



FCC RF Test Report

APPLICANT : NetComm Wireless Limited
EQUIPMENT : LTE WiFi Router (LTE Band 4/Band 17)
BRAND NAME : NetComm Wireless
MODEL NAME : 4G100W-01
MARKETING NAME : LTE WiFi Router
FCC ID : XIA-4G100W
STANDARD : 47 CFR Part 2, 27
CLASSIFICATION : PCS Licensed Transmitter (PCB)

The product was received on Jul. 25, 2012 and completely tested on Aug. 14, 2012. 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.

Reviewed by:

Jones Tsai / Manager



SPORTON INTERNATIONAL INC.

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

SPORTON INTERNATIONAL INC.

TEL : 886-3-327-3456

FAX : 886-3-328-4978

FCC ID : XIA-4G100W

Page Number : 1 of 85

Report Issued Date : Sep. 17, 2012

Report Version : Rev. 01



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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG272508B	Rev. 01	Initial issue of report	Sep. 17, 2012



SUMMARY OF TEST RESULT

Report Section	FCC Rule	IC Rule	Description	Limit	Result	Remark
3.1	§2.1046	NA	Conducted Output Power	NA	PASS	-
3.1	§27.50(c)(10) §27.50(d)(4)	RSS-139 (6.4) SRSP-513(5.1.2)	Effective Radiated Power and Equivalent Isotropic Radiated Power	ERP < 3 Watts (Band 17) EIRP < 1 Watt (Band 4)	PASS	-
3.2	NA	NA	Peak-to-Average Ratio	<13 dB	PASS	-
3.3	§2.1049	RSS-139 (6.5)	Occupied Bandwidth and 26dB Bandwidth Measurement	NA	PASS	-
3.4	§2.1049 §27.53(g)(h)	RSS-139 (6.5)	Band Edge Measurement	< 43+10log ₁₀ (P[Watts])	PASS	-
3.5	§2.1051 §27.53(g)(h)	RSS-139 (6.5)	Conducted Spurious Emission	< 43+10log ₁₀ (P[Watts])	PASS	-
3.6	§2.1053 §27.53(g)(h)	RSS-139 (6.5)	Undesirable Out of Band Emissions	< 43+10log ₁₀ (P[Watts])	PASS	Under limit 19.31 dB at 3460.000 MHz
3.7	§2.1055 §27.54	RSS-139 (6.3)	Frequency Stability Temperature & Voltage	< 2.5 ppm	PASS	-



1 General Description

1.1 Applicant

NetComm Wireless Limited

Level 2, 18-20 Orion Road Lane Cove, NSW Australia

1.2 Manufacturer

NetComm Wireless Limited

Level 2, 18-20 Orion Road Lane Cove, NSW Australia

1.3 Feature of Equipment Under Test

Product Feature	
Equipment	LTE WiFi Router (LTE Band 4/Band 17)
Brand Name	NetComm Wireless
Model Name	4G100W-01
FCC ID	XIA-4G100W
Integrated Module	Brand Name : Sierra Model Name : MC7700 FCC ID : N7NMC7700
EUT supports Radios application	GSM/EGPRS/WCDMA/HSPA/LTE/ WLAN 11bgn
HW Version	V1.10
SW Version	1.1.18.0
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.

Product Specification subjective to this standard	
Tx Frequency	LTE Band 4 : 1712.5 MHz ~ 1752.5 MHz LTE Band 17 : 706.5 MHz ~ 713.5 MHz
Rx Frequency	LTE Band 4 : 2112.5 MHz ~ 2152.5 MHz LTE Band 17 : 736.5 MHz ~ 743.5 MHz
Bandwidth	5MHz/ 10MHz (Band 4) 5MHz / 10MHz (Band 17)
Maximum Output Power to Antenna	LTE Band 4 : 23.00 dBm LTE Band 17 : 22.57 dBm
Antenna Type	Fixed Internal Antenna
Type of Modulation	QPSK / 16QAM

1.4 Emission Designator

FCC Rule	System	Type of Modulation	BW	Maximum ERP/EIRP (W)	Frequency Tolerance (% , Hz, ppm)	Emission Designator
Part 27	LTE Band 4	QPSK	5MHz	0.575	0.011 ppm	4M50G7D
Part 27	LTE Band 4	16QAM	5MHz	0.524	0.011 ppm	4M52D7W
Part 27	LTE Band 4	QPSK	10MHz	0.571	0.018 ppm	9M13G7D
Part 27	LTE Band 4	16QAM	10MHz	0.486	0.018 ppm	9M13D7W
Part 27	LTE Band 17	QPSK	5MHz	0.175	0.009 ppm	4M52G7D
Part 27	LTE Band 17	16QAM	5MHz	0.163	0.009 ppm	4M52D7W
Part 27	LTE Band 17	QPSK	10MHz	0.174	0.007 ppm	9M13G7D
Part 27	LTE Band 17	16QAM	10MHz	0.166	0.007 ppm	9M10D7W

1.5 Testing Site

Test Site	SPORTON INTERNATIONAL INC.		
Test Site Location	No. 52, Hwa Ya 1 st 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	03CH05-HY	TW1022/4086B-1



1.6 Applied Standards

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

- ♦ 47 CFR Part 2, 27
- ♦ FCC KDB 971168 D01 Power Meas. License Digital Systems v01
- ♦ FCC KDB 412172 D01 Determining ERP and EIRP v01

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.

1.7 Ancillary Equipment List

Item	Equipment	Trade Name	Model No.	FCC ID	Data Cable	Power Cord
1.	System Simulator	Anritsu	MT8820C	N/A	N/A	Unshielded, 1.8 m

2 Test Configuration of Equipment Under Test

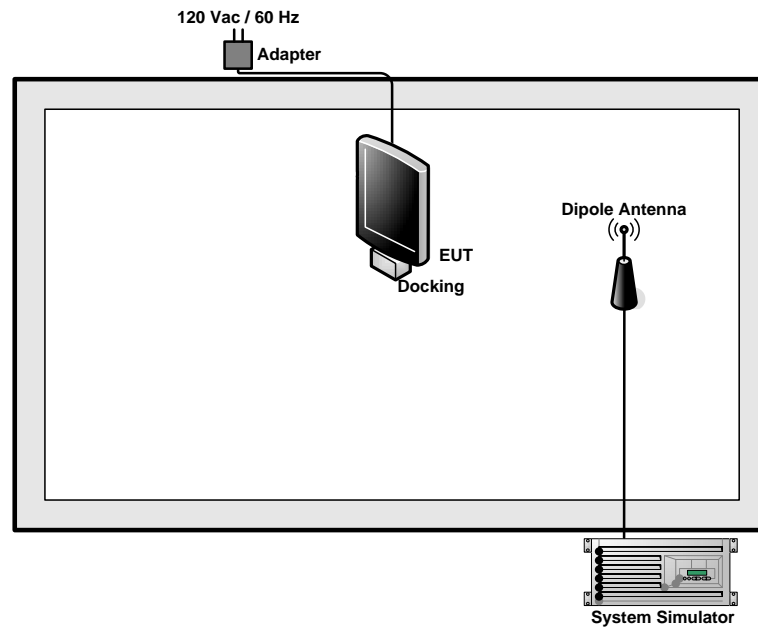
2.1 Test Mode

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.

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

Test Modes			
Band		Radiated TCs	Conducted TCs
		Modulation : QPSK / 16QAM	Modulation : QPSK / 16QAM
LTE Band 4	BW 5MHz	<ul style="list-style-type: none"> ■ LTE (RB Size 1, RB Offset 0) Link 	<ul style="list-style-type: none"> ■ LTE (RB Size 1, RB Offset 0) Link ■ LTE (RB Size 1, RB Offset 24) Link ■ LTE (RB Size 12, RB Offset 6) Link ■ LTE (RB Size 25, RB Offset 0) Link
	BW 10MHz	<ul style="list-style-type: none"> ■ LTE (RB Size 1, RB Offset 0) Link 	<ul style="list-style-type: none"> ■ LTE (RB Size 1, RB Offset 0) Link ■ LTE (RB Size 1, RB Offset 49) Link ■ LTE (RB Size 25, RB Offset 13) Link ■ LTE (RB Size 50, RB Offset 0) Link
LTE Band 17	BW 5MHz	<ul style="list-style-type: none"> ■ LTE (RB Size 1, RB Offset 24) Link 	<ul style="list-style-type: none"> ■ LTE (RB Size 1, RB Offset 0) Link ■ LTE (RB Size 1, RB Offset 24) Link ■ LTE (RB Size 12, RB Offset 6) Link ■ LTE (RB Size 25, RB Offset 0) Link
	BW 10MHz	<ul style="list-style-type: none"> ■ LTE (RB Size 1, RB Offset 49) Link 	<ul style="list-style-type: none"> ■ LTE (RB Size 1, RB Offset 0) Link ■ LTE (RB Size 1, RB Offset 49) Link ■ LTE (RB Size 25, RB Offset 13) Link ■ LTE (RB Size 50, RB Offset 0) Link

2.2 Connection Diagram of Test System



3 Test Result

3.1 Conducted Output Power and ERP/EIRP Measurement

3.1.1 Description of the Conducted Output Power and ERP/EIRP 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.

The ERP of mobile transmitters must not exceed 3 Watts for band 17 and the EIRP of mobile transmitters are limited to 1 Watt for band 4. According to KDB 412172 D01 Power Approach,

$ERP/EIRP = P_T + G_T - L_C$, $ERP = EIRP - 2.15$, where

P_T = transmitter output power in dBm

G_T = gain of the transmitting antenna in dBi

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

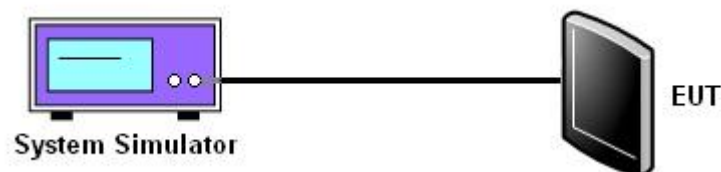
3.1.2 Measuring Instruments

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. Set EUT at maximum power through base station.
3. Select lowest, middle, and highest channels for each band and different modulation.
4. Compare each band and different modulation combination to show the worst data rate.

3.1.4 Test Setup





3.1.5 Test Result of Conducted Output Power

Operation Band	Band Width	Modulation	Channel	Frequency (MHz)	Conducted Power (dBm)	Conducted Power (Watts)	PAPR (dB)	EIRP (dBm)	EIRP (Watts)
LTE Band 4 ($G_T - L_C = 4.6\text{dB}$)	5MHz	QPSK	19975	1712.5	22.94	0.1968	5.80	27.54	0.568
			20175	1732.5	23.00	0.1995	5.80	27.60	0.575
			20375	1752.5	22.77	0.1892	5.80	27.37	0.546
		16QAM	19975	1712.5	22.34	0.1714	6.35	26.94	0.494
			20175	1732.5	22.59	0.1816	6.35	27.19	0.524
			20375	1752.5	22.16	0.1644	6.35	26.76	0.474
	10MHz	QPSK	20000	1715.0	22.85	0.1928	5.67	27.45	0.556
			20175	1732.5	22.97	0.1982	5.67	27.57	0.571
			20350	1750.0	22.90	0.1950	5.67	27.50	0.562
		16QAM	20000	1715.0	22.23	0.1671	6.60	26.83	0.482
			20175	1732.5	22.27	0.1687	6.60	26.87	0.486
			20350	1750.0	22.02	0.1592	6.60	26.62	0.459



Operation Band	Band Width	Modulation	Channel	Frequency (MHz)	Conducted Power (dBm)	Conducted Power (Watts)	PAPR (dB)	ERP (dBm)	ERP (Watts)
LTE Band 17 (G _T - L _C = 2.0dB)	5MHz	QPSK	23755	706.5	22.50	0.1778	6.28	22.35	0.172
			23790	710.0	22.23	0.1671	6.28	22.08	0.161
			23825	713.5	22.57	0.1807	6.28	22.42	0.175
		16QAM	23755	706.5	22.06	0.1607	7.02	21.91	0.155
			23790	710.0	22.24	0.1675	7.02	22.09	0.162
			23825	713.5	22.28	0.1690	7.02	22.13	0.163
	10MHz	QPSK	23780	709.0	22.14	0.1637	6.22	21.99	0.158
			23790	710.0	22.55	0.1799	6.22	22.40	0.174
			23800	711.0	22.53	0.1791	6.22	22.38	0.173
		16QAM	23780	709.0	22.12	0.1629	6.92	21.97	0.157
			23790	710.0	22.36	0.1722	6.92	22.21	0.166
			23800	711.0	22.26	0.1683	6.92	22.11	0.163

Note: Maximum average power for LTE.

$$EIRP = P_T + G_T - L_C, ERP = EIRP - 2.15, \text{ where}$$

P_T = transmitter output power in dBm

G_T = gain of the transmitting antenna in dBi

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

3.2 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. The following guidelines are offered for performing a CCDF measurement.

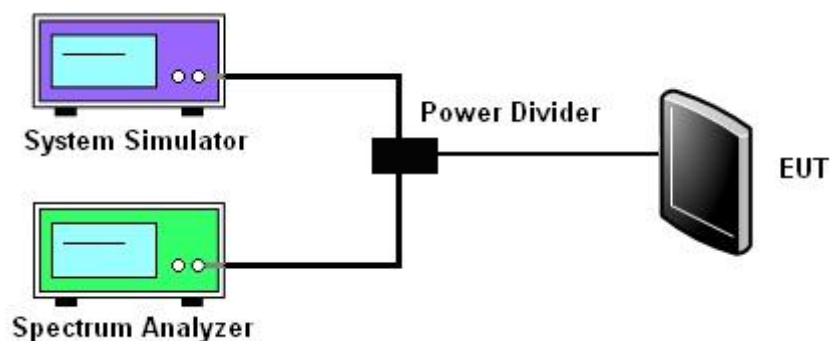
3.2.2 Measuring Instruments

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. The CCDF (Complementary Cumulative Distribution Function) of the middle channel for the highest RF powers were measured.

3.2.4 Test Setup





3.2.5 Test Result of Peak-to-Average Ratio

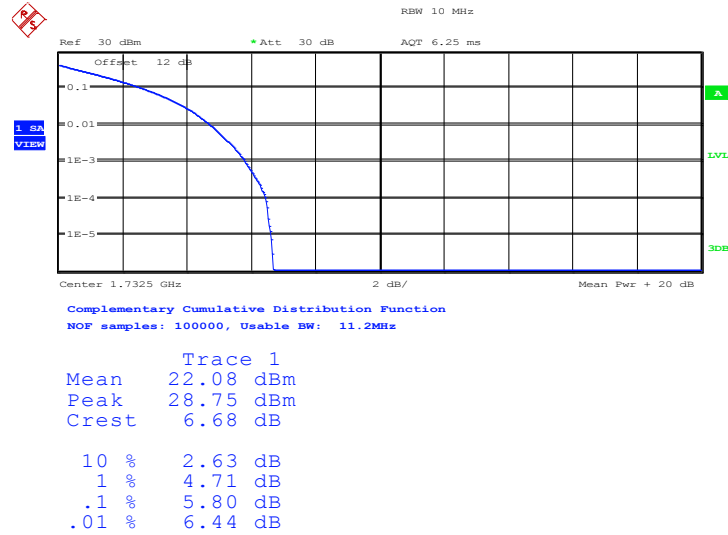
Modes	LTE Band 4			
BW / Mod.	5MHz / QPSK	5MHz / 16QAM	10MHz / QPSK	10MHz / 16QAM
Peak-to-Average Ratio (dB)	5.80	6.35	5.67	6.60

Modes	LTE Band 17			
BW / Mod.	5MHz / QPSK	5MHz / 16QAM	10MHz / QPSK	10MHz / 16QAM
Peak-to-Average Ratio (dB)	6.28	7.02	6.22	6.92



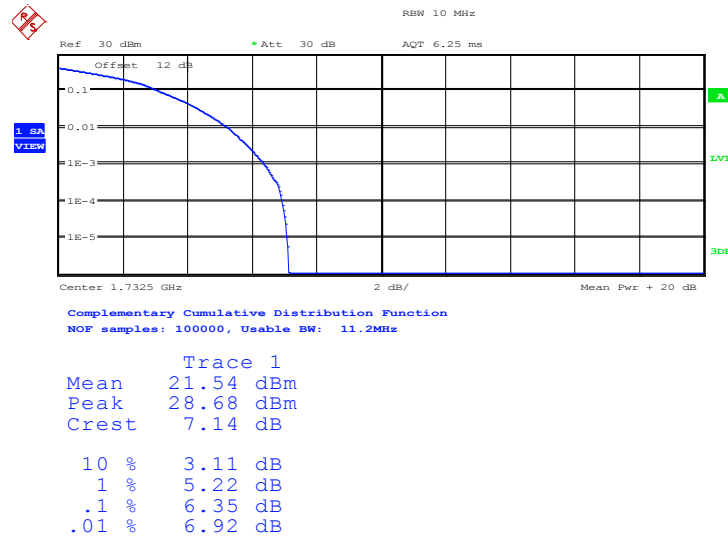
3.2.6 Peak to Average Power Ratio

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



Date: 6.AUG.2012 21:40:11

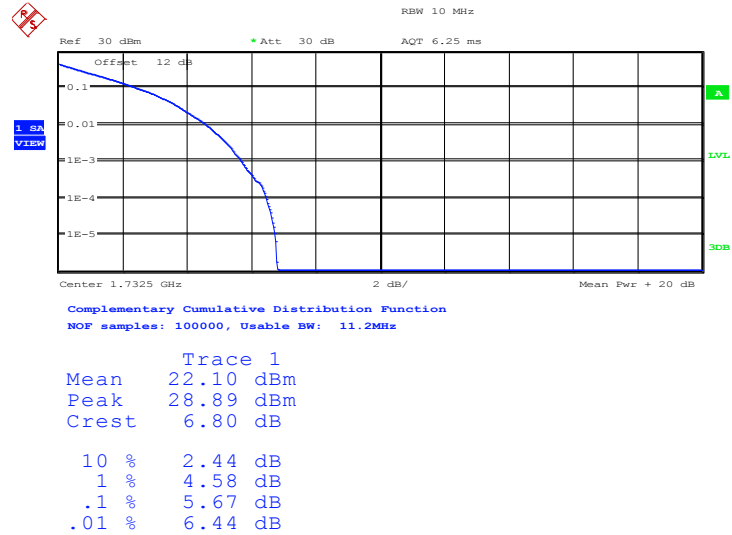
Peak-to-Average Ratio on LTE Band 4 5MHz / 16QAM



Date: 6.AUG.2012 21:40:43

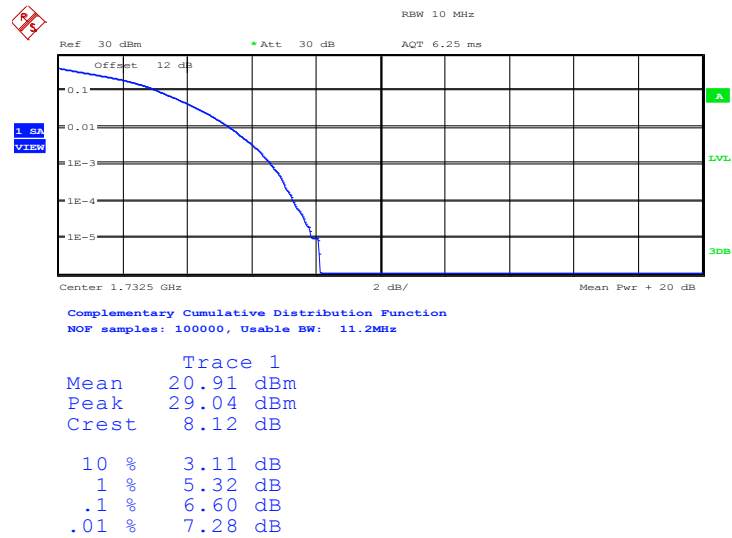


Peak-to-Average Ratio on LTE Band 4 10MHz / QPSK



Date: 6.AUG.2012 21:11:11

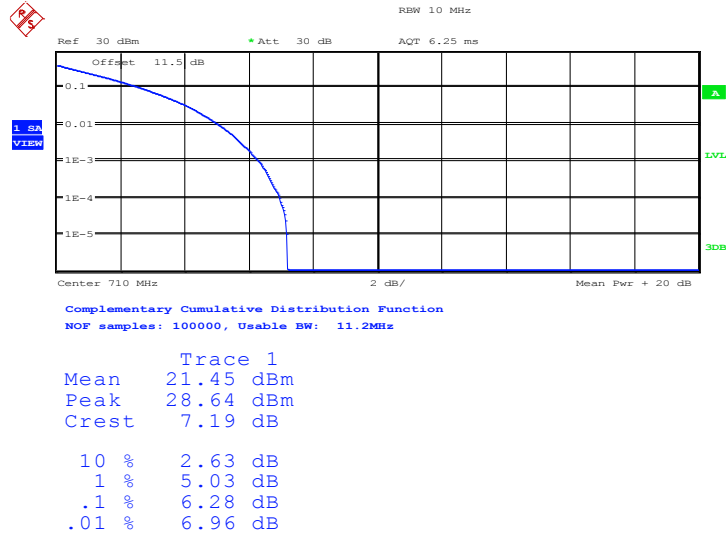
Peak-to-Average Ratio on LTE Band 4 10MHz / 16QAM



Date: 6.AUG.2012 21:38:54

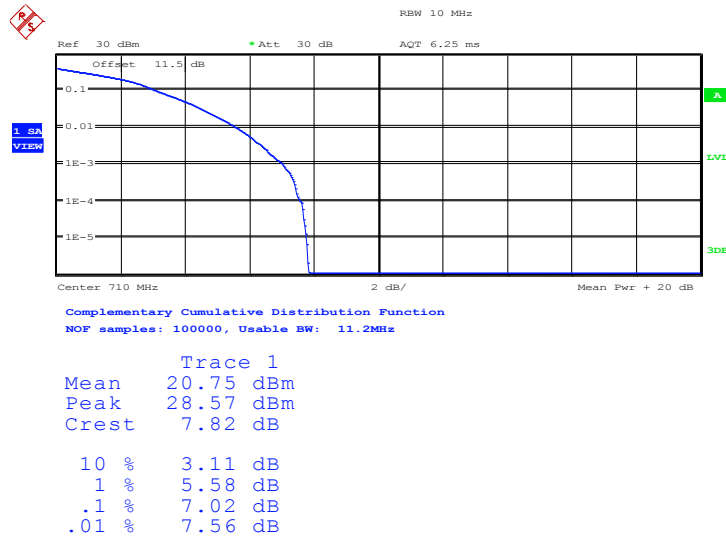


Peak-to-Average Ratio on LTE Band 17 5MHz / QPSK



Date: 7.AUG.2012 00:51:22

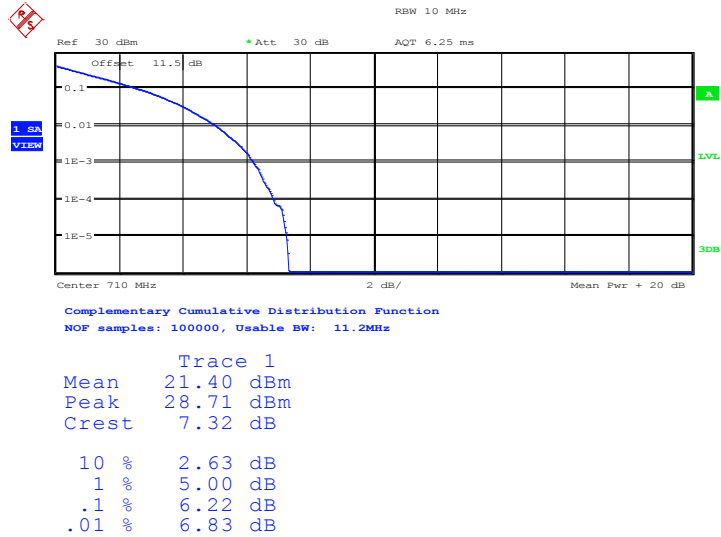
Peak-to-Average Ratio on LTE Band 17 5MHz / 16QAM



Date: 7.AUG.2012 00:51:45

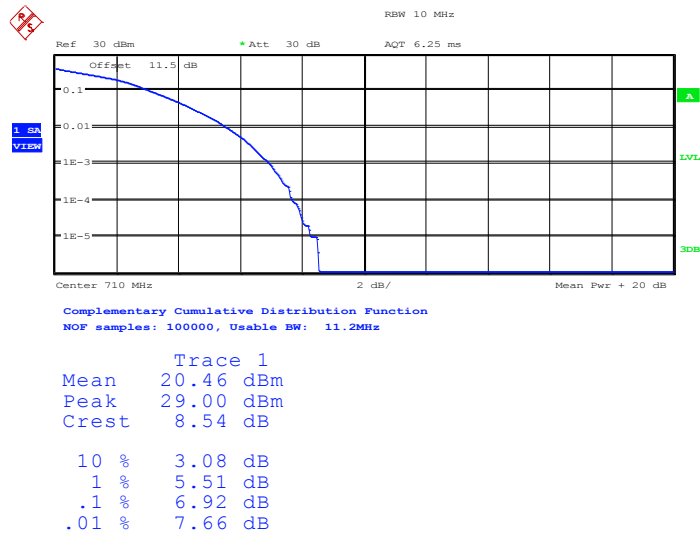


Peak-to-Average Ratio on LTE Band 17 10MHz / QPSK



Date: 7.AUG.2012 00:53:04

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



Date: 7.AUG.2012 00:53:24

3.3 Occupied Bandwidth and 26dB Bandwidth Measurement

3.3.1 Description of Occupied Bandwidth and 26dB Bandwidth Measurement

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

The emission bandwidth is defined as the width of the signal between two points, located at the 2 sides of the carrier frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

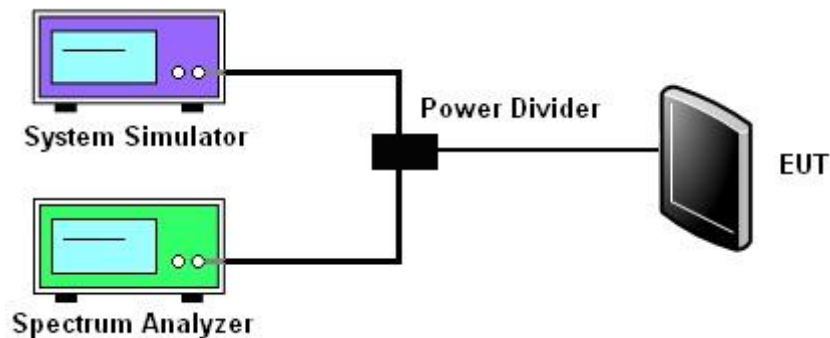
3.3.2 Measuring Instruments

See list of measuring instruments of this test report.

3.3.3 Test Procedures

1. The EUT was connected to Spectrum Analyzer and Base Station via power divider.
2. The 99% occupied bandwidth and 26 dB bandwidth of the middle channel for the highest RF powers were measured.

3.3.4 Test Setup





3.3.5 Test Result of Occupied Bandwidth

Modes	LTE Band 4			
BW / Modulation	5MHz / QPSK	5MHz / 16QAM	10MHz / QPSK	10MHz / 16QAM
99% OBW (MHz)	4.50	4.52	9.13	9.13
26dB BW (MHz)	5.10	5.05	10.13	10.16

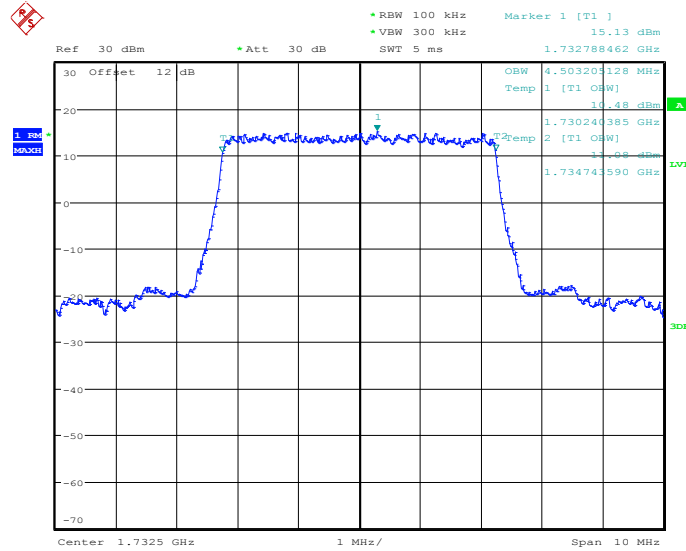
Modes	LTE Band 17			
BW / Modulation	5MHz / QPSK	5MHz / 16QAM	10MHz / QPSK	10MHz / 16QAM
99% OBW (MHz)	4.52	4.52	9.13	9.10
26dB BW (MHz)	5.10	5.05	10.13	10.00



3.3.6 Test Result (Plots) of Occupied Bandwidth

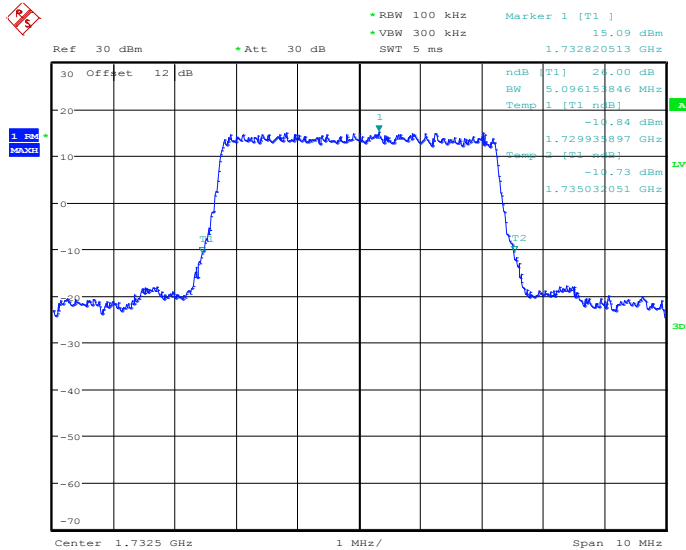
Band :	LTE Band 4	BW / Mod. :	5MHz / QPSK
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99% Occupied Bandwidth Plot on Channel 20175



Date: 6.AUG.2012 21:50:34

26dB Bandwidth Plot on Channel 20175

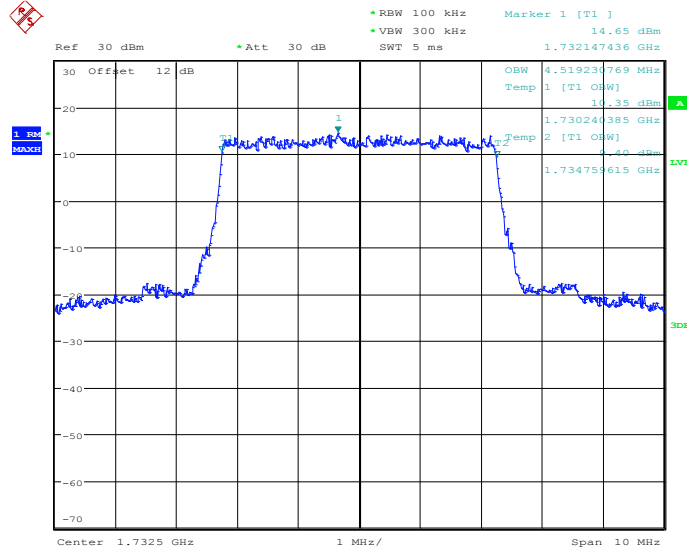


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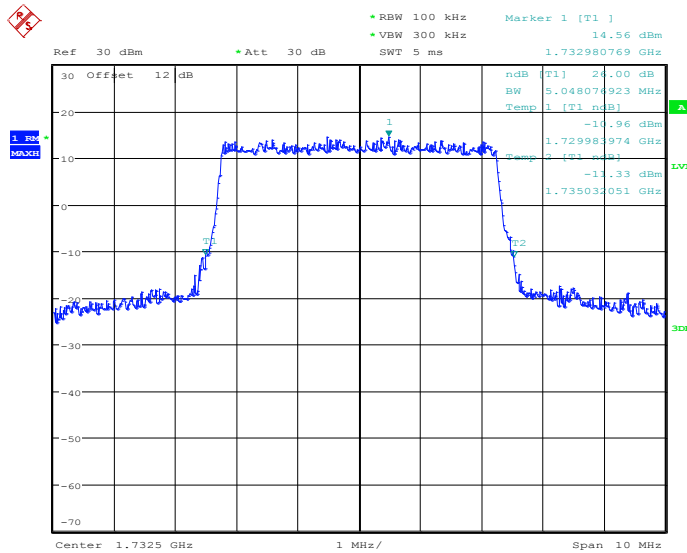
Band :	LTE Band 4	BW / Mod. :	5MHz / 16QAM
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99% Occupied Bandwidth Plot on Channel 20175



Date: 6.AUG.2012 21:51:21

26dB Bandwidth Plot on Channel 20175

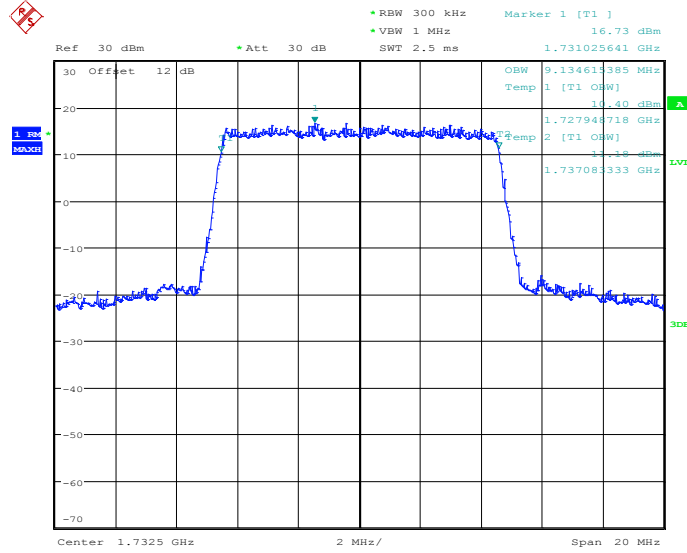


Date: 6.AUG.2012 22:28:41



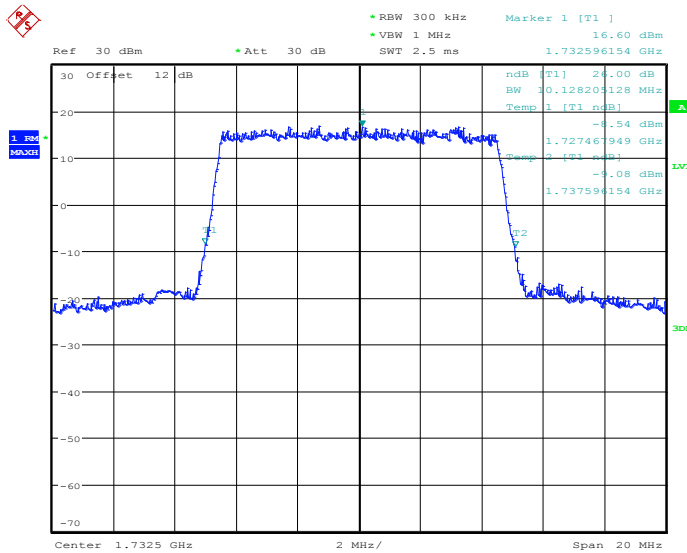
Band :	LTE Band 4	BW / Mod. :	10MHz / QPSK
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99% Occupied Bandwidth Plot on Channel 20175



Date: 6.AUG.2012 22:09:59

26dB Bandwidth Plot on Channel 20175

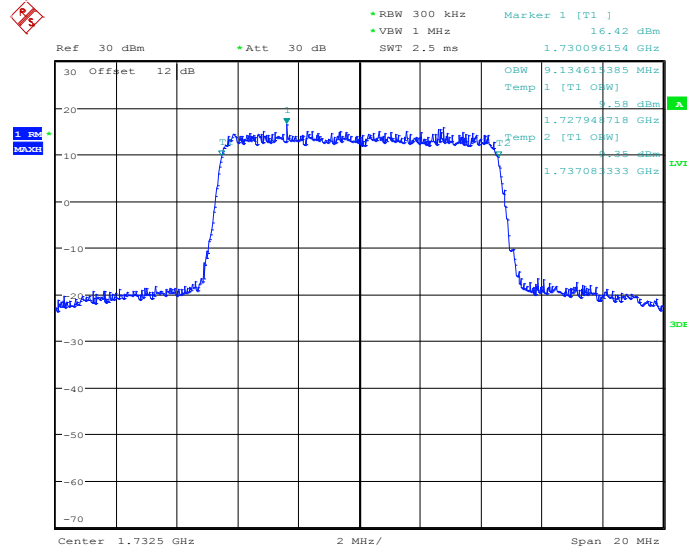


Date: 6.AUG.2012 22:17:22



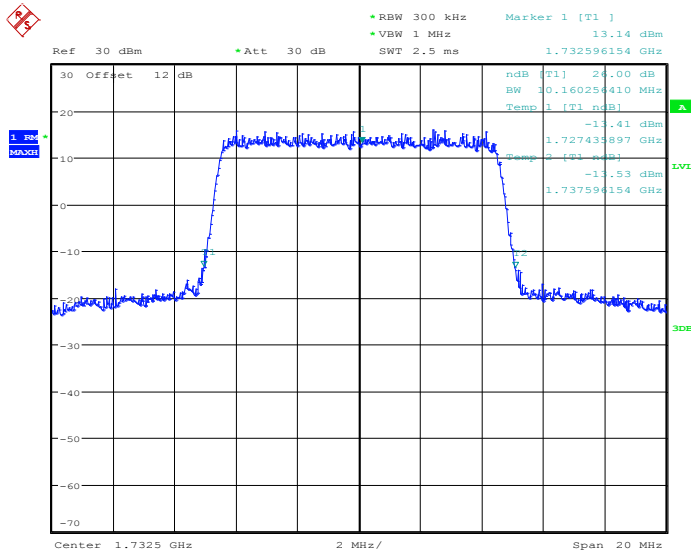
Band :	LTE Band 4	BW / Mod. :	10MHz / 16QAM
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99% Occupied Bandwidth Plot on Channel 20175



Date: 6.AUG.2012 22:10:21

26dB Bandwidth Plot on Channel 20175

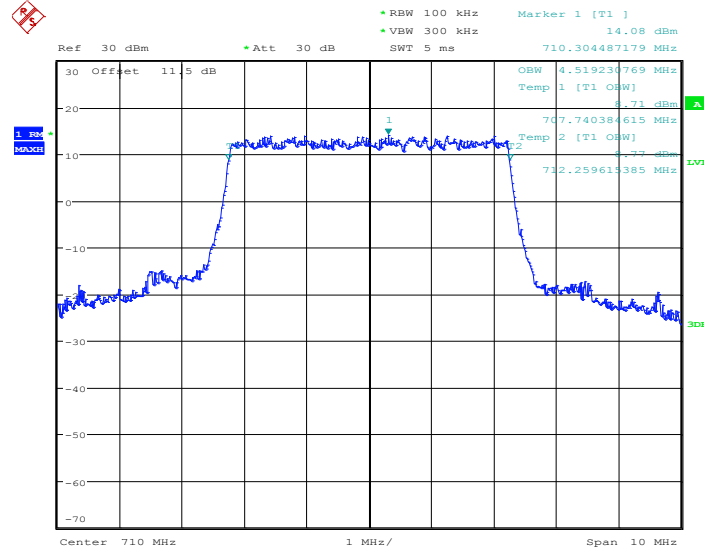


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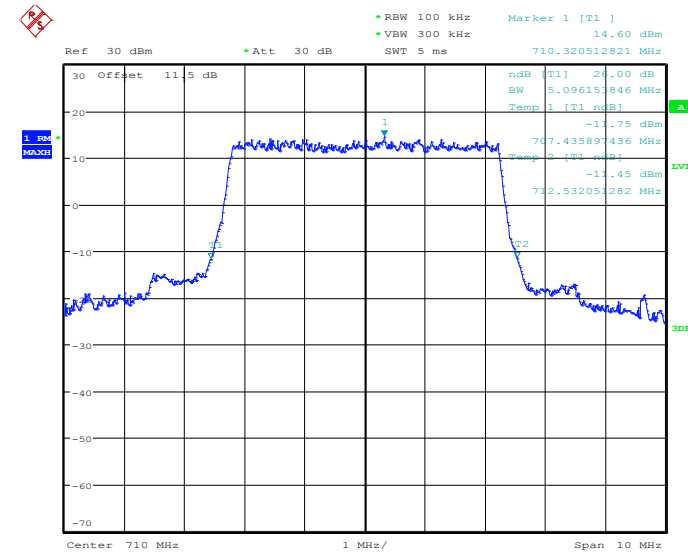
Band :	LTE Band 17	BW / Mod. :	5MHz / QPSK
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99% Occupied Bandwidth Plot on Channel 23790



Date: 7.AUG.2012 00:44:49

26dB Bandwidth Plot on Channel 23790

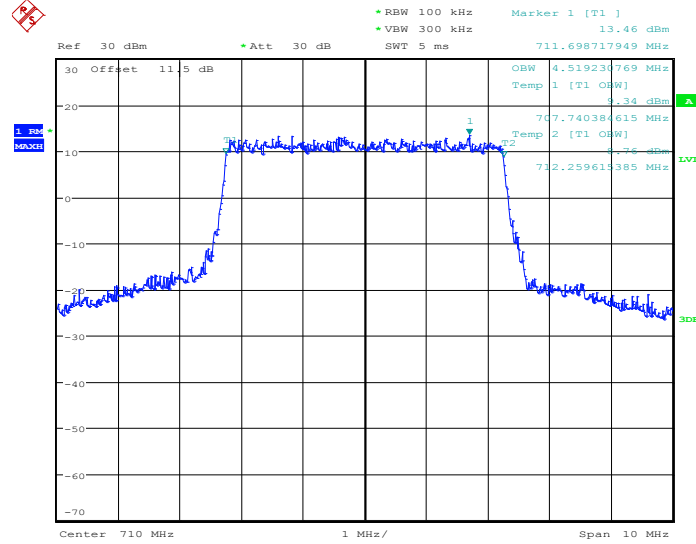


Date: 7.AUG.2012 00:30:41



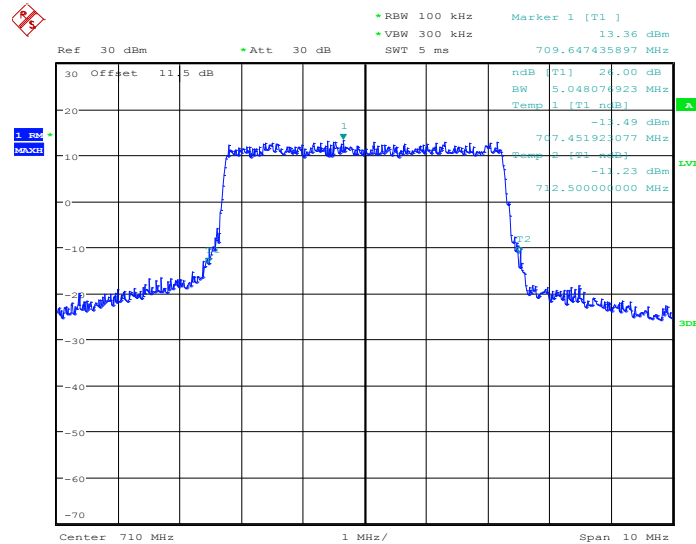
Band :	LTE Band 17	BW / Mod. :	5MHz / 16QAM
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99% Occupied Bandwidth Plot on Channel 23790



Date: 7.AUG.2012 00:45:15

26dB Bandwidth Plot on Channel 23790

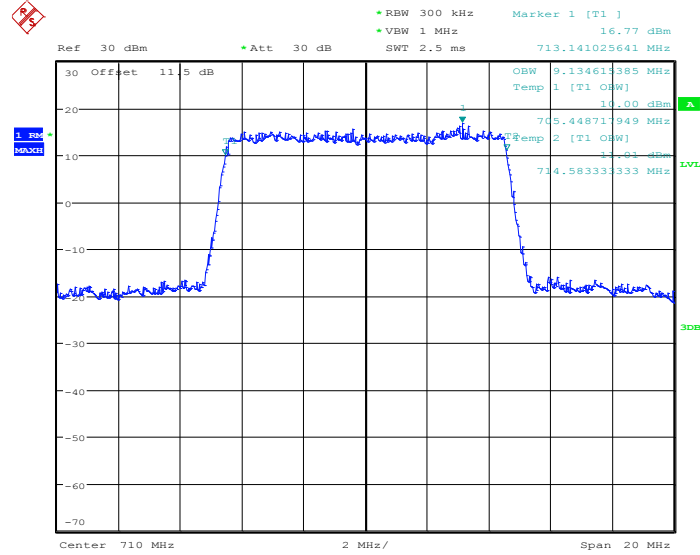


Date: 7.AUG.2012 00:34:00



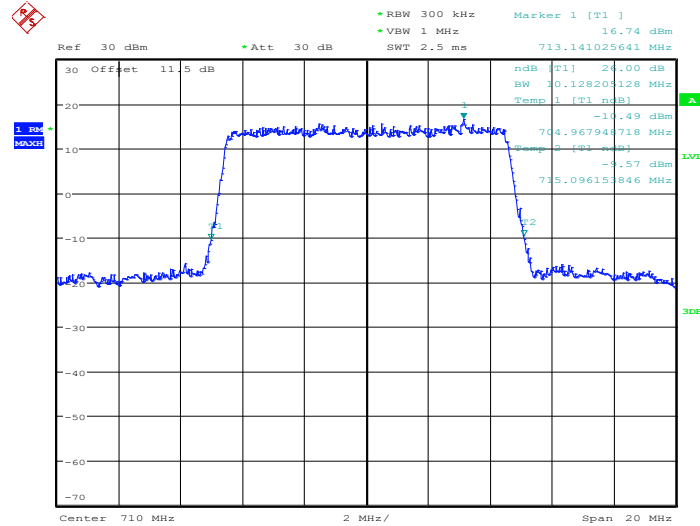
Band :	LTE Band 17	BW / Mod. :	10MHz / QPSK
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99% Occupied Bandwidth Plot on Channel 23790



Date: 7.AUG.2012 00:37:02

26dB Bandwidth Plot on Channel 23790

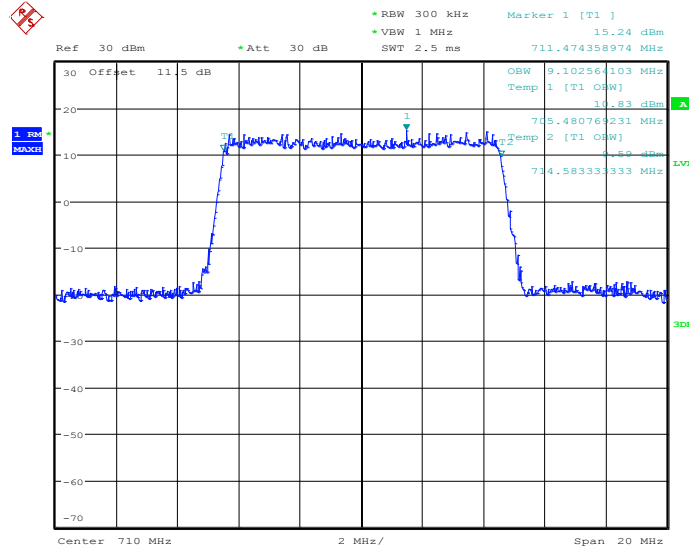


Date: 7.AUG.2012 00:34:57



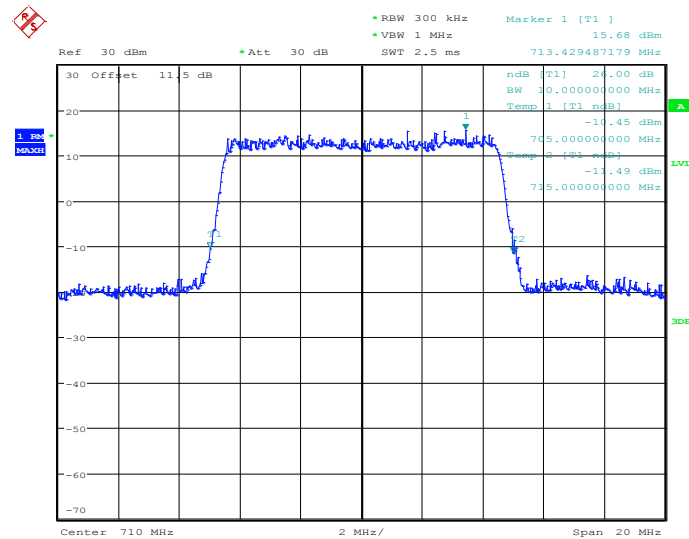
Band :	LTE Band 17	BW / Mod. :	10MHz / 16QAM
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99% Occupied Bandwidth Plot on Channel 23790



Date: 7.AUG.2012 00:37:20

26dB Bandwidth Plot on Channel 23790



Date: 7.AUG.2012 00:35:13

3.4 Band Edge Measurement

3.4.1 Limit

The emissions be operated in the 698 -746 MHz band, the FCC limit is $43 + 10\log_{10}(P[\text{Watts}]) \text{ dB} = -13 \text{ dBm}$ in a 100 KHz bandwidth.

For operations in the 1710 – 1755 MHz bands , the FCC limit is $43 + 10\log_{10}(P[\text{Watts}]) \text{ dB} = -13 \text{ dBm}$ in a 1 MHz bandwidth.

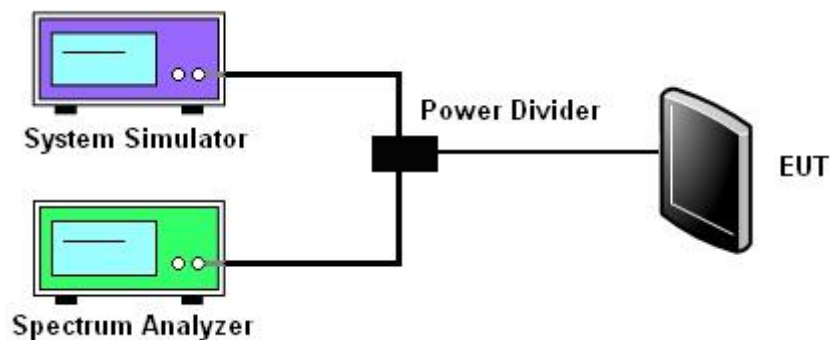
3.4.2 Measuring Instruments

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 band edges of low and high channels for the highest RF powers were measured. Setting RBW = 100KHz(Band 17) / 1MHz(Band 4).

3.4.4 Test Setup

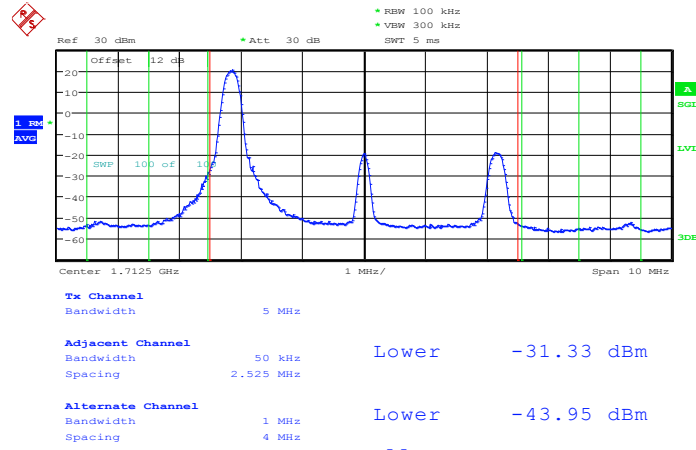




3.4.5 Test Result (Plots) of Conducted Band Edge

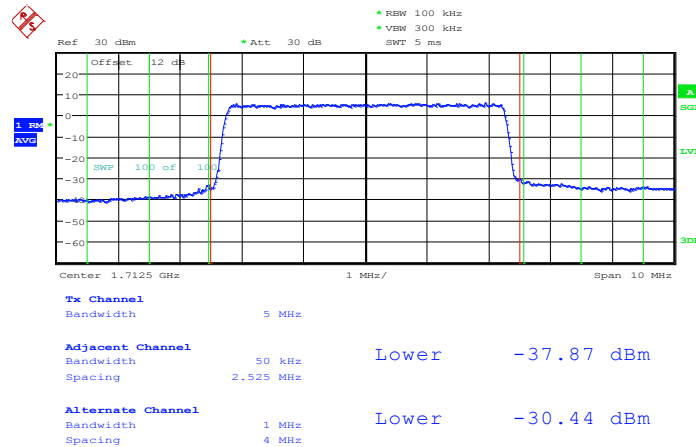
Band :	LTE Band 4	Band Width	5MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Date: 7.AUG.2012 03:29:28

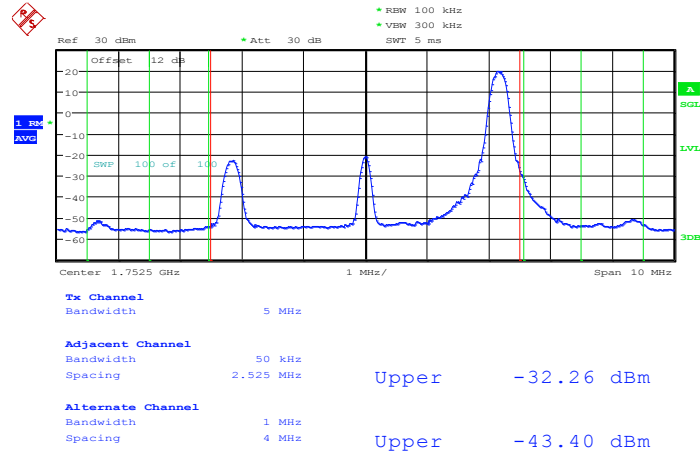
Lower Band Edge Plot for QPSK-RB Size 25, RB Offset 0



Date: 7.AUG.2012 03:27:46

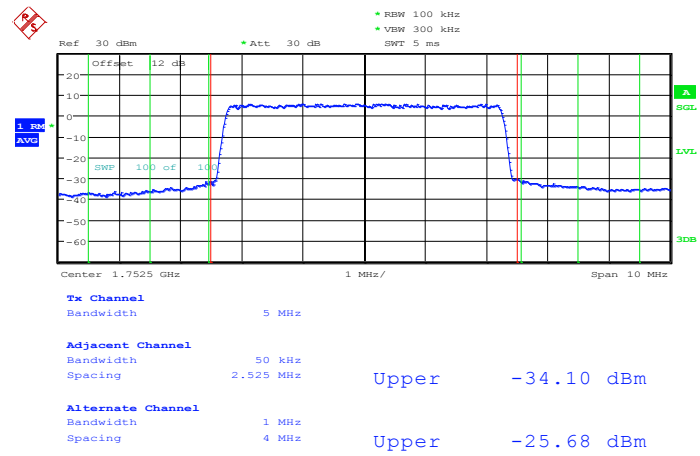


Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 24



Date: 7.AUG.2012 03:38:07

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

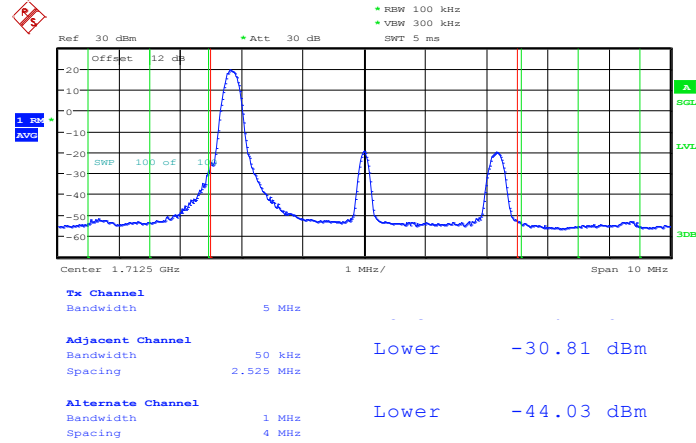


Date: 7.AUG.2012 03:36:43



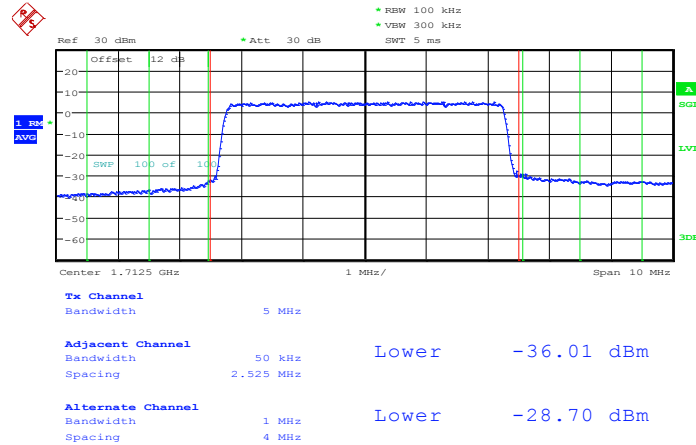
Band :	LTE Band 4	Band Width	5MHz / 16QAM
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Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



Date: 7.AUG.2012 03:29:51

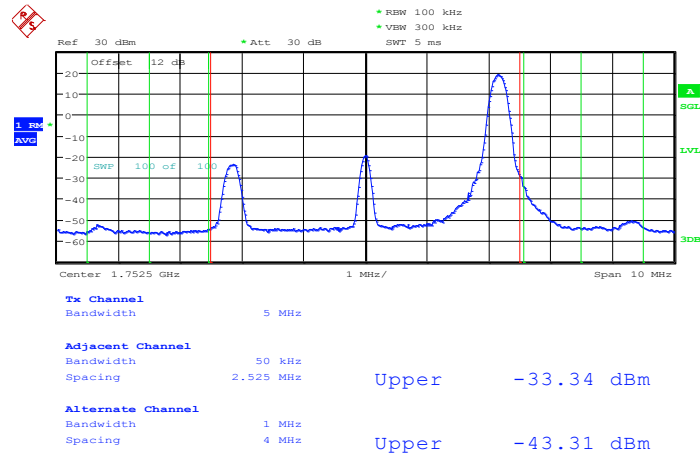
Lower Band Edge Plot for 16QAM-RB Size 25, RB Offset 0



Date: 7.AUG.2012 03:29:00

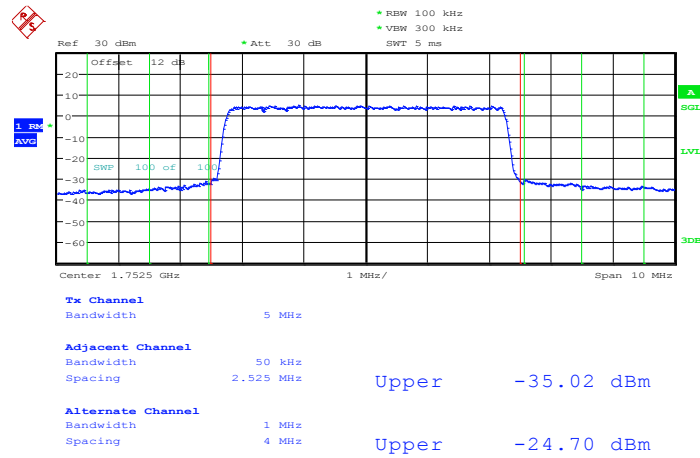


Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 24



Date: 7.AUG.2012 03:38:24

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

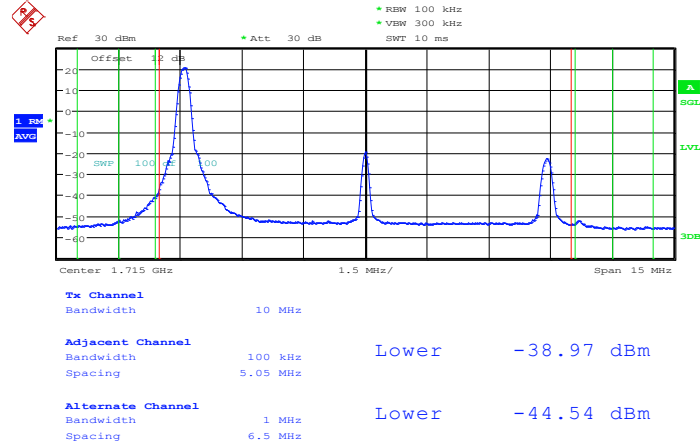


Date: 7.AUG.2012 03:37:16



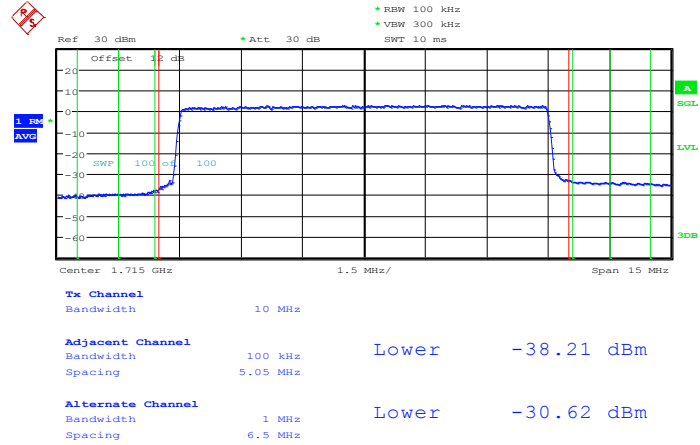
Band :	LTE Band 4	Band Width	10MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Date: 7.AUG.2012 03:21:18

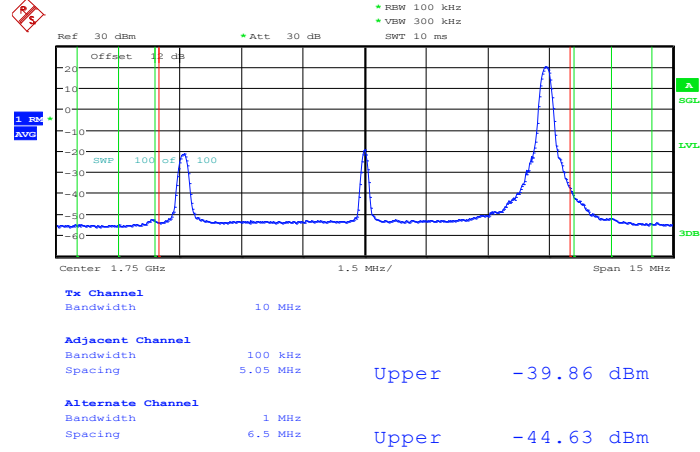
Lower Band Edge Plot for QPSK-RB Size 50, RB Offset 0



Date: 7.AUG.2012 03:06:17

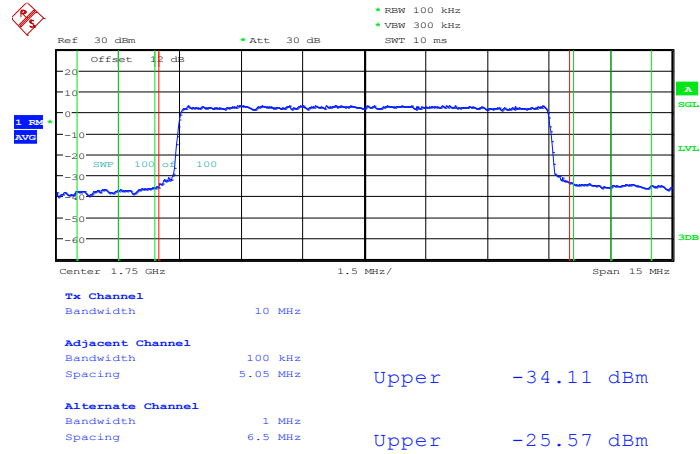


Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 49



Date: 7.AUG.2012 03:23:57

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

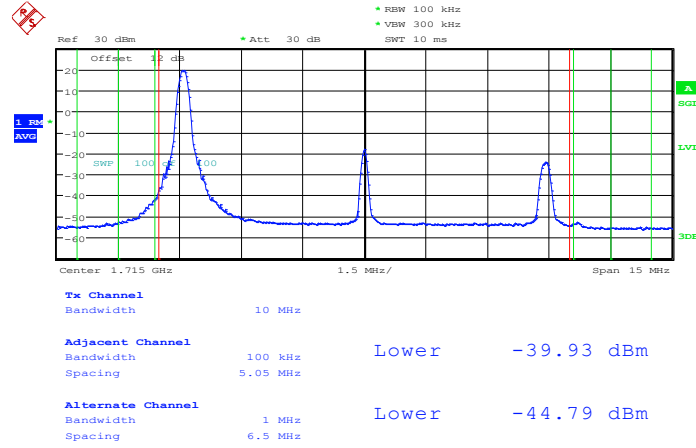


Date: 7.AUG.2012 03:22:43



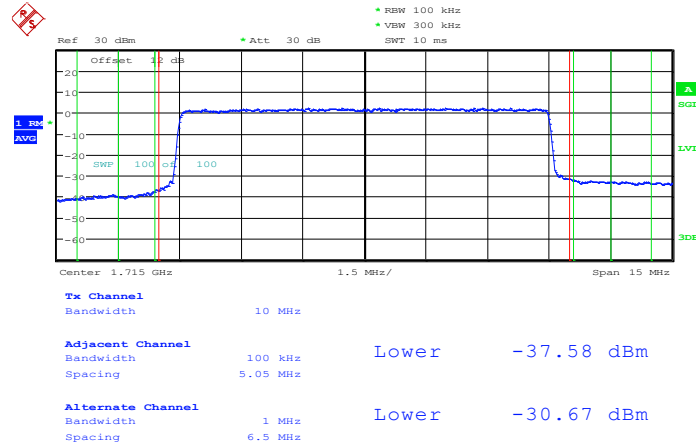
Band :	LTE Band 4	Band Width	10MHz / 16QAM
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Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



Date: 7.AUG.2012 03:21:39

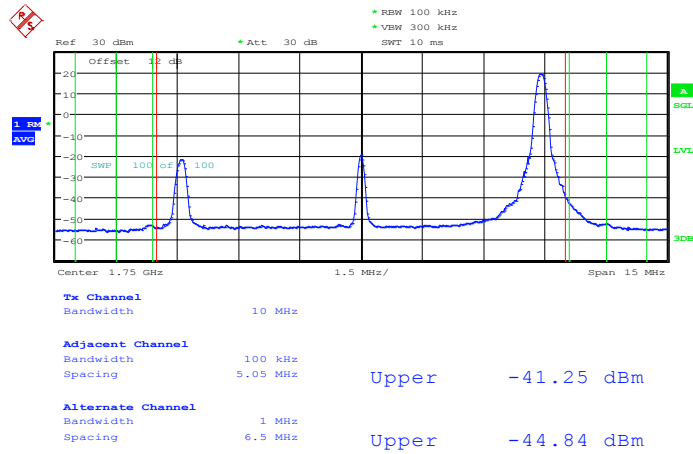
Lower Band Edge Plot for 16QAM-RB Size 50, RB Offset 0



Date: 7.AUG.2012 03:16:32

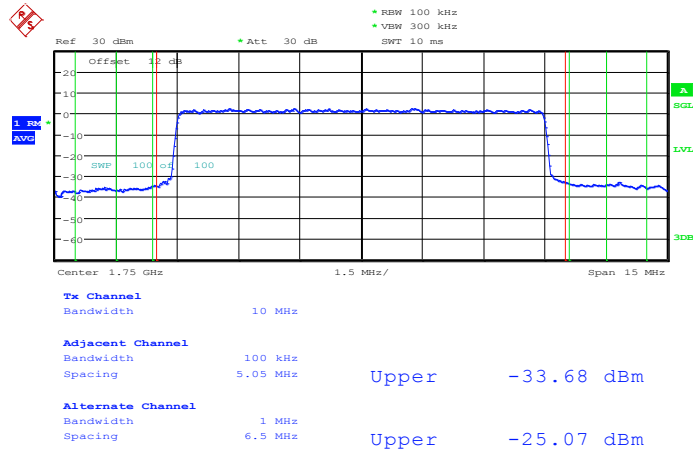


Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 49



Date: 7.AUG.2012 03:24:14

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

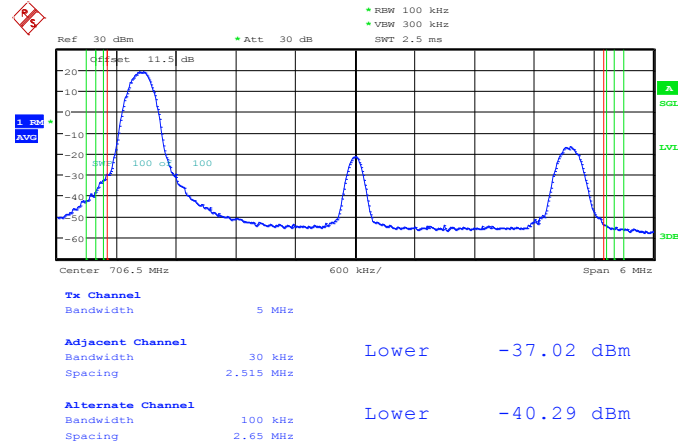


Date: 7.AUG.2012 03:23:26



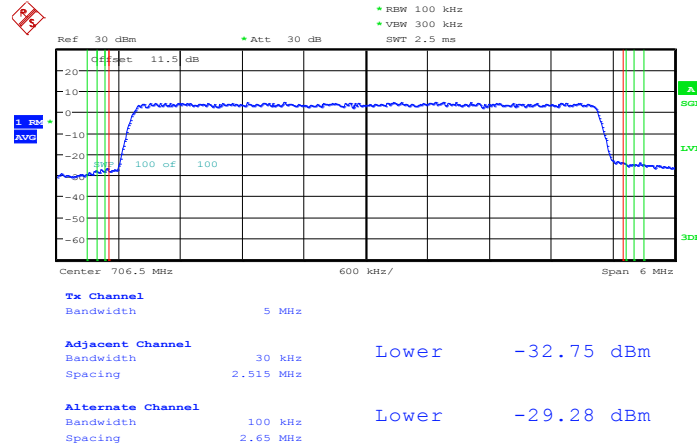
Band :	LTE Band 17	Band Width	5MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Date: 7.AUG.2012 01:00:32

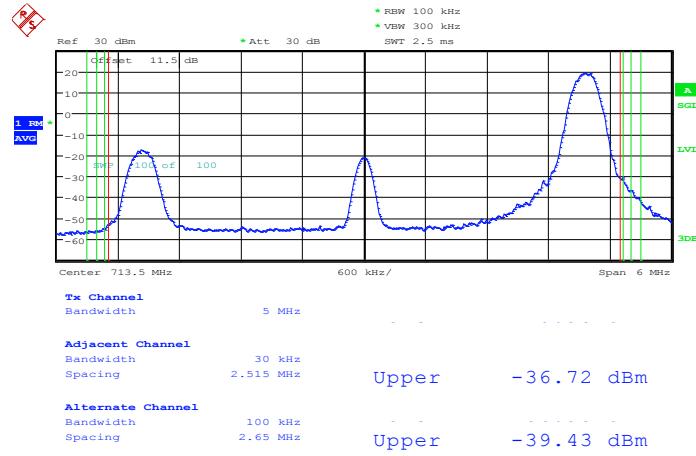
Lower Band Edge Plot for QPSK-RB Size 25, RB Offset 0



Date: 7.AUG.2012 01:02:12

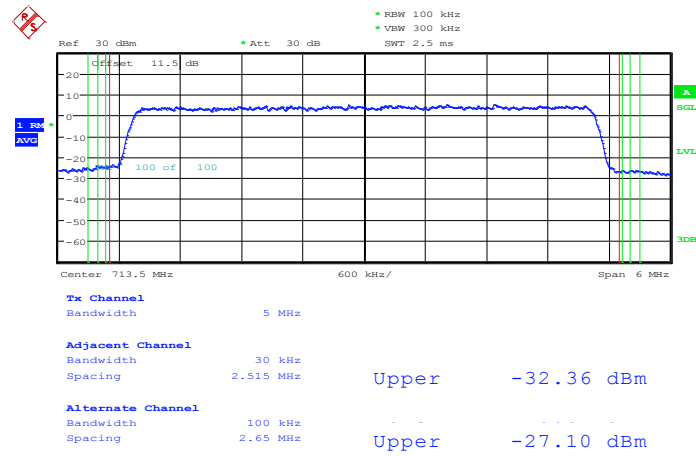


Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 24



Date: 7.AUG.2012 01:10:40

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

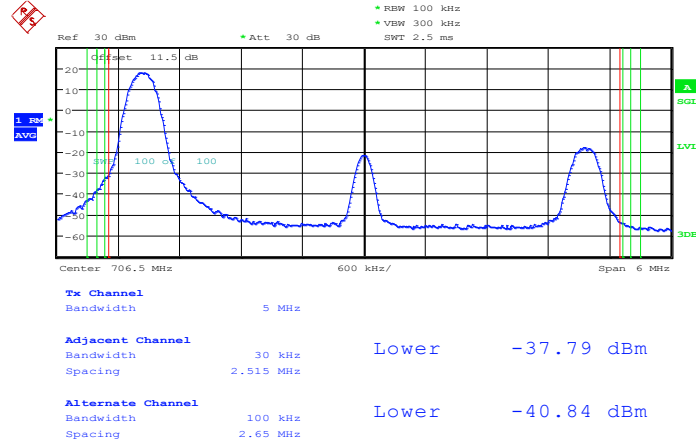


Date: 7.AUG.2012 01:06:21



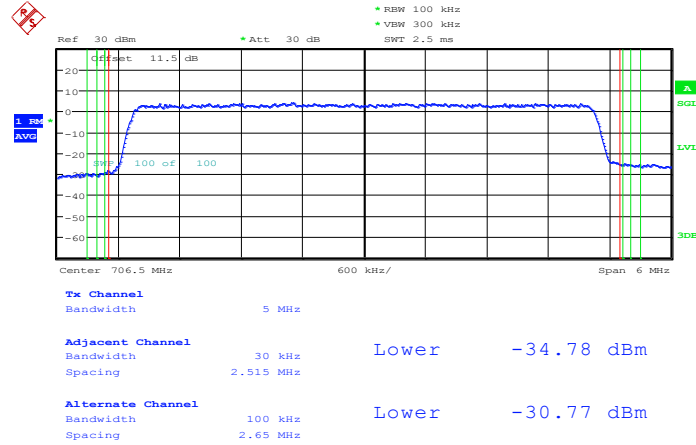
Band :	LTE Band 17	Band Width	5MHz / 16QAM
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Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



Date: 7.AUG.2012 01:00:52

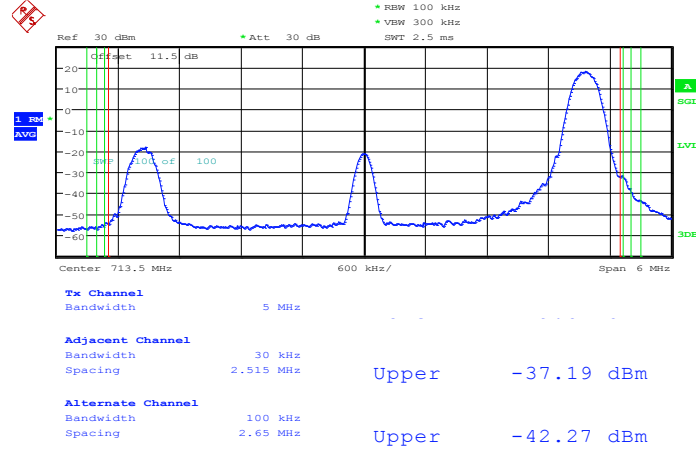
Lower Band Edge Plot for 16QAM-RB Size 25, RB Offset 0



Date: 7.AUG.2012 01:02:42

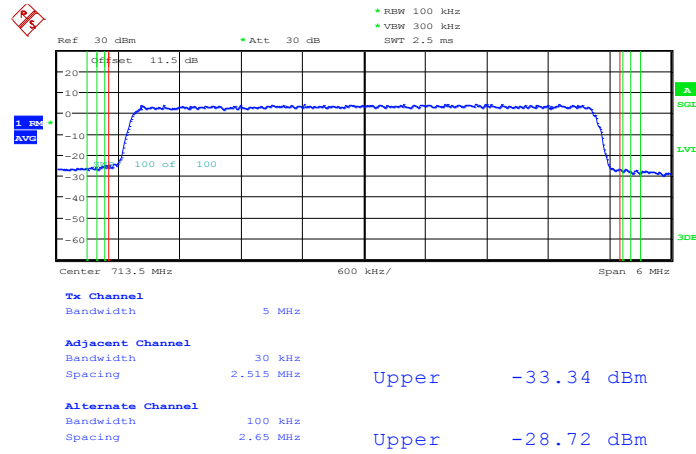


Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 24



Date: 7.AUG.2012 01:11:05

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

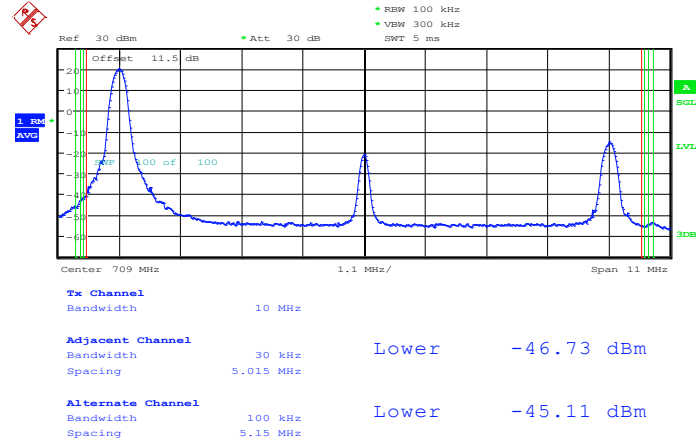


Date: 7.AUG.2012 01:07:11



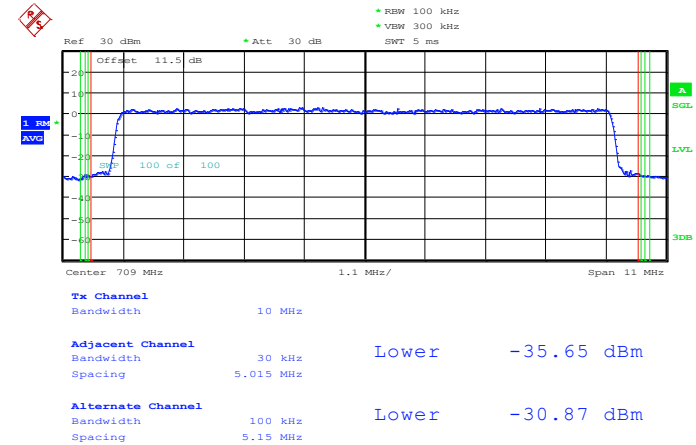
Band :	LTE Band 17	Band Width	10MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Date: 7.AUG.2012 01:21:31

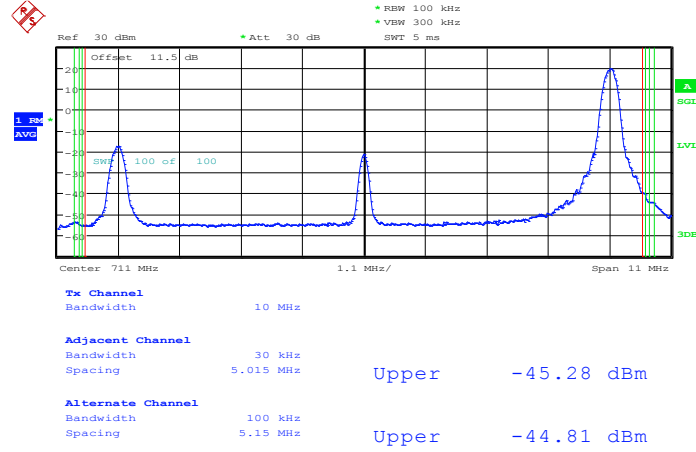
Lower Band Edge Plot for QPSK-RB Size 50, RB Offset 0



Date: 7.AUG.2012 01:19:41

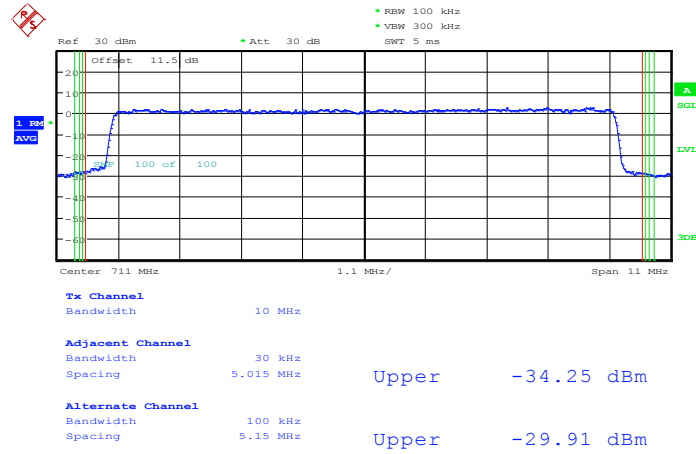


Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 49



Date: 7.AUG.2012 01:25:38

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

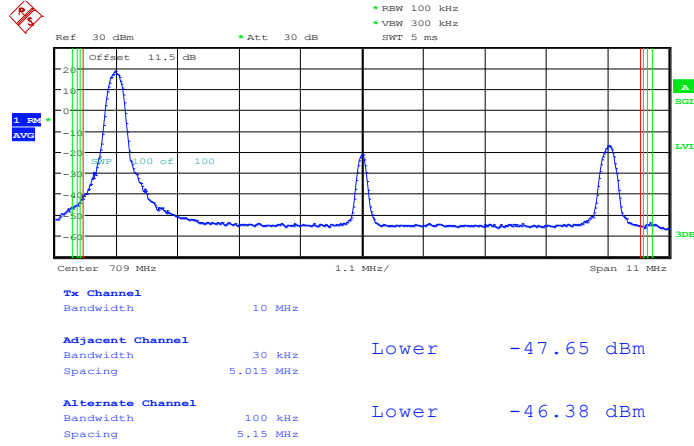


Date: 7.AUG.2012 01:23:36



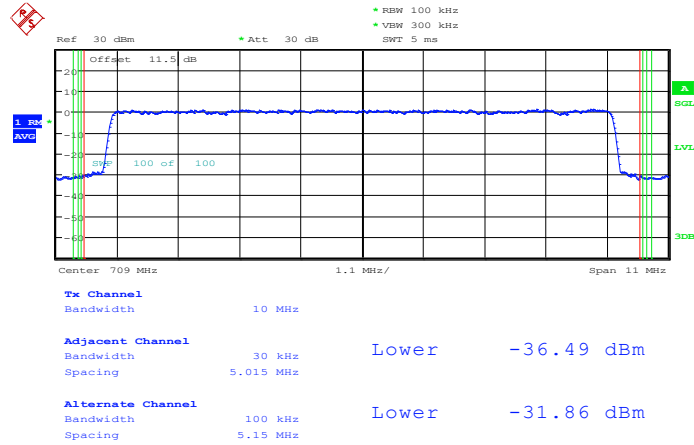
Band :	LTE Band 17	Band Width	10MHz / 16QAM
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Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



Date: 7.AUG.2012 01:21:59

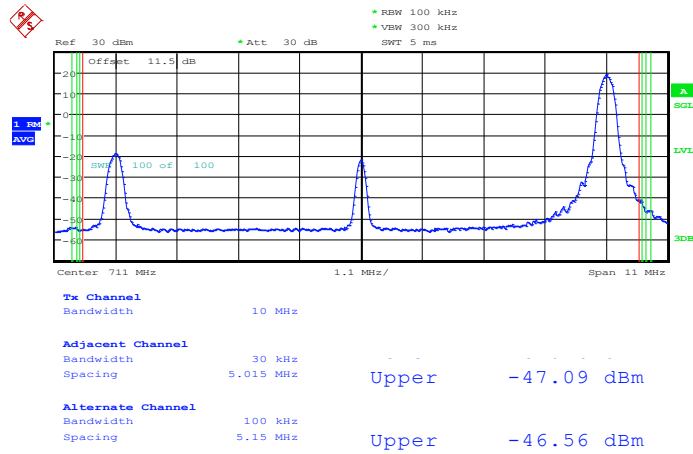
Lower Band Edge Plot for 16QAM-RB Size 50, RB Offset 0



Date: 7.AUG.2012 01:20:59

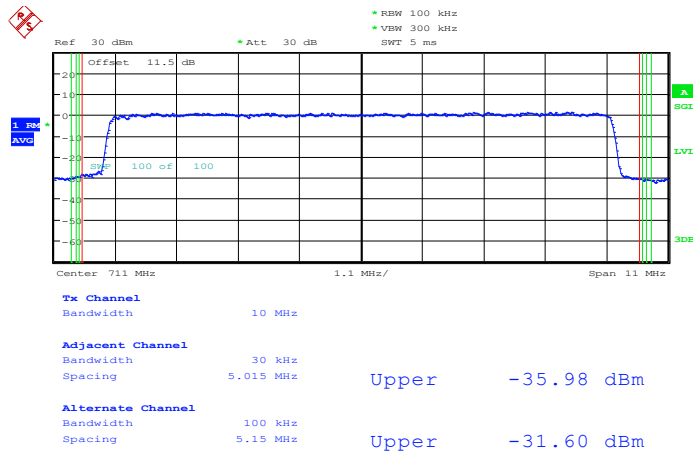


Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 49



Date: 7.AUG.2012 01:25:59

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



Date: 7.AUG.2012 01:24:59

3.5 Conducted Spurious Emission Measurement

3.5.1 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.

It is measured by means of a calibrated spectrum analyzer and scanned from 9 KHz up to a frequency including its 10th harmonic.

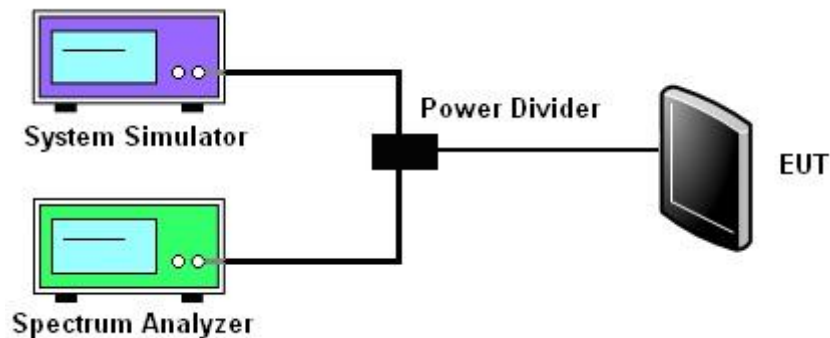
3.5.2 Measuring Instruments

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 middle channel for the highest RF power within the transmitting frequency was measured.
3. The conducted spurious emission for the whole frequency range was taken.

3.5.4 Test Setup

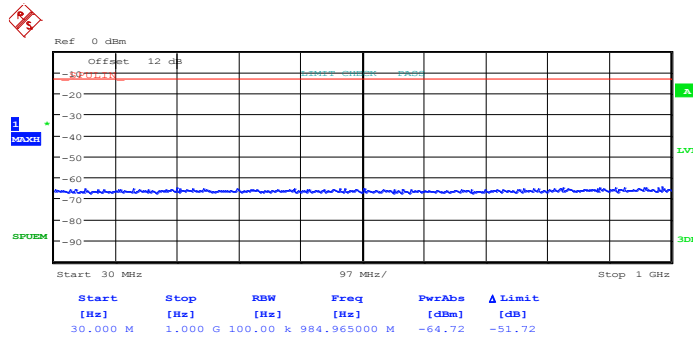




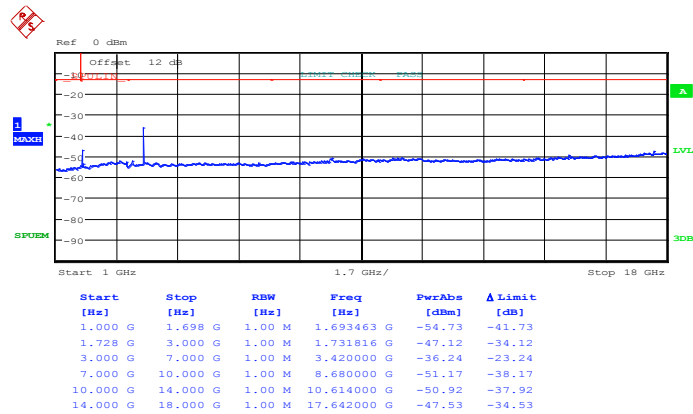
3.5.5 Test Result (Plots) of Conducted Spurious Emission

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

QPSK (RB Size 1, RB Offset 0)



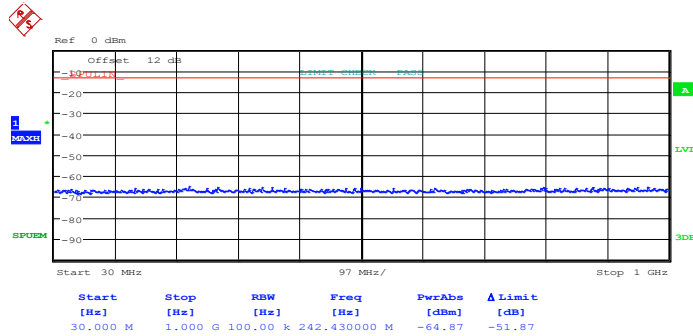
Date: 6.AUG.2012 23:37:15



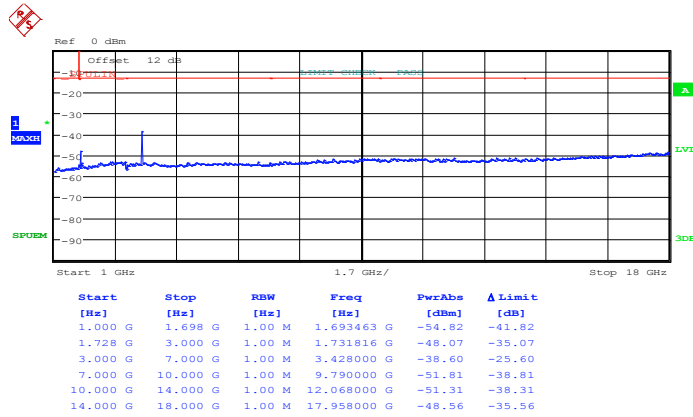
Date: 6.AUG.2012 23:54:45



16QAM (RB Size 1, RB Offset 24)



Date: 6.AUG.2012 23:37:34

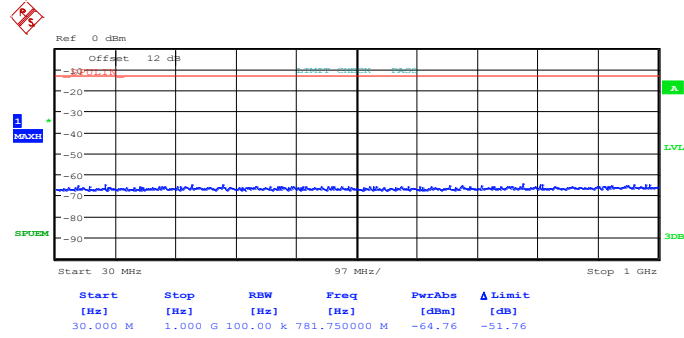


Date: 10.AUG.2012 02:34:21

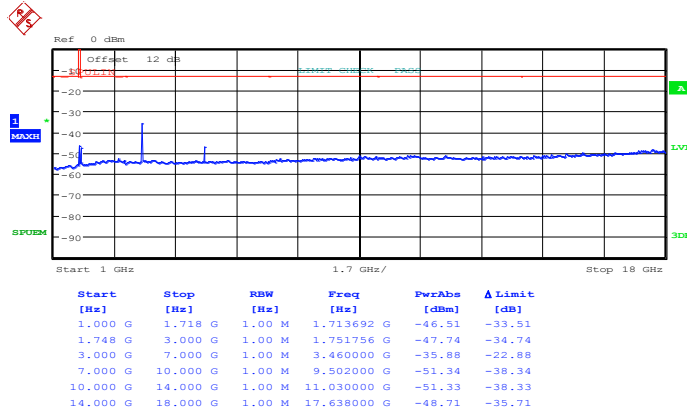


Band :	LTE Band 4	Channel :	CH20175 (Middle)
Band Width	5MHz		

QPSK (RB Size 1, RB Offset 0)



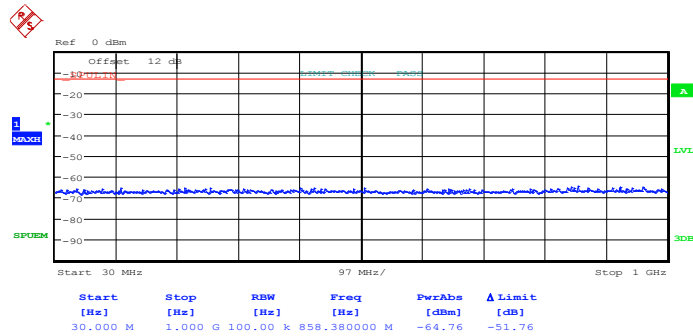
Date: 6.AUG.2012 23:38:11



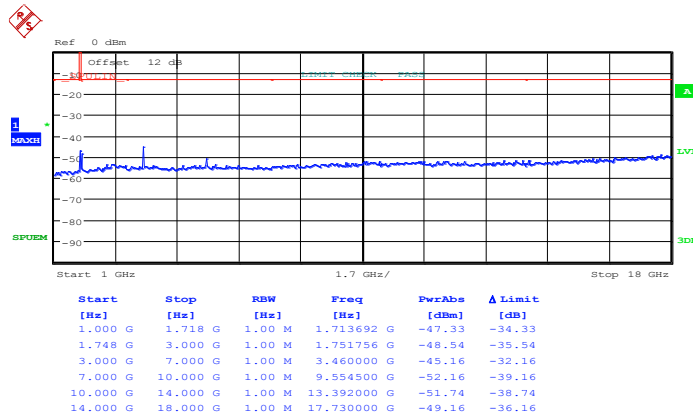
Date: 6.AUG.2012 23:58:39



16QAM (RB Size 1, RB Offset 0)



Date: 6.AUG.2012 23:38:45

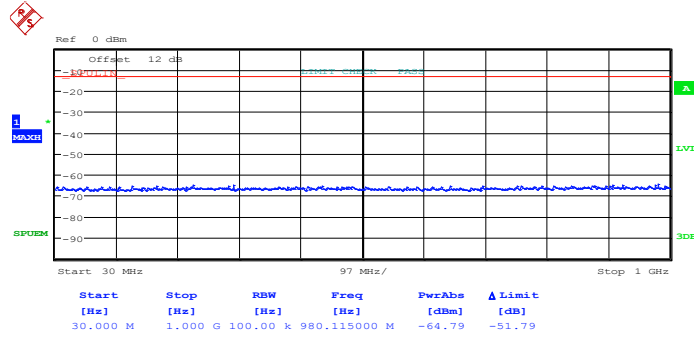


Date: 6.AUG.2012 23:58:56

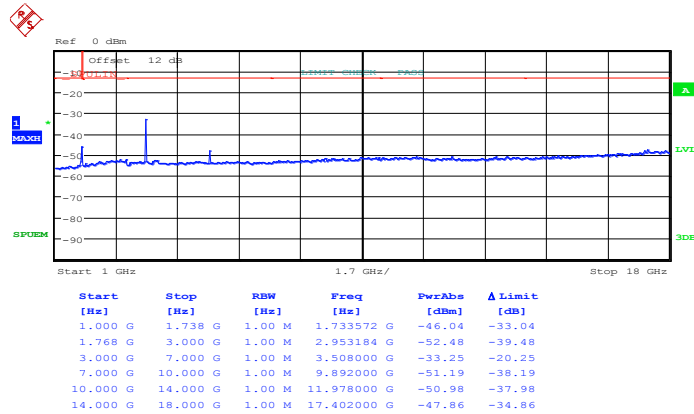


Band :	LTE Band 4	Channel :	CH20375 (High)
Band Width	5MHz		

QPSK (RB Size 1, RB Offset 24)



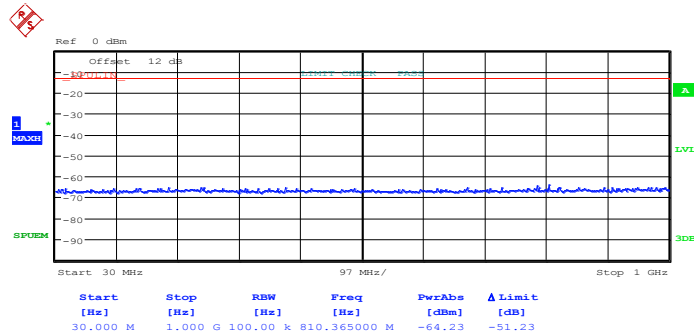
Date: 6.AUG.2012 23:48:27



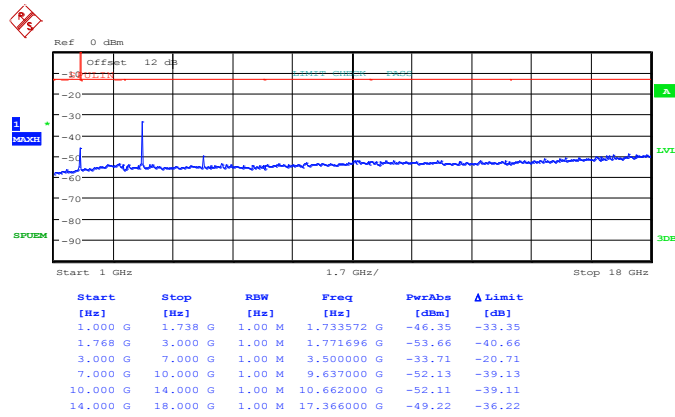
Date: 10.AUG.2012 02:45:00



16QAM (RB Size 1, RB Offset 0)



Date: 6.AUG.2012 23:39:17

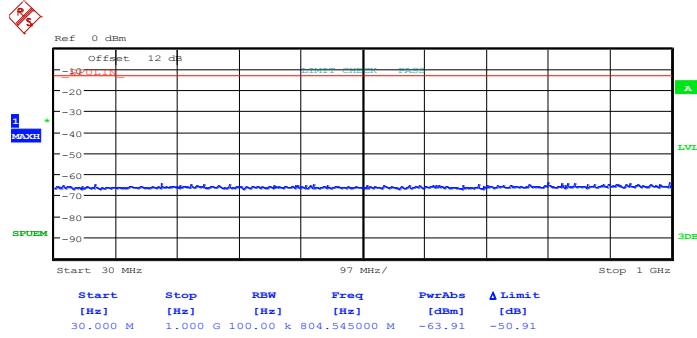


Date: 7.AUG.2012 00:00:42

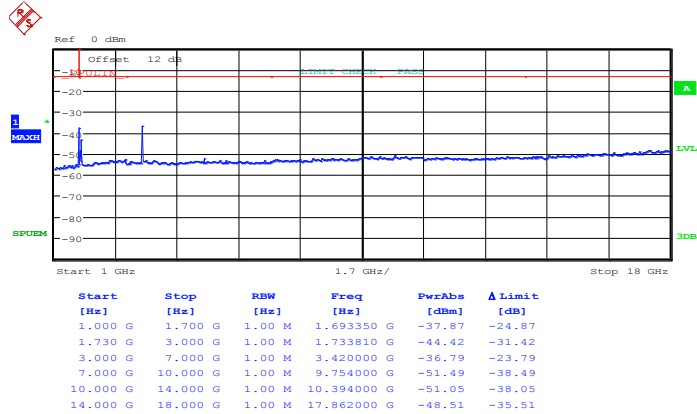


Band :	LTE Band 4	Channel :	CH20350
Band Width	10MHz		

QPSK (RB Size 1, RB Offset 0)



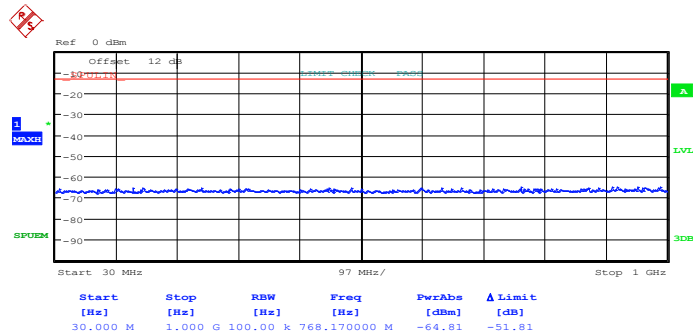
Date: 6.AUG.2012 23:45:42



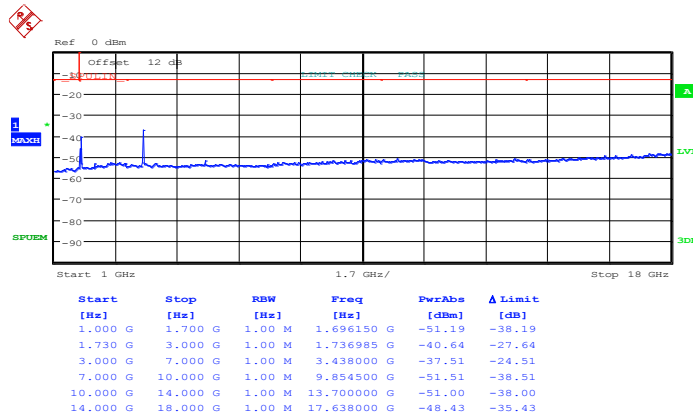
Date: 7.AUG.2012 00:03:25



16QAM (RB Size 1, RB Offset 49)



Date: 6.AUG.2012 23:46:08

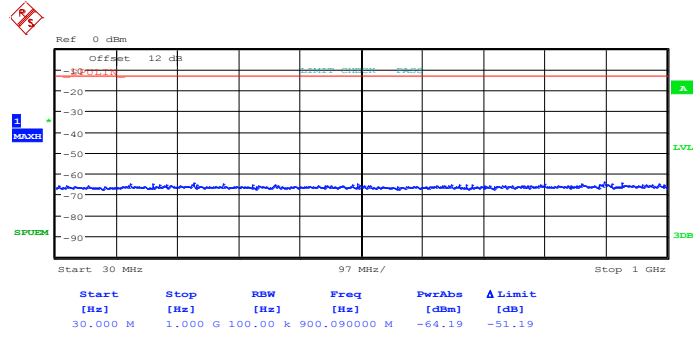


Date: 10.AUG.2012 02:51:51

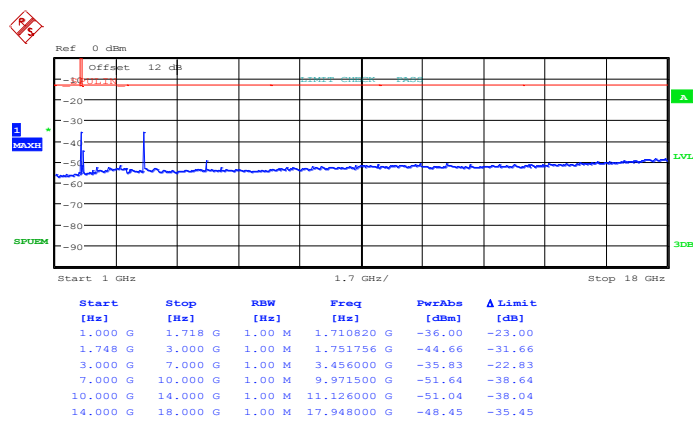


Band :	LTE Band 4	Channel :	CH20175 (Middle)
Band Width	10MHz		

QPSK (RB Size 1, RB Offset 0)



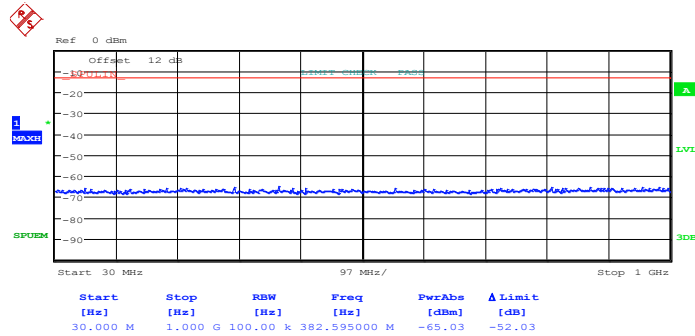
Date: 6.AUG.2012 23:49:21



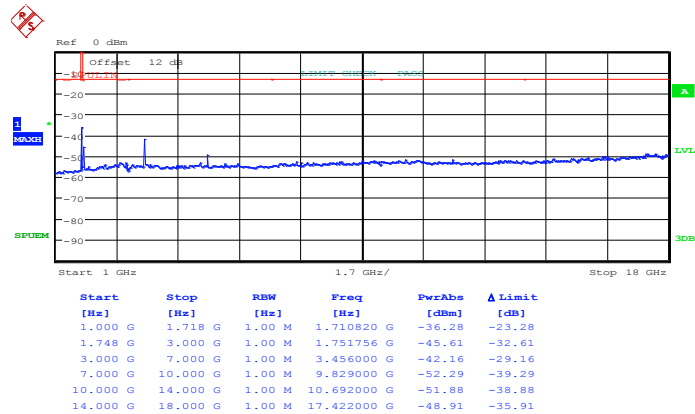
Date: 7.AUG.2012 00:04:51



16QAM (RB Size 1, RB Offset 0)



Date: 6.AUG.2012 23:49:33

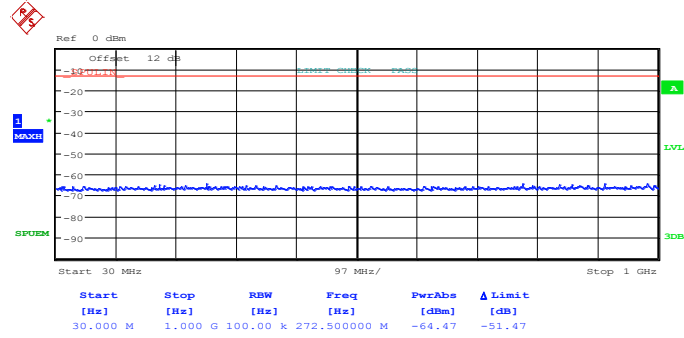


Date: 7.AUG.2012 00:05:16

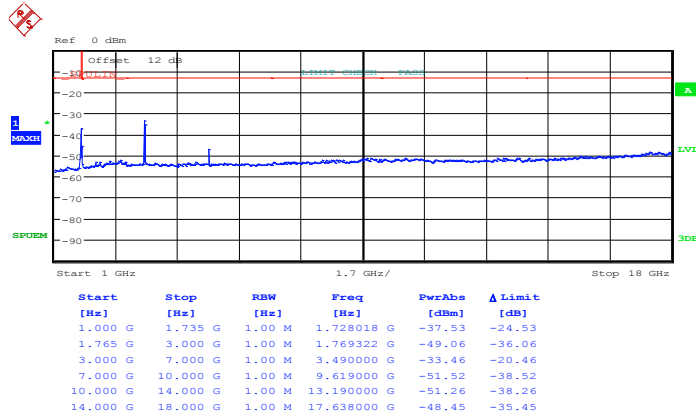


Band :	LTE Band 4	Channel :	CH20350 (High)
Band Width	10MHz		

QPSK (RB Size 1, RB Offset 0)



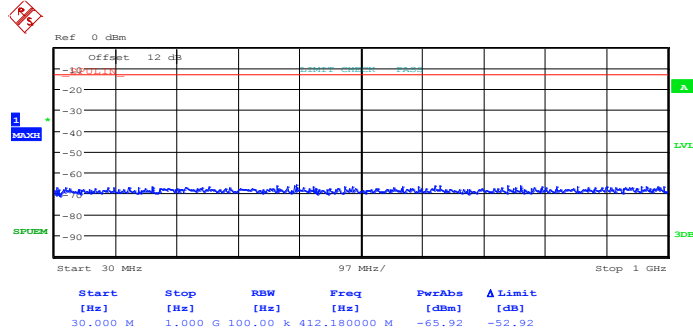
Date: 6.AUG.2012 23:50:19



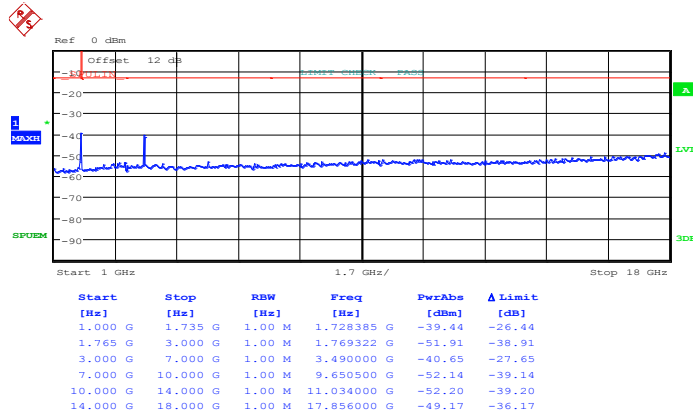
Date: 7.AUG.2012 00:06:23



16QAM (RB Size 1, RB Offset 0)



Date: 6.AUG.2012 23:50:43

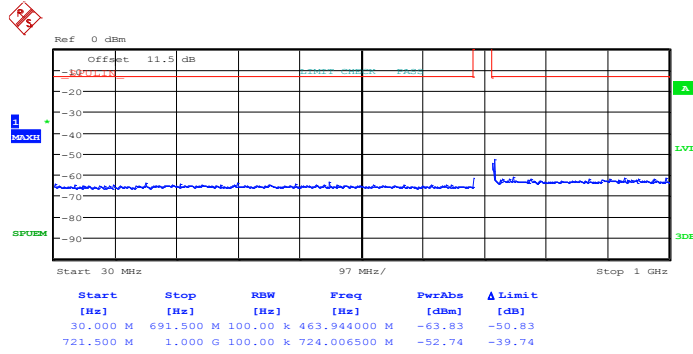


Date: 7.AUG.2012 00:06:57

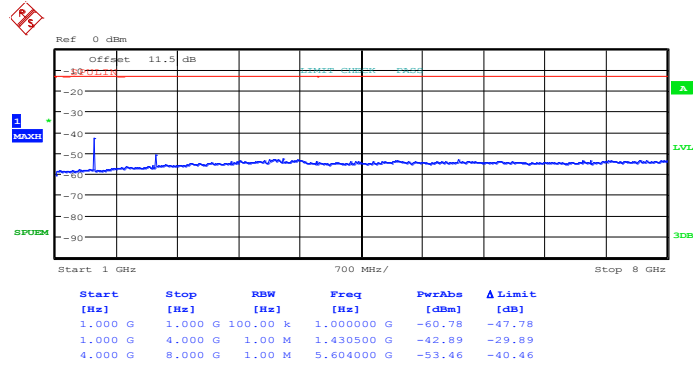


Band :	LTE Band 17	Channel :	CH23755 (Low)
Band Width	5MHz		

QPSK (RB Size 1, RB Offset 24)



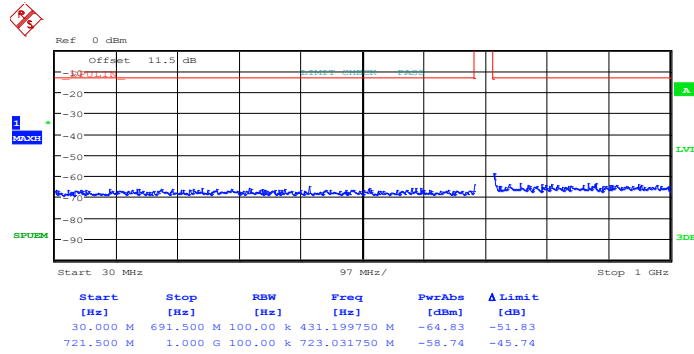
Date: 10.AUG.2012 03:45:25



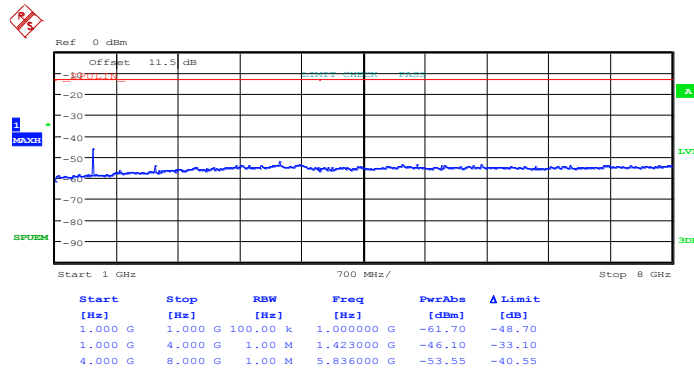
Date: 10.AUG.2012 03:50:59



16QAM (RB Size 1, RB Offset 0)



Date: 10.AUG.2012 03:50:09

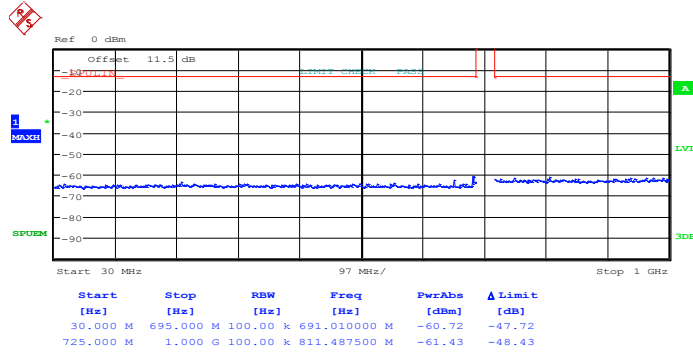


Date: 10.AUG.2012 03:51:25

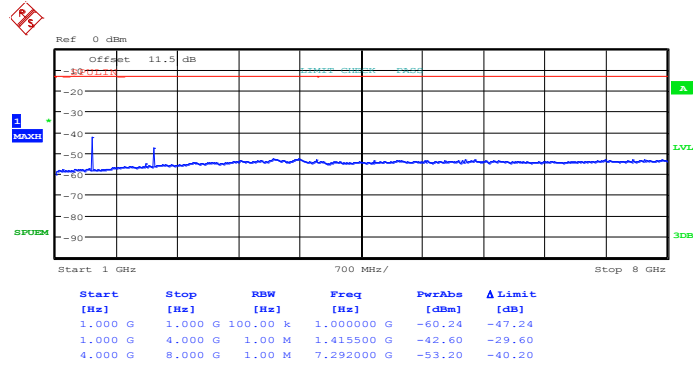


Band :	LTE Band 17	Channel :	CH23790 (Middle)
Band Width	5MHz		

QPSK (RB Size 1, RB Offset 0)



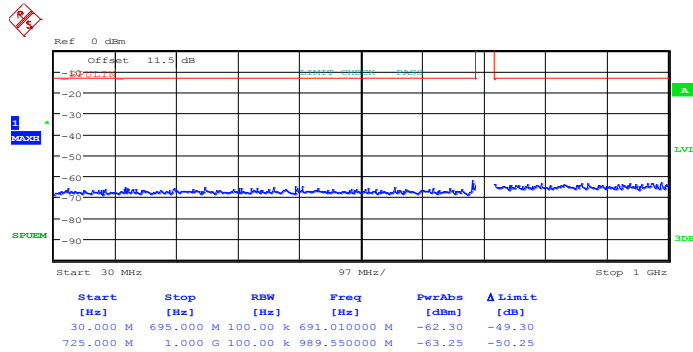
Date: 10.AUG.2012 03:39:24



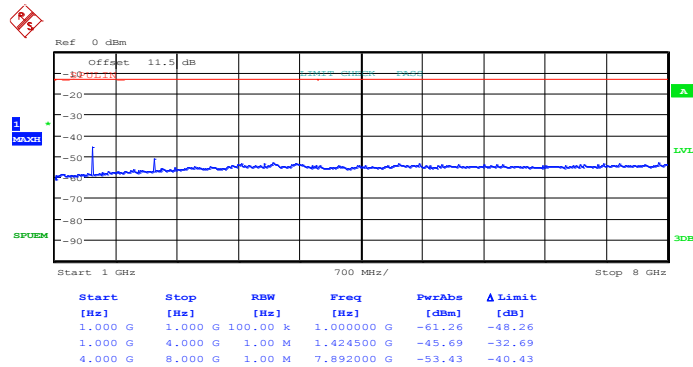
Date: 10.AUG.2012 03:53:40



16QAM (RB Size 1, RB Offset 24)



Date: 10.AUG.2012 03:39:52

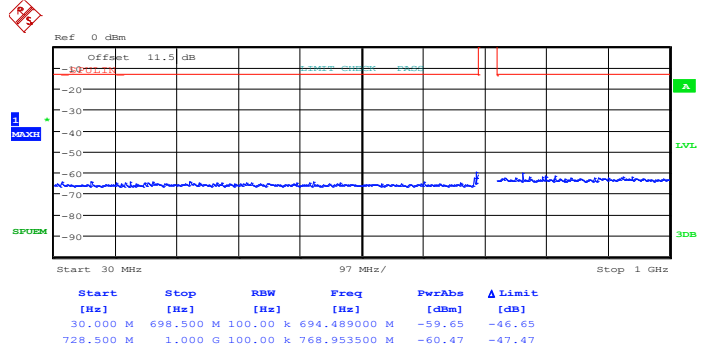


Date: 10.AUG.2012 03:54:12

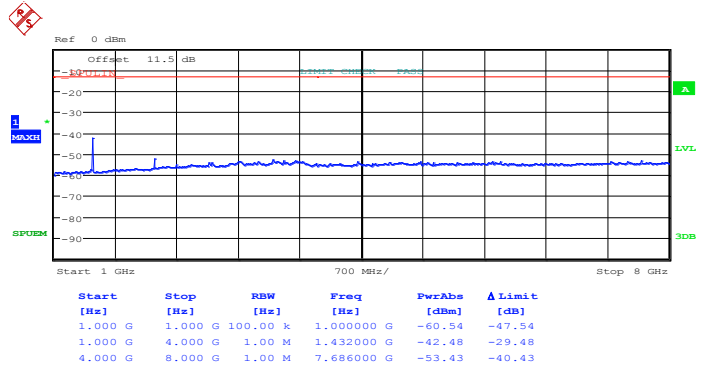


Band :	LTE Band 17	Channel :	CH23825 (High)
Band Width	5MHz		

QPSK (RB Size 1, RB Offset 24)



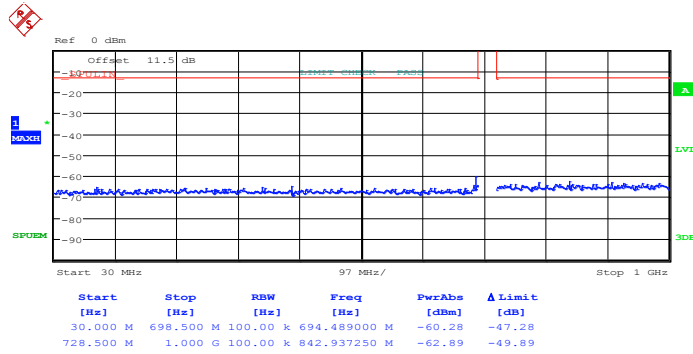
Date: 10.AUG.2012 03:42:23



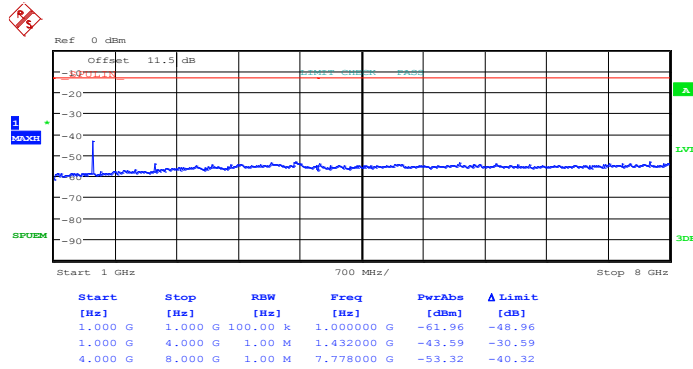
Date: 10.AUG.2012 03:54:42



16QAM (RB Size 1, RB Offset 24)



Date: 10.AUG.2012 03:42:44

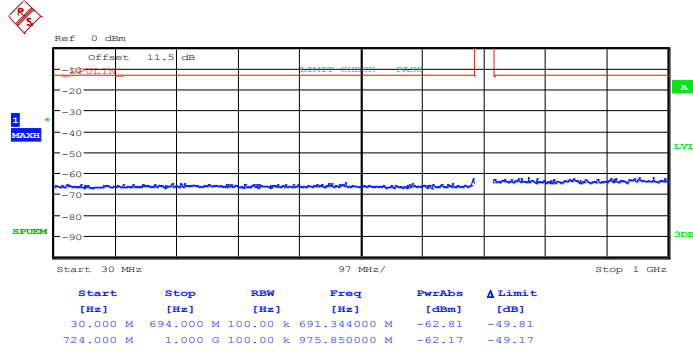


Date: 10.AUG.2012 03:55:07

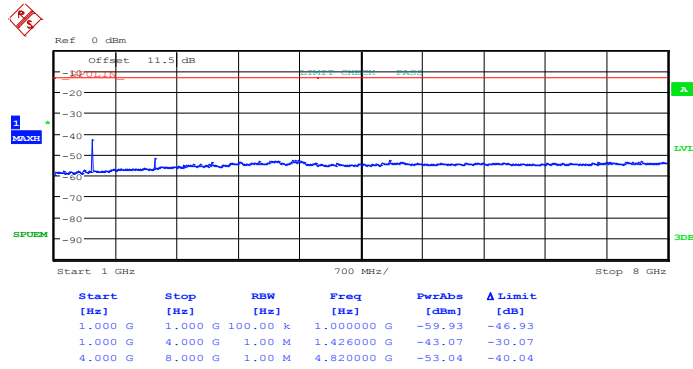


Band :	LTE Band 17	Channel :	CH23755 (Low)
Band Width	10MHz		

QPSK (RB Size 1, RB Offset 49)



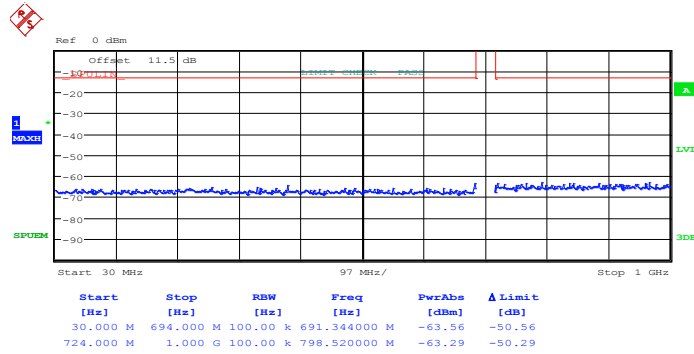
Date: 10.AUG.2012 04:13:54



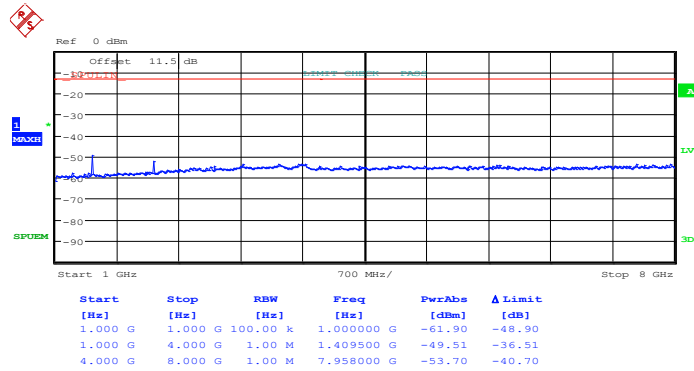
Date: 10.AUG.2012 04:08:56



16QAM (RB Size 1, RB Offset 0)



Date: 10.AUG.2012 04:15:13

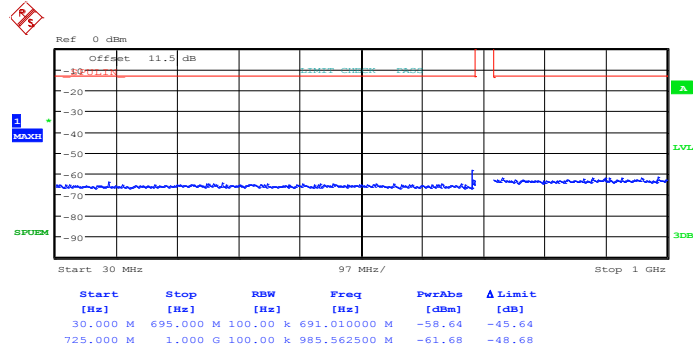


Date: 10.AUG.2012 04:09:22

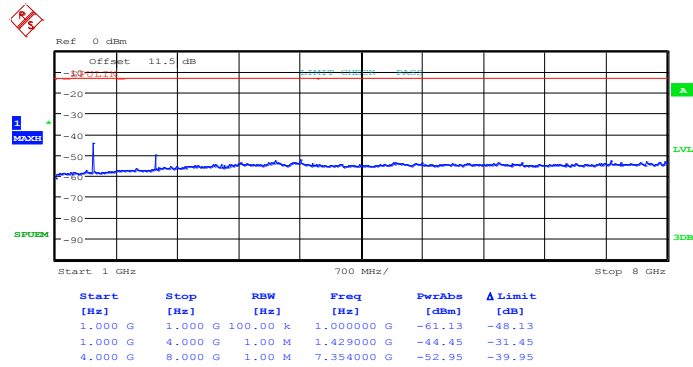


Band :	LTE Band 17	Channel :	CH23790 (Middle)
Band Width	10MHz		

QPSK (RB Size 1, RB Offset 49)



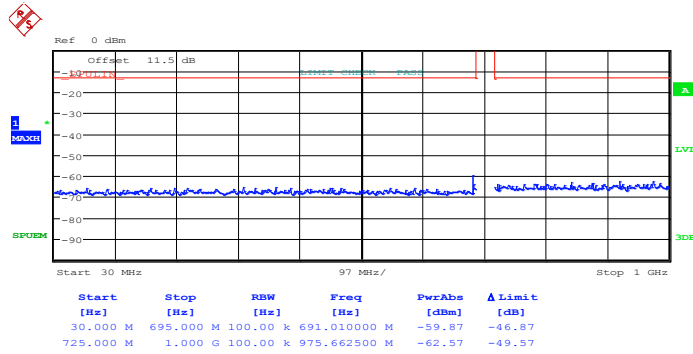
Date: 10.AUG.2012 04:17:18



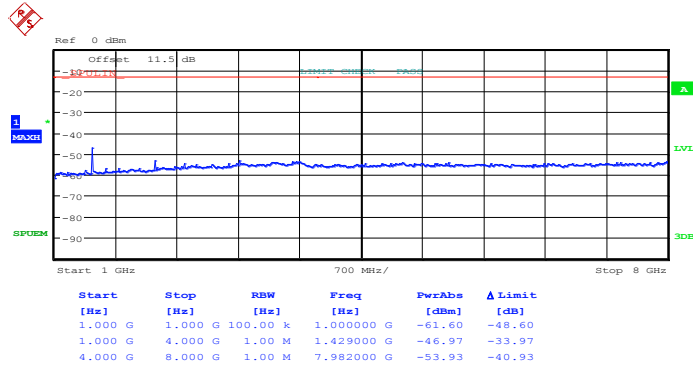
Date: 10.AUG.2012 04:10:06



16QAM (RB Size 1, RB Offset 49)



Date: 10.AUG.2012 04:18:21

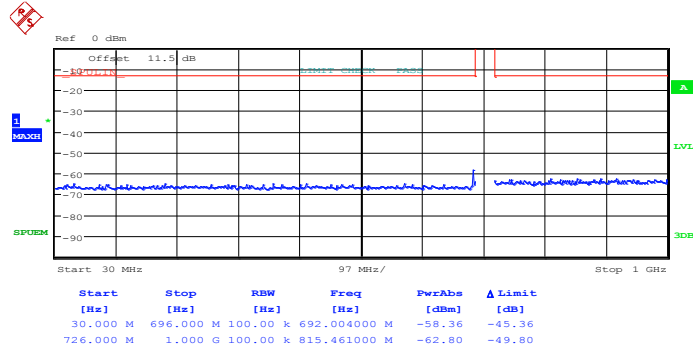


Date: 10.AUG.2012 04:10:21

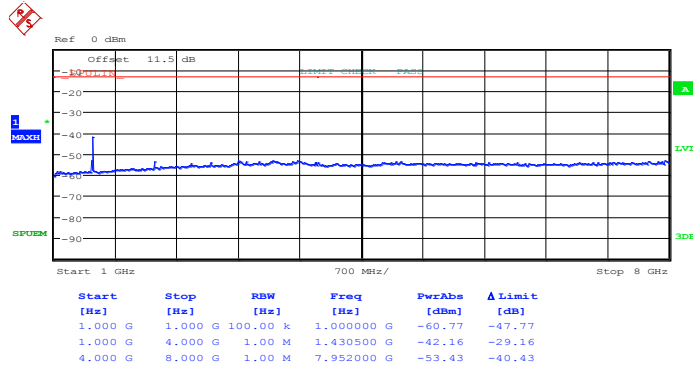


Band :	LTE Band 17	Channel :	CH23825 (High)
Band Width	10MHz		

QPSK (RB Size 1, RB Offset 49)



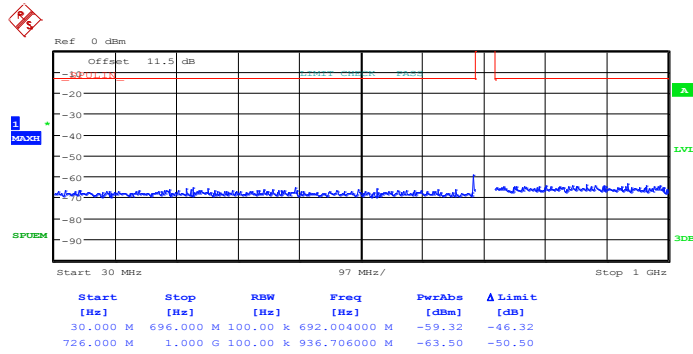
Date: 10.AUG.2012 04:19:47



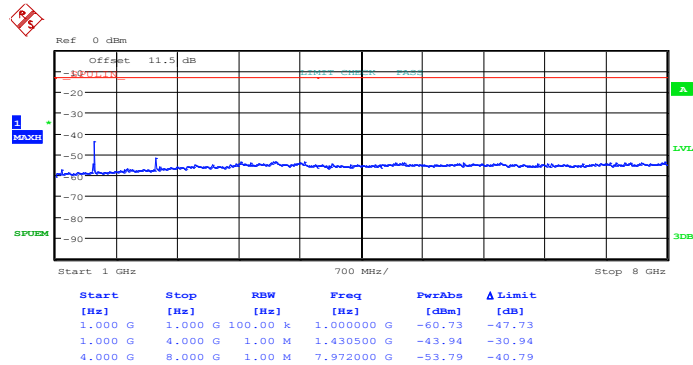
Date: 10.AUG.2012 04:11:00



16QAM (RB Size 1, RB Offset 49)



Date: 10.AUG.2012 04:20:19



Date: 10.AUG.2012 04:11:25

3.6 Field Strength of Spurious Radiation Measurement

3.6.1 Description of Field Strength of Spurious Radiated Measurement

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.

3.6.2 Measuring Instruments

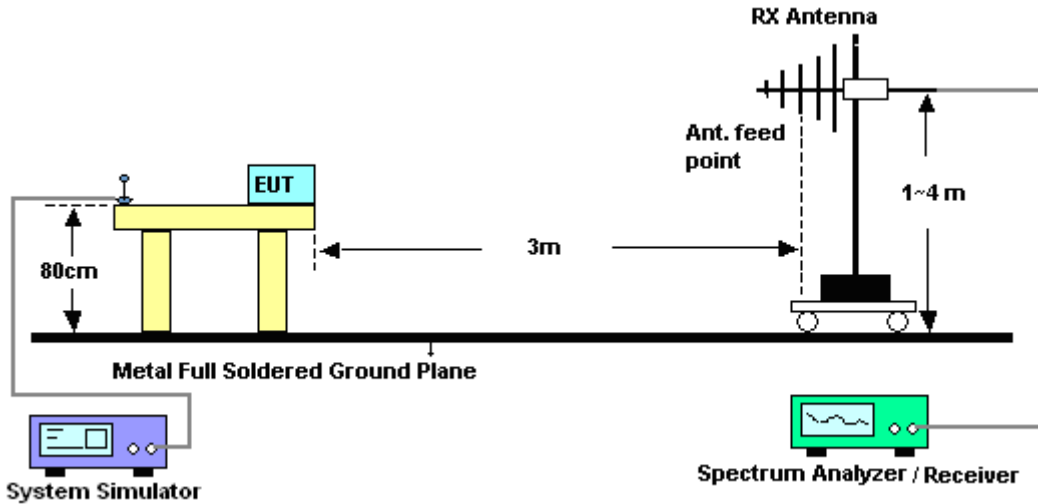
See list of measuring instruments of this test report.

3.6.3 Test Procedures

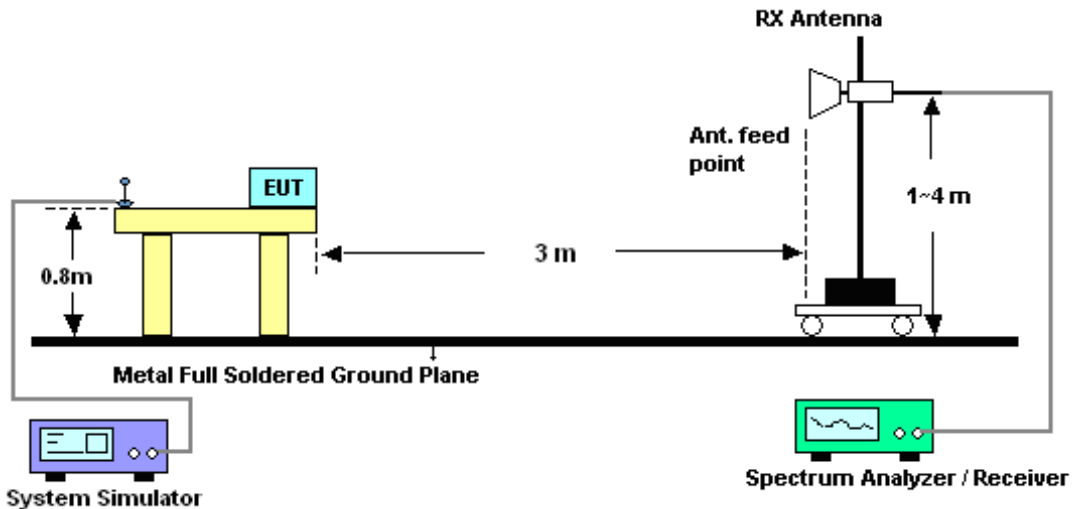
1. The EUT was placed on a rotatable wooden table with 0.8 meter above ground.
2. The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest spurious emission.
4. The height of the receiving 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, 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. Emission level (dBm) = output power + substitution Gain.

3.6.4 Test Setup

For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



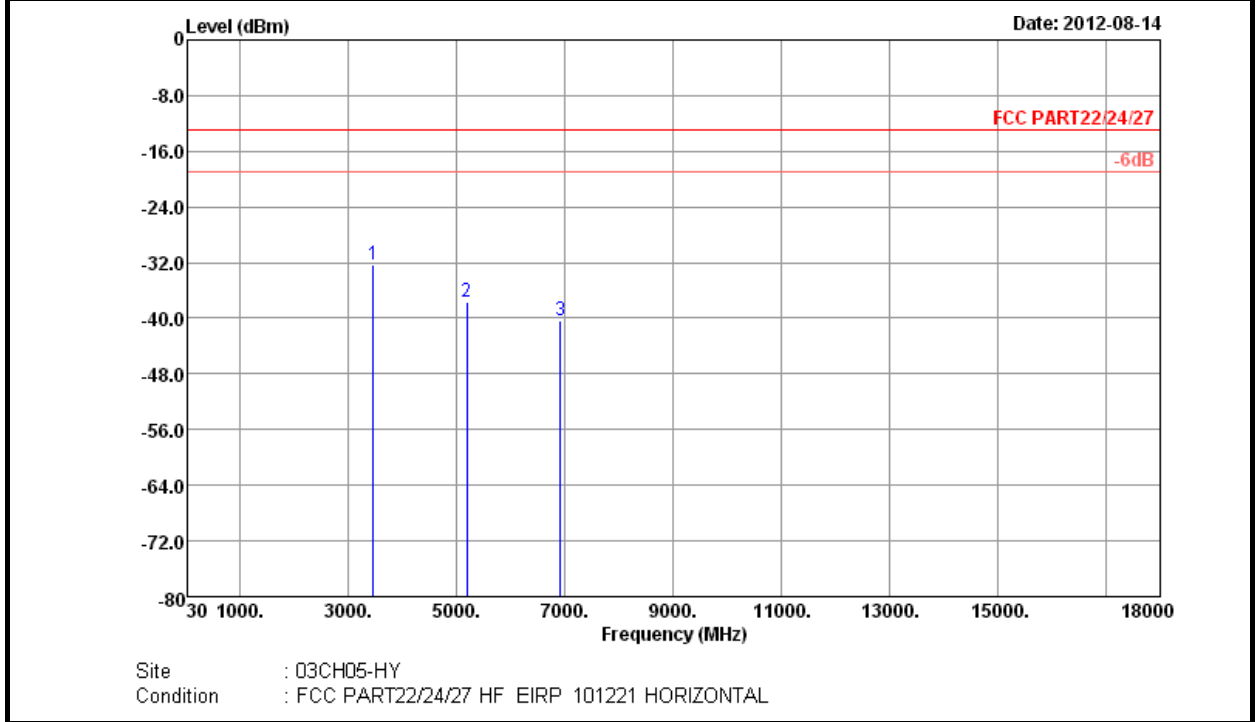
3.6.5 Test Results of Radiated Emissions (9 KHz ~ 30 MHz)

The low frequency, which started from 9 KHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line per 15.31(o) was not reported.



3.6.6 Test Result of Field Strength of Spurious Radiated

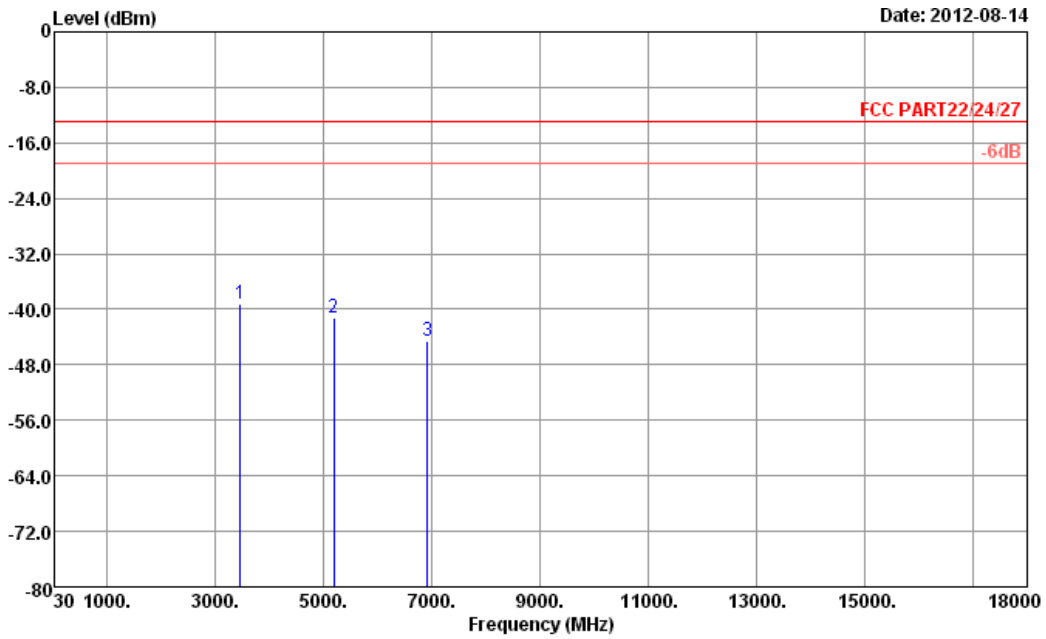
Band :	LTE Band 4	Temperature :	23~24°C
Test Mode :	5MHZ QPSK RB Size 1	Relative Humidity :	47~48%
Test Engineer :	Hayden Wu	Polarization :	Horizontal
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



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
3460	-32.31	-13	-19.31	-44.17	-38.6	2.01	8.30	H	Pass
5192	-37.63	-13	-24.63	-55.38	-46.1	2.09	10.56	H	Pass
6924	-40.38	-13	-27.38	-61.55	-49.5	2.38	11.50	H	Pass



Band :	LTE Band 4	Temperature :	23~24°C
Test Mode :	5MHZ QPSK RB Size 1	Relative Humidity :	47~48%
Test Engineer :	Hayden Wu	Polarization :	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		

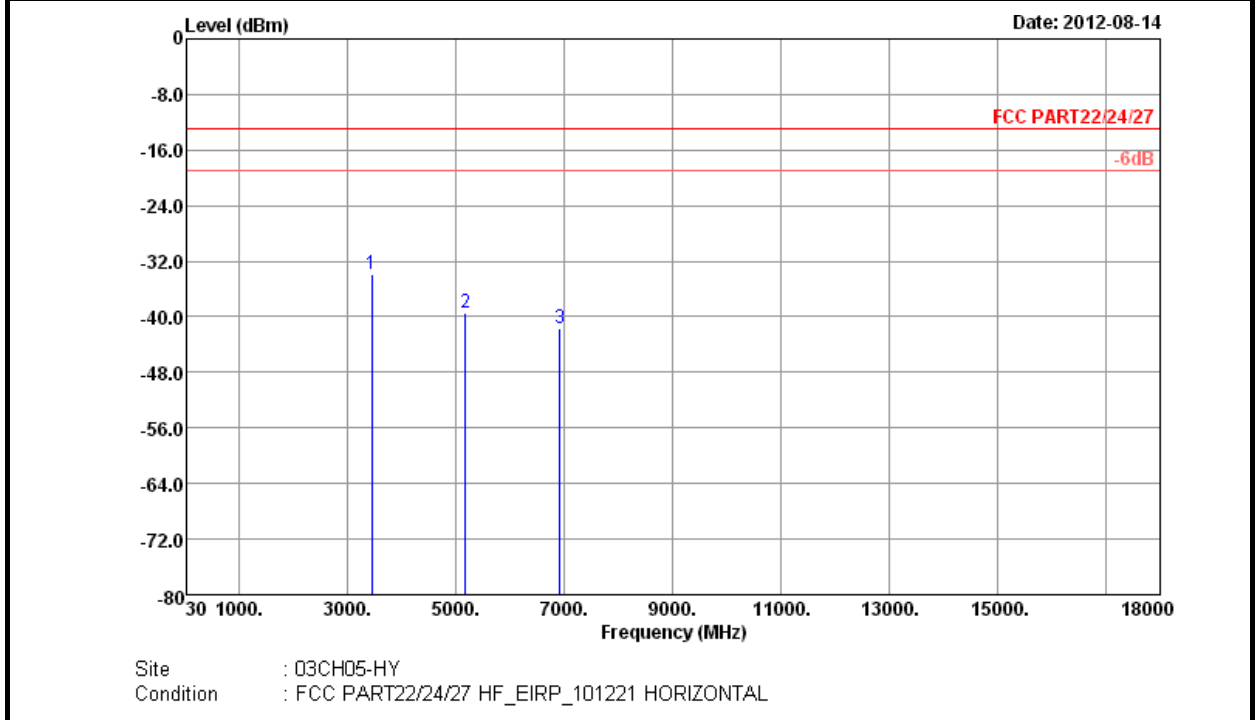


Site : 03CH05-HY
 Condition : FCC PART22/24/27 HF_EIRP_101221 VERTICAL

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
3460	-39.31	-13	-26.31	-51.14	-45.6	2.01	8.30	V	Pass
5192	-41.33	-13	-28.33	-58.99	-49.8	2.09	10.56	V	Pass
6924	-44.58	-13	-31.58	-65.83	-53.7	2.38	11.50	V	Pass



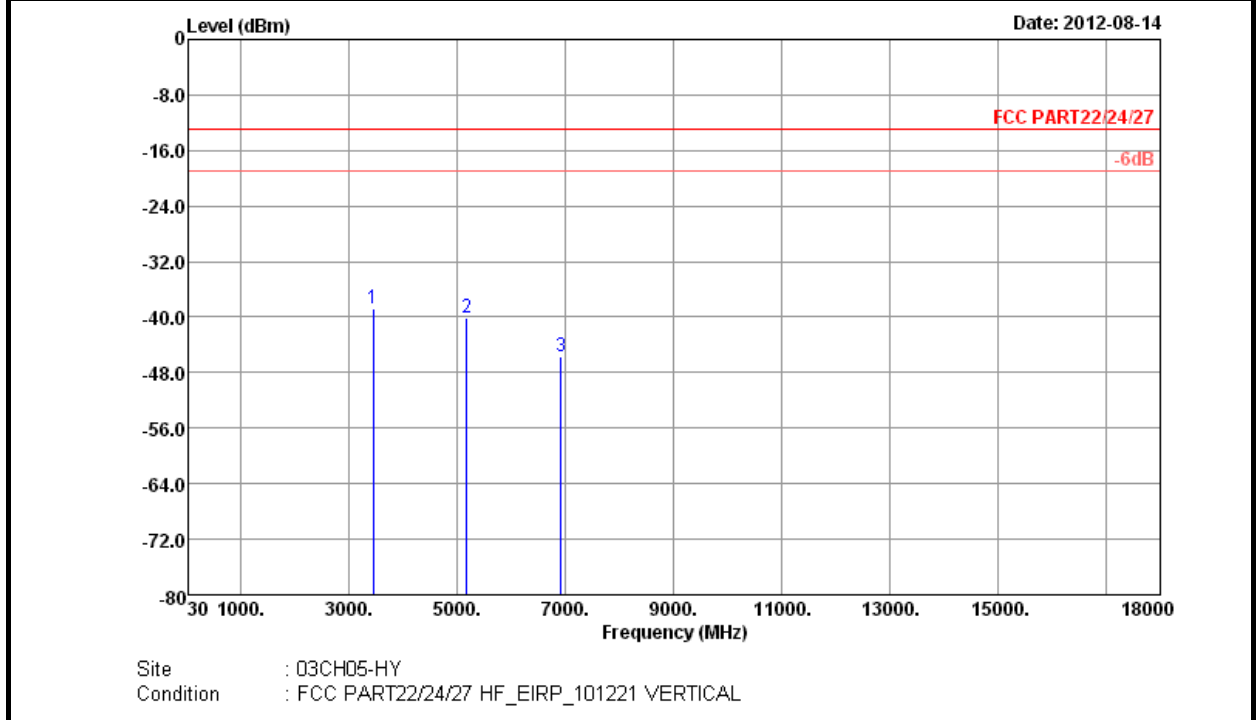
Band :	LTE Band 4	Temperature :	23~24°C
Test Mode :	10MHZ QPSK RB Size 1	Relative Humidity :	47~48%
Test Engineer :	Hayden Wu	Polarization :	Horizontal
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



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
3456	-33.91	-13	-20.91	-45.78	-40.2	2.01	8.30	H	Pass
5184	-39.43	-13	-26.43	-57.21	-47.9	2.09	10.56	H	Pass
6916	-41.68	-13	-28.68	-63	-50.8	2.38	11.50	H	Pass



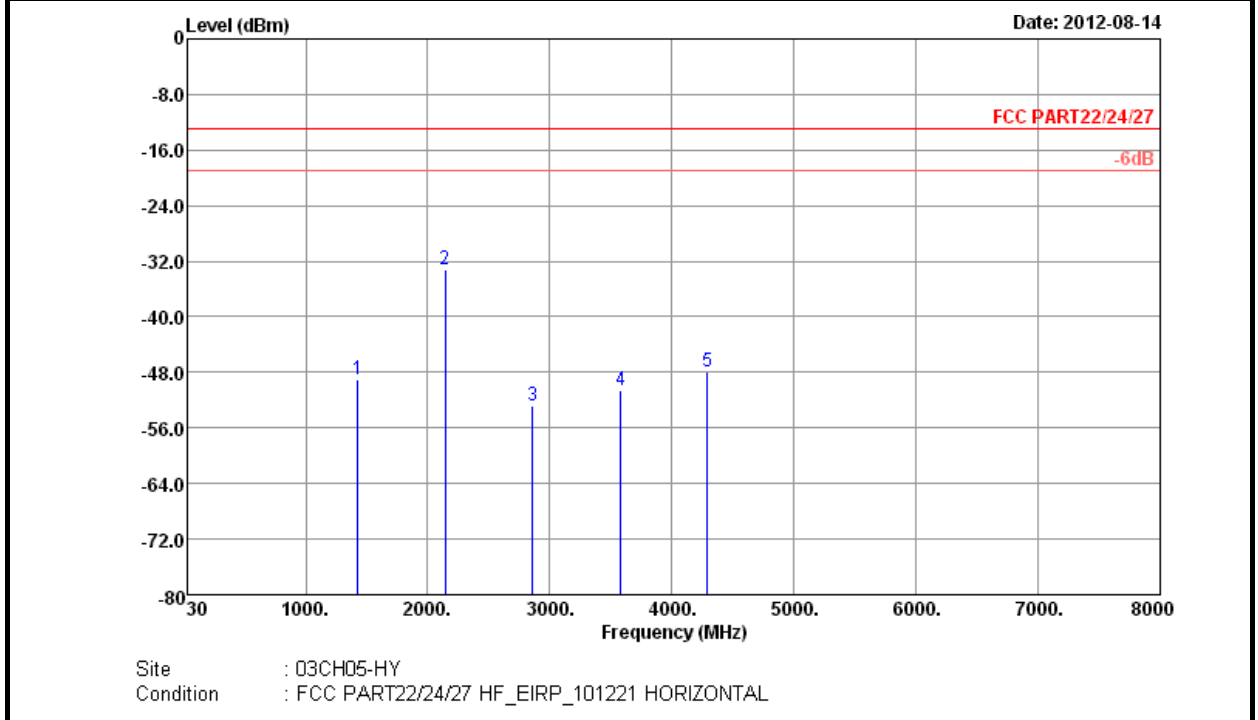
Band :	LTE Band 4	Temperature :	23~24°C
Test Mode :	10MHZ QPSK RB Size 1	Relative Humidity :	47~48%
Test Engineer :	Hayden Wu	Polarization :	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



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
3456	-38.81	-13	-25.81	-50.74	-45.1	2.01	8.30	V	Pass
5184	-40.03	-13	-27.03	-57.66	-48.5	2.09	10.56	V	Pass
6916	-45.78	-13	-32.78	-66.99	-54.9	2.38	11.50	V	Pass



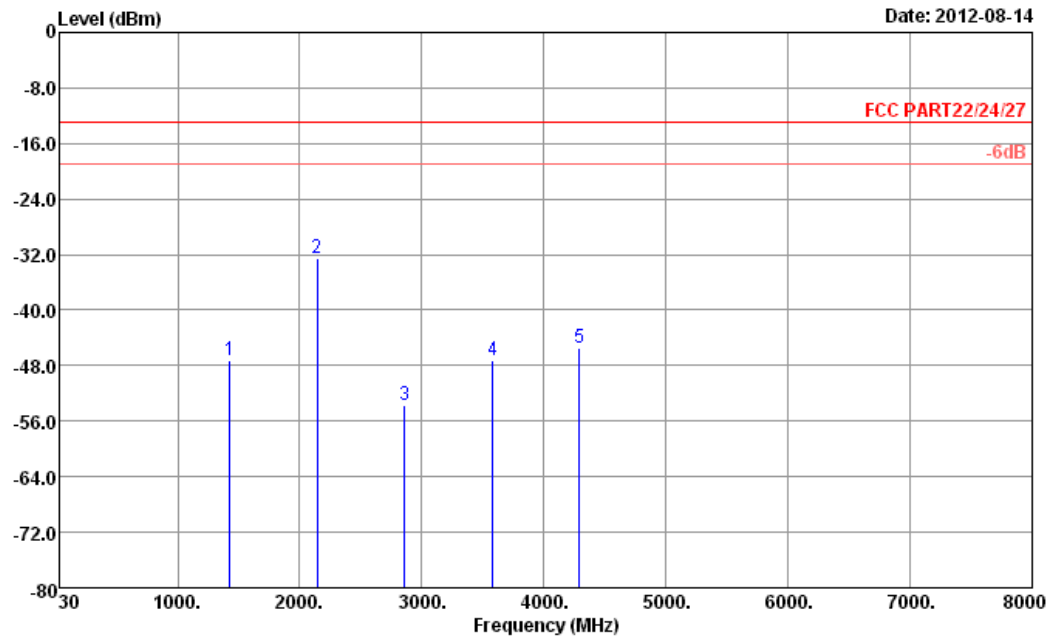
Band :	LTE Band 17	Temperature :	23~24°C
Test Mode :	5MHZ QPSK RB Size 1	Relative Humidity :	47~48%
Test Engineer :	Hayden Wu	Polarization :	Horizontal
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



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
1429	-46.89	-13	-33.89	-53.68	-50.8	1.25	5.16	H	Pass
2146	-31.07	-13	-18.07	-41.95	-34.6	1.49	5.02	H	Pass
2857	-50.72	-13	-37.72	-63.09	-55.7	1.69	6.67	H	Pass
3580	-48.54	-13	-35.54	-63.36	-55	2.02	8.48	H	Pass
4290	-45.73	-13	-32.73	-63.46	-53	1.95	9.22	H	Pass



Band :	LTE Band 17	Temperature :	23~24°C
Test Mode :	5MHZ QPSK RB Size 1	Relative Humidity :	47~48%
Test Engineer :	Hayden Wu	Polarization :	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		

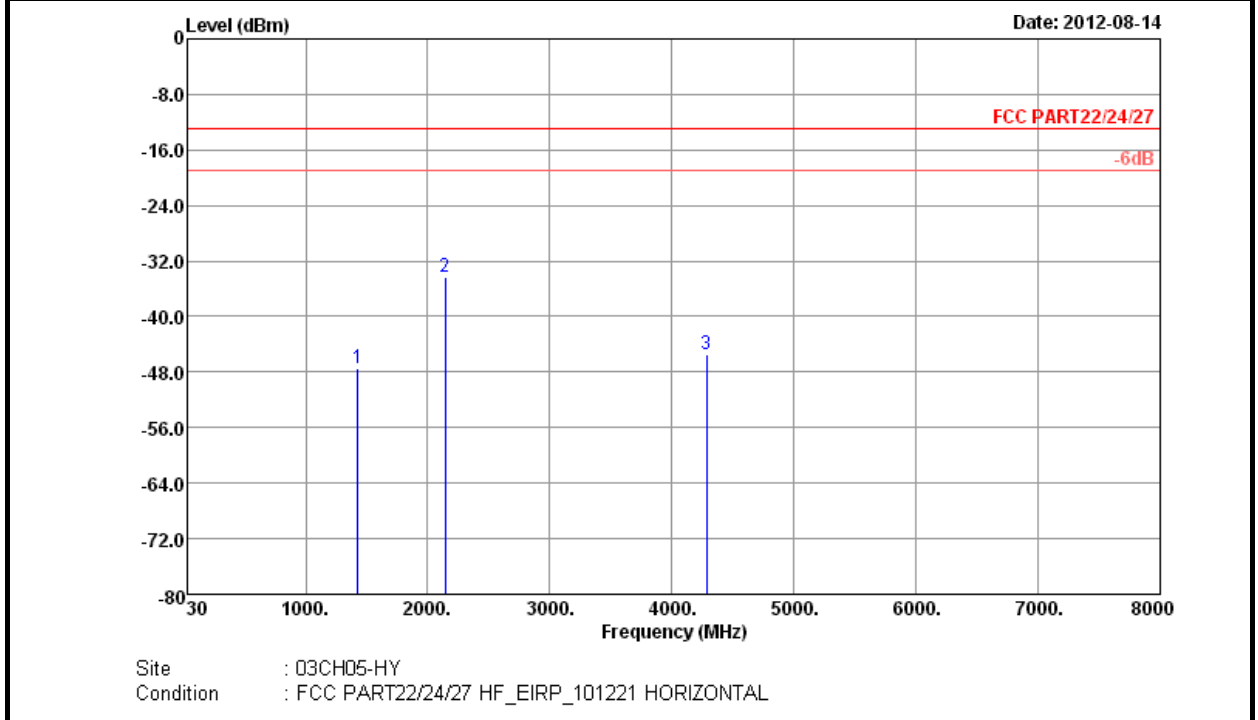


Site : 03CH05-HY
 Condition : FCC PART22/24/27 HF_EIRP_101221 VERTICAL

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
1429	-45.09	-13	-32.09	-51.9	-49	1.25	5.16	V	Pass
2146	-30.47	-13	-17.47	-40.96	-34	1.49	5.02	V	Pass
2857	-51.62	-13	-38.62	-64.14	-56.6	1.69	6.67	V	Pass
3580	-45.04	-13	-32.04	-59.6	-51.5	2.02	8.48	V	Pass
4290	-43.23	-13	-30.23	-60.92	-50.5	1.95	9.22	V	Pass



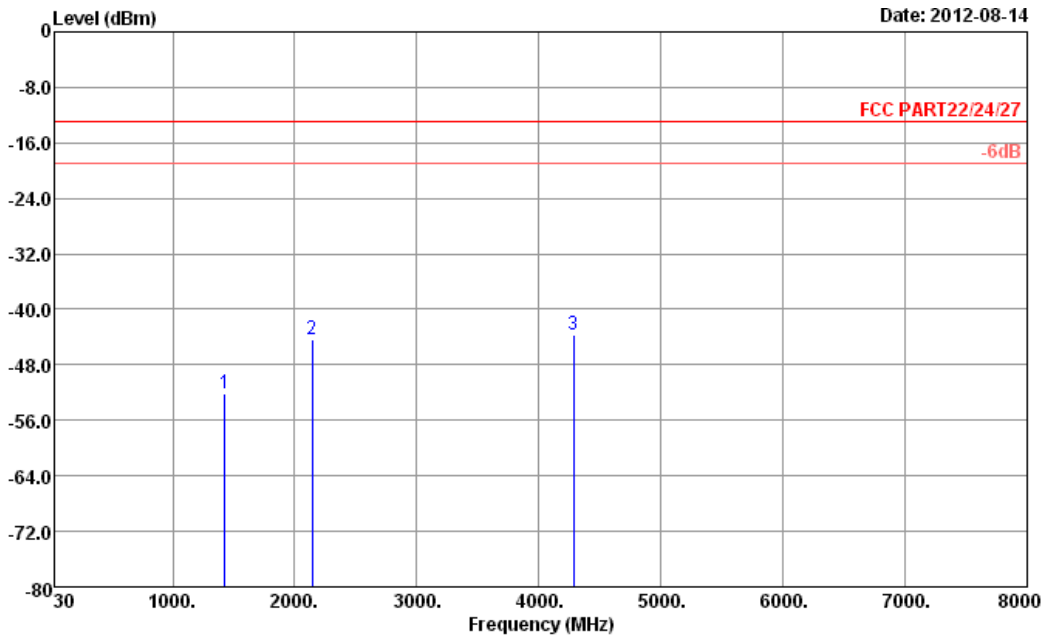
Band :	LTE Band 17	Temperature :	23~24°C
Test Mode :	10MHZ QPSK RB Size 1	Relative Humidity :	47~48%
Test Engineer :	Hayden Wu	Polarization :	Horizontal
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



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
1426	-45.35	-13	-32.35	-52.06	-49.22	1.25	5.12	H	Pass
2143	-32.18	-13	-19.18	-42.91	-35.69	1.48	4.99	H	Pass
4285	-43.22	-13	-30.22	-60.93	-50.47	1.95	9.21	H	Pass



Band :	LTE Band 17	Temperature :	23~24°C
Test Mode :	10MHZ QPSK RB Size 1	Relative Humidity :	47~48%
Test Engineer :	Hayden Wu	Polarization :	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



Site : 03CH05-HY
 Condition : FCC PART22/24/27 HF_EIRP_101221 VERTICAL

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
1429	-49.89	-13	-36.89	-56.88	-53.76	1.25	5.12	V	Pass
2143	-42.12	-13	-29.12	-53.06	-45.63	1.48	4.99	V	Pass
4285	-41.57	-13	-28.57	-59.39	-48.82	1.95	9.21	V	Pass

3.7 Frequency Stability Measurement

3.7.1 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 $\pm 0.00025\%$ ($\pm 2.5\text{ppm}$) of the center frequency.

3.7.2 Measuring Instruments

See list of measuring instruments of this test report.

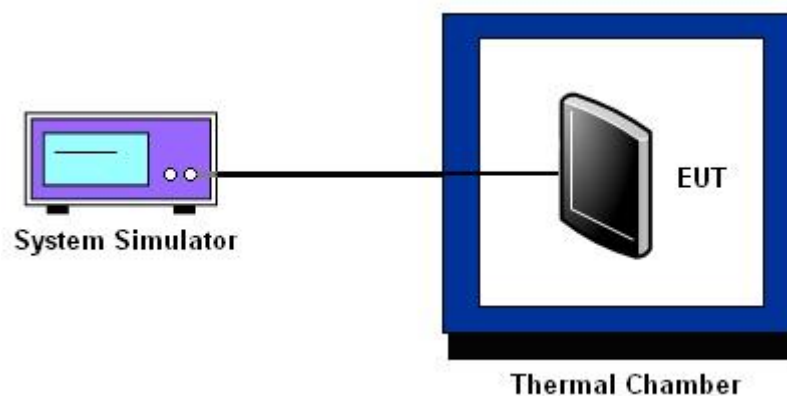
3.7.3 Test Procedures for Temperature Variation

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.
4. If the EUT cannot be turned on at -30°C , the testing lowest temperature will be raised in 10°C step until the EUT can be turned on.

3.7.4 Test Procedures for Voltage Variation

1. The EUT was placed in a temperature chamber at $25\pm 5^{\circ}\text{C}$ 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.

3.7.5 Test Setup



3.7.6 Test Result of Temperature Variation

Band :	LTE Band 4			Limit (ppm) :	2.5
Temperature (°C)	BW 5MHz		BW 10MHz		Result
	Freq. Dev. (Hz)	Deviation (ppm)	Freq. Dev. (Hz)	Deviation (ppm)	
-30	-7.5	-0.011	-12.9	-0.018	PASS
-20	-6.4	-0.009	-10.1	-0.014	
-10	-4.1	-0.006	-7.4	-0.010	
0	-4.4	-0.006	-6.7	-0.009	
10	-5.2	-0.007	-7.4	-0.010	
20	-6.3	-0.009	-6.6	-0.009	
30	-7.2	-0.010	7.1	0.010	
35	-4.8	-0.007	6.2	0.009	
40	-6.0	-0.008	-6.0	-0.008	
50	-7.3	-0.010	-7.3	-0.010	

Band :	LTE Band 17			Limit (ppm) :	2.5
Temperature (°C)	BW 5MHz		BW 10MHz		Result
	Freq. Dev. (Hz)	Deviation (ppm)	Freq. Dev. (Hz)	Deviation (ppm)	
-30	4.9	0.007	4.6	0.006	PASS
-20	5.1	0.007	4.2	0.006	
-10	4.2	0.006	-4.2	-0.006	
0	4.5	0.006	4.3	0.006	
10	4.0	0.006	5.0	0.007	
20	4.9	0.007	5.1	0.007	
30	5.1	0.007	5.0	0.007	
35	6.1	0.009	4.9	0.007	
40	5.9	0.008	-4.1	-0.006	
50	6.3	0.009	4.7	0.007	



3.7.7 Test Result of Voltage Variation

Band	Bandwidth	Voltage (Volt)	Freq. Dev. (Hz)	Deviation (ppm)	Limit (ppm)	Result
LTE Band 4	5M	Normal	-7.1	-0.010	2.5	PASS
		8	-6.8	-0.010		
		20	-6.4	-0.009		
	10M	Normal	-5.7	-0.008		
		8	-6.6	-0.009		
		20	-7.1	-0.010		
LTE Band 17	5M	Normal	4.3	0.006	2.5	PASS
		8	4.9	0.007		
		20	4.7	0.007		
	10M	Normal	4.6	0.006		
		8	4.7	0.007		
		20	4.5	0.006		

Remark:

- 1. Normal Voltage = 12V.
- 2. The manufacturer declared that the EUT could work properly between voltage 8V ~ 20V.



4 List of Measuring Equipments

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
LTE Base Station	Anritsu	MT8820C	6201074414	N/A	Jan. 05, 2012	Aug. 06, 2012 ~ Aug. 10, 2012	Jan. 04, 2013	Conducted (TH02-HY)
Spectrum Analyzer	R&S	FSP40	100055	9kHz~40GHz	Jun. 06, 2012	Aug. 06, 2012 ~ Aug. 10, 2012	Jun. 05, 2013	Conducted (TH02-HY)
Thermal Chamber	Ten Billion	TTH-D3SP	TBN-930701	N/A	Jul. 23, 2012	Aug. 06, 2012 ~ Aug. 10, 2012	Jul. 22, 2013	Conducted (TH02-HY)
Spectrum Analyzer	R&S	ESU26	100390	20Hz ~ 26.5GHz	Dec. 22, 2011	Aug. 13, 2012 ~ Aug. 14, 2012	Dec. 21, 2012	Radiation (03CH05-HY)
Bilog Antenna	SCHAFFNER	CBL6111C	2725	30MHz ~ 2GHz	Oct. 22, 2011	Aug. 13, 2012 ~ Aug. 14, 2012	Oct. 21, 2012	Radiation (03CH05-HY)
Turn Table	HD	Deis HD 2000	420/611	0 ~ 360 degree	N/A	Aug. 13, 2012 ~ Aug. 14, 2012	N/A	Radiation (03CH05-HY)
Antenna Mast	HD	MA 240	240/666	1 m ~ 4 m	N/A	Aug. 13, 2012 ~ Aug. 14, 2012	N/A	Radiation (03CH05-HY)
Horn Antenna	ESCO	3117	66584	1GHz~18GHz	Aug. 10, 2012	Aug. 13, 2012 ~ Aug. 14, 2012	Aug. 09, 2013	Radiation (03CH05-HY)
Pre Amplifier	COM-POWER	PA-103A	161075	10Hz ~ 1000MHz Gain:32dB	Feb. 27, 2012	Aug. 13, 2012 ~ Aug. 14, 2012	Feb. 26, 2013	Radiation (03CH05-HY)
Pre Amplifier	MITEQ	AMF-7D-00 101800-30-1	159087	1GHz~18GHz	Feb. 27, 2012	Aug. 13, 2012 ~ Aug. 14, 2012	Feb. 26, 2013	Radiation (03CH05-HY)
Pre Amplifier	Agilent	8449B	3008A01917	1GHz~26.5GHz	Aug. 30, 2011	Aug. 13, 2012 ~ Aug. 14, 2012	Aug. 29, 2012	Radiation (03CH05-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA917025 1	15GHz ~ 40GHz	Oct. 21, 2011	Aug. 13, 2012 ~ Aug. 14, 2012	Oct. 20, 2012	Radiation (03CH05-HY)
Loop Antenna	R&S	HFH2-Z2	860004/001	9 kHz~30 MHz	Jul. 03, 2012	Aug. 13, 2012 ~ Aug. 14, 2012	Jul. 02, 2014	Radiation (03CH05-HY)
LTE Base Station	Anritsu	MT8820C	6201074414	N/A	Jan. 05, 2012	Aug. 13, 2012 ~ Aug. 14, 2012	Jan. 04, 2013	Radiation (03CH05-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
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Uncertainty of Radiated Emission Measurement (1 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	4.72
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Appendix A. Photographs of EUT

Please refer to Sporton report number EP272508 as below.