



FCC RF Test Report

APPLICANT : HMD Global Oy
EQUIPMENT : Mobile phone
BRAND NAME : Nokia
MODEL NAME : TA-1222
FCC ID : 2AJOTTA-1222
STANDARD : 47 CFR Part 2, 22(H), 24(E), 27(L), 27(H)
CLASSIFICATION : PCS Licensed Transmitter Held to Ear (PCE)

The product was received on Dec. 31, 2019 and completely tested on Feb. 22, 2020. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.26-2015 and shown compliance with the applicable technical standards.

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

Louis Wu

Approved by: Louis Wu



SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory

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SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.4	§2.1046	Conducted Output Power	Reporting Only	PASS	-
	§22.913(a)(5)	Effective Radiated Power (Band 5)	ERP < 7 Watt		
	§27.50(c)(10)	Effective Radiated Power (Band 12)	ERP < 3 Watt		
	§24.232(c)	Equivalent Isotropic Radiated Power (Band 2)	EIRP < 2Watt		
	§27.50(d)(4)	Equivalent Isotropic Radiated Power (Band 4) (Band 66)	EIRP < 1Watt		
3.5	§24.232(d)	Peak-to-Average Ratio	<13 dB	PASS	-
3.6	§2.1049	Occupied Bandwidth	Reporting Only	PASS	-
3.7	§2.1051 §22.917(a) §24.238(a) §27.53(g) §27.53(h)	Conducted Band Edge Measurement (Band 2) (Band 4) (Band 5) (Band 12) (Band 66)	< 43+10log10(P[Watts])	PASS	-
3.8	§2.1051 §22.917(a) §24.238(a) §27.53(g) §27.53(h)	Conducted Spurious Emission (Band 2) (Band 4) (Band 5) (Band 12) (Band 66)	< 43+10log10(P[Watts])	PASS	-
3.9	§2.1055 §22.355	Frequency Stability Temperature & Voltage	< 2.5 ppm for Part 22	PASS	-
	§2.1055 §24.235 §27.54		Within Authorized Band		



Report Section	FCC Rule	Description	Limit	Result	Remark
4.4	§2.1053 §22.917(a) §24.238(a) §27.53(g) §27.53(h)	Radiated Spurious Emission (Band 2) (Band 4) (Band 5) (Band 12) (Band 66)	$< 43 + 10 \log_{10}(P[\text{Watts}])$	PASS	Under limit 29.13 dB at 5133.000 MHz

Declaration of Conformity:

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

Comments and Explanations:

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



1 General Description

1.1 Applicant

HMD Global Oy

Bertel Jungin aukio 9, 02600 Espoo, Finland

1.2 Manufacturer

HMD Global Oy

Bertel Jungin aukio 9, 02600 Espoo, Finland

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	Mobile phone
Brand Name	Nokia
Model Name	TA-1222
FCC ID	2AJOTTA-1222
EUT supports Radios application	GSM/WCDMA/LTE WLAN 2.4GHz 802.11b/g/n HT20 Bluetooth BR / EDR / LE FM Receiver and GNSS
IMEI Code:	Conducted: 355787100004170 Radiation: 355787100003410
HW Version	V1.0
SW Version	00CUS_0_18Q
EUT Stage	Production Unit



1.4 Product Specification of Equipment Under Test

Standards-related Product Specification	
Tx Frequency	LTE Band 2 : 1850.7 MHz ~ 1909.3 MHz LTE Band 4 : 1710.7 MHz ~ 1754.3 MHz LTE Band 5 : 824.7 MHz ~ 848.3 MHz LTE Band 12 : 699.7 MHz ~ 715.3 MHz LTE Band 66 : 1710.7 MHz ~ 1779.3 MHz
Rx Frequency	LTE Band 2 : 1930.7 MHz ~ 1989.3 MHz LTE Band 4 : 2110.7 MHz ~ 2154.3 MHz LTE Band 5 : 869.7 MHz ~ 893.3 MHz LTE Band 12 : 729.7 MHz ~ 745.3 MHz LTE Band 66 : 2110.7 MHz~ 2199.3 MHz
Bandwidth	LTE Band 2 : 1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz / 20MHz LTE Band 4 : 1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz / 20MHz LTE Band 5 : 1.4MHz / 3MHz / 5MHz / 10MHz LTE Band 12 : 1.4MHz / 3MHz / 5MHz / 10MHz LTE Band 66 : 1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz / 20MHz
Maximum Output Power to Antenna	LTE Band 2 : 22.75 dBm LTE Band 4 : 22.58 dBm LTE Band 5 : 22.94 dBm LTE Band 12 : 22.71 dBm LTE Band 66 : 22.45 dBm
Antenna Gain	LTE Band 2 : 2.60 dBi LTE Band 4 : 1.76 dBi LTE Band 5 : 1.28 dBi LTE Band 12 : 1.51 dBi LTE Band 66 : 1.76 dBi
Type of Modulation	QPSK / 16QAM / 64QAM

1.5 Modification of EUT

No modifications are made to the EUT during all test items.



1.6 Maximum ERP/EIRP Power, Frequency Tolerance, and Emission Designator

LTE Band 2		QPSK			16QAM		
BW (MHz)	Frequency Range (MHz)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)
1.4	1850.7 ~ 1909.3	1M09G7D	-	0.3396	1M11W7D	-	0.2812
3	1851.5 ~ 1908.5	2M71G7D	-	0.3281	2M72W7D	-	0.2838
5	1852.5 ~ 1907.5	4M50G7D	-	0.3420	4M50W7D	-	0.2851
10	1855.0 ~ 1905.0	9M05G7D	0.0063	0.3273	9M05W7D	-	0.2606
15	1857.5 ~ 1902.5	13M5G7D	-	0.3243	13M5W7D	-	0.2844
20	1860.0 ~ 1900.0	17M9G7D	-	0.3428	17M9W7D	-	0.2793
LTE Band 2		64QAM					
BW (MHz)	Frequency Range (MHz)	Emission Designator (99%OBW)		Frequency Tolerance (ppm)	Maximum EIRP(W)		
1.4	1850.7 ~ 1909.3	1M11W7D		-	0.2317		
3	1851.5 ~ 1908.5	2M71W7D		-	0.2317		
5	1852.5 ~ 1907.5	4M49W7D		-	0.2360		
10	1855.0 ~ 1905.0	9M05W7D		-	0.2259		
15	1857.5 ~ 1902.5	13M5W7D		-	0.2270		
20	1860.0 ~ 1900.0	17M9W7D		-	0.2173		
LTE Band 4		QPSK			16QAM		
BW (MHz)	Frequency Range (MHz)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)
1.4	1710.7 ~ 1754.3	1M10G7D	-	0.2679	1M09W7D	-	0.2339
3	1711.5 ~ 1753.5	2M72G7D	-	0.2606	2M73W7D	-	0.2312
5	1712.5 ~ 1752.5	4M49G7D	-	0.2710	4M48W7D	-	0.2213
10	1715.0 ~ 1750.0	9M03G7D	0.0086	0.2673	9M05W7D	-	0.2301
15	1717.5 ~ 1747.5	13M5G7D	-	0.2618	13M5W7D	-	0.2355
20	1720.0 ~ 1745.0	17M9G7D	-	0.2716	17M9W7D	-	0.2228



LTE Band 4		64QAM					
BW (MHz)	Frequency Range (MHz)	Emission Designator (99%OBW)		Frequency Tolerance (ppm)		Maximum EIRP(W)	
1.4	1710.7 ~ 1754.3	1M10W7D		-		0.1941	
3	1711.5 ~ 1753.5	2M72W7D		-		0.1914	
5	1712.5 ~ 1752.5	4M49W7D		-		0.1914	
10	1715.0 ~ 1750.0	9M13W7D		-		0.1963	
15	1717.5 ~ 1747.5	13M5W7D		-		0.1858	
20	1720.0 ~ 1745.0	17M9W7D		-		0.1820	
LTE Band 5		QPSK			16QAM		
BW (MHz)	Frequency Range (MHz)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum ERP(W)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum ERP(W)
1.4	824.7 ~ 848.3	1M10G7D	-	0.1552	1M10W7D	-	0.1327
3	825.5 ~ 847.5	2M72G7D	-	0.1521	2M72W7D	-	0.1315
5	826.5 ~ 846.5	4M50G7D	-	0.1607	4M50W7D	-	0.1355
10	829.0 ~ 844.0	9M07G7D	0.0146	0.1611	9M05W7D	-	0.1330
LTE Band 5		64QAM					
BW (MHz)	Frequency Range (MHz)	Emission Designator (99%OBW)		Frequency Tolerance (ppm)		Maximum ERP(W)	
1.4	824.7 ~ 848.3	1M10W7D		-		0.1094	
3	825.5 ~ 847.5	2M73W7D		-		0.1076	
5	826.5 ~ 846.5	4M51W7D		-		0.1109	
10	829.0 ~ 844.0	9M07W7D		-		0.1047	
LTE Band 12		QPSK			16QAM		
BW (MHz)	Frequency Range (MHz)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum ERP(W)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum ERP(W)
1.4	699.7 ~ 715.3	1M10G7D	-	0.1596	1M09W7D	-	0.1276
3	700.5 ~ 714.5	2M71G7D	-	0.1535	2M72W7D	-	0.1374
5	701.5 ~ 713.5	4M50G7D	-	0.1596	4M51W7D	-	0.1368
10	704.0 ~ 711.0	9M07G7D	0.0269	0.1611	9M11W7D	-	0.1396



LTE Band 12		64QAM					
BW (MHz)	Frequency Range (MHz)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum ERP(W)			
1.4	699.7 ~ 715.3	1M10W7D	-	0.1094			
3	700.5 ~ 714.5	2M73W7D	-	0.1130			
5	701.5 ~ 713.5	4M52W7D	-	0.1081			
10	704.0 ~ 711.0	9M07W7D	-	0.1148			
LTE Band 66		QPSK			16QAM		
BW (MHz)	Frequency Range (MHz)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)
1.4	1710.7 ~ 1779.3	1M09G7D	-	0.2518	1M10W7D	-	0.2198
3	1711.5 ~ 1778.5	2M71G7D	-	0.2518	2M71W7D	-	0.2188
5	1712.5 ~ 1777.5	4M52G7D	-	0.2612	4M51W7D	-	0.2193
10	1715.0 ~ 1775.0	9M09G7D	0.0050	0.2570	9M07W7D	-	0.2208
15	1717.5 ~ 1772.5	13M5G7D	-	0.2618	13M5W7D	-	0.2223
20	1720.0 ~ 1770.0	18M0G7D	-	0.2636	17M9W7D	-	0.2193
LTE Band 66		64QAM					
BW (MHz)	Frequency Range (MHz)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)
1.4	1710.7 ~ 1779.3	1M10W7D	-	0.1820			
3	1711.5 ~ 1778.5	2M73W7D	-	0.1738			
5	1712.5 ~ 1777.5	4M52W7D	-	0.1884			
10	1715.0 ~ 1775.0	9M07W7D	-	0.1778			
15	1717.5 ~ 1772.5	13M5W7D	-	0.1778			
20	1720.0 ~ 1770.0	18M0W7D	-	0.1816			



1.7 Testing Location

Sporton Lab is accredited to ISO 17025 by Taiwan Accreditation Foundation (TAF code : 1190) and the FCC designation No. TW1190 and TW0007.

Test Site	SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory
Test Site Location	No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.) TEL: +886-3-327-3456 FAX: +886-3-328-4978
Test Site No.	Sporton Site No.
	TH03-HY

Test Site	SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory
Test Site Location	No. 58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.) TEL: +886-3-327-0868 FAX: +886-3-327-0855
Test Site No.	Sporton Site No.
	03CH12-HY

1.8 Test Software

Item	Site	Manufacture	Name	Version
1.	03CH12-HY	AUDIX	E3	6.2009-8-24



1.9 Applicable Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- ♦ 47 CFR Part 2, 22(H), 24(E), 27(L), 27(H)
- ♦ ANSI C63.26-2015
- ♦ FCC KDB 971168 D01 Power Meas License Digital Systems v03r01
- ♦ FCC KDB 412172 D01 Determining ERP and EIRP v01r01

Remark:

1. All test items were verified and recorded according to the standards and without any deviation during the test.
2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.



2 Test Configuration of Equipment Under Test

2.1 Test Mode

Antenna port conducted and radiated test items listed below are performed according to KDB 971168 D01 Power Meas License Digital Systems v03r01 with maximum output power.

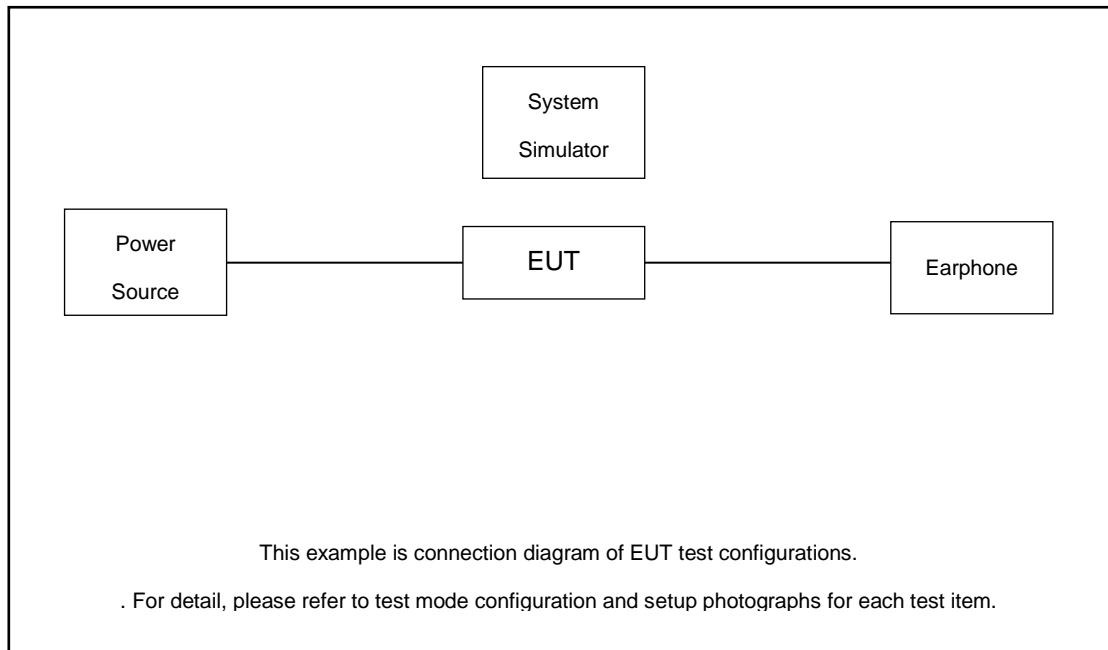
Radiated measurements are performed by rotating the EUT in three different orthogonal test planes to find the maximum emission.

Test Items	Band	Bandwidth (MHz)						Modulation			RB #			Test Channel		
		1.4	3	5	10	15	20	QPSK	16QAM	64QAM	1	Half	Full	L	M	H
Max. Output Power	2	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v
	4	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v
	5	v	v	v	v	-	-	v	v	v	v	v	v	v	v	v
	12	v	v	v	v	-	-	v	v	v	v	v	v	v	v	v
	66	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v
Peak-to-Average Ratio	2						v	v	v	v	v		v	v	v	v
	4						v	v	v	v	v		v	v	v	v
	5				v	-	-	v	v	v	v		v	v	v	v
	66						v	v	v	v	v		v	v	v	v
26dB and 99% Bandwidth	2	v	v	v	v	v	v	v	v	v			v	v	v	v
	4	v	v	v	v	v	v	v	v	v			v	v	v	v
	5	v	v	v	v	-	-	v	v	v			v	v	v	v
	12	v	v	v	v	-	-	v	v	v			v	v	v	v
	66	v	v	v	v	v	v	v	v	v			v	v	v	v
Conducted Band Edge	2	v	v	v	v	v	v	v	v	v	v		v	v		v
	4	v	v	v	v	v	v	v	v	v	v		v	v		v
	5	v	v	v	v	-	-	v	v	v	v		v	v		v
	12	v	v	v	v	-	-	v	v	v	v		v	v		v
	66	v	v	v	v	v	v	v	v	v	v		v	v		v



Test Items	Band	Bandwidth (MHz)						Modulation			RB #			Test Channel		
		1.4	3	5	10	15	20	QPSK	16QAM	64QAM	1	Half	Full	L	M	H
Conducted Spurious Emission	2	v	v	v	v	v	v	v	v	v	v			v	v	v
	4	v	v	v	v	v	v	v	v	v	v			v	v	v
	5	v	v	v	v	-	-	v	v	v	v			v	v	v
	12	v	v	v	v	-	-	v	v	v	v			v	v	v
	66	v	v	v	v	v	v	v	v	v	v			v	v	v
Frequency Stability	2				v			v					v		v	
	4				v			v					v		v	
	5				v	-	-	v					v		v	
	12				v	-	-	v					v		v	
	66				v			v					v		v	
E.R.P / E.I.R.P	2	v	v	v	v	v	v	v	v	v	v			v	v	v
	4	v	v	v	v	v	v	v	v	v	v			v	v	v
	5	v	v	v	v	-	-	v	v	v	v			v	v	v
	12	v	v	v	v	-	-	v	v	v	v			v	v	v
	66	v	v	v	v	v	v	v	v	v	v			v	v	v
Radiated Spurious Emission	2	Worst Case											v	v	v	
	4	Worst Case											v	v	v	
	5	Worst Case											v	v	v	
	12	Worst Case											v	v	v	
	66	Worst Case											v	v	v	
Note	1. The mark "v " means that this configuration is chosen for testing 2. The mark "- " means that this bandwidth is not supported. 3. The device is investigated from 30MHz to 10 times of fundamental signal for radiated spurious emission test under different RB size/offset and modulations in exploratory test. Subsequently, only the worst case emissions are reported.															

2.2 Connection Diagram of Test System



2.3 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model No.	FCC ID	Data Cable	Power Cord
1.	Earphone	Apple	A1285	N/A	N/A	N/A
2.	Base Station	Anritsu	8820C	N/A	N/A	N/A
3.	Base Station	R&S	CMU 200	N/A	N/A	N/A

2.4 Measurement Results Explanation Example

For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuator factor between EUT conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly the EUT RF output level.

The spectrum analyzer offset is derived from RF cable loss and attenuator factor.

Offset = RF cable loss + attenuator factor.

Following shows an offset computation example with cable loss 1.7 dB and 10dB attenuator.

Example :

$$\begin{aligned} \text{Offset(dB)} &= \text{RF cable loss(dB)} + \text{attenuator factor(dB)}. \\ &= 1.7 + 10 = 11.7 \text{ (dB)} \end{aligned}$$



2.5 Frequency List of Low/Middle/High Channels

LTE Band 2 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
20	Channel	18700	18900	19100
	Frequency	1860	1880	1900
15	Channel	18675	18900	19125
	Frequency	1857.5	1880	1902.5
10	Channel	18650	18900	19150
	Frequency	1855	1880	1905
5	Channel	18625	18900	19175
	Frequency	1852.5	1880	1907.5
3	Channel	18615	18900	19185
	Frequency	1851.5	1880	1908.5
1.4	Channel	18607	18900	19193
	Frequency	1850.7	1880	1909.3

LTE Band 4 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
20	Channel	20050	20175	20300
	Frequency	1720	1732.5	1745
15	Channel	20025	20175	20325
	Frequency	1717.5	1732.5	1747.5
10	Channel	20000	20175	20350
	Frequency	1715	1732.5	1750
5	Channel	19975	20175	20375
	Frequency	1712.5	1732.5	1752.5
3	Channel	19965	20175	20385
	Frequency	1711.5	1732.5	1753.5
1.4	Channel	19957	20175	20393
	Frequency	1710.7	1732.5	1754.3



LTE Band 5 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
10	Channel	20450	20525	20600
	Frequency	829	836.5	844
5	Channel	20425	20525	20625
	Frequency	826.5	836.5	846.5
3	Channel	20415	20525	20635
	Frequency	825.5	836.5	847.5
1.4	Channel	20407	20525	20643
	Frequency	824.7	836.5	848.3

LTE Band 12 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
10	Channel	23060	23095	23130
	Frequency	704	707.5	711
5	Channel	23035	23095	23155
	Frequency	701.5	707.5	713.5
3	Channel	23025	23095	23165
	Frequency	700.5	707.5	714.5
1.4	Channel	23017	23095	23173
	Frequency	699.7	707.5	715.3



LTE Band 66 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
20	Channel	132072	132322	132572
	Frequency	1720	1745	1770
15	Channel	132047	132322	132597
	Frequency	1717.5	1745	1772.5
10	Channel	132022	132322	132622
	Frequency	1715	1745	1775
5	Channel	131997	132322	132647
	Frequency	1712.5	1745	1777.5
3	Channel	131987	132322	132657
	Frequency	1711.5	1745	1778.5
1.4	Channel	131979	132322	132665
	Frequency	1710.7	1745	1779.3

3 Conducted Test Items

3.1 Measuring Instruments

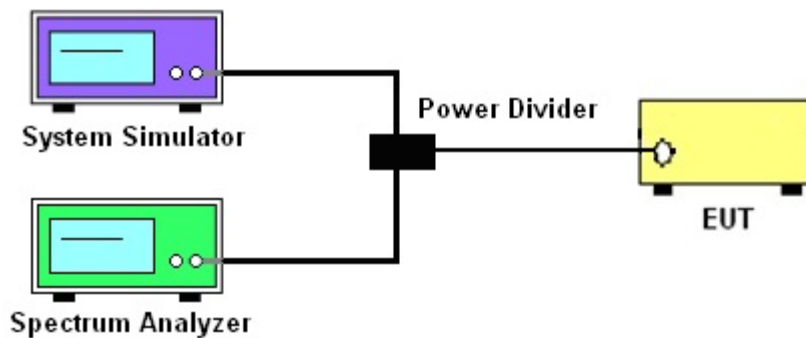
See list of measuring instruments of this test report.

3.2 Test Setup

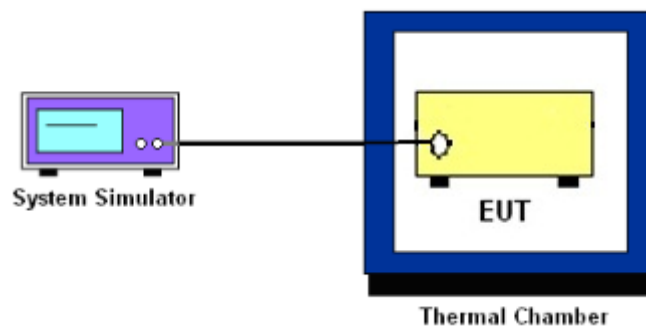
3.2.1 Conducted Output Power



3.2.2 Peak-to-Average Ratio, Occupied Bandwidth ,Conducted Band-Edge and Conducted Spurious Emission



3.2.3 Frequency Stability



3.3 Test Result of Conducted Test

Please refer to Appendix A.



3.4 Conducted Output Power and ERP/EIRP

3.4.1 Description of the Conducted Output Power Measurement and ERP/EIRP Measurement

A system simulator was used to establish communication with the EUT. Its parameters were set to force the EUT transmitting at maximum output power. The measured power in the radio frequency on the transmitter output terminals shall be reported.

The ERP of mobile transmitters must not exceed 7 Watts for LTE Band 5.

The ERP of mobile transmitters must not exceed 3 Watts for LTE Band 12.

The EIRP of mobile transmitters must not exceed 2 Watts for LTE Band 2.

The EIRP of mobile transmitters must not exceed 1 Watts for LTE Band 4 and Band 66.

According to KDB 412172 D01 Power Approach,

$EIRP = P_T + G_T - L_C$, $ERP = EIRP - 2.15$, where

P_T = transmitter output power in dBm

G_T = gain of the transmitting antenna in dBi

L_C = signal attenuation in the connecting cable between the transmitter and antenna in dB

3.4.2 Test Procedures

1. The testing follows ANSI C63.26 Section 5.2
2. The transmitter output port was connected to the system simulator.
3. Set EUT at maximum power through the system simulator.
4. Select lowest, middle, and highest channels for each band and different modulation.
5. Measure and record the power level from the system simulator.



3.5 Peak-to-Average Ratio

3.5.1 Description of the PAR Measurement

Power Complementary Cumulative Distribution Function (CCDF) curves provide a means for characterizing the power peaks of a digitally modulated signal on a statistical basis. A CCDF curve depicts the probability of the peak signal amplitude exceeding the average power level. Most contemporary measurement instrumentation include the capability to produce CCDF curves for an input signal provided that the instrument's resolution bandwidth can be set wide enough to accommodate the entire input signal bandwidth. In measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

3.5.2 Test Procedures

1. The testing follows ANSI C63.26 Section 5.2.3.4 (CCDF).
2. The EUT was connected to spectrum and system simulator via a power divider.
3. Set the CCDF (Complementary Cumulative Distribution Function) option in spectrum analyzer.
4. The highest RF powers were measured and recorded the maximum PAPR level associated with a probability of 0.1 %.
5. Record the deviation as Peak to Average Ratio.



3.6 Occupied Bandwidth

3.6.1 Description of Occupied Bandwidth Measurement

The occupied bandwidth is the width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5% of the total mean transmitted power.

The 26 dB emission bandwidth is defined as the frequency range between two points, one above and one below the carrier frequency, at which the spectral density of the emission is attenuated 26 dB below the maximum in-band spectral density of the modulated signal. Spectral density (power per unit bandwidth) is to be measured with a detector of resolution bandwidth equal to approximately 1.0% of the emission bandwidth.

3.6.2 Test Procedures

1. The testing follows ANSI C63.26 Section 5.4
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The span range for the spectrum analyzer shall be between two and five times the anticipated OBW.
4. The nominal resolution bandwidth (RBW) shall be in the range of 1 to 5 % of the anticipated OBW, and the VBW shall be at least 3 times the RBW.
5. Set the detection mode to peak, and the trace mode to max hold.
6. Determine the reference value: Set the EUT to transmit a modulated signal. Allow the trace to stabilize. Set the spectrum analyzer marker to the highest level of the displayed trace.
(this is the reference value)
7. Determine the “-26 dB down amplitude” as equal to (Reference Value – X).
8. Place two markers, one at the lowest and the other at the highest frequency of the envelope of the spectral display such that each marker is at or slightly below the “-X dB down amplitude” determined in step 6. If a marker is below this “-X dB down amplitude” value it shall be placed as close as possible to this value. The OBW is the positive frequency difference between the two markers.
9. Use the 99 % power bandwidth function of the spectrum analyzer and report the measured bandwidth.



3.7 Conducted Band Edge

3.7.1 Description of Conducted Band Edge Measurement

22.917(a)

For operations in the 824 – 849 MHz band, the FCC limit is $43 + 10\log_{10}(P[\text{Watts}])$ dB below the transmitter power P(Watts) in a 100kHz bandwidth. However, in the 1MHz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

24.238 (a)

For operations in the 1850-1910 and 1930-1990 MHz band, the FCC limit is $43 + 10\log_{10}(P[\text{Watts}])$ dB below the transmitter power P(Watts) in a 1MHz bandwidth. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

27.53 (g)

For operations in the 600MHz band and 698 -746 MHz band, the FCC limit is $43 + 10\log_{10}(P[\text{Watts}])$ dB below the transmitter power P(Watts) in a 100 kHz bandwidth. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

27.53 (h)

For operations in the 1710 – 1755 MHz band, the FCC limit is $43 + 10\log_{10}(P[\text{Watts}])$ dB below the transmitter power P(Watts) in a 1 MHz bandwidth. However, in the 1MHz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.



3.7.2 Test Procedures

1. The testing follows ANSI C63.26 section 5.7
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. The band edges of low and high channels for the highest RF powers were measured.
4. Set RBW \geq 1% EBW in the 1MHz band immediately outside and adjacent to the band edge.
5. Beyond the 1 MHz band from the band edge, RBW=1MHz was used or a narrower RBW was used and the measured power was integrated over the full required measurement bandwidth of 1 MHz.
6. Set spectrum analyzer with RMS detector.
7. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
8. Checked that all the results comply with the emission limit line.

Example:

The limit line is derived from $43 + 10\log(P)$ dB below the transmitter power P(Watts)

$$= P(W) - [43 + 10\log(P)] \text{ (dB)}$$

$$= [30 + 10\log(P)] \text{ (dBm)} - [43 + 10\log(P)] \text{ (dB)} = -13\text{dBm.}$$



3.8 Conducted Spurious Emission

3.8.1 Description of Conducted Spurious Emission Measurement

The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of at least $43 + 10 \log (P)$ dB.

It is measured by means of a calibrated spectrum analyzer and scanned from 30 MHz up to a frequency including its 10th harmonic.

3.8.2 Test Procedures

1. The testing follows ANSI C63.26 section 5.7
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
4. The middle channel for the highest RF power within the transmitting frequency was measured.
5. The conducted spurious emission for the whole frequency range was taken.
6. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz.
7. Set spectrum analyzer with RMS detector.
8. Taking the record of maximum spurious emission.
9. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
10. The limit line is derived from $43 + 10\log(P)$ dB below the transmitter power P(Watts)
= $P(W) - [43 + 10\log(P)]$ (dB)
= $[30 + 10\log(P)]$ (dBm) - $[43 + 10\log(P)]$ (dB)
= -13dBm.



3.9 Frequency Stability

3.9.1 Description of Frequency Stability Measurement

The frequency stability shall be measured by variation of ambient temperature and variation of primary supply voltage to ensure that the fundamental emission stays within the authorized frequency block. The frequency stability of the transmitter shall be maintained within $\pm 0.00025\%$ ($\pm 2.5\text{ppm}$) of the center frequency.

3.9.2 Test Procedures for Temperature Variation

1. The testing follows ANSI C63.26 section 5.6.4
2. The EUT was set up in the thermal chamber and connected with the system simulator.
3. With power OFF, the temperature was decreased to -30°C and the EUT was stabilized before testing. Power was applied and the maximum change in frequency was recorded within one minute.
4. With power OFF, the temperature was raised in 10°C step up to 50°C . The EUT was stabilized at each step for at least half an hour. Power was applied and the maximum frequency change was recorded within one minute.

3.9.3 Test Procedures for Voltage Variation

1. The testing follows ANSI C63.26 section 5.6.5
2. The EUT was placed in a temperature chamber at $20\pm 5^{\circ}\text{C}$ and connected with the system simulator.
3. The power supply voltage to the EUT was varied from 85% to 115% of the nominal value for other than hand carried battery equipment.
4. For hand carried, battery powered equipment, reduce the primary ac or dc supply voltage to the battery operating end point, which shall be specified by the manufacturer.
5. The variation in frequency was measured for the worst case.

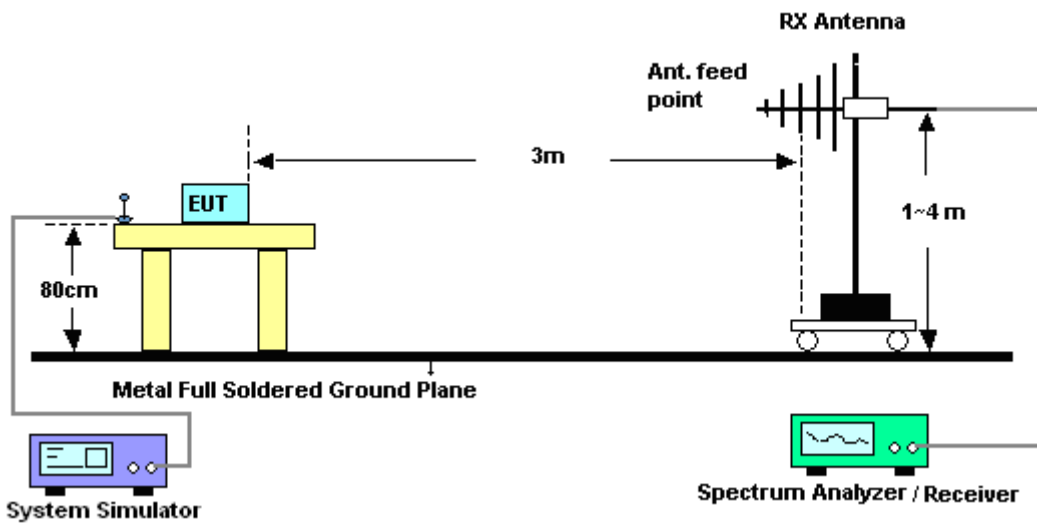
4 Radiated Test Items

4.1 Measuring Instruments

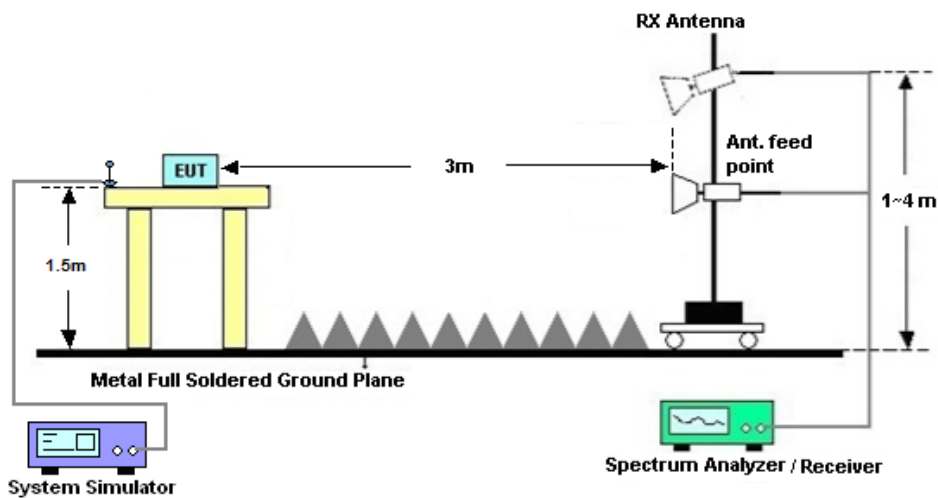
See list of measuring instruments of this test report.

4.2 Test Setup

4.2.1 For radiated test from 30MHz to 1GHz



4.2.2 For radiated test above 1GHz



4.3 Test Result of Radiated Test

Please refer to Appendix B.



4.4 Radiated Spurious Emission

4.4.1 Description of Radiated Spurious Emission

The radiated spurious emission was measured by substitution method according to ANSI C63.26. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least $43 + 10 \log (P)$ dB.

The spectrum is scanned from 30 MHz up to a frequency including its 10th harmonic.

4.4.2 Test Procedures

1. The testing follows ANSI C63.26 Section 5.5
2. The EUT was placed on a turntable with 0.8 meter height for frequency below 1GHz and 1.5 meter height for frequency above 1GHz respectively above ground.
3. The EUT was set 3 meters from the receiving antenna mounted on the antenna tower.
4. The table was rotated 360 degrees to determine the position of the highest spurious emission.
5. The height of the receiving antenna is varied between 1m to 4m to search the maximum spurious emission for both horizontal and vertical polarizations.
6. During the measurement, the system simulator parameters were set to force the EUT transmitting at maximum output power.
7. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
8. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
9. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
10. $EIRP \text{ (dBm)} = S.G. \text{ Power} - Tx \text{ Cable Loss} + Tx \text{ Antenna Gain}$
11. $ERP \text{ (dBm)} = EIRP - 2.15$
12. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

The limit line is derived from $43 + 10\log(P)$ dB below the transmitter power P(Watts)
= $P(W) - [43 + 10\log(P)] \text{ (dB)}$
= $[30 + 10\log(P)] \text{ (dBm)} - [43 + 10\log(P)] \text{ (dB)}$
= -13dBm.



5 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Hygrometer	Testo	608-H1	34893241	N/A	Mar. 06, 2019	Feb. 18, 2020~ Feb. 22, 2020	Mar. 05, 2020	Conducted (TH03-HY)
Spectrum Analyzer	Rohde & Schwarz	FSP30	101329	9kHz~30GHz	Sep. 04, 2019	Feb. 18, 2020~ Feb. 22, 2020	Sep. 03, 2020	Conducted (TH03-HY)
Temperature Chamber	ESPEC	SU-641	92013721	-30°C ~70°C	Nov. 26, 2019	Feb. 18, 2020~ Feb. 22, 2020	Nov. 25, 2020	Conducted (TH03-HY)
Programmable Power Supply	GW Instek	PSS-2005	EL890001	1V~20V 0.5A~4A	Oct. 09, 2019	Feb. 18, 2020~ Feb. 22, 2020	Oct. 08, 2020	Conducted (TH03-HY)
Base Station(Measure)	Rohde & Schwarz	CMU200	117995	GSM / GPRS / WCDMA / CDMA	Aug. 23, 2019	Feb. 18, 2020~ Feb. 22, 2020	Aug. 22, 2020	Conducted (TH03-HY)
Power Divider	Warison	WCOU-0.4-26.5S-20	#A	N/A	Nov. 06, 2019	Feb. 18, 2020~ Feb. 22, 2020	Nov. 05, 2020	Conducted (TH03-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100315	9 kHz~30 MHz	Dec. 26, 2019	Feb. 05, 2020~ Feb. 12, 2020	Dec. 25, 2020	Radiation (03CH12-HY)
Bilog Antenna	TESEQ	CBL 6111D & 00800N1D0 1N-06	37059 & 01	30MHz~1GHz	Otc. 12, 2019	Feb. 05, 2020~ Feb. 12, 2020	Otc 11, 2020	Radiation (03CH12-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120D	9120D-1328	1GHz ~ 18GHz	Nov. 14, 2019	Feb. 05, 2020~ Feb. 12, 2020	Nov. 13, 2020	Radiation (03CH12-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120D	9120D-1522	1GHz ~ 18GHz	Sep. 19, 2019	Feb. 05, 2020~ Feb. 12, 2020	Sep. 18, 2020	Radiation (03CH12-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA917058 4	18GHz ~ 40GHz	Dec. 10, 2019	Feb. 05, 2020~ Feb. 12, 2020	Dec. 09, 2020	Radiation (03CH12-HY)
Preamplifier	COM-POWER	PA-103	161075	10MHz~1GHz	Mar. 25, 2019	Feb. 05, 2020~ Feb. 12, 2020	Mar. 24, 2020	Radiation (03CH12-HY)
Preamplifier	Jet-Power	JPA0010180 0-30-10P	1601180002	1GHz~18GHz	Aug. 01, 2019	Feb. 05, 2020~ Feb. 12, 2020	Jul. 01, 2020	Radiation (03CH12-HY)
Preamplifier	EMEC	EM18G40G	060715	18GHz ~ 40GHz	Dec. 13, 2019	Feb. 05, 2020~ Feb. 12, 2020	Dec. 12, 2020	Radiation (03CH12-HY)
Preamplifier	Keysight	83017A	MY53270148	1GHz~26.5GHz	Dec. 20, 2019	Feb. 05, 2020~ Feb. 12, 2020	Dec. 19, 2020	Radiation (03CH12-HY)
Spectrum Analyzer	Rohde & Schwarz	FSV40	101408	10Hz~40GHz	Aug. 13, 2019	Feb. 05, 2020~ Feb. 12, 2020	Aug. 12, 2020	Radiation (03CH12-HY)
Signal Generator	Rohde & Schwarz	SMF100A	101107	100kHz~40GHz	Aug. 27, 2019	Feb. 05, 2020~ Feb. 12, 2020	Aug. 26, 2020	Radiation (03CH12-HY)
Hygrometer	TECPEL	DTM-303B	TP161243	N/A	May. 11, 2019	Feb. 05, 2020~ Feb. 12, 2020	May. 10, 2020	Radiation (03CH12-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 126E	0058/126E	30M-18G	Mar. 13, 2019	Feb. 05, 2020~ Feb. 12, 2020	Mar. 12, 2020	Radiation (03CH12-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	505134/2	30M~40GHz	Feb. 26, 2019	Feb. 05, 2020~ Feb. 12, 2020	Feb. 25, 2020	Radiation (03CH12-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	800740/2	30M~40GHz	Feb. 26, 2019	Feb. 05, 2020~ Feb. 12, 2020	Feb. 25, 2020	Radiation (03CH12-HY)
Base Station	Anritsu	MT8821C	6201432816	GSM / GPRS /WCDMA / LTE FDD/TDD with 44) /LTE-3CC DLCA,2CC ULCA	May 05, 2019	Feb. 05, 2020~ Feb. 12, 2020	May 04, 2020	Radiation (03CH12-HY)
Controller	EMEC	EM1000	N/A	Control Turn table & Ant Mast	N/A	Feb. 05, 2020~ Feb. 12, 2020	N/A	Radiation (03CH12-HY)
Antenna Mast	EMEC	AM-BS-450 0-B	N/A	1m~4m	N/A	Feb. 05, 2020~ Feb. 12, 2020	N/A	Radiation (03CH12-HY)
Turn Table	EMEC	TT2000	N/A	0~360 Degree	N/A	Feb. 05, 2020~ Feb. 12, 2020	N/A	Radiation (03CH12-HY)
Software	Audix	E3 6.2009-8-24	RK-000989	N/A	N/A	Feb. 05, 2020~ Feb. 12, 2020	N/A	Radiation (03CH12-HY)

NCR: No Calibration Required



6 Uncertainty of Evaluation

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI 63.26-2015. All the measurement uncertainty value were shown with a coverage $K=2$ to indicate 95% level of confidence. The measurement data show herein meets or exceeds the CISPR measurement uncertainty values specified in CISPR 16-4-2 and can be compared directly to specified limit to determine compliance.

Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	3.24dB
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Uncertainty of Radiated Emission Measurement (1 GHz ~ 18 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	3.62dB
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Uncertainty of Radiated Emission Measurement (18 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	4.06dB
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Appendix A. Test Results of Conducted Test

Conducted Output Power(Average power)

LTE Band 2 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
20	1	0	QPSK	22.36	22.43	22.43
20	1	49		22.75	22.58	22.58
20	1	99		22.45	22.43	22.34
20	50	0		21.47	21.46	21.54
20	50	24		21.60	21.50	21.48
20	50	50		21.47	21.27	21.44
20	100	0		21.52	21.39	21.51
20	1	0	16-QAM	21.44	21.48	21.66
20	1	49		21.86	21.74	21.71
20	1	99		21.45	21.40	21.42
20	50	0		20.47	20.53	20.54
20	50	24		20.51	20.41	20.49
20	50	50		20.40	20.36	20.42
20	100	0		20.43	20.44	20.48
20	1	0	64-QAM	20.55	20.50	20.77
20	1	49		20.68	20.62	20.73
20	1	99		20.49	20.53	20.32
20	50	0		19.68	19.86	19.82
20	50	24		19.76	19.79	19.84
20	50	50		19.68	19.62	19.66
20	100	0		19.76	19.71	19.73
15	1	0	QPSK	22.47	22.45	22.36
15	1	37		22.45	22.47	22.49
15	1	74		22.36	22.30	22.25
15	36	0		21.46	21.47	21.50
15	36	20		21.44	21.44	21.53
15	36	39		21.46	21.45	21.55
15	75	0		22.51	22.47	22.35



15	1	0	16-QAM	21.60	21.59	21.49
15	1	37		21.94	21.51	21.56
15	1	74		21.55	21.47	21.54
15	36	0		20.50	20.46	20.50
15	36	20		20.59	20.47	20.38
15	36	39		20.51	20.45	20.41
15	75	0		21.39	21.58	21.32
15	1	0	64-QAM	20.81	20.79	20.56
15	1	37		20.86	20.70	20.73
15	1	74		20.96	20.80	20.57
15	36	0		19.73	19.78	19.78
15	36	20		19.71	19.79	19.74
15	36	39		19.73	19.72	19.77
15	75	0		19.96	20.07	19.86



LTE Band 2 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK	22.47	22.42	22.33
10	1	25		22.55	22.55	22.55
10	1	49		22.38	22.31	22.29
10	25	0		21.57	21.51	21.48
10	25	12		21.56	21.48	21.53
10	25	25		21.51	21.53	21.41
10	50	0		21.44	21.57	21.52
10	1	0	16-QAM	21.46	21.37	21.55
10	1	25		21.56	21.45	21.56
10	1	49		21.42	21.27	21.54
10	25	0		20.51	20.50	20.47
10	25	12		20.40	20.35	20.42
10	25	25		20.54	20.42	20.45
10	50	0		20.37	20.52	20.49
10	1	0	64-QAM	20.84	20.84	20.72
10	1	25		20.94	20.82	20.73
10	1	49		20.81	20.58	20.78
10	25	0		19.69	19.82	19.88
10	25	12		19.70	19.70	19.83
10	25	25		19.61	19.72	19.64
10	50	0		19.75	19.82	19.67
5	1	0	QPSK	22.33	22.28	22.25
5	1	12		22.74	22.70	22.46
5	1	24		22.35	22.33	22.27
5	12	0		21.45	21.43	21.39
5	12	7		21.54	21.46	21.55
5	12	13		21.48	21.58	21.40
5	25	0		21.46	21.53	21.36
5	1	0	16-QAM	21.56	21.56	21.62
5	1	12		21.76	21.95	21.76
5	1	24		21.58	21.52	21.45
5	12	0		20.31	20.44	20.50
5	12	7		20.39	20.54	20.57



5	12	13	64-QAM	20.37	20.50	20.49
5	25	0		20.54	20.49	20.44
5	1	0		20.74	20.74	20.71
5	1	12		20.93	21.13	20.95
5	1	24		20.73	20.71	20.78
5	12	0		19.76	19.61	19.78
5	12	7		19.68	19.80	19.84
5	12	13		19.83	19.72	19.80
5	25	0		19.64	19.73	19.76



LTE Band 2 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
3	1	0	QPSK	22.44	22.53	22.41
3	1	8		22.46	22.44	22.44
3	1	14		22.56	22.44	22.50
3	8	0		21.51	21.49	21.38
3	8	4		21.49	21.51	21.45
3	8	7		21.53	21.60	21.40
3	15	0		21.52	21.47	21.51
3	1	0	16-QAM	21.51	21.57	21.53
3	1	8		21.82	21.48	21.51
3	1	14		21.83	21.84	21.93
3	8	0		20.49	20.54	20.51
3	8	4		20.57	20.59	20.56
3	8	7		20.64	20.56	20.60
3	15	0		20.35	20.50	20.48
3	1	0	64-QAM	20.62	20.84	20.95
3	1	8		21.05	20.94	20.84
3	1	14		20.83	20.88	20.82
3	8	0		19.92	19.80	19.83
3	8	4		19.90	19.83	19.83
3	8	7		19.75	19.66	19.76
3	15	0		19.70	19.67	19.79
1.4	1	0	QPSK	22.47	22.43	22.35
1.4	1	3		22.71	22.69	22.60
1.4	1	5		22.48	22.49	22.31
1.4	3	0		22.67	22.45	22.54
1.4	3	1		22.68	22.60	22.53
1.4	3	3		22.62	22.54	22.48
1.4	6	0		21.68	21.64	21.48
1.4	1	0	16-QAM	21.58	21.89	21.53
1.4	1	3		21.64	21.68	21.62
1.4	1	5		21.49	21.87	21.61
1.4	3	0		21.55	21.44	21.54
1.4	3	1		21.67	21.40	21.70



1.4	3	3	64-QAM	21.44	21.64	21.52
1.4	6	0		20.64	20.59	20.62
1.4	1	0		20.93	20.69	20.78
1.4	1	3		21.05	20.98	20.70
1.4	1	5		20.88	20.94	20.69
1.4	3	0		20.78	20.86	20.69
1.4	3	1		20.79	20.75	20.80
1.4	3	3		20.83	20.85	20.82
1.4	6	0		19.68	19.89	19.74



LTE Band 4 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
20	1	0	QPSK	22.16	22.17	22.13
20	1	49		22.38	22.58	22.29
20	1	99		22.23	22.32	22.31
20	50	0		21.35	21.45	21.37
20	50	24		21.39	21.33	21.37
20	50	50		21.44	21.26	21.23
20	100	0		21.42	21.43	21.34
20	1	0	16-QAM	21.43	21.51	21.40
20	1	49		21.65	21.60	21.72
20	1	99		21.45	21.42	21.34
20	50	0		20.39	20.45	20.42
20	50	24		20.51	20.49	20.48
20	50	50		20.45	20.32	20.33
20	100	0		20.40	20.39	20.48
20	1	0	64-QAM	20.61	20.41	20.34
20	1	49		20.72	20.84	20.49
20	1	99		20.83	20.45	20.42
20	50	0		19.63	19.67	19.82
20	50	24		19.81	19.81	19.75
20	50	50		19.65	19.54	19.52
20	100	0		19.75	19.71	19.66
15	1	0	QPSK	22.29	22.32	22.20
15	1	37		22.36	22.42	22.35
15	1	74		22.07	22.12	22.14
15	36	0		21.47	21.49	21.46
15	36	20		21.37	21.37	21.39
15	36	39		21.35	21.34	21.32
15	75	0		21.44	21.41	21.45
15	1	0	16-QAM	21.56	21.86	21.78
15	1	37		21.95	21.95	21.96
15	1	74		21.71	21.51	21.67
15	36	0		20.45	20.39	20.52
15	36	20		20.38	20.53	20.44



15	36	39	64-QAM	20.38	20.24	20.28
15	75	0		20.52	20.38	20.49
15	1	0		20.61	20.65	20.93
15	1	37		20.84	20.93	20.71
15	1	74		20.48	20.53	20.48
15	36	0		19.77	19.79	19.78
15	36	20		19.71	19.71	19.64
15	36	39		19.65	19.62	19.68
15	75	0		19.68	19.60	19.70



LTE Band 4 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK	22.35	22.36	22.29
10	1	25		22.38	22.34	22.51
10	1	49		22.18	22.19	22.28
10	25	0		21.45	21.46	21.37
10	25	12		21.40	21.37	21.32
10	25	25		21.44	21.38	21.37
10	50	0		21.48	21.44	21.40
10	1	0	16-QAM	21.63	21.86	21.41
10	1	25		21.82	21.83	21.47
10	1	49		21.76	21.63	21.36
10	25	0		20.39	20.50	20.40
10	25	12		20.43	20.38	20.35
10	25	25		20.39	20.37	20.36
10	50	0		20.53	20.50	20.33
10	1	0	64-QAM	20.98	21.17	20.73
10	1	25		21.08	20.90	21.00
10	1	49		20.91	20.73	20.73
10	25	0		19.74	19.90	19.85
10	25	12		19.78	19.70	19.68
10	25	25		19.78	19.64	19.70
10	50	0		19.75	19.64	19.65
5	1	0	QPSK	22.22	22.25	22.29
5	1	12		22.54	22.57	22.35
5	1	24		22.09	22.13	22.16
5	12	0		21.38	21.32	21.31
5	12	7		21.39	21.32	21.30
5	12	13		21.36	21.42	21.37
5	25	0		21.40	21.38	21.28
5	1	0	16-QAM	21.52	21.69	21.33
5	1	12		21.58	21.65	21.56
5	1	24		21.56	21.63	21.63
5	12	0		20.35	20.39	20.33
5	12	7		20.36	20.40	20.41



5	12	13	64-QAM	20.36	20.32	20.32
5	25	0		20.31	20.40	20.46
5	1	0		20.67	20.73	20.64
5	1	12		21.04	21.06	20.72
5	1	24		20.67	20.92	20.71
5	12	0		19.64	19.66	19.63
5	12	7		19.67	19.70	19.77
5	12	13		19.63	19.69	19.71
5	25	0		19.64	19.68	19.70



LTE Band 4 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
3	1	0	QPSK	22.38	22.40	22.31
3	1	8		22.37	22.26	22.34
3	1	14		22.33	22.18	22.23
3	8	0		21.31	21.29	21.35
3	8	4		21.33	21.33	21.31
3	8	7		21.41	21.37	21.32
3	15	0		21.39	21.29	21.32
3	1	0	16-QAM	21.47	21.88	21.48
3	1	8		21.65	21.75	21.63
3	1	14		21.62	21.83	21.86
3	8	0		20.41	20.53	20.48
3	8	4		20.41	20.48	20.58
3	8	7		20.41	20.46	20.44
3	15	0		20.45	20.50	20.48
3	1	0	64-QAM	20.98	20.93	21.06
3	1	8		20.63	21.03	20.98
3	1	14		20.96	21.03	20.77
3	8	0		19.64	19.73	19.78
3	8	4		19.61	19.70	19.75
3	8	7		19.75	19.71	19.71
3	15	0		19.67	19.62	19.68
1.4	1	0	QPSK	22.30	22.22	22.18
1.4	1	3		22.39	22.37	22.29
1.4	1	5		22.33	22.21	22.16
1.4	3	0		22.39	22.35	22.35
1.4	3	1		22.52	22.35	22.43
1.4	3	3		22.36	22.27	22.31
1.4	6	0		21.33	21.46	21.40
1.4	1	0	16-QAM	21.56	21.67	21.68
1.4	1	3		21.79	21.93	21.82
1.4	1	5		21.56	21.68	21.76
1.4	3	0		21.37	21.37	21.35
1.4	3	1		21.48	21.41	21.45



1.4	3	3	64-QAM	21.40	21.20	21.28
1.4	6	0		20.67	20.55	20.43
1.4	1	0		20.62	20.64	21.05
1.4	1	3		20.73	20.73	21.12
1.4	1	5		20.71	21.07	20.99
1.4	3	0		20.38	20.47	20.62
1.4	3	1		20.79	20.67	20.70
1.4	3	3		20.53	20.47	20.68
1.4	6	0		19.63	19.75	19.62



LTE Band 5 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK	22.62	22.62	22.60
10	1	25		22.77	22.94	22.71
10	1	49		22.57	22.59	22.60
10	25	0		21.82	21.78	21.76
10	25	12		21.83	21.83	21.80
10	25	25		21.71	21.85	21.67
10	50	0		21.70	21.80	21.74
10	1	0	16-QAM	21.98	22.00	21.94
10	1	25		22.11	22.09	21.97
10	1	49		22.01	21.96	21.82
10	25	0		20.81	20.82	20.70
10	25	12		20.79	20.80	20.78
10	25	25		20.74	20.83	20.57
10	50	0		20.79	20.79	20.68
10	1	0	64-QAM	20.97	21.01	20.91
10	1	25		20.98	20.98	20.85
10	1	49		21.05	21.07	20.92
10	25	0		19.87	19.91	19.81
10	25	12		19.90	19.96	19.83
10	25	25		19.90	19.91	19.80
10	50	0		19.85	19.87	19.78
5	1	0	QPSK	22.53	22.54	22.47
5	1	12		22.93	22.76	22.70
5	1	24		22.50	22.49	22.47
5	12	0		21.72	21.70	21.70
5	12	7		21.74	21.77	21.71
5	12	13		21.78	21.79	21.65
5	25	0		21.70	21.72	21.65
5	1	0	16-QAM	21.78	21.90	21.75
5	1	12		22.19	22.19	21.97
5	1	24		21.86	21.92	21.74
5	12	0		20.67	20.71	20.65
5	12	7		20.78	20.77	20.66



5	12	13	64-QAM	20.74	20.75	20.62
5	25	0		20.70	20.75	20.61
5	1	0		21.01	21.03	21.00
5	1	12		21.24	21.32	21.15
5	1	24		21.01	21.04	20.94
5	12	0		19.96	19.96	19.94
5	12	7		20.02	20.06	19.92
5	12	13		19.97	20.02	19.86
5	25	0		20.00	20.00	19.86



LTE Band 5 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
3	1	0	QPSK	22.62	22.64	22.57
3	1	8		22.69	22.60	22.56
3	1	14		22.64	22.59	22.61
3	8	0		21.73	21.73	21.63
3	8	4		21.76	21.79	21.71
3	8	7		21.71	21.70	21.63
3	15	0		21.66	21.74	21.68
3	1	0	16-QAM	22.00	22.06	21.75
3	1	8		21.95	21.97	21.82
3	1	14		21.95	21.98	21.84
3	8	0		20.76	20.79	20.67
3	8	4		20.80	20.81	20.73
3	8	7		20.82	20.78	20.66
3	15	0		20.68	20.71	20.65
3	1	0	64-QAM	21.09	21.13	21.03
3	1	8		21.10	21.10	20.97
3	1	14		21.17	21.19	21.04
3	8	0		19.99	20.03	19.93
3	8	4		20.02	20.08	19.95
3	8	7		20.02	20.03	19.92
3	15	0		19.97	19.99	19.90
1.4	1	0	QPSK	22.60	22.60	22.53
1.4	1	3		22.78	22.75	22.67
1.4	1	5		22.61	22.57	22.54
1.4	3	0		22.73	22.70	22.62
1.4	3	1		22.76	22.77	22.77
1.4	3	3		22.73	22.70	22.64
1.4	6	0		21.68	21.79	21.78
1.4	1	0	16-QAM	21.91	21.94	21.81
1.4	1	3		22.05	22.10	21.92
1.4	1	5		21.87	21.95	21.78
1.4	3	0		21.70	21.78	21.62
1.4	3	1		21.81	21.87	21.70



1.4	3	3	64-QAM	21.73	21.77	21.65
1.4	6	0		20.82	20.85	20.73
1.4	1	0		21.03	21.18	20.97
1.4	1	3		21.26	21.18	21.12
1.4	1	5		21.08	21.16	20.99
1.4	3	0		21.05	21.14	20.93
1.4	3	1		21.02	21.11	21.05
1.4	3	3		21.08	21.05	21.01
1.4	6	0		19.97	20.07	19.95



LTE Band 12 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK	22.57	22.57	22.55
10	1	25		22.71	22.53	22.56
10	1	49		22.55	22.56	22.48
10	25	0		21.57	21.67	21.65
10	25	12		21.62	21.68	21.65
10	25	25		21.62	21.59	21.59
10	50	0		21.67	21.66	21.65
10	1	0	16-QAM	21.77	22.00	22.09
10	1	25		22.05	22.01	22.06
10	1	49		22.07	22.00	22.01
10	25	0		20.72	20.62	20.77
10	25	12		20.86	20.70	20.69
10	25	25		20.82	20.65	20.69
10	50	0		20.72	20.71	20.71
10	1	0	64QAM	20.79	20.83	21.16
10	1	25		21.19	20.78	21.17
10	1	49		20.91	20.86	21.24
10	25	0		19.79	19.77	19.83
10	25	12		19.90	19.83	19.91
10	25	25		19.84	19.74	19.69
10	50	0		19.88	19.84	19.92
5	1	0	QPSK	22.39	22.33	22.41
5	1	12		22.67	22.51	22.67
5	1	24		22.33	22.40	22.36
5	12	0		21.48	21.60	21.55
5	12	7		21.66	21.64	21.62
5	12	13		21.65	21.57	21.65
5	25	0		21.50	21.63	21.49
5	1	0	16-QAM	21.62	21.71	21.72
5	1	12		22.00	21.95	21.68
5	1	24		21.84	21.69	21.64
5	12	0		20.47	20.54	20.51
5	12	7		20.56	20.61	20.56



5	12	13		20.58	20.46	20.56
5	25	0		20.60	20.57	20.60
5	1	0	64QAM	20.98	20.60	20.66
5	1	12		20.89	20.98	20.85
5	1	24		20.68	20.77	20.67
5	12	0		19.52	19.72	19.65
5	12	7		19.62	19.81	19.87
5	12	13		19.79	19.76	19.81
5	25	0		19.75	19.82	19.74



LTE Band 12 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
3	1	0	QPSK	22.50	22.50	22.48
3	1	8		22.49	22.46	22.49
3	1	14		22.48	22.49	22.41
3	8	0		21.50	21.60	21.58
3	8	4		21.55	21.61	21.58
3	8	7		21.55	21.52	21.52
3	15	0		21.60	21.59	21.58
3	1	0	16-QAM	21.70	21.93	22.02
3	1	8		21.98	21.94	21.99
3	1	14		22.00	21.93	21.94
3	8	0		20.65	20.55	20.70
3	8	4		20.79	20.63	20.62
3	8	7		20.75	20.58	20.62
3	15	0		20.65	20.64	20.64
3	1	0	64QAM	20.72	20.76	21.09
3	1	8		21.12	20.71	21.10
3	1	14		20.84	20.79	21.17
3	8	0		19.72	19.70	19.76
3	8	4		19.83	19.76	19.84
3	8	7		19.77	19.67	19.62
3	15	0		19.81	19.77	19.85
1.4	1	0	QPSK	22.41	22.46	22.43
1.4	1	3		22.67	22.56	22.48
1.4	1	5		22.45	22.50	22.50
1.4	3	0		22.51	22.43	22.49
1.4	3	1		22.62	22.48	22.50
1.4	3	3		22.59	22.59	22.54
1.4	6	0		21.57	21.58	21.69
1.4	1	0	16-QAM	21.67	21.34	21.48
1.4	1	3		21.59	21.70	21.70
1.4	1	5		21.69	21.54	21.57
1.4	3	0		21.54	21.59	21.51
1.4	3	1		21.57	21.41	21.48



1.4	3	3	64QAM	21.66	21.55	21.36
1.4	6	0		20.63	20.57	20.58
1.4	1	0		20.81	20.75	20.67
1.4	1	3		21.03	20.83	20.86
1.4	1	5		20.84	20.74	20.76
1.4	3	0		20.73	20.64	20.71
1.4	3	1		20.58	20.61	20.84
1.4	3	3		20.62	20.71	20.73
1.4	6	0		19.81	19.67	19.72



LTE Band 66 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
20	1	0	QPSK	22.01	22.45	22.19
20	1	49		22.21	22.42	22.26
20	1	99		22.00	22.01	22.00
20	50	0		21.17	21.32	21.16
20	50	24		21.28	21.27	21.22
20	50	50		21.26	21.19	21.08
20	100	0		21.29	21.30	21.10
20	1	0	16-QAM	21.22	21.48	21.65
20	1	49		21.63	21.34	21.35
20	1	99		21.19	21.45	21.32
20	50	0		20.43	20.39	20.24
20	50	24		20.35	20.28	20.22
20	50	50		20.31	20.18	20.10
20	100	0		20.38	20.23	20.29
20	1	0	64QAM	20.61	20.36	20.47
20	1	49		20.63	20.83	20.73
20	1	99		20.52	20.57	20.52
20	50	0		19.58	19.55	19.46
20	50	24		19.55	19.50	19.57
20	50	50		19.57	19.35	19.35
20	100	0		19.59	19.34	19.44
15	1	0	QPSK	22.16	22.07	22.08
15	1	37		22.24	22.42	22.30
15	1	74		22.00	22.00	22.34
15	36	0		21.25	21.27	21.27
15	36	20		21.23	21.29	21.20
15	36	39		21.24	21.15	21.14
15	75	0		21.27	21.16	21.13
15	1	0	16-QAM	21.25	21.52	21.69
15	1	37		21.71	21.53	21.65
15	1	74		21.28	21.44	21.24
15	36	0		20.37	20.33	20.29



15	36	20		20.30	20.26	20.30
15	36	39		20.34	20.32	20.20
15	75	0		20.32	20.30	20.32
15	1	0	64QAM	20.38	20.41	20.51
15	1	37		20.65	20.55	20.74
15	1	74		20.74	20.43	20.63
15	36	0		19.38	19.40	19.50
15	36	20		19.52	19.51	19.42
15	36	39		19.49	19.41	19.42
15	75	0		19.54	19.37	19.47



LTE Band 66 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK	22.11	22.19	22.17
10	1	25		22.25	22.28	22.34
10	1	49		22.04	22.12	22.08
10	25	0		21.31	21.24	21.38
10	25	12		21.28	21.22	21.19
10	25	25		21.31	21.16	21.26
10	50	0		21.31	21.28	21.27
10	1	0	16-QAM	21.63	21.45	21.27
10	1	25		21.34	21.68	21.44
10	1	49		21.63	21.34	21.45
10	25	0		20.20	20.42	20.20
10	25	12		20.36	20.24	20.41
10	25	25		20.29	20.28	20.28
10	50	0		20.36	20.30	20.27
10	1	0	64QAM	20.69	20.45	20.54
10	1	25		20.64	20.60	20.74
10	1	49		20.47	20.35	20.41
10	25	0		19.51	19.49	19.55
10	25	12		19.55	19.56	19.45
10	25	25		19.58	19.54	19.56
10	50	0		19.49	19.52	19.44
5	1	0	QPSK	22.23	22.34	22.34
5	1	12		22.22	22.39	22.41
5	1	24		22.31	22.11	22.34
5	12	0		21.31	21.27	21.29
5	12	7		21.21	21.34	21.27
5	12	13		21.22	21.18	21.21
5	25	0		21.22	21.25	21.18
5	1	0	16-QAM	21.48	21.30	21.24
5	1	12		21.65	21.56	21.49
5	1	24		21.49	21.32	21.26
5	12	0		20.27	20.20	20.30
5	12	7		20.41	20.38	20.24



5	12	13		20.26	20.31	20.13
5	25	0		20.32	20.30	20.37
5	1	0	64QAM	20.82	20.62	20.73
5	1	12		20.84	20.99	20.71
5	1	24		20.50	20.74	20.73
5	12	0		19.49	19.45	19.63
5	12	7		19.42	19.63	19.63
5	12	13		19.69	19.51	19.67
5	25	0		19.66	19.55	19.61



LTE Band 66 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
3	1	0	QPSK	22.19	22.12	22.18
3	1	8		22.17	22.16	22.25
3	1	14		22.19	22.06	22.04
3	8	0		21.25	21.14	21.28
3	8	4		21.19	21.19	21.25
3	8	7		21.28	21.13	21.22
3	15	0		21.24	21.26	21.19
3	1	0	16-QAM	21.20	21.26	21.54
3	1	8		21.26	21.28	21.45
3	1	14		21.35	21.31	21.64
3	8	0		20.30	20.35	20.38
3	8	4		20.38	20.48	20.38
3	8	7		20.25	20.39	20.19
3	15	0		20.37	20.16	20.38
3	1	0	64QAM	20.32	20.35	20.52
3	1	8		20.64	20.47	20.54
3	1	14		20.54	20.31	20.52
3	8	0		19.62	19.57	19.51
3	8	4		19.65	19.55	19.62
3	8	7		19.52	19.62	19.54
3	15	0		19.65	19.50	19.58
1.4	1	0	QPSK	22.16	22.16	22.13
1.4	1	3		22.20	22.23	22.23
1.4	1	5		22.10	22.12	22.23
1.4	3	0		22.25	22.13	22.12
1.4	3	1		22.14	22.11	22.24
1.4	3	3		22.13	22.18	22.06
1.4	6	0		21.20	21.15	21.25
1.4	1	0	16-QAM	21.38	21.23	21.54
1.4	1	3		21.36	21.31	21.66
1.4	1	5		21.28	21.19	21.52
1.4	3	0		21.19	21.22	21.24
1.4	3	1		21.18	21.23	21.25



1.4	3	3	64QAM	21.26	21.01	21.01
1.4	6	0		20.38	20.31	20.46
1.4	1	0		20.48	20.84	20.40
1.4	1	3		20.57	20.58	20.73
1.4	1	5		20.50	20.51	20.78
1.4	3	0		20.47	20.51	20.70
1.4	3	1		20.49	20.48	20.78
1.4	3	3		20.49	20.49	20.74
1.4	6	0		19.49	19.57	19.63



ERP/EIRP

LTE Band 2 / 1.4MHz (Average) (GT - LC = 2.6 dB)					
Channel	Mode	Conducted		EIRP	
		Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	22.71	0.1866	25.31	0.3396
Middle		22.69	0.1858	25.29	0.3381
Highest		22.60	0.1820	25.20	0.3311
Lowest	16QAM	21.58	0.1439	24.18	0.2618
Middle		21.89	0.1545	24.49	0.2812
Highest		21.53	0.1422	24.13	0.2588
Lowest	64QAM	21.05	0.1274	23.65	0.2317
Middle		20.98	0.1253	23.58	0.2280
Highest		20.70	0.1175	23.30	0.2138

LTE Band 2 / 3MHz (Average) (GT - LC = 2.6 dB)					
Channel	Mode	Conducted		EIRP	
		Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	22.56	0.1803	25.16	0.3281
Middle		22.44	0.1754	25.04	0.3192
Highest		22.50	0.1778	25.10	0.3236
Lowest	16QAM	21.83	0.1524	24.43	0.2773
Middle		21.84	0.1528	24.44	0.2780
Highest		21.93	0.1560	24.53	0.2838
Lowest	64QAM	21.05	0.1274	23.65	0.2317
Middle		20.94	0.1242	23.54	0.2259
Highest		20.84	0.1213	23.44	0.2208



LTE Band 2 / 5MHz (Average) (GT - LC = 2.6 dB)					
Channel	Mode	Conducted		EIRP	
		Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	22.74	0.1879	25.34	0.3420
Middle		22.70	0.1862	25.30	0.3388
Highest		22.46	0.1762	25.06	0.3206
Lowest	16QAM	21.76	0.1500	24.36	0.2729
Middle		21.95	0.1567	24.55	0.2851
Highest		21.76	0.1500	24.36	0.2729
Lowest	64QAM	20.93	0.1239	23.53	0.2254
Middle		21.13	0.1297	23.73	0.2360
Highest		20.95	0.1245	23.55	0.2265

LTE Band 2 / 10MHz (Average) (GT - LC = 2.6 dB)					
Channel	Mode	Conducted		EIRP	
		Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	22.55	0.1799	25.15	0.3273
Middle		22.55	0.1799	25.15	0.3273
Highest		22.55	0.1799	25.15	0.3273
Lowest	16QAM	21.56	0.1432	24.16	0.2606
Middle		21.45	0.1396	24.05	0.2541
Highest		21.56	0.1432	24.16	0.2606
Lowest	64QAM	20.94	0.1242	23.54	0.2259
Middle		20.82	0.1208	23.42	0.2198
Highest		20.73	0.1183	23.33	0.2153



LTE Band 2 / 15MHz (Average) (GT - LC = 2.6 dB)					
Channel	Mode	Conducted		EIRP	
		Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	22.51	0.1782	25.11	0.3243
Middle		22.47	0.1766	25.07	0.3214
Highest		22.35	0.1718	24.95	0.3126
Lowest	16QAM	21.94	0.1563	24.54	0.2844
Middle		21.51	0.1416	24.11	0.2576
Highest		21.56	0.1432	24.16	0.2606
Lowest	64QAM	20.96	0.1247	23.56	0.2270
Middle		20.80	0.1202	23.40	0.2188
Highest		20.57	0.1140	23.17	0.2075

LTE Band 2 / 20MHz (Average) (GT - LC = 2.6 dB)					
Channel	Mode	Conducted		EIRP	
		Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	22.75	0.1884	25.35	0.3428
Middle		22.58	0.1811	25.18	0.3296
Highest		22.58	0.1811	25.18	0.3296
Lowest	16QAM	21.86	0.1535	24.46	0.2793
Middle		21.74	0.1493	24.34	0.2716
Highest		21.71	0.1483	24.31	0.2698
Lowest	64QAM	20.55	0.1135	23.15	0.2065
Middle		20.50	0.1122	23.10	0.2042
Highest		20.77	0.1194	23.37	0.2173



LTE Band 4 / 1.4MHz (Average) (GT - LC = 1.76 dB)					
Channel	Mode	Conducted		EIRP	
		Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	22.52	0.1786	24.28	0.2679
Middle		22.35	0.1718	24.11	0.2576
Highest		22.43	0.1750	24.19	0.2624
Lowest	16QAM	21.79	0.1510	23.55	0.2265
Middle		21.93	0.1560	23.69	0.2339
Highest		21.82	0.1521	23.58	0.2280
Lowest	64QAM	20.73	0.1183	22.49	0.1774
Middle		20.73	0.1183	22.49	0.1774
Highest		21.12	0.1294	22.88	0.1941

LTE Band 4 / 3MHz (Average) (GT - LC = 1.76 dB)					
Channel	Mode	Conducted		EIRP	
		Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	22.38	0.1730	24.14	0.2594
Middle		22.40	0.1738	24.16	0.2606
Highest		22.31	0.1702	24.07	0.2553
Lowest	16QAM	21.47	0.1403	23.23	0.2104
Middle		21.88	0.1542	23.64	0.2312
Highest		21.48	0.1406	23.24	0.2109
Lowest	64QAM	20.98	0.1253	22.74	0.1879
Middle		20.93	0.1239	22.69	0.1858
Highest		21.06	0.1276	22.82	0.1914



LTE Band 4 / 5MHz (Average) (GT - LC = 1.76 dB)					
Channel	Mode	Conducted		EIRP	
		Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	22.54	0.1795	24.30	0.2692
Middle		22.57	0.1807	24.33	0.2710
Highest		22.35	0.1718	24.11	0.2576
Lowest	16QAM	21.52	0.1419	23.28	0.2128
Middle		21.69	0.1476	23.45	0.2213
Highest		21.33	0.1358	23.09	0.2037
Lowest	64QAM	21.04	0.1271	22.80	0.1905
Middle		21.06	0.1276	22.82	0.1914
Highest		20.72	0.1180	22.48	0.1770

LTE Band 4 / 10MHz (Average) (GT - LC = 1.76 dB)					
Channel	Mode	Conducted		EIRP	
		Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	22.38	0.1730	24.14	0.2594
Middle		22.34	0.1714	24.10	0.2570
Highest		22.51	0.1782	24.27	0.2673
Lowest	16QAM	21.63	0.1455	23.39	0.2183
Middle		21.86	0.1535	23.62	0.2301
Highest		21.41	0.1384	23.17	0.2075
Lowest	64QAM	20.98	0.1253	22.74	0.1879
Middle		21.17	0.1309	22.93	0.1963
Highest		20.73	0.1183	22.49	0.1774



LTE Band 4 / 15MHz (Average) (GT - LC = 1.76 dB)					
Channel	Mode	Conducted		EIRP	
		Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	22.36	0.1722	24.12	0.2582
Middle		22.42	0.1746	24.18	0.2618
Highest		22.35	0.1718	24.11	0.2576
Lowest	16QAM	21.95	0.1567	23.71	0.2350
Middle		21.95	0.1567	23.71	0.2350
Highest		21.96	0.1570	23.72	0.2355
Lowest	64QAM	20.61	0.1151	22.37	0.1726
Middle		20.65	0.1161	22.41	0.1742
Highest		20.93	0.1239	22.69	0.1858

LTE Band 4 / 20MHz (Average) (GT - LC = 1.76 dB)					
Channel	Mode	Conducted		EIRP	
		Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	22.38	0.1730	24.14	0.2594
Middle		22.58	0.1811	24.34	0.2716
Highest		22.29	0.1694	24.05	0.2541
Lowest	16QAM	21.65	0.1462	23.41	0.2193
Middle		21.60	0.1445	23.36	0.2168
Highest		21.72	0.1486	23.48	0.2228
Lowest	64QAM	20.72	0.1180	22.48	0.1770
Middle		20.84	0.1213	22.60	0.1820
Highest		20.49	0.1119	22.25	0.1679



LTE Band 5 / 1.4MHz (Average) (GT - LC = 1.28 dB)					
Channel	Mode	Conducted		ERP	
		Power (dBm)	Power (Watts)	ERP(dBm)	ERP(W)
Lowest	QPSK	22.78	0.1897	21.91	0.1552
Middle		22.75	0.1884	21.88	0.1542
Highest		22.67	0.1849	21.80	0.1514
Lowest	16QAM	22.05	0.1603	21.18	0.1312
Middle		22.10	0.1622	21.23	0.1327
Highest		21.92	0.1556	21.05	0.1274
Lowest	64QAM	21.26	0.1337	20.39	0.1094
Middle		21.18	0.1312	20.31	0.1074
Highest		21.12	0.1294	20.25	0.1059

LTE Band 5 / 3MHz (Average) (GT - LC = 1.28 dB)					
Channel	Mode	Conducted		ERP	
		Power (dBm)	Power (Watts)	ERP(dBm)	ERP(W)
Lowest	QPSK	22.69	0.1858	21.82	0.1521
Middle		22.60	0.1820	21.73	0.1489
Highest		22.56	0.1803	21.69	0.1476
Lowest	16QAM	22.00	0.1585	21.13	0.1297
Middle		22.06	0.1607	21.19	0.1315
Highest		21.75	0.1496	20.88	0.1225
Lowest	64QAM	21.17	0.1309	20.30	0.1072
Middle		21.19	0.1315	20.32	0.1076
Highest		21.04	0.1271	20.17	0.1040



LTE Band 5 / 5MHz (Average) (GT - LC = 1.28 dB)					
Channel	Mode	Conducted		ERP	
		Power (dBm)	Power (Watts)	ERP(dBm)	ERP(W)
Lowest	QPSK	22.93	0.1963	22.06	0.1607
Middle		22.76	0.1888	21.89	0.1545
Highest		22.70	0.1862	21.83	0.1524
Lowest	16QAM	22.19	0.1656	21.32	0.1355
Middle		22.19	0.1656	21.32	0.1355
Highest		21.97	0.1574	21.10	0.1288
Lowest	64QAM	21.24	0.1330	20.37	0.1089
Middle		21.32	0.1355	20.45	0.1109
Highest		21.15	0.1303	20.28	0.1067

LTE Band 5 / 10MHz (Average) (GT - LC = 1.28 dB)					
Channel	Mode	Conducted		ERP	
		Power (dBm)	Power (Watts)	ERP(dBm)	ERP(W)
Lowest	QPSK	22.77	0.1892	21.90	0.1549
Middle		22.94	0.1968	22.07	0.1611
Highest		22.71	0.1866	21.84	0.1528
Lowest	16QAM	22.11	0.1626	21.24	0.1330
Middle		22.09	0.1618	21.22	0.1324
Highest		21.97	0.1574	21.10	0.1288
Lowest	64QAM	21.05	0.1274	20.18	0.1042
Middle		21.07	0.1279	20.20	0.1047
Highest		20.92	0.1236	20.05	0.1012



LTE Band 12 / 1.4MHz (Average) (GT - LC = 1.51 dB)					
Channel	Mode	Conducted		ERP	
		Power (dBm)	Power (Watts)	ERP(dBm)	ERP(W)
Lowest	QPSK	22.67	0.1849	22.03	0.1596
Middle		22.56	0.1803	21.92	0.1556
Highest		22.48	0.1770	21.84	0.1528
Lowest	16QAM	21.59	0.1442	20.95	0.1245
Middle		21.70	0.1479	21.06	0.1276
Highest		21.70	0.1479	21.06	0.1276
Lowest	64QAM	21.03	0.1268	20.39	0.1094
Middle		20.83	0.1211	20.19	0.1045
Highest		20.86	0.1219	20.22	0.1052

LTE Band 12 / 3MHz (Average) (GT - LC = 1.51 dB)					
Channel	Mode	Conducted		ERP	
		Power (dBm)	Power (Watts)	ERP(dBm)	ERP(W)
Lowest	QPSK	22.50	0.1778	21.86	0.1535
Middle		22.50	0.1778	21.86	0.1535
Highest		22.48	0.1770	21.84	0.1528
Lowest	16QAM	21.70	0.1479	21.06	0.1276
Middle		21.93	0.1560	21.29	0.1346
Highest		22.02	0.1592	21.38	0.1374
Lowest	64QAM	20.84	0.1213	20.20	0.1047
Middle		20.79	0.1199	20.15	0.1035
Highest		21.17	0.1309	20.53	0.1130



LTE Band 12 / 5MHz (Average) (GT - LC = 1.51 dB)					
Channel	Mode	Conducted		ERP	
		Power (dBm)	Power (Watts)	ERP(dBm)	ERP(W)
Lowest	QPSK	22.67	0.1849	22.03	0.1596
Middle		22.51	0.1782	21.87	0.1538
Highest		22.67	0.1849	22.03	0.1596
Lowest	16QAM	22.00	0.1585	21.36	0.1368
Middle		21.95	0.1567	21.31	0.1352
Highest		21.68	0.1472	21.04	0.1271
Lowest	64QAM	20.98	0.1253	20.34	0.1081
Middle		20.60	0.1148	19.96	0.0991
Highest		20.66	0.1164	20.02	0.1005

LTE Band 12 / 10MHz (Average) (GT - LC = 1.51 dB)					
Channel	Mode	Conducted		ERP	
		Power (dBm)	Power (Watts)	ERP(dBm)	ERP(W)
Lowest	QPSK	22.71	0.1866	22.07	0.1611
Middle		22.53	0.1791	21.89	0.1545
Highest		22.56	0.1803	21.92	0.1556
Lowest	16QAM	21.77	0.1503	21.13	0.1297
Middle		22.00	0.1585	21.36	0.1368
Highest		22.09	0.1618	21.45	0.1396
Lowest	64QAM	20.91	0.1233	20.27	0.1064
Middle		20.86	0.1219	20.22	0.1052
Highest		21.24	0.1330	20.60	0.1148



LTE Band 66 / 1.4MHz (Average) (GT - LC = 1.76 dB)					
Channel	Mode	Conducted		EIRP	
		Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	22.25	0.1679	24.01	0.2518
Middle		22.13	0.1633	23.89	0.2449
Highest		22.12	0.1629	23.88	0.2443
Lowest	16QAM	21.36	0.1368	23.12	0.2051
Middle		21.31	0.1352	23.07	0.2028
Highest		21.66	0.1466	23.42	0.2198
Lowest	64QAM	20.48	0.1117	22.24	0.1675
Middle		20.84	0.1213	22.60	0.1820
Highest		20.40	0.1096	22.16	0.1644

LTE Band 66 / 3MHz (Average) (GT - LC = 1.76 dB)					
Channel	Mode	Conducted		EIRP	
		Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	22.17	0.1648	23.93	0.2472
Middle		22.16	0.1644	23.92	0.2466
Highest		22.25	0.1679	24.01	0.2518
Lowest	16QAM	21.35	0.1365	23.11	0.2046
Middle		21.31	0.1352	23.07	0.2028
Highest		21.64	0.1459	23.40	0.2188
Lowest	64QAM	20.64	0.1159	22.40	0.1738
Middle		20.47	0.1114	22.23	0.1671
Highest		20.54	0.1132	22.30	0.1698



LTE Band 66 / 5MHz (Average) (GT - LC = 1.76 dB)					
Channel	Mode	Conducted		EIRP	
		Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	22.22	0.1667	23.98	0.2500
Middle		22.39	0.1734	24.15	0.2600
Highest		22.41	0.1742	24.17	0.2612
Lowest	16QAM	21.65	0.1462	23.41	0.2193
Middle		21.56	0.1432	23.32	0.2148
Highest		21.49	0.1409	23.25	0.2113
Lowest	64QAM	20.84	0.1213	22.60	0.1820
Middle		20.99	0.1256	22.75	0.1884
Highest		20.71	0.1178	22.47	0.1766

LTE Band 66 / 10MHz (Average) (GT - LC = 1.76 dB)					
Channel	Mode	Conducted		EIRP	
		Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	22.25	0.1679	24.01	0.2518
Middle		22.28	0.1690	24.04	0.2535
Highest		22.34	0.1714	24.10	0.2570
Lowest	16QAM	21.34	0.1361	23.10	0.2042
Middle		21.68	0.1472	23.44	0.2208
Highest		21.44	0.1393	23.20	0.2089
Lowest	64QAM	20.64	0.1159	22.40	0.1738
Middle		20.60	0.1148	22.36	0.1722
Highest		20.74	0.1186	22.50	0.1778



LTE Band 66 / 15MHz (Average) (GT - LC = 1.76 dB)					
Channel	Mode	Conducted		EIRP	
		Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	22.24	0.1675	24.00	0.2512
Middle		22.42	0.1746	24.18	0.2618
Highest		22.30	0.1698	24.06	0.2547
Lowest	16QAM	21.71	0.1483	23.47	0.2223
Middle		21.53	0.1422	23.29	0.2133
Highest		21.65	0.1462	23.41	0.2193
Lowest	64QAM	20.65	0.1161	22.41	0.1742
Middle		20.55	0.1135	22.31	0.1702
Highest		20.74	0.1186	22.50	0.1778

LTE Band 66 / 20MHz (Average) (GT - LC = 1.76 dB)					
Channel	Mode	Conducted		EIRP	
		Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	22.01	0.1589	23.77	0.2382
Middle		22.45	0.1758	24.21	0.2636
Highest		22.19	0.1656	23.95	0.2483
Lowest	16QAM	21.22	0.1324	22.98	0.1986
Middle		21.48	0.1406	23.24	0.2109
Highest		21.65	0.1462	23.41	0.2193
Lowest	64QAM	20.63	0.1156	22.39	0.1734
Middle		20.83	0.1211	22.59	0.1816
Highest		20.73	0.1183	22.49	0.1774



LTE Band 2

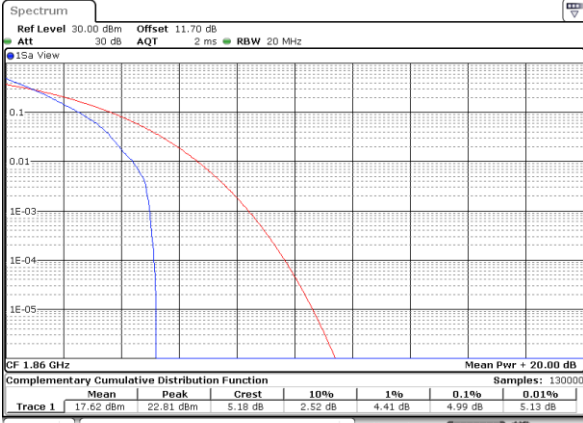
Peak-to-Average Ratio

Mode	LTE Band 2 / 20MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	4.99	5.28	5.62	6.20	PASS
Middle CH	5.48	5.30	6.29	6.23	
Highest CH	5.25	5.39	6.00	6.26	
Mode	LTE Band 2 / 20MHz				
Mod.	64QAM				Limit: 13dB
RB Size	1RB	Full RB			Result
Lowest CH	6.26	6.32	-	-	PASS
Middle CH	6.55	6.32	-	-	
Highest CH	6.64	6.43	-	-	



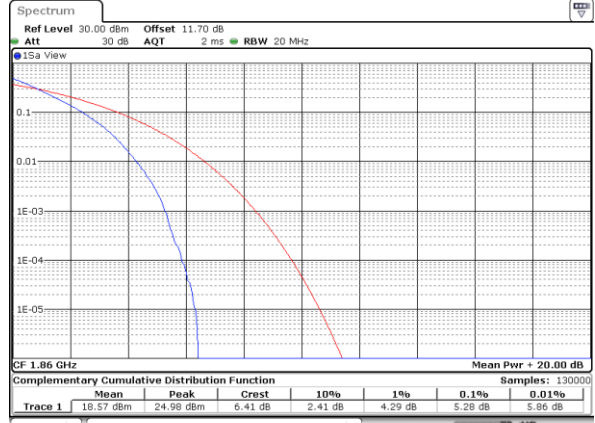
LTE Band 2 / 20MHz / QPSK

Lowest Channel / 1RB



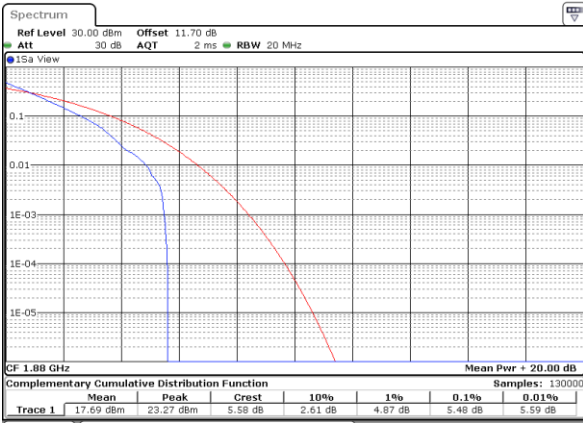
Date: 8 FEB 2020 06:05:03

Lowest Channel / Full RB



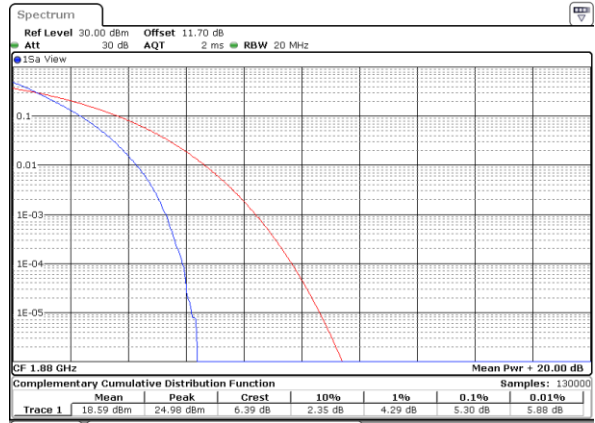
Date: 8 FEB 2020 06:05:14

Middle Channel / 1RB



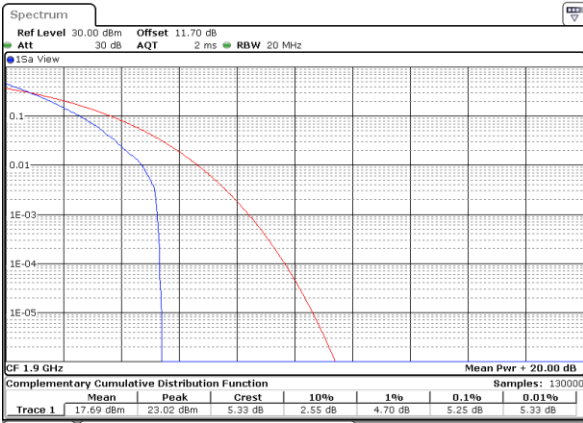
Date: 8 FEB 2020 06:05:24

Middle Channel / Full RB



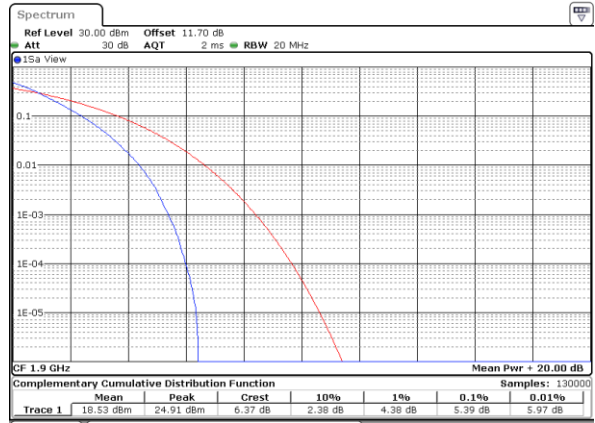
Date: 8 FEB 2020 06:05:34

Highest Channel / 1RB



Date: 8 FEB 2020 06:05:45

Highest Channel / Full RB

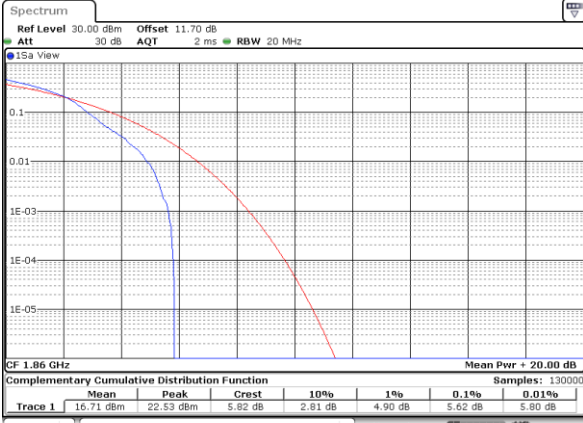


Date: 8 FEB 2020 06:05:55



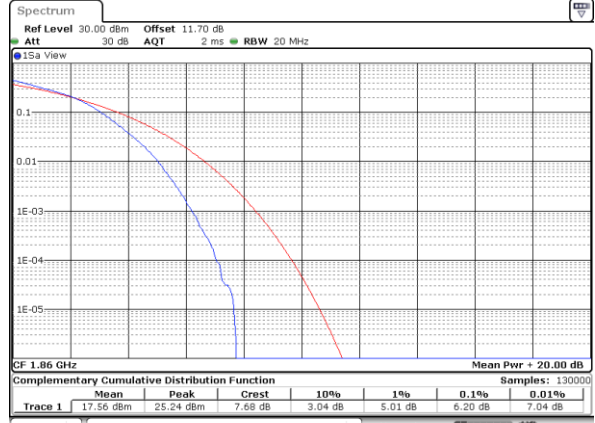
LTE Band 2 / 20MHz / 16QAM

Lowest Channel / 1RB



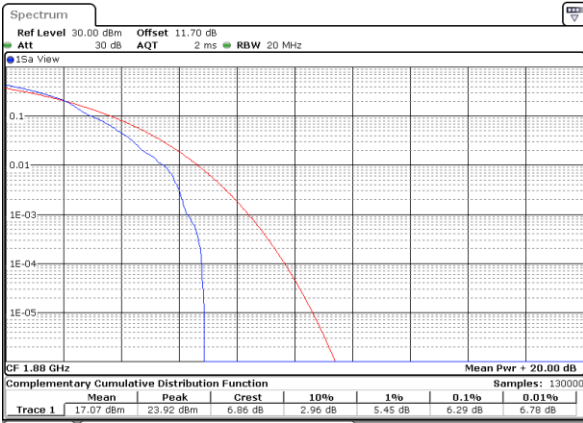
Date: 8 FEB 2020 06:03:48

Lowest Channel / Full RB



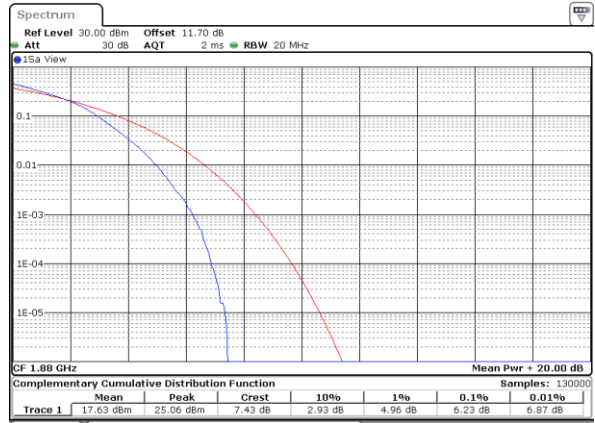
Date: 8 FEB 2020 06:03:59

Middle Channel / 1RB



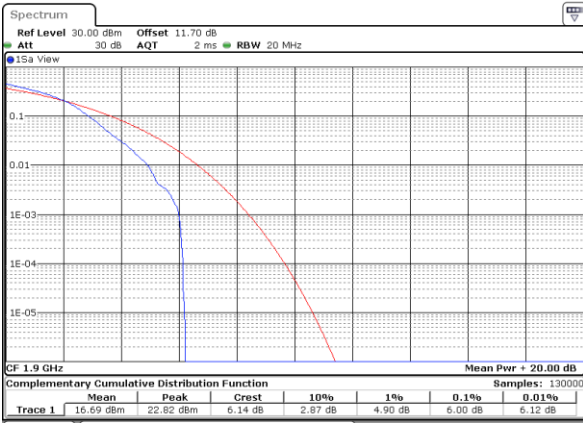
Date: 8 FEB 2020 06:04:09

Middle Channel / Full RB



Date: 8 FEB 2020 06:04:26

Highest Channel / 1RB



Date: 8 FEB 2020 06:04:36

Highest Channel / Full RB

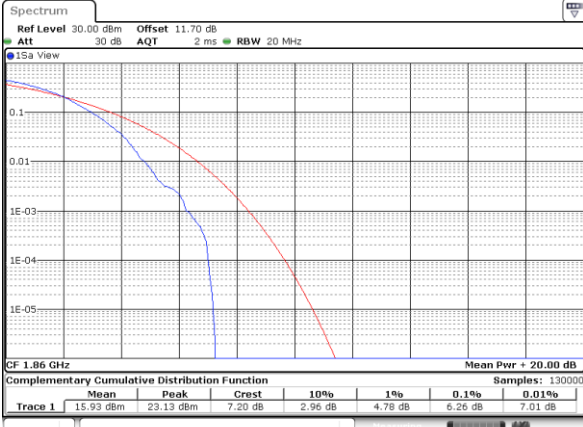


Date: 8 FEB 2020 06:04:53



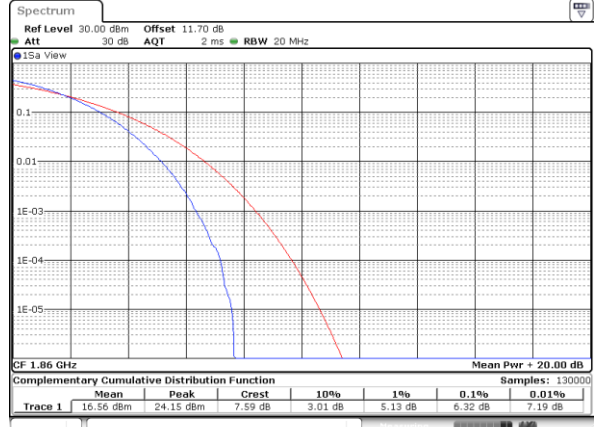
LTE Band 2 / 20MHz / 64QAM

Lowest Channel / 1RB



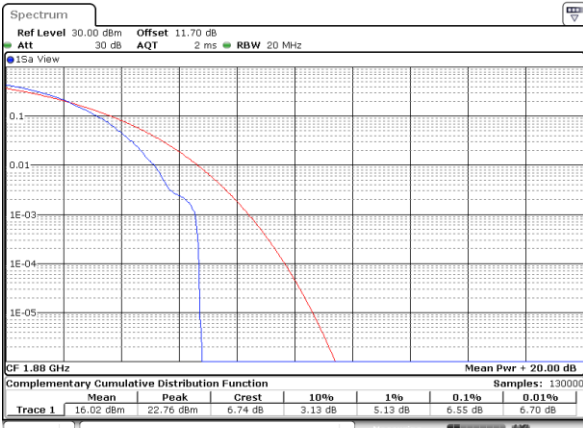
Date: 8 FEB 2020 06:06:06

Lowest Channel / Full RB



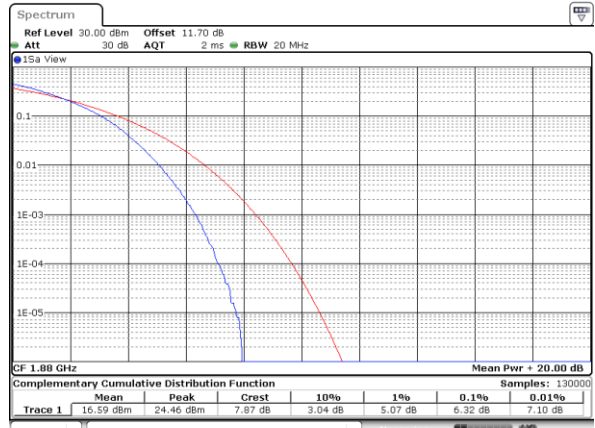
Date: 8 FEB 2020 06:06:23

Middle Channel / 1RB



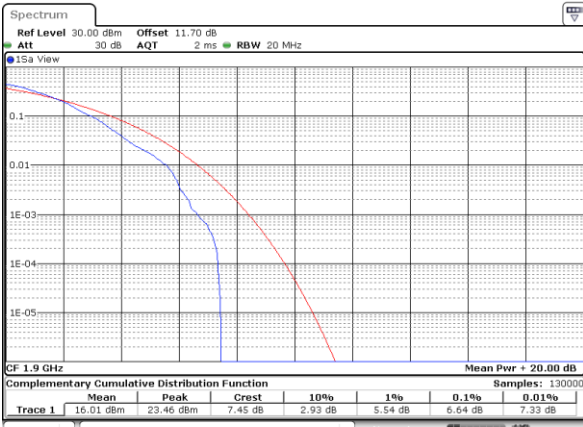
Date: 8 FEB 2020 06:06:43

Middle Channel / Full RB



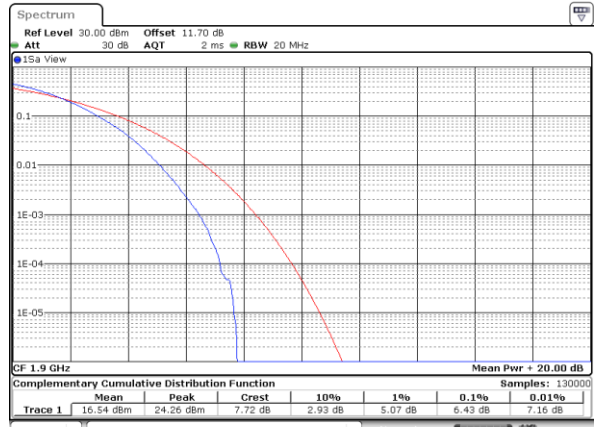
Date: 8 FEB 2020 06:07:13

Highest Channel / 1RB



Date: 8 FEB 2020 06:07:25

Highest Channel / Full RB



Date: 8 FEB 2020 06:07:36



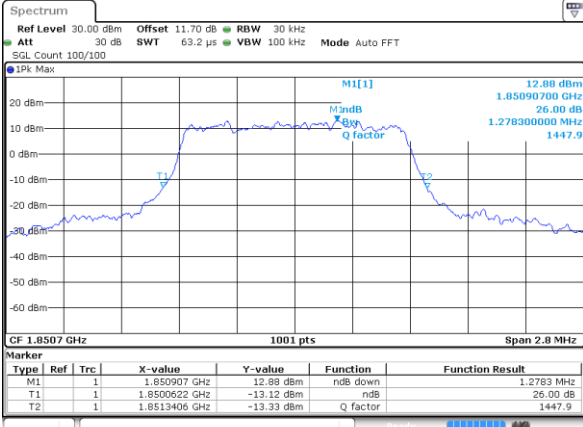
26dB Bandwidth

Mode	LTE Band 2 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	1.28	1.30	2.97	2.93	4.91	4.88	9.87	9.87	14.18	14.48	18.78	18.82
Middle CH	1.29	1.30	2.94	2.94	4.86	4.83	9.77	9.73	14.21	14.30	18.82	19.18
Highest CH	1.27	1.29	2.95	2.97	4.82	4.80	9.63	9.87	14.45	14.12	18.98	18.94
Mode	LTE Band 2 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	1.28	-	2.94	-	4.89	-	9.81	-	14.33	-	18.98	-
Middle CH	1.27	-	2.97	-	4.86	-	9.79	-	14.54	-	18.94	-
Highest CH	1.28	-	2.96	-	4.90	-	9.77	-	14.45	-	19.06	-



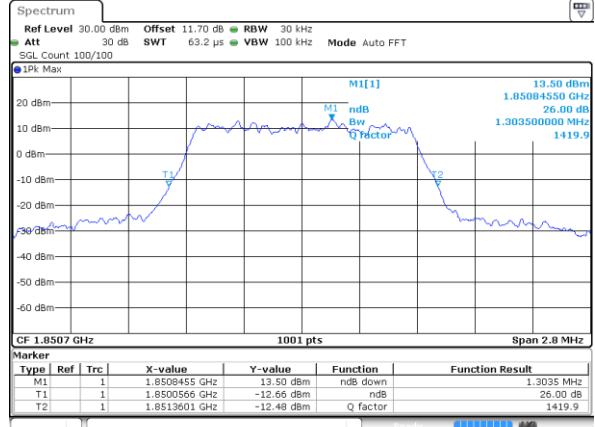
LTE Band 2

Lowest Channel / 1.4MHz / QPSK



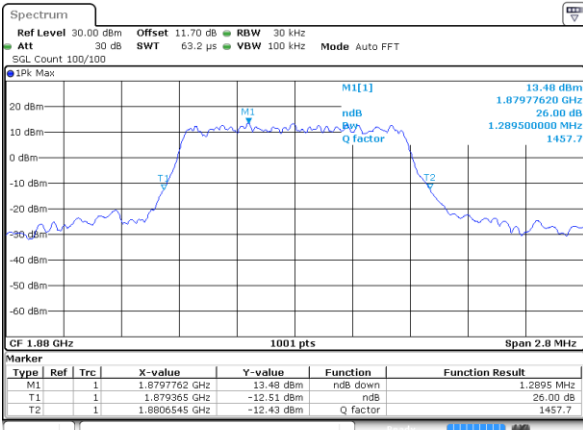
Date: 8 FEB 2020 06:16:11

Lowest Channel / 1.4MHz / 16QAM



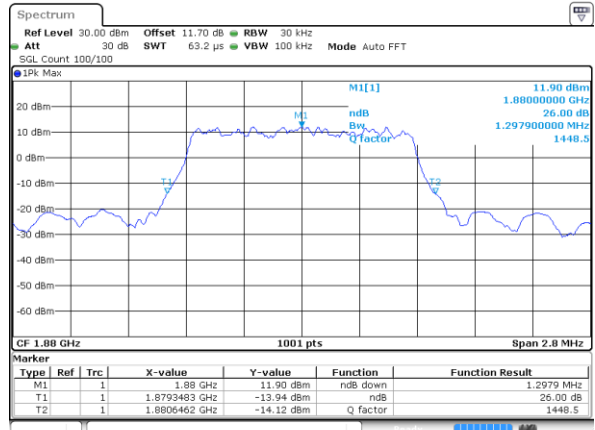
Date: 8 FEB 2020 06:16:23

Middle Channel / 1.4MHz / QPSK



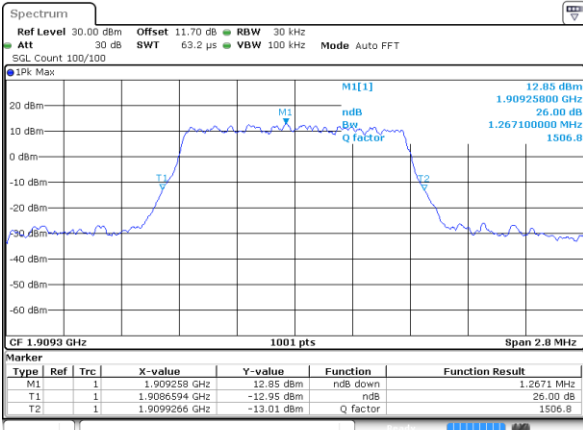
Date: 8 FEB 2020 06:22:34

Middle Channel / 1.4MHz / 16QAM



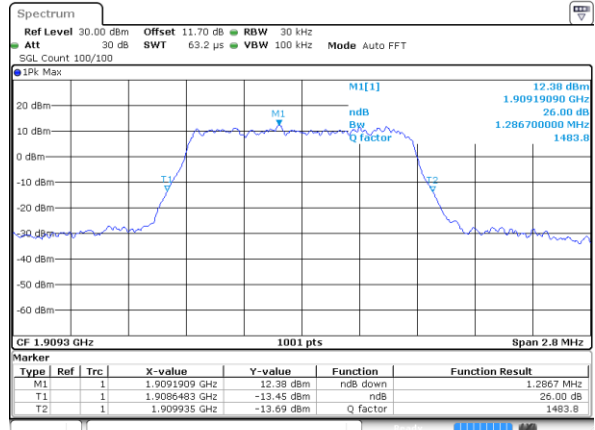
Date: 8 FEB 2020 06:22:46

Highest Channel / 1.4MHz / QPSK



Date: 8 FEB 2020 06:30:25

Highest Channel / 1.4MHz / 16QAM

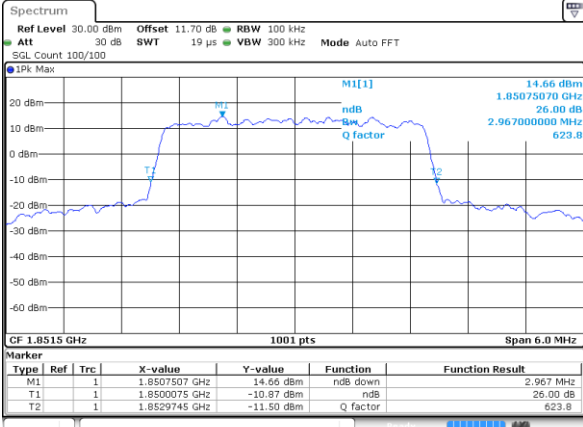


Date: 8 FEB 2020 06:30:37



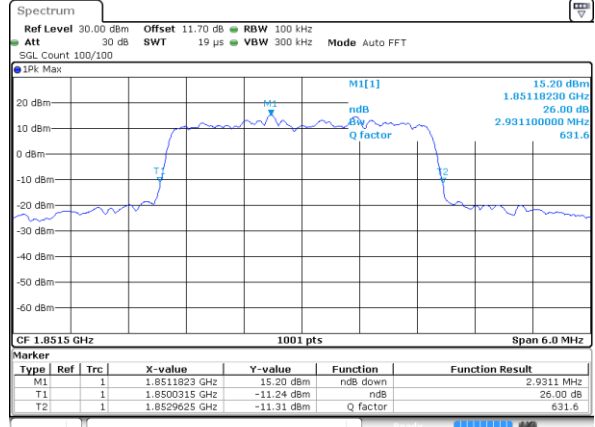
LTE Band 2

Lowest Channel / 3MHz / QPSK



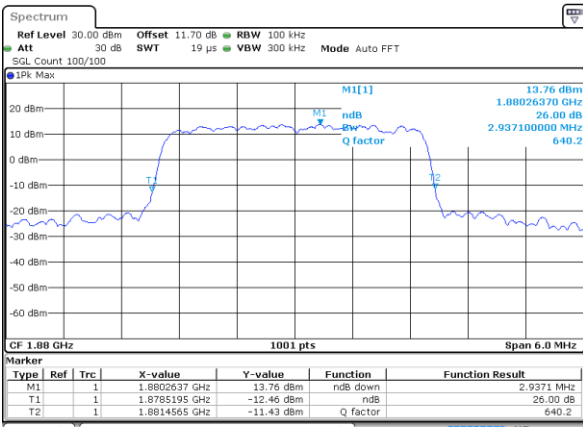
Date: 8 FEB 2020 04:23:20

Lowest Channel / 3MHz / 16QAM



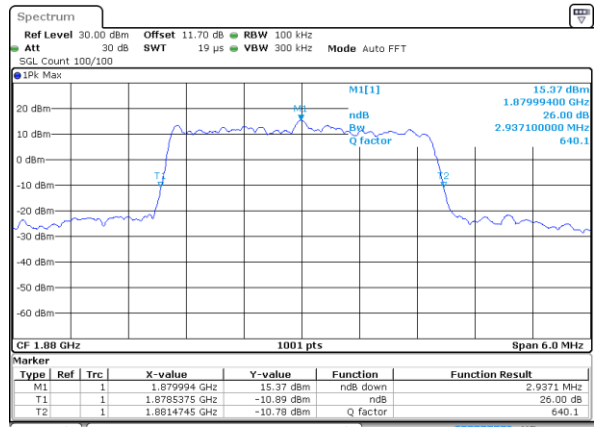
Date: 8 FEB 2020 04:23:32

Middle Channel / 3MHz / QPSK



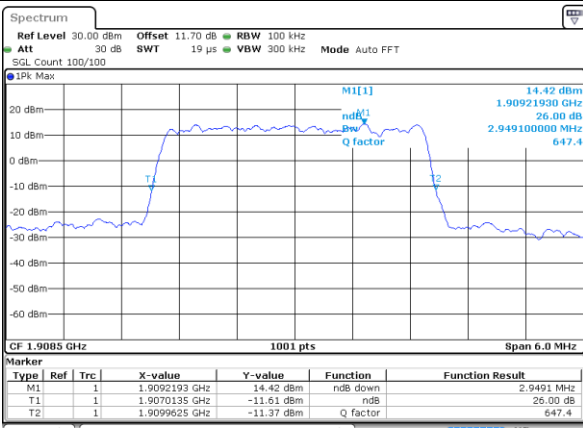
Date: 8 FEB 2020 04:28:11

Middle Channel / 3MHz / 16QAM



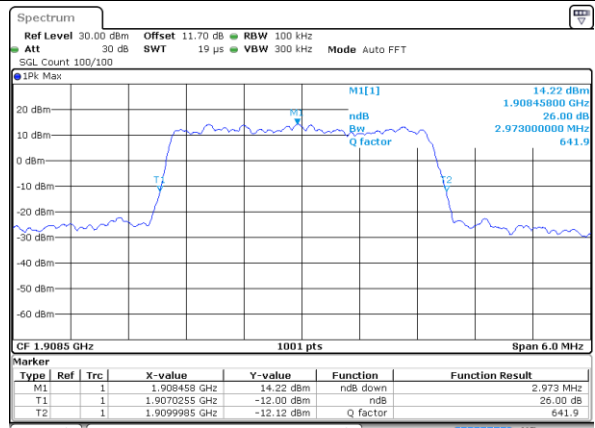
Date: 8 FEB 2020 04:28:23

Highest Channel / 3MHz / QPSK



Date: 8 FEB 2020 04:30:20

Highest Channel / 3MHz / 16QAM

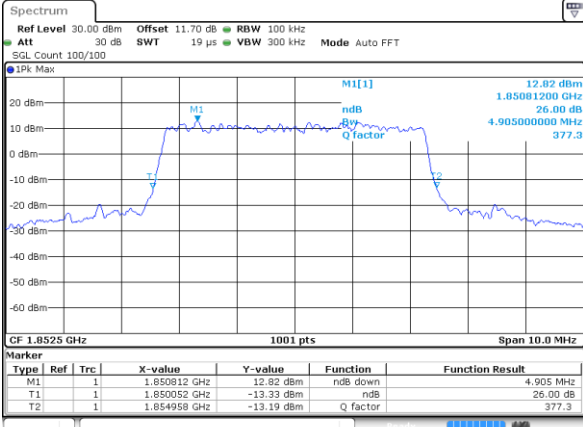


Date: 8 FEB 2020 04:30:32



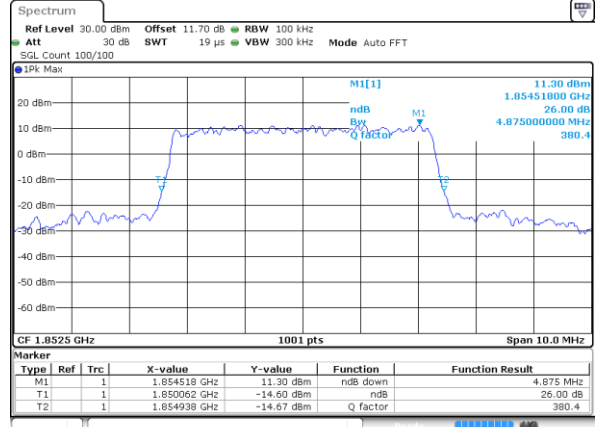
LTE Band 2

Lowest Channel / 5MHz / QPSK



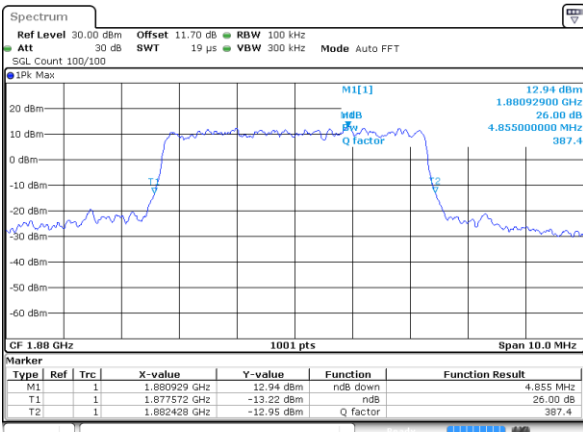
Date: 8 FEB 2020 04:35:13

Lowest Channel / 5MHz / 16QAM



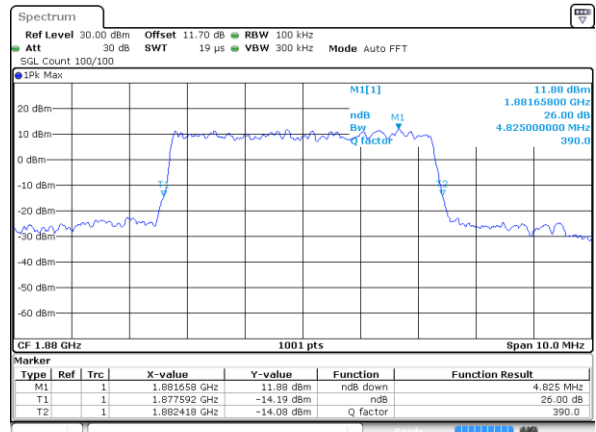
Date: 8 FEB 2020 04:35:25

Middle Channel / 5MHz / QPSK



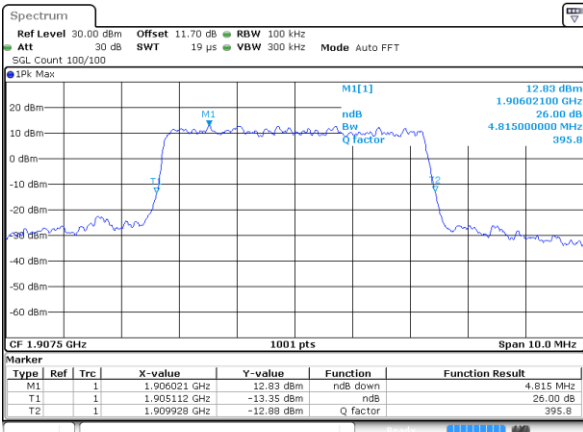
Date: 8 FEB 2020 04:40:05

Middle Channel / 5MHz / 16QAM



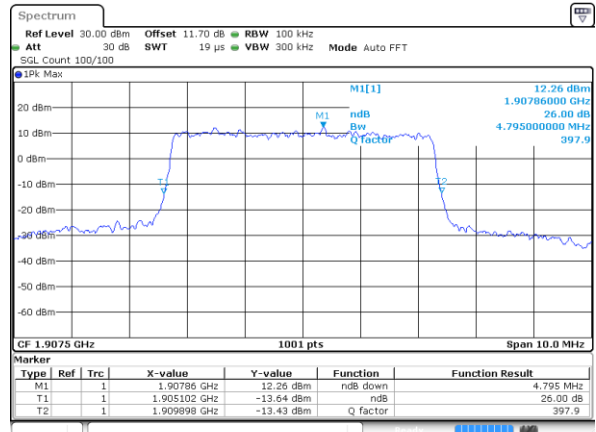
Date: 8 FEB 2020 04:40:16

Highest Channel / 5MHz / QPSK



Date: 8 FEB 2020 04:42:13

Highest Channel / 5MHz / 16QAM

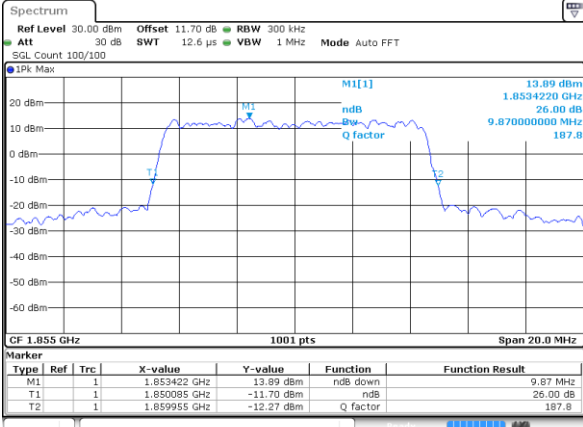


Date: 8 FEB 2020 04:42:25



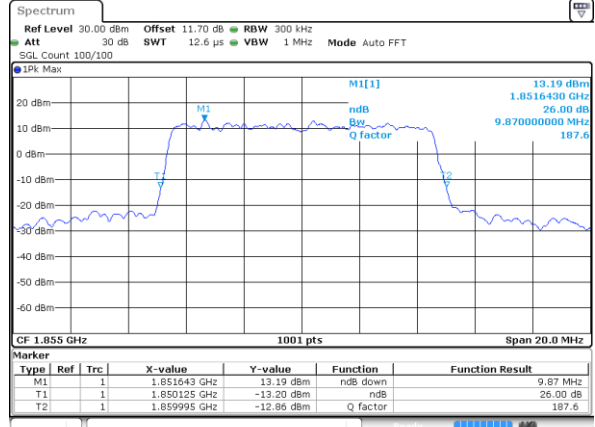
LTE Band 2

Lowest Channel / 10MHz / QPSK



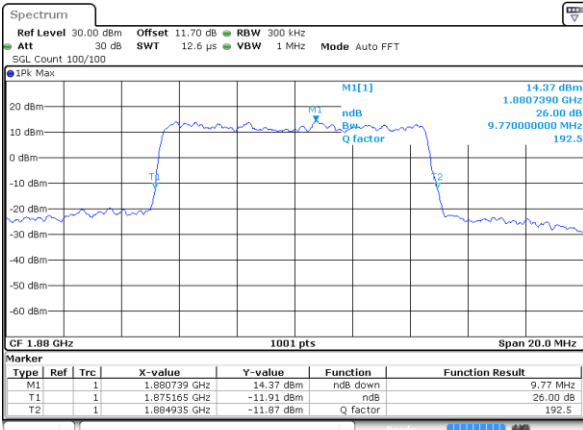
Date: 8 FEB 2020 04:47:05

Lowest Channel / 10MHz / 16QAM



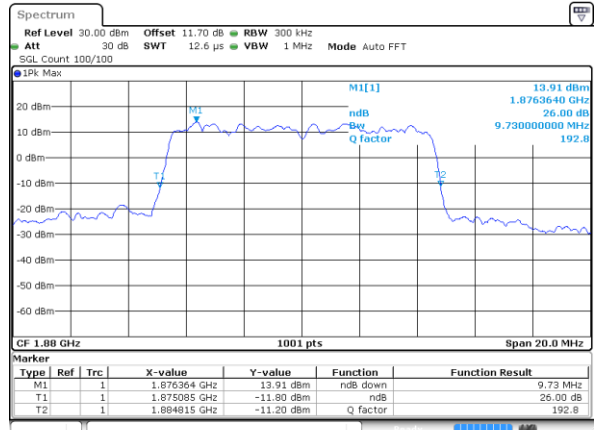
Date: 8 FEB 2020 04:47:17

Middle Channel / 10MHz / QPSK



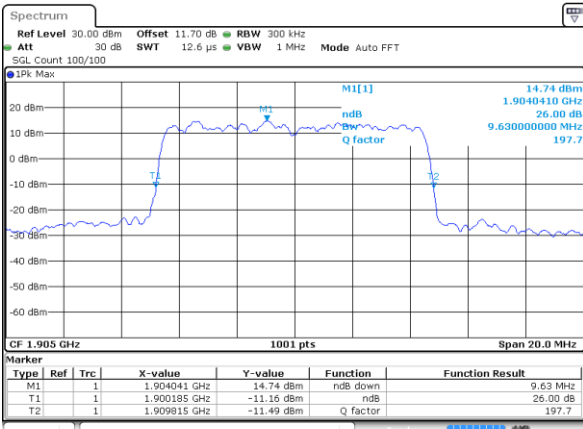
Date: 8 FEB 2020 04:51:57

Middle Channel / 10MHz / 16QAM



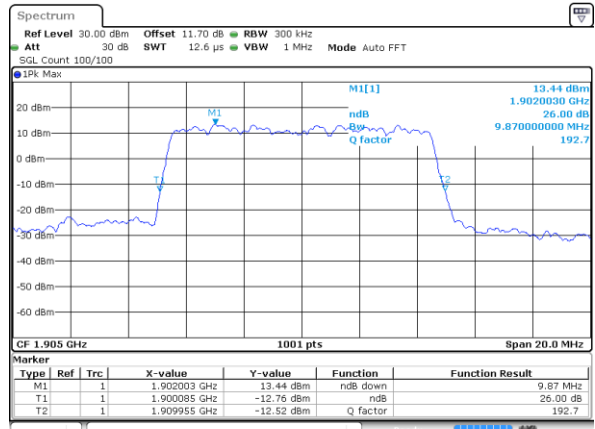
Date: 8 FEB 2020 04:52:08

Highest Channel / 10MHz / QPSK



Date: 8 FEB 2020 04:54:05

Highest Channel / 10MHz / 16QAM

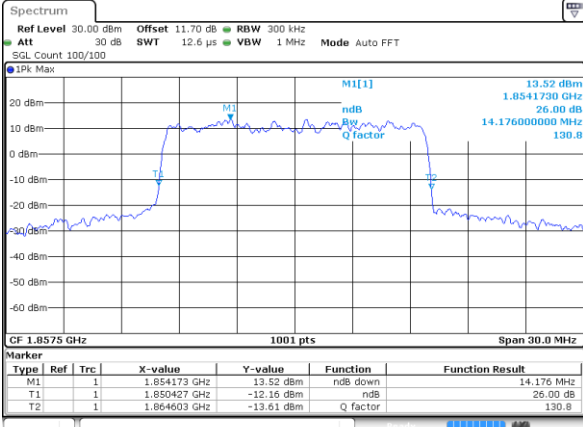


Date: 8 FEB 2020 04:54:17



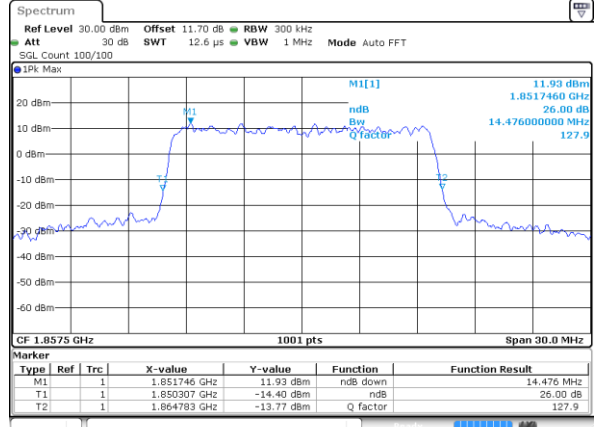
LTE Band 2

Lowest Channel / 15MHz / QPSK



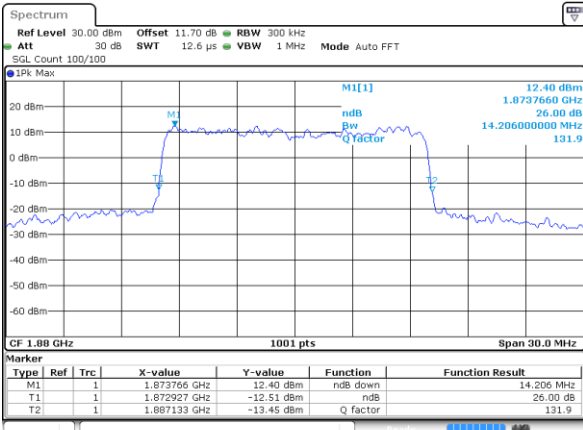
Date: 8 FEB 2020 04:58:57

Lowest Channel / 15MHz / 16QAM



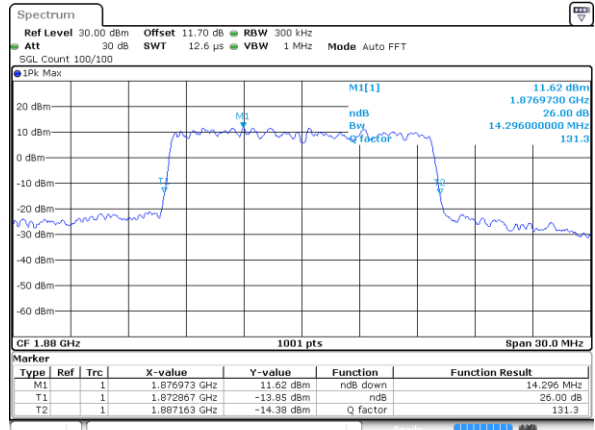
Date: 8 FEB 2020 04:59:10

Middle Channel / 15MHz / QPSK



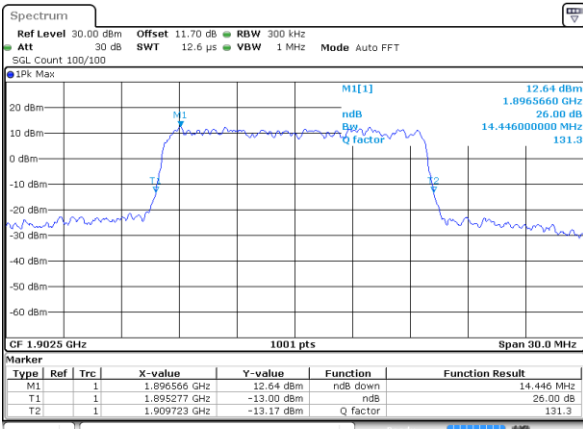
Date: 8 FEB 2020 05:03:49

Middle Channel / 15MHz / 16QAM



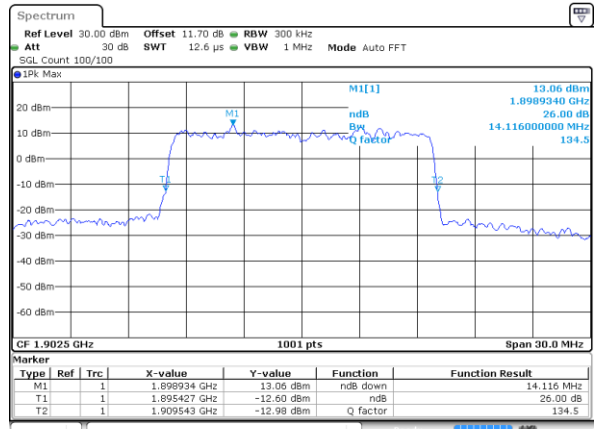
Date: 8 FEB 2020 05:04:00

Highest Channel / 15MHz / QPSK



Date: 8 FEB 2020 05:05:57

Highest Channel / 15MHz / 16QAM

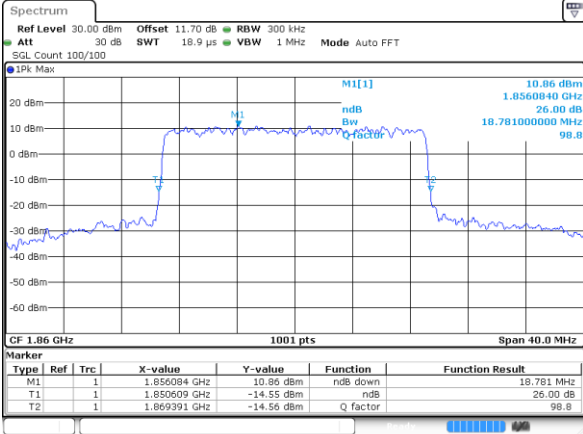


Date: 8 FEB 2020 05:06:09



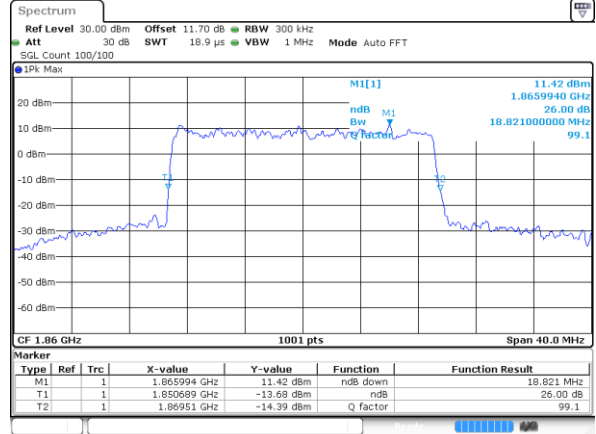
LTE Band 2

Lowest Channel / 20MHz / QPSK



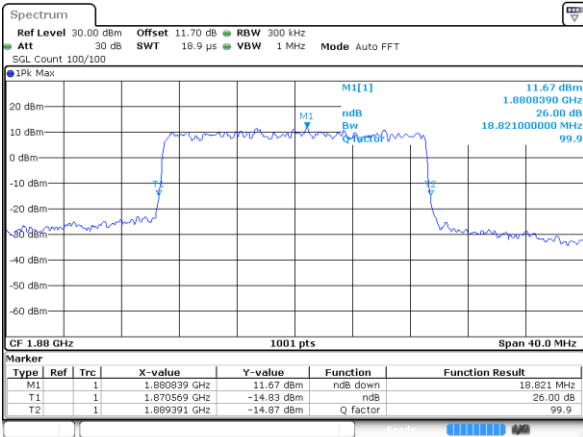
Date: 8 FEB 2020 05:19:18

Lowest Channel / 20MHz / 16QAM



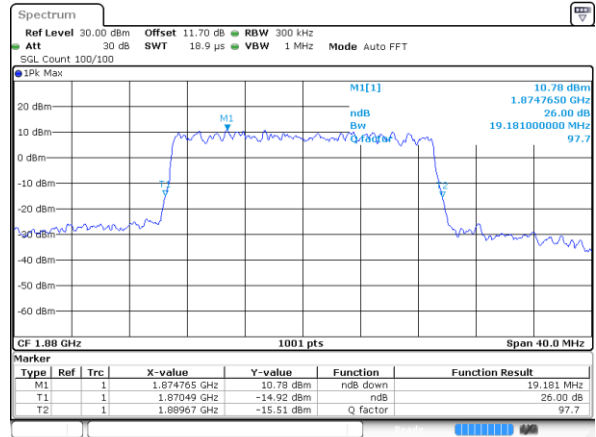
Date: 8 FEB 2020 05:19:30

Middle Channel / 20MHz / QPSK



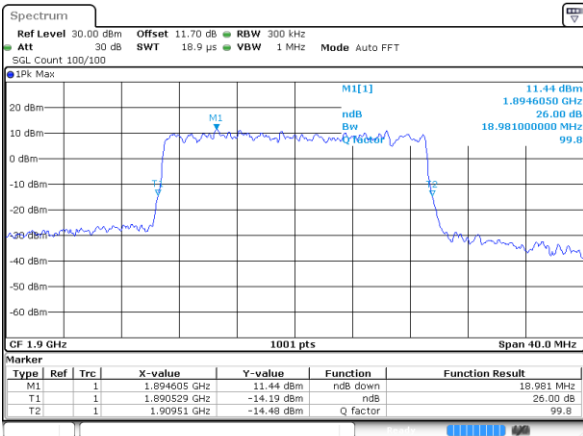
Date: 8 FEB 2020 05:24:09

Middle Channel / 20MHz / 16QAM



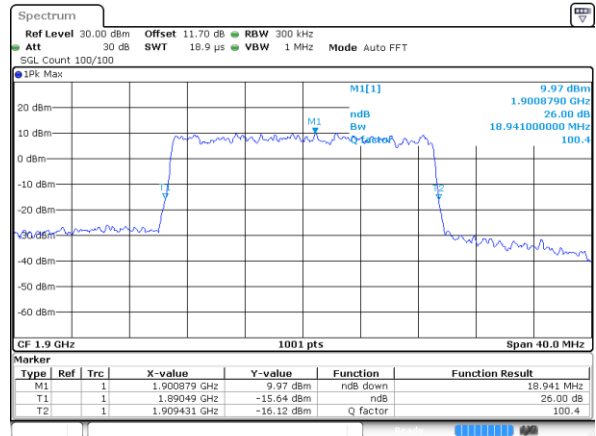
Date: 8 FEB 2020 05:24:20

Highest Channel / 20MHz / QPSK



Date: 8 FEB 2020 05:26:17

Highest Channel / 20MHz / 16QAM

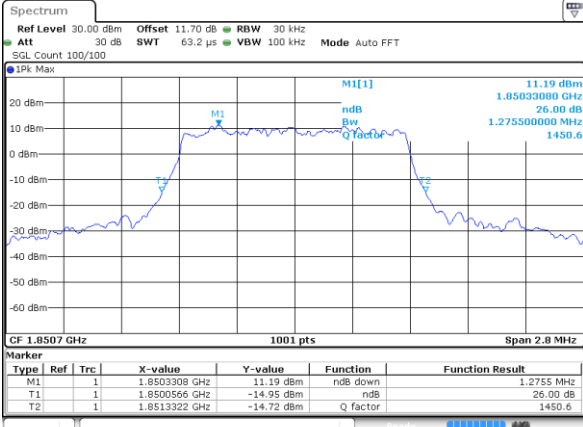


Date: 8 FEB 2020 05:26:29



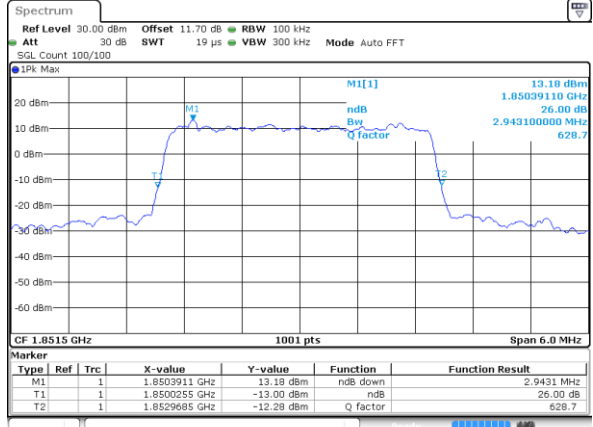
LTE Band 2

Lowest Channel / 1.4MHz / 64QAM



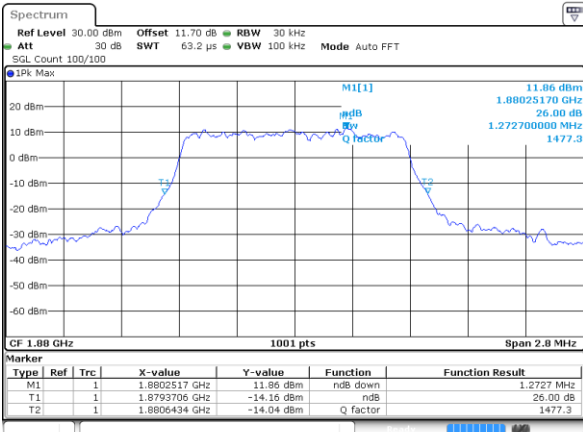
Date: 8 FEB 2020 06:08:30

Lowest Channel / 3MHz / 64QAM



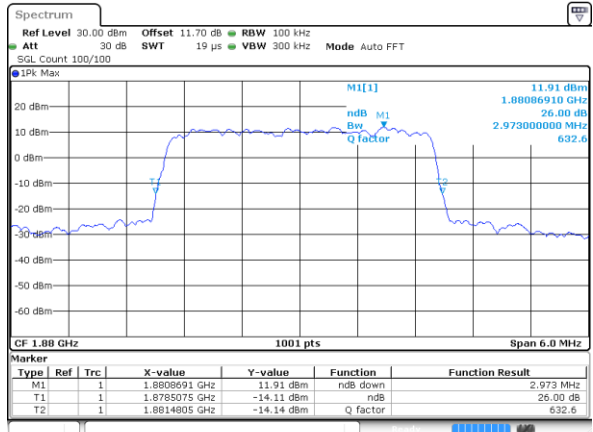
Date: 8 FEB 2020 05:30:58

Middle Channel / 1.4MHz / 64QAM



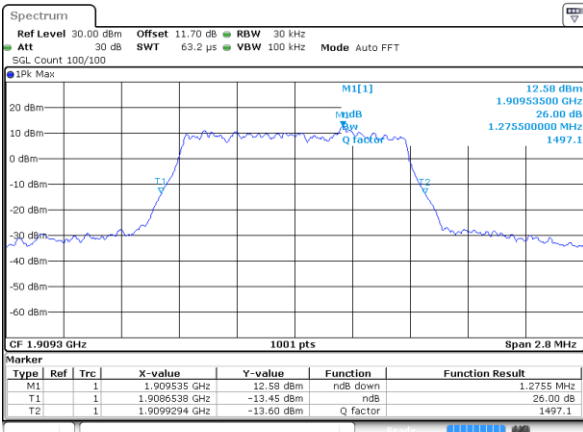
Date: 8 FEB 2020 06:11:42

Middle Channel / 3MHz / 64QAM



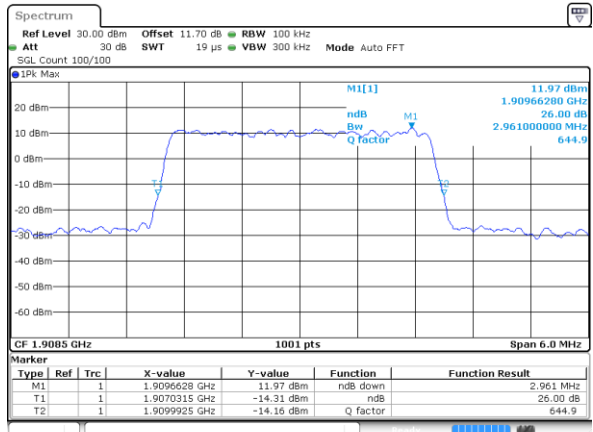
Date: 8 FEB 2020 05:33:23

Highest Channel / 1.4MHz / 64QAM



Date: 8 FEB 2020 06:12:46

Highest Channel / 3MHz / 64QAM

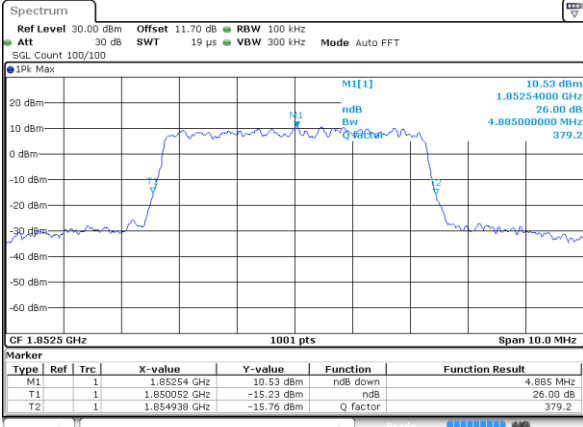


Date: 8 FEB 2020 05:34:27



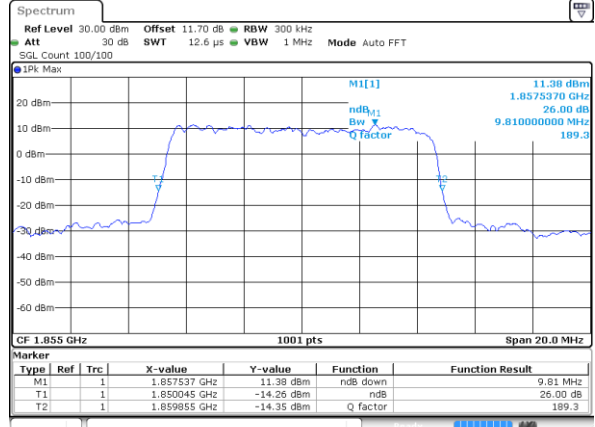
LTE Band 2

Lowest Channel / 5MHz / 64QAM



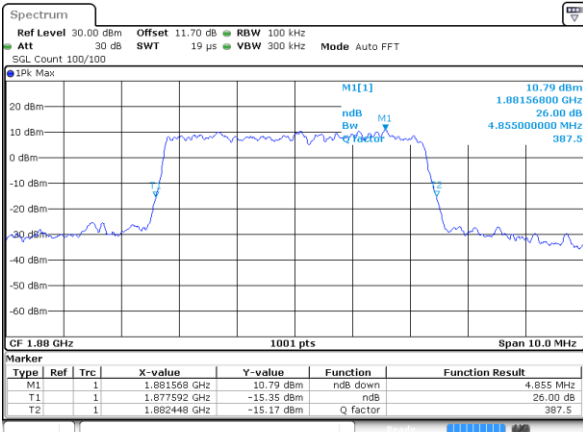
Date: 8 FEB 2020 05:36:54

Lowest Channel / 10MHz / 64QAM



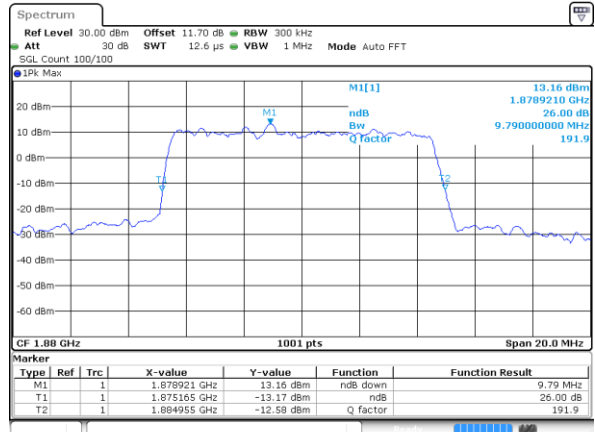
Date: 8 FEB 2020 05:42:50

Middle Channel / 5MHz / 64QAM



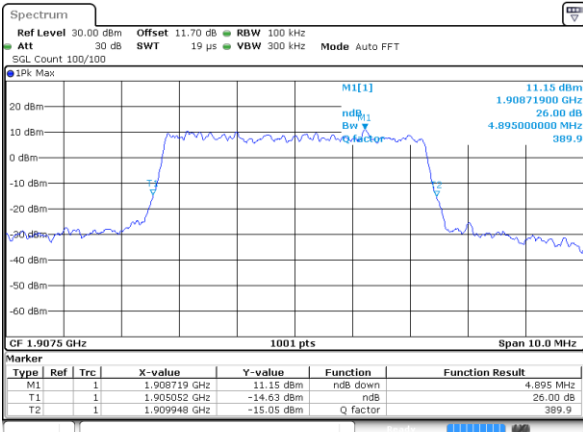
Date: 8 FEB 2020 05:39:20

Middle Channel / 10MHz / 64QAM



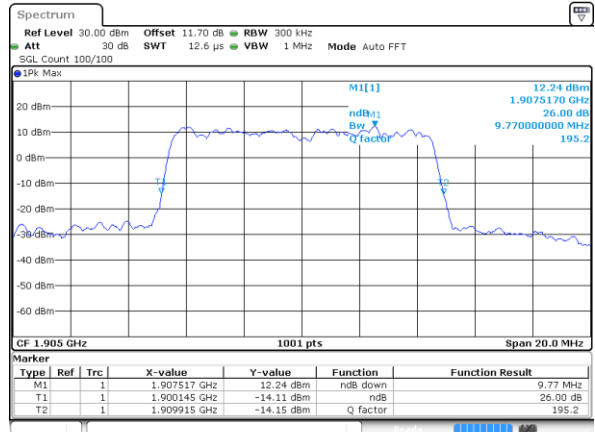
Date: 8 FEB 2020 05:45:16

Highest Channel / 5MHz / 64QAM



Date: 8 FEB 2020 05:40:24

Highest Channel / 10MHz / 64QAM

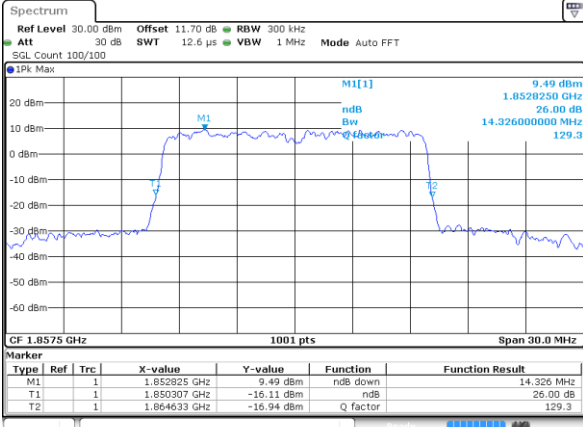


Date: 8 FEB 2020 05:46:20



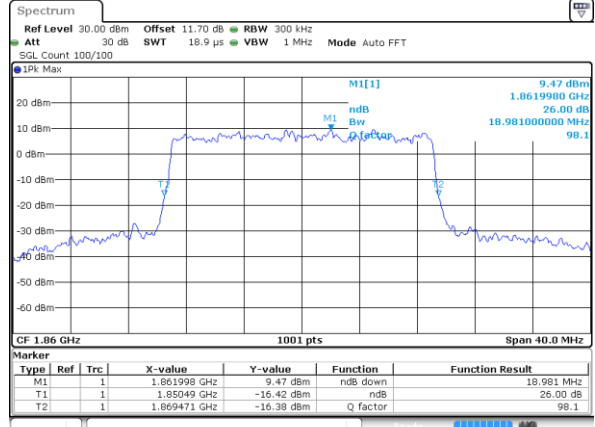
LTE Band 2

Lowest Channel / 15MHz / 64QAM



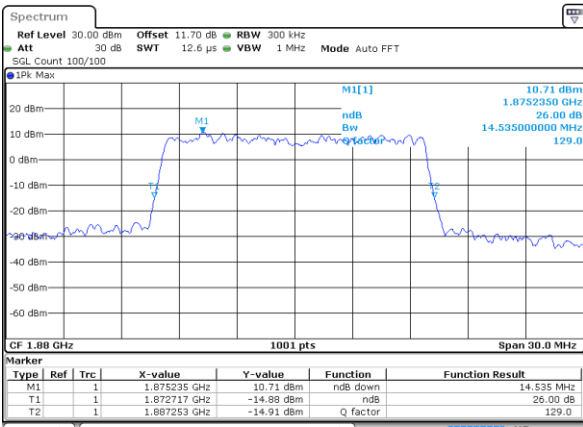
Date: 8 FEB 2020 05:48:46

Lowest Channel / 20MHz / 64QAM



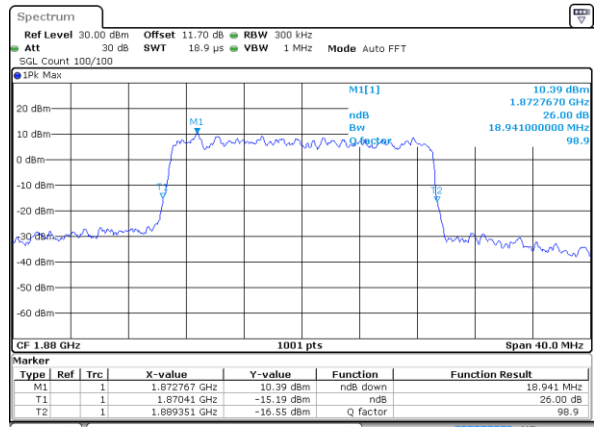
Date: 8 FEB 2020 05:54:42

Middle Channel / 15MHz / 64QAM



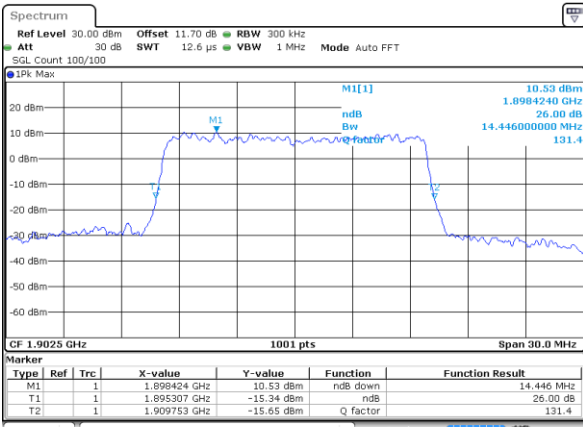
Date: 8 FEB 2020 05:51:11

Middle Channel / 20MHz / 64QAM



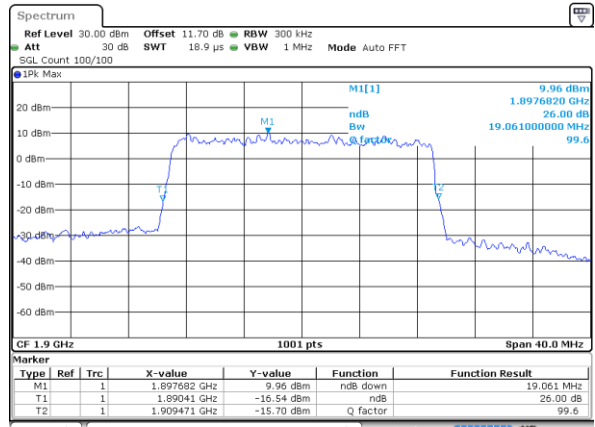
Date: 8 FEB 2020 05:57:07

Highest Channel / 15MHz / 64QAM



Date: 8 FEB 2020 05:52:15

Highest Channel / 20MHz / 64QAM



Date: 8 FEB 2020 05:58:11



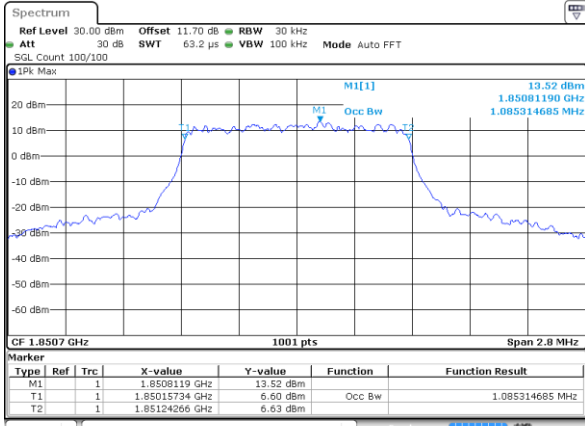
Occupied Bandwidth

Mode	LTE Band 2 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	1.09	1.11	2.71	2.70	4.50	4.49	9.05	9.01	13.43	13.49	17.90	17.94
Middle CH	1.09	1.09	2.70	2.71	4.47	4.50	9.03	9.05	13.46	13.52	17.90	17.90
Highest CH	1.09	1.09	2.69	2.72	4.48	4.50	8.99	9.03	13.40	13.43	17.86	17.86
Mode	LTE Band 2 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	1.08	-	2.71	-	4.49	-	9.01	-	13.46	-	17.90	-
Middle CH	1.09	-	2.71	-	4.48	-	9.05	-	13.43	-	17.90	-
Highest CH	1.11	-	2.71	-	4.49	-	9.03	-	13.52	-	17.86	-



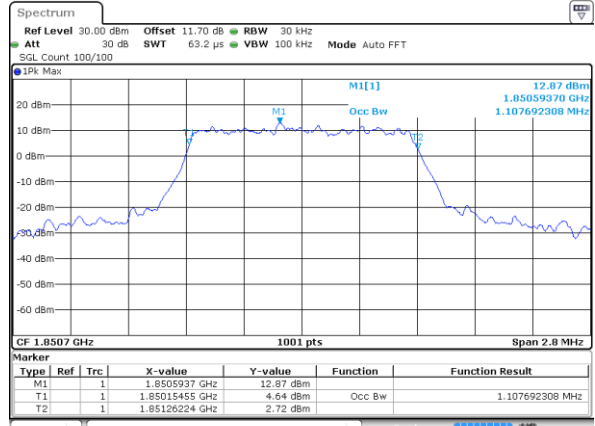
LTE Band 2

Lowest Channel / 1.4MHz / QPSK



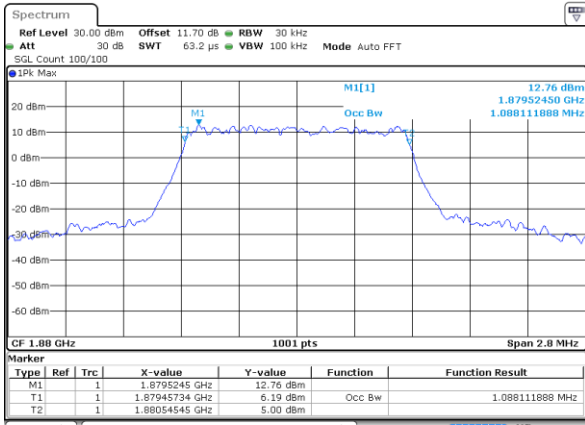
Date: 8 FEB 2020 06:15:47

Lowest Channel / 1.4MHz / 16QAM



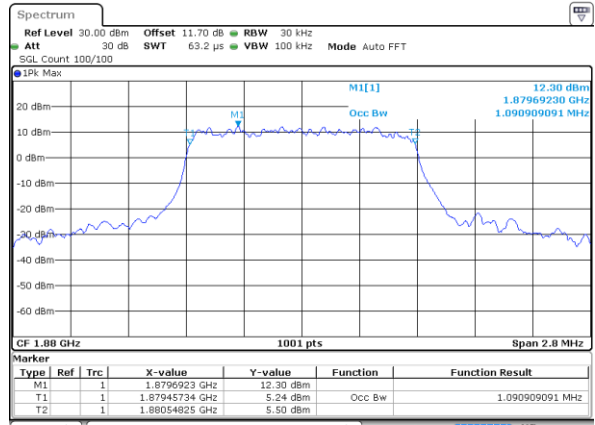
Date: 8 FEB 2020 06:15:59

Middle Channel / 1.4MHz / QPSK



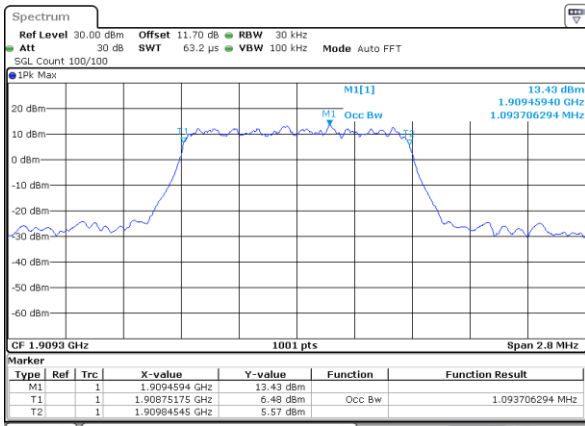
Date: 8 FEB 2020 06:22:11

Middle Channel / 1.4MHz / 16QAM



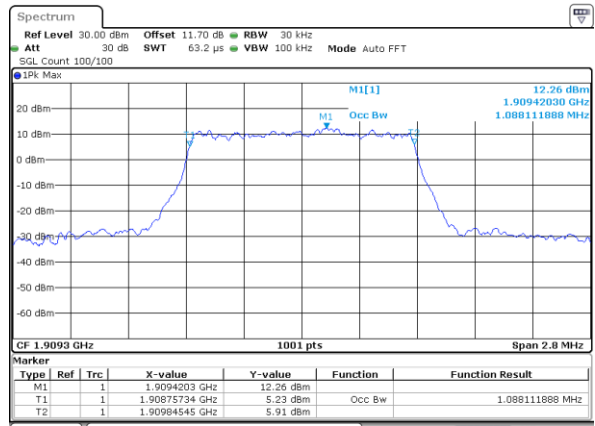
Date: 8 FEB 2020 06:22:23

Highest Channel / 1.4MHz / QPSK



Date: 8 FEB 2020 06:24:19

Highest Channel / 1.4MHz / 16QAM

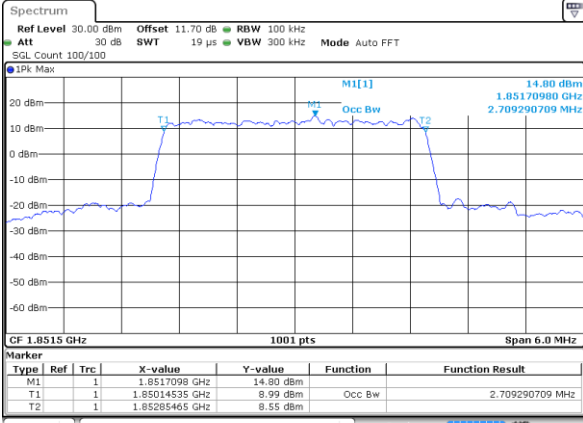


Date: 8 FEB 2020 06:24:31



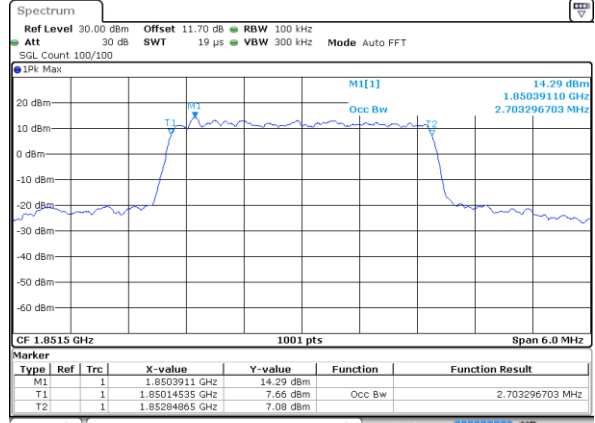
LTE Band 2

Lowest Channel / 3MHz / QPSK



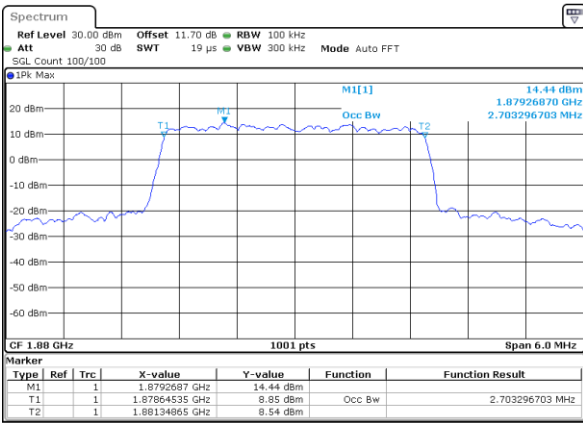
Date: 8 FEB 2020 04:22:56

Lowest Channel / 3MHz / 16QAM



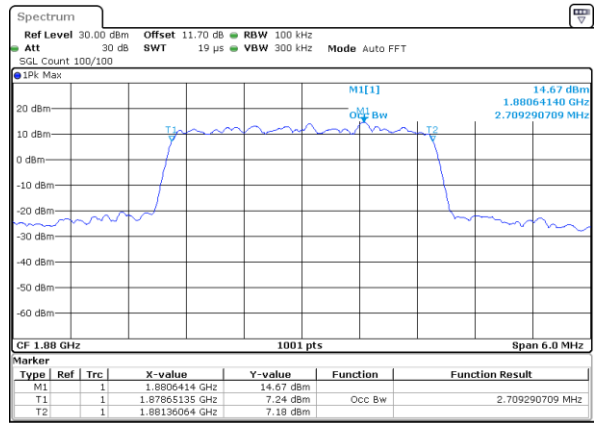
Date: 8 FEB 2020 04:23:08

Middle Channel / 3MHz / QPSK



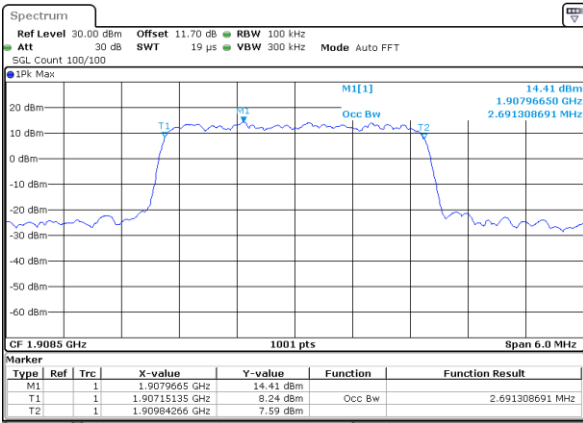
Date: 8 FEB 2020 04:27:48

Middle Channel / 3MHz / 16QAM



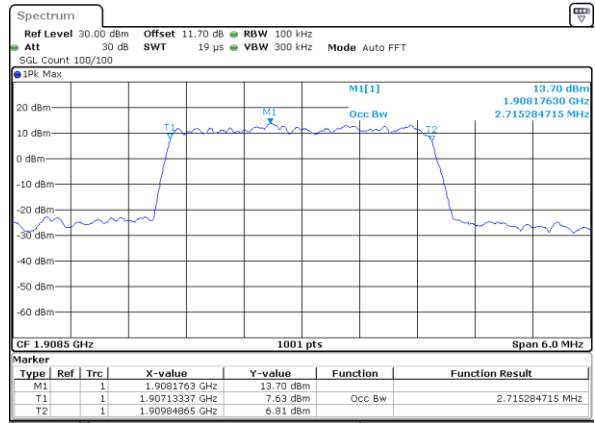
Date: 8 FEB 2020 04:28:00

Highest Channel / 3MHz / QPSK



Date: 8 FEB 2020 04:29:56

Highest Channel / 3MHz / 16QAM

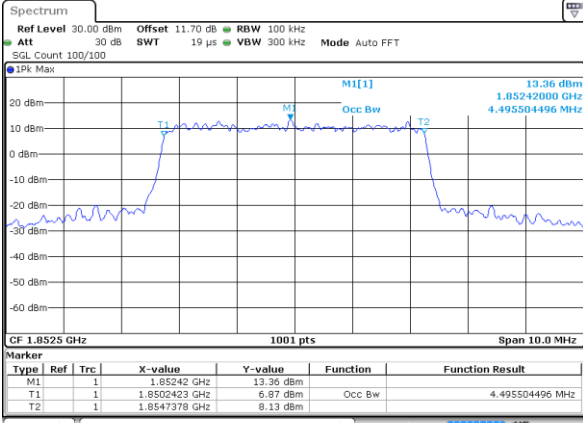


Date: 8 FEB 2020 04:30:08



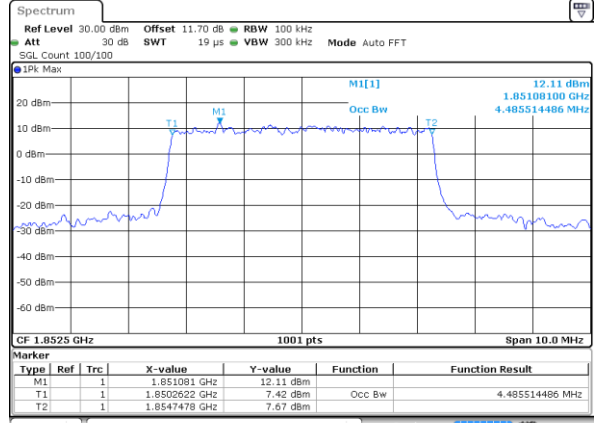
LTE Band 2

Lowest Channel / 5MHz / QPSK



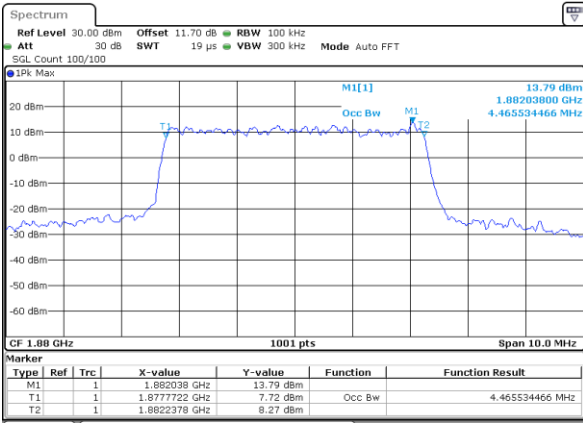
Date: 8 FEB 2020 04:34:49

Lowest Channel / 5MHz / 16QAM



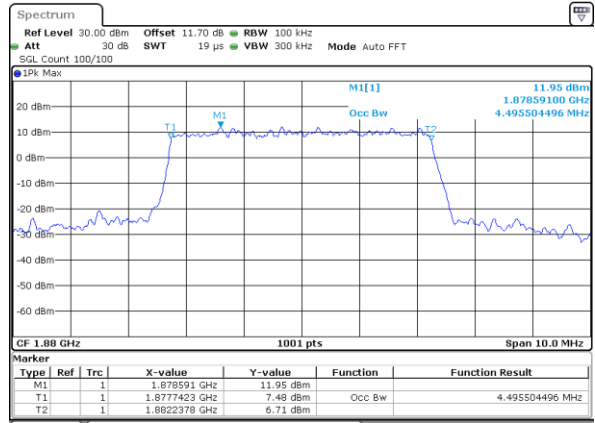
Date: 8 FEB 2020 04:35:01

Middle Channel / 5MHz / QPSK



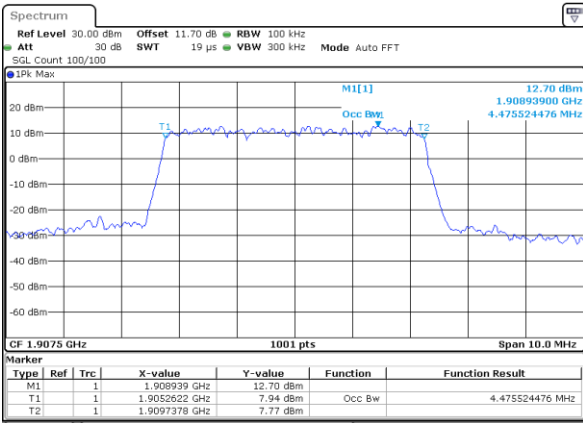
Date: 8 FEB 2020 04:39:42

Middle Channel / 5MHz / 16QAM



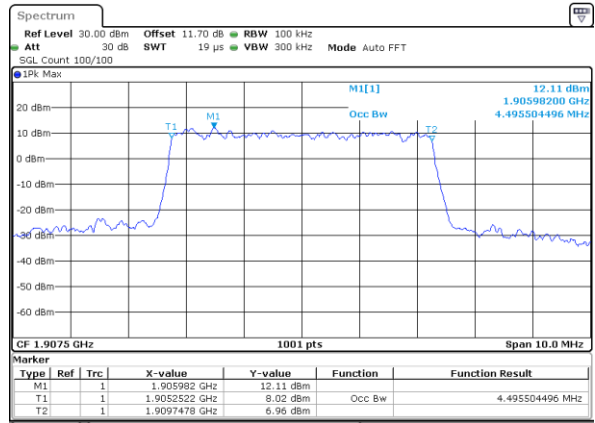
Date: 8 FEB 2020 04:39:53

Highest Channel / 5MHz / QPSK



Date: 8 FEB 2020 04:41:49

Highest Channel / 5MHz / 16QAM

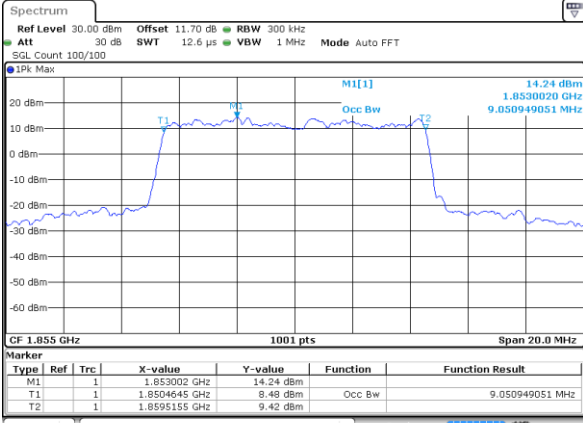


Date: 8 FEB 2020 04:42:01



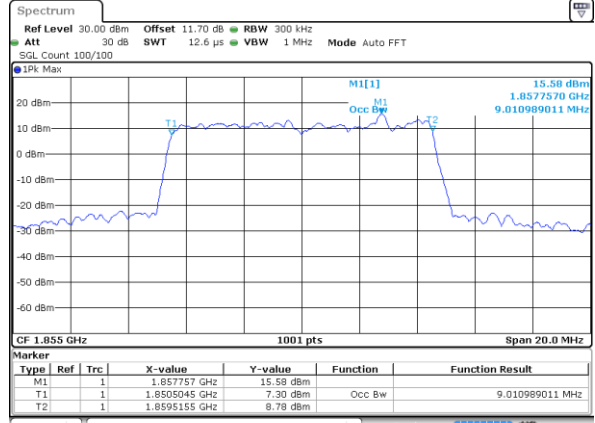
LTE Band 2

Lowest Channel / 10MHz / QPSK



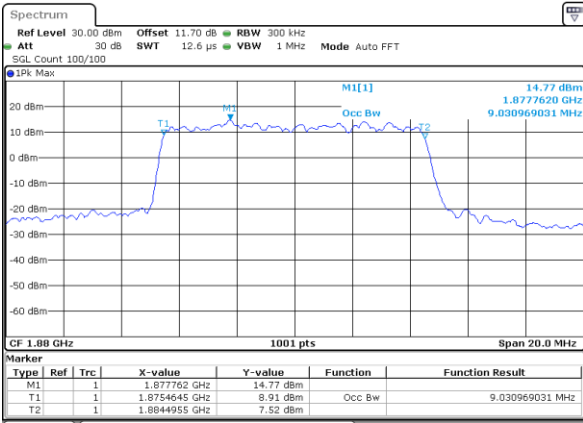
Date: 8 FEB 2020 04:46:41

Lowest Channel / 10MHz / 16QAM



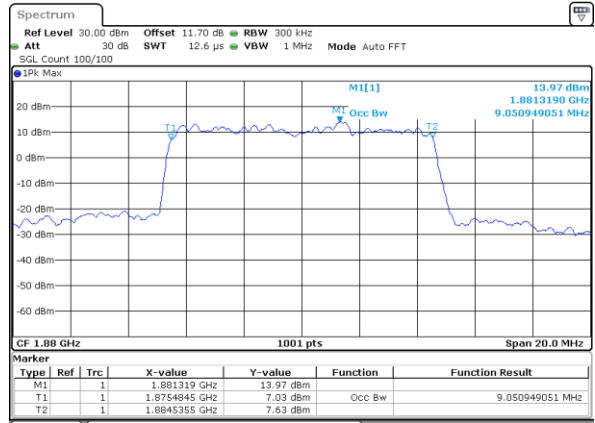
Date: 8 FEB 2020 04:46:53

Middle Channel / 10MHz / QPSK



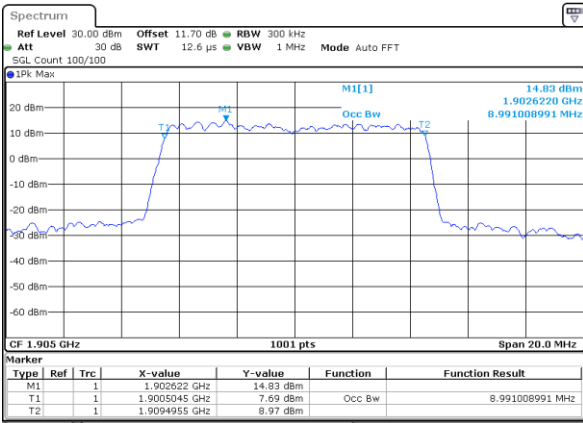
Date: 8 FEB 2020 04:51:34

Middle Channel / 10MHz / 16QAM



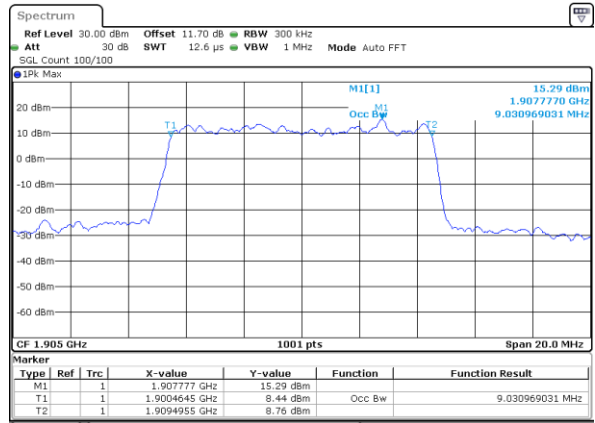
Date: 8 FEB 2020 04:51:45

Highest Channel / 10MHz / QPSK



Date: 8 FEB 2020 04:53:41

Highest Channel / 10MHz / 16QAM

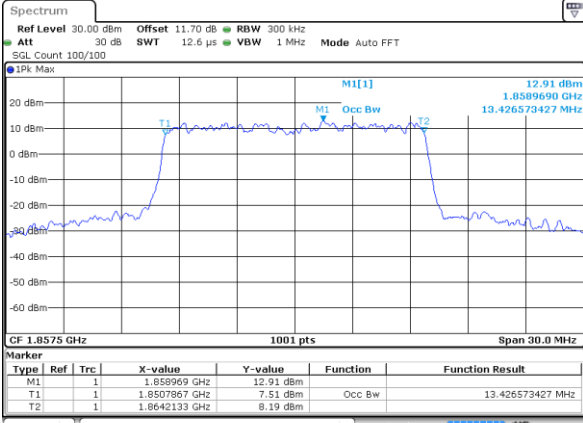


Date: 8 FEB 2020 04:53:53



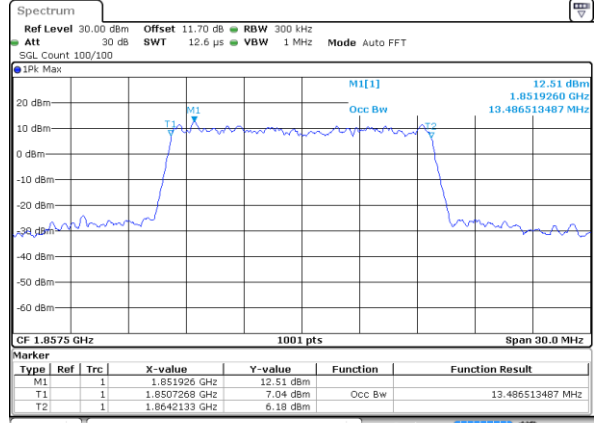
LTE Band 2

Lowest Channel / 15MHz / QPSK



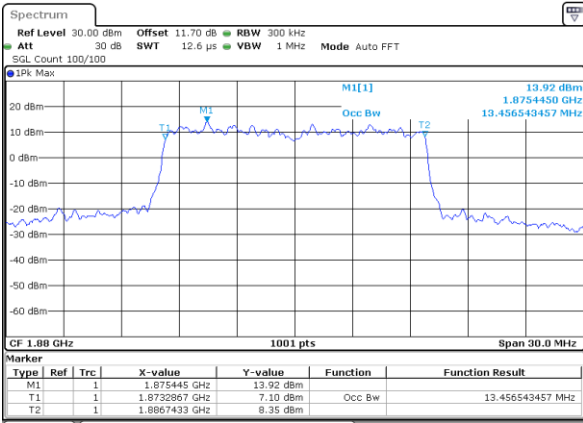
Date: 8 FEB 2020 04:58:33

Lowest Channel / 15MHz / 16QAM



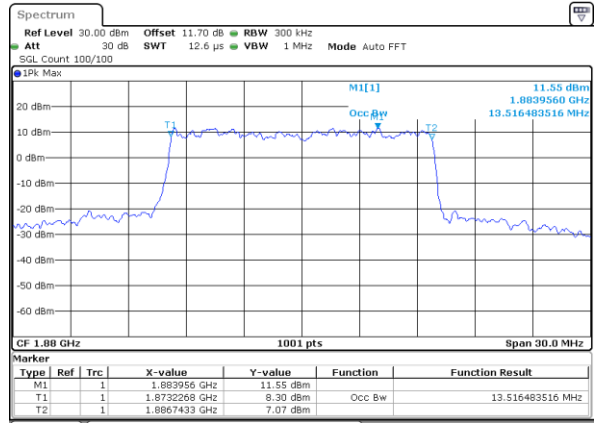
Date: 8 FEB 2020 04:58:45

Middle Channel / 15MHz / QPSK



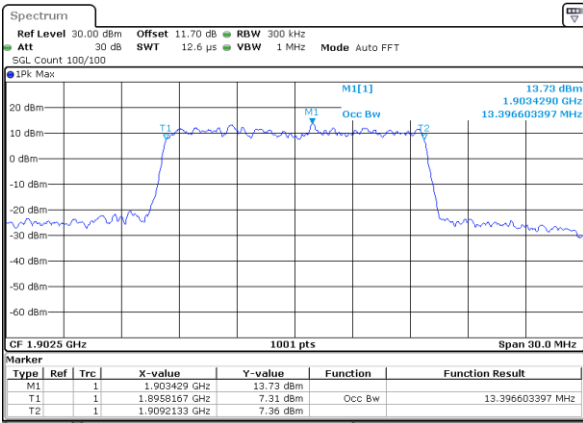
Date: 8 FEB 2020 05:03:26

Middle Channel / 15MHz / 16QAM



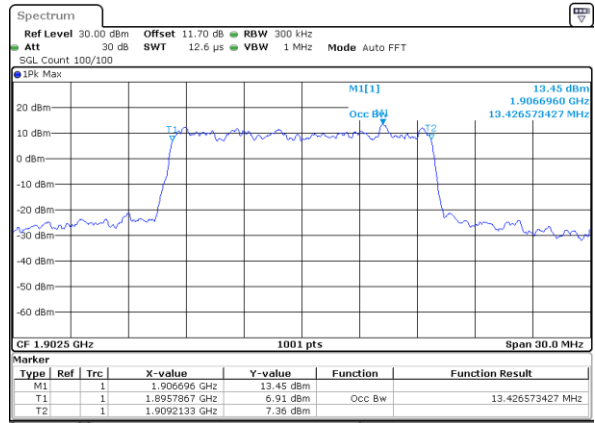
Date: 8 FEB 2020 05:03:37

Highest Channel / 15MHz / QPSK



Date: 8 FEB 2020 05:05:33

Highest Channel / 15MHz / 16QAM

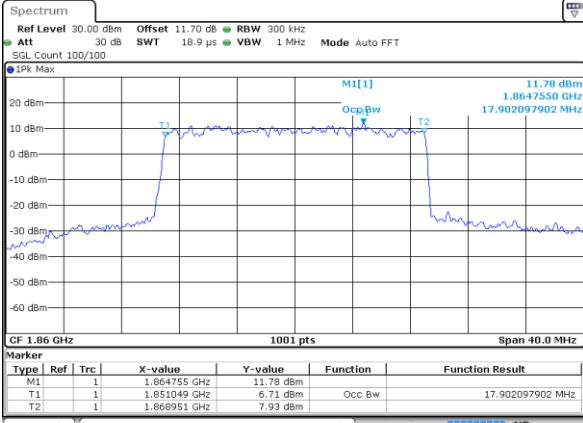


Date: 8 FEB 2020 05:05:45



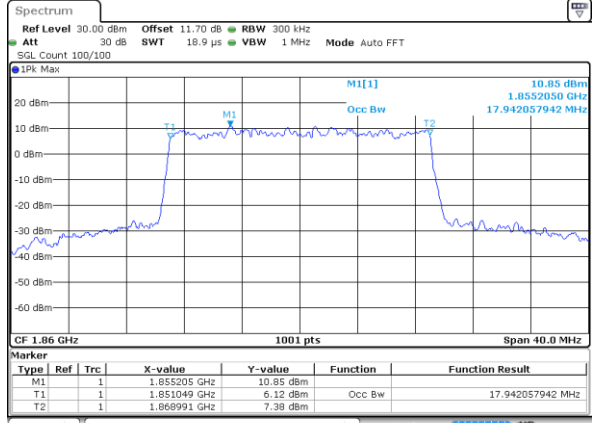
LTE Band 2

Lowest Channel / 20MHz / QPSK



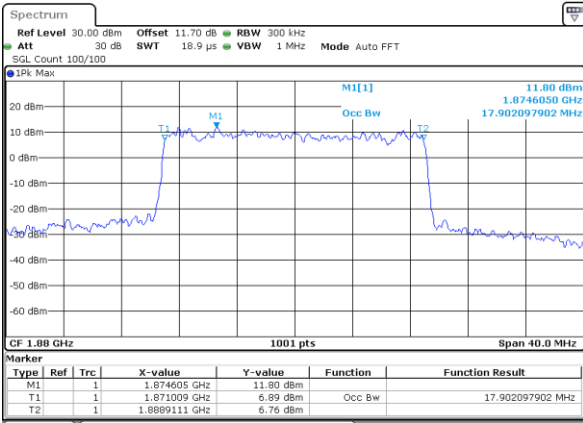
Date: 8 FEB 2020 05:18:54

Lowest Channel / 20MHz / 16QAM



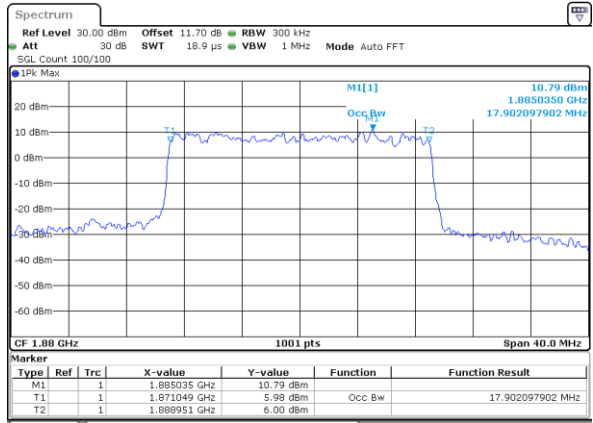
Date: 8 FEB 2020 05:19:06

Middle Channel / 20MHz / QPSK



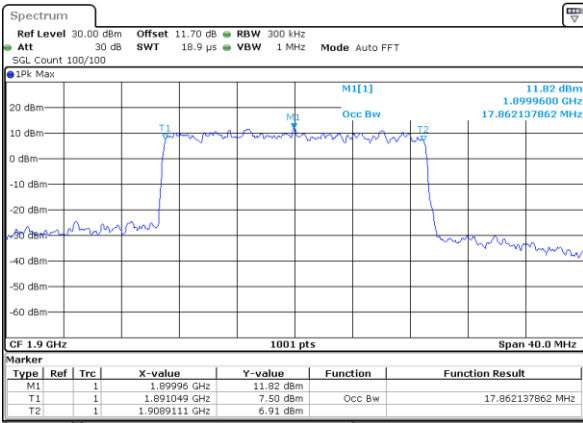
Date: 8 FEB 2020 05:23:46

Middle Channel / 20MHz / 16QAM



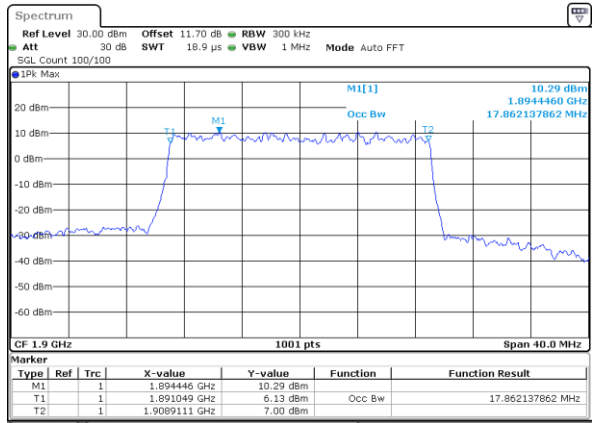
Date: 8 FEB 2020 05:23:58

Highest Channel / 20MHz / QPSK



Date: 8 FEB 2020 05:25:53

Highest Channel / 20MHz / 16QAM



Date: 8 FEB 2020 05:26:05