



TEST REPORT

REPORT NUMBER: I21W00049-WWAN

ON

Type of Equipment:	BaseStation
Type of Designation:	AIRE100A
Brand Name:	PRIME
Manufacturer:	Micron Electronics LLC.
FCC ID:	ZKQ-BAS4GA

ACCORDING TO

FCC CFR Part 2, FREQUENCY ALLOCATIONS AND RADIO TREATY MATTERS;
GENERAL, e-CFR, 2019

PART 22, PUBLIC MOBILE SERVICES, e-CFR, 2019

PART 24, PERSONAL COMMUNICATIONS SERVICES, e-CFR, 2019

PART 27, MISCELLANEOUS WIRELESS COMMUNICATIONS SERVICES, e-CFR, 2019

ANSI C63.26-2015

Chongqing Academy of Information and Communications Technology

Month date, year

Jan, 10, 2022

Signature



Xiang Luoyong

Director

Note:

The test results in this test report relate only to the devices specified in this report.
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Chongqing Academy of Information and Communications Technology.



Report No.: I21W00049-WWAN

Revision Version

Report Number	Revision	Date	Memo
I21W00049-WWAN	00	2022-01-10	Initial creation of test report

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CONTENTS

1. Test Laboratory.....	5
1.1. Testing Location.....	5
1.2. Testing Environment.....	5
1.3. Project data.....	5
1.4. Signature.....	5
2. Client Information.....	6
2.1. Applicant Information.....	6
2.2. Manufacturer Information.....	6
3. Equipment under Test (EUT) and Ancillary Equipment (AE).....	7
3.1. About EUT.....	7
3.2. Internal Identification of EUT used during the test.....	7
3.3. Outline of Equipment under Test.....	8
3.4. Internal Identification of AE used during the test.....	8
4. Reference Documents.....	9
4.1. Documents supplied by applicant.....	9
4.2. Reference Documents for testing.....	9
5. Test Equipments Utilized.....	10
5.1. RF Test System.....	10
5.2. RSE Test System.....	10
5.3. Climate Chamber.....	10
5.4. Vibration table.....	10
5.5. Test software.....	11
6. Test Results.....	11
6.1. Summary of Test Results.....	12
6.2. Conducted RF Power Output.....	13
6.3. ERP and EIRP.....	36

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Tel: 0086-23-88069965 FAX: 0086-23-88608777



Report No.: I21W00049-WWAN

6.4. Occupied Bandwidth.....	41
6.5. Conducted spurious emissions.....	86
6.6. Radiated Spurious Emission.....	118
6.7. Band Edge.....	169
6.8. Frequency Stability over Temperature Variation.....	259
6.9. Frequency Stability over Voltage Variation.....	261
6.10. Peak to Average Ratio.....	263
Annex A EUT Photos.....	270
ANNEX B Deviations from Prescribed Test Methods.....	271

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1. Test Laboratory

1.1. Testing Location

Name:	Chongqing Academy of Information and Communications Technology
FCC Registration Number:	CN1239
Address:	Building C, Technology Innovation Center, No.8, Yuma Road, Chayuan New Area, Nan'an District, Chongqing, People's Republic of China
Postal Code:	401336
Telephone:	0086-23-88069965
Fax:	0086-23-88608777

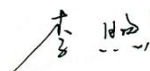
1.2. Testing Environment

Normal Temperature:	15-35°C
Relative Humidity:	30-60%

1.3. Project data

Testing Start Date:	2021-12-14
Testing End Date:	2021-12-18

1.4. Signature



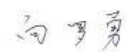
2022-01-10

LiXu
(Prepared this test report)

Date


2022-01-10

ChenWen
(Reviewed this test report)

Date


2022-01-10

XiangLuoYong
Director of the laboratory
(Approved this test report)

Date

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2. Client Information

2.1. Applicant Information

Company Name:	Micron Electronics LLC.
Address /Post:	1001 Yamato Road, Suite 400, Boca Raton, FL 33431, USA
City:	Boca Raton
Country:	USA
Telephone:	18885383489
Fax:	--
Email:	pcheng@micron-electronics.com
Contact Person:	Ping Cheng

2.2. Manufacturer Information

Company Name:	--
Address /Post:	--
City:	--
Country:	--
Telephone:	--
Fax:	--
Email:	--
Contact Person:	--

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3. Equipment under Test (EUT) and Ancillary Equipment (AE)

3.1. About EUT

EUT Description	BaseStation
Model name	AIRE100A
Brand name	Micron Electronics LLC.
LTE Frequency Band	2/4/5/12/13
Type of modulation	QPSK/16QAM
Power Class	3
Extreme Temperature	-20/+55°C
Antenna gain	LTE Band2: 3.37dBi
	LTE Band4: 3.87dBi
	LTE Band5: 0.68dBi
	LTE Band12: 0.10dBi
	LTE Band13: 1.63dBi
Nominal Voltage	3.8
Extreme High Voltage	4.2
Extreme Low Voltage	3.5

Note: Photographs of EUT are shown in ANNEX A of this test report.

Note: High and low voltage values in extreme condition test are given by manufacturer.

3.2. Internal Identification of EUT used during the test

EUT ID*	SN or IMEI	HW Version	SW Version	Date of receipt
S1	860371050880503	A106_V3	LS100AV05.01B04.I01	2021-12-08
S2	865171050693608	A106_V3	LS100AV05.01B04.I01	2021-12-08

*EUT ID: is used to identify the test sample in the lab internally.

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3.3. Outline of Equipment under Test

Technology	Band	UL Freq.(MHz)	DL Freq.(MHz)	Note
LTE	B2	1850 – 1910	1930 – 1990	--
	B4	1710 – 1755	2110 – 2155	--
	B5	824 – 849	869 – 894	--
	B12	699-716	729-746	--
	B13	777-787	746-756	--

3.4. Internal Identification of AE used during the test

AE ID*	Description	dB*
AE1	--	--

*AE ID: is used to identify the test sample in the lab internally.

dB*: is provided customer.

4. Reference Documents

4.1. Documents supplied by applicant

PICS/PIXIT, referring to Annex B for detailed information, is supplied by the client or manufacturer, which is the basis of testing.

4.2. Reference Documents for testing

The following documents listed in this section are referred for testing.

Reference	Title	Version
FCC CFR Part 2	FREQUENCY ALLOCATIONS AND RADIO TREATY MATTERS; GENERAL RULES AND REGULATIONS, e-CFR	2019
PART 22	PUBLIC MOBILE SERVICES	2019
PART 24, , 2019	PERSONAL COMMUNICATIONS SERVICES, e-CFR	2019
PART 27, 2019	MISCELLANEOUS WIRELESS COMMUNICATIONS SERVICES, e-CFR	2019
ANSI C63.26-2015	--	2015

5. Test Equipments Utilized

5.1. RF Test System

No.	Equipment	Model	SN	HW Version	SW Version	Manufacture	Cal. Date	Cal.Due Date
1	spectrum analyzer	FSQ 26	201137/026	--	--	R&S	2021-05-12	2022-06-11
2	DC Power Supply	N6705B	MY50000919	--	--	Agilent	2021-05-12	2022-06-11
3	Universal Radio Communication Tester	CMW500	152395	--	--	R&S	2021-05-12	2022-06-11

5.2. RSE Test System

No.	Equipment	Model	SN	HW Version	SW Version	Manufacture	Cal. Date	Cal.Due Date
1	Test Receiver	ESU 26	100350	01	4.43 SP3	R&S	2021-05-12	2022-06-11
2	Trilog Antenna	VULB9163	01392	--	--	Schwarzbeck	2021-02-05	2023-03-04
3	Double Ridged Guide Antenna	HF907	100357	--	--	R&S	2021-01-11	2023-02-10
5	Trilog super broadBand test antenna	VULB 9163	00995	--	--	Schwarzbeck	2021-03-01	2023-04-02
6	Double-Ridged Horn Antenna	9120D	1103	--	--	Schwarzbeck	2021-05-12	2022-06-11

5.3. Climate Chamber

No.	Name	Type	SN	Manufacture	Cal. Date	Cal.Due Date
1	Climate chamber	SH-241	92010759	ESPEC	2021-05-12	2022-06-11
2	Fully anechoic chamber	--	--	ETS	2020-05-25	2022-06-25

5.4. Vibration table

No.	Name	Type	SN	Manufacture	Cal.Due Date
--	--	--	--	--	--

Anechoic chamber

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Fully anechoic chamber by ETS-LINDGREN.

5.5. Test software

No.	Name	version	SN	Manufacture
1	EMC32	V8.51.0	--	R&S

6. Test Results

6.1. Summary of Test Results

A brief summary of the tests carried out is shown as following.

FCC Rules	Name of Test	Result
2.1046,22.913(a),24.232(c),27.50	Conducted RF Power Output	Pass
24.232(b),27.50(d),27.50(h)(2),27.50(c)	ERP and EIRP	Pass
2.1049,22.917(b),24.238(b)	Occupied Bandwidth	*Note 1
2.1051,2.1053,24.238,22.917,27.53	Conducted spurious emissions	Pass
2.1051,2.1053,24.238,22.917,27.53	Radiated Spurious Emission	Pass
2.1051,2.1053,24.238,22.917,27.53	Band Edge	Pass
2.1055,22.355,24.235,27.54	Frequency Stability over Temperature Variation	Pass
2.1055,22.355,24.235,27.54	Frequency Stability over Voltage Variation	Pass
24.232,27.50	Peak to Average Ratio	Pass
Note 1: No applicable performance criteria.		
Note 2: The module Under 16QAM modulation mode, the maximum number of RB is 27		

6.2. Conducted RF Power Output

Specifications:	FCC Part 2.1046, 22.913(a), 24.232(c), 27.50
DUT Serial Number:	865171050693608
Test conditions:	Ambient Temperature:15℃-35℃ Relative Humidity:30%-60% Air pressure: 86-106kPa
Test Results:	Pass

Limit Level Construction:

According to Part 22.913(a), the ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 Watts.

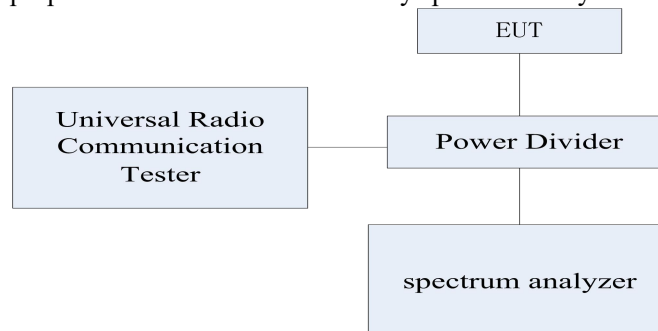
According to Part 24.232(c), mobile and portable stations are limited to 2 watts EIRP and the equipment must employ a means for limiting power to the minimum necessary for successful communications.

According to Part 27.50(c), portable stations (hand-held devices) in the 600 MHz uplink Band and the 698-746 MHz Band, and fixed and mobile stations in the 600 MHz uplink Band are limited to 3 watts ERP.

According to Part 27.50(d), fixed, mobile, and portable (hand-held) stations operating in the 1710-1755 MHz Band and mobile and portable stations operating in the 1695-1710 MHz and 1755-1780 MHz Bands are limited to 1 watt EIRP.

Test Setup:

During the test, the EUT was controlled via the Wireless Telecommunications Test Set to ensure max power transmission and proper modulation and measured by spectrum analyzer.



Test Method:

- 1) The EUT was coupled to the spectrum analyzer and the Wireless Telecommunications Test Set through a power divider. The loss of the RF cables of the test system is calibrated to correct the readings.
- 2) For RMS power test, the spectrum analyzer was set to RMS Detector function and Maximum hold mode.
- 3) For Peak power test, the spectrum analyzer was set to Maxpeak Detector function and Maximum hold mode.
- 4) The resolution Bandwidth of the spectrum analyzer was comparable to the emission Bandwidth.

Note: --

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6.2.1 LTE B2 Conducted RF Power Output Results

Test Data (1.4MHz bandwidth Mode)

Channel	Frequency (MHz)	No.RB	RB START	Modulation	Max Power(RMS)	Max Power (PK)	PAR
18607	1850.7	1	0	QPSK	23.42	28.14	4.72
		1	2		23.48	28.06	4.58
		1	5		23.31	27.97	4.66
		6	0		22.15	27.57	5.42
		1	0	16QAM	22.45	28.01	5.56
		1	2		22.70	28.14	5.44
		1	5		22.38	27.93	5.55
		6	0		21.02	27.32	6.30
18900	1880	1	0	QPSK	23.20	27.99	4.79
		1	2		23.07	27.81	4.74
		1	5		23.18	27.84	4.66
		6	0		22.26	27.65	5.39
		1	0	16QAM	22.78	27.99	5.21
		1	2		22.72	27.82	5.10
		1	5		22.79	27.96	5.17
		6	0		21.36	27.55	6.19
19193	1909.3	1	0	QPSK	23.17	27.56	4.39
		1	2		23.33	27.62	4.29
		1	5		23.12	27.48	4.36
		6	0		22.08	27.42	5.34
		1	0	16QAM	21.76	27.19	5.43
		1	2		21.99	27.29	5.30
		1	5		21.83	27.18	5.35
		6	0		20.84	27.18	6.34

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Test Data (3MHz bandwidth Mode)

Channel	Frequency (MHz)	No.RB	RB START	Modulation	Max Power(RMS)	Max Power (PK)	PAR
18615	1851.5	1	0	QPSK	23.47	28.07	4.60
		1	8		23.45	27.93	4.48
		1	15		23.72	28.10	4.38
		15	0		22.06	27.40	5.34
		1	0	16QAM	22.83	28.07	5.24
		1	8		22.81	27.94	5.13
		1	15		23.10	28.11	5.01
		15	0		21.12	27.30	6.18
18900	1880	1	0	QPSK	23.44	28.23	4.79
		1	8		23.33	28.03	4.70
		1	15		23.71	28.56	4.85
		15	0		22.51	28.50	5.99
		1	0	16QAM	22.78	28.44	5.66
		1	8		22.59	28.20	5.61
		1	15		22.73	28.59	5.86
		15	0		21.54	28.24	6.70
19185	1908.5	1	0	QPSK	23.87	28.11	4.24
		1	8		23.31	27.76	4.45
		1	15		23.62	28.02	4.40
		15	0		22.23	27.85	5.62
		1	0	16QAM	22.96	28.09	5.13
		1	8		22.16	27.57	5.41
		1	15		22.68	28.01	5.33
		15	0		21.20	27.74	6.54

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Test Data (5MHz bandwidth Mode)

Channel	Frequency (MHz)	No.RB	RB START	Modulation	Max Power(RMS)	Max Power (PK)	PAR
18625	1852.5	1	0	QPSK	23.20	27.77	4.57
		1	13		23.20	27.63	4.43
		1	24		23.41	27.60	4.19
		25	0		22.17	27.45	5.28
		1	0	16QAM	22.31	27.81	5.5
		1	13		22.30	27.66	5.36
		1	24		22.43	27.59	5.16
		25	0		21.23	27.55	6.32
18900	1880	1	0	QPSK	23.60	28.09	4.49
		1	13		23.36	27.95	4.59
		1	24		23.50	28.25	4.75
		25	0		22.36	28.06	5.70
		1	0	16QAM	22.81	28.18	5.37
		1	13		22.41	27.95	5.54
		1	24		22.62	28.29	5.67
		25	0		21.21	27.95	6.74
19175	1907.5	1	0	QPSK	23.79	27.85	4.06
		1	13		23.14	27.56	4.42
		1	24		23.44	27.93	4.49
		25	0		22.30	27.86	5.56
		1	0	16QAM	23.22	27.73	4.51
		1	13		22.58	27.49	4.91
		1	24		22.88	27.82	4.94
		25	0		21.25	27.64	6.39

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Test Data (10MHz bandwidth Mode)

Channel	Frequency (MHz)	No.RB	RB START	Modulation	Max Power(RMS)	Max Power (PK)	PAR
18650	1855	1	0	QPSK	22.90	27.47	4.57
		1	25		23.30	27.91	4.61
		1	49		23.15	27.75	4.60
		50	0		22.08	27.68	5.60
		1	0	16QAM	21.87	27.58	5.71
		1	25		22.25	27.29	5.04
		1	49		22.10	27.22	5.12
		27	0		21.69	27.56	5.87
18900	1880	1	0	QPSK	23.25	27.59	4.34
		1	25		23.18	27.88	4.70
		1	49		23.27	28.03	4.76
		50	0		22.36	27.54	5.18
		1	0	16QAM	22.27	27.72	5.45
		1	25		22.21	28.03	5.82
		1	49		22.23	28.18	5.95
		27	0		21.72	27.60	5.88
19150	1905	1	0	QPSK	23.68	27.46	3.78
		1	25		23.21	27.58	4.37
		1	49		22.89	27.52	4.63
		50	0		22.42	27.98	5.56
		1	0	16QAM	23.05	27.40	4.35
		1	25		22.47	27.34	4.87
		1	49		22.28	27.57	5.29
		27	0		21.90	27.32	5.42

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Test Data (15MHz bandwidth Mode)

Channel	Frequency (MHz)	No.RB	RB START	Modulation	Max Power(RMS)	Max Power (PK)	PAR
18675	1857.5	1	0	QPSK	23.05	27.64	4.59
		1	38		22.95	26.73	3.78
		1	74		23.49	26.57	3.08
		75	0		22.14	27.44	5.30
		1	0	16QAM	22.32	27.63	5.31
		1	38		22.30	26.81	4.51
		1	74		22.89	26.59	3.70
		27	0		21.55	27.43	5.88
18900	1880	1	0	QPSK	23.36	27.47	4.11
		1	38		23.14	27.88	4.74
		1	74		23.64	28.30	4.66
		75	0		22.25	28.08	5.83
		1	0	16QAM	22.31	27.46	5.15
		1	38		22.08	27.91	5.83
		1	74		22.43	28.35	5.92
		27	0		21.58	27.25	5.67
19125	1902.5	1	0	QPSK	23.90	27.58	3.68
		1	38		23.11	27.07	3.96
		1	74		22.17	26.90	4.73
		75	0		22.31	27.76	5.45
		1	0	16QAM	23.28	27.67	4.39
		1	38		22.52	27.14	4.62
		1	74		21.56	26.88	5.32
		27	0		22.26	27.42	5.16

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Test Data (20MHz bandwidth Mode)

Channel	Frequency (MHz)	No.RB	RB START	Modulation	Max Power(RMS)	Max Power (PK)	PAR
18700	1860	1	0	QPSK	22.70	27.41	4.71
		1	50		23.20	26.59	3.39
		1	99		23.22	26.81	3.59
		100	0		22.33	27.41	5.08
		1	0	16QAM	22.18	27.45	5.27
		1	50		22.59	26.56	3.97
		1	99		22.68	26.78	4.10
		27	0		21.26	27.16	5.90
18900	1880	1	0	QPSK	23.24	27.08	3.84
		1	50		23.13	27.87	4.74
		1	99		24.08	28.40	4.32
		100	0		22.25	27.82	5.57
		1	0	16QAM	22.86	27.10	4.24
		1	50		22.79	27.86	5.07
		1	99		23.66	28.38	4.72
		27	0		21.62	27.00	5.38
19100	1900	1	0	QPSK	23.49	27.70	4.21
		1	50		23.61	27.33	3.72
		1	99		21.79	26.56	4.77
		100	0		22.35	27.76	5.41
		1	0	16QAM	22.85	27.72	4.87
		1	50		22.97	27.33	4.36
		1	99		21.24	26.61	5.37
		27	0		21.95	27.41	5.46

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6.2.2 LTE B4 Conducted RF Power Output Results

Test Data (1.4MHz bandwidth Mode)

Channel	Frequency (MHz)	No.RB	RB START	Modulation	Max Power(RMS)	Max Power (PK)	PAR
19957	1710.7	1	0	QPSK	22.40	26.60	4.20
		1	2		22.59	26.65	4.06
		1	5		22.43	26.56	4.13
		6	0		21.58	26.65	5.07
		1	0	16QAM	21.75	26.55	4.80
		1	2		21.89	26.58	4.69
		1	5		21.54	26.75	5.21
		6	0		20.53	26.54	6.01
20175	1732.5	1	0	QPSK	21.78	26.39	4.61
		1	2		21.85	26.32	4.47
		1	5		21.86	26.39	4.53
		6	0		21.75	27.41	5.66
		1	0	16QAM	20.84	26.48	5.64
		1	2		20.92	26.45	5.53
		1	5		20.92	26.51	5.59
		6	0		20.93	26.88	5.95
20393	1754.3	1	0	QPSK	22.68	26.90	4.22
		1	2		22.75	26.89	4.14
		1	5		21.70	26.86	5.16
		6	0		21.84	26.98	5.14
		1	0	16QAM	21.71	26.89	5.18
		1	2		21.79	26.88	5.09
		1	5		21.64	26.75	5.11
		6	0		20.97	26.75	5.78

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Tel: 0086-23-88069965 FAX: 0086-23-88608777

Test Data (3MHz bandwidth Mode)

Channel	Frequency (MHz)	No.RB	RB START	Modulation	Max Power(RMS)	Max Power (PK)	PAR
19965	1711.5	1	0	QPSK	22.60	26.76	4.16
		1	8		22.55	26.53	3.98
		1	14		21.63	27.08	5.45
		15	0		21.68	26.88	5.20
		1	0	16QAM	22.03	26.79	4.76
		1	8		21.98	26.60	4.62
		1	14		22.13	26.82	4.69
		15	0		22.79	26.87	4.08
20175	1732.5	1	0	QPSK	21.53	26.29	4.76
		1	8		21.74	26.34	4.60
		1	14		21.80	26.52	4.72
		15	0		21.74	27.12	5.38
		1	0	16QAM	20.54	26.37	5.83
		1	8		20.75	26.41	5.66
		1	14		20.78	26.58	5.8
		15	0		20.82	27.05	6.23
20385	1753.5	1	0	QPSK	22.89	27.09	4.20
		1	8		22.60	26.72	4.12
		1	14		22.55	26.80	4.25
		15	0		21.70	27.18	5.48
		1	0	16QAM	22.02	27.11	5.09
		1	8		21.78	26.86	5.08
		1	14		21.69	26.80	5.11
		15	0		20.67	26.89	6.22

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 Tel: 0086-23-88069965 FAX: 0086-23-88608777

Test Data (5MHz bandwidth Mode)

Channel	Frequency (MHz)	No.RB	RB START	Modulation	Max Power(RMS)	Max Power (PK)	PAR
19975	1712.5	1	0	QPSK	22.59	26.75	4.16
		1	13		22.63	26.65	4.02
		1	24		22.75	26.88	4.13
		25	0		21.68	26.90	5.22
		1	0	16QAM	22.16	26.70	4.54
		1	13		22.20	26.62	4.42
		1	24		22.29	26.84	4.55
		25	0		20.82	26.80	5.98
20175	1732.5	1	0	QPSK	21.62	26.21	4.59
		1	13		21.97	26.46	4.49
		1	24		22.04	26.62	4.58
		25	0		21.83	27.21	5.38
		1	0	16QAM	20.82	26.34	5.52
		1	13		21.15	26.56	5.41
		1	24		21.21	26.69	5.48
		25	0		20.97	27.38	6.41
20375	1752.5	1	0	QPSK	22.85	27.04	4.19
		1	13		22.68	26.75	4.07
		1	24		22.61	26.80	4.19
		25	0		21.78	27.04	5.26
		1	0	16QAM	22.04	27.11	5.07
		1	13		21.87	26.82	4.95
		1	24		21.74	26.81	5.07
		25	0		20.77	26.98	6.21

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Address: No. 8,Yuma Road, Chayuan New City, Nan'an District, Chongqing, P. R. China,401336
Tel: 0086-23-88069965 FAX:0086-23-88608777

Test Data (10MHz bandwidth Mode)

Channel	Frequency (MHz)	No.RB	RB START	Modulation	Max Power(RMS)	Max Power (PK)	PAR
20000	1715	1	0	QPSK	22.42	26.59	4.17
		1	25		22.86	26.94	4.08
		1	49		21.62	26.10	4.48
		50	0		21.93	27.25	5.32
		1	0	16QAM	21.33	26.58	5.25
		1	25		21.85	27.02	5.17
		1	49		20.65	26.17	5.52
		27	0		21.31	27.15	5.84
20175	1732.5	1	0	QPSK	20.77	25.39	4.62
		1	25		21.90	26.56	4.66
		1	49		21.50	26.11	4.61
		50	0		21.93	27.92	5.99
		1	0	16QAM	19.92	25.54	5.62
		1	25		21.05	26.68	5.63
		1	49		20.64	26.24	5.60
		27	0		21.00	27.75	6.75
20350	1750	1	0	QPSK	22.19	26.65	4.46
		1	25		22.95	27.10	4.15
		1	49		22.40	26.59	4.19
		50	0		21.86	27.25	5.39
		1	0	16QAM	21.49	26.60	5.11
		1	25		22.18	26.99	4.81
		1	49		21.60	26.48	4.88
		27	0		21.13	27.32	4.17

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Tel: 0086-23-88069965 FAX: 0086-23-88608777

Test Data (15MHz bandwidth Mode)

Channel	Frequency (MHz)	No.RB	RB START	Modulation	Max Power(RMS)	Max Power (PK)	PAR
20025	1717.5	1	0	QPSK	22.45	26.55	4.10
		1	38		22.54	26.80	4.26
		1	74		20.79	25.36	4.57
		75	0		21.80	27.25	5.45
		1	0	16QAM	21.82	26.56	4.74
		1	38		21.92	26.81	4.89
		1	74		20.17	25.37	5.20
		27	0		21.38	26.81	5.43
20175	1732.5	1	0	QPSK	20.81	25.41	4.60
		1	38		21.83	26.51	4.68
		1	74		21.67	26.27	4.60
		75	0		21.70	27.58	5.88
		1	0	16QAM	19.58	25.26	5.68
		1	38		20.76	26.49	5.73
		1	74		20.65	26.28	5.63
		27	0		20.75	26.71	5.96
20325	1747.5	1	0	QPSK	21.35	25.87	4.52
		1	38		22.88	27.08	4.20
		1	74		22.39	26.55	4.16
		75	0		21.63	27.20	5.57
		1	0	16QAM	20.80	25.95	5.15
		1	38		22.22	27.11	4.89
		1	74		21.80	26.59	4.79
		27	0		20.44	26.28	5.84

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Tel: 0086-23-88069965 FAX:0086-23-88608777

Test Data (20MHz bandwidth Mode)

Channel	Frequency (MHz)	No.RB	RB START	Modulation	Max Power(RMS)	Max Power (PK)	PAR
20050	1720	1	0	QPSK	22.01	26.19	4.18
		1	50		21.90	26.35	4.45
		1	99		20.35	24.94	4.59
		100	0		21.60	27.20	5.60
		1	0	16QAM	21.38	26.18	4.80
		1	50		21.33	26.36	5.03
		1	99		19.88	24.93	5.05
		27	0		21.60	26.95	5.35
20175	1732.5	1	0	QPSK	20.39	25.36	4.97
		1	50		21.71	26.39	4.68
		1	99		21.73	26.22	4.49
		100	0		21.70	27.71	6.01
		1	0	16QAM	20.00	24.91	4.91
		1	50		21.31	26.30	4.99
		1	99		21.28	26.20	4.92
		27	0		20.52	26.44	5.92
20300	1745	1	0	QPSK	21.06	25.67	4.61
		1	50		23.06	27.41	4.35
		1	99		22.23	26.45	4.22
		100	0		21.82	27.59	5.77
		1	0	16QAM	20.36	25.58	5.22
		1	50		22.56	27.49	4.93
		1	99		21.65	26.47	4.82
		27	0		19.92	25.74	5.82

Chongqing Academy of Information and Communication Technology

Address: No. 8, Yuma Road, Chayuan New City, Nan'an District, Chongqing, P. R. China, 401336
Tel: 0086-23-88069965 FAX: 0086-23-88608777

6.2.3 LTE B5 Conducted RF Power Output Results

Test Data (1.4MHz bandwidth Mode)

Channel	Frequency (MHz)	No.RB	RB START	Modulation	Max Power(RMS)	Max Power (PK)	PAR
20407	824.7	1	0	QPSK	23.57	29.06	5.49
		1	2		23.57	29.05	5.48
		1	5		23.58	29.00	5.42
		6	0		23.58	29.12	5.54
		1	0	16QAM	23.84	29.46	5.62
		1	2		23.94	29.48	5.54
		1	5		23.90	29.51	5.61
		6	0		23.59	29.26	5.67
20525	836.5	1	0	QPSK	23.58	28.66	5.08
		1	2		23.58	28.70	5.12
		1	5		23.57	28.65	5.08
		6	0		23.82	28.83	5.01
		1	0	16QAM	23.59	28.66	5.07
		1	2		23.72	28.75	5.03
		1	5		23.59	28.66	5.07
		6	0		23.60	28.68	5.08
20643	848.3	1	0	QPSK	24.20	28.39	4.19
		1	2		24.35	28.31	3.96
		1	5		24.44	28.11	3.67
		6	0		23.60	28.59	4.99
		1	0	16QAM	24.40	28.40	4.00
		1	2		24.21	28.28	4.07
		1	5		23.93	28.14	4.21
		6	0		22.66	28.43	5.77

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Tel: 0086-23-88069965 FAX: 0086-23-88608777

Test Data (3MHz bandwidth Mode)

Channel	Frequency (MHz)	No.RB	RB START	Modulation	Max Power(RMS)	Max Power (PK)	PAR
20415	825.5	1	0	QPSK	25.08	29.67	4.59
		1	8		24.73	29.24	4.51
		1	14		25.21	29.60	4.39
		15	0		23.39	29.21	5.82
		1	0	16QAM	24.45	29.65	5.20
		1	8		24.08	29.24	5.16
		1	14		24.60	29.59	4.99
		15	0		22.47	28.76	6.29
20525	836.5	1	0	QPSK	24.79	28.44	3.65
		1	8		24.35	28.28	3.93
		1	14		24.96	28.86	3.90
		15	0		23.47	28.34	4.87
		1	0	16QAM	23.81	28.47	4.66
		1	8		23.36	28.32	4.96
		1	14		23.94	28.91	4.97
		15	0		22.57	28.75	6.18
20635	847.5	1	0	QPSK	25.29	28.64	3.35
		1	8		24.46	28.02	3.56
		1	14		24.86	28.18	3.32
		15	0		23.36	28.51	5.15
		1	0	16QAM	24.35	28.57	4.22
		1	8		23.46	27.92	4.46
		1	14		23.82	28.09	4.27
		15	0		22.29	28.19	5.90

Chongqing Academy of Information and Communication Technology

Address: No. 8, Yuma Road, Chayuan New City, Nan'an District, Chongqing, P. R. China, 401336
 Tel: 0086-23-88069965 FAX: 0086-23-88608777

Test Data (5MHz bandwidth Mode)

Channel	Frequency (MHz)	No.RB	RB START	Modulation	Max Power(RMS)	Max Power (PK)	PAR
20425	826.5	1	0	QPSK	24.65	29.33	4.68
		1	13		24.46	28.98	4.52
		1	24		24.44	28.85	4.41
		25	0		23.30	29.05	5.75
		1	0	16QAM	24.18	29.28	5.10
		1	13		23.89	28.88	4.99
		1	24		23.87	28.72	4.85
		25	0		22.43	28.89	6.46
20525	836.5	1	0	QPSK	24.86	28.36	3.50
		1	13		24.35	28.22	3.87
		1	24		24.90	28.92	4.02
		25	0		23.42	28.55	5.13
		1	0	16QAM	24.00	28.39	4.39
		1	13		23.44	28.12	4.68
		1	24		24.02	28.97	4.95
		25	0		22.46	28.56	6.10
20625	846.5	1	0	QPSK	24.85	29.05	4.20
		1	13		24.42	28.12	3.70
		1	24		23.93	27.83	3.90
		25	0		23.42	28.58	5.16
		1	0	16QAM	23.89	29.02	5.13
		1	13		23.52	28.14	4.62
		1	24		23.08	27.85	4.77
		25	0		22.36	28.36	6.00

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Address: No. 8,Yuma Road, Chayuan New City, Nan'an District, Chongqing, P. R. China,401336
 Tel: 0086-23-88069965 FAX:0086-23-88608777

Test Data (10MHz bandwidth Mode)

Channel	Frequency (MHz)	No.RB	RB START	Modulation	Max Power(RMS)	Max Power (PK)	PAR
20450	829	1	0	QPSK	24.42	29.13	4.71
		1	25		24.39	28.70	4.31
		1	49		23.91	27.95	4.04
		50	0		23.53	28.90	5.37
		1	0	16QAM	23.75	29.09	5.34
		1	25		23.75	28.70	4.95
		1	49		23.30	27.94	4.64
		27	0		22.41	28.51	6.10
20525	836.5	1	0	QPSK	24.88	28.56	3.68
		1	25		24.25	28.26	4.01
		1	49		24.89	29.39	4.50
		50	0		23.32	28.75	5.43
		1	0	16QAM	23.98	28.59	4.61
		1	25		23.33	28.30	4.97
		1	49		23.85	29.39	5.54
		27	0		22.59	27.95	5.36
20600	844	1	0	QPSK	23.62	28.31	4.69
		1	25		24.35	28.81	4.46
		1	49		23.73	27.77	4.04
		50	0		23.33	28.78	5.45
		1	0	16QAM	22.66	28.33	5.67
		1	25		23.38	28.88	5.50
		1	49		22.71	27.70	4.99
		27	0		22.27	28.50	6.23

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Address: No. 8,Yuma Road, Chayuan New City, Nan'an District, Chongqing, P. R. China,401336
Tel: 0086-23-88069965 FAX:0086-23-88608777

6.2.4 LTE B12 Conducted RF Power Output Results

Test Data (1.4MHz bandwidth Mode)

Channel	Frequency (MHz)	No.RB	RB START	Modulation	Max Power(RMS)	Max Power (PK)	PAR
23017	699.7	1	0	QPSK	23.36	27.17	3.81
		1	2		23.56	27.29	3.73
		1	5		23.43	27.26	3.83
		6	0		22.47	27.92	5.45
		1	0	16QAM	22.52	26.96	4.44
		1	2		22.79	27.04	4.25
		1	5		22.59	27.04	4.45
		6	0		21.26	27.83	6.57
23095	707.5	1	0	QPSK	23.39	27.18	3.79
		1	2		23.55	27.26	3.71
		1	5		23.20	27.07	3.87
		6	0		22.50	28.60	6.10
		1	0	16QAM	22.38	27.17	4.79
		1	2		22.56	27.27	4.71
		1	5		22.24	27.04	4.80
		6	0		21.60	28.02	6.42
23173	715.3	1	0	QPSK	23.25	26.88	3.63
		1	2		23.32	26.78	3.46
		1	5		23.34	26.80	3.46
		6	0		22.58	27.86	5.28
		1	0	16QAM	22.37	26.88	4.51
		1	2		22.43	26.77	4.34
		1	5		22.53	26.86	4.33
		6	0		21.70	27.61	5.91

Chongqing Academy of Information and Communication Technology

Address: No. 8, Yuma Road, Chayuan New City, Nan'an District, Chongqing, P. R. China, 401336
Tel: 0086-23-88069965 FAX: 0086-23-88608777

Test Data (3MHz bandwidth Mode)

Channel	Frequency (MHz)	No.RB	RB START	Modulation	Max Power(RMS)	Max Power (PK)	PAR
23025	700.5	1	0	QPSK	23.60	27.39	3.79
		1	8		23.65	27.27	3.62
		1	14		23.50	27.30	3.80
		15	0		22.53	27.97	5.44
		1	0	16QAM	22.96	27.38	4.42
		1	8		23.01	27.27	4.26
		1	14		22.87	27.29	4.42
		15	0		21.58	27.80	6.22
23095	707.5	1	0	QPSK	23.68	27.55	3.87
		1	8		23.38	27.13	3.75
		1	14		23.35	27.29	3.94
		15	0		22.53	27.90	5.37
		1	0	16QAM	22.73	27.69	4.96
		1	8		22.42	27.25	4.83
		1	14		22.17	27.22	5.05
		15	0		21.65	28.18	6.53
23165	714.5	1	0	QPSK	23.47	27.22	3.75
		1	8		23.53	26.99	3.46
		1	14		23.71	27.10	3.39
		15	0		22.58	28.18	5.60
		1	0	16QAM	22.44	27.07	4.63
		1	8		22.56	26.95	4.39
		1	14		22.68	27.00	4.32
		15	0		21.55	27.58	6.03

Chongqing Academy of Information and Communication Technology

Address: No. 8, Yuma Road, Chayuan New City, Nan'an District, Chongqing, P. R. China, 401336
Tel: 0086-23-88069965 FAX: 0086-23-88608777

Test Data (5MHz bandwidth Mode)

Channel	Frequency (MHz)	No.RB	RB START	Modulation	Max Power(RMS)	Max Power (PK)	PAR
23035	701.5	1	0	QPSK	23.24	27.02	3.78
		1	13		23.18	26.83	3.65
		1	24		23.49	27.24	3.75
		25	0		22.36	28.17	5.81
		1	0	16QAM	22.75	27.03	4.28
		1	13		22.89	27.02	4.13
		1	24		23.02	27.26	4.24
		25	0		21.43	28.00	6.57
23095	707.5	1	0	QPSK	23.85	27.49	3.64
		1	13		23.48	27.11	3.63
		1	24		23.34	27.12	3.78
		25	0		22.59	28.15	5.56
		1	0	16QAM	22.93	27.50	4.57
		1	13		22.67	27.25	4.58
		1	24		22.45	27.16	4.71
		25	0		21.63	28.23	6.60
23155	713.5	1	0	QPSK	23.20	26.92	3.72
		1	13		23.55	27.02	3.47
		1	24		23.66	27.02	3.36
		25	0		22.47	28.02	5.55
		1	0	16QAM	22.36	27.03	4.67
		1	13		22.63	27.03	4.40
		1	24		22.75	27.01	4.26
		25	0		21.57	27.97	6.40

Chongqing Academy of Information and Communication Technology

Address: No. 8, Yuma Road, Chayuan New City, Nan'an District, Chongqing, P. R. China, 401336
 Tel: 0086-23-88069965 FAX: 0086-23-88608777

Test Data (10MHz bandwidth Mode)

Channel	Frequency (MHz)	No.RB	RB START	Modulation	Max Power(RMS)	Max Power (PK)	PAR
23060	704	1	0	QPSK	23.16	26.90	3.74
		1	25		23.69	27.36	3.67
		1	49		22.91	26.74	3.83
		50	0		22.51	28.23	5.72
		1	0	16QAM	22.39	26.83	4.44
		1	25		22.95	27.28	4.33
		1	49		22.23	26.71	4.48
		27	0		22.52	28.33	5.81
23095	707.5	1	0	QPSK	23.30	27.07	3.77
		1	25		23.44	27.27	3.83
		1	49		23.21	27.02	3.81
		50	0		22.69	28.67	5.98
		1	0	16QAM	22.26	27.07	4.81
		1	25		22.42	27.32	4.90
		1	49		22.14	27.02	4.88
		27	0		22.58	28.63	6.05
23130	711	1	0	QPSK	23.36	27.18	3.82
		1	25		23.57	27.34	3.77
		1	49		23.54	27.00	3.46
		50	0		22.61	28.29	5.68
		1	0	16QAM	22.42	27.21	4.79
		1	25		22.44	27.16	4.72
		1	49		22.60	27.00	4.40
		27	0		22.62	28.24	5.62

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6.2.5 LTE B13 Conducted RF Power Output Results

Test Data (5MHz bandwidth Mode)

Channel	Frequency (MHz)	No.RB	RB START	Modulation	Max Power(RMS)	Max Power (PK)	PAR
23205	779.5	1	0	QPSK	24.24	28.65	4.41
		1	13		24.45	28.14	3.69
		1	24		24.18	28.10	3.92
		25	0		23.33	28.70	5.37
		1	0	16QAM	23.70	28.55	4.85
		1	13		23.88	28.20	4.32
		1	24		23.72	28.07	4.35
		25	0		22.44	28.77	6.33
23230	782	1	0	QPSK	25.88	28.55	2.67
		1	13		24.30	28.28	3.98
		1	24		24.12	29.18	5.06
		25	0		23.16	28.33	5.17
		1	0	16QAM	25.03	28.59	3.56
		1	13		23.39	28.27	4.88
		1	24		23.21	29.18	5.97
		25	0		22.26	28.44	6.18
23255	784.5	1	0	QPSK	24.38	28.46	4.08
		1	13		24.23	29.26	5.03
		1	24		25.86	29.48	3.62
		25	0		23.17	29.37	6.20
		1	0	16QAM	23.54	28.52	4.98
		1	13		23.34	29.35	6.01
		1	24		25.15	30.51	5.36
		25	0		22.11	28.81	6.70

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Test Data (10MHz bandwidth Mode)

Channel	Frequency (MHz)	No.RB	RB START	Modulation	Max Power(RMS)	Max Power (PK)	PAR
23230	782	1	0	QPSK	24.42	28.98	4.56
		1	25		23.98	28.14	4.16
		1	49		25.30	30.22	4.92
		50	0		23.36	29.36	6.00
		1	0	16QAM	23.31	28.97	5.66
		1	25		23.02	28.20	5.18
		1	49		24.34	30.25	5.91
		27	0		22.63	28.60	5.97

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6.3. ERP and EIRP

Specifications:	FCC Part 22.913(a), 24.232(b)
DUT Serial Number:	860371050880503
Test conditions:	Ambient Temperature:15℃-35℃ Relative Humidity:30%-60% Air pressure: 86-106kPa
Test Results:	Pass

Limit Level Construction:

This is the test for the maximum radiated power from the EUT.

According to Part 24.232(c),"Mobile/portable stations are limited to 2 watts e.i.r.p. Peak power"and 24.232(c) specifies that "Peak transmit power must be measured over any interval of continuous transmission using instrumentation calibrated in terms of an rms-equivalent voltage."

According to 22.913(a), The ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 Watts."

According to Part 27.50(d), "Fixed, mobile, and portable (handheld) stations operating in the 1710–1755 MHz band are limited to 1 watt EIRP".

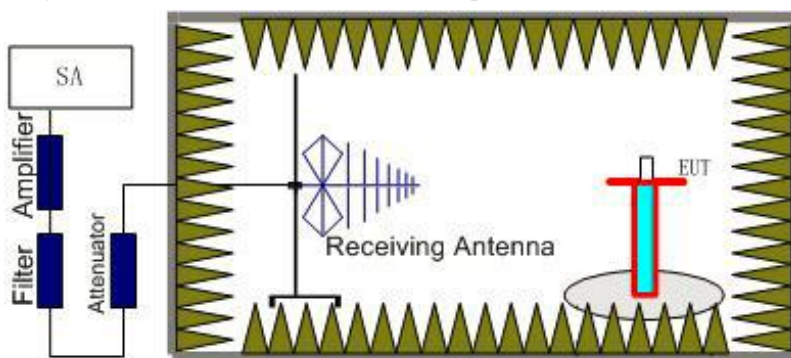
According to Part 27.50(h)(2) "Mobile stations are limited to 2.0 watts EIRP".

According to Part 27.50(c),specifies "Portable stations (hand-held de-vices) are limited to 3 watts ERP".

Method of Measurement

The measurements procedures in TIA-603E-2016 are used.

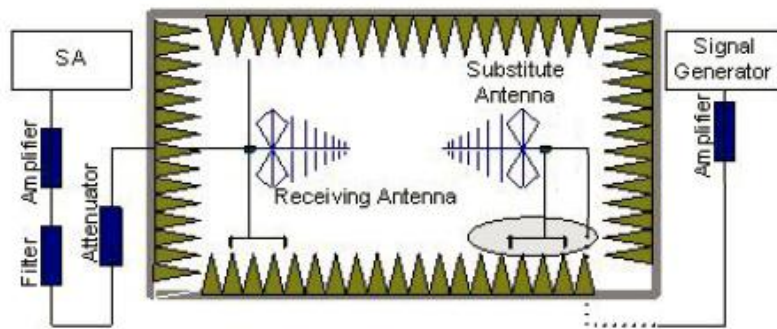
1. EUT was placed on a 1.5 meter high non-conductive stand at a 3 meter test distance from thereceive antenna. A receiving antenna was placed on the antenna mast 3 meters from the EUTfor emission measurements. The height of receiving antenna is 1.5m. The test setup refers tofigure below. Detected emissions were maximized at each frequency by rotating the EUTthrough 360° and adjusting the receiving antenna polarization. The radiated emissionmeasurements of all transmit frequencies in three channels (High, Middle, Low) weremeasured with peak detector.



- The EUT is then put into continuously transmitting mode at its maximum power level during the test. And the maximum value of the receiver should be recorded as (Pr).
- The EUT shall be replaced by a substitution antenna. The test setup refers to figure below.

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In the chamber, an substitution antenna for the frequency band of interest is placed at thereference point of the chamber. An RF Signal source for the frequency band of interest isconnected to the substitution antenna with a cable that has been constructed to not interferewith the radiation pattern of the antenna. A power (PMea) is applied to the input of thesubstitution antenna, and adjust the level of the signal generator output until the value of thereceiver reach the previously recorded (Pr). The power of signal source (PMea) is recorded. Thetest should be performed by rotating the test item and adjusting the receiving antennapolarization.

4. A amplifier should be connected to the Signal Source output port. And the cable should beconnect between the Amplifier and the Substitution Antenna.

The cable loss (Pcl) ,the Substitution Antenna Gain (Ga) and the Amplifier Gain (PAg) should berecorded after test.

The measurement results are obtained as described below:

$$\text{Power(EIRP)} = \text{PMea} + \text{PAg} - \text{Pcl} + \text{Ga}$$

5. This value is EIRP since the measurement is calibrated using an antenna of known gain (2.15dBi) and known input power.

6. ERP can be calculated from EIRP by subtracting the gain of the dipole,

$$\text{ERP} = \text{S.G output(dBM)} - \text{cable loss (dB)} + \text{antenna gain (dBd)}$$

$$\text{EIRP} = \text{S.G output(dBM)} - \text{cable loss (dB)} + \text{antenna gain (dBi)}$$

6.3.3 LTE Band 2 Measurement result

LTE Band 2_15 MHz_QPSK

Frequency [MHz]	Generator output power(P_g) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (P_d) [dBm]	Antenna Polarization [H/V]
1857.5	22.5	5.0	7.2	24.7	V
1880.0	22.7	5.0	7.2	24.9	V
1902.5	23.4	5.1	6.8	25.1	V

LTE Band 2_20 MHz_16QAM

Frequency [MHz]	Generator output power(P_g) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (P_d) [dBm]	Antenna Polarization [H/V]
1857.5	21.9	5.0	7.2	24.1	V
1880.0	21.5	5.0	7.2	23.7	V
1902.5	22.8	5.1	6.8	24.5	V

6.3.4 LTE Band 4 Measurement result

LTE Band 4_10MHz_QPSK

Frequency [MHz]	Generator output power(P_g) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (P_d) [dBm]	Antenna Polarization [H/V]
1715.0	21.5	4.8	7.9	24.6	V
1732.5	20.5	4.9	8.1	23.7	V
1750.0	21.6	4.9	8.1	24.8	V

LTE Band 4_10MHz_16QAM

Frequency [MHz]	Generator output power(P_g) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (P_d) [dBm]	Antenna Polarization [H/V]
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1715.0	20.5	4.8	7.9	23.6	V
1732.5	19.6	4.9	8.1	22.8	V
1750.0	20.7	4.9	8.1	23.9	V

6.3.5 LTE Band 5 Measurement result

LTE Band 5_3MHz_QPSK

Frequency [MHz]	Generator output power(P_g) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (P_d) [dBm]	Antenna Polarization [H/V]
825.5	19.9	3.4	7.3	23.8	V
836.4	20.3	3.4	6.6	23.5	V
847.5	20.5	3.4	6.6	23.7	V

LTE Band 5_3MHz_16QAM

Frequency [MHz]	Generator output power(P_g) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (P_d) [dBm]	Antenna Polarization [H/V]
825.5	19.2	3.4	7.3	23.1	V
836.4	19.3	3.4	6.6	22.5	V
847.5	19.7	3.4	6.6	22.9	V

6.3.5 LTE Band 12 Measurement result

LTE Band 12_5MHz_QPSK

Frequency [MHz]	Generator output power(P_g) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (P_d) [dBm]	Antenna Polarization [H/V]
701.5	17.2	3.1	7.3	21.4	V
707.5	18.3	3.1	6.6	21.8	V
713.5	18.1	3.1	6.6	21.6	V

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LTE Band 12_5MHz_16QAM

Frequency [MHz]	Generator output power(P_g) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (P_d) [dBm]	Antenna Polarization [H/V]
701.5	16.8	3.1	7.3	21.0	V
707.5	16.7	3.1	7.3	20.9	V
713.5	16.5	3.1	7.3	20.7	V

6.3.5 LTE Band 13 Measurement result
LTE Band 13_5MHz_QPSK

Frequency [MHz]	Generator output power(P_g) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (P_d) [dBm]	Antenna Polarization [H/V]
779.5	19.9	3.3	7.4	24.0	V
782.0	21.3	3.3	7.4	25.4	V
784.5	21.3	3.3	7.4	25.4	V

LTE Band 13_15MHz_16QAM

Frequency [MHz]	Generator output power(P_g) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (P_d) [dBm]	Antenna Polarization [H/V]
779.5	19.3	3.3	7.4	23.4	V
782.0	20.5	3.3	7.4	24.6	V
784.5	20.6	3.3	7.4	24.7	V

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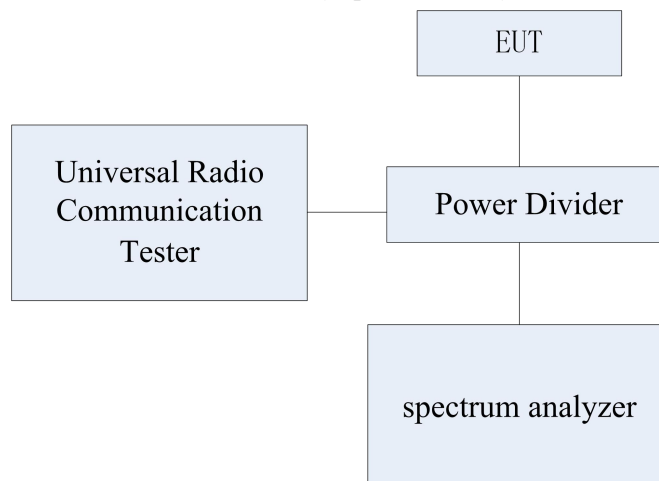
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6.4. Occupied Bandwidth

Specifications:	FCC Part 2.1049, 22.917(b), 24.238(b)
DUT Serial Number:	865171050693608
Test conditions:	Ambient Temperature:15℃-35℃ Relative Humidity:30%-60% Air pressure: 86-106kPa
Test Results:	Pass

Test Setup

During the test, the EUT was controlled via the Wireless Communications Test Set to ensure max power transmission and proper modulation and measured by spectrum analyzer.



Test Method

The 99% occupied Bandwidth was calculated from the spectrum analyzer. Markers in the spectrum analyzer were then placed between the calculated frequencies to show the calculated 99% power Band. The 26dB Bandwidth was also measured and recorded.

Note: --

6.4.1 LTE B2 occupied bandwidth Results

Mode	EUT channel No.	bandwidth	No. RB	RB offset	99% occupied bandwidth [MHz]	-26dBc occupied bandwidth [MHz]
QPSK	18900 (1880MHz)	1.4MHz	6	0	1.11	1.29
		3MHz	15		2.69	2.93
		5MHz	25		4.50	4.98
		10MHz	50		8.94	9.68
		15MHz	75		13.51	14.90
		20MHz	100		17.95	19.29
16QAM		1.4MHz	6		1.10	1.31
		3MHz	15		2.69	2.94
		5MHz	25		4.50	4.98
		10MHz	50		4.90	5.61
		15MHz	75		5.24	6.15
		20MHz	27		5.26	6.47

6.4.2 LTE B4 occupied bandwidth Results

Mode	EUT channel No.	bandwidth	No. RB	RB offset	99% occupied bandwidth [MHz]	-26dBc occupied bandwidth [MHz]
QPSK	20175 (1732.5MHz)	1.4MHz	6	0	1.10	1.30
		3MHz	15		2.70	2.92
		5MHz	25		4.52	5.02
		10MHz	50		8.94	9.71
		15MHz	75		13.56	14.81
		20MHz	100		17.95	19.36
16QAM		1.4MHz	6		1.11	1.30
		3MHz	15		2.68	2.93
		5MHz	25		4.52	4.98
		10MHz	50		4.90	5.64
		15MHz	75		5.14	6.11
		20MHz	27		5.19	6.35

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6.4.3 LTE B5 occupied bandwidth Results

Mode	EUT channel No.	bandwidth	No. RB	RB offset	99% occupied bandwidth [MHz]	-26dBc occupied bandwidth [MHz]
QPSK	20525 (836.5MHz)	1.4MHz	6	0	1.12	1.27
		3MHz	15		2.69	2.93
		5MHz	25		4.50	4.98
		10MHz	50		8.94	9.65
16QAM		1.4MHz	6		1.10	1.31
		3MHz	15		2.62	2.95
		5MHz	25		4.50	4.95
		10MHz	27		4.87	5.42

6.4.4 LTE B12 occupied bandwidth Results

Mode	EUT channel No.	bandwidth	No. RB	RB offset	99% occupied bandwidth [MHz]	-26dBc occupied bandwidth [MHz]
QPSK	23095 (707.5MHz)	1.4MHz	6	0	1.10	1.31
		3MHz	15		2.69	2.92
		5MHz	25		4.52	4.98
		10MHz	50		8.94	9.74
16QAM		1.4MHz	6		1.11	1.28
		3MHz	15		2.69	2.93
		5MHz	25		4.50	4.97
		10MHz	27		4.87	5.58

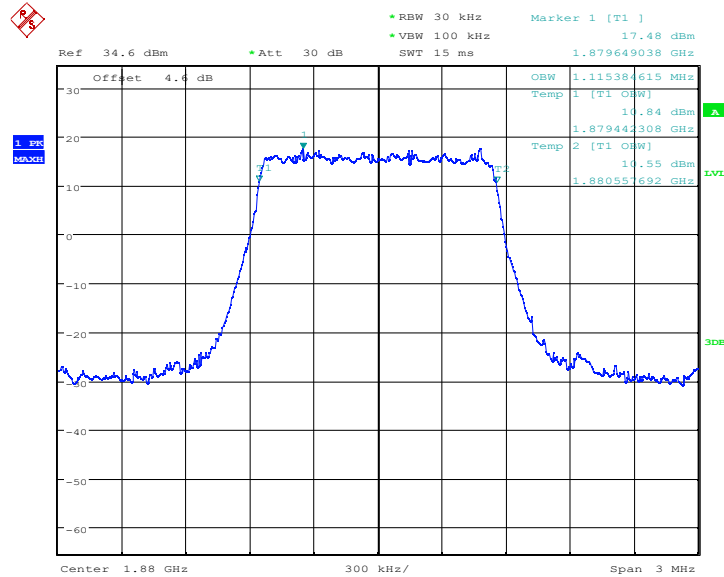
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6.4.5 LTE B13 occupied bandwidth Results

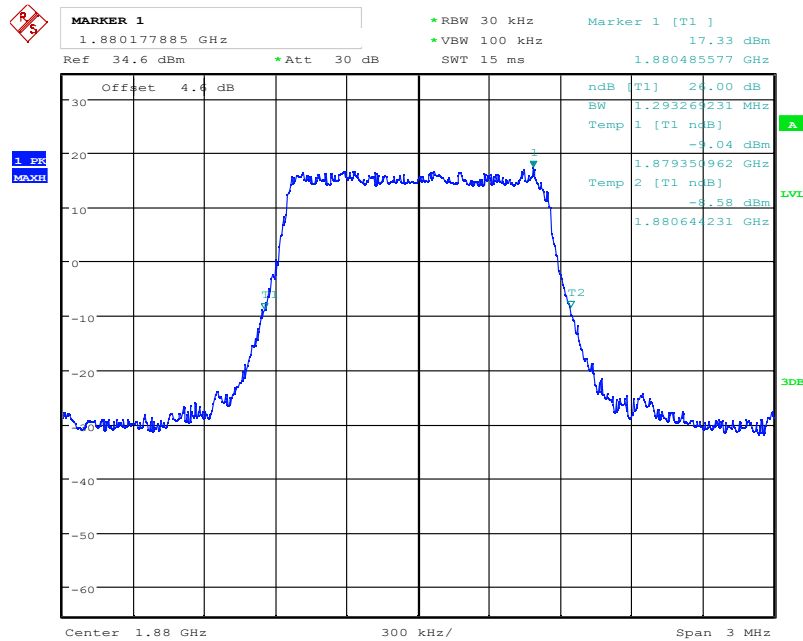
Mode	EUT channel No.	bandwidth	No. RB	RB offset	99% occupied bandwidth [MHz]	-26dBc occupied bandwidth [MHz]
QPSK	23230 (782MHz)	5MHz	25	0	4.52	4.95
		10MHz	50		8.94	9.65
16QAM		5MHz	25		4.52	5.00
		10MHz	27		4.87	5.51

Graphical results for LTE B2:



Date: 15.DEC.2021 05:54:28

LTE Band2 QPSK 99% Channel 18900 BW=1.4MHz RB=6 RB Offset=0

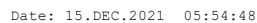
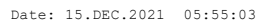


Date: 15.DEC.2021 05:54:35

LTE Band2 QPSK -26dBc Channel 18900 BW=1.4MHz RB=6 RB Offset=0

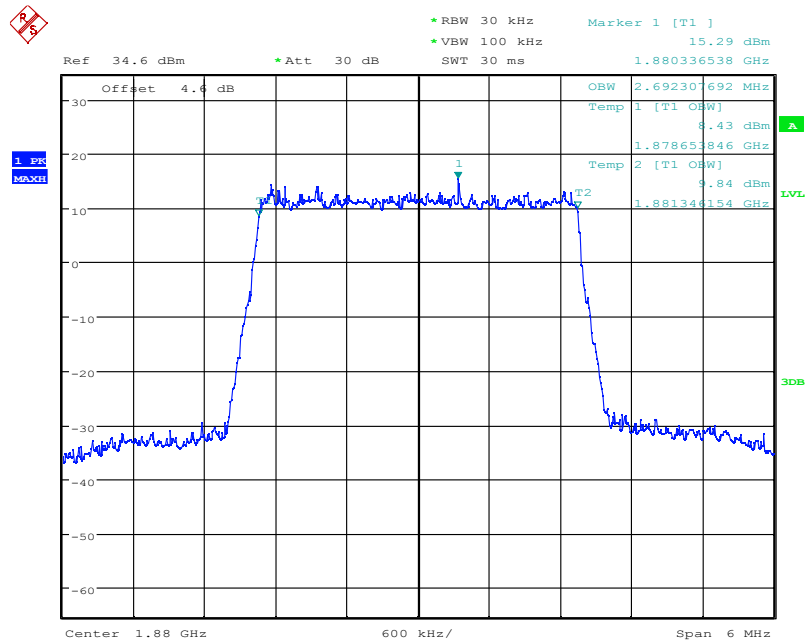
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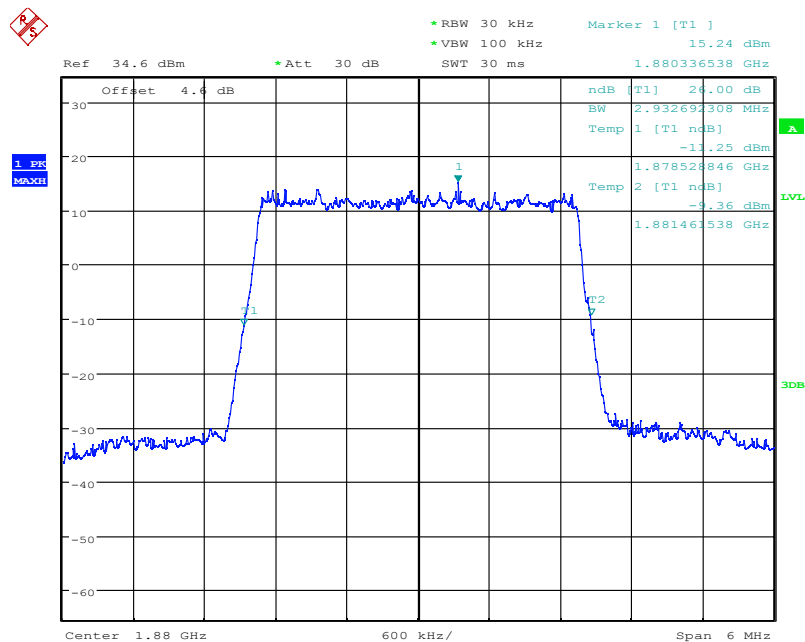
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Page 47 of 271



Date: 15.DEC.2021 05:55:44

LTE Band2 QPSK 99% Channel 18900 BW=3MHz RB=15 RB Offset=0

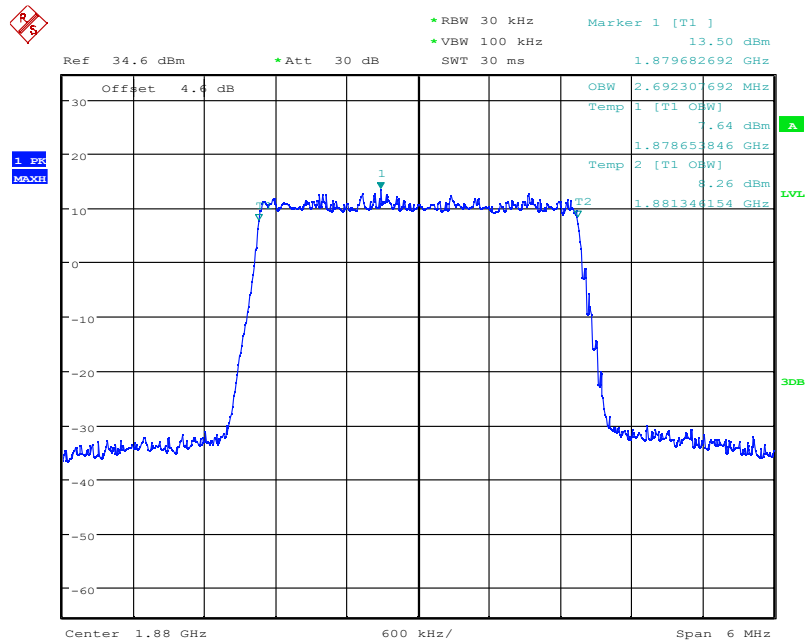


Date: 15.DEC.2021 05:55:38

LTE Band2 QPSK -26dBc Channel 18900 BW=3MHz RB=15 RB Offset=0

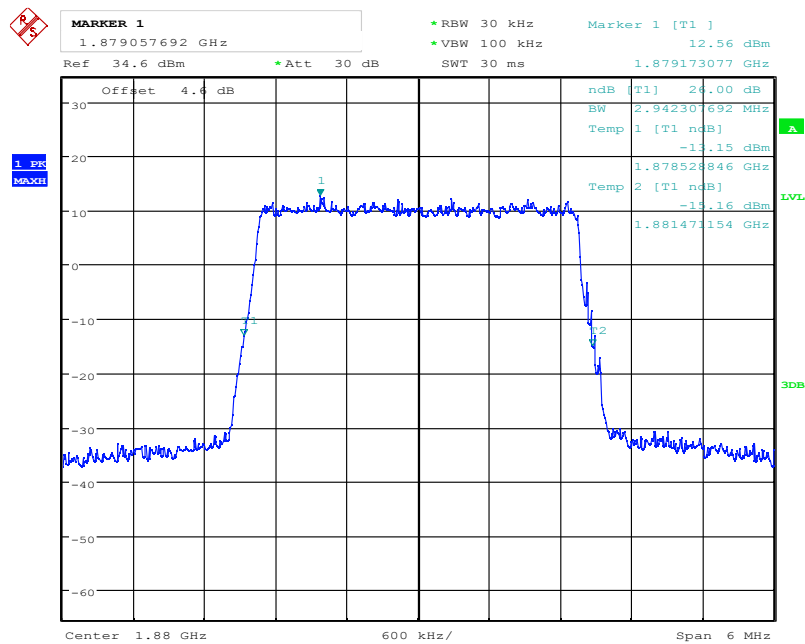
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Date: 15.DEC.2021 05:55:21

LTE Band2 16QAM 99% Channel 18900 BW=3MHz RB=15 RB Offset=0

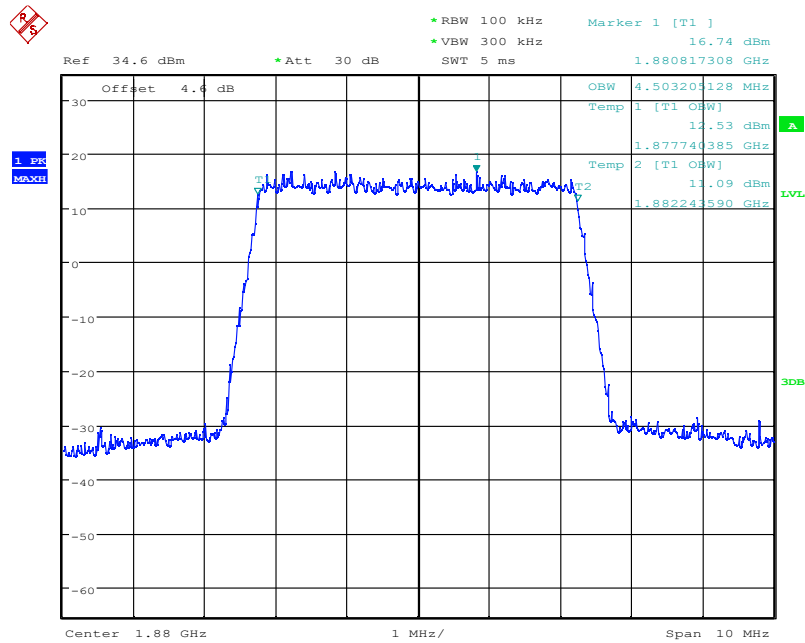


Date: 15.DEC.2021 05:55:27

LTE Band2 16QAM -26dBc Channel 18900 BW=3MHz RB=15 RB Offset=0

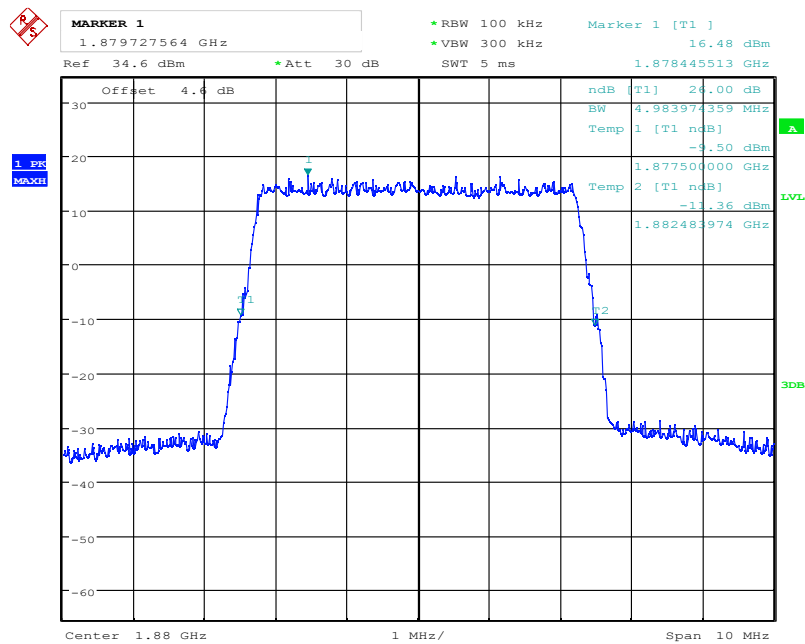
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Date: 15.DEC.2021 05:56:02

LTE Band2 QPSK 99% Channel 18900 BW=5MHz RB=25 RB Offset=0

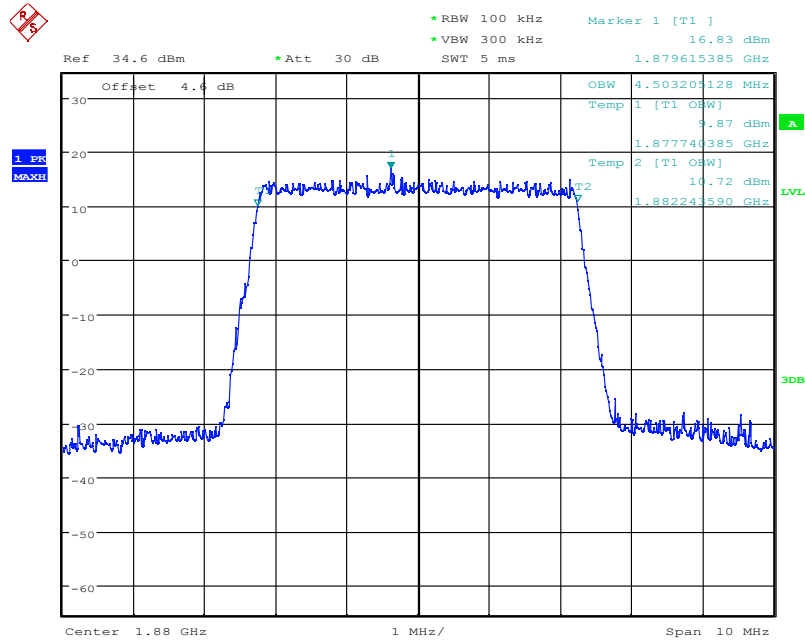


Date: 15.DEC.2021 05:56:08

LTE Band2 QPSK -26dBc Channel 18900 BW=5MHz RB=25 RB Offset=0

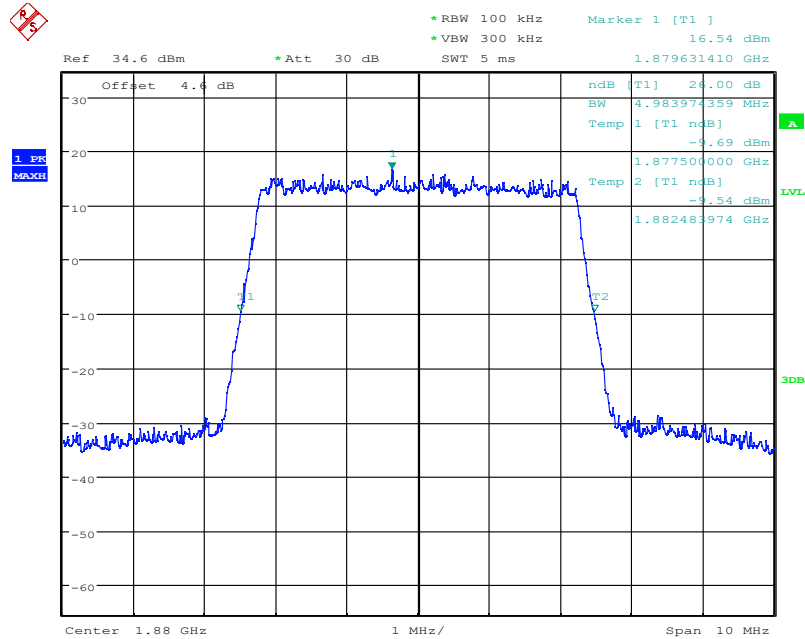
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Date: 15.DEC.2021 05:56:23

LTE Band2 16QAM 99% Channel 18900 BW=5MHz RB=25 RB Offset=0

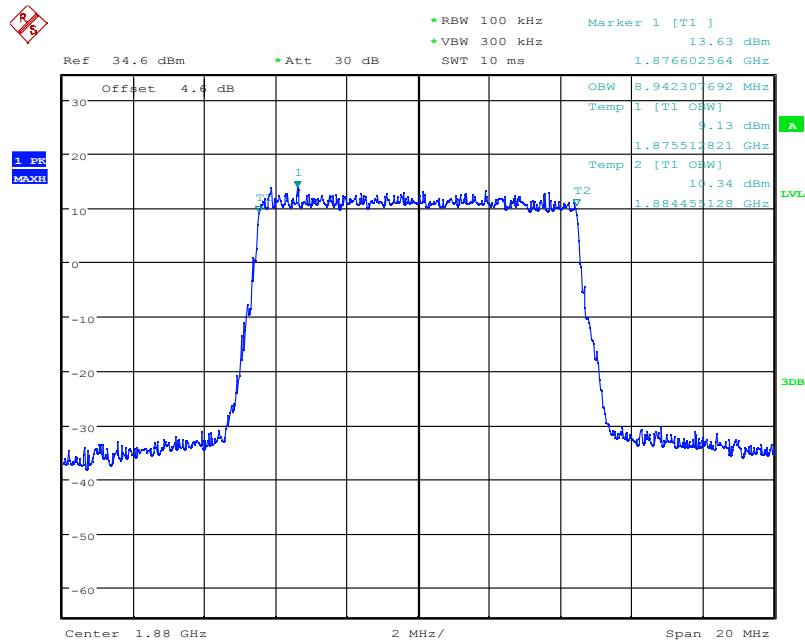


Date: 15.DEC.2021 05:56:17

LTE Band2 16QAM -26dBc Channel 18900 BW=5MHz RB=25 RB Offset=0

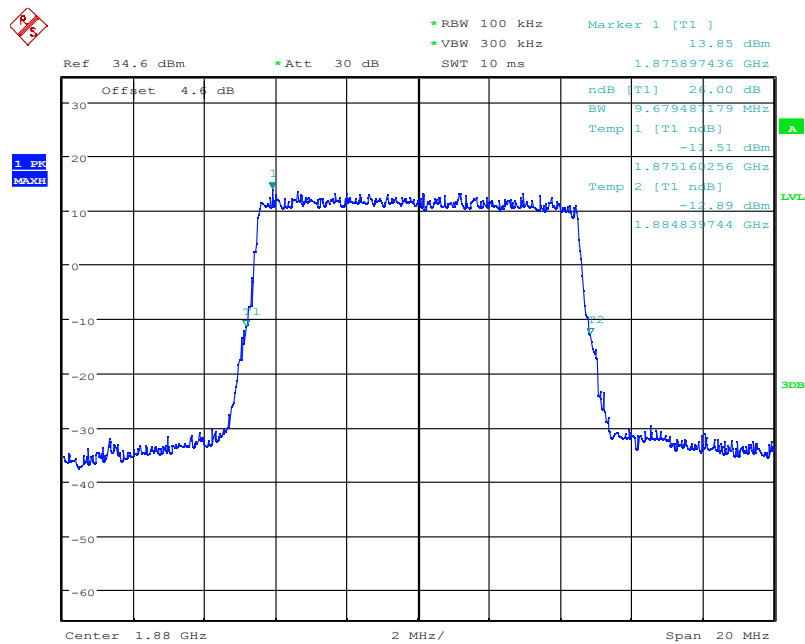
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Date: 15.DEC.2021 05:57:02

LTE Band2 QPSK 99% Channel 18900 BW=10MHz RB=50 RB Offset=0

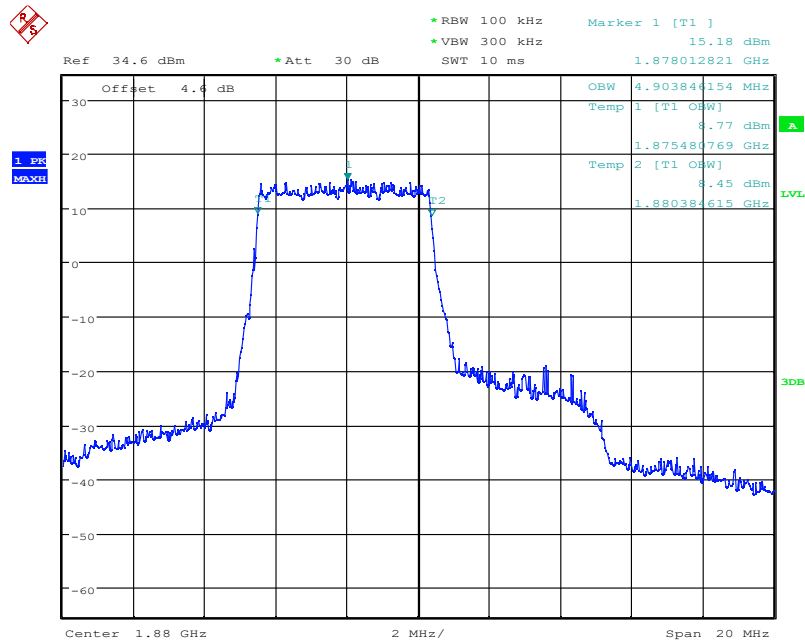


Date: 15.DEC.2021 05:56:57

LTE Band2 QPSK -26dBc Channel 18900 BW=10MHz RB=50 RB Offset=0

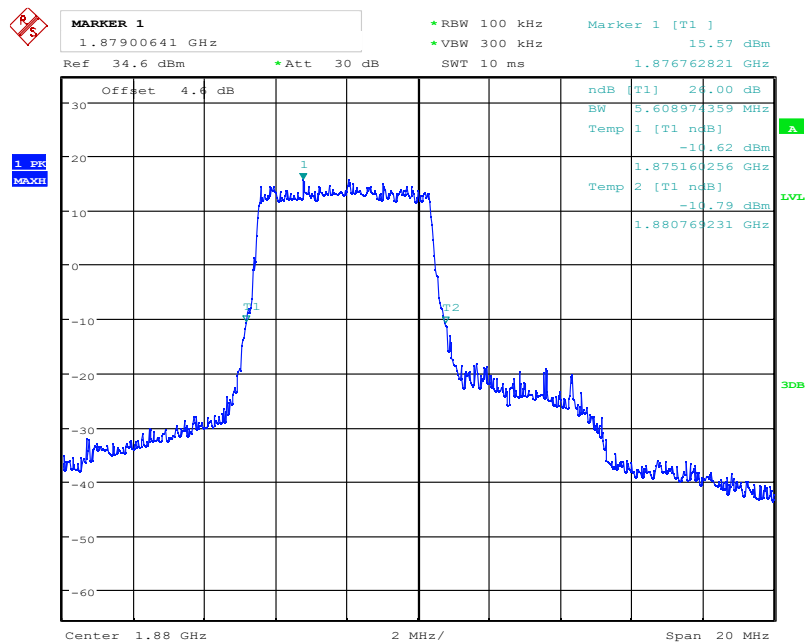
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Date: 15.DEC.2021 05:56:37

LTE Band2 16QAM 99% Channel 18900 BW=10MHz RB=27 RB Offset=0

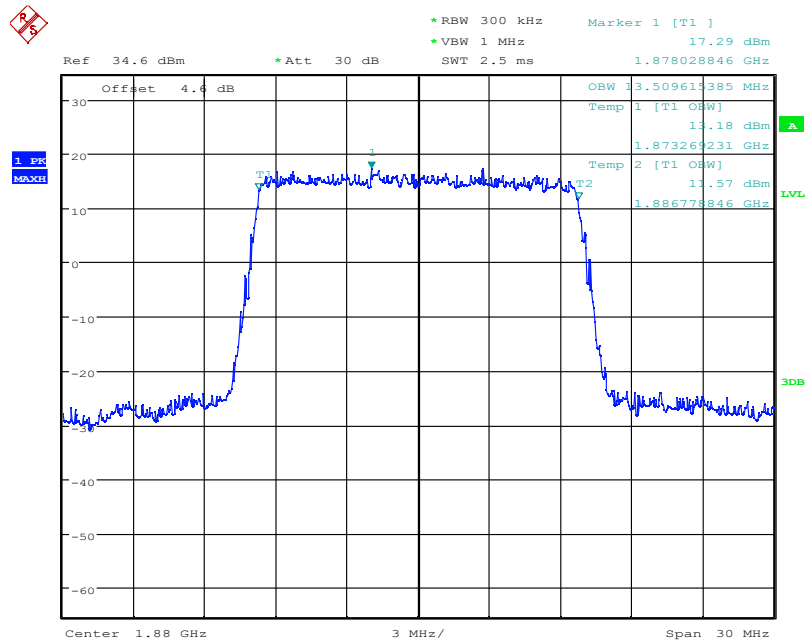


Date: 15.DEC.2021 05:56:43

LTE Band2 16QAM -26dBc Channel 18900 BW=10MHz RB=27 RB Offset=0

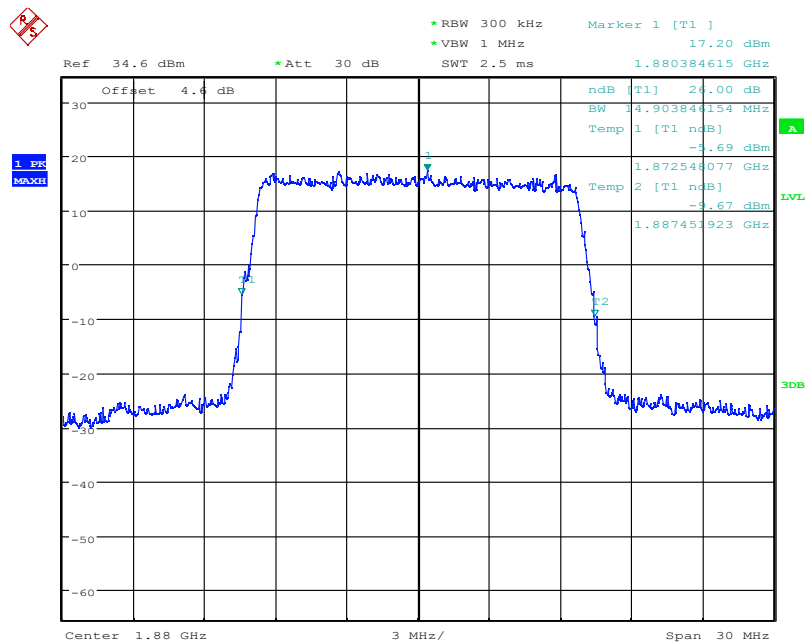
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Date: 15.DEC.2021 05:57:52

LTE Band2 QPSK 99% Channel 18900 BW=15MHz RB=75 RB Offset=0

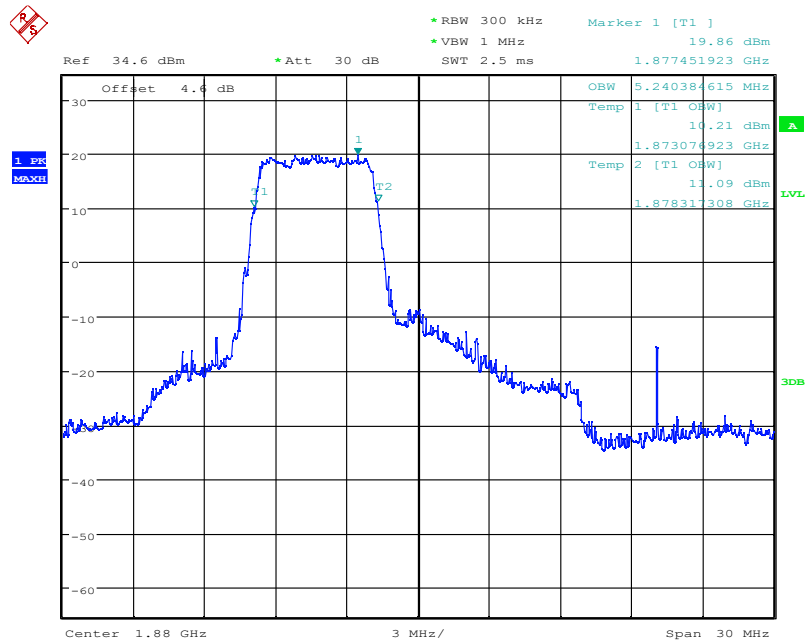


Date: 15.DEC.2021 05:57:46

LTE Band2 QPSK -26dBc Channel 18900 BW=15MHz RB=75 RB Offset=0

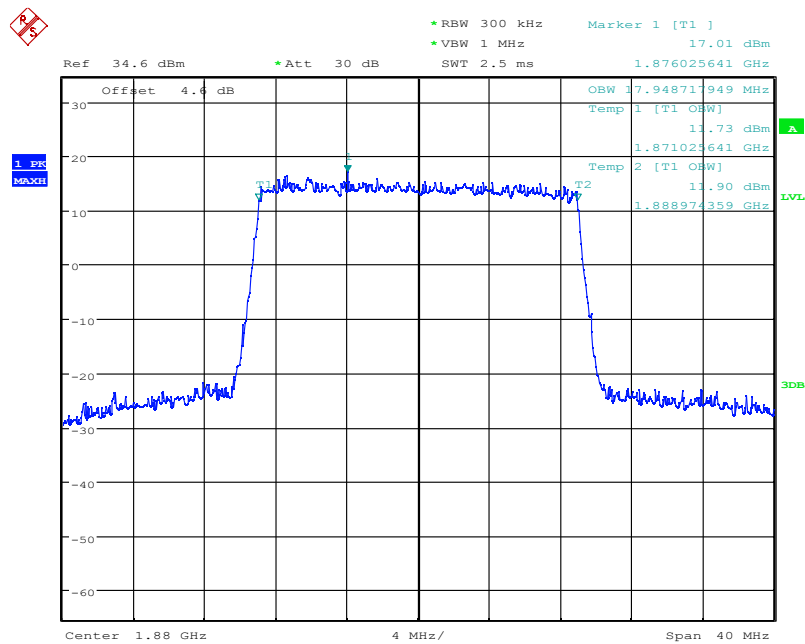
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Date: 15.DEC.2021 05:57:25

LTE Band2 16QAM 99% Channel 18900 BW=15MHz RB=27 RB Offset=0

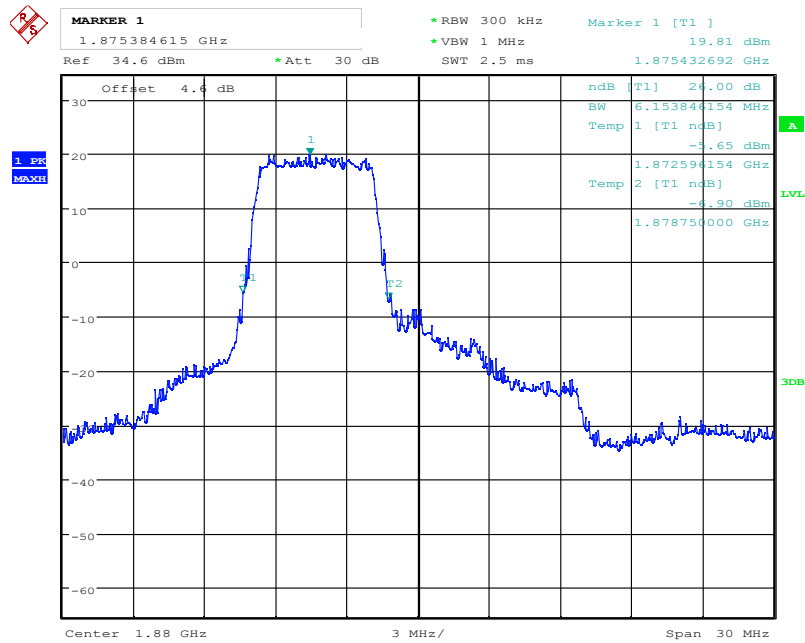


Date: 15.DEC.2021 05:58:08

LTE Band2 16QAM -26dBc Channel 18900 BW=15MHz RB=27 RB Offset=0

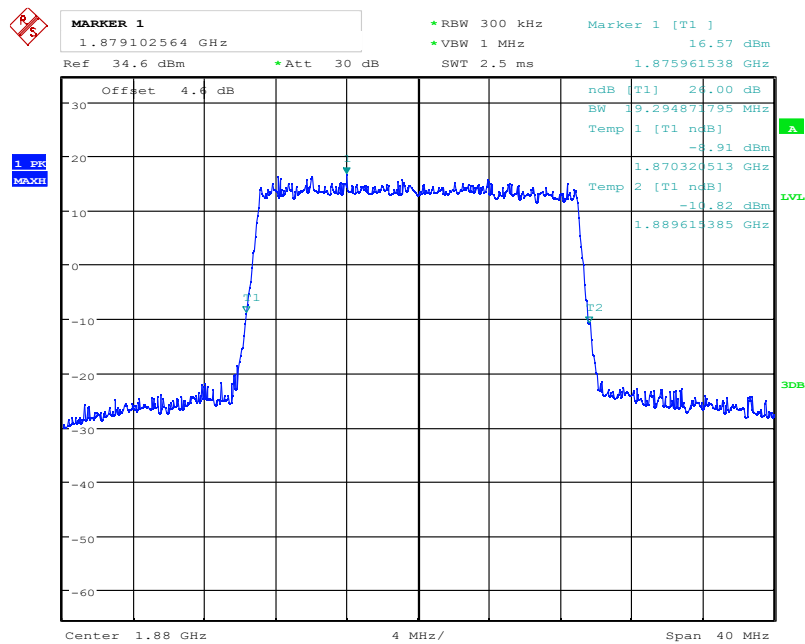
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Date: 15.DEC.2021 05:57:33

LTE Band2 QPSK 99% Channel 18900 BW=20MHz RB=100 RB Offset=0

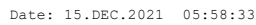


Date: 15.DEC.2021 05:58:13

LTE Band2 QPSK -26dBc Channel 18900 BW=20MHz RB=100 RB Offset=0

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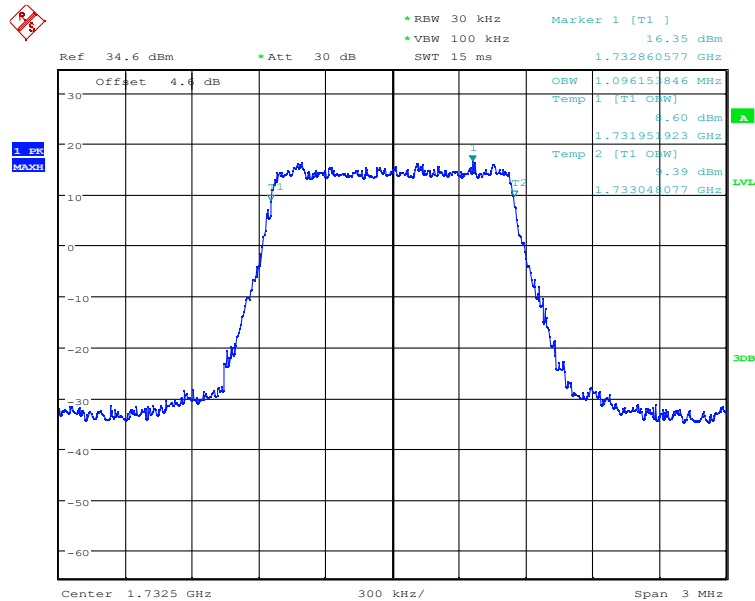
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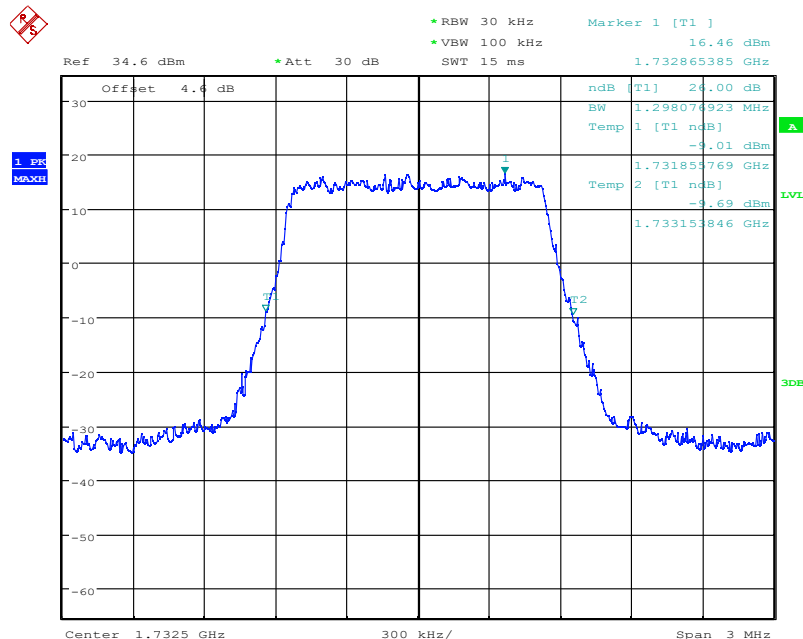
Page 57 of 271

Graphical results for LTE B4



Date: 15.DEC.2021 05:59:25

LTE Band4 QPSK 99% Channel 20175 BW=1.4MHz RB=6 RB Offset=0

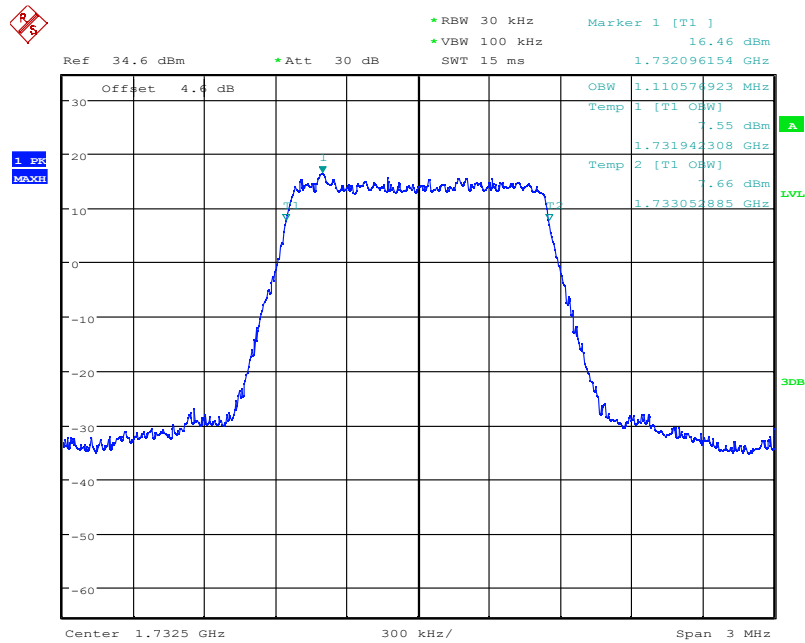


Date: 15.DEC.2021 05:59:19

LTE Band4 QPSK -26dBc Channel 20175 BW=1.4MHz RB=6 RB Offset=0

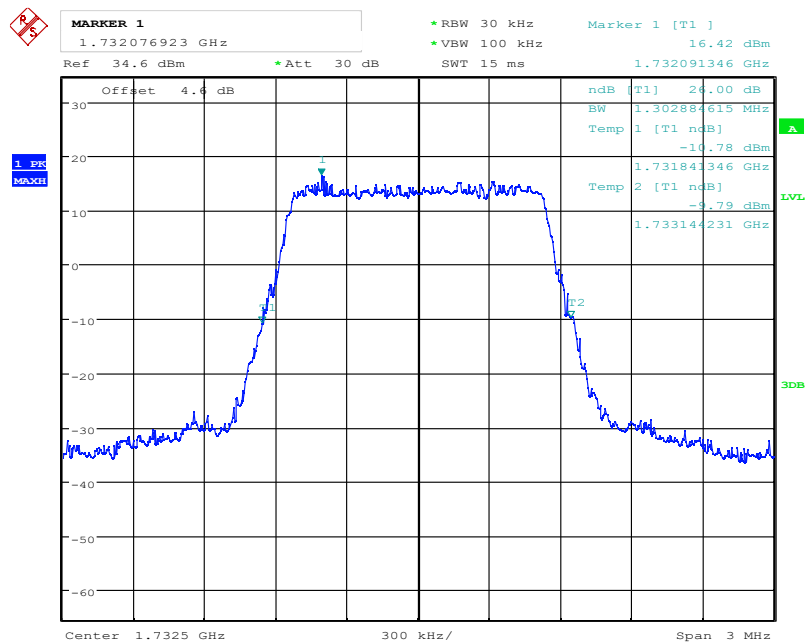
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Date: 15.DEC.2021 05:59:03

LTE Band4 16QAM 99% Channel 20175 BW=1.4MHz RB=6 RB Offset=0

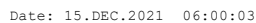
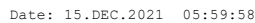


Date: 15.DEC.2021 05:59:09

LTE Band4 16QAM -26dBc Channel 20175 BW=1.4MHz RB=6 RB Offset=0

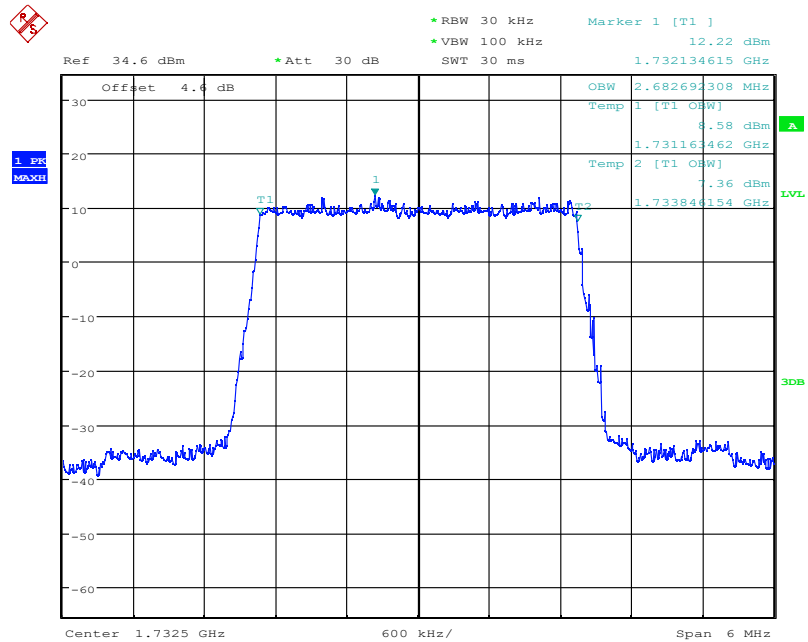
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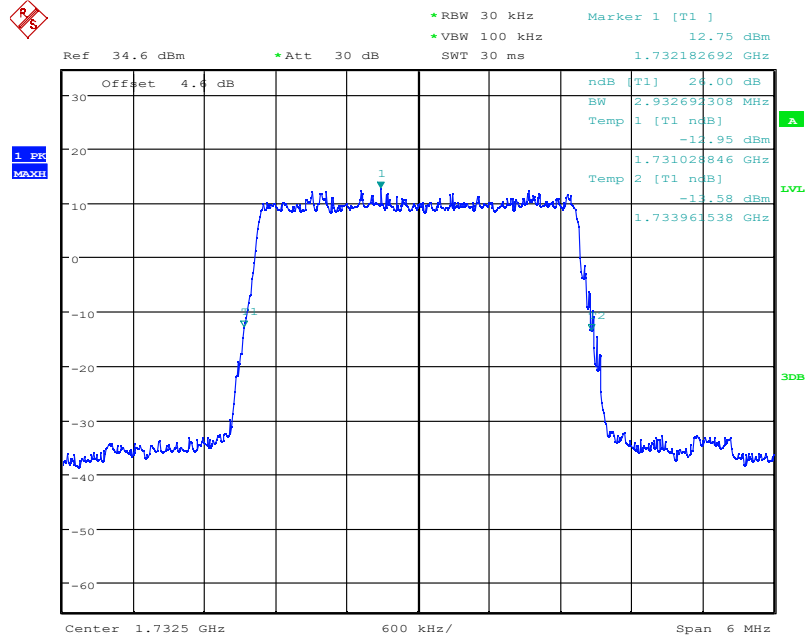
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Page 60 of 271



Date: 15.DEC.2021 06:00:17

LTE Band4 16QAM 99% Channel 20175 BW=3MHz RB=15 RB Offset=0

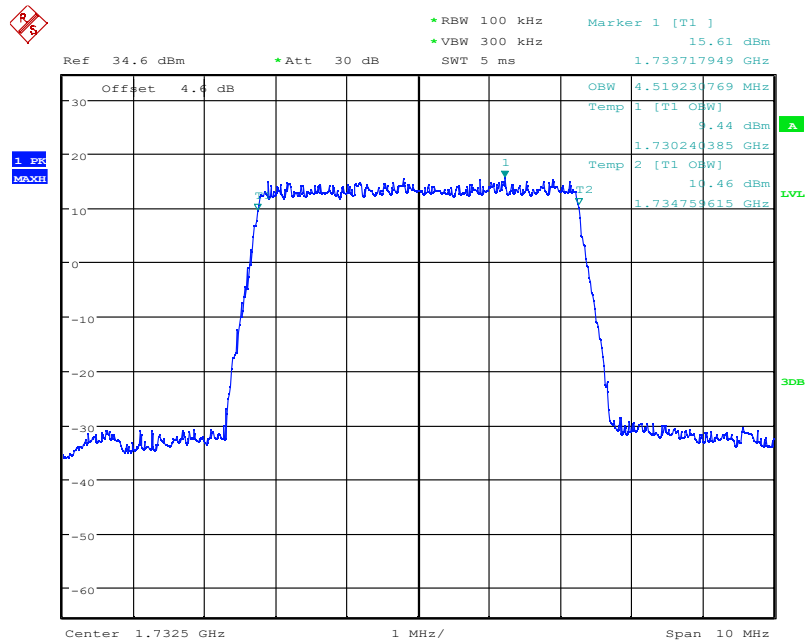


Date: 15.DEC.2021 06:00:11

LTE Band4 16QAM -26dBc Channel 20175 BW=3MHz RB=15 RB Offset=0

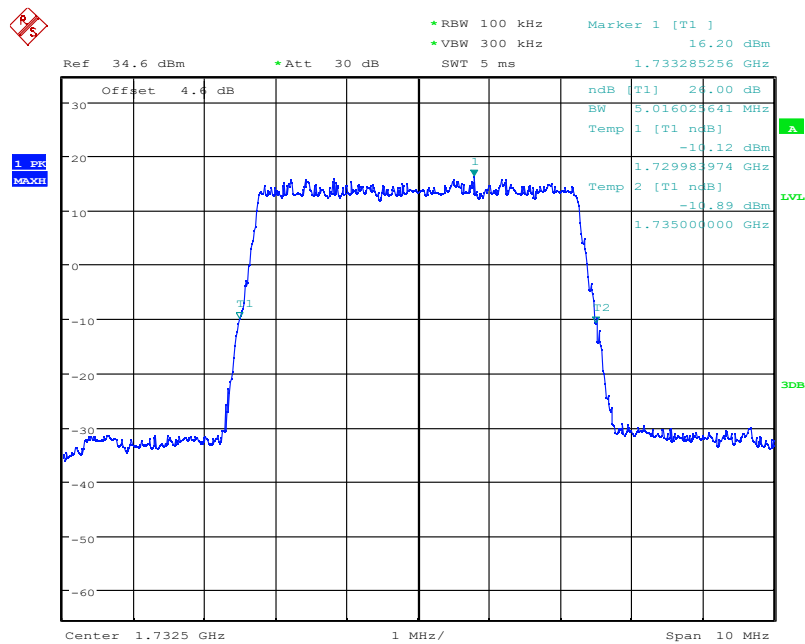
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Date: 15.DEC.2021 06:01:00

LTE Band4 QPSK 99% Channel 20175 BW=5MHz RB=25 RB Offset=0

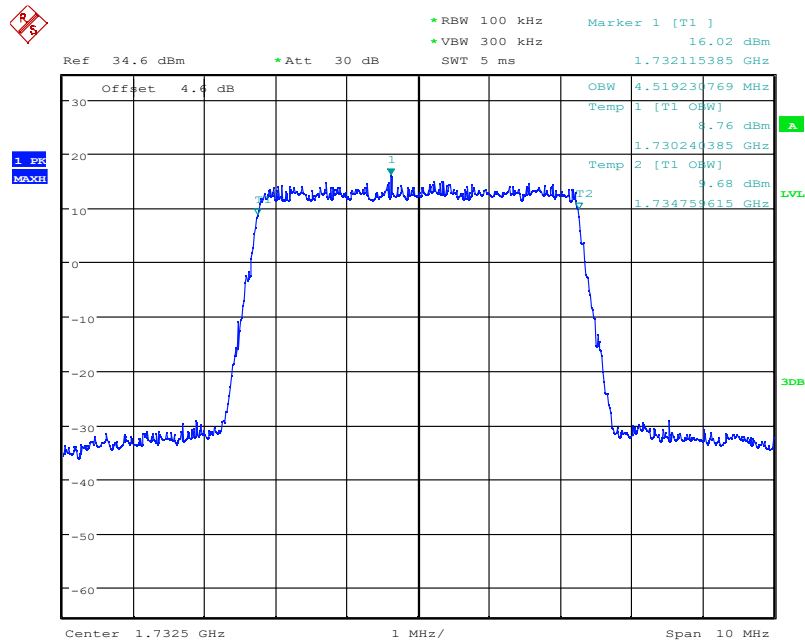


Date: 15.DEC.2021 06:00:52

LTE Band4 QPSK -26dBc Channel 20175 BW=5MHz RB=25 RB Offset=0

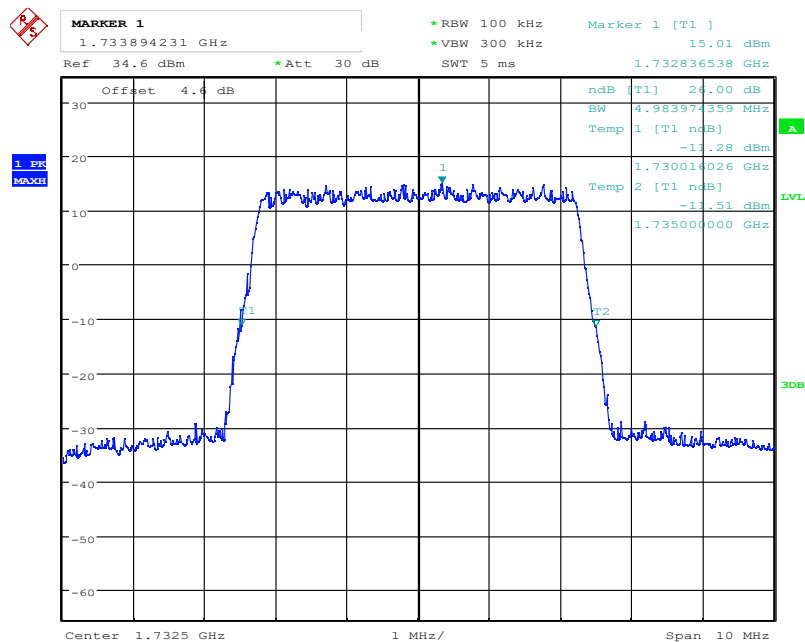
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Date: 15.DEC.2021 06:00:34

LTE Band4 16QAM 99% Channel 20175 BW=5MHz RB=25 RB Offset=0

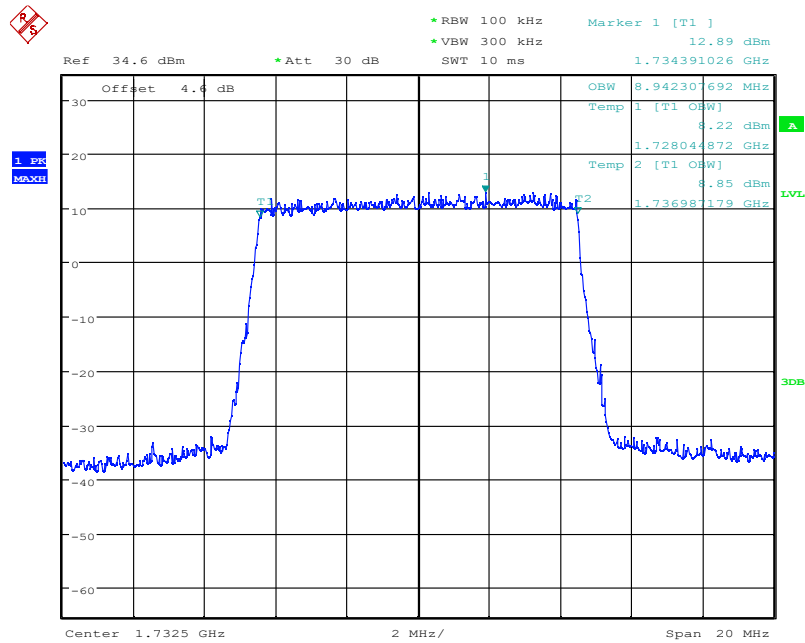


Date: 15.DEC.2021 06:00:42

LTE Band4 16QAM -26dBc Channel 20175 BW=5MHz RB=25 RB Offset=0

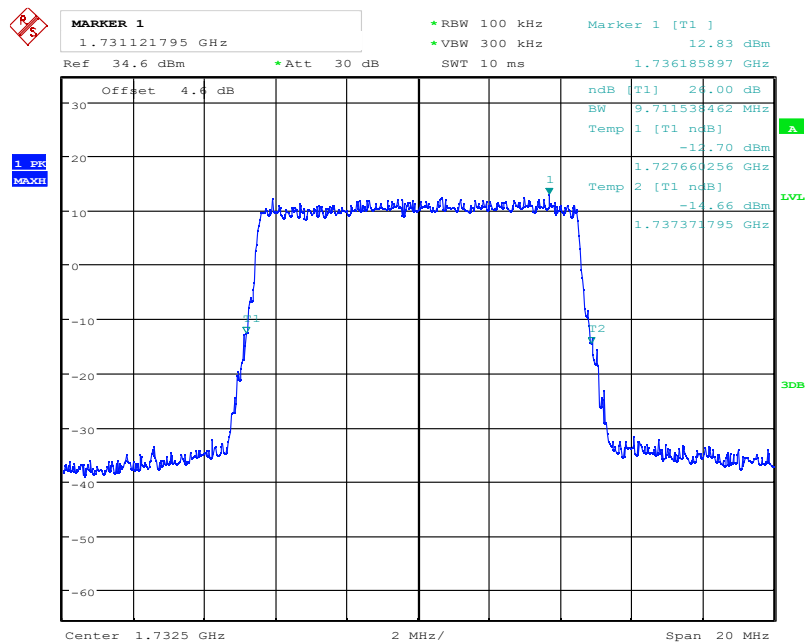
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Date: 15.DEC.2021 06:01:19

LTE Band4 QPSK 99% Channel 20175 BW=10MHz RB=50 RB Offset=0

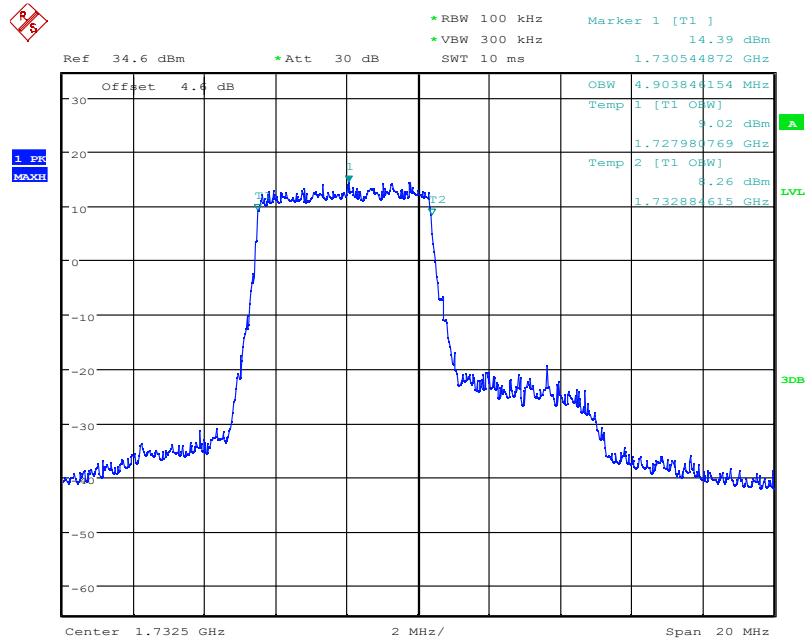


Date: 15.DEC.2021 06:01:25

LTE Band4 QPSK -26dBc Channel 20175 BW=10MHz RB=50 RB Offset=0

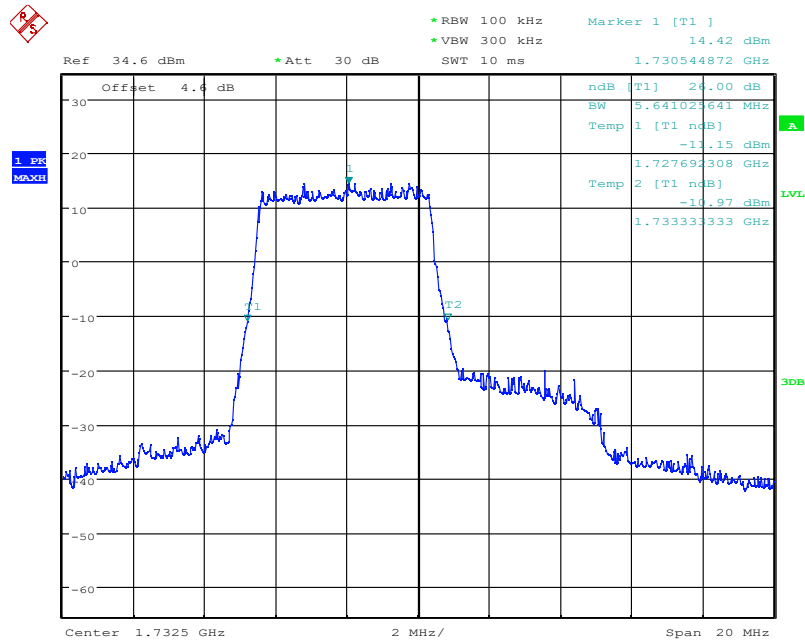
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Date: 15.DEC.2021 06:01:45

LTE Band4 16QAM 99% Channel 20175 BW=10MHz RB=27 RB Offset=0

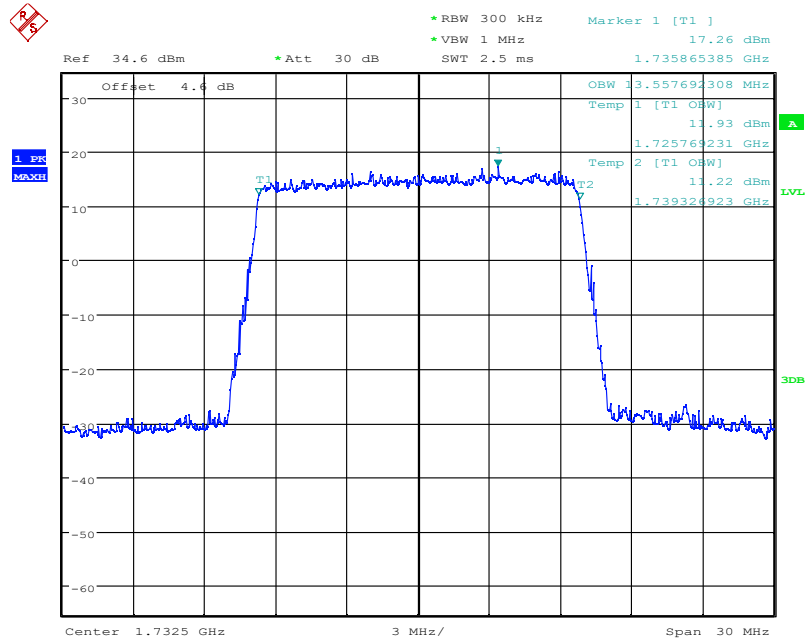


Date: 15.DEC.2021 06:01:38

LTE Band4 16QAM -26dBc Channel 20175 BW=10MHz RB=27 RB Offset=0

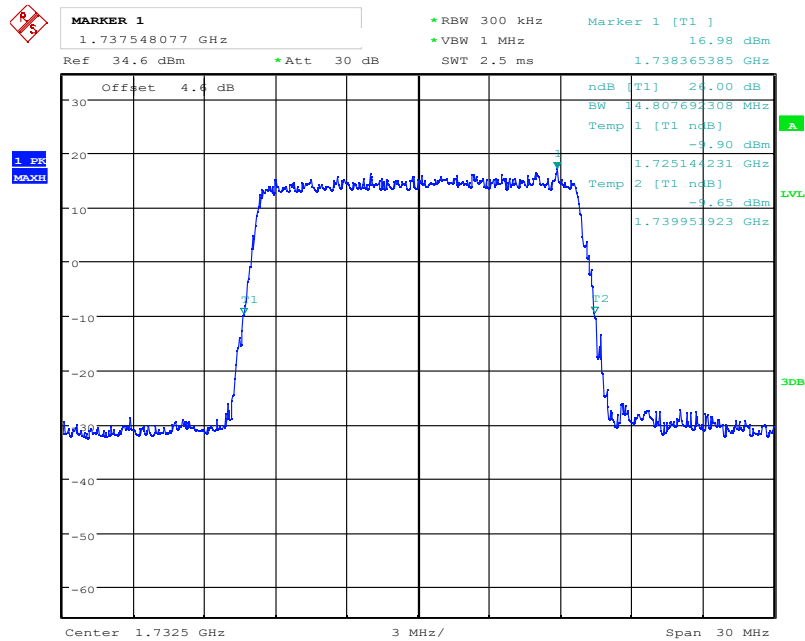
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Date: 15.DEC.2021 06:02:05

LTE Band4 QPSK 99% Channel 20175 BW=15MHz RB=75 RB Offset=0

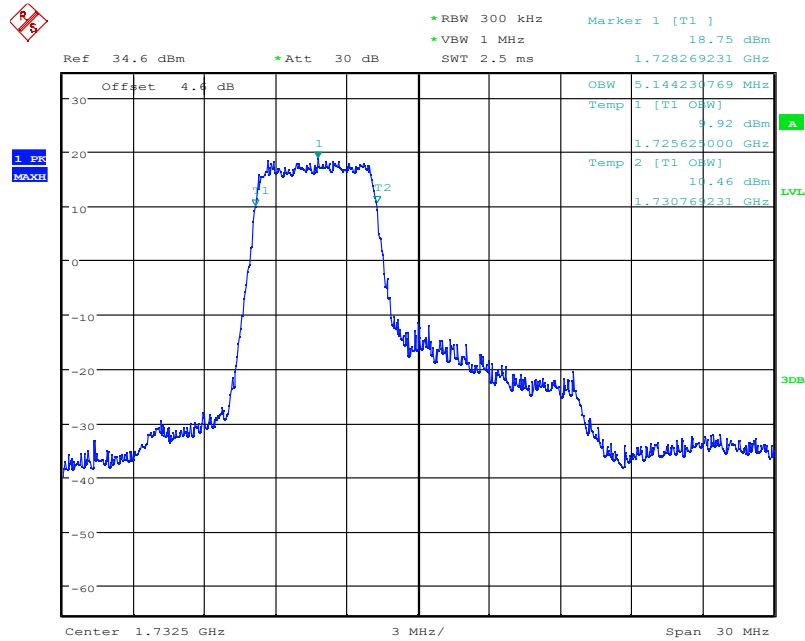


Date: 15.DEC.2021 06:02:11

LTE Band4 QPSK -26dBc Channel 20175 BW=15MHz RB=75 RB Offset=0

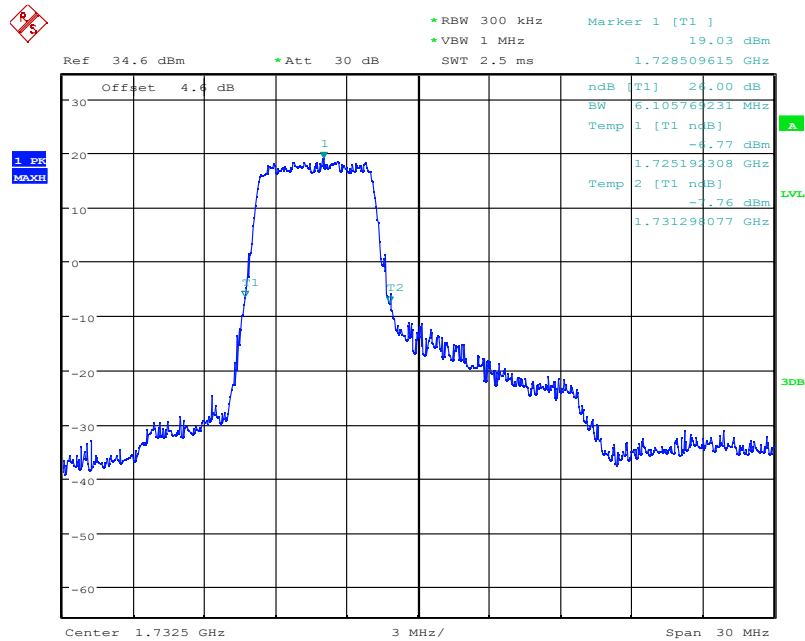
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Date: 15.DEC.2021 06:02:30

LTE Band4 16QAM 99% Channel 20175 BW=15MHz RB=27 RB Offset=0

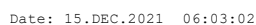
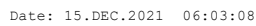


Date: 15.DEC.2021 06:02:24

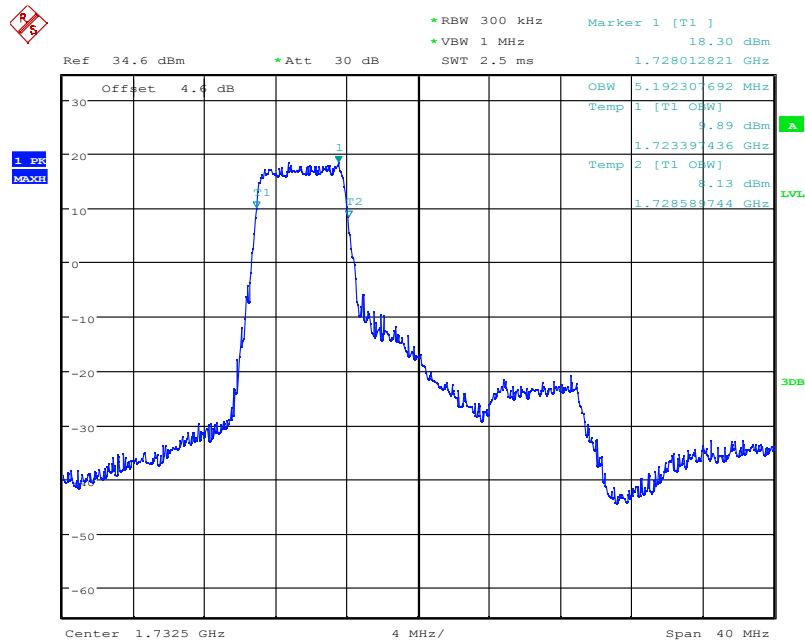
LTE Band4 16QAM -26dBc Channel 20175 BW=15MHz RB=27 RB Offset=0

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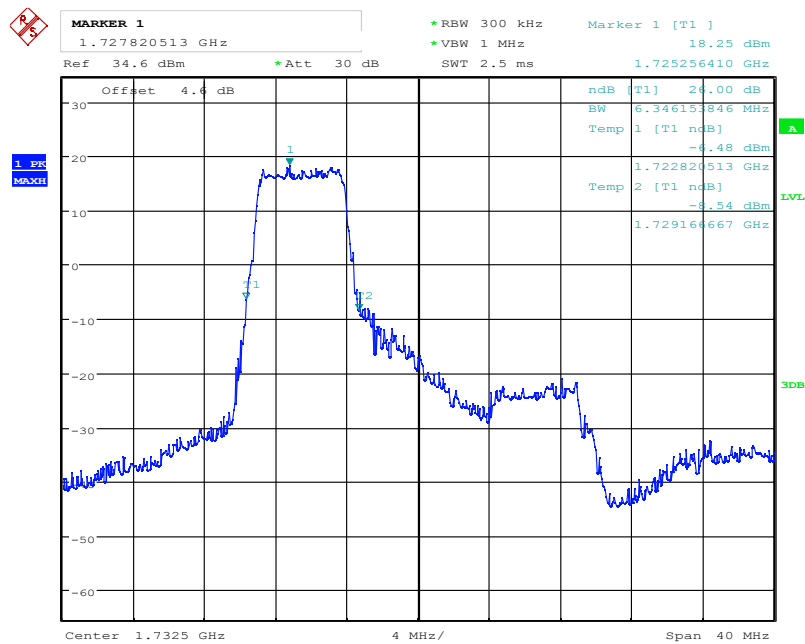


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Date: 15.DEC.2021 06:02:43

LTE Band4 16QAM 99% Channel 20175 BW=20MHz RB=27 RB Offset=0



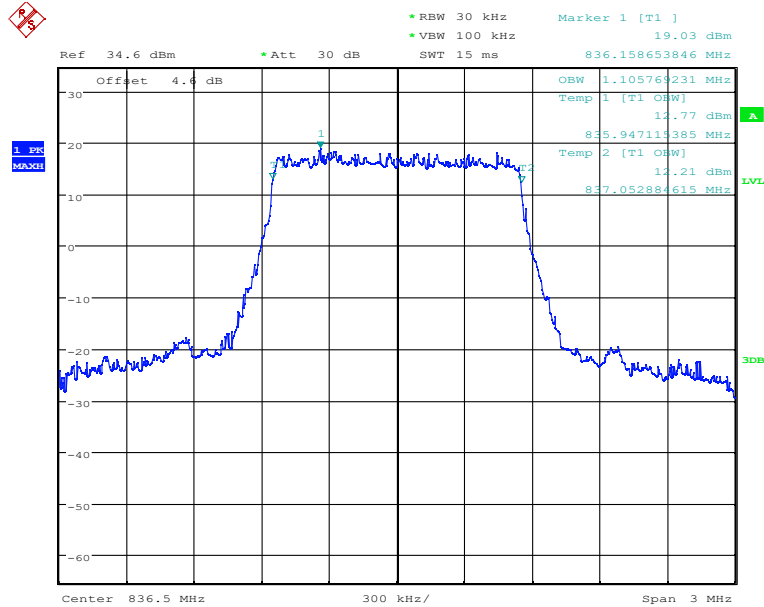
Date: 15.DEC.2021 06:02:49

LTE Band4 16QAM -26dBc Channel 20175 BW=20MHz RB=27 RB Offset=0

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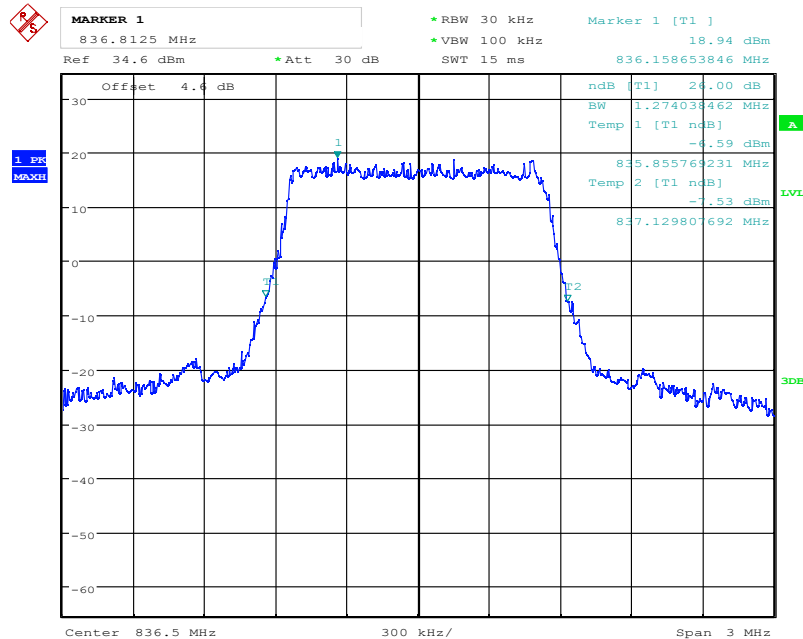
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Graphical results for LTE B5:



Date: 15.DEC.2021 06:04:07

LTE Band5 QPSK 99% Channel 20525 BW=1.4MHz RB=6 RB Offset=0

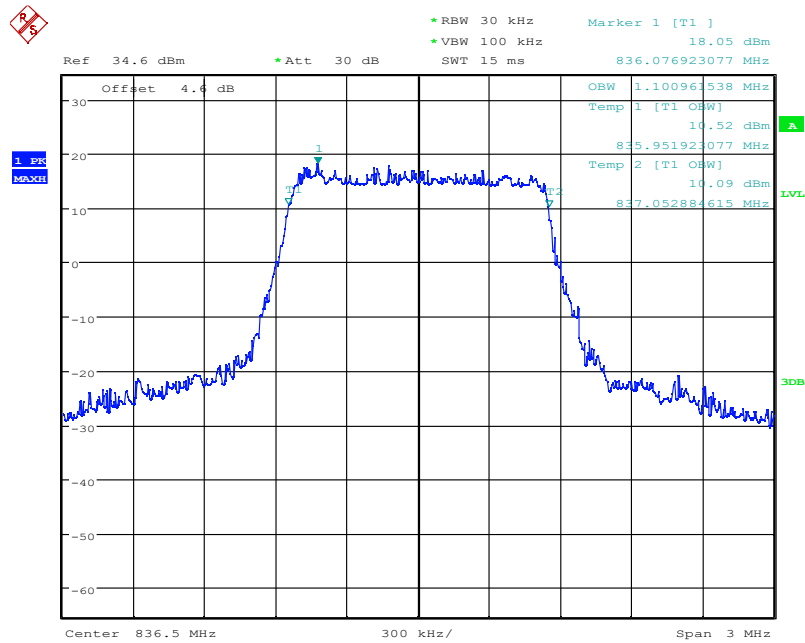


Date: 15.DEC.2021 06:04:15

LTE Band5 QPSK -26dBc Channel 20525 BW=1.4MHz RB=6 RB Offset=0

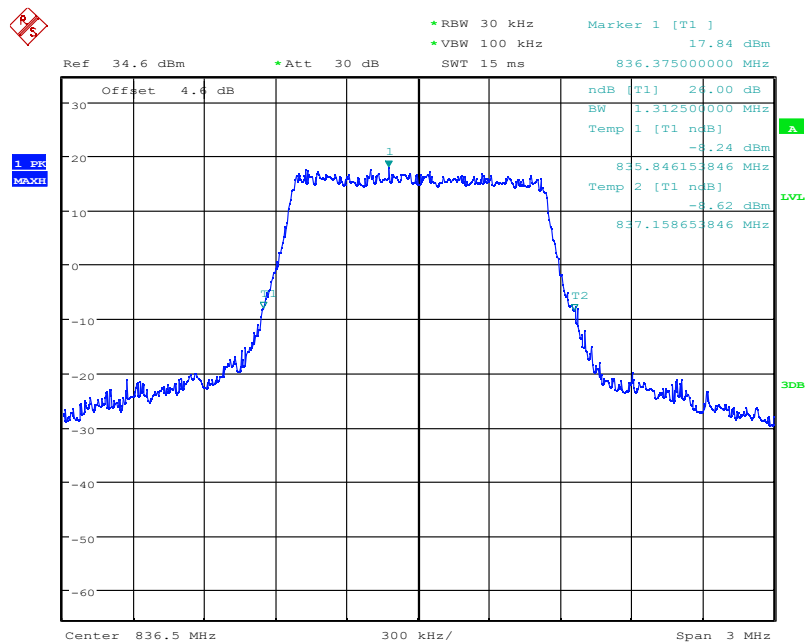
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Date: 15.DEC.2021 06:04:33

LTE Band5 16QAM 99% Channel 20525 BW=1.4MHz RB=6 RB Offset=0

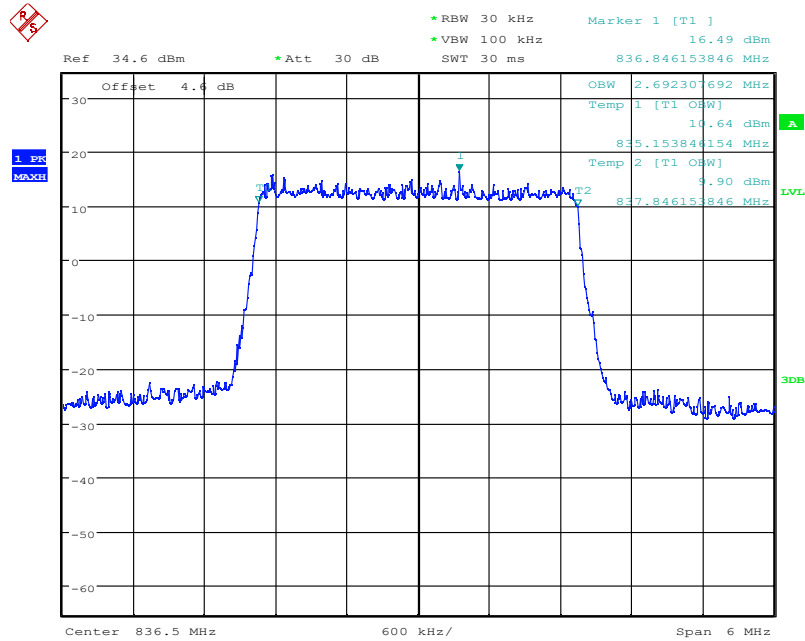


Date: 15.DEC.2021 06:04:27

LTE Band5 16QAM -26dBc Channel 20525 BW=1.4MHz RB=6 RB Offset=0

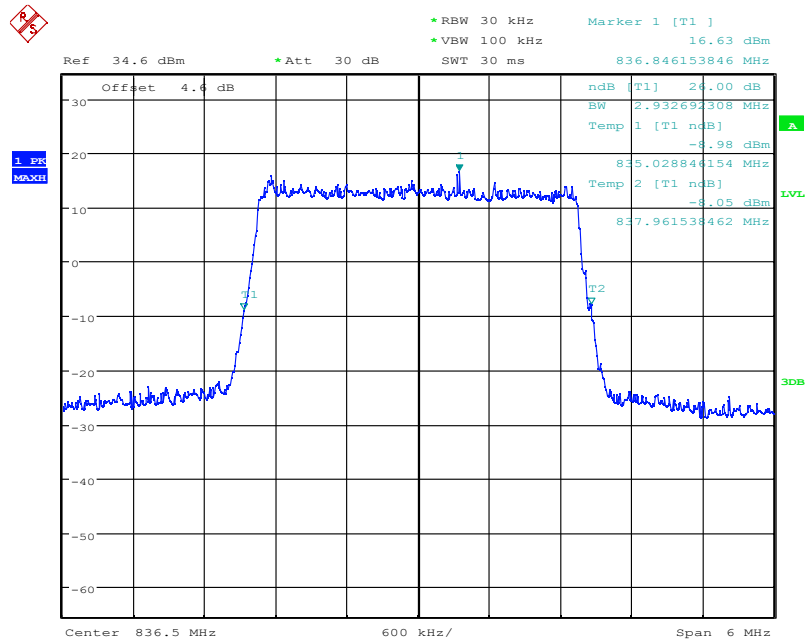
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Date: 15.DEC.2021 06:05:13

LTE Band5 QPSK 99% Channel 20525 BW=3MHz RB=15 RB Offset=0

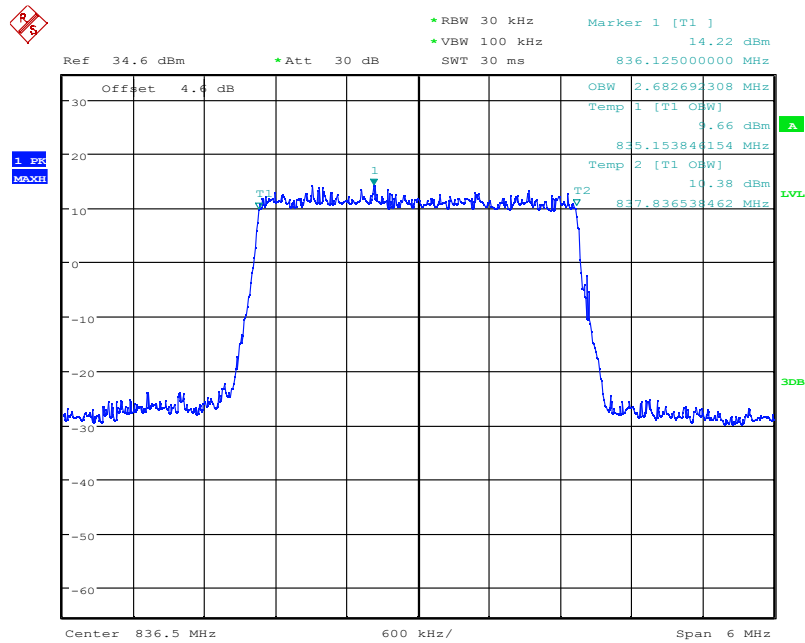


Date: 15.DEC.2021 06:05:05

LTE Band5 QPSK 16dBc Channel 20525 BW=3MHz RB=15 RB Offset=0

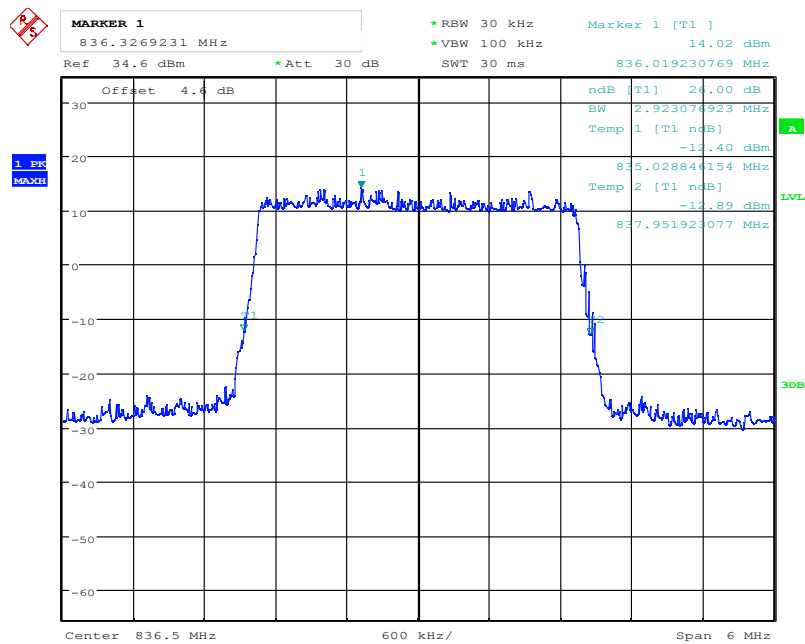
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Date: 15.DEC.2021 06:04:46

LTE Band5 16QAM 99% Channel 20525 BW=3MHz RB=15 RB Offset=0

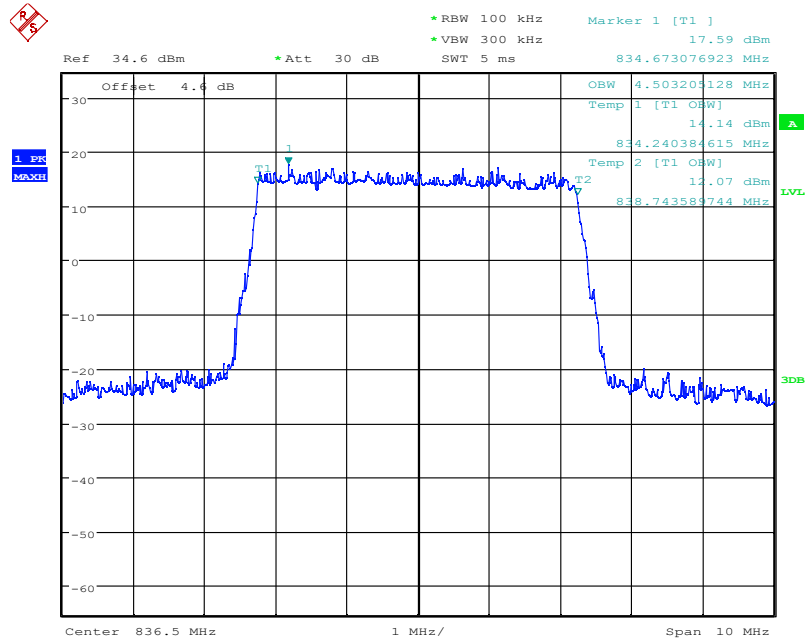


Date: 15.DEC.2021 06:04:53

LTE Band5 16QAM -26dBc Channel 20525 BW=3MHz RB=15 RB Offset=0

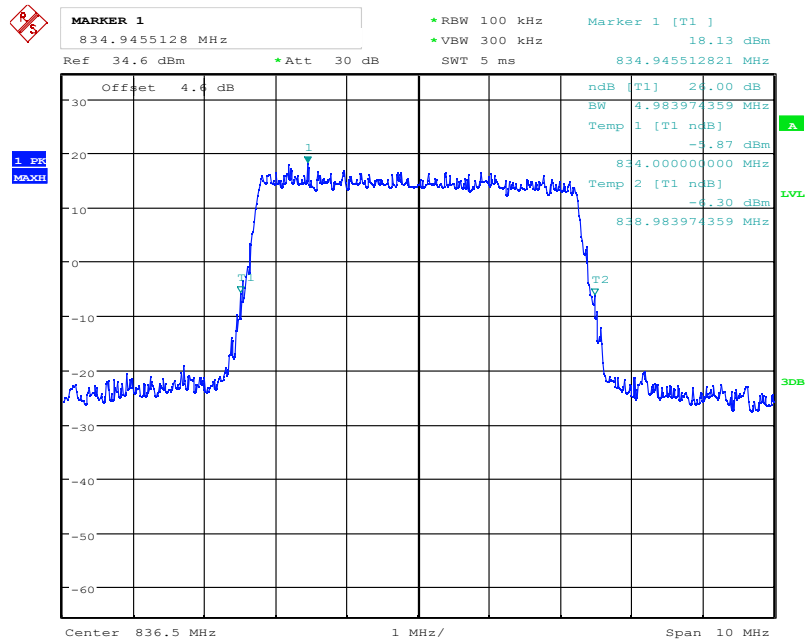
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Date: 15.DEC.2021 06:05:29

LTE Band5 QPSK 99% Channel 20525 BW=5MHz RB=25 RB Offset=0

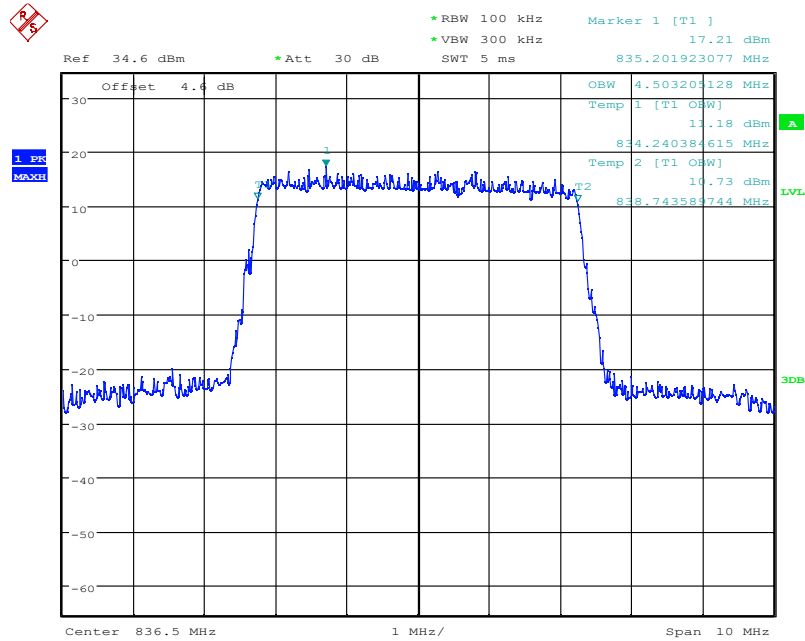


Date: 15.DEC.2021 06:05:35

LTE Band5 QPSK -26dBc Channel 20525 BW=5MHz RB=25 RB Offset=0

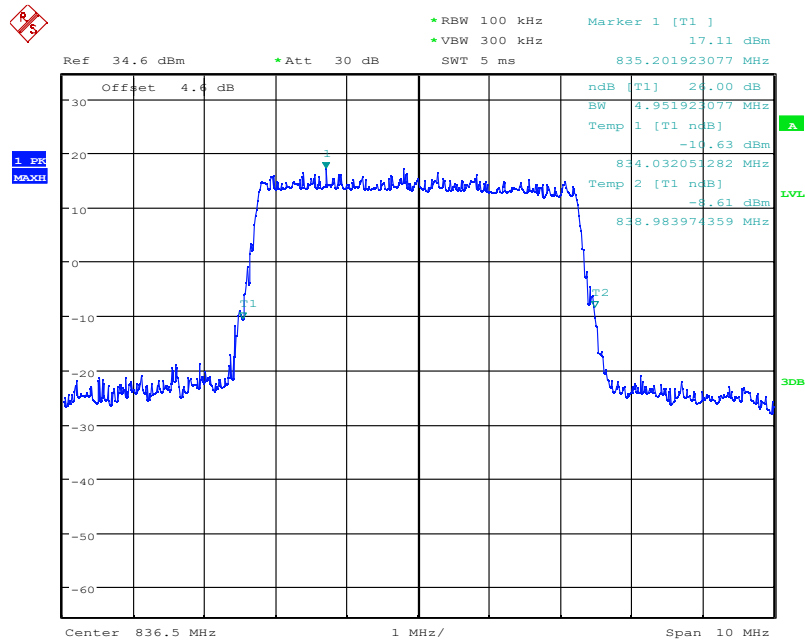
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Date: 15.DEC.2021 06:05:51

LTE Band5 16QAM 99% Channel 20525 BW=5MHz RB=25 RB Offset=0

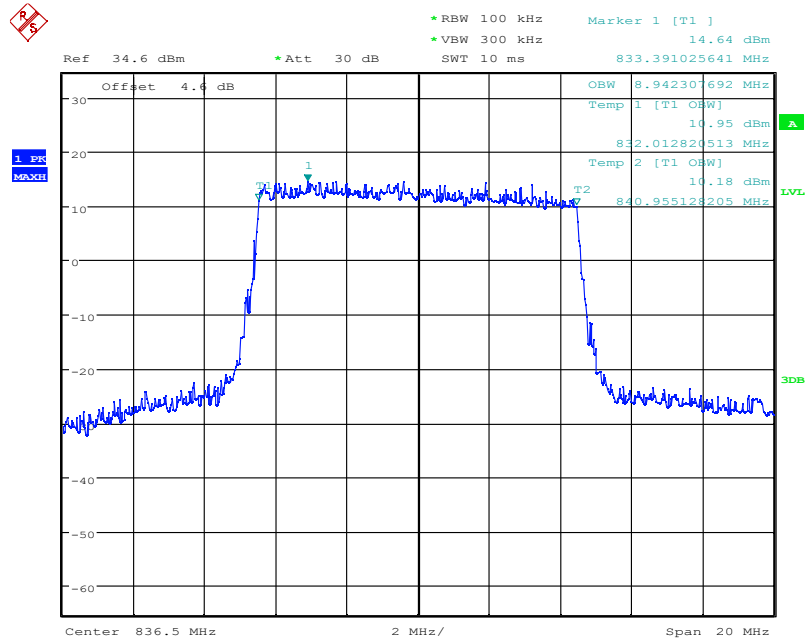


Date: 15.DEC.2021 06:05:45

LTE Band5 16QAM -26dBc Channel 20525 BW=5MHz RB=25 RB Offset=0

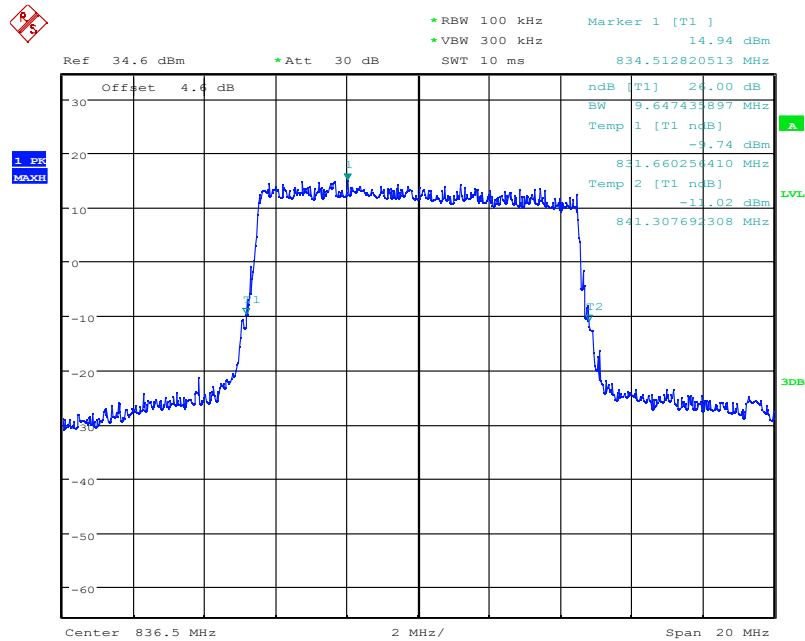
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Date: 15.DEC.2021 06:06:35

LTE Band5 QPSK 99% Channel 20525 BW=10MHz RB=50 RB Offset=0

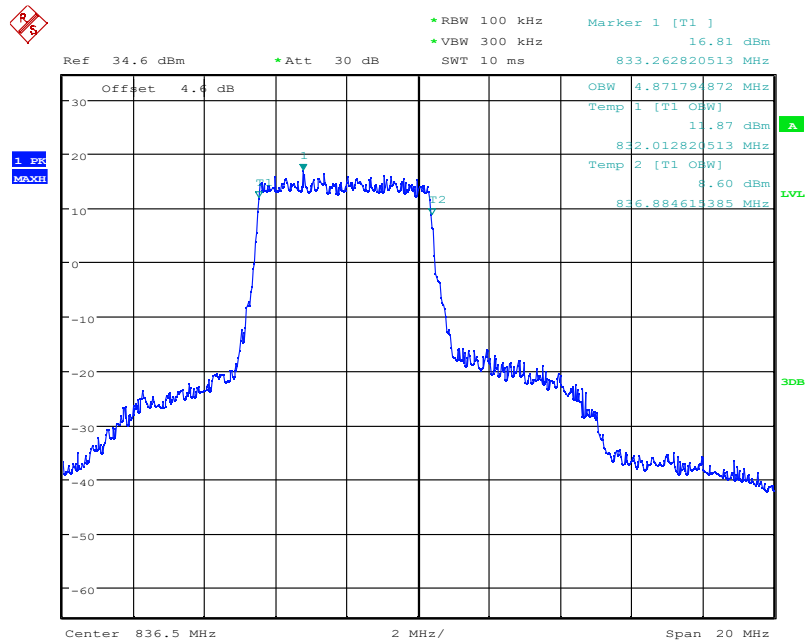


Date: 15.DEC.2021 06:06:28

LTE Band5 QPSK -26dBc Channel 20525 BW=10MHz RB=50 RB Offset=0

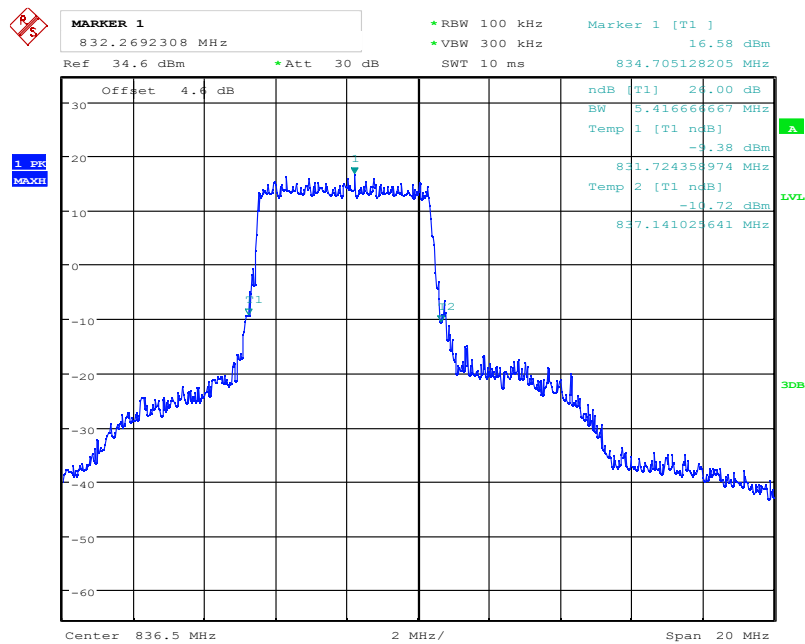
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Date: 15.DEC.2021 06:06:08

LTE Band5 16QAM 99% Channel 20525 BW=10MHz RB=27 RB Offset=0



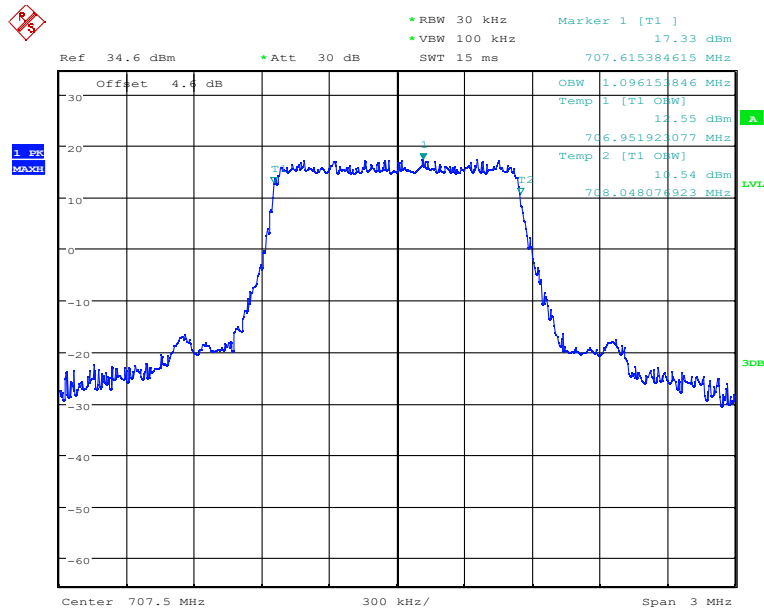
Date: 15.DEC.2021 06:06:16

LTE Band5 16QAM -26dBc Channel 20525 BW=10MHz RB=27 RB Offset=0

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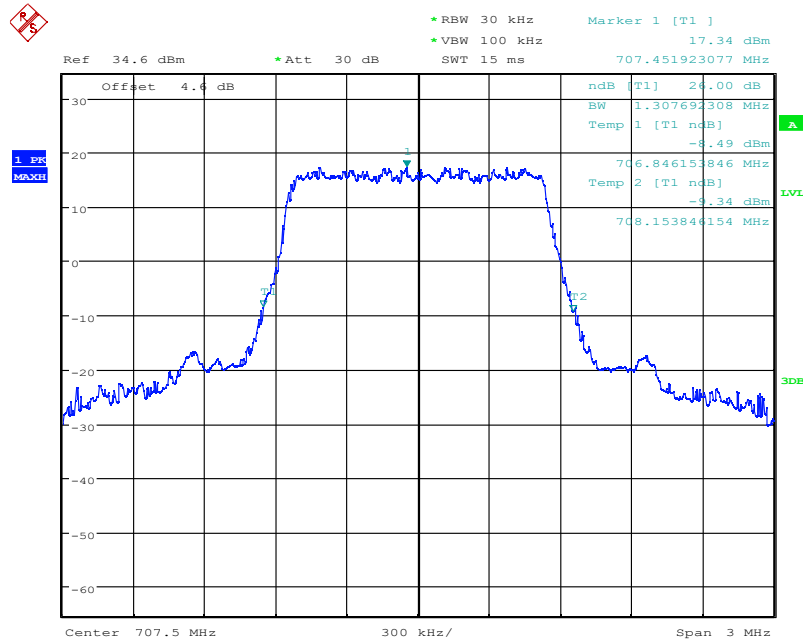
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Tel: 0086-23-88069965 FAX: 0086-23-88608777

Graphical results for LTE B12:



Date: 15.DEC.2021 06:08:13

LTE Band12 QPSK 99% Channel 23095 BW=1.4MHz RB=6 RB Offset=0

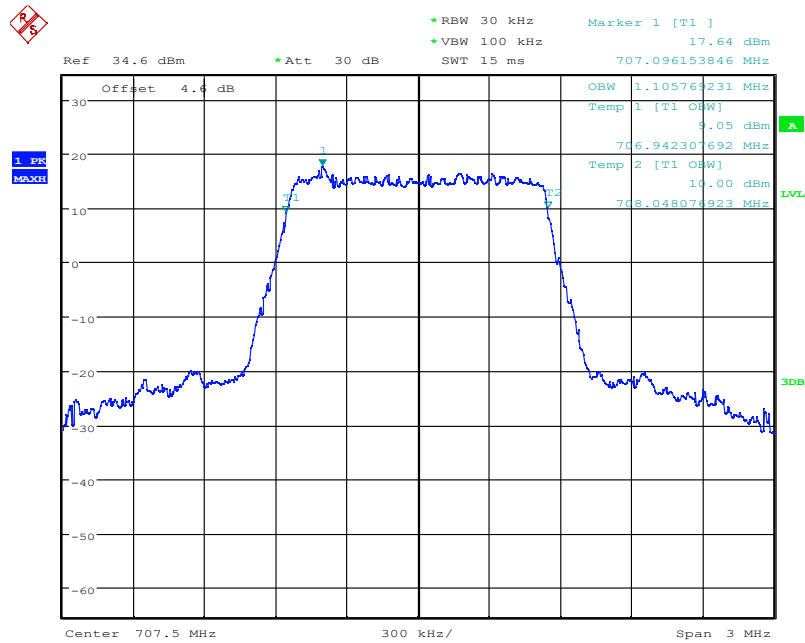


Date: 15.DEC.2021 06:08:08

LTE Band12 QPSK -26dBc Channel 23095 BW=1.4MHz RB=6 RB Offset=0

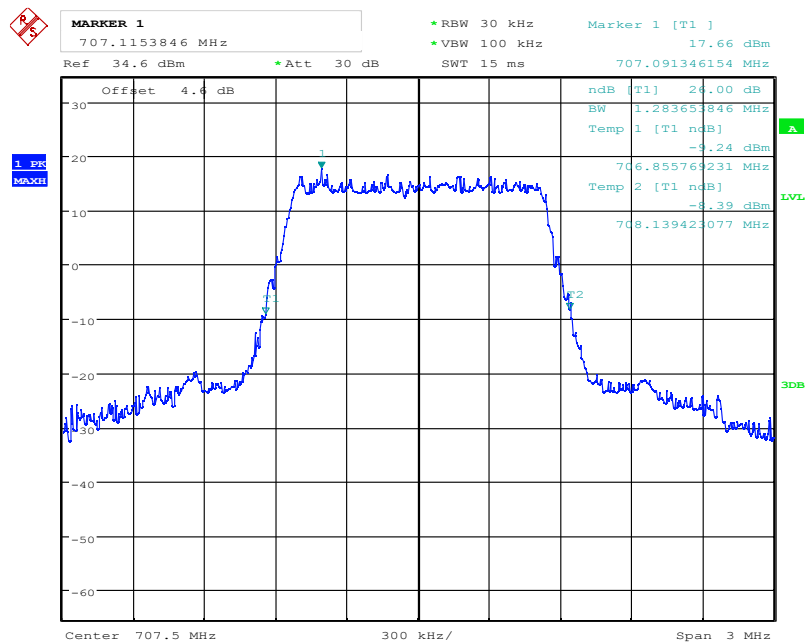
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Date: 15.DEC.2021 06:07:52

LTE Band12 16QAM 99% Channel 23095 BW=1.4MHz RB=6 RB Offset=0

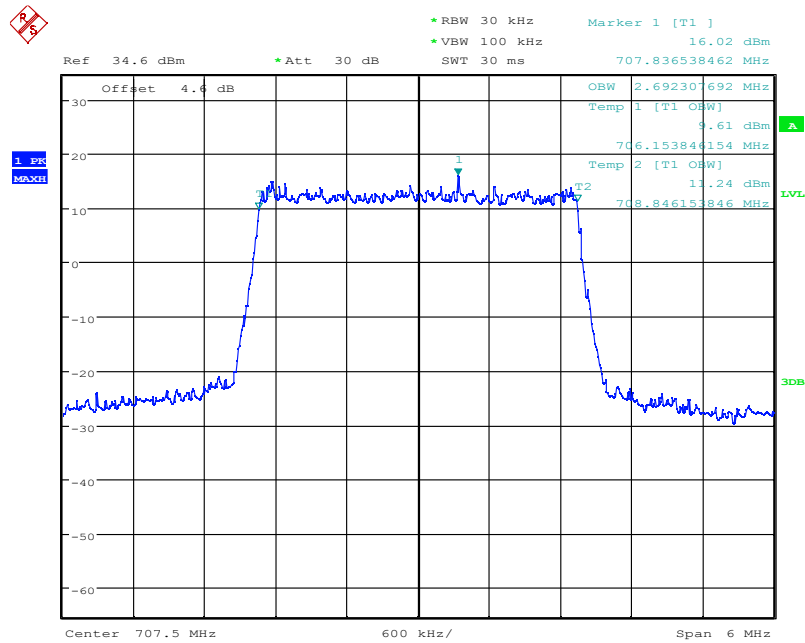


Date: 15.DEC.2021 06:07:58

LTE Band12 16QAM -26dBc Channel 23095 BW=1.4MHz RB=6 RB Offset=0

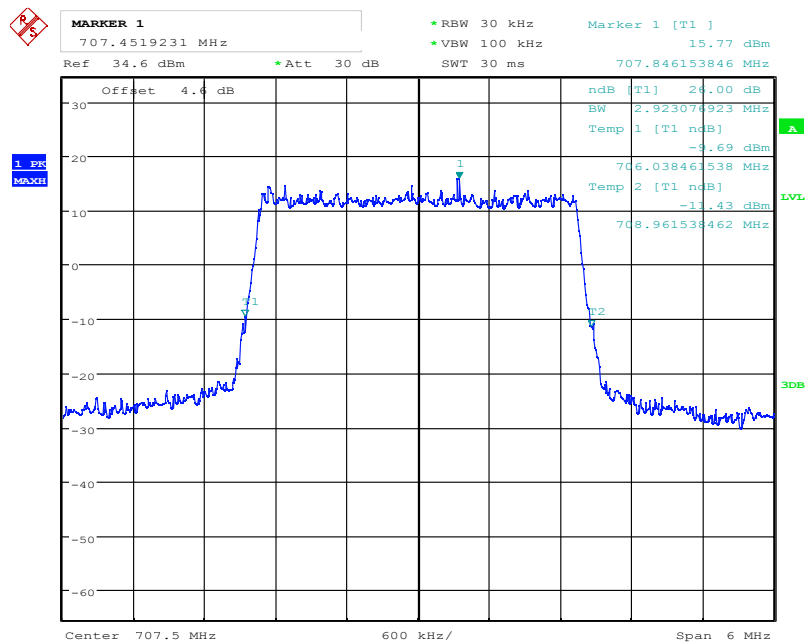
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Tel: 0086-23-88069965 FAX: 0086-23-88608777



Date: 15.DEC.2021 06:08:28

LTE Band12 QPSK 99% Channel 23095 BW=3MHz RB=15 RB Offset=0

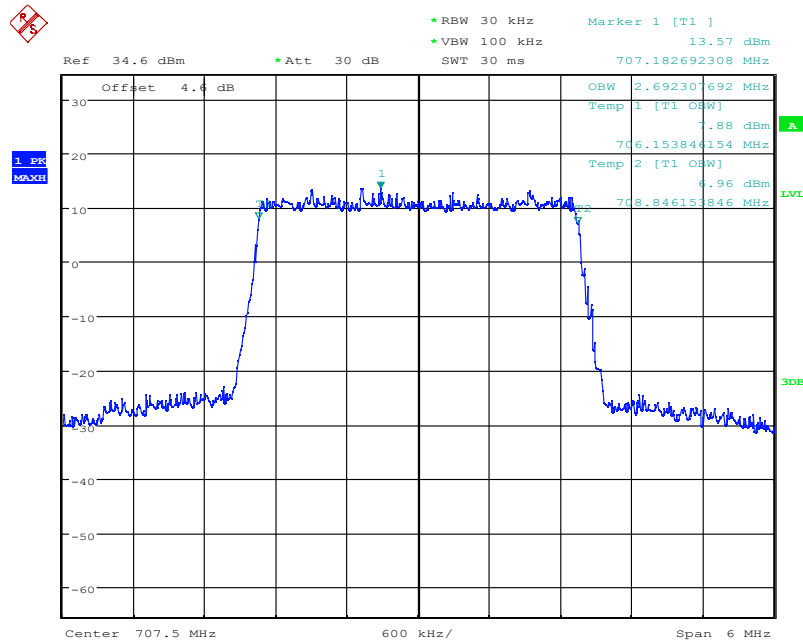


Date: 15.DEC.2021 06:08:34

LTE Band12 QPSK -26dBc Channel 23095 BW=3MHz RB=15 RB Offset=0

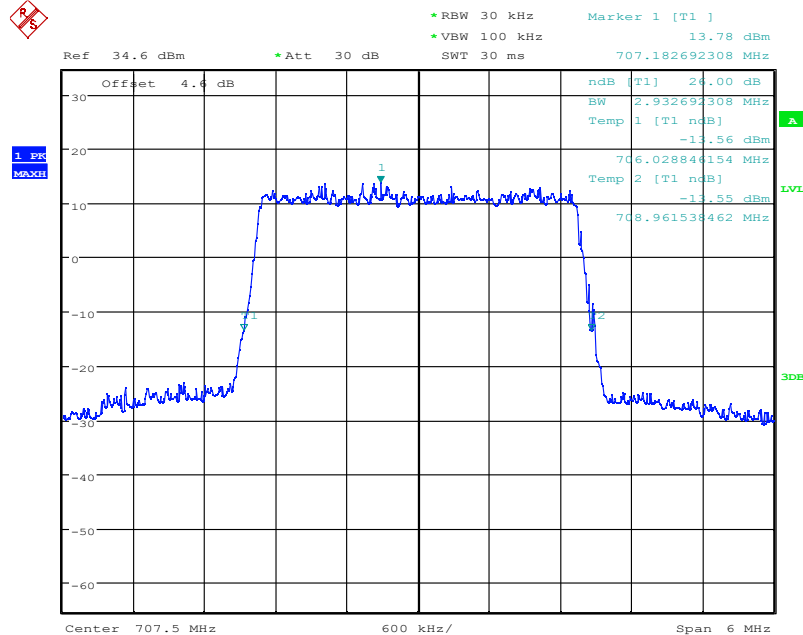
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Date: 15.DEC.2021 06:08:51

LTE Band12 16QAM 99% Channel 23095 BW=3MHz RB=15 RB Offset=0

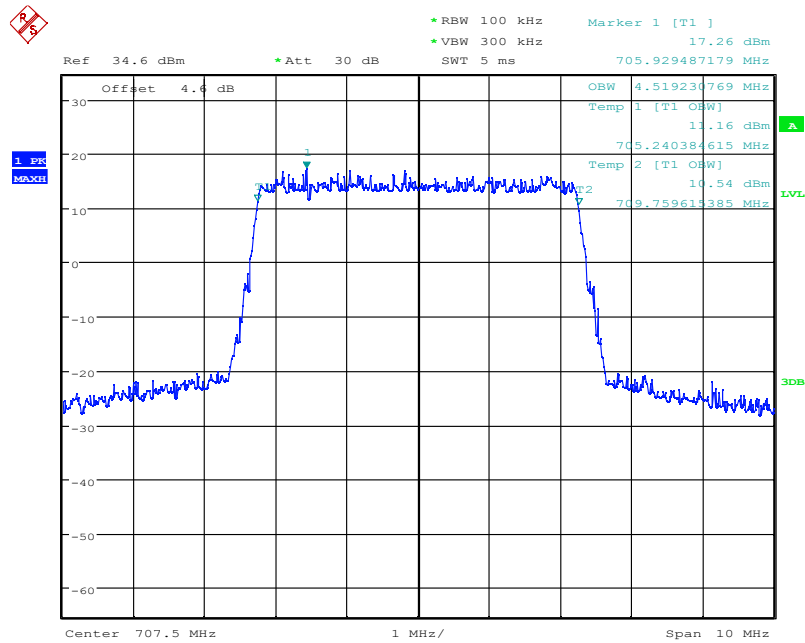


Date: 15.DEC.2021 06:08:44

LTE Band12 16QAM -26dBc Channel 23095 BW=3MHz RB=15 RB Offset=0

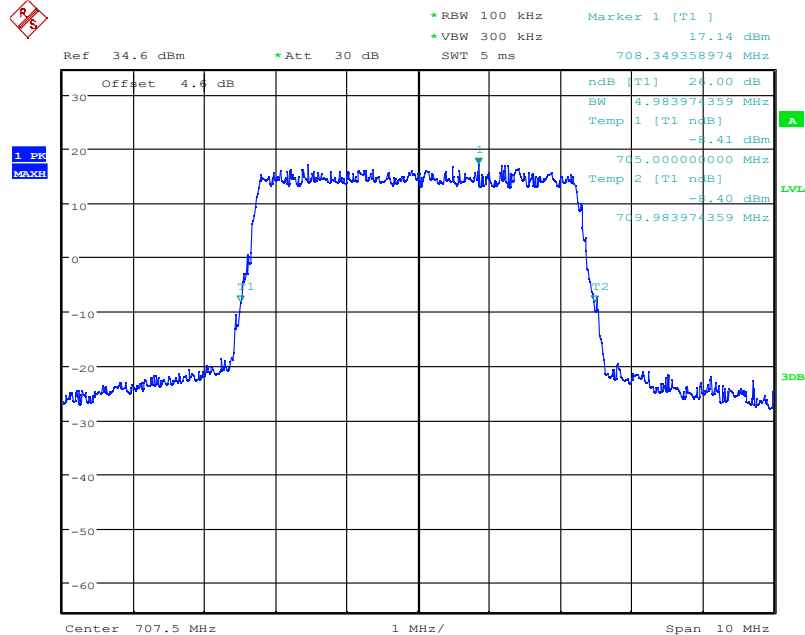
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Date: 15.DEC.2021 06:09:37

LTE Band12 QPSK 99% Channel 23095 BW=5MHz RB=25 RB Offset=0

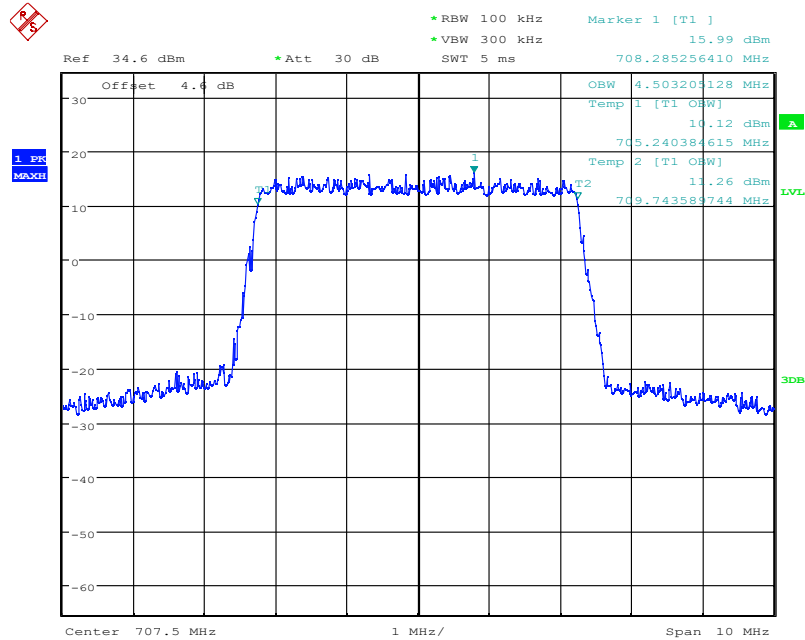


Date: 15.DEC.2021 06:09:32

LTE Band12 QPSK -26dBc Channel 23095 BW=5MHz RB=25 RB Offset=0

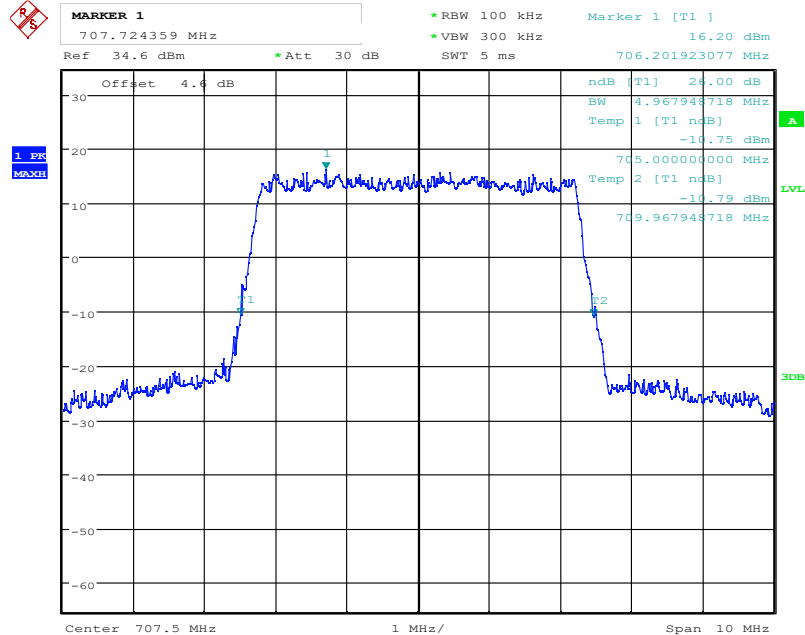
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Date: 15.DEC.2021 06:09:09

LTE Band12 16QAM 99% Channel 23095 BW=5MHz RB=25 RB Offset=0

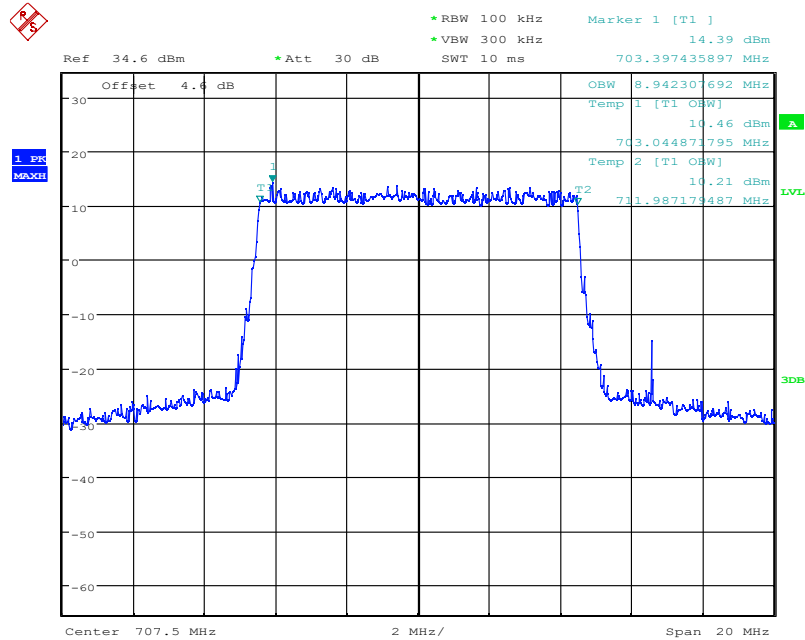


Date: 15.DEC.2021 06:09:18

LTE Band12 16QAM -26dBc Channel 23095 BW=5MHz RB=25 RB Offset=0

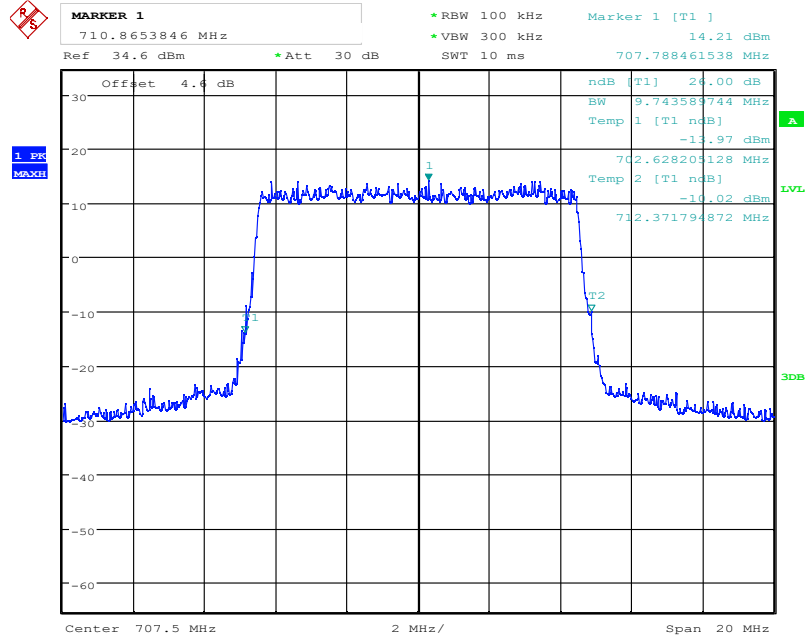
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Date: 15.DEC.2021 06:09:51

LTE Band12 QPSK 99% Channel 23095 BW=10MHz RB=50 RB Offset=0

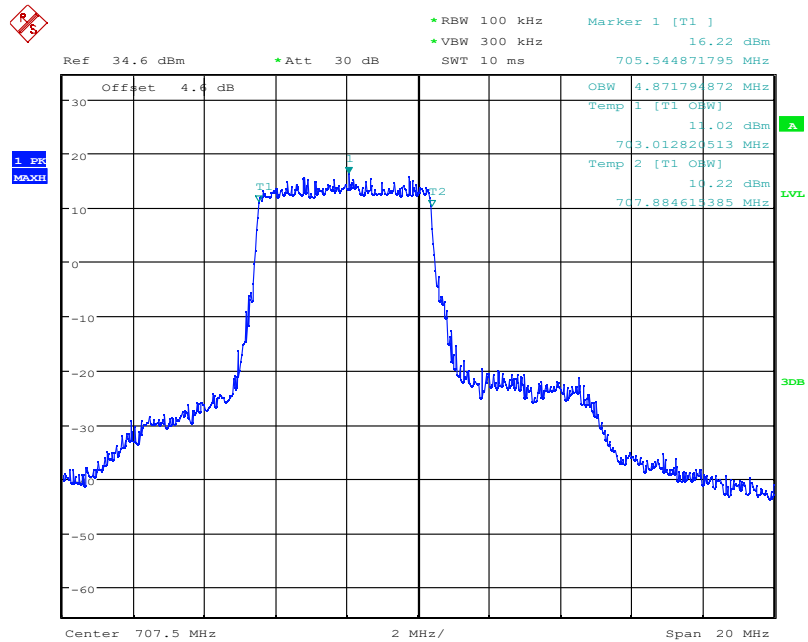


Date: 15.DEC.2021 06:09:58

LTE Band12 QPSK -26dBc Channel 23095 BW=10MHz RB=50 RB Offset=0

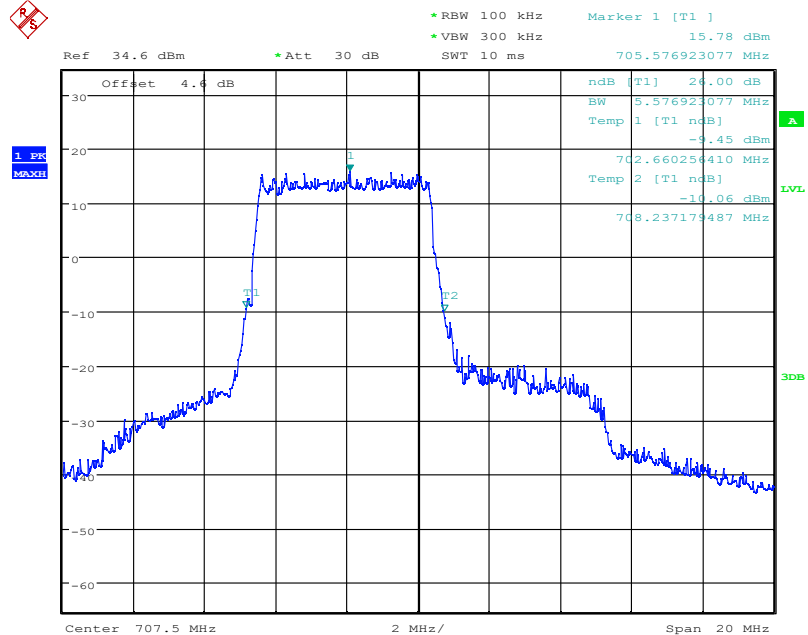
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Date: 15.DEC.2021 06:10:24

LTE Band12 16QAM 99% Channel 23095 BW=10MHz RB=27 RB Offset=0



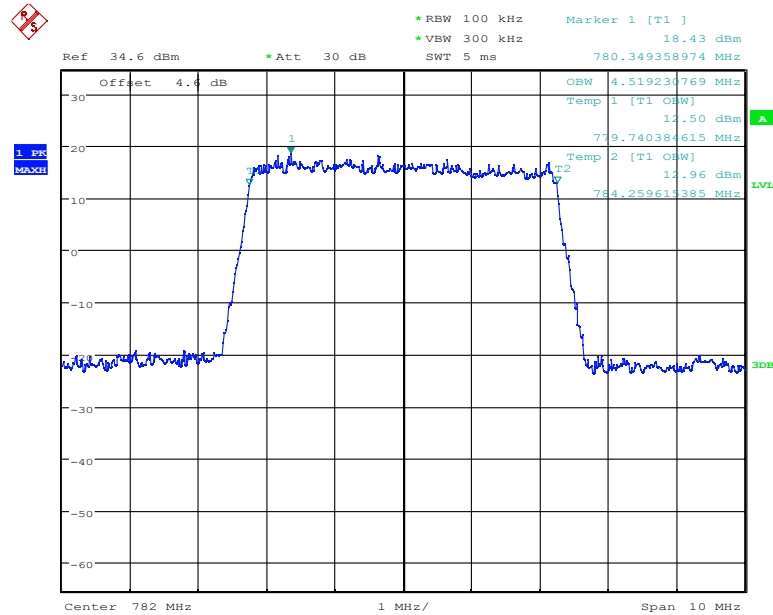
Date: 15.DEC.2021 06:10:18

LTE Band12 16QAM -26dBc Channel 23095 BW=10MHz RB=27 RB Offset=0

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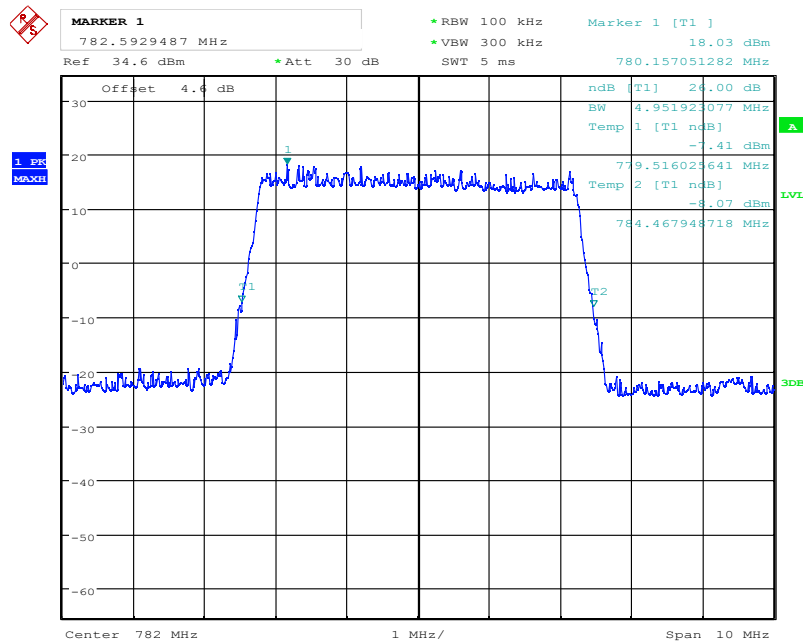
Address: No. 8, Yuma Road, Chayuan New City, Nan'an District, Chongqing, P. R. China, 401336
Tel: 0086-23-88069965 FAX: 0086-23-88608777

Graphical results for LTE B13:



Date: 15.DEC.2021 06:13:19

LTE Band13 QPSK 99% Channel 23230 BW=5MHz RB=25 RB Offset=0

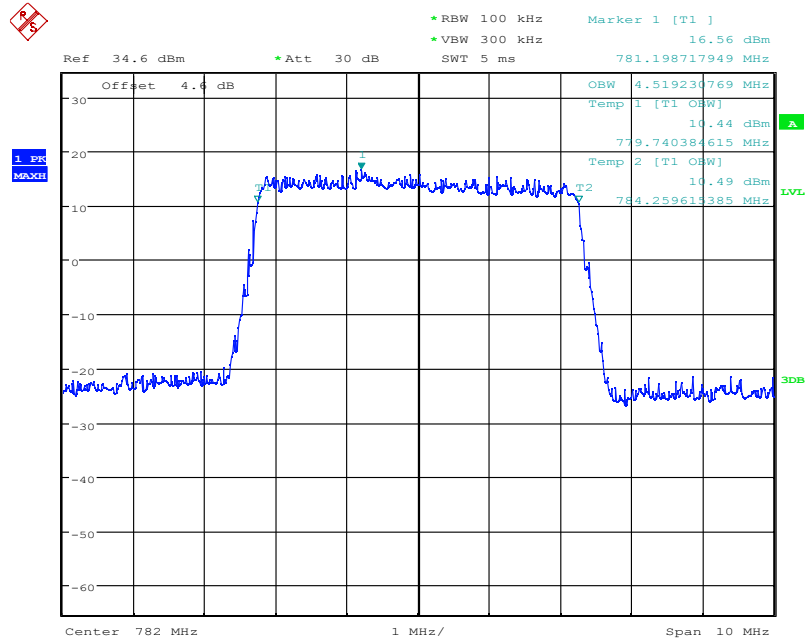


Date: 15.DEC.2021 06:13:25

LTE Band13 QPSK -26dBc Channel 23230 BW=5MHz RB=25 RB Offset=0

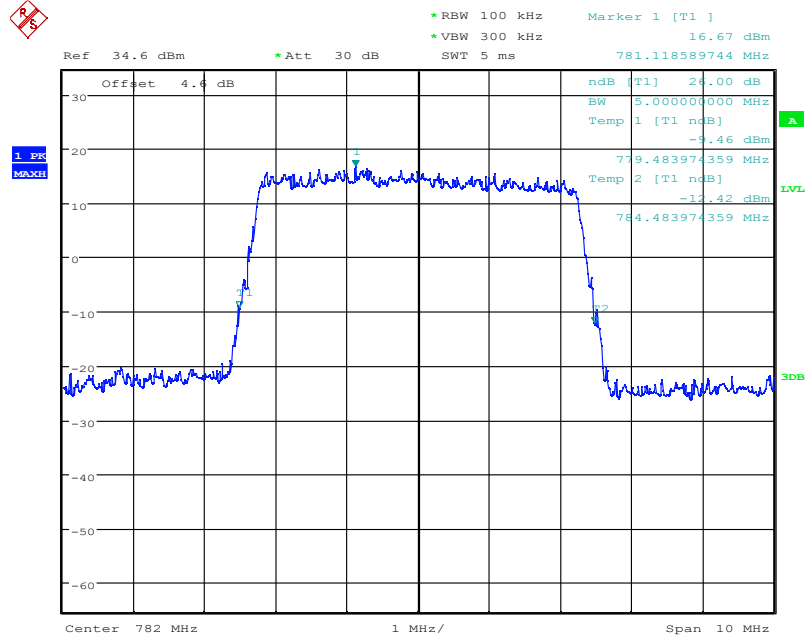
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Tel: 0086-23-88069965 FAX: 0086-23-88608777



Date: 15.DEC.2021 06:13:41

LTE Band13 16QAM 99% Channel 23230 BW=5MHz RB=25 RB Offset=0

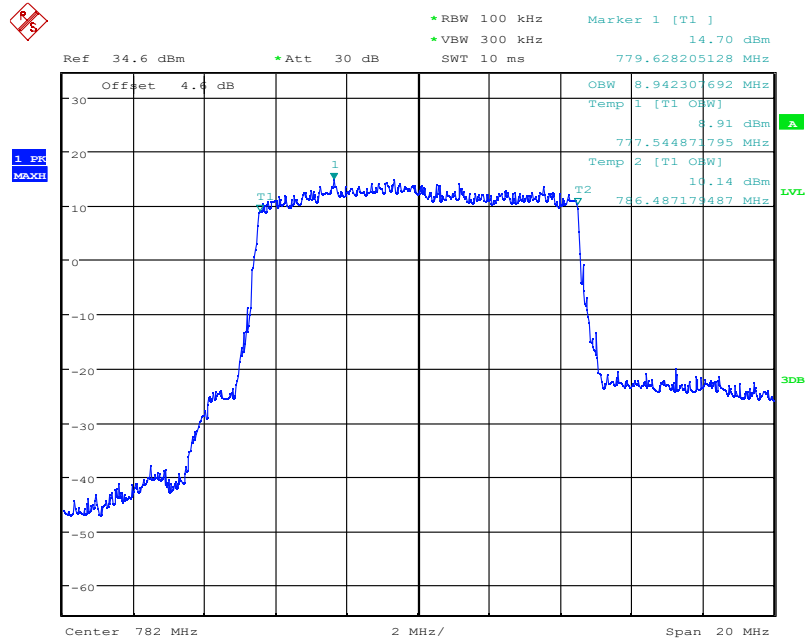


Date: 15.DEC.2021 06:13:34

LTE Band13 16QAM -26dBc Channel 23230 BW=5MHz RB=25 RB Offset=0

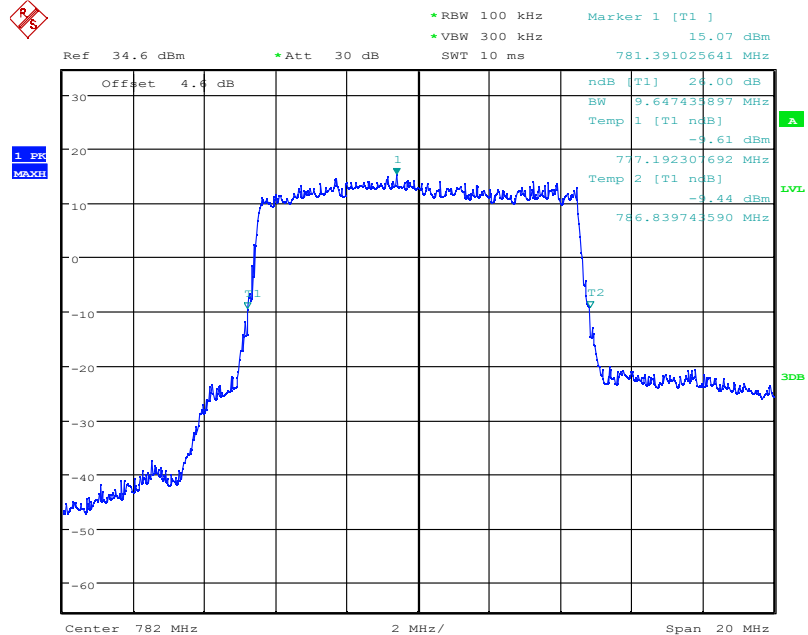
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Tel: 0086-23-88069965 FAX: 0086-23-88608777



Date: 15.DEC.2021 06:14:53

LTE Band13 QPSK 99% Channel 23230 BW=10MHz RB=50 RB Offset=0

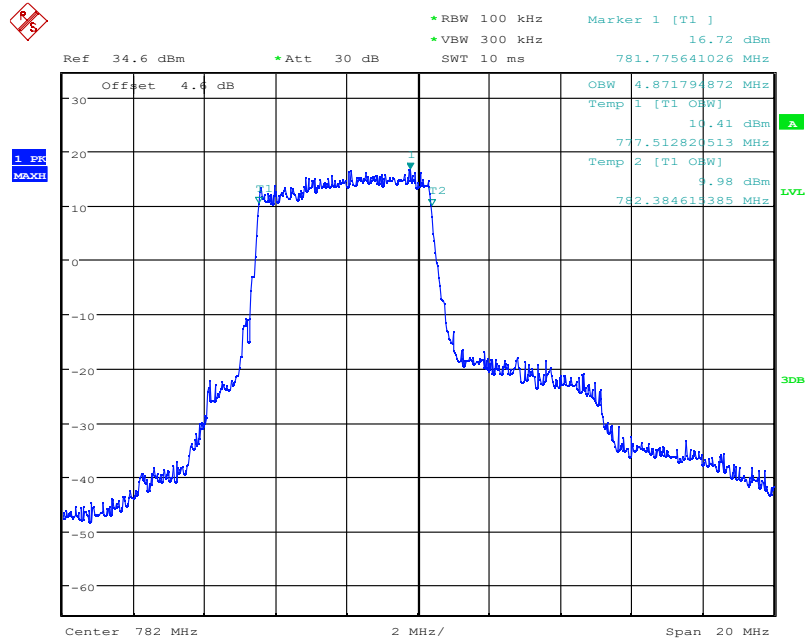


Date: 15.DEC.2021 06:14:48

LTE Band13 QPSK -26dBc Channel 23230 BW=10MHz RB=50 RB Offset=0

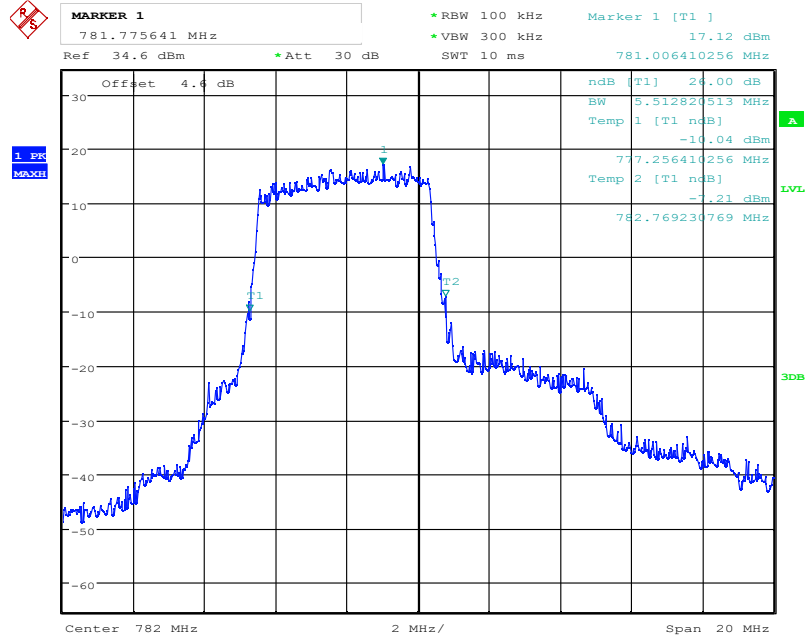
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Date: 15.DEC.2021 06:13:57

LTE Band13 16QAM 99% Channel 23230 BW=10MHz RB=27 RB Offset=0



Date: 15.DEC.2021 06:14:02

LTE Band13 16QAM -26dBc Channel 23230 BW=10MHz RB=27 RB Offset=0

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6.5. Conducted spurious emissions

Specifications:	FCC Part 2.1051, 24.238, 2.1053, 22.917, 27.53
DUT Serial Number:	865171050693608
Test conditions:	Ambient Temperature:15℃-35℃ Relative Humidity:30%-60% Air pressure: 86-106kPa
Test Results:	Pass

Limit Level Construction:

According to Part 22.917 (a), i.e., Out of Band emissions. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB.

According to Part 24.238 (a), i.e., Out of Band emissions. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB, so the limit level is: $P(\text{dBm}) - (43 + 10 \log(P)) \text{ dB} = -13 \text{ dBm}$.

According to Part 27.53(h):

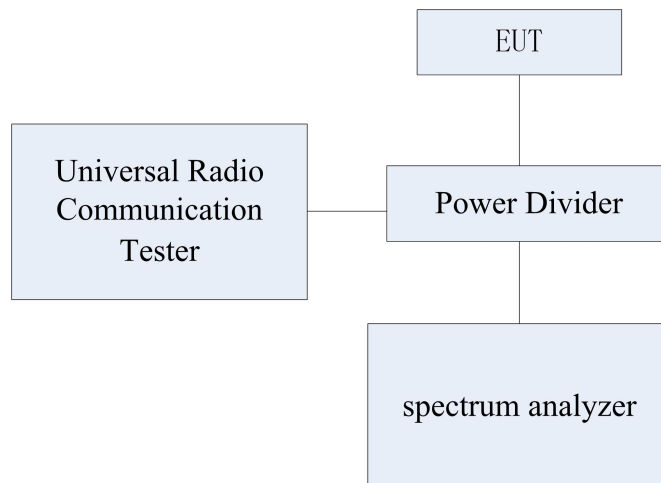
Except as otherwise specified below, for operations in the 1695-1710 MHz, 1710-1755 MHz, 1755-1780 MHz, 1915-1920 MHz, 1995-2000 MHz, 2000-2020 MHz, 2110-2155 MHz, 2155-2180 MHz, and 2180-2200 Bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least $43 + 10 \log_{10}(P)$ dB.

According to Part 27.53(g):

For operations in the 600 MHz Band and the 698-746 MHz Band, the power of any emission outside a licensee's frequency Band(s) of operation shall be attenuated below the transmitter power (P) within the licensed Band(s) of operation, measured in watts, by at least $43 + 10 \log(P)$ dB. Compliance with this provision is based on the use of measurement instrumentation employing a resolution Bandwidth of 100 kilohertz or greater. 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.

Test Setup:

During the test, the EUT was controlled via the Wireless Communications Test Set to ensure max power transmission and proper modulation and measured by spectrum analyzer.

**Test Method:**

The measurement was performed accordance with section 2.2.13 of ANSI/TIA-603-D: Land Mobile FM or PM Communications Equipment Measurement and Performance Standards.

The measurement was performed accordance with section 2.2.13 of ANSI/TIA-603-D-2010: Land Mobile FM or PM Communications Equipment Measurement and Performance Standards.

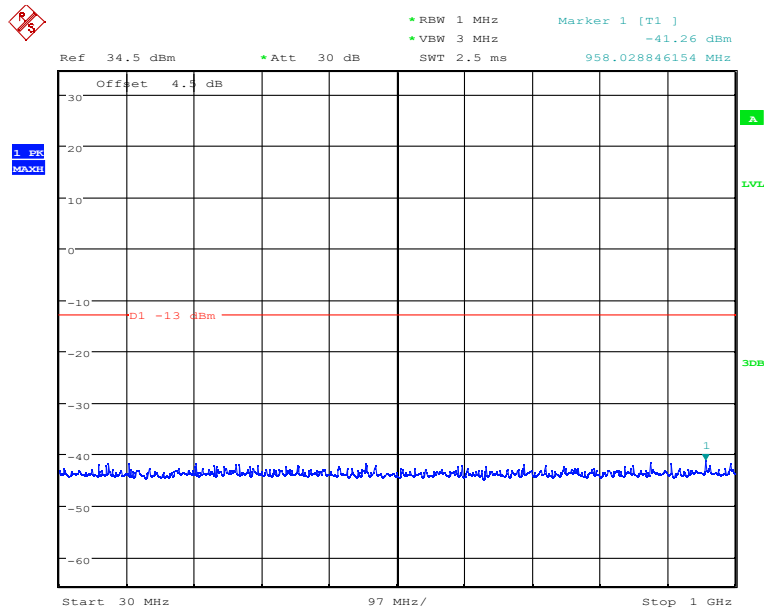
The RF output of the transmitter was connected to a spectrum analyzer through a calibrated coaxial cable. Sufficient scans were taken to show the out-of-Band emissions, if any, up to 10th harmonic. The EUT was scanned for spurious emissions from 30MHz to 20GHz with sufficient Bandwidth and video resolution. The spectrum analyzer was set to Maximum hold mode to ensure that the worst-case emissions were captured.

Note: --

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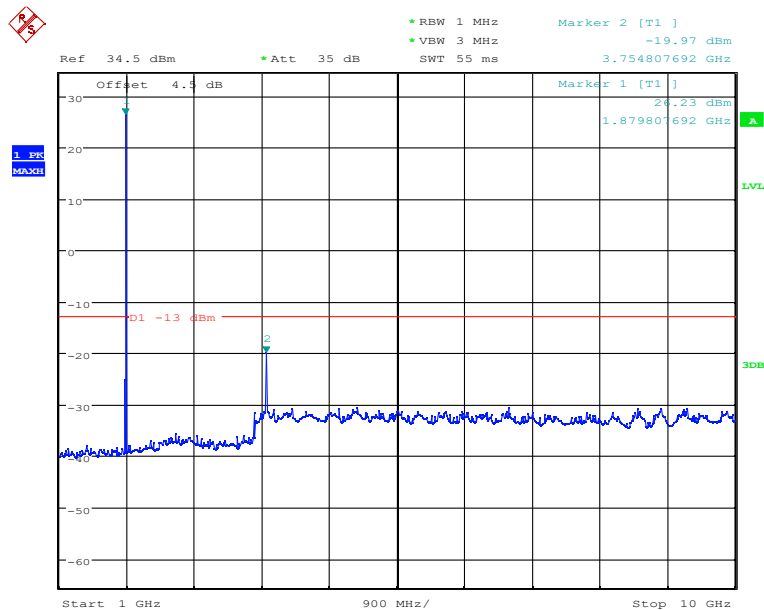
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6.5.1 LTE B2 Conducted Spurious Emission Results



Date: 13.DEC.2021 08:48:28

1.4MHz bandwidth QPSK Mode Middle channel, 1880 MHz, 30MHz to 1GHz



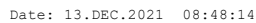
Date: 13.DEC.2021 08:48:46

1.4MHz bandwidth QPSK Middle channel, 1880MHz,1GHz to 10GHz

Note: The strong emission shown in each case is the carrier signal.

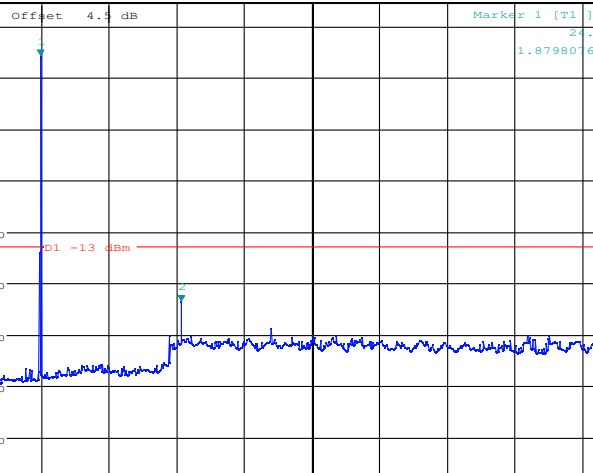
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Page 93 of 271



Ref 34.5 dBm * Att 35 dB * RBW 1 MHz * VBW 3 MHz SWT 55 ms Marker 2 [T1] -23.49 dBm 3.754807692 GHz

Offset 4.5 dB

Marker 1 [T1]

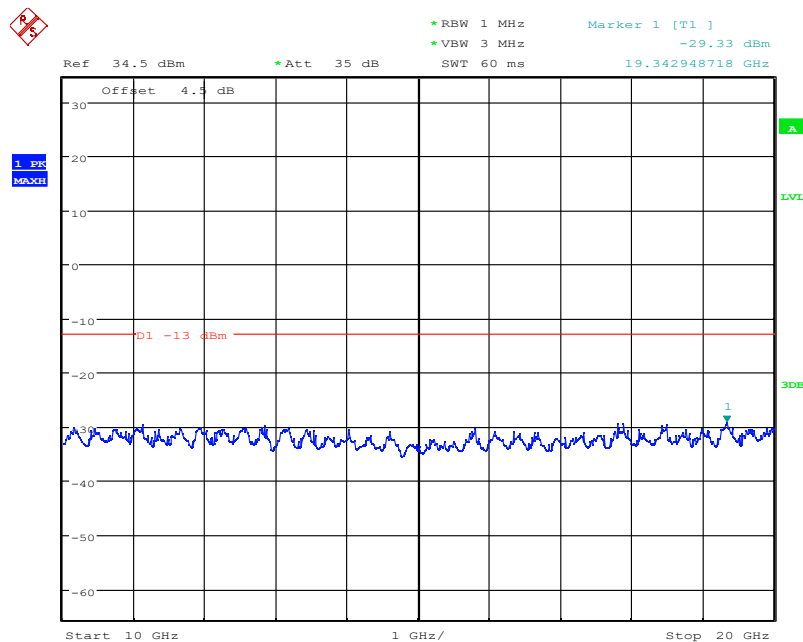
24.17 dBm

1.879807692 GHz

D1 -13 dBm

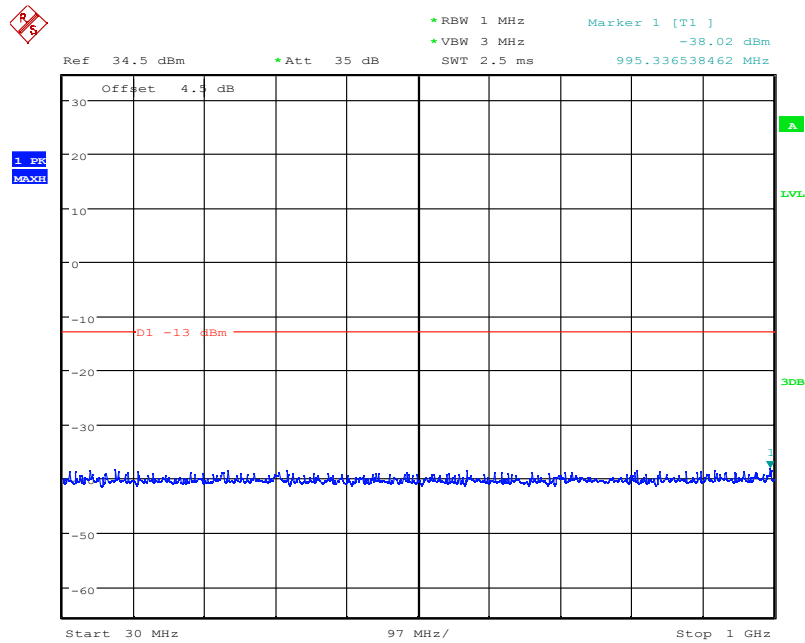
Start 1 GHz 900 MHz/ Stop 10 GHz

Note: The strong emission shown in each case is the carrier signal.



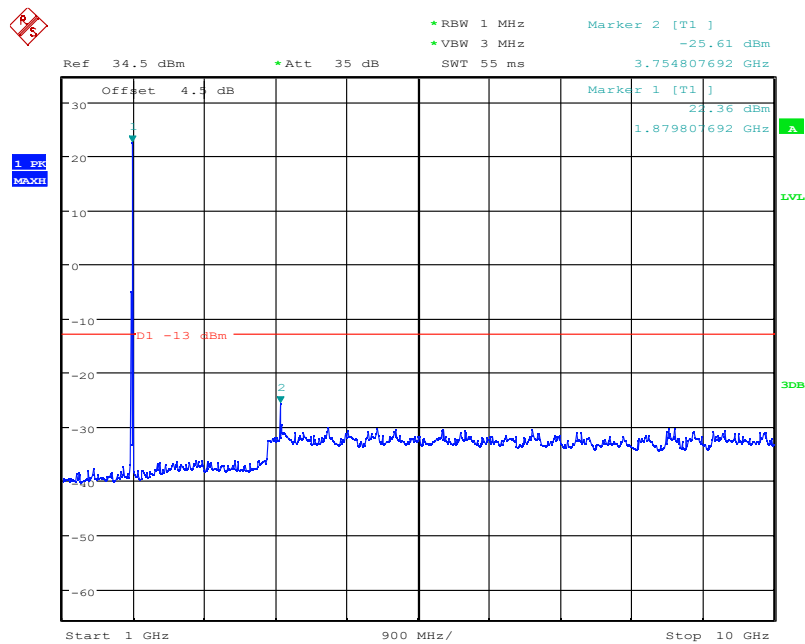
3MHz bandwidth QPSK Middle Channel, 1880 MHz, 10GHz to 20GHz

Page 94 of 271



Date: 13.DEC.2021 08:51:00

5MHz bandwidth QPSK Mode Middle Channel, 1880 MHz, 30MHz to 1GHz



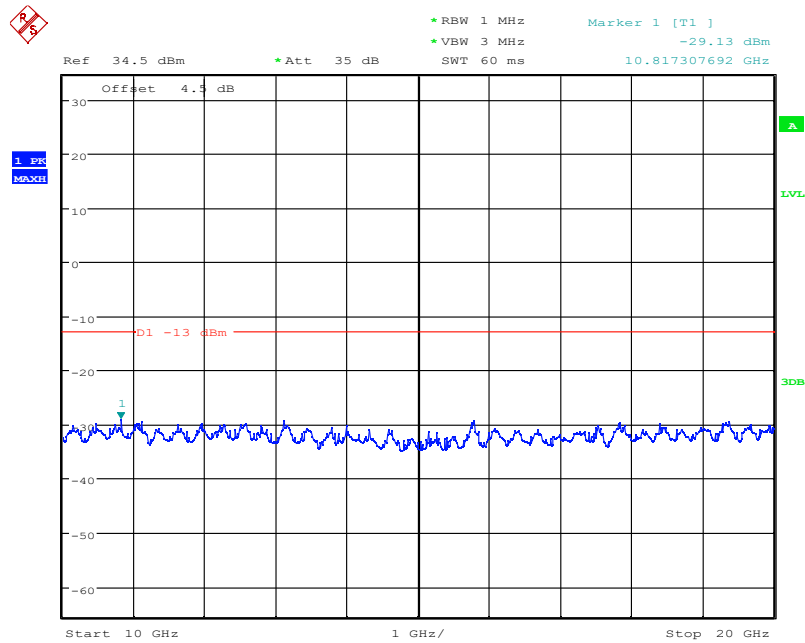
Date: 13.DEC.2021 08:51:14

5MHz bandwidth QPSK Mode Middle Channel, 1880 MHz, 1GHz to 10GHz

Note: The strong emission shown in each case is the carrier signal.

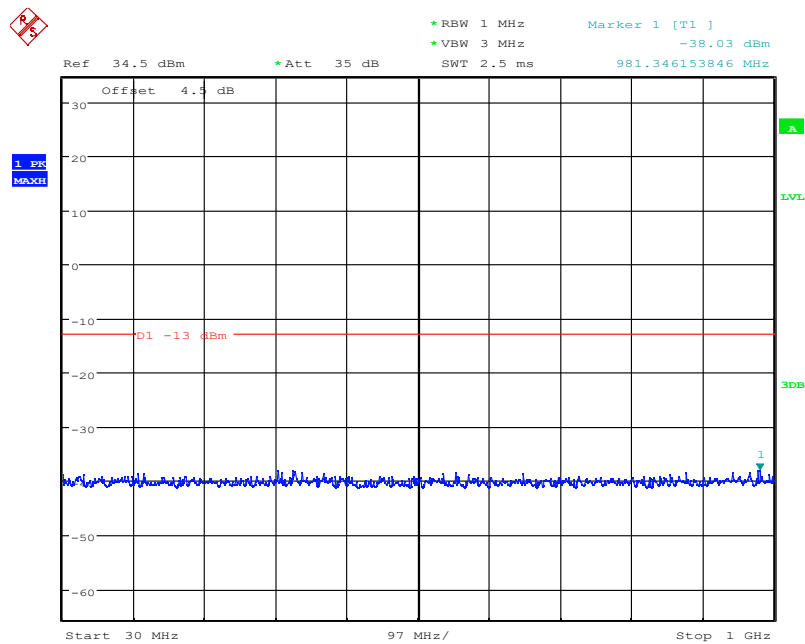
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Tel: 0086-23-88069965 FAX: 0086-23-88608777



Date: 13.DEC.2021 08:50:48

5MHz bandwidth QPSK Mode Middle Channel, 1880 MHz, 10GHz to 20GHz

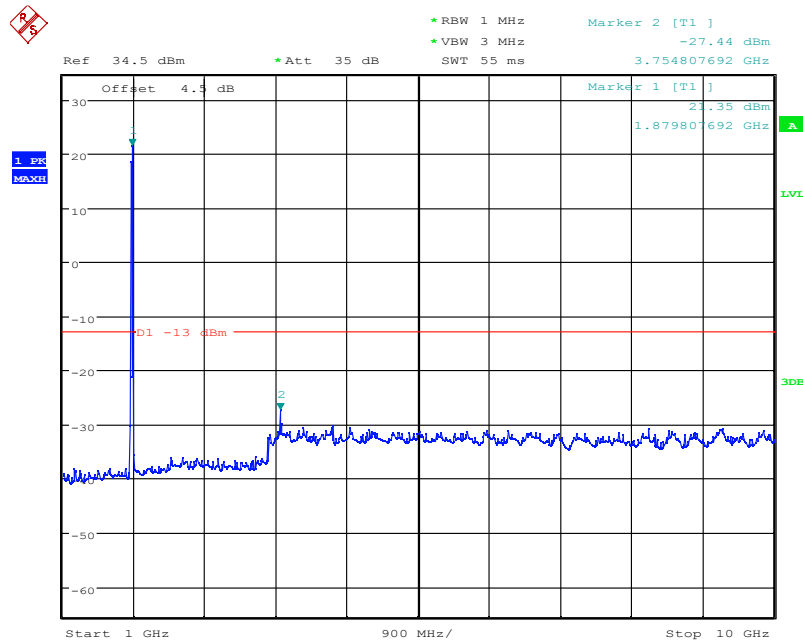


Date: 13.DEC.2021 08:52:21

10MHz bandwidth QPSK Mode Middle Channel, 1880 MHz, 30MHz to 1GHz

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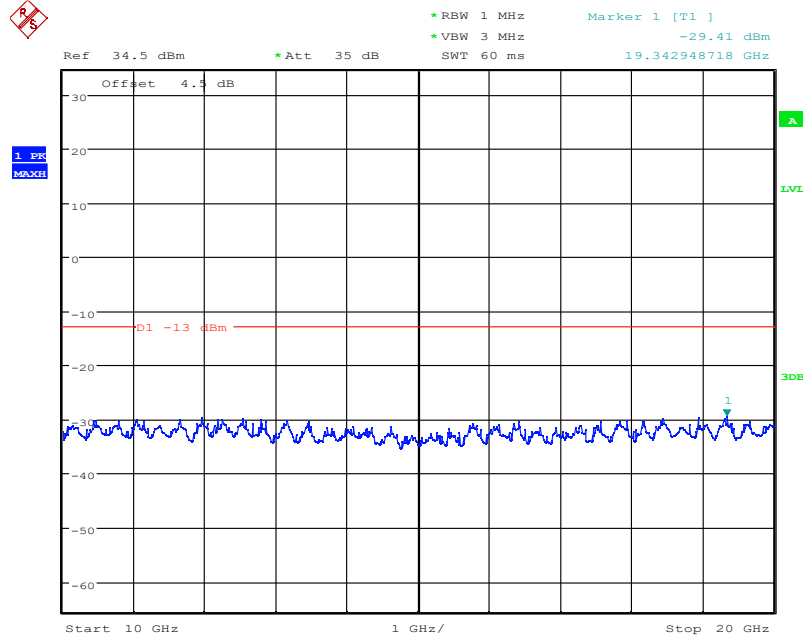
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Tel: 0086-23-88069965 FAX: 0086-23-88608777



Date: 13.DEC.2021 08:52:09

10MHz bandwidth QPSK Mode Middle Channel, 1880 MHz, 1GHz to 10GHz

Note: The strong emission shown in each case is the carrier signal.

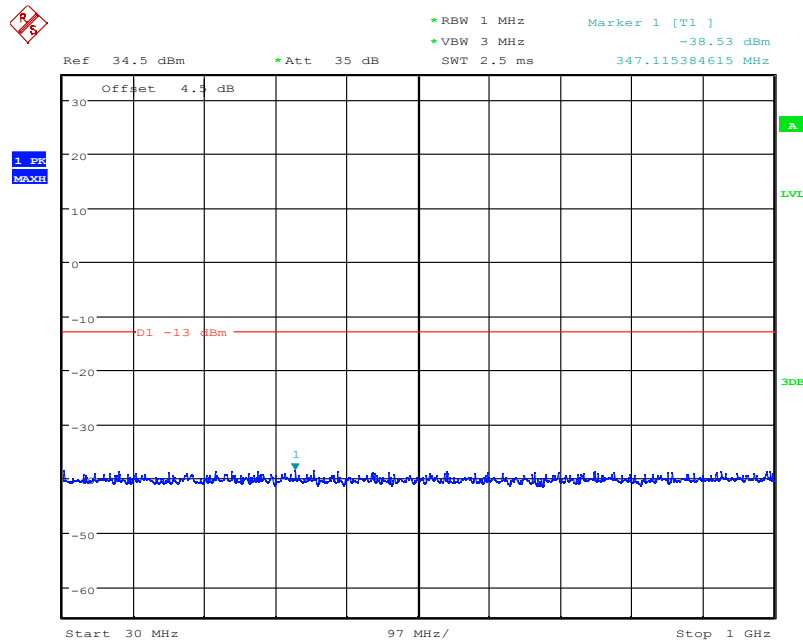


Date: 13.DEC.2021 08:52:33

10MHz bandwidth QPSK Mode Middle Channel, 1880 MHz, 10GHz to 20GHz

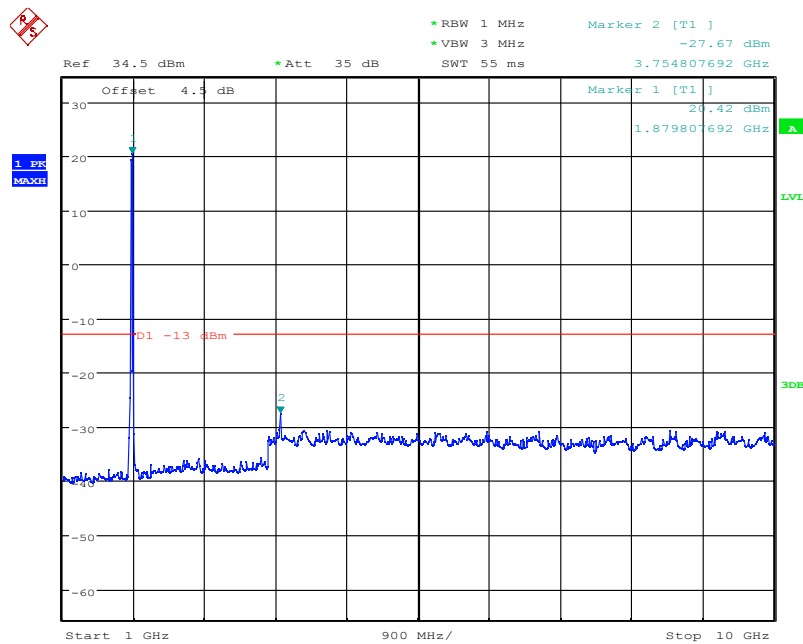
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Date: 13.DEC.2021 08:53:11

15MHz bandwidth QPSK Mode Middle Channel, 1880 MHz, 30MHz to 1GHz



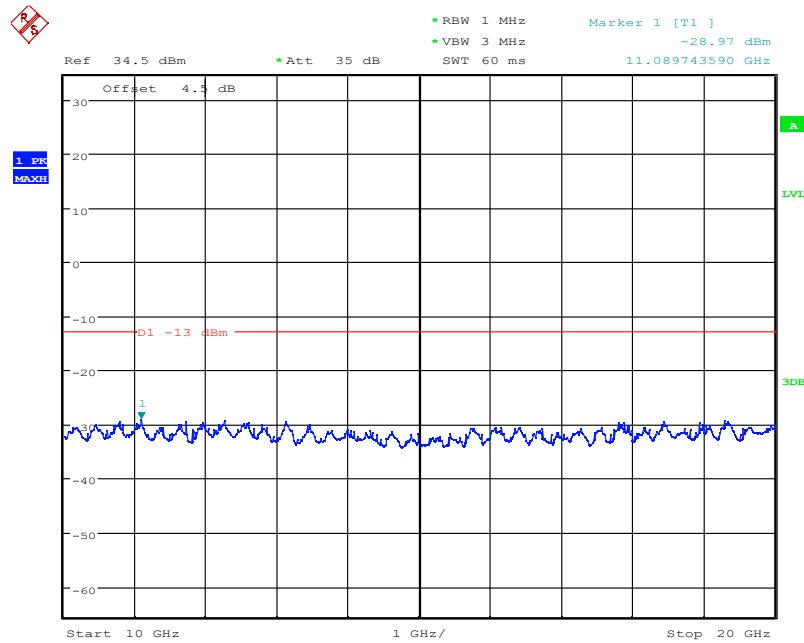
Date: 13.DEC.2021 08:53:23

15MHz bandwidth QPSK Mode Middle Channel, 1880 MHz, 1GHz to 10GHz

Note: The strong emission shown in each case is the carrier signal.

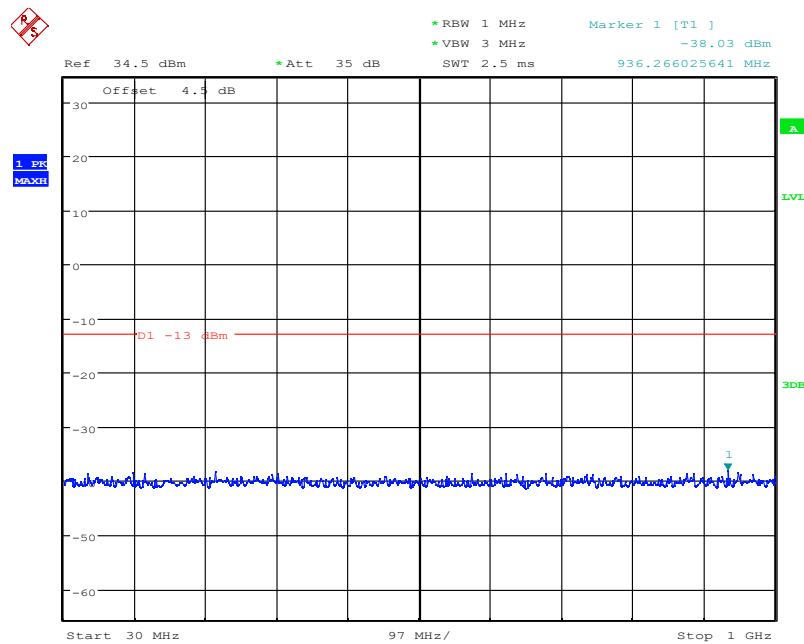
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Date: 13.DEC.2021 08:52:59

15MHz bandwidth QPSK Mode Middle Channel, 1880 MHz, 10GHz to 20GHz

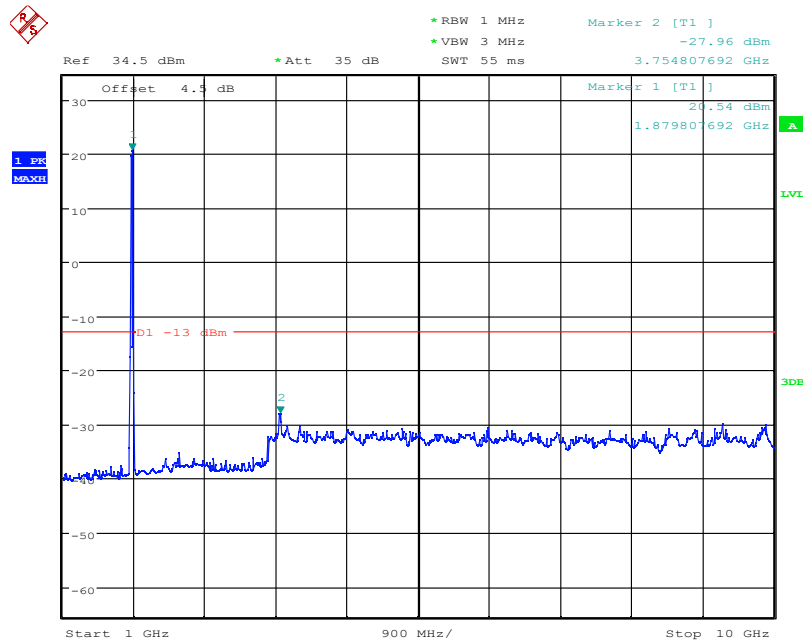


Date: 13.DEC.2021 08:53:53

20MHz bandwidth QPSK Mode Middle Channel, 1880 MHz, 30MHz to 1GHz

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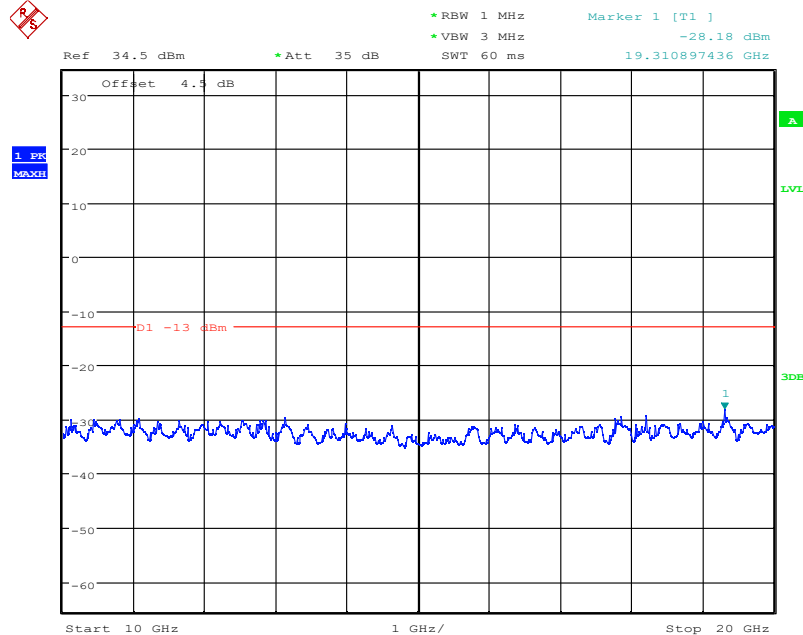
Address: No. 8, Yuma Road, Chayuan New City, Nan'an District, Chongqing, P. R. China, 401336
Tel: 0086-23-88069965 FAX: 0086-23-88608777



Date: 13.DEC.2021 08:53:42

20MHz bandwidth QPSK Mode Middle Channel, 1880 MHz, 1GHz to 10GHz

Note: The strong emission shown in each case is the carrier signal.



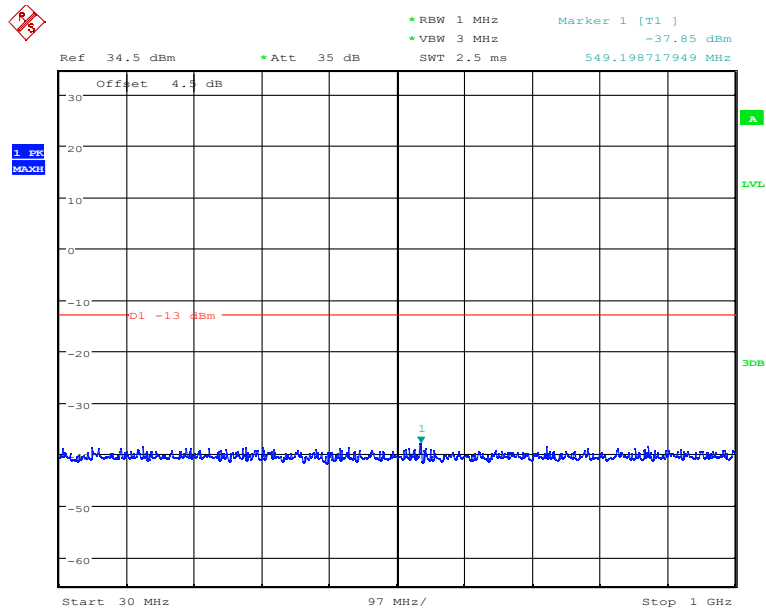
Date: 13.DEC.2021 08:54:05

20MHz bandwidth QPSK Mode Middle Channel, 1880 MHz, 10GHz to 20GHz

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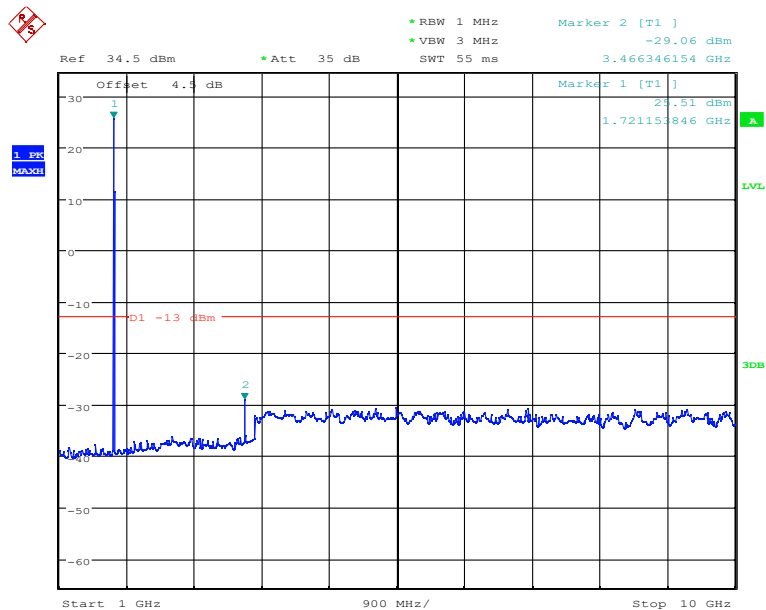
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Tel: 0086-23-88069965 FAX: 0086-23-88608777

6.5.2 LTE B4 Conducted Spurious Emission Results



Date: 13.DEC.2021 09:00:01

1.4MHz bandwidth QPSK Mode Middle channel, 1732.5 MHz, 30MHz to 1GHz



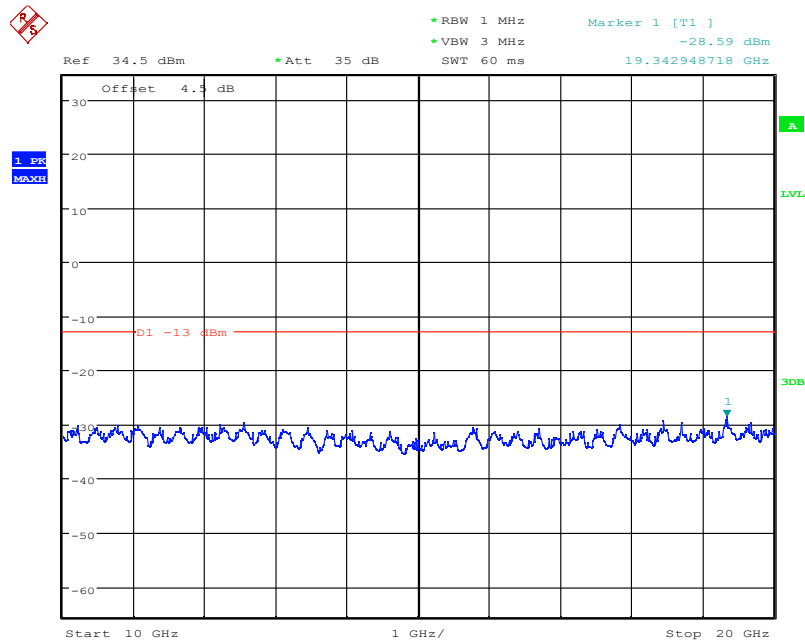
Date: 13.DEC.2021 09:00:15

1.4MHz bandwidth QPSK Middle channel, 1732.5MHz,1GHz to 10GHz

Note: The strong emission shown in each case is the carrier signal.

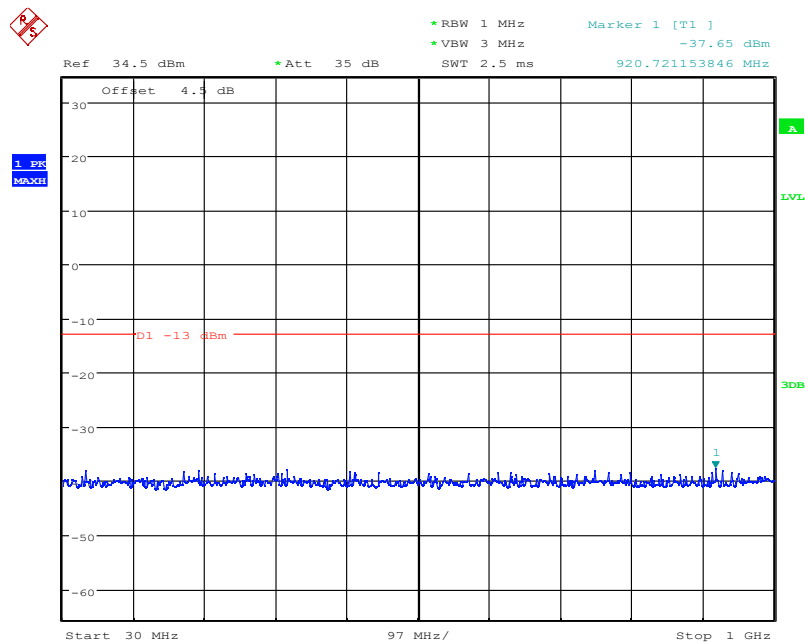
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Tel: 0086-23-88069965 FAX:0086-23-88608777



Date: 13.DEC.2021 09:00:25

1.4MHz bandwidth QPSK Middle channel, 1732.5 MHz, 10GHz to 20GHz

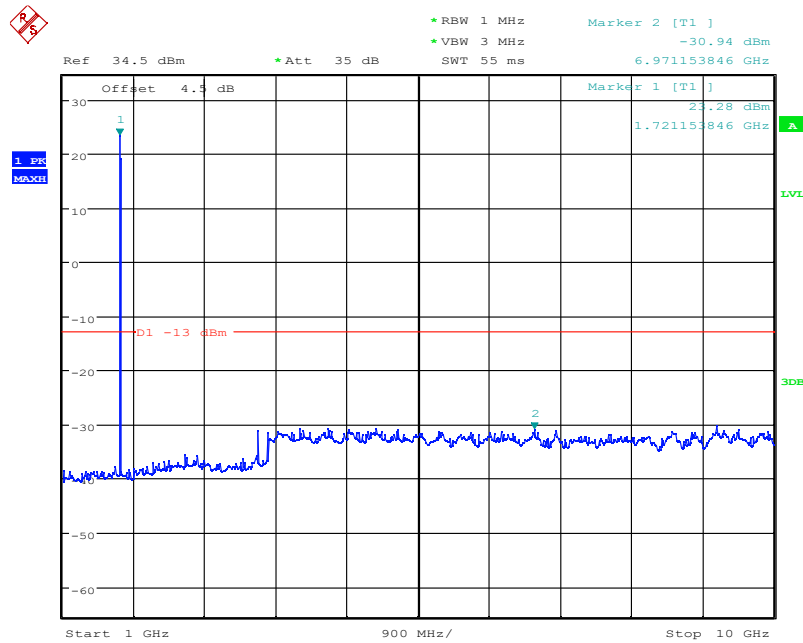


Date: 13.DEC.2021 08:59:51

3MHz bandwidth QPSK Mode Middle Channel, 1732.5 MHz, 30MHz to 1GHz

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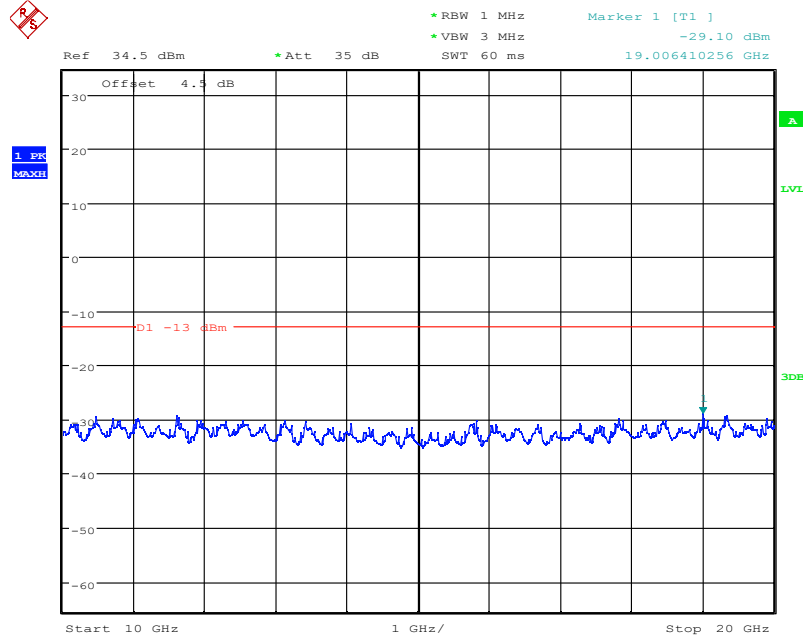
Address: No. 8, Yuma Road, Chayuan New City, Nan'an District, Chongqing, P. R. China, 401336
Tel: 0086-23-88069965 FAX: 0086-23-88608777



Date: 13.DEC.2021 08:59:40

3MHz bandwidth QPSK Middle Channel, 1732.5 MHz, 1GHz to 10GHz

Note: The strong emission shown in each case is the carrier signal.

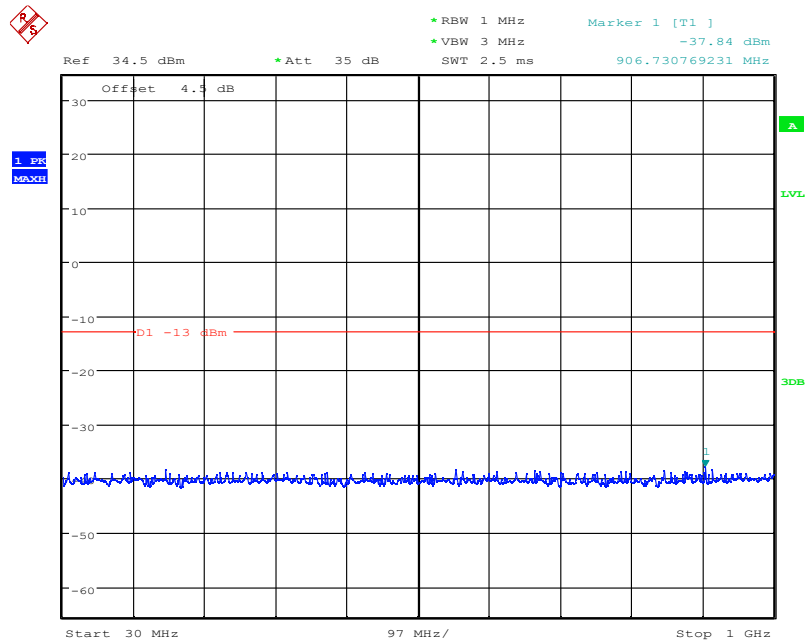


Date: 13.DEC.2021 08:59:29

3MHz bandwidth QPSK Middle Channel, 1732.5 MHz, 10GHz to 20GHz

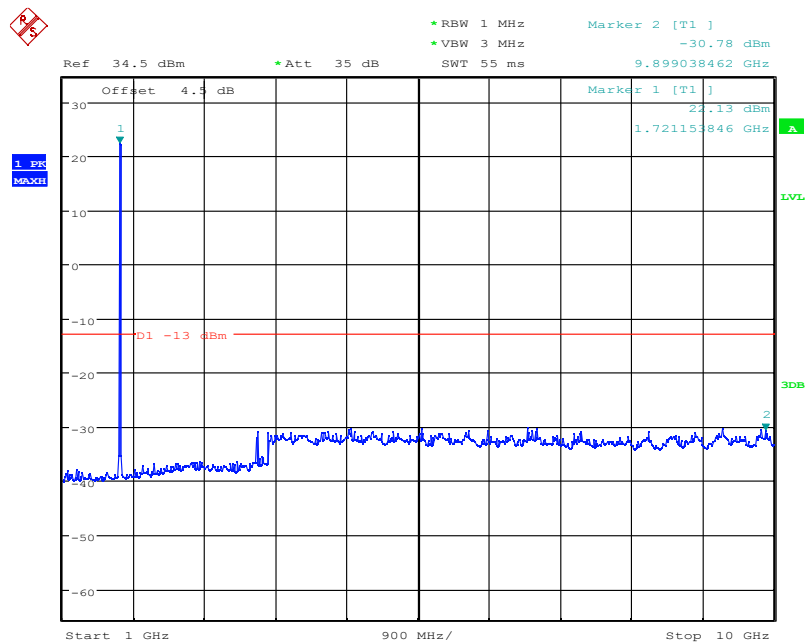
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Tel: 0086-23-88069965 FAX: 0086-23-88608777



Date: 13.DEC.2021 08:58:50

5MHz bandwidth QPSK Mode Middle Channel, 1732.5 MHz, 30MHz to 1GHz



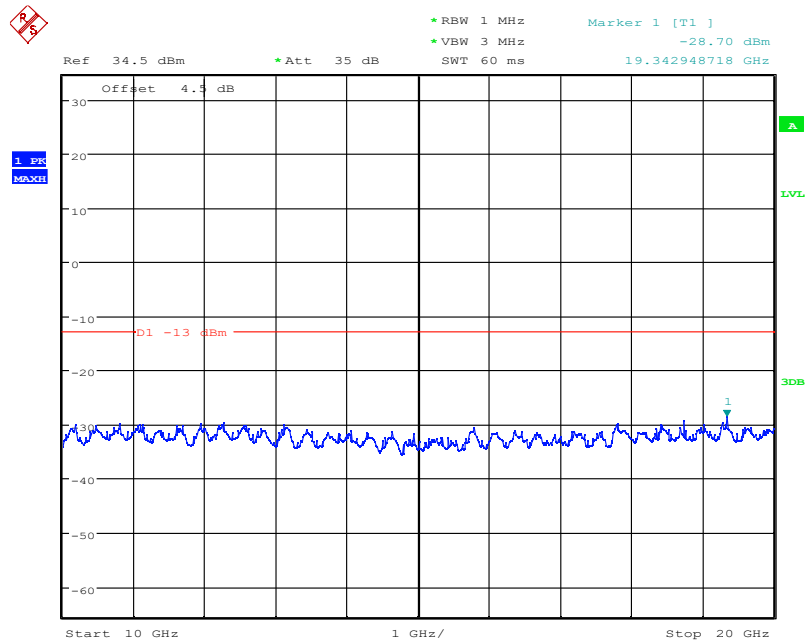
Date: 13.DEC.2021 08:59:05

5MHz bandwidth QPSK Mode Middle Channel, 1732.5 MHz, 1GHz to 10GHz

Note: The strong emission shown in each case is the carrier signal.

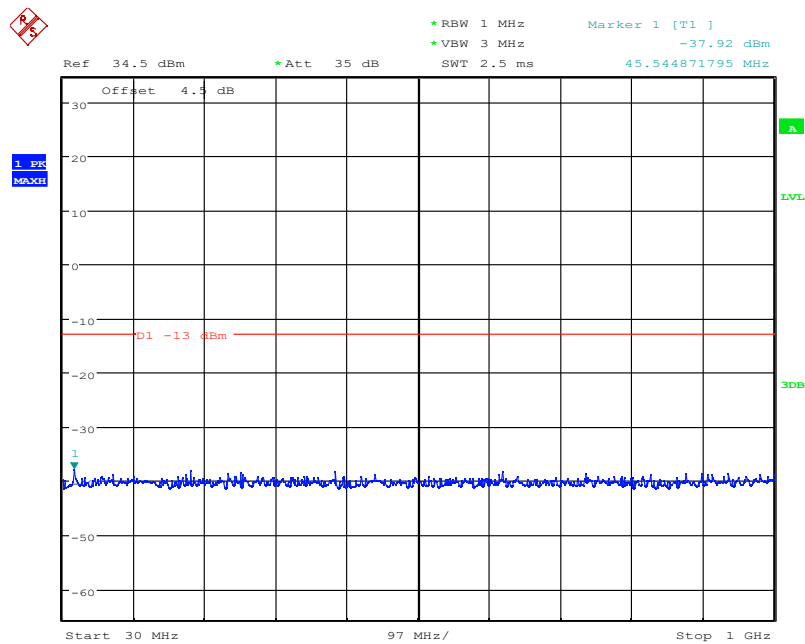
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Date: 13.DEC.2021 08:59:18

5MHz bandwidth QPSK Mode Middle Channel, 1732.5 MHz, 10GHz to 20GHz

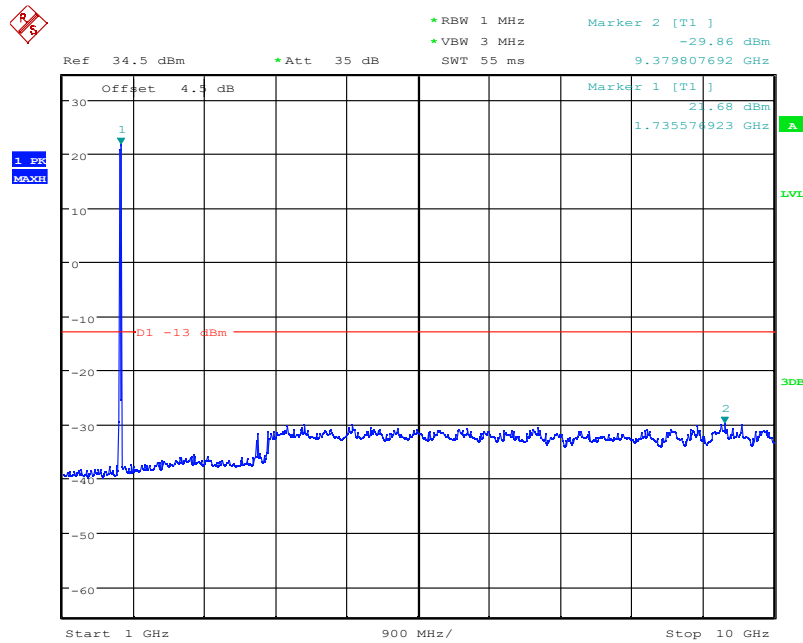


Date: 13.DEC.2021 08:58:39

10MHz bandwidth QPSK Mode Middle Channel, 1732.5 MHz, 30MHz to 1GHz

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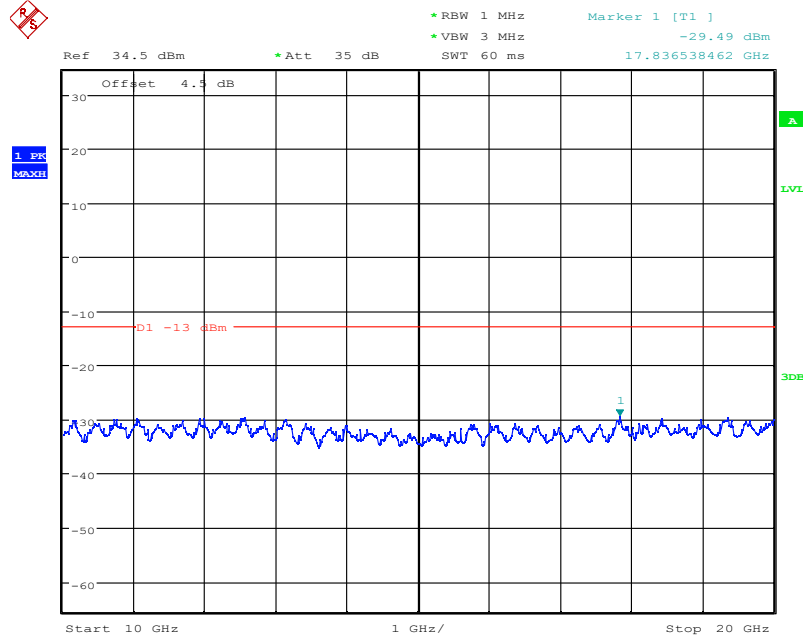
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Tel: 0086-23-88069965 FAX: 0086-23-88608777



Date: 13.DEC.2021 08:58:28

10MHz bandwidth QPSK Mode Middle Channel, 1732.5 MHz, 1GHz to 10GHz

Note: The strong emission shown in each case is the carrier signal.

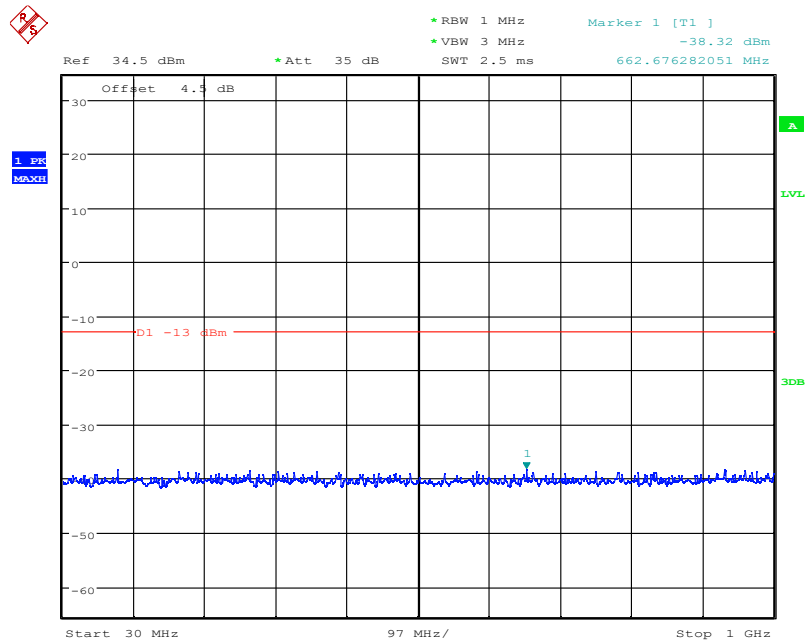


Date: 13.DEC.2021 08:57:52

10MHz bandwidth QPSK Mode Middle Channel, 1732.5 MHz, 10GHz to 20GHz

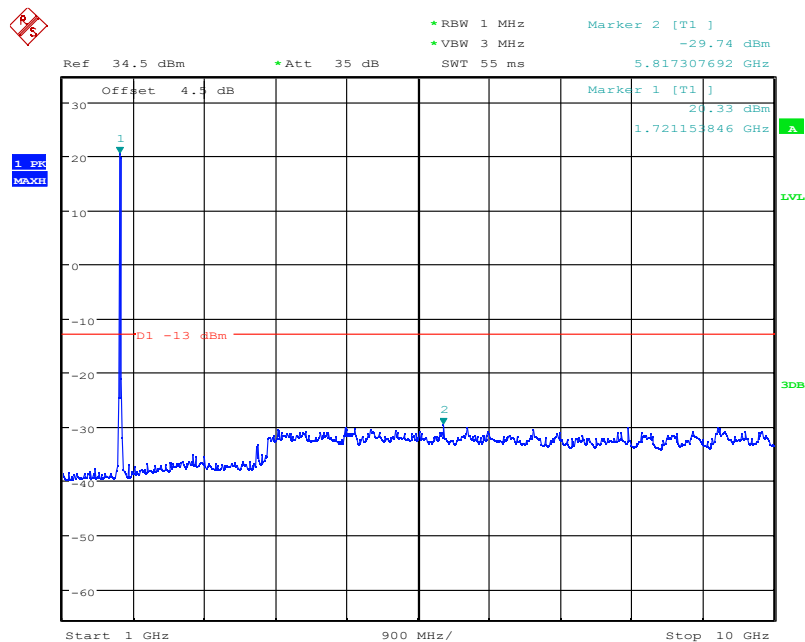
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Date: 13.DEC.2021 08:56:54

15MHz bandwidth QPSK Mode Middle Channel, 1732.5 MHz, 30MHz to 1GHz



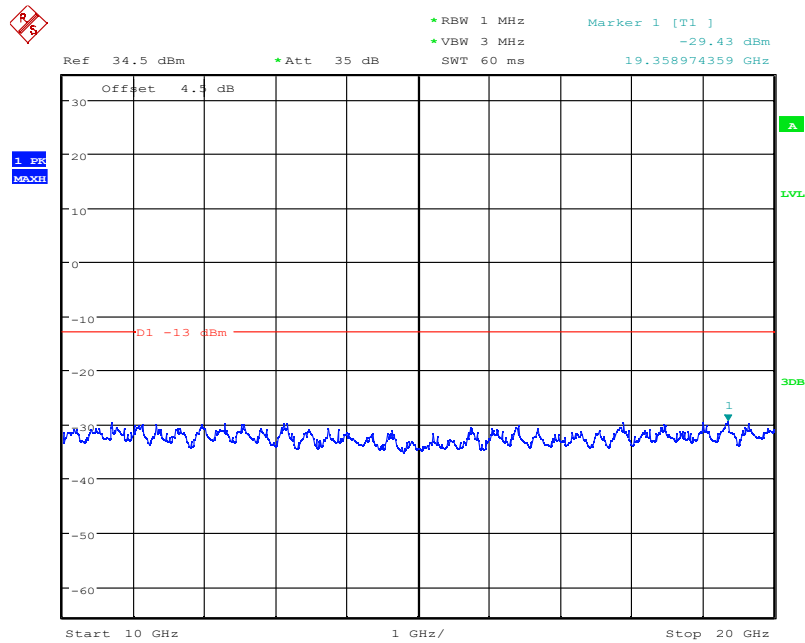
Date: 13.DEC.2021 08:57:20

15MHz bandwidth QPSK Mode Middle Channel, 1732.5 MHz, 1GHz to 10GHz

Note: The strong emission shown in each case is the carrier signal.

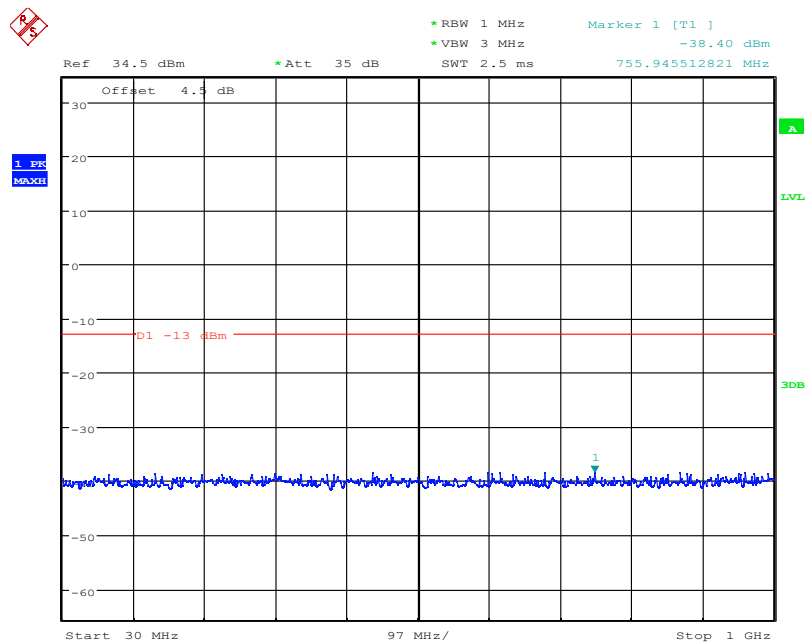
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Date: 13.DEC.2021 08:57:33

15MHz bandwidth QPSK Mode Middle Channel, 1732.5 MHz, 10GHz to 20GHz

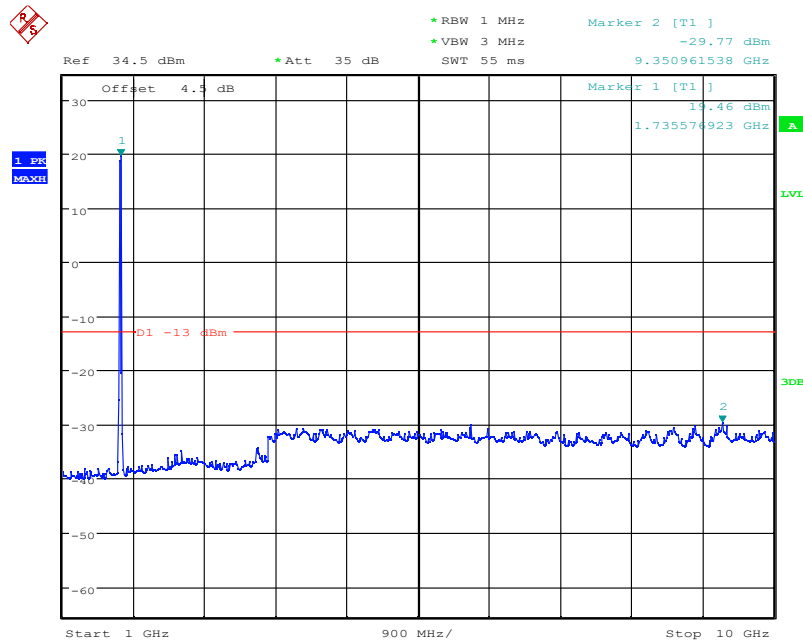


Date: 13.DEC.2021 08:56:34

20MHz bandwidth QPSK Mode Middle Channel, 1732.5 MHz, 30MHz to 1GHz

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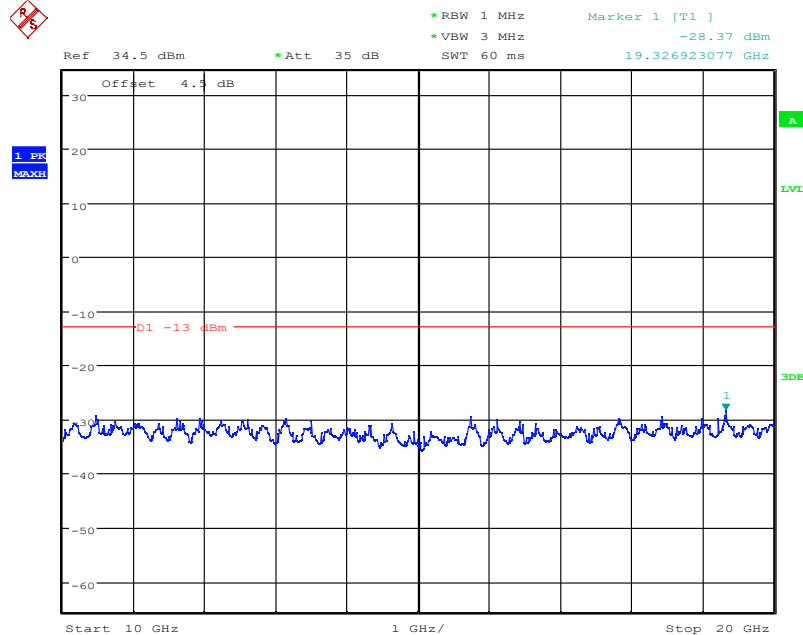
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Date: 13.DEC.2021 08:56:23

20MHz bandwidth QPSK Mode Middle Channel, 1732.5 MHz, 1GHz to 10GHz

Note: The strong emission shown in each case is the carrier signal.



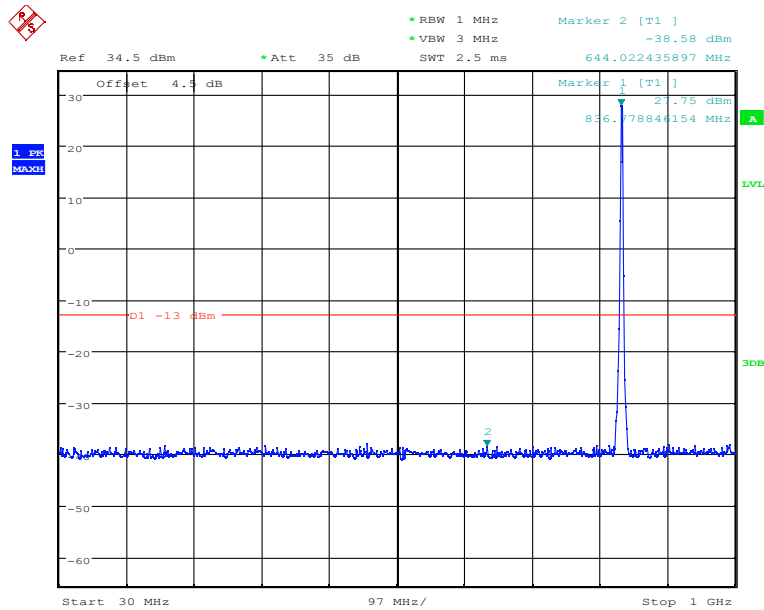
Date: 13.DEC.2021 08:56:03

20MHz bandwidth QPSK Mode Middle Channel, 1732.5 MHz, 10GHz to 20GHz

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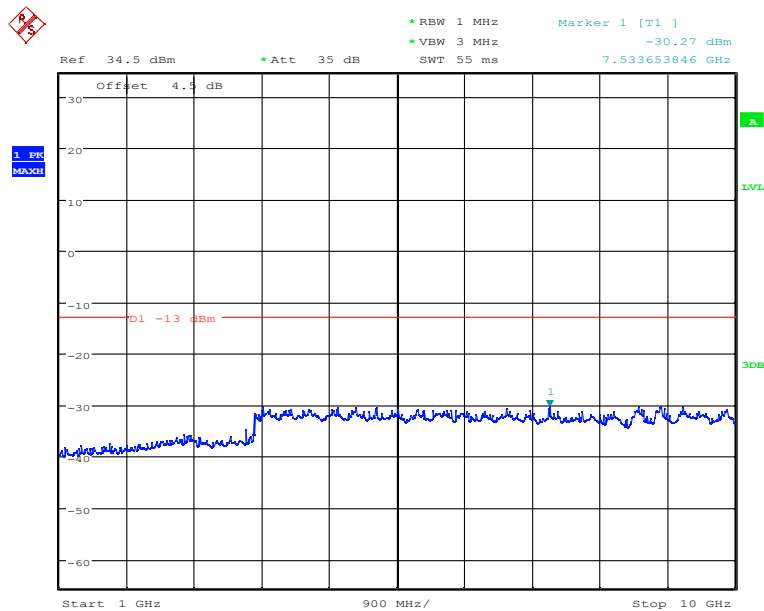
6.5.3 LTE B5 Conducted Spurious Emission Results



Date: 13.DEC.2021 09:02:31

1.4MHz bandwidth QPSK Mode Middle Channel, 836.5 MHz,30MHz to 1GHz

Note: The strong emission shown in each case is the carrier signal.

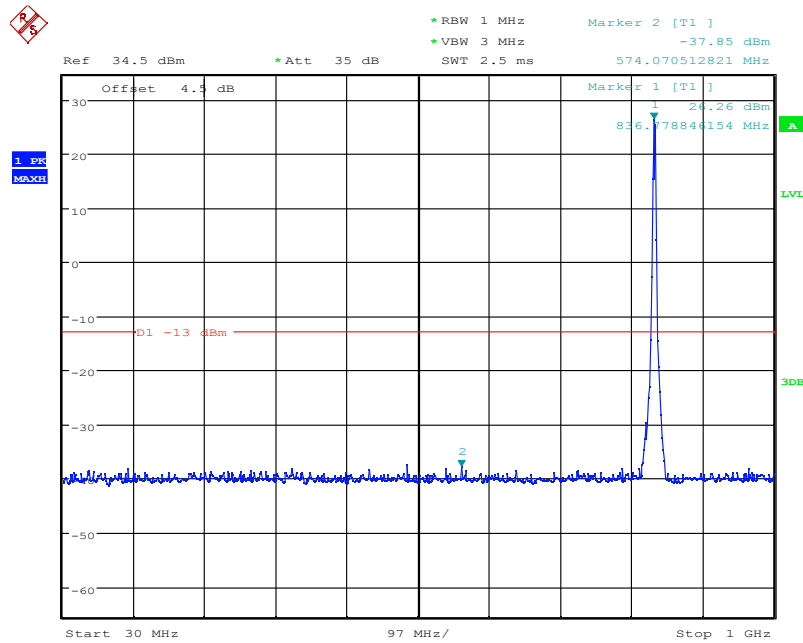


Date: 13.DEC.2021 09:02:59

1.4MHz bandwidth QPSK Mode Middle Channel, 836.5 MHz,1GHz to 10GHz

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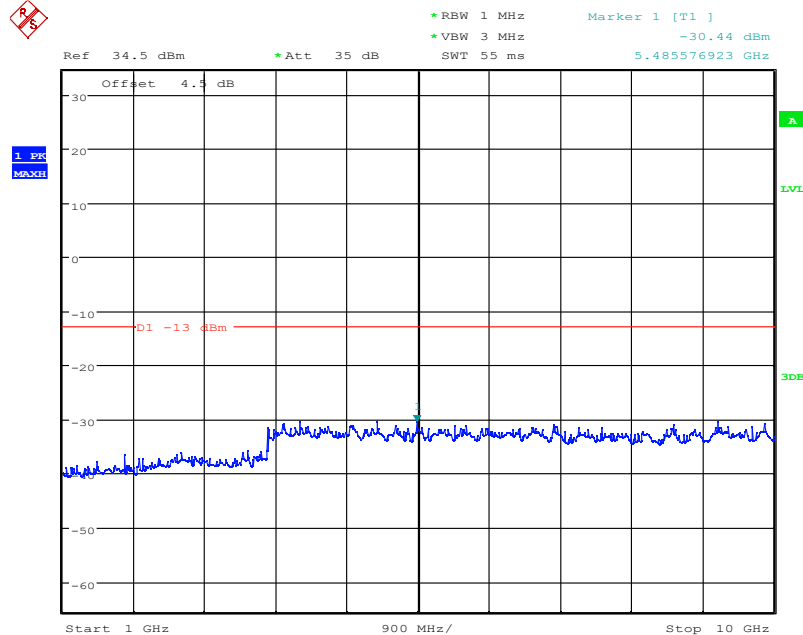
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Date: 13.DEC.2021 09:03:29

3MHz bandwidth QPSK Mode Middle Channel, 836.5 MHz, 30MHz to 1GHz

Note: The strong emission shown in each case is the carrier signal.

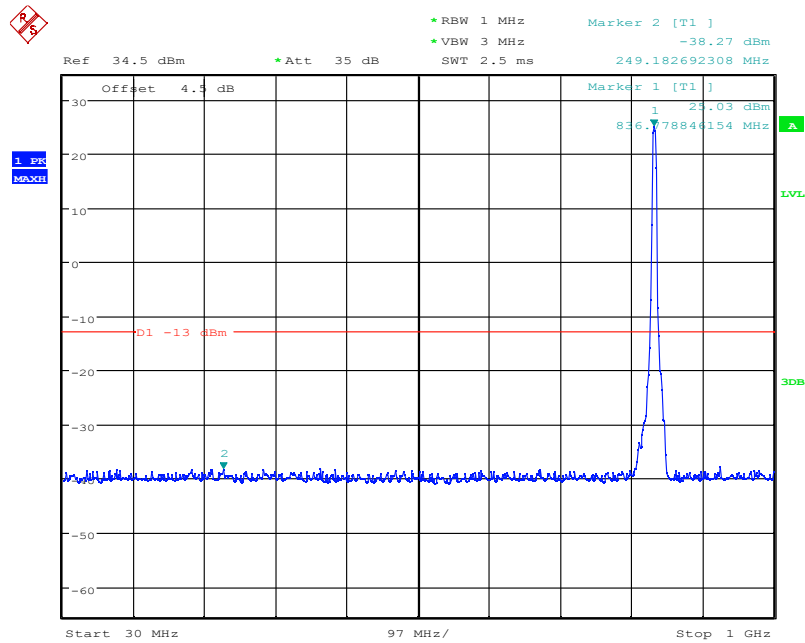


Date: 13.DEC.2021 09:03:12

3MHz bandwidth QPSK Mode Middle Channel, 836.5 MHz, 1GHz to 10GHz

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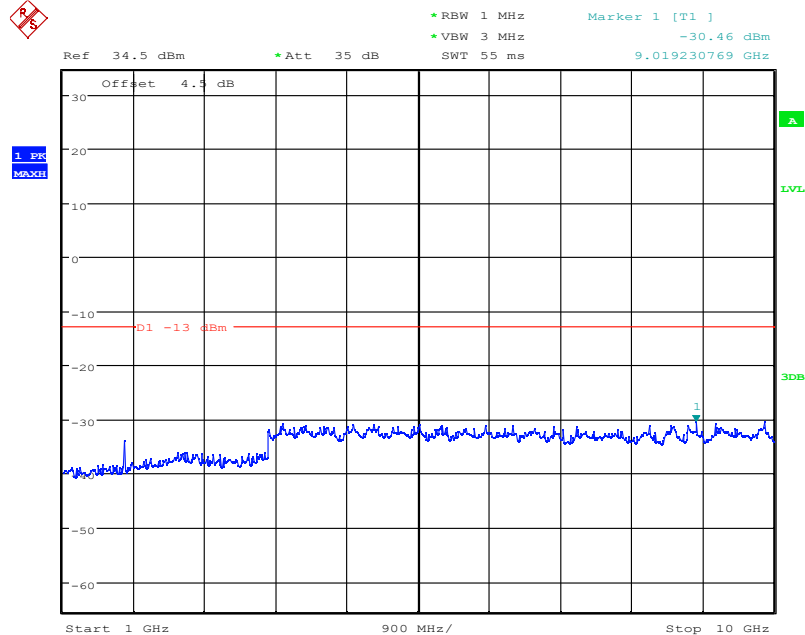
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Date: 13.DEC.2021 09:03:54

5MHz bandwidth QPSK Mode Middle Channel, 836.5 MHz, 30MHz to 1GHz

Note: The strong emission shown in each case is the carrier signal.

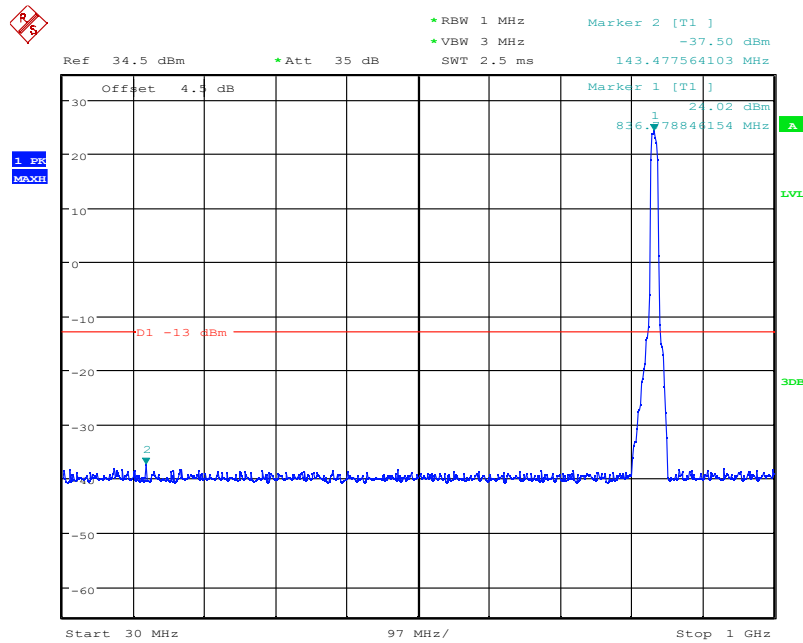


Date: 13.DEC.2021 09:04:05

5MHz bandwidth QPSK Mode Middle Channel, 836.5 MHz, 1GHz to 10GHz

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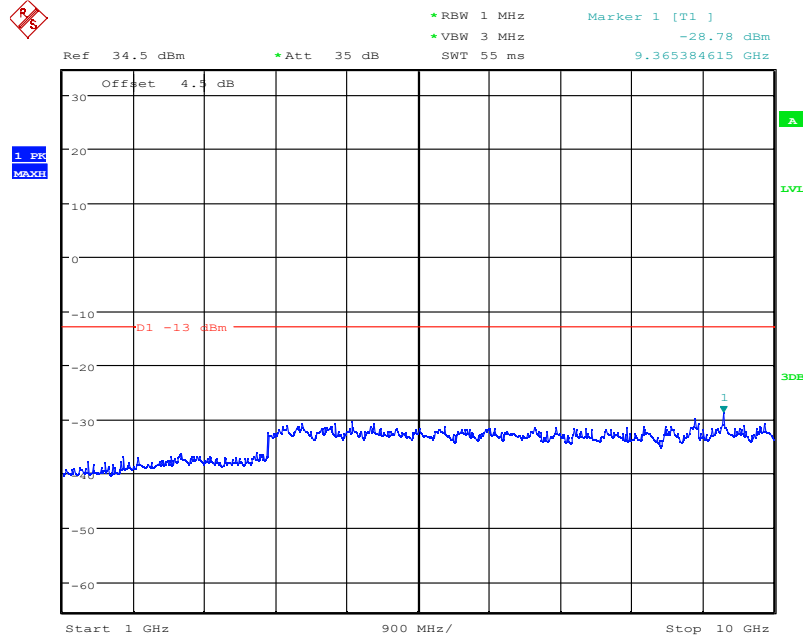
Address: No. 8, Yuma Road, Chayuan New City, Nan'an District, Chongqing, P. R. China, 401336
Tel: 0086-23-88069965 FAX: 0086-23-88608777



Date: 13.DEC.2021 09:04:43

10MHz bandwidth QPSK Mode Middle Channel, 836.5 MHz, 30MHz to 1GHz

Note: The strong emission shown in each case is the carrier signal.



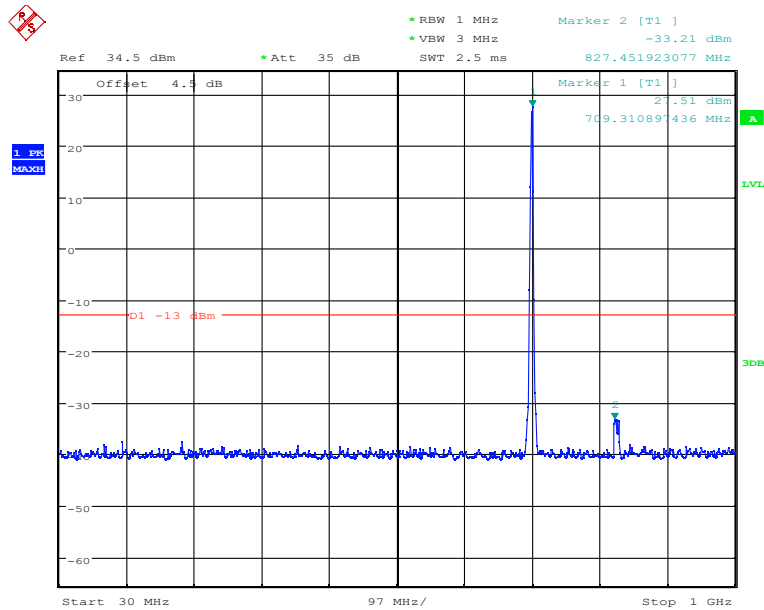
Date: 13.DEC.2021 09:04:15

10MHz bandwidth QPSK Mode Middle Channel, 836.5 MHz, 1GHz to 10GHz

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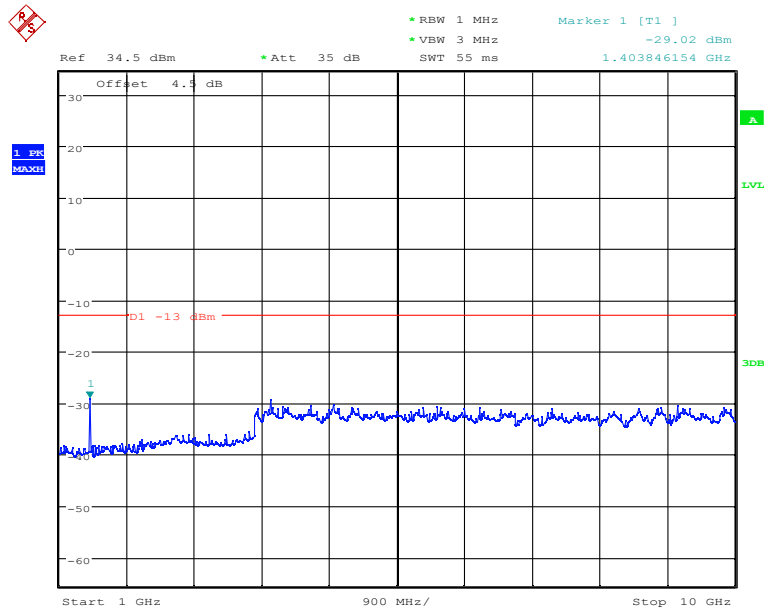
6.5.4 LTE B12 Conducted Spurious Emission Results



Date: 13.DEC.2021 10:00:39

1.4MHz bandwidth QPSK Mode Middle channel, 707.5 MHz, 30MHz to 1GHz

Note: The strong emission shown in each case is the carrier signal.

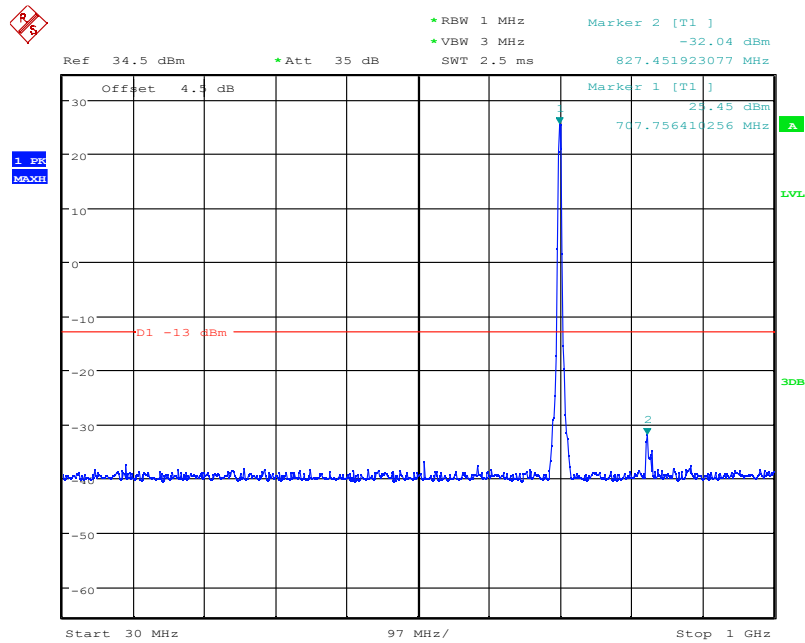


Date: 13.DEC.2021 10:00:53

1.4MHz bandwidth QPSK Middle channel, 707.5MHz, 1GHz to 10GHz

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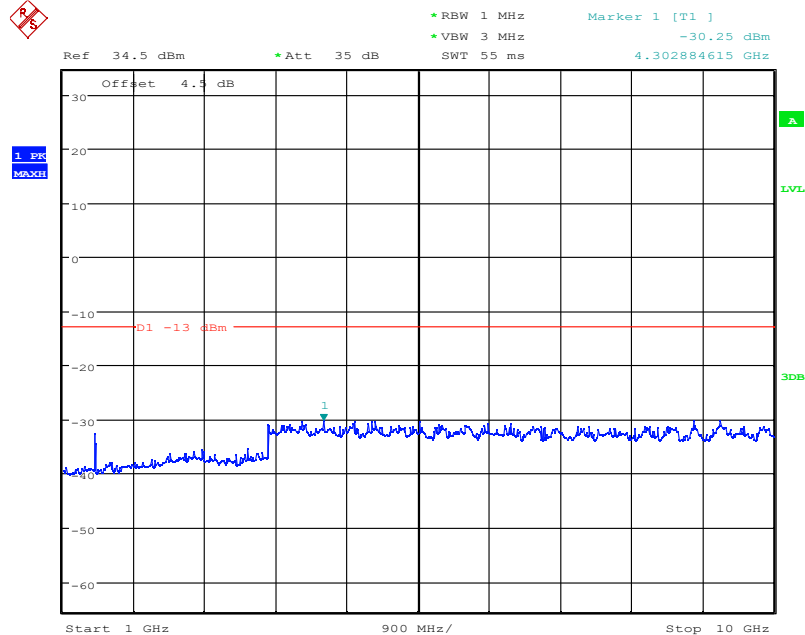
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Date: 13.DEC.2021 10:01:49

3MHz bandwidth QPSK Mode Middle Channel, 707.5MHz, 30MHz to 1GHz

Note: The strong emission shown in each case is the carrier signal.

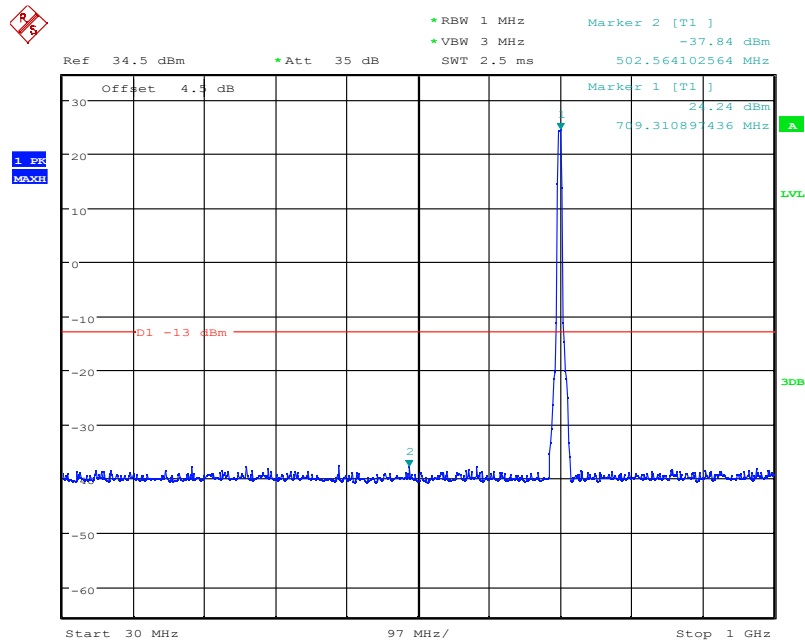


Date: 13.DEC.2021 10:01:12

3MHz bandwidth QPSK Middle Channel, 707.5 MHz, 1GHz to 10GHz

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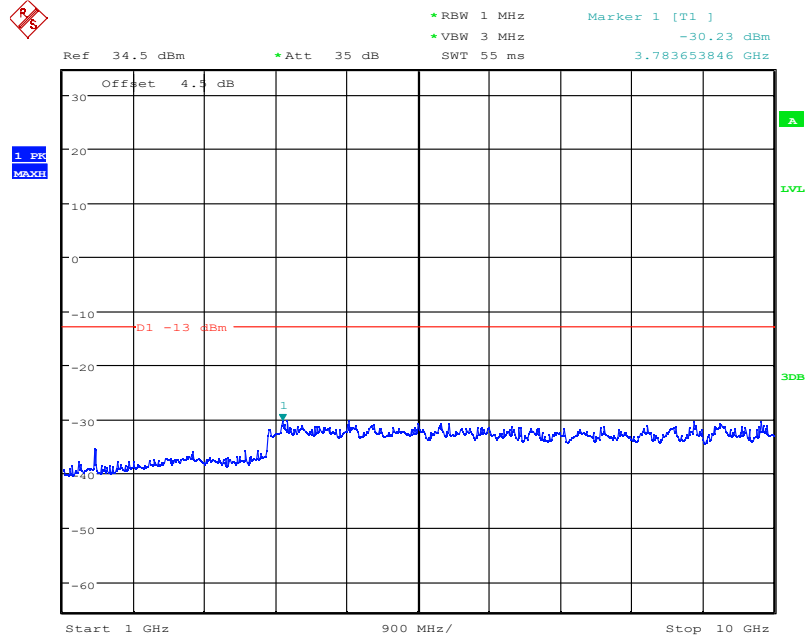
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Date: 13.DEC.2021 10:02:17

5MHz bandwidth QPSK Mode Middle Channel, 707.5 MHz, 30MHz to 1GHz

Note: The strong emission shown in each case is the carrier signal.

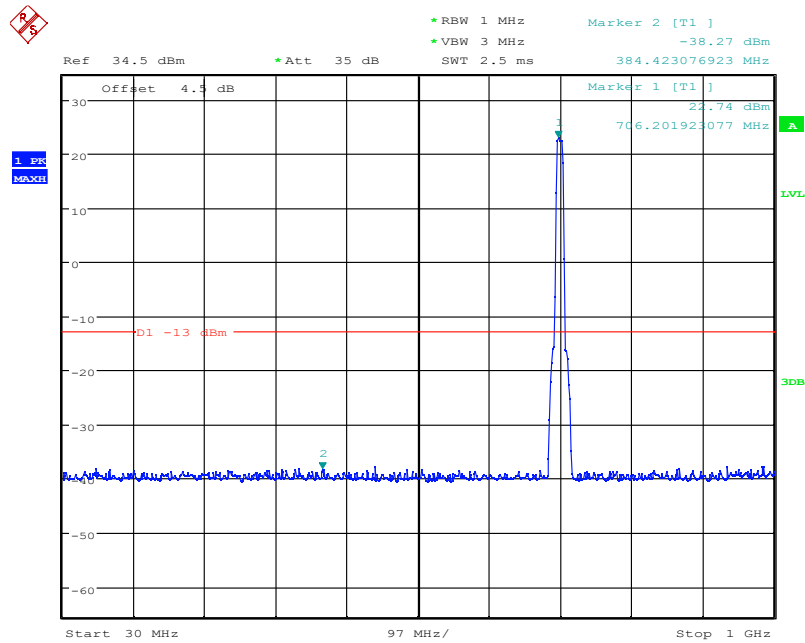


Date: 13.DEC.2021 10:02:31

5MHz bandwidth QPSK Mode Middle Channel, 707.5MHz, 1GHz to 10GHz

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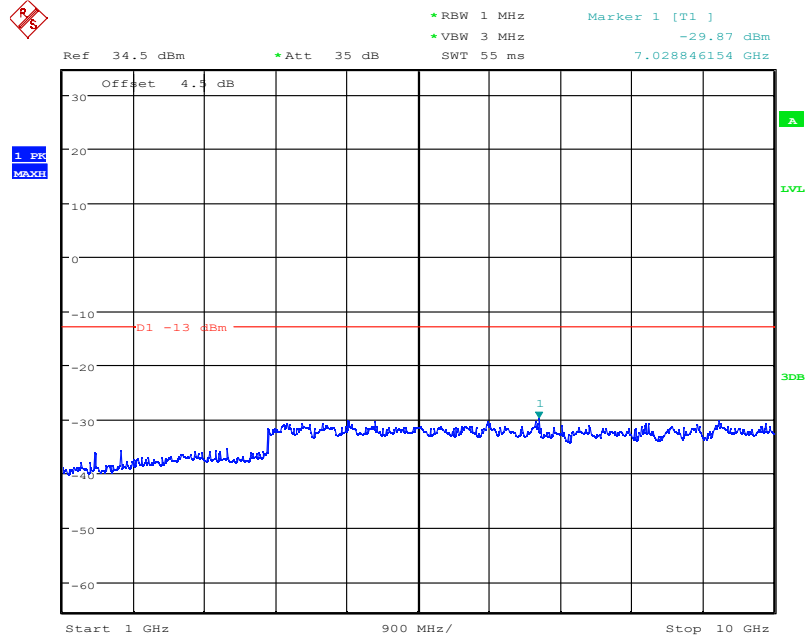
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Date: 13.DEC.2021 10:03:30

10MHz bandwidth QPSK Mode Middle Channel, 707.5MHz, 30MHz to 1GHz

Note: The strong emission shown in each case is the carrier signal.



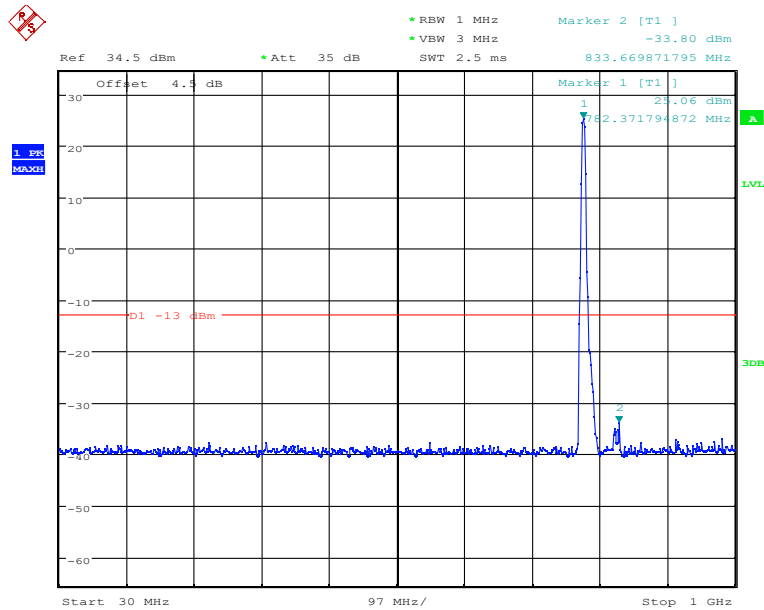
Date: 13.DEC.2021 10:02:56

10MHz bandwidth QPSK Mode Middle Channel, 707.5MHz, 1GHz to 10GHz

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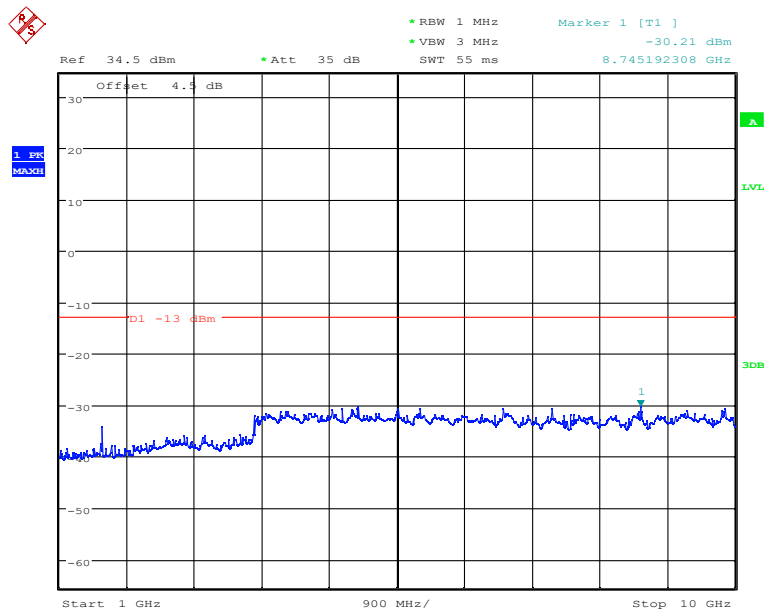
6.5.5 LTE B13 Conducted Spurious Emission Results



Date: 13.DEC.2021 10:04:29

5MHz bandwidth QPSK Mode Middle Channel, 782 MHz,30MHz to 1GHz

Note: The strong emission shown in each case is the carrier signal.

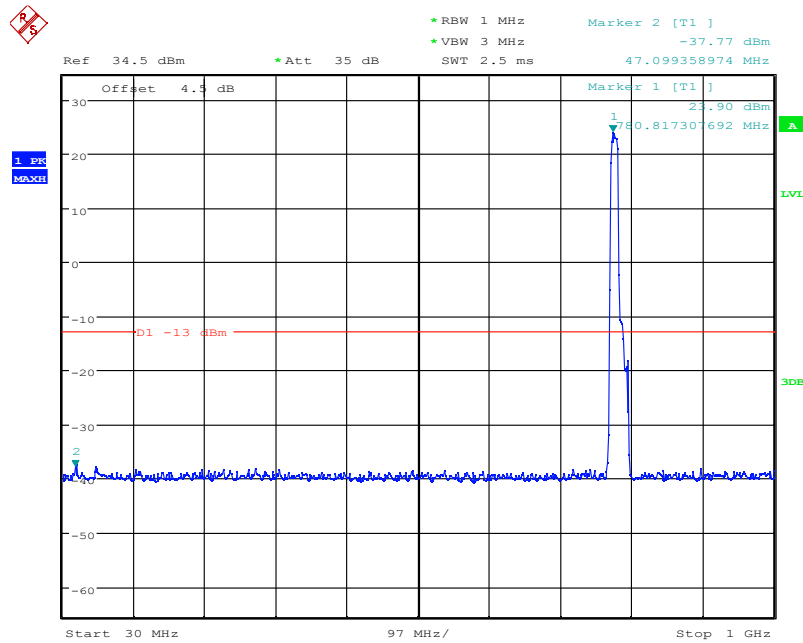


Date: 13.DEC.2021 10:04:40

5MHz bandwidth QPSK Mode Middle Channel, 782 MHz,1GHz to 10GHz

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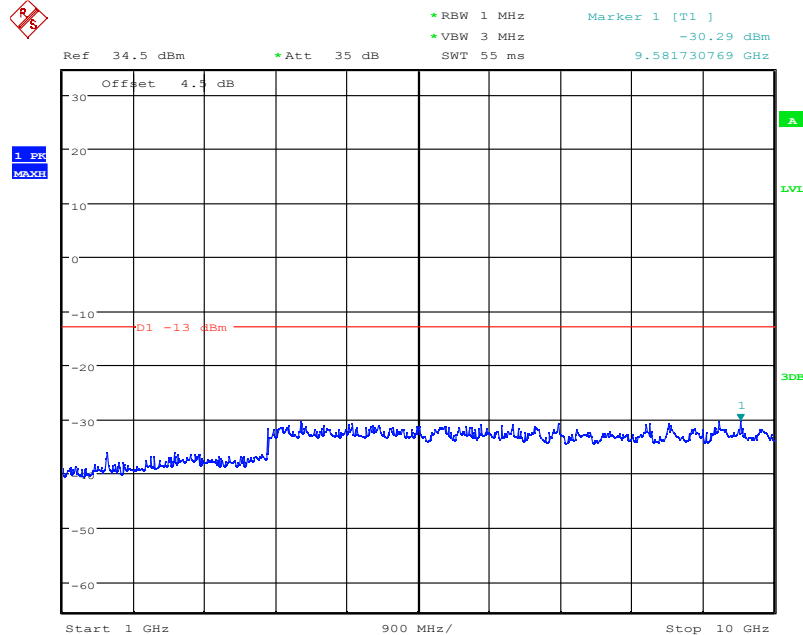
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Date: 13.DEC.2021 10:05:26

10MHz bandwidth QPSK Mode Middle Channel, 782 MHz, 30MHz to 1GHz

Note: The strong emission shown in each case is the carrier signal.



Date: 13.DEC.2021 10:04:53

10MHz bandwidth QPSK Mode Middle Channel, 782 MHz, 1GHz to 10GHz

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6.6. Radiated Spurious Emission

Specifications:	FCC Part 2.1051, 2.1053, 24.238, 22.917, 27.53
DUT Serial Number:	860371050880503
Test conditions:	Ambient Temperature:15°C-35°C Relative Humidity:30%-60% Air pressure: 86-106kPa
Test Results:	Pass

Limit Level Construction:

According to Part 22.917 (a), i.e., Out of Band emissions. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB.

According to Part 24.238 (a), i.e., Out of Band emissions. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB, so the limit level is: $P(\text{dBm}) - (43 + 10 \log(P)) \text{ dB} = -13 \text{ dBm}$.

According to Part 27.53(c):

On any frequency outside the 776-788 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least $43 + 10 \log(P)$ dB;

According to Part 27.53(h):

Except as otherwise specified below, for operations in the 1695-1710 MHz, 1710-1755 MHz, 1755-1780 MHz, 1915-1920 MHz, 1995-2000 MHz, 2000-2020 MHz, 2110-2155 MHz, 2155-2180 MHz, and 2180-2200 Bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least $43 + 10 \log_{10}(P)$ dB.

According to Part 27.53(g):

For operations in the 600 MHz Band and the 698-746 MHz Band, the power of any emission outside a licensee's frequency Band(s) of operation shall be attenuated below the transmitter power (P) within the licensed Band(s) of operation, measured in watts, by at least $43 + 10 \log(P)$ dB. Compliance with this provision is based on the use of measurement instrumentation employing a resolution Bandwidth of 100 kilohertz or greater. 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.

Limits for Radiated spurious emissions(UE)	
Frequency range	Limit Level /Resolution Bandwidth
30 MHz to 20000 MHz	-13dBm/1MHz

Measurement Uncertainty:

Item	Uncertainty
Expanded Uncertainty (30MHz-150MHz)	5.15 dB (k=2)
Expanded Uncertainty (150MHz-1GHz)	4.09dB (k=2)
Expanded Uncertainty (1GHz-3GHz)	2.92dB (k=2)
Expanded Uncertainty (3GHz-6GHz)	2.93dB (k=2)
Expanded Uncertainty (3GHz-12.75GHz)	2.69dB (k=2)

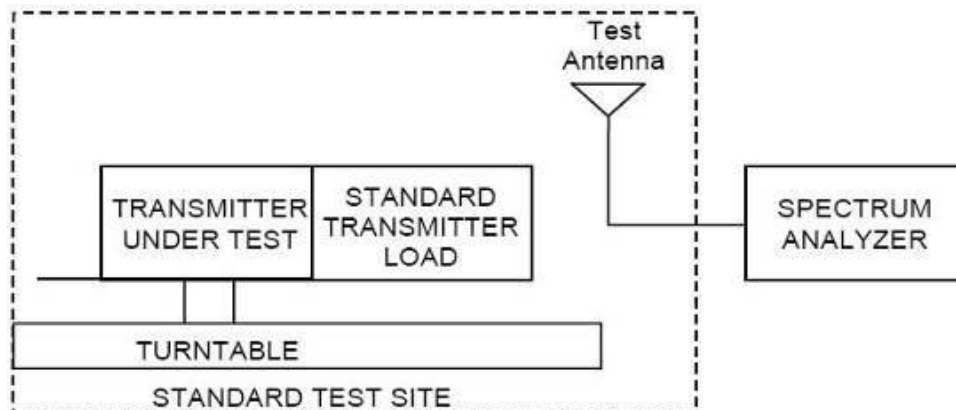
Test Setup:

The EUT was placed in an anechoic chamber. The Wireless Communications Test Set was used to set the TX channel and power level and modulate the TX signal with different bit patterns.

Test Method:

The measurement method is substitution method accordance with section 2.2.12 of ANSI/TIA-603-E: Land Mobile FM or PM Communications Equipment Measurement and Performance Standards.

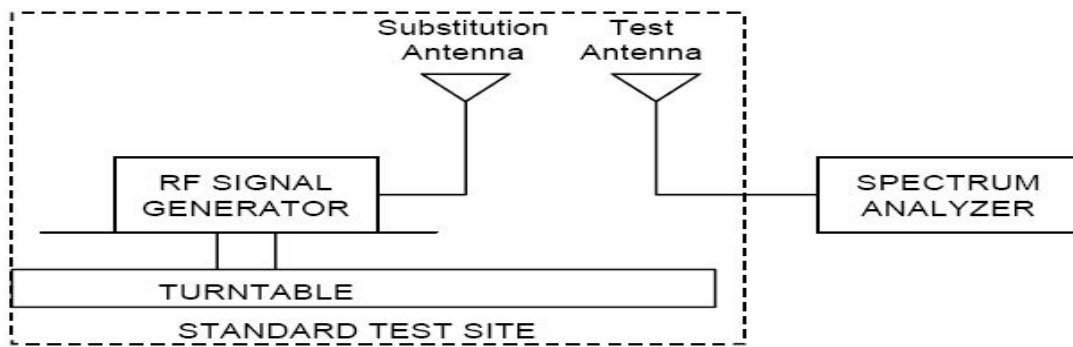
(a) Connect the equipment as illustrated and measure the spurious emissions as the method as above. The distance from the device to the antenna is 3 m .



(b) Reconnect the equipment as illustrated.

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(c) Remove the transmitter and replace it with a substitution antenna. The center of the substitution antenna should be approximately at the same location as the center of the transmitter.

(d) Feed the substitution antenna at the transmitter end with a signal generator connected to the antenna by means of a non-radiating cable. With the antennas at both ends horizontally polarized, and with the signal generator tuned to a particular spurious frequency, raise and lower the test antenna to obtain a maximum reading at the spectrum analyzer. Adjust the level of the signal generator output until the previously recorded maximum reading for this set of conditions is obtained. This should be done carefully repeating the adjustment of the test antenna and generator output.

(e) Repeat step d) with both antennas vertically polarized for each spurious frequency.

(f) Calculate power in dBm into a reference ideal half-wave dipole antenna by reducing the readings obtained in steps d) and e) by the power loss in the cable between the generator and the antenna, and further corrected for the gain of the substitution antenna used relative to an ideal half-wave dipole antenna by the following formula:

$$P_d(\text{dBm}) = P_g(\text{dBm}) - \text{cable loss (dB)} + \text{antenna gain (dB)}$$

where:

P_d is the dipole equivalent power and P_g is the generator output power into the substitution antenna.

Note: The evaluation of radiated spurious emission under the simultaneous transmission of WWAN & WLAN.

6.6.1 LTE B2 Radiated Spurious Emission Results

Test Data (1.4MHz bandwidth 18607 QPSK Mode)

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3701.4	-67.1	7.2	8.9	-65.4	V
5552.1	-71.3	2.5	10.5	-63.3	V
7402.8	-73.0	0.9	11.9	-62.0	V
9253.5	-69.5	1.0	11.5	-59.0	V
11104.2	-70.9	0.3	12.1	-59.1	V
12954.9	-69.7	0.4	12.4	-57.7	V

Test Data (1.4MHz bandwidth 18607 16QAM Mode)

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3701.4	-66.8	7.2	8.9	-65.1	V
5552.1	-71.6	2.5	10.5	-63.6	V
7402.8	-73.4	0.9	11.9	-62.4	V
9253.5	-70.4	1.0	11.5	-59.9	V
11104.2	-70.8	0.3	12.1	-59.0	V
12954.9	-69.9	0.4	12.4	-57.9	V

Test Data (1.4MHz bandwidth 18900 QPSK Mode)

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3760.0	-66.5	7.3	8.9	-64.9	V
5640.0	-71.5	1.8	10.5	-62.8	V
7520.0	-72.2	0.9	11.9	-61.2	V

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9400.0	-69.1	0.8	11.8	-58.1	V
11280.0	-70.0	0.3	12.1	-58.2	V
13160.0	-69.6	0.4	12.4	-57.6	V

Test Data (1.4MHz bandwidth 18900 16QAM Mode)

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3760.0	-65.5	7.3	8.9	-63.9	V
5640.0	-72.0	1.8	10.5	-63.3	V
7520.0	-71.9	0.9	11.9	-60.9	V
9400.0	-69.5	0.8	11.8	-58.5	V
11280.0	-69.9	0.3	12.1	-58.1	V
13160.0	-69.2	0.4	12.4	-57.2	V

Test Data (1.4MHz bandwidth 19192 QPSK Mode)

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3818.4	-66.1	7.4	9.2	-64.3	V
5727.6	-72.4	1.5	10.5	-63.4	V
7636.8	-72.1	1.1	11.9	-61.3	V
9546.0	-70.9	0.9	11.8	-60.0	V
11455.2	-71.2	0.3	12.2	-59.3	V
13364.4	-69.7	0.4	12.4	-57.7	V

Test Data (1.4MHz bandwidth 19192 16QAM Mode)

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3818.4	-66.0	7.4	9.2	-64.2	V
5727.6	-71.7	1.5	10.5	-62.7	V

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7636.8	-71.7	1.1	11.9	-60.9	V
9546.0	-70.7	0.9	11.8	-59.8	V
11455.2	-71.1	0.3	12.2	-59.2	V
13364.4	-69.6	0.4	12.4	-57.6	V

Test Data (3MHz bandwidth 18615 QPSK Mode)

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3703.0	-66.4	7.2	8.9	-64.7	V
5554.5	-71.3	2.0	10.5	-62.8	V
7406.0	-73.1	0.9	11.9	-62.1	V
9257.5	-71.0	1.0	11.5	-60.5	V
11109.0	-71.0	0.4	12.1	-59.3	V
12960.5	-70.4	0.4	12.4	-58.4	V

Test Data (3MHz bandwidth 18615 16QAM Mode)

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3703.0	-66.8	7.2	8.9	-65.1	V
5554.5	-71.8	2.0	10.5	-63.3	V
7406.0	-73.1	0.9	11.9	-62.1	V
9257.5	-69.6	1.0	11.5	-59.1	V
11109.0	-71.0	0.4	12.1	-59.3	V
12960.5	-69.4	0.4	12.4	-57.4	V

Test Data (3MHz bandwidth 18900 QPSK Mode)

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3760.0	-66.6	7.3	8.9	-65.0	V

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5640.0	-71.8	1.8	10.5	-63.1	V
7520.0	-72.4	0.9	11.9	-61.4	V
9400.0	-70.2	0.8	11.8	-59.2	V
11280.0	-70.0	0.3	12.1	-58.2	V
13160.0	-69.8	0.4	12.4	-57.8	V

Test Data (3MHz bandwidth 18900 16QAM Mode)

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3760.0	-66.6	7.3	8.9	-65.0	V
5640.0	-71.9	1.8	10.5	-63.2	V
7520.0	-72.0	0.9	11.9	-61.0	V
9400.0	-70.5	0.8	11.8	-59.5	V
11280.0	-69.8	0.3	12.1	-58.0	V
13160.0	-69.8	0.4	12.4	-57.8	V

Test Data (3MHz bandwidth 19184 QPSK Mode)

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3816.4	-66.1	7.4	9.2	-64.3	V
5724.8	-72.4	1.4	10.5	-63.3	V
7633.2	-71.6	1.1	11.9	-60.8	V
9541.6	-71.0	0.9	11.8	-60.1	V
11450.0	-70.7	0.8	12.2	-59.3	V
13358.4	-69.7	0.4	12.4	-57.7	V

Test Data (3MHz bandwidth 19184 16QAM Mode)

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
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3816.4	-66.8	7.4	9.2	-65.0	V
5724.8	-72.3	1.4	10.5	-63.2	V
7633.2	-72.0	1.1	11.9	-61.2	V
9541.6	-70.9	0.9	11.8	-60.0	V
11450.0	-70.8	0.8	12.2	-59.4	V
13358.4	-69.5	0.4	12.4	-57.5	V

Test Data (5MHz bandwidth 18625 QPSK Mode)

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3705.0	-66.6	7.2	8.9	-64.9	V
5557.5	-71.7	2.5	10.5	-63.7	V
7410.0	-72.9	0.9	11.9	-61.9	V
9262.5	-70.4	1.0	11.5	-59.9	V
11115.0	-71.2	0.3	12.1	-59.4	V
12967.5	-69.8	0.4	12.4	-57.8	V

Test Data (5MHz bandwidth 18625 16QAM Mode)

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3705.0	-66.3	7.2	8.9	-64.6	V
5557.5	-70.6	2.5	10.5	-62.6	V
7410.0	-73.1	0.9	11.9	-62.1	V
9262.5	-70.8	1.0	11.5	-60.3	V
11115.0	-70.9	0.3	12.1	-59.1	V
12967.5	-69.6	0.4	12.4	-57.6	V

Test Data (5MHz bandwidth 18900 QPSK Mode)

Frequency [MHz]	Generator output	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission	Antenna Polarization
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	power(Pg) [dBm]			Power (Pd) [dBm]	[H/V]
3760.0	-66.2	7.3	8.9	-64.6	V
5640.0	-71.9	1.8	10.5	-63.2	V
7520.0	-71.5	0.9	11.9	-60.5	V
9400.0	-70.5	0.8	11.8	-59.5	V
11280.0	-70.1	0.3	12.1	-58.3	V
13160.0	-69.8	0.4	12.4	-57.8	V

Test Data (5MHz bandwidth 18900 16QAM Mode)

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3760.0	-66.3	7.3	8.9	-64.7	V
5640.0	-72.3	1.8	10.5	-63.6	V
7520.0	-72.1	0.9	11.9	-61.1	V
9400.0	-70.6	0.8	11.8	-59.6	V
11280.0	-70.0	0.3	12.1	-58.2	V
13160.0	-69.7	0.4	12.4	-57.7	V

Test Data (5MHz bandwidth 19174 QPSK Mode)

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3814.8	-66.1	7.4	9.2	-64.3	V
5722.2	-72.0	1.5	10.5	-63.0	V
7629.6	-72.0	0.8	11.9	-60.9	V
9537.0	-70.7	0.9	11.8	-59.8	V
11444.4	-70.7	0.8	12.2	-59.3	V
13351.8	-70.5	0.4	12.4	-58.5	V

Test Data (5MHz bandwidth 19174 16QAM Mode)

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Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3814.8	-67.0	7.4	9.2	-65.2	V
5722.2	-72.0	1.5	10.5	-63.0	V
7629.6	-72.5	0.8	11.9	-61.4	V
9537.0	-71.2	0.9	11.8	-60.3	V
11444.4	-70.8	0.8	12.2	-59.4	V
13351.8	-69.2	0.4	12.4	-57.2	V

Test Data (10MHz bandwidth 18650 QPSK Mode)

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3710.0	-66.8	7.2	8.9	-65.1	V
5565.0	-71.7	2.0	10.5	-63.2	V
7420.0	-72.9	0.9	11.9	-61.9	V
9275.0	-70.0	1.0	11.5	-59.5	V
11130.0	-70.7	0.3	12.1	-58.9	V
12985.0	-69.5	0.4	12.4	-57.5	V

Test Data (10MHz bandwidth 18650 16QAM Mode)

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3710.0	-66.4	7.2	8.9	-64.7	V
5565.0	-71.9	2.0	10.5	-63.4	V
7420.0	-72.6	0.9	11.9	-61.6	V
9275.0	-70.6	1.0	11.5	-60.1	V
11130.0	-71.1	0.3	12.1	-59.3	V
12985.0	-69.4	0.4	12.4	-57.4	V

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Test Data (10MHz bandwidth 18900 QPSK Mode)

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3760.0	-66.7	7.3	8.9	-65.1	V
5640.0	-72.6	1.8	10.5	-63.9	V
7520.0	-71.9	0.9	11.9	-60.9	V
9400.0	-70.3	0.8	11.8	-59.3	V
11280.0	-70.0	0.3	12.1	-58.2	V
13160.0	-68.8	0.4	12.4	-56.8	V

Test Data (10MHz bandwidth 18900 16QAM Mode)

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3760.0	-66.3	7.3	8.9	-64.7	V
5640.0	-71.7	1.8	10.5	-63.0	V
7520.0	-71.8	0.9	11.9	-60.8	V
9400.0	-70.4	0.8	11.8	-59.4	V
11280.0	-70.3	0.3	12.1	-58.5	V
13160.0	-69.4	0.4	12.4	-57.4	V

Test Data (10MHz bandwidth 19149 QPSK Mode)

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3809.8	-66.0	7.4	9.2	-64.2	V
5714.7	-72.1	1.5	10.5	-63.1	V
7619.6	-71.8	1.1	11.9	-61.0	V
9524.5	-70.2	0.9	11.8	-59.3	V
11429.4	-70.6	0.8	12.2	-59.2	V

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13343.3	-69.8	0.4	12.4	-57.8	V
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Test Data (10MHz bandwidth 19149 16QAM Mode)

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3809.8	-66.1	7.4	9.2	-64.3	V
5714.7	-72.6	1.5	10.5	-63.6	V
7619.6	-72.6	1.1	11.9	-61.8	V
9524.5	-70.4	0.9	11.8	-59.5	V
11429.4	-70.6	0.8	12.2	-59.2	V
13343.3	-70.7	0.4	12.4	-58.7	V

Test Data (15MHz bandwidth 18675 QPSK Mode)

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3715.0	-67.3	7.2	8.9	-65.6	V
5572.5	-72.0	2.0	10.5	-63.5	V
7430.0	-72.0	0.9	11.9	-61.0	V
9287.5	-70.4	1.0	11.5	-59.9	V
11145.0	-70.8	0.3	12.1	-59.0	V
13002.5	-69.8	0.4	12.4	-57.8	V

Test Data (15MHz bandwidth 18675 16QAM Mode)

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3715.0	-66.3	7.2	8.9	-64.6	V
5572.5	-71.9	2.0	10.5	-63.4	V
7430.0	-72.1	0.9	11.9	-61.1	V
9287.5	-69.5	1.0	11.5	-59.0	V

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11145.0	-70.5	0.3	12.1	-58.7	V
13002.5	-70.8	0.4	12.4	-58.8	V

Test Data (15MHz bandwidth 18900 QPSK Mode)

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3760.0	-66.5	7.3	8.9	-64.9	V
5640.0	-72.5	1.8	10.5	-63.8	V
7520.0	-72.3	0.9	11.9	-61.3	V
9400.0	-70.6	0.8	11.8	-59.6	V
11280.0	-70.0	0.3	12.1	-58.2	V
13160.0	-70.8	0.4	12.4	-58.8	V

Test Data (15MHz bandwidth 18900 16QAM Mode)

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3760.0	-65.9	7.3	8.9	-64.3	V
5640.0	-71.6	1.8	10.5	-62.9	V
7520.0	-71.8	0.9	11.9	-60.8	V
9400.0	-70.5	0.8	11.8	-59.5	V
11280.0	-70.4	0.3	12.1	-58.6	V
13160.0	-70.8	0.4	12.4	-58.8	V

Test Data (15MHz bandwidth 19124 QPSK Mode)

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3804.8	-66.3	7.4	9.2	-64.5	V
5707.2	-71.7	1.5	10.5	-62.7	V
7609.6	-71.7	1.1	11.9	-60.9	V

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9512.0	-70.5	0.9	11.8	-59.6	V
11414.4	-70.5	0.8	12.2	-59.1	V
13316.8	-70.6	0.4	12.4	-58.6	V

Test Data (15MHz bandwidth 19124 16QAM Mode)

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3804.8	-66.6	7.4	9.2	-64.8	V
5707.2	-72.3	1.5	10.5	-63.3	V
7609.6	-72.3	1.1	11.9	-61.5	V
9512.0	-70.2	0.9	11.8	-59.3	V
11414.4	-70.7	0.8	12.2	-59.3	V
13316.8	-70.4	0.4	12.4	-58.4	V

Test Data (20MHz bandwidth 18700 QPSK Mode)

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3720.0	-67.1	7.3	9.2	-65.2	V
5580.0	-71.7	2.0	10.5	-63.2	V
7440.0	-71.3	0.9	11.9	-60.3	V
9300.0	-70.7	0.7	11.8	-59.6	V
11160.0	-70.4	0.3	12.2	-58.5	V
13020.0	-69.9	0.4	12.4	-57.9	V

Test Data (20MHz bandwidth 18700 16QAM Mode)

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3720.0	-67.4	7.3	9.2	-65.5	V
5580.0	-71.9	2.0	10.5	-63.4	V

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Tel: 0086-23-88069965 FAX:0086-23-88608777

7440.0	-72.3	0.9	11.9	-61.3	V
9300.0	-71.1	0.7	11.8	-60.0	V
11160.0	-70.8	0.3	12.2	-58.9	V
13020.0	-68.7	0.4	12.4	-56.7	V

Test Data (20MHz bandwidth 18900 QPSK Mode)

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
-58.23760.0	-66.7	7.3	8.9	-65.1	V
5640.0	-72.1	1.8	10.5	-63.4	V
7520.0	-71.6	0.9	11.9	-60.6	V
9400.0	-70.5	0.8	11.8	-59.5	V
11280.0	-70.0	0.3	12.1	-58.2	V
13160.0	-69.2	0.4	12.4	-57.2	V

Test Data (20MHz bandwidth 18900 16QAM Mode)

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3760.0	-66.2	7.3	8.9	-64.6	V
5640.0	-72.1	1.8	10.5	-63.4	V
7520.0	-71.7	0.9	11.9	-60.7	V
9400.0	-70.3	0.8	11.8	-59.3	V
11280.0	-69.8	0.3	12.1	-58.0	V
13160.0	-68.4	0.4	12.4	-56.4	V

Test Data (20MHz bandwidth 19099 QPSK Mode)

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3799.8	-66.6	7.4	9.2	-64.8	V

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5699.7	-72.3	1.7	10.5	-63.5	V
7599.6	-72.2	0.8	11.9	-61.1	V
9499.5	-70.6	0.8	11.8	-59.6	V
11399.4	-70.6	0.8	12.2	-59.2	V
13299.3	-70.8	0.4	12.4	-58.8	V

Test Data (20MHz bandwidth 19099 16QAM Mode)

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3799.8	-66.3	7.4	9.2	-64.5	V
5699.7	-71.7	1.7	10.5	-62.9	V
7599.6	-72.1	0.8	11.9	-61.0	V
9499.5	-70.9	0.8	11.8	-59.9	V
11399.4	-70.6	0.8	12.2	-59.2	V
13299.3	-70.8	0.4	12.4	-58.8	V

6.6.2 LTE B4 Radiated Spurious Emission Results

Test Data (1.4MHz bandwidth 19957 QPSK Mode)

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3421.4	-68.3	6.9	8.9	-66.3	V
5132.1	-68.1	6.3	9.9	-64.5	V
6842.8	-72.5	0.8	11.9	-61.4	V
8553.5	-70.8	0.9	11.2	-60.5	V
10264.2	-71.8	0.5	12.0	-60.3	V
11974.9	-69.8	0.4	12.2	-58.0	V

Test Data (1.4MHz bandwidth 19957 16QAM Mode)

Frequency	Generator	Cable loss	Antenna	Spurious	Antenna
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[MHz]	output power(Pg) [dBm]	[dB]	Gain [dB]	Emission Power (Pd) [dBm]	Polarization [H/V]
3421.4	-68.0	6.9	8.9	-66.0	V
5132.1	-66.7	6.3	9.9	-63.1	V
6842.8	-72.1	0.8	11.9	-61.0	V
8553.5	-71.0	0.9	11.2	-60.7	V
10264.2	-72.0	0.5	12.0	-60.5	V
11974.9	-70.1	0.4	12.2	-58.3	V

Test Data (1.4MHz bandwidth 20175 QPSK Mode)

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3465.0	-68.3	6.9	8.9	-66.3	V
5197.5	-67.7	5.8	9.9	-63.6	V
6930.0	-72.8	0.9	11.9	-61.8	V
8662.5	-70.0	0.9	11.2	-59.7	V
10395.0	-71.8	0.7	12.2	-60.3	V
12127.5	-70.3	0.6	12.2	-58.7	V

Test Data (1.4MHz bandwidth 20175 16QAM Mode)

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3465.0	-68.7	6.9	8.9	-66.7	V
5197.5	-67.6	5.8	9.9	-63.5	V
6930.0	-73.2	0.9	11.9	-62.2	V
8662.5	-70.6	0.9	11.2	-60.3	V
10395.0	-71.7	0.7	12.2	-60.2	V
12127.5	-70.0	0.6	12.2	-58.4	V

Test Data (1.4MHz bandwidth 20392 QPSK Mode)
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Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3508.4	-68.4	7.0	8.9	-66.5	V
5262.5	-68.7	4.7	9.9	-63.5	V
7016.8	-72.0	1.2	11.9	-61.3	V
8771.0	-70.3	1.1	11.2	-60.2	V
10525.2	-71.6	0.6	12.2	-60.0	V
12279.4	-70.3	0.3	12.2	-58.4	V

Test Data (1.4MHz bandwidth 20392 16QAM Mode)

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3508.4	-68.4	7.0	8.9	-66.5	V
5262.5	-69.2	4.7	9.9	-64.0	V
7016.8	-71.8	1.2	11.9	-61.1	V
8771.0	-70.2	1.1	11.2	-60.1	V
10525.2	-71.2	0.6	12.2	-59.6	V
12279.4	-70.7	0.3	12.2	-58.8	V

Test Data (3MHz bandwidth 19965 QPSK Mode)

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3423.0	-68.4	6.9	8.9	-66.4	V
5134.5	-67.5	6.3	9.9	-63.9	V
6846.0	-72.8	0.8	11.9	-61.7	V
8557.5	-69.8	0.9	11.2	-59.5	V
10269.0	-72.1	0.5	12.0	-60.6	V
11980.5	-69.9	0.4	12.2	-58.1	V

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Test Data (3MHz bandwidth 1996S 16QAM Mode)

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3423.0	-68.5	6.9	8.9	-66.5	V
5134.5	-66.5	6.3	9.9	-62.9	V
6846.0	-72.3	0.8	11.9	-61.2	V
8557.5	-70.2	0.9	11.2	-59.9	V
10269.0	-72.0	0.5	12.0	-60.5	V
11980.5	-69.7	0.4	12.2	-57.9	V

Test Data (3MHz bandwidth 2017S QPSK Mode)

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3465.0	-68.9	6.9	8.9	-66.9	V
5197.5	-67.6	5.8	9.9	-63.5	V
6930.0	-72.9	0.9	11.9	-61.9	V
8662.5	-70.2	0.9	11.2	-59.9	V
10395.0	-71.4	0.7	12.2	-59.9	V
12127.5	-70.0	0.6	12.2	-58.4	V

Test Data (3MHz bandwidth 2017S 16QAM Mode)

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3465.0	-67.9	6.9	8.9	-65.9	V
5197.5	-68.2	5.8	9.9	-64.1	V
6930.0	-72.9	0.9	11.9	-61.9	V
8662.5	-69.9	0.9	11.2	-59.6	V
10395.0	-72.1	0.7	12.2	-60.6	V

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12127.5	-70.3	0.6	12.2	-58.7	V
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Test Data (3MHz bandwidth 20384 QPSK Mode)

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3506.8	-64.8	7.0	8.9	-62.9	V
5260.2	-68.5	5.0	9.9	-63.6	V
7013.6	-71.5	1.2	11.9	-60.8	V
8767.0	-69.8	1.2	11.2	-59.8	V
10520.4	-71.3	0.6	12.2	-59.7	V
12273.8	-70.3	0.3	12.2	-58.4	V

Test Data (3MHz bandwidth 20384 16QAM Mode)

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3506.8	-65.3	7.0	8.9	-63.4	V
5260.2	-69.0	5.0	9.9	-64.1	V
7013.6	-71.5	1.2	11.9	-60.8	V
8767.0	-70.6	1.2	11.2	-60.6	V
10520.4	-71.2	0.6	12.2	-59.6	V
12273.8	-70.5	0.3	12.2	-58.6	V

Test Data (5MHz bandwidth 19975 QPSK Mode)

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3425.0	-68.4	6.9	8.9	-66.4	V
5137.5	-67.4	6.3	9.9	-63.8	V
6850.0	-72.7	0.8	11.9	-61.6	V
8562.5	-70.8	0.9	11.2	-60.5	V

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10275.0	-71.9	0.5	12.0	-60.4	V
11987.5	-69.7	0.4	12.2	-57.9	V

Test Data (5MHz bandwidth 19975 16QAM Mode)

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3425.0	-67.8	6.9	8.9	-65.8	V
5137.5	-66.8	6.3	9.9	-63.2	V
6850.0	-73.3	0.8	11.9	-62.2	V
8562.5	-70.9	0.9	11.2	-60.6	V
10275.0	-71.9	0.5	12.0	-60.4	V
11987.5	-69.8	0.4	12.2	-58.0	V

Test Data (5MHz bandwidth 20175 QPSK Mode)

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3465.0	-68.0	6.9	8.9	-66.0	V
5197.5	-67.6	5.8	9.9	-63.5	V
6930.0	-73.3	0.9	11.9	-62.3	V
8662.5	-69.9	0.9	11.2	-59.6	V
10395.0	-72.2	0.7	12.2	-60.7	V
12127.5	-70.3	0.6	12.2	-58.7	V

Test Data (5MHz bandwidth 20175 16QAM Mode)

Frequency [MHz]	Generator output power(Pg) [dBm]	Cable loss [dB]	Antenna Gain [dB]	Spurious Emission Power (Pd) [dBm]	Antenna Polarization [H/V]
3465.0	-68.3	6.9	8.9	-66.3	V
5197.5	-67.9	5.8	9.9	-63.8	V
6930.0	-73.2	0.9	11.9	-62.2	V

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