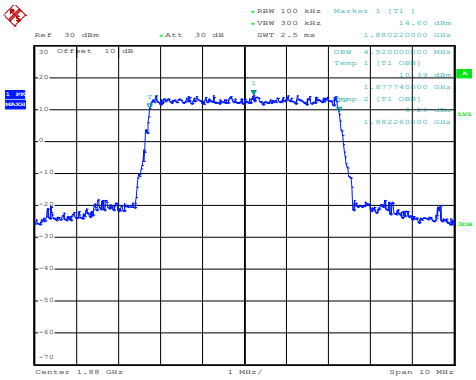
Lowest channel

16QAM



Date: 27.MAR.2021 15:58:49

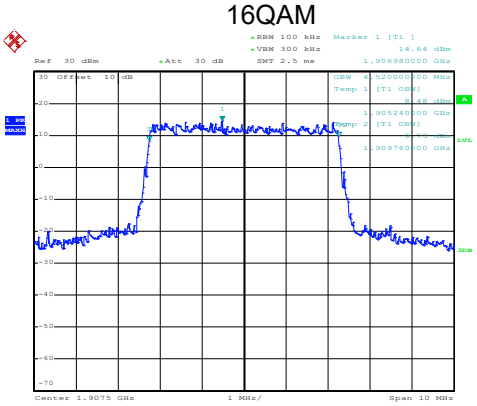
QPSK



Date: 27.MAR.2021 15:58:44

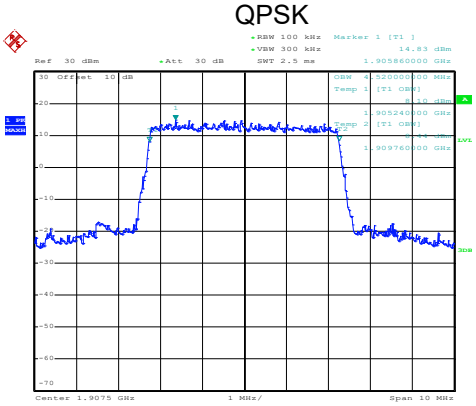
Middle channel

16QAM



Date: 27.MAR.2021 15:59:39

QPSK

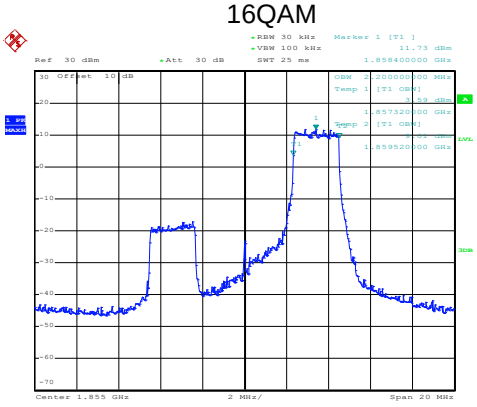


Date: 27.MAR.2021 15:59:34

Highest channel

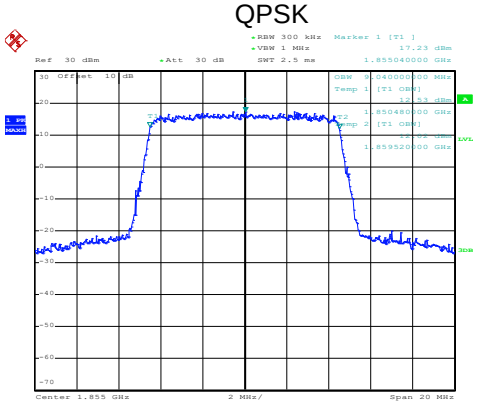
LTE Band 2: 99% Occupy bandwidth
BW: 10MHz

16QAM



Date: 28.MAR.2021 13:03:58

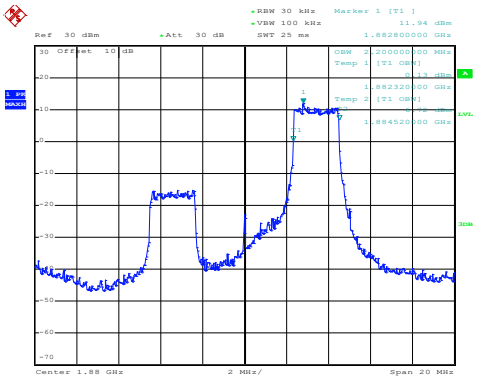
QPSK



Date: 27.MAR.2021 16:01:11

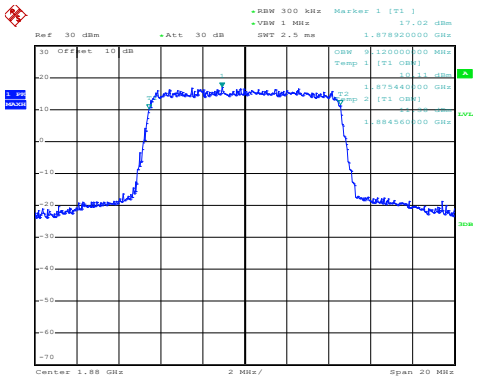
Lowest channel

16QAM



Date: 28.MAR.2021 13:04:25

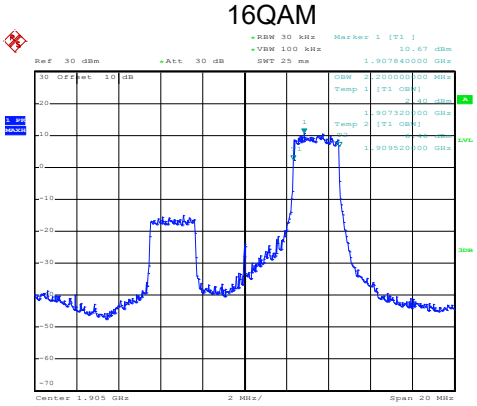
QPSK



Date: 27.MAR.2021 16:04:38

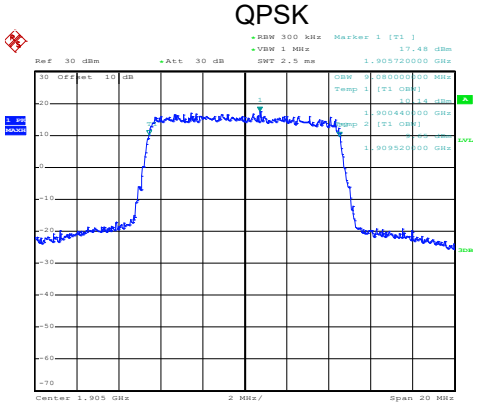
Middle channel

16QAM



Date: 28.MAR.2021 13:05:23

QPSK

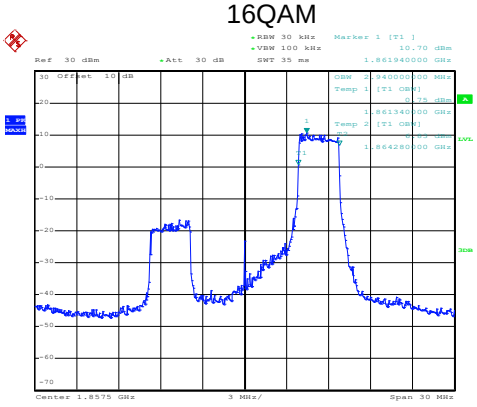


Date: 27.MAR.2021 16:05:12

Highest channel

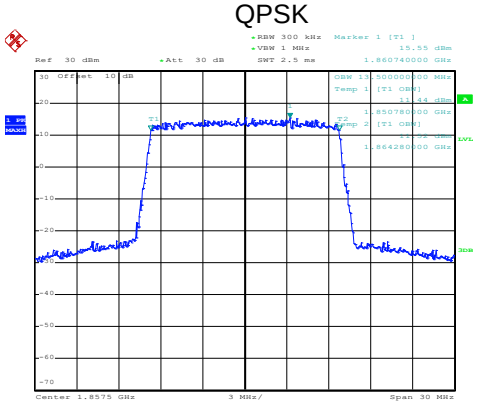
LTE Band 2: 99% Occupy bandwidth
BW: 15MHz

16QAM



Date: 28.MAR.2021 13:06:10

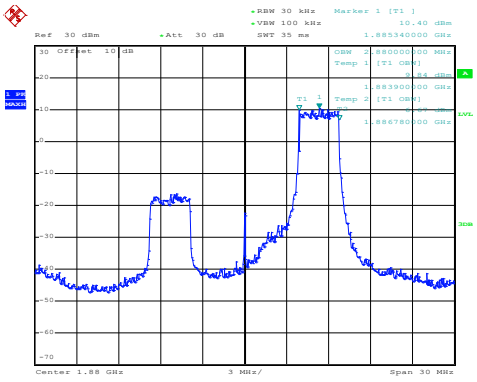
QPSK



Date: 27.MAR.2021 16:06:53

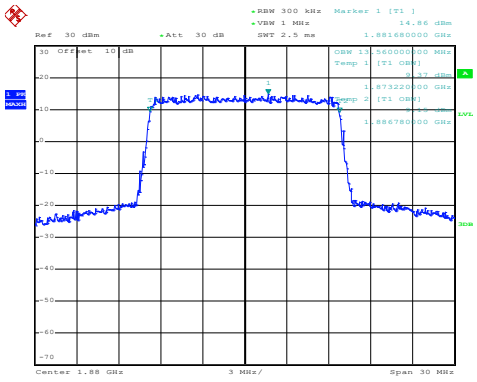
Lowest channel

16QAM



Date: 28.MAR.2021 13:07:12

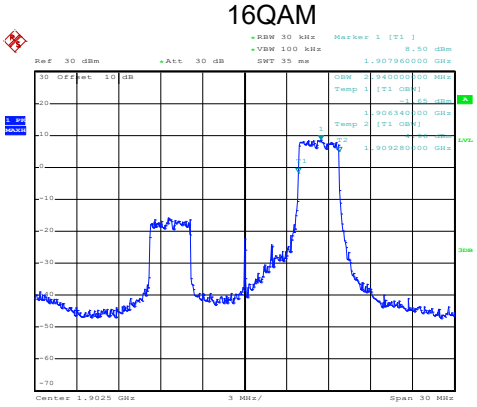
QPSK



Date: 27.MAR.2021 16:10:34

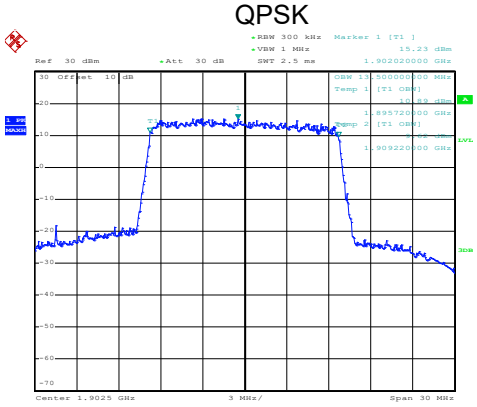
Middle channel

16QAM



Date: 28.MAR.2021 13:07:39

QPSK

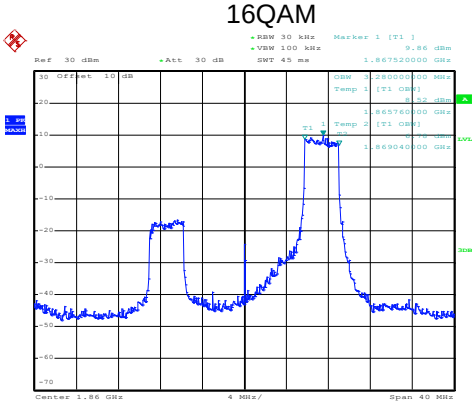


Date: 27.MAR.2021 16:12:08

Highest channel

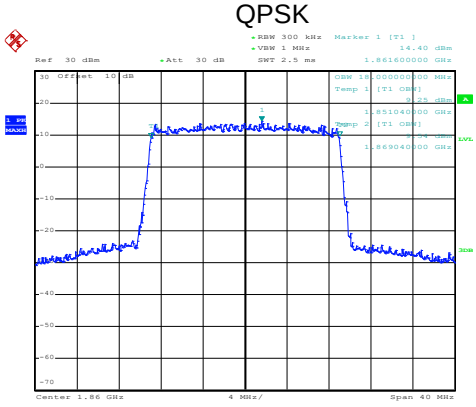
LTE Band 2: 99% Occupy bandwidth
BW: 20MHz

16QAM



Date: 28.MAR.2021 13:09:29

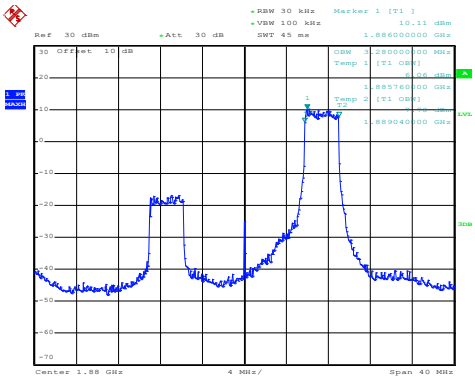
QPSK



Date: 27.MAR.2021 16:14:28

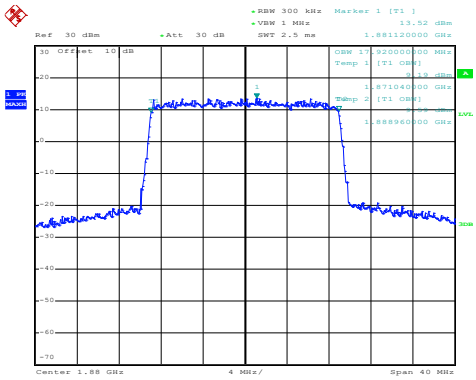
Lowest channel

16QAM



Date: 28.MAR.2021 13:12:04

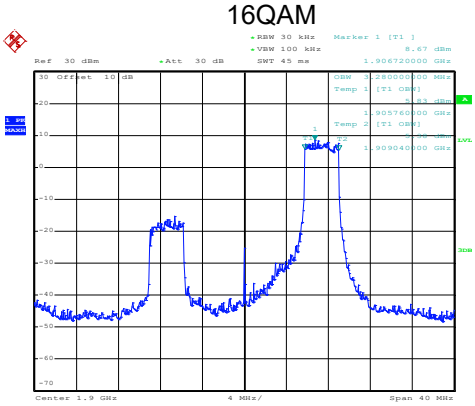
QPSK



Date: 27.MAR.2021 16:16:44

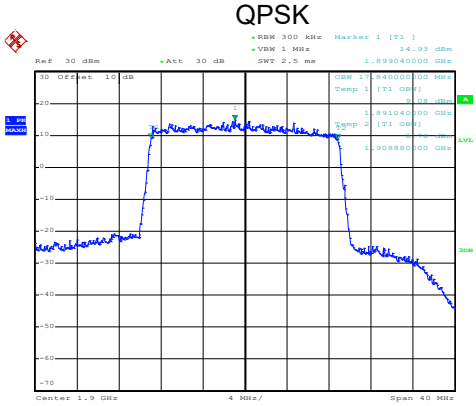
Middle channel

16QAM



Date: 28.MAR.2021 13:13:46

QPSK

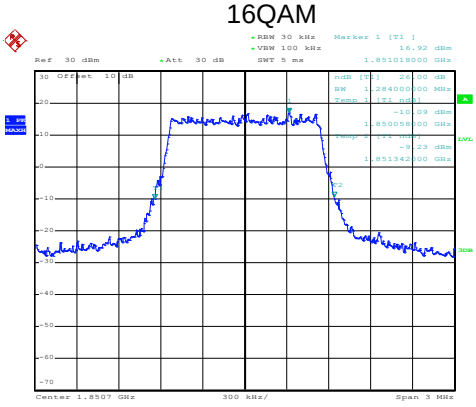


Date: 27.MAR.2021 16:18:12

Highest channel

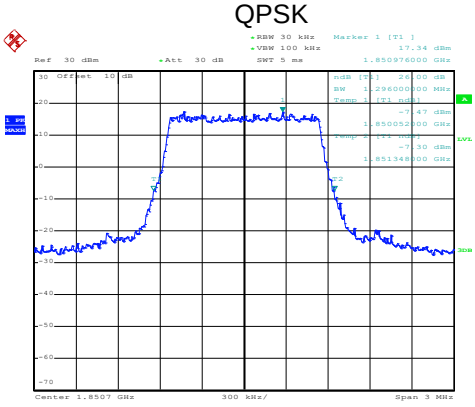
LTE Band 2: -26dBc bandwidth
BW: 1.4MHz

16QAM



Date: 27.MAR.2021 15:51:08

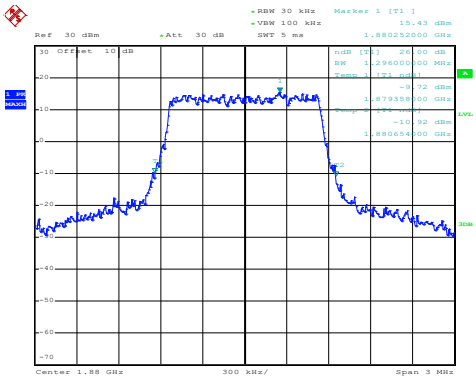
QPSK



Date: 27.MAR.2021 15:51:01

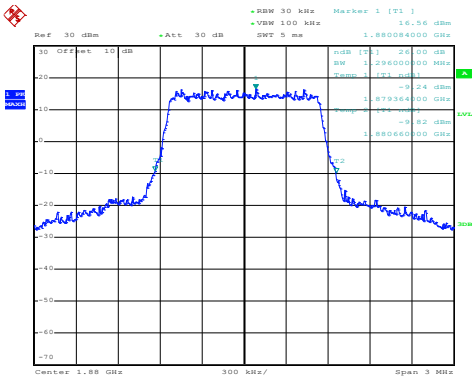
Lowest channel

16QAM



Date: 27.MAR.2021 15:52:29

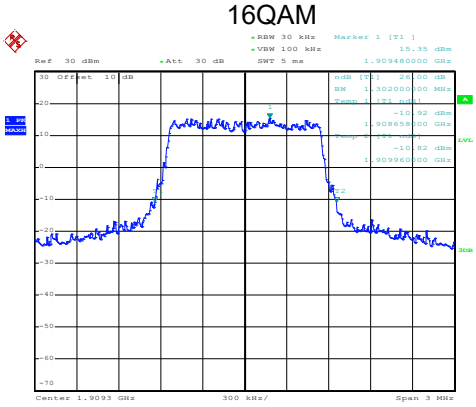
QPSK



Date: 27.MAR.2021 15:52:25

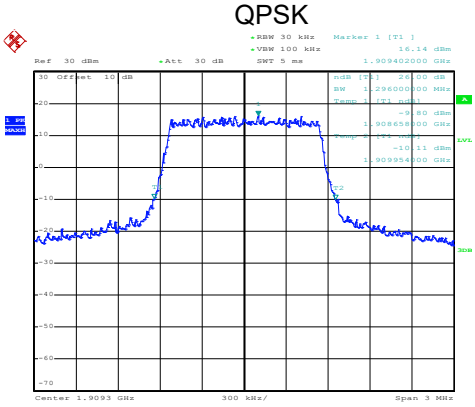
Middle channel

16QAM



Date: 27.MAR.2021 15:53:04

QPSK

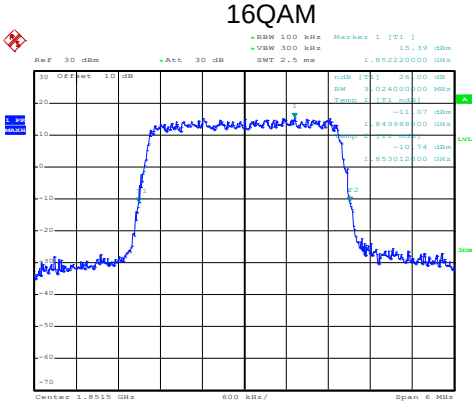


Date: 27.MAR.2021 15:53:01

Highest channel

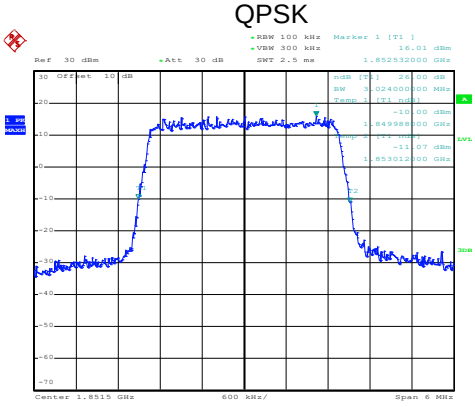
LTE Band 2: -26dBc bandwidth
BW: 3MHz

16QAM



Date: 28.MAR.2021 14:18:49

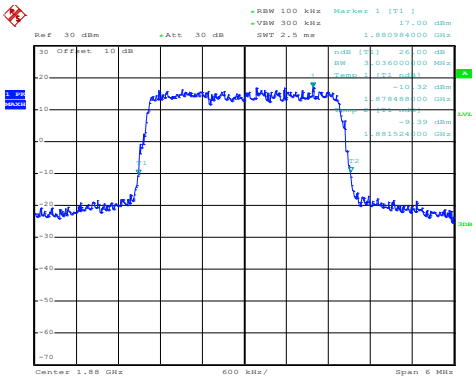
QPSK



Date: 28.MAR.2021 14:18:54

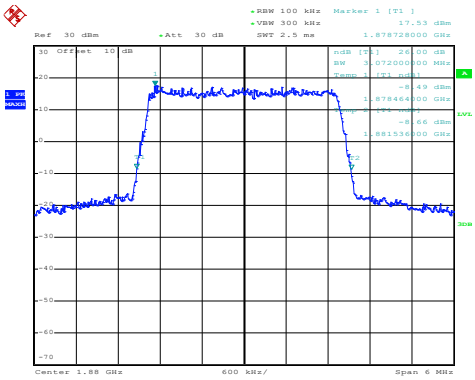
Lowest channel

16QAM



Date: 27.MAR.2021 15:55:16

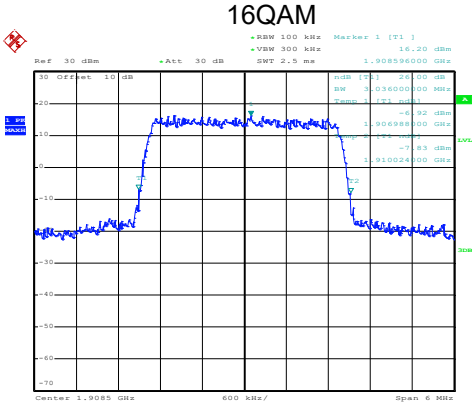
QPSK



Date: 27.MAR.2021 15:55:13

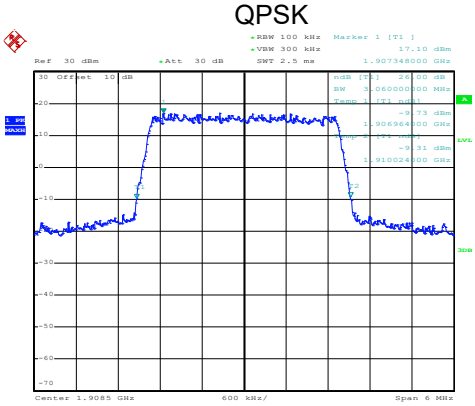
Middle channel

16QAM



Date: 27.MAR.2021 15:56:08

QPSK

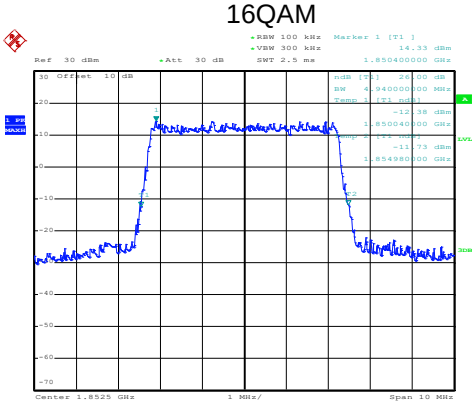


Date: 27.MAR.2021 15:56:04

Highest channel

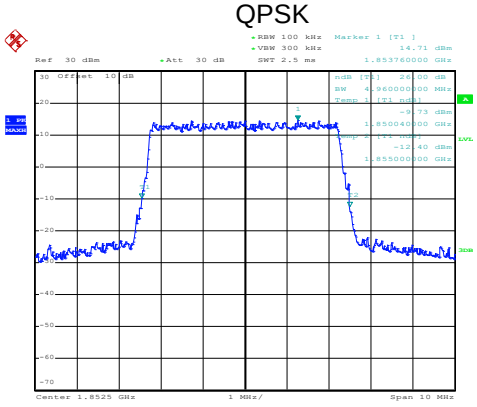
LTE Band 2: -26dBc bandwidth
BW: 5MHz

16QAM



Date: 27.MAR.2021 15:57:42

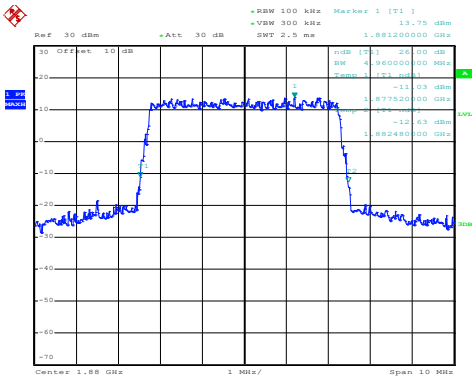
QPSK



Date: 27.MAR.2021 15:57:38

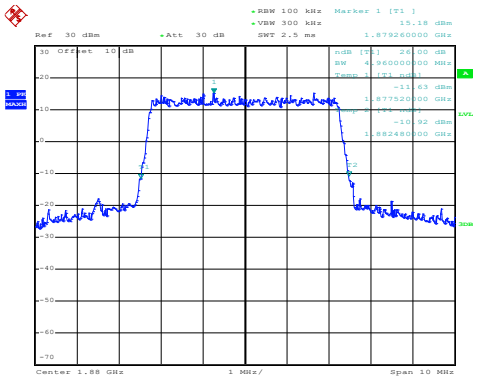
Lowest channel

16QAM



Date: 27.MAR.2021 15:58:24

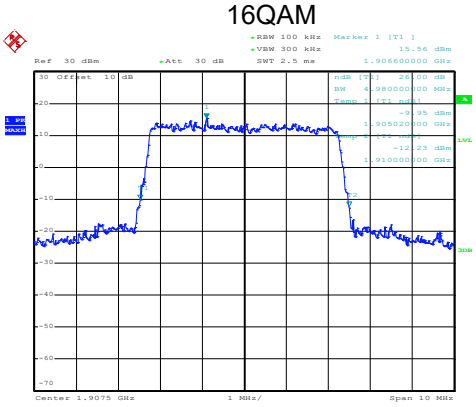
QPSK



Date: 27.MAR.2021 15:58:20

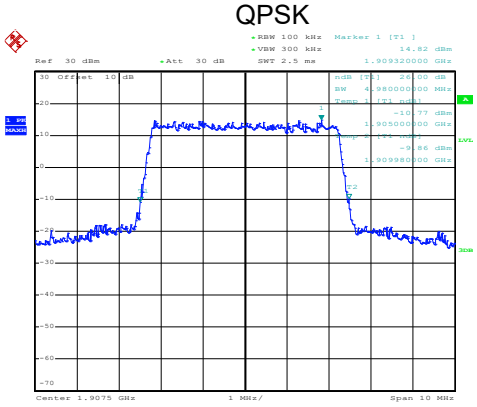
Middle channel

16QAM



Date: 27.MAR.2021 15:59:57

QPSK

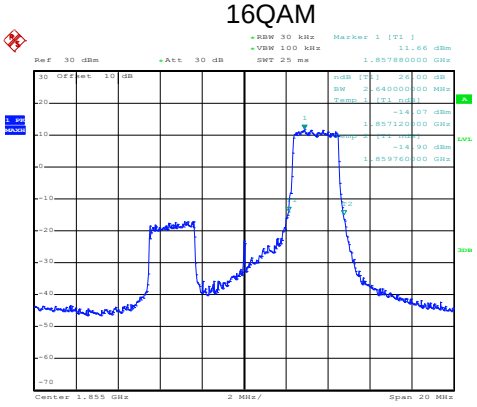


Date: 27.MAR.2021 15:59:49

Highest channel

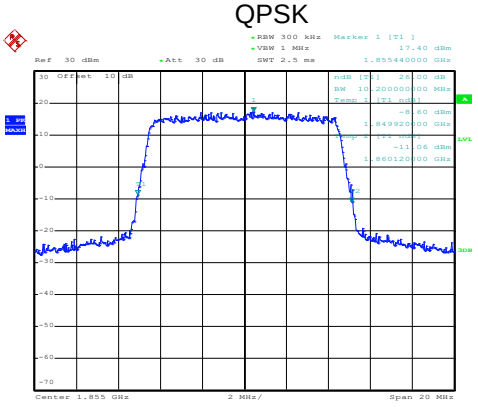
LTE Band 2: -26dBc bandwidth
BW: 10MHz

16QAM



Date: 28.MAR.2021 13:03:30

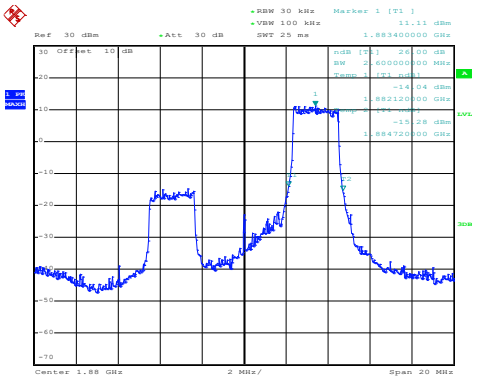
QPSK



Date: 27.MAR.2021 16:01:32

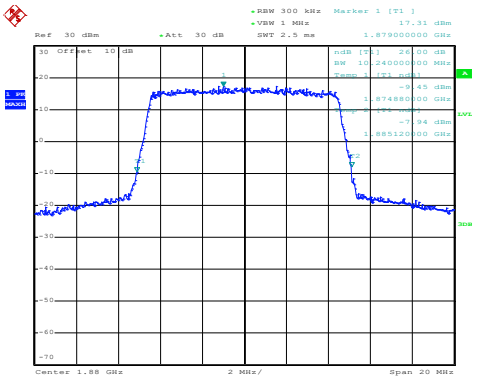
Lowest channel

16QAM



Date: 28.MAR.2021 13:04:37

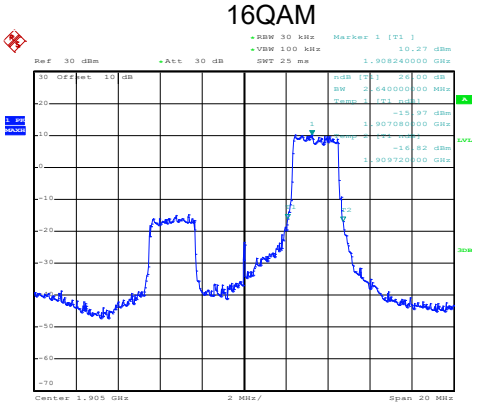
QPSK



Date: 27.MAR.2021 16:04:16

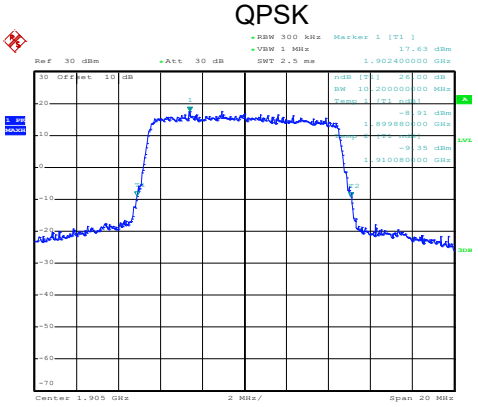
Middle channel

16QAM



Date: 28.MAR.2021 13:05:10

QPSK

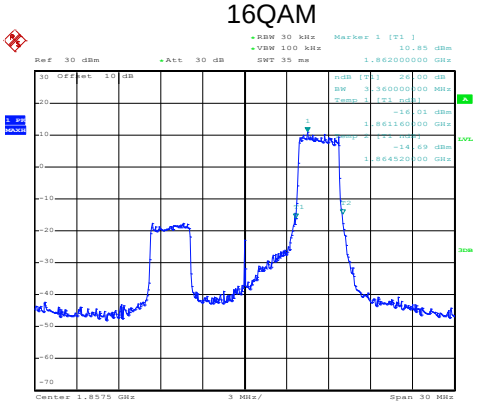


Date: 27.MAR.2021 16:05:33

Highest channel

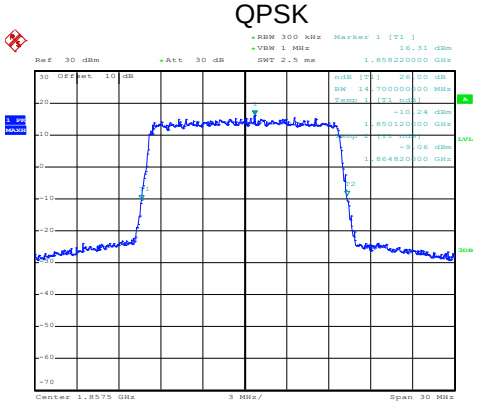
LTE Band 2: -26dBc bandwidth
BW: 15MHz

16QAM



Date: 28.MAR.2021 13:06:32

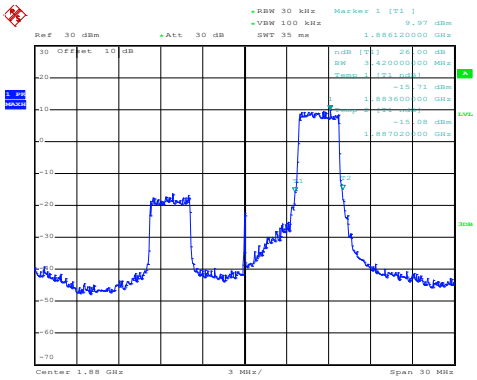
QPSK



Date: 27.MAR.2021 16:06:28

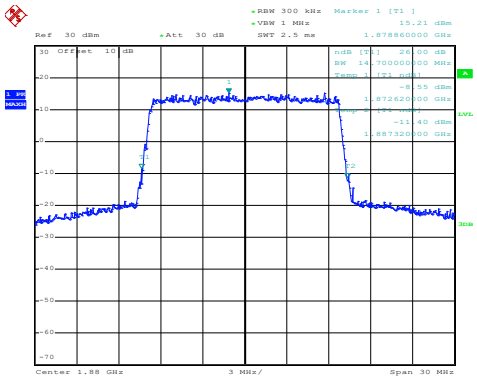
Lowest channel

16QAM



Date: 28.MAR.2021 13:06:55

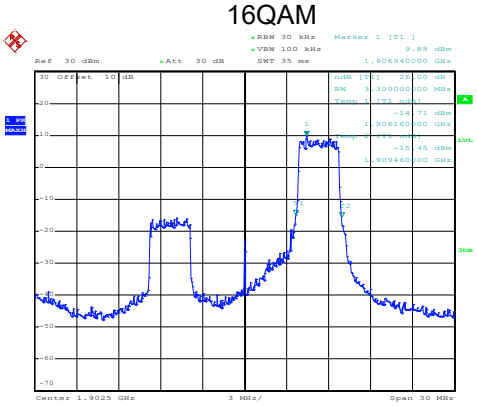
QPSK



Date: 27.MAR.2021 16:10:57

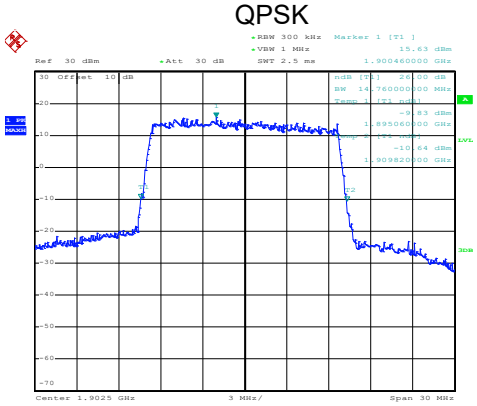
Middle channel

16QAM



Date: 28.MAR.2021 13:07:52

QPSK

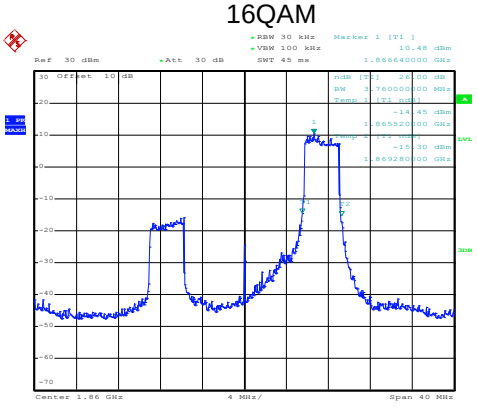


Date: 27.MAR.2021 16:11:42

Highest channel

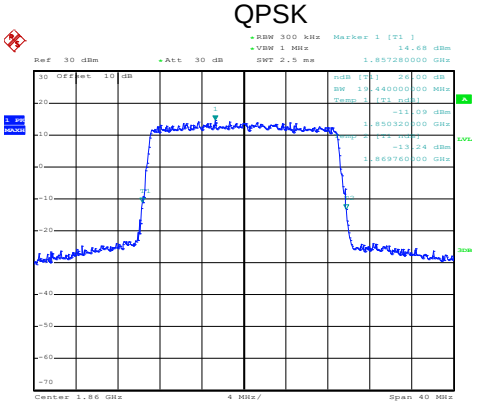
LTE Band 2: -26dBc bandwidth
BW: 20MHz

16QAM



Date: 28.MAR.2021 13:09:45

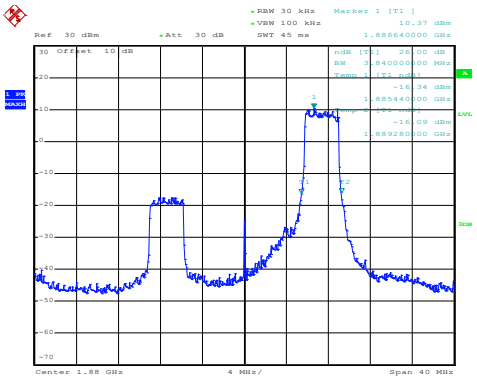
QPSK



Date: 27.MAR.2021 16:14:05

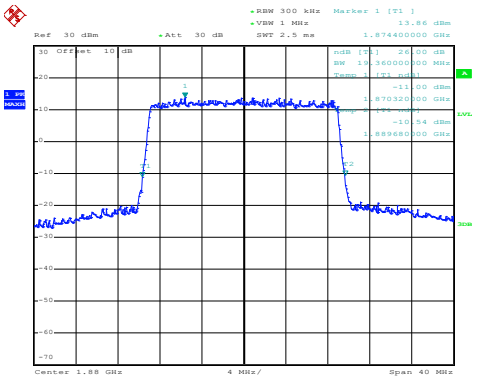
Lowest channel

16QAM



Date: 28.MAR.2021 13:11:39

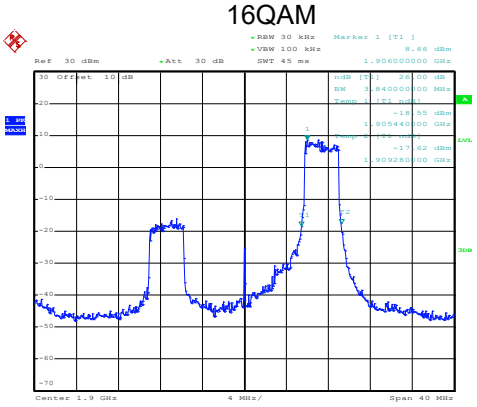
QPSK



Date: 27.MAR.2021 16:17:06

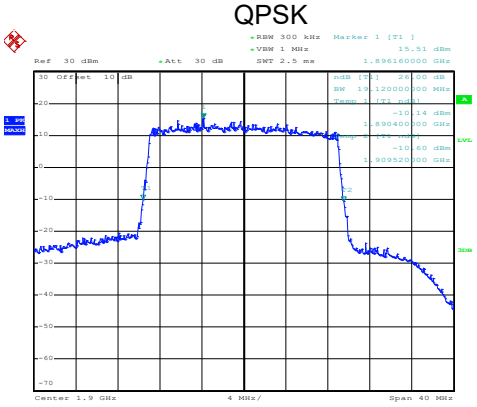
Middle channel

16QAM



Date: 28.MAR.2021 13:13:59

QPSK



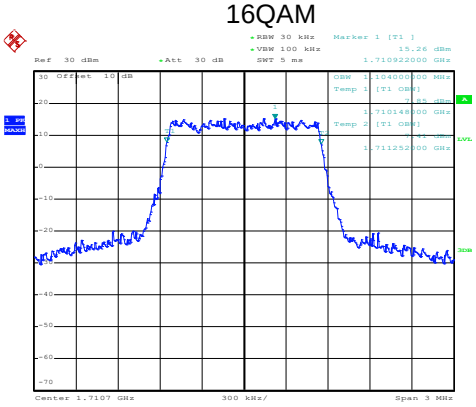
Date: 27.MAR.2021 16:17:49

Highest channel

LTE Band 4 part:

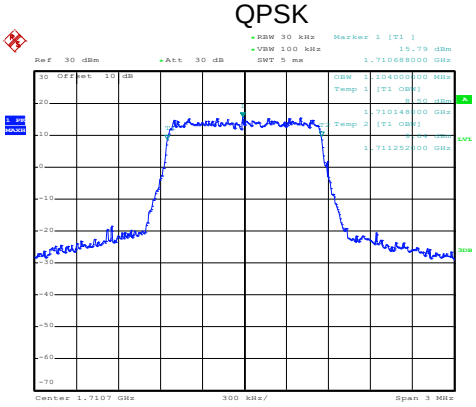
LTE Band 4: 99% Occupy bandwidth
BW: 1.4MHz

16QAM



Date: 27.MAR.2021 16:20:59

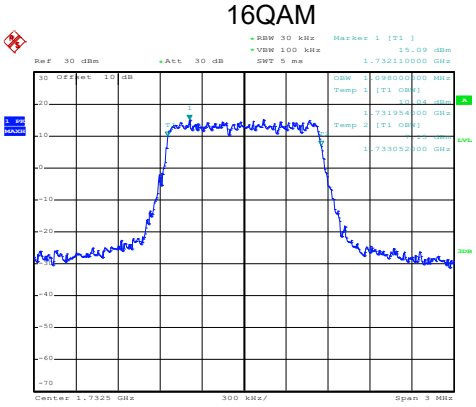
QPSK



Date: 27.MAR.2021 16:20:54

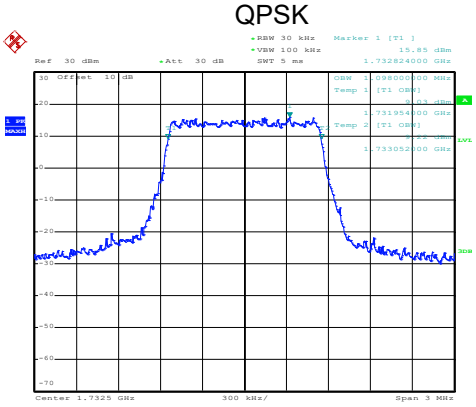
Lowest channel

16QAM



Date: 27.MAR.2021 16:21:38

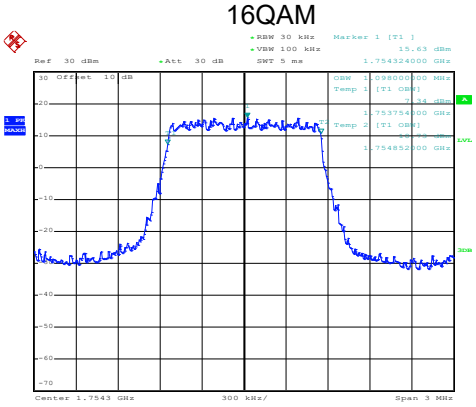
QPSK



Date: 27.MAR.2021 16:21:33

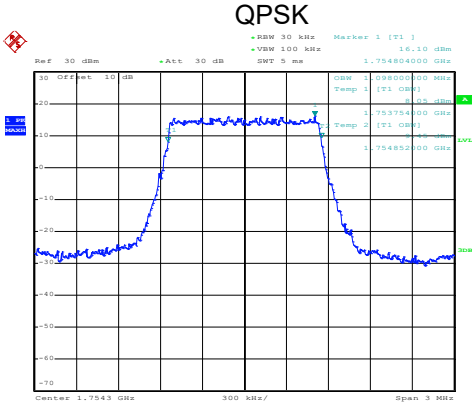
Middle channel

16QAM



Date: 27.MAR.2021 16:23:19

QPSK

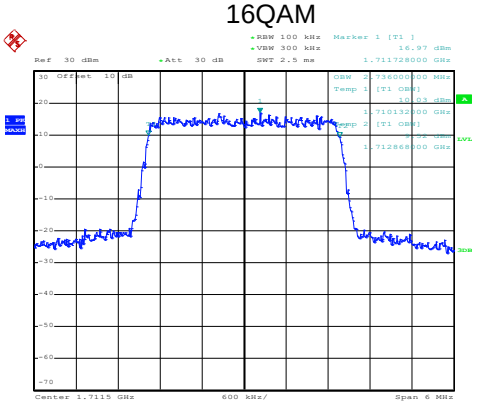


Date: 27.MAR.2021 16:23:13

Highest channel

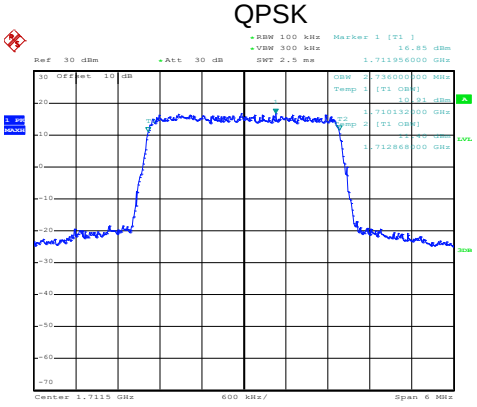
LTE Band 4: 99% Occupy bandwidth
BW: 3MHz

16QAM



Date: 27.MAR.2021 16:25:06

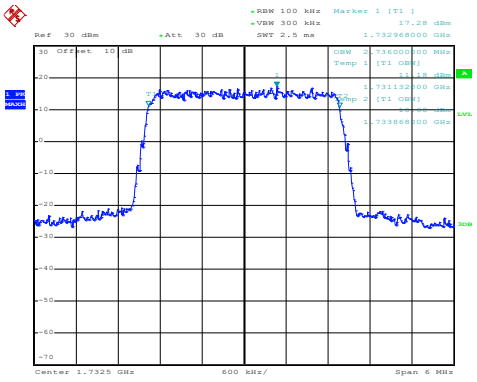
QPSK



Date: 27.MAR.2021 16:25:02

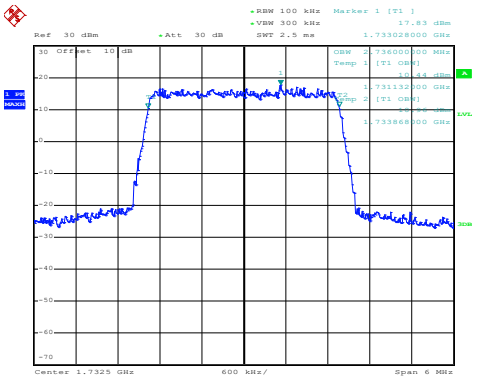
Lowest channel

16QAM



Date: 27.MAR.2021 16:25:38

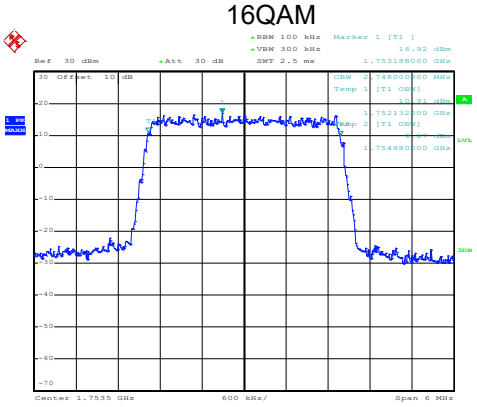
QPSK



Date: 27.MAR.2021 16:25:32

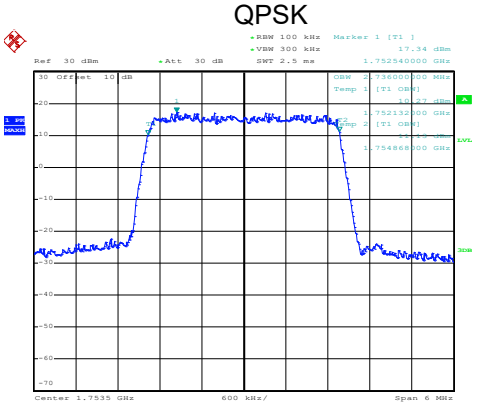
Middle channel

16QAM



Date: 27.MAR.2021 16:27:55

QPSK

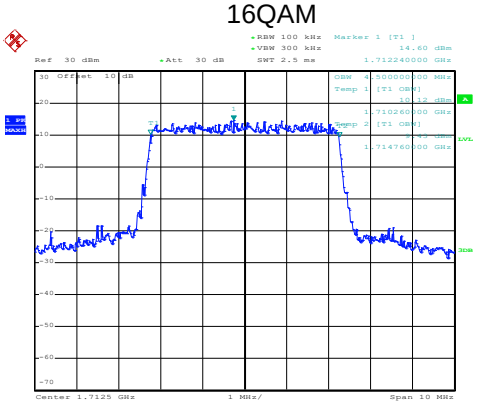


Date: 27.MAR.2021 16:27:50

Highest channel

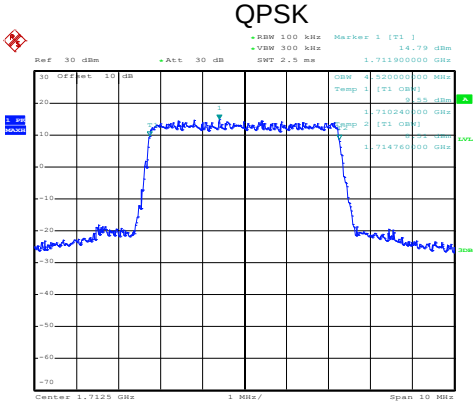
LTE Band 4: 99% Occupy bandwidth
BW: 5MHz

16QAM



Date: 27.MAR.2021 16:30:15

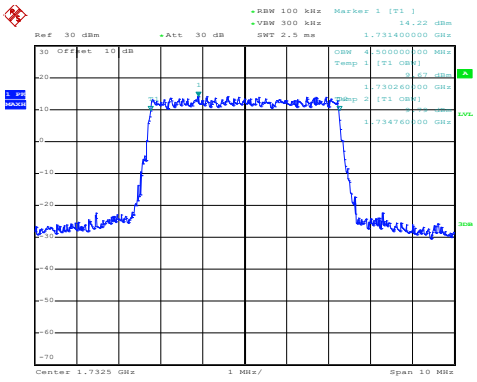
QPSK



Date: 27.MAR.2021 16:30:10

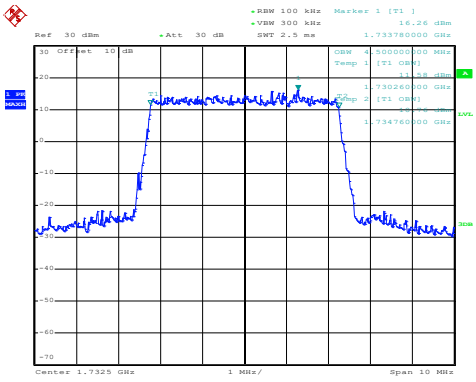
Lowest channel

16QAM



Date: 27.MAR.2021 16:30:55

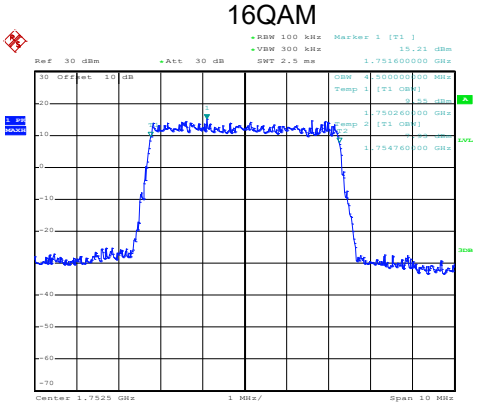
QPSK



Date: 27.MAR.2021 16:30:49

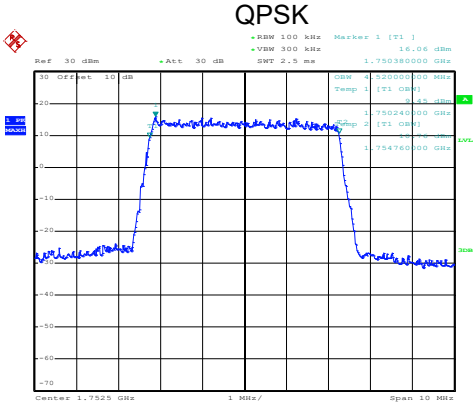
Middle channel

16QAM



Date: 27.MAR.2021 16:32:34

QPSK

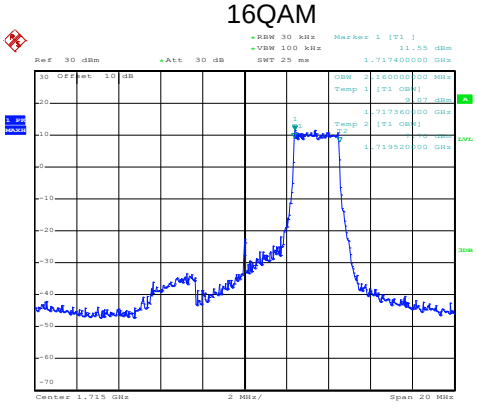


Date: 27.MAR.2021 16:32:29

Highest channel

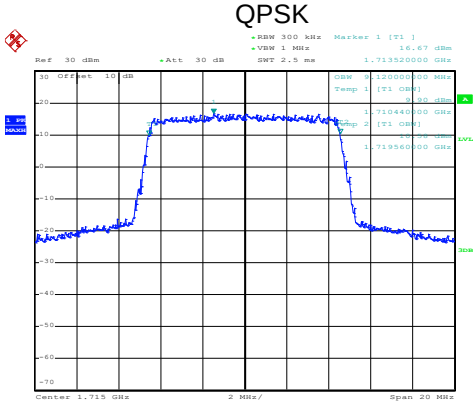
LTE Band 4: 99% Occupy bandwidth
BW: 10MHz

16QAM



Date: 28.MAR.2021 13:15:48

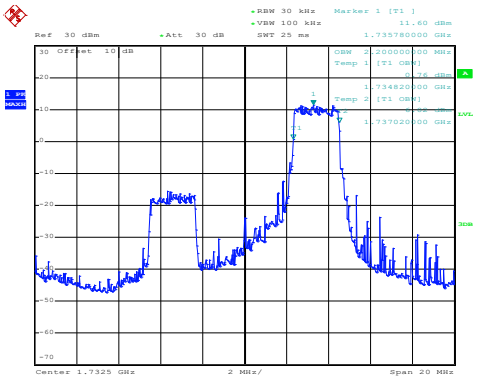
QPSK



Date: 27.MAR.2021 16:34:18

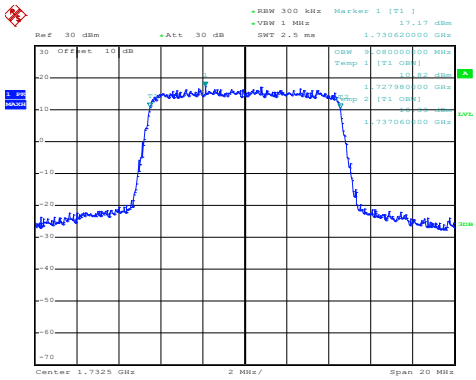
Lowest channel

16QAM



Date: 28.MAR.2021 13:16:06

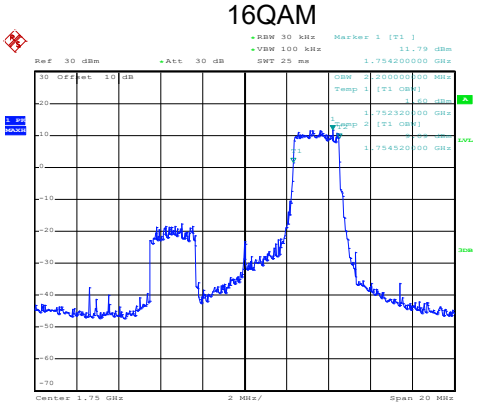
QPSK



Date: 27.MAR.2021 16:36:51

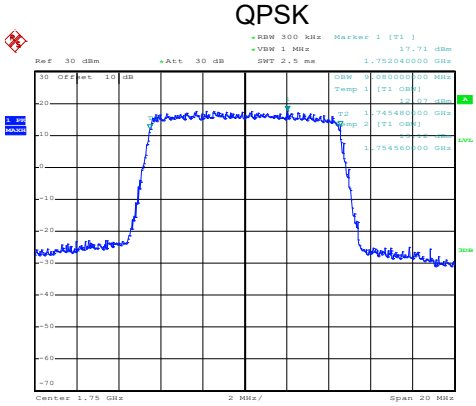
Middle channel

16QAM



Date: 28.MAR.2021 13:16:59

QPSK

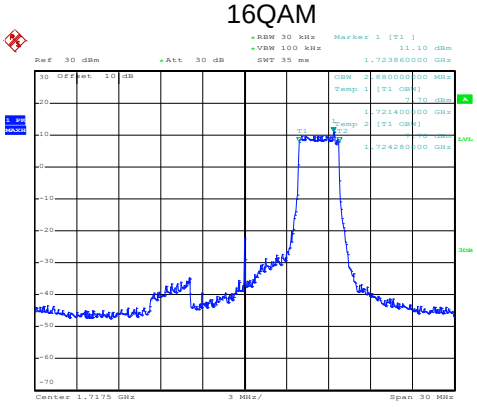


Date: 27.MAR.2021 16:41:52

Highest channel

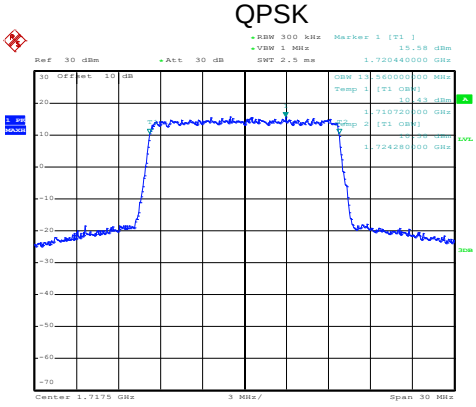
LTE Band 4: 99% Occupy bandwidth
BW: 15MHz

16QAM



Date: 28.MAR.2021 13:17:37

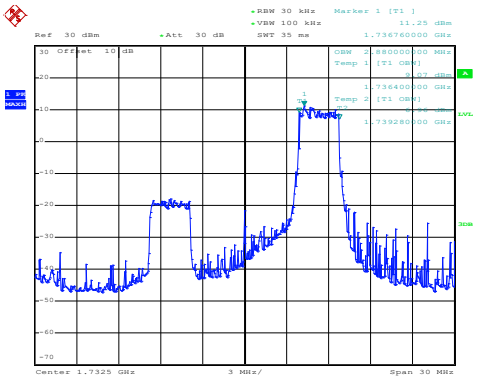
QPSK



Date: 27.MAR.2021 16:44:53

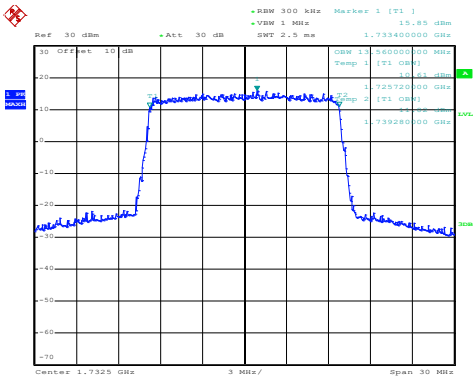
Lowest channel

16QAM



Date: 28.MAR.2021 13:18:27

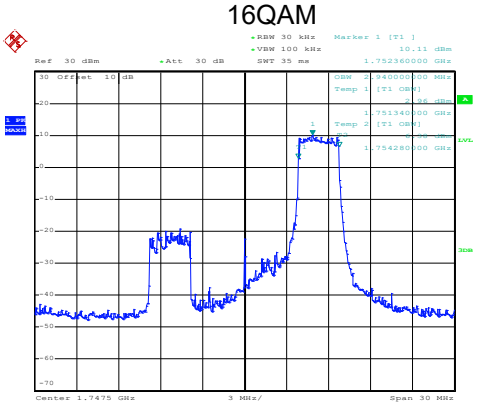
QPSK



Date: 27.MAR.2021 16:48:39

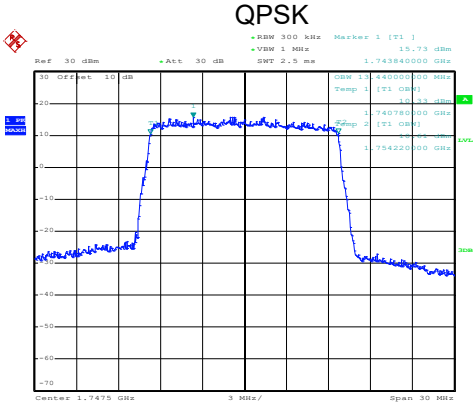
Middle channel

16QAM



Date: 28.MAR.2021 13:18:49

QPSK

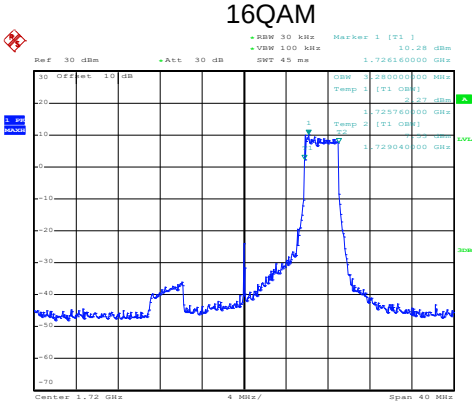


Date: 27.MAR.2021 16:50:52

Highest channel

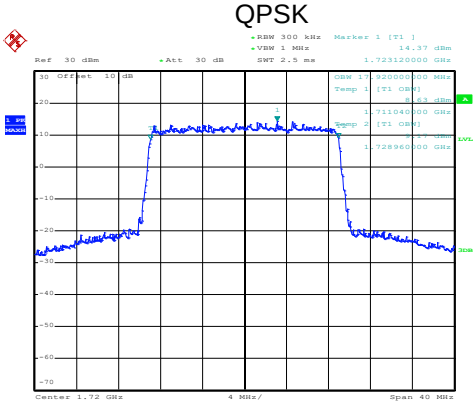
LTE Band 4: 99% Occupy bandwidth
BW: 20MHz

16QAM



Date: 28.MAR.2021 13:19:59

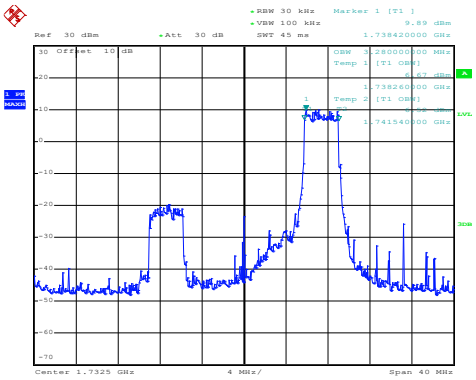
QPSK



Date: 27.MAR.2021 16:55:12

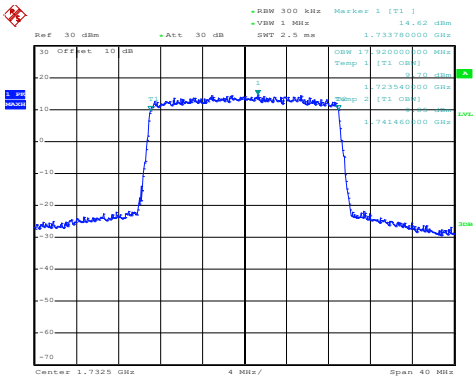
Lowest channel

16QAM



Date: 28.MAR.2021 13:20:16

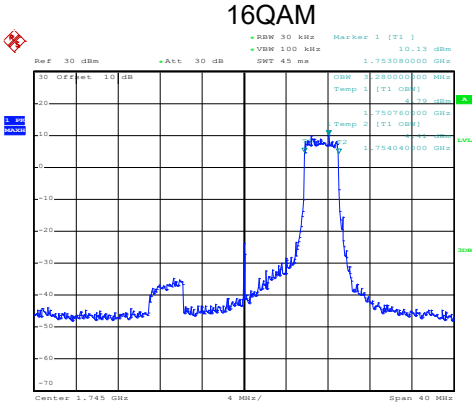
QPSK



Date: 27.MAR.2021 16:58:06

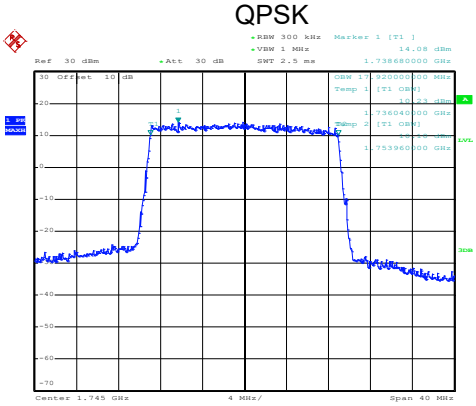
Middle channel

16QAM



Date: 28.MAR.2021 13:21:21

QPSK

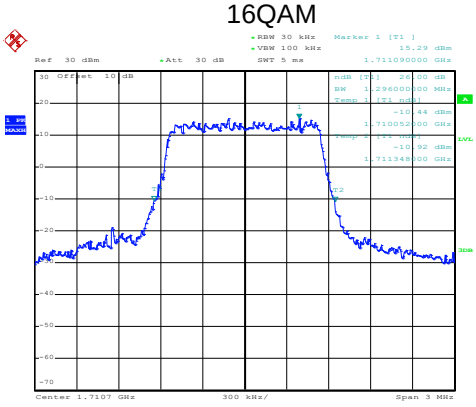


Date: 27.MAR.2021 17:00:54

Highest channel

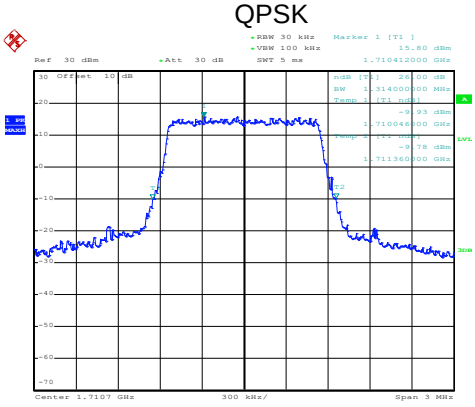
LTE Band 4: -26dBc bandwidth
BW: 1.4MHz

16QAM



Date: 27.MAR.2021 16:20:33

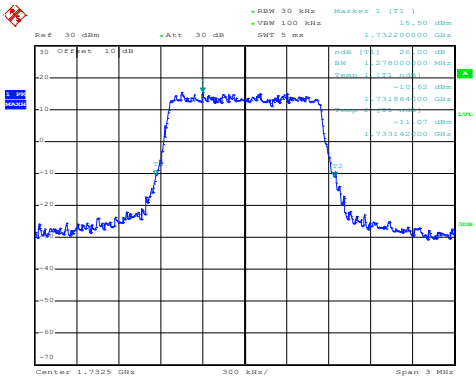
QPSK



Date: 27.MAR.2021 16:20:28

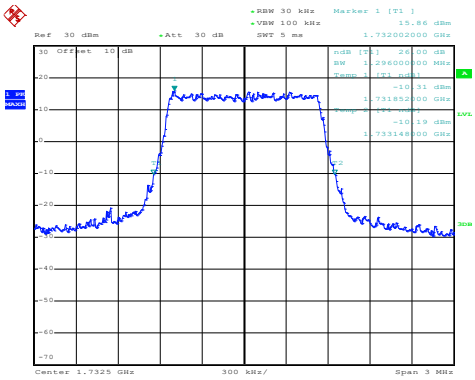
Lowest channel

16QAM



Date: 27.MAR.2021 16:22:01

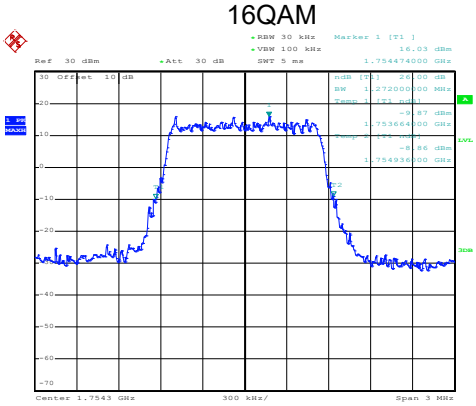
QPSK



Date: 27.MAR.2021 16:21:56

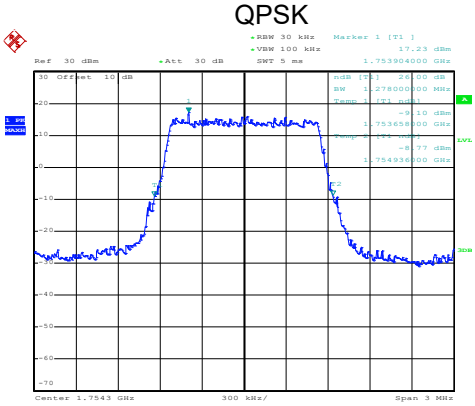
Middle channel

16QAM



Date: 27.MAR.2021 16:23:44

QPSK

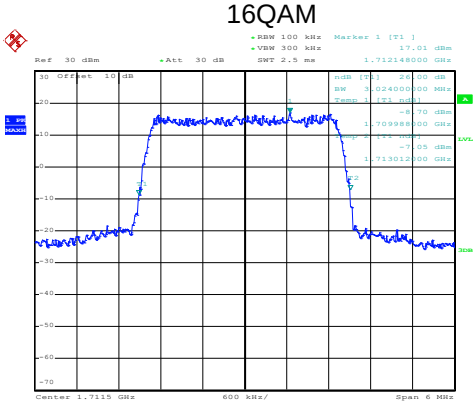


Date: 27.MAR.2021 16:23:40

Highest channel

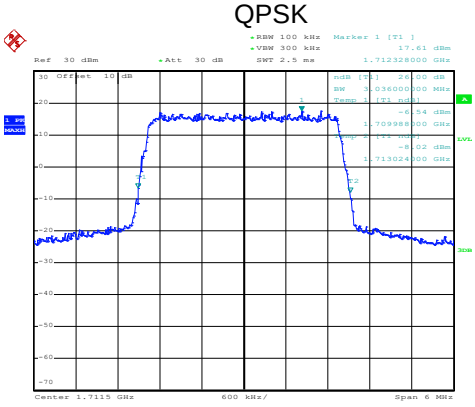
LTE Band 4: -26dBc bandwidth
BW: 3MHz

16QAM



Date: 27.MAR.2021 16:24:41

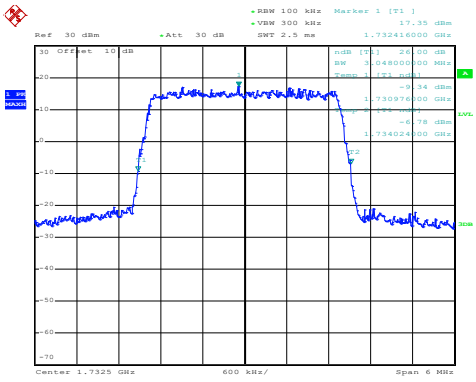
QPSK



Date: 27.MAR.2021 16:24:36

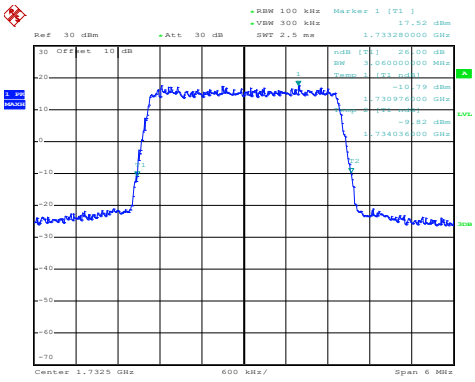
Lowest channel

16QAM



Date: 27.MAR.2021 16:26:03

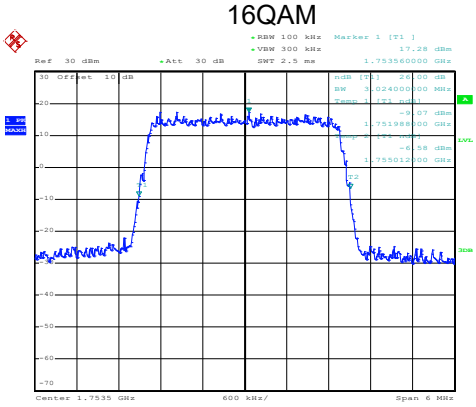
QPSK



Date: 27.MAR.2021 16:25:57

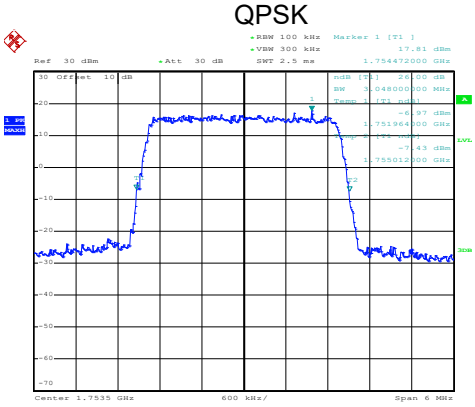
Middle channel

16QAM



Date: 27.MAR.2021 16:27:30

QPSK

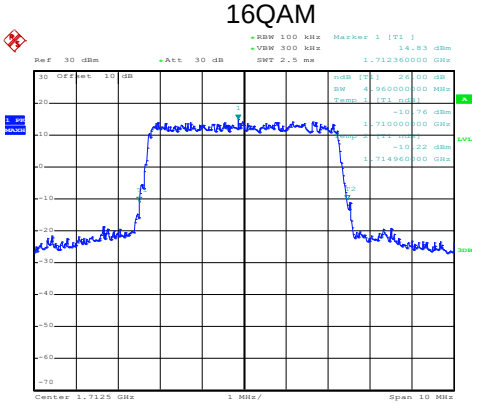


Date: 27.MAR.2021 16:27:26

Highest channel

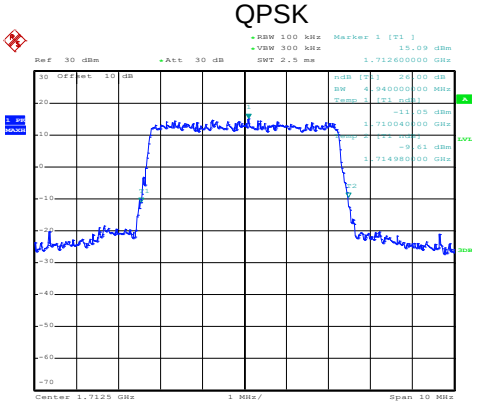
LTE Band 4: -26dBc bandwidth
BW: 5MHz

16QAM



Date: 27.MAR.2021 16:29:47

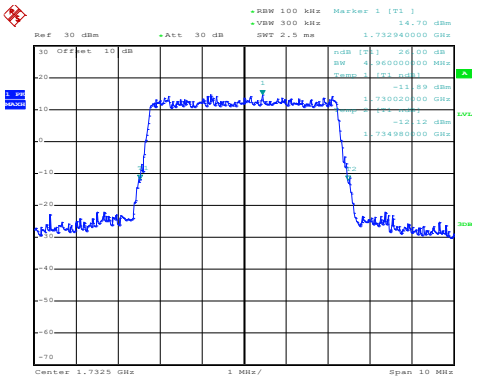
QPSK



Date: 27.MAR.2021 16:29:33

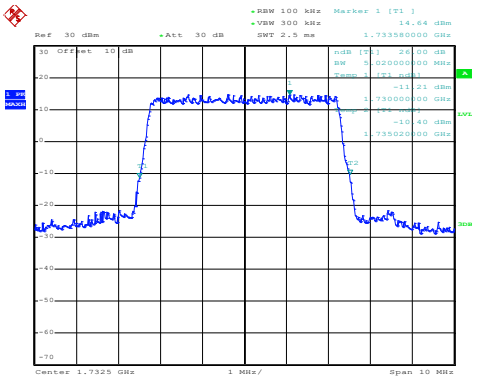
Lowest channel

16QAM



Date: 27.MAR.2021 16:31:20

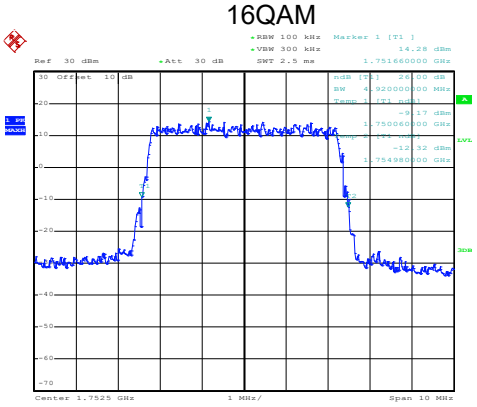
QPSK



Date: 27.MAR.2021 16:31:14

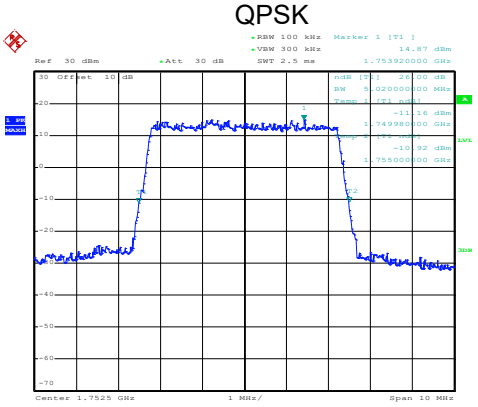
Middle channel

16QAM



Date: 27.MAR.2021 16:32:57

QPSK

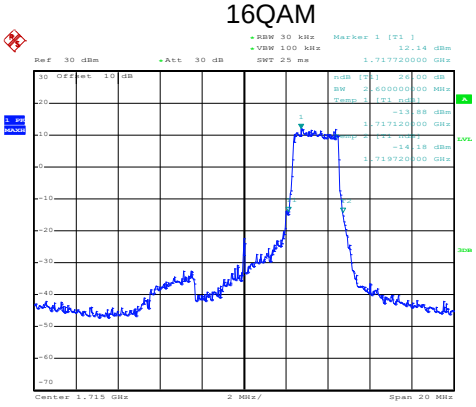


Date: 27.MAR.2021 16:32:53

Highest channel

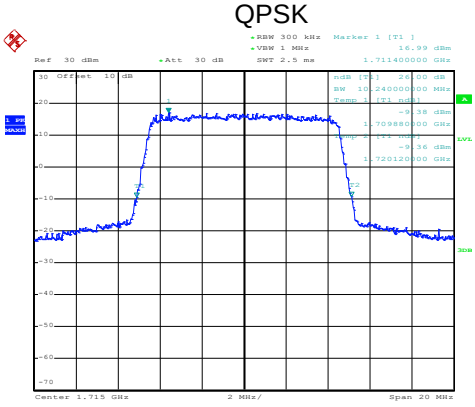
LTE Band 4: -26dBc bandwidth
BW: 10MHz

16QAM



Date: 28.MAR.2021 13:15:36

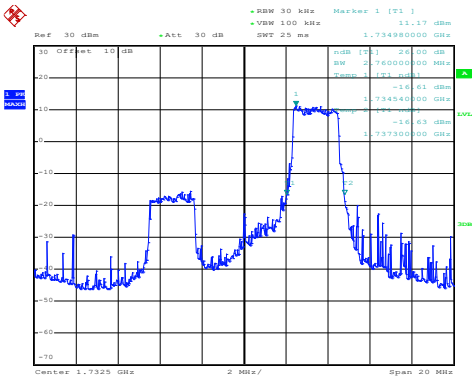
QPSK



Date: 27.MAR.2021 16:33:52

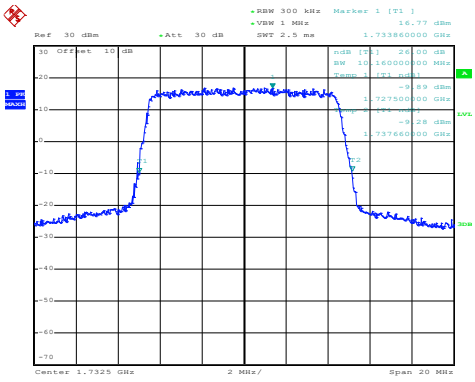
Lowest channel

16QAM



Date: 28.MAR.2021 13:16:18

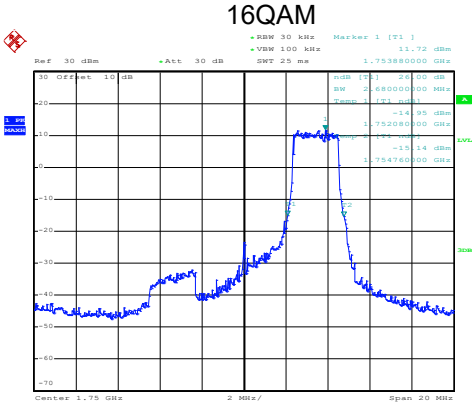
QPSK



Date: 27.MAR.2021 16:37:17

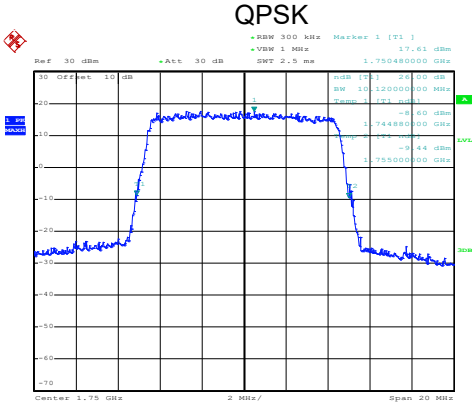
Middle channel

16QAM



Date: 28.MAR.2021 13:16:44

QPSK

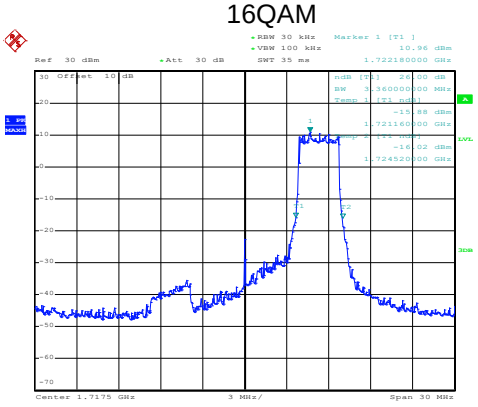


Date: 27.MAR.2021 16:41:27

Highest channel

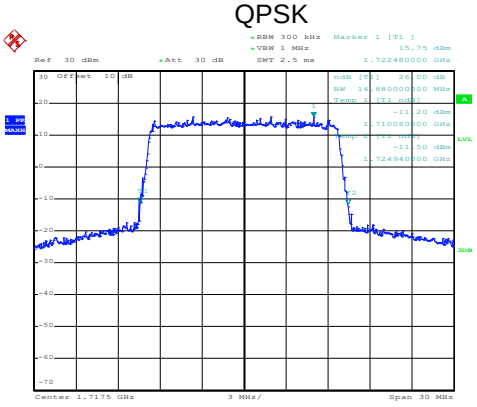
LTE Band 4: -26dBc bandwidth
BW: 15MHz

16QAM



Date: 28.MAR.2021 13:17:49

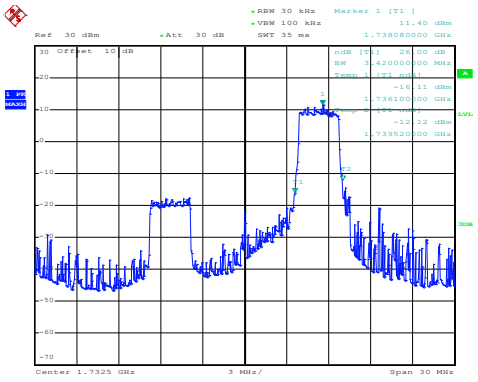
QPSK



Date: 27.MAR.2021 16:45:22

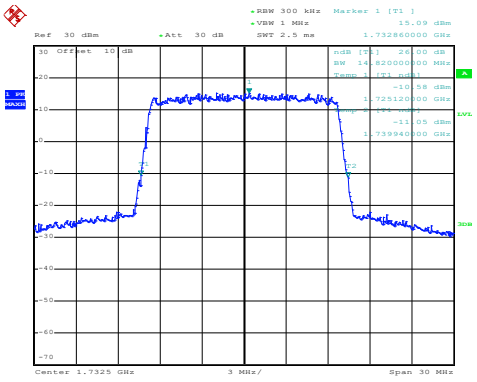
Lowest channel

16QAM



Date: 28.MAR.2021 13:18:15

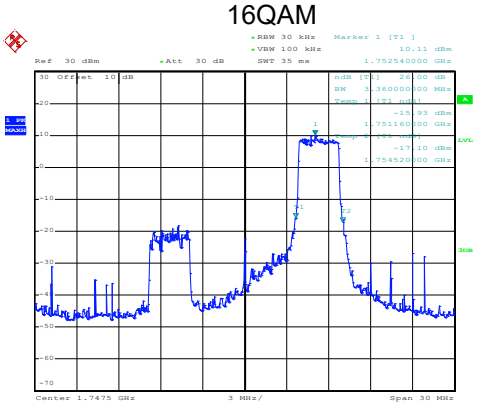
QPSK



Date: 27.MAR.2021 16:48:07

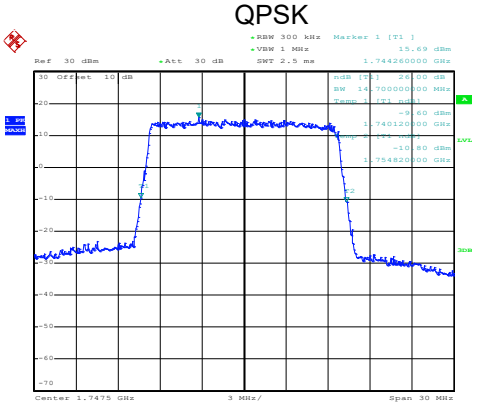
Middle channel

16QAM



Date: 28.MAR.2021 13:19:01

QPSK

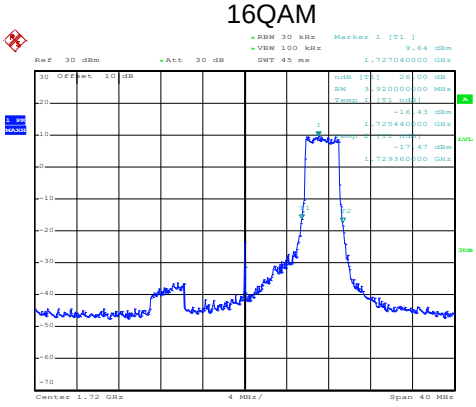


Date: 27.MAR.2021 16:51:25

Highest channel

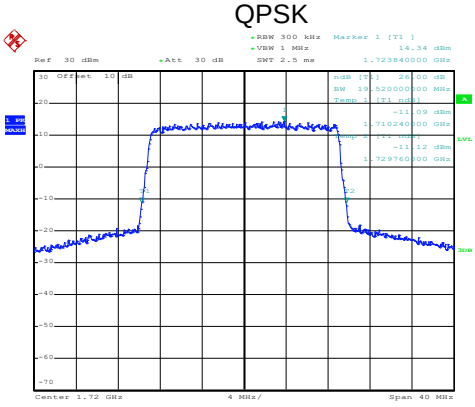
LTE Band 4: -26dBc bandwidth
BW: 20MHz

16QAM



Date: 28.MAR.2021 13:19:45

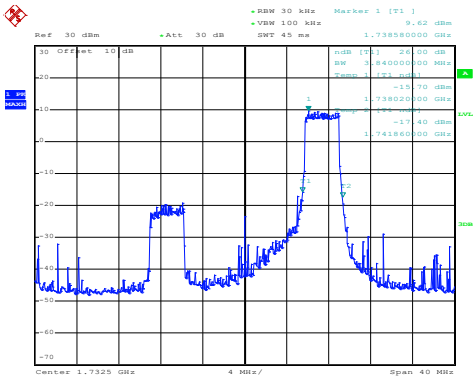
QPSK



Date: 27.MAR.2021 16:54:33

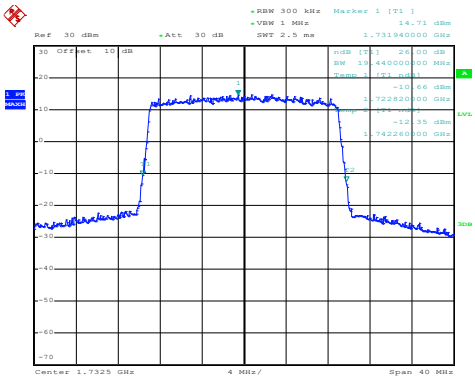
Lowest channel

16QAM



Date: 28.MAR.2021 13:20:28

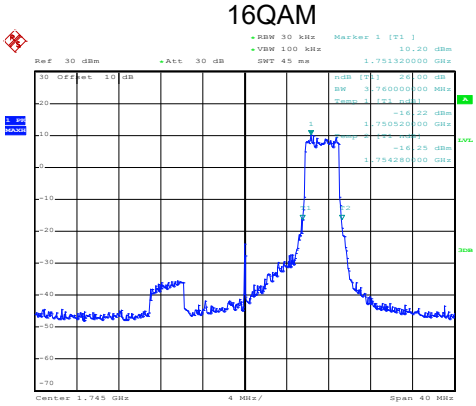
QPSK



Date: 27.MAR.2021 16:57:23

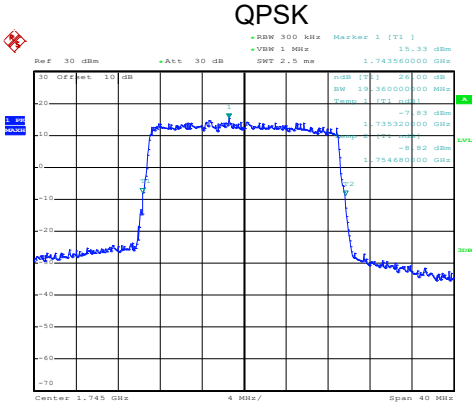
Middle channel

16QAM



Date: 28.MAR.2021 13:21:08

QPSK



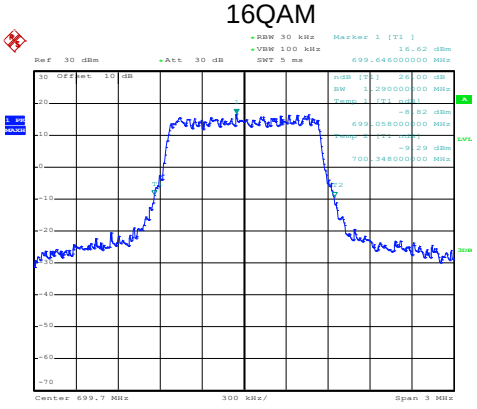
Date: 27.MAR.2021 17:00:23

Highest channel

LTE Band 12 part:

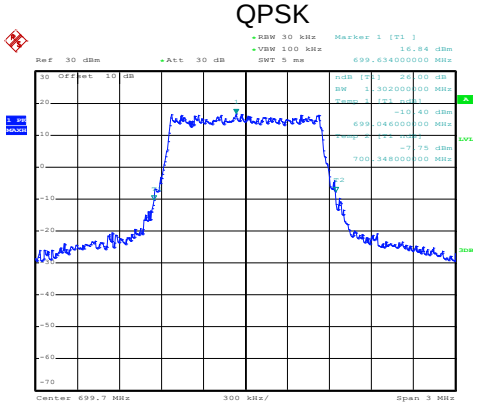
LTE Band 12: 99% Occupy bandwidth
BW: 1.4MHz

16QAM



Date: 27.MAR.2021 17:15:00

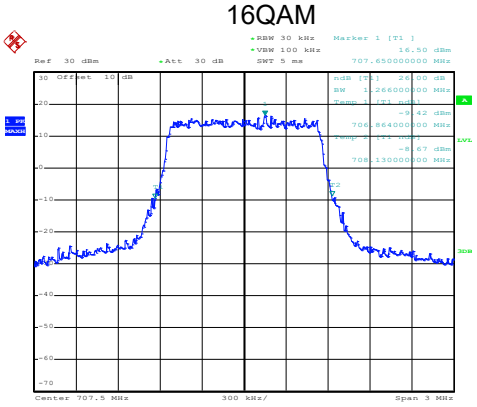
QPSK



Date: 27.MAR.2021 17:14:55

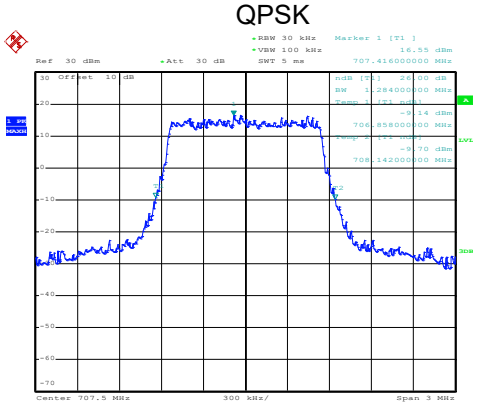
Lowest channel

16QAM



Date: 27.MAR.2021 17:16:50

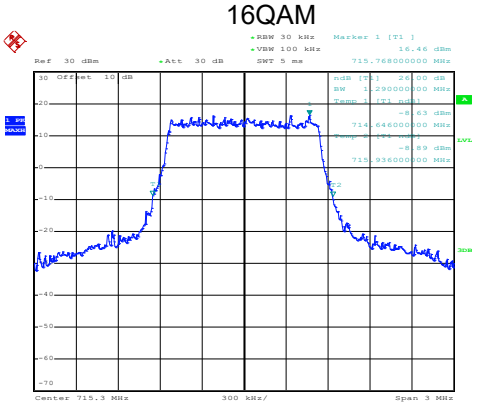
QPSK



Date: 27.MAR.2021 17:16:45

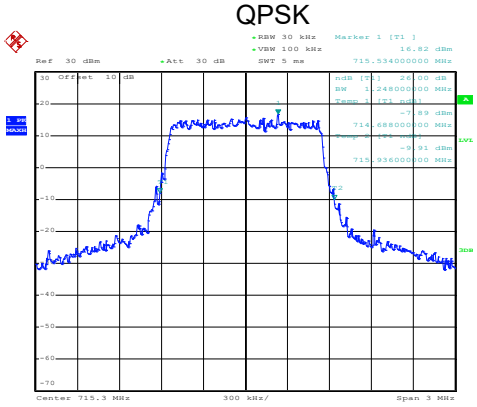
Middle channel

16QAM



Date: 27.MAR.2021 17:17:27

QPSK

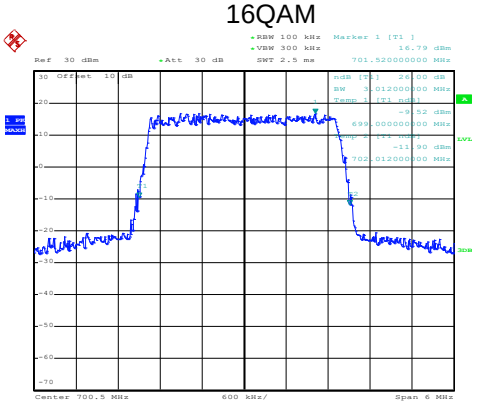


Date: 27.MAR.2021 17:17:22

Highest channel

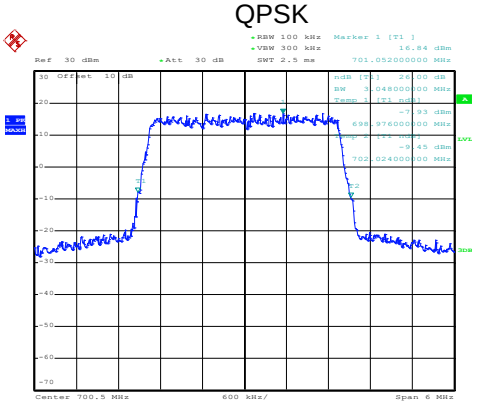
LTE Band 12: 99% Occupy bandwidth
BW: 3MHz

16QAM



Date: 27.MAR.2021 17:19:31

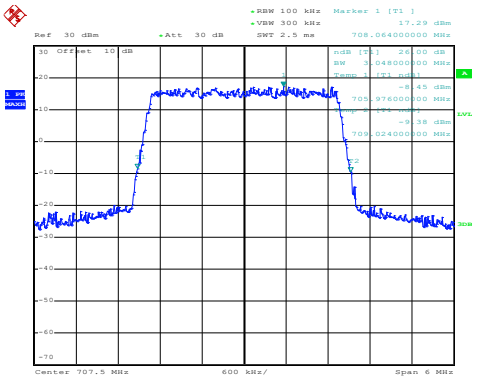
QPSK



Date: 27.MAR.2021 17:19:25

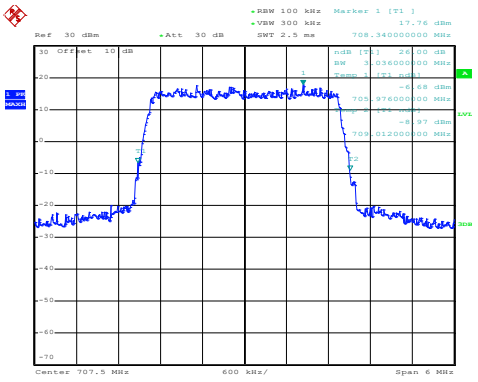
Lowest channel

16QAM



Date: 27.MAR.2021 17:20:24

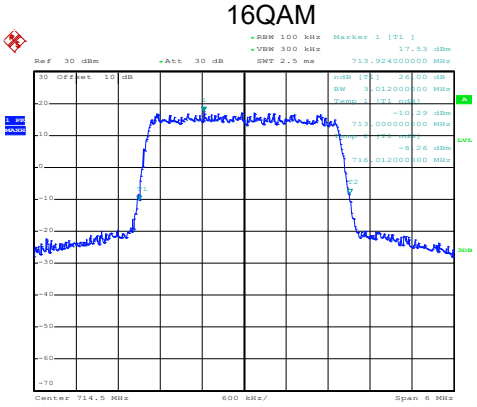
QPSK



Date: 27.MAR.2021 17:20:18

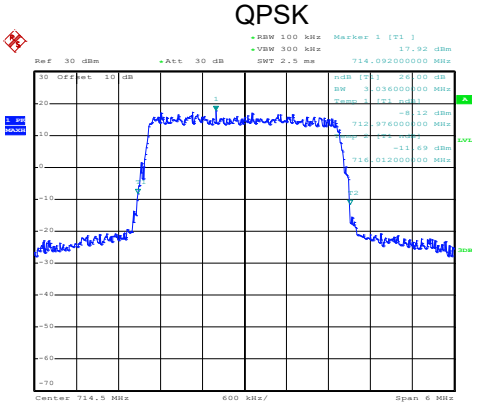
Middle channel

16QAM



Date: 27.MAR.2021 17:21:54

QPSK

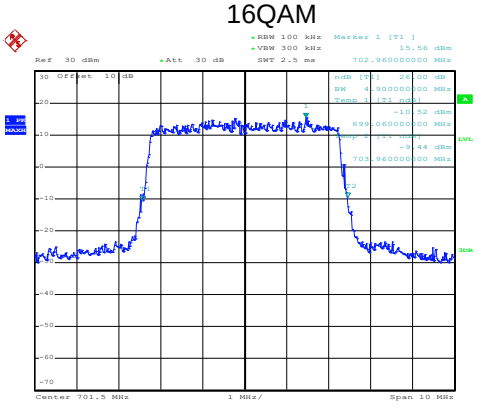


Date: 27.MAR.2021 17:21:49

Highest channel

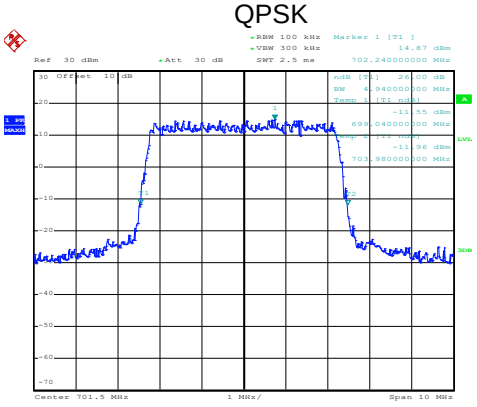
LTE Band 12: 99% Occupy bandwidth
BW: 5MHz

16QAM



Date: 27.MAR.2021 17:22:59

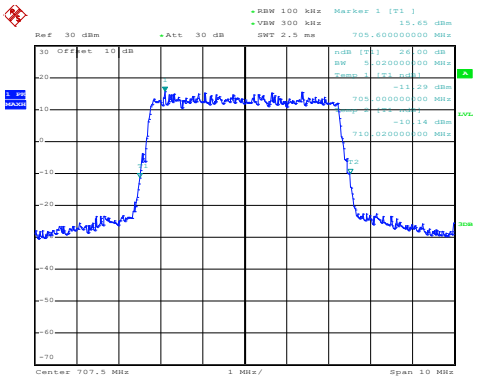
QPSK



Date: 27.MAR.2021 17:22:54

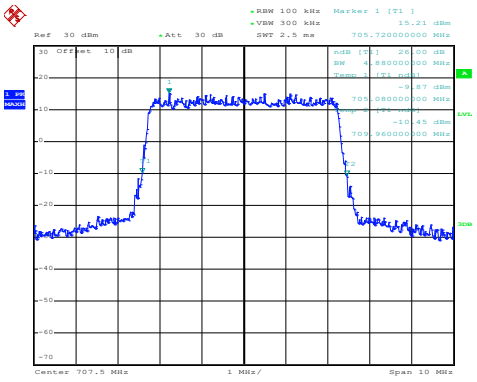
Lowest channel

16QAM



Date: 27.MAR.2021 17:24:31

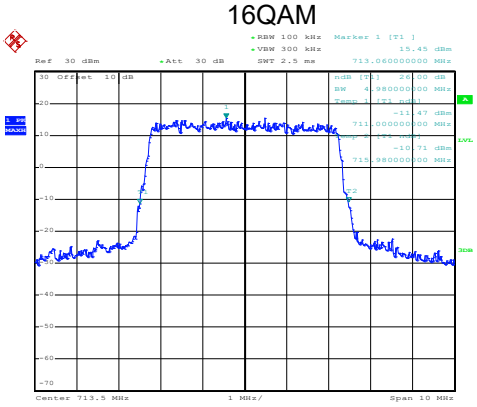
QPSK



Date: 27.MAR.2021 17:24:25

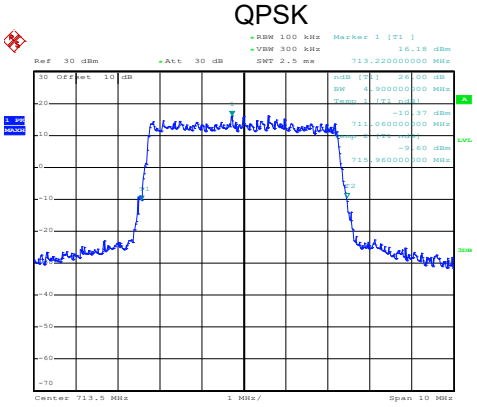
Middle channel

16QAM



Date: 27.MAR.2021 17:26:02

QPSK

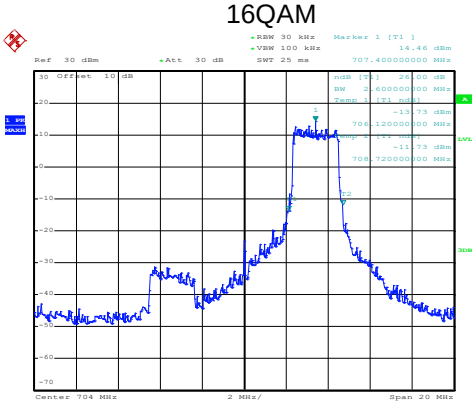


Date: 27.MAR.2021 17:25:55

Highest channel

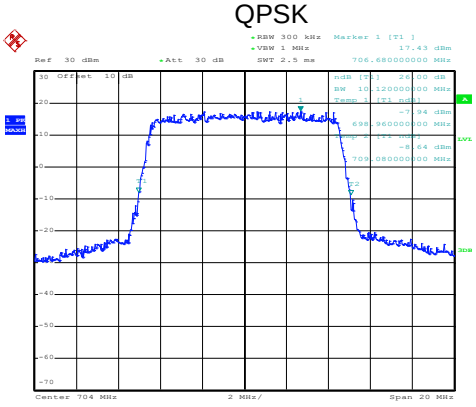
LTE Band 12: 99% Occupy bandwidth
BW: 10MHz

16QAM



Date: 27.MAR.2021 17:49:16

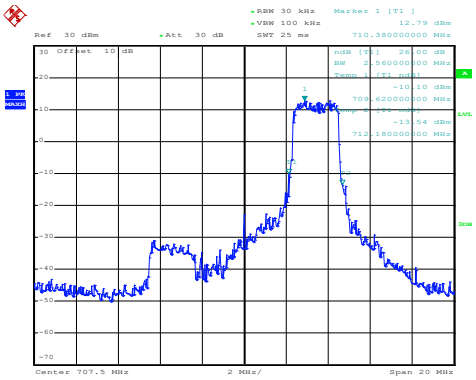
QPSK



Date: 27.MAR.2021 17:27:54

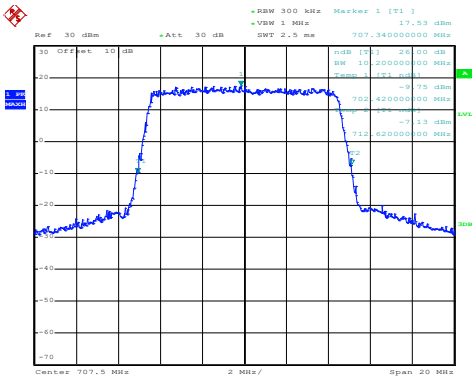
Lowest channel

16QAM



Date: 27.MAR.2021 17:52:22

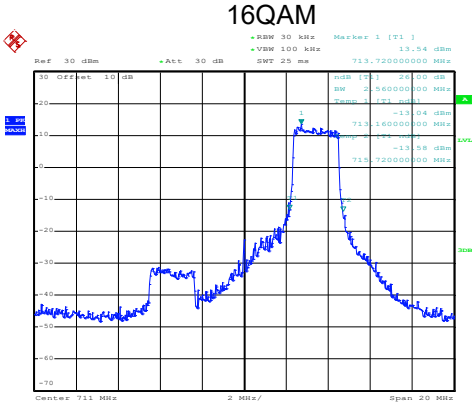
QPSK



Date: 27.MAR.2021 17:30:12

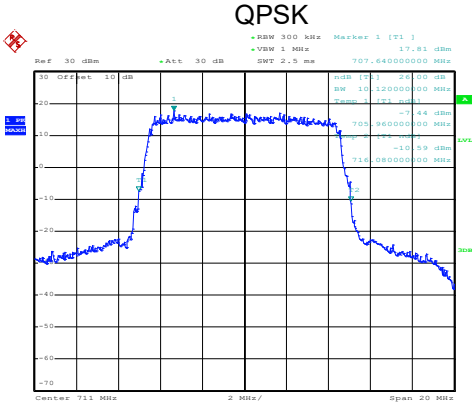
Middle channel

16QAM



Date: 27.MAR.2021 17:54:23

QPSK

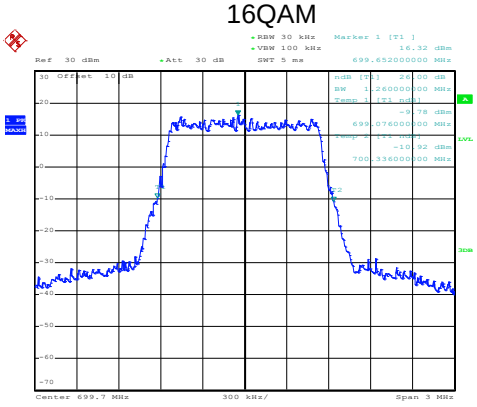


Date: 27.MAR.2021 17:32:18

Highest channel

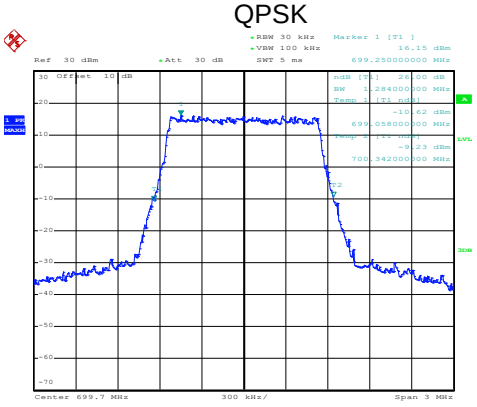
LTE Band 12: -26dBc bandwidth
BW: 1.4MHz

16QAM



Date: 28.MAR.2021 12:45:07

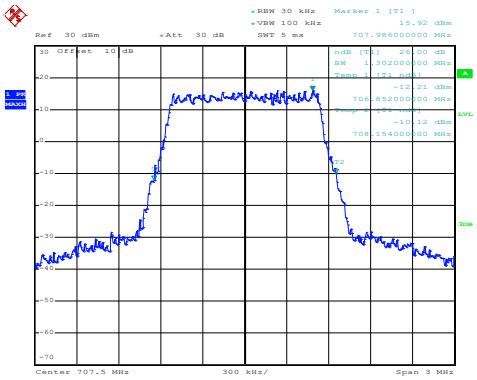
QPSK



Date: 28.MAR.2021 12:45:03

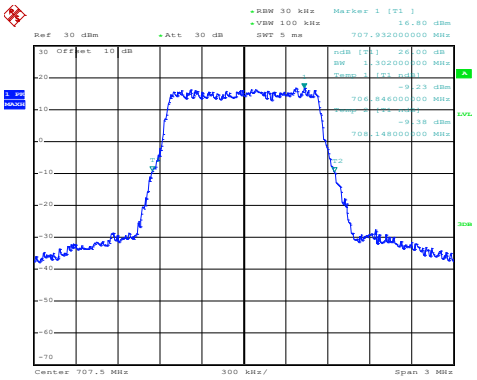
Lowest channel

16QAM



Date: 28.MAR.2021 12:46:54

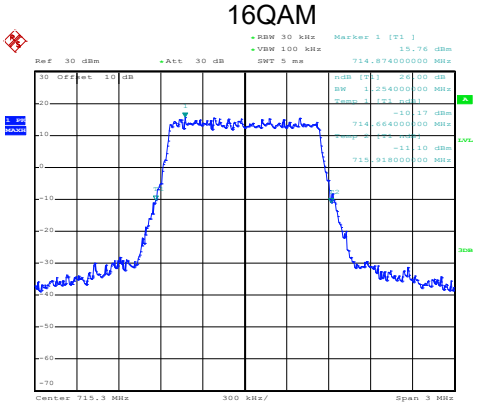
QPSK



Date: 28.MAR.2021 12:46:50

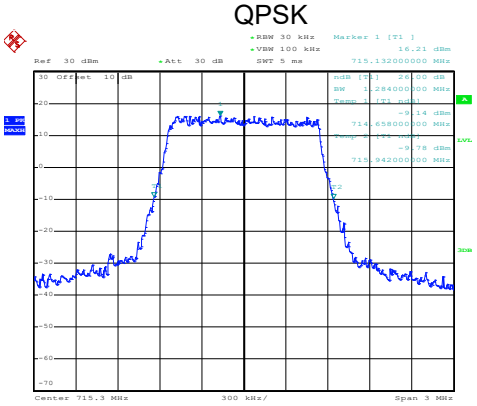
Middle channel

16QAM



Date: 28.MAR.2021 12:48:34

QPSK



Date: 28.MAR.2021 12:48:30

Highest channel