



FCC RF Test Report

APPLICANT : Sonim Technologies, Inc.
EQUIPMENT : Smartphone
BRAND NAME : Sonim
MODEL NAME : X802
FCC ID : WYPS3111
STANDARD : 47 CFR Part 22(H), 27(H), 27(F) , 27(N)
CLASSIFICATION : PCS Licensed Transmitter Held to Ear (PCE)
TEST DATE(S) : Nov. 11, 2024 ~ May 06, 2025

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.

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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. (Kunshan)

**No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300
People's Republic of China**



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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG4O2403C	Rev. 01	Initial issue of report	May 22, 2025



SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.4	§2.1046	Conducted Output Power	-	Report Only	-
	§22.913(a)(5)	Effective Radiated Power (Band 5) (Band 26)	ERP < 7 Watt	PASS	-
	§27.50(b)(10) §27.50(c)(10)	Effective Radiated Power (Band 12) (Band 13) (Band 71)	ERP < 3 Watt		-
3.5	§24.232(d)	Peak-to-Average Ratio	<13 dB	PASS	-
3.6	§2.1049	Occupied Bandwidth	-	Report Only	-
3.7	§2.1051 §22.917(a) §27.53(c)(2)(4) §27.53(g)	Conducted Band Edge Measurement (Band 5) (Band 12) (Band 13) (Band 26) (Band 71)	< 43+10log ₁₀ (P[Watts])	PASS	-
3.8	§2.1051 §22.917(a) §27.53(c)(2) §27.53(g)	Conducted Spurious Emission (Band 5) (Band 12) (Band 13) (Band 26) (Band 71)	< 43+10log ₁₀ (P[Watts])	PASS	-
3.9	§2.1055 §22.355	Frequency Stability Temperature & Voltage	< 2.5 ppm for Part 22	PASS	-
	§2.1055 §24.235 §27.54		Within Authorized Band		
4.4	§2.1053 §22.917(a) §27.53(c)(2) §27.53(f) §27.53(g)	Radiated Spurious Emission (Band 5) (Band 12) (Band 13) (Band 26) (Band 71)	< 43+10log ₁₀ (P[Watts])	PASS	Under limit 14.87 dB at 1559.500 MHz

Conformity Assessment Condition:

- The test results (PASS/FAIL) with all measurement uncertainty excluded are presented against the regulation limits or in accordance with the requirements stipulated by the applicant/manufacturer who shall bear all the risks of non-compliance that may potentially occur if measurement uncertainty is taken into account.
- The measurement uncertainty please refer to each test result in the section "Measurement Uncertainty"

Disclaimer:

The product specifications of the EUT presented in the test report that may affect the test assessments are declared by the manufacturer who shall take full responsibility for the authenticity.



1 General Description

1.1 Applicant

Sonim Technologies, Inc.

4445 Eastgate Mall,Suite200, San Diego,CA92121,USA

1.2 Manufacturer

Sonim Technologies, Inc.

4445 Eastgate Mall,Suite200, San Diego,CA92121,USA

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	Smartphone
Brand Name	Sonim
Model Name	X802
FCC ID	WYPS3111
HW Version	V1.0
SW Version	X80.0-01-14.0-42.18.00
EUT Stage	Identical Prototype

Remark: The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

1.4 Product Specification of Equipment Under Test

Standards-related Product Specification	
Tx Frequency	LTE Band 5 : 824 MHz ~ 849 MHz LTE Band 12 : 699 MHz ~ 716 MHz LTE Band 13 : 777 MHz ~ 787 MHz LTE Band 26 : 824 MHz ~ 849 MHz LTE Band 71: 663 MHz ~ 698 MHz
Rx Frequency	LTE Band 5 : 869 MHz ~ 894 MHz LTE Band 12 : 729 MHz ~ 746 MHz LTE Band 13 : 746 MHz ~ 756 MHz LTE Band 26 : 869 MHz ~ 894 MHz LTE Band 71: 617 MHz ~ 652 MHz
Bandwidth	LTE Band 5 : 1.4MHz / 3MHz / 5MHz / 10MHz LTE Band 12 : 1.4MHz / 3MHz / 5MHz / 10MHz LTE Band 13 : 5MHz / 10MHz LTE Band 26 : 1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz LTE Band 71 : 5MHz / 10MHz / 15MHz / 20MHz
Maximum Output Power to Antenna	<Ant1>: LTE Band 5 : 23.85 dBm LTE Band 12 : 24.16 dBm LTE Band 13 : 23.79 dBm LTE Band 26 : 23.87 dBm LTE Band 71 : 23.84 dBm
Antenna Gain	<Ant1>: LTE Band 5 : -6.26 dBi LTE Band 12 : -5.52 dBi LTE Band 13 : -4.41 dBi LTE Band 26 : -6.26 dBi LTE Band 71 : -6.75 dBi
Type of Modulation	QPSK / 16QAM / 64QAM / 256QAM

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 5		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	824.7 ~ 848.3	0.0347	1M09G7D	0.0271	1M10W7D
3	825.5 ~ 847.5	0.0340	2M74G7D	0.0270	2M72W7D
5	826.5 ~ 846.5	0.0347	4M51G7D	0.0275	4M57W7D
10	829.0 ~ 844.0	0.0350	9M01G7D	0.0274	9M01W7D
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	0.0439	1M10G7D	0.0344	1M11W7D
3	700.5 ~ 714.5	0.0437	2M75G7D	0.0348	2M72W7D
5	701.5 ~ 713.5	0.0442	4M51G7D	0.0345	4M50W7D
10	704.0 ~ 711.0	0.0446	9M07G7D	0.0348	9M05W7D
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	0.0509	4M50G7D	0.0410	4M46W7D
10	782.0	0.0528	8M97G7D	0.0404	8M83W7D
LTE Band 26		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	824.7 ~ 848.3	0.0340	1M09G7D	0.0266	1M10W7D
3	825.5 ~ 847.5	0.0337	2M74G7D	0.0268	2M72W7D
5	826.5 ~ 846.5	0.0348	4M51G7D	0.0267	4M57W7D
10	829.0 ~ 844.0	0.0340	9M01G7D	0.0267	9M01W7D
15	831.5 ~ 841.5	0.0352	13M5G7D	0.0274	13M4W7D
CH26790	824.0	0.0343	13M4G7D	0.0269	13M4W7D



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	0.0311	4M53G7D	0.0242	4M53W7D
10	668.0 ~ 693.0	0.0307	9M01G7D	0.0239	9M01W7D
15	670.5 ~ 690.5	0.0305	13M4G7D	0.0237	13M5W7D
20	673.0 ~ 688.0	0.0312	17M9G7D	0.0242	17M9W7D

Note:

1. LTE Band 26 overlaps the entire frequency range of LTE Band 5. Therefore, the test results provided in this report covers Band 5 and the portion of Band 26 subject to Part 22.
2. All modulations have been tested, and only the worst test results of PSK & QAM are shown in the report.

1.7 Testing Location

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

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

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	101, 1st Floor, Block B, Building 1, No. 2, Tengfeng 4th Road, Fenghuang Community, Fuyong Street, Baoan District, Shenzhen City, Guangdong Province 518103 People's Republic of China TEL: +86-755-86066985		
Test Site No.	Sporton Site No.	FCC Designation No.	FCC Test Firm Registration No.
	03CH01-SZ	CN1256	421272

Test data subcontracted: Radiated Spurious Emission test case in section 4.4 of this report

1.8 Test Software

Item	Site	Manufacture	Name	Version
1.	03CH01-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 22(H), 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

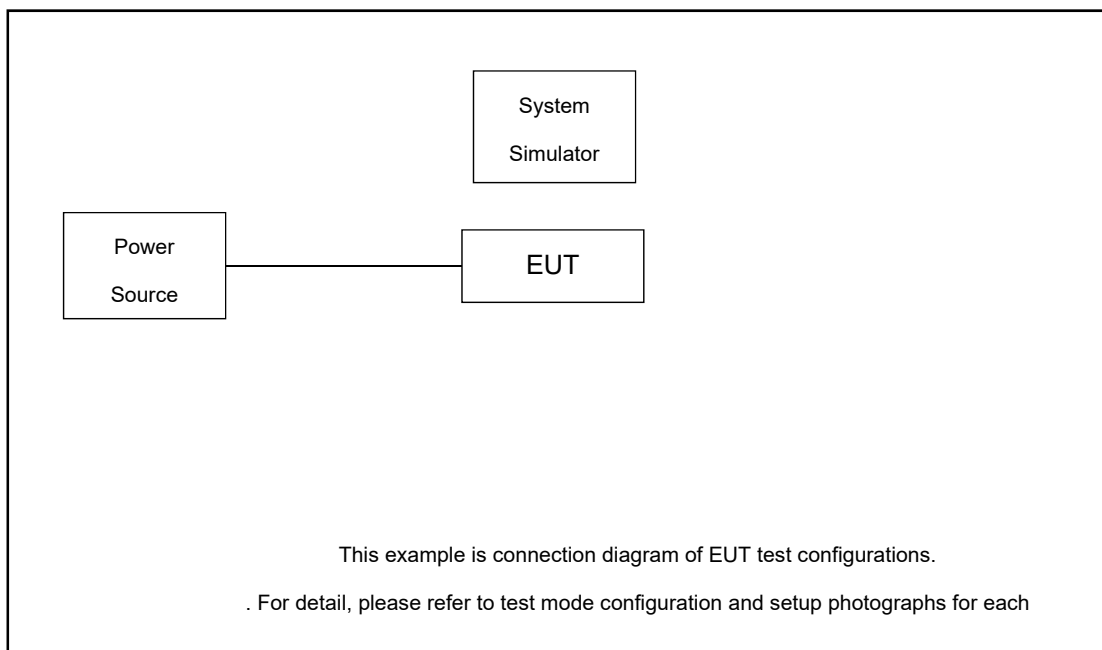
Antenna port conducted and radiated test items listed below are performed according to KDB 971168 D01 Power Meas License Digital Systems v03r01 with maximum output power.

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

Test Items	Band	Bandwidth (MHz)						Modulation				RB #			Test Channel		
		1.4	3	5	10	15	20	QPSK	16QAM	64QAM	256 QAM	1	Half	Full	L	M	H
Max. Output Power	5	v	v	v	v	-	-	v	v	v	v	v	v	v	v	v	v
	12	v	v	v	v	-	-	v	v	v	v	v	v	v	v	v	v
	13	-	-	v	v	-	-	v	v	v	v	v	v	v	v	v	v
	26	v	v	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
Peak-to-Average Ratio	12				v	-	-	v	v	v	v			v		v	
	13	-	-		v	-	-	v	v	v	v			v		v	
	26				v		-	v	v	v	v			v		v	
	71	-	-				v	v	v	v	v			v		v	
26dB and 99% Bandwidth	12	v	v	v	v	-	-	v	v					v		v	
	13	-	-	v	v	-	-	v	v					v		v	
	26	v	v	v	v	v	-	v	v					v		v	
	71	-	-	v	v	v	v	v	v					v		v	
Conducted Band Edge	12	v	v	v	v	-	-	v	v	v	v	v		v	v		v
	13	-	-	v	v	-	-	v	v	v	v	v		v	v		v
	26	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
Conducted Spurious Emission	12	v	v	v	v	-	-	v				v			v	v	v
	13	-	-	v	v	-	-	v				v			v	v	v
	26	v	v	v	v	v	-	v				v			v	v	v
	71	-	-	v	v	v	v	v				v			v	v	v
Frequency Stability	12	v				-	-	v						v		v	
	13	-	-	v		-	-	v						v		v	
	26				v		-	v						v		v	
	71	-	-	v				v						v		v	

Test Items	Band	Bandwidth (MHz)						Modulation				RB #			Test Channel		
		1.4	3	5	10	15	20	QPSK	16QAM	64QAM	256 QAM	1	Half	Full	L	M	H
E.R.P.	5	v	v	v	v	-	-	v	v	v	v	v	v	v	v	v	v
	12	v	v	v	v	-	-	v	v	v	v	v	v	v	v	v	v
	13	-	-	v	v	-	-	v	v	v	v	v	v	v	v	v	v
	26	v	v	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
Radiated Spurious Emission	12	Worst Case													v	v	v
	13	Worst Case													v	v	v
	26	Worst Case													v	v	v
	71	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	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 4.6 dB.

Example :

$$\begin{aligned}\text{Offset(dB)} &= \text{RF cable loss(dB)}. \\ &= 4.6 \text{ (dB)}\end{aligned}$$

2.5 Frequency List of Low/Middle/High Channels

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



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

LTE Band 13 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
10	Channel	-	23230	-
	Frequency	-	782	-
5	Channel	23205	23230	23255
	Frequency	779.5	782	784.5

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 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

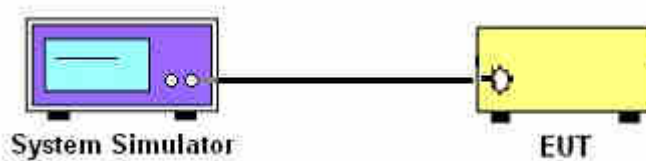
3 Conducted Test Items

3.1 Measuring Instruments

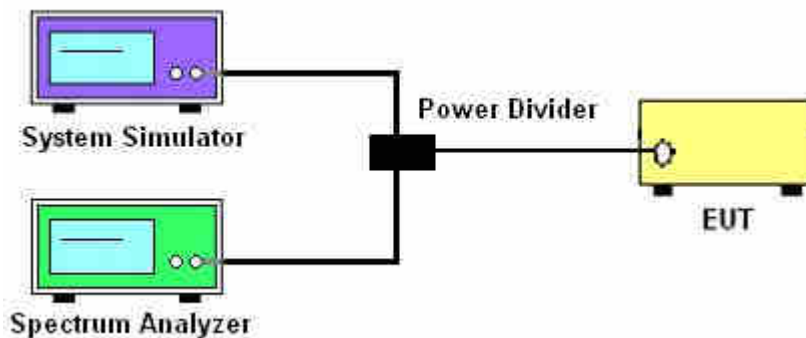
See list of measuring instruments of this test report.

3.2 Test Setup

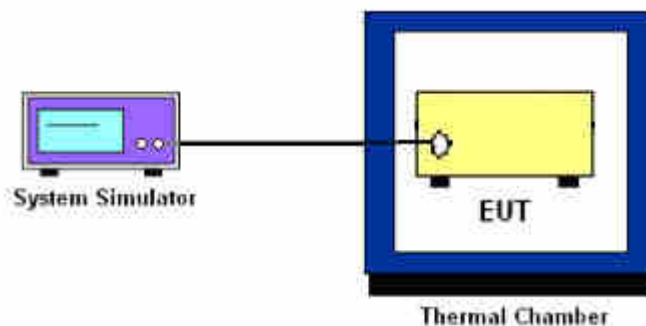
3.2.1 Conducted Output Power



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 7 Watts for LTE Band 5 and Band 26.

The ERP of mobile transmitters must not exceed 3 Watts for LTE Band 12, Band 13 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

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.

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

3.7.2 Test Procedures

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

Example:

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

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

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

8. 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 power divider.
The path loss was compensated to the results for each measurement.
Path Loss Factor = Cable + Power Divider, Where the cable and power divider are the total path loss for the system calibration.
4. The low/middle/high 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.

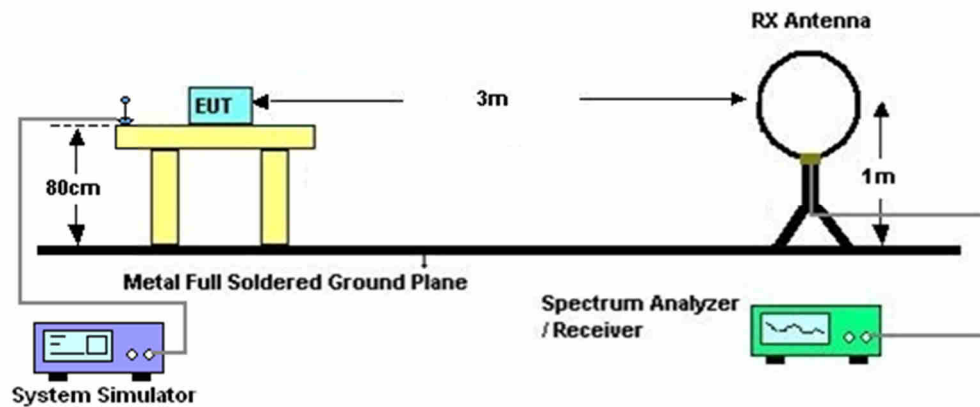
4 Radiated Test Items

4.1 Measuring Instruments

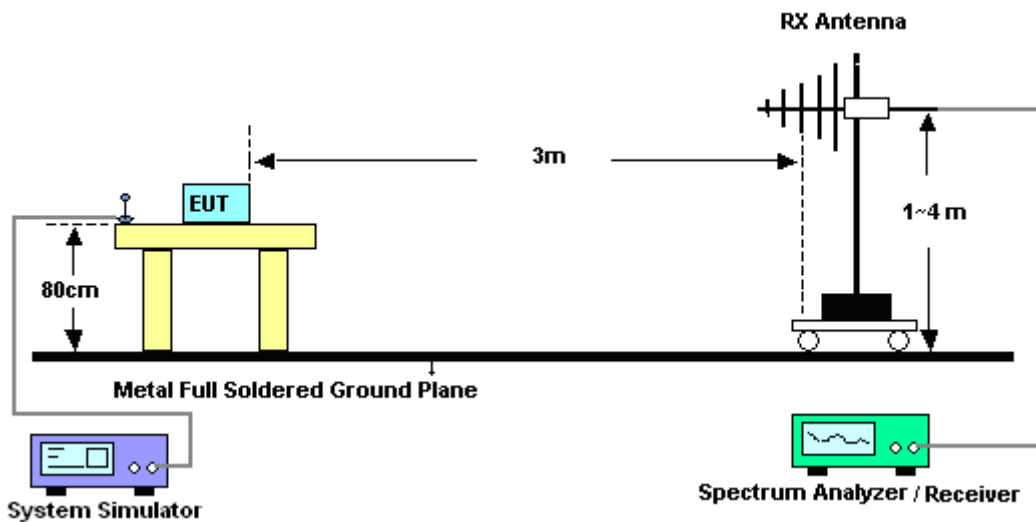
See list of measuring instruments of this test report.

4.2 Test Setup

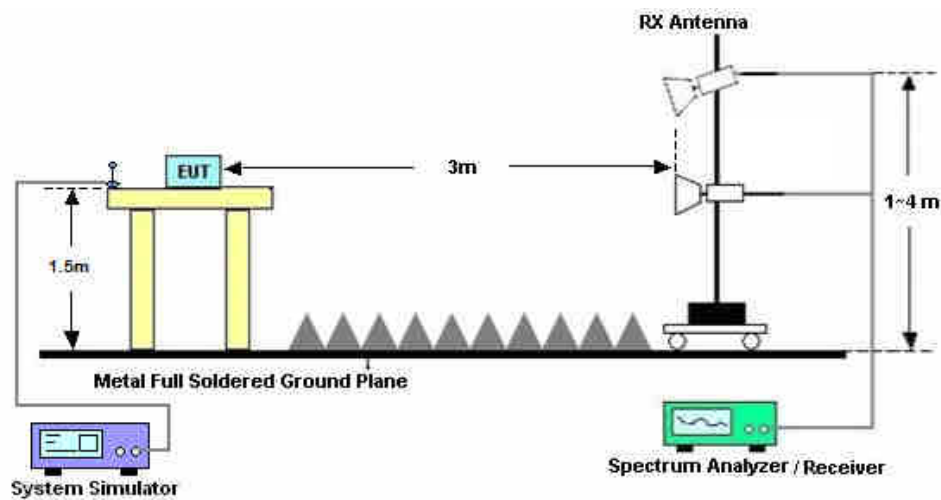
4.2.1 For radiated test below 30MHz



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. $\text{EIRP (dBm)} = \text{S.G. Power} - \text{Tx Cable Loss} + \text{Tx Antenna Gain}$
11. $\text{ERP (dBm)} = \text{EIRP} - 2.15$
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	101040	10Hz~40GHz	Oct. 10, 2024	Nov. 11, 2024~ May 06, 2025	Oct. 09, 2025	Conducted (TH01-KS)
Power divider	STI	STI08-0055	-	0.5~40GHz	NCR	Nov. 11, 2024~ May 06, 2025	NCR	Conducted (TH01-KS)
Temperature & humidity chamber	Hongzhan	LP-150U	H2014011440	-40~+150°C 20%~95%RH	Jul. 04, 2024	Nov. 11, 2024~ May 06, 2025	Jul. 03, 2025	Conducted (TH01-KS)
EXA Spectrum Analyzer	KEYSIGHT	N9010A	MY55150213	10Hz~44GHz	Jul. 03, 2024	Jan. 24, 2025	Jul. 02, 2025	Radiation (03CH01-SZ)
Loop Antenna	R&S	HFH2-Z2E	101141	9kHz~30MHz	Dec. 28, 2024	Jan. 24, 2025	Dec. 27, 2025	Radiation (03CH01-SZ)
HF Amplifier	KEYSIGHT	83017A	MY53270105	0.5GHz~26.5Ghz	Oct. 14, 2024	Jan. 24, 2025	Oct. 13, 2025	Radiation (03CH01-SZ)
Bilog Antenna	TeseQ	CBL6112D	35407	30MHz-2GHz	Oct. 24, 2023	Jan. 24, 2025	Oct. 23, 2025	Radiation (03CH01-SZ)
Double Ridge Horn Antenna	ETS-Lindgren	3117	00119436	1GHz~18GHz	Jul. 04, 2024	Jan. 24, 2025	Jul. 03, 2025	Radiation (03CH01-SZ)
SHF-EHF Horn	com-power	AH-840	101071	18Ghz-40GHz	Apr. 09, 2024	Jan. 24, 2025	Apr. 08, 2025	Radiation (03CH01-SZ)
LF Amplifier	EM Electronics	EM330	060788	20MHz-3GHz	Dec. 25, 2024	Jan. 24, 2025	Dec. 24, 2025	Radiation (03CH01-SZ)
HF Amplifier	MITEQ	AMF-7D-00 101800-30-1 0P-R	1943528	1GHz~18GHz	Oct. 14, 2024	Jan. 24, 2025	Oct. 13, 2025	Radiation (03CH01-SZ)
HF Amplifier	MITEQ	TTA1840-35 -HG	1871923	18GHz~40GHz	Jul. 03, 2024	Jan. 24, 2025	Jul. 02, 2025	Radiation (03CH01-SZ)
AC Power Source	Chroma	61601	616010001985	N/A	Oct. 14, 2024	Jan. 24, 2025	Oct. 13, 2025	Radiation (03CH01-SZ)
Turn Table	EM	EM1000	N/A	0~360 degree	NCR	Jan. 24, 2025	NCR	Radiation (03CH01-SZ)
Antenna Mast	EM	EM1000	N/A	1 m~4 m	NCR	Jan. 24, 2025	NCR	Radiation (03CH01-SZ)

NCR: No Calibration Required

6 Measurement Uncertainty

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 Conducted Measurement

Test Item	Uncertainty
Conducted Spurious Emission & Bandedge	± 2.22 dB
Occupied Channel Bandwidth	$\pm 0.1\%$
Conducted Power	± 0.50 dB
Peak to Average Ratio	± 0.90 dB
Frequency Stability	± 0.04 ppm

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	2.48 dB
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Uncertainty of Radiated Emission Measurement (1 GHz ~ 18 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	3.53 dB
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Uncertainty of Radiated Emission Measurement (18 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	4.02 dB
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----- THE END -----



Appendix A. Test Results of Conducted Test

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

Conducted Output Power(Average power) and ERP

LTE Band 5_Ant1:

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	ERP	ERP	ERP
Channel				20450	20525	20600	20450	20525	20600
Frequency (MHz)				829	836.5	844	829	836.5	844
10	QPSK	1	0	23.84	23.85	23.72	0.0349	0.0350	0.0340
10	QPSK	1	25	23.64	23.69	23.70	0.0333	0.0337	0.0338
10	QPSK	1	49	23.68	23.71	23.71	0.0337	0.0339	0.0339
10	QPSK	25	0	22.64	22.82	22.65	0.0265	0.0276	0.0265
10	QPSK	25	12	22.69	22.77	22.76	0.0268	0.0273	0.0272
10	QPSK	25	25	22.67	22.76	22.77	0.0267	0.0272	0.0273
10	QPSK	50	0	22.73	22.81	22.64	0.0270	0.0275	0.0265
10	16QAM	1	0	22.73	22.69	22.75	0.0270	0.0268	0.0272
10	16QAM	1	25	22.78	22.75	22.69	0.0274	0.0272	0.0268
10	16QAM	1	49	22.72	22.79	22.61	0.0270	0.0274	0.0263
10	16QAM	25	0	21.63	21.69	21.72	0.0210	0.0213	0.0214
10	16QAM	25	12	21.74	21.68	21.76	0.0215	0.0212	0.0216
10	16QAM	25	25	21.74	21.71	21.84	0.0215	0.0214	0.0220
10	16QAM	50	0	21.84	21.83	21.70	0.0220	0.0220	0.0213
10	64QAM	1	0	21.75	21.67	21.71	0.0216	0.0212	0.0214
10	64QAM	1	25	21.70	21.74	21.65	0.0213	0.0215	0.0211
10	64QAM	1	49	21.69	21.72	21.76	0.0213	0.0214	0.0216
10	64QAM	25	0	20.60	20.64	20.78	0.0166	0.0167	0.0173
10	64QAM	25	12	20.77	20.75	20.73	0.0172	0.0171	0.0171
10	64QAM	25	25	20.65	20.58	20.73	0.0167	0.0165	0.0171
10	64QAM	50	0	20.71	20.67	20.58	0.0170	0.0168	0.0165
10	256QAM	1	0	18.51	18.66	18.46	0.0102	0.0106	0.0101
10	256QAM	1	25	18.52	18.56	18.61	0.0103	0.0104	0.0105
10	256QAM	1	49	18.50	18.70	18.47	0.0102	0.0107	0.0101
10	256QAM	25	0	18.58	18.53	18.55	0.0104	0.0103	0.0103
10	256QAM	25	12	18.61	18.69	18.54	0.0105	0.0107	0.0103
10	256QAM	25	25	18.56	18.62	18.48	0.0104	0.0105	0.0102
10	256QAM	50	0	18.53	18.66	18.51	0.0103	0.0106	0.0102
Channel				20425	20525	20625	20425	20525	20625
Frequency (MHz)				826.5	836.5	846.5	826.5	836.5	846.5



5	QPSK	1	0	23.81	23.74	23.57	0.0347	0.0341	0.0328
5	QPSK	1	12	23.45	23.48	23.66	0.0319	0.0321	0.0335
5	QPSK	1	24	23.69	23.68	23.54	0.0337	0.0337	0.0326
5	QPSK	12	0	22.56	22.78	22.67	0.0260	0.0274	0.0267
5	QPSK	12	7	22.61	22.64	22.71	0.0263	0.0265	0.0269
5	QPSK	12	13	22.64	22.67	22.67	0.0265	0.0267	0.0267
5	QPSK	25	0	22.59	22.68	22.64	0.0262	0.0267	0.0265
5	16QAM	1	0	22.68	22.62	22.55	0.0267	0.0264	0.0259
5	16QAM	1	12	22.75	22.63	22.62	0.0272	0.0264	0.0264
5	16QAM	1	24	22.63	22.80	22.63	0.0264	0.0275	0.0264
5	16QAM	12	0	21.46	21.49	21.59	0.0202	0.0203	0.0208
5	16QAM	12	7	21.63	21.61	21.75	0.0210	0.0209	0.0216
5	16QAM	12	13	21.60	21.53	21.66	0.0208	0.0205	0.0211
5	16QAM	25	0	21.79	21.66	21.67	0.0218	0.0211	0.0212
5	64QAM	1	0	21.71	21.58	21.57	0.0214	0.0207	0.0207
5	64QAM	1	12	21.68	21.71	21.54	0.0212	0.0214	0.0206
5	64QAM	1	24	21.54	21.70	21.72	0.0206	0.0213	0.0214
5	64QAM	12	0	20.46	20.42	20.63	0.0160	0.0159	0.0167
5	64QAM	12	7	20.63	20.55	20.64	0.0167	0.0164	0.0167
5	64QAM	12	13	20.54	20.38	20.67	0.0163	0.0157	0.0168
5	64QAM	25	0	20.61	20.65	20.40	0.0166	0.0167	0.0158
5	256QAM	1	0	18.44	18.52	18.30	0.0101	0.0103	0.0097
5	256QAM	1	12	18.43	18.40	18.56	0.0100	0.0100	0.0104
5	256QAM	1	24	18.41	18.62	18.48	0.0100	0.0105	0.0102
5	256QAM	12	0	18.40	18.38	18.53	0.0100	0.0099	0.0103
5	256QAM	12	7	18.62	18.71	18.44	0.0105	0.0107	0.0101
5	256QAM	12	13	18.52	18.55	18.27	0.0103	0.0103	0.0097
5	256QAM	25	0	18.40	18.58	18.50	0.0100	0.0104	0.0102
Channel				20415	20525	20635	20415	20525	20635
Frequency (MHz)				825.5	836.5	847.5	825.5	836.5	847.5
3	QPSK	1	0	23.65	23.69	23.72	0.0334	0.0337	0.0340
3	QPSK	1	8	23.51	23.62	23.70	0.0324	0.0332	0.0338
3	QPSK	1	14	23.61	23.64	23.72	0.0331	0.0333	0.0340
3	QPSK	8	0	22.44	22.73	22.56	0.0253	0.0270	0.0260
3	QPSK	8	4	22.60	22.61	22.67	0.0262	0.0263	0.0267
3	QPSK	8	7	22.55	22.72	22.68	0.0259	0.0270	0.0267
3	QPSK	15	0	22.57	22.81	22.64	0.0261	0.0275	0.0265
3	16QAM	1	0	22.67	22.50	22.72	0.0267	0.0256	0.0270
3	16QAM	1	8	22.59	22.68	22.69	0.0262	0.0267	0.0268
3	16QAM	1	14	22.64	22.62	22.51	0.0265	0.0264	0.0257
3	16QAM	8	0	21.50	21.53	21.60	0.0204	0.0205	0.0208
3	16QAM	8	4	21.72	21.62	21.74	0.0214	0.0209	0.0215
3	16QAM	8	7	21.74	21.49	21.76	0.0215	0.0203	0.0216
3	16QAM	15	0	21.76	21.65	21.50	0.0216	0.0211	0.0204
3	64QAM	1	0	21.77	21.45	21.65	0.0217	0.0201	0.0211



3	64QAM	1	8	21.64	21.69	21.53	0.0210	0.0213	0.0205
3	64QAM	1	14	21.65	21.68	21.72	0.0211	0.0212	0.0214
3	64QAM	8	0	20.44	20.47	20.79	0.0160	0.0161	0.0173
3	64QAM	8	4	20.69	20.74	20.67	0.0169	0.0171	0.0168
3	64QAM	8	7	20.54	20.43	20.52	0.0163	0.0159	0.0163
3	64QAM	15	0	20.49	20.67	20.57	0.0161	0.0168	0.0164
3	256QAM	1	0	18.44	18.54	18.33	0.0101	0.0103	0.0098
3	256QAM	1	8	18.40	18.49	18.62	0.0100	0.0102	0.0105
3	256QAM	1	14	18.47	18.62	18.44	0.0101	0.0105	0.0101
3	256QAM	8	0	18.51	18.42	18.50	0.0102	0.0100	0.0102
3	256QAM	8	4	18.55	18.59	18.45	0.0103	0.0104	0.0101
3	256QAM	8	7	18.52	18.43	18.47	0.0103	0.0100	0.0101
3	256QAM	15	0	18.47	18.47	18.34	0.0101	0.0101	0.0098
Channel				20407	20525	20643	20407	20525	20643
Frequency (MHz)				824.7	836.5	848.3	824.7	836.5	848.3
1.4	QPSK	1	0	23.71	23.77	23.51	0.0339	0.0344	0.0324
1.4	QPSK	1	3	23.53	23.70	23.49	0.0325	0.0338	0.0322
1.4	QPSK	1	5	23.48	23.50	23.72	0.0321	0.0323	0.0340
1.4	QPSK	3	0	23.67	23.81	23.57	0.0336	0.0347	0.0328
1.4	QPSK	3	1	23.48	23.55	23.68	0.0321	0.0327	0.0337
1.4	QPSK	3	3	23.58	23.61	23.72	0.0329	0.0331	0.0340
1.4	QPSK	6	0	22.63	22.60	22.58	0.0264	0.0262	0.0261
1.4	16QAM	1	0	22.62	22.59	22.68	0.0264	0.0262	0.0267
1.4	16QAM	1	3	22.74	22.64	22.48	0.0271	0.0265	0.0255
1.4	16QAM	1	5	22.51	22.63	22.60	0.0257	0.0264	0.0262
1.4	16QAM	3	0	22.59	22.48	22.69	0.0262	0.0255	0.0268
1.4	16QAM	3	1	22.64	22.74	22.51	0.0265	0.0271	0.0257
1.4	16QAM	3	3	22.62	22.69	22.59	0.0264	0.0268	0.0262
1.4	16QAM	6	0	21.77	21.78	21.55	0.0217	0.0217	0.0206
1.4	64QAM	1	0	21.59	21.67	21.65	0.0208	0.0212	0.0211
1.4	64QAM	1	3	21.69	21.53	21.66	0.0213	0.0205	0.0211
1.4	64QAM	1	5	21.69	21.68	21.77	0.0213	0.0212	0.0217
1.4	64QAM	3	0	21.62	21.53	21.75	0.0209	0.0205	0.0216
1.4	64QAM	3	1	21.85	21.84	21.71	0.0221	0.0220	0.0214
1.4	64QAM	3	3	21.57	21.53	21.57	0.0207	0.0205	0.0207
1.4	64QAM	6	0	20.57	20.64	20.50	0.0164	0.0167	0.0162
1.4	256QAM	1	0	18.30	18.62	18.38	0.0097	0.0105	0.0099
1.4	256QAM	1	3	18.52	18.36	18.62	0.0103	0.0099	0.0105
1.4	256QAM	1	5	18.51	18.64	18.36	0.0102	0.0105	0.0099
1.4	256QAM	3	0	18.54	18.44	18.50	0.0103	0.0101	0.0102
1.4	256QAM	3	1	18.42	18.63	18.49	0.0100	0.0105	0.0102
1.4	256QAM	3	3	18.34	18.50	18.40	0.0098	0.0102	0.0100
1.4	256QAM	6	0	18.34	18.68	18.45	0.0098	0.0106	0.0101



LTE Band 12_Ant1:

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	ERP(W)		
Channel				23060	23095	23130			
Frequency (MHz)				704	707.5	711	L	M	H
10	QPSK	1	0	23.89	24.16	23.93	0.0419	0.0446	0.0423
10	QPSK	1	25	23.77	24.08	23.90	0.0407	0.0438	0.0420
10	QPSK	1	49	23.88	24.10	23.83	0.0418	0.0440	0.0413
10	QPSK	25	0	22.68	22.87	22.74	0.0317	0.0331	0.0321
10	QPSK	25	12	22.71	22.69	22.84	0.0319	0.0318	0.0329
10	QPSK	25	25	22.67	22.78	22.84	0.0316	0.0324	0.0329
10	QPSK	50	0	22.86	22.88	22.66	0.0330	0.0332	0.0316
10	16QAM	1	0	23.00	22.92	23.05	0.0341	0.0335	0.0345
10	16QAM	1	25	22.87	23.07	23.08	0.0331	0.0347	0.0348
10	16QAM	1	49	22.95	23.03	22.91	0.0337	0.0344	0.0334
10	16QAM	25	0	21.85	21.97	21.80	0.0262	0.0269	0.0259
10	16QAM	25	12	21.88	21.97	21.83	0.0264	0.0269	0.0261
10	16QAM	25	25	21.90	21.93	21.93	0.0265	0.0267	0.0267
10	16QAM	50	0	21.81	21.94	21.92	0.0259	0.0267	0.0266
10	64QAM	1	0	21.95	21.82	21.87	0.0268	0.0260	0.0263
10	64QAM	1	25	21.96	21.75	21.91	0.0269	0.0256	0.0265
10	64QAM	1	49	21.86	21.93	21.79	0.0262	0.0267	0.0258
10	64QAM	25	0	20.81	20.89	20.98	0.0206	0.0210	0.0214
10	64QAM	25	12	20.81	21.00	20.96	0.0206	0.0215	0.0213
10	64QAM	25	25	20.96	20.96	20.96	0.0213	0.0213	0.0213
10	64QAM	50	0	20.87	20.86	20.78	0.0209	0.0208	0.0205
10	256QAM	1	0	18.92	18.77	18.95	0.0133	0.0129	0.0134
10	256QAM	1	25	18.76	18.90	18.83	0.0129	0.0133	0.0131
10	256QAM	1	49	18.92	18.83	18.81	0.0133	0.0131	0.0130
10	256QAM	25	0	18.85	18.90	18.76	0.0131	0.0133	0.0129
10	256QAM	25	12	18.86	18.96	18.95	0.0132	0.0135	0.0134
10	256QAM	25	25	18.76	18.82	18.97	0.0129	0.0130	0.0135
10	256QAM	50	0	18.75	18.94	18.86	0.0128	0.0134	0.0132
Channel				23035	23095	23155	ERP(W)		
Frequency (MHz)				701.5	707.5	713.5	L	M	H
5	QPSK	1	0	23.77	24.12	23.95	0.0407	0.0442	0.0425
5	QPSK	1	12	23.69	24.05	23.69	0.0400	0.0435	0.0400
5	QPSK	1	24	23.88	24.01	23.62	0.0418	0.0431	0.0394
5	QPSK	12	0	22.63	22.87	22.61	0.0313	0.0331	0.0312
5	QPSK	12	7	22.70	22.62	22.84	0.0318	0.0313	0.0329
5	QPSK	12	13	22.68	22.58	22.68	0.0317	0.0310	0.0317
5	QPSK	25	0	22.78	22.71	22.60	0.0324	0.0319	0.0311
5	16QAM	1	0	22.81	22.71	23.05	0.0327	0.0319	0.0345
5	16QAM	1	12	22.72	22.90	23.00	0.0320	0.0333	0.0341
5	16QAM	1	24	22.91	22.92	22.74	0.0334	0.0335	0.0321
5	16QAM	12	0	21.75	21.95	21.67	0.0256	0.0268	0.0251
5	16QAM	12	7	21.87	21.84	21.70	0.0263	0.0261	0.0253
5	16QAM	12	13	21.71	21.75	21.92	0.0254	0.0256	0.0266
5	16QAM	25	0	21.81	21.85	21.86	0.0259	0.0262	0.0262



5	64QAM	1	0	21.78	21.83	21.85	0.0258	0.0261	0.0262
5	64QAM	1	12	21.97	21.65	21.83	0.0269	0.0250	0.0261
5	64QAM	1	24	21.87	21.92	21.72	0.0263	0.0266	0.0254
5	64QAM	12	0	20.67	20.70	20.80	0.0200	0.0201	0.0206
5	64QAM	12	7	20.76	21.00	20.96	0.0204	0.0215	0.0213
5	64QAM	12	13	20.88	20.92	20.81	0.0209	0.0211	0.0206
5	64QAM	25	0	20.76	20.72	20.79	0.0204	0.0202	0.0205
5	256QAM	1	0	18.72	18.67	18.87	0.0127	0.0126	0.0132
5	256QAM	1	12	18.77	18.76	18.69	0.0129	0.0129	0.0126
5	256QAM	1	24	18.88	18.83	18.76	0.0132	0.0131	0.0129
5	256QAM	12	0	18.65	18.78	18.75	0.0125	0.0129	0.0128
5	256QAM	12	7	18.85	18.79	18.79	0.0131	0.0129	0.0129
5	256QAM	12	13	18.74	18.74	18.96	0.0128	0.0128	0.0135
5	256QAM	25	0	18.57	18.79	18.77	0.0123	0.0129	0.0129
Channel				23025	23095	23165	ERP(W)		
Frequency (MHz)				700.5	707.5	714.5	L	M	H
3	QPSK	1	0	23.78	24.07	23.87	0.0408	0.0437	0.0417
3	QPSK	1	8	23.70	24.06	23.86	0.0401	0.0436	0.0416
3	QPSK	1	14	23.81	23.93	23.80	0.0411	0.0423	0.0410
3	QPSK	8	0	22.63	22.86	22.65	0.0313	0.0330	0.0315
3	QPSK	8	4	22.72	22.49	22.72	0.0320	0.0303	0.0320
3	QPSK	8	7	22.50	22.69	22.70	0.0304	0.0318	0.0318
3	QPSK	15	0	22.64	22.72	22.48	0.0314	0.0320	0.0303
3	16QAM	1	0	22.82	22.73	22.91	0.0327	0.0321	0.0334
3	16QAM	1	8	22.80	23.09	23.00	0.0326	0.0348	0.0341
3	16QAM	1	14	22.84	22.85	22.93	0.0329	0.0330	0.0336
3	16QAM	8	0	21.80	21.99	21.69	0.0259	0.0270	0.0252
3	16QAM	8	4	21.85	21.83	21.65	0.0262	0.0261	0.0250
3	16QAM	8	7	21.73	21.92	21.88	0.0255	0.0266	0.0264
3	16QAM	15	0	21.77	21.91	21.82	0.0257	0.0265	0.0260
3	64QAM	1	0	21.83	21.74	21.77	0.0261	0.0255	0.0257
3	64QAM	1	8	21.81	21.75	21.86	0.0259	0.0256	0.0262
3	64QAM	1	14	21.75	21.74	21.79	0.0256	0.0255	0.0258
3	64QAM	8	0	20.72	20.76	20.81	0.0202	0.0204	0.0206
3	64QAM	8	4	20.82	20.99	20.77	0.0207	0.0215	0.0204
3	64QAM	8	7	20.82	20.93	20.85	0.0207	0.0212	0.0208
3	64QAM	15	0	20.66	20.83	20.71	0.0199	0.0207	0.0201
3	256QAM	1	0	18.92	18.76	18.93	0.0133	0.0129	0.0134
3	256QAM	1	8	18.56	18.70	18.85	0.0123	0.0127	0.0131
3	256QAM	1	14	18.83	18.67	18.72	0.0131	0.0126	0.0127
3	256QAM	8	0	18.76	18.87	18.63	0.0129	0.0132	0.0125
3	256QAM	8	4	18.64	18.90	18.94	0.0125	0.0133	0.0134
3	256QAM	8	7	18.60	18.66	18.88	0.0124	0.0126	0.0132
3	256QAM	15	0	18.56	18.94	18.69	0.0123	0.0134	0.0126
Channel				23017	23095	23173	ERP(W)		
Frequency (MHz)				699.7	707.5	715.3	L	M	H
1.4	QPSK	1	0	23.70	23.95	23.77	0.0401	0.0425	0.0407
1.4	QPSK	1	3	23.75	24.06	23.83	0.0406	0.0436	0.0413
1.4	QPSK	1	5	23.67	24.09	23.76	0.0398	0.0439	0.0406
1.4	QPSK	3	0	23.80	24.03	23.94	0.0410	0.0433	0.0424



1.4	QPSK	3	1	23.76	24.04	23.81	0.0406	0.0434	0.0411
1.4	QPSK	3	3	23.68	23.99	23.84	0.0399	0.0429	0.0414
1.4	QPSK	6	0	22.67	22.86	22.65	0.0316	0.0330	0.0315
1.4	16QAM	1	0	22.98	22.91	22.89	0.0340	0.0334	0.0333
1.4	16QAM	1	3	22.67	23.02	23.04	0.0316	0.0343	0.0344
1.4	16QAM	1	5	22.79	22.96	22.73	0.0325	0.0338	0.0321
1.4	16QAM	3	0	22.66	22.67	22.60	0.0316	0.0316	0.0311
1.4	16QAM	3	1	22.80	22.89	22.99	0.0326	0.0333	0.0340
1.4	16QAM	3	3	22.74	22.98	22.93	0.0321	0.0340	0.0336
1.4	16QAM	6	0	21.81	21.74	21.77	0.0259	0.0255	0.0257
1.4	64QAM	1	0	21.85	21.64	21.79	0.0262	0.0249	0.0258
1.4	64QAM	1	3	21.83	21.76	21.71	0.0261	0.0256	0.0254
1.4	64QAM	1	5	21.85	21.75	21.68	0.0262	0.0256	0.0252
1.4	64QAM	3	0	21.67	21.74	21.90	0.0251	0.0255	0.0265
1.4	64QAM	3	1	21.82	21.83	21.69	0.0260	0.0261	0.0252
1.4	64QAM	3	3	21.74	21.75	21.89	0.0255	0.0256	0.0264
1.4	64QAM	6	0	20.72	20.84	20.79	0.0202	0.0207	0.0205
1.4	256QAM	1	0	18.84	18.62	18.76	0.0131	0.0124	0.0129
1.4	256QAM	1	3	18.66	18.83	18.70	0.0126	0.0131	0.0127
1.4	256QAM	1	5	18.92	18.63	18.83	0.0133	0.0125	0.0131
1.4	256QAM	3	0	18.65	18.84	18.64	0.0125	0.0131	0.0125
1.4	256QAM	3	1	18.68	18.82	18.78	0.0126	0.0130	0.0129
1.4	256QAM	3	3	18.73	18.74	18.76	0.0128	0.0128	0.0129
1.4	256QAM	6	0	18.75	18.78	18.66	0.0128	0.0129	0.0126

LTE Band 13_Ant1:

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	ERP(W)		
Channel				23230					
Frequency (MHz)				782			M		
10	QPSK	1	0		23.79			0.0528	
10	QPSK	1	25		23.49			0.0493	
10	QPSK	1	49		23.58			0.0504	
10	QPSK	25	0		22.84			0.0425	
10	QPSK	25	12		22.67			0.0408	
10	QPSK	25	25		22.64			0.0406	
10	QPSK	50	0		22.95			0.0436	
10	16QAM	1	0		22.52			0.0394	
10	16QAM	1	25		22.54			0.0396	
10	16QAM	1	49		22.62			0.0404	
10	16QAM	25	0		21.49			0.0311	
10	16QAM	25	12		21.68			0.0325	
10	16QAM	25	25		21.52			0.0313	
10	16QAM	50	0		21.78			0.0333	
10	64QAM	1	0		21.56			0.0316	
10	64QAM	1	25		21.73			0.0329	
10	64QAM	1	49		21.73			0.0329	
10	64QAM	25	0		20.56			0.0251	
10	64QAM	25	12		20.71			0.0260	



10	64QAM	25	25		20.57			0.0252	
10	64QAM	50	0		20.51			0.0248	
10	256QAM	1	0		18.47			0.0155	
10	256QAM	1	25		18.44			0.0154	
10	256QAM	1	49		18.52			0.0157	
10	256QAM	25	0		18.38			0.0152	
10	256QAM	25	12		18.70			0.0164	
10	256QAM	25	25		18.62			0.0161	
10	256QAM	50	0		18.51			0.0157	
Channel				23205	23230	23255	ERP(W)		
Frequency (MHz)				779.5	782	784.5	L	M	H
5	QPSK	1	0	23.62	23.60	23.51	0.0508	0.0506	0.0495
5	QPSK	1	12	23.32	23.36	23.46	0.0474	0.0479	0.0490
5	QPSK	1	24	23.49	23.63	23.38	0.0493	0.0509	0.0481
5	QPSK	12	0	22.51	22.73	22.63	0.0394	0.0414	0.0405
5	QPSK	12	7	22.59	22.48	22.57	0.0401	0.0391	0.0399
5	QPSK	12	13	22.61	22.64	22.52	0.0403	0.0406	0.0394
5	QPSK	25	0	22.53	22.61	22.61	0.0395	0.0403	0.0403
5	16QAM	1	0	22.69	22.61	22.55	0.0410	0.0403	0.0397
5	16QAM	1	12	22.61	22.63	22.63	0.0403	0.0405	0.0405
5	16QAM	1	24	22.59	22.68	22.51	0.0401	0.0409	0.0394
5	16QAM	12	0	21.41	21.44	21.40	0.0305	0.0308	0.0305
5	16QAM	12	7	21.46	21.56	21.66	0.0309	0.0316	0.0324
5	16QAM	12	13	21.41	21.31	21.66	0.0305	0.0299	0.0324
5	16QAM	25	0	21.68	21.55	21.50	0.0325	0.0316	0.0312
5	64QAM	1	0	21.57	21.43	21.49	0.0317	0.0307	0.0311
5	64QAM	1	12	21.50	21.62	21.39	0.0312	0.0321	0.0304
5	64QAM	1	24	21.36	21.51	21.67	0.0302	0.0313	0.0324
5	64QAM	12	0	20.46	20.27	20.64	0.0245	0.0235	0.0256
5	64QAM	12	7	20.47	20.46	20.55	0.0246	0.0245	0.0251
5	64QAM	12	13	20.48	20.22	20.52	0.0247	0.0232	0.0249
5	64QAM	25	0	20.57	20.45	20.32	0.0252	0.0245	0.0238
5	256QAM	1	0	18.27	18.50	18.28	0.0148	0.0156	0.0149
5	256QAM	1	12	18.32	18.21	18.50	0.0150	0.0146	0.0156
5	256QAM	1	24	18.23	18.63	18.44	0.0147	0.0161	0.0154
5	256QAM	12	0	18.41	18.26	18.46	0.0153	0.0148	0.0155
5	256QAM	12	7	18.41	18.67	18.37	0.0153	0.0163	0.0152
5	256QAM	12	13	18.40	18.40	18.26	0.0153	0.0153	0.0148
5	256QAM	25	0	18.19	18.52	18.30	0.0146	0.0157	0.0149



LTE Band 26_Ant1:

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	ERP(W)			
Channel				26790	26865	26915	26965				
Frequency (MHz)				824	831.5	836.5	841.5	Straddle Ch	L	M	H
15	QPSK	1	0	23.76	23.87	23.38	23.52	0.0343	0.0352	0.0314	0.0324
15	QPSK	1	37	23.43	23.55	23.45	23.51	0.0318	0.0327	0.0319	0.0324
15	QPSK	1	74	23.46	23.60	23.53	23.57	0.0320	0.0330	0.0325	0.0328
15	QPSK	36	0	22.67	22.75	22.53	22.57	0.0267	0.0272	0.0258	0.0261
15	QPSK	36	20	22.48	22.60	22.56	22.70	0.0255	0.0262	0.0260	0.0269
15	QPSK	36	39	22.52	22.55	22.49	22.64	0.0258	0.0259	0.0256	0.0265
15	QPSK	75	0	22.66	22.69	22.27	22.42	0.0266	0.0268	0.0243	0.0252
15	16QAM	1	0	22.64	22.67	22.59	22.63	0.0265	0.0267	0.0262	0.0264
15	16QAM	1	37	22.51	22.56	22.49	22.65	0.0257	0.0260	0.0256	0.0265
15	16QAM	1	74	22.70	22.79	22.45	22.58	0.0269	0.0274	0.0254	0.0261
15	16QAM	36	0	21.55	21.66	21.51	21.57	0.0206	0.0211	0.0204	0.0207
15	16QAM	36	20	21.39	21.47	21.46	21.62	0.0199	0.0202	0.0202	0.0209
15	16QAM	36	39	21.63	21.66	21.55	21.65	0.0210	0.0211	0.0206	0.0211
15	16QAM	75	0	21.58	21.72	21.46	21.59	0.0207	0.0214	0.0202	0.0208
15	64QAM	1	0	21.63	21.66	21.53	21.57	0.0210	0.0211	0.0205	0.0207
15	64QAM	1	37	21.50	21.58	21.62	21.65	0.0204	0.0207	0.0209	0.0211
15	64QAM	1	74	21.46	21.59	21.66	21.72	0.0202	0.0208	0.0211	0.0214
15	64QAM	36	0	20.40	20.49	20.40	20.61	0.0158	0.0161	0.0158	0.0166
15	64QAM	36	20	20.50	20.53	20.34	20.56	0.0162	0.0163	0.0156	0.0164
15	64QAM	36	39	20.39	20.44	20.54	20.74	0.0158	0.0160	0.0163	0.0171
15	64QAM	75	0	20.41	20.46	20.29	20.49	0.0158	0.0160	0.0154	0.0161
15	256QAM	1	0	18.45	18.52	18.29	18.46	0.0101	0.0103	0.0097	0.0101
15	256QAM	1	37	18.41	18.54	18.33	18.45	0.0100	0.0103	0.0098	0.0101
15	256QAM	1	74	18.56	18.62	18.15	18.32	0.0104	0.0105	0.0094	0.0098
15	256QAM	36	0	18.29	18.35	18.36	18.40	0.0097	0.0099	0.0099	0.0100
15	256QAM	36	20	18.44	18.49	18.41	18.52	0.0101	0.0102	0.0100	0.0103
15	256QAM	36	39	18.44	18.50	18.27	18.48	0.0101	0.0102	0.0097	0.0102
15	256QAM	75	0	18.57	18.60	18.32	18.51	0.0104	0.0104	0.0098	0.0102
Channel				/	26840	26915	26990	ERP(W)			
Frequency (MHz)					829	836.5	844	/	L	M	H
10	QPSK	1	0		23.68	23.73	23.34		0.0337	0.0340	0.0311
10	QPSK	1	25		23.47	23.56	23.48		0.0321	0.0327	0.0321
10	QPSK	1	49		23.41	23.52	23.47		0.0316	0.0324	0.0321
10	QPSK	25	0		22.27	22.61	22.54		0.0243	0.0263	0.0259
10	QPSK	25	12		22.60	22.53	22.64		0.0262	0.0258	0.0265
10	QPSK	25	25		22.40	22.51	22.49		0.0251	0.0257	0.0256
10	QPSK	50	0		22.54	22.48	22.43		0.0259	0.0255	0.0252
10	16QAM	1	0		22.67	22.46	22.54		0.0267	0.0254	0.0259
10	16QAM	1	25		22.57	22.41	22.65		0.0261	0.0251	0.0265
10	16QAM	1	49		22.61	22.58	22.42		0.0263	0.0261	0.0252



10	16QAM	25	0		21.31	21.65	21.55		0.0195	0.0211	0.0206
10	16QAM	25	12		21.72	21.41	21.63		0.0214	0.0200	0.0210
10	16QAM	25	25		21.51	21.67	21.66		0.0204	0.0212	0.0211
10	16QAM	50	0		21.80	21.58	21.50		0.0218	0.0207	0.0204
10	64QAM	1	0		21.77	21.50	21.51		0.0217	0.0204	0.0204
10	64QAM	1	25		21.55	21.39	21.48		0.0206	0.0199	0.0203
10	64QAM	1	49		21.45	21.40	21.63		0.0201	0.0199	0.0210
10	64QAM	25	0		20.38	20.44	20.53		0.0157	0.0160	0.0163
10	64QAM	25	12		20.44	20.34	20.58		0.0160	0.0156	0.0165
10	64QAM	25	25		20.62	20.25	20.66		0.0166	0.0153	0.0168
10	64QAM	50	0		20.59	20.40	20.42		0.0165	0.0158	0.0159
10	256QAM	1	0		18.44	18.33	18.41		0.0101	0.0098	0.0100
10	256QAM	1	25		18.22	18.33	18.33		0.0096	0.0098	0.0098
10	256QAM	1	49		18.50	18.62	18.29		0.0102	0.0105	0.0097
10	256QAM	25	0		18.42	18.16	18.40		0.0100	0.0094	0.0100
10	256QAM	25	12		18.23	18.41	18.43		0.0096	0.0100	0.0100
10	256QAM	25	25		18.42	18.41	18.45		0.0100	0.0100	0.0101
10	256QAM	50	0		18.30	18.48	18.46		0.0097	0.0102	0.0101
Channel					26815	26915	27015	ERP(W)			
Frequency (MHz)					826.5	836.5	846.5	L	M	H	
5	QPSK	1	0		23.60	23.83	23.44	0.0330	0.0348	0.0318	
5	QPSK	1	12		23.66	23.45	23.38	0.0335	0.0319	0.0314	
5	QPSK	1	24		23.59	23.55	23.55	0.0330	0.0327	0.0327	
5	QPSK	12	0		22.34	22.75	22.55	0.0247	0.0272	0.0259	
5	QPSK	12	7		22.42	22.53	22.69	0.0252	0.0258	0.0268	
5	QPSK	12	13		22.56	22.56	22.60	0.0260	0.0260	0.0262	
5	QPSK	25	0		22.61	22.56	22.23	0.0263	0.0260	0.0241	
5	16QAM	1	0		22.54	22.60	22.50	0.0259	0.0262	0.0256	
5	16QAM	1	12		22.59	22.51	22.52	0.0262	0.0257	0.0258	
5	16QAM	1	24		22.63	22.68	22.45	0.0264	0.0267	0.0254	
5	16QAM	12	0		21.27	21.47	21.57	0.0193	0.0202	0.0207	
5	16QAM	12	7		21.56	21.36	21.45	0.0207	0.0197	0.0201	
5	16QAM	12	13		21.62	21.50	21.51	0.0209	0.0204	0.0204	
5	16QAM	25	0		21.66	21.50	21.53	0.0211	0.0204	0.0205	
5	64QAM	1	0		21.54	21.46	21.50	0.0206	0.0202	0.0204	
5	64QAM	1	12		21.48	21.40	21.52	0.0203	0.0199	0.0205	
5	64QAM	1	24		21.52	21.59	21.51	0.0205	0.0208	0.0204	
5	64QAM	12	0		20.32	20.35	20.57	0.0155	0.0156	0.0164	
5	64QAM	12	7		20.51	20.51	20.50	0.0162	0.0162	0.0162	
5	64QAM	12	13		20.60	20.23	20.70	0.0166	0.0152	0.0169	
5	64QAM	25	0		20.65	20.42	20.37	0.0167	0.0159	0.0157	
5	256QAM	1	0		18.32	18.38	18.29	0.0098	0.0099	0.0097	
5	256QAM	1	12		18.33	18.48	18.24	0.0098	0.0102	0.0096	
5	256QAM	1	24		18.43	18.48	18.31	0.0100	0.0102	0.0098	
5	256QAM	12	0		18.34	18.28	18.42	0.0098	0.0097	0.0100	
5	256QAM	12	7		18.35	18.37	18.34	0.0099	0.0099	0.0098	
5	256QAM	12	13		18.43	18.36	18.38	0.0100	0.0099	0.0099	



5	256QAM	25	0		18.33	18.40	18.33		0.0098	0.0100	0.0098
Channel				/	26815	26915	27025	/	ERP(W)		
Frequency (MHz)					825.5	836.5	847.5		L	M	H
3	QPSK	1	0		23.60	23.69	23.45		0.0330	0.0337	0.0319
3	QPSK	1	8		23.59	23.49	23.43		0.0330	0.0322	0.0318
3	QPSK	1	14		23.48	23.44	23.55		0.0321	0.0318	0.0327
3	QPSK	8	0		22.29	22.65	22.38		0.0244	0.0265	0.0249
3	QPSK	8	4		22.38	22.50	22.58		0.0249	0.0256	0.0261
3	QPSK	8	7		22.43	22.40	22.63		0.0252	0.0251	0.0264
3	QPSK	15	0		22.63	22.60	22.26		0.0264	0.0262	0.0243
3	16QAM	1	0		22.52	22.55	22.61		0.0258	0.0259	0.0263
3	16QAM	1	8		22.58	22.50	22.57		0.0261	0.0256	0.0261
3	16QAM	1	14		22.55	22.69	22.40		0.0259	0.0268	0.0251
3	16QAM	8	0		21.49	21.60	21.54		0.0203	0.0208	0.0206
3	16QAM	8	4		21.65	21.39	21.53		0.0211	0.0199	0.0205
3	16QAM	8	7		21.59	21.65	21.48		0.0208	0.0211	0.0203
3	16QAM	15	0		21.80	21.65	21.57		0.0218	0.0211	0.0207
3	64QAM	1	0		21.75	21.62	21.36		0.0216	0.0209	0.0197
3	64QAM	1	8		21.49	21.46	21.64		0.0203	0.0202	0.0210
3	64QAM	1	14		21.51	21.50	21.74		0.0204	0.0204	0.0215
3	64QAM	8	0		20.42	20.31	20.58		0.0159	0.0155	0.0165
3	64QAM	8	4		20.35	20.50	20.35		0.0156	0.0162	0.0156
3	64QAM	8	7		20.49	20.46	20.73		0.0161	0.0160	0.0171
3	64QAM	15	0		20.55	20.46	20.45		0.0164	0.0160	0.0160
3	256QAM	1	0		18.44	18.32	18.40		0.0101	0.0098	0.0100
3	256QAM	1	8		18.32	18.47	18.40		0.0098	0.0101	0.0100
3	256QAM	1	14		18.30	18.46	18.17		0.0097	0.0101	0.0095
3	256QAM	8	0		18.55	18.18	18.27		0.0103	0.0095	0.0097
3	256QAM	8	4		18.26	18.29	18.44		0.0097	0.0097	0.0101
3	256QAM	8	7	18.49	18.49	18.32	0.0102	0.0102	0.0098		
3	256QAM	15	0	18.46	18.55	18.40	0.0101	0.0103	0.0100		
Channel				/	26797	26915	27033	/	ERP(W)		
Frequency (MHz)					824.7	836.5	848.3		L	M	H
1.4	QPSK	1	0		23.21	23.35	23.38		0.0302	0.0312	0.0314
1.4	QPSK	1	3		23.45	23.50	23.49		0.0319	0.0323	0.0322
1.4	QPSK	1	5		23.45	23.37	23.51		0.0319	0.0313	0.0324
1.4	QPSK	3	0		23.32	23.26	23.43		0.0310	0.0305	0.0318
1.4	QPSK	3	1		23.38	23.60	23.59		0.0314	0.0330	0.0330
1.4	QPSK	3	3		23.64	23.70	23.73		0.0333	0.0338	0.0340
1.4	QPSK	6	0		22.53	22.42	22.53		0.0258	0.0252	0.0258
1.4	16QAM	1	0		22.65	22.46	22.66		0.0265	0.0254	0.0266
1.4	16QAM	1	3		22.18	22.27	22.30		0.0238	0.0243	0.0245
1.4	16QAM	1	5		22.26	22.21	22.38		0.0243	0.0240	0.0249
1.4	16QAM	3	0		22.46	22.40	22.59		0.0254	0.0251	0.0262
1.4	16QAM	3	1		22.37	22.34	22.37		0.0249	0.0247	0.0249
1.4	16QAM	3	3	22.38	22.42	22.52	0.0249	0.0252	0.0258		
1.4	16QAM	6	0	21.25	21.27	21.39	0.0192	0.0193	0.0199		



1.4	64QAM	1	0	21.42	21.35	21.55	0.0200	0.0197	0.0206
1.4	64QAM	1	3	21.48	21.38	21.57	0.0203	0.0198	0.0207
1.4	64QAM	1	5	21.77	21.70	21.78	0.0217	0.0213	0.0217
1.4	64QAM	3	0	21.44	21.59	21.60	0.0201	0.0208	0.0208
1.4	64QAM	3	1	21.46	21.52	21.67	0.0202	0.0205	0.0212
1.4	64QAM	3	3	21.51	21.42	21.51	0.0204	0.0200	0.0204
1.4	64QAM	6	0	20.27	20.28	20.42	0.0153	0.0154	0.0159
1.4	256QAM	1	0	18.06	18.10	18.22	0.0092	0.0093	0.0096
1.4	256QAM	1	3	18.25	18.34	18.45	0.0096	0.0098	0.0101
1.4	256QAM	1	5	18.01	18.12	18.15	0.0091	0.0094	0.0094
1.4	256QAM	3	0	18.37	18.40	18.48	0.0099	0.0100	0.0102
1.4	256QAM	3	1	18.29	18.33	18.34	0.0097	0.0098	0.0098
1.4	256QAM	3	3	18.10	18.21	18.28	0.0093	0.0095	0.0097
1.4	256QAM	6	0	18.41	18.27	18.43	0.0100	0.0097	0.0100

LTE Band 71_Ant1:

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	ERP(W)		
Channel				133222	133322	133372			
Frequency (MHz)				673	683	688	L	M	H
20	QPSK	1	0	23.82	23.84	23.64	0.0310	0.0312	0.0298
20	QPSK	1	49	23.51	23.51	23.65	0.0289	0.0289	0.0299
20	QPSK	1	99	23.67	23.65	23.51	0.0300	0.0299	0.0289
20	QPSK	50	0	22.54	22.67	22.56	0.0231	0.0238	0.0232
20	QPSK	50	24	22.60	22.56	22.55	0.0234	0.0232	0.0232
20	QPSK	50	50	22.46	22.65	22.55	0.0227	0.0237	0.0232
20	QPSK	100	0	22.64	22.72	22.54	0.0237	0.0241	0.0231
20	16QAM	1	0	22.61	22.65	22.65	0.0235	0.0237	0.0237
20	16QAM	1	49	22.56	22.63	22.58	0.0232	0.0236	0.0233
20	16QAM	1	99	22.70	22.74	22.61	0.0240	0.0242	0.0235
20	16QAM	50	0	21.54	21.51	21.62	0.0184	0.0182	0.0187
20	16QAM	50	24	21.57	21.67	21.65	0.0185	0.0189	0.0188
20	16QAM	50	50	21.75	21.66	21.67	0.0193	0.0189	0.0189
20	16QAM	100	0	21.67	21.78	21.51	0.0189	0.0194	0.0182
20	64QAM	1	0	21.62	21.50	21.52	0.0187	0.0182	0.0183
20	64QAM	1	49	21.50	21.73	21.67	0.0182	0.0192	0.0189
20	64QAM	1	99	21.49	21.69	21.68	0.0182	0.0190	0.0190
20	64QAM	50	0	20.56	20.53	20.72	0.0147	0.0146	0.0152
20	64QAM	50	24	20.59	20.75	20.54	0.0148	0.0153	0.0146
20	64QAM	50	50	20.60	20.50	20.53	0.0148	0.0145	0.0146
20	64QAM	100	0	20.60	20.54	20.59	0.0148	0.0146	0.0148
20	256QAM	1	0	18.30	18.61	18.38	0.0087	0.0094	0.0089
20	256QAM	1	49	18.37	18.41	18.43	0.0089	0.0089	0.0090
20	256QAM	1	99	18.40	18.52	18.27	0.0089	0.0092	0.0086
20	256QAM	50	0	18.38	18.47	18.34	0.0089	0.0091	0.0088
20	256QAM	50	24	18.42	18.54	18.51	0.0090	0.0092	0.0091
20	256QAM	50	50	18.42	18.43	18.26	0.0090	0.0090	0.0086
20	256QAM	100	0	18.44	18.63	18.32	0.0090	0.0094	0.0087



Channel				133197	133297	133397	ERP(W)		
Frequency (MHz)				670.5	680.5	690.5	L	M	H
15	QPSK	1	0	23.75	23.73	23.54	0.0305	0.0304	0.0291
15	QPSK	1	37	23.35	23.42	23.64	0.0279	0.0283	0.0298
15	QPSK	1	74	23.69	23.63	23.29	0.0301	0.0297	0.0275
15	QPSK	36	0	22.45	22.56	22.58	0.0226	0.0232	0.0233
15	QPSK	36	20	22.39	22.42	22.47	0.0223	0.0225	0.0228
15	QPSK	36	39	22.35	22.63	22.41	0.0221	0.0236	0.0224
15	QPSK	75	0	22.48	22.67	22.54	0.0228	0.0238	0.0231
15	16QAM	1	0	22.43	22.56	22.47	0.0225	0.0232	0.0228
15	16QAM	1	37	22.54	22.56	22.36	0.0231	0.0232	0.0222
15	16QAM	1	74	22.58	22.64	22.43	0.0233	0.0237	0.0225
15	16QAM	36	0	21.48	21.34	21.41	0.0181	0.0175	0.0178
15	16QAM	36	20	21.43	21.60	21.61	0.0179	0.0186	0.0187
15	16QAM	36	39	21.57	21.57	21.60	0.0185	0.0185	0.0186
15	16QAM	75	0	21.51	21.58	21.37	0.0182	0.0185	0.0177
15	64QAM	1	0	21.51	21.40	21.53	0.0182	0.0178	0.0183
15	64QAM	1	37	21.38	21.55	21.62	0.0177	0.0184	0.0187
15	64QAM	1	74	21.47	21.57	21.58	0.0181	0.0185	0.0185
15	64QAM	36	0	20.56	20.53	20.59	0.0147	0.0146	0.0148
15	64QAM	36	20	20.40	20.65	20.53	0.0141	0.0150	0.0146
15	64QAM	36	39	20.40	20.44	20.55	0.0141	0.0143	0.0146
15	64QAM	75	0	20.46	20.35	20.40	0.0143	0.0140	0.0141
15	256QAM	1	0	18.10	18.40	18.27	0.0083	0.0089	0.0086
15	256QAM	1	37	18.28	18.20	18.25	0.0087	0.0085	0.0086
15	256QAM	1	74	18.18	18.51	18.06	0.0085	0.0091	0.0082
15	256QAM	36	0	18.25	18.28	18.35	0.0086	0.0087	0.0088
15	256QAM	36	20	18.21	18.43	18.37	0.0085	0.0090	0.0089
15	256QAM	36	39	18.20	18.24	18.12	0.0085	0.0086	0.0084
15	256QAM	75	0	18.38	18.63	18.31	0.0089	0.0094	0.0087
Channel				133172	133272	133422	ERP(W)		
Frequency (MHz)				668	678	693	L	M	H
10	QPSK	1	0	23.73	23.77	23.46	0.0304	0.0307	0.0286
10	QPSK	1	25	23.46	23.43	23.52	0.0286	0.0284	0.0290
10	QPSK	1	49	23.50	23.65	23.38	0.0288	0.0299	0.0281
10	QPSK	25	0	22.33	22.68	22.38	0.0220	0.0239	0.0223
10	QPSK	25	12	22.43	22.52	22.38	0.0225	0.0230	0.0223
10	QPSK	25	25	22.33	22.59	22.42	0.0220	0.0234	0.0225
10	QPSK	50	0	22.54	22.60	22.40	0.0231	0.0234	0.0224
10	16QAM	1	0	22.59	22.49	22.58	0.0234	0.0229	0.0233
10	16QAM	1	25	22.55	22.60	22.55	0.0232	0.0234	0.0232
10	16QAM	1	49	22.69	22.66	22.58	0.0239	0.0238	0.0233
10	16QAM	25	0	21.54	21.44	21.45	0.0184	0.0179	0.0180
10	16QAM	25	12	21.45	21.59	21.49	0.0180	0.0186	0.0182
10	16QAM	25	25	21.69	21.62	21.62	0.0190	0.0187	0.0187
10	16QAM	50	0	21.47	21.71	21.51	0.0181	0.0191	0.0182
10	64QAM	1	0	21.49	21.33	21.34	0.0182	0.0175	0.0175
10	64QAM	1	25	21.42	21.74	21.50	0.0179	0.0192	0.0182
10	64QAM	1	49	21.49	21.50	21.65	0.0182	0.0182	0.0188
10	64QAM	25	0	20.43	20.40	20.59	0.0142	0.0141	0.0148



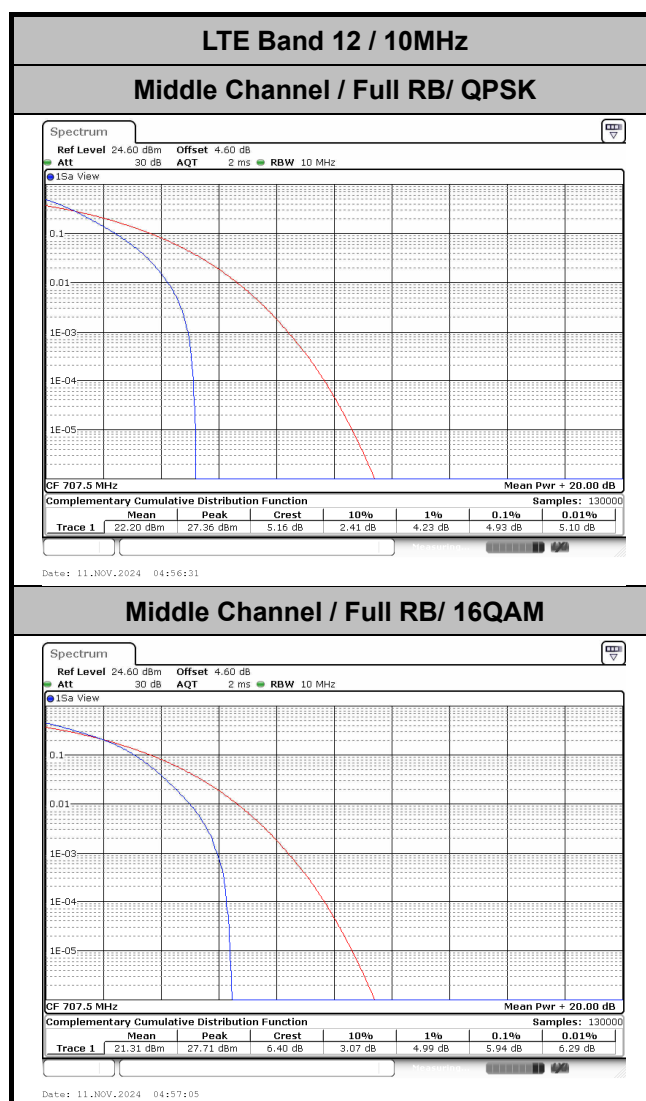
10	64QAM	25	12	20.57	20.61	20.46	0.0147	0.0148	0.0143
10	64QAM	25	25	20.40	20.43	20.40	0.0141	0.0142	0.0141
10	64QAM	50	0	20.58	20.39	20.46	0.0147	0.0141	0.0143
10	256QAM	1	0	18.24	18.52	18.22	0.0086	0.0092	0.0086
10	256QAM	1	25	18.16	18.27	18.43	0.0084	0.0086	0.0090
10	256QAM	1	49	18.26	18.34	18.10	0.0086	0.0088	0.0083
10	256QAM	25	0	18.27	18.31	18.29	0.0086	0.0087	0.0087
10	256QAM	25	12	18.26	18.55	18.32	0.0086	0.0092	0.0087
10	256QAM	25	25	18.24	18.35	18.27	0.0086	0.0088	0.0086
10	256QAM	50	0	18.25	18.43	18.13	0.0086	0.0090	0.0084
Channel				133147	133247	133447	ERP(W)		
Frequency (MHz)				665.5	675.5	695.5	L	M	H
5	QPSK	1	0	23.80	23.83	23.62	0.0309	0.0311	0.0296
5	QPSK	1	12	23.49	23.41	23.63	0.0288	0.0282	0.0297
5	QPSK	1	24	23.63	23.57	23.45	0.0297	0.0293	0.0285
5	QPSK	12	0	22.45	22.67	22.53	0.0226	0.0238	0.0231
5	QPSK	12	7	22.61	22.42	22.41	0.0235	0.0225	0.0224
5	QPSK	12	13	22.28	22.63	22.42	0.0218	0.0236	0.0225
5	QPSK	25	0	22.50	22.69	22.37	0.0229	0.0239	0.0222
5	16QAM	1	0	22.57	22.52	22.53	0.0233	0.0230	0.0231
5	16QAM	1	12	22.45	22.53	22.52	0.0226	0.0231	0.0230
5	16QAM	1	24	22.56	22.73	22.52	0.0232	0.0242	0.0230
5	16QAM	12	0	21.34	21.44	21.46	0.0175	0.0179	0.0180
5	16QAM	12	7	21.57	21.52	21.47	0.0185	0.0183	0.0181
5	16QAM	12	13	21.75	21.57	21.67	0.0193	0.0185	0.0189
5	16QAM	25	0	21.51	21.66	21.52	0.0182	0.0189	0.0183
5	64QAM	1	0	21.46	21.48	21.52	0.0180	0.0181	0.0183
5	64QAM	1	12	21.36	21.51	21.62	0.0176	0.0182	0.0187
5	64QAM	1	24	21.27	21.70	21.69	0.0173	0.0191	0.0190
5	64QAM	12	0	20.46	20.53	20.71	0.0143	0.0146	0.0152
5	64QAM	12	7	20.54	20.75	20.35	0.0146	0.0153	0.0140
5	64QAM	12	13	20.39	20.38	20.45	0.0141	0.0141	0.0143
5	64QAM	25	0	20.60	20.55	20.48	0.0148	0.0146	0.0144
5	256QAM	1	0	18.08	18.55	18.40	0.0083	0.0092	0.0089
5	256QAM	1	12	18.37	18.21	18.34	0.0089	0.0085	0.0088
5	256QAM	1	24	18.26	18.31	18.14	0.0086	0.0087	0.0084
5	256QAM	12	0	18.33	18.40	18.12	0.0088	0.0089	0.0084
5	256QAM	12	7	18.34	18.41	18.35	0.0088	0.0089	0.0088
5	256QAM	12	13	18.25	18.38	18.10	0.0086	0.0089	0.0083
5	256QAM	25	0	18.36	18.58	18.31	0.0088	0.0093	0.0087

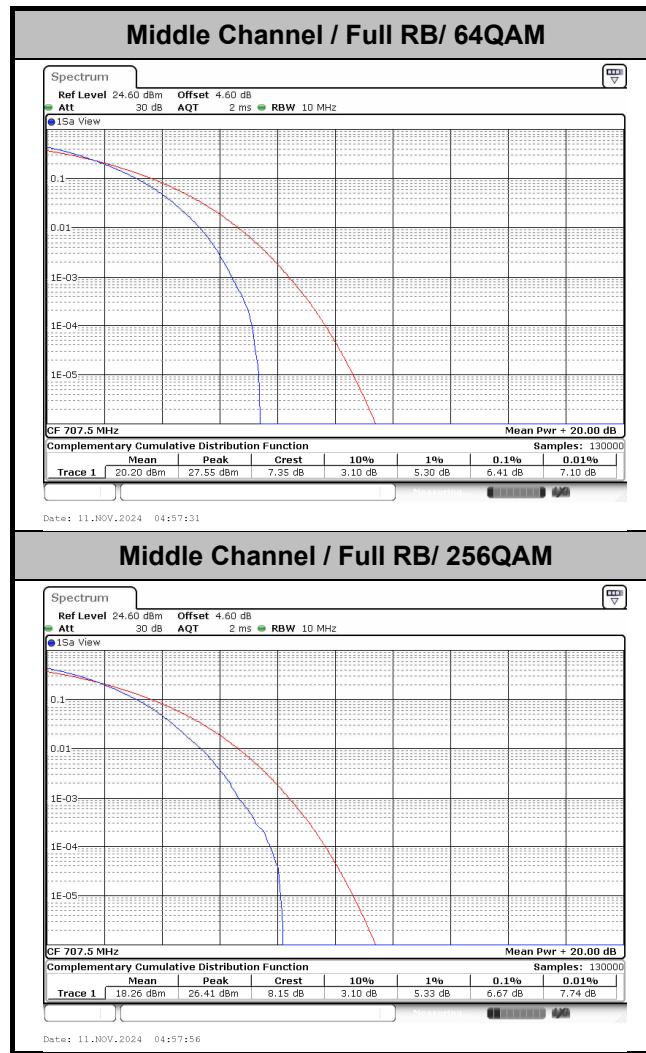


LTE Band 12

Peak-to-Average Ratio

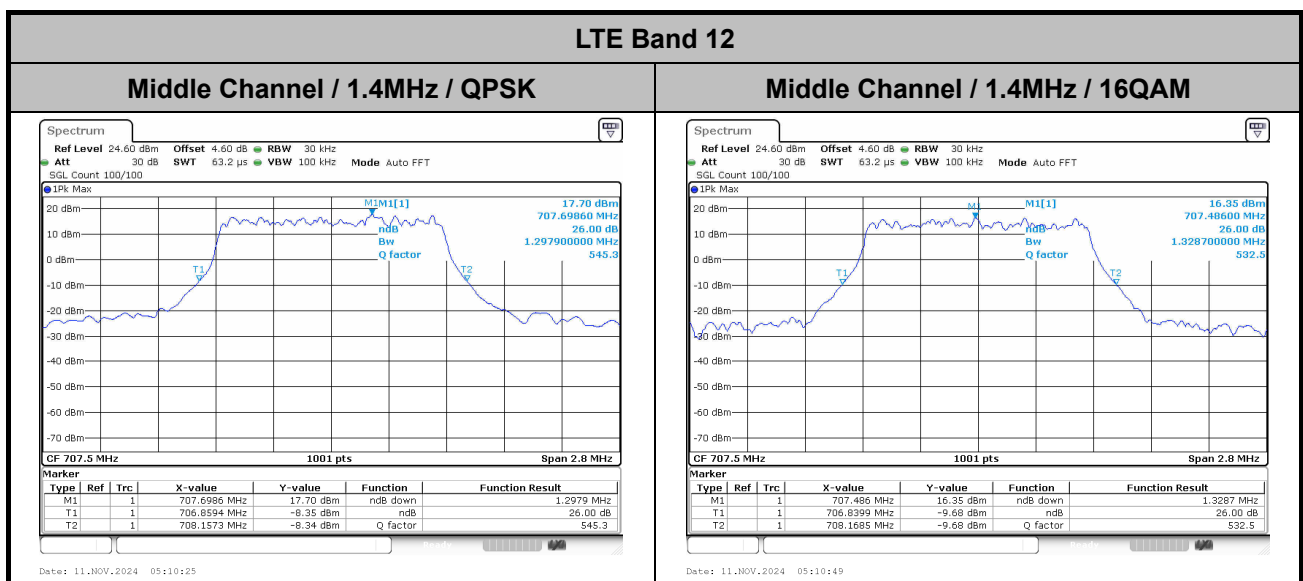
Mode	LTE Band 12 / 10MHz				
Mod.	QPSK	16QAM	64QAM	256QAM	Limit: 13dB
RB Size	Full RB	Full RB	Full RB	Full RB	Result
Middle CH	4.93	5.94	6.41	6.67	PASS





**26dB Bandwidth**

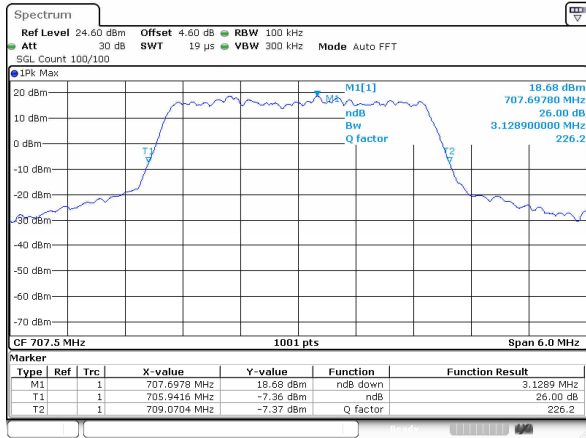
Mode	LTE Band 12 : 26dB BW(MHz)	
BW	1.4MHz	
Mod.	QPSK	16QAM
Middle CH	1.30	1.33
BW	3MHz	
Mod.	QPSK	16QAM
Middle CH	3.13	3.00
BW	5MHz	
Mod.	QPSK	16QAM
Middle CH	4.90	5.10
BW	10MHz	
Mod.	QPSK	16QAM
Middle CH	9.95	9.89



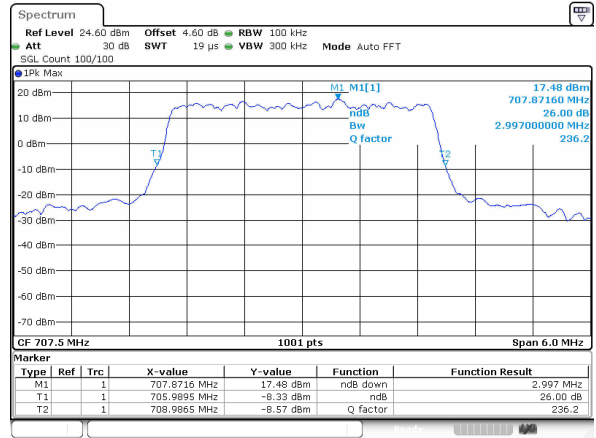


LTE Band 12

Middle Channel / 3MHz / QPSK

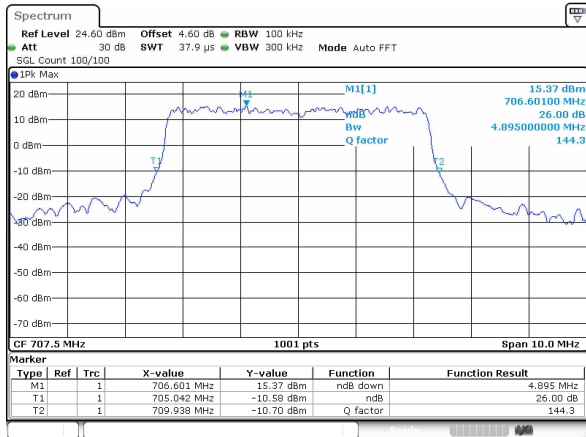


Middle Channel / 3MHz / 16QAM

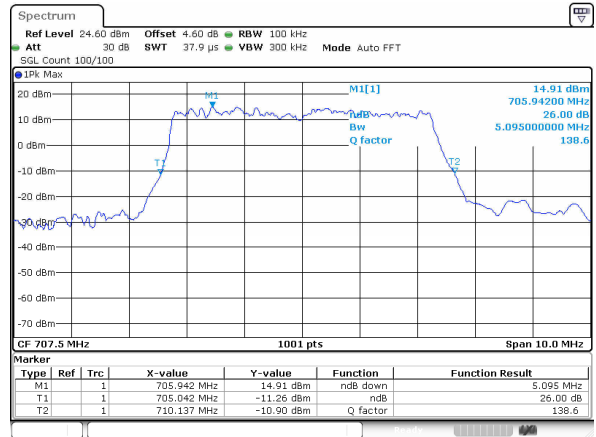


LTE Band 12

Middle Channel / 5MHz / QPSK

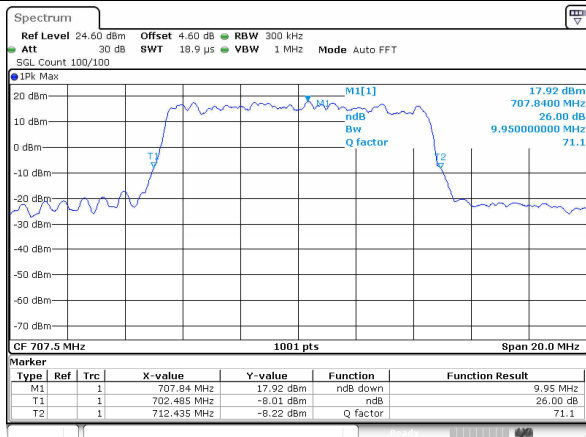


Middle Channel / 5MHz / 16QAM

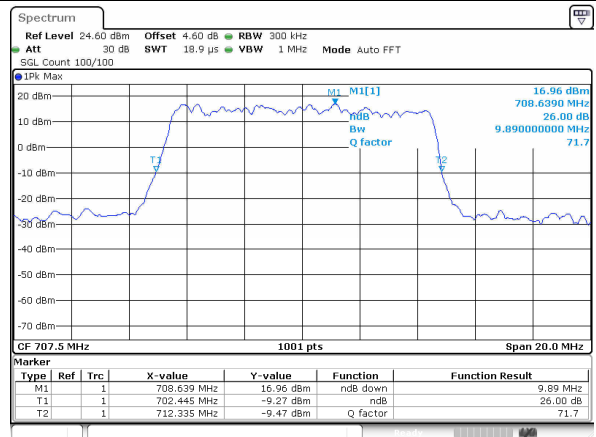


LTE Band 12

Middle Channel / 10MHz / QPSK



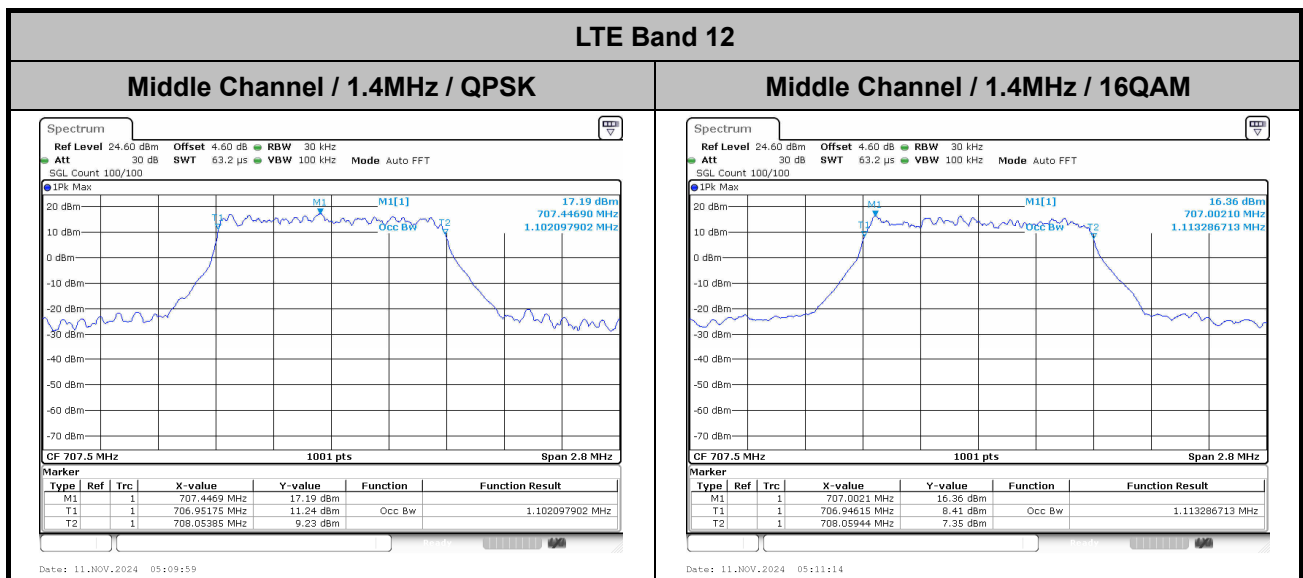
Middle Channel / 10MHz / 16QAM





Occupied Bandwidth

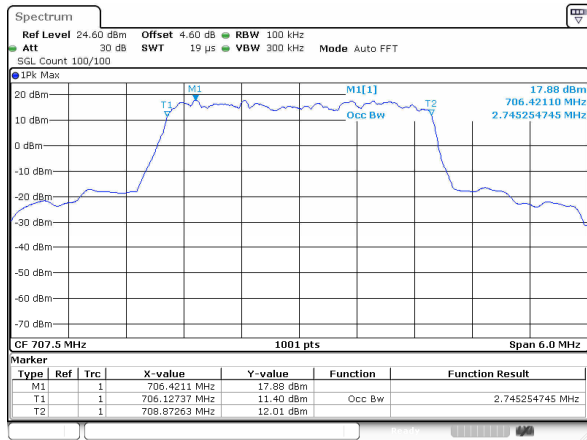
Mode	LTE Band 12 : 99%OBW(MHz)	
BW	1.4MHz	
Mod.	QPSK	16QAM
Middle CH	1.10	1.11
BW	3MHz	
Mod.	QPSK	16QAM
Middle CH	2.75	2.72
BW	5MHz	
Mod.	QPSK	16QAM
Middle CH	4.51	4.50
BW	10MHz	
Mod.	QPSK	16QAM
Middle CH	9.07	9.05



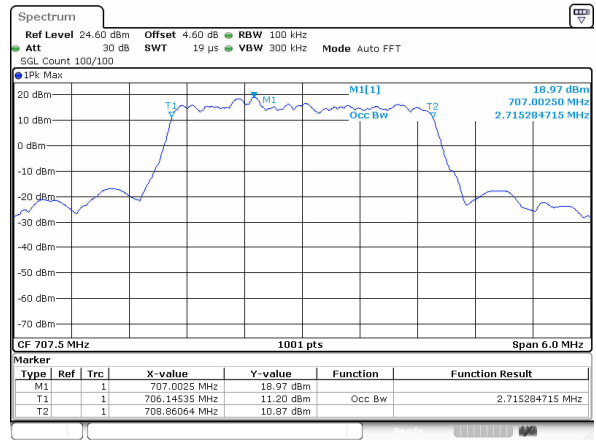


LTE Band 12

Middle Channel / 3MHz / QPSK

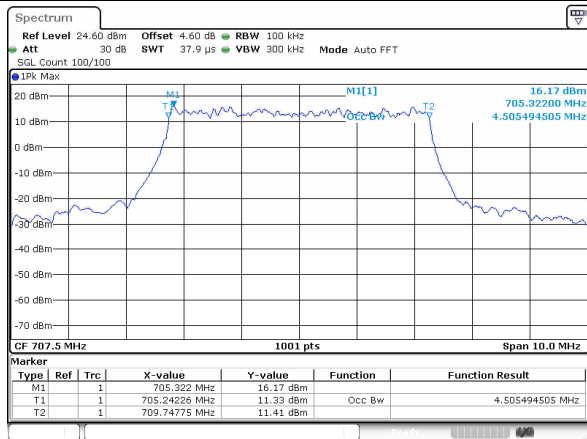


Middle Channel / 3MHz / 16QAM

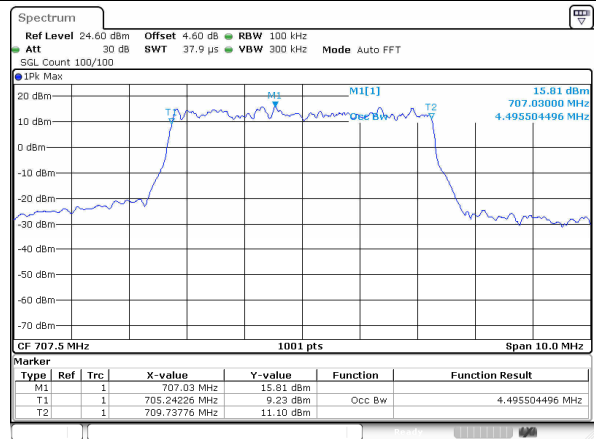


LTE Band 12

Middle Channel / 5MHz / QPSK

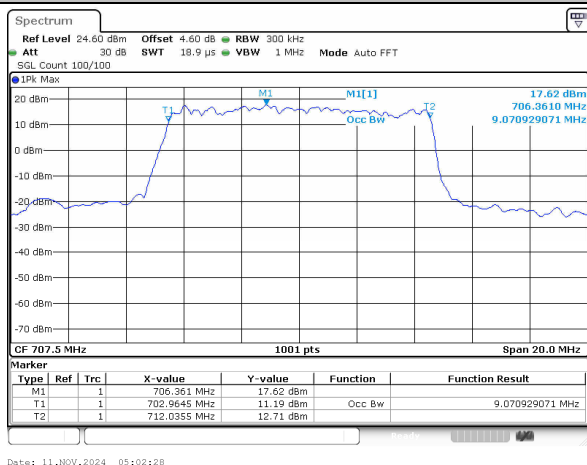


Middle Channel / 5MHz / 16QAM

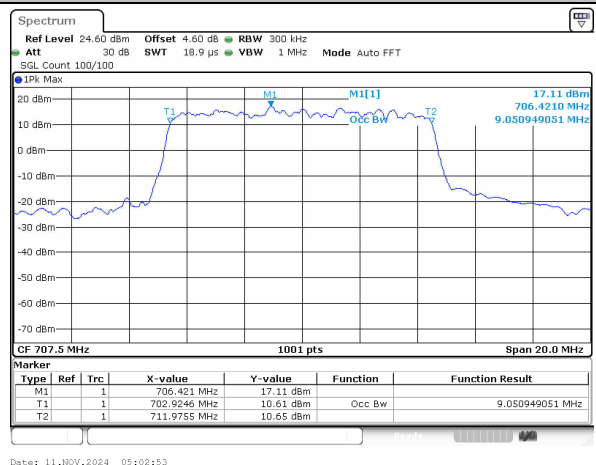


LTE Band 12

Middle Channel / 10MHz / QPSK



Middle Channel / 10MHz / 16QAM





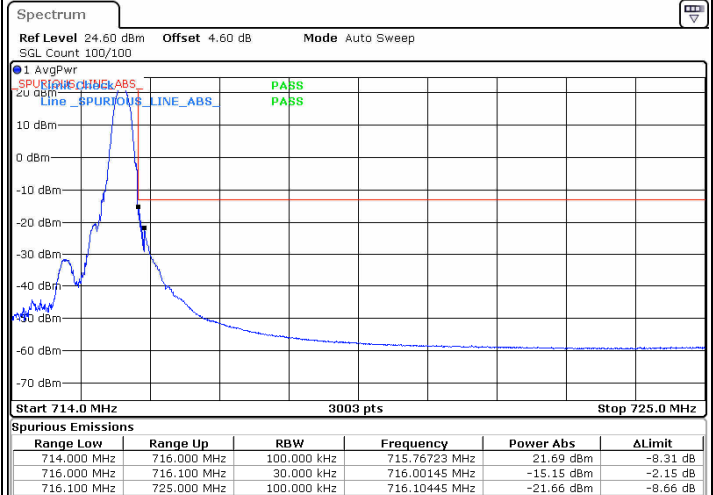
Conducted Band Edge

LTE Band 12 / 1.4MHz / QPSK

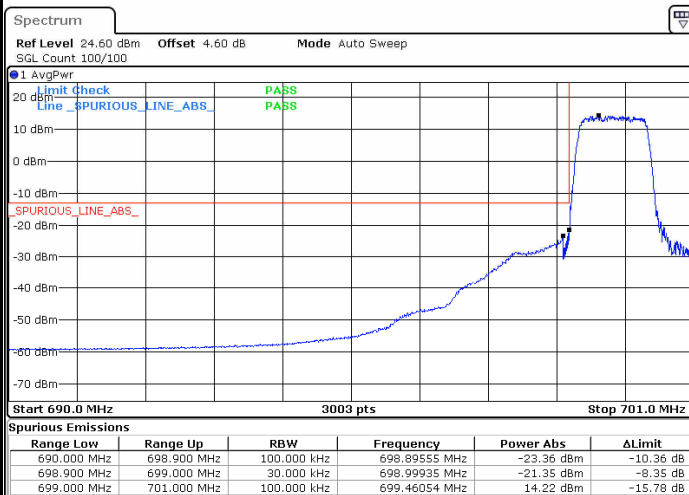
Lowest Band Edge / 1RB



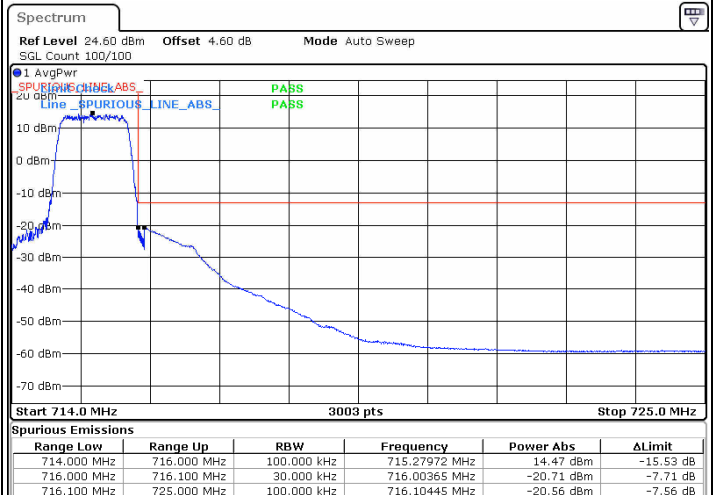
Highest Band Edge / 1RB



Lowest Band Edge / Full RB



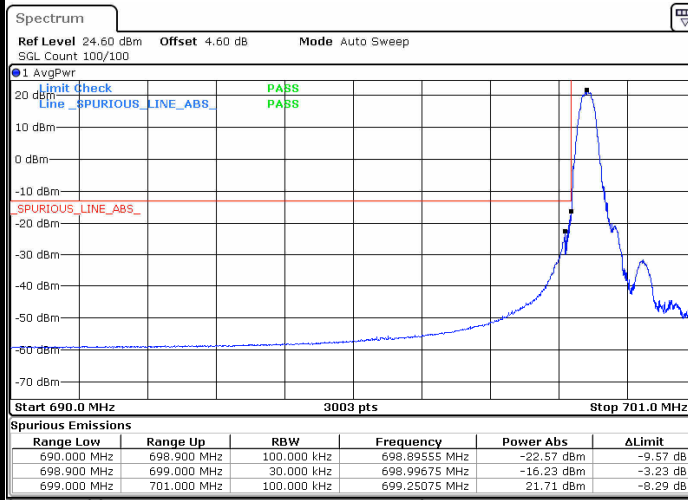
Highest Band Edge / Full RB



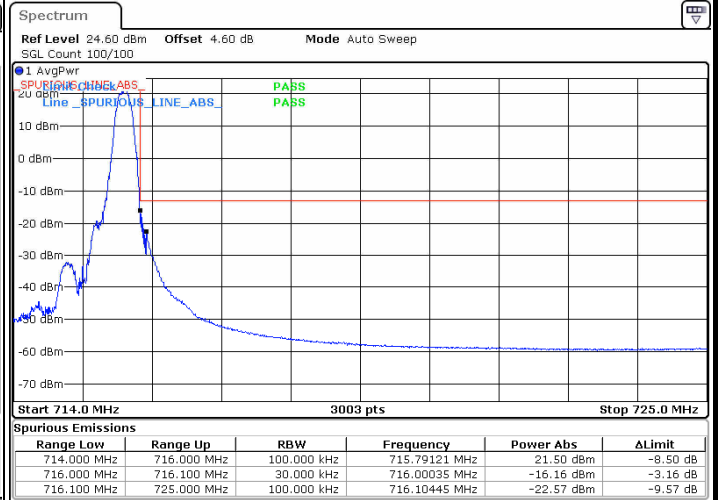


LTE Band 12 / 1.4MHz / 16QAM

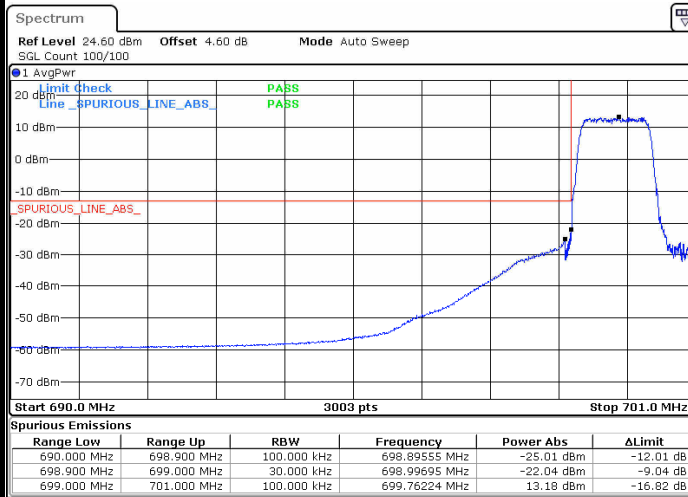
Lowest Band Edge / 1 RB



Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



Highest Band Edge / Full RB

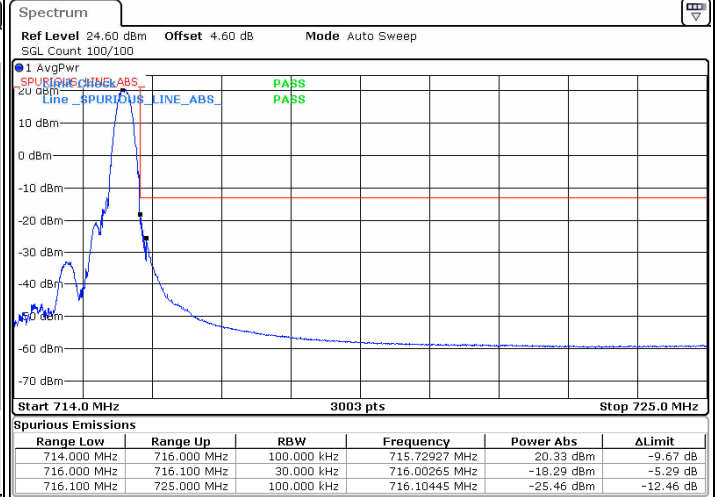
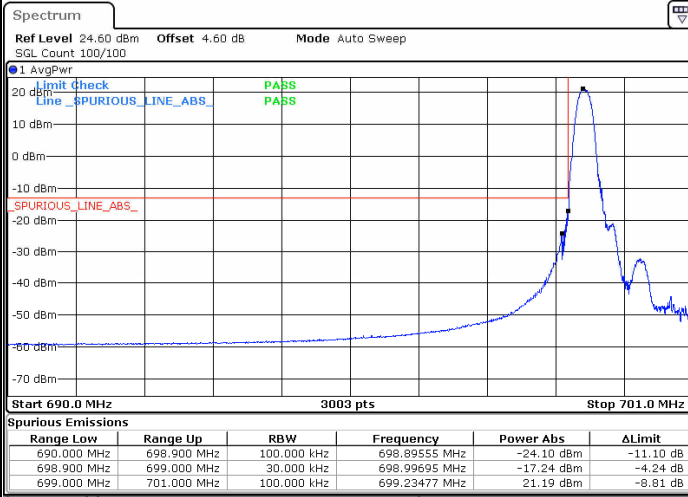




LTE Band 12 / 1.4MHz / 64QAM

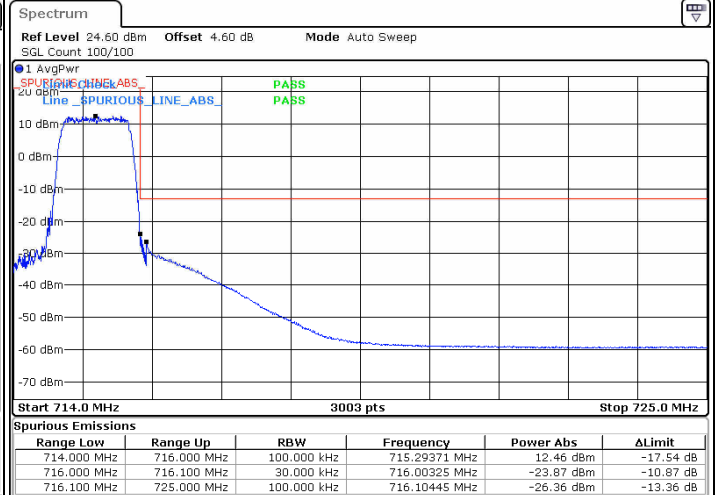
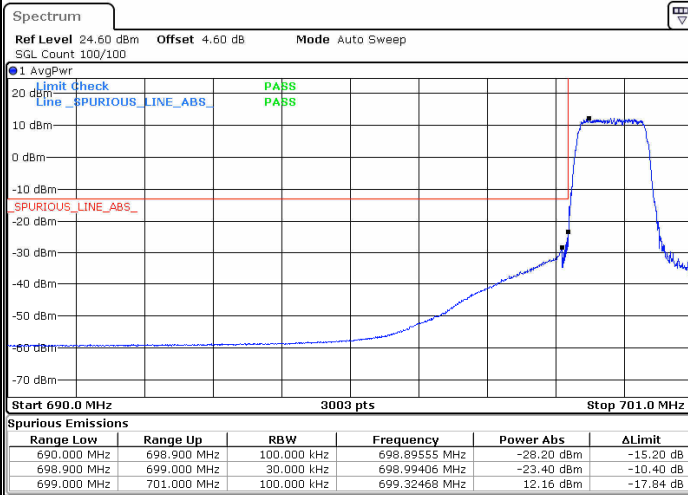
Lowest Band Edge / 1 RB

Highest Band Edge / 1 RB



Lowest Band Edge / Full RB

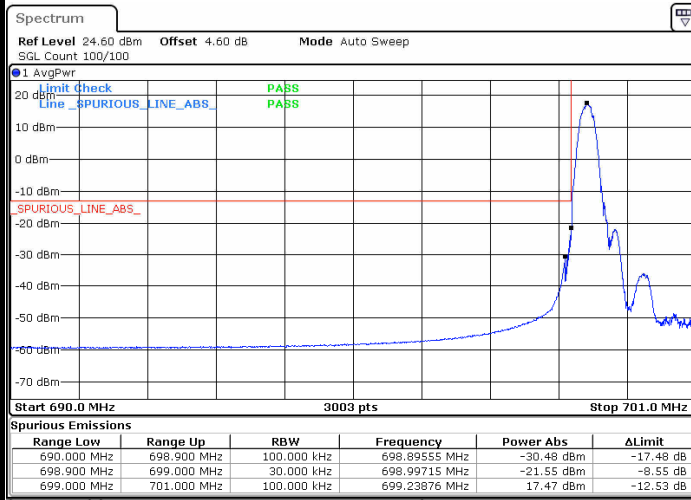
Highest Band Edge / Full RB



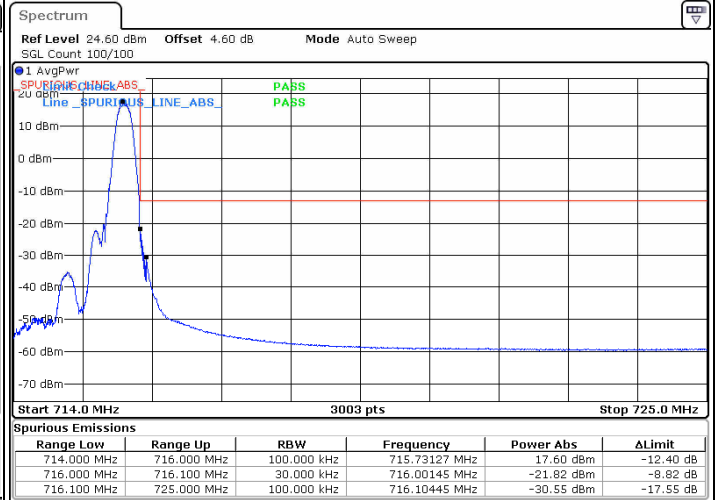


LTE Band 12 / 1.4MHz / 256QAM

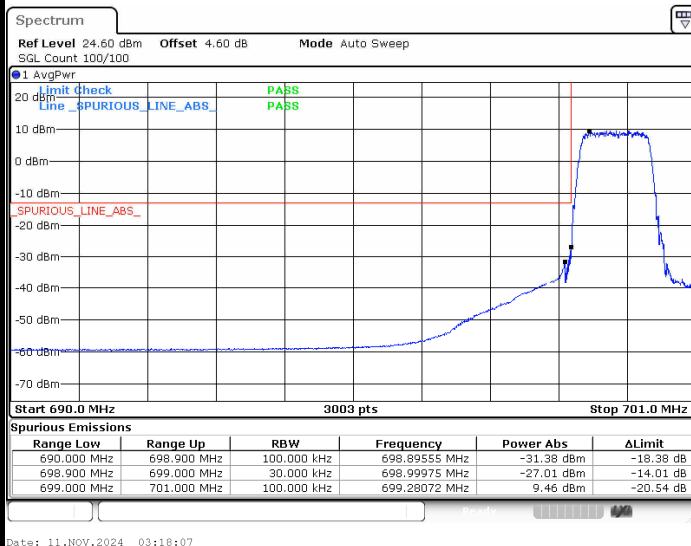
Lowest Band Edge / 1 RB



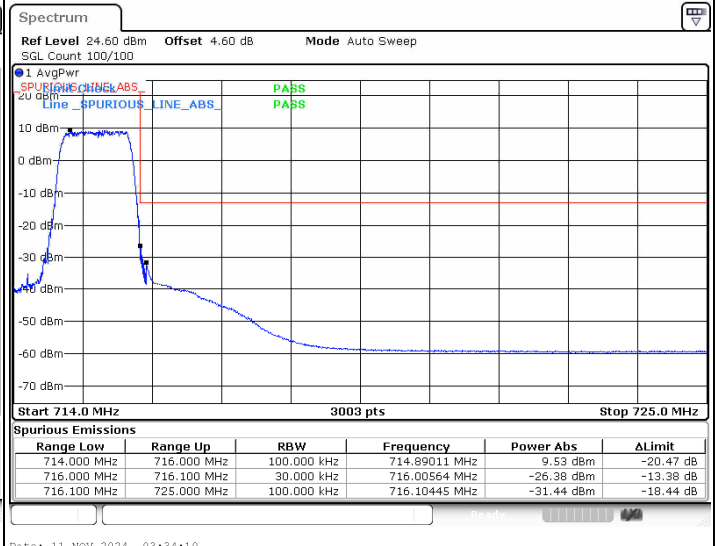
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



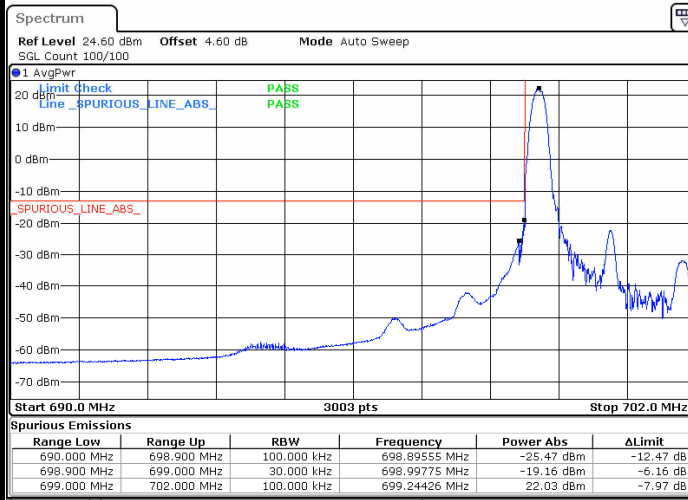
Highest Band Edge / Full RB



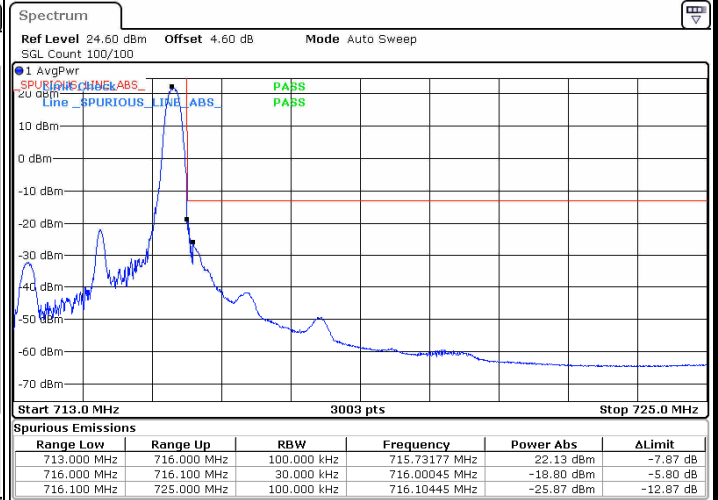


LTE Band 12 / 3MHz / QPSK

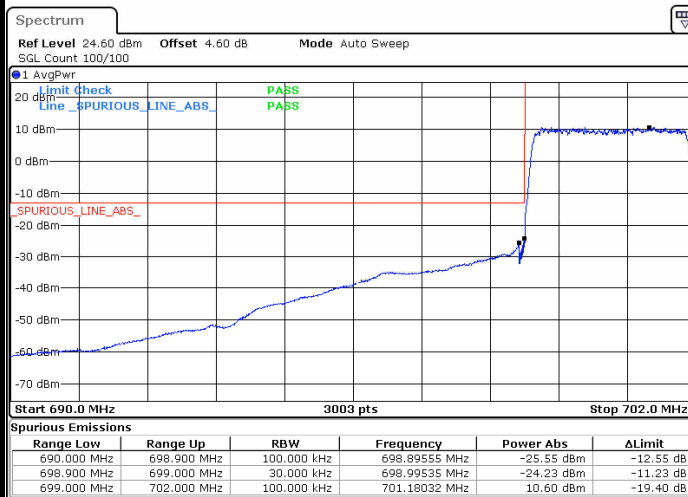
Lowest Band Edge / 1RB



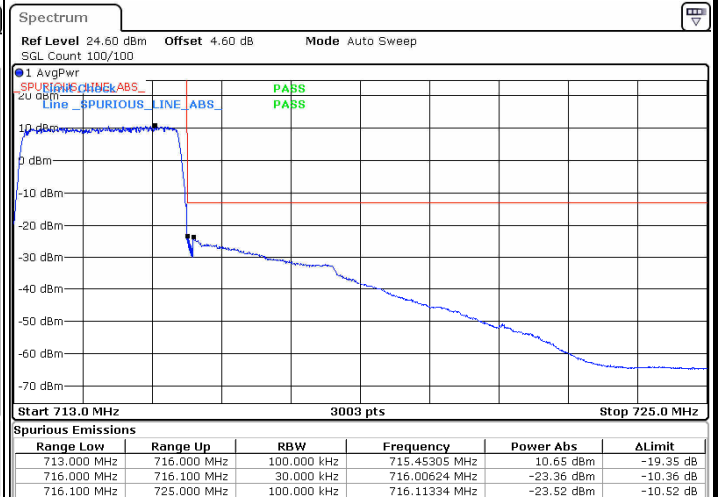
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



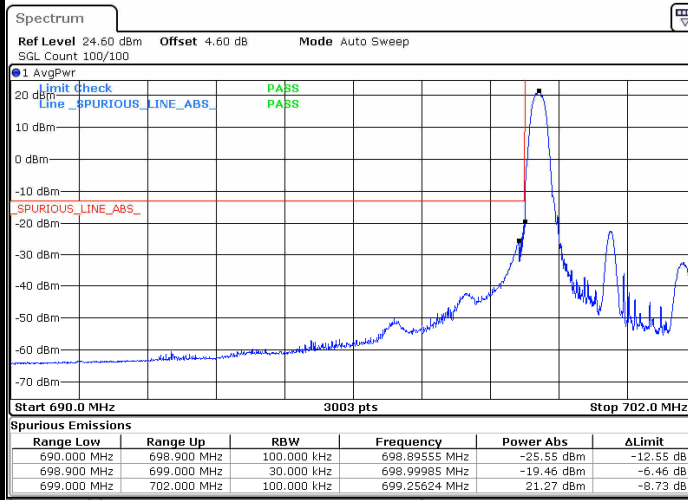
Highest Band Edge / Full RB



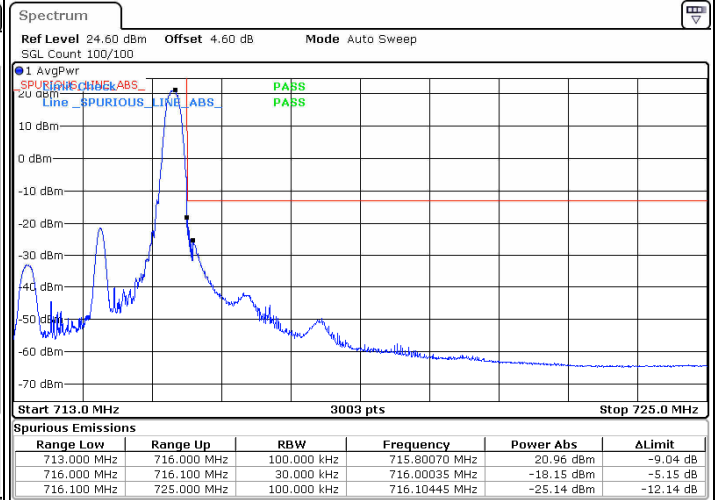


LTE Band 12 / 3MHz / 16QAM

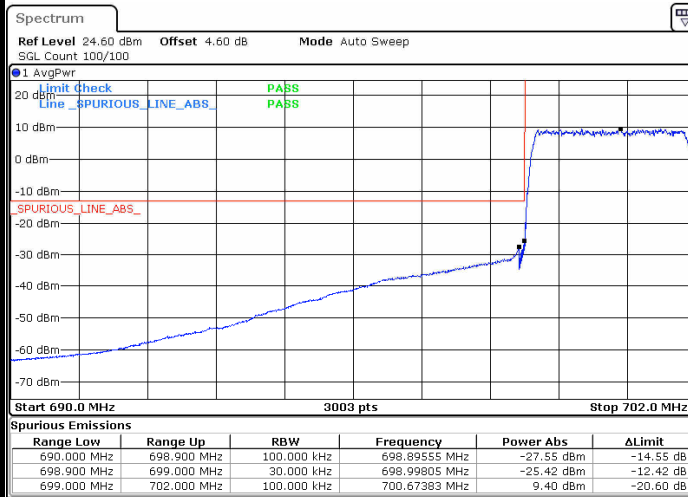
Lowest Band Edge / 1 RB



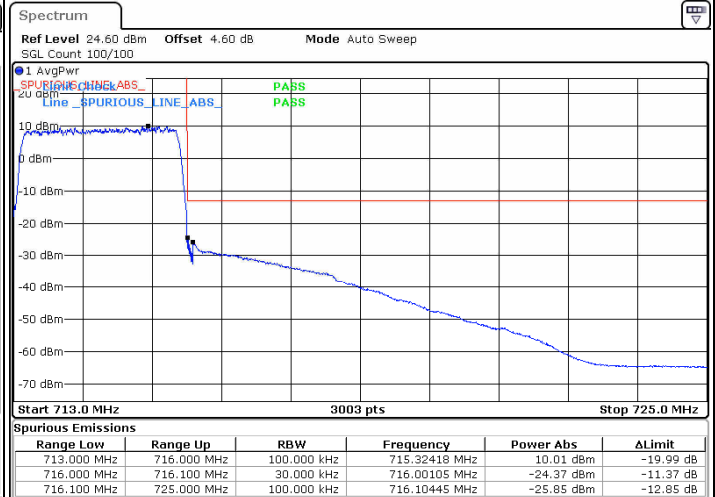
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



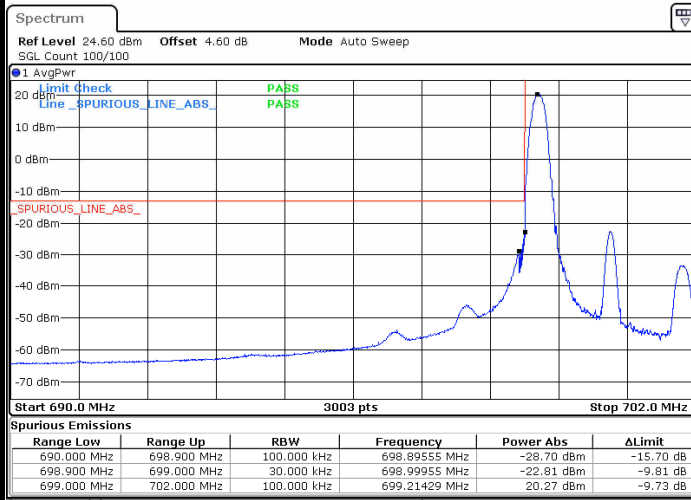
Highest Band Edge / Full RB



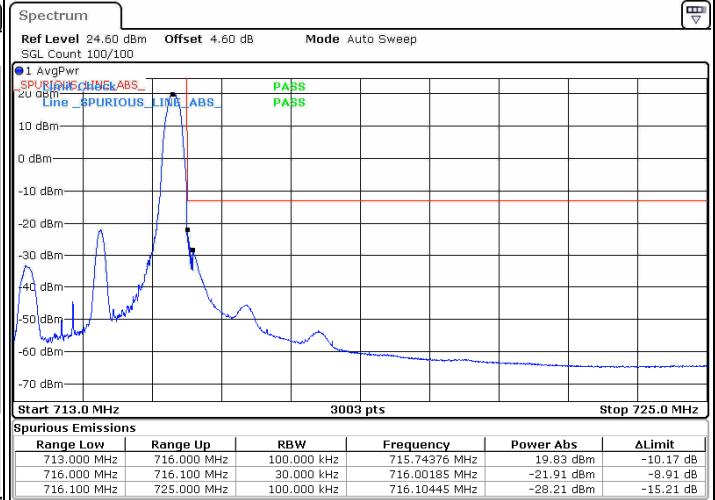


LTE Band 12 / 3MHz / 64QAM

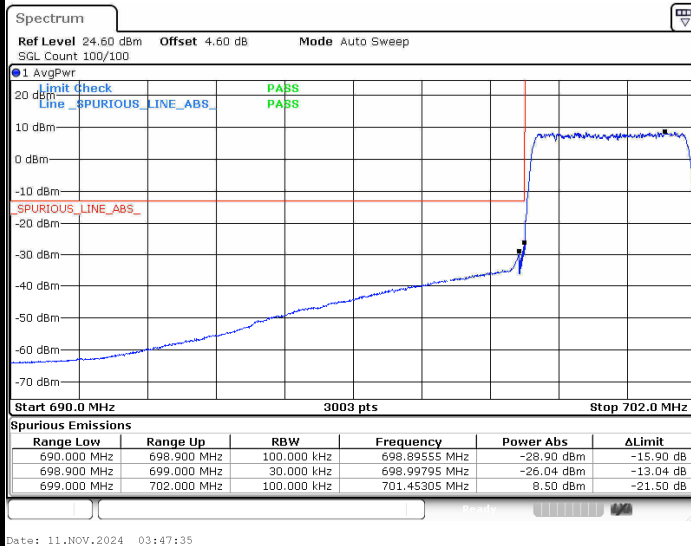
Lowest Band Edge / 1 RB



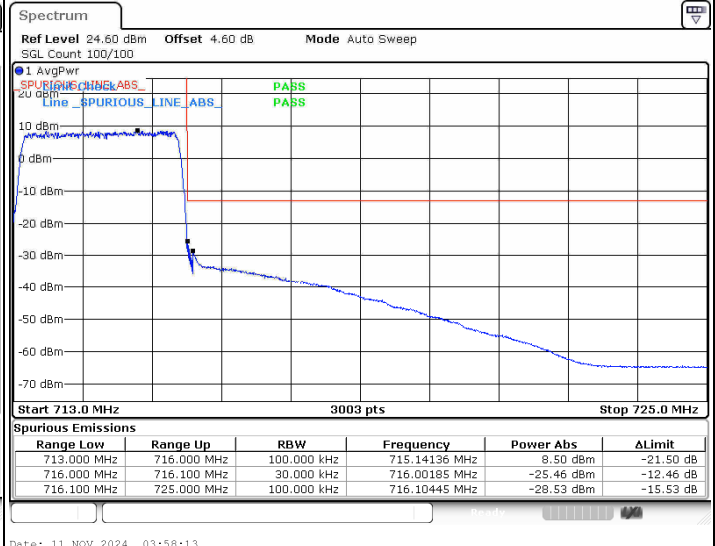
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



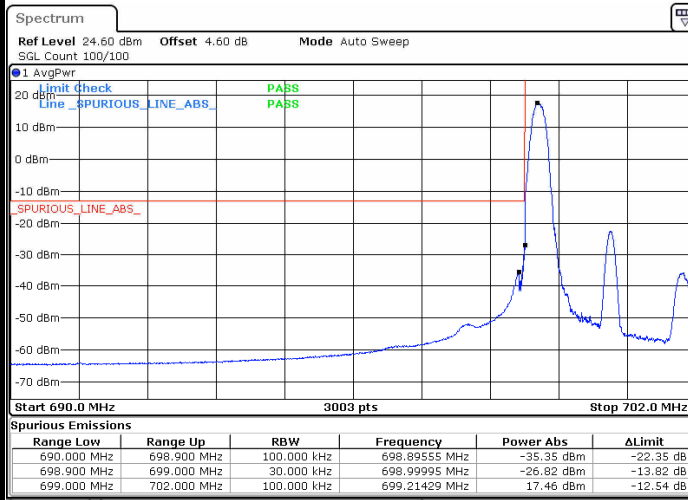
Highest Band Edge / Full RB



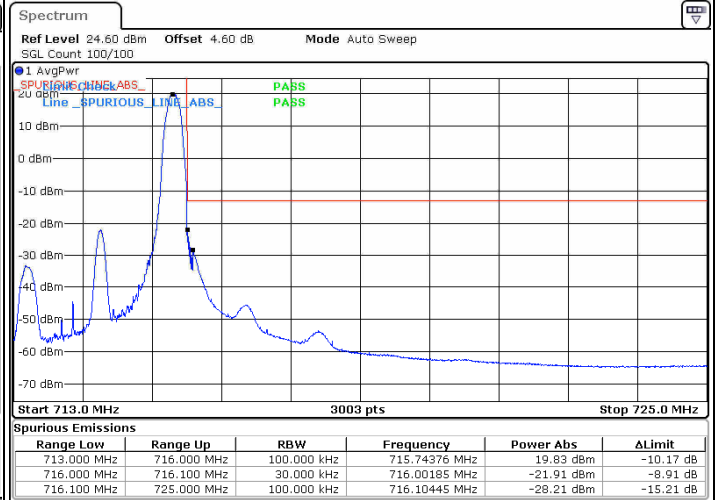


LTE Band 12 / 3MHz / 256QAM

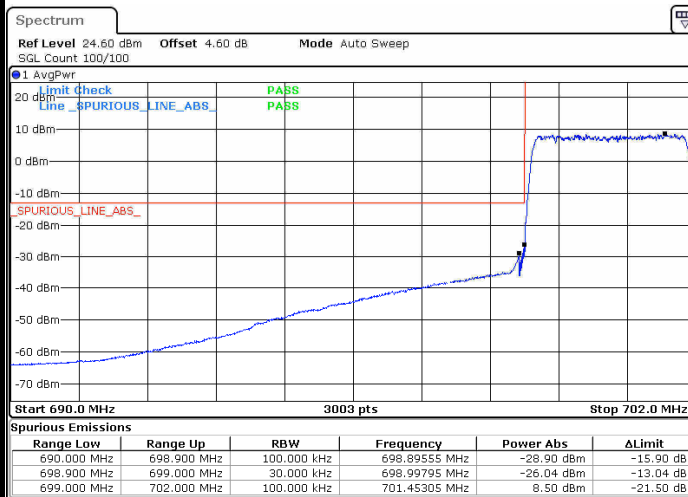
Lowest Band Edge / 1 RB



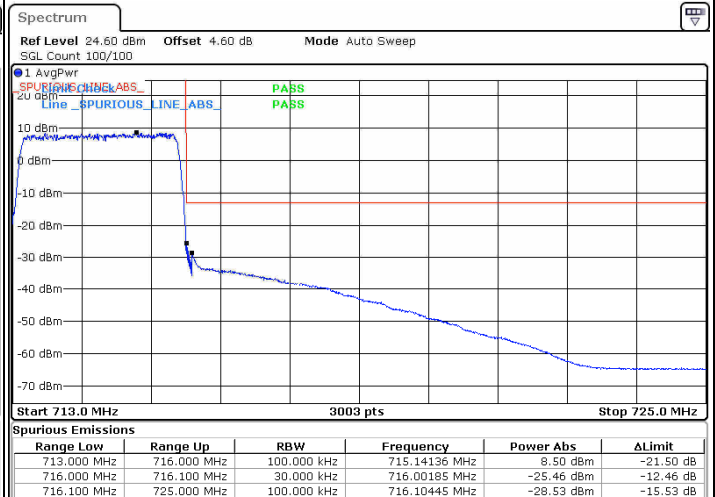
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



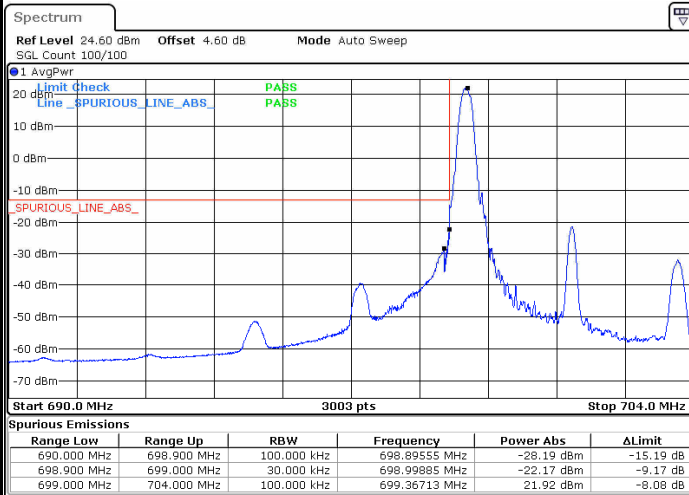
Highest Band Edge / Full RB



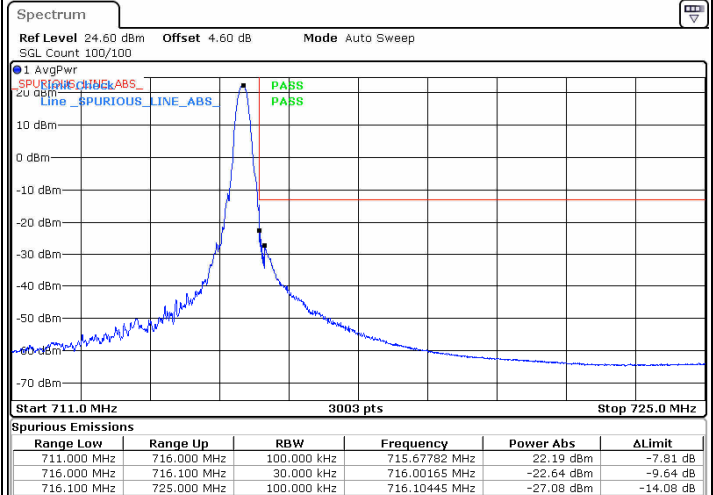


LTE Band 12 / 5MHz / QPSK

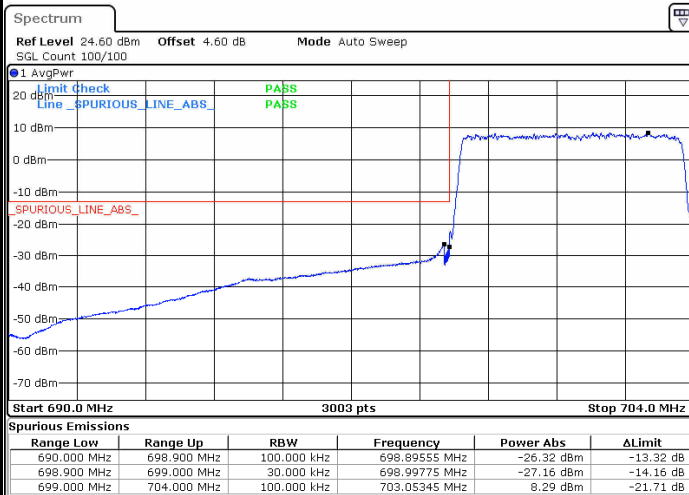
Lowest Band Edge / 1 RB



Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



Highest Band Edge / Full RB

