



FCC RF Test Report

APPLICANT : Motorola Mobility LLC
EQUIPMENT : Mobile Cellular Phone
BRAND NAME : Motorola
MODEL NAME : XT2113-3
FCC ID : IHDT56ZF4
STANDARD : 47 CFR Part 2, 22(H), 24(E), 27(H), 27(L), 27(M)
CLASSIFICATION : PCS Licensed Transmitter Held to Ear (PCE)

The product was received on Sep. 11, 2020 and completely tested on Sep. 22, 2020. We, Sporton International (Kunshan) 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 (Kunshan) Inc., the test report shall not be reproduced except in full.

Reviewed by: Jason Jia / Supervisor

Approved by: James Huang / Manager



Sporton International (Kunshan) Inc.

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG082402-01B	Rev. 01	Initial issue of report	Oct. 09, 2020
FG082402-01B	Rev. 02	Update accessory list	Oct. 13, 2020
FG082402-01B	Rev. 03	Revised FCC ID	Oct. 21, 2020



SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.4	§2.1046	Conducted Output Power	Reporting Only	PASS	-
	§27.50(c)(10)	Effective Radiated Power (Band 12)	ERP < 3 Watt	PASS	-
	§27.50(h)(2)	Equivalent Isotropic Radiated Power (Band 7C) (Band 41)	EIRP < 2Watt	PASS	-
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 §27.53(g)	Conducted Band Edge Measurement (Band 12)	< 43+10log ₁₀ (P[Watts])	PASS	-
	§27.53(m)(4)	Conducted Band Edge Measurement (Band 7C) (Band 41)	§27.53(m)(4)		
3.8	§2.1051 §27.53(g)	Conducted Spurious Emission (Band 12)	< 43+10log ₁₀ (P[Watts])	PASS	-
	§2.1051 §27.53(m)(4)	Conducted Spurious Emission (Band 7C) (Band 41)	< 55+10log ₁₀ (P[Watts])		
3.9	§2.1055 §22.355	Frequency Stability Temperature & Voltage	< 2.5 ppm for Part 22H	PASS	-
	§2.1055 §24.235 §27.54		Within Authorized Band		
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 26) (Band 66)	< 43+10log ₁₀ (P[Watts])	PASS	Under limit 23.88 dB at 5032.000 MHz
	§2.1053 §27.53(m)(4)	Radiated Spurious Emission (Band 7C) (Band 41)	< 55+10log ₁₀ (P[Watts])		

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

Motorola Mobility LLC
222 W,Merchandise Mart Plaza,Chicago,IL60654 USA

1.2 Manufacturer

Motorola Mobility LLC
222 W,Merchandise Mart Plaza,Chicago,IL60654 USA

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	Mobile Cellular Phone
Brand Name	Motorola
Model Name	XT2113-3
FCC ID	IHDT56ZF4
EUT supports Radios application	GSM/WCDMA/LTE/5G NR WLAN 2.4GHz 802.11b/g/n HT20 WLAN 5GHz 802.11a/n HT20/HT40 WLAN 5GHz 802.11ac VHT20/VHT40/VHT80 Bluetooth BR/EDR/LE NFC , FM Receiver and GNSS
IMEI Code	Conducted : 066228050040674/066228050040682 Radiation : 355571110012953/355571110012961
HW Version	DVT2
SW Version	QZK30.Q4-23
EUT Stage	Identical Prototype



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 7 : 2502.5 MHz ~ 2567.5 MHz LTE Band 12 : 699.7 MHz ~ 715.3 MHz LTE Band 26 : 824.7MHz ~ 848.3 MHz LTE Band 38 : 2572.5MHz ~ 2617.5MHz LTE Band 41 : 2498.5 MHz ~ 2687.5 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 7 : 2622.5MHz ~ 2687.5 MHz LTE Band 12 : 729.7 MHz ~ 745.3 MHz LTE Band 26 : 869.7MHz ~ 893.3MHz LTE Band 38 : 2572.5MHz ~ 2617.5MHz LTE Band 41 : 2498.5 MHz ~ 2687.5 MHz LTE Band 66 : 2110.7 MHz~ 2199.3 MHz
Bandwidth	LTE Band 7 : 5MHz/ 10MHz / 15MHz / 20MHz LTE Band 12 : 1.4MHz / 3MHz / 5MHz / 10MHz LTE Band 41 : 5MHz / 10MHz / 15MHz / 20MHz
Maximum Output Power to Antenna	LTE Band 12 : 22.68 dBm LTE Band 41 : 22.64 dBm LTE Band 7C_CA : 22.63 dBm
Antenna Gain	LTE Band 7 : -1.80 dBi LTE Band 12 : -1.50 dBi LTE Band 41 : -1.80 dBi
Type of Modulation	QPSK / 16QAM / 64QAM

Note: The Maximum ERP/EIRP is calculated from Max Output power and Max antenna gain, only the maximum ERP/EIRP of Antenna 1 is shown in the report

1.5 Modification of EUT

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

1.6 Specification of Accessory

Specification of Accessory				
AC Adapter 1(US)	Brand Name	Motorola (Chenyang)	Model Name	MC-201
AC Adapter 1(EU)	Brand Name	Motorola (Chenyang)	Model Name	MC-202
AC Adapter 1(UK)	Brand Name	Motorola (Chenyang)	Model Name	MC-203
AC Adapter 1(AU)	Brand Name	Motorola (Chenyang)	Model Name	MC-205
AC Adapter 1(AR)	Brand Name	Motorola (Chenyang)	Model Name	MC-206
AC Adapter 1(BR)	Brand Name	Motorola (Chenyang)	Model Name	MC-207
AC Adapter 2(US)	Brand Name	Motorola (Acbel)	Model Name	MC-201
AC Adapter 2(EU)	Brand Name	Motorola (Acbel)	Model Name	MC-202
AC Adapter 2(UK)	Brand Name	Motorola (Acbel)	Model Name	MC-203
AC Adapter 2(AU)	Brand Name	Motorola (Acbel)	Model Name	MC-205
AC Adapter 2(AR)	Brand Name	Motorola (Acbel)	Model Name	MC-206
AC Adapter 2(CHILE)	Brand Name	Motorola (Acbel)	Model Name	MC-209
AC Adapter 3(IN)	Brand Name	Motorola (Chenyang)	Model Name	MC-204
AC Adapter 4(BR)	Brand Name	Motorola (Dynalf)	Model Name	MC-207
AC Adapter 5(BR)	Brand Name	Motorola (Salcomp)	Model Name	MC-207
Battery	Brand Name	Motorola (Amperex)	Model Name	MK50
Earphone 1	Brand Name	Motorola (Lyand)	Model Name	MH191
Earphone 2	Brand Name	Motorola(Lchse)	Model Name	MH191
Earphone 3	Brand Name	Motorola (Lyand)	Model Name	MH181
Earphone 4	Brand Name	Motorola (Cosonic)	Model Name	MH181
USB Cable 1	Brand Name	Motorola (Saibao)	Model Name	SC18C24367
USB Cable 2	Brand Name	Motorola (Luxshare)	Model Name	SC18C24368
USB Cable 3	Brand Name	Motorola (I SHENG)	Model Name	SC18C28955



1.7 Re-use of Measured Data

1.7.1 Introduction Section

This application re-uses data collected on a similar device. The subject device of this application (Model: XT2113-3, FCC ID: IHDT56ZF4) is electrically identical to the reference device (Model: XT2113-2, XT2113-5, FCC ID: IHDT56ZF2) for the portions of the circuitry corresponding to the data being re-used, as treated by KDB Publication 484596 D01.

1.7.2 Difference Section

For details concerning the similarity with respect to component placement, mechanical/electrical design etc., please refer to the Product Equality Declaration.

The re-used RF data includes the following bands provided in Appendix D (Sporton RF Report No. FG082402B and FG082402C for the reference device (Model: XT2113-2, XT2113-5, FCC ID: IHDT56ZF2).

1.7.3 Reference detail Section:

Equipment Class	Reference FCC ID	Folder Test	Report Title/Section
PCE	IHDT56ZF2	FG082402B and FG082402C	All sections applicable for LTE Band 7/38 and Conducted items/ Power/ERP/EIRP of LTE Band 2/4/5/26/66

1.7.4 Spot Check Verification Data Section

In order to confirm hardware similarity of the subject device with the reference device, spot check measurements were performed on the subject device for the following test items, the test result were consistent with FCC ID: IHDT56ZF2 and LTE Band 12/41 to re-test and LTE Band 7C to full test.

Assertions concerning the similarity of these devices are based on representations by the applicant. The applicant accepts full responsibility for the validity of the similarity claim, and for the determination that verification test data are sufficient to support it.

Test Item	Mode	IHDT56ZF2 Worst Result	IHDT56ZF4 Worst Result	Difference (dB)
Radiated Spurious Emission (dBm)	LTE Band 7	-42.49	-44.29	1.80



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

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	-	0.0794	1M10W7D	-	0.0678
3	700.5 ~ 714.5	2M72G7D	-	0.0798	2M72W7D	-	0.0685
5	701.5 ~ 713.5	4M50G7D	-	0.0796	4M49W7D	-	0.0685
10	704.0 ~ 711.0	9M05G7D	0.0058	0.0800	9M01W7D	-	0.0687
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	1M09W7D		-	0.0543		
3	700.5 ~ 714.5	2M73W7D		-	0.0556		
5	701.5 ~ 713.5	4M50W7D		-	0.0552		
10	704.0 ~ 711.0	9M11W7D		-	0.0550		
LTE Band 41		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)
5	2498.5 ~ 2687.5	4M53G7D	-	0.1211	4M52W7D	-	0.1019
10	2501.0 ~ 2685.0	9M07G7D	0.0027	0.1211	9M03W7D	-	0.0995
15	2503.5 ~ 2682.5	13M6G7D	-	0.1189	13M5W7D	-	0.1002
20	2506.0 ~ 2680.0	18M3G7D	-	0.1213	18M4W7D	-	0.0989
LTE Band 41		64QAM					
BW (MHz)	Frequency Range (MHz)	Emission Designator (99%OBW)		Frequency Tolerance (ppm)	Maximum EIRP(W)		
5	2498.5 ~ 2687.5	4M52W7D		-	0.0773		
10	2501.0 ~ 2685.0	9M05W7D		-	0.0785		
15	2503.5 ~ 2682.5	13M5W7D		-	0.0771		
20	2506.0 ~ 2680.0	18M4W7D		-	0.0769		



LTE Band 7 CA	QPSK			16QAM		
BW (MHz)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)
20MHz+20MHz	37M7G7D	-	0.1211	37M8W7D	-	0.0971
LTE Band 7 CA	64QAM					
BW (MHz)	Emission Designator (99%OBW)		Frequency Tolerance (ppm)	Maximum EIRP(W)		
20MHz+20MHz	37M6W7D		-	0.0811		



1.9 Testing Location

Sporton International (Kunshan) Inc. is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.02.

Test Firm	Sporton International (Kunshan) Inc.		
Test Site Location	No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300 People's Republic of China TEL : +86-512-57900158 FAX : +86-512-57900958		
Test Site No.	Sporton Site No.	FCC Designation No.	FCC Test Firm Registration No.
	03CH04-KS TH01-KS	CN1257	314309

1.10 Test Software

Item	Site	Manufacture	Name	Version
1.	03CH04-KS	AUDIX	E3	6.2009-8-24a

1.11 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(H), 27(L), 27(M)
- ♦ 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.

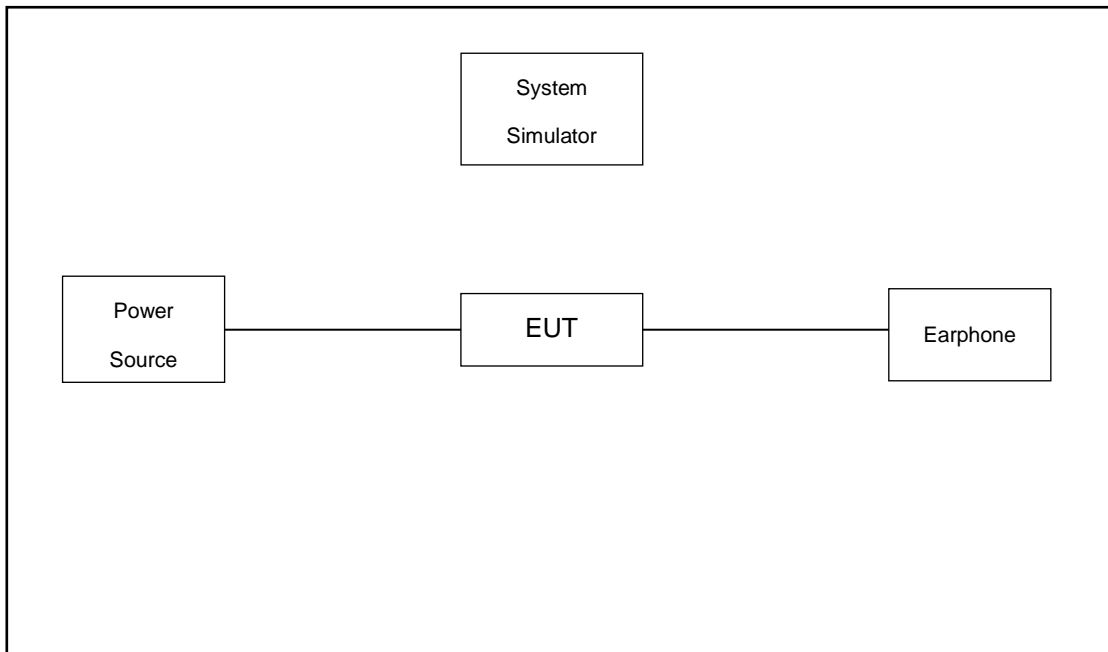
Test Items	Band	Bandwidth (MHz)						Modulation			RB #			Test Channel		
		1.4	3	5	10	15	20	QPSK	16QAM	64QAM	1	Half	Full	L	M	H
Max. Output Power	12	v	v	v	v	-	-	v	v	v	v	v	v	v	v	v
	41	-	-	v	v	v	v	v	v	v	v	v	v	v	v	v
Peak-to-Average Ratio	12				v	-	-	v	v	v	v		v	v	v	v
	41	-	-				v	v	v	v	v		v	v	v	v
26dB and 99% Bandwidth	12	v	v	v	v	-	-	v	v	v			v	v	v	v
	41	-	-	v	v	v	v	v	v	v			v	v	v	v
Conducted Band Edge	12	v	v	v	v	-	-	v	v	v	v		v	v		v
	41	-	-	v	v	v	v	v	v	v	v		v	v		v
Conducted Spurious Emission	12	v	v	v	v	-	-	v	v	v	v			v	v	v
	41	-	-	v	v	v	v	v	v	v	v			v	v	v
Frequency Stability	12				v	-	-	v					v		v	
	41	-	-		v			v					v		v	
E.R.P / E.I.R.P	12	v	v	v	v	-	-	v	v	v	v			v	v	v
	41	-	-	v	v	v	v	v	v	v	v			v	v	v
Radiated Spurious Emission	2	Worst Case											v	v	v	
	5	Worst Case											v	v	v	
	12	Worst Case											v	v	v	
	26	Worst Case											v	v	v	
	66	Worst Case											v	v	v	
	41	Worst Case											v	v	v	
Note	<ol style="list-style-type: none"> The mark "v" means that this configuration is chosen for testing The mark "-" means that this bandwidth is not supported. 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. LTE Band 26 overlaps the entire frequency range of LTE Band 5. According to the RSE test results provided in this report covers Band 5 and the portion of Band 26 subject to Part 22. LTE Band 66 overlaps the entire frequency range of LTE Band 4. According to the RSE test results provided in this 															



report covers Band 66 as well as Band 4.

Test Items	Band	Bandwidth (MHz)										Modulation			RB #			Test Channel		
		20+20	20+15	15+20	20+10	10+20	20+5	5+20	15+15	15+10	10+15	QPSK	16QAM	64QAM	1	Half	Full	L	M	H
Max. Output Power	7C_CA	v	v	v	v	v	-	-	v	v	-	v	v	v	v	v	v	v	v	v
26dB and 99% Bandwidth	7C_CA	v	v	v	v	v	-	-	v	v	-	v	v	v			v	v	v	v
Conducted Band Edge	7C_CA	v	v	v	v	v	-	-	v	v	-	v	v	v	v		v	v		v
Conducted Spurious Emission	7C_CA	v	v	v	v	v	-	-	v	v	-	v	v	v	v			v	v	v
E.I.R.P.	7C_CA	v	v	v	v	v	-	-	v	v	-	v	v	v	v			v	v	v
Radiated Spurious Emission	7C_CA	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.	Power Supply	GWINSTEK	PSS-2002	N/A	N/A	Unshielded, 1.8 m
2.	LTE Base Station	Anritsu	MT8820C/MT8821C	N/A	N/A	Unshielded, 1.8 m

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 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.

Offset = RF cable loss.

Following shows an offset computation example with cable loss 4.8 dB.

Example :

$$\begin{aligned} \text{Offset(dB)} &= \text{RF cable loss(dB)}. \\ &= 4.8 \text{ (dB)} \end{aligned}$$



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 7 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
20	Channel	20850	21100	21350
	Frequency	2510	2535	2560
15	Channel	20825	21100	21375
	Frequency	2507.5	2535	2562.5
10	Channel	20800	21100	21400
	Frequency	2505	2535	2565
5	Channel	20775	21100	21425
	Frequency	2502.5	2535	2567.5

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 26 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
15	Channel	26865	26915	26965
	Frequency	831.5	836.5	841.5
10	Channel	26840	26915	26990
	Frequency	829	836.5	844
5	Channel	26815	26915	27015
	Frequency	826.5	836.5	846.5
3	Channel	26805	26915	27025
	Frequency	825.5	836.5	847.5
1.4	Channel	26797	26915	27033
	Frequency	824.7	836.5	848.3

LTE Band 38 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
20	Channel	37850	38000	38150
	Frequency	2580	2595	2610
15	Channel	37825	38000	38175
	Frequency	2577.5	2595	2612.5
10	Channel	37800	38000	38200
	Frequency	2575	2595	2615
5	Channel	37775	38000	38225
	Frequency	2572.5	2595	2617.5

LTE Band 41 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
20	Channel	39750	40620	41490
	Frequency	2506	2593	2680
15	Channel	39725	40620	41515
	Frequency	2503.5	2593	2682.5
10	Channel	39700	40620	41540
	Frequency	2501	2593	2685
5	Channel	39675	40620	41565
	Frequency	2498.5	2593	2687.5



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



LTE Band 7C_CA Channel and Frequency List					
BW [MHz]	Channel/Frequency(MHz)		Lowest	Middle	Highest
20 + 20	PCC	Channel	20850	21001	21152
		Frequency	2510.0	2525.1	2540.2
	SCC	Channel	21048	21199	21350
		Frequency	2529.8	2544.9	2560.0
20 + 15	PCC	Channel	20850	21026	21201
		Frequency	2510.0	2527.6	2545.1
	SCC	Channel	21021	21197	21372
		Frequency	2527.1	2544.7	2562.2
15 + 20	PCC	Channel	20828	21003	21179
		Frequency	2507.8	2525.3	2542.9
	SCC	Channel	20999	21174	21350
		Frequency	2524.9	2542.4	2560.0
20 + 10	PCC	Channel	20850	21051	21251
		Frequency	2510.0	2530.1	2550.1
	SCC	Channel	20994	21195	21395
		Frequency	2524.4	2544.5	2564.5
10 + 20	PCC	Channel	20805	21006	21206
		Frequency	2505.5	2525.6	2545.6
	SCC	Channel	20949	21150	21350
		Frequency	2519.9	2540.0	2560.0
15 + 15	PCC	Channel	20825	21025	21225
		Frequency	2507.5	2527.5	2547.5
	SCC	Channel	20975	21175	21375
		Frequency	2522.5	2542.5	2562.5
15 + 10	PCC	Channel	20825	21051	21277
		Frequency	2507.5	2530.1	2552.7
	SCC	Channel	20945	21171	21397
		Frequency	2519.5	2542.1	2564.7

3 Conducted Test Items

3.1 Measuring Instruments

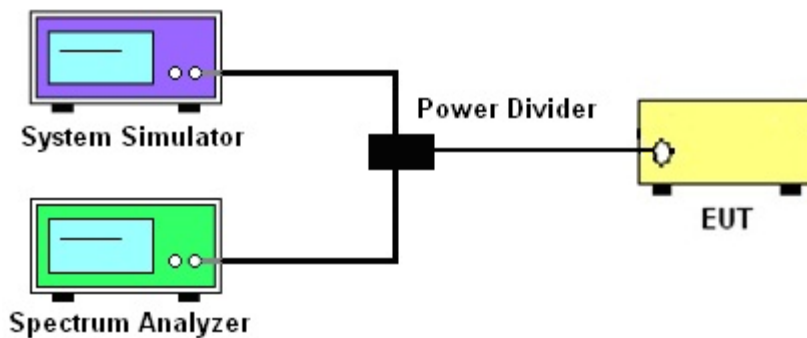
See list of measuring instruments of this test report.

3.2 Test Setup

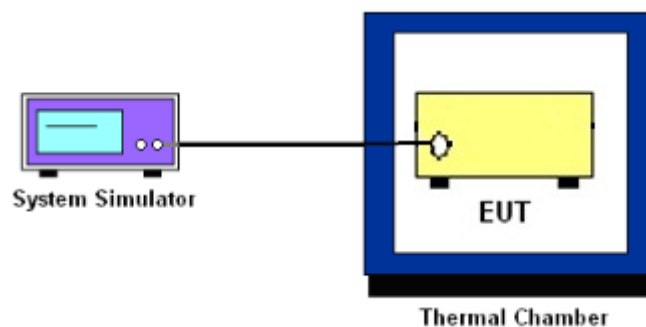
3.2.1 Conducted Output Power



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 3 Watts for LTE Band 12.

The EIRP of mobile transmitters must not exceed 2 Watts for Band 7 and Band 41.

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 $P(\text{Watts})$ 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 $P(\text{Watts})$ 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 $P(\text{Watts})$ 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 $P(\text{Watts})$ 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.



27.53(m)(4)

For mobile digital stations, the attenuation factor shall be not less than $40 + 10 \log (P)$ dB on all frequencies between the channel edge and 5 megahertz from the channel edge, $43 + 10 \log (P)$ dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and $55 + 10 \log (P)$ dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less that $43 + 10 \log (P)$ dB on all frequencies between 2490.5 MHz and 2496 MHz and $55 + 10 \log (P)$ dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.

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. Offset has included the duty factor for LTE Band 41. Duty factor $=10 \log (1/x)$, where x is the measured duty cycle.
8. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
9. 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)
 $= P(W) - [43 + 10\log(P)]$ (dB)
 $= [30 + 10\log(P)]$ (dBm) - $[43 + 10\log(P)]$ (dB) = -13dBm.

10. For LTE Band 7, 38, 41, the other 40 dB, and 55 dB have additionally applied same calculation above.



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.

For Band 7,38,41:

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 $55 + 10 \log (P)$ 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. Offset has included the duty factor for LTE Band 41. Duty factor = $10 \log (1/x)$, where x is the measured duty cycle.
9. Taking the record of maximum spurious emission.
10. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
11. 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.
12. For Band 7, 38, 41
The limit line is derived from $55 + 10 \log (P)$ dB below the transmitter power P(Watts)
= $P(W) - [55 + 10 \log (P)]$ (dB)
= $[30 + 10 \log (P)]$ (dBm) - $[55 + 10 \log (P)]$ (dB)
= -25dBm.



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.

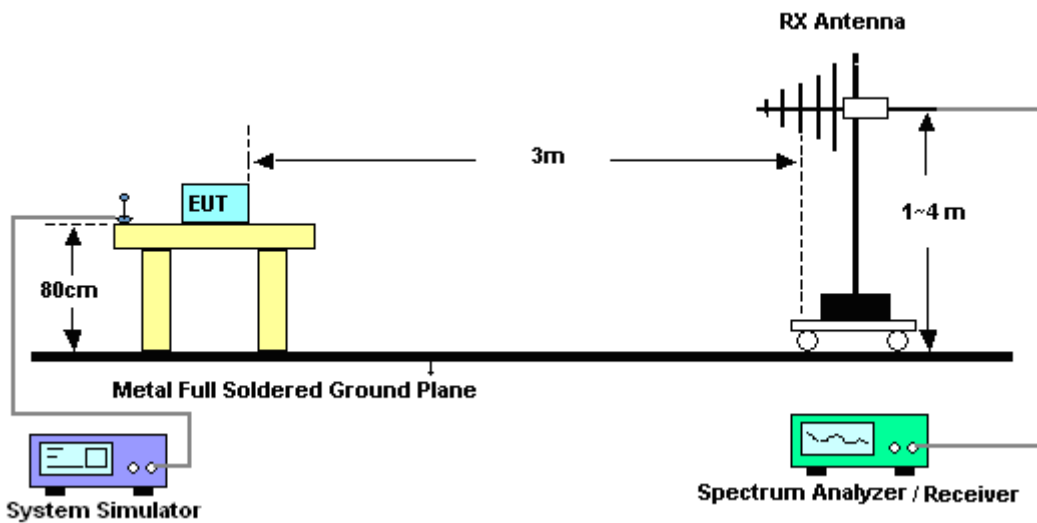
4 Radiated Test Items

4.1 Measuring Instruments

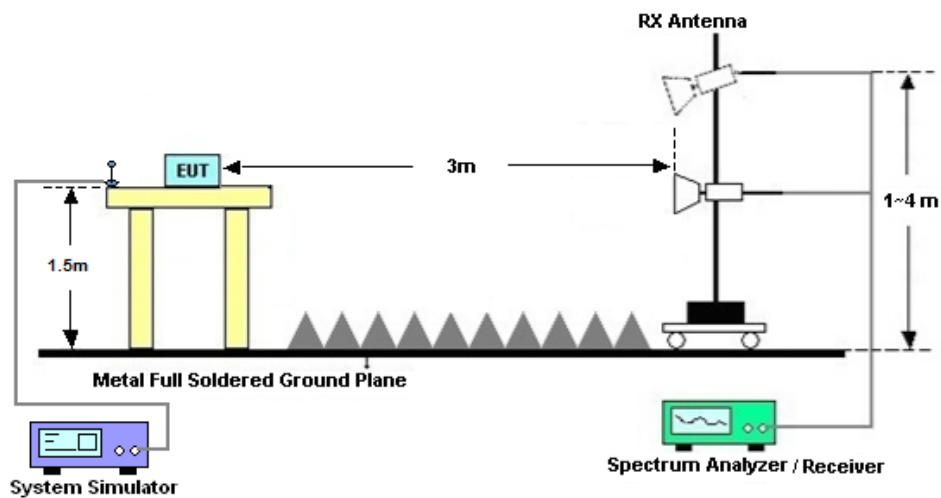
See list of measuring instruments of this test report.

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.

For Band 7, 38, 41

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 $55 + 10 \log (P)$ 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. $EIRP (dBm) = S.G. Power - Tx Cable Loss + Tx Antenna Gain$
11. $ERP (dBm) = EIRP - 2.15$
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)
 $= P(W) - [43 + 10\log(P)] (dB)$
 $= [30 + 10\log(P)] (dBm) - [43 + 10\log(P)] (dB)$
 $= -13dBm.$

13. For Band 7, 38, 41:

The limit line is derived from $55 + 10\log(P)$ dB below the transmitter power P(Watts)



5 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSV40	101040	10Hz~40GHz	Nov. 02, 2019	Sep. 10, 2020~ Sep. 22, 2020	Nov. 01, 2020	Conducted (TH01-KS)
Thermal Chamber	Ten Billion	TTC-B3S	TBN-960502	-40~+150°C	Nov. 18, 2019	Sep. 10, 2020~ Sep. 22, 2020	Nov. 17, 2020	Conducted (TH01-KS)
EXA Spectrum Analyzer	Keysight	N9010A	MY55150244	10Hz-44G,MAX 30dB	Apr. 15, 2020	Sep. 21, 2020	Apr. 14, 2021	Radiation (03CH04-KS)
Bilog Antenna	TeseQ	CBL6111D	49922	30MHz-1GHz	Jan. 03, 2020	Sep. 21, 2020	Jan. 02, 2021	Radiation (03CH04-KS)
Double Ridge Horn Antenna	ETS-Lindgren	3117	75957	1GHz~18GHz	Nov. 10, 2019	Sep. 21, 2020	Nov. 09, 2020	Radiation (03CH04-KS)
SHF-EHF Horn	Com-power	AH-840	101115	18GHz~40GHz	Nov. 10, 2019	Sep. 21, 2020	Nov. 09, 2020	Radiation (03CH04-KS)
Amplifier	SONOMA	310N	187289	9KHz-1GHz	Jan. 03, 2020	Sep. 21, 2020	Jan. 02, 2021	Radiation (03CH04-KS)
Amplifier	MITEQ	EM18G40G GA	060728	18~40GHz	Jan. 08, 2020	Sep. 21, 2020	Jan. 07, 2021	Radiation (03CH04-KS)
high gain Amplifier	MITEQ	AMF-7D-00 101800-30-1 0P	2025788	1Ghz-18Ghz	Jan. 03, 2020	Sep. 21, 2020	Jan. 02, 2021	Radiation (03CH04-KS)
Amplifier	Keysight	83017A	MY57280106	500MHz~26.5GHz	Oct. 15, 2019	Sep. 21, 2020	Oct. 14, 2020	Radiation (03CH04-KS)
AC Power Source	Chroma	61601	F104090004	N/A	NCR	Sep. 21, 2020	NCR	Radiation (03CH04-KS)
Turn Table	ChamPro	EM 1000-T	060762-T	0~360 degree	NCR	Sep. 21, 2020	NCR	Radiation (03CH04-KS)
Antenna Mast	ChamPro	EM 1000-A	060762-A	1 m~4 m	NCR	Sep. 21, 2020	NCR	Radiation (03CH04-KS)

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))	3.3dB
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Uncertainty of Radiated Emission Measurement (1 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	2.8dB
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Appendix A. Test Results of Conducted Test

Conducted Output Power(Average power)

LTE Band 12						
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				23060	23095	23130
Frequency (MHz)				704	707.5	711
10	QPSK	1	0	22.64	22.68	22.61
10	QPSK	1	25	22.63	22.57	22.63
10	QPSK	1	49	22.62	22.62	22.58
10	QPSK	25	0	21.64	21.75	21.65
10	QPSK	25	12	21.72	21.65	21.71
10	QPSK	25	25	21.73	21.74	21.70
10	QPSK	50	0	21.74	21.68	21.73
10	16QAM	1	0	22.02	21.91	21.94
10	16QAM	1	25	21.88	21.86	21.93
10	16QAM	1	49	21.89	21.99	21.91
10	16QAM	25	0	20.72	20.71	20.66
10	16QAM	25	12	20.74	20.68	20.74
10	16QAM	25	25	20.76	20.74	20.68
10	16QAM	50	0	20.73	20.67	20.76
10	64QAM	1	0	20.93	20.91	20.99
10	64QAM	1	25	20.97	21.05	20.86
10	64QAM	1	49	20.92	20.97	20.96
10	64QAM	25	0	19.72	19.80	19.74
10	64QAM	25	12	19.80	19.80	19.89
10	64QAM	25	25	19.81	19.79	19.82
10	64QAM	50	0	19.80	19.75	19.84
Channel				23035	23095	23155
Frequency (MHz)				701.5	707.5	713.5
5	QPSK	1	0	22.54	22.53	22.58
5	QPSK	1	12	22.56	22.62	22.61



5	QPSK	1	24	22.66	22.65	22.62
5	QPSK	12	0	21.72	21.68	21.66
5	QPSK	12	7	21.71	21.68	21.72
5	QPSK	12	13	21.69	21.67	21.65
5	QPSK	25	0	21.70	21.68	21.66
5	16QAM	1	0	21.92	21.89	21.94
5	16QAM	1	12	21.94	21.99	21.94
5	16QAM	1	24	21.99	22.01	21.94
5	16QAM	12	0	20.70	20.68	20.67
5	16QAM	12	7	20.73	20.70	20.75
5	16QAM	12	13	20.71	20.72	20.66
5	16QAM	25	0	20.70	20.66	20.64
5	64QAM	1	0	20.94	20.93	21.01
5	64QAM	1	12	20.93	21.02	20.95
5	64QAM	1	24	21.04	21.07	20.93
5	64QAM	12	0	19.82	19.77	19.74
5	64QAM	12	7	19.83	19.78	19.82
5	64QAM	12	13	19.79	19.83	19.80
5	64QAM	25	0	19.84	19.76	19.75
Channel				23025	23095	23165
Frequency (MHz)				700.5	707.5	714.5
3	QPSK	1	0	22.67	22.58	22.56
3	QPSK	1	8	22.64	22.66	22.66
3	QPSK	1	14	22.63	22.62	22.57
3	QPSK	8	0	21.73	21.67	21.65
3	QPSK	8	4	21.74	21.74	21.68
3	QPSK	8	7	21.69	21.65	21.67
3	QPSK	15	0	21.71	21.64	21.66
3	16QAM	1	0	21.96	21.83	21.80
3	16QAM	1	8	21.99	22.01	22.00
3	16QAM	1	14	21.96	21.96	21.90
3	16QAM	8	0	20.81	20.73	20.69
3	16QAM	8	4	20.77	20.78	20.78
3	16QAM	8	7	20.70	20.75	20.70
3	16QAM	15	0	20.72	20.67	20.68
3	64QAM	1	0	21.02	20.86	20.91



3	64QAM	1	8	20.96	21.03	21.02
3	64QAM	1	14	20.98	21.10	20.90
3	64QAM	8	0	19.88	19.79	19.78
3	64QAM	8	4	19.87	19.86	19.81
3	64QAM	8	7	19.80	19.84	19.76
3	64QAM	15	0	19.83	19.77	19.71
Channel				23017	23095	23173
Frequency (MHz)				699.7	707.5	715.3
1.4	QPSK	1	0	22.59	22.53	22.51
1.4	QPSK	1	3	22.61	22.59	22.59
1.4	QPSK	1	5	22.51	22.53	22.47
1.4	QPSK	3	0	22.60	22.51	22.55
1.4	QPSK	3	1	22.65	22.55	22.60
1.4	QPSK	3	3	22.58	22.55	22.53
1.4	QPSK	6	0	21.64	21.57	21.57
1.4	16QAM	1	0	21.94	21.83	21.89
1.4	16QAM	1	3	21.88	21.96	21.86
1.4	16QAM	1	5	21.82	21.80	21.80
1.4	16QAM	3	0	21.70	21.61	21.67
1.4	16QAM	3	1	21.70	21.68	21.68
1.4	16QAM	3	3	21.66	21.64	21.52
1.4	16QAM	6	0	20.72	20.69	20.63
1.4	64QAM	1	0	20.99	20.95	20.96
1.4	64QAM	1	3	20.88	21.00	20.94
1.4	64QAM	1	5	20.83	20.76	20.82
1.4	64QAM	3	0	20.86	20.72	20.82
1.4	64QAM	3	1	20.89	20.85	20.83
1.4	64QAM	3	3	20.81	20.76	20.66
1.4	64QAM	6	0	19.80	19.72	19.74



LTE Band 41						
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				39750	40620	41490
Frequency (MHz)				2506	2593	2680
20	QPSK	1	0	22.60	22.64	22.63
20	QPSK	1	49	22.36	22.40	22.45
20	QPSK	1	99	22.38	22.53	22.54
20	QPSK	50	0	21.84	21.85	21.67
20	QPSK	50	24	21.57	21.62	21.52
20	QPSK	50	50	21.49	21.64	21.65
20	QPSK	100	0	21.55	21.83	21.75
20	16QAM	1	0	21.51	21.60	21.75
20	16QAM	1	49	21.50	21.54	21.56
20	16QAM	1	99	21.52	21.68	21.40
20	16QAM	50	0	20.58	20.53	20.60
20	16QAM	50	24	20.59	20.64	20.53
20	16QAM	50	50	20.52	20.65	20.43
20	16QAM	100	0	20.60	20.65	20.48
20	64QAM	1	0	20.57	20.43	20.61
20	64QAM	1	49	20.56	20.49	20.66
20	64QAM	1	99	20.65	20.51	20.57
20	64QAM	50	0	19.62	19.57	19.66
20	64QAM	50	24	19.64	19.68	19.58
20	64QAM	50	50	19.61	19.71	19.48
20	64QAM	100	0	19.75	19.80	19.65
Channel				39725	40620	41515
Frequency (MHz)				2503.5	2593	2682.5
15	QPSK	1	0	22.31	22.46	22.54
15	QPSK	1	37	22.35	22.40	22.42
15	QPSK	1	74	22.38	22.55	22.34
15	QPSK	36	0	21.53	21.53	21.61
15	QPSK	36	20	21.56	21.60	21.49
15	QPSK	36	39	21.55	21.62	21.41
15	QPSK	75	0	21.55	21.62	21.50



15	16QAM	1	0	21.53	21.58	21.81
15	16QAM	1	37	21.48	21.54	21.54
15	16QAM	1	74	21.49	21.69	21.46
15	16QAM	36	0	20.50	20.52	20.57
15	16QAM	36	20	20.54	20.60	20.45
15	16QAM	36	39	20.53	20.62	20.36
15	16QAM	75	0	20.60	20.67	20.50
15	64QAM	1	0	20.37	20.44	20.67
15	64QAM	1	37	20.33	20.42	20.38
15	64QAM	1	74	20.43	20.52	20.30
15	64QAM	36	0	19.64	19.65	19.72
15	64QAM	36	20	19.68	19.74	19.60
15	64QAM	36	39	19.66	19.74	19.52
15	64QAM	75	0	19.72	19.77	19.62
Channel				39700	40620	41540
Frequency (MHz)				2501	2593	2685
10	QPSK	1	0	22.60	22.58	22.45
10	QPSK	1	25	22.57	22.63	22.40
10	QPSK	1	49	22.55	22.43	22.38
10	QPSK	25	0	21.70	21.63	21.59
10	QPSK	25	12	21.71	21.78	21.50
10	QPSK	25	25	21.68	21.76	21.43
10	QPSK	50	0	21.69	21.77	21.49
10	16QAM	1	0	21.74	21.71	21.78
10	16QAM	1	25	21.73	21.74	21.51
10	16QAM	1	49	21.69	21.74	21.46
10	16QAM	25	0	20.73	20.68	20.60
10	16QAM	25	12	20.76	20.78	20.50
10	16QAM	25	25	20.69	20.79	20.44
10	16QAM	50	0	20.74	20.79	20.49
10	64QAM	1	0	20.75	20.75	20.64
10	64QAM	1	25	20.51	20.64	20.35
10	64QAM	1	49	20.62	20.72	20.33
10	64QAM	25	0	19.77	19.74	19.67
10	64QAM	25	12	19.84	19.89	19.58
10	64QAM	25	25	19.79	19.89	19.51



10	64QAM	50	0	19.78	19.81	19.55
Channel				39675	40620	41565
Frequency (MHz)				2498.5	2593	2687.5
5	QPSK	1	0	22.61	22.58	22.52
5	QPSK	1	12	22.58	22.63	22.34
5	QPSK	1	24	22.54	22.45	22.31
5	QPSK	12	0	21.69	21.74	21.47
5	QPSK	12	7	21.73	21.77	21.42
5	QPSK	12	13	21.72	21.75	21.37
5	QPSK	25	0	21.68	21.74	21.39
5	16QAM	1	0	21.72	21.69	21.61
5	16QAM	1	12	21.75	21.88	21.46
5	16QAM	1	24	21.78	21.67	21.46
5	16QAM	12	0	20.66	20.70	20.43
5	16QAM	12	7	20.72	20.76	20.39
5	16QAM	12	13	20.67	20.76	20.34
5	16QAM	25	0	20.71	20.81	20.41
5	64QAM	1	0	20.63	20.55	20.50
5	64QAM	1	12	20.57	20.58	20.32
5	64QAM	1	24	20.65	20.68	20.33
5	64QAM	12	0	19.78	19.86	19.54
5	64QAM	12	7	19.81	19.87	19.51
5	64QAM	12	13	19.79	19.84	19.45
5	64QAM	25	0	19.78	19.85	19.47



CA Power

CA_7C							
Combination 20MHz+20MHz (100RB+100RB)							
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)
			RB Size	RB offset	RB Size	RB offset	
20850	21048	QPSK	1	0	0	0	22.45
21001	21199	QPSK	1	0	0	0	22.63
21152	21350	QPSK	1	0	0	0	22.41
20850	21048	16QAM	1	0	0	0	21.67
21001	21199	16QAM	1	0	0	0	21.54
21152	21350	16QAM	1	0	0	0	21.66
20850	21048	64QAM	1	0	0	0	20.89
21001	21199	64QAM	1	0	0	0	20.56
21152	21350	64QAM	1	0	0	0	20.61



ERP/EIRP

LTE Band 12 (GT - LC = -1.5 dB) QPSK									
Bandwidth	1.4M			3M			5M		
Channel	23017	23095	23173	23025	23095	23165	23035	23095	23155
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency (MHz)	699.7	707.5	715.3	700.5	707.5	714.5	701.5	707.5	713.5
Conducted Power (dBm)	22.65	22.55	22.60	22.67	22.58	22.56	22.66	22.65	22.62
Conducted Power (Watts)	0.1841	0.1799	0.1820	0.1849	0.1811	0.1803	0.1845	0.1841	0.1828
ERP(dBm)	19.00	18.90	18.95	19.02	18.93	18.91	19.01	19.00	18.97
ERP(Watts)	0.0794	0.0776	0.0785	0.0798	0.0782	0.0778	0.0796	0.0794	0.0789

LTE Band 12 (GT - LC = -1.5 dB) QPSK			
Bandwidth	10M		
Channel	23060	23095	23130
	(Low)	(Mid)	(High)
Frequency (MHz)	704	707.5	711
Conducted Power (dBm)	22.64	22.68	22.61
Conducted Power (Watts)	0.1837	0.1854	0.1824
ERP(dBm)	18.99	19.03	18.96
ERP(Watts)	0.0793	0.0800	0.0787



LTE Band 12 (GT - LC = -1.5 dB) 16QAM									
Bandwidth	1.4M			3M			5M		
Channel	23017	23095	23173	23025	23095	23165	23035	23095	23155
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency (MHz)	699.7	707.5	715.3	700.5	707.5	714.5	701.5	707.5	713.5
Conducted Power (dBm)	21.88	21.96	21.86	21.99	22.01	22.00	21.99	22.01	21.94
Conducted Power (Watts)	0.1542	0.1570	0.1535	0.1581	0.1589	0.1585	0.1581	0.1589	0.1563
ERP(dBm)	18.23	18.31	18.21	18.34	18.36	18.35	18.34	18.36	18.29
ERP(Watts)	0.0665	0.0678	0.0662	0.0682	0.0685	0.0684	0.0682	0.0685	0.0675

LTE Band 12 (GT - LC = -1.5 dB) 16QAM			
Bandwidth	10M		
Channel	23060	23095	23130
	(Low)	(Mid)	(High)
Frequency (MHz)	704	707.5	711
Conducted Power (dBm)	22.02	21.91	21.94
Conducted Power (Watts)	0.1592	0.1552	0.1563
ERP(dBm)	18.37	18.26	18.29
ERP(Watts)	0.0687	0.0670	0.0675



LTE Band 12 (GT - LC = -1.5 dB) 64QAM									
Bandwidth	1.4M			3M			5M		
Channel	23017	23095	23173	23025	23095	23165	23035	23095	23155
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency (MHz)	699.7	707.5	715.3	700.5	707.5	714.5	701.5	707.5	713.5
Conducted Power (dBm)	20.88	21.00	20.94	20.98	21.10	20.90	21.04	21.07	20.93
Conducted Power (Watts)	0.1225	0.1259	0.1242	0.1253	0.1288	0.1230	0.1271	0.1279	0.1239
ERP(dBm)	17.23	17.35	17.29	17.33	17.45	17.25	17.39	17.42	17.28
ERP(Watts)	0.0528	0.0543	0.0536	0.0541	0.0556	0.0531	0.0548	0.0552	0.0535

LTE Band 12 (GT - LC = -1.5 dB) 64QAM			
Bandwidth	10M		
Channel	23060	23095	23130
	(Low)	(Mid)	(High)
Frequency (MHz)	704	707.5	711
Conducted Power (dBm)	20.97	21.05	20.86
Conducted Power (Watts)	0.1250	0.1274	0.1219
ERP(dBm)	17.32	17.40	17.21
ERP(Watts)	0.0540	0.0550	0.0526



LTE Band 41 (G _T - L _C = -1.8dB) QPSK									
Bandwidth	5M			10M			15M		
Channel	39675	40620	41565	39700	40620	41540	39725	40620	41515
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency	2498.5	2593	2687.5	2501	2593	2685	2503.5	2593	2682.5
(MHz)									
Conducted Power (dBm)	22.58	22.63	22.34	22.57	22.63	22.40	22.38	22.55	22.34
Conducted Power (Watts)	0.1811	0.1832	0.1714	0.1807	0.1832	0.1738	0.1730	0.1799	0.1714
EIRP(dBm)	20.78	20.83	20.54	20.77	20.83	20.60	20.58	20.75	20.54
EIRP(Watts)	0.1197	0.1211	0.1132	0.1194	0.1211	0.1148	0.1143	0.1189	0.1132

LTE Band 41 (G _T - L _C = -1.8dB) QPSK			
Bandwidth	20M		
Channel	39750	40620	41490
	(Low)	(Mid)	(High)
Frequency	2506	2593	2680
(MHz)			
Conducted Power (dBm)	22.60	22.64	22.63
Conducted Power (Watts)	0.1820	0.1837	0.1832
EIRP(dBm)	20.80	20.84	20.83
EIRP(Watts)	0.1202	0.1213	0.1211



LTE Band 41 (G _T - L _C = -1.8dB) 16QAM									
Bandwidth	5M			10M			15M		
Channel	39675	40620	41565	39700	40620	41540	39725	40620	41515
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency	2498.5	2593	2687.5	2501	2593	2685	2503.5	2593	2682.5
(MHz)									
Conducted Power (dBm)	21.75	21.88	21.46	21.74	21.71	21.78	21.53	21.58	21.81
Conducted Power (Watts)	0.1496	0.1542	0.1400	0.1493	0.1483	0.1507	0.1422	0.1439	0.1517
EIRP(dBm)	19.95	20.08	19.66	19.94	19.91	19.98	19.73	19.78	20.01
EIRP(Watts)	0.0989	0.1019	0.0925	0.0986	0.0979	0.0995	0.0940	0.0951	0.1002

LTE Band 41 (G _T - L _C = -1.8dB) 16QAM			
Bandwidth	20M		
Channel	39750	40620	41490
	(Low)	(Mid)	(High)
Frequency	2506	2593	2680
(MHz)			
Conducted Power (dBm)	21.51	21.60	21.75
Conducted Power (Watts)	0.1416	0.1445	0.1496
EIRP(dBm)	19.71	19.80	19.95
EIRP(Watts)	0.0935	0.0955	0.0989



LTE Band 41 (G _T - L _C = -1.8dB) 64QAM									
Bandwidth	5M			10M			15M		
Channel	39675	40620	41565	39700	40620	41540	39725	40620	41515
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency (MHz)	2498.5	2593	2687.5	2501	2593	2685	2503.5	2593	2682.5
Conducted Power (dBm)	20.65	20.68	20.33	20.75	20.75	20.64	20.37	20.44	20.67
Conducted Power (Watts)	0.1161	0.1169	0.1079	0.1189	0.1189	0.1159	0.1089	0.1107	0.1167
EIRP(dBm)	18.85	18.88	18.53	18.95	18.95	18.84	18.57	18.64	18.87
EIRP(Watts)	0.0767	0.0773	0.0713	0.0785	0.0785	0.0766	0.0719	0.0731	0.0771

LTE Band 41 (G _T - L _C = -1.8dB) 64QAM			
Bandwidth	20M		
Channel	39750	40620	41490
	(Low)	(Mid)	(High)
Frequency (MHz)	2506	2593	2680
Conducted Power (dBm)	20.56	20.49	20.66
Conducted Power (Watts)	0.1138	0.1119	0.1164
EIRP(dBm)	18.76	18.69	18.86
EIRP(Watts)	0.0752	0.0740	0.0769



CA EIRP

LTE Band 7 CA (GT - LC = -1.8 dB) QPSK			
Bandwidth	20M + 20M		
Channel PCC	20850	21001	21152
	(Low)	(Mid)	(High)
Channel SCC	21048	21199	21350
	(Low)	(Mid)	(High)
Conducted Power (dBm)	22.45	22.63	22.41
Conducted Power (Watts)	0.1758	0.1832	0.1742
EIRP(dBm)	20.65	20.83	20.61
EIRP(Watts)	0.1161	0.1211	0.1151

LTE Band 7 CA (GT - LC = -1.8 dB) QPSK			
Bandwidth	20M + 20M		
Channel PCC	20850	21001	21152
	(Low)	(Mid)	(High)
Channel SCC	21048	21199	21350
	(Low)	(Mid)	(High)
Conducted Power (dBm)	21.67	21.54	21.66
Conducted Power (Watts)	0.1469	0.1426	0.1466
EIRP(dBm)	19.87	19.74	19.86
EIRP(Watts)	0.0971	0.0942	0.0968



LTE Band 7 CA (GT - LC = -1.8 dB) QPSK			
Bandwidth	20M + 20M		
Channel PCC	20850	21001	21152
	(Low)	(Mid)	(High)
Channel SCC	21048	21199	21350
	(Low)	(Mid)	(High)
Conducted Power (dBm)	20.89	20.56	20.61
Conducted Power (Watts)	0.1227	0.1138	0.1151
EIRP(dBm)	19.09	18.76	18.81
EIRP(Watts)	0.0811	0.0752	0.0760



LTE Band 12

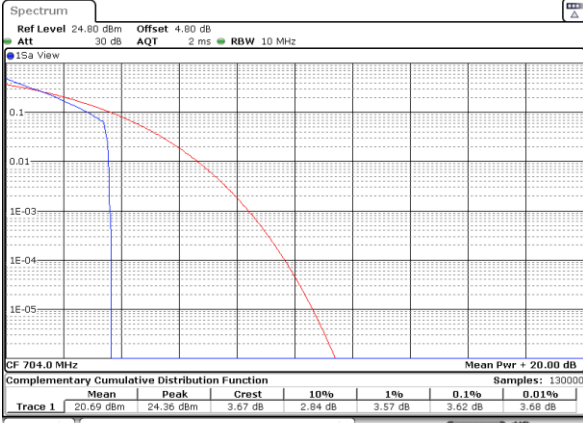
Peak-to-Average Ratio

Mode	LTE Band 12 / 10MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	3.62	5.07	5.25	5.91	PASS
Middle CH	3.57	5.01	5.10	5.97	
Highest CH	3.65	5.01	5.33	5.86	
Mode	LTE Band 12 / 10MHz				
Mod.	64QAM				Limit: 13dB
RB Size	1RB	Full RB			Result
Lowest CH	6.81	6.49	-	-	PASS
Middle CH	7.22	6.41	-	-	
Highest CH	7.19	6.43	-	-	



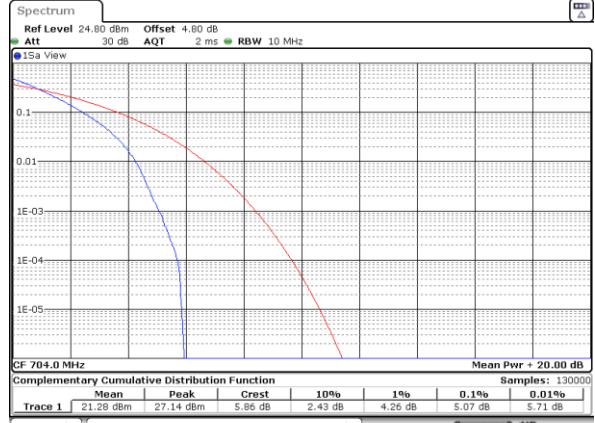
LTE Band 12 / 10MHz / QPSK

Lowest Channel / 1RB



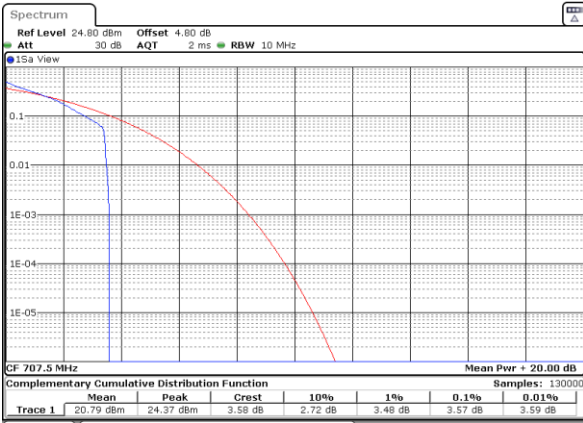
Date: 11 SEP 2020 00:48:03

Lowest Channel / Full RB



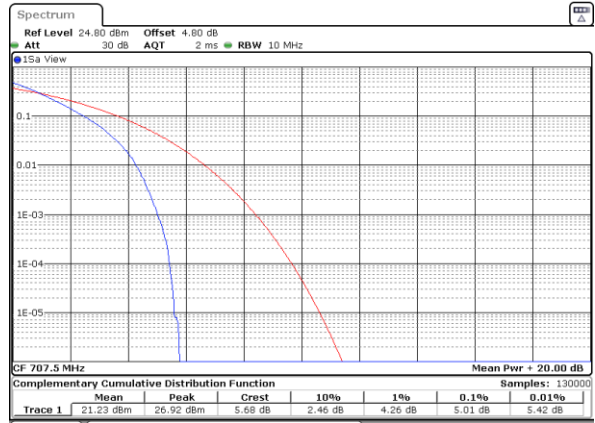
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Middle Channel / 1RB



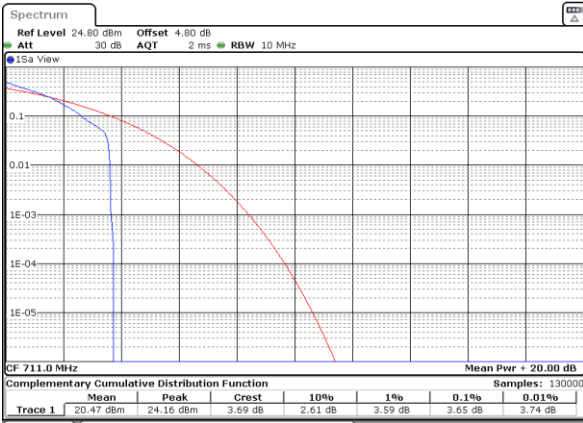
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Middle Channel / Full RB



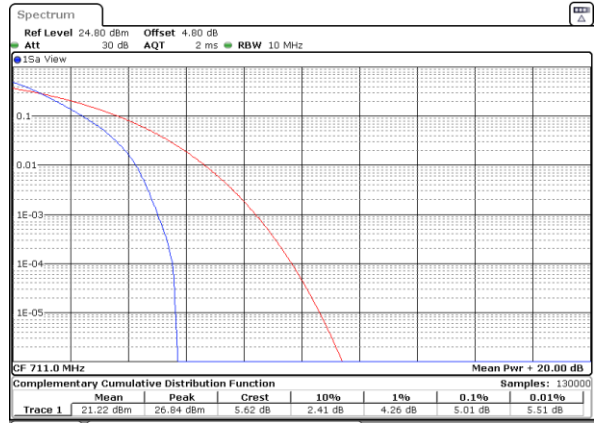
Date: 11 SEP 2020 00:48:43

Highest Channel / 1RB



Date: 11 SEP 2020 00:49:20

Highest Channel / Full RB

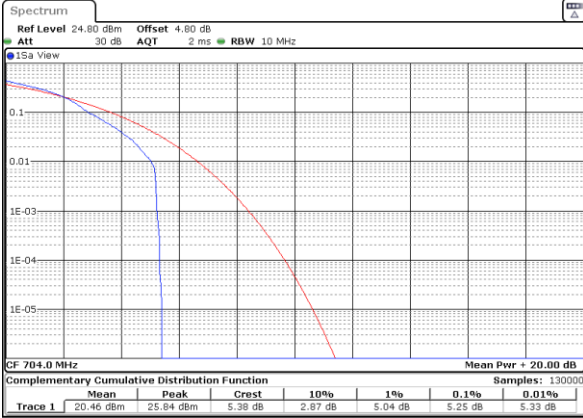


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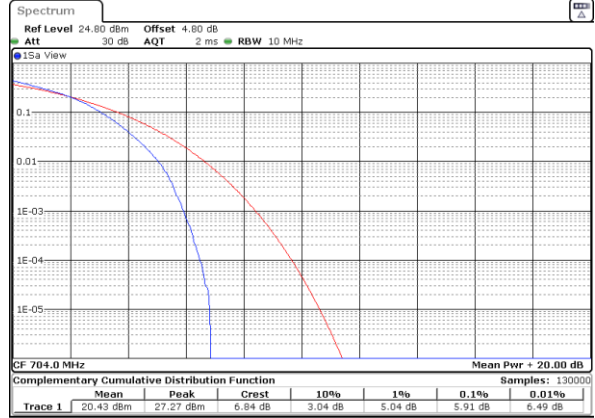
LTE Band 12 / 10MHz / 16QAM

Lowest Channel / 1RB



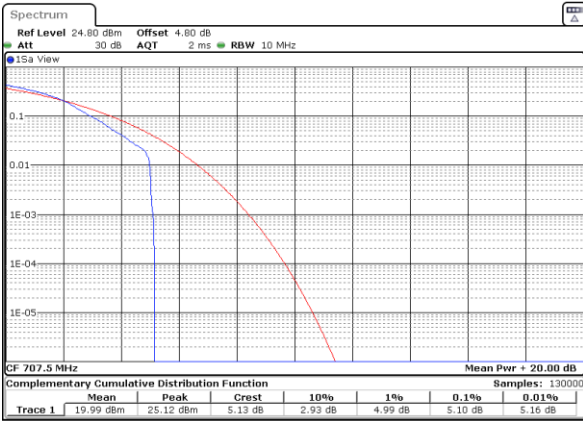
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Lowest Channel / Full RB



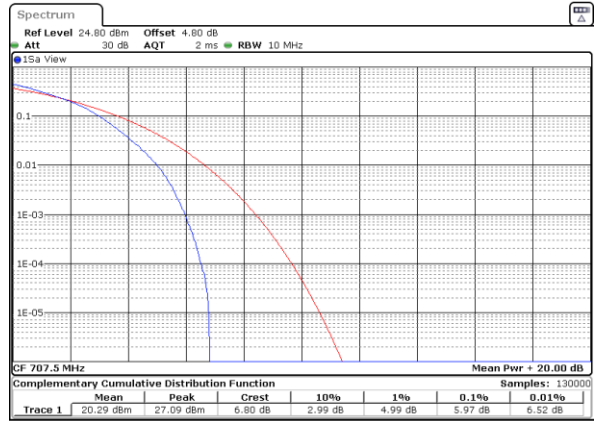
Date: 11 SEP 2020 00:48:25

Middle Channel / 1RB



Date: 11 SEP 2020 00:49:01

Middle Channel / Full RB



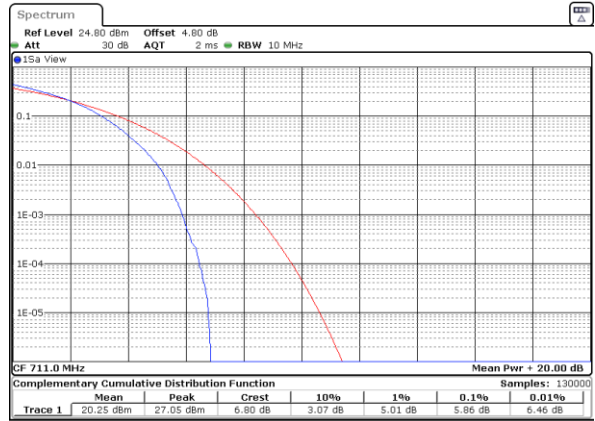
Date: 11 SEP 2020 00:48:34

Highest Channel / 1RB



Date: 11 SEP 2020 00:49:11

Highest Channel / Full RB



Date: 11 SEP 2020 00:49:38



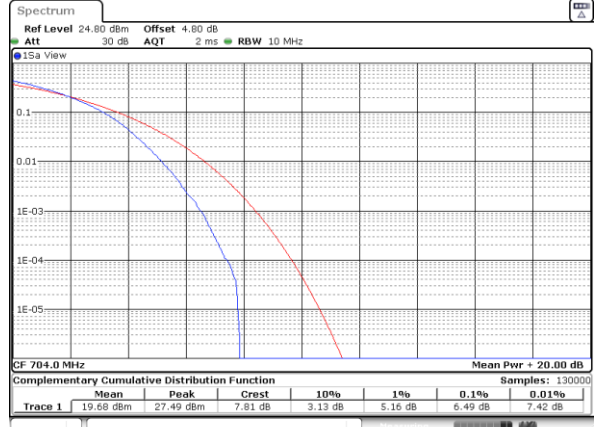
LTE Band 12 / 10MHz / 64QAM

Lowest Channel / 1RB



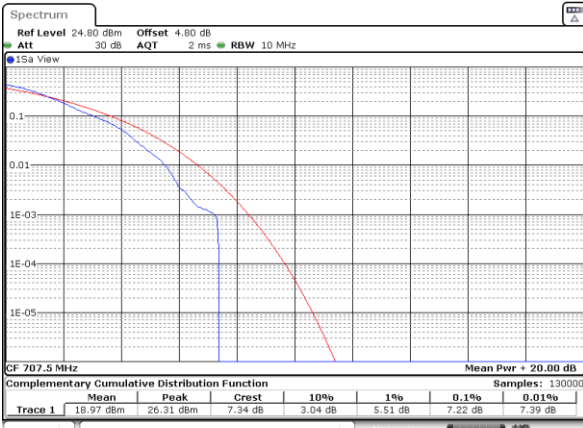
Date: 11 SEP 2020 00:47:02

Lowest Channel / Full RB



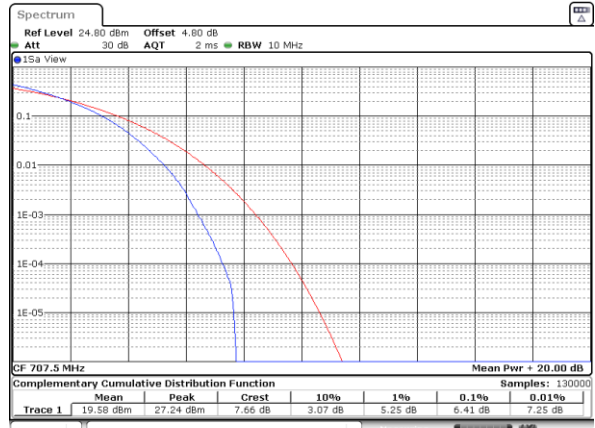
Date: 11 SEP 2020 00:47:11

Middle Channel / 1RB



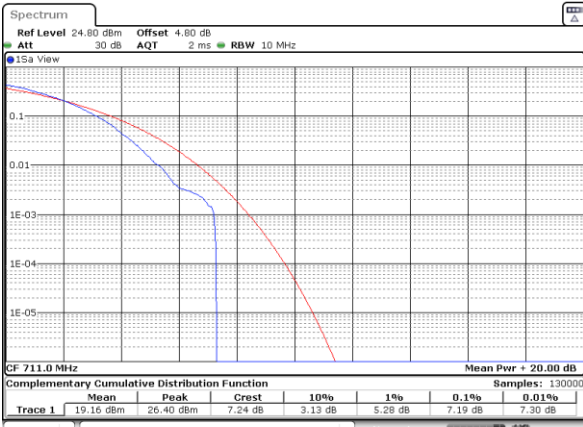
Date: 11 SEP 2020 00:47:28

Middle Channel / Full RB



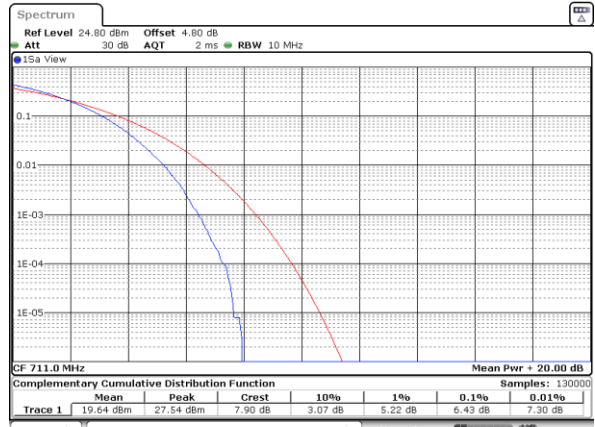
Date: 11 SEP 2020 00:47:19

Highest Channel / 1RB



Date: 11 SEP 2020 00:47:37

Highest Channel / Full RB



Date: 11 SEP 2020 00:47:46



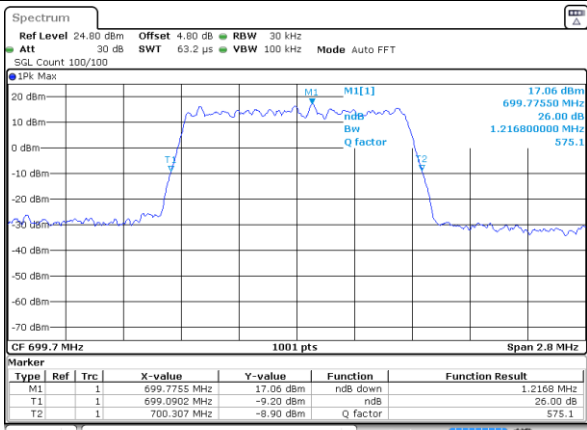
26dB Bandwidth

Mode	LTE Band 12 : 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	1.22	1.23	3.00	3.03	4.86	4.88	9.83	9.73	-	-	-	-
Middle CH	1.22	1.23	3.05	3.05	4.95	4.92	9.91	9.69	-	-	-	-
Highest CH	1.22	1.21	3.05	3.06	4.90	4.89	9.67	9.81	-	-	-	-
Mode	LTE Band 12 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	1.21	-	3.00	-	4.86	-	9.79	-	-	-	-	-
Middle CH	1.21	-	3.05	-	4.90	-	9.89	-	-	-	-	-
Highest CH	1.23	-	3.02	-	4.96	-	9.77	-	-	-	-	-



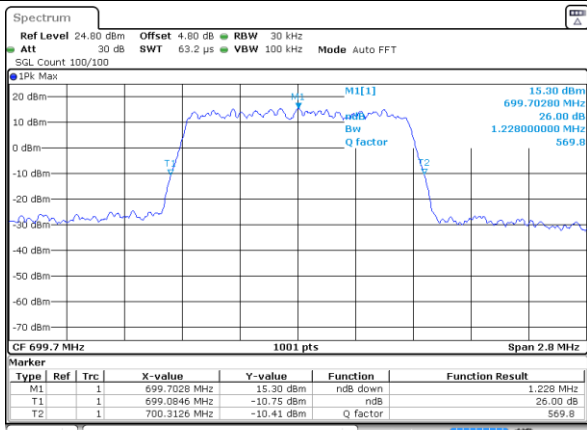
LTE Band 12

Lowest Channel / 1.4MHz / QPSK



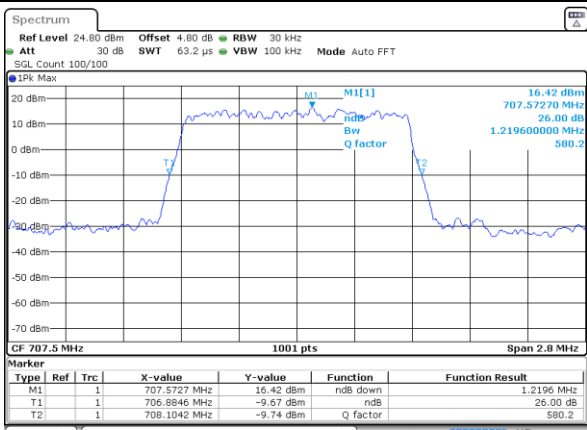
Date: 10 SEP 2020 22:49:49

Lowest Channel / 1.4MHz / 16QAM



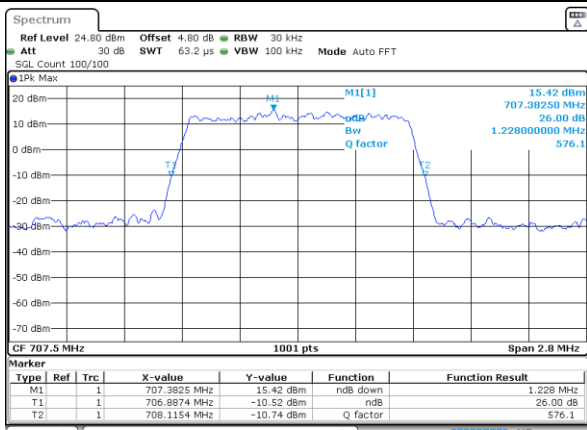
Date: 10 SEP 2020 22:49:39

Middle Channel / 1.4MHz / QPSK



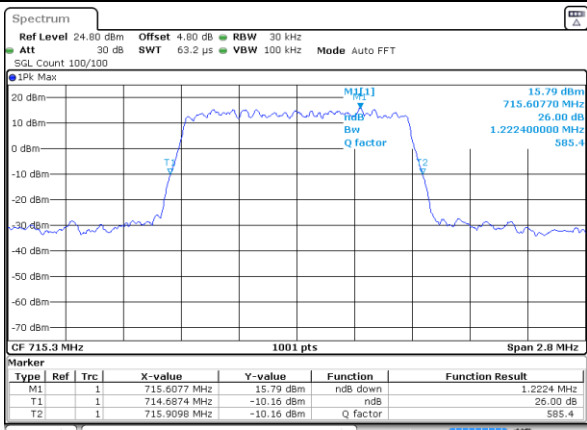
Date: 10 SEP 2020 22:49:19

Middle Channel / 1.4MHz / 16QAM



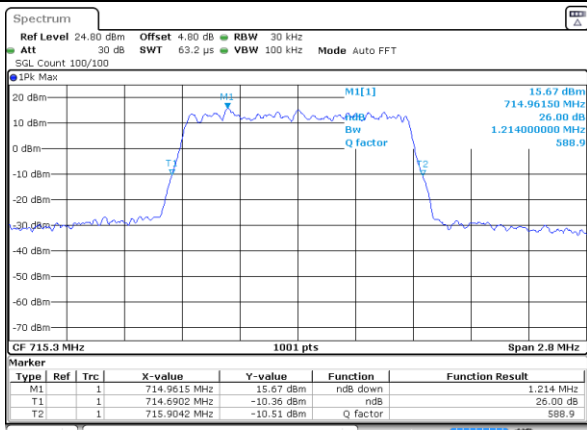
Date: 10 SEP 2020 22:49:29

Highest Channel / 1.4MHz / QPSK



Date: 10 SEP 2020 22:49:09

Highest Channel / 1.4MHz / 16QAM

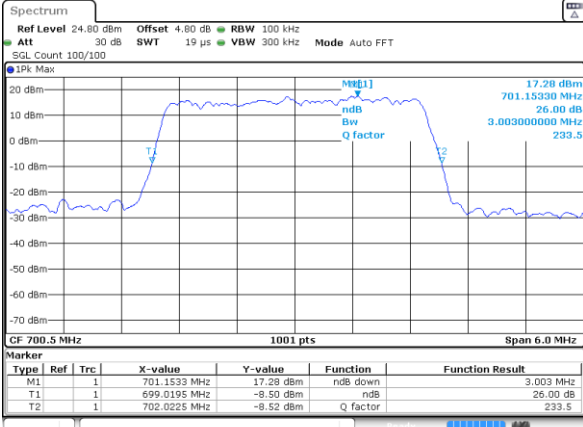


Date: 10 SEP 2020 22:48:59



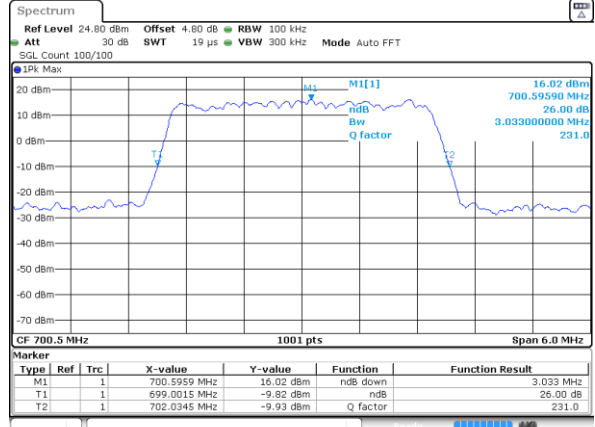
LTE Band 12

Lowest Channel / 3MHz / QPSK



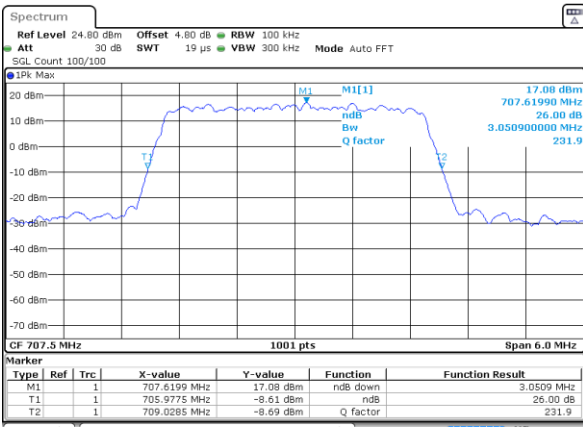
Date: 10 SEP 2020 23:12:47

Lowest Channel / 3MHz / 16QAM



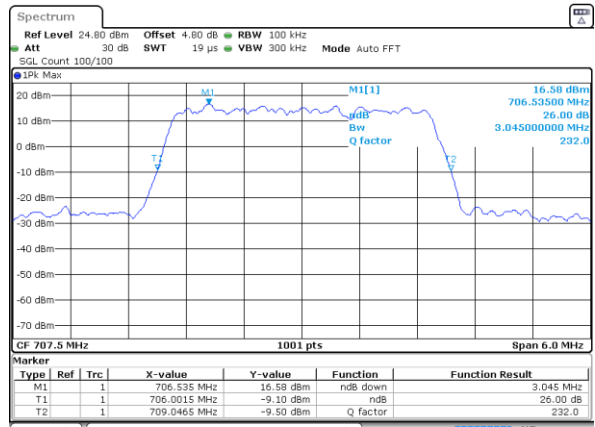
Date: 10 SEP 2020 23:12:37

Middle Channel / 3MHz / QPSK



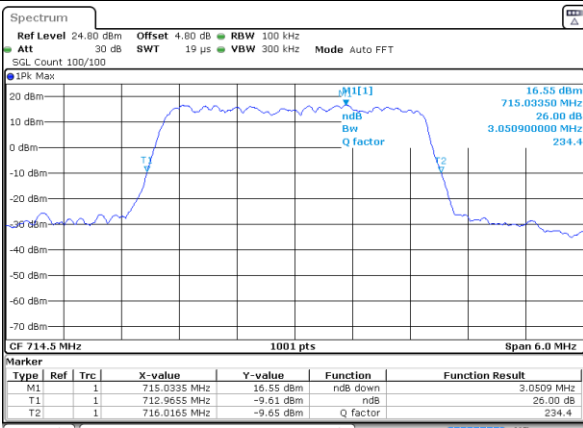
Date: 10 SEP 2020 23:12:17

Middle Channel / 3MHz / 16QAM



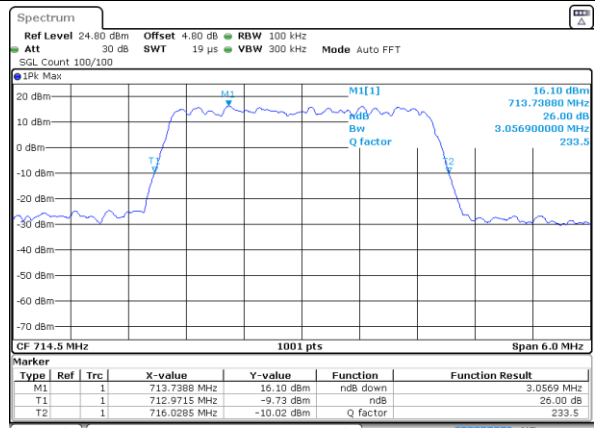
Date: 10 SEP 2020 23:12:27

Highest Channel / 3MHz / QPSK



Date: 10 SEP 2020 23:12:07

Highest Channel / 3MHz / 16QAM

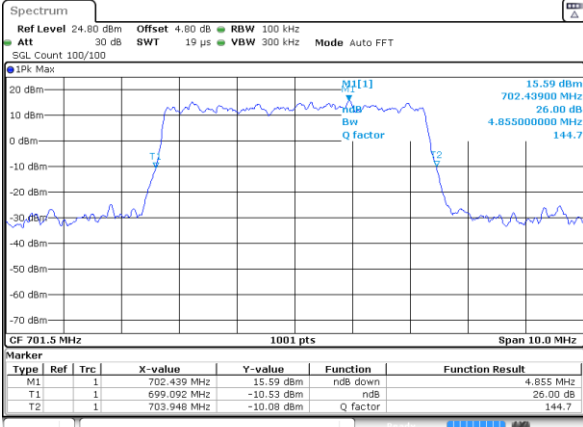


Date: 10 SEP 2020 23:11:57



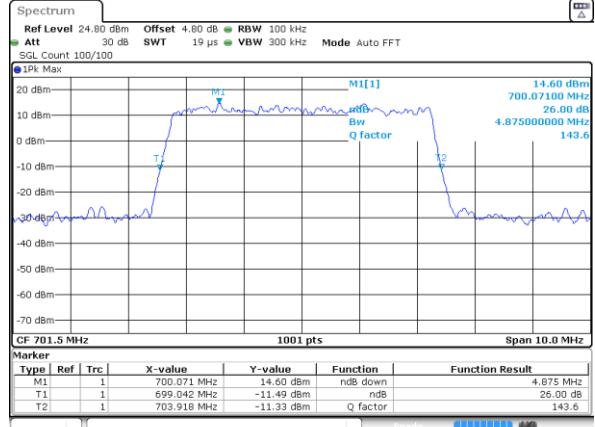
LTE Band 12

Lowest Channel / 5MHz / QPSK



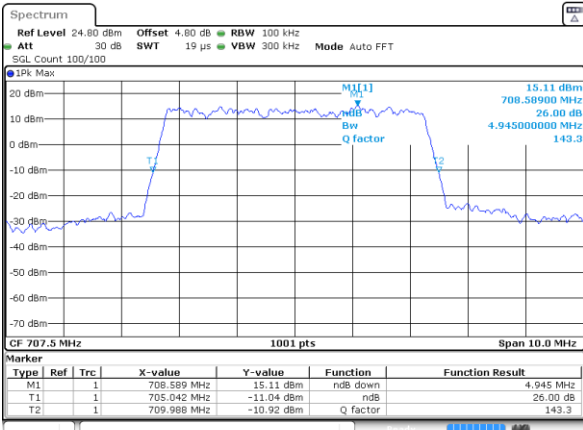
Date: 10 SEP 2020 23:30:14

Lowest Channel / 5MHz / 16QAM



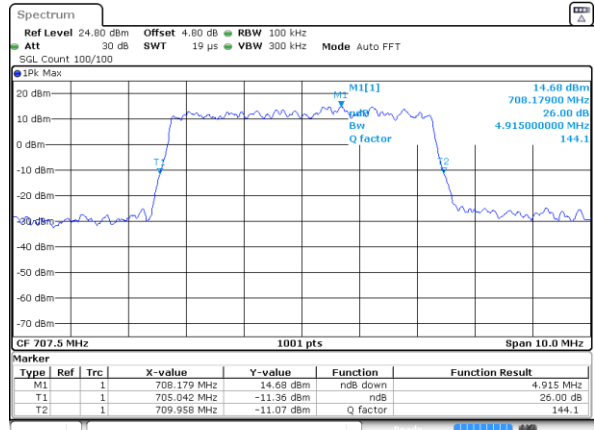
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Middle Channel / 5MHz / QPSK



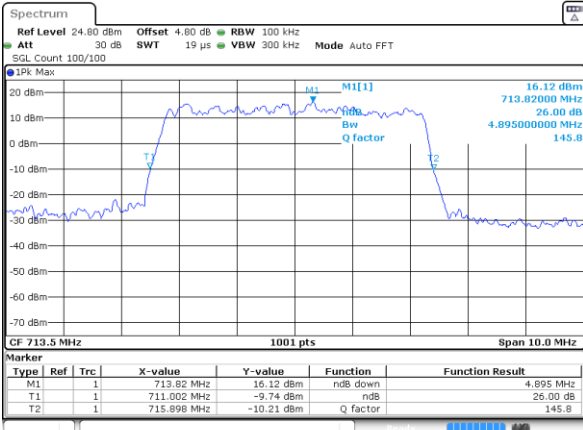
Date: 10 SEP 2020 23:29:43

Middle Channel / 5MHz / 16QAM



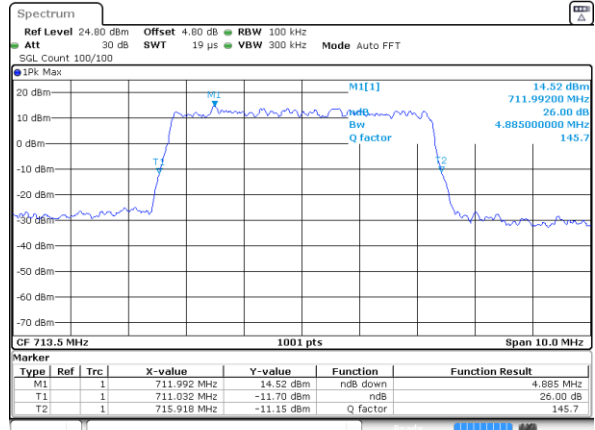
Date: 10 SEP 2020 23:29:53

Highest Channel / 5MHz / QPSK



Date: 10 SEP 2020 23:29:33

Highest Channel / 5MHz / 16QAM

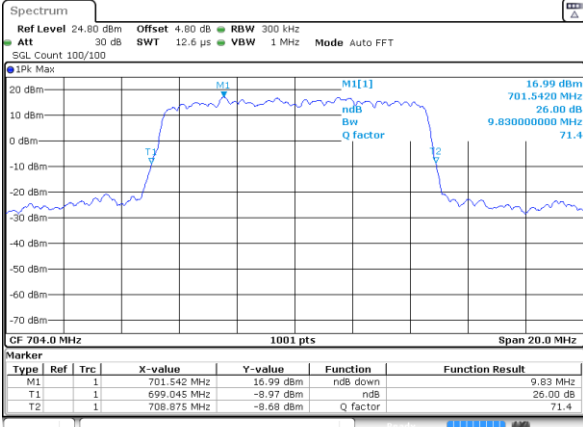


Date: 10 SEP 2020 23:29:23



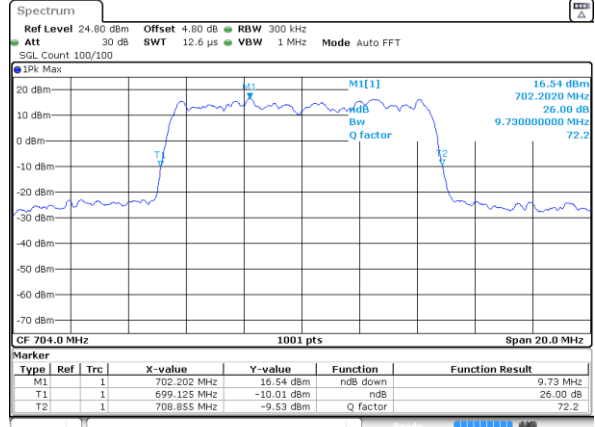
LTE Band 12

Lowest Channel / 10MHz / QPSK



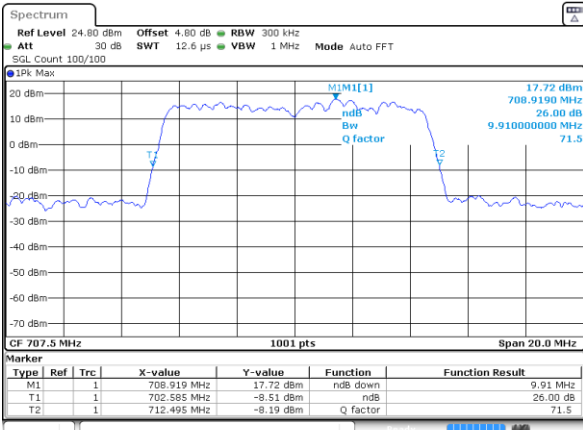
Date: 10 SEP 2020 23:47:37

Lowest Channel / 10MHz / 16QAM



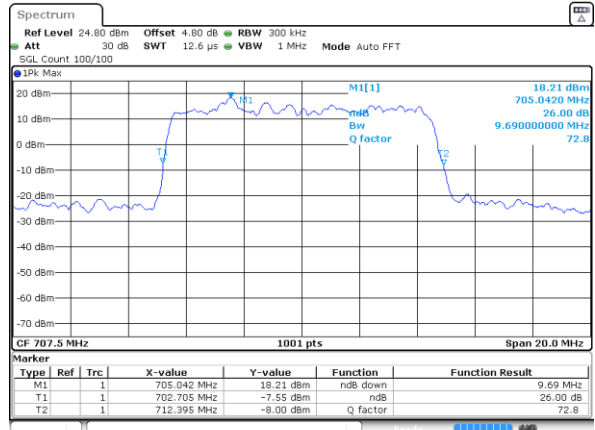
Date: 10 SEP 2020 23:47:27

Middle Channel / 10MHz / QPSK



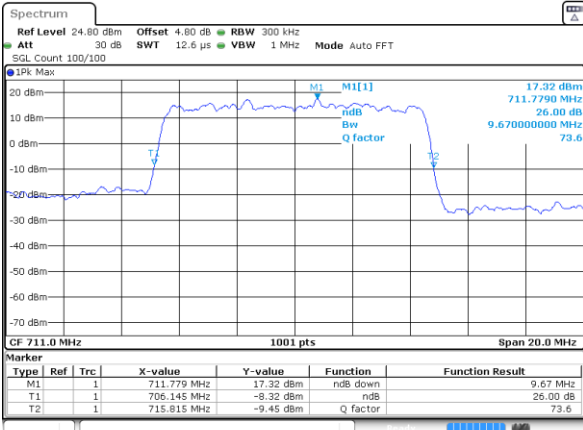
Date: 10 SEP 2020 23:47:07

Middle Channel / 10MHz / 16QAM



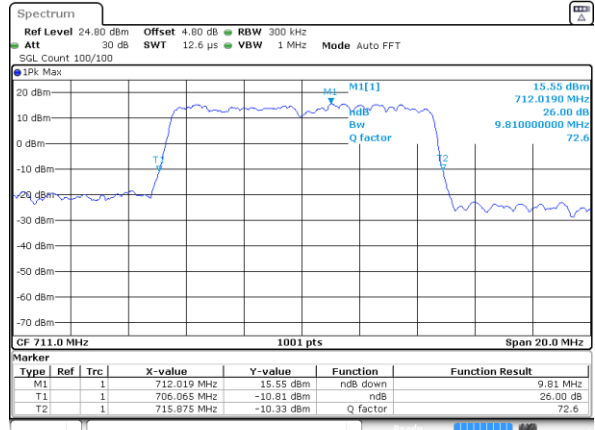
Date: 10 SEP 2020 23:47:17

Highest Channel / 10MHz / QPSK



Date: 10 SEP 2020 23:46:57

Highest Channel / 10MHz / 16QAM

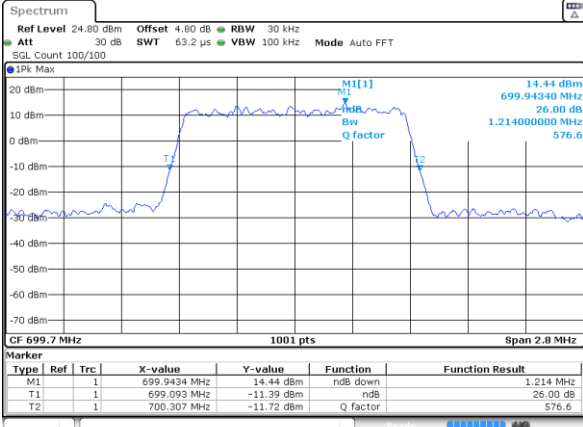


Date: 10 SEP 2020 23:46:47



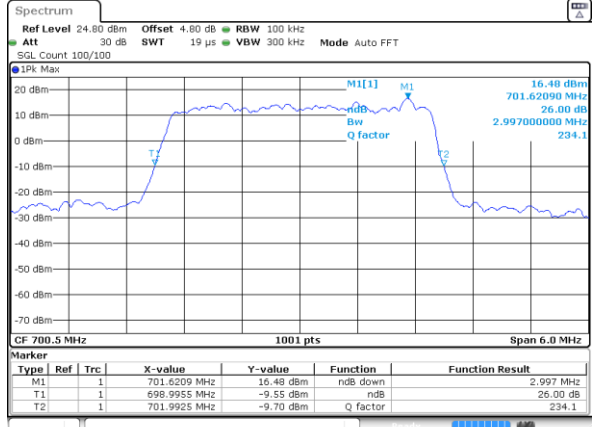
LTE Band 12

Lowest Channel / 1.4MHz / 64QAM



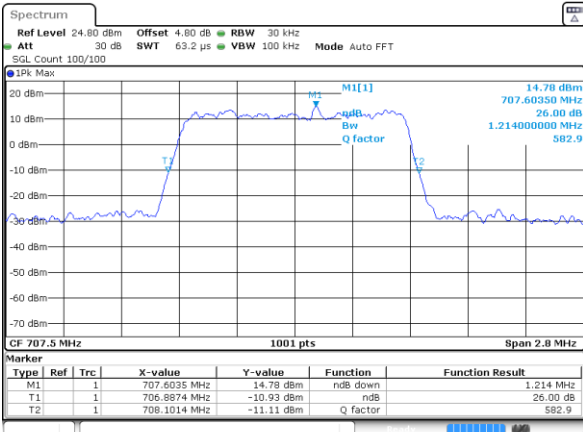
Date: 11 SEP 2020 00:02:47

Lowest Channel / 3MHz / 64QAM



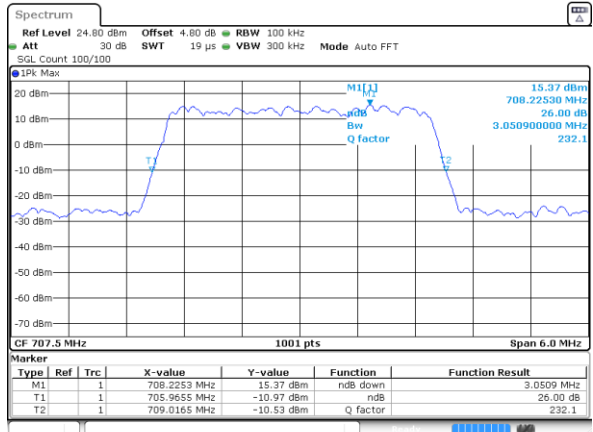
Date: 11 SEP 2020 00:14:06

Middle Channel / 1.4MHz / 64QAM



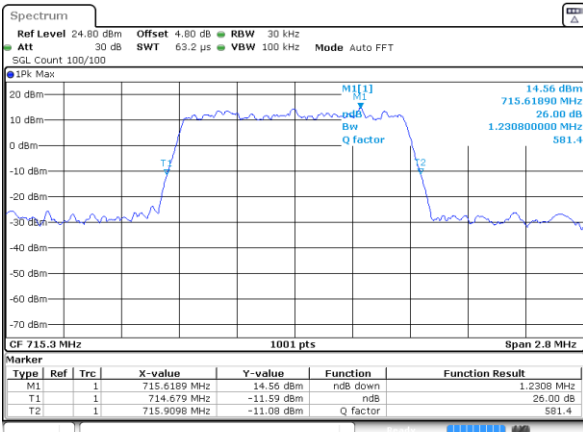
Date: 11 SEP 2020 00:03:07

Middle Channel / 3MHz / 64QAM



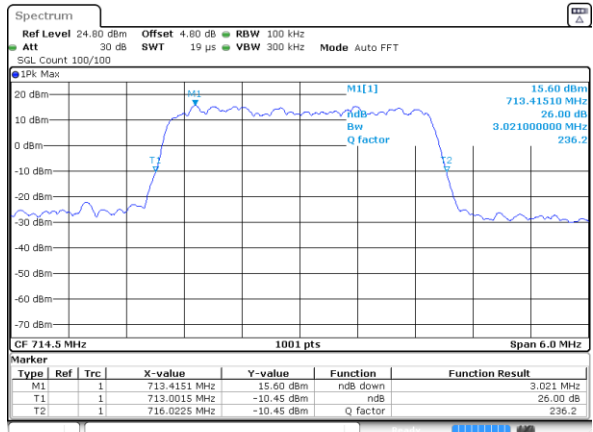
Date: 11 SEP 2020 00:14:27

Highest Channel / 1.4MHz / 64QAM



Date: 11 SEP 2020 00:03:27

Highest Channel / 3MHz / 64QAM

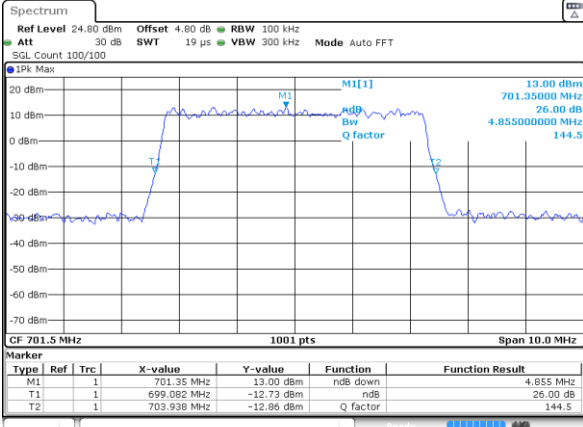


Date: 11 SEP 2020 00:14:47



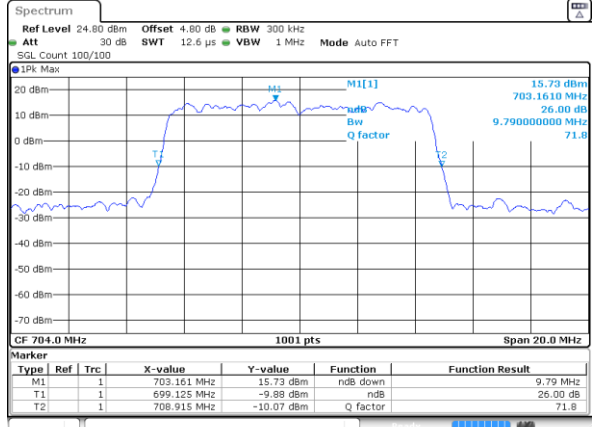
LTE Band 12

Lowest Channel / 5MHz / 64QAM



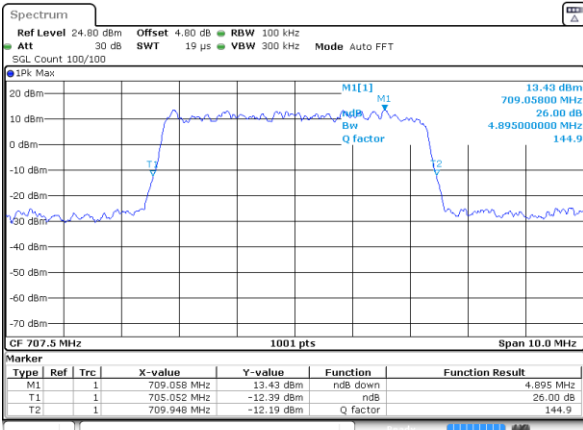
Date: 11 SEP 2020 00:20:44

Lowest Channel / 10MHz / 64QAM



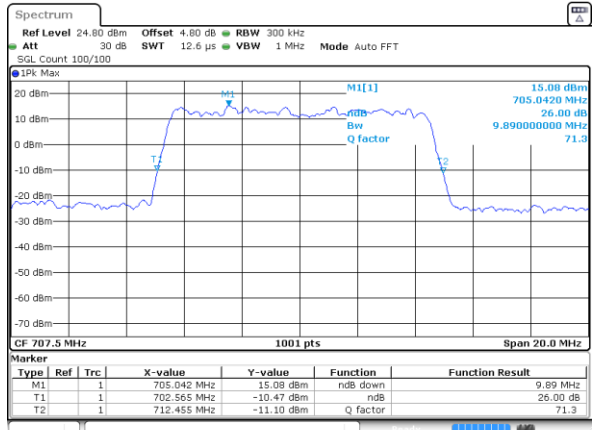
Date: 11 SEP 2020 00:41:37

Middle Channel / 5MHz / 64QAM



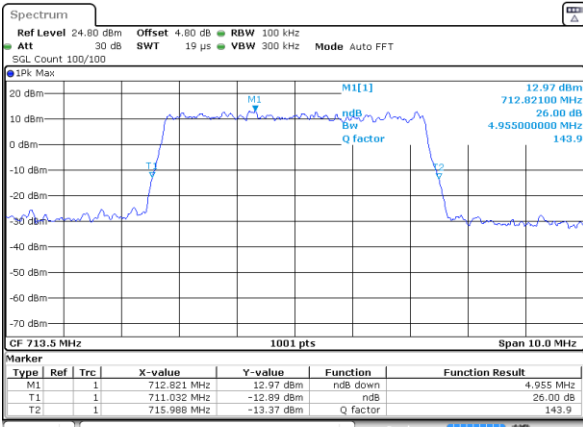
Date: 11 SEP 2020 00:21:04

Middle Channel / 10MHz / 64QAM



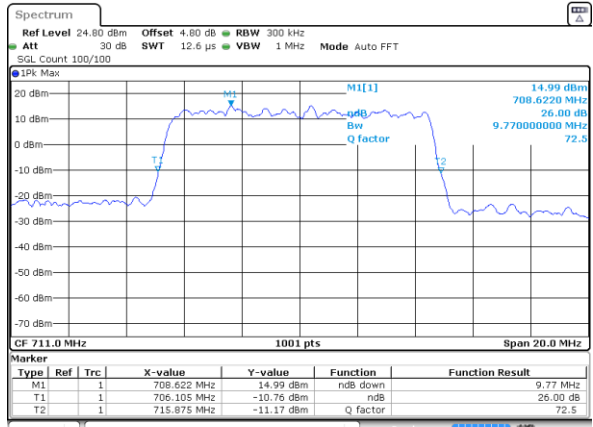
Date: 11 SEP 2020 00:41:57

Highest Channel / 5MHz / 64QAM



Date: 11 SEP 2020 00:21:24

Highest Channel / 10MHz / 64QAM



Date: 11 SEP 2020 00:42:17



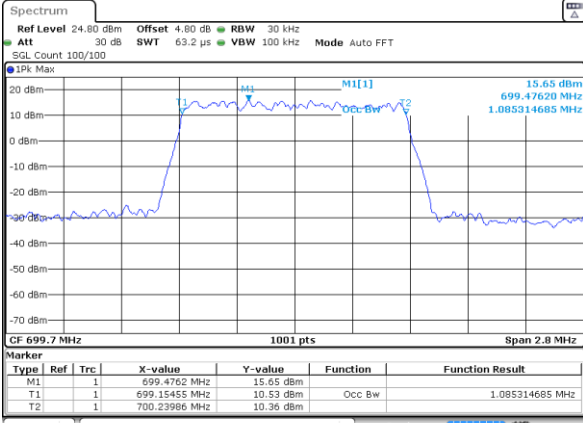
Occupied Bandwidth

Mode	LTE Band 12 : 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	1.09	2.71	2.71	4.50	4.47	8.99	8.99	-	-	-	-
Middle CH	1.09	1.09	2.71	2.70	4.49	4.49	9.05	9.01	-	-	-	-
Highest CH	1.10	1.10	2.72	2.72	4.50	4.49	9.03	9.01	-	-	-	-
Mode	LTE Band 12 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	1.09	-	2.73	-	4.48	-	8.97	-	-	-	-	-
Middle CH	1.09	-	2.73	-	4.50	-	9.11	-	-	-	-	-
Highest CH	1.09	-	2.72	-	4.49	-	8.99	-	-	-	-	-



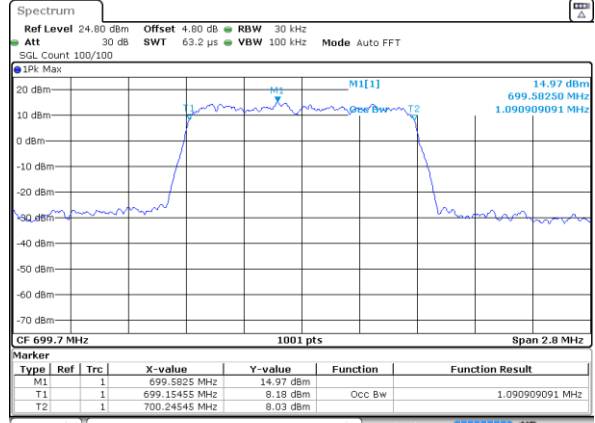
LTE Band 12

Lowest Channel / 1.4MHz / QPSK



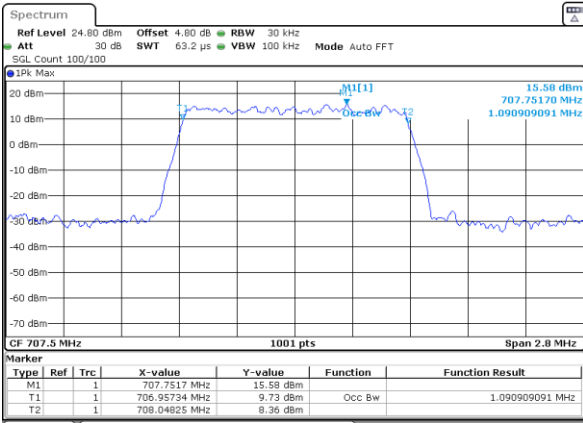
Date: 10 SEP 2020 22:47:58

Lowest Channel / 1.4MHz / 16QAM



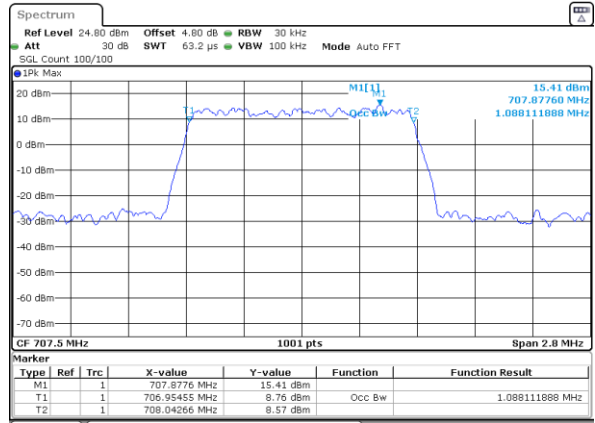
Date: 10 SEP 2020 22:48:08

Middle Channel / 1.4MHz / QPSK



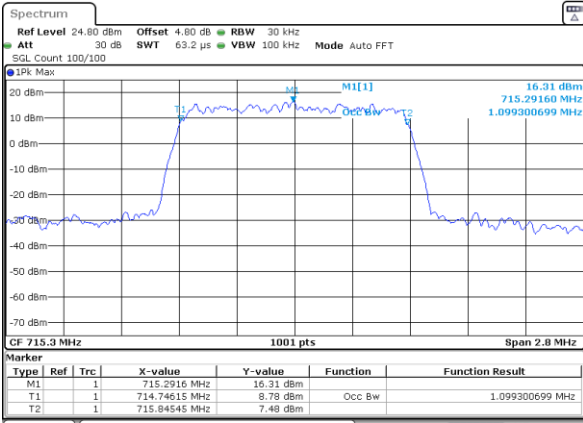
Date: 10 SEP 2020 22:48:28

Middle Channel / 1.4MHz / 16QAM



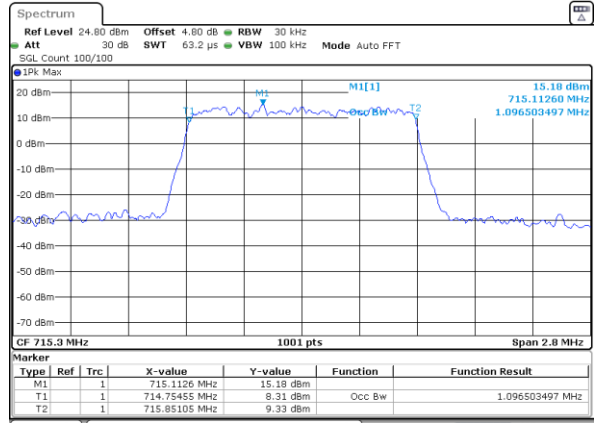
Date: 10 SEP 2020 22:48:18

Highest Channel / 1.4MHz / QPSK



Date: 10 SEP 2020 22:48:38

Highest Channel / 1.4MHz / 16QAM

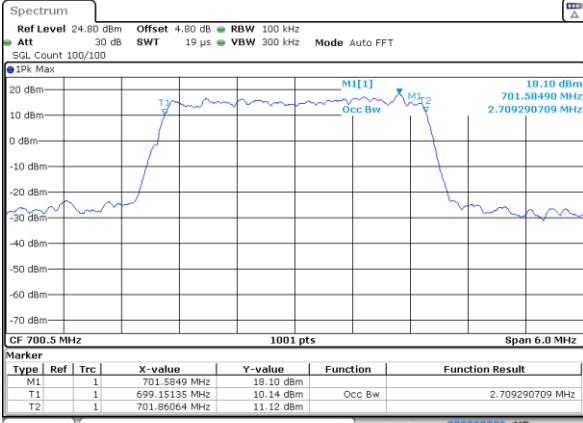


Date: 10 SEP 2020 22:48:48



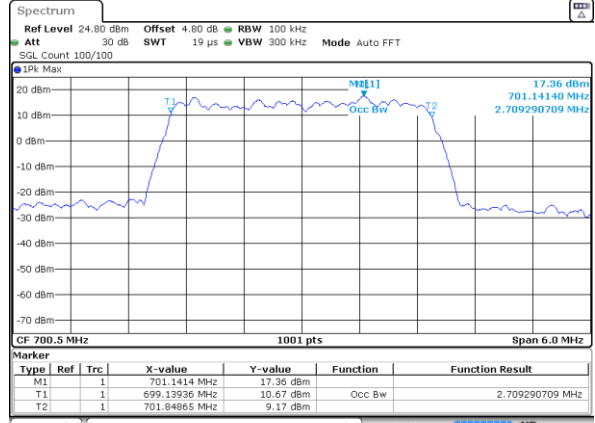
LTE Band 12

Lowest Channel / 3MHz / QPSK



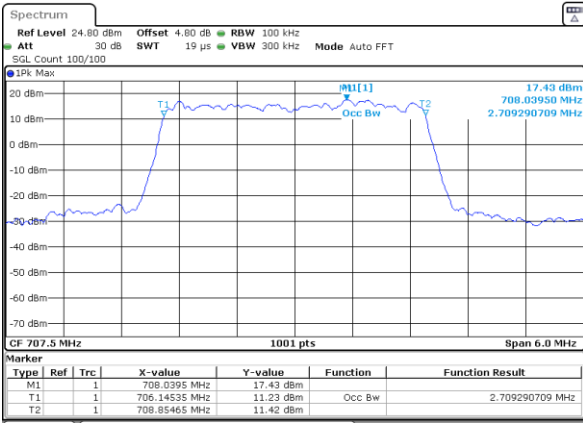
Date: 10 SEP 2020 23:10:57

Lowest Channel / 3MHz / 16QAM



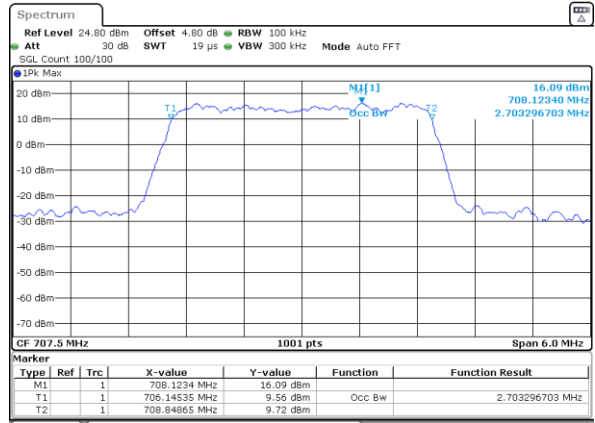
Date: 10 SEP 2020 23:11:07

Middle Channel / 3MHz / QPSK



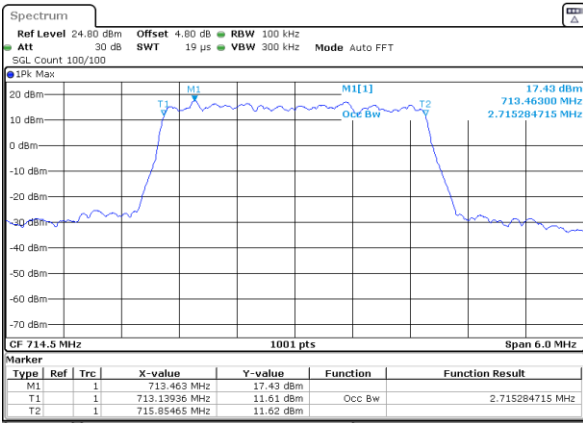
Date: 10 SEP 2020 23:11:27

Middle Channel / 3MHz / 16QAM



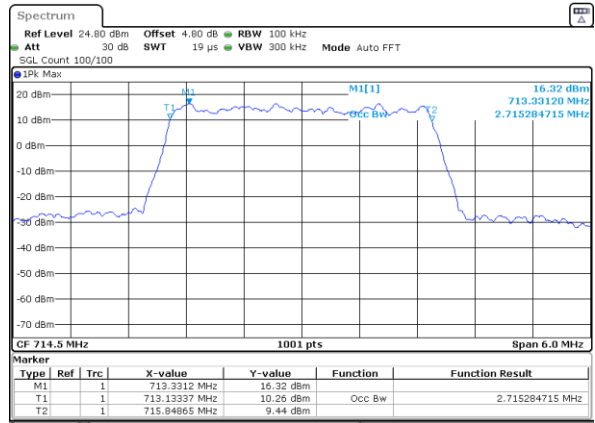
Date: 10 SEP 2020 23:11:17

Highest Channel / 3MHz / QPSK



Date: 10 SEP 2020 23:11:37

Highest Channel / 3MHz / 16QAM

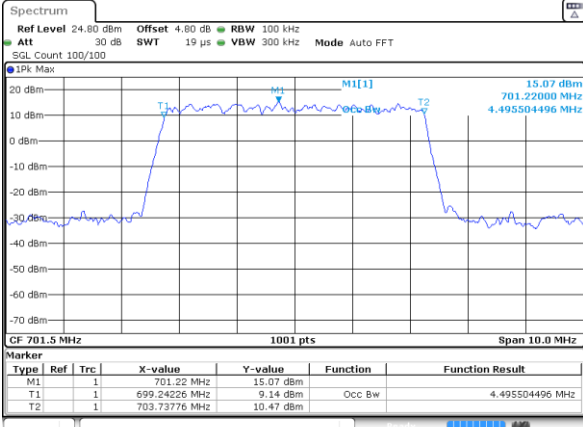


Date: 10 SEP 2020 23:11:47



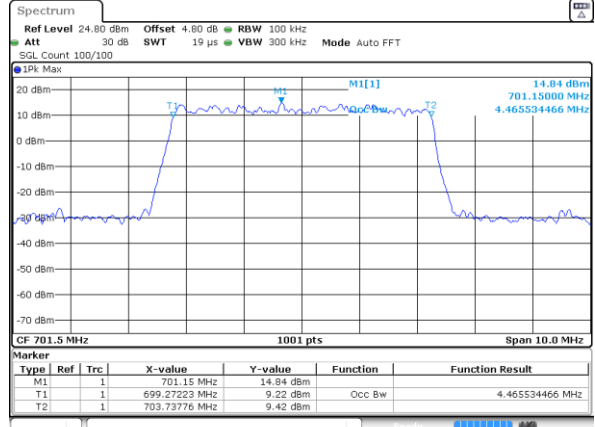
LTE Band 12

Lowest Channel / 5MHz / QPSK



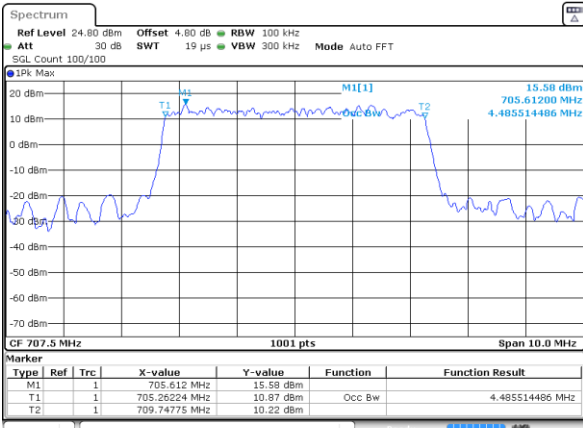
Date: 10 SEP 2020 23:28:23

Lowest Channel / 5MHz / 16QAM



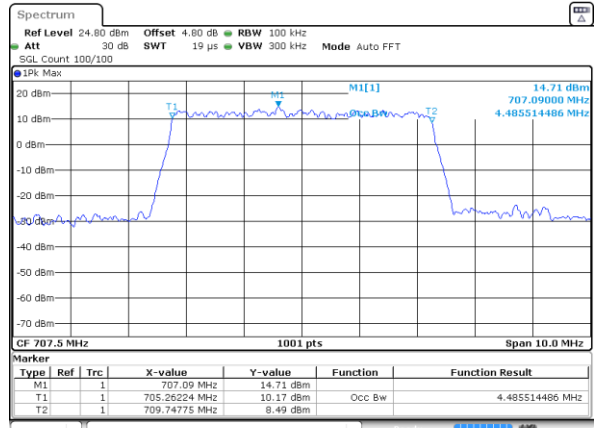
Date: 10 SEP 2020 23:28:33

Middle Channel / 5MHz / QPSK



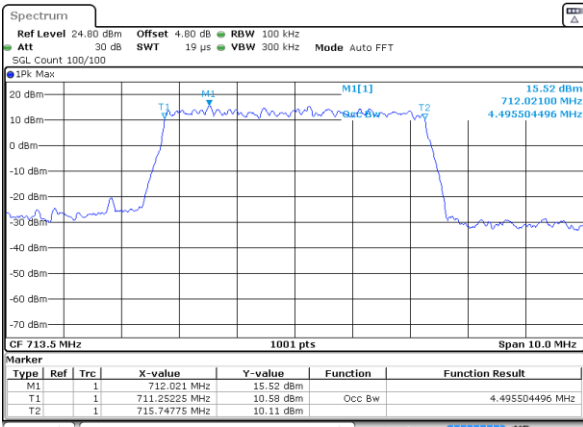
Date: 10 SEP 2020 23:28:53

Middle Channel / 5MHz / 16QAM



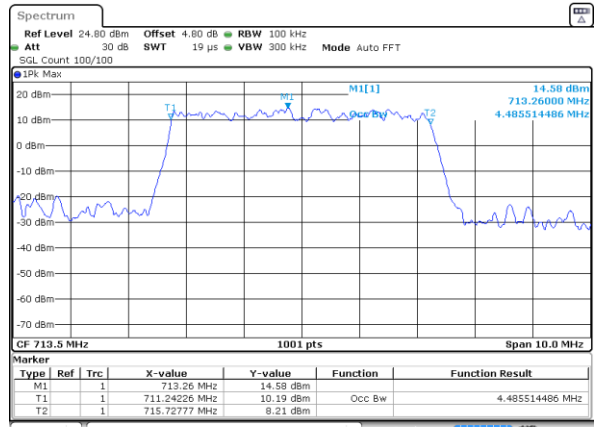
Date: 10 SEP 2020 23:28:43

Highest Channel / 5MHz / QPSK



Date: 10 SEP 2020 23:29:03

Highest Channel / 5MHz / 16QAM

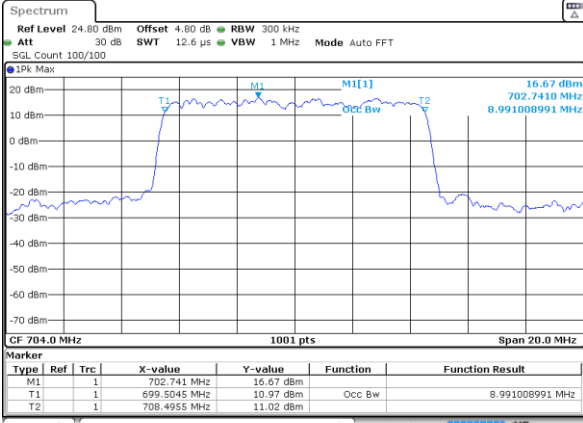


Date: 10 SEP 2020 23:29:13



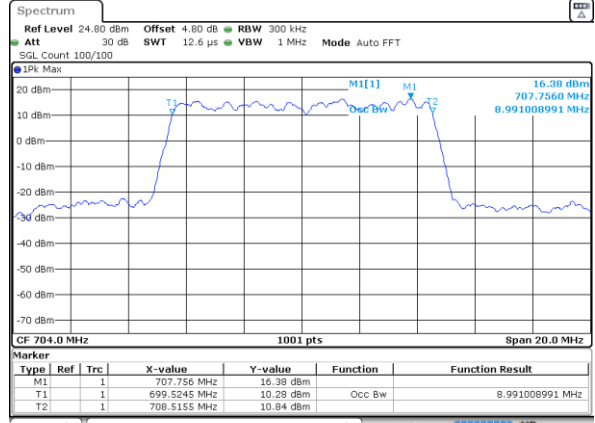
LTE Band 12

Lowest Channel / 10MHz / QPSK



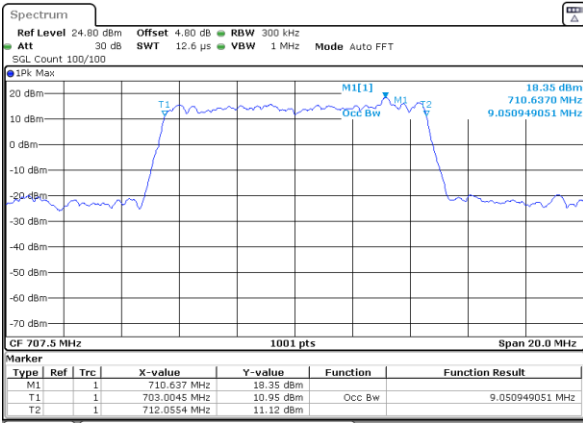
Date: 10 SEP 2020 23:45:47

Lowest Channel / 10MHz / 16QAM



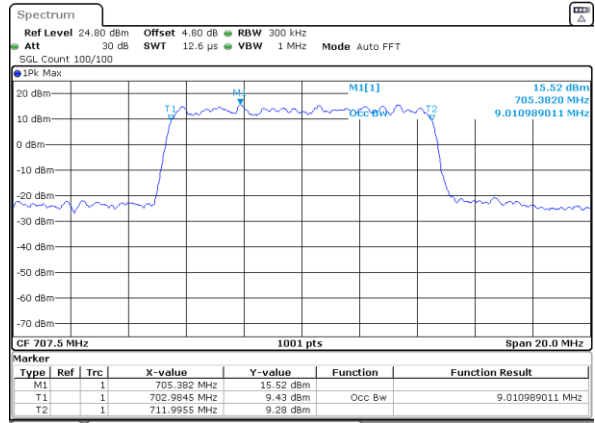
Date: 10 SEP 2020 23:45:57

Middle Channel / 10MHz / QPSK



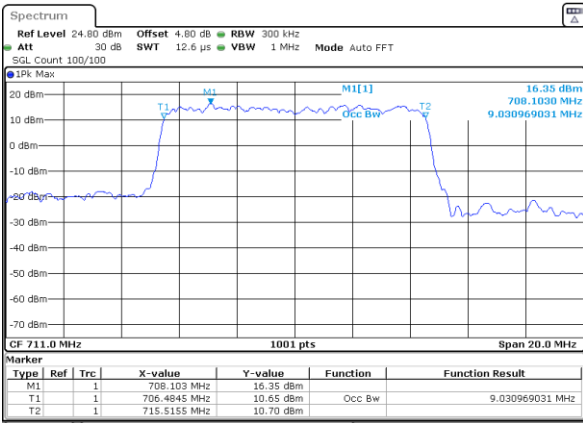
Date: 10 SEP 2020 23:46:17

Middle Channel / 10MHz / 16QAM



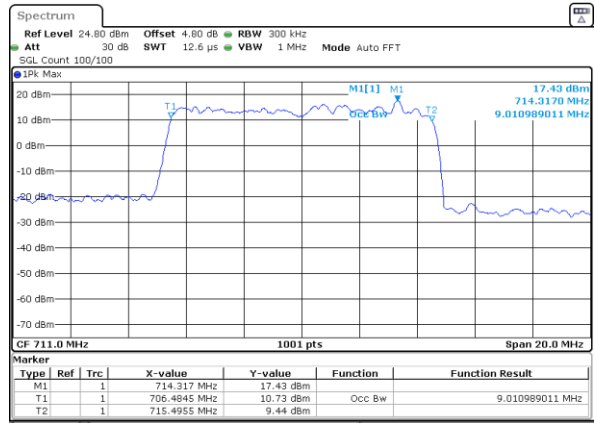
Date: 10 SEP 2020 23:46:07

Highest Channel / 10MHz / QPSK



Date: 10 SEP 2020 23:46:27

Highest Channel / 10MHz / 16QAM

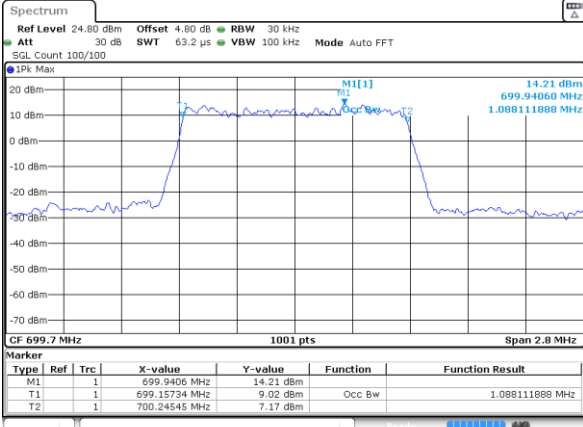


Date: 10 SEP 2020 23:46:37



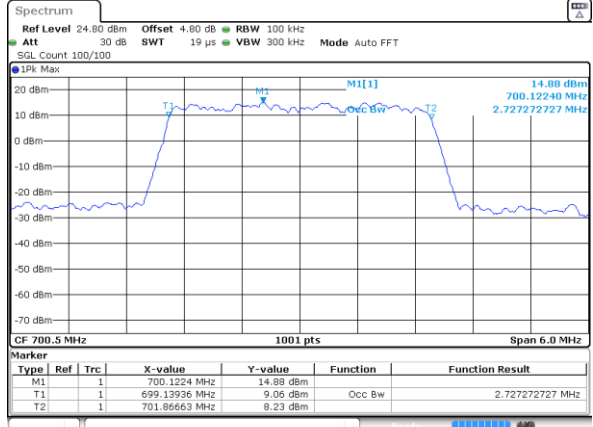
LTE Band 12

Lowest Channel / 1.4MHz / 64QAM



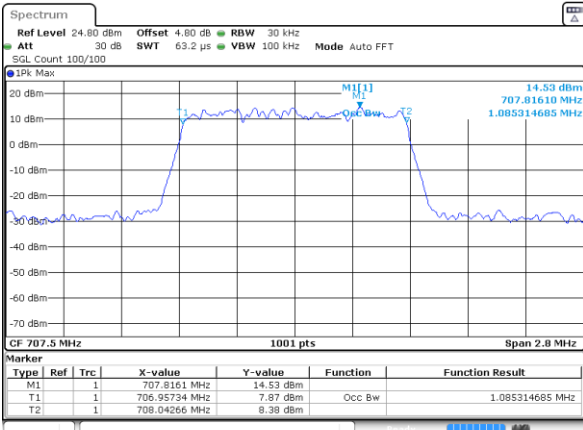
Date: 11 SEP 2020 00:02:37

Lowest Channel / 3MHz / 64QAM



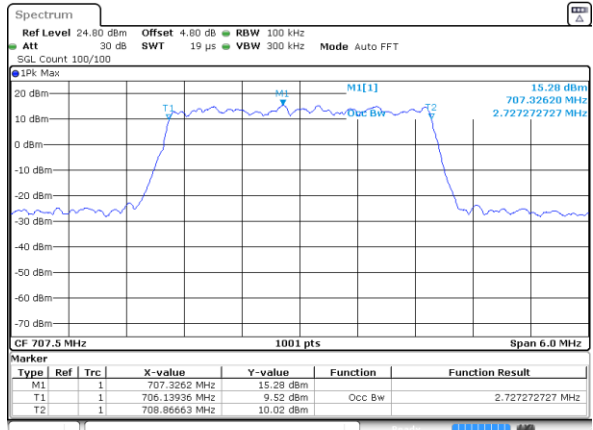
Date: 11 SEP 2020 00:13:56

Middle Channel / 1.4MHz / 64QAM



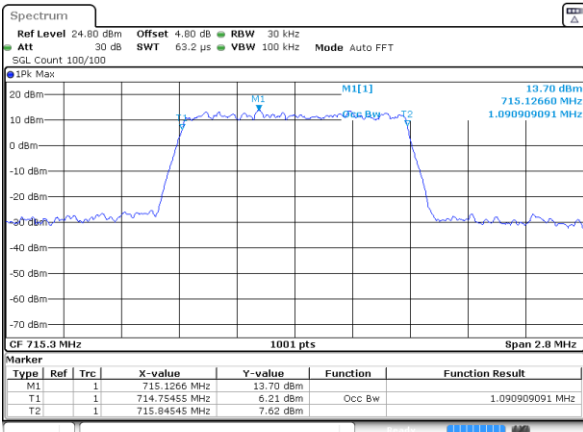
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Middle Channel / 3MHz / 64QAM



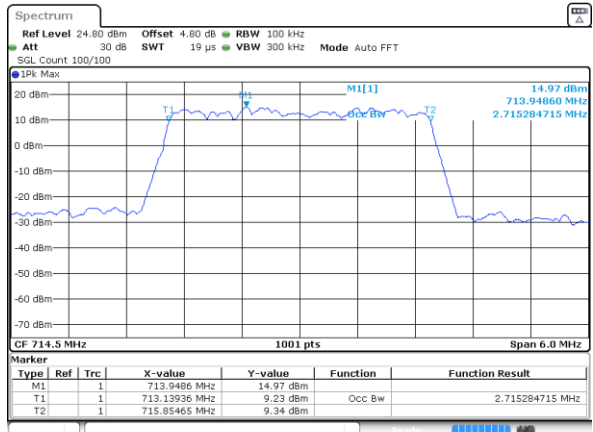
Date: 11 SEP 2020 00:14:17

Highest Channel / 1.4MHz / 64QAM



Date: 11 SEP 2020 00:03:17

Highest Channel / 3MHz / 64QAM

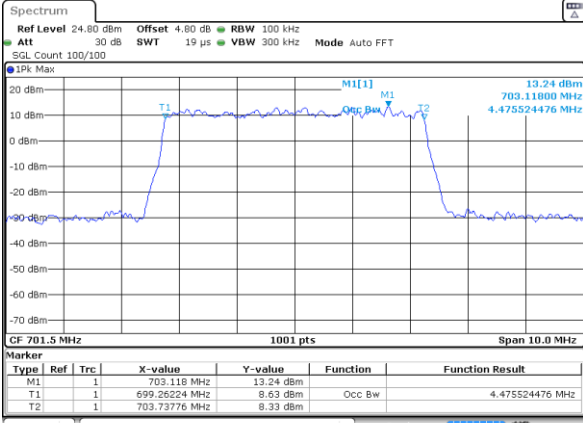


Date: 11 SEP 2020 00:14:37



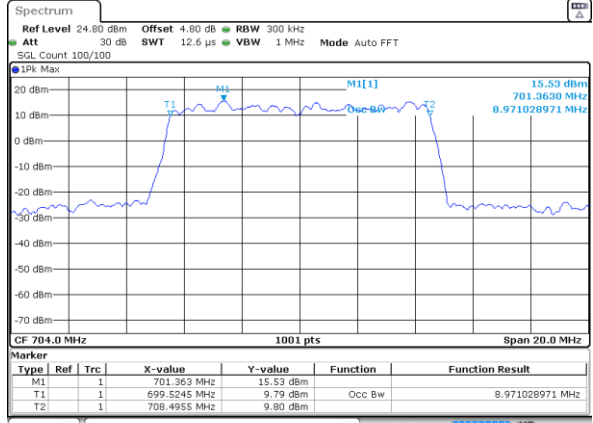
LTE Band 12

Lowest Channel / 5MHz / 64QAM



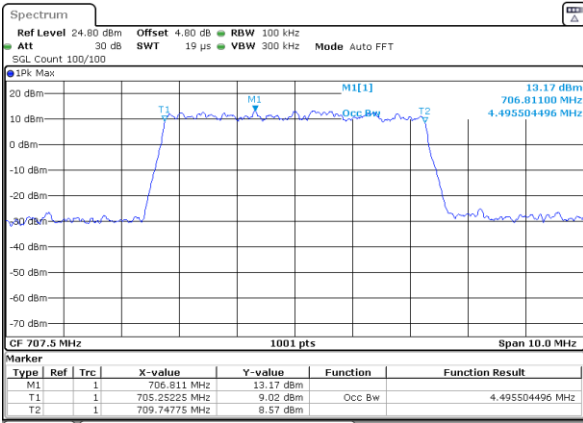
Date: 11 SEP 2020 00:20:34

Lowest Channel / 10MHz / 64QAM



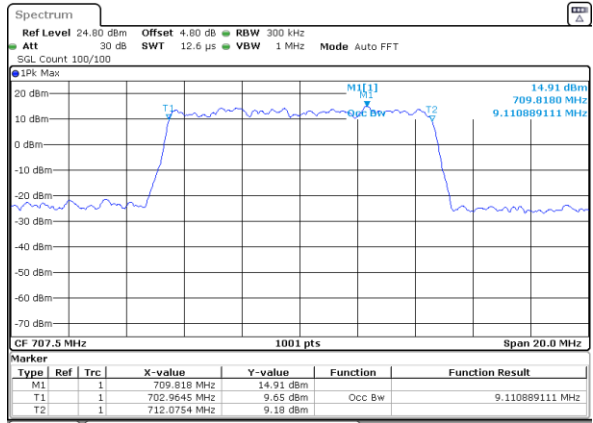
Date: 11 SEP 2020 00:41:27

Middle Channel / 5MHz / 64QAM



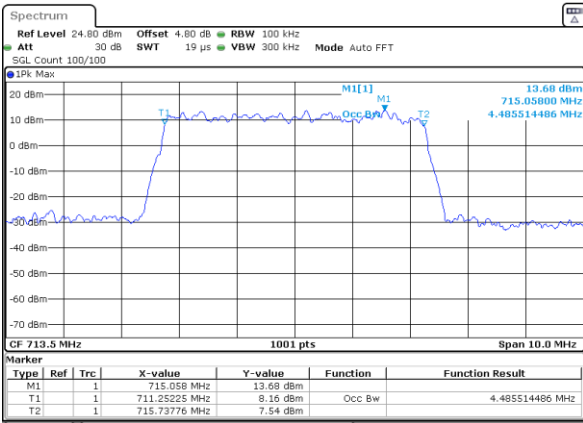
Date: 11 SEP 2020 00:20:54

Middle Channel / 10MHz / 64QAM



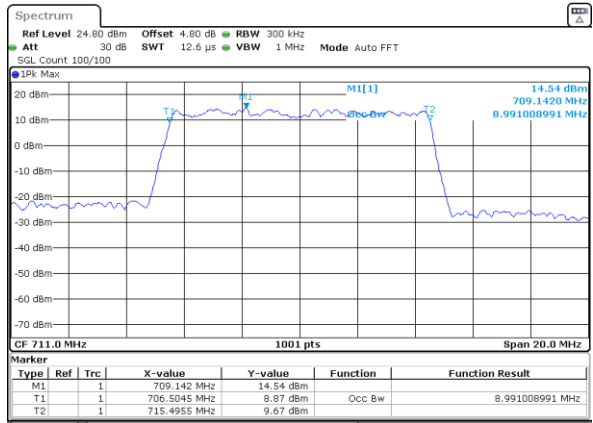
Date: 11 SEP 2020 00:41:47

Highest Channel / 5MHz / 64QAM



Date: 11 SEP 2020 00:21:14

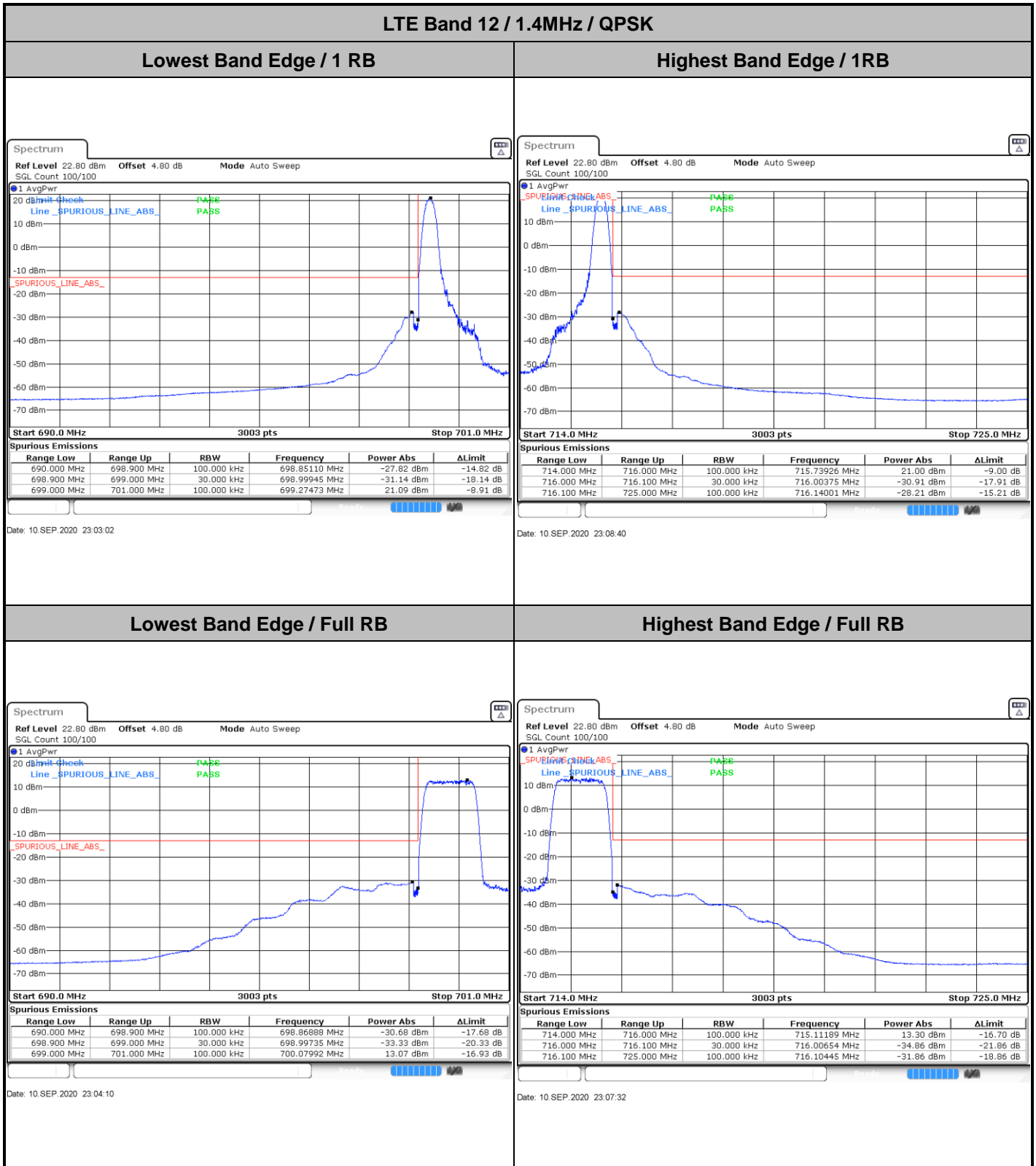
Highest Channel / 10MHz / 64QAM



Date: 11 SEP 2020 00:42:07



Conducted Band Edge





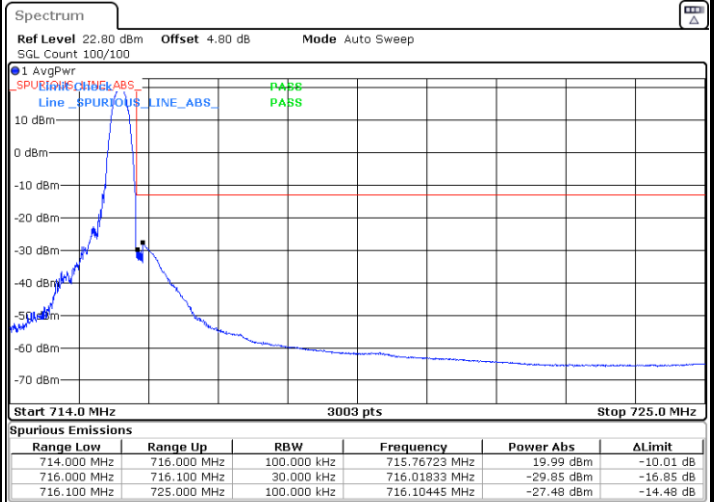
LTE Band 12 / 1.4MHz / 16QAM

Lowest Band Edge / 1 RB



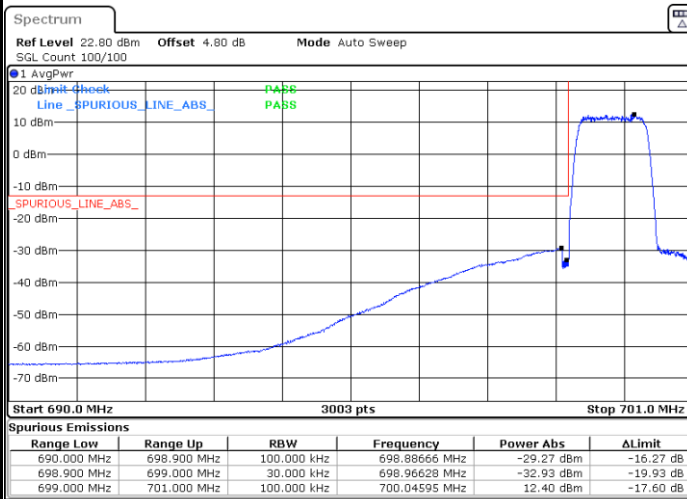
Date: 10.SEP.2020 23:01:55

Highest Band Edge / 1 RB



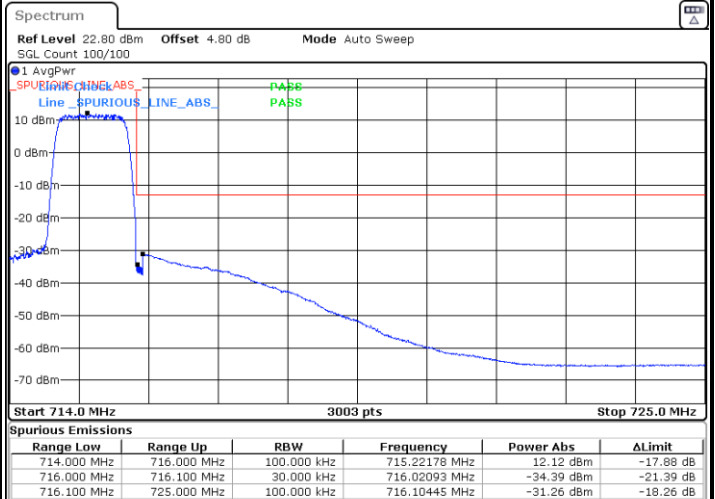
Date: 10.SEP.2020 23:09:47

Lowest Band Edge / Full RB



Date: 10.SEP.2020 23:05:17

Highest Band Edge / Full RB

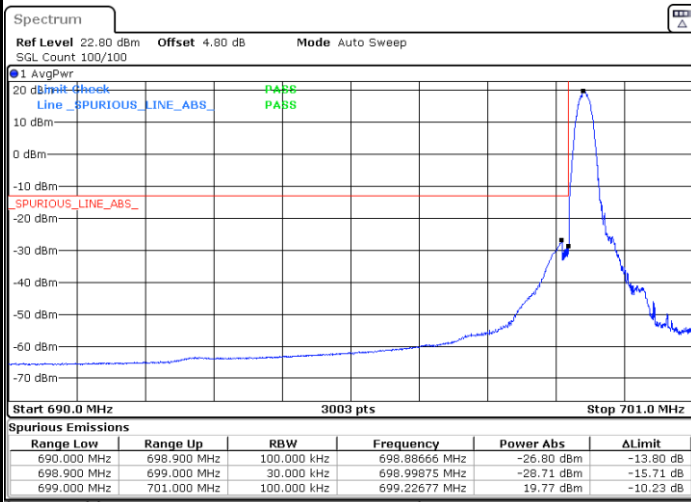


Date: 10.SEP.2020 23:06:25



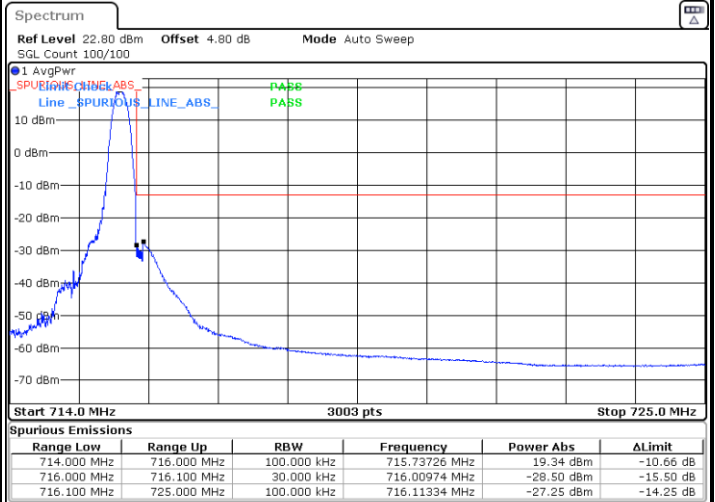
LTE Band 12 / 1.4MHz / 64QAM

Lowest Band Edge / 1 RB



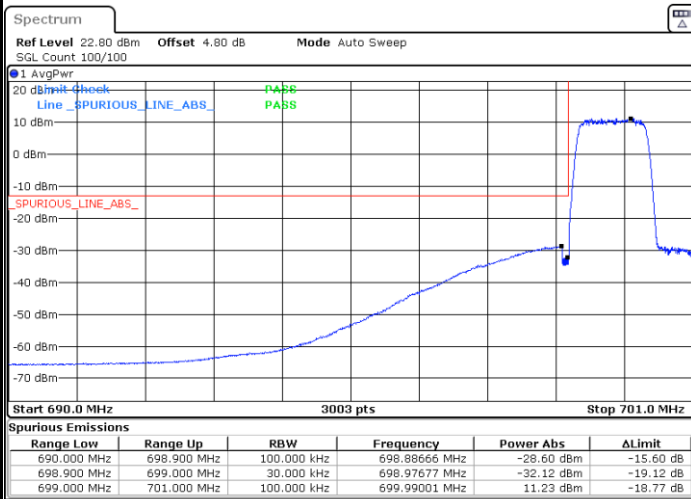
Date: 11.SEP.2020 00:06:50

Highest Band Edge / 1 RB



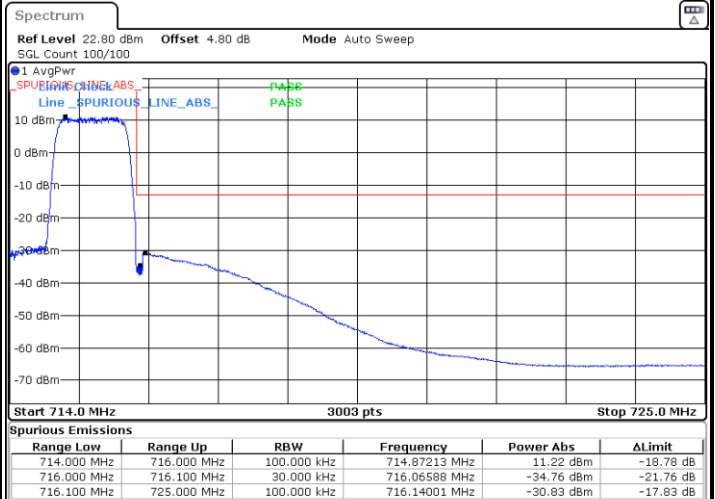
Date: 11.SEP.2020 00:04:35

Lowest Band Edge / Full RB



Date: 11.SEP.2020 00:07:57

Highest Band Edge / Full RB

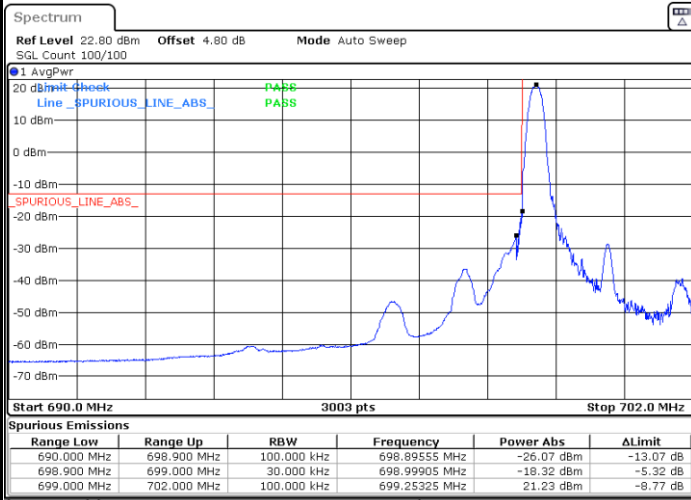


Date: 11.SEP.2020 00:05:42



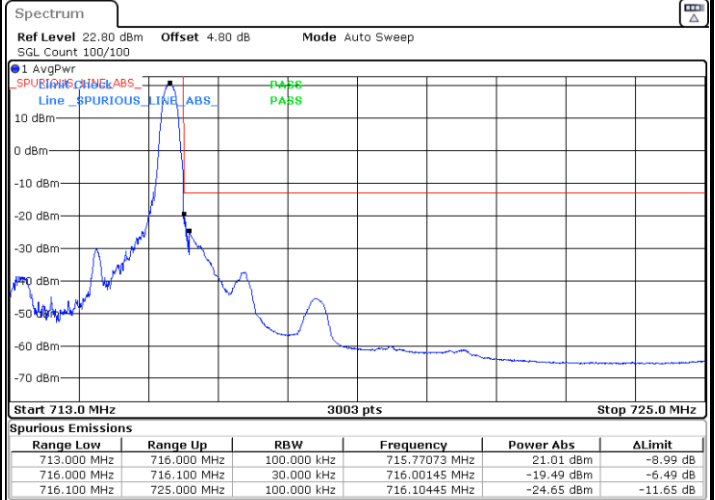
LTE Band 12 / 3MHz / QPSK

Lowest Band Edge / 1RB



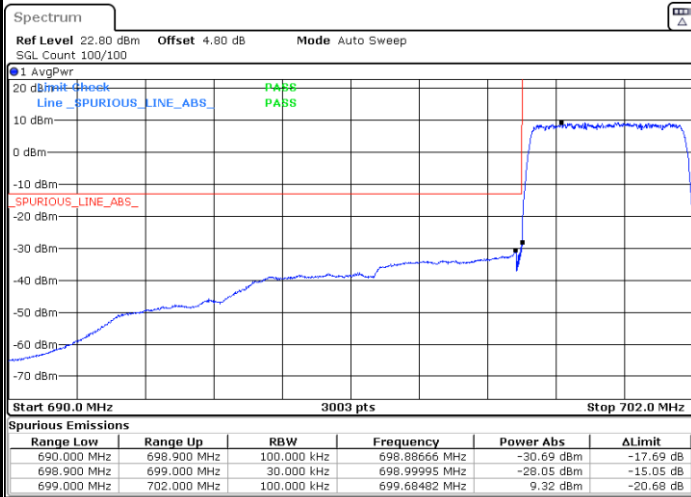
Date: 10.SEP.2020 23:20:30

Highest Band Edge / 1 RB



Date: 10.SEP.2020 23:26:07

Lowest Band Edge / Full RB



Date: 10.SEP.2020 23:21:37

Highest Band Edge / Full RB



Date: 10.SEP.2020 23:25:00