FCC RF Test Report

APPLICANT	:	Motorola Solutions, Inc.
EQUIPMENT	:	Touch Computer
BRAND NAME	:	Motorola
MODEL NAME	:	TC55AH
FCC ID	:	UZ7TC55AH
STANDARD	:	FCC 47 CFR Part 2, 22(H), 24(E), 27
CLASSIFICATION	:	PCS Licensed Transmitter Held to Ear (PCE)

The product was received on Jun. 02, 2013 and completely tested on Jul. 02, 2013. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI / TIA / EIA-603-C-2004 and shown compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC., the test report shall not be reproduced except in full.

Louis Wu

Reviewed by: Louis Wu / Manager

Jones Tsai

Approved by: Jones Tsai / Manager

Testing Laboratory 1190

SPORTON INTERNATIONAL INC.

No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG322304-07B	Rev. 01	Initial issue of report	Aug. 14, 2013

SUMMARY OF TEST RESULT

Report Section	FCC Rule	IC Rule	Description	Limit	Result	Remark
3.1	§2.1046	RSS-132 (5.4) RSS-133 (6.4) RSS-139(6.4)	Conducted Output Power	Reporting Only	PASS	-
3.2	§24.232(d) 27.50(d)(5)	RSS-132 (5.4) RSS-133 (6.4) RSS-139(6.4)	Peak-to-Average Ratio	<13 dB	PASS	-
3.3	§22.913(a)(2)	RSS-132(5.4) SRSP-503(5.1.3)	Effective Radiated Power (Band 5)	ERP < 7 Watts	PASS	-
	§27.50(c)(10)	N/A	Effective Radiated Power (Band 17)	ERP < 3 Watts		
	§24.232(c)	RSS-133 (6.4) SRSP-510(5.1.2)	Equivalent Isotropic Radiated Power (Band 2)	EIRP < 2Watt		
	§27.50(d)(4)	RSS-139 (6.4) SRSP-513(5.1.2)	Equivalent Isotropic Radiated Power (Band 4)	EIRP < 1Watt		
3.4	§2.1049 §22.917(b) §24.238(b) §27.53(h)(3)	RSS-GEN(4.6.1) RSS-132 (3.1) RSS-133(3.1) RSS-139 (3.1)	Occupied Bandwidth	Reporting Only	PASS	-
3.5	§2.1049 §22.917(a) §24.238(a) §27.53(g)(h)	RSS-132 (5.5) RSS-133 (6.5) RSS-139 (6.5)	Conducted Band Edge Measurement (Band 2) (Band 4) (Band 5) (Band 17)	< 43+10log10(P[Watts])	PASS	-

Report Section	FCC Rule	IC Rule	Description	Limit	Result	Remark
3.6	§2.1051 §22.917(a) §24.238(a) §27.53(g)(h)	RSS-132 (5.5) RSS-133 (6.5) RSS-139 (6.5)	Conducted Spurious Emission (Band 2) (Band 4) (Band 5) (Band 17)	< 43+10log$_{10}$(P[Watts])	PASS	-
3.7	§2.1053 §22.917(a) §24.238(a) §27.53(g)(h)	RSS-132 (5.5) RSS-133 (6.5) RSS-139 (6.5)	Radiated Spurious Emission (Band 2) (Band 4) (Band 5) (Band 17)	< 43+10log$_{10}$(P[Watts])	PASS	Under limit 24.00 dB at 1648.000 MHz
3.8	§2.1055 §22.355 §24.235 §27.54	RSS-132(5.3) RSS-133(6.3) RSS-139 (6.3)	Frequency Stability Temperature & Voltage	< 2.5 ppm	PASS	-

1 General Description

1.1 Applicant

Motorola Solutions, Inc.
One Motorola Plaza, Holtsville, NY 11742-1300 USA

1.2 Manufacturer

Motorola Solutions, Inc.
One Motorola Plaza, Holtsville, NY 11742-1300 USA

1.3 Feature of Equipment Under Test

Product Feature	
Equipment	Touch Computer
Brand Name	Motorola
Model Name	TC55AH
FCC ID	UZ7TC55AH
Sample 1	EUT with Scanner
Sample 2	EUT without Scanner
EUT supports Radios application	GSM/EGPRS/WCDMA/HSPA/LTE
HW Version	DV1
SW Version	Android 4.1.2
FW Version	BSP 1.27
EUT Stage	Identical Prototype

Remark: The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

1.4 Product Specification of Equipment Under Test

Product Specification subjective to this standard	
Tx Frequency	LTE Band 2 : 1852.5 MHz ~ 1907.5 MHz LTE Band 4 : 1712.5 MHz ~ 1752.5 MHz LTE Band 5 : 826.5 MHz ~ 846.5 MHz LTE Band 17 : 706.5 MHz ~ 713.5 MHz
Rx Frequency	LTE Band 2 : 1932.5 MHz ~ 1987.5 MHz LTE Band 4 : 2112.5 MHz ~ 2152.5 MHz LTE Band 5 : 871.5 MHz ~ 891.5 MHz LTE Band 17 : 736.5 MHz ~ 743.5 MHz
Bandwidth	5MHz / 10MHz
Maximum Output Power to Antenna	LTE Band 2 : 24.41 dBm LTE Band 4 : 24.40 dBm LTE Band 5 : 24.36 dBm LTE Band 17 : 24.49 dBm
Antenna Type	Monopole Antenna
Type of Modulation	QPSK / 16QAM

1.5 Modification of EUT

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

1.6 Emission Designator

FCC Rule	System	Type of Modulation	BW	Maximum ERP/EIRP (W)	Frequency Tolerance (%, Hz, ppm)	Emission Designator
Part 22	LTE Band 5	QPSK	5 MHz	0.1291 W	0.017 ppm	4M50G7D
Part 22	LTE Band 5	16QAM	5 MHz	0.1102 W	0.017 ppm	4M50D7W
Part 22	LTE Band 5	QPSK	10 MHz	0.1607 W	0.017 ppm	9M07G7D
Part 22	LTE Band 5	16QAM	10 MHz	0.1337 W	0.018 ppm	9M07D7W
Part 24	LTE Band 2	QPSK	5 MHz	0.3581 W	0.017 ppm	4M50G7D
Part 24	LTE Band 2	16QAM	5 MHz	0.3133 W	0.017 ppm	4M52D7W
Part 24	LTE Band 2	QPSK	10 MHz	0.3597 W	0.016 ppm	9M07G7D
Part 24	LTE Band 2	16QAM	10 MHz	0.2985 W	0.017 ppm	9M10D7W
Part 27	LTE Band 4	QPSK	5MHz	0.1626 W	0.016 ppm	4M50G7D
Part 27	LTE Band 4	16QAM	5MHz	0.1337 W	0.017 ppm	4M54D7W
Part 27	LTE Band 4	QPSK	10MHz	0.1977 W	0.017 ppm	9M07G7D
Part 27	LTE Band 4	16QAM	10MHz	0.1726 W	0.017 ppm	9M07D7W
Part 27	LTE Band 17	QPSK	5MHz	0.1274 W	0.017 ppm	4M54G7D
Part 27	LTE Band 17	16QAM	5MHz	0.1089 W	0.017 ppm	4M54D7W
Part 27	LTE Band 17	QPSK	10MHz	0.1535 W	0.017 ppm	9M10G7D
Part 27	LTE Band 17	16QAM	10MHz	0.1081 W	0.018 ppm	9M10D7W

1.7 Testing Site

Test Site	SPORTON INTERNATIONAL INC.		
Test Site Location	No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C. TEL: +886-3-327-3456 FAX: +886-3-328-4978		
Test Site No.	Sporton Site No.		FCC/IC Registration No.
	TH02-HY	03CH07-HY	TW1022/4086B-1

1.8 Applied Standards

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

- 47 CFR Part 2, 22(H), 24(E), 27
- ANSI / TIA / EIA-603-C-2004
- FCC KDB 971168 D01 Power Meas. License Digital Systems v02r01

Remark:

1. All test items were verified and recorded according to the standards and without any deviation during the test.
2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.

2 Test Configuration of Equipment Under Test

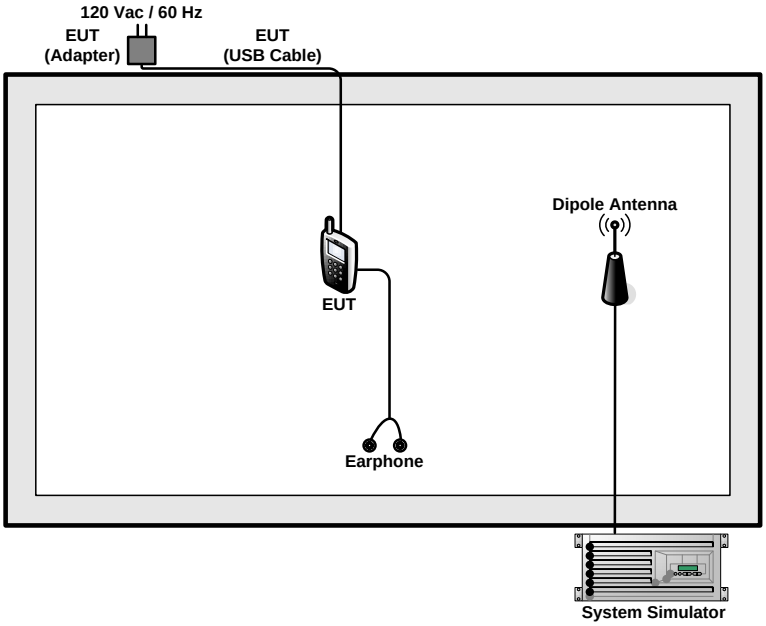
2.1 Test Mode

During all testing, EUT is in link mode with base station emulator at maximum power level. The spurious emission measurements were carried out in semi-anechoic chamber with 3-meter test range, and EUT is rotated on three test planes to find out the worst emission.

Frequency range investigated for radiated emission: 30MHz to 10th harmonic.

Test Modes			
Band		Radiated TCs	Conducted TCs
		Modulation : QPSK	Modulation : QPSK / 16QAM
LTE Band 5	BW 5MHz	■ LTE (RB Size 1) Link + Battery 2 for Sample 1	■ LTE (RB Size 1) Link ■ LTE (RB Size 12) Link ■ LTE (RB Size 25) Link
	BW 10MHz	■ LTE (RB Size 1) Link +Battery 2 for Sample 1 ■ LTE (RB Size 1) Link + Battery 1 for Sample 1 ■ LTE (RB Size 1) Link + Battery 2 for Sample 2	■ LTE (RB Size 1) Link ■ LTE (RB Size 25) Link ■ LTE (RB Size 50) Link
LTE Band 2	BW 5MHz	■ LTE (RB Size 1) Link + Battery 2 for Sample 1	■ LTE (RB Size 1) Link ■ LTE (RB Size 12) Link ■ LTE (RB Size 25) Link
	BW 10MHz	■ LTE (RB Size 1) Link + Battery 2 for Sample 1	■ LTE (RB Size 1) Link ■ LTE (RB Size 25) Link ■ LTE (RB Size 50) Link
LTE Band 4	BW 5MHz	■ LTE (RB Size 1) Link + Battery 2 for Sample 1	■ LTE (RB Size 1) Link ■ LTE (RB Size 12) Link ■ LTE (RB Size 25) Link
	BW 10MHz	■ LTE (RB Size 1) Link + Battery 2 for Sample 1	■ LTE (RB Size 1) Link ■ LTE (RB Size 25) Link ■ LTE (RB Size 50) Link
LTE Band 17	BW 5MHz	■ LTE (RB Size 1) Link + Battery 2 for Sample 1 ■ LTE (RB Size 1) Link + Battery 1 for Sample 1 ■ LTE (RB Size 1) Link + Battery 2 for Sample 2	■ LTE (RB Size 1) Link ■ LTE (RB Size 12) Link ■ LTE (RB Size 25) Link
	BW 10MHz	■ LTE (RB Size 1) Link + Battery 2 for Sample 1	■ LTE (RB Size 1) Link ■ LTE (RB Size 25) Link ■ LTE (RB Size 50) Link

2.2 Connection Diagram of Test System



2.3 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model No.	FCC ID	Data Cable	Power Cord
1.	LTE Base Station	Anritsu	MT8820C	N/A	N/A	Unshielded, 1.8 m
2.	Earphone	Cotron	MAX-300	N/A	Unshielded, 1.2m	N/A

2.4 Measurement Results Explanation Example

For all conducted test items:

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

Example :

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

Offset = RF cable loss + attenuator factor.

Following shows an offset computation example with cable loss 4.2 dB and 10dB attenuator.

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

= 4.2 + 10 = 14.2 (dB)

3 Test Result

3.1 Conducted Output Power Measurement

3.1.1 Description of the Conducted Output Power Measurement

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

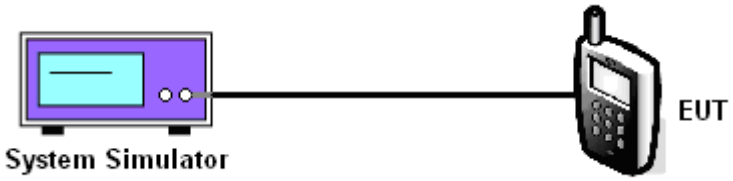
3.1.2 Measuring Instruments

See list of measuring instruments of this test report.

3.1.3 Test Procedures

1. The transmitter output port was connected to base station.
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set EUT at maximum power through base station.
4. Select lowest, middle, and highest channels for each band and different modulation.
5. Measure the RMS power for LTE.

3.1.4 Test Setup



3.1.5 Test Result of Conducted Output Power

Mode	Band Width	Channel	Frequency (MHz)	Modulation	RB Configuration		Average Power (dBm)	Average Power (Watts)
					RB Size	RB Offset		
LTE Band 5	5MHz	20425	826.5	QPSK	1	0	24.30	0.2692
					1	12	24.27	0.2673
					1	24	24.31	0.2698
					12	0	23.41	0.2193
					12	6	23.36	0.2168
					12	11	23.30	0.2138
					25	0	23.35	0.2163
				16-QAM	1	0	23.23	0.2104
					1	12	23.30	0.2138
					1	24	23.33	0.2153
					12	0	22.38	0.1730
					12	6	22.34	0.1714
					12	11	22.29	0.1694
					25	0	22.23	0.1671
		20525	836.5	QPSK	1	0	24.28	0.2679
					1	12	24.27	0.2673
					1	24	24.21	0.2636
					12	0	23.36	0.2168
					12	6	23.20	0.2089
					12	11	23.15	0.2065
					25	0	23.20	0.2089
				16-QAM	1	0	23.30	0.2138
					1	12	23.34	0.2158
					1	24	23.21	0.2094
					12	0	22.35	0.1718
					12	6	22.21	0.1663
					12	11	22.16	0.1644
					25	0	22.15	0.1641
		20625	846.5	QPSK	1	0	23.90	0.2455
					1	12	23.95	0.2483
					1	24	23.95	0.2483
					12	0	22.99	0.1991
					12	6	23.01	0.2000
					12	11	23.04	0.2014
					25	0	22.92	0.1959
				16-QAM	1	0	22.93	0.1963
					1	12	23.00	0.1995
					1	24	23.00	0.1995
					12	0	21.89	0.1545
					12	6	21.95	0.1567
					12	11	21.99	0.1581
					25	0	21.81	0.1517

Mode	Band Width	Channel	Frequency (MHz)	Modulation	RB Configuration		Average Power (dBm)	Average Power (Watts)
					RB Size	RB Offset		
LTE Band 5	10MHz	20450	829	QPSK	1	0	24.36	0.2729
					1	24	24.31	0.2698
					1	49	24.35	0.2723
					25	0	23.33	0.2153
					25	12	23.26	0.2118
					25	24	23.24	0.2109
					50	0	23.24	0.2109
				16-QAM	1	0	23.33	0.2153
					1	24	23.37	0.2173
					1	49	23.38	0.2178
					25	0	22.19	0.1656
					25	12	22.20	0.1660
					25	24	22.19	0.1656
					50	0	22.09	0.1618
		20525	836.5	QPSK	1	0	24.30	0.2692
					1	24	24.29	0.2685
					1	49	23.95	0.2483
					25	0	23.25	0.2113
					25	12	23.21	0.2094
					25	24	23.09	0.2037
					50	0	23.10	0.2042
				16-QAM	1	0	23.31	0.2143
					1	24	23.30	0.2138
					1	49	22.93	0.1963
					25	0	22.19	0.1656
					25	12	22.13	0.1633
					25	24	22.00	0.1585
					50	0	21.99	0.1581
		20600	844	QPSK	1	0	24.09	0.2564
					1	24	23.82	0.2410
					1	49	23.97	0.2495
					25	0	22.95	0.1972
					25	12	22.83	0.1919
					25	24	22.81	0.1910
					50	0	22.86	0.1932
				16-QAM	1	0	23.11	0.2046
					1	24	22.97	0.1982
					1	49	23.04	0.2014
					25	0	21.84	0.1528
					25	12	21.79	0.1510
					25	24	21.76	0.1500
					50	0	21.76	0.1500

Mode	Band Width	Channel	Frequency (MHz)	Modulation	RB Configuration		Average Power (dBm)	Average Power (Watts)
					RB Size	RB Offset		
LTE Band 2	5MHz	18625	1852.5	QPSK	1	0	24.15	0.2600
					1	12	24.19	0.2624
					1	24	24.05	0.2541
					12	0	23.28	0.2128
					12	6	23.39	0.2183
					12	11	23.30	0.2138
					25	0	23.33	0.2153
				16-QAM	1	0	23.24	0.2109
					1	12	23.26	0.2118
					1	24	23.13	0.2056
					12	0	22.33	0.1710
					12	6	22.44	0.1754
					12	11	22.36	0.1722
					25	0	22.22	0.1667
		18900	1880	QPSK	1	0	24.28	0.2679
					1	12	24.25	0.2661
					1	24	24.20	0.2630
					12	0	23.34	0.2158
					12	6	23.31	0.2143
					12	11	23.29	0.2133
					25	0	23.23	0.2104
				16-QAM	1	0	23.33	0.2153
					1	12	23.33	0.2153
					1	24	23.33	0.2153
					12	0	22.36	0.1722
					12	6	22.29	0.1694
					12	11	22.39	0.1734
					25	0	22.23	0.1671
		19175	1907.5	QPSK	1	0	24.10	0.2570
					1	12	24.11	0.2576
					1	24	24.07	0.2553
					12	0	23.14	0.2061
					12	6	23.19	0.2084
					12	11	23.14	0.2061
					25	0	23.11	0.2046
				16-QAM	1	0	23.19	0.2084
					1	12	23.14	0.2061
					1	24	23.14	0.2061
					12	0	22.27	0.1687
					12	6	22.28	0.1690
					12	11	22.16	0.1644
					25	0	22.11	0.1626

Mode	Band Width	Channel	Frequency (MHz)	Modulation	RB Configuration		Average Power (dBm)	Average Power (Watts)
					RB Size	RB Offset		
LTE Band 2	10MHz	18650	1855.0	QPSK	1	0	24.41	0.2761
					1	24	24.30	0.2692
					1	49	24.35	0.2723
					25	0	23.21	0.2094
					25	12	23.09	0.2037
					25	24	23.18	0.2080
					50	0	22.96	0.1977
				16-QAM	1	0	23.22	0.2099
					1	24	23.14	0.2061
					1	49	23.12	0.2051
					25	0	22.19	0.1656
					25	12	22.14	0.1637
					25	24	22.13	0.1633
					50	0	21.96	0.1570
		18900	1880.0	QPSK	1	0	24.33	0.2710
					1	24	24.31	0.2698
					1	49	24.19	0.2624
					25	0	23.33	0.2153
					25	12	23.24	0.2109
					25	24	23.30	0.2138
					50	0	23.15	0.2065
				16-QAM	1	0	23.41	0.2193
					1	24	23.33	0.2153
					1	49	23.26	0.2118
					25	0	22.32	0.1706
					25	12	22.30	0.1698
					25	24	22.29	0.1694
					50	0	22.14	0.1637
		19150	1905.0	QPSK	1	0	24.32	0.2704
					1	24	24.12	0.2582
					1	49	24.14	0.2594
					25	0	23.18	0.2080
					25	12	23.17	0.2075
					25	24	23.19	0.2084
					50	0	23.01	0.2000
				16-QAM	1	0	23.24	0.2109
					1	24	23.23	0.2104
					1	49	23.16	0.2070
					25	0	22.25	0.1679
					25	12	22.13	0.1633
					25	24	22.17	0.1648
					50	0	22.02	0.1592

Mode	Band Width	Channel	Frequency (MHz)	Modulation	RB Configuration		Average Power (dBm)	Average Power (Watts)
					RB Size	RB Offset		
LTE Band 4	5MHz	19975	1712.5	QPSK	1	0	24.32	0.2704
					1	12	24.26	0.2667
					1	24	24.38	0.2742
					12	0	23.41	0.2193
					12	6	23.32	0.2148
					12	11	23.32	0.2148
					25	0	23.28	0.2128
				16-QAM	1	0	23.35	0.2163
					1	12	23.31	0.2143
					1	24	23.30	0.2138
					12	0	22.45	0.1758
					12	6	22.37	0.1726
					12	11	22.40	0.1738
					25	0	22.32	0.1706
		20175	1732.5	QPSK	1	0	24.15	0.2600
					1	12	24.10	0.2570
					1	24	24.02	0.2523
					12	0	23.24	0.2109
					12	6	23.13	0.2056
					12	11	23.11	0.2046
					25	0	23.09	0.2037
				16-QAM	1	0	23.18	0.2080
					1	12	23.10	0.2042
					1	24	23.04	0.2014
					12	0	22.19	0.1656
					12	6	22.21	0.1663
					12	11	22.16	0.1644
					25	0	22.07	0.1611
		20375	1752.5	QPSK	1	0	23.87	0.2438
					1	12	23.95	0.2483
					1	24	23.94	0.2477
					12	0	22.97	0.1982
					12	6	22.99	0.1991
					12	11	22.94	0.1968
					25	0	22.93	0.1963
				16-QAM	1	0	22.90	0.1950
					1	12	22.99	0.1991
					1	24	22.92	0.1959
					12	0	21.98	0.1578
					12	6	22.02	0.1592
					12	11	22.03	0.1596
					25	0	21.92	0.1556

Mode	Band Width	Channel	Frequency (MHz)	Modulation	RB Configuration		Average Power (dBm)	Average Power (Watts)
					RB Size	RB Offset		
LTE Band 4	10MHz	20000	1715.0	QPSK	1	0	24.40	0.2754
					1	24	24.34	0.2716
					1	49	24.39	0.2748
					25	0	23.33	0.2153
					25	12	23.38	0.2178
					25	24	23.44	0.2208
					50	0	23.22	0.2099
				16-QAM	1	0	23.41	0.2193
					1	24	23.42	0.2198
					1	49	23.32	0.2148
					25	0	22.30	0.1698
					25	12	22.42	0.1746
					25	24	22.45	0.1758
					50	0	22.26	0.1683
		20175	1732.5	QPSK	1	0	24.32	0.2704
					1	24	24.10	0.2570
					1	49	24.01	0.2518
					25	0	23.14	0.2061
					25	12	23.05	0.2018
					25	24	23.04	0.2014
					50	0	22.97	0.1982
				16-QAM	1	0	23.38	0.2178
					1	24	23.19	0.2084
					1	49	23.07	0.2028
					25	0	22.10	0.1622
					25	12	22.00	0.1585
					25	24	22.01	0.1589
					50	0	21.95	0.1567
		20350	1750.0	QPSK	1	0	23.94	0.2477
					1	24	23.92	0.2466
					1	49	23.93	0.2472
					25	0	22.88	0.1941
					25	12	22.93	0.1963
					25	24	22.97	0.1982
					50	0	22.77	0.1892
				16-QAM	1	0	23.00	0.1995
					1	24	23.09	0.2037
					1	49	22.98	0.1986
					25	0	21.88	0.1542
					25	12	21.93	0.1560
					25	24	21.97	0.1574
					50	0	21.79	0.1510

Mode	Band Width	Channel	Frequency (MHz)	Modulation	RB Configuration		Average Power (dBm)	Average Power (Watts)
					RB Size	RB Offset		
LTE Band 17	5MHz	23755	706.5	QPSK	1	0	24.08	0.2559
					1	12	24.26	0.2667
					1	24	24.21	0.2636
					12	0	23.12	0.2051
					12	6	23.26	0.2118
					12	11	23.22	0.2099
					25	0	23.13	0.2056
				16-QAM	1	0	23.11	0.2046
					1	12	23.36	0.2168
					1	24	23.25	0.2113
					12	0	22.19	0.1656
					12	6	22.27	0.1687
					12	11	22.20	0.1660
					25	0	22.11	0.1626
		23790	710.0	QPSK	1	0	24.01	0.2518
					1	12	24.27	0.2673
					1	24	24.32	0.2704
					12	0	23.22	0.2099
					12	6	23.32	0.2148
					12	11	23.29	0.2133
					25	0	23.26	0.2118
				16-QAM	1	0	23.12	0.2051
					1	12	23.35	0.2163
					1	24	23.39	0.2183
					12	0	22.20	0.1660
					12	6	22.42	0.1746
					12	11	22.42	0.1746
					25	0	22.25	0.1679
		23825	713.5	QPSK	1	0	24.31	0.2698
					1	12	24.43	0.2773
					1	24	24.30	0.2692
					12	0	23.41	0.2193
					12	6	23.46	0.2218
					12	11	23.49	0.2234
					25	0	23.45	0.2213
				16-QAM	1	0	23.39	0.2183
					1	12	23.47	0.2223
					1	24	23.43	0.2203
					12	0	22.45	0.1758
					12	6	22.39	0.1734
					12	11	22.41	0.1742
					25	0	22.48	0.1770

Mode	Band Width	Channel	Frequency (MHz)	Modulation	RB Configuration		Average Power (dBm)	Average Power (Watts)
					RB Size	RB Offset		
LTE Band 17	10MHz	23780	709.0	QPSK	1	0	23.99	0.2506
					1	24	24.15	0.2600
					1	49	**24.49**	0.2812
					25	0	23.13	0.2056
					25	12	23.19	0.2084
					25	24	23.33	0.2153
					50	0	23.18	0.2080
				16-QAM	1	0	23.05	0.2018
					1	24	23.24	0.2109
					1	49	23.40	0.2188
					25	0	22.05	0.1603
					25	12	22.21	0.1663
					25	24	22.37	0.1726
					50	0	22.13	0.1633
		23790	710.0	QPSK	1	0	23.97	0.2495
					1	24	24.11	0.2576
					1	49	24.34	0.2716
					25	0	23.03	0.2009
					25	12	23.11	0.2046
					25	24	23.30	0.2138
					50	0	23.22	0.2099
				16-QAM	1	0	23.06	0.2023
					1	24	23.27	0.2123
					1	49	23.30	0.2138
					25	0	21.99	0.1581
					25	12	22.18	0.1652
					25	24	22.36	0.1722
					50	0	22.12	0.1629
		23800	711.0	QPSK	1	0	24.13	0.2588
					1	24	24.30	0.2692
					1	49	24.42	0.2767
					25	0	23.07	0.2028
					25	12	23.21	0.2094
					25	24	23.40	0.2188
					50	0	23.32	0.2148
				16-QAM	1	0	23.18	0.2080
					1	24	23.39	0.2183
					1	49	23.45	0.2213
					25	0	22.00	0.1585
					25	12	22.25	0.1679
					25	24	22.45	0.1758
					50	0	22.26	0.1683

3.2 Peak-to-Average Ratio

3.2.1 Description of the PAR Measurement

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

3.2.2 Measuring Instruments

See list of measuring instruments of this test report.

3.2.3 Test Procedures

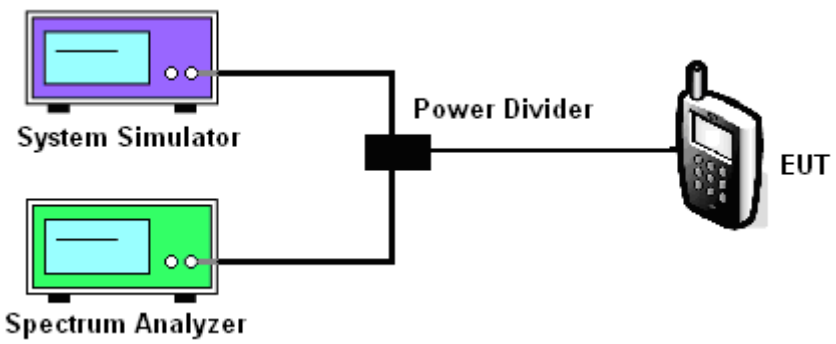
1. The EUT was connected to Spectrum Analyzer and Base Station via power divider.
2. For LTE operating modes:

a. Set the CCDF (Complementary Cumulative Distribution Function) option in spectrum analyzer.

b. The highest RF powers were measured and recorded the maximum PAPR level associated with a probability of 0.1 %.

3. Record the deviation as Peak to Average Ratio.

3.2.4 Test Setup



3.2.5 Test Result of Peak-to-Average Ratio

Modes	LTE Band 5			
BW / Mod.	5MHz / QPSK	5MHz / 16QAM	10MHz / QPSK	10MHz / 16QAM
Peak-to-Average Ratio (dB)	5.99	6.86	5.96	6.83

Modes	LTE Band 2			
BW / Mod.	5MHz / QPSK	5MHz / 16QAM	10MHz / QPSK	10MHz / 16QAM
Peak-to-Average Ratio (dB)	5.74	6.57	5.61	6.57

Modes	LTE Band 4			
BW / Mod.	5MHz / QPSK	5MHz / 16QAM	10MHz / QPSK	10MHz / 16QAM
Peak-to-Average Ratio (dB)	5.71	6.57	5.64	6.57

Modes	LTE Band 17			
BW / Mod.	5MHz / QPSK	5MHz / 16QAM	10MHz / QPSK	10MHz / 16QAM
Peak-to-Average Ratio (dB)	6.25	7.05	6.09	7.02

Note:

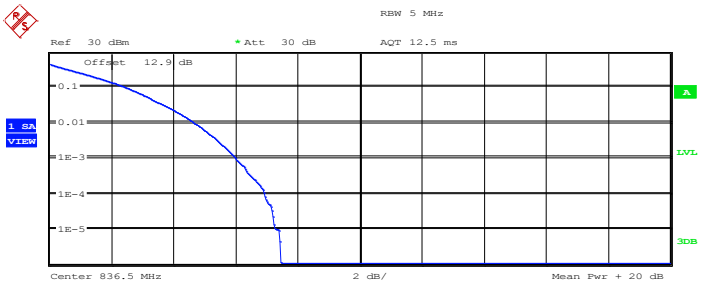
The maximum RB configurations of the PAPR summary as below:

BW5.0M RB setting：RB Size 25, RB offset 0

BW10M RB setting：RB Size 50, RB offset 0

3.2.6 Peak to Average Power Ratio

Peak-to-Average Ratio on LTE Band 5 5MHz / QPSK

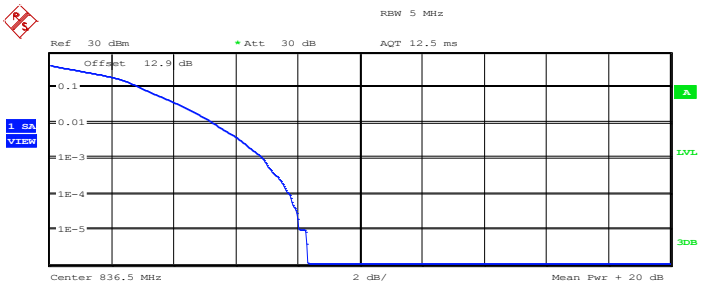


Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 7.1MHz

	Trace 1
Mean	24.09 dBm
Peak	31.54 dBm
Crest	7.45 dB
10 %	2.47 dB
1 %	4.65 dB
.1 %	5.99 dB
.01 %	6.92 dB

Date: 24.JUN.2013 13:58:59

Peak-to-Average Ratio on LTE Band 5 5MHz / 16QAM

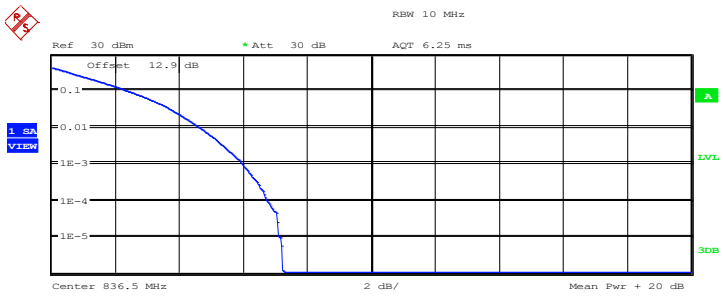


Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 7.1MHz

	Trace 1
Mean	23.16 dBm
Peak	31.47 dBm
Crest	8.32 dB
10 %	2.95 dB
1 %	5.29 dB
.1 %	6.86 dB
.01 %	7.69 dB

Date: 24.JUN.2013 13:58:36

Peak-to-Average Ratio on LTE Band 5 10MHz / QPSK

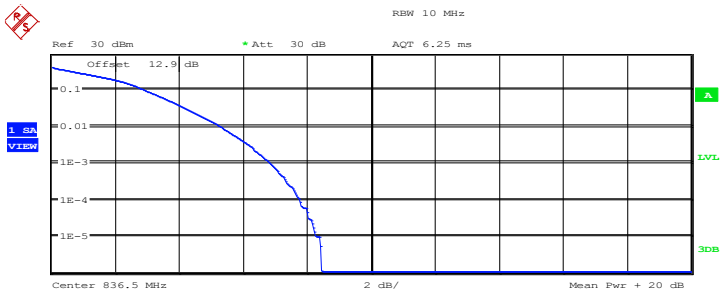


Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 11.2MHz

	Trace 1
Mean	24.22 dBm
Peak	31.46 dBm
Crest	7.24 dB
10 %	2.40 dB
1 %	4.62 dB
.1 %	5.96 dB
.01 %	6.73 dB

Date: 24.JUN.2013 13:57:57

Peak-to-Average Ratio on LTE Band 5 10MHz / 16QAM

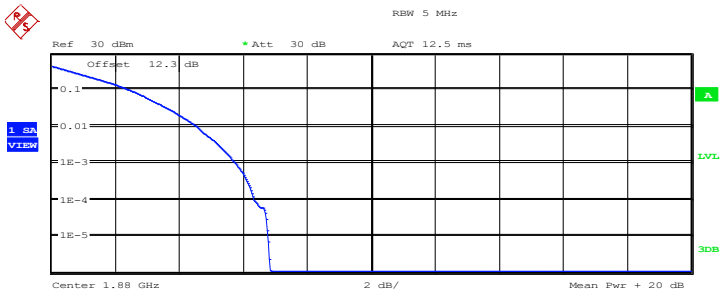


Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 11.2MHz

	Trace 1
Mean	23.08 dBm
Peak	31.53 dBm
Crest	8.45 dB
10 %	2.95 dB
1 %	5.29 dB
.1 %	6.83 dB
.01 %	7.76 dB

Date: 24.JUN.2013 13:57:41

Peak-to-Average Ratio on LTE Band 2 5MHz / QPSK

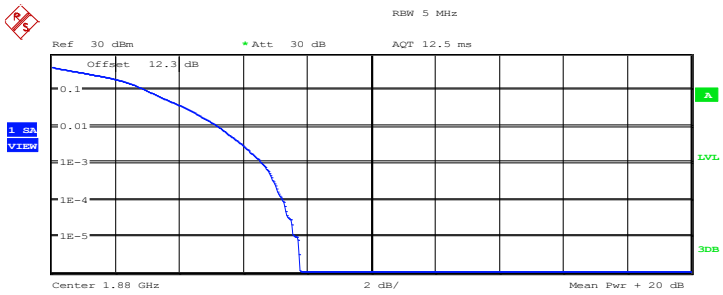


Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 7.1MHz

	Trace 1
Mean	21.61 dBm
Peak	28.44 dBm
Crest	6.83 dB
10 %	2.47 dB
1 %	4.52 dB
.1 %	5.74 dB
.01 %	6.35 dB

Date: 24.JUN.2013 09:55:38

Peak-to-Average Ratio on LTE Band 2 5MHz / 16QAM

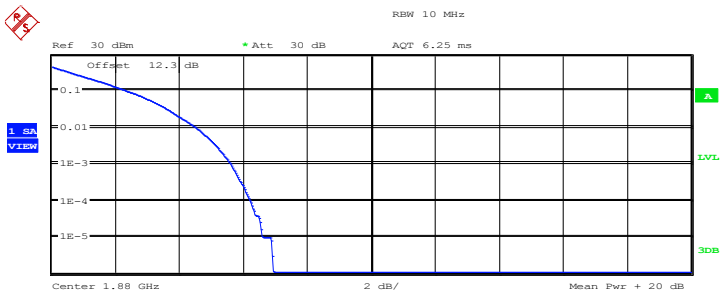


Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 7.1MHz

	Trace 1
Mean	20.60 dBm
Peak	28.37 dBm
Crest	7.77 dB
10 %	2.98 dB
1 %	5.22 dB
.1 %	6.57 dB
.01 %	7.21 dB

Date: 24.JUN.2013 09:56:05

Peak-to-Average Ratio on LTE Band 2 10MHz / QPSK

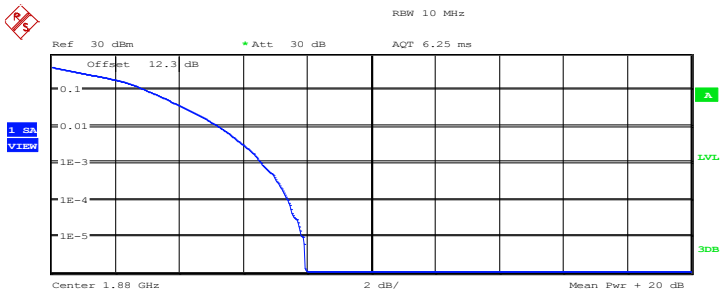


Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 11.2MHz

	Trace 1
Mean	21.72 dBm
Peak	28.65 dBm
Crest	6.93 dB
10 %	2.37 dB
1 %	4.52 dB
.1 %	5.61 dB
.01 %	6.22 dB

Date: 24.JUN.2013 09:58:53

Peak-to-Average Ratio on LTE Band 2 10MHz / 16QAM

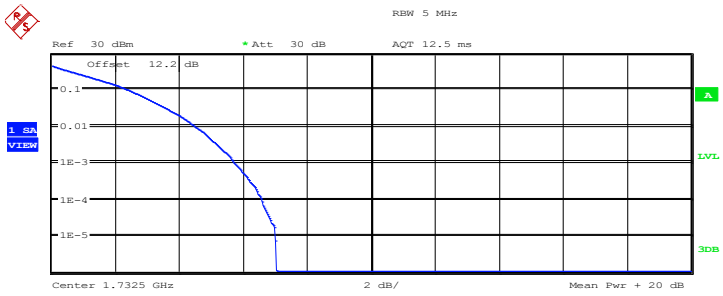


Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 11.2MHz

	Trace 1
Mean	20.77 dBm
Peak	28.72 dBm
Crest	7.94 dB
10 %	2.98 dB
1 %	5.22 dB
.1 %	6.57 dB
.01 %	7.40 dB

Date: 24.JUN.2013 09:59:25

Peak-to-Average Ratio on LTE Band 4 5MHz / QPSK

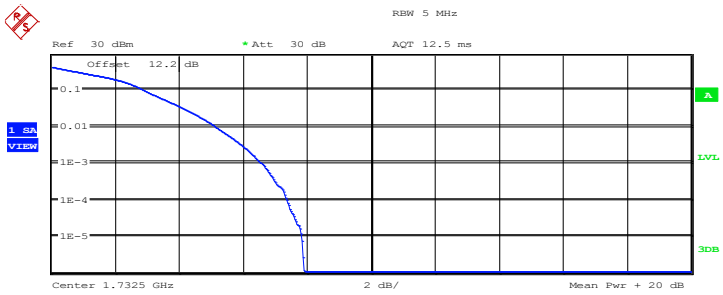


Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 7.1MHz

	Trace 1
Mean	21.90 dBm
Peak	28.93 dBm
Crest	7.03 dB
10 %	2.40 dB
1 %	4.49 dB
.1 %	5.71 dB
.01 %	6.57 dB

Date: 24.JUN.2013 11:51:14

Peak-to-Average Ratio on LTE Band 4 5MHz / 16QAM

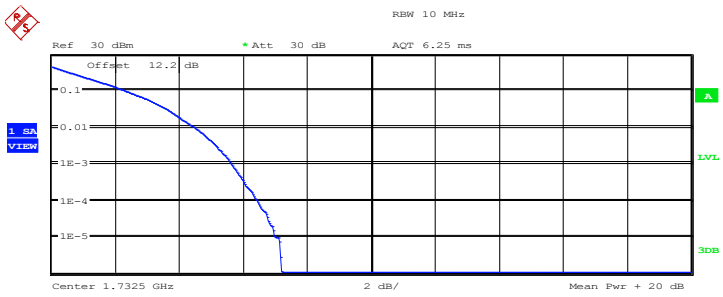


Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 7.1MHz

	Trace 1
Mean	20.90 dBm
Peak	28.79 dBm
Crest	7.89 dB
10 %	2.88 dB
1 %	5.13 dB
.1 %	6.57 dB
.01 %	7.37 dB

Date: 24.JUN.2013 11:51:26

Peak-to-Average Ratio on LTE Band 4 10MHz / QPSK

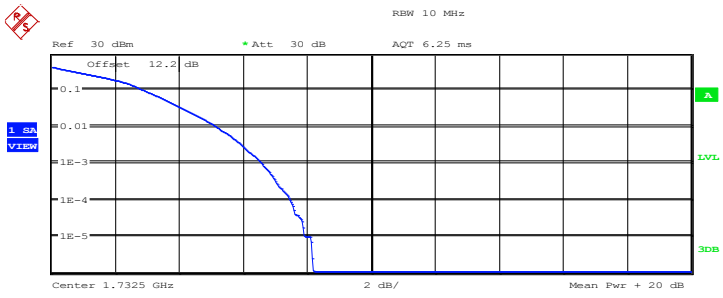


Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 11.2MHz

	Trace 1
Mean	21.99 dBm
Peak	29.18 dBm
Crest	7.19 dB
10 %	2.34 dB
1 %	4.49 dB
.1 %	5.64 dB
.01 %	6.41 dB

Date: 24.JUN.2013 11:50:43

Peak-to-Average Ratio on LTE Band 4 10MHz / 16QAM

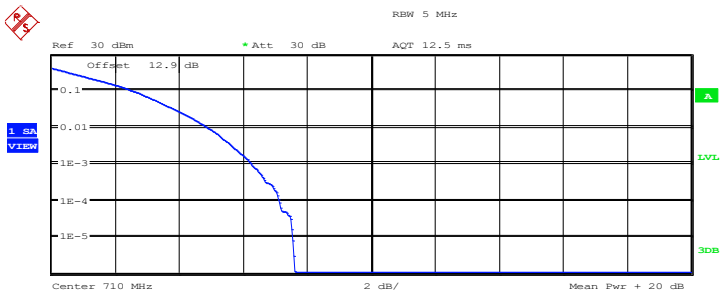


Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 11.2MHz

	Trace 1
Mean	21.00 dBm
Peak	29.18 dBm
Crest	8.18 dB
10 %	2.88 dB
1 %	5.16 dB
.1 %	6.57 dB
.01 %	7.47 dB

Date: 24.JUN.2013 11:50:18

Peak-to-Average Ratio on LTE Band 17 5MHz / QPSK

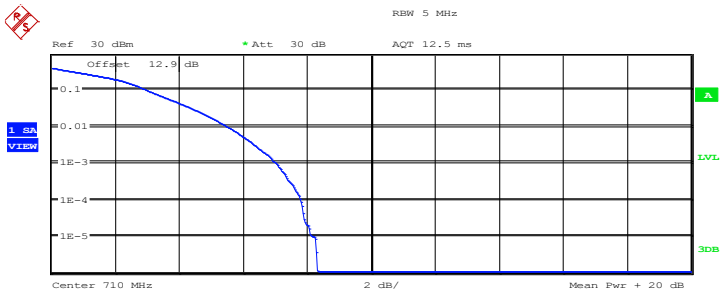


Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 7.1MHz

	Trace 1
Mean	23.59 dBm
Peak	31.19 dBm
Crest	7.60 dB
10 %	2.56 dB
1 %	4.87 dB
.1 %	6.25 dB
.01 %	7.12 dB

Date: 24.JUN.2013 16:19:03

Peak-to-Average Ratio on LTE Band 17 5MHz / 16QAM

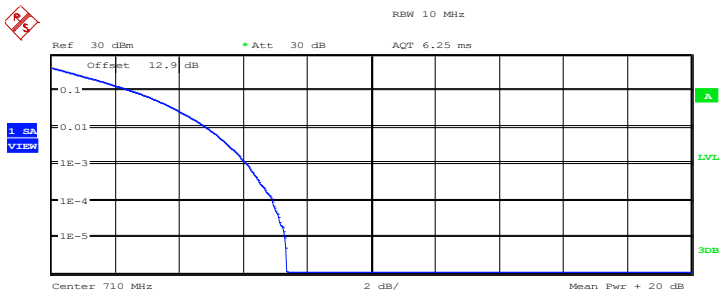


Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 7.1MHz

	Trace 1
Mean	23.16 dBm
Peak	31.47 dBm
Crest	8.31 dB
10 %	3.01 dB
1 %	5.51 dB
.1 %	7.05 dB
.01 %	7.79 dB

Date: 24.JUN.2013 16:18:49

Peak-to-Average Ratio on LTE Band 17 10MHz / QPSK

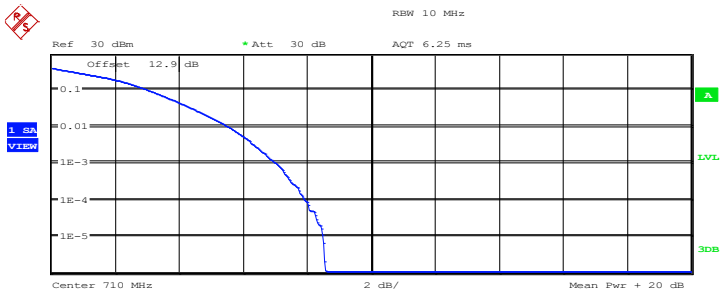


Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 11.2MHz

	Trace 1
Mean	24.28 dBm
Peak	31.64 dBm
Crest	7.36 dB
10 %	2.53 dB
1 %	4.84 dB
.1 %	6.09 dB
.01 %	6.92 dB

Date: 24.JUN.2013 16:15:54

Peak-to-Average Ratio on LTE Band 17 10MHz / 16QAM



Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 11.2MHz

	Trace 1
Mean	23.23 dBm
Peak	31.78 dBm
Crest	8.56 dB
10 %	3.04 dB
1 %	5.51 dB
.1 %	7.02 dB
.01 %	7.92 dB

Date: 24.JUN.2013 16:15:38

3.3 Effective Radiated Power and Equivalent Isotropic Radiated Power Measurement

3.3.1 Description of the ERP/EIRP Measurement

Effective radiated power output measurements by substitution method according to ANSI / TIA / EIA-603-C-2004, and the spectrum analyzer configuration follows KDB 971168 D01 Power Meas. License Digital Systems v02r01. Mobile and portable (hand-held) stations operating are limited to average ERP of 7 watts with LTE band 5 and 3 watt with LTE band 17.

Equivalent isotropic radiated power output measurements by substitution method according to ANSI / TIA / EIA-603-C-2004, and the spectrum analyzer configuration follows KDB 971168 D01 Power Meas. License Digital Systems v02r01. Mobile and portable (hand-held) stations operating are limited to average EIRP of 2 watts with LTE band 2 and 1 watt with LTE band 4.

3.3.2 Measuring Instruments

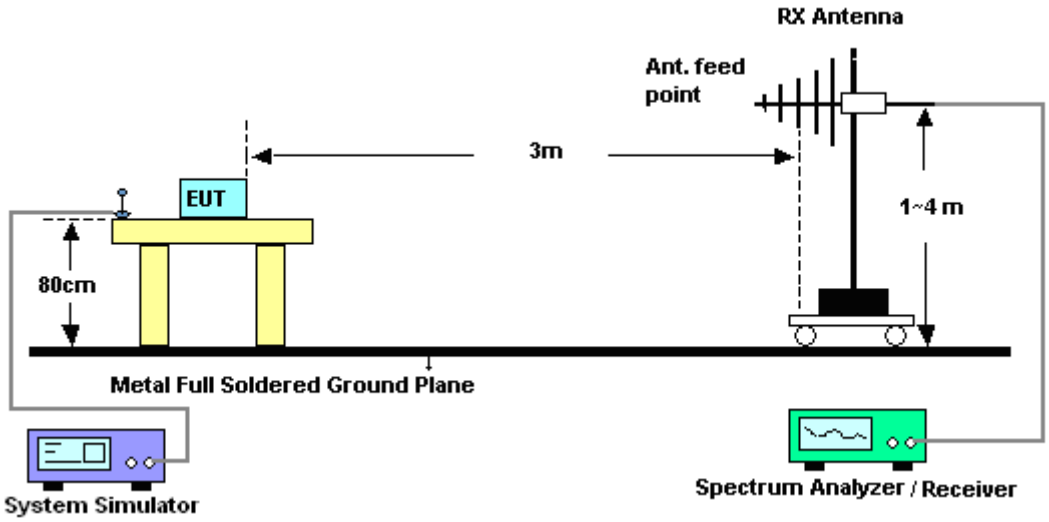
See list of measuring instruments of this test report.

3.3.3 Test Procedures

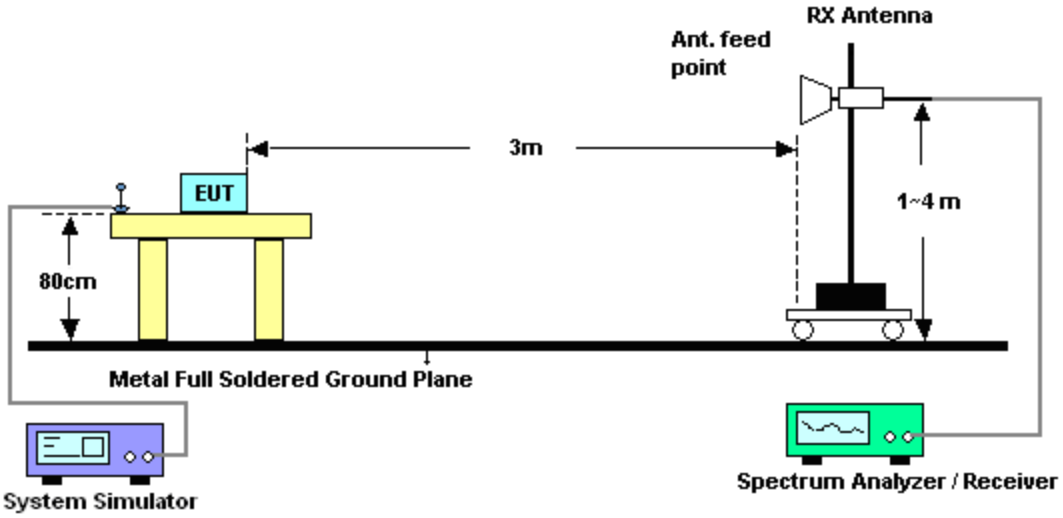
1. The EUT was placed on a non-conductive rotating platform with 0.8 meter height in a semi-anechoic chamber. The radiated emission at the fundamental frequency was measured at 3 m with a test antenna and a spectrum analyzer with RBW= 300kHz, VBW= 1MHz for BW 5MHz and BW 10MHz, , RMS detector, and used Channel Power function with measurement bandwidth = 5MHz/10MHz per section 4.0 of KDB 971168 D01.
2. During the measurement, the EUT was enforced in maximum power and linked with a base station. The highest emission was recorded from analyzer power level (LVL) from the 360 degrees rotation of the turntable and the test antenna raised and lowered over a range from 1 to 4 meters in both horizontally and vertically polarized orientations.
3. Effective Isotropic Radiated Power (EIRP) was measured by substitution method according to TIA/EIA-603-C. The EUT was replaced by dipole antenna (substitution antenna) at same location, and then a known power from S.G. was applied into the dipole antenna through a Tx cable, and then recorded the maximum Analyzer reading through raised and lowered the test antenna. The correction factor (in dB) = S.G. - Tx Cable loss + Substitution antenna gain - Analyzer reading. Then the EUT's EIRP was calculated with the correction factor, EIRP= LVL + Correction factor and ERP = EIRP – 2.15.

3.3.4 Test Setup

For Effective Radiated Power



For Equivalent Isotropic Radiated Power



3.3.5 Test Result of ERP/EIRP

LTE Band 5 Radiated Power ERP for BW 5MHz / QPSK with Battery 1 for Sample 1				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (W)**
826.5	-9.11	31.44	20.18	0.1042
836.5	-8.78	32.04	21.11	0.1291
846.5	-10.08	32.63	20.40	0.1096
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (W)**
826.5	-17.34	32.78	13.29	0.0213
836.5	-16.90	32.82	13.77	0.0238
846.5	-18.49	33.40	12.76	0.0189

* ERP = LVL (dBm) + Correction Factor (dB) – 2.15

LTE Band 5 Radiated Power ERP for BW 5MHz / 16QAM with Battery 1 for Sample 1				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (W)**
826.5	-9.72	31.44	19.57	0.0906
836.5	-9.47	32.04	20.42	0.1102
846.5	-10.51	32.63	19.97	0.0993
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (W)**
826.5	-17.97	32.78	12.66	0.0185
836.5	-17.57	32.82	13.10	0.0204
846.5	-19.02	33.40	12.23	0.0167

* ERP = LVL (dBm) + Correction Factor (dB) – 2.15

LTE Band 5 Radiated Power ERP for BW 10MHz / QPSK with Battery 1 for Sample 1				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (W)**
829	-7.54	31.44	21.75	0.1496
836.5	-9.44	32.04	20.45	0.1109
844	-8.42	32.63	22.06	0.1607
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
829	-15.49	32.78	15.14	0.0327
836.5	-16.67	32.82	14.00	0.0251
844	-15.79	33.40	15.46	0.0352

* ERP = LVL (dBm) + Correction Factor (dB) – 2.15

LTE Band 5 Radiated Power ERP for BW 10MHz / 16QAM with Battery 1 for Sample 1				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (W)**
829	-9.86	31.44	19.43	0.0877
836.5	-10.09	32.04	19.80	0.0955
844	-9.22	32.63	21.26	0.1337
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (W)**
829	-16.98	32.78	13.65	0.0232
836.5	-17.32	32.82	13.35	0.0216
844	-16.59	33.40	14.66	0.0292

* ERP = LVL (dBm) + Correction Factor (dB) – 2.15

LTE Band 2 Radiated Power EIRP for BW 5MHz / QPSK with Battery 1 for Sample 1				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
1852.5	-19.45	43.69	24.24	0.2655
1880.0	-19.25	44.79	25.54	0.3581
1907.5	-18.06	43.59	25.53	0.3573
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
1852.5	-24.70	45.72	21.02	0.1265
1880.0	-24.34	46.78	22.44	0.1754
1907.5	-23.93	46.77	22.84	0.1923

* EIRP = LVL (dBm) + Correction Factor (dB)

LTE Band 2 Radiated Power EIRP for BW 5MHz / 16QAM with Battery 1 for Sample 1				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
1852.5	-20.35	43.69	23.34	0.2158
1880.0	-19.83	44.79	24.96	0.3133
1907.5	-18.77	43.59	24.82	0.3034
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
1852.5	-25.30	45.72	20.42	0.1102
1880.0	-24.86	46.78	21.92	0.1556
1907.5	-24.51	46.77	22.26	0.1683

* EIRP = LVL (dBm) + Correction Factor (dB)

LTE Band 2 Radiated Power EIRP for BW 10MHz / QPSK with Battery 1 for Sample 1				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
1855.0	-19.68	43.69	24.01	0.2518
1880.0	-19.23	44.79	25.56	0.3597
1905.0	-18.65	43.59	24.94	0.3119
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
1855.0	-24.19	45.72	21.53	0.1422
1880.0	-23.07	46.78	23.71	0.2350
1905.0	-23.18	46.77	23.59	0.2286

* EIRP = LVL (dBm) + Correction Factor (dB)

LTE Band 2 Radiated Power EIRP for BW 10MHz / 16QAM with Battery 1 for Sample 1				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
1855.0	-20.28	43.69	23.41	0.2193
1880.0	-20.04	44.79	24.75	0.2985
1905.0	-19.43	43.59	24.16	0.2606
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
1855.0	-24.90	45.72	20.82	0.1208
1880.0	-23.87	46.78	22.91	0.1954
1905.0	-24.04	46.77	22.73	0.1875

* EIRP = LVL (dBm) + Correction Factor (dB)

LTE Band 4 Radiated Power EIRP for BW 5MHz / QPSK with Battery 1 for Sample 1				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
1712.50	-17.36	41.62	22.11	0.1626
1732.50	-17.99	42.06	21.92	0.1556
1752.50	-17.84	41.73	21.74	0.1493
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
1712.50	-25.03	43.45	16.27	0.0424
1732.50	-25.25	45.68	18.28	0.0673
1752.50	-25.92	44.88	16.81	0.0480

* EIRP = LVL (dBm) + Correction Factor (dB)

LTE Band 4 Radiated Power EIRP for BW 5MHz / 16QAM with Battery 1 for Sample 1				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
1712.50	-18.59	41.62	20.88	0.1225
1732.50	-18.92	42.06	20.99	0.1256
1752.50	-18.32	41.73	21.26	0.1337
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
1712.50	-27.62	43.45	13.68	0.0233
1732.50	-25.72	45.68	17.81	0.0604
1752.50	-26.29	44.88	16.44	0.0441

* EIRP = LVL (dBm) + Correction Factor (dB)

LTE Band 4 Radiated Power EIRP for BW 10MHz / QPSK with Battery 1 for Sample 1				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
1715.00	-17.01	42.12	22.96	0.1977
1732.50	-17.86	42.06	22.05	0.1603
1750.00	-17.57	41.57	21.85	0.1531
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
1715.00	-24.93	44.81	17.73	0.0593
1732.50	-25.20	45.68	18.33	0.0681
1750.00	-24.76	44.74	17.83	0.0607

* EIRP = LVL (dBm) + Correction Factor (dB)

LTE Band 4 Radiated Power EIRP for BW 10MHz / 16QAM with Battery 1 for Sample 1				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
1715.00	-17.60	42.12	22.37	0.1726
1732.50	-18.45	42.06	21.46	0.1400
1750.00	-18.16	41.57	21.26	0.1337
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
1715.00	-25.66	44.81	17.00	0.0501
1732.50	-25.83	45.68	17.70	0.0589
1750.00	-25.38	44.74	17.21	0.0526

* EIRP = LVL (dBm) + Correction Factor (dB)

LTE Band 17 Radiated Power ERP for BW 5MHz / QPSK with Battery 1 for Sample 1				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (W)**
706.50	-8.21	30.84	20.48	0.1117
710.00	-7.66	30.86	21.05	0.1274
713.50	-8.02	30.81	20.64	0.1159
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (W)**
706.50	-16.59	34.59	15.85	0.0385
710.00	-16.58	34.03	15.30	0.0339
713.50	-16.15	33.68	15.38	0.0345

* ERP = LVL (dBm) + Correction Factor (dB) – 2.15

LTE Band 17 Radiated Power ERP for BW 5MHz / 16QAM with Battery 1 for Sample 1				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (W)**
706.50	-8.87	30.84	19.82	0.0959
710.00	-8.34	30.86	20.37	0.1089
713.50	-8.50	30.81	20.16	0.1038
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (W)**
706.50	-17.08	34.59	15.36	0.0344
710.00	-16.75	34.03	15.13	0.0326
713.50	-16.75	33.68	14.78	0.0301

* ERP = LVL (dBm) + Correction Factor (dB) – 2.15

LTE Band 17 Radiated Power ERP for BW 10MHz / QPSK with Battery 1 for Sample 1				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (W)**
709.00	-7.89	30.77	20.73	0.1183
710.00	-7.10	30.86	21.61	0.1449
711.00	-6.81	30.82	21.86	0.1535
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (W)**
709.00	-16.24	34.16	15.77	0.0378
710.00	-15.61	34.03	16.27	0.0424
711.00	-15.64	33.94	16.15	0.0412

* ERP = LVL (dBm) + Correction Factor (dB) – 2.15

LTE Band 17 Radiated Power ERP for BW 10MHz / 16QAM with Battery 1 for Sample 1				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (W)**
709.00	-8.48	30.77	20.14	0.1033
710.00	-8.38	30.86	20.33	0.1079
711.00	-8.33	30.82	20.34	0.1081
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (W)**
709.00	-16.83	34.16	15.18	0.0330
710.00	-16.67	34.03	15.21	0.0332
711.00	-16.55	33.94	15.24	0.0334

* ERP = LVL (dBm) + Correction Factor (dB) - 2.15

LTE Band 17 Radiated Power ERP for BW 10MHz / QPSK with Battery 2 for Sample 1				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (W)**
709.00	-8.50	30.77	20.12	0.1028
710.00	-7.44	30.86	21.27	0.1340
711.00	-7.80	30.82	20.87	0.1222
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (W)**
709.00	-15.50	34.16	16.51	0.0448
710.00	-15.68	34.03	16.20	0.0417
711.00	-15.47	33.94	16.32	0.0429

* ERP = LVL (dBm) + Correction Factor (dB) – 2.15

LTE Band 17 Radiated Power ERP for BW 10MHz / QPSK with Battery 1 for Sample 2				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (W)**
709.00	-7.10	30.77	21.52	0.1419
710.00	-6.88	30.86	21.83	0.1524
711.00	-6.92	30.82	21.75	0.1496
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (W)**
709.00	-16.17	34.16	15.84	0.0384
710.00	-15.60	34.03	16.28	0.0425
711.00	-15.68	33.94	16.11	0.0408

* ERP = LVL (dBm) + Correction Factor (dB) - 2.15

3.4 Occupied Bandwidth

3.4.1 Description of Occupied Bandwidth Measurement

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

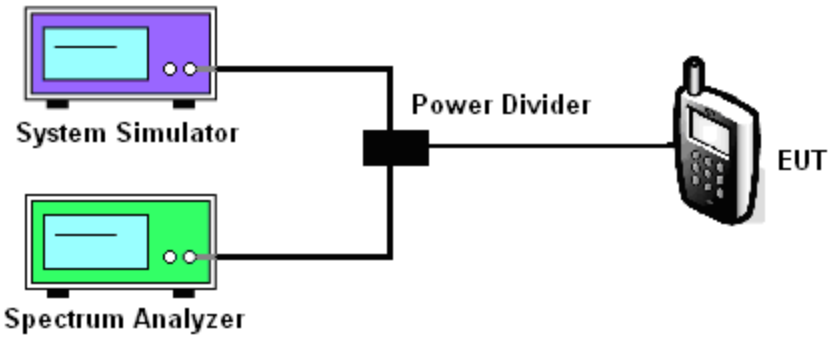
3.4.2 Measuring Instruments

See list of measuring instruments of this test report.

3.4.3 Test Procedures

1. The EUT was connected to Spectrum Analyzer and Base Station via power divider.
2. The 99% occupied bandwidth (BW) of the middle channel for the highest RF powers with full RB sizes were measured.

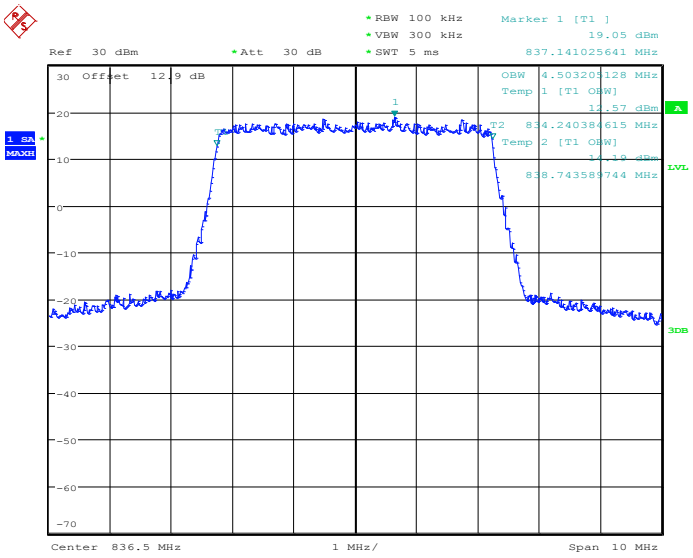
3.4.4 Test Setup



3.4.5 Test Result (Plots) of Occupied Bandwidth

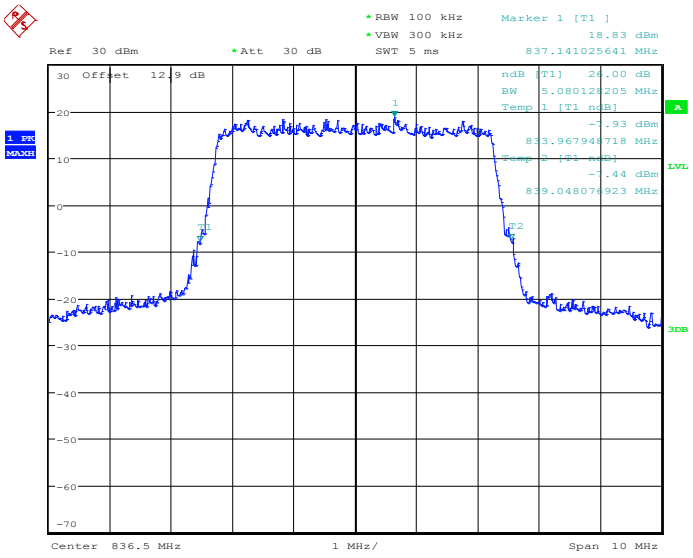
Band :	LTE Band 5	BW / Mod. :	5MHz / QPSK

99% Occupied Bandwidth Plot on Channel 20525



Date: 24.JUN.2013 14:31:59

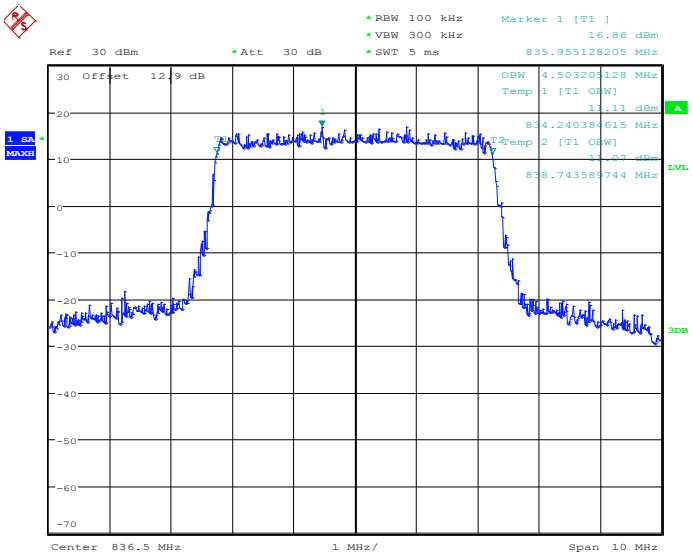
26dB Bandwidth Plot on Channel 20525



Date: 24.JUN.2013 13:56:00

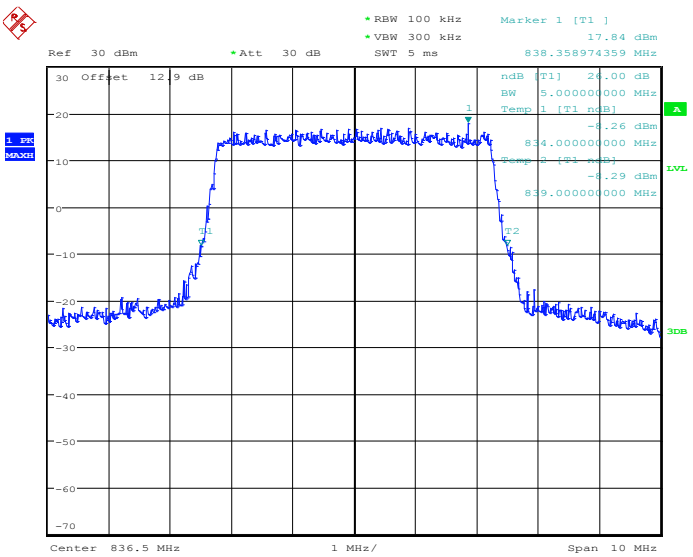
Band :	LTE Band 5	BW / Mod. :	5MHz / 16QAM

99% Occupied Bandwidth Plot on Channel 20525



Date: 24.JUN.2013 14:32:12

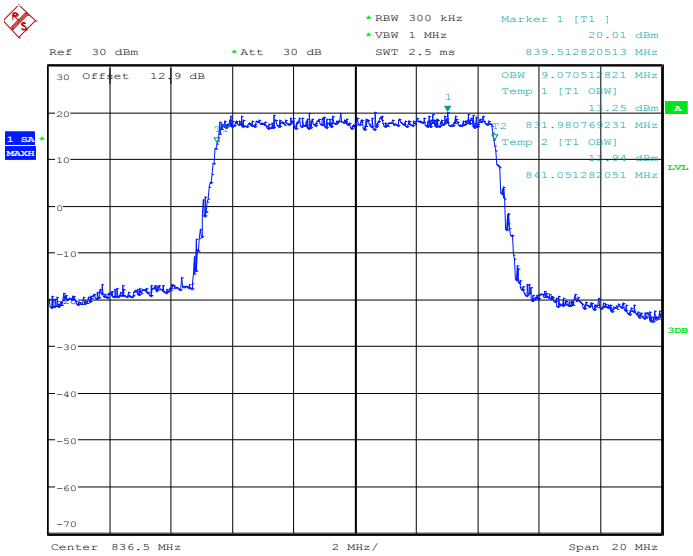
26dB Bandwidth Plot on Channel 20525



Date: 24.JUN.2013 13:56:13

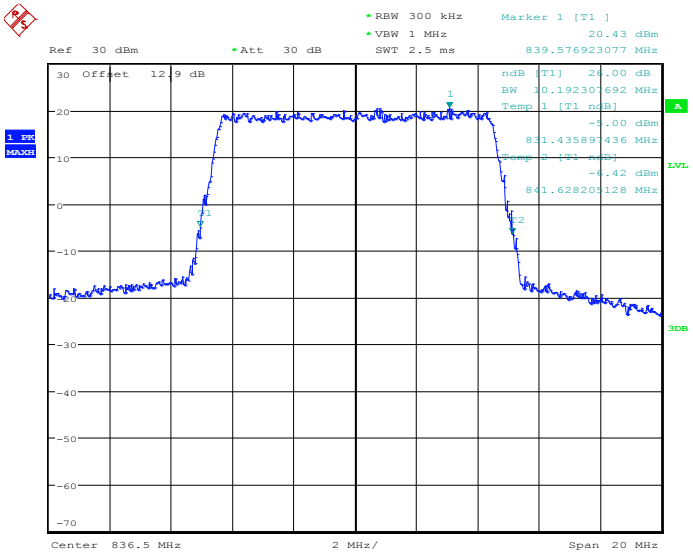
Band :	LTE Band 5	BW / Mod. :	10MHz / QPSK

99% Occupied Bandwidth Plot on Channel 20525



Date: 24.JUN.2013 14:32:50

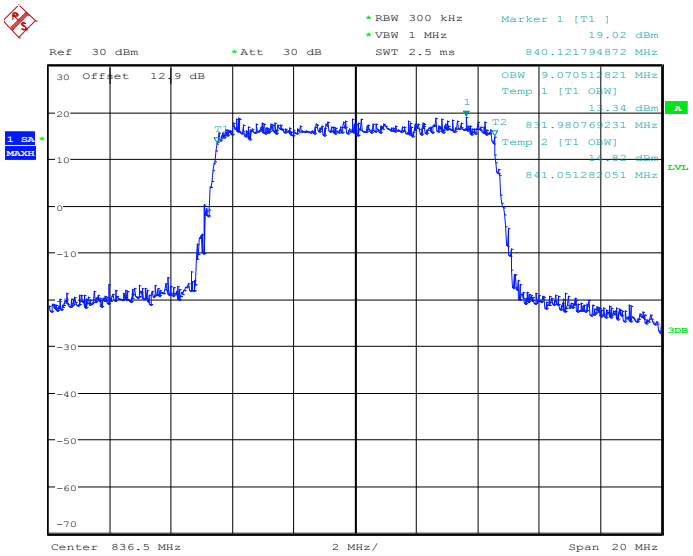
26dB Bandwidth Plot on Channel 20525



Date: 24.JUN.2013 13:56:43

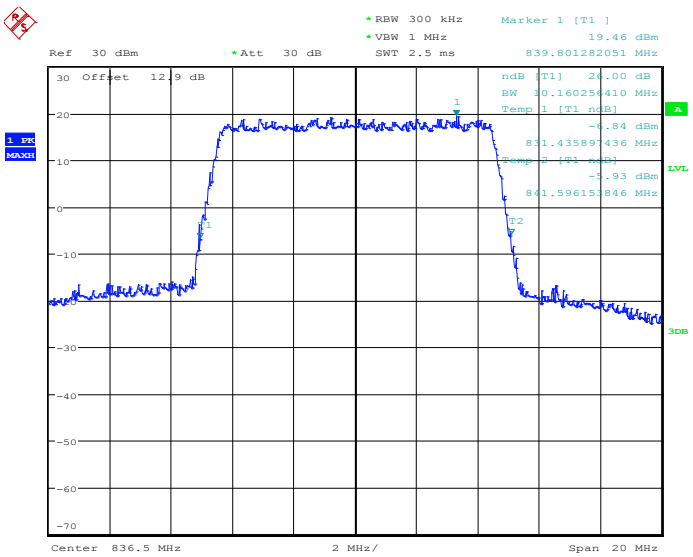
Band :	LTE Band 5	BW / Mod. :	10MHz / 16QAM

99% Occupied Bandwidth Plot on Channel 20525



Date: 24.JUN.2013 14:33:02

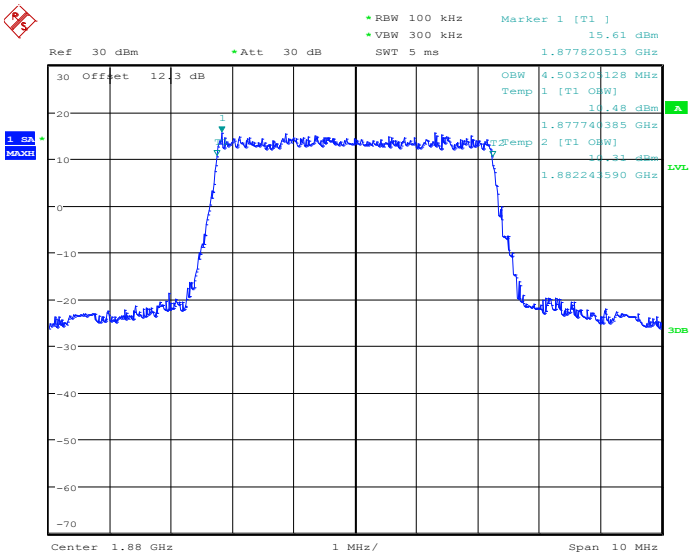
26dB Bandwidth Plot on Channel 20525



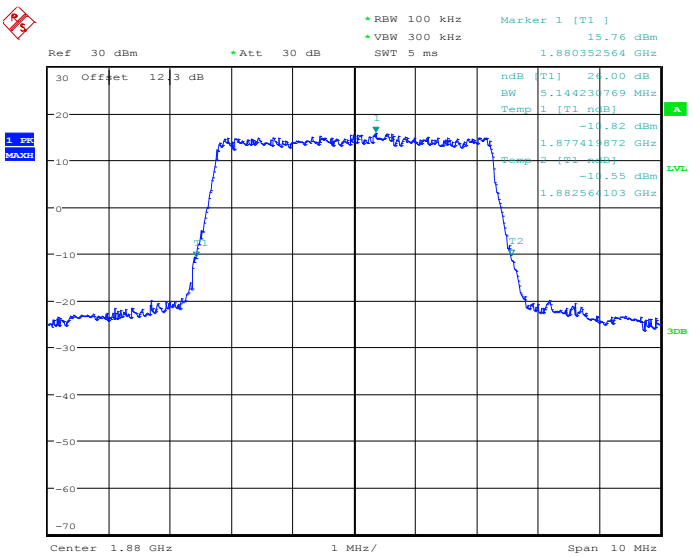
Date: 24.JUN.2013 13:56:54

Band :	LTE Band 2	BW / Mod. :	5MHz / QPSK

99% Occupied Bandwidth Plot on Channel 18900

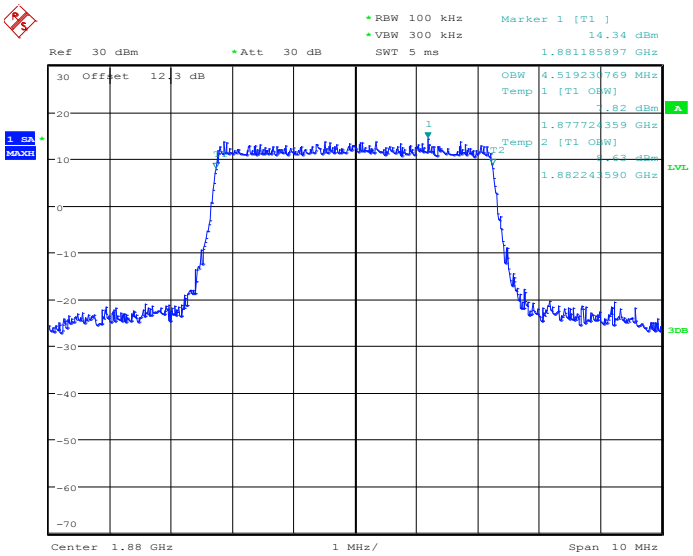


26dB Bandwidth Plot on Channel 18900



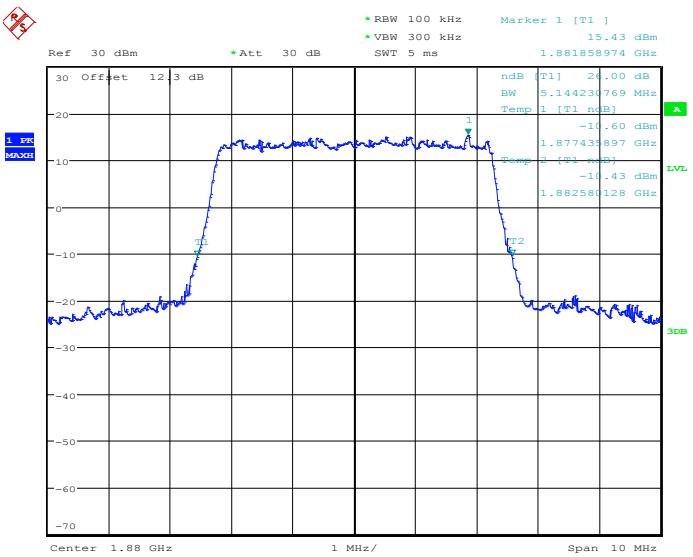
Band :	LTE Band 2	BW / Mod. :	5MHz / 16QAM

99% Occupied Bandwidth Plot on Channel 18900



Date: 24.JUN.2013 12:03:40

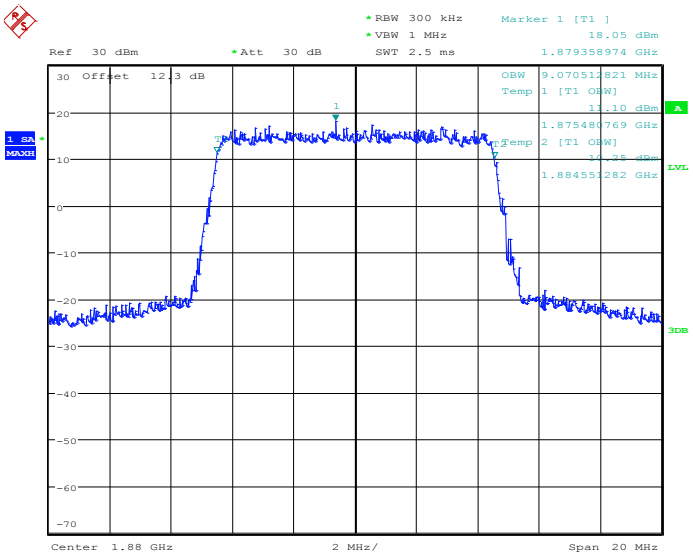
26dB Bandwidth Plot on Channel 18900



Date: 24.JUN.2013 10:03:29

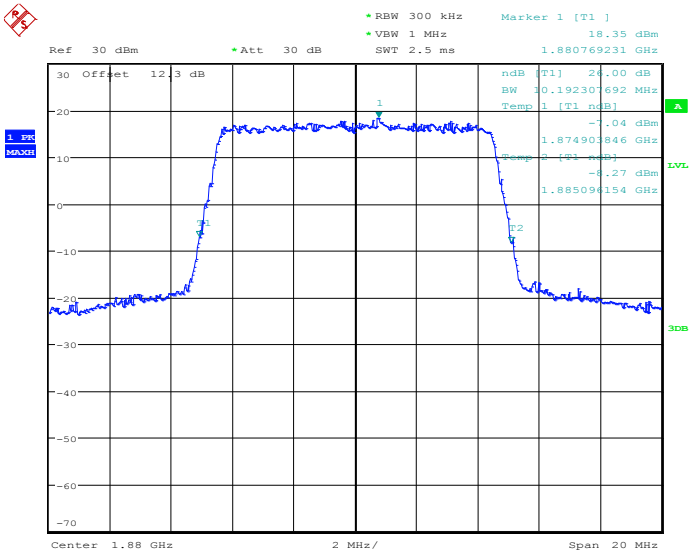
Band :	LTE Band 2	BW / Mod. :	10MHz / QPSK

99% Occupied Bandwidth Plot on Channel 18900



Date: 24.JUN.2013 12:33:04

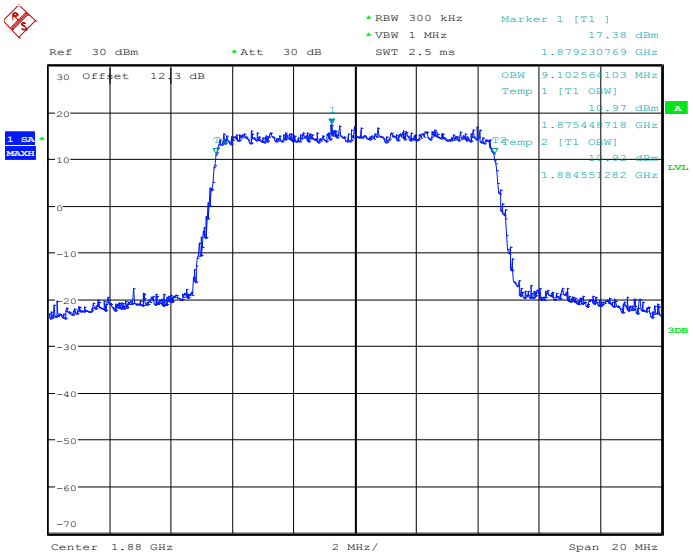
26dB Bandwidth Plot on Channel 18900



Date: 24.JUN.2013 09:52:25

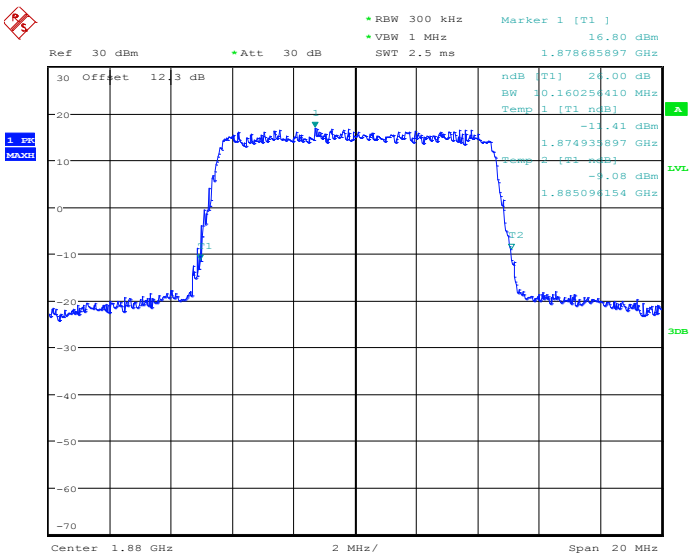
Band :	LTE Band 2	BW / Mod. :	10MHz / 16QAM

99% Occupied Bandwidth Plot on Channel 18900



Date: 24.JUN.2013 12:32:53

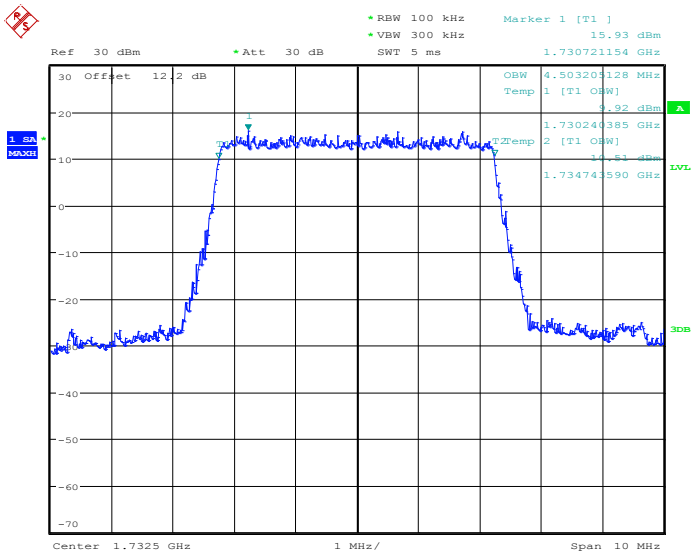
26dB Bandwidth Plot on Channel 18900



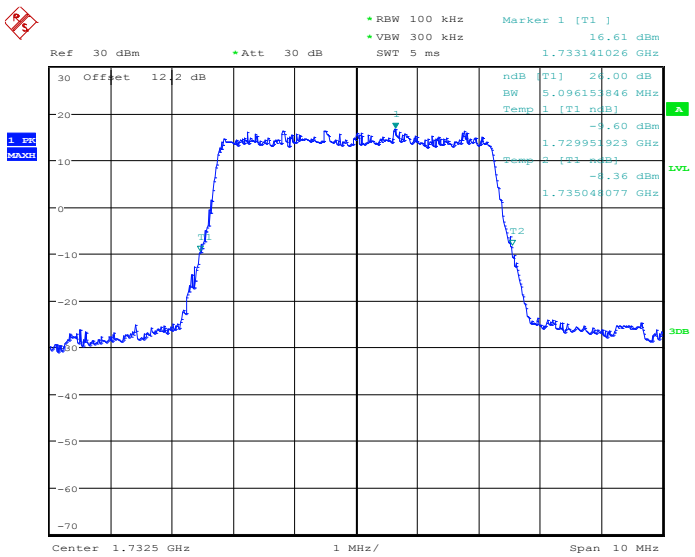
Date: 24.JUN.2013 09:52:37

Band :	LTE Band 4	BW / Mod. :	5MHz / QPSK

99% Occupied Bandwidth Plot on Channel 20175

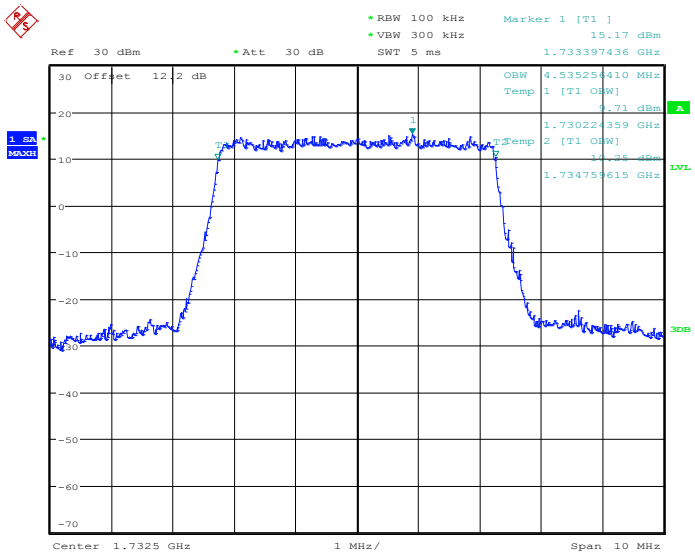


26dB Bandwidth Plot on Channel 20175



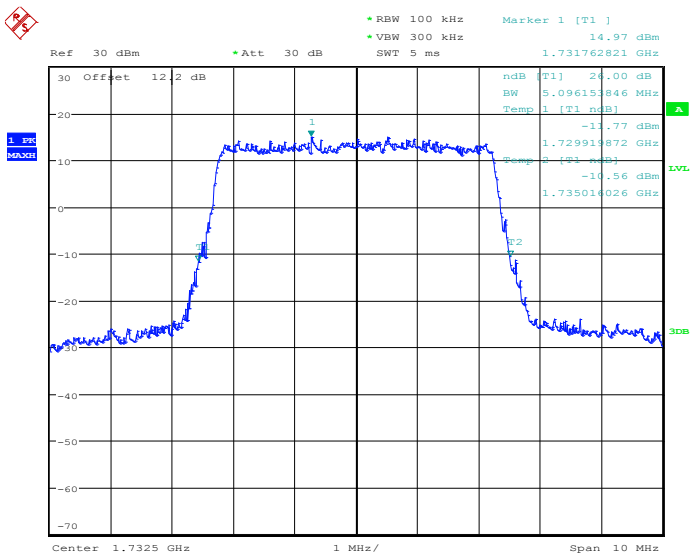
Band :	LTE Band 4	BW / Mod. :	5MHz / 16QAM

99% Occupied Bandwidth Plot on Channel 20175



Date: 24.JUN.2013 11:54:44

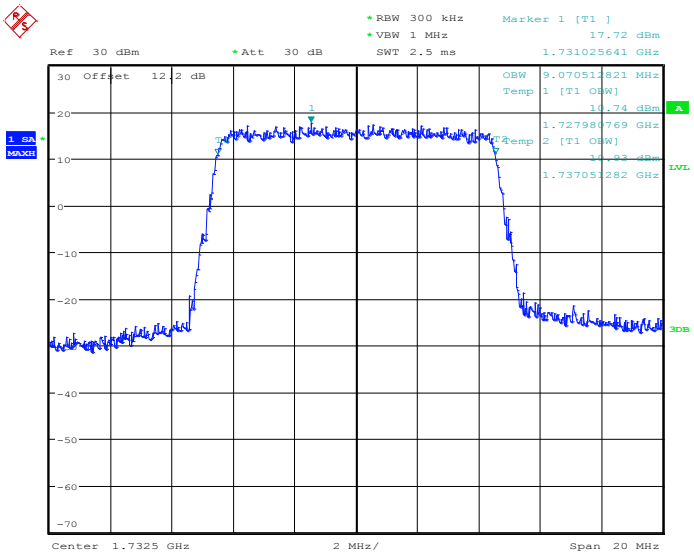
26dB Bandwidth Plot on Channel 20175



Date: 24.JUN.2013 11:48:30

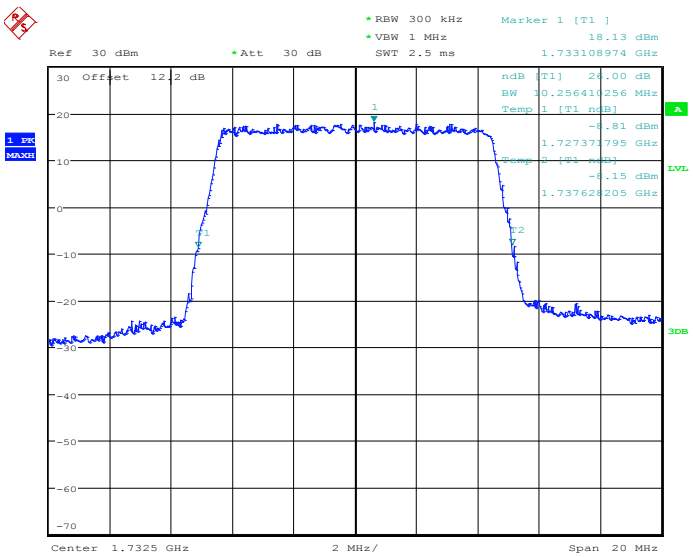
Band :	LTE Band 4	BW / Mod. :	10MHz / QPSK

99% Occupied Bandwidth Plot on Channel 20175



Date: 24.JUN.2013 11:57:21

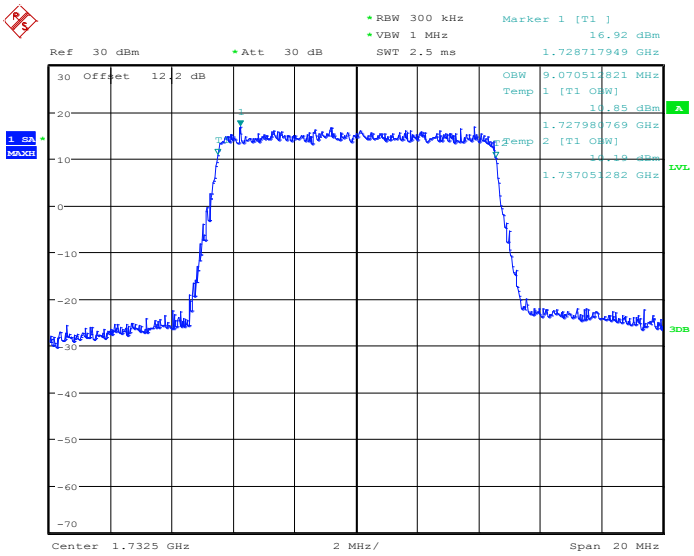
26dB Bandwidth Plot on Channel 20175



Date: 24.JUN.2013 11:47:41

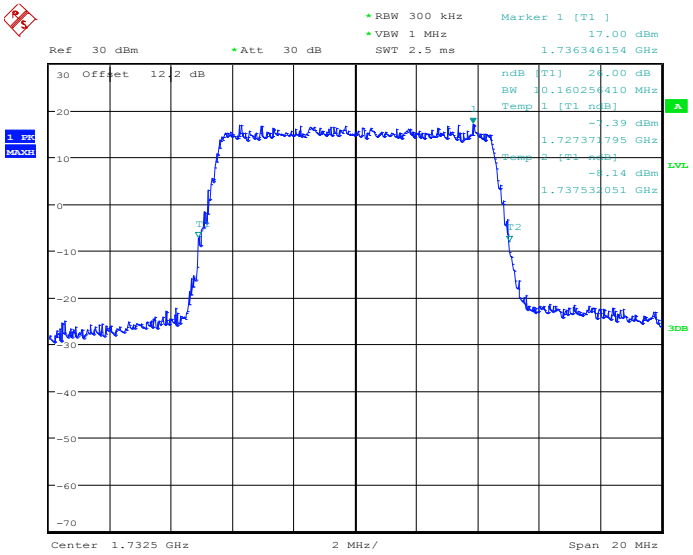
Band :	LTE Band 4	BW / Mod. :	10MHz / 16QAM

99% Occupied Bandwidth Plot on Channel 20175



Date: 24.JUN.2013 11:57:08

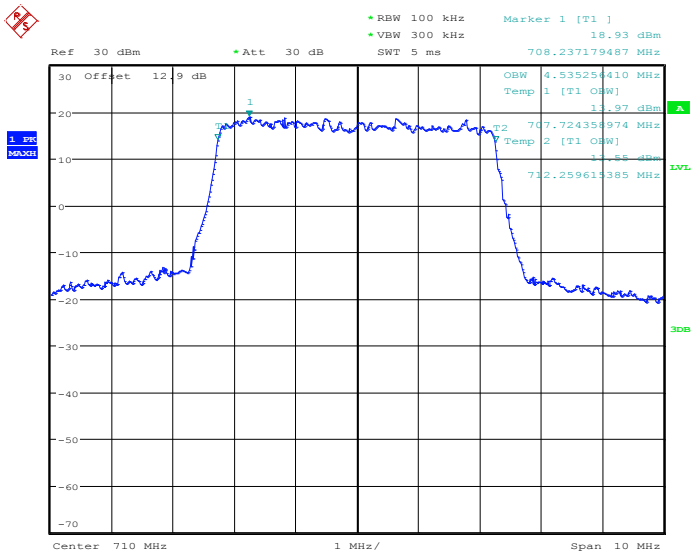
26dB Bandwidth Plot on Channel 20175



Date: 24.JUN.2013 11:47:51

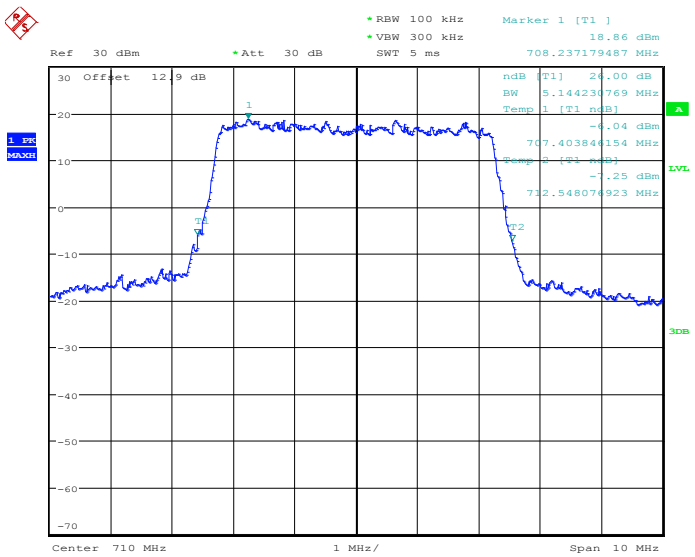
Band :	LTE Band 17	BW / Mod. :	5MHz / QPSK

99% Occupied Bandwidth Plot on Channel 23790



Date: 24.JUN.2013 16:09:05

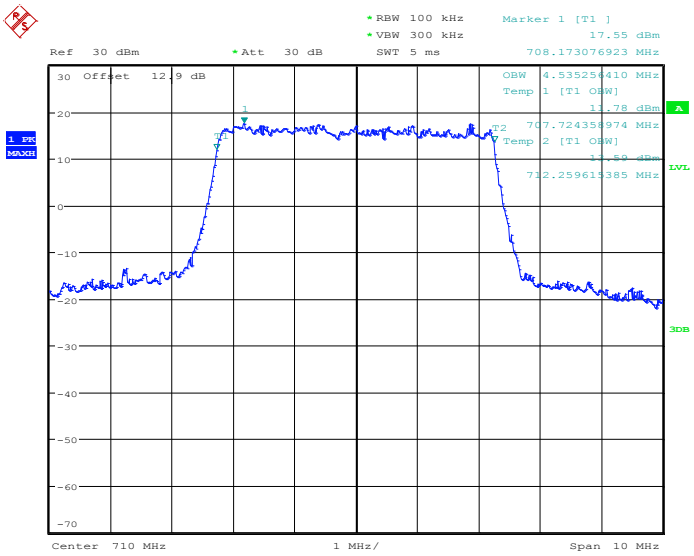
26dB Bandwidth Plot on Channel 23790



Date: 24.JUN.2013 16:11:53

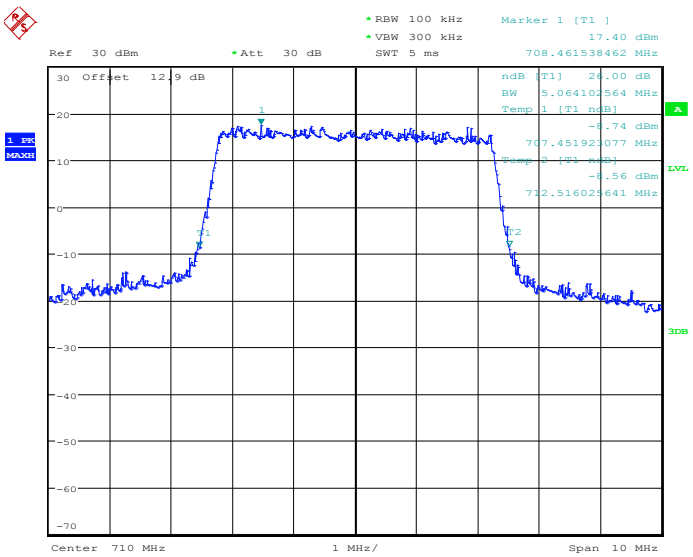
Band :	LTE Band 17	BW / Mod. :	5MHz / 16QAM

99% Occupied Bandwidth Plot on Channel 23790



Date: 24.JUN.2013 16:09:38

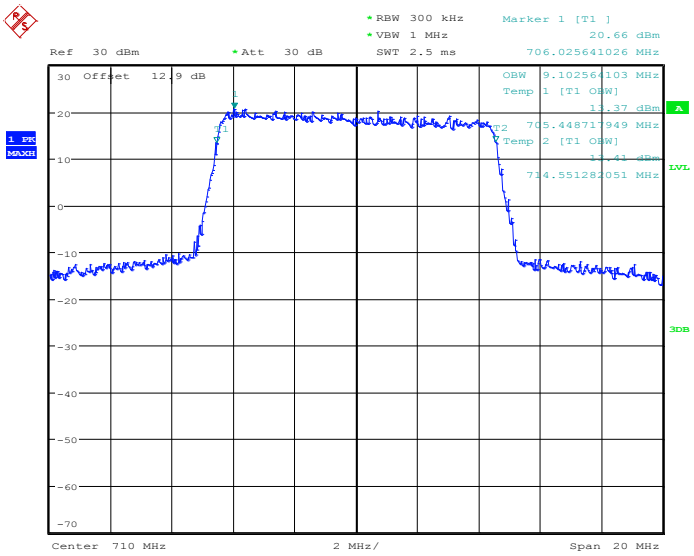
26dB Bandwidth Plot on Channel 23790



Date: 24.JUN.2013 16:12:05

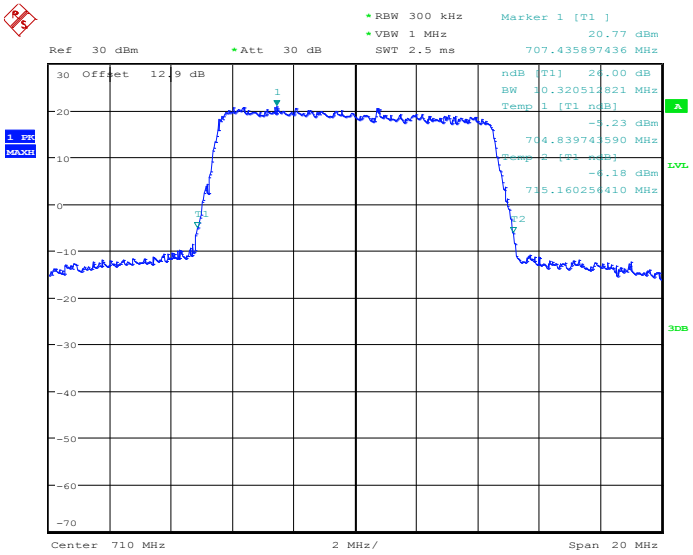
Band :	LTE Band 17	BW / Mod. :	10MHz / QPSK

99% Occupied Bandwidth Plot on Channel 23790



Date: 24.JUN.2013 16:06:14

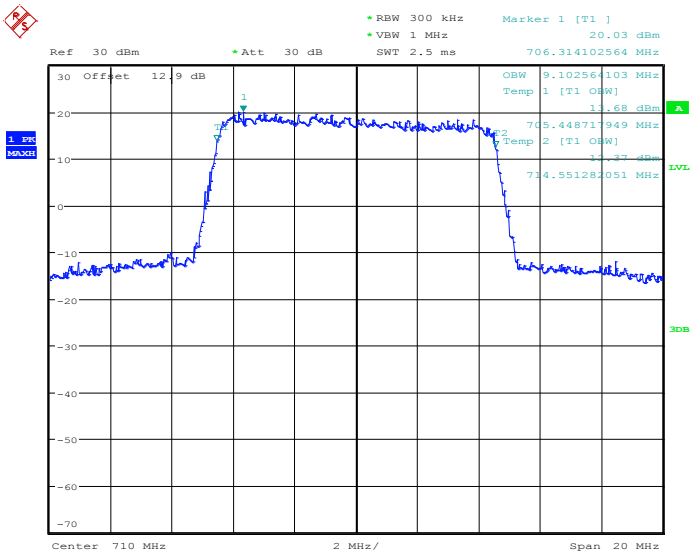
26dB Bandwidth Plot on Channel 23790



Date: 24.JUN.2013 16:12:46

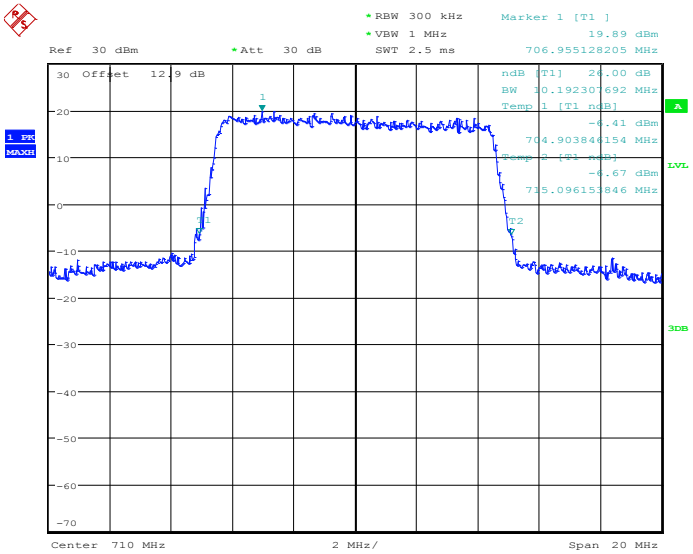
Band :	LTE Band 17	BW / Mod. :	10MHz / 16QAM

99% Occupied Bandwidth Plot on Channel 23790



Date: 24.JUN.2013 16:04:31

26dB Bandwidth Plot on Channel 23790



Date: 24.JUN.2013 16:12:56

3.5 Conducted Band Edge Measurement

3.5.1 Description of Conducted Band Edge Measurement

For operations in the 824 – 849 MHz band, the FCC limit is 43 + $10\log_{10}$(P[Watts]) dB below the transmitter power P(Watts) in a 100kHz bandwidth. However, in the 1MHz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

For operations in the 1850-1910 band, the FCC limit is 43 + $10\log_{10}$(P[Watts]) dB below the transmitter power P(Watts) in a 1MHz bandwidth. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

For operations in the 1710 – 1755 MHz band, the FCC limit is 43 + $10\log_{10}$(P[Watts]) dB below the transmitter power P(Watts) in a 1 MHz bandwidth. However, in the 1MHz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

For operations in the 698 -746 MHz band, the FCC limit is 43 + 10log10(P[Watts]) dB below the transmitter power P(Watts) in a 100 kHz bandwidth. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

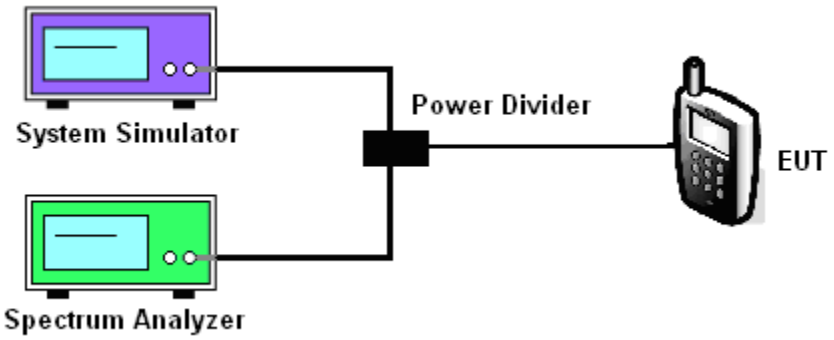
3.5.2 Measuring Instruments

See list of measuring instruments of this test report.

3.5.3 Test Procedures

1. The EUT was connected to Spectrum Analyzer and Base Station via power divider.
2. The band edges of low and high channels for the highest RF powers were measured. Setting RBW ≥ 1% EBW, and measuring bandwidth = 1MHz.
3. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
4. The limit line is derived from 43 + 10log(P)dB below the transmitter power P(Watts)
   = P(W)- [43 + 10log(P)] (dB)
   = [30 + 10log(P)] (dBm) - [43 + 10log(P)] (dB)
   = -13dBm.

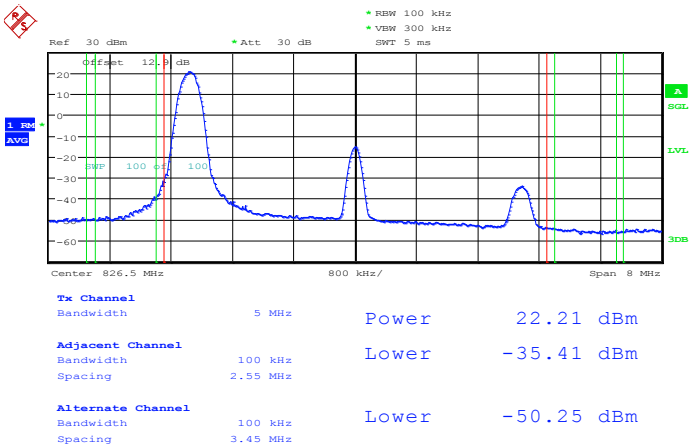
3.5.4 Test Setup



3.5.5 Test Result (Plots) of Conducted Band Edge

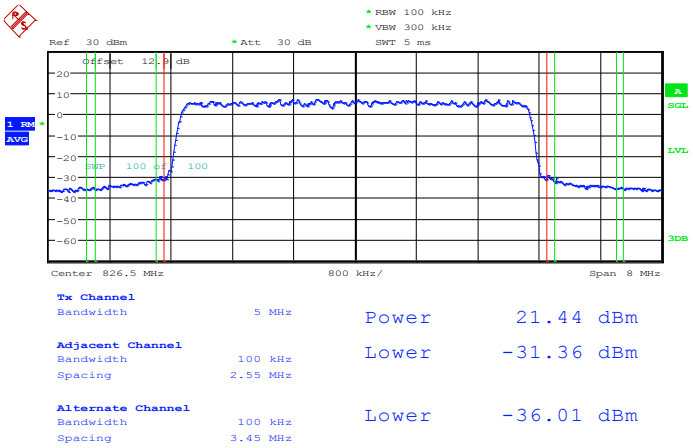
Band :	LTE Band 5	Band Width :	5MHz / QPSK

Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



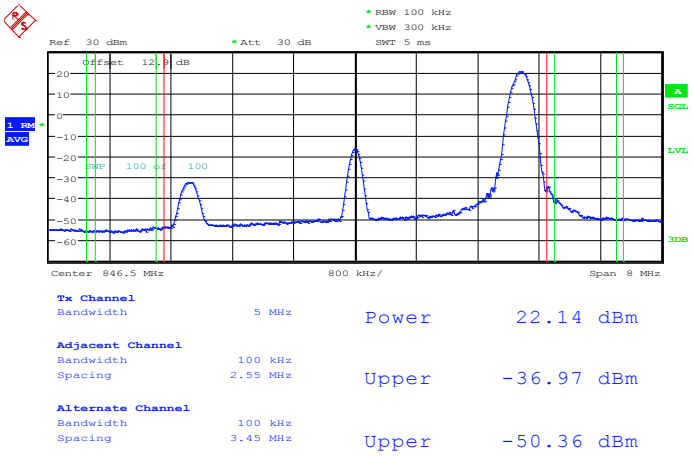
Date: 24.JUN.2013 15:00:42

Lower Band Edge Plot for QPSK-RB Size 25, RB Offset 0



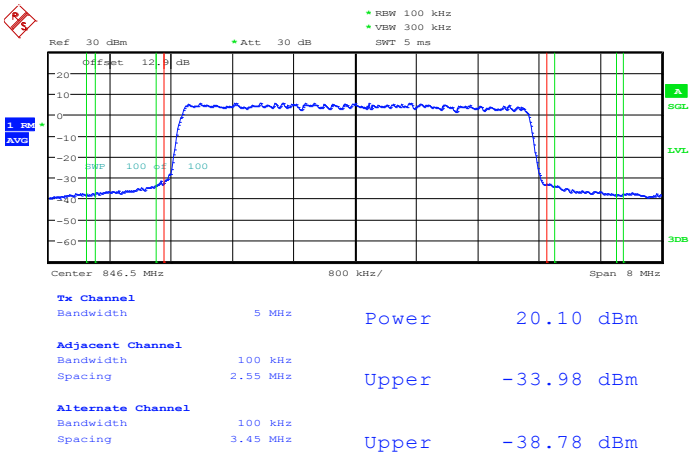
Date: 24.JUN.2013 15:01:33

Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 24



Date: 24.JUN.2013 14:58:45

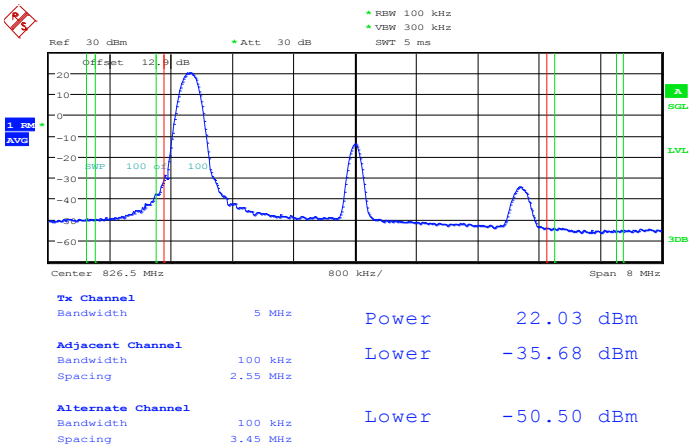
Higher Band Edge Plot for QPSK-RB Size 25, RB Offset 0



Date: 24.JUN.2013 14:58:00

Band :	LTE Band 5	Band Width :	5MHz / 16QAM

Lower Band Edge Plot for 16QAM -RB Size 1, RB Offset 0

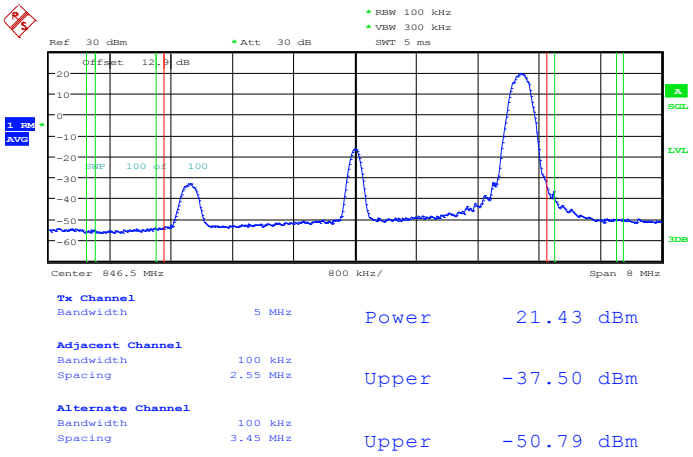


Date: 24.JUN.2013 15:00:53

Lower Band Edge Plot for 16QAM -RB Size 25, RB Offset 0

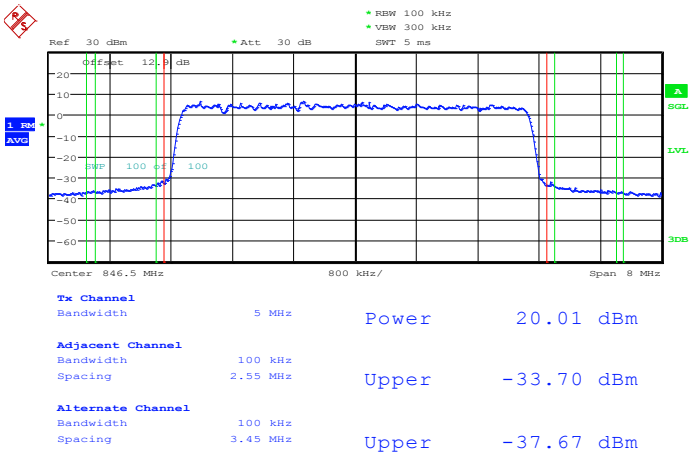
Date: 24.JUN.2013 15:01:11

Higher Band Edge Plot for 16QAM -RB Size 1, RB Offset 24



Date: 24.JUN.2013 14:58:20

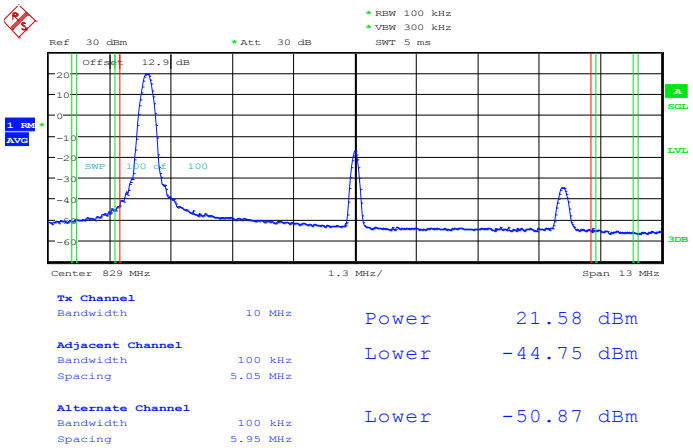
Higher Band Edge Plot for 16QAM -RB Size 25, RB Offset 0



Date: 24.JUN.2013 14:57:47

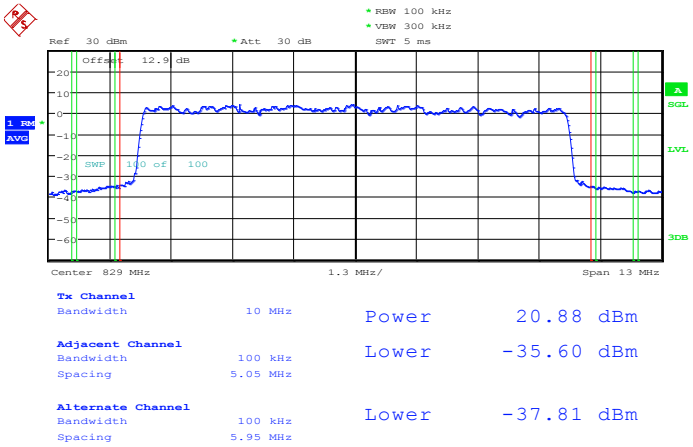
Band :	LTE Band 5	Band Width :	10MHz / QPSK

Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



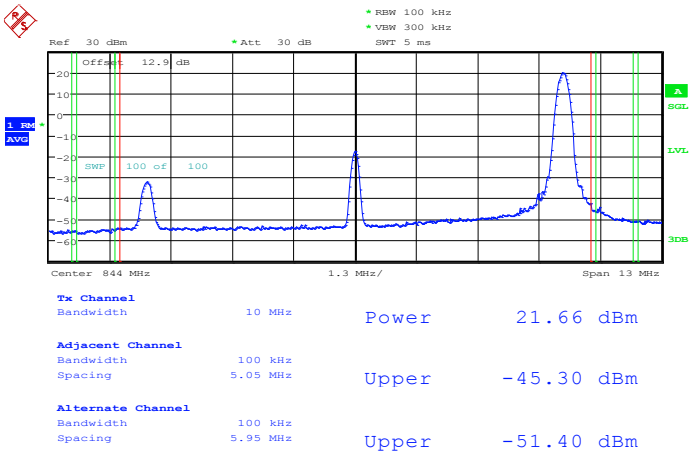
Date: 24.JUN.2013 14:50:48

Lower Band Edge Plot for QPSK-RB Size 50, RB Offset 0



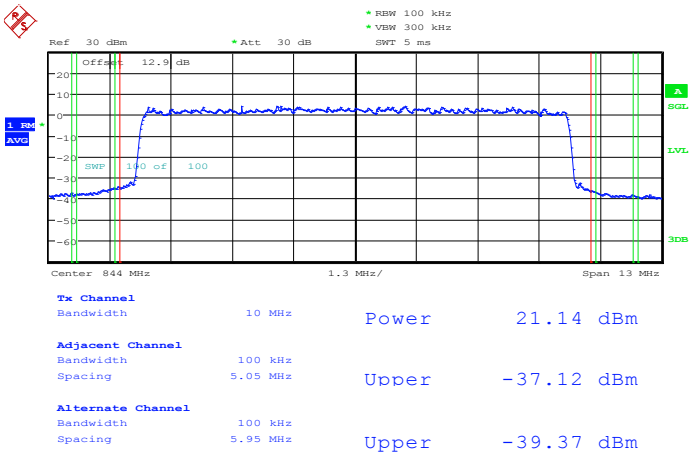
Date: 24.JUN.2013 14:50:04

Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 49



Date: 24.JUN.2013 14:55:49

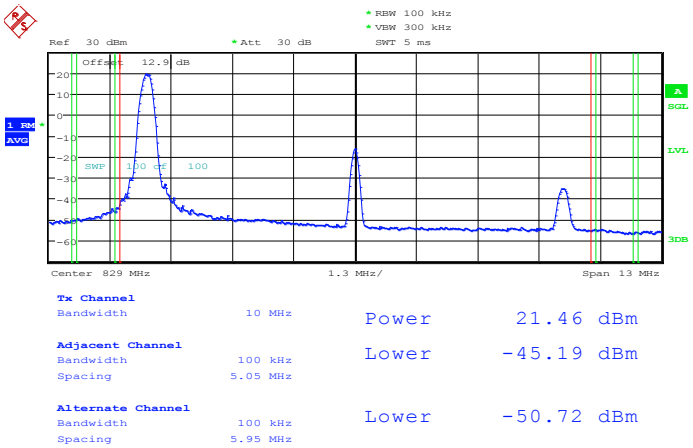
Higher Band Edge Plot for QPSK-RB Size 50, RB Offset 0



Date: 24.JUN.2013 14:56:47

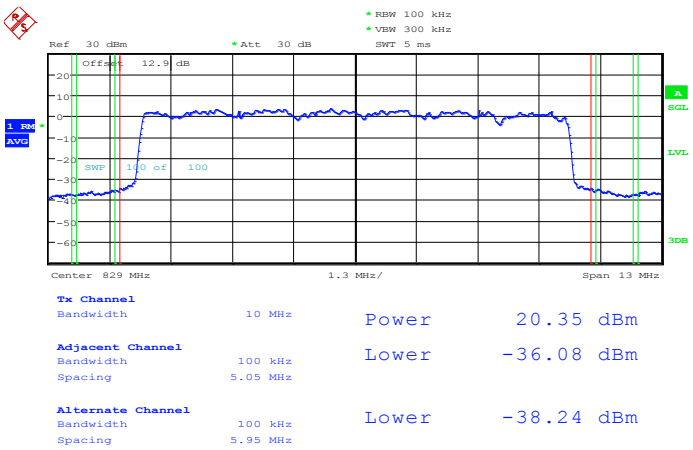
Band :	LTE Band 5	Band Width :	10MHz / 16QAM

Lower Band Edge Plot for 16QAM -RB Size 1, RB Offset 0



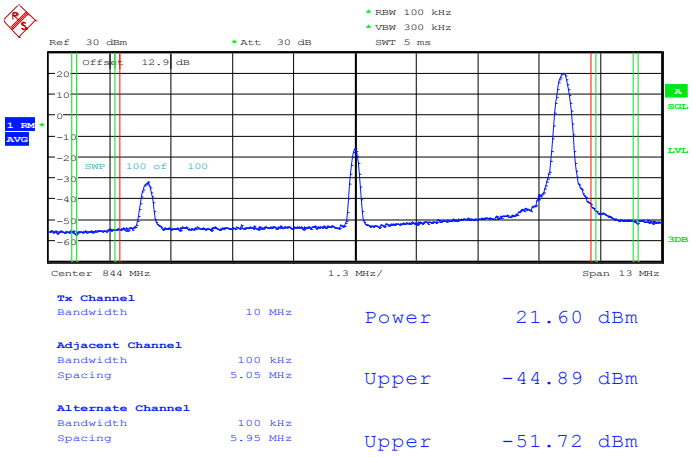
Date: 24.JUN.2013 14:50:35

Lower Band Edge Plot for 16QAM -RB Size 50, RB Offset 0



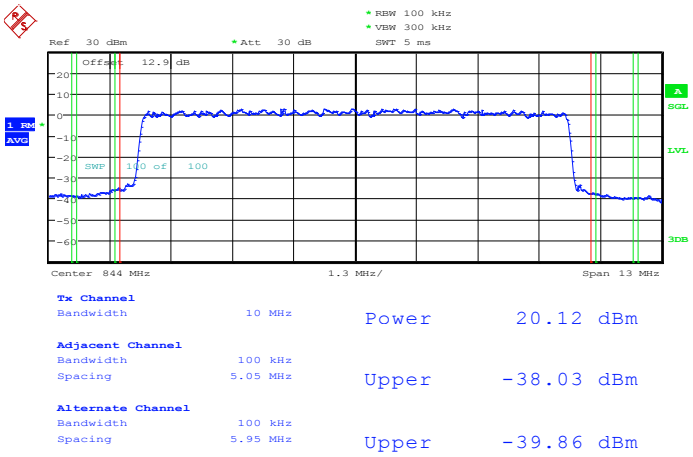
Date: 24.JUN.2013 14:50:18

Higher Band Edge Plot for 16QAM -RB Size 1, RB Offset 49



Date: 24.JUN.2013 14:56:09

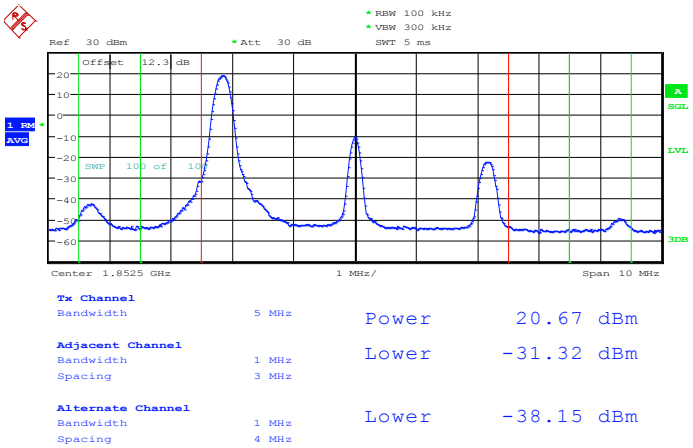
Higher Band Edge Plot for 16QAM -RB Size 50, RB Offset 0



Date: 24.JUN.2013 14:56:34

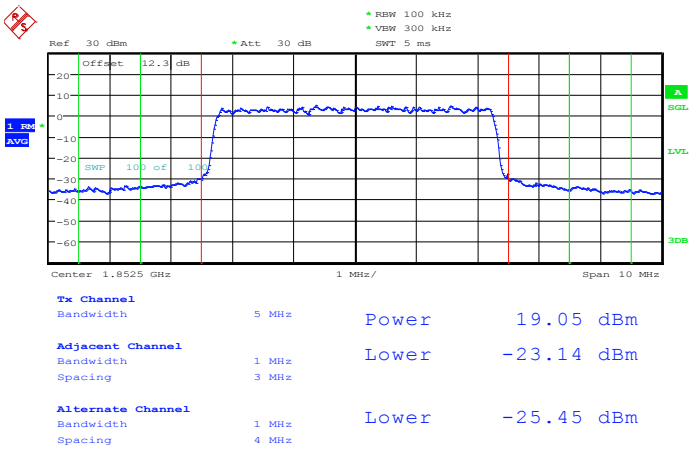
Band :	LTE Band 2	Band Width :	5MHz / QPSK

Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



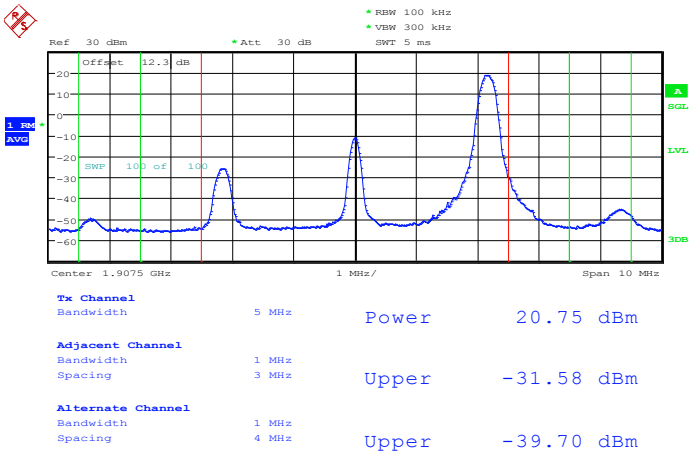
Date: 24.JUN.2013 10:09:50

Lower Band Edge Plot for QPSK-RB Size 25, RB Offset 0



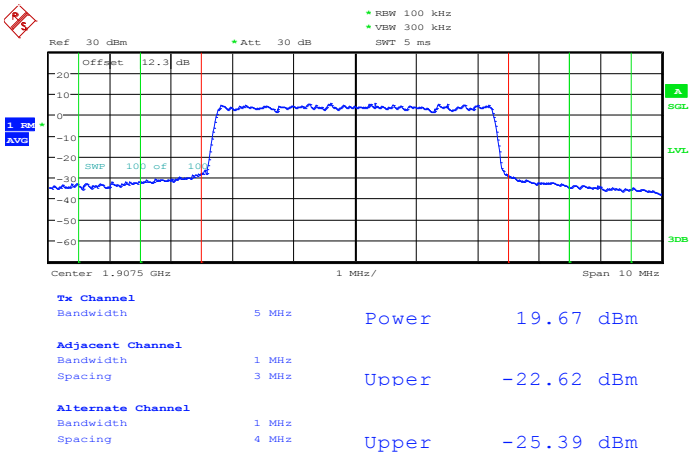
Date: 24.JUN.2013 10:09:03

Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 24



Date: 24.JUN.2013 10:11:09

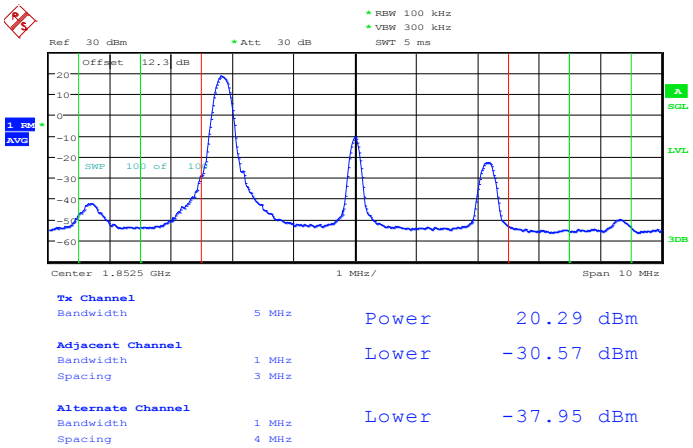
Higher Band Edge Plot for QPSK-RB Size 25, RB Offset 0



Date: 24.JUN.2013 10:12:06

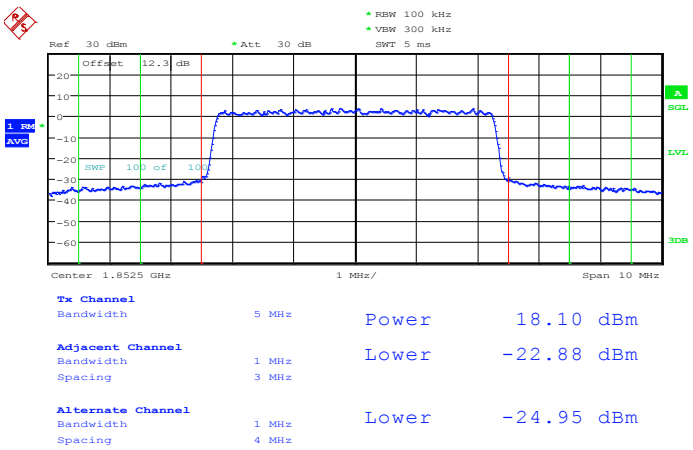
Band :	LTE Band 2	Band Width :	5MHz / 16QAM

Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



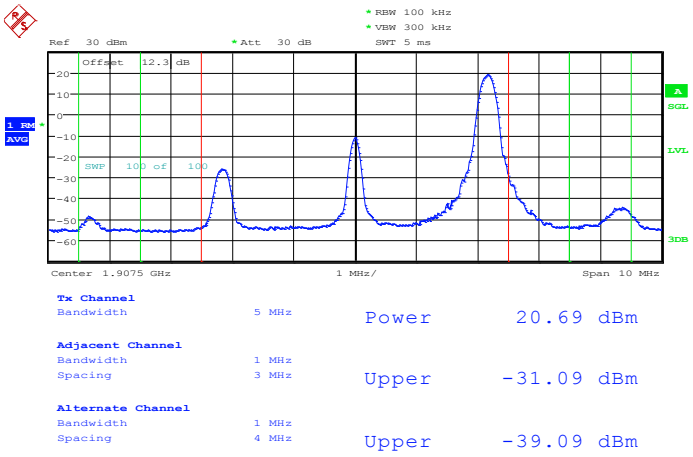
Date: 24.JUN.2013 10:09:39

Lower Band Edge Plot for 16QAM-RB Size 25, RB Offset 0



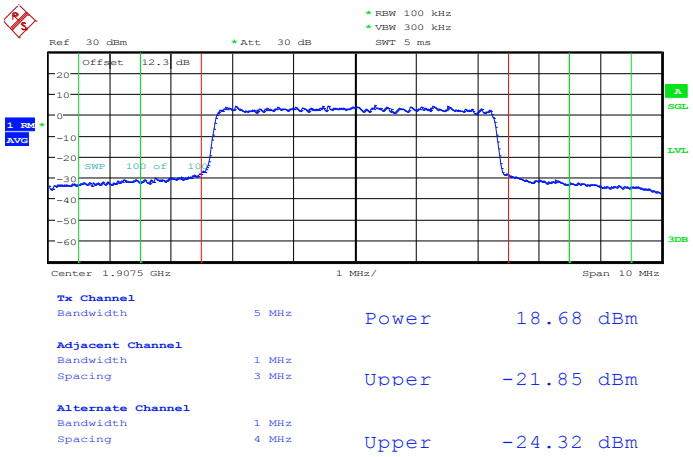
Date: 24.JUN.2013 10:09:20

Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 24



Date: 24.JUN.2013 10:11:21

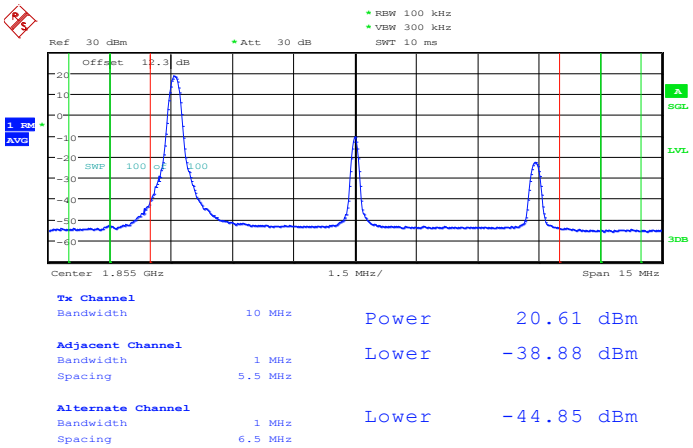
Higher Band Edge Plot for 16QAM-RB Size 25, RB Offset 0



Date: 24.JUN.2013 10:11:52

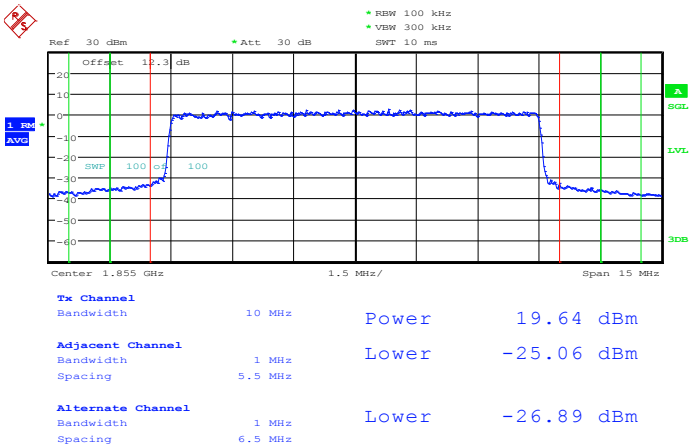
Band :	LTE Band 2	Band Width :	10MHz / QPSK

Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



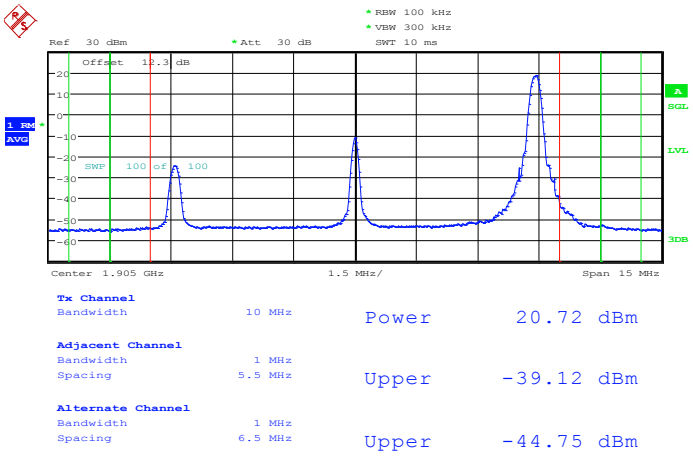
Date: 24.JUN.2013 10:17:04

Lower Band Edge Plot for QPSK-RB Size 50, RB Offset 0



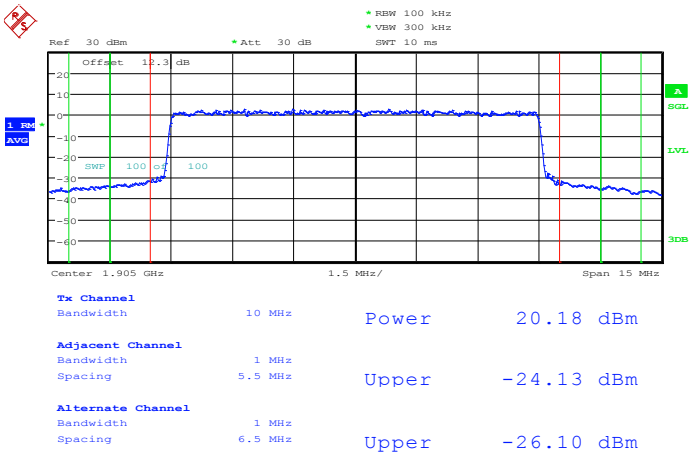
Date: 24.JUN.2013 10:17:57

Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 49



Date: 24.JUN.2013 10:16:12

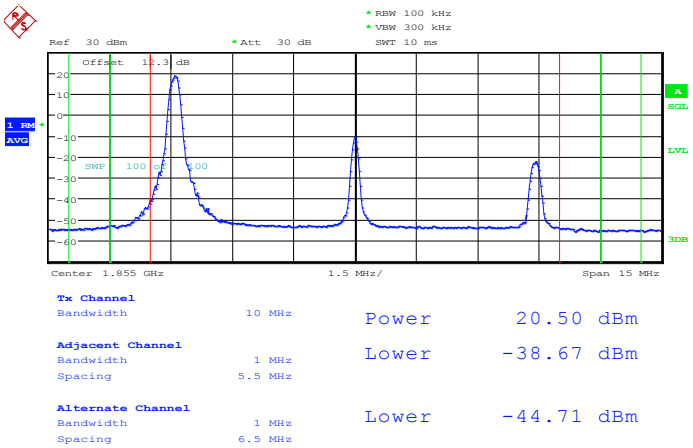
Higher Band Edge Plot for QPSK-RB Size 50, RB Offset 0



Date: 24.JUN.2013 10:15:01

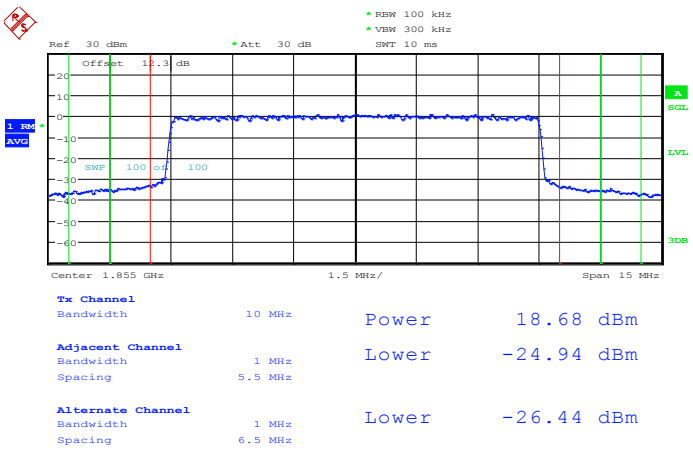
Band :	LTE Band 2	Band Width :	10MHz / 16QAM

Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



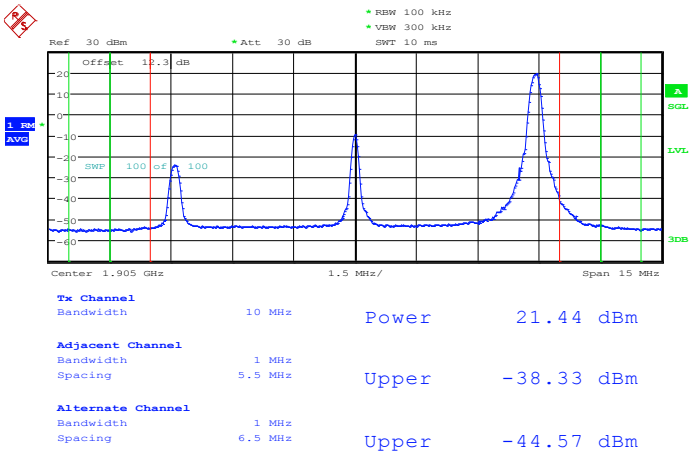
Date: 24.JUN.2013 10:17:23

Lower Band Edge Plot for 16QAM-RB Size 50, RB Offset 0



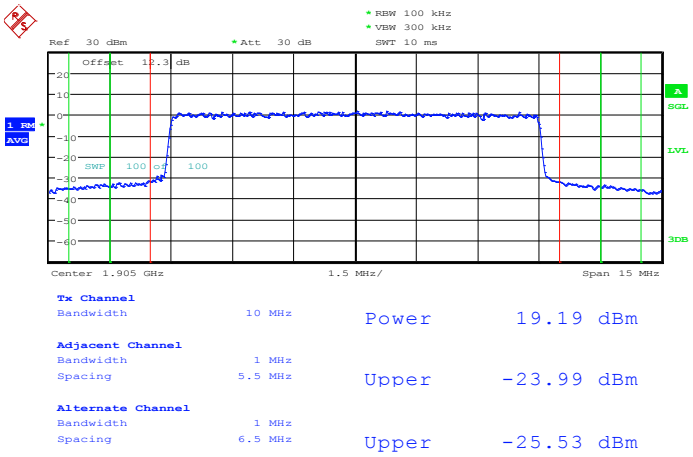
Date: 24.JUN.2013 10:17:44

Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 49



Date: 24.JUN.2013 10:15:56

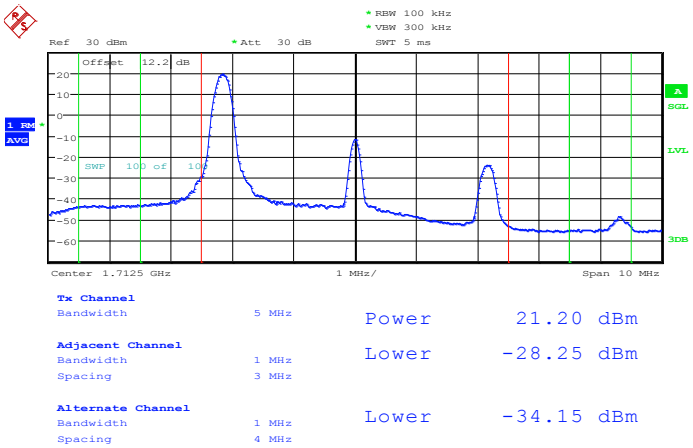
Higher Band Edge Plot for 16QAM-RB Size 50, RB Offset 0



Date: 24.JUN.2013 10:15:22

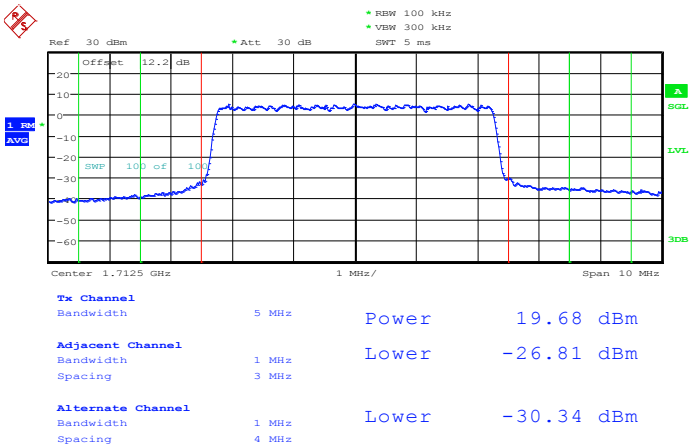
Band :	LTE Band 4	Band Width :	5MHz / QPSK

Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



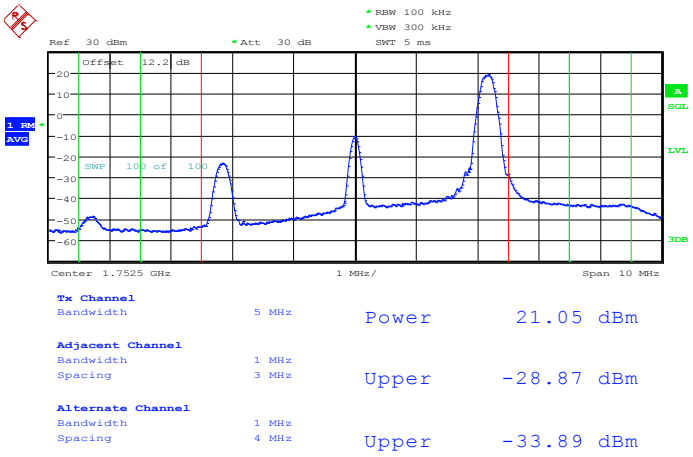
Date: 24.JUN.2013 11:36:28

Lower Band Edge Plot for QPSK-RB Size 25, RB Offset 0



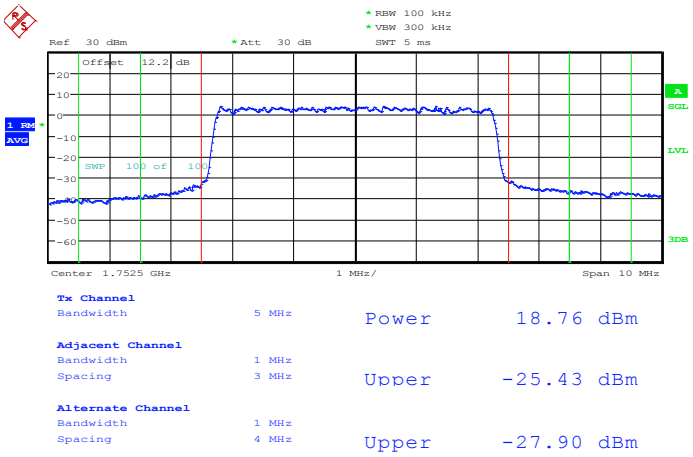
Date: 24.JUN.2013 11:37:11

Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 24



Date: 24.JUN.2013 11:38:48

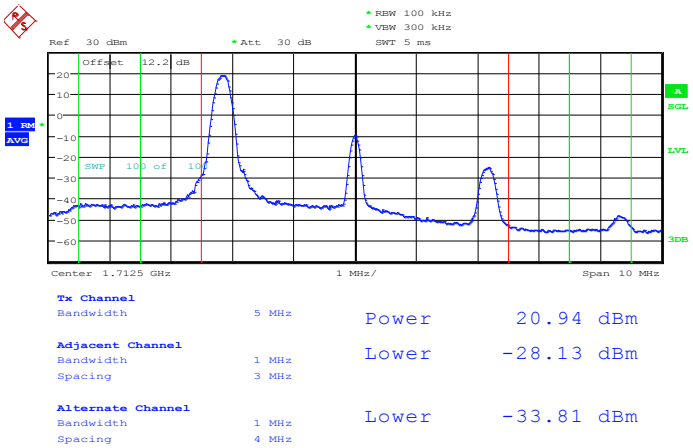
Higher Band Edge Plot for QPSK-RB Size 25, RB Offset 0



Date: 24.JUN.2013 11:38:08

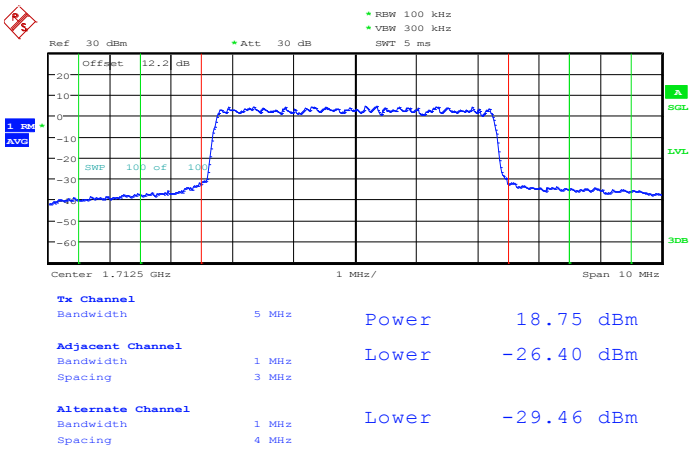
Band :	LTE Band 4	Band Width :	5MHz / 16QAM

Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



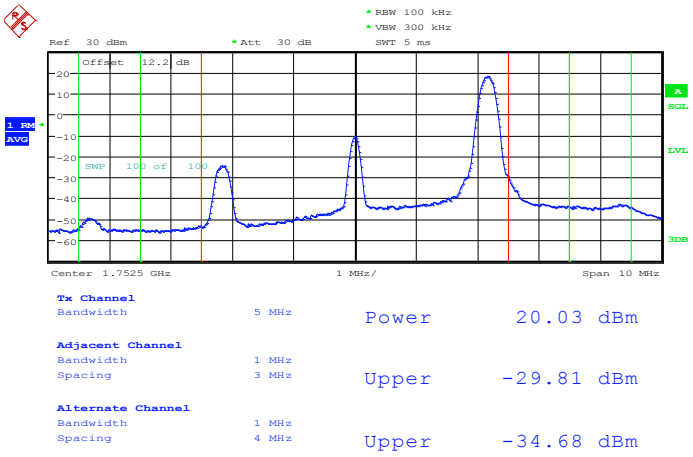
Date: 24.JUN.2013 11:36:41

Lower Band Edge Plot for 16QAM-RB Size 25, RB Offset 0



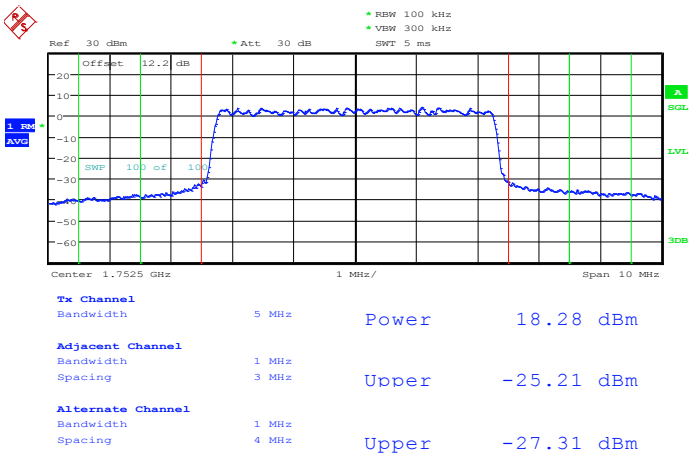
Date: 24.JUN.2013 11:37:00

Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 24



Date: 24.JUN.2013 11:38:38

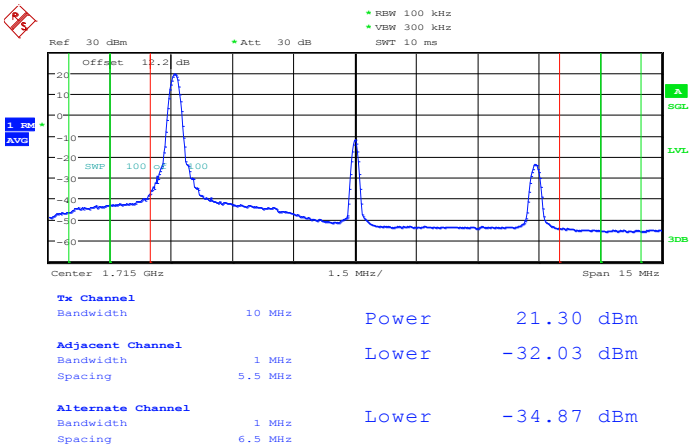
Higher Band Edge Plot for 16QAM-RB Size 25, RB Offset 0



Date: 24.JUN.2013 11:38:21

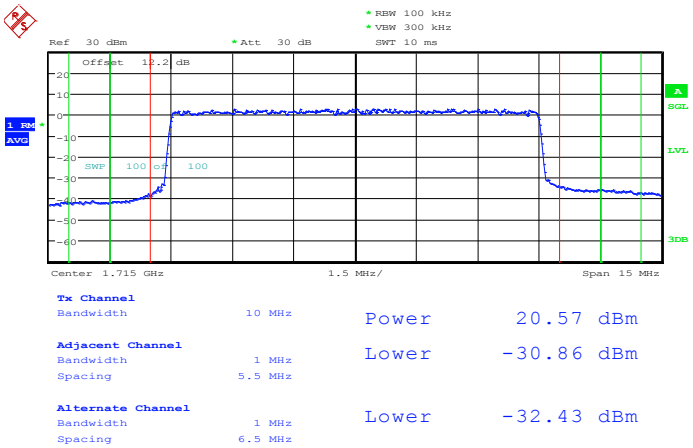
Band :	LTE Band 4	Band Width :	10MHz / QPSK

Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



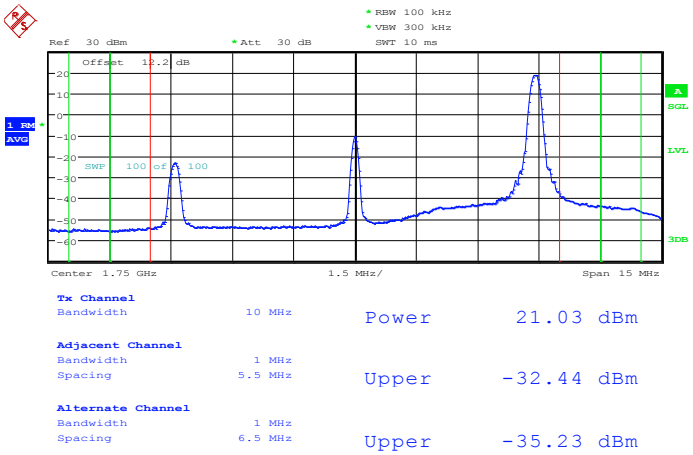
Date: 24.JUN.2013 11:34:26

Lower Band Edge Plot for QPSK-RB Size 50, RB Offset 0



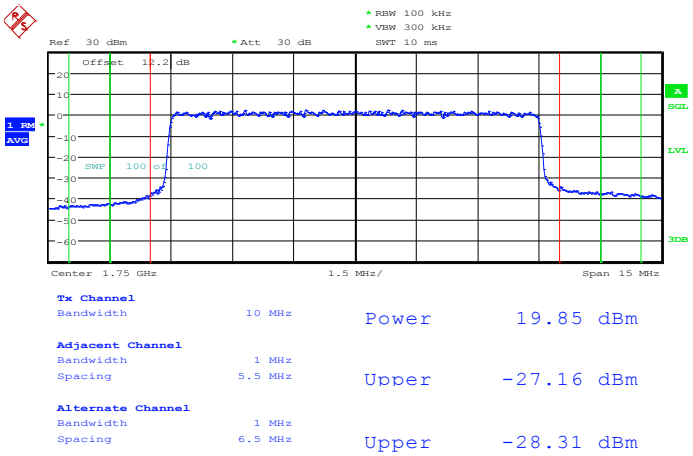
Date: 24.JUN.2013 11:35:10

Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 49



Date: 24.JUN.2013 11:33:55

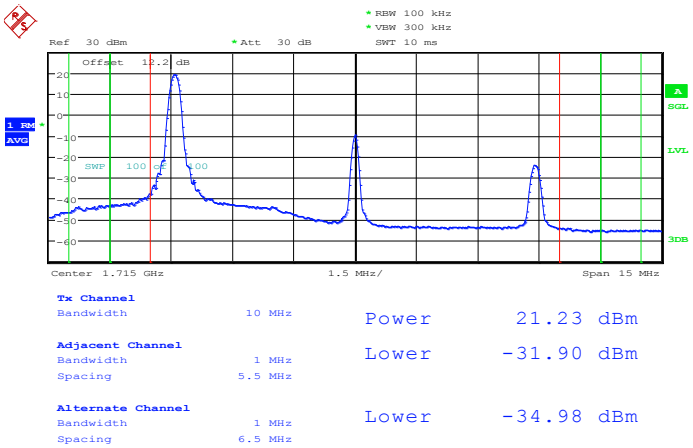
Higher Band Edge Plot for QPSK-RB Size 50, RB Offset 0



Date: 24.JUN.2013 11:32:44

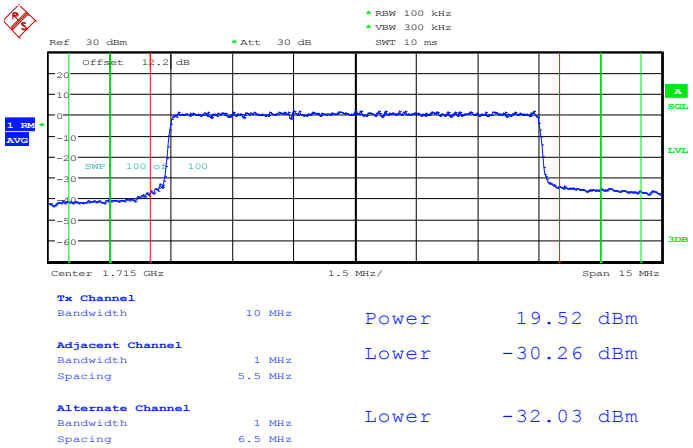
Band :	LTE Band 4	Band Width :	10MHz / 16QAM

Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



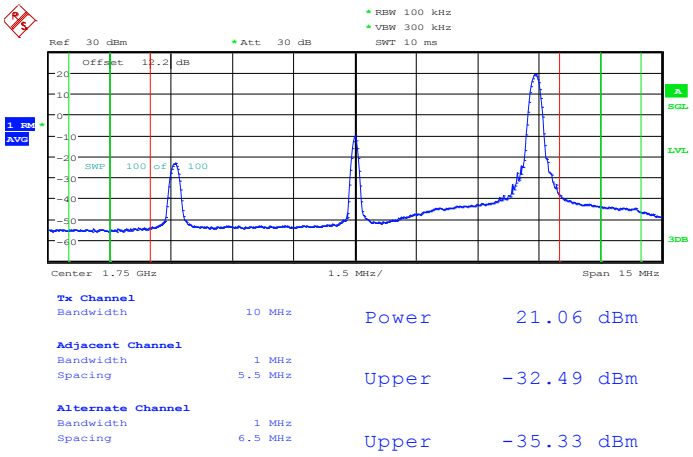
Date: 24.JUN.2013 11:34:40

Lower Band Edge Plot for 16QAM-RB Size 50, RB Offset 0



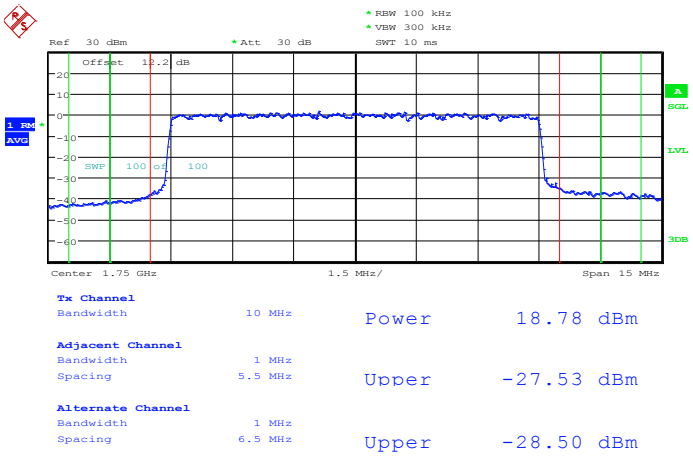
Date: 24.JUN.2013 11:34:57

Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 49



Date: 24.JUN.2013 11:33:42

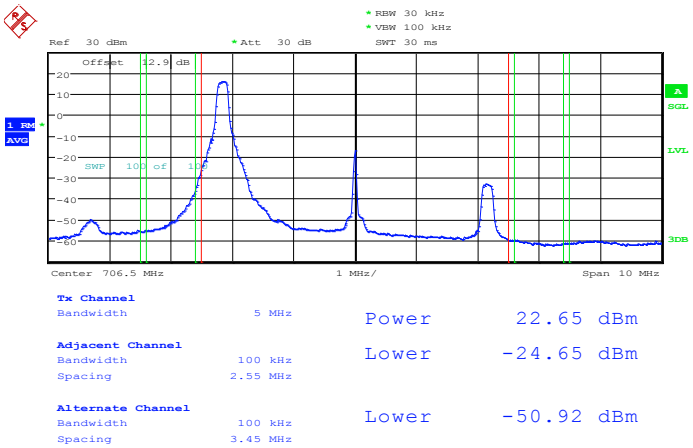
Higher Band Edge Plot for 16QAM-RB Size 50, RB Offset 0



Date: 24.JUN.2013 11:33:22

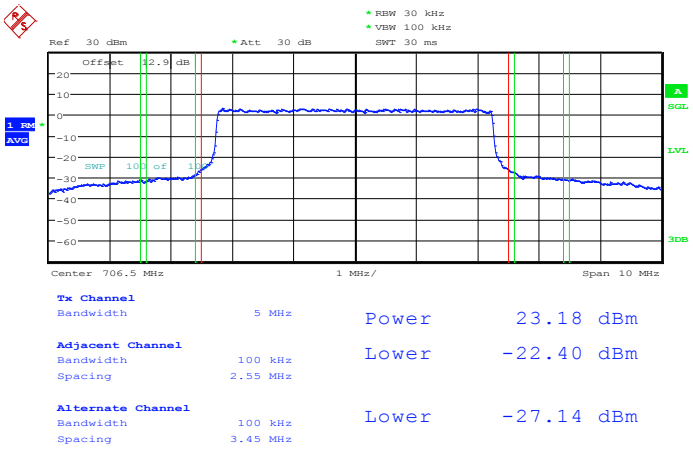
Band :	LTE Band 17	Band Width :	5MHz / QPSK

Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



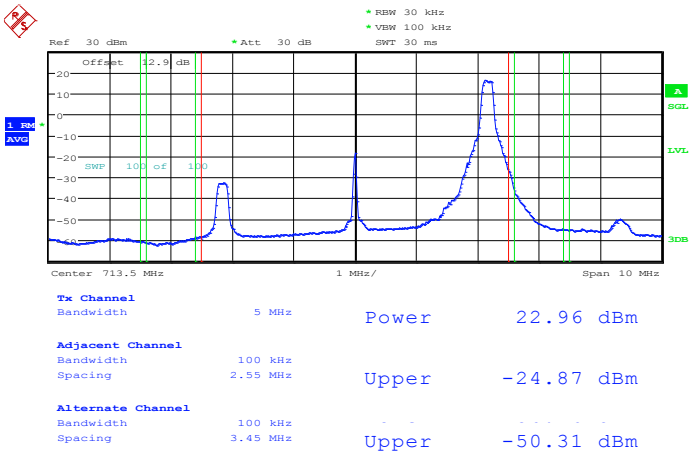
Date: 24.JUN.2013 15:46:44

Lower Band Edge Plot for QPSK-RB Size 25, RB Offset 0



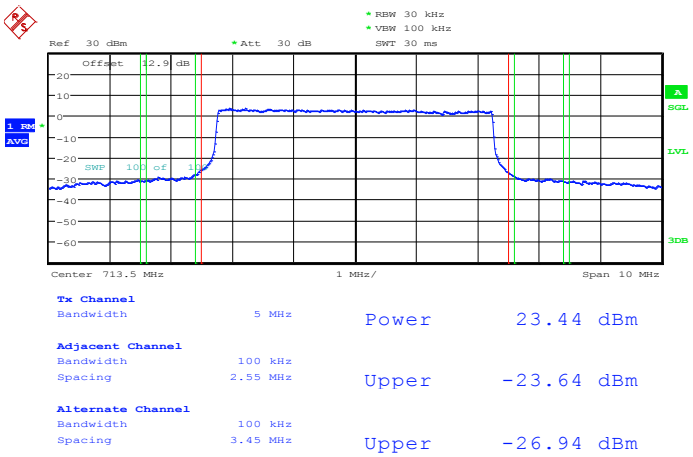
Date: 24.JUN.2013 15:45:41

Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 24



Date: 24.JUN.2013 15:47:10

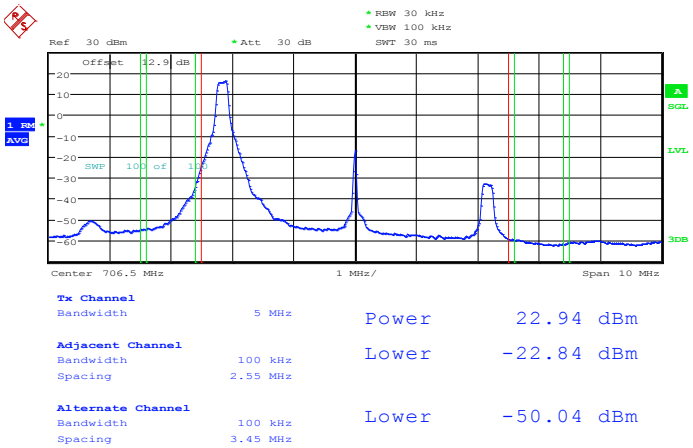
Higher Band Edge Plot for QPSK-RB Size 25, RB Offset 0



Date: 24.JUN.2013 15:47:57

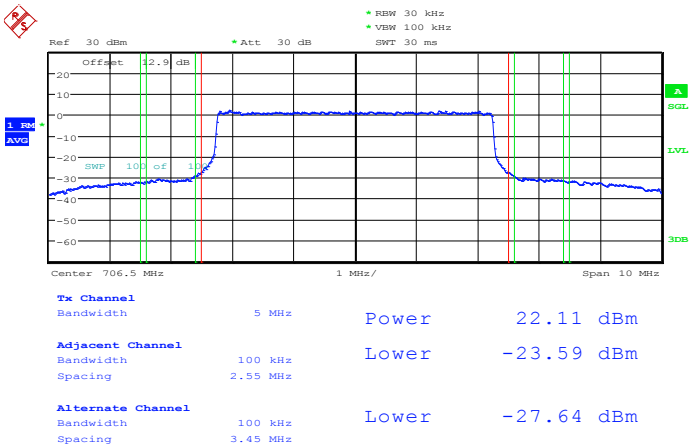
Band :	LTE Band 17	Band Width :	5MHz / 16QAM

Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



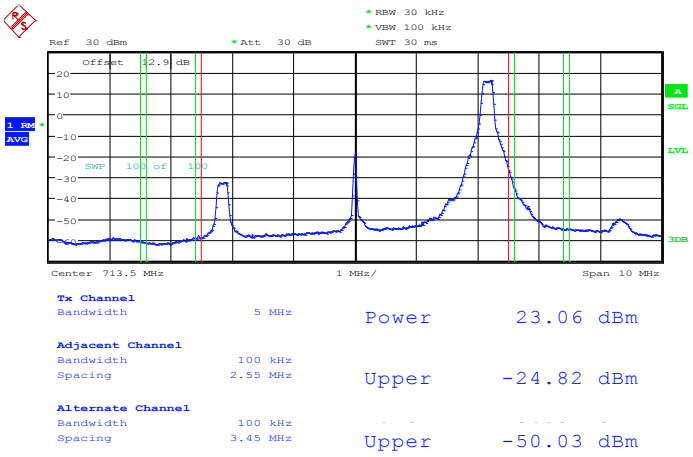
Date: 24.JUN.2013 15:46:29

Lower Band Edge Plot for 16QAM-RB Size 25, RB Offset 0



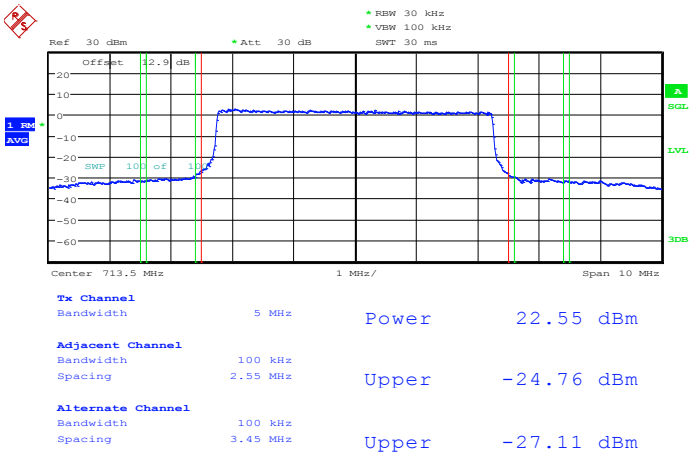
Date: 24.JUN.2013 15:45:57

Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 24



Date: 24.JUN.2013 15:47:24

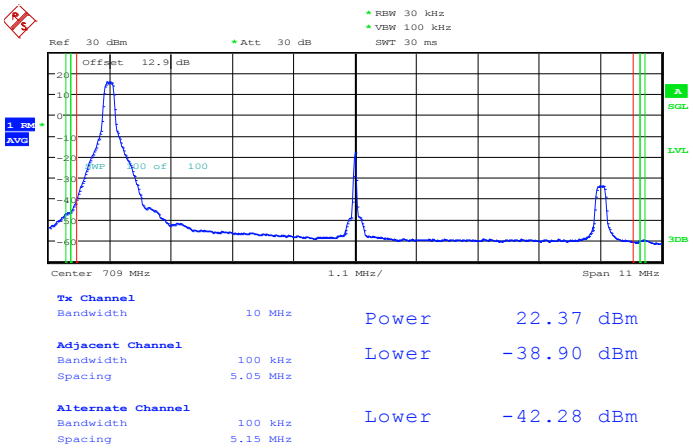
Higher Band Edge Plot for 16QAM-RB Size 25, RB Offset 0



Date: 24.JUN.2013 15:47:45

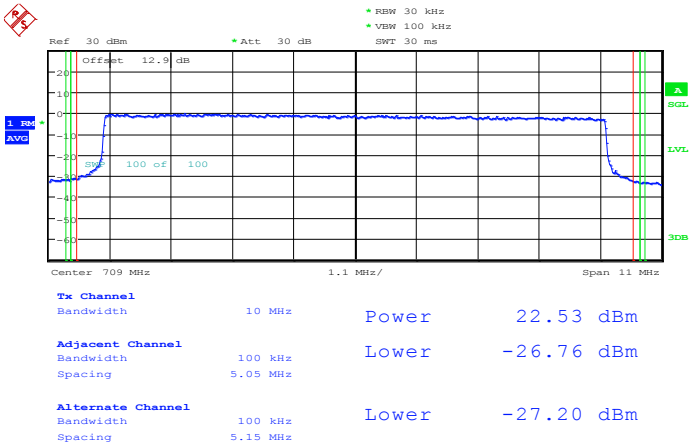
Band :	LTE Band 17	Band Width :	10MHz / QPSK

Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



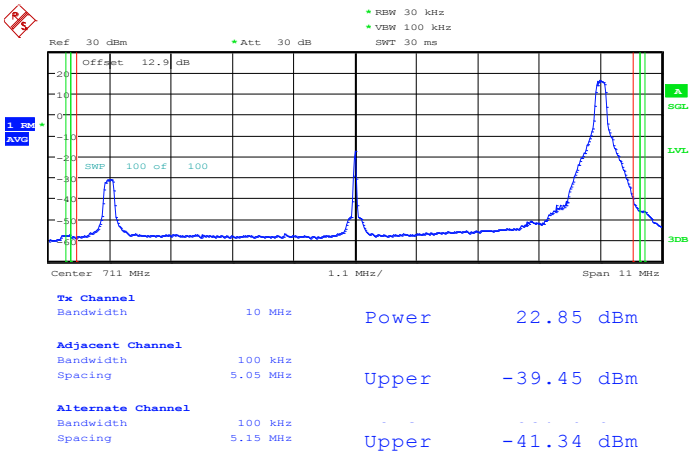
Date: 24.JUN.2013 15:51:48

Lower Band Edge Plot for QPSK-RB Size 50, RB Offset 0



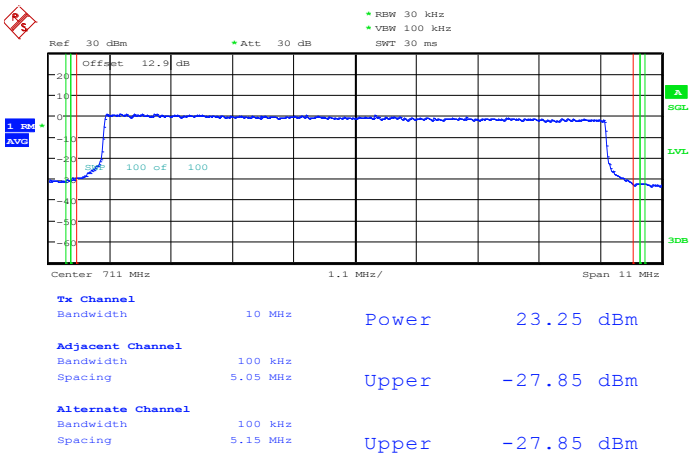
Date: 24.JUN.2013 15:51:04

Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 49



Date: 24.JUN.2013 15:49:54

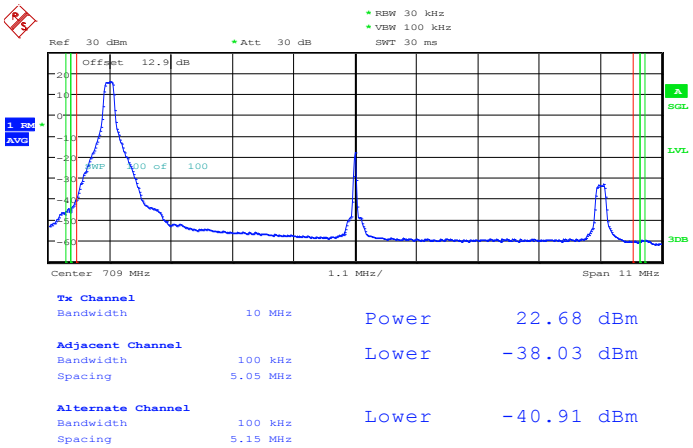
Higher Band Edge Plot for QPSK-RB Size 50, RB Offset 0



Date: 24.JUN.2013 15:50:42

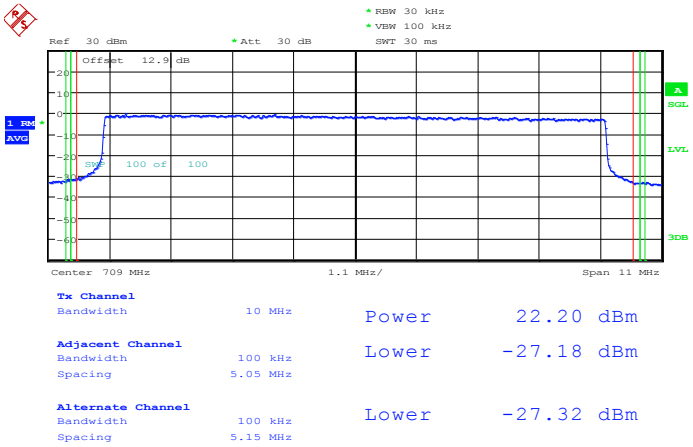
Band :	LTE Band 17	Band Width :	10MHz / 16QAM

Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



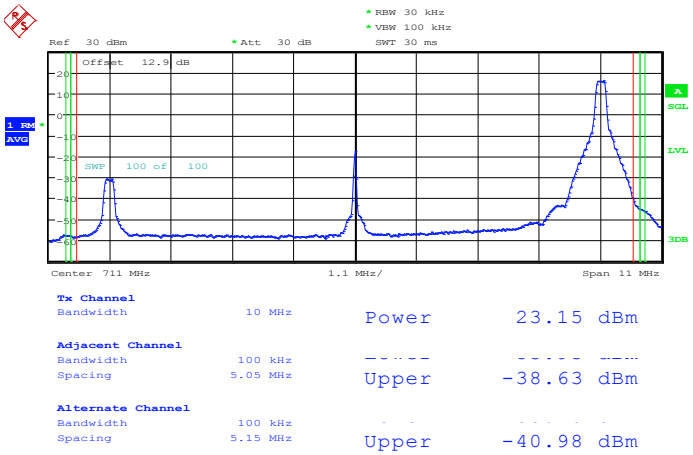
Date: 24.JUN.2013 15:51:36

Lower Band Edge Plot for 16QAM-RB Size 50, RB Offset 0



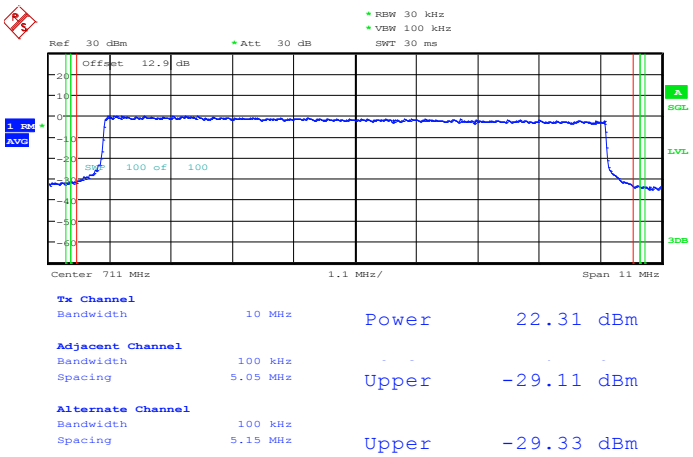
Date: 24.JUN.2013 15:51:22

Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 49



Date: 24.JUN.2013 15:50:12

Higher Band Edge Plot for 16QAM-RB Size 50, RB Offset 0



Date: 24.JUN.2013 15:50:29

3.6 Conducted Spurious Emission Measurement

3.6.1 Description of Conducted Spurious Emission Measurement

The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of at least 43 + 10 log (P) dB.

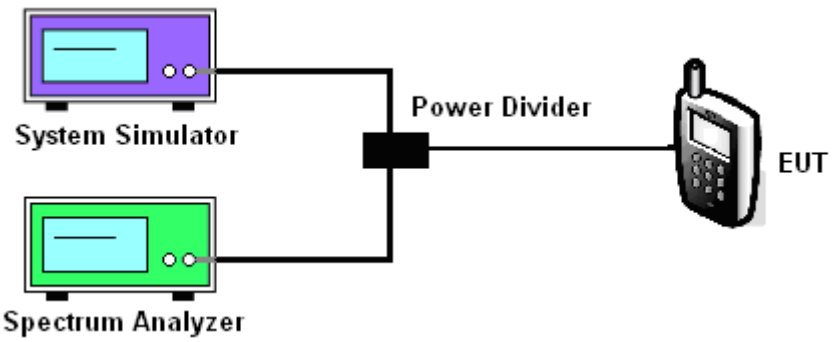
3.6.2 Measuring Instruments

See list of measuring instruments of this test report.

3.6.3 Test Procedures

1. The EUT was connected to spectrum analyzer and base station via power divider.
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. The middle channel for the highest RF power within the transmitting frequency was measured.
4. The conducted spurious emission for the whole frequency range was taken.
5. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
6. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
7. The limit line is derived from 43 + 10log(P)dB below the transmitter power P(Watts)
   = P(W)- [43 + 10log(P)] (dB)
   = [30 + 10log(P)] (dBm) - [43 + 10log(P)] (dB)
   = -13dBm.

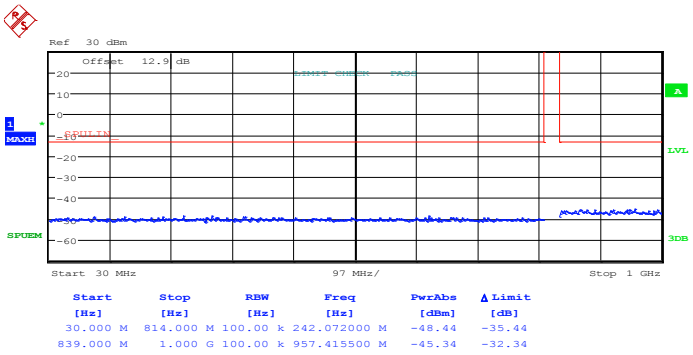
3.6.4 Test Setup



3.6.5 Test Result (Plots) of Conducted Spurious Emission

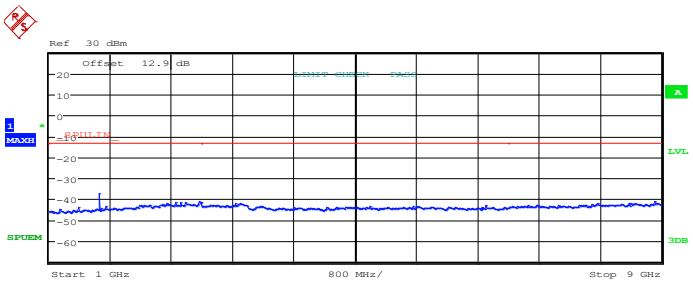
Band :	LTE Band 5	Channel :	CH20425 (Low)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 24)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	814.000 M	100.00 k	242.072000 M	-48.44	-35.44
839.000 M	1.000 G	100.00 k	957.415500 M	-45.34	-32.34

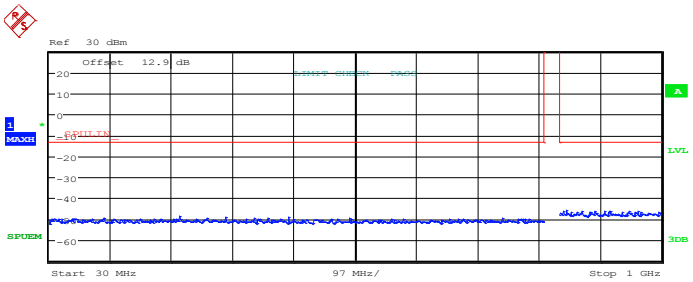
Date: 24.JUN.2013 15:12:56



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	3.000 G	1.00 M	1.657000 G	-37.41	-24.41
3.000 G	7.000 G	1.00 M	3.496000 G	-42.14	-29.14
7.000 G	9.000 G	1.00 M	8.910000 G	-41.22	-28.22

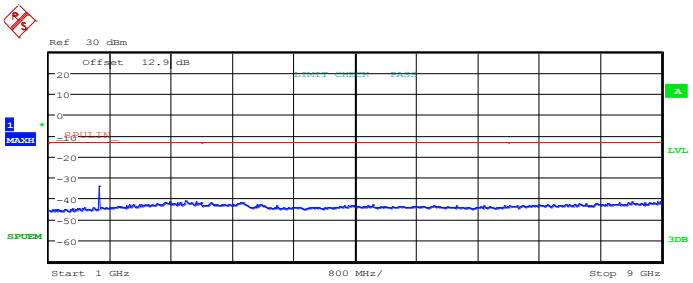
Date: 24.JUN.2013 15:14:15

16QAM (RB Size 1, RB Offset 24)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	814.000 M	100.00 k	236.192000 M	-48.81	-35.81
839.000 M	1.000 G	100.00 k	849.143000 M	-45.93	-32.93

Date: 24.JUN.2013 15:13:08

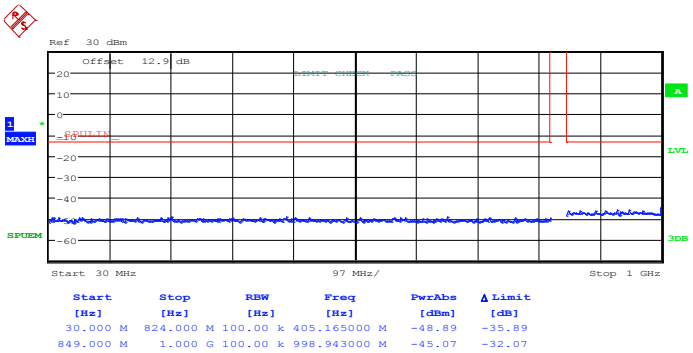


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	3.000 G	1.00 M	1.658000 G	-33.94	-20.94
3.000 G	7.000 G	1.00 M	3.512000 G	-42.03	-29.03
7.000 G	9.000 G	1.00 M	8.983000 G	-41.50	-28.50

Date: 24.JUN.2013 15:13:56

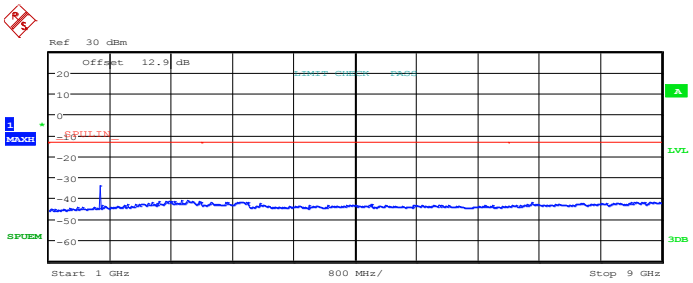
Band :	LTE Band 5	Channel :	CH20525 (Middle)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 0)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	824.000 M	100.00 k	405.165000 M	-48.89	-35.89
849.000 M	1.000 G	100.00 k	998.943000 M	-45.07	-32.07

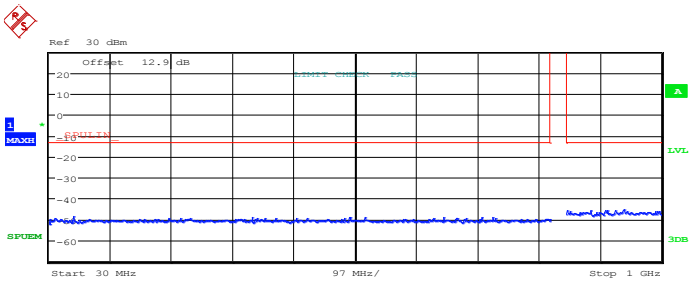
Date: 24.JUN.2013 15:16:44



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	3.000 G	1.00 M	1.669000 G	-33.91	-20.91
3.000 G	7.000 G	1.00 M	3.534000 G	-41.86	-28.86
7.000 G	9.000 G	1.00 M	8.906000 G	-41.89	-28.89

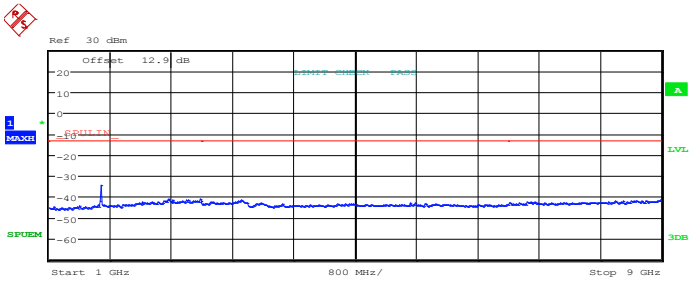
Date: 24.JUN.2013 15:15:11

16QAM (RB Size 1, RB Offset 12)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	824.000 M	100.00 k	67.715000 M	-48.48	-35.48
849.000 M	1.000 G	100.00 k	941.563000 M	-45.54	-32.54

Date: 24.JUN.2013 15:16:04

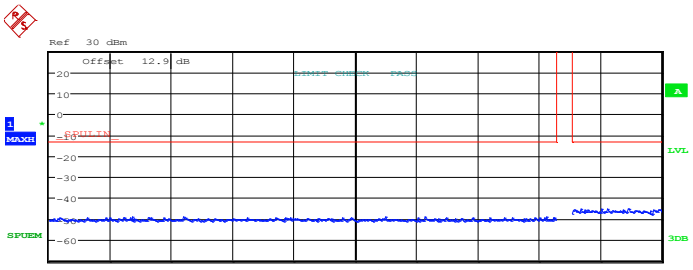


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	3.000 G	1.00 M	1.673000 G	-34.68	-21.68
3.000 G	7.000 G	1.00 M	3.506000 G	-41.60	-28.60
7.000 G	9.000 G	1.00 M	8.987000 G	-41.59	-28.59

Date: 24.JUN.2013 15:15:43

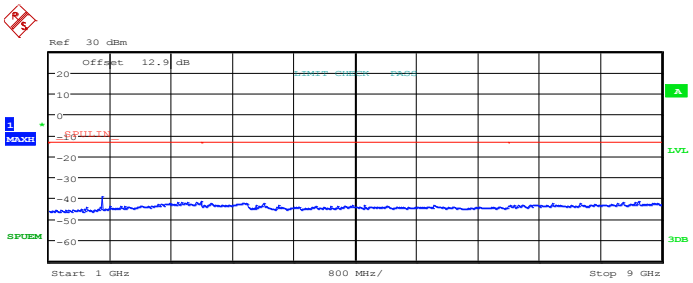
Band :	LTE Band 5	Channel :	CH20625 (High)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 0)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	834.000 M	100.00 k	563.052000 M	-48.95	-35.95
859.000 M	1.000 G	100.00 k	914.554000 M	-45.26	-32.26

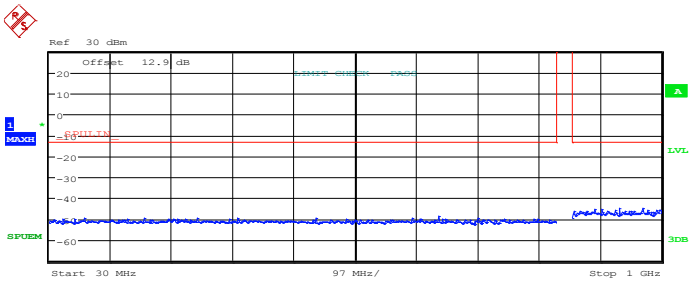
Date: 24.JUN.2013 15:18:46



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	3.000 G	1.00 M	1.693000 G	-39.31	-26.31
3.000 G	7.000 G	1.00 M	3.522000 G	-42.30	-29.30
7.000 G	9.000 G	1.00 M	8.704000 G	-41.55	-28.55

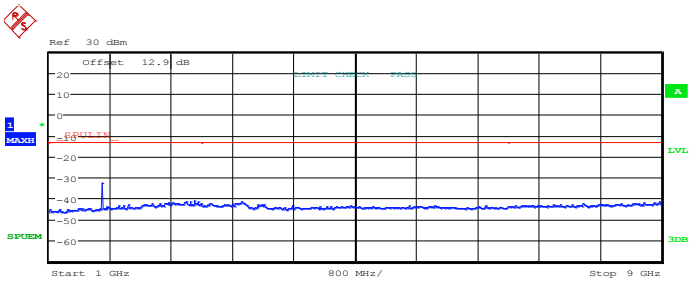
Date: 24.JUN.2013 15:19:23

16QAM (RB Size 1, RB Offset 12)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	834.000 M	100.00 k	647.472000 M	-48.87	-35.87
859.000 M	1.000 G	100.00 k	932.743000 M	-44.80	-31.80

Date: 24.JUN.2013 15:19:02

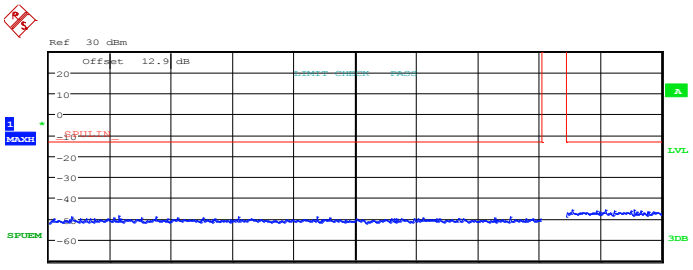


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	3.000 G	1.00 M	1.693000 G	-32.55	-19.55
3.000 G	7.000 G	1.00 M	3.516000 G	-41.55	-28.55
7.000 G	9.000 G	1.00 M	8.968000 G	-41.43	-28.43

Date: 24.JUN.2013 15:19:15

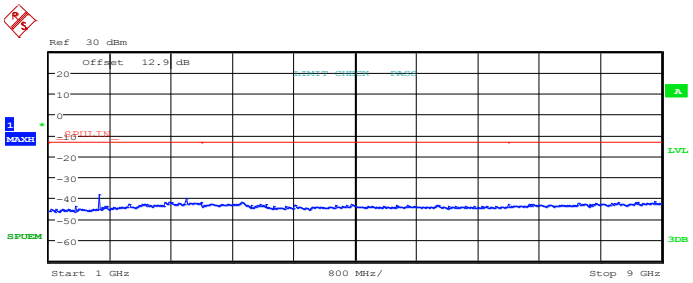
Band :	LTE Band 5	Channel :	CH20450 (Low)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 0)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	809.000 M	100.00 k	139.839000 M	-48.78	-35.78
849.000 M	1.000 G	100.00 k	858.211000 M	-45.83	-32.83

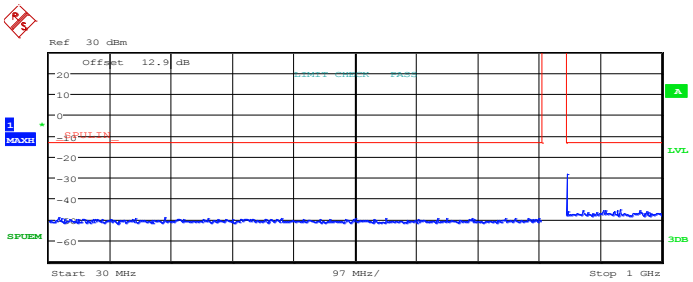
Date: 24.JUN.2013 15:25:17



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	3.000 G	1.00 M	1.649000 G	-38.08	-25.08
3.000 G	7.000 G	1.00 M	3.520000 G	-41.96	-28.96
7.000 G	9.000 G	1.00 M	8.905000 G	-41.78	-28.78

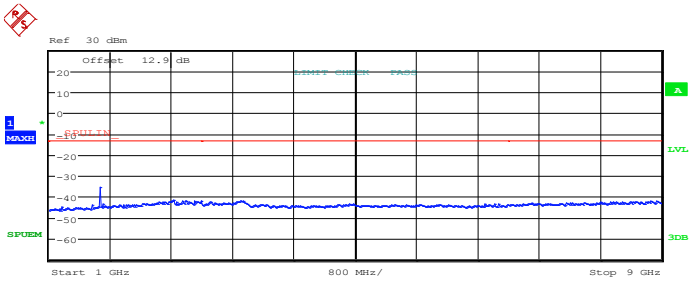
Date: 24.JUN.2013 15:24:32

16QAM (RB Size 1, RB Offset 49)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	809.000 M	100.00 k	213.065000 M	-49.22	-36.22
849.000 M	1.000 G	100.00 k	851.038500 M	-28.51	-15.51

Date: 24.JUN.2013 15:25:02

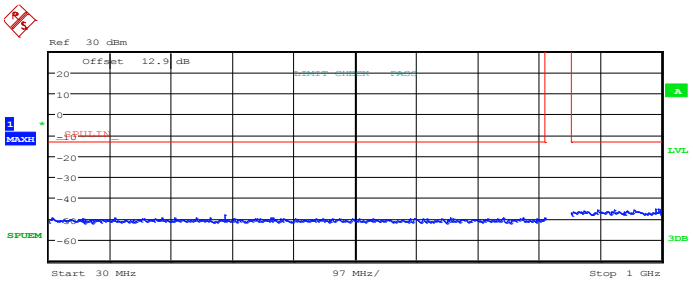


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	3.000 G	1.00 M	1.667000 G	-35.56	-22.56
3.000 G	7.000 G	1.00 M	3.502000 G	-41.95	-28.95
7.000 G	9.000 G	1.00 M	8.863000 G	-42.15	-29.15

Date: 24.JUN.2013 15:24:47

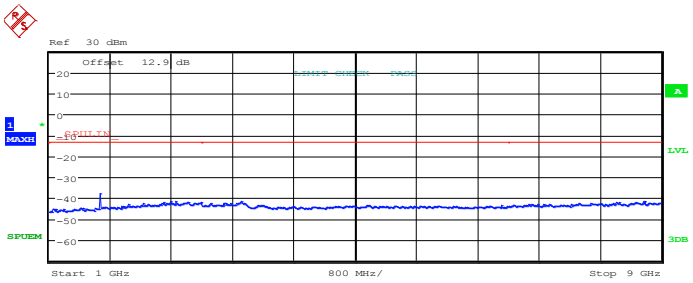
Band :	LTE Band 5	Channel :	CH20525 (Middle)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 0)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	816.500 M	100.00 k	308.027750 M	-48.09	-35.09
856.500 M	1.000 G	100.00 k	995.551500 M	-45.41	-32.41

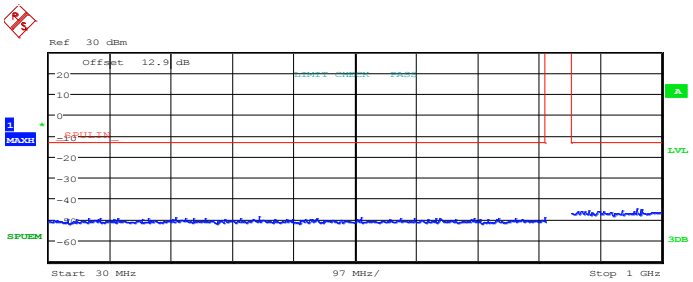
Date: 24.JUN.2013 15:23:10



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	3.000 G	1.00 M	1.665000 G	-37.86	-24.86
3.000 G	7.000 G	1.00 M	3.512000 G	-41.81	-28.81
7.000 G	9.000 G	1.00 M	8.771000 G	-41.44	-28.44

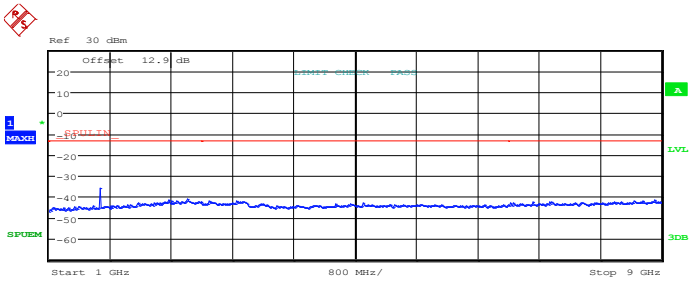
Date: 24.JUN.2013 15:23:55

16QAM (RB Size 1, RB Offset 0)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	816.500 M	100.00 k	362.296250 M	-48.55	-35.55
856.500 M	1.000 G	100.00 k	961.685500 M	-44.84	-31.84

Date: 24.JUN.2013 15:23:24

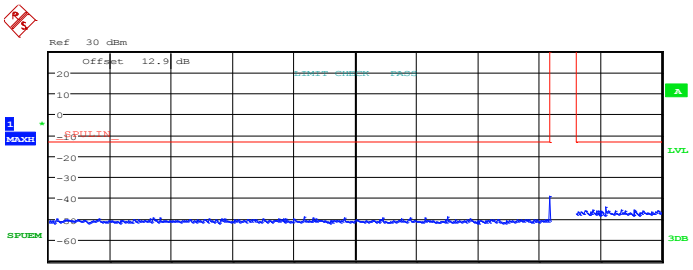


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	3.000 G	1.00 M	1.665000 G	-36.08	-23.08
3.000 G	7.000 G	1.00 M	3.090000 G	-42.19	-29.19
7.000 G	9.000 G	1.00 M	8.912000 G	-41.61	-28.61

Date: 24.JUN.2013 15:23:39

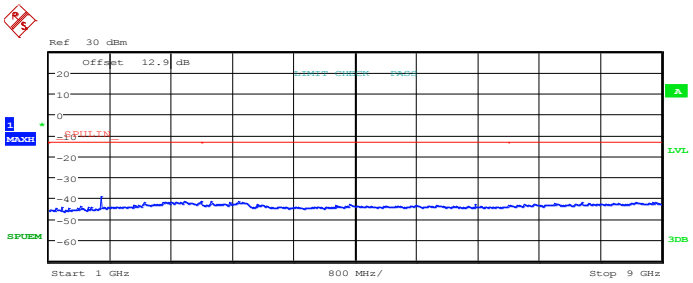
Band :	LTE Band 5	Channel :	CH20600 (High)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 0)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	824.000 M	100.00 k	822.412000 M	-39.19	-26.19
864.000 M	1.000 G	100.00 k	911.328000 M	-44.64	-31.64

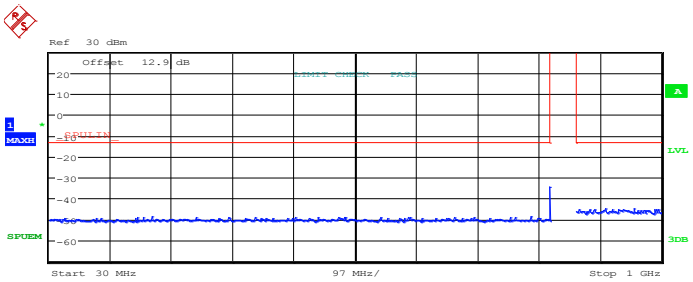
Date: 24.JUN.2013 15:22:35



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	3.000 G	1.00 M	1.679000 G	-39.08	-26.08
3.000 G	7.000 G	1.00 M	3.466000 G	-41.49	-28.49
7.000 G	9.000 G	1.00 M	7.966000 G	-41.84	-28.84

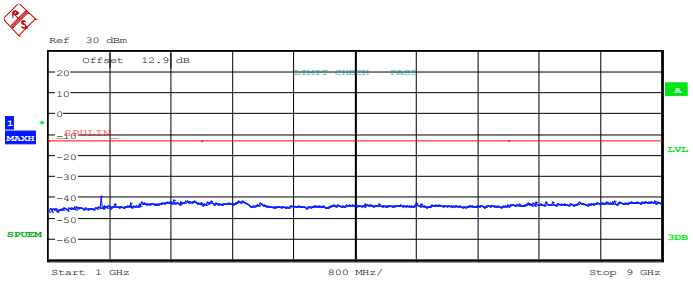
Date: 24.JUN.2013 15:21:34

16QAM (RB Size 1, RB Offset 0)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	824.000 M	100.00 k	822.015000 M	-34.37	-21.37
864.000 M	1.000 G	100.00 k	910.648000 M	-44.69	-31.69

Date: 24.JUN.2013 15:22:20

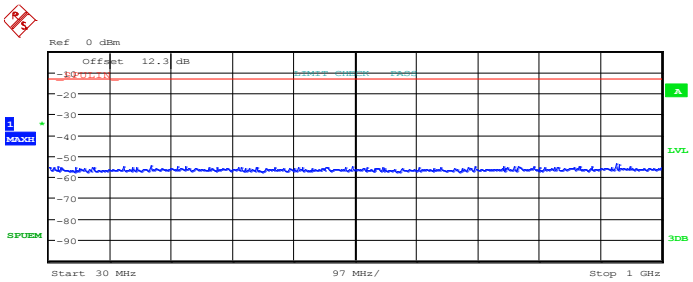


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	3.000 G	1.00 M	1.679000 G	-39.69	-26.69
3.000 G	7.000 G	1.00 M	3.118000 G	-42.00	-29.00
7.000 G	9.000 G	1.00 M	8.380000 G	-42.27	-29.27

Date: 24.JUN.2013 15:21:45

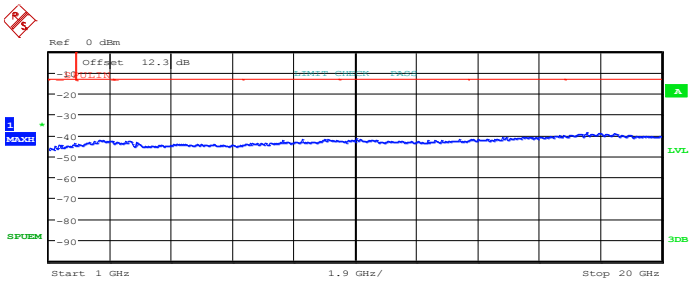
Band :	LTE Band 2	Channel :	CH18625 (Low)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 12)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	1.000 G	100.00 k	928.220000 M	-53.53	-40.53

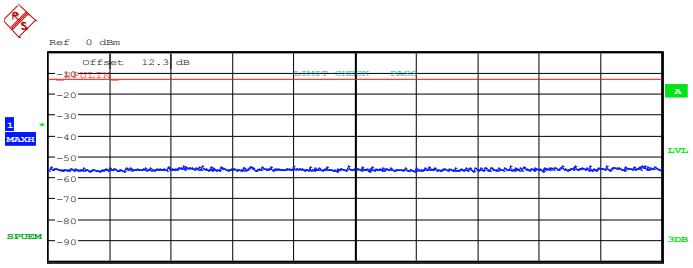
Date: 24.JUN.2013 10:50:18



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	1.840 G	1.00 M	1.806400 G	-44.08	-31.08
1.865 G	3.000 G	1.00 M	2.559620 G	-42.27	-29.27
3.000 G	7.000 G	1.00 M	3.472000 G	-43.07	-30.07
7.000 G	10.000 G	1.00 M	8.867500 G	-42.02	-29.02
10.000 G	14.000 G	1.00 M	10.522000 G	-41.51	-28.51
14.000 G	17.000 G	1.00 M	16.830500 G	-40.25	-27.25
17.000 G	20.000 G	1.00 M	17.676500 G	-38.91	-25.91

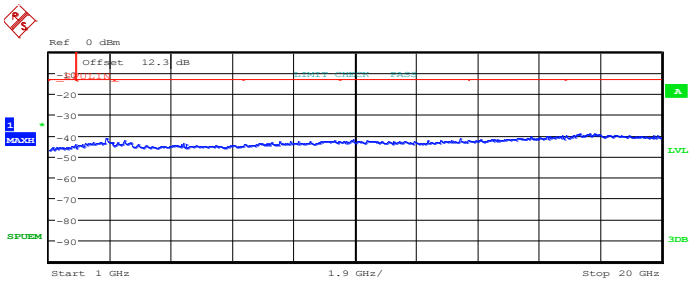
Date: 24.JUN.2013 10:49:40

16QAM (RB Size 1, RB Offset 12)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	1.000 G	100.00 k	841.890000 M	-54.46	-41.46

Date: 24.JUN.2013 10:50:07

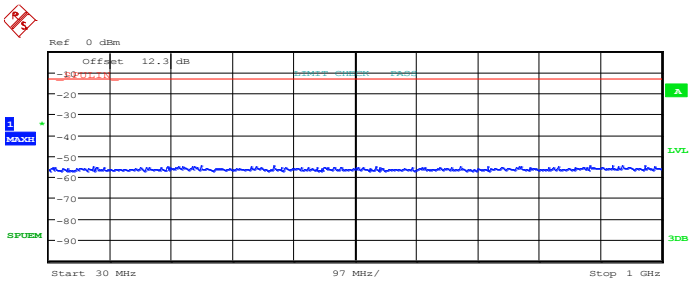


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	1.840 G	1.00 M	1.808920 G	-44.51	-31.51
1.865 G	3.000 G	1.00 M	2.763352 G	-41.63	-28.63
3.000 G	7.000 G	1.00 M	3.348000 G	-42.31	-29.31
7.000 G	10.000 G	1.00 M	9.862000 G	-42.37	-29.37
10.000 G	14.000 G	1.00 M	13.770000 G	-41.35	-28.35
14.000 G	17.000 G	1.00 M	16.914500 G	-40.16	-27.16
17.000 G	20.000 G	1.00 M	17.469500 G	-39.19	-26.19

Date: 24.JUN.2013 10:49:51

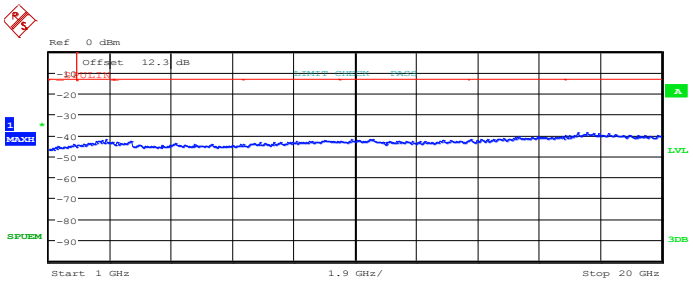
Band :	LTE Band 2	Channel :	CH18900 (Middle)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 0)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	1.000 G	100.00 k	937.435000 M	-54.57	-41.57

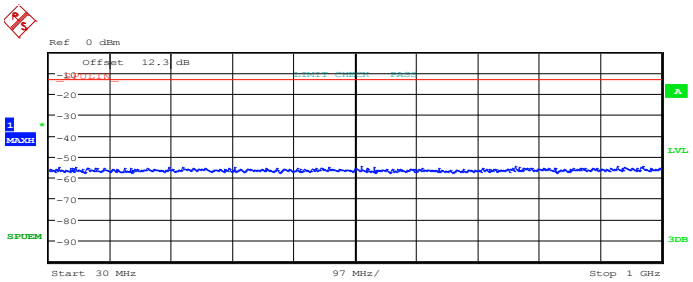
Date: 24.JUN.2013 10:47:32



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	1.867 G	1.00 M	1.770774 G	-44.37	-31.37
1.893 G	3.000 G	1.00 M	2.772409 G	-42.12	-29.12
3.000 G	7.000 G	1.00 M	3.546000 G	-43.10	-30.10
7.000 G	10.000 G	1.00 M	9.560500 G	-42.50	-29.50
10.000 G	14.000 G	1.00 M	11.060000 G	-41.97	-28.97
14.000 G	17.000 G	1.00 M	16.908500 G	-40.41	-27.41
17.000 G	20.000 G	1.00 M	17.681000 G	-38.86	-25.86

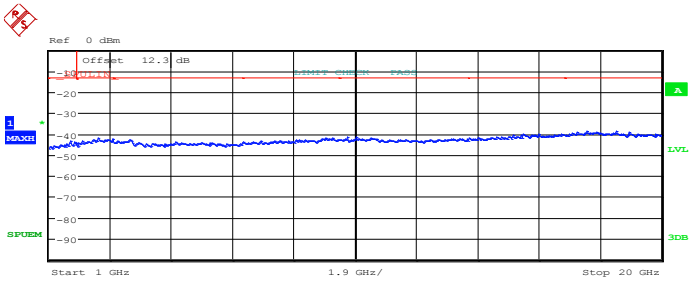
Date: 24.JUN.2013 10:48:17

16QAM (RB Size 1, RB Offset 0)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	1.000 G	100.00 k	970.415000 M	-54.63	-41.63

Date: 24.JUN.2013 10:47:45

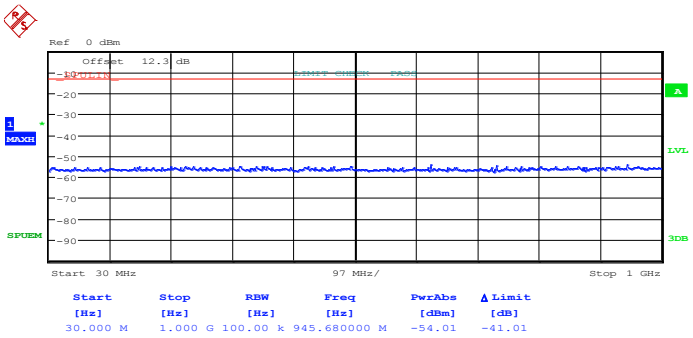


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	1.867 G	1.00 M	1.659734 G	-43.29	-30.29
1.893 G	3.000 G	1.00 M	2.525436 G	-42.11	-29.11
3.000 G	7.000 G	1.00 M	3.498000 G	-43.02	-30.02
7.000 G	10.000 G	1.00 M	9.812500 G	-42.21	-29.21
10.000 G	14.000 G	1.00 M	10.532000 G	-41.39	-28.39
14.000 G	17.000 G	1.00 M	15.707000 G	-40.03	-27.03
17.000 G	20.000 G	1.00 M	18.594500 G	-38.68	-25.68

Date: 24.JUN.2013 10:48:06

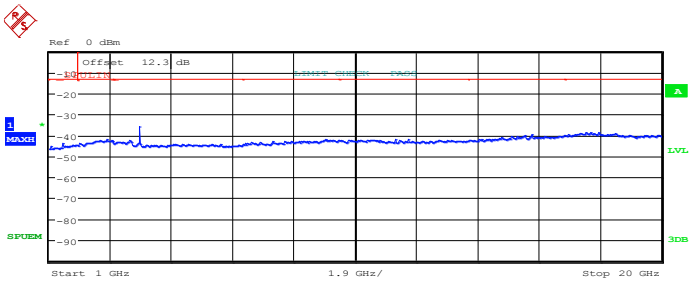
Band :	LTE Band 2	Channel :	CH19175 (High)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 12)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	1.000 G	100.00 k	945.680000 M	-54.01	-41.01

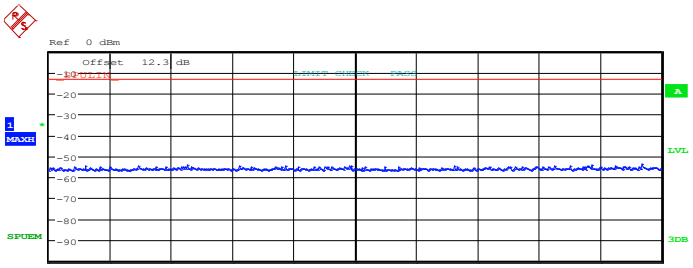
Date: 24.JUN.2013 10:45:46



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	1.895 G	1.00 M	1.419307 G	-43.86	-30.86
1.920 G	3.000 G	1.00 M	2.796960 G	-42.08	-29.08
3.000 G	7.000 G	1.00 M	3.810000 G	-35.83	-22.83
7.000 G	10.000 G	1.00 M	9.572500 G	-42.14	-29.14
10.000 G	14.000 G	1.00 M	11.744000 G	-42.03	-29.03
14.000 G	17.000 G	1.00 M	15.966500 G	-39.88	-26.88
17.000 G	20.000 G	1.00 M	18.042500 G	-38.70	-25.70

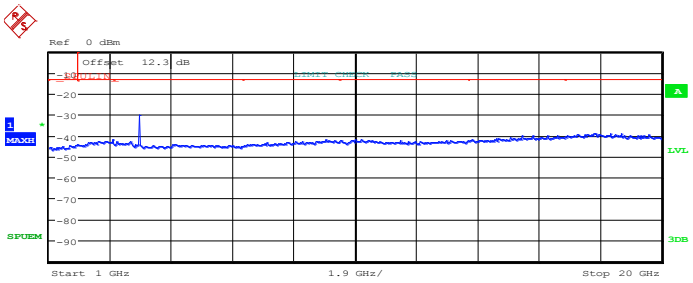
Date: 24.JUN.2013 10:44:48

16QAM (RB Size 1, RB Offset 0)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	1.000 G	100.00 k	967.990000 M	-53.81	-40.81

Date: 24.JUN.2013 10:45:30

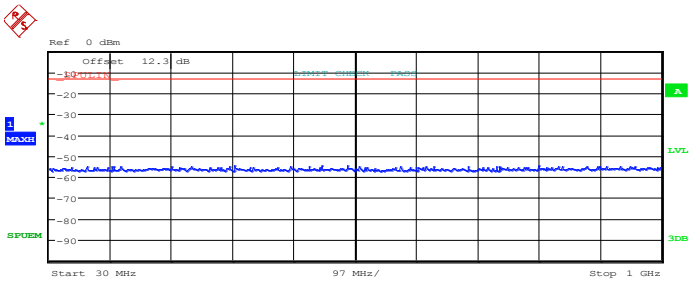


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	1.895 G	1.00 M	1.892762 G	-44.35	-31.35
1.920 G	3.000 G	1.00 M	2.995680 G	-42.19	-29.19
3.000 G	7.000 G	1.00 M	3.810000 G	-30.37	-17.37
7.000 G	10.000 G	1.00 M	9.586000 G	-42.19	-29.19
10.000 G	14.000 G	1.00 M	10.670000 G	-42.01	-29.01
14.000 G	17.000 G	1.00 M	16.785500 G	-40.06	-27.06
17.000 G	20.000 G	1.00 M	17.885000 G	-39.04	-26.04

Date: 24.JUN.2013 10:45:02

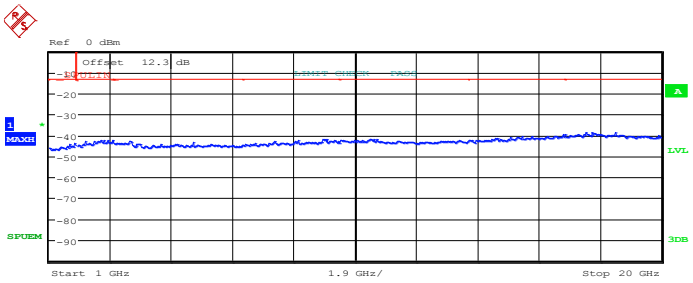
Band :	LTE Band 2	Channel :	CH18650 (Low)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 0)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	1.000 G	100.00 k	322.940000 M	-54.77	-41.77

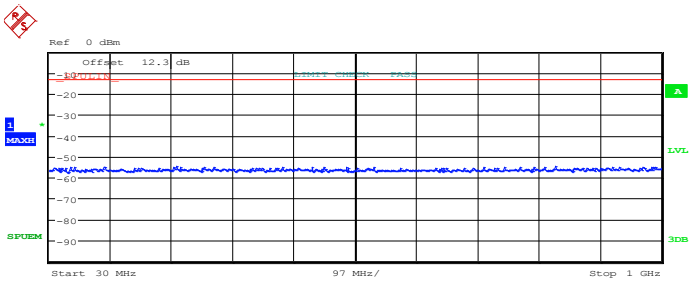
Date: 24.JUN.2013 10:32:26



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	1.835 G	1.00 M	1.789075 G	-43.92	-30.92
1.875 G	3.000 G	1.00 M	2.971312 G	-42.35	-29.35
3.000 G	7.000 G	1.00 M	3.486000 G	-42.99	-29.99
7.000 G	10.000 G	1.00 M	9.544000 G	-42.10	-29.10
10.000 G	14.000 G	1.00 M	10.996000 G	-41.88	-28.88
14.000 G	17.000 G	1.00 M	16.970000 G	-39.89	-26.89
17.000 G	20.000 G	1.00 M	17.843000 G	-38.68	-25.68

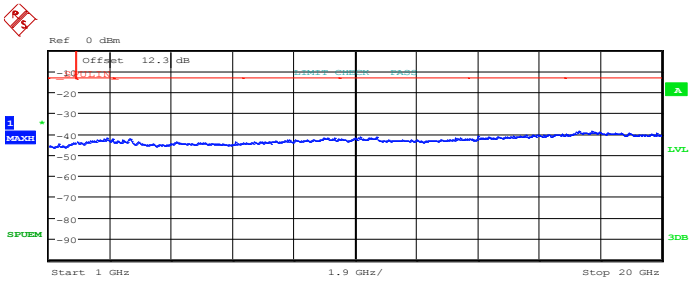
Date: 24.JUN.2013 10:34:03

16QAM (RB Size 1, RB Offset 0)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	1.000 G	100.00 k	231.275000 M	-54.80	-41.80

Date: 24.JUN.2013 10:32:42

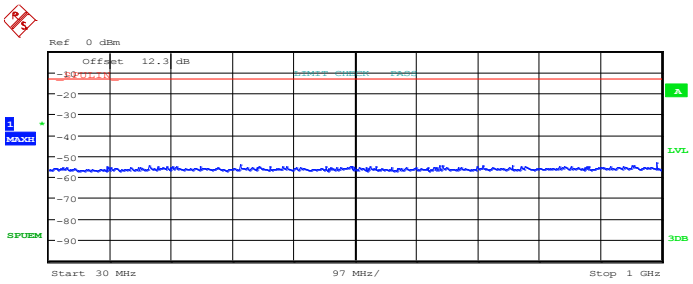


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	1.835 G	1.00 M	1.832912 G	-44.44	-31.44
1.875 G	3.000 G	1.00 M	2.787938 G	-41.82	-28.82
3.000 G	7.000 G	1.00 M	3.506000 G	-42.39	-29.39
7.000 G	10.000 G	1.00 M	9.847000 G	-42.12	-29.12
10.000 G	14.000 G	1.00 M	11.160000 G	-41.47	-28.47
14.000 G	17.000 G	1.00 M	16.935500 G	-40.14	-27.14
17.000 G	20.000 G	1.00 M	17.844500 G	-38.82	-25.82

Date: 24.JUN.2013 10:33:48

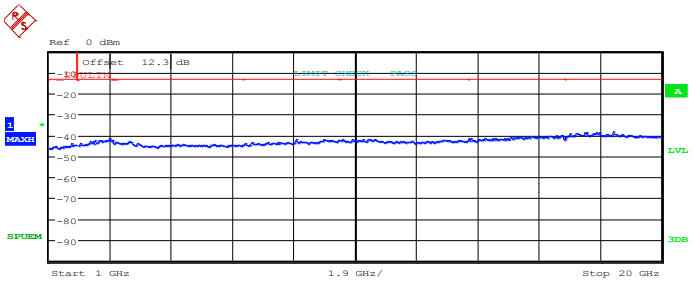
Band :	LTE Band 2	Channel :	CH18900 (Middle)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 0)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	1.000 G	100.00 k	991.270000 M	-53.44	-40.44

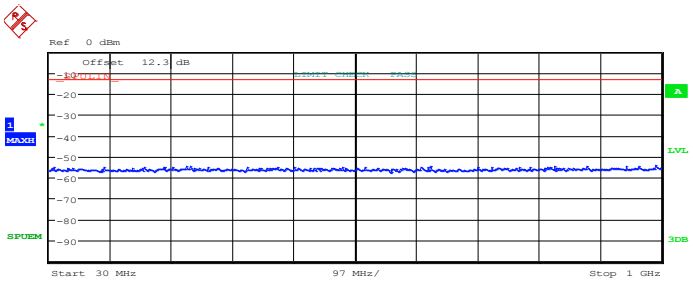
Date: 24.JUN.2013 10:36:02



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	1.860 G	1.00 M	1.710790 G	-44.03	-31.03
1.900 G	3.000 G	1.00 M	2.877350 G	-41.65	-28.65
3.000 G	7.000 G	1.00 M	3.476000 G	-42.91	-29.91
7.000 G	10.000 G	1.00 M	8.669500 G	-41.82	-28.82
10.000 G	14.000 G	1.00 M	10.396000 G	-41.89	-28.89
14.000 G	17.000 G	1.00 M	16.892000 G	-39.92	-26.92
17.000 G	20.000 G	1.00 M	18.516500 G	-38.44	-25.44

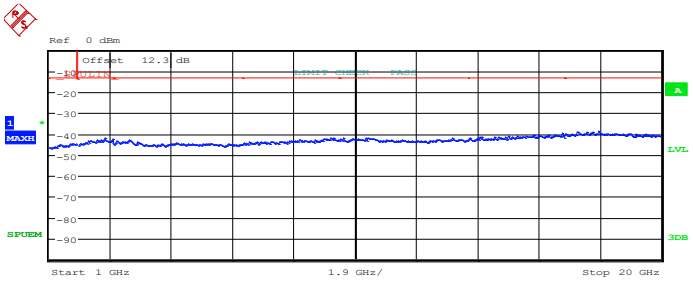
Date: 24.JUN.2013 10:35:16

16QAM (RB Size 1, RB Offset 0)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	1.000 G	100.00 k	990.300000 M	-54.36	-41.36

Date: 24.JUN.2013 10:35:47

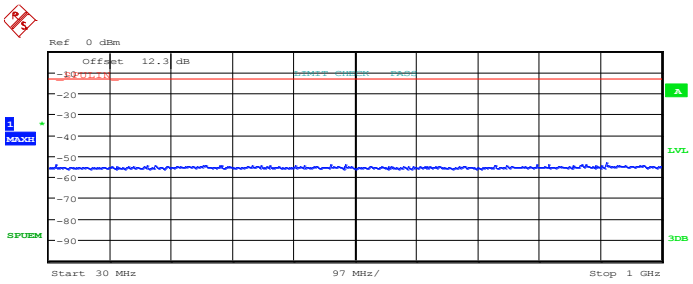


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	1.860 G	1.00 M	1.743040 G	-44.66	-31.66
1.900 G	3.000 G	1.00 M	2.722250 G	-42.06	-29.06
3.000 G	7.000 G	1.00 M	3.512000 G	-42.78	-29.78
7.000 G	10.000 G	1.00 M	9.824500 G	-42.05	-29.05
10.000 G	14.000 G	1.00 M	10.900000 G	-41.89	-28.89
14.000 G	17.000 G	1.00 M	16.931000 G	-39.87	-26.87
17.000 G	20.000 G	1.00 M	18.063500 G	-38.93	-25.93

Date: 24.JUN.2013 10:35:30

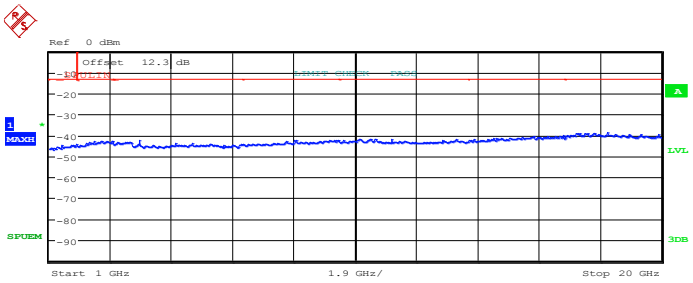
Band :	LTE Band 2	Channel :	CH19150 (High)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 0)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	1.000 G	100.00 k	912.215000 M	-53.21	-40.21

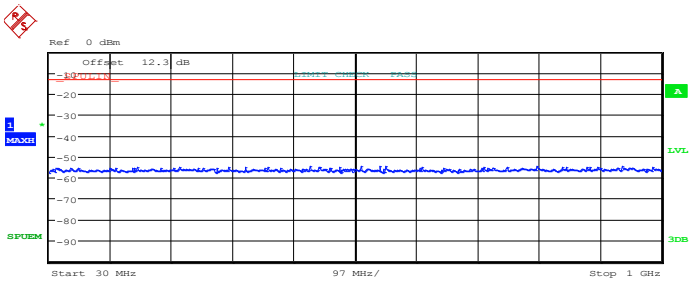
Date: 24.JUN.2013 10:40:59



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	1.885 G	1.00 M	1.838095 G	-44.47	-31.47
1.925 G	3.000 G	1.00 M	2.637188 G	-42.73	-29.73
3.000 G	7.000 G	1.00 M	3.802000 G	-42.32	-29.32
7.000 G	10.000 G	1.00 M	9.692500 G	-42.34	-29.34
10.000 G	14.000 G	1.00 M	10.952000 G	-41.98	-28.98
14.000 G	17.000 G	1.00 M	16.956500 G	-40.29	-27.29
17.000 G	20.000 G	1.00 M	18.320000 G	-38.74	-25.74

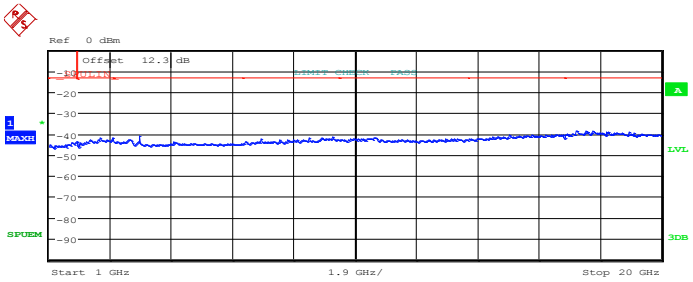
Date: 24.JUN.2013 10:42:29

16QAM (RB Size 1, RB Offset 0)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	1.000 G	100.00 k	802.605000 M	-54.47	-41.47

Date: 24.JUN.2013 10:41:12

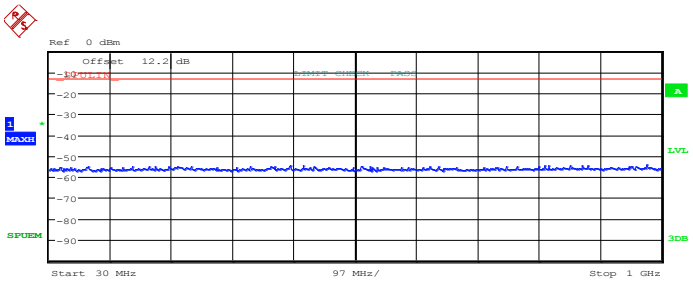


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	1.885 G	1.00 M	1.883673 G	-43.92	-30.92
1.925 G	3.000 G	1.00 M	2.592038 G	-42.17	-29.17
3.000 G	7.000 G	1.00 M	3.802000 G	-41.06	-28.06
7.000 G	10.000 G	1.00 M	9.790000 G	-41.69	-28.69
10.000 G	14.000 G	1.00 M	11.118000 G	-42.08	-29.08
14.000 G	17.000 G	1.00 M	16.592000 G	-40.40	-27.40
17.000 G	20.000 G	1.00 M	17.372000 G	-38.75	-25.75

Date: 24.JUN.2013 10:42:17

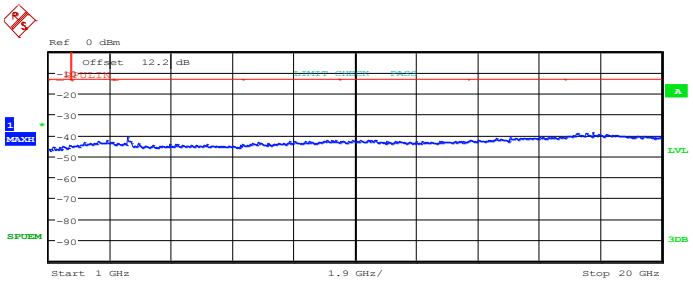
Band :	LTE Band 4	Channel :	CH19975 (Low)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 24)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	1.000 G	100.00 k	976.720000 M	-54.24	-41.24

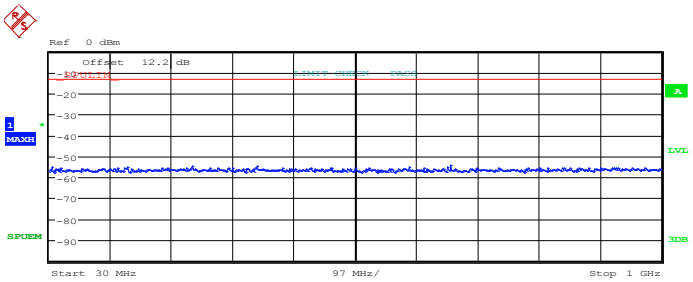
Date: 24.JUN.2013 11:02:26



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	1.700 G	1.00 M	1.652050 G	-44.99	-31.99
1.725 G	3.000 G	1.00 M	2.792813 G	-42.69	-29.69
3.000 G	7.000 G	1.00 M	3.420000 G	-40.99	-27.99
7.000 G	10.000 G	1.00 M	9.610000 G	-42.41	-29.41
10.000 G	14.000 G	1.00 M	11.100000 G	-42.37	-29.37
14.000 G	17.000 G	1.00 M	15.302000 G	-40.65	-27.65
17.000 G	20.000 G	1.00 M	17.880500 G	-38.76	-25.76

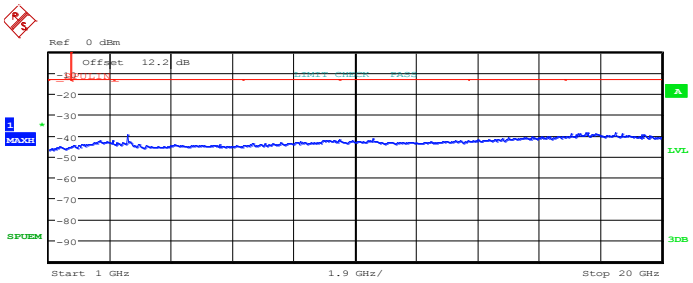
Date: 24.JUN.2013 11:03:37

16QAM (RB Size 1, RB Offset 0)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	1.000 G	100.00 k	665.835000 M	-54.41	-41.41

Date: 24.JUN.2013 11:02:39

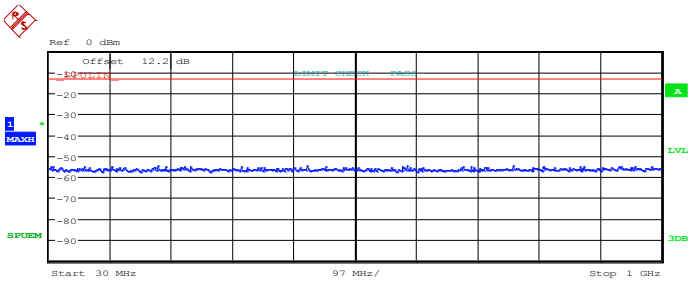


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	1.700 G	1.00 M	1.694750 G	-45.35	-32.35
1.725 G	3.000 G	1.00 M	2.989800 G	-42.33	-29.33
3.000 G	7.000 G	1.00 M	3.420000 G	-39.89	-26.89
7.000 G	10.000 G	1.00 M	9.692500 G	-42.39	-29.39
10.000 G	14.000 G	1.00 M	11.048000 G	-41.73	-28.73
14.000 G	17.000 G	1.00 M	16.538000 G	-40.38	-27.38
17.000 G	20.000 G	1.00 M	17.715500 G	-38.69	-25.69

Date: 24.JUN.2013 11:03:27

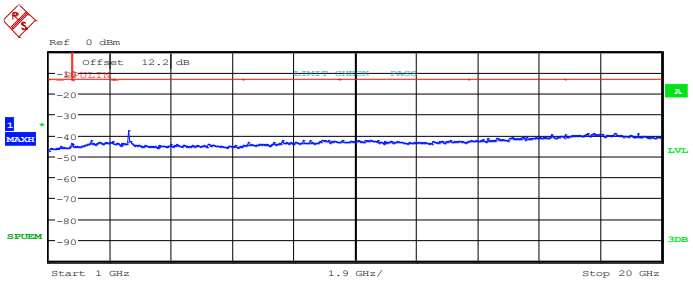
Band :	LTE Band 4	Channel :	CH20175 (Middle)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 0)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	1.000 G	100.00 k	764.775000 M	-54.46	-41.46

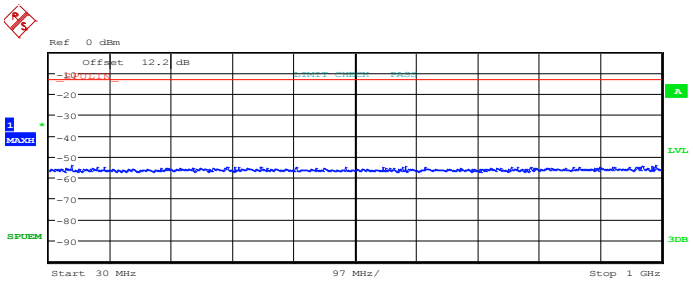
Date: 24.JUN.2013 11:05:07



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	1.720 G	1.00 M	1.713880 G	-43.80	-30.80
1.745 G	3.000 G	1.00 M	2.301592 G	-42.34	-29.34
3.000 G	7.000 G	1.00 M	3.460000 G	-37.82	-24.82
7.000 G	10.000 G	1.00 M	9.482500 G	-42.50	-29.50
10.000 G	14.000 G	1.00 M	10.100000 G	-42.31	-29.31
14.000 G	17.000 G	1.00 M	16.578500 G	-39.89	-26.89
17.000 G	20.000 G	1.00 M	17.885000 G	-38.99	-25.99

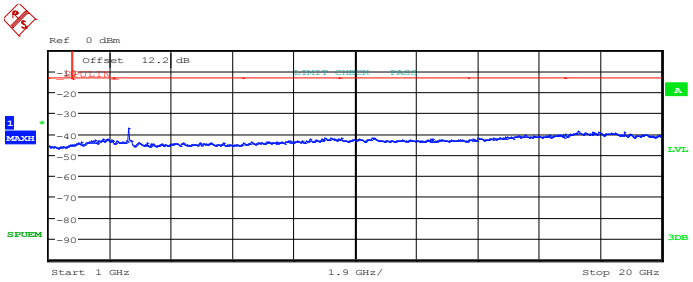
Date: 24.JUN.2013 11:04:27

16QAM (RB Size 1, RB Offset 0)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	1.000 G	100.00 k	990.785000 M	-54.04	-41.04

Date: 24.JUN.2013 11:04:56

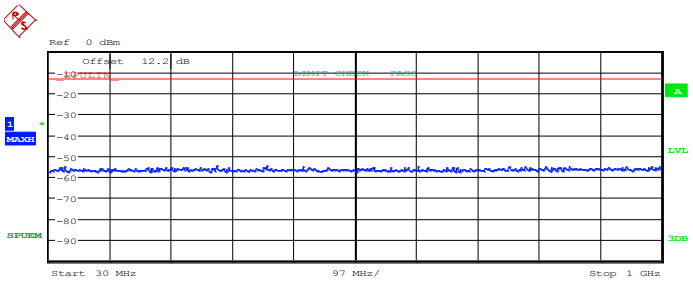


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	1.720 G	1.00 M	1.716760 G	-45.20	-32.20
1.745 G	3.000 G	1.00 M	2.681230 G	-42.47	-29.47
3.000 G	7.000 G	1.00 M	3.460000 G	-37.19	-24.19
7.000 G	10.000 G	1.00 M	9.728500 G	-42.22	-29.22
10.000 G	14.000 G	1.00 M	11.020000 G	-42.08	-29.08
14.000 G	17.000 G	1.00 M	16.800500 G	-40.50	-27.50
17.000 G	20.000 G	1.00 M	17.402000 G	-38.94	-25.94

Date: 24.JUN.2013 11:04:41

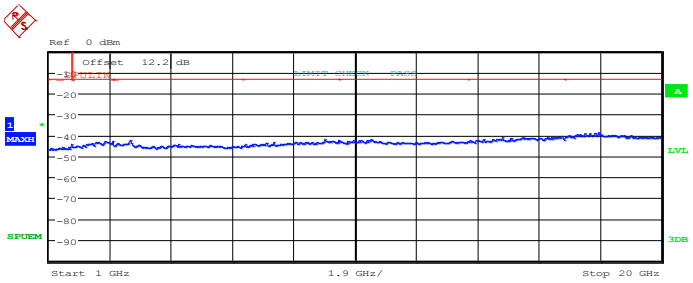
Band :	LTE Band 4	Channel :	CH20375 (High)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 12)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	1.000 G	100.00 k	375.320000 M	-54.49	-41.49

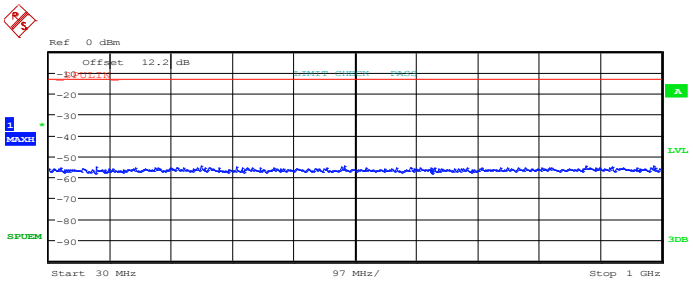
Date: 24.JUN.2013 11:05:37



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	1.740 G	1.00 M	1.708550 G	-44.48	-31.48
1.765 G	3.000 G	1.00 M	2.978388 G	-42.85	-29.85
3.000 G	7.000 G	1.00 M	3.512000 G	-42.67	-29.67
7.000 G	10.000 G	1.00 M	9.554500 G	-42.11	-29.11
10.000 G	14.000 G	1.00 M	10.988000 G	-42.10	-29.10
14.000 G	17.000 G	1.00 M	16.934000 G	-40.65	-27.65
17.000 G	20.000 G	1.00 M	18.065000 G	-38.95	-25.95

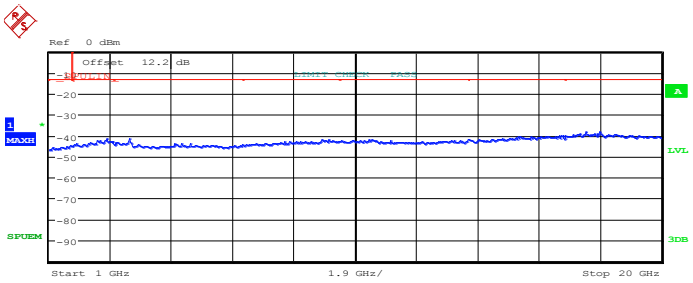
Date: 24.JUN.2013 11:06:15

16QAM (RB Size 1, RB Offset 12)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	1.000 G	100.00 k	498.025000 M	-54.56	-41.56

Date: 24.JUN.2013 11:05:48

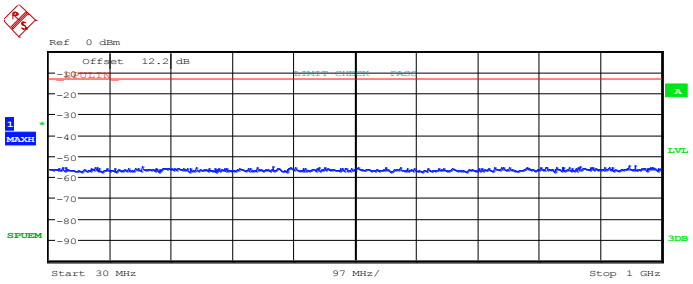


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	1.740 G	1.00 M	1.679320 G	-44.69	-31.69
1.765 G	3.000 G	1.00 M	2.793755 G	-41.71	-28.71
3.000 G	7.000 G	1.00 M	3.500000 G	-41.34	-28.34
7.000 G	10.000 G	1.00 M	9.689500 G	-41.84	-28.84
10.000 G	14.000 G	1.00 M	10.928000 G	-41.92	-28.92
14.000 G	17.000 G	1.00 M	16.974500 G	-40.05	-27.05
17.000 G	20.000 G	1.00 M	17.657000 G	-38.36	-25.36

Date: 24.JUN.2013 11:06:06

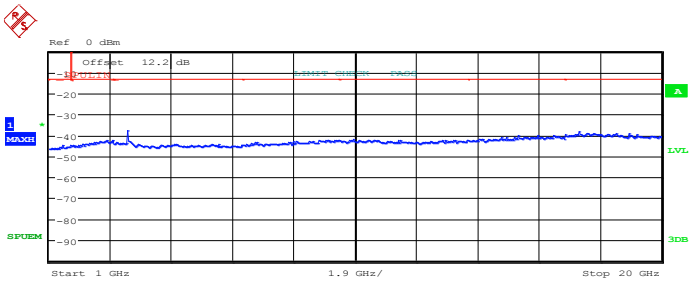
Band :	LTE Band 4	Channel :	CH20000 (Low)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 24)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	1.000 G	100.00 k	957.320000 M	-54.81	-41.81

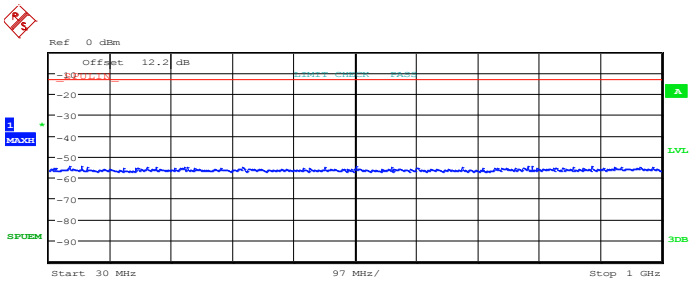
Date: 24.JUN.2013 11:22:49



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	1.695 G	1.00 M	1.658860 G	-44.67	-31.67
1.735 G	3.000 G	1.00 M	2.792540 G	-42.60	-29.60
3.000 G	7.000 G	1.00 M	3.430000 G	-37.77	-24.77
7.000 G	10.000 G	1.00 M	10.000000 G	-42.31	-29.31
10.000 G	14.000 G	1.00 M	10.448000 G	-41.96	-28.96
14.000 G	17.000 G	1.00 M	15.539000 G	-39.98	-26.98
17.000 G	20.000 G	1.00 M	17.445500 G	-38.09	-25.09

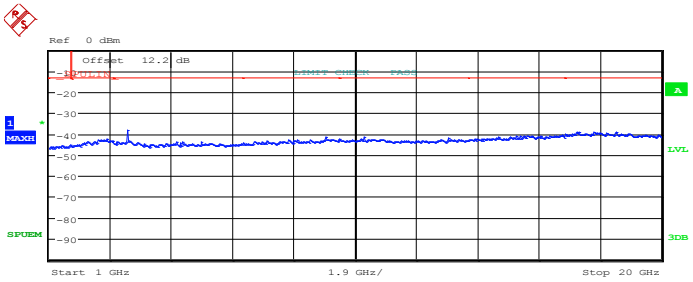
Date: 24.JUN.2013 11:22:13

16QAM (RB Size 1, RB Offset 24)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	1.000 G	100.00 k	515.485000 M	-54.60	-41.60

Date: 24.JUN.2013 11:22:39

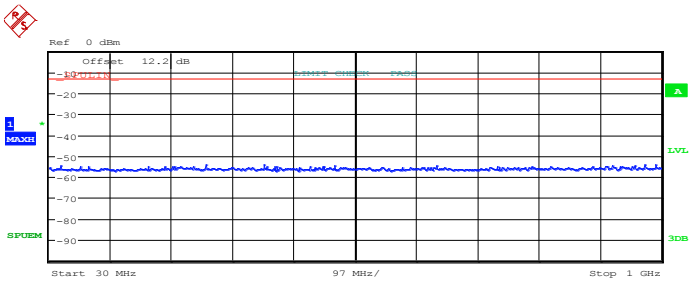


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	1.695 G	1.00 M	1.672760 G	-45.53	-32.53
1.735 G	3.000 G	1.00 M	2.794437 G	-42.49	-29.49
3.000 G	7.000 G	1.00 M	3.430000 G	-38.08	-25.08
7.000 G	10.000 G	1.00 M	9.574000 G	-41.69	-28.69
10.000 G	14.000 G	1.00 M	10.780000 G	-41.63	-28.63
14.000 G	17.000 G	1.00 M	16.908500 G	-40.68	-27.68
17.000 G	20.000 G	1.00 M	17.430500 G	-39.07	-26.07

Date: 24.JUN.2013 11:22:24

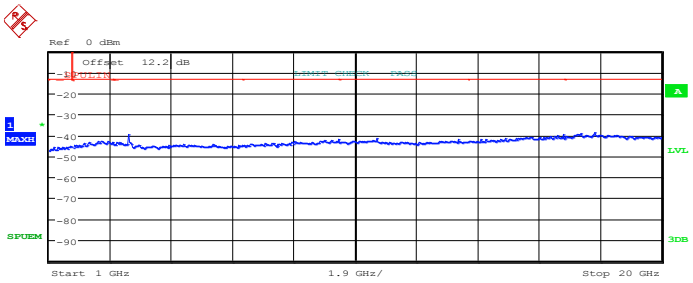
Band :	LTE Band 4	Channel :	CH20175 (Middle)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 0)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	1.000 G	100.00 k	973.810000 M	-54.11	-41.11

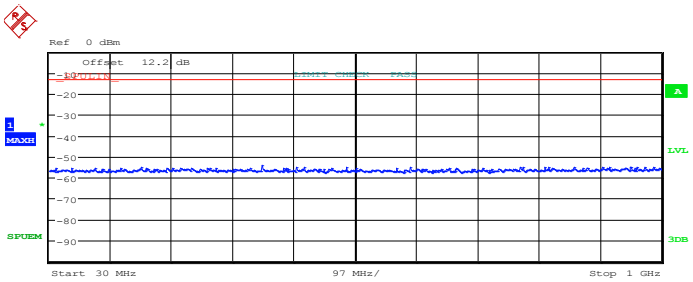
Date: 24.JUN.2013 11:20:38



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	1.712 G	1.00 M	1.664406 G	-45.32	-32.32
1.752 G	3.000 G	1.00 M	2.639473 G	-42.78	-29.78
3.000 G	7.000 G	1.00 M	3.456000 G	-39.46	-26.46
7.000 G	10.000 G	1.00 M	9.992500 G	-42.25	-29.25
10.000 G	14.000 G	1.00 M	11.160000 G	-41.50	-28.50
14.000 G	17.000 G	1.00 M	16.944500 G	-39.90	-26.90
17.000 G	20.000 G	1.00 M	17.913500 G	-38.71	-25.71

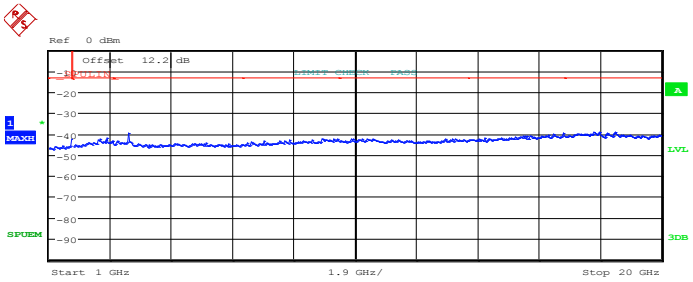
Date: 24.JUN.2013 11:21:26

16QAM (RB Size 1, RB Offset 0)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	1.000 G	100.00 k	367.075000 M	-54.34	-41.34

Date: 24.JUN.2013 11:20:50

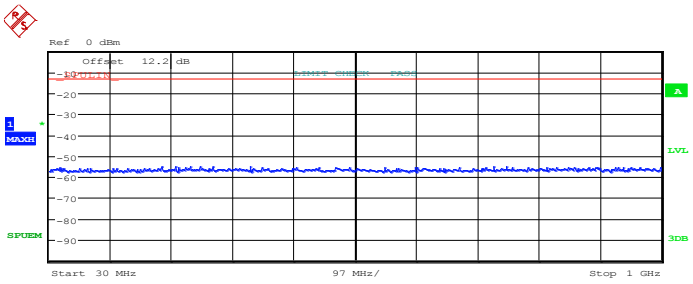


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	1.712 G	1.00 M	1.710006 G	-42.60	-29.60
1.752 G	3.000 G	1.00 M	2.791668 G	-42.24	-29.24
3.000 G	7.000 G	1.00 M	3.456000 G	-39.82	-26.82
7.000 G	10.000 G	1.00 M	9.946000 G	-42.40	-29.40
10.000 G	14.000 G	1.00 M	11.048000 G	-42.44	-29.44
14.000 G	17.000 G	1.00 M	17.000000 G	-39.58	-26.58
17.000 G	20.000 G	1.00 M	18.558500 G	-39.05	-26.05

Date: 24.JUN.2013 11:21:16

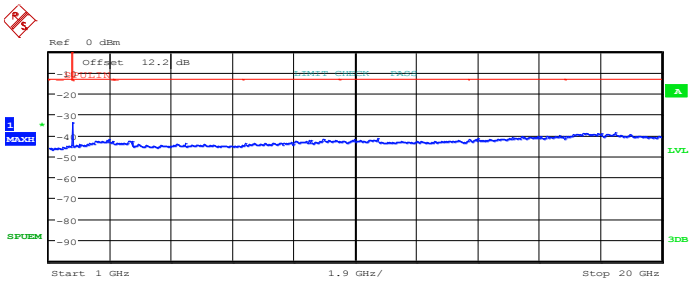
Band :	LTE Band 4	Channel :	CH20350 (High)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 0)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	1.000 G	100.00 k	207.995000 M	-55.07	-42.07

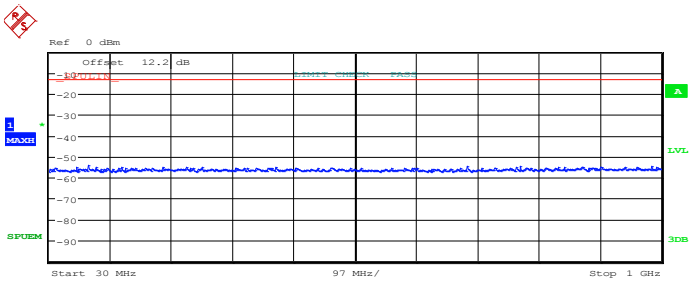
Date: 24.JUN.2013 11:07:31



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	1.730 G	1.00 M	1.728540 G	-33.92	-20.92
1.770 G	3.000 G	1.00 M	2.848710 G	-42.16	-29.16
3.000 G	7.000 G	1.00 M	3.572000 G	-42.88	-29.88
7.000 G	10.000 G	1.00 M	9.503500 G	-41.94	-28.94
10.000 G	14.000 G	1.00 M	11.186000 G	-41.50	-28.50
14.000 G	17.000 G	1.00 M	16.821500 G	-40.23	-27.23
17.000 G	20.000 G	1.00 M	18.560000 G	-38.83	-25.83

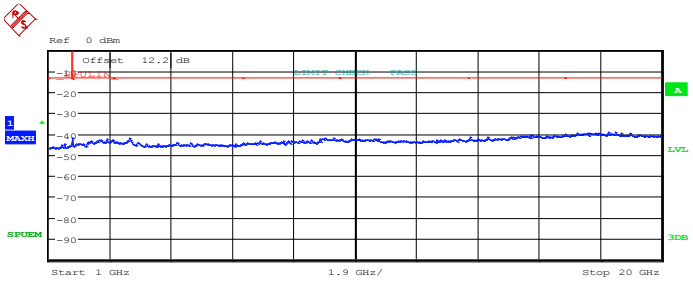
Date: 24.JUN.2013 11:06:52

16QAM (RB Size 1, RB Offset 24)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	1.000 G	100.00 k	91.595000 M	-54.37	-41.37

Date: 24.JUN.2013 11:07:22

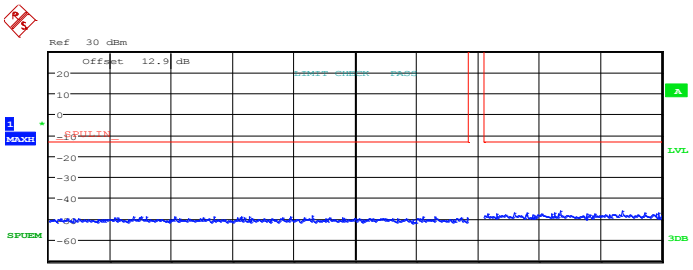


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	1.730 G	1.00 M	1.729270 G	-42.02	-29.02
1.770 G	3.000 G	1.00 M	2.785980 G	-42.26	-29.26
3.000 G	7.000 G	1.00 M	3.490000 G	-42.25	-29.25
7.000 G	10.000 G	1.00 M	9.817000 G	-42.16	-29.16
10.000 G	14.000 G	1.00 M	11.222000 G	-42.28	-29.28
14.000 G	17.000 G	1.00 M	15.924500 G	-40.80	-27.80
17.000 G	20.000 G	1.00 M	18.560000 G	-39.32	-26.32

Date: 24.JUN.2013 11:07:02

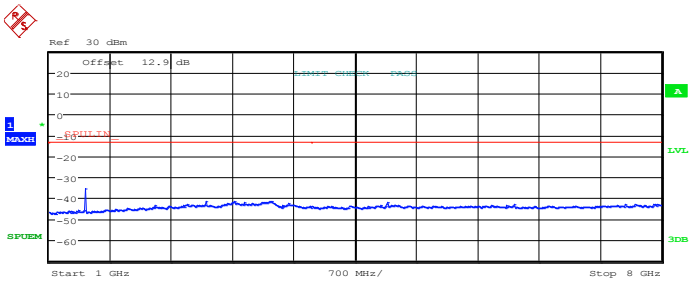
Band :	LTE Band 17	Channel :	CH23755 (Low)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 12)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	694.000 M	100.00 k	446.660000 M	-48.43	-35.43
719.000 M	1.000 G	100.00 k	839.549000 M	-46.40	-33.40

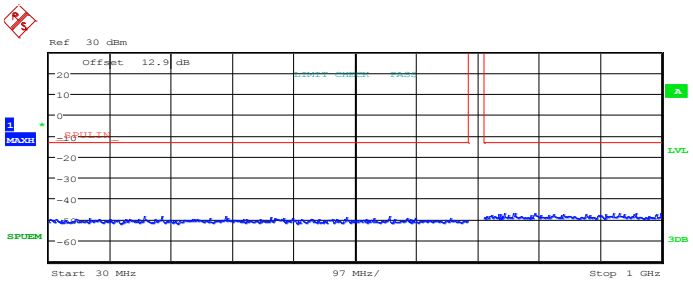
Date: 24.JUN.2013 15:41:04



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	4.000 G	1.00 M	1.412500 G	-35.70	-22.70
4.000 G	8.000 G	1.00 M	4.872000 G	-42.23	-29.23

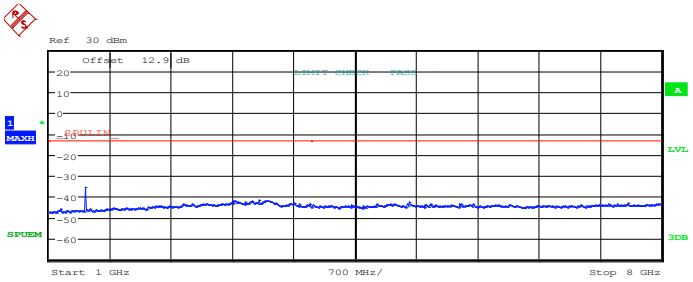
Date: 24.JUN.2013 15:40:32

16QAM (RB Size 1, RB Offset 12)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	694.000 M	100.00 k	309.876000 M	-48.48	-35.48
719.000 M	1.000 G	100.00 k	751.315000 M	-47.01	-34.01

Date: 24.JUN.2013 15:40:53

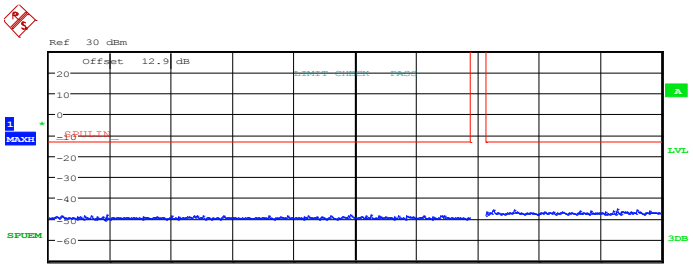


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	4.000 G	1.00 M	1.412500 G	-35.63	-22.63
4.000 G	8.000 G	1.00 M	5.112000 G	-42.69	-29.69

Date: 24.JUN.2013 15:40:42

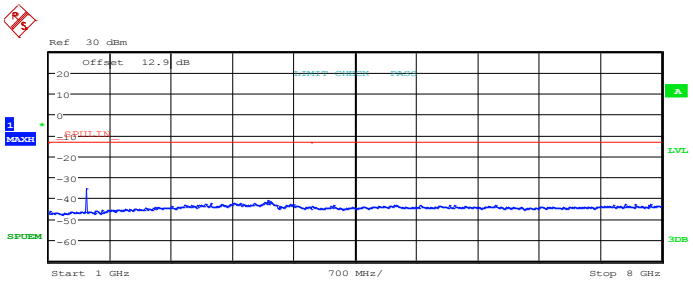
Band :	LTE Band 17	Channel :	CH23790 (Middle)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 24)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	697.500 M	100.00 k	121.781250 M	-48.17	-35.17
722.500 M	1.000 G	100.00 k	929.653750 M	-45.34	-32.34

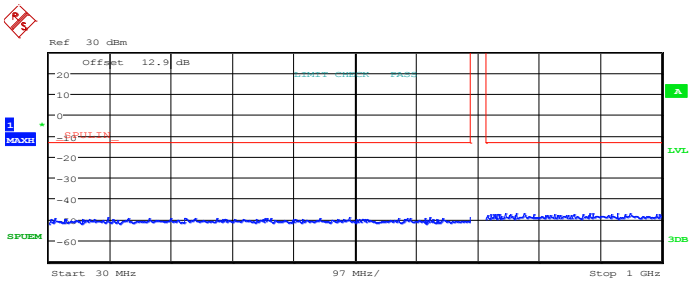
Date: 24.JUN.2013 15:38:39



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	4.000 G	1.00 M	1.424500 G	-35.69	-22.69
4.000 G	8.000 G	1.00 M	7.578000 G	-42.89	-29.89

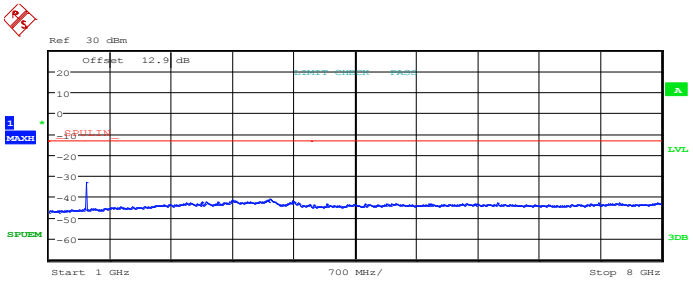
Date: 24.JUN.2013 15:39:25

16QAM (RB Size 1, RB Offset 24)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	697.500 M	100.00 k	122.448750 M	-49.09	-36.09
722.500 M	1.000 G	100.00 k	886.225000 M	-47.06	-34.06

Date: 24.JUN.2013 15:38:50

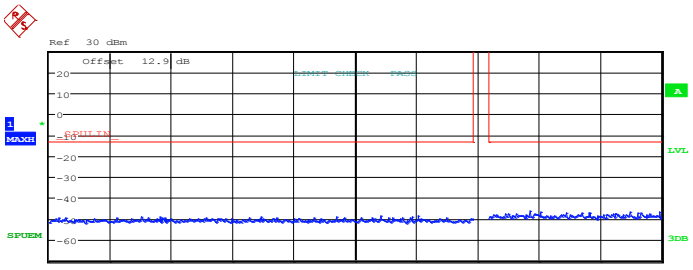


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	4.000 G	1.00 M	1.424500 G	-33.02	-20.02
4.000 G	8.000 G	1.00 M	7.512000 G	-42.86	-29.86

Date: 24.JUN.2013 15:39:15

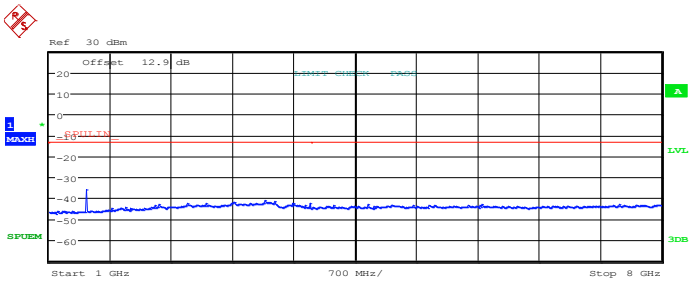
Band :	LTE Band 17	Channel :	CH23825 (High)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 12)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	701.000 M	100.00 k	555.728500 M	-48.74	-35.74
726.000 M	1.000 G	100.00 k	792.308000 M	-46.46	-33.46

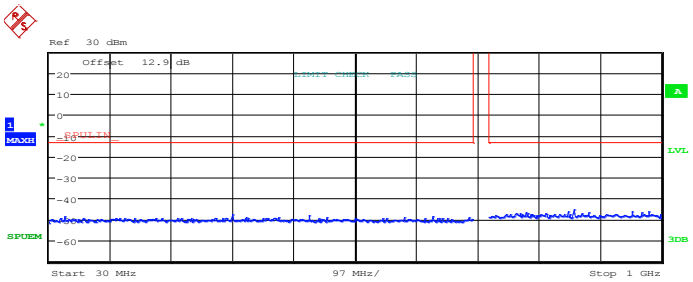
Date: 24.JUN.2013 15:36:13



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	4.000 G	1.00 M	1.427500 G	-36.04	-23.04
4.000 G	8.000 G	1.00 M	7.518000 G	-43.13	-30.13

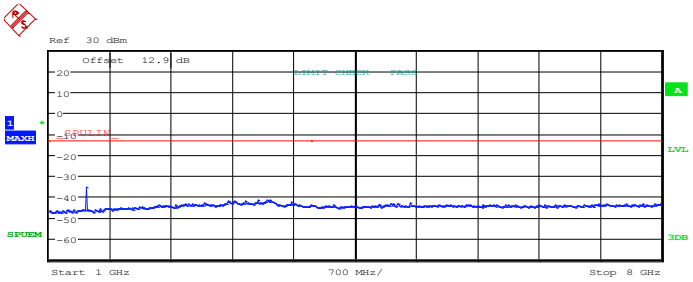
Date: 24.JUN.2013 15:35:35

16QAM (RB Size 1, RB Offset 12)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	701.000 M	100.00 k	319.872000 M	-47.92	-34.92
726.000 M	1.000 G	100.00 k	861.630000 M	-45.48	-32.48

Date: 24.JUN.2013 15:36:02

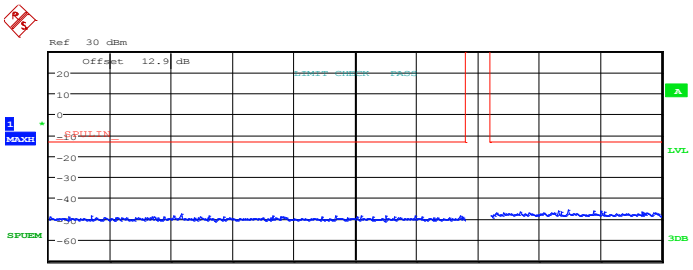


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	4.000 G	1.00 M	1.427500 G	-35.39	-22.39
4.000 G	8.000 G	1.00 M	5.130000 G	-43.15	-30.15

Date: 24.JUN.2013 15:35:45

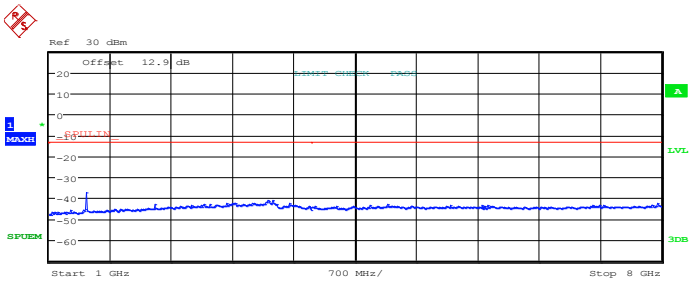
Band :	LTE Band 17	Channel :	CH23780 (Low)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 49)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	689.000 M	100.00 k	239.562000 M	-47.68	-34.68
729.000 M	1.000 G	100.00 k	851.898500 M	-45.91	-32.91

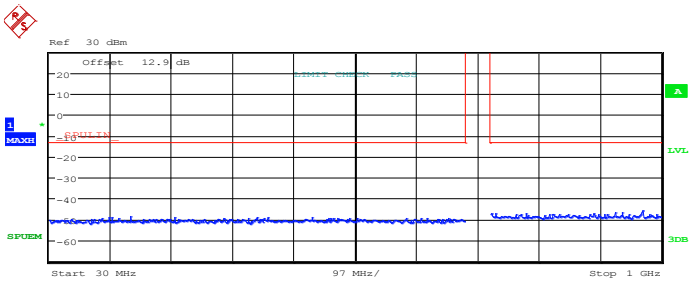
Date: 24.JUN.2013 15:28:28



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	4.000 G	1.00 M	1.427500 G	-37.31	-24.31
4.000 G	8.000 G	1.00 M	7.948000 G	-42.70	-29.70

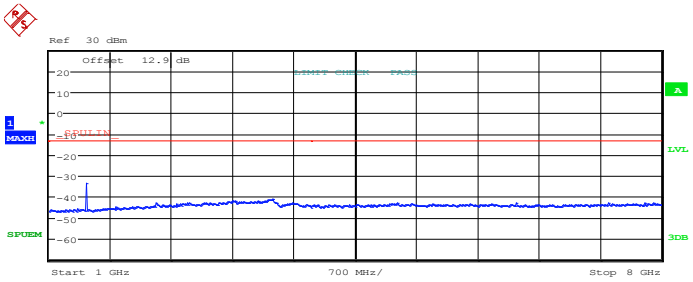
Date: 24.JUN.2013 15:29:52

16QAM (RB Size 1, RB Offset 49)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	689.000 M	100.00 k	158.175500 M	-48.78	-35.78
729.000 M	1.000 G	100.00 k	969.648000 M	-45.90	-32.90

Date: 24.JUN.2013 15:28:41

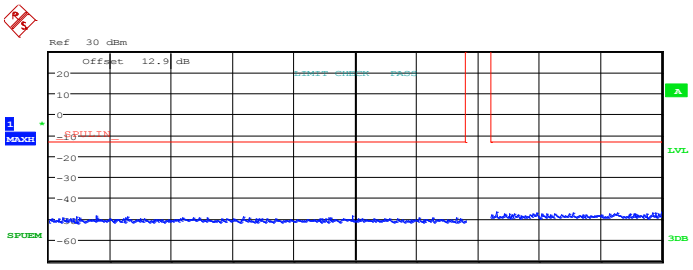


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	4.000 G	1.00 M	1.426000 G	-33.73	-20.73
4.000 G	8.000 G	1.00 M	6.336000 G	-42.79	-29.79

Date: 24.JUN.2013 15:29:41

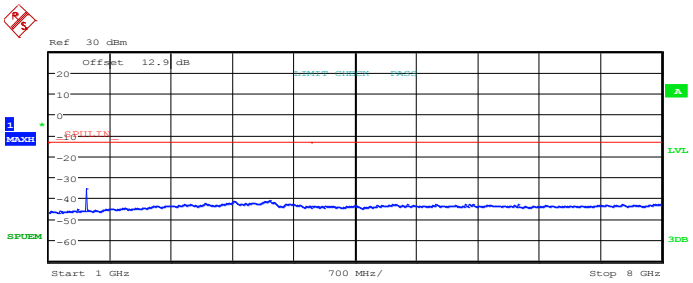
Band :	LTE Band 17	Channel :	CH23790 (Middle)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 49)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	690.000 M	100.00 k	104.580000 M	-48.70	-35.70
730.000 M	1.000 G	100.00 k	738.100000 M	-46.81	-33.81

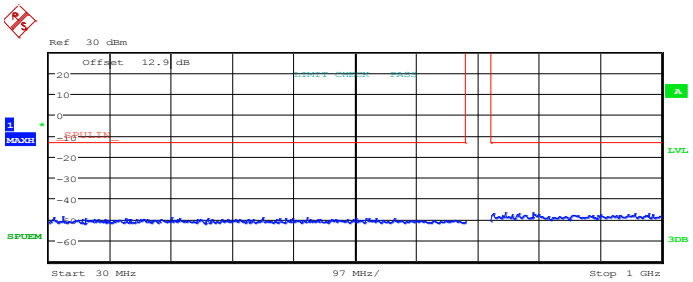
Date: 24.JUN.2013 15:31:22



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	4.000 G	1.00 M	1.429000 G	-35.59	-22.59
4.000 G	8.000 G	1.00 M	5.094000 G	-42.79	-29.79

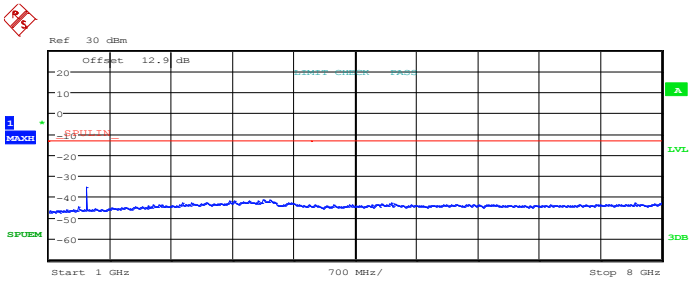
Date: 24.JUN.2013 15:30:44

16QAM (RB Size 1, RB Offset 49)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	690.000 M	100.00 k	52.110000 M	-48.81	-35.81
730.000 M	1.000 G	100.00 k	752.140000 M	-46.75	-33.75

Date: 24.JUN.2013 15:31:10

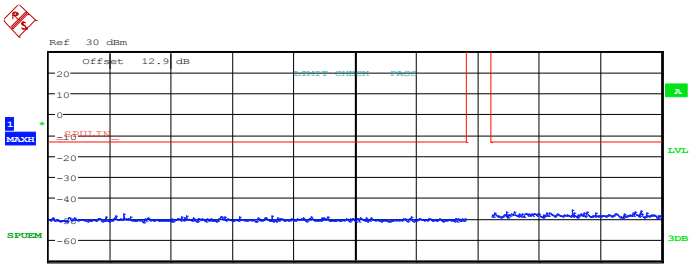


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	4.000 G	1.00 M	1.429000 G	-35.52	-22.52
4.000 G	8.000 G	1.00 M	7.692000 G	-42.79	-29.79

Date: 24.JUN.2013 15:30:58

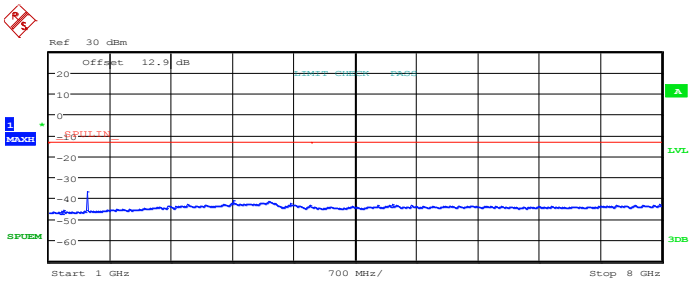
Band :	LTE Band 17	Channel :	CH23800 (High)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 49)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	691.000 M	100.00 k	147.988500 M	-47.50	-34.50
731.000 M	1.000 G	100.00 k	858.102500 M	-45.73	-32.73

Date: 24.JUN.2013 15:31:56



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	4.000 G	1.00 M	1.430500 G	-36.97	-23.97
4.000 G	8.000 G	1.00 M	4.920000 G	-42.93	-29.93

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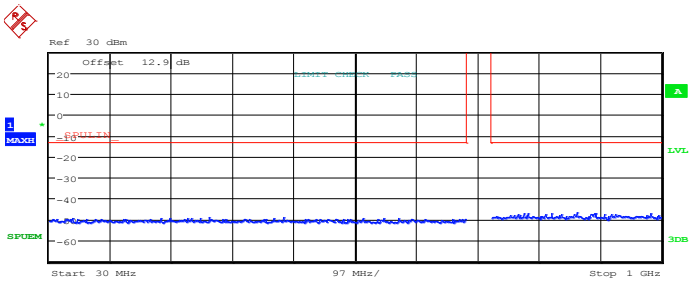
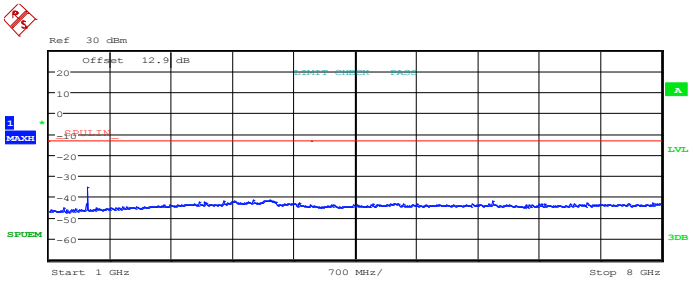
16QAM (RB Size 1, RB Offset 49)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	691.000 M	100.00 k	282.832500 M	-49.00	-36.00
731.000 M	1.000 G	100.00 k	866.307000 M	-46.53	-33.53

Date: 24.JUN.2013 15:32:08



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	4.000 G	1.00 M	1.430500 G	-35.54	-22.54
4.000 G	8.000 G	1.00 M	6.072000 G	-41.94	-28.94

Date: 24.JUN.2013 15:32:24

3.7 Radiated Spurious Emission Measurement

3.7.1 Description of Radiated Spurious Emission

The radiated spurious emission was measured by substitution method according to ANSI / TIA / EIA-603-C-2004. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least 43 + 10 log (P) dB. The spectrum is scanned from 30 MHz up to a frequency including its 10th harmonic.

3.7.2 Measuring Instruments

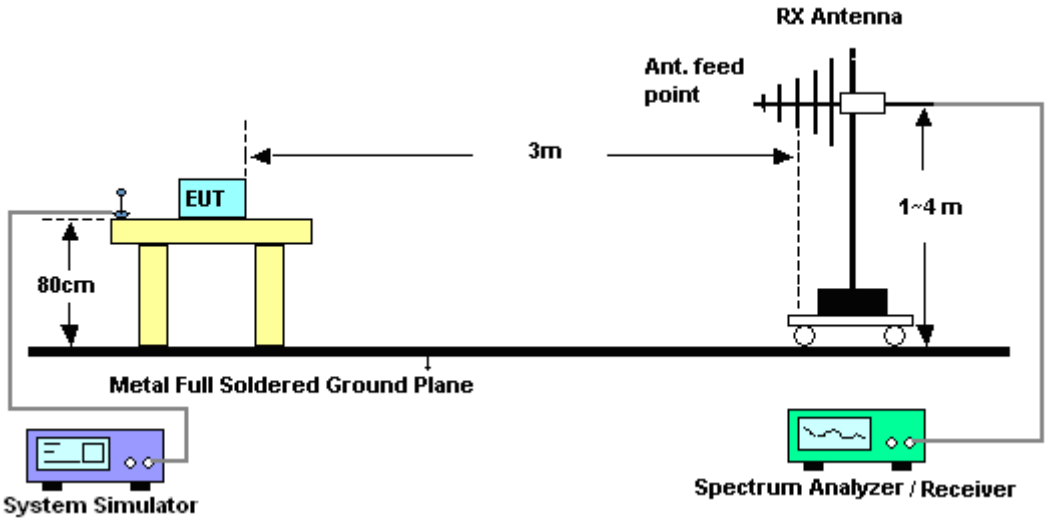
See list of measuring instruments of this test report.

3.7.3 Test Procedures

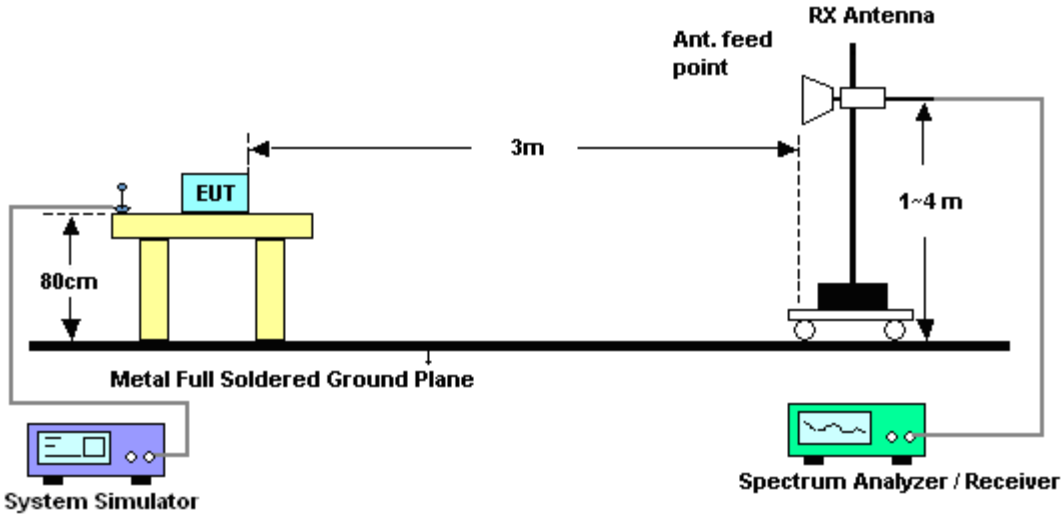
1. The EUT was placed on a rotatable wooden table with 0.8 meter about ground.
2. The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest spurious emission.
4. The height of the receiving antenna is varied between one meter and four meters to search the maximum spurious emission for both horizontal and vertical polarizations.
5. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, Sweep = 500ms, Taking the record of maximum spurious emission.
6. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
7. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
8. Taking the record of output power at antenna port.
9. Repeat step 7 to step 8 for another polarization.
10. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
    The limit line is derived from 43 + 10log(P) dB below the transmitter power P(Watts)
    = P(W) - [43 + 10log(P)] (dB)
    = [30 + 10log(P)] (dBm) - [43 + 10log(P)] (dB)
    = -13dBm.
11. EIRP (dBm) = S.G. Power – Tx Cable Loss + Tx Antenna Gain
12. ERP (dBm) = EIRP - 2.15

3.7.4 Test Setup

For radiated emissions from 30MHz to 1GHz

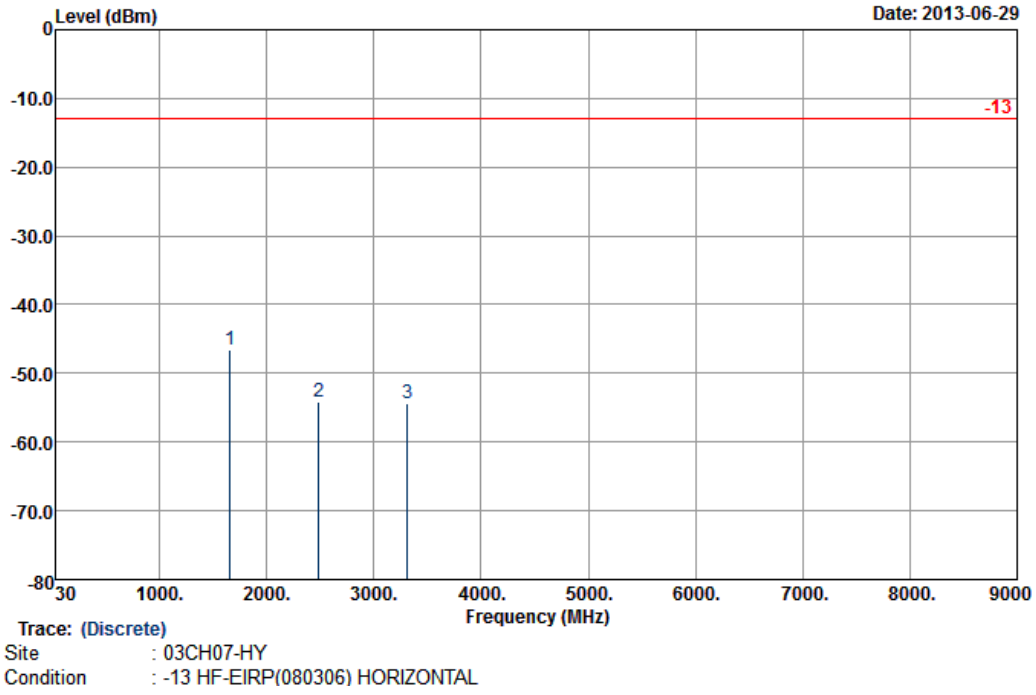


For radiated emissions above 1GHz



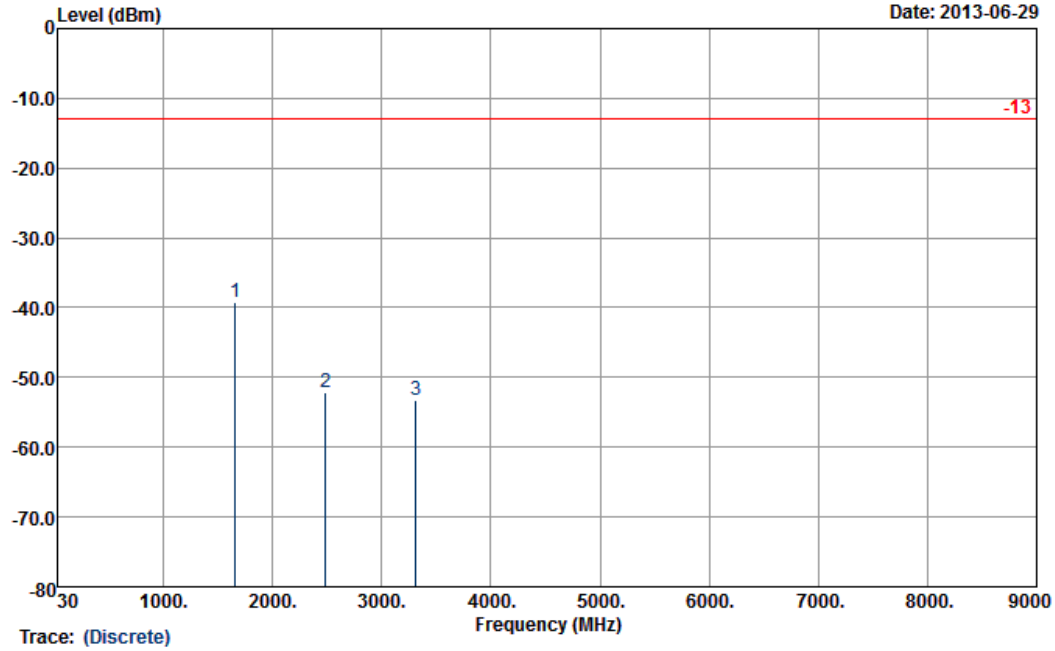
3.7.5 Test Result of Field Strength of Spurious Radiated

Band :	LTE Band 5	**Temperature :**	23~25°C
Test Mode :	5MHz QPSK RB Size 1 Offset 24 + Battery 2 for Sample 1	**Relative Humidity :**	49~51%
Test Engineer :	Eric Shih	**Polarization :**	Horizontal
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



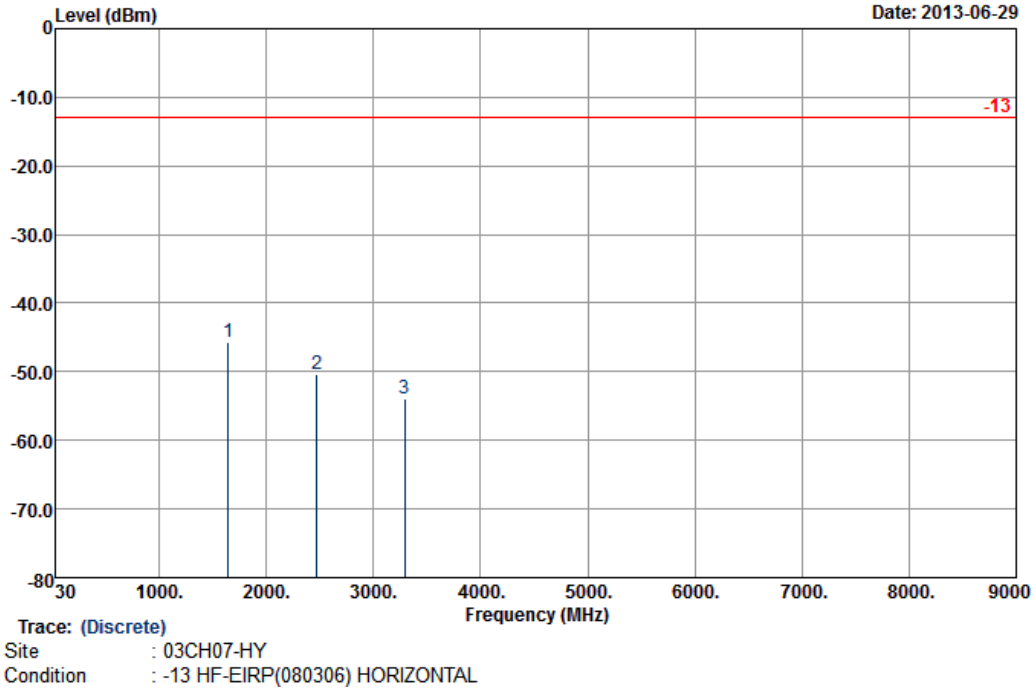
Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1657	-46.65	-13	-33.65	-54.99	-48.4	1.61	5.51	H	Pass
2485	-54.19	-13	-41.19	-66.48	-56.2	2.1	6.26	H	Pass
3313	-54.45	-13	-41.45	-67.99	-57.3	3.12	8.12	H	Pass

Band :	LTE Band 5	Temperature :	23~25°C
Test Mode :	5MHz QPSK RB Size 1 Offset 24 + Battery 2 for Sample 1	Relative Humidity :	49~51%
Test Engineer :	Eric Shih	Polarization :	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



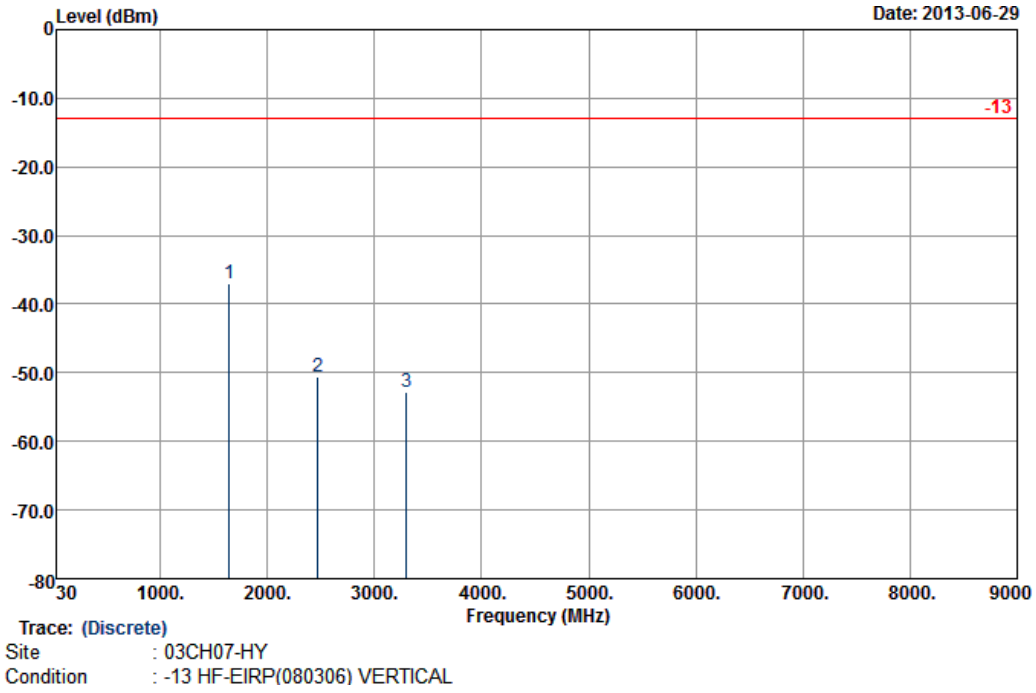
Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1657	-39.25	-13	-26.25	-49.48	-41	1.61	5.51	V	Pass
2485	-52.19	-13	-39.19	-65.02	-54.2	2.1	6.26	V	Pass
3313	-53.15	-13	-40.15	-68.38	-56	3.12	8.12	V	Pass

Band :	LTE Band 5	Temperature :	23~25°C
Test Mode :	10MHz QPSK RB Size 1 Offset 0 + Battery 2 for Sample 1	Relative Humidity :	49~51%
Test Engineer :	Eric Shih	Polarization :	Horizontal
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



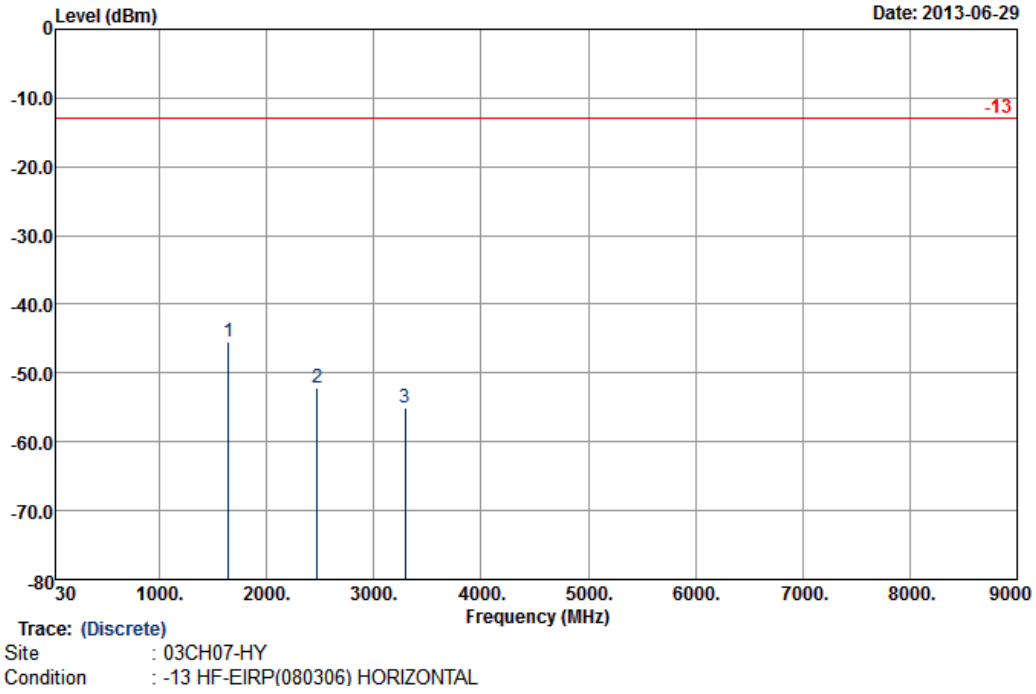
Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1648	-45.60	-13	-32.60	-54.42	-47.4	1.63	5.58	H	Pass
2473	-50.35	-13	-37.35	-63.62	-52.3	2.21	6.31	H	Pass
3295	-53.92	-13	-40.92	-67.67	-56.8	3.1	8.13	H	Pass

Band :	LTE Band 5	Temperature :	23~25°C
Test Mode :	10MHz QPSK RB Size 1 Offset 0 + Battery 2 for Sample 1	Relative Humidity :	49~51%
Test Engineer :	Eric Shih	Polarization :	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



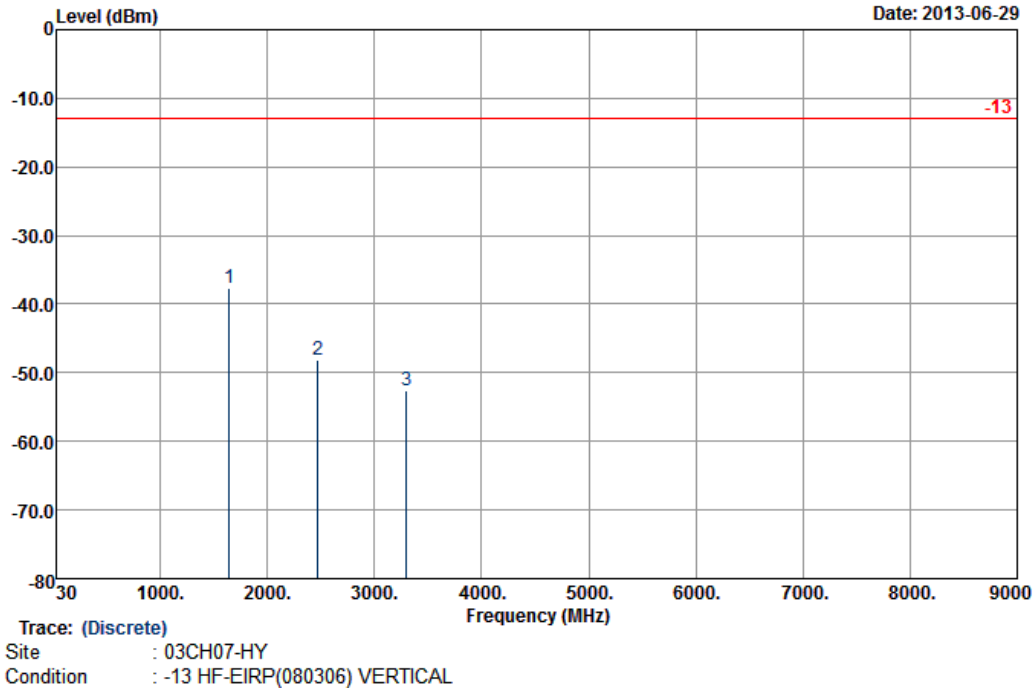
Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1648	-37.00	-13	-24.00	-47.42	-38.8	1.63	5.58	V	Pass
2473	-50.65	-13	-37.65	-63.79	-52.6	2.21	6.31	V	Pass
3296	-52.82	-13	-39.82	-67.89	-55.7	3.1	8.13	V	Pass

Band :	LTE Band 5	Temperature :	23~25°C
Test Mode :	10MHz QPSK RB Size 1 Offset 0 + Battery 1 for Sample 1	Relative Humidity :	49~51%
Test Engineer :	Eric Shih	Polarization :	Horizontal
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



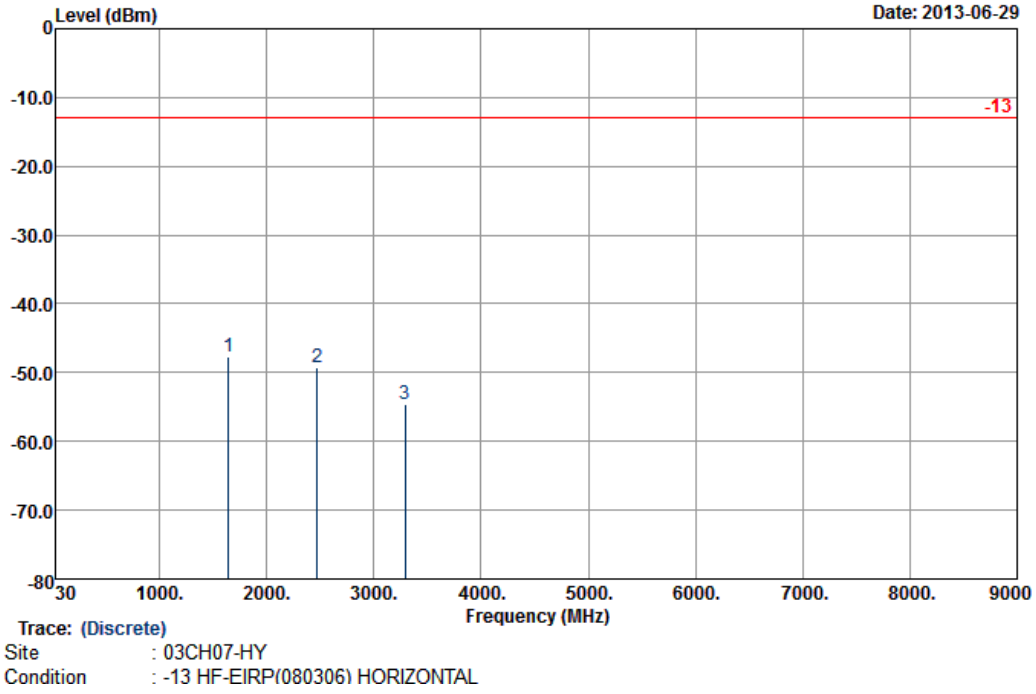
Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1648	-45.40	-13	-32.40	-54.18	-47.2	1.63	5.58	H	Pass
2473	-52.25	-13	-39.25	-64.52	-54.2	2.21	6.31	H	Pass
3295	-55.12	-13	-42.12	-68.3	-58	3.1	8.13	H	Pass

Band :	LTE Band 5	Temperature :	23~25°C
Test Mode :	10MHz QPSK RB Size 1 Offset 0 + Battery 1 for Sample 1	Relative Humidity :	49~51%
Test Engineer :	Eric Shih	Polarization :	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



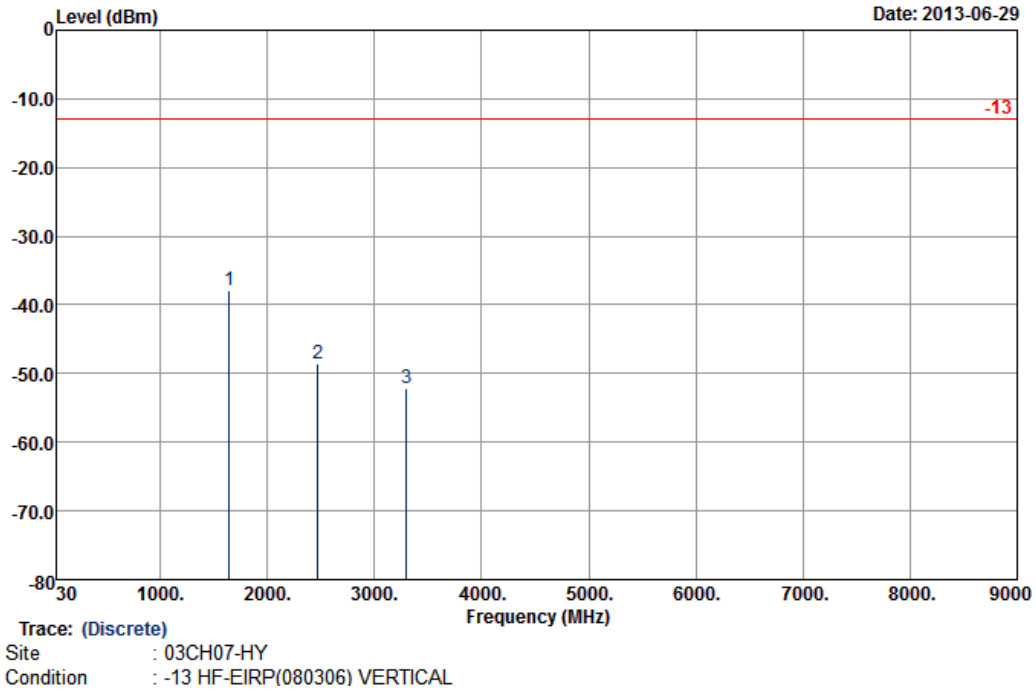
Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1648	-37.60	-13	-24.60	-47.75	-39.4	1.63	5.58	V	Pass
2473	-48.05	-13	-35.05	-60.77	-50	2.21	6.31	V	Pass
3296	-52.52	-13	-39.52	-67.28	-55.4	3.1	8.13	V	Pass

Band :	LTE Band 5	Temperature :	23~25°C
Test Mode :	10MHz QPSK RB Size 1 Offset 0 + Battery 2 for Sample 2	Relative Humidity :	49~51%
Test Engineer :	Eric Shih	Polarization :	Horizontal
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



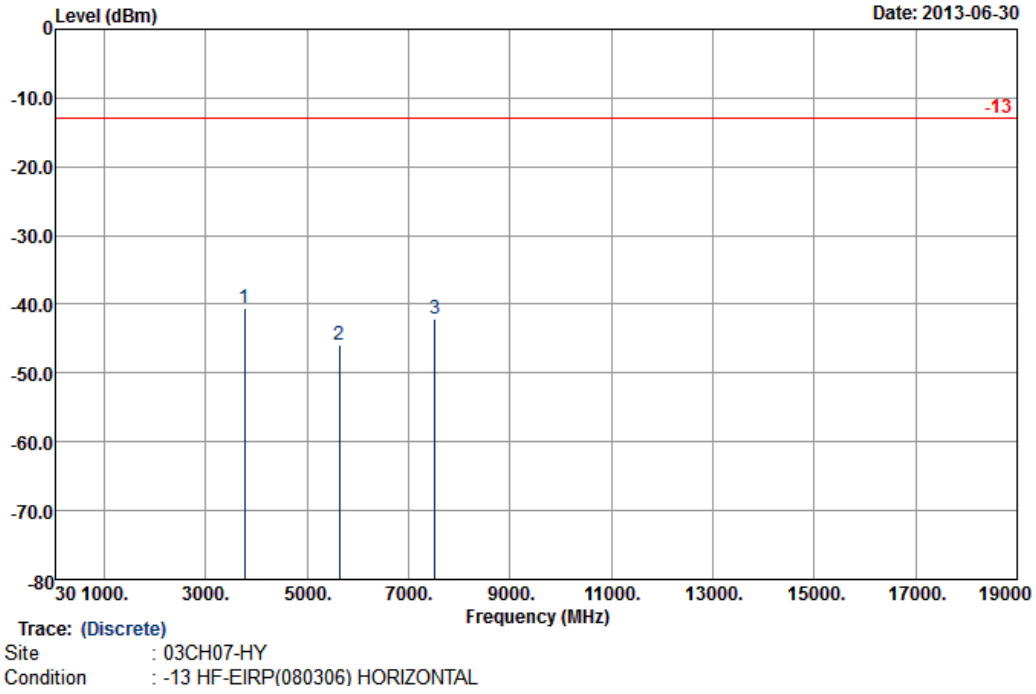
Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1648	-47.70	-13	-34.70	-55.51	-49.5	1.63	5.58	H	Pass
2473	-49.15	-13	-36.15	-61.4	-51.1	2.21	6.31	H	Pass
3295	-54.62	-13	-41.62	-67.84	-57.5	3.1	8.13	H	Pass

Band :	LTE Band 5	Temperature :	23~25°C
Test Mode :	10MHz QPSK RB Size 1 Offset 0 + Battery 2 for Sample 2	Relative Humidity :	49~51%
Test Engineer :	Eric Shih	Polarization :	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



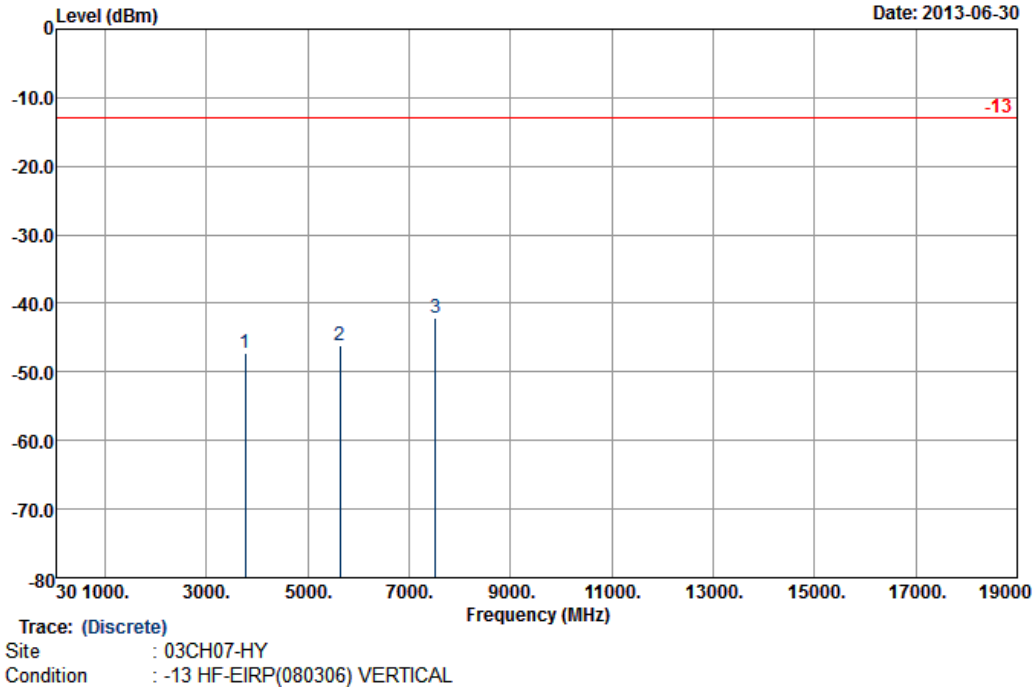
Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1648	-37.90	-13	-24.90	-48.02	-39.7	1.63	5.58	V	Pass
2473	-48.65	-13	-35.65	-62.38	-50.6	2.21	6.31	V	Pass
3296	-52.12	-13	-39.12	-67.1	-55	3.1	8.13	V	Pass

Band :	LTE Band 2	Temperature :	23~25°C
Test Mode :	5MHz QPSK RB Size 1 Offset 0 + Battery 2 for Sample 1	Relative Humidity :	49~51%
Test Engineer :	Eric Shih	Polarization :	Horizontal
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



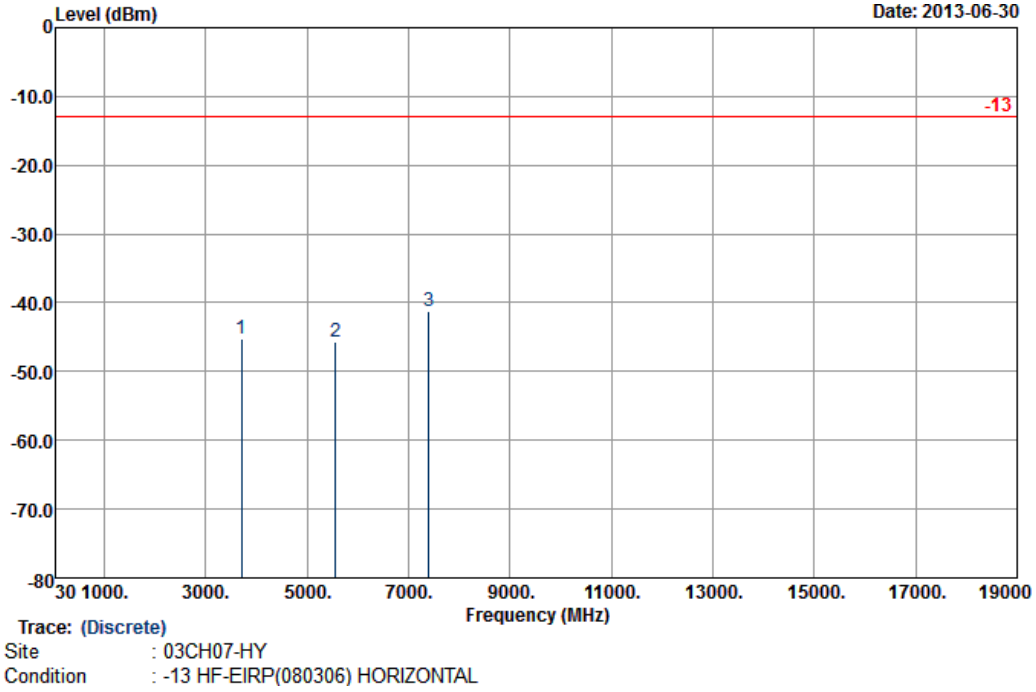
Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3756	-40.52	-13	-27.52	-55.87	-46.82	2.51	8.81	H	Pass
5632	-45.85	-13	-32.85	-66.55	-53.56	2.99	10.70	H	Pass
7512	-42.11	-13	-29.11	-69.52	-50.64	3.59	12.12	H	Pass

Band :	LTE Band 2	Temperature :	23~25°C
Test Mode :	5MHz QPSK RB Size 1 Offset 0 + Battery 2 for Sample 1	Relative Humidity :	49~51%
Test Engineer :	Eric Shih	Polarization :	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



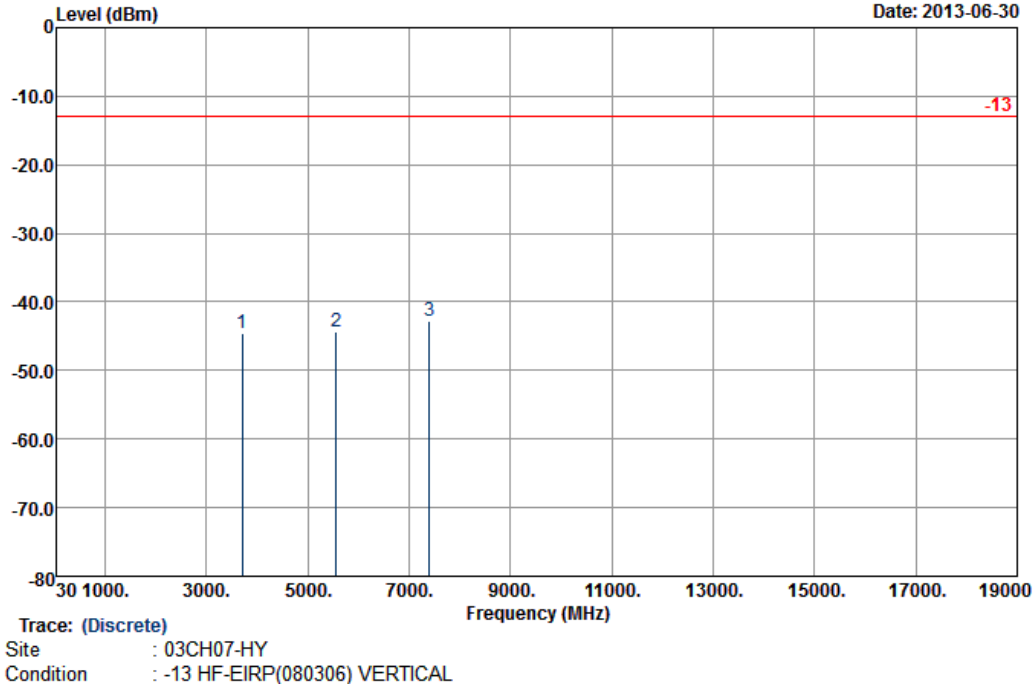
Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3756	-47.30	-13	-34.30	-63.6	-53.6	2.51	8.81	V	Pass
5636	-46.05	-13	-33.05	-66.62	-53.76	2.99	10.70	V	Pass
7512	-42.15	-13	-29.15	-69.32	-50.68	3.59	12.12	V	Pass

Band :	LTE Band 2	Temperature :	23~25°C
Test Mode :	10MHz QPSK RB Size 1 Offset 0 + Battery 2 for Sample 1	Relative Humidity :	49~51%
Test Engineer :	Eric Shih	Polarization :	Horizontal
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



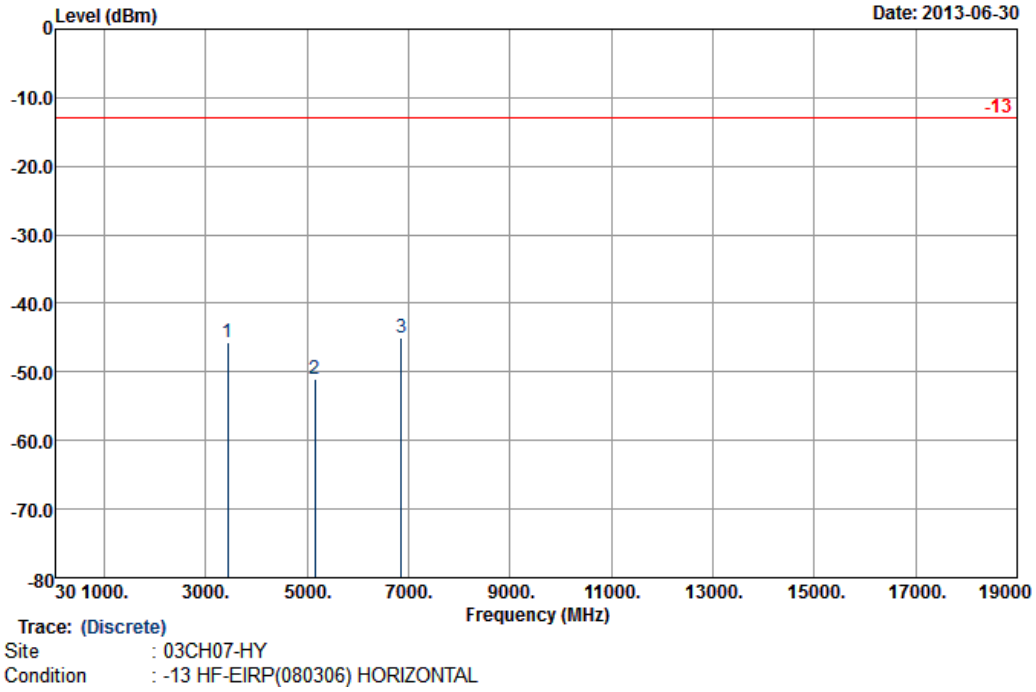
Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3700	-45.15	-13	-32.15	-60.3	-51.57	2.47	8.89	H	Pass
5552	-45.66	-13	-32.66	-66.1	-53.52	2.93	10.79	H	Pass
7400	-41.31	-13	-28.31	-68.63	-50.12	3.45	12.26	H	Pass

Band :	LTE Band 2	Temperature :	23~25°C
Test Mode :	10MHz QPSK RB Size 1 Offset 0 + Battery 2 for Sample 1	Relative Humidity :	49~51%
Test Engineer :	Eric Shih	Polarization :	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



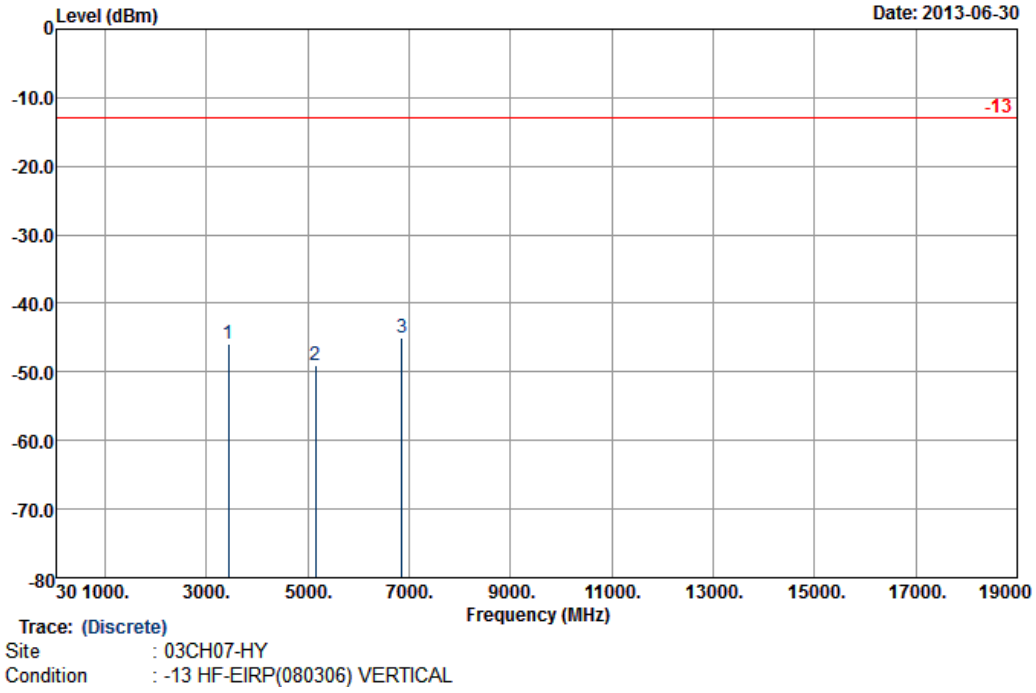
Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3700	-44.51	-13	-31.51	-60.66	-50.93	2.47	8.89	V	Pass
5552	-44.26	-13	-31.26	-64.53	-52.12	2.93	10.79	V	Pass
7400	-42.88	-13	-29.88	-69.83	-51.69	3.45	12.26	V	Pass

Band :	LTE Band 4	Temperature :	23~25°C
Test Mode :	5MHz QPSK RB Size 1 Offset 24 + Battery 2 for Sample 1	Relative Humidity :	49~51%
Test Engineer :	Eric Shih	Polarization :	Horizontal
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



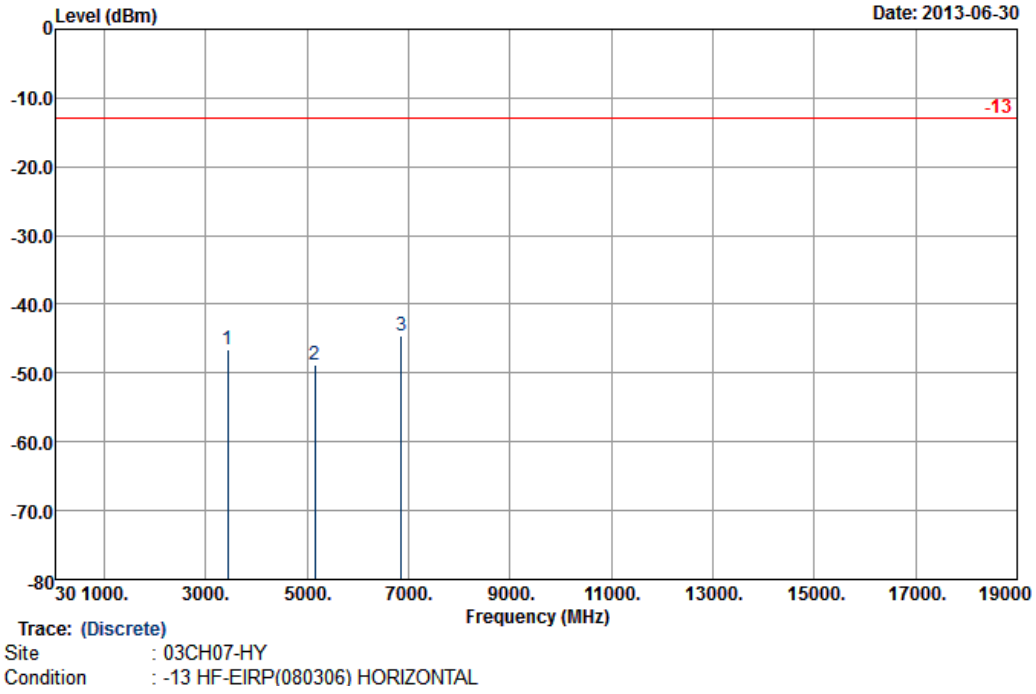
Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3428	-45.79	-13	-32.79	-60.03	-47.47	4.48	8.31	H	Pass
5144	-50.95	-13	-37.95	-69.5	-53.44	5.332	9.98	H	Pass
6856	-44.92	-13	-31.92	-70.65	-48.01	6.1	11.34	H	Pass

Band :	LTE Band 4	Temperature :	23~25°C
Test Mode :	5MHz QPSK RB Size 1 Offset 24 + Battery 2 for Sample 1	Relative Humidity :	49~51%
Test Engineer :	Eric Shih	Polarization :	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



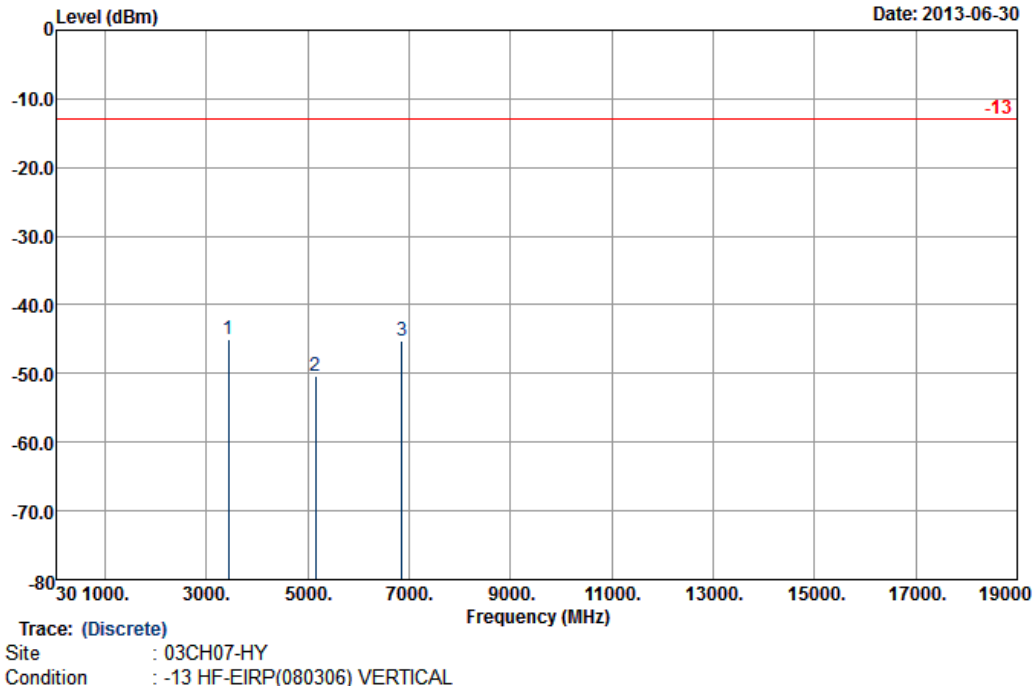
Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3428	-45.84	-13	-32.84	-61.4	-47.52	4.48	8.31	V	Pass
5144	-49.10	-13	-36.10	-67.72	-51.59	5.332	9.98	V	Pass
6856	-44.94	-13	-31.94	-69.93	-48.03	6.1	11.34	V	Pass

Band :	LTE Band 4	Temperature :	23~25°C
Test Mode :	10MHz QPSK RB Size 1 Offset 0 + Battery 2 for Sample 1	Relative Humidity :	49~51%
Test Engineer :	Eric Shih	Polarization :	Horizontal
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



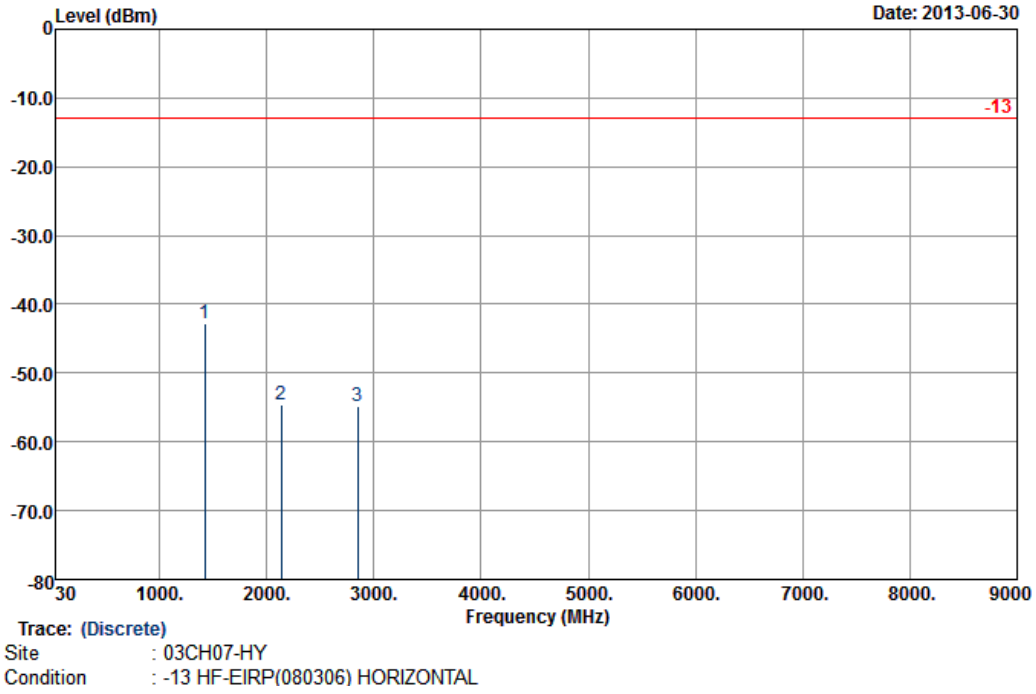
Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3428	-46.53	-13	-33.53	-60.77	-48.2	4.51	8.33	H	Pass
5144	-48.89	-13	-35.89	-67.44	-51.41	5.36	10.03	H	Pass
6856	-44.60	-13	-31.60	-70.33	-47.68	6.13	11.36	H	Pass

Band :	LTE Band 4	Temperature :	23~25°C
Test Mode :	10MHz QPSK RB Size 1 Offset 0 + Battery 2 for Sample 1	Relative Humidity :	49~51%
Test Engineer :	Eric Shih	Polarization :	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



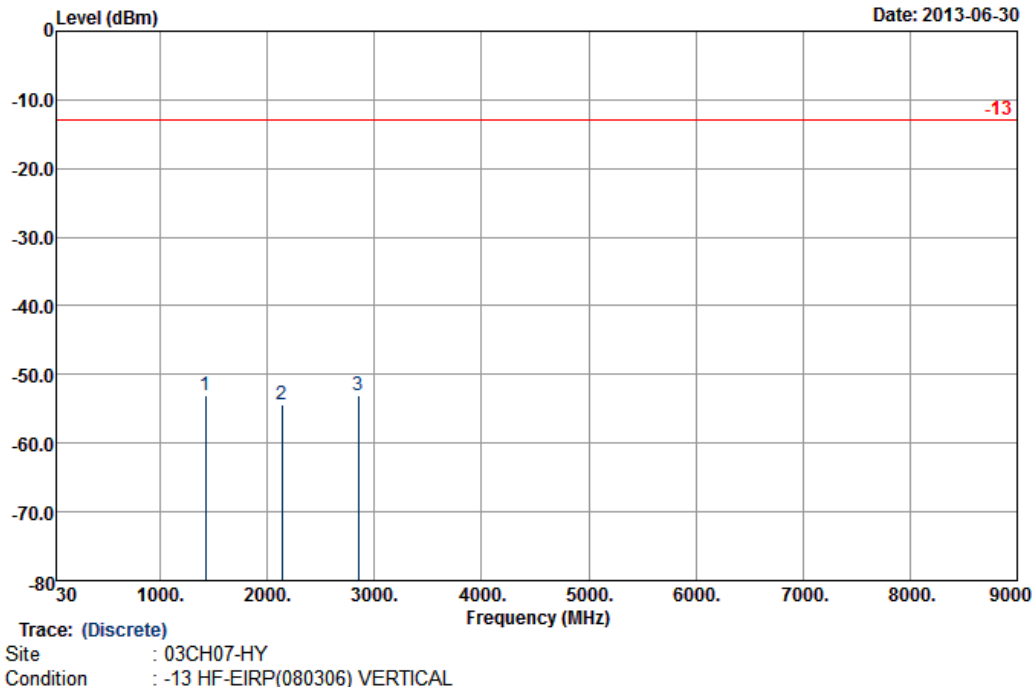
Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3428	-45.03	-13	-32.03	-60.59	-46.7	4.51	8.33	V	Pass
5144	-50.39	-13	-37.39	-69.01	-52.91	5.36	10.03	V	Pass
6856	-45.28	-13	-32.28	-70.27	-48.36	6.13	11.36	V	Pass

Band :	LTE Band 17	Temperature :	23~25°C
Test Mode :	5MHz QPSK RB Size 1 Offset 12 + Battery 2 for Sample 1	Relative Humidity :	49~51%
Test Engineer :	Eric Shih	Polarization :	Horizontal
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



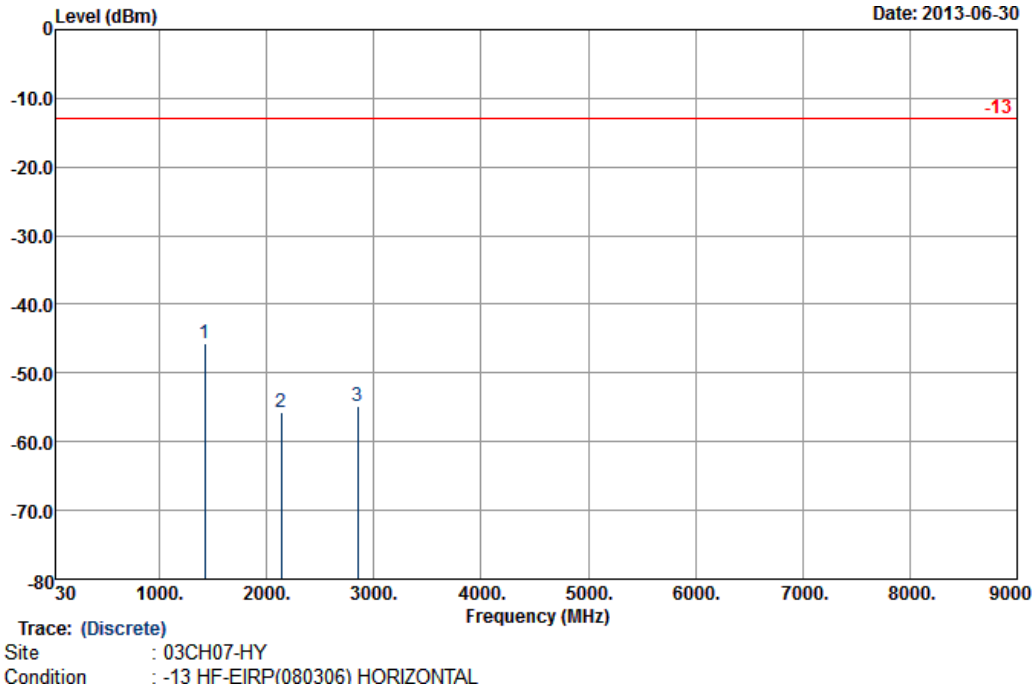
Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1426	-42.85	-13	-29.85	-50.96	-44.8	1.54	5.64	H	Pass
2140	-54.52	-13	-41.52	-65.84	-56.58	1.87	6.08	H	Pass
2851	-54.81	-13	-41.81	-68.25	-57.51	2.26	7.11	H	Pass

Band :	LTE Band 17	Temperature :	23~25°C
Test Mode :	5MHz QPSK RB Size 1 Offset 12 + Battery 2 for Sample 1	Relative Humidity :	49~51%
Test Engineer :	Eric Shih	Polarization :	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



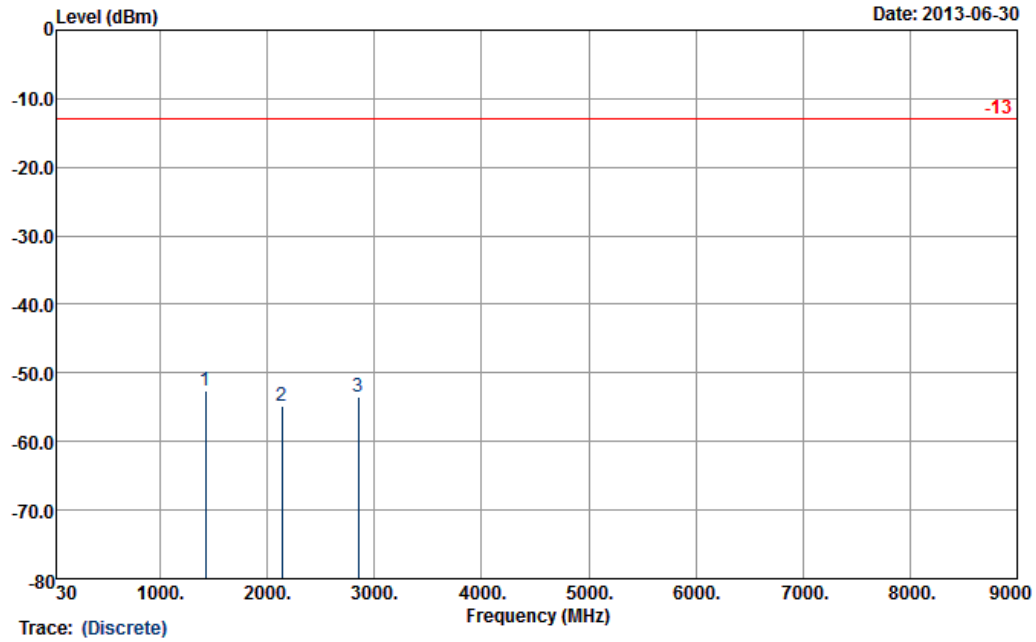
Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1426	-53.07	-13	-40.07	-63.39	-55.02	1.54	5.64	V	Pass
2139	-54.47	-13	-41.47	-67.6	-56.53	1.87	6.08	V	Pass
2852	-52.99	-13	-39.99	-68.1	-55.69	2.26	7.11	V	Pass

Band :	LTE Band 17	Temperature :	23~25°C
Test Mode :	5MHz QPSK RB Size 1 Offset 12 + Battery 1 for Sample 1	Relative Humidity :	49~51%
Test Engineer :	Eric Shih	Polarization :	Horizontal
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



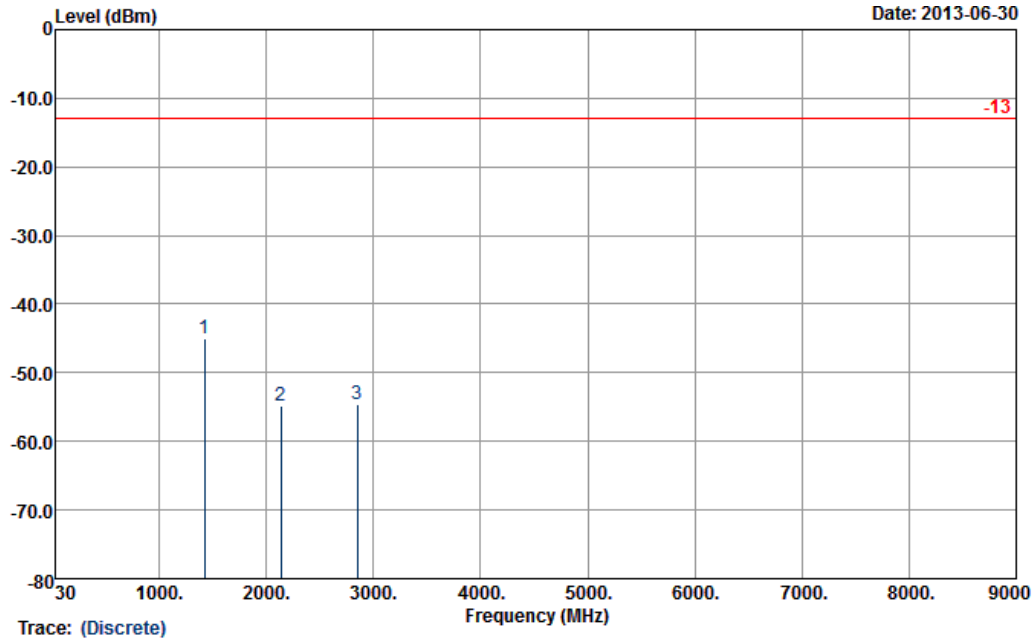
Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1426	-45.69	-13	-32.69	-53.8	-47.64	1.54	5.64	H	Pass
2140	-55.72	-13	-42.72	-67.04	-57.78	1.87	6.08	H	Pass
2851	-54.79	-13	-41.79	-68.23	-57.49	2.26	7.11	H	Pass

Band :	LTE Band 17	Temperature :	23~25°C
Test Mode :	5MHz QPSK RB Size 1 Offset 12 + Battery 1 for Sample 1	Relative Humidity :	49~51%
Test Engineer :	Eric Shih	Polarization :	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



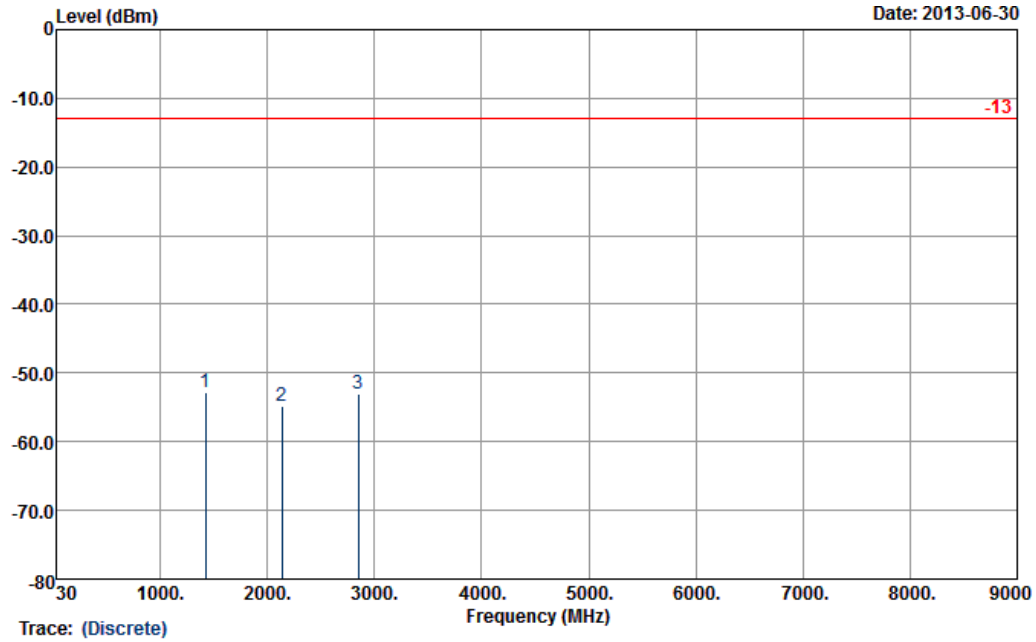
Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1426	-52.68	-13	-39.68	-63	-54.63	1.54	5.64	V	Pass
2139	-54.73	-13	-41.73	-67.86	-56.79	1.87	6.08	V	Pass
2852	-53.46	-13	-40.46	-68.57	-56.16	2.26	7.11	V	Pass

Band :	LTE Band 17	Temperature :	23~25°C
Test Mode :	5MHz QPSK RB Size 1 Offset 12 + Battery 2 for Sample 2	Relative Humidity :	49~51%
Test Engineer :	Eric Shih	Polarization :	Horizontal
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



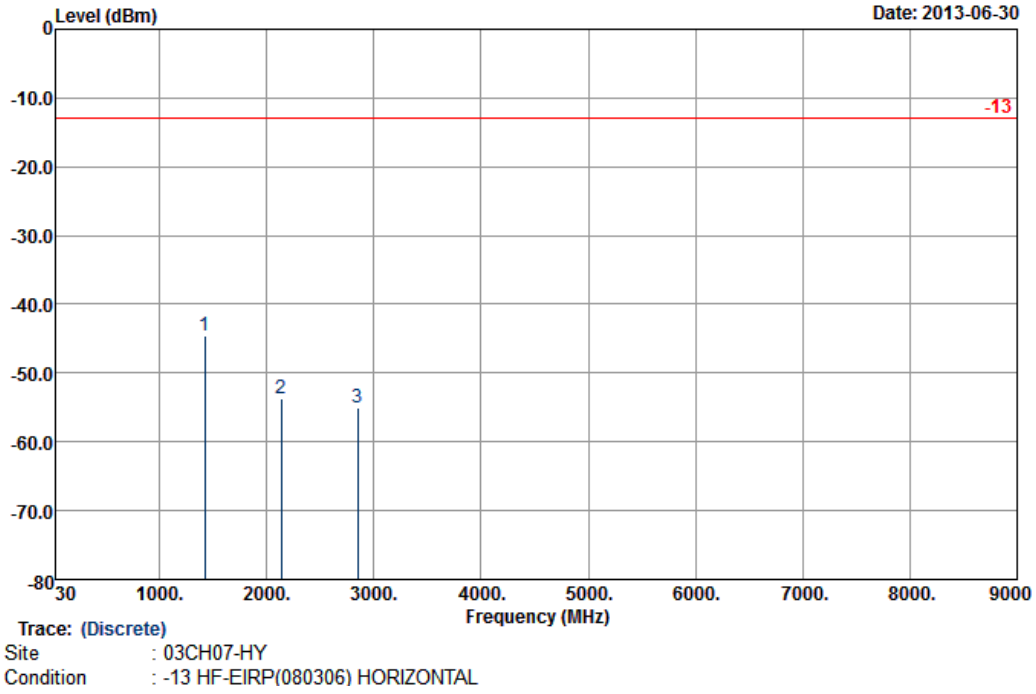
Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1426	-44.94	-13	-31.94	-53.05	-46.89	1.54	5.64	H	Pass
2139	-54.83	-13	-41.83	-66.15	-56.89	1.87	6.08	H	Pass
2852	-54.51	-13	-41.51	-67.95	-57.21	2.26	7.11	H	Pass

Band :	LTE Band 17	Temperature :	23~25°C
Test Mode :	5MHz QPSK RB Size 1 Offset 12 + Battery 2 for Sample 2	Relative Humidity :	49~51%
Test Engineer :	Eric Shih	Polarization :	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



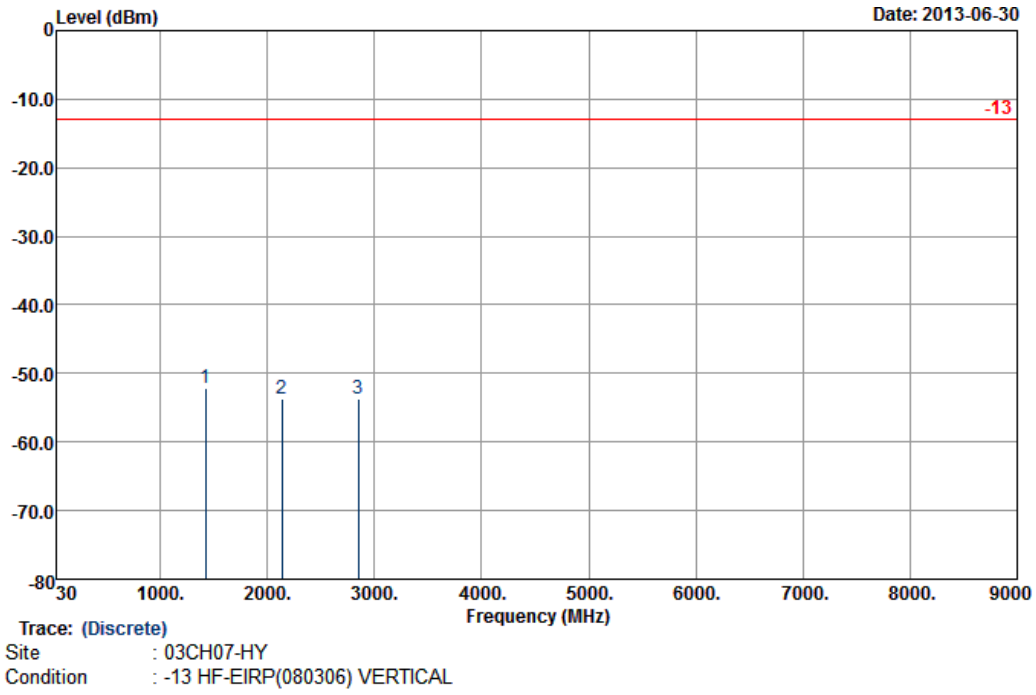
Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1426	-52.80	-13	-39.80	-63.12	-54.75	1.54	5.64	V	Pass
2139	-54.88	-13	-41.88	-68.01	-56.94	1.87	6.08	V	Pass
2852	-53.06	-13	-40.06	-68.17	-55.76	2.26	7.11	V	Pass

Band :	LTE Band 17	Temperature :	23~25°C
Test Mode :	10MHz QPSK RB Size 1 Offset 49 + Battery 2 for Sample 1	Relative Humidity :	49~51%
Test Engineer :	Eric Shih	Polarization :	Horizontal
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1426	-44.48	-13	-31.48	-52.59	-46.42	1.51	5.60	H	Pass
2140	-53.74	-13	-40.74	-65.06	-55.77	1.82	6.00	H	Pass
2851	-55.13	-13	-42.13	-68.57	-57.76	2.2	6.98	H	Pass

Band :	LTE Band 17	**Temperature :**	23~25°C
Test Mode :	10MHz QPSK RB Size 1 Offset 49 + Battery 2 for Sample 1	**Relative Humidity :**	49~51%
Test Engineer :	Eric Shih	**Polarization :**	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1426	-52.23	-13	-39.23	-62.55	-54.17	1.51	5.60	V	Pass
2140	-53.75	-13	-40.75	-66.88	-55.78	1.82	6.00	V	Pass
2851	-53.74	-13	-40.74	-68.85	-56.37	2.2	6.98	V	Pass

3.8 Frequency Stability Measurement

3.8.1 Description of Frequency Stability Measurement

The frequency stability shall be measured by variation of ambient temperature and variation of primary supply voltage to ensure that the fundamental emission stays within the authorized frequency block. The frequency stability of the transmitter shall be maintained within ±0.00025% (±2.5ppm) of the center frequency.

3.8.2 Measuring Instruments

See list of measuring instruments of this test report.

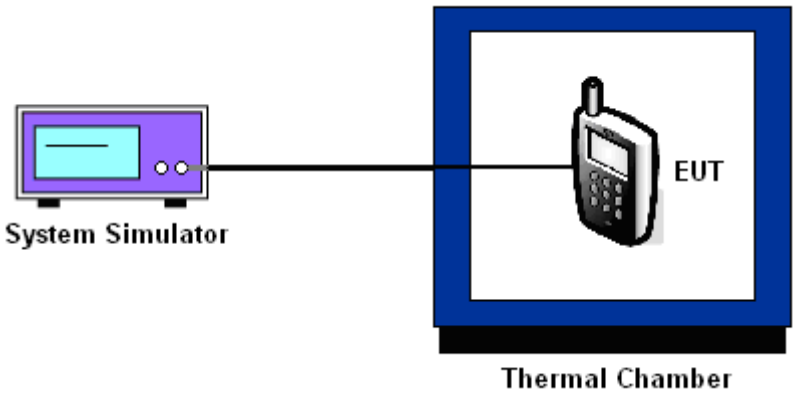
3.8.3 Test Procedures for Temperature Variation

1. The EUT was set up in the thermal chamber and connected with the base station.
2. With power OFF, the temperature was decreased to -30°C and the EUT was stabilized before testing. Power was applied and the maximum change in frequency was recorded within one minute.
3. With power OFF, the temperature was raised in 10°C step up to 50°C. The EUT was stabilized at each step for at least half an hour. Power was applied and the maximum frequency change was recorded within one minute.

3.8.4 Test Procedures for Voltage Variation

1. The EUT was placed in a temperature chamber at 25±5° C and connected with the base station.
2. The power supply voltage to the EUT was varied from 85% to 115% of the nominal value measured at the input to the EUT.
3. The variation in frequency was measured for the worst case.

3.8.5 Test Setup



3.8.6 Test Result of Temperature Variation

Band :	LTE Band 5 (QPSK)	Limit (ppm) :	2.5

Temperature (°C)	BW 5MHz		BW 10MHz		Result
	Freq. Dev. (Hz)	Deviation (ppm)	Freq. Dev. (Hz)	Deviation (ppm)	
-30	-12.1	-0.017	-10.1	-0.014	PASS
-20	10.7	0.015	12.0	0.017	
-10	11.6	0.016	10.4	0.015	
0	10.8	0.015	9.8	0.014	
10	-9.9	-0.014	11.2	0.016	
20	10.2	0.014	-12.3	-0.017	
30	11.3	0.016	-11.6	-0.016	
40	9.7	0.014	-10.7	-0.015	
50	-10.7	-0.015	10.9	0.015	

Band :	LTE Band 5 (16QAM)	Limit (ppm) :	2.5

Temperature (°C)	BW 5MHz		BW 10MHz		Result
	Freq. Dev. (Hz)	Deviation (ppm)	Freq. Dev. (Hz)	Deviation (ppm)	
-30	-10.7	-0.015	11.6	0.016	PASS
-20	-11.9	-0.017	10.5	0.015	
-10	10.5	0.015	-12.6	-0.018	
0	9.0	0.013	11.1	0.016	
10	11.2	0.016	-10.2	-0.014	
20	-9.7	-0.014	-11.3	-0.016	
30	11.3	0.016	10.4	0.015	
40	12.1	0.017	10.8	0.015	
50	-9.5	-0.013	-9.7	-0.014	

Band :	LTE Band 2 (QPSK)	Limit (ppm) :	2.5

Temperature (°C)	BW 5MHz		BW 10MHz		Result
	Freq. Dev. (Hz)	Deviation (ppm)	Freq. Dev. (Hz)	Deviation (ppm)	
-30	-9.8	-0.014	-11.5	-0.016	PASS
-20	10.3	0.015	10.3	0.015	
-10	11.6	0.016	11.6	0.016	
0	-8.9	-0.013	9.8	0.014	
10	10.4	0.015	10.7	0.015	
20	11.5	0.016	11.2	0.016	
30	10.9	0.015	9.7	0.014	
40	-12.0	-0.017	-8.9	-0.013	
50	11.8	0.017	-10.4	-0.015	

Band :	LTE Band 2 (16QAM)	Limit (ppm) :	2.5

Temperature (°C)	BW 5MHz		BW 10MHz		Result
	Freq. Dev. (Hz)	Deviation (ppm)	Freq. Dev. (Hz)	Deviation (ppm)	
-30	10.7	0.015	12.4	0.017	PASS
-20	-12.3	-0.017	-11.5	-0.016	
-10	11.5	0.016	10.7	0.015	
0	10.9	0.015	11.9	0.017	
10	-9.6	-0.014	-9.9	-0.014	
20	8.8	0.012	-9.4	-0.013	
30	9.7	0.014	-10.3	-0.015	
40	11.3	0.016	12.2	0.017	
50	-10.4	-0.015	11.6	0.016	

Band :	LTE Band 4 (QPSK)	Limit (ppm) :	2.5

Temperature (°C)	BW 5MHz		BW 10MHz		Result
	Freq. Dev. (Hz)	Deviation (ppm)	Freq. Dev. (Hz)	Deviation (ppm)	
-30	9.7	0.014	11.2	0.016	PASS
-20	-10.2	-0.014	9.6	0.014	
-10	8.6	0.012	-12.1	-0.017	
0	10.3	0.015	10.3	0.015	
10	-11.5	-0.016	11.9	0.017	
20	9.9	0.014	-9.9	-0.014	
30	10.4	0.015	-9.7	-0.014	
40	-11.0	-0.015	8.5	0.012	
50	11.2	0.016	8.9	0.013	

Band :	LTE Band 4 (16QAM)	Limit (ppm) :	2.5

Temperature (°C)	BW 5MHz		BW 10MHz		Result
	Freq. Dev. (Hz)	Deviation (ppm)	Freq. Dev. (Hz)	Deviation (ppm)	
-30	11.2	0.016	-11.4	-0.016	PASS
-20	-9.6	-0.014	12.0	0.017	
-10	12.3	0.017	-10.6	-0.015	
0	11.7	0.016	9.8	0.014	
10	-12.1	-0.017	9.7	0.014	
20	-9.9	-0.014	-8.8	-0.012	
30	8.7	0.012	8.6	0.012	
40	9.0	0.013	-10.9	-0.015	
50	10.5	0.015	9.1	0.013	

Band :	LTE Band 17 (QPSK)	Limit (ppm) :	2.5

Temperature (°C)	BW 5MHz		BW 10MHz		Result
	Freq. Dev. (Hz)	Deviation (ppm)	Freq. Dev. (Hz)	Deviation (ppm)	
-30	8.9	0.013	9.7	0.014	PASS
-20	-10.1	-0.014	-10.5	-0.015	
-10	8.6	0.012	-11.3	-0.016	
0	7.7	0.011	-9.6	-0.014	
10	-11.3	-0.016	8.5	0.012	
20	10.4	0.015	10.7	0.015	
30	12.0	0.017	11.2	0.016	
40	9.2	0.013	10.4	0.015	
50	9.5	0.013	11.9	0.017	

Band :	LTE Band 17 (16QAM)	Limit (ppm) :	2.5

Temperature (°C)	BW 5MHz		BW 10MHz		Result
	Freq. Dev. (Hz)	Deviation (ppm)	Freq. Dev. (Hz)	Deviation (ppm)	
-30	-8.4	-0.012	9.3	0.013	PASS
-20	-7.9	-0.011	-11.2	-0.016	
-10	10.2	0.014	-10.5	-0.015	
0	11.3	0.016	9.4	0.013	
10	8.8	0.012	-12.3	-0.017	
20	-9.3	-0.013	10.7	0.015	
30	12.0	0.017	9.1	0.013	
40	9.7	0.014	-10.8	-0.015	
50	-8.2	-0.012	11.7	0.016	

3.8.7 Test Result of Voltage Variation

Band	Bandwidth	Voltage (Volt)	Freq. Dev. (Hz)	Deviation (ppm)	Limit (ppm)	Result
LTE Band 5 (QPSK)	5M	4.20	9.6	0.014	2.5	PASS
		Normal	-10.2	-0.014		
		3.55	11.0	0.015		
	10M	4.20	9.9	0.014		
		Normal	-10.7	-0.015		
		3.55	10.8	0.015		
LTE Band 2 (QPSK)	5M	4.20	11.7	0.016	2.5	PASS
		Normal	10.8	0.015		
		3.55	-10.5	-0.015		
	10M	4.20	9.7	0.014		
		Normal	-11.6	-0.016		
		3.55	9.9	0.014		
LTE Band 4 (QPSK)	5M	4.20	10.2	0.014	2.5	PASS
		Normal	-9.7	-0.014		
		3.55	11.3	0.016		
	10M	4.20	-12.3	-0.017		
		Normal	11.5	0.016		
		3.55	9.9	0.014		
LTE Band 17 (QPSK)	5M	4.20	-11.3	-0.016	2.5	PASS
		Normal	10.8	0.015		
		3.55	9.6	0.014		
	10M	4.20	9.2	0.013		
		Normal	-12.4	-0.017		
		3.55	-10.5	-0.015		

Band	Bandwidth	Voltage (Volt)	Freq. Dev. (Hz)	Deviation (ppm)	Limit (ppm)	Result
LTE Band 5 (16QAM)	5M	4.20	11.4	0.016	2.5	PASS
		Normal	-12.0	-0.017		
		3.55	9.9	0.014		
	10M	4.20	8.7	0.012		
		Normal	10.3	0.015		
		3.55	-11.5	-0.016		
LTE Band 2 (16QAM)	5M	4.20	8.7	0.012	2.5	PASS
		Normal	11.2	0.016		
		3.55	10.0	0.014		
	10M	4.200	-12.1	-0.017		
		Normal	7.9	0.011		
		3.55	-10.4	-0.015		
LTE Band 4 (16QAM)	5M	4.20	-10.9	-0.015	2.5	PASS
		Normal	11.7	0.016		
		3.55	9.6	0.014		
	10M	4.20	-9.4	-0.013		
		Normal	10.0	0.014		
		3.55	-10.7	-0.015		
LTE Band 17 (16QAM)	5M	4.20	11.7	0.016	2.5	PASS
		Normal	12.4	0.017		
		3.55	-10.6	-0.015		
	10M	4.20	8.7	0.012		
		Normal	-12.5	-0.018		
		3.55	9.6	0.014		

Remark:

1. Normal Voltage = 3.70V.
2. The manufacturer declared that the EUT could work properly between voltage 3.55V ~ 4.20V.

4 List of Measuring Equipments

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	Rohde & Schwarz	FSP40	100055	9kHz~40GHz	Jun. 07, 2013	Jun. 24, 2013 ~ Jun. 29, 2013	Jun. 06, 2014	Conducted (TH02-HY)
Thermal Chamber	Ten Billion	TTH-D3SP	TBN-930701	N/A	Jul. 23, 2012	Jun. 24, 2013 ~ Jun. 29, 2013	Jul. 22, 2013	Conducted (TH02-HY)
Spectrum Analyzer	Rohde & Schwarz	FSP30	101067	9KHz~30GHz	Nov. 30, 2012	Jun. 27, 2013 ~ Jul. 02, 2013	Nov. 29, 2013	Radiation (03CH07-HY)
Bilog Antenna	Schaffner	CBL6111C	2726	30MHz~1GHz	Oct. 06, 2012	Jun. 27, 2013 ~ Jul. 02, 2013	Oct. 05, 2013	Radiation (03CH07-HY)
Double Ridge Horn Antenna	ESCO	3117	75962	1GHz~18GHz	Aug. 22, 2012	Jun. 27, 2013 ~ Jul. 02, 2013	Aug. 21, 2013	Radiation (03CH07-HY)
Preamplifier	COM-POWER	PA-103A	161241	30MHz~1GHz	Feb. 26, 2013	Jun. 27, 2013 ~ Jul. 02, 2013	Feb. 25, 2014	Radiation (03CH07-HY)
Preamplifier	Agilent	8449B	3008A02362	1GHz~26.5GHz	Dec. 01, 2012	Jun. 27, 2013 ~ Jul. 02, 2013	Nov. 30, 2013	Radiation (03CH07-HY)
Turn Table	ChainTek	ChainTek 3000	N/A	0 ~ 360 degree	N/A	Jun. 27, 2013 ~ Jul. 02, 2013	N/A	Radiation (03CH07-HY)
Antenna Mast	ChainTek	ChainTek 3000	N/A	N/A	N/A	Jun. 27, 2013 ~ Jul. 02, 2013	N/A	Radiation (03CH07-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170251	18GHz~40GHz	Sep. 28, 2012	Jun. 27, 2013 ~ Jul. 02, 2013	Sep. 27, 2013	Radiation (03CH07-HY)

5 Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**2.54**

Uncertainty of Radiated Emission Measurement (1 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**4.72**