TEST REPORT

REPORT NUMBER: B16X50266-WWAN-Rev3

ON

Type of Equipment:	Tablet
Model Name:	Ilium Pad L8X
Manufacturer:	Corporativo Lanix S.A.de C.V.

ACCORDING TO

FCC CFR Part 2, FREQUENCY ALLOCATIONS AND RADIO TREATY MATTERS; GENERAL RULES AND REGULATIONS; e-CFR, Mar 17, 2015

PART 22, PUBLIC MOBILE SERVICES , e-CFR, Mar 17, 2015

PART 24, PERSONAL COMMUNICATIONS SERVICES, e-CFR, Mar 17, 2015

PART 27,MISCELLANEOUS WIRELESS COMMUNICATIONS SERVICES, e-CFR, Aug. 15, 2014

China Telecommunication Technology Labs.

Month date, year
Aug, 22, 2016
Signature

He Guili
Director

Note:

The test results in this test report relate only to the devices specified in this report. This report shall not be reproduced except in full without the written approval of China Telecommunication Technology Labs.

FCC ID:	ZC4L8X
Report Date:	2016-08-22
Test Firm Name:	China Telecommunication Technology Labs
FCC Registration Number:	840587

Statement

The measurements shown in this report were made in accordance with the procedures described on test pages. All reported tests were carried out on a sample equipment to demonstrate limited compliance with FCC CFR 47 Parts 2, 22, 24, 27. The sample tested was found to comply with the requirements defined in the applied rules.

CONTENTS

1 General Information

1.1 Notes

All reported tests were carried out on a sample equipment to demonstrate limited compliance with FCC CFR 47 Parts 2, 22, 24, 27.

The test results of this test report relate exclusively to the item(s) tested as specified in section 2.

The following deviation from, additions to, or exclusions from the test specifications have been made. See Annex B.

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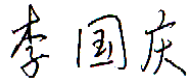
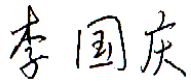
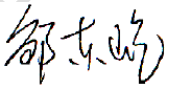
1.2 Testers

Name:	Li Guoqing
Position:	Engineer
Department:	Department of RF test
Date:	2016-06-28 to 2016-08-22
Signature:	

Editor of this test report:

Name:	Li Guoqing
Position:	Engineer
Department:	Department of RF test
Date:	2016-08-22
Signature:	

Technical responsibility for area of testing:

Name:	Zou Dongyi
Position:	Manager
Department:	Director of the laboratory
Date:	2016-08-22
Signature:	

1.3 Testing Laboratory information

1.3.1 Location

Name:	China Telecommunication Technology Labs.
Address:	No. 11, Yue Tan Nan Jie, Xi Cheng District BEIJING P. R. CHINA, 100083
Tel:	+86 10 68094053
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1.3.2 Details of accreditation status

Accredited by:	China National Accreditation Service for Conformity Assessment (CNAS)
Registration number:	CNAS Registration No. CNAS L0570
Standard:	ISO/IEC 17025:2005

1.3.3 Test location, where different from section 1.3.1

Name:	------
Street:	------
City:	------
Country:	------
Telephone:	------
Fax:	------
Postcode:	------

1.4 Details of applicant or manufacturer

1.4.1 Applicant

Name:	Corporativo Lanix S.A.de C.V.
Address:	Carretera Internacional Hermosillo - Nogales Km 8.5 Hermosillo, Sonora, México
Country:	México
Telephone:	0052 16621090811
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Contact:	Oscar Guzman
Email:	oguzman@lanix.com

1.4.2 Manufacturer (if different from applicant in section 1.4.1)

Name:	Corporativo Lanix S.A.de C.V.
Address:	Carretera Internacional Hermosillo - Nogales Km 8.5 Hermosillo, Sonora, México
Country:	México
Telephone:	0052 16621090811
Fax:	--
Contact:	Oscar Guzman
Email:	oguzman@lanix.com

2 Test Item

2.1 General Information

Manufacturer:	Corporativo Lanix S.A.de C.V.
Type of Equipment:	Tablet
Model Name:	Ilium Pad L8X
Serial Number:	S3/9: 358067070000937 S8/9: 358067070000903 S9/9: 358067070001059
Production Status:	Product
Receipt date of test item:	2016-05-24

2.2 Outline of Equipment under Test

The Ilium Pad L8X, referred to as "EUT" hereafter, is a multi-band wireless modem operating on the GSM/UMTS networks. The table below shows the supported bands for the EUT.

Technology	Band	UL Freq.(MHz)	DL Freq.(MHz)	Note
GSM	GSM850	824 - 849	869 – 894	--
	PCS1900	1850 - 1910	1930 - 1990	--
WCDMA	B2	1850 – 1910	1930 – 1990	--
	B5	824 – 849	869 – 894	--
LTE	B2	1850-1910	1930-1990	--
	B4	1710-1755	2110-2155	--
	B7	2500-2570	2620-2690	--
	B17	704-716	734-746	--

2.3 Modifications Incorporated in EUT

The EUT has not been modified from what is described by the brand name and unique type identification stated above.

2.4 Equipment Configuration

Equipment configuration list:

Item	Generic Description	Manufacturer	Type	Serial No.	Remarks
A	Modem	Corporativo Lanix S.A.de C.V.	Ilium Pad L8X	S3/9: 358067070000937 S8/9: 358067070000903	None

				S9/9: 358067070001059	
B	Adaptor	None	None	--	None

2.5 Other Information

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3 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
2.1049, 22.917(b), 24.238(b)	Occupied Bandwidth	*Note 1
2.1051, 2.1053, 24.238, 22.917	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
22.913(a), 24.232(b)	ERP and EIRP	Pass
Note 1: No applicable performance criteria.		

4 Test Equipments and Ancillaries Used For Tests

The test equipments and ancillaries used are as follows.

No.	Equipment	Model	SN	Manufacture	Cal. Due Date
1	EMI Test Receiver	ESU26	100367	R&S	2017-03-04
2	Trilog super broadband test antenna	VULB 9163	9163-544	R&S	2017-01-05
3	Double-Ridged Horn Antenna	HF907	100356	R&S	2016-12-12
4	Fully-Anechoic Chamber	11.8m×6.5 m×6.3m	--	ETS	2017-08-19
5	Universal Radio Communication Tester	CMW500	128181	R&S	2017-03-04
6	Signal Generator	SMU200A	104517	R&S	2017-03-04
7	spectrum analyzer	FSQ 26	201137/026	R&S	2017-03-04
8	spectrum analyzer	N9020A	MY50200376	Agilent	2017-03-04
9	Universal Radio Communication Tester	CMU200	112012	R&S	2017-03-04
10	Climate chamber	SH-241	92010759	ESPEC	2017-03-04
11	DC Power Supply	N6705B	MY50000919	Agilent	2017-12-06

5 Test Results

5.1 Conducted RF Power Output

Specifications:	FCC Part 2.1046, 22.913(a), 24.232(c), 27.50
DUT Serial Number:	S3/9: 358067070000937
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 Part24.232(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.

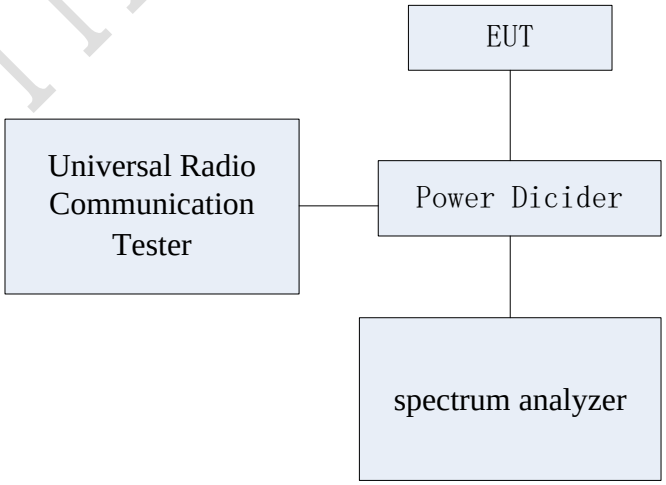
According to Part 27.50(b), portable stations (hand-held devices) transmitting in the 746-757 MHz, 776-788 MHz, and 805-806 MHz bands are limited to 3 watts ERP.

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 lost of the cables the test system is calibrated to correct the readings.

2) The spectrum analyzer was set to Maxpeak Detector function and Maximum hold mode.

3) The resolution bandwidth of the spectrum analyzer was comparable to the emission bandwidth.

Note: --

5.1.1 GSM850 Conducted RF Power Output Results

GSM GMSK Mode:

Channel No.	Maximum output power(pk) [dBm]
128 (824.2MHz)	31.76
190 (836.6MHz)	31.48
251 (848.8MHz)	31.39

GPRS GMSK Mode:

Channel No.	Maximum output power(pk) [dBm]			
	1TS	2TS	3TS	4TS
128 (824.2MHz)	31.77	31.32	30.00	29.01
190 (836.6MHz)	31.45	31.02	29.71	28.73
251 (848.8MHz)	31.36	31.02	29.73	28.72

EGPRS GMSK Mode

Channel No.	Maximum output power(pk) [dBm]			
	1TS	2TS	3TS	4TS
128 (824.2MHz)	31.76	31.33	29.98	29.01
190 (836.6MHz)	31.44	31.02	29.70	28.72
251 (848.8MHz)	31.36	31.01	29.73	28.72

EGPRS 8PSK Mode

Channel No.	Maximum output power(pk) [dBm]			
	1TS	2TS	3TS	4TS
128 (824.2MHz)	27.28	26.32	24.18	23.35
190 (836.6MHz)	27.32	26.23	24.25	23.27
251 (848.8MHz)	27.19	26.17	24.31	23.42

5.1.2 PCS1900 Conducted RF Power Output Results

GSM GMSK Mode:

Channel No.	Maximum output power(pk) [dBm]
512 (1850.2MHz)	28.92
661 (1880.0MHz)	28.65
810 (1909.8MHz)	28.74

GPRS GMSK Mode

Channel No.	Maximum output power(pk) [dBm]			
	1TS	2TS	3TS	4TS
512 (1850.2MHz)	28.95	28.82	27.81	26.83
661 (1880.0MHz)	28.67	28.63	27.78	26.51
810 (1909.8MHz)	28.82	28.70	27.74	26.73

EGPRS GMSK Mode

Channel No.	Maximum output power(pk) [dBm]			
	1TS	2TS	3TS	4TS
512 (1850.2MHz)	28.91	28.80	27.81	26.82
661 (1880.0MHz)	28.65	28.62	27.79	26.51
810 (1909.8MHz)	28.82	28.71	27.73	26.73

EGPRS 8PSK Mode

Channel No.	Maximum output power(pk) [dBm]			
	1TS	2TS	3TS	4TS
512 (1850.2MHz)	26.07	25.04	23.02	21.88
661 (1880.0MHz)	26.29	25.10	23.08	21.93
810 (1909.8MHz)	26.15	25.13	23.05	21.80

5.1.3 WCDMA Band2 Conducted RF Power Output Results

		Maximum output power(pk) [dBm]			Maximum output power(RMS) [dBm]		
Mode	3GPP Subtest	9262	9400	9538	9262	9400	9538
RMC	--	25.41	25.09	25.54	22.66	22.86	22.66
HSDPA	1	24.84	24.61	24.90	21.67	21.98	21.88
	2	25.30	24.98	25.58	21.62	21.81	21.78
	3	25.16	24.78	25.39	20.55	20.68	20.66
	4	25.30	24.74	25.56	20.56	20.58	20.70
HSUPA (QPSK)	1	25.48	24.43	24.74	20.51	19.90	20.43
	2	25.16	24.60	25.30	20.52	19.92	19.23
	3	25.47	24.35	24.38	20.54	19.93	19.14
	4	25.36	24.26	24.21	20.53	20.01	19.30
	5	25.38	24.65	24.58	20.50	19.97	20.64
HSUPA (16QAM)	1	25.02	24.36	24.59	20.07	19.58	20.01
	2	25.35	24.57	25.15	20.05	19.53	18.92
	3	25.51	24.44	24.26	20.12	19.67	18.73
	4	25.48	24.23	24.15	20.11	19.62	18.86
	5	25.19	24.30	24.45	20.03	19.62	20.24

5.1.4 WCDMA Band5 Conducted RF Power Output Results

		Maximum output power(pk) [dBm]			Maximum output power(RMS) [dBm]		
Mode	3GPP Subtest	4132	4182	4233	4132	4182	4233
RMC	--	24.85	24.92	24.78	22.53	22.51	22.48
HSDPA	1	24.09	24.16	24.07	21.30	21.31	21.21
	2	24.91	25.52	25.16	21.44	21.49	21.46

	3	24.78	25.17	24.72	20.46	20.45	20.34
	4	24.79	24.88	24.89	20.48	20.49	20.35
HSUPA (QPSK)	1	24.72	24.91	24.86	20.44	20.41	20.35
	2	25.00	24.85	24.97	20.47	20.44	20.34
	3	25.10	24.88	25.00	20.49	20.45	20.33
	4	24.82	24.89	24.90	20.45	20.43	20.37
	5	24.72	24.82	24.65	20.48	20.42	20.36
HSUPA (16QAM)	1	24.89	24.75	24.81	20.17	20.02	19.95
	2	25.12	24.54	24.61	20.09	20.12	20.03
	3	25.21	24.72	24.85	20.13	20.09	19.97
	4	24.75	24.63	24.85	20.08	20.11	20.06
	5	24.56	24.63	24.89	20.03	20.08	19.87

5.1.5 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	22.59	25.08	2.49
		1	2		22.61	25.12	2.51
		1	5		22.60	25.18	2.58
		6	0		21.62	26.00	4.38
		1	0	16QAM	21.58	24.86	3.28
		1	2		21.64	24.96	3.32
		1	5		21.59	24.96	3.37
		6	0		20.53	25.77	5.24
18900	1880	1	0	QPSK	22.60	24.59	1.99
		1	2		22.60	24.58	1.98
		1	5		22.63	24.63	2.00
		6	0		21.59	25.68	4.09
		1	0	16QAM	21.36	24.44	3.08
		1	2		21.47	24.44	2.97
		1	5		21.41	24.44	3.03
		6	0		20.37	25.18	4.81

19193	1909.3	1	0	QPSK	22.52	25.20	2.68
		1	2		22.58	25.19	2.61
		1	5		22.54	25.24	2.70
		6	0		21.55	26.08	4.53
		1	0	16QAM	21.37	25.05	3.68
		1	2		21.43	25.08	3.65
		1	5		21.41	25.10	3.69
		6	0		20.45	26.08	5.63

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	22.56	25.07	2.51
		1	8		22.58	25.26	2.68
		1	15		22.52	25.39	2.87
		15	0		21.52	26.17	4.65
		1	0	16QAM	21.56	24.85	3.29
		1	8		21.57	25.04	3.47
		1	15		21.54	25.16	3.62
		15	0		20.44	26.10	5.66
18900	1880	1	0	QPSK	22.59	24.63	2.04
		1	8		22.58	24.57	1.99
		1	15		22.58	24.61	2.03
		15	0		21.43	25.81	4.38
		1	0	16QAM	21.37	24.47	3.10
		1	8		21.39	24.42	3.03
		1	15		21.36	24.45	3.09
		15	0		20.38	25.76	5.38
19185	1908.5	1	0	QPSK	22.48	25.05	2.57

		1	8		22.53	25.08	2.55
		1	15		22.51	25.14	2.63
		15	0		21.48	26.42	4.94
		1	0	16QAM	21.76	25.13	3.37
		1	8		21.80	25.14	3.34
		1	15		21.77	25.20	3.43
		15	0		20.46	26.10	5.64

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	22.55	25.09	2.54
		1	13		22.24	25.32	3.08
		1	24		22.50	25.70	3.20
		25	0		21.47	26.67	5.20
		1	0	16QAM	21.73	25.04	3.31
		1	13		21.63	25.29	3.66
		1	24		21.69	25.63	3.94
		25	0		20.44	26.39	5.95
18900	1880	1	0	QPSK	22.36	24.67	2.31
		1	13		22.15	24.54	2.39
		1	24		22.40	24.58	2.18
		25	0		21.40	25.95	4.55
		1	0	16QAM	21.47	24.60	3.13
		1	13		21.44	24.51	3.07
		1	24		21.42	24.49	3.07
		25	0		20.35	25.59	5.24
19175	1907.5	1	0	QPSK	22.49	25.42	2.93

		1	13		22.51	25.15	2.64
		1	24		22.49	25.22	2.73
		25	0		21.42	26.30	4.88
		1	0	16QAM	21.29	25.13	3.84
		1	13		21.29	24.92	3.63
		1	24		21.30	25.03	3.73
		25	0		20.43	26.11	5.68

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	22.15	25.05	2.90
		1	25		22.31	25.70	3.39
		1	49		22.08	26.16	4.08
		50	0		21.46	26.71	5.25
		1	0	16QAM	21.36	24.82	3.46
		1	25		21.53	25.42	3.89
		1	49		21.30	25.72	4.42
		50	0		20.48	26.62	6.14
18900	1880	1	0	QPSK	22.12	24.82	2.70
		1	25		22.21	24.51	2.30
		1	49		22.04	24.49	2.45
		50	0		21.42	25.83	4.41
		1	0	16QAM	21.28	24.75	3.47
		1	25		21.38	24.46	3.08
		1	49		21.23	24.43	3.20
		50	0		20.38	25.94	5.56
19150	1905	1	0	QPSK	22.29	25.88	3.59

		1	25		22.52	25.29	2.77
		1	49		22.12	25.05	2.93
		50	0		21.44	26.46	5.02
		1	0	16QAM	21.85	26.14	4.29
		1	25		21.85	25.38	3.53
		1	49		21.73	25.16	3.43
		50	0		20.42	26.54	6.12

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	22.43	25.11	2.68
		1	38		22.33	25.92	3.59
		1	74		22.21	26.22	4.01
		75	0		21.46	27.21	5.75
		1	0	16QAM	21.64	24.95	3.31
		1	38		21.57	25.68	4.11
		1	74		21.47	25.82	4.35
		75	0		20.54	27.01	6.47
18900	1880	1	0	QPSK	22.25	25.00	2.75
		1	38		22.14	24.46	2.32
		1	74		22.30	24.73	2.43
		75	0		21.48	26.23	4.75
		1	0	16QAM	21.63	25.11	3.48
		1	38		21.54	24.47	2.93
		1	74		21.67	24.76	3.09
		75	0		20.52	25.88	5.36
19125	1902.5	1	0	QPSK	22.48	25.96	3.48

		1	38		22.39	25.53	3.14
		1	74		22.36	25.69	3.33
		75	0		21.61	27.19	5.58
		1	0	16QAM	21.93	26.06	4.13
		1	38		21.88	25.59	3.71
		1	74		21.88	25.03	3.15
		75	0		20.55	26.74	6.19

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	22.23	25.86	3.63
		1	50		22.17	26.02	3.85
		1	99		22.34	25.94	3.60
		100	0		21.44	26.86	5.42
		1	0	16QAM	21.31	24.69	3.38
		1	50		21.20	25.75	4.55
		1	99		21.03	25.38	4.35
		100	0		20.48	26.65	6.17
18900	1880	1	0	QPSK	21.95	25.62	3.67
		1	50		21.96	24.35	2.39
		1	99		22.64	25.17	2.53
		100	0		21.48	26.16	4.68
		1	0	16QAM	21.84	25.70	3.86
		1	50		21.68	24.40	2.72
		1	99		21.79	25.11	3.32
		100	0		20.38	25.98	5.60
19100	1900	1	0	QPSK	22.59	25.55	2.96

		1	50		22.61	26.18	3.57
		1	99		22.60	24.99	2.39
		100	0		21.52	26.83	5.31
		1	0	16QAM	21.65	25.57	3.92
		1	50		21.74	26.24	4.50
		1	99		21.72	25.02	3.30
		100	0		20.48	26.63	6.15

5.1.6 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	21.85	26.19	4.34
		1	2		21.90	26.15	4.25
		1	5		21.87	26.20	4.33
		6	0		21.87	27.00	5.13
		1	0	16QAM	21.94	26.06	4.12
		1	2		22.00	26.04	4.04
		1	5		21.94	26.05	4.11
		6	0		21.85	27.27	5.42
20175	1732.5	1	0	QPSK	21.81	25.80	3.99
		1	2		21.77	25.76	3.99
		1	5		21.76	25.77	4.01
		6	0		21.74	26.92	5.18
		1	0	16QAM	21.80	26.00	4.20
		1	2		21.74	26.00	4.26
		1	5		21.75	26.01	4.26
		6	0		21.64	26.92	5.28
20393	1754.3	1	0	QPSK	21.85	26.08	4.23
		1	2		21.91	26.04	4.13
		1	5		21.86	26.04	4.18
		6	0		21.89	26.99	5.10
		1	0	16QAM	21.79	26.06	4.27
		1	2		21.85	26.04	4.19
		1	5		21.81	26.03	4.22
		6	0		21.82	27.29	5.47

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	21.83	26.16	4.33
		1	8		21.87	26.17	4.30
		1	15		21.80	25.93	4.13
		15	0		21.86	27.12	5.26
		1	0	16QAM	22.25	26.66	4.41
		1	8		22.28	26.66	4.38
		1	15		22.25	26.66	4.41
		15	0		21.85	27.43	5.58
20175	1732.5	1	0	QPSK	21.83	25.97	4.14
		1	8		21.66	25.92	4.26
		1	15		21.67	25.99	4.32
		15	0		21.74	26.81	5.07
		1	0	16QAM	21.92	25.88	3.96
		1	8		21.75	25.79	4.04
		1	15		21.77	25.85	4.08
		15	0		21.65	27.44	5.79
20385	1753.5	1	0	QPSK	21.85	25.83	3.98
		1	8		21.92	25.77	3.85
		1	15		21.85	25.68	3.83
		15	0		21.84	27.50	5.66
		1	0	16QAM	21.81	26.03	4.22
		1	8		21.85	25.94	4.09
		1	15		21.79	25.87	4.08
		15	0		21.81	27.61	5.80

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	21.87	26.18	4.31
		1	13		21.45	25.92	4.47
		1	24		21.71	26.07	4.36
		25	0		21.43	27.01	5.58
		1	0	16QAM	22.07	26.40	4.33
		1	13		21.68	26.17	4.49
		1	24		21.91	26.30	4.39
		25	0		21.40	27.53	6.13
20175	1732.5	1	0	QPSK	21.77	26.18	4.41
		1	13		21.27	26.03	4.76
		1	24		21.43	26.17	4.74
		25	0		21.28	27.27	5.99
		1	0	16QAM	21.79	26.36	4.57
		1	13		21.30	26.07	4.77
		1	24		21.47	26.09	4.62
		25	0		21.28	27.17	5.89
20375	1752.5	1	0	QPSK	21.85	26.36	4.51
		1	13		21.43	26.07	4.64
		1	24		21.86	26.09	4.23
		25	0		21.54	27.17	5.63
		1	0	16QAM	21.70	26.11	4.41
		1	13		21.28	25.81	4.53
		1	24		21.72	25.89	4.17
		25	0		21.54	27.43	5.89

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	21.35	25.90	4.55
		1	25		21.51	25.89	4.38
		1	49		21.26	25.73	4.47
		50	0		21.46	27.04	5.58
		1	0	16QAM	21.46	25.73	4.27
		1	25		21.60	25.74	4.14
		1	49		21.36	25.56	4.20
		50	0		21.42	27.38	5.96
20175	1732.5	1	0	QPSK	21.27	25.41	4.14
		1	25		21.26	25.47	4.21
		1	49		20.85	25.30	4.45
		50	0		21.23	26.76	5.53
		1	0	16QAM	21.24	25.66	4.42
		1	25		21.23	25.74	4.51
		1	49		20.84	25.59	4.75
		50	0		21.23	27.40	6.17
20350	1750	1	0	QPSK	21.30	25.67	4.37
		1	25		21.37	25.61	4.24
		1	49		21.40	25.48	4.08
		50	0		21.49	27.12	5.63
		1	0	16QAM	21.78	26.58	4.80
		1	25		21.84	26.44	4.60
		1	49		21.84	26.19	4.35
		50	0		21.45	27.71	6.26

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	21.65	26.07	4.42
		1	38		21.52	25.87	4.35
		1	74		21.60	25.87	4.27
		75	0		21.53	27.33	5.80
		1	0	16QAM	21.74	25.92	4.18
		1	38		21.62	25.72	4.10
		1	74		21.69	25.73	4.04
		75	0		21.50	27.67	6.17
20175	1732.5	1	0	QPSK	21.66	25.45	3.79
		1	38		21.24	25.30	4.06
		1	74		21.02	25.23	4.21
		75	0		21.24	27.14	5.90
		1	0	16QAM	21.92	25.89	3.97
		1	38		21.54	25.76	4.22
		1	74		21.36	25.81	4.45
		75	0		21.20	27.42	6.22
20325	1747.5	1	0	QPSK	21.49	25.78	4.29
		1	38		21.30	25.69	4.39
		1	74		21.63	25.62	3.99
		75	0		21.45	27.55	6.10
		1	0	16QAM	21.97	26.61	4.64
		1	38		21.79	26.55	4.76
		1	74		22.06	26.27	4.21
		75	0		21.42	27.70	6.28

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	21.73	25.97	4.24
		1	50		21.54	25.69	4.15
		1	99		21.41	25.66	4.25
		100	0		21.54	27.30	5.76
		1	0	16QAM	21.85	26.53	4.68
		1	50		21.65	26.23	4.58
		1	99		21.52	26.20	4.68
		100	0		21.50	27.60	6.10
20175	1732.5	1	0	QPSK	21.70	25.80	4.10
		1	50		21.18	25.59	4.41
		1	99		21.00	25.72	4.72
		100	0		21.26	27.21	5.95
		1	0	16QAM	22.13	26.14	4.01
		1	50		21.67	26.03	4.36
		1	99		21.53	26.24	4.71
		100	0		21.24	27.29	6.05
20300	1745	1	0	QPSK	21.48	25.94	4.46
		1	50		21.20	25.87	4.67
		1	99		21.50	25.83	4.33
		100	0		21.31	27.19	5.88
		1	0	16QAM	21.69	26.18	4.49
		1	50		21.43	26.17	4.74
		1	99		21.71	26.04	4.33
		100	0		21.30	27.62	6.32

5.1.7 LTE B7 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
20775	2502.5	1	0	QPSK	22.15	25.52	3.37
		1	13		21.69	25.46	3.77
		1	24		22.18	25.72	3.54
		25	0		20.83	26.84	6.01
		1	0	16QAM	21.47	25.65	4.18
		1	13		21.07	25.60	4.53
		1	24		21.58	25.85	4.27
		25	0		19.93	26.61	6.68
21100	2535	1	0	QPSK	21.20	25.84	4.64
		1	13		20.81	25.67	4.86
		1	24		21.23	25.88	4.65
		25	0		19.85	26.25	6.40
		1	0	16QAM	20.34	25.78	5.44
		1	13		19.98	25.65	5.67
		1	24		20.41	25.83	5.42
		25	0		19.01	26.35	7.34
21425	2567.5	1	0	QPSK	21.00	25.52	4.52
		1	13		20.31	25.29	4.98
		1	24		20.26	25.27	5.01
		25	0		19.41	25.61	6.20
		1	0	16QAM	20.06	25.12	5.06
		1	13		19.38	24.70	5.32
		1	24		19.45	24.72	5.27
		25	0		19.01	25.52	6.88

Test Data (10MHz bandwidth Mode)

Channel	Frequency (MHz)	No.RB	RB START	Modulation	Max Power(RMS)	Max Power (PK)	PAR
20800	2505	1	0	QPSK	21.52	25.36	3.84
		1	25		21.71	25.53	3.82
		1	49		21.61	25.73	4.12
		50	0		20.77	26.55	5.78
		1	0	16QAM	20.71	25.05	4.34
		1	25		20.95	25.26	4.31
		1	49		20.91	25.40	4.49
		50	0		19.88	26.32	6.44
21100	2535	1	0	QPSK	20.62	25.38	4.76
		1	25		20.81	25.52	4.71
		1	49		20.60	25.38	4.78
		50	0		19.80	25.67	5.87
		1	0	16QAM	19.77	25.11	5.34
		1	25		19.95	25.25	5.30
		1	49		19.73	25.06	5.33
		50	0		19.01	26.52	7.55
21400	2565	1	0	QPSK	20.36	25.25	4.89
		1	25		20.49	25.21	4.72
		1	49		19.87	24.89	5.02
		50	0		19.50	26.09	6.59
		1	0	16QAM	19.63	24.96	5.33
		1	25		19.82	25.02	5.20
		1	49		19.25	24.64	5.39
		50	0		19.01	25.76	7.12

Test Data (15MHz bandwidth Mode)

Channel	Frequency (MHz)	No.RB	RB START	Modulation	Max Power(RMS)	Max Power (PK)	PAR
20825	2507.5	1	0	QPSK	21.67	25.58	3.91
		1	38		21.70	25.81	4.11
		1	74		21.77	25.96	4.19
		75	0		20.69	26.72	6.03
		1	0	16QAM	20.65	25.40	4.75
		1	38		20.70	25.67	4.97
		1	74		20.85	25.91	5.06
		75	0		19.87	26.64	6.77
21100	2535	1	0	QPSK	20.79	25.79	5.00
		1	38		20.73	25.76	5.03
		1	74		20.77	25.78	5.01
		75	0		19.80	26.63	6.83
		1	0	16QAM	20.20	25.58	5.38
		1	38		20.15	25.55	5.40
		1	74		20.21	25.59	5.38
		75	0		19.03	26.29	7.36
21375	2562.5	1	0	QPSK	20.38	25.32	4.94
		1	38		20.47	25.27	4.80
		1	74		20.17	25.03	4.86
		75	0		19.52	26.03	6.51
		1	0	16QAM	19.66	25.03	5.37
		1	38		19.78	25.03	5.25
		1	74		19.57	24.86	5.29
		75	0		19.02	26.08	7.45

Test Data (20MHz bandwidth Mode)

Channel	Frequency (MHz)	No.RB	RB START	Modulation	Max Power(RMS)	Max Power (PK)	PAR
20850	2510	1	0	QPSK	22.57	26.58	3.61
		1	50		22.58	26.20	3.11
		1	99		22.59	27.18	4.07
		100	0		21.89	27.30	5.41
		1	0	16QAM	22.04	26.61	4.57
		1	50		22.11	26.19	4.08
		1	99		22.15	27.15	5.00
		100	0		20.85	26.99	6.14
21100	2535	1	0	QPSK	22.47	26.54	3.49
		1	50		22.57	27.64	4.51
		1	99		22.58	27.45	4.22
		100	0		21.98	27.97	5.99
		1	0	16QAM	22.66	26.49	3.83
		1	50		22.82	27.60	4.78
		1	99		22.77	27.45	4.68
		100	0		20.88	27.72	6.84
21350	2560	1	0	QPSK	22.56	27.85	4.81
		1	50		22.58	26.66	3.49
		1	99		22.59	26.17	2.90
		100	0		21.94	27.37	5.43
		1	0	16QAM	22.23	27.68	5.45
		1	50		22.29	26.58	4.29
		1	99		22.36	25.99	3.63
		100	0		20.95	27.33	6.38

5.1.8 LTE B17 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
23755	706.5	1	0	QPSK	21.64	25.68	4.04
		1	13		21.20	25.68	4.48
		1	24		21.71	26.02	4.31
		25	0		20.46	26.80	6.34
		1	0	16QAM	21.07	25.77	4.70
		1	13		20.65	25.70	5.05
		1	24		21.16	26.08	4.92
		25	0		19.67	26.64	6.97
23790	710	1	0	QPSK	22.02	26.39	4.37
		1	13		21.49	26.08	4.59
		1	24		21.89	26.29	4.40
		25	0		20.74	26.98	6.24
		1	0	16QAM	21.26	26.14	4.88
		1	13		20.69	26.02	5.33
		1	24		21.14	26.13	4.99
		25	0		19.90	26.69	6.79
23825	713.5	1	0	QPSK	22.19	26.61	4.42
		1	13		21.45	26.16	4.71
		1	24		21.46	26.03	4.57
		25	0		20.70	26.57	5.87
		1	0	16QAM	21.28	26.05	4.77
		1	13		20.53	25.53	5.00
		1	24		20.59	25.42	4.83
		25	0		19.94	27.06	7.12

Test Data (10MHz bandwidth Mode)

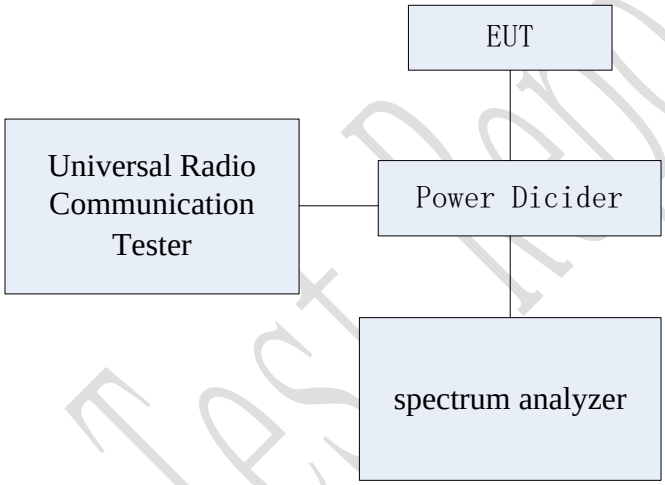
Channel	Frequency (MHz)	No.RB	RB START	Modulation	Max Power(RMS)	Max Power (PK)	PAR
23780	709	1	0	QPSK	21.75	26.08	4.33
		1	25		21.47	26.12	4.65
		1	49		21.42	25.90	4.48
		50	0		20.75	26.69	5.94
		1	0	16QAM	21.08	25.60	4.52
		1	25		20.76	25.44	4.68
		1	49		20.79	25.38	4.59
		50	0		19.91	26.55	6.64
23790	710	1	0	QPSK	21.55	25.67	4.12
		1	25		21.47	25.81	4.34
		1	49		21.29	25.52	4.23
		50	0		20.71	26.65	5.94
		1	0	16QAM	20.82	25.57	4.75
		1	25		20.66	25.70	5.04
		1	49		20.56	25.45	4.89
		50	0		19.93	26.89	6.96
23800	711	1	0	QPSK	21.60	25.64	4.04
		1	25		21.55	25.78	4.23
		1	49		21.07	25.33	4.26
		50	0		20.70	26.58	5.88
		1	0	16QAM	21.34	26.02	4.68
		1	25		21.26	26.28	5.02
		1	49		20.84	25.75	4.91
		50	0		19.91	27.17	7.26

5.2 Occupied bandwidth

Specifications:	FCC Part 2.1049, 22.917(b), 24.238(b)
DUT Serial Number:	S3/9: 358067070000937
Test conditions:	Ambient Temperature:15℃-35℃ Relative Humidity:30%-60% Air pressure: 86-106kPa
Test Results:	--

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: --

5.2.1 GSM Mode Occupied Bandwidth Results

Band	EUT channel No.	Mode	99% OBW (MHz)	-26dBc OBW (MHz)
GSM850	128	GMSK	0.24	0.32
		8PSK	0.24	0.30
	190	GMSK	0.24	0.32
		8PSK	0.24	0.30
	251	GMSK	0.24	0.32
		8PSK	0.24	0.30
PCS1900	512	GMSK	0.24	0.32
		8PSK	0.24	0.30
	661	GMSK	0.24	0.32
		8PSK	0.23	0.29
	810	GMSK	0.24	0.32
		8PSK	0.24	0.29

5.2.2 WCDMA Band Mode Occupied Bandwidth Results

Band	EUT channel No.	Mode	99% OBW (MHz)	-26dBc OBW (MHz)
Band 2	9400	QPSK	4.32	5.16
		16QAM	4.30	4.98
Band 5	4182	QPSK	4.21	4.89
		16QAM	4.23	4.90

5.2.3 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	1.40
		3MHz	15		2.69	3.05
		5MHz	25		4.50	5.08
		10MHz	50		8.97	10.05
		15MHz	75		13.46	14.79
		20MHz	100		17.88	19.26
16QAM		1.4MHz	6		1.09	1.31
		3MHz	15		2.69	2.93
		5MHz	25		4.49	5.06
		10MHz	50		8.97	9.57
		15MHz	75		13.46	14.79
		20MHz	100		17.93	19.17

5.2.4 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	1.09	1.25
		3MHz	15		2.68	2.89
		5MHz	25		4.49	5.01
		10MHz	50		8.97	9.67
		15MHz	75		13.49	14.73
		20MHz	100		17.88	19.23
16QAM		1.4MHz	6		1.09	1.29
		3MHz	15		2.69	2.92
		5MHz	25		4.49	5.01

		10MHz	50		8.94	9.60
		15MHz	75		13.46	14.67
		20MHz	100		17.93	19.19

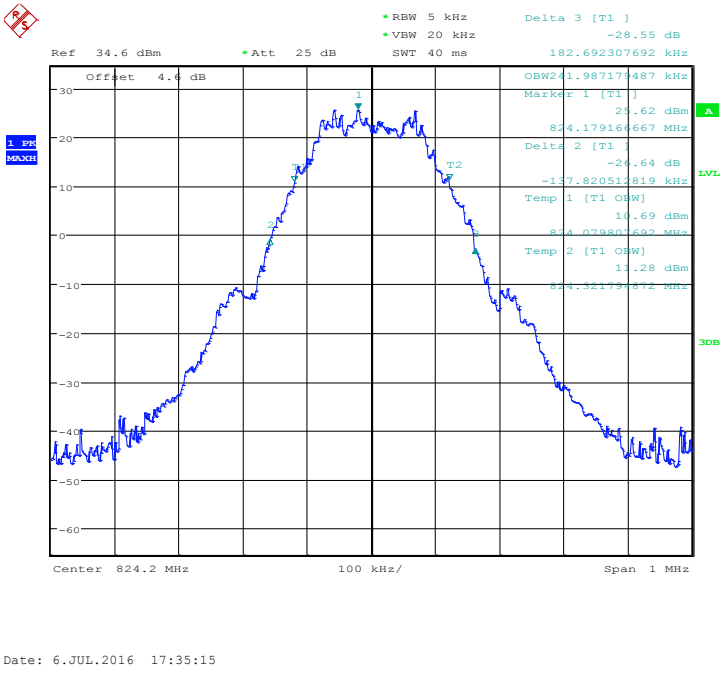
5.2.5 LTE B7 occupied bandwidth Results

Mode	EUT channel No.	bandwidth	No. RB	RB offset	99% occupied bandwidth [MHz]	-26dBc occupied bandwidth [MHz]
QPSK	21100 (2535MHz)	5MHz	25	0	4.49	4.98
		10MHz	50		8.97	9.58
		15MHz	75		13.49	14.58
		20MHz	100		17.93	18.96
16QAM		5MHz	25		4.49	4.98
		10MHz	50		8.94	9.33
		15MHz	75		13.49	14.68
		20MHz	100		17.93	19.20

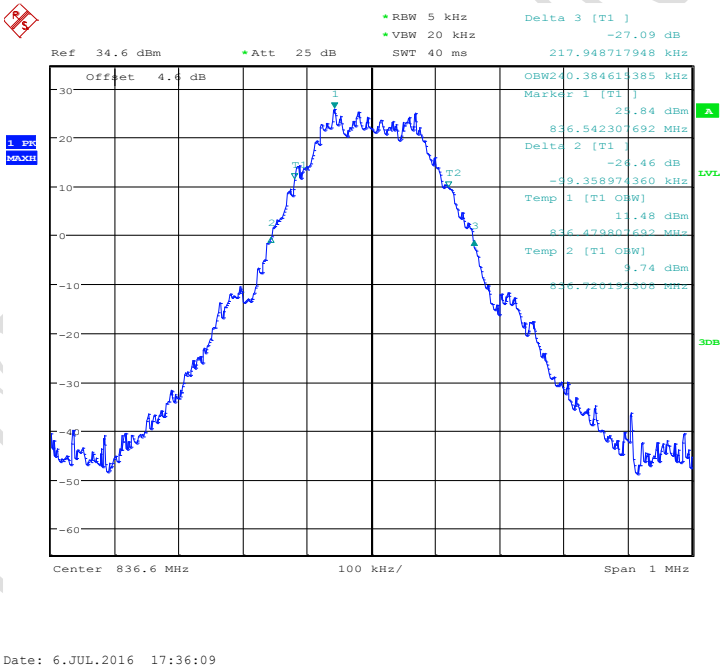
5.2.6 LTE B17 occupied bandwidth Results

Mode	EUT channel No.	bandwidth	No. RB	RB offset	99% occupied bandwidth [MHz]	-26dBc occupied bandwidth [MHz]
QPSK	23790 (710MHz)	5MHz	25	0	4.49	4.92
		10MHz	50		8.97	9.49
16QAM		5MHz	25		4.47	4.94
		10MHz	50		8.91	9.39

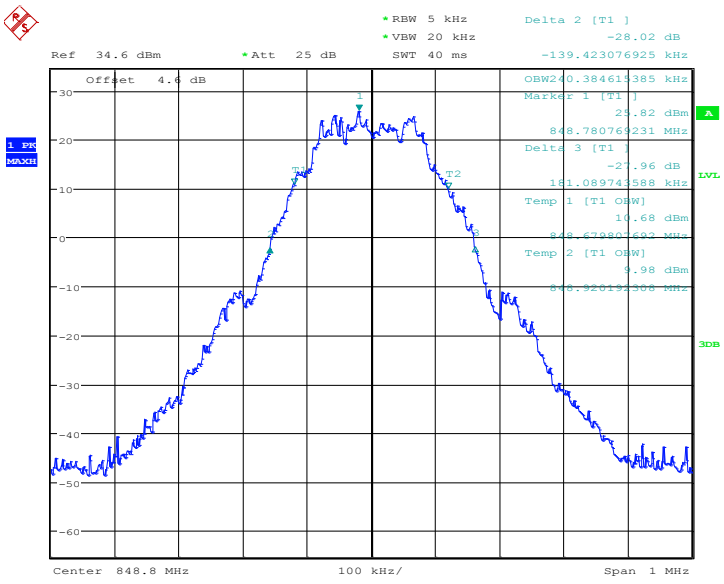
Graphical results for GSM :



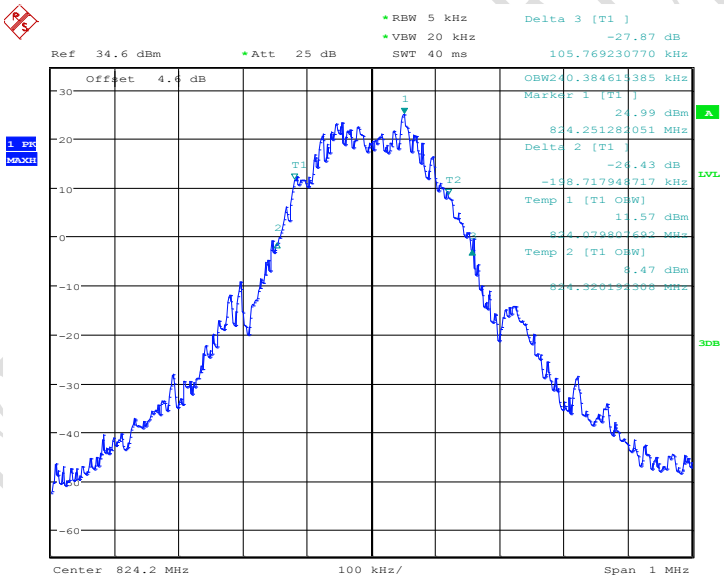
GMSK Channel 128



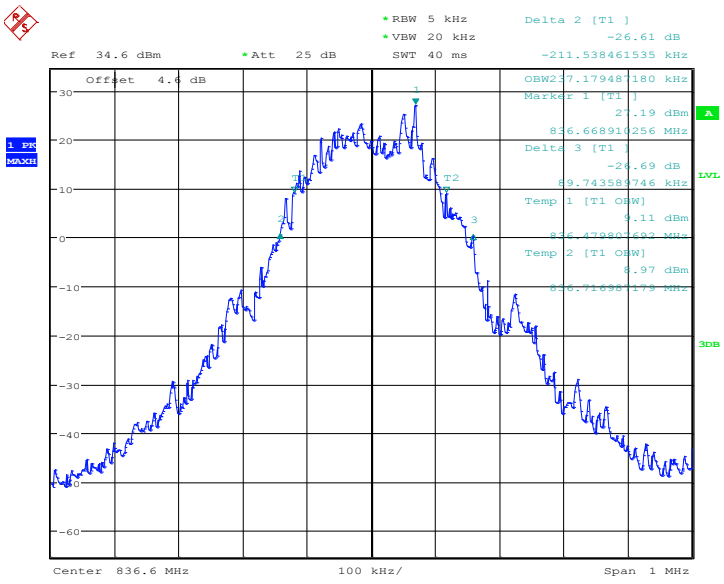
GMSK Channel 190



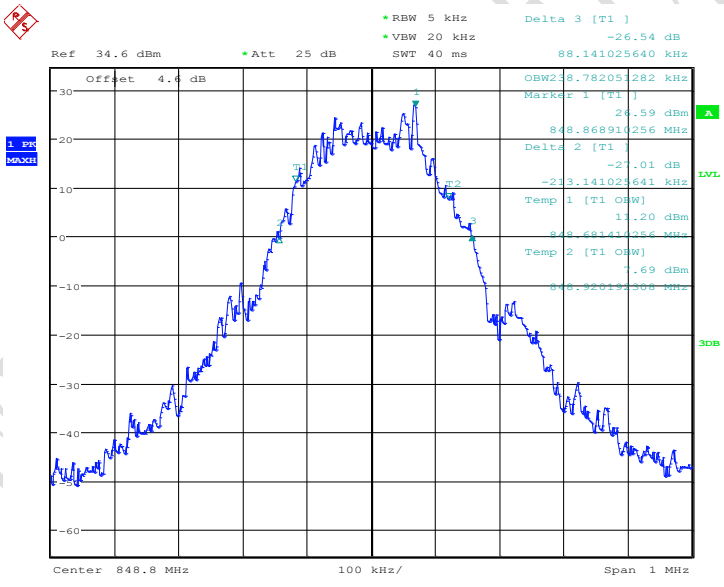
GMSK Channel 251



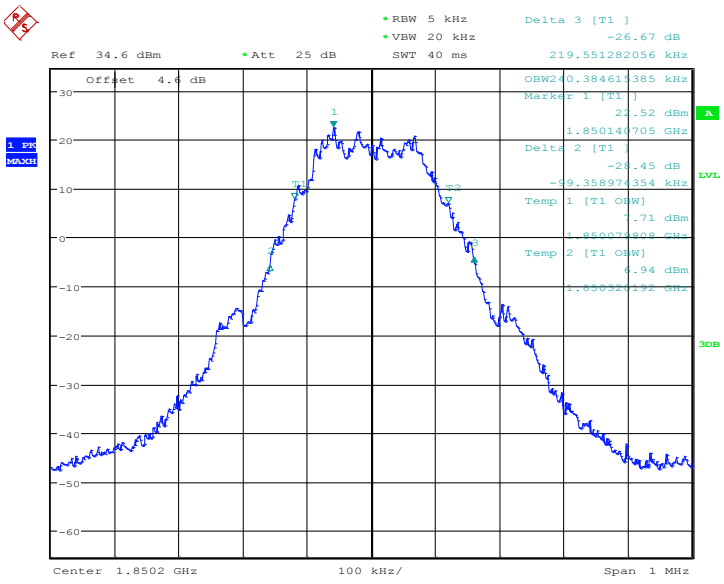
8PSK Channel 128



8PSK Channel 190

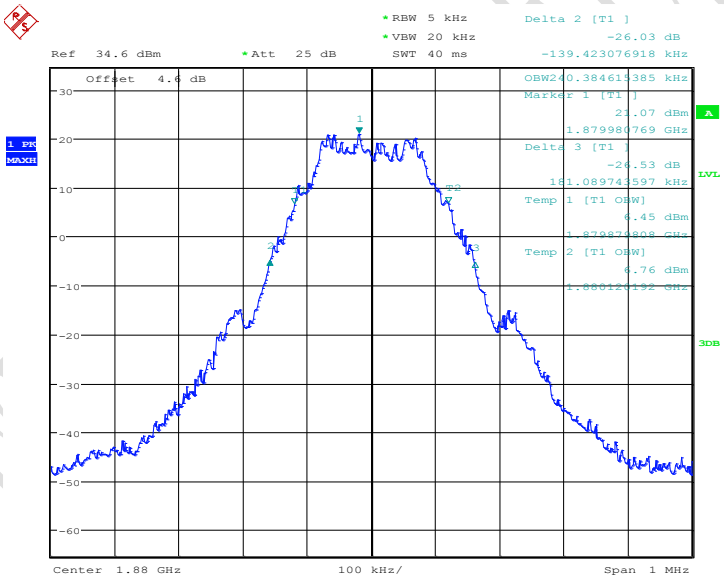


8PSK Channel 251



Date: 6.JUL.2016 17:45:05

GMSK Channel 512



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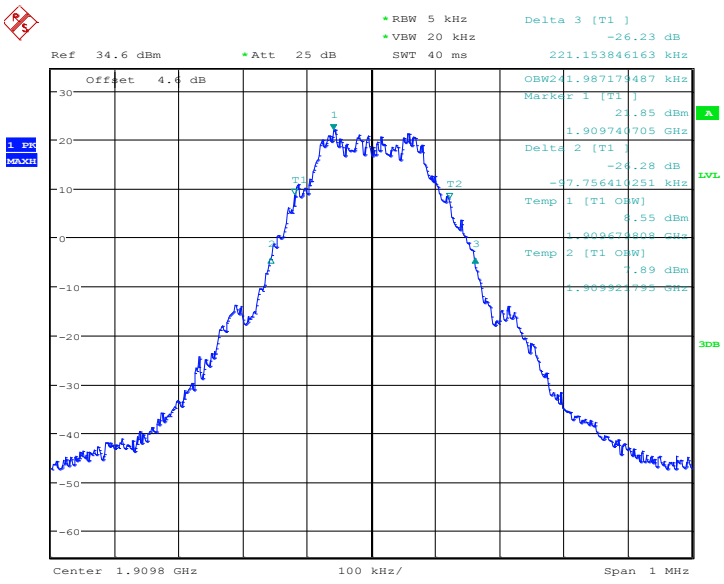
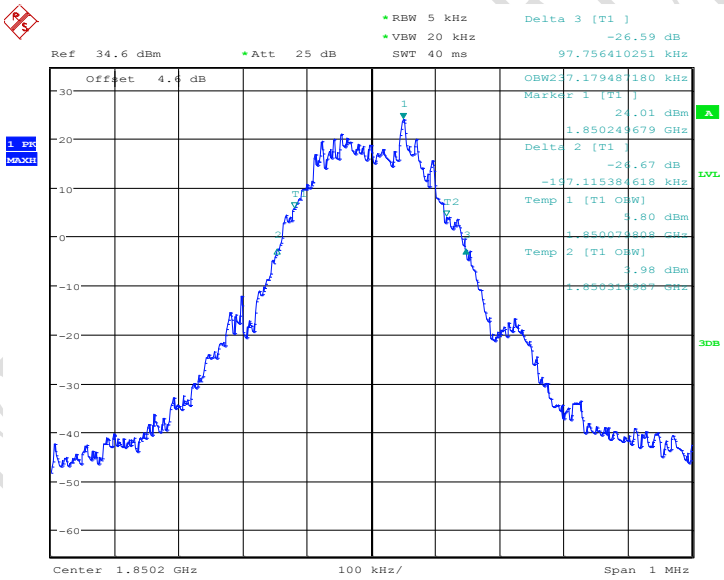
GMSK Channel 661



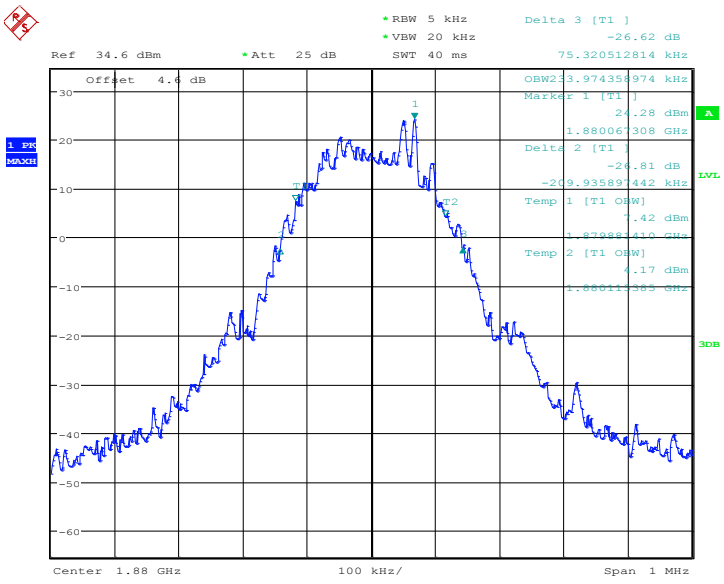
Date: 6.JUL.2016 17:46:58

GMSK Channel 810



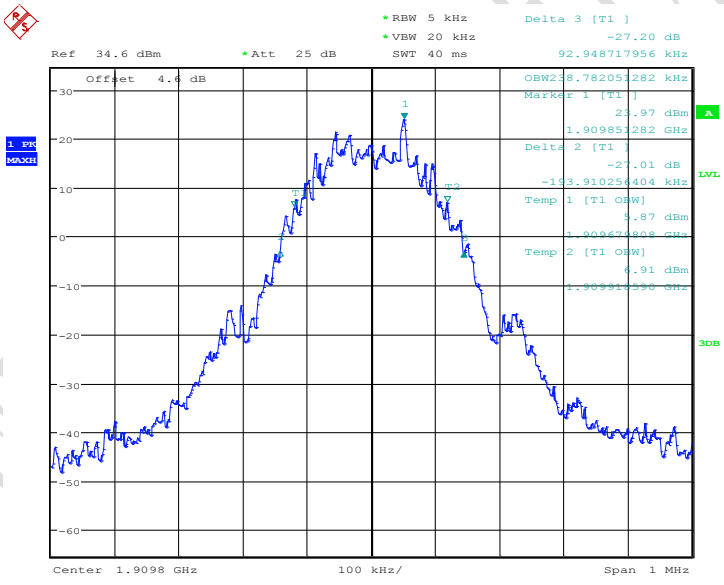
Date: 6.JUL.2016 17:50:05

8PSK Channel 512



Date: 6.JUL.2016 17:48:55

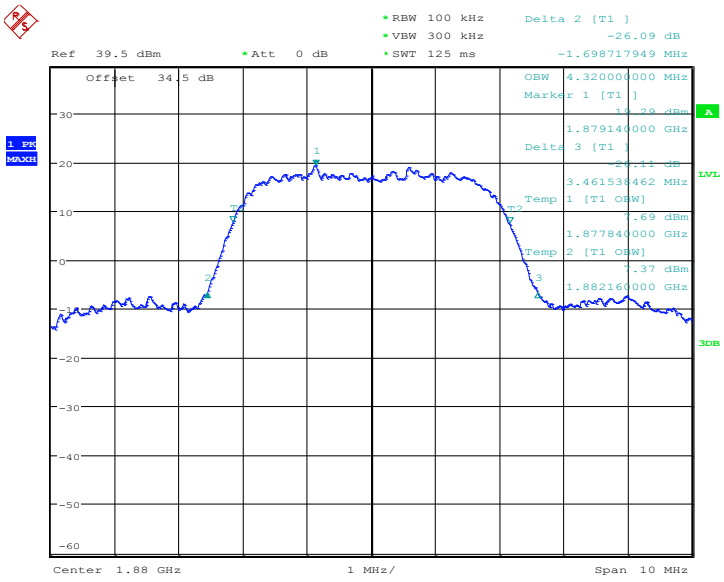
8PSK Channel 661



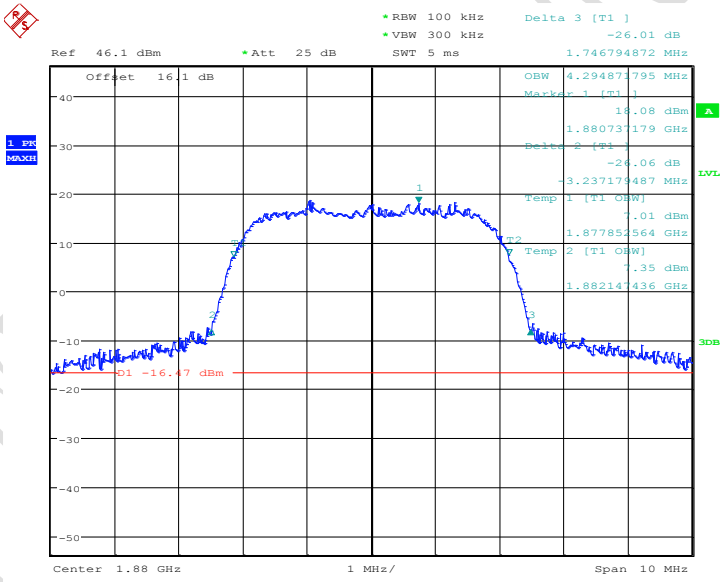
Date: 6.JUL.2016 17:48:04

8PSK Channel 810

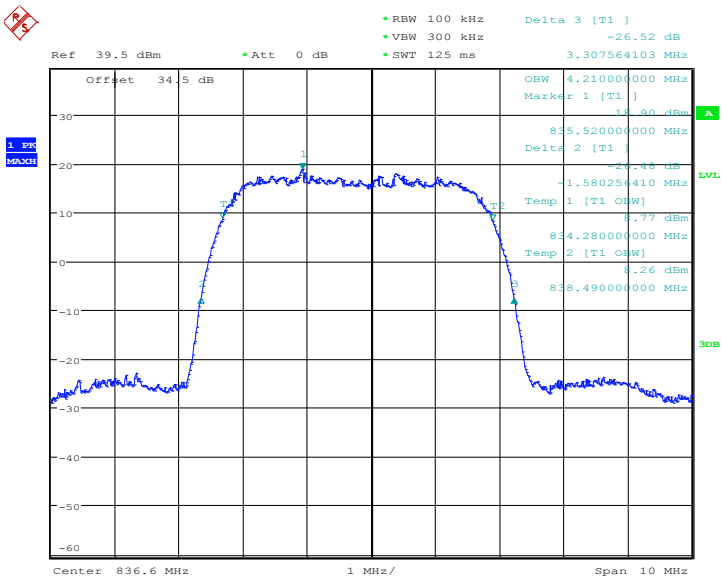
Graphical results for WCDMA :



WCDMA B2 Channel 9400, QPSK

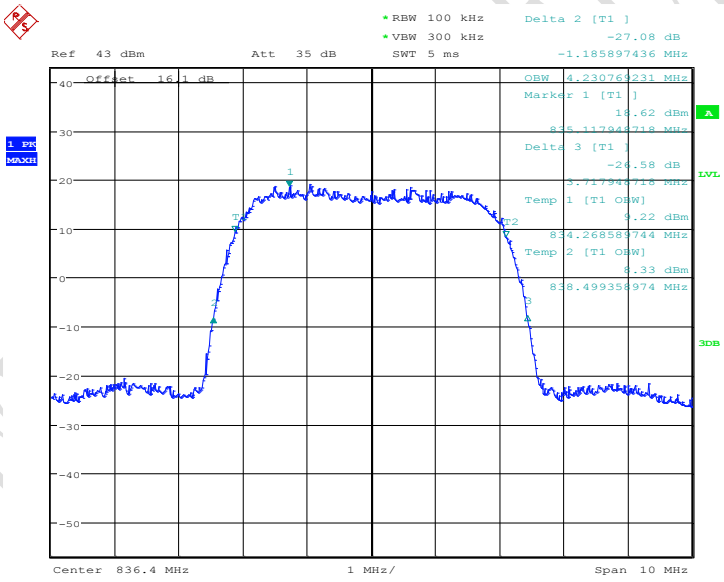


WCDMA B2 Channel 9400, 16QAM



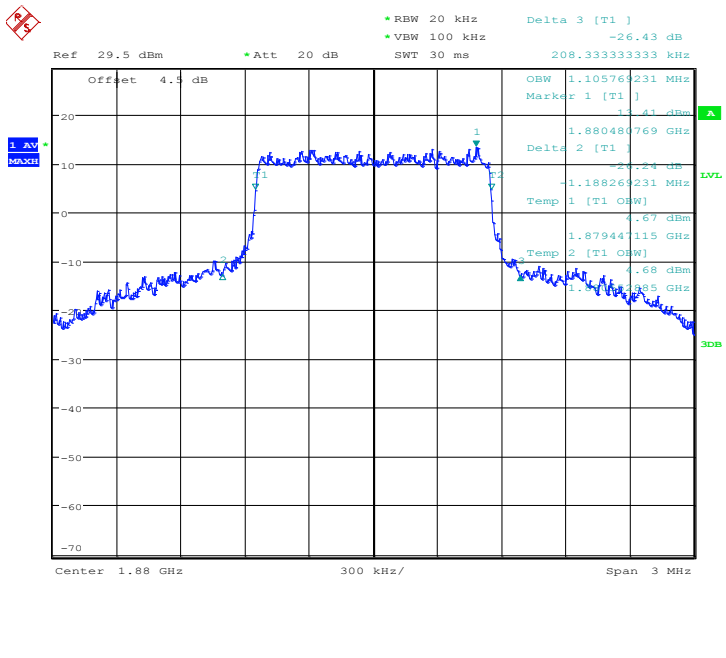
Date: 7.JUL.2016 10:29:02

WCDMA B5 Channel 4182, QPSK



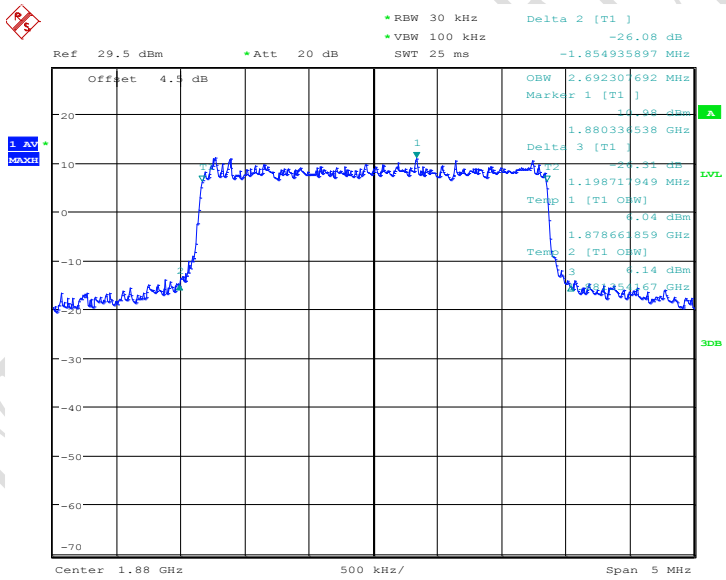
Date: 14.JUL.2016 10:35:30

WCDMA B5 Channel 4182, 16QAM



Date: 28.JUN.2016 18:23:30

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



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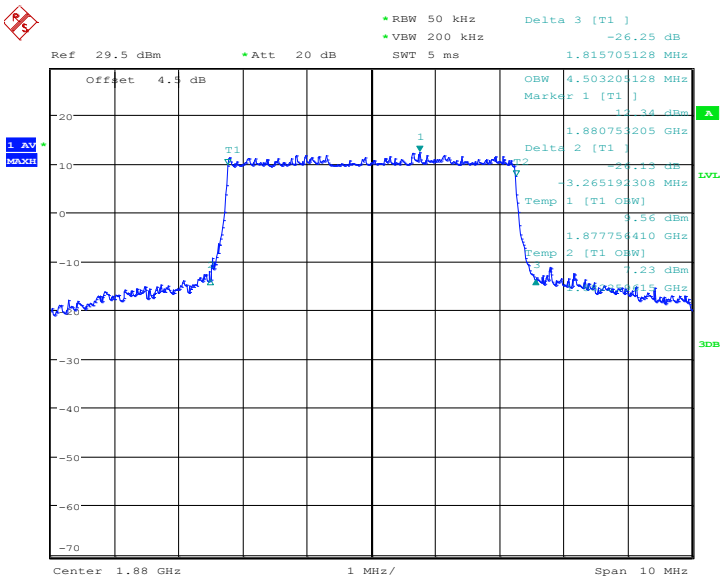
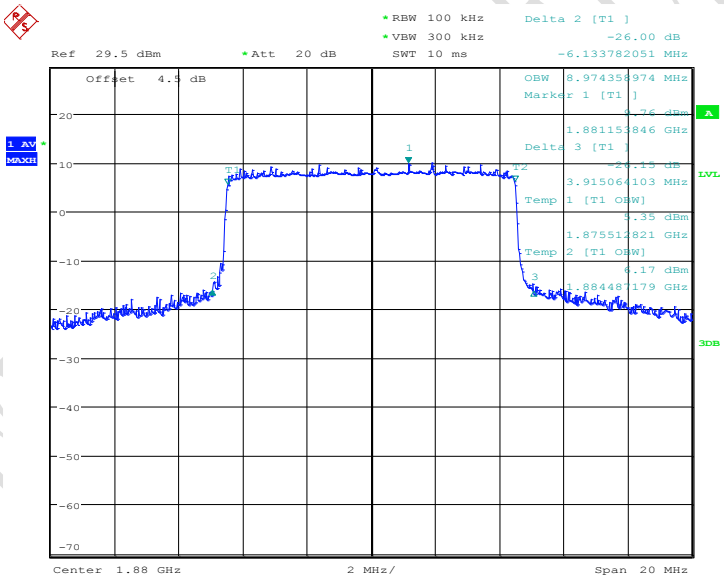
LTE Band2 QPSK Channel 18900 BW=3MHz RB=15 RB Offset=0



Date: 28.JUN.2016 18:32:27

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



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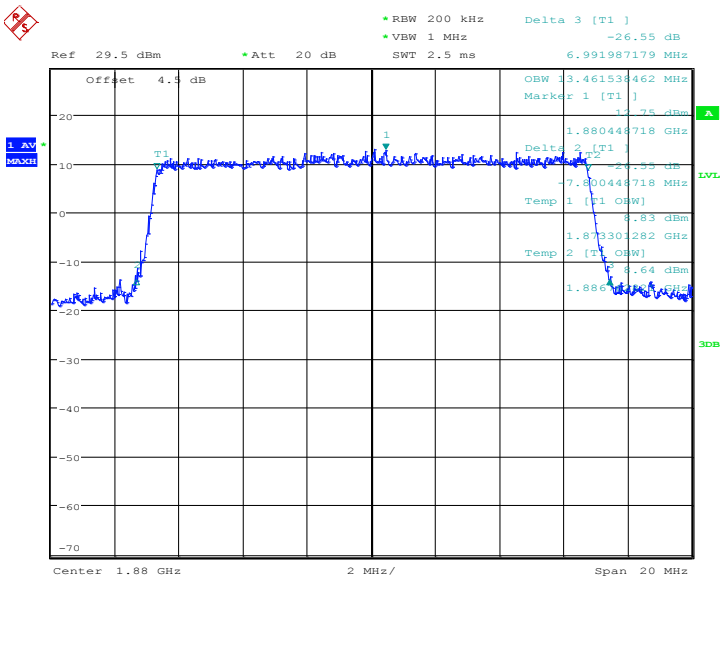
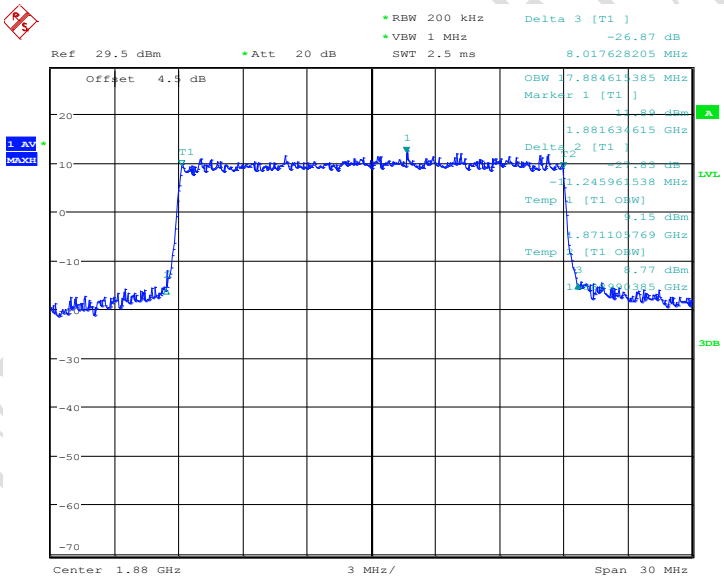
LTE Band2 QPSK Channel 18900 BW=10MHz RB=50 RB Offset=0



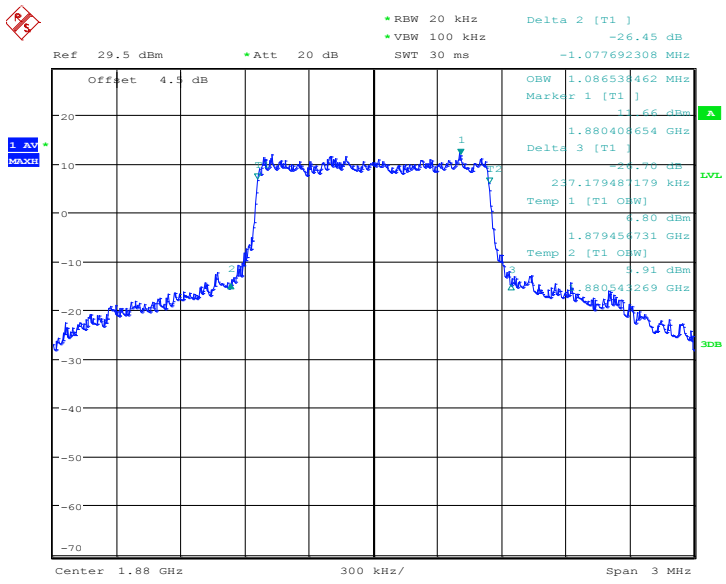
Date: 28.JUN.2016 20:10:19

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



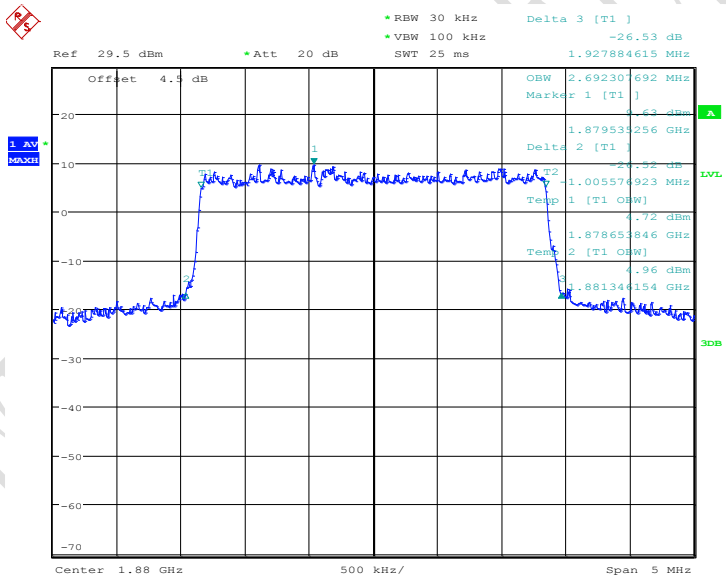
Date: 28.JUN.2016 20:14:07

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



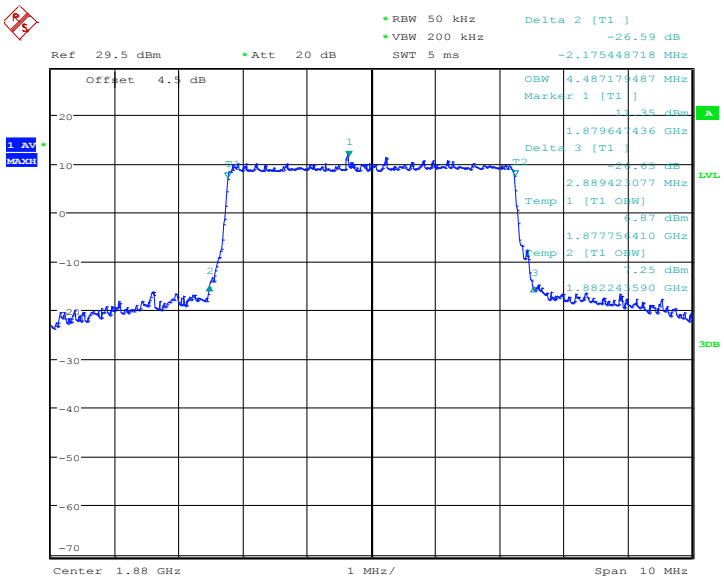
Date: 28.JUN.2016 18:25:26

LTE Band2 16QAM Channel 18900 BW=1.4MHz RB=6 RB Offset=0

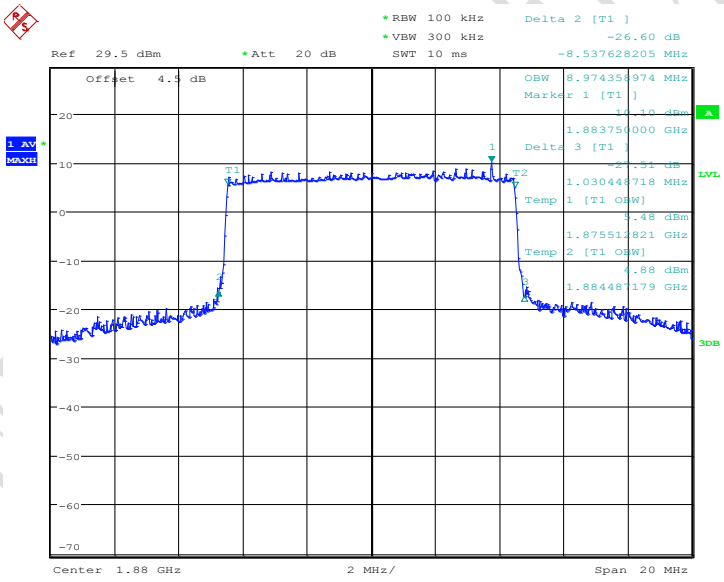


Date: 28.JUN.2016 18:29:01

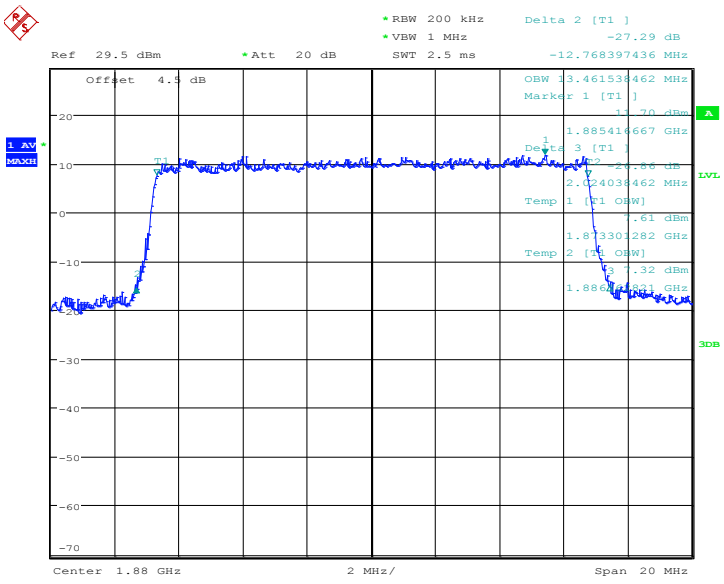
LTE Band2 16QAM Channel 18900 BW=3MHz RB=15 RB Offset=0



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



LTE Band2 16QAM Channel 18900 BW=10MHz RB=50 RB Offset=0



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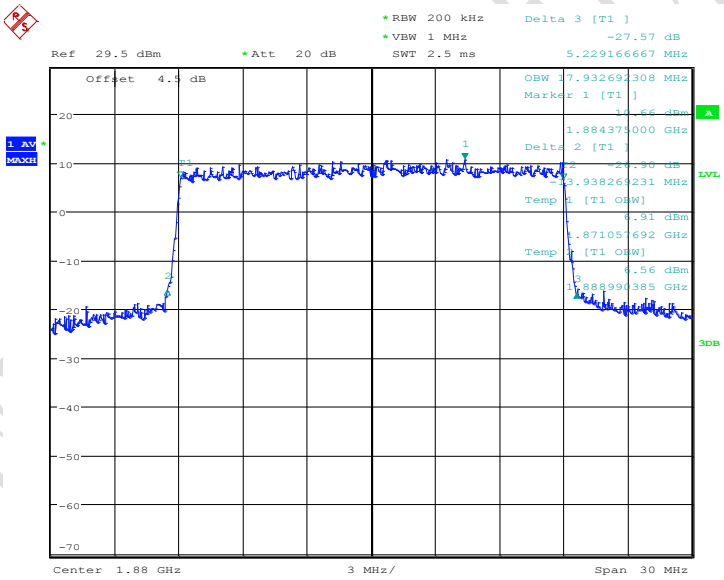
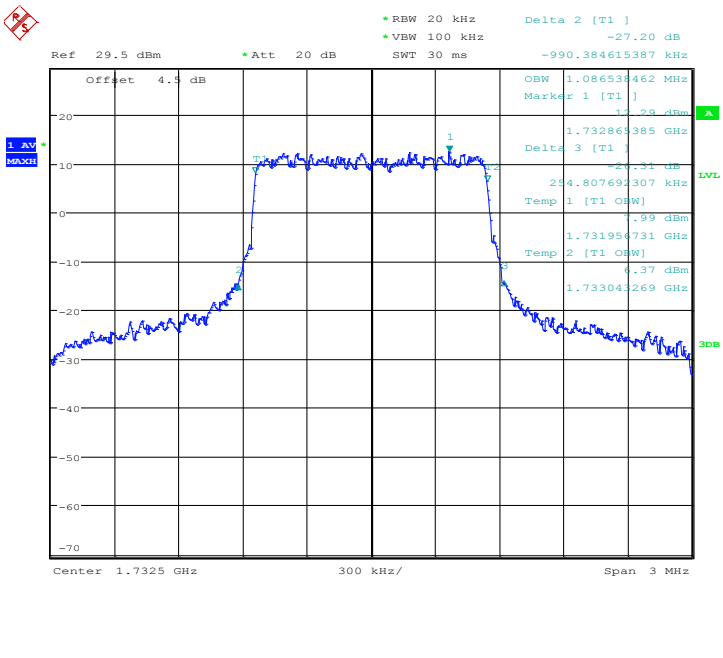
LTE Band2 16QAM Channel 18900 BW=15MHz RB=75 RB Offset=0



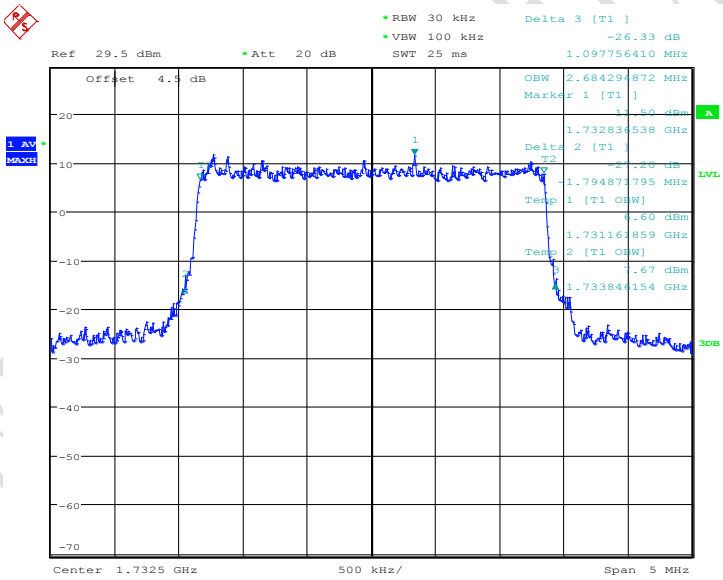
Date: 28.JUN.2016 20:14:47

LTE Band2 16QAM Channel 18900 BW=20MHz RB=100 RB Offset=0



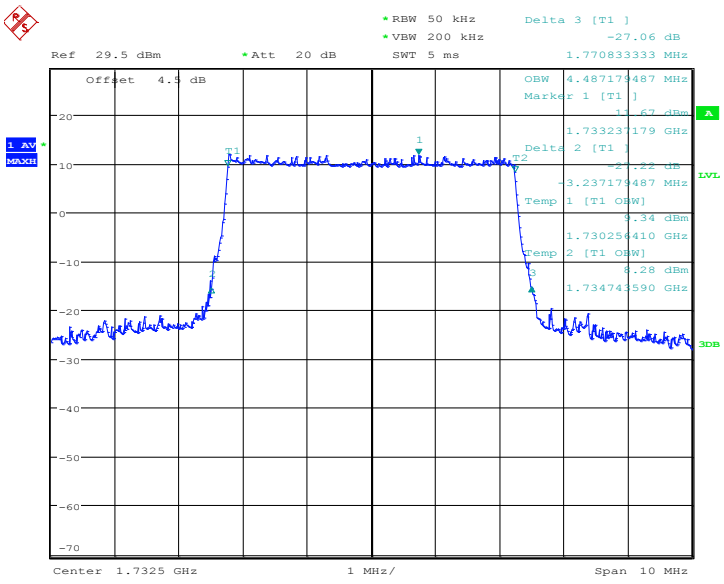
Date: 28.JUN.2016 20:17:05

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



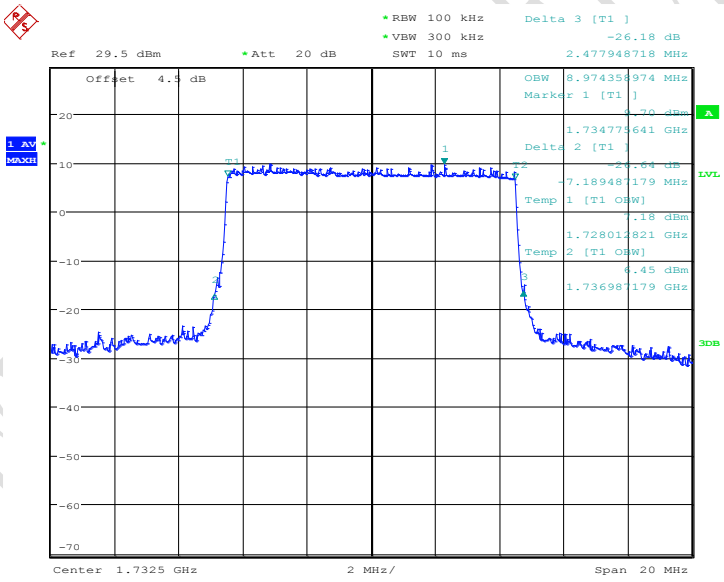
Date: 28.JUN.2016 20:21:09

LTE Band4 QPSK Channel 20175 BW=3MHz RB=15 RB Offset=0



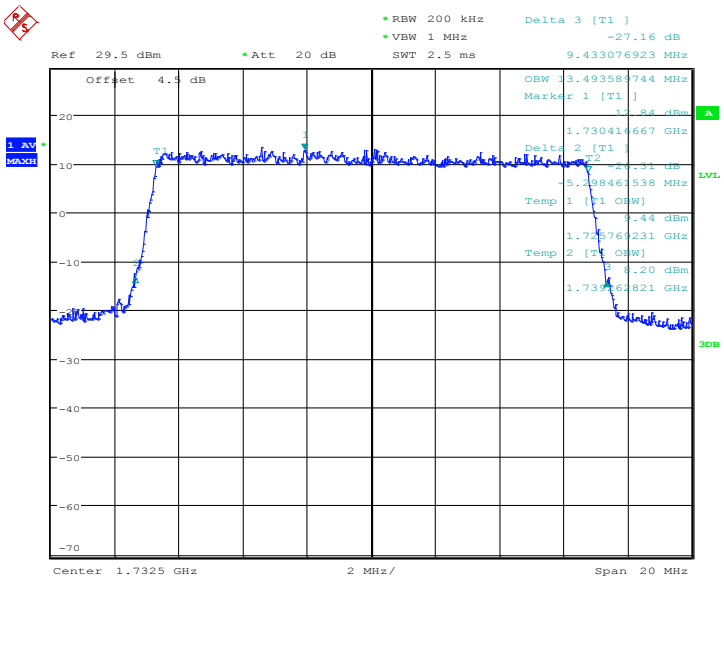
Date: 28.JUN.2016 20:23:33

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



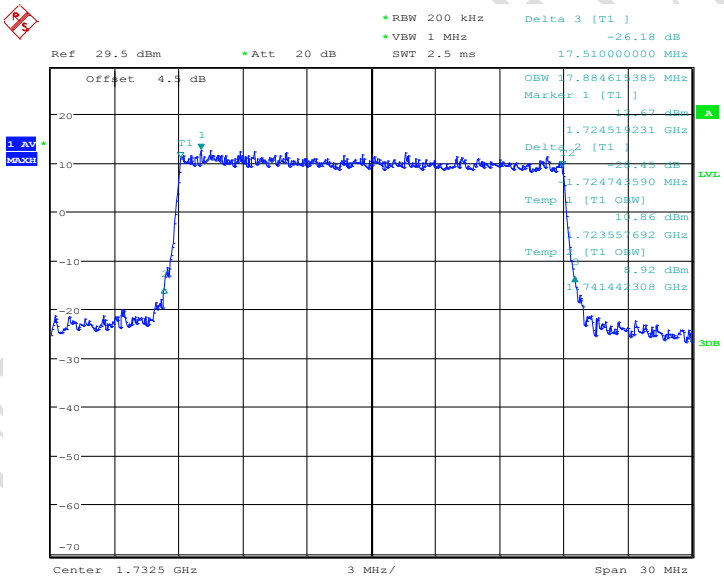
Date: 28.JUN.2016 20:27:47

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



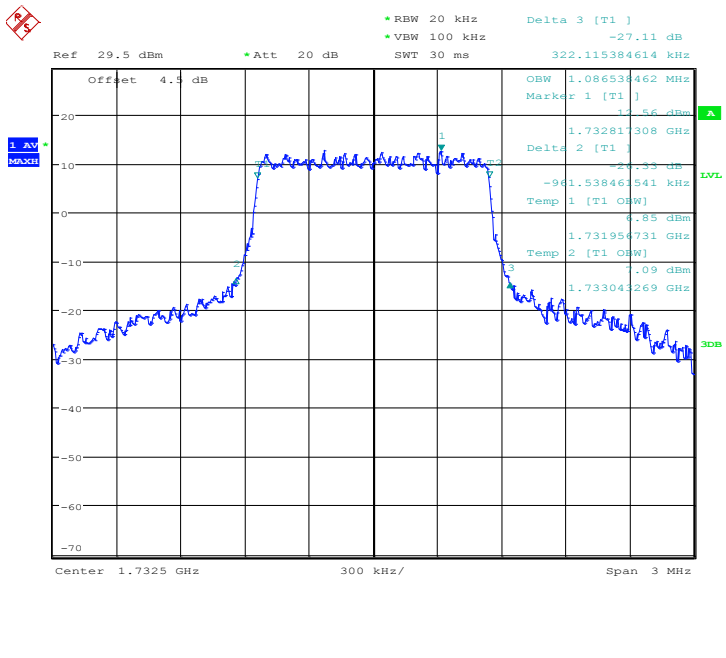
Date: 28.JUN.2016 20:30:07

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



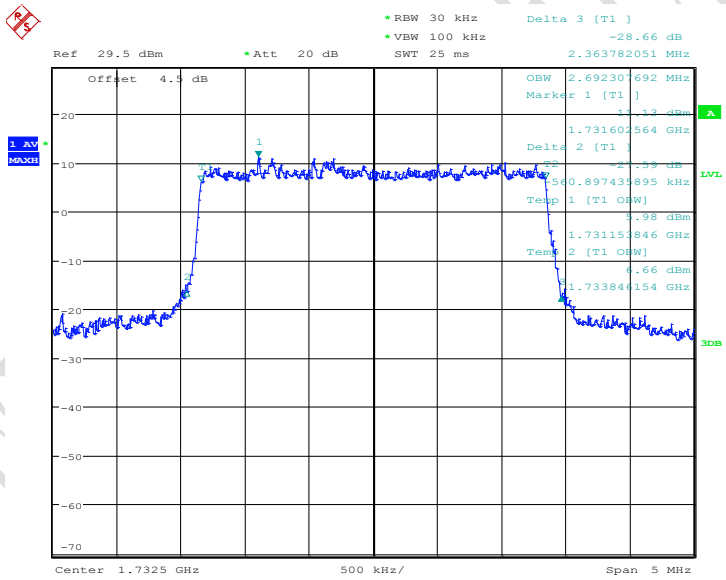
Date: 28.JUN.2016 20:36:05

LTE Band4 QPSK Channel 20175 BW=20MHz RB=100 RB Offset=0



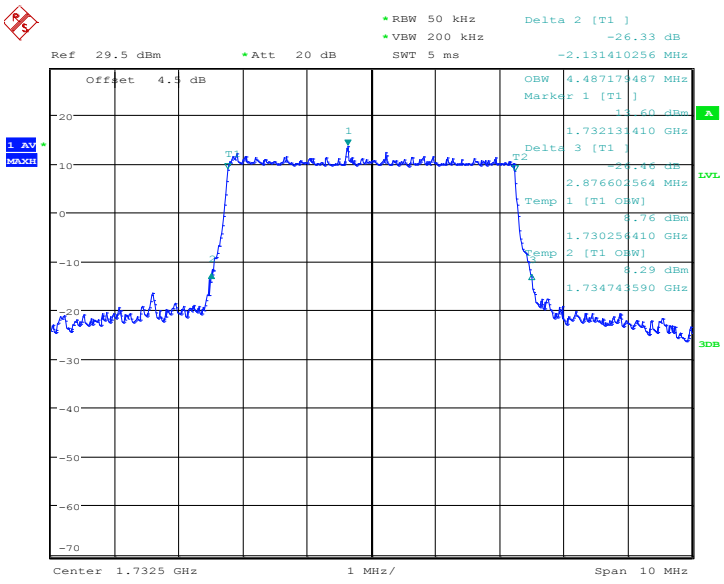
Date: 28.JUN.2016 20:18:02

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

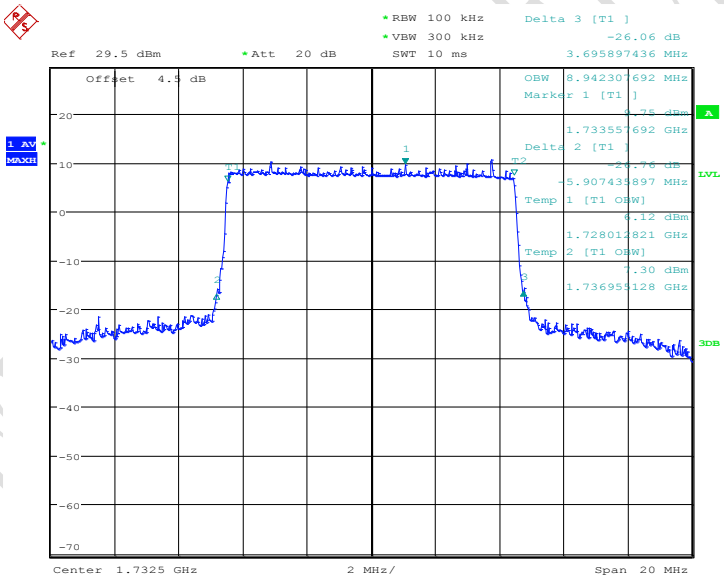


Date: 28.JUN.2016 20:22:20

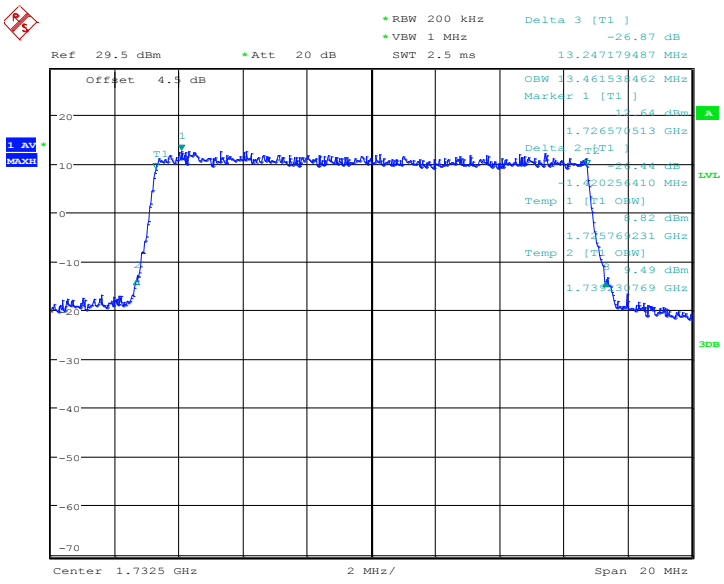
LTE Band4 16QAM Channel 20175 BW=3MHz RB=15 RB Offset=0



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

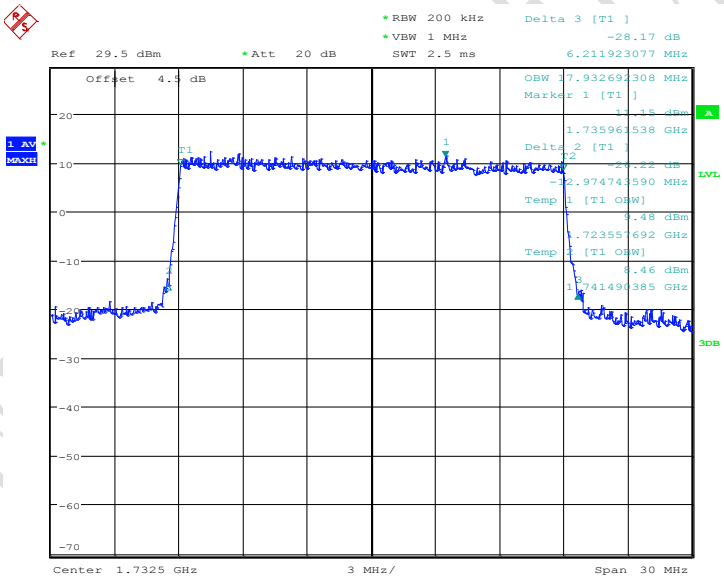


LTE Band4 16QAM Channel 20175 BW=10MHz RB=50 RB Offset=0



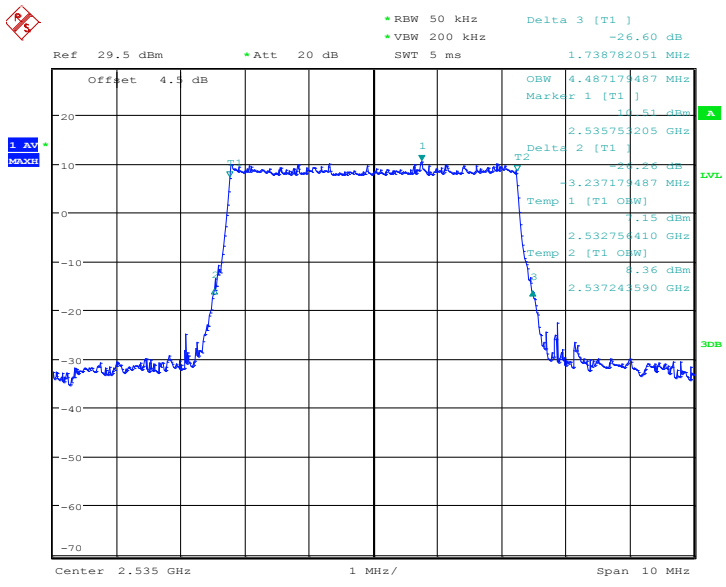
Date: 28.JUN.2016 20:30:53

LTE Band4 16QAM Channel 20175 BW=15MHz RB=75 RB Offset=0



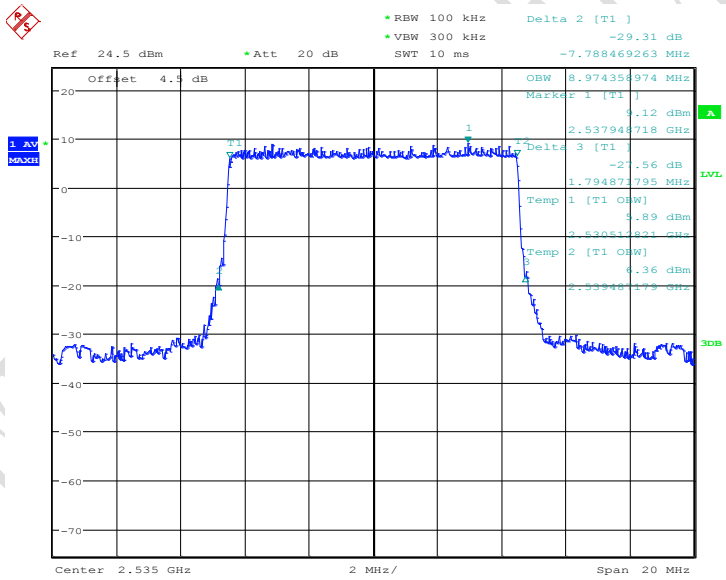
Date: 28.JUN.2016 20:37:11

LTE Band4 16QAM Channel 20175 BW=20MHz RB=100 RB Offset=0



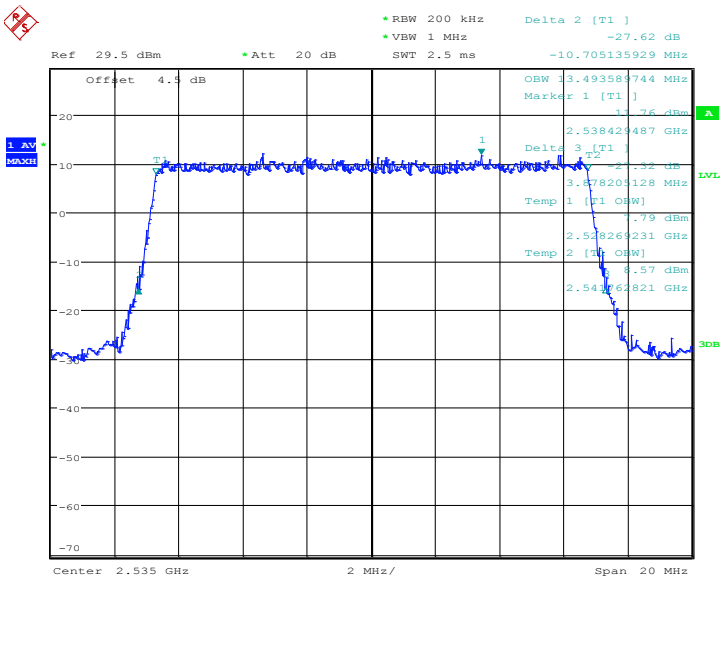
Date: 28.JUN.2016 20:58:46

LTE Band7 QPSK Channel 21100 BW=5MHz RB=25 RB Offset=0



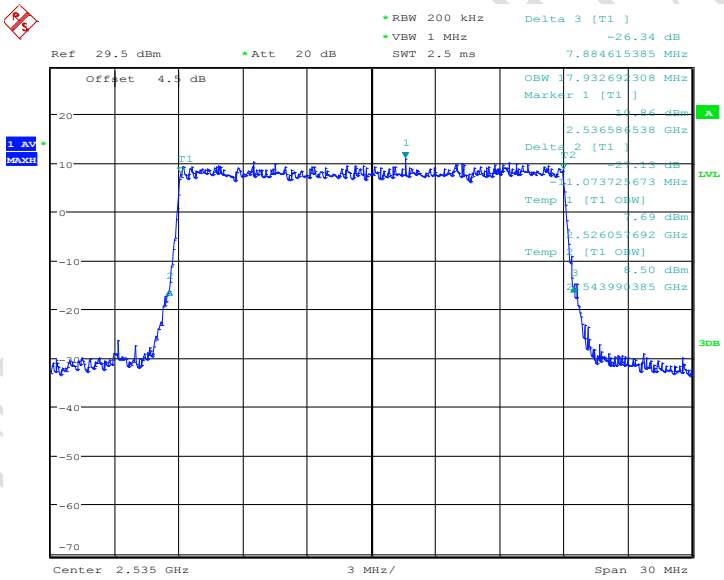
Date: 28.JUN.2016 21:39:31

LTE Band7 QPSK Channel 21100 BW=10MHz RB=50 RB Offset=0



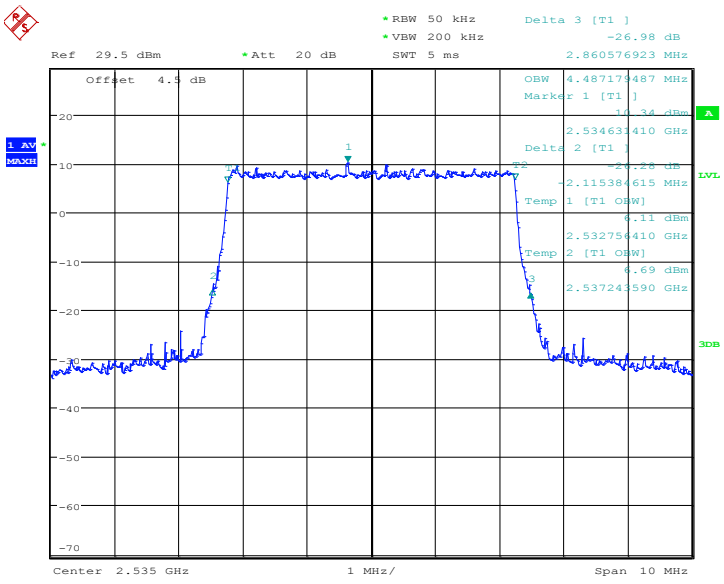
Date: 28.JUN.2016 21:41:51

LTE Band7 QPSK Channel 21100 BW=15MHz RB=75 RB Offset=0



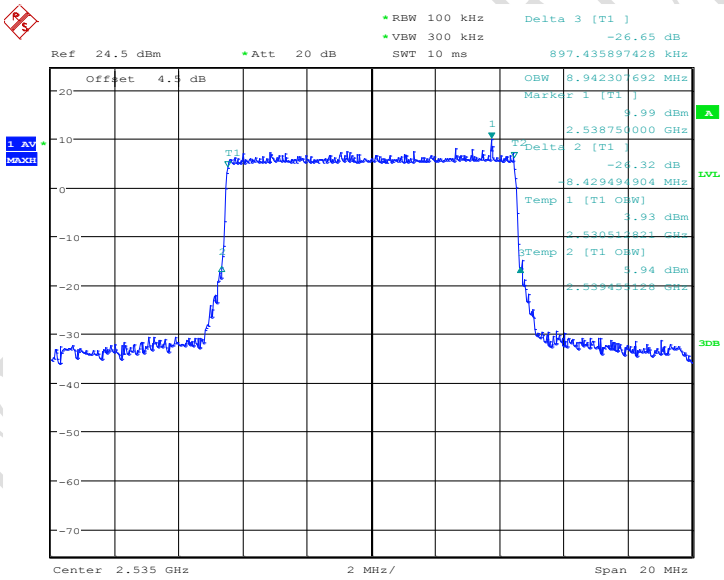
Date: 28.JUN.2016 21:44:26

LTE Band7 QPSK Channel 21100 BW=20MHz RB=100 RB Offset=0



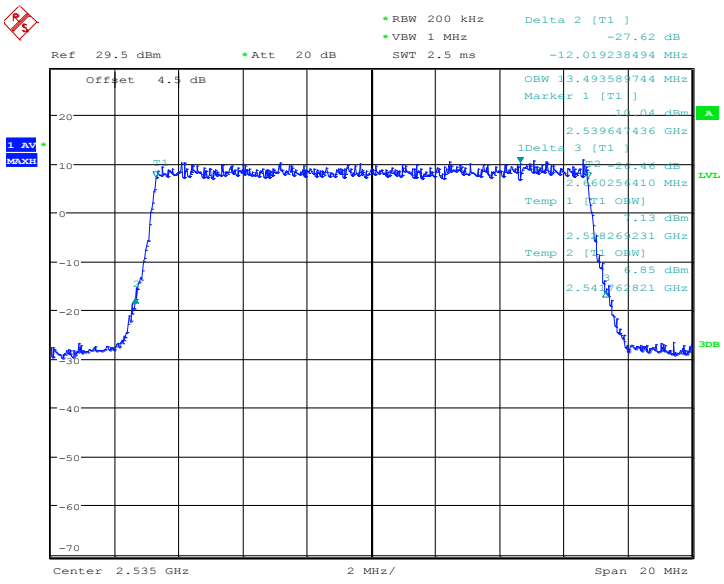
Date: 28.JUN.2016 21:00:47

LTE Band7 16QAM Channel 21100 BW=5MHz RB=25 RB Offset=0



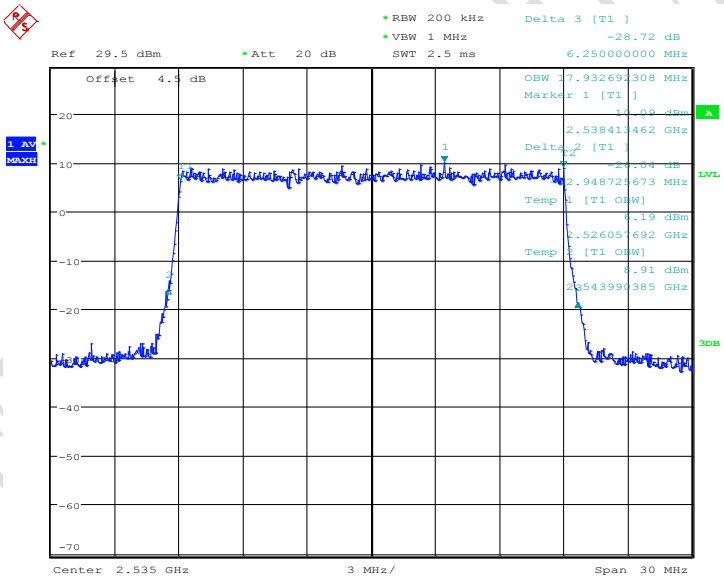
Date: 28.JUN.2016 21:40:16

LTE Band7 16QAM Channel 21100 BW=10MHz RB=50 RB Offset=0



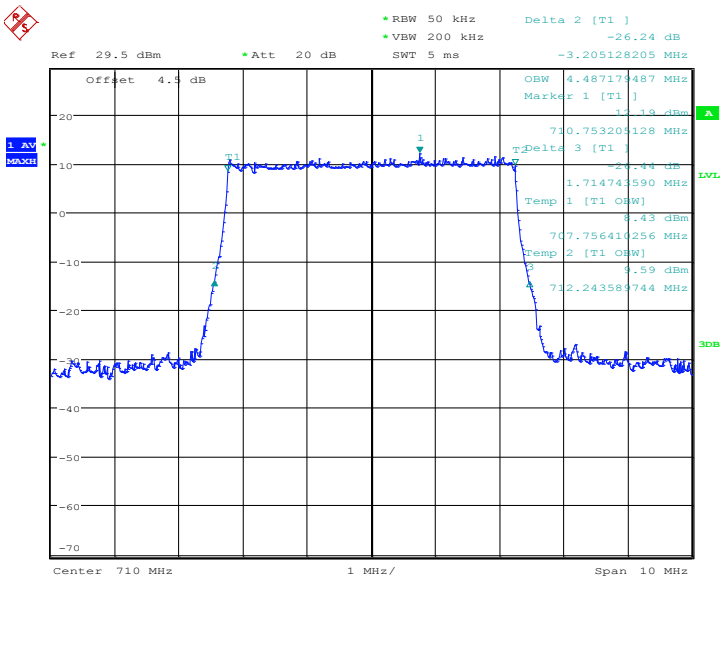
Date: 28.JUN.2016 21:43:03

LTE Band7 16QAM Channel 21100 BW=15MHz RB=75 RB Offset=0



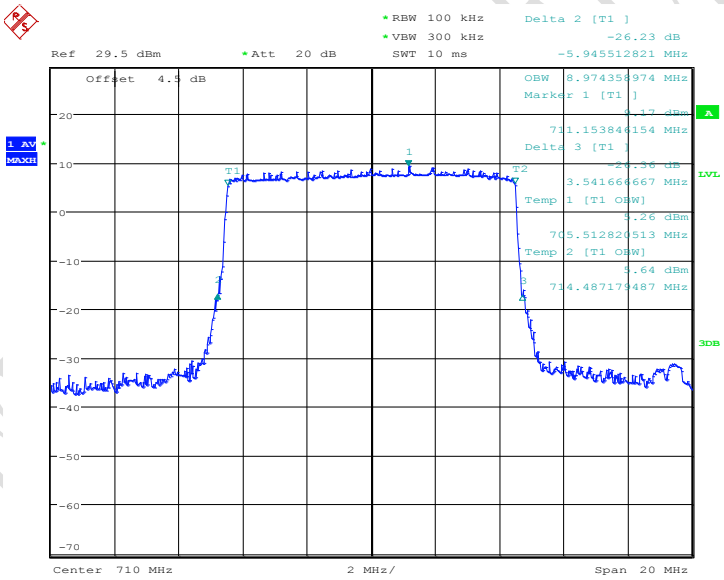
Date: 28.JUN.2016 21:45:40

LTE Band7 16QAM Channel 21100 BW=20MHz RB=100 RB Offset=0



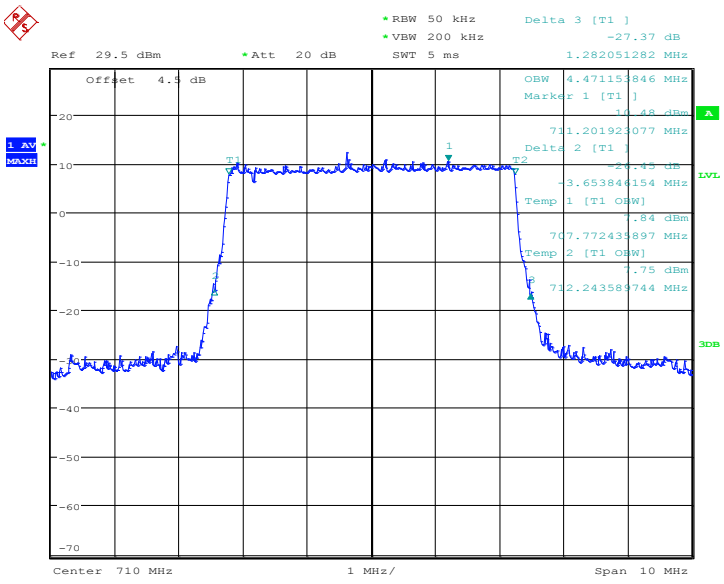
Date: 5.JUL.2016 16:08:25

LTE Band17 QPSK Channel 21100 BW=5MHz RB=25 RB Offset=0



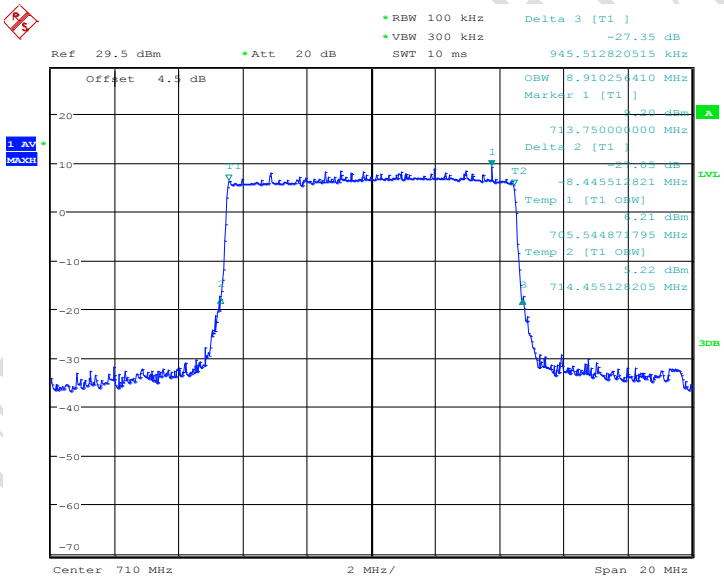
Date: 5.JUL.2016 16:10:22

LTE Band17 QPSK Channel 21100 BW=10MHz RB=50 RB Offset=0



Date: 5.JUL.2016 16:09:10

LTE Band17 16QAM Channel 21100 BW=5MHz RB=25 RB Offset=0



Date: 5.JUL.2016 16:11:14

LTE Band17 16QAM Channel 21100 BW=10MHz RB=50 RB Offset=0

5.3 Conducted Spurious Emission

Specifications:	FCC Part 2.1051, 24.238, 2.1053, 22.917, 27.53
DUT Serial Number:	S3/9: 358067070000937
Test conditions:	Ambient Temperature:15℃-35℃ Relative Humidity:30%-60% Air pressure: 86-106kPa
Test Results:	--

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(dBm) – (43 + 10 log(P)) dB= -13dBm.

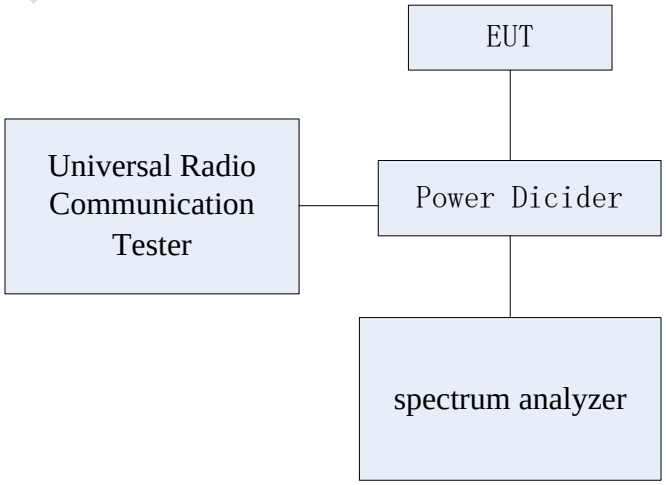
According to Part 27.53(h):

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 log10(P) dB

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

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:

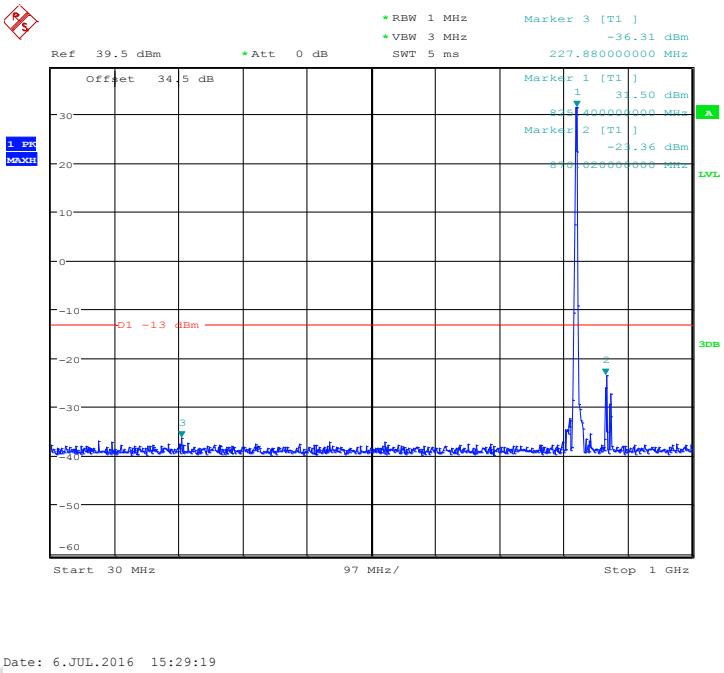
The measurement was performed accordance with section 2.2.13 of ANSI/TIA-603-B-2002: Land Mobile FM or PM Communications Equipment Measurement and Performance Standards.

The following steps outline the procedure used to measure the conducted emissions from the EUT.

1. Determine frequency range for measurements: From CFR 2.1057 the spectrum should be investigated from the lowest radio frequency generated in the equipment up to at least the 10th harmonic of the carrier frequency.

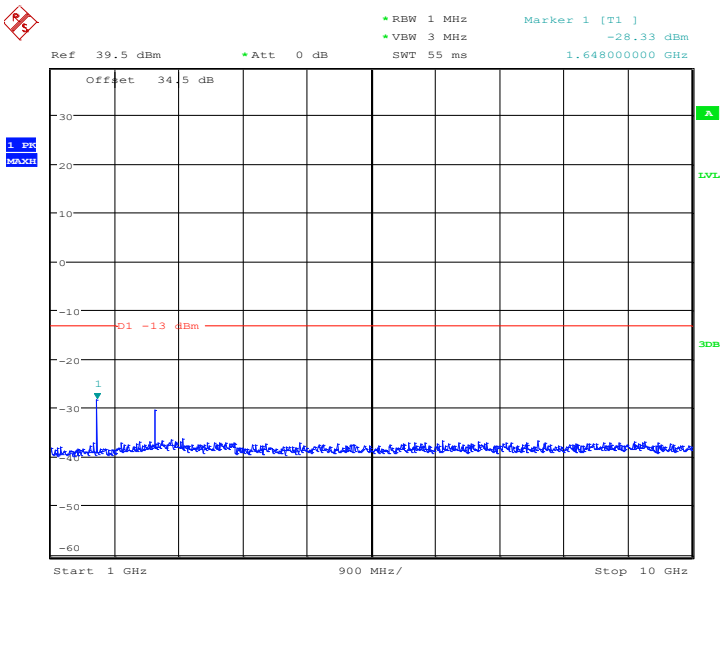
Note: --

5.3.1 GSM Band Mode Conducted Spurious Emission Results

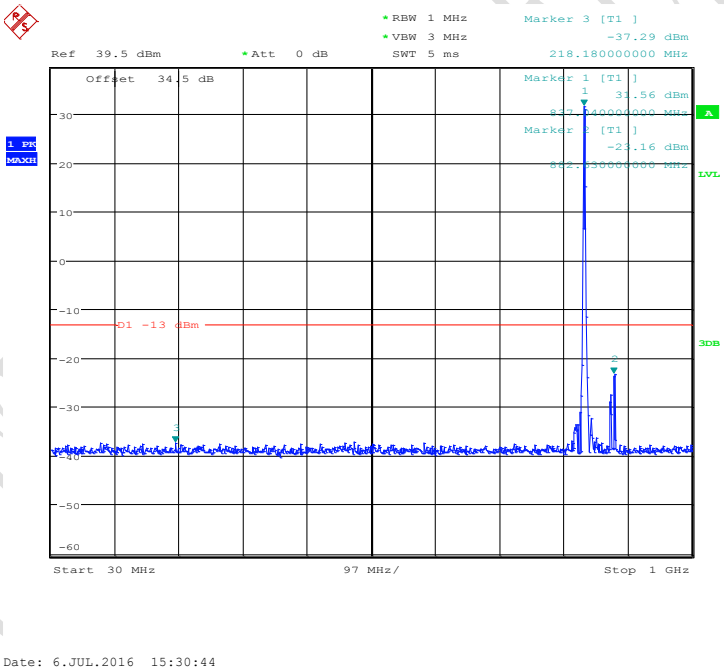


GMSK, Low channel, 824.200 MHz, 30MHz to 1GHz

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

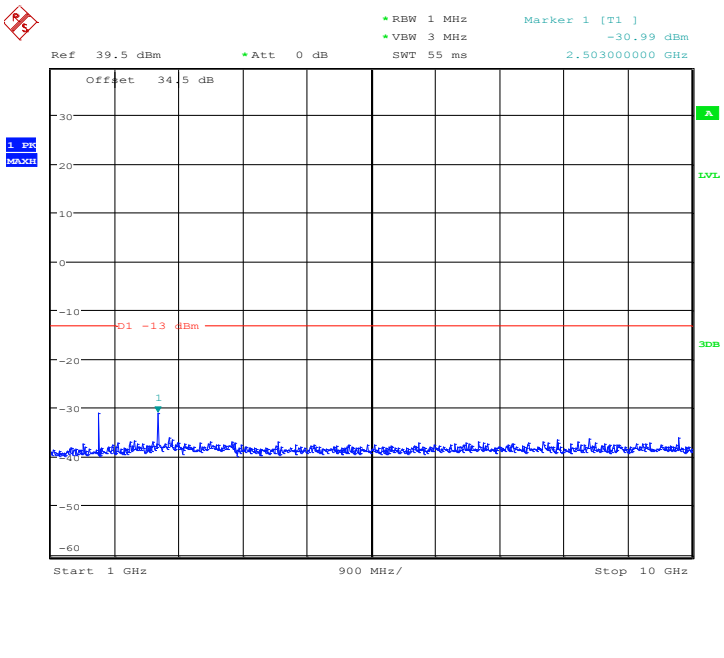


GMSK, Low channel, 824.200 MHz, 1GHz to 10GHz

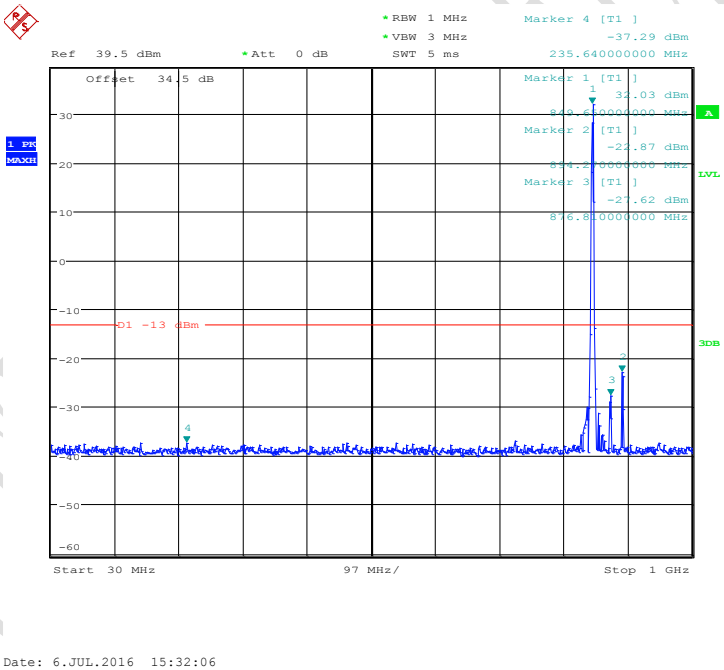


GMSK, Mid Channel, 836.6 MHz, 30MHz to 1GHz

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

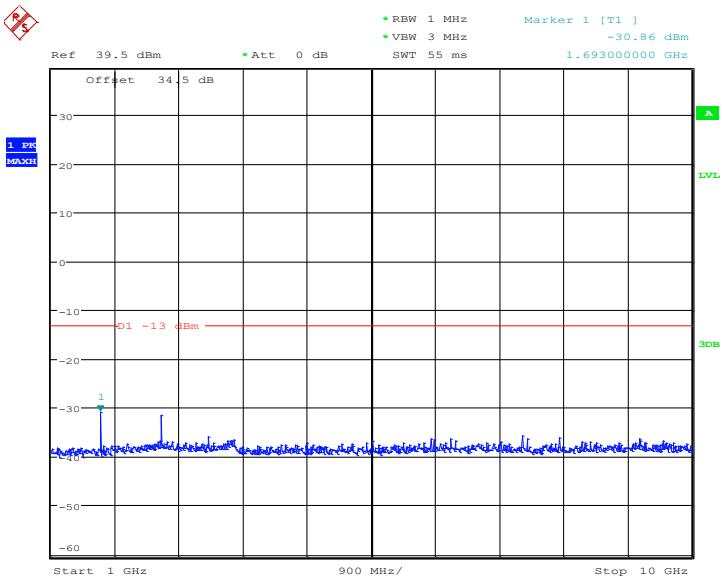


GMSK, Mid Channel, 836.6 MHz, 1GHz to 10GHz



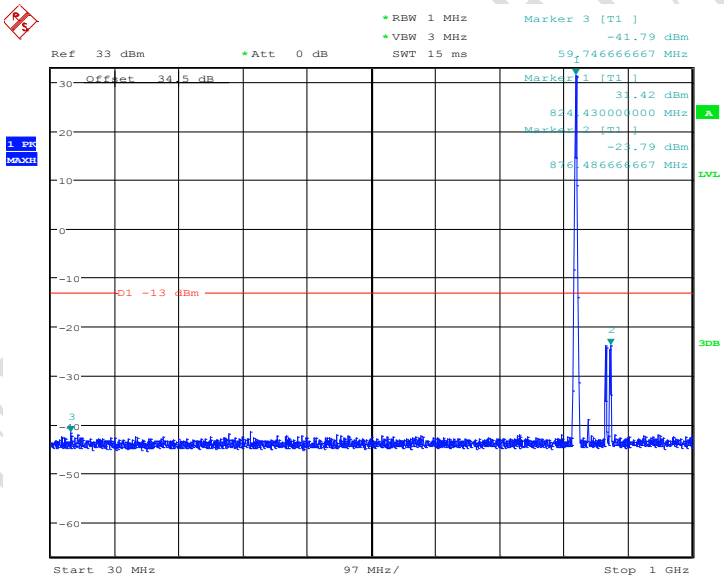
GMSK, High Channel, 848.8 MHz, 30MHz to 1GHz

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



Date: 6.JUL.2016 15:32:24

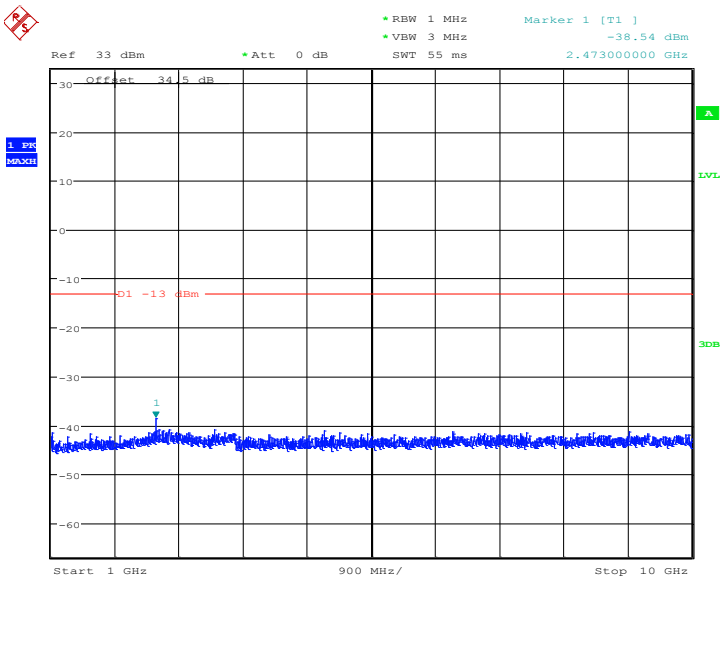
GMSK, High Channel, 848.8 MHz, 1GHz to 10GHz



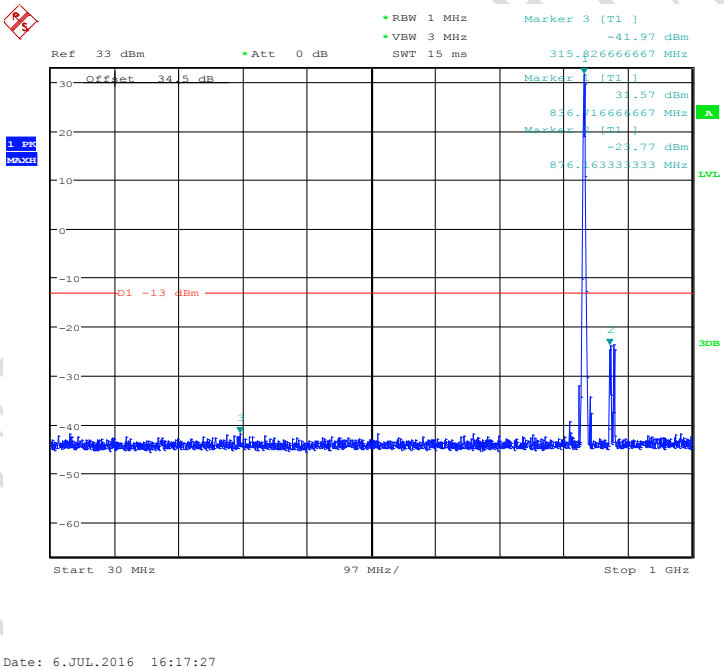
Date: 6.JUL.2016 16:16:18

8PSK, Low channel, 824.200 MHz, 30MHz to 1GHz

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

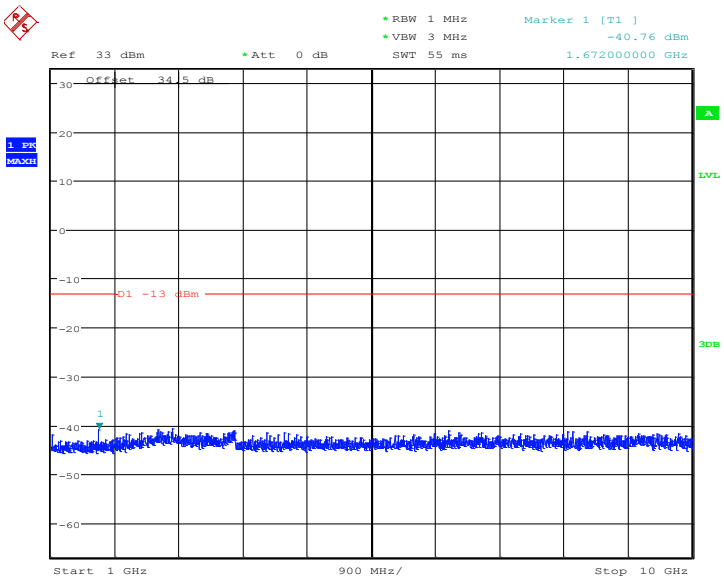


8PSK, Low channel, 824.200 MHz, 1GHz to 10GHz



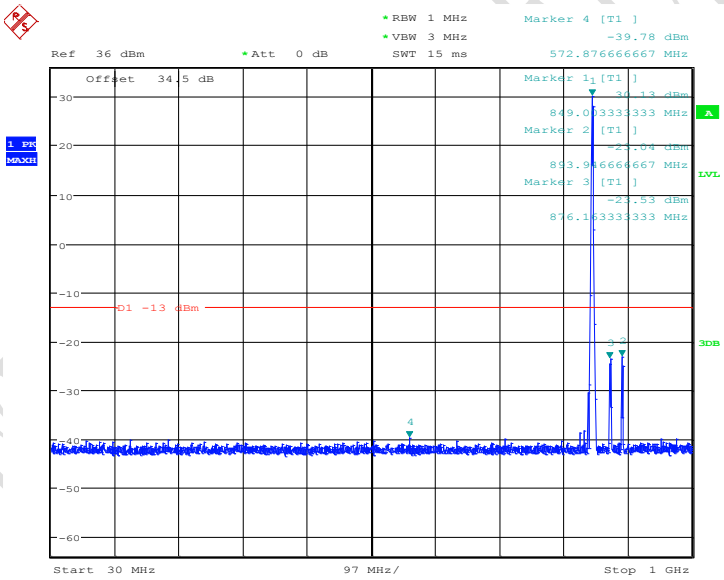
8PSK, Mid Channel, 836.6 MHz, 30MHz to 1GHz

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



Date: 6.JUL.2016 16:16:58

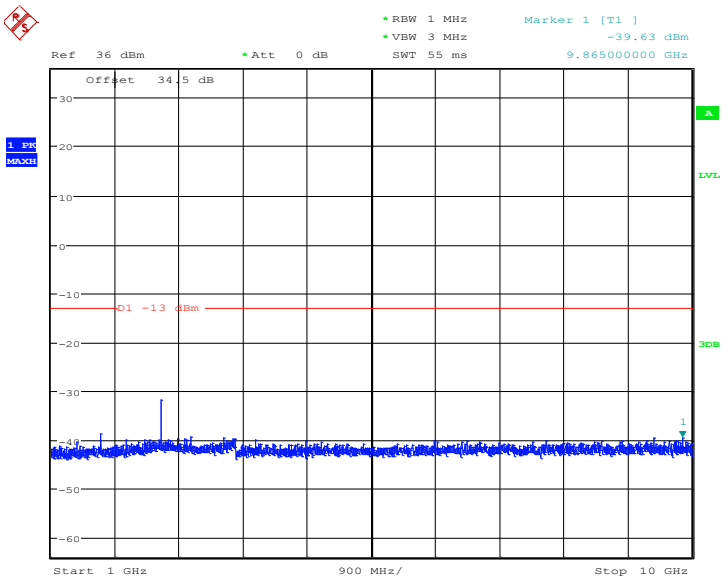
8PSK, Mid Channel, 836.6 MHz, 1GHz to 10GHz



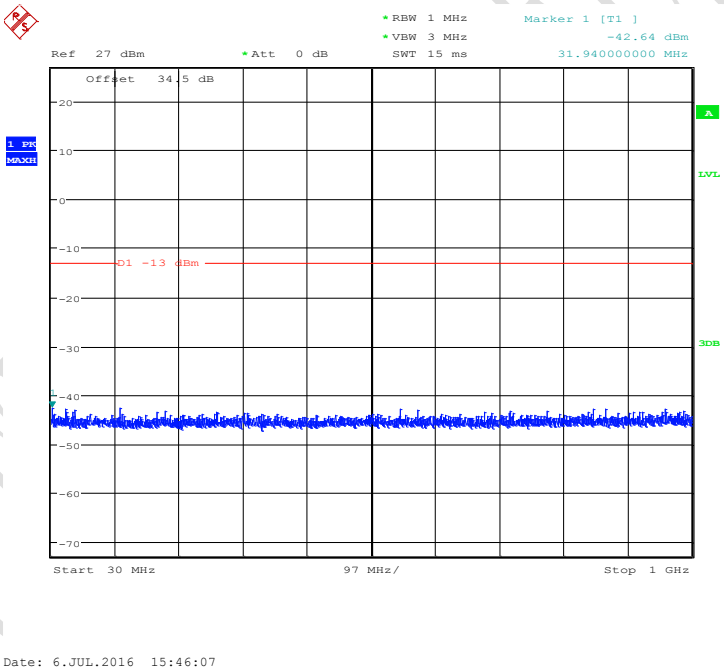
Date: 6.JUL.2016 16:18:43

8PSK, High Channel, 848.8 MHz, 30MHz to 1GHz

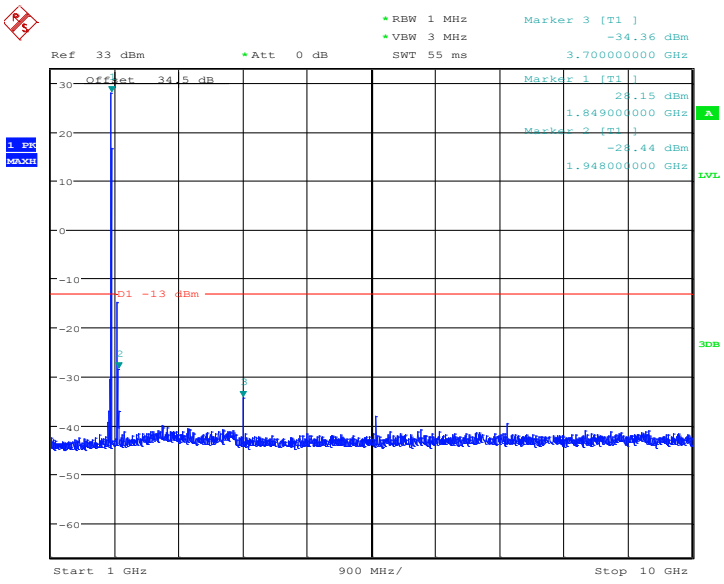
Note: The strong emission shown in each case is the carrier signal.



8PSK, High Channel, 848.8 MHz, 1GHz to 10GHz



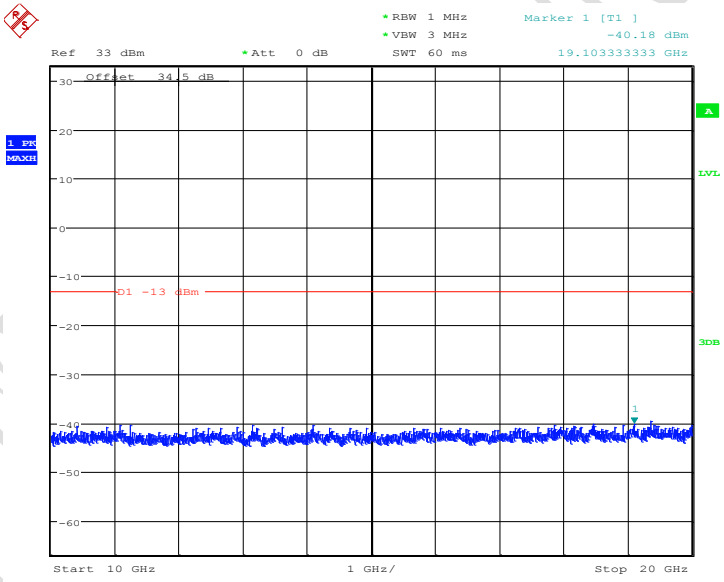
GMSK, Low channel, 1850.2 MHz, 30MHz to 1GHz



Date: 6.JUL.2016 15:47:28

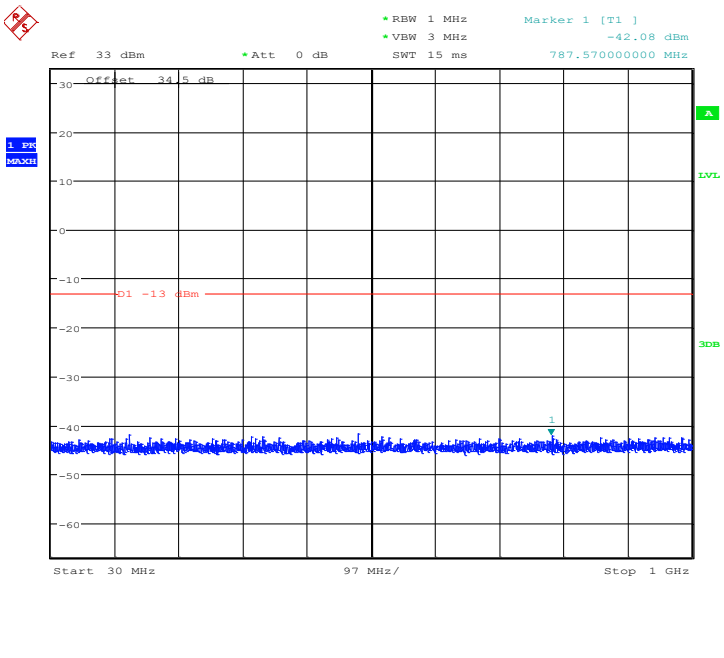
GMSK, Low channel, 1850.2 MHz, 1GHz to 10GHz

Note: The strong emission shown is the carrier signal.

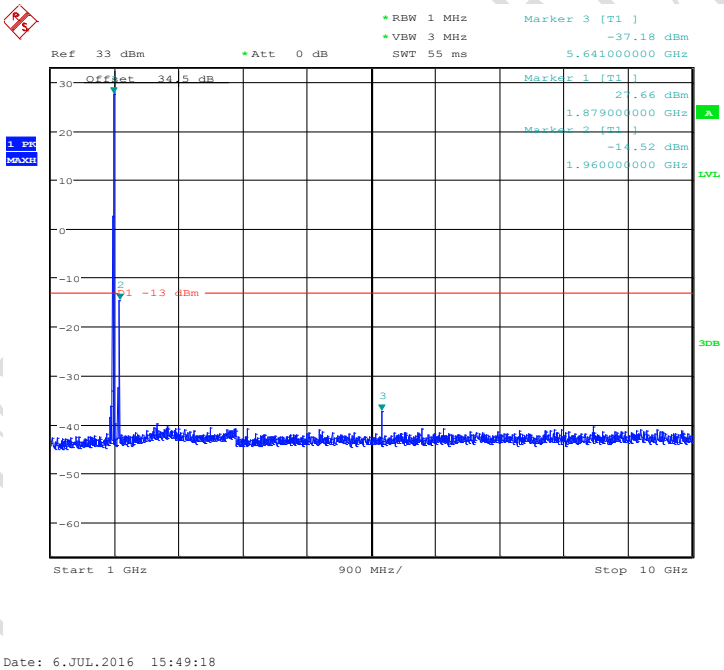


Date: 6.JUL.2016 15:47:49

GMSK, Low channel, 1850.2 MHz, 10GHz to 20GHz

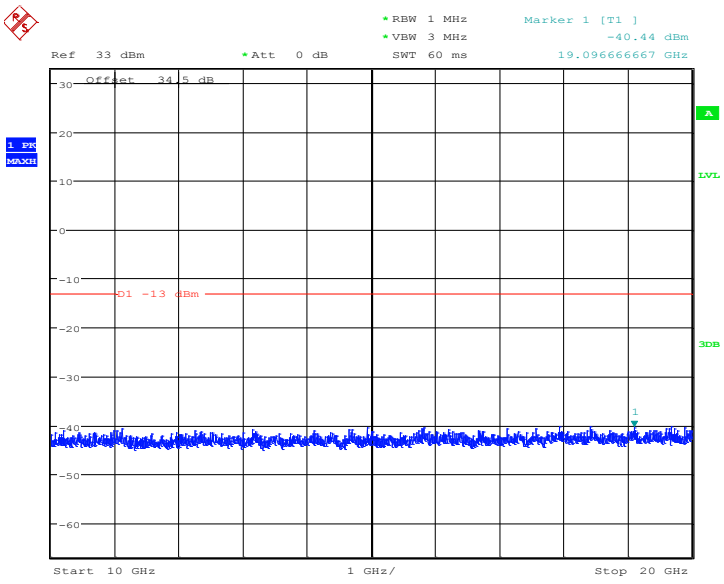


GMSK, Middle channel, 1880.0 MHz, 30MHz to 1GHz

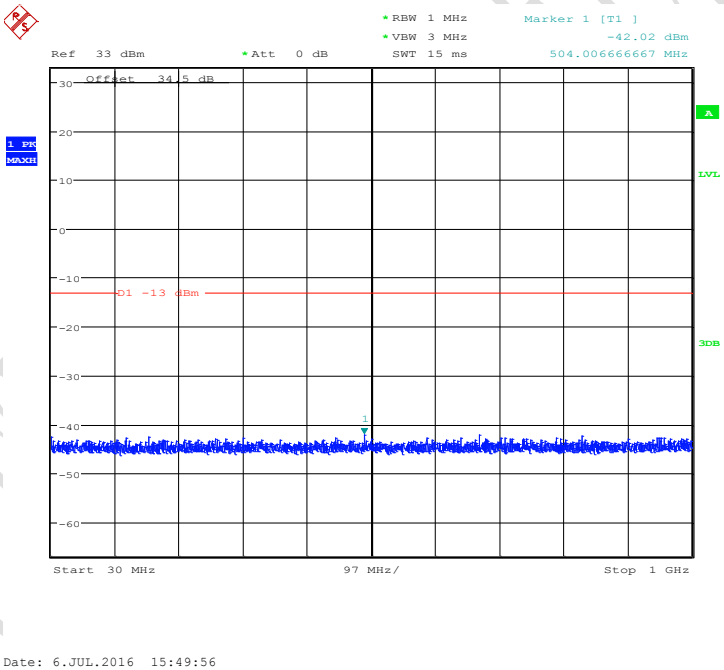


GMSK, Middle channel, 1880.0 MHz, 1GHz to 10GHz

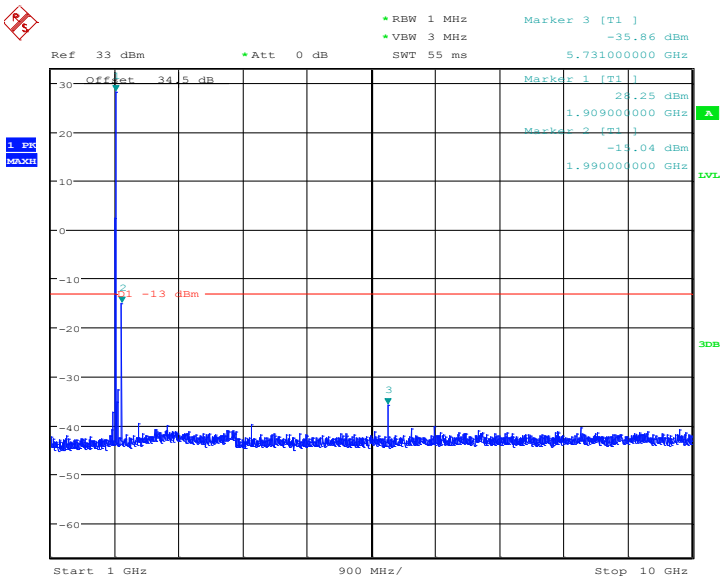
Note: The strong emission shown is the carrier signal.



GMSK, Middle channel, 1880.0 MHz, 10GHz to 20GHz



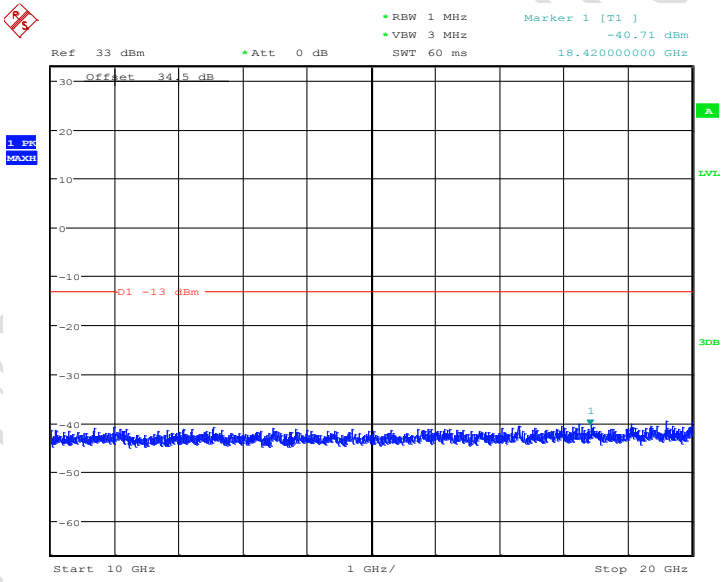
GMSK, High channel, 1909.8 MHz, 30MHz to 1GHz



Date: 6.JUL.2016 15:50:23

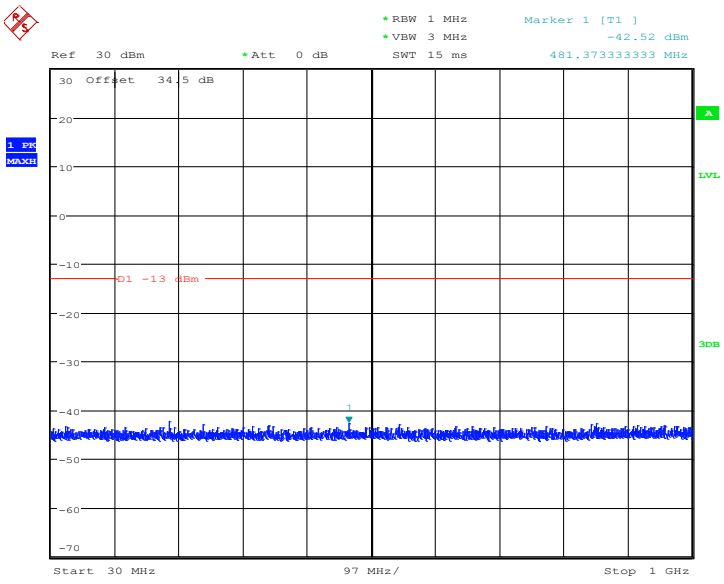
GMSK, High channel, 1909.8 MHz, 1GHz to 10GHz

Note: The strong emission shown is the carrier signal.

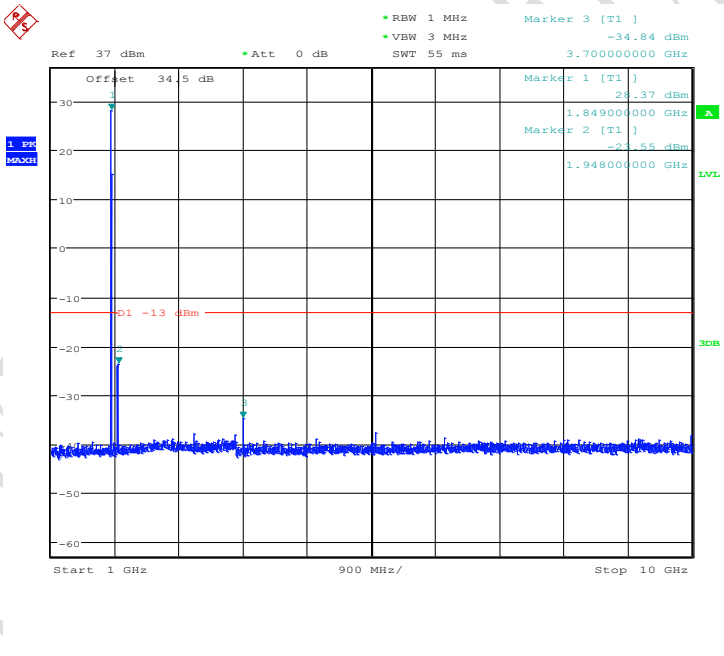


Date: 6.JUL.2016 15:50:37

GMSK, High channel, 1909.8 MHz, 10GHz to 20GHz

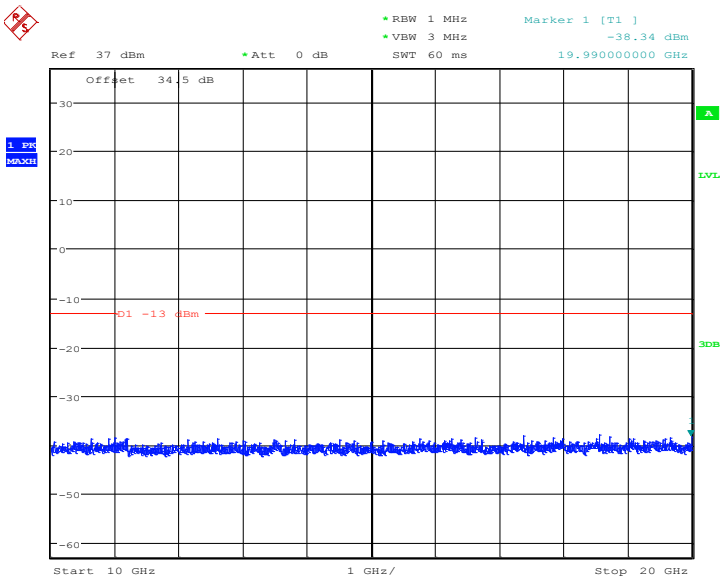


8PSK, Low channel, 1850.2 MHz, 30MHz to 1GHz

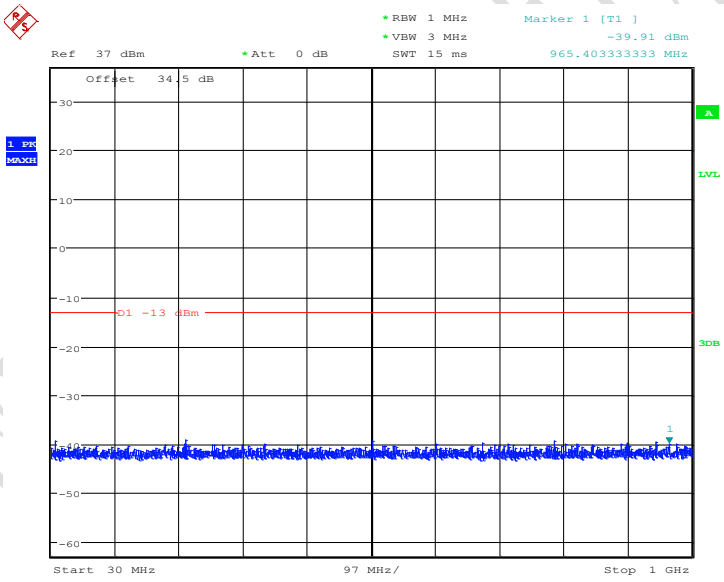


8PSK, Low channel, 1850.2 MHz, 1GHz to 10GHz

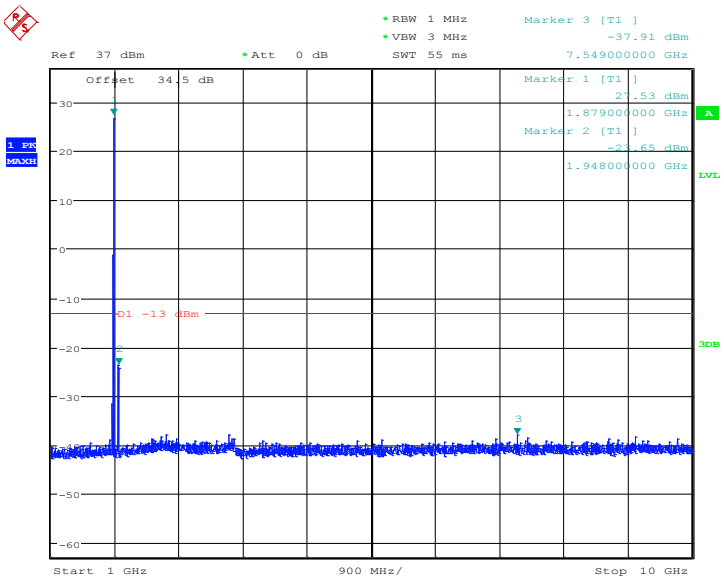
Note: The strong emission shown is the carrier signal.



8PSK, Low channel, 1850.2 MHz, 10GHz to 20GHz



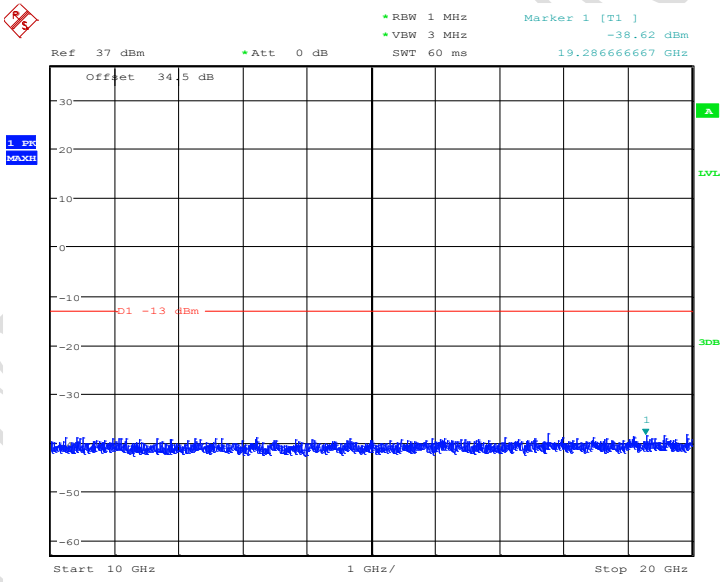
8PSK, Middle channel, 1880.0 MHz, 30MHz to 1GHz



Date: 6.JUL.2016 16:40:24

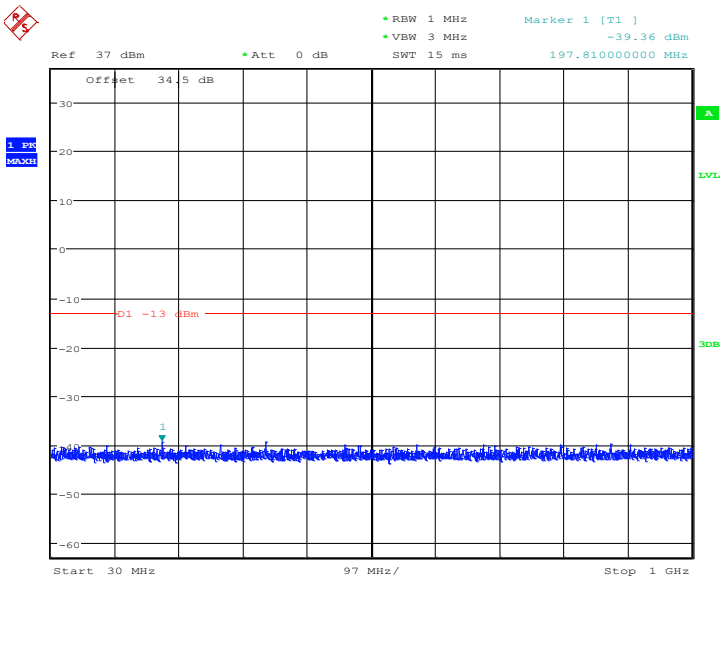
8PSK, Middle channel, 1880.0 MHz, 1GHz to 10GHz

Note: The strong emission shown is the carrier signal.

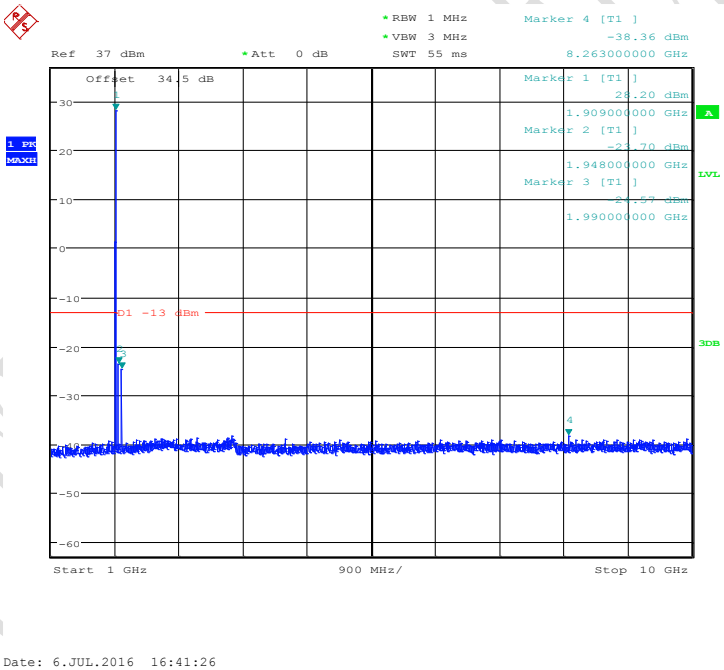


Date: 6.JUL.2016 16:40:02

8PSK, Middle channel, 1880.0 MHz, 10GHz to 20GHz

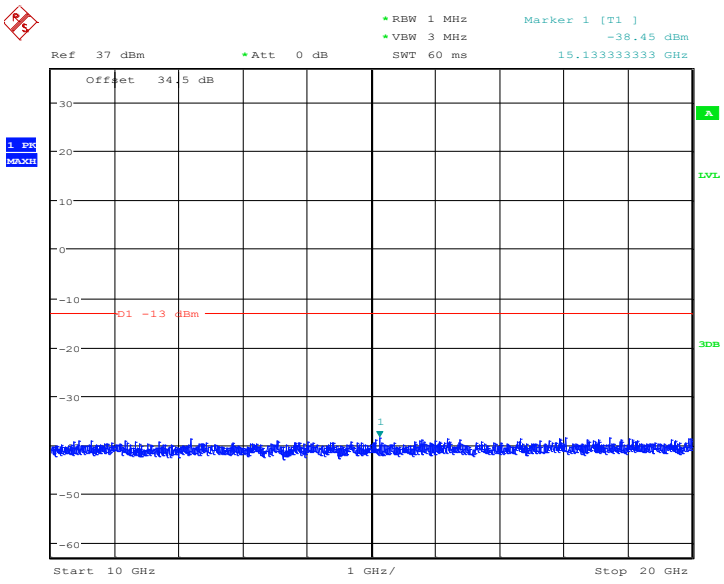


8PSK, High channel, 1909.8 MHz, 30MHz to 1GHz



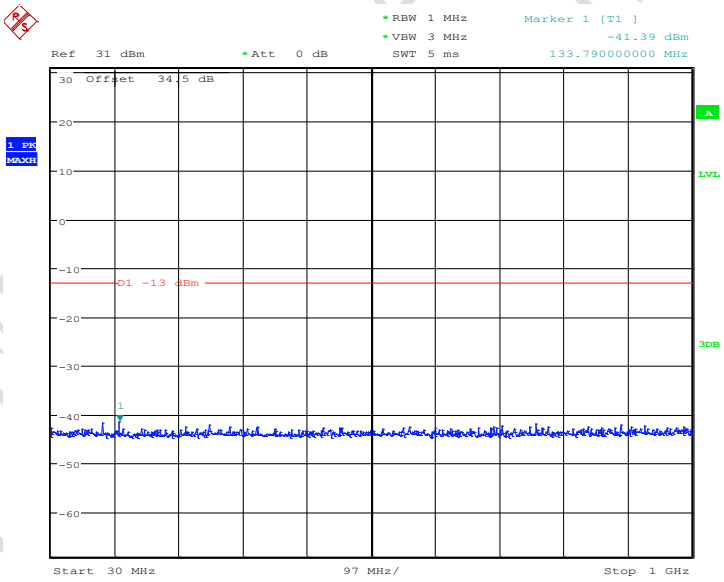
8PSK, High channel, 1909.8 MHz, 1GHz to 10GHz

Note: The strong emission shown is the carrier signal

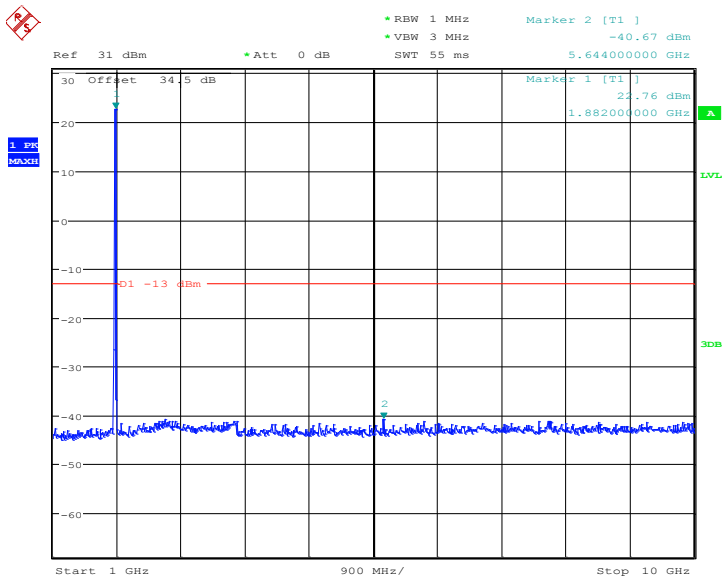


8PSK, High channel, 1909.8 MHz, 10GHz to 20GHz

5.3.2 WCDMA Band Mode Conducted Spurious Emission Results

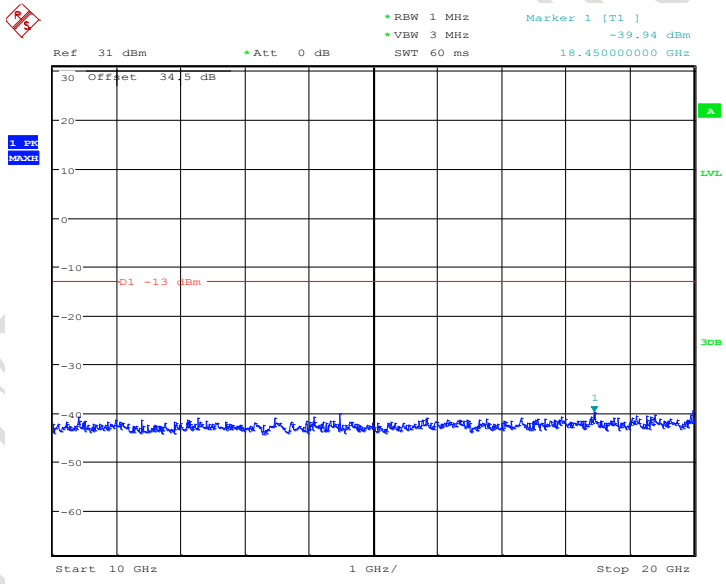


WCDMA Band 2 QPSK Mode Middle Channel, 1880 MHz, 30MHz to 1GHz

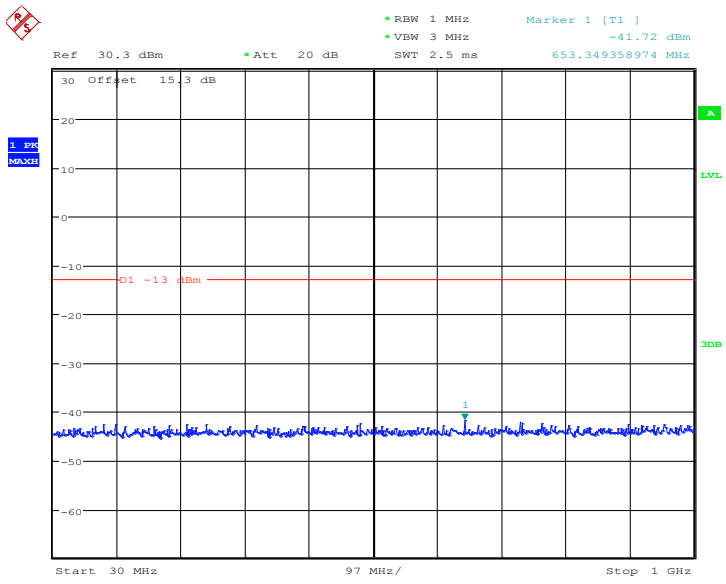


WCDMA Band 2 QPSK Mode Middle Channel, 1880 MHz, 1GHz to 10GHz

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

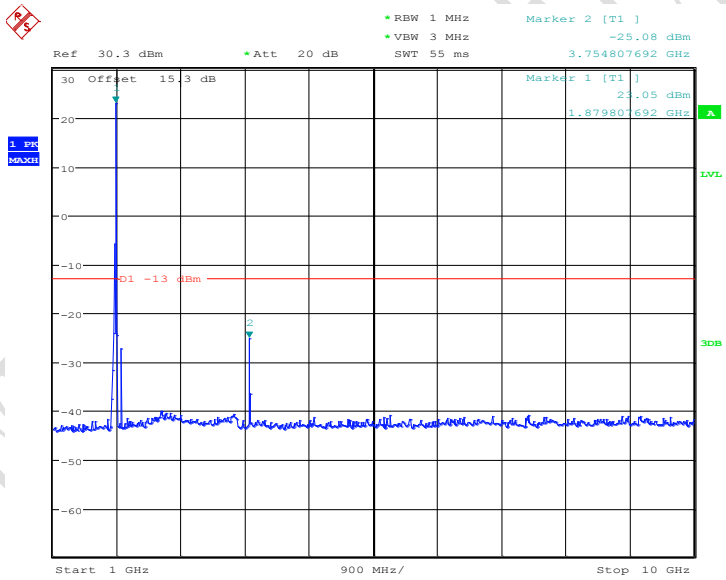


WCDMA Band 2 QPSK Mode Middle Channel, 1880 MHz, 10GHz to 20GHz



Date: 14.JUL.2016 10:42:56

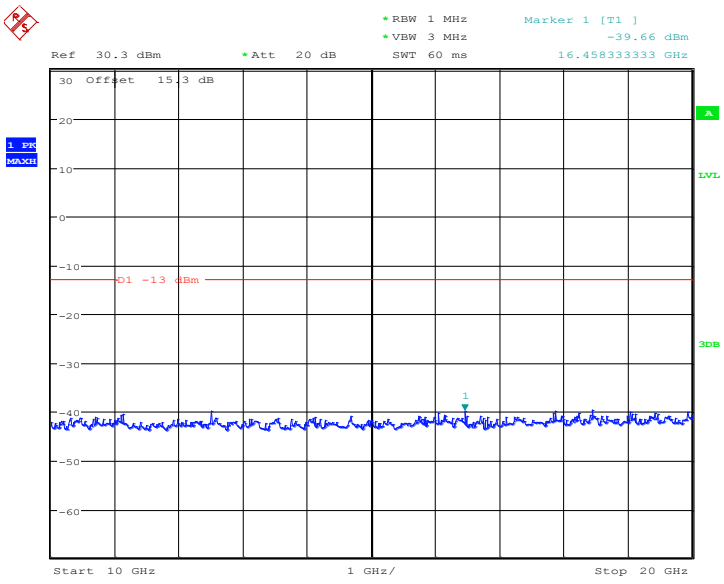
WCDMA Band 2 16QAM Mode Middle Channel, 1880 MHz, 30MHz to 1GHz



Date: 14.JUL.2016 10:43:20

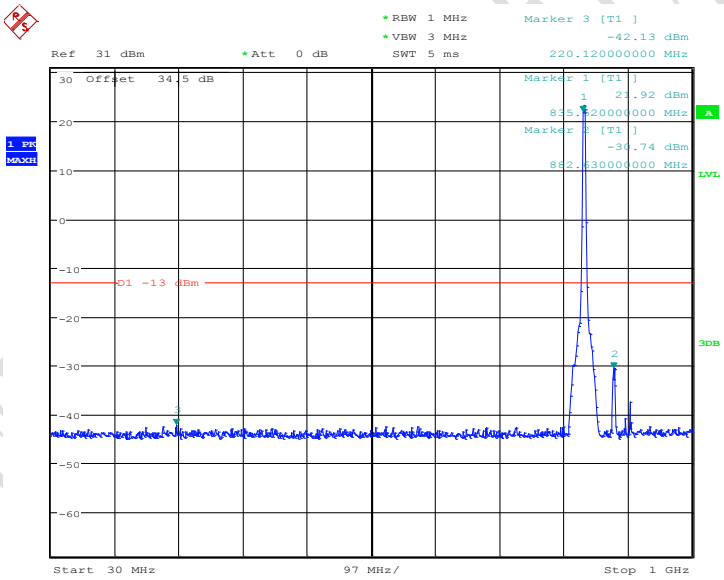
WCDMA Band 2 16QAM Mode Middle Channel, 1880 MHz, 1GHz to 10GHz

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



Date: 14.JUL.2016 10:43:51

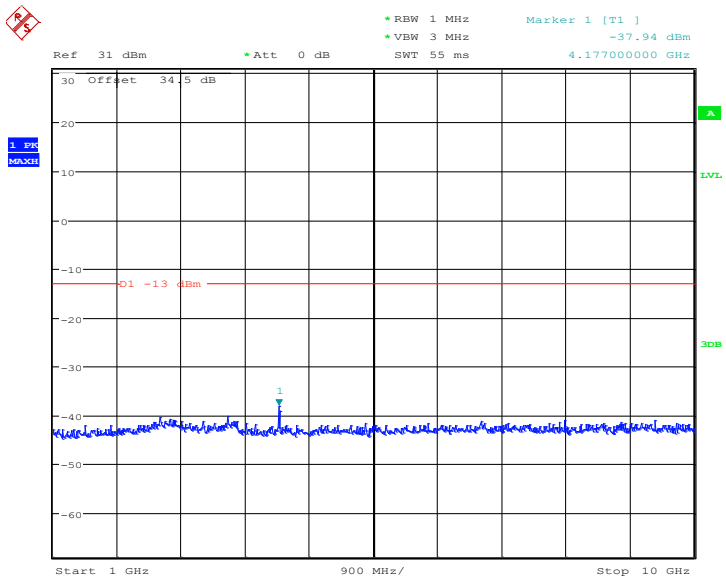
WCDMA Band 2 16QAM Mode Middle Channel, 1880 MHz, 10GHz to 20GHz



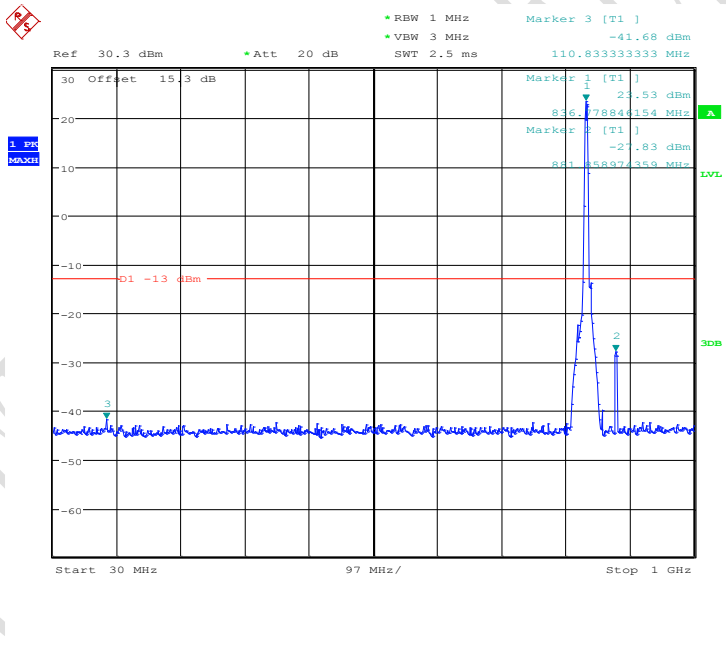
Date: 7.JUL.2016 10:32:01

WCDMA Band 5 QPSK Mode Middle Channel, 836.4 MHz, 30MHz to 1GHz

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

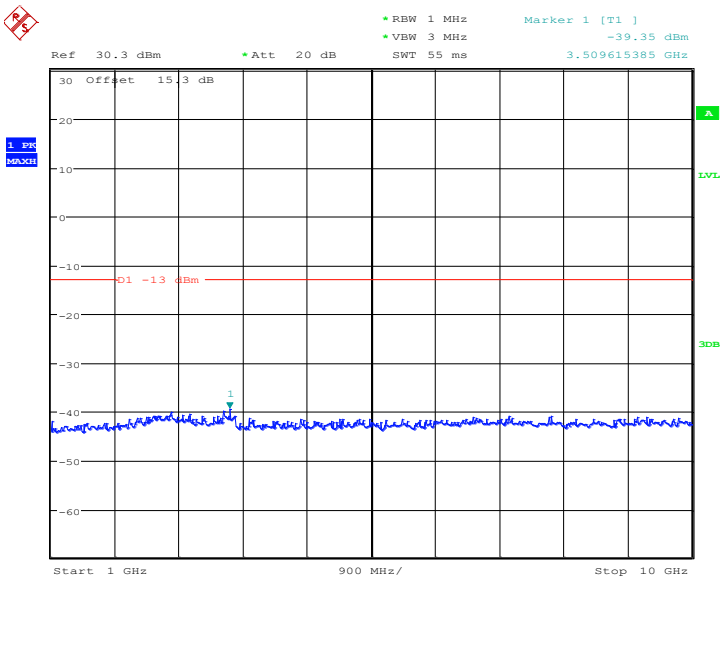


WCDMA Band 5 QPSK Mode Middle Channel, 836.4 MHz, 1GHz to 10GHz



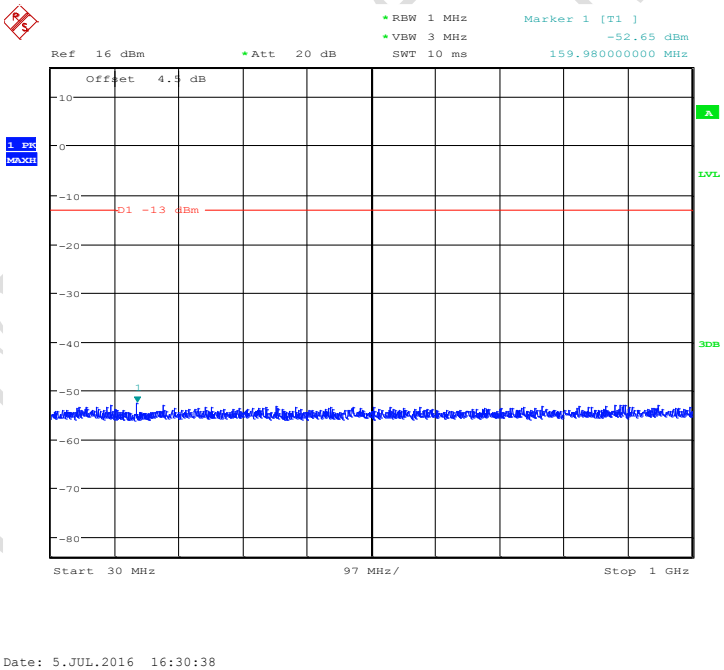
WCDMA Band 5 16QAM Mode Middle Channel, 836.4 MHz, 30MHz to 1GHz

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

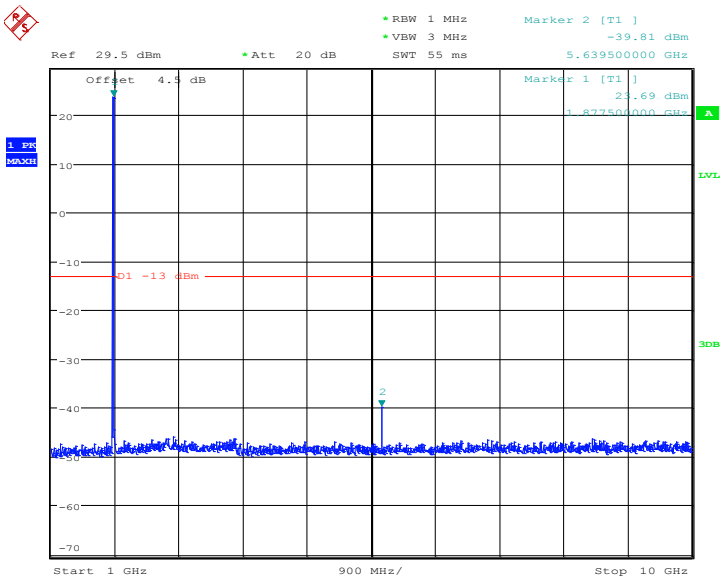


WCDMA Band 5 16QAM Mode Middle Channel, 836.4 MHz, 1GHz to 10GHz

5.3.3 LTE B2 Conducted Spurious Emission Results



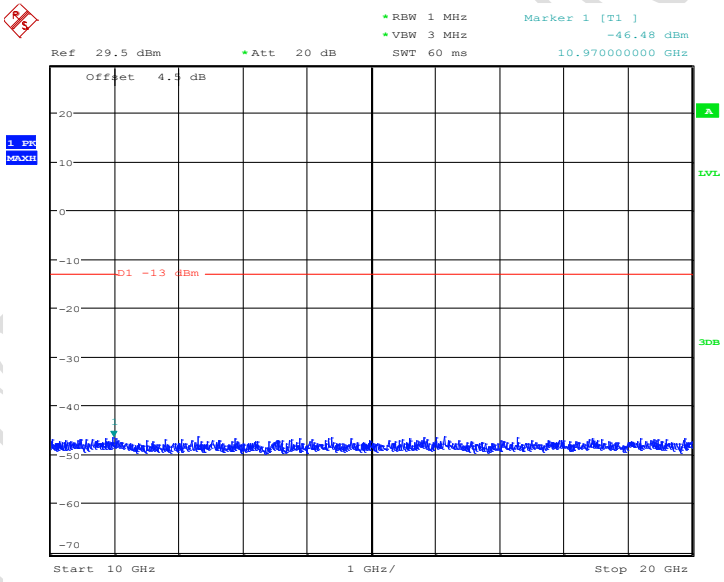
1.4MHz bandwidth QPSK Mode Middle channel, 1880 MHz, 30MHz to 1GHz



Date: 5.JUL.2016 16:31:20

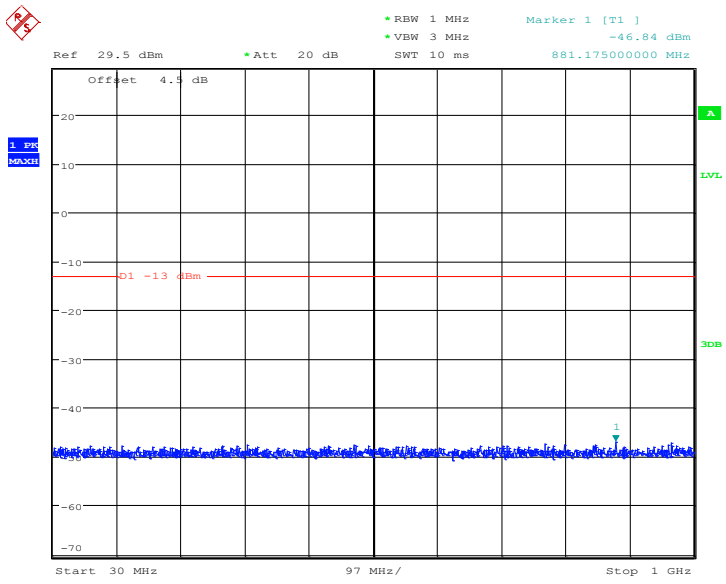
1.4MHz bandwidth QPSK Middle channel, 1880MHz,1GHz to 10GHz

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

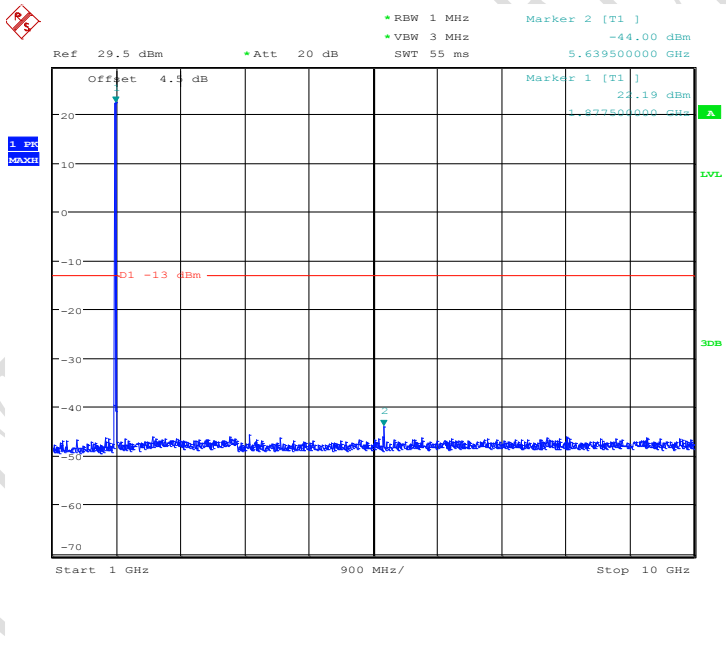


Date: 5.JUL.2016 16:31:45

1.4MHz bandwidth QPSK Middle channel, 1880 MHz,10GHz to 20GHz

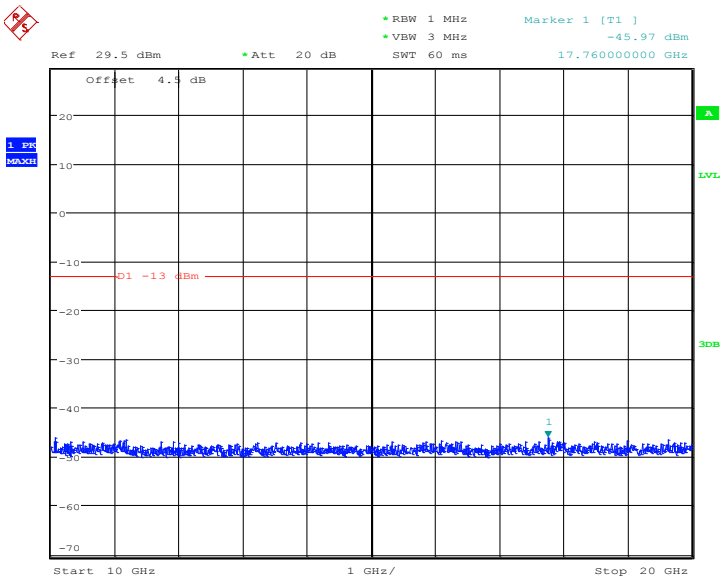


3MHz bandwidth QPSK Mode Middle Channel, 1880 MHz, 30MHz to 1GHz



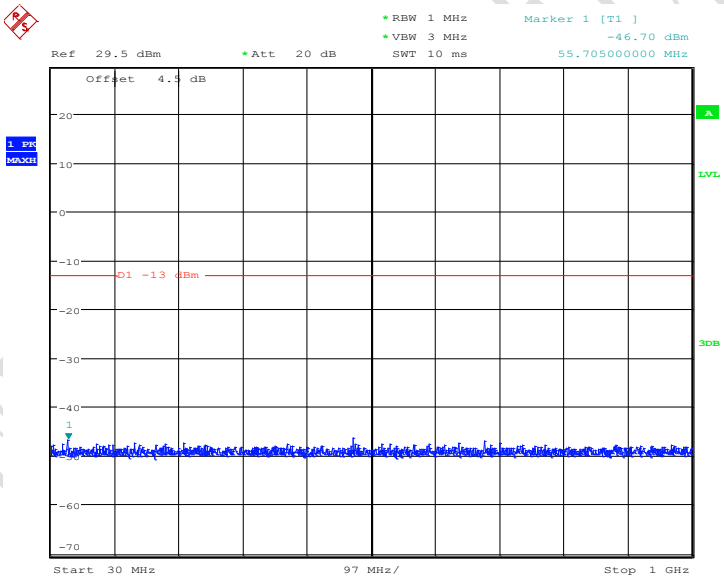
3MHz bandwidth QPSK Middle Channel, 1880 MHz, 1GHz to 10GHz

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



Date: 5.JUL.2016 16:33:56

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



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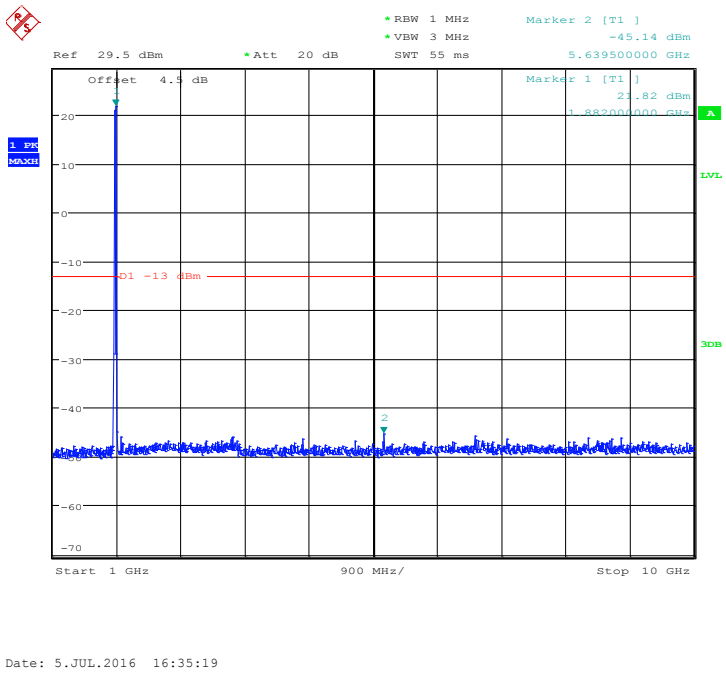
5MHz bandwidth QPSK Mode Middle Channel, 1880 MHz,30MHz to 1GHz



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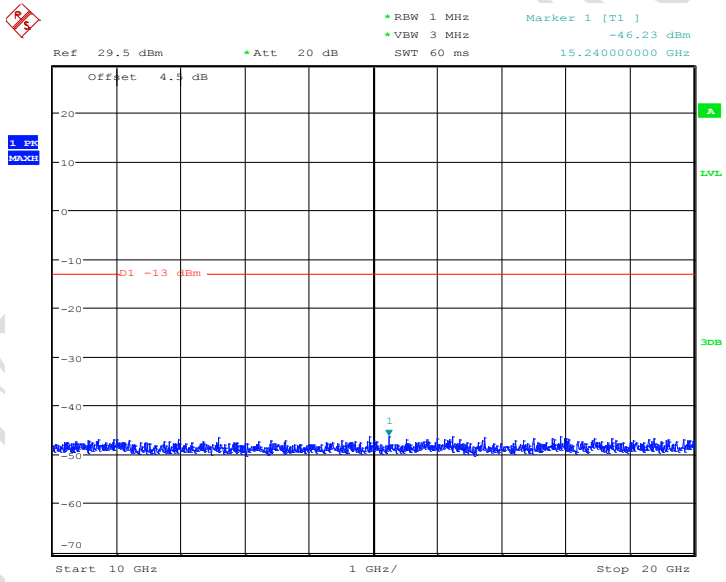
5MHz bandwidth QPSK Mode Middle Channel, 1880 MHz,1GHz to 10GHz

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



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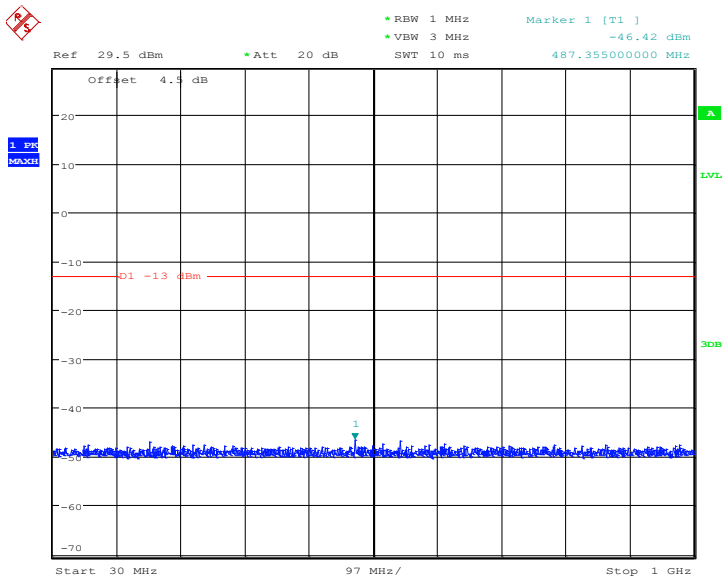
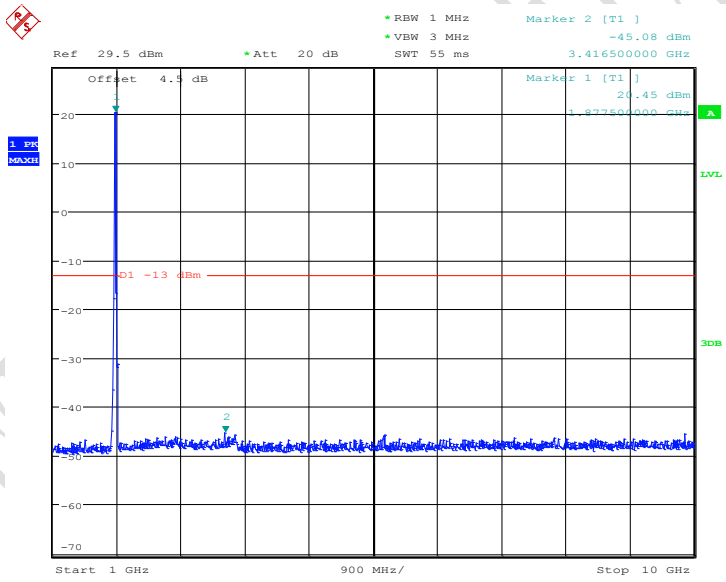
5MHz bandwidth QPSK Mode Middle Channel, 1880 MHz,10GHz to 20GHz

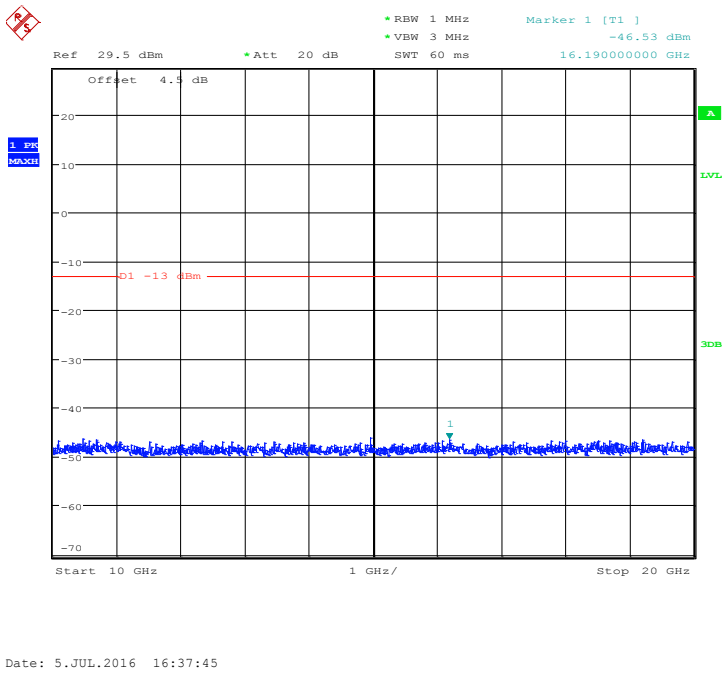


10MHz bandwidth QPSK Mode Middle Channel, 1880 MHz, 30MHz to 1GHz

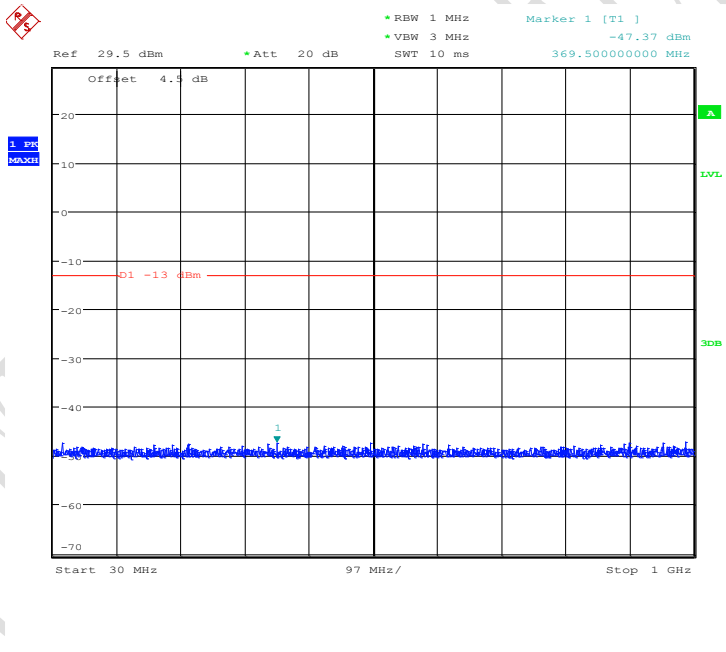


10MHz bandwidth QPSK Mode Middle Channel, 1880 MHz, 1GHz to 10GHz

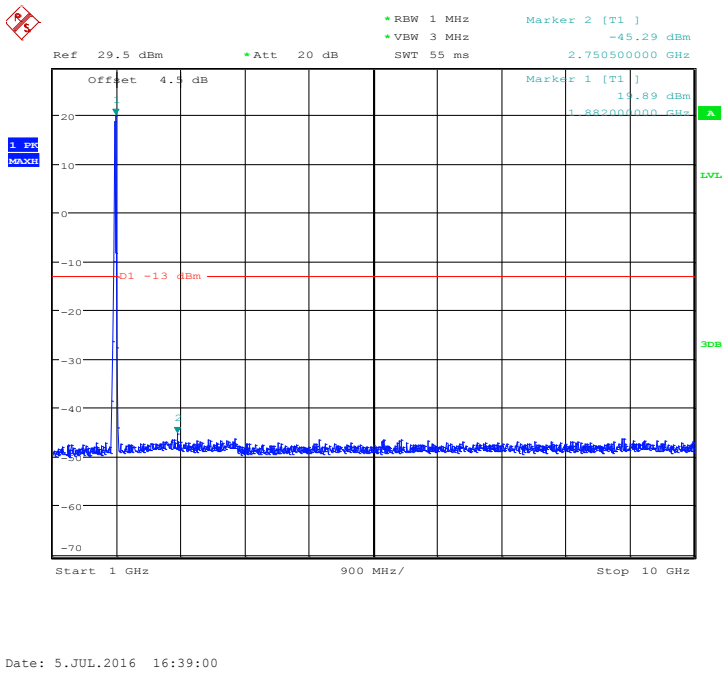
Note: The strong emission shown in each case is the carrier signal.



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

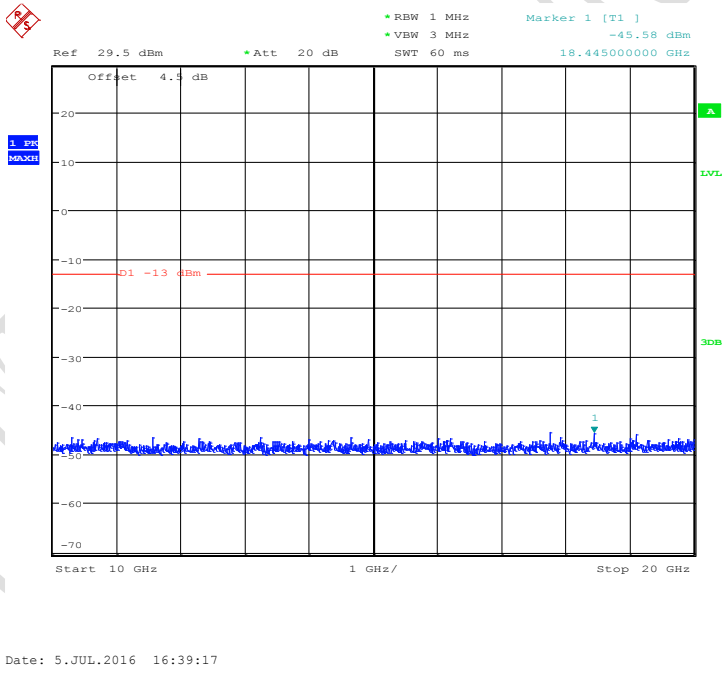


15MHz bandwidth QPSK Mode Middle Channel, 1880 MHz, 30MHz to 1GHz

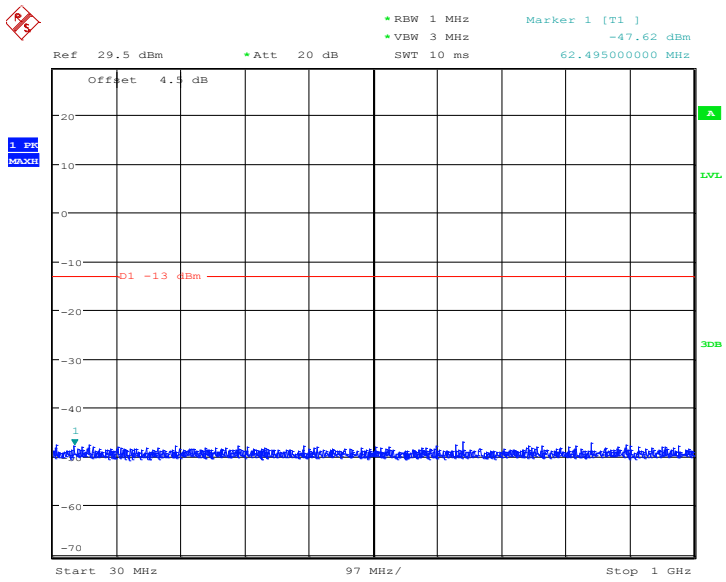


15MHz bandwidth QPSK Mode Middle Channel, 1880 MHz, 1GHz to 10GHz

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



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



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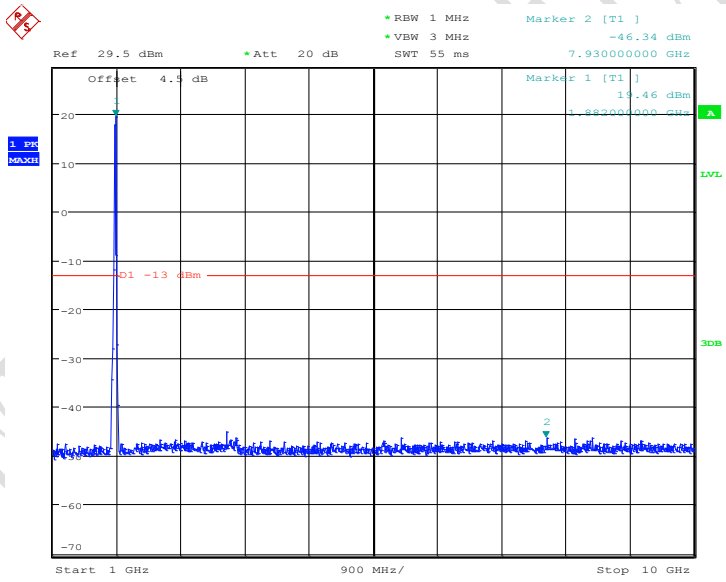
20MHz bandwidth QPSK Mode Middle Channel, 1880 MHz, 30MHz to 1GHz



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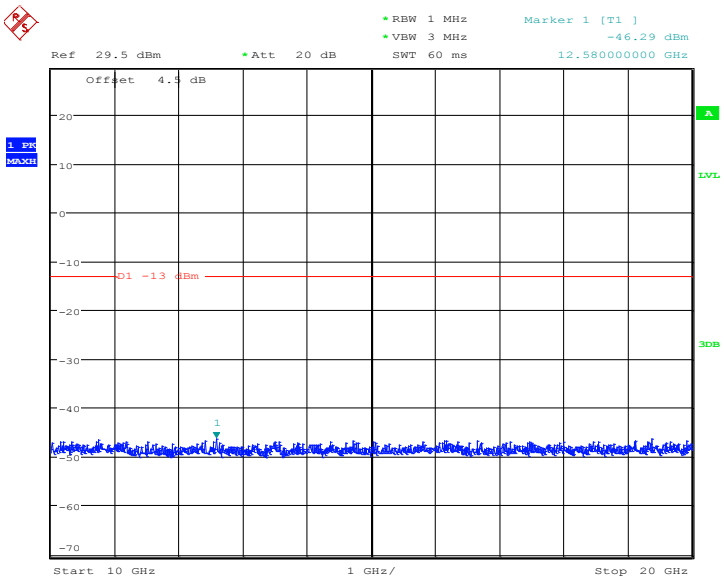
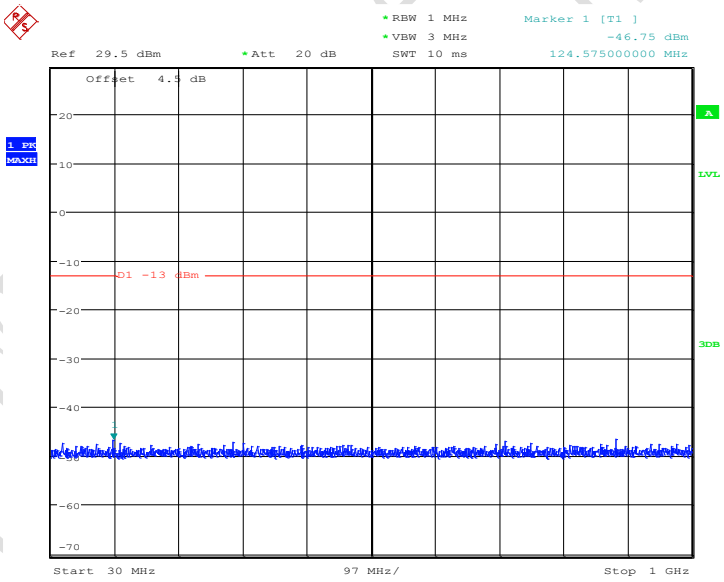
20MHz bandwidth QPSK Mode Middle Channel, 1880 MHz, 1GHz to 10GHz

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



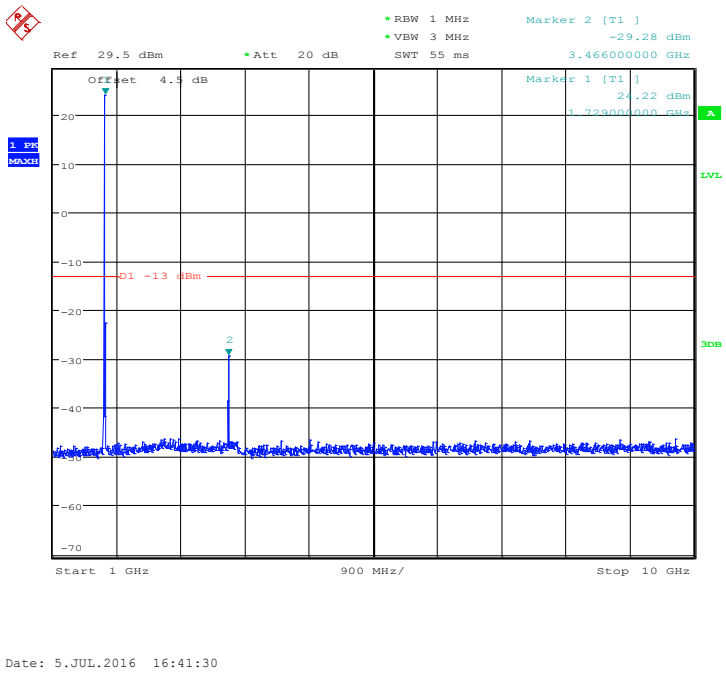
20MHz bandwidth QPSK Mode Middle Channel, 1880 MHz, 10GHz to 20GHz

5.3.4 LTE B4 Conducted Spurious Emission Results

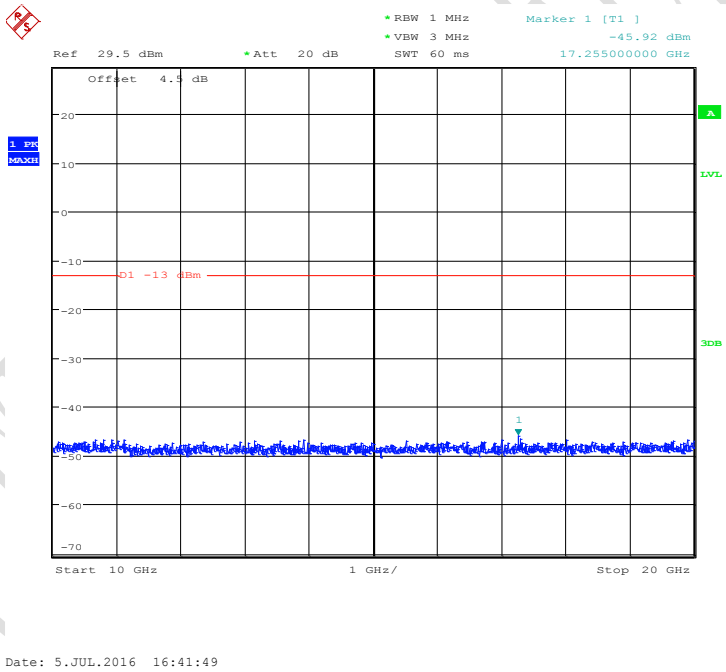


1.4MHz bandwidth QPSK Mode Middle Channel, 1732.5 MHz,30MHz to 1GHz

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



1.4MHz bandwidth QPSK Mode Middle Channel, 1732.5 MHz,1GHz to 10GHz



1.4MHz bandwidth QPSK Mode Middle Channel, 1732.5 MHz, 10GHz to 20GHz