FCC RF Test Report

APPLICANT	: Nokia Shanghai Bell Co., Ltd.
EQUIPMENT	: Nokia FastMile 5G Gateway 12
BRAND NAME	: Nokia
MODEL NAME	: 5G31-03W-B
FCC ID	: 2ADZR5G3103WB
STANDARD	: 47 CFR Part 2, 27(F), 27(H), 27(M), 27(N)
CLASSIFICATION	: PCS Licensed Transmitter (PCB)
TEST DATE(S)	: Apr. 11, 2024 ~ Jun. 20, 2024

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.

This report contains data that were produced under subcontract by Sporton International Inc. (Shenzhen)

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

ACCREDITED Cert #5145.02

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People's Republic of China

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG432101B	Rev. 01	Initial issue of report	Jun. 21, 2024

SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.4	§2.1046	Conducted Output Power	-	Report Only	-
	§27.50(b)(10) §27.50(c)(10)	Effective Radiated Power (Band 12) (Band 13) (Band 71)	ERP < 3 Watt	PASS	-
	§27.50(h)(2)	Equivalent Isotropic Radiated Power (Band 7) (Band 38) (Band 41)	EIRP < 2Watt		-
3.5	N/A	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) §27.53(h)	Conducted Band Edge Measurement (Band 12) (Band 13) ((Band 71)	< 43+10log10(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) §27.53(h)	Conducted Spurious Emission (Band 12) (Band 13) (Band 71)	< 43+10log10(P[Watts])	PASS	-
	§2.1051 §27.53(m)(4)	Conducted Spurious Emission (Band 7) (Band 38) (Band 41)	< $55+10\log_{10}$(P[Watts])		
3.9	§2.1055 §27.54	Frequency Stability Temperature & Voltage	Within Authorized Band	PASS	-
4.4	§2.1053 §27.53(c)(2) §27.53(f) §27.53(g)	Radiated Spurious Emission (Band 12) (Band 13) (Band 71)	< $43+10\log_{10}$(P[Watts])	PASS	Under limit 16.47 dB at 7584.00 MHz
	§2.1053 §27.53(m)(4)	Radiated Spurious Emission (Band 7) (Band 38) (Band 41)	< $55+10\log_{10}$(P[Watts])		

Conformity Assessment Condition:

1. 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.
2. 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

Nokia Shanghai Bell Co., Ltd.
388#, Ningqiao Road, China (Shanghai) Pilot Free Trade Zone, Shanghai 201206, China

1.2 Manufacturer

Nokia Solutions and Networks Oy
Karakaari 7, 02610 Espoo, Finland

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	Nokia FastMile 5G Gateway 12
Brand Name	Nokia
Model Name	5G31-03W-B
FCC ID	2ADZR5G3103WB
SN / IMEI Code	Conducted: KLT241102369(SN) Radiation: 355630740001412 for Sample 1 (IMEI) 355630740001388 for Sample 2 (IMEI) 355630740001404 for Sample 3 (IMEI)
HW Version	3TG03021Exxx (x may be from A to Z)
SW Version	5GGW-QCOM7X_D240200B31T0601E0496
EUT Stage	Identical Prototype

Remark: There are three samples under test, only different for the antenna manufacturers as below. According to the difference, we choose sample 1 to full test and the sample 2/3 are verified the RSE worse cases of LTE in this report, and NR in another report.

Ant Description	P/N	Vendor_1	Vendor_2	Vendor_3
Ant0&WiFi3_2.4G	3TG03393AAAA	GW12-A0W3	N42NKASA-PK1-D1X95BUD150U4LI	NKH049-15-000-R
Ant1&WiFi2_6G	3TG03394AAAA	GW12-A1W2	N40NKASB-PK1-E1X190BUE110U4LI	NKH050-15-000-R
Ant 2,Ant3,Ant5,Ant7	3TG03395AAAA	GW12-A2357	N40NKASC-PK1-R150U4LID115U4LI E165U4LIA105U4LI	NKH051-15-000-R
Ant4,Ant6&Ant9	3TG03396AAAA	GW12-A469	N40NKASD-PK1-A135U4LID170U4LI E200U4LI	NKH052-15-000-R
WiFi1_6G	3TG03397AAAA	GW12-W1	N06NKASF-PK1-A1X95BU	NKH053-15-000-R
WiFi4_2.4G	3TG03398AAAA	GW12-W4	N01NKASG-PK1-R1X160BU	NKH054-15-000-R
WiFi5_5G	3TG03399AAAA	GW12-W5	N02NKASH-PK1-D1X90BU	NKH055-15-000-R
Ant8&WiFi6_5G	3TG03400AAAA	GW12-A8W6	N43NKASE-PK1-E1X95BUA165U4LI	NKH056-15-000-R
WiFi7_5G	3TG03401AAAA	GW12-W7	N02NKASJ-PK1-A1X95BU	NKH057-15-000-R
WiFi8_5G	3TG03402AAAA	GW12-W8	N02NKASK-PK1-R1X115BU	NKH058-15-000-R

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. 0> LTE Band 12 : 22.97 dBm LTE Band 13 : 22.98 dBm LTE Band 71 : 23.53 dBm <Ant. 9> LTE Band 7 : 23.63 dBm LTE Band 38 : 26.58 dBm LTE Band 41 : 26.61 dBm LTE Band 41C : 23.66 dBm
Antenna Gain	<Ant. 0> LTE Band 12 : 2.6 dBi LTE Band 13 : 3.3 dBi LTE Band 71 : 2.0 dBi <Ant. 9> LTE Band 7 : 4.5 dBi LTE Band 38 : 5.0 dBi LTE Band 41 : 6.0 dBi
Type of Modulation	QPSK / 16QAM / 64QAM / 256QAM

Note: LTE B38/41 support 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/256QAM	
BW (MHz)	Frequency Range (MHz)	Maximum EIRP(W)	Emission Designator (99%OBW)	Maximum EIRP(W)	Emission Designator (99%OBW)
5	2502.5 ~ 2567.5	0.6383	4M50G7D	0.5433	4M53W7D
10	2505.0 ~ 2565.0	0.6295	9M07G7D	0.5383	9M03W7D
15	2507.5 ~ 2562.5	0.6339	13M5G7D	0.5383	13M6W7D
20	2510.0 ~ 2560.0	0.6501	17M9G7D	0.5470	17M9W7D
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	0.2153	1M09G7D	0.1871	1M09W7D
3	700.5 ~ 714.5	0.2183	2M75G7D	0.1866	2M70W7D
5	701.5 ~ 713.5	0.2178	4M48G7D	0.1897	4M49W7D
10	704.0 ~ 711.0	0.2198	9M01G7D	0.1901	9M03W7D
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	0.2570	4M53G7D	0.2188	4M49W7D
10	782.0	0.2588	9M01G7D	0.2213	9M03W7D
LTE Band 38		QPSK		16QAM/64QAM/256QAM	
BW (MHz)	Frequency Range (MHz)	Maximum EIRP(W)	Emission Designator (99%OBW)	Maximum EIRP(W)	Emission Designator (99%OBW)
5	2572.5 ~ 2617.5	1.3868	4M47G7D	1.1830	4M48W7D
10	2575.0 ~ 2615.0	1.3932	9M09G7D	1.2503	9M05W7D
15	2577.5 ~ 2612.5	1.3932	13M5G7D	1.2445	13M4W7D
20	2580.0 ~ 2610.0	1.4388	18M1G7D	1.2560	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	1.7824	4M47G7D	1.6255	4M48W7D
10	2501.0 ~ 2685.0	1.7989	9M09G7D	1.6634	9M05W7D
15	2503.5 ~ 2682.5	1.7783	13M5G7D	1.6558	13M4W7D
20	2506.0 ~ 2680.0	1.8239	18M1G7D	1.7140	17M9W7D

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	0.2104	4M52G7D	0.1816	4M48W7D
10	668.0 ~ 693.0	0.2138	9M07G7D	0.1803	9M07W7D
15	670.5 ~ 690.5	0.2099	13M5G7D	0.1828	13M4W7D
20	673.0 ~ 688.0	0.2178	17M9G7D	0.1841	17M9W7D

LTE Band 41 CA	QPSK		16QAM/64QAM/256QAM	
BW (MHz)	Maximum EIRP(W)	Emission Designator (99%OBW)	Maximum EIRP(W)	Emission Designator (99%OBW)
5MHz+20MHz	0.8730	23M2G7D	0.8017	23M4W7D
10MHz+20MHz	0.8750	28M2G7D	0.7889	28M1W7D
10MHz+15MHz	0.8995	23M7G7D	0.7980	23M4W7D
15MHz+15MHz	0.8790	28M5G7D	0.7998	28M7W7D
15MHz+20MHz	0.8913	32M6G7D	0.7980	33M2W7D
15MHz+10MHz	0.8770	23M2G7D	0.8054	23M5W7D
20MHz+5MHz	0.8770	23M4G7D	0.7980	23M4W7D
20MHz+10MHz	0.8974	27M9G7D	0.8072	28M2W7D
20MHz+15MHz	0.8954	32M7G7D	0.7834	32M7W7D
20MHz+20MHz	0.9247	38M0G7D	0.8472	37M6W7D

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.**
	03CH04-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	1/F, 2/F, Bldg 5, Shiling Industrial Zone, Xinwei Village, Xili, Nanshan, Shenzhen, 518055 People's Republic of China TEL: +86-755-86379589 FAX: +86-755-86379595		
Test Site No.	**Sporton Site No.**	**FCC Designation No.**	**FCC Test Firm Registration No.**
	TH01-SZ	CN1256	421272

Test data subcontracted: Conducted test cases in section 3 of this report.

1.8 Test Software

Item	Site	Manufacture	Name	Version
1.	03CH04-KS	AUDIX	E3	210616

1.9 Applicable Standards

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

- 47 CFR Part 2, 27(F), 27(H), 27(M), 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.

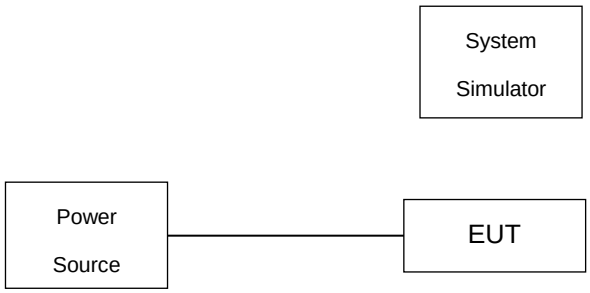
Radiated measurements are performed by rotating the EUT in three different orthogonal test planes to find the maximum emission. (Y/Z Plane)

Test Items	Band	Bandwidth (MHz)						Modulation				RB #			Test Channel		
		1.4	3	5	10	15	20	QPSK	16 QAM	64 QAM	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	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
	38	-	-	v	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	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	
	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	
	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
	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	

Test Items	Band	Bandwidth (MHz)						Modulation				RB #			Test Channel		
		1.4	3	5	10	15	20	QPSK	16 QAM	64 QAM	256 QAM	1	Half	Full	L	M	H
	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	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
	38	-	-	v	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	v
Radiated Spurious Emission	7	Worst Case														v	
	12	Worst Case														v	
	13	Worst Case														v	
	41	Worst Case														v	
	71	Worst Case														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. 4. For QAM modulation mode, the whole testing has assessed 16QAM&64QAM mode by referring to the higher conducted power.																

Test Items	Band	Bandwidth (MHz)										Modulation				RB #			Test Channel		
		20+20	20+15	15+20	20+10	10+20	20+5	5+20	15+15	15+10	10+15	QPSK	16 QAM	64 QAM	256 QAM	1	Half	Full	L	M	H
Max. Output Power	41C_CA	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v			v	v	v
26dB and 99% Bandwidth	41C_CA	v	v	v	v	v	v	v	v	v	v	v	v					v		v	
Conducted Band Edge	41C_CA	v	v	v	v	v	v	v	v	v	v	v	v	v		v		v	v		v
Conducted Spurious Emission	41C_CA	v	v	v	v	v	v	v	v	v	v	v				v			v	v	v
E.I.R.P.	41C_CA	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v			v	v	v
Radiated Spurious Emission	41C_CA	Worst Case																		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. 4. For QAM modulation mode, the whole testing has assessed 16QAM&64QAM mode by referring to the higher conducted power.																				

2.2 Connection Diagram of Test System



This example is connection diagram of EUT test configurations.

. For detail, please refer to test mode configuration and setup photographs for each test item.

2.3 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model No.	FCC ID	Data Cable	Power Cord
1.	Power Supply	GWINSTEK	PSS-2002	N/A	N/A	Unshielded, 1.8 m
2.	LTE Base Station	Anritsu	MT8820C	N/A	N/A	Unshielded, 1.8 m

2.4 Measurement Results Explanation Example

For all conducted test items:

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

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

Offset = RF cable loss + attenuator factor.

Following shows an offset computation example with cable loss 5.0 dB and 10dB attenuator.

Example :

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

= 5.0 + 10 = 15.0 (dB)

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

LTE Band 41C_CA Channel and Frequency List					
BW [MHz]	Channel/Frequency(MHz)		Lowest	Middle	Highest
20 + 20	PCC	Channel	39750	40521	41292
		Frequency	2506.0	2583.1	2660.2
	SCC	Channel	39948	40719	41490
		Frequency	2525.8	2602.9	2680.0
20 + 15	PCC	Channel	39750	40546	41341
		Frequency	2506.0	2585.6	2665.1
	SCC	Channel	39921	40717	41512
		Frequency	2523.1	2602.7	2682.2
15 + 20	PCC	Channel	39728	40523	41319
		Frequency	2503.8	2593.3	2662.9
	SCC	Channel	39899	40694	41490

		Frequency	2520.9	2600.4	2680.0
20 + 10	PCC	Channel	39750	40571	41391
		Frequency	2506.0	2588.1	2670.1
	SCC	Channel	39894	40715	41535
		Frequency	2520.4	2602.5	2684.5
10 + 20	PCC	Channel	39705	40526	41346
		Frequency	2501.5	2583.6	2665.6
	SCC	Channel	39849	40670	41490
		Frequency	2515.9	2598.0	2680.0

LTE Band 41C_CA Channel and Frequency List					
20 + 5	PCC	Channel	39750	40595	41440
		Frequency	2506.0	2590.5	2675.0
	SCC	Channel	39867	40712	41557
		Frequency	2517.7	2602.2	2686.7
5 + 20	PCC	Channel	39683	40528	41373
		Frequency	2499.3	2583.8	2668.3
	SCC	Channel	39800	40645	41490
		Frequency	2511.0	2595.5	2680.0
15 + 15	PCC	Channel	39725	40545	41365
		Frequency	2503.5	2585.5	2667.5
	SCC	Channel	39875	40695	41515
		Frequency	2518.5	2600.5	2682.5
10 + 15	PCC	Channel	39703	40549	41395
		Frequency	2501.3	2585.9	2670.5
	SCC	Channel	39823	40669	41515
		Frequency	2513.3	2597.9	2682.5
15 + 10	PCC	Channel	39725	40571	41417
		Frequency	2503.5	2588.1	2672.7
	SCC	Channel	39845	40691	41537
		Frequency	2515.5	2600.1	2684.7

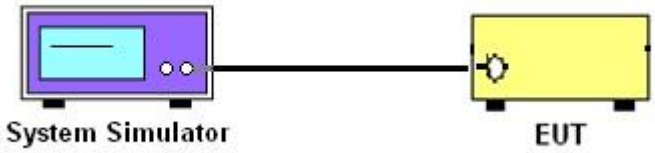
3 Conducted Test Items

3.1 Measuring Instruments

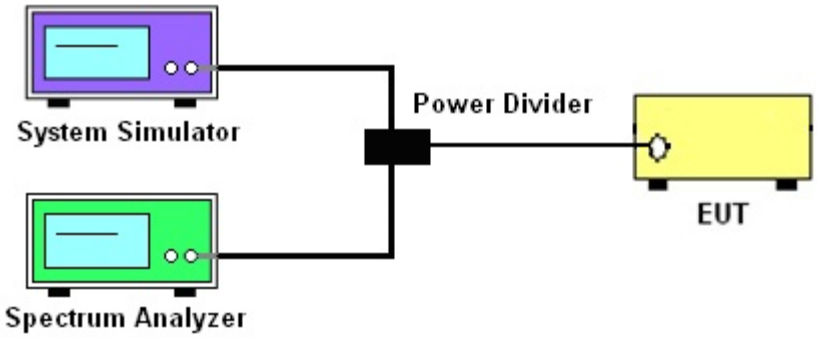
See list of measuring instruments of this test report.

3.2 Test Setup

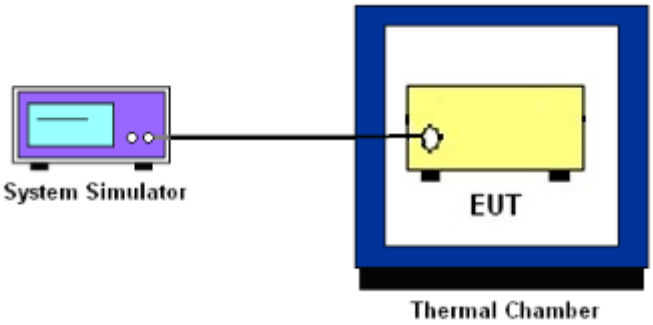
3.2.1 Conducted Output Power



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



3.2.3 Frequency Stability



3.3 Test Result of Conducted Test

Please refer to Appendix A.

3.4 Conducted Output Power and ERP/EIRP

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

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

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

The EIRP of mobile transmitters must not exceed 2 Watts for LTE Band 7, 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

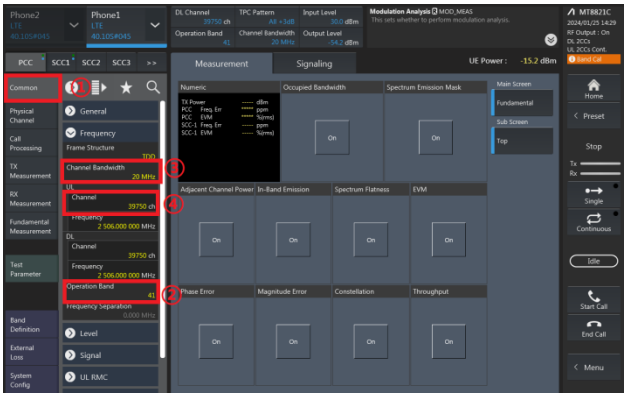
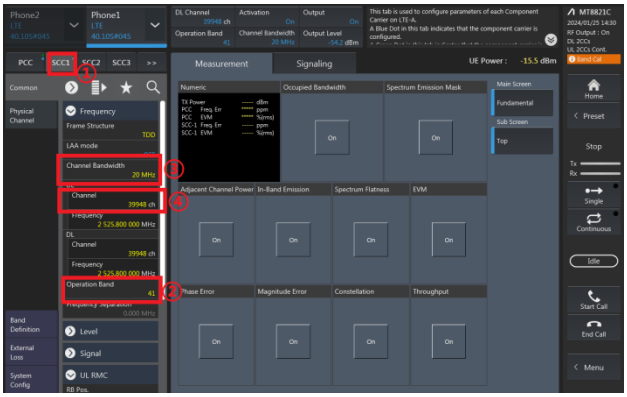
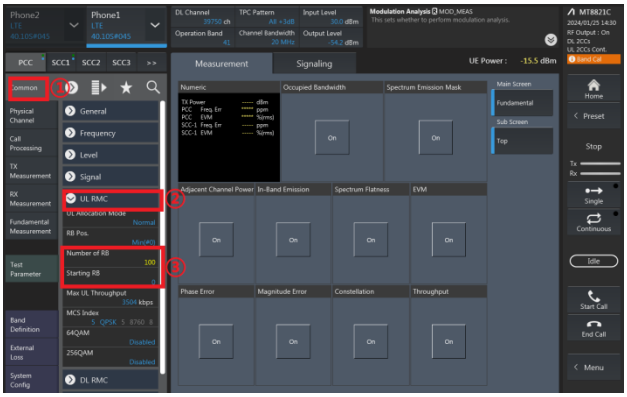
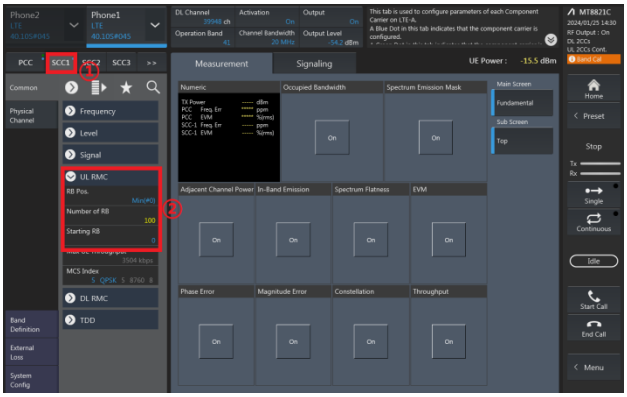
L_C = signal attenuation in the connecting cable between the transmitter and antenna in dB

3.4.2 Test Procedures

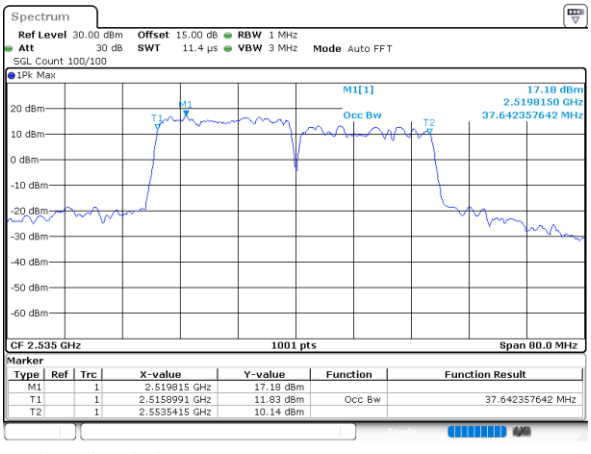
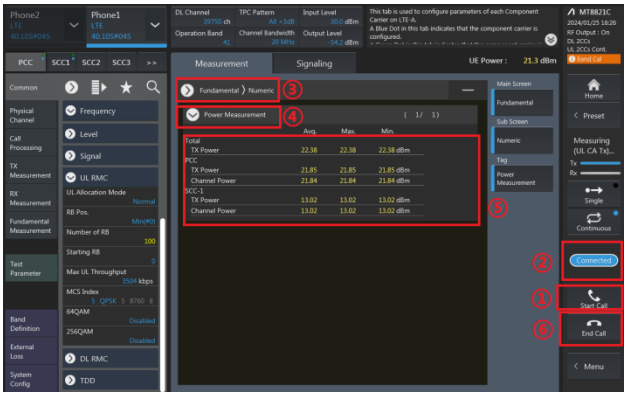
1. The testing follows ANSI C63.26 Section 5.2
2. The transmitter output port was connected to the system simulator.
3. Set EUT at maximum power through the system simulator.
4. Select lowest, middle, and highest channels for each band and different modulation.
5. Measure and record the power level from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

3.4.3 Test Procedures for LTE ULCA

1. The testing follows ANSI C63.26 Section 5.2
2. The transmitter PCC & SCC output ports were connected to the system simulator.
3. Set EUT at maximum power, set the PCC/SCC CA band, channel, bandwidth and RB config.

PCC config_(Channel Bandwidth / Channel / Band)	SCC config_(Channel Bandwidth / Channel / Band)
	
PCC config_(Number of RB / Starting RB)	**SCC config_(Number of RB / Starting RB)**
	

4. Select lowest, middle, and highest channels for each ULCA band and different modulation.
5. Check the ULCA spectrum and record the total power from the system simulator.

Check the ULCA spectrum (eg. 20M+20M)	Read the Total UL CA output power (PCC+SCC)
	

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[Watts]) dB below the transmitter power P(Watts) in a 100 kHz bandwidth. However, in the 100 kHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of at least 30 kHz may be employed. In addition, the power of any unwanted emissions in any 6.25 kHz bandwidth for all frequencies between 763-775 MHz and 793-806 MHz shall be attenuated below the transmitter power, P (dBW), by at least 65 + 10 log10 p(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 + 10log10(P[Watts]) dB below the transmitter power P(Watts) in a 100 kHz bandwidth. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

27.53(m)(4)

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

3.7.2 Test Procedures

1. The testing follows ANSI C63.26 section 5.7
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. The band edges of low and high channels for the highest RF powers were measured.
4. Set RBW >= 1% / 2% EBW in the 1MHz band immediately outside and adjacent to the band edge.
5. Beyond the 1 MHz band from the band edge, RBW=1MHz was used
6. Set spectrum analyzer with RMS detector.
7. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
8. Checked that all the results comply with the emission limit line.
   Example:
   The limit line is derived from 43 + 10log(P)dB below the transmitter power P(Watts)
   = P(W)- [43 + 10log(P)] (dB)
   = [30 + 10log(P)] (dBm) - [43 + 10log(P)] (dB) = -13dBm.
9. For LTE Band 7, 38, 41, the other 40 dB, and 55 dB have additionally applied same calculation above.
10. 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 10^{th} 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 + 10log(P)dB below the transmitter power P(Watts)
    = P(W)- [43 + 10log(P)] (dB)
    = [30 + 10log(P)] (dBm) - [43 + 10log(P)] (dB)
    = -13dBm.
11. For Band 7, 38, 41
    The limit line is derived from 55 + 10log(P)dB below the transmitter power P(Watts)
    = P(W)- [55+ 10log(P)] (dB)
    = [30+ 10log(P)] (dBm) - [55+ 10log(P)] (dB)
    = -25dBm.

3.9 Frequency Stability

3.9.1 Description of Frequency Stability Measurement

The frequency stability shall be measured by variation of ambient temperature and variation of primary supply voltage to ensure that the fundamental emission stays within the authorized frequency block.

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.

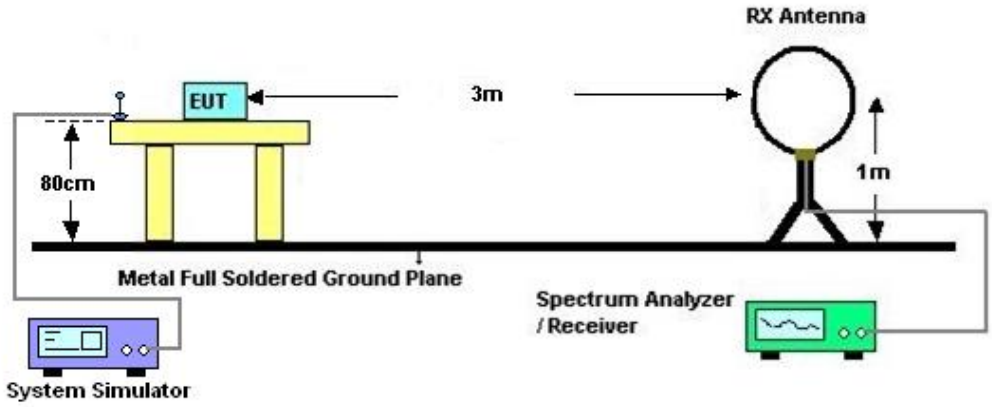
4 Radiated Test Items

4.1 Measuring Instruments

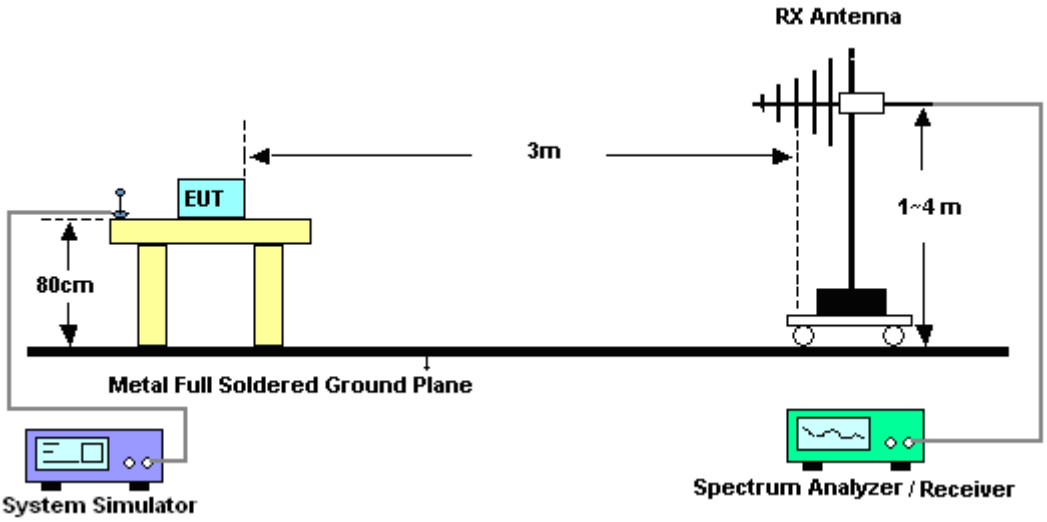
See list of measuring instruments of this test report.

4.2 Test Setup

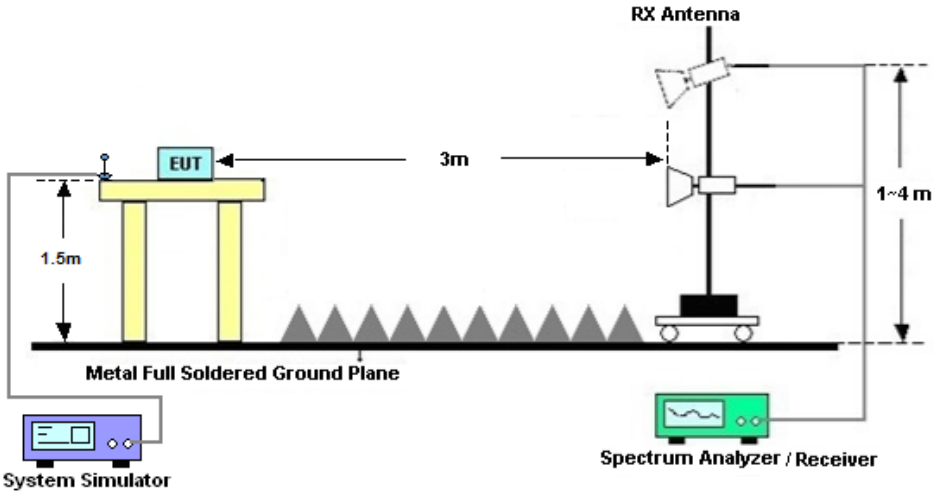
4.2.1 For radiated test below 30MHz



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. EIRP (dBm) = S.G. Power – Tx Cable Loss + Tx Antenna Gain
11. ERP (dBm) = EIRP - 2.15
12. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
    The limit line is derived from 43 + 10log(P)dB below the transmitter power P(Watts)
    = P(W)- [43 + 10log(P)] (dB)
    = [30 + 10log(P)] (dBm) - [43 + 10log(P)] (dB)
    = -13dBm.
13. For Band 7, 38, 41:
    The limit line is derived from 55 + 10log(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	101078	10Hz~40GHz	Apr. 09, 2024	Apr. 11, 2024~ Jun. 20, 2024	Apr. 08, 2025	Conducted (TH01-SZ)
DC Power Supply	TTI	PL330P	290070	Max 32V，3A	Oct. 16, 2023	Apr. 11, 2024~ Jun. 20, 2024	Oct. 15, 2024	Conducted (TH01-SZ)
Power Divider	TOJOIN	PS-2SM-04265	60.06.020.0077	0.4GHz~26.5GHz	Dec. 25, 2023	Apr. 11, 2024~ Jun. 20, 2024	Dec. 24, 2024	Conducted (TH01-SZ)
Thermal Chamber	Ten Billion Hongzhangroup	LP-150U	H2014081803	-40~+150°C	Jul. 05, 2023	Apr. 11, 2024~ Jun. 20, 2024	Jul. 04, 2024	Conducted (TH01-SZ)
EXA Spectrum Analyzer	Keysight	N9010B	MY57471079	10Hz-44G,MAX 30dB	Oct. 10, 2023	May 08, 2024	Oct. 09, 2024	Radiation (03CH04-KS)
Loop Antenna	R&S	HFH2-Z2E	101125	9kHz~30MHz	Sep. 11, 2023	May 08, 2024	Sep. 10, 2024	Radiation (03CH04-KS)
Bilog Antenna	TeseQ	CBL6111D	59913	30MHz-1GHz	Aug. 19, 2023	May 08, 2024	Aug. 18, 2024	Radiation (03CH04-KS)
Double Ridge Horn Antenna	ETS-Lindgren	3117	00251694	1GHz~18GHz	Jul. 12, 2023	May 08, 2024	Jul. 11, 2024	Radiation (03CH04-KS)
SHF-EHF Horn	Com-power	AH-840	101070	18GHz~40GHz	Jan. 05, 2024	May 08, 2024	Jan. 04, 2025	Radiation (03CH04-KS)
Amplifier	SONOMA	310N	380827	9KHz-1GHz	Jul. 06, 2023	May 08, 2024	Jul. 05, 2024	Radiation (03CH04-KS)
Amplifier	MITEQ	EM18G40GGA	060728	18~40GHz	Jan. 05, 2024	May 08, 2024	Jan. 04, 2025	Radiation (03CH04-KS)
high gain Amplifier	EM	EM01G18GA	060840	1Ghz-18Ghz	Oct. 10, 2023	May 08, 2024	Oct. 09, 2024	Radiation (03CH04-KS)
Amplifier	Agilent	8449B	3008A02370	1Ghz-18Ghz	Oct. 10, 2023	May 08, 2024	Oct. 09, 2024	Radiation (03CH04-KS)
AC Power Source	Chroma	61601	F104090004	N/A	NCR	May 08, 2024	NCR	Radiation (03CH04-KS)
Turn Table	ChamPro	EM 1000-T	060762-T	0~360 degree	NCR	May 08, 2024	NCR	Radiation (03CH04-KS)
Antenna Mast	ChamPro	EM 1000-A	060762-A	1 m~4 m	NCR	May 08, 2024	NCR	Radiation (03CH04-KS)

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	±1.34 dB
Occupied Channel Bandwidth	±0.012 MHz
Conducted Power	±1.34 dB
Peak to Average Ratio	±1.34 dB
Frequency Stability	±1.3 Hz

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	2.83 dB

Uncertainty of Radiated Emission Measurement (1 GHz ~ 18 GHz

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	2.83 dB

Uncertainty of Radiated Emission Measurement (18 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	2.82 dB

---------- THE END ----------

Appendix A. Test Results of Conducted Test

Test Engineer :	Lorenzo Liu	Temperature :	24~26℃
		Relative Humidity :	50~53%

A1. Conducted Output Power(Average power) and ERP/EIRP

LTE Band 7:

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	EIRP(W)		
Channel				20850	20850	21350			
Frequency (MHz)				2510	2535	2560	L	M	H
20	QPSK	1	0	23.63	23.49	23.39	0.6501	0.6295	0.6152
20	QPSK	1	49	23.30	23.45	23.55	0.6026	0.6237	0.6383
20	QPSK	1	99	23.52	23.51	23.50	0.6339	0.6324	0.6310
20	QPSK	50	0	22.23	22.45	22.40	0.4710	0.4955	0.4898
20	QPSK	50	24	22.34	22.46	22.58	0.4831	0.4966	0.5105
20	QPSK	50	50	22.39	22.53	22.63	0.4887	0.5047	0.5164
20	QPSK	100	0	22.42	22.40	22.46	0.4920	0.4898	0.4966
20	16QAM	1	0	22.34	22.88	22.84	0.4831	0.5470	0.5420
20	64QAM	1	0	20.59	20.38	20.82	0.3228	0.3076	0.3404
20	256QAM	1	0	18.17	18.39	18.31	0.1849	0.1945	0.1910
Channel				20825	21100	21375	EIRP(W)		
Frequency (MHz)				2507.5	2535	2562.5	L	M	H
15	QPSK	1	0	23.25	23.52	23.40	0.5957	0.6339	0.6166
15	16QAM	1	0	22.43	22.76	22.81	0.4932	0.5321	0.5383
Channel				20800	21100	21400	EIRP(W)		
Frequency (MHz)				2505	2535	2565	L	M	H
10	QPSK	1	0	23.23	23.49	23.45	0.5929	0.6295	0.6237
10	16QAM	1	0	22.33	22.68	22.81	0.4819	0.5224	0.5383
Channel				20775	21100	21425	EIRP(W)		
Frequency (MHz)				2502.5	2535	2567.5	L	M	H
5	QPSK	1	0	23.34	23.55	23.46	0.6081	0.6383	0.6252
5	16QAM	1	0	22.35	22.75	22.85	0.4842	0.5309	0.5433

LTE Band 12:

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	22.97	22.72	22.85	0.2198	0.2075	0.2138
10	QPSK	1	25	22.88	22.96	22.89	0.2153	0.2193	0.2158
10	QPSK	1	49	22.87	22.86	22.88	0.2148	0.2143	0.2153
10	QPSK	25	0	21.84	21.87	21.91	0.1694	0.1706	0.1722
10	QPSK	25	12	21.97	21.92	22.00	0.1746	0.1726	0.1758
10	QPSK	25	25	21.94	21.98	21.93	0.1734	0.1750	0.1730
10	QPSK	50	0	21.88	21.83	21.95	0.1710	0.1690	0.1738
10	16QAM	1	0	22.24	22.34	22.05	0.1858	0.1901	0.1778
10	64QAM	1	0	20.69	20.50	21.19	0.1300	0.1245	0.1459
10	256QAM	1	0	18.30	18.44	18.21	0.0750	0.0774	0.0735
Channel				23035	23095	23155	ERP(W)		
Frequency (MHz)				701.5	707.5	713.5	L	M	H
5	QPSK	1	0	22.93	22.70	22.93	0.2178	0.2065	0.2178
5	16QAM	1	0	22.25	22.33	22.02	0.1862	0.1897	0.1766
Channel				23025	23095	23165	ERP(W)		
Frequency (MHz)				700.5	707.5	714.5	L	M	H
3	QPSK	1	0	22.94	22.74	22.85	0.2183	0.2084	0.2138
3	16QAM	1	0	22.23	22.26	22.07	0.1854	0.1866	0.1786
Channel				23017	23095	23173	ERP(W)		
Frequency (MHz)				699.7	707.5	715.3	L	M	H
1.4	QPSK	1	0	22.88	22.72	22.85	0.2153	0.2075	0.2138
1.4	16QAM	1	0	22.24	22.27	22.05	0.1858	0.1871	0.1778

LTE Band 13:

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		22.98			0.2588	
10	QPSK	1	25		22.94			0.2564	
10	QPSK	1	49		22.94			0.2564	
10	QPSK	25	0		21.91			0.2023	
10	QPSK	25	12		21.91			0.2023	
10	QPSK	25	25		21.99			0.2061	
10	QPSK	50	0		21.87			0.2004	
10	16QAM	1	0		22.30			0.2213	
10	64QAM	1	0		20.90			0.1603	
10	256QAM	1	0		18.39			0.0899	
Channel				23205	23230	23255	ERP(W)		
Frequency (MHz)				779.5	782	784.5	L	M	H
5	QPSK	1	0	22.84	22.95	22.87	0.2506	0.2570	0.2523
5	16QAM	1	0	22.21	22.25	22.16	0.2168	0.2188	0.2143

LTE Band 38:

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	EIRP(W)		
Channel				37850	38000	38150			
Frequency (MHz)				2580	2595	2610	L	M	H
20	QPSK	1	0	26.32	26.41	26.41	1.3552	1.3836	1.3836
20	QPSK	1	49	26.48	26.42	26.58	1.4060	1.3868	1.4388
20	QPSK	1	99	26.43	26.44	26.43	1.3900	1.3932	1.3900
20	QPSK	50	0	25.58	25.59	25.61	1.1429	1.1455	1.1508
20	QPSK	50	24	25.55	25.59	25.62	1.1350	1.1455	1.1535
20	QPSK	50	50	25.60	25.64	25.56	1.1482	1.1588	1.1376
20	QPSK	100	0	25.62	25.57	25.57	1.1535	1.1402	1.1402
20	16QAM	1	0	25.99	25.72	25.67	1.2560	1.1803	1.1668
20	64QAM	1	0	24.76	24.91	24.83	0.9462	0.9795	0.9616
20	256QAM	1	0	21.89	21.80	21.76	0.4887	0.4786	0.4742
Channel				37825	38000	38175	EIRP(W)		
Frequency (MHz)				2577.5	2595	2612.5	L	M	H
15	QPSK	1	0	26.37	26.44	26.42	1.3709	1.3932	1.3868
15	16QAM	1	0	25.95	25.74	25.69	1.2445	1.1858	1.1722
Channel				37800	38000	38200	EIRP(W)		
Frequency (MHz)				2575	2595	2615	L	M	H
10	QPSK	1	0	26.39	26.42	26.44	1.3772	1.3868	1.3932
10	16QAM	1	0	25.97	25.73	25.64	1.2503	1.1830	1.1588
Channel				37775	38000	38225	EIRP(W)		
Frequency (MHz)				2572.5	2595	2617.5	L	M	H
5	QPSK	1	0	26.28	26.42	26.38	1.3428	1.3868	1.3740
5	16QAM	1	0	25.55	25.73	25.73	1.1350	1.1830	1.1830

LTE Band 41:

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	EIRP(W)		
Channel				39750	40620	41490			
Frequency (MHz)				2506	2593	2680	L	M	H
20	QPSK	1	0	26.14	26.37	26.49	1.6368	1.7258	1.7742
20	QPSK	1	49	26.29	26.45	26.61	1.6943	1.7579	1.8239
20	QPSK	1	99	26.31	26.37	26.30	1.7022	1.7258	1.6982
20	QPSK	50	0	25.40	25.48	25.45	1.3804	1.4060	1.3964
20	QPSK	50	24	25.33	25.64	25.50	1.3583	1.4588	1.4125
20	QPSK	50	50	25.40	25.52	25.49	1.3804	1.4191	1.4093
20	QPSK	100	0	25.33	25.50	25.51	1.3583	1.4125	1.4158
20	16QAM	1	0	25.65	25.59	26.34	1.4622	1.4421	1.7140
20	64QAM	1	0	24.83	24.56	24.82	1.2106	1.1376	1.2078
20	256QAM	1	0	21.78	21.89	21.72	0.5998	0.6152	0.5916
Channel				39725	40620	41515	EIRP(W)		
Frequency (MHz)				2503.5	2593	2682.5	L	M	H
15	QPSK	1	0	26.22	26.43	26.50	1.6672	1.7498	1.7783
15	16QAM	1	0	25.61	25.67	26.19	1.4488	1.4689	1.6558
Channel				39700	40620	41540	EIRP(W)		
Frequency (MHz)				2501	2593	2685	L	M	H
10	QPSK	1	0	26.20	26.35	26.55	1.6596	1.7179	1.7989
10	16QAM	1	0	25.66	25.55	26.21	1.4655	1.4289	1.6634
Channel				39675	40620	41565	EIRP(W)		
Frequency (MHz)				2498.5	2593	2687.5	L	M	H
5	QPSK	1	0	26.20	26.37	26.51	1.6596	1.7258	1.7824
5	16QAM	1	0	25.61	25.62	26.11	1.4488	1.4521	1.6255

LTE Band 71:

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	23.17	23.40	23.32	0.2004	0.2113	0.2075
20	QPSK	1	49	23.27	23.39	23.46	0.2051	0.2109	0.2143
20	QPSK	1	99	23.48	23.53	23.38	0.2153	0.2178	0.2104
20	QPSK	50	0	22.22	22.41	22.32	0.1611	0.1683	0.1648
20	QPSK	50	24	22.24	22.41	22.47	0.1618	0.1683	0.1706
20	QPSK	50	50	22.38	22.50	22.60	0.1671	0.1718	0.1758
20	QPSK	100	0	22.39	22.37	22.35	0.1675	0.1667	0.1660
20	16QAM	1	0	22.24	22.59	22.80	0.1618	0.1754	0.1841
20	64QAM	1	0	21.58	21.27	21.82	0.1390	0.1294	0.1469
20	256QAM	1	0	18.08	18.35	18.30	0.0621	0.0661	0.0653
Channel				133197	133297	133397	EIRP(W)		
Frequency (MHz)				670.5	680.5	690.5	L	M	H
15	QPSK	1	0	23.24	23.37	23.37	0.2037	0.2099	0.2099
15	16QAM	1	0	22.24	22.61	22.77	0.1618	0.1762	0.1828
Channel				133172	133272	133422	EIRP(W)		
Frequency (MHz)				668	678	693	L	M	H
10	QPSK	1	0	23.24	23.45	23.34	0.2037	0.2138	0.2084
10	16QAM	1	0	22.22	22.60	22.71	0.1611	0.1758	0.1803
Channel				133147	133247	133447	EIRP(W)		
Frequency (MHz)				665.5	675.5	695.5	L	M	H
5	QPSK	1	0	23.24	23.38	23.33	0.2037	0.2104	0.2080
5	16QAM	1	0	22.24	22.63	22.74	0.1618	0.1770	0.1816

LTE Band 41C:

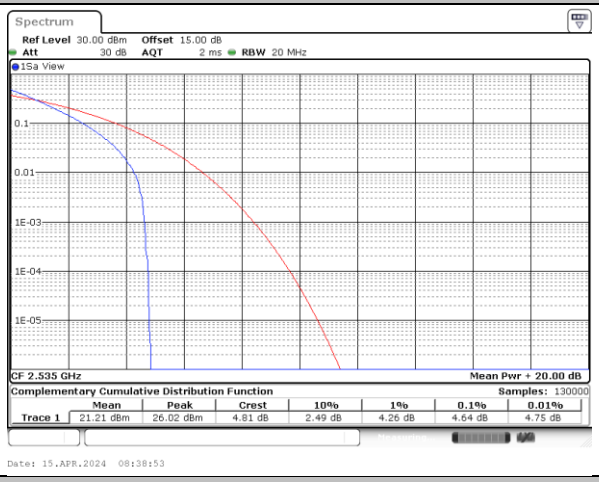
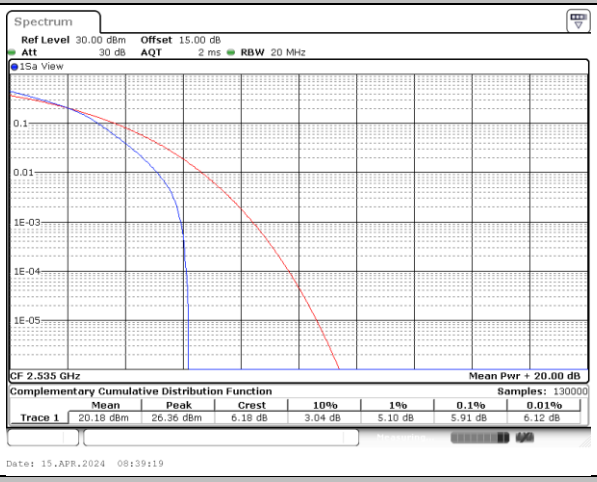
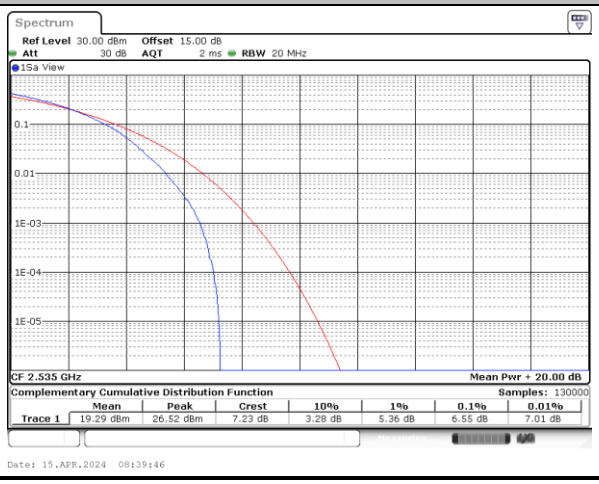
Combination 20MHz+20MHz (100RB+100RB)							
Channel	Modulation	PCC		SCC		Measured Power	EIRP(W)
		RB Size	RB offset	RB Size	RB offset		
L	QPSK	1	Max	1	0	23.56	0.9036
M	QPSK	1	Max	1	0	23.66	0.9247
H	QPSK	1	Max	1	0	23.65	0.9226
L	16QAM	1	Max	1	0	23.22	0.8356
M	16QAM	1	Max	1	0	23.28	0.8472
H	16QAM	1	Max	1	0	23.21	0.8337
L	64QAM	1	Max	1	0	22.37	0.6871
M	64QAM	1	Max	1	0	22.34	0.6823
H	64QAM	1	Max	1	0	22.29	0.6745
L	256QAM	1	Max	1	0	19.18	0.3296
M	256QAM	1	Max	1	0	19.04	0.3192
H	256QAM	1	Max	1	0	19.02	0.3177
Combination 20MHz+15MHz (100RB+75RB)							
Channel	Modulation	PCC		SCC		Measured Power	EIRP(W)
		RB Size	RB offset	RB Size	RB offset		
M	QPSK	1	Max	1	0	23.52	0.8954
M	16QAM	1	Max	1	0	22.94	0.7834
Combination 15MHz+20MHz (75RB+100RB)							
Channel	Modulation	PCC		SCC		Measured Power	EIRP(W)
		RB Size	RB offset	RB Size	RB offset		
M	QPSK	1	Max	1	0	23.50	0.8913
M	16QAM	1	Max	1	0	23.02	0.7980
Combination 15MHz+15MHz (75RB+75RB)							
Channel	Modulation	PCC		SCC		Measured Power	EIRP(W)
		RB Size	RB offset	RB Size	RB offset		
M	QPSK	1	Max	1	0	23.44	0.8790
M	16QAM	1	Max	1	0	23.03	0.7998
Combination 20MHz+10MHz (100RB+50RB)							
Channel	Modulation	PCC		SCC		Measured Power	EIRP(W)
		RB Size	RB offset	RB Size	RB offset		
M	QPSK	1	Max	1	0	23.53	0.8974
M	16QAM	1	Max	1	0	23.07	0.8072
Combination 10MHz+20MHz (50RB+100RB)							
Channel	Modulation	PCC		SCC		Measured Power	EIRP(W)
		RB Size	RB offset	RB Size	RB offset		
M	QPSK	1	Max	1	0	23.42	0.8750
M	16QAM	1	Max	1	0	22.97	0.7889
Combination 15MHz+10MHz (75RB+50RB)							
Channel	Modulation	PCC		SCC		Measured Power	EIRP(W)
		RB Size	RB offset	RB Size	RB offset		
M	QPSK	1	Max	1	0	23.43	0.8770
M	16QAM	1	Max	1	0	23.06	0.8054

Combination 10MHz+15MHz (50RB+75RB)							
Channel	Modulation	PCC		SCC		Measured Power	EIRP(W)
		RB Size	RB offset	RB Size	RB offset		
M	QPSK	1	Max	1	0	23.54	0.8995
M	16QAM	1	Max	1	0	23.02	0.7980
Combination 20MHz+5MHz (100RB+25RB)							
Channel	Modulation	PCC		SCC		Measured Power	EIRP(W)
		RB Size	RB offset	RB Size	RB offset		
M	QPSK	1	Max	1	0	23.43	0.8770
M	16QAM	1	Max	1	0	23.02	0.7980
Combination 5MHz+20MHz (25RB+100RB)							
Channel	Modulation	PCC		SCC		Measured Power	EIRP(W)
		RB Size	RB offset	RB Size	RB offset		
M	QPSK	1	Max	1	0	23.41	0.8730
M	16QAM	1	Max	1	0	23.04	0.8017

A2. LTE Band 7

A2.1 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	4.64	5.91	6.55	PASS

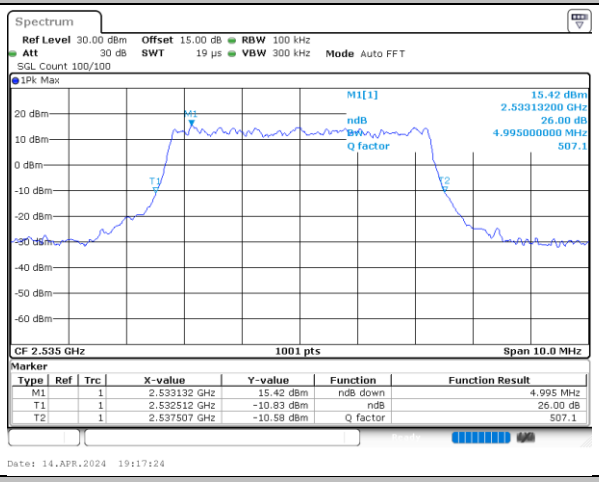
LTE Band 7 / 20MHz / QPSK	LTE Band 7 / 20MHz / 16QAM
Middle Channel / Full RB	Middle Channel / Full RB
	
LTE Band 7 / 20MHz / 64QAM	
Middle Channel / Full RB	
	

A2.2 26dB Bandwidth

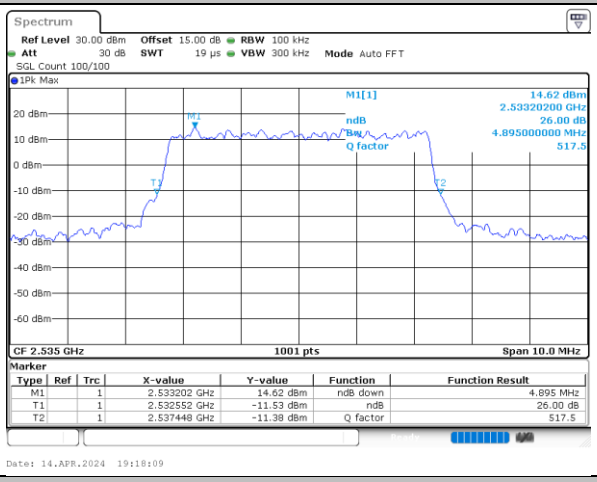
Mode	LTE Band 7 : 26dB BW(MHz)							
BW	5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	5.00	4.90	9.93	10.01	14.48	14.75	19.30	19.18

LTE Band 7

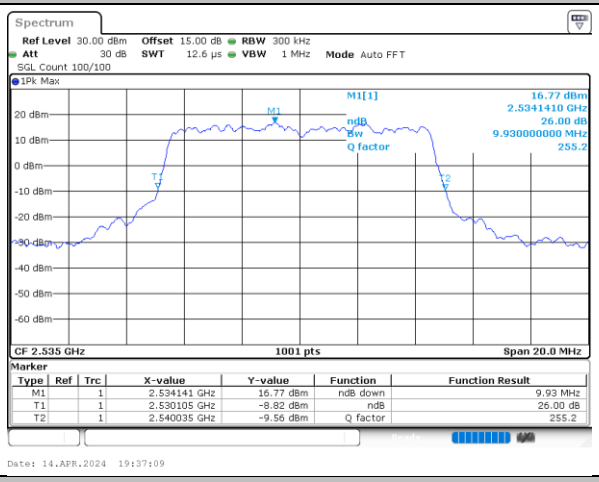
Middle Channel / 5MHz / QPSK



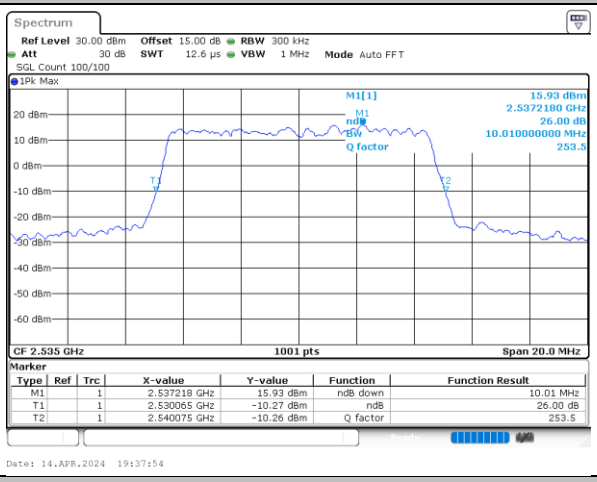
Middle Channel / 5MHz / 16QAM



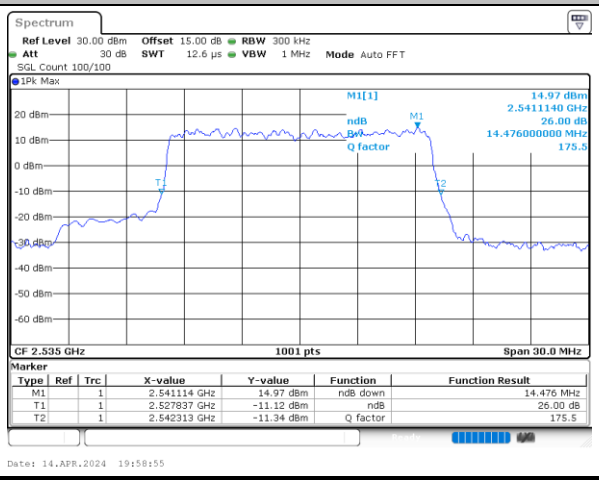
Middle Channel / 10MHz / QPSK



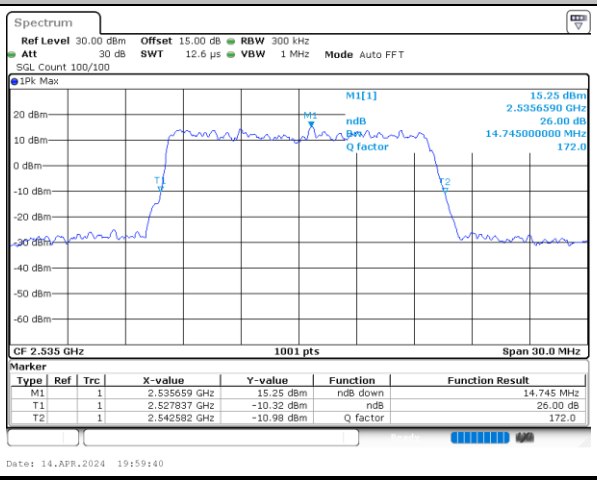
Middle Channel / 10MHz / 16QAM

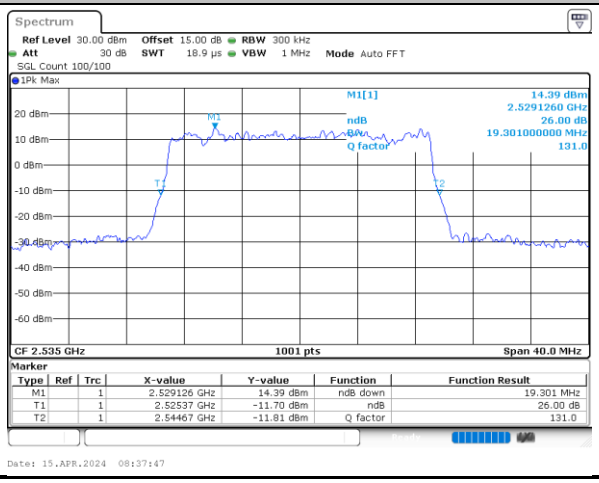
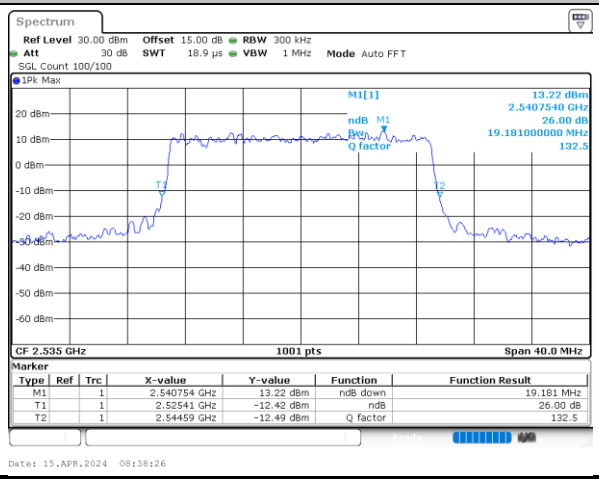


Middle Channel / 15MHz / QPSK



Middle Channel / 15MHz / 16QAM



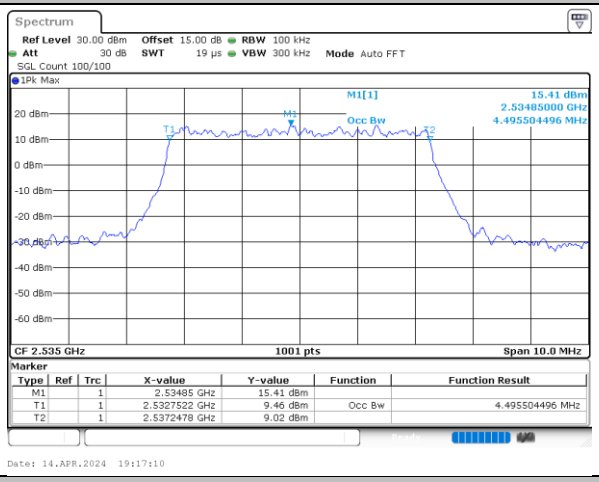
LTE Band 7	
Middle Channel / 20MHz / QPSK	**Middle Channel / 20MHz / 16QAM**
	

A2.3 Occupied Bandwidth

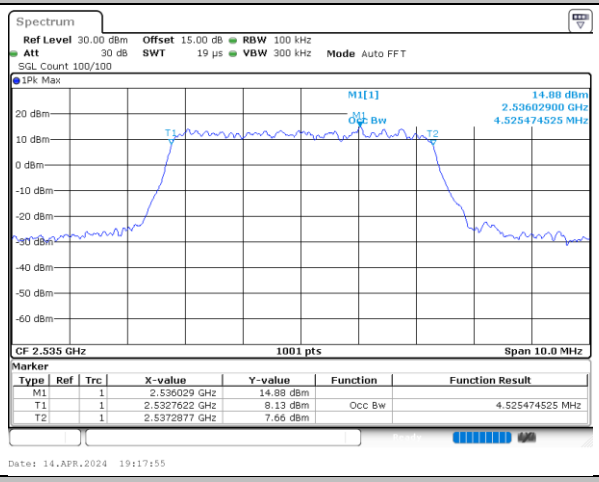
Mode	LTE Band 7 : 99%OBW(MHz)							
BW	5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	4.50	4.53	9.07	9.03	13.49	13.58	17.94	17.86

LTE Band 7

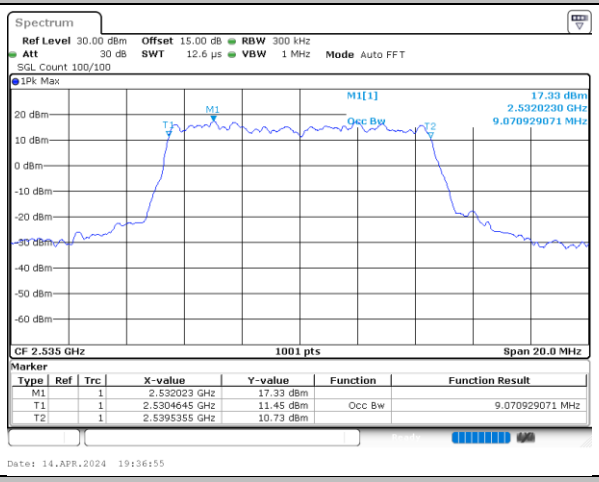
Middle Channel / 5MHz / QPSK



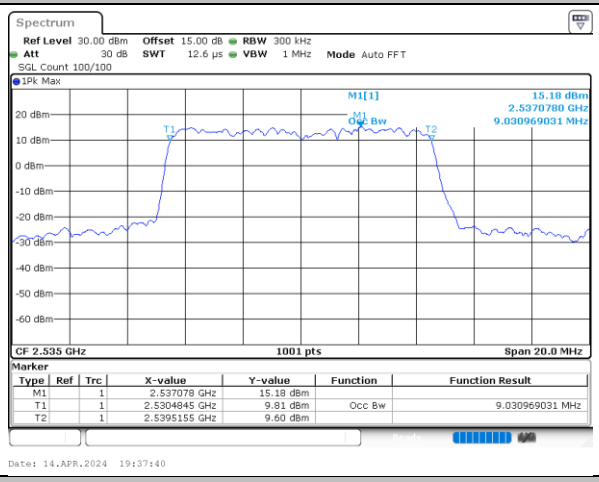
Middle Channel / 5MHz / 16QAM



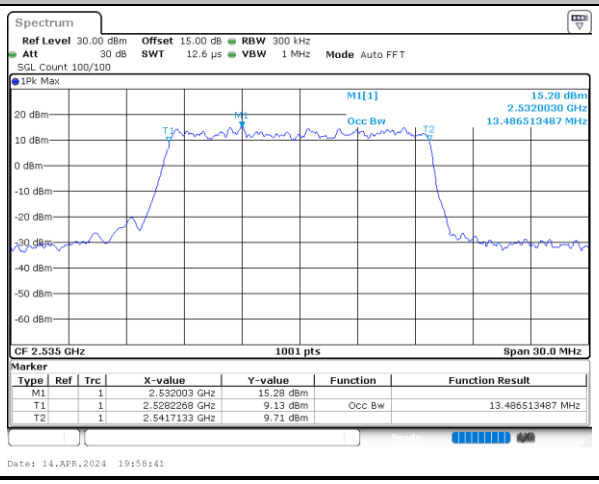
Middle Channel / 10MHz / QPSK



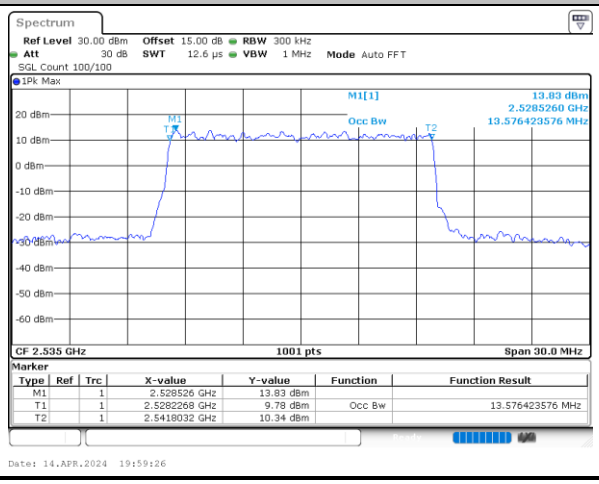
Middle Channel / 10MHz / 16QAM

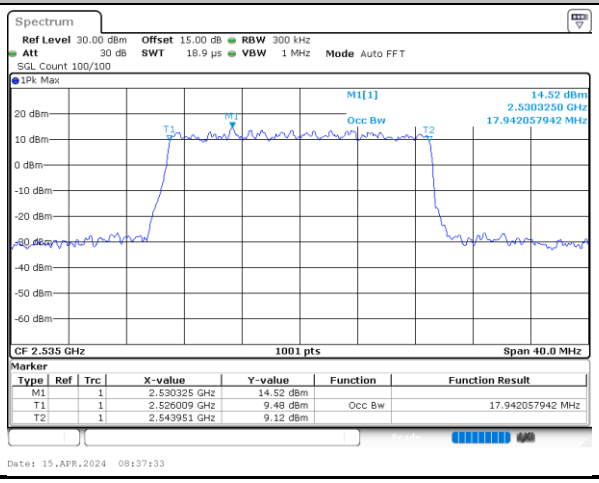
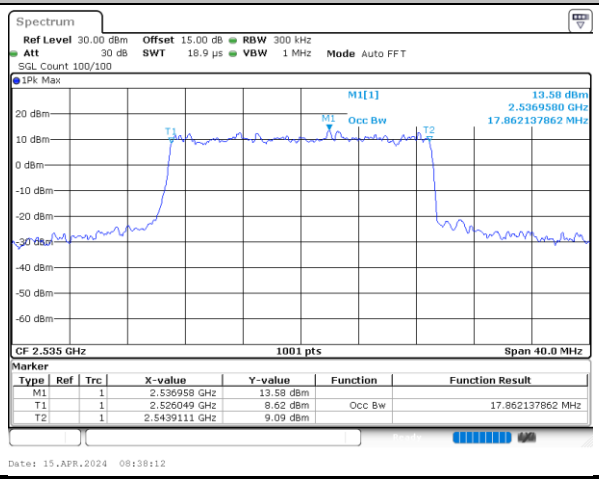


Middle Channel / 15MHz / QPSK



Middle Channel / 15MHz / 16QAM

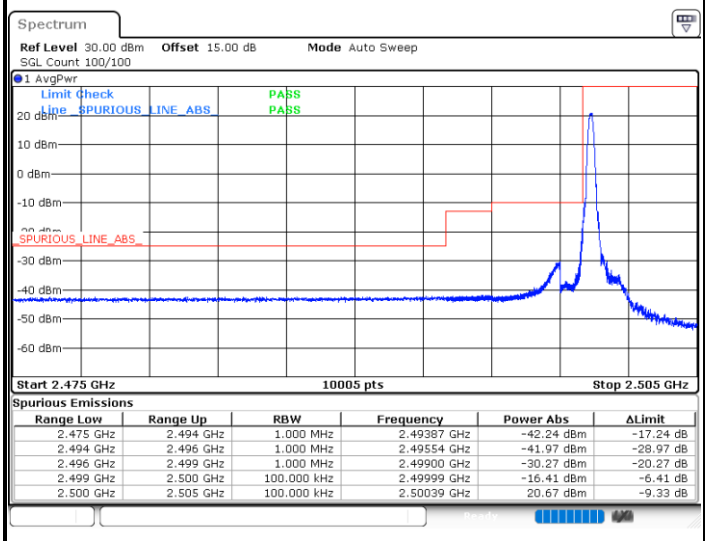


LTE Band 7	
Middle Channel / 20MHz / QPSK	**Middle Channel / 20MHz / 16QAM**
	

A2.4 Conducted Band Edge

LTE Band 7 / 5MHz / QPSK

Lowest Band Edge / 1 RB

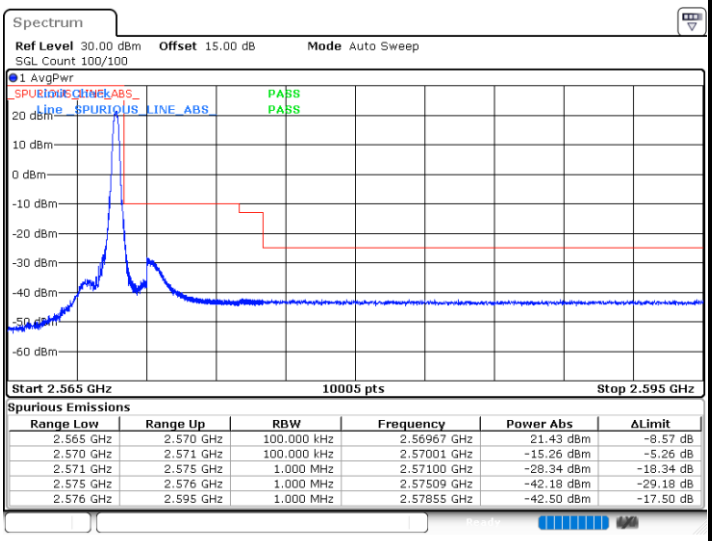


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.475 GHz	2.494 GHz	1.000 MHz	2.49387 GHz	-42.24 dBm	-17.24 dB
2.494 GHz	2.496 GHz	1.000 MHz	2.49554 GHz	-41.97 dBm	-28.97 dB
2.496 GHz	2.499 GHz	1.000 MHz	2.49900 GHz	-30.27 dBm	-20.27 dB
2.499 GHz	2.500 GHz	100.000 kHz	2.49999 GHz	-16.41 dBm	-6.41 dB
2.500 GHz	2.505 GHz	100.000 kHz	2.50039 GHz	20.67 dBm	-9.33 dB

Date: 14.APR.2024 19:08:03

Highest Band Edge / 1 RB

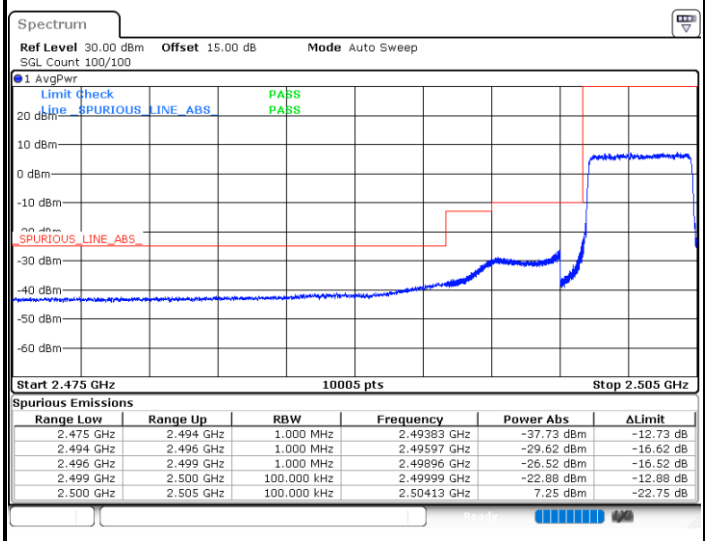


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.565 GHz	2.570 GHz	100.000 kHz	2.56967 GHz	21.43 dBm	-8.57 dB
2.570 GHz	2.571 GHz	100.000 kHz	2.57001 GHz	-15.26 dBm	-5.26 dB
2.571 GHz	2.575 GHz	1.000 MHz	2.57100 GHz	-28.34 dBm	-18.34 dB
2.575 GHz	2.576 GHz	1.000 MHz	2.57509 GHz	-42.18 dBm	-29.18 dB
2.576 GHz	2.595 GHz	1.000 MHz	2.57855 GHz	-42.50 dBm	-17.50 dB

Date: 14.APR.2024 19:19:19

Lowest Band Edge / Full RB

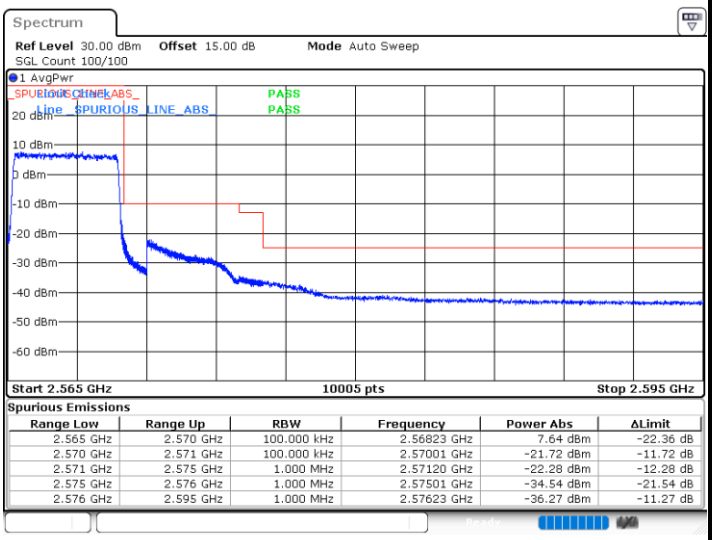


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.475 GHz	2.494 GHz	1.000 MHz	2.49383 GHz	-37.73 dBm	-12.73 dB
2.494 GHz	2.496 GHz	1.000 MHz	2.49597 GHz	-29.62 dBm	-16.62 dB
2.496 GHz	2.499 GHz	1.000 MHz	2.49896 GHz	-26.52 dBm	-16.52 dB
2.499 GHz	2.500 GHz	100.000 kHz	2.49999 GHz	-22.88 dBm	-12.88 dB
2.500 GHz	2.505 GHz	100.000 kHz	2.50413 GHz	7.25 dBm	-22.75 dB

Date: 14.APR.2024 19:11:37

Highest Band Edge / Full RB



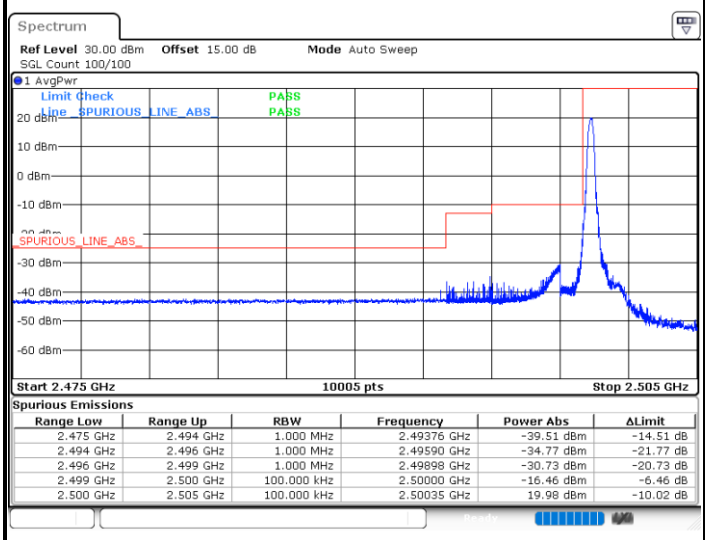
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.565 GHz	2.570 GHz	100.000 kHz	2.56823 GHz	7.64 dBm	-22.36 dB
2.570 GHz	2.571 GHz	100.000 kHz	2.57001 GHz	-21.72 dBm	-11.72 dB
2.571 GHz	2.575 GHz	1.000 MHz	2.57120 GHz	-22.28 dBm	-12.28 dB
2.575 GHz	2.576 GHz	1.000 MHz	2.57501 GHz	-34.54 dBm	-21.54 dB
2.576 GHz	2.595 GHz	1.000 MHz	2.57623 GHz	-36.27 dBm	-11.27 dB

Date: 14.APR.2024 19:22:52

LTE Band 7 / 5MHz / 16QAM

Lowest Band Edge / 1RB

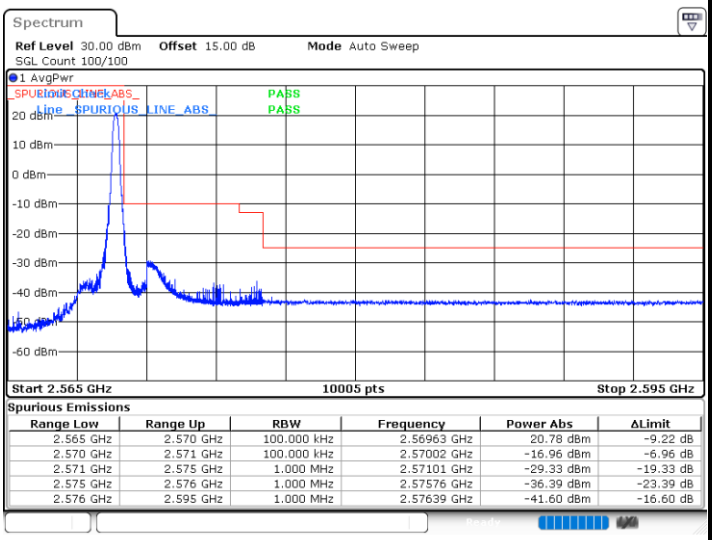


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.475 GHz	2.494 GHz	1.000 MHz	2.49376 GHz	-39.51 dBm	-14.51 dB
2.494 GHz	2.496 GHz	1.000 MHz	2.49590 GHz	-34.77 dBm	-21.77 dB
2.496 GHz	2.499 GHz	1.000 MHz	2.49898 GHz	-30.73 dBm	-20.73 dB
2.499 GHz	2.500 GHz	100.000 kHz	2.50000 GHz	-16.46 dBm	-6.46 dB
2.500 GHz	2.505 GHz	100.000 kHz	2.50035 GHz	19.98 dBm	-10.02 dB

Date: 14.APR.2024 19:09:14

Highest Band Edge / 1 RB

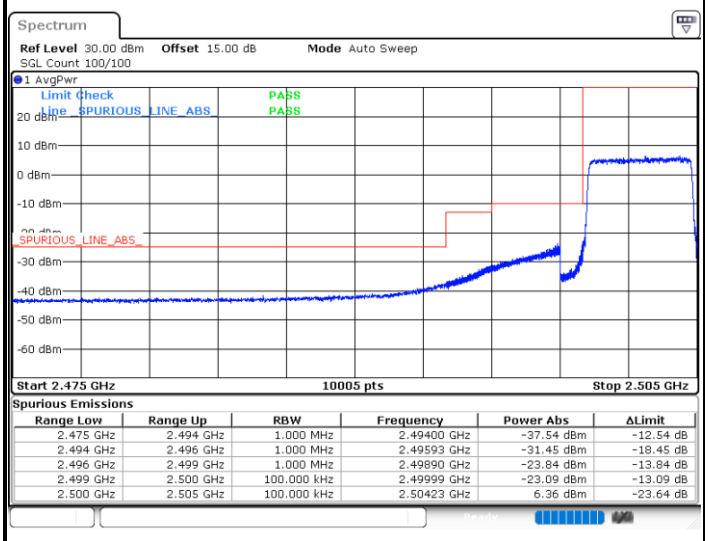


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.565 GHz	2.570 GHz	100.000 kHz	2.56963 GHz	20.78 dBm	-9.22 dB
2.570 GHz	2.571 GHz	100.000 kHz	2.57002 GHz	-16.96 dBm	-6.96 dB
2.571 GHz	2.575 GHz	1.000 MHz	2.57101 GHz	-29.33 dBm	-19.33 dB
2.575 GHz	2.576 GHz	1.000 MHz	2.57576 GHz	-36.39 dBm	-23.39 dB
2.576 GHz	2.595 GHz	1.000 MHz	2.57639 GHz	-41.60 dBm	-16.60 dB

Date: 14.APR.2024 19:20:30

Lowest Band Edge / Full RB

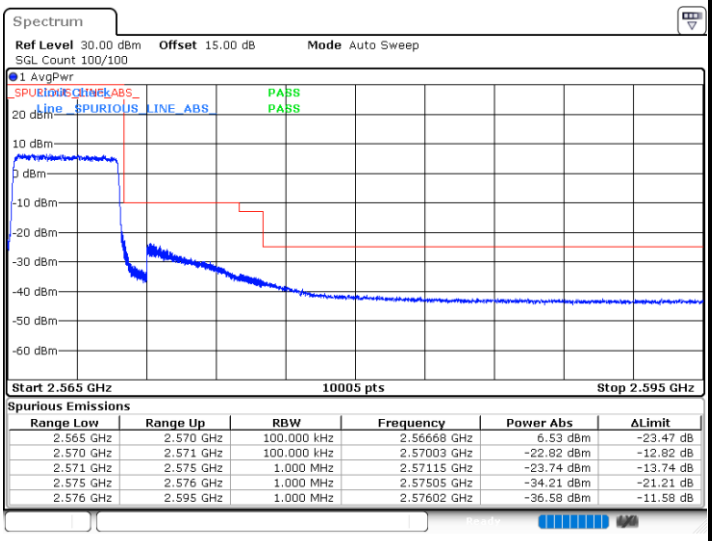


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.475 GHz	2.494 GHz	1.000 MHz	2.49400 GHz	-37.54 dBm	-12.54 dB
2.494 GHz	2.496 GHz	1.000 MHz	2.49593 GHz	-31.45 dBm	-18.45 dB
2.496 GHz	2.499 GHz	1.000 MHz	2.49890 GHz	-23.84 dBm	-13.84 dB
2.499 GHz	2.500 GHz	100.000 kHz	2.49999 GHz	-23.09 dBm	-13.09 dB
2.500 GHz	2.505 GHz	100.000 kHz	2.50423 GHz	6.36 dBm	-23.64 dB

Date: 14.APR.2024 19:12:48

Highest Band Edge / Full RB



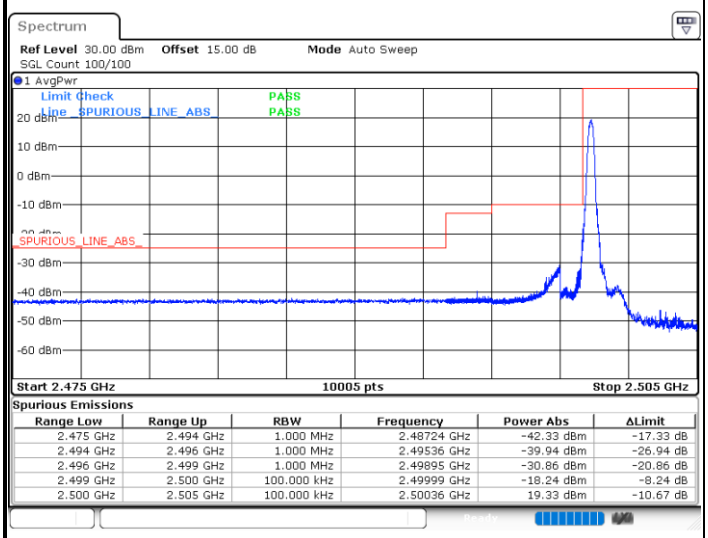
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.565 GHz	2.570 GHz	100.000 kHz	2.56668 GHz	6.53 dBm	-23.47 dB
2.570 GHz	2.571 GHz	100.000 kHz	2.57003 GHz	-22.82 dBm	-12.82 dB
2.571 GHz	2.575 GHz	1.000 MHz	2.57115 GHz	-23.74 dBm	-13.74 dB
2.575 GHz	2.576 GHz	1.000 MHz	2.57505 GHz	-34.21 dBm	-21.21 dB
2.576 GHz	2.595 GHz	1.000 MHz	2.57602 GHz	-36.58 dBm	-11.58 dB

Date: 14.APR.2024 19:24:03

LTE Band 7 / 5MHz / 64QAM

Lowest Band Edge / 1RB

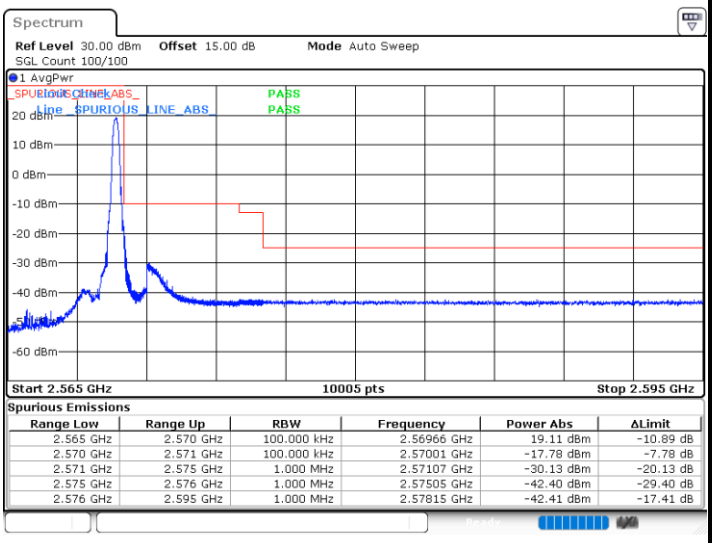


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.475 GHz	2.494 GHz	1.000 MHz	2.48724 GHz	-42.33 dBm	-17.33 dB
2.494 GHz	2.496 GHz	1.000 MHz	2.49536 GHz	-39.94 dBm	-26.94 dB
2.496 GHz	2.499 GHz	1.000 MHz	2.49895 GHz	-30.86 dBm	-20.86 dB
2.499 GHz	2.500 GHz	100.000 kHz	2.49999 GHz	-18.24 dBm	-8.24 dB
2.500 GHz	2.505 GHz	100.000 kHz	2.50036 GHz	19.33 dBm	-10.67 dB

Date: 14.APR.2024 19:10:26

Highest Band Edge / 1 RB

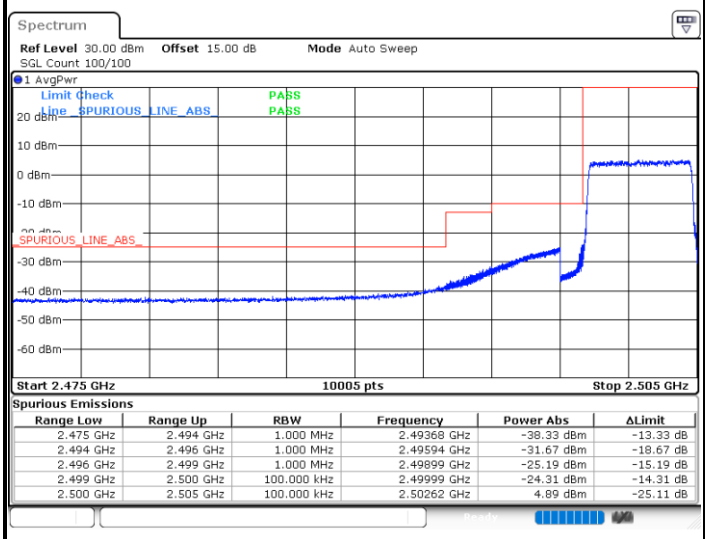


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.565 GHz	2.570 GHz	100.000 kHz	2.56966 GHz	19.11 dBm	-10.89 dB
2.570 GHz	2.571 GHz	100.000 kHz	2.57001 GHz	-17.78 dBm	-7.78 dB
2.571 GHz	2.575 GHz	1.000 MHz	2.57107 GHz	-30.13 dBm	-20.13 dB
2.575 GHz	2.576 GHz	1.000 MHz	2.57505 GHz	-42.40 dBm	-29.40 dB
2.576 GHz	2.595 GHz	1.000 MHz	2.57815 GHz	-42.41 dBm	-17.41 dB

Date: 14.APR.2024 19:21:41

Lowest Band Edge / Full RB

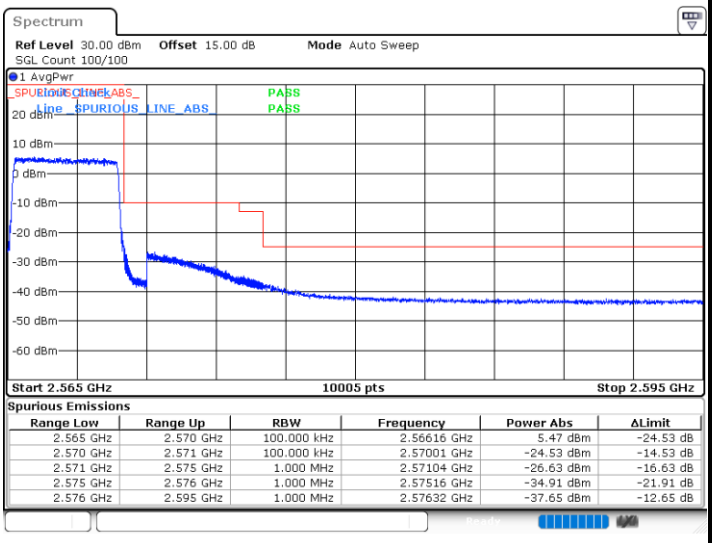


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.475 GHz	2.494 GHz	1.000 MHz	2.49368 GHz	-38.33 dBm	-13.33 dB
2.494 GHz	2.496 GHz	1.000 MHz	2.49594 GHz	-31.67 dBm	-18.67 dB
2.496 GHz	2.499 GHz	1.000 MHz	2.49899 GHz	-25.19 dBm	-15.19 dB
2.499 GHz	2.500 GHz	100.000 kHz	2.49999 GHz	-24.31 dBm	-14.31 dB
2.500 GHz	2.505 GHz	100.000 kHz	2.50262 GHz	4.89 dBm	-25.11 dB

Date: 14.APR.2024 19:14:00

Highest Band Edge / Full RB



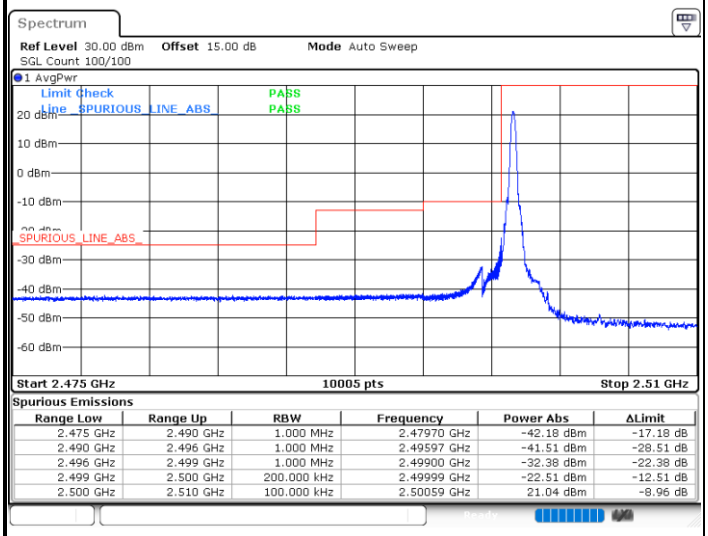
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.565 GHz	2.570 GHz	100.000 kHz	2.56616 GHz	5.47 dBm	-24.53 dB
2.570 GHz	2.571 GHz	100.000 kHz	2.57001 GHz	-24.53 dBm	-14.53 dB
2.571 GHz	2.575 GHz	1.000 MHz	2.57104 GHz	-26.63 dBm	-16.63 dB
2.575 GHz	2.576 GHz	1.000 MHz	2.57516 GHz	-34.91 dBm	-21.91 dB
2.576 GHz	2.595 GHz	1.000 MHz	2.57632 GHz	-37.65 dBm	-12.65 dB

Date: 14.APR.2024 19:25:14

LTE Band 7 / 10MHz / QPSK

Lowest Band Edge / 1 RB

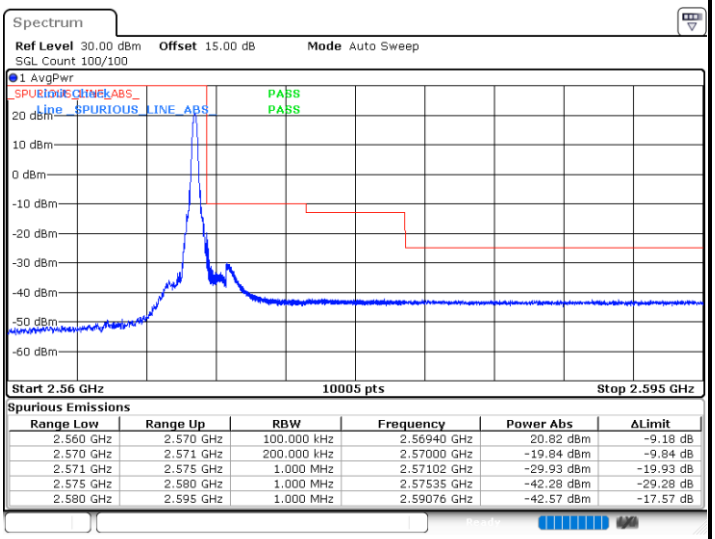


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.475 GHz	2.490 GHz	1.000 MHz	2.47970 GHz	-42.18 dBm	-17.18 dB
2.490 GHz	2.496 GHz	1.000 MHz	2.49597 GHz	-41.51 dBm	-28.51 dB
2.496 GHz	2.499 GHz	1.000 MHz	2.49900 GHz	-32.38 dBm	-22.38 dB
2.499 GHz	2.500 GHz	200.000 kHz	2.49999 GHz	-22.51 dBm	-12.51 dB
2.500 GHz	2.510 GHz	100.000 kHz	2.50059 GHz	21.04 dBm	-8.96 dB

Date: 14.APR.2024 19:27:50

Highest Band Edge / 1 RB

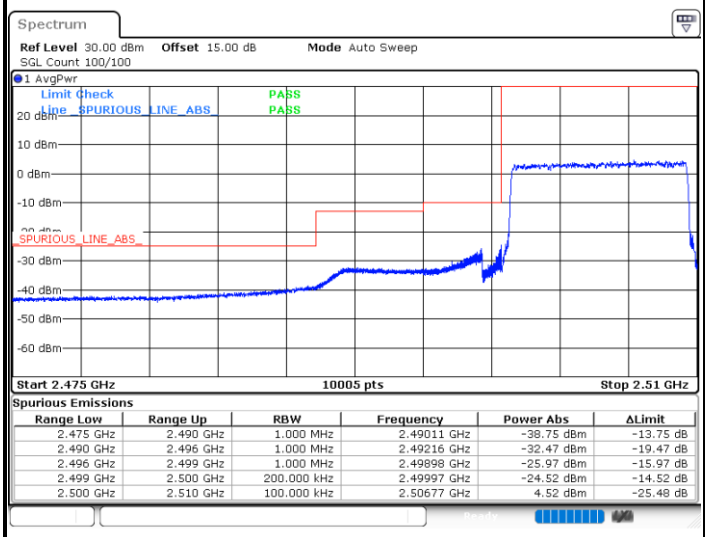


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.560 GHz	2.570 GHz	100.000 kHz	2.56940 GHz	20.82 dBm	-9.18 dB
2.570 GHz	2.571 GHz	200.000 kHz	2.57000 GHz	-19.84 dBm	-9.84 dB
2.571 GHz	2.575 GHz	1.000 MHz	2.57102 GHz	-29.93 dBm	-19.93 dB
2.575 GHz	2.580 GHz	1.000 MHz	2.57535 GHz	-42.28 dBm	-29.28 dB
2.580 GHz	2.595 GHz	1.000 MHz	2.59076 GHz	-42.57 dBm	-17.57 dB

Date: 14.APR.2024 19:39:04

Lowest Band Edge / Full RB

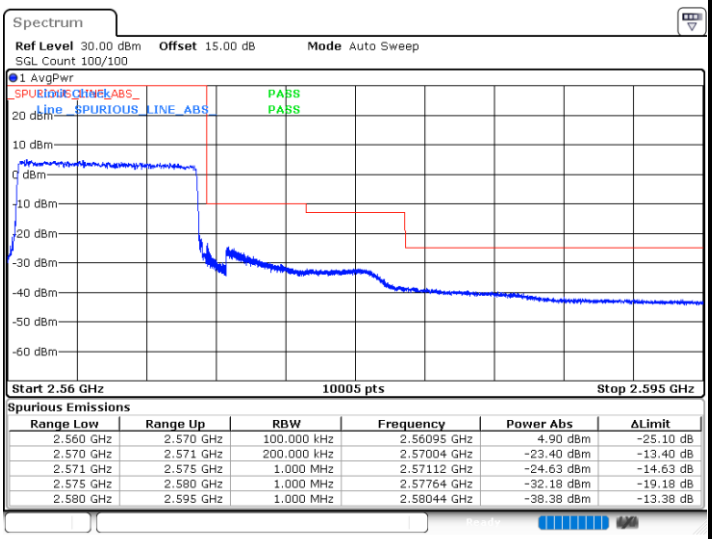


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.475 GHz	2.490 GHz	1.000 MHz	2.49011 GHz	-38.75 dBm	-13.75 dB
2.490 GHz	2.496 GHz	1.000 MHz	2.49216 GHz	-32.47 dBm	-19.47 dB
2.496 GHz	2.499 GHz	1.000 MHz	2.49898 GHz	-25.97 dBm	-15.97 dB
2.499 GHz	2.500 GHz	200.000 kHz	2.49997 GHz	-24.52 dBm	-14.52 dB
2.500 GHz	2.510 GHz	100.000 kHz	2.50677 GHz	4.52 dBm	-25.48 dB

Date: 14.APR.2024 19:31:23

Highest Band Edge / Full RB



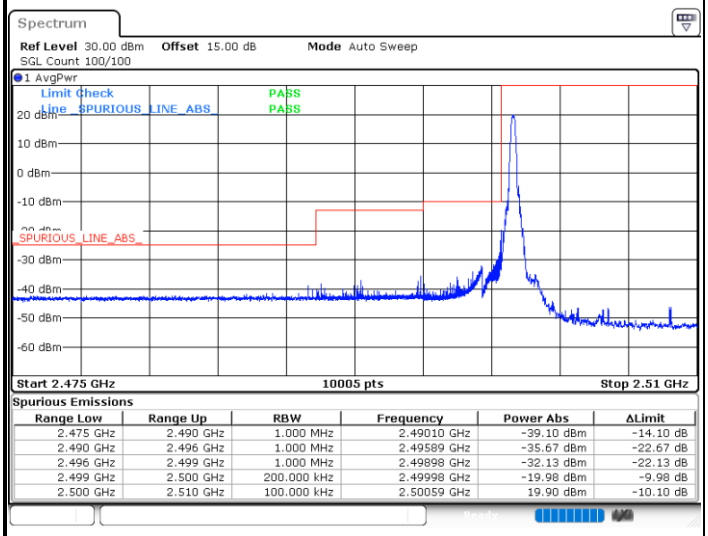
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.560 GHz	2.570 GHz	100.000 kHz	2.56095 GHz	4.90 dBm	-25.10 dB
2.570 GHz	2.571 GHz	200.000 kHz	2.57004 GHz	-23.40 dBm	-13.40 dB
2.571 GHz	2.575 GHz	1.000 MHz	2.57112 GHz	-24.63 dBm	-14.63 dB
2.575 GHz	2.580 GHz	1.000 MHz	2.57764 GHz	-32.18 dBm	-19.18 dB
2.580 GHz	2.595 GHz	1.000 MHz	2.58044 GHz	-38.38 dBm	-13.38 dB

Date: 14.APR.2024 19:42:37

LTE Band 7 / 10MHz / 16QAM

Lowest Band Edge / 1RB

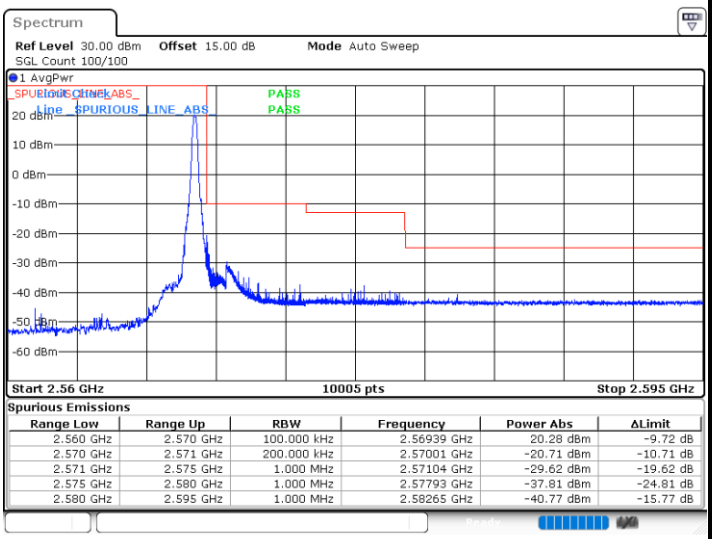


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.475 GHz	2.490 GHz	1.000 MHz	2.49010 GHz	-39.10 dBm	-14.10 dB
2.490 GHz	2.496 GHz	1.000 MHz	2.49589 GHz	-35.67 dBm	-22.67 dB
2.496 GHz	2.499 GHz	1.000 MHz	2.49898 GHz	-32.13 dBm	-22.13 dB
2.499 GHz	2.500 GHz	200.000 kHz	2.49998 GHz	-19.98 dBm	-9.98 dB
2.500 GHz	2.510 GHz	100.000 kHz	2.50059 GHz	19.90 dBm	-10.10 dB

Date: 14.APR.2024 19:29:01

Highest Band Edge / 1 RB

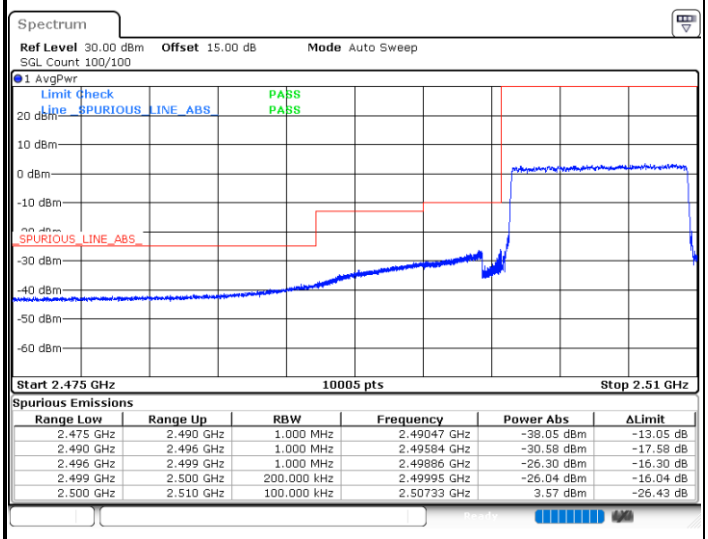


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.560 GHz	2.570 GHz	100.000 kHz	2.56939 GHz	20.28 dBm	-9.72 dB
2.570 GHz	2.571 GHz	200.000 kHz	2.57001 GHz	-20.71 dBm	-10.71 dB
2.571 GHz	2.575 GHz	1.000 MHz	2.57104 GHz	-29.62 dBm	-19.62 dB
2.575 GHz	2.580 GHz	1.000 MHz	2.57793 GHz	-37.81 dBm	-24.81 dB
2.580 GHz	2.595 GHz	1.000 MHz	2.58265 GHz	-40.77 dBm	-15.77 dB

Date: 14.APR.2024 19:40:15

Lowest Band Edge / Full RB

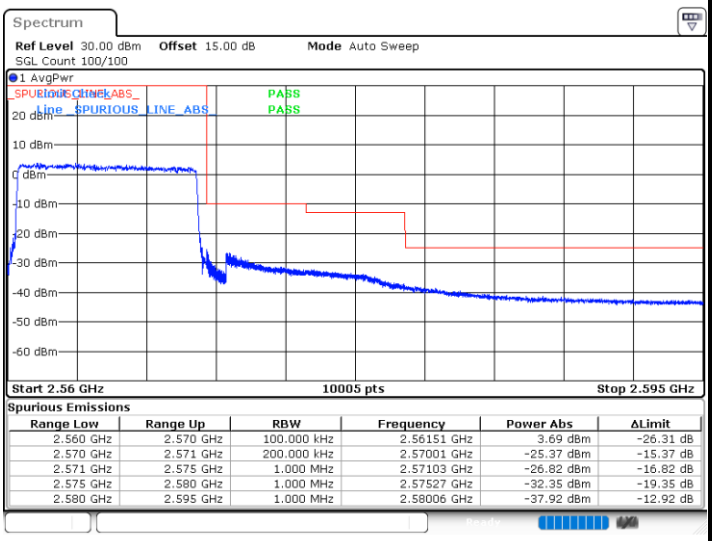


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.475 GHz	2.490 GHz	1.000 MHz	2.49047 GHz	-38.05 dBm	-13.05 dB
2.490 GHz	2.496 GHz	1.000 MHz	2.49584 GHz	-30.58 dBm	-17.58 dB
2.496 GHz	2.499 GHz	1.000 MHz	2.49886 GHz	-26.30 dBm	-16.30 dB
2.499 GHz	2.500 GHz	200.000 kHz	2.49995 GHz	-26.04 dBm	-16.04 dB
2.500 GHz	2.510 GHz	100.000 kHz	2.50733 GHz	3.57 dBm	-26.43 dB

Date: 14.APR.2024 19:32:34

Highest Band Edge / Full RB



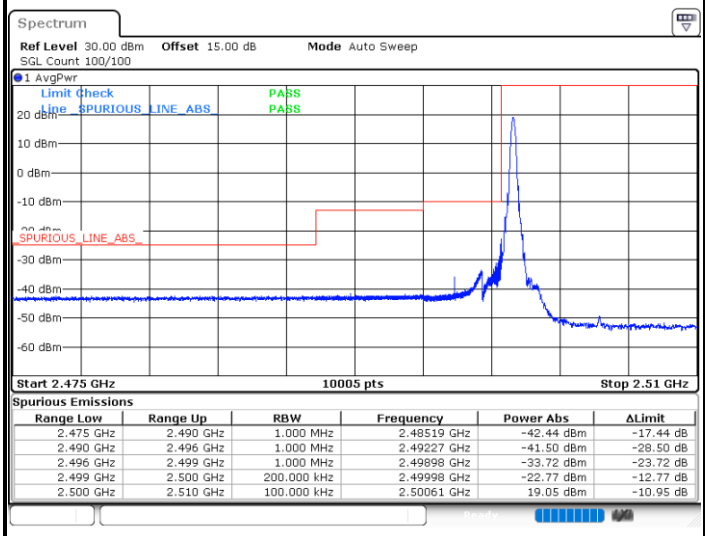
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.560 GHz	2.570 GHz	100.000 kHz	2.56151 GHz	3.69 dBm	-26.31 dB
2.570 GHz	2.571 GHz	200.000 kHz	2.57001 GHz	-25.37 dBm	-15.37 dB
2.571 GHz	2.575 GHz	1.000 MHz	2.57103 GHz	-26.82 dBm	-16.82 dB
2.575 GHz	2.580 GHz	1.000 MHz	2.57527 GHz	-32.35 dBm	-19.35 dB
2.580 GHz	2.595 GHz	1.000 MHz	2.58006 GHz	-37.92 dBm	-12.92 dB

Date: 14.APR.2024 19:43:48

LTE Band 7 / 10MHz / 64QAM

Lowest Band Edge / 1RB

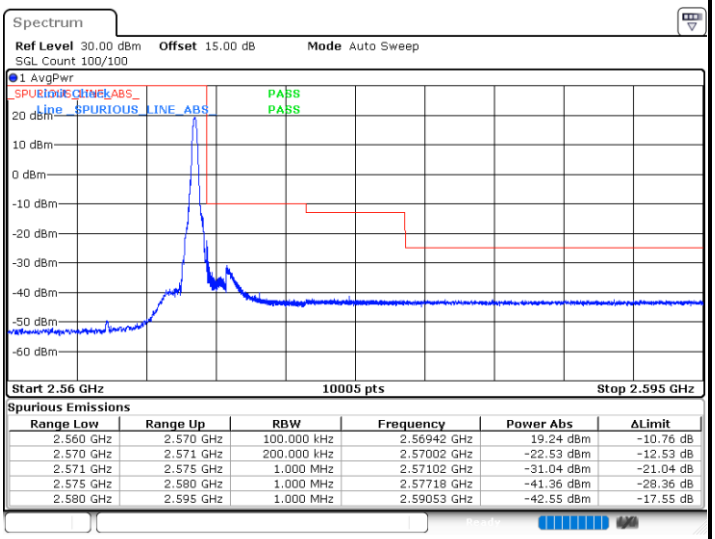


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.475 GHz	2.490 GHz	1.000 MHz	2.48519 GHz	-42.44 dBm	-17.44 dB
2.490 GHz	2.496 GHz	1.000 MHz	2.49227 GHz	-41.50 dBm	-28.50 dB
2.496 GHz	2.499 GHz	1.000 MHz	2.49898 GHz	-33.72 dBm	-23.72 dB
2.499 GHz	2.500 GHz	200.000 kHz	2.49998 GHz	-22.77 dBm	-12.77 dB
2.500 GHz	2.510 GHz	100.000 kHz	2.50061 GHz	19.05 dBm	-10.95 dB

Date: 14.APR.2024 19:30:12

Highest Band Edge / 1 RB

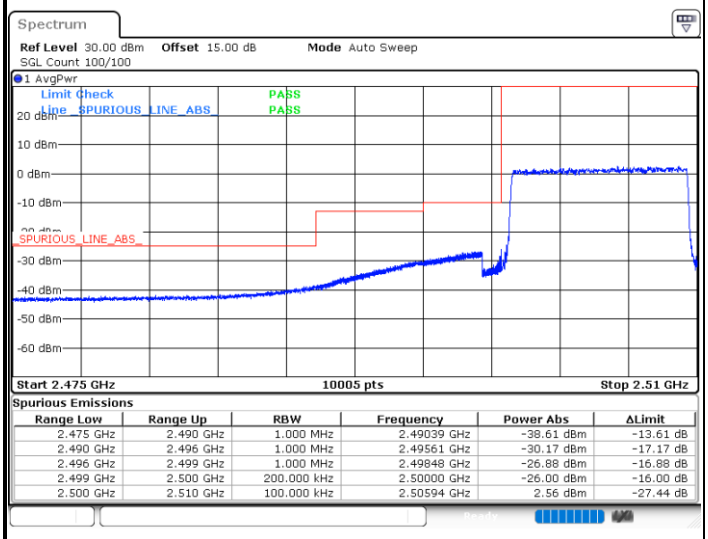


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.560 GHz	2.570 GHz	100.000 kHz	2.56942 GHz	19.24 dBm	-10.76 dB
2.570 GHz	2.571 GHz	200.000 kHz	2.57002 GHz	-22.53 dBm	-12.53 dB
2.571 GHz	2.575 GHz	1.000 MHz	2.57102 GHz	-31.04 dBm	-21.04 dB
2.575 GHz	2.580 GHz	1.000 MHz	2.57718 GHz	-41.36 dBm	-28.36 dB
2.580 GHz	2.595 GHz	1.000 MHz	2.59053 GHz	-42.55 dBm	-17.55 dB

Date: 14.APR.2024 19:41:26

Lowest Band Edge / Full RB

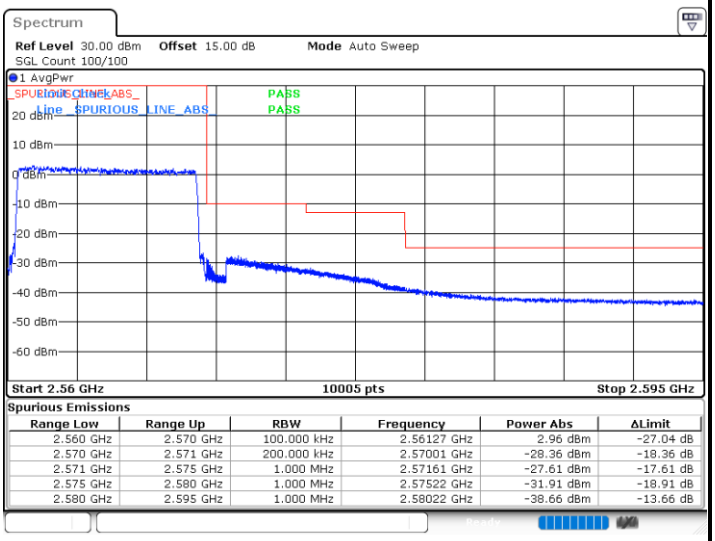


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.475 GHz	2.490 GHz	1.000 MHz	2.49039 GHz	-38.61 dBm	-13.61 dB
2.490 GHz	2.496 GHz	1.000 MHz	2.49561 GHz	-30.17 dBm	-17.17 dB
2.496 GHz	2.499 GHz	1.000 MHz	2.49848 GHz	-26.88 dBm	-16.88 dB
2.499 GHz	2.500 GHz	200.000 kHz	2.50000 GHz	-26.00 dBm	-16.00 dB
2.500 GHz	2.510 GHz	100.000 kHz	2.50594 GHz	2.56 dBm	-27.44 dB

Date: 14.APR.2024 19:33:45

Highest Band Edge / Full RB



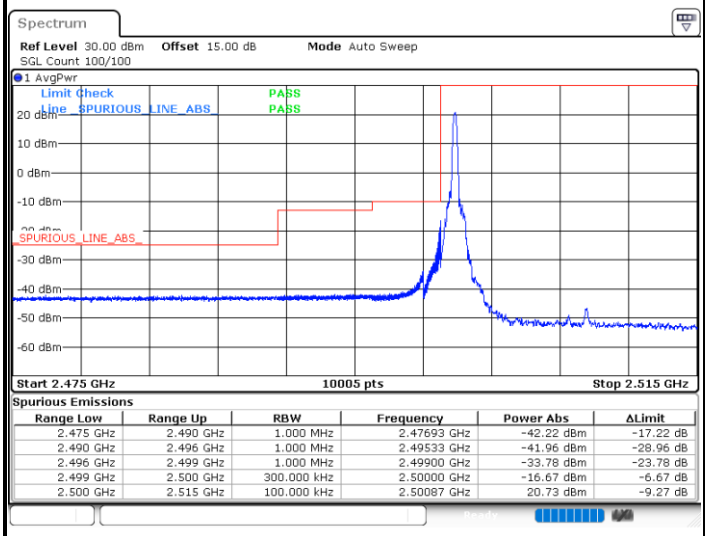
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.560 GHz	2.570 GHz	100.000 kHz	2.56127 GHz	2.96 dBm	-27.04 dB
2.570 GHz	2.571 GHz	200.000 kHz	2.57001 GHz	-28.36 dBm	-18.36 dB
2.571 GHz	2.575 GHz	1.000 MHz	2.57161 GHz	-27.61 dBm	-17.61 dB
2.575 GHz	2.580 GHz	1.000 MHz	2.57522 GHz	-31.91 dBm	-18.91 dB
2.580 GHz	2.595 GHz	1.000 MHz	2.58022 GHz	-38.66 dBm	-13.66 dB

Date: 14.APR.2024 19:44:59

LTE Band 7 / 15MHz / QPSK

Lowest Band Edge / 1 RB

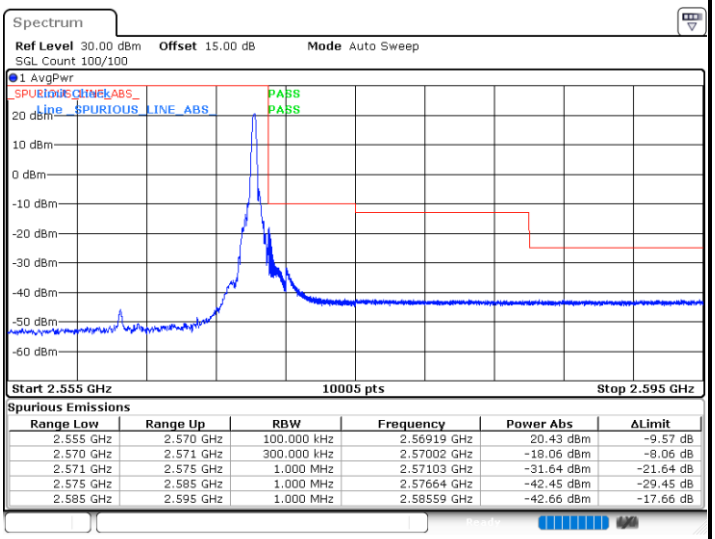


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.475 GHz	2.490 GHz	1.000 MHz	2.47693 GHz	-42.22 dBm	-17.22 dB
2.490 GHz	2.496 GHz	1.000 MHz	2.49533 GHz	-41.96 dBm	-28.96 dB
2.496 GHz	2.499 GHz	1.000 MHz	2.49900 GHz	-33.78 dBm	-23.78 dB
2.499 GHz	2.500 GHz	300.000 kHz	2.50000 GHz	-16.67 dBm	-6.67 dB
2.500 GHz	2.515 GHz	100.000 kHz	2.50087 GHz	20.73 dBm	-9.27 dB

Date: 14.APR.2024 19:49:34

Highest Band Edge / 1 RB

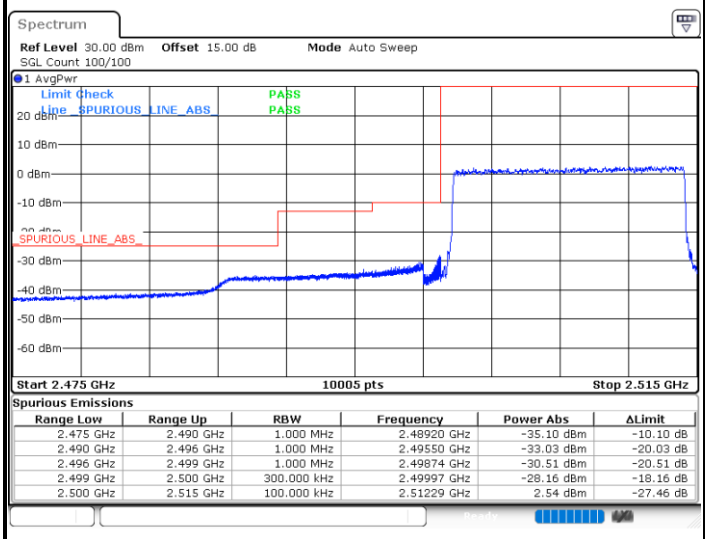


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.555 GHz	2.570 GHz	100.000 kHz	2.56919 GHz	20.43 dBm	-9.57 dB
2.570 GHz	2.571 GHz	300.000 kHz	2.57002 GHz	-18.06 dBm	-8.06 dB
2.571 GHz	2.575 GHz	1.000 MHz	2.57103 GHz	-31.64 dBm	-21.64 dB
2.575 GHz	2.585 GHz	1.000 MHz	2.57664 GHz	-42.45 dBm	-29.45 dB
2.585 GHz	2.595 GHz	1.000 MHz	2.58559 GHz	-42.66 dBm	-17.66 dB

Date: 14.APR.2024 20:00:50

Lowest Band Edge / Full RB

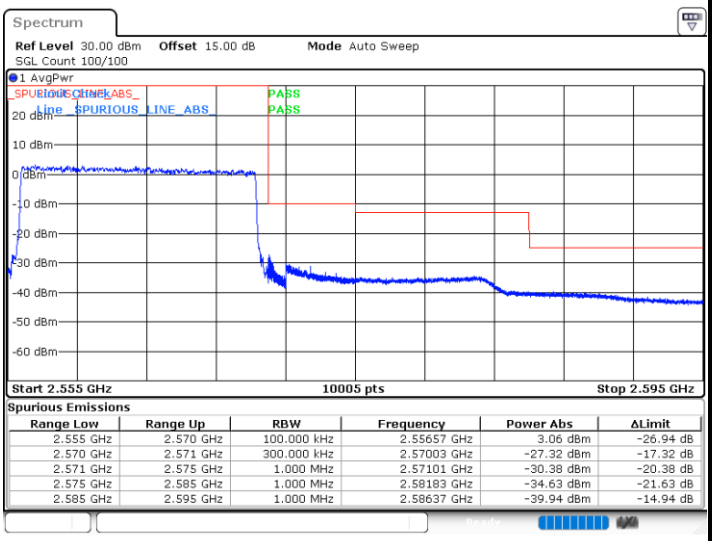


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.475 GHz	2.490 GHz	1.000 MHz	2.48920 GHz	-35.10 dBm	-10.10 dB
2.490 GHz	2.496 GHz	1.000 MHz	2.49550 GHz	-33.03 dBm	-20.03 dB
2.496 GHz	2.499 GHz	1.000 MHz	2.49874 GHz	-30.51 dBm	-20.51 dB
2.499 GHz	2.500 GHz	300.000 kHz	2.49997 GHz	-28.16 dBm	-18.16 dB
2.500 GHz	2.515 GHz	100.000 kHz	2.51229 GHz	2.54 dBm	-27.46 dB

Date: 14.APR.2024 19:53:08

Highest Band Edge / Full RB



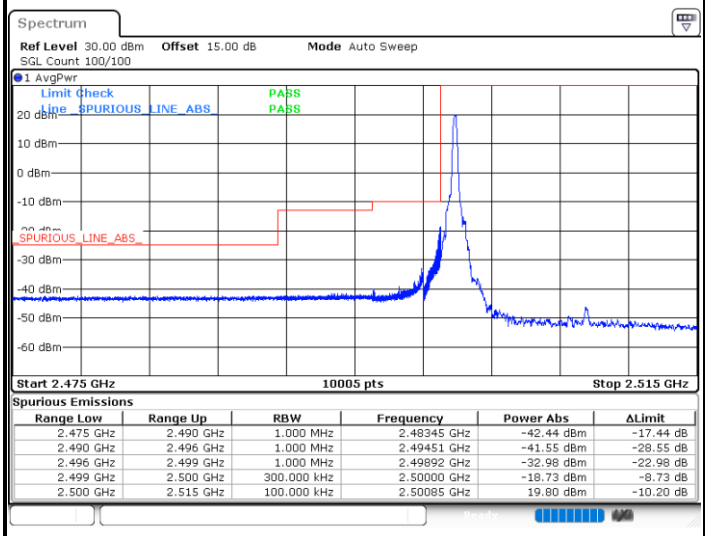
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.555 GHz	2.570 GHz	100.000 kHz	2.55657 GHz	3.06 dBm	-26.94 dB
2.570 GHz	2.571 GHz	300.000 kHz	2.57003 GHz	-27.32 dBm	-17.32 dB
2.571 GHz	2.575 GHz	1.000 MHz	2.57101 GHz	-30.38 dBm	-20.38 dB
2.575 GHz	2.585 GHz	1.000 MHz	2.58183 GHz	-34.63 dBm	-21.63 dB
2.585 GHz	2.595 GHz	1.000 MHz	2.58637 GHz	-39.94 dBm	-14.94 dB

Date: 14.APR.2024 20:04:23

LTE Band 7 / 15MHz / 16QAM

Lowest Band Edge / 1RB

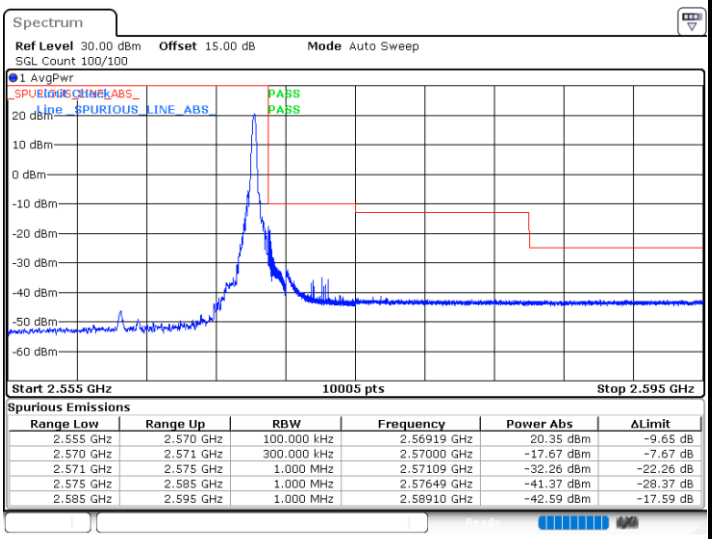


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.475 GHz	2.490 GHz	1.000 MHz	2.48345 GHz	-42.44 dBm	-17.44 dB
2.490 GHz	2.496 GHz	1.000 MHz	2.49451 GHz	-41.55 dBm	-28.55 dB
2.496 GHz	2.499 GHz	1.000 MHz	2.49892 GHz	-32.98 dBm	-22.98 dB
2.499 GHz	2.500 GHz	300.000 kHz	2.50000 GHz	-18.73 dBm	-8.73 dB
2.500 GHz	2.515 GHz	100.000 kHz	2.50085 GHz	19.80 dBm	-10.20 dB

Date: 14.APR.2024 19:50:45

Highest Band Edge / 1 RB

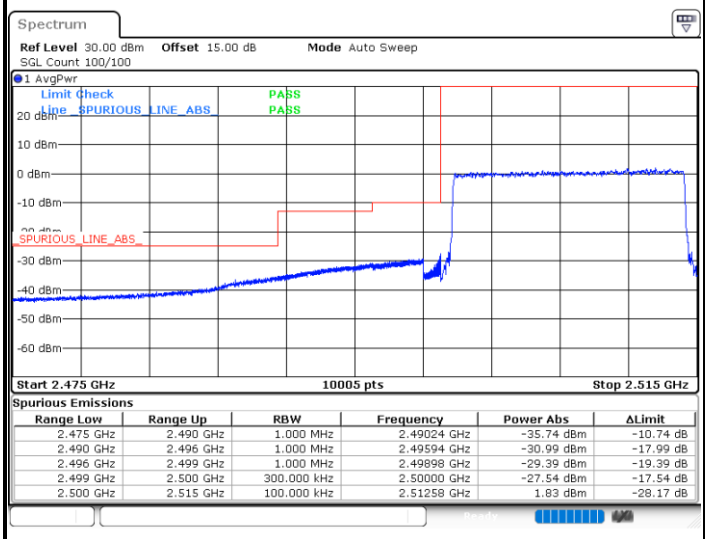


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.555 GHz	2.570 GHz	100.000 kHz	2.56919 GHz	20.35 dBm	-9.65 dB
2.570 GHz	2.571 GHz	300.000 kHz	2.57000 GHz	-17.67 dBm	-7.67 dB
2.571 GHz	2.575 GHz	1.000 MHz	2.57109 GHz	-32.26 dBm	-22.26 dB
2.575 GHz	2.585 GHz	1.000 MHz	2.57649 GHz	-41.37 dBm	-28.37 dB
2.585 GHz	2.595 GHz	1.000 MHz	2.58910 GHz	-42.59 dBm	-17.59 dB

Date: 14.APR.2024 20:02:01

Lowest Band Edge / Full RB

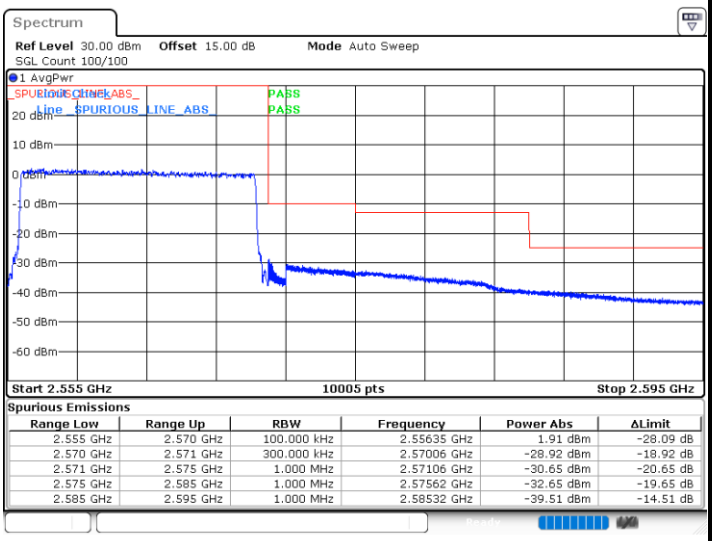


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.475 GHz	2.490 GHz	1.000 MHz	2.49024 GHz	-35.74 dBm	-10.74 dB
2.490 GHz	2.496 GHz	1.000 MHz	2.49594 GHz	-30.99 dBm	-17.99 dB
2.496 GHz	2.499 GHz	1.000 MHz	2.49898 GHz	-29.39 dBm	-19.39 dB
2.499 GHz	2.500 GHz	300.000 kHz	2.50000 GHz	-27.54 dBm	-17.54 dB
2.500 GHz	2.515 GHz	100.000 kHz	2.51258 GHz	1.83 dBm	-28.17 dB

Date: 14.APR.2024 19:54:19

Highest Band Edge / Full RB



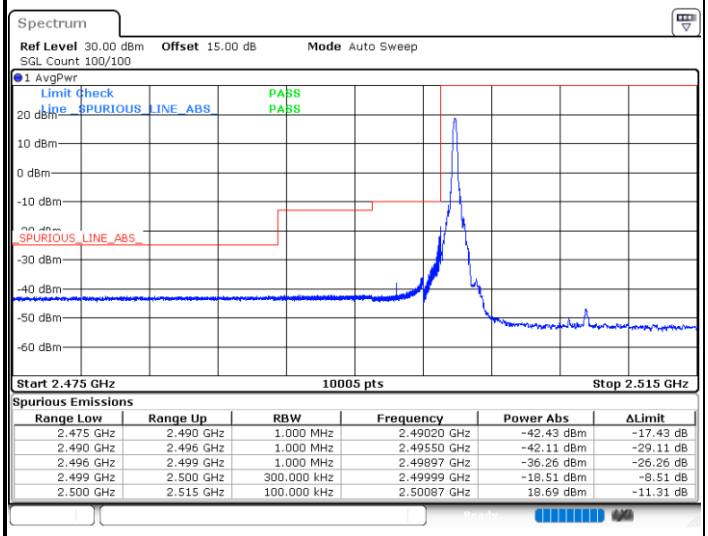
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.555 GHz	2.570 GHz	100.000 kHz	2.55635 GHz	1.91 dBm	-28.09 dB
2.570 GHz	2.571 GHz	300.000 kHz	2.57006 GHz	-28.92 dBm	-18.92 dB
2.571 GHz	2.575 GHz	1.000 MHz	2.57106 GHz	-30.65 dBm	-20.65 dB
2.575 GHz	2.585 GHz	1.000 MHz	2.57562 GHz	-32.65 dBm	-19.65 dB
2.585 GHz	2.595 GHz	1.000 MHz	2.58532 GHz	-39.51 dBm	-14.51 dB

Date: 14.APR.2024 20:05:34

LTE Band 7 / 15MHz / 64QAM

Lowest Band Edge / 1RB

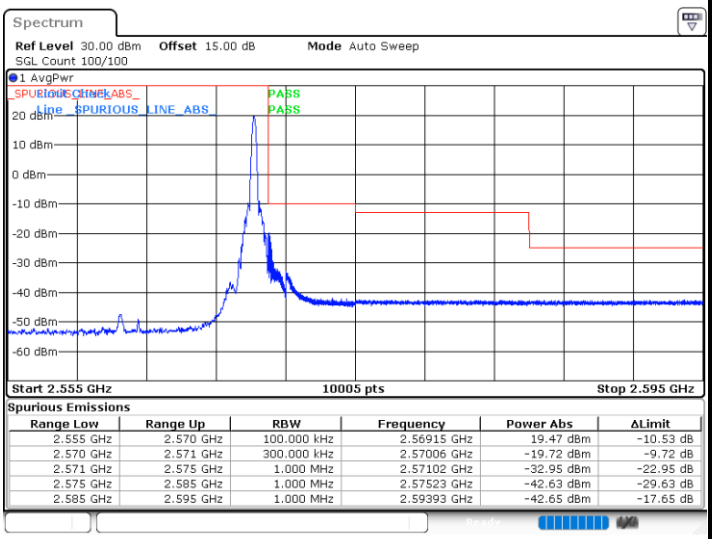


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.475 GHz	2.490 GHz	1.000 MHz	2.49020 GHz	-42.43 dBm	-17.43 dB
2.490 GHz	2.496 GHz	1.000 MHz	2.49550 GHz	-42.11 dBm	-29.11 dB
2.496 GHz	2.499 GHz	1.000 MHz	2.49897 GHz	-36.26 dBm	-26.26 dB
2.499 GHz	2.500 GHz	300.000 kHz	2.49999 GHz	-18.51 dBm	-8.51 dB
2.500 GHz	2.515 GHz	100.000 kHz	2.50087 GHz	18.69 dBm	-11.31 dB

Date: 14.APR.2024 19:51:56

Highest Band Edge / 1 RB

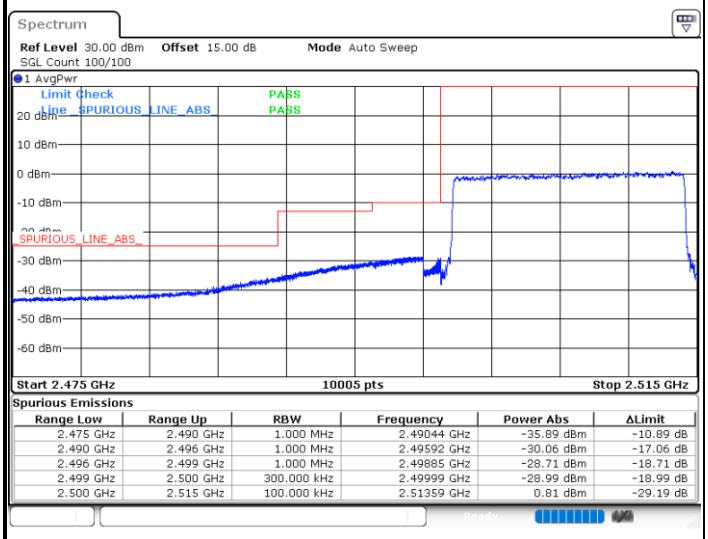


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.555 GHz	2.570 GHz	100.000 kHz	2.56915 GHz	19.47 dBm	-10.53 dB
2.570 GHz	2.571 GHz	300.000 kHz	2.57006 GHz	-19.72 dBm	-9.72 dB
2.571 GHz	2.575 GHz	1.000 MHz	2.57102 GHz	-32.95 dBm	-22.95 dB
2.575 GHz	2.585 GHz	1.000 MHz	2.57523 GHz	-42.63 dBm	-29.63 dB
2.585 GHz	2.595 GHz	1.000 MHz	2.59393 GHz	-42.65 dBm	-17.65 dB

Date: 14.APR.2024 20:03:12

Lowest Band Edge / Full RB

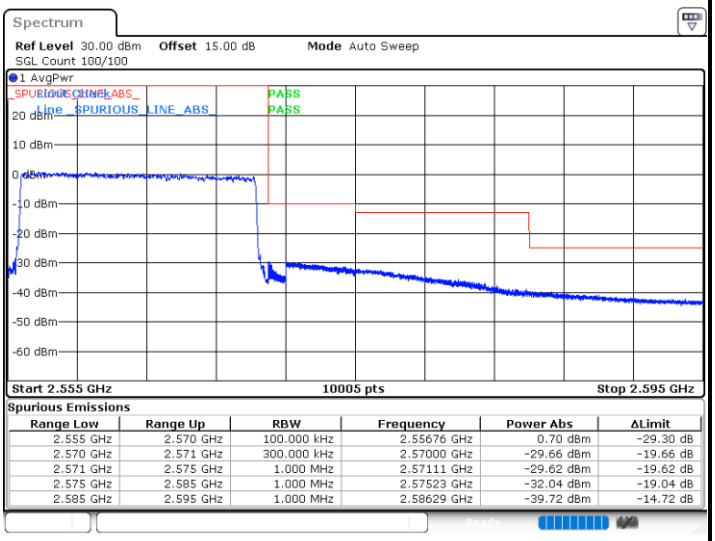


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.475 GHz	2.490 GHz	1.000 MHz	2.49044 GHz	-35.89 dBm	-10.89 dB
2.490 GHz	2.496 GHz	1.000 MHz	2.49592 GHz	-30.06 dBm	-17.06 dB
2.496 GHz	2.499 GHz	1.000 MHz	2.49885 GHz	-28.71 dBm	-18.71 dB
2.499 GHz	2.500 GHz	300.000 kHz	2.49999 GHz	-28.99 dBm	-18.99 dB
2.500 GHz	2.515 GHz	100.000 kHz	2.51359 GHz	0.81 dBm	-29.19 dB

Date: 14.APR.2024 19:55:30

Highest Band Edge / Full RB



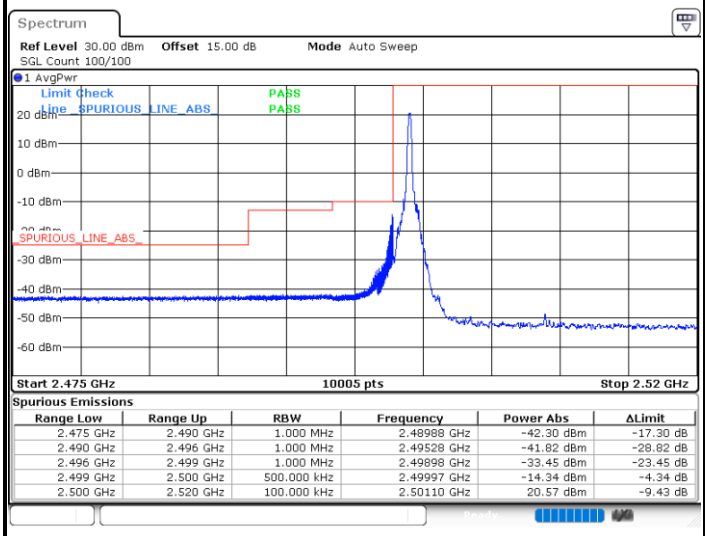
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.555 GHz	2.570 GHz	100.000 kHz	2.55676 GHz	0.70 dBm	-29.30 dB
2.570 GHz	2.571 GHz	300.000 kHz	2.57000 GHz	-29.66 dBm	-19.66 dB
2.571 GHz	2.575 GHz	1.000 MHz	2.57111 GHz	-29.62 dBm	-19.62 dB
2.575 GHz	2.585 GHz	1.000 MHz	2.57523 GHz	-32.04 dBm	-19.04 dB
2.585 GHz	2.595 GHz	1.000 MHz	2.58629 GHz	-39.72 dBm	-14.72 dB

Date: 14.APR.2024 20:06:45

LTE Band 7 / 20MHz / QPSK

Lowest Band Edge / 1 RB

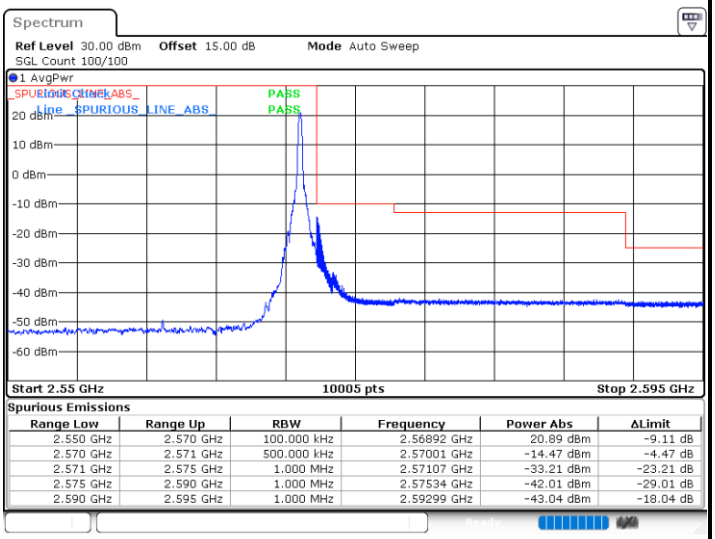


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.475 GHz	2.490 GHz	1.000 MHz	2.48988 GHz	-42.30 dBm	-17.30 dB
2.490 GHz	2.496 GHz	1.000 MHz	2.49528 GHz	-41.82 dBm	-28.82 dB
2.496 GHz	2.499 GHz	1.000 MHz	2.49898 GHz	-33.45 dBm	-23.45 dB
2.499 GHz	2.500 GHz	500.000 kHz	2.49997 GHz	-14.34 dBm	-4.34 dB
2.500 GHz	2.520 GHz	100.000 kHz	2.50110 GHz	20.57 dBm	-9.43 dB

Date: 14.APR.2024 20:11:20

Highest Band Edge / 1 RB

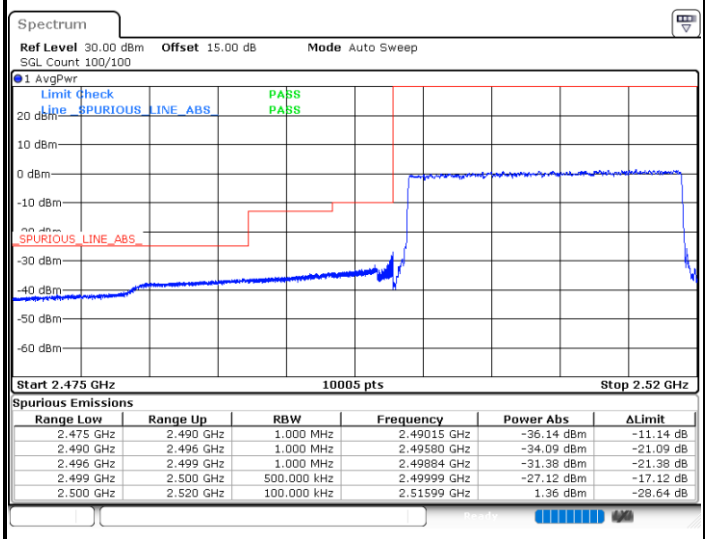


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.550 GHz	2.570 GHz	100.000 kHz	2.56892 GHz	20.89 dBm	-9.11 dB
2.570 GHz	2.571 GHz	500.000 kHz	2.57001 GHz	-14.47 dBm	-4.47 dB
2.571 GHz	2.575 GHz	1.000 MHz	2.57107 GHz	-33.21 dBm	-23.21 dB
2.575 GHz	2.590 GHz	1.000 MHz	2.57534 GHz	-42.01 dBm	-29.01 dB
2.590 GHz	2.595 GHz	1.000 MHz	2.59299 GHz	-43.04 dBm	-18.04 dB

Date: 15.APR.2024 08:40:51

Lowest Band Edge / Full RB

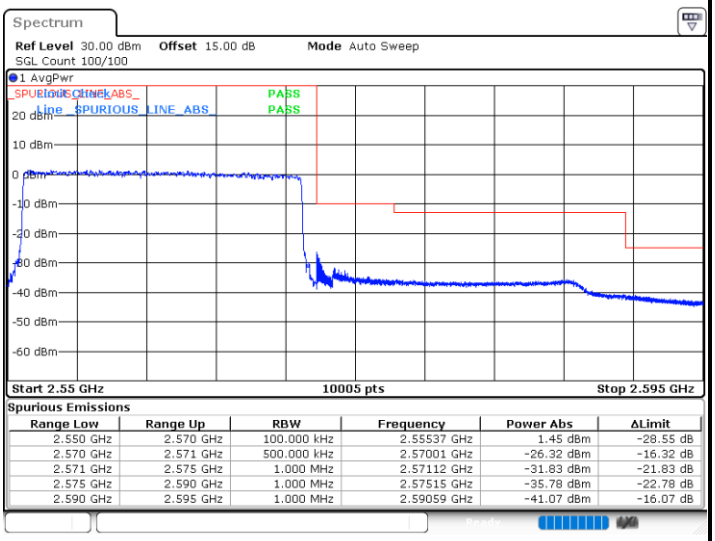


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.475 GHz	2.490 GHz	1.000 MHz	2.49015 GHz	-36.14 dBm	-11.14 dB
2.490 GHz	2.496 GHz	1.000 MHz	2.49580 GHz	-34.09 dBm	-21.09 dB
2.496 GHz	2.499 GHz	1.000 MHz	2.49884 GHz	-31.38 dBm	-21.38 dB
2.499 GHz	2.500 GHz	500.000 kHz	2.49999 GHz	-27.12 dBm	-17.12 dB
2.500 GHz	2.520 GHz	100.000 kHz	2.51599 GHz	1.36 dBm	-28.64 dB

Date: 14.APR.2024 20:14:54

Highest Band Edge / Full RB



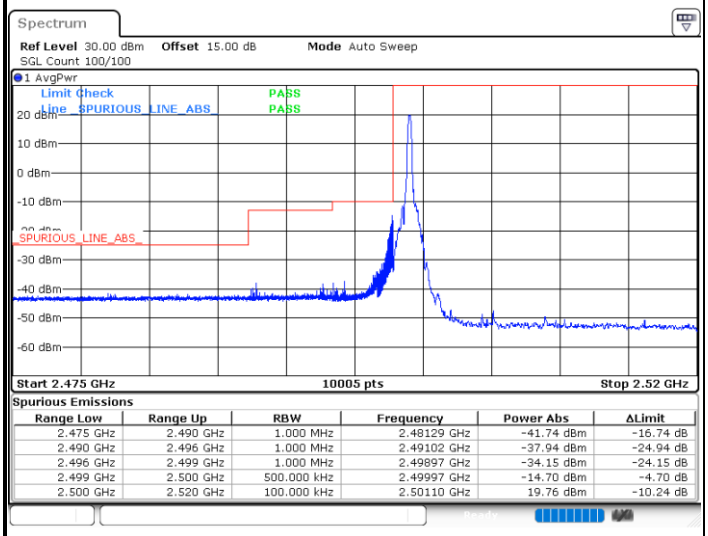
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.550 GHz	2.570 GHz	100.000 kHz	2.55537 GHz	1.45 dBm	-28.55 dB
2.570 GHz	2.571 GHz	500.000 kHz	2.57001 GHz	-26.32 dBm	-16.32 dB
2.571 GHz	2.575 GHz	1.000 MHz	2.57112 GHz	-31.83 dBm	-21.83 dB
2.575 GHz	2.590 GHz	1.000 MHz	2.57515 GHz	-35.78 dBm	-22.78 dB
2.590 GHz	2.595 GHz	1.000 MHz	2.59059 GHz	-41.07 dBm	-16.07 dB

Date: 15.APR.2024 08:44:08

LTE Band 7 / 20MHz / 16QAM

Lowest Band Edge / 1RB

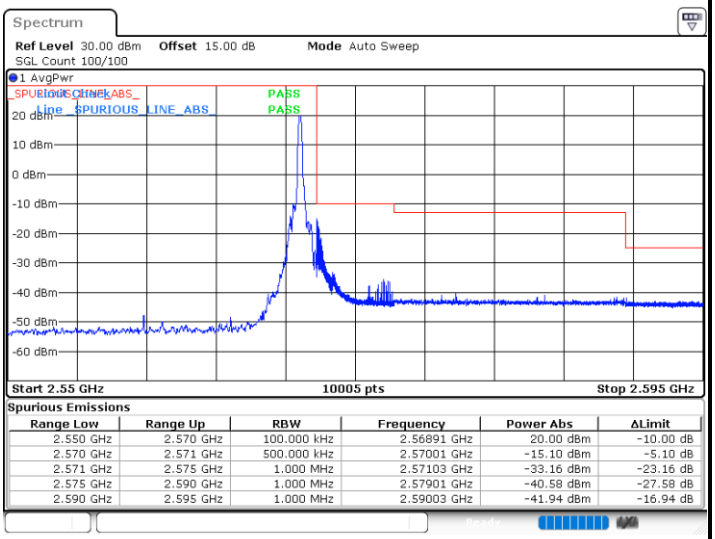


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.475 GHz	2.490 GHz	1.000 MHz	2.48129 GHz	-41.74 dBm	-16.74 dB
2.490 GHz	2.496 GHz	1.000 MHz	2.49102 GHz	-37.94 dBm	-24.94 dB
2.496 GHz	2.499 GHz	1.000 MHz	2.49897 GHz	-34.15 dBm	-24.15 dB
2.499 GHz	2.500 GHz	500.000 kHz	2.49997 GHz	-14.70 dBm	-4.70 dB
2.500 GHz	2.520 GHz	100.000 kHz	2.50110 GHz	19.76 dBm	-10.24 dB

Date: 14.APR.2024 20:12:31

Highest Band Edge / 1 RB

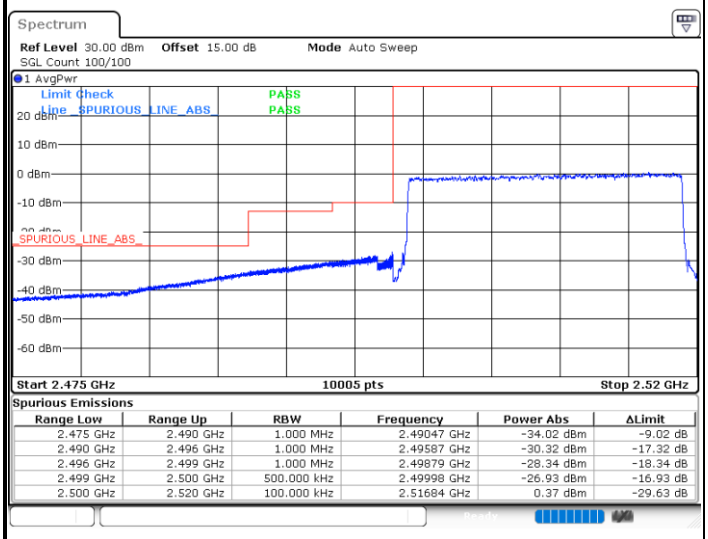


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.550 GHz	2.570 GHz	100.000 kHz	2.56891 GHz	20.00 dBm	-10.00 dB
2.570 GHz	2.571 GHz	500.000 kHz	2.57001 GHz	-15.10 dBm	-5.10 dB
2.571 GHz	2.575 GHz	1.000 MHz	2.57103 GHz	-33.16 dBm	-23.16 dB
2.575 GHz	2.590 GHz	1.000 MHz	2.57901 GHz	-40.58 dBm	-27.58 dB
2.590 GHz	2.595 GHz	1.000 MHz	2.59003 GHz	-41.94 dBm	-16.94 dB

Date: 15.APR.2024 08:41:57

Lowest Band Edge / Full RB

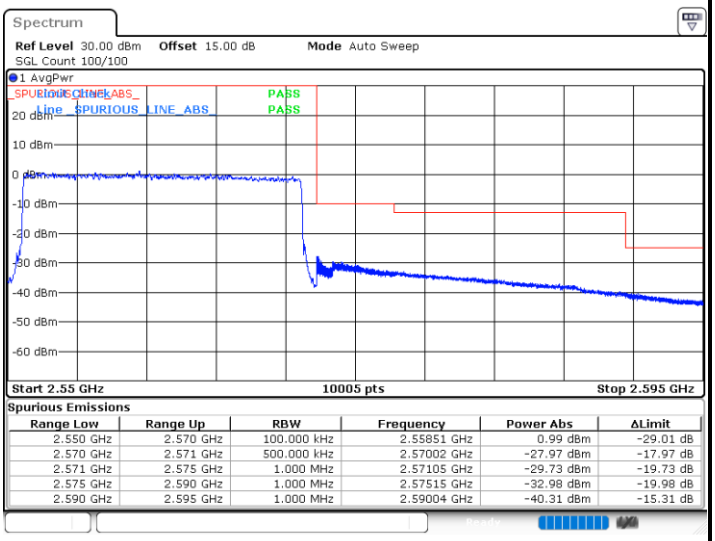


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.475 GHz	2.490 GHz	1.000 MHz	2.49047 GHz	-34.02 dBm	-9.02 dB
2.490 GHz	2.496 GHz	1.000 MHz	2.49587 GHz	-30.32 dBm	-17.32 dB
2.496 GHz	2.499 GHz	1.000 MHz	2.49879 GHz	-28.34 dBm	-18.34 dB
2.499 GHz	2.500 GHz	500.000 kHz	2.49998 GHz	-26.93 dBm	-16.93 dB
2.500 GHz	2.520 GHz	100.000 kHz	2.51684 GHz	0.37 dBm	-29.63 dB

Date: 14.APR.2024 20:16:05

Highest Band Edge / Full RB



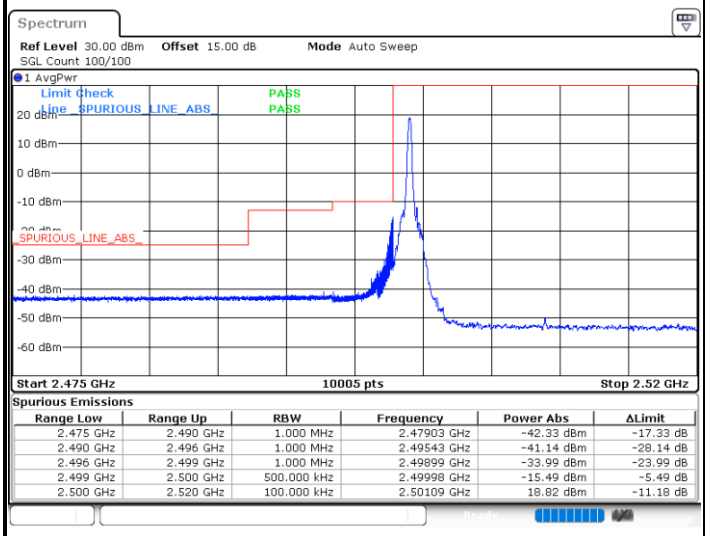
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.550 GHz	2.570 GHz	100.000 kHz	2.55851 GHz	0.99 dBm	-29.01 dB
2.570 GHz	2.571 GHz	500.000 kHz	2.57002 GHz	-27.97 dBm	-17.97 dB
2.571 GHz	2.575 GHz	1.000 MHz	2.57105 GHz	-29.73 dBm	-19.73 dB
2.575 GHz	2.590 GHz	1.000 MHz	2.57515 GHz	-32.98 dBm	-19.98 dB
2.590 GHz	2.595 GHz	1.000 MHz	2.59004 GHz	-40.31 dBm	-15.31 dB

Date: 15.APR.2024 08:45:14

LTE Band 7 / 20MHz / 64QAM

Lowest Band Edge / 1RB

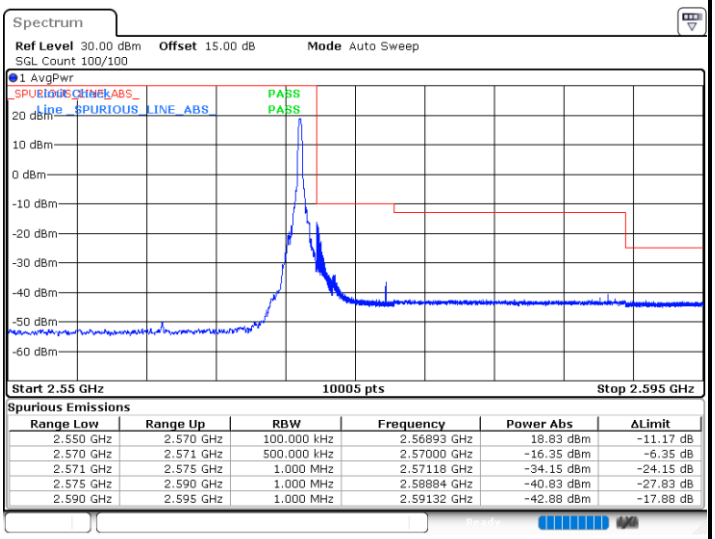


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.475 GHz	2.490 GHz	1.000 MHz	2.47903 GHz	-42.33 dBm	-17.33 dB
2.490 GHz	2.496 GHz	1.000 MHz	2.49543 GHz	-41.14 dBm	-28.14 dB
2.496 GHz	2.499 GHz	1.000 MHz	2.49899 GHz	-33.99 dBm	-23.99 dB
2.499 GHz	2.500 GHz	500.000 kHz	2.49998 GHz	-15.49 dBm	-5.49 dB
2.500 GHz	2.520 GHz	100.000 kHz	2.50109 GHz	18.82 dBm	-11.18 dB

Date: 14.APR.2024 20:13:42

Highest Band Edge / 1 RB

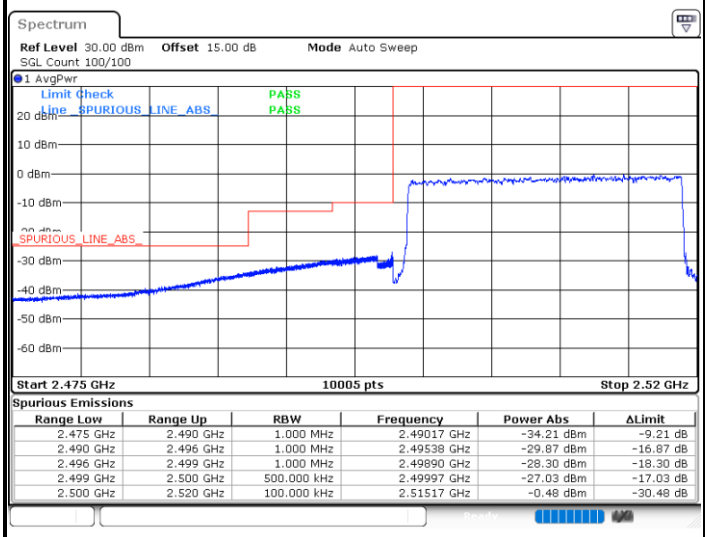


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.550 GHz	2.570 GHz	100.000 kHz	2.56893 GHz	18.83 dBm	-11.17 dB
2.570 GHz	2.571 GHz	500.000 kHz	2.57000 GHz	-16.35 dBm	-6.35 dB
2.571 GHz	2.575 GHz	1.000 MHz	2.57118 GHz	-34.15 dBm	-24.15 dB
2.575 GHz	2.590 GHz	1.000 MHz	2.58884 GHz	-40.83 dBm	-27.83 dB
2.590 GHz	2.595 GHz	1.000 MHz	2.59132 GHz	-42.88 dBm	-17.88 dB

Date: 15.APR.2024 08:43:03

Lowest Band Edge / Full RB

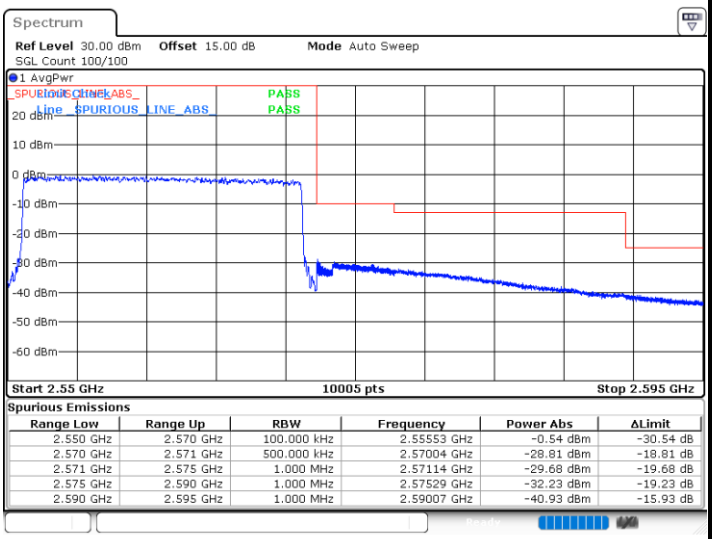


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.475 GHz	2.490 GHz	1.000 MHz	2.49017 GHz	-34.21 dBm	-9.21 dB
2.490 GHz	2.496 GHz	1.000 MHz	2.49538 GHz	-29.87 dBm	-16.87 dB
2.496 GHz	2.499 GHz	1.000 MHz	2.49890 GHz	-28.30 dBm	-18.30 dB
2.499 GHz	2.500 GHz	500.000 kHz	2.49997 GHz	-27.03 dBm	-17.03 dB
2.500 GHz	2.520 GHz	100.000 kHz	2.51517 GHz	-0.48 dBm	-30.48 dB

Date: 14.APR.2024 20:17:16

Highest Band Edge / Full RB



Spurious Emissions

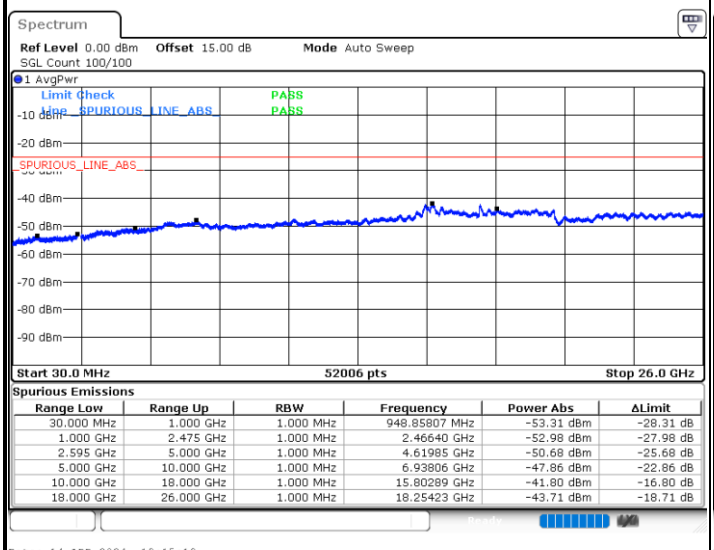
Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.550 GHz	2.570 GHz	100.000 kHz	2.55553 GHz	-0.54 dBm	-30.54 dB
2.570 GHz	2.571 GHz	500.000 kHz	2.57004 GHz	-28.81 dBm	-18.81 dB
2.571 GHz	2.575 GHz	1.000 MHz	2.57114 GHz	-29.68 dBm	-19.68 dB
2.575 GHz	2.590 GHz	1.000 MHz	2.57529 GHz	-32.23 dBm	-19.23 dB
2.590 GHz	2.595 GHz	1.000 MHz	2.59007 GHz	-40.93 dBm	-15.93 dB

Date: 15.APR.2024 08:46:20

A2.5 Conducted Spurious Emission

LTE Band 7 / 5MHz

Lowest Channel / QPSK

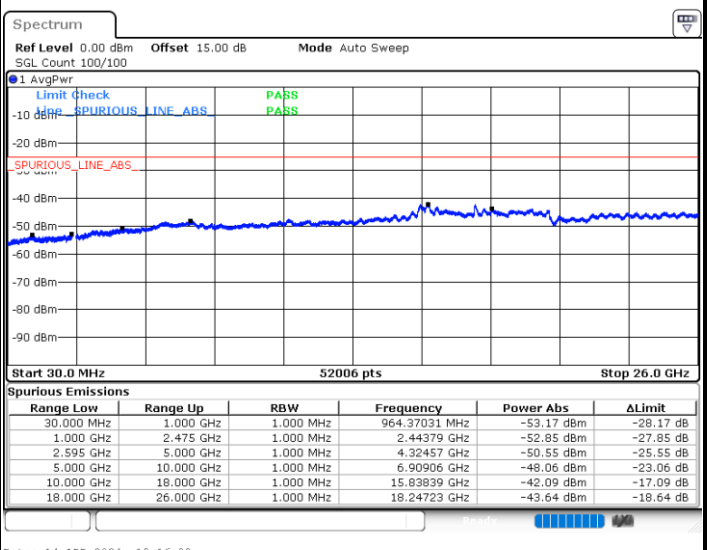


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	948.85807 MHz	-53.31 dBm	-28.31 dB
1.000 GHz	2.475 GHz	1.000 MHz	2.46640 GHz	-52.98 dBm	-27.98 dB
2.595 GHz	5.000 GHz	1.000 MHz	4.61985 GHz	-50.68 dBm	-25.68 dB
5.000 GHz	10.000 GHz	1.000 MHz	6.93806 GHz	-47.86 dBm	-22.86 dB
10.000 GHz	18.000 GHz	1.000 MHz	15.80289 GHz	-41.80 dBm	-16.80 dB
18.000 GHz	26.000 GHz	1.000 MHz	18.25423 GHz	-43.71 dBm	-18.71 dB

Date: 14.APR.2024 19:15:19

Middle Channel / QPSK

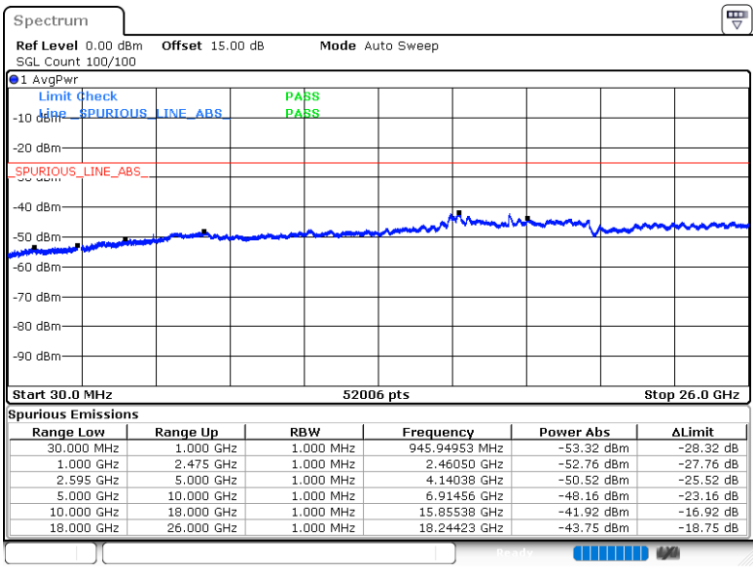


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	964.37031 MHz	-53.17 dBm	-28.17 dB
1.000 GHz	2.475 GHz	1.000 MHz	2.44379 GHz	-52.85 dBm	-27.85 dB
2.595 GHz	5.000 GHz	1.000 MHz	4.32457 GHz	-50.55 dBm	-25.55 dB
5.000 GHz	10.000 GHz	1.000 MHz	6.90906 GHz	-48.06 dBm	-23.06 dB
10.000 GHz	18.000 GHz	1.000 MHz	15.83839 GHz	-42.09 dBm	-17.09 dB
18.000 GHz	26.000 GHz	1.000 MHz	18.24723 GHz	-43.64 dBm	-18.64 dB

Date: 14.APR.2024 19:16:39

Highest Channel / QPSK



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	945.94953 MHz	-53.32 dBm	-28.32 dB
1.000 GHz	2.475 GHz	1.000 MHz	2.46050 GHz	-52.76 dBm	-27.76 dB
2.595 GHz	5.000 GHz	1.000 MHz	4.14038 GHz	-50.52 dBm	-25.52 dB
5.000 GHz	10.000 GHz	1.000 MHz	6.91456 GHz	-48.16 dBm	-23.16 dB
10.000 GHz	18.000 GHz	1.000 MHz	15.85538 GHz	-41.92 dBm	-16.92 dB
18.000 GHz	26.000 GHz	1.000 MHz	18.24423 GHz	-43.75 dBm	-18.75 dB

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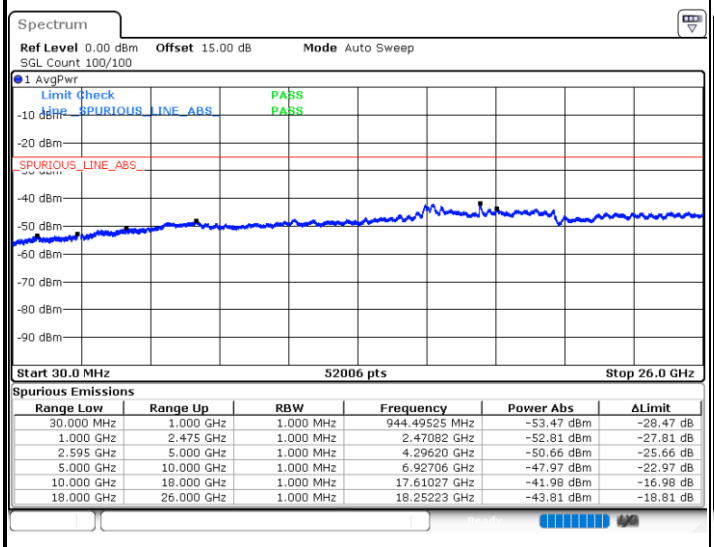
LTE Band 7 / 10MHz

Lowest Channel / QPSK

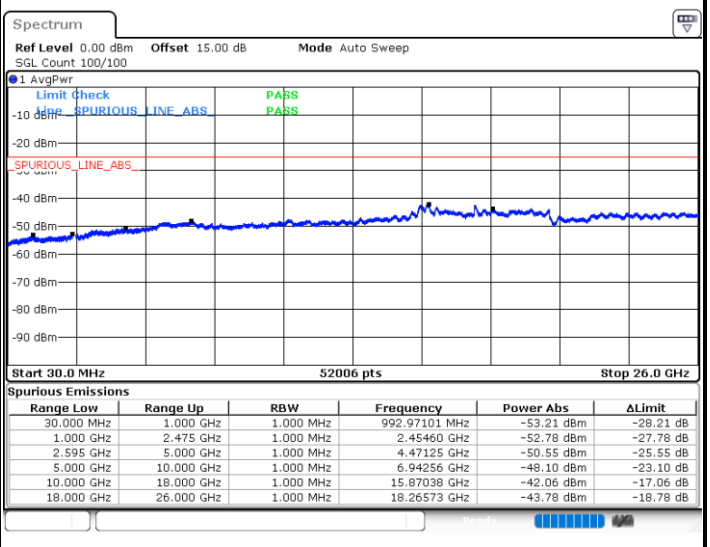


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	944.49525 MHz	-53.47 dBm	-28.47 dB
1.000 GHz	2.475 GHz	1.000 MHz	2.47082 GHz	-52.81 dBm	-27.81 dB
2.595 GHz	5.000 GHz	1.000 MHz	4.29620 GHz	-50.66 dBm	-25.66 dB
5.000 GHz	10.000 GHz	1.000 MHz	6.92706 GHz	-47.97 dBm	-22.97 dB
10.000 GHz	18.000 GHz	1.000 MHz	17.61027 GHz	-41.98 dBm	-16.98 dB
18.000 GHz	26.000 GHz	1.000 MHz	18.25223 GHz	-43.81 dBm	-18.81 dB

Date: 14.APR.2024 19:35:05

Middle Channel / QPSK



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	992.97101 MHz	-53.21 dBm	-28.21 dB
1.000 GHz	2.475 GHz	1.000 MHz	2.45460 GHz	-52.78 dBm	-27.78 dB
2.595 GHz	5.000 GHz	1.000 MHz	4.47125 GHz	-50.55 dBm	-25.55 dB
5.000 GHz	10.000 GHz	1.000 MHz	6.94256 GHz	-48.10 dBm	-23.10 dB
10.000 GHz	18.000 GHz	1.000 MHz	15.87038 GHz	-42.06 dBm	-17.06 dB
18.000 GHz	26.000 GHz	1.000 MHz	18.26573 GHz	-43.78 dBm	-18.78 dB

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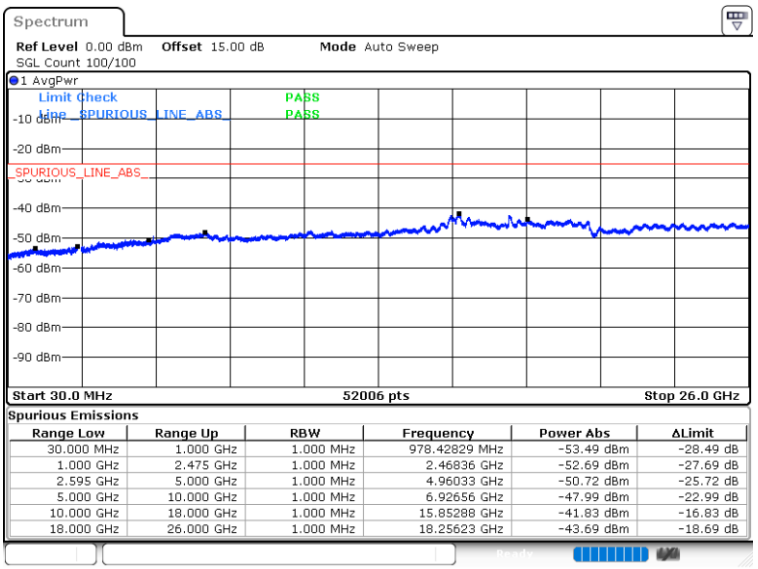
Highest Channel / QPSK



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	978.42829 MHz	-53.49 dBm	-28.49 dB
1.000 GHz	2.475 GHz	1.000 MHz	2.46836 GHz	-52.69 dBm	-27.69 dB
2.595 GHz	5.000 GHz	1.000 MHz	4.96033 GHz	-50.72 dBm	-25.72 dB
5.000 GHz	10.000 GHz	1.000 MHz	6.92656 GHz	-47.99 dBm	-22.99 dB
10.000 GHz	18.000 GHz	1.000 MHz	15.85288 GHz	-41.83 dBm	-16.83 dB
18.000 GHz	26.000 GHz	1.000 MHz	18.25623 GHz	-43.69 dBm	-18.69 dB

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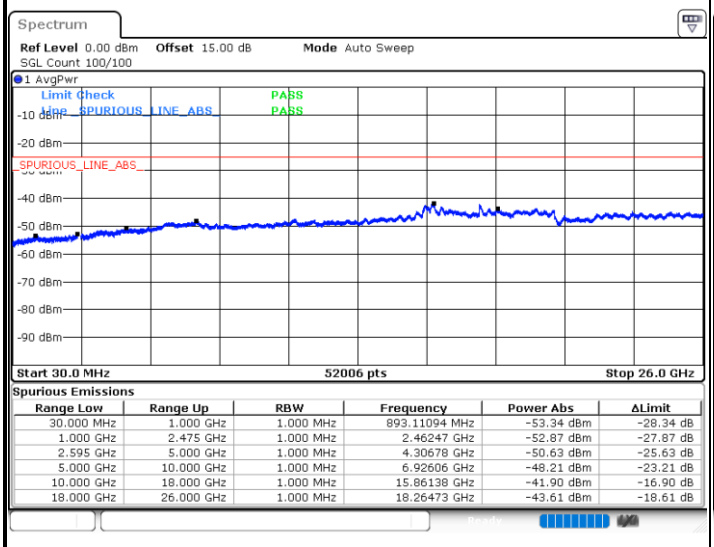
LTE Band 7 / 15MHz

Lowest Channel / QPSK



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	893.11094 MHz	-53.34 dBm	-28.34 dB
1.000 GHz	2.475 GHz	1.000 MHz	2.46247 GHz	-52.87 dBm	-27.87 dB
2.595 GHz	5.000 GHz	1.000 MHz	4.30678 GHz	-50.63 dBm	-25.63 dB
5.000 GHz	10.000 GHz	1.000 MHz	6.92606 GHz	-48.21 dBm	-23.21 dB
10.000 GHz	18.000 GHz	1.000 MHz	15.86138 GHz	-41.90 dBm	-16.90 dB
18.000 GHz	26.000 GHz	1.000 MHz	18.26473 GHz	-43.61 dBm	-18.61 dB

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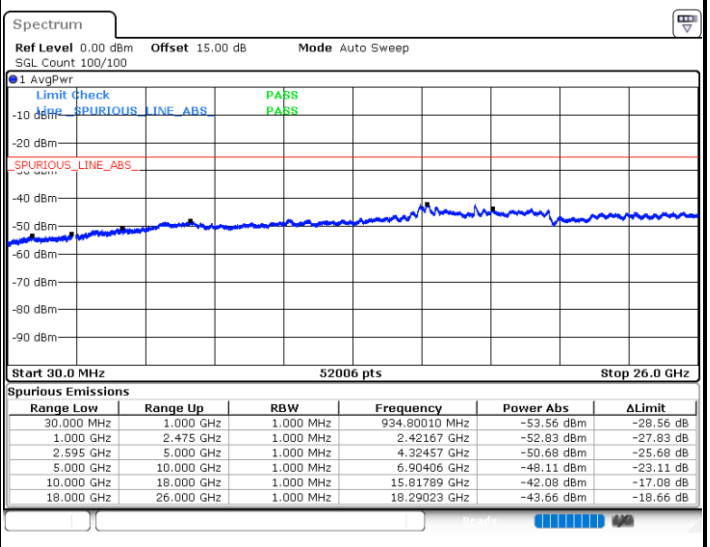
Middle Channel / QPSK



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	934.80010 MHz	-53.56 dBm	-28.56 dB
1.000 GHz	2.475 GHz	1.000 MHz	2.42167 GHz	-52.83 dBm	-27.83 dB
2.595 GHz	5.000 GHz	1.000 MHz	4.32457 GHz	-50.68 dBm	-25.68 dB
5.000 GHz	10.000 GHz	1.000 MHz	6.90406 GHz	-48.11 dBm	-23.11 dB
10.000 GHz	18.000 GHz	1.000 MHz	15.81789 GHz	-42.08 dBm	-17.08 dB
18.000 GHz	26.000 GHz	1.000 MHz	18.29023 GHz	-43.66 dBm	-18.66 dB

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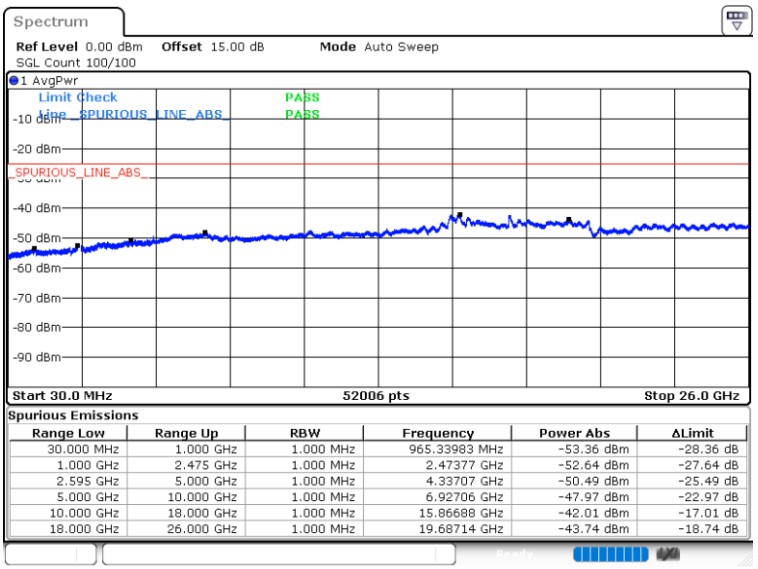
Highest Channel / QPSK



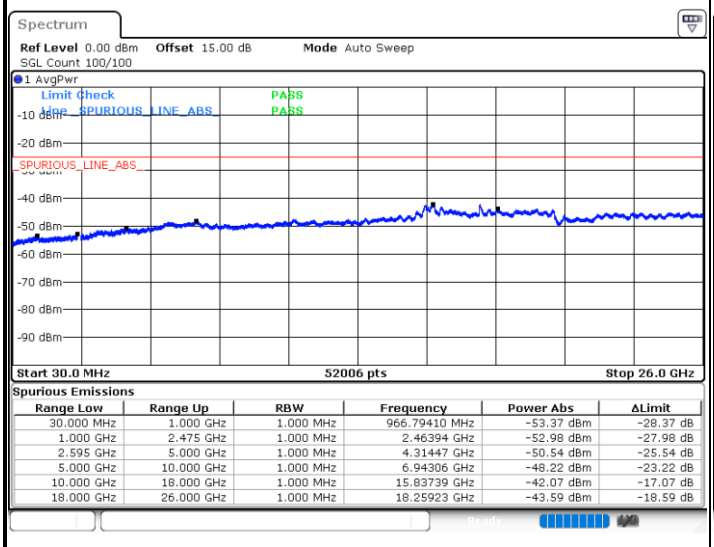
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	965.33983 MHz	-53.36 dBm	-28.36 dB
1.000 GHz	2.475 GHz	1.000 MHz	2.47377 GHz	-52.64 dBm	-27.64 dB
2.595 GHz	5.000 GHz	1.000 MHz	4.33707 GHz	-50.49 dBm	-25.49 dB
5.000 GHz	10.000 GHz	1.000 MHz	6.92706 GHz	-47.97 dBm	-22.97 dB
10.000 GHz	18.000 GHz	1.000 MHz	15.86688 GHz	-42.01 dBm	-17.01 dB
18.000 GHz	26.000 GHz	1.000 MHz	19.68714 GHz	-43.74 dBm	-18.74 dB

Date: 14.APR.2024 20:08:05

LTE Band 7 / 20MHz

Lowest Channel / QPSK



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	966.79410 MHz	-53.37 dBm	-28.37 dB
1.000 GHz	2.475 GHz	1.000 MHz	2.46394 GHz	-52.98 dBm	-27.98 dB
2.595 GHz	5.000 GHz	1.000 MHz	4.31447 GHz	-50.54 dBm	-25.54 dB
5.000 GHz	10.000 GHz	1.000 MHz	6.94306 GHz	-48.22 dBm	-23.22 dB
10.000 GHz	18.000 GHz	1.000 MHz	15.83739 GHz	-42.07 dBm	-17.07 dB
18.000 GHz	26.000 GHz	1.000 MHz	18.25923 GHz	-43.59 dBm	-18.59 dB

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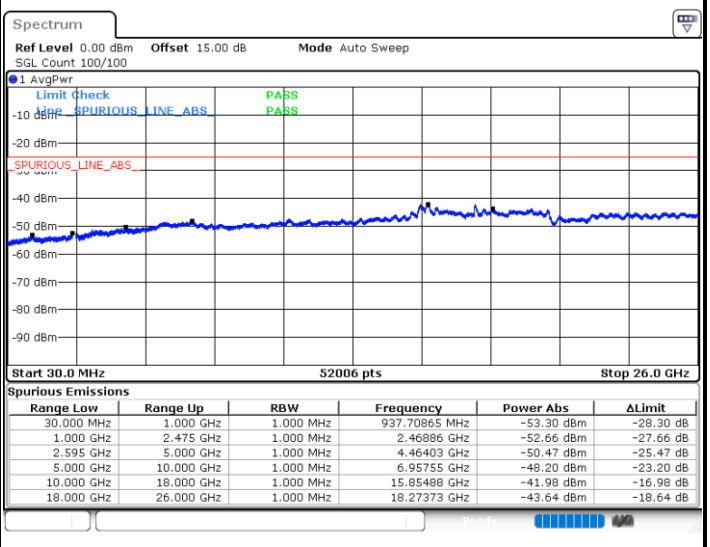
Middle Channel / QPSK



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	937.70865 MHz	-53.30 dBm	-28.30 dB
1.000 GHz	2.475 GHz	1.000 MHz	2.46886 GHz	-52.66 dBm	-27.66 dB
2.595 GHz	5.000 GHz	1.000 MHz	4.46403 GHz	-50.47 dBm	-25.47 dB
5.000 GHz	10.000 GHz	1.000 MHz	6.95755 GHz	-48.20 dBm	-23.20 dB
10.000 GHz	18.000 GHz	1.000 MHz	15.85488 GHz	-41.98 dBm	-16.98 dB
18.000 GHz	26.000 GHz	1.000 MHz	18.27373 GHz	-43.64 dBm	-18.64 dB

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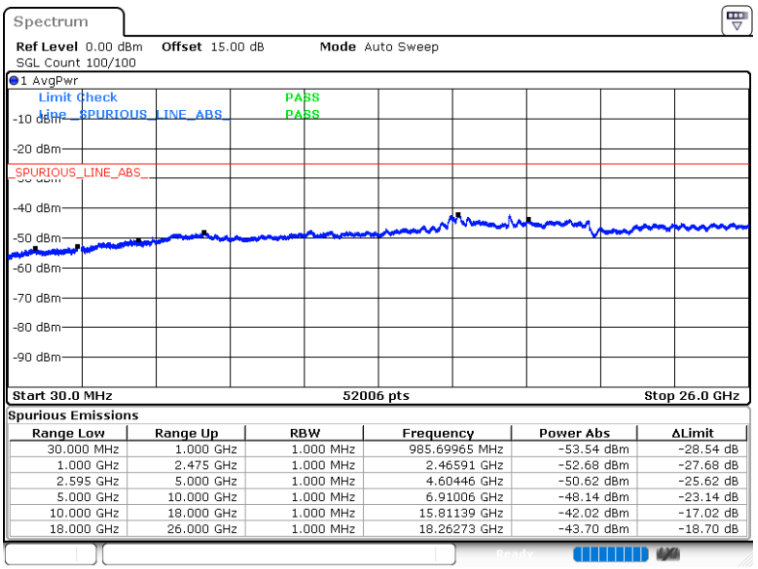
Highest Channel / QPSK



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	985.69965 MHz	-53.54 dBm	-28.54 dB
1.000 GHz	2.475 GHz	1.000 MHz	2.46591 GHz	-52.68 dBm	-27.68 dB
2.595 GHz	5.000 GHz	1.000 MHz	4.60446 GHz	-50.62 dBm	-25.62 dB
5.000 GHz	10.000 GHz	1.000 MHz	6.91006 GHz	-48.14 dBm	-23.14 dB
10.000 GHz	18.000 GHz	1.000 MHz	15.81139 GHz	-42.02 dBm	-17.02 dB
18.000 GHz	26.000 GHz	1.000 MHz	18.26273 GHz	-43.70 dBm	-18.70 dB

Date: 15.APR.2024 08:47:34

A2.6 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	0.0032	PASS
40	Normal Voltage	0.0029	
30	Normal Voltage	0.0007	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0001	
0	Normal Voltage	0.0002	
-10	Normal Voltage	0.0029	
-20	Normal Voltage	0.0022	
-30	Normal Voltage	0.0026	
20	Maximum Voltage	0.0002	
20	Normal Voltage	0.0000	
20	Minimum Voltage	0.0006	

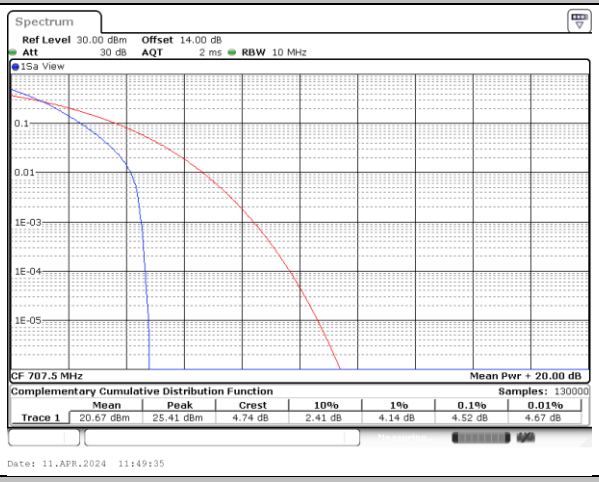
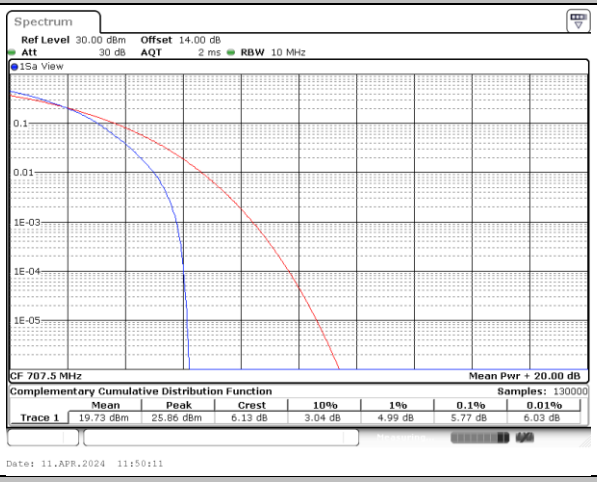
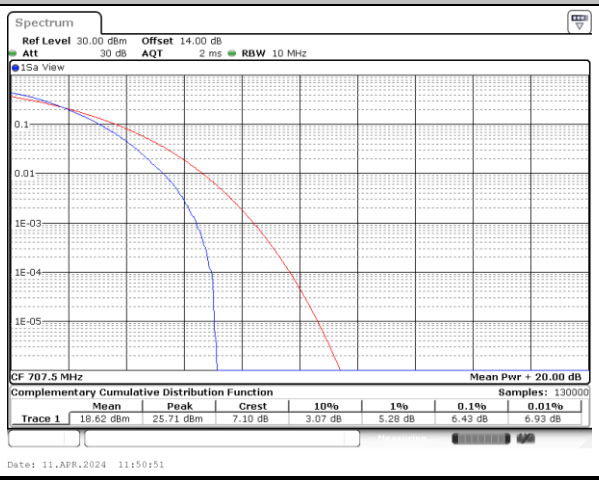
Note:

1. Normal Voltage = 12 V. ; Minimum Voltage = 10.8 V. ; Maximum Voltage = 13.2 V.
2. The frequency fundamental emissions stay within the authorized frequency block.

A3. LTE Band 12

A3.1 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	4.52	5.77	6.43	PASS

LTE Band 12 / 10MHz / QPSK	LTE Band 12 / 10MHz / 16QAM
Middle Channel / Full RB	**Middle Channel / Full RB**
	
LTE Band 12 / 10MHz / 64QAM	
Middle Channel / Full RB	
	

A3.2 26dB Bandwidth

Mode	LTE Band 12 : 26dB BW(MHz)							
BW	1.4MHz		3MHz		5MHz		10MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	1.28	1.31	2.97	3.09	4.92	4.91	9.71	9.99