TEST REPORT

REPORT NUMBER: B15W50341-FCC-RF_Rev2

ON

Type of Equipment: Wireless Modules
Type of Designation: EM7455
Manufacturer: Sierra Wireless Inc.

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
PART 90,PRIVATE LAND MOBILE RADIO SERVICES, e-CFR, Jan. 26, 2012
RSS-Gen — General Requirements for Compliance of Radio Apparatus., November 13, 2014
RSS-130 Mobile Broadband Services (MBS) Equipment Operating in the Frequency Bands 698-756 MHz and 777-787 MHz, October 2013
RSS-132 — Cellular Telephone Systems Operating in the Bands 824-849 MHz and 869-894 MHz, Issue 3, January 2013
RSS-133 — 2 GHz Personal Communications Services, Issue 6, January 2013
RSS-139 — Advanced Wireless Services (AWS) Equipment Operating in the Bands 1710-1780 MHz and 2110-2180 MHz, Issue 3, July 2015
RSS-199 Broadband Radio Service (BRS) Equipment Operating in the Band 2500-2690 MHz, Issue 2, October 2014

China Telecommunication Technology Labs.

Month date, year
Aug, 10, 2015
Signature

He Guili
Director

FCC ID:	N7NEM7455
IC:	2417C-EM7455
Report Date:	2015-08-10

Test Firm Name:	Chongqing Institute of Telecommunications
FCC Registration Number:	428018
IC Registration Number:	11590A

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 compliance with FCC CFR 47 Parts 2, 22, 24, 27, 90 and RSS-Gen, 130, 132, 133, 139 and 199. The sample tested was found to comply with the requirements defined in the applied rules.

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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, 90 and RSS-Gen,130, 132, 133, 139, 199.

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 C.

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1.2 Testers

Name: Chen Wen

Position: Engineer

Department: Department of RF test

Date: 2015-06-18 to 2015-07-10

Signature:

Editor of this test report:

Name: Zhou Jin

Position: Engineer

Department: Department of RF test

Date: 2015-08-10

Signature:

Technical responsibility for area of testing:

Name: Zhang Yan

Position: Manager

Department: Director of the laboratory

Date: 2015-08-10

Signature:

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1.3 Testing Laboratory information

1.3.1 Location

Name:	China Telecommunication Technology Labs.
Address:	No.8, Yuma Road, Chayuan New City, Nan'an District, Chongqing, P. R. China
Postal Code:	401336
Tel:	0086-23-88068315
Fax:	0086-23-88608777

1.3.2 Details of accreditation status

Accredited by:	China National Accreditation Service for Conformity Assessment (CNAS)
Registration number:	CNAS Registration No. CNAS L6377
Standard:	ISO/IEC 17025:2005

1.3.3 Test location, where different from section 1.3.1

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

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1.4 Details of applicant or manufacturer

1.4.1 Applicant

Name:	Sierra Wireless Inc.
Address:	13811, Wireless Way, Richmond, British Columbia
Country:	Canada
Telephone:	+1 604 232 1440
Fax:	+1 604 231 1109
Contact:	Ying Wang
Telephone:	+1 604 232 1440
Email:	ywang@sierrawireless.com

1.4.2 Manufacturer (if different from applicant in section 1.4.1)

Name:	--
Address:	--
City:	--
Country:	--

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2 Test Item

2.1 General Information

Manufacturer:	Sierra Wireless Inc.
Name:	Wireless Modules
Model Number:	EM7455
Serial Number:	S1/2:359073060017898; S2/2:359073060017898
Production Status:	Product
Receipt date of test item:	2015-06-18

2.2 Outline of EUT

The EM7455, supporting LTE B2/B4/B5/B7/B12/B13/B25/B26/B29/B30/B41, WCDMA/HSDPA/HSUPA/HSPA+ FDD II/IV/V bands. The uplink frequency band of LTE B2 is covered by B25, the uplink frequency band of LTE B5 is covered by B26. For test reduction, the bands covered by other bands, e.g., B2/B5 are reduced. The uplink frequencies and bandwidth configurations information are as following table:

LTE:

Band No.	Frequency range (MHz)	Bandwidth configurations (MHz)	Note
2	1850 - 1910	1.4/3/5/10/15/20	Covered by B25 (B2 is a subset of B25. Both bands share the same hardware and have the same radio performance. Separate measurement in B2 is not required.)
4	1710 - 1755	1.4/3/5/10/15/20	--
5	824 – 849	1.4/3/5/10	Covered by B26 (B5 is a subset of B26. Both bands share the same hardware and have the same radio performance. Separate measurement in B5 is not required.)
7	2500 - 2570	5/10/15/20	--
12	699 – 716	1.4/3/5/10	--
13	777 – 787	5/10	--
25	1850 – 1915	1.4/3/5/10/15/20	--
26	814 – 849	1.4/3/5/10/15	--
30	2305 - 2315	5/10	--
41	2496 – 2690	5/10/15/20	TDD

WCDMA:

Band No.	Frequency range (MHz)
2	1850 –1910 MHz
4	1710 -1755MHz
5	824 - 849MHz

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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	Sierra Wireless Inc.	EM7455	S1/2: 359073060017898; S2/2: 359073060017898	None
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	IC Standards	Name of Test	Result
2.1046,22.913(a),24.232(c) ,27.50, 90.635(b)	RSS-130 4.4 RSS-132 4.4 RSS-133 6.4 RSS-139 4.4 RSS-199 4.4	Conducted RF Power Output	Pass
2.1049,22.917(b), 24.238(b)	RSS-Gen 6.6	Occupied Bandwidth	*Note 1
2.1051,24.238,2.1053,22.9 17, 27.53,90.691	RSS-130 4.6 RSS-132 4.5 RSS-133 6.5 RSS-199 4.6	Conducted spurious emissions	Pass
2.1051,24.238,2.1053,22.9 17, 27.53,90.691	RSS-130 4.6 RSS-132 4.5 RSS-133 6.5 RSS-199 4.6	Radiated Spurious Emission	Pass
2.1051,24.238, 2.1053, 22.917, 27.53,90.691	RSS-130 4.6 RSS-132 4.5 RSS-133 6.5 RSS-199 4.6	Band Edge	Pass
2.1055, 22.355, 24.235, 27.54,90.213	RSS-130 4.3 RSS-132 4.3 RSS-133 6.3 RSS-199 4.3	Frequency Stability over Temperature Variation	Pass
2.1055, 22.355, 24.235, 27.54,90.213	RSS-130 4.3 RSS-132 4.3 RSS-133 6.3 RSS-199 4.3	Frequency Stability over Voltage Variation	Pass
24.232, 27.50	RSS-130 4.4	Peak to Average Ratio	Pass
Note 1: No applicable performance criteria.			

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Test equipment Used:						
Asset Number	**Description**	**Manufacturer**	**Model Number**	**Serial Number**	**Cal Due**	**State**
CWY5110	EMI Test Receiver	R/S	ESU26	100367	2016-03-05	Normal
CWY5119	Ultra Broadband Antenna	R/S	VULB 9163	9163-544	2016-12-13	Normal
CWY5127	Double-Ridged Horn Antenna	R/S	HF907	100356	2016-12-13	Normal
CNY5153	Fully-Anechoic Chamber	ETS	11.8m×6.5m ×6.3m	--	2015-11-16	Normal
CNY0676	Radio Communications Analyzer	R/S	CMW500	128181	2016-03-05	Normal
CWY5125	Signal Generator	R/S	SMF100A	102222	2016-03-05	Normal
CWY5007	spectrum analyzer	R/S	FSQ 26	201137/026	2016-03-05	Normal
CNY5097	spectrum analyzer	Agilent	N9020A	MY50200376	2016-03-05	Normal
CXY5323	Radio Communications Analyzer	R/S	CMW200	112012	2016-03-05	Normal

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4 Test Results

4.1 RF Power Output

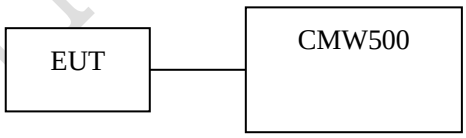
Specifications:	FCC Part 2.1046, 22.913(a), 24.232(c), 27.50, 90.635(b) RSS-130 4.4, RSS-132 4.4, RSS-133 6.4, RSS-139 4.4, RSS-199 4.4
Date of Tests	2015-06-18 to 2015-07-03
Test conditions:	Ambient Temperature:15℃-35℃ Relative Humidity:30%-60% Air pressure: 86-106kPa
Test Results:	Pass

Limit Level Construction:

According to Part 22.913(a) and 24.232(c), the ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 Watts;
According to Part 90.635(b),the maximum output power of the transmitter for mobile stations is 100 watts (20 dBw);
According to Part 27.50(a), for mobile and portable stations transmitting in the 2305-2315 MHz band or the 2350-2360 MHz band, the average EIRP must not exceed 50 milliwatts within any 1 megahertz of authorized bandwidth, except that for mobile and portable stations compliant with 3GPP LTE standards;
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.
According to Part 90.635(b), The maximum output power of the transmitter for mobile stations is 100 watts (20 dBw).

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

1) The EUT was connected to the base station simulator CMW500. The lost of the cables the test system is calibrated to correct the readings.
2) The Wireless Simulator CMW500 TPC was set to Max Power(Up power control command) .

Note:

The antenna's model of EM7455 has not yet finalized, therefore did not carry out the relevant tests of ERP and ERIP.

4.1.1 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	23.74	28.90	5.16
		1	2		23.65	28.49	4.84
		1	5		23.58	28.78	5.20
		6	0		22.18	27.41	5.23
		1	0	16QAM	22.52	28.63	6.11
		1	2		22.89	28.65	5.76
		1	5		22.64	28.64	6.00
		6	0		21.11	27.48	6.37
20175	1732.5	1	0	QPSK	23.37	28.45	5.08
		1	2		23.20	28.01	4.81
		1	5		23.18	28.29	5.11
		6	0		21.86	27.65	5.79
		1	0	16QAM	22.26	27.55	5.29
		1	2		22.64	28.01	5.37
		1	5		22.27	27.67	5.40
		6	0		20.88	26.88	6.00
20393	1754.3	1	0	QPSK	22.87	28.04	5.17
		1	2		23.05	27.89	4.84
		1	5		22.95	27.91	4.96
		6	0		21.88	27.81	5.93
		1	0	16QAM	22.01	27.92	5.91
		1	2		22.49	27.93	5.44
		1	5		22.11	27.95	5.84
		6	0		20.80	27.92	7.12

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	23.32	26.68	3.36
		1	8		23.45	26.86	3.41
		1	15		23.33	27.08	3.75
		15	0		22.24	27.46	5.22
		1	0	16QAM	23.20	28.49	5.29
		1	8		22.92	26.92	4.00
		1	15		23.40	28.71	5.31
		15	0		21.29	27.45	6.16
20175	1732.5	1	0	QPSK	23.23	28.04	4.81
		1	8		23.08	27.75	4.67
		1	15		23.16	28.03	4.87
		15	0		21.95	26.92	4.97
		1	0	16QAM	22.37	26.43	4.06
		1	8		22.36	27.61	5.25
		1	15		22.50	27.93	5.43
		15	0		21.18	28.09	6.91
20385	1753.5	1	0	QPSK	23.61	28.27	4.66
		1	8		23.76	28.02	4.26
		1	15		23.31	27.87	4.56
		15	0		21.85	27.98	6.13
		1	0	16QAM	22.29	28.08	5.79
		1	8		22.07	27.82	5.75
		1	15		22.22	27.96	5.74
		15	0		20.80	27.40	6.60

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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	23.77	28.61	4.84
		1	13		23.52	27.07	3.55
		1	24		23.51	27.18	3.67
		25	0		21.94	27.15	5.21
		1	0	16QAM	22.43	28.36	5.93
		1	13		22.18	26.98	4.80
		1	24		22.02	27.11	5.09
		25	0		21.03	27.39	6.36
20175	1732.5	1	0	QPSK	23.52	28.33	4.81
		1	13		23.59	28.23	4.64
		1	24		23.54	28.18	4.64
		25	0		21.98	27.05	5.07
		1	0	16QAM	22.46	26.51	4.05
		1	13		22.43	27.81	5.38
		1	24		22.33	27.91	5.58
		25	0		20.88	27.25	6.37
20375	1752.5	1	0	QPSK	23.14	28.03	4.89
		1	13		23.02	27.71	4.69
		1	24		23.08	27.77	4.69
		25	0		21.78	27.82	6.04
		1	0	16QAM	22.21	27.98	5.77
		1	13		22.11	27.79	5.68
		1	24		22.02	27.74	5.72
		25	0		20.89	28.10	7.21

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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	23.86	28.62	4.76
		1	25		23.49	27.22	3.73
		1	49		23.63	27.64	4.01
		50	0		22.31	27.81	5.5
		1	0	16QAM	23.29	28.6	5.31
		1	25		23.16	27.26	4.1
		1	49		23.23	27.29	4.06
		50	0		21.29	27.7	6.41
20175	1732.5	1	0	QPSK	23.77	28.53	4.76
		1	25		23.02	27.78	4.76
		1	49		23.30	28.15	4.85
		50	0		22.22	28.43	6.21
		1	0	16QAM	23.12	28.47	5.35
		1	25		22.48	27.77	5.29
		1	49		22.84	28.22	5.38
		50	0		21.25	28.2	6.95
20350	1750	1	0	QPSK	23.75	28	4.25
		1	25		23.51	28.24	4.73
		1	49		23.63	27.75	4.12
		50	0		22.09	28.23	6.14
		1	0	16QAM	22.26	28.04	5.78
		1	25		22.14	27.99	5.85
		1	49		22.05	27.83	5.78
		50	0		20.93	27.88	6.95

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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	23.91	28.76	4.85
		1	38		23.30	27.41	4.11
		1	74		23.48	27.29	3.81
		75	0		22.38	28.01	5.63
		1	0	16QAM	23.69	28.88	5.19
		1	38		23.00	27.29	4.29
		1	74		23.29	27.25	3.96
		75	0		21.35	27.75	6.40
20175	1732.5	1	0	QPSK	23.99	28.78	4.79
		1	38		23.17	27.93	4.76
		1	74		23.37	28.13	4.76
		75	0		22.35	28.78	6.43
		1	0	16QAM	23.25	28.52	5.27
		1	38		22.42	27.68	5.26
		1	74		22.68	28.07	5.39
		75	0		21.37	28.52	7.15
20325	1747.5	1	0	QPSK	23.91	28.02	4.11
		1	38		23.44	28.19	4.75
		1	74		23.72	27.89	4.17
		75	0		22.20	28.34	6.14
		1	0	16QAM	23.15	28.07	4.92
		1	38		22.51	27.94	5.43
		1	74		22.68	28.01	5.33
		75	0		21.19	28.18	6.99

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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	23.86	28.93	5.07
		1	50		23.51	27.39	3.88
		1	99		23.77	28.40	4.63
		100	0		22.70	27.88	5.18
		1	0	16QAM	23.46	28.88	5.42
		1	50		22.75	27.39	4.64
		1	99		23.02	28.43	5.41
		100	0		21.60	27.86	6.26
20175	1732.5	1	0	QPSK	23.84	28.85	5.01
		1	50		23.56	28.23	4.67
		1	99		23.62	28.10	4.48
		100	0		22.57	28.75	6.18
		1	0	16QAM	23.48	28.94	5.46
		1	50		22.42	27.98	5.56
		1	99		22.75	28.17	5.42
		100	0		21.50	28.54	7.04
20300	1745	1	0	QPSK	23.89	28.28	4.39
		1	50		23.18	28.00	4.82
		1	99		23.47	27.99	4.52
		100	0		22.35	28.29	5.94
		1	0	16QAM	23.48	27.69	4.21
		1	50		22.79	28.01	5.22
		1	99		23.14	28.09	4.95
		100	0		21.36	28.49	7.13

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4.1.2 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	22.93	26.72	3.79
		1	13		22.81	26.72	3.91
		1	24		22.68	26.90	4.22
		25	0		21.27	27.38	6.11
		1	0	16QAM	21.87	26.72	4.85
		1	13		21.73	27.72	5.99
		1	24		21.60	26.92	5.32
		25	0		20.18	26.72	6.54
21100	2535	1	0	QPSK	22.57	26.67	4.10
		1	13		22.31	26.53	4.22
		1	24		22.40	26.47	4.07
		25	0		21.18	27.05	5.87
		1	0	16QAM	21.52	26.70	5.18
		1	13		21.47	26.56	5.09
		1	24		21.37	26.50	5.13
		25	0		20.29	26.73	6.44
21425	2567.5	1	0	QPSK	22.27	25.80	3.53
		1	13		22.02	25.56	3.54
		1	24		21.13	25.36	4.23
		25	0		20.93	26.08	5.15
		1	0	16QAM	21.06	25.76	4.70
		1	13		20.85	25.54	4.69
		1	24		20.01	25.24	5.23
		25	0		20.03	26.27	6.24

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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	22.72	26.79	4.07
		1	25		22.57	27.04	4.47
		1	49		22.33	26.02	3.69
		50	0		21.34	26.61	5.27
		1	0	16QAM	22.23	26.78	4.55
		1	25		22.09	27.05	4.96
		1	49		21.93	27.31	5.38
		50	0		20.41	27.25	6.84
21100	2535	1	0	QPSK	22.93	26.84	3.91
		1	25		22.77	26.67	3.9
		1	49		22.72	26.53	3.81
		50	0		21.28	27.20	5.92
		1	0	16QAM	21.33	26.82	5.49
		1	25		21.44	26.70	5.26
		1	49		21.14	26.54	5.4
		50	0		20.25	26.98	6.73
21400	2565	1	0	QPSK	22.55	26.43	3.88
		1	25		22.33	25.80	3.47
		1	49		21.19	25.32	4.33
		50	0		21.17	26.85	5.68
		1	0	16QAM	22.03	26.49	4.46
		1	25		21.84	25.81	3.97
		1	49		20.56	25.14	4.58
		50	0		20.36	26.65	6.29

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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	22.57	26.98	4.41
		1	38		22.46	25.98	3.52
		1	74		22.04	26.47	4.43
		75	0		21.19	26.98	5.79
		1	0	16QAM	22.14	26.95	4.81
		1	38		21.86	25.96	4.10
		1	74		21.54	26.45	4.91
		75	0		20.26	26.61	6.35
21100	2535	1	0	QPSK	22.88	27.15	4.27
		1	38		22.59	26.70	4.11
		1	74		22.42	26.67	4.25
		75	0		21.16	27.24	6.08
		1	0	16QAM	21.89	27.01	5.12
		1	38		21.66	26.64	4.98
		1	74		21.25	25.37	4.12
		75	0		20.15	26.94	6.79
21375	2562.5	1	0	QPSK	22.07	25.60	3.53
		1	38		22.04	26.10	4.06
		1	74		21.22	25.14	3.92
		75	0		20.93	27.04	6.11
		1	0	16QAM	21.68	25.56	3.88
		1	38		21.44	26.08	4.64
		1	74		20.98	25.36	4.38
		50	0		20.03	26.66	6.63

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	22.67	26.99	4.32
		1	50		22.40	26.18	3.78
		1	99		21.97	26.34	4.37
		100	0		21.15	26.76	5.61
		1	0	16QAM	21.54	25.66	4.12
		1	50		21.46	26.17	4.71
		1	99		20.91	26.28	5.37
		100	0		20.16	26.71	6.55
21100	2535	1	0	QPSK	22.22	25.86	3.64
		1	50		22.51	26.59	4.08
		1	99		21.73	25.57	3.84
		100	0		21.24	27.26	6.02
		1	0	16QAM	22.02	27.14	5.12
		1	50		21.43	26.64	5.21
		1	99		21.06	26.57	5.51
		100	0		20.22	27.06	6.84
21350	2560	1	0	QPSK	21.80	25.68	3.88
		1	50		21.00	26.37	5.37
		1	99		21.28	25.22	3.94
		100	0		20.89	26.83	5.94
		1	0	16QAM	21.62	25.63	4.01
		1	38		21.73	26.35	4.62
		1	74		21.10	25.42	4.32
		50	0		19.90	26.73	6.83

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4.1.3 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	23.84	28.25	4.41
		1	2		23.76	28.32	4.56
		1	5		23.99	28.43	4.44
		6	0		22.28	28.35	6.07
		1	0	16QAM	22.56	28.20	5.64
		1	2		22.71	28.31	5.60
		1	5		22.50	28.38	5.88
		6	0		21.29	28.39	7.10
23095	707.5	1	0	QPSK	23.78	28.84	5.06
		1	2		23.67	28.50	4.83
		1	5		23.77	28.87	5.10
		6	0		22.31	28.06	5.75
		1	0	16QAM	23.05	28.45	5.40
		1	2		23.08	28.46	5.38
		1	5		22.87	28.27	5.40
		6	0		21.17	28.47	7.30
23173	715.3	1	0	QPSK	23.71	28.54	4.83
		1	2		23.54	28.11	4.57
		1	5		23.74	27.78	4.04
		6	0		22.26	27.97	5.71
		1	0	16QAM	22.06	28.45	6.39
		1	2		22.06	28.10	6.04
		1	5		21.93	27.86	5.93
		6	0		21.36	28.18	6.82

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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	23.30	28.11	4.81
		1	8		23.55	28.35	4.80
		1	15		23.24	28.21	4.97
		15	0		22.14	28.07	5.93
		1	0	16QAM	22.99	28.11	5.12
		1	8		22.82	28.09	5.27
		1	15		22.95	28.39	5.44
		15	0		21.30	27.88	6.58
23095	707.5	1	0	QPSK	23.43	28.23	4.80
		1	8		23.28	27.96	4.68
		1	15		23.52	28.41	4.89
		15	0		22.28	27.85	5.57
		1	0	16QAM	22.77	28.12	5.35
		1	8		22.62	27.90	5.28
		1	15		22.70	28.15	5.45
		15	0		21.38	28.29	6.91
23165	714.5	1	0	QPSK	23.91	28.74	4.83
		1	8		23.86	28.47	4.61
		1	15		23.61	27.58	3.97
		15	0		22.31	28.28	5.97
		1	0	16QAM	23.01	28.80	5.79
		1	8		22.55	28.27	5.72
		1	15		22.79	27.66	4.87
		15	0		21.36	27.94	6.58

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Test Data （5MHz bandwidth Mode）

Channel	Frequency (MHz)	No.RB	RB START	Modulation	Max Power(RMS)	Max Power (PK)	Max Power(RMS)
23035	701.5	1	0	QPSK	23.43	28.26	4.83
		1	13		23.30	28.04	4.74
		1	24		23.50	28.36	4.86
		25	0		22.12	28.42	6.30
		1	0	16QAM	22.26	28.24	5.98
		1	13		22.40	28.37	5.97
		1	24		22.51	28.56	6.05
		25	0		21.30	28.06	6.76
23095	707.5	1	0	QPSK	23.80	28.56	4.76
		1	13		23.90	28.72	4.82
		1	24		23.65	28.57	4.92
		25	0		22.36	28.64	6.28
		1	0	16QAM	22.94	28.60	5.66
		1	13		22.66	28.04	5.38
		1	24		22.79	28.41	5.62
		25	0		21.37	28.23	6.86
23155	713.5	1	0	QPSK	23.61	28.42	4.81
		1	13		23.52	28.21	4.69
		1	24		23.59	27.87	4.28
		25	0		22.20	28.27	6.07
		1	0	16QAM	22.62	28.44	5.82
		1	13		22.55	28.22	5.67
		1	24		22.62	27.93	5.31
		25	0		21.34	28.56	7.22

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	23.65	28.19	4.54
		1	25		23.61	28.49	4.88
		1	49		23.44	28.26	4.82
		50	0		22.36	28.48	6.12
		1	0	16QAM	23.11	28.20	5.09
		1	25		22.86	28.27	5.41
		1	49		22.99	28.41	5.42
		50	0		21.39	28.38	6.99
23095	707.5	1	0	QPSK	23.95	28.86	4.91
		1	25		23.91	28.64	4.73
		1	49		23.85	28.45	4.60
		50	0		22.53	28.71	6.18
		1	0	16QAM	22.61	28.53	5.92
		1	25		22.68	28.31	5.63
		1	49		22.54	28.98	6.44
		50	0		21.43	28.20	6.77
23130	711	1	0	QPSK	23.67	28.50	4.83
		1	25		23.84	28.46	4.62
		1	49		23.74	27.99	4.25
		50	0		22.45	28.89	6.44
		1	0	16QAM	23.17	28.42	5.25
		1	25		23.32	28.55	5.23
		1	49		23.25	28.13	4.88
		50	0		21.50	28.56	7.06

4.1.4 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	22.11	25.66	3.55
		1	13		23.89	27.68	3.79
		1	24		23.88	28.66	4.78
		25	0		22.71	28.48	5.77
		1	0	16QAM	20.93	25.21	4.28
		1	13		22.88	27.91	5.03
		1	24		22.96	28.49	5.53
		25	0		21.73	28.56	6.83
23230	782	1	0	QPSK	23.72	27.98	4.26
		1	13		23.55	28.19	4.64
		1	24		23.65	28.46	4.81
		25	0		22.35	27.88	5.53
		1	0	16QAM	22.78	28.01	5.23
		1	13		22.61	28.22	5.61
		1	24		22.65	28.35	5.70
		25	0		21.47	28.60	7.13
23255	784.5	1	0	QPSK	23.70	28.51	4.81
		1	13		23.52	28.19	4.67
		1	24		23.23	27.98	4.75
		25	0		22.38	27.88	5.50
		1	0	16QAM	22.43	28.40	5.97
		1	13		22.72	28.56	5.84
		1	24		22.25	28.08	5.83
		25	0		21.56	28.20	6.64

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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	22.30	25.95	3.65
		1	25		23.93	28.65	4.72
		1	49		23.47	28.15	4.68
		50	0		22.73	28.78	6.05
		1	0	16QAM	21.91	25.96	4.05
		1	25		23.56	28.77	5.21
		1	49		23.07	28.27	5.2
		50	0		21.73	28.79	7.06

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4.1.5 LTE B25 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
26047	1850.7	1	0	QPSK	23.79	28.41	4.62
		1	2		23.59	28.22	4.63
		1	5		23.66	28.44	4.78
		6	0		22.26	28.34	6.08
		1	0	16QAM	22.71	28.25	5.54
		1	2		22.74	28.22	5.48
		1	5		22.59	28.44	5.85
		6	0		21.37	28.58	7.21
26365	1882.5	1	0	QPSK	23.66	28.56	4.90
		1	2		23.60	28.38	4.78
		1	5		23.59	28.81	5.22
		6	0		22.06	28.00	5.94
		1	0	16QAM	22.47	28.43	5.96
		1	2		22.57	28.30	5.73
		1	5		22.45	28.48	6.03
		6	0		21.08	28.43	7.35
26683	1914.3	1	0	QPSK	23.63	27.91	4.28
		1	2		23.54	27.51	3.97
		1	5		23.60	27.49	3.89
		6	0		22.20	27.82	5.62
		1	0	16QAM	22.59	27.80	5.21
		1	2		23.09	27.51	4.42
		1	5		22.63	27.61	4.98
		6	0		21.00	28.04	7.04

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Test Data （3MHz bandwidth Mode）

Channel	Frequency (MHz)	No.RB	RB START	Modulation	Max Power(RMS)	Max Power (PK)	PAR
26055	1851.5	1	0	QPSK	23.76	28.26	4.50
		1	8		23.67	28.28	4.61
		1	15		23.56	28.43	4.87
		15	0		22.47	28.22	5.75
		1	0	16QAM	23.31	28.25	4.94
		1	8		23.02	28.14	5.12
		1	15		23.17	28.48	5.31
		15	0		21.54	28.24	6.70
26365	1882.5	1	0	QPSK	23.31	28.13	4.82
		1	8		23.21	27.89	4.68
		1	15		23.34	28.23	4.89
		15	0		22.15	28.01	5.86
		1	0	16QAM	22.43	27.82	5.39
		1	8		22.42	27.74	5.32
		1	15		22.62	28.10	5.48
		15	0		21.12	27.71	6.59
26675	1913.5	1	0	QPSK	23.49	27.75	4.26
		1	8		23.52	27.72	4.20
		1	15		23.35	27.39	4.04
		15	0		22.26	28.02	5.76
		1	0	16QAM	23.04	27.97	4.93
		1	8		22.92	27.70	4.78
		1	15		23.18	27.42	4.24
		15	0		21.02	27.78	6.76

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Test Data （5MHz bandwidth Mode）

Channel	Frequency (MHz)	No.RB	RB START	Modulation	Max Power(RMS)	Max Power (PK)	PAR
26065	1852.5	1	0	QPSK	23.78	28.20	4.42
		1	13		23.51	28.16	4.65
		1	24		23.39	28.28	4.89
		25	0		22.32	28.61	6.29
		1	0	16QAM	22.55	28.20	5.65
		1	13		22.36	28.18	5.82
		1	24		22.23	28.22	5.99
		25	0		21.42	28.19	6.77
26365	1882.5	1	0	QPSK	23.75	28.26	4.51
		1	13		23.99	28.44	4.45
		1	24		23.76	28.54	4.78
		25	0		22.19	28.36	6.17
		1	0	16QAM	22.68	28.14	5.46
		1	13		22.45	27.86	5.41
		1	24		22.49	28.11	5.62
		25	0		21.19	28.47	7.28
26665	1912.5	1	0	QPSK	23.58	27.99	4.41
		1	13		23.36	27.76	4.40
		1	24		23.55	27.25	3.70
		25	0		22.24	27.75	5.51
		1	0	16QAM	22.68	27.98	5.30
		1	13		22.44	27.77	5.33
		1	24		22.43	27.25	4.82
		25	0		21.02	28.03	7.01

Test Data （10MHz bandwidth Mode）

Channel	Frequency (MHz)	No.RB	RB START	Modulation	Max Power(RMS)	Max Power (PK)	PAR
26090	1855	1	0	QPSK	23.99	28.24	4.25
		1	25		23.63	28.42	4.79
		1	49		23.70	28.57	4.87
		50	0		22.52	28.63	6.11
		1	0	16QAM	23.42	28.23	4.81
		1	25		22.97	28.32	5.35
		1	49		23.21	28.67	5.46
		50	0		21.53	28.63	7.1
26365	1882.5	1	0	QPSK	23.93	28.17	4.24
		1	25		23.82	28.42	4.6
		1	49		23.88	28.58	4.7
		50	0		22.39	28.56	6.17
		1	0	16QAM	22.56	28.22	5.66
		1	25		22.39	28.12	5.73
		1	49		22.32	28.18	5.86
		50	0		21.31	28.24	6.93
26640	1910	1	0	QPSK	23.84	28.33	4.49
		1	25		23.64	28.09	4.45
		1	49		23.52	27.24	3.72
		50	0		22.32	27.91	5.59
		1	0	16QAM	23.27	28.34	5.07
		1	25		23.27	28.18	4.91
		1	49		23.22	27.38	4.16
		50	0		21.31	28.16	6.85

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Test Data （15MHz bandwidth Mode）

Channel	Frequency (MHz)	No.RB	RB START	Modulation	Max Power(RMS)	Max Power (PK)	PAR
26115	1857.5	1	0	QPSK	23.90	28.20	4.30
		1	38		23.31	26.77	3.46
		1	74		23.67	28.39	4.72
		75	0		22.40	28.69	6.29
		1	0	16QAM	23.52	28.34	4.82
		1	38		22.84	26.80	3.96
		1	74		23.43	28.57	5.14
		75	0		21.36	28.41	7.05
26365	1882.5	1	0	QPSK	23.61	28.21	4.60
		1	38		23.06	27.82	4.76
		1	74		23.09	26.85	3.76
		75	0		22.14	28.83	6.69
		1	0	16QAM	22.84	28.06	5.22
		1	38		22.29	27.61	5.32
		1	74		22.67	26.89	4.22
		75	0		21.21	28.45	7.24
26615	1907.5	1	0	QPSK	23.99	28.57	4.58
		1	38		23.10	27.84	4.74
		1	74		23.32	27.51	4.19
		75	0		22.12	28.40	6.28
		1	0	16QAM	23.03	28.32	5.29
		1	38		22.35	27.74	5.39
		1	74		22.58	27.57	4.99
		75	0		20.81	28.07	7.26

CTTL Test Report

Test Data （20MHz bandwidth Mode）

Channel	Frequency (MHz)	No.RB	RB START	Modulation	Max Power(RMS)	Max Power (PK)	PAR
26140	1860	1	0	QPSK	23.85	27.85	4.00
		1	50		23.55	28.36	4.81
		1	99		23.81	28.36	4.55
		100	0		22.52	28.59	6.07
		1	0	16QAM	23.33	28.35	5.02
		1	50		22.54	26.84	4.30
		1	99		22.66	28.05	5.39
		100	0		21.46	27.71	6.25
26365	1882.5	1	0	QPSK	23.94	28.22	4.28
		1	50		23.30	27.97	4.67
		1	99		23.31	36.95	13.64
		100	0		22.06	28.50	6.44
		1	0	16QAM	23.12	28.25	5.13
		1	50		22.27	27.83	5.56
		1	99		23.01	28.58	5.57
		100	0		21.14	28.35	7.21
26590	1905	1	0	QPSK	23.85	28.59	4.74
		1	50		23.05	27.81	4.76
		1	99		23.29	27.64	4.35
		100	0		22.24	28.72	6.48
		1	0	16QAM	23.56	28.67	5.11
		1	50		22.46	27.70	5.24
		1	99		23.03	27.68	4.65
		100	0		21.02	28.55	7.53

4.1.6 LTE B26 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
26697	814.7	1	0	QPSK	23.83	27.93	4.10
		1	2		23.63	28.04	4.41
		1	5		23.67	28.15	4.48
		6	0		22.26	28.12	5.86
		1	0	16QAM	22.58	27.77	5.19
		1	2		22.74	27.97	5.23
		1	5		22.39	28.10	5.71
		6	0		21.24	28.16	6.92
26865	831.5	1	0	QPSK	23.84	28.87	5.03
		1	2		23.27	26.79	3.52
		1	5		23.72	28.82	5.10
		6	0		22.08	27.31	5.23
		1	0	16QAM	23.81	28.88	5.07
		1	2		23.24	28.41	5.17
		1	5		23.59	28.70	5.11
		6	0		21.04	27.33	6.29
27033	848.3	1	0	QPSK	23.53	27.78	4.25
		1	2		23.72	27.64	3.92
		1	5		23.48	27.60	4.12
		6	0		22.49	28.16	5.67
		1	0	16QAM	22.54	27.87	5.33
		1	2		22.93	27.62	4.69
		1	5		22.54	27.57	5.03
		6	0		21.17	28.24	7.07

CTTL Test Report

Test Data （3MHz bandwidth Mode）

Channel	Frequency (MHz)	No.RB	RB START	Modulation	Max Power(RMS)	Max Power (PK)	PAR
26705	815.5	1	0	QPSK	23.45	27.83	4.38
		1	8		23.57	28.20	4.63
		1	15		23.34	28.22	4.88
		15	0		22.22	28.05	5.83
		1	0	16QAM	23.26	27.83	4.57
		1	8		22.60	27.73	5.13
		1	15		22.81	28.13	5.32
		15	0		21.08	27.60	6.52
26865	831.5	1	0	QPSK	23.49	26.98	3.49
		1	8		23.33	26.84	3.51
		1	15		23.29	26.85	3.56
		15	0		22.46	27.64	5.18
		1	0	16QAM	23.12	29.10	5.98
		1	8		23.05	28.38	5.33
		1	15		22.93	28.38	5.45
		15	0		21.42	27.69	6.27
27025	847.5	1	0	QPSK	23.87	28.57	4.70
		1	8		23.96	28.00	4.04
		1	15		23.90	27.77	3.87
		15	0		22.52	28.52	6.00
		1	0	16QAM	22.82	28.48	5.66
		1	8		22.63	28.15	5.52
		1	15		23.30	27.78	4.48
		15	0		23.45	27.83	4.38

CTTL Test Report

Test Data （5MHz bandwidth Mode）

Channel	Frequency (MHz)	No.RB	RB START	Modulation	Max Power(RMS)	Max Power (PK)	PAR
26715	816.5	1	0	QPSK	23.50	27.91	4.41
		1	13		23.31	27.97	4.66
		1	24		23.33	28.14	4.81
		25	0		22.10	28.37	6.27
		1	0	16QAM	22.37	27.85	5.48
		1	13		22.43	28.23	5.80
		1	24		22.27	28.21	5.94
		25	0		21.21	27.94	6.73
26865	831.5	1	0	QPSK	23.68	28.49	4.81
		1	13		23.92	28.57	4.65
		1	24		23.67	28.66	4.99
		25	0		22.16	27.33	5.17
		1	0	16QAM	22.98	28.56	5.58
		1	13		22.61	26.69	4.08
		1	24		22.71	28.28	5.57
		25	0		21.15	27.57	6.42
27015	846.5	1	0	QPSK	23.81	28.69	4.88
		1	13		23.29	27.86	4.57
		1	24		23.38	27.36	3.98
		25	0		22.08	28.15	6.07
		1	0	16QAM	22.59	28.32	5.73
		1	13		22.55	28.04	5.49
		1	24		22.59	27.60	5.01
		25	0		21.13	28.03	6.90

CTTL Test Report

Test Data （10MHz bandwidth Mode）

Channel	Frequency (MHz)	No.RB	RB START	Modulation	Max Power(RMS)	Max Power (PK)	PAR
26740	819	1	0	QPSK	23.70	27.89	4.19
		1	25		23.51	28.27	4.76
		1	49		23.43	28.27	4.84
		50	0		22.41	28.63	6.22
		1	0	16QAM	23.06	27.88	4.82
		1	25		22.97	28.29	5.32
		1	49		23.05	28.41	5.36
		50	0		22.02	28.24	6.22
26865	831.5	1	0	QPSK	23.98	28.63	4.65
		1	25		23.94	28.64	4.70
		1	49		23.82	28.49	4.67
		50	0		22.66	28.84	6.18
		1	0	16QAM	22.66	28.41	5.75
		1	25		22.72	28.48	5.76
		1	49		22.60	28.32	5.72
		50	0		21.57	27.99	6.42
26990	844	1	0	QPSK	23.96	28.58	4.62
		1	25		23.83	28.59	4.76
		1	49		23.66	27.76	4.10
		50	0		22.57	29.05	6.48
		1	0	16QAM	23.45	28.57	5.12
		1	25		23.71	28.89	5.18
		1	49		23.24	27.82	4.58
		50	0		21.52	28.77	7.25

Test Data （15MHz bandwidth Mode）

Channel	Frequency (MHz)	No.RB	RB START	Modulation	Max Power(RMS)	Max Power (PK)	PAR
26765	821.5	1	0	QPSK	23.83	28.14	4.31
		1	38		23.25	27.99	4.74
		1	74		23.20	26.75	3.55
		75	0		22.29	28.58	6.29
		1	0	16QAM	23.16	28.15	4.99
		1	38		23.01	28.18	5.17
		1	74		23.23	28.49	5.26
		75	0		21.32	28.36	7.04
26865	831.5	1	0	QPSK	23.50	28.23	4.73
		1	38		23.57	28.36	4.79
		1	74		23.35	28.03	4.68
		75	0		22.75	29.06	6.31
		1	0	16QAM	22.81	28.13	5.32
		1	38		22.78	28.11	5.33
		1	74		22.70	27.98	5.28
		75	0		21.53	28.59	7.06
26965	841.5	1	0	QPSK	23.96	28.60	4.64
		1	38		23.84	28.55	4.71
		1	74		23.78	27.64	3.86
		75	0		22.58	28.95	6.37
		1	0	16QAM	23.12	28.46	5.34
		1	38		22.99	28.33	5.34
		1	74		22.84	27.71	4.87
		75	0		21.57	29.01	7.44

CTTL Test Report

4.1.7 LTE B30 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
27685	2307.5	1	0	QPSK	22.57	26.76	4.19
		1	13		22.60	26.55	3.95
		1	24		22.47	26.47	4.00
		25	0		21.28	27.03	5.75
		1	0	16QAM	21.54	26.61	5.07
		1	13		21.43	26.46	5.03
		1	24		21.44	26.42	4.98
		25	0		20.45	27.12	6.67
27710	2310	1	0	QPSK	22.88	26.52	3.64
		1	13		22.95	26.26	3.31
		1	24		22.58	26.40	3.82
		25	0		21.30	27.25	5.95
		1	0	16QAM	21.65	26.44	4.79
		1	13		21.67	26.35	4.68
		1	24		21.61	26.38	4.77
		25	0		20.27	27.30	7.03
27735	2312.5	1	0	QPSK	22.70	26.42	3.72
		1	13		22.52	26.38	3.86
		1	24		22.50	26.49	3.99
		25	0		21.22	27.05	5.83
		1	0	16QAM	21.68	26.31	4.63
		1	13		21.58	26.32	4.74
		1	24		21.47	26.43	4.96
		25	0		19.92	27.16	7.24

CTTL Test Report

Test Data （10MHz bandwidth Mode）

Channel	Frequency (MHz)	No.RB	RB START	Modulation	Max Power(RMS)	Max Power (PK)	PAR
27710	2310	1	0	QPSK	22.81	27.98	5.17
		1	25		22.74	26.44	3.70
		1	49		22.66	26.57	3.91
		50	0		21.46	27.45	5.99
		1	0	16QAM	22.15	27.80	5.65
		1	25		22.43	26.48	4.05
		1	49		22.12	26.61	4.49
		50	0		20.46	27.37	6.91

CTTL Test Report

4.1.8 LTE B41 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
39675	2498.5	1	0	QPSK	22.32	25.92	3.60
		1	13		22.22	26.08	3.86
		1	24		22.35	27.24	4.89
		25	0		20.88	26.67	5.79
		1	0	16QAM	21.17	25.82	4.65
		1	13		21.31	25.90	4.59
		1	24		21.15	26.12	4.97
		25	0		19.98	26.55	6.57
40620	2593	1	0	QPSK	22.42	27.03	4.61
		1	13		22.49	26.96	4.47
		1	24		22.17	27.04	4.87
		25	0		21.12	26.63	5.51
		1	0	16QAM	21.66	26.93	5.27
		1	13		21.70	26.95	5.25
		1	24		21.49	26.91	5.42
		25	0		20.20	26.44	6.24
41565	2687.5	1	0	QPSK	22.47	26.18	3.71
		1	13		22.63	26.16	3.53
		1	24		22.45	26.12	3.67
		25	0		21.51	26.93	5.42
		1	0	16QAM	21.85	26.11	4.26
		1	13		22.02	26.04	4.02
		1	24		22.03	25.99	3.96
		25	0		20.53	26.89	6.36

CTTL Test Report

Test Data （10MHz bandwidth Mode）

Channel	Frequency (MHz)	No.RB	RB START	Modulation	Max Power(RMS)	Max Power (PK)	PAR
39700	2501	1	0	QPSK	21.97	25.93	3.96
		1	25		22.35	27.13	4.78
		1	49		22.39	27.78	5.39
		50	0		20.96	26.87	5.91
		1	0	16QAM	20.93	25.69	4.76
		1	25		21.29	27.29	6.00
		1	49		21.30	27.57	6.27
		50	0		19.93	26.74	6.81
40620	2593	1	0	QPSK	22.92	27.42	4.50
		1	25		22.73	27.38	4.65
		1	49		22.64	27.5	4.86
		50	0		21.10	26.81	5.71
		1	0	16QAM	21.60	26.97	5.37
		1	25		21.83	27.41	5.58
		1	49		21.46	27.26	5.80
		50	0		20.04	26.57	6.53
41540	2685	1	0	QPSK	22.68	26.76	4.08
		1	25		22.92	26.55	3.63
		1	49		22.56	26.22	3.66
		50	0		21.54	27.45	5.91
		1	0	16QAM	22.32	27.06	4.74
		1	25		22.32	26.74	4.42
		1	49		21.98	26.30	4.32
		50	0		20.47	27.08	6.61

CTTL Test Report

Test Data （15MHz bandwidth Mode）

Channel	Frequency (MHz)	No.RB	RB START	Modulation	Max Power(RMS)	Max Power (PK)	PAR
39725	2503.5	1	0	QPSK	21.93	26.66	4.73
		1	38		22.13	27.71	5.58
		1	74		21.81	27.56	5.75
		75	0		20.83	27.80	6.97
		1	0	16QAM	21.87	25.79	3.92
		1	38		21.87	27.69	5.82
		1	74		21.79	27.53	5.74
		75	0		19.78	27.73	7.95
40620	2593	1	0	QPSK	22.25	25.73	3.48
		1	38		22.25	26.92	4.67
		1	74		22.08	25.91	3.83
		75	0		21.23	26.93	5.70
		1	0	16QAM	21.10	25.73	4.63
		1	38		21.31	27.12	5.81
		1	74		21.00	25.80	4.80
		75	0		20.21	26.73	6.52
41515	2682.5	1	0	QPSK	22.62	26.47	3.85
		1	38		22.41	26.19	3.78
		1	74		22.17	25.82	3.65
		75	0		21.39	27.06	5.67
		1	0	16QAM	21.94	26.81	4.87
		1	38		21.92	26.49	4.57
		1	74		21.78	26.10	4.32
		75	0		20.41	27.23	6.82

CTTL Test Report

Test Data （20MHz bandwidth Mode）

Channel	Frequency (MHz)	No.RB	RB START	Modulation	Max Power(RMS)	Max Power (PK)	PAR
39750	2506	1	0	QPSK	21.84	25.72	3.88
		1	50		22.03	27.65	5.62
		1	99		21.45	27.43	5.98
		100	0		20.74	27.80	7.06
		1	0	16QAM	21.12	25.71	4.59
		1	50		21.19	27.83	6.64
		1	99		20.59	27.54	6.95
		100	0		19.64	27.73	8.09
40620	2593	1	0	QPSK	22.13	25.72	3.59
		1	50		22.28	26.97	4.69
		1	99		21.93	25.80	3.87
		100	0		21.17	26.93	5.76
		1	0	16QAM	21.21	25.75	4.54
		1	50		21.51	27.24	5.73
		1	99		20.81	25.79	4.98
		100	0		20.22	26.79	6.57
41490	2680	1	0	QPSK	22.90	27.08	4.18
		1	50		22.95	26.99	4.04
		1	99		22.48	26.15	3.67
		100	0		21.37	27.43	6.06
		1	0	16QAM	21.84	26.81	4.97
		1	50		21.78	26.54	4.76
		1	99		21.48	26.00	4.52
		100	0		20.39	27.17	6.78

4.1.9 WCDMA B2 Conducted RF Power Output Results

Test Data:

		Maximum output power (PK)[dBm]			Maximum output power (AV)[dBm]		
mode	3GPP Subtest	9262	9400	9538	9262	9400	9538
RMC	--	25.70	26.19	25.60	23.64	23.09	23.10
Rel6 HSDPA	1	25.97	25.15	25.55	22.12	22.16	22.20
	2	25.96	25.88	26.51	22.04	22.09	22.19
	3	25.94	26.09	26.10	22.02	21.17	21.09
	4	25.96	25.93	26.31	22.20	20.89	20.63
Rel6 HSUPA	1	25.36	26.13	26.55	21.29	21.16	21.50
	2	25.50	26.79	26.32	21.23	21.18	21.22
	3	25.55	26.17	26.39	21.35	21.15	21.10
	4	25.37	26.84	26.56	21.27	21.18	21.31
	5	25.38	26.79	26.39	21.42	21.22	21.29

4.1.10 WCDMA B4 Conducted RF Power Output Results

Test Data:

		Maximum output power (PK)[dBm]			Maximum output power (AV)[dBm]		
mode	3GPP Subtest	1312	1412	1512	1312	1412	1512
RMC	--	25.81	25.97	25.78	23.45	23.45	23.24
Rel6 HSDPA	1	25.42	25.41	25.39	22.38	22.39	22.22
	2	25.77	26.09	26.28	22.25	22.67	22.34
	3	25.68	26.05	26.07	21.25	21.40	21.37
	4	25.64	25.98	26.62	20.88	21.11	21.21
Rel6 HSUPA	1	25.86	26.07	26.46	21.59	22.19	21.33
	2	25.95	26.16	26.17	21.42	21.80	21.34
	3	25.80	26.12	26.23	21.64	21.24	21.31
	4	25.91	26.05	26.35	21.65	21.47	21.14
	5	25.86	26.16	26.20	21.42	21.37	21.43

4.1.11 WCDMA B5 Conducted RF Power Output Results

Test Data:

		Maximum output power (PK)[dBm]			Maximum output power (AV)[dBm]		
mode	3GPP Subtest	4132	4182	4233	4132	4182	4233
RMC	--	25.52	26.22	26.39	23.27	23.32	23.51
Rel6 HSDPA	1	25.08	25.13	25.45	22.47	22.32	22.40
	2	25.52	26.27	26.16	22.04	22.16	22.46
	3	25.39	25.86	25.83	21.37	21.32	21.25
	4	25.48	26.35	25.89	20.78	20.66	20.73
Rel6 HSUPA	1	25.51	26.54	26.38	21.24	21.20	21.40
	2	25.55	26.55	26.44	21.28	21.68	21.18
	3	26.51	26.70	26.58	21.26	21.47	21.79
	4	26.09	26.68	26.74	21.21	21.13	21.36
	5	26.53	26.69	25.98	21.66	21.49	21.78

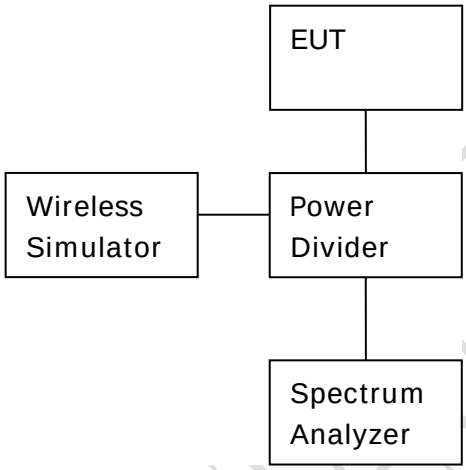
CTTL Test Report

4.2 Occupied bandwidth

Specifications:	2.1049,22.917(b),24.238(b), RSS-Gen 6.6
Date of Test	2015-06-18 to 2015-06-26
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 form the spectrum analyzer. Markers in the spectrum analyzer were then placed between the calculated frequencies to show the calculated 99% power band.

Note:

None

CTTL Test Report

4.2.1 LTE B4 Occupied bandwidth Results

Test Data

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	1.18
		3MHz	15		2.68	2.83
		5MHz	25		4.47	4.67
		10MHz	50		8.88	9.22
		15MHz	75		13.40	14.07
		20MHz	100		17.88	18.67
16QAM		1.4MHz	6		1.07	1.17
		3MHz	15		2.68	2.81
		5MHz	25		4.47	4.67
		10MHz	50		8.91	9.30
		15MHz	75		13.40	14.17
		20MHz	100		17.84	18.67

4.2.2 LTE B7 Occupied bandwidth Results

Test Data

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	4.65
		10MHz	50		8.91	9.29
		15MHz	75		13.43	14.20
		20MHz	100		17.89	18.73
16QAM		5MHz	25		4.47	4.54
		10MHz	50		8.91	9.29
		15MHz	75		13.43	14.20
		20MHz	100		17.89	18.73

CTTL Test Report

4.2.3 LTE B12 Occupied bandwidth Results

Test Data

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	1.08	1.18
		3MHz	15		2.69	2.82
		5MHz	25		4.47	4.68
		10MHz	50		8.91	9.26
16QAM		1.4MHz	6		1.08	1.20
		3MHz	15		2.68	2.81
		5MHz	25		4.49	4.65
		10MHz	50		8.91	9.26

4.2.4 LTE B13 Occupied bandwidth Results

Test Data

Mode	EUT channel No.	bandwidth	No. RB	RB offset	99% occupied bandwidth [MHz]	-26dBc occupied bandwidth [MHz]
QPSK	23230 (782MHz)	5MHz	25	0	4.47	4.65
		10MHz	50		8.91	9.28
16QAM		5MHz	25		4.47	4.66
		10MHz	50		8.88	9.28

CTTL Test Report

4.2.5 LTE B25 Occupied bandwidth Results

Test Data

Mode	EUT channel No.	bandwidth	No. RB	RB offset	99% occupied bandwidth [MHz]	-26dBc occupied bandwidth [MHz]
QPSK	26365 (1882.5MHz)	1.4MHz	6	0	1.09	1.17
		3MHz	15		2.69	2.80
		5MHz	25		4.47	4.66
		10MHz	50		8.94	9.29
		15MHz	75		13.43	14.13
		20MHz	100		17.89	18.78
16QAM		1.4MHz	6		1.08	1.14
		3MHz	15		2.68	2.80
		5MHz	25		4.46	4.67
		10MHz	50		8.91	9.29
		15MHz	75		13.43	14.17
		20MHz	100		17.89	18.68

4.2.6 LTE B26 Occupied bandwidth Results

Test Data (Part22:824 MHz ~849MHz)

Mode	EUT channel No.	bandwidth	No. RB	RB offset	99% occupied bandwidth [MHz]	-26dBc occupied bandwidth [MHz]
QPSK	26865 (831.5MHz)	1.4MHz	6	0	1.08	1.17
		3MHz	15		2.69	2.81
		5MHz	25		4.49	4.68
		10MHz	50		8.94	9.30
		15MHz	75		13.43	14.17
16QAM		1.4MHz	6		1.08	1.17
		3MHz	15		2.69	2.79
		5MHz	25		4.46	4.65
		10MHz	50		8.94	9.30
		15MHz	75		13.46	14.14

Test Data(Part90:814MHz~824MHz)

Mode	EUT channel No.	bandwidth	No. RB	RB offset	99% occupied bandwidth [MHz]	-26dBc occupied bandwidth [MHz]
QPSK	26739 (818.9MHz)	1.4MHz	6	0	1.08	1.22
16QAM					1.09	1.20
QPSK	26735 (818.5MHz)	3MHz	15	0	2.69	2.90
16QAM					2.69	2.88
QPSK	26740	5MHz	25	0	4.49	4.89
		10MHz	50		8.98	9.49
16QAM		5MHz	25		4.49	4.85
		10MHz	50		8.94	9.43

4.2.7 LTE B30 Occupied bandwidth Results

Test Data

Mode	EUT channel No.	bandwidth	No. RB	RB offset	99% occupied bandwidth [MHz]	-26dBc occupied bandwidth [MHz]
QPSK	27710 (2310MHz)	5MHz	25	0	4.47	4.65
		10MHz	50		8.94	9.29
16QAM		5MHz	25		4.46	4.65
		10MHz	50		8.91	9.29

4.2.8 LTE B41 Occupied bandwidth Results

Test Data

Mode	EUT channel No.	bandwidth	No. RB	RB offset	99% occupied bandwidth [MHz]	-26dBc occupied bandwidth [MHz]
QPSK	40620 (2593MHz)	5MHz	25	0	4.47	4.66
		10MHz	50		8.91	9.29
		15MHz	75		13.43	14.15
		20MHz	100		17.84	19.08

16QAM		5MHz	25		4.47	4.66
		10MHz	50		8.91	9.29
		15MHz	75		13.40	14.18
		20MHz	100		17.84	18.65

4.2.9 WCDMA B2 Occupied bandwidth Results

Test Data

Mode	Band	Frequency (MHz)	Channel	99% occupied bandwidth [MHz]	-26dBc occupied bandwidth [MHz]
B2	Rel99	1880	9400	4.14	4.78
	Rel 6(HSUPA)	1880	9400	4.17	4.74

4.2.10 WCDMA B4 Occupied bandwidth Results

Test Data

Mode	Band	Frequency (MHz)	Channel	99% occupied bandwidth [MHz]	-26dBc occupied bandwidth [MHz]
B4	Rel99	1732.4	1412	4.14	4.76
	Rel 6(HSUPA)	1732.4	1412	4.15	4.73

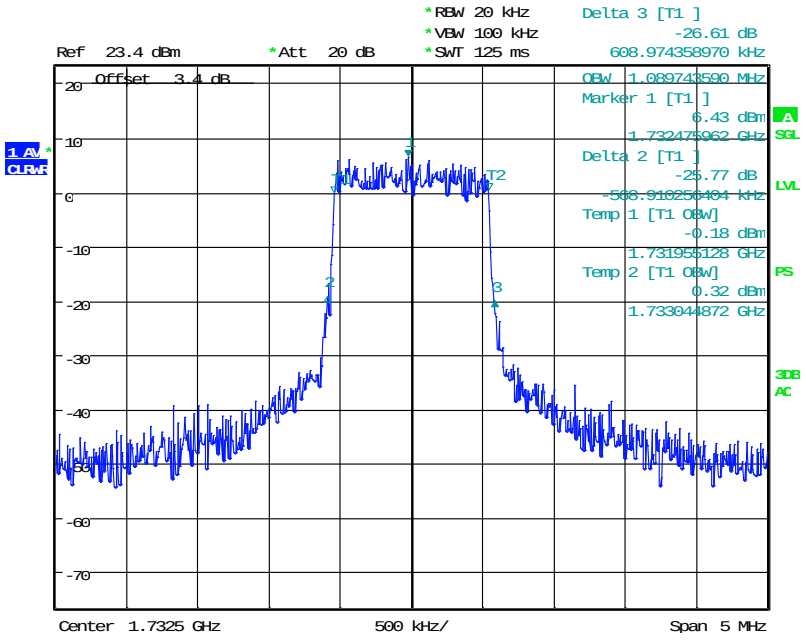
4.2.11 WCDMA B5 Occupied bandwidth Results

Test Data

Mode	Band	Frequency (MHz)	Channel	99% occupied bandwidth [MHz]	-26dBc occupied bandwidth [MHz]
B5	Rel99	836.4	4182	4.14	4.74
	Rel 6(HSUPA)	836.4	4182	4.17	4.71

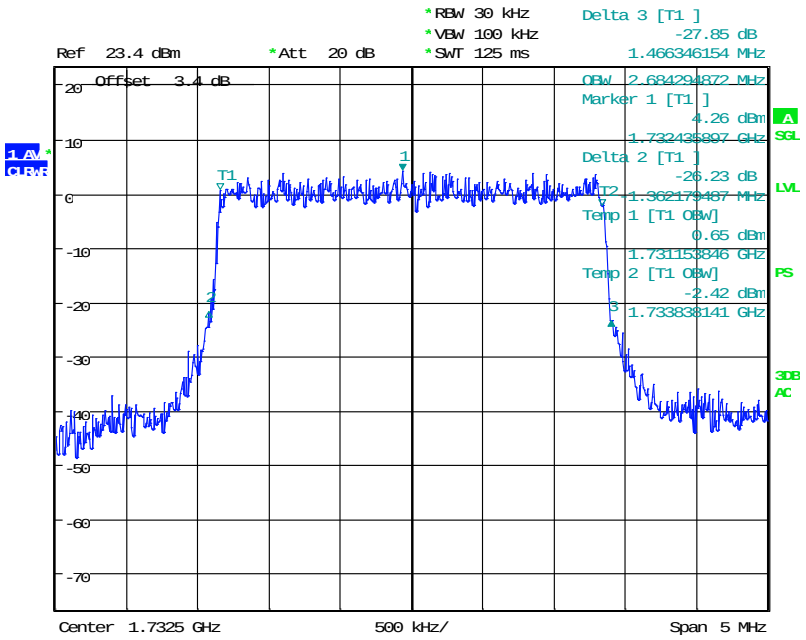
CTTL Test Report

Graphical results for LTE B4:



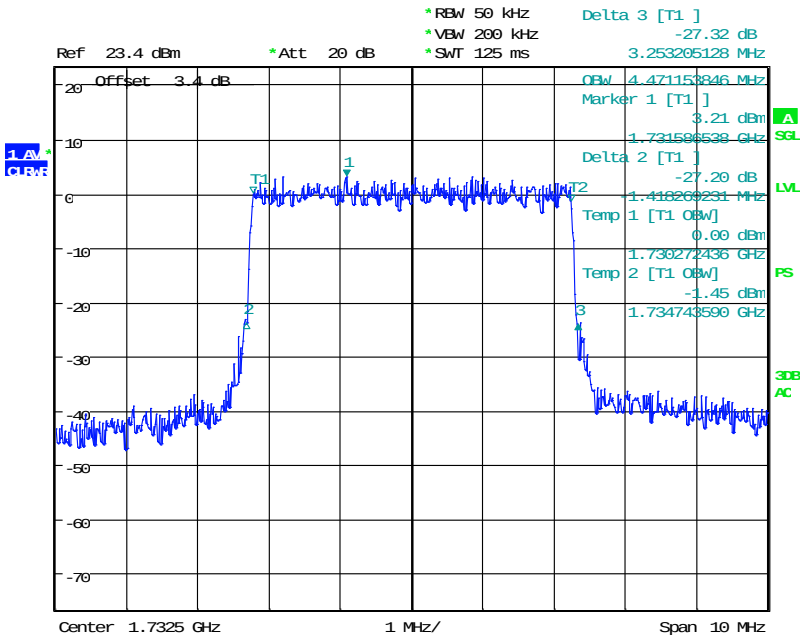
Date: 12.JUN.2015 07:59:12

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



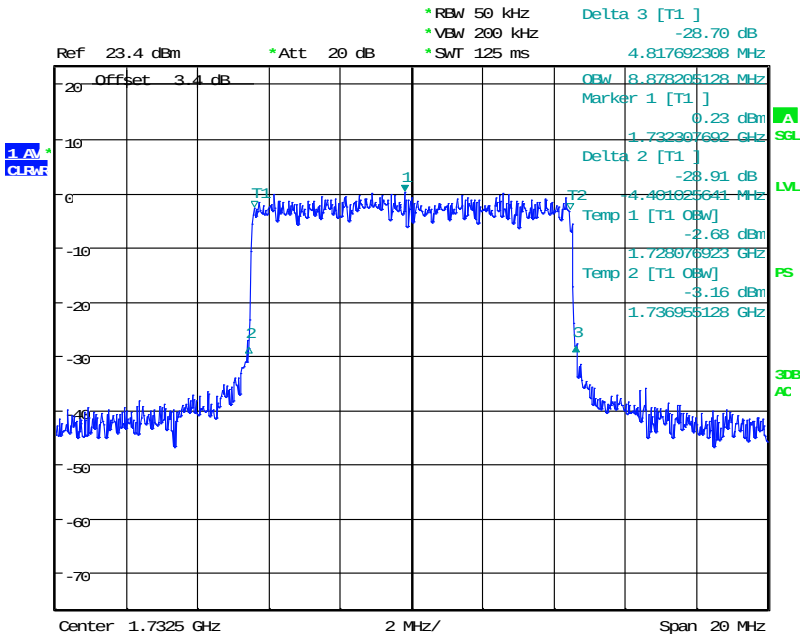
Date: 12.JUN.2015 08:54:28

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



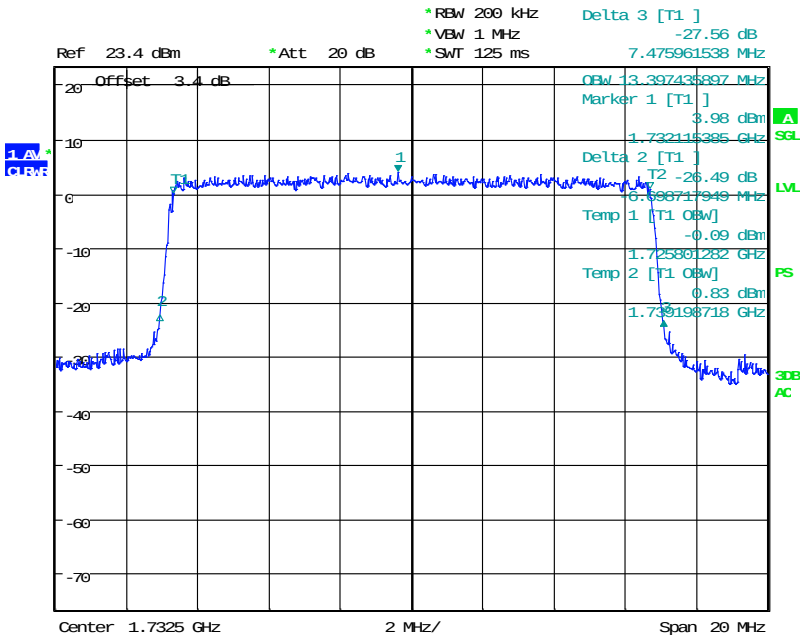
Date: 12.JUN.2015 08:11:24

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



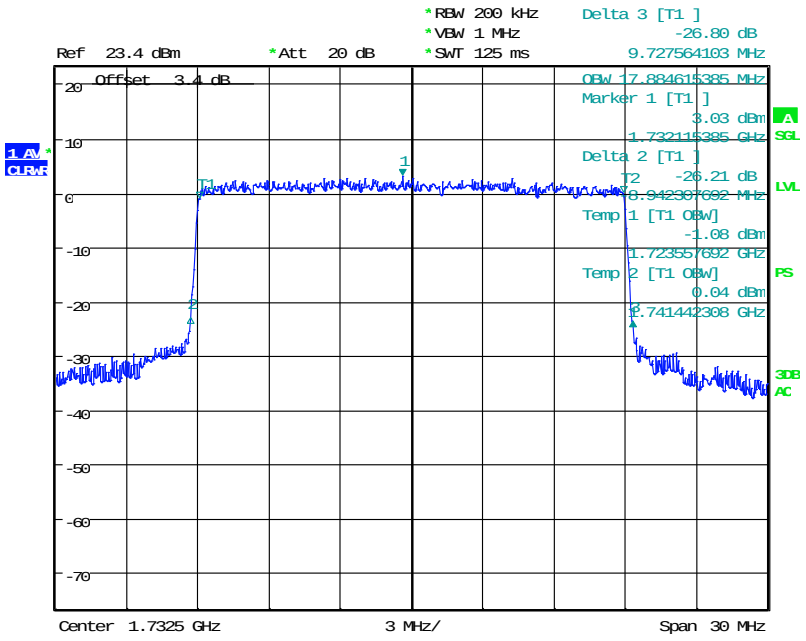
Date: 12.JUN.2015 08:21:49

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



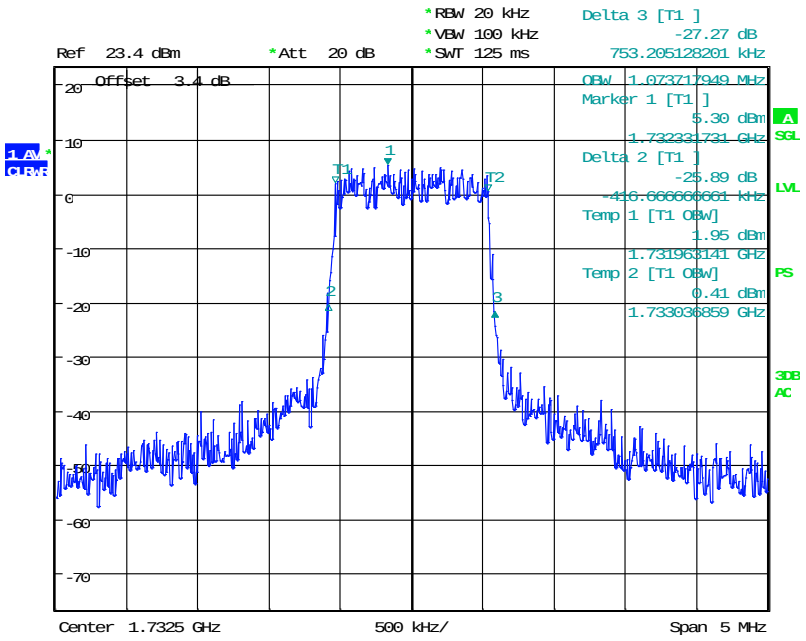
Date: 12.JUN.2015 08:44:55

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



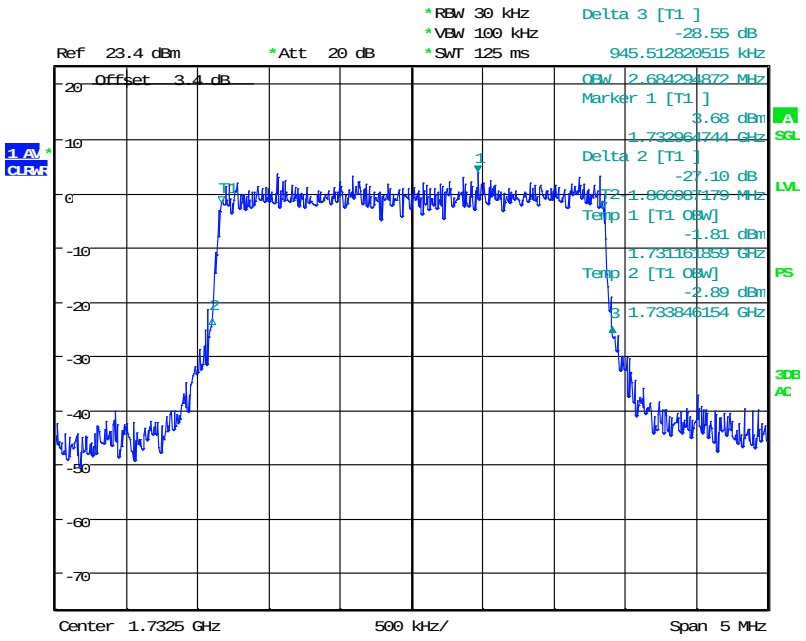
Date: 12.JUN.2015 08:56:42

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



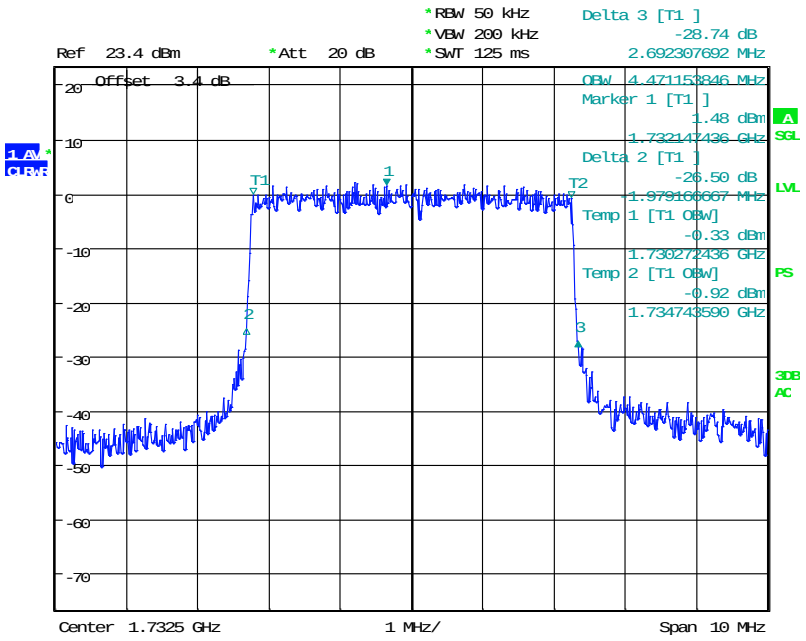
Date: 12.JUN.2015 08:02:19

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



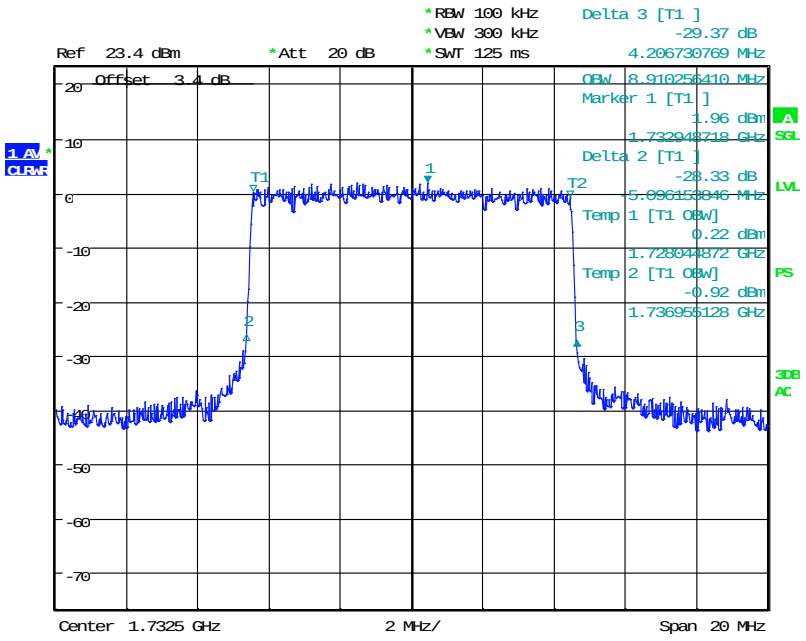
Date: 12.JUN.2015 08:55:22

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



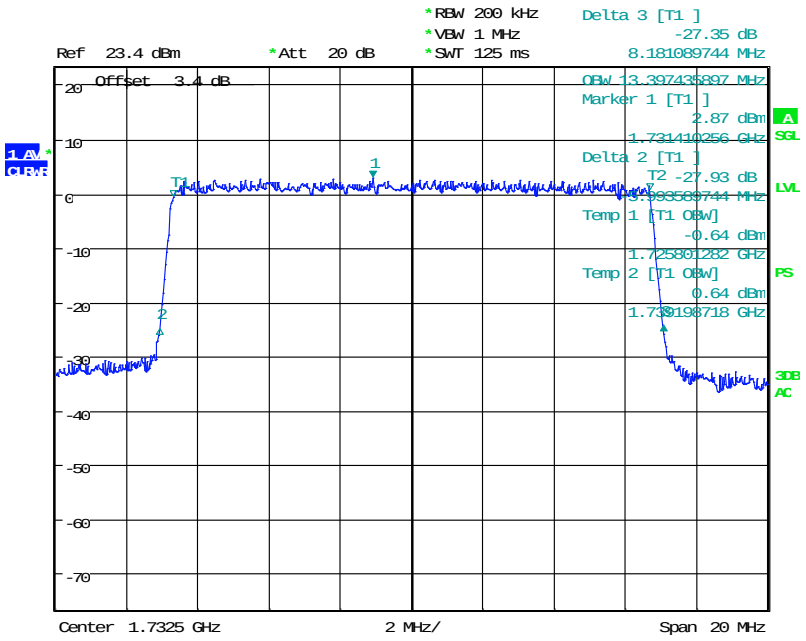
Date: 12.JUN.2015 08:12:50

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



Date: 12.JUN.2015 08:52:48

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



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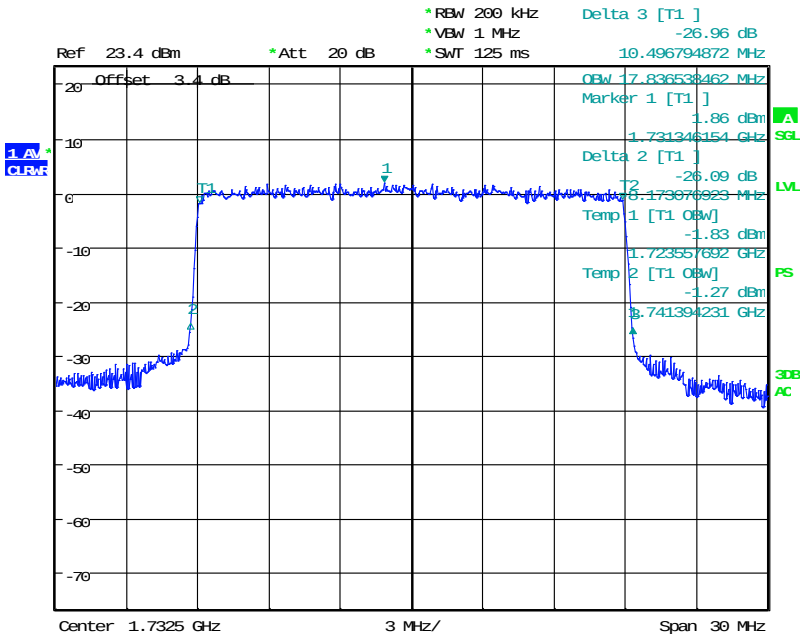
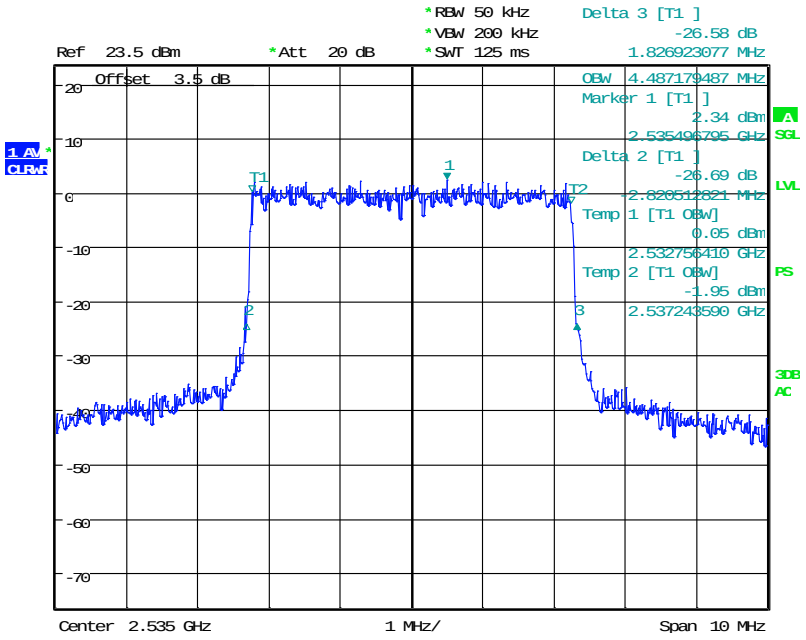
LTE Band4 16QAM Channel 20175 BW=15MHz RB=75 RB Offset=0



Date: 12.JUN.2015 08:57:22

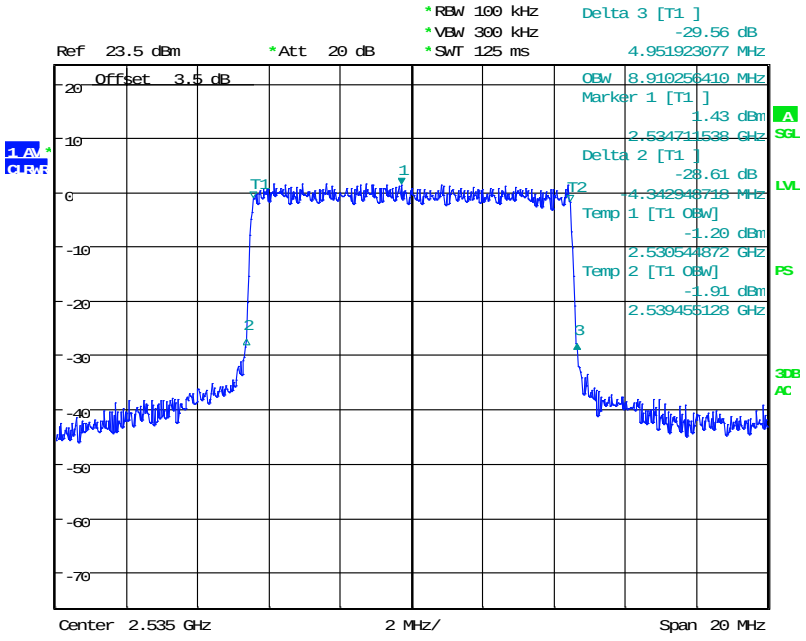
LTE Band4 16QAM Channel 20175 BW=20MHz RB=100 RB Offset=0

Graphical results for LTE B7:



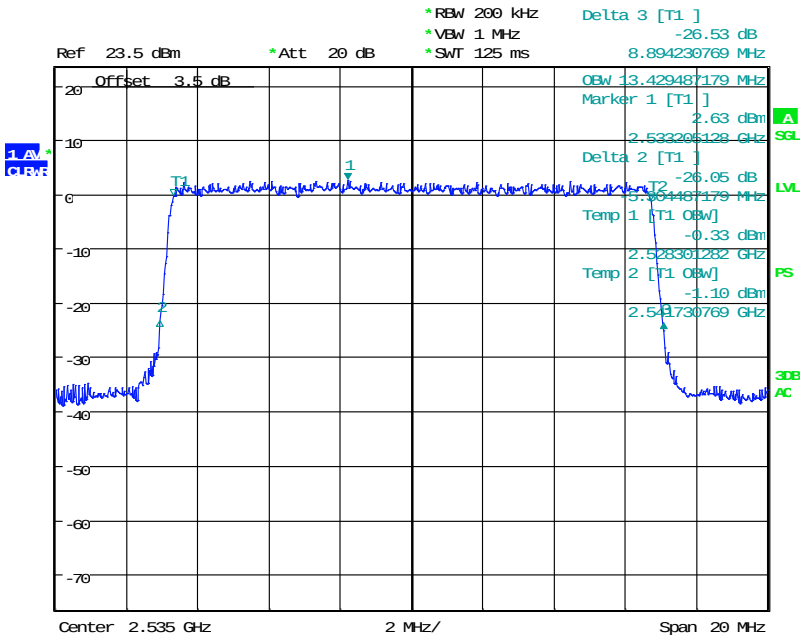
Date: 12.JUN.2015 09:00:56

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



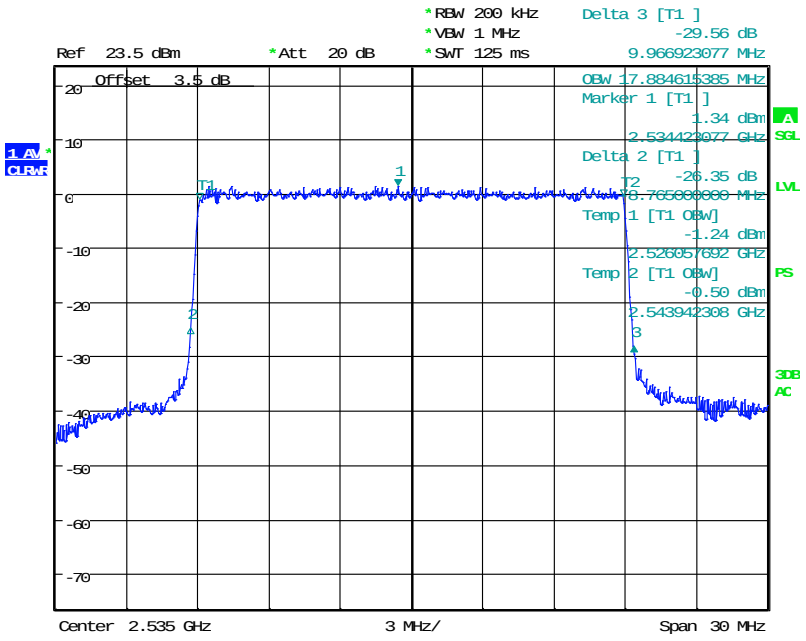
Date: 12.JUN.2015 09:04:48

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



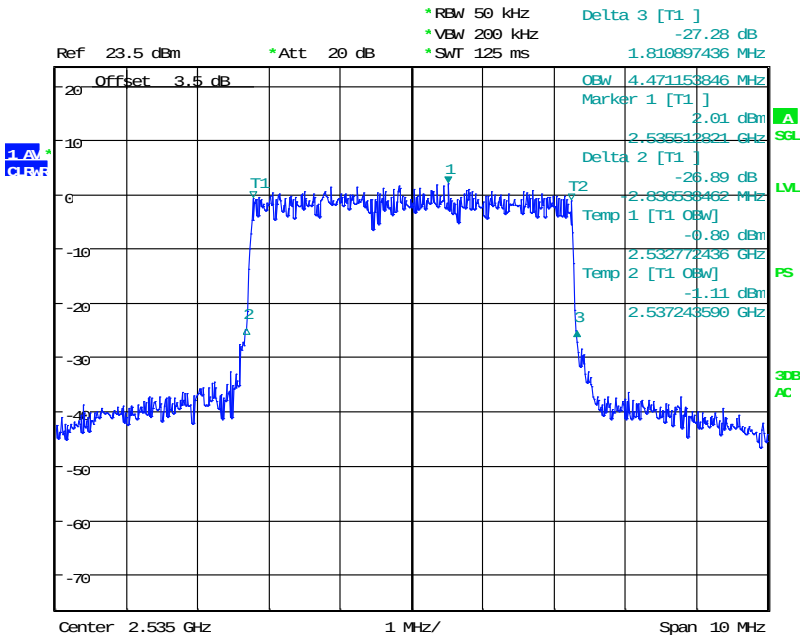
Date: 12.JUN.2015 09:07:01

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



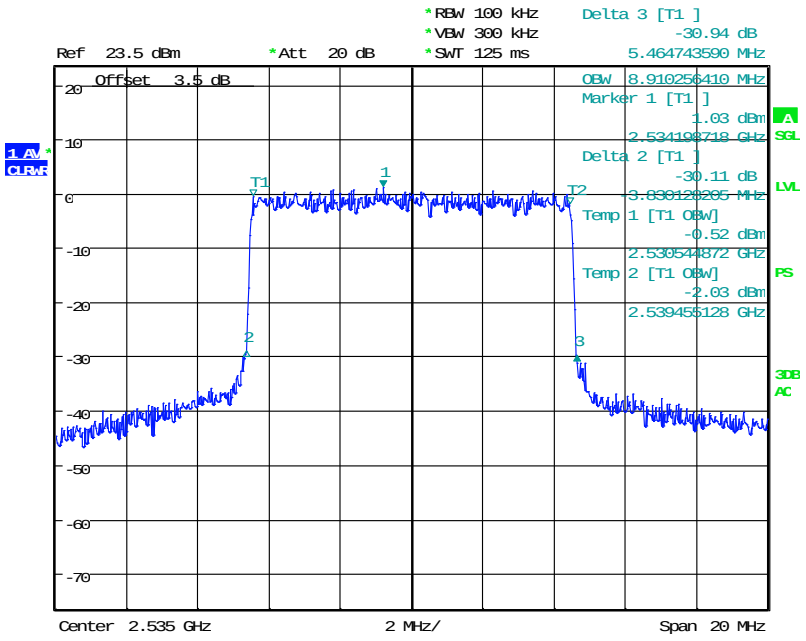
Date: 12.JUN.2015 09:09:44

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



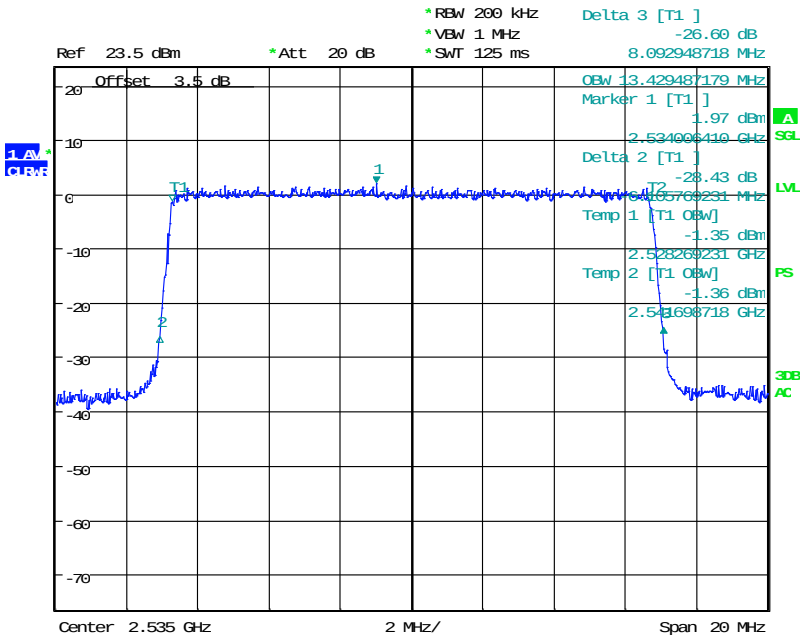
Date: 12.JUN.2015 09:01:29

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



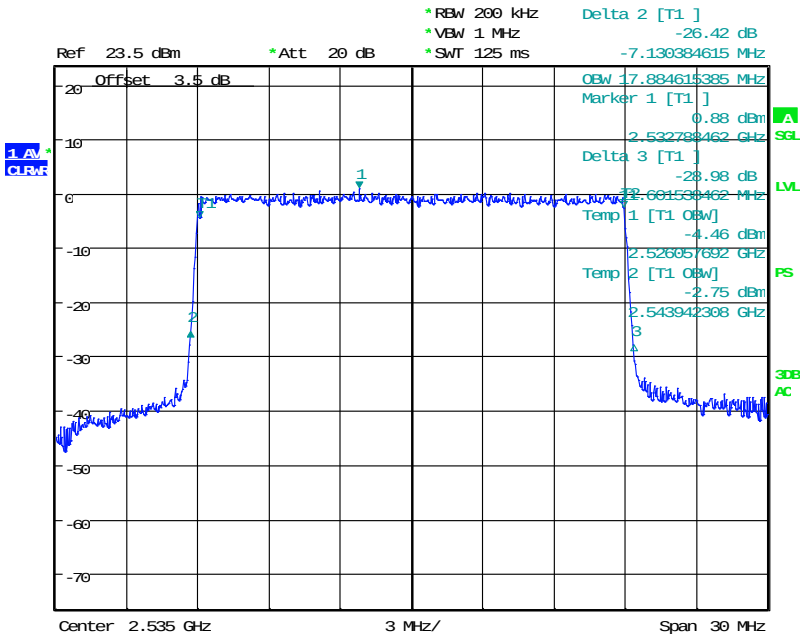
Date: 12.JUN.2015 09:05:55

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



Date: 12.JUN.2015 09:07:42

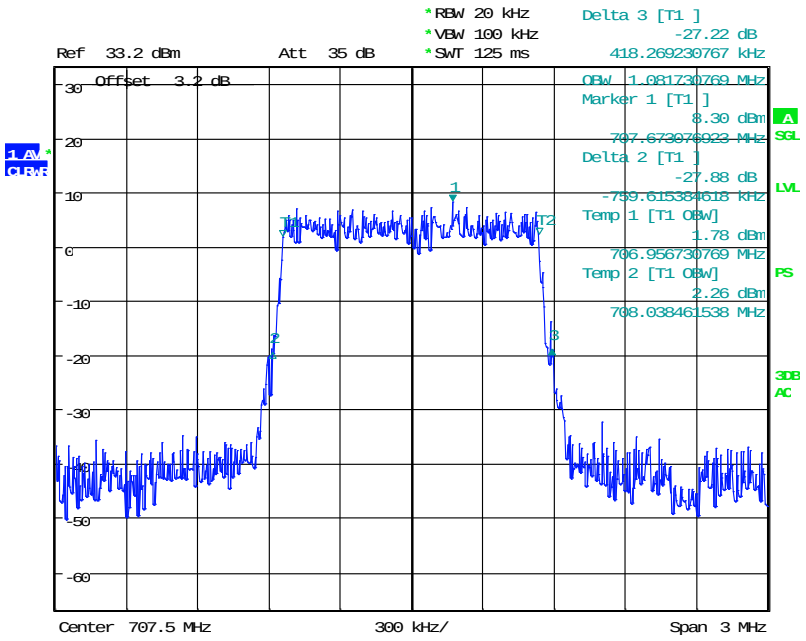
LTE Band7 16QAM Channel 21100 BW=15MHz RB=75 RB Offset=0



Date: 12.JUN.2015 09:10:31

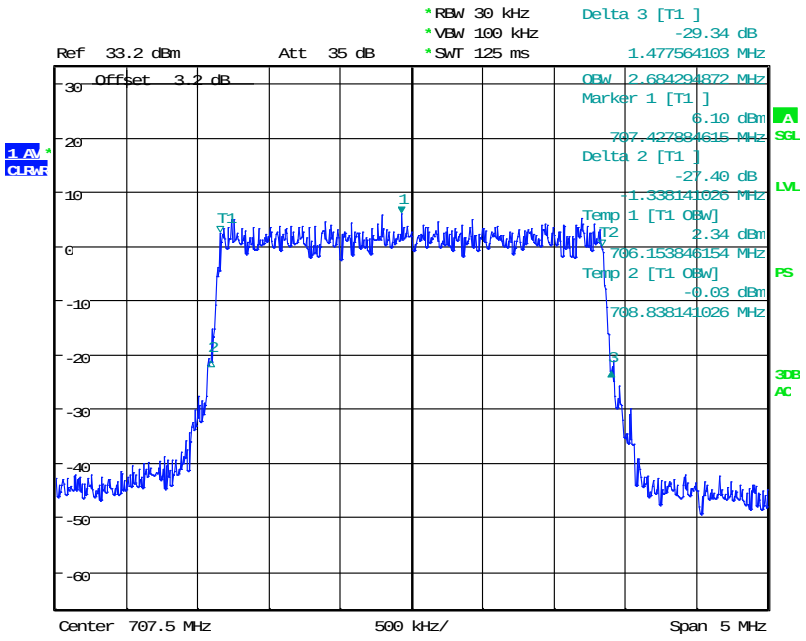
LTE Band7 16QAM Channel 21100 BW=20MHz RB=100 RB Offset=0

Graphical results for LTE B12:



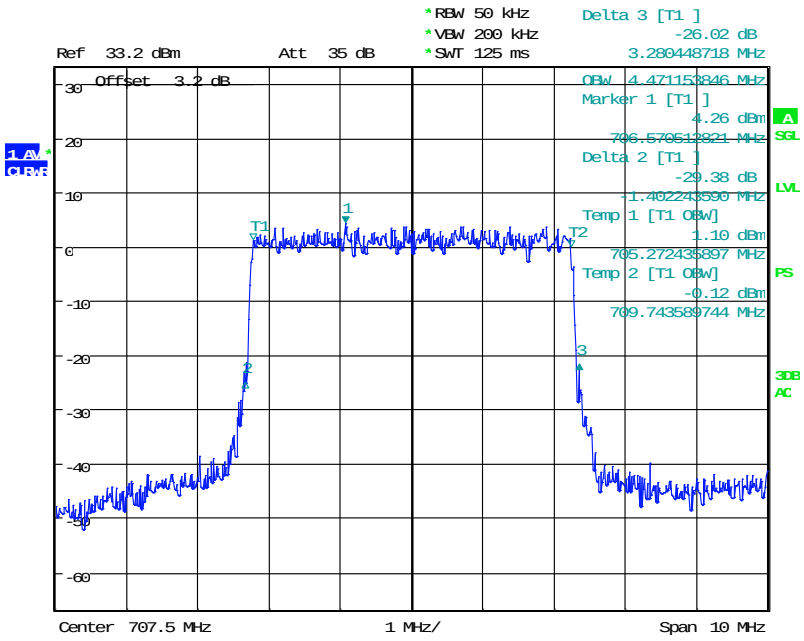
Date: 12.JUN.2015 09:16:07

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



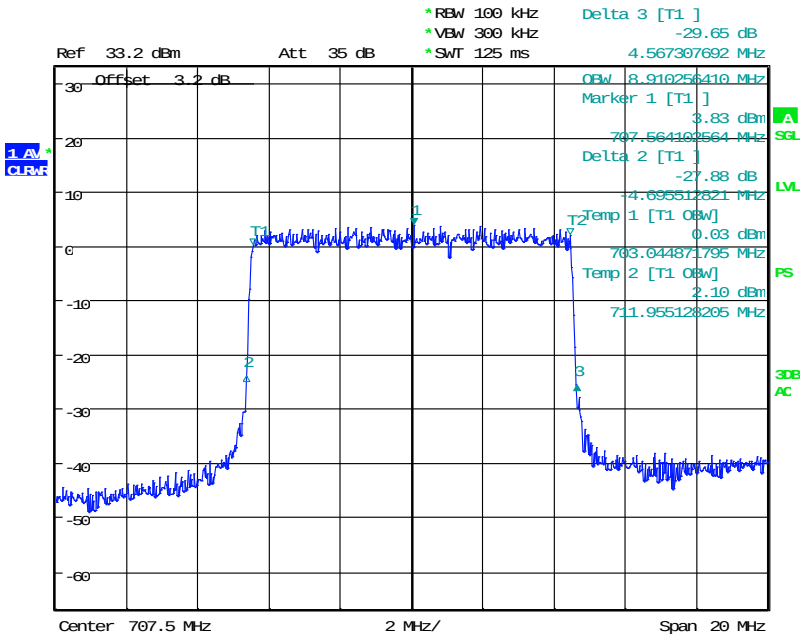
Date: 12.JUN.2015 09:17:55

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



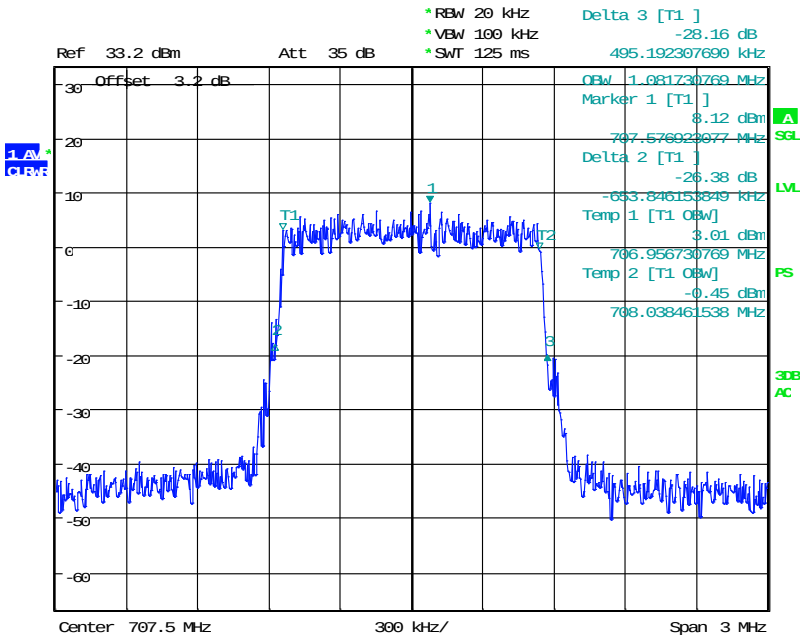
Date: 12.JUN.2015 09:19:29

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



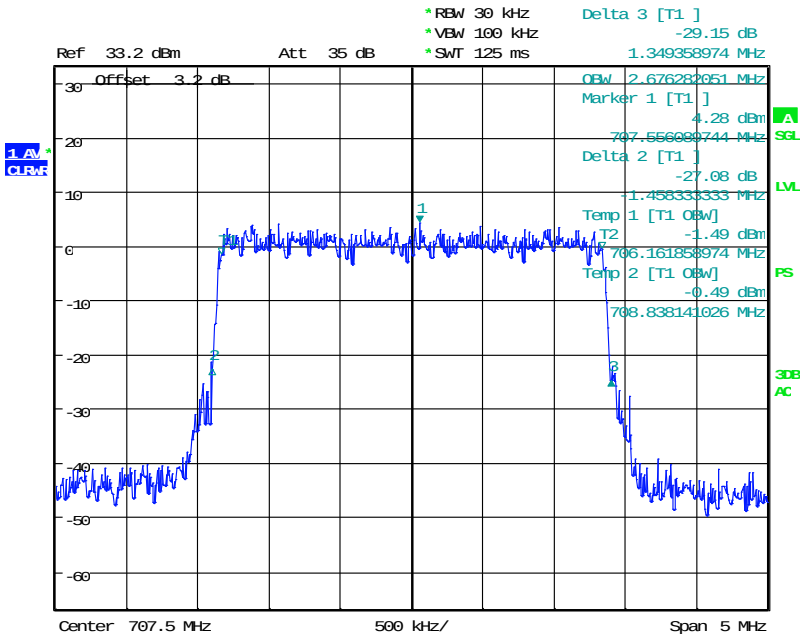
Date: 12.JUN.2015 09:27:23

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



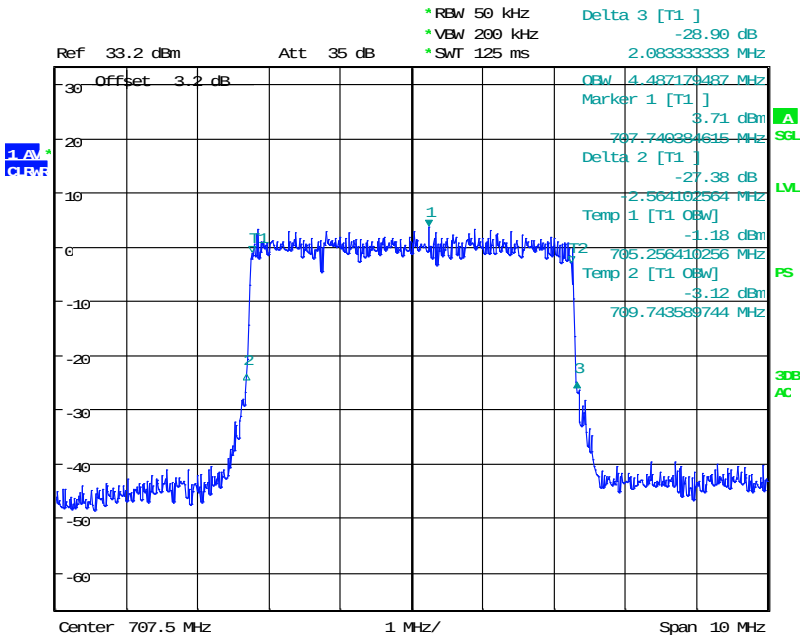
Date: 12.JUN.2015 09:16:45

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



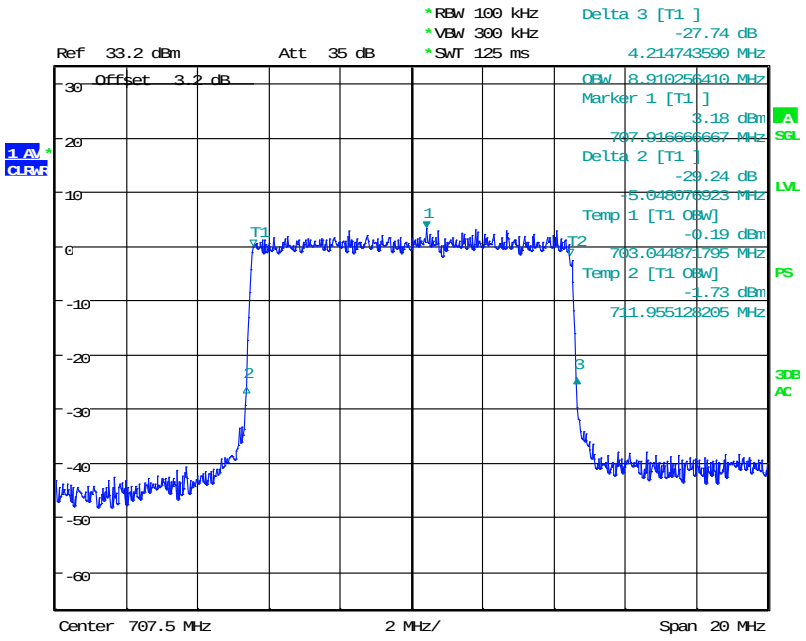
Date: 12.JUN.2015 09:18:36

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



Date: 12.JUN.2015 09:21:42

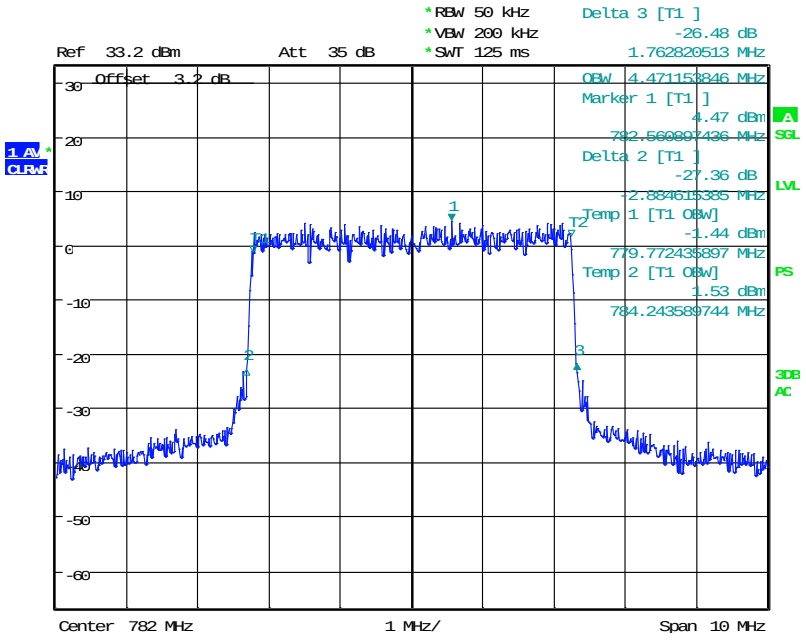
LTE Band12 16QAM Channel 23095 BW=5MHz RB=25 RB Offset=0



Date: 12.JUN.2015 09:28:08

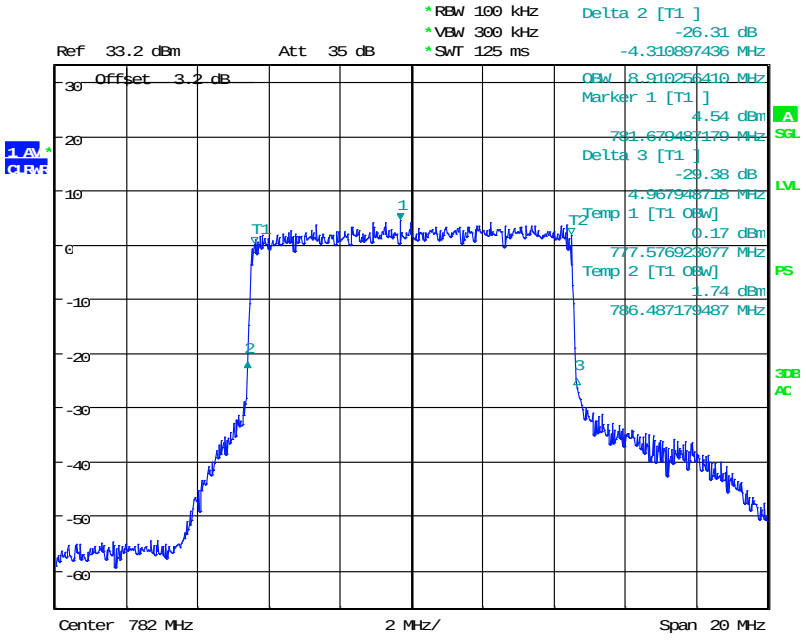
LTE Band12 16QAM Channel 23095 BW=10MHz RB=50 RB Offset=0

Graphical results for LTE B13:



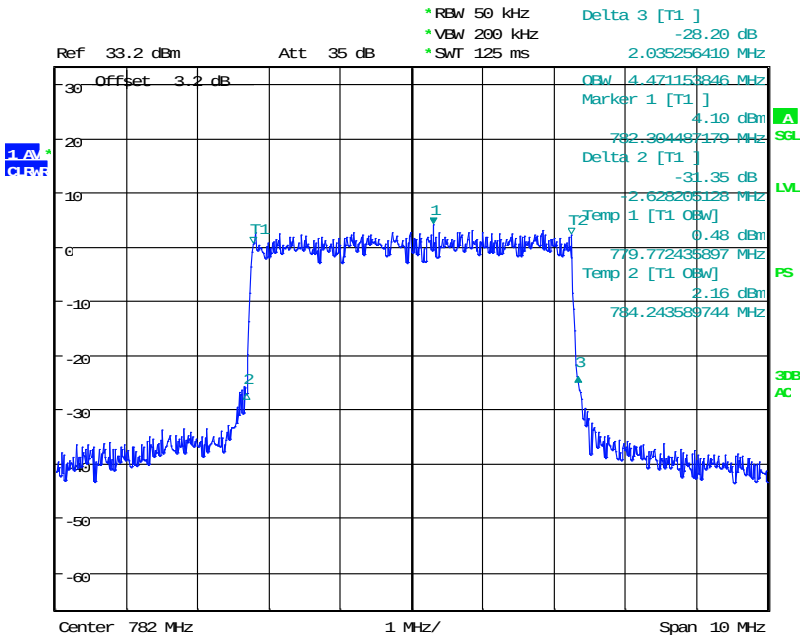
Date: 12.JUN.2015 09:31:05

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



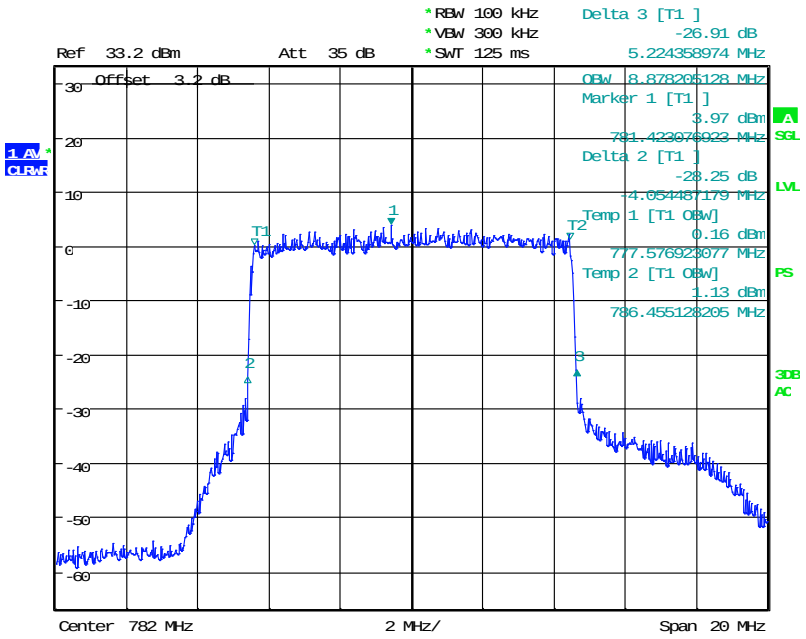
Date: 12.JUN.2015 09:33:03

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



Date: 12.JUN.2015 09:32:03

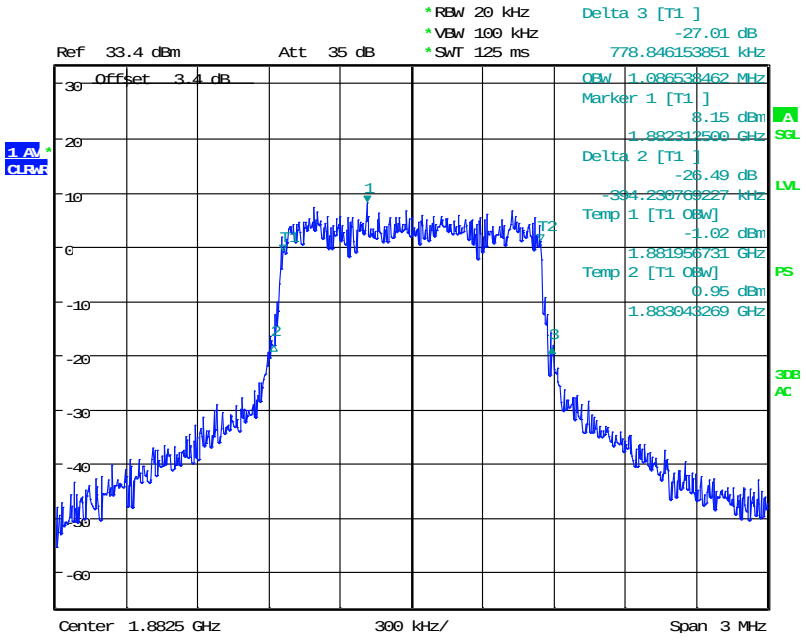
LTE Band13 16QAM Channel 23230 BW=5MHz RB=25 RB Offset=0



Date: 12.JUN.2015 09:34:21

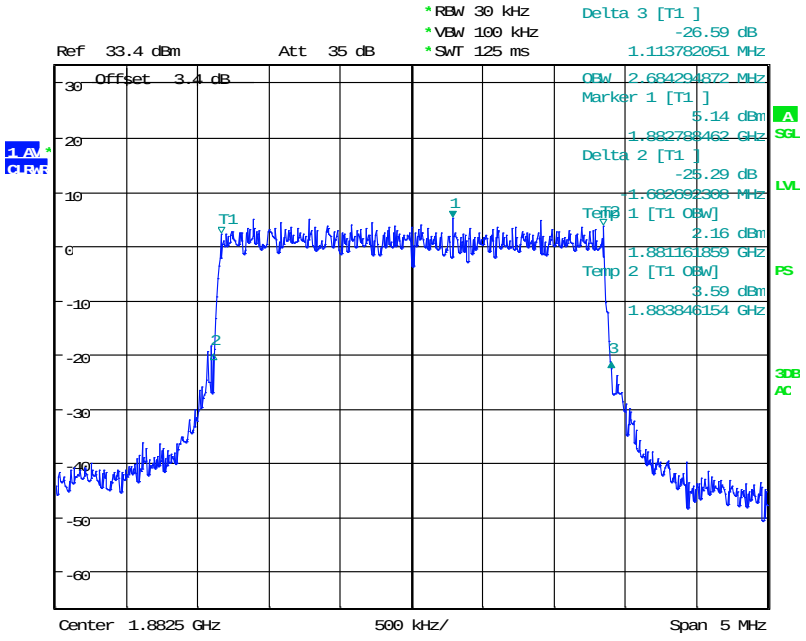
LTE Band13 16QAM Channel 23230 BW=10MHz RB=50 RB Offset=0

Graphical results for LTE B25:



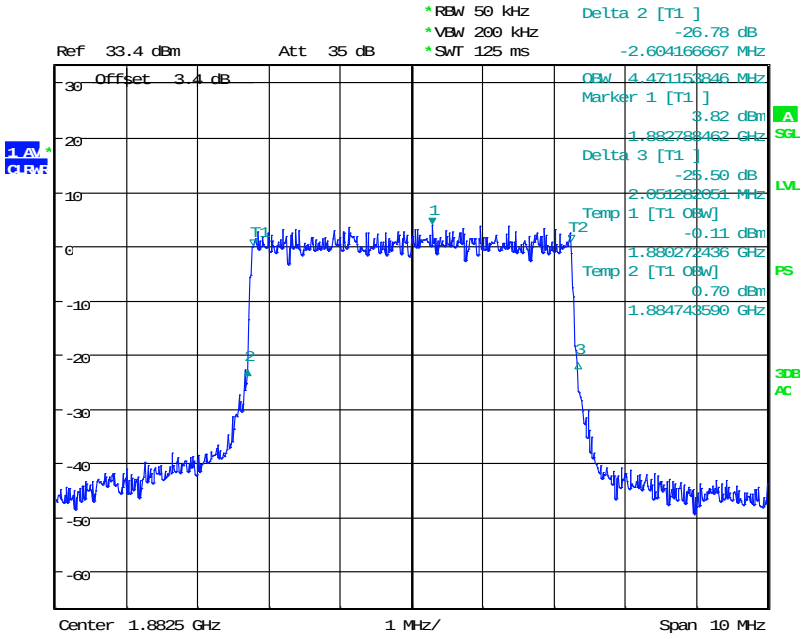
Date: 12.JUN.2015 09:43:48

LTE Band25 QPSK Channel 26365 BW=1.4MHz RB=6 RB Offset=0



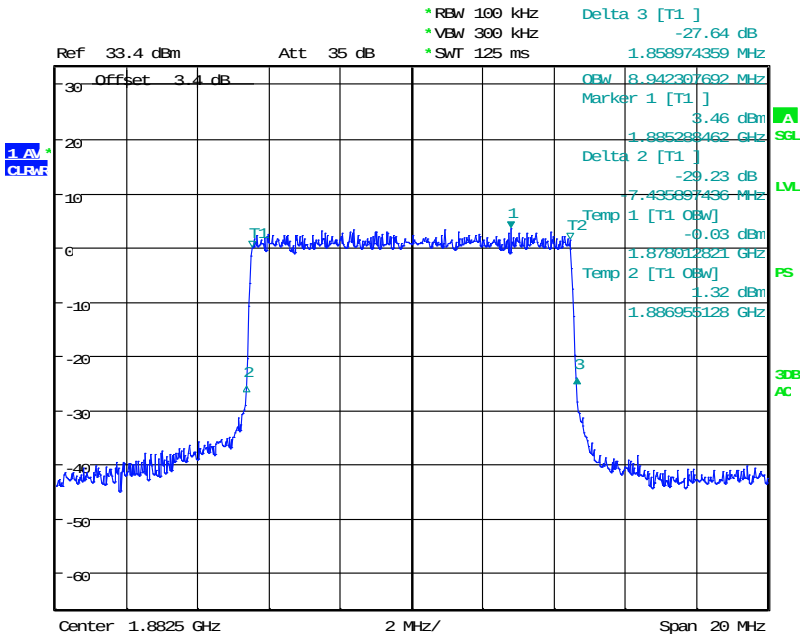
Date: 12.JUN.2015 09:46:22

LTE Band25 QPSK Channel 26365 BW=3MHz RB=15 RB Offset=0



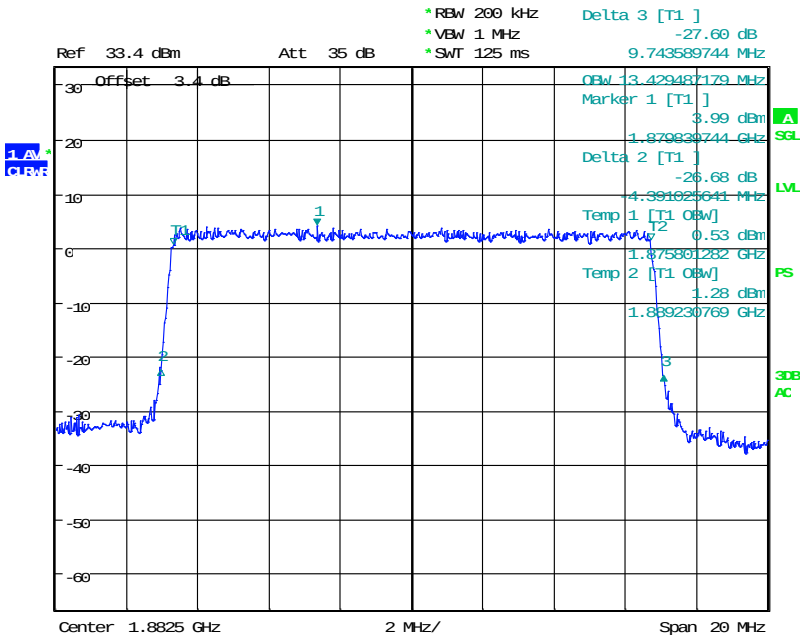
Date: 12.JUN.2015 09:48:08

LTE Band25 QPSK Channel 26365 BW=5MHz RB=25 RB Offset=0



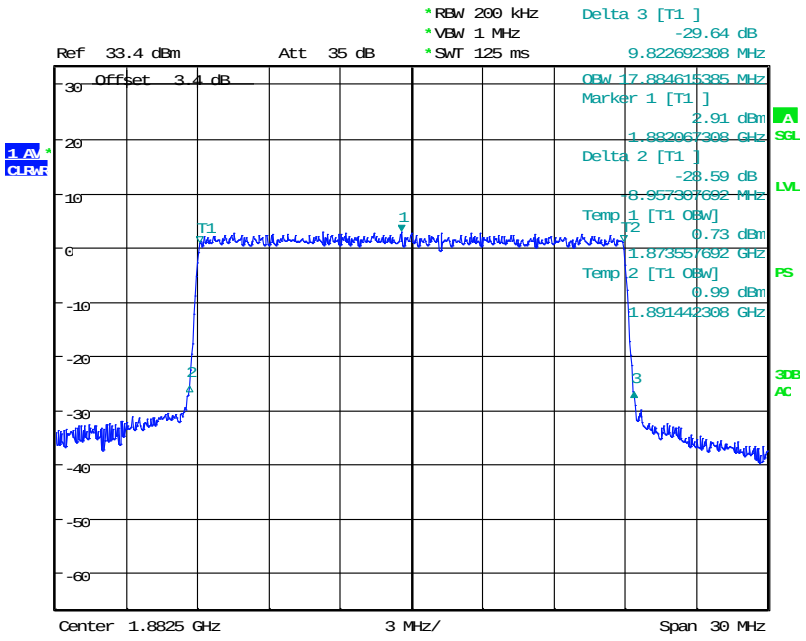
Date: 12.JUN.2015 09:50:17

LTE Band25 QPSK Channel 26365 BW=10MHz RB=50 RB Offset=0



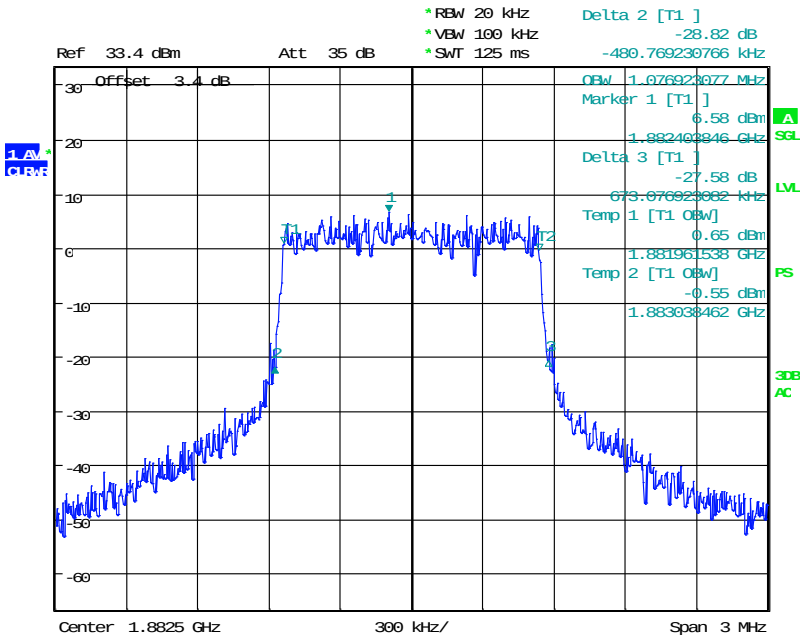
Date: 12.JUN.2015 09:53:12

LTE Band25 QPSK Channel 26365 BW=15MHz RB=75 RB Offset=0



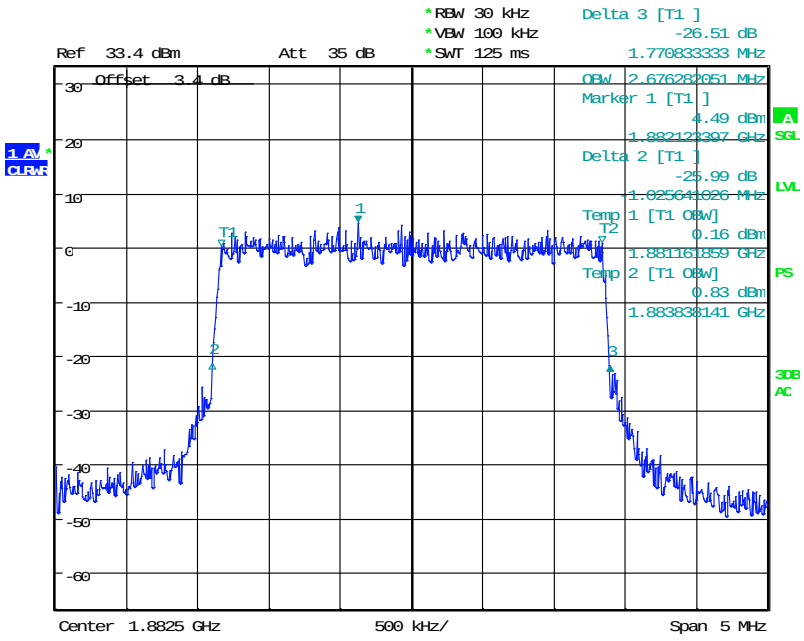
Date: 12.JUN.2015 09:54:48

LTE Band25 QPSK Channel 26365 BW=20MHz RB=100 RB Offset=0



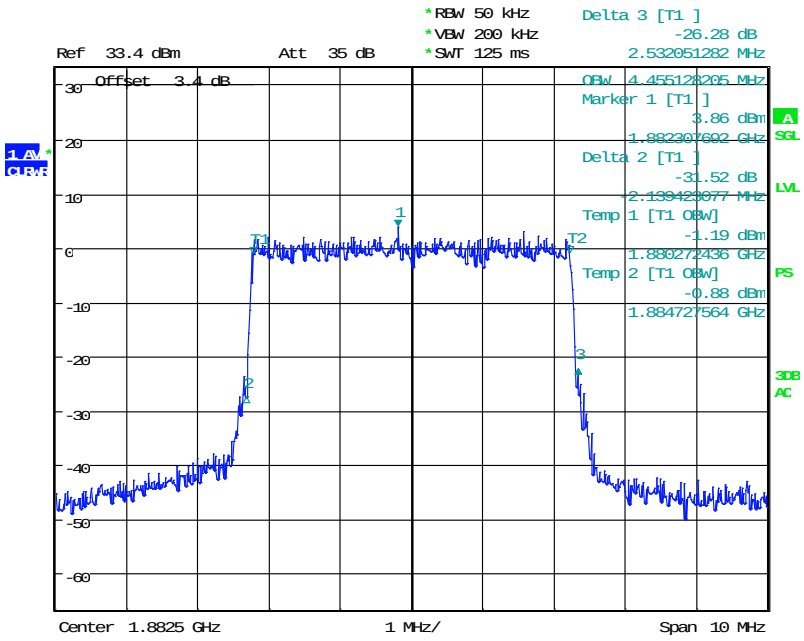
Date: 12.JUN.2015 09:44:28

LTE Band25 16QAM Channel 26365 BW=1.4MHz RB=6 RB Offset=0



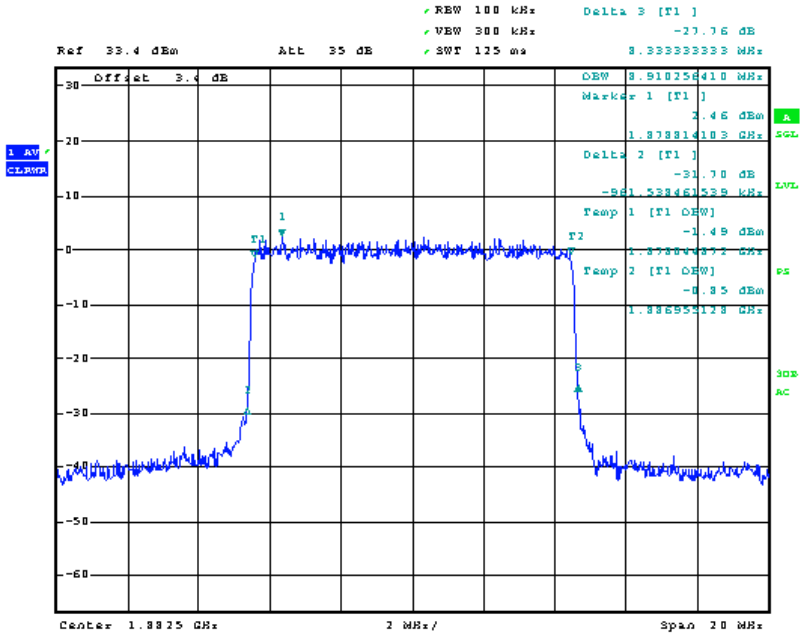
Date: 12.JUN.2015 09:46:54

LTE Band25 16QAM Channel 26365 BW=3MHz RB=15 RB Offset=0



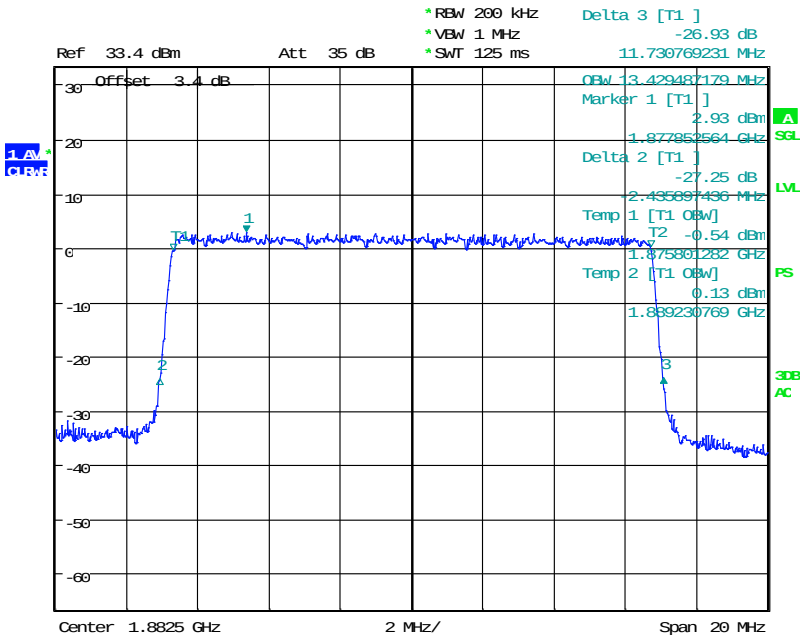
Date: 12.JUN.2015 09:48:50

LTE Band25 16QAM Channel 26365 BW=5MHz RB=25 RB Offset=0



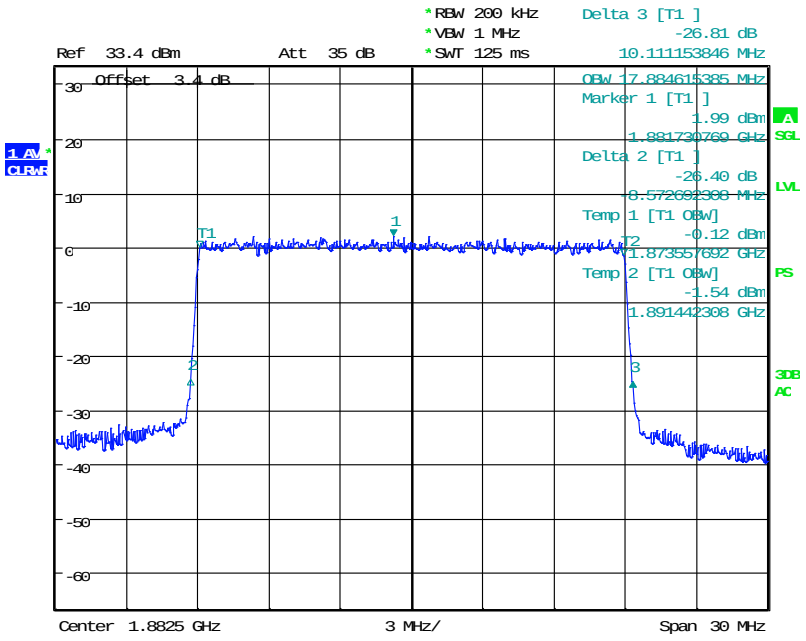
Date: 12.JUN.2015 09:51:34

LTE Band25 16QAM Channel 26365 BW=10MHz RB=50 RB Offset=0



Date: 12.JUN.2015 09:53:45

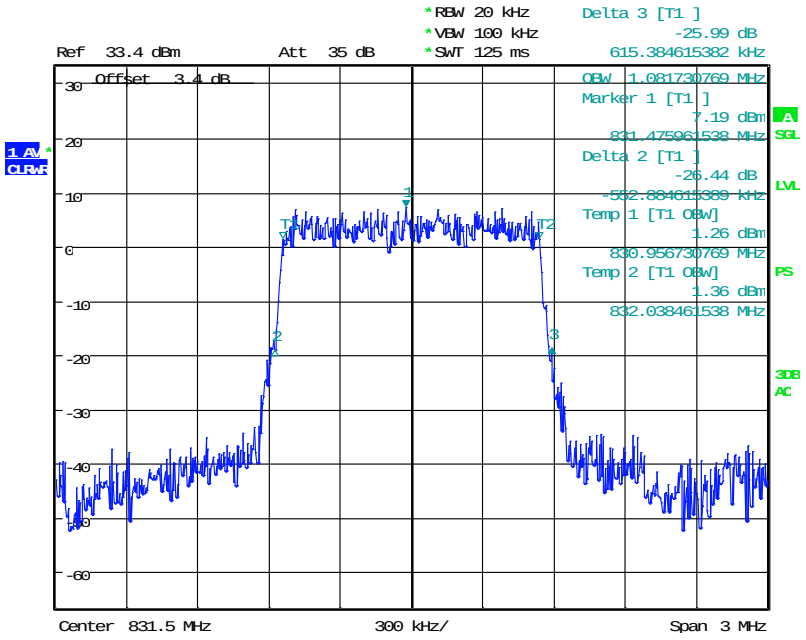
LTE Band25 16QAM Channel 26365 BW=15MHz RB=75 RB Offset=0



Date: 12.JUN.2015 09:55:16

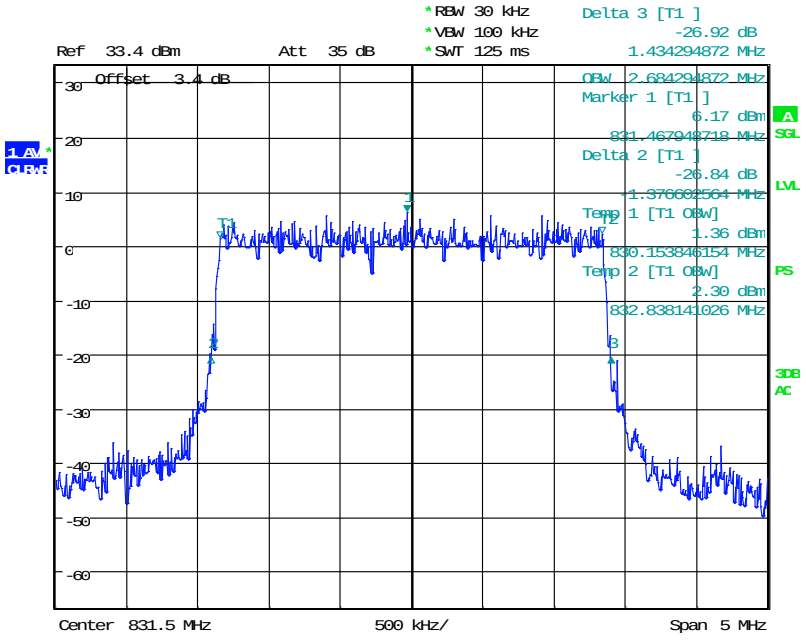
LTE Band25 16QAM Channel 26365 BW=20MHz RB=100 RB Offset=0

Graphical results for LTE B26:



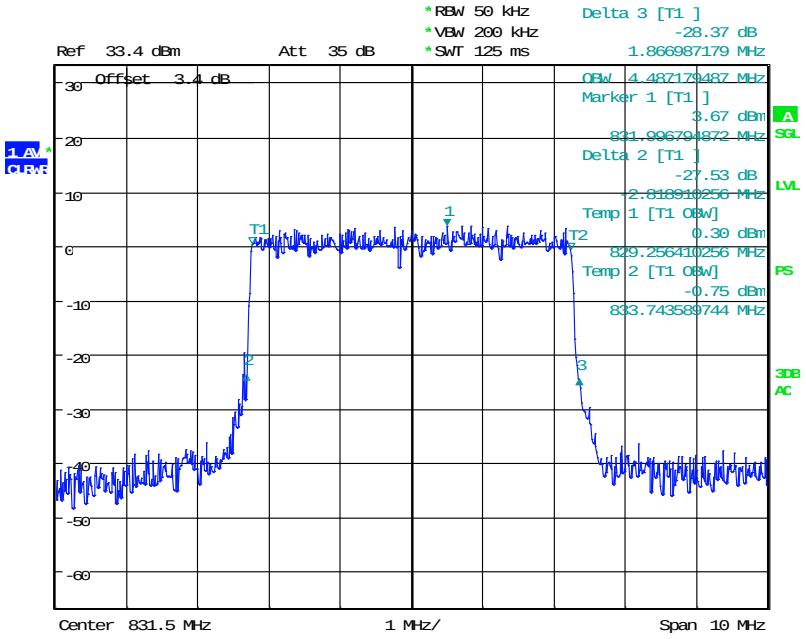
Date: 12.JUN.2015 10:01:09

LTE Band26 QPSK Channel 26865 BW=1.4MHz RB=6 RB Offset=0



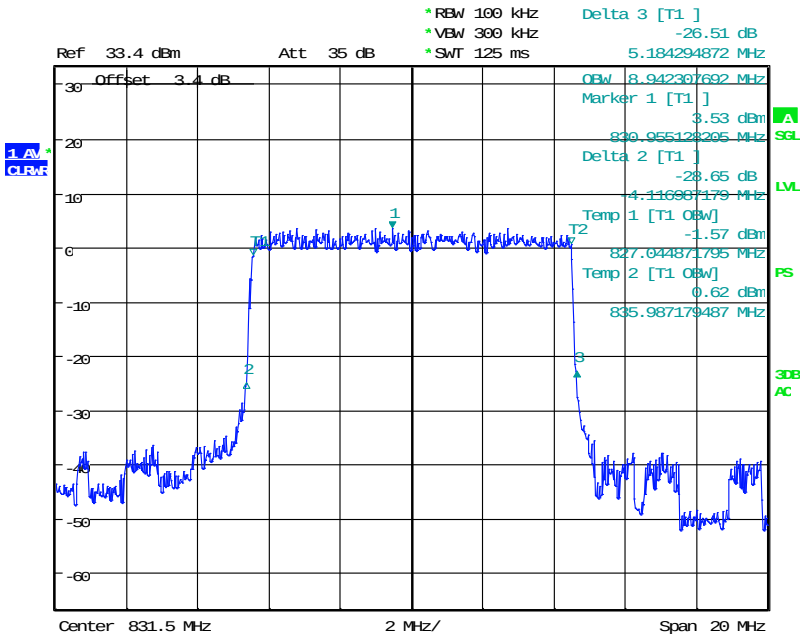
Date: 12.JUN.2015 10:03:40

LTE Band26 QPSK Channel 26865 BW=3MHz RB=15 RB Offset=0



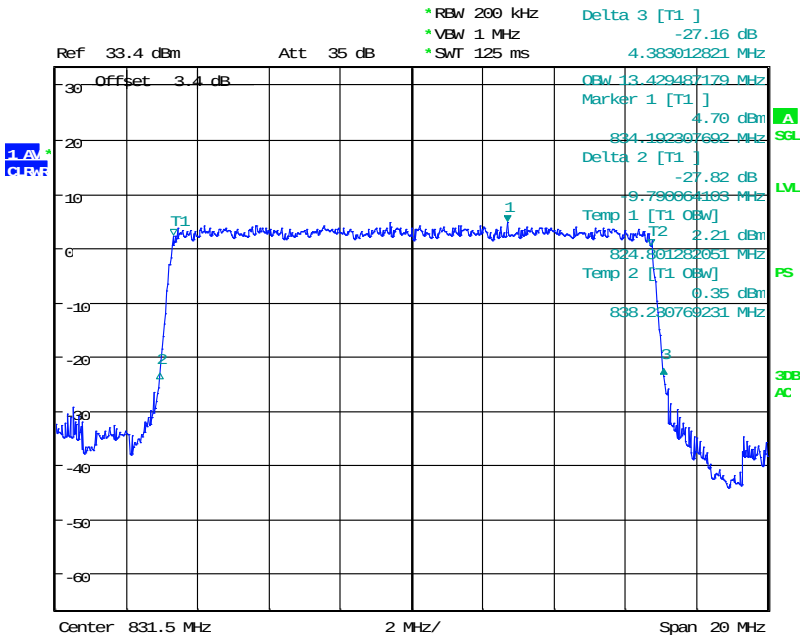
Date: 12.JUN.2015 10:05:03

LTE Band26 QPSK Channel 26865 BW=5MHz RB=25 RB Offset=0



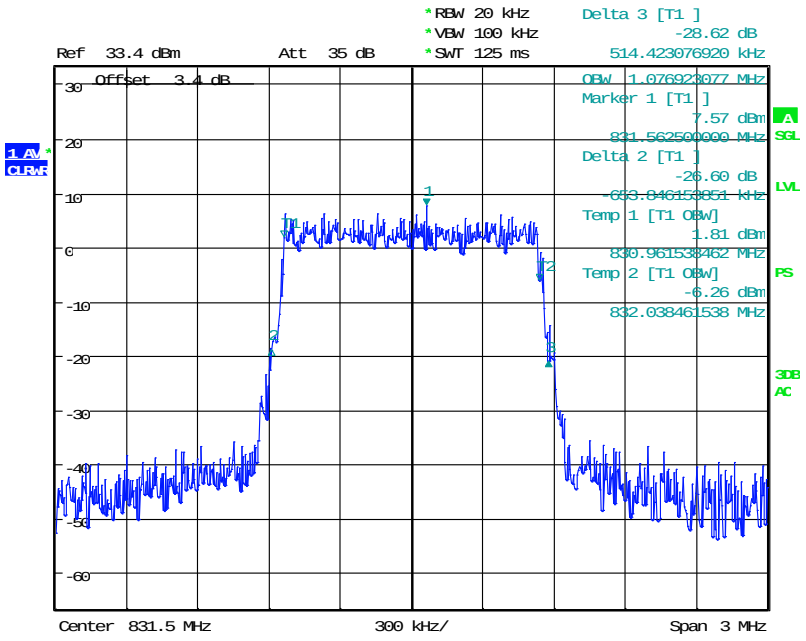
Date: 12.JUN.2015 10:06:28

LTE Band26 QPSK Channel 26865 BW=10MHz RB=50 RB Offset=0



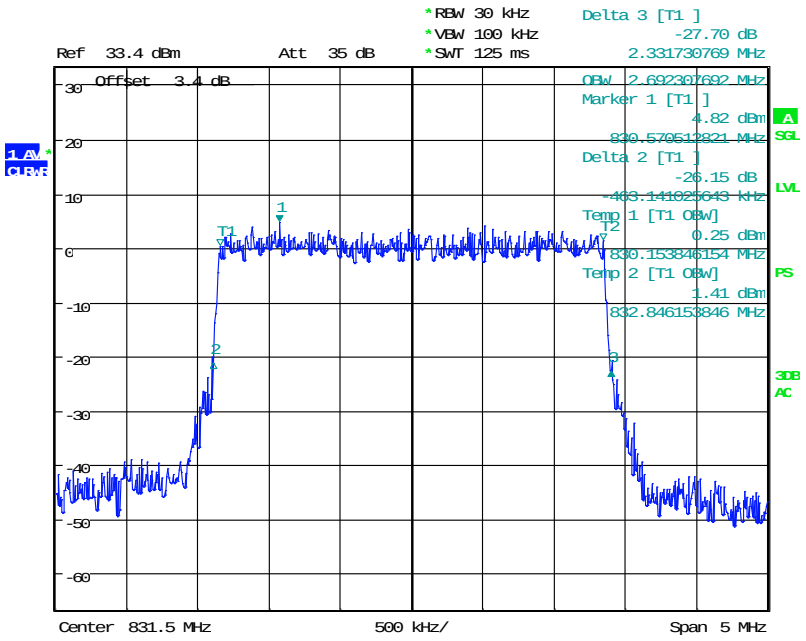
Date: 12.JUN.2015 10:12:37

LTE Band26 QPSK Channel 26865 BW=15MHz RB=75 RB Offset=0



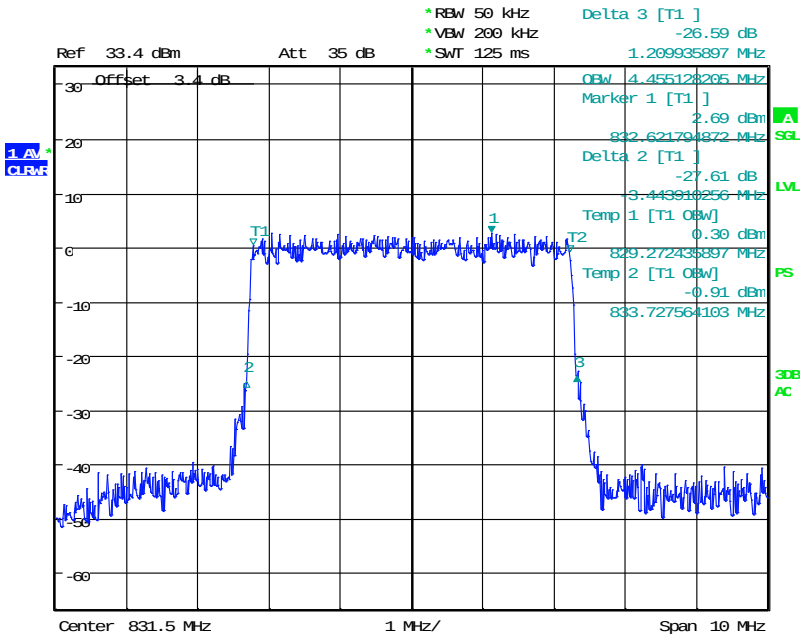
Date: 12.JUN.2015 10:02:25

LTE Band26 16QAM Channel 26865 BW=1.4MHz RB=6 RB Offset=0



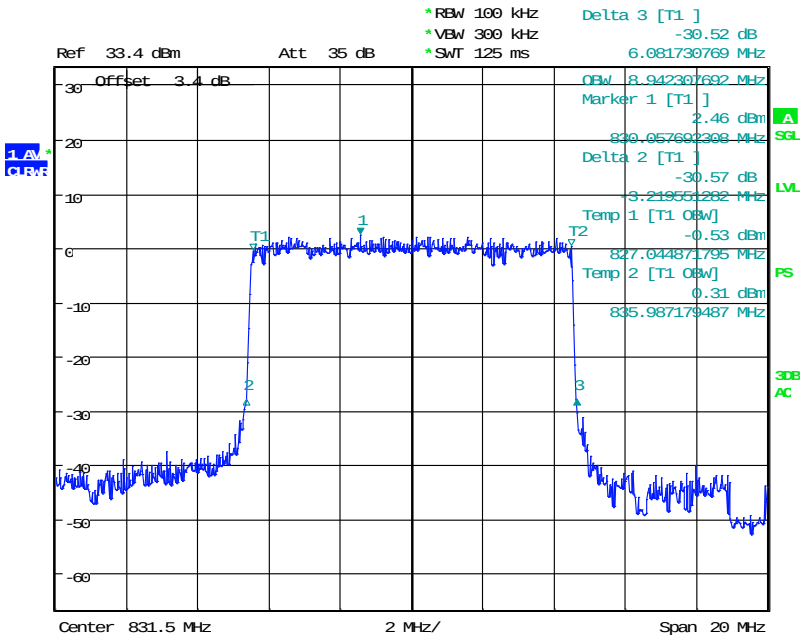
Date: 12.JUN.2015 10:04:12

LTE Band26 16QAM Channel 26865 BW=3MHz RB=15 RB Offset=0



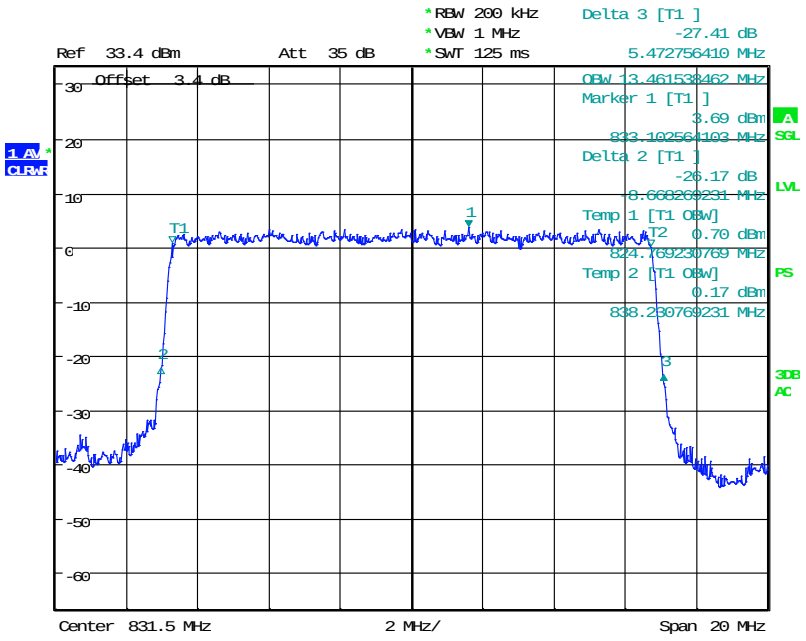
Date: 12.JUN.2015 10:05:32

LTE Band26 16QAM Channel 26865 BW=5MHz RB=25 RB Offset=0



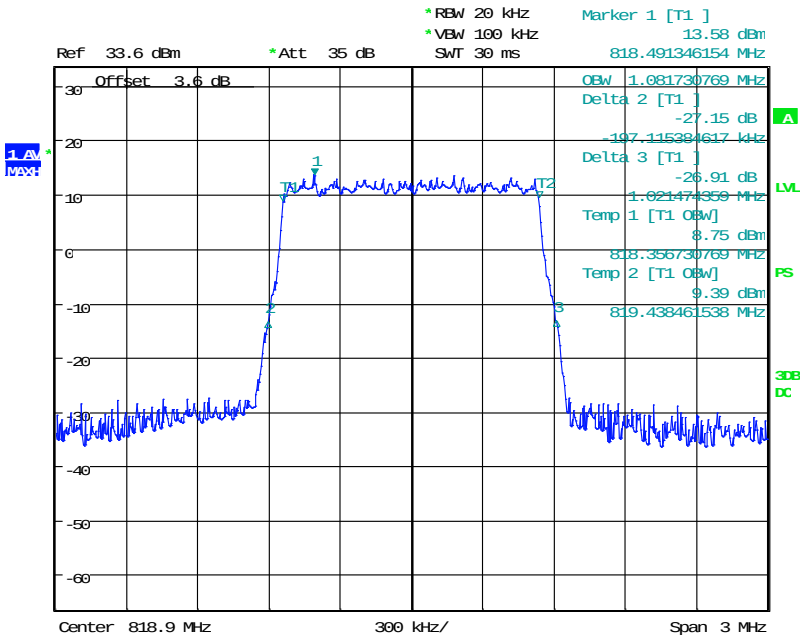
Date: 12.JUN.2015 10:07:28

LTE Band26 16QAM Channel 26865 BW=10MHz RB=50 RB Offset=0



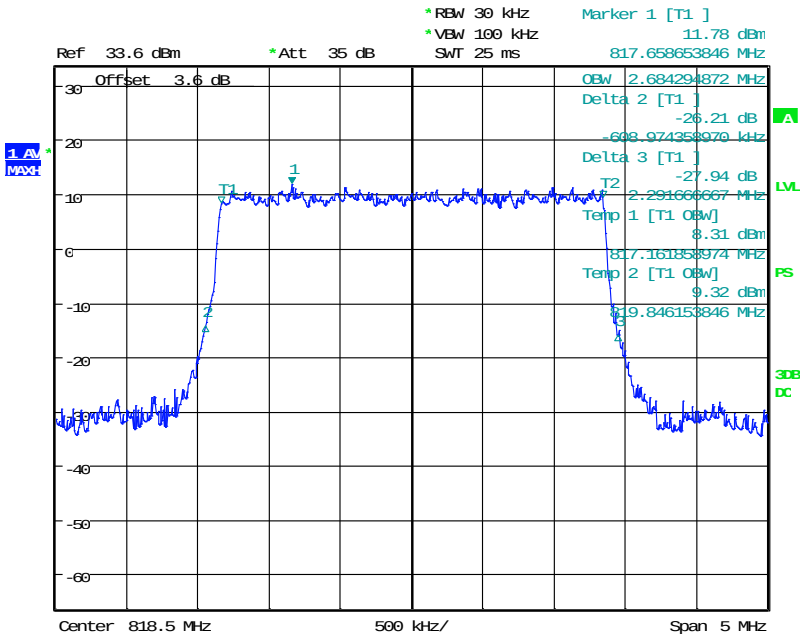
Date: 12.JUN.2015 10:13:15

LTE Band26 16QAM Channel 26865 BW=15MHz RB=75 RB Offset=0



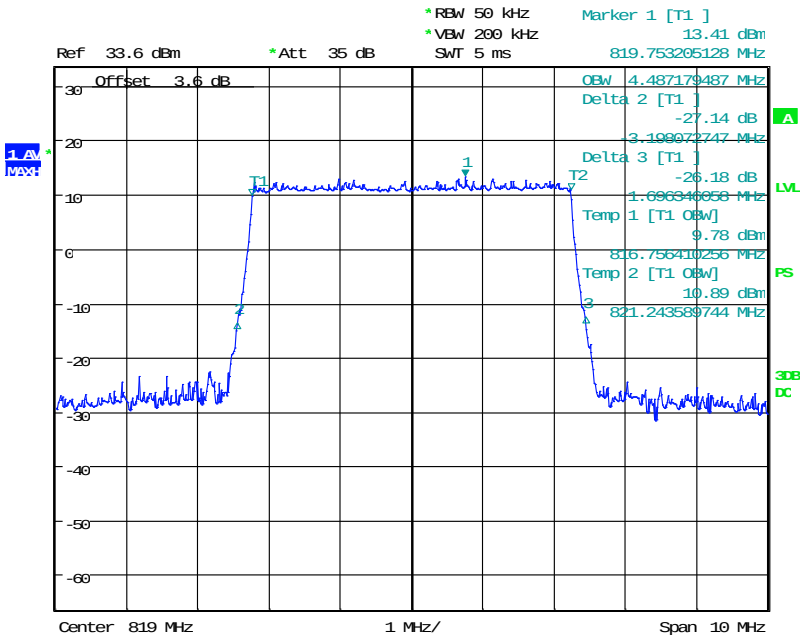
Date: 10.JUL.2015 09:53:37

LTE Band26 814MHz~824MHz QPSK
Channel 26739 BW=1.4MHz RB=6 RB Offset=0



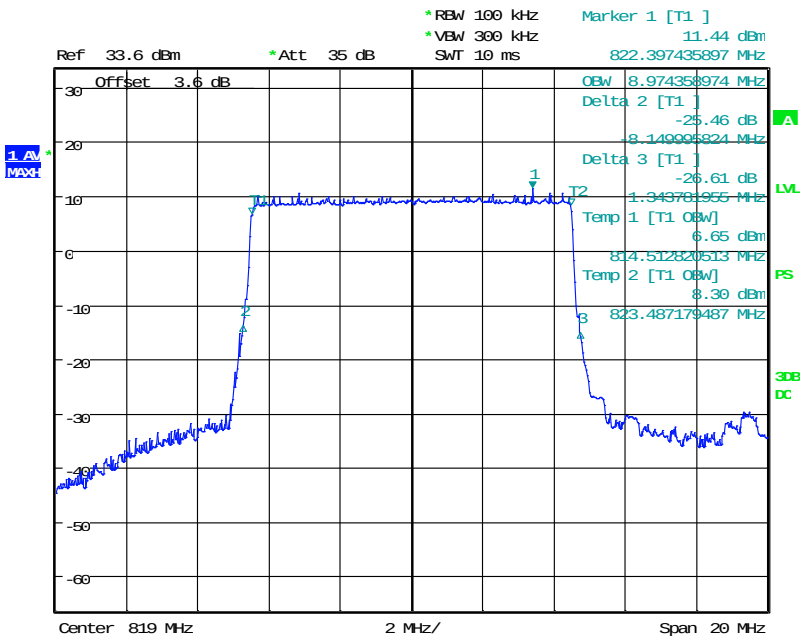
Date: 10.JUL.2015 09:51:20

LTE Band26 814MHz~824MHz QPSK
Channel 26735 BW=3MHz RB=15 RB Offset=0



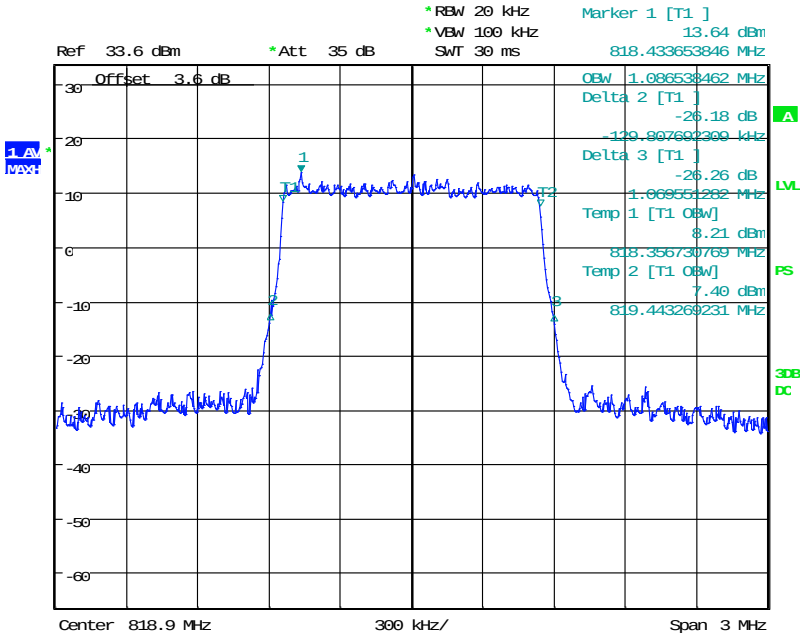
Date: 10.JUL.2015 09:48:51

LTE Band26 814MHz~824MHz QPSK
Channel 26740 BW=5MHz RB=25 RB Offset=0



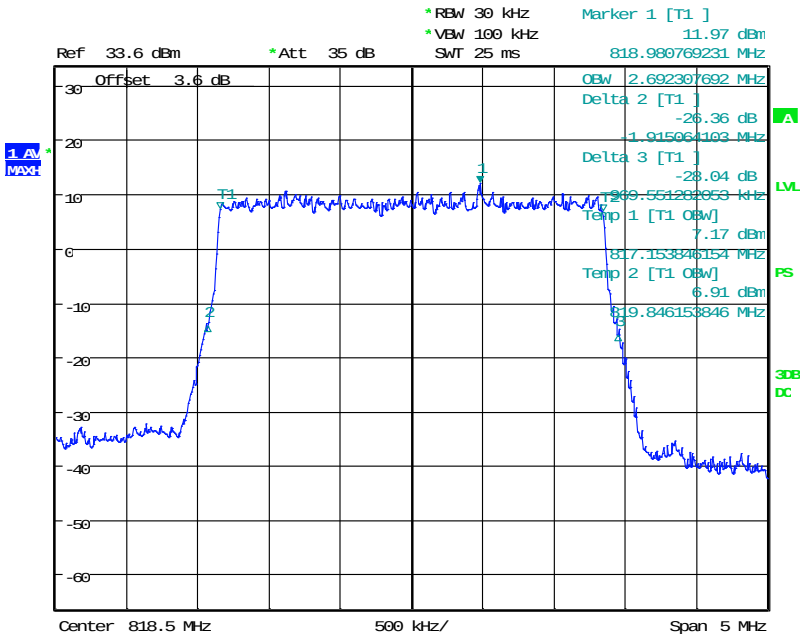
Date: 10.JUL.2015 09:45:44

LTE Band26 814MHz~824MHz QPSK
Channel 26740 BW=10MHz RB=50 RB Offset=0



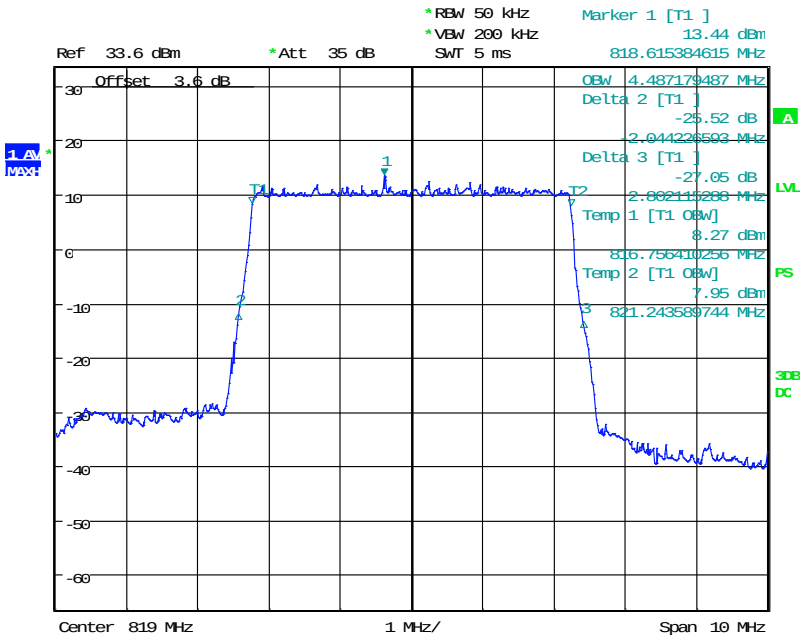
Date: 10.JUL.2015 10:16:12

LTE Band26 814MHz~824MHz 16QAM
Channel 26739 BW=1.4MHz RB=6 RB Offset=0



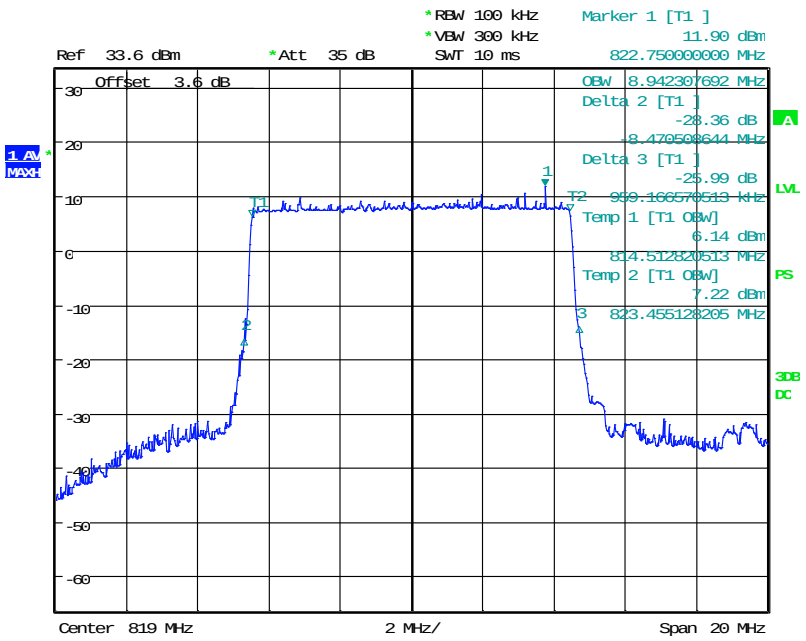
Date: 10.JUL.2015 09:50:31

LTE Band26 814MHz~824MHz QPSK
Channel 26735 BW=3MHz RB=15 RB Offset=0



Date: 10.JUL.2015 09:48:01

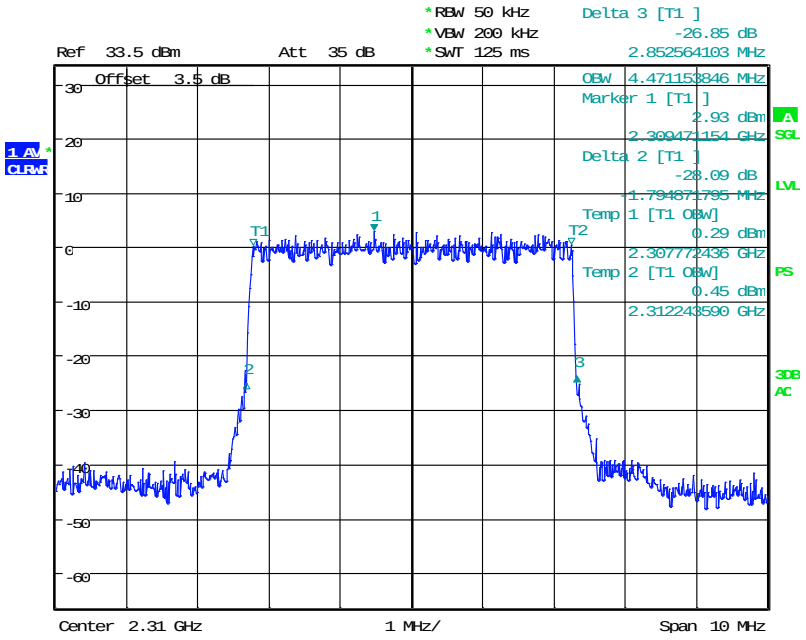
LTE Band26 814MHz~824MHz QPSK
Channel 26740 BW=5MHz RB=25 RB Offset=0



Date: 10.JUL.2015 09:46:20

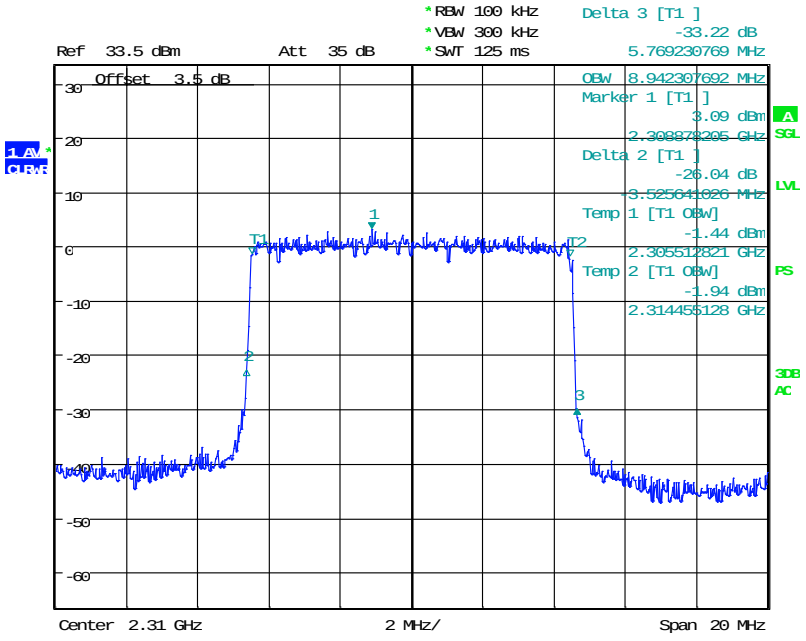
LTE Band26 814MHz~824MHz QPSK
Channel 26740 BW=10MHz RB=50 RB Offset=0

Graphical results for LTE B30:



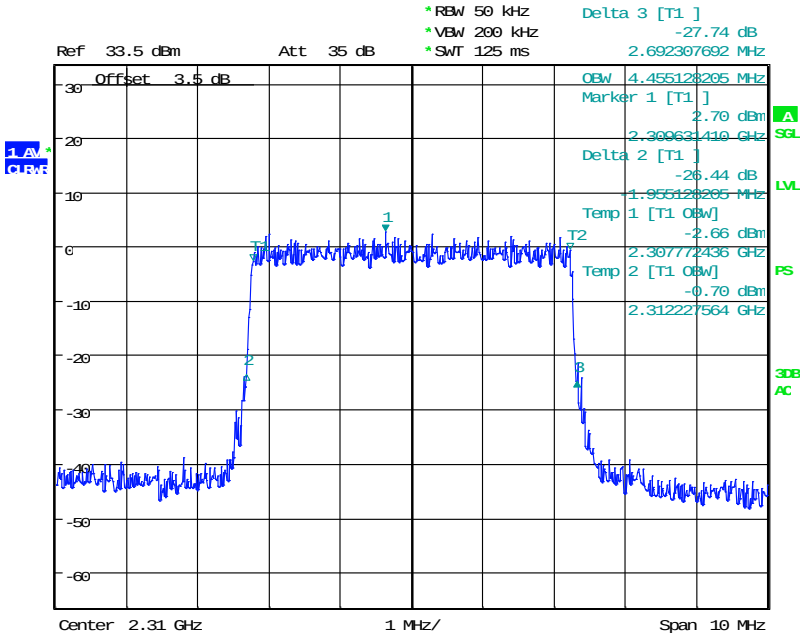
Date: 12.JUN.2015 10:15:23

LTE Band30 QPSK Channel 27710 BW=5MHz RB=25 RB Offset=0



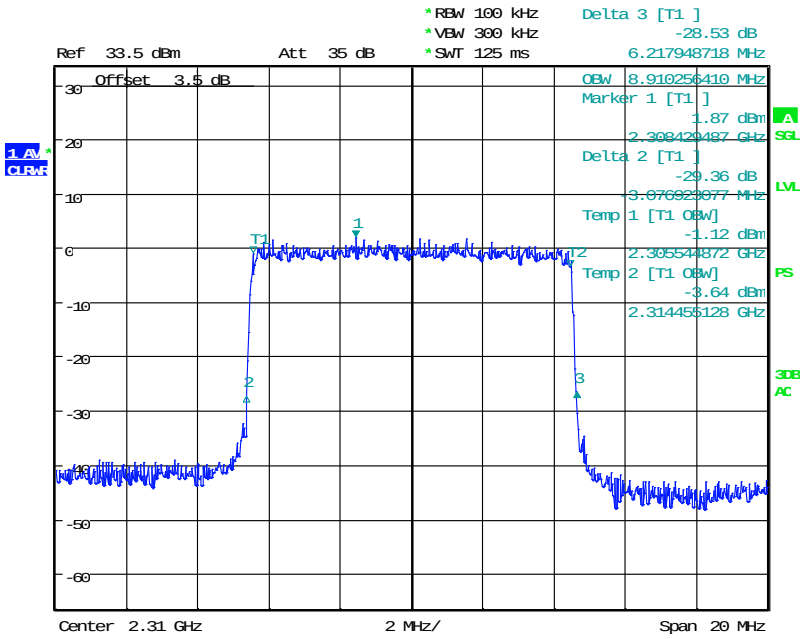
Date: 12.JUN.2015 10:17:53

LTE Band30 QPSK Channel 27710 BW=10MHz RB=50 RB Offset=0



Date: 12.JUN.2015 10:15:58

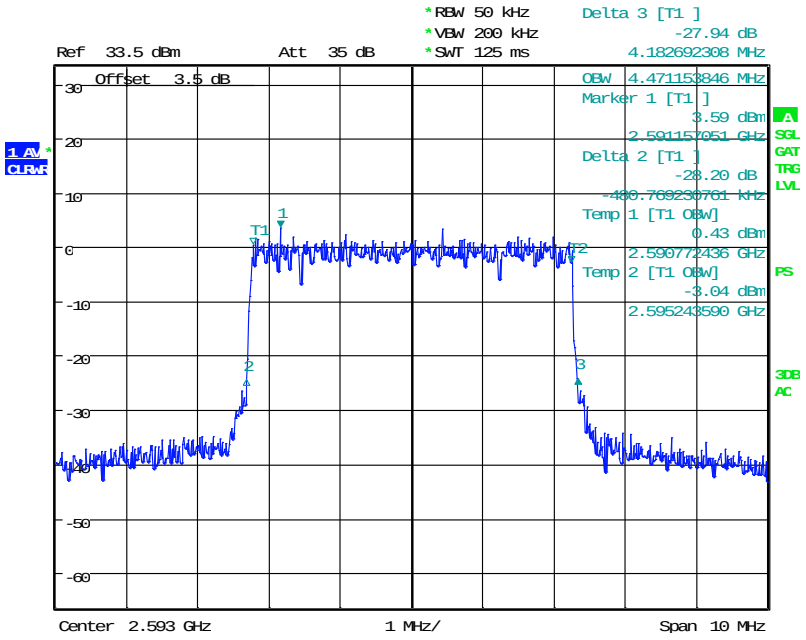
LTE Band30 16QAM Channel 27710 BW=5MHz RB=25 RB Offset=0



Date: 12.JUN.2015 10:19:03

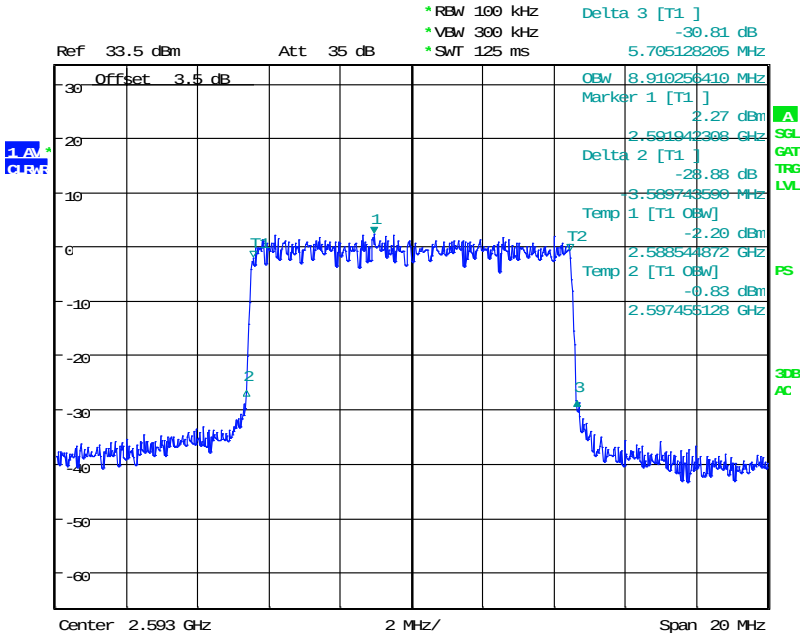
LTE Band30 16QAM Channel 27710 BW=10MHz RB=50 RB Offset=0

Graphical results for LTE B41:



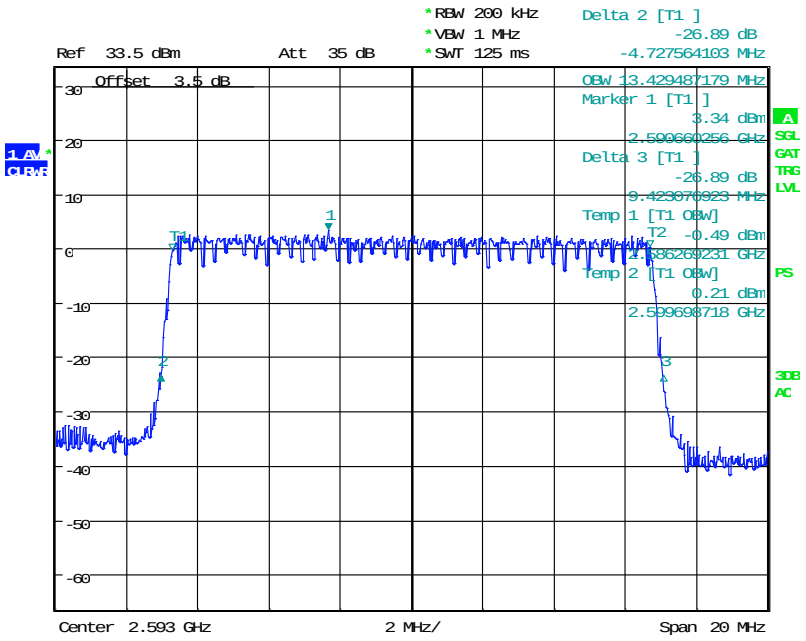
Date: 12.JUN.2015 10:25:16

LTE Band41 QPSK Channel 40620 BW=5MHz RB=25 RB Offset=0



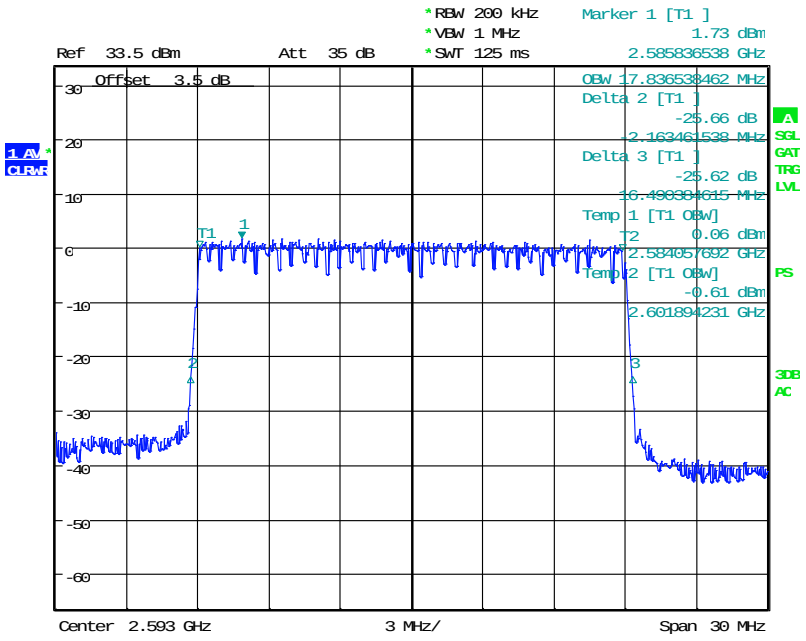
Date: 12.JUN.2015 10:22:32

LTE Band41 QPSK Channel 40620 BW=10MHz RB=50 RB Offset=0



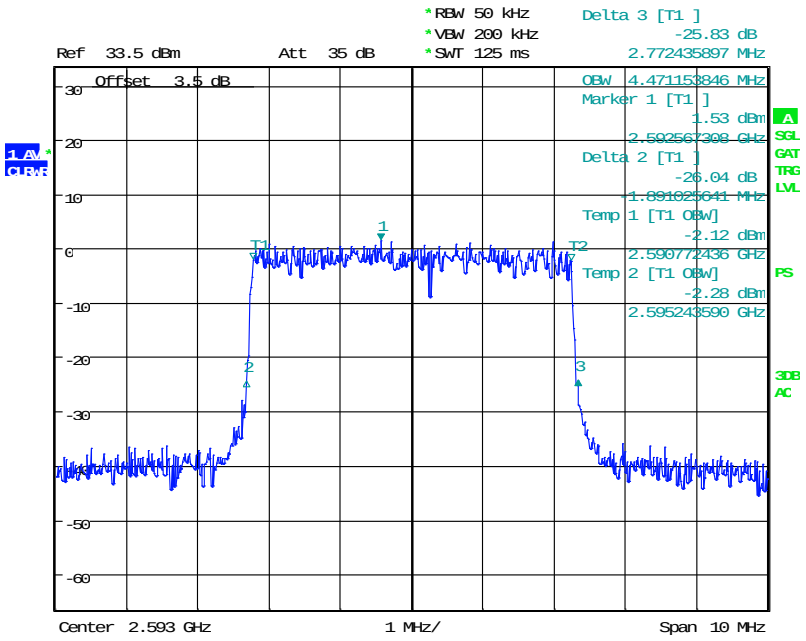
Date: 12.JUN.2015 10:27:26

LTE Band41 QPSK Channel 40620 BW=15MHz RB=75 RB Offset=0

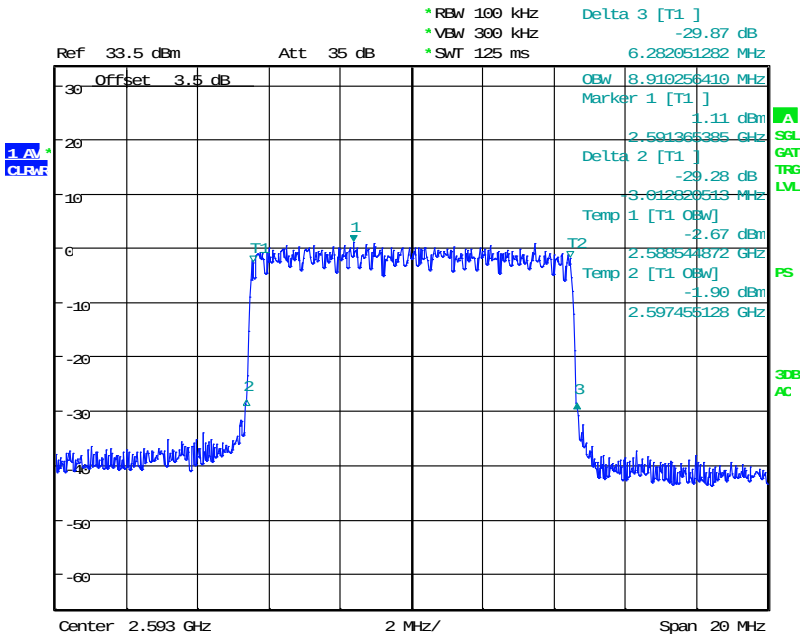


Date: 12.JUN.2015 10:29:30

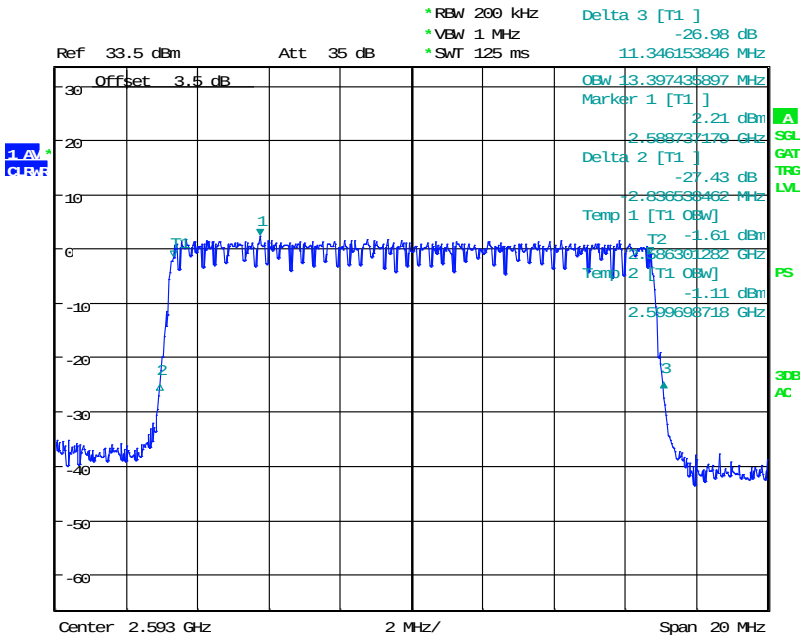
LTE Band41 QPSK Channel 40620 BW=20MHz RB=100 RB Offset=0



LTE Band41 16QAM Channel 40620 BW=5MHz RB=25 RB Offset=0

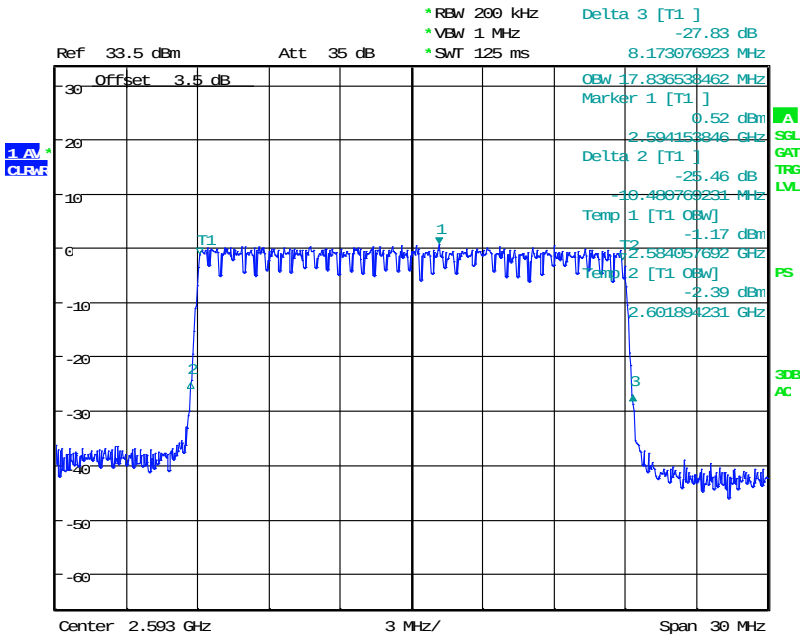


LTE Band41 16QAM Channel 40620 BW=10MHz RB=50 RB Offset=0



Date: 12.JUN.2015 10:27:52

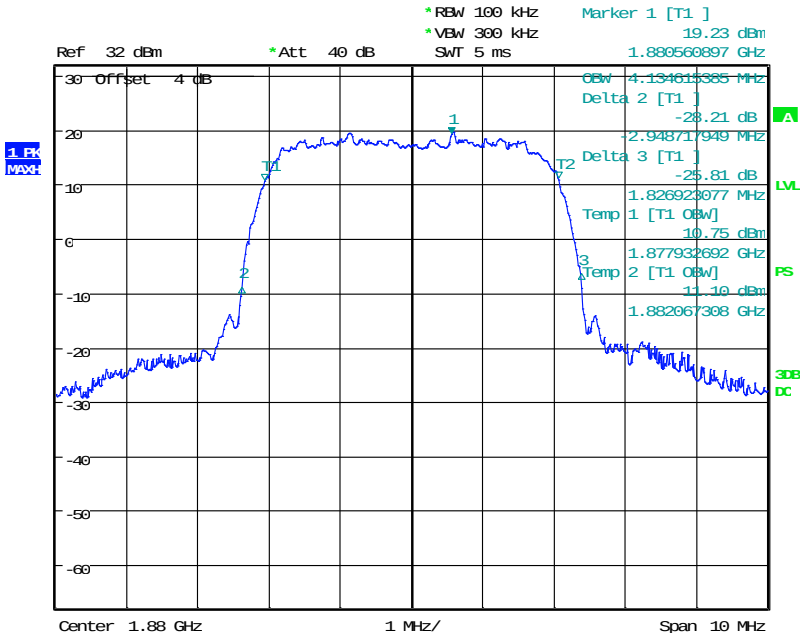
LTE Band41 16QAM Channel 40620 BW=15MHz RB=75 RB Offset=0



Date: 12.JUN.2015 10:30:06

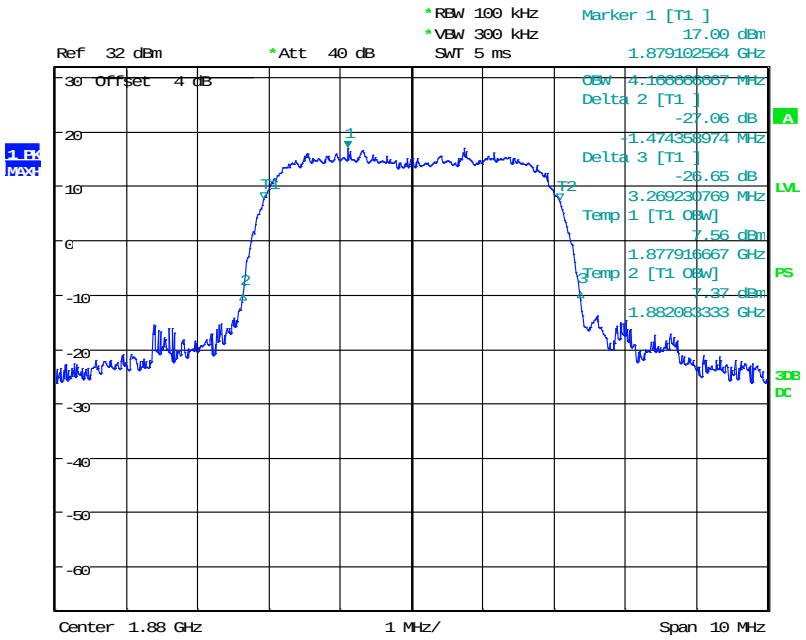
LTE Band41 16QAM Channel 40620 BW=20MHz RB=100 RB Offset=0

Graphical results for WCDMA B2:



Date: 3.JUL.2015 12:09:50

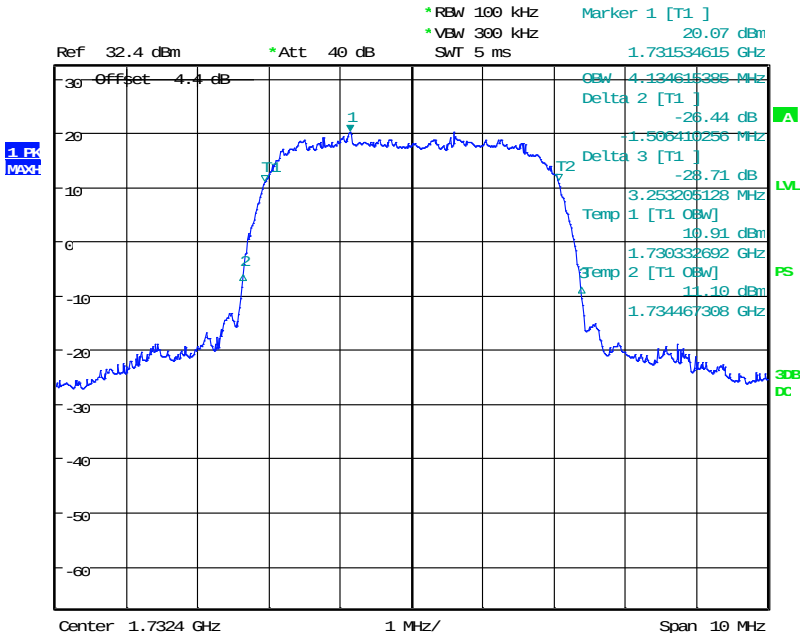
WCDMA B2 Rel99 Channel 9400



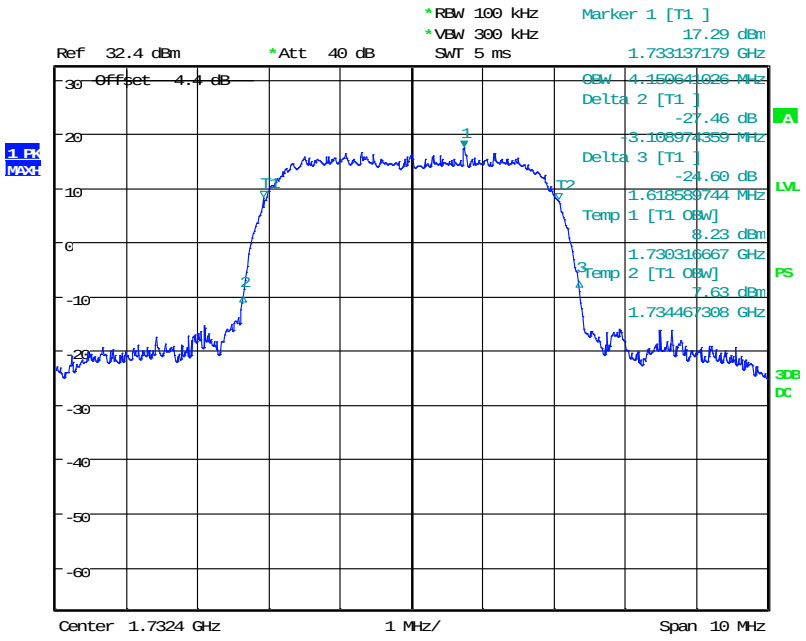
Date: 3.JUL.2015 12:13:17

WCDMA B2 Rel6(subtest5) Channel 9400

Graphical results for WCDMA B4:

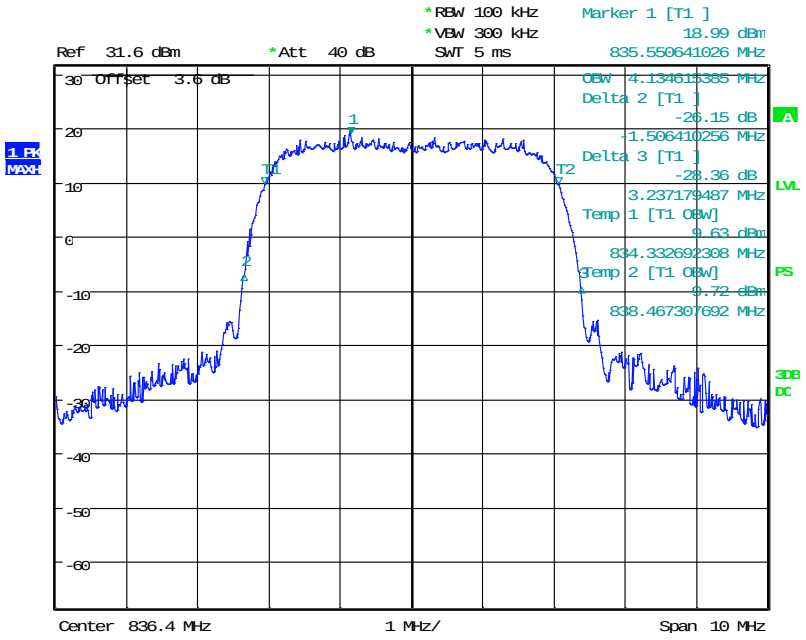


WCDMA B4 Rel99 Channel 1412



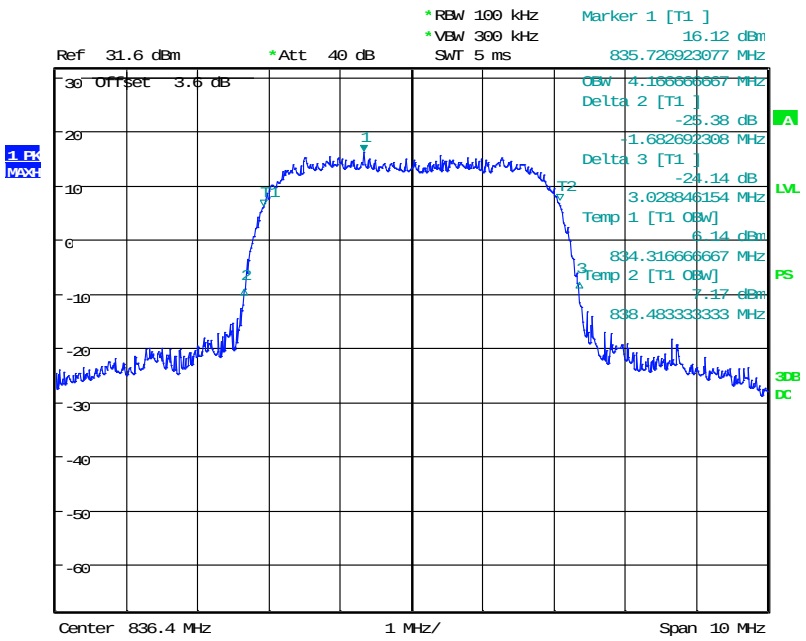
WCDMA B4 Rel6(subtest5) Channel 1412

Graphical results for WCDMA B5:



Date: 3.JUL.2015 12:49:30

WCDMA B5 Rel99 Channel 4182



Date: 3.JUL.2015 12:48:35

WCDMA B5 Rel6(subtest5) Channel 4182

4.3 Conducted Spurious Emission

Specifications:	FCC Part 2.1051,24.238,2.1053,22.917, 27.53, 90.691 RSS-130 4.6, RSS-132 4.5, RSS-133 6.5, RSS-199 4.6
Date of Tests	2015-06-23 to 2015-07-01
Test conditions:	Ambient Temperature:15℃-35℃ Relative Humidity:30%-60% Air pressure: 86-106kPa
Test Results:	Pass

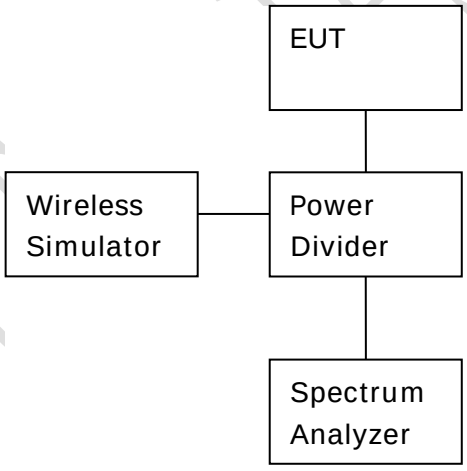
Limit Level Construction:
The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB, so the limit level is:

P(dBm) – (43 + 10 log(P)) dB= -13dBm

Limits for Radiated spurious emissions(UE)	
Frequency range	**Limit Level /Resolution Bandwidth**
30 MHz to 26500 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:

None

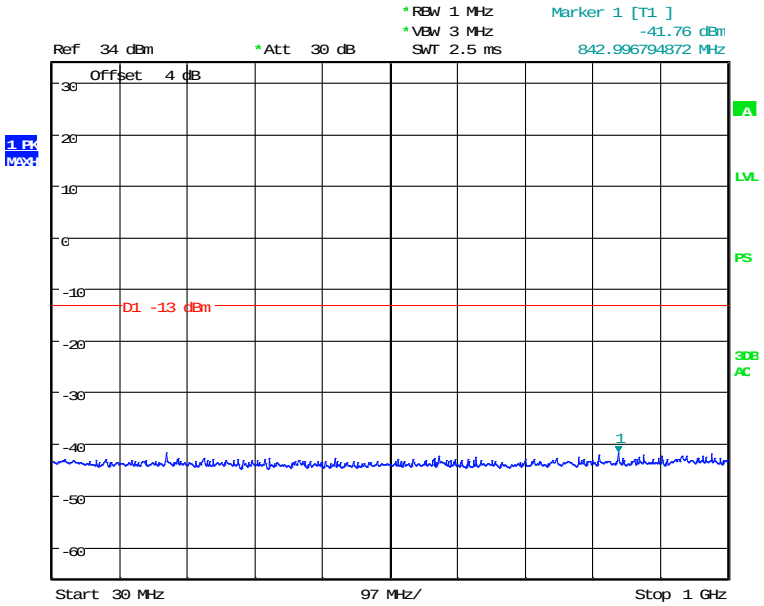
CTTL Test Report

4.3.1 LTE B4 Conducted Spurious Emission Results

Graphical results:

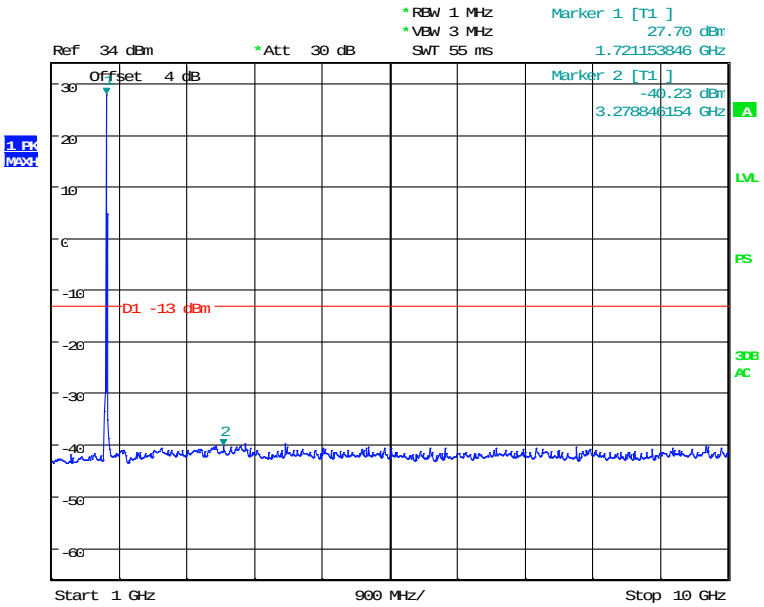
1.4MHz bandwidth QPSK Mode

Middle channel, 1732.5 MHz, 30MHz to 1GHz



Date: 25.JUN.2015 16:36:20

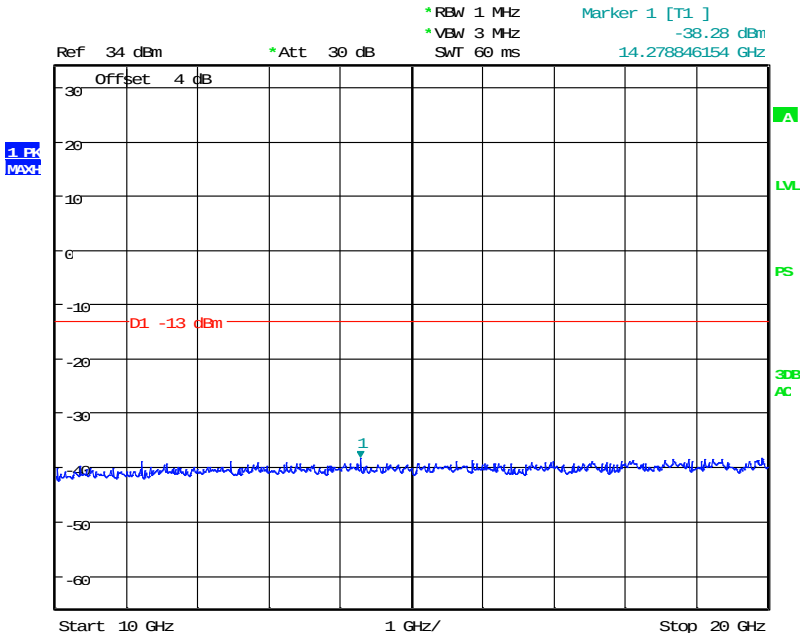
Middle channel, 1732.5MHz,1GHz to 10GHz



Date: 25.JUN.2015 16:35:43

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

Middle channel, 1732.5 MHz,10GHz to 20GHz

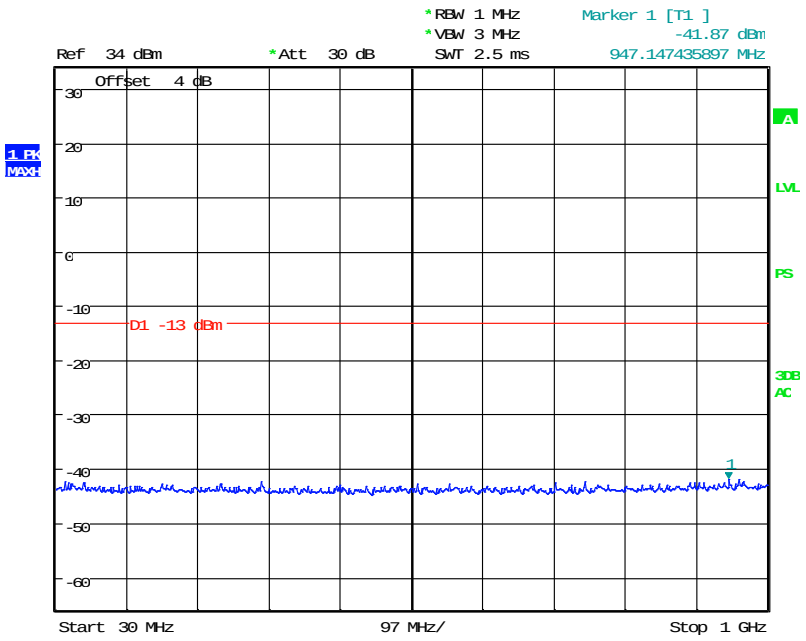


Date: 25.JUN.2015 16:34:28

Graphical results:

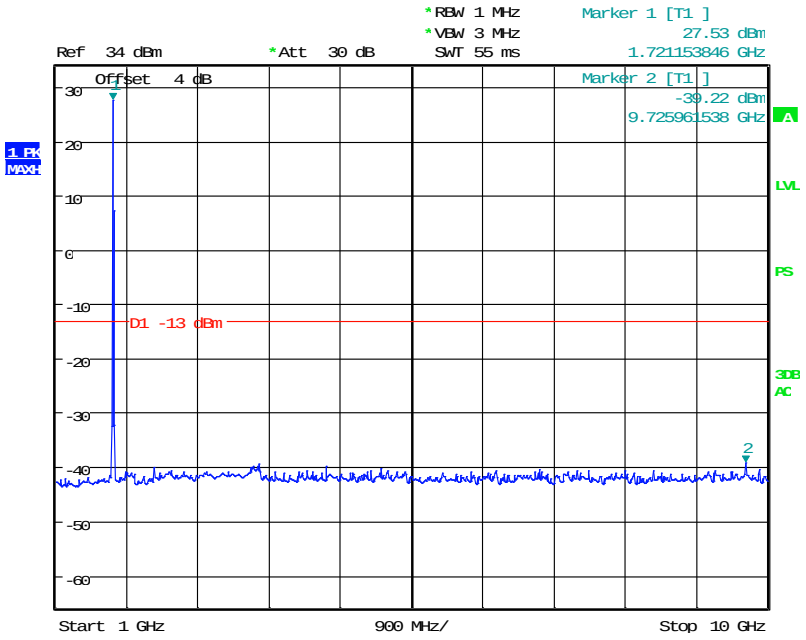
3MHz bandwidth QPSK Mode

Middle Channel, 1732.5 MHz, 30MHz to 1GHz



Date: 25.JUN.2015 16:36:58

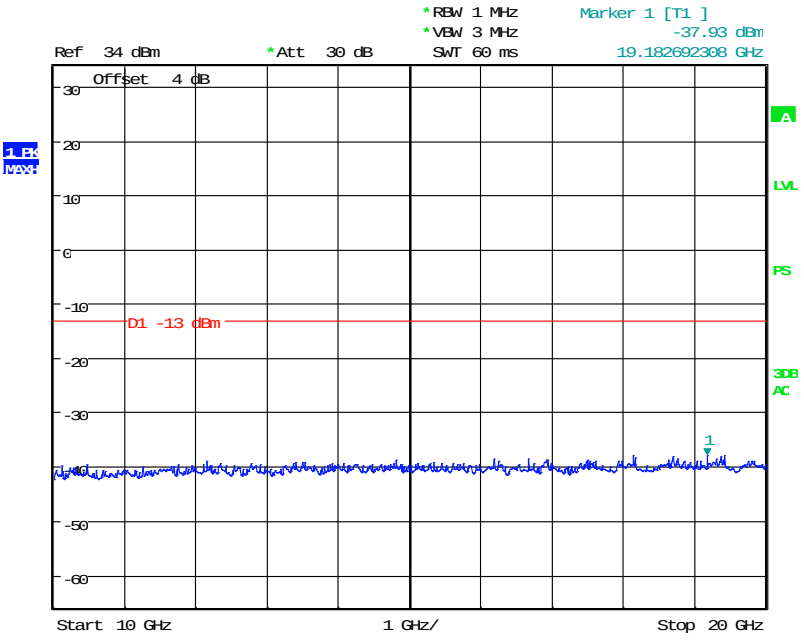
Middle Channel, 1732.5 MHz, 1GHz to 10GHz



Date: 25.JUN.2015 16:37:32

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

Middle Channel, 1732.5 MHz, 10GHz to 20GHz

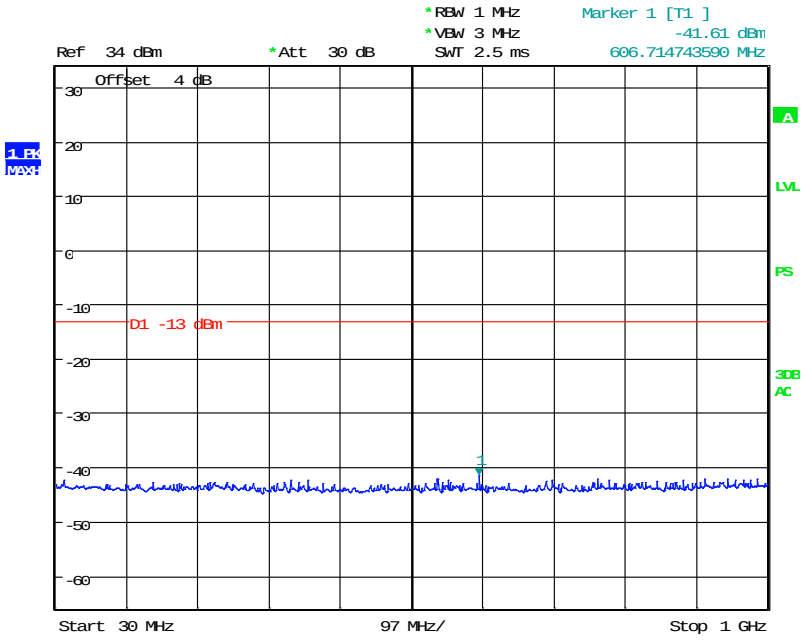


Date: 25.JUN.2015 16:37:59

Graphical results:

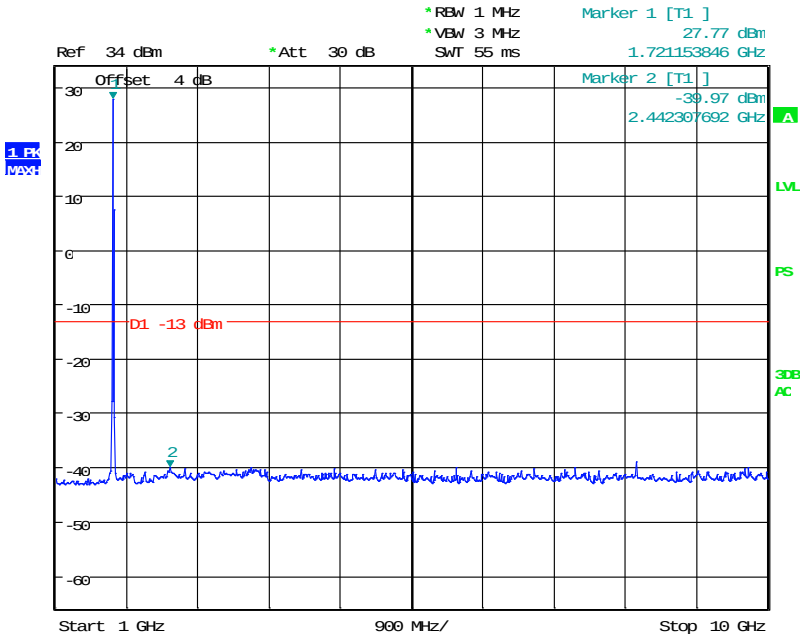
5MHz bandwidth QPSK Mode

Middle Channel, 1732.5 MHz,30MHz to 1GHz



Date: 25.JUN.2015 16:40:09

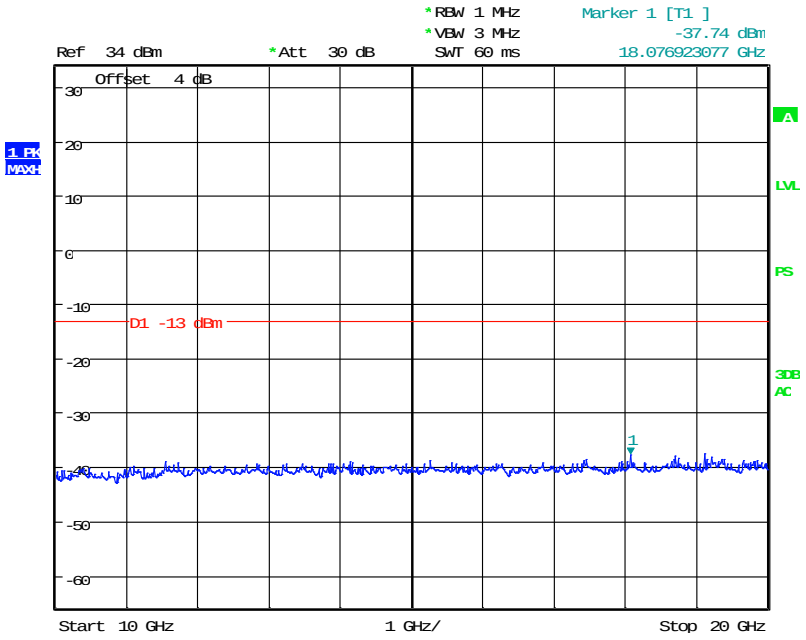
Middle Channel, 1732.5 MHz,1GHz to 10GHz



Date: 25.JUN.2015 16:39:41

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

Middle Channel, 1732.5 MHz,10GHz to 20GHz

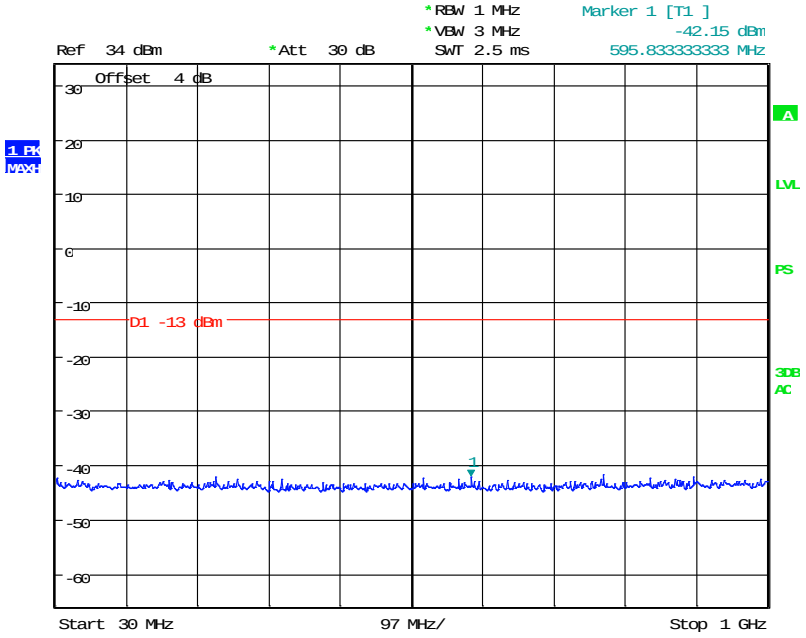


Date: 25.JUN.2015 16:39:02

Graphical results:

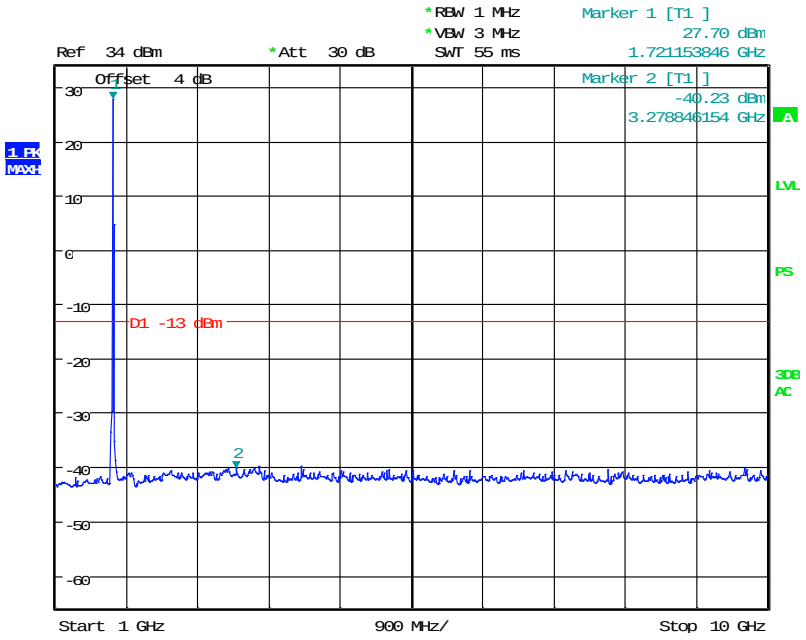
10MHz bandwidth QPSK Mode

Middle Channel, 1732.5 MHz, 30MHz to 1GHz



Date: 25.JUN.2015 16:40:40

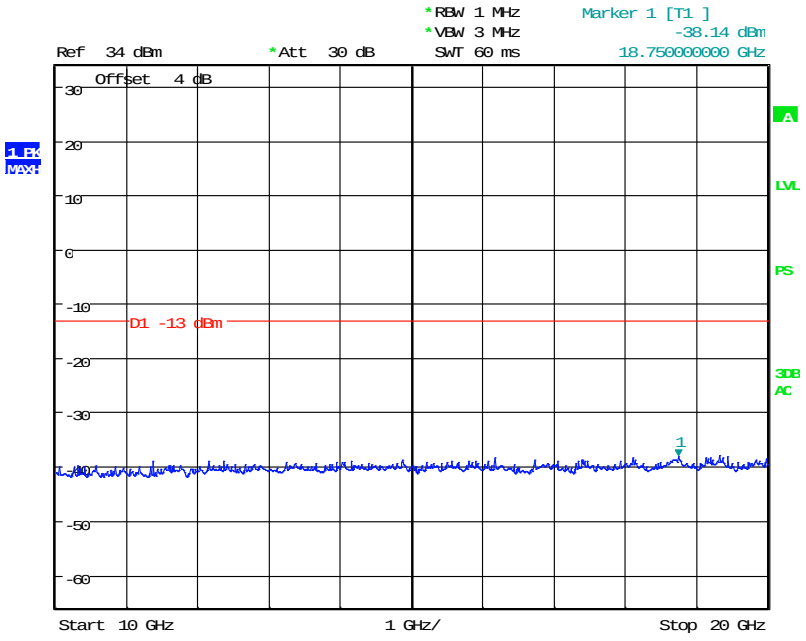
Middle Channel, 1732.5 MHz, 1GHz to 10GHz



Date: 25.JUN.2015 16:35:43

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

Middle Channel, 1732.5 MHz, 10GHz to 20GHz

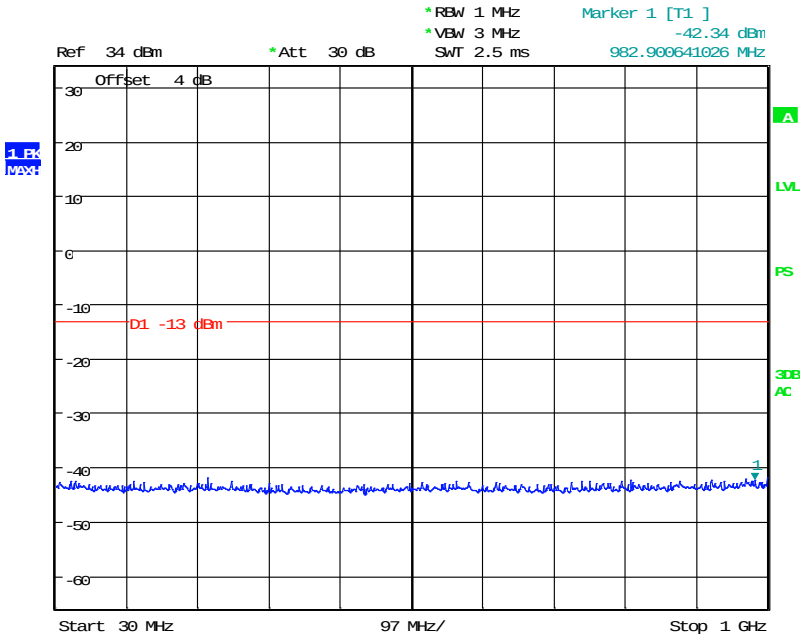


Date: 25.JUN.2015 16:41:46

Graphical results:

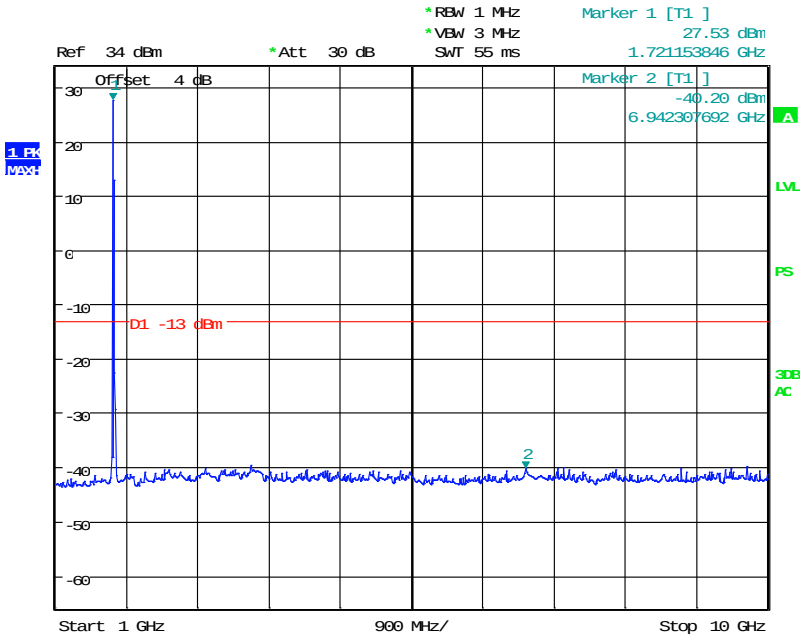
15MHz bandwidth QPSK Mode

Middle Channel, 1732.5 MHz, 30MHz to 1GHz



Date: 25.JUN.2015 16:43:31

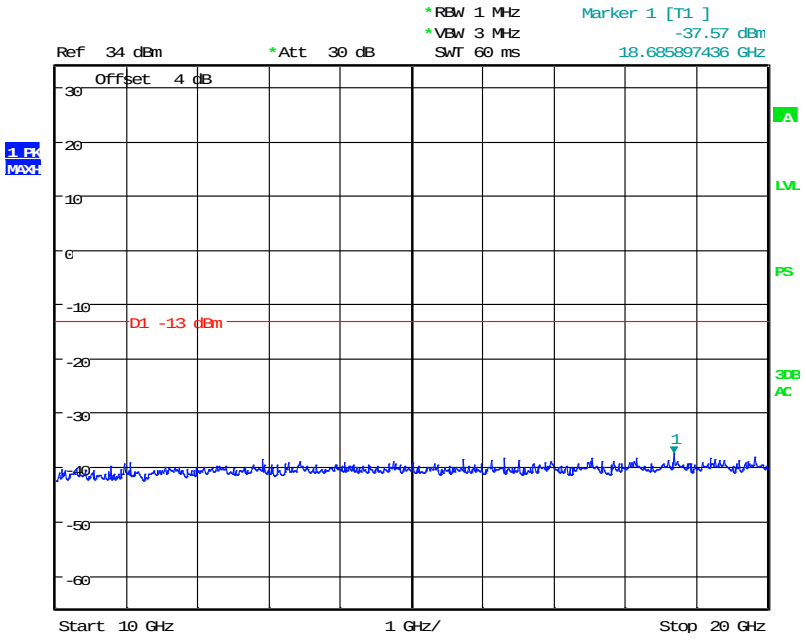
Middle Channel, 1732.5 MHz, 1GHz to 10GHz



Date: 25.JUN.2015 16:44:28

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

Middle Channel, 1732.5 MHz, 10GHz to 20GHz

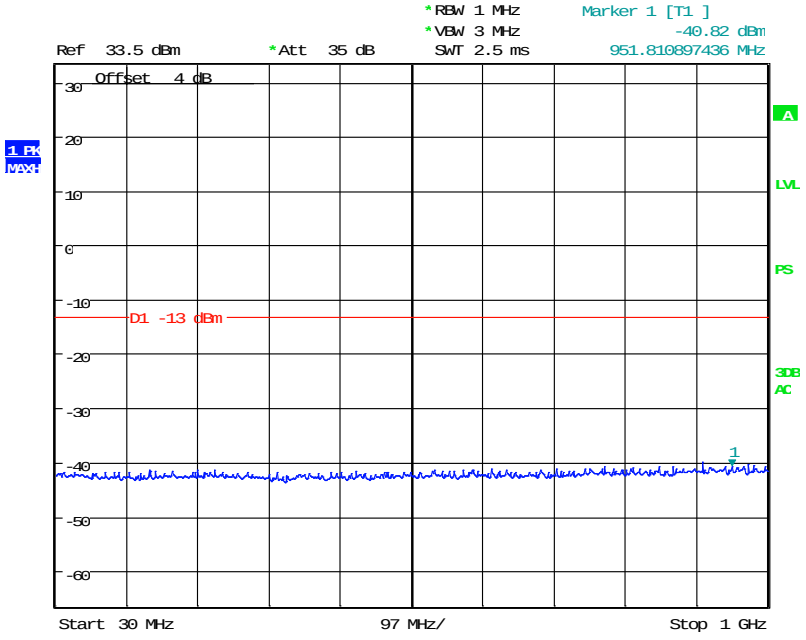


Date: 25.JUN.2015 16:42:20

Graphical results:

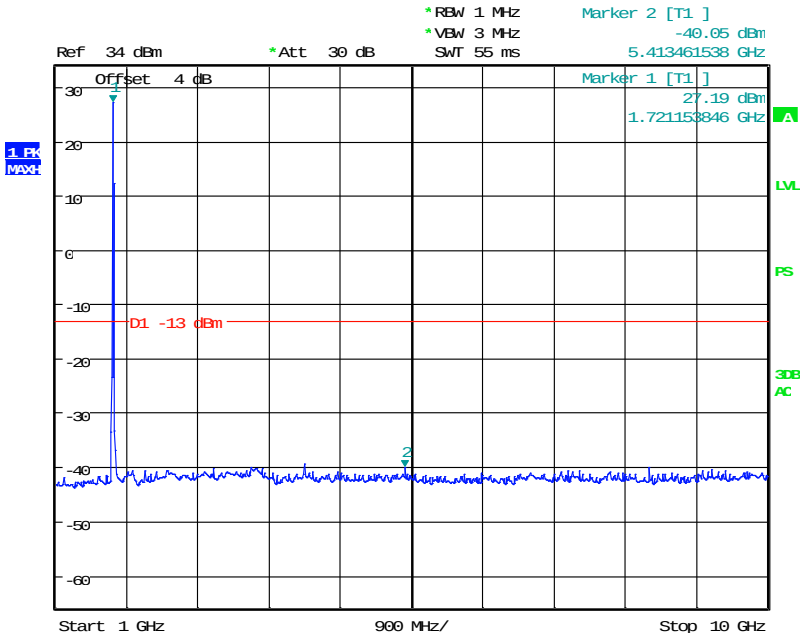
20MHz bandwidth QPSK Mode

Middle Channel, 1732.5 MHz, 30MHz to 1GHz



Date: 25.JUN.2015 16:29:19

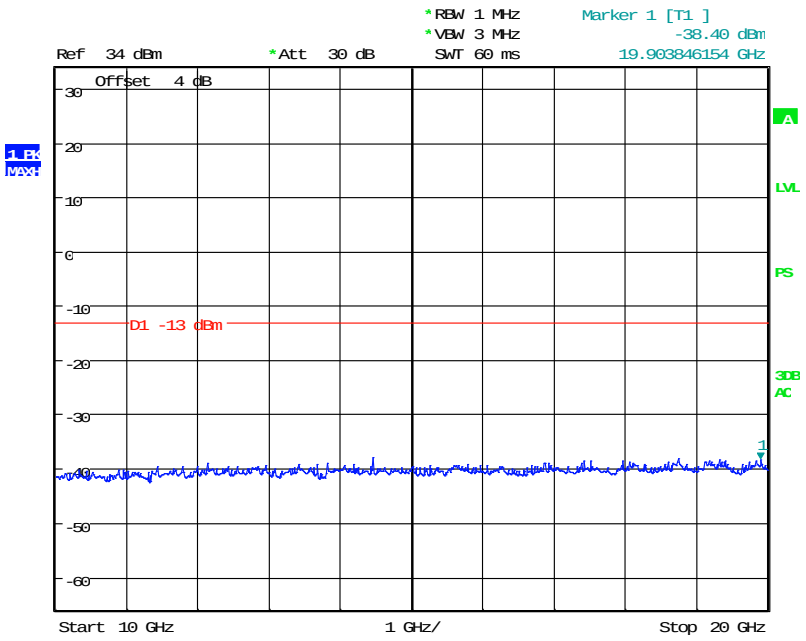
Middle Channel, 1732.5 MHz, 1GHz to 10GHz



Date: 25.JUN.2015 16:32:24

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

Middle Channel, 1732.5 MHz, 10GHz to 20GHz



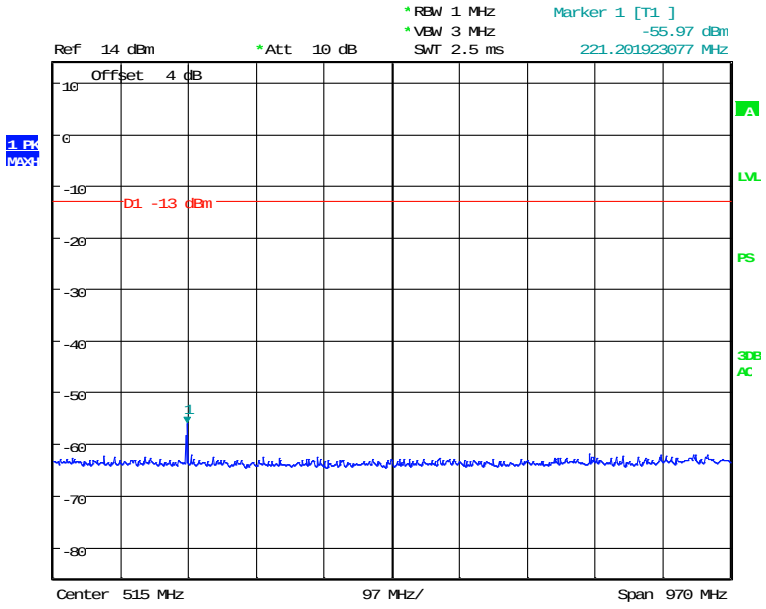
Date: 25.JUN.2015 16:34:56

4.3.2 LTE B7 Conducted Spurious Emission Results

Graphical results:

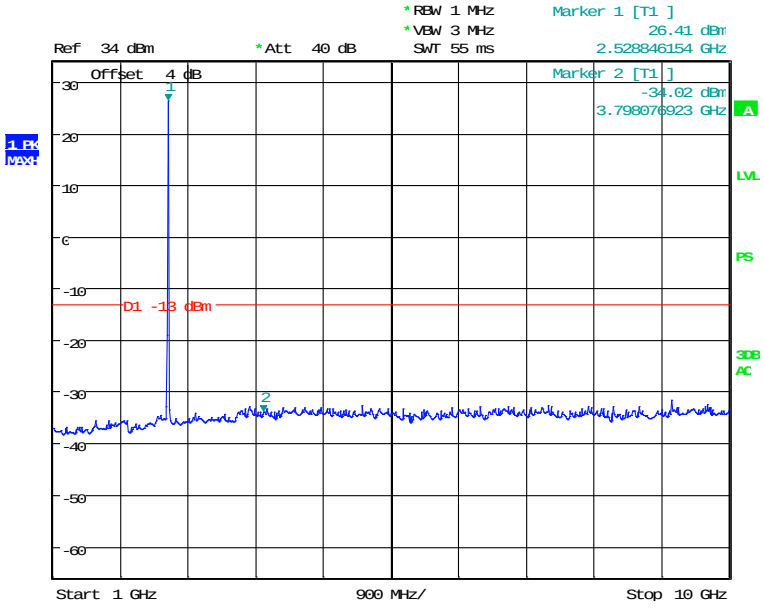
5MHz bandwidth QPSK Mode

Middle Channel, 2535 MHz, 30MHz to 1GHz



Date: 25.JUN.2015 16:48:07

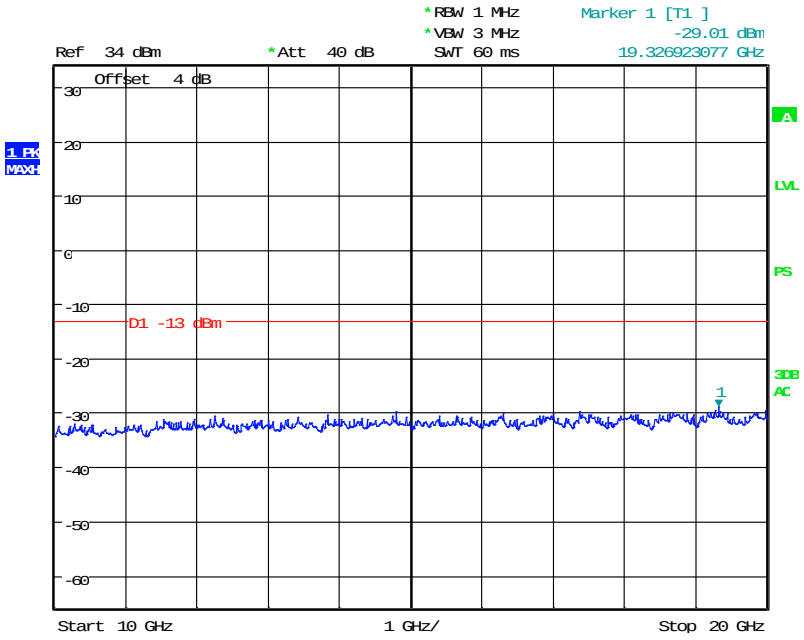
Middle Channel, 2535 MHz, 1GHz to 10GHz



Date: 25.JUN.2015 16:50:20

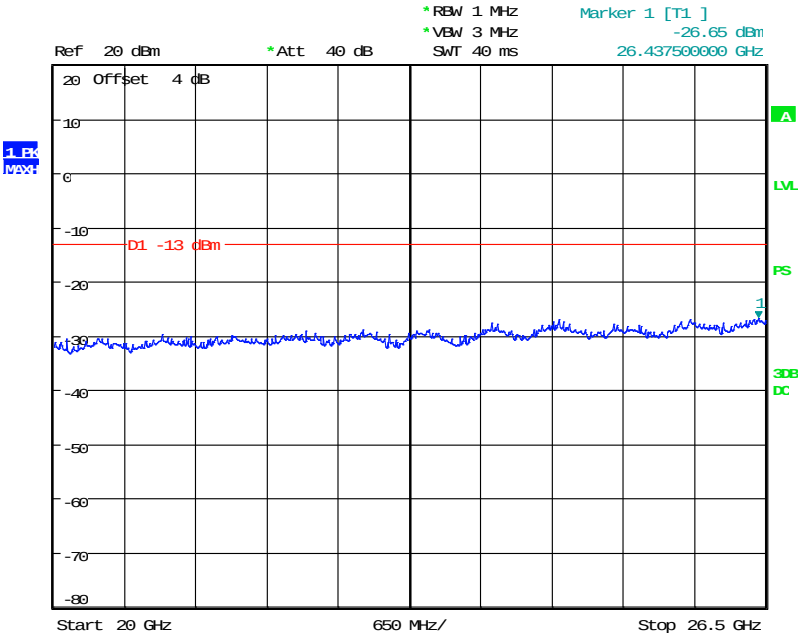
Note: The strong emission shown in each case is the carrier signal.

Middle Channel, 2535 MHz, 10GHz to 20GHz



Date: 25.JUN.2015 16:51:08

Middle Channel, 2535 MHz, 20GHz to 26.5GHz

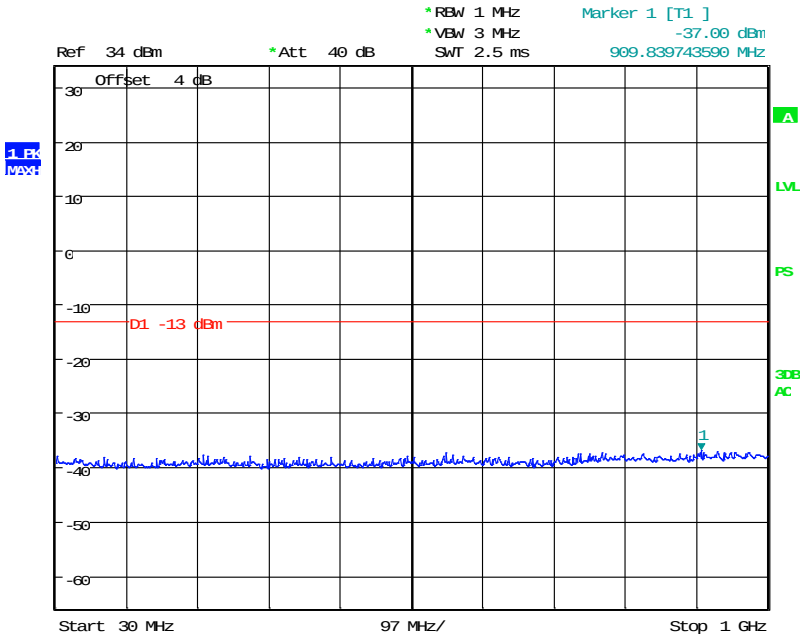


Date: 1.JUL.2015 14:30:13

Graphical results:

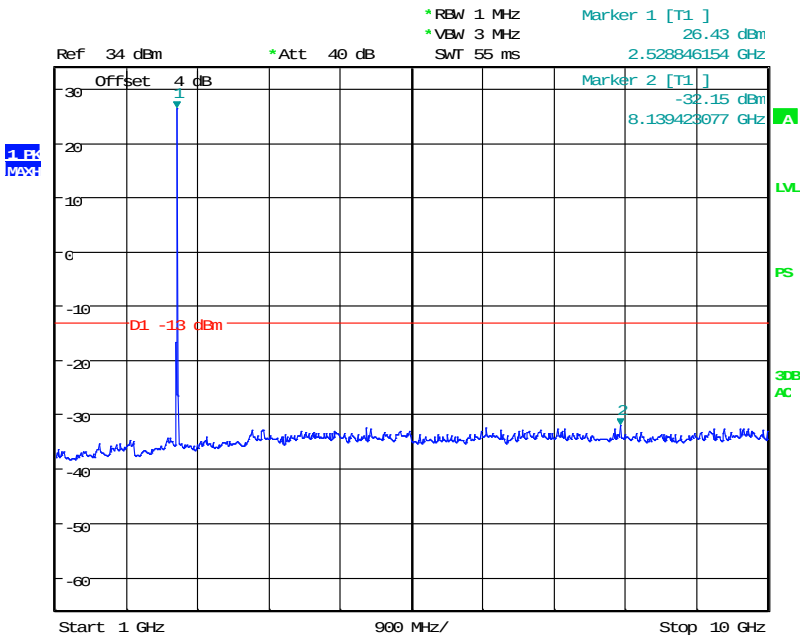
10MHz bandwidth QPSK Mode

Middle Channel, 2535 MHz,30MHz to 1GHz



Date: 25.JUN.2015 16:53:35

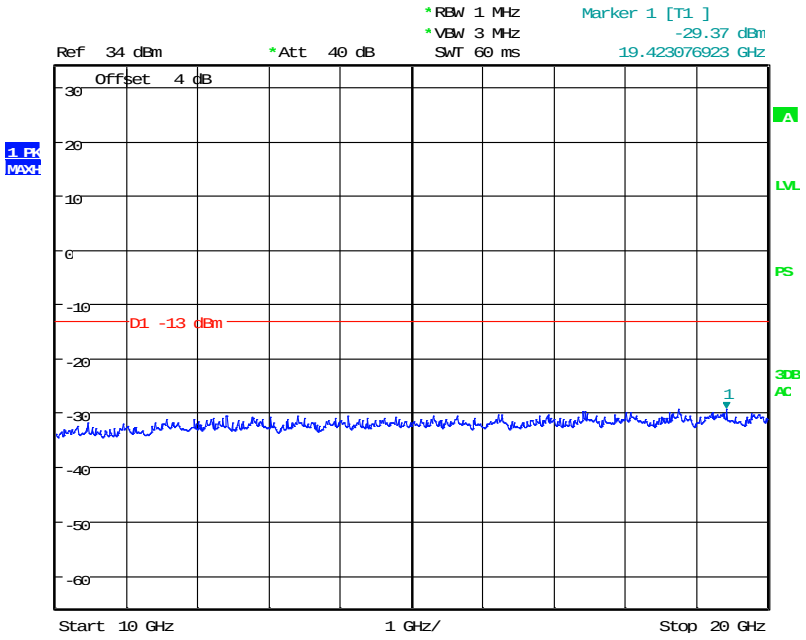
Middle Channel, 2535 MHz, 1GHz to 10GHz



Date: 25.JUN.2015 16:53:12

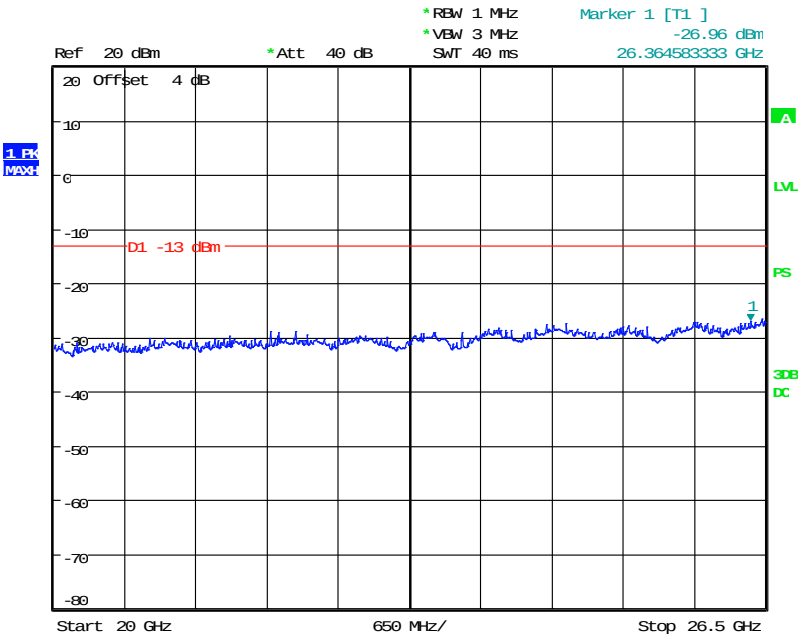
Note: The strong emission shown in each case is the carrier signal.

Middle Channel, 2535 MHz,10GHz to 20GHz



Date: 25.JUN.2015 16:52:39

Middle Channel, 2535 MHz,20GHz to 26.5GHz

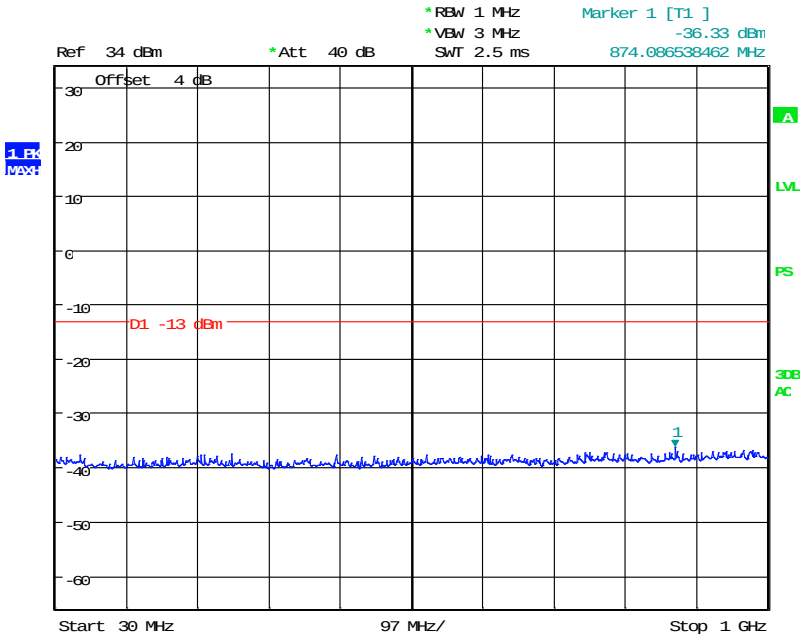


Date: 1.JUL.2015 14:31:39

Graphical results:

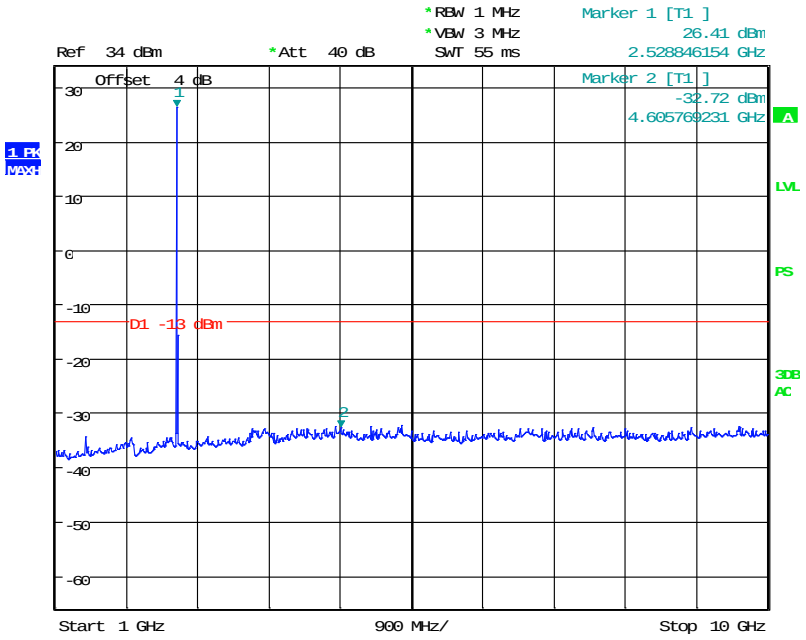
15MHz bandwidth QPSK Mode

Middle Channel, 2535 MHz,30MHz to 1GHz



Date: 25.JUN.2015 16:54:10

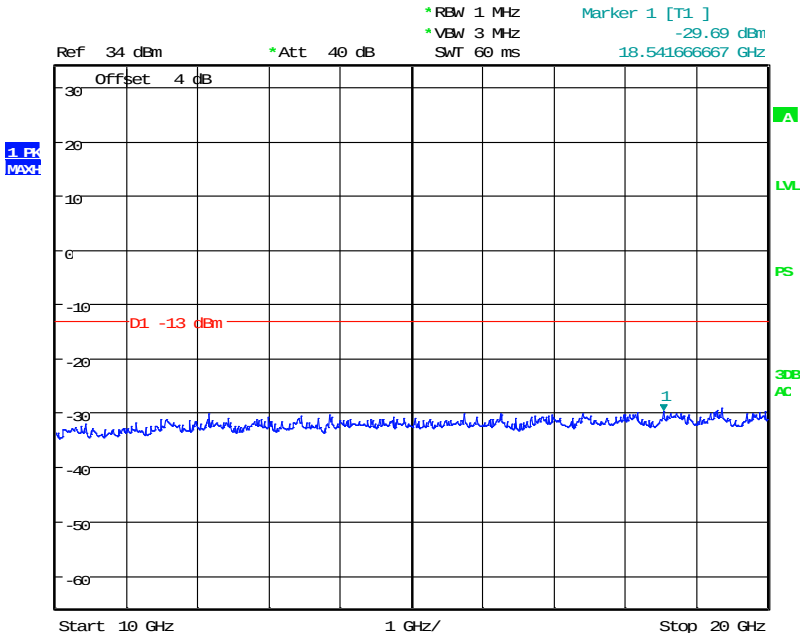
Middle Channel, 2535 MHz, 1GHz to 10GHz



Date: 25.JUN.2015 16:54:43

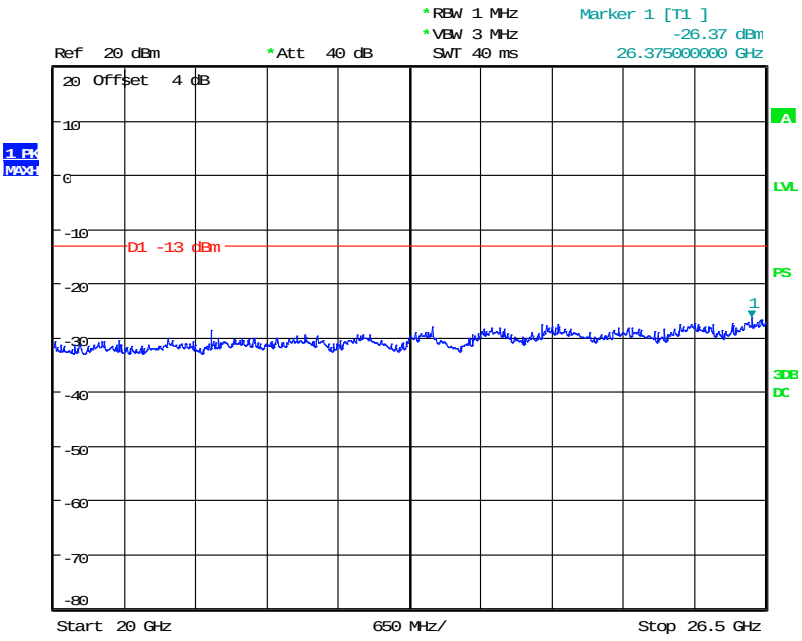
Note: The strong emission shown in each case is the carrier signal.

Middle Channel, 2535 MHz, 10GHz to 20GHz



Date: 25.JUN.2015 16:55:13

Middle Channel, 2535 MHz, 20GHz to 26.5GHz



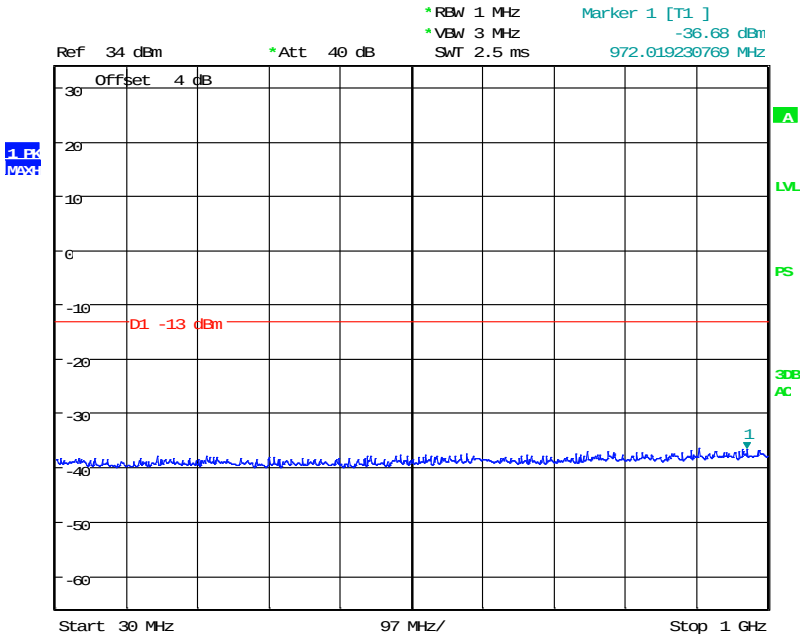
Date: 1.JUL.2015 14:32:10

Report

Graphical results:

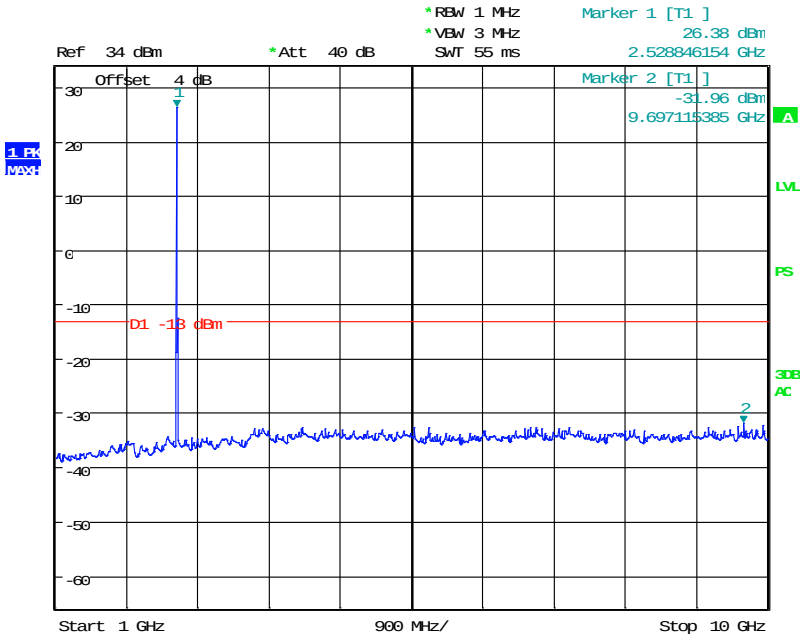
20MHz bandwidth QPSK Mode

Middle Channel, 2535 MHz,30MHz to 1GHz



Date: 25.JUN.2015 16:56:41

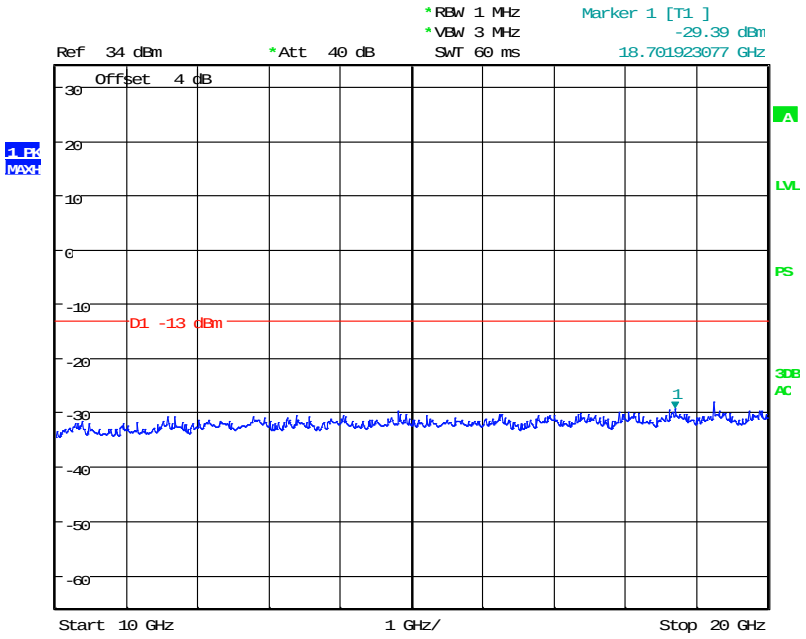
Middle Channel, 2535 MHz,1GHz to 10GHz



Date: 25.JUN.2015 16:56:07

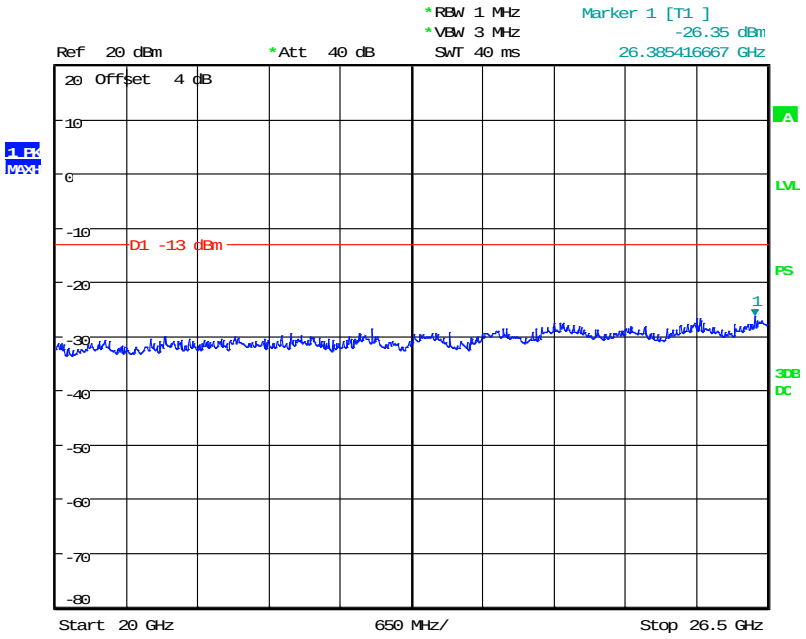
Note: The strong emission shown in each case is the carrier signal.

Middle Channel, 2535 MHz, 10GHz to 20GHz



Date: 25.JUN.2015 16:55:40

Middle Channel, 2535 MHz, 20GHz to 26.5GHz



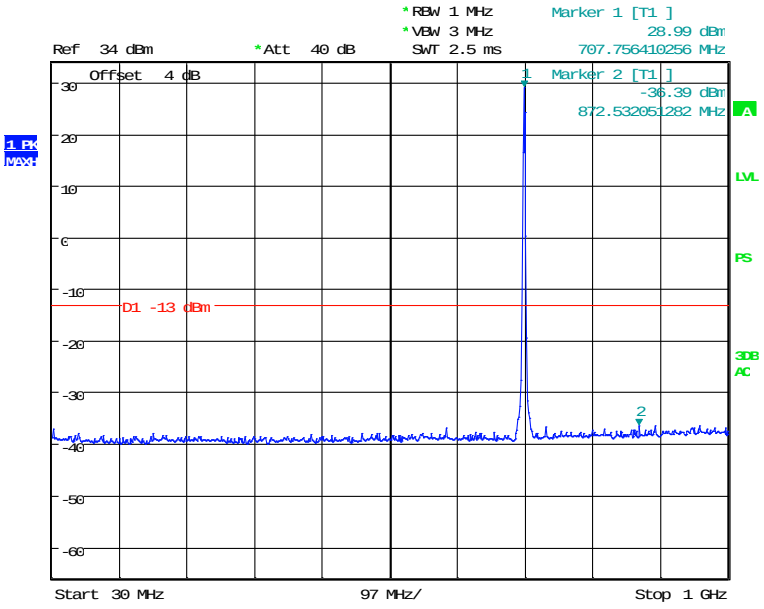
Date: 1.JUL.2015 14:32:37

4.3.3 LTE B12 Conducted Spurious Emission Results

Graphical results:

1.4MHz bandwidth QPSK Mode

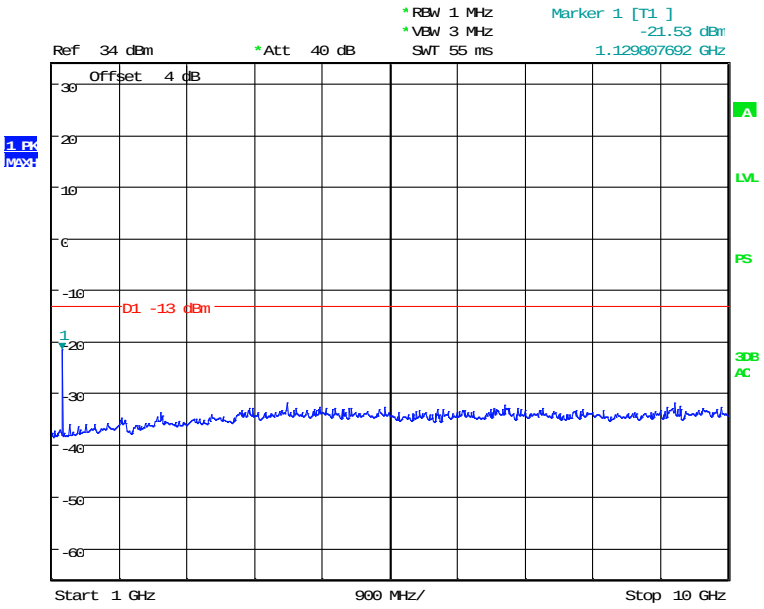
Middle Channel, 707.5 MHz,30MHz to 1GHz



Date: 25.JUN.2015 17:07:38

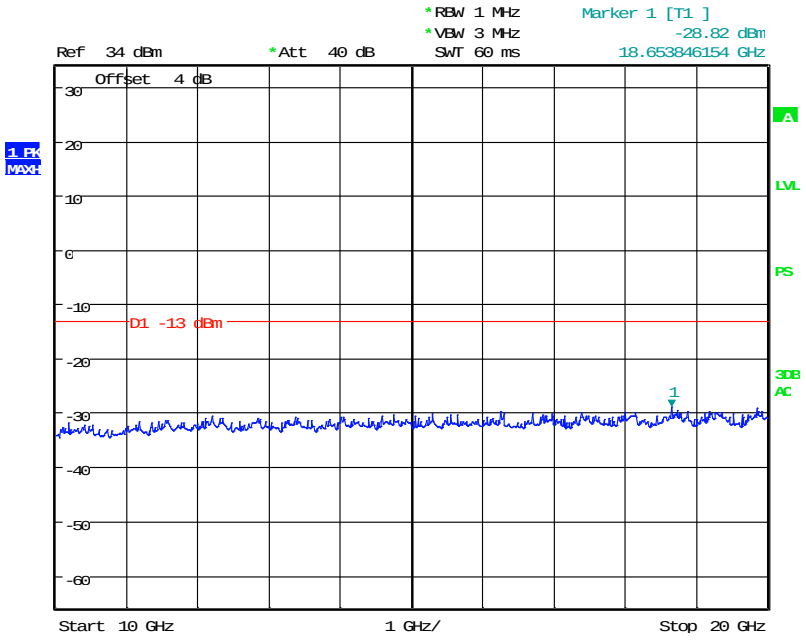
Note: The strong emission shown in each case is the carrier signal.

Middle Channel, 707.5 MHz,1GHz to 10GHz



Date: 25.JUN.2015 17:08:24

Middle Channel, 707.5 MHz, 10GHz to 20GHz

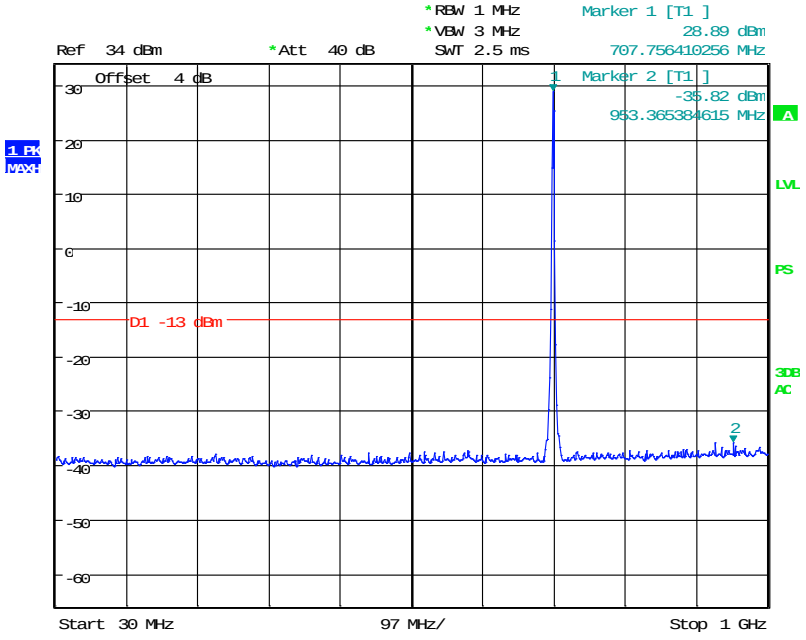


Date: 25.JUN.2015 17:08:53

Graphical results:

3MHz bandwidth QPSK Mode

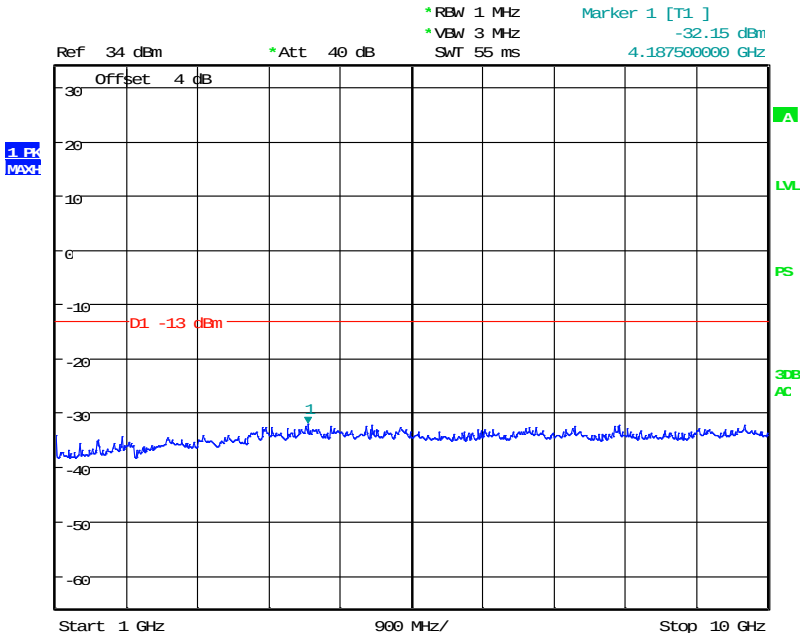
Middle Channel, 707.5 MHz,30MHz to 1GHz



Date: 25.JUN.2015 17:10:51

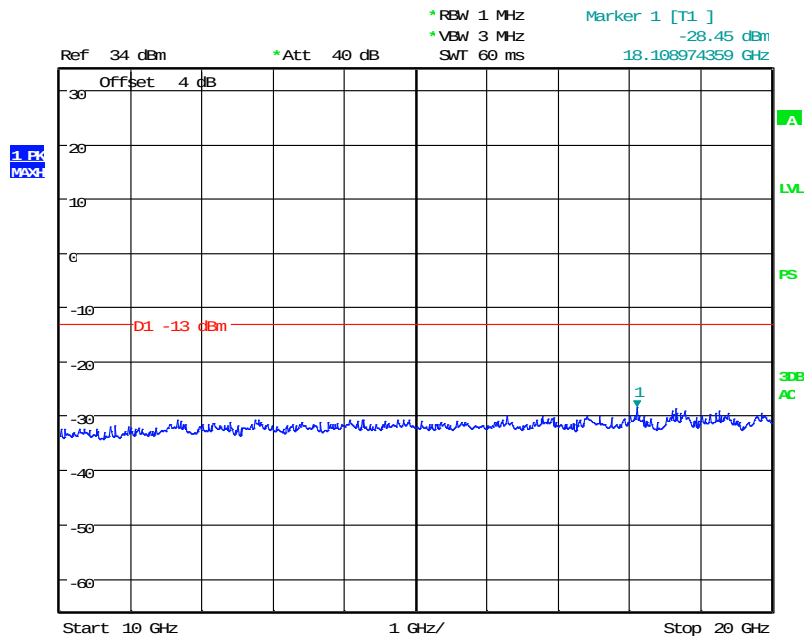
Note: The strong emission shown in each case is the carrier signal.

Middle Channel, 707.5 MHz,1GHz to 10GHz



Date: 25.JUN.2015 17:10:21

Middle Channel, 707.5 MHz,10GHz to 20GHz

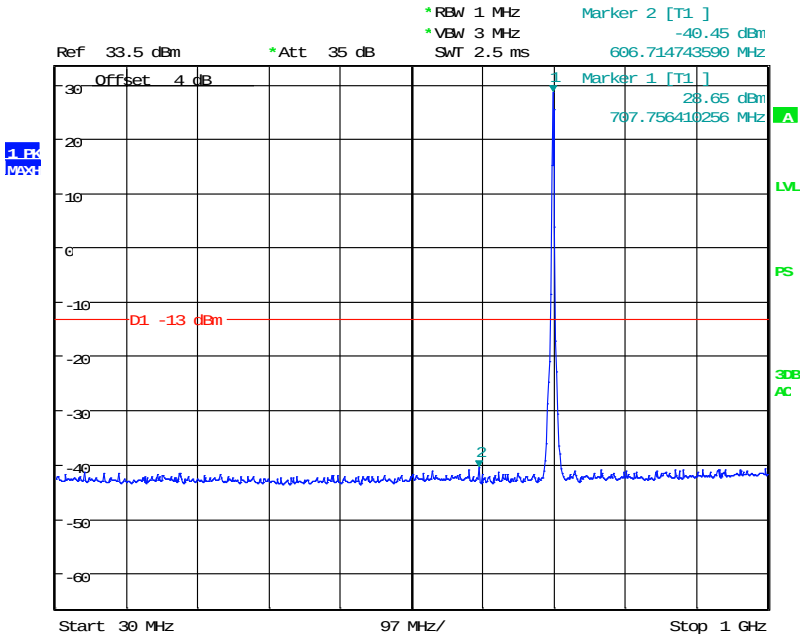


Date: 25.JUN.2015 17:09:26

Graphical results:

5MHz bandwidth QPSK Mode

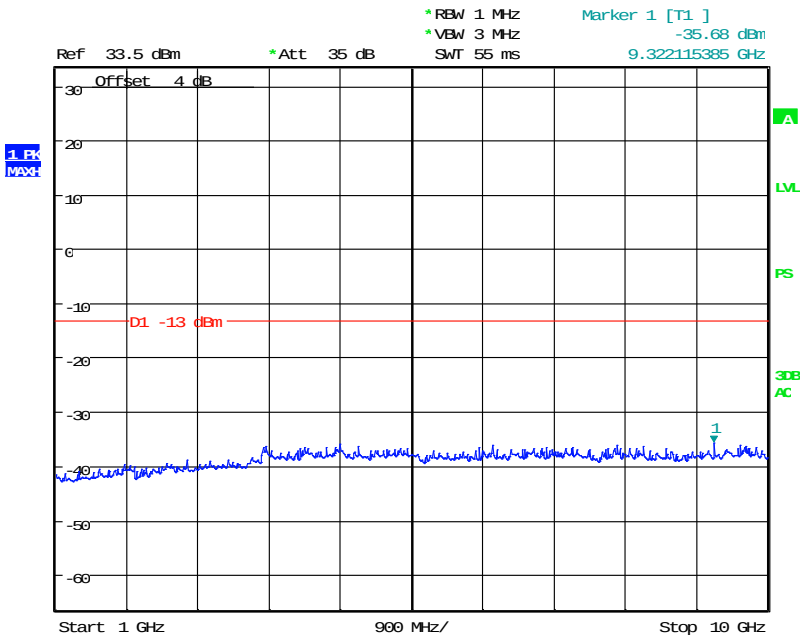
Middle Channel, 707.5 MHz,30MHz to 1GHz



Date: 25.JUN.2015 17:27:10

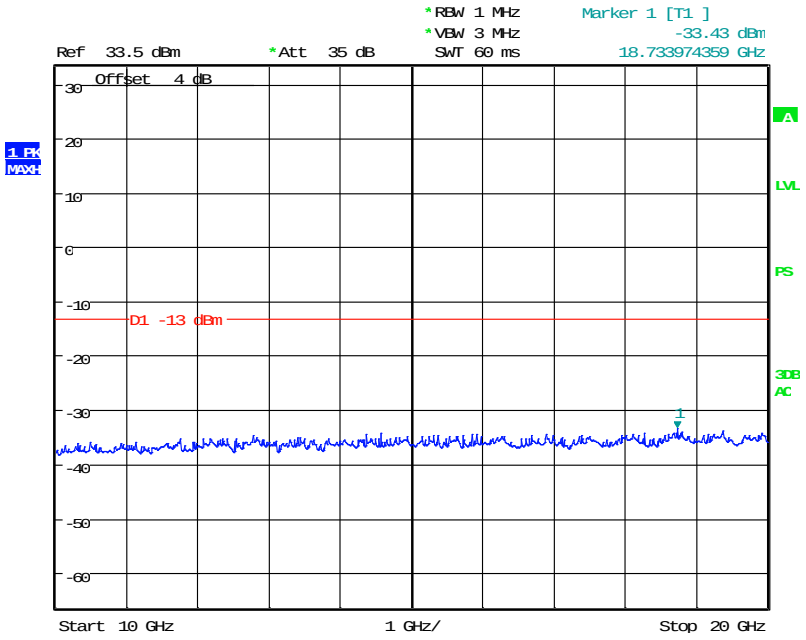
Note: The strong emission shown in each case is the carrier signal.

Middle Channel, 707.5 MHz, 1GHz to 10GHz



Date: 25.JUN.2015 17:26:08

Middle Channel, 707.5 MHz,10GHz to 20GHz

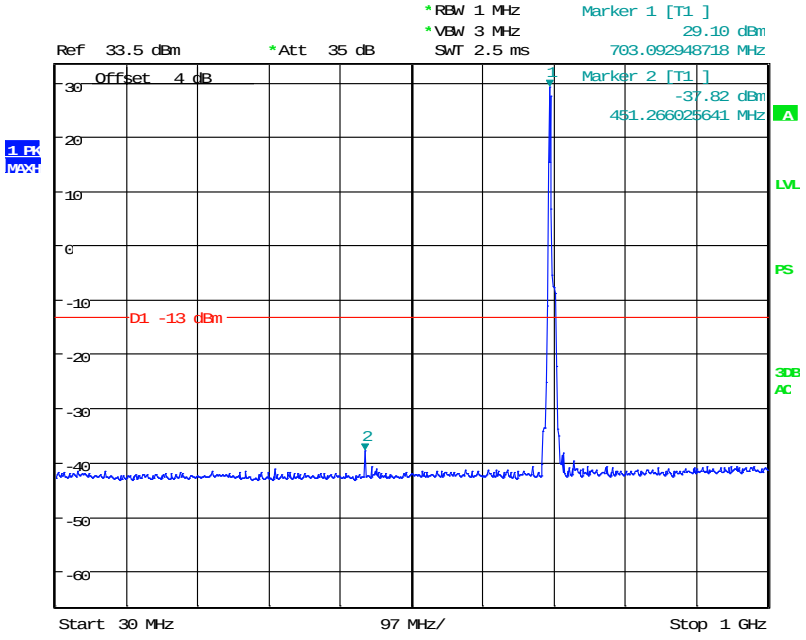


Date: 25.JUN.2015 17:25:22

Graphical results:

10MHz bandwidth QPSK Mode

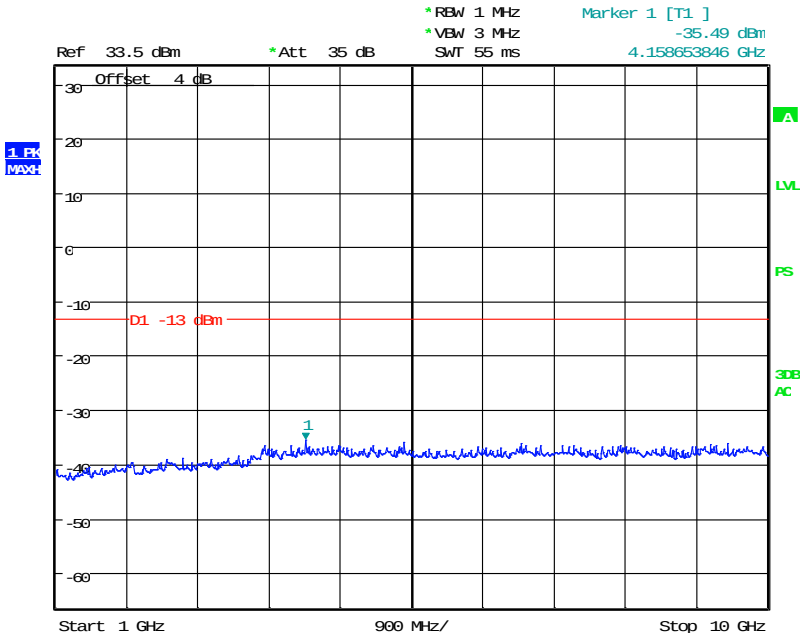
Middle Channel, 707.5 MHz,30MHz to 1GHz



Date: 25.JUN.2015 17:22:13

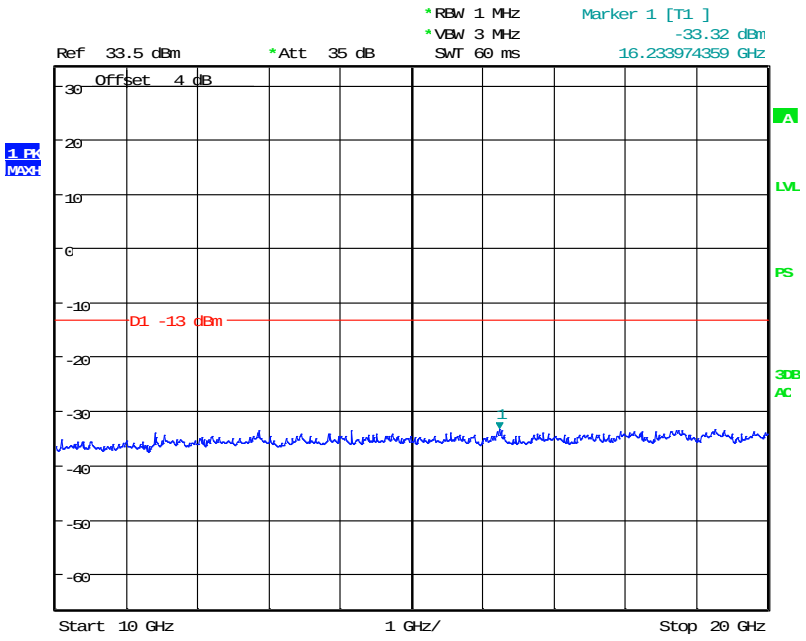
Note: The strong emission shown in each case is the carrier signal.

Middle Channel, 707.5 MHz,1GHz to 10GHz



Date: 25.JUN.2015 17:22:58

Middle Channel, 707.5 MHz,10GHz to 20GHz



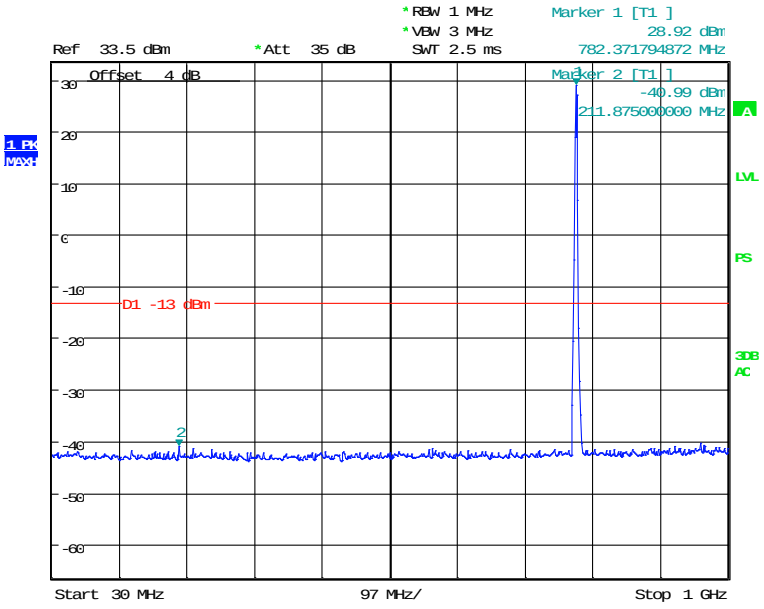
Date: 25.JUN.2015 17:24:56

4.3.4 LTE B13 Conducted Spurious Emission Results

Graphical results:

5MHz bandwidth QPSK Mode

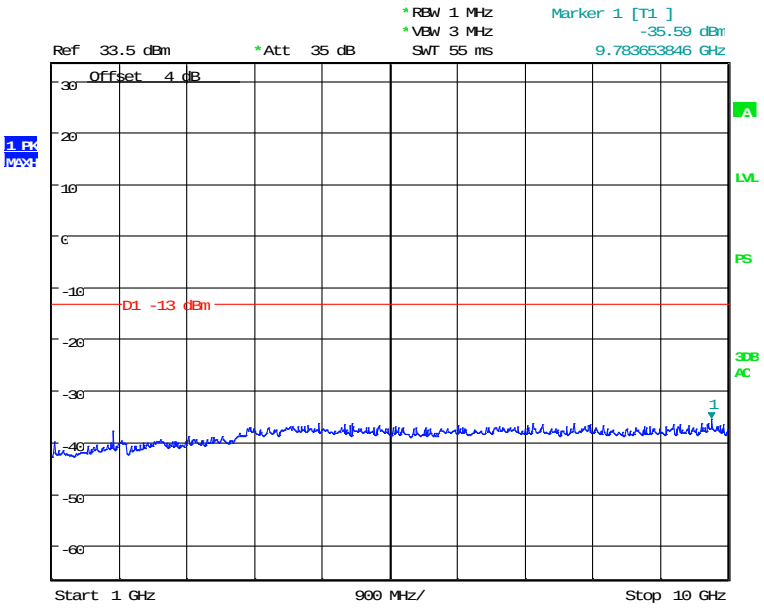
Middle Channel, 782 MHz,30MHz to 1GHz



Date: 25.JUN.2015 17:35:35

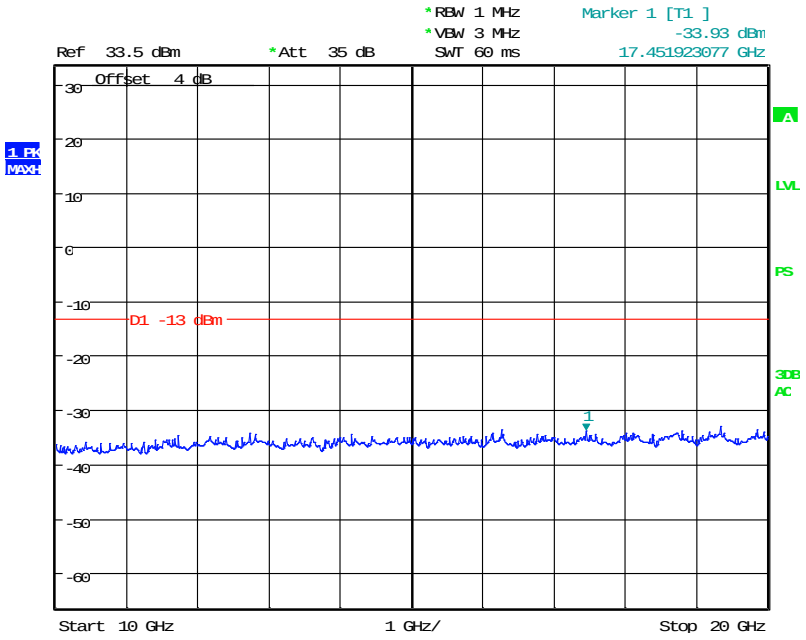
Note: The strong emission shown in each case is the carrier signal.

Middle Channel, 782 MHz, 1GHz to 10GHz



Date: 25.JUN.2015 17:34:56

Middle Channel, 782 MHz, 10GHz to 20GHz

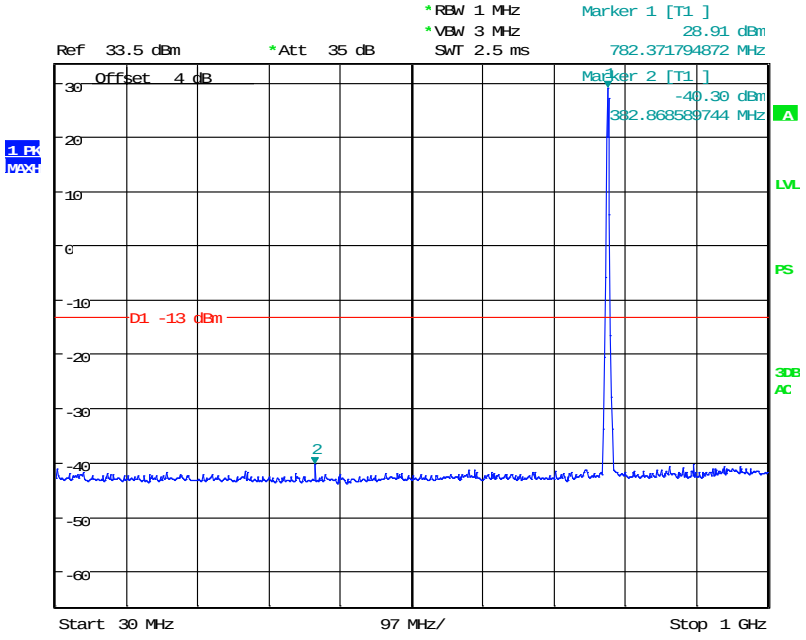


Date: 25.JUN.2015 17:34:22

Graphical results:

10MHz bandwidth QPSK Mode

Middle Channel, 782 MHz, 30MHz to 1GHz



Date: 25.JUN.2015 17:30:59

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