



FCC RF Test Report

APPLICANT : ASUSTeK COMPUTER INC.
EQUIPMENT : ASUS Phone(Mobile Phone)
BRAND NAME : ASUS
MODEL NAME : ASUS_AI2201_F, ASUS_AI2201_D
FCC ID : MSQAI2201
STANDARD : 47 CFR Part 2, 27(H), 27(F), 27(N)
CLASSIFICATION : PCS Licensed Transmitter Held to Ear (PCE)
TEST DATE(S) : Mar. 27, 2022 ~ May 20, 2022

We, Sporton International Inc. (Kunshan), 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. (Kunshan), the test report shall not be reproduced except in full.

Jason Jia



Approved by: Jason Jia

Sporton International Inc. (ShenZhen)

1/F, 2/F, Bldg 5, Shiling Industrial Zone, Xinwei Village, Xili, Nanshan, Shenzhen, 518055

People's Republic of China



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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG230112E	Rev. 01	Initial issue of report	Jul. 28, 2022



SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.4	§2.1046	Conducted Output Power	-	Report Only	-
	§27.50(b)(10) §27.50(c)(10)	Effective Radiated Power (Band 12) (Band 13) (Band 17) (Band 71)	ERP < 3 Watt		-
3.6	§2.1049	Occupied Bandwidth	-	Report Only	-
3.7	§2.1051 §27.53(c)(2)(4) §27.53(g)	Conducted Band Edge Measurement (Band 12) (Band 13) (Band 17) (Band 71)	< 43+10log10(P[Watts])	PASS	-
3.8	§2.1051 §27.53(c)(2) §27.53(g)	Conducted Spurious Emission (Band 12) (Band 13) (Band 17) (Band 71)	< 43+10log10(P[Watts])	PASS	-
3.9	§2.1055 §27.54	Frequency Stability Temperature & Voltage	Within Authorized Band	PASS	-
4.4	§2.1053 §27.53(c)(2) §27.53(f) §27.53(g)	Radiated Spurious Emission (Band 12) (Band 13) (Band 17) (Band 71)	< 43+10log ₁₀ (P[Watts])	PASS	Under limit 4.09 dB at 1559.500 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

ASUSTeK COMPUTER INC.

1F., No. 15, Lide Rd., Beitou Dist., Taipei City 112, Taiwan

1.2 Manufacturer

ASUSTeK COMPUTER INC.

1F., No. 15, Lide Rd., Beitou Dist., Taipei City 112, Taiwan

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	ASUS Phone(Mobile Phone)
Brand Name	ASUS
Model Name	ASUS_AI2201_F, ASUS_AI2201_D
FCC ID	MSQAI2201
IMEI Code	Conducted: 353700810104792 353700810104800 Radiation: 353700810106011/353700810106029
HW Version	R3.0
SW Version	Android 12
EUT Stage	Identical Prototype

All the test were performed by SKU 2

Sample Information		
SKU	SKU 1	SKU 2
Build Stage	PR	
Config.	WW-High (with LGF)	WW-High (with PMOLED)
RF module board	WW-High(Entry)	WW-PRO
LCD + Touch front frame	AI2201 FRONT CASE ASSY WW	AI2201 FRONT CASE ASSY WW
DDR	16G (Samsung) LPDDR5 SAMSUNG/K3LK6K60BM-BGCP	18G(HYNIX) LPDDR5 HYNIX/H58GU6MK6HX042
UFS	512G (HYNIX) HYNIX HN8T25DEHKX077	512G (HYNIX) HYNIX HN8T25DEHKX077
MB	AI2201_MB	AI2201_MB
Battery	SCUD/C21P2101	SWD/C21P2101
Rear Camera 50+13M	PRIMAX/50-704JQASC8	TRIPLEWIN/CASAF-001A
Front Camera 12M	TSPRECISION/TNBF1166	LUXVISIONS/FRA-00000658
Rear Camera 5M	SHINE PHOTICS/BF515B	TSPRECISION/O5F9323 VERA1
PCB	COMPEQ	COMPEQ
CPU	QUALCOMM MPSP1518B / SM-8475-1 MPSP1518B ES	QUALCOMM MPSP1518B / SM-8475-1 MPSP1518B ES



1.4 Product Specification of Equipment Under Test

Standards-related Product Specification	
Tx Frequency	LTE Band 12 : 699 MHz ~ 716 MHz LTE Band 13 : 777 MHz ~ 787 MHz LTE Band 17 : 704 MHz ~ 716 MHz LTE Band 71: 663 MHz ~ 698 MHz
Rx Frequency	LTE Band 12 : 729 MHz ~ 746 MHz LTE Band 13 : 746 MHz ~ 756 MHz LTE Band 17 : 734 MHz ~ 746 MHz LTE Band 71: 617 MHz ~ 652 MHz
Bandwidth	LTE Band 12 : 1.4MHz / 3MHz / 5MHz / 10MHz LTE Band 13 : 5MHz / 10MHz LTE Band 17 : 5MHz / 10MHz LTE Band 71 : 5MHz / 10MHz / 15MHz / 20MHz
Maximum Output Power to Antenna	Ant.0/2: LTE Band 12 : 24.36 dBm LTE Band 13 : 24.35 dBm LTE Band 17 : 24.32 dBm LTE Band 71 : 24.40 dBm
Antenna Gain	Ant.0: LTE Band 12 : -1.88 dBi LTE Band 13 : -3.89 dBi LTE Band 17 : -1.88 dBi LTE Band 71 : -2.91 dBi Ant.2: LTE Band 12 : -5.36 dBi LTE Band 13 : -5.36 dBi LTE Band 17 : -5.36 dBi LTE Band 71 : -8.70 dBi
Type of Modulation	QPSK / 16QAM / 64QAM / 256QAM

Note: The maximum ERP is calculated from maximum output power and maximum antenna gain, only the maximum ERP of Ant.0 is shown in the report

1.5 Modification of EUT

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



1.6 Maximum ERP Power and Emission Designator

LTE Band 12		QPSK		16QAM/64QAM/256QAM	
BW (MHz)	Frequency Range (MHz)	Maximum ERP(W)	Emission Designator (99%OBW)	Maximum ERP(W)	Emission Designator (99%OBW)
1.4	699.7 ~ 715.3	0.1076	1M11G7D	0.0940	1M11W7D
3	700.5 ~ 714.5	0.1076	2M74G7D	0.0940	2M75W7D
5	701.5 ~ 713.5	0.1076	4M53G7D	0.0935	4M52W7D
10	704.0 ~ 711.0	0.1079	9M07G7D	0.0929	9M09W7D
LTE Band 13		QPSK		16QAM/64QAM/256QAM	
BW (MHz)	Frequency Range (MHz)	Maximum ERP(W)	Emission Designator (99%OBW)	Maximum ERP(W)	Emission Designator (99%OBW)
5	779.5 ~ 784.5	0.0675	4M49G7D	0.0592	4M50W7D
10	782.0	0.0678	8M97G7D	0.0592	9M01W7D
LTE Band 17		QPSK		16QAM/64QAM/256QAM	
BW (MHz)	Frequency Range (MHz)	Maximum ERP(W)	Emission Designator (99%OBW)	Maximum ERP(W)	Emission Designator (99%OBW)
5	706.5 ~ 713.5	0.1076	4M53G7D	0.0935	4M52W7D
10	709.0 ~ 711.0	0.1079	9M07G7D	0.0929	9M09W7D
LTE Band 71		QPSK		16QAM/64QAM/256QAM	
BW (MHz)	Frequency Range (MHz)	Maximum ERP(W)	Emission Designator (99%OBW)	Maximum ERP(W)	Emission Designator (99%OBW)
5	665.5 ~ 695.5	0.0857	4M51G7D	0.0740	4M54W7D
10	668.0 ~ 693.0	0.0857	9M09G7D	0.0753	9M07W7D
15	670.5 ~ 690.5	0.0855	13M5G7D	0.0736	13M5W7D
20	673.0 ~ 688.0	0.0859	18M0G7D	0.0789	17M9W7D

Note: LTE Band 12 overlaps the entire frequency range of LTE Band 17. Therefore, the test results provided in this report covers Band 12 as well as Band 17.



1.7 Testing Location

Sporton International Inc. (Shenzhen) is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.01.

Test Firm	Sporton International Inc. (Shenzhen)		
Test Site Location	1/F, 2/F, Bldg 5, Shiling Industrial Zone, Xinwei Village, Xili, Nanshan, Shenzhen, 518055 People's Republic of China TEL: +86-755-86379589 FAX: +86-755-86379595		
Test Site No.	Sporton Site No.	FCC Designation No.	FCC Test Firm Registration No.
	TH01-SZ	CN1256	421272

Test Firm	Sporton International Inc. (Shenzhen)		
Test Site Location	101, 1st Floor, Block B, Building 1, No. 2, Tengfeng 4th Road, Fenghuang Community, Fuyong Street, Baoan District, Shenzhen City Guangdong Province China 518103 TEL: +86-755-33202398		
Test Site No.	Sporton Site No.	FCC Designation No.	FCC Test Firm Registration No.
	03CH04-SZ	CN1256	421272

1.8 Test Software

Item	Site	Manufacturer	Name	Version
1.	03CH04-SZ	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, 27(H), 27(F), 27(N)
- ♦ 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

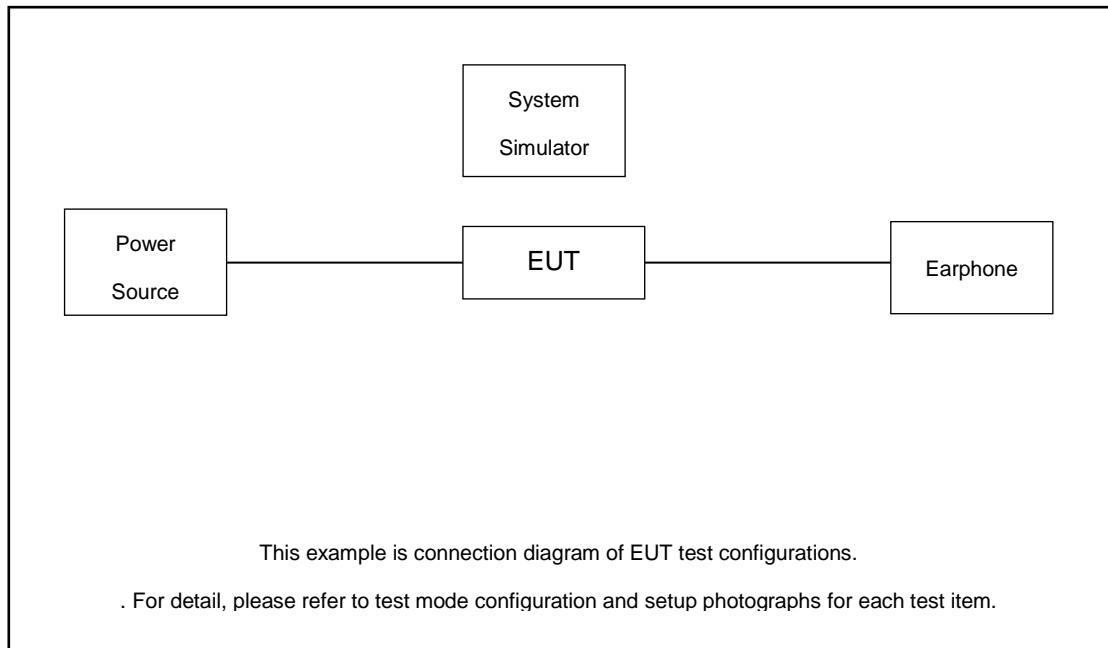
Antenna port conducted and radiated test items listed below are performed according to KDB 971168 D01 Power Meas License Digital Systems v03r01 with maximum output power.

Radiated measurements are performed by rotating the EUT in three different orthogonal test planes(X, Y, Z) to find the maximum emission(X,Z plane).

Test Items	Band	Bandwidth (MHz)						Modulation				RB #			Test Channel			
		1.4	3	5	10	15	20	QPSK	16QAM	64QAM	256QAM	1	Half	Full	L	M	H	
Max. Output Power	12	v	v	v	v	-	-	v	v	v	v	v	v	v	v	v	v	v
	13	-	-	v	v	-	-	v	v	v	v	v	v	v	v	v	v	v
	17	-	-	v	v	-	-	v	v	v	v	v	v	v	v	v	v	v
	71	-	-	v	v	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	
	13	-	-		v	-	-	v	v	v		v		v	v	v	v	
	71	-	-				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	
	13	-	-	v	v	-	-	v	v	v				v	v	v	v	
	71	-	-	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	
	13	-	-	v	v	-	-	v	v	v		v		v	v		v	
	71	-	-	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	
	13	-	-	v	v	-	-	v	v	v		v			v	v	v	
	71	-	-	v	v	v	v	v	v	v		v			v	v	v	
Frequency Stability	12				v	-	-	v						v		v		
	13	-	-		v	-	-	v						v		v		
	71	-	-		v			v						v		v		
E.R.P / E.I.R.P	12	v	v	v	v	-	-	v	v	v	v	v	v	v	v	v	v	
	13	-	-	v	v	-	-	v	v	v	v	v	v	v	v	v	v	
	17	-	-	v	v	-	-	v	v	v	v	v	v	v	v	v	v	
	71	-	-	v	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	256QAM	1	Half	Full	L	M	H		
Radiated Spurious Emission	12	Worst Case															v	v	v
	13	Worst Case															v	v	v
	71	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 12 overlaps the entire frequency range of LTE Band 17. Therefore, the test results provided in this report covers Band 12 as well as Band 17. For QAM modulation mode, the whole testing has assessed 16QAM&64QAM mode by referring to the higher conducted power 																		

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	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 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 4.0 dB and 10dB attenuator.

Example :

Offset(dB) = RF cable loss(dB) + attenuator factor(dB).
= 4.0 + 10 = 14.0 (dB)

2.5 Frequency List of Low/Middle/High Channels

Table with 5 columns: BW [MHz], Channel/Frequency(MHz), Lowest, Middle, Highest. Rows include LTE Band 12 Channel and Frequency List for bandwidths 10, 5, 3, and 1.4 MHz.

Table with 5 columns: BW [MHz], Channel/Frequency(MHz), Lowest, Middle, Highest. Rows include LTE Band 13 Channel and Frequency List for bandwidths 10 and 5 MHz.



LTE Band 17 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
10	Channel	23780	23790	23800
	Frequency	709	710	711
5	Channel	23755	23790	23825
	Frequency	706.5	710	713.5

LTE Band 71 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
20	Channel	133222	133322	133372
	Frequency	673.0	680.5	688.0
15	Channel	133197	133297	133397
	Frequency	670.5	680.5	690.5
10	Channel	133172	133272	133422
	Frequency	668.0	678.0	693.0
5	Channel	133147	133247	133447
	Frequency	665.5	675.5	695.5

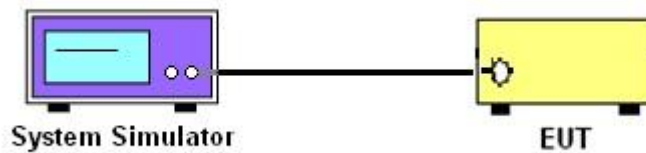
3 Conducted Test Items

3.1 Measuring Instruments

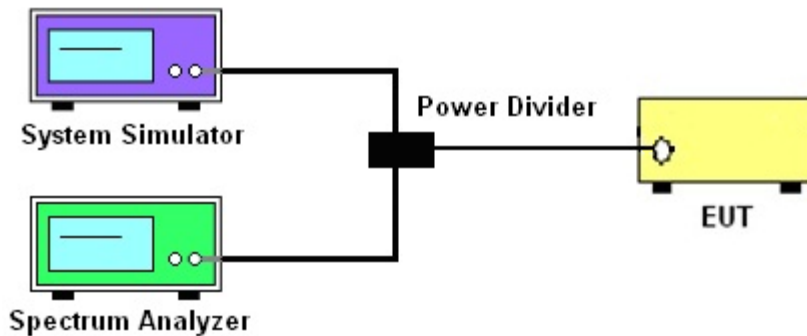
See list of measuring instruments of this test report.

3.2 Test Setup

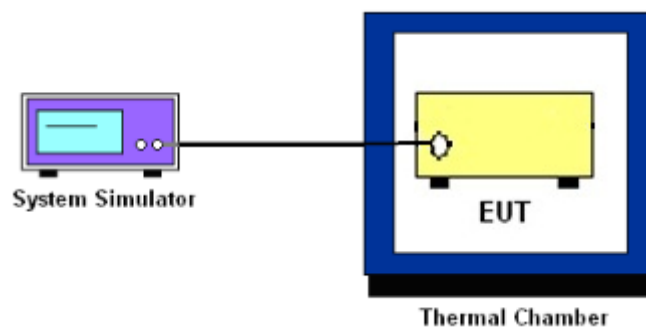
3.2.1 Conducted Output Power



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

3.4.1 Description of the Conducted Output Power Measurement and ERP 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, Band 13 and Band 17 and Band 71.

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

27.53 (c)

For operations in the 776-788 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 kHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of at least 30 kHz may be employed. In addition, the power of any unwanted emissions in any 6.25 kHz bandwidth for all frequencies between 763-775 MHz and 793-806 MHz shall be attenuated below the transmitter power, P (dBW), by at least $65 + 10 \log_{10} p(\text{watts})$, dB, for mobile and portable equipment.

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.

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:

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

9. When using the integration method, the starting frequency of the integration shall be centered at one-half of the RBW away from the band edge.



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 + 10log(P)] (dB)
= [30 + 10log(P)] (dBm) - [43 + 10log(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.

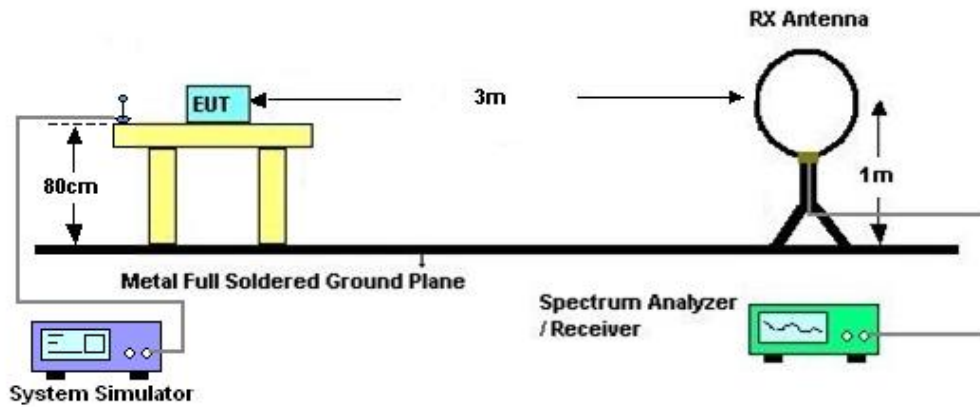
4 Radiated Test Items

4.1 Measuring Instruments

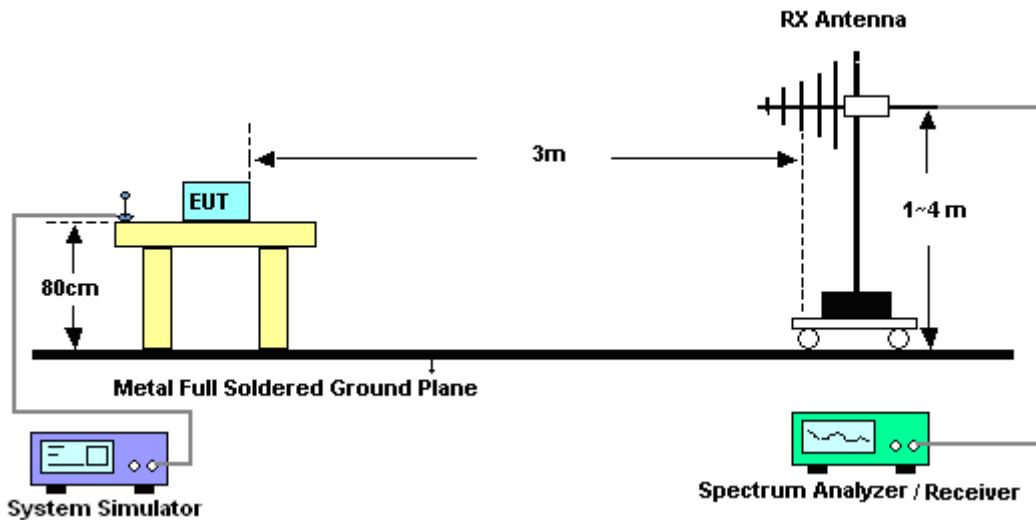
See list of measuring instruments of this test report.

4.2 Test Setup

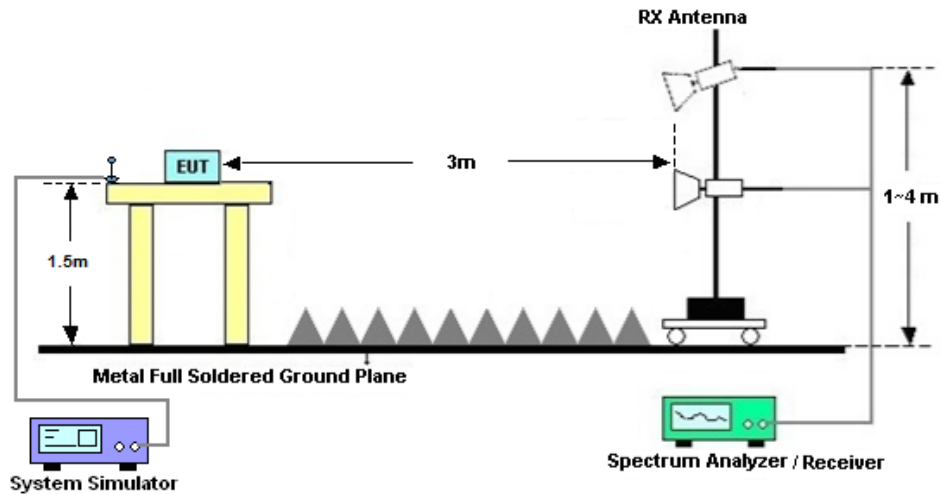
4.2.1 For radiated test below 30MHz



4.2.2 For radiated test from 30MHz to 1GHz



4.2.3 For radiated test above 1GHz



4.3 Test Result of Radiated Test

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line was not reported.

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 LTE Band 13

For operations in the 746-758 MHz, 775-788 MHz, and 805-806 MHz bands, emissions in the band 1559-1610 MHz shall be limited to -70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals, and -80 dBW EIRP for discrete emissions of less than 700 Hz bandwidth.

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



5 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSV40	101078	10Hz~40GHz	Apr. 07, 2022	Mar. 27, 2022~ Mar. 28, 2022	Apr. 06, 2023	Conducted (TH01-SZ)
Power Divider	TOJOIN	PS-2SM-04 265	60.06.020.007 7	0.4GHz~26.5GHz	Dec. 25, 2021	Mar. 27, 2022~ Mar. 28, 2022	Dec. 24, 2022	Conducted (TH01-SZ)
Thermal Chamber	Ten Billion Hongzhangroup	LP-150U	H2014081803	-40~+150°C	Jul. 14, 2021	Mar. 27, 2022~ Mar. 28, 2022	Jul. 13, 2022	Conducted (TH01-SZ)
EMI Test Receiver	R&S	ESR7	101404	9kHz~7GHz	Oct. 22,2021	May 20, 2022	Oct. 21,2022	Radiation (03CH04-SZ)
EXA Spectrum Analyzer	KEYSIGHT	N9010A	MY55150213	10Hz~44GHz	Jul. 20, 2021	May 20, 2022	Jul. 19, 2022	Radiation (03CH04-SZ)
Loop Antenna	R&S	HFH2-Z2	100354	9kHz~30MHz	Jun. 22, 2020	May 20, 2022	Jun. 21, 2022	Radiation (03CH04-SZ)
Bilog Antenna	TeseQ	CBL6111D	41909	30MHz~1GHz	Oct. 22,2021	May 20, 2022	Oct. 21,2022	Radiation (03CH04-SZ)
Double Ridge Horn Antenna	SCHWARZBECK	BBHA9120D	9120D-1474	1GHz~18GHz	Jul. 15, 2021	May 20, 2022	Jul. 14, 2022	Radiation (03CH04-SZ)
Horn Antenna	SCHWARZBECK	BBHA9170	9170#679	15GHz~40GHz	Jul. 25, 2021	May 20, 2022	Jul. 24, 2022	Radiation (03CH04-SZ)
Amplifier	Burgeon	BPA-530	102211	0.01Hz ~3000MHz	Oct. 22,2021	May 20, 2022	Oct. 21,2022	Radiation (03CH04-SZ)
HF Amplifier	MITEQ	AMF-7D-00 101800-30-1 0P-R	1943528	1GHz~18GHz	Oct. 22,2021	May 20, 2022	Oct. 21,2022	Radiation (03CH04-SZ)
HF Amplifier	MITEQ	TTA1840-35 -HG	1871923	18GHz~40GHz	Jul. 20. 2021	May 20, 2022	Jul. 19. 2022	Radiation (03CH04-SZ)
Amplifier	Agilent Technologies	83017A	MY53270156	500MHz~26.5GHz	Oct. 22,2021	May 20, 2022	Oct. 21,2022	Radiation (03CH04-SZ)
AC Power Source	Chroma	61601	N/A	N/A	NCR	May 20, 2022	NCR	Radiation (03CH04-SZ)
Turn Table	EM	EM1000	N/A	0~360 degree	NCR	May 20, 2022	NCR	Radiation (03CH04-SZ)
Antenna Mast	EM	EM1000	N/A	1 m~4 m	NCR	May 20, 2022	NCR	Radiation (03CH04-SZ)

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))	2.8 dB
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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))	3.1 dB
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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))	3.9 dB
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Appendix A. Test Results of Conducted Test

Test Engineer :	Fly Liang	Temperature :	22~23°C
		Relative Humidity :	40~42%

Conducted Output Power(Average power)

LTE Band 12-Ant 0						
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	24.09	24.07	24.13
10	QPSK	1	25	24.19	24.21	24.28
10	QPSK	1	49	24.22	24.29	24.36
10	QPSK	25	0	23.16	23.17	23.23
10	QPSK	25	12	23.27	23.30	23.36
10	QPSK	25	25	23.25	23.29	23.30
10	QPSK	50	0	23.25	23.28	23.36
10	16QAM	1	0	23.56	23.59	23.63
10	16QAM	1	25	23.58	23.54	23.63
10	16QAM	1	49	23.71	23.70	23.70
10	16QAM	25	0	22.22	22.20	22.25
10	16QAM	25	12	22.29	22.31	22.31
10	16QAM	25	25	22.28	22.30	22.40
10	16QAM	50	0	22.26	22.29	22.36
10	64QAM	1	0	22.35	22.32	22.42
10	64QAM	1	25	22.44	22.47	22.50
10	64QAM	1	49	22.50	22.56	22.59
10	64QAM	25	0	21.18	21.21	21.24
10	64QAM	25	12	21.27	21.30	21.29
10	64QAM	25	25	21.28	21.30	21.38
10	64QAM	50	0	21.26	21.29	21.36
10	256QAM	1	0	19.24	19.41	19.30



10	256QAM	1	25	19.63	19.53	19.61
10	256QAM	1	49	19.42	19.48	19.27
10	256QAM	25	0	19.48	19.38	19.37
10	256QAM	25	12	19.28	19.40	19.36
10	256QAM	25	25	19.38	19.44	19.46
10	256QAM	50	0	19.42	19.38	19.18
Channel				23035	23095	23155
Frequency (MHz)				701.5	707.5	713.5
5	QPSK	1	0	24.15	24.13	24.28
5	QPSK	1	12	24.24	24.27	24.35
5	QPSK	1	24	24.20	24.23	24.30
5	QPSK	12	0	23.16	23.18	23.28
5	QPSK	12	7	23.26	23.27	23.38
5	QPSK	12	13	23.22	23.24	23.35
5	QPSK	25	0	23.22	23.24	23.36
5	16QAM	1	0	23.48	23.48	23.63
5	16QAM	1	12	23.69	23.63	23.74
5	16QAM	1	24	23.58	23.55	23.66
5	16QAM	12	0	22.22	22.21	22.33
5	16QAM	12	7	22.31	22.32	22.45
5	16QAM	12	13	22.26	22.30	22.41
5	16QAM	25	0	22.26	22.27	22.37
5	64QAM	1	0	22.37	22.44	22.60
5	64QAM	1	12	22.49	22.51	22.60
5	64QAM	1	24	22.44	22.44	22.56
5	64QAM	12	0	21.19	21.23	21.35
5	64QAM	12	7	21.30	21.32	21.41
5	64QAM	12	13	21.24	21.29	21.40
5	64QAM	25	0	21.25	21.26	21.37
5	256QAM	1	0	19.10	19.34	19.42
5	256QAM	1	12	19.62	19.62	19.55
5	256QAM	1	24	19.47	19.46	19.29
5	256QAM	12	0	19.49	19.20	19.26
5	256QAM	12	7	19.40	19.17	19.27
5	256QAM	12	13	19.36	19.47	19.44
5	256QAM	25	0	19.24	19.50	19.07



Channel				23025	23095	23165
Frequency (MHz)				700.5	707.5	714.5
3	QPSK	1	0	24.10	24.16	24.28
3	QPSK	1	8	24.22	24.25	24.35
3	QPSK	1	14	24.09	24.12	24.25
3	QPSK	8	0	23.26	23.21	23.32
3	QPSK	8	4	23.24	23.28	23.42
3	QPSK	8	7	23.20	23.23	23.36
3	QPSK	15	0	23.20	23.24	23.28
3	16QAM	1	0	23.53	23.48	23.68
3	16QAM	1	8	23.59	23.64	23.76
3	16QAM	1	14	23.47	23.53	23.60
3	16QAM	8	0	22.33	22.30	22.41
3	16QAM	8	4	22.34	22.37	22.49
3	16QAM	8	7	22.32	22.32	22.49
3	16QAM	15	0	22.26	22.28	22.33
3	64QAM	1	0	22.43	22.42	22.51
3	64QAM	1	8	22.44	22.51	22.62
3	64QAM	1	14	22.39	22.43	22.55
3	64QAM	8	0	21.27	21.24	21.39
3	64QAM	8	4	21.33	21.29	21.45
3	64QAM	8	7	21.22	21.27	21.42
3	64QAM	15	0	21.26	21.26	21.33
3	256QAM	1	0	19.28	19.36	19.35
3	256QAM	1	8	19.48	19.41	19.66
3	256QAM	1	14	19.31	19.28	19.36
3	256QAM	8	0	19.40	19.35	19.37
3	256QAM	8	4	19.34	19.51	19.39
3	256QAM	8	7	19.21	19.54	19.52
3	256QAM	15	0	19.24	19.15	19.05
Channel				23017	23095	23173
Frequency (MHz)				699.7	707.5	715.3
1.4	QPSK	1	0	24.17	24.16	24.31
1.4	QPSK	1	3	24.19	24.20	24.35
1.4	QPSK	1	5	24.12	24.15	24.30
1.4	QPSK	3	0	24.23	24.22	24.29



1.4	QPSK	3	1	24.22	24.20	24.28
1.4	QPSK	3	3	24.19	24.22	24.35
1.4	QPSK	6	0	23.18	23.20	23.27
1.4	16QAM	1	0	23.57	23.53	23.74
1.4	16QAM	1	3	23.63	23.57	23.76
1.4	16QAM	1	5	23.61	23.56	23.68
1.4	16QAM	3	0	23.38	23.40	23.51
1.4	16QAM	3	1	23.40	23.38	23.54
1.4	16QAM	3	3	23.33	23.38	23.51
1.4	16QAM	6	0	22.30	22.27	22.37
1.4	64QAM	1	0	22.47	22.34	22.58
1.4	64QAM	1	3	22.41	22.42	22.63
1.4	64QAM	1	5	22.41	22.42	22.46
1.4	64QAM	3	0	22.37	22.37	22.48
1.4	64QAM	3	1	22.34	22.32	22.51
1.4	64QAM	3	3	22.29	22.35	22.50
1.4	64QAM	6	0	21.23	21.23	21.34
1.4	256QAM	1	0	19.15	19.46	19.27
1.4	256QAM	1	3	19.66	19.57	19.59
1.4	256QAM	1	5	19.22	19.41	19.23
1.4	256QAM	3	0	19.54	19.20	19.21
1.4	256QAM	3	1	19.22	19.26	19.43
1.4	256QAM	3	3	19.23	19.35	19.30
1.4	256QAM	6	0	19.22	19.50	19.21



LTE Band 13-Ant 0						
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				23230		
Frequency (MHz)				782		
10	QPSK	1	0		24.18	
10	QPSK	1	25		24.35	
10	QPSK	1	49		24.08	
10	QPSK	25	0		23.33	
10	QPSK	25	12		23.40	
10	QPSK	25	25		23.23	
10	QPSK	50	0		23.31	
10	16QAM	1	0		23.59	
10	16QAM	1	25		23.76	
10	16QAM	1	49		23.50	
10	16QAM	25	0		22.34	
10	16QAM	25	12		22.42	
10	16QAM	25	25		22.25	
10	16QAM	50	0		22.33	
10	64QAM	1	0		22.50	
10	64QAM	1	25		22.76	
10	64QAM	1	49		22.34	
10	64QAM	25	0		21.37	
10	64QAM	25	12		21.42	
10	64QAM	25	25		21.26	
10	64QAM	50	0		21.33	
10	256QAM	1	0		19.39	
10	256QAM	1	25		19.60	
10	256QAM	1	49		19.29	
10	256QAM	25	0		19.56	
10	256QAM	25	12		19.45	
10	256QAM	25	25		19.31	
10	256QAM	50	0		19.47	
Channel				23205	23230	23255
Frequency (MHz)				779.5	782	784.5



5	QPSK	1	0	24.08	24.18	24.22
5	QPSK	1	12	24.22	24.33	24.12
5	QPSK	1	24	24.27	24.12	24.08
5	QPSK	12	0	23.13	23.26	23.19
5	QPSK	12	7	23.28	23.33	23.18
5	QPSK	12	13	23.31	23.24	23.00
5	QPSK	25	0	23.26	23.26	23.13
5	16QAM	1	0	23.45	23.59	23.63
5	16QAM	1	12	23.63	23.76	23.59
5	16QAM	1	24	23.70	23.52	23.21
5	16QAM	12	0	22.19	22.32	22.24
5	16QAM	12	7	22.32	22.38	22.25
5	16QAM	12	13	22.37	22.27	22.09
5	16QAM	25	0	22.25	22.28	22.19
5	64QAM	1	0	22.30	22.54	22.49
5	64QAM	1	12	22.46	22.60	22.37
5	64QAM	1	24	22.53	22.35	22.15
5	64QAM	12	0	21.15	21.31	21.20
5	64QAM	12	7	21.33	21.36	21.18
5	64QAM	12	13	21.33	21.31	21.02
5	64QAM	25	0	21.27	21.26	21.14
5	256QAM	1	0	19.45	19.17	19.34
5	256QAM	1	12	19.62	19.65	19.42
5	256QAM	1	24	19.34	19.24	19.36
5	256QAM	12	0	19.57	19.45	19.54
5	256QAM	12	7	19.39	19.51	19.52
5	256QAM	12	13	19.29	19.39	19.17
5	256QAM	25	0	19.37	19.53	19.35



LTE Band 17-Ant 0						
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				23780	23790	23800
Frequency (MHz)				709	710	711
10	QPSK	1	0	24.07	24.10	24.10
10	QPSK	1	25	24.20	24.22	24.25
10	QPSK	1	49	24.28	24.28	24.32
10	QPSK	25	0	23.21	23.21	23.26
10	QPSK	25	12	23.32	23.30	23.33
10	QPSK	25	25	23.27	23.29	23.32
10	QPSK	50	0	23.28	23.22	23.30
10	16QAM	1	0	23.55	23.53	23.59
10	16QAM	1	25	23.55	23.60	23.57
10	16QAM	1	49	23.71	23.71	23.75
10	16QAM	25	0	22.21	22.25	22.28
10	16QAM	25	12	22.35	22.28	22.33
10	16QAM	25	25	22.31	22.33	22.36
10	16QAM	50	0	22.32	22.24	22.27
10	64QAM	1	0	22.31	22.33	22.41
10	64QAM	1	25	22.45	22.47	22.51
10	64QAM	1	49	22.54	22.49	22.62
10	64QAM	25	0	21.19	21.24	21.27
10	64QAM	25	12	21.34	21.28	21.32
10	64QAM	25	25	21.29	21.29	21.35
10	64QAM	50	0	21.30	21.23	21.27
10	256QAM	1	0	19.37	19.32	19.43
10	256QAM	1	25	19.55	19.52	19.33
10	256QAM	1	49	19.47	19.42	19.51
10	256QAM	25	0	19.31	19.35	19.39
10	256QAM	25	12	19.44	19.48	19.42
10	256QAM	25	25	19.31	19.51	19.54
10	256QAM	50	0	19.19	19.38	19.30
Channel				23755	23790	23825
Frequency (MHz)				706.5	710	713.5



5	QPSK	1	0	24.19	24.24	24.30
5	QPSK	1	12	24.20	24.29	24.31
5	QPSK	1	24	24.15	24.19	24.28
5	QPSK	12	0	23.20	23.27	23.34
5	QPSK	12	7	23.23	23.29	23.29
5	QPSK	12	13	23.19	23.27	23.31
5	QPSK	25	0	23.23	23.22	23.27
5	16QAM	1	0	23.55	23.59	23.79
5	16QAM	1	12	23.61	23.65	23.70
5	16QAM	1	24	23.42	23.57	23.59
5	16QAM	12	0	22.26	22.31	22.39
5	16QAM	12	7	22.27	22.35	22.35
5	16QAM	12	13	22.24	22.32	22.39
5	16QAM	25	0	22.25	22.25	22.31
5	64QAM	1	0	22.48	22.55	22.60
5	64QAM	1	12	22.47	22.53	22.58
5	64QAM	1	24	22.42	22.53	22.54
5	64QAM	12	0	21.26	21.31	21.37
5	64QAM	12	7	21.28	21.35	21.32
5	64QAM	12	13	21.19	21.31	21.37
5	64QAM	25	0	21.26	21.23	21.31
5	256QAM	1	0	19.46	19.14	19.56
5	256QAM	1	12	19.66	19.53	19.14
5	256QAM	1	24	19.44	19.41	19.53
5	256QAM	12	0	19.39	19.21	19.21
5	256QAM	12	7	19.23	19.35	19.29
5	256QAM	12	13	19.40	19.55	19.41
5	256QAM	25	0	19.11	19.35	19.38



LTE Band 71-Ant 0						
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				133222	133297	133372
Frequency (MHz)				673	680.5	688
20	QPSK	1	0	24.37	24.34	24.31
20	QPSK	1	49	24.38	24.40	24.32
20	QPSK	1	99	24.35	24.30	24.15
20	QPSK	50	0	23.37	23.35	23.24
20	QPSK	50	24	23.40	23.42	23.27
20	QPSK	50	50	23.39	23.35	23.25
20	QPSK	100	0	23.36	23.40	23.25
20	16QAM	1	0	23.60	23.70	23.57
20	16QAM	1	49	23.84	24.03	23.72
20	16QAM	1	99	23.59	23.51	23.41
20	16QAM	50	0	22.39	22.40	22.30
20	16QAM	50	24	22.47	22.38	22.25
20	16QAM	50	50	22.40	22.37	22.27
20	16QAM	100	0	22.45	22.35	22.26
20	64QAM	1	0	22.54	22.53	22.48
20	64QAM	1	49	22.75	22.73	22.58
20	64QAM	1	99	22.56	22.47	22.37
20	64QAM	50	0	21.39	21.35	21.27
20	64QAM	50	24	21.46	21.36	21.25
20	64QAM	50	50	21.38	21.35	21.25
20	64QAM	100	0	21.46	21.34	21.23
20	256QAM	1	0	19.67	19.84	19.68
20	256QAM	1	49	19.55	19.62	19.53
20	256QAM	1	99	19.48	19.42	19.50
20	256QAM	50	0	19.49	19.52	19.34
20	256QAM	50	24	19.39	19.50	19.56
20	256QAM	50	50	19.54	19.41	19.28
20	256QAM	100	0	19.51	19.49	19.44
Channel				133197	133297	133397
Frequency (MHz)				670.5	680.5	690.5



15	QPSK	1	0	24.32	24.26	24.18
15	QPSK	1	37	24.38	24.37	24.19
15	QPSK	1	74	24.31	24.18	24.10
15	QPSK	36	0	23.35	23.34	23.19
15	QPSK	36	20	23.41	23.31	23.18
15	QPSK	36	39	23.36	23.33	23.18
15	QPSK	75	0	23.41	23.31	23.15
15	16QAM	1	0	23.56	23.56	23.54
15	16QAM	1	37	23.73	23.68	23.55
15	16QAM	1	74	23.65	23.59	23.44
15	16QAM	36	0	22.36	22.35	22.21
15	16QAM	36	20	22.43	22.35	22.17
15	16QAM	36	39	22.38	22.35	22.22
15	16QAM	75	0	22.41	22.33	22.18
15	64QAM	1	0	22.51	22.48	22.44
15	64QAM	1	37	22.56	22.63	22.43
15	64QAM	1	74	22.52	22.51	22.33
15	64QAM	36	0	21.35	21.34	21.20
15	64QAM	36	20	21.40	21.33	21.19
15	64QAM	36	39	21.36	21.33	21.22
15	64QAM	75	0	21.41	21.32	21.16
15	256QAM	1	0	19.48	19.84	19.55
15	256QAM	1	37	19.65	19.42	19.44
15	256QAM	1	74	19.50	19.42	19.42
15	256QAM	36	0	19.26	19.65	19.29
15	256QAM	36	20	19.41	19.30	19.56
15	256QAM	36	39	19.37	19.27	19.05
15	256QAM	75	0	19.41	19.53	19.53
Channel				133172	133297	133422
Frequency (MHz)				668	680.5	693
10	QPSK	1	0	24.36	24.35	24.21
10	QPSK	1	25	24.39	24.38	24.19
10	QPSK	1	49	24.32	24.30	24.10
10	QPSK	25	0	23.35	23.31	23.13
10	QPSK	25	12	23.44	23.33	23.23
10	QPSK	25	25	23.38	23.35	23.16



10	QPSK	50	0	23.41	23.29	23.19
10	16QAM	1	0	23.81	23.83	23.64
10	16QAM	1	25	23.72	23.70	23.49
10	16QAM	1	49	23.73	23.66	23.51
10	16QAM	25	0	22.36	22.35	22.17
10	16QAM	25	12	22.45	22.37	22.24
10	16QAM	25	25	22.38	22.39	22.19
10	16QAM	50	0	22.40	22.32	22.21
10	64QAM	1	0	22.66	22.66	22.47
10	64QAM	1	25	22.65	22.68	22.44
10	64QAM	1	49	22.59	22.54	22.37
10	64QAM	25	0	21.35	21.35	21.16
10	64QAM	25	12	21.43	21.36	21.23
10	64QAM	25	25	21.37	21.37	21.18
10	64QAM	50	0	21.42	21.32	21.21
10	256QAM	1	0	19.48	19.88	19.66
10	256QAM	1	25	19.44	19.39	19.57
10	256QAM	1	49	19.50	19.48	19.47
10	256QAM	25	0	19.26	19.38	19.20
10	256QAM	25	12	19.42	19.63	19.62
10	256QAM	25	25	19.55	19.33	19.22
10	256QAM	50	0	19.42	19.56	19.39
Channel				133147	133297	133447
Frequency (MHz)				665.5	680.5	695.5
5	QPSK	1	0	24.31	24.23	24.01
5	QPSK	1	12	24.39	24.37	24.15
5	QPSK	1	24	24.29	24.21	24.03
5	QPSK	12	0	23.29	23.25	23.03
5	QPSK	12	7	23.38	23.28	23.15
5	QPSK	12	13	23.35	23.29	23.07
5	QPSK	25	0	23.34	23.22	23.09
5	16QAM	1	0	23.70	23.57	23.41
5	16QAM	1	12	23.75	23.74	23.51
5	16QAM	1	24	23.71	23.55	23.35
5	16QAM	12	0	22.33	22.28	22.10
5	16QAM	12	7	22.42	22.32	22.20



5	16QAM	12	13	22.40	22.34	22.13
5	16QAM	25	0	22.36	22.24	22.13
5	64QAM	1	0	22.59	22.54	22.33
5	64QAM	1	12	22.57	22.59	22.37
5	64QAM	1	24	22.54	22.37	22.23
5	64QAM	12	0	21.30	21.28	21.07
5	64QAM	12	7	21.41	21.32	21.17
5	64QAM	12	13	21.38	21.32	21.13
5	64QAM	25	0	21.36	21.25	21.11
5	256QAM	1	0	19.53	19.69	19.81
5	256QAM	1	12	19.38	19.46	19.44
5	256QAM	1	24	19.29	19.36	19.36
5	256QAM	12	0	19.40	19.34	19.36
5	256QAM	12	7	19.39	19.44	19.44
5	256QAM	12	13	19.60	19.44	19.23
5	256QAM	25	0	19.42	19.55	19.57



ERP

LTE Band 12 (GT - LC = -1.88 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)	24.19	24.22	24.35	24.22	24.25	24.35	24.24	24.27	24.35
Conducted Power (Watts)	0.2624	0.2642	0.2723	0.2642	0.2661	0.2723	0.2655	0.2673	0.2723
ERP(dBm)	20.16	20.19	20.32	20.19	20.22	20.32	20.21	20.24	20.32
ERP(Watts)	0.1038	0.1045	0.1076	0.1045	0.1052	0.1076	0.1050	0.1057	0.1076

LTE Band 12 (GT - LC = -1.88 dB) QPSK			
Bandwidth	10M		
Channel	23060	23095	23130
	(Low)	(Mid)	(High)
Frequency (MHz)	704	707.5	711
Conducted Power (dBm)	24.22	24.29	24.36
Conducted Power (Watts)	0.2642	0.2685	0.2729
ERP(dBm)	20.19	20.26	20.33
ERP(Watts)	0.1045	0.1062	0.1079



LTE Band 12 (GT - LC = -1.88 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)	23.63	23.57	23.76	23.59	23.64	23.76	23.69	23.63	23.74
Conducted Power (Watts)	0.2307	0.2275	0.2377	0.2286	0.2312	0.2377	0.2339	0.2307	0.2366
ERP(dBm)	19.60	19.54	19.73	19.56	19.61	19.73	19.66	19.60	19.71
ERP(Watts)	0.0912	0.0899	0.0940	0.0904	0.0914	0.0940	0.0925	0.0912	0.0935

LTE Band 12 (GT - LC = -1.88 dB) 16QAM			
Bandwidth	10M		
Channel	23060	23095	23130
	(Low)	(Mid)	(High)
Frequency (MHz)	704	707.5	711
Conducted Power (dBm)	23.71	23.70	23.70
Conducted Power (Watts)	0.2350	0.2344	0.2344
ERP(dBm)	19.68	19.67	19.67
ERP(Watts)	0.0929	0.0927	0.0927



LTE Band 12 (GT - LC = -1.88 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)	22.41	22.42	22.63	22.44	22.51	22.62	22.49	22.51	22.60
Conducted Power (Watts)	0.1742	0.1746	0.1832	0.1754	0.1782	0.1828	0.1774	0.1782	0.1820
ERP(dBm)	18.38	18.39	18.60	18.41	18.48	18.59	18.46	18.48	18.57
ERP(Watts)	0.0689	0.0690	0.0724	0.0693	0.0705	0.0723	0.0701	0.0705	0.0719

LTE Band 12 (GT - LC = -1.88 dB) 64QAM			
Bandwidth	10M		
Channel	23060	23095	23130
	(Low)	(Mid)	(High)
Frequency (MHz)	704	707.5	711
Conducted Power (dBm)	22.50	22.56	22.59
Conducted Power (Watts)	0.1778	0.1803	0.1816
ERP(dBm)	18.47	18.53	18.56
ERP(Watts)	0.0703	0.0713	0.0718



LTE Band 12 (GT - LC = -1.88 dB) 256QAM									
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)	19.66	19.57	19.59	19.48	19.41	19.66	19.62	19.62	19.55
Conducted Power (Watts)	0.0925	0.0906	0.0910	0.0887	0.0873	0.0925	0.0916	0.0916	0.0902
ERP(dBm)	15.63	15.54	15.56	15.45	15.38	15.63	15.59	15.59	15.52
ERP(Watts)	0.0366	0.0358	0.0360	0.0351	0.0345	0.0366	0.0362	0.0362	0.0356

LTE Band 12 (GT - LC = -1.88 dB) 256QAM			
Bandwidth	10M		
Channel	23060	23095	23130
	(Low)	(Mid)	(High)
Frequency (MHz)	704	707.5	711
Conducted Power (dBm)	19.63	19.53	19.61
Conducted Power (Watts)	0.0918	0.0897	0.0914
ERP(dBm)	15.60	15.50	15.58
ERP(Watts)	0.0363	0.0355	0.0361



LTE Band 13 (GT - LC = -3.89 dB) QPSK						
Bandwidth	5M			10M		
Channel	23205	23230	23255	23230		
	(Low)	(Mid)	(High)	-	(Mid)	-
Frequency (MHz)	779.5	782	784.5	-	782	-
Conducted Power (dBm)	24.22	24.33	24.12		24.35	-
Conducted Power (Watts)	0.2642	0.2710	0.2582		0.2723	-
ERP(dBm)	18.18	18.29	18.08		18.31	-
ERP(Watts)	0.0658	0.0675	0.0643		0.0678	-

LTE Band 13 (GT - LC = -3.89 dB) 16QAM						
Bandwidth	5M			10M		
Channel	23205	23230	23255	23230		
	(Low)	(Mid)	(High)	-	(Mid)	-
Frequency (MHz)	779.5	782	784.5	-	782	-
Conducted Power (dBm)	23.63	23.76	23.59		23.76	-
Conducted Power (Watts)	0.2307	0.2377	0.2286		0.2377	-
ERP(dBm)	17.59	17.72	17.55		17.72	-
ERP(Watts)	0.0574	0.0592	0.0569		0.0592	-



LTE Band 13 (GT - LC = -3.89 dB) 64QAM						
Bandwidth	5M			10M		
Channel	23205	23230	23255	23230		
	(Low)	(Mid)	(High)	-	(Mid)	-
Frequency (MHz)	779.5	782	784.5	-	782	-
Conducted Power (dBm)	22.46	22.60	22.37		22.76	-
Conducted Power (Watts)	0.1762	0.1820	0.1726		0.1888	-
ERP(dBm)	16.42	16.56	16.33		16.72	-
ERP(Watts)	0.0439	0.0453	0.0430		0.0470	-

LTE Band 13 (GT - LC = -3.89 dB) 256QAM						
Bandwidth	5M			10M		
Channel	23205	23230	23255	23230		
	(Low)	(Mid)	(High)	-	(Mid)	-
Frequency (MHz)	779.5	782	784.5	-	782	-
Conducted Power (dBm)	19.62	19.65	19.42		19.60	-
Conducted Power (Watts)	0.0916	0.0923	0.0875		0.0912	-
ERP(dBm)	13.58	13.61	13.38		13.56	-
ERP(Watts)	0.0228	0.0230	0.0218		0.0227	-



LTE Band 71 (GT - LC = -2.91 dB) QPSK									
Bandwidth	5M			10M			15M		
Channel	133147	133297	133447	133172	133297	133422	133197	133297	133397
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency (MHz)	665.5	680.5	695.5	668	680.5	693	670.5	680.5	690.5
Conducted Power (dBm)	24.39	24.37	24.15	24.39	24.38	24.19	24.38	24.37	24.19
Conducted Power (Watts)	0.2748	0.2735	0.2600	0.2748	0.2742	0.2624	0.2742	0.2735	0.2624
ERP(dBm)	19.33	19.31	19.09	19.33	19.32	19.13	19.32	19.31	19.13
ERP(Watts)	0.0857	0.0853	0.0811	0.0857	0.0855	0.0818	0.0855	0.0853	0.0818

LTE Band 71 (GT - LC = -2.91 dB) QPSK			
Bandwidth	20M		
Channel	133222	133297	133372
	(Low)	(Mid)	(High)
Frequency (MHz)	673	680.5	688
Conducted Power (dBm)	24.38	24.40	24.32
Conducted Power (Watts)	0.2742	0.2754	0.2704
ERP(dBm)	19.32	19.34	19.26
ERP(Watts)	0.0855	0.0859	0.0843



LTE Band 71 (GT - LC = -2.91 dB) 16QAM									
Bandwidth	5M			10M			15M		
Channel	133147	133297	133447	133172	133297	133422	133197	133297	133397
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency (MHz)	665.5	680.5	695.5	668	680.5	693	670.5	680.5	690.5
Conducted Power (dBm)	23.75	23.74	23.51	23.81	23.83	23.64	23.73	23.68	23.55
Conducted Power (Watts)	0.2371	0.2366	0.2244	0.2404	0.2415	0.2312	0.2360	0.2333	0.2265
ERP(dBm)	18.69	18.68	18.45	18.75	18.77	18.58	18.67	18.62	18.49
ERP(Watts)	0.0740	0.0738	0.0700	0.0750	0.0753	0.0721	0.0736	0.0728	0.0706

LTE Band 71 (GT - LC = -2.91 dB) 16QAM			
Bandwidth	20M		
Channel	133222	133297	133372
	(Low)	(Mid)	(High)
Frequency (MHz)	673	680.5	688
Conducted Power (dBm)	23.84	24.03	23.72
Conducted Power (Watts)	0.2421	0.2529	0.2355
ERP(dBm)	18.78	18.97	18.66
ERP(Watts)	0.0755	0.0789	0.0735



LTE Band 71 (GT - LC = -2.91 dB) 64QAM									
Bandwidth	5M			10M			15M		
Channel	133147	133297	133447	133172	133297	133422	133197	133297	133397
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency (MHz)	665.5	680.5	695.5	668	680.5	693	670.5	680.5	690.5
Conducted Power (dBm)	22.59	22.54	22.33	22.65	22.68	22.44	22.56	22.63	22.43
Conducted Power (Watts)	0.1816	0.1795	0.1710	0.1841	0.1854	0.1754	0.1803	0.1832	0.1750
ERP(dBm)	17.53	17.48	17.27	17.59	17.62	17.38	17.50	17.57	17.37
ERP(Watts)	0.0566	0.0560	0.0533	0.0574	0.0578	0.0547	0.0562	0.0571	0.0546

LTE Band 71 (GT - LC = -2.91 dB) 64QAM			
Bandwidth	20M		
Channel	133222	133297	133372
	(Low)	(Mid)	(High)
Frequency (MHz)	673	680.5	688
Conducted Power (dBm)	22.75	22.73	22.58
Conducted Power (Watts)	0.1884	0.1875	0.1811
ERP(dBm)	17.69	17.67	17.52
ERP(Watts)	0.0587	0.0585	0.0565



LTE Band 71 (GT - LC = -2.91 dB) 256QAM									
Bandwidth	5M			10M			15M		
Channel	133147	133297	133447	133172	133297	133422	133197	133297	133397
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency (MHz)	665.5	680.5	695.5	668	680.5	693	670.5	680.5	690.5
Conducted Power (dBm)	19.53	19.69	19.81	19.48	19.88	19.66	19.48	19.84	19.55
Conducted Power (Watts)	0.0897	0.0931	0.0957	0.0887	0.0973	0.0925	0.0887	0.0964	0.0902
ERP(dBm)	14.47	14.63	14.75	14.42	14.82	14.60	14.42	14.78	14.49
ERP(Watts)	0.0280	0.0290	0.0299	0.0277	0.0303	0.0288	0.0277	0.0301	0.0281

LTE Band 71 (GT - LC = -2.91 dB) 256QAM			
Bandwidth	20M		
Channel	133222	133297	133372
	(Low)	(Mid)	(High)
Frequency (MHz)	673	680.5	688
Conducted Power (dBm)	19.67	19.84	19.68
Conducted Power (Watts)	0.0927	0.0964	0.0929
ERP(dBm)	14.61	14.78	14.62
ERP(Watts)	0.0289	0.0301	0.0290



LTE Band 12

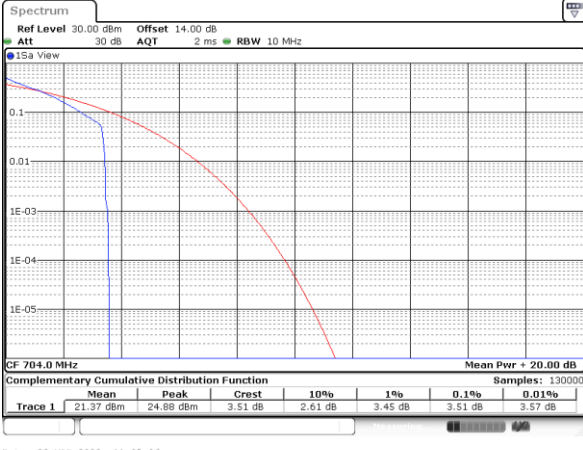
Peak-to-Average Ratio

Mode	LTE Band 12 / 10MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	3.51	4.64	4.35	5.62	PASS
Middle CH	3.48	4.43	4.17	5.68	
Highest CH	3.51	4.41	4.26	5.57	
Mode	LTE Band 12 / 10MHz				
Mod.	64QAM				Limit: 13dB
RB Size	1RB	Full RB			Result
Lowest CH	5.33	6.23	-	-	PASS
Middle CH	5.25	6.17	-	-	
Highest CH	5.36	6.20	-	-	



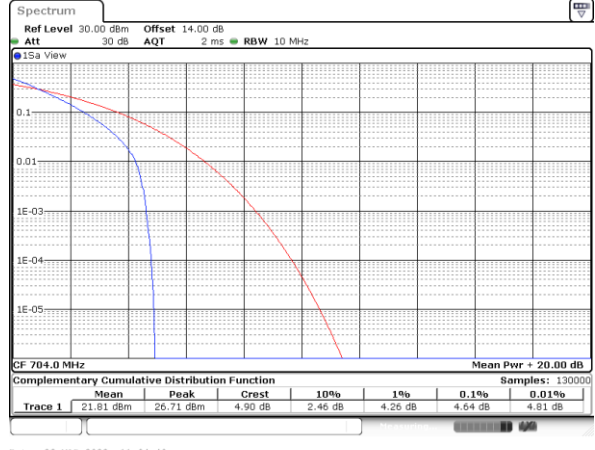
LTE Band 12 / 10MHz / QPSK

Lowest Channel / 1RB



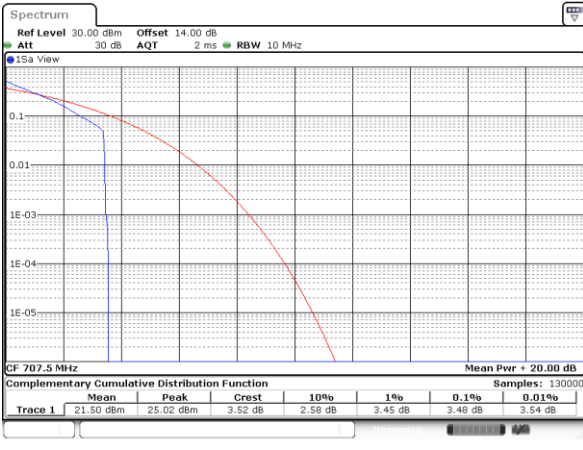
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Lowest Channel / Full RB



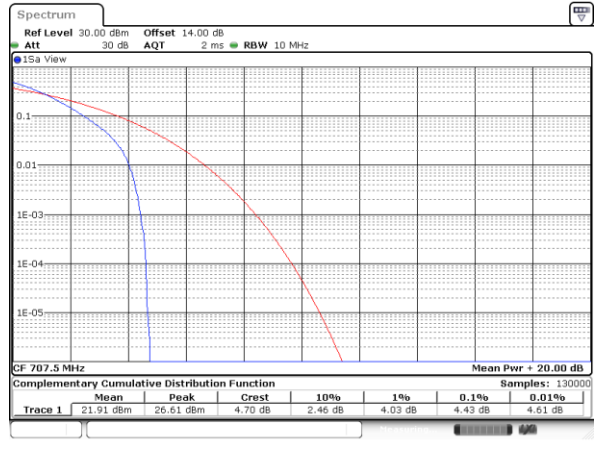
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Middle Channel / 1RB



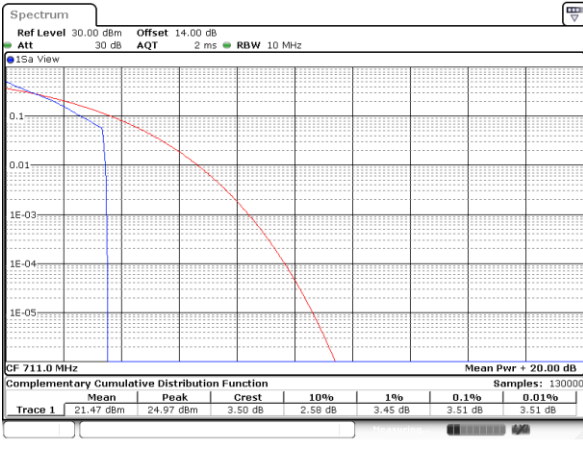
Date: 28.MAR.2022 11:05:02

Middle Channel / Full RB



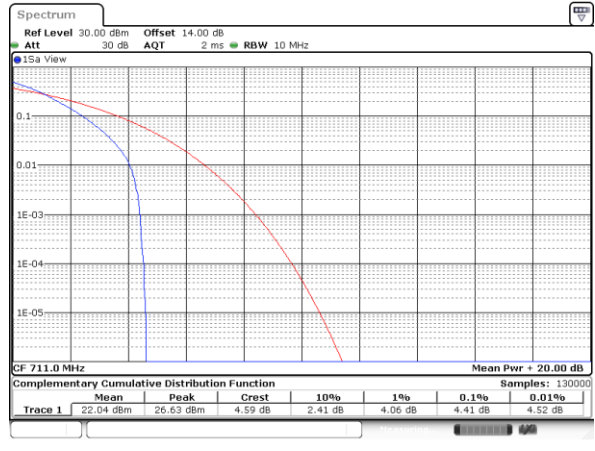
Date: 28.MAR.2022 11:05:57

Highest Channel / 1RB



Date: 28.MAR.2022 11:06:48

Highest Channel / Full RB

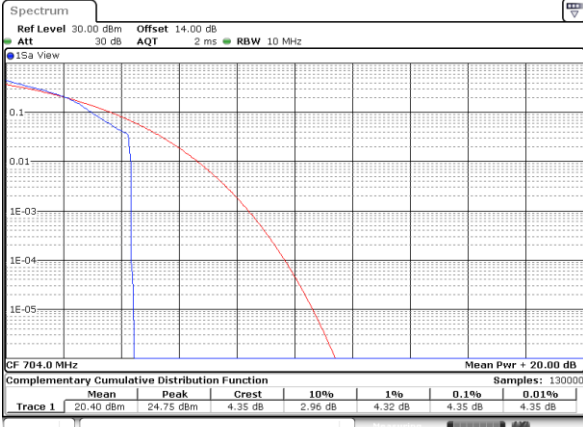


Date: 28.MAR.2022 11:06:23



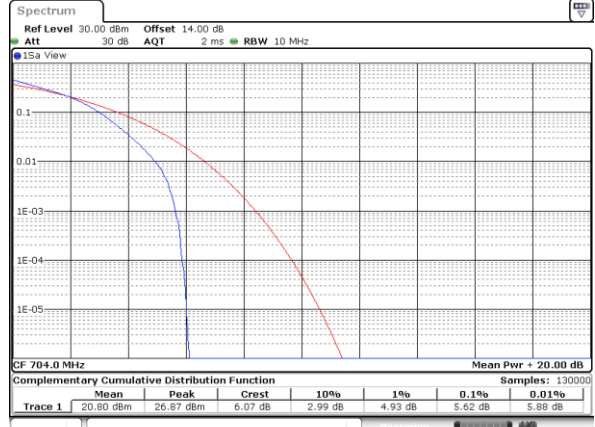
LTE Band 12 / 10MHz / 16QAM

Lowest Channel / 1RB



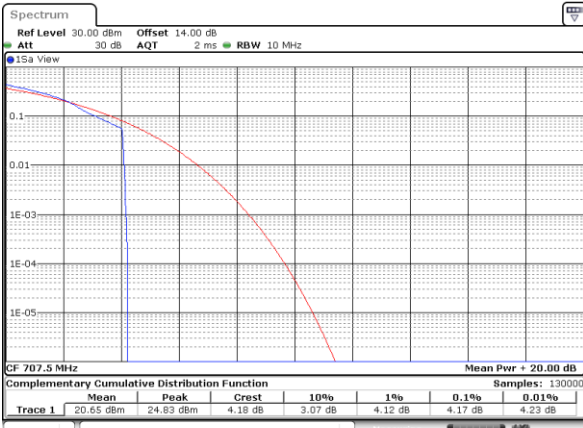
Date: 28.MAR.2022 11:02:13

Lowest Channel / Full RB



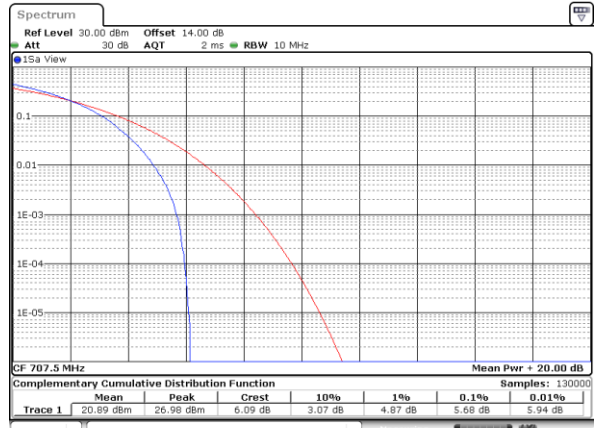
Date: 28.MAR.2022 11:02:05

Middle Channel / 1RB



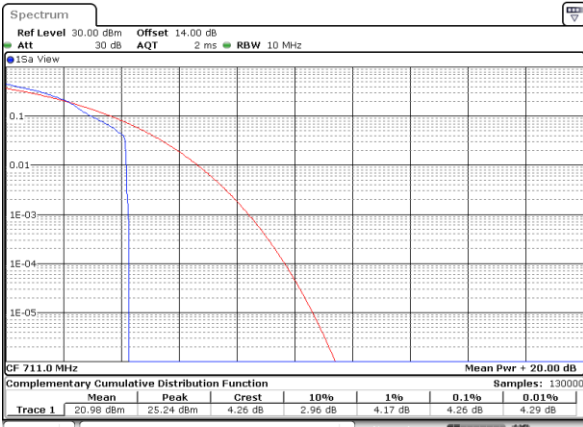
Date: 28.MAR.2022 11:02:56

Middle Channel / Full RB



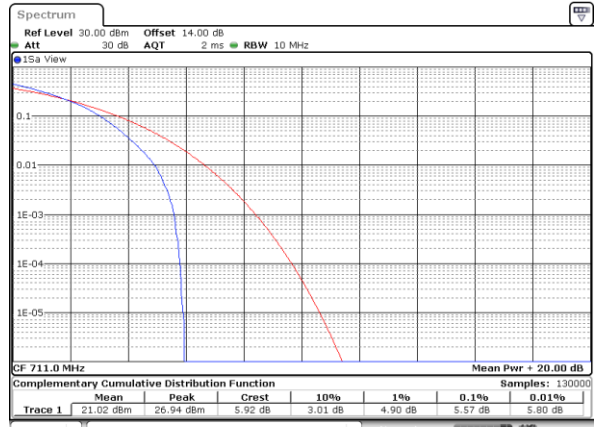
Date: 28.MAR.2022 11:03:22

Highest Channel / 1RB



Date: 28.MAR.2022 11:04:14

Highest Channel / Full RB

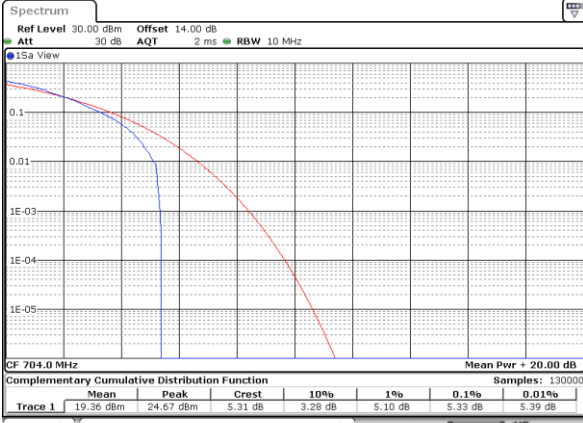


Date: 28.MAR.2022 11:03:48



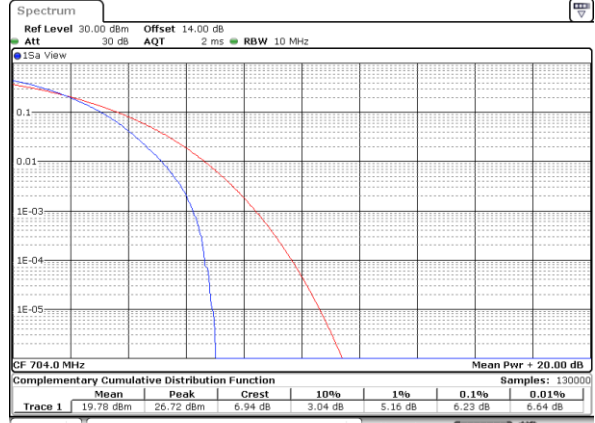
LTE Band 12 / 10MHz / 64QAM

Lowest Channel / 1RB



Date: 28.MAR.2022 10:59:57

Lowest Channel / Full RB



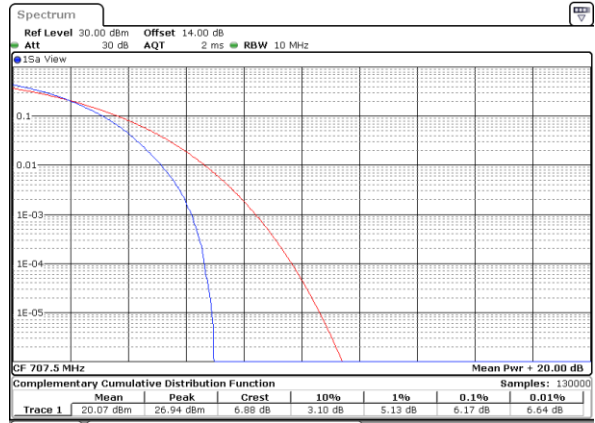
Date: 28.MAR.2022 10:59:30

Middle Channel / 1RB



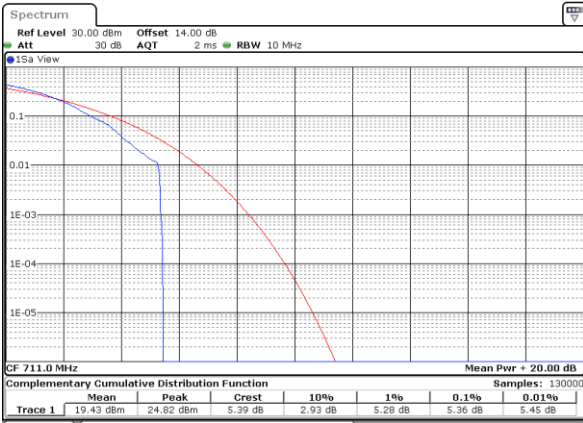
Date: 28.MAR.2022 11:00:23

Middle Channel / Full RB



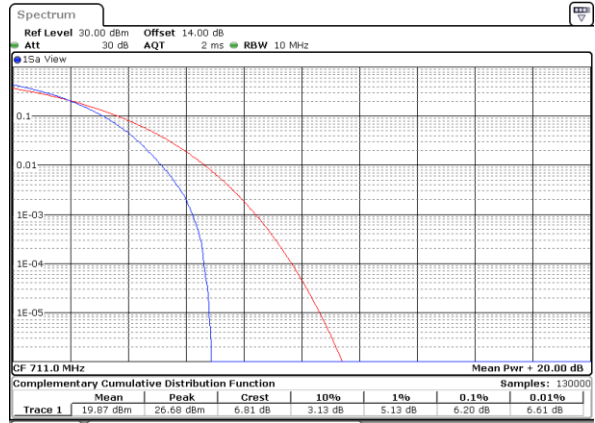
Date: 28.MAR.2022 11:00:48

Highest Channel / 1RB



Date: 28.MAR.2022 11:01:39

Highest Channel / Full RB



Date: 28.MAR.2022 11:01:13



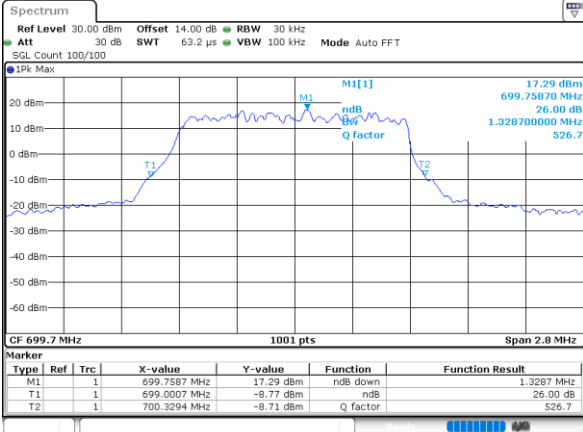
26dB Bandwidth

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	1.33	1.27	3.02	3.09	5.08	5.11	10.17	9.79	-	-	-	-
Middle CH	1.32	1.35	3.12	3.15	5.10	5.05	10.07	9.95	-	-	-	-
Highest CH	1.34	1.33	3.04	3.09	4.93	5.03	9.99	9.89	-	-	-	-
Mode	LTE Band 12 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	1.29	-	3.05	-	5.03	-	9.89	-	-	-	-	-
Middle CH	1.33	-	3.07	-	5.02	-	9.81	-	-	-	-	-
Highest CH	1.38	-	3.07	-	5.09	-	9.85	-	-	-	-	-



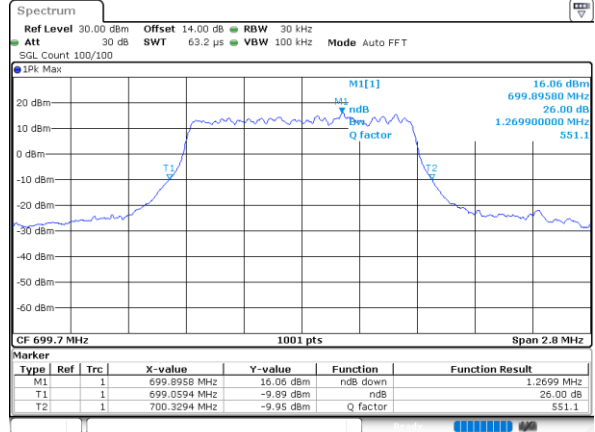
LTE Band 12

Lowest Channel / 1.4MHz / QPSK



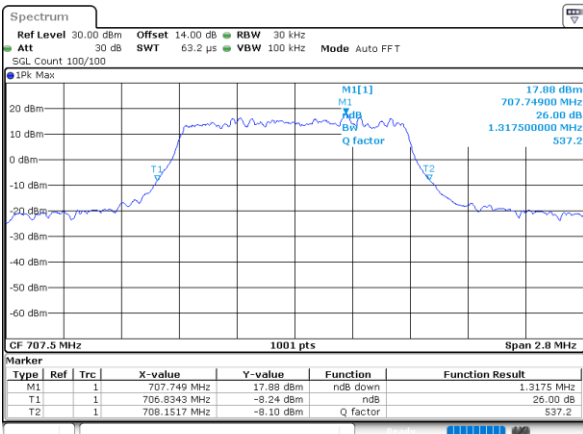
Date: 27_MAR_2022 18:56:50

Lowest Channel / 1.4MHz / 16QAM



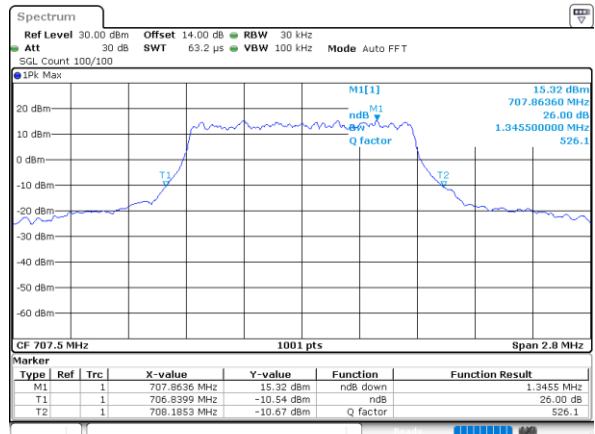
Date: 27_MAR_2022 18:56:26

Middle Channel / 1.4MHz / QPSK



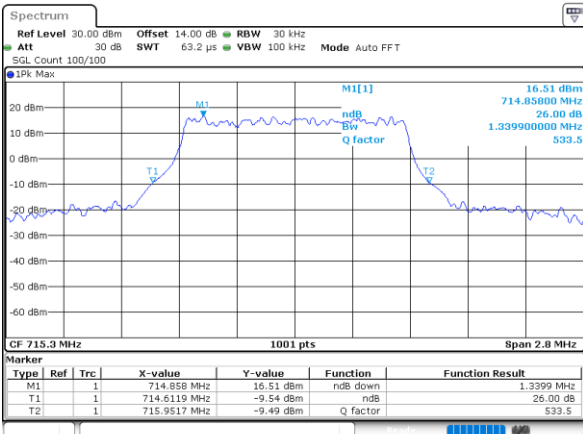
Date: 27_MAR_2022 19:05:29

Middle Channel / 1.4MHz / 16QAM



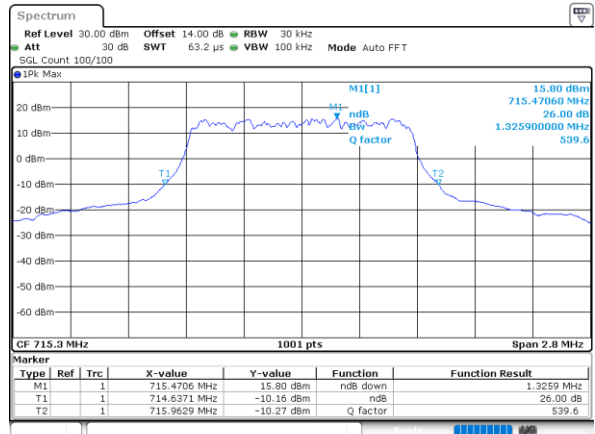
Date: 27_MAR_2022 19:05:53

Highest Channel / 1.4MHz / QPSK



Date: 27_MAR_2022 19:09:45

Highest Channel / 1.4MHz / 16QAM

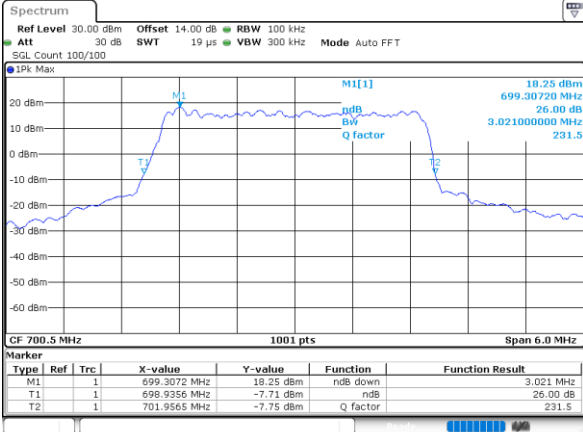


Date: 27_MAR_2022 19:09:21



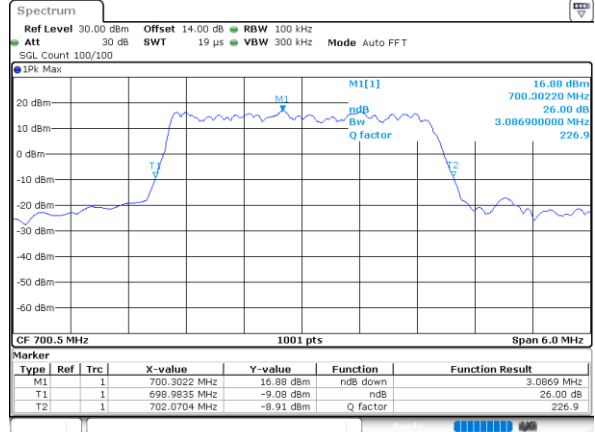
LTE Band 12

Lowest Channel / 3MHz / QPSK



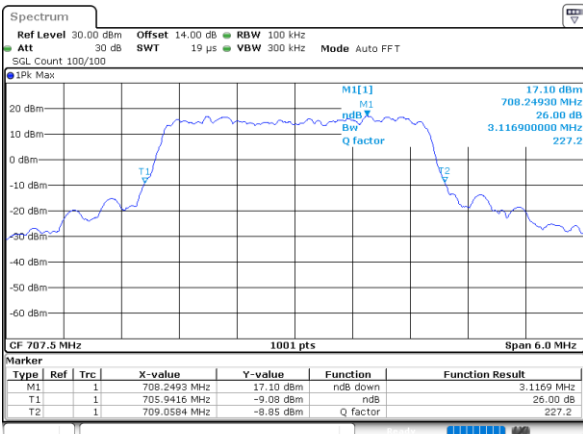
Date: 27_MAR.2022 17:14:46

Lowest Channel / 3MHz / 16QAM



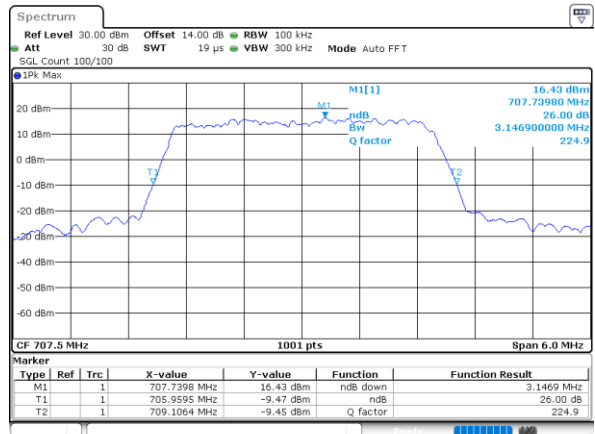
Date: 27_MAR.2022 17:14:21

Middle Channel / 3MHz / QPSK



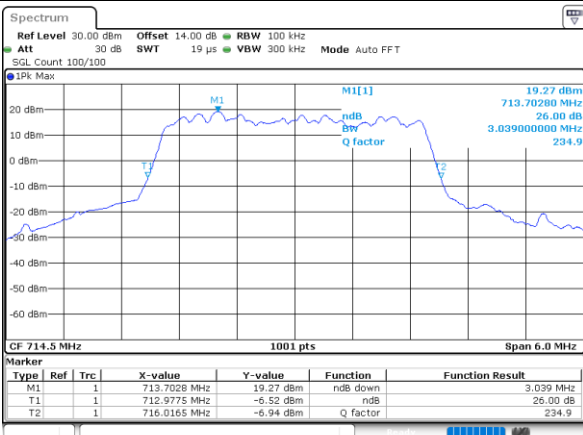
Date: 27_MAR.2022 17:23:25

Middle Channel / 3MHz / 16QAM



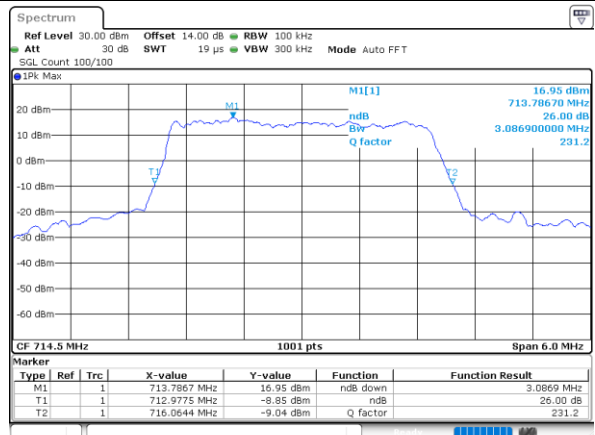
Date: 27_MAR.2022 17:23:49

Highest Channel / 3MHz / QPSK



Date: 27_MAR.2022 17:27:42

Highest Channel / 3MHz / 16QAM

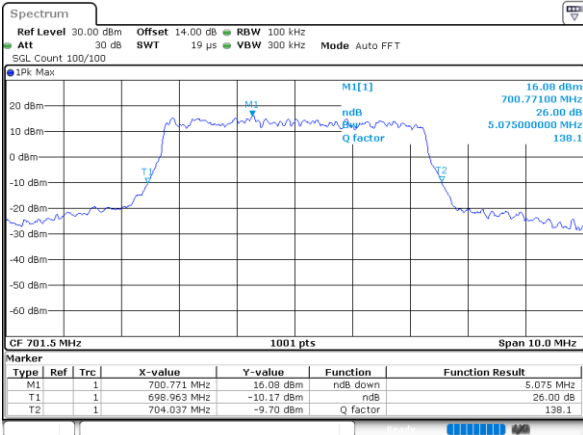


Date: 27_MAR.2022 17:27:17



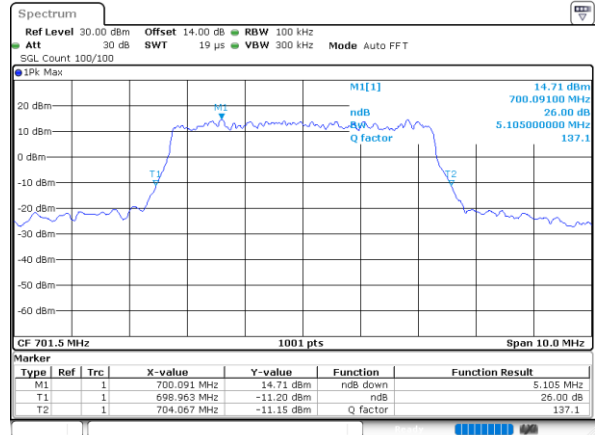
LTE Band 12

Lowest Channel / 5MHz / QPSK



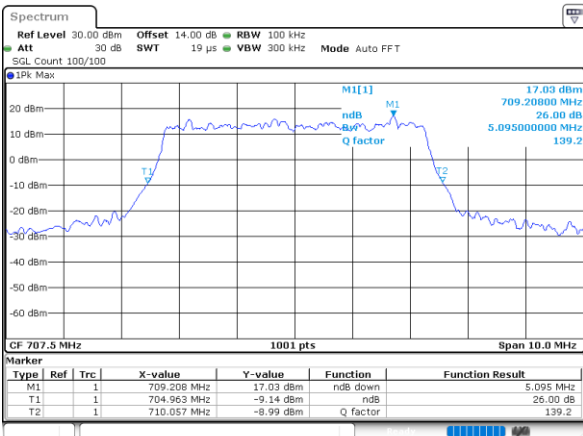
Date: 27_MAR.2022 17:58:13

Lowest Channel / 5MHz / 16QAM



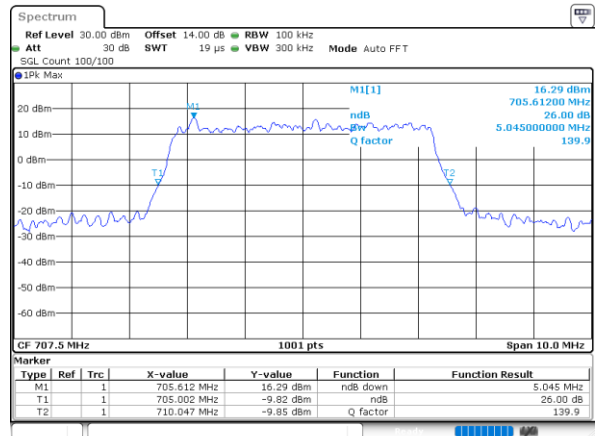
Date: 27_MAR.2022 17:57:48

Middle Channel / 5MHz / QPSK



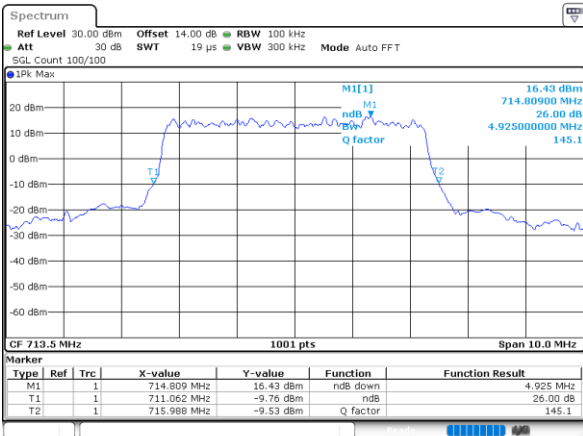
Date: 27_MAR.2022 18:06:52

Middle Channel / 5MHz / 16QAM



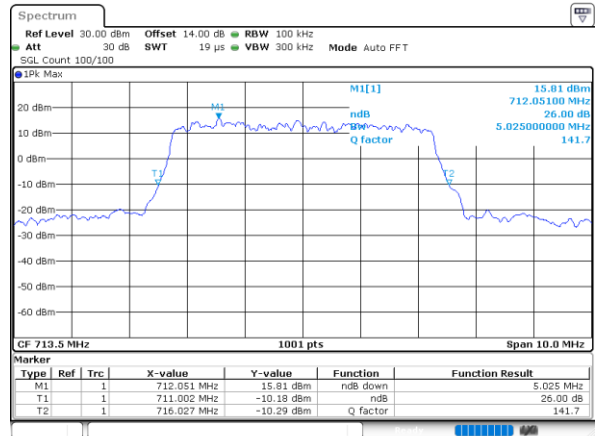
Date: 27_MAR.2022 18:07:15

Highest Channel / 5MHz / QPSK



Date: 27_MAR.2022 18:11:08

Highest Channel / 5MHz / 16QAM

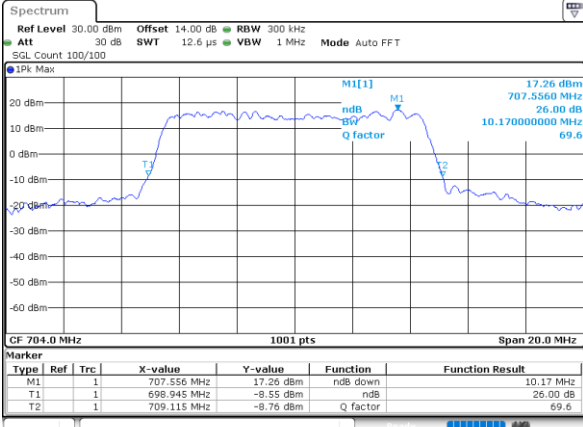


Date: 27_MAR.2022 18:10:43



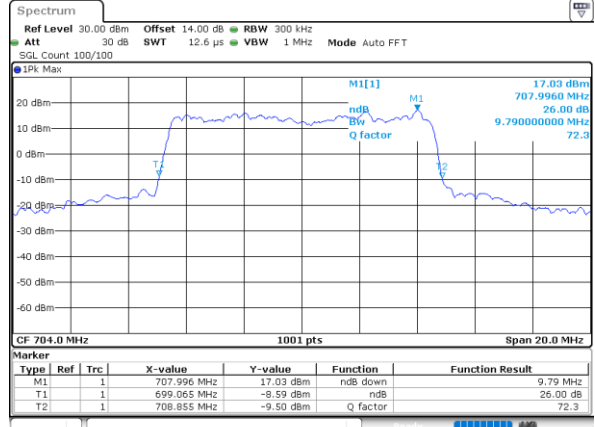
LTE Band 12

Lowest Channel / 10MHz / QPSK



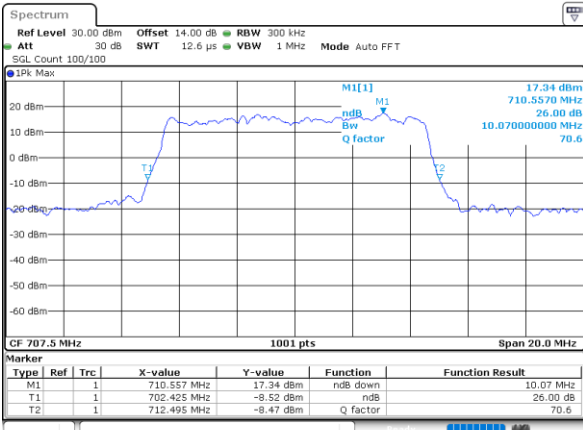
Date: 27_MAR.2022 18:20:22

Lowest Channel / 10MHz / 16QAM



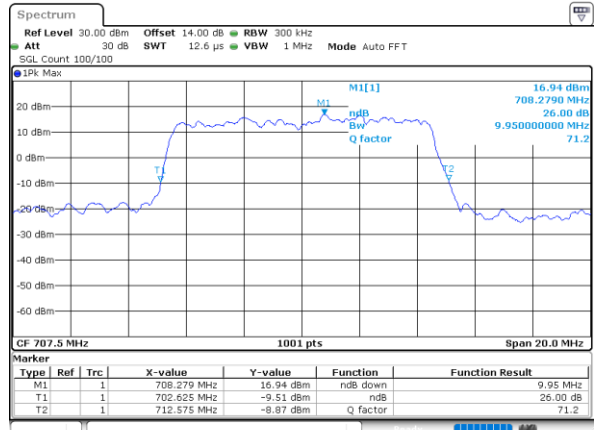
Date: 27_MAR.2022 18:19:57

Middle Channel / 10MHz / QPSK



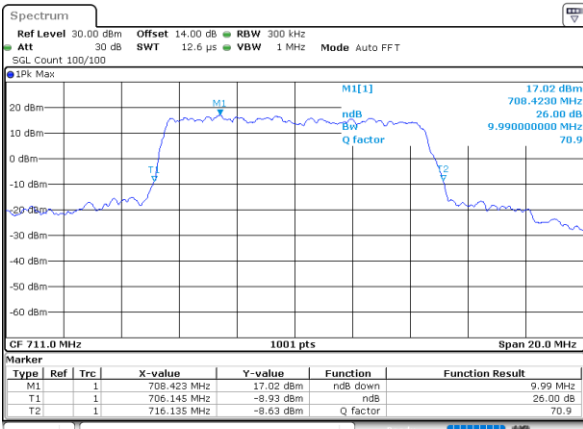
Date: 27_MAR.2022 18:29:01

Middle Channel / 10MHz / 16QAM



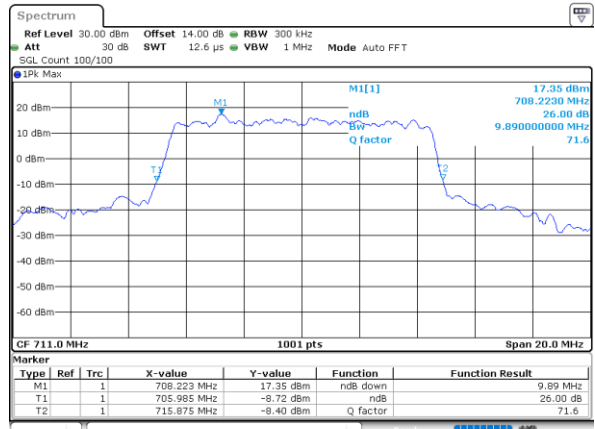
Date: 27_MAR.2022 18:29:25

Highest Channel / 10MHz / QPSK



Date: 27_MAR.2022 18:33:17

Highest Channel / 10MHz / 16QAM

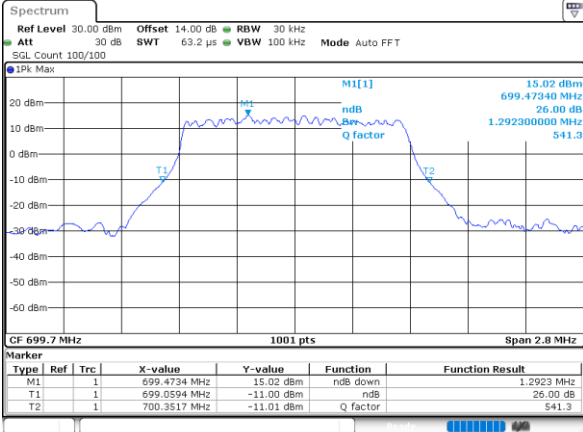


Date: 27_MAR.2022 18:32:53



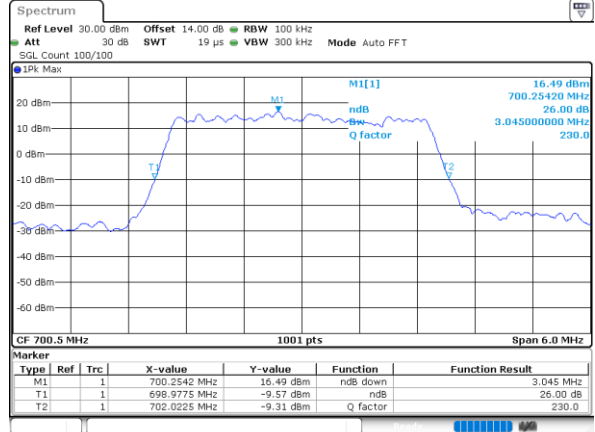
LTE Band 12

Lowest Channel / 1.4MHz / 64QAM



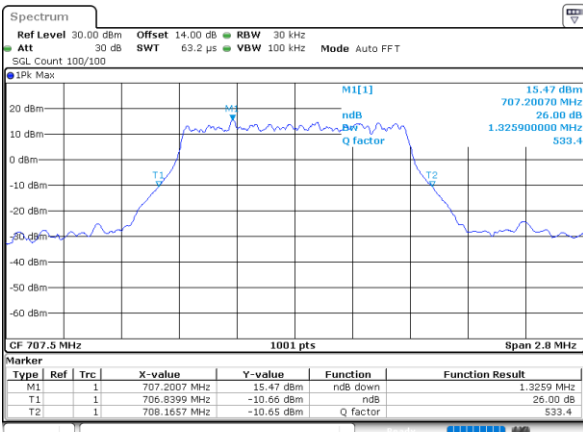
Date: 27_MAR.2022 19:18:11

Lowest Channel / 3MHz / 64QAM



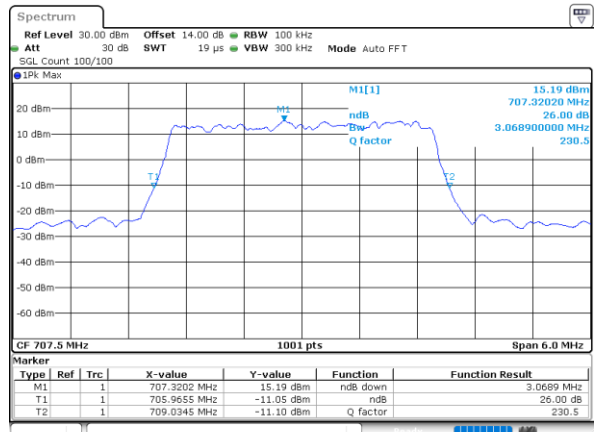
Date: 27_MAR.2022 17:13:109

Middle Channel / 1.4MHz / 64QAM



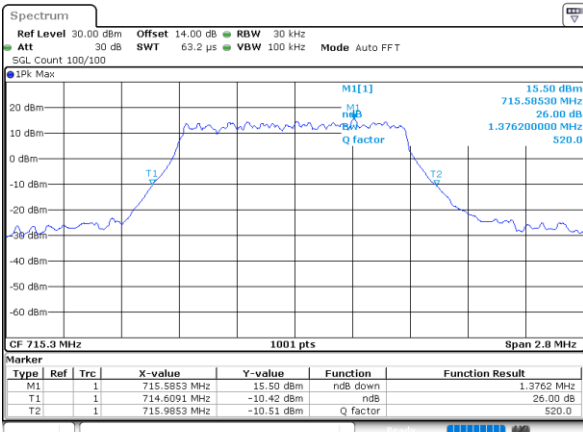
Date: 27_MAR.2022 19:26:31

Middle Channel / 3MHz / 64QAM



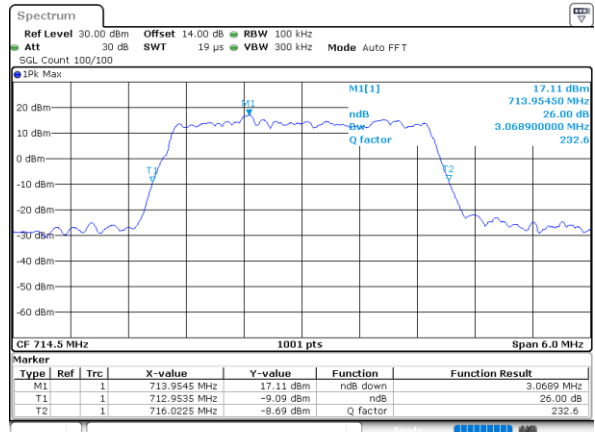
Date: 27_MAR.2022 17:14:027

Highest Channel / 1.4MHz / 64QAM



Date: 27_MAR.2022 19:28:23

Highest Channel / 3MHz / 64QAM

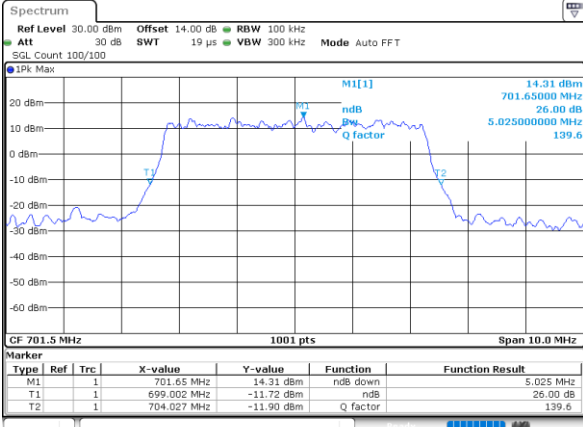


Date: 27_MAR.2022 17:14:218



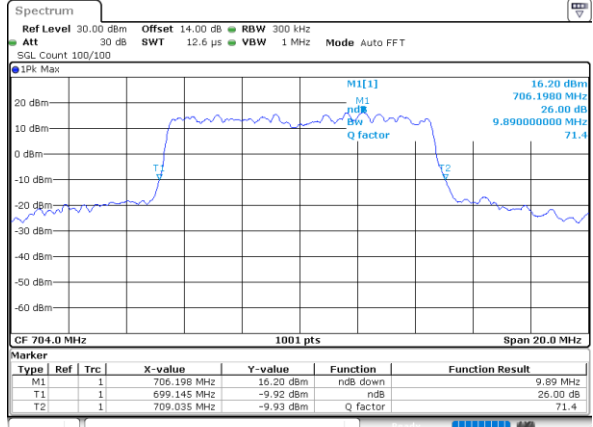
LTE Band 12

Lowest Channel / 5MHz / 64QAM



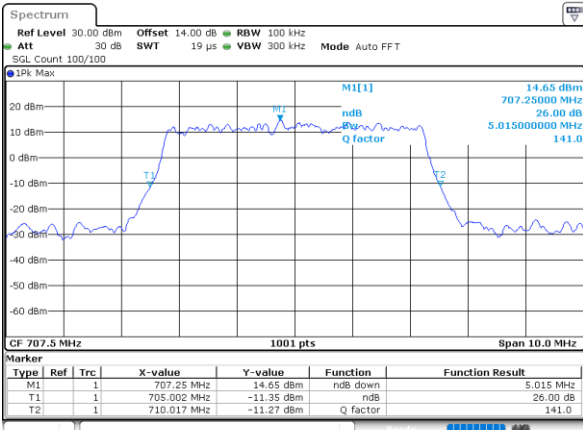
Date: 27_MAR.2022 17:46:46

Lowest Channel / 10MHz / 64QAM



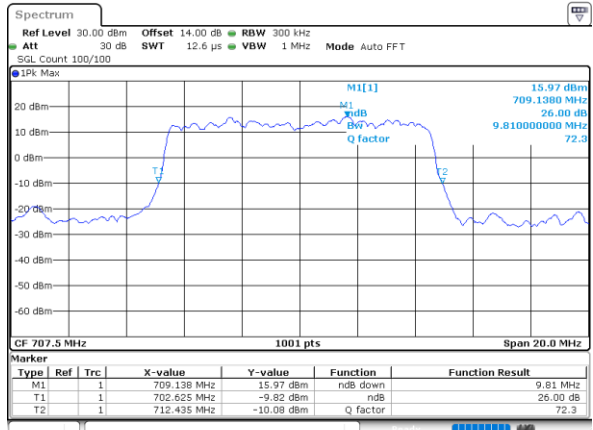
Date: 27_MAR.2022 18:41:42

Middle Channel / 5MHz / 64QAM



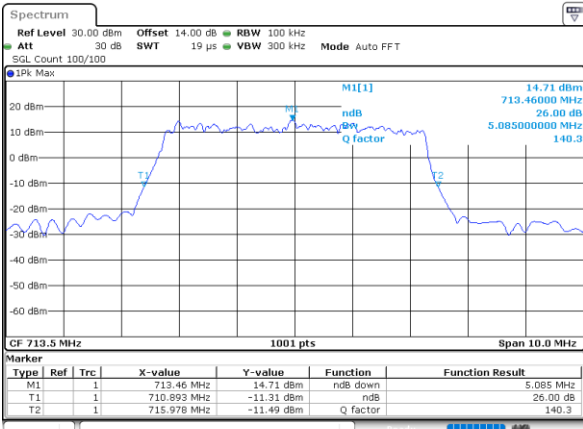
Date: 27_MAR.2022 17:51:04

Middle Channel / 10MHz / 64QAM



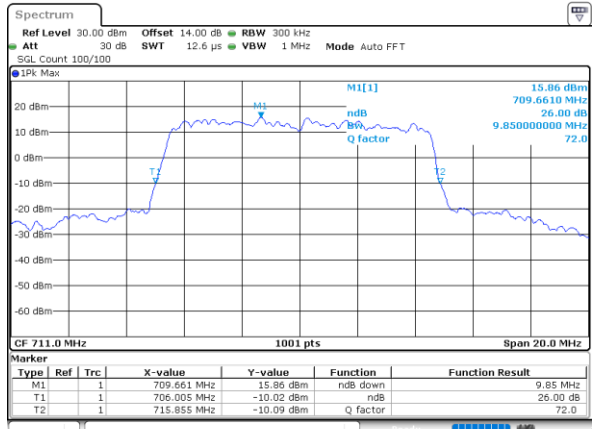
Date: 27_MAR.2022 18:46:00

Highest Channel / 5MHz / 64QAM



Date: 27_MAR.2022 17:52:56

Highest Channel / 10MHz / 64QAM



Date: 27_MAR.2022 18:47:51



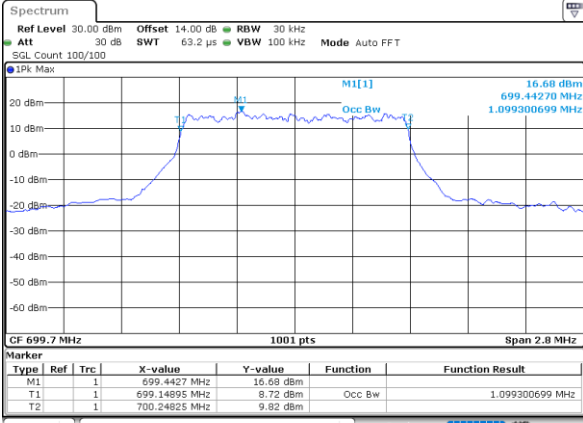
Occupied Bandwidth

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	1.10	1.11	2.74	2.74	4.53	4.48	9.05	9.07	-	-	-	-
Middle CH	1.11	1.09	2.73	2.72	4.48	4.51	8.99	9.05	-	-	-	-
Highest CH	1.09	1.10	2.73	2.74	4.48	4.51	9.07	9.09	-	-	-	-
Mode	LTE Band 12 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	1.11	-	2.73	-	4.52	-	9.07	-	-	-	-	-
Middle CH	1.09	-	2.75	-	4.49	-	9.09	-	-	-	-	-
Highest CH	1.10	-	2.72	-	4.48	-	9.03	-	-	-	-	-



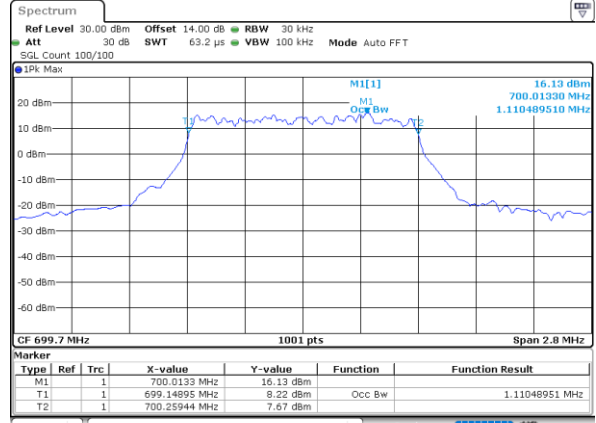
LTE Band 12

Lowest Channel / 1.4MHz / QPSK



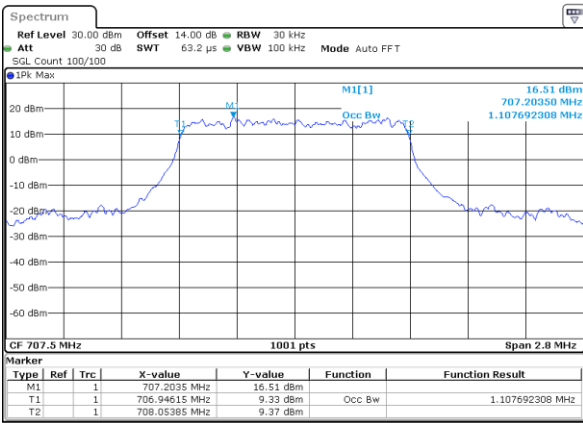
Date: 27_MAR.2022 18:55:46

Lowest Channel / 1.4MHz / 16QAM



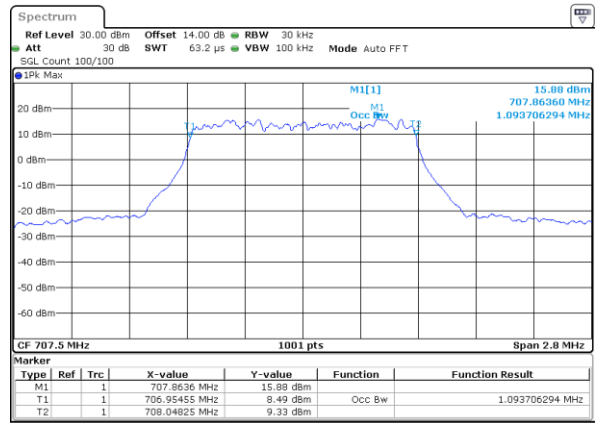
Date: 27_MAR.2022 18:56:11

Middle Channel / 1.4MHz / QPSK



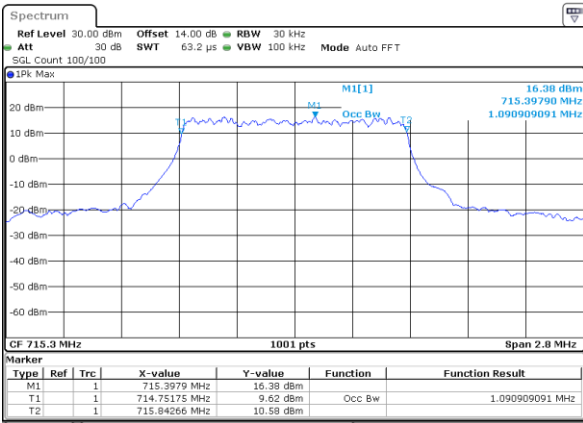
Date: 27_MAR.2022 19:05:14

Middle Channel / 1.4MHz / 16QAM



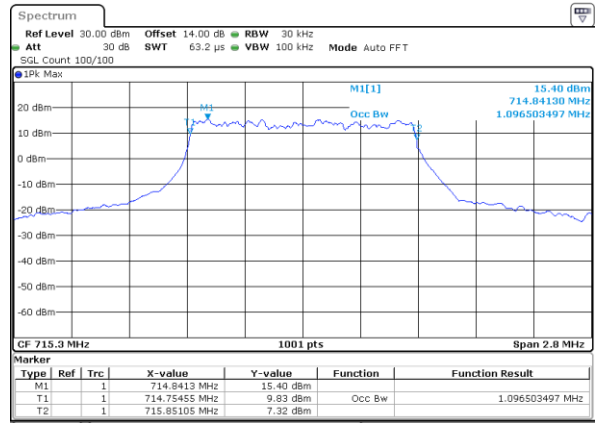
Date: 27_MAR.2022 19:04:50

Highest Channel / 1.4MHz / QPSK



Date: 27_MAR.2022 19:08:41

Highest Channel / 1.4MHz / 16QAM

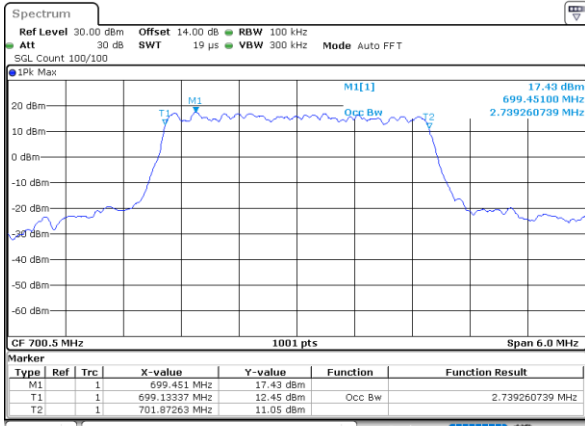


Date: 27_MAR.2022 19:09:05



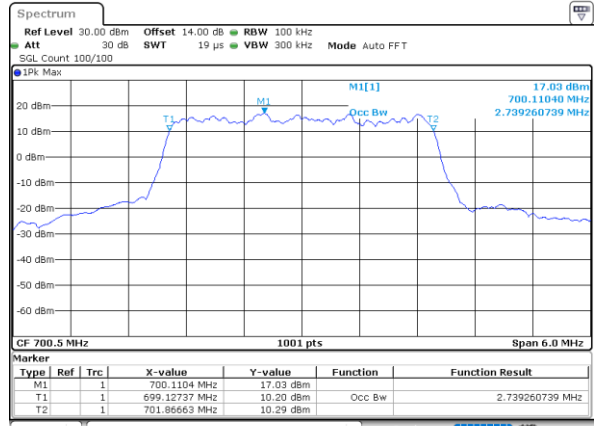
LTE Band 12

Lowest Channel / 3MHz / QPSK



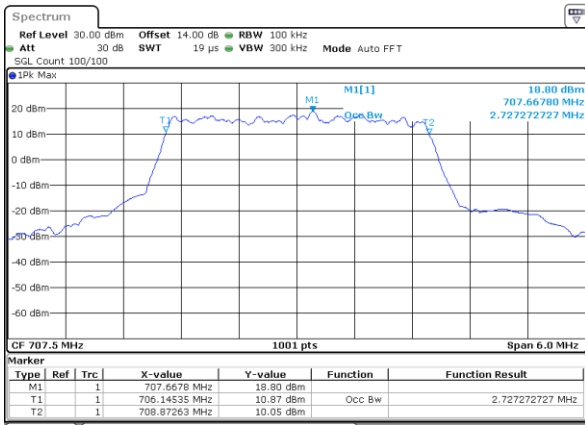
Date: 27_MAR.2022 17:13:41

Lowest Channel / 3MHz / 16QAM



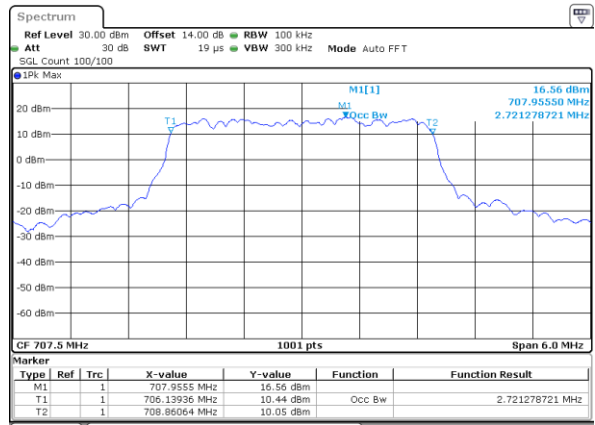
Date: 27_MAR.2022 17:14:06

Middle Channel / 3MHz / QPSK



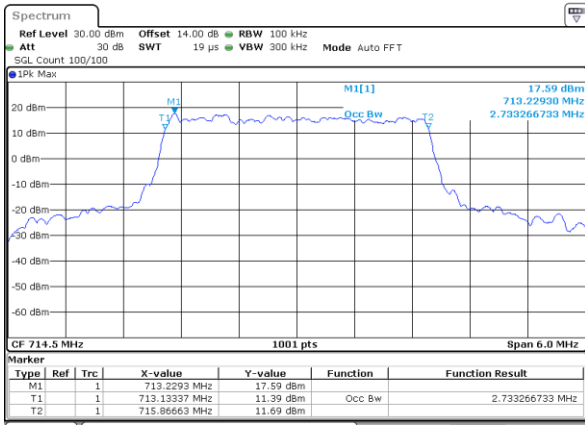
Date: 27_MAR.2022 17:23:10

Middle Channel / 3MHz / 16QAM



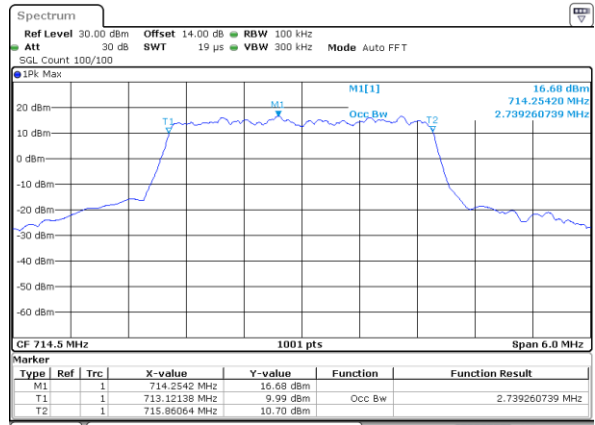
Date: 27_MAR.2022 17:22:47

Highest Channel / 3MHz / QPSK



Date: 27_MAR.2022 17:26:38

Highest Channel / 3MHz / 16QAM

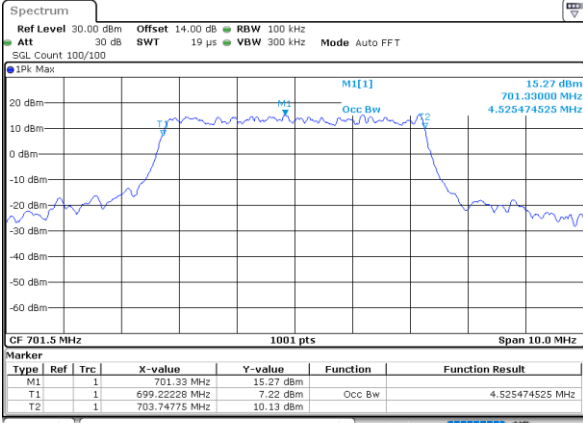


Date: 27_MAR.2022 17:27:02



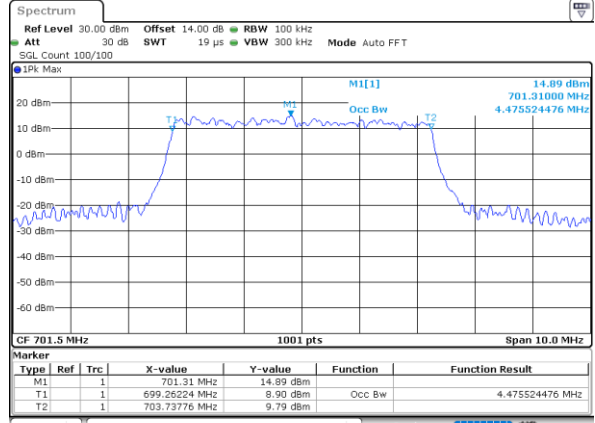
LTE Band 12

Lowest Channel / 5MHz / QPSK



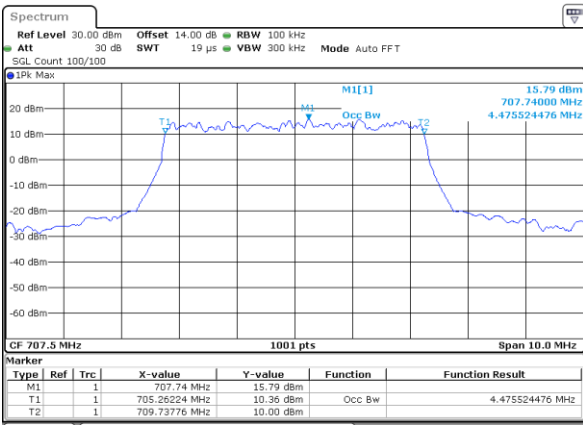
Date: 27_MAR.2022 17:57:09

Lowest Channel / 5MHz / 16QAM



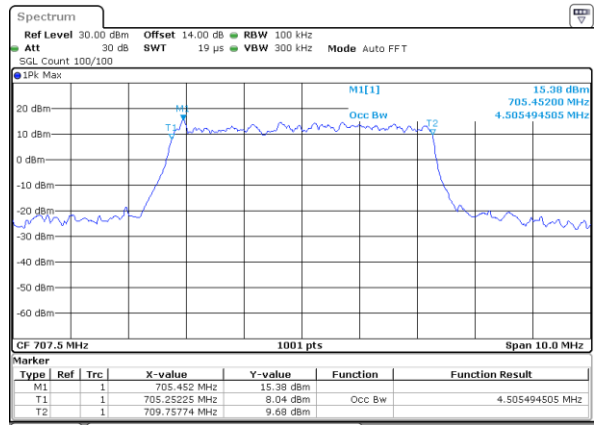
Date: 27_MAR.2022 17:57:133

Middle Channel / 5MHz / QPSK



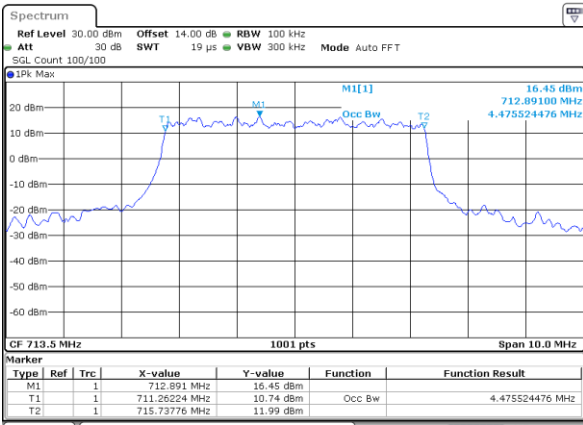
Date: 27_MAR.2022 18:06:37

Middle Channel / 5MHz / 16QAM



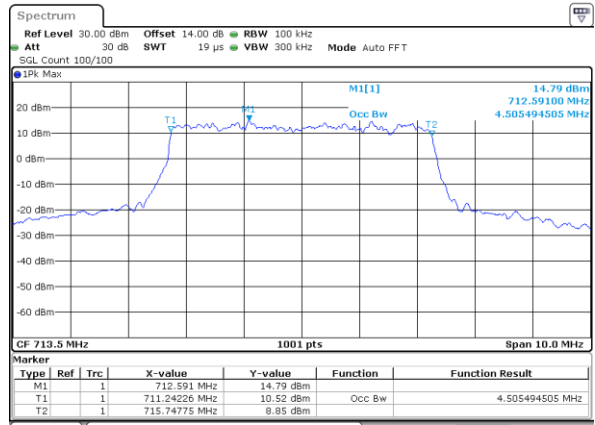
Date: 27_MAR.2022 18:06:113

Highest Channel / 5MHz / QPSK



Date: 27_MAR.2022 18:10:04

Highest Channel / 5MHz / 16QAM

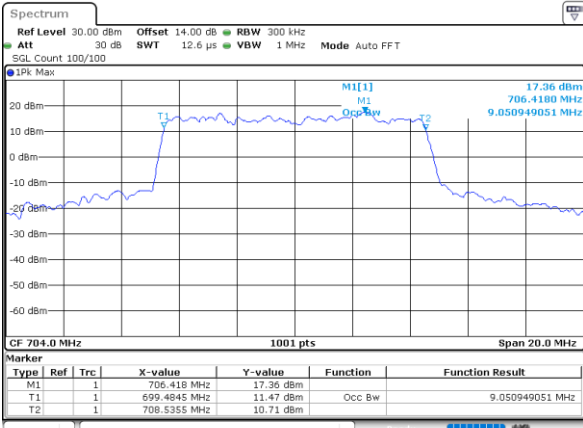


Date: 27_MAR.2022 18:10:128



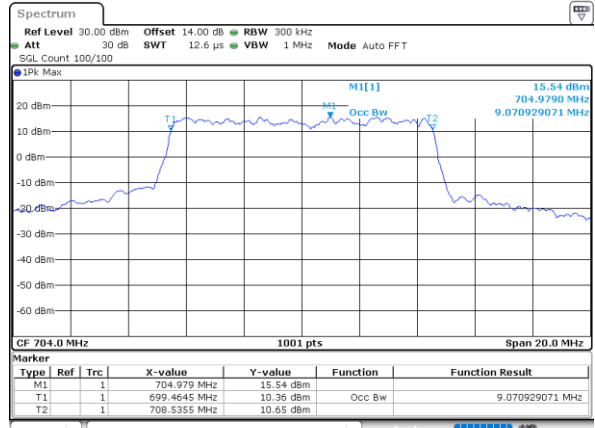
LTE Band 12

Lowest Channel / 10MHz / QPSK



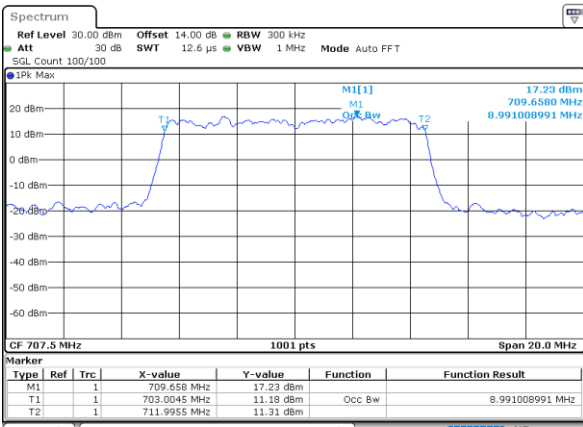
Date: 27_MAR_2022 18:19:18

Lowest Channel / 10MHz / 16QAM



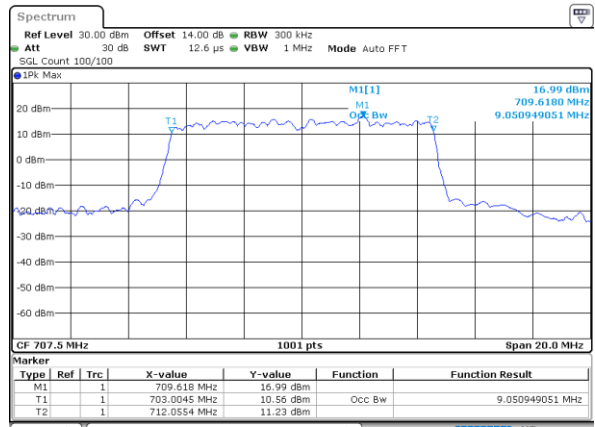
Date: 27_MAR_2022 18:19:42

Middle Channel / 10MHz / QPSK



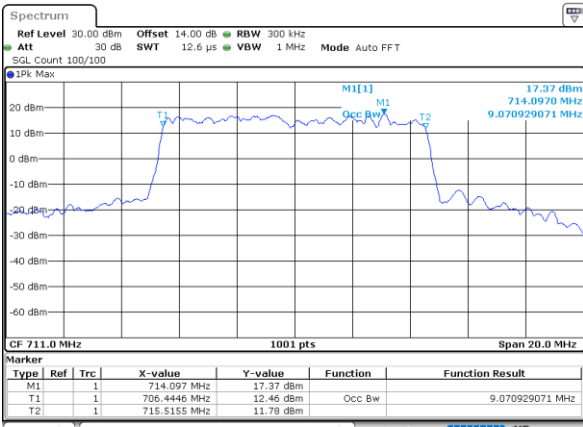
Date: 27_MAR_2022 18:28:46

Middle Channel / 10MHz / 16QAM



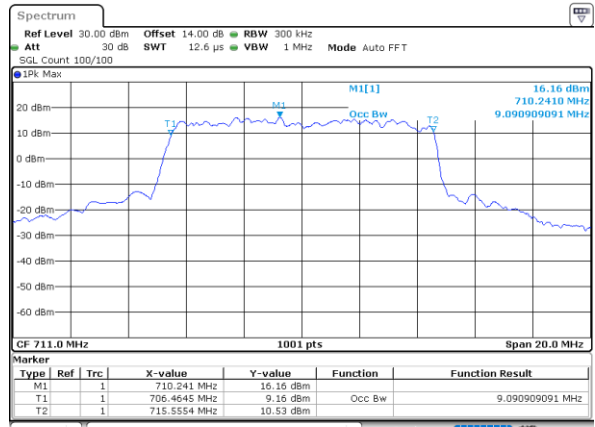
Date: 27_MAR_2022 18:28:22

Highest Channel / 10MHz / QPSK



Date: 27_MAR_2022 18:32:13

Highest Channel / 10MHz / 16QAM

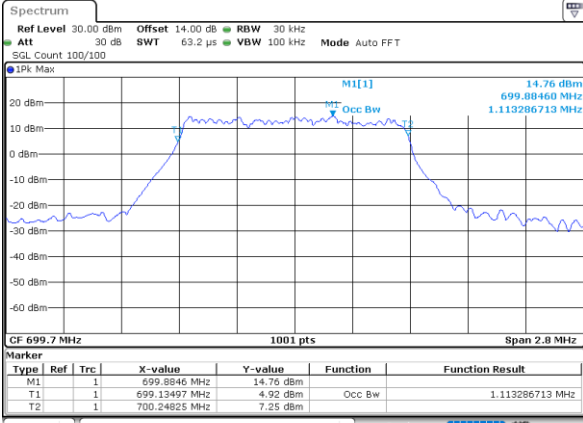


Date: 27_MAR_2022 18:32:37



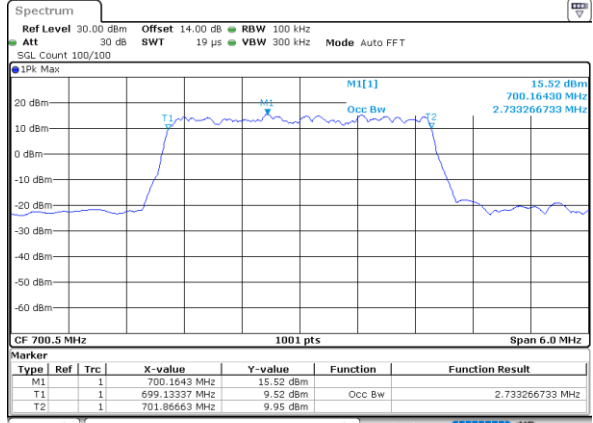
LTE Band 12

Lowest Channel / 1.4MHz / 64QAM



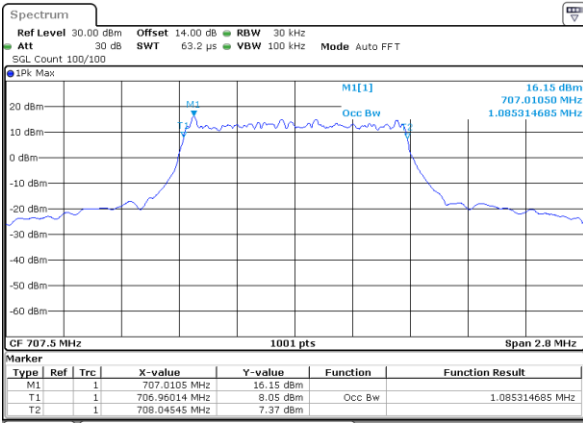
Date: 27_MAR.2022 19:17:56

Lowest Channel / 3MHz / 64QAM



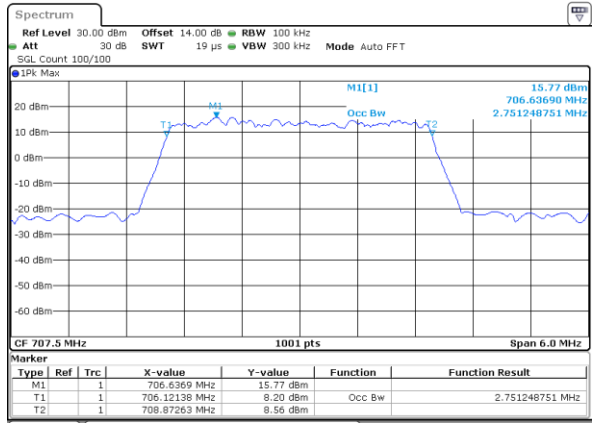
Date: 27_MAR.2022 17:35:54

Middle Channel / 1.4MHz / 64QAM



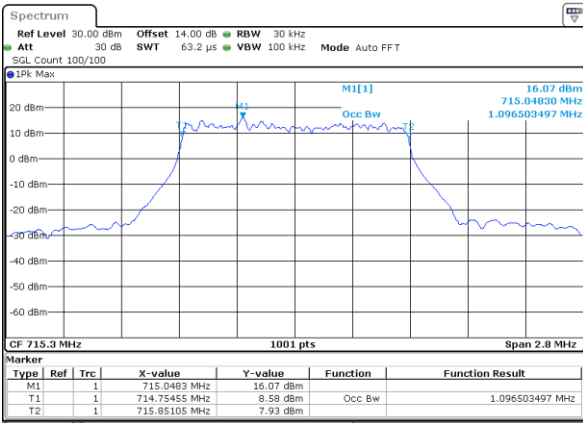
Date: 27_MAR.2022 19:26:16

Middle Channel / 3MHz / 64QAM



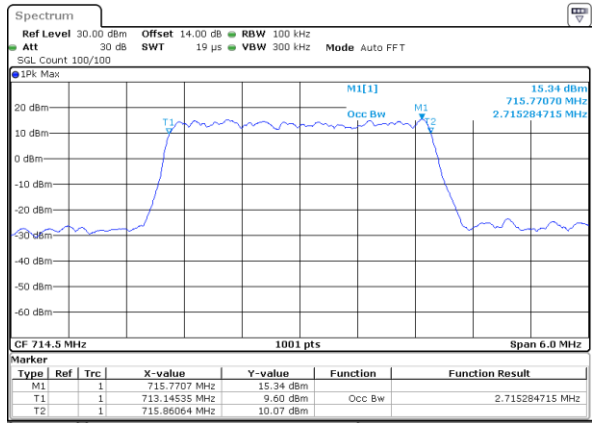
Date: 27_MAR.2022 17:40:12

Highest Channel / 1.4MHz / 64QAM



Date: 27_MAR.2022 19:28:08

Highest Channel / 3MHz / 64QAM

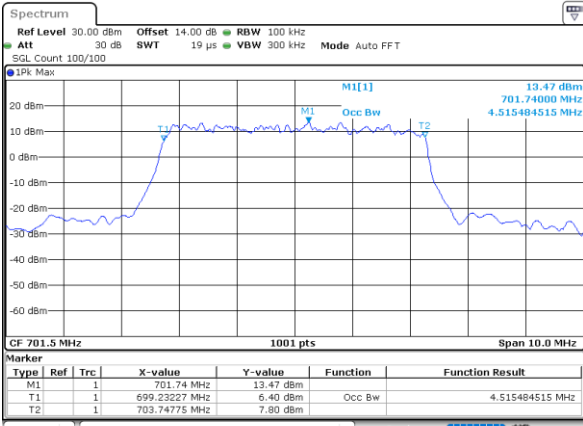


Date: 27_MAR.2022 17:42:03



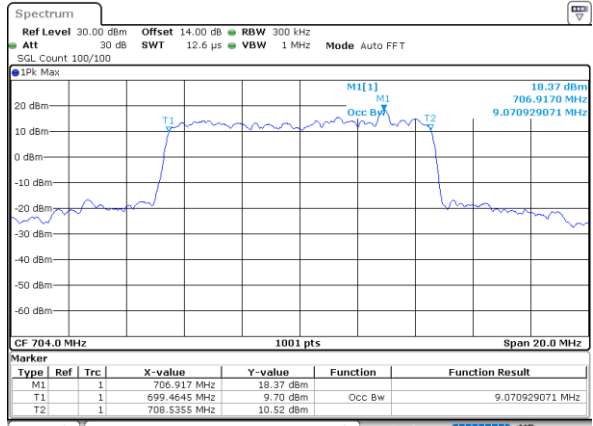
LTE Band 12

Lowest Channel / 5MHz / 64QAM



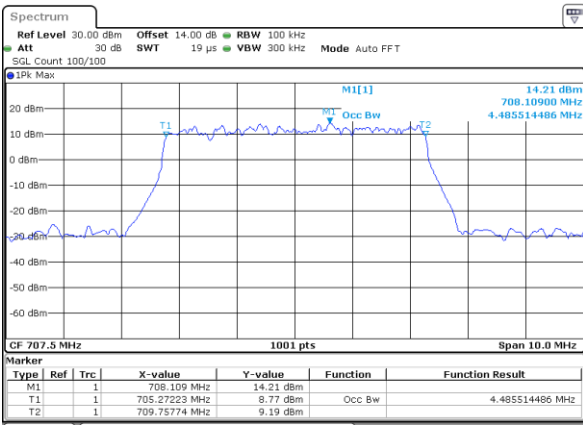
Date: 27_MAR.2022 17:46:33

Lowest Channel / 10MHz / 64QAM



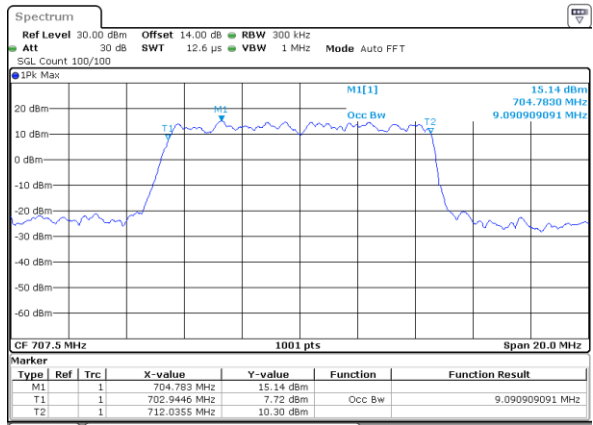
Date: 27_MAR.2022 18:41:27

Middle Channel / 5MHz / 64QAM



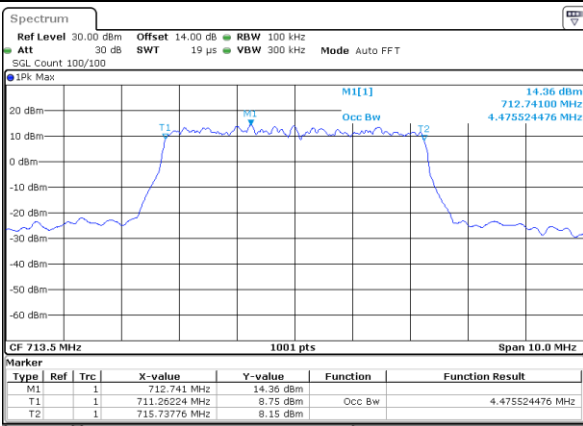
Date: 27_MAR.2022 17:50:49

Middle Channel / 10MHz / 64QAM



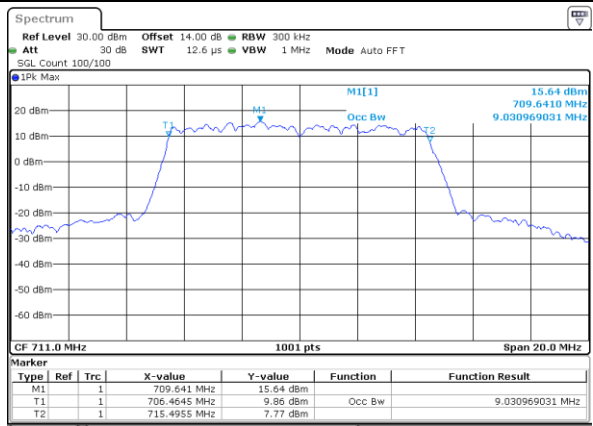
Date: 27_MAR.2022 18:45:45

Highest Channel / 5MHz / 64QAM



Date: 27_MAR.2022 17:52:41

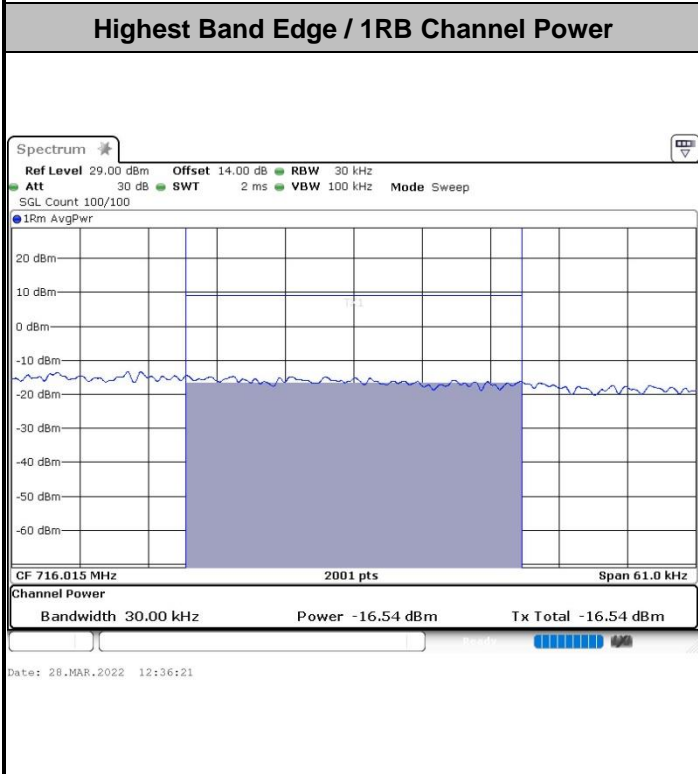
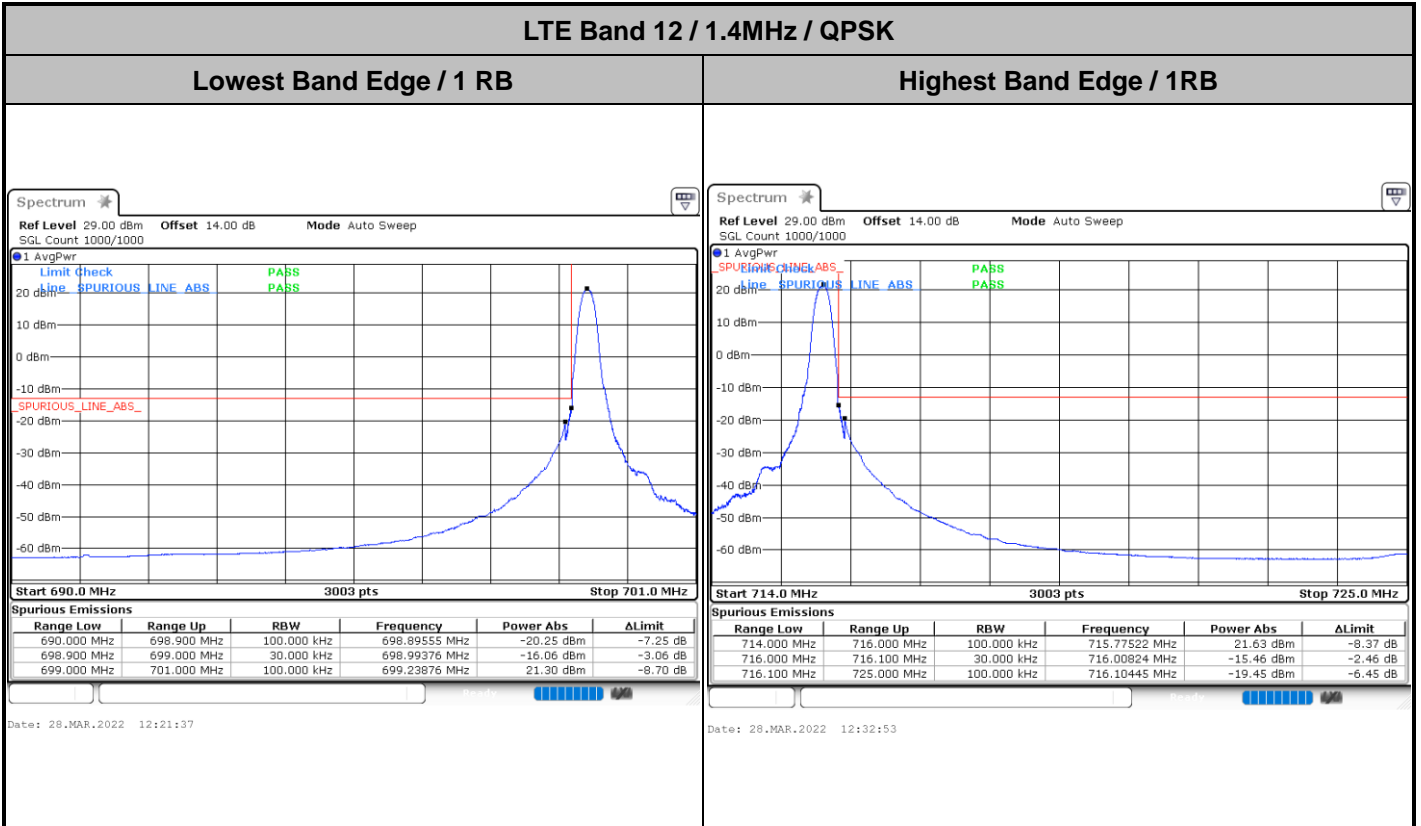
Highest Channel / 10MHz / 64QAM

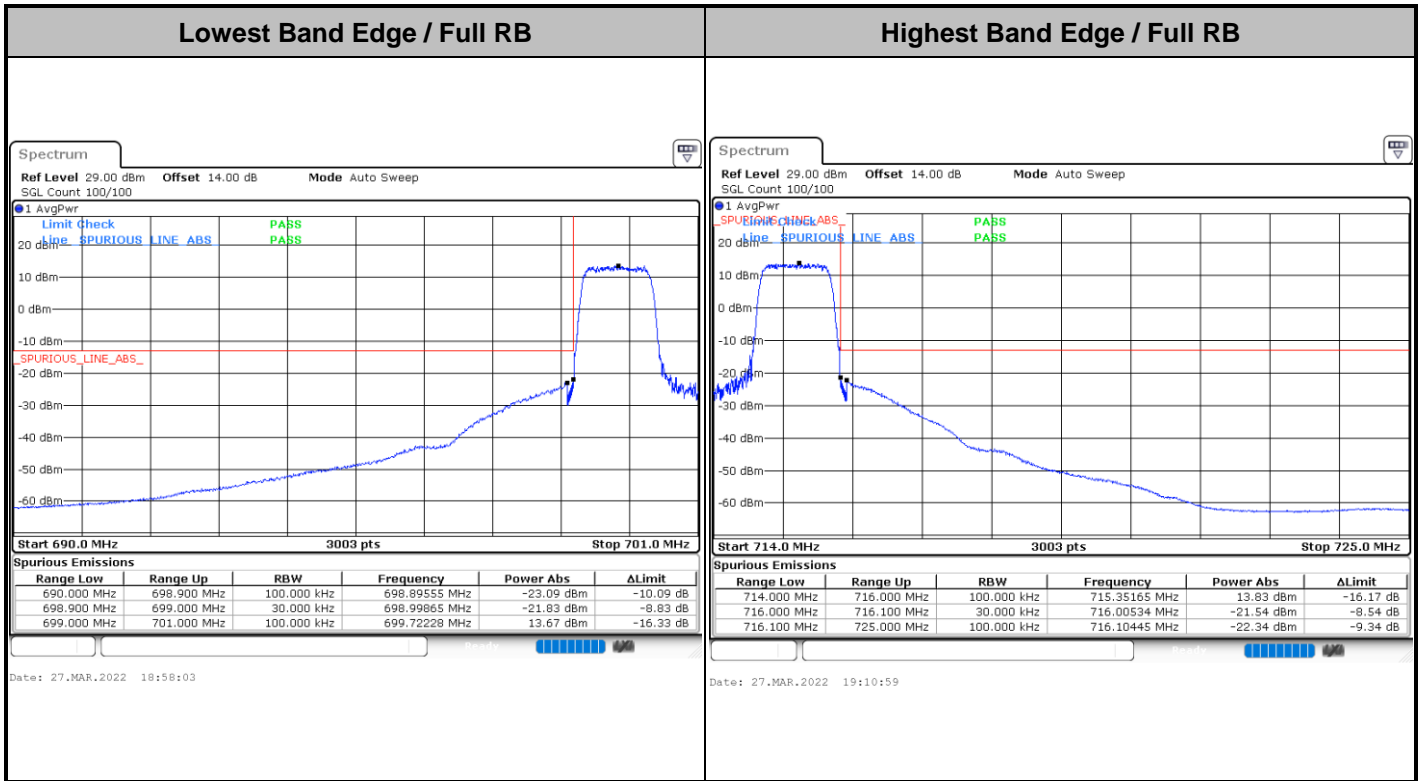


Date: 27_MAR.2022 18:47:36



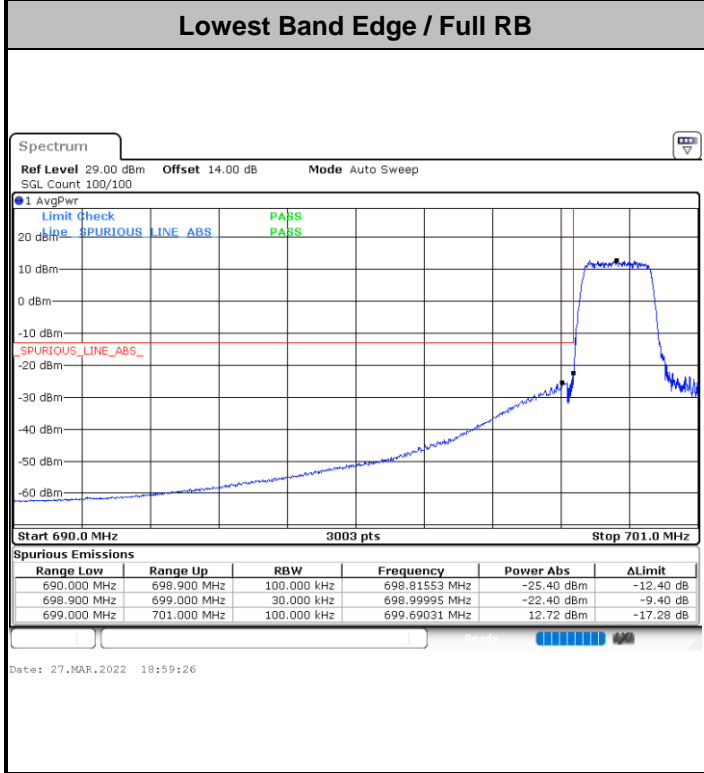
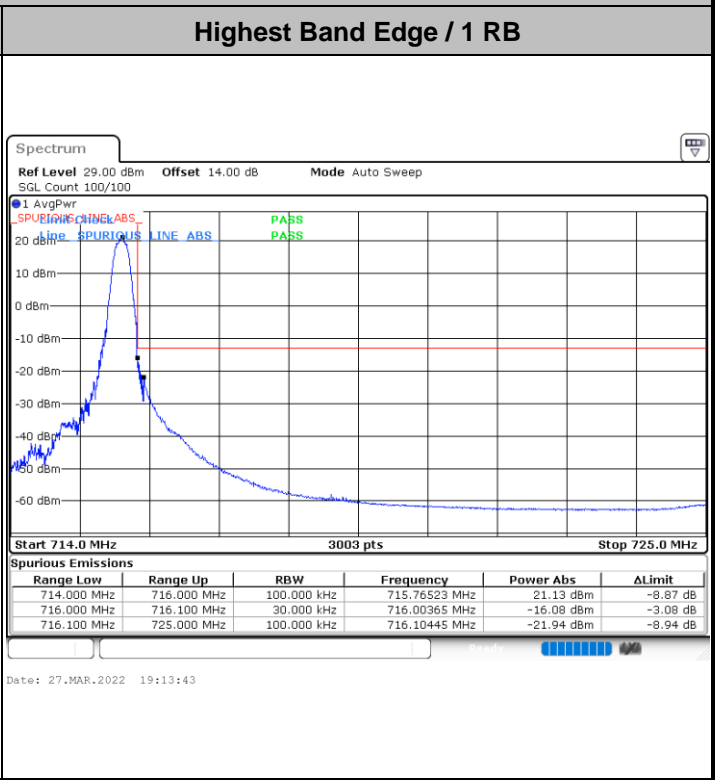
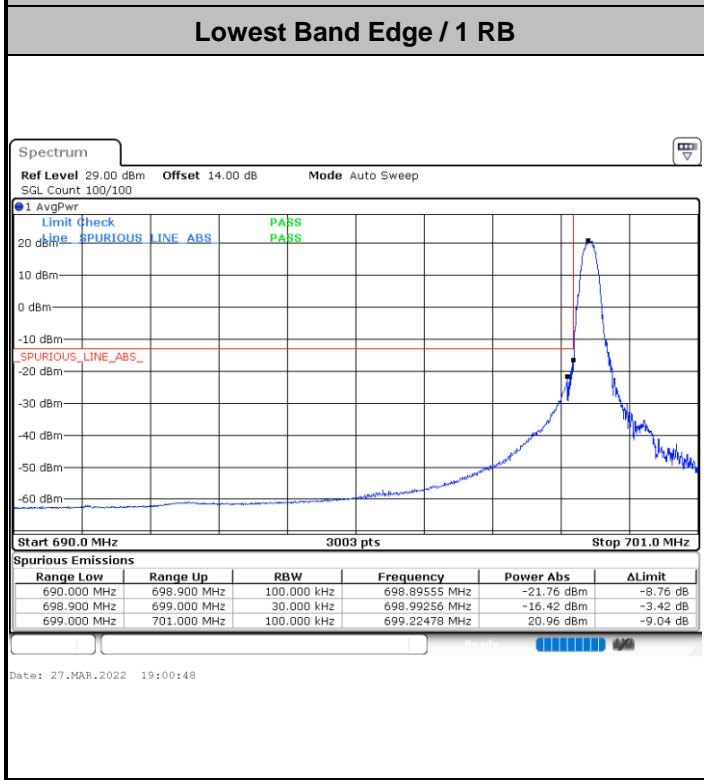
Conducted Band Edge







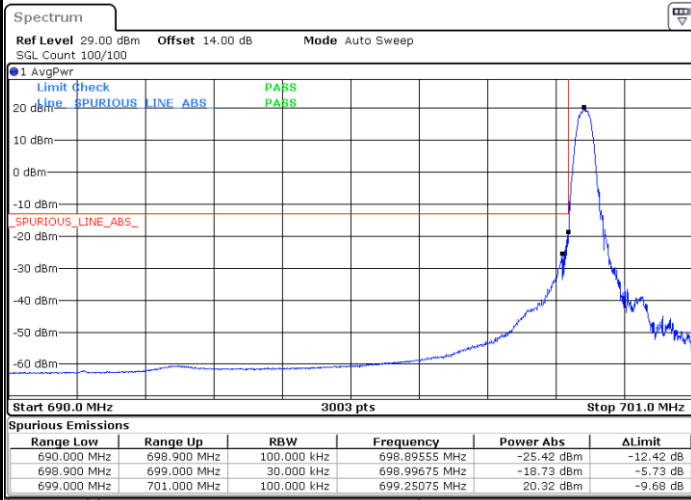
LTE Band 12 / 1.4MHz / 16QAM





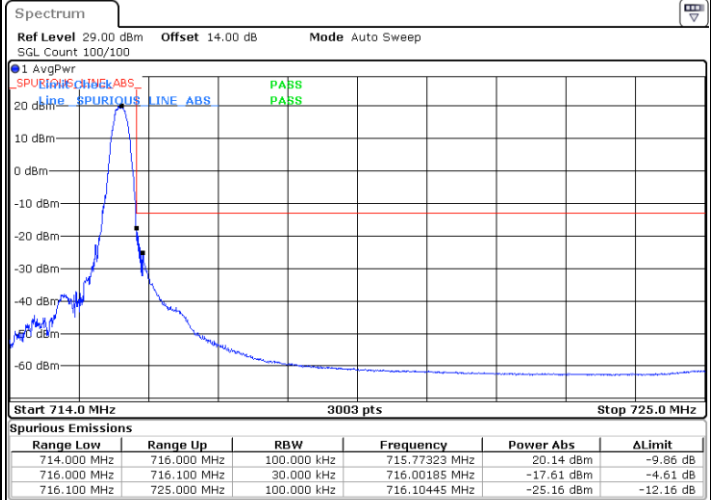
LTE Band 12 / 1.4MHz / 64QAM

Lowest Band Edge / 1 RB



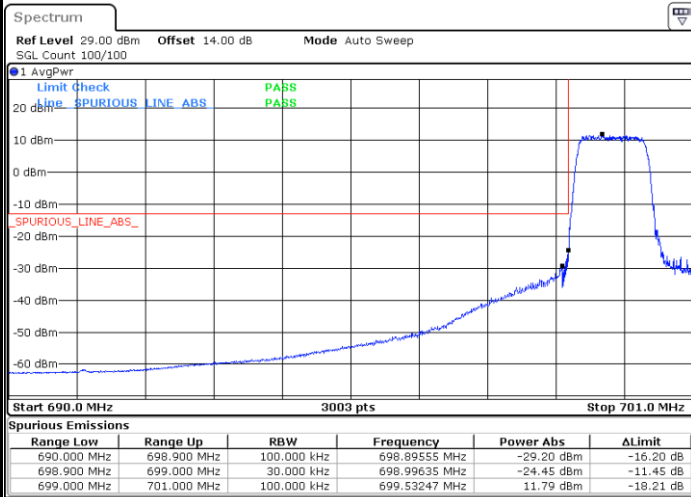
Date: 27.MAR.2022 19:24:49

Highest Band Edge / 1 RB



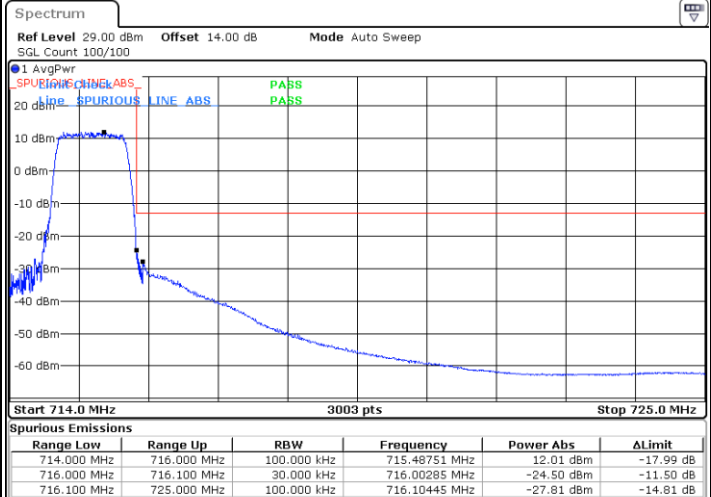
Date: 27.MAR.2022 19:30:59

Lowest Band Edge / Full RB



Date: 27.MAR.2022 19:19:24

Highest Band Edge / Full RB



Date: 27.MAR.2022 19:29:37