



FCC RF Test Report

APPLICANT : Relay, Inc.
EQUIPMENT : Relay
BRAND NAME : RelayM
MODEL NAME : RY2267
FCC ID : 2AMBHRY2267
STANDARD : 47 CFR Part 27(M), 27(F), 27(H), 27(N)
CLASSIFICATION : PCS Licensed Transmitter held to face (PCF)
TEST DATE(S) : Sep. 09, 2024 ~ Feb. 08, 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



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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG250505B	Rev. 01	Initial issue of report	Feb. 24, 2025

SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.4	§2.1046	Conducted Output Power	-	PASS	-
	§27.50(b)(10) §27.50(c)(10)	Effective Radiated Power (Band 12) (Band 13) (Band 71)	ERP < 3 Watt		-
	§27.50(h)(2)	Equivalent Isotropic Radiated Power (Band 7) (Band 38) (Band 41)	EIRP < 2Watt		-
3.5	§24.232(d)	Peak-to-Average Ratio	<13 dB	PASS	-
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 71)	< 43+10log ₁₀ (P[Watts])	PASS	-
	§27.53(m)(4)	Conducted Band Edge Measurement (Band 7) (Band 38) (Band 41)	§27.53(m)(4)		
3.8	§2.1051 §27.53(c)(2) §27.53(g)	Conducted Spurious Emission (Band 12) (Band 13) (Band 71)	< 43+10log ₁₀ (P[Watts])	PASS	-
	§2.1051 §27.53(m)(4)	Conducted Spurious Emission (Band 7) (Band 38) (Band 41)	< 55+10log ₁₀ (P[Watts])		
3.9	§2.1055 §24.235 §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 71)	< 43+10log ₁₀ (P[Watts])	PASS	Under limit 23.18 dB at 1564.50 MHz
	§2.1053 §27.53(m)(4)	Radiated Spurious Emission (Band 7) (Band 38) (Band 41)	< 55+10log ₁₀ (P[Watts])		

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

Relay, Inc.

2230 Bandmate Way, Suite 500, Raleigh, NC 27607, USA

1.2 Manufacturer

Relay, Inc.

2230 Bandmate Way, Suite 500, Raleigh, NC 27607, USA

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	Relay
Brand Name	RelayM
Model Name	RY2267
FCC ID	2AMBHRY2267
IMEI Code	Conducted: 004400152020000 Radiation: 990007540010789
HW Version	v01
EUT Stage	Identical Prototype

1.4 Product Specification of Equipment Under Test

Standards-related Product Specification	
Tx Frequency	LTE Band 7 : 2500 MHz ~ 2570 MHz LTE Band 12 : 699 MHz ~ 716 MHz LTE Band 13 : 777 MHz ~ 787 MHz LTE Band 38 : 2570 MHz ~ 2620 MHz LTE Band 41 : 2496 MHz ~ 2690 MHz LTE Band 71: 663 MHz ~ 698 MHz
Rx Frequency	LTE Band 7 : 2620 MHz ~ 2690 MHz LTE Band 12 : 729 MHz ~ 746 MHz LTE Band 13 : 746 MHz ~ 756 MHz LTE Band 38: 2570 MHz ~ 2620 MHz LTE Band 41 : 2496 MHz ~ 2690 MHz LTE Band 71: 617 MHz ~ 652 MHz
Bandwidth	LTE Band 7 : 5MHz/ 10MHz / 15MHz / 20MHz LTE Band 12 : 1.4MHz / 3MHz / 5MHz / 10MHz LTE Band 13 : 5MHz / 10MHz LTE Band 38 : 5MHz / 10MHz / 15MHz / 20MHz LTE Band 41 : 5MHz / 10MHz / 15MHz / 20MHz LTE Band 71 : 5MHz / 10MHz / 15MHz / 20MHz
Maximum Output Power to Antenna	<Ant.1> LTE Band 7 : 24.06 dBm LTE Band 12 : 23.41 dBm LTE Band 13 : 24.27 dBm LTE Band 38 : 24.47 dBm LTE Band 41 : 26.86 dBm LTE Band 71 : 23.94 dBm
Antenna Gain	<Ant.1> LTE Band 7 : 3.0 dBi LTE Band 12 : -8.8 dBi LTE Band 13 : -9.1 dBi LTE Band 38 : 2.1 dBi LTE Band 41 : 2.1 dBi LTE Band 71 : -16.3 dBi
Antenna Type	PIFA Antenna
Type of Modulation	QPSK / 16QAM / 64QAM

Note:

1. LTE Band 41 supports QPSK / 16QAM / 64QAM /256QAM Modulation.
2. LTE Band41 supports HPUE mode.

1.5 Modification of EUT

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



1.6 Maximum ERP/EIRP Power and Emission Designator

LTE Band 7		QPSK		16QAM/64QAM	
BW (MHz)	Frequency Range (MHz)	Maximum EIRP(W)	Emission Designator (99%OBW)	Maximum EIRP(W)	Emission Designator (99%OBW)
5	2502.5 ~ 2567.5	0.5012	4M51G7D	0.4027	4M49W7D
10	2505.0 ~ 2565.0	0.4977	9M13G7D	0.4046	9M01W7D
15	2507.5 ~ 2562.5	0.5035	13M5G7D	0.4027	13M5W7D
20	2510.0 ~ 2560.0	0.5082	17M9G7D	0.4093	18M0W7D
LTE Band 12		QPSK		16QAM/64QAM	
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	0.0174	1M10G7D	0.0140	1M10W7D
3	700.5 ~ 714.5	0.0175	2M74G7D	0.0141	2M73W7D
5	701.5 ~ 713.5	0.0173	4M49G7D	0.0140	4M49W7D
10	704.0 ~ 711.0	0.0176	9M05G7D	0.0143	9M05W7D
LTE Band 13		QPSK		16QAM/64QAM	
BW (MHz)	Frequency Range (MHz)	Maximum ERP(W)	Emission Designator (99%OBW)	Maximum ERP(W)	Emission Designator (99%OBW)
5	779.5 ~ 784.5	0.0198	4M47G7D	0.0161	4M40W7D
10	782.0	0.0200	8M97G7D	0.0160	9M01W7D
LTE Band 38		QPSK		16QAM/64QAM	
BW (MHz)	Frequency Range (MHz)	Maximum EIRP(W)	Emission Designator (99%OBW)	Maximum EIRP(W)	Emission Designator (99%OBW)
5	2572.5 ~ 2617.5	0.4436	4M53G7D	0.3631	4M52W7D
10	2575.0 ~ 2615.0	0.4426	9M03G7D	0.3664	9M07W7D
15	2577.5 ~ 2612.5	0.4498	13M5G7D	0.3606	13M5W7D
20	2580.0 ~ 2610.0	0.4539	17M9G7D	0.3698	17M9W7D
LTE Band 41		QPSK		16QAM/64QAM/256QAM	
BW (MHz)	Frequency Range (MHz)	Maximum EIRP(W)	Emission Designator (99%OBW)	Maximum EIRP(W)	Emission Designator (99%OBW)
5	2498.5 ~ 2687.5	0.7780	4M53G7D	0.6353	4M52W7D
10	2501.0 ~ 2685.0	0.7656	9M03G7D	0.6442	9M07W7D
15	2503.5 ~ 2682.5	0.7745	13M5G7D	0.6339	13M5W7D
20	2506.0 ~ 2680.0	0.7870	17M9G7D	0.6531	17M9W7D



LTE Band 71		QPSK		16QAM/64QAM	
BW (MHz)	Frequency Range (MHz)	Maximum ERP(W)	Emission Designator (99%OBW)	Maximum ERP(W)	Emission Designator (99%OBW)
5	665.5 ~ 695.5	0.0035	4M51G7D	0.0028	4M51W7D
10	668.0 ~ 693.0	0.0035	9M05G7D	0.0028	9M05W7D
15	670.5 ~ 690.5	0.0035	13M5G7D	0.0028	13M5W7D
20	673.0 ~ 688.0	0.0035	17M9G7D	0.0029	17M9W7D

Note:

1. LTE Band 41 overlaps the entire frequency range of LTE Band 38. Therefore, the test results provided in this report covers Band 41 as well as Band 38.
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.
	03CH02-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.	TH01-KS	SPORTON	FCC LTE_Ver2.0 Auto_china_210503	2.0
2.	03CH02-SZ	AUDIX	E3	6.2009-8-24a

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 27(M), 27(F), 27(H), 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.

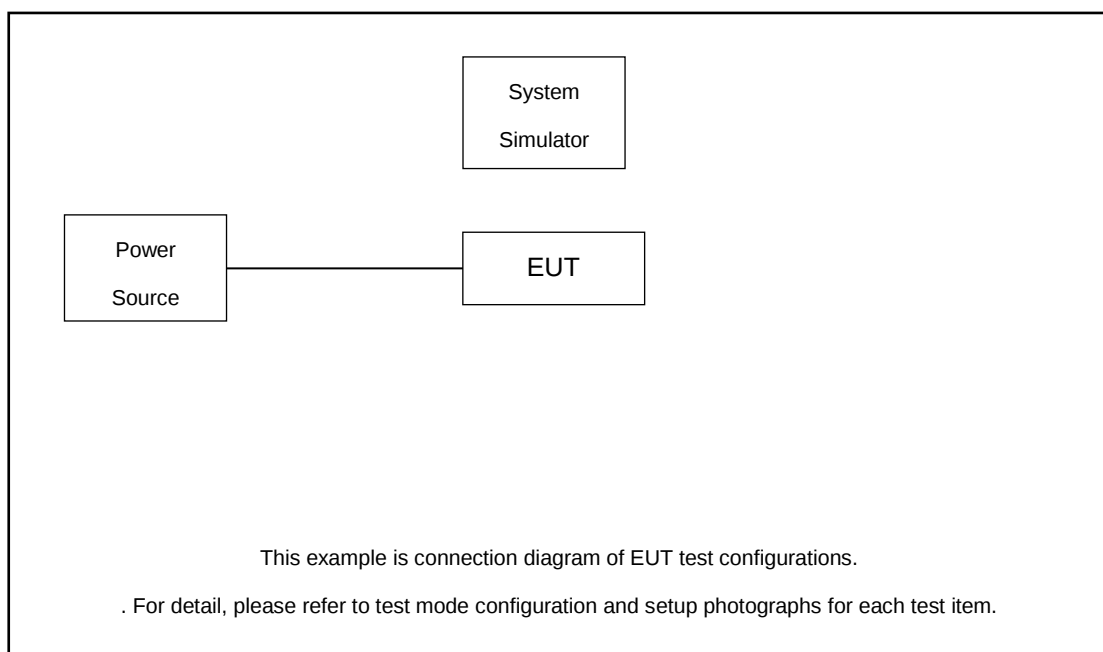
Radiated measurements are performed by rotating the EUT in three different orthogonal test planes to find the maximum emission. (Y Plane)

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	7	-	-	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
	13	-	-	v	v	-	-	v	v	v	-	v	v	v	v	v	v
	38	-	-	v	v	v	v	v	v	v	-	v	v	v	v	v	v
	41	-	-	v	v	v	v	v	v	v	v	v	v	v	v	v	v
	71	-	-	v	v	v	v	v	v	v	-	v	v	v	v	v	v
Peak-to-Average Ratio	7	-	-				v	v	v	v	-			v		v	
	12				v	-	-	v	v	v	-			v		v	
	13	-	-		v	-	-	v	v	v	-			v		v	
	41	-	-				v	v	v	v	v			v		v	
	71	-	-				v	v	v	v	-			v		v	
26dB and 99% Bandwidth	7	-	-	v	v	v	v	v	v		-			v		v	
	12	v	v	v	v	-	-	v	v	v	-			v		v	
	13	-	-	v	v	-	-	v	v		-			v		v	
	41	-	-	v	v	v	v	v	v					v		v	
	71	-	-	v	v	v	v	v	v		-			v		v	
Conducted Band Edge	7	-	-	v	v	v	v	v	v	v	-	v		v	v		v
	12	v	v	v	v	-	-	v	v	v	-	v		v	v		v
	13	-	-	v	v	-	-	v	v	v	-	v		v	v		v
	41	-	-	v	v	v	v	v	v	v	v	v		v	v		v
	71	-	-	v	v	v	v	v	v	v	-	v		v	v		v
Conducted Spurious Emission	7	-	-	v	v	v	v	v			-	v			v	v	v
	12	v	v	v	v	-	-	v			-	v			v	v	v
	13	-	-	v	v	-	-	v			-	v			v	v	v
	41	-	-	v	v	v	v	v				v			v	v	v
	71	-	-	v	v	v	v	v			-	v			v	v	v



Frequency Stability	7	-	-		v			v			-			v		v	
	12				v	-	-	v			-			v		v	
	13	-	-		v	-	-	v			-			v		v	
	41	-	-		v			v						v		v	
	71	-	-		v			v			-			v		v	
E.R.P / E.I.R.P	7	-	-	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
	13	-	-	v	v	-	-	v	v	v	-	v	v	v	v	v	v
	38	-	-	v	v	v	v	v	v	v	-	v	v	v	v	v	v
	41	-	-	v	v	v	v	v	v	v	v	v	v	v	v	v	v
	71	-	-	v	v	v	v	v	v	v	-	v	v	v	v	v	v
Radiated Spurious Emission	7	Worst Case													v	v	v
	12	Worst Case													v	v	v
	13	Worst Case													v	v	v
	41	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 6.0 dB.

Example :

$$\begin{aligned} \text{Offset(dB)} &= \text{RF cable loss(dB)}. \\ &= 6.0 \text{ (dB)} \end{aligned}$$

2.5 Frequency List of Low/Middle/High Channels

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



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

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



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

LTE Band 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

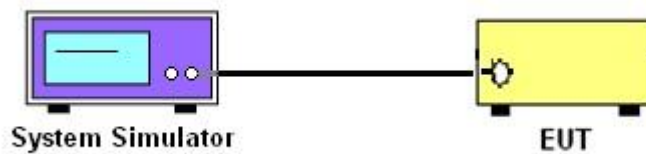
3 Conducted Test Items

3.1 Measuring Instruments

See list of measuring instruments of this test report.

3.2 Test Setup

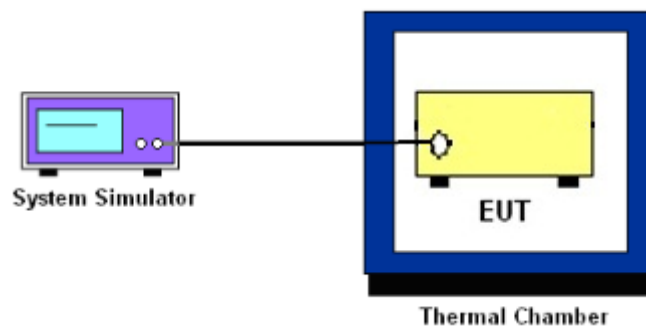
3.2.1 Conducted Output Power



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/EIRP

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

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

The ERP of mobile transmitters must not exceed 3 Watts for LTE Band 12, Band 13 and Band 71.

The EIRP of mobile transmitters must not exceed 2 Watts for LTE Band 7 and Band 38 and Band 41.

According to KDB 412172 D01 Power Approach,

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

P_T = transmitter output power in dBm

G_T = gain of the transmitting antenna in dBi

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

3.4.2 Test Procedures

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

3.5 Peak-to-Average Ratio

3.5.1 Description of the PAR Measurement

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

3.5.2 Test Procedures

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

3.6 Occupied Bandwidth

3.6.1 Description of Occupied Bandwidth Measurement

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

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

3.6.2 Test Procedures

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

3.7 Conducted Band Edge

3.7.1 Description of Conducted Band Edge Measurement

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.

27.53(m)(4)

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

3.7.2 Test Procedures

1. The testing follows ANSI C63.26 section 5.7
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. For LTE Band 7, 38, 41, the other 40 dB, and 55 dB have additionally applied same calculation above.
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.

For Band 7,38,41:

The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of at least $55 + 10 \log (P)$ dB.

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

3.8.2 Test Procedures

1. The testing follows ANSI C63.26 section 5.7
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator.
The path loss was compensated to the results for each measurement.
4. The middle channel for the highest RF power within the transmitting frequency was measured.
5. The conducted spurious emission for the whole frequency range was taken.
6. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz.
7. Set spectrum analyzer with RMS detector.
8. Taking the record of maximum spurious emission.
9. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
10. The limit line is derived from $43 + 10\log(P)$ dB below the transmitter power P(Watts)
 $= P(W) - [43 + 10\log(P)]$ (dB)
 $= [30 + 10\log(P)]$ (dBm) - $[43 + 10\log(P)]$ (dB)
 $= -13\text{dBm}$.
11. For Band 7, 38, 41
The limit line is derived from $55 + 10\log(P)$ dB below the transmitter power P(Watts)
 $= P(W) - [55 + 10\log(P)]$ (dB)
 $= [30 + 10\log(P)]$ (dBm) - $[55 + 10\log(P)]$ (dB)
 $= -25\text{dBm}$.

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.

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±5°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

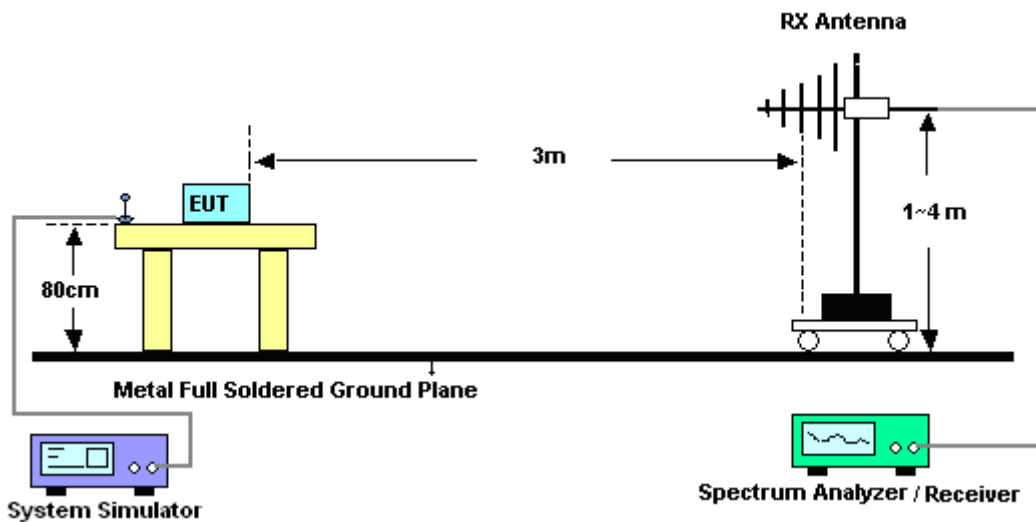
See list of measuring instruments of this test report.

4.2 Test Setup

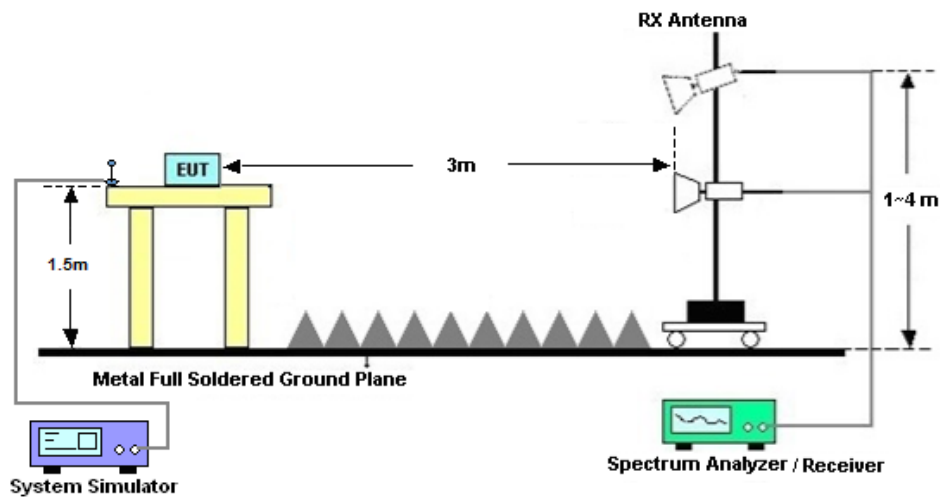
4.2.1 For radiated test below 30MHz



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 Band 7, 38, 41

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least $55 + 10 \log (P)$ dB.

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

13. For Band 7, 38, 41:

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



5 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSV40	101040	10Hz~40GHz	Oct. 10, 2023	Sep. 09, 2024~ Sep. 11, 2024	Oct. 09, 2024	Conducted (TH01-KS)
Power divider	STI	STI08-0055	-	0.5~40GHz	NCR	Sep. 09, 2024~ Sep. 11, 2024	NCR	Conducted (TH01-KS)
Temperature & humidity chamber	Hongzhan	LP-150U	H2014011440	-40~+150°C 20%~95%RH	Jul. 04, 2024	Sep. 09, 2024~ Sep. 11, 2024	Jul. 03, 2025	Conducted (TH01-KS)
EXA Spectrum Analyzer	KEYSIGHT	N9010A	MY55150213	10Hz~44GHz	Jul. 03, 2024	Feb. 08, 2025	Jul. 02, 2025	Radiation (03CH02-SZ)
Loop Antenna	R&S	HFH2-Z2E	101141	9kHz~30MHz	Dec. 28, 2024	Feb. 08, 2025	Dec. 27, 2025	Radiation (03CH02-SZ)
Bilog Antenna	TeseQ	CBL6112D	35407	30MHz~2GHz	Oct. 24, 2023	Feb. 08, 2025	Oct. 23, 2025	Radiation (03CH02-SZ)
Double Ridge Horn Antenna	ETS-Lindgren	3117	00119436	1GHz~18GHz	Jul. 04, 2024	Feb. 08, 2025	Jul. 04, 2025	Radiation (03CH02-SZ)
HF Amplifier	MITEQ	TTA1840-35-HG	1871923	18GHz~40GHz	Jul. 03, 2024	Feb. 08, 2025	Jul. 03, 2025	Radiation (03CH02-SZ)
SHF-EHF Horn	com-power	AH-840	101071	18Ghz~40GHz	Apr. 09, 2024	Feb. 08, 2025	Apr. 08, 2025	Radiation (03CH02-SZ)
LF Amplifier	Burgeon	BPA-530	102211	0.01~3000Mhz	Oct. 18, 2024	Feb. 08, 2025	Oct. 17, 2025	Radiation (03CH02-SZ)
HF Amplifier	KEYSIGHT	83017A	MY53270105	0.5GHz~26.5Ghz	Oct. 14, 2024	Feb. 08, 2025	Oct. 13, 2025	Radiation (03CH02-SZ)
AC Power Source	Chroma	61601	616010003043	N/A	Oct. 18, 2024	Feb. 08, 2025	Oct. 17, 2025	Radiation (03CH02-SZ)
Turn Table	Chaintek	T-200	N/A	0~360 degree	NCR	Feb. 08, 2025	NCR	Radiation (03CH02-SZ)
Antenna Mast	Chaintek	MBS-400	N/A	1 m~4 m	NCR	Feb. 08, 2025	NCR	Radiation (03CH02-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	±0.1%
Conducted Power	±0.50 dB
Peak to Average Ratio	±0.50 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))	2.47 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))	3.31 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))	3.72 dB
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----- THE END -----



Appendix A. Test Results of Conducted Test

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

Conducted Output Power(Average power) and ERP/EIRP

LTE Band 7_ANT1:

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	EIRP	EIRP	EIRP
Channel				20850	21100	21350	20850	21100	21350
Frequency (MHz)				2510	2535	2560	2510	2535	2560
20	QPSK	1	0	23.93	24.06	24.02	0.4932	0.5082	0.5035
20	QPSK	1	49	23.78	23.97	23.93	0.4764	0.4977	0.4932
20	QPSK	1	99	23.87	23.81	23.87	0.4864	0.4797	0.4864
20	QPSK	50	0	22.96	23.04	23.08	0.3945	0.4018	0.4055
20	QPSK	50	24	22.95	22.97	22.79	0.3936	0.3954	0.3793
20	QPSK	50	50	22.91	22.92	22.93	0.3899	0.3908	0.3917
20	QPSK	100	0	22.85	23.05	22.97	0.3846	0.4027	0.3954
20	16QAM	1	0	23.01	23.10	22.98	0.3990	0.4074	0.3963
20	16QAM	1	49	23.12	23.07	23.11	0.4093	0.4046	0.4083
20	16QAM	1	99	22.94	23.00	23.01	0.3926	0.3981	0.3990
20	16QAM	50	0	22.02	22.19	22.04	0.3177	0.3304	0.3192
20	16QAM	50	24	21.93	21.99	22.05	0.3112	0.3155	0.3199
20	16QAM	50	50	21.89	22.00	21.92	0.3083	0.3162	0.3105
20	16QAM	100	0	21.78	22.08	21.86	0.3006	0.3221	0.3062
20	64QAM	1	0	21.83	22.09	22.03	0.3041	0.3228	0.3184
20	64QAM	1	49	21.96	22.13	22.02	0.3133	0.3258	0.3177
20	64QAM	1	99	21.95	22.13	21.91	0.3126	0.3258	0.3097
20	64QAM	50	0	20.85	21.10	20.90	0.2427	0.2570	0.2455
20	64QAM	50	24	20.98	21.06	21.01	0.2500	0.2547	0.2518
20	64QAM	50	50	20.94	21.06	21.03	0.2477	0.2547	0.2529
20	64QAM	100	0	20.84	21.07	21.05	0.2421	0.2553	0.2541
Channel				20825	21100	21375	20825	21100	21375
Frequency (MHz)				2507.5	2535	2562.5	2507.5	2535	2562.5
15	QPSK	1	0	23.85	24.02	24.00	0.4842	0.5035	0.5012
15	QPSK	1	37	23.68	23.88	23.89	0.4656	0.4875	0.4887
15	QPSK	1	74	23.79	23.76	23.83	0.4775	0.4742	0.4819
15	QPSK	36	0	22.88	22.94	22.98	0.3873	0.3926	0.3963
15	QPSK	36	20	22.93	22.86	22.76	0.3917	0.3855	0.3767
15	QPSK	36	39	22.77	22.79	22.86	0.3776	0.3793	0.3855
15	QPSK	75	0	22.73	22.92	22.86	0.3741	0.3908	0.3855
15	16QAM	1	0	22.92	23.01	22.87	0.3908	0.3990	0.3864



15	16QAM	1	37	23.05	22.96	23.04	0.4027	0.3945	0.4018
15	16QAM	1	74	22.81	22.87	22.94	0.3811	0.3864	0.3926
15	16QAM	36	0	21.99	22.06	22.00	0.3155	0.3206	0.3162
15	16QAM	36	20	21.90	21.88	21.97	0.3090	0.3076	0.3141
15	16QAM	36	39	21.77	21.92	21.82	0.2999	0.3105	0.3034
15	16QAM	75	0	21.76	21.94	21.77	0.2992	0.3119	0.2999
15	64QAM	1	0	21.74	22.03	21.90	0.2979	0.3184	0.3090
15	64QAM	1	37	21.88	22.07	21.95	0.3076	0.3214	0.3126
15	64QAM	1	74	21.84	22.03	21.80	0.3048	0.3184	0.3020
15	64QAM	36	0	20.79	20.99	20.78	0.2393	0.2506	0.2388
15	64QAM	36	20	20.85	21.04	20.90	0.2427	0.2535	0.2455
15	64QAM	36	39	20.90	20.99	20.99	0.2455	0.2506	0.2506
15	64QAM	75	0	20.74	20.99	21.01	0.2366	0.2506	0.2518
Channel				20800	21100	21400	20800	21100	21400
Frequency (MHz)				2505	2535	2565	2505	2535	2565
10	QPSK	1	0	23.82	23.97	23.89	0.4808	0.4977	0.4887
10	QPSK	1	25	23.69	23.90	23.81	0.4667	0.4898	0.4797
10	QPSK	1	49	23.84	23.69	23.75	0.4831	0.4667	0.4732
10	QPSK	25	0	22.89	23.01	22.94	0.3882	0.3990	0.3926
10	QPSK	25	12	22.90	22.91	22.66	0.3890	0.3899	0.3681
10	QPSK	25	25	22.85	22.81	22.83	0.3846	0.3811	0.3828
10	QPSK	50	0	22.74	22.92	22.83	0.3750	0.3908	0.3828
10	16QAM	1	0	22.87	22.96	22.88	0.3864	0.3945	0.3873
10	16QAM	1	25	23.02	22.96	23.07	0.3999	0.3945	0.4046
10	16QAM	1	49	22.81	22.92	22.88	0.3811	0.3908	0.3873
10	16QAM	25	0	21.99	22.09	22.02	0.3155	0.3228	0.3177
10	16QAM	25	12	21.91	21.97	22.02	0.3097	0.3141	0.3177
10	16QAM	25	25	21.81	21.91	21.84	0.3027	0.3097	0.3048
10	16QAM	50	0	21.67	21.99	21.77	0.2931	0.3155	0.2999
10	64QAM	1	0	21.78	21.96	21.91	0.3006	0.3133	0.3097
10	64QAM	1	25	21.92	22.10	21.93	0.3105	0.3236	0.3112
10	64QAM	1	49	21.92	22.03	21.85	0.3105	0.3184	0.3055
10	64QAM	25	0	20.73	20.98	20.78	0.2360	0.2500	0.2388
10	64QAM	25	12	20.93	21.04	20.98	0.2472	0.2535	0.2500
10	64QAM	25	25	20.80	21.01	20.93	0.2399	0.2518	0.2472
10	64QAM	50	0	20.72	21.01	20.94	0.2355	0.2518	0.2477
Channel				20775	21100	21425	20775	21100	21425
Frequency (MHz)				2502.5	2535	2567.5	2502.5	2535	2567.5
5	QPSK	1	0	23.88	24.00	23.95	0.4875	0.5012	0.4955
5	QPSK	1	12	23.74	23.83	23.81	0.4721	0.4819	0.4797
5	QPSK	1	24	23.77	23.70	23.73	0.4753	0.4677	0.4710
5	QPSK	12	0	22.87	22.93	22.96	0.3864	0.3917	0.3945
5	QPSK	12	7	22.85	22.94	22.75	0.3846	0.3926	0.3758
5	QPSK	12	13	22.84	22.87	22.90	0.3837	0.3864	0.3890
5	QPSK	25	0	22.82	22.94	22.86	0.3819	0.3926	0.3855
5	16QAM	1	0	22.88	23.04	22.88	0.3873	0.4018	0.3873
5	16QAM	1	12	23.05	23.04	23.03	0.4027	0.4018	0.4009



5	16QAM	1	24	22.88	22.97	22.90	0.3873	0.3954	0.3890
5	16QAM	12	0	21.90	22.13	21.98	0.3090	0.3258	0.3148
5	16QAM	12	7	21.86	21.89	21.95	0.3062	0.3083	0.3126
5	16QAM	12	13	21.82	21.88	21.90	0.3034	0.3076	0.3090
5	16QAM	25	0	21.65	21.95	21.80	0.2917	0.3126	0.3020
5	64QAM	1	0	21.71	21.96	21.91	0.2958	0.3133	0.3097
5	64QAM	1	12	21.92	22.07	21.97	0.3105	0.3214	0.3141
5	64QAM	1	24	21.84	22.07	21.79	0.3048	0.3214	0.3013
5	64QAM	12	0	20.76	20.99	20.79	0.2377	0.2506	0.2393
5	64QAM	12	7	20.94	21.01	20.90	0.2477	0.2518	0.2455
5	64QAM	12	13	20.90	20.97	20.89	0.2455	0.2495	0.2449
5	64QAM	25	0	20.81	20.93	21.01	0.2404	0.2472	0.2518

LTE Band 12_ANT1:

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	ERP	ERP	ERP
Channel				23060	23095	23130	23060	23095	23130
Frequency (MHz)				704	707.5	711	704	707.5	711
10	QPSK	1	0	23.23	23.41	23.31	0.0169	0.0176	0.0172
10	QPSK	1	25	23.19	23.28	23.27	0.0167	0.0171	0.0171
10	QPSK	1	49	23.15	23.19	23.18	0.0166	0.0167	0.0167
10	QPSK	25	0	22.43	22.32	22.33	0.0141	0.0137	0.0137
10	QPSK	25	12	22.27	22.34	22.13	0.0136	0.0138	0.0131
10	QPSK	25	25	22.34	22.23	22.24	0.0138	0.0134	0.0135
10	QPSK	50	0	22.16	22.46	22.31	0.0132	0.0142	0.0137
10	16QAM	1	0	22.44	22.49	22.32	0.0141	0.0143	0.0137
10	16QAM	1	25	22.45	22.38	22.44	0.0141	0.0139	0.0141
10	16QAM	1	49	22.25	22.36	22.31	0.0135	0.0138	0.0137
10	16QAM	25	0	21.31	21.47	21.42	0.0109	0.0113	0.0111
10	16QAM	25	12	21.21	21.32	21.30	0.0106	0.0109	0.0108
10	16QAM	25	25	21.19	21.35	21.26	0.0106	0.0110	0.0107
10	16QAM	50	0	21.13	21.40	21.16	0.0104	0.0111	0.0105
10	64QAM	1	0	21.21	21.37	21.33	0.0106	0.0110	0.0109
10	64QAM	1	25	21.24	21.34	21.32	0.0107	0.0109	0.0109
10	64QAM	1	49	21.24	21.50	21.24	0.0107	0.0114	0.0107
10	64QAM	25	0	20.20	20.49	20.24	0.0084	0.0090	0.0085
10	64QAM	25	12	20.29	20.33	20.33	0.0086	0.0087	0.0087
10	64QAM	25	25	20.26	20.46	20.37	0.0085	0.0089	0.0087
10	64QAM	50	0	20.20	20.42	20.25	0.0084	0.0089	0.0085
Channel				23035	23095	23155	23035	23095	23155
Frequency (MHz)				701.5	707.5	713.5	701.5	707.5	713.5
5	QPSK	1	0	23.16	23.34	23.22	0.0166	0.0173	0.0169
5	QPSK	1	12	23.04	23.18	23.12	0.0162	0.0167	0.0165
5	QPSK	1	24	23.11	23.11	23.06	0.0164	0.0164	0.0163
5	QPSK	12	0	22.35	22.28	22.30	0.0138	0.0136	0.0136
5	QPSK	12	7	22.19	22.26	21.99	0.0133	0.0135	0.0127



5	QPSK	12	13	22.21	22.11	22.21	0.0134	0.0131	0.0134
5	QPSK	25	0	22.11	22.43	22.22	0.0131	0.0141	0.0134
5	16QAM	1	0	22.37	22.40	22.21	0.0139	0.0140	0.0134
5	16QAM	1	12	22.30	22.35	22.37	0.0136	0.0138	0.0139
5	16QAM	1	24	22.11	22.30	22.23	0.0131	0.0136	0.0134
5	16QAM	12	0	21.28	21.42	21.37	0.0108	0.0111	0.0110
5	16QAM	12	7	21.09	21.21	21.27	0.0103	0.0106	0.0108
5	16QAM	12	13	21.08	21.27	21.13	0.0103	0.0108	0.0104
5	16QAM	25	0	21.02	21.35	21.11	0.0102	0.0110	0.0104
5	64QAM	1	0	21.18	21.42	21.26	0.0105	0.0111	0.0107
5	64QAM	1	12	21.29	21.35	21.24	0.0108	0.0110	0.0107
5	64QAM	1	24	21.30	21.46	21.25	0.0108	0.0112	0.0107
5	64QAM	12	0	20.16	20.48	20.36	0.0083	0.0090	0.0087
5	64QAM	12	7	20.29	20.49	20.24	0.0086	0.0090	0.0085
5	64QAM	12	13	20.27	20.43	20.39	0.0086	0.0089	0.0088
5	64QAM	25	0	20.20	20.44	20.34	0.0084	0.0089	0.0087
Channel				23025	23095	23165	23025	23095	23165
Frequency (MHz)				700.5	707.5	714.5	700.5	707.5	714.5
3	QPSK	1	0	23.14	23.37	23.21	0.0166	0.0175	0.0168
3	QPSK	1	8	23.11	23.15	23.14	0.0164	0.0166	0.0166
3	QPSK	1	14	23.03	23.06	23.08	0.0161	0.0163	0.0163
3	QPSK	8	0	22.36	22.20	22.28	0.0138	0.0133	0.0136
3	QPSK	8	4	22.23	22.26	22.01	0.0134	0.0135	0.0128
3	QPSK	8	7	22.22	22.17	22.09	0.0134	0.0132	0.0130
3	QPSK	15	0	22.02	22.40	22.27	0.0128	0.0140	0.0136
3	16QAM	1	0	22.38	22.43	22.20	0.0139	0.0141	0.0133
3	16QAM	1	8	22.39	22.24	22.34	0.0139	0.0135	0.0138
3	16QAM	1	14	22.13	22.28	22.27	0.0131	0.0136	0.0136
3	16QAM	8	0	21.26	21.44	21.30	0.0107	0.0112	0.0108
3	16QAM	8	4	21.12	21.20	21.22	0.0104	0.0106	0.0106
3	16QAM	8	7	21.15	21.25	21.19	0.0105	0.0107	0.0106
3	16QAM	15	0	21.02	21.33	21.13	0.0102	0.0109	0.0104
3	64QAM	1	0	21.23	21.39	21.29	0.0107	0.0111	0.0108
3	64QAM	1	8	21.17	21.33	21.38	0.0105	0.0109	0.0110
3	64QAM	1	14	21.16	21.42	21.26	0.0105	0.0111	0.0107
3	64QAM	8	0	20.21	20.48	20.28	0.0084	0.0090	0.0086
3	64QAM	8	4	20.22	20.38	20.32	0.0085	0.0088	0.0086
3	64QAM	8	7	20.15	20.39	20.33	0.0083	0.0088	0.0087
3	64QAM	15	0	20.23	20.39	20.26	0.0085	0.0088	0.0085
Channel				23017	23095	23173	23017	23095	23173
Frequency (MHz)				699.7	707.5	715.3	699.7	707.5	715.3
1.4	QPSK	1	0	23.14	23.35	23.21	0.0166	0.0174	0.0168
1.4	QPSK	1	3	23.04	23.22	23.15	0.0162	0.0169	0.0166
1.4	QPSK	1	5	23.12	23.06	23.09	0.0165	0.0163	0.0164
1.4	QPSK	3	0	23.15	23.26	23.23	0.0166	0.0170	0.0169
1.4	QPSK	3	1	23.06	23.13	23.17	0.0163	0.0165	0.0167
1.4	QPSK	3	3	23.11	23.15	23.14	0.0164	0.0166	0.0166



1.4	QPSK	6	0	22.37	22.26	22.28	0.0139	0.0135	0.0136
1.4	16QAM	1	0	22.24	22.25	22.08	0.0135	0.0135	0.0130
1.4	16QAM	1	3	22.27	22.12	22.11	0.0136	0.0131	0.0131
1.4	16QAM	1	5	22.05	22.39	22.27	0.0129	0.0139	0.0136
1.4	16QAM	3	0	22.38	22.38	22.22	0.0139	0.0139	0.0134
1.4	16QAM	3	1	22.36	22.29	22.40	0.0138	0.0136	0.0140
1.4	16QAM	3	3	22.18	22.32	22.26	0.0133	0.0137	0.0135
1.4	16QAM	6	0	21.18	21.43	21.29	0.0105	0.0112	0.0108
1.4	64QAM	1	0	21.25	21.41	21.36	0.0107	0.0111	0.0110
1.4	64QAM	1	3	21.15	21.34	21.34	0.0105	0.0109	0.0109
1.4	64QAM	1	5	21.25	21.50	21.30	0.0107	0.0114	0.0108
1.4	64QAM	3	0	21.30	21.49	21.40	0.0108	0.0113	0.0111
1.4	64QAM	3	1	21.20	21.49	21.36	0.0106	0.0113	0.0110
1.4	64QAM	3	3	21.19	21.37	21.23	0.0106	0.0110	0.0107
1.4	64QAM	6	0	20.29	20.37	20.30	0.0086	0.0087	0.0086

LTE Band 13_ANT1:

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	ERP	ERP	ERP
Channel				23230			23230		
Frequency (MHz)				782			782		
10	QPSK	1	0		24.27			0.0200	
10	QPSK	1	25		24.12			0.0194	
10	QPSK	1	49		24.05			0.0191	
10	QPSK	25	0		23.24			0.0158	
10	QPSK	25	12		23.07			0.0152	
10	QPSK	25	25		22.98			0.0149	
10	QPSK	50	0		23.34			0.0162	
10	16QAM	1	0		23.28			0.0160	
10	16QAM	1	25		23.21			0.0157	
10	16QAM	1	49		23.10			0.0153	
10	16QAM	25	0		22.32			0.0128	
10	16QAM	25	12		22.14			0.0123	
10	16QAM	25	25		22.17			0.0124	
10	16QAM	50	0		22.32			0.0128	
10	64QAM	1	0		22.20			0.0124	
10	64QAM	1	25		22.13			0.0122	
10	64QAM	1	49		22.24			0.0126	
10	64QAM	25	0		21.19			0.0099	
10	64QAM	25	12		21.24			0.0100	
10	64QAM	25	25		21.15			0.0098	
10	64QAM	50	0		21.26			0.0100	
Channel				23205	23230	23255	23205	23230	23255
Frequency (MHz)				779.5	782	784.5	779.5	782	784.5
5	QPSK	1	0	24.18	24.22	24.13	0.0196	0.0198	0.0194
5	QPSK	1	12	24.07	24.12	24.09	0.0191	0.0194	0.0192



5	QPSK	1	24	23.87	23.98	23.85	0.0183	0.0187	0.0182
5	QPSK	12	0	23.11	23.19	23.05	0.0153	0.0156	0.0151
5	QPSK	12	7	22.95	23.10	23.07	0.0148	0.0153	0.0152
5	QPSK	12	13	22.97	23.02	23.00	0.0149	0.0150	0.0150
5	QPSK	25	0	23.30	23.34	23.24	0.0160	0.0162	0.0158
5	16QAM	1	0	23.12	23.31	23.24	0.0154	0.0161	0.0158
5	16QAM	1	12	23.18	23.15	23.14	0.0156	0.0155	0.0155
5	16QAM	1	24	23.12	23.21	23.14	0.0154	0.0157	0.0155
5	16QAM	12	0	22.16	22.30	22.17	0.0123	0.0127	0.0124
5	16QAM	12	7	22.04	22.21	22.08	0.0120	0.0125	0.0121
5	16QAM	12	13	22.09	22.20	22.02	0.0121	0.0124	0.0119
5	16QAM	25	0	22.25	22.27	22.14	0.0126	0.0126	0.0123
5	64QAM	1	0	22.04	22.20	22.17	0.0120	0.0124	0.0124
5	64QAM	1	12	22.07	22.26	22.21	0.0121	0.0126	0.0125
5	64QAM	1	24	22.13	22.18	22.19	0.0122	0.0124	0.0124
5	64QAM	12	0	21.05	21.11	21.21	0.0095	0.0097	0.0099
5	64QAM	12	7	21.10	21.21	21.07	0.0097	0.0099	0.0096
5	64QAM	12	13	21.23	21.15	21.03	0.0100	0.0098	0.0095
5	64QAM	25	0	21.16	21.12	21.21	0.0098	0.0097	0.0099

LTE Band 38_ANT1:

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	EIRP	EIRP	EIRP
Channel				37850	38000	38150	37850	38000	38150
Frequency (MHz)				2580	2595	2610	2580	2595	2610
20	QPSK	1	0	24.30	24.47	24.35	0.4365	0.4539	0.4416
20	QPSK	1	49	24.25	24.38	24.45	0.4315	0.4446	0.4519
20	QPSK	1	99	24.17	24.29	24.34	0.4236	0.4355	0.4406
20	QPSK	50	0	23.47	23.52	23.35	0.3606	0.3648	0.3508
20	QPSK	50	24	23.38	23.40	23.27	0.3532	0.3548	0.3443
20	QPSK	50	50	23.35	23.49	23.34	0.3508	0.3622	0.3499
20	QPSK	100	0	23.26	23.37	23.31	0.3436	0.3524	0.3475
20	16QAM	1	0	23.52	23.47	23.58	0.3648	0.3606	0.3698
20	16QAM	1	49	23.38	23.50	23.42	0.3532	0.3631	0.3565
20	16QAM	1	99	23.43	23.42	23.44	0.3573	0.3565	0.3581
20	16QAM	50	0	22.38	22.48	22.39	0.2805	0.2871	0.2812
20	16QAM	50	24	22.27	22.35	22.37	0.2735	0.2786	0.2799
20	16QAM	50	50	22.29	22.40	22.50	0.2748	0.2818	0.2884
20	16QAM	100	0	22.38	22.50	22.36	0.2805	0.2884	0.2793
20	64QAM	1	0	22.30	22.56	22.25	0.2754	0.2924	0.2723
20	64QAM	1	49	22.39	22.59	22.45	0.2812	0.2944	0.2851
20	64QAM	1	99	22.24	22.50	22.44	0.2716	0.2884	0.2844
20	64QAM	50	0	21.27	21.37	21.39	0.2173	0.2223	0.2234
20	64QAM	50	24	21.28	21.50	21.29	0.2178	0.2291	0.2183
20	64QAM	50	50	21.34	21.52	21.44	0.2208	0.2301	0.2259
20	64QAM	100	0	21.33	21.48	21.33	0.2203	0.2280	0.2203



Channel				37825	38000	38175	37825	38000	38175
Frequency (MHz)				2577.5	2595	2612.5	2577.5	2595	2612.5
15	QPSK	1	0	24.28	24.43	24.21	0.4345	0.4498	0.4276
15	QPSK	1	37	24.18	24.30	24.33	0.4246	0.4365	0.4395
15	QPSK	1	74	24.14	24.20	24.25	0.4207	0.4266	0.4315
15	QPSK	36	0	23.38	23.40	23.32	0.3532	0.3548	0.3483
15	QPSK	36	20	23.36	23.34	23.13	0.3516	0.3499	0.3334
15	QPSK	36	39	23.30	23.43	23.28	0.3467	0.3573	0.3451
15	QPSK	75	0	23.22	23.28	23.26	0.3404	0.3451	0.3436
15	16QAM	1	0	23.47	23.37	23.46	0.3606	0.3524	0.3597
15	16QAM	1	37	23.31	23.36	23.31	0.3475	0.3516	0.3475
15	16QAM	1	74	23.37	23.34	23.36	0.3524	0.3499	0.3516
15	16QAM	36	0	22.25	22.37	22.28	0.2723	0.2799	0.2742
15	16QAM	36	20	22.17	22.30	22.28	0.2673	0.2754	0.2742
15	16QAM	36	39	22.20	22.31	22.43	0.2692	0.2761	0.2838
15	16QAM	75	0	22.27	22.42	22.30	0.2735	0.2831	0.2754
15	64QAM	1	0	22.23	22.44	22.18	0.2710	0.2844	0.2679
15	64QAM	1	37	22.29	22.52	22.43	0.2748	0.2897	0.2838
15	64QAM	1	74	22.12	22.48	22.36	0.2642	0.2871	0.2793
15	64QAM	36	0	21.23	21.30	21.28	0.2153	0.2188	0.2178
15	64QAM	36	20	21.18	21.44	21.18	0.2128	0.2259	0.2128
15	64QAM	36	39	21.23	21.43	21.37	0.2153	0.2254	0.2223
15	64QAM	75	0	21.21	21.42	21.25	0.2143	0.2249	0.2163
Channel				37800	38000	38200	37800	38000	38200
Frequency (MHz)				2575	2595	2615	2575	2595	2615
10	QPSK	1	0	24.25	24.36	24.32	0.4315	0.4426	0.4385
10	QPSK	1	25	24.16	24.30	24.34	0.4227	0.4365	0.4406
10	QPSK	1	49	24.07	24.16	24.28	0.4140	0.4227	0.4345
10	QPSK	25	0	23.39	23.45	23.24	0.3540	0.3589	0.3420
10	QPSK	25	12	23.26	23.31	23.20	0.3436	0.3475	0.3388
10	QPSK	25	25	23.31	23.40	23.29	0.3475	0.3548	0.3459
10	QPSK	50	0	23.12	23.31	23.24	0.3327	0.3475	0.3420
10	16QAM	1	0	23.49	23.35	23.54	0.3622	0.3508	0.3664
10	16QAM	1	25	23.33	23.46	23.36	0.3491	0.3597	0.3516
10	16QAM	1	49	23.38	23.38	23.36	0.3532	0.3532	0.3516
10	16QAM	25	0	22.33	22.36	22.27	0.2773	0.2793	0.2735
10	16QAM	25	12	22.18	22.23	22.27	0.2679	0.2710	0.2735
10	16QAM	25	25	22.21	22.30	22.38	0.2698	0.2754	0.2805
10	16QAM	50	0	22.30	22.46	22.29	0.2754	0.2858	0.2748
10	64QAM	1	0	22.22	22.52	22.14	0.2704	0.2897	0.2655
10	64QAM	1	25	22.36	22.51	22.38	0.2793	0.2891	0.2805
10	64QAM	1	49	22.13	22.47	22.40	0.2649	0.2864	0.2818
10	64QAM	25	0	21.23	21.34	21.35	0.2153	0.2208	0.2213
10	64QAM	25	12	21.23	21.38	21.26	0.2153	0.2228	0.2168
10	64QAM	25	25	21.31	21.48	21.36	0.2193	0.2280	0.2218
10	64QAM	50	0	21.26	21.43	21.24	0.2168	0.2254	0.2158
Channel				37775	38000	38225	37775	38000	38225
Frequency (MHz)				2572.5	2595	2617.5	2572.5	2595	2617.5



5	QPSK	1	0	24.22	24.37	24.23	0.4285	0.4436	0.4295
5	QPSK	1	12	24.11	24.29	24.35	0.4178	0.4355	0.4416
5	QPSK	1	24	24.05	24.19	24.25	0.4121	0.4256	0.4315
5	QPSK	12	0	23.38	23.41	23.32	0.3532	0.3556	0.3483
5	QPSK	12	7	23.35	23.33	23.22	0.3508	0.3491	0.3404
5	QPSK	12	13	23.32	23.36	23.30	0.3483	0.3516	0.3467
5	QPSK	25	0	23.18	23.28	23.29	0.3373	0.3451	0.3459
5	16QAM	1	0	23.47	23.41	23.50	0.3606	0.3556	0.3631
5	16QAM	1	12	23.28	23.37	23.32	0.3451	0.3524	0.3483
5	16QAM	1	24	23.38	23.35	23.31	0.3532	0.3508	0.3475
5	16QAM	12	0	22.33	22.40	22.31	0.2773	0.2818	0.2761
5	16QAM	12	7	22.21	22.25	22.29	0.2698	0.2723	0.2748
5	16QAM	12	13	22.19	22.37	22.47	0.2685	0.2799	0.2864
5	16QAM	25	0	22.29	22.45	22.26	0.2748	0.2851	0.2729
5	64QAM	1	0	22.23	22.53	22.19	0.2710	0.2904	0.2685
5	64QAM	1	12	22.25	22.47	22.32	0.2723	0.2864	0.2767
5	64QAM	1	24	22.13	22.46	22.36	0.2649	0.2858	0.2793
5	64QAM	12	0	21.14	21.25	21.26	0.2109	0.2163	0.2168
5	64QAM	12	7	21.17	21.38	21.26	0.2123	0.2228	0.2168
5	64QAM	12	13	21.27	21.47	21.32	0.2173	0.2275	0.2198
5	64QAM	25	0	21.29	21.37	21.27	0.2183	0.2223	0.2173

LTE Band 41_ANT1:

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	EIRP	EIRP	EIRP
Channel				39750	40620	41490	39750	40620	41490
Frequency (MHz)				2506	2593	2680	2506	2593	2680
20	QPSK	1	0	26.62	26.86	26.70	0.7447	0.7870	0.7586
20	QPSK	1	49	26.52	26.75	26.57	0.7278	0.7674	0.7362
20	QPSK	1	99	26.46	26.77	26.56	0.7178	0.7709	0.7345
20	QPSK	50	0	25.62	25.98	25.76	0.5916	0.6427	0.6109
20	QPSK	50	24	25.58	25.86	25.68	0.5861	0.6252	0.5998
20	QPSK	50	50	25.61	25.81	25.82	0.5902	0.6180	0.6194
20	QPSK	100	0	25.61	25.83	25.81	0.5902	0.6209	0.6180
20	16QAM	1	0	25.78	25.98	25.69	0.6138	0.6427	0.6012
20	16QAM	1	49	25.58	26.05	25.80	0.5861	0.6531	0.6166
20	16QAM	1	99	25.64	25.93	25.82	0.5943	0.6353	0.6194
20	16QAM	50	0	24.65	24.96	24.74	0.4732	0.5082	0.4831
20	16QAM	50	24	24.65	24.75	24.65	0.4732	0.4842	0.4732
20	16QAM	50	50	24.77	24.89	24.65	0.4864	0.5000	0.4732
20	16QAM	100	0	24.50	24.92	24.51	0.4571	0.5035	0.4581
20	64QAM	1	0	24.74	24.88	24.63	0.4831	0.4989	0.4710
20	64QAM	1	49	24.81	24.95	24.70	0.4909	0.5070	0.4786
20	64QAM	1	99	24.72	24.86	24.85	0.4808	0.4966	0.4955
20	64QAM	50	0	23.63	23.95	23.69	0.3741	0.4027	0.3793
20	64QAM	50	24	23.68	23.89	23.68	0.3784	0.3972	0.3784
20	64QAM	50	50	23.80	23.72	23.82	0.3890	0.3819	0.3908



20	64QAM	100	0	23.63	23.90	23.65	0.3741	0.3981	0.3758
20	256QAM	1	0	22.30	22.22	22.14	0.2754	0.2704	0.2655
20	256QAM	1	49	22.23	22.21	22.20	0.2710	0.2698	0.2692
20	256QAM	1	99	22.10	22.04	22.19	0.2630	0.2594	0.2685
20	256QAM	50	0	22.09	22.05	22.00	0.2624	0.2600	0.2570
20	256QAM	50	24	21.93	21.88	21.92	0.2529	0.2500	0.2523
20	256QAM	50	50	22.11	22.07	22.19	0.2636	0.2612	0.2685
20	256QAM	100	0	22.08	22.20	22.05	0.2618	0.2692	0.2600
Channel				39725	40620	41515	39725	40620	41515
Frequency (MHz)				2503.5	2593	2682.5	2503.5	2593	2682.5
15	QPSK	1	0	26.57	26.79	26.62	0.7362	0.7745	0.7447
15	QPSK	1	37	26.49	26.61	26.49	0.7228	0.7430	0.7228
15	QPSK	1	74	26.43	26.75	26.49	0.7129	0.7674	0.7228
15	QPSK	36	0	25.48	25.93	25.64	0.5728	0.6353	0.5943
15	QPSK	36	20	25.46	25.80	25.54	0.5702	0.6166	0.5808
15	QPSK	36	39	25.57	25.77	25.75	0.5848	0.6124	0.6095
15	QPSK	75	0	25.56	25.79	25.71	0.5834	0.6152	0.6039
15	16QAM	1	0	25.75	25.87	25.61	0.6095	0.6266	0.5902
15	16QAM	1	37	25.45	25.92	25.69	0.5689	0.6339	0.6012
15	16QAM	1	74	25.52	25.90	25.68	0.5781	0.6310	0.5998
15	16QAM	36	0	24.59	24.91	24.69	0.4667	0.5023	0.4775
15	16QAM	36	20	24.61	24.63	24.60	0.4688	0.4710	0.4677
15	16QAM	36	39	24.75	24.75	24.60	0.4842	0.4842	0.4677
15	16QAM	75	0	24.36	24.80	24.47	0.4426	0.4898	0.4539
15	64QAM	1	0	24.62	24.76	24.55	0.4699	0.4853	0.4624
15	64QAM	1	37	24.75	24.84	24.64	0.4842	0.4943	0.4721
15	64QAM	1	74	24.61	24.76	24.82	0.4688	0.4853	0.4920
15	64QAM	36	0	23.58	23.91	23.59	0.3698	0.3990	0.3707
15	64QAM	36	20	23.61	23.77	23.56	0.3724	0.3864	0.3681
15	64QAM	36	39	23.77	23.66	23.71	0.3864	0.3767	0.3811
15	64QAM	75	0	23.57	23.87	23.58	0.3690	0.3954	0.3698
15	256QAM	1	0	22.19	22.09	22.00	0.2685	0.2624	0.2570
15	256QAM	1	37	22.18	22.17	22.07	0.2679	0.2673	0.2612
15	256QAM	1	74	21.97	21.95	22.13	0.2553	0.2541	0.2649
15	256QAM	36	0	21.98	22.03	21.94	0.2559	0.2588	0.2535
15	256QAM	36	20	21.84	21.81	21.90	0.2477	0.2460	0.2512
15	256QAM	36	39	22.05	22.04	22.09	0.2600	0.2594	0.2624
15	256QAM	75	0	21.97	22.08	21.93	0.2553	0.2618	0.2529
Channel				39700	40620	41540	39700	40620	41540
Frequency (MHz)				2501	2593	2685	2501	2593	2685
10	QPSK	1	0	26.59	26.74	26.64	0.7396	0.7656	0.7482
10	QPSK	1	25	26.41	26.64	26.43	0.7096	0.7482	0.7129
10	QPSK	1	49	26.43	26.72	26.52	0.7129	0.7621	0.7278
10	QPSK	25	0	25.48	25.86	25.70	0.5728	0.6252	0.6026
10	QPSK	25	12	25.49	25.77	25.61	0.5741	0.6124	0.5902
10	QPSK	25	25	25.56	25.71	25.77	0.5834	0.6039	0.6124
10	QPSK	50	0	25.52	25.74	25.77	0.5781	0.6081	0.6124
10	16QAM	1	0	25.65	25.84	25.66	0.5957	0.6223	0.5970



10	16QAM	1	25	25.49	25.99	25.78	0.5741	0.6442	0.6138
10	16QAM	1	49	25.61	25.89	25.72	0.5902	0.6295	0.6053
10	16QAM	25	0	24.57	24.89	24.67	0.4645	0.5000	0.4753
10	16QAM	25	12	24.61	24.62	24.56	0.4688	0.4699	0.4634
10	16QAM	25	25	24.70	24.76	24.53	0.4786	0.4853	0.4603
10	16QAM	50	0	24.42	24.85	24.46	0.4487	0.4955	0.4529
10	64QAM	1	0	24.71	24.83	24.54	0.4797	0.4932	0.4613
10	64QAM	1	25	24.70	24.87	24.68	0.4786	0.4977	0.4764
10	64QAM	1	49	24.58	24.74	24.81	0.4656	0.4831	0.4909
10	64QAM	25	0	23.61	23.92	23.59	0.3724	0.3999	0.3707
10	64QAM	25	12	23.60	23.79	23.55	0.3715	0.3882	0.3673
10	64QAM	25	25	23.76	23.60	23.75	0.3855	0.3715	0.3846
10	64QAM	50	0	23.53	23.80	23.62	0.3656	0.3890	0.3733
10	256QAM	1	0	22.20	22.20	22.06	0.2692	0.2692	0.2606
10	256QAM	1	25	22.15	22.12	22.17	0.2661	0.2642	0.2673
10	256QAM	1	49	22.03	21.91	22.06	0.2588	0.2518	0.2606
10	256QAM	25	0	21.98	21.93	21.96	0.2559	0.2529	0.2547
10	256QAM	25	12	21.89	21.86	21.87	0.2506	0.2489	0.2495
10	256QAM	25	25	22.06	22.04	22.09	0.2606	0.2594	0.2624
10	256QAM	50	0	21.97	22.07	21.95	0.2553	0.2612	0.2541
Channel				39675	40620	41565	39675	40620	41565
Frequency (MHz)				2498.5	2593	2687.5	2498.5	2593	2687.5
5	QPSK	1	0	26.53	26.81	26.57	0.7295	0.7780	0.7362
5	QPSK	1	12	26.45	26.70	26.44	0.7161	0.7586	0.7145
5	QPSK	1	24	26.35	26.70	26.54	0.6998	0.7586	0.7311
5	QPSK	12	0	25.59	25.86	25.62	0.5875	0.6252	0.5916
5	QPSK	12	7	25.46	25.83	25.58	0.5702	0.6209	0.5861
5	QPSK	12	13	25.49	25.74	25.68	0.5741	0.6081	0.5998
5	QPSK	25	0	25.48	25.75	25.78	0.5728	0.6095	0.6138
5	16QAM	1	0	25.68	25.92	25.56	0.5998	0.6339	0.5834
5	16QAM	1	12	25.51	25.93	25.67	0.5768	0.6353	0.5984
5	16QAM	1	24	25.62	25.91	25.79	0.5916	0.6324	0.6152
5	16QAM	12	0	24.62	24.90	24.71	0.4699	0.5012	0.4797
5	16QAM	12	7	24.59	24.66	24.62	0.4667	0.4742	0.4699
5	16QAM	12	13	24.72	24.83	24.59	0.4808	0.4932	0.4667
5	16QAM	25	0	24.43	24.83	24.48	0.4498	0.4932	0.4550
5	64QAM	1	0	24.69	24.77	24.52	0.4775	0.4864	0.4592
5	64QAM	1	12	24.70	24.92	24.61	0.4786	0.5035	0.4688
5	64QAM	1	24	24.62	24.83	24.83	0.4699	0.4932	0.4932
5	64QAM	12	0	23.54	23.92	23.67	0.3664	0.3999	0.3776
5	64QAM	12	7	23.54	23.82	23.61	0.3664	0.3908	0.3724
5	64QAM	12	13	23.76	23.62	23.68	0.3855	0.3733	0.3784
5	64QAM	25	0	23.60	23.78	23.63	0.3715	0.3873	0.3741
5	256QAM	1	0	22.22	22.14	22.10	0.2704	0.2655	0.2630
5	256QAM	1	12	22.11	22.18	22.11	0.2636	0.2679	0.2636
5	256QAM	1	24	21.99	21.92	22.16	0.2564	0.2523	0.2667
5	256QAM	12	0	22.02	21.99	21.96	0.2582	0.2564	0.2547
5	256QAM	12	7	21.85	21.85	21.80	0.2483	0.2483	0.2455



5	256QAM	12	13	21.97	21.96	22.13	0.2553	0.2547	0.2649
5	256QAM	25	0	22.03	22.13	21.99	0.2588	0.2649	0.2564

LTE Band 71_ANT1:

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	ERP	ERP	ERP
Channel				133222	133322	133372	133222	133322	133372
Frequency (MHz)				673	683	688	673	683	688
20	QPSK	1	0	23.91	23.94	23.80	0.0035	0.0035	0.0034
20	QPSK	1	49	23.76	23.91	23.77	0.0034	0.0035	0.0034
20	QPSK	1	99	23.68	23.81	23.78	0.0033	0.0034	0.0034
20	QPSK	50	0	22.87	22.88	22.80	0.0028	0.0028	0.0027
20	QPSK	50	24	22.66	22.87	22.66	0.0026	0.0028	0.0026
20	QPSK	50	50	22.78	22.84	22.81	0.0027	0.0027	0.0027
20	QPSK	100	0	22.86	22.91	22.87	0.0028	0.0028	0.0028
20	16QAM	1	0	22.85	22.90	22.86	0.0028	0.0028	0.0028
20	16QAM	1	49	22.92	22.89	22.82	0.0028	0.0028	0.0027
20	16QAM	1	99	22.90	23.00	22.93	0.0028	0.0029	0.0028
20	16QAM	50	0	21.76	21.91	21.78	0.0021	0.0022	0.0022
20	16QAM	50	24	21.72	21.76	21.82	0.0021	0.0021	0.0022
20	16QAM	50	50	21.78	21.93	21.80	0.0022	0.0022	0.0022
20	16QAM	100	0	21.83	21.88	21.80	0.0022	0.0022	0.0022
20	64QAM	1	0	21.84	21.99	21.87	0.0022	0.0023	0.0022
20	64QAM	1	49	21.95	21.94	21.77	0.0022	0.0022	0.0021
20	64QAM	1	99	21.85	21.85	21.86	0.0022	0.0022	0.0022
20	64QAM	50	0	20.91	20.93	20.83	0.0018	0.0018	0.0017
20	64QAM	50	24	20.88	20.93	20.77	0.0017	0.0018	0.0017
20	64QAM	50	50	20.85	20.99	20.85	0.0017	0.0018	0.0017
20	64QAM	100	0	20.93	20.91	20.91	0.0018	0.0018	0.0018
Channel				133197	133297	133397	133197	133297	133397
Frequency (MHz)				670.5	680.5	690.5	670.5	680.5	690.5
15	QPSK	1	0	23.79	23.80	23.71	0.0034	0.0034	0.0034
15	QPSK	1	37	23.68	23.87	23.67	0.0033	0.0035	0.0033
15	QPSK	1	74	23.59	23.68	23.65	0.0033	0.0033	0.0033
15	QPSK	36	0	22.80	22.76	22.70	0.0027	0.0027	0.0027
15	QPSK	36	20	22.55	22.74	22.62	0.0026	0.0027	0.0026
15	QPSK	36	39	22.73	22.75	22.72	0.0027	0.0027	0.0027
15	QPSK	75	0	22.82	22.85	22.78	0.0027	0.0028	0.0027
15	16QAM	1	0	22.80	22.79	22.75	0.0027	0.0027	0.0027
15	16QAM	1	37	22.78	22.80	22.75	0.0027	0.0027	0.0027
15	16QAM	1	74	22.79	22.86	22.83	0.0027	0.0028	0.0027
15	16QAM	36	0	21.70	21.87	21.71	0.0021	0.0022	0.0021
15	16QAM	36	20	21.57	21.70	21.70	0.0021	0.0021	0.0021
15	16QAM	36	39	21.67	21.90	21.71	0.0021	0.0022	0.0021
15	16QAM	75	0	21.71	21.79	21.67	0.0021	0.0022	0.0021
15	64QAM	1	0	21.90	21.96	21.91	0.0022	0.0022	0.0022



15	64QAM	1	37	21.95	22.00	21.88	0.0022	0.0023	0.0022
15	64QAM	1	74	21.98	21.93	21.72	0.0023	0.0022	0.0021
15	64QAM	36	0	20.82	20.95	20.79	0.0017	0.0018	0.0017
15	64QAM	36	20	20.87	20.96	20.86	0.0017	0.0018	0.0017
15	64QAM	36	39	20.80	20.83	20.81	0.0017	0.0017	0.0017
15	64QAM	75	0	20.90	20.90	20.87	0.0018	0.0018	0.0017
Channel				133172	133272	133422	133172	133272	133422
Frequency (MHz)				668	678	693	668	678	693
10	QPSK	1	0	23.81	23.90	23.69	0.0034	0.0035	0.0033
10	QPSK	1	25	23.69	23.87	23.70	0.0033	0.0035	0.0033
10	QPSK	1	49	23.63	23.77	23.67	0.0033	0.0034	0.0033
10	QPSK	25	0	22.76	22.80	22.70	0.0027	0.0027	0.0027
10	QPSK	25	12	22.52	22.82	22.56	0.0026	0.0027	0.0026
10	QPSK	25	25	22.72	22.71	22.71	0.0027	0.0027	0.0027
10	QPSK	50	0	22.76	22.77	22.82	0.0027	0.0027	0.0027
10	16QAM	1	0	22.80	22.82	22.81	0.0027	0.0027	0.0027
10	16QAM	1	25	22.85	22.77	22.72	0.0028	0.0027	0.0027
10	16QAM	1	49	22.84	22.97	22.82	0.0027	0.0028	0.0027
10	16QAM	25	0	21.61	21.87	21.67	0.0021	0.0022	0.0021
10	16QAM	25	12	21.63	21.61	21.72	0.0021	0.0021	0.0021
10	16QAM	25	25	21.67	21.86	21.71	0.0021	0.0022	0.0021
10	16QAM	50	0	21.70	21.83	21.65	0.0021	0.0022	0.0021
10	64QAM	1	0	21.90	21.96	21.84	0.0022	0.0022	0.0022
10	64QAM	1	25	21.79	21.83	21.89	0.0022	0.0022	0.0022
10	64QAM	1	49	21.91	21.90	21.81	0.0022	0.0022	0.0022
10	64QAM	25	0	20.94	20.85	20.86	0.0018	0.0017	0.0017
10	64QAM	25	12	20.99	20.86	20.89	0.0018	0.0017	0.0018
10	64QAM	25	25	20.90	20.91	20.90	0.0018	0.0018	0.0018
10	64QAM	50	0	20.90	20.92	20.83	0.0018	0.0018	0.0017
Channel				133147	133247	133447	133147	133247	133447
Frequency (MHz)				665.5	675.5	695.5	665.5	675.5	695.5
5	QPSK	1	0	23.78	23.86	23.67	0.0034	0.0035	0.0033
5	QPSK	1	12	23.66	23.80	23.72	0.0033	0.0034	0.0034
5	QPSK	1	24	23.54	23.76	23.74	0.0032	0.0034	0.0034
5	QPSK	12	0	22.83	22.78	22.76	0.0027	0.0027	0.0027
5	QPSK	12	7	22.59	22.81	22.62	0.0026	0.0027	0.0026
5	QPSK	12	13	22.64	22.76	22.68	0.0026	0.0027	0.0026
5	QPSK	25	0	22.73	22.85	22.83	0.0027	0.0028	0.0027
5	16QAM	1	0	22.76	22.85	22.73	0.0027	0.0028	0.0027
5	16QAM	1	12	22.89	22.75	22.78	0.0028	0.0027	0.0027
5	16QAM	1	24	22.85	22.93	22.87	0.0028	0.0028	0.0028
5	16QAM	12	0	21.69	21.81	21.66	0.0021	0.0022	0.0021
5	16QAM	12	7	21.65	21.67	21.69	0.0021	0.0021	0.0021
5	16QAM	12	13	21.67	21.88	21.67	0.0021	0.0022	0.0021
5	16QAM	25	0	21.70	21.84	21.70	0.0021	0.0022	0.0021
5	64QAM	1	0	21.92	21.86	21.69	0.0022	0.0022	0.0021
5	64QAM	1	12	21.87	21.93	21.81	0.0022	0.0022	0.0022



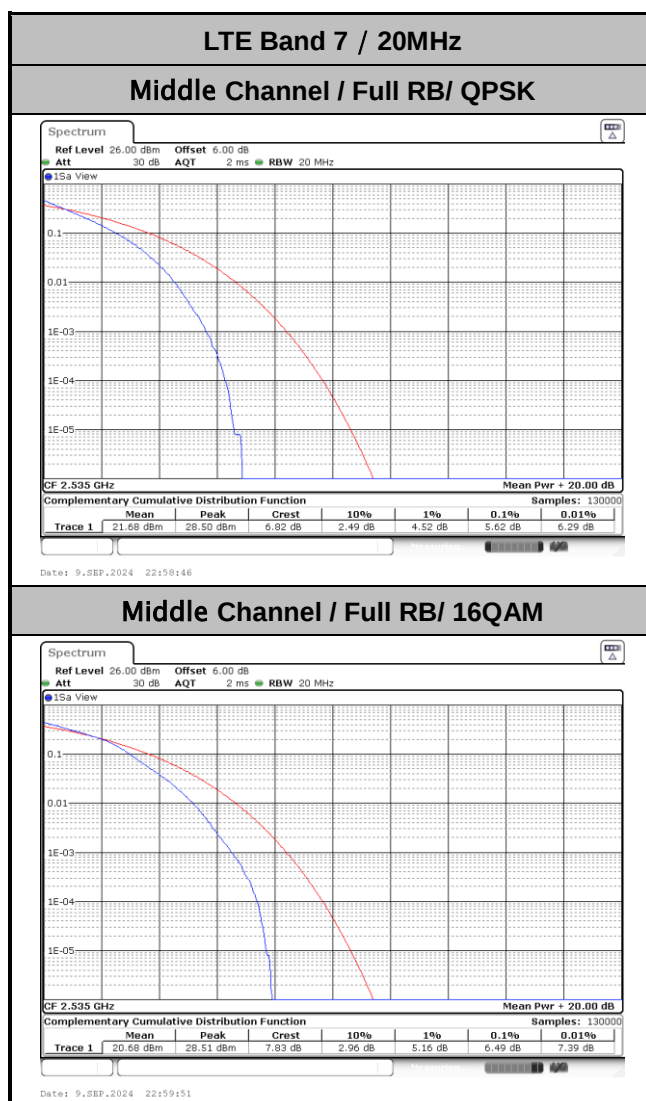
5	64QAM	1	24	21.84	21.87	21.85	0.0022	0.0022	0.0022
5	64QAM	12	0	20.93	20.93	20.73	0.0018	0.0018	0.0017
5	64QAM	12	7	20.99	20.97	20.90	0.0018	0.0018	0.0018
5	64QAM	12	13	21.00	20.86	20.73	0.0018	0.0017	0.0017
5	64QAM	25	0	20.94	20.82	20.73	0.0018	0.0017	0.0017

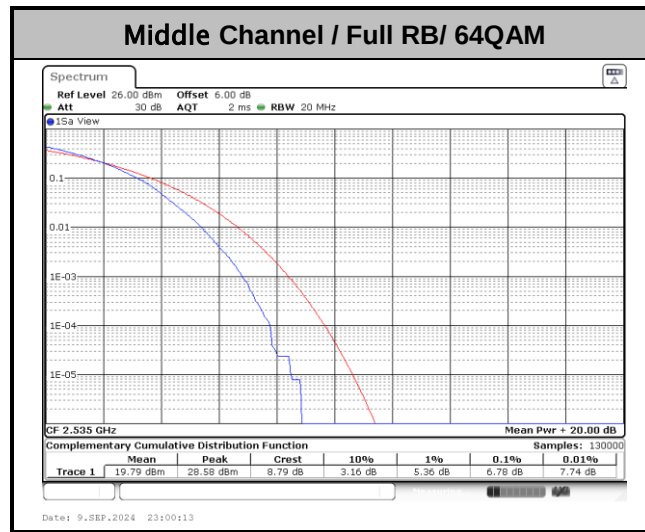


LTE Band 7

Peak-to-Average Ratio

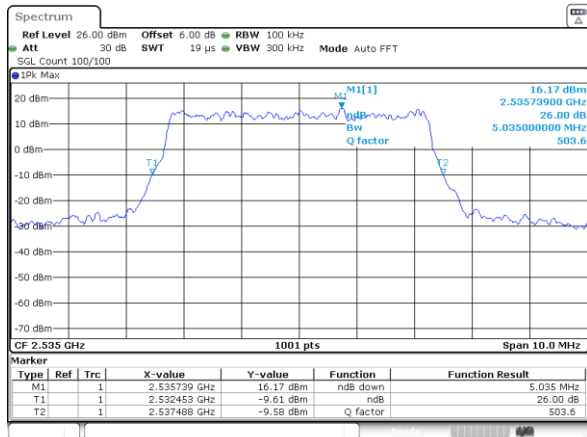
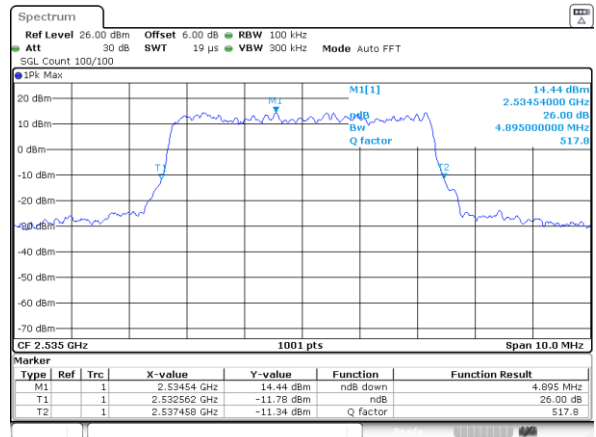
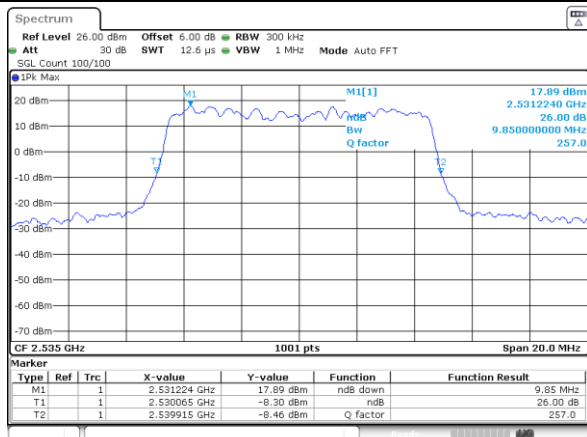
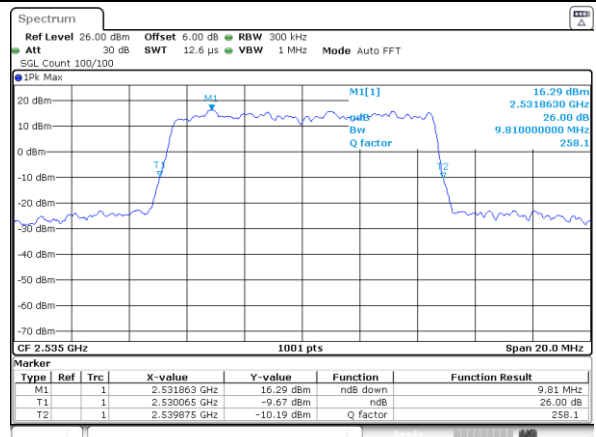
Mode	LTE Band 7 / 20MHz			
Mod.	QPSK	16QAM	64QAM	Limit: 13dB
RB Size	Full RB	Full RB	Full RB	Result
Middle CH	5.62	6.49	6.78	PASS





**26dB Bandwidth**

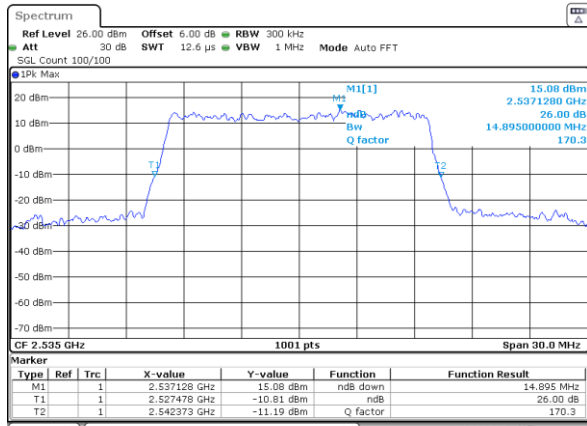
Mode	LTE Band 7 : 26dB BW(MHz)							
BW	5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	5.04	4.90	9.85	9.81	14.90	14.66	18.78	18.98

LTE Band 7**Middle Channel / 5MHz / QPSK****Middle Channel / 5MHz / 16QAM****LTE Band 7****Middle Channel / 10MHz / QPSK****Middle Channel / 10MHz / 16QAM**



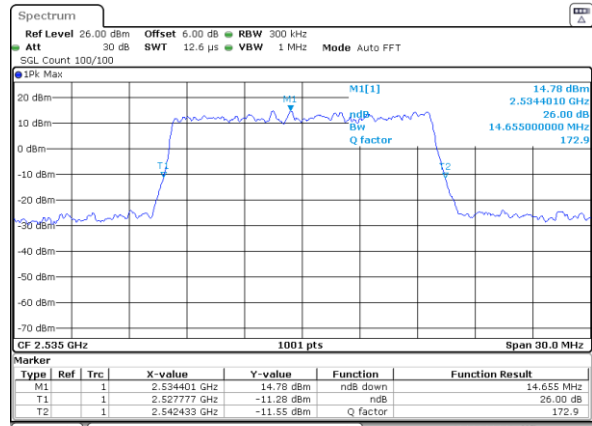
LTE Band 7

Middle Channel / 15MHz / QPSK



Date: 9,SEP,2024 23:02:47

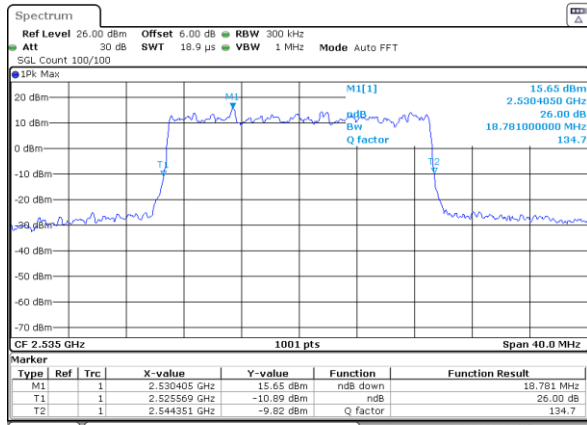
Middle Channel / 15MHz / 16QAM



Date: 9,SEP,2024 23:03:08

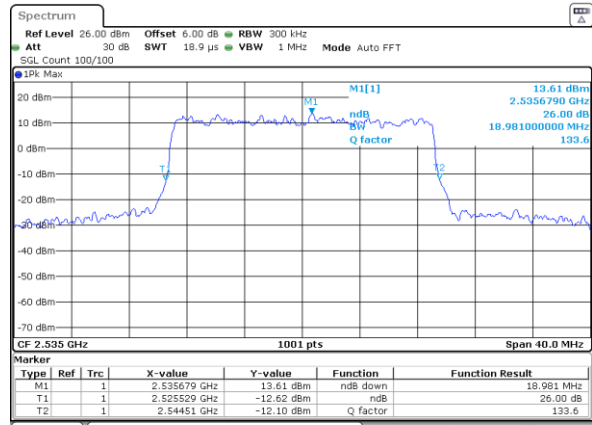
LTE Band 7

Middle Channel / 20MHz / QPSK



Date: 9,SEP,2024 22:58:23

Middle Channel / 20MHz / 16QAM



Date: 9,SEP,2024 22:59:29

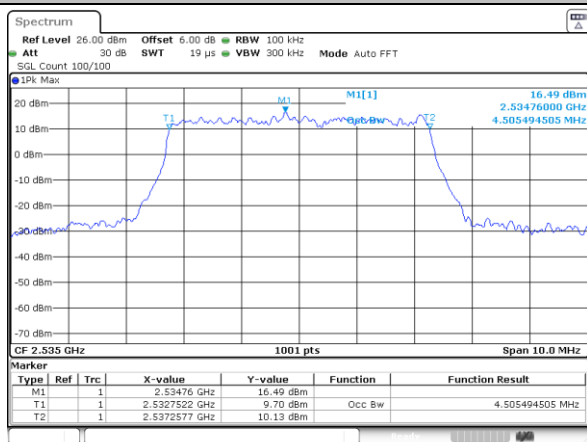


Occupied Bandwidth

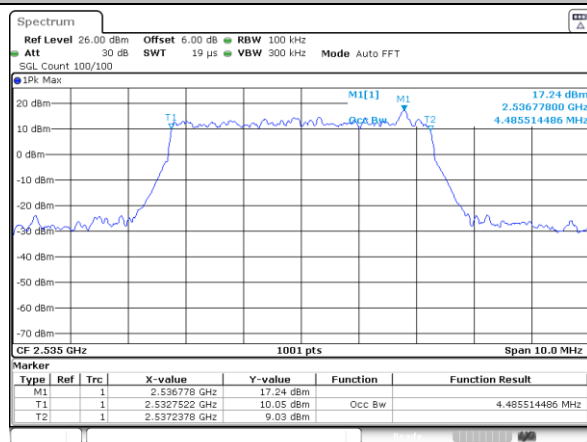
Mode	LTE Band 7 : 99%OBW(MHz)							
BW	5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	4.51	4.49	9.13	9.01	13.52	13.46	17.86	18.02

LTE Band 7

Middle Channel / 5MHz / QPSK

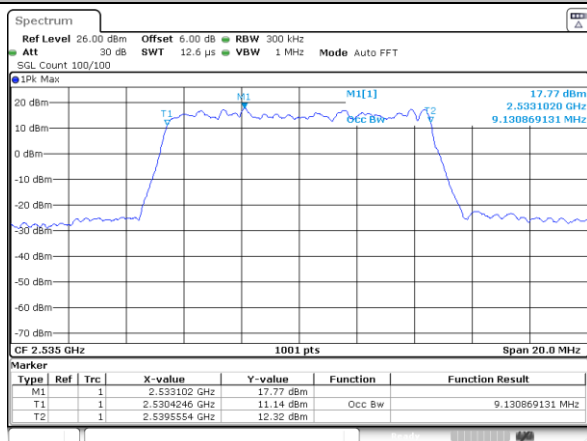


Middle Channel / 5MHz / 16QAM

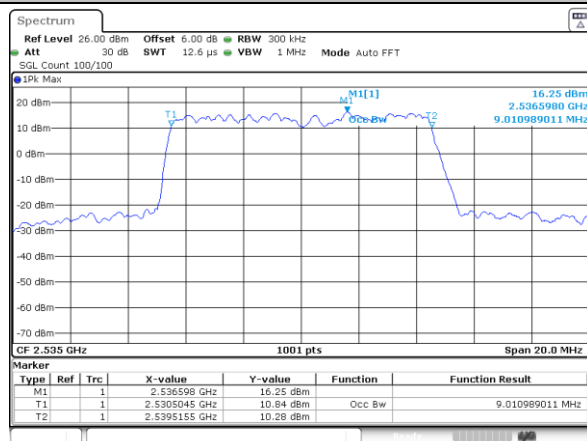


LTE Band 7

Middle Channel / 10MHz / QPSK



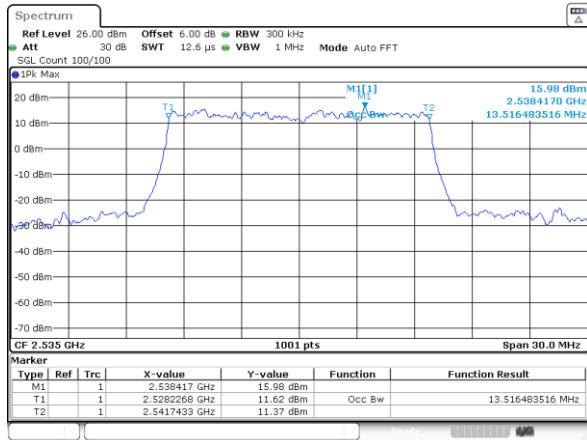
Middle Channel / 10MHz / 16QAM



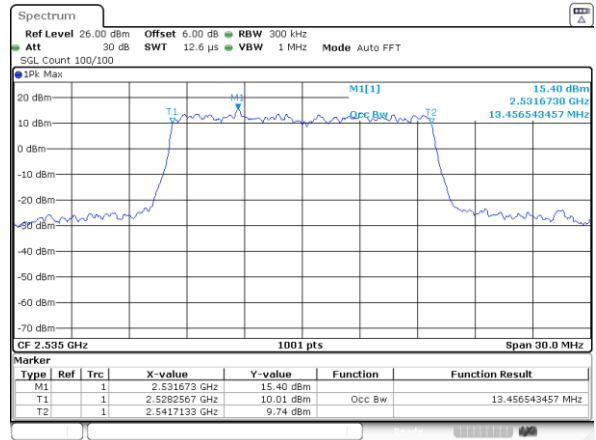


LTE Band 7

Middle Channel / 15MHz / QPSK

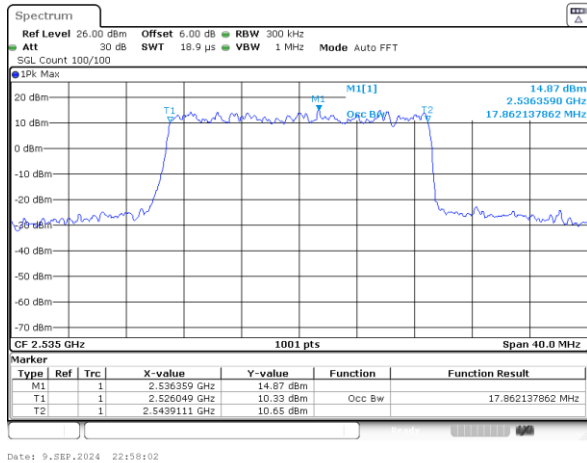


Middle Channel / 15MHz / 16QAM

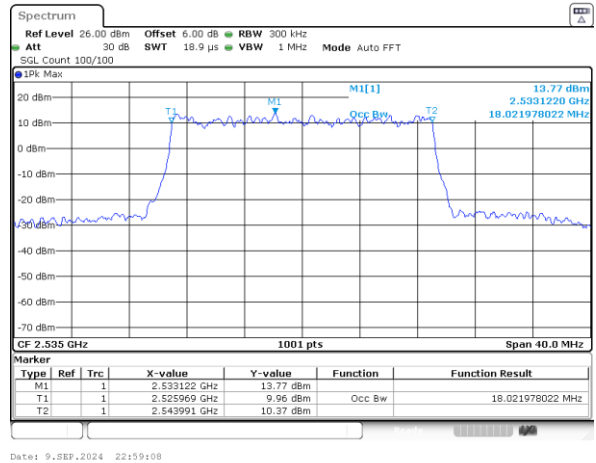


LTE Band 7

Middle Channel / 20MHz / QPSK



Middle Channel / 20MHz / 16QAM

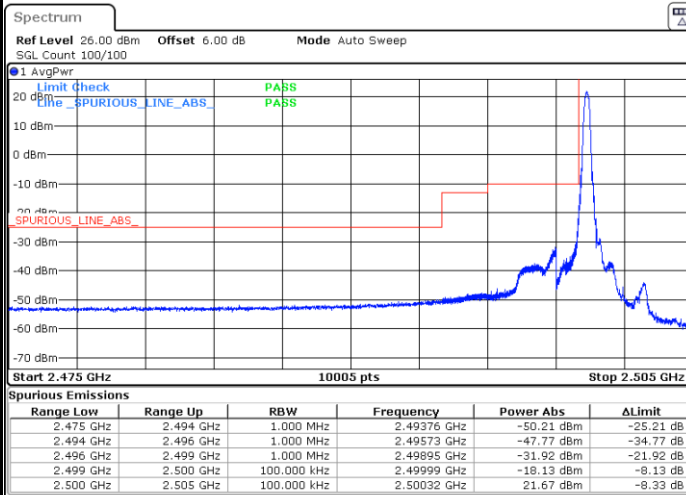




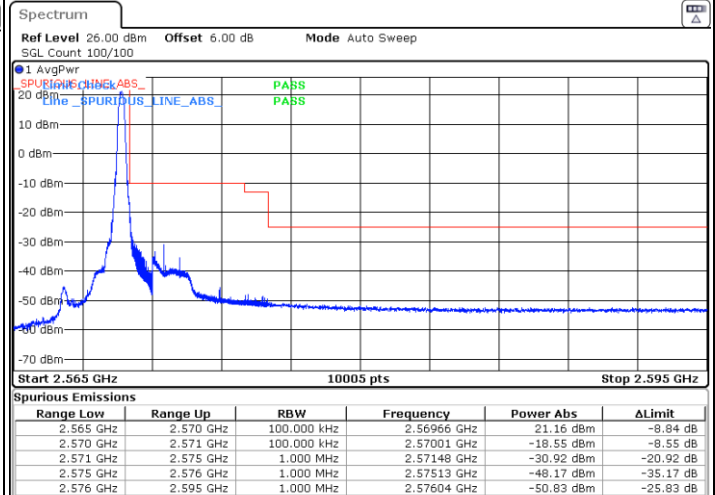
Conducted Band Edge

LTE Band 7 / 5MHz / QPSK

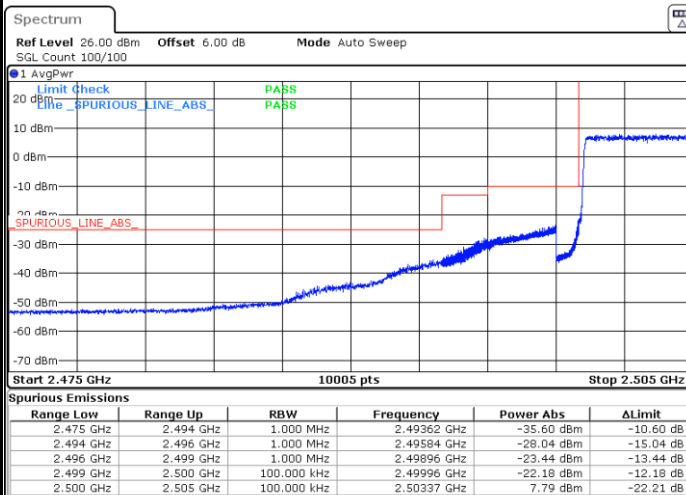
Lowest Band Edge / 1 RB



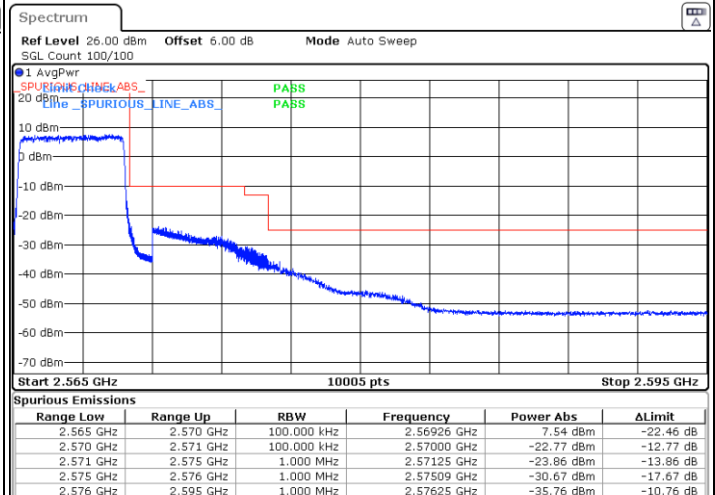
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



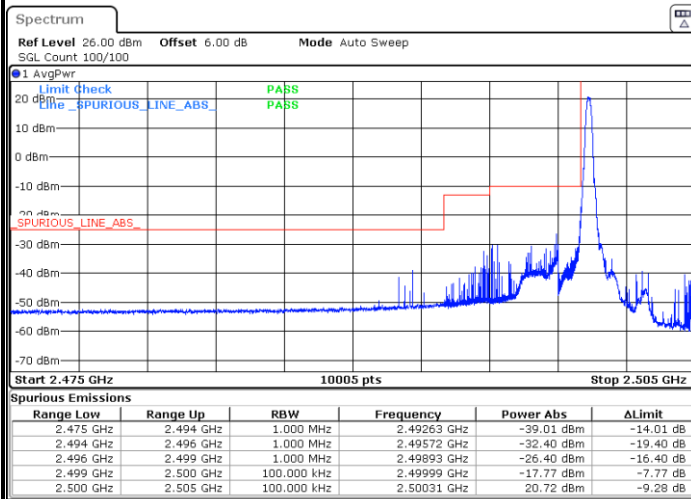
Highest Band Edge / Full RB



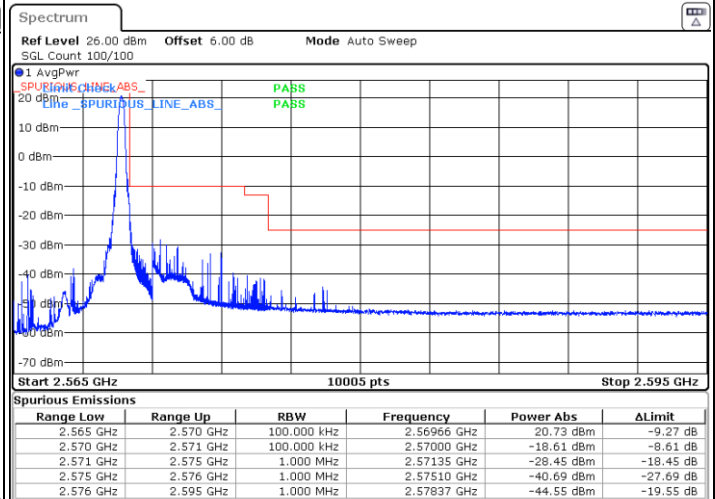


LTE Band 7 / 5MHz / 16QAM

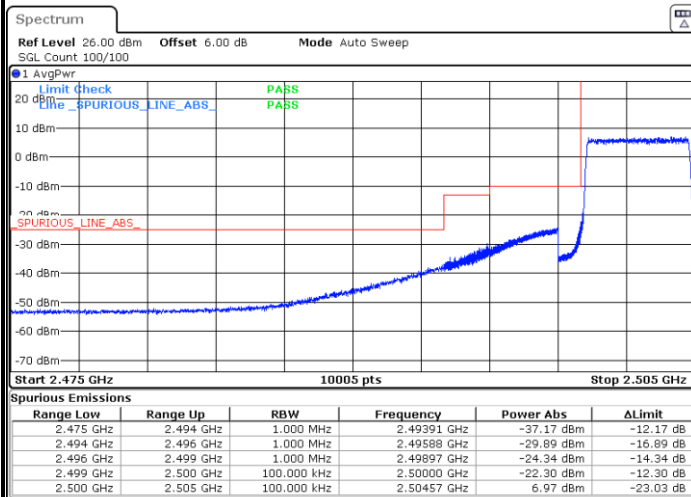
Lowest Band Edge / 1RB



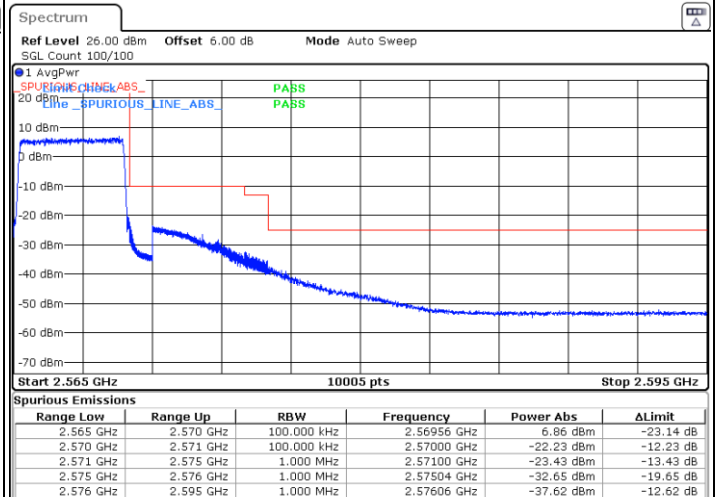
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



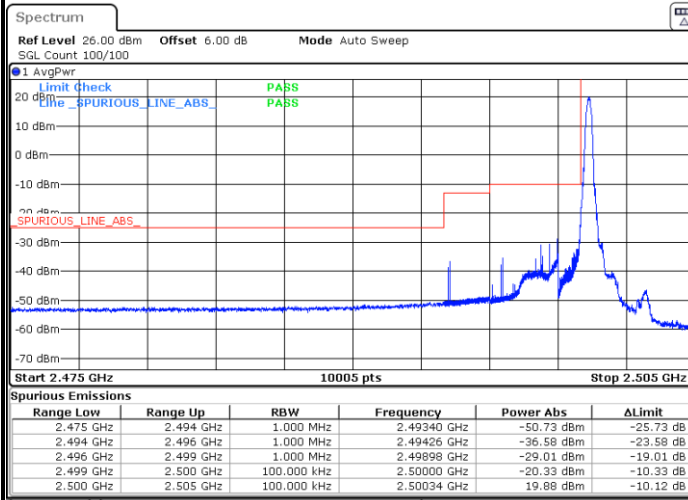
Highest Band Edge / Full RB



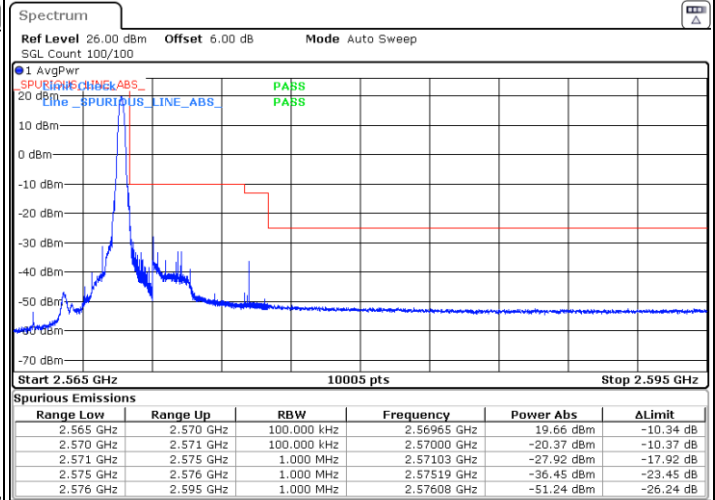


LTE Band 7 / 5MHz / 64QAM

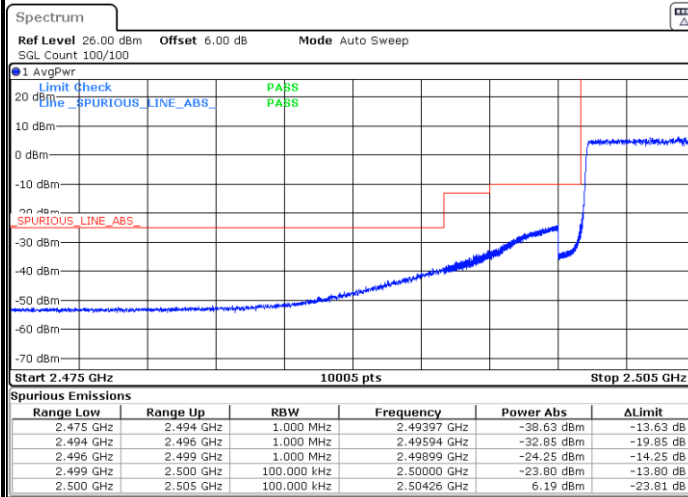
Lowest Band Edge / 1RB



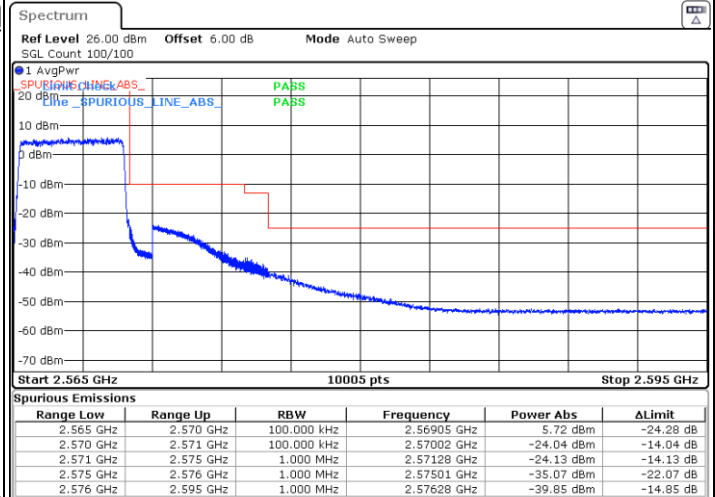
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



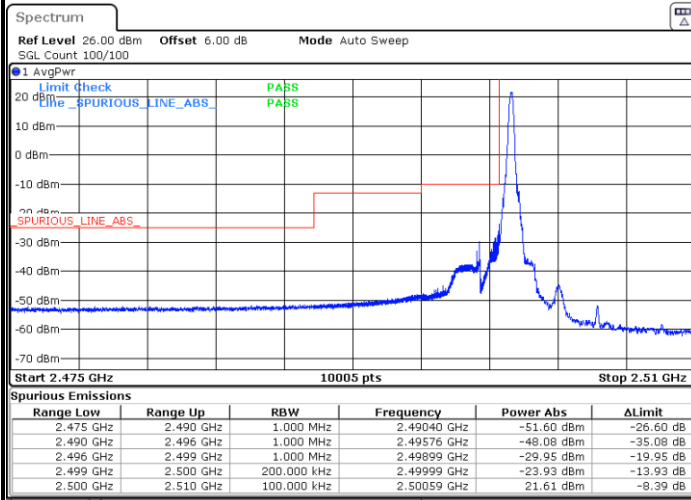
Highest Band Edge / Full RB



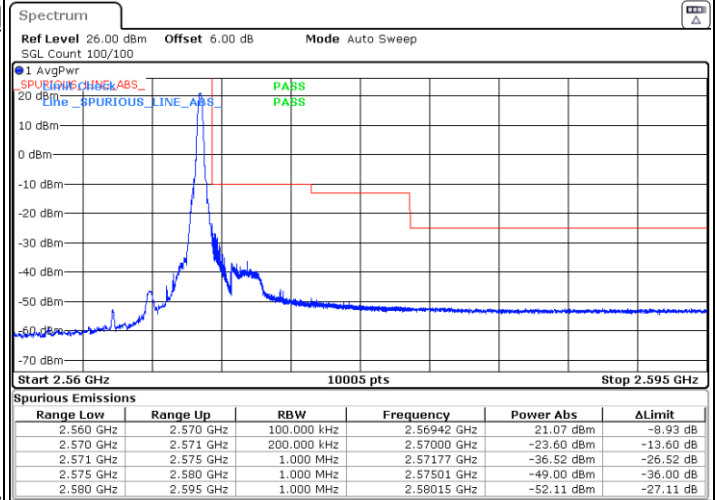


LTE Band 7 / 10MHz / QPSK

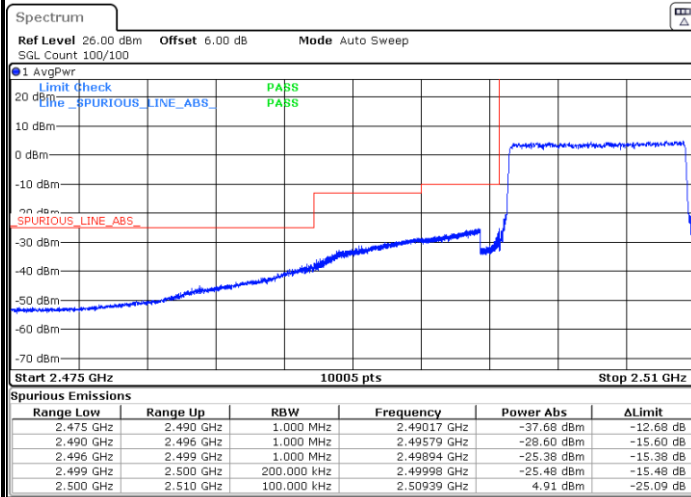
Lowest Band Edge / 1 RB



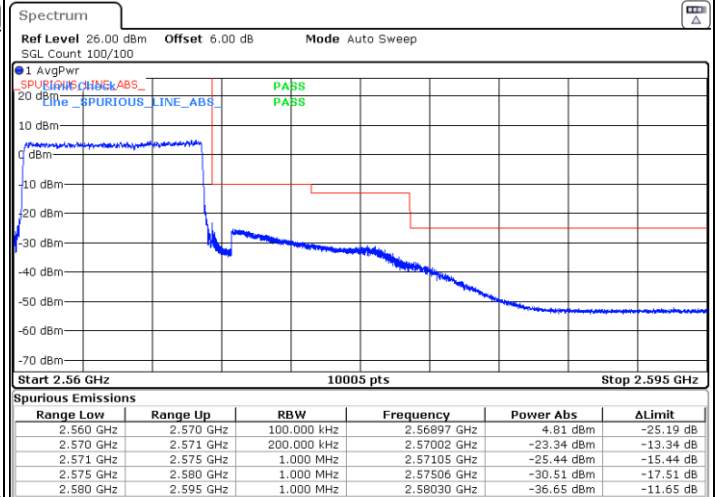
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



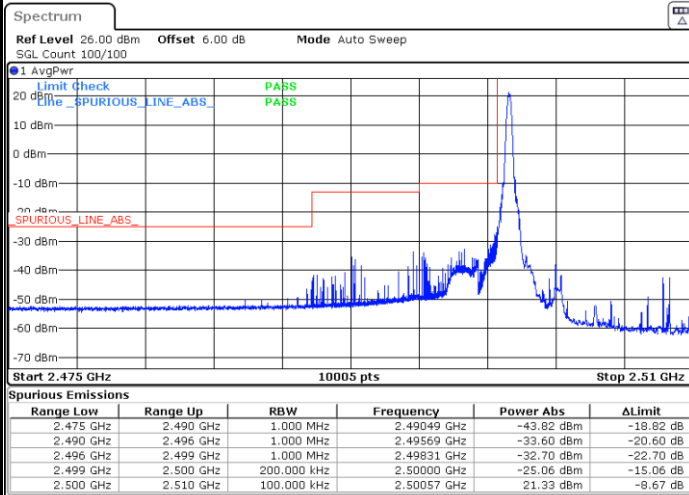
Highest Band Edge / Full RB





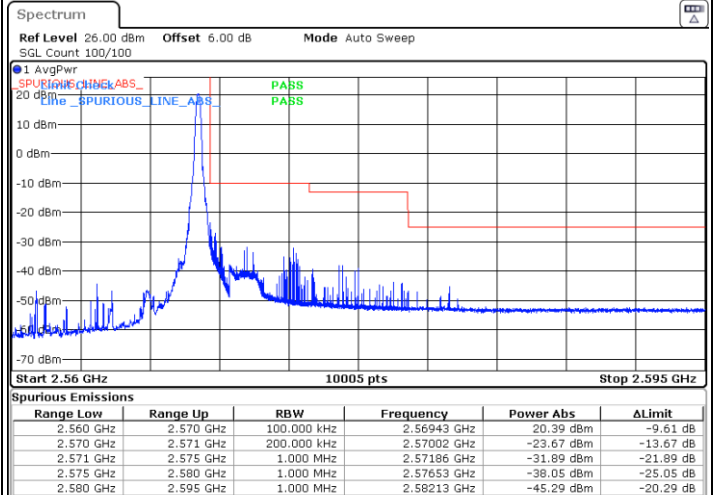
LTE Band 7 / 10MHz / 16QAM

Lowest Band Edge / 1 RB



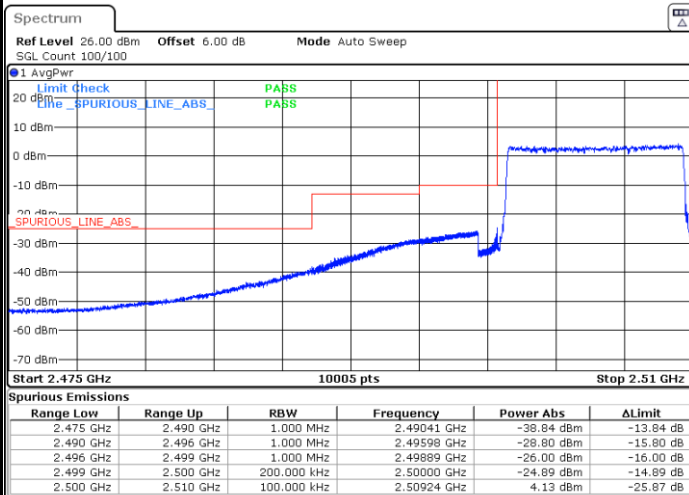
Date: 9.SEP.2024 22:13:55

Highest Band Edge / 1 RB



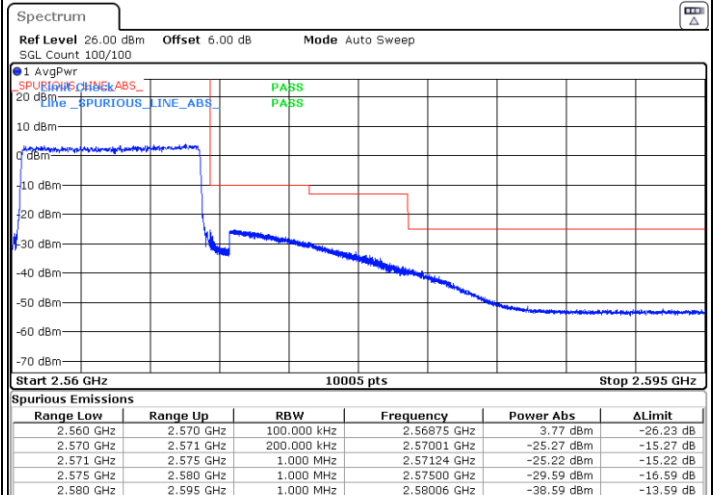
Date: 9.SEP.2024 22:20:58

Lowest Band Edge / Full RB



Date: 9.SEP.2024 22:11:08

Highest Band Edge / Full RB

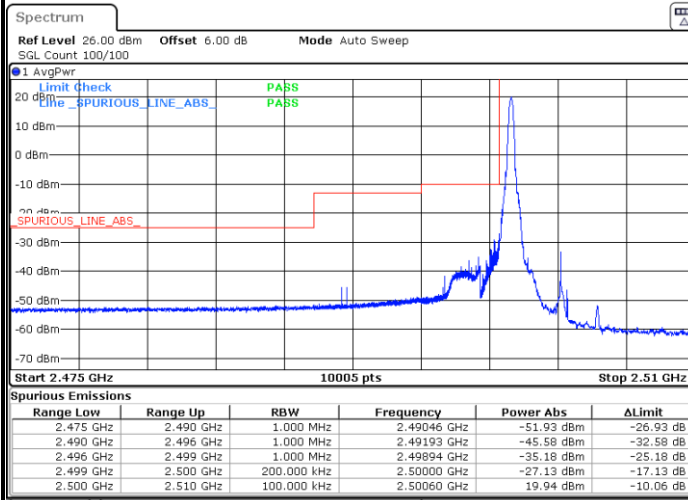


Date: 9.SEP.2024 22:23:46

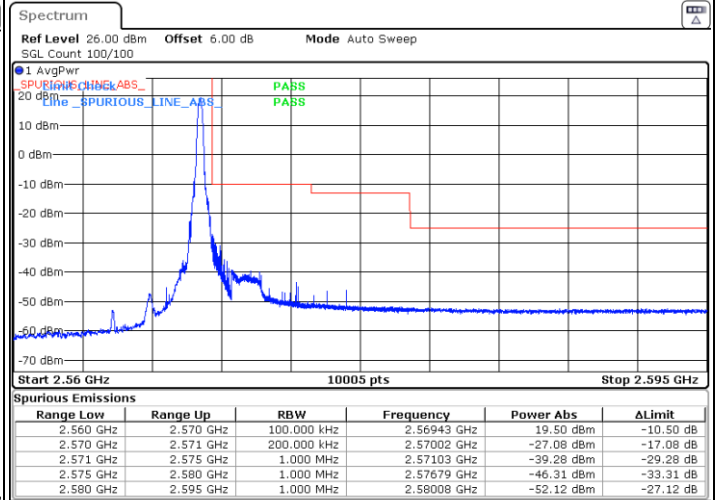


LTE Band 7 / 10MHz / 64QAM

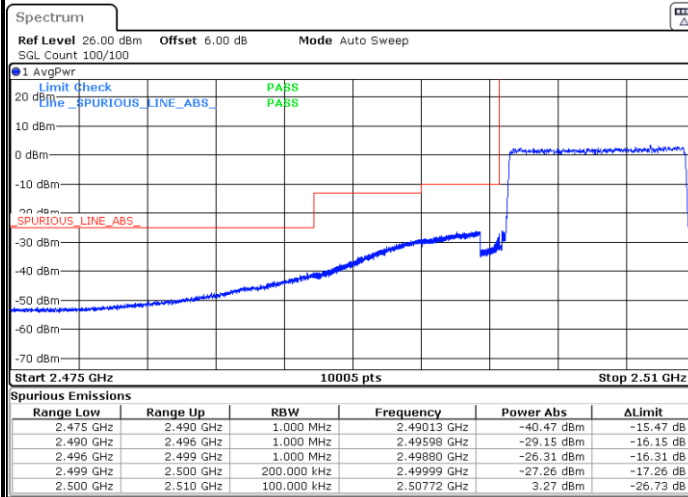
Lowest Band Edge / 1 RB



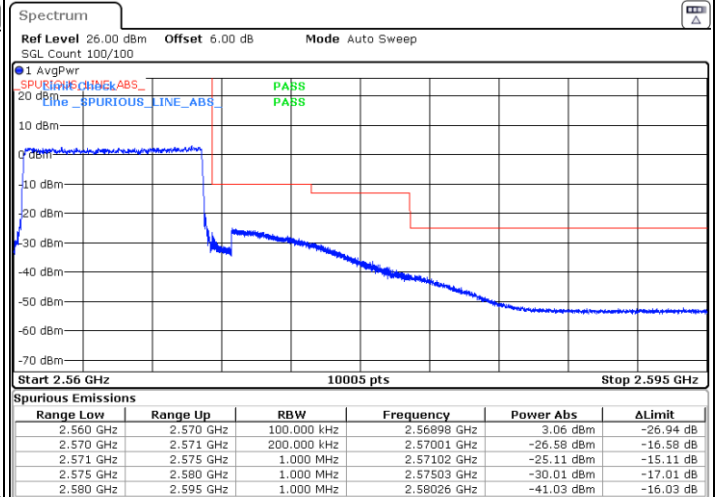
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



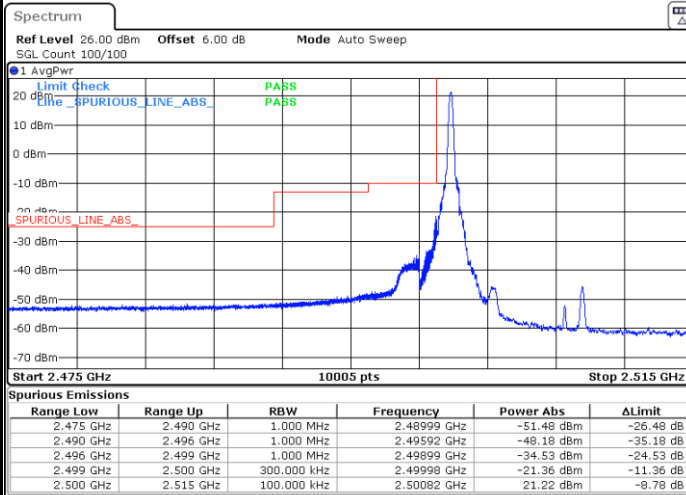
Highest Band Edge / Full RB



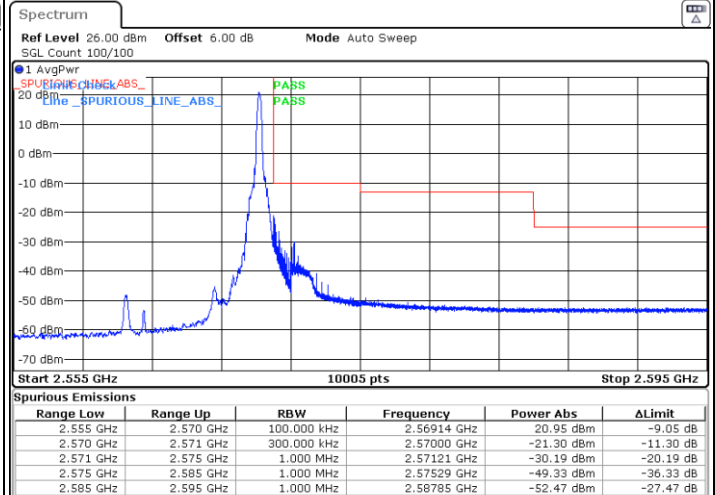


LTE Band 7 / 15MHz / QPSK

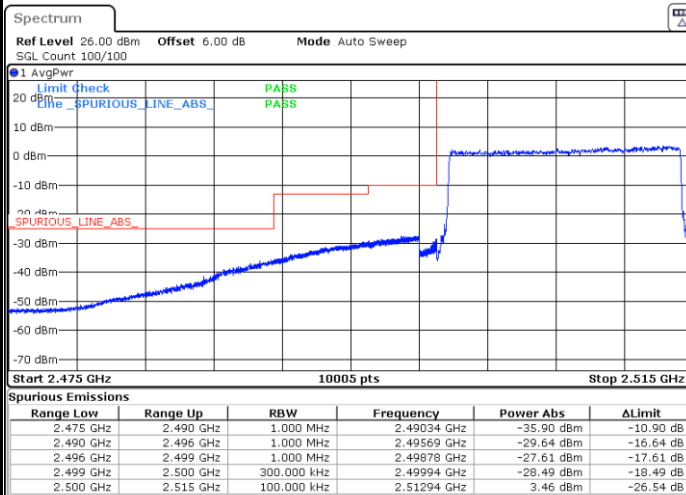
Lowest Band Edge / 1 RB



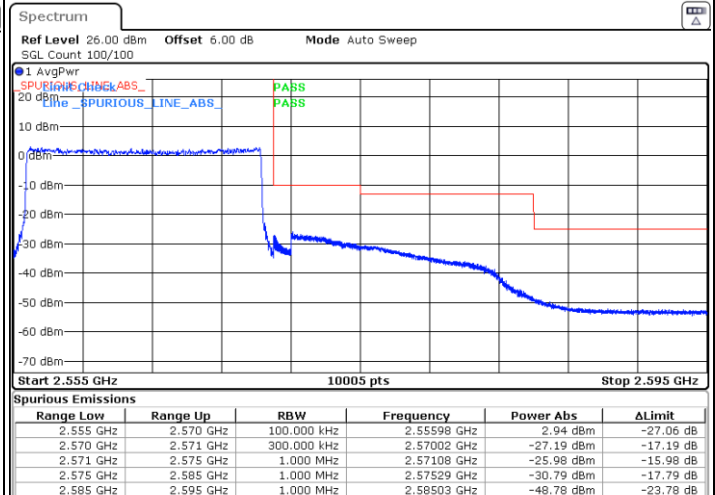
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



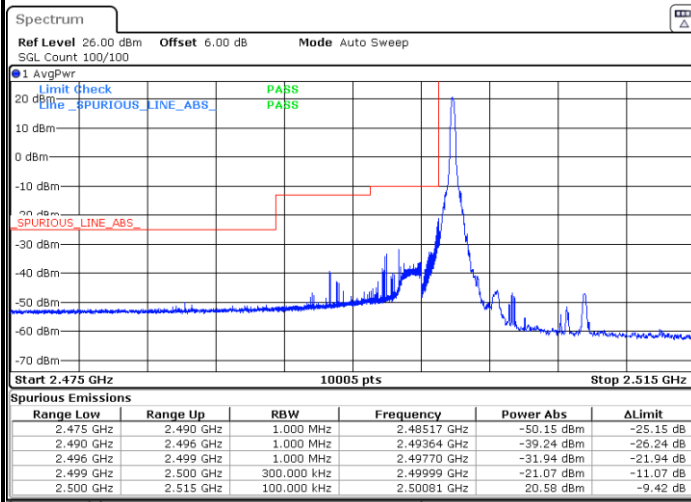
Highest Band Edge / Full RB



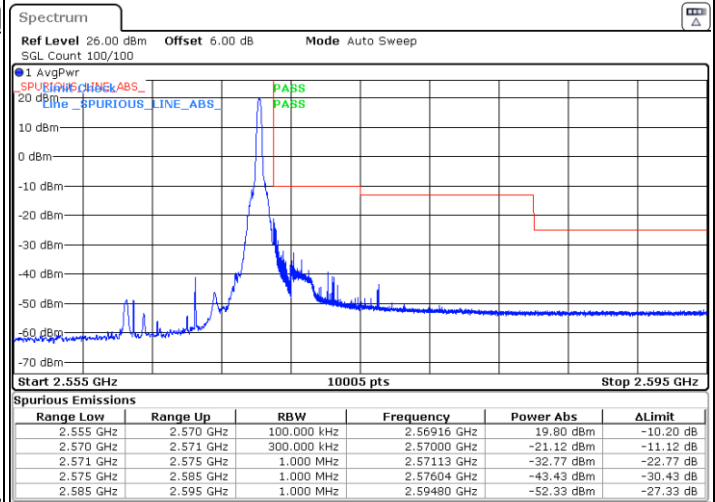


LTE Band 7 / 15MHz / 16QAM

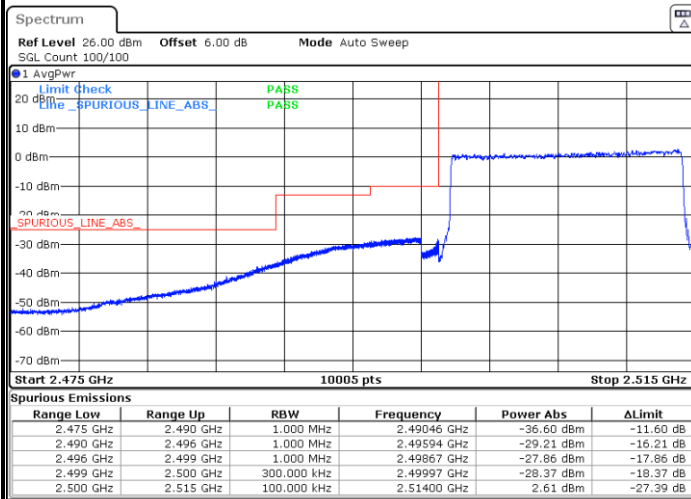
Lowest Band Edge / 1 RB



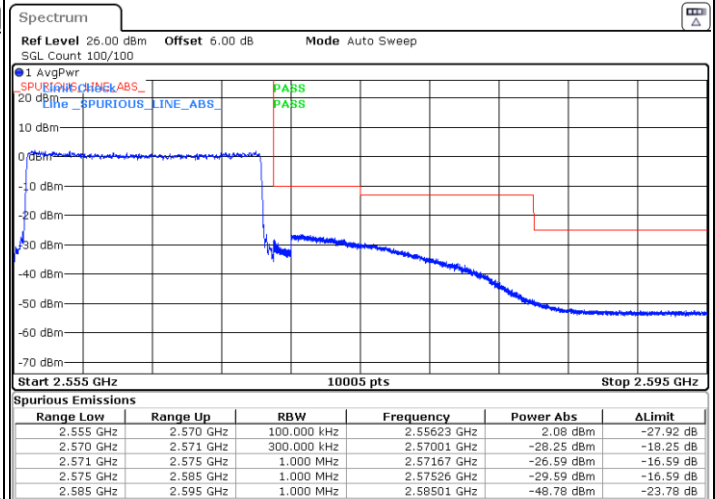
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



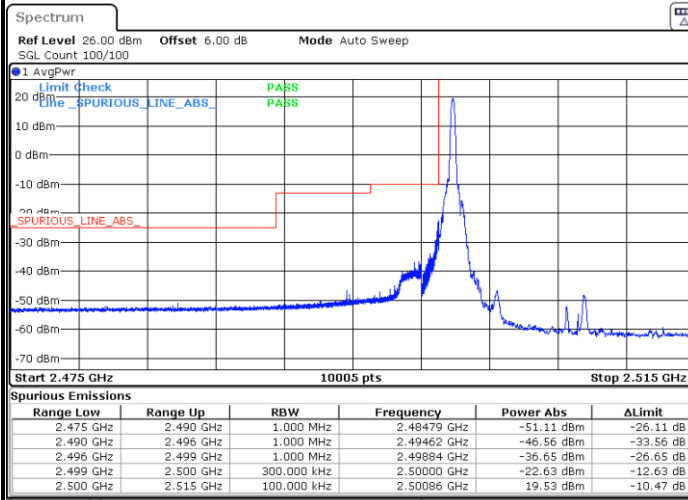
Highest Band Edge / Full RB



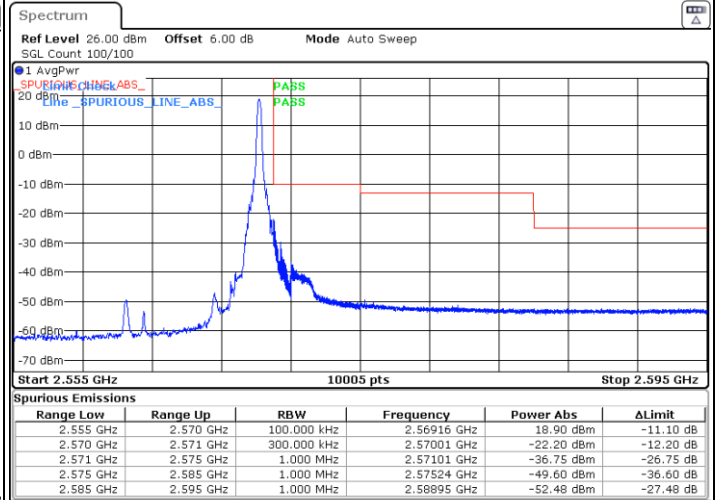


LTE Band 7 / 15MHz / 64QAM

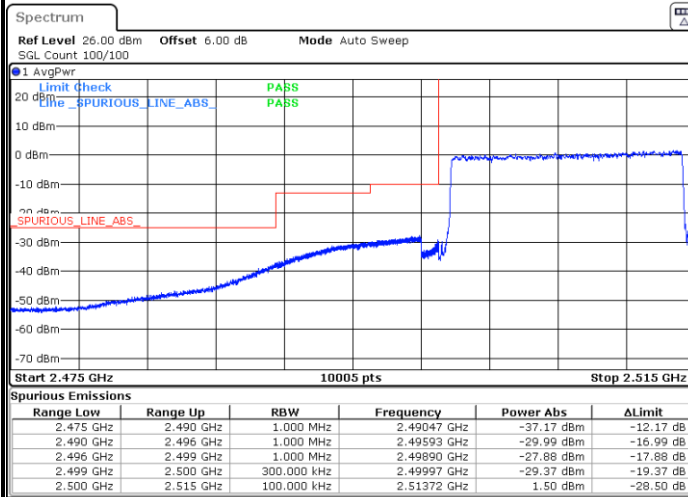
Lowest Band Edge / 1 RB



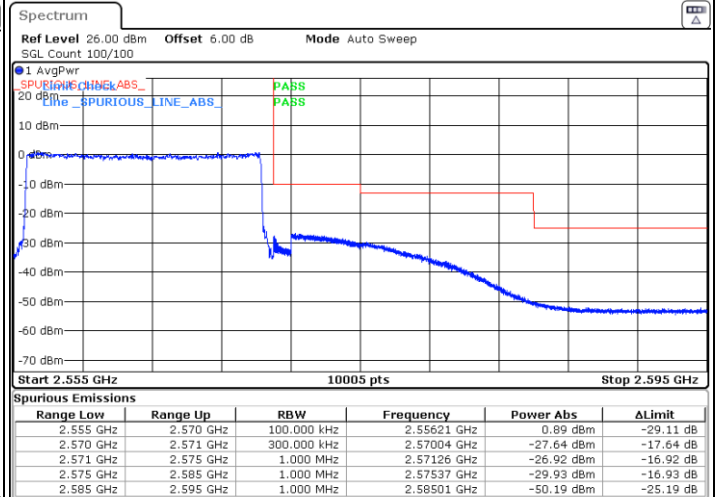
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



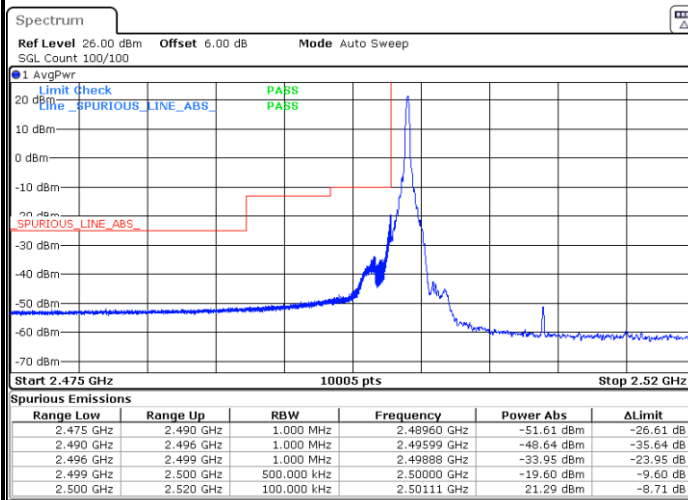
Highest Band Edge / Full RB



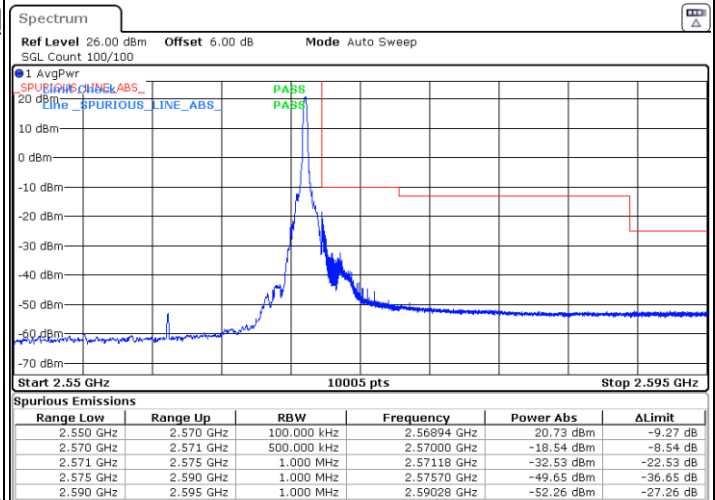


LTE Band 7 / 20MHz / QPSK

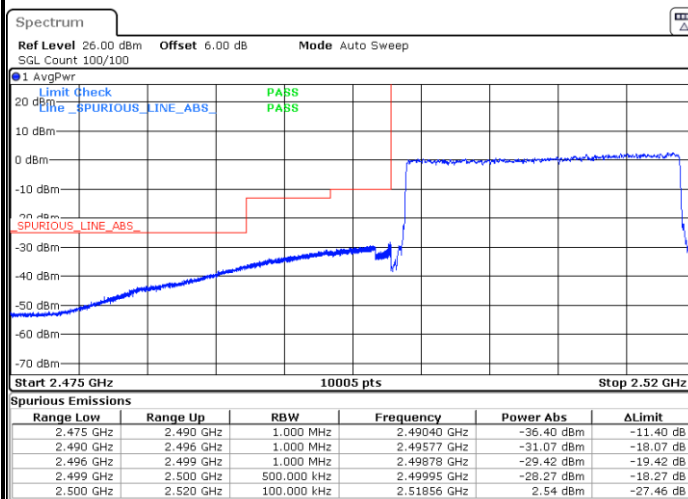
Lowest Band Edge / 1 RB



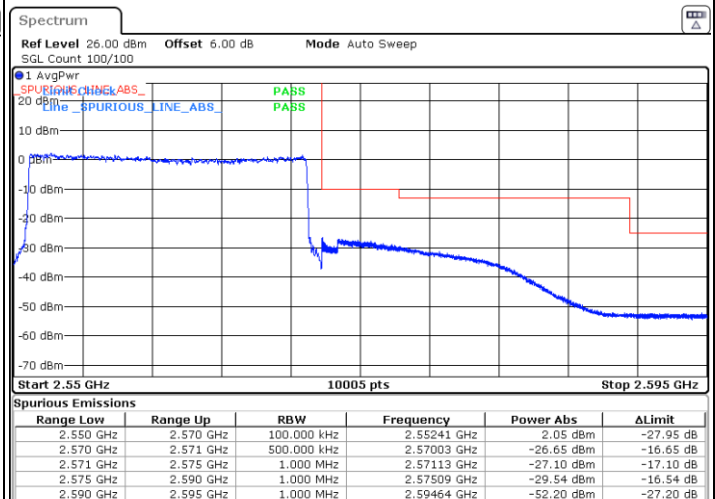
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



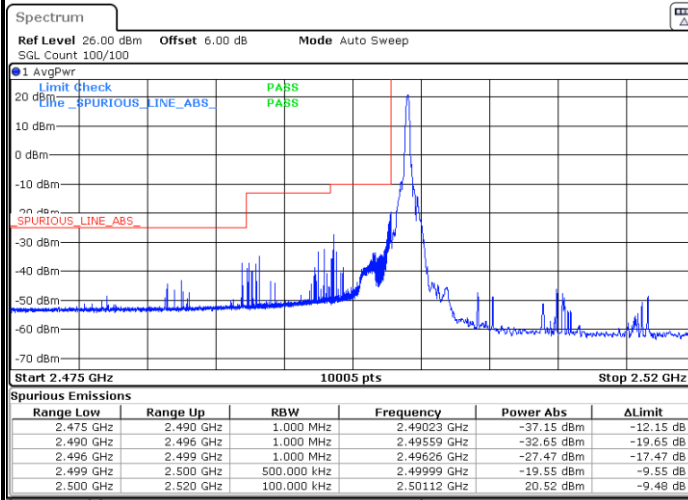
Highest Band Edge / Full RB



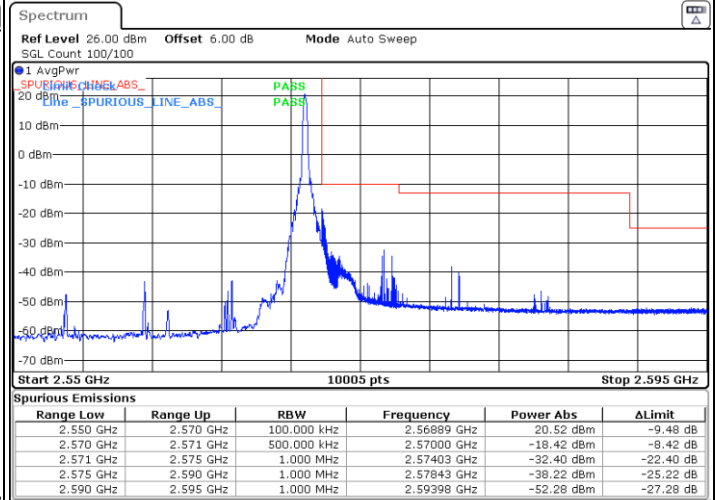


LTE Band 7 / 20MHz / 16QAM

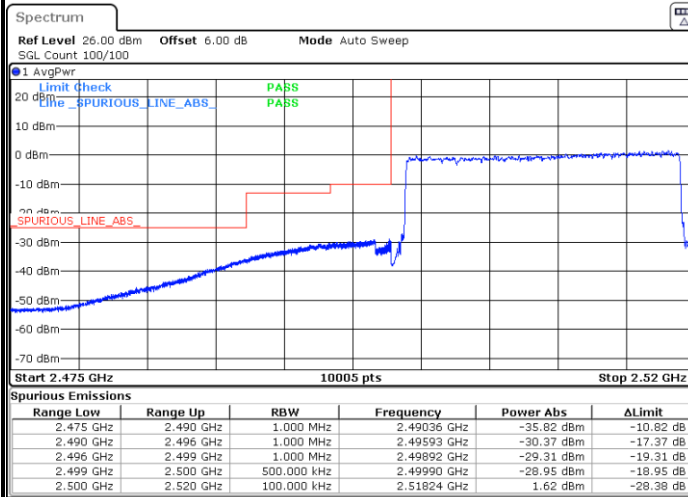
Lowest Band Edge / 1 RB



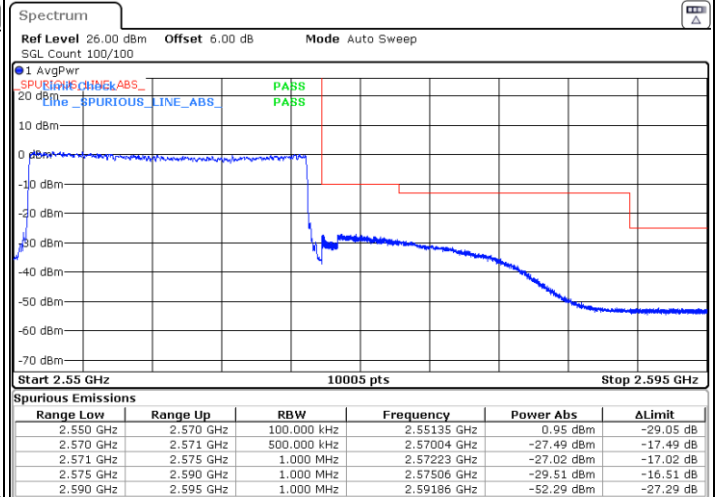
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



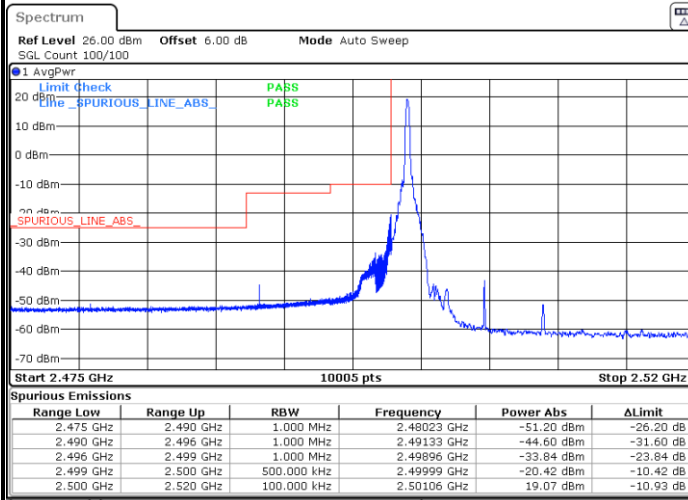
Highest Band Edge / Full RB



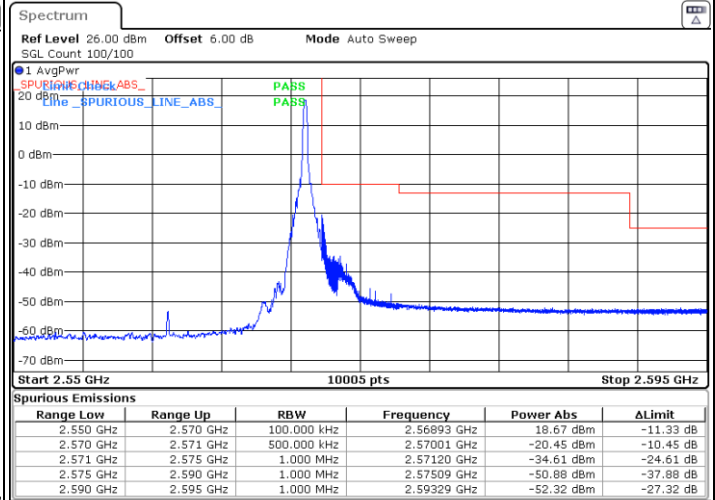


LTE Band 7 / 20MHz / 64QAM

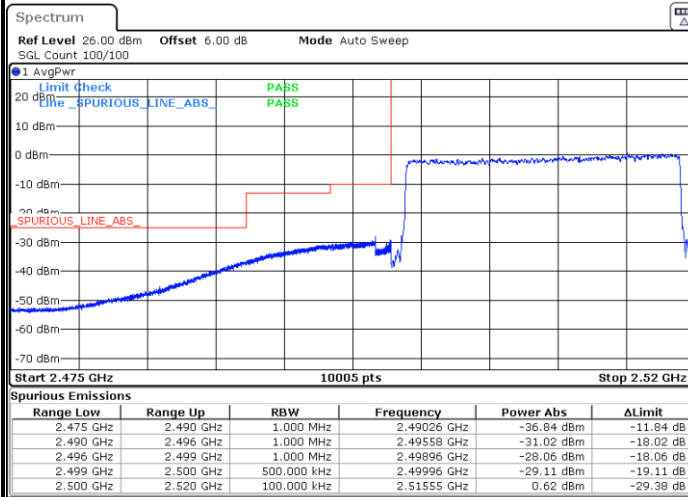
Lowest Band Edge / 1 RB



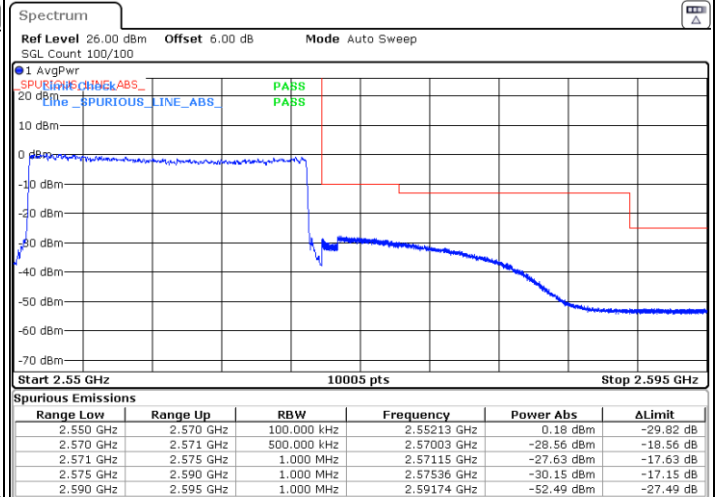
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



Highest Band Edge / Full RB

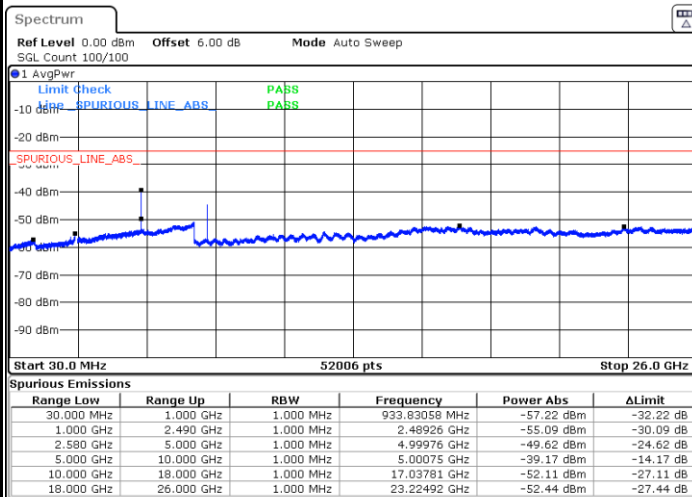




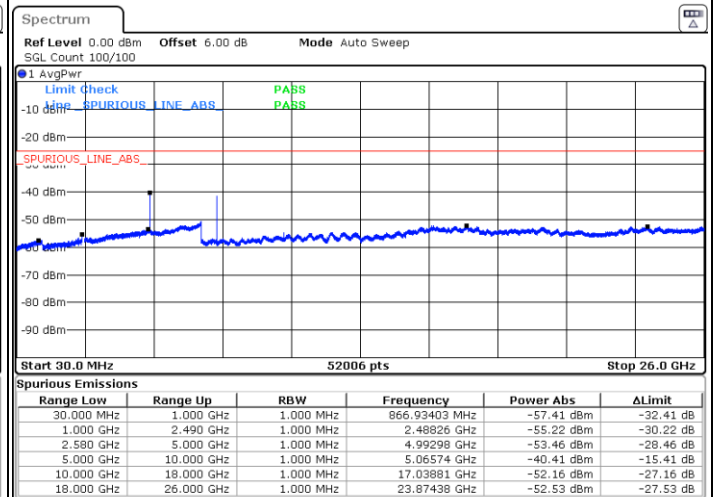
Conducted Spurious Emission

LTE Band 7 / 5MHz

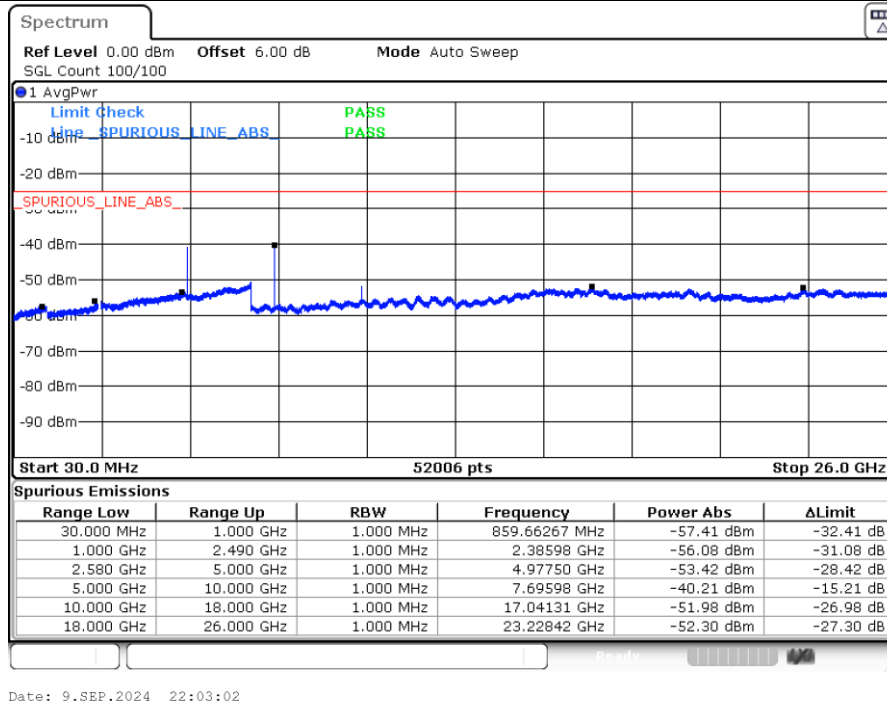
Lowest Channel / QPSK



Middle Channel / QPSK



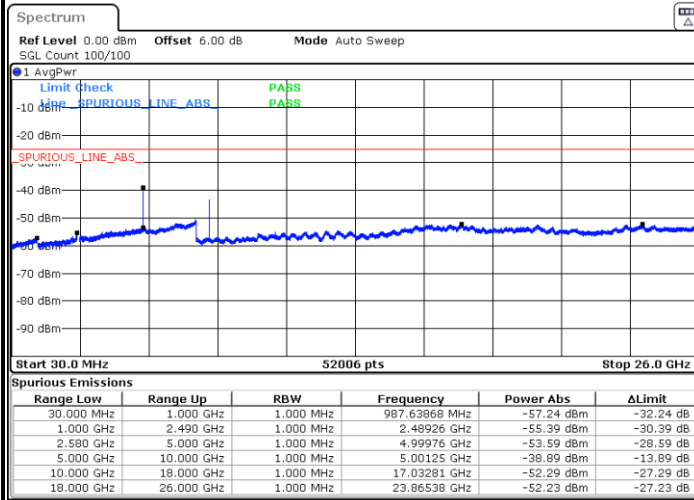
Highest Channel / QPSK





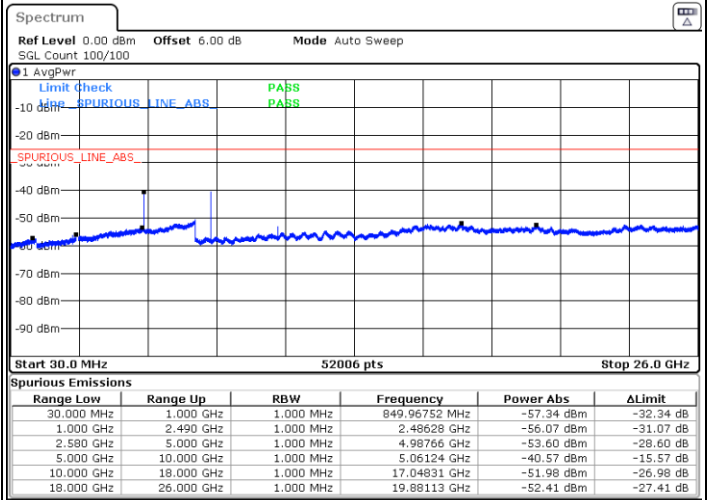
LTE Band 7 / 10MHz

Lowest Channel / QPSK



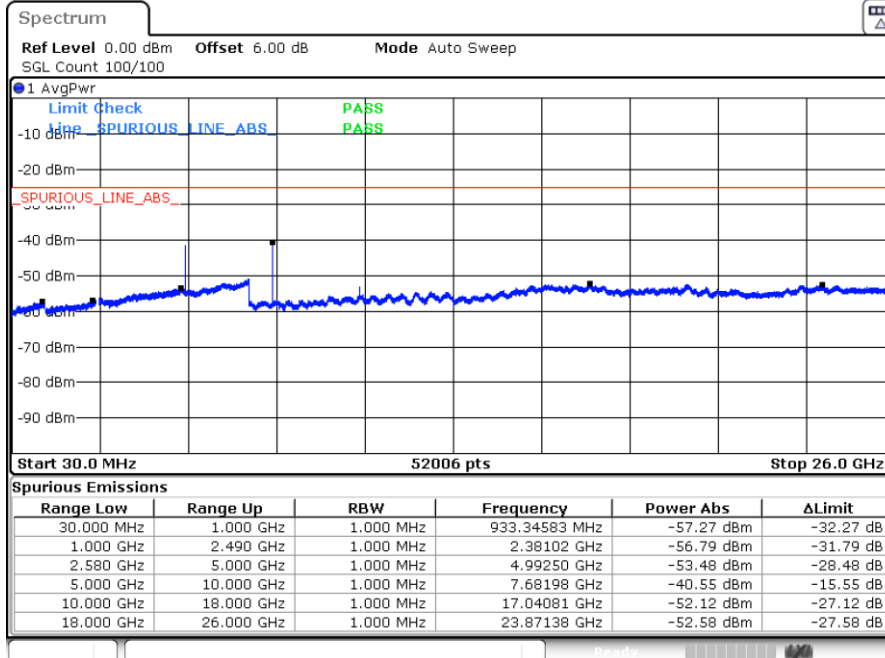
Date: 9.SEP.2024 22:16:46

Middle Channel / QPSK



Date: 9.SEP.2024 22:18:10

Highest Channel / QPSK

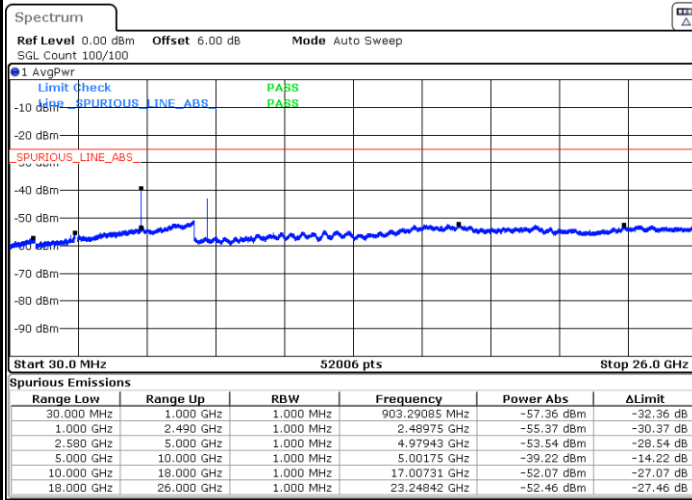


Date: 9.SEP.2024 22:19:36



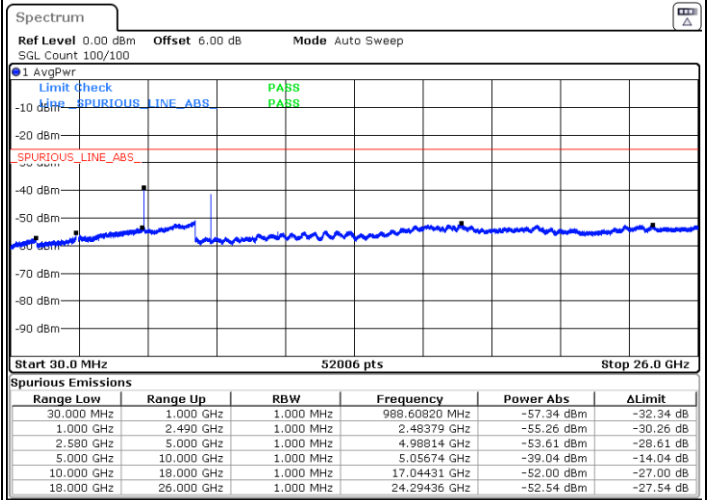
LTE Band 7 / 15MHz

Lowest Channel / QPSK



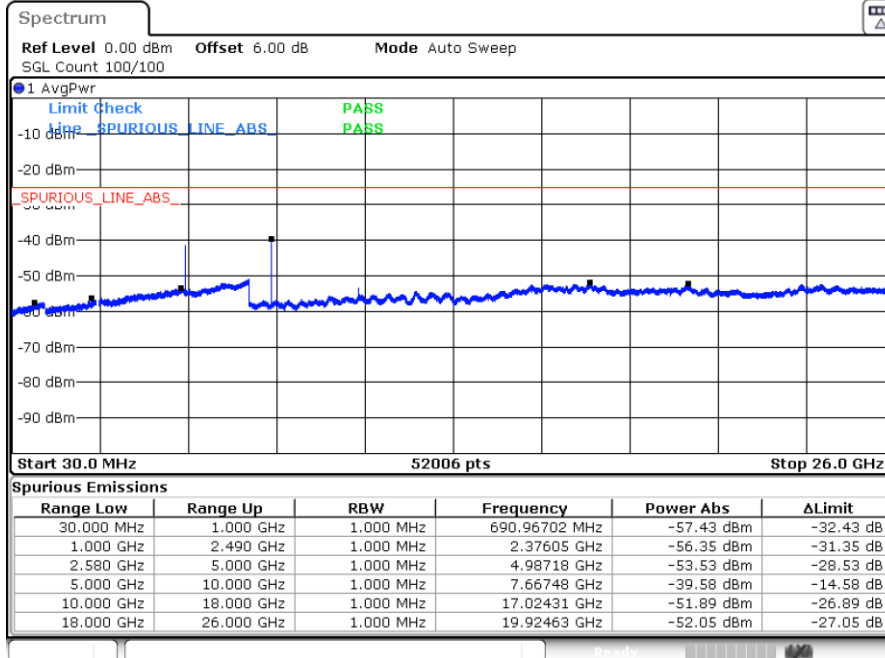
Date: 9.SEP.2024 22:32:42

Middle Channel / QPSK



Date: 9.SEP.2024 22:34:07

Highest Channel / QPSK

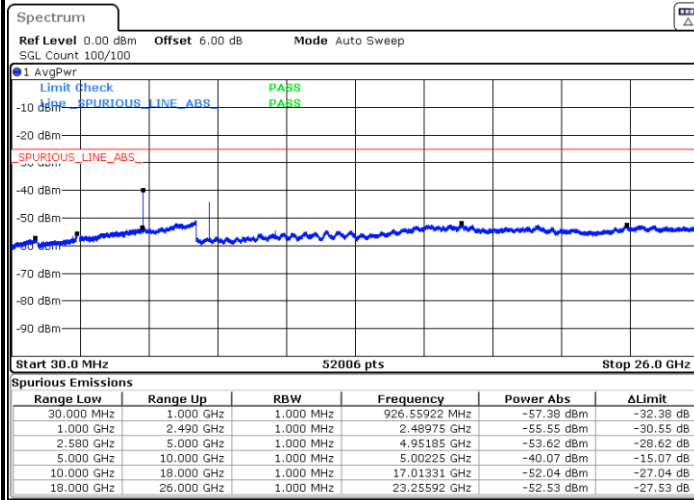


Date: 9.SEP.2024 22:35:32



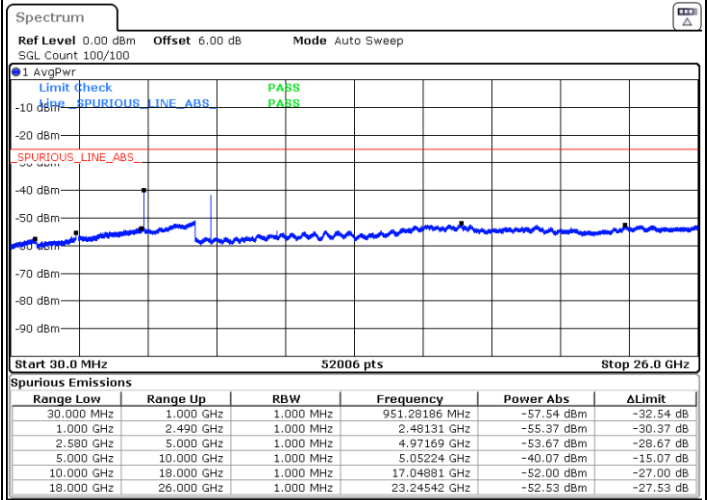
LTE Band 7 / 20MHz

Lowest Channel / QPSK



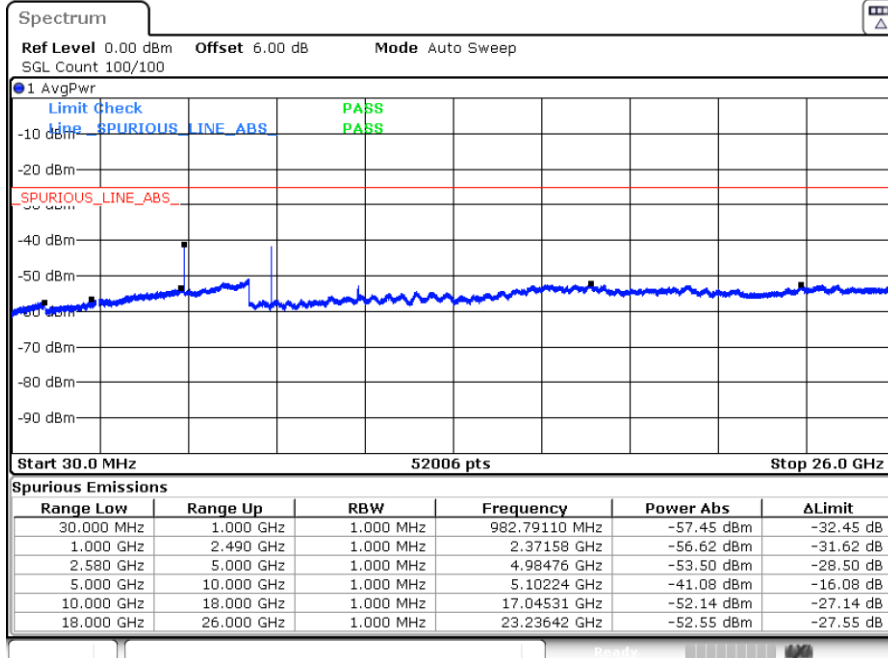
Date: 9.SEP.2024 22:49:04

Middle Channel / QPSK



Date: 9.SEP.2024 22:50:29

Highest Channel / QPSK



Date: 9.SEP.2024 22:51:54

Frequency Stability

Test Conditions		LTE Band 7 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0011	PASS
40	Normal Voltage	0.0008	
30	Normal Voltage	0.0012	
20(Ref.)	Normal Voltage	0.0002	
10	Normal Voltage	0.0022	
0	Normal Voltage	0.0023	
-10	Normal Voltage	0.0026	
-20	Normal Voltage	0.0015	
-30	Normal Voltage	0.0026	
20	Maximum Voltage	0.0012	
20	Normal Voltage	0.0015	
20	Battery End Point	0.0008	

Note:

1. Normal Voltage =3.85 V. ; Battery End Point (BEP) =3.6 V. ; Maximum Voltage =4.4 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.



LTE Band 12

Peak-to-Average Ratio

Mode	LTE Band 12 / 10MHz				
Mod.	QPSK	16QAM	64QAM		Limit: 13dB
RB Size	Full RB	Full RB	Full RB		Result
Middle CH	5.86	6.61	6.78		PASS

