

# FCC RF Test Report

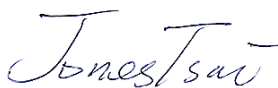
**APPLICANT** : TCT Mobile Limited  
**EQUIPMENT** : Module  
**BRAND NAME** : ALCATEL  
                  one touch  
**MODEL NAME** : one touch M8000  
**FCC ID** : RAD382  
**STANDARD** : 47 CFR Part 2, 22(H), 24(E), 27(H), 27(L), 27(M)  
**CLASSIFICATION** : PCS Licensed Transmitter (PCB)

The product was received on Jun. 13, 2013 and testing was completed on Nov. 25, 2013. We, SPORTON INTERNATIONAL (SHENZHEN) 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 (SHENZHEN) INC., the test report shall not be reproduced except in full.



Reviewed by: Joseph Lin / Supervisor



Approved by: Jones Tsai / Manager



## **SPORTON INTERNATIONAL (SHENZHEN) INC.**

**No. 3 Building, the third floor of south, Shahe River west, Fengzeyuan warehouse, Nanshan District, Shenzhen, Guangdong, P.R.C.**



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**APPENDIX A. SETUP PHOTOGRAPHS**



### REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG361310B	Rev. 01	Initial issue of report	Dec. 02, 2013

## SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.1	§2.1046	Conducted Output Power	Reporting Only	PASS	-
3.2	§24.232(d) 27.53(d)(5)	Peak-to-Average Ratio	<13 dB	PASS	-
3.3	§22.913(a)(2)	Effective Radiated Power (Band 5)	ERP < 7 Watts	PASS	-
	§27.50(c)(10)	Effective Radiated Power (Band 17)	ERP < 3 Watts		
	§24.232(c) §27.50(a)	Equivalent Isotropic Radiated Power (Band 2) (Band 7)	EIRP < 2Watt		
	§27.50(d)(4)	Equivalent Isotropic Radiated Power (Band 4)	EIRP < 1Watt		
3.4	§2.1049 §22.917(a) §24.238(a) §27.53(h)(3)	Occupied Bandwidth	Reporting Only	PASS	-
3.5	§2.1049 §22.917(a) §24.238(a) §27.53(g)(h)	Conducted Band Edge Measurement	< 43+10log10(P[Watts])	PASS	-
	§2.1033 §2.1046 §27.50(a)	Conducted Band Edge Measurement	< 5.5MHz: -13 dBm ≥5.5MHz: -25 dBm		



Report Section	FCC Rule	Description	Limit	Result	Remark
3.6	§2.1051 §22.917(a) §24.238(a) §27.53(g)(h)	Conducted Spurious Emission (Band 2) (Band 4) (Band 5) (Band 17)	$< 43+10\log_{10}(P[\text{Watts}])$	PASS	-
3.6	§2.1033 §2.1046 §27.50(a)	Conducted Spurious Emission (Band 7)	$< 5.5\text{MHz: } -13 \text{ dBm}$ $\geq 5.5\text{MHz: } -25 \text{ dBm}$	PASS	-
3.7	§2.1053 §22.917(a) §24.238(a) §27.53(g)(h)	Radiated Spurious Emission (Band 2) (Band 4) (Band 5) (Band 17)	$< 43+10\log_{10}(P[\text{Watts}])$	PASS	Under limit 19.73 dB at 2128.000 MHz
	§2.1053 §27.53(m)	Radiated Spurious Emission (Band 7)	$< 55+10\log_{10}(P[\text{Watts}])$		
3.8	§2.1055 §22.355 §24.235 §27.54	Frequency Stability Temperature & Voltage	$< 2.5 \text{ ppm}$	PASS	



# 1 General Description

## 1.1 Applicant

**TCT Mobile Limited**

5F, C building, No. 232, Liang Jing Road ZhangJiang High-Tech Park, Pudong Area Shanghai, P.R. China. 201203

## 1.2 Manufacturer

**TCL COMMUNICATION TECHNOLOGY HOLDINGS LIMITED**

70 Huifeng 4rd., ZhongKai Hi-tech Development District, Huizhou, Guangdong 516006 P.R.China (TCL Mobile Communication Co., LTD. Huizhou)

## 1.3 Feature of Equipment Under Test

Product Feature	
Equipment	Module
Brand Name	ALCATEL one touch
Model Name	one touch M8000
FCC ID	RAD382
EUT supports Radios application	GPRS/EGPRS/WCDMA/HSPA/HSPA+/DC-HSDPA/LTE
HW Version	V3.0
SW Version	VL_131101_40J00B_40G000_070G0G_0041000(V)
EUT Stage	Production Unit

**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	
<b>Tx Frequency</b>	LTE Band 2 : 1850.7 MHz ~ 1909.3 MHz LTE Band 4 : 1710.7MHz ~ 1754.3 MHz LTE Band 5 : 824.7 MHz ~ 848.3 MHz LTE Band 7 : 2506.5 MHz ~ 2534.5 MHz and 2562.5 MHz ~ 2567.5 MHz LTE Band 17 : 706.5 MHz ~ 713.5 MHz
<b>Rx Frequency</b>	LTE Band 2 : 1930.7 MHz ~ 1989.3 MHz LTE Band 4 : 2110.7 MHz ~ 2154.3 MHz LTE Band 5 : 869.7 MHz ~ 893.3 MHz LTE Band 7 : 2626.5MHz ~ 2654.5 MHz and 2666.5 MHz ~ 2687.5 MHz LTE Band 17 : 736.5 MHz ~ 743.5 MHz
<b>Bandwidth</b>	1.4MHz/3MHz/5MHz/10MHz/15MHz/20MHz (LTE Band 2/4) 1.4MHz/3MHz/5MHz/10MHz (LTE Band 5) 5MHz/10MHz/15MHz/20MHz (LTE Band 7) 5MHz/10MHz (LTE Band 17)
<b>Maximum Output Power to Antenna</b>	LTE Band 2 : 23.87 dBm LTE Band 4 : 22.57 dBm LTE Band 5 : 23.28 dBm LTE Band 7 : 22.71 dBm LTE Band 17 : 24.00 dBm
<b>Antenna Type</b>	IFA Antenna
<b>Type of Modulation</b>	QPSK / 16QAM

### 1.5 Modification of EUT

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

### 1.6 Maximum ERP/EIRP Power, Frequency Tolerance, and Emission Designator

FCC Rule	System	Type of Modulation	BW	Maximum EIRP (W)	Frequency Tolerance (% , Hz, ppm)	Emission Designator
Part 24E	LTE Band 2	QPSK	1.4MHz	0.0240 W	0.013 ppm	1M10G7D
Part 24E	LTE Band 2	16QAM	1.4MHz	0.0180 W	0.012 ppm	1M10D7W
Part 24E	LTE Band 2	QPSK	3MHz	0.0207 W	0.012 ppm	2M75G7D
Part 24E	LTE Band 2	16QAM	3MHz	0.0211 W	0.011 ppm	2M74D7W
Part 24E	LTE Band 2	QPSK	5MHz	0.0232 W	0.012 ppm	4M50G7D
Part 24E	LTE Band 2	16QAM	5MHz	0.0194 W	0.012 ppm	4M50D7W
Part 24E	LTE Band 2	QPSK	10MHz	0.0223 W	0.011 ppm	9M16G7D
Part 24E	LTE Band 2	16QAM	10MHz	0.0192 W	0.012 ppm	9M12D7W
Part 24E	LTE Band 2	QPSK	15MHz	0.0226 W	0.012 ppm	13M6G7D
Part 24E	LTE Band 2	16QAM	15MHz	0.0194 W	0.012 ppm	13M6D7W
Part 24E	LTE Band 2	QPSK	20MHz	0.0154 W	0.013 ppm	18M8G7D
Part 24E	LTE Band 2	16QAM	20MHz	0.0204 W	0.015 ppm	18M8D7W
Part 27L	LTE Band 4	QPSK	1.4MHz	0.0338 W	0.007 ppm	1M10G7D
Part 27L	LTE Band 4	16QAM	1.4MHz	0.0284 W	0.008 ppm	1M10D7W
Part 27L	LTE Band 4	QPSK	3MHz	0.0353 W	0.007 ppm	2M74G7D
Part 27L	LTE Band 4	16QAM	3MHz	0.0297 W	0.007 ppm	2M74D7W
Part 27L	LTE Band 4	QPSK	5MHz	0.0374 W	0.007 ppm	4M50G7D
Part 27L	LTE Band 4	16QAM	5MHz	0.0292 W	0.007 ppm	4M52D7W
Part 27L	LTE Band 4	QPSK	10MHz	0.0377 W	0.008 ppm	9M16G7D
Part 27L	LTE Band 4	16QAM	10MHz	0.0299 W	0.008 ppm	9M08D7W
Part 27L	LTE Band 4	QPSK	15MHz	0.0374 W	0.007 ppm	13M6G7D
Part 27L	LTE Band 4	16QAM	15MHz	0.0311 W	0.008 ppm	13M5D7W
Part 27L	LTE Band 4	QPSK	20MHz	0.0365 W	0.007 ppm	18M8G7D
Part 27L	LTE Band 4	16QAM	20MHz	0.0300 W	0.007 ppm	18M8D7W





FCC Rule	System	Type of Modulation	BW	Maximum ERP/EIRP (W)	Frequency Tolerance (% , Hz, ppm)	Emission Designator
Part 22H	LTE Band 5	QPSK	1.4MHz	0.0175 W	0.009 ppm	1M10G7D
Part 22H	LTE Band 5	16QAM	1.4MHz	0.0148 W	0.008 ppm	1M10D7W
Part 22H	LTE Band 5	QPSK	3MHz	0.0168 W	0.007 ppm	2M74G7D
Part 22H	LTE Band 5	16QAM	3MHz	0.0139 W	0.007 ppm	2M74D7W
Part 22H	LTE Band 5	QPSK	5MHz	0.0169 W	0.008 ppm	4M50G7D
Part 22H	LTE Band 5	16QAM	5MHz	0.0143 W	0.009 ppm	4M50D7W
Part 22H	LTE Band 5	QPSK	10MHz	0.0169 W	0.007 ppm	9M08G7D
Part 22H	LTE Band 5	16QAM	10MHz	0.0137 W	0.008 ppm	9M08D7W
Part 22M	LTE Band 7	QPSK	5MHz	0.0521 W	0.009 ppm	4M50G7D
Part 22M	LTE Band 7	16QAM	5MHz	0.0404 W	0.010 ppm	4M50D7W
Part 22M	LTE Band 7	QPSK	10MHz	0.0520 W	0.009 ppm	9M16G7D
Part 22M	LTE Band 7	16QAM	10MHz	0.0394 W	0.009 ppm	9M12D7W
Part 22M	LTE Band 7	QPSK	15MHz	0.0439 W	0.008 ppm	13M6G7D
Part 22M	LTE Band 7	16QAM	15MHz	0.0378 W	0.009 ppm	13M6D7W
Part 22M	LTE Band 7	QPSK	20MHz	0.0466 W	0.009 ppm	18M7G7D
Part 22M	LTE Band 7	16QAM	20MHz	0.0403 W	0.009 ppm	18M9D7W
Part 27H	LTE Band 17	QPSK	5MHz	0.0075 W	0.007 ppm	4M50G7D
Part 27H	LTE Band 17	16QAM	5MHz	0.0060 W	0.007 ppm	4M50D7W
Part 27H	LTE Band 17	QPSK	10MHz	0.0105 W	0.007 ppm	9M12G7D
Part 27H	LTE Band 17	16QAM	10MHz	0.0056 W	0.007 ppm	9M04D7W

### 1.7 Testing Site

<b>Test Site</b>	SPORTON INTERNATIONAL (SHENZHEN) INC.		
<b>Test Site Location</b>	No. 3 Building, the third floor of south, Shahe River west, Fengzeyuan warehouse, Nanshan District, Shenzhen, Guangdong, P.R.C. TEL: +86-755-3320-2398		
<b>Test Site No.</b>	<b>Sporton Site No.</b>		<b>FCC Registration No.</b>
	TH01-SZ	03CH01-SZ	831040

<b>Test Site</b>	SPORTON INTERNATIONAL (SHENZHEN) INC.		
<b>Test Site Location</b>	No. 101, Complex Building C, Guanlong Village, Xili Town, Nanshan District, Shenzhen, Guangdong, P.R.C. TEL: +86-755-8637-9589 FAX: +86-755-8637-9595		
<b>Test Site No.</b>	<b>Sporton Site No.</b>		
	OTA01-SZ		

### 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(H), 27(L), 27(M)
- ♦ 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 10<sup>th</sup> harmonic.

Test Modes			
Band	Radiated TCs	Conducted TCs	
LTE Band 2	BW 1.4MHz	<ul style="list-style-type: none"> <li>■ LTE (RB Size 1, RB Offset 0) QPSK Link</li> </ul>	<ul style="list-style-type: none"> <li>■ LTE (RB Size 1) Link</li> <li>■ LTE (RB Size 3) Link</li> <li>■ LTE (RB Size 6) Link</li> </ul>
	BW 3MHz	<ul style="list-style-type: none"> <li>■ LTE (RB Size 1, RB Offset 0) QPSK Link</li> </ul>	<ul style="list-style-type: none"> <li>■ LTE (RB Size 1) Link</li> <li>■ LTE (RB Size 8) Link</li> <li>■ LTE (RB Size 15) Link</li> </ul>
	BW 5MHz	<ul style="list-style-type: none"> <li>■ LTE (RB Size 1, RB Offset 0) QPSK Link</li> </ul>	<ul style="list-style-type: none"> <li>■ LTE (RB Size 1) Link</li> <li>■ LTE (RB Size 12) Link</li> <li>■ LTE (RB Size 25) Link</li> </ul>
	BW 10MHz	<ul style="list-style-type: none"> <li>■ LTE (RB Size 1, RB Offset 0) QPSK Link</li> </ul>	<ul style="list-style-type: none"> <li>■ LTE (RB Size 1) Link</li> <li>■ LTE (RB Size 25) Link</li> <li>■ LTE (RB Size 50) Link</li> </ul>
	BW 15MHz	<ul style="list-style-type: none"> <li>■ LTE (RB Size 1, RB Offset 0) QPSK Link</li> </ul>	<ul style="list-style-type: none"> <li>■ LTE (RB Size 1) Link</li> <li>■ LTE (RB Size 36) Link</li> <li>■ LTE (RB Size 75) Link</li> </ul>
	BW 20MHz	<ul style="list-style-type: none"> <li>■ LTE (RB Size 1, RB Offset 0) QPSK Link</li> </ul>	<ul style="list-style-type: none"> <li>■ LTE (RB Size 1) Link</li> <li>■ LTE (RB Size 50) Link</li> <li>■ LTE (RB Size 100) Link</li> </ul>

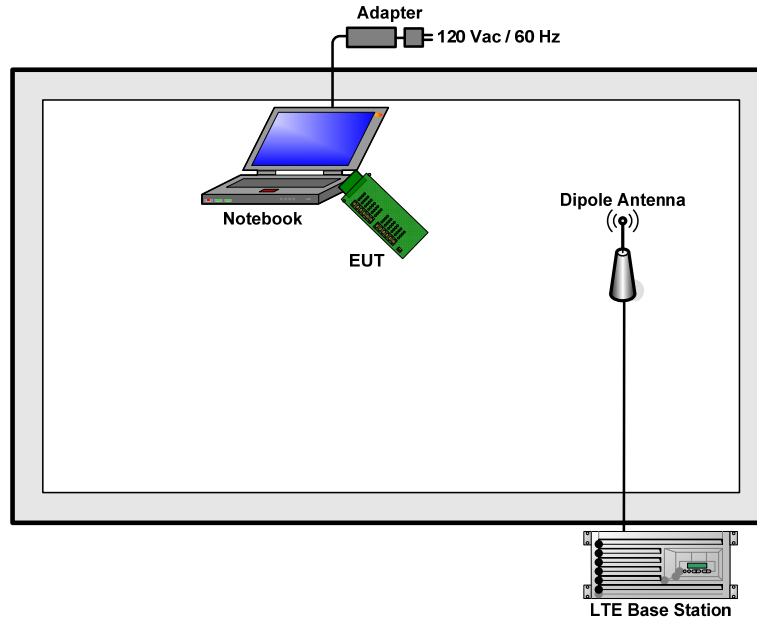


Test Modes			
Band		Radiated TCs	Conducted TCs
LTE Band 4	BW 1.4MHz	<ul style="list-style-type: none"> <li>■ LTE (RB Size 1, RB Offset 0) QPSK Link</li> </ul>	<ul style="list-style-type: none"> <li>■ LTE (RB Size 1) Link</li> <li>■ LTE (RB Size 3) Link</li> <li>■ LTE (RB Size 6) Link</li> </ul>
	BW 3MHz	<ul style="list-style-type: none"> <li>■ LTE (RB Size 1, RB Offset 0) QPSK Link</li> </ul>	<ul style="list-style-type: none"> <li>■ LTE (RB Size 1) Link</li> <li>■ LTE (RB Size 8) Link</li> <li>■ LTE (RB Size 15) Link</li> </ul>
	BW 5MHz	<ul style="list-style-type: none"> <li>■ LTE (RB Size 1, RB Offset 0) QPSK Link</li> </ul>	<ul style="list-style-type: none"> <li>■ LTE (RB Size 1) Link</li> <li>■ LTE (RB Size 12) Link</li> <li>■ LTE (RB Size 25) Link</li> </ul>
	BW 10MHz	<ul style="list-style-type: none"> <li>■ LTE (RB Size 1, RB Offset 0) QPSK Link</li> </ul>	<ul style="list-style-type: none"> <li>■ LTE (RB Size 1) Link</li> <li>■ LTE (RB Size 25) Link</li> <li>■ LTE (RB Size 50) Link</li> </ul>
	BW 15MHz	<ul style="list-style-type: none"> <li>■ LTE (RB Size 1, RB Offset 37) QPSK Link</li> </ul>	<ul style="list-style-type: none"> <li>■ LTE (RB Size 1) Link</li> <li>■ LTE (RB Size 36) Link</li> <li>■ LTE (RB Size 75) Link</li> </ul>
	BW 20MHz	<ul style="list-style-type: none"> <li>■ LTE (RB Size 1, RB Offset 0) QPSK Link</li> </ul>	<ul style="list-style-type: none"> <li>■ LTE (RB Size 1) Link</li> <li>■ LTE (RB Size 50) Link</li> <li>■ LTE (RB Size 100) Link</li> </ul>
LTE Band 5	BW 1.4MHz	<ul style="list-style-type: none"> <li>■ LTE (RB Size 1, RB Offset 5) QPSK Link</li> </ul>	<ul style="list-style-type: none"> <li>■ LTE (RB Size 1) Link</li> <li>■ LTE (RB Size 3) Link</li> <li>■ LTE (RB Size 6) Link</li> </ul>
	BW 3MHz	<ul style="list-style-type: none"> <li>■ LTE (RB Size 1, RB Offset 7) QPSK Link</li> </ul>	<ul style="list-style-type: none"> <li>■ LTE (RB Size 1) Link</li> <li>■ LTE (RB Size 8) Link</li> <li>■ LTE (RB Size 15) Link</li> </ul>
	BW 5MHz	<ul style="list-style-type: none"> <li>■ LTE (RB Size 1, RB Offset 12) QPSK Link</li> </ul>	<ul style="list-style-type: none"> <li>■ LTE (RB Size 1) Link</li> <li>■ LTE (RB Size 12) Link</li> <li>■ LTE (RB Size 25) Link</li> </ul>
	BW 10MHz	<ul style="list-style-type: none"> <li>■ LTE (RB Size 1, RB Offset 0) QPSK Link</li> </ul>	<ul style="list-style-type: none"> <li>■ LTE (RB Size 1) Link</li> <li>■ LTE (RB Size 25) Link</li> <li>■ LTE (RB Size 50) Link</li> </ul>

Test Modes			
Band		Radiated TCs	Conducted TCs
LTE Band 7	BW 5MHz	<ul style="list-style-type: none"> <li>■ LTE (RB Size 1, RB Offset 12) QPSK Link</li> </ul>	<ul style="list-style-type: none"> <li>■ LTE (RB Size 1) Link</li> <li>■ LTE (RB Size 12) Link</li> <li>■ LTE (RB Size 25) Link</li> </ul>
	BW 10MHz	<ul style="list-style-type: none"> <li>■ LTE (RB Size 1, RB Offset 24) QPSK Link</li> </ul>	<ul style="list-style-type: none"> <li>■ LTE (RB Size 1) Link</li> <li>■ LTE (RB Size 25) Link</li> <li>■ LTE (RB Size 50) Link</li> </ul>
	BW 15MHz	<ul style="list-style-type: none"> <li>■ LTE (RB Size 1, RB Offset 74) QPSK Link</li> </ul>	<ul style="list-style-type: none"> <li>■ LTE (RB Size 1) Link</li> <li>■ LTE (RB Size 36) Link</li> <li>■ LTE (RB Size 75) Link</li> </ul>
	BW 20MHz	<ul style="list-style-type: none"> <li>■ LTE (RB Size 1, RB Offset 99) QPSK Link</li> </ul>	<ul style="list-style-type: none"> <li>■ LTE (RB Size 1) Link</li> <li>■ LTE (RB Size 50) Link</li> <li>■ LTE (RB Size 100) Link</li> </ul>
LTE Band 17	BW 5MHz	<ul style="list-style-type: none"> <li>■ LTE (RB Size 1, RB Offset 0) QPSK Link</li> </ul>	<ul style="list-style-type: none"> <li>■ LTE (RB Size 1) Link</li> <li>■ LTE (RB Size 12) Link</li> <li>■ LTE (RB Size 25) Link</li> </ul>
	BW 10MHz	<ul style="list-style-type: none"> <li>■ LTE (RB Size 1, RB Offset 24) QPSK Link</li> </ul>	<ul style="list-style-type: none"> <li>■ LTE (RB Size 1) Link</li> <li>■ LTE (RB Size 25) Link</li> <li>■ LTE (RB Size 50) Link</li> </ul>

Note: The spurious emission was performed by conducted and radiated methods. From conducted spurious emission measurement (QPSK and 16QAM), the modulation related spurious emission out of the band was not identified and the radiated spurious emissions results on 16QAM were not worse than QSPK mode during exploratory test.

## 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.	Notebook	Lenovo	G480	N/A	N/A	AC I/P: Unshielded, 1.8 m DC O/P: Shielded, 1.8 m
3.	DC Power Supply	TOPWORD	3303DR	N/A	N/A	Unshielded, 1.8 m

## 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.

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 7.5 dB and 10dB attenuator.

Example:

$$\begin{aligned} \text{Offset (dB)} &= \text{RF cable loss(dB)} + \text{attenuator factor(dB)}. \\ &= 7.5 + 10 = 17.5 \text{ (dB)} \end{aligned}$$

### 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.

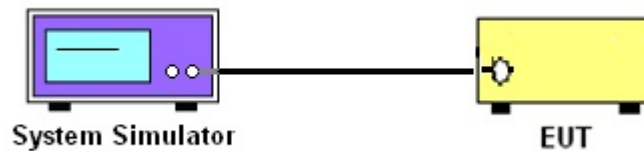
##### 3.1.2 Measuring Instruments

Measuring equipment is listed in the section 4 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.

##### 3.1.4 Test Setup







3.1.5 Test Result of Conducted Output Power

<LTE Band 2 Conducted Power>

BW [MHz]	Modulation	RB Size	RB Offset	Power (dBm) Low Ch. / Freq.	Power (dBm) Middle Ch. / Freq.	Power (dBm) High Ch. / Freq.
<b>Channel</b>				<b>18700</b>	<b>18900</b>	<b>19100</b>
<b>Frequency (MHz)</b>				<b>1860</b>	<b>1880</b>	<b>1900</b>
20	QPSK	1	0	23.70	23.87	23.39
20	QPSK	1	49	23.37	23.65	23.40
20	QPSK	1	99	23.55	23.37	23.74
20	QPSK	50	0	22.22	22.42	22.18
20	QPSK	50	24	22.21	22.53	22.10
20	QPSK	50	49	22.24	22.46	22.09
20	QPSK	100	0	22.26	22.40	22.15
20	16QAM	1	0	22.59	22.69	22.79
20	16QAM	1	49	22.14	22.75	22.39
20	16QAM	1	99	22.86	22.46	22.78
20	16QAM	50	0	21.26	21.48	21.37
20	16QAM	50	24	21.33	21.69	21.08
20	16QAM	50	49	21.42	21.37	21.11
20	16QAM	100	0	21.32	21.48	21.15
<b>Channel</b>				<b>18675</b>	<b>18900</b>	<b>19125</b>
<b>Frequency (MHz)</b>				<b>1857.5</b>	<b>1880</b>	<b>1902.5</b>
15	QPSK	1	0	23.59	23.80	23.39
15	QPSK	1	37	23.42	23.77	23.40
15	QPSK	1	74	23.49	23.70	23.56
15	QPSK	36	0	22.39	22.57	22.05
15	QPSK	36	18	22.33	22.61	22.08
15	QPSK	36	37	22.31	22.43	22.42
15	QPSK	75	0	22.22	22.48	22.52
15	16QAM	1	0	22.54	23.00	22.75
15	16QAM	1	37	22.83	23.06	22.72
15	16QAM	1	74	22.34	22.55	22.80
15	16QAM	36	0	21.31	21.57	21.25
15	16QAM	36	18	21.34	21.53	21.11
15	16QAM	36	37	21.37	21.40	21.12
15	16QAM	75	0	21.21	21.47	21.21



BW [MHz]	Modulation	RB Size	RB Offset	Power (dBm) Low Ch. / Freq.	Power (dBm) Middle Ch. / Freq.	Power (dBm) High Ch. / Freq.
<b>Channel</b>				<b>18650</b>	<b>18900</b>	<b>19150</b>
<b>Frequency (MHz)</b>				<b>1855</b>	<b>1880</b>	<b>1905</b>
10	QPSK	1	0	23.59	23.85	23.29
10	QPSK	1	24	23.53	23.64	23.38
10	QPSK	1	49	23.48	23.76	23.66
10	QPSK	25	0	22.41	22.69	23.49
10	QPSK	25	12	22.38	22.66	22.61
10	QPSK	25	24	22.39	22.65	22.60
10	QPSK	50	0	22.19	22.46	22.56
10	16QAM	1	0	22.76	23.06	22.35
10	16QAM	1	24	22.37	22.67	22.32
10	16QAM	1	49	22.67	22.58	22.45
10	16QAM	25	0	21.45	21.59	21.63
10	16QAM	25	12	21.38	21.64	21.31
10	16QAM	25	24	21.33	21.59	21.71
10	16QAM	50	0	21.32	21.47	21.22
<b>Channel</b>				<b>18625</b>	<b>18900</b>	<b>19175</b>
<b>Frequency (MHz)</b>				<b>1852.5</b>	<b>1880</b>	<b>1907.5</b>
5	QPSK	1	0	23.59	23.77	23.36
5	QPSK	1	12	23.51	23.56	23.44
5	QPSK	1	24	23.43	23.64	23.53
5	QPSK	12	0	22.54	22.75	22.44
5	QPSK	12	6	22.60	22.60	22.65
5	QPSK	12	11	22.57	22.71	22.57
5	QPSK	25	0	22.44	22.62	22.48
5	16QAM	1	0	22.45	22.98	22.59
5	16QAM	1	12	22.60	22.93	22.53
5	16QAM	1	24	22.39	22.45	22.82
5	16QAM	12	0	21.56	21.90	21.60
5	16QAM	12	6	21.63	21.79	21.78
5	16QAM	12	11	21.68	21.70	21.73
5	16QAM	25	0	21.51	21.54	21.68



BW [MHz]	Modulation	RB Size	RB Offset	Power (dBm) Low Ch. / Freq.	Power (dBm) Middle Ch. / Freq.	Power (dBm) High Ch. / Freq.
<b>Channel</b>				<b>18615</b>	<b>18900</b>	<b>19185</b>
<b>Frequency (MHz)</b>				<b>1851.5</b>	<b>1880</b>	<b>1908.5</b>
3	QPSK	1	0	23.37	23.59	23.84
3	QPSK	1	7	23.41	23.66	23.31
3	QPSK	1	14	23.49	23.55	23.50
3	QPSK	8	0	22.48	22.70	22.50
3	QPSK	8	4	22.45	22.62	22.59
3	QPSK	8	7	22.46	22.69	22.49
3	QPSK	15	0	22.51	22.66	22.51
3	16QAM	1	0	22.89	22.81	22.65
3	16QAM	1	7	22.35	22.74	22.60
3	16QAM	1	14	22.60	22.68	22.91
3	16QAM	8	0	21.32	21.64	21.69
3	16QAM	8	4	21.39	21.61	21.35
3	16QAM	8	7	21.45	21.55	21.31
3	16QAM	15	0	21.30	21.47	21.79
<b>Channel</b>				<b>18607</b>	<b>18900</b>	<b>19193</b>
<b>Frequency (MHz)</b>				<b>1850.7</b>	<b>1880</b>	<b>1909.3</b>
1.4	QPSK	1	0	23.45	23.72	23.54
1.4	QPSK	1	2	23.56	23.58	23.39
1.4	QPSK	1	5	23.49	23.70	23.36
1.4	QPSK	3	0	23.46	23.65	23.46
1.4	QPSK	3	1	23.55	23.61	23.47
1.4	QPSK	3	2	23.58	23.62	23.41
1.4	QPSK	6	0	22.58	22.65	22.59
1.4	16QAM	1	0	22.68	22.40	22.65
1.4	16QAM	1	2	22.36	22.62	22.60
1.4	16QAM	1	5	22.37	22.86	22.46
1.4	16QAM	3	0	22.97	22.85	22.37
1.4	16QAM	3	1	22.35	22.66	22.67
1.4	16QAM	3	2	22.54	22.87	22.48
1.4	16QAM	6	0	21.58	21.73	21.36



<LTE Band 4 Conducted Power>

BW [MHz]	Modulation	RB Size	RB Offset	Power (dBm) Low Ch. / Freq.	Power (dBm) Middle Ch. / Freq.	Power (dBm) High Ch. / Freq.
<b>Channel</b>				<b>20050</b>	<b>20175</b>	<b>20300</b>
<b>Frequency (MHz)</b>				<b>1720</b>	<b>1732.5</b>	<b>1745</b>
20	QPSK	1	0	22.57	21.86	21.95
20	QPSK	1	49	22.54	21.92	22.19
20	QPSK	1	99	22.29	22.10	22.15
20	QPSK	50	0	21.20	20.79	21.22
20	QPSK	50	24	21.17	20.79	20.92
20	QPSK	50	49	21.15	20.92	20.94
20	QPSK	100	0	21.08	20.78	21.12
20	16QAM	1	0	21.54	21.38	21.00
20	16QAM	1	49	21.78	21.24	21.16
20	16QAM	1	99	21.10	21.61	21.07
20	16QAM	50	0	20.08	19.80	19.98
20	16QAM	50	24	20.02	19.80	19.93
20	16QAM	50	49	19.95	19.89	20.02
20	16QAM	100	0	20.09	19.74	20.04
<b>Channel</b>				<b>20025</b>	<b>20175</b>	<b>20325</b>
<b>Frequency (MHz)</b>				<b>1717.5</b>	<b>1732.5</b>	<b>1747.5</b>
15	QPSK	1	0	22.23	21.85	21.87
15	QPSK	1	37	22.39	21.80	22.14
15	QPSK	1	74	22.05	21.85	22.04
15	QPSK	36	0	21.17	20.86	21.02
15	QPSK	36	18	21.12	20.80	21.04
15	QPSK	36	37	21.09	20.88	21.00
15	QPSK	75	0	21.00	20.81	21.00
15	16QAM	1	0	21.31	21.07	21.64
15	16QAM	1	37	21.56	21.34	21.81
15	16QAM	1	74	21.43	21.33	21.40
15	16QAM	36	0	20.18	19.96	20.06
15	16QAM	36	18	20.15	19.94	20.01
15	16QAM	36	37	20.14	19.93	20.02
15	16QAM	75	0	19.92	19.84	20.04



BW [MHz]	Modulation	RB Size	RB Offset	Power (dBm) Low Ch. / Freq.	Power (dBm) Middle Ch. / Freq.	Power (dBm) High Ch. / Freq.
<b>Channel</b>				<b>20000</b>	<b>20175</b>	<b>20350</b>
<b>Frequency (MHz)</b>				<b>1715</b>	<b>1732.5</b>	<b>1750</b>
10	QPSK	1	0	22.22	22.10	22.30
10	QPSK	1	24	22.37	21.96	22.15
10	QPSK	1	49	22.26	21.98	22.22
10	QPSK	25	0	21.17	20.82	21.24
10	QPSK	25	12	21.19	20.85	21.15
10	QPSK	25	24	21.07	20.84	21.07
10	QPSK	50	0	21.02	20.68	21.04
10	16QAM	1	0	21.15	20.90	21.00
10	16QAM	1	24	21.47	20.58	21.19
10	16QAM	1	49	21.38	20.93	21.12
10	16QAM	25	0	20.26	19.93	20.16
10	16QAM	25	12	20.13	19.89	20.23
10	16QAM	25	24	20.14	19.86	20.21
10	16QAM	50	0	20.00	19.75	20.06
<b>Channel</b>				<b>19975</b>	<b>20175</b>	<b>20375</b>
<b>Frequency (MHz)</b>				<b>1712.5</b>	<b>1732.5</b>	<b>1752.5</b>
5	QPSK	1	0	22.14	21.85	22.20
5	QPSK	1	12	22.22	21.85	22.17
5	QPSK	1	24	22.14	21.74	22.05
5	QPSK	12	0	21.18	20.85	21.25
5	QPSK	12	6	21.24	20.95	21.22
5	QPSK	12	11	21.23	20.97	21.25
5	QPSK	25	0	21.17	20.81	21.34
5	16QAM	1	0	21.14	20.94	22.21
5	16QAM	1	12	21.30	20.85	22.22
5	16QAM	1	24	21.28	20.83	22.17
5	16QAM	12	0	20.37	19.95	21.21
5	16QAM	12	6	20.13	20.11	21.20
5	16QAM	12	11	20.33	20.09	21.22
5	16QAM	25	0	20.17	19.87	21.20



BW [MHz]	Modulation	RB Size	RB Offset	Power (dBm) Low Ch. / Freq.	Power (dBm) Middle Ch. / Freq.	Power (dBm) High Ch. / Freq.
<b>Channel</b>				<b>19965</b>	<b>20175</b>	<b>20385</b>
<b>Frequency (MHz)</b>				<b>1711.5</b>	<b>1732.5</b>	<b>1753.5</b>
3	QPSK	1	0	22.16	21.79	22.27
3	QPSK	1	7	22.19	21.92	22.12
3	QPSK	1	14	22.16	21.92	22.19
3	QPSK	8	0	21.25	20.90	21.34
3	QPSK	8	4	21.10	20.91	21.28
3	QPSK	8	7	21.13	20.89	21.21
3	QPSK	15	0	21.09	20.83	21.22
3	16QAM	1	0	21.41	20.99	21.65
3	16QAM	1	7	21.18	20.98	21.38
3	16QAM	1	14	21.22	20.81	21.32
3	16QAM	8	0	20.07	20.13	20.24
3	16QAM	8	4	20.09	19.98	20.18
3	16QAM	8	7	20.22	19.94	20.24
3	16QAM	15	0	20.06	19.92	20.35
<b>Channel</b>				<b>19957</b>	<b>20175</b>	<b>20393</b>
<b>Frequency (MHz)</b>				<b>1710.7</b>	<b>1732.5</b>	<b>1754.3</b>
1.4	QPSK	1	0	22.07	21.90	22.37
1.4	QPSK	1	2	22.30	21.93	22.23
1.4	QPSK	1	5	22.21	21.99	22.16
1.4	QPSK	3	0	22.19	21.92	22.19
1.4	QPSK	3	1	22.18	21.99	22.19
1.4	QPSK	3	2	22.16	21.90	22.30
1.4	QPSK	6	0	21.16	20.91	21.27
1.4	16QAM	1	0	21.24	20.77	21.05
1.4	16QAM	1	2	21.08	20.78	21.23
1.4	16QAM	1	5	21.02	20.75	21.43
1.4	16QAM	3	0	21.37	21.28	21.45
1.4	16QAM	3	1	21.50	21.18	21.46
1.4	16QAM	3	2	21.52	21.15	21.34
1.4	16QAM	6	0	20.11	20.06	20.43



<LTE Band 5 Conducted Power>

BW [MHz]	Modulation	RB Size	RB Offset	Power (dBm) Low Ch. / Freq.	Power (dBm) Middle Ch. / Freq.	Power (dBm) High Ch. / Freq.
<b>Channel</b>				<b>20450</b>	<b>20525</b>	<b>20600</b>
<b>Frequency (MHz)</b>				<b>829</b>	<b>836.5</b>	<b>844</b>
10	QPSK	1	0	23.04	22.16	23.28
10	QPSK	1	24	23.13	22.76	23.23
10	QPSK	1	49	22.62	22.61	22.77
10	QPSK	25	0	22.43	22.68	22.28
10	QPSK	25	12	22.09	21.61	21.99
10	QPSK	25	24	21.70	21.87	21.69
10	QPSK	50	0	21.88	21.51	21.67
10	16QAM	1	0	21.78	21.21	22.13
10	16QAM	1	24	22.32	21.54	22.43
10	16QAM	1	49	21.51	21.75	22.09
10	16QAM	25	0	21.54	20.37	21.39
10	16QAM	25	12	21.11	20.65	21.15
10	16QAM	25	24	20.52	20.95	20.83
10	16QAM	50	0	20.92	20.53	20.72
<b>Channel</b>				<b>20425</b>	<b>20525</b>	<b>20625</b>
<b>Frequency (MHz)</b>				<b>826.5</b>	<b>836.5</b>	<b>846.5</b>
5	QPSK	1	0	22.64	22.47	22.07
5	QPSK	1	12	23.11	22.73	22.22
5	QPSK	1	24	23.07	22.72	22.04
5	QPSK	12	0	22.70	21.59	21.49
5	QPSK	12	6	22.82	21.68	21.23
5	QPSK	12	11	22.63	21.94	21.21
5	QPSK	25	0	22.65	21.66	21.07
5	16QAM	1	0	21.59	21.70	21.02
5	16QAM	1	12	22.16	21.78	21.15
5	16QAM	1	24	22.15	22.21	21.31
5	16QAM	12	0	21.79	20.67	20.66
5	16QAM	12	6	21.95	20.86	20.49
5	16QAM	12	11	21.94	20.99	20.43
5	16QAM	25	0	21.94	20.75	20.52



BW [MHz]	Modulation	RB Size	RB Offset	Power (dBm) Low Ch. / Freq.	Power (dBm) Middle Ch. / Freq.	Power (dBm) High Ch. / Freq.
<b>Channel</b>				<b>20415</b>	<b>20525</b>	<b>20635</b>
<b>Frequency (MHz)</b>				<b>825.5</b>	<b>836.5</b>	<b>847.5</b>
3	QPSK	1	0	22.34	22.56	22.55
3	QPSK	1	7	22.89	22.55	22.38
3	QPSK	1	14	22.79	22.61	22.08
3	QPSK	8	0	22.68	21.72	22.35
3	QPSK	8	4	22.84	21.77	21.37
3	QPSK	8	7	22.74	21.81	21.33
3	QPSK	15	0	22.70	21.81	21.21
3	16QAM	1	0	21.72	21.87	21.59
3	16QAM	1	7	21.94	21.77	21.62
3	16QAM	1	14	21.89	21.82	21.05
3	16QAM	8	0	21.73	20.65	20.44
3	16QAM	8	4	21.96	20.83	20.51
3	16QAM	8	7	21.90	20.80	20.34
3	16QAM	15	0	21.89	20.77	20.39
<b>Channel</b>				<b>20407</b>	<b>20525</b>	<b>20643</b>
<b>Frequency (MHz)</b>				<b>824.7</b>	<b>836.5</b>	<b>848.3</b>
1.4	QPSK	1	0	23.13	22.59	22.21
1.4	QPSK	1	2	23.03	22.60	22.19
1.4	QPSK	1	5	23.14	22.61	22.15
1.4	QPSK	3	0	23.06	22.55	22.17
1.4	QPSK	3	1	23.08	22.53	22.16
1.4	QPSK	3	2	23.06	22.56	22.07
1.4	QPSK	6	0	22.57	21.88	21.19
1.4	16QAM	1	0	22.44	22.00	21.43
1.4	16QAM	1	2	22.48	21.84	21.55
1.4	16QAM	1	5	22.81	21.90	21.21
1.4	16QAM	3	0	22.23	22.07	21.39
1.4	16QAM	3	1	22.36	22.14	21.45
1.4	16QAM	3	2	22.26	22.07	21.30
1.4	16QAM	6	0	21.95	20.89	20.32





<LTE Band 7 Conducted Power>

BW [MHz]	Modulation	RB Size	RB Offset	Power (dBm) Low Ch. / Freq.	Power (dBm) Middle Ch. / Freq.	Power (dBm) High Ch. / Freq.
<b>Channel</b>				<b>20890</b>	<b>21020</b>	
<b>Frequency (MHz)</b>				<b>2514</b>	<b>2527</b>	
20	QPSK	1	0	21.96	22.56	
20	QPSK	1	49	21.93	22.55	
20	QPSK	1	99	22.58	22.71	
20	QPSK	50	0	21.67	22.45	
20	QPSK	50	24	21.77	22.55	
20	QPSK	50	49	21.87	22.59	
20	QPSK	100	0	21.89	22.46	
20	16QAM	1	0	22.13	22.70	
20	16QAM	1	49	22.43	22.47	
20	16QAM	1	99	22.48	22.36	
20	16QAM	50	0	22.05	22.57	
20	16QAM	50	24	22.11	22.33	
20	16QAM	50	49	22.24	22.51	
20	16QAM	100	0	22.42	22.54	
<b>Channel</b>				<b>20865</b>	<b>21045</b>	<b>21375</b>
<b>Frequency (MHz)</b>				<b>2511.5</b>	<b>2529.5</b>	<b>2562.5</b>
15	QPSK	1	0	22.13	22.59	22.68
15	QPSK	1	37	22.32	22.61	22.30
15	QPSK	1	74	22.18	22.69	22.32
15	QPSK	36	0	22.12	22.42	22.37
15	QPSK	36	18	22.23	22.60	22.04
15	QPSK	36	37	22.31	22.52	22.26
15	QPSK	75	0	22.09	22.49	22.13
15	16QAM	1	0	22.31	22.53	22.22
15	16QAM	1	37	22.29	22.45	22.46
15	16QAM	1	74	22.30	22.62	22.67
15	16QAM	36	0	22.28	22.55	22.25
15	16QAM	36	18	22.17	22.52	22.08
15	16QAM	36	37	22.15	22.44	22.28
15	16QAM	75	0	22.16	22.40	22.17



BW [MHz]	Modulation	RB Size	RB Offset	Power (dBm) Low Ch. / Freq.	Power (dBm) Middle Ch. / Freq.	Power (dBm) High Ch. / Freq.
<b>Channel</b>				<b>20840</b>	<b>21070</b>	<b>21400</b>
<b>Frequency (MHz)</b>				<b>2509</b>	<b>2532</b>	<b>2565</b>
10	QPSK	1	0	22.48	22.61	22.44
10	QPSK	1	24	22.26	22.66	22.27
10	QPSK	1	49	22.35	22.39	22.07
10	QPSK	25	0	22.46	22.60	22.19
10	QPSK	25	12	22.35	22.58	22.65
10	QPSK	25	24	22.21	22.57	22.14
10	QPSK	50	0	22.33	22.43	22.16
10	16QAM	1	0	22.49	22.62	22.23
10	16QAM	1	24	22.33	22.63	22.16
10	16QAM	1	49	22.21	22.61	22.52
10	16QAM	25	0	22.13	22.47	22.03
10	16QAM	25	12	22.19	22.61	22.65
10	16QAM	25	24	22.37	22.40	22.60
10	16QAM	50	0	22.04	22.57	22.03
<b>Channel</b>				<b>20815</b>	<b>21095</b>	<b>21425</b>
<b>Frequency (MHz)</b>				<b>2506.5</b>	<b>2534.5</b>	<b>2567.5</b>
5	QPSK	1	0	22.33	22.58	22.64
5	QPSK	1	12	22.55	22.67	22.12
5	QPSK	1	24	22.39	22.47	22.35
5	QPSK	12	0	22.16	22.65	22.54
5	QPSK	12	6	22.51	22.65	22.56
5	QPSK	12	11	22.51	22.49	22.57
5	QPSK	25	0	21.94	22.57	22.50
5	16QAM	1	0	22.31	22.48	22.54
5	16QAM	1	12	22.23	22.55	22.66
5	16QAM	1	24	22.51	22.59	22.57
5	16QAM	12	0	22.48	22.56	22.60
5	16QAM	12	6	22.19	22.47	22.07
5	16QAM	12	11	22.29	22.38	22.59
5	16QAM	25	0	22.09	22.42	22.47



<LTE Band 17 Conducted Power>

BW [MHz]	Modulation	RB Size	RB Offset	Power (dBm) Low Ch. / Freq.	Power (dBm) Middle Ch. / Freq.	Power (dBm) High Ch. / Freq.
<b>Channel</b>				<b>23780</b>	<b>23790</b>	<b>23800</b>
<b>Frequency (MHz)</b>				<b>709</b>	<b>710</b>	<b>711</b>
10	QPSK	1	0	23.64	23.60	23.46
10	QPSK	1	24	24.00	23.74	23.68
10	QPSK	1	49	23.66	23.69	23.07
10	QPSK	25	0	22.51	22.78	22.22
10	QPSK	25	12	22.38	22.43	22.43
10	QPSK	25	24	22.52	22.70	22.62
10	QPSK	50	0	22.39	22.43	22.37
10	16QAM	1	0	22.74	22.72	22.48
10	16QAM	1	24	22.39	22.39	22.72
10	16QAM	1	49	22.85	22.47	22.86
10	16QAM	25	0	21.36	21.58	21.39
10	16QAM	25	12	21.49	21.45	21.54
10	16QAM	25	24	21.64	21.59	21.73
10	16QAM	50	0	21.59	21.36	21.26
<b>Channel</b>				<b>23755</b>	<b>23790</b>	<b>23825</b>
<b>Frequency (MHz)</b>				<b>706.5</b>	<b>710</b>	<b>713.5</b>
5	QPSK	1	0	23.68	23.56	23.53
5	QPSK	1	12	23.65	23.64	23.54
5	QPSK	1	24	23.41	23.61	23.52
5	QPSK	12	0	22.58	22.46	22.80
5	QPSK	12	6	22.60	22.56	22.84
5	QPSK	12	11	22.59	22.57	22.83
5	QPSK	25	0	22.43	22.47	22.62
5	16QAM	1	0	22.58	22.90	22.57
5	16QAM	1	12	22.61	22.94	22.55
5	16QAM	1	24	22.53	22.68	22.74
5	16QAM	12	0	21.53	21.58	21.88
5	16QAM	12	6	21.88	21.54	21.84
5	16QAM	12	11	21.64	21.71	22.03
5	16QAM	25	0	21.46	21.55	21.70

Note: Maximum average power for LTE.

## 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.

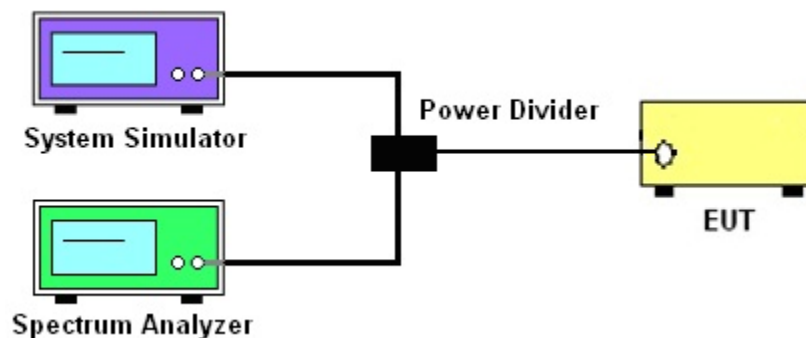
### 3.2.2 Measuring Instruments

Measuring equipment is listed in the section 4 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 2			
BW / Mod.	1.4MHz / QPSK	1.4MHz / 16QAM	3MHz / QPSK	3MHz / 16QAM
Peak-to-Average Ratio (dB)	6.08	6.40	6.04	6.44
BW / Mod.	5MHz / QPSK	5MHz / 16QAM	10MHz / QPSK	10MHz / 16QAM
Peak-to-Average Ratio (dB)	5.76	6.28	5.68	6.12
BW / Mod.	15MHz / QPSK	15MHz / 16QAM	20MHz / QPSK	20MHz / 16QAM
Peak-to-Average Ratio (dB)	5.84	6.88	6.52	7.20

Modes	LTE Band 4			
BW / Mod.	1.4MHz / QPSK	1.4MHz / 16QAM	3MHz / QPSK	3MHz / 16QAM
Peak-to-Average Ratio (dB)	6.44	7.00	6.32	6.84
BW / Mod.	5MHz / QPSK	5MHz / 16QAM	10MHz / QPSK	10MHz / 16QAM
Peak-to-Average Ratio (dB)	6.16	6.80	5.80	6.52
BW / Mod.	15MHz / QPSK	15MHz / 16QAM	20MHz / QPSK	20MHz / 16QAM
Peak-to-Average Ratio (dB)	5.88	6.88	6.52	7.16



Modes	LTE Band 5			
BW / Mod.	1.4MHz / QPSK	1.4MHz / 16QAM	3MHz / QPSK	3MHz / 16QAM
Peak-to-Average Ratio (dB)	4.20	4.40	4.20	5.04
BW / Mod.	5MHz / QPSK	5MHz / 16QAM	10MHz / QPSK	10MHz / 16QAM
Peak-to-Average Ratio (dB)	4.56	5.36	5.16	5.80

Modes	LTE Band 17			
BW / Mod.	5MHz / QPSK	5MHz / 16QAM	10MHz / QPSK	10MHz / 16QAM
Peak-to-Average Ratio (dB)	6.04	6.44	5.68	6.40

**Note:**

The maximum RB configurations of the PAPR summary as below:

BW1.4MHz RB setting : RB Size 6, RB offset 0

BW3.0MHz RB setting : RB Size 15, RB offset 0

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

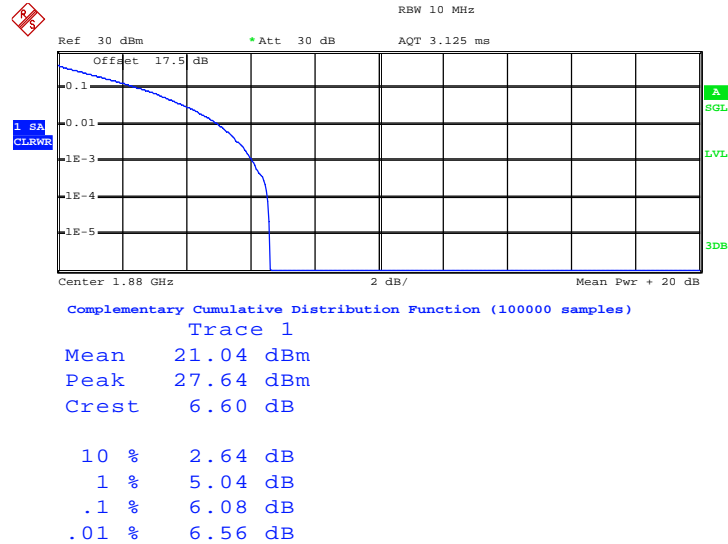
BW10MHz RB setting : RB Size 50, RB offset 0

BW15MHz RB setting : RB Size 75, RB offset 0

BW20MHz RB setting : RB Size 100, RB offset 0

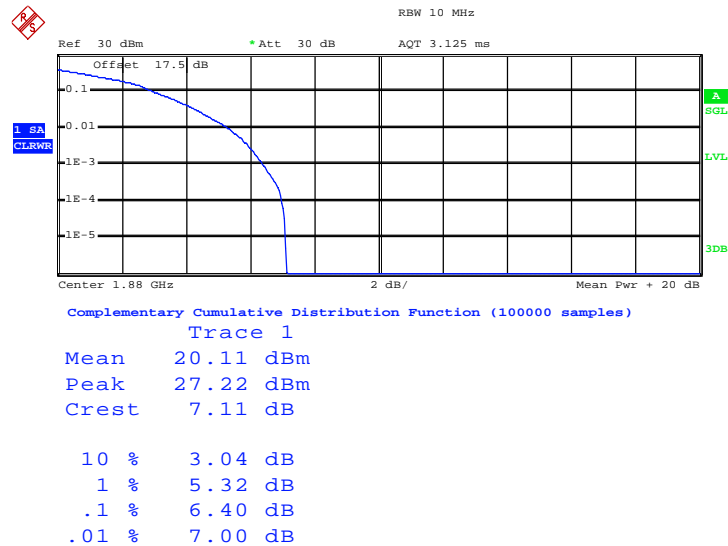
### 3.2.6 Peak to Average Power Ratio

#### Peak-to-Average Ratio on LTE Band 2 1.4MHz / QPSK



Date: 23.OCT.2013 23:10:34

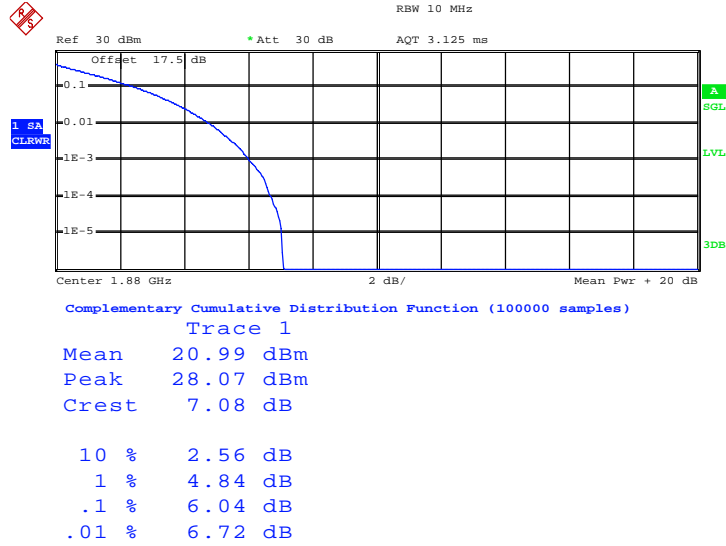
#### Peak-to-Average Ratio on LTE Band 2 1.4MHz / 16QAM



Date: 23.OCT.2013 23:09:54

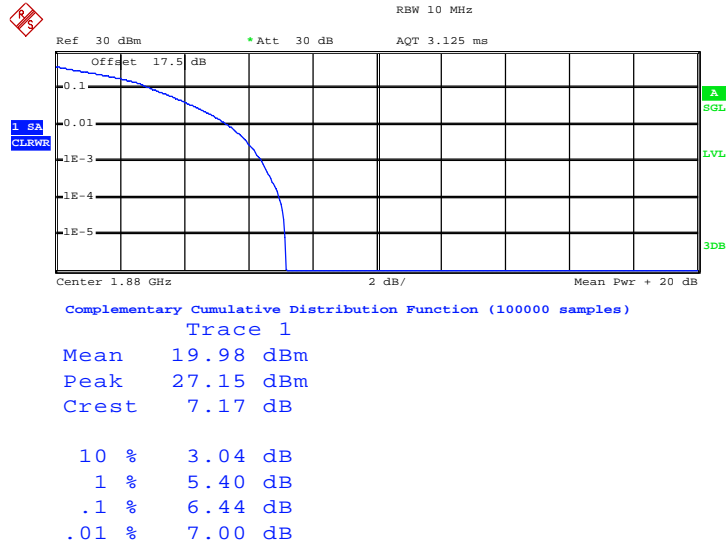


Peak-to-Average Ratio on LTE Band 2 3MHz / QPSK



Date: 23.OCT.2013 23:08:54

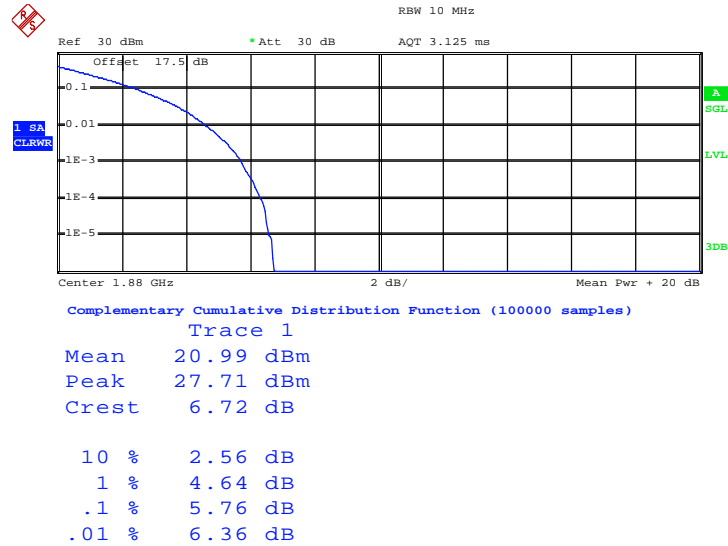
Peak-to-Average Ratio on LTE Band 2 3MHz / 16QAM



Date: 23.OCT.2013 23:09:19

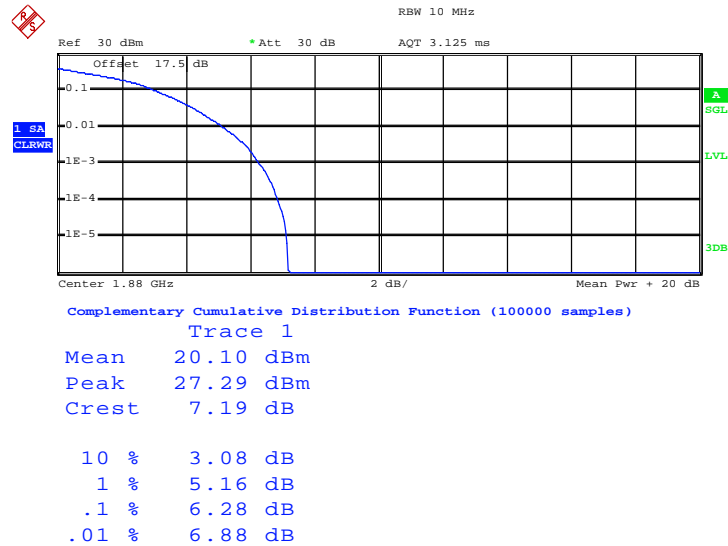


Peak-to-Average Ratio on LTE Band 2 5MHz / QPSK



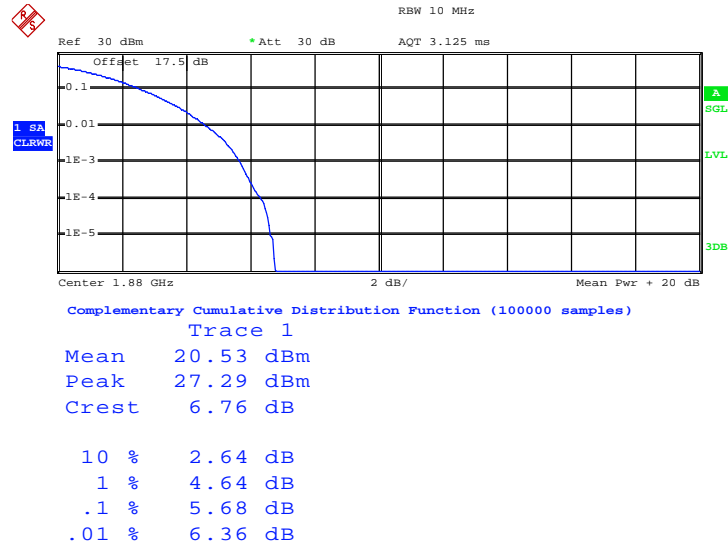
Date: 23.OCT.2013 23:02:16

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



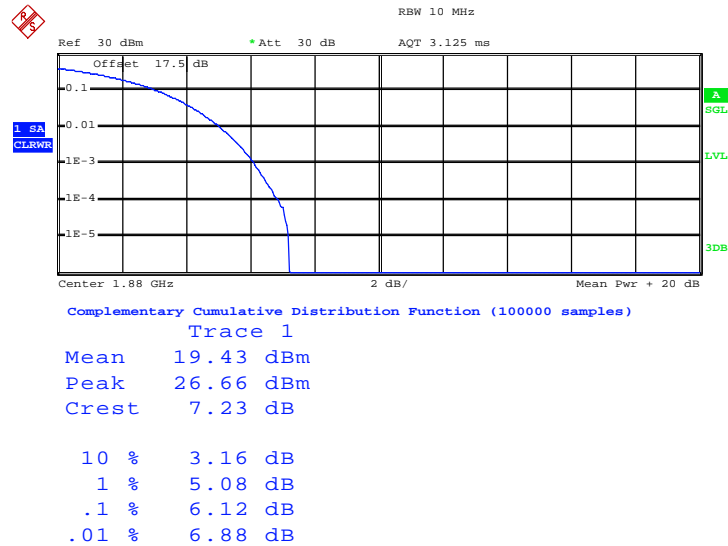
Date: 23.OCT.2013 23:03:04

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



Date: 23.OCT.2013 23:07:03

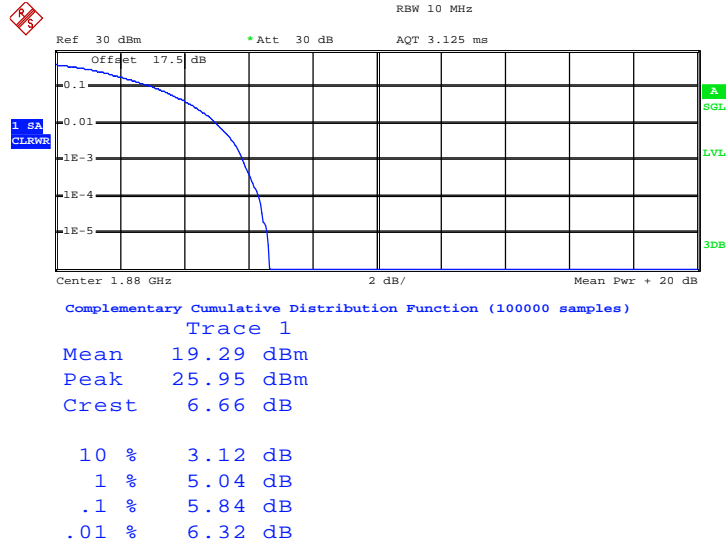
Peak-to-Average Ratio on LTE Band 2 10MHz / 16QAM



Date: 23.OCT.2013 23:03:50

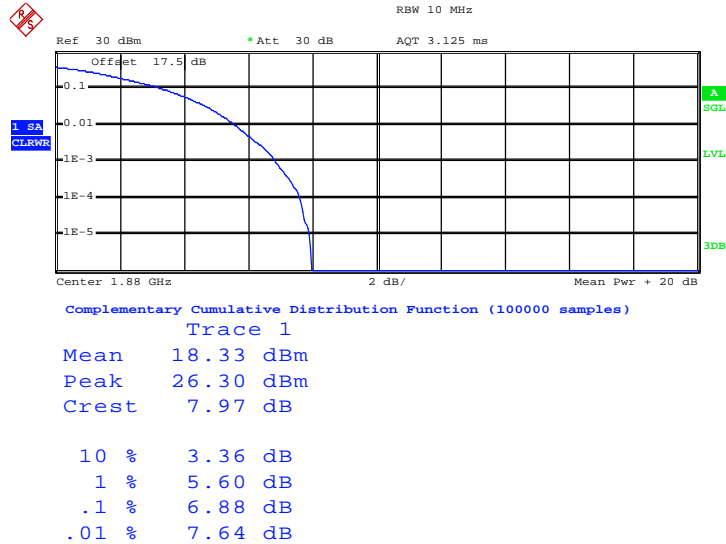


Peak-to-Average Ratio on LTE Band 2 15MHz / QPSK



Date: 23.OCT.2013 23:06:19

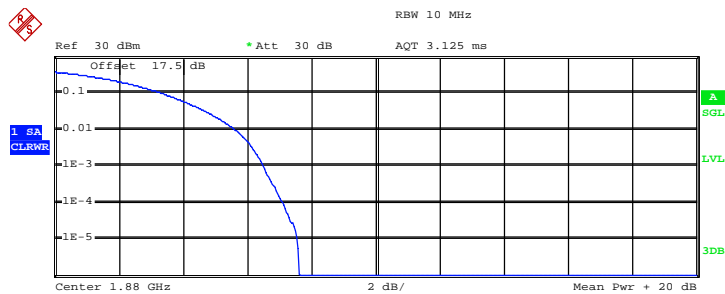
Peak-to-Average Ratio on LTE Band 2 15MHz / 16QAM



Date: 23.OCT.2013 23:04:38



Peak-to-Average Ratio on LTE Band 2 20MHz / QPSK



Complementary Cumulative Distribution Function (100000 samples)

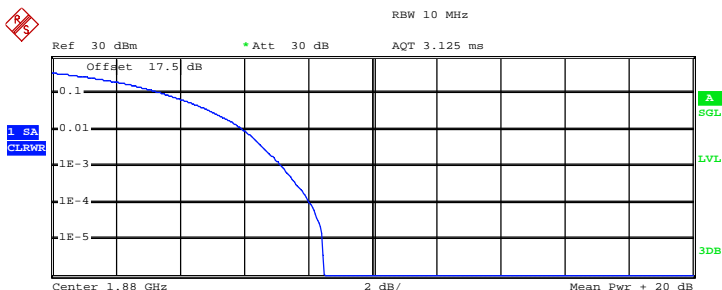
Trace 1

Mean 18.04 dBm  
Peak 25.67 dBm  
Crest 7.62 dB

10 % 3.40 dB  
1 % 5.64 dB  
.1 % 6.52 dB  
.01 % 7.12 dB

Date: 23.OCT.2013 23:05:49

Peak-to-Average Ratio on LTE Band 2 20MHz / 16QAM



Complementary Cumulative Distribution Function (100000 samples)

Trace 1

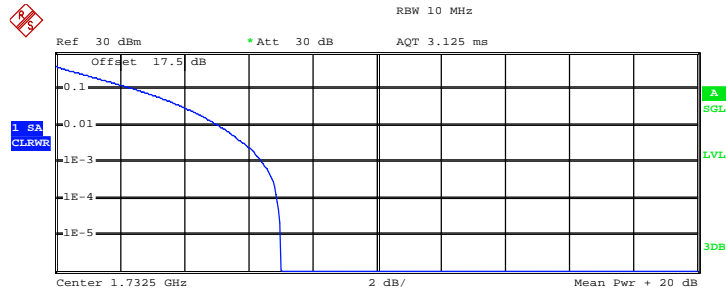
Mean 16.98 dBm  
Peak 25.46 dBm  
Crest 8.48 dB

10 % 3.56 dB  
1 % 6.00 dB  
.1 % 7.20 dB  
.01 % 8.08 dB

Date: 23.OCT.2013 23:05:16



Peak-to-Average Ratio on LTE Band 4 1.4MHz / QPSK



Complementary Cumulative Distribution Function (100000 samples)

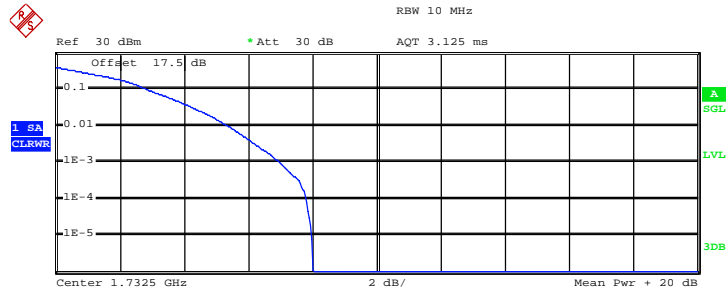
Trace 1

Mean 20.63 dBm  
 Peak 27.64 dBm  
 Crest 7.02 dB

10 % 2.56 dB  
 1 % 5.12 dB  
 .1 % 6.44 dB  
 .01 % 6.92 dB

Date: 23.OCT.2013 23:12:17

Peak-to-Average Ratio on LTE Band 4 1.4MHz / 16QAM



Complementary Cumulative Distribution Function (100000 samples)

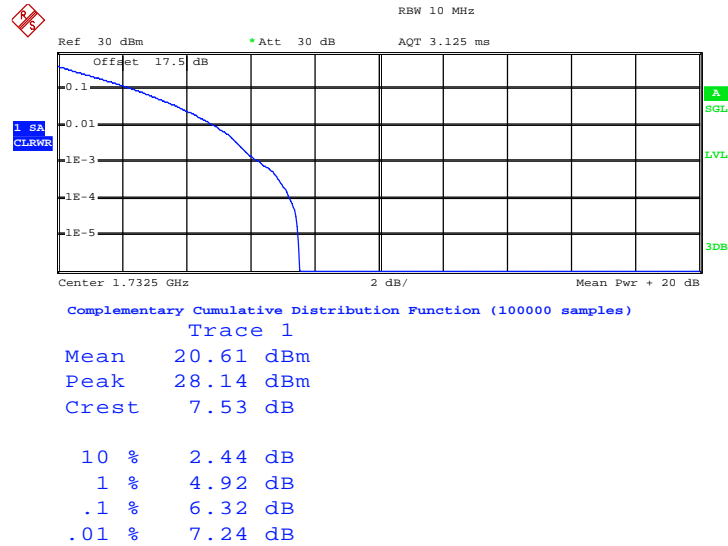
Trace 1

Mean 19.70 dBm  
 Peak 27.71 dBm  
 Crest 8.01 dB

10 % 2.92 dB  
 1 % 5.40 dB  
 .1 % 7.00 dB  
 .01 % 7.80 dB

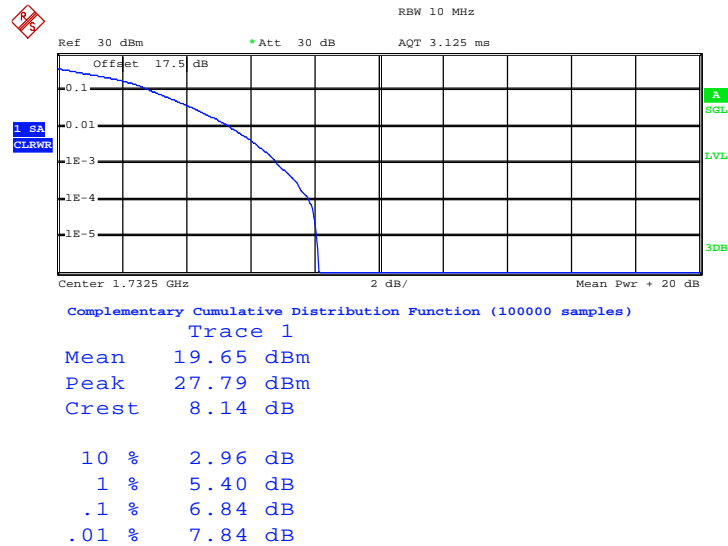
Date: 23.OCT.2013 23:13:12

Peak-to-Average Ratio on LTE Band 4 3MHz / QPSK



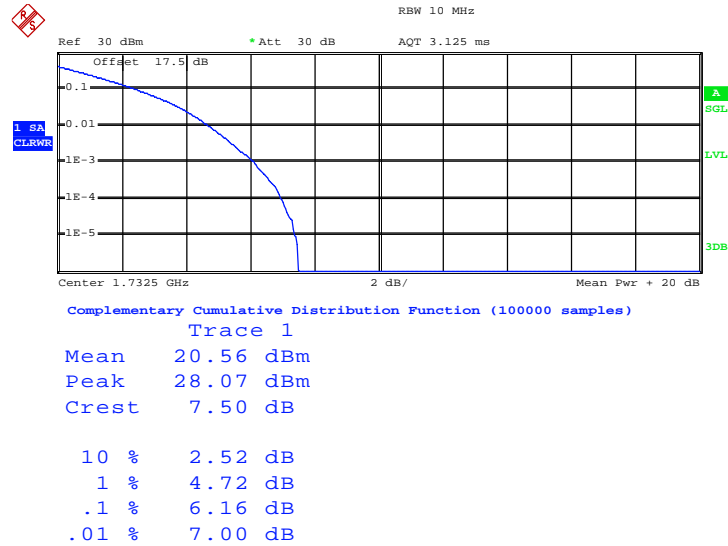
Date: 23.OCT.2013 23:14:33

Peak-to-Average Ratio on LTE Band 4 3MHz / 16QAM



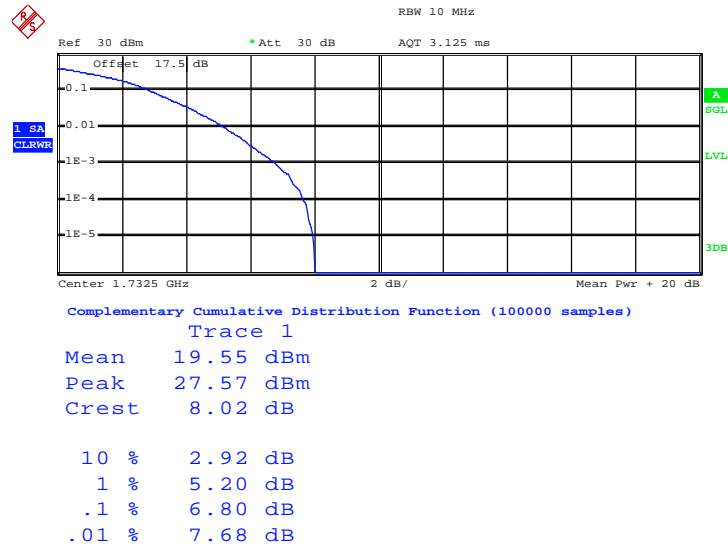
Date: 23.OCT.2013 23:13:58

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



Date: 23.OCT.2013 23:15:19

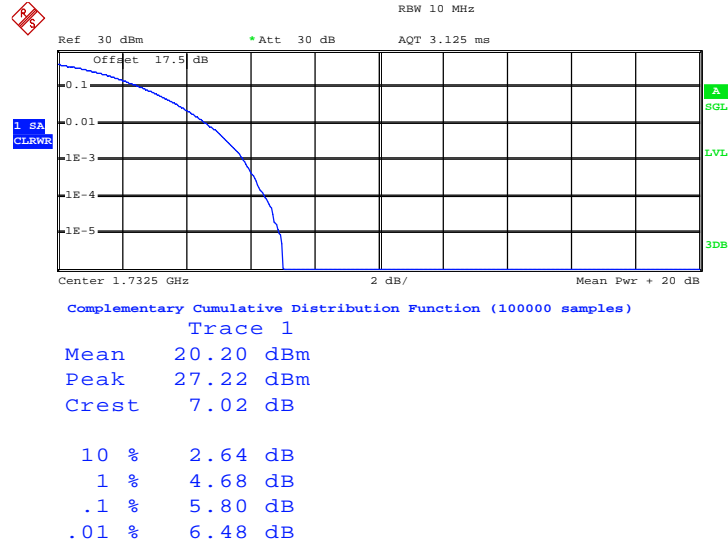
Peak-to-Average Ratio on LTE Band 4 5MHz / 16QAM



Date: 23.OCT.2013 23:15:46

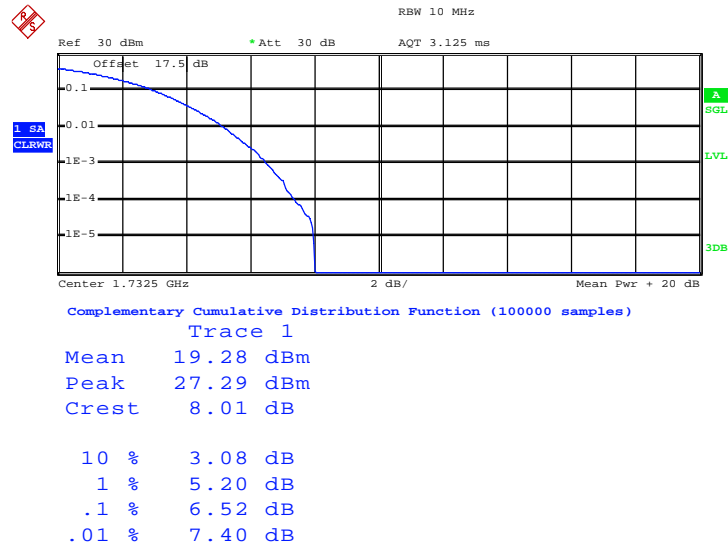


Peak-to-Average Ratio on LTE Band 4 10MHz / QPSK



Date: 23.OCT.2013 23:18:18

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

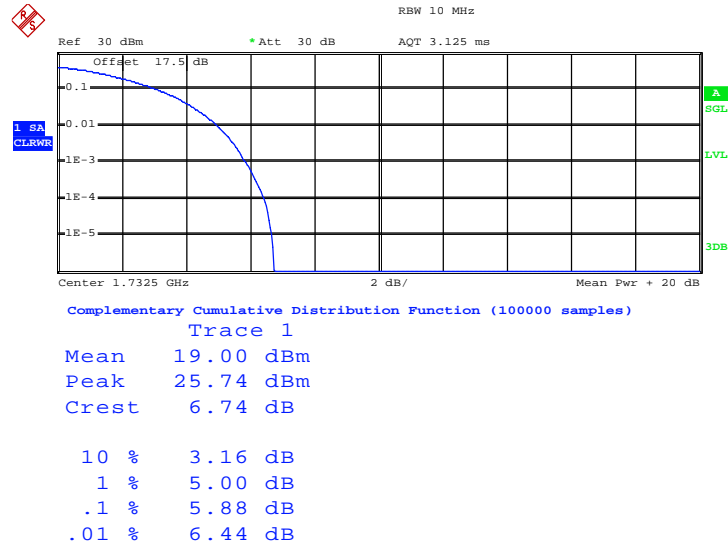


Date: 23.OCT.2013 23:17:05



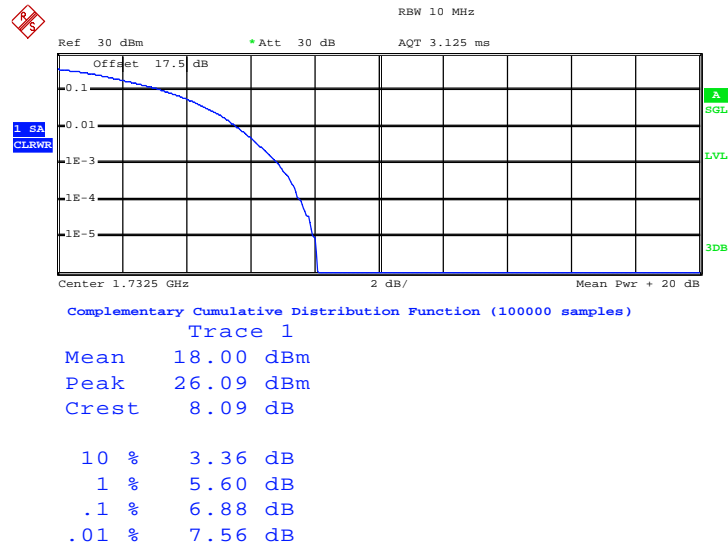


Peak-to-Average Ratio on LTE Band 4 15MHz / QPSK



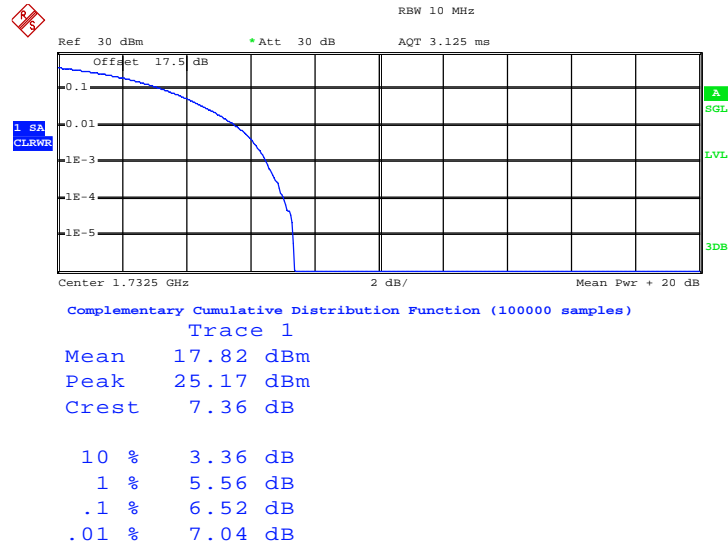
Date: 23.OCT.2013 23:18:55

Peak-to-Average Ratio on LTE Band 4 15MHz / 16QAM



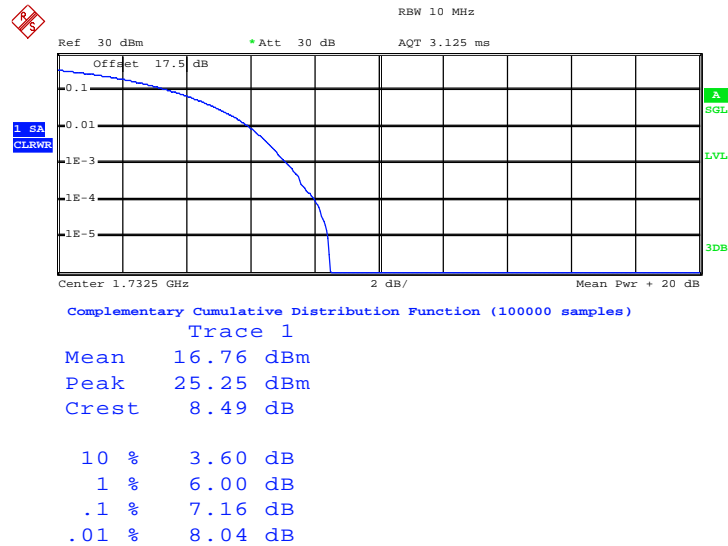
Date: 23.OCT.2013 23:19:37

Peak-to-Average Ratio on LTE Band 4 20MHz / QPSK



Date: 23.OCT.2013 23:21:18

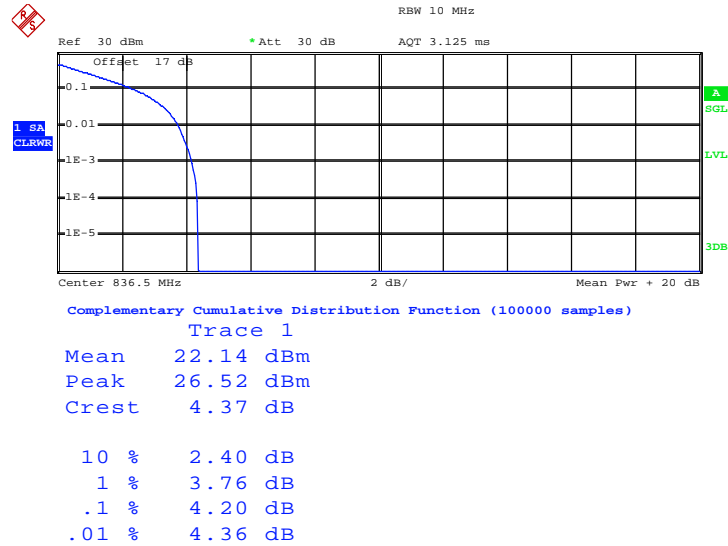
Peak-to-Average Ratio on LTE Band 4 20MHz / 16QAM



Date: 23.OCT.2013 23:20:28

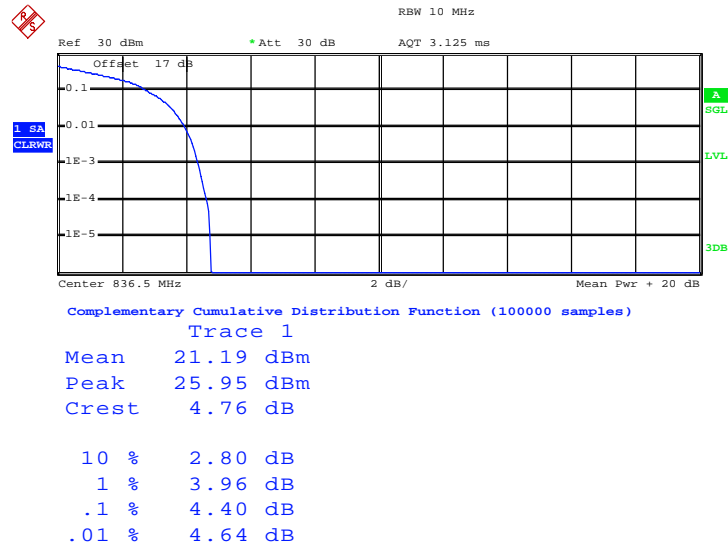


Peak-to-Average Ratio on LTE Band 5 1.4MHz / QPSK



Date: 23.OCT.2013 23:42:55

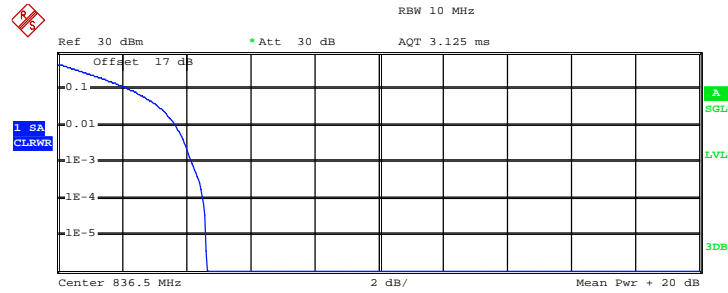
Peak-to-Average Ratio on LTE Band 5 1.4MHz / 16QAM



Date: 23.OCT.2013 23:42:25



Peak-to-Average Ratio on LTE Band 5 3MHz / QPSK



Complementary Cumulative Distribution Function (100000 samples)

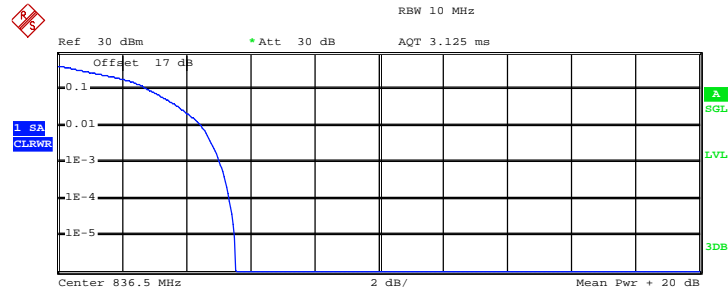
Trace 1

Mean 21.95 dBm  
 Peak 26.59 dBm  
 Crest 4.64 dB

10 % 2.28 dB  
 1 % 3.68 dB  
 .1 % 4.20 dB  
 .01 % 4.52 dB

Date: 23.OCT.2013 23:36:59

Peak-to-Average Ratio on LTE Band 5 3MHz / 16QAM



Complementary Cumulative Distribution Function (100000 samples)

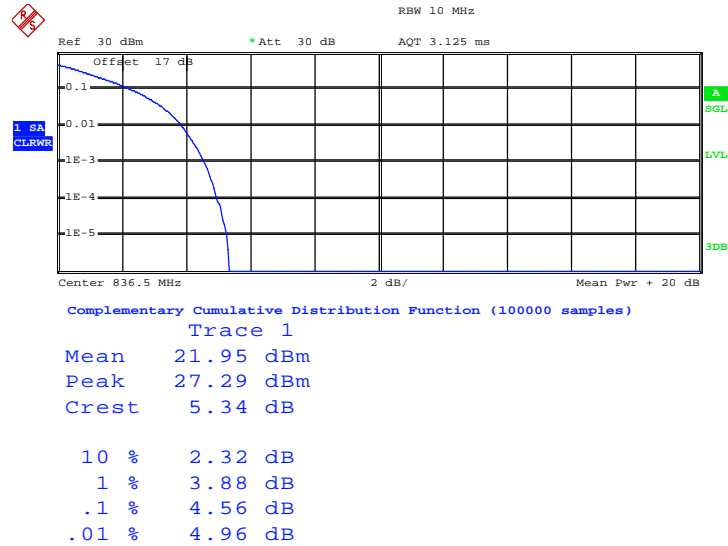
Trace 1

Mean 20.90 dBm  
 Peak 26.44 dBm  
 Crest 5.54 dB

10 % 2.88 dB  
 1 % 4.48 dB  
 .1 % 5.04 dB  
 .01 % 5.36 dB

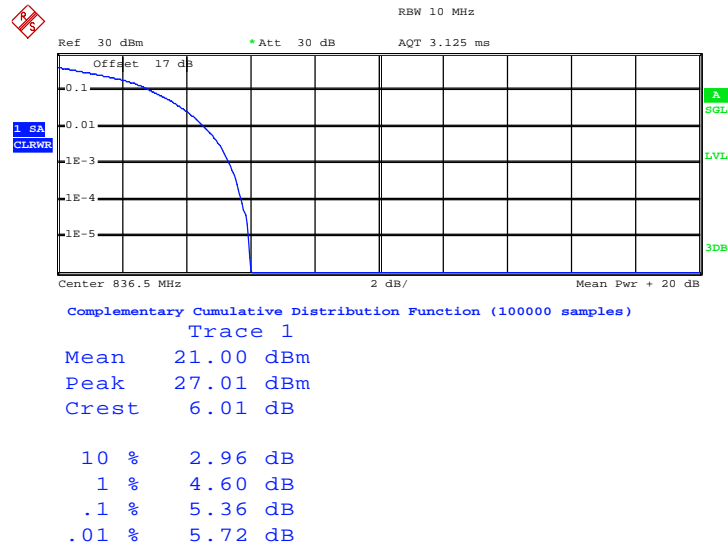
Date: 23.OCT.2013 23:37:26

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



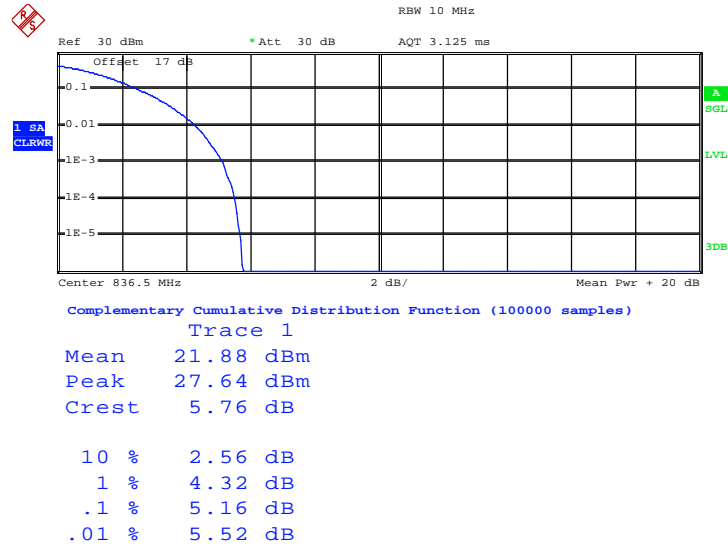
Date: 23.OCT.2013 23:36:28

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



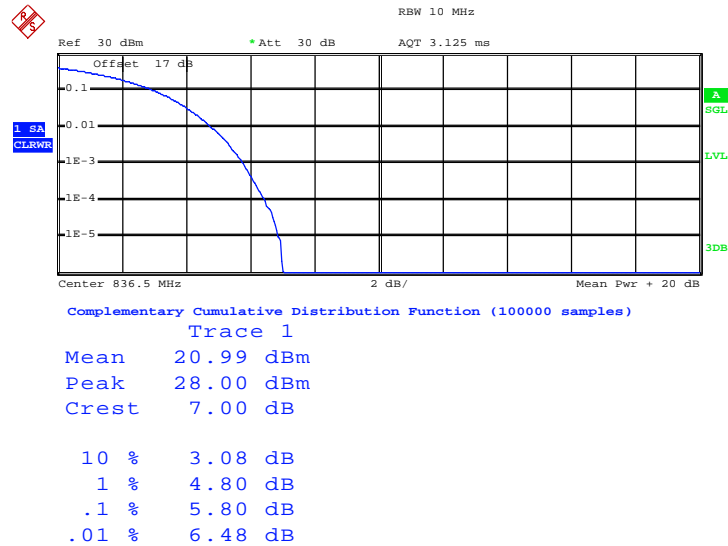
Date: 23.OCT.2013 23:35:56

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



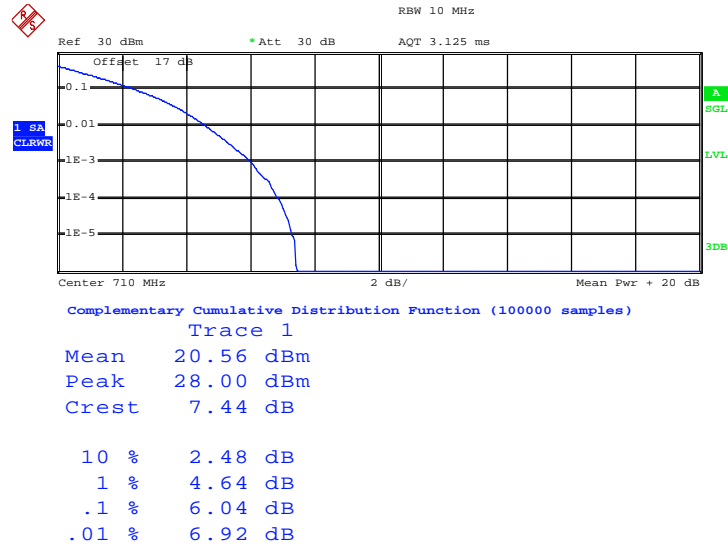
Date: 23.OCT.2013 23:34:44

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



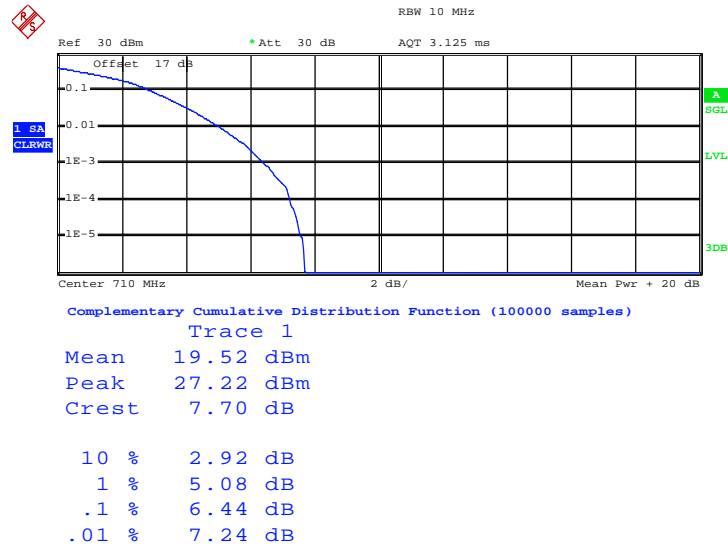
Date: 23.OCT.2013 23:35:15

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



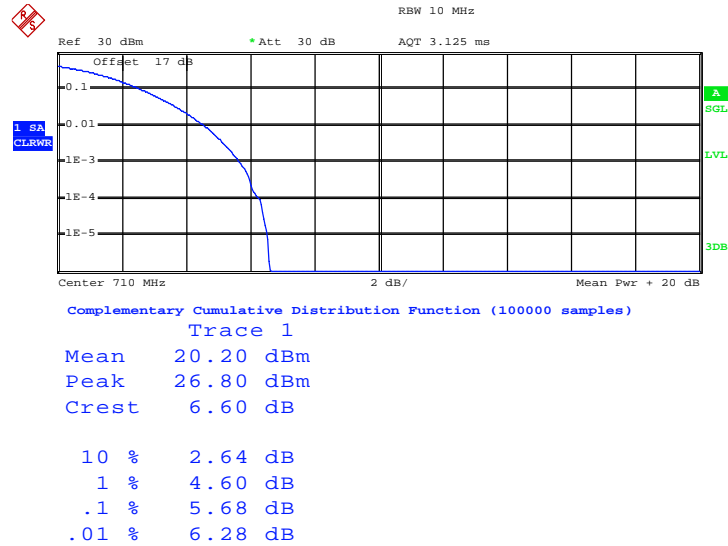
Date: 23.OCT.2013 23:48:20

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



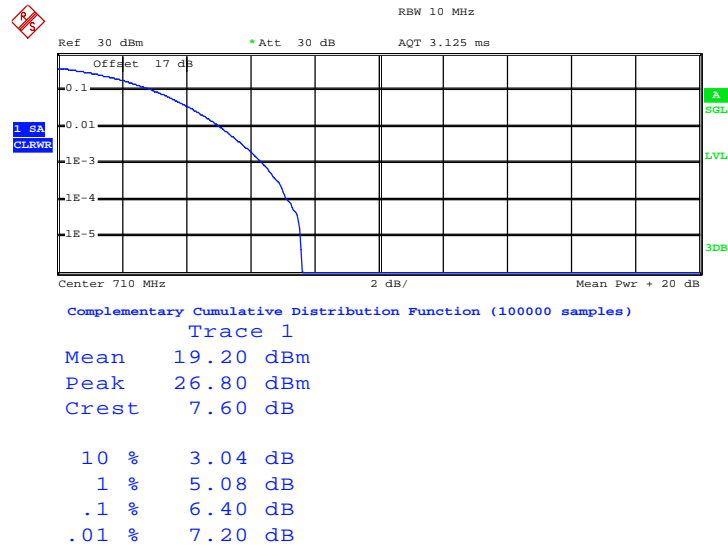
Date: 23.OCT.2013 23:49:01

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



Date: 23.OCT.2013 23:49:58

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



Date: 23.OCT.2013 23:49:33



### 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, 7 and 1 watt with LTE band 4.

#### 3.3.2 Measuring Instruments

Measuring equipment is listed in the section 4 of this test report.

#### 3.3.3 Test Procedures

1. The EUT was placed on a turntable with 1.5 meter height in a fully anechoic chamber.
2. The EUT was set at 3 meters from the receiving antenna, which was mounted on the antenna tower.
3. The radiated emission at the fundamental frequency was measured at 3 m with a test antenna and a spectrum analyzer which used a channel power option across EUT's signal bandwidth per section 4.0 of KDB 971168 D01.
4. The table was rotated 360 degrees to determine the position of the highest radiated power.
5. The height of the receiving antenna is adjusted to look for the maximum ERP/EIRP.
6. Taking the record of maximum ERP/EIRP.
7. A dipole antenna was substituted in place of the EUT and was driven by a signal generator.
8. The conducted power at the terminal of the dipole antenna is measured.
9. Repeat step 3 to step 5 to get the maximum ERP/EIRP of the substitution antenna.
10.  $ERP/EIRP = P_s + E_t - E_s + G_s = P_s + R_t - R_s + G_s$

$P_s$  (dBm) : Input power to substitution antenna.

$G_s$  (dBi or dBd) : Substitution antenna Gain.

$E_t = R_t + AF$

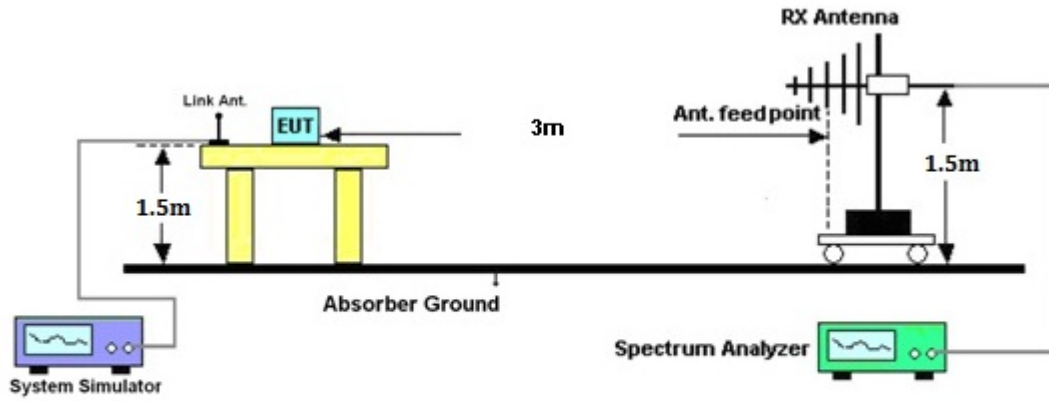
$E_s = R_s + AF$

AF (dB/m) : Receive antenna factor

$R_t$  : The highest received signal in spectrum analyzer for EUT.

$R_s$  : The highest received signal in spectrum analyzer for substitution antenna.

### 3.3.4 Test Setup





3.3.5 Test Result of ERP/EIRP

LTE Band 2 Radiated Power EIRP								
LTE Band	Channel BW (MHz)	Modulation	RB Configuration		Freq. (MHz)	EIRP (dBm)	EIRP (W)	H/V
			RB Size	RB Offset				
2	1.4	QPSK	3	2	1850.7	12.21	0.0166	H
2	1.4	QPSK	1	0	1880	12.09	0.0162	H
2	1.4	QPSK	1	0	1909.3	11.83	0.0152	H
2	1.4	QPSK	3	2	1850.7	12.17	0.0165	V
2	1.4	QPSK	1	0	1880	12.92	0.0196	V
2	1.4	QPSK	1	0	1909.3	13.81	0.0240	V
2	1.4	16QAM	3	0	1850.7	11.31	0.0135	H
2	1.4	16QAM	3	2	1880	11.44	0.0139	H
2	1.4	16QAM	3	1	1909.3	10.64	0.0116	H
2	1.4	16QAM	3	0	1850.7	11.41	0.0138	V
2	1.4	16QAM	3	2	1880	12.42	0.0175	V
2	1.4	16QAM	3	1	1909.3	12.55	0.0180	V
2	3	QPSK	1	14	1851.5	11.97	0.0157	H
2	3	QPSK	1	7	1880	12.22	0.0167	H
2	3	QPSK	1	0	1908.5	11.53	0.0142	H
2	3	QPSK	1	14	1851.5	13.15	0.0207	V
2	3	QPSK	1	7	1880	12.90	0.0195	V
2	3	QPSK	1	0	1908.5	13.06	0.0202	V
2	3	16QAM	1	0	1851.5	11.41	0.0138	H
2	3	16QAM	1	0	1880	11.09	0.0129	H
2	3	16QAM	1	14	1908.5	11.01	0.0126	H
2	3	16QAM	1	0	1851.5	13.24	0.0211	V
2	3	16QAM	1	0	1880	12.00	0.0158	V
2	3	16QAM	1	14	1908.5	12.64	0.0184	V



LTE Band 2 Radiated Power EIRP								
LTE Band	Channel BW (MHz)	Modulation	RB Configuration		Freq. (MHz)	EIRP (dBm)	EIRP (W)	H/V
			RB Size	RB Offset				
2	5	QPSK	1	0	1852.5	11.94	0.0156	H
2	5	QPSK	1	0	1880	12.26	0.0168	H
2	5	QPSK	1	24	1907.5	12.07	0.0161	H
2	5	QPSK	1	0	1852.5	12.84	0.0192	V
2	5	QPSK	1	0	1880	13.17	0.0207	V
2	5	QPSK	1	24	1907.5	13.66	0.0232	V
2	5	16QAM	1	12	1852.5	10.95	0.0124	H
2	5	16QAM	1	0	1880	11.24	0.0133	H
2	5	16QAM	1	24	1907.5	11.04	0.0127	H
2	5	16QAM	1	12	1852.5	12.87	0.0194	V
2	5	16QAM	1	0	1880	12.34	0.0171	V
2	5	16QAM	1	24	1907.5	12.78	0.0190	V
2	10	QPSK	1	0	1855	11.76	0.0150	H
2	10	QPSK	1	0	1880	12.04	0.0160	H
2	10	QPSK	1	49	1905	11.86	0.0153	H
2	10	QPSK	1	0	1855	12.62	0.0183	V
2	10	QPSK	1	0	1880	13.12	0.0205	V
2	10	QPSK	1	49	1905	13.48	0.0223	V
2	10	16QAM	1	0	1855	11.19	0.0132	H
2	10	16QAM	1	0	1880	10.93	0.0124	H
2	10	16QAM	1	49	1905	10.92	0.0124	H
2	10	16QAM	1	0	1855	12.80	0.0191	V
2	10	16QAM	1	0	1880	12.24	0.0167	V
2	10	16QAM	1	49	1905	12.83	0.0192	V



LTE Band 2 Radiated Power EIRP								
LTE Band	Channel BW (MHz)	Modulation	RB Configuration		Freq. (MHz)	EIRP (dBm)	EIRP (W)	H/V
			RB Size	RB Offset				
2	15	QPSK	1	0	1857.5	11.99	0.0158	H
2	15	QPSK	1	0	1880	11.66	0.0147	H
2	15	QPSK	1	74	1902.5	11.85	0.0153	H
2	15	QPSK	1	0	1857.5	12.35	0.0172	V
2	15	QPSK	1	0	1880	10.97	0.0125	V
2	15	QPSK	1	74	1902.5	13.55	0.0226	V
2	15	16QAM	1	37	1857.5	10.85	0.0122	H
2	15	16QAM	1	37	1880	11.13	0.0130	H
2	15	16QAM	1	74	1902.5	11.12	0.0129	H
2	15	16QAM	1	37	1857.5	12.22	0.0167	V
2	15	16QAM	1	37	1880	12.13	0.0163	V
2	15	16QAM	1	74	1902.5	12.88	0.0194	V
2	20	QPSK	1	0	1860	11.07	0.0128	H
2	20	QPSK	1	0	1880	11.30	0.0135	H
2	20	QPSK	1	99	1900	11.74	0.0149	H
2	20	QPSK	1	0	1860	10.07	0.0102	V
2	20	QPSK	1	0	1880	10.93	0.0124	V
2	20	QPSK	1	99	1900	11.88	0.0154	V
2	20	16QAM	1	99	1860	10.99	0.0126	H
2	20	16QAM	1	49	1880	11.11	0.0129	H
2	20	16QAM	1	0	1900	11.86	0.0153	H
2	20	16QAM	1	99	1860	11.85	0.0153	V
2	20	16QAM	1	49	1880	12.28	0.0169	V
2	20	16QAM	1	0	1900	13.10	0.0204	V



LTE Band 4 Radiated Power EIRP								
LTE Band	Channel BW (MHz)	Modulation	RB Configuration		Freq. (MHz)	EIRP (dBm)	EIRP (W)	H/V
			RB Size	RB Offset				
4	1.4	QPSK	1	0	1710.7	14.69	0.0294	H
4	1.4	QPSK	1	2	1732.5	13.10	0.0204	H
4	1.4	QPSK	1	0	1754.3	13.11	0.0205	H
4	1.4	QPSK	1	0	1710.7	15.17	0.0329	V
4	1.4	QPSK	1	2	1732.5	14.14	0.0259	V
4	1.4	QPSK	1	0	1754.3	15.29	0.0338	V
4	1.4	16QAM	1	2	1710.7	13.40	0.0219	H
4	1.4	16QAM	3	0	1732.5	12.47	0.0177	H
4	1.4	16QAM	3	1	1754.3	12.23	0.0167	H
4	1.4	16QAM	1	2	1710.7	14.44	0.0278	V
4	1.4	16QAM	3	0	1732.5	13.74	0.0237	V
4	1.4	16QAM	3	1	1754.3	14.53	0.0284	V
4	3	QPSK	1	0	1711.5	14.65	0.0292	H
4	3	QPSK	1	7	1732.5	13.05	0.0202	H
4	3	QPSK	1	0	1753.5	13.36	0.0217	H
4	3	QPSK	1	0	1711.5	15.10	0.0324	V
4	3	QPSK	1	7	1732.5	14.17	0.0261	V
4	3	QPSK	1	0	1753.5	15.48	0.0353	V
4	3	16QAM	1	7	1711.5	13.49	0.0223	H
4	3	16QAM	1	14	1732.5	12.17	0.0165	H
4	3	16QAM	1	0	1753.5	12.53	0.0179	H
4	3	16QAM	1	7	1711.5	14.28	0.0268	V
4	3	16QAM	1	14	1732.5	13.41	0.0219	V
4	3	16QAM	1	0	1753.5	14.73	0.0297	V



LTE Band 4 Radiated Power EIRP								
LTE Band	Channel BW (MHz)	Modulation	RB Configuration		Freq. (MHz)	EIRP (dBm)	EIRP (W)	H/V
			RB Size	RB Offset				
4	5	QPSK	1	0	1712.5	14.67	0.0293	H
4	5	QPSK	1	0	1732.5	13.04	0.0201	H
4	5	QPSK	1	0	1752.5	13.76	0.0238	H
4	5	QPSK	1	0	1712.5	15.10	0.0324	V
4	5	QPSK	1	0	1732.5	14.00	0.0251	V
4	5	QPSK	1	0	1752.5	15.73	0.0374	V
4	5	16QAM	1	0	1712.5	13.82	0.0241	H
4	5	16QAM	1	0	1732.5	12.05	0.0160	H
4	5	16QAM	1	12	1752.5	12.44	0.0175	H
4	5	16QAM	1	0	1712.5	14.61	0.0289	V
4	5	16QAM	1	0	1732.5	13.23	0.0210	V
4	5	16QAM	1	12	1752.5	14.66	0.0292	V
4	10	QPSK	1	0	1715	14.58	0.0287	H
4	10	QPSK	1	49	1732.5	13.36	0.0217	H
4	10	QPSK	1	0	1750	13.89	0.0245	H
4	10	QPSK	1	0	1715	15.04	0.0319	V
4	10	QPSK	1	49	1732.5	14.70	0.0295	V
4	10	QPSK	1	0	1750	15.76	0.0377	V
4	10	16QAM	1	0	1715	13.83	0.0242	H
4	10	16QAM	1	0	1732.5	11.96	0.0157	H
4	10	16QAM	1	24	1750	12.74	0.0188	H
4	10	16QAM	1	0	1715	14.45	0.0279	V
4	10	16QAM	1	0	1732.5	13.06	0.0202	V
4	10	16QAM	1	24	1750	14.76	0.0299	V



LTE Band 4 Radiated Power EIRP								
LTE Band	Channel BW (MHz)	Modulation	RB Configuration		Freq. (MHz)	EIRP (dBm)	EIRP (W)	H/V
			RB Size	RB Offset				
4	15	QPSK	1	0	1717.5	14.52	0.0283	H
4	15	QPSK	1	74	1732.5	13.65	0.0232	H
4	15	QPSK	1	37	1747.5	13.74	0.0237	H
4	15	QPSK	1	0	1717.5	14.98	0.0315	V
4	15	QPSK	1	74	1732.5	15.01	0.0317	V
4	15	QPSK	1	37	1747.5	15.73	0.0374	V
4	15	16QAM	1	37	1717.5	13.05	0.0202	H
4	15	16QAM	1	0	1732.5	12.13	0.0163	H
4	15	16QAM	1	37	1747.5	12.90	0.0195	H
4	15	16QAM	1	37	1717.5	13.65	0.0232	V
4	15	16QAM	1	0	1732.5	12.97	0.0198	V
4	15	16QAM	1	37	1747.5	14.93	0.0311	V
4	20	QPSK	1	0	1720	14.62	0.0290	H
4	20	QPSK	1	99	1732.5	11.40	0.0138	H
4	20	QPSK	1	49	1745	13.77	0.0238	H
4	20	QPSK	1	0	1720	15.08	0.0322	V
4	20	QPSK	1	99	1732.5	15.11	0.0324	V
4	20	QPSK	1	49	1745	15.62	0.0365	V
4	20	16QAM	1	0	1720	13.88	0.0244	H
4	20	16QAM	1	99	1732.5	12.79	0.0190	H
4	20	16QAM	1	49	1745	12.94	0.0197	H
4	20	16QAM	1	0	1720	14.44	0.0278	V
4	20	16QAM	1	99	1732.5	14.26	0.0267	V
4	20	16QAM	1	49	1745	14.77	0.0300	V





LTE Band 5 Radiated Power ERP								
LTE Band	Channel BW (MHz)	Modulation	RB Configuration		Freq. (MHz)	ERP (dBm)	ERP (W)	H/V
			RB Size	RB Offset				
5	1.4	QPSK	1	5	824.7	12.27	0.0169	H
5	1.4	QPSK	1	5	836.5	12.42	0.0175	H
5	1.4	QPSK	1	0	848.3	11.25	0.0133	H
5	1.4	QPSK	1	5	824.7	8.54	0.0071	V
5	1.4	QPSK	1	5	836.5	8.37	0.0069	V
5	1.4	QPSK	1	0	848.3	7.87	0.0061	V
5	1.4	16QAM	1	5	824.7	11.37	0.0137	H
5	1.4	16QAM	3	1	836.5	11.71	0.0148	H
5	1.4	16QAM	1	2	848.3	10.23	0.0105	H
5	1.4	16QAM	1	5	824.7	7.41	0.0055	V
5	1.4	16QAM	3	1	836.5	7.92	0.0062	V
5	1.4	16QAM	1	2	848.3	6.93	0.0049	V
5	3	QPSK	1	7	825.5	11.92	0.0156	H
5	3	QPSK	1	14	836.5	12.25	0.0168	H
5	3	QPSK	1	0	847.5	11.06	0.0128	H
5	3	QPSK	1	7	825.5	7.92	0.0062	V
5	3	QPSK	1	14	836.5	8.18	0.0066	V
5	3	QPSK	1	0	847.5	7.63	0.0058	V
5	3	16QAM	8	4	825.5	11.42	0.0139	H
5	3	16QAM	1	0	836.5	10.96	0.0125	H
5	3	16QAM	1	7	847.5	10.21	0.0105	H
5	3	16QAM	8	4	825.5	7.27	0.0053	V
5	3	16QAM	1	0	836.5	6.98	0.0050	V
5	3	16QAM	1	7	847.5	6.82	0.0048	V



LTE Band 5 Radiated Power ERP								
LTE Band	Channel BW (MHz)	Modulation	RB Configuration		Freq. (MHz)	ERP (dBm)	ERP (W)	H/V
			RB Size	RB Offset				
5	5	QPSK	1	12	826.5	12.11	0.0163	H
5	5	QPSK	1	12	836.5	12.27	0.0169	H
5	5	QPSK	1	12	846.5	11.03	0.0127	H
5	5	QPSK	1	12	826.5	8.00	0.0063	V
5	5	QPSK	1	12	836.5	8.23	0.0067	V
5	5	QPSK	1	12	846.5	7.61	0.0058	V
5	5	16QAM	1	12	826.5	11.54	0.0143	H
5	5	16QAM	1	24	836.5	11.04	0.0127	H
5	5	16QAM	1	24	846.5	10.14	0.0103	H
5	5	16QAM	1	12	826.5	7.29	0.0054	V
5	5	16QAM	1	24	836.5	7.08	0.0051	V
5	5	16QAM	1	24	846.5	6.88	0.0049	V
5	10	QPSK	1	24	829	12.24	0.0167	H
5	10	QPSK	1	24	836.5	12.29	0.0169	H
5	10	QPSK	1	0	844	11.20	0.0132	H
5	10	QPSK	1	24	829	7.85	0.0061	V
5	10	QPSK	1	24	836.5	8.44	0.0070	V
5	10	QPSK	1	0	844	7.31	0.0054	V
5	10	16QAM	1	24	829	11.38	0.0137	H
5	10	16QAM	1	49	836.5	10.28	0.0107	H
5	10	16QAM	1	24	844	10.24	0.0106	H
5	10	16QAM	1	24	829	6.85	0.0048	V
5	10	16QAM	1	49	836.5	5.94	0.0039	V
5	10	16QAM	1	24	844	6.98	0.0050	V



LTE Band 7 Radiated Power EIRP								
LTE Band	Channel BW (MHz)	Modulation	RB Configuration		Freq. (MHz)	EIRP (dBm)	EIRP (W)	H/V
			RB Size	RB Offset				
7	5	QPSK	1	12	2506.5	16.28	0.0425	H
7	5	QPSK	1	12	2534.5	16.48	0.0445	H
7	5	QPSK	1	0	2567.5	17.17	0.0521	H
7	5	QPSK	1	12	2506.5	15.11	0.0324	V
7	5	QPSK	1	12	2534.5	15.37	0.0344	V
7	5	QPSK	1	0	2567.5	16.22	0.0419	V
7	5	16QAM	1	24	2506.5	15.19	0.0330	H
7	5	16QAM	1	24	2534.5	15.53	0.0357	H
7	5	16QAM	1	12	2567.5	16.06	0.0404	H
7	5	16QAM	1	24	2506.5	13.94	0.0248	V
7	5	16QAM	1	24	2534.5	14.41	0.0276	V
7	5	16QAM	1	12	2567.5	15.09	0.0323	V
7	10	QPSK	1	0	2509	16.18	0.0415	H
7	10	QPSK	1	24	2532	16.37	0.0434	H
7	10	QPSK	25	12	2565	17.16	0.0520	H
7	10	QPSK	1	0	2509	15.01	0.0317	V
7	10	QPSK	1	24	2532	15.33	0.0341	V
7	10	QPSK	25	12	2565	16.14	0.0411	V
7	10	16QAM	1	0	2509	15.11	0.0324	H
7	10	16QAM	1	24	2532	15.21	0.0332	H
7	10	16QAM	25	12	2565	15.96	0.0394	H
7	10	16QAM	1	0	2509	13.85	0.0243	V
7	10	16QAM	1	24	2532	14.18	0.0262	V
7	10	16QAM	25	12	2565	15.01	0.0317	V



LTE Band 7 Radiated Power EIRP								
LTE Band	Channel BW (MHz)	Modulation	RB Configuration		Freq. (MHz)	EIRP (dBm)	EIRP (W)	H/V
			RB Size	RB Offset				
7	15	QPSK	1	37	2511.5	16.42	0.0439	H
7	15	QPSK	1	74	2529.5	16.03	0.0401	H
7	15	QPSK	1	0	2562.5	16.02	0.0400	H
7	15	QPSK	1	37	2511.5	15.24	0.0334	V
7	15	QPSK	1	74	2529.5	15.00	0.0316	V
7	15	QPSK	1	0	2562.5	14.81	0.0303	V
7	15	16QAM	1	0	2511.5	15.13	0.0326	H
7	15	16QAM	1	74	2529.5	14.85	0.0305	H
7	15	16QAM	1	74	2562.5	15.78	0.0378	H
7	15	16QAM	1	0	2511.5	13.87	0.0244	V
7	15	16QAM	1	74	2529.5	13.95	0.0248	V
7	15	16QAM	1	74	2562.5	14.86	0.0306	V
7	20	QPSK	1	99	2514	16.68	0.0466	H
7	20	QPSK	1	99	2527	16.08	0.0406	H
7	20	QPSK	1	99	2514	15.64	0.0366	V
7	20	QPSK	1	99	2527	14.97	0.0314	V
7	20	16QAM	1	99	2514	15.75	0.0376	H
7	20	16QAM	1	0	2527	16.05	0.0403	H
7	20	16QAM	1	99	2514	14.65	0.0292	V
7	20	16QAM	1	0	2527	14.96	0.0313	V



LTE Band 17 Radiated Power ERP								
LTE Band	Channel BW (MHz)	Modulation	RB Configuration		Freq. (MHz)	ERP (dBm)	ERP (W)	H/V
			RB Size	RB Offset				
17	5	QPSK	1	0	706.5	8.30	0.0068	H
17	5	QPSK	1	12	710	8.74	0.0075	H
17	5	QPSK	1	12	713.5	8.37	0.0069	H
17	5	QPSK	1	0	706.5	5.49	0.0035	V
17	5	QPSK	1	12	710	6.80	0.0048	V
17	5	QPSK	1	12	713.5	6.33	0.0043	V
17	5	16QAM	1	12	706.5	6.43	0.0044	H
17	5	16QAM	1	12	710	6.96	0.0050	H
17	5	16QAM	1	24	713.5	7.79	0.0060	H
17	5	16QAM	1	12	706.5	3.75	0.0024	V
17	5	16QAM	1	12	710	4.56	0.0029	V
17	5	16QAM	1	24	713.5	4.58	0.0029	V
17	10	QPSK	1	24	709	9.10	0.0081	H
17	10	QPSK	1	24	710	10.23	0.0105	H
17	10	QPSK	1	24	711	8.96	0.0079	H
17	10	QPSK	1	24	709	7.17	0.0052	V
17	10	QPSK	1	24	710	7.61	0.0058	V
17	10	QPSK	1	24	711	7.05	0.0051	V
17	10	16QAM	1	49	709	7.52	0.0056	H
17	10	16QAM	1	0	710	7.48	0.0056	H
17	10	16QAM	1	49	711	6.12	0.0041	H
17	10	16QAM	1	49	709	5.62	0.0036	V
17	10	16QAM	1	0	710	4.80	0.0030	V
17	10	16QAM	1	49	711	5.19	0.0033	V

### 3.4 99% Occupied Bandwidth and 26dB Bandwidth Measurement

#### 3.4.1 Description of 99% 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 26dB 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 26 dB.

The 26 dB emission bandwidth is defined as the frequency range between two points, one above and one below the carrier frequency, at which the spectral density of the emission is attenuated 26 dB below the maximum in-band spectral density of the modulated signal. Spectral density (power per unit bandwidth) is to be measured with a detector of resolution bandwidth equal to approximately 1.0% of the emission bandwidth.

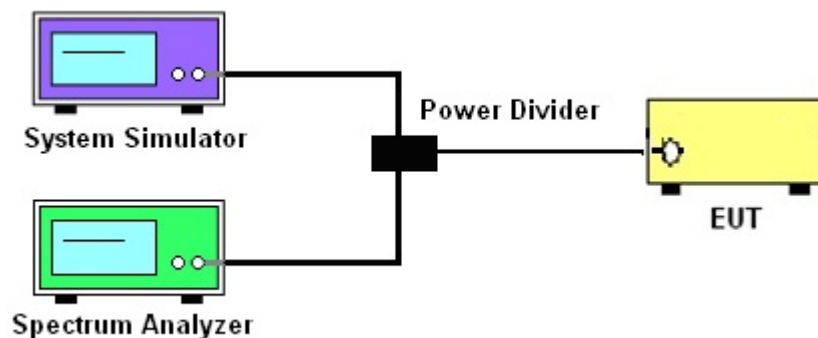
#### 3.4.2 Measuring Instruments

Measuring equipment is listed in the section 4 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 26dB and 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 of 99% Occupied Bandwidth and 26dB Bandwidth

Modes	LTE Band 2			
BW / Mod.	1.4MHz / QPSK	1.4MHz / 16QAM	3MHz / QPSK	3MHz / 16QAM
99% OBW (MHz)	1.0976	1.1032	2.7480	2.7360
26dB BW (MHz)	1.3048	1.3160	3.1200	3.1440
BW / Mod.	5MHz / QPSK	5MHz / 16QAM	10MHz / QPSK	10MHz / 16QAM
99% OBW (MHz)	4.5000	4.5000	9.1600	9.1200
26dB BW (MHz)	5.1200	5.1000	10.1600	10.0800
BW / Mod.	15MHz / QPSK	15MHz / 16QAM	20MHz / QPSK	20MHz / 16QAM
99% OBW (MHz)	13.5600	13.5600	18.8000	18.8000
26dB BW (MHz)	14.7600	14.9400	21.2000	21.2800

Modes	LTE Band 4			
BW / Mod.	1.4MHz / QPSK	1.4MHz / 16QAM	3MHz / QPSK	3MHz / 16QAM
99% OBW (MHz)	1.1032	1.1032	2.7360	2.7360
26dB BW (MHz)	1.3216	1.3048	3.1080	3.1440
BW / Mod.	5MHz / QPSK	5MHz / 16QAM	10MHz / QPSK	10MHz / 16QAM
99% OBW (MHz)	4.5000	4.5200	9.1600	9.0800
26dB BW (MHz)	5.1200	5.0800	10.1600	10.0800
BW / Mod.	15MHz / QPSK	15MHz / 16QAM	20MHz / QPSK	20MHz / 16QAM
99% OBW (MHz)	13.5600	13.5000	18.8000	18.8000
26dB BW (MHz)	14.8200	15.0600	21.2000	21.3600

Modes	LTE Band 5			
BW / Mod.	1.4MHz / QPSK	1.4MHz / 16QAM	3MHz / QPSK	3MHz / 16QAM
99% OBW (MHz)	1.0976	1.1032	2.7360	2.7360
26dB BW (MHz)	1.2936	1.3160	3.1200	3.1560
BW / Mod.	5MHz / QPSK	5MHz / 16QAM	10MHz / QPSK	10MHz / 16QAM
99% OBW (MHz)	4.5000	4.5000	9.0800	9.0800
26dB BW (MHz)	5.1200	5.0200	10.0800	10.0800



Modes	LTE Band 7			
BW / Mod.	5MHz / QPSK	5MHz / 16QAM	10MHz / QPSK	10MHz / 16QAM
99% OBW (MHz)	4.5000	4.5000	9.1600	9.1200
26dB BW (MHz)	5.1000	5.0600	10.0800	10.0800
BW / Mod.	15MHz / QPSK	15MHz / 16QAM	20MHz / QPSK	20MHz / 16QAM
99% OBW (MHz)	13.5600	13.5600	18.7200	18.8800
26dB BW (MHz)	14.7600	14.8800	21.2000	21.4400

Modes	LTE Band 17			
BW / Mod.	5MHz / QPSK	5MHz / 16QAM	10MHz / QPSK	10MHz / 16QAM
99% OBW (MHz)	4.5000	4.5000	9.1200	9.0400
26dB BW (MHz)	5.0800	5.0600	10.0400	10.0400

**Note:**

The maximum RB configurations of the 99% Occupied Bandwidth and 26dB Bandwidth summary as below:

BW1.4MHz RB setting : RB Size 6, RB offset 0

BW3.0MHz RB setting : RB Size 15, RB offset 0

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

BW10MHz RB setting : RB Size 50, RB offset 0

BW15MHz RB setting : RB Size 75, RB offset 0

BW20MHz RB setting : RB Size 100, RB offset 0

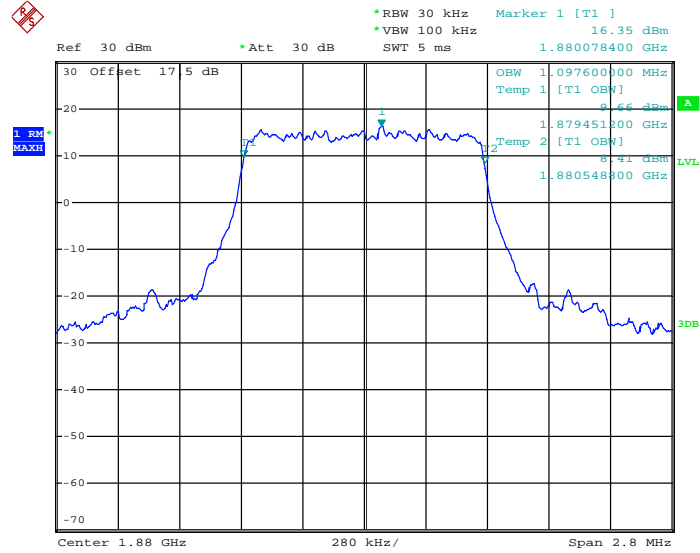




### 3.4.6 Test Plots of 99% Occupied Bandwidth and 26dB Bandwidth

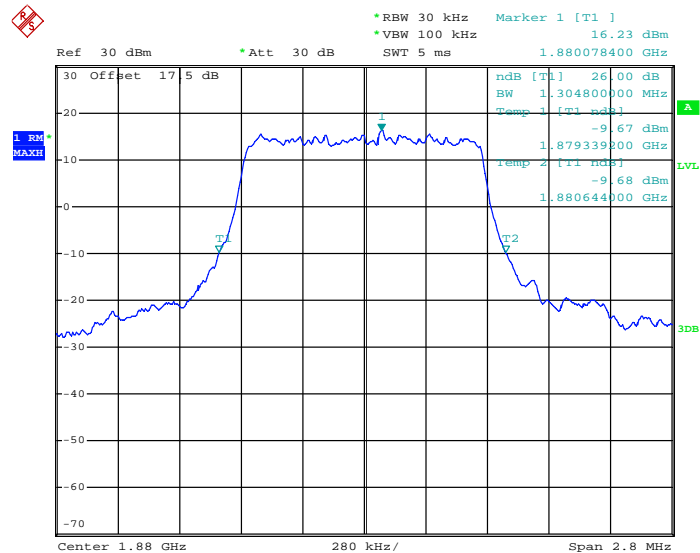
Band :	LTE Band 2	BW / Mod. :	1.4MHz / QPSK
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99% Occupied Bandwidth Plot on Channel 18900



Date: 24.OCT.2013 00:13:09

26dB Bandwidth Plot on Channel 18900

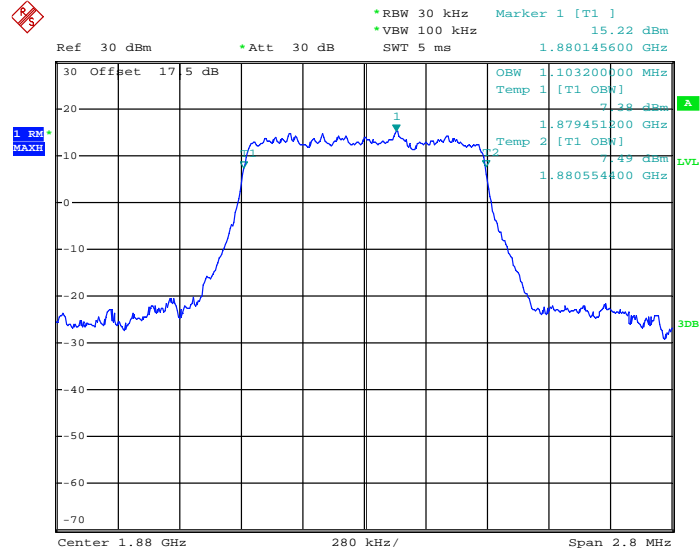


Date: 23.OCT.2013 20:19:38



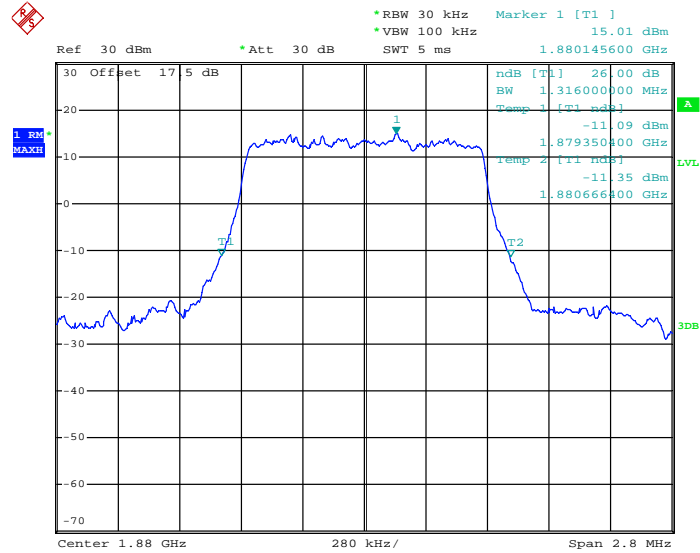
<b>Band :</b>	LTE Band 2	<b>BW / Mod. :</b>	1.4MHz / 16QAM
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99% Occupied Bandwidth Plot on Channel 18900



Date: 24.OCT.2013 00:14:08

26dB Bandwidth Plot on Channel 18900

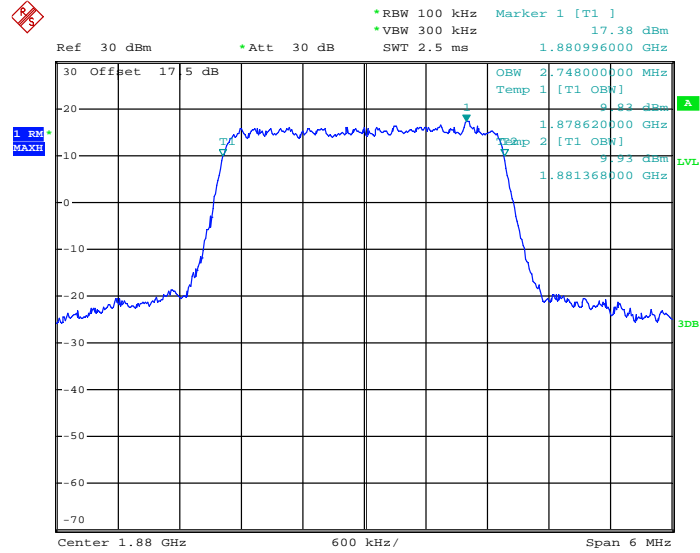


Date: 23.OCT.2013 20:20:59



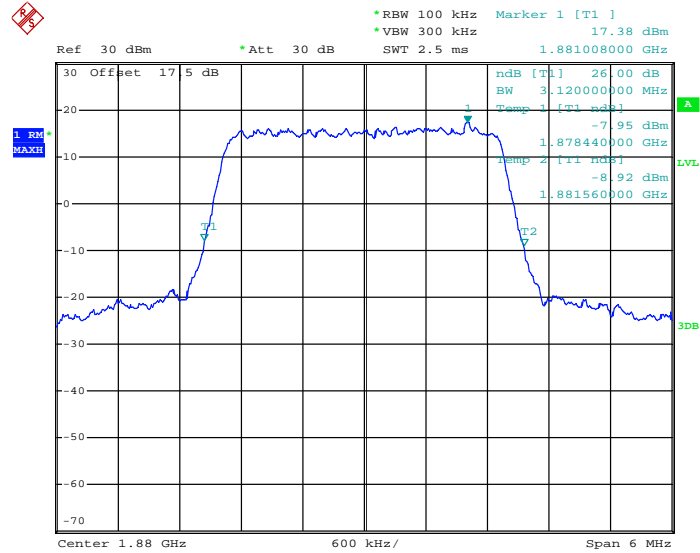
Band :	LTE Band 2	BW / Mod. :	3MHz / QPSK
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99% Occupied Bandwidth Plot on Channel 18900



Date: 24.OCT.2013 00:23:19

26dB Bandwidth Plot on Channel 18900

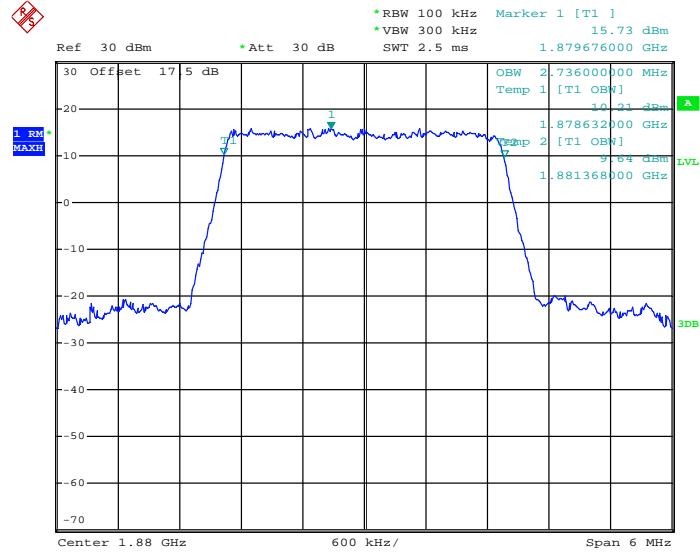


Date: 23.OCT.2013 20:27:20



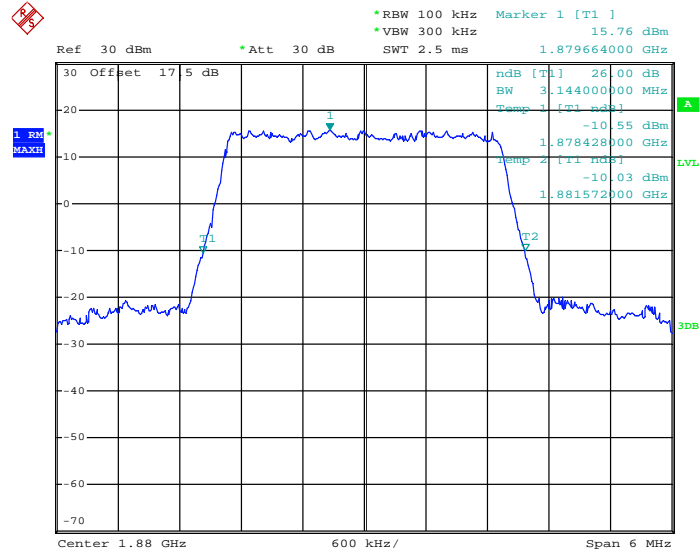
<b>Band :</b>	LTE Band 2	<b>BW / Mod. :</b>	3MHz / 16QAM
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99% Occupied Bandwidth Plot on Channel 18900



Date: 24.OCT.2013 00:25:00

26dB Bandwidth Plot on Channel 18900

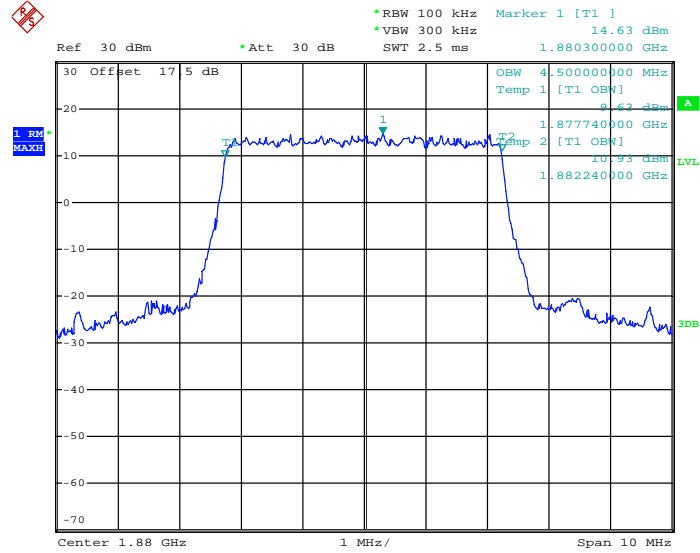


Date: 23.OCT.2013 20:24:25



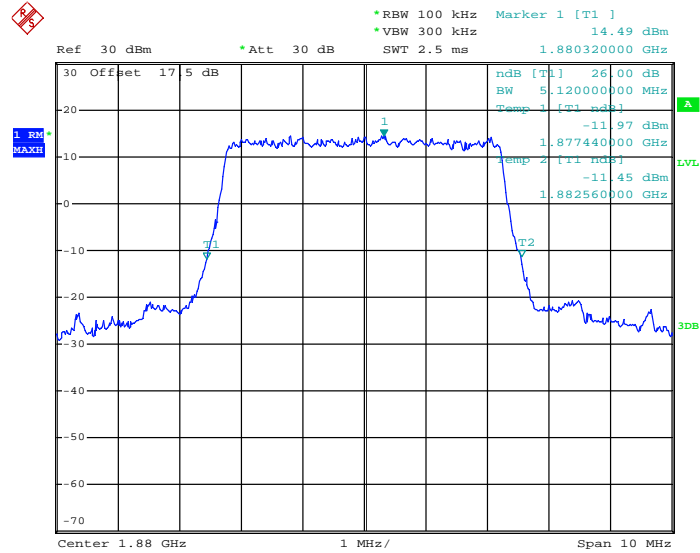
<b>Band :</b>	LTE Band 2	<b>BW / Mod. :</b>	5MHz / QPSK
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99% Occupied Bandwidth Plot on Channel 18900



Date: 24.OCT.2013 00:35:10

26dB Bandwidth Plot on Channel 18900

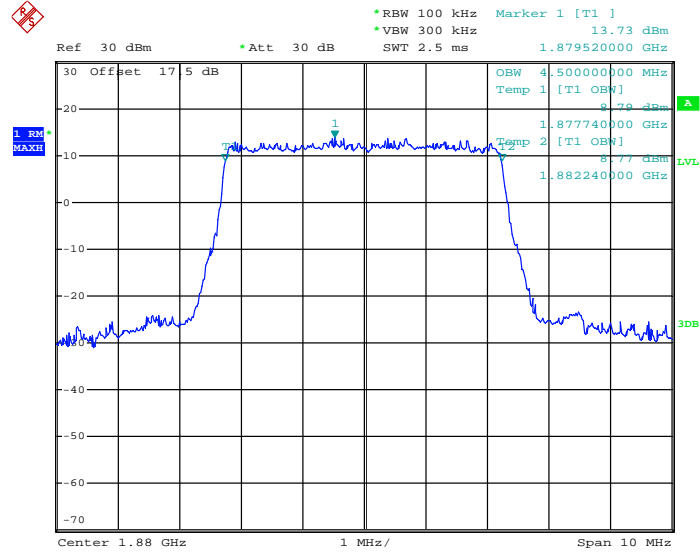


Date: 23.OCT.2013 20:31:21



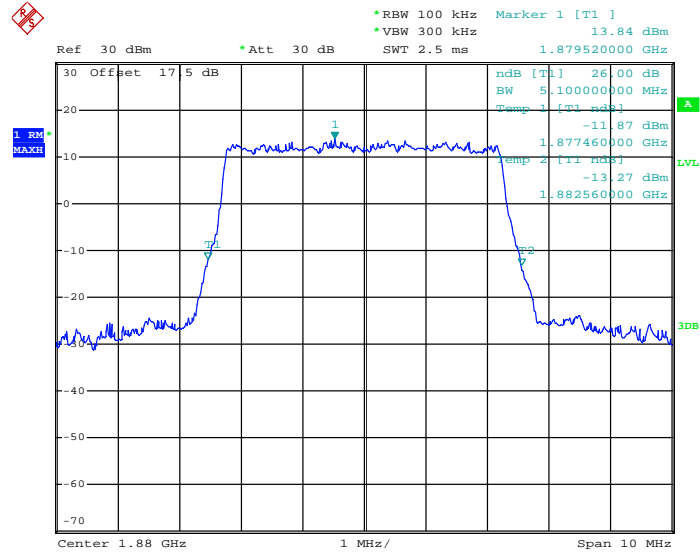
<b>Band :</b>	LTE Band 2	<b>BW / Mod. :</b>	5MHz / 16QAM
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99% Occupied Bandwidth Plot on Channel 18900



Date: 24.OCT.2013 00:36:12

26dB Bandwidth Plot on Channel 18900

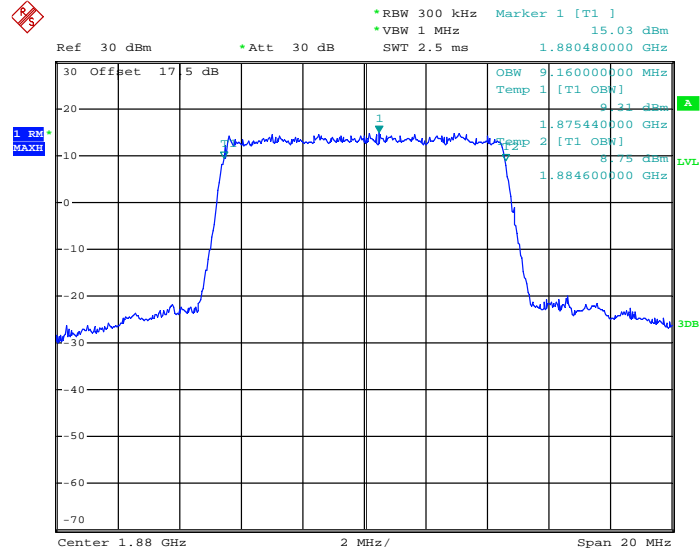


Date: 23.OCT.2013 20:32:58



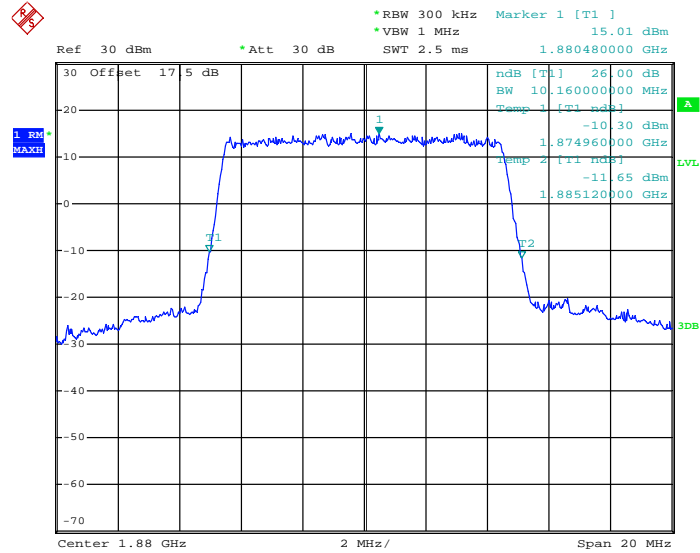
<b>Band :</b>	LTE Band 2	<b>BW / Mod. :</b>	10MHz / QPSK
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99% Occupied Bandwidth Plot on Channel 18900



Date: 24.OCT.2013 00:44:11

26dB Bandwidth Plot on Channel 18900

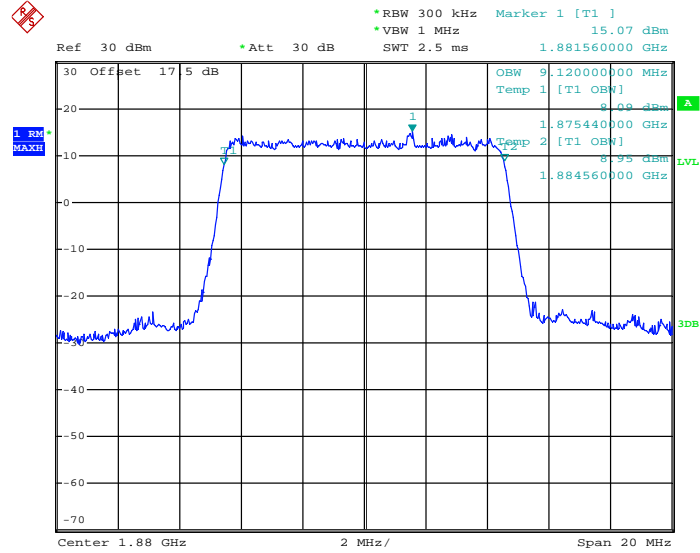


Date: 23.OCT.2013 20:41:24



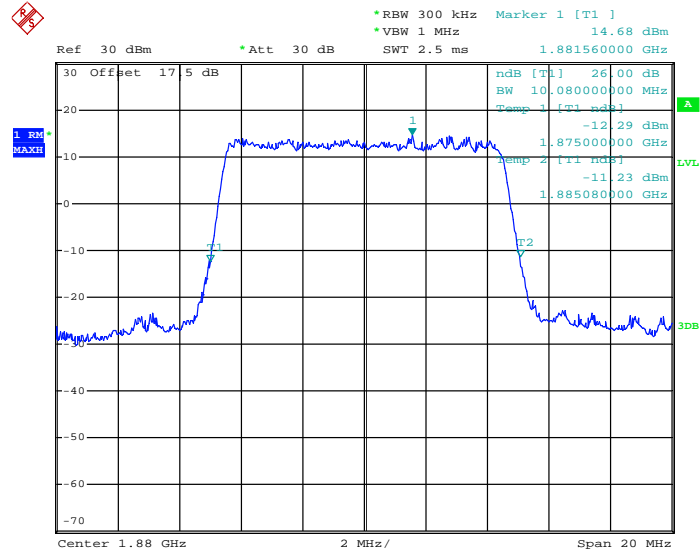
Band :	LTE Band 2	BW / Mod. :	10MHz / 16QAM
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99% Occupied Bandwidth Plot on Channel 18900



Date: 24.OCT.2013 00:45:40

26dB Bandwidth Plot on Channel 18900



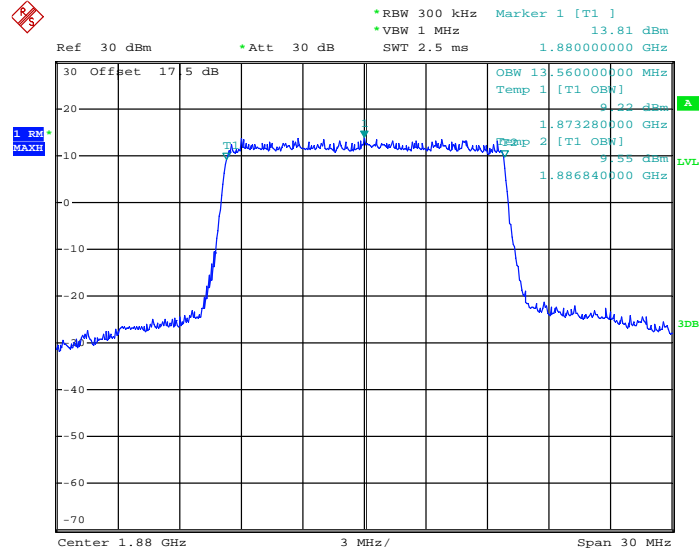
Date: 23.OCT.2013 20:38:42





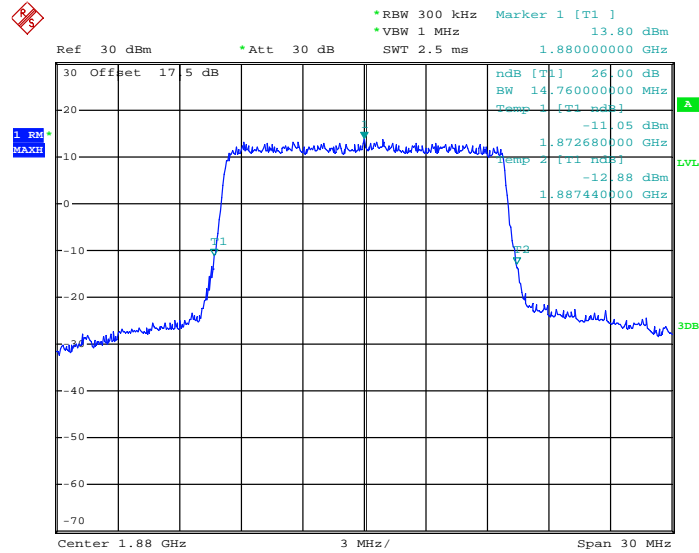
<b>Band :</b>	LTE Band 2	<b>BW / Mod. :</b>	15MHz / QPSK
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99% Occupied Bandwidth Plot on Channel 18900



Date: 24.OCT.2013 00:58:32

26dB Bandwidth Plot on Channel 18900

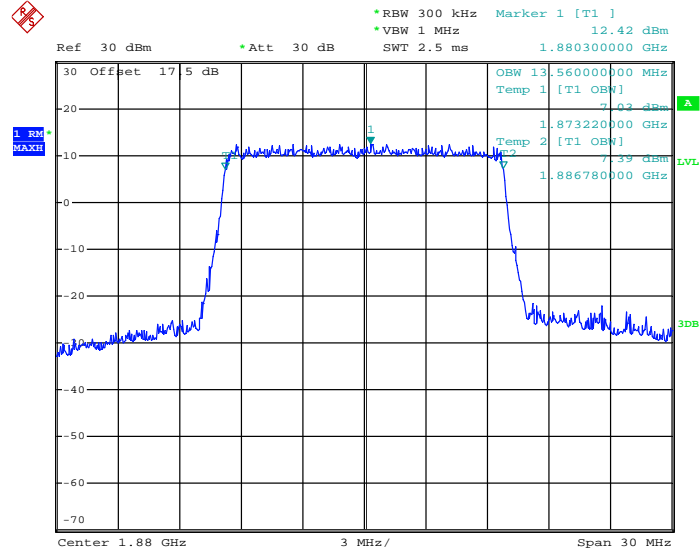


Date: 23.OCT.2013 20:43:59



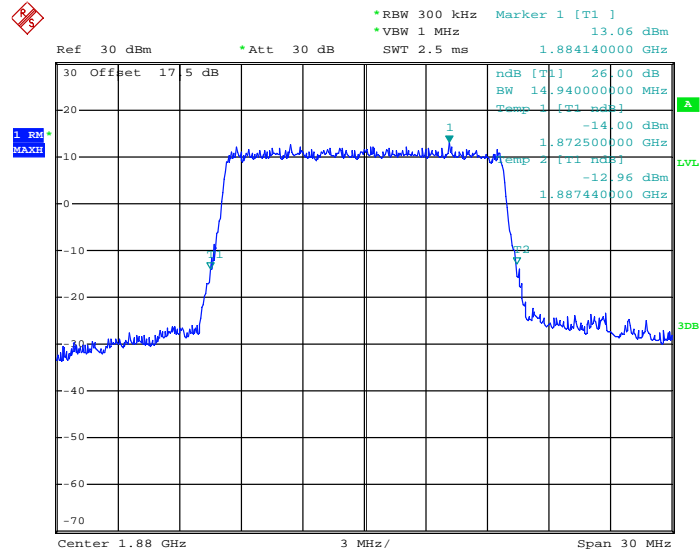
<b>Band :</b>	LTE Band 2	<b>BW / Mod. :</b>	15MHz / 16QAM
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99% Occupied Bandwidth Plot on Channel 18900



Date: 24.OCT.2013 01:00:07

26dB Bandwidth Plot on Channel 18900

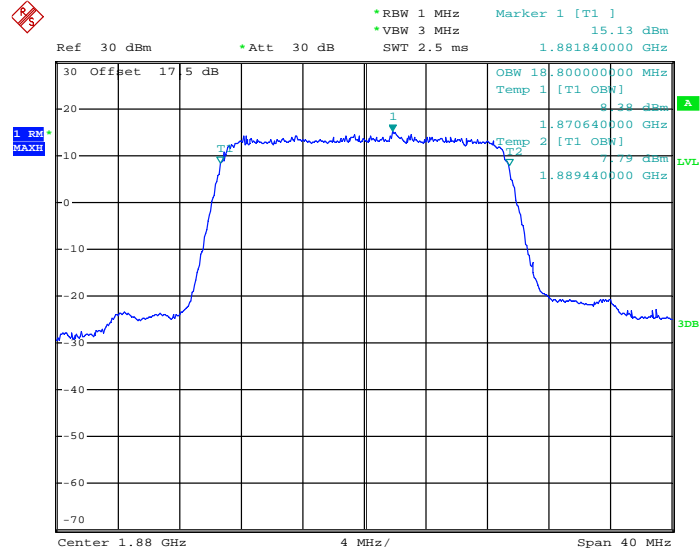


Date: 23.OCT.2013 20:45:58



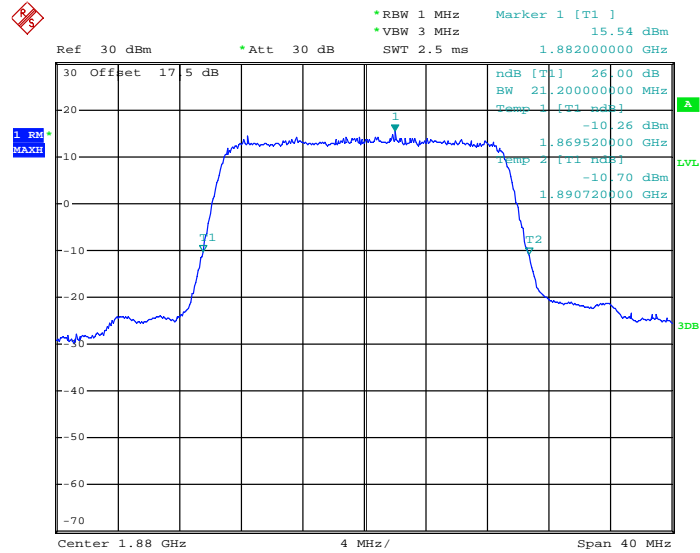
<b>Band :</b>	LTE Band 2	<b>BW / Mod. :</b>	20MHz / QPSK
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99% Occupied Bandwidth Plot on Channel 18900



Date: 24.OCT.2013 01:09:19

26dB Bandwidth Plot on Channel 18900

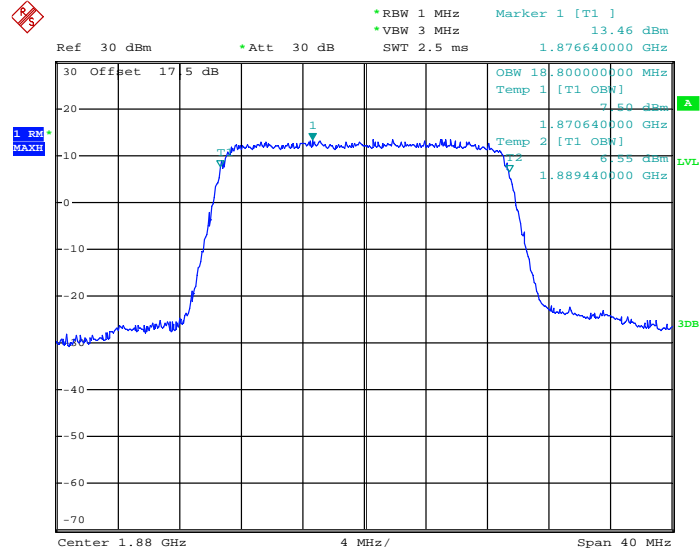


Date: 23.OCT.2013 20:49:59



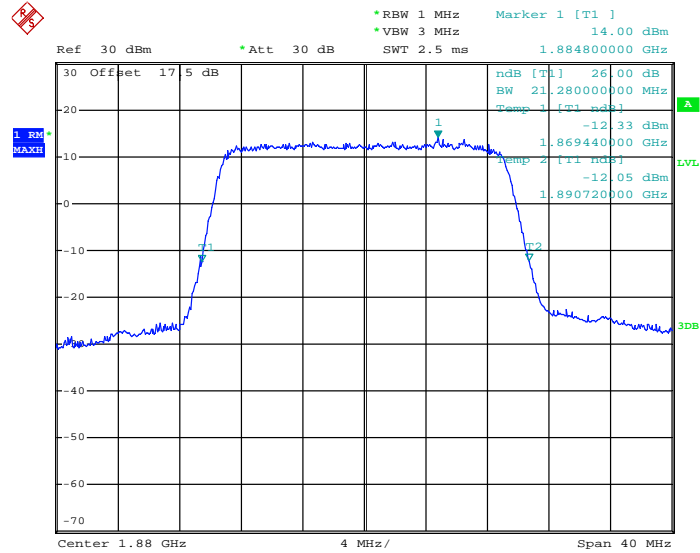
<b>Band :</b>	LTE Band 2	<b>BW / Mod. :</b>	20MHz / 16QAM
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99% Occupied Bandwidth Plot on Channel 18900



Date: 24.OCT.2013 01:10:13

26dB Bandwidth Plot on Channel 18900

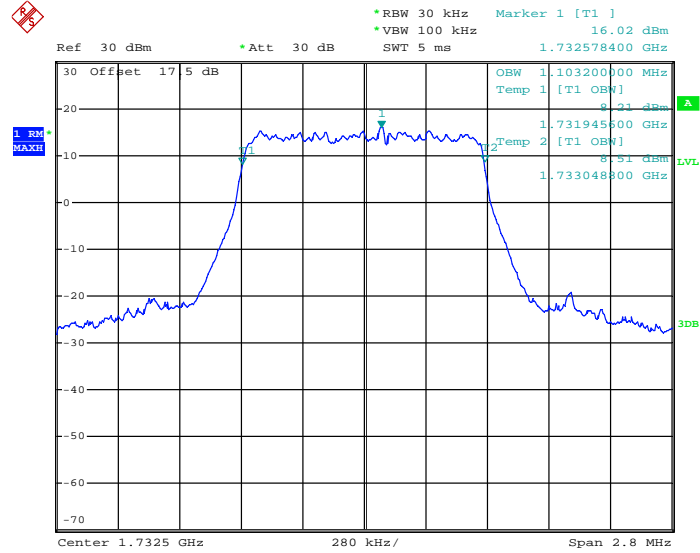


Date: 23.OCT.2013 20:48:10



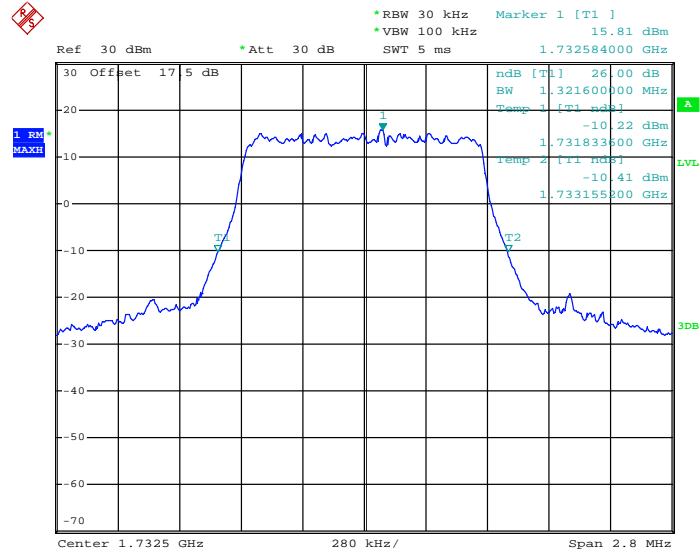
<b>Band :</b>	LTE Band 4	<b>BW / Mod. :</b>	1.4MHz / QPSK
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99% Occupied Bandwidth Plot on Channel 20175



Date: 24.OCT.2013 22:51:07

26dB Bandwidth Plot on Channel 20175

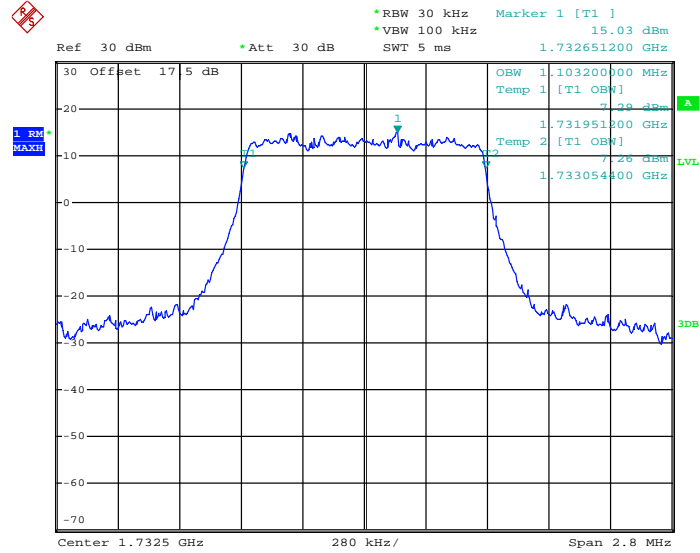


Date: 23.OCT.2013 21:04:03



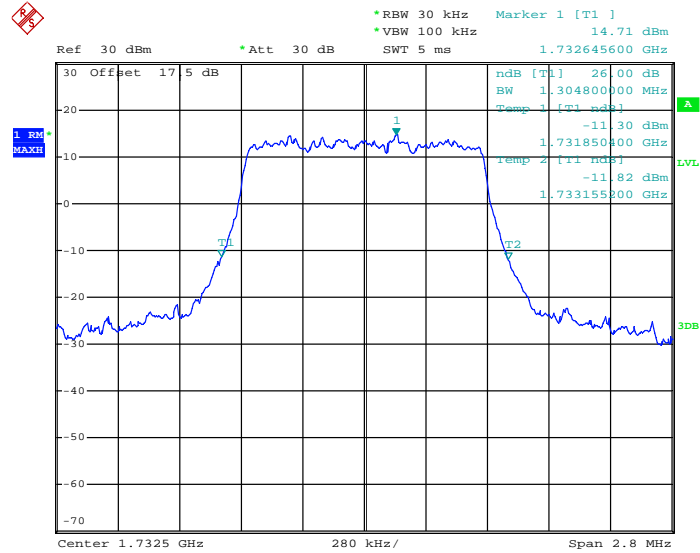
<b>Band :</b>	LTE Band 4	<b>BW / Mod. :</b>	1.4MHz / 16QAM
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99% Occupied Bandwidth Plot on Channel 20175



Date: 24.OCT.2013 22:52:01

26dB Bandwidth Plot on Channel 20175

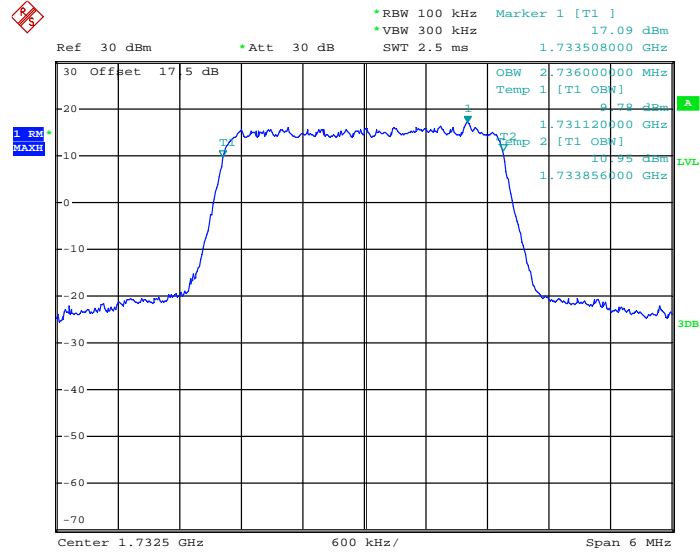


Date: 23.OCT.2013 21:05:30



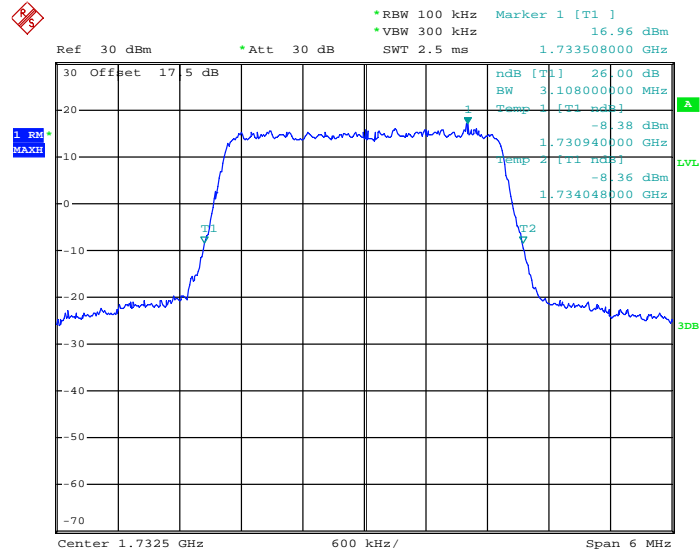
<b>Band :</b>	LTE Band 4	<b>BW / Mod. :</b>	3MHz / QPSK
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99% Occupied Bandwidth Plot on Channel 20175



Date: 24.OCT.2013 23:01:11

26dB Bandwidth Plot on Channel 20175

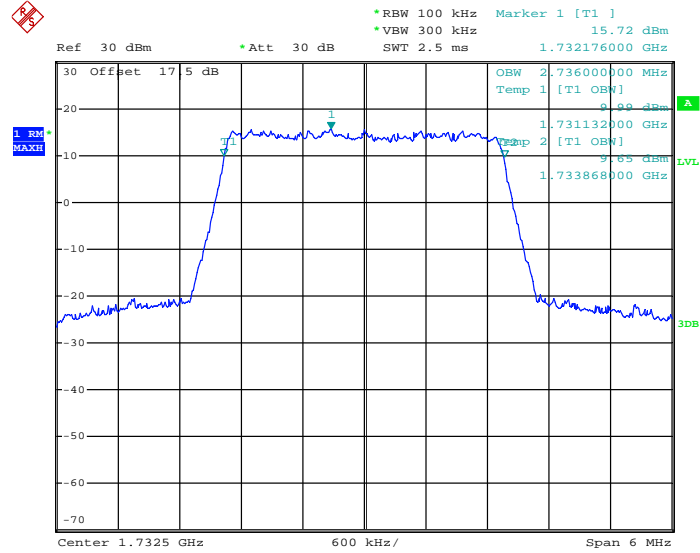


Date: 23.OCT.2013 21:09:38



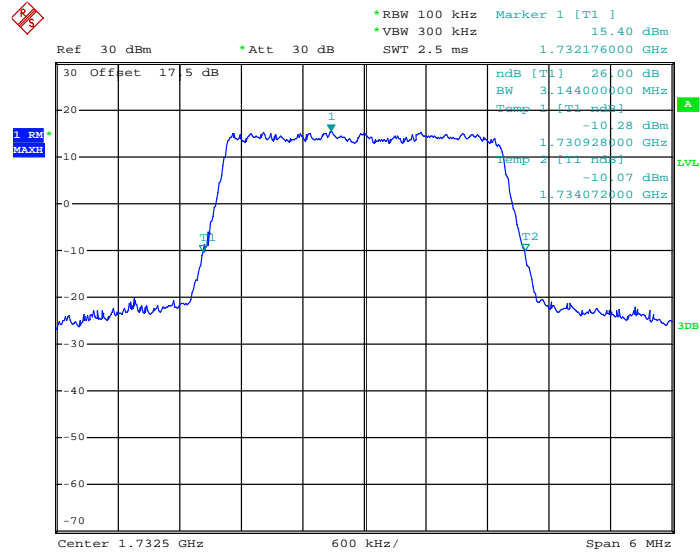
Band :	LTE Band 4	BW / Mod. :	3MHz / 16QAM
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99% Occupied Bandwidth Plot on Channel 20175



Date: 24.OCT.2013 23:02:23

26dB Bandwidth Plot on Channel 20175



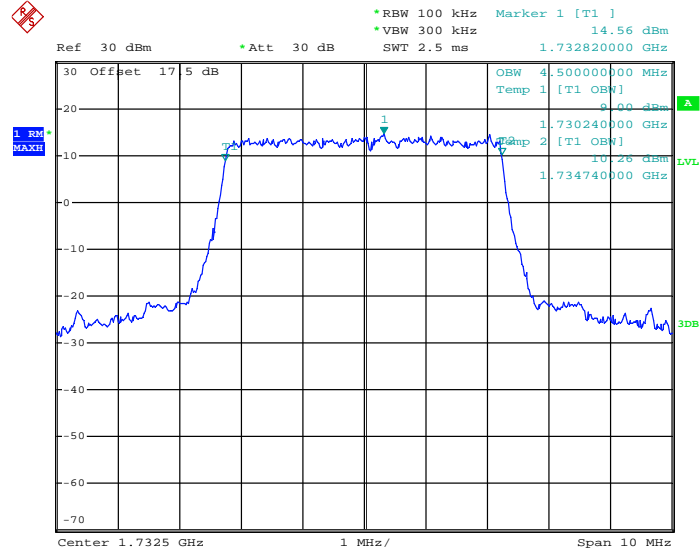
Date: 23.OCT.2013 21:07:32





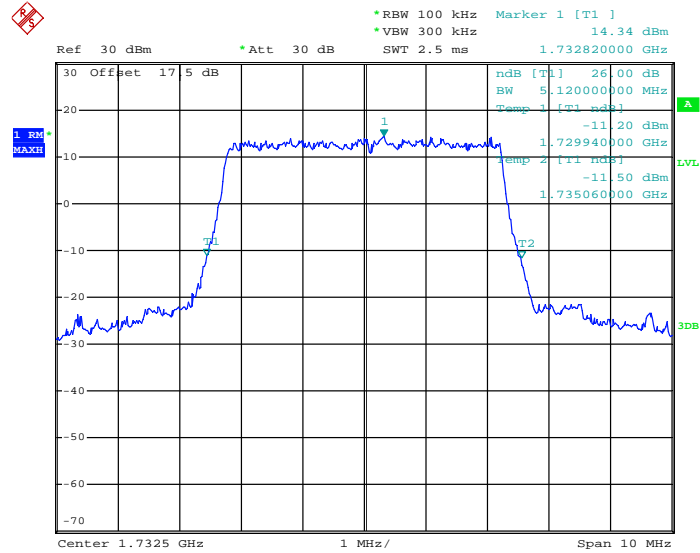
Band :	LTE Band 4	BW / Mod. :	5MHz / QPSK
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99% Occupied Bandwidth Plot on Channel 20175



Date: 24.OCT.2013 23:12:50

26dB Bandwidth Plot on Channel 20175

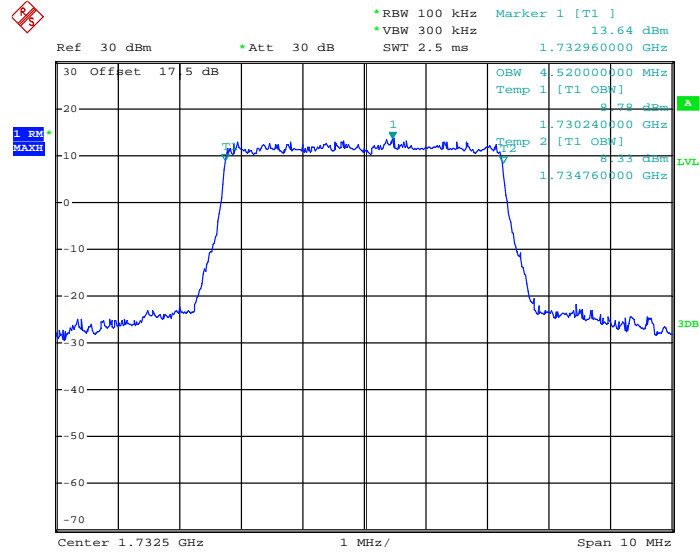


Date: 23.OCT.2013 21:11:36



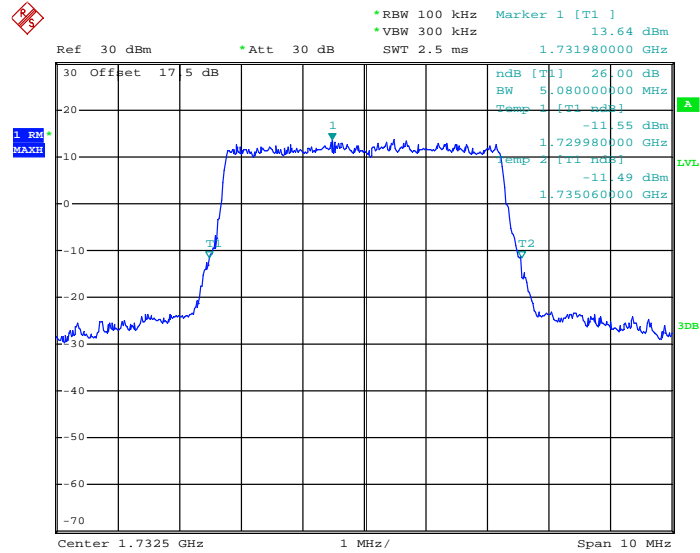
Band :	LTE Band 4	BW / Mod. :	5MHz / 16QAM
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99% Occupied Bandwidth Plot on Channel 20175



Date: 24.OCT.2013 23:14:06

26dB Bandwidth Plot on Channel 20175

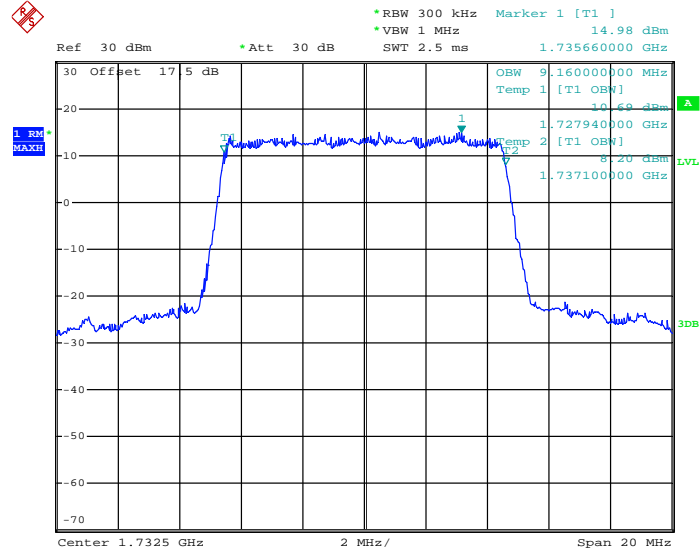


Date: 23.OCT.2013 21:13:20



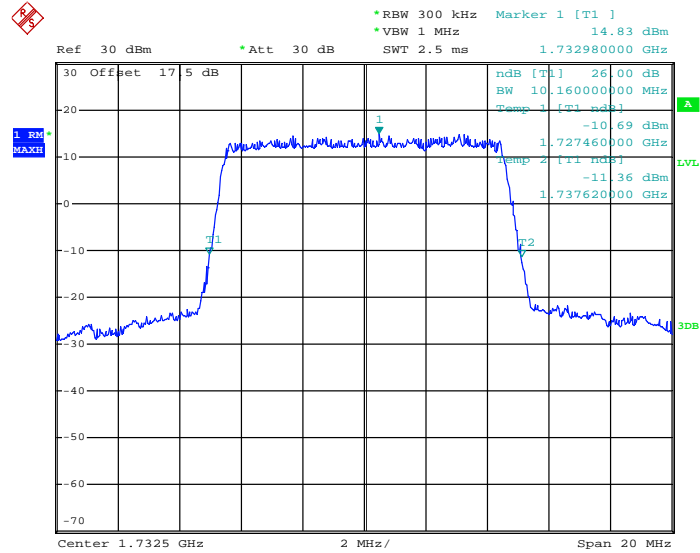
Band :	LTE Band 4	BW / Mod. :	10MHz / QPSK
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99% Occupied Bandwidth Plot on Channel 20175



Date: 24.OCT.2013 23:26:17

26dB Bandwidth Plot on Channel 20175

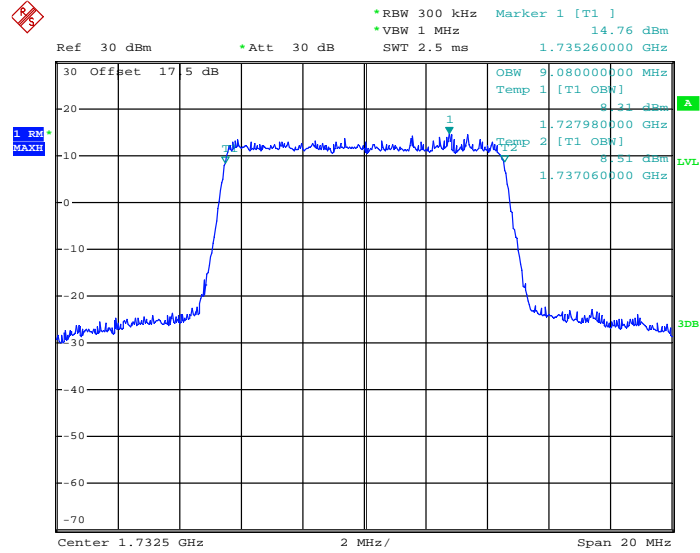


Date: 23.OCT.2013 21:17:27



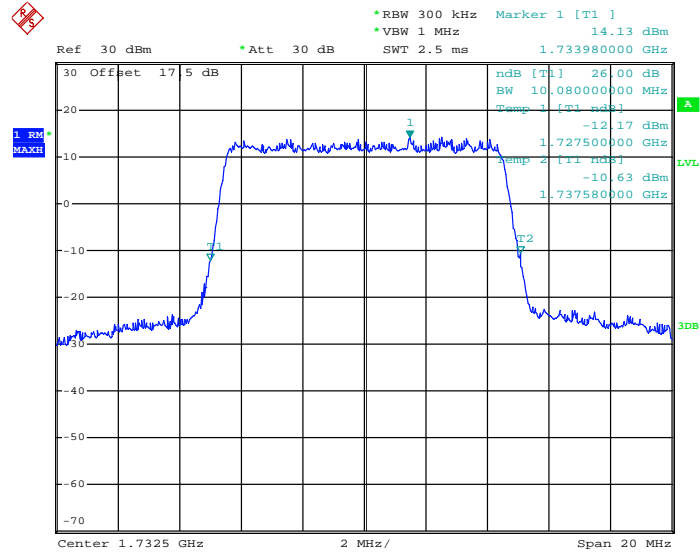
<b>Band :</b>	LTE Band 4	<b>BW / Mod. :</b>	10MHz / 16QAM
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99% Occupied Bandwidth Plot on Channel 20175



Date: 24.OCT.2013 23:27:23

26dB Bandwidth Plot on Channel 20175

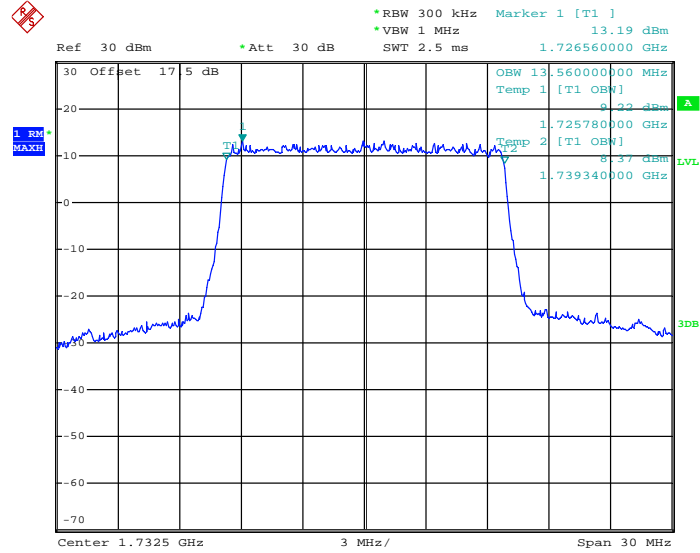


Date: 23.OCT.2013 21:16:03



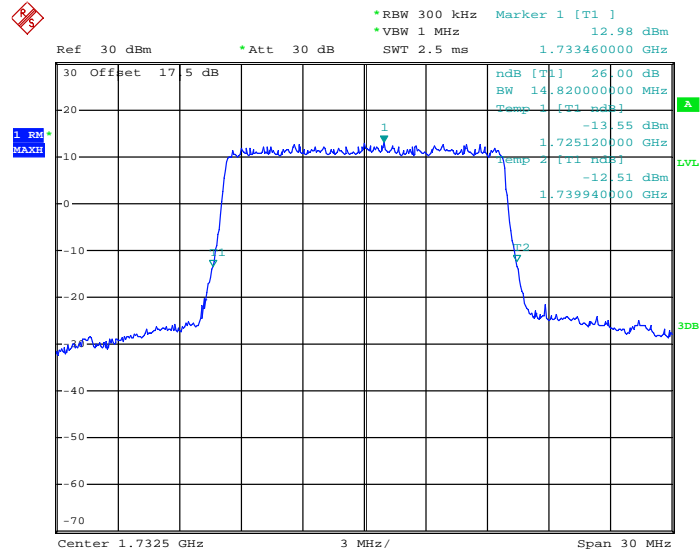
<b>Band :</b>	LTE Band 4	<b>BW / Mod. :</b>	15MHz / QPSK
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99% Occupied Bandwidth Plot on Channel 20175



Date: 24.OCT.2013 23:39:20

26dB Bandwidth Plot on Channel 20175

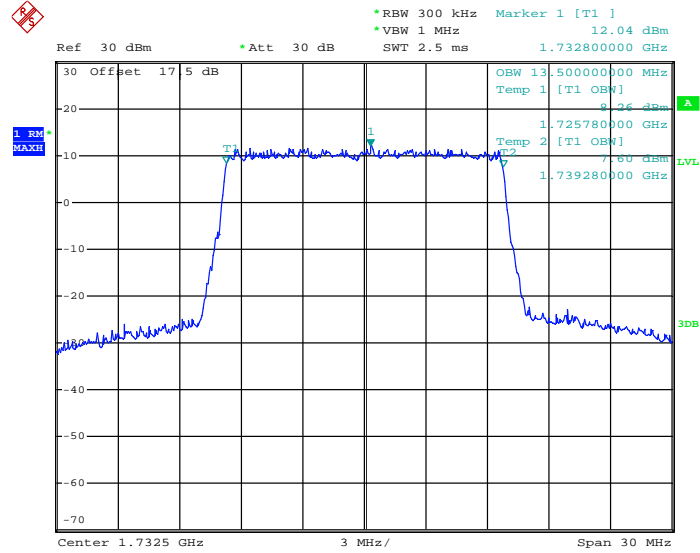


Date: 23.OCT.2013 21:19:49



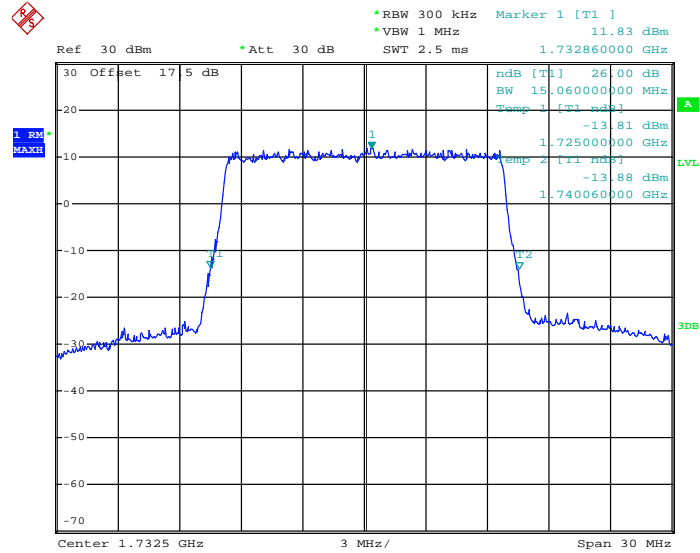
<b>Band :</b>	LTE Band 4	<b>BW / Mod. :</b>	15MHz / 16QAM
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99% Occupied Bandwidth Plot on Channel 20175



Date: 24.OCT.2013 23:40:40

26dB Bandwidth Plot on Channel 20175

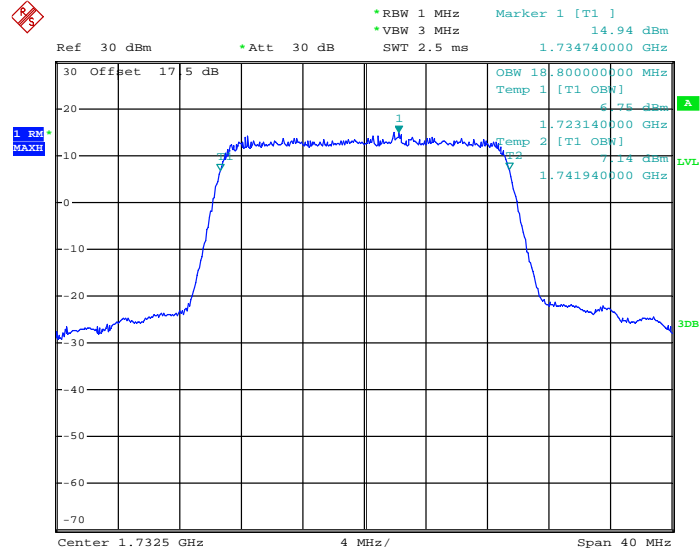


Date: 23.OCT.2013 21:21:58



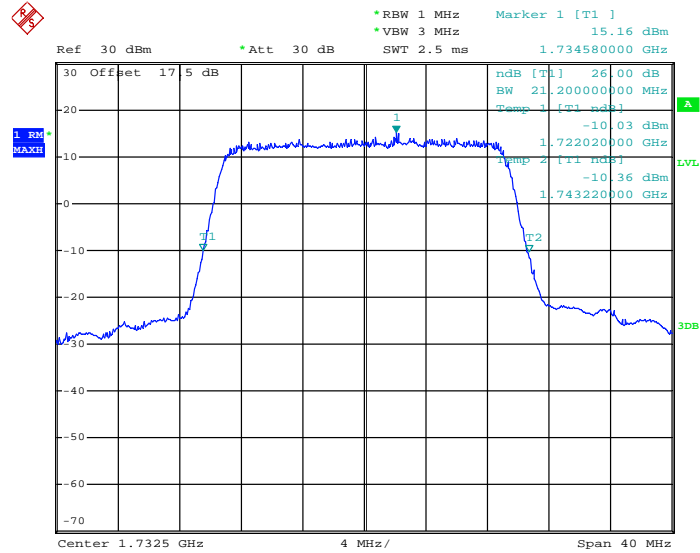
<b>Band :</b>	LTE Band 4	<b>BW / Mod. :</b>	20MHz / QPSK
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99% Occupied Bandwidth Plot on Channel 20175



Date: 24.OCT.2013 23:48:47

26dB Bandwidth Plot on Channel 20175

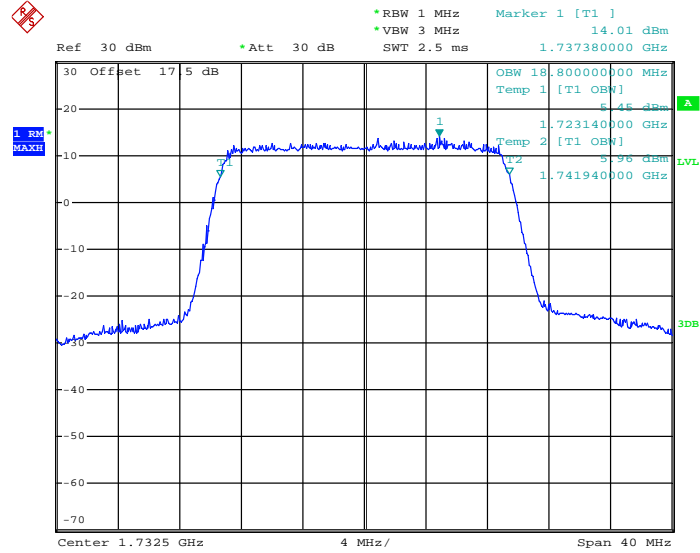


Date: 23.OCT.2013 21:26:33



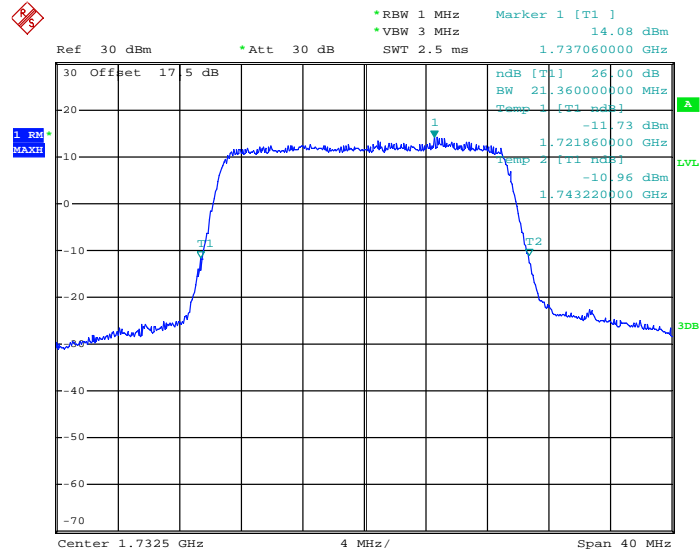
Band :	LTE Band 4	BW / Mod. :	20MHz / 16QAM
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99% Occupied Bandwidth Plot on Channel 20175



Date: 24.OCT.2013 23:49:39

26dB Bandwidth Plot on Channel 20175



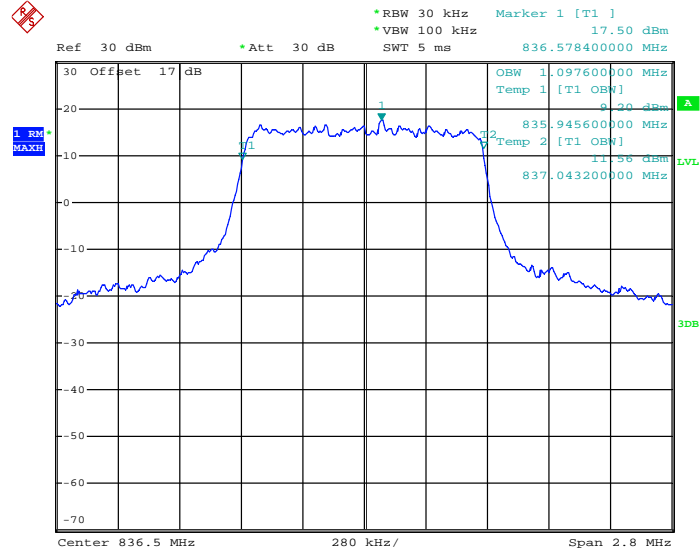
Date: 23.OCT.2013 21:25:22





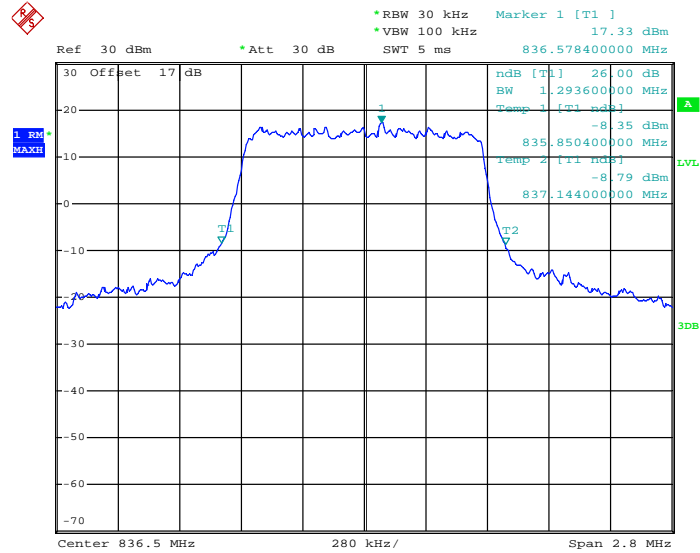
Band :	LTE Band 5	BW / Mod. :	1.4MHz / QPSK
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99% Occupied Bandwidth Plot on Channel 20525



Date: 24.OCT.2013 21:48:15

26dB Bandwidth Plot on Channel 20525

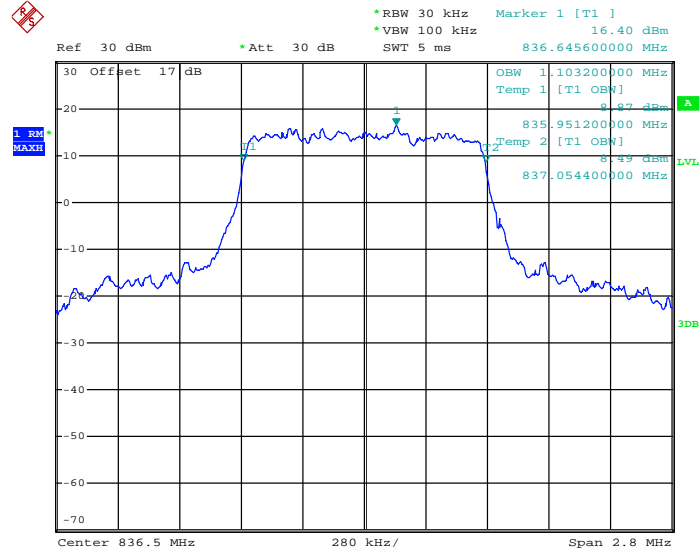


Date: 23.OCT.2013 21:31:52



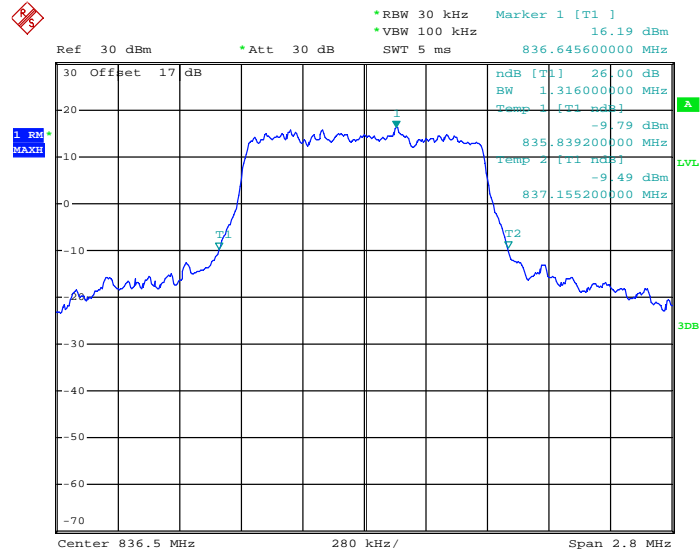
<b>Band :</b>	LTE Band 5	<b>BW / Mod. :</b>	1.4MHz / 16QAM
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99% Occupied Bandwidth Plot on Channel 20525



Date: 24.OCT.2013 21:49:53

26dB Bandwidth Plot on Channel 20525

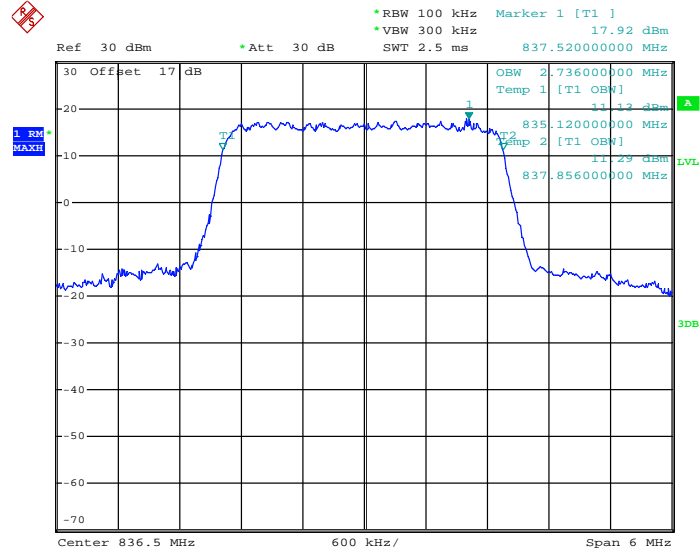


Date: 23.OCT.2013 21:34:08



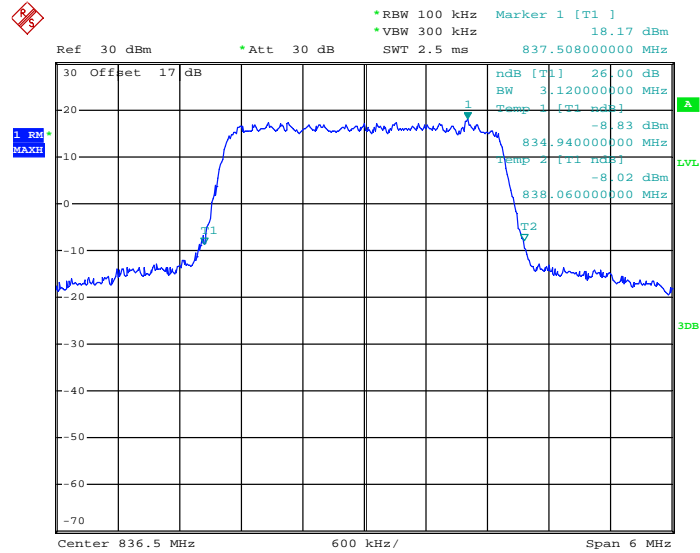
<b>Band :</b>	LTE Band 5	<b>BW / Mod. :</b>	3MHz / QPSK
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99% Occupied Bandwidth Plot on Channel 20525



Date: 24.OCT.2013 22:04:33

26dB Bandwidth Plot on Channel 20525

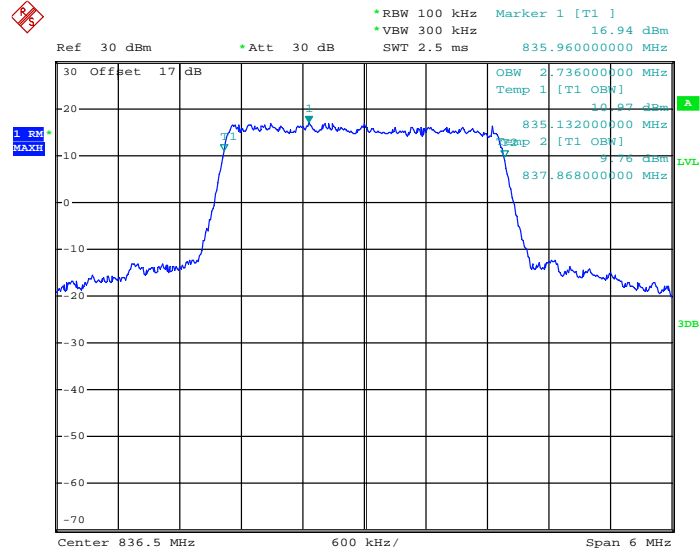


Date: 23.OCT.2013 21:38:18



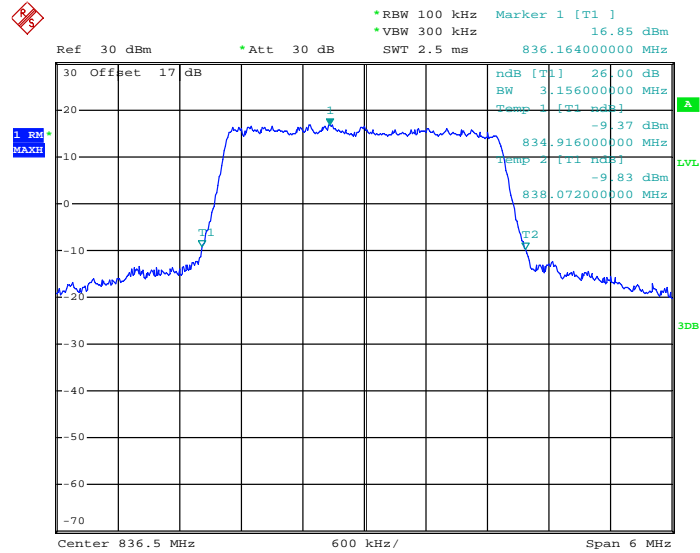
<b>Band :</b>	LTE Band 5	<b>BW / Mod. :</b>	3MHz / 16QAM
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99% Occupied Bandwidth Plot on Channel 20525



Date: 24.OCT.2013 22:07:08

26dB Bandwidth Plot on Channel 20525

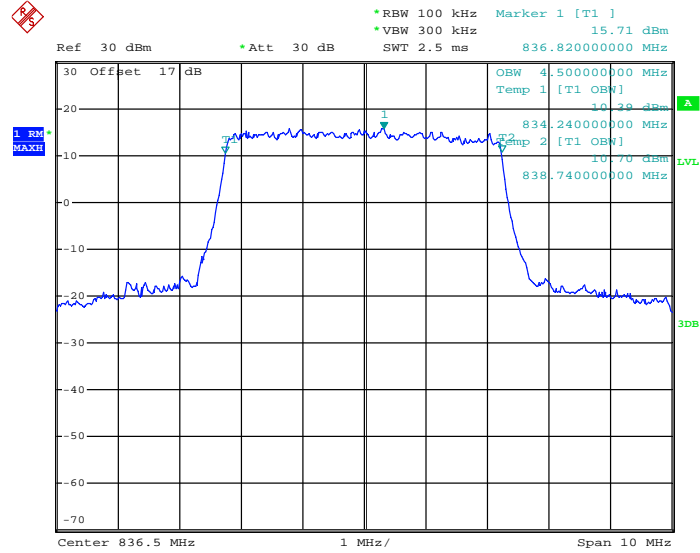


Date: 23.OCT.2013 21:36:31



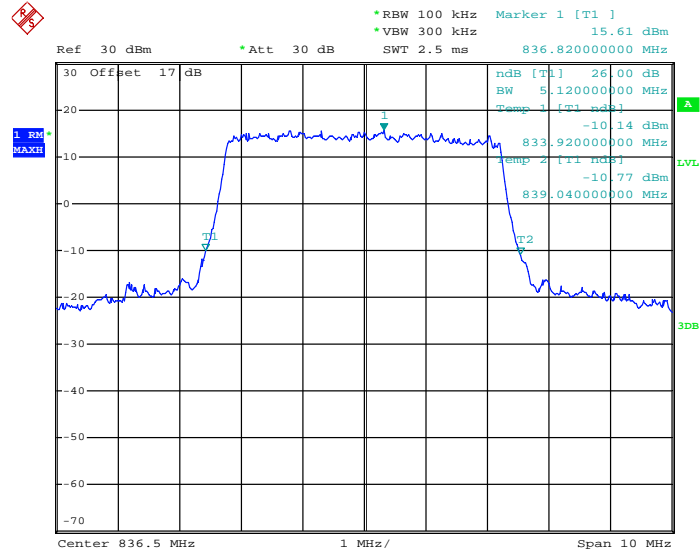
<b>Band :</b>	LTE Band 5	<b>BW / Mod. :</b>	5MHz / QPSK
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99% Occupied Bandwidth Plot on Channel 20525



Date: 24.OCT.2013 22:25:29

26dB Bandwidth Plot on Channel 20525

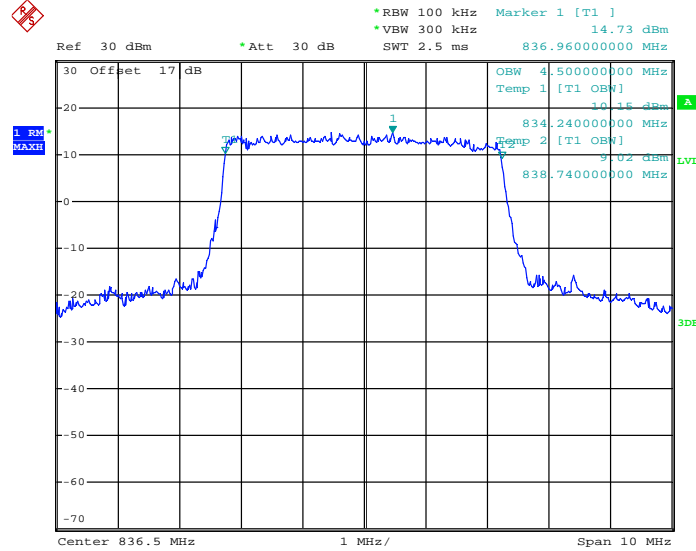


Date: 23.OCT.2013 21:41:11



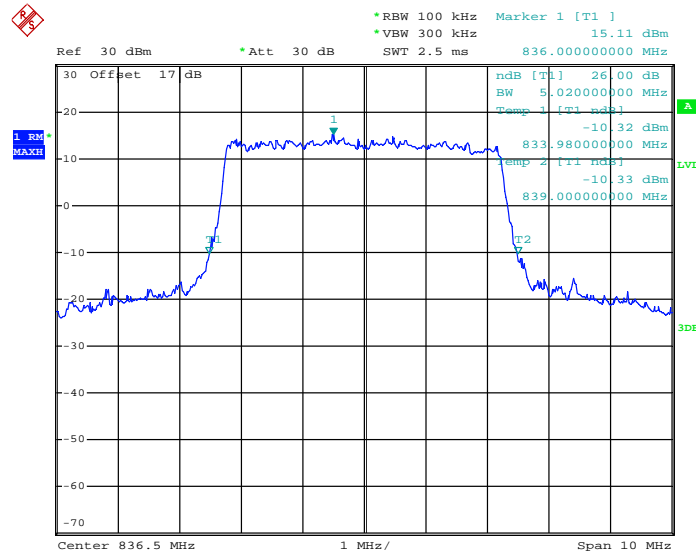
Band :	LTE Band 5	BW / Mod. :	5MHz / 16QAM
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99% Occupied Bandwidth Plot on Channel 20525



Date: 24.OCT.2013 22:26:39

26dB Bandwidth Plot on Channel 20525

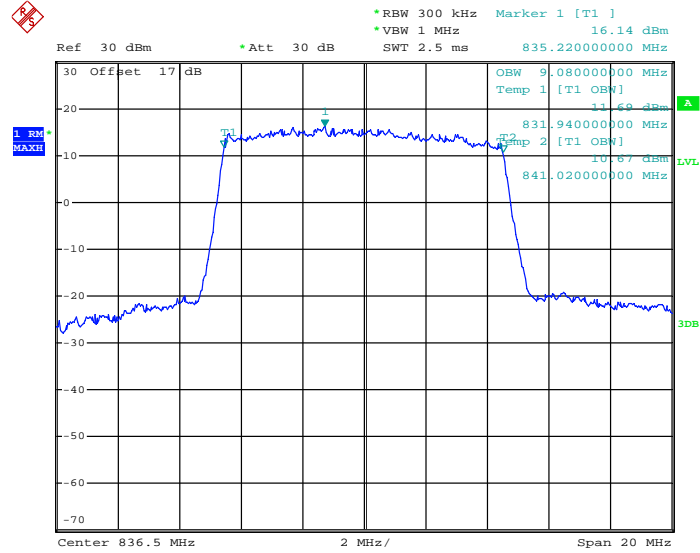


Date: 23.OCT.2013 21:43:04



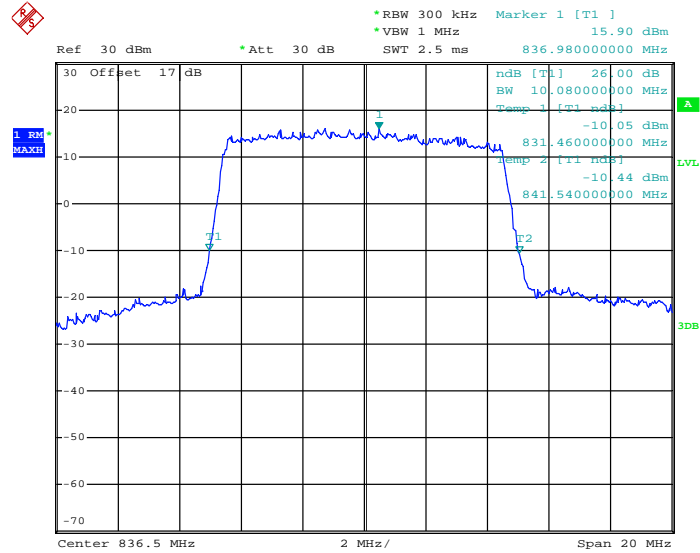
<b>Band :</b>	LTE Band 5	<b>BW / Mod. :</b>	10MHz / QPSK
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99% Occupied Bandwidth Plot on Channel 20525



Date: 24.OCT.2013 22:36:06

26dB Bandwidth Plot on Channel 20525

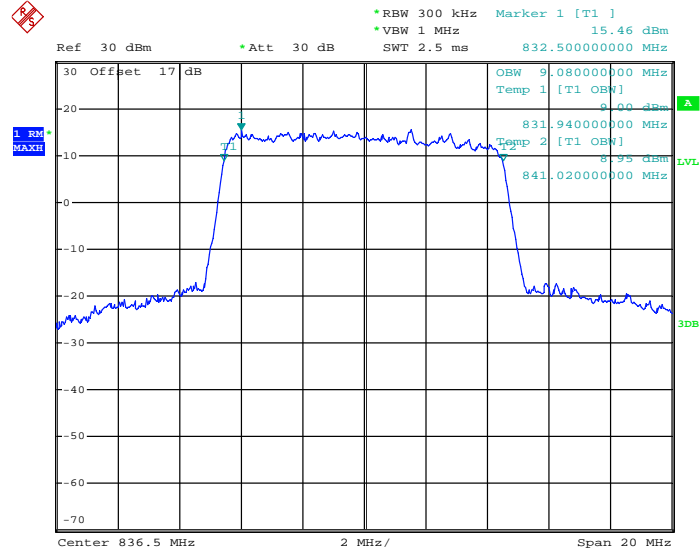


Date: 23.OCT.2013 21:46:02



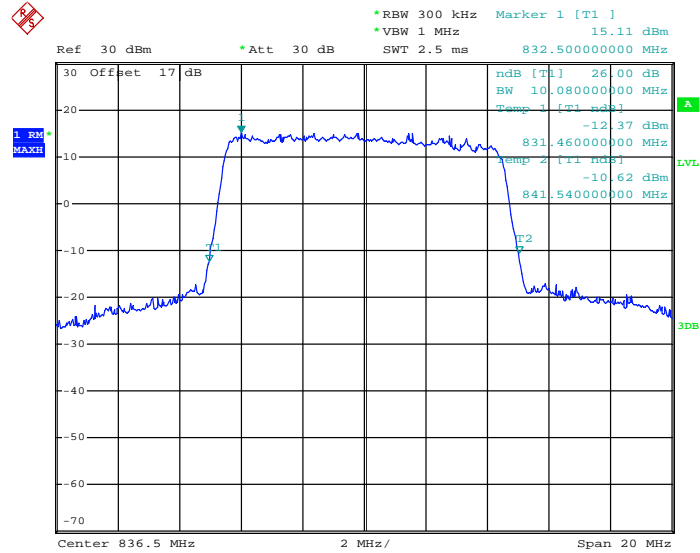
<b>Band :</b>	LTE Band 5	<b>BW / Mod. :</b>	10MHz / 16QAM
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99% Occupied Bandwidth Plot on Channel 20525



Date: 24.OCT.2013 22:38:35

26dB Bandwidth Plot on Channel 20525



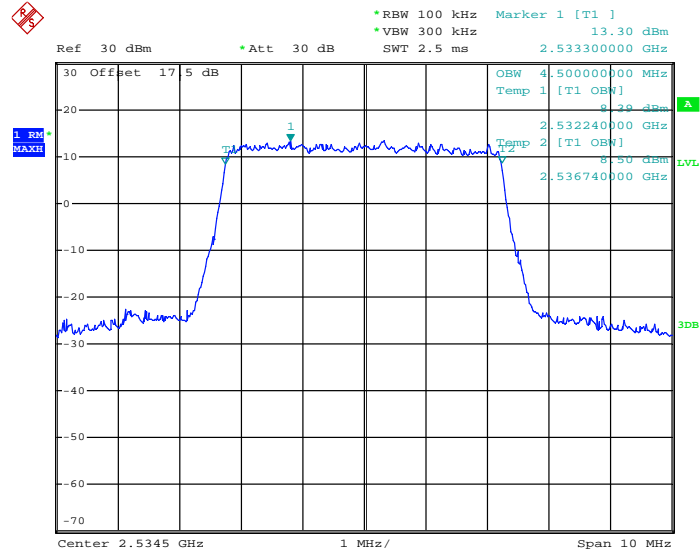
Date: 23.OCT.2013 21:45:09





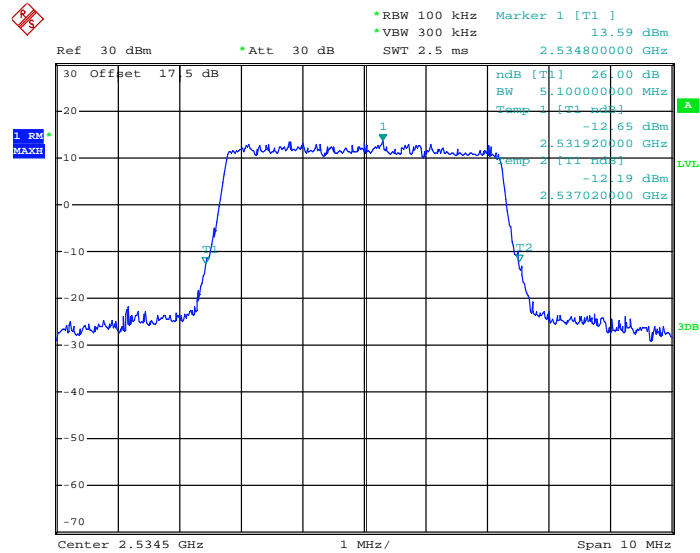
Band :	LTE Band 7	BW / Mod. :	5MHz / QPSK
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99% Occupied Bandwidth Plot on Channel 21095



Date: 25.OCT.2013 00:53:51

26dB Bandwidth Plot on Channel 21095

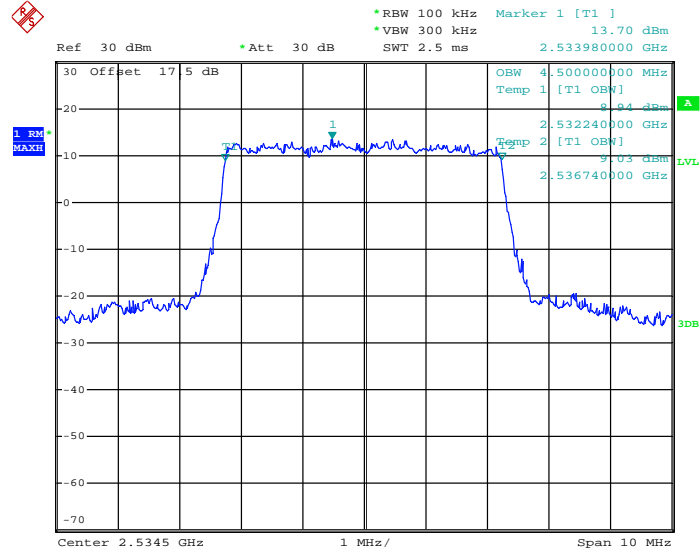


Date: 23.OCT.2013 22:26:30



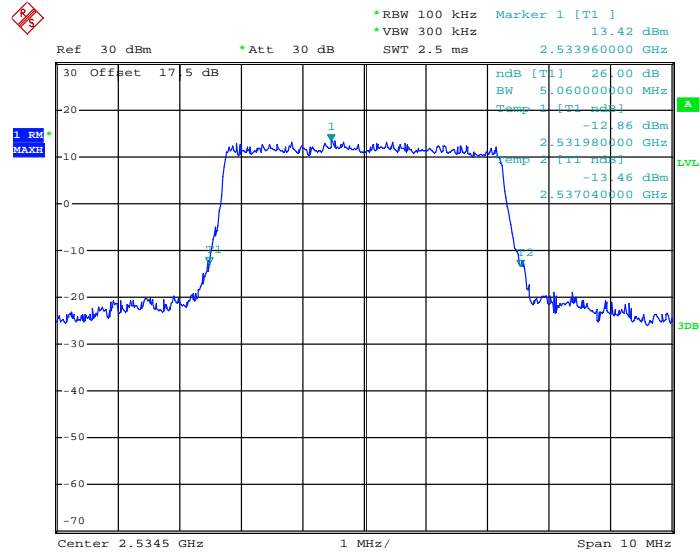
<b>Band :</b>	LTE Band 7	<b>BW / Mod. :</b>	5MHz / 16QAM
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99% Occupied Bandwidth Plot on Channel 21095



Date: 25.OCT.2013 00:55:00

26dB Bandwidth Plot on Channel 21095

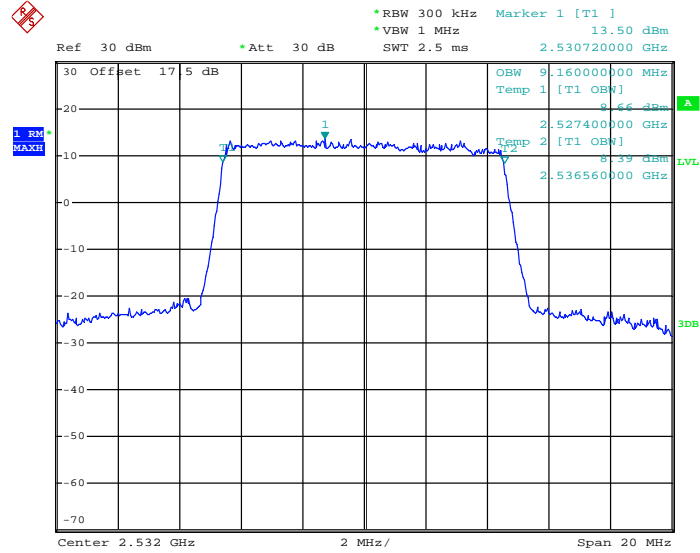


Date: 23.OCT.2013 22:25:36



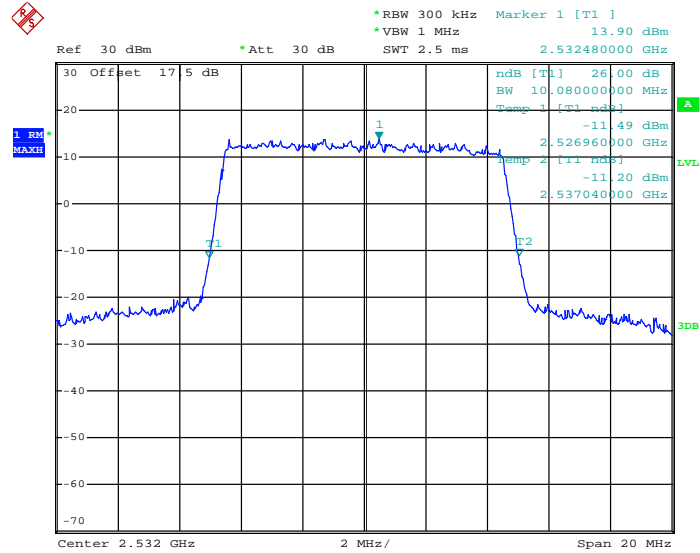
<b>Band :</b>	LTE Band 7	<b>BW / Mod. :</b>	10MHz / QPSK
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99% Occupied Bandwidth Plot on Channel 21070



Date: 25.OCT.2013 00:40:54

26dB Bandwidth Plot on Channel 21070

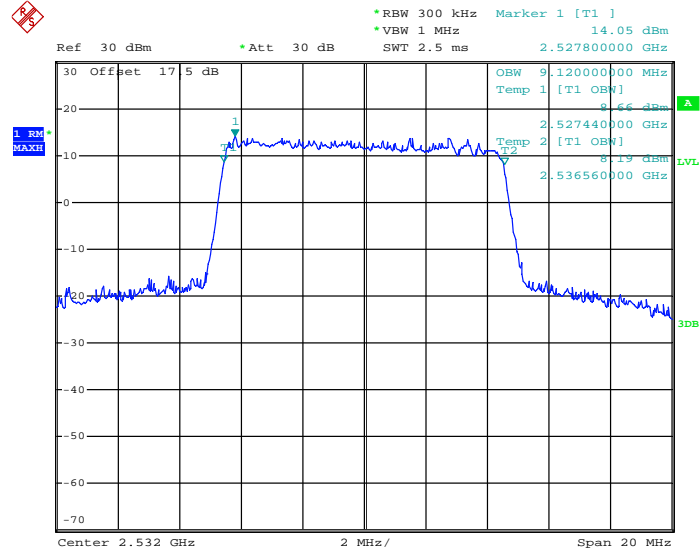


Date: 23.OCT.2013 22:15:56



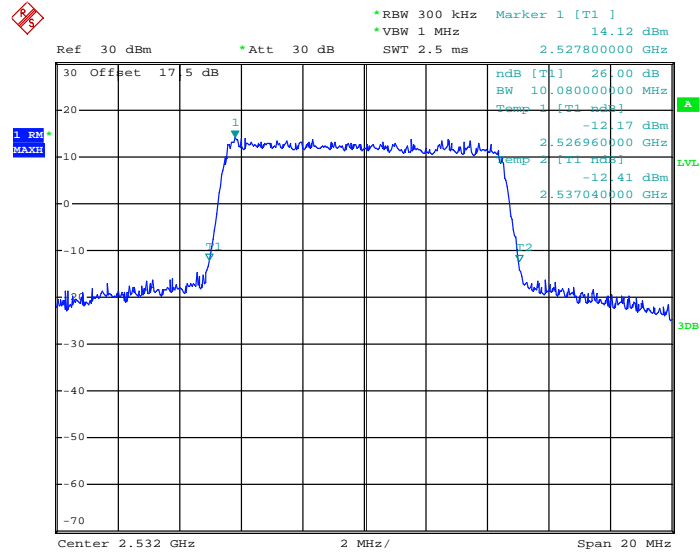
Band :	LTE Band 7	BW / Mod. :	10MHz / 16QAM
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99% Occupied Bandwidth Plot on Channel 21070



Date: 25.OCT.2013 00:42:26

26dB Bandwidth Plot on Channel 21070

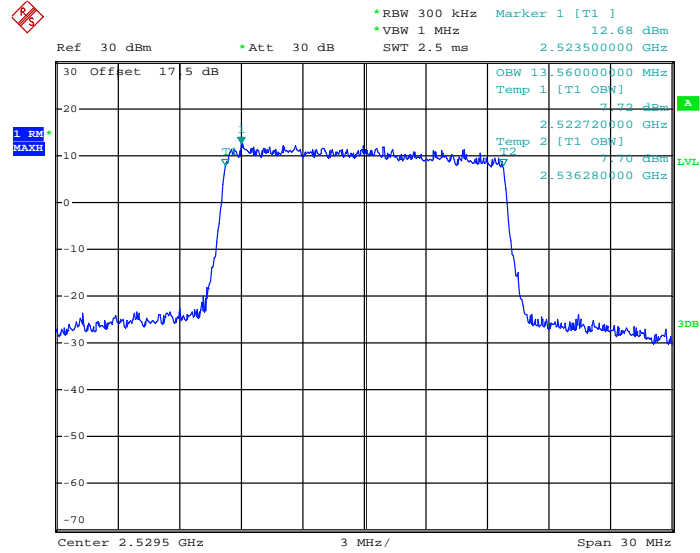


Date: 23.OCT.2013 22:17:05



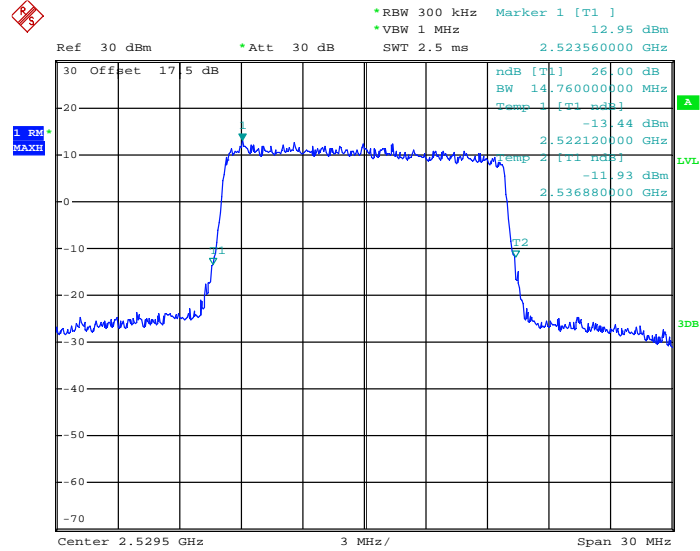
<b>Band :</b>	LTE Band 7	<b>BW / Mod. :</b>	15MHz / QPSK
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99% Occupied Bandwidth Plot on Channel 21045



Date: 25.OCT.2013 00:26:48

26dB Bandwidth Plot on Channel 21045

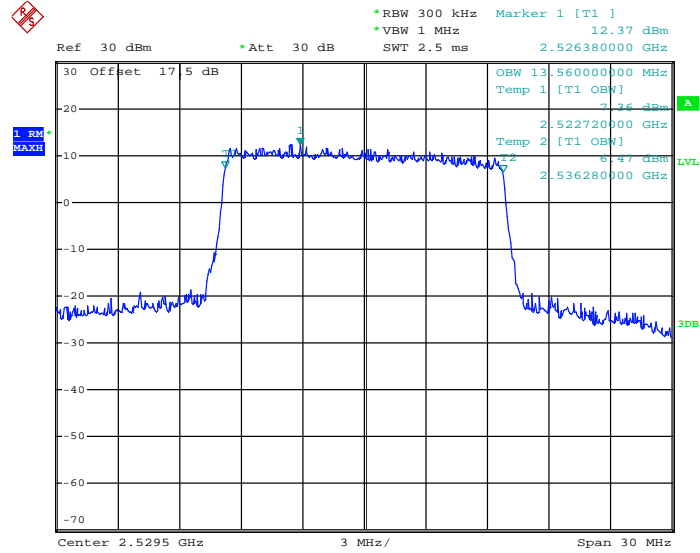


Date: 23.OCT.2013 22:28:57



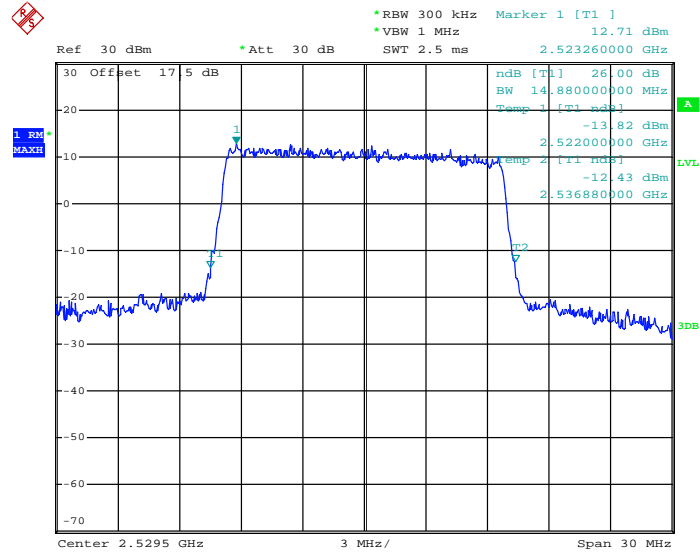
<b>Band :</b>	LTE Band 7	<b>BW / Mod. :</b>	15MHz / 16QAM
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99% Occupied Bandwidth Plot on Channel 21045



Date: 25.OCT.2013 00:27:40

26dB Bandwidth Plot on Channel 21045

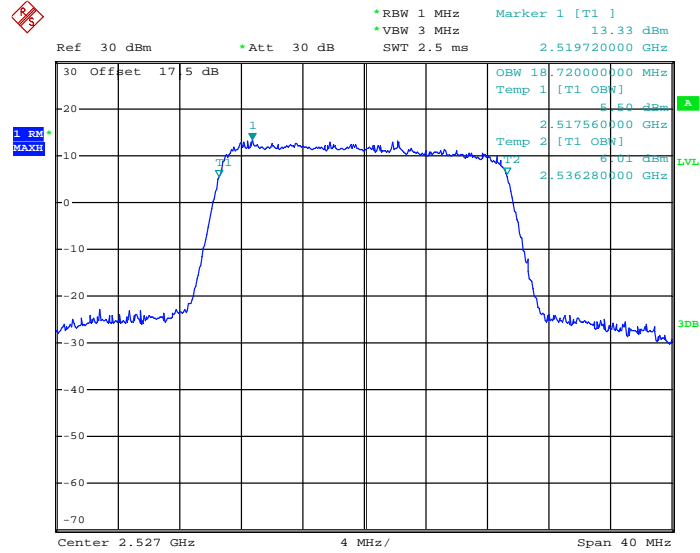


Date: 23.OCT.2013 22:30:34



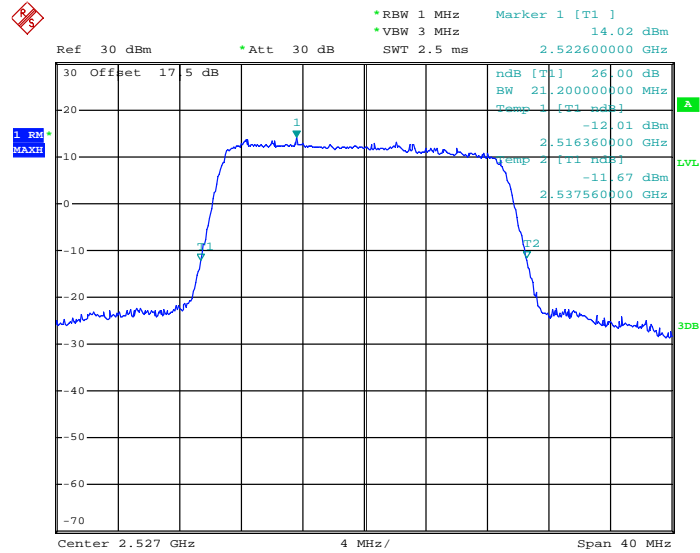
Band :	LTE Band 7	BW / Mod. :	20MHz / QPSK
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99% Occupied Bandwidth Plot on Channel 21020



Date: 25.OCT.2013 00:16:56

26dB Bandwidth Plot on Channel 21020

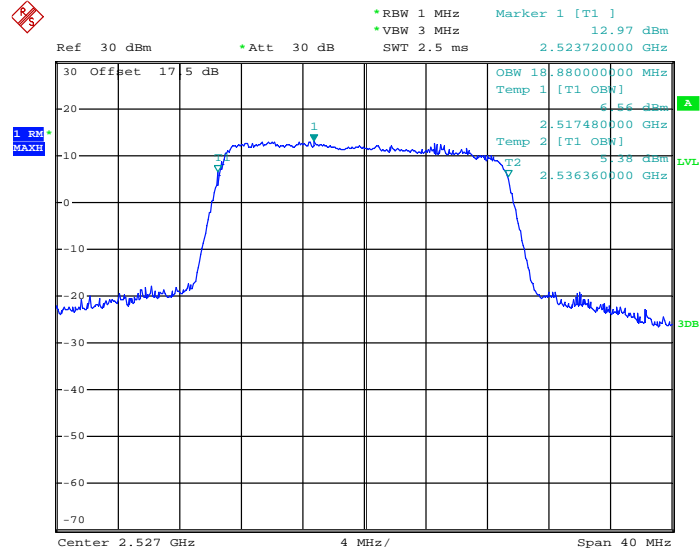


Date: 23.OCT.2013 22:38:41



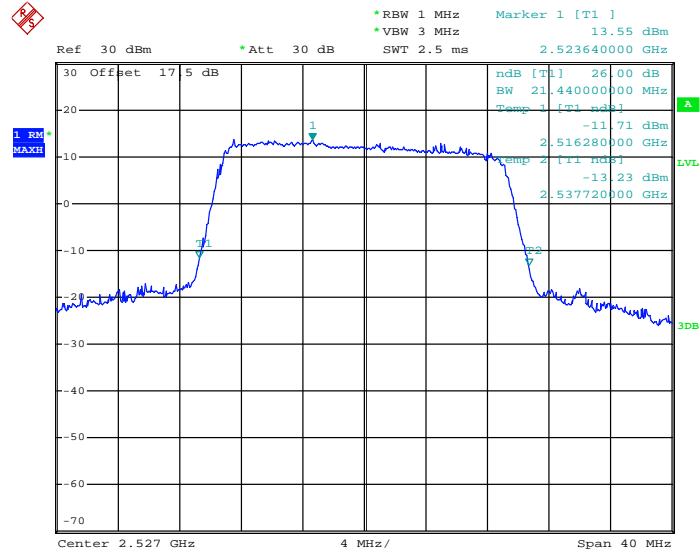
Band :	LTE Band 7	BW / Mod. :	20MHz / 16QAM
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99% Occupied Bandwidth Plot on Channel 21020



Date: 25.OCT.2013 00:15:53

26dB Bandwidth Plot on Channel 21020



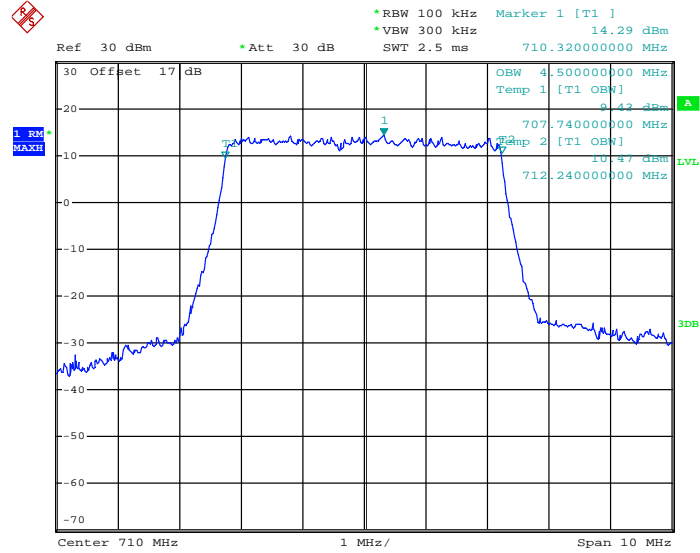
Date: 23.OCT.2013 22:37:32





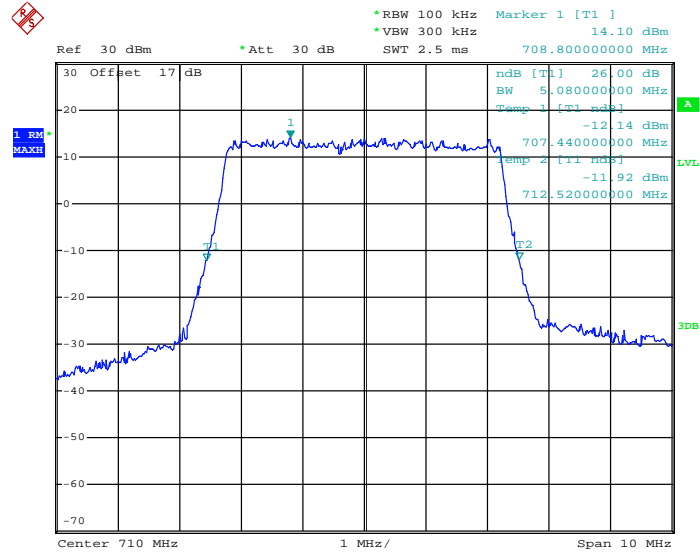
<b>Band :</b>	LTE Band 17	<b>BW / Mod. :</b>	5MHz / QPSK
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99% Occupied Bandwidth Plot on Channel 23790



Date: 24.OCT.2013 01:45:28

26dB Bandwidth Plot on Channel 23790

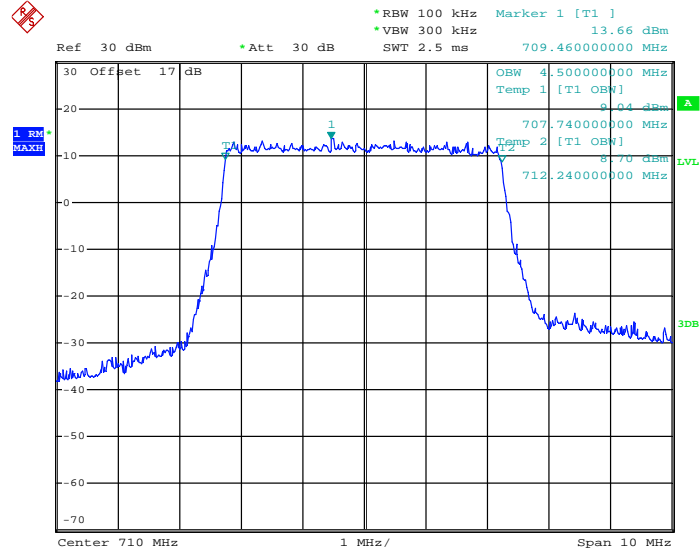


Date: 23.OCT.2013 21:50:50



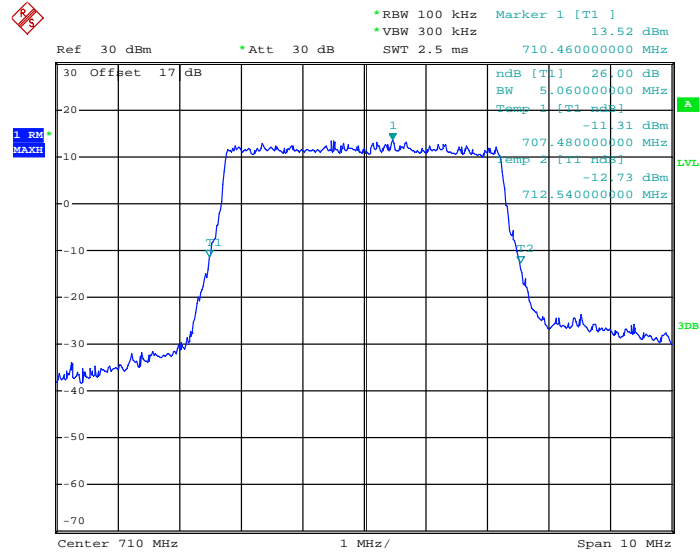
Band :	LTE Band 17	BW / Mod. :	5MHz / 16QAM
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99% Occupied Bandwidth Plot on Channel 23790



Date: 24.OCT.2013 01:46:22

26dB Bandwidth Plot on Channel 23790

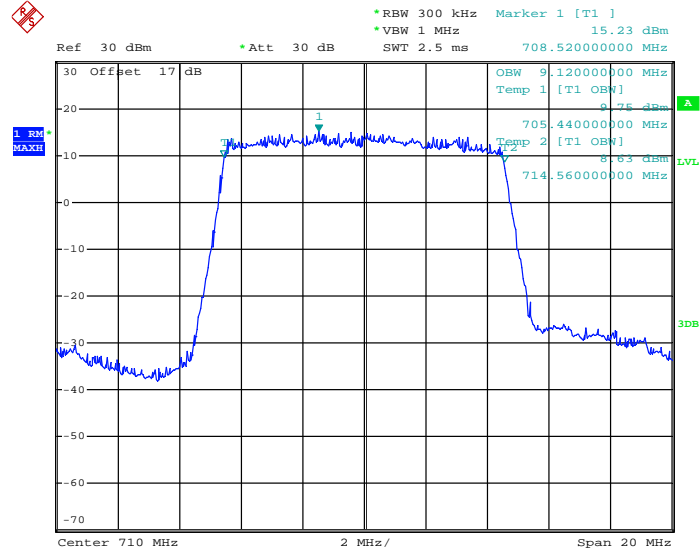


Date: 23.OCT.2013 21:52:16



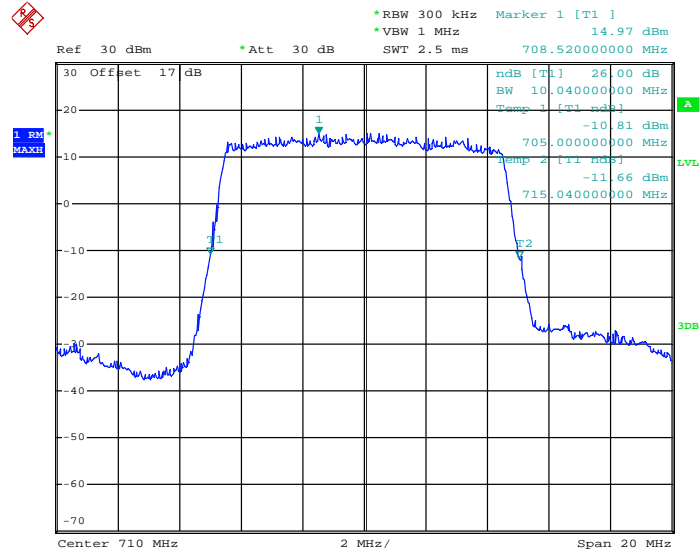
<b>Band :</b>	LTE Band 17	<b>BW / Mod. :</b>	10MHz / QPSK
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99% Occupied Bandwidth Plot on Channel 23790



Date: 24.OCT.2013 01:57:15

26dB Bandwidth Plot on Channel 23790

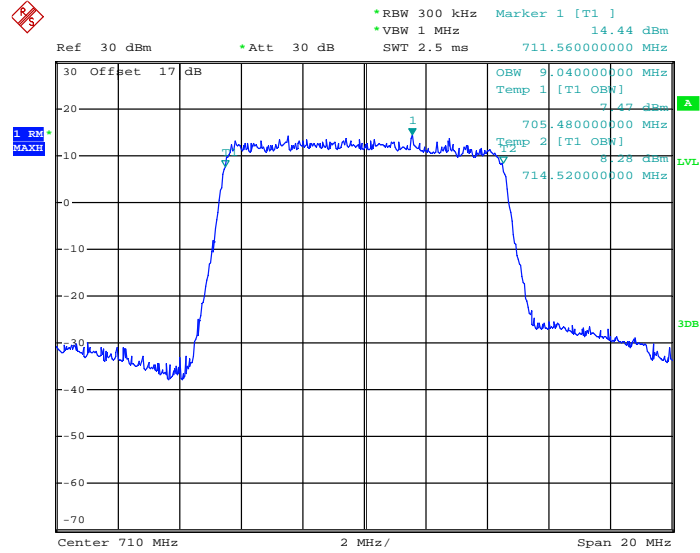


Date: 23.OCT.2013 21:55:40



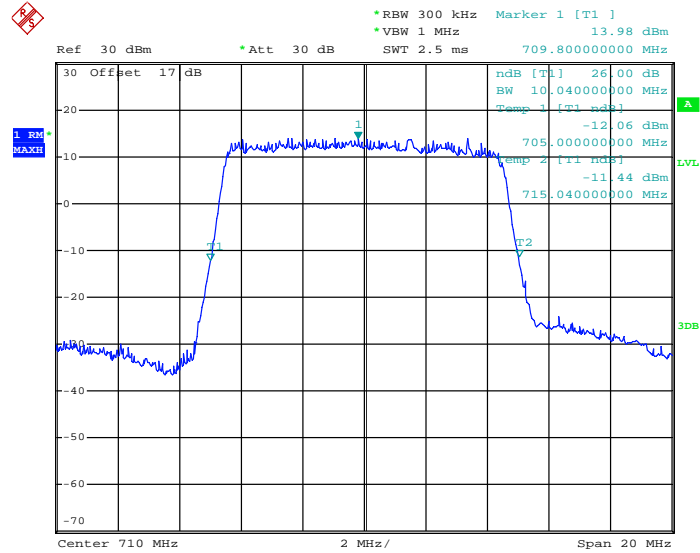
<b>Band :</b>	LTE Band 17	<b>BW / Mod. :</b>	10MHz / 16QAM
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99% Occupied Bandwidth Plot on Channel 23790



Date: 24.OCT.2013 01:57:53

26dB Bandwidth Plot on Channel 23790



Date: 23.OCT.2013 21:53:56

## 3.5 Conducted Band Edge Measurement

### 3.5.1 Description of Conducted Band Edge Measurement

24.238 (a) for Band 2

For operations in the 1850-1910 and 1930-1990 MHz band, the FCC limit is  $43 + 10\log_{10}(P[\text{Watts}])$  dB below the transmitter power  $P(\text{Watts})$  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.

27.53 (h) for Band 4

For operations in the 1710 – 1755 MHz band, the FCC limit is  $43 + 10\log_{10}(P[\text{Watts}])$  dB below the transmitter power  $P(\text{Watts})$  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.

22.917(a) for Band 5

For operations in the 824 – 849 MHz band, the FCC limit is  $43 + 10\log_{10}(P[\text{Watts}])$  dB below the transmitter power  $P(\text{Watts})$  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.

27.50 (a) for Band 7

The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power ( $P$ ) by a factor of mobile digital stations, the attenuation factor shall be not less than  $43 + 10 \log (P)$  dB at the channel edge and  $55 + 10 \log (P)$  dB at 5.5 MHz from the channel edges. It is measured by means of a calibrated spectrum analyzer and scanned from 30 MHz up to a frequency including its 10<sup>th</sup> harmonic.

27.53 (g) for Band 17

For operations in the 698 -746 MHz band, the FCC limit is  $43 + 10\log_{10}(P[\text{Watts}])$  dB below the transmitter power  $P(\text{Watts})$  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.

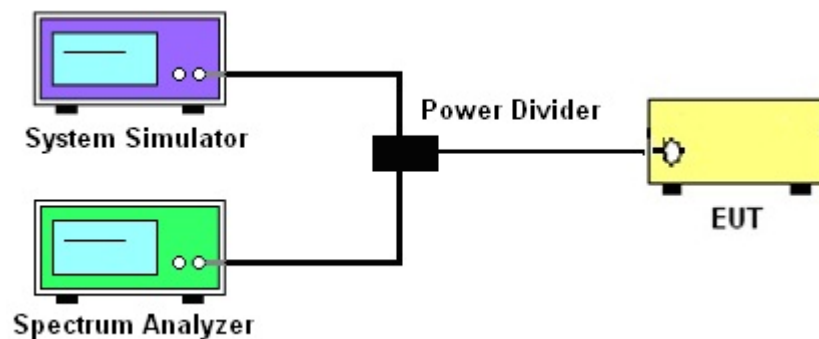
### 3.5.2 Measuring Instruments

Measuring equipment is listed in the section 4 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  $RBW \geq 1\%$  EBW, and measuring bandwidth = 1MHz.
3. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

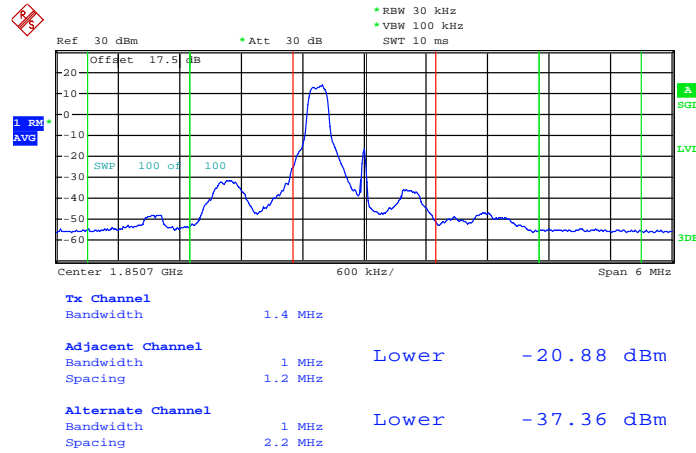
### 3.5.4 Test Setup



### 3.5.5 Test Result (Plots) of Conducted Band Edge

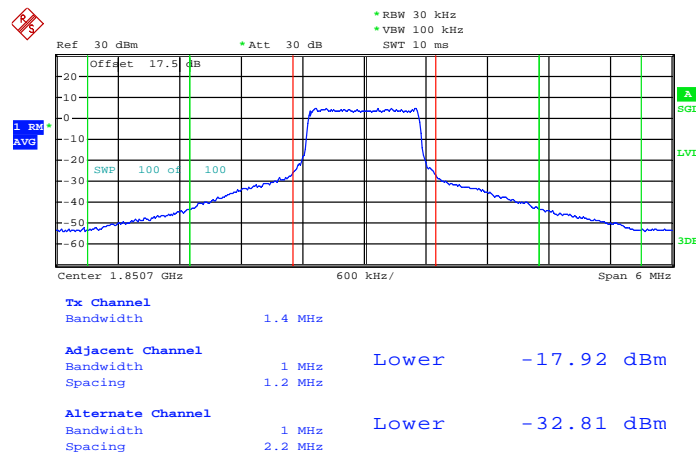
Band :	LTE Band 2	Band Width :	1.4MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Date: 28.OCT.2013 13:26:30

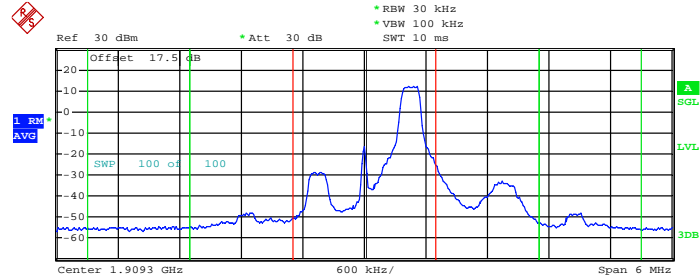
Lower Band Edge Plot for QPSK-RB Size 6, RB Offset 0



Date: 28.OCT.2013 13:25:37



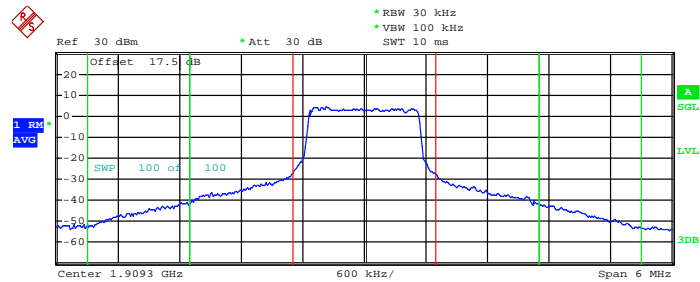
Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 5



<b>Tx Channel</b>			
Bandwidth	1.4 MHz		
<b>Adjacent Channel</b>			
Bandwidth	1 MHz		
Spacing	1.2 MHz	Upper	-21.14 dBm
<b>Alternate Channel</b>			
Bandwidth	1 MHz		
Spacing	2.2 MHz	Upper	-37.76 dBm

Date: 28.OCT.2013 13:27:18

Higher Band Edge Plot for QPSK-RB Size 6, RB Offset 0



<b>Tx Channel</b>			
Bandwidth	1.4 MHz		
<b>Adjacent Channel</b>			
Bandwidth	1 MHz		
Spacing	1.2 MHz	Upper	-19.77 dBm
<b>Alternate Channel</b>			
Bandwidth	1 MHz		
Spacing	2.2 MHz	Upper	-31.25 dBm

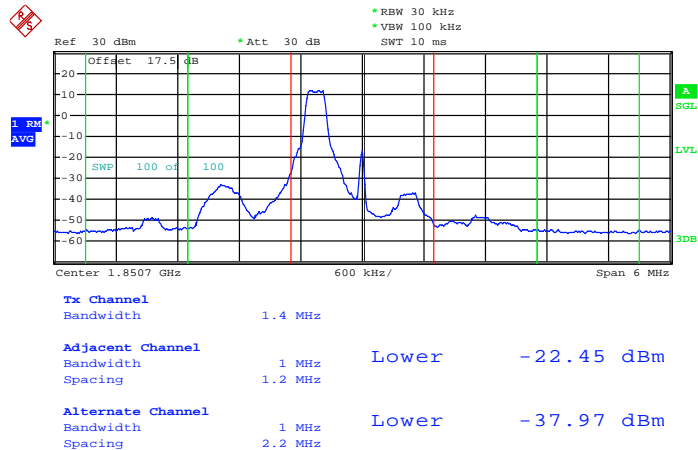
Date: 28.OCT.2013 13:28:14





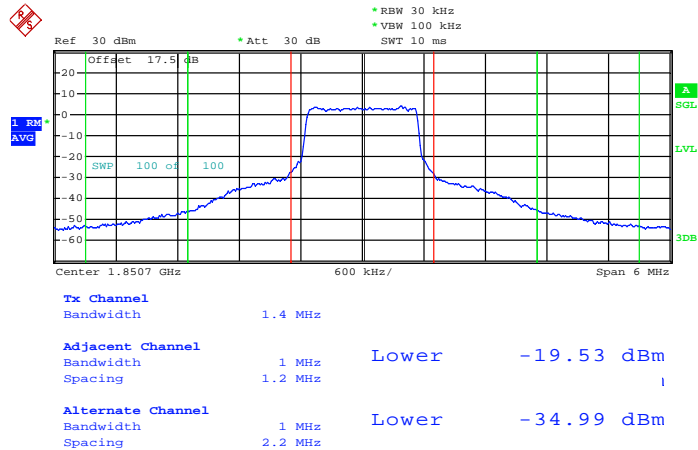
<b>Band :</b>	LTE Band 2	<b>Band Width :</b>	1.4MHz / 16QAM
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Lower Band Edge Plot for 16QAM -RB Size 1, RB Offset 0



Date: 28.OCT.2013 13:26:14

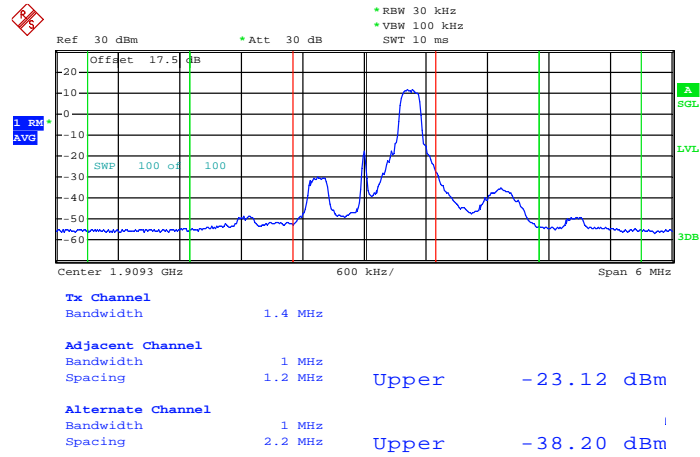
Lower Band Edge Plot for 16QAM -RB Size 6, RB Offset 0



Date: 28.OCT.2013 13:25:56

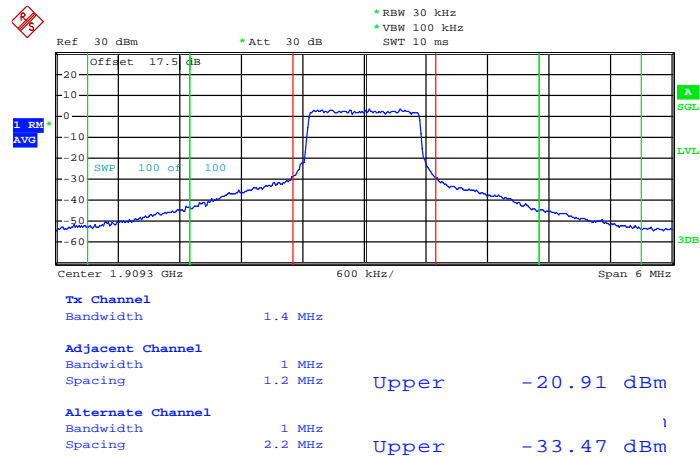


Higher Band Edge Plot for 16QAM -RB Size 1, RB Offset 5



Date: 28.OCT.2013 13:27:35

Higher Band Edge Plot for 16QAM -RB Size 6, RB Offset 0

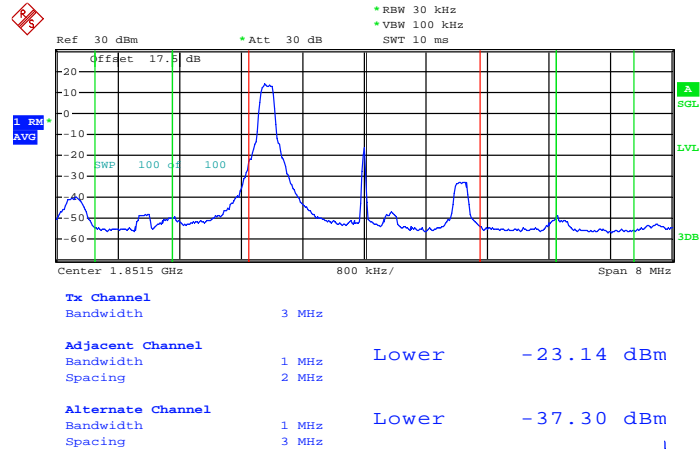


Date: 28.OCT.2013 13:27:56



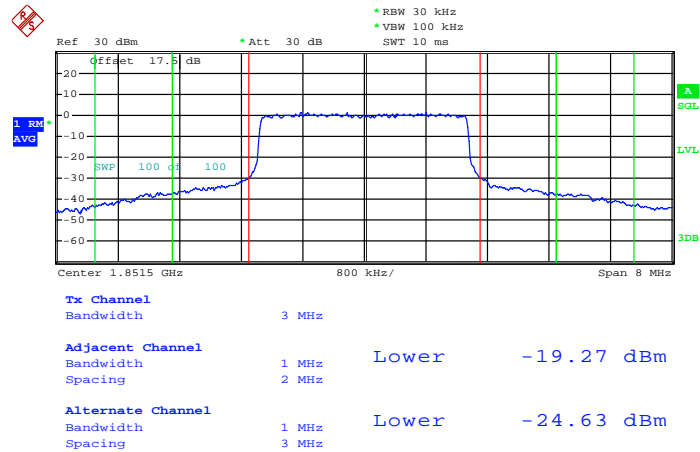
<b>Band :</b>	LTE Band 2	<b>Band Width :</b>	3MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Date: 28.OCT.2013 13:31:40

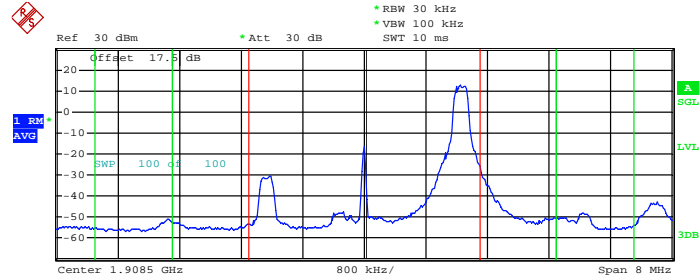
Lower Band Edge Plot for QPSK-RB Size 15, RB Offset 0



Date: 28.OCT.2013 13:30:47



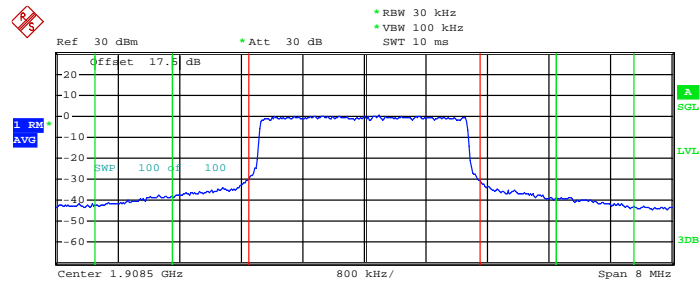
Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 14



<b>Tx Channel</b>			
Bandwidth	3 MHz		
<b>Adjacent Channel</b>			
Bandwidth	1 MHz		
Spacing	2 MHz	Upper	-23.23 dBm
<b>Alternate Channel</b>			
Bandwidth	1 MHz		
Spacing	3 MHz	Upper	-37.26 dBm

Date: 28.OCT.2013 13:32:42

Higher Band Edge Plot for QPSK-RB Size 15, RB Offset 0



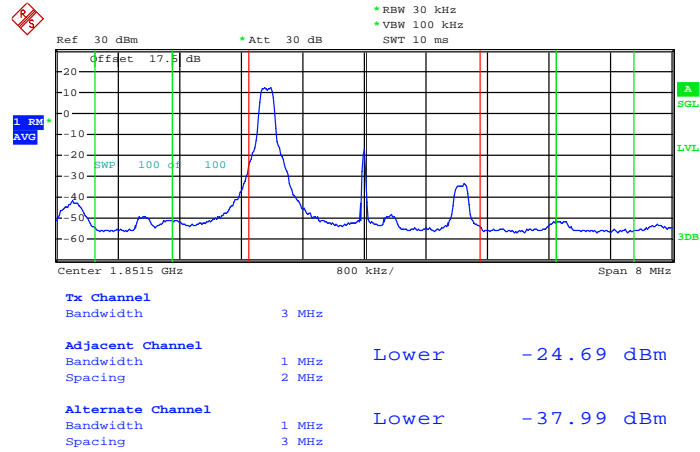
<b>Tx Channel</b>			
Bandwidth	3 MHz		
<b>Adjacent Channel</b>			
Bandwidth	1 MHz		
Spacing	2 MHz	Upper	-20.97 dBm
<b>Alternate Channel</b>			
Bandwidth	1 MHz		
Spacing	3 MHz	Upper	-25.80 dBm

Date: 28.OCT.2013 13:33:35



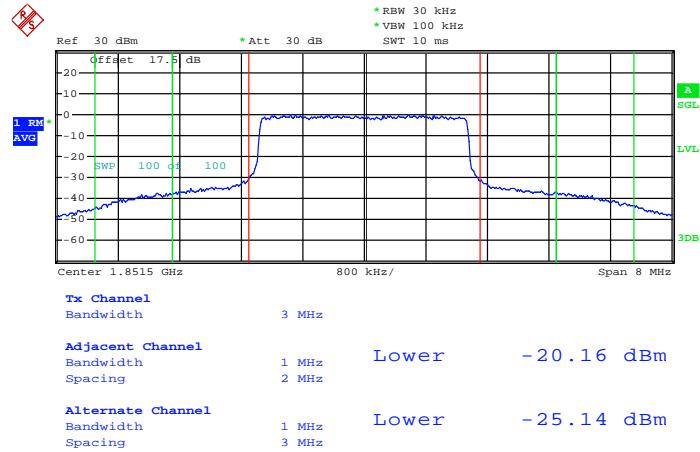
<b>Band :</b>	LTE Band 2	<b>Band Width :</b>	3MHz / 16QAM
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Lower Band Edge Plot for 16QAM -RB Size 1, RB Offset 0



Date: 28.OCT.2013 13:31:25

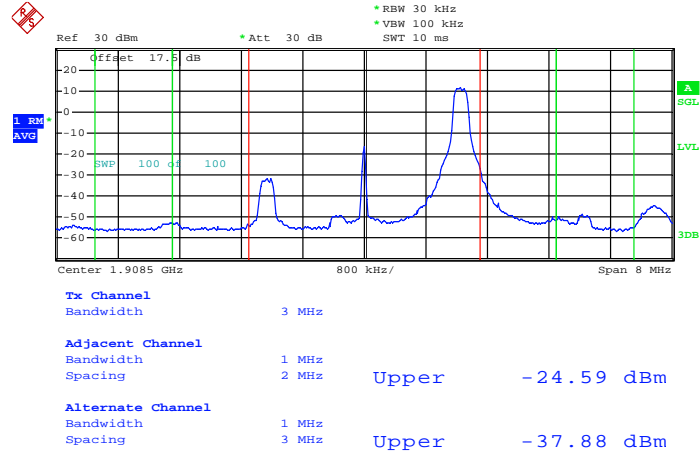
Lower Band Edge Plot for 16QAM -RB Size 15, RB Offset 0



Date: 28.OCT.2013 13:31:06

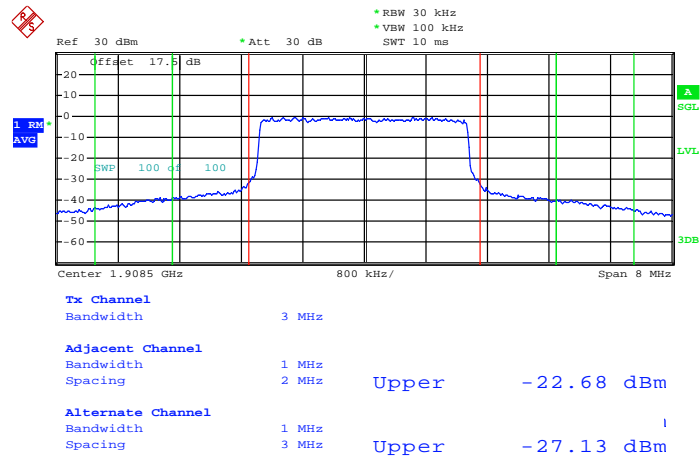


Higher Band Edge Plot for 16QAM -RB Size 1, RB Offset 14



Date: 28.OCT.2013 13:33:00

Higher Band Edge Plot for 16QAM -RB Size 15, RB Offset 0

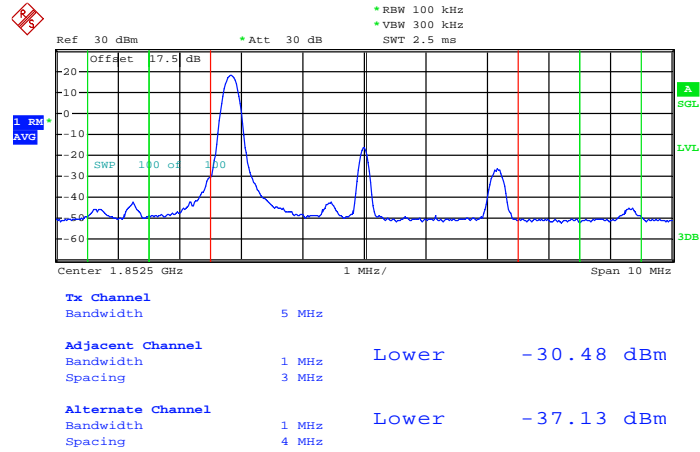


Date: 28.OCT.2013 13:33:22



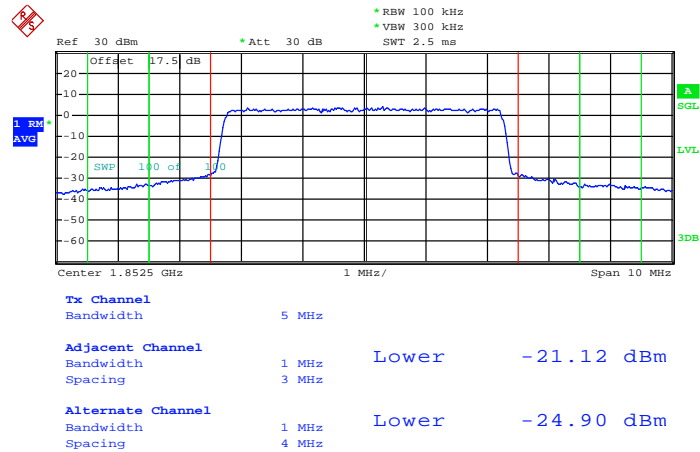
<b>Band :</b>	LTE Band 2	<b>Band Width :</b>	5MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Date: 28.OCT.2013 13:38:02

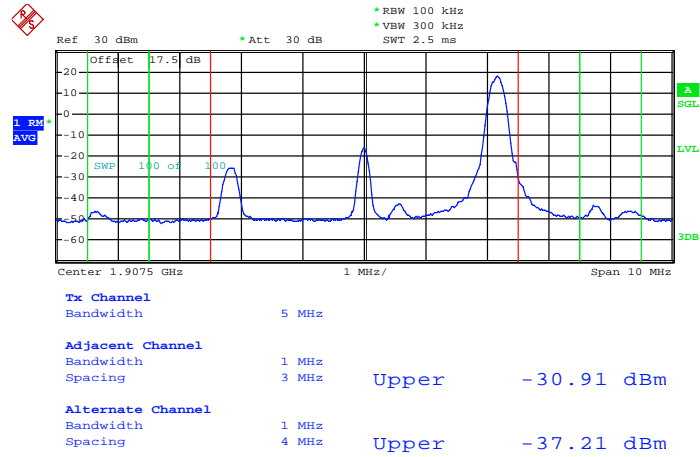
Lower Band Edge Plot for QPSK-RB Size 25, RB Offset 0



Date: 28.OCT.2013 13:38:58

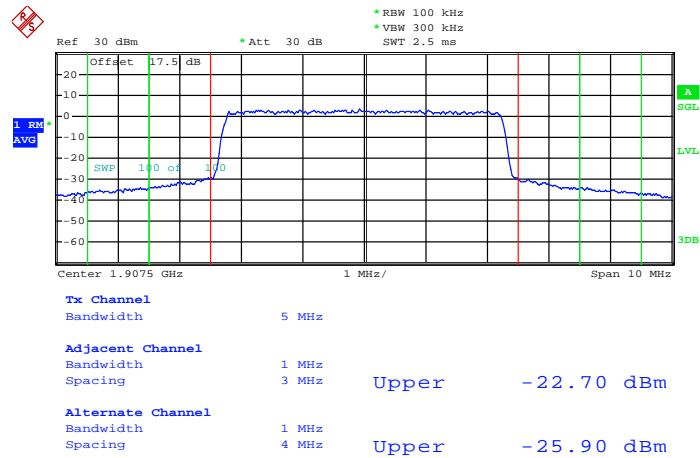


Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 24



Date: 28.OCT.2013 13:37:09

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



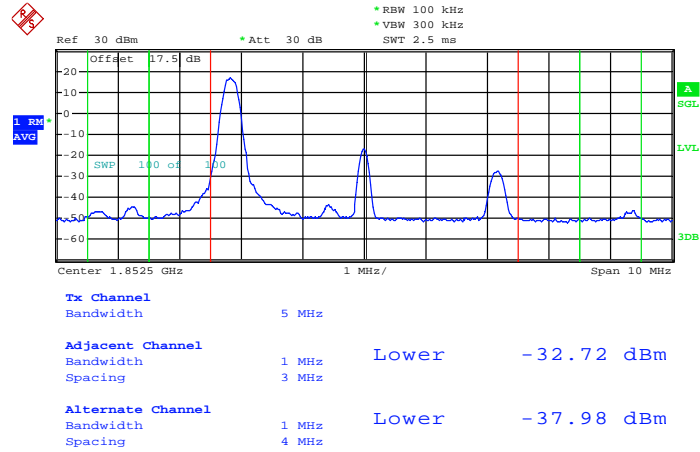
Date: 28.OCT.2013 13:36:09





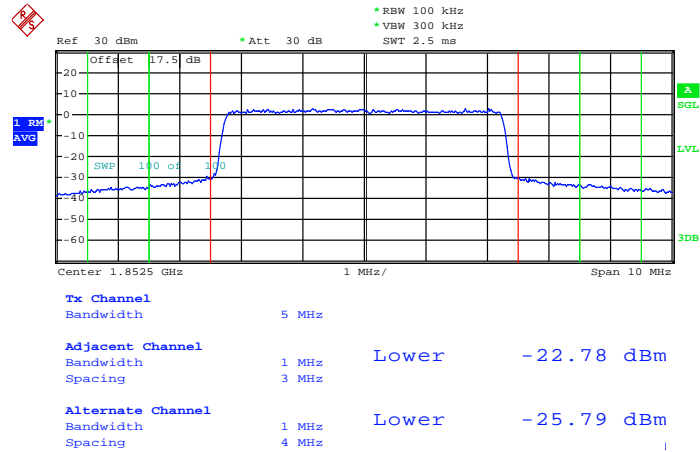
<b>Band :</b>	LTE Band 2	<b>Band Width :</b>	5MHz / 16QAM
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Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



Date: 28.OCT.2013 13:38:21

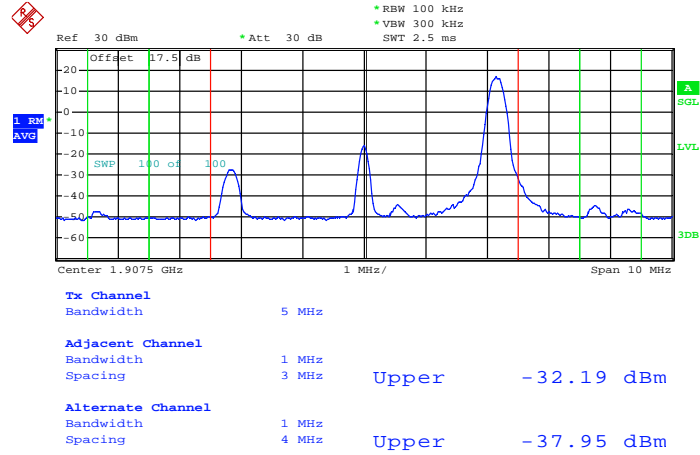
Lower Band Edge Plot for 16QAM-RB Size 25, RB Offset 0



Date: 28.OCT.2013 13:38:40

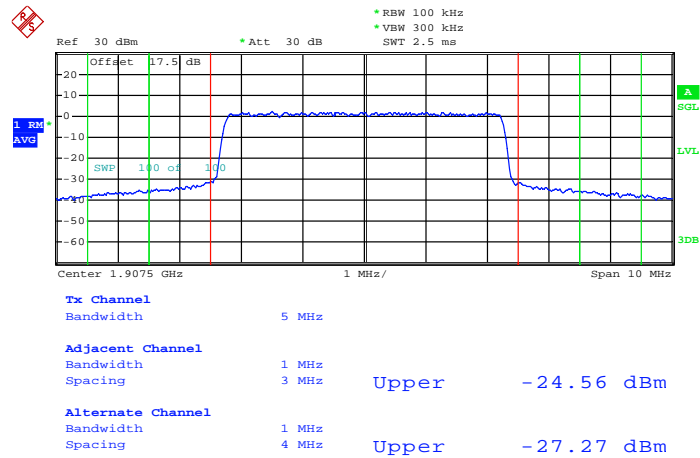


Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 24



Date: 28.OCT.2013 13:36:48

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

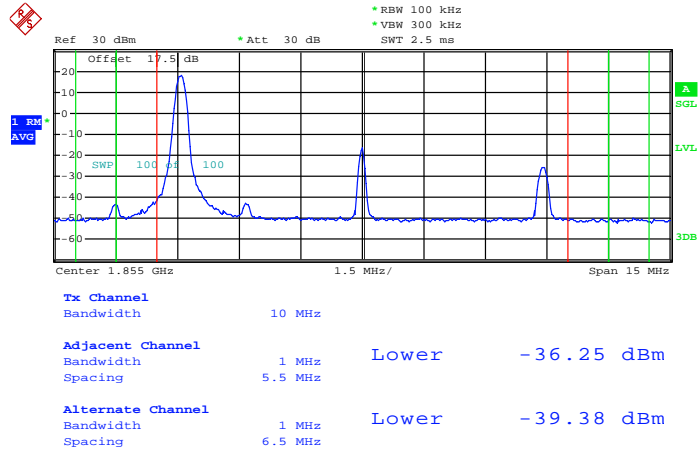


Date: 28.OCT.2013 13:36:26



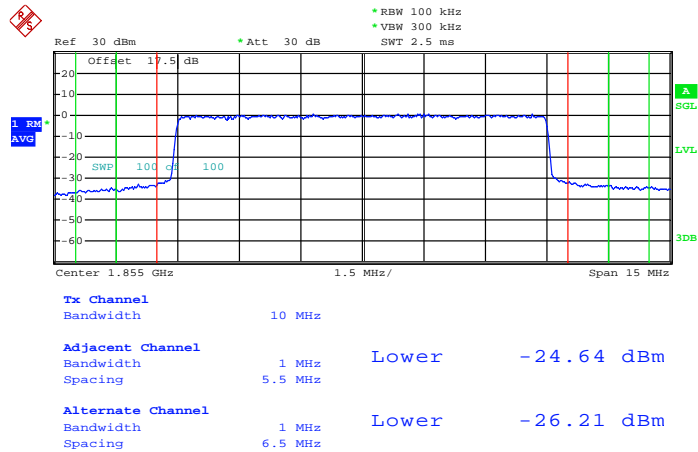
<b>Band :</b>	LTE Band 2	<b>Band Width :</b>	10MHz / QPSK
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**Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0**



Date: 28.OCT.2013 13:44:44

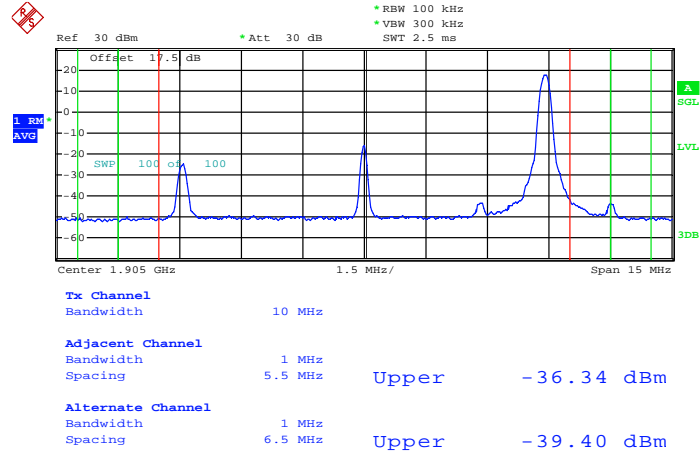
**Lower Band Edge Plot for QPSK-RB Size 50, RB Offset 0**



Date: 28.OCT.2013 13:43:57

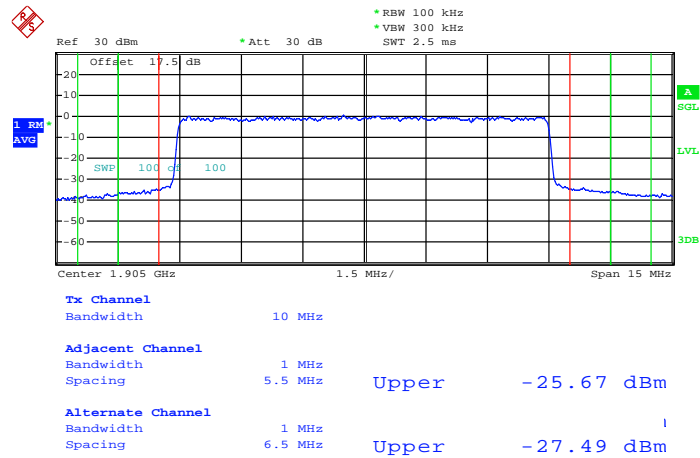


Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 49



Date: 28.OCT.2013 13:45:34

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

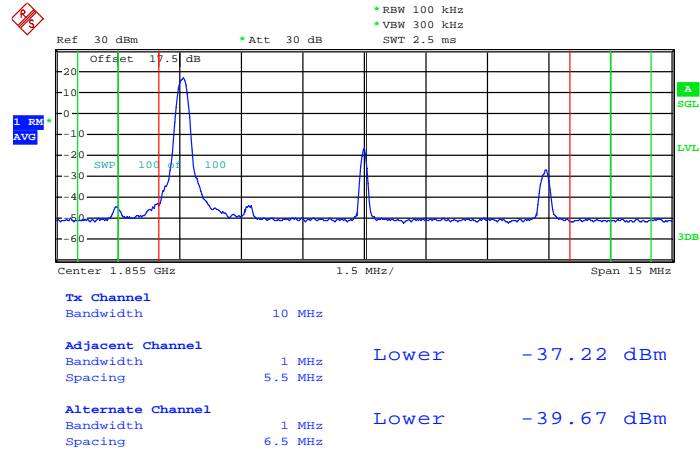


Date: 28.OCT.2013 13:46:24



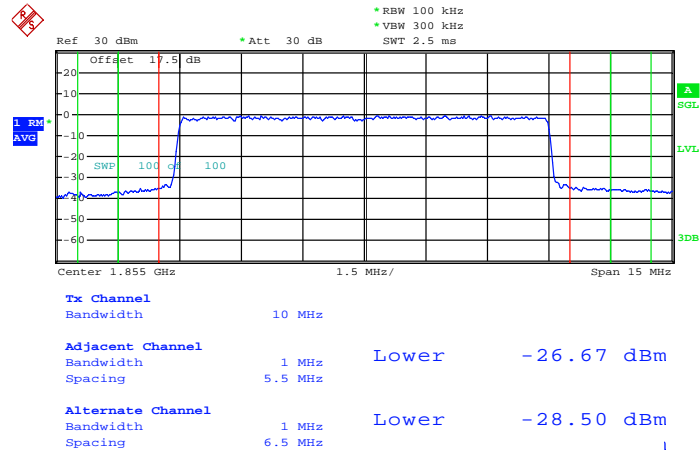
<b>Band :</b>	LTE Band 2	<b>Band Width :</b>	10MHz / 16QAM
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Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



Date: 28.OCT.2013 13:44:29

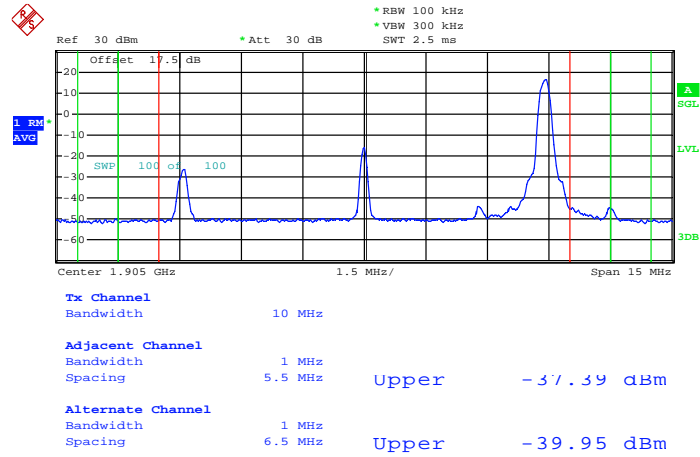
Lower Band Edge Plot for 16QAM-RB Size 50, RB Offset 0



Date: 28.OCT.2013 13:44:12

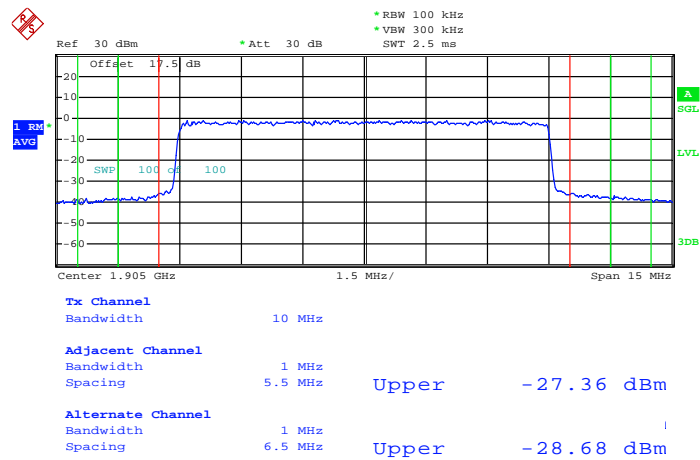


Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 49



Date: 28.OCT.2013 13:45:49

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

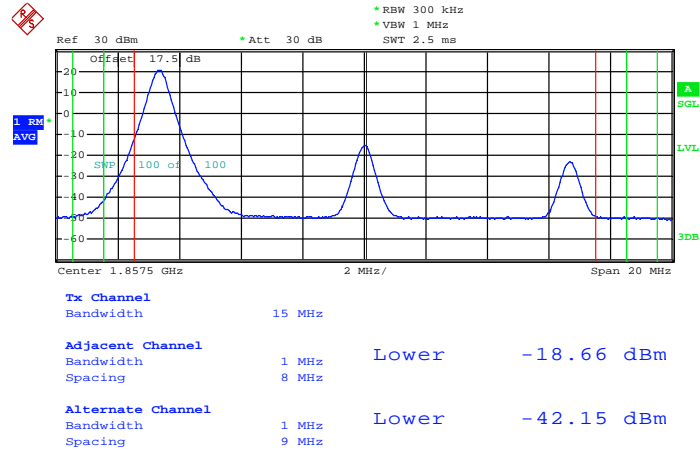


Date: 28.OCT.2013 13:46:10



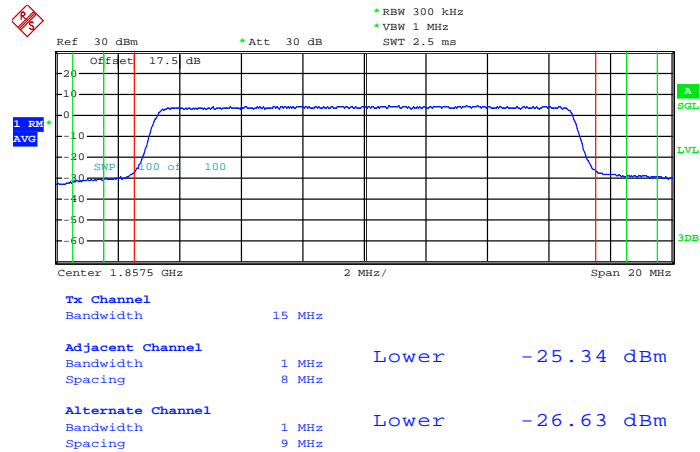
<b>Band :</b>	LTE Band 2	<b>Band Width :</b>	15MHz / QPSK
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**Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0**



Date: 28.OCT.2013 14:01:03

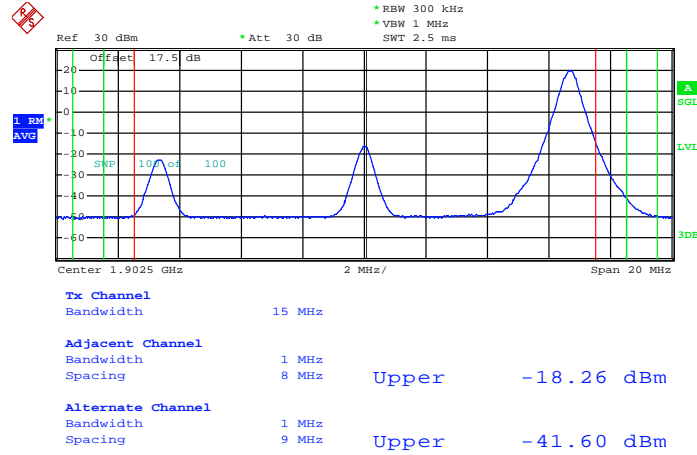
**Lower Band Edge Plot for QPSK-RB Size 75, RB Offset 0**



Date: 28.OCT.2013 14:00:15

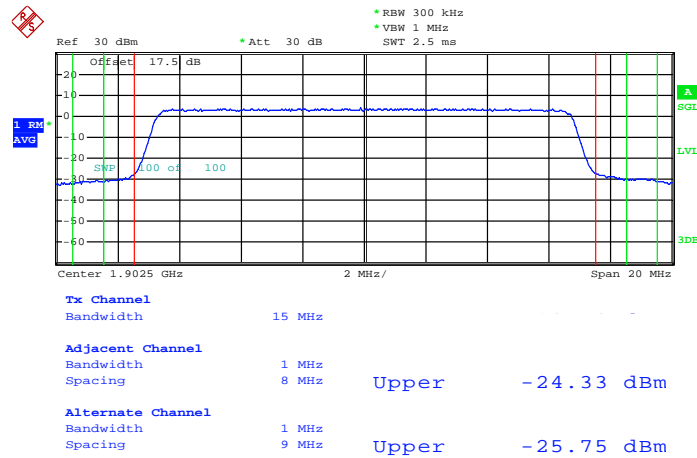


Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 74



Date: 28.OCT.2013 14:03:11

Higher Band Edge Plot for QPSK-RB Size 75, RB Offset 0



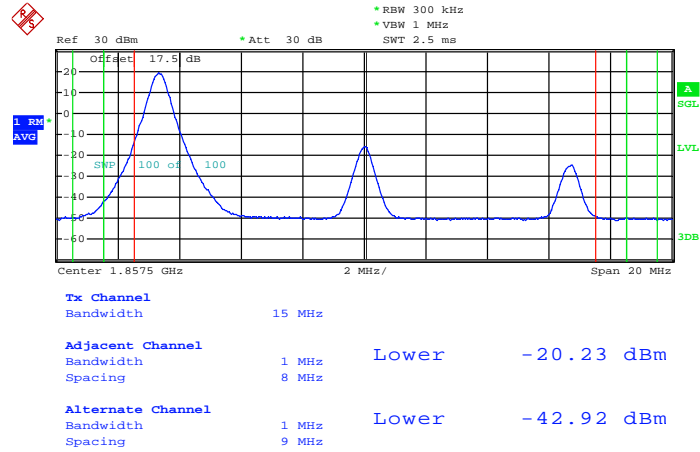
Date: 28.OCT.2013 14:04:14





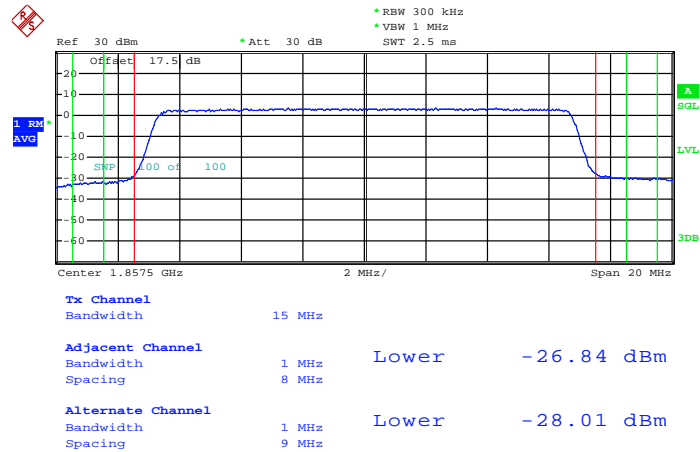
<b>Band :</b>	LTE Band 2	<b>Band Width :</b>	15MHz / 16QAM
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Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



Date: 28.OCT.2013 14:00:49

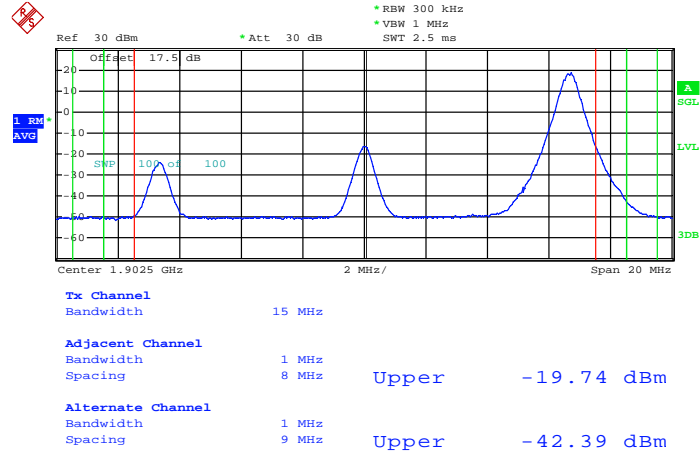
Lower Band Edge Plot for 16QAM-RB Size 75, RB Offset 0



Date: 28.OCT.2013 14:00:30

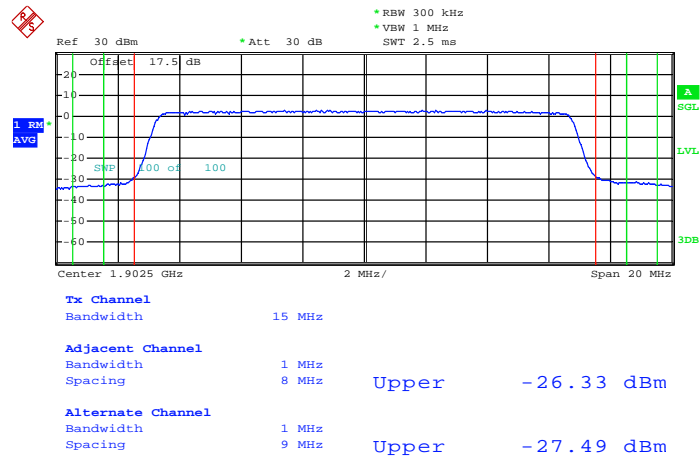


Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 74



Date: 28.OCT.2013 14:03:32

Higher Band Edge Plot for 16QAM-RB Size 75, RB Offset 0

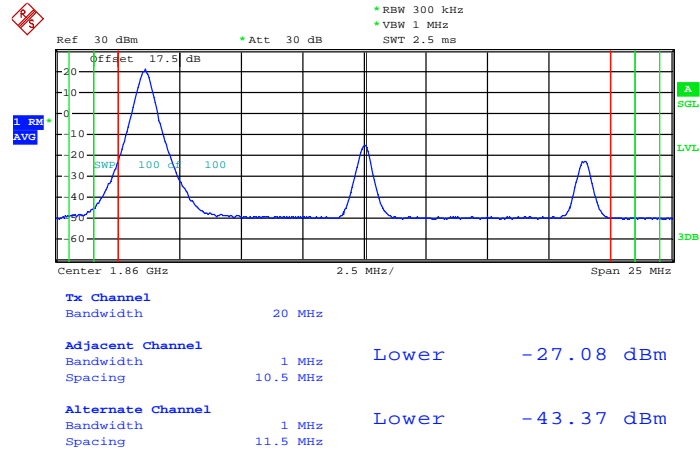


Date: 28.OCT.2013 14:03:54



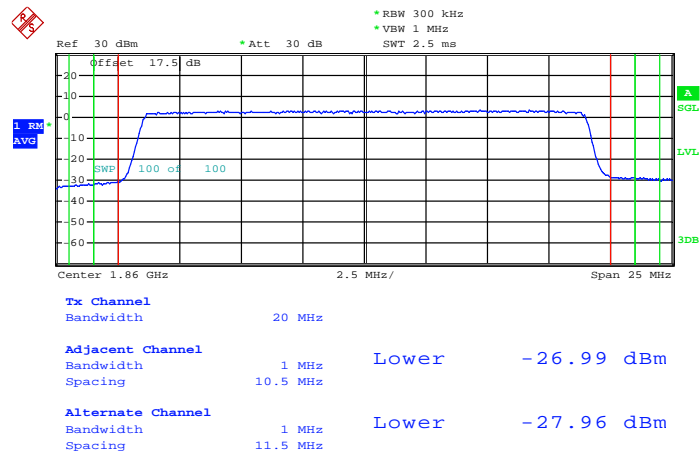
<b>Band :</b>	LTE Band 2	<b>Band Width :</b>	20MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Date: 28.OCT.2013 14:07:51

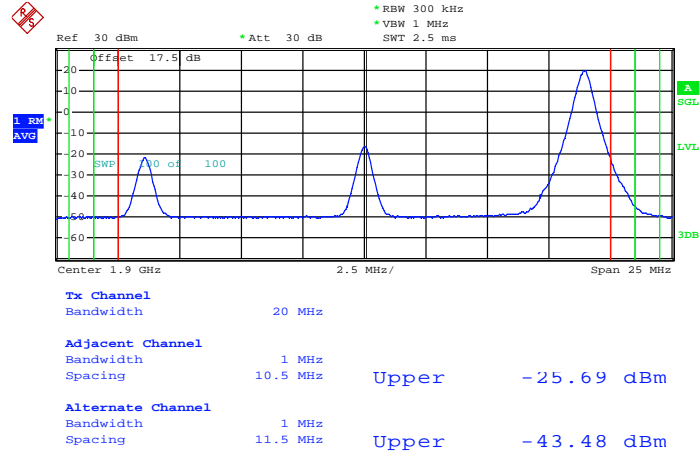
Lower Band Edge Plot for QPSK-RB Size 100, RB Offset 0



Date: 28.OCT.2013 14:07:03

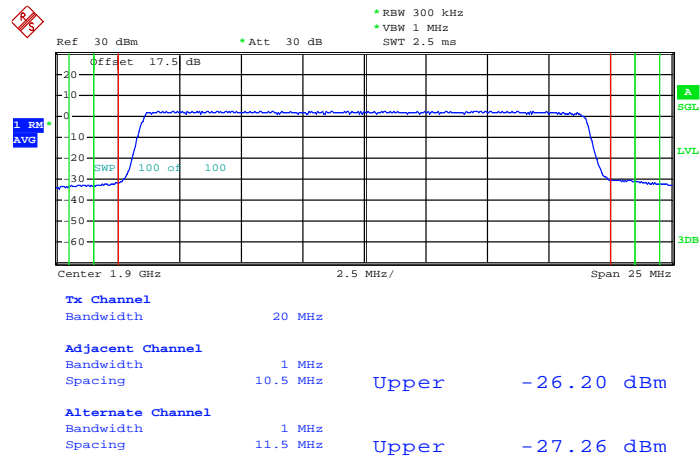


Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 99



Date: 28.OCT.2013 14:08:34

Higher Band Edge Plot for QPSK-RB Size 100, RB Offset 0

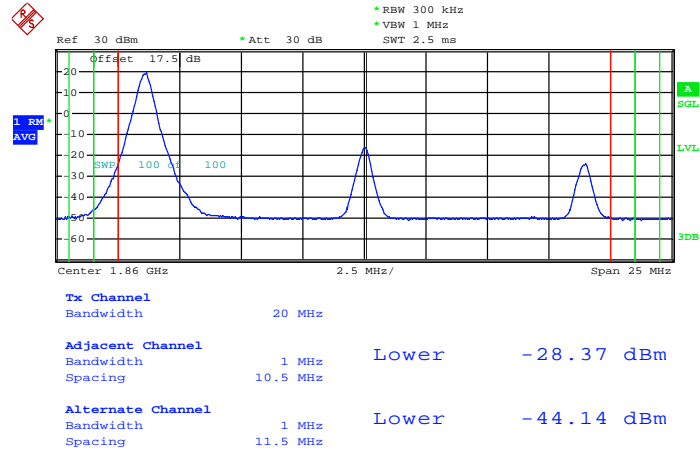


Date: 28.OCT.2013 14:09:25



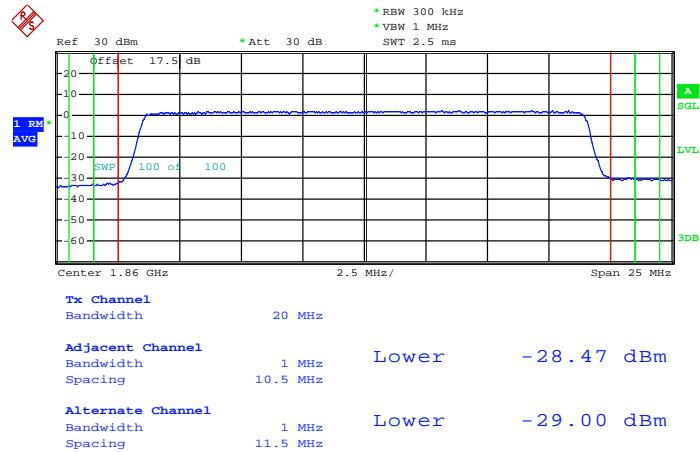
<b>Band :</b>	LTE Band 2	<b>Band Width :</b>	20MHz / 16QAM
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Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



Date: 28.OCT.2013 14:07:35

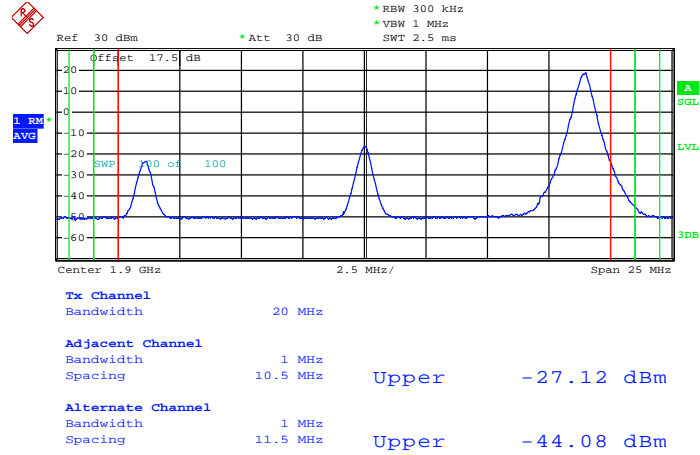
Lower Band Edge Plot for 16QAM-RB Size 100, RB Offset 0



Date: 28.OCT.2013 14:07:17

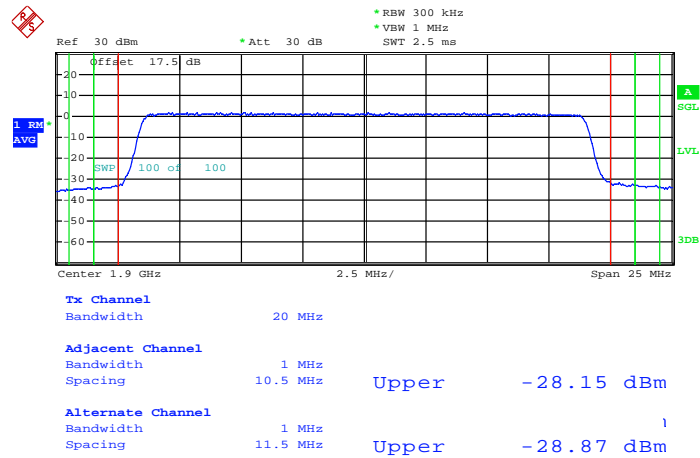


Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 99



Date: 28.OCT.2013 14:08:49

Higher Band Edge Plot for 16QAM-RB Size 100, RB Offset 0

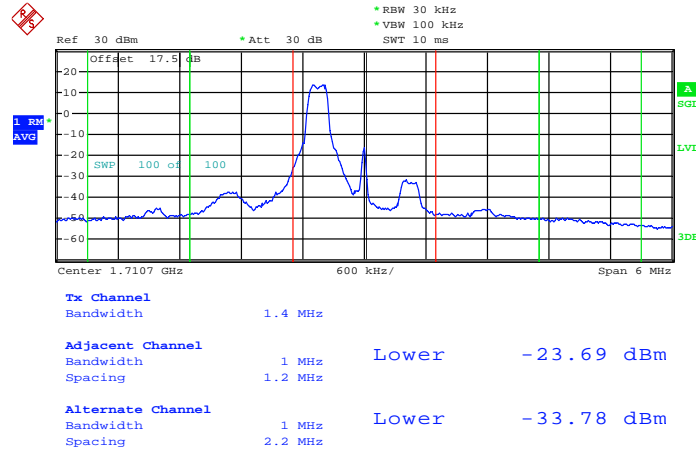


Date: 28.OCT.2013 14:09:10



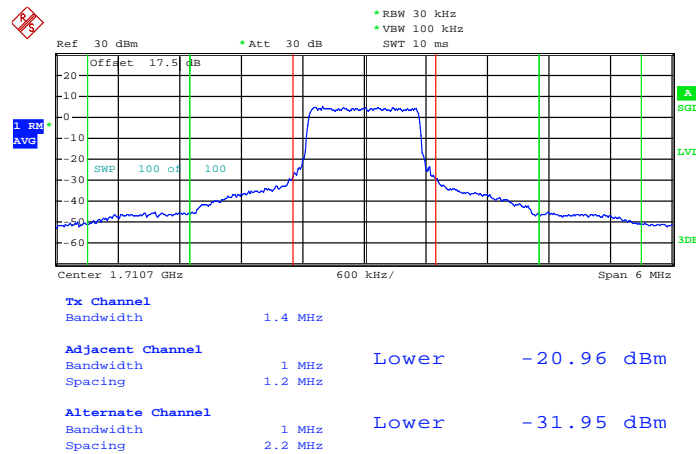
<b>Band :</b>	LTE Band 4	<b>Band Width :</b>	1.4MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Date: 28.OCT.2013 14:46:49

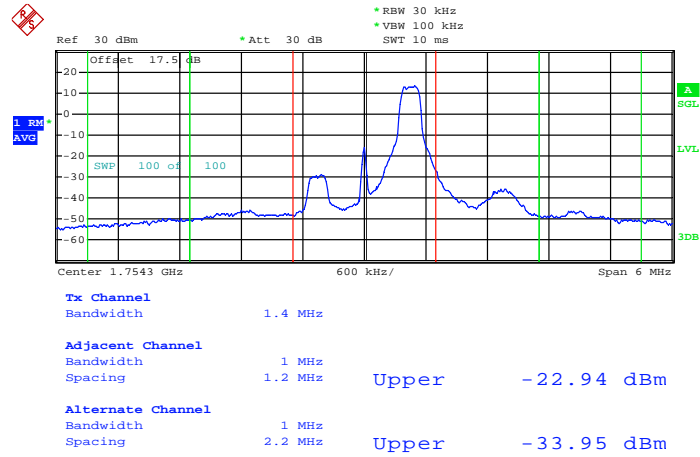
Lower Band Edge Plot for QPSK-RB Size 6, RB Offset 0



Date: 28.OCT.2013 14:47:39

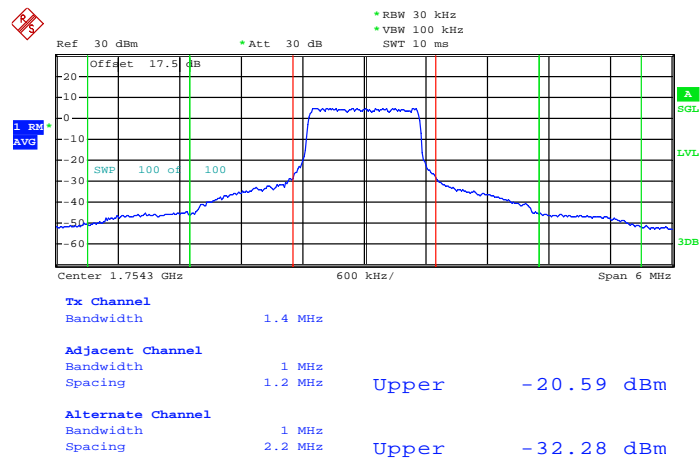


### Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 5



Date: 28.OCT.2013 14:46:05

### Higher Band Edge Plot for QPSK-RB Size 6, RB Offset 0



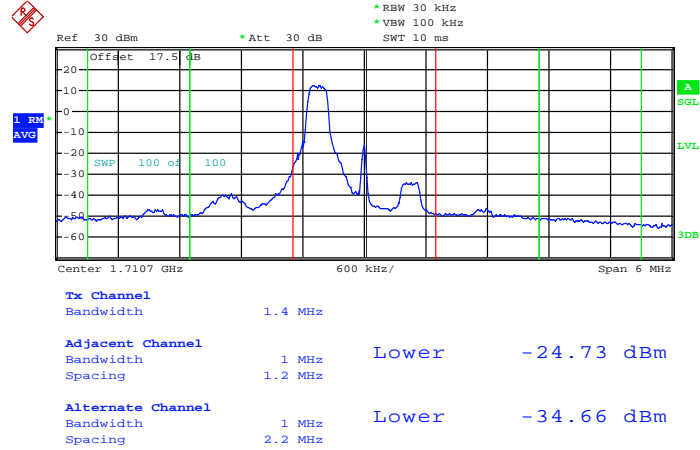
Date: 28.OCT.2013 14:45:10





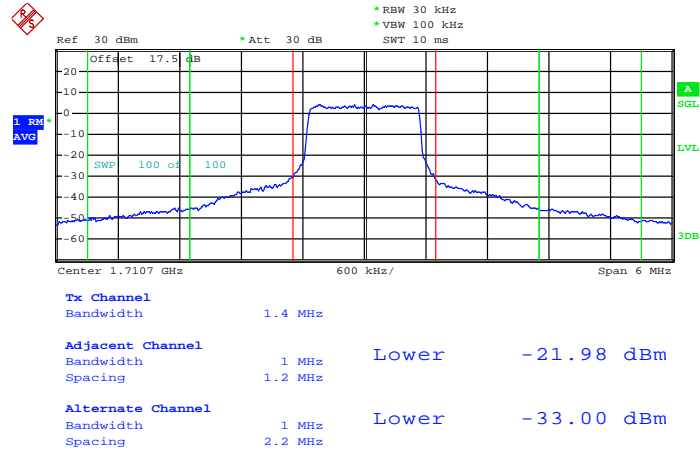
<b>Band :</b>	LTE Band 4	<b>Band Width :</b>	1.4MHz / 16QAM
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Lower Band Edge Plot for 16QAM -RB Size 1, RB Offset 0



Date: 28.OCT.2013 14:47:03

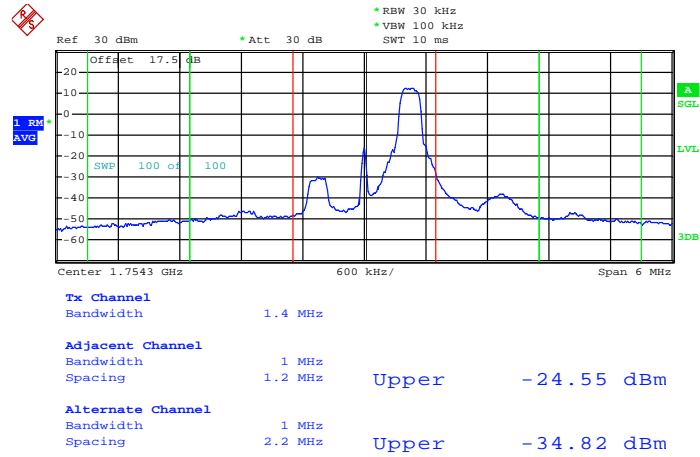
Lower Band Edge Plot for 16QAM-RB Size 6, RB Offset 0



Date: 28.OCT.2013 14:47:25

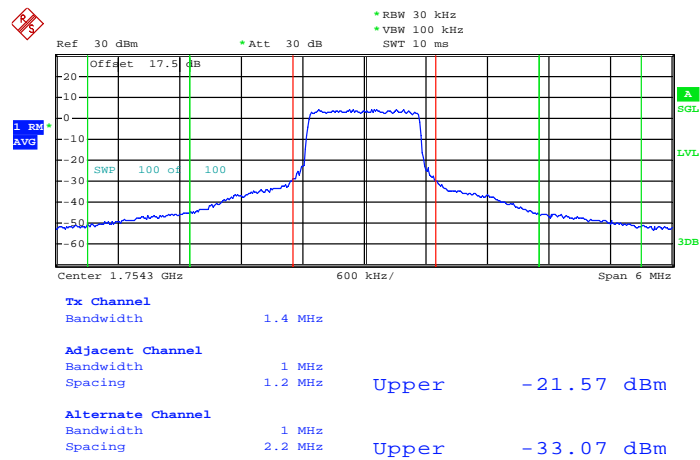


### Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 5



Date: 28.OCT.2013 14:45:51

### Higher Band Edge Plot for 16QAM-RB Size 6, RB Offset 0

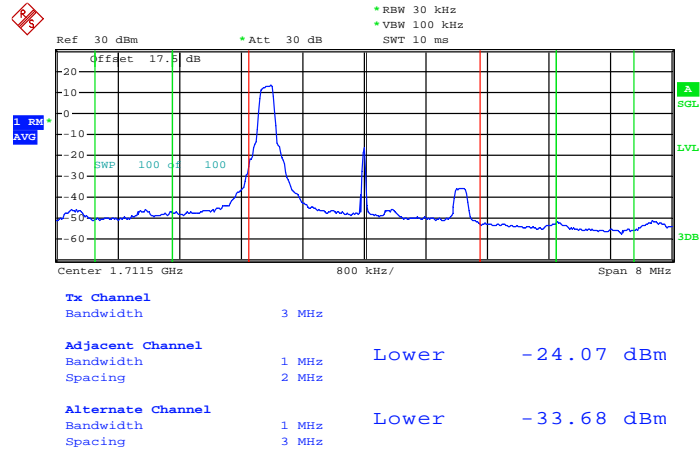


Date: 28.OCT.2013 14:45:28



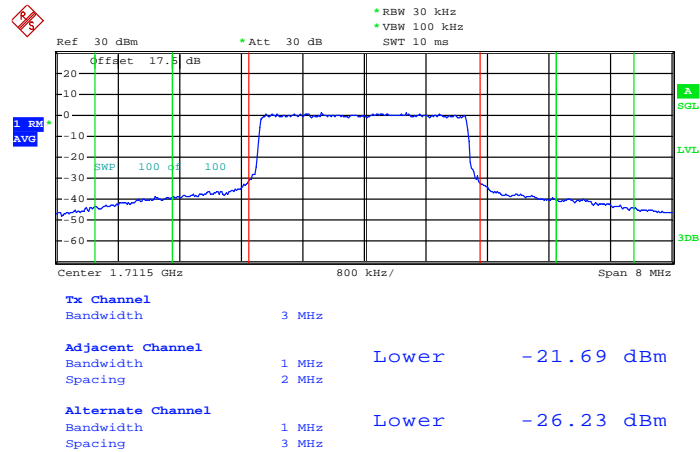
<b>Band :</b>	LTE Band 4	<b>Band Width :</b>	3MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Date: 28.OCT.2013 14:41:37

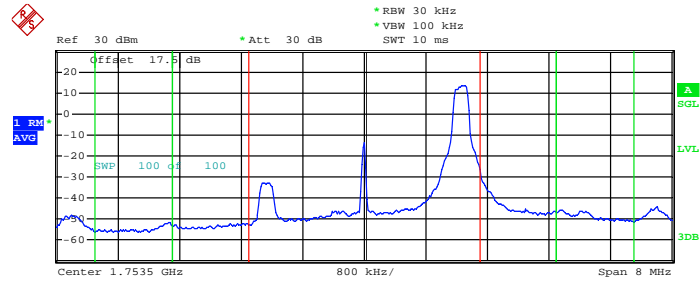
Lower Band Edge Plot for QPSK-RB Size 15, RB Offset 0



Date: 28.OCT.2013 14:40:37



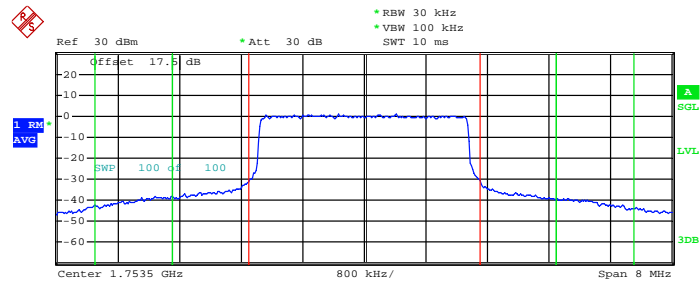
Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 14



<b>Tx Channel</b>			
Bandwidth	3 MHz		
<b>Adjacent Channel</b>			
Bandwidth	1 MHz		
Spacing	2 MHz	Upper	-23.70 dBm
<b>Alternate Channel</b>			
Bandwidth	1 MHz		
Spacing	3 MHz	Upper	-33.50 dBm

Date: 28.OCT.2013 14:42:30

Higher Band Edge Plot for QPSK-RB Size 15, RB Offset 0



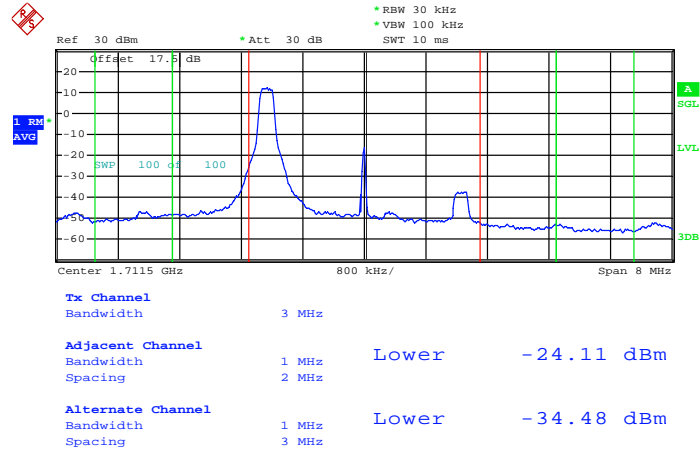
<b>Tx Channel</b>			
Bandwidth	3 MHz		
<b>Adjacent Channel</b>			
Bandwidth	1 MHz		
Spacing	2 MHz	Upper	-21.60 dBm
<b>Alternate Channel</b>			
Bandwidth	1 MHz		
Spacing	3 MHz	Upper	-26.25 dBm

Date: 28.OCT.2013 14:43:20



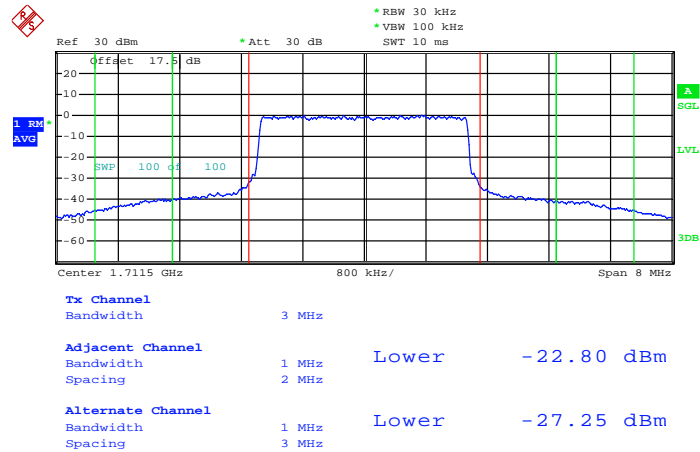
<b>Band :</b>	LTE Band 4	<b>Band Width :</b>	3MHz / 16QAM
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Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



Date: 28.OCT.2013 14:41:23

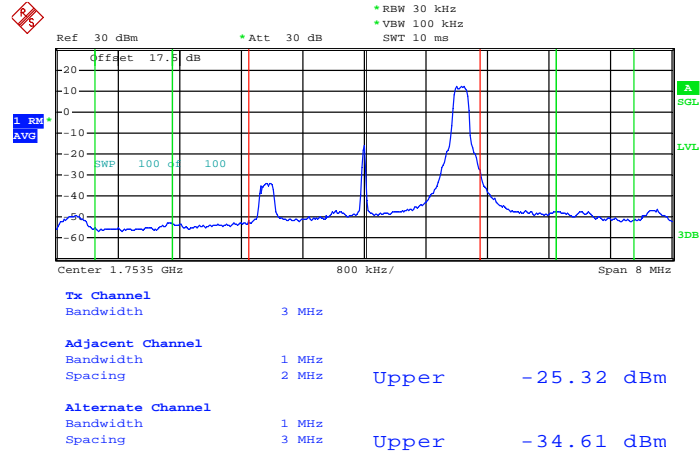
Lower Band Edge Plot for 16QAM-RB Size 15, RB Offset 0



Date: 28.OCT.2013 14:40:57

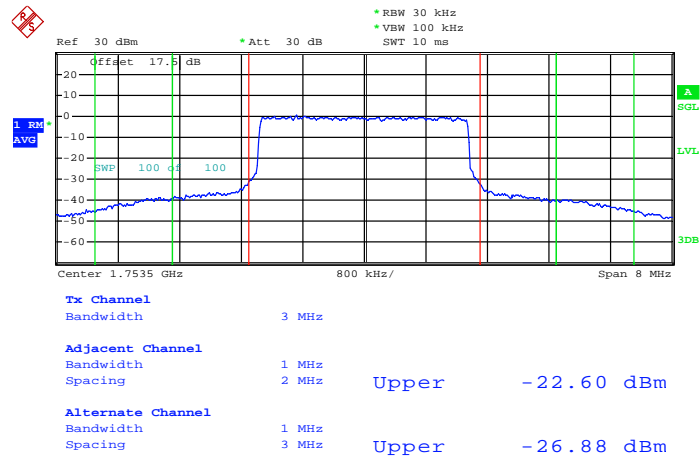


Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 14



Date: 28.OCT.2013 14:42:47

Higher Band Edge Plot for 16QAM-RB Size 15, RB Offset 0

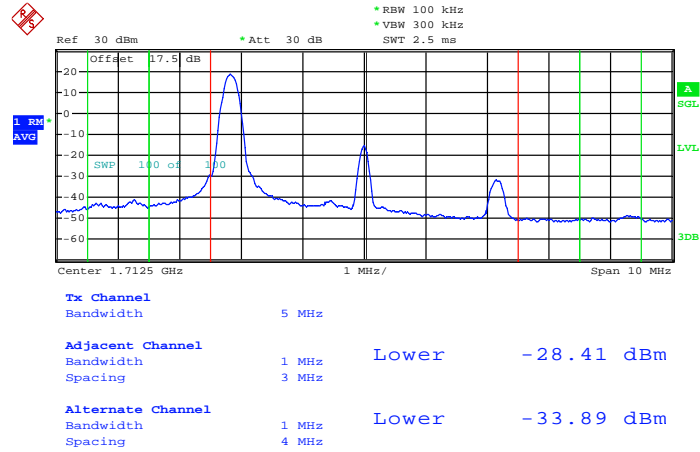


Date: 28.OCT.2013 14:43:06



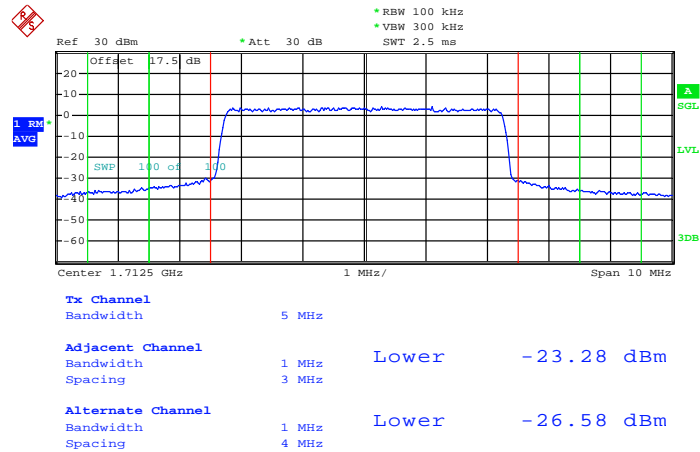
<b>Band :</b>	LTE Band 4	<b>Band Width :</b>	5MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Date: 28.OCT.2013 14:38:17

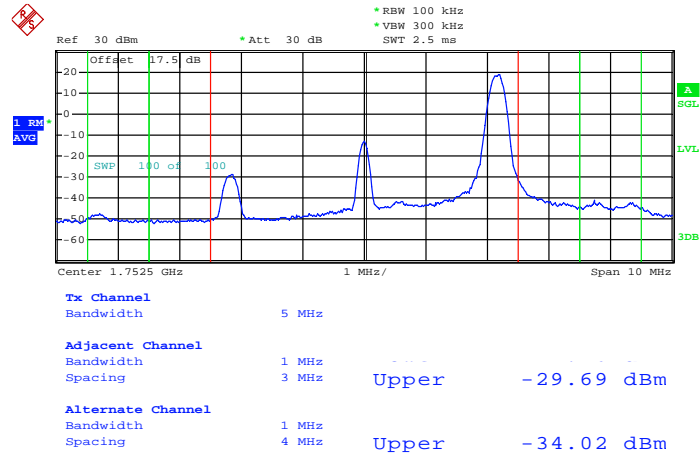
Lower Band Edge Plot for QPSK-RB Size 25, RB Offset 0



Date: 28.OCT.2013 14:39:08

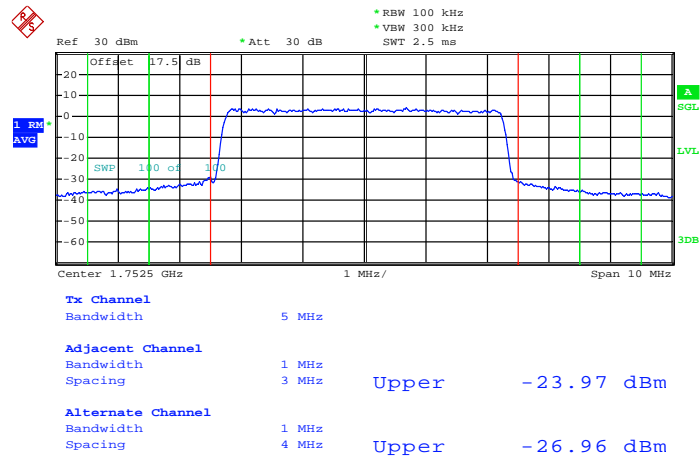


Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 24



Date: 28.OCT.2013 14:37:24

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



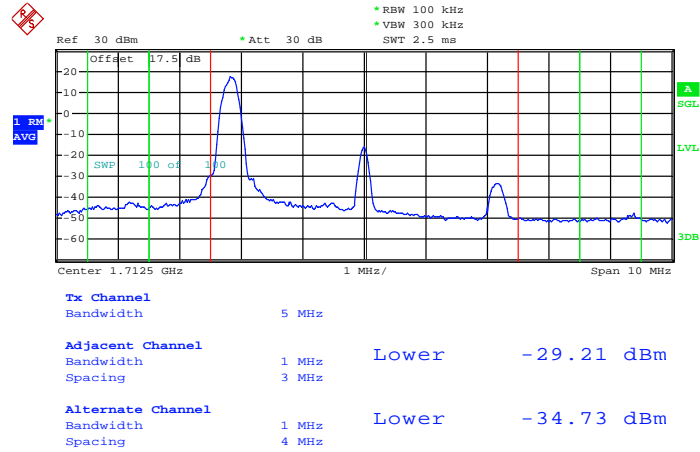
Date: 28.OCT.2013 14:36:18





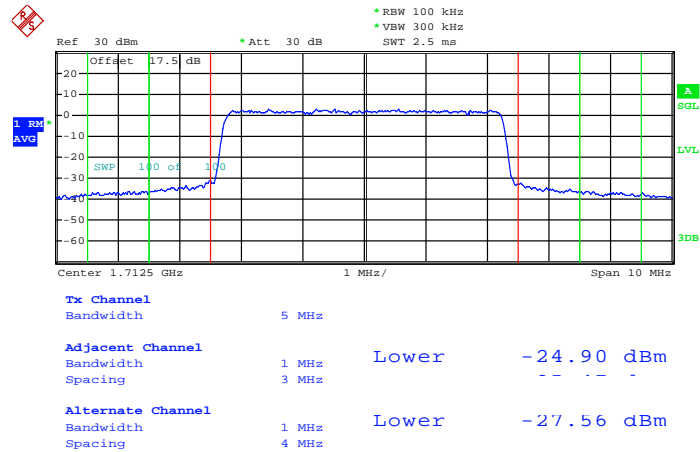
<b>Band :</b>	LTE Band 4	<b>Band Width :</b>	5MHz / 16QAM
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Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



Date: 28.OCT.2013 14:38:33

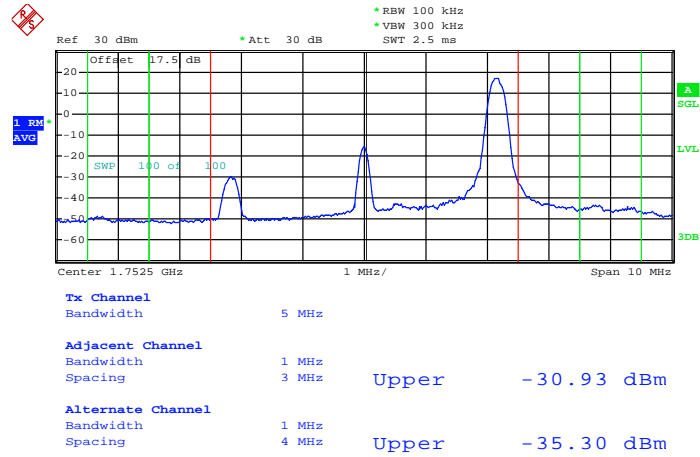
Lower Band Edge Plot for 16QAM-RB Size 25, RB Offset 0



Date: 28.OCT.2013 14:38:52

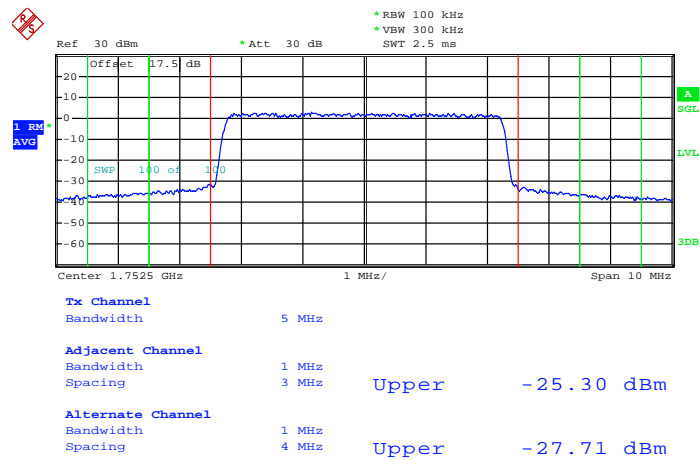


Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 24



Date: 28.OCT.2013 14:37:09

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

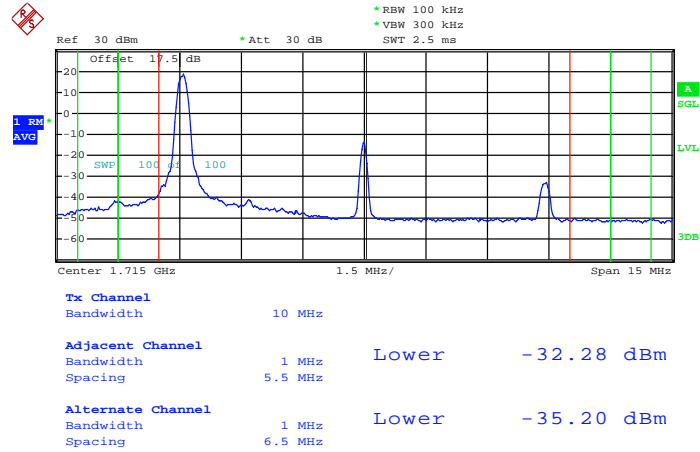


Date: 28.OCT.2013 14:36:47



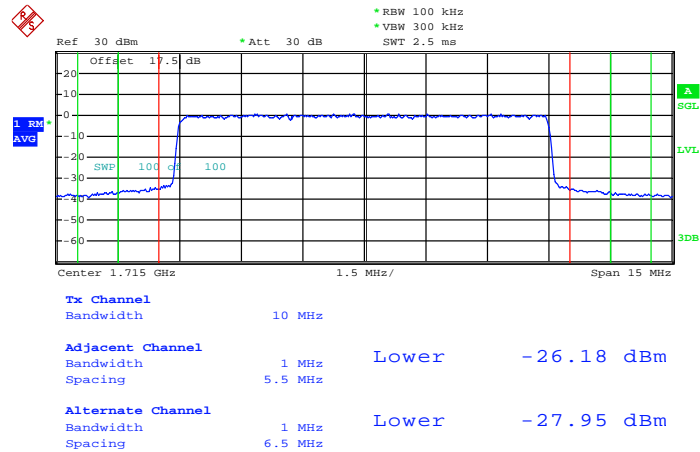
<b>Band :</b>	LTE Band 4	<b>Band Width :</b>	10MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Date: 28.OCT.2013 14:28:53

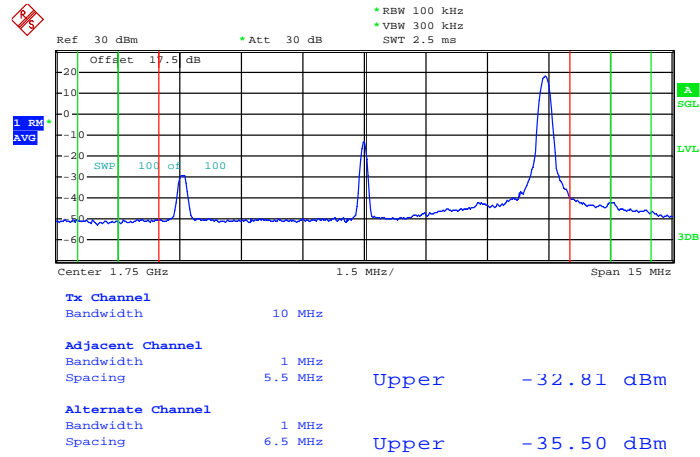
Lower Band Edge Plot for QPSK-RB Size 50, RB Offset 0



Date: 28.OCT.2013 14:27:58

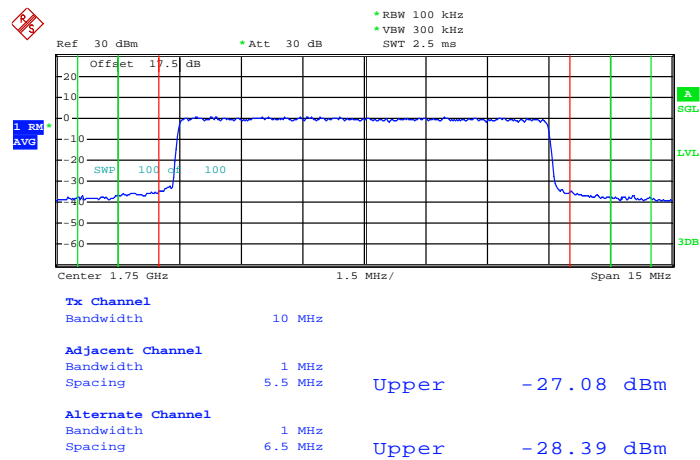


Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 49



Date: 28.OCT.2013 14:29:41

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

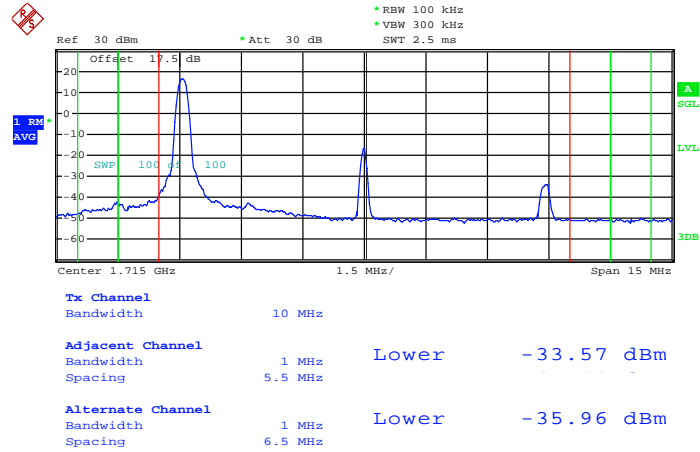


Date: 28.OCT.2013 14:30:42



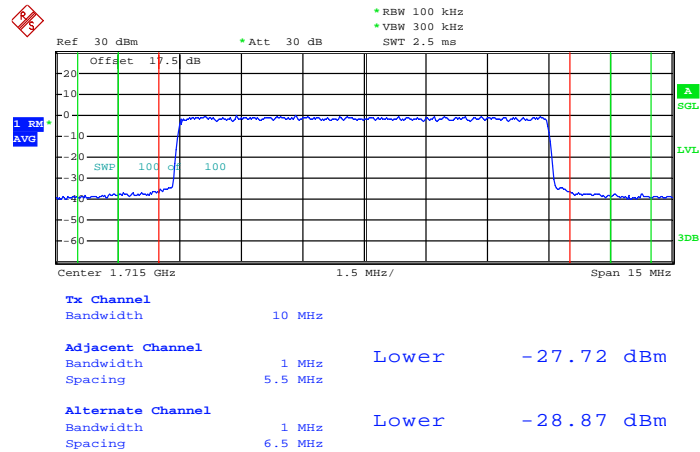
<b>Band :</b>	LTE Band 4	<b>Band Width :</b>	10MHz / 16QAM
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Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



Date: 28.OCT.2013 14:28:40

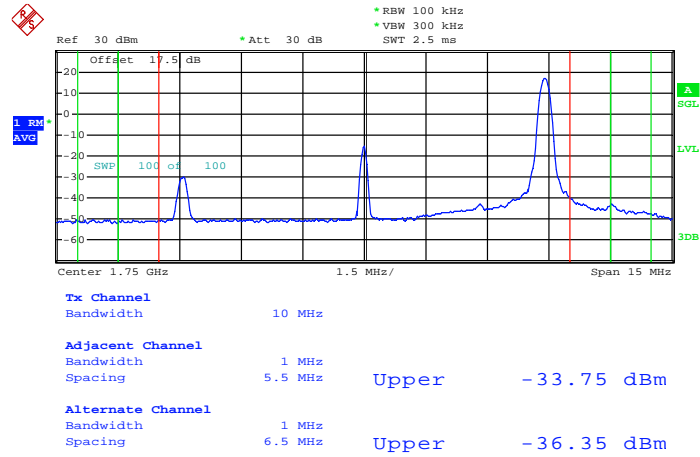
Lower Band Edge Plot for 16QAM-RB Size 50, RB Offset 0



Date: 28.OCT.2013 14:28:15

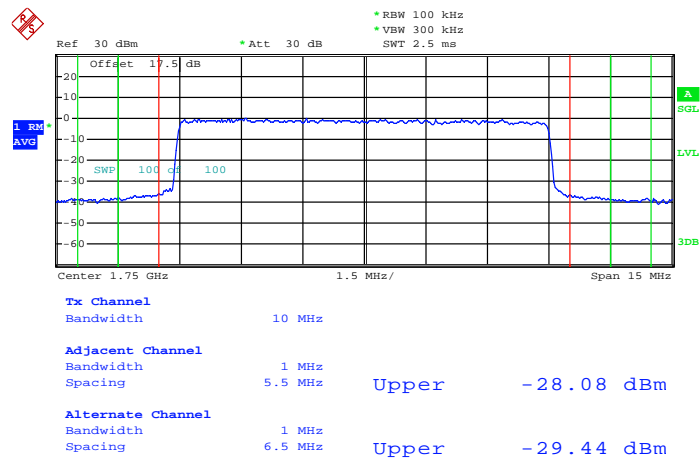


Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 49



Date: 28.OCT.2013 14:29:59

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

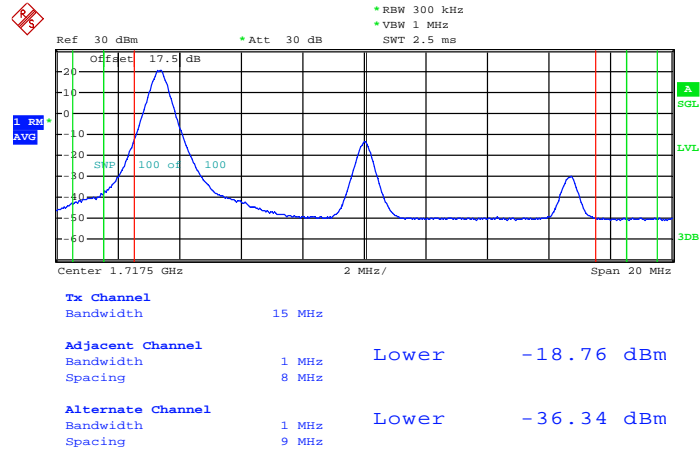


Date: 28.OCT.2013 14:30:23



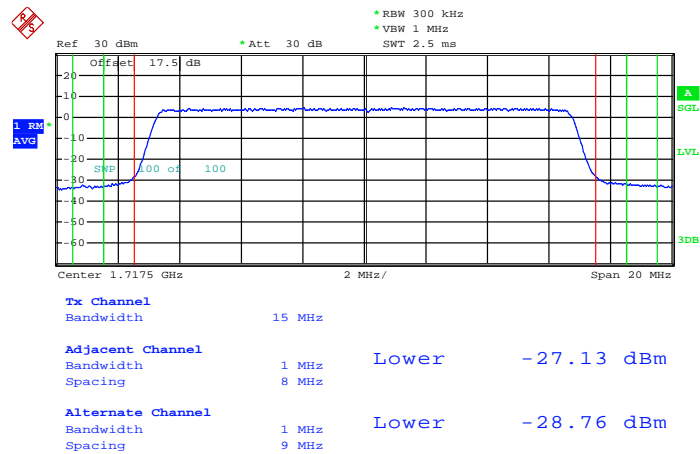
<b>Band :</b>	LTE Band 4	<b>Band Width :</b>	15MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Date: 28.OCT.2013 14:22:45

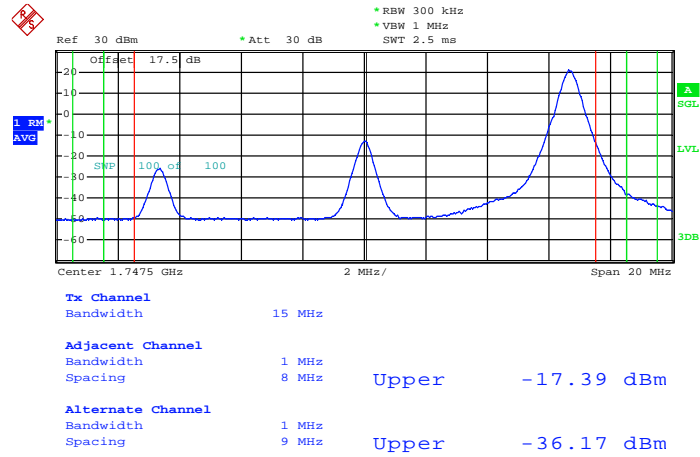
Lower Band Edge Plot for QPSK-RB Size 75, RB Offset 0



Date: 28.OCT.2013 14:23:36

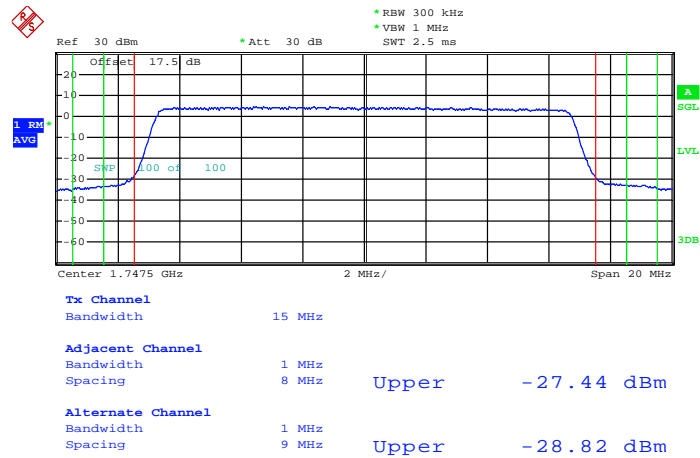


Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 74



Date: 28.OCT.2013 14:21:56

Higher Band Edge Plot for QPSK-RB Size 75, RB Offset 0



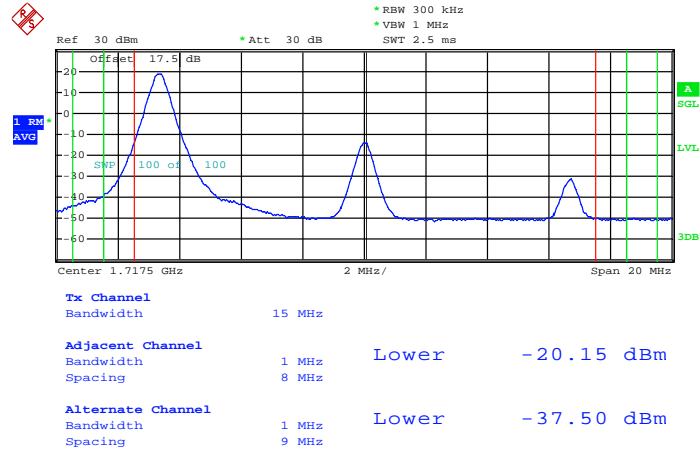
Date: 28.OCT.2013 14:20:03





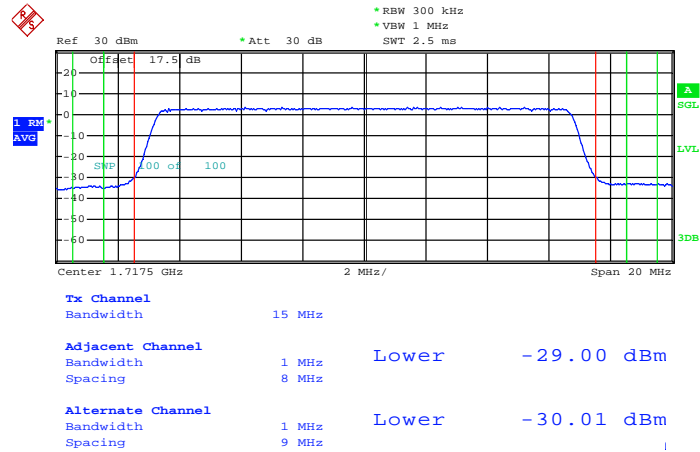
<b>Band :</b>	LTE Band 4	<b>Band Width :</b>	15MHz / 16QAM
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Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



Date: 28.OCT.2013 14:23:01

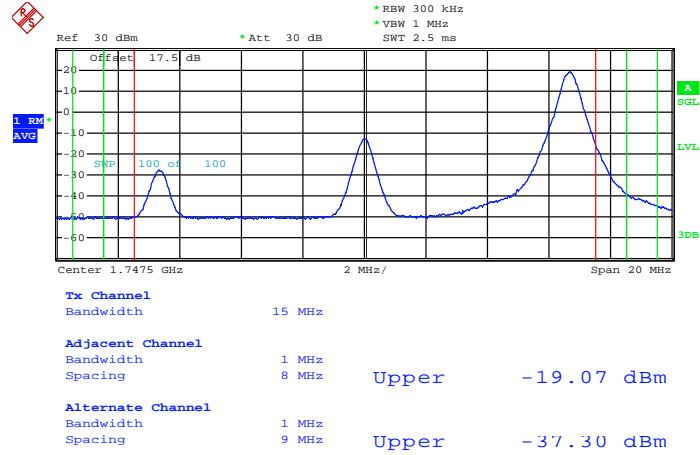
Lower Band Edge Plot for 16QAM-RB Size 75, RB Offset 0



Date: 28.OCT.2013 14:23:21

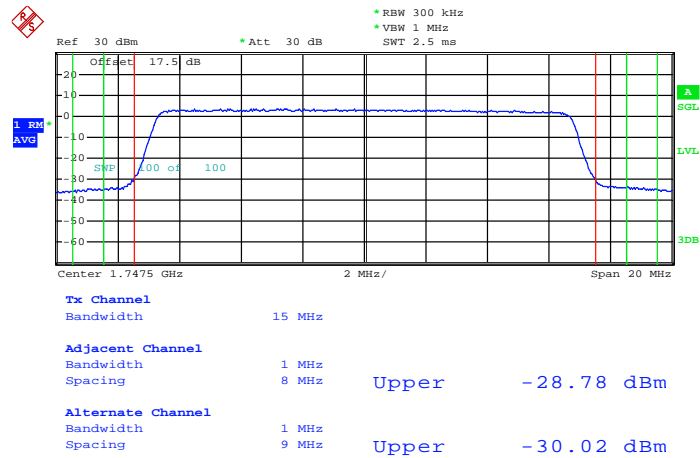


Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 74



Date: 28.OCT.2013 14:21:42

Higher Band Edge Plot for 16QAM-RB Size 75, RB Offset 0

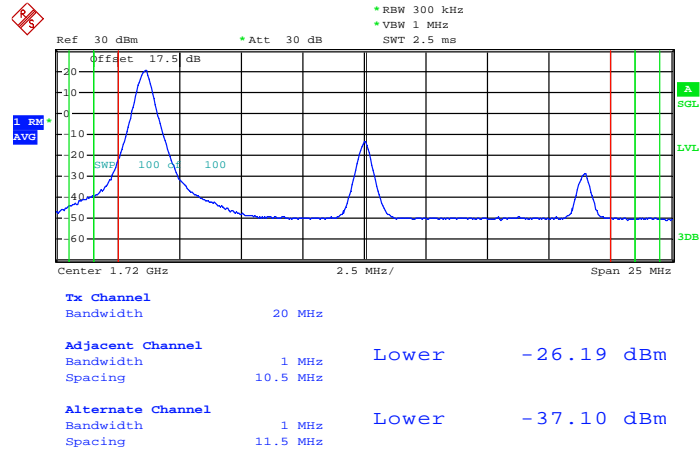


Date: 28.OCT.2013 14:21:16



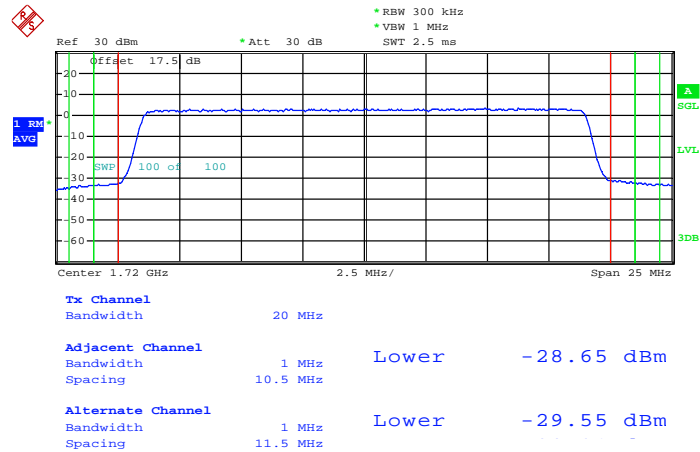
<b>Band :</b>	LTE Band 4	<b>Band Width :</b>	20MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Date: 28.OCT.2013 14:15:59

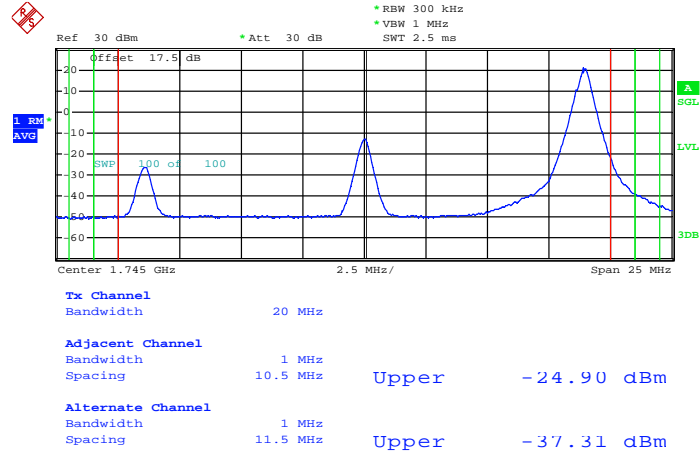
Lower Band Edge Plot for QPSK-RB Size 100, RB Offset 0



Date: 28.OCT.2013 14:14:57

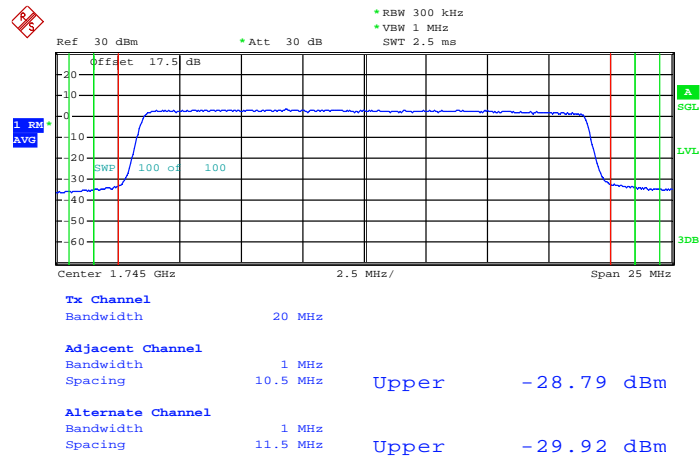


Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 99



Date: 28.OCT.2013 14:17:50

Higher Band Edge Plot for QPSK-RB Size 100, RB Offset 0

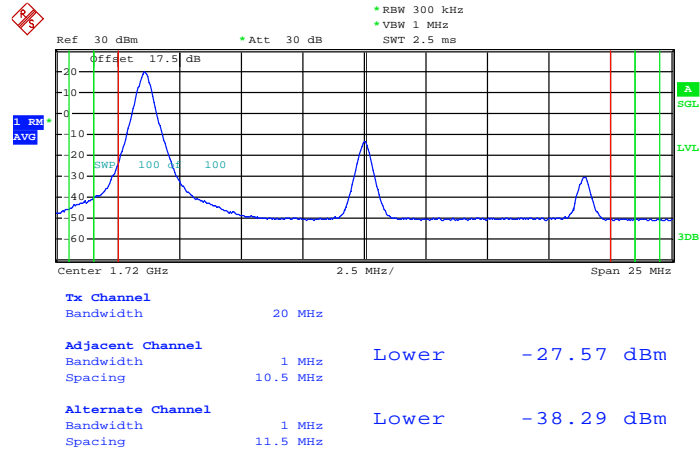


Date: 28.OCT.2013 14:18:50



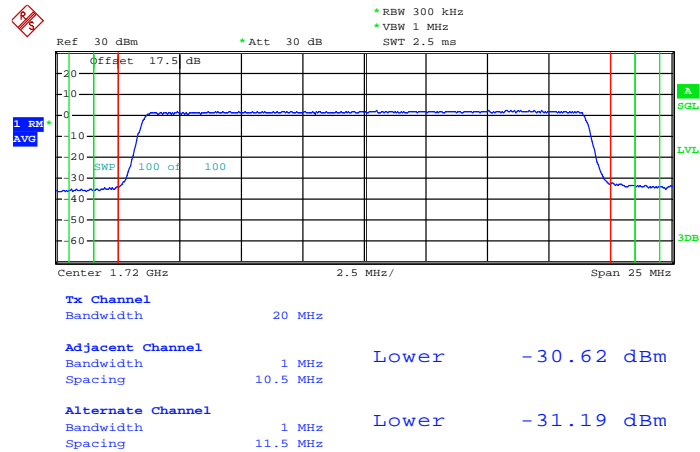
<b>Band :</b>	LTE Band 4	<b>Band Width :</b>	20MHz / 16QAM
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**Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0**



Date: 28.OCT.2013 14:15:38

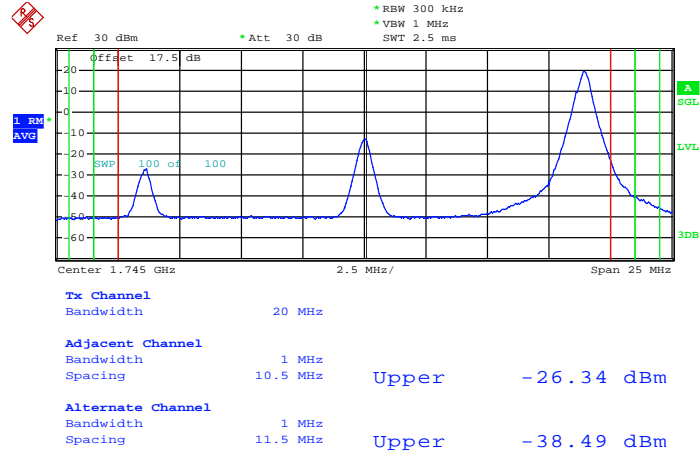
**Lower Band Edge Plot for 16QAM-RB Size 100, RB Offset 0**



Date: 28.OCT.2013 14:15:23

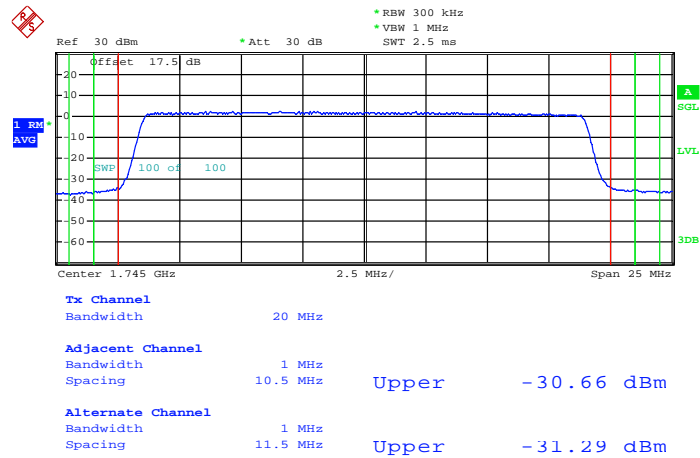


Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 99



Date: 28.OCT.2013 14:18:09

Higher Band Edge Plot for 16QAM-RB Size 100, RB Offset 0

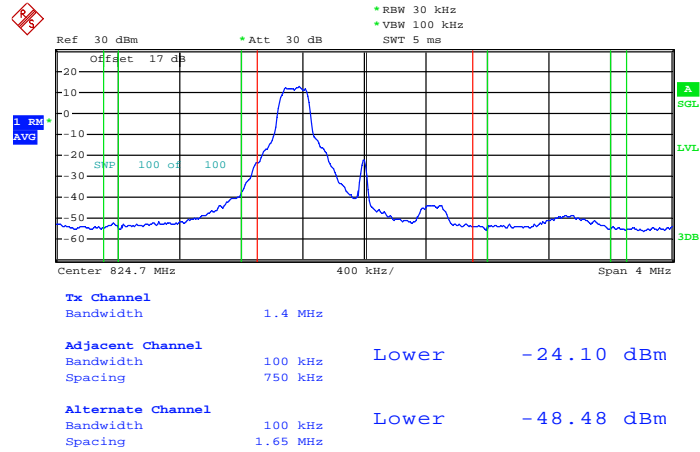


Date: 28.OCT.2013 14:18:35



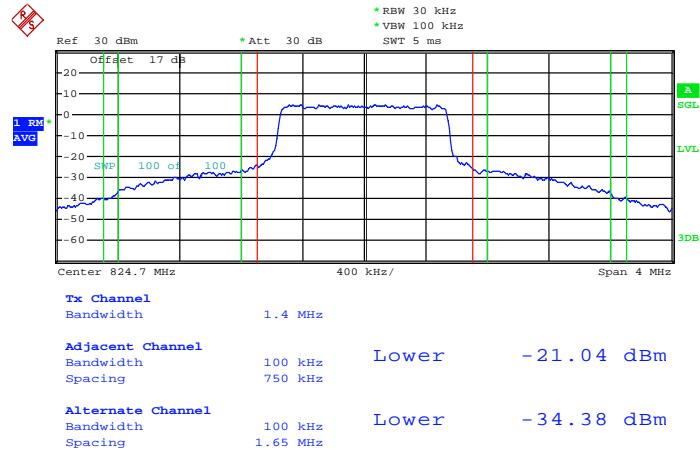
<b>Band :</b>	LTE Band 5	<b>Band Width :</b>	1.4MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Date: 28.OCT.2013 12:56:03

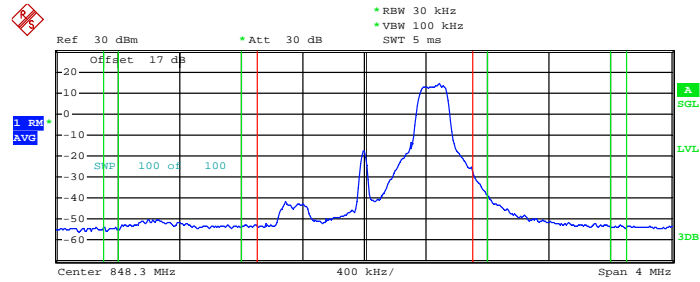
Lower Band Edge Plot for QPSK-RB Size 6, RB Offset 0



Date: 28.OCT.2013 12:55:11



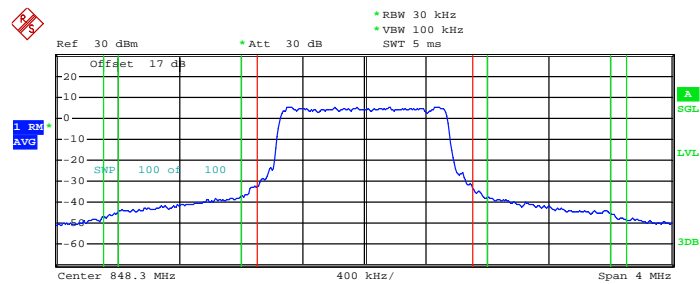
Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 5



<b>Tx Channel</b>	Bandwidth	1.4 MHz		
<b>Adjacent Channel</b>	Bandwidth	100 kHz		
	Spacing	750 kHz	Upper	-26.73 dBm
<b>Alternate Channel</b>	Bandwidth	100 kHz		
	Spacing	1.65 MHz	Upper	-48.72 dBm

Date: 28.OCT.2013 13:00:58

Higher Band Edge Plot for QPSK-RB Size 6, RB Offset 0



<b>Tx Channel</b>	Bandwidth	1.4 MHz		
<b>Adjacent Channel</b>	Bandwidth	100 kHz		
	Spacing	750 kHz	Upper	-30.53 dBm
<b>Alternate Channel</b>	Bandwidth	100 kHz		
	Spacing	1.65 MHz	Upper	-42.12 dBm

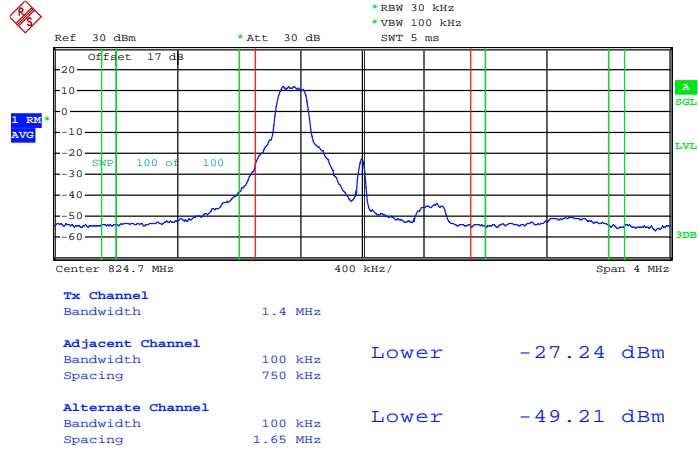
Date: 28.OCT.2013 13:00:34





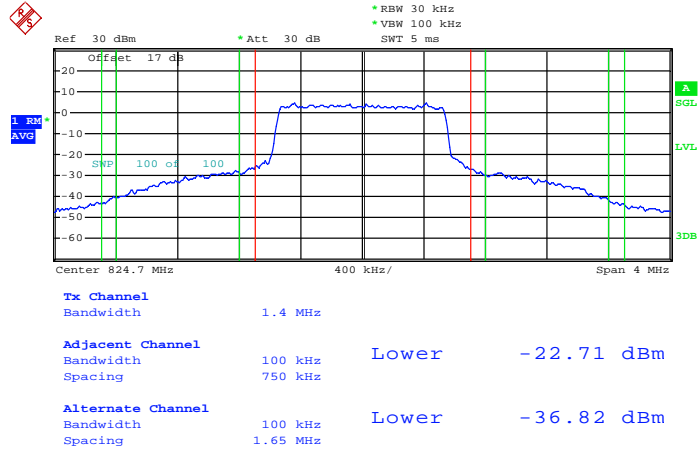
<b>Band :</b>	LTE Band 5	<b>Band Width :</b>	1.4MHz / 16QAM
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Lower Band Edge Plot for 16QAM -RB Size 1, RB Offset 0



Date: 28.OCT.2013 12:55:44

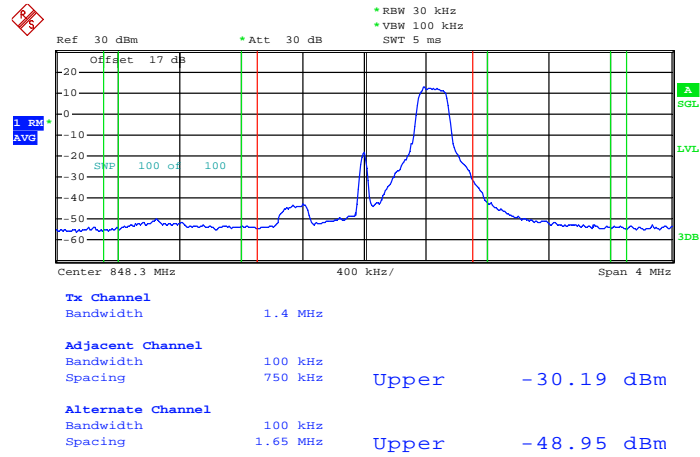
Lower Band Edge Plot for 16QAM -RB Size 6, RB Offset 0



Date: 28.OCT.2013 12:55:27

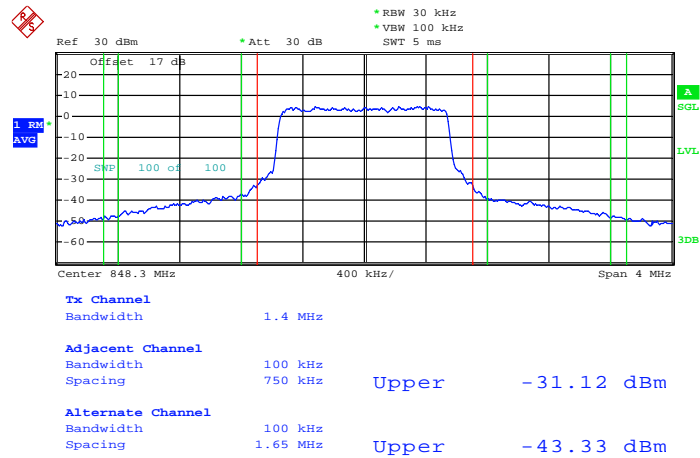


Higher Band Edge Plot for 16QAM -RB Size 1, RB Offset 5



Date: 28.OCT.2013 13:01:11

Higher Band Edge Plot for 16QAM -RB Size 6, RB Offset 0

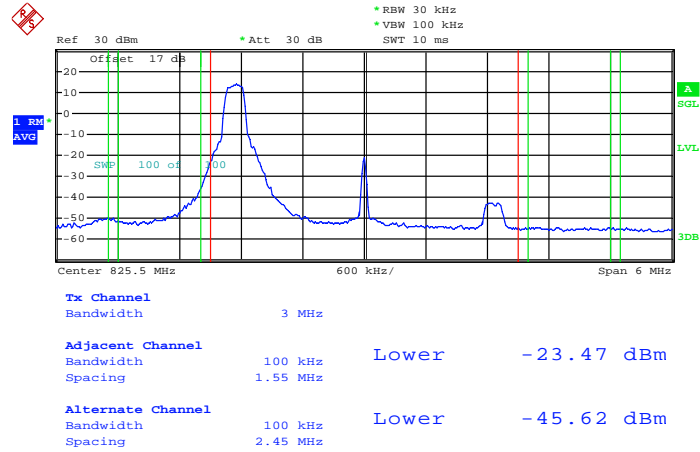


Date: 28.OCT.2013 13:00:20



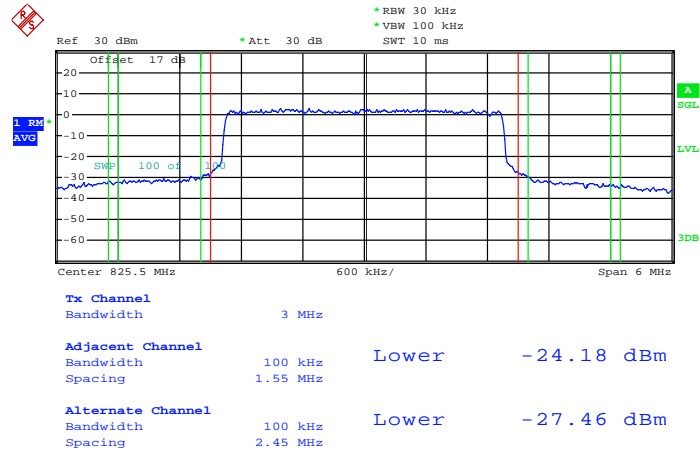
<b>Band :</b>	LTE Band 5	<b>Band Width :</b>	3MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Date: 28.OCT.2013 13:05:49

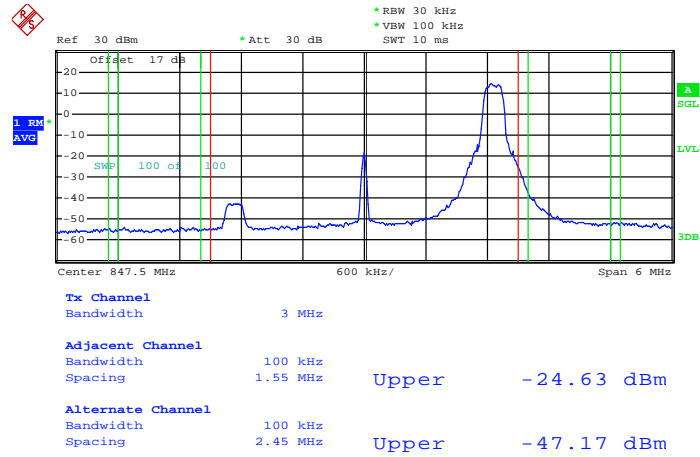
Lower Band Edge Plot for QPSK-RB Size 15, RB Offset 0



Date: 28.OCT.2013 13:04:51

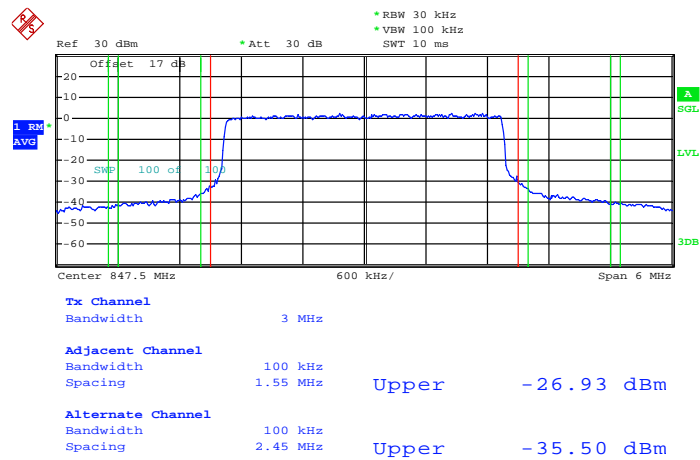


Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 14



Date: 28.OCT.2013 13:03:57

Higher Band Edge Plot for QPSK-RB Size 15, RB Offset 0

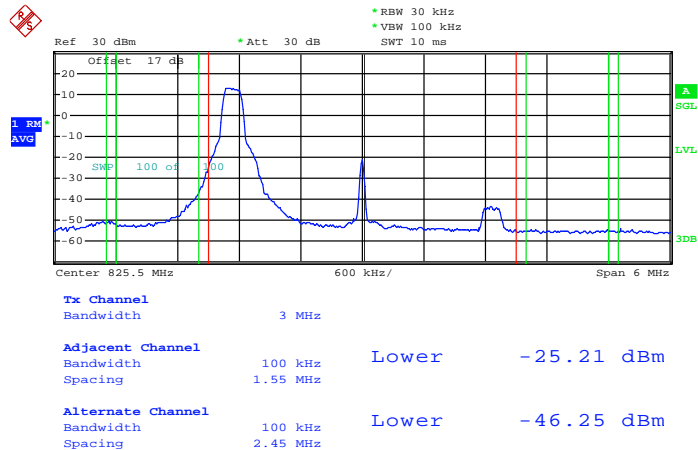


Date: 28.OCT.2013 13:02:57



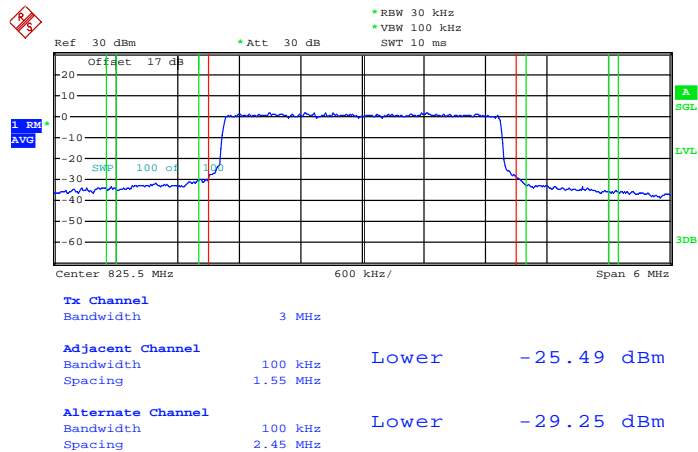
<b>Band :</b>	LTE Band 5	<b>Band Width :</b>	3MHz / 16QAM
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**Lower Band Edge Plot for 16QAM -RB Size 1, RB Offset 0**



Date: 28.OCT.2013 13:05:27

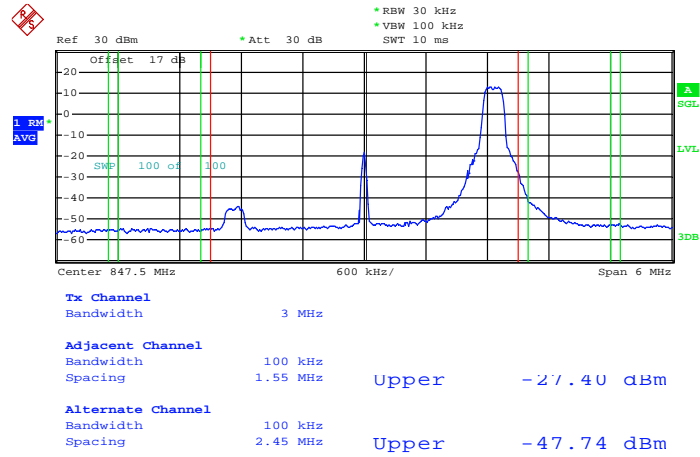
**Lower Band Edge Plot for 16QAM -RB Size 15, RB Offset 0**



Date: 28.OCT.2013 13:05:09

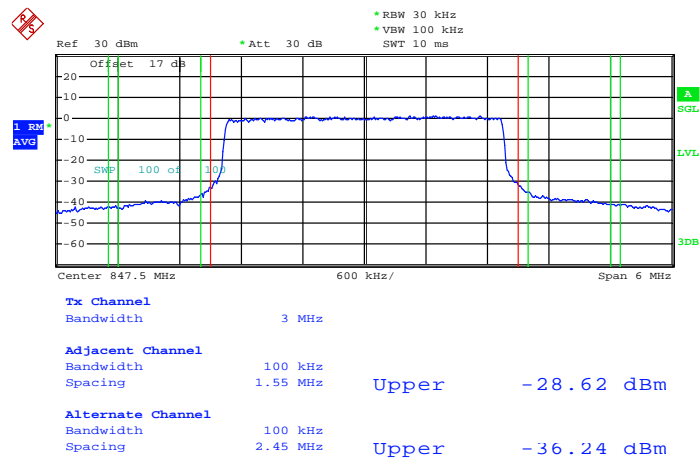


### Higher Band Edge Plot for 16QAM -RB Size 1, RB Offset 14



Date: 28.OCT.2013 13:03:41

### Higher Band Edge Plot for 16QAM -RB Size 15, RB Offset 0

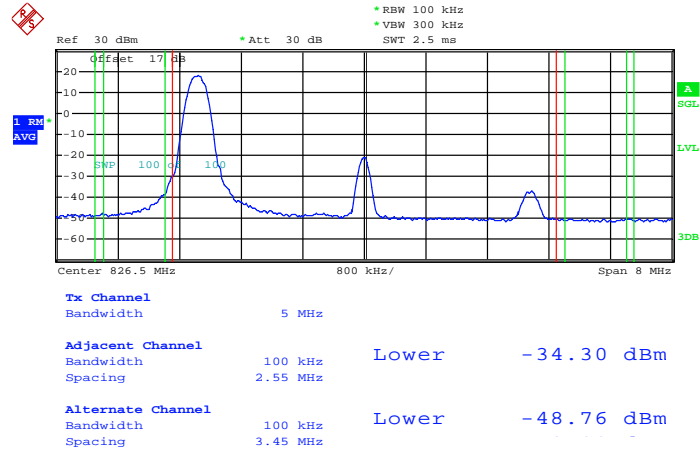


Date: 28.OCT.2013 13:03:13



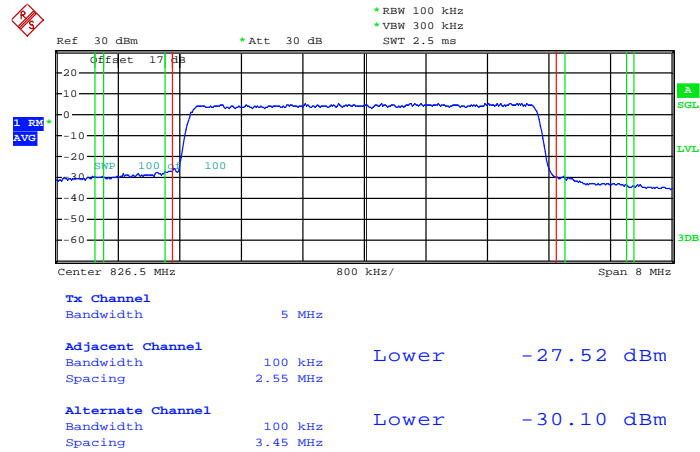
<b>Band :</b>	LTE Band 5	<b>Band Width :</b>	5MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Date: 28.OCT.2013 13:10:50

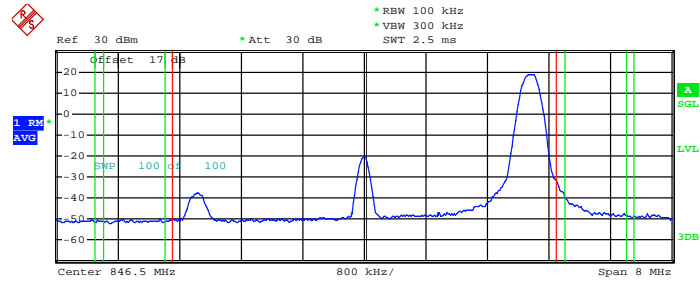
Lower Band Edge Plot for QPSK-RB Size 25, RB Offset 0



Date: 28.OCT.2013 13:09:56



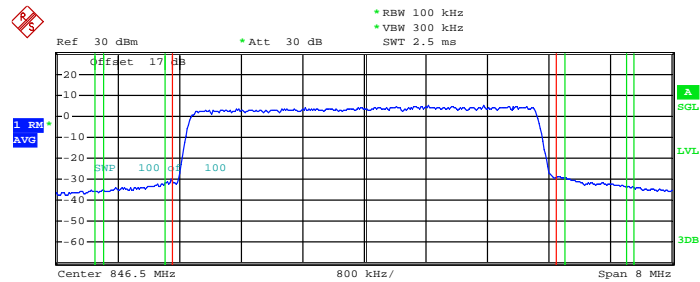
Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 24



<b>Tx Channel</b>			
Bandwidth	5 MHz		
<b>Adjacent Channel</b>			
Bandwidth	100 kHz		
Spacing	2.55 MHz	Upper	-35.11 dBm
<b>Alternate Channel</b>			
Bandwidth	100 kHz		
Spacing	3.45 MHz	Upper	-49.01 dBm

Date: 28.OCT.2013 13:12:21

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



<b>Tx Channel</b>			
Bandwidth	5 MHz		
<b>Adjacent Channel</b>			
Bandwidth	100 kHz		
Spacing	2.55 MHz	Upper	-29.34 dBm
<b>Alternate Channel</b>			
Bandwidth	100 kHz		
Spacing	3.45 MHz	Upper	-33.97 dBm

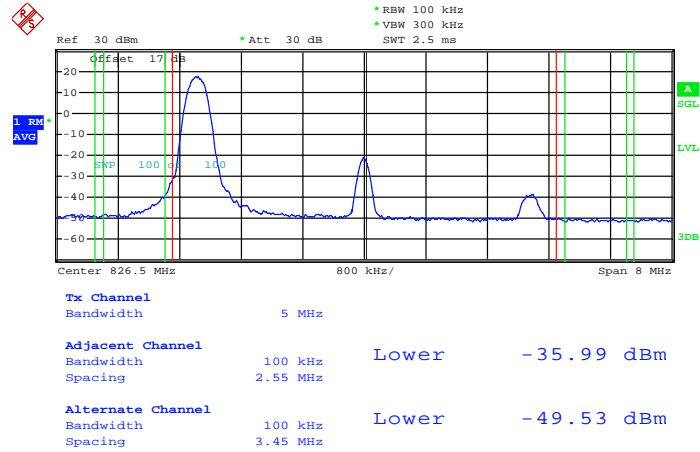
Date: 28.OCT.2013 13:13:14





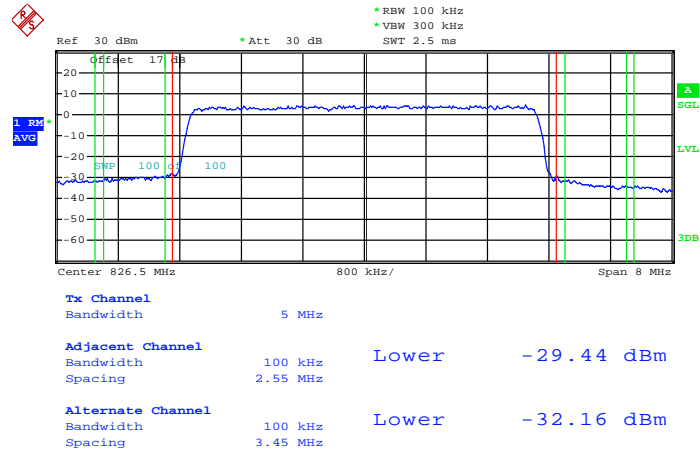
<b>Band :</b>	LTE Band 5	<b>Band Width :</b>	5MHz / 16QAM
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Lower Band Edge Plot for 16QAM -RB Size 1, RB Offset 0



Date: 28.OCT.2013 13:10:29

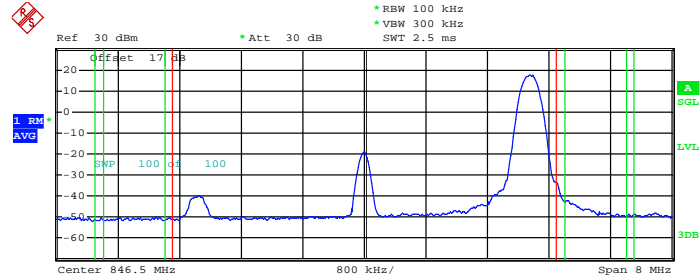
Lower Band Edge Plot for 16QAM -RB Size 25, RB Offset 0



Date: 28.OCT.2013 13:10:10



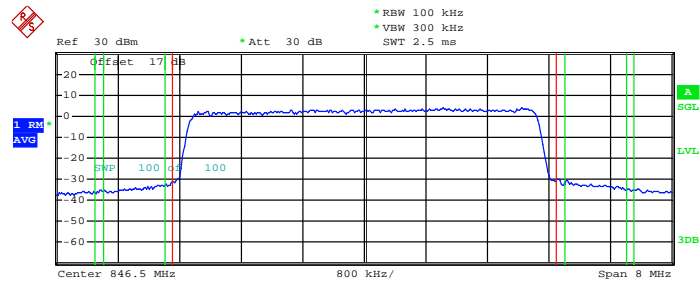
Higher Band Edge Plot for 16QAM -RB Size 1, RB Offset 24



<b>Tx Channel</b>			
Bandwidth	5 MHz		
<b>Adjacent Channel</b>			
Bandwidth	100 kHz		
Spacing	2.55 MHz	Upper	-37.38 dBm
<b>Alternate Channel</b>			
Bandwidth	100 kHz		
Spacing	3.45 MHz	Upper	-49.47 dBm

Date: 28.OCT.2013 13:12:36

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



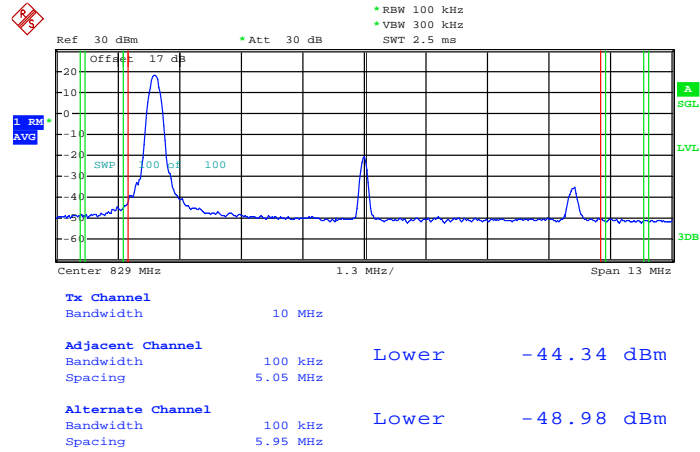
<b>Tx Channel</b>			
Bandwidth	5 MHz		
<b>Adjacent Channel</b>			
Bandwidth	100 kHz		
Spacing	2.55 MHz	Upper	-31.26 dBm
<b>Alternate Channel</b>			
Bandwidth	100 kHz		
Spacing	3.45 MHz	Upper	-35.39 dBm

Date: 28.OCT.2013 13:12:59



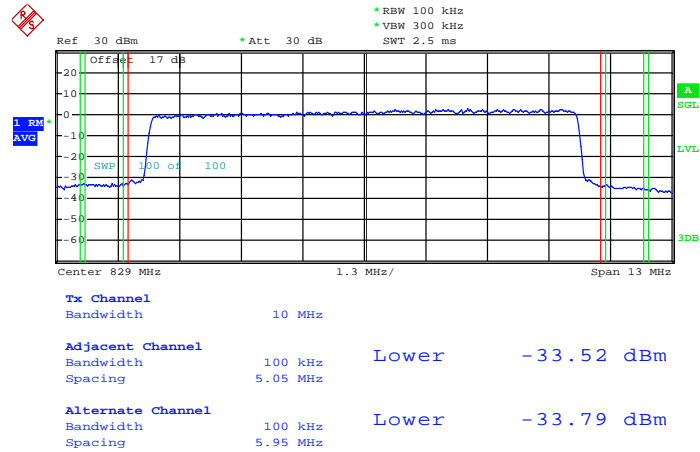
<b>Band :</b>	LTE Band 5	<b>Band Width :</b>	10MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Date: 28.OCT.2013 13:17:38

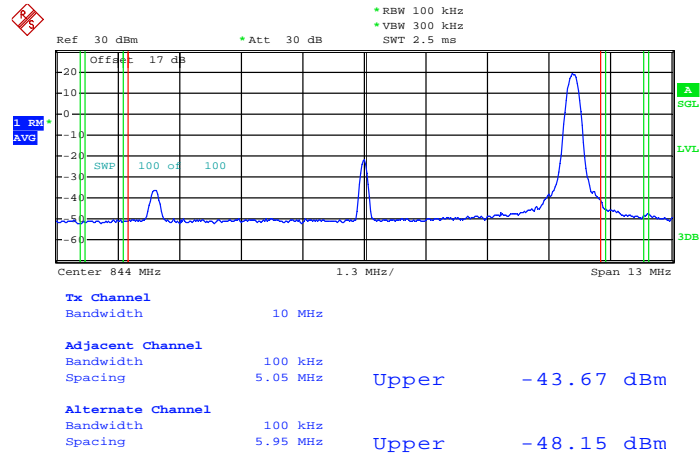
Lower Band Edge Plot for QPSK-RB Size 50, RB Offset 0



Date: 28.OCT.2013 13:18:29

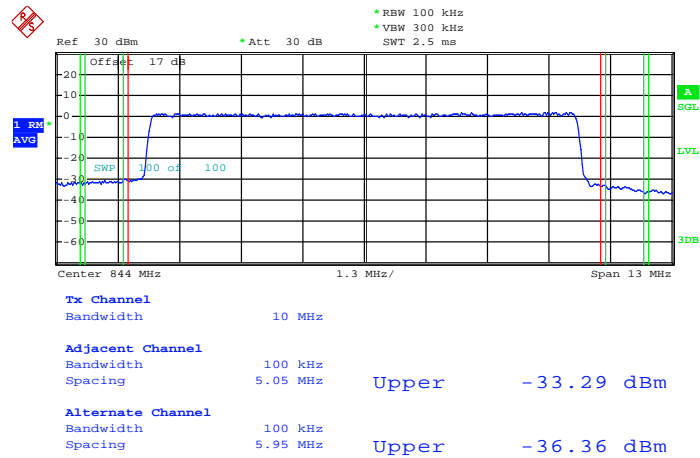


Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 49



Date: 28.OCT.2013 13:16:58

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

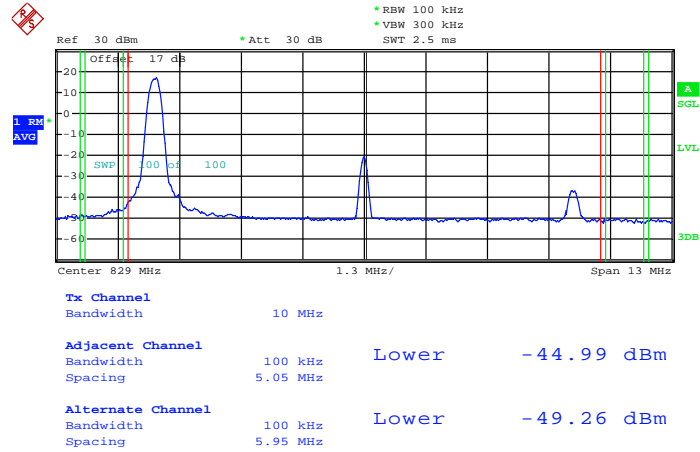


Date: 28.OCT.2013 13:16:05



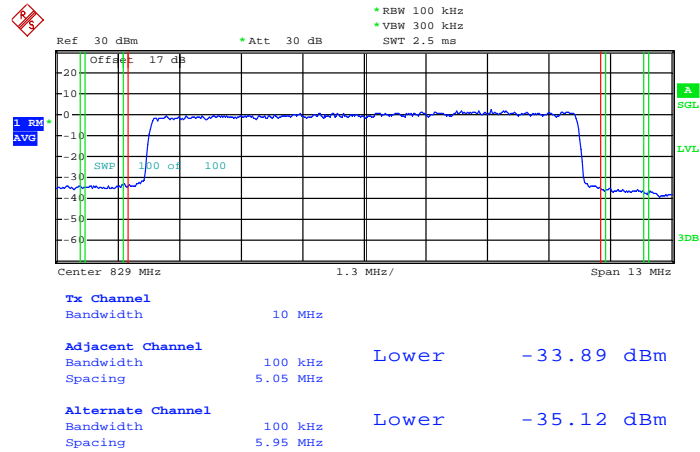
<b>Band :</b>	LTE Band 5	<b>Band Width :</b>	10MHz / QPSK
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**Lower Band Edge Plot for 16QAM -RB Size 1, RB Offset 0**



Date: 28.OCT.2013 13:17:53

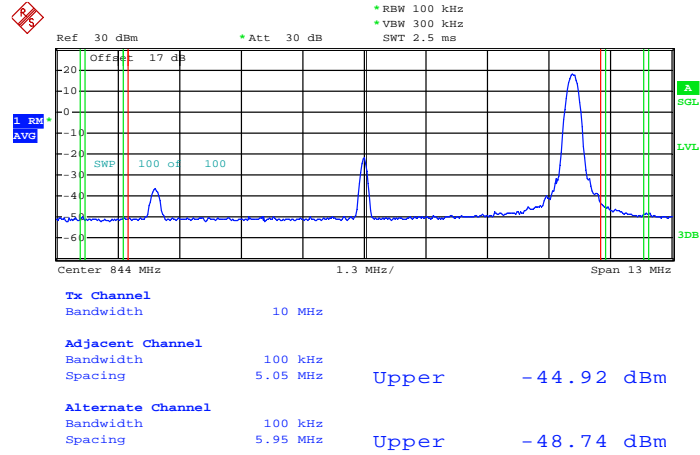
**Lower Band Edge Plot for 16QAM -RB Size 50, RB Offset 0**



Date: 28.OCT.2013 13:18:17

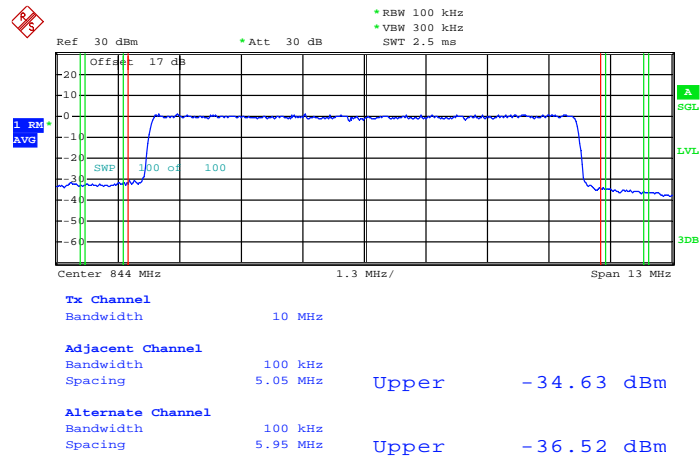


Higher Band Edge Plot for 16QAM -RB Size 1, RB Offset 49



Date: 28.OCT.2013 13:16:43

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

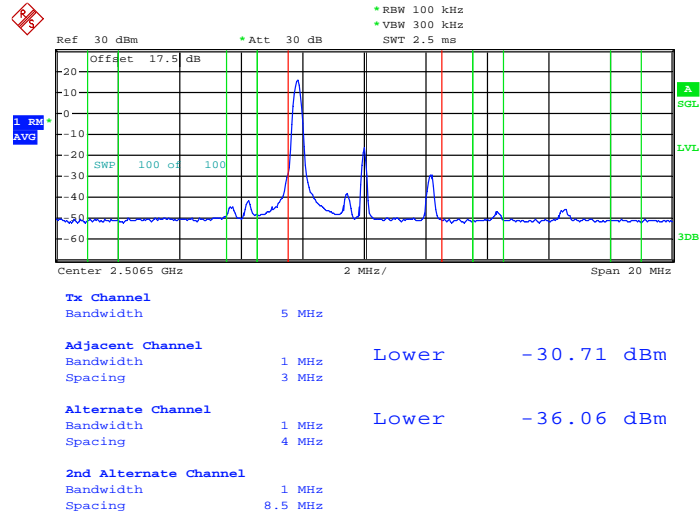


Date: 28.OCT.2013 13:16:19



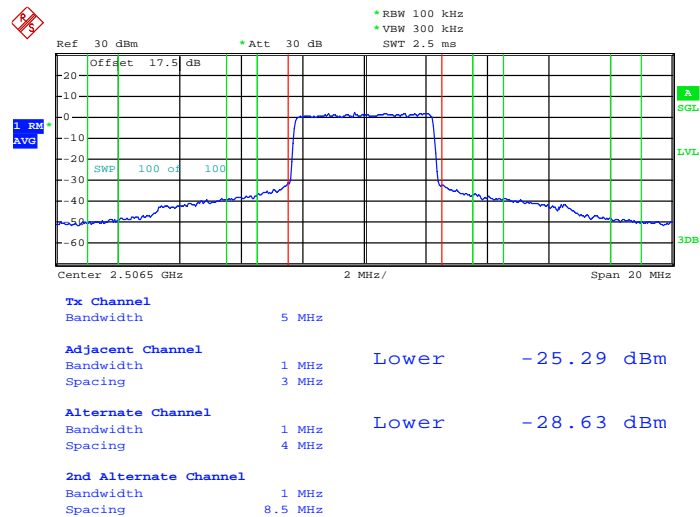
<b>Band :</b>	LTE Band 7	<b>Band Width :</b>	5MHz / QPSK
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Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



Date: 25.OCT.2013 15:16:26

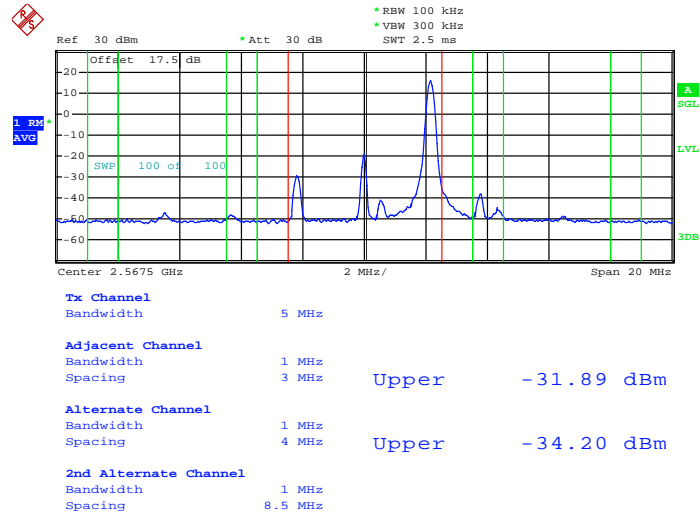
Lower Band Edge Plot for 16QAM-RB Size 25, RB Offset 0



Date: 25.OCT.2013 15:15:25

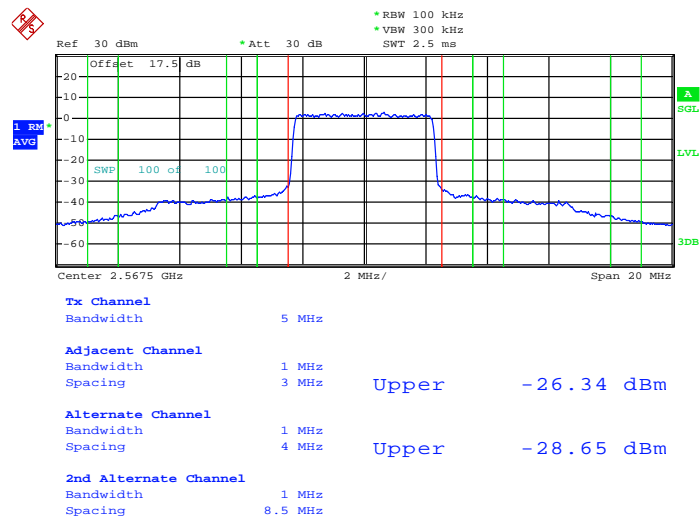


Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 24



Date: 25.OCT.2013 15:17:33

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



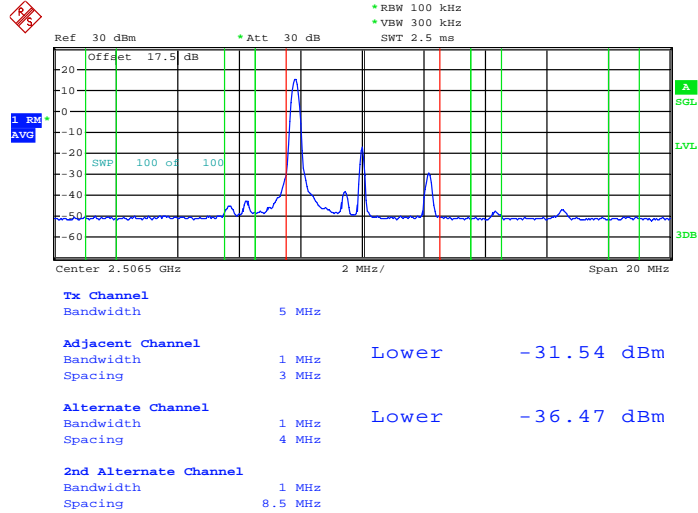
Date: 25.OCT.2013 15:18:35





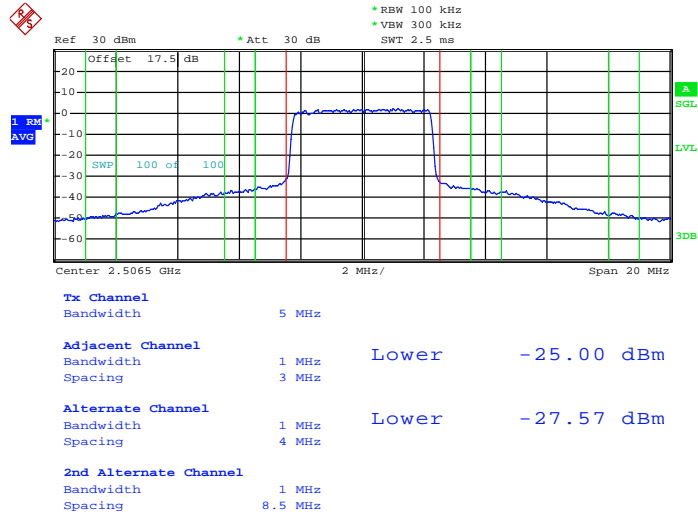
<b>Band :</b>	LTE Band 7	<b>Band Width :</b>	5MHz / 16QAM
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Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



Date: 25.OCT.2013 15:16:07

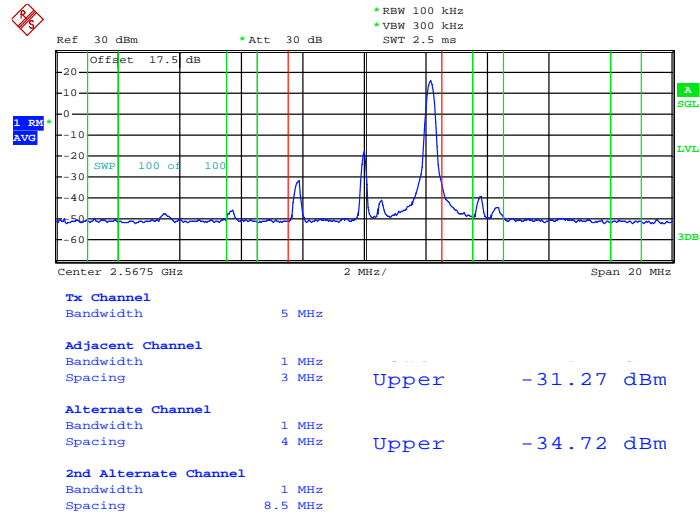
Lower Band Edge Plot for 16QAM-RB Size 25, RB Offset 0



Date: 25.OCT.2013 15:15:43

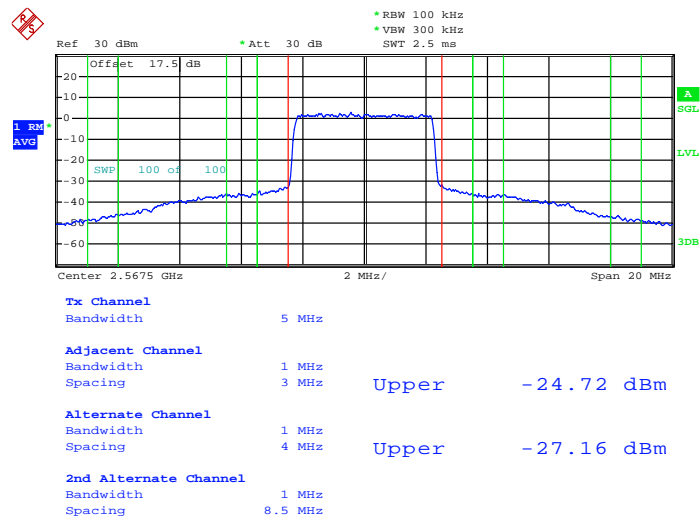


Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 24



Date: 25.OCT.2013 15:17:51

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

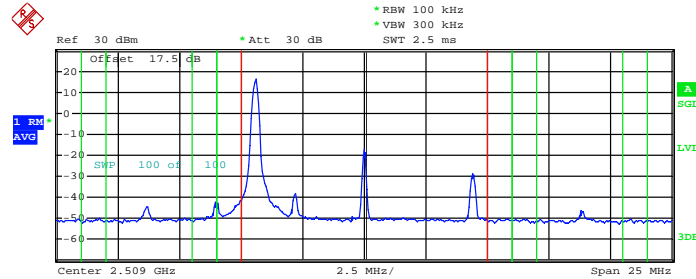


Date: 25.OCT.2013 15:18:18



<b>Band :</b>	LTE Band 7	<b>Band Width :</b>	10MHz / QPSK
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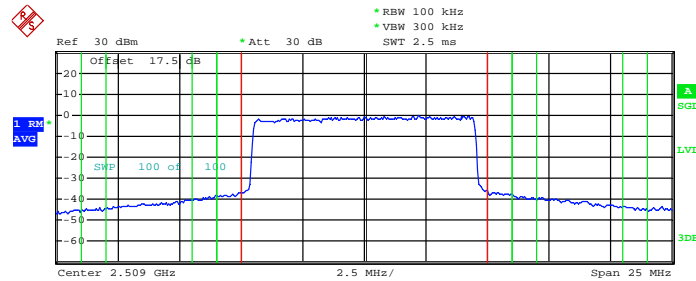
Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



<b>Tx Channel</b>	Bandwidth	10 MHz		
<b>Adjacent Channel</b>	Bandwidth	1 MHz	Lower	-35.58 dBm
	Spacing	5.5 MHz		
<b>Alternate Channel</b>	Bandwidth	1 MHz	Lower	-38.68 dBm
	Spacing	6.5 MHz		
<b>2nd Alternate Channel</b>	Bandwidth	1 MHz		
	Spacing	11 MHz		

Date: 25.OCT.2013 15:22:33

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

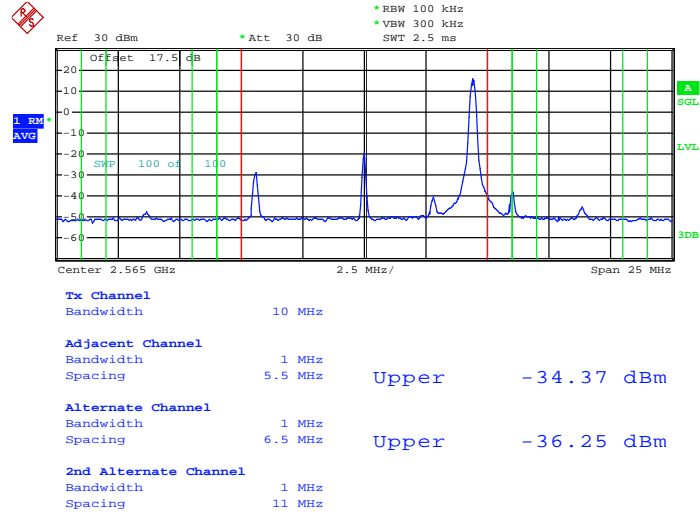


<b>Tx Channel</b>	Bandwidth	10 MHz		
<b>Adjacent Channel</b>	Bandwidth	1 MHz	Lower	-28.41 dBm
	Spacing	5.5 MHz		
<b>Alternate Channel</b>	Bandwidth	1 MHz	Lower	-29.91 dBm
	Spacing	6.5 MHz		
<b>2nd Alternate Channel</b>	Bandwidth	1 MHz		
	Spacing	11 MHz		

Date: 25.OCT.2013 15:23:30

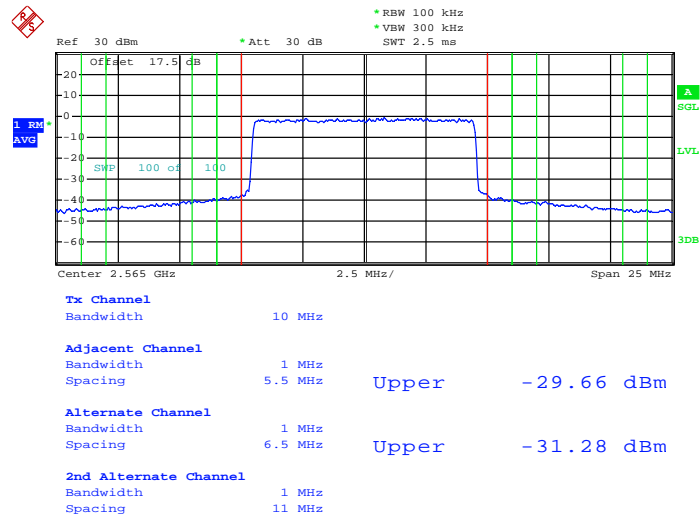


Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 49



Date: 25.OCT.2013 15:21:39

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

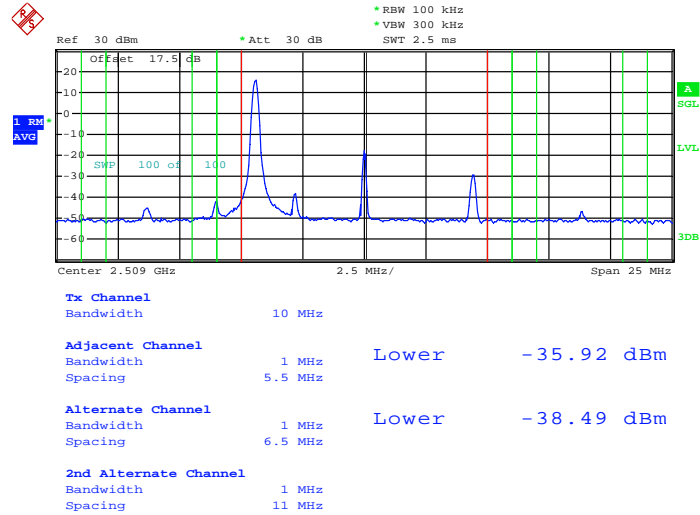


Date: 25.OCT.2013 15:20:30



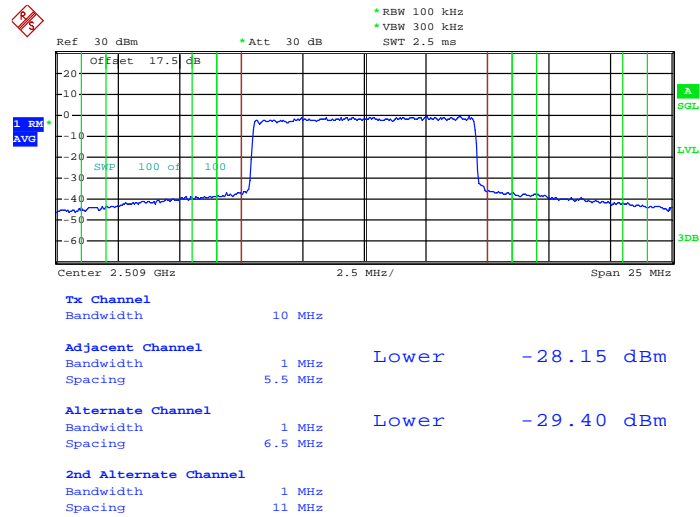
<b>Band :</b>	LTE Band 7	<b>Band Width :</b>	10MHz / 16QAM
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Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



Date: 25.OCT.2013 15:22:56

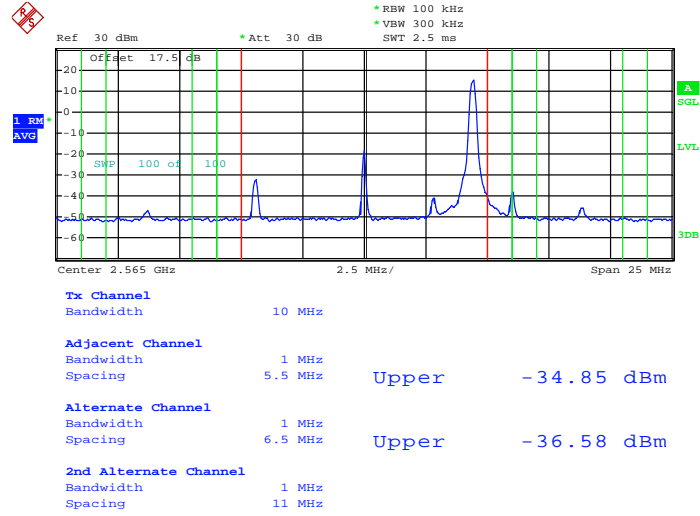
Lower Band Edge Plot for 16QAM-RB Size 50, RB Offset 0



Date: 25.OCT.2013 15:23:14

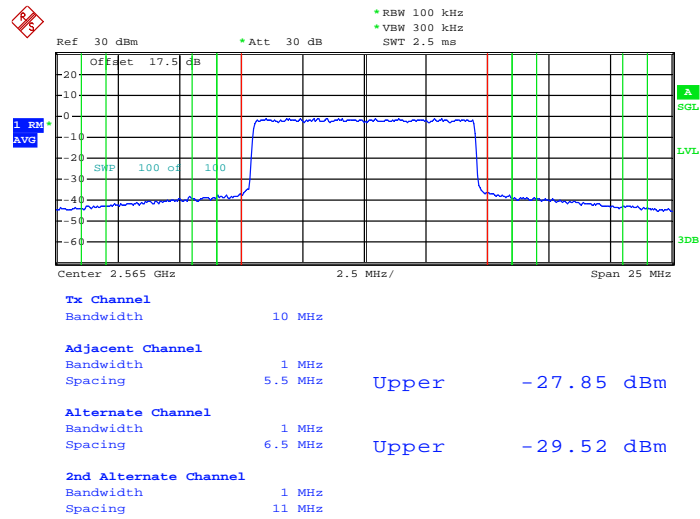


Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 49



Date: 25.OCT.2013 15:21:22

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

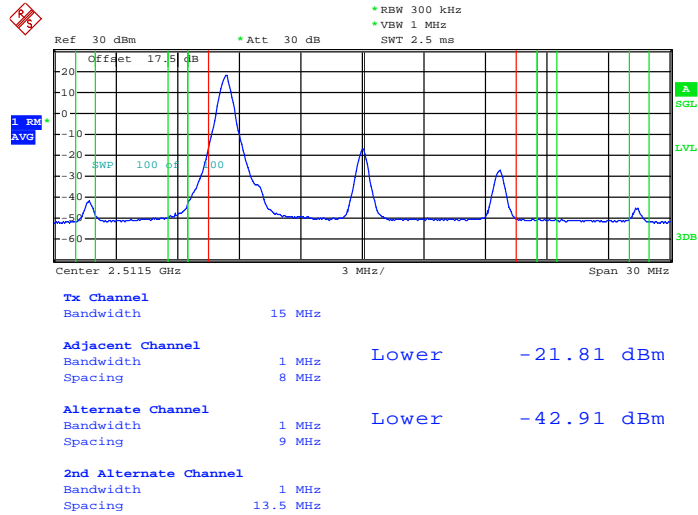


Date: 25.OCT.2013 15:20:45



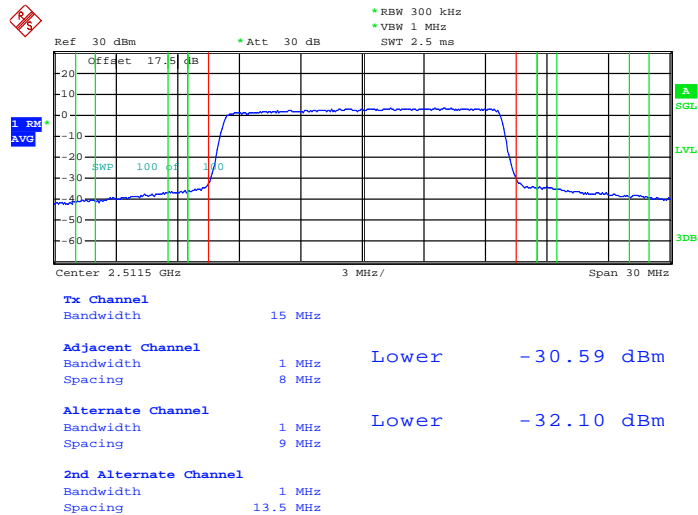
<b>Band :</b>	LTE Band 7	<b>Band Width :</b>	15MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Date: 25.OCT.2013 15:27:07

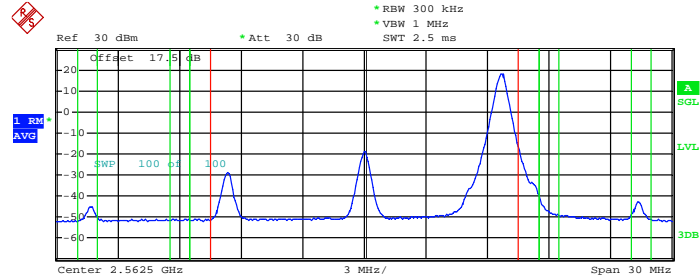
Lower Band Edge Plot for QPSK-RB Size 75, RB Offset 0



Date: 25.OCT.2013 15:26:09



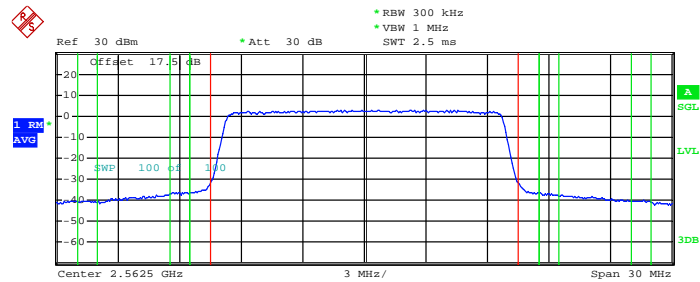
Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 74



<b>Tx Channel</b>	Bandwidth	15 MHz		
<b>Adjacent Channel</b>	Bandwidth	1 MHz		
	Spacing	8 MHz	Upper	-19.93 dBm
<b>Alternate Channel</b>	Bandwidth	1 MHz		
	Spacing	9 MHz	Upper	-40.96 dBm
<b>2nd Alternate Channel</b>	Bandwidth	1 MHz		
	Spacing	13.5 MHz		

Date: 25.OCT.2013 15:28:33

Higher Band Edge Plot for QPSK-RB Size 75, RB Offset 0



<b>Tx Channel</b>	Bandwidth	15 MHz		
<b>Adjacent Channel</b>	Bandwidth	1 MHz		
	Spacing	8 MHz	Upper	-30.65 dBm
<b>Alternate Channel</b>	Bandwidth	1 MHz		
	Spacing	9 MHz	Upper	-32.65 dBm
<b>2nd Alternate Channel</b>	Bandwidth	1 MHz		
	Spacing	13.5 MHz		

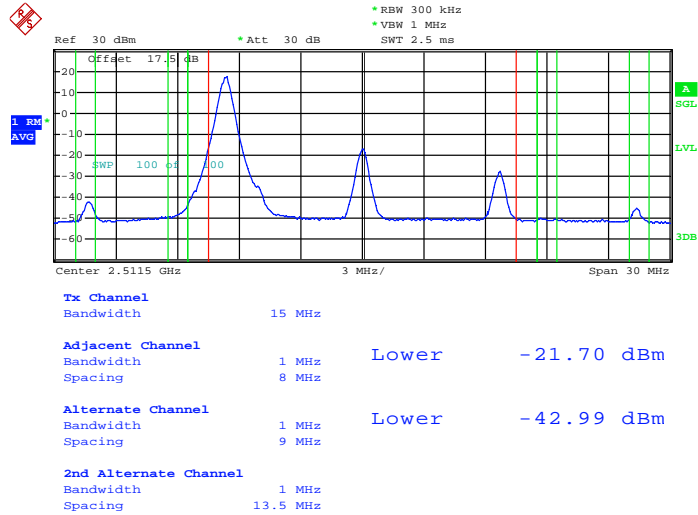
Date: 25.OCT.2013 15:29:25





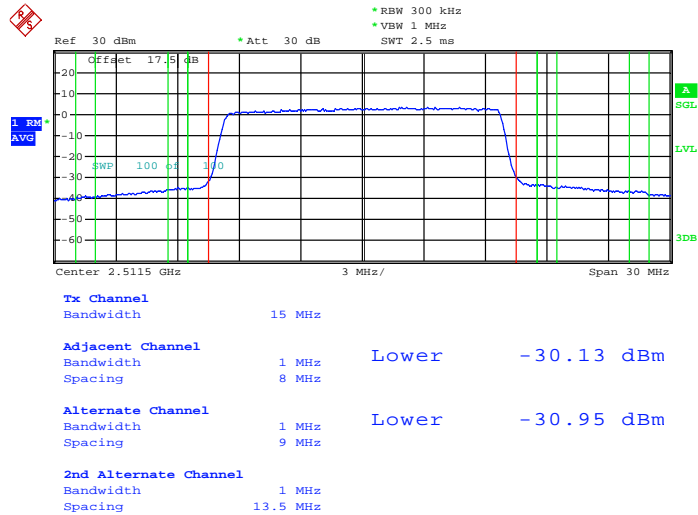
<b>Band :</b>	LTE Band 7	<b>Band Width :</b>	15MHz / 16QAM
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Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



Date: 25.OCT.2013 15:26:46

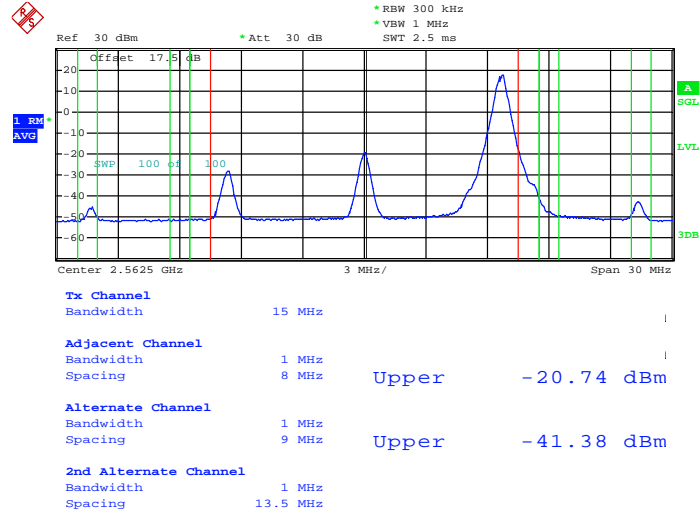
Lower Band Edge Plot for 16QAM-RB Size 75, RB Offset 0



Date: 25.OCT.2013 15:26:27

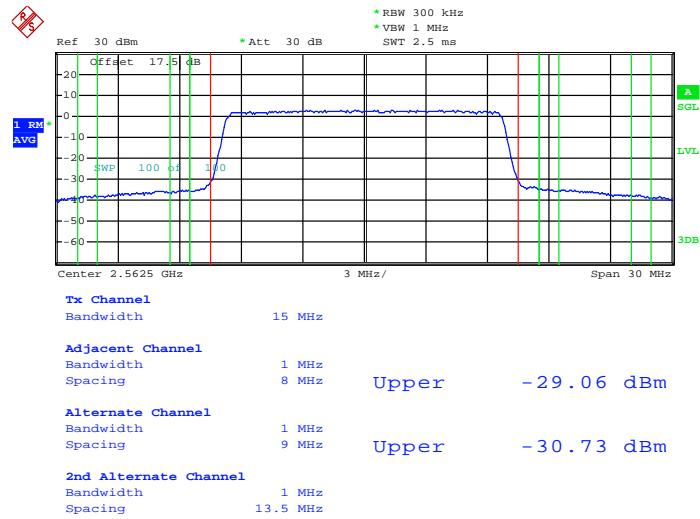


Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 74



Date: 25.OCT.2013 15:28:47

Higher Band Edge Plot for 16QAM-RB Size 75, RB Offset 0

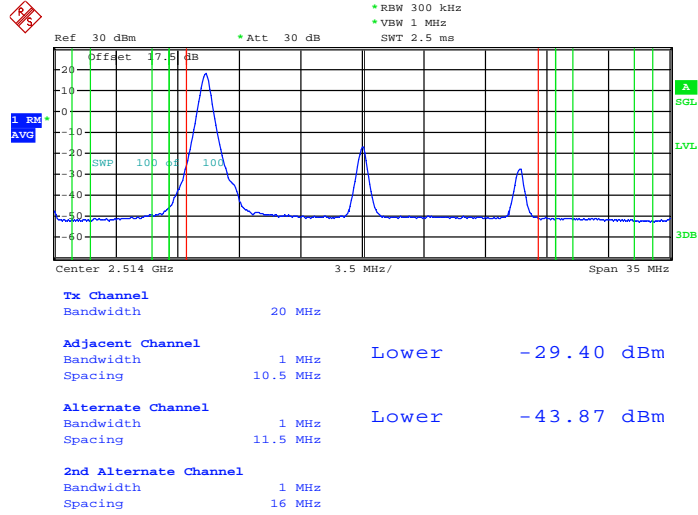


Date: 25.OCT.2013 15:29:06



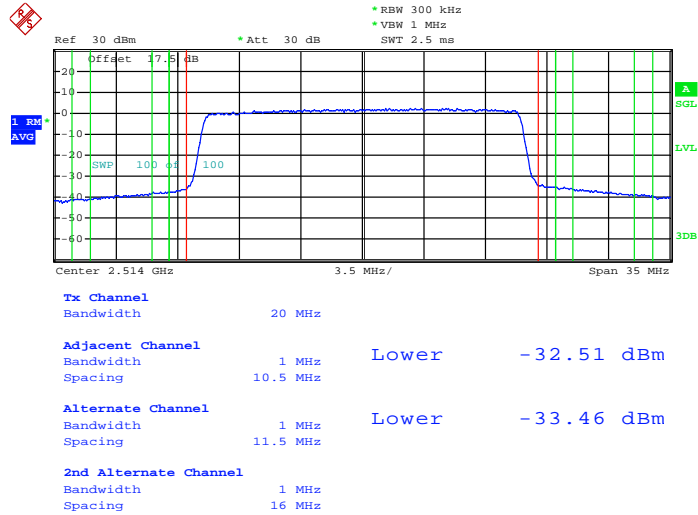
<b>Band :</b>	LTE Band 7	<b>Band Width :</b>	20MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Date: 25.OCT.2013 15:36:15

Lower Band Edge Plot for QPSK-RB Size 100, RB Offset 0

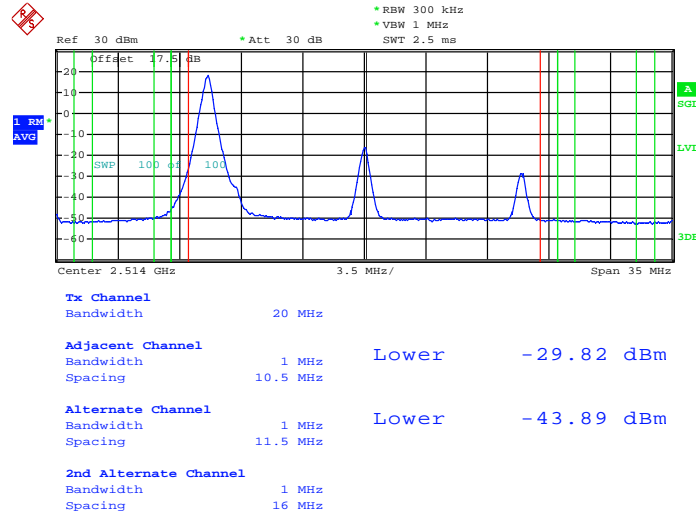


Date: 25.OCT.2013 15:35:27



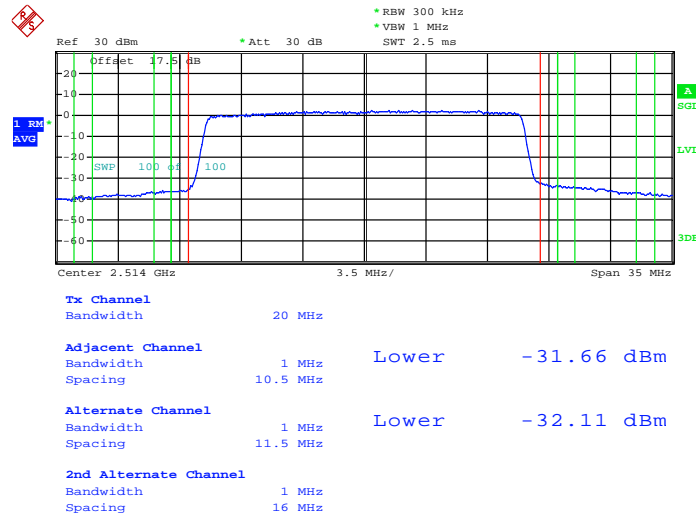
<b>Band :</b>	LTE Band 7	<b>Band Width :</b>	20MHz / 16QAM
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Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



Date: 25.OCT.2013 15:35:57

Lower Band Edge Plot for 16QAM-RB Size 100, RB Offset 0

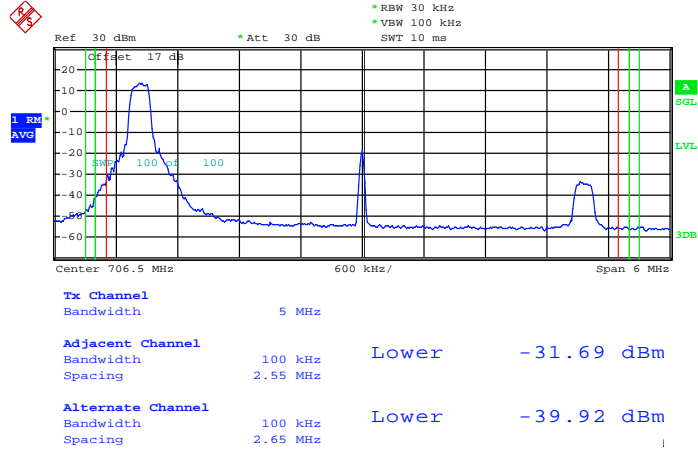


Date: 25.OCT.2013 15:35:41



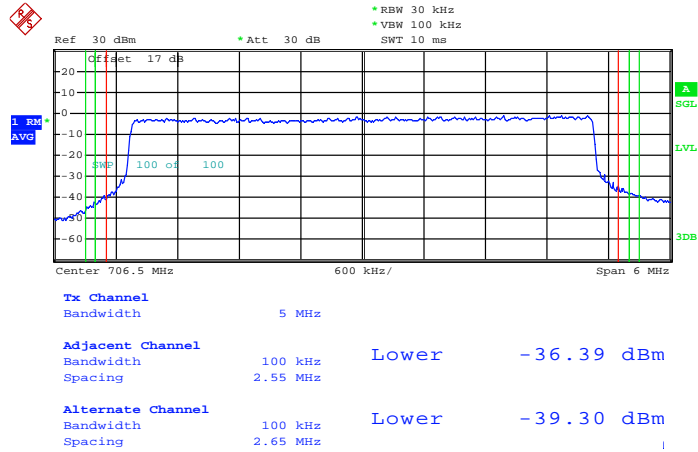
<b>Band :</b>	LTE Band 17	<b>Band Width :</b>	5MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Date: 25.OCT.2013 14:39:12

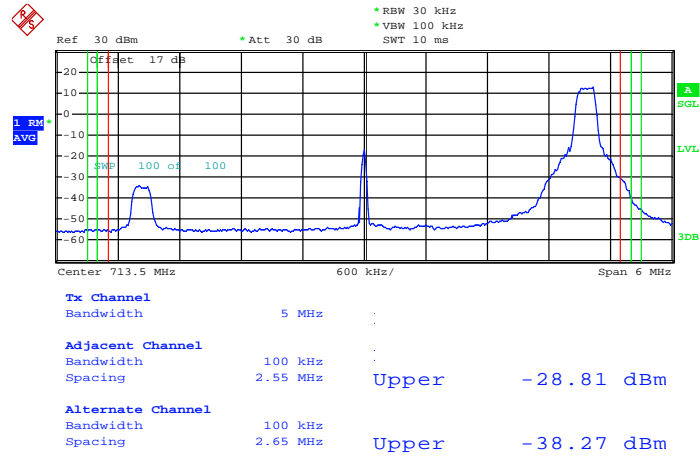
Lower Band Edge Plot for QPSK-RB Size 25, RB Offset 0



Date: 25.OCT.2013 14:41:42

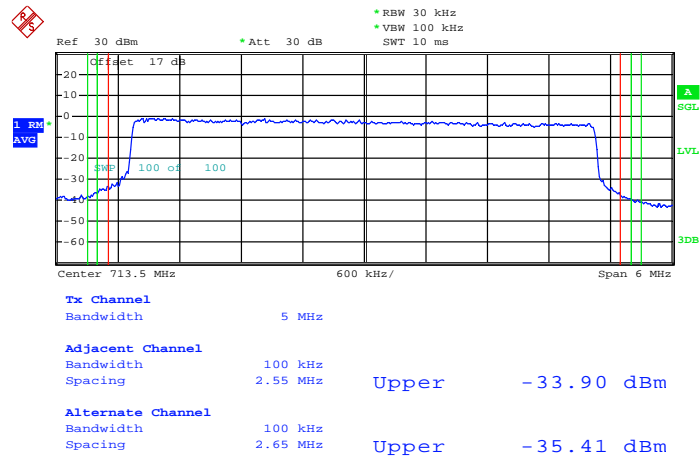


Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 24



Date: 25.OCT.2013 14:43:27

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

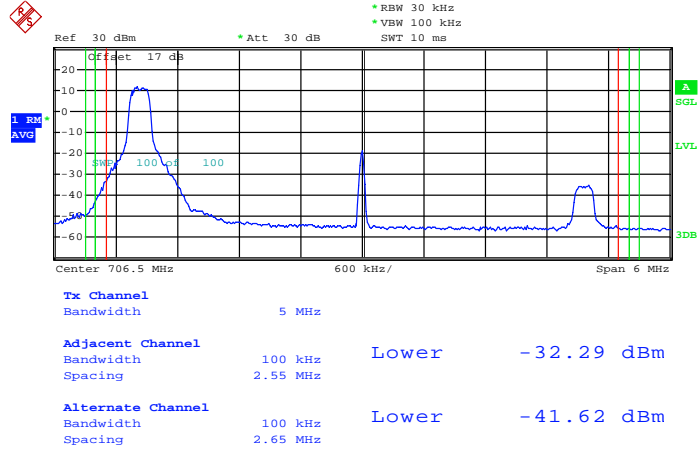


Date: 25.OCT.2013 14:42:25



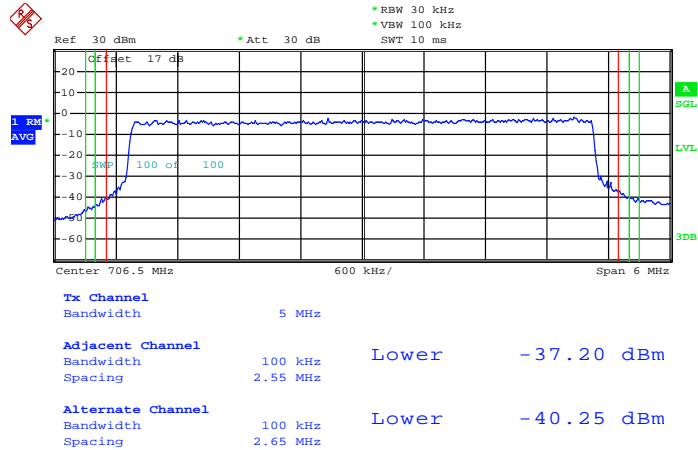
<b>Band :</b>	LTE Band 17	<b>Band Width :</b>	5MHz / 16QAM
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Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



Date: 25.OCT.2013 14:41:07

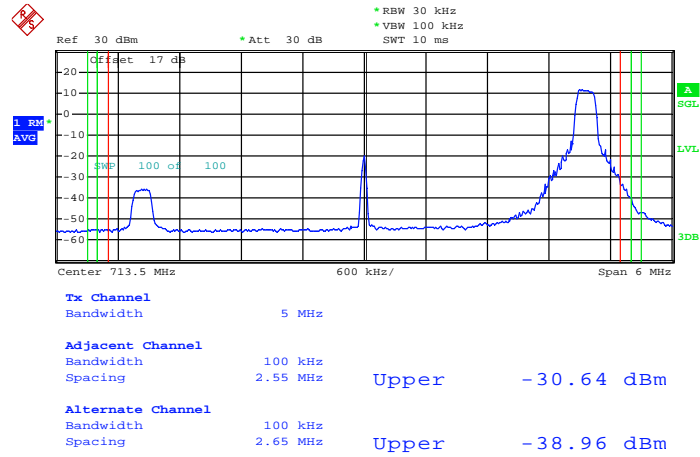
Lower Band Edge Plot for 16QAM-RB Size 25, RB Offset 0



Date: 25.OCT.2013 14:41:27

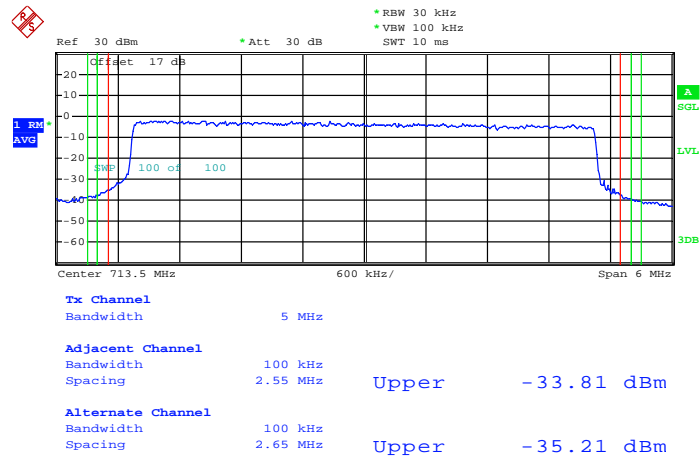


Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 24



Date: 25.OCT.2013 14:43:07

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



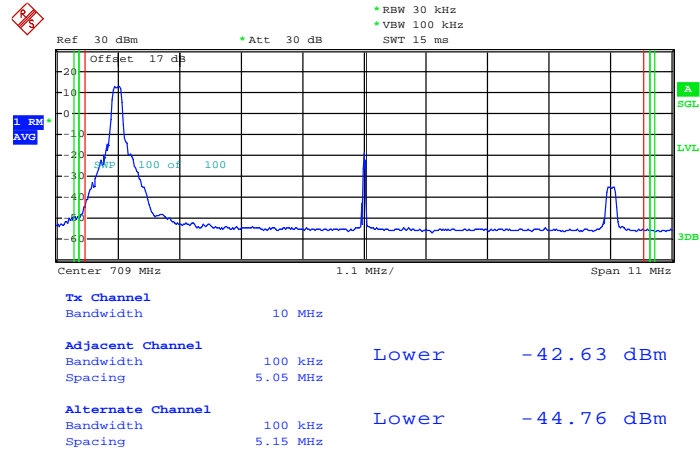
Date: 25.OCT.2013 14:42:40





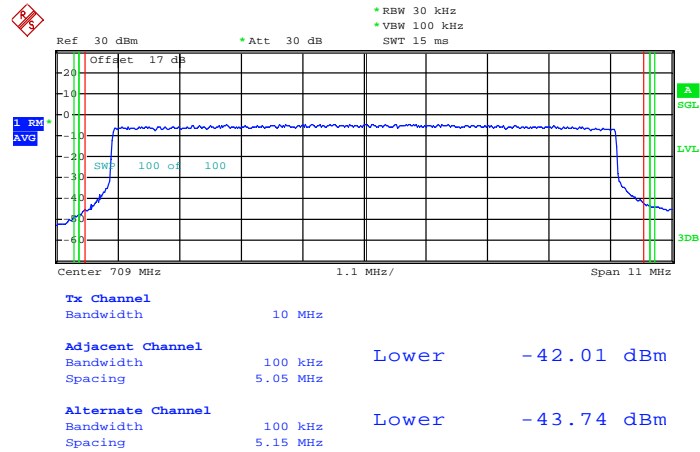
<b>Band :</b>	LTE Band 17	<b>Band Width :</b>	10MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Date: 25.OCT.2013 14:48:05

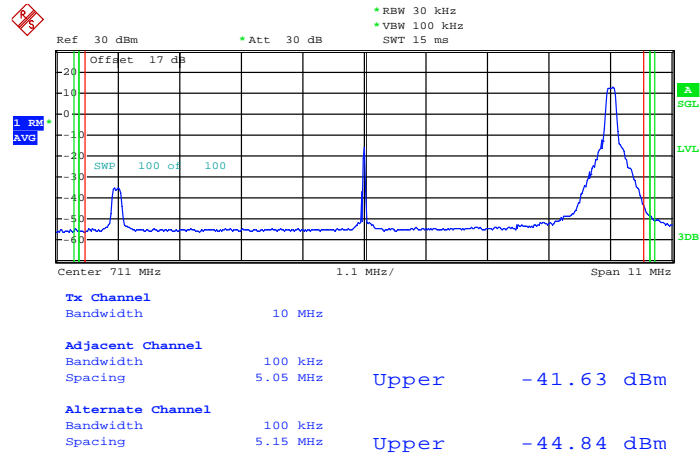
Lower Band Edge Plot for QPSK-RB Size 50, RB Offset 0



Date: 25.OCT.2013 14:48:57

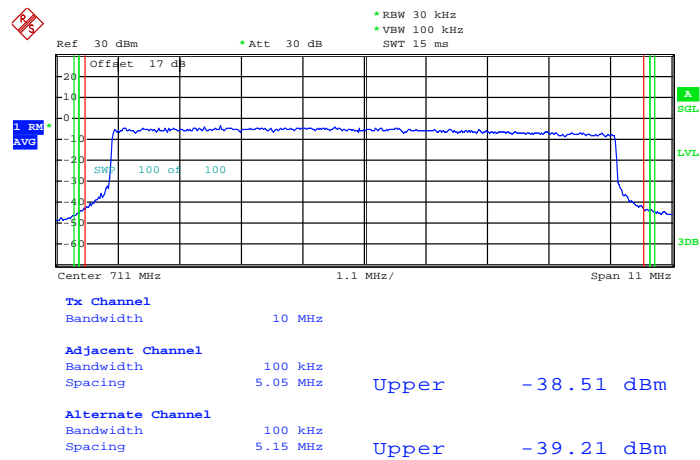


Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 49



Date: 25.OCT.2013 14:47:14

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

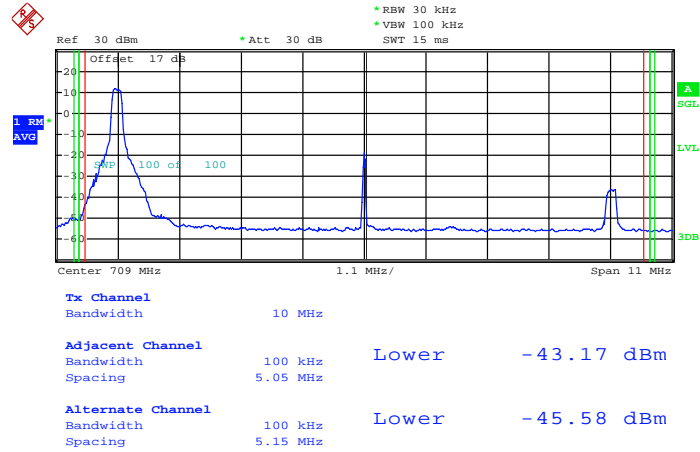


Date: 25.OCT.2013 14:46:08



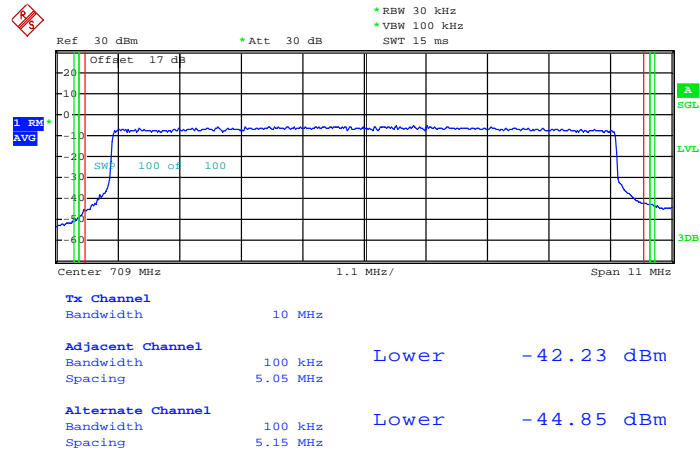
<b>Band :</b>	LTE Band 17	<b>Band Width :</b>	10MHz / 16QAM
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Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



Date: 25.OCT.2013 14:48:21

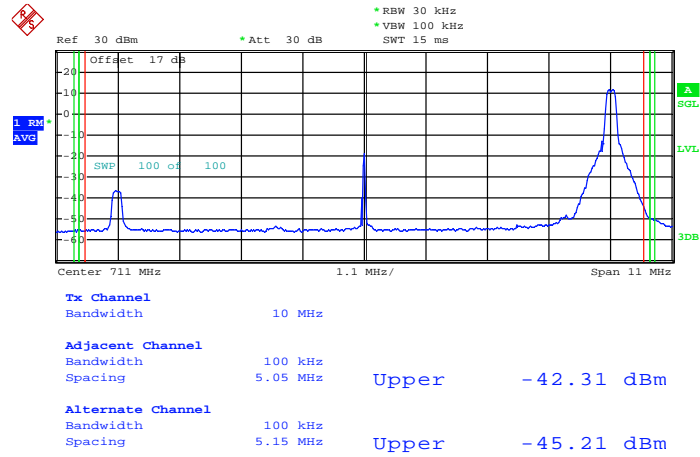
Lower Band Edge Plot for 16QAM-RB Size 50, RB Offset 0



Date: 25.OCT.2013 14:48:40

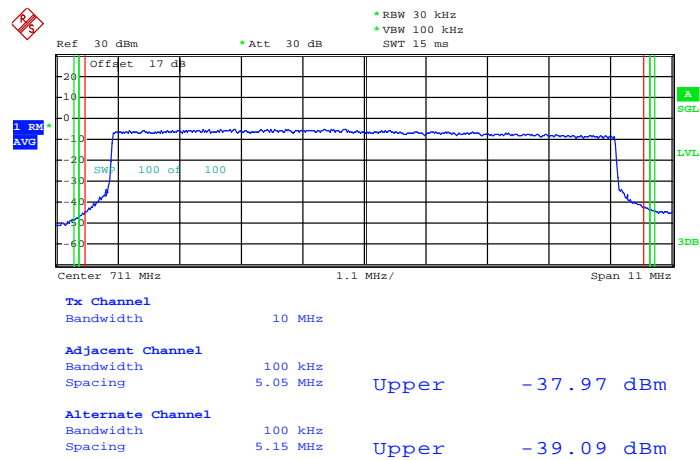


Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 49



Date: 25.OCT.2013 14:46:51

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



Date: 25.OCT.2013 14:46:27

## 3.6 Conducted Spurious Emission Measurement

### 3.6.1 Description of Conducted Spurious Emission Measurement

For Band 2, 4, 5, 17

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.

For Band 7

The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of mobile digital stations, the attenuation factor shall be not less than  $43 + 10 \log (P)$  dB at the channel edge and  $55 + 10 \log (P)$  dB at 5.5 MHz from the channel edges.

It is measured by means of a calibrated spectrum analyzer and scanned from 9 kHz up to a frequency including its 10<sup>th</sup> harmonic.

### 3.6.2 Measuring Instruments

Measuring equipment is listed in the section 4 of this test report.

### 3.6.3 Test Procedures

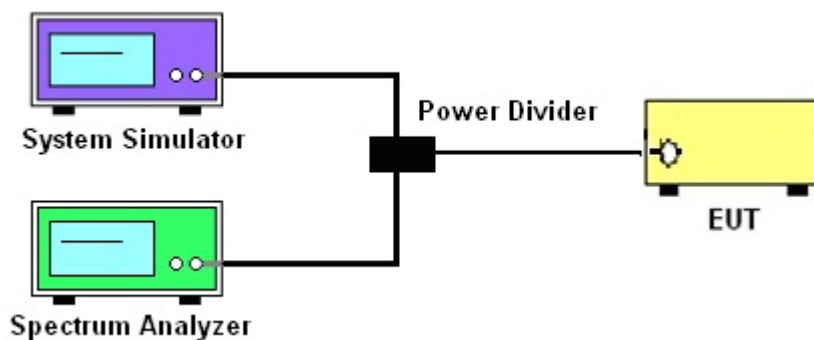
1. The EUT was connected to spectrum analyzer and base station via power divider.
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. The middle channel for the highest RF power within the transmitting 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. For Band 2, 4, 5, 17

The limit line is derived from  $43 + 10\log(P)$ dB below the transmitter power P(Watts)  
= P(W)- [43 + 10log(P)] (dB)  
= [30 + 10log(P)] (dBm) - [43 + 10log(P)] (dB)  
= -13dBm.

8. For Band 7

The limit line is derived from  $55 + 10\log(P)$ dB below the transmitter power P(Watts)

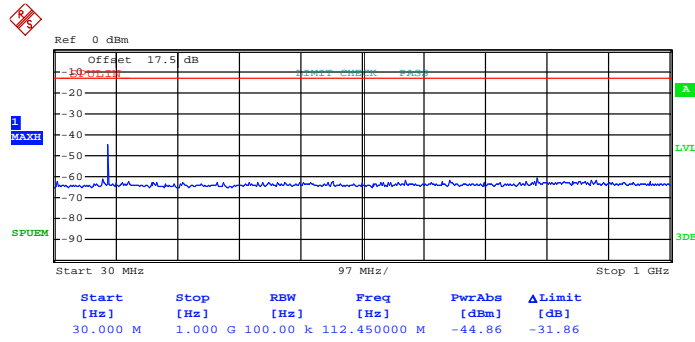
### 3.6.4 Test Setup



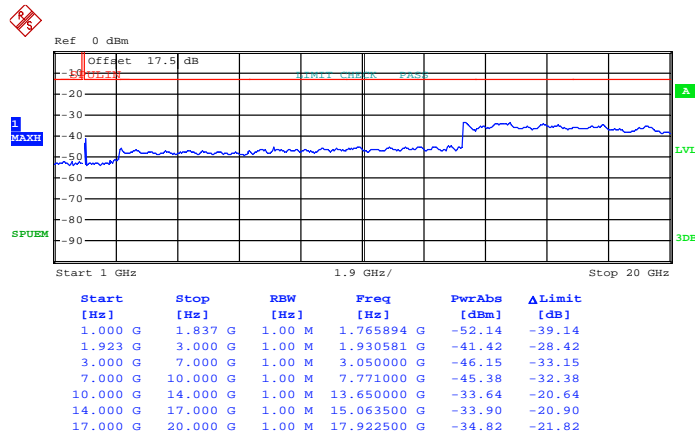
### 3.6.5 Test Result (Plots) of Conducted Spurious Emission

Band :	LTE Band 2	Channel :	CH18607 (Low)
Band Width :	1.4MHz		

#### QPSK (RB Size 3, RB Offset 2)



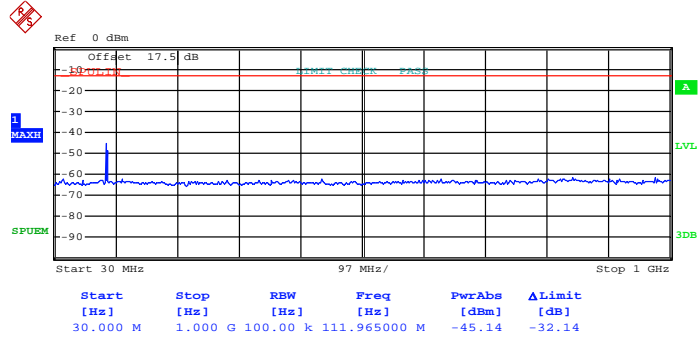
Date: 24.OCT.2013 16:22:42



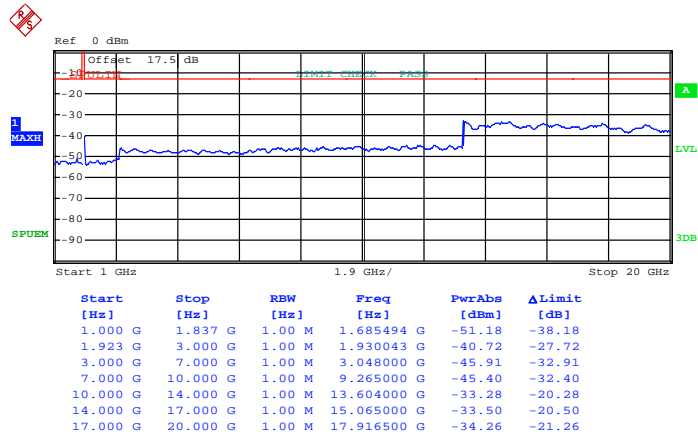
Date: 24.OCT.2013 16:22:03



16QAM (RB Size 3, RB Offset 0)



Date: 24.OCT.2013 16:23:13



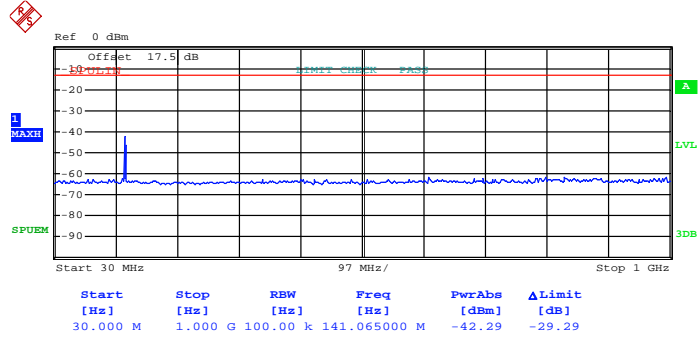
Date: 24.OCT.2013 16:24:25



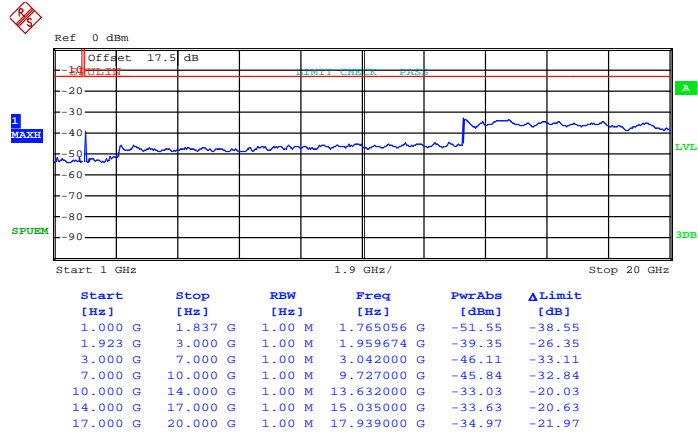


<b>Band :</b>	LTE Band 2	<b>Channel :</b>	CH18900 (Middle)
<b>Band Width :</b>	1.4MHz		

**QPSK (RB Size 1, RB Offset 0)**



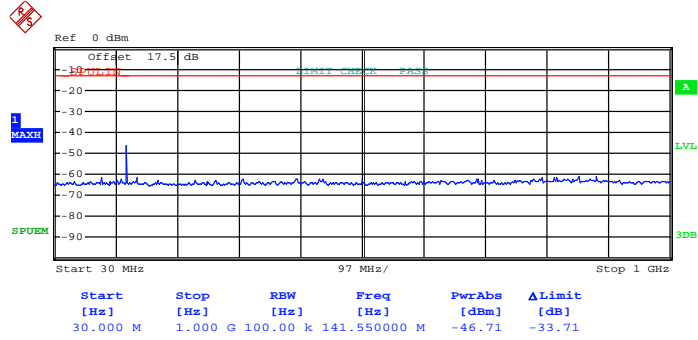
Date: 24.OCT.2013 16:18:53



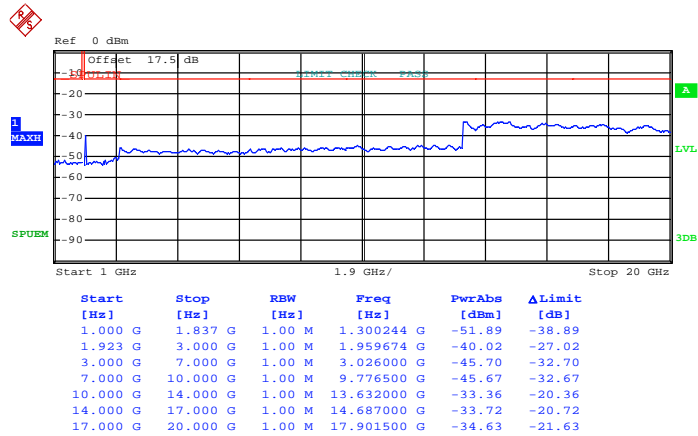
Date: 24.OCT.2013 16:18:16



16QAM (RB Size 3, RB Offset 2)



Date: 24.OCT.2013 16:19:46

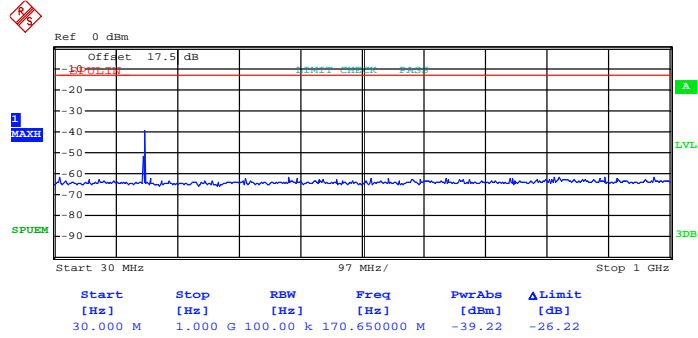


Date: 24.OCT.2013 16:20:59

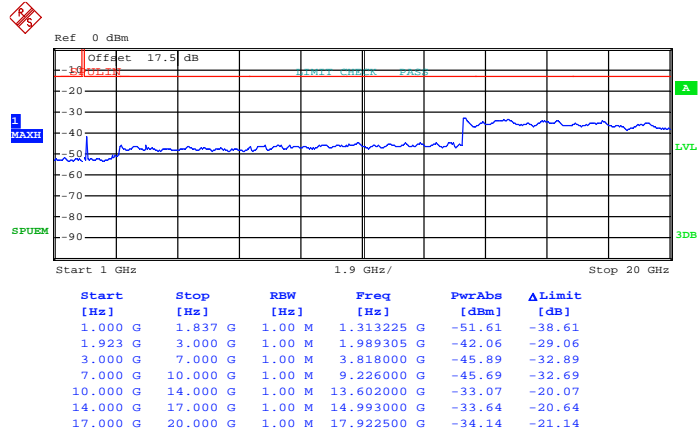


Band :	LTE Band 2	Channel :	CH19193 (High)
Band Width :	1.4MHz		

QPSK (RB Size 1, RB Offset 0)



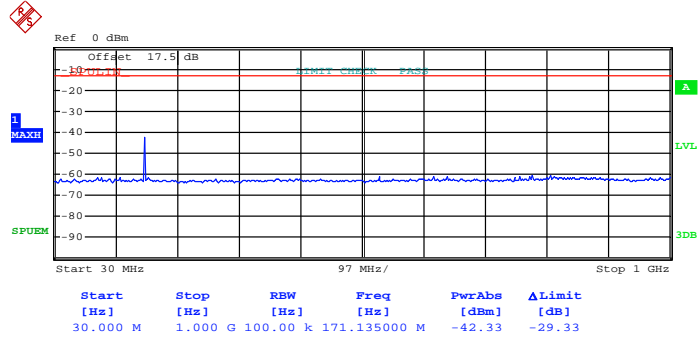
Date: 24.OCT.2013 16:29:04



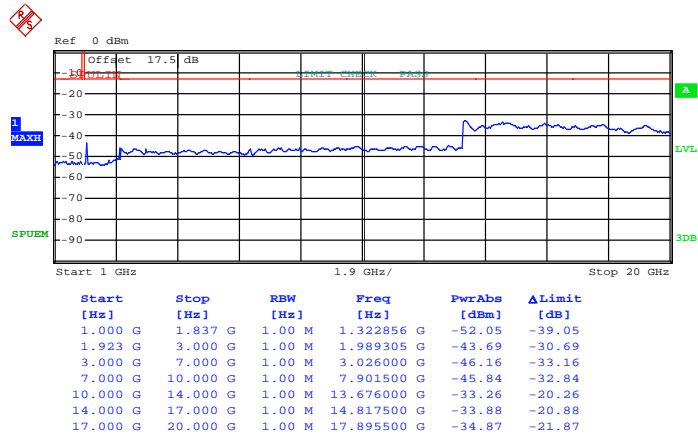
Date: 24.OCT.2013 16:30:20



16QAM (RB Size 3, RB Offset 1)



Date: 24.OCT.2013 16:28:33

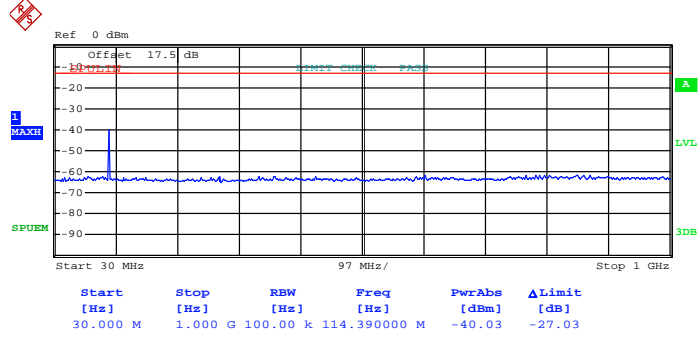


Date: 24.OCT.2013 16:25:33

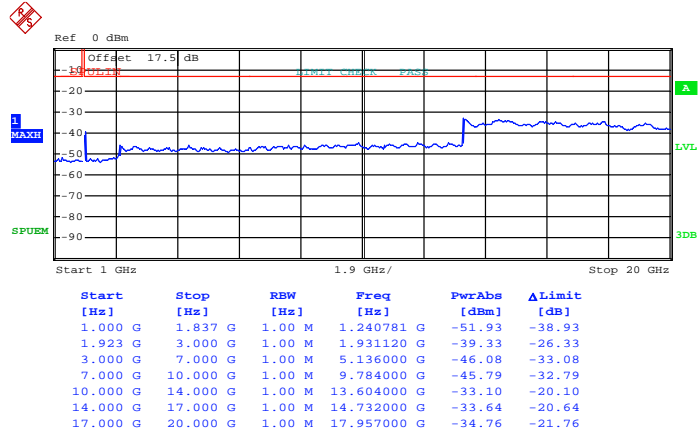


Band :	LTE Band 2	Channel :	CH18615 (Low)
Band Width :	3MHz		

QPSK (RB Size 1, RB Offset 14)



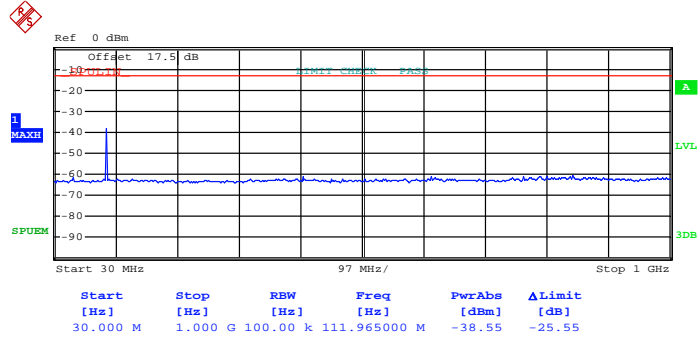
Date: 24.OCT.2013 16:08:35



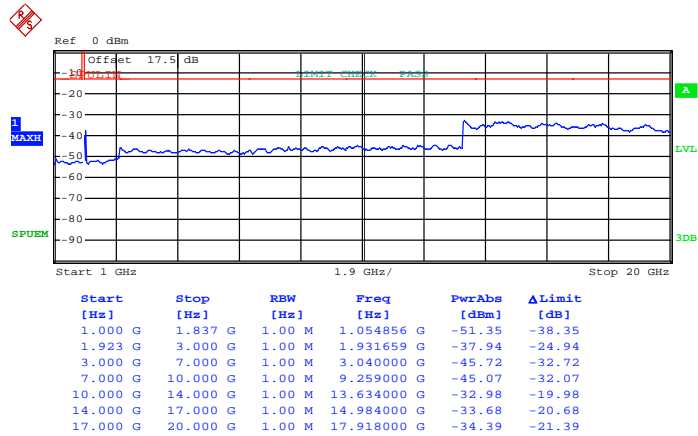
Date: 24.OCT.2013 16:07:47



16QAM (RB Size 1, RB Offset 0)



Date: 24.OCT.2013 16:11:33

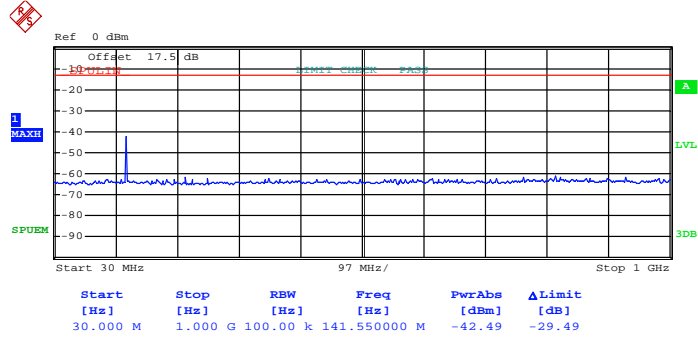


Date: 24.OCT.2013 16:13:15

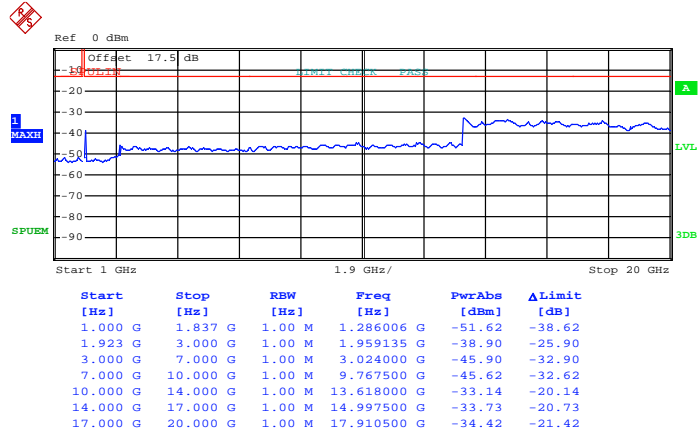


Band :	LTE Band 2	Channel :	CH18900 (Middle)
Band Width :	3MHz		

QPSK (RB Size 1, RB Offset 7)



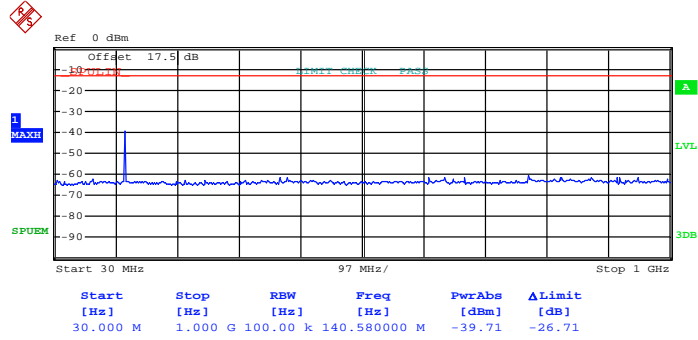
Date: 24.OCT.2013 16:05:08



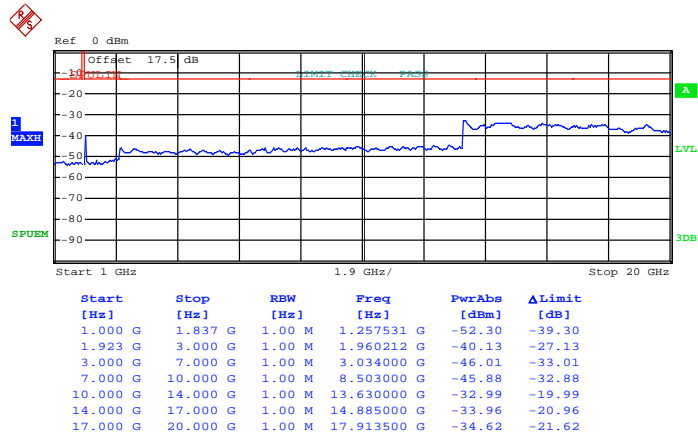
Date: 24.OCT.2013 16:05:49



16QAM (RB Size 1, RB Offset 0)



Date: 24.OCT.2013 16:04:36



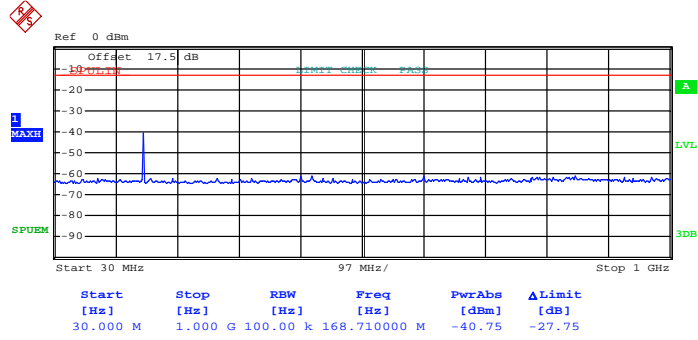
Date: 24.OCT.2013 16:04:01



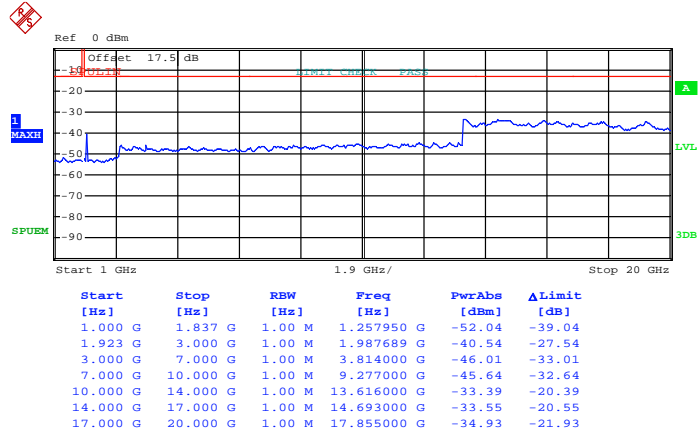


Band :	LTE Band 2	Channel :	CH19185 (High)
Band Width :	3MHz		

QPSK (RB Size 1, RB Offset 0)



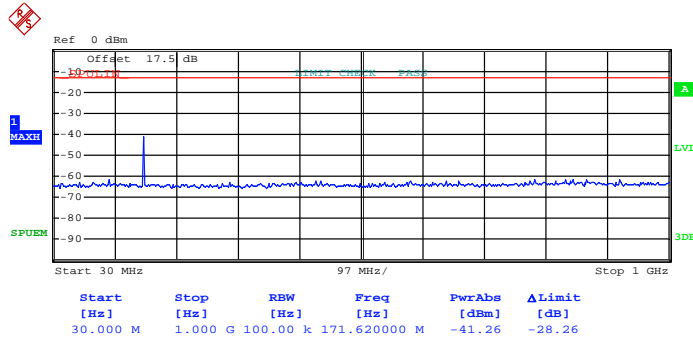
Date: 24.OCT.2013 16:15:10



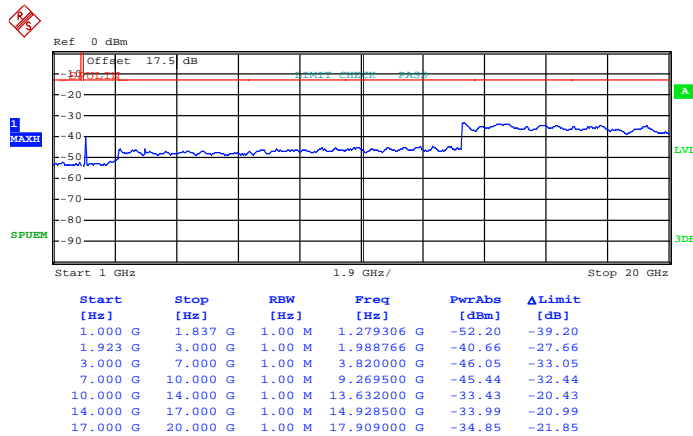
Date: 24.OCT.2013 16:14:23



16QAM (RB Size 1, RB Offset 14)



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

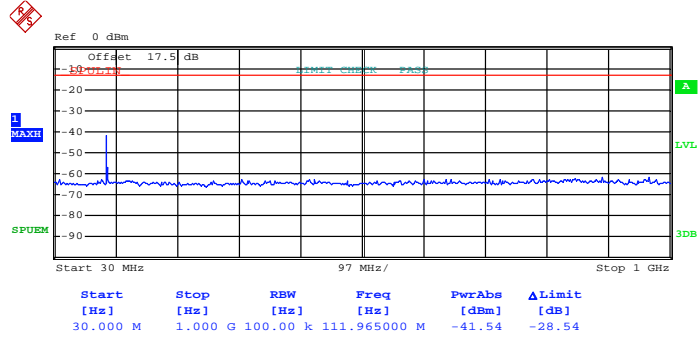


Date: 24.OCT.2013 16:16:25

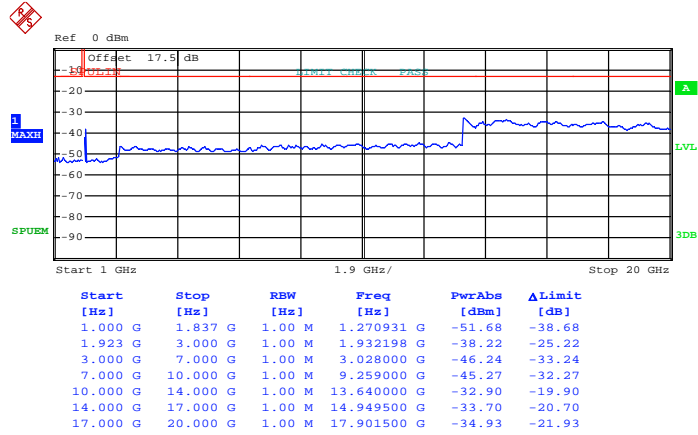


Band :	LTE Band 2	Channel :	CH18625 (Low)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 0)



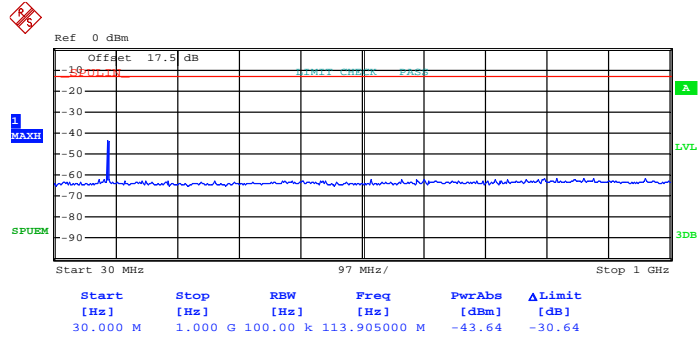
Date: 24.OCT.2013 15:55:01



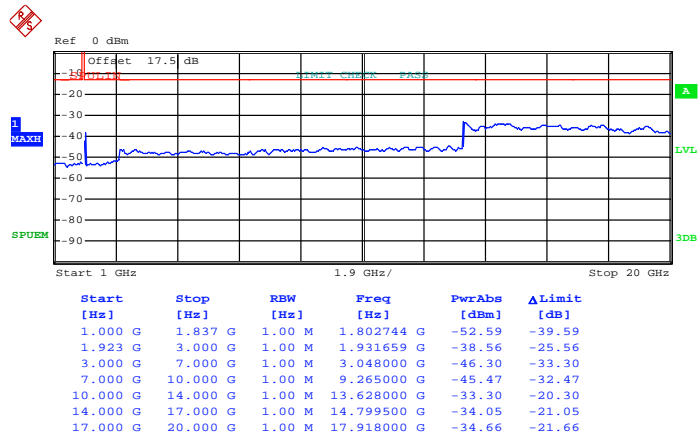
Date: 24.OCT.2013 15:55:38



16QAM (RB Size 1, RB Offset 12)



Date: 24.OCT.2013 15:56:58

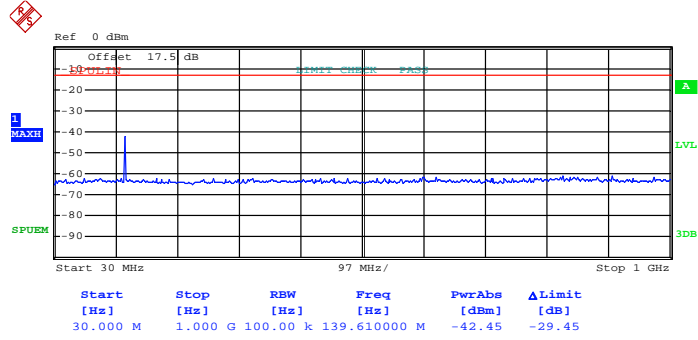


Date: 24.OCT.2013 15:56:22

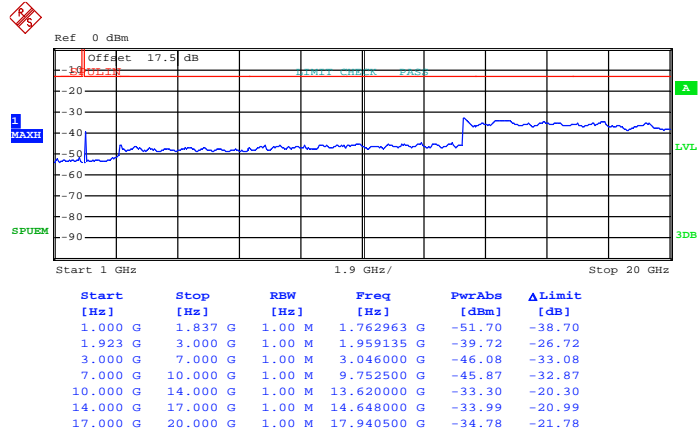


<b>Band :</b>	LTE Band 2	<b>Channel :</b>	CH18900 (Middle)
<b>Band Width :</b>	5MHz		

**QPSK (RB Size 1, RB Offset 0)**



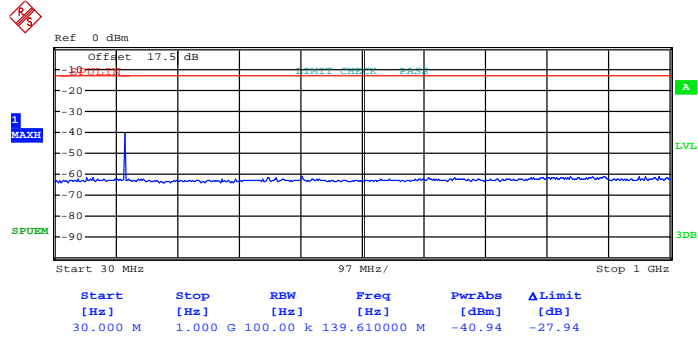
Date: 24.OCT.2013 15:42:10



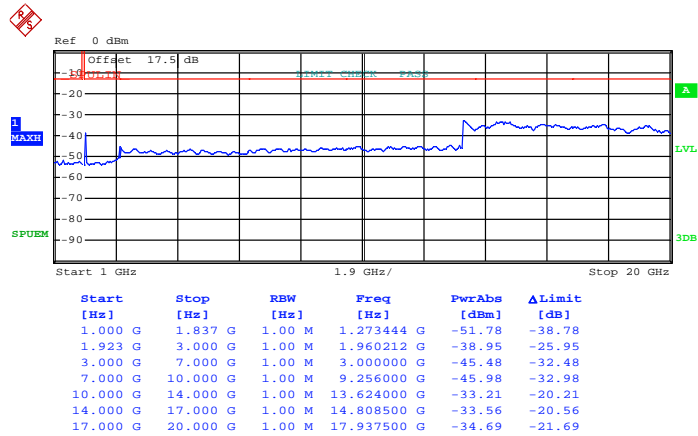
Date: 24.OCT.2013 15:41:27



16QAM (RB Size 1, RB Offset 0)



Date: 24.OCT.2013 15:45:45

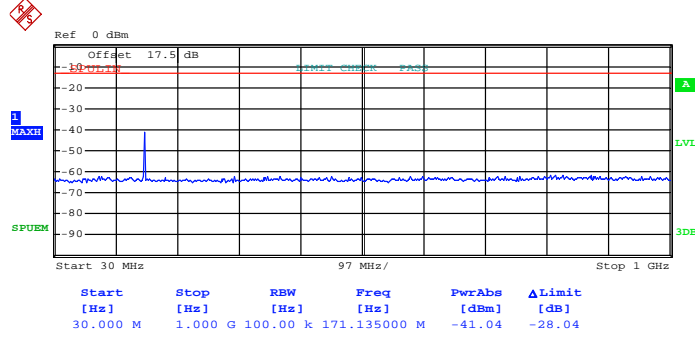


Date: 24.OCT.2013 15:41:00

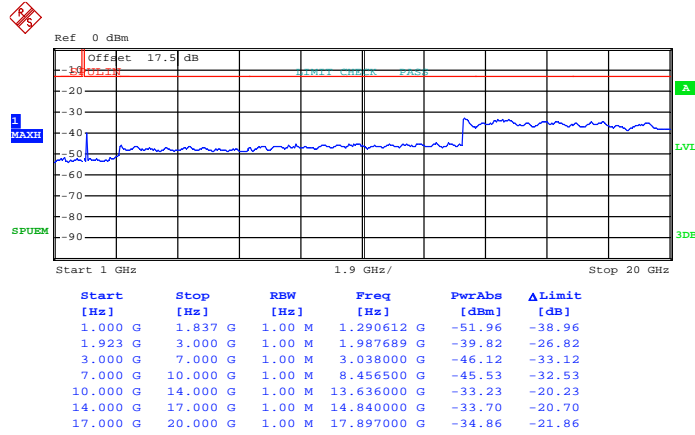


Band :	LTE Band 2	Channel :	CH19175 (High)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 24)



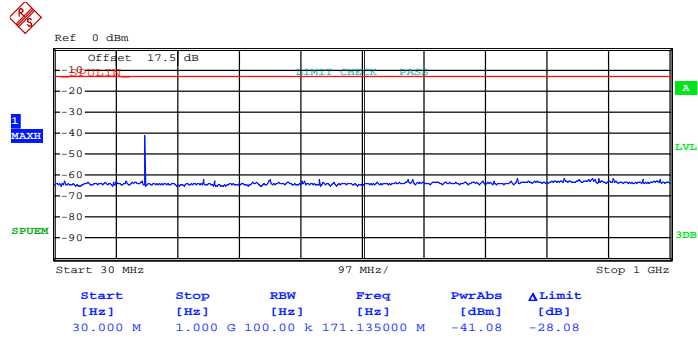
Date: 24.OCT.2013 15:58:44



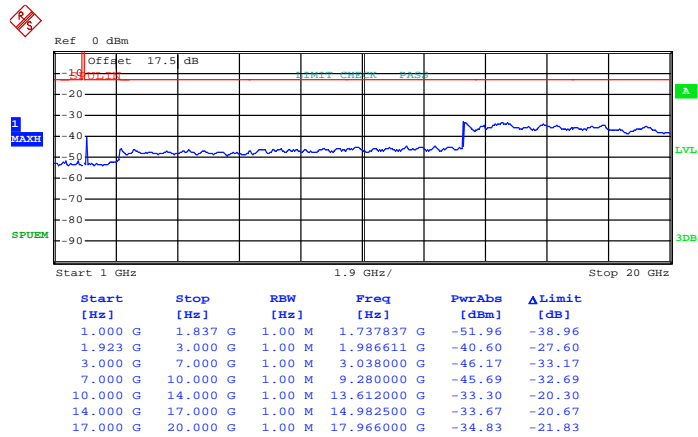
Date: 24.OCT.2013 15:59:31



16QAM (RB Size 1, RB Offset 24)



Date: 24.OCT.2013 15:58:10



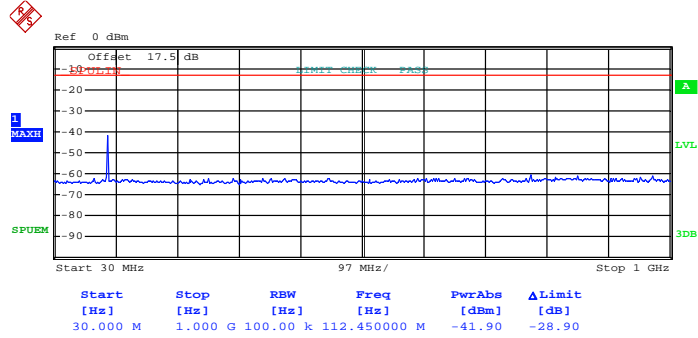
Date: 24.OCT.2013 16:00:00



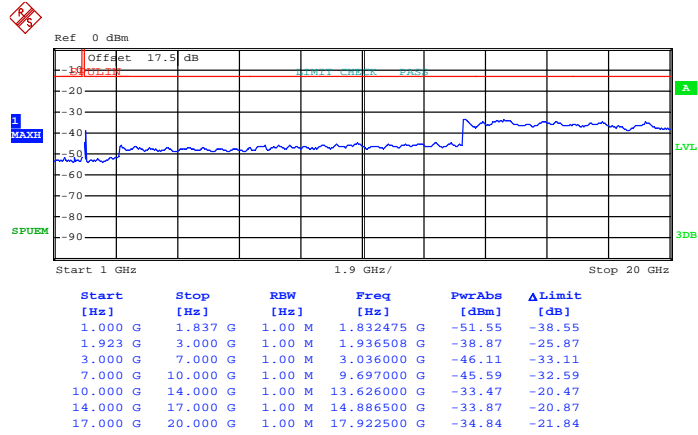


Band :	LTE Band 2	Channel :	CH18650 (Low)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 0)



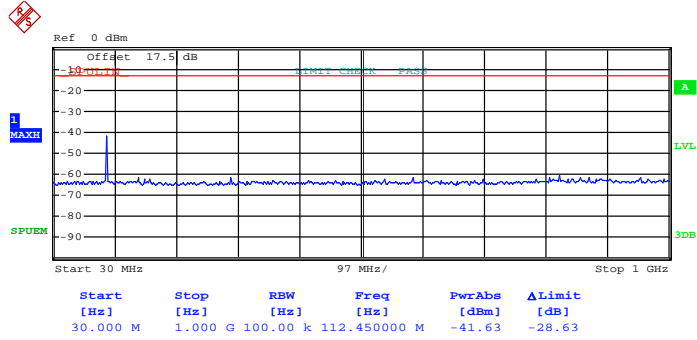
Date: 24.OCT.2013 15:32:37



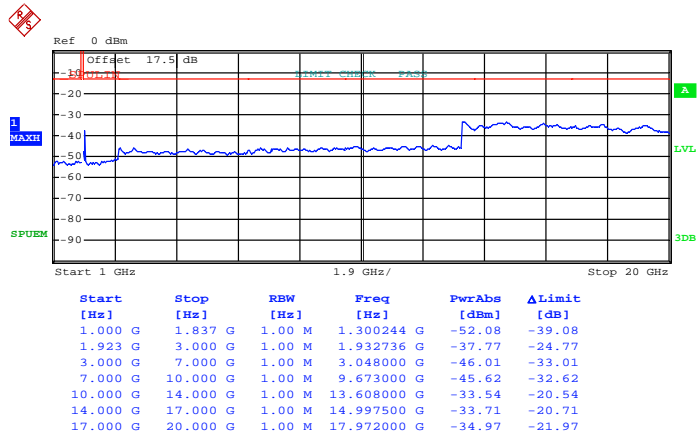
Date: 24.OCT.2013 15:31:37



16QAM (RB Size 1, RB Offset 0)



Date: 24.OCT.2013 15:33:00

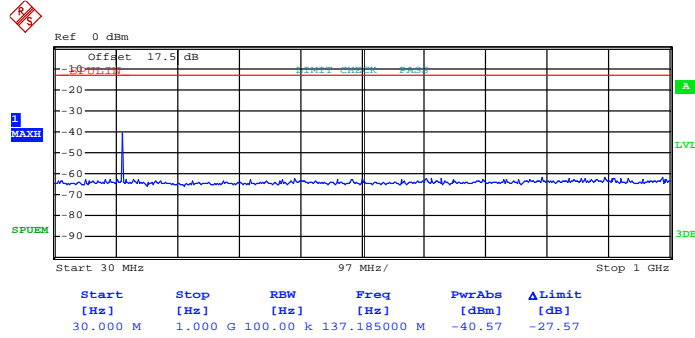


Date: 24.OCT.2013 15:31:01

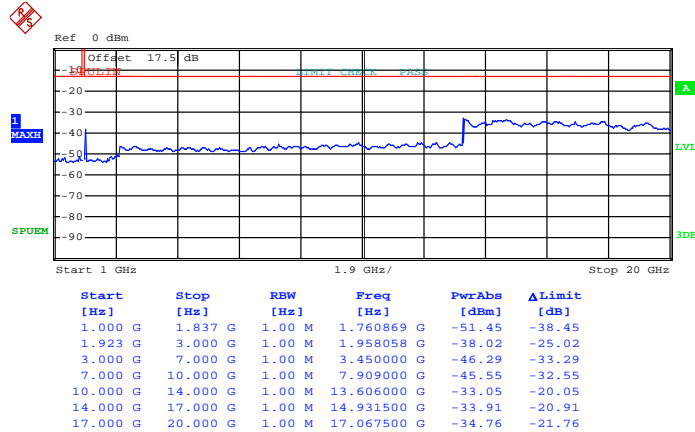


Band :	LTE Band 2	Channel :	CH18900 (Middle)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 0)



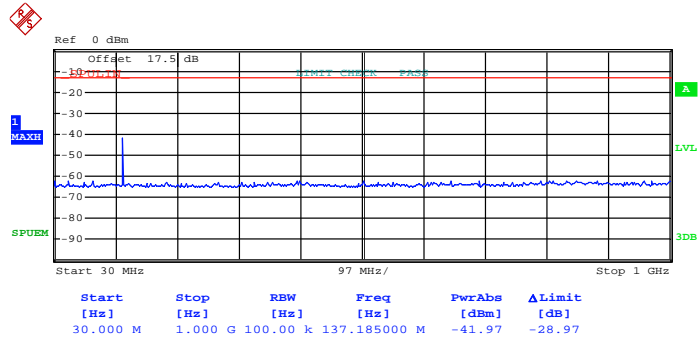
Date: 24.OCT.2013 15:27:43



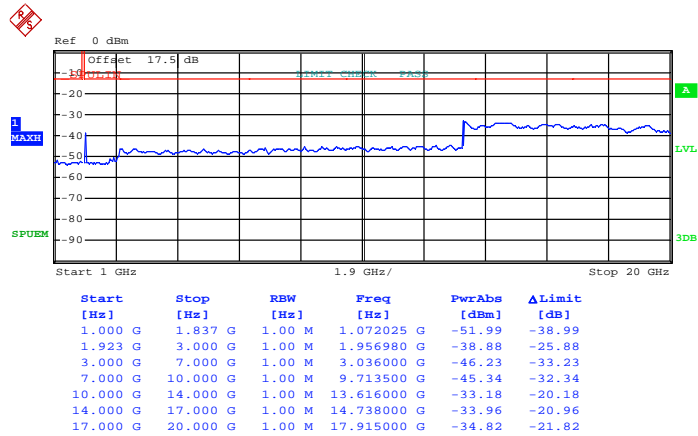
Date: 24.OCT.2013 15:28:24



16QAM (RB Size 1, RB Offset 0)



Date: 24.OCT.2013 15:27:22

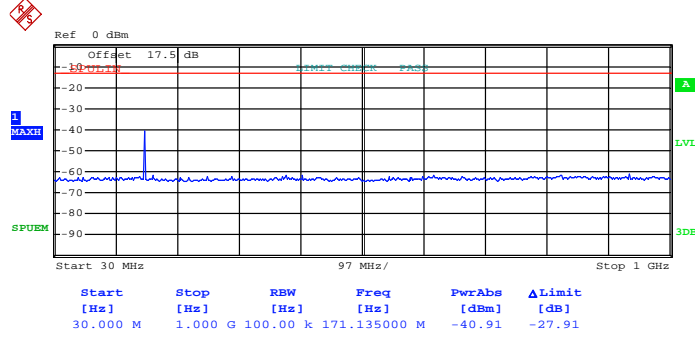


Date: 24.OCT.2013 15:29:12

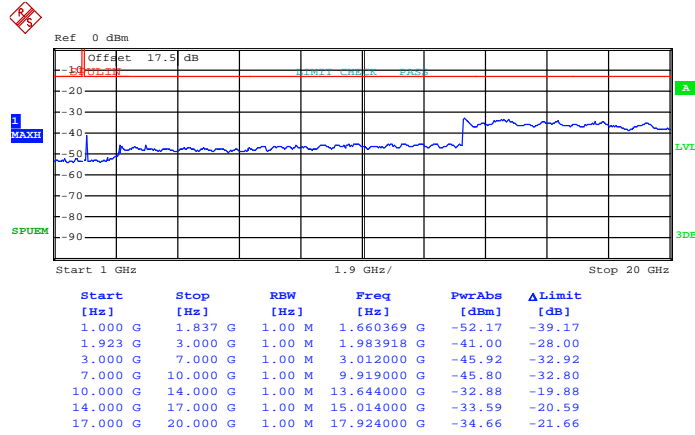


Band :	LTE Band 2	Channel :	CH19150 (High)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 49)



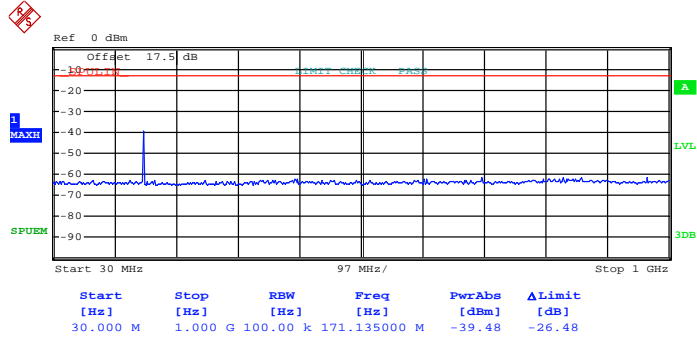
Date: 24.OCT.2013 15:35:26



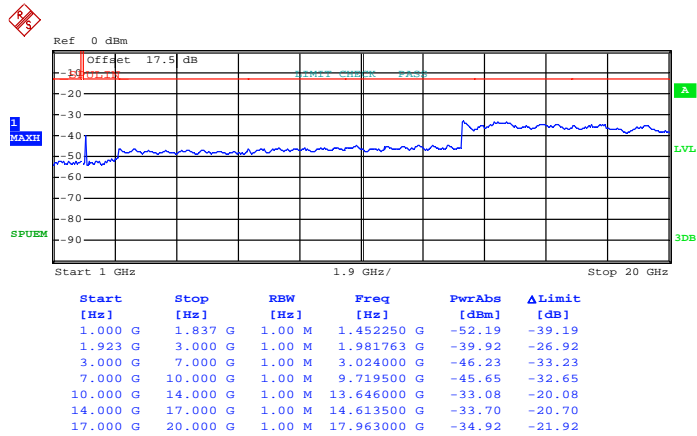
Date: 24.OCT.2013 15:37:06



16QAM (RB Size 1, RB Offset 49)



Date: 24.OCT.2013 15:34:38

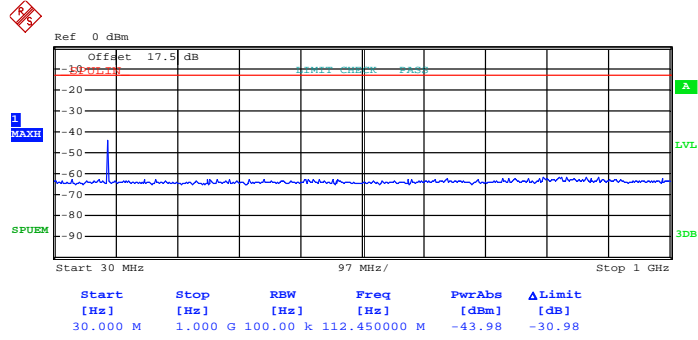


Date: 24.OCT.2013 15:37:47

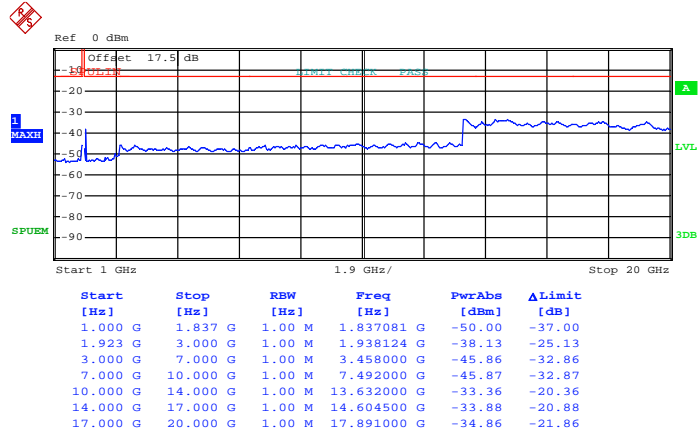


Band :	LTE Band 2	Channel :	CH18675 (Low)
Band Width :	15MHz		

QPSK (RB Size 1, RB Offset 0)



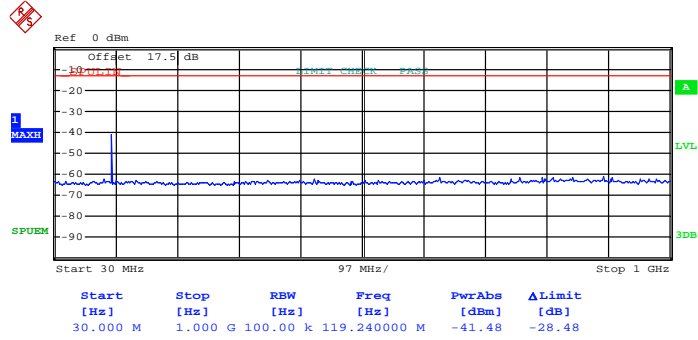
Date: 24.OCT.2013 15:18:14



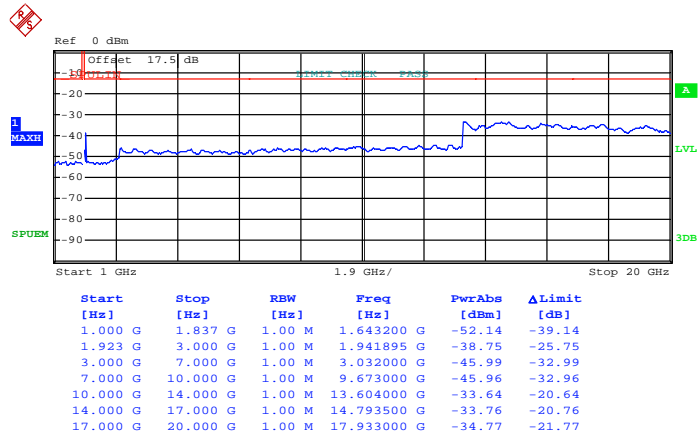
Date: 24.OCT.2013 15:17:25



16QAM (RB Size 1, RB Offset 37)



Date: 24.OCT.2013 15:18:53



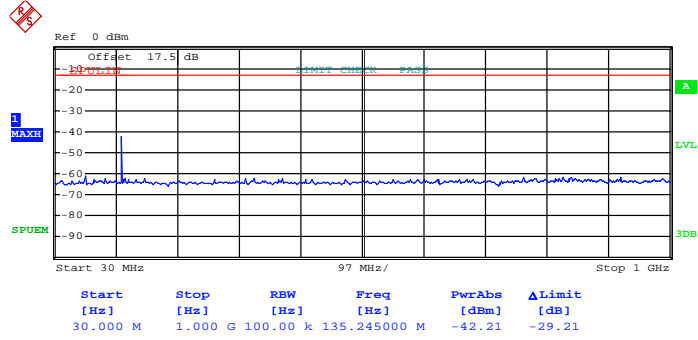
Date: 24.OCT.2013 15:19:48



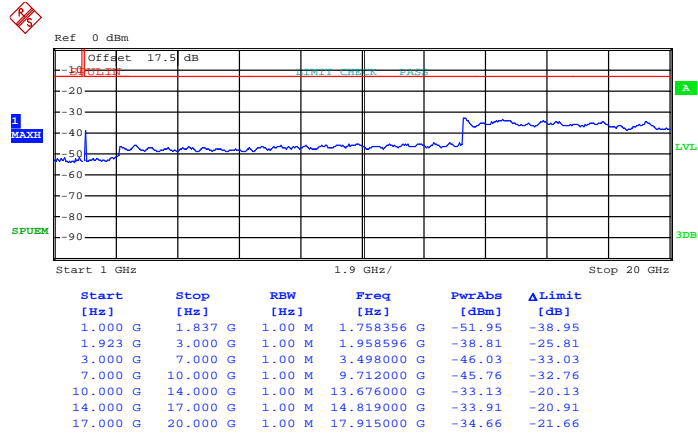


Band :	LTE Band 2	Channel :	CH18900 (Middle)
Band Width :	15MHz		

QPSK (RB Size 1, RB Offset 0)



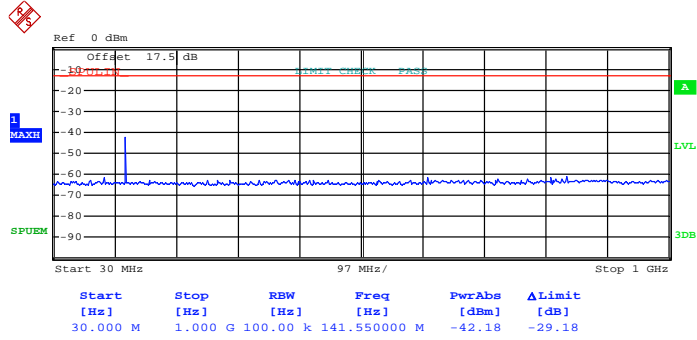
Date: 24.OCT.2013 15:15:04



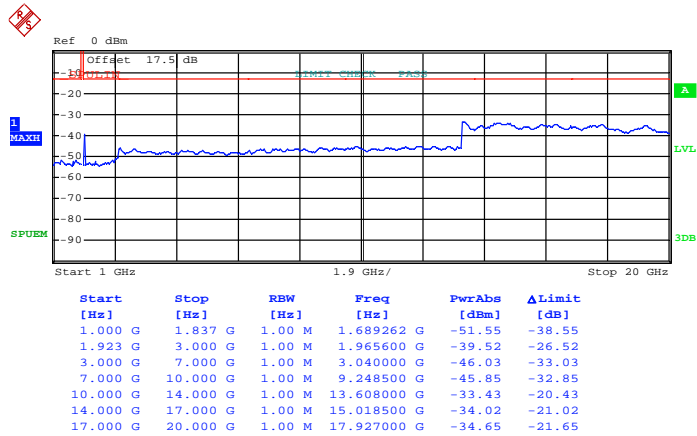
Date: 24.OCT.2013 15:15:55



16QAM (RB Size 1, RB Offset 37)



Date: 24.OCT.2013 15:14:26

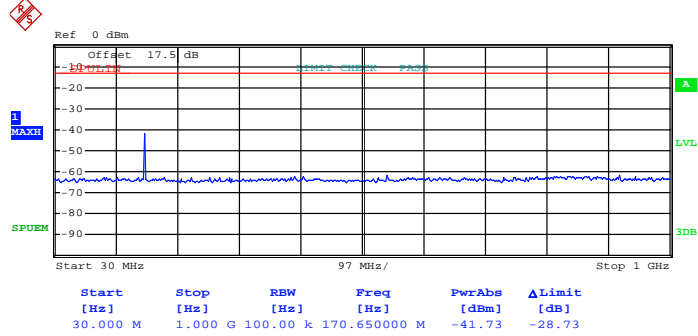


Date: 24.OCT.2013 15:13:58

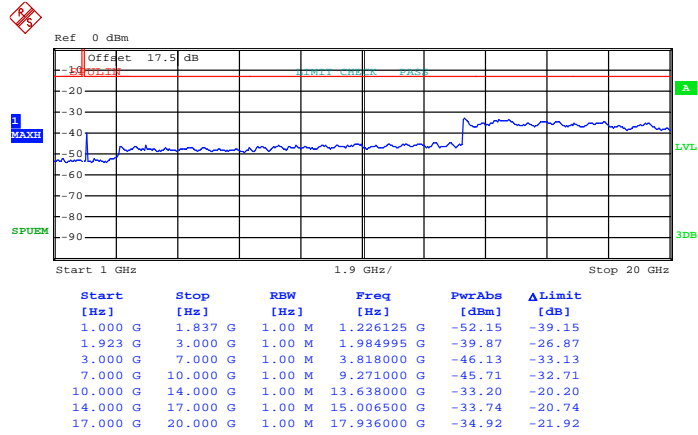


Band :	LTE Band 2	Channel :	CH19125 (High)
Band Width :	15MHz		

QPSK (RB Size 1, RB Offset 74)



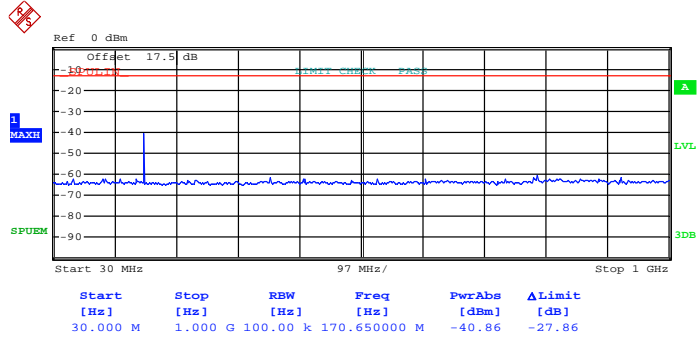
Date: 24.OCT.2013 15:22:32



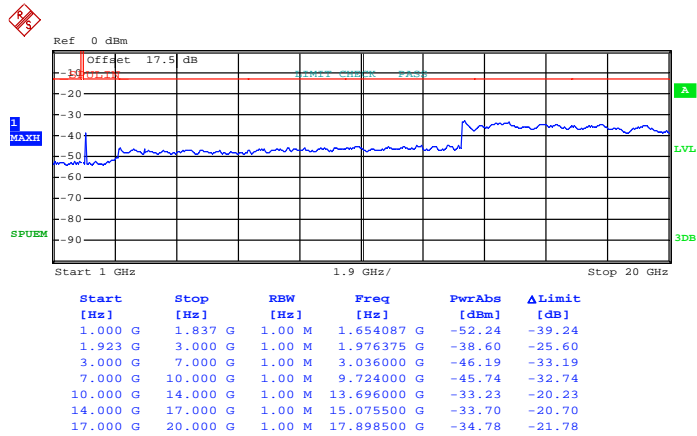
Date: 24.OCT.2013 15:21:58



16QAM (RB Size 1, RB Offset 74)



Date: 24.OCT.2013 15:23:00

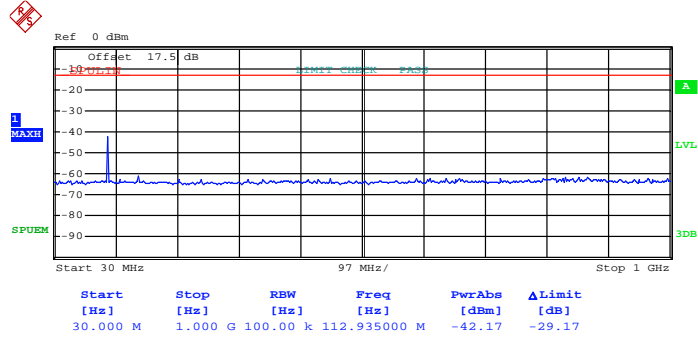


Date: 24.OCT.2013 15:21:11

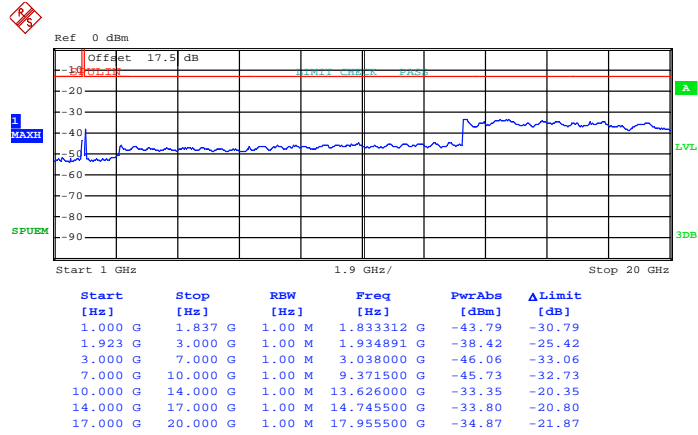


Band :	LTE Band 2	Channel :	CH18700 (Low)
Band Width :	20MHz		

QPSK (RB Size 1, RB Offset 0)



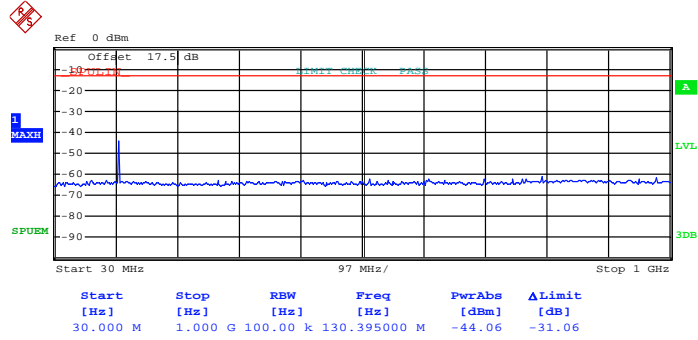
Date: 24.OCT.2013 15:07:55



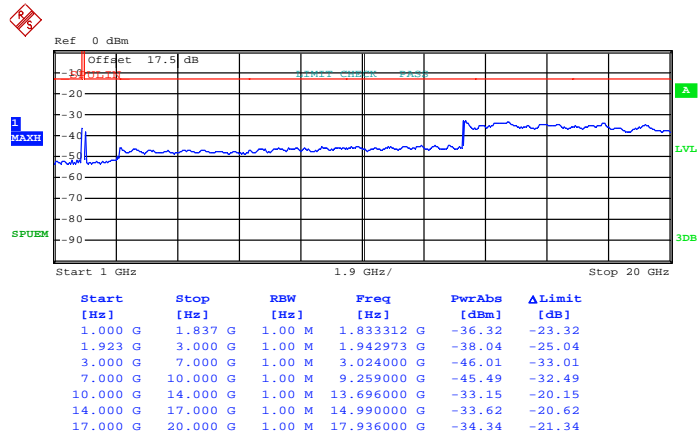
Date: 24.OCT.2013 15:07:26



16QAM (RB Size 1, RB Offset 99)



Date: 24.OCT.2013 15:08:26

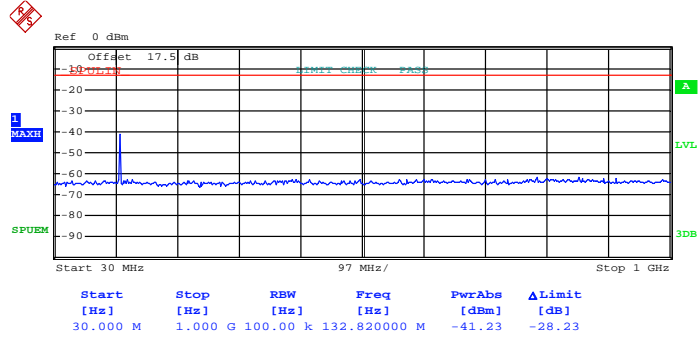


Date: 24.OCT.2013 15:09:34

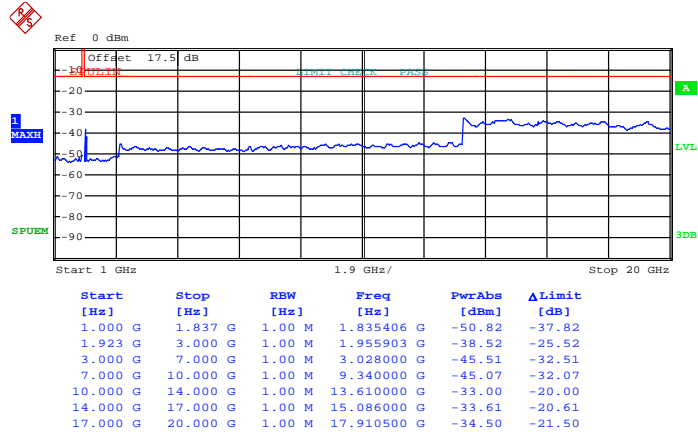


Band :	LTE Band 2	Channel :	CH18900 (Middle)
Band Width :	20MHz		

QPSK (RB Size 1, RB Offset 0)



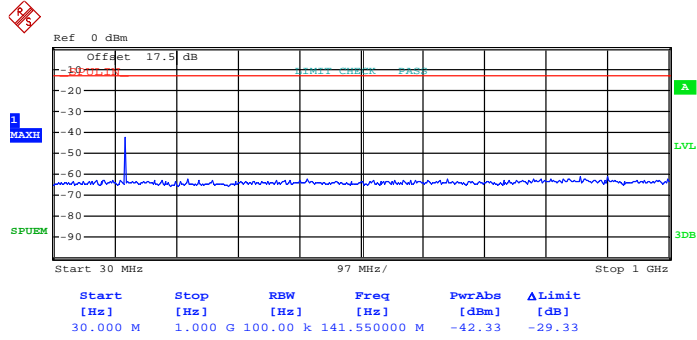
Date: 24.OCT.2013 15:03:50



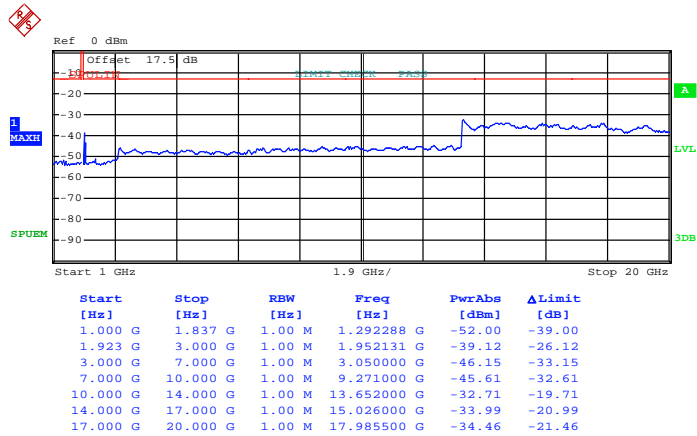
Date: 24.OCT.2013 15:04:51



16QAM (RB Size 1, RB Offset 49)



Date: 24.OCT.2013 15:02:54



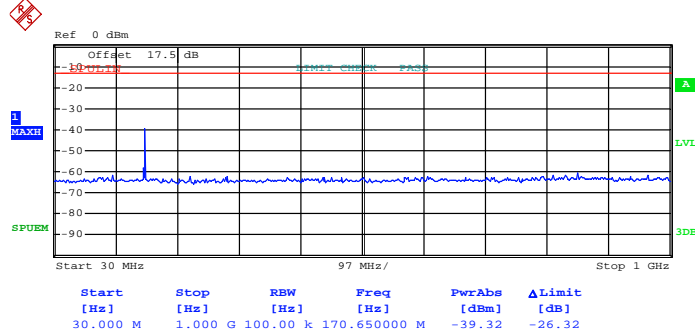
Date: 24.OCT.2013 14:59:23



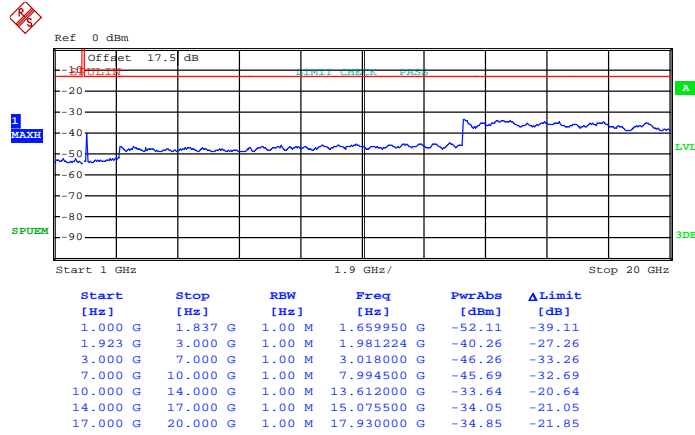


<b>Band :</b>	LTE Band 2	<b>Channel :</b>	CH19100 (High)
<b>Band Width :</b>	20MHz		

QPSK (RB Size 1, RB Offset 99)



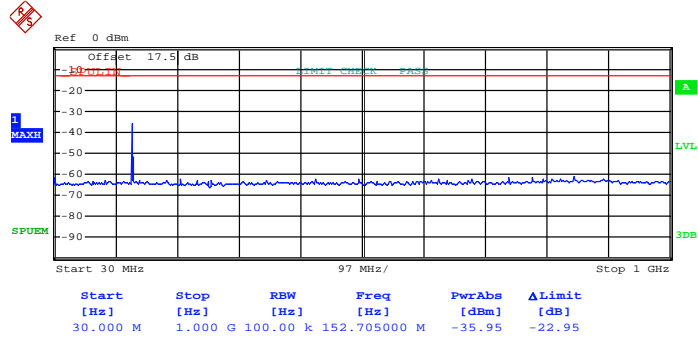
Date: 24.OCT.2013 15:10:50



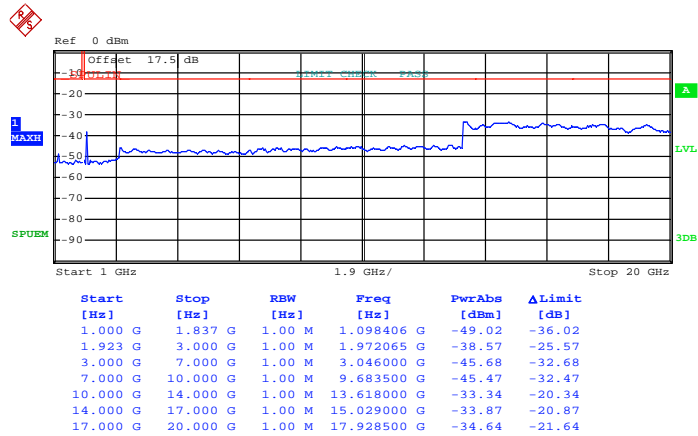
Date: 24.OCT.2013 15:10:23



16QAM (RB Size 1, RB Offset 0)



Date: 24.OCT.2013 15:11:24

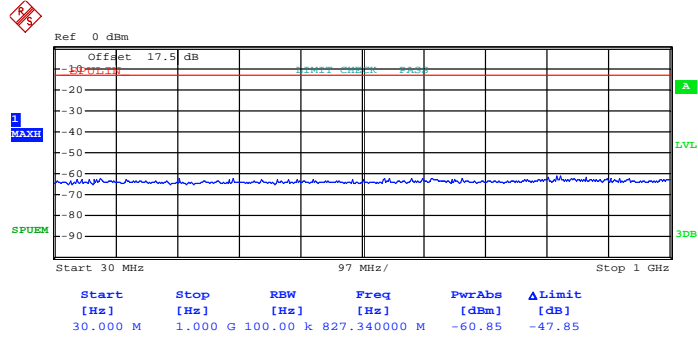


Date: 24.OCT.2013 15:12:37

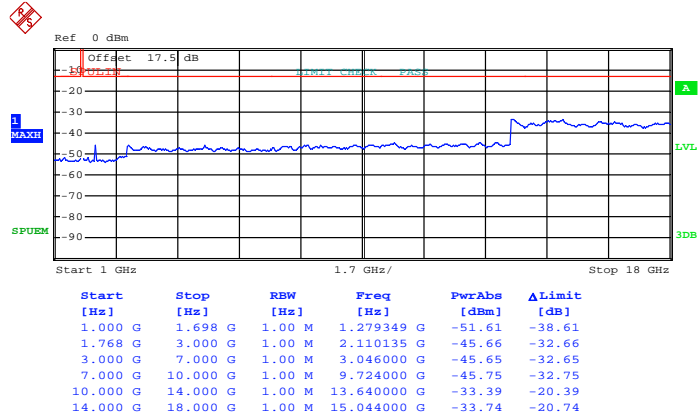


Band :	LTE Band 4	Channel :	CH19957 (Low)
Band Width :	1.4MHz		

QPSK (RB Size 1, RB Offset 0)



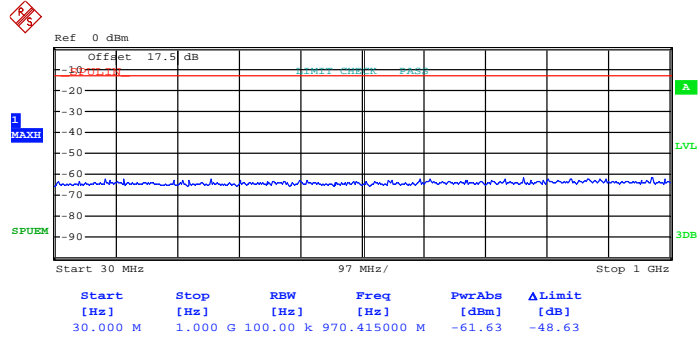
Date: 24.OCT.2013 10:34:04



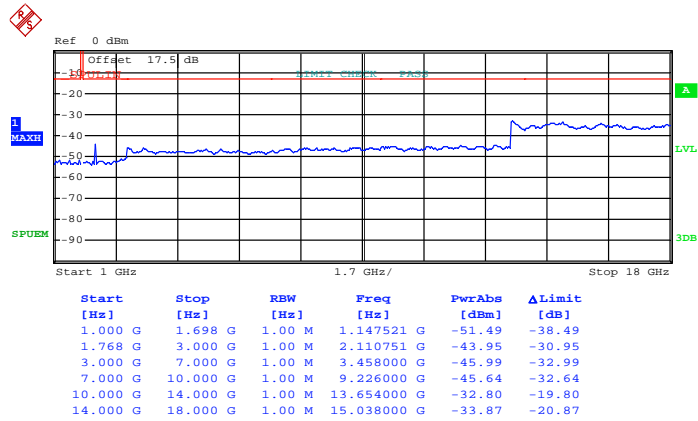
Date: 24.OCT.2013 10:33:22



16QAM (RB Size 1, RB Offset 2)



Date: 24.OCT.2013 10:31:25

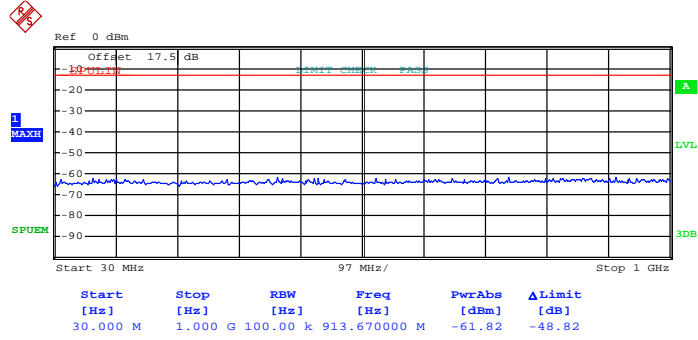


Date: 24.OCT.2013 10:32:37

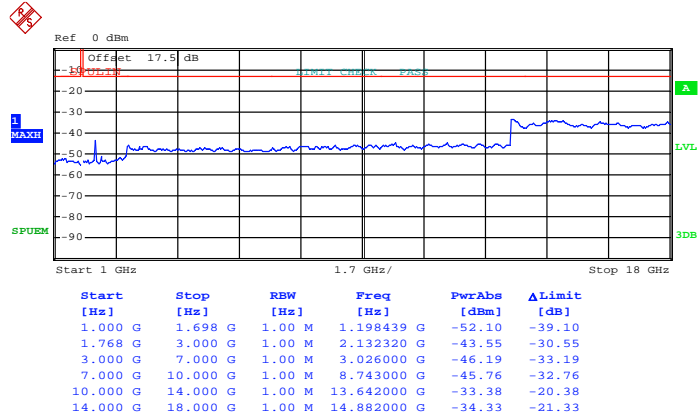


Band :	LTE Band 4	Channel :	CH20175 (Middle)
Band Width :	1.4MHz		

QPSK (RB Size 1, RB Offset 2)



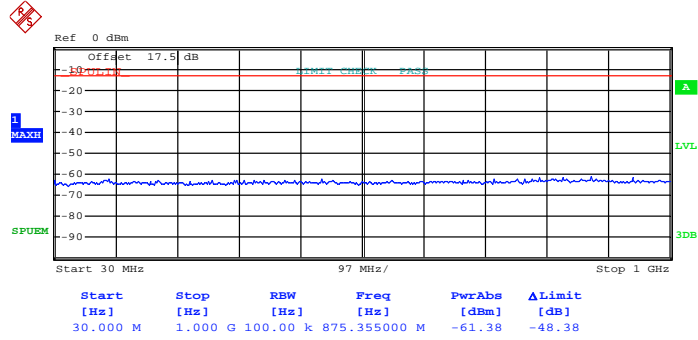
Date: 24.OCT.2013 10:29:21



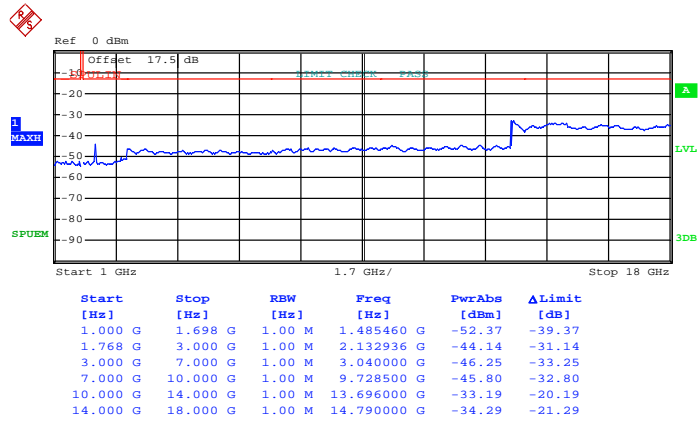
Date: 24.OCT.2013 10:27:07



16QAM (RB Size 3, RB Offset 0)



Date: 24.OCT.2013 10:28:48

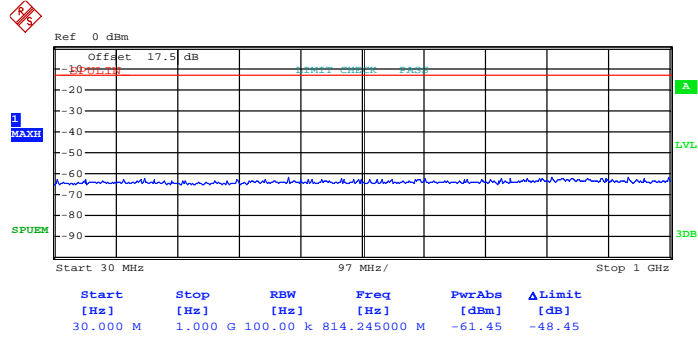


Date: 24.OCT.2013 10:28:03

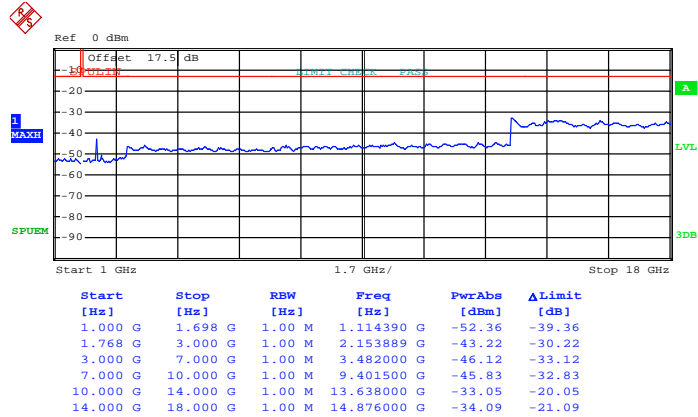


Band :	LTE Band 4	Channel :	CH20393 (High)
Band Width :	1.4MHz		

QPSK (RB Size 1, RB Offset 0)



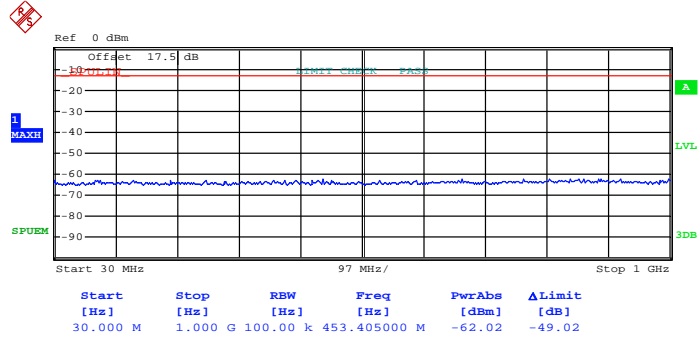
Date: 24.OCT.2013 10:35:50



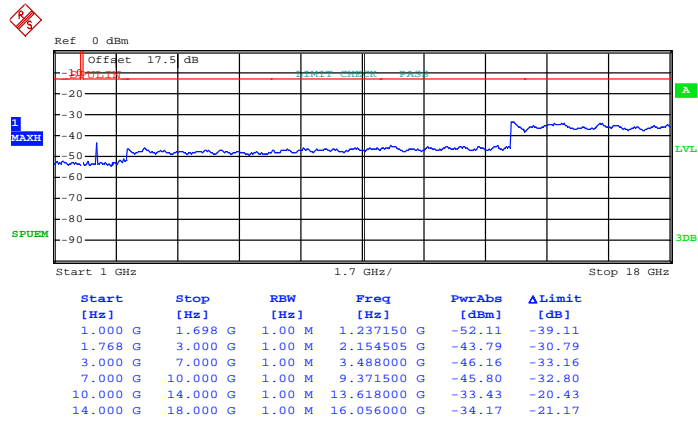
Date: 24.OCT.2013 10:36:36



16QAM (RB Size 3, RB Offset 1)



Date: 24.OCT.2013 10:38:32



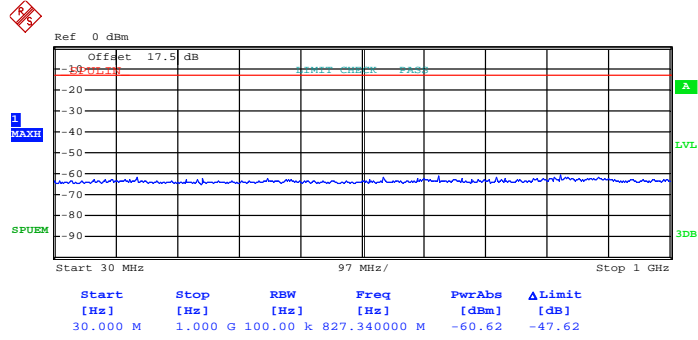
Date: 24.OCT.2013 10:37:58



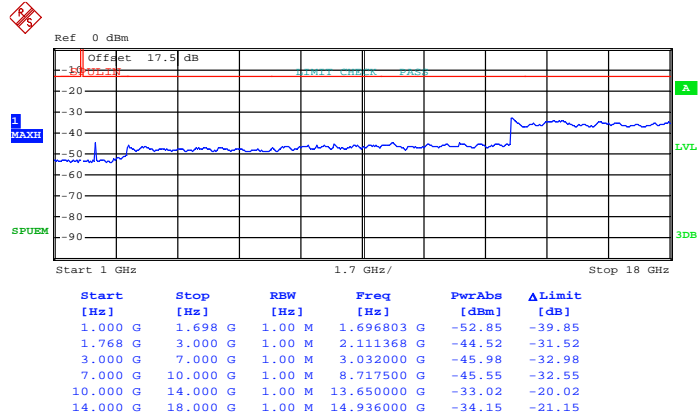


Band :	LTE Band 4	Channel :	CH19965 (Low)
Band Width :	3MHz		

QPSK (RB Size 1, RB Offset 0)



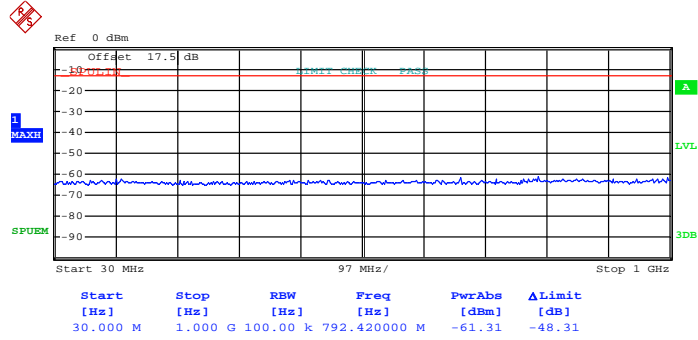
Date: 24.OCT.2013 11:08:33



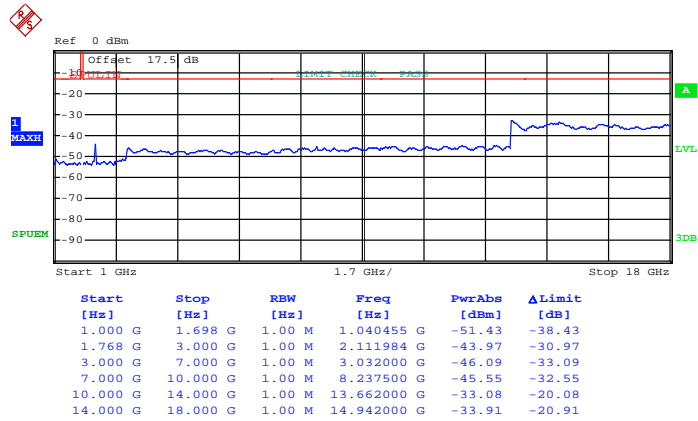
Date: 24.OCT.2013 11:07:52



16QAM (RB Size 1, RB Offset 7)



Date: 24.OCT.2013 11:06:14

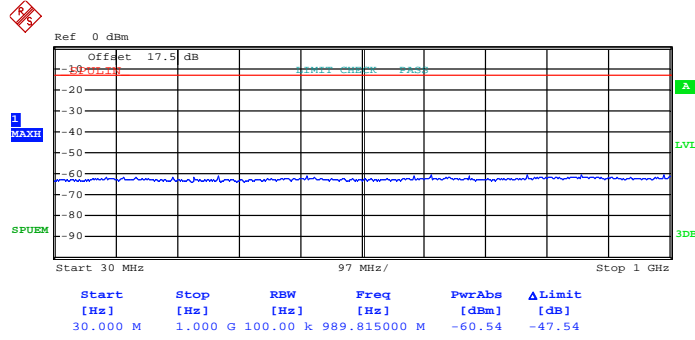


Date: 24.OCT.2013 11:07:05

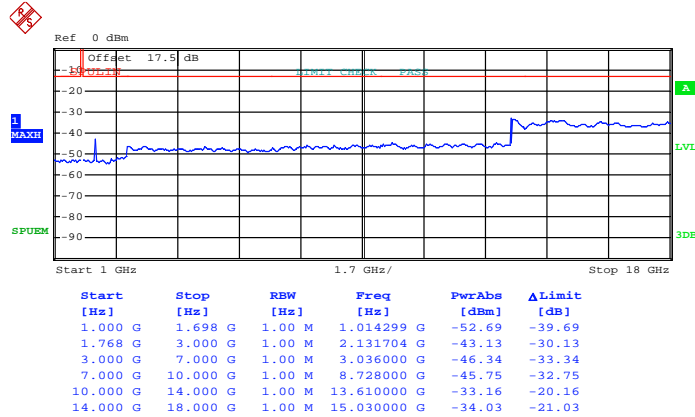


Band :	LTE Band 4	Channel :	CH20175 (Middle)
Band Width :	3MHz		

QPSK (RB Size 1, RB Offset 7)



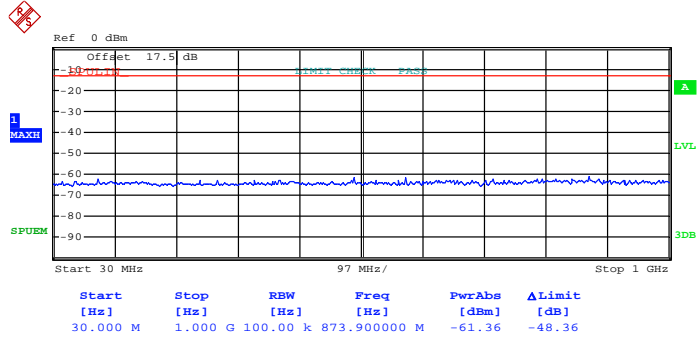
Date: 24.OCT.2013 11:05:04



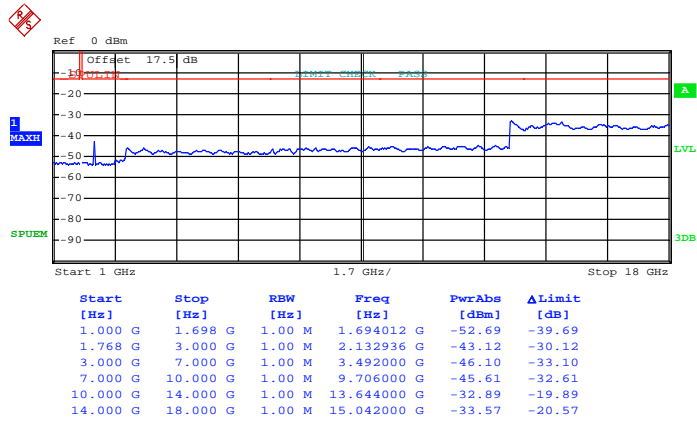
Date: 24.OCT.2013 11:00:29



16QAM (RB Size 1, RB Offset 14)



Date: 24.OCT.2013 10:59:04

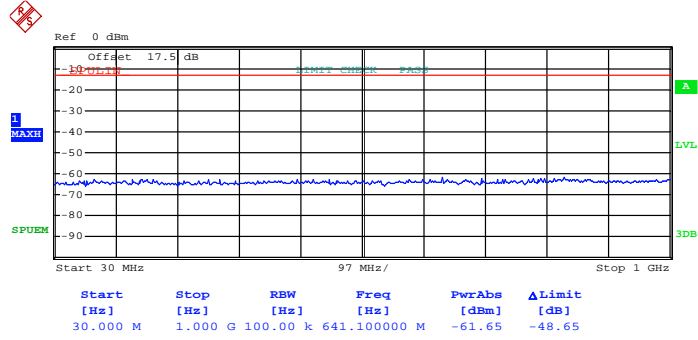


Date: 24.OCT.2013 10:59:50

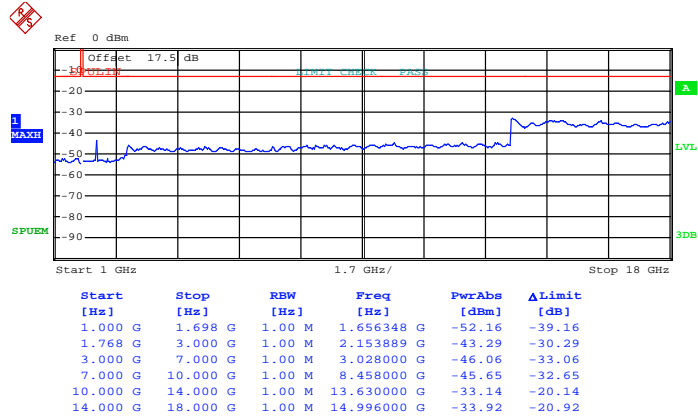


Band :	LTE Band 4	Channel :	CH20385 (High)
Band Width :	3MHz		

QPSK (RB Size 1, RB Offset 0)



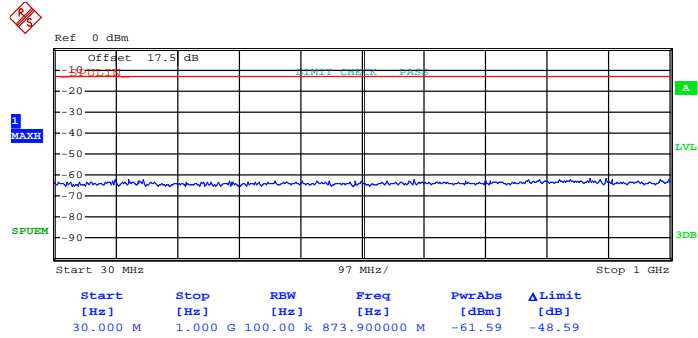
Date: 24.OCT.2013 11:09:26



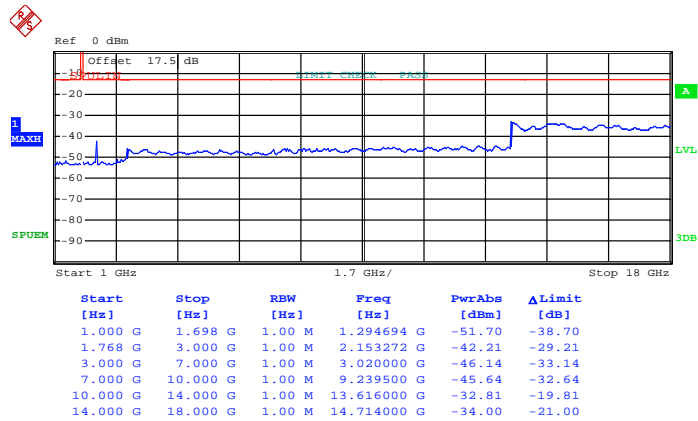
Date: 24.OCT.2013 11:11:22



16QAM (RB Size 1, RB Offset 0)



Date: 24.OCT.2013 11:09:55

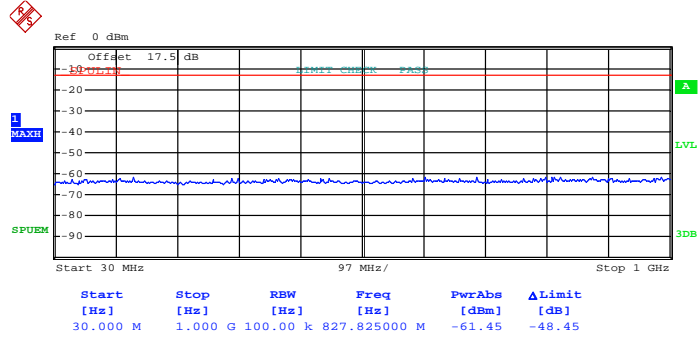


Date: 24.OCT.2013 11:10:48

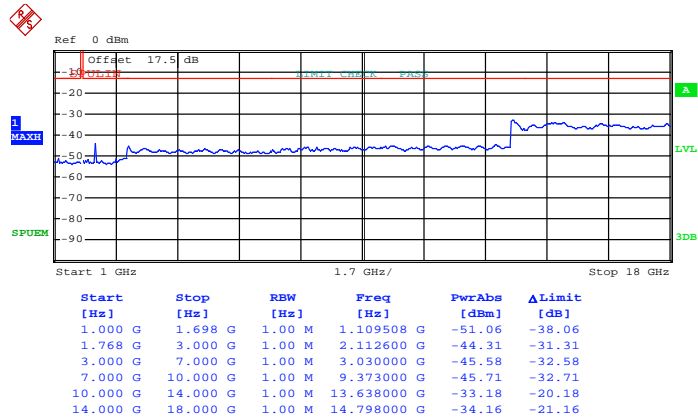


Band :	LTE Band 4	Channel :	CH19975 (Low)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 0)



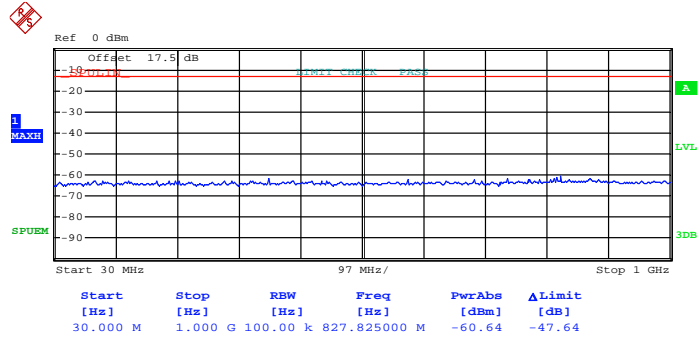
Date: 24.OCT.2013 11:21:04



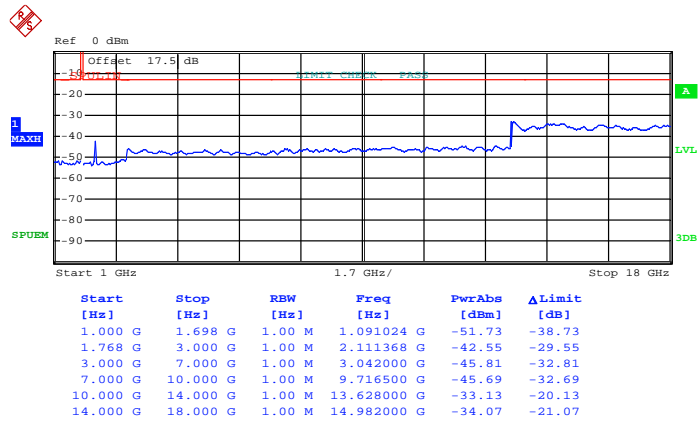
Date: 24.OCT.2013 11:23:18



16QAM (RB Size 1, RB Offset 0)



Date: 24.OCT.2013 11:21:30



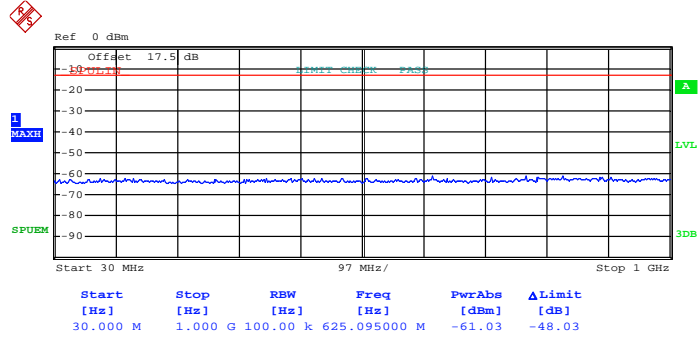
Date: 24.OCT.2013 11:22:36



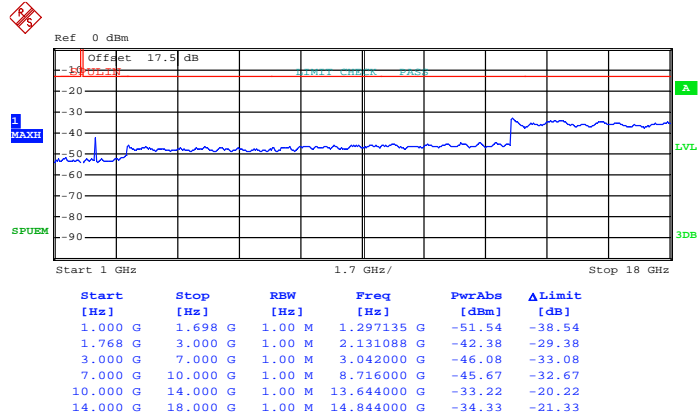


Band :	LTE Band 4	Channel :	CH20175 (Middle)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 0)



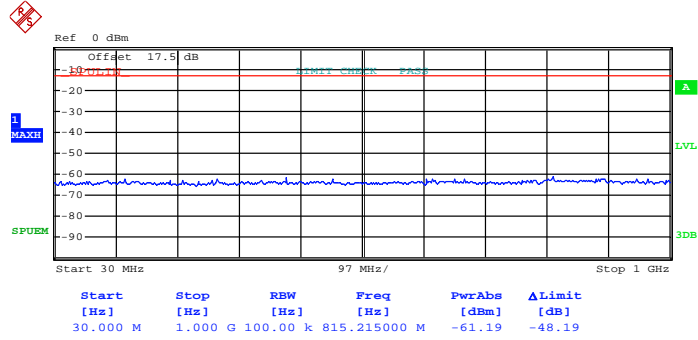
Date: 24.OCT.2013 11:19:52



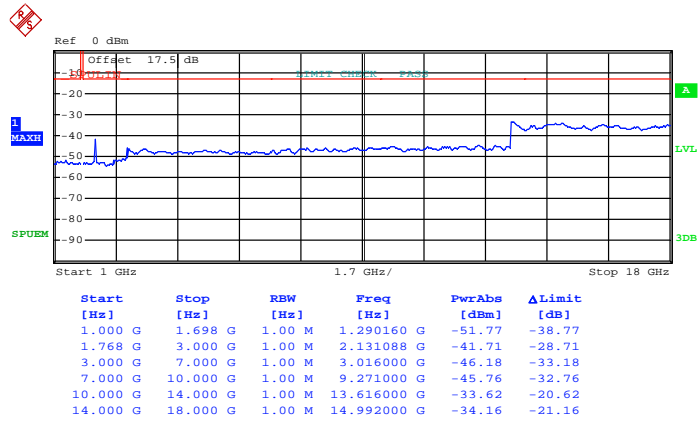
Date: 24.OCT.2013 11:17:08



16QAM (RB Size 1, RB Offset 0)



Date: 24.OCT.2013 11:19:02

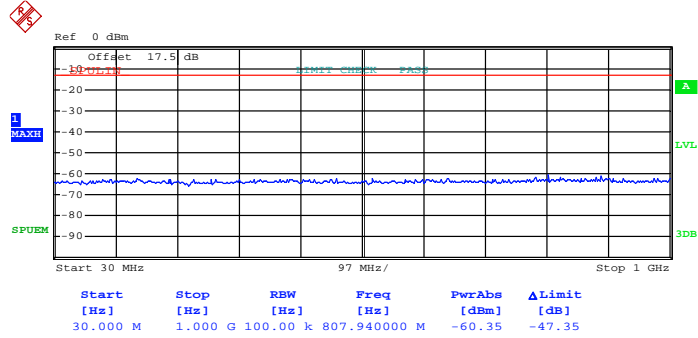


Date: 24.OCT.2013 11:17:48

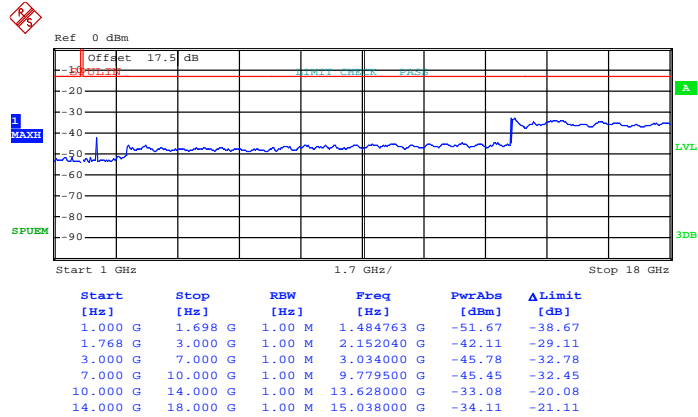


Band :	LTE Band 4	Channel :	CH20375 (High)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 0)



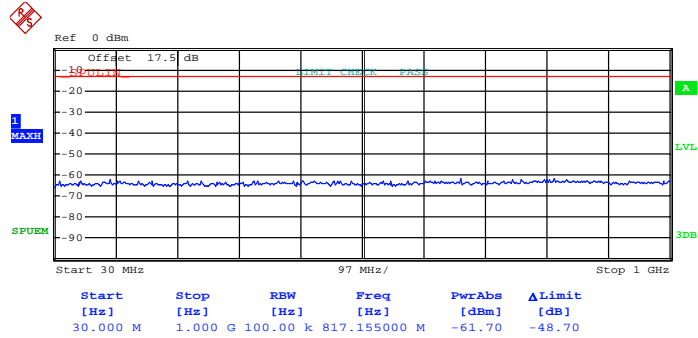
Date: 24.OCT.2013 11:25:32



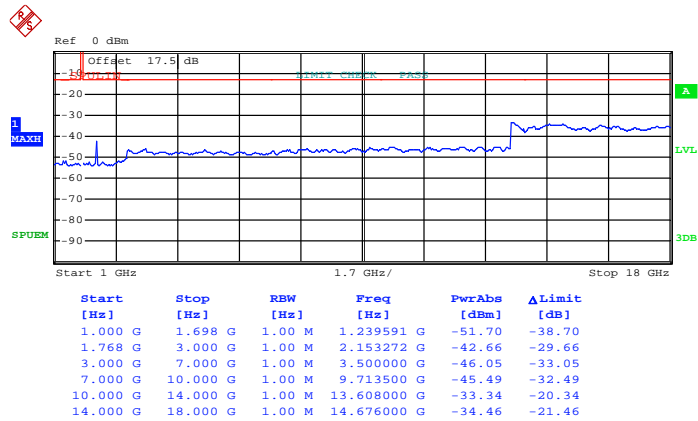
Date: 24.OCT.2013 11:24:57



16QAM (RB Size 1, RB Offset 12)



Date: 24.OCT.2013 11:26:07

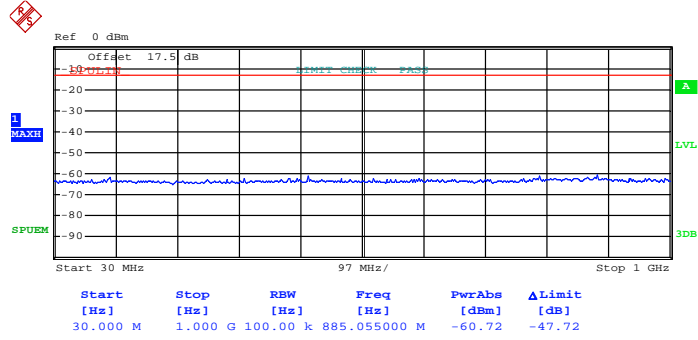


Date: 24.OCT.2013 11:26:49

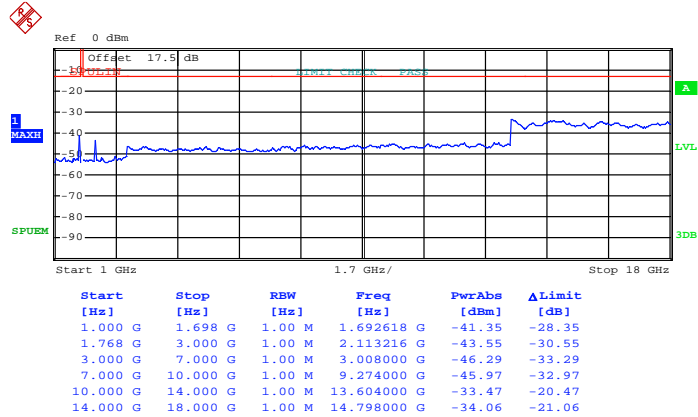


Band :	LTE Band 4	Channel :	CH20000 (Low)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 0)



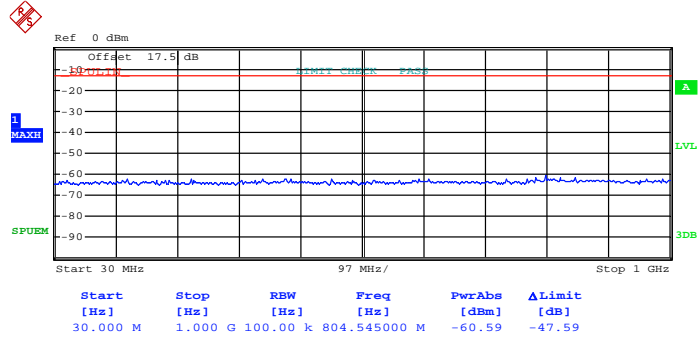
Date: 24.OCT.2013 14:08:44



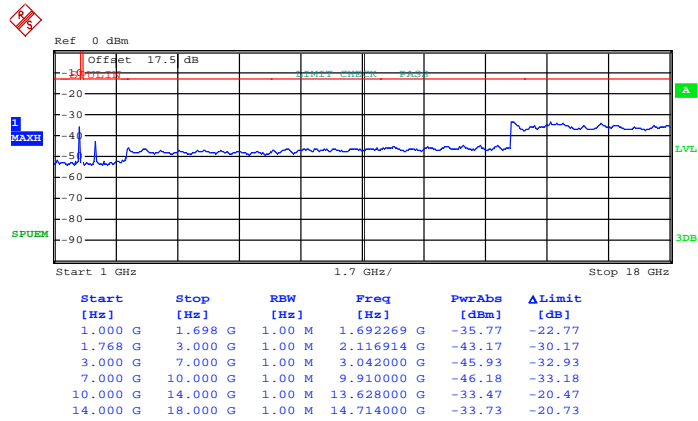
Date: 24.OCT.2013 14:07:00



16QAM (RB Size 1, RB Offset 0)



Date: 24.OCT.2013 14:08:09

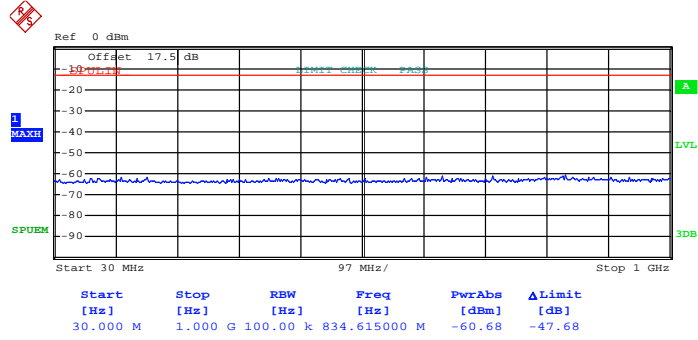


Date: 24.OCT.2013 14:07:35

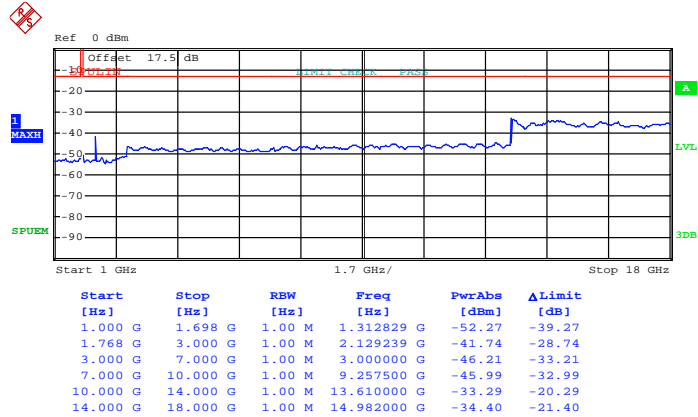


<b>Band :</b>	LTE Band 4	<b>Channel :</b>	CH20175 (Middle)
<b>Band Width :</b>	10MHz		

QPSK (RB Size 1, RB Offset 49)



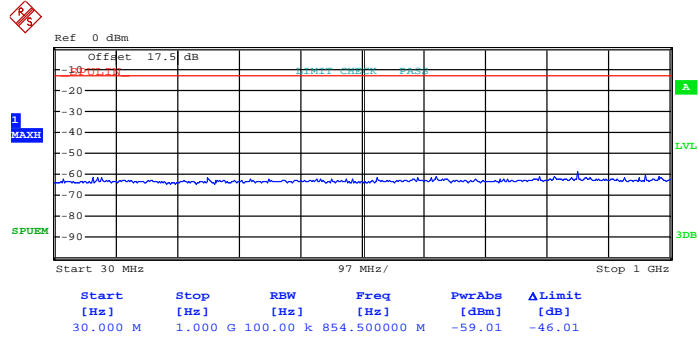
Date: 24.OCT.2013 14:05:02



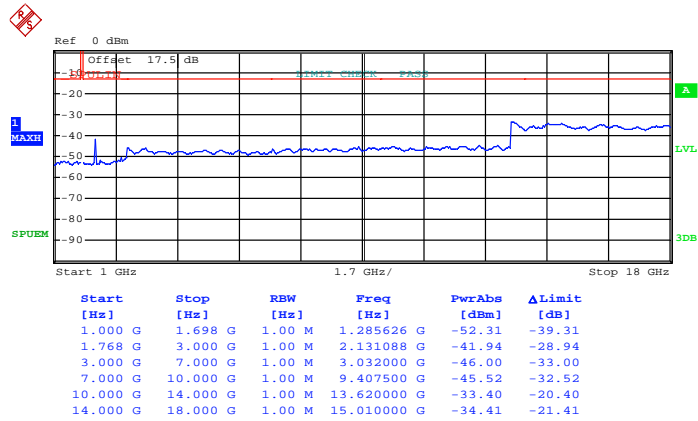
Date: 24.OCT.2013 14:05:44



16QAM (RB Size 1, RB Offset 0)



Date: 24.OCT.2013 14:03:53



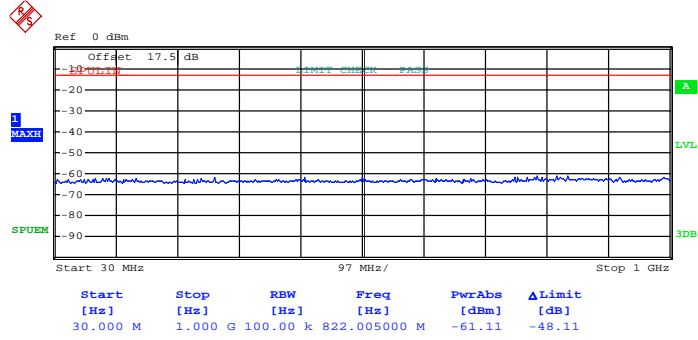
Date: 24.OCT.2013 14:02:33



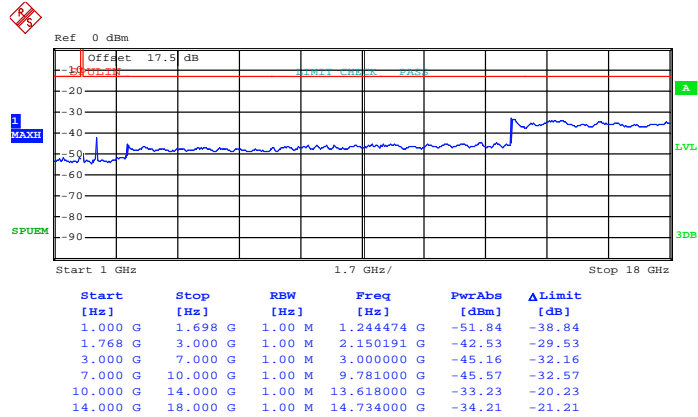


Band :	LTE Band 4	Channel :	CH20350 (High)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 0)



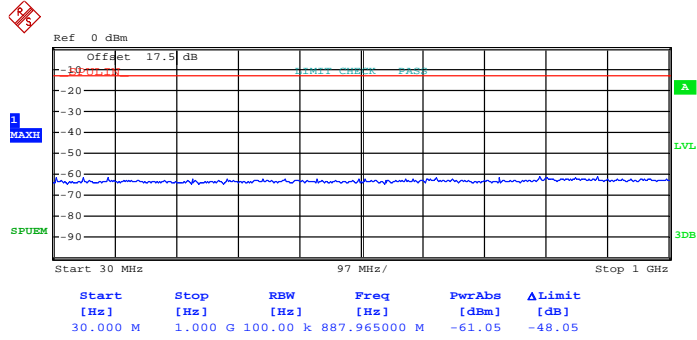
Date: 24.OCT.2013 14:10:12



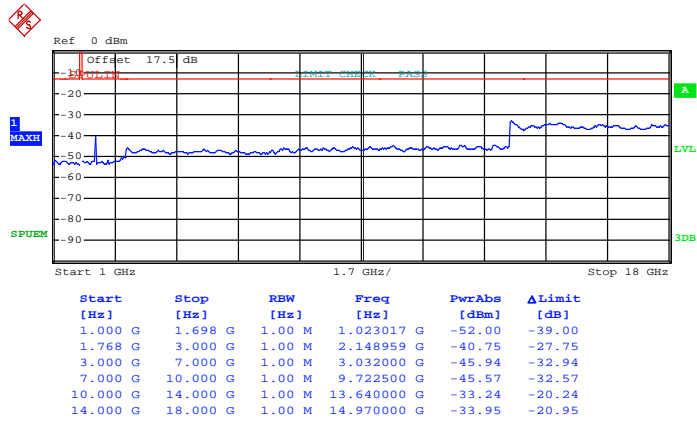
Date: 24.OCT.2013 14:10:59



16QAM (RB Size 1, RB Offset 24)



Date: 24.OCT.2013 14:13:33

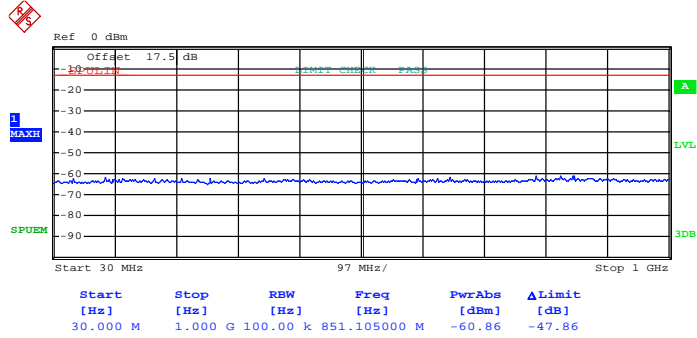


Date: 24.OCT.2013 14:12:25

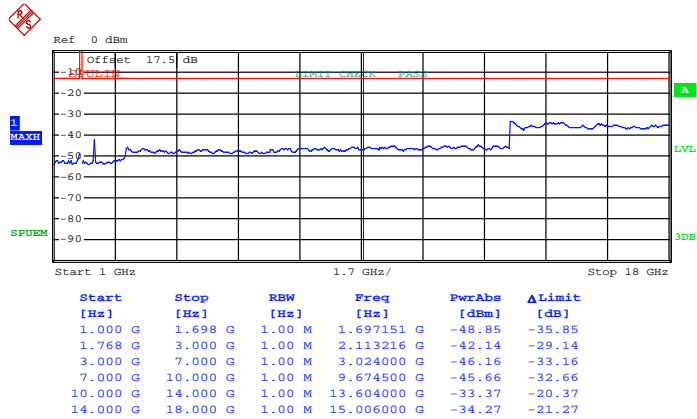


Band :	LTE Band 4	Channel :	CH20025 (Low)
Band Width :	15MHz		

QPSK (RB Size 1, RB Offset 0)



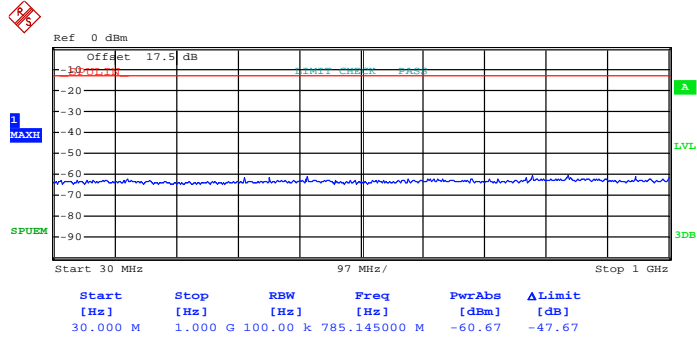
Date: 24.OCT.2013 14:21:10



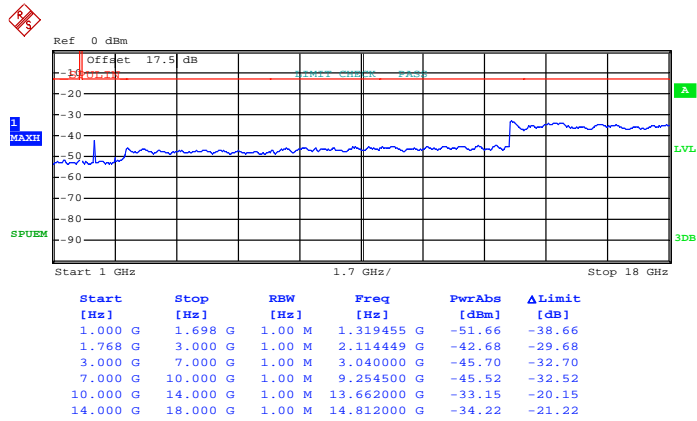
Date: 24.OCT.2013 14:22:03



16QAM (RB Size 1, RB Offset 37)



Date: 24.OCT.2013 14:24:42

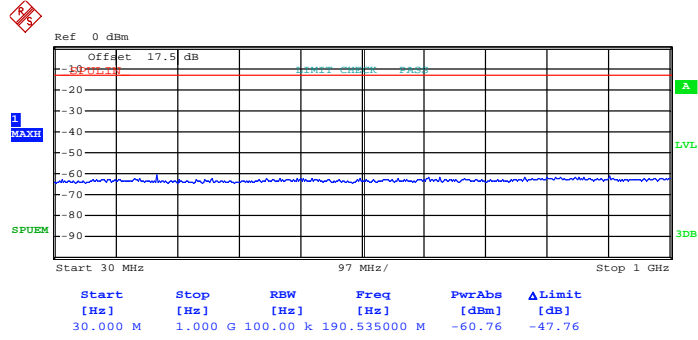


Date: 24.OCT.2013 14:23:53

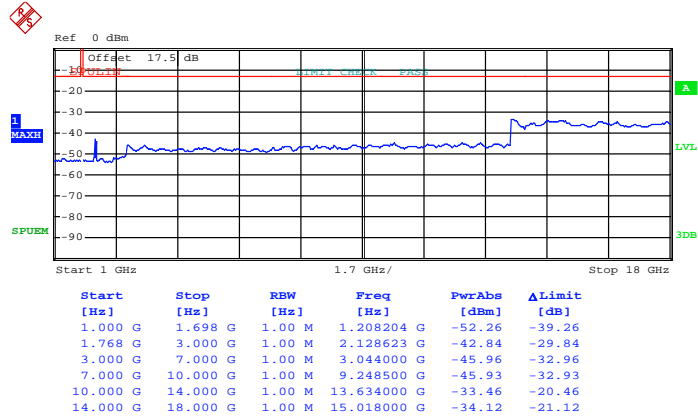


Band :	LTE Band 4	Channel :	CH20175 (Middle)
Band Width :	15MHz		

QPSK (RB Size 1, RB Offset 74)



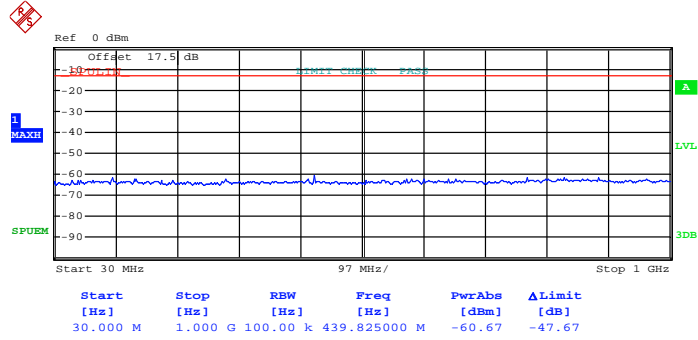
Date: 24.OCT.2013 14:19:33



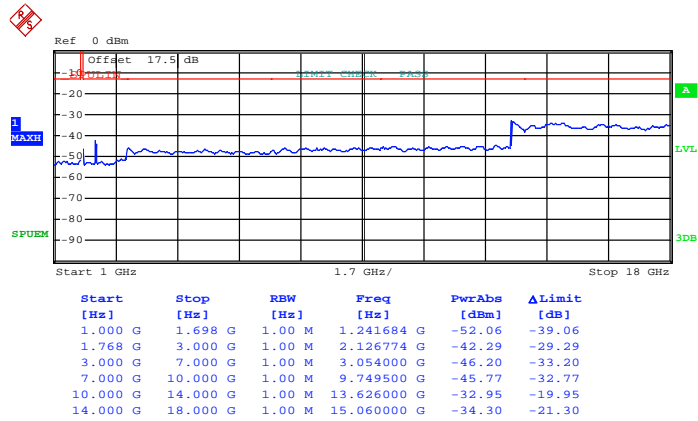
Date: 24.OCT.2013 14:18:26



16QAM (RB Size 1, RB Offset 0)



Date: 24.OCT.2013 14:16:04

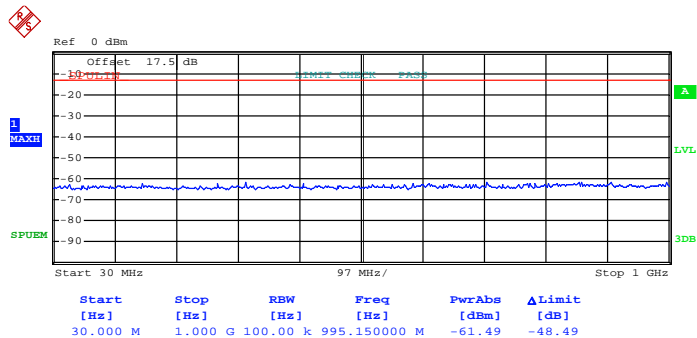


Date: 24.OCT.2013 14:17:36

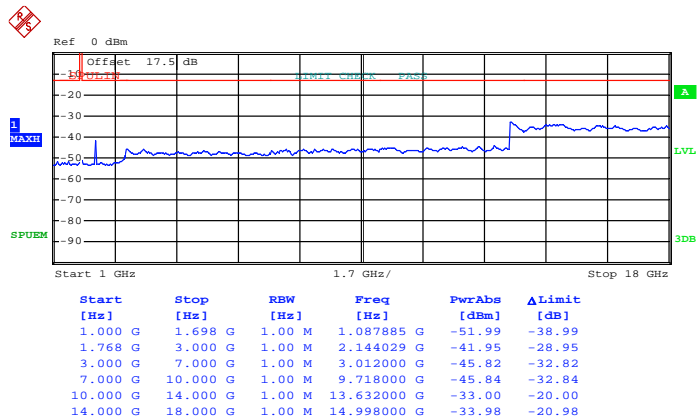


Band :	LTE Band 4	Channel :	CH20325 (High)
Band Width :	15MHz		

QPSK (RB Size 1, RB Offset 37)



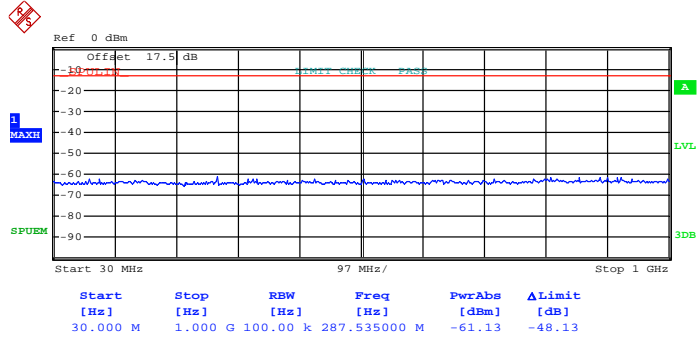
Date: 24.OCT.2013 14:28:39



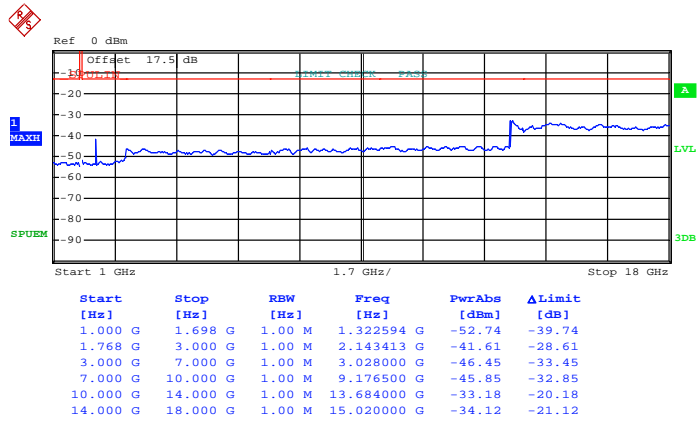
Date: 24.OCT.2013 14:31:08



16QAM (RB Size 1, RB Offset 37)



Date: 24.OCT.2013 14:25:56



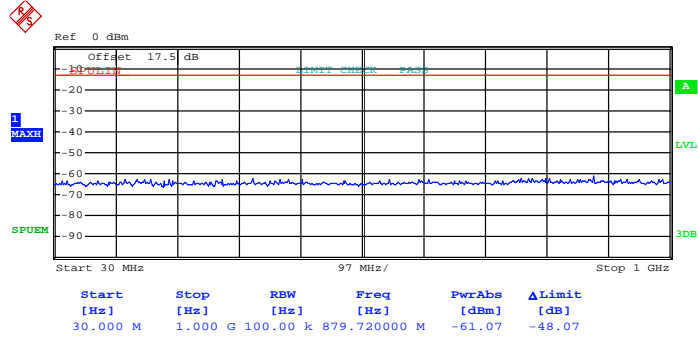
Date: 24.OCT.2013 14:31:36



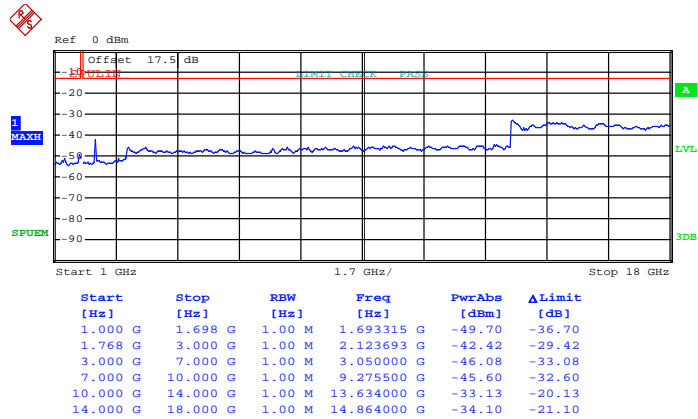


Band :	LTE Band 4	Channel :	CH20050 (Low)
Band Width :	20MHz		

QPSK (RB Size 1, RB Offset 0)



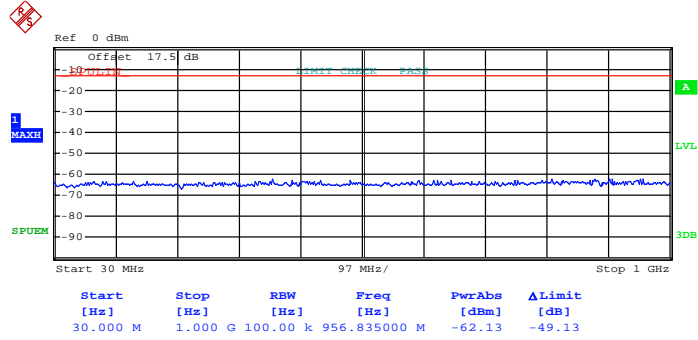
Date: 24.OCT.2013 14:39:06



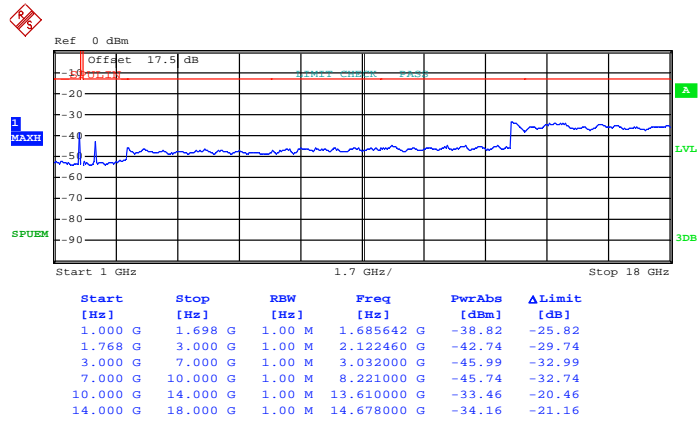
Date: 24.OCT.2013 14:39:48



16QAM (RB Size 1, RB Offset 0)



Date: 24.OCT.2013 14:38:48

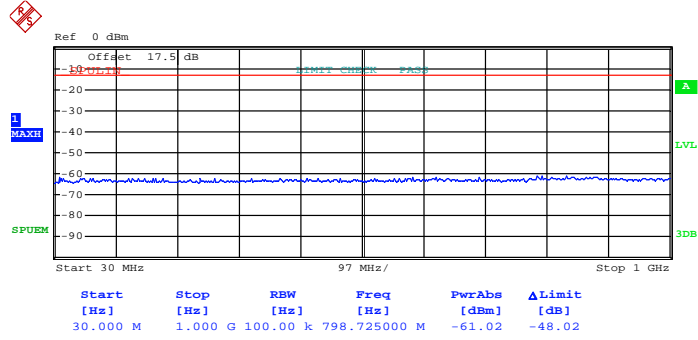


Date: 24.OCT.2013 14:40:28

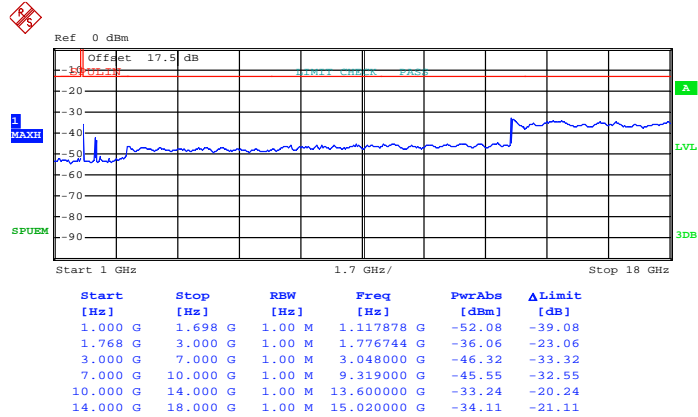


Band :	LTE Band 4	Channel :	CH20175 (Middle)
Band Width :	20MHz		

QPSK (RB Size 1, RB Offset 99)



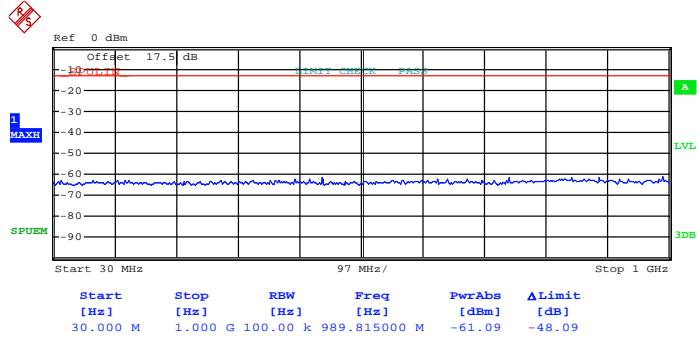
Date: 24.OCT.2013 14:37:27



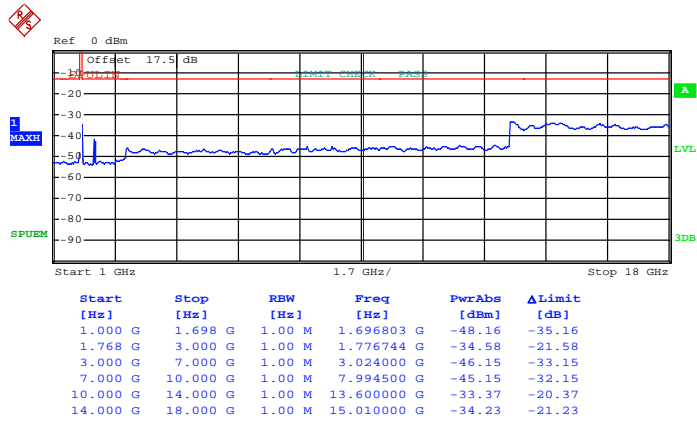
Date: 24.OCT.2013 14:35:51



16QAM (RB Size 1, RB Offset 99)



Date: 24.OCT.2013 14:37:52

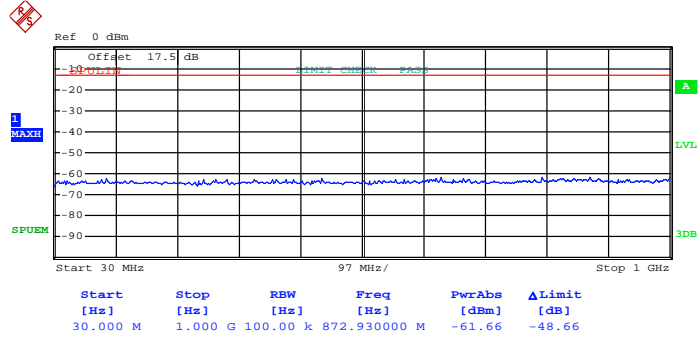


Date: 24.OCT.2013 14:34:59

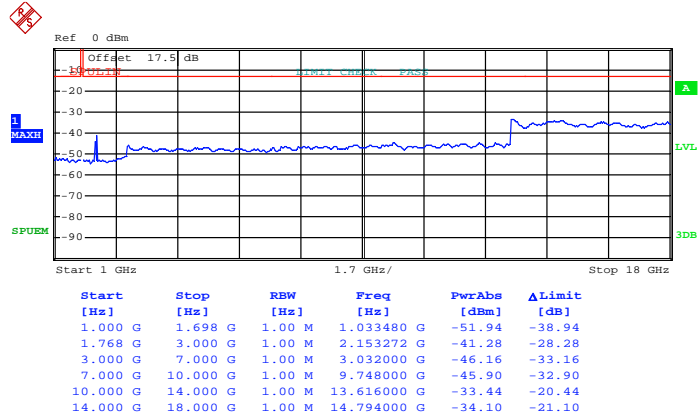


Band :	LTE Band 4	Channel :	CH20300 (High)
Band Width :	20MHz		

QPSK (RB Size 1, RB Offset 49)



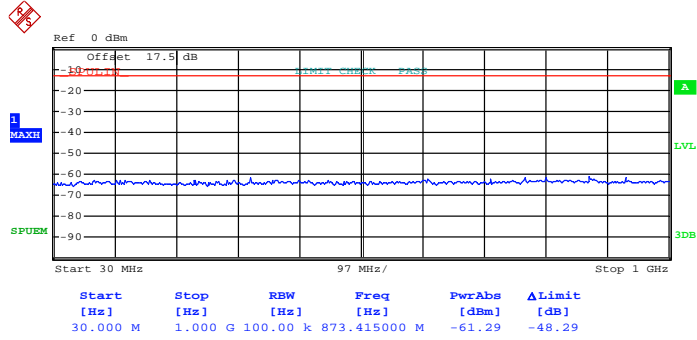
Date: 24.OCT.2013 14:42:59



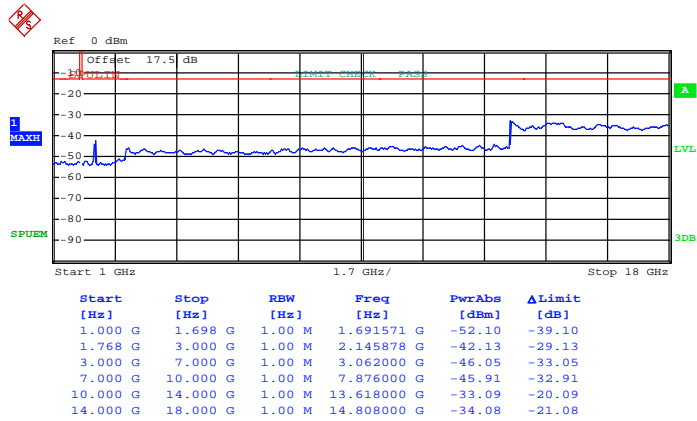
Date: 24.OCT.2013 14:42:26



16QAM (RB Size 1, RB Offset 49)



Date: 24.OCT.2013 14:43:24

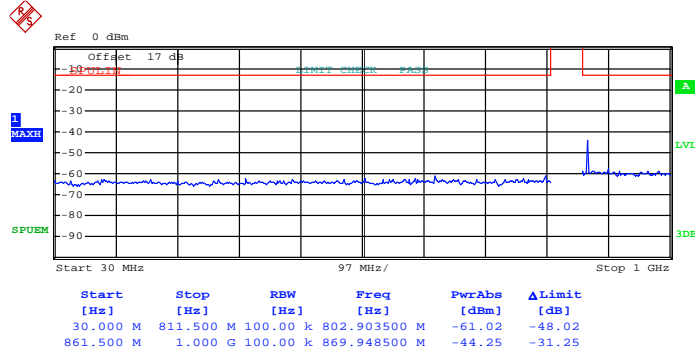


Date: 24.OCT.2013 14:41:52

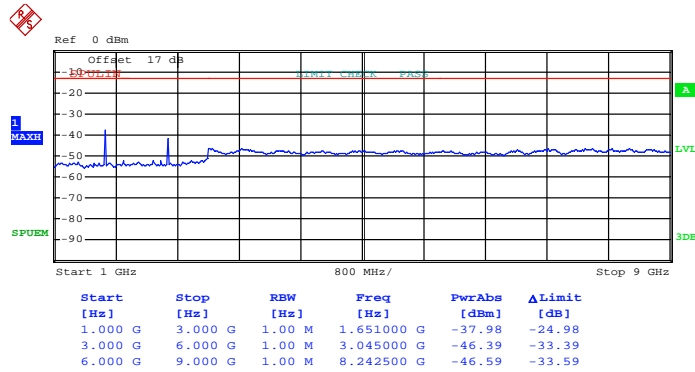


Band :	LTE Band 5	Channel :	CH20407 (Low)
Band Width :	1.4MHz		

QPSK (RB Size 1, RB Offset 5)



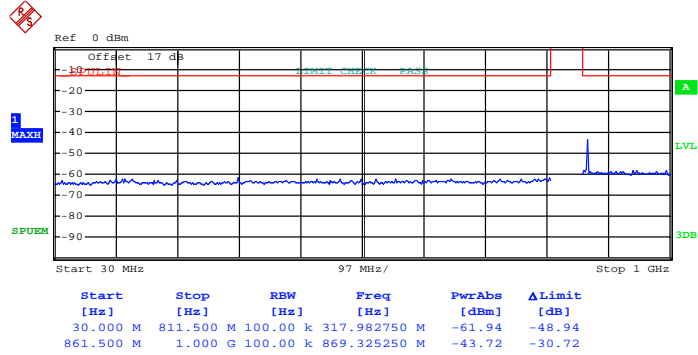
Date: 24.OCT.2013 16:48:35



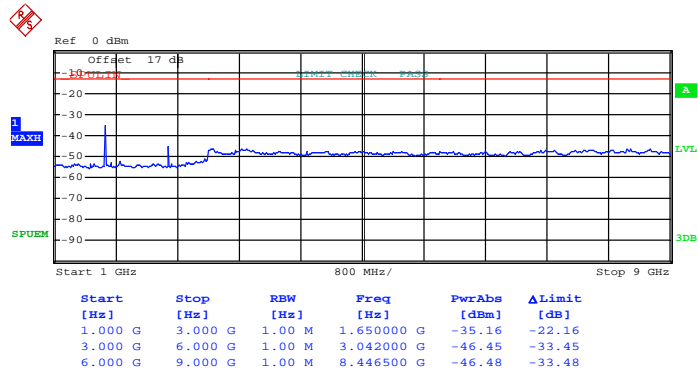
Date: 24.OCT.2013 16:47:54



16QAM(RB Size 1, RB Offset 5)



Date: 24.OCT.2013 16:49:13



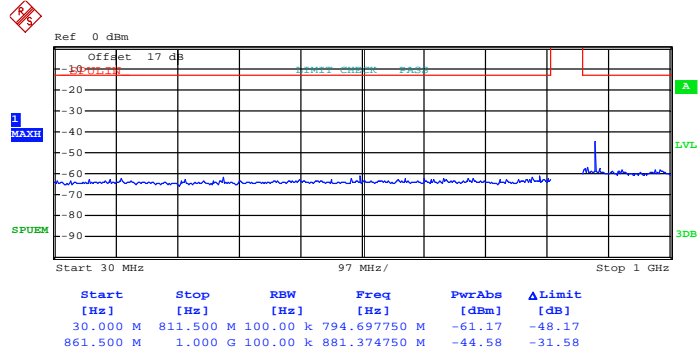
Date: 24.OCT.2013 16:47:28



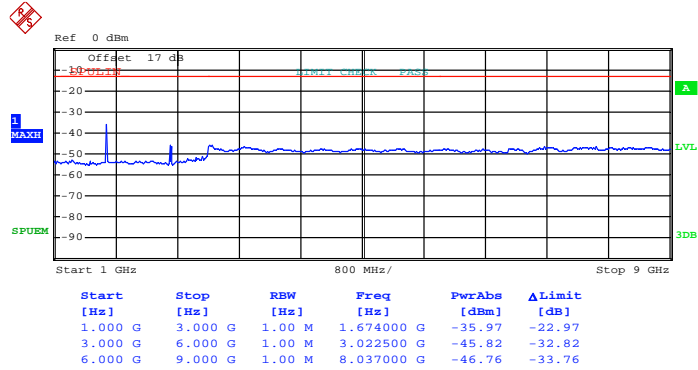


Band :	LTE Band 5	Channel :	CH20525 (Middle)
Band Width :	1.4MHz		

QPSK (RB Size 1, RB Offset 5)



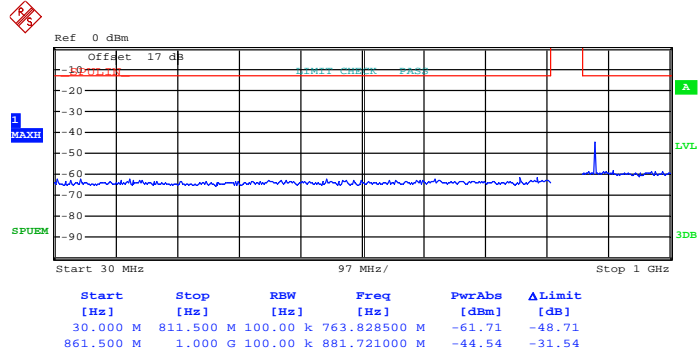
Date: 24.OCT.2013 16:44:36



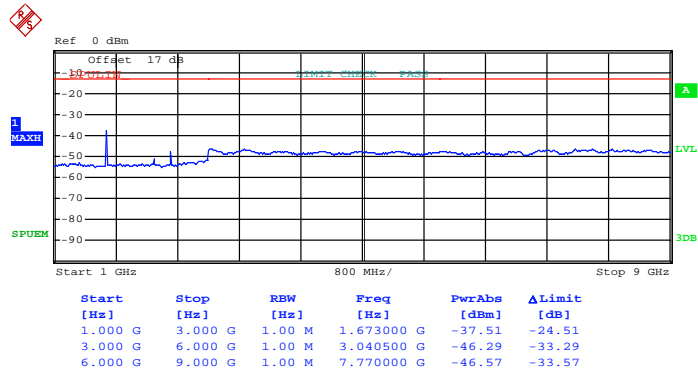
Date: 24.OCT.2013 16:43:58



16QAM (RB Size 3, RB Offset 1)



Date: 24.OCT.2013 16:45:20

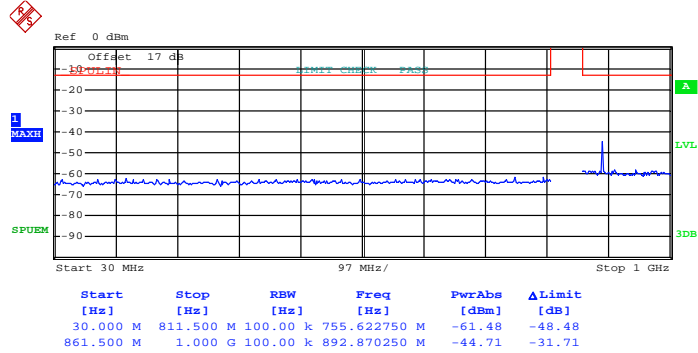


Date: 24.OCT.2013 16:45:50

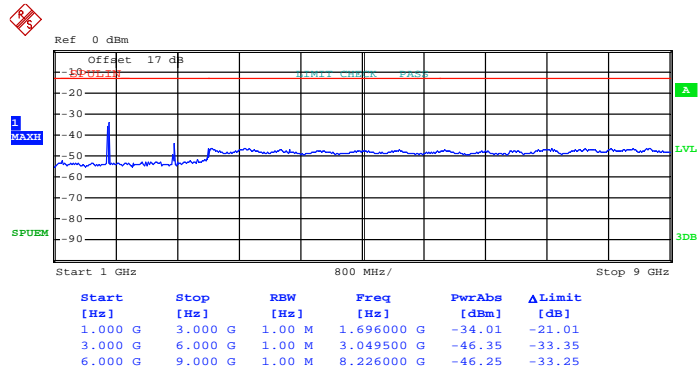


Band :	LTE Band 5	Channel :	CH20643 (High)
Band Width :	1.4MHz		

QPSK (RB Size 1, RB Offset 0)



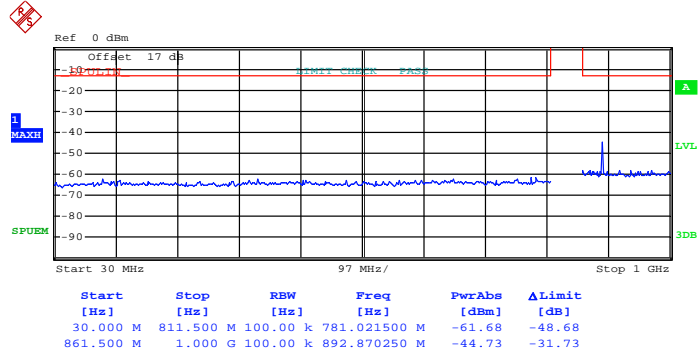
Date: 24.OCT.2013 16:52:08



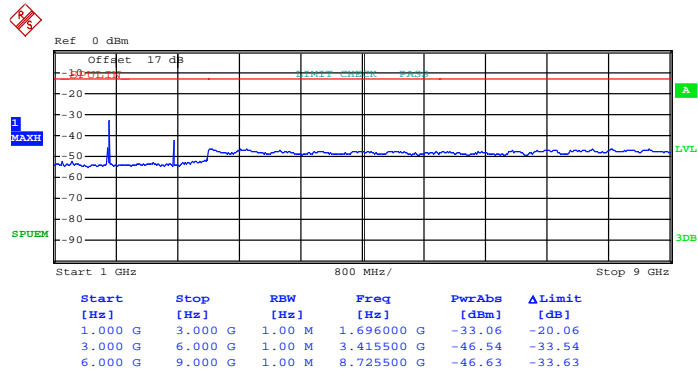
Date: 24.OCT.2013 16:51:34



16QAM (RB Size 1, RB Offset 2)



Date: 24.OCT.2013 16:50:04

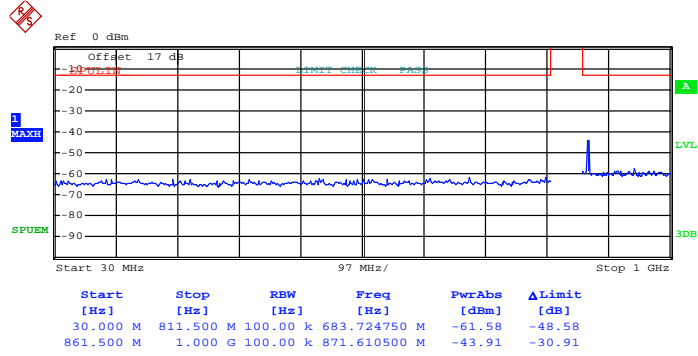


Date: 24.OCT.2013 16:50:53

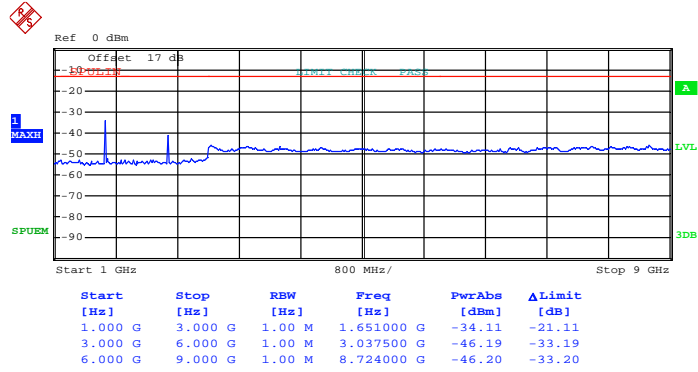


Band :	LTE Band 5	Channel :	CH20415 (Low)
Band Width :	3MHz		

QPSK (RB Size 1, RB Offset 7)



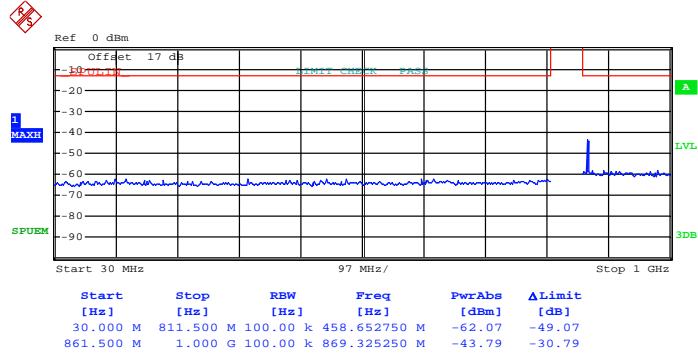
Date: 24.OCT.2013 19:25:20



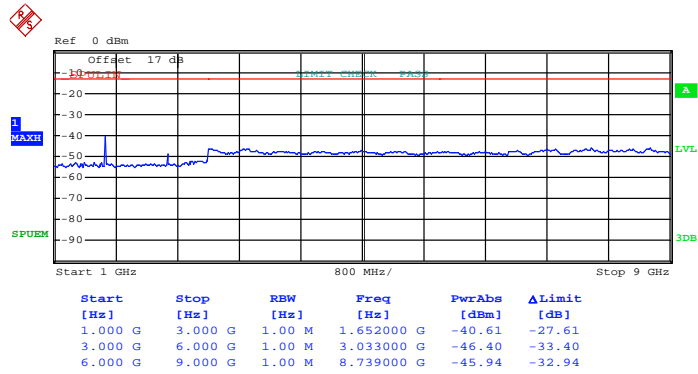
Date: 24.OCT.2013 19:26:22



16QAM (RB Size 8, RB Offset 4)



Date: 24.OCT.2013 19:29:13

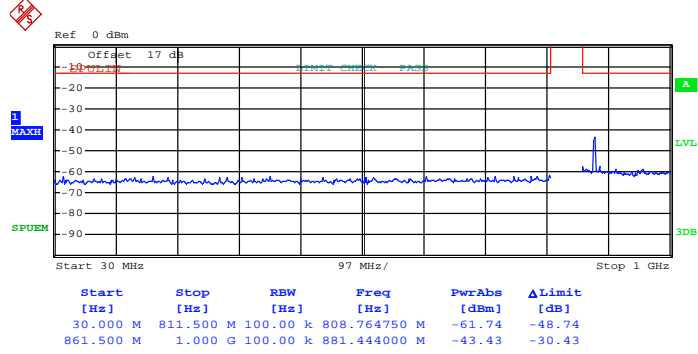


Date: 24.OCT.2013 19:28:16

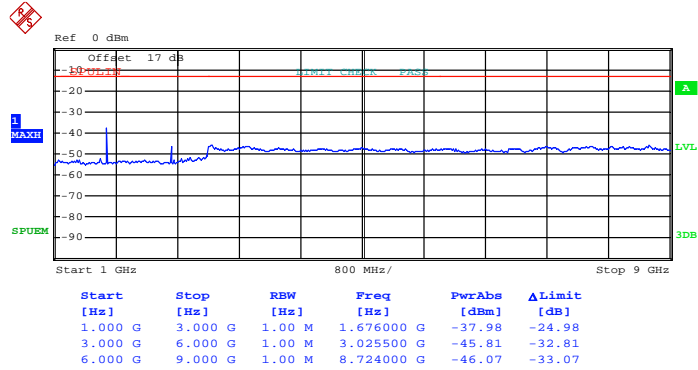


Band :	LTE Band 5	Channel :	CH20525 (Middle)
Band Width :	3MHz		

QPSK (RB Size 1, RB Offset 14)



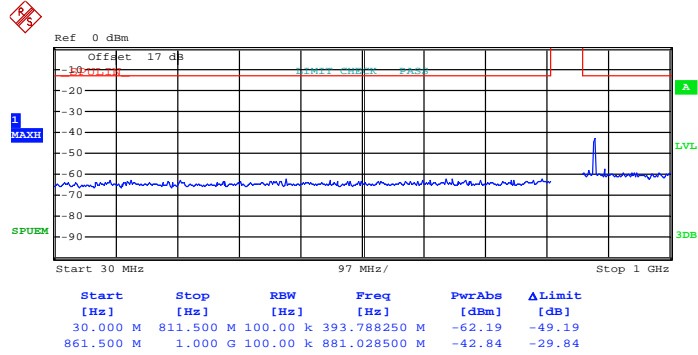
Date: 24.OCT.2013 19:14:59



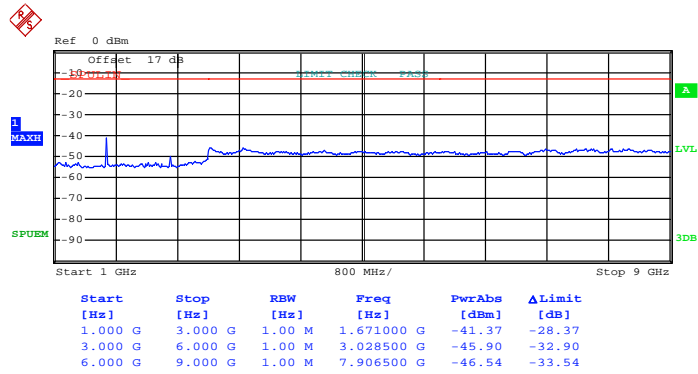
Date: 24.OCT.2013 19:15:54



16QAM (RB Size 1, RB Offset 0)



Date: 24.OCT.2013 19:20:54



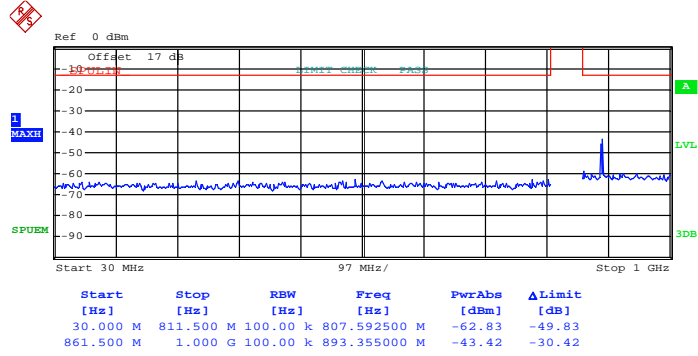
Date: 24.OCT.2013 19:17:03



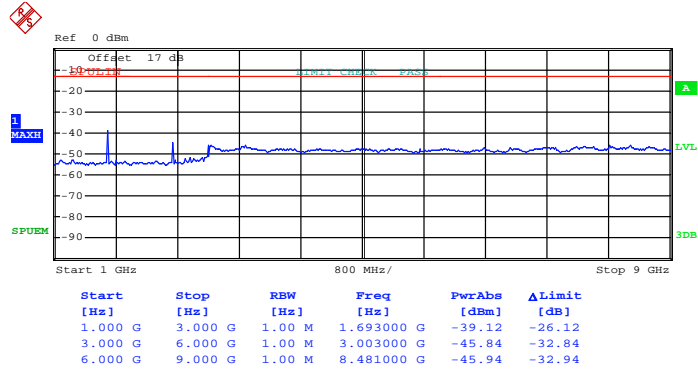


Band :	LTE Band 5	Channel :	CH20635 (High)
Band Width :	3MHz		

QPSK (RB Size 1, RB Offset 0)



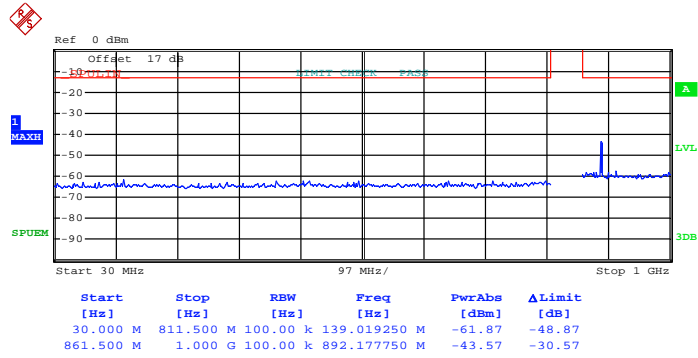
Date: 24.OCT.2013 19:08:02



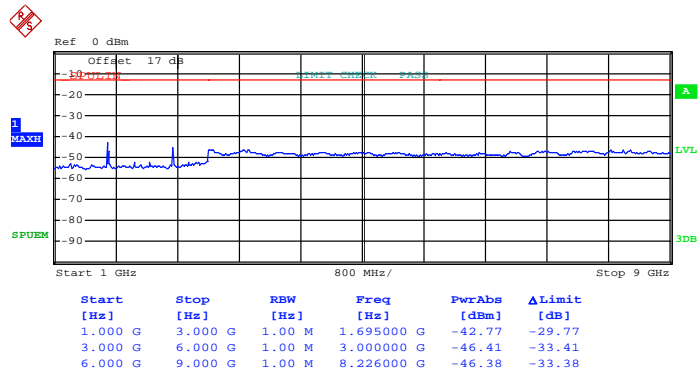
Date: 24.OCT.2013 19:09:51



16QAM (RB Size 1, RB Offset 7)



Date: 24.OCT.2013 19:12:00

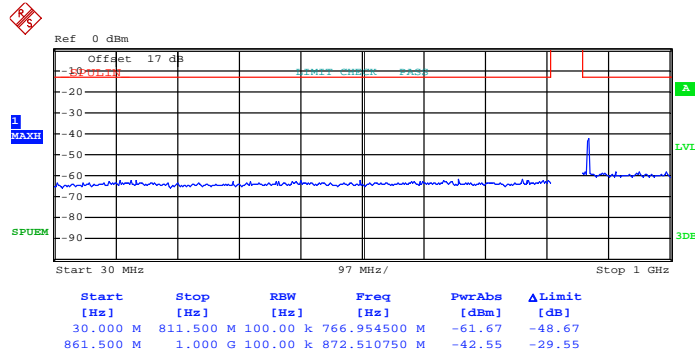


Date: 24.OCT.2013 19:11:16

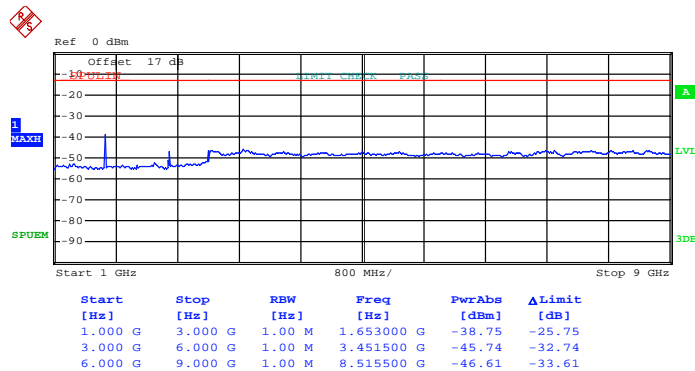


Band :	LTE Band 5	Channel :	CH20425 (Low)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 12)



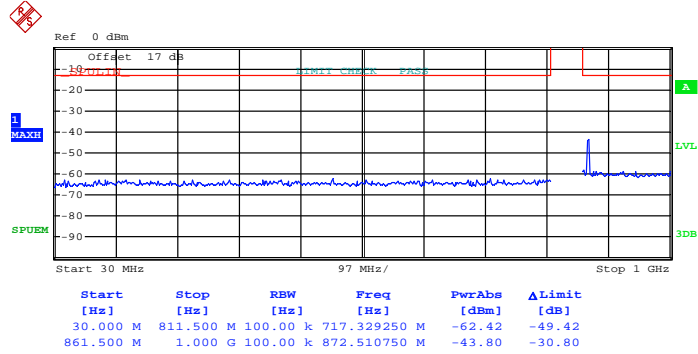
Date: 24.OCT.2013 19:33:35



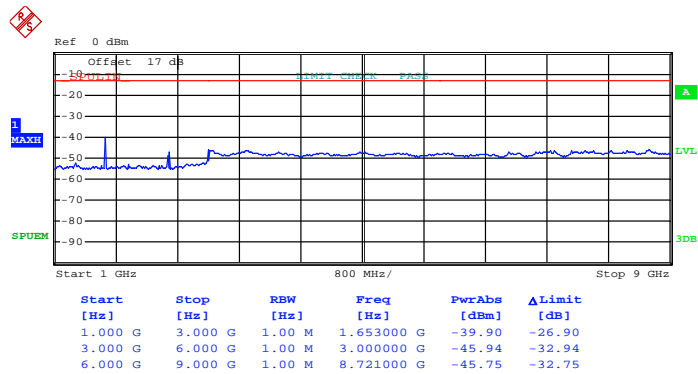
Date: 24.OCT.2013 19:34:58



16QAM (RB Size 1, RB Offset 12)



Date: 24.OCT.2013 19:36:33

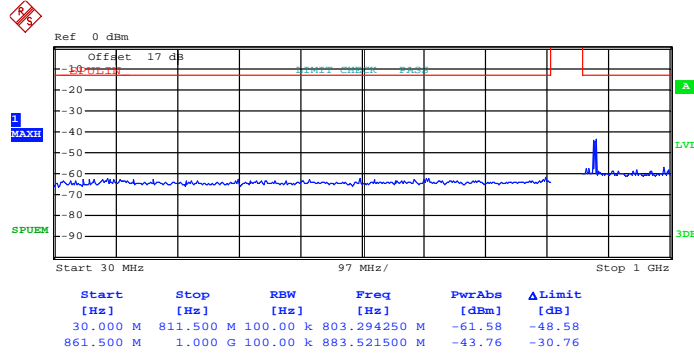


Date: 24.OCT.2013 19:35:43

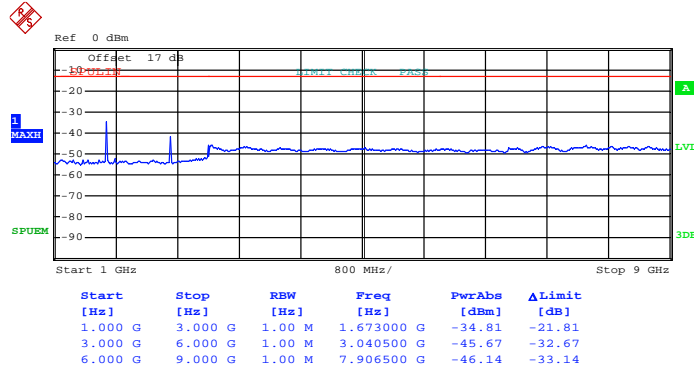


Band :	LTE Band 5	Channel :	CH20525 (Middle)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 12)



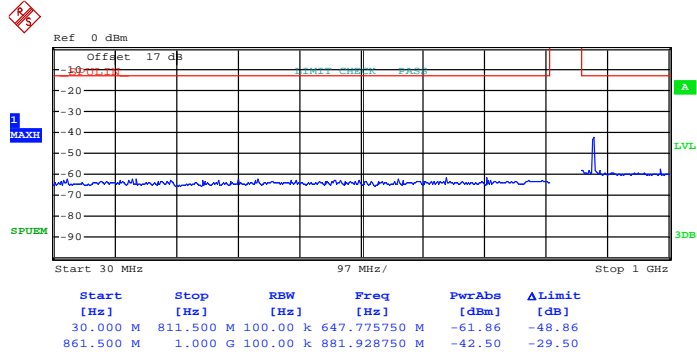
Date: 24.OCT.2013 19:39:39



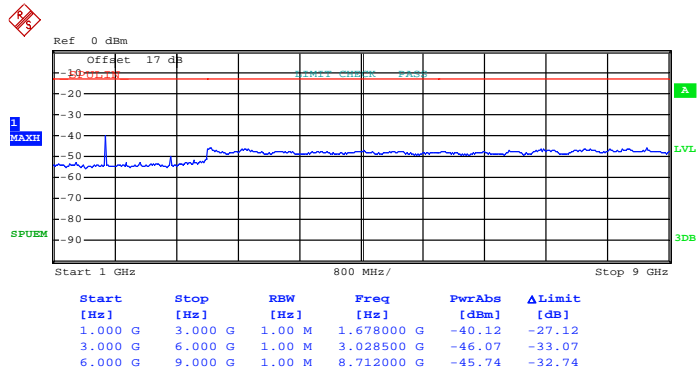
Date: 24.OCT.2013 19:40:35



16QAM (RB Size 1, RB Offset 24)



Date: 24.OCT.2013 19:43:56

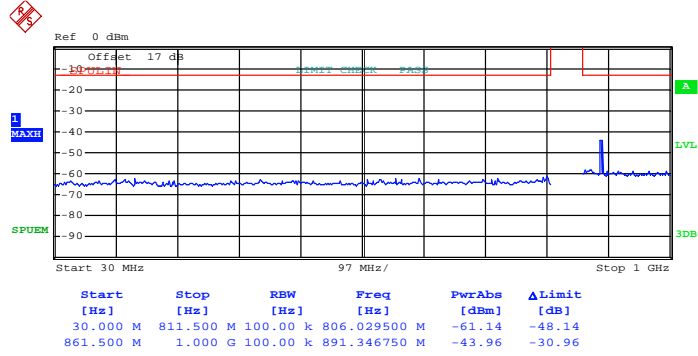


Date: 24.OCT.2013 19:42:11

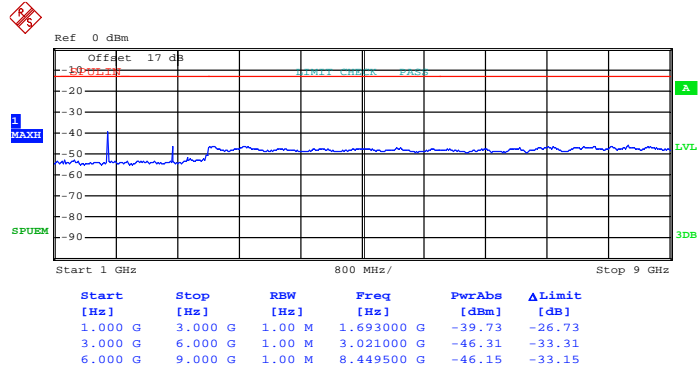


Band :	LTE Band 5	Channel :	CH20625 (High)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 12)



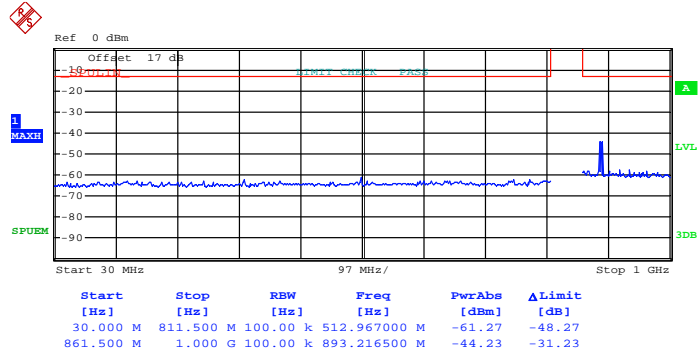
Date: 24.OCT.2013 19:47:33



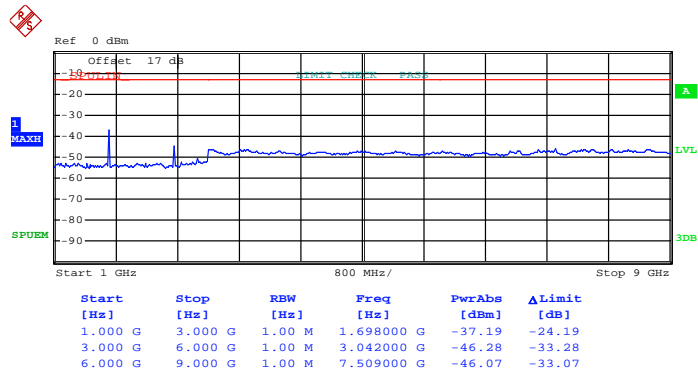
Date: 24.OCT.2013 19:48:26



16QAM (RB Size 1, RB Offset 24)



Date: 24.OCT.2013 19:52:50



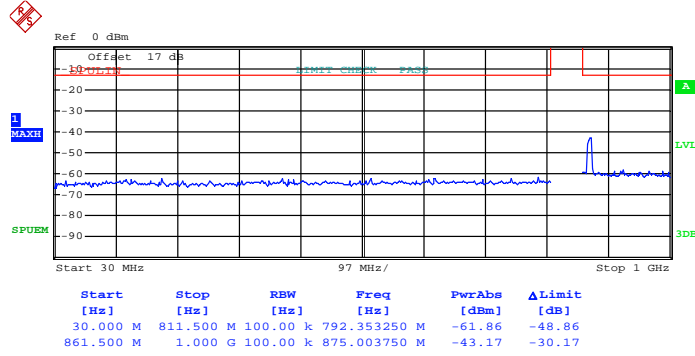
Date: 24.OCT.2013 19:49:18



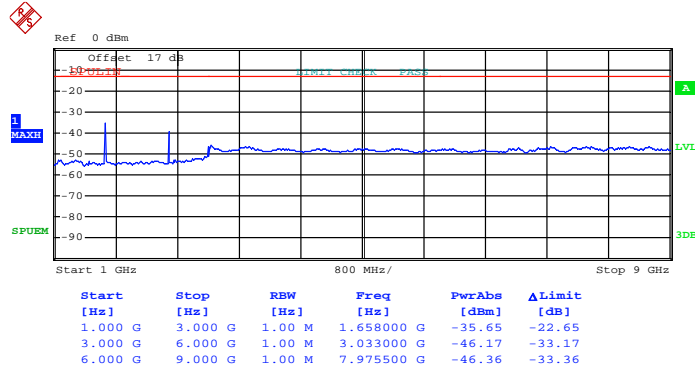


Band :	LTE Band 5	Channel :	CH20450 (Low)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 24)



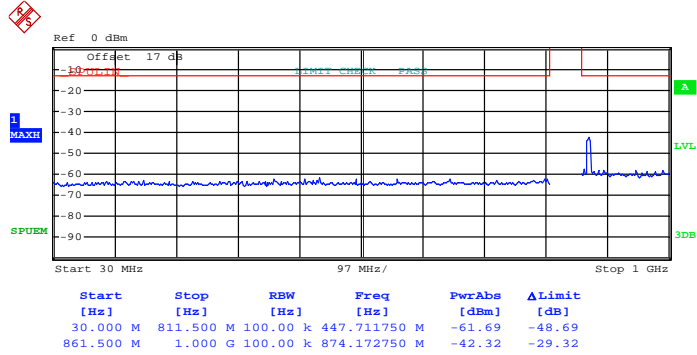
Date: 24.OCT.2013 20:20:25



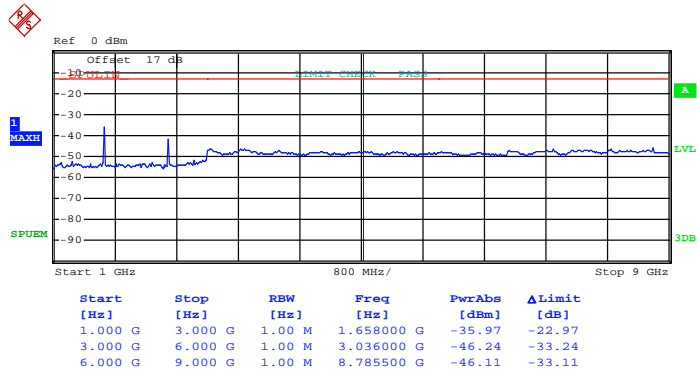
Date: 24.OCT.2013 20:22:23



16QAM (RB Size 1, RB Offset 24)



Date: 24.OCT.2013 20:20:56

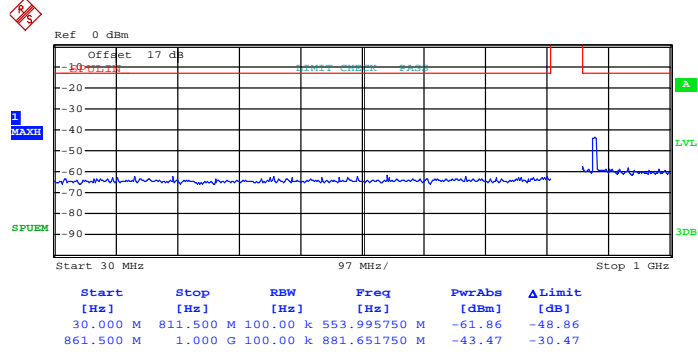


Date: 24.OCT.2013 20:21:43

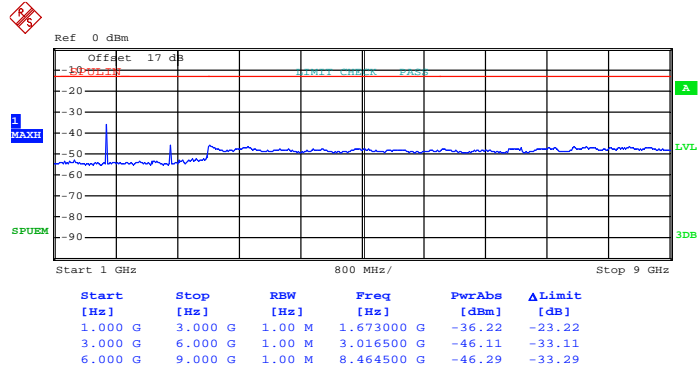


Band :	LTE Band 5	Channel :	CH20525 (Middle)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 24)



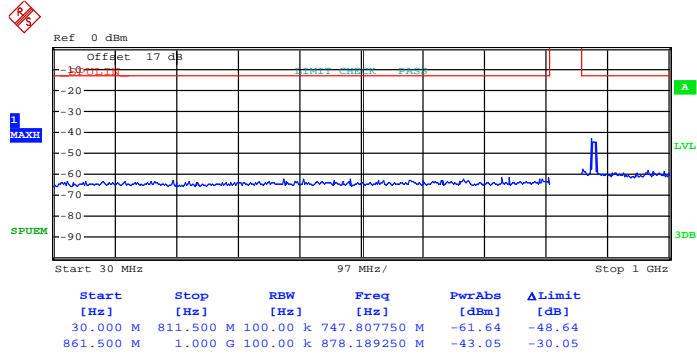
Date: 24.OCT.2013 20:18:14



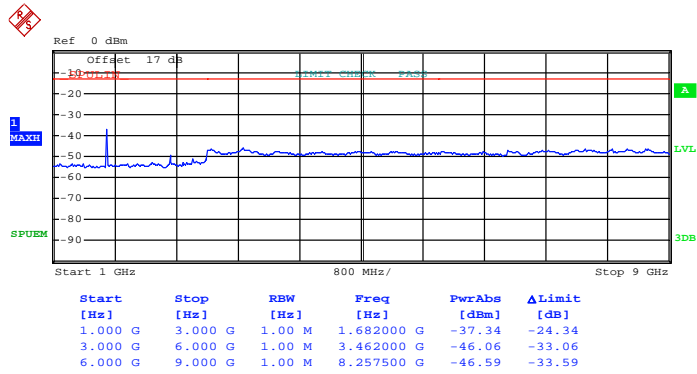
Date: 24.OCT.2013 20:15:45



16QAM (RB Size 1, RB Offset 49)



Date: 24.OCT.2013 20:17:27

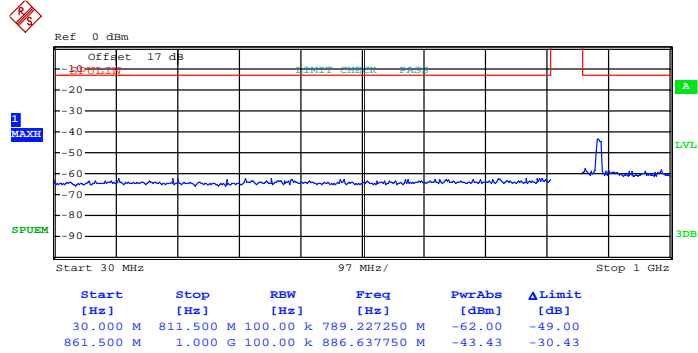


Date: 24.OCT.2013 20:16:46

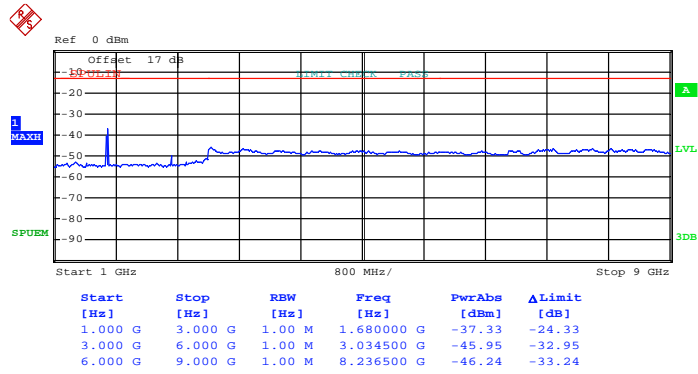


Band :	LTE Band 5	Channel :	CH20600 (High)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 0)



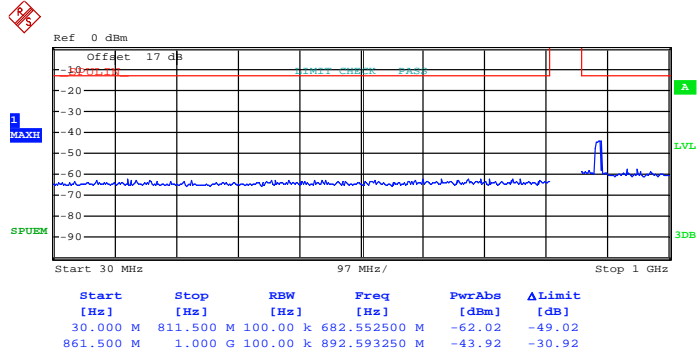
Date: 24.OCT.2013 20:11:04



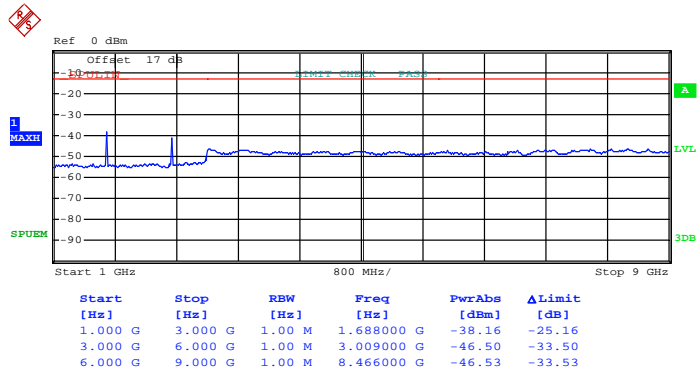
Date: 24.OCT.2013 20:13:42



16QAM (RB Size 1, RB Offset 24)



Date: 24.OCT.2013 20:12:06

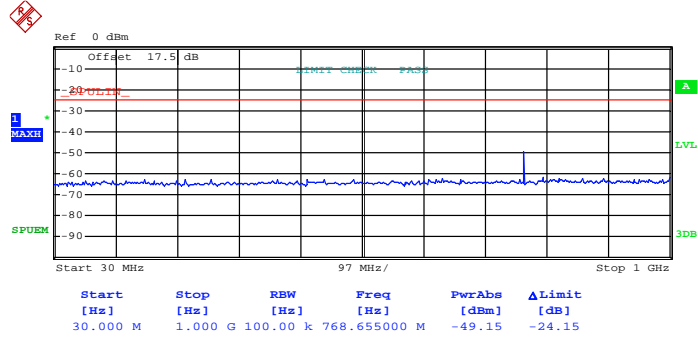


Date: 24.OCT.2013 20:12:50

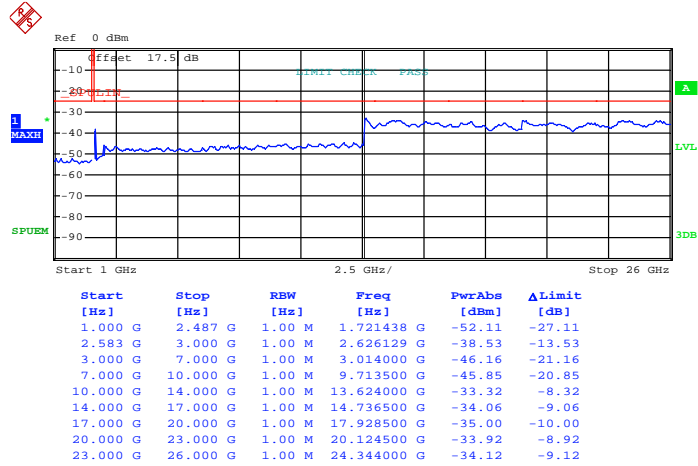


Band :	LTE Band 7	Channel :	CH20815 (Low)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 12)



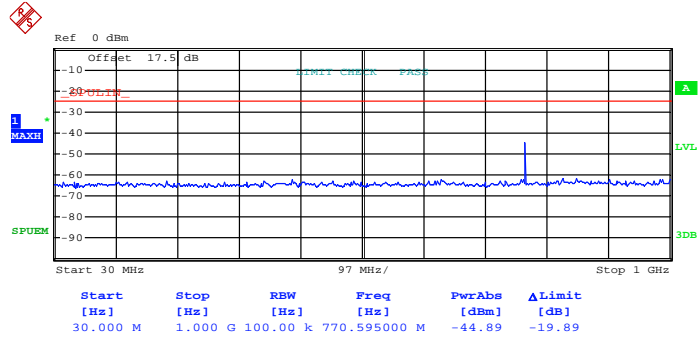
Date: 25.OCT.2013 17:07:20



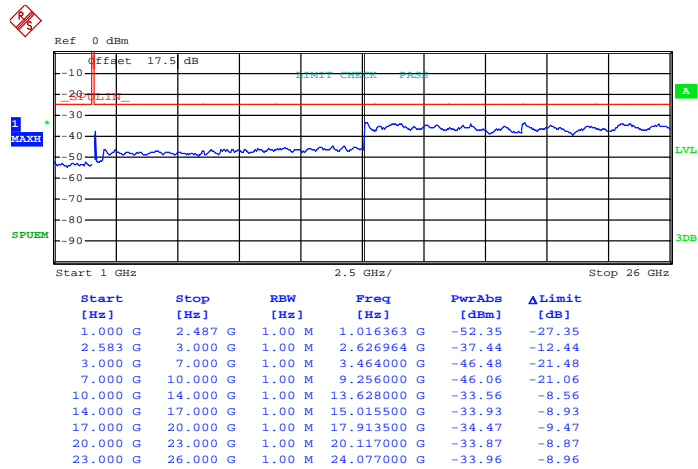
Date: 25.OCT.2013 17:06:55



16QAM (RB Size 1, RB Offset 24)



Date: 25.OCT.2013 17:07:55



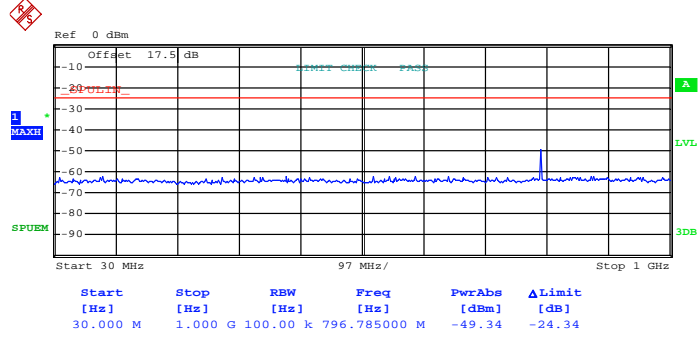
Date: 25.OCT.2013 17:08:32



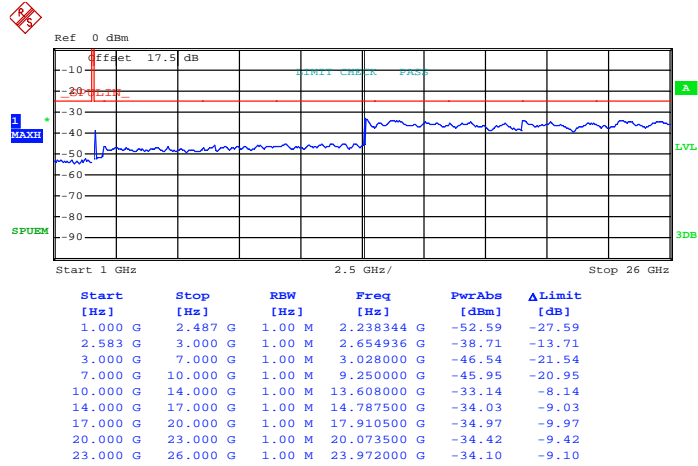


Band :	LTE Band 7	Channel :	CH21095 (Middle)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 12)



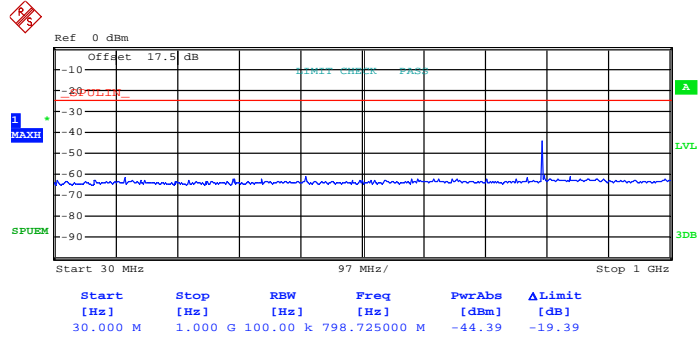
Date: 25.OCT.2013 17:11:26



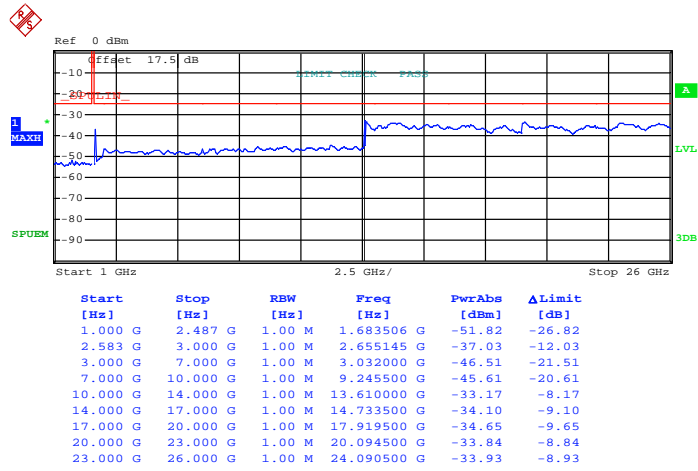
Date: 25.OCT.2013 17:11:51



16QAM (RB Size 1, RB Offset 24)



Date: 25.OCT.2013 17:11:01

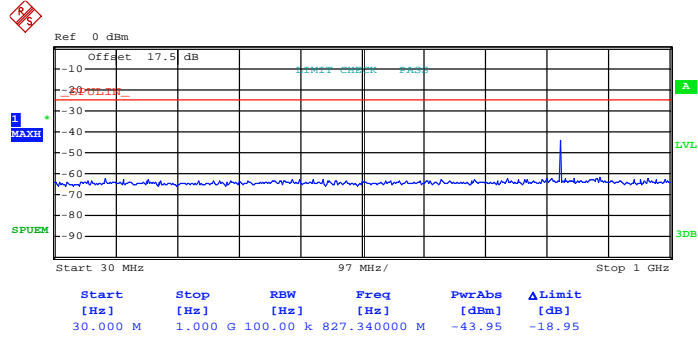


Date: 25.OCT.2013 17:10:25

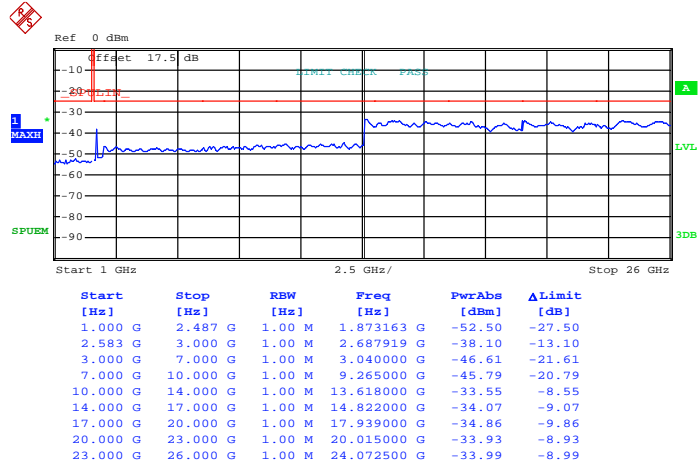


Band :	LTE Band 7	Channel :	CH21425 (High)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 0)



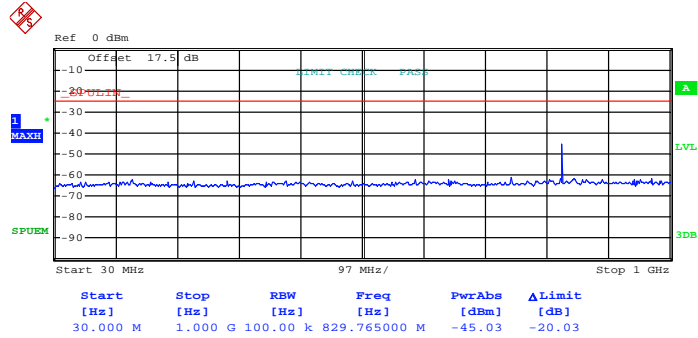
Date: 25.OCT.2013 17:15:06



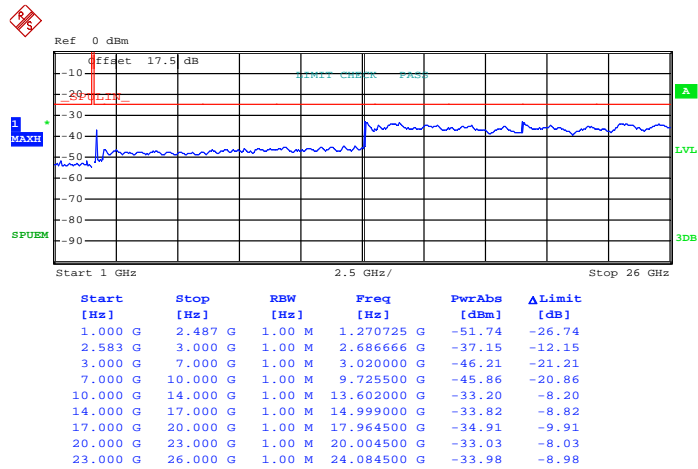
Date: 25.OCT.2013 17:14:41



16QAM (RB Size 1, RB Offset 12)



Date: 25.OCT.2013 17:13:32

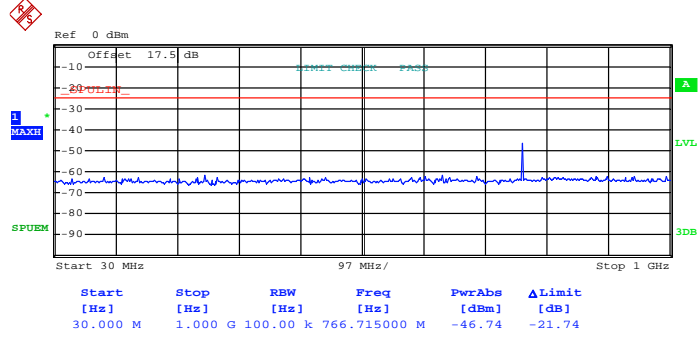


Date: 25.OCT.2013 17:14:10

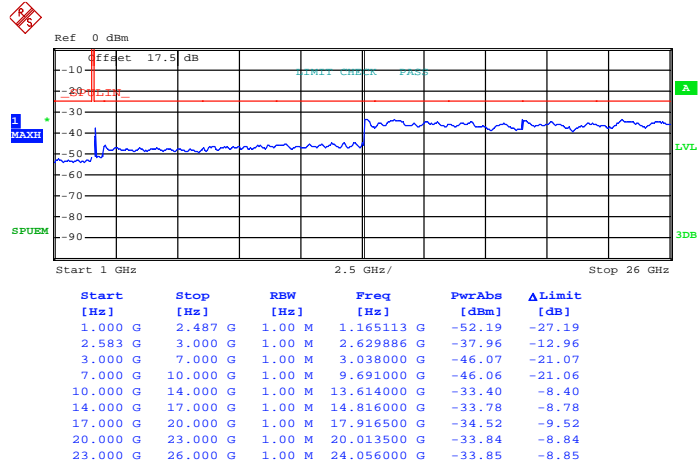


Band :	LTE Band 7	Channel :	CH20840 (Low)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 0)



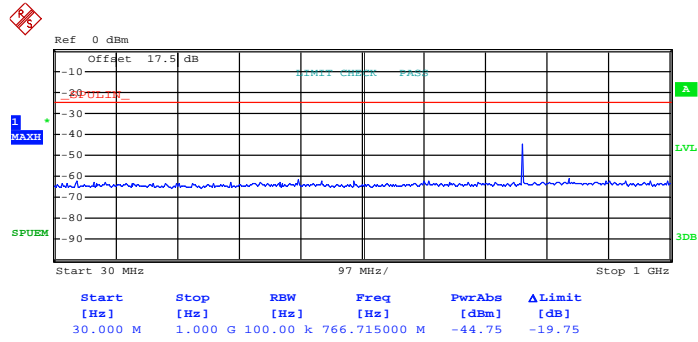
Date: 25.OCT.2013 17:01:17



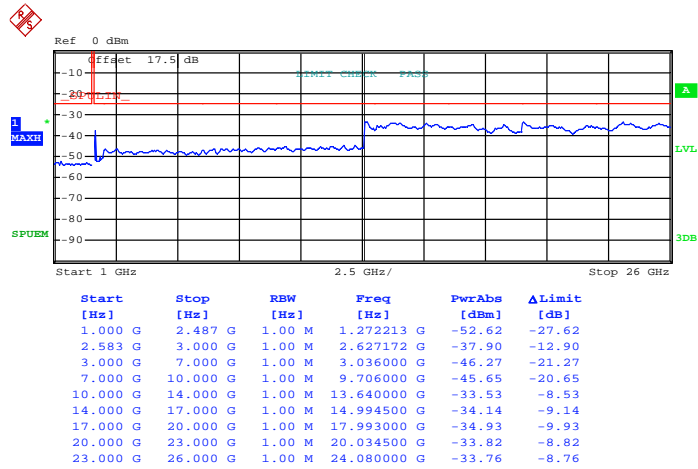
Date: 25.OCT.2013 17:02:56



16QAM (RB Size 1, RB Offset 0)



Date: 25.OCT.2013 17:01:50

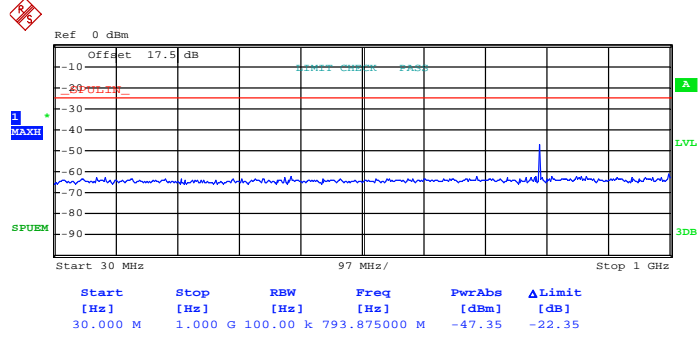


Date: 25.OCT.2013 17:02:22

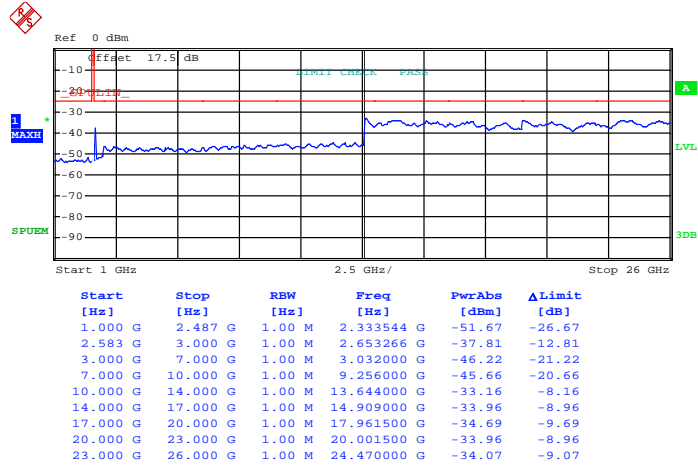


Band :	LTE Band 7	Channel :	CH21070 (Middle)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 24)



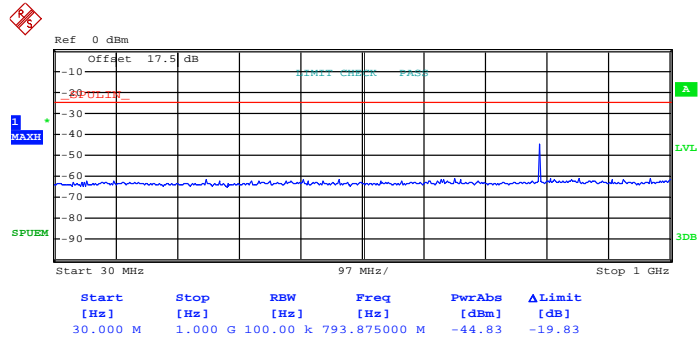
Date: 25.OCT.2013 17:00:16



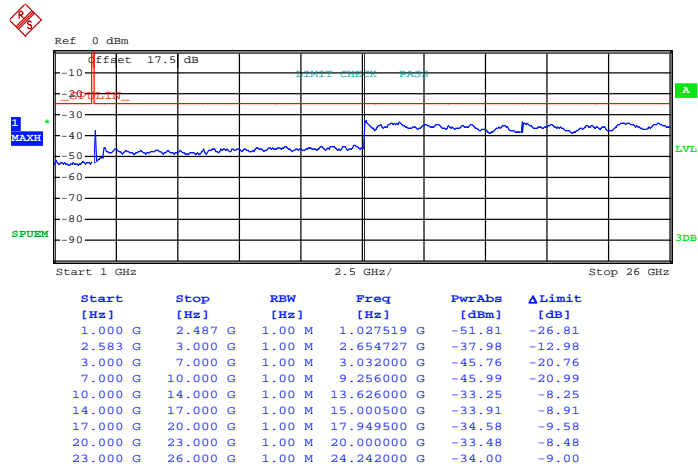
Date: 25.OCT.2013 16:57:58



16QAM (RB Size 1, RB Offset 24)



Date: 25.OCT.2013 16:59:56



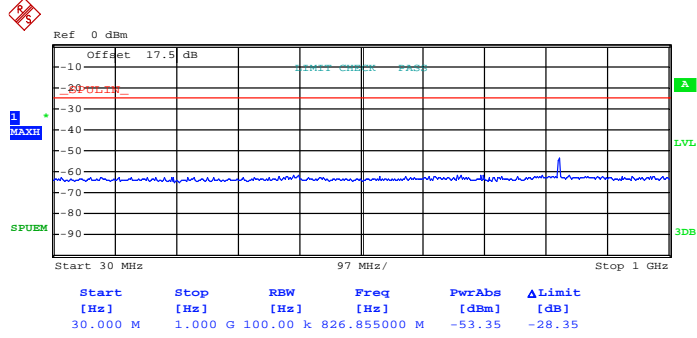
Date: 25.OCT.2013 16:58:41



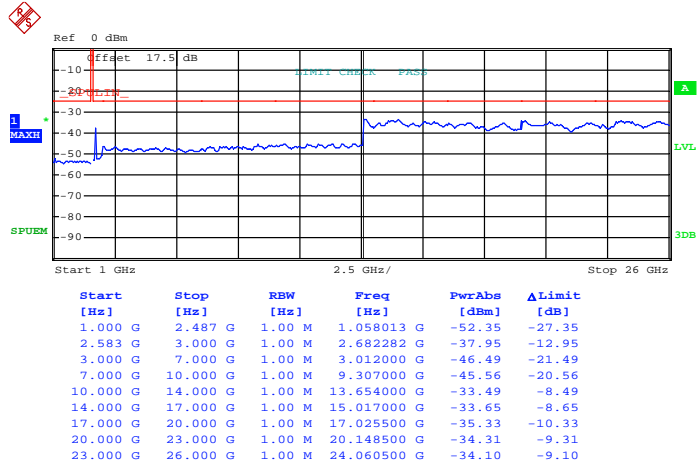


Band :	LTE Band 7	Channel :	CH21400 (High)
Band Width :	10MHz		

QPSK (RB Size 25, RB Offset 12)



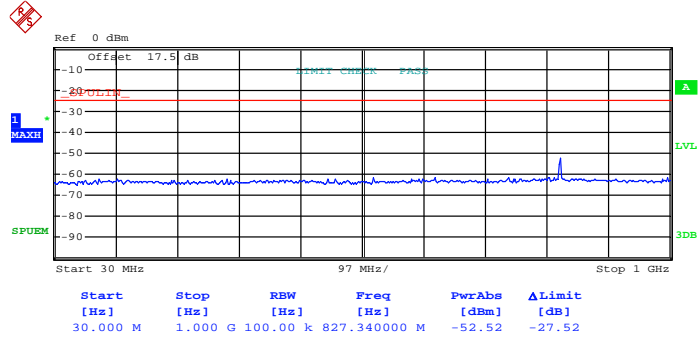
Date: 25.OCT.2013 16:53:57



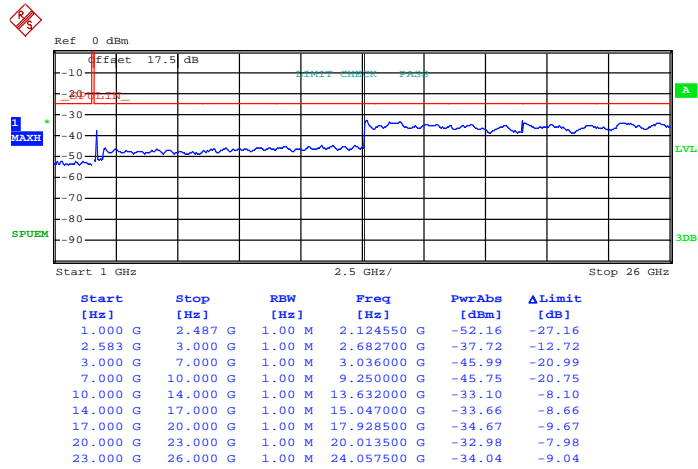
Date: 25.OCT.2013 16:56:15



16QAM (RB Size 25, RB Offset 12)



Date: 25.OCT.2013 16:54:55

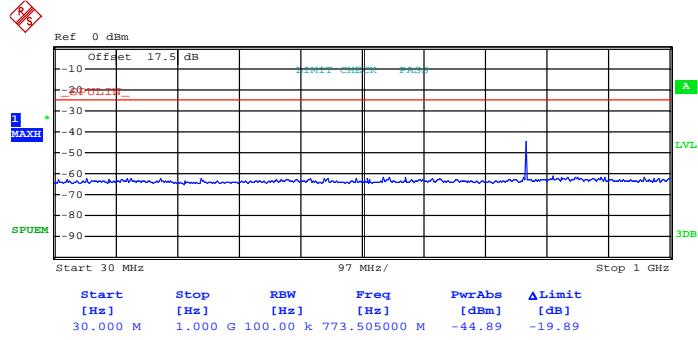


Date: 25.OCT.2013 16:55:54

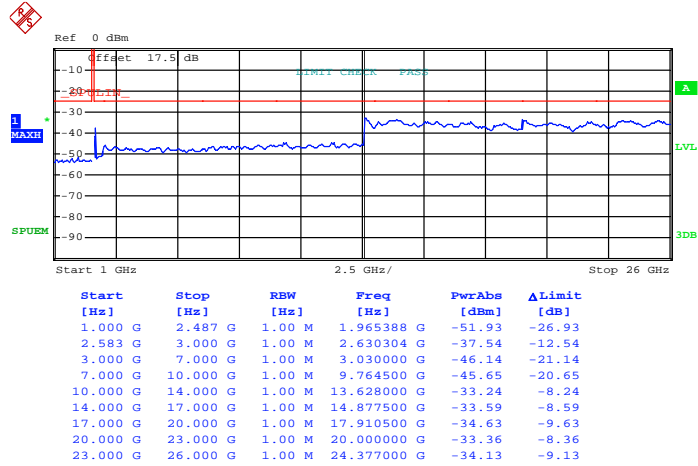


Band :	LTE Band 7	Channel :	CH20865 (Low)
Band Width :	15MHz		

QPSK (RB Size 1, RB Offset 37)



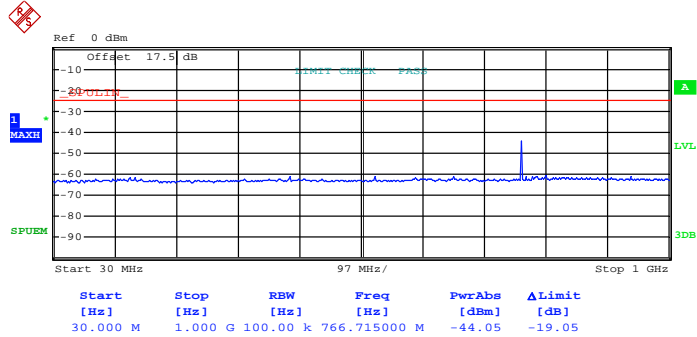
Date: 25.OCT.2013 16:28:29



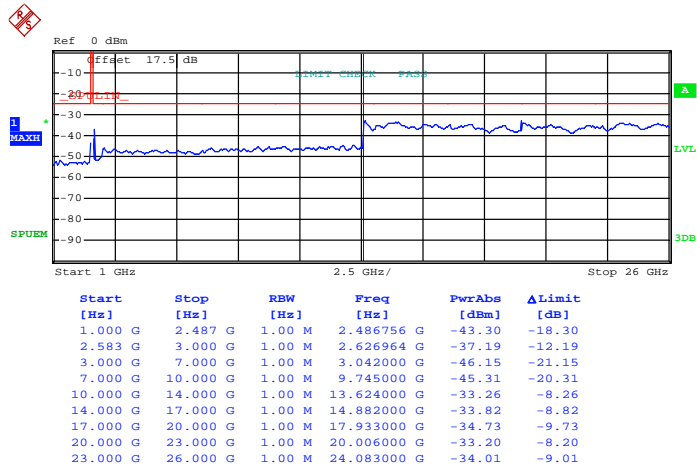
Date: 25.OCT.2013 16:29:09



16QAM (RB Size 1, RB Offset 0)



Date: 25.OCT.2013 16:35:53

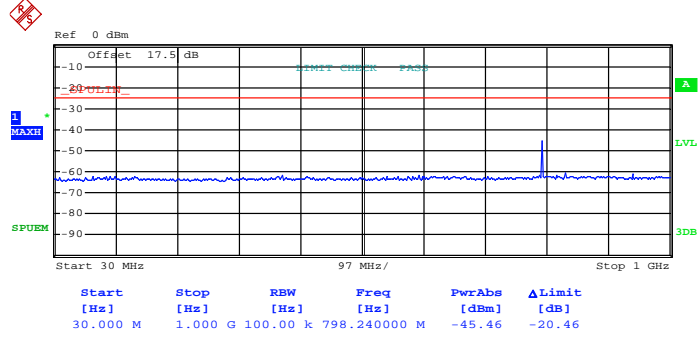


Date: 25.OCT.2013 16:31:57

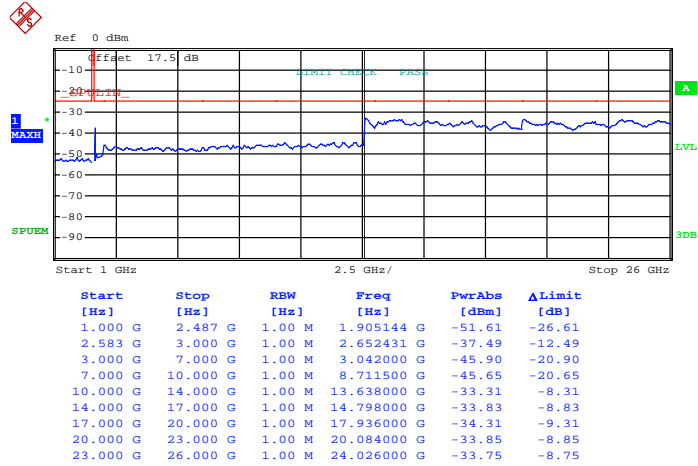


Band :	LTE Band 7	Channel :	CH21045 (Middle)
Band Width :	15MHz		

QPSK (RB Size 1, RB Offset 74)



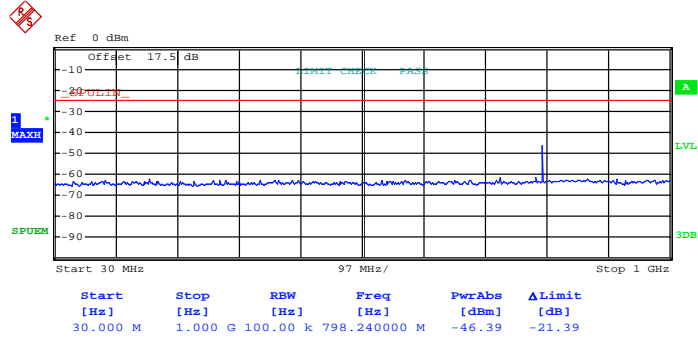
Date: 25.OCT.2013 16:05:04



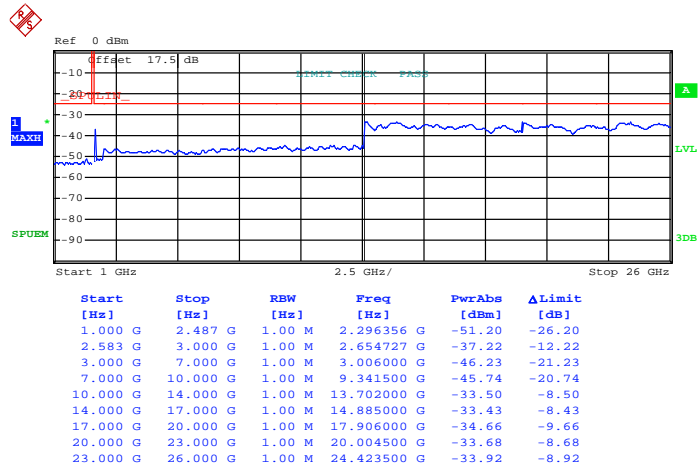
Date: 25.OCT.2013 16:06:18



16QAM (RB Size 1, RB Offset 74)



Date: 25.OCT.2013 16:03:43

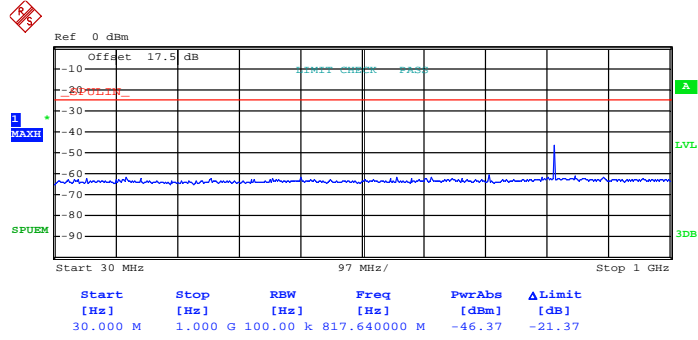


Date: 25.OCT.2013 16:07:07

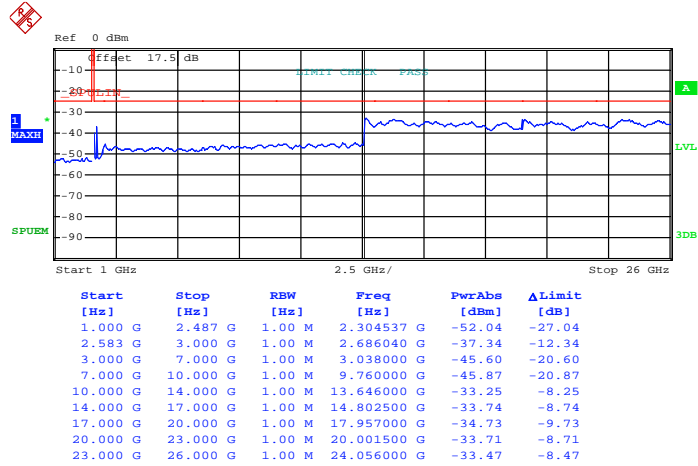


Band :	LTE Band 7	Channel :	CH21375 (High)
Band Width :	15MHz		

QPSK (RB Size 1, RB Offset 0)



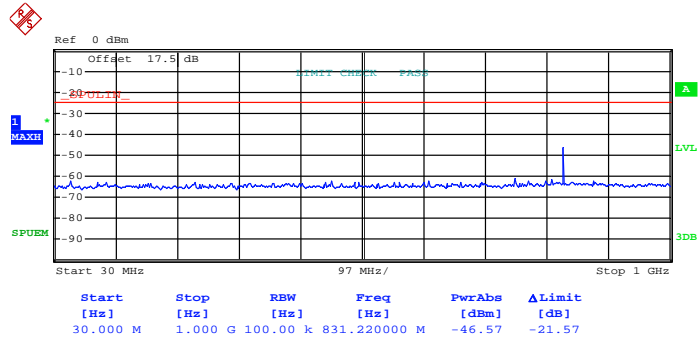
Date: 25.OCT.2013 16:46:15



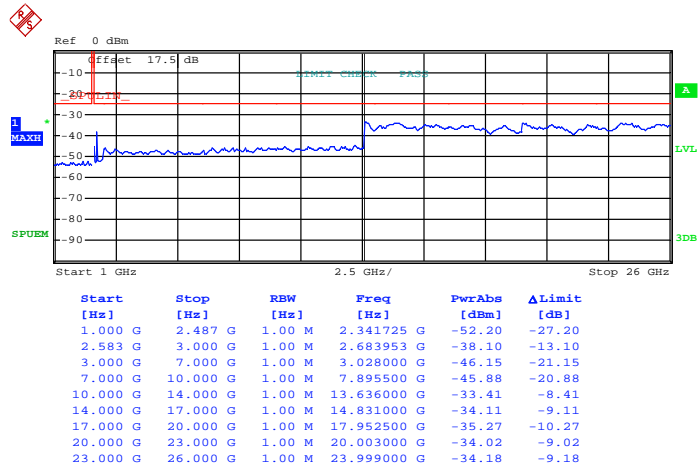
Date: 25.OCT.2013 16:45:16



16QAM (RB Size 1, RB Offset 74)



Date: 25.OCT.2013 16:43:27



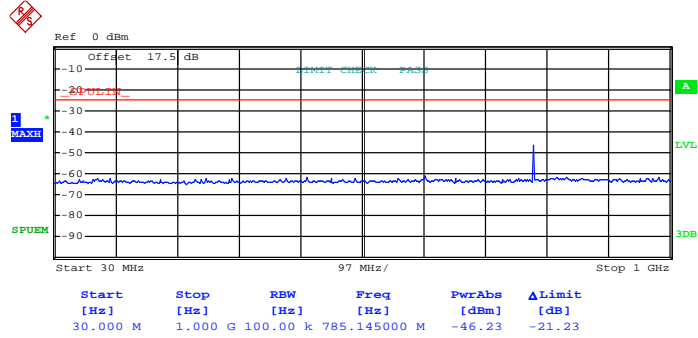
Date: 25.OCT.2013 16:43:58



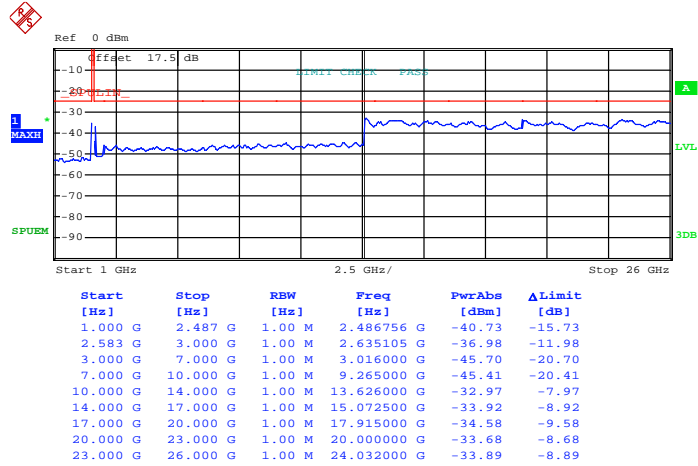


Band :	LTE Band 7	Channel :	CH20890 (Low)
Band Width :	20MHz		

QPSK (RB Size 1, RB Offset 99)



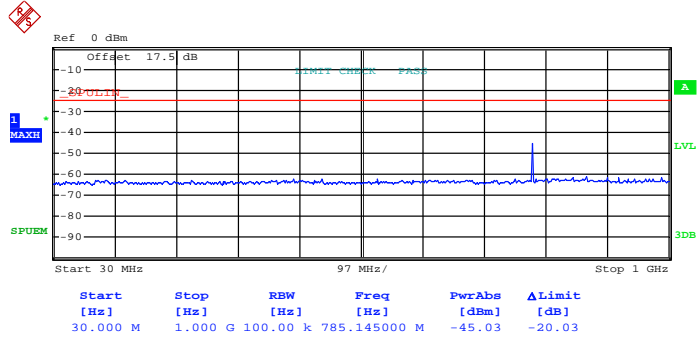
Date: 25.OCT.2013 16:26:46



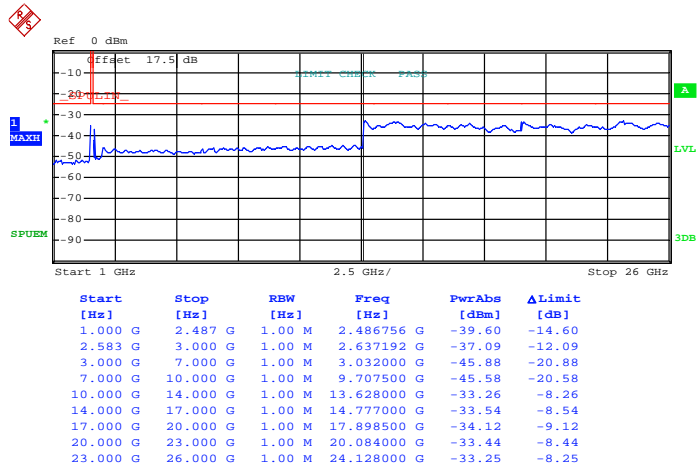
Date: 25.OCT.2013 16:22:46



16QAM (RB Size 1, RB Offset 99)



Date: 25.OCT.2013 16:25:55

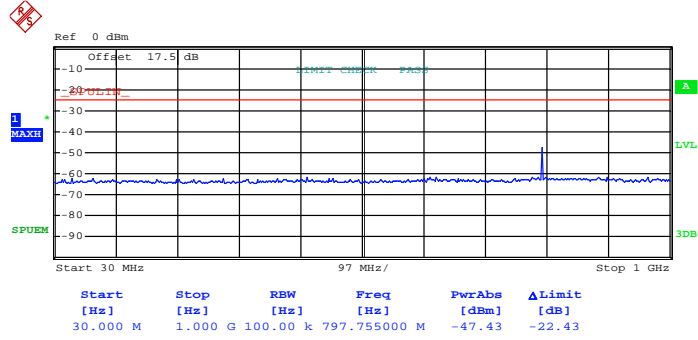


Date: 25.OCT.2013 16:25:13

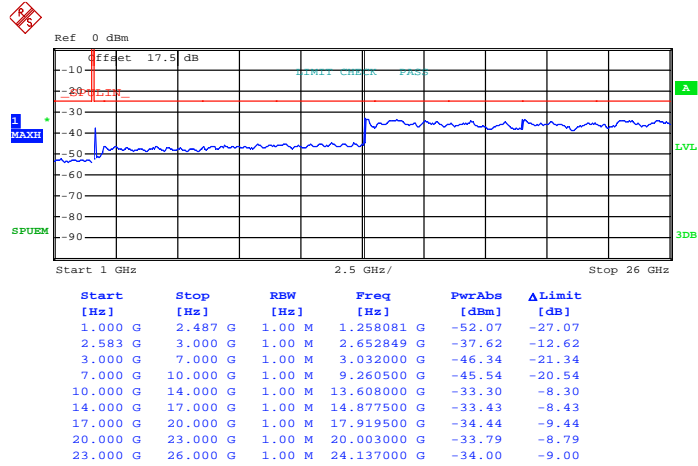


Band :	LTE Band 7	Channel :	CH21020 (Middle)
Band Width :	20MHz		

QPSK (RB Size 1, RB Offset 99)



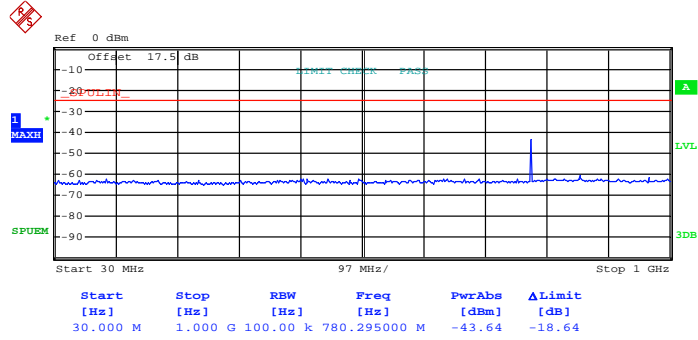
Date: 25.OCT.2013 16:11:13



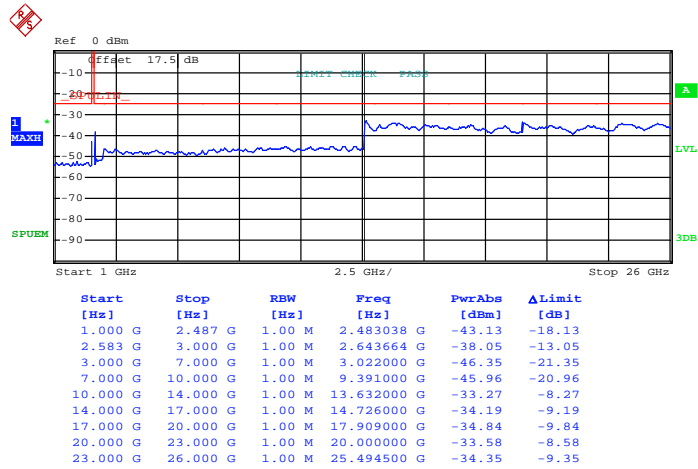
Date: 25.OCT.2013 16:12:21



16QAM (RB Size 1, RB Offset 0)



Date: 25.OCT.2013 16:10:04

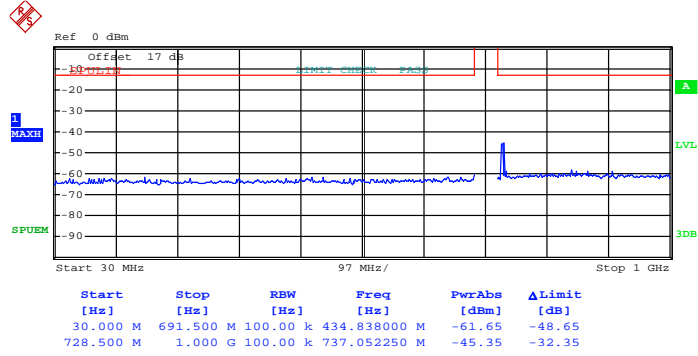


Date: 25.OCT.2013 16:09:06

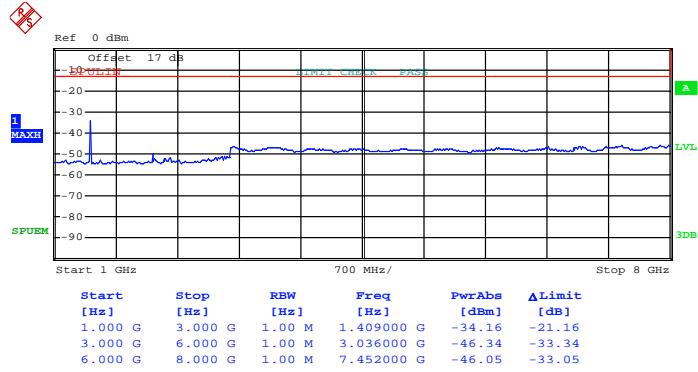


Band :	LTE Band 17	Channel :	CH23755 (Low)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 0)



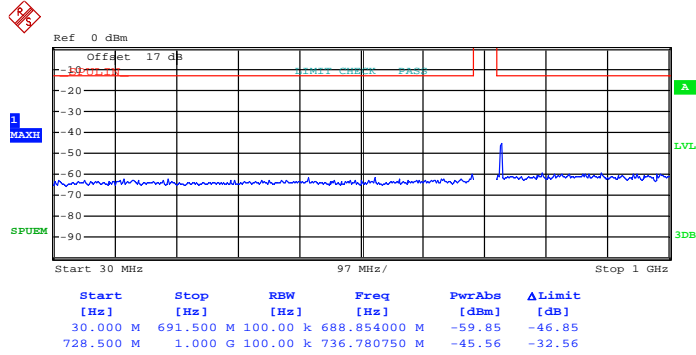
Date: 25.OCT.2013 11:10:53



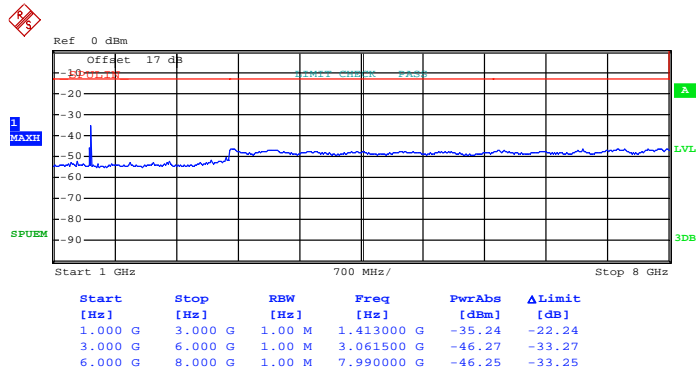
Date: 25.OCT.2013 11:10:20



16QAM (RB Size 1, RB Offset 12)



Date: 25.OCT.2013 11:08:58

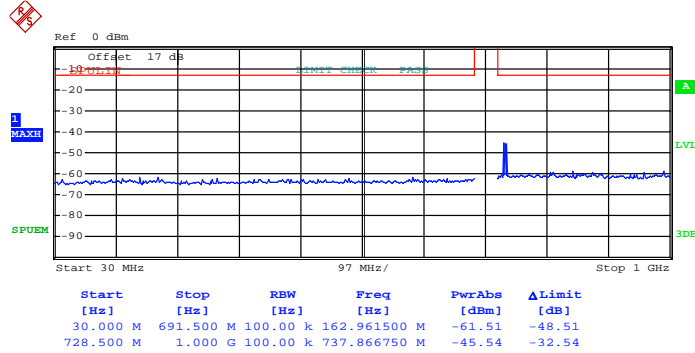


Date: 25.OCT.2013 11:09:29

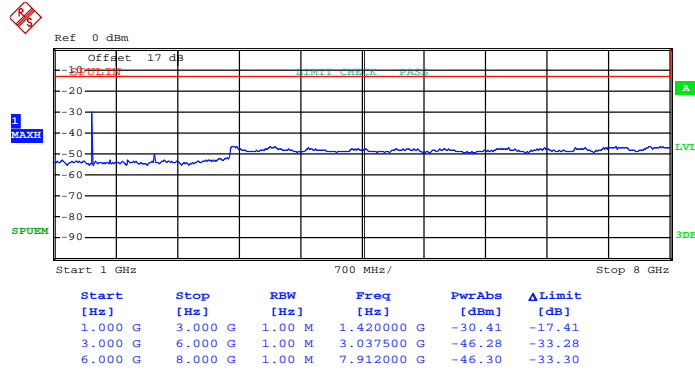


Band :	LTE Band 17	Channel :	CH23790 (Middle)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 12)



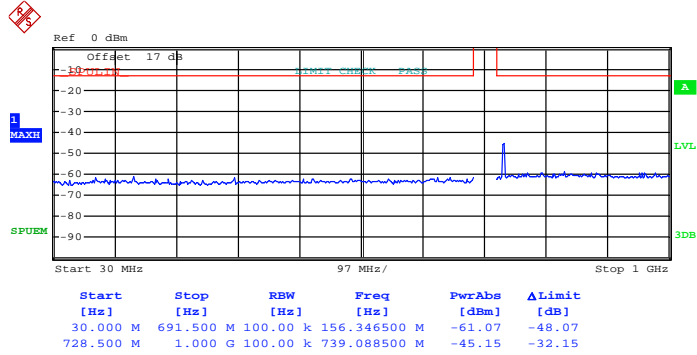
Date: 25.OCT.2013 11:07:36



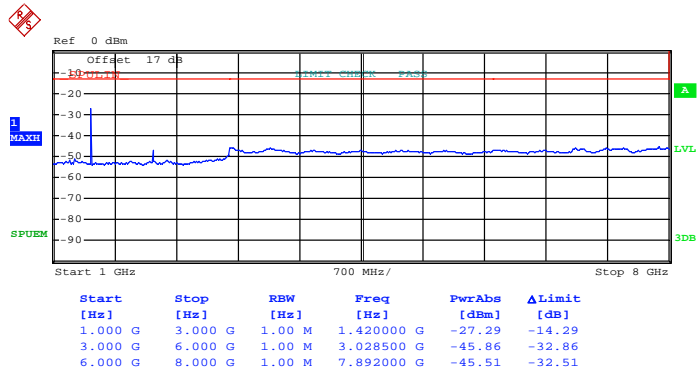
Date: 25.OCT.2013 11:07:06



16QAM (RB Size 1, RB Offset 12)



Date: 25.OCT.2013 11:08:10



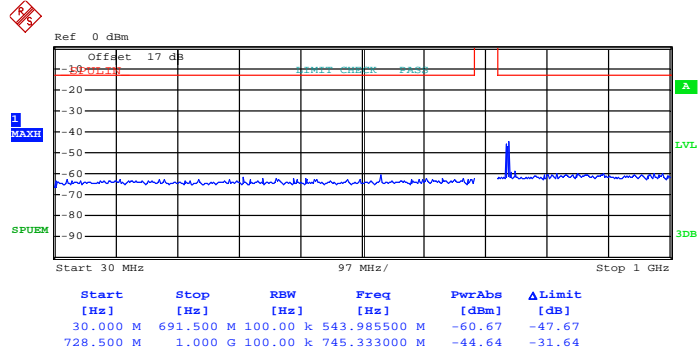
Date: 25.OCT.2013 11:06:36



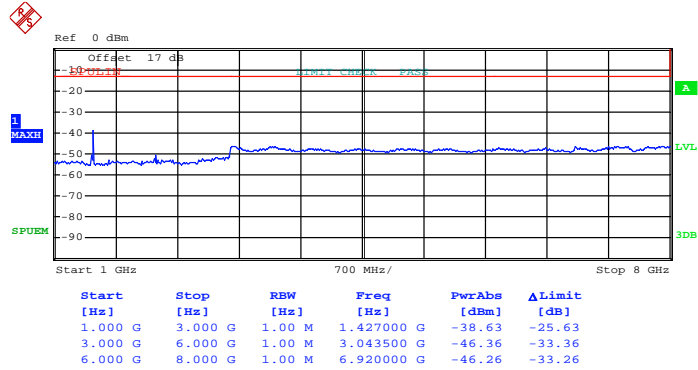


Band :	LTE Band 17	Channel :	CH23825 (High)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 12)



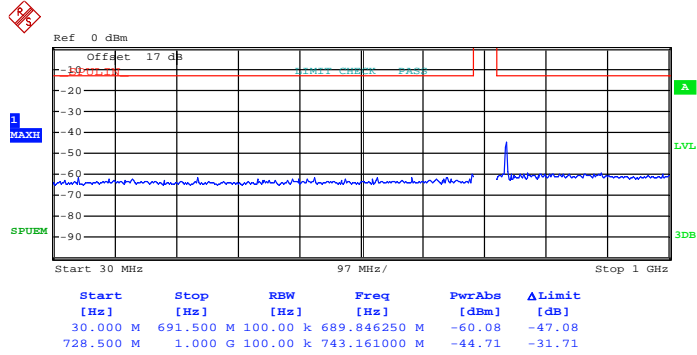
Date: 25.OCT.2013 11:11:39



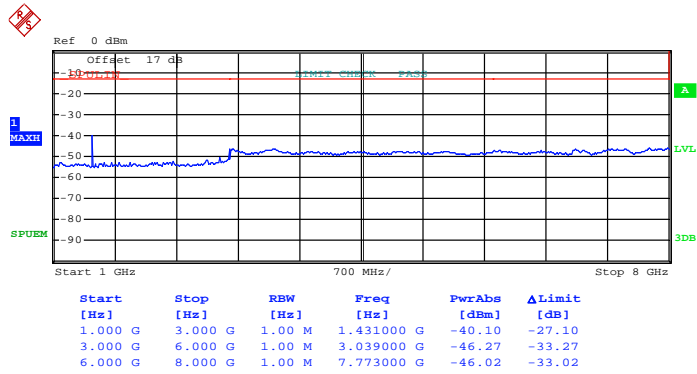
Date: 25.OCT.2013 11:12:17



16QAM (RB Size 1, RB Offset 24)



Date: 25.OCT.2013 11:13:29

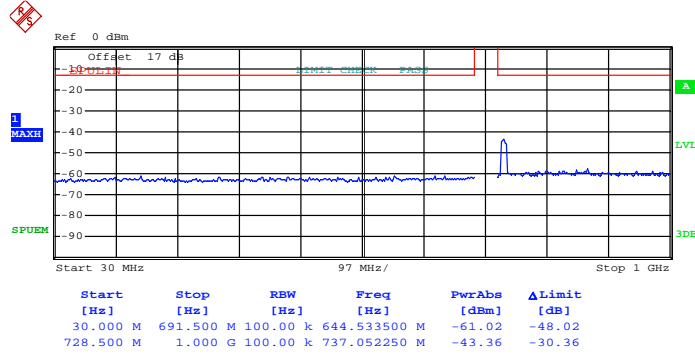


Date: 25.OCT.2013 11:12:54

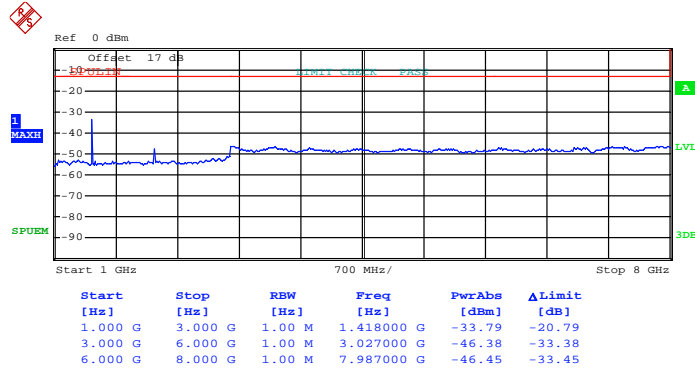


Band :	LTE Band 17	Channel :	CH23780 (Low)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 24)



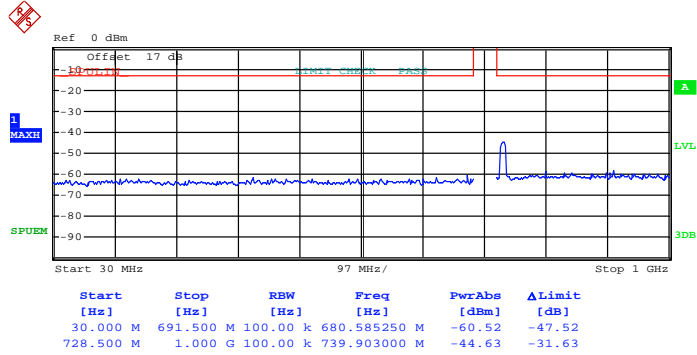
Date: 25.OCT.2013 11:21:41



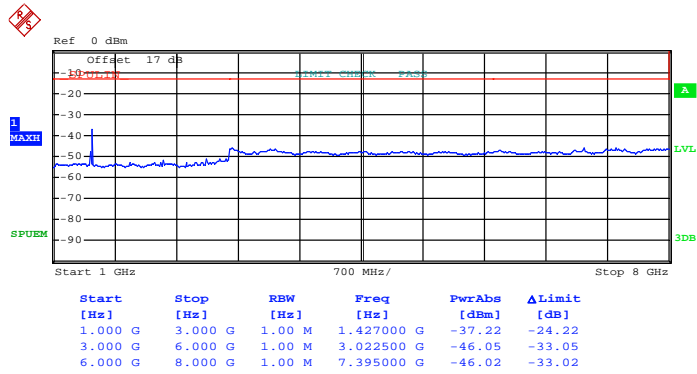
Date: 25.OCT.2013 11:19:29



16QAM (RB Size 1, RB Offset 49)



Date: 25.OCT.2013 11:18:04

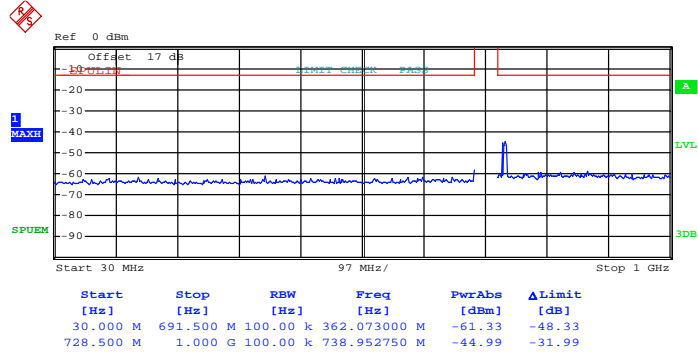


Date: 25.OCT.2013 11:18:50

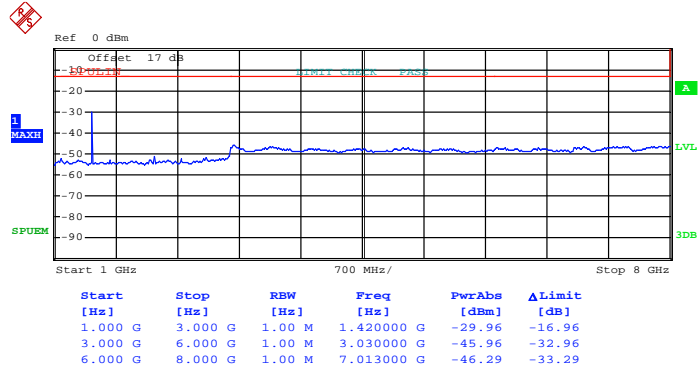


Band :	LTE Band 17	Channel :	CH23790 (Middle)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 24)



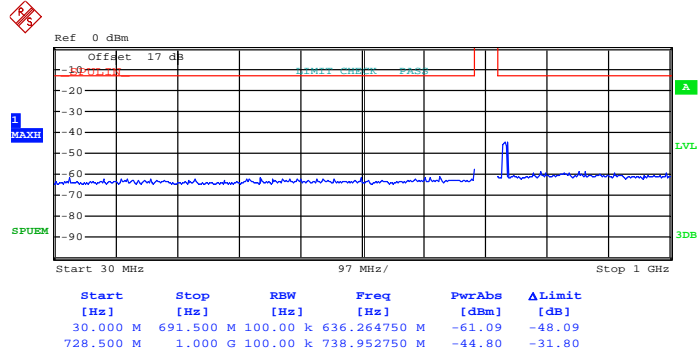
Date: 25.OCT.2013 11:22:35



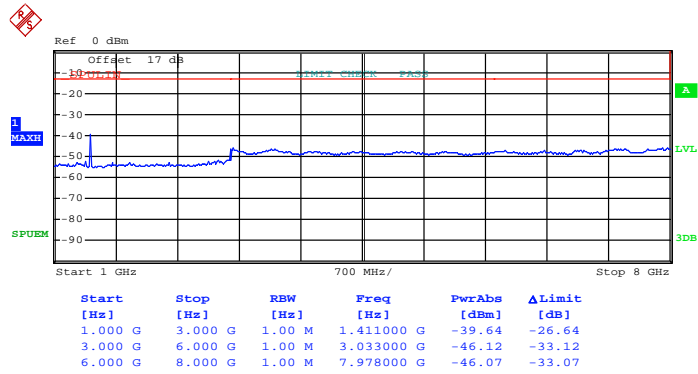
Date: 25.OCT.2013 11:23:21



16QAM (RB Size 1, RB Offset 0)



Date: 25.OCT.2013 11:24:32

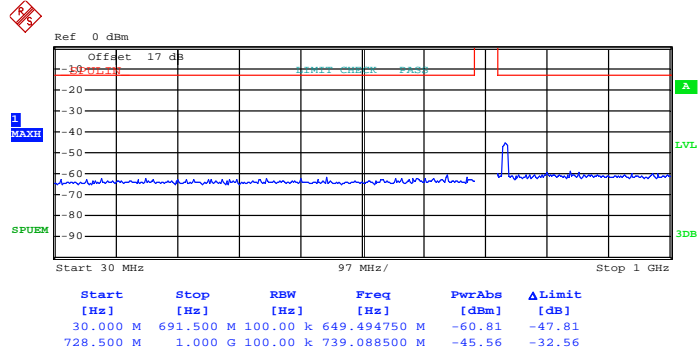


Date: 25.OCT.2013 11:23:51

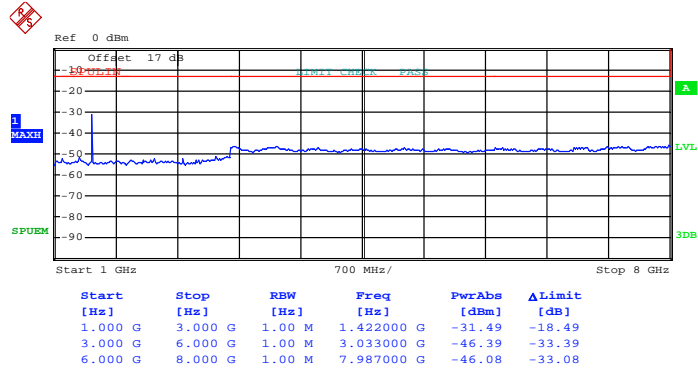


Band :	LTE Band 17	Channel :	CH23800 (High)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 24)



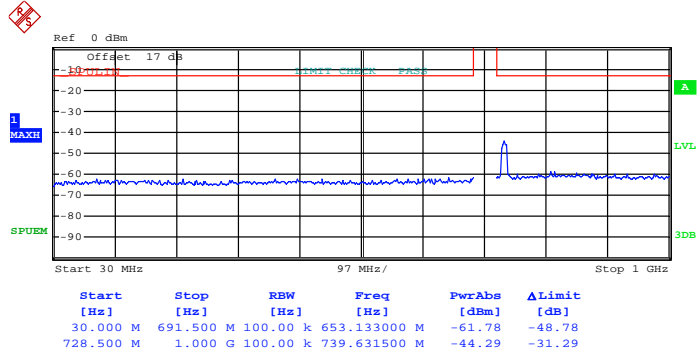
Date: 25.OCT.2013 11:14:40



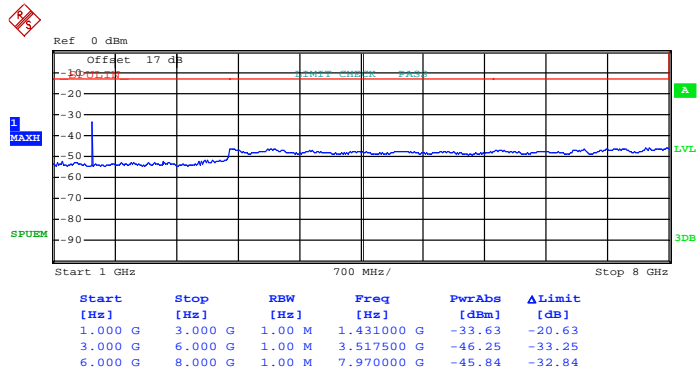
Date: 25.OCT.2013 11:15:21



16QAM (RB Size 1, RB Offset 49)



Date: 25.OCT.2013 11:16:53



Date: 25.OCT.2013 11:16:23



## 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.

For Band 2, 4, 5, 17

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.

For Band 7

The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of mobile digital stations, the attenuation factor shall be not less than  $55 + 10 \log (P)$  dB at 5.5 MHz from the channel edges.

The spectrum is scanned from 30 MHz up to a frequency including its 10th harmonic.

### 3.7.2 Measuring Instruments

Measuring equipment is listed in the section 4 of this test report.

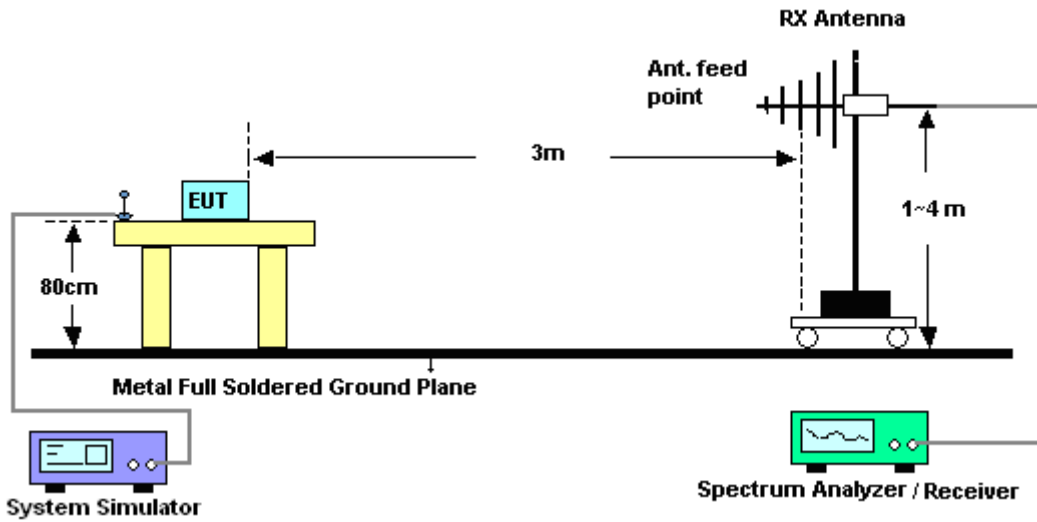


### **3.7.3 Test Procedures**

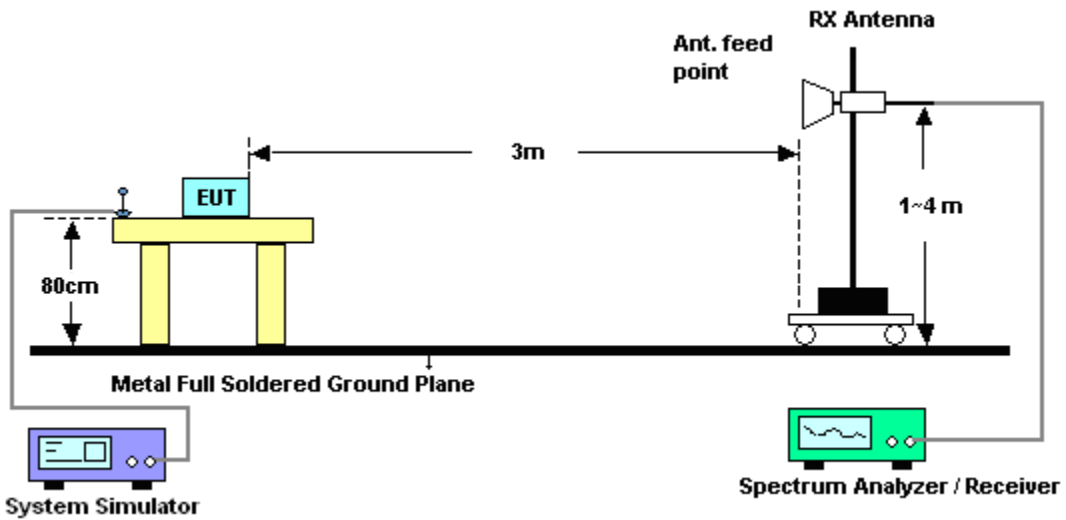
1. The EUT was placed on a rotatable wooden table with 0.8 meter above ground.
2. The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest spurious emission.
4. The height of the receiving 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. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
11.  $EIRP \text{ (dBm)} = S.G. \text{ Power} - Tx \text{ Cable Loss} + Tx \text{ Antenna Gain}$
12.  $ERP \text{ (dBm)} = EIRP - 2.15$

### 3.7.4 Test Setup

For radiated emissions from 30MHz to 1GHz



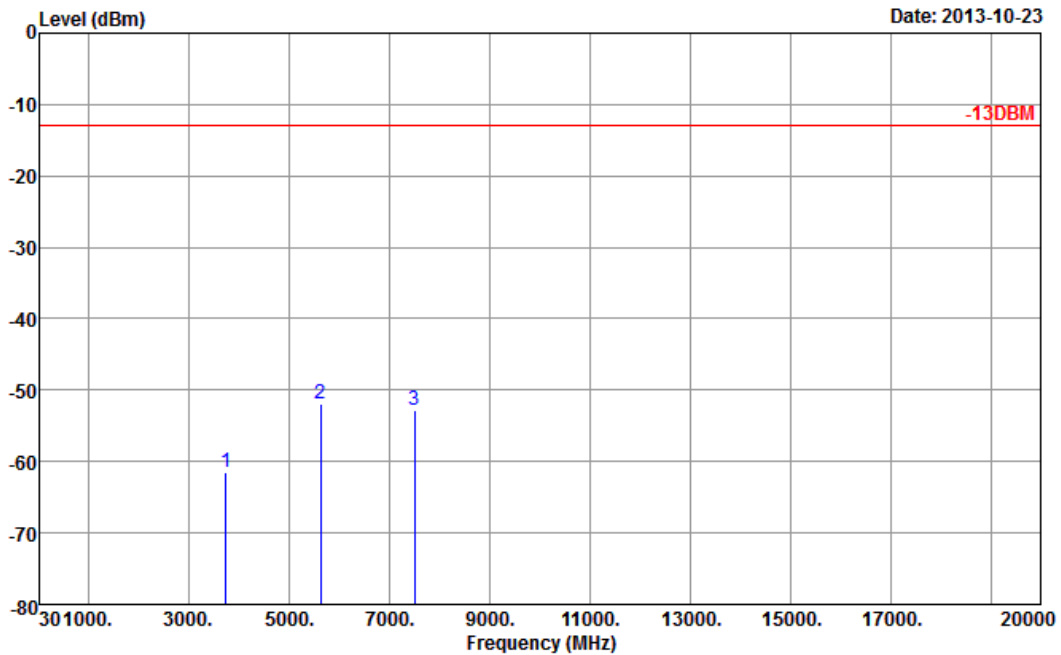
For radiated emissions above 1GHz





3.7.5 Test Result of Field Strength of Spurious Radiated

<b>Band :</b>	LTE Band 2	<b>Temperature :</b>	24~26°C
<b>Test Mode :</b>	1.4MHz QPSK RB Size 1 Offset 0	<b>Relative Humidity :</b>	49~52%
<b>Test Engineer :</b>	Robin Luo	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		

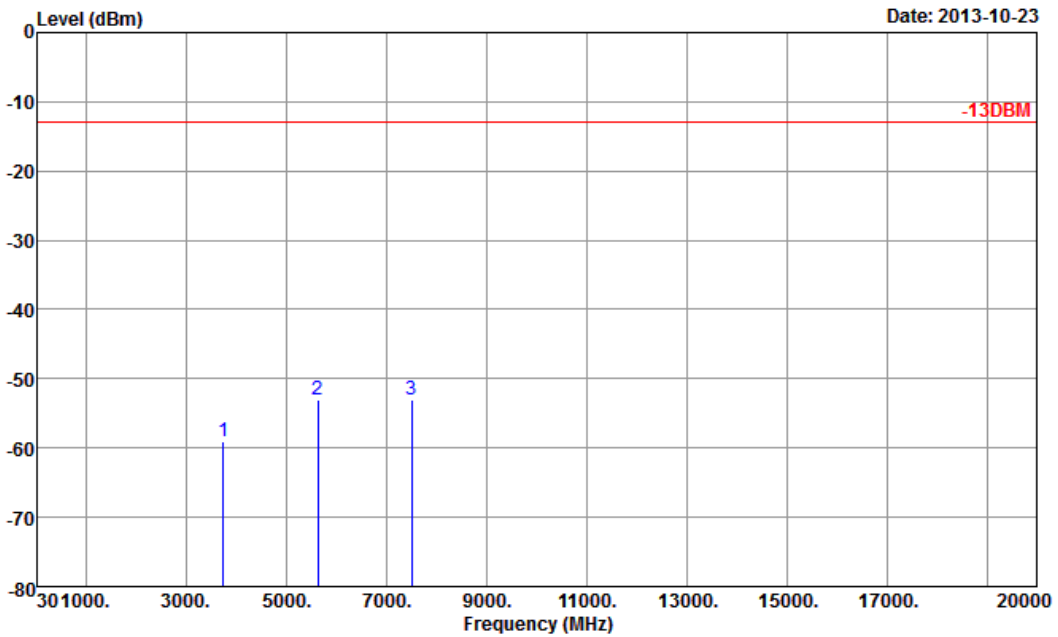


Site : 03CH01-SZ  
 Condition : -13DBM HF\_EIRP\_H\_130101 HORIZONTAL

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
3760	-61.55	-13	-48.55	-73.70	-68.29	1.28	8.02	H	Pass
5640	-52.01	-13	-39.01	-70.00	-60.43	1.58	10.00	H	Pass
7520	-52.90	-13	-39.90	-74.84	-63.22	1.78	12.10	H	Pass



<b>Band :</b>	LTE Band 2	<b>Temperature :</b>	24~26°C
<b>Test Mode :</b>	1.4MHz QPSK RB Size 1 Offset 0	<b>Relative Humidity :</b>	49~52%
<b>Test Engineer :</b>	Robin Luo	<b>Polarization :</b>	Vertical
<b>Remark :</b>	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		

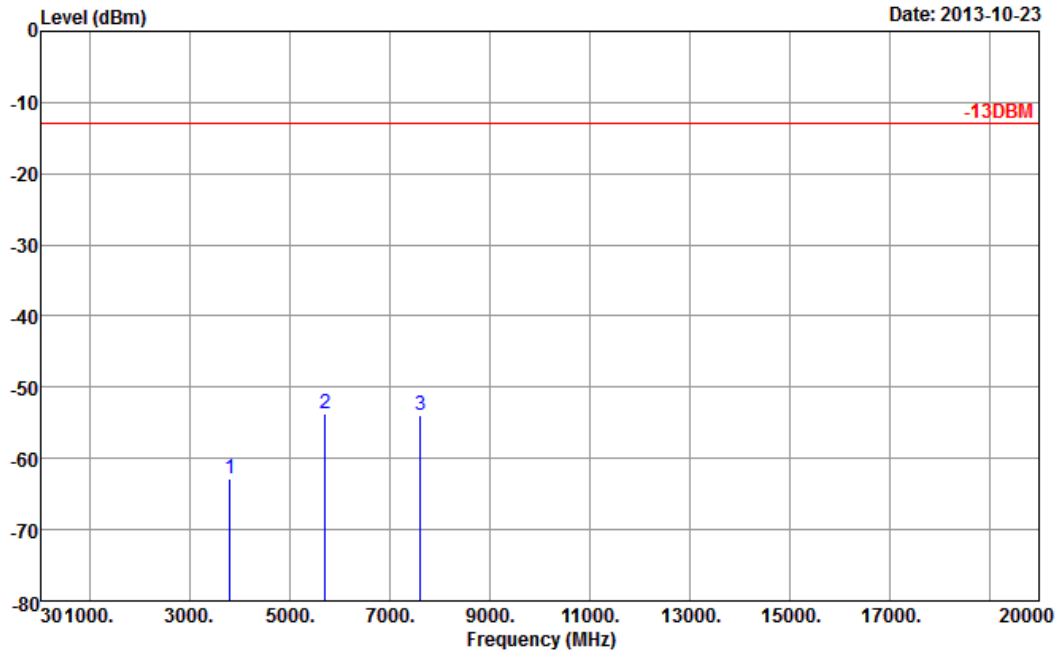


Site : 03CH01-SZ  
 Condition : -13DBM HF\_EIRP\_V\_130101 VERTICAL

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
3760	-58.96	-13	-45.96	-73.99	-65.70	1.28	8.02	V	Pass
5640	-53.13	-13	-40.13	-70.21	-61.55	1.58	10	V	Pass
7520	-52.93	-13	-39.93	-75.18	-63.25	1.78	12.1	V	Pass



<b>Band :</b>	LTE Band 2	<b>Temperature :</b>	24~26°C
<b>Test Mode :</b>	3MHz QPSK RB Size 1 Offset 0	<b>Relative Humidity :</b>	49~52%
<b>Test Engineer :</b>	Robin Luo	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		

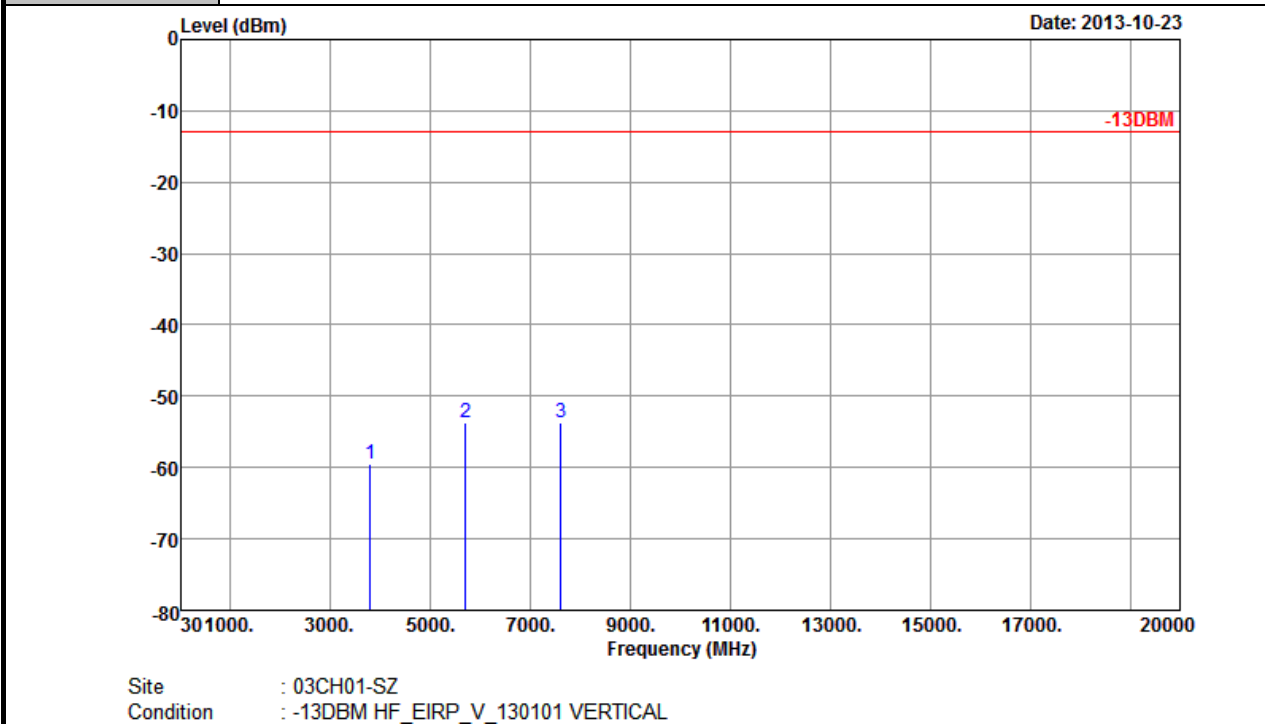


Site : 03CH01-SZ  
 Condition : -13DBM HF\_EIRP\_H\_130101 HORIZONTAL

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
3814	-62.88	-13	-49.88	-75.03	-69.58	1.3	8.00	H	Pass
5722	-53.70	-13	-40.70	-71.69	-62.31	1.6	10.21	H	Pass
7629	-54.02	-13	-41.02	-75.96	-64.22	1.8	12.00	H	Pass



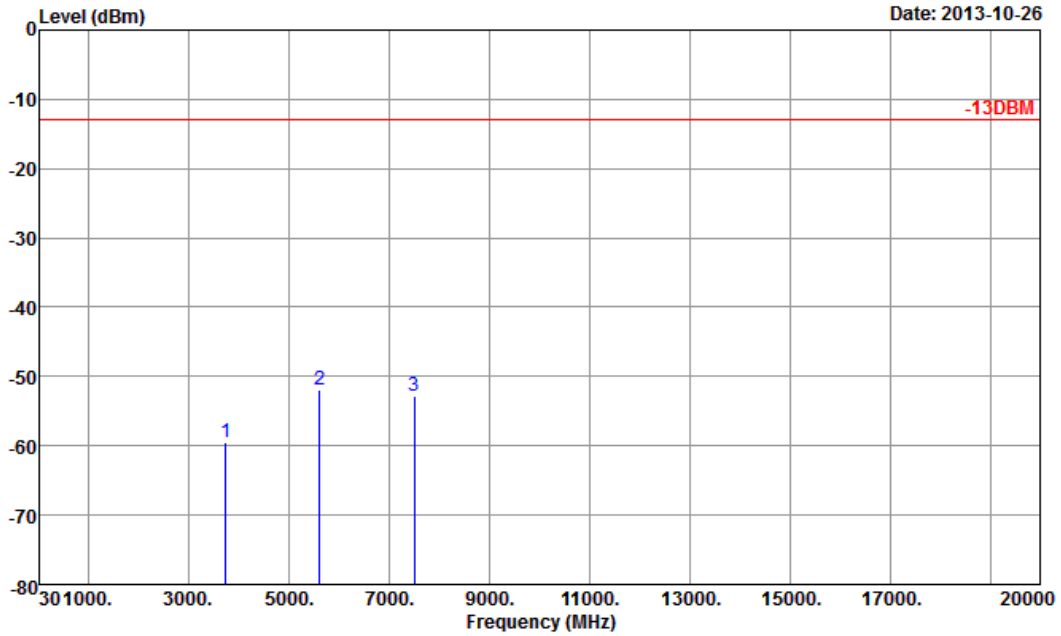
<b>Band :</b>	LTE Band 2	<b>Temperature :</b>	24~26°C
<b>Test Mode :</b>	3MHz QPSK RB Size 1 Offset 0	<b>Relative Humidity :</b>	49~52%
<b>Test Engineer :</b>	Robin Luo	<b>Polarization :</b>	Vertical
<b>Remark :</b>	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



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
3814	-59.53	-13	-46.53	-74.56	-66.23	1.3	8	V	Pass
5722	-53.79	-13	-40.79	-70.87	-62.40	1.6	10.21	V	Pass
7629	-53.79	-13	-40.79	-76.04	-63.99	1.8	12	V	Pass



<b>Band :</b>	LTE Band 2	<b>Temperature :</b>	24~26°C
<b>Test Mode :</b>	5MHz QPSK RB Size 1 Offset 0	<b>Relative Humidity :</b>	49~52%
<b>Test Engineer :</b>	Robin Luo	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



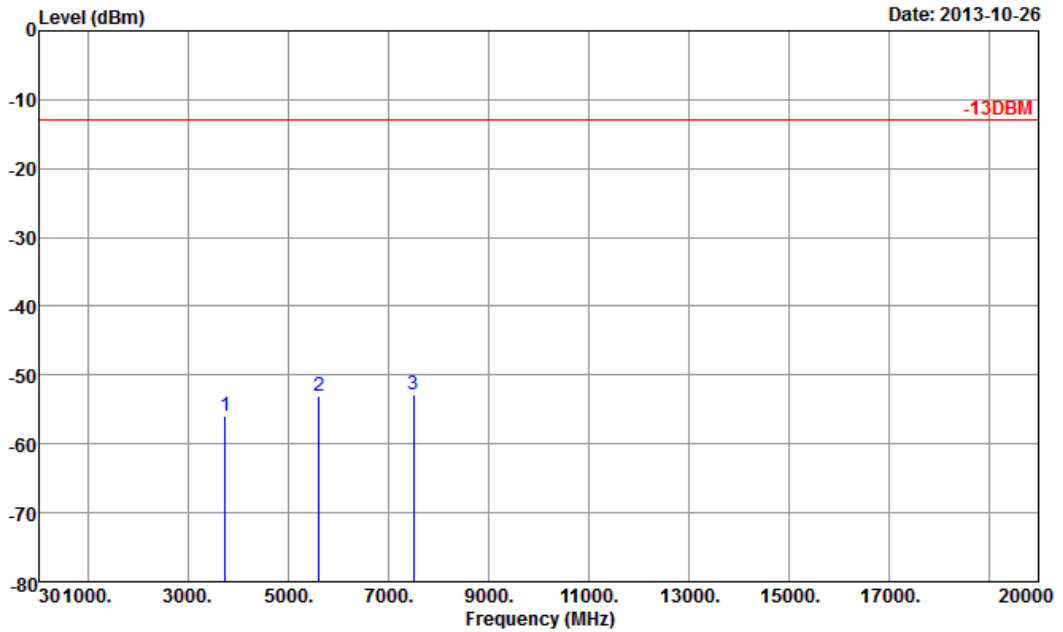
Site : 03CH01-SZ  
 Condition : -13DBM HF\_EIRP\_H\_130101 HORIZONTAL

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	-59.55	-13	-46.55	-71.70	-66.29	1.28	8.02	H	Pass
5633	-52.01	-13	-39.01	-70.00	-60.43	1.58	10.00	H	Pass
7511	-52.76	-13	-39.76	-74.70	-63.08	1.78	12.10	H	Pass





<b>Band :</b>	LTE Band 2	<b>Temperature :</b>	24~26°C
<b>Test Mode :</b>	5MHz QPSK RB Size 1 Offset 0	<b>Relative Humidity :</b>	49~52%
<b>Test Engineer :</b>	Robin Luo	<b>Polarization :</b>	Vertical
<b>Remark :</b>	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		

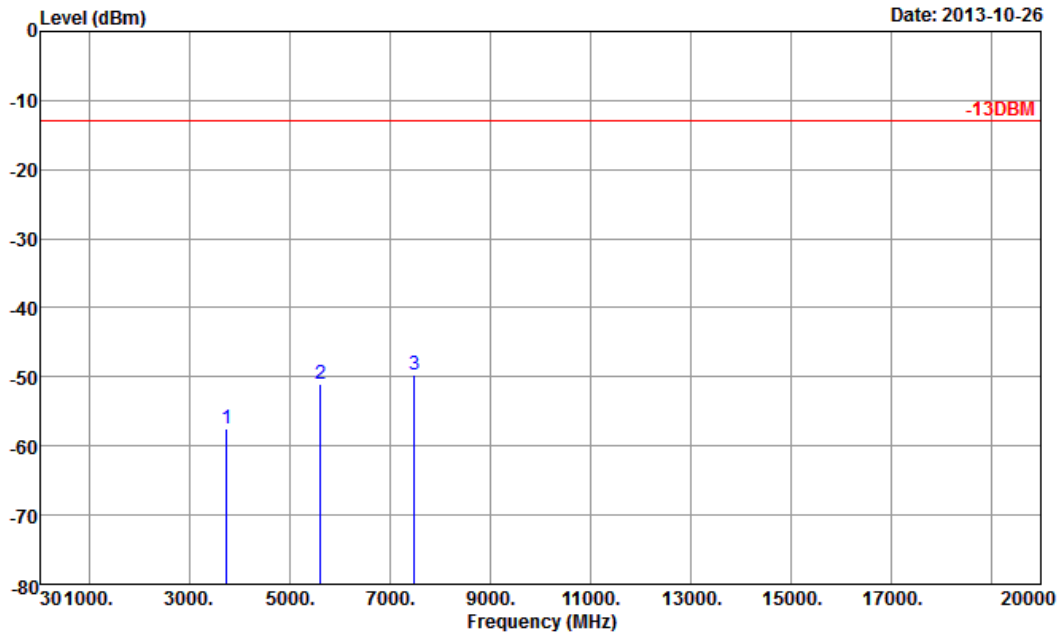


Site : 03CH01-SZ  
 Condition : -13DBM HF\_EIRP\_V\_130101 VERTICAL

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
3756	-55.96	-13	-42.96	-70.99	-62.70	1.28	8.02	V	Pass
5633	-53.13	-13	-40.13	-70.21	-61.55	1.58	10	V	Pass
7511	-52.71	-13	-39.71	-74.96	-63.03	1.78	12.1	V	Pass



<b>Band :</b>	LTE Band 2	<b>Temperature :</b>	24~26°C
<b>Test Mode :</b>	10MHz QPSK RB Size 1 Offset 0	<b>Relative Humidity :</b>	49~52%
<b>Test Engineer :</b>	Robin Luo	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		

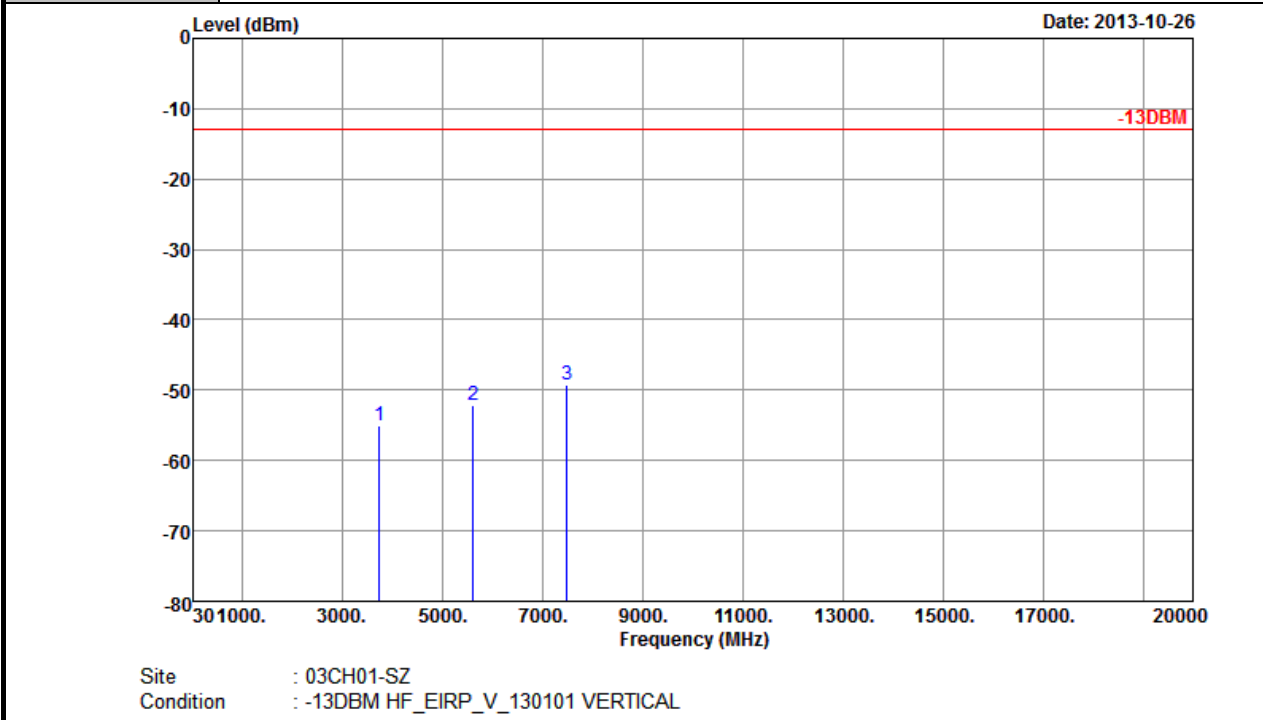


Site : 03CH01-SZ  
 Condition : -13DBM HF\_EIRP\_H\_130101 HORIZONTAL

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
3752	-57.55	-13	-44.55	-69.70	-64.29	1.28	8.02	H	Pass
5628	-50.94	-13	-37.94	-68.93	-59.36	1.58	10.00	H	Pass
7504	-49.66	-13	-36.66	-71.60	-59.98	1.78	12.10	H	Pass



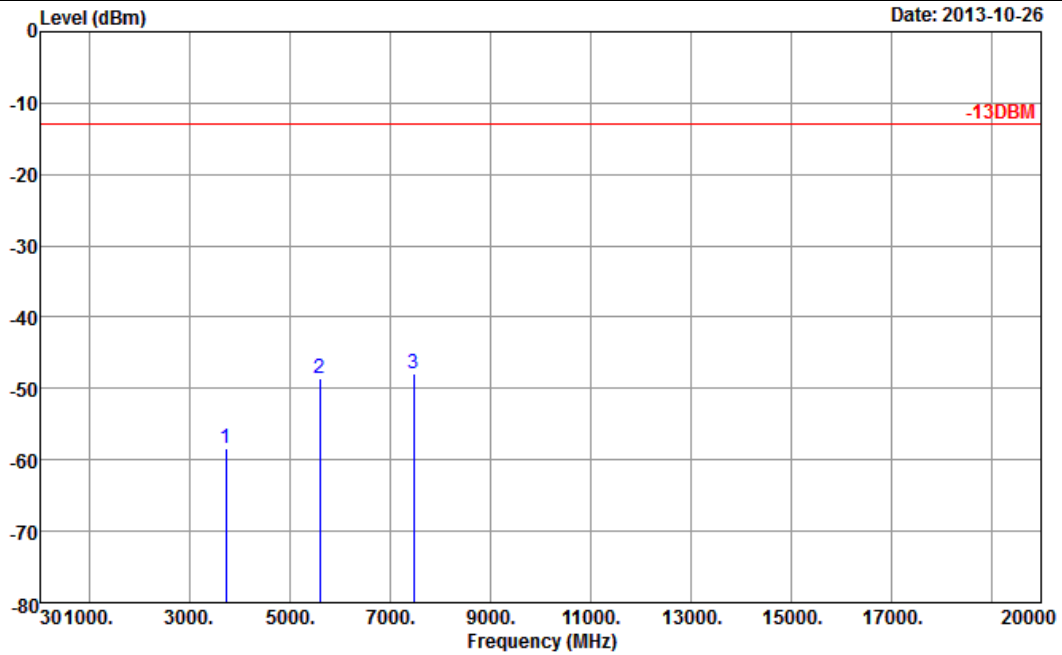
<b>Band :</b>	LTE Band 2	<b>Temperature :</b>	24~26°C
<b>Test Mode :</b>	10MHz QPSK RB Size 1 Offset 0	<b>Relative Humidity :</b>	49~52%
<b>Test Engineer :</b>	Robin Luo	<b>Polarization :</b>	Vertical
<b>Remark :</b>	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



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
3752	-54.96	-13	-41.96	-69.99	-61.70	1.28	8.02	V	Pass
5628	-52.10	-13	-39.10	-69.18	-60.52	1.58	10	V	Pass
7504	-49.16	-13	-36.16	-71.41	-59.48	1.78	12.1	V	Pass



<b>Band :</b>	LTE Band 2	<b>Temperature :</b>	24~26°C
<b>Test Mode :</b>	15MHz QPSK RB Size 1 Offset 0	<b>Relative Humidity :</b>	49~52%
<b>Test Engineer :</b>	Robin Luo	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		

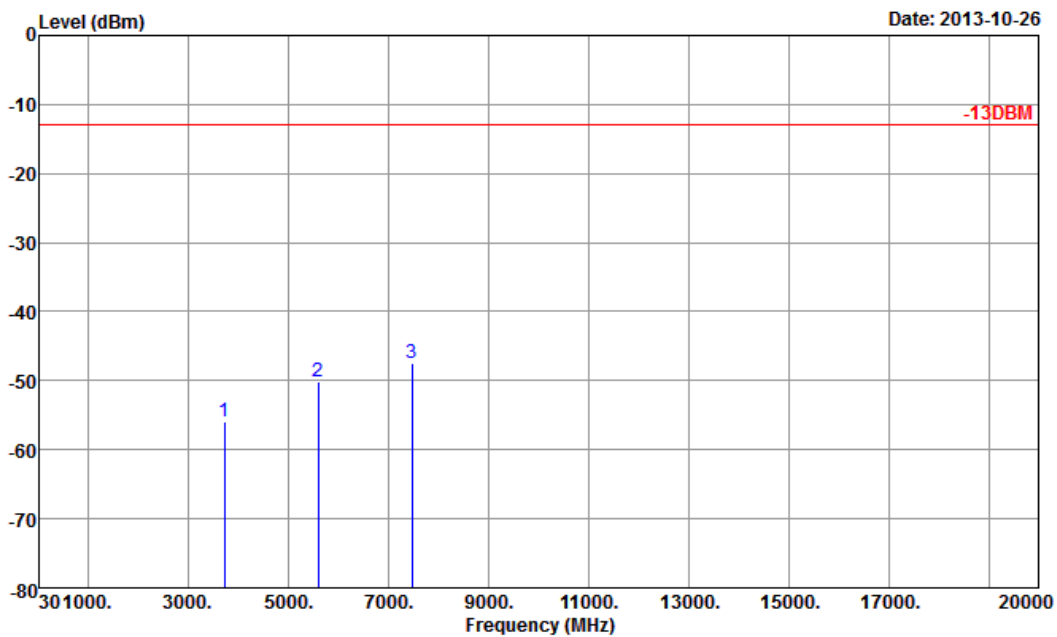


Site : 03CH01-SZ  
 Condition : -13DBM HF\_EIRP\_H\_130101 HORIZONTAL

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
3744	-58.43	-13	-45.43	-70.58	-65.17	1.28	8.02	H	Pass
5616	-48.68	-13	-35.68	-66.67	-57.10	1.58	10.00	H	Pass
7488	-47.80	-13	-34.80	-69.74	-58.12	1.78	12.10	H	Pass



<b>Band :</b>	LTE Band 2	<b>Temperature :</b>	24~26°C
<b>Test Mode :</b>	15MHz QPSK RB Size 1 Offset 0	<b>Relative Humidity :</b>	49~52%
<b>Test Engineer :</b>	Robin Luo	<b>Polarization :</b>	Vertical
<b>Remark :</b>	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		

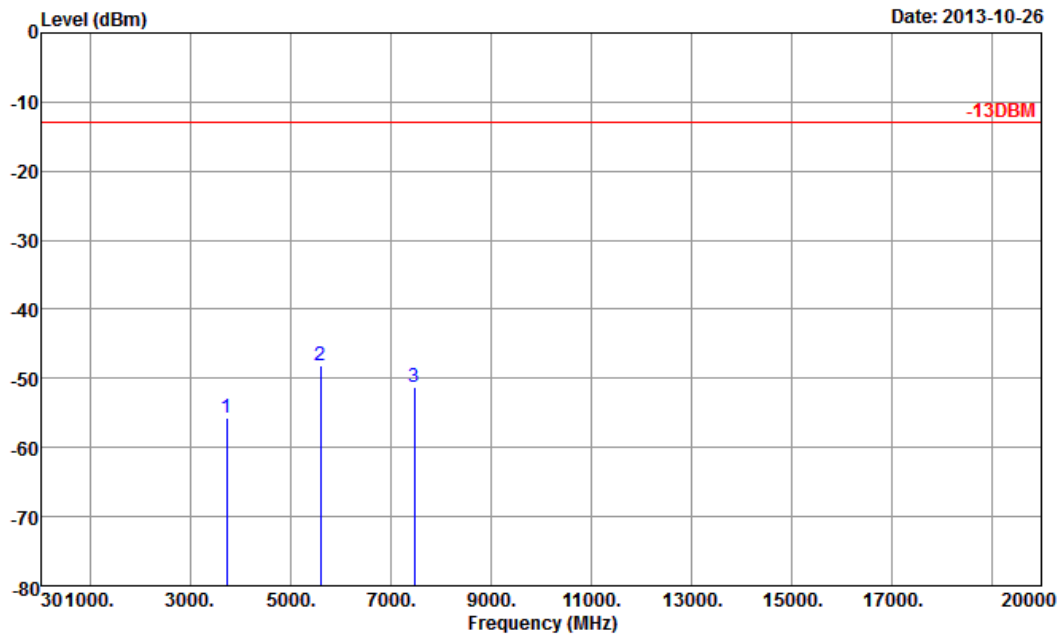


Site : 03CH01-SZ  
 Condition : -13DBM HF\_EIRP\_V\_130101 VERTICAL

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
3744	-55.96	-13	-42.96	-70.99	-62.70	1.28	8.02	V	Pass
5616	-50.10	-13	-37.10	-67.18	-58.52	1.58	10	V	Pass
7488	-47.38	-13	-34.38	-69.63	-57.70	1.78	12.1	V	Pass



<b>Band :</b>	LTE Band 2	<b>Temperature :</b>	24~26°C
<b>Test Mode :</b>	20MHz QPSK RB Size 1 Offset 0	<b>Relative Humidity :</b>	49~52%
<b>Test Engineer :</b>	Robin Luo	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		

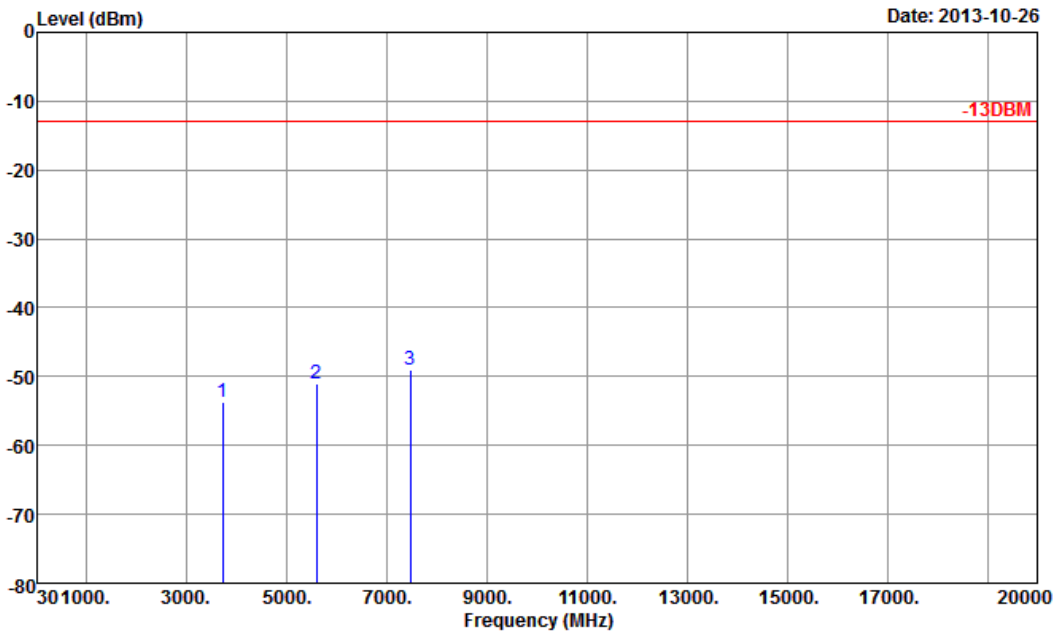


Site : 03CH01-SZ  
 Condition : -13DBM HF\_EIRP\_H\_130101 HORIZONTAL

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
3740	-55.68	-13	-42.68	-67.83	-62.42	1.28	8.02	H	Pass
5610	-48.16	-13	-35.16	-66.15	-56.58	1.58	10.00	H	Pass
7480	-51.30	-13	-38.30	-73.24	-61.62	1.78	12.10	H	Pass



<b>Band :</b>	LTE Band 2	<b>Temperature :</b>	24~26°C
<b>Test Mode :</b>	20MHz QPSK RB Size 1 Offset 0	<b>Relative Humidity :</b>	49~52%
<b>Test Engineer :</b>	Robin Luo	<b>Polarization :</b>	Vertical
<b>Remark :</b>	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		

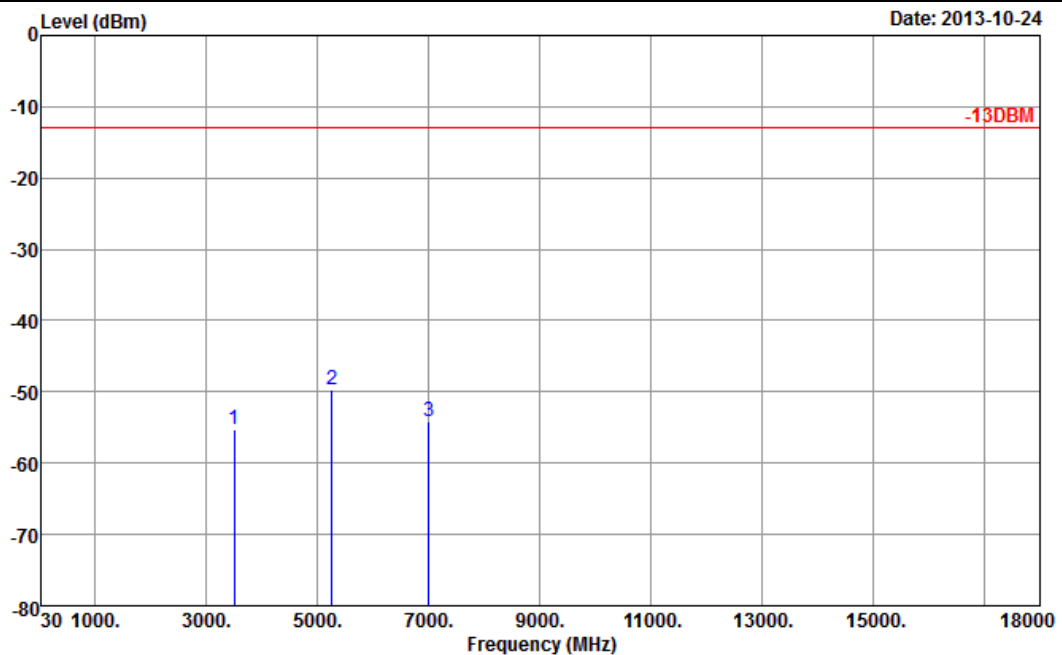


Site : 03CH01-SZ  
 Condition : -13DBM HF\_EIRP\_V\_130101 VERTICAL

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
3740	-53.60	-13	-40.60	-68.63	-60.34	1.28	8.02	V	Pass
5610	-51.00	-13	-38.00	-68.08	-59.42	1.58	10	V	Pass
7480	-49.11	-13	-36.11	-71.36	-59.43	1.78	12.1	V	Pass



<b>Band :</b>	LTE Band 4	<b>Temperature :</b>	24~26°C
<b>Test Mode :</b>	1.4MHz QPSK RB Size 1 Offset 0	<b>Relative Humidity :</b>	49~52%
<b>Test Engineer :</b>	Robin Luo	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



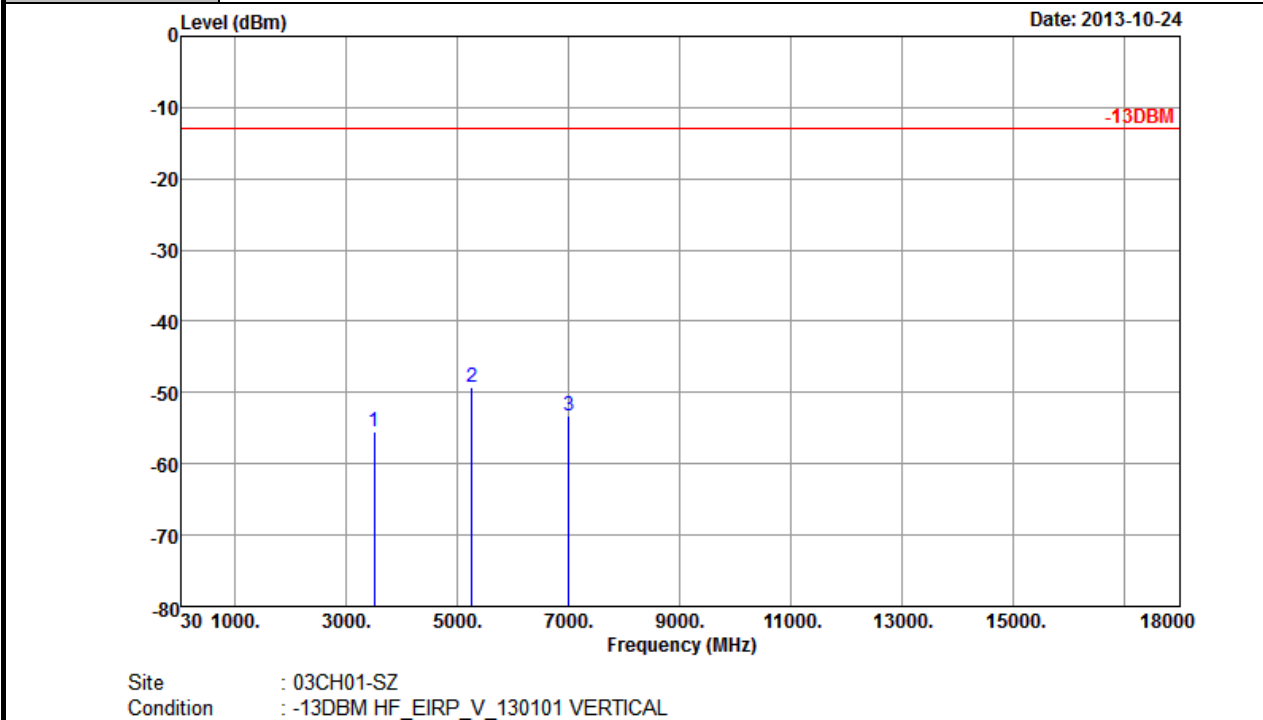
Site : 03CH01-SZ  
 Condition : -13DBM HF\_EIRP\_H\_130101 HORIZONTAL

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
3508	-55.36	-13	-42.36	-68.03	-62.36	1.3	8.30	H	Pass
5260	-49.75	-13	-36.75	-67.48	-58.27	1.6	10.12	H	Pass
7015	-54.13	-13	-41.13	-75.87	-64.53	1.7	12.10	H	Pass





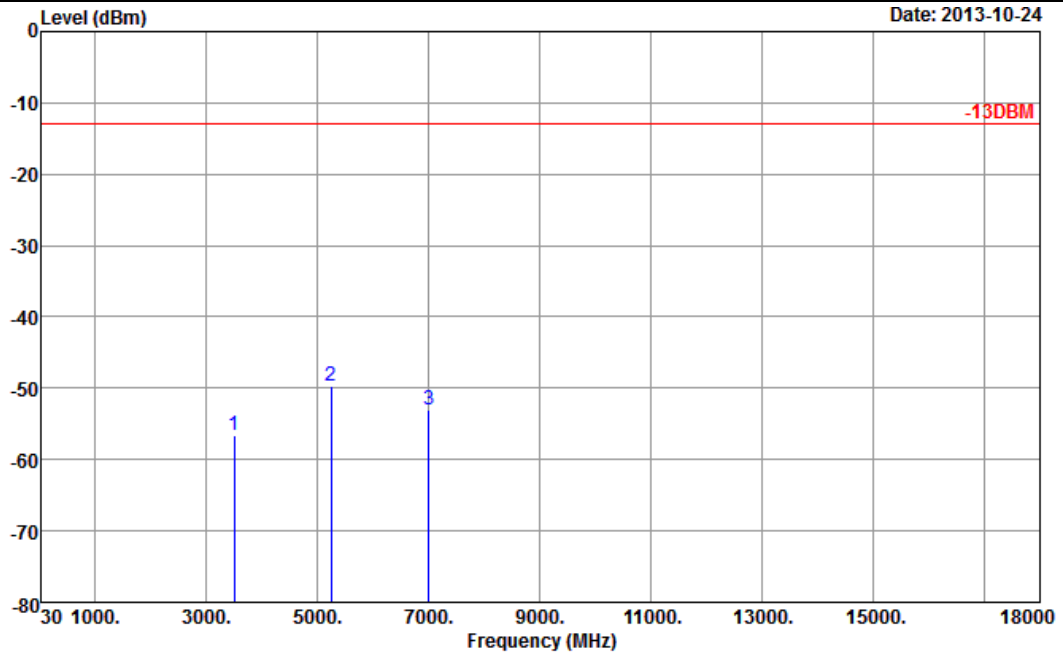
<b>Band :</b>	LTE Band 4	<b>Temperature :</b>	24~26°C
<b>Test Mode :</b>	1.4MHz QPSK RB Size 1 Offset 0	<b>Relative Humidity :</b>	49~52%
<b>Test Engineer :</b>	Robin Luo	<b>Polarization :</b>	Vertical
<b>Remark :</b>	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



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
3508	-55.48	-13	-42.48	-71.03	-62.48	1.3	8.3	V	Pass
5260	-49.27	-13	-36.27	-66.09	-57.79	1.6	10.12	V	Pass
7015	-53.22	-13	-40.22	-75.27	-63.62	1.7	12.1	V	Pass



<b>Band :</b>	LTE Band 4	<b>Temperature :</b>	24~26°C
<b>Test Mode :</b>	3MHz QPSK RB Size 1 Offset 0	<b>Relative Humidity :</b>	49~52%
<b>Test Engineer :</b>	Robin Luo	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		

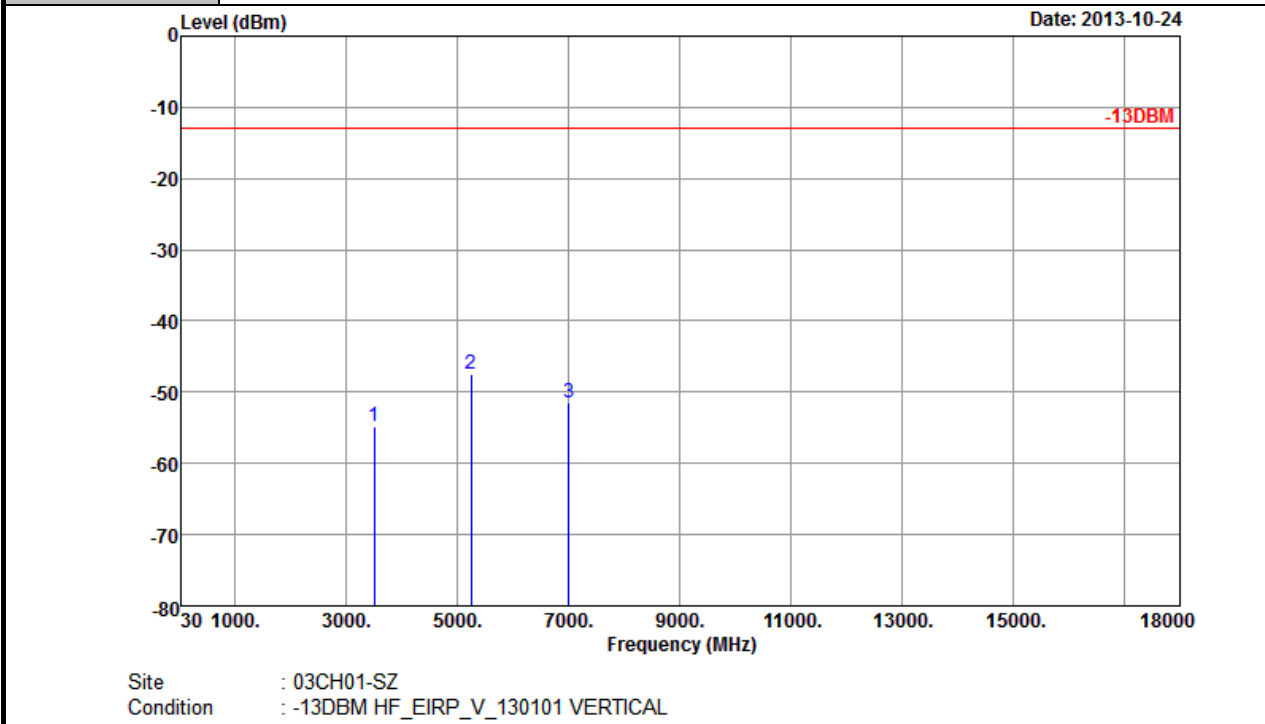


Site : 03CH01-SZ  
 Condition : -13DBM HF\_EIRP\_H\_130101 HORIZONTAL

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
3504	-56.68	-13	-43.68	-69.35	-63.68	1.3	8.30	H	Pass
5256	-49.67	-13	-36.67	-67.40	-58.19	1.6	10.12	H	Pass
7009	-52.93	-13	-39.93	-74.67	-63.33	1.7	12.10	H	Pass



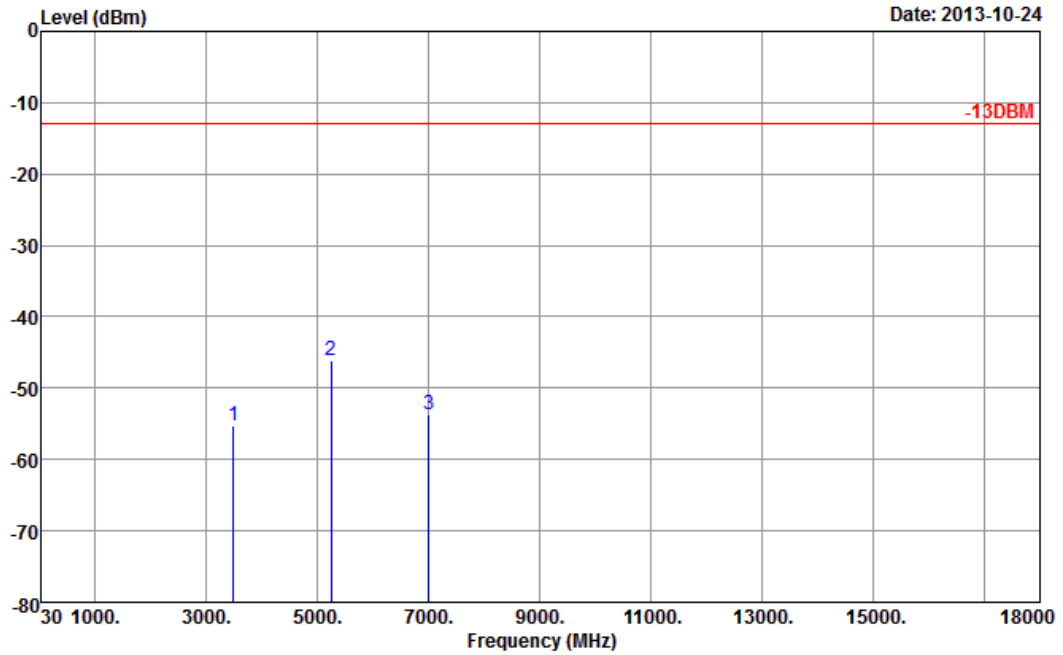
<b>Band :</b>	LTE Band 4	<b>Temperature :</b>	24~26°C
<b>Test Mode :</b>	3MHz QPSK RB Size 1 Offset 0	<b>Relative Humidity :</b>	49~52%
<b>Test Engineer :</b>	Robin Luo	<b>Polarization :</b>	Vertical
<b>Remark :</b>	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



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
3504	-54.81	-13	-41.81	-70.36	-61.81	1.3	8.3	V	Pass
5256	-47.38	-13	-34.38	-64.2	-55.90	1.6	10.12	V	Pass
7009	-51.52	-13	-38.52	-73.57	-61.92	1.7	12.1	V	Pass



<b>Band :</b>	LTE Band 4	<b>Temperature :</b>	24~26°C
<b>Test Mode :</b>	5MHz QPSK RB Size 1 Offset 0	<b>Relative Humidity :</b>	49~52%
<b>Test Engineer :</b>	Robin Luo	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		

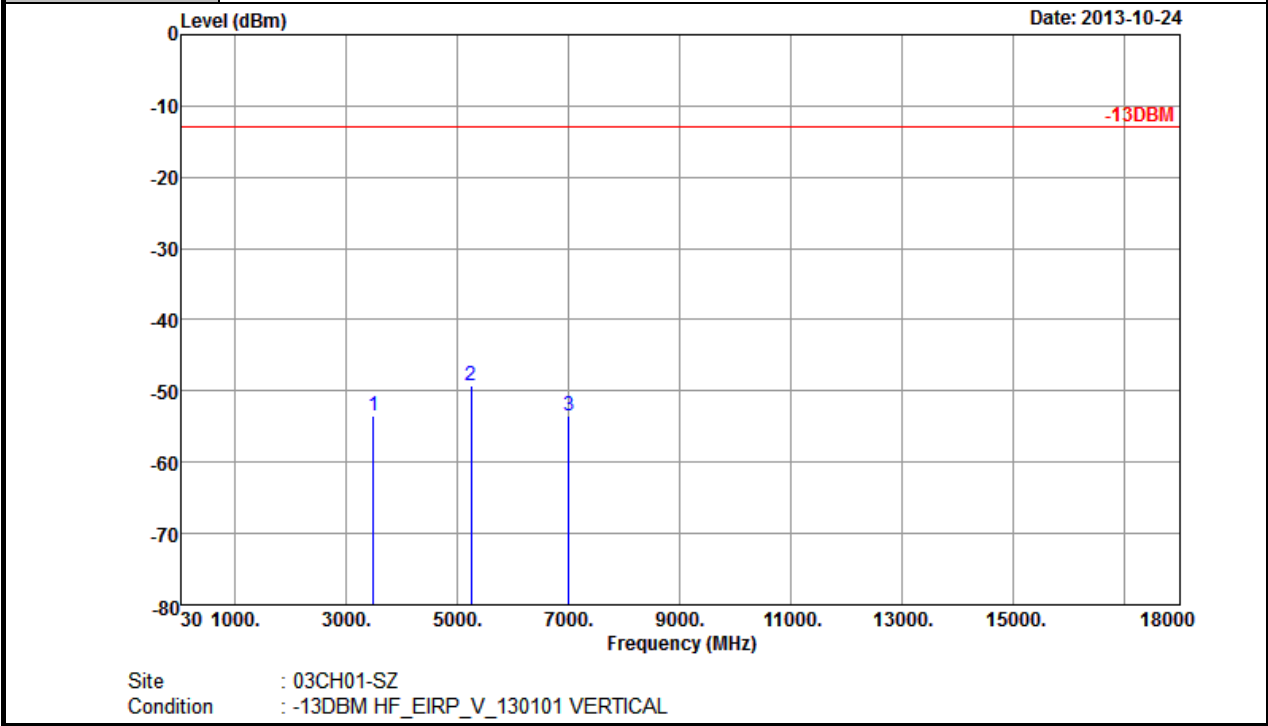


Site : 03CH01-SZ  
 Condition : -13DBM HF\_EIRP\_H\_130101 HORIZONTAL

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
3500	-55.24	-13	-42.24	-67.91	-62.24	1.3	8.30	H	Pass
5252	-46.23	-13	-33.23	-63.96	-54.75	1.6	10.12	H	Pass
7002	-53.67	-13	-40.67	-75.41	-64.07	1.7	12.10	H	Pass



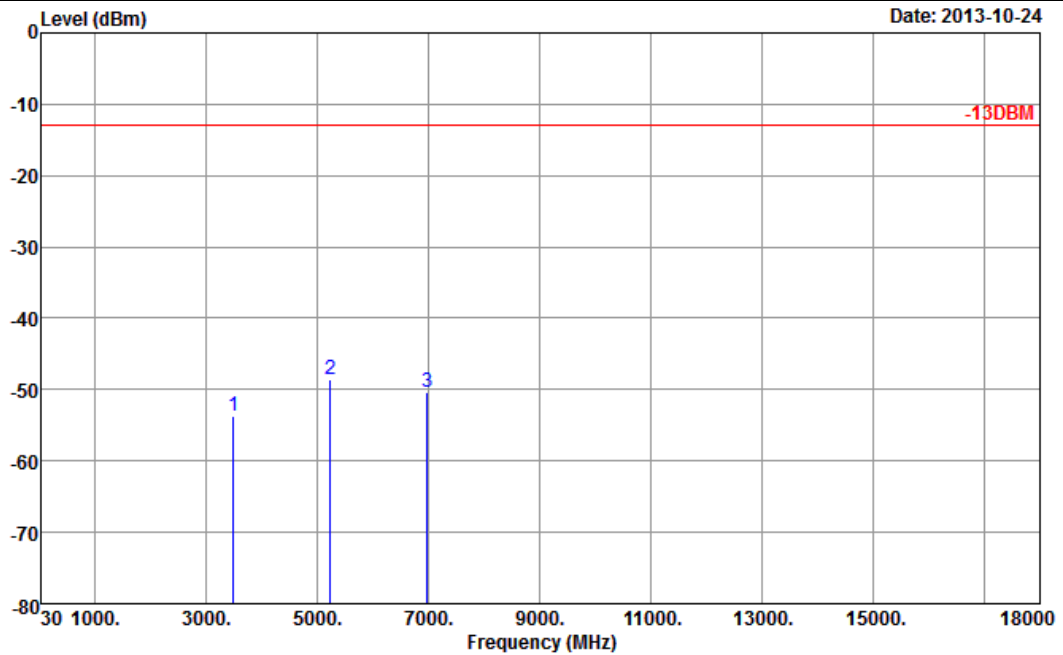
<b>Band :</b>	LTE Band 4	<b>Temperature :</b>	24~26°C
<b>Test Mode :</b>	5MHz QPSK RB Size 1 Offset 0	<b>Relative Humidity :</b>	49~52%
<b>Test Engineer :</b>	Robin Luo	<b>Polarization :</b>	Vertical
<b>Remark :</b>	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



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
3500	-53.42	-13	-40.42	-68.97	-60.42	1.3	8.3	V	Pass
5252	-49.33	-13	-36.33	-66.15	-57.85	1.6	10.12	V	Pass
7002	-53.42	-13	-40.42	-75.47	-63.82	1.7	12.1	V	Pass



<b>Band :</b>	LTE Band 4	<b>Temperature :</b>	24~26°C
<b>Test Mode :</b>	10MHz QPSK RB Size 1 Offset 0	<b>Relative Humidity :</b>	49~52%
<b>Test Engineer :</b>	Robin Luo	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		

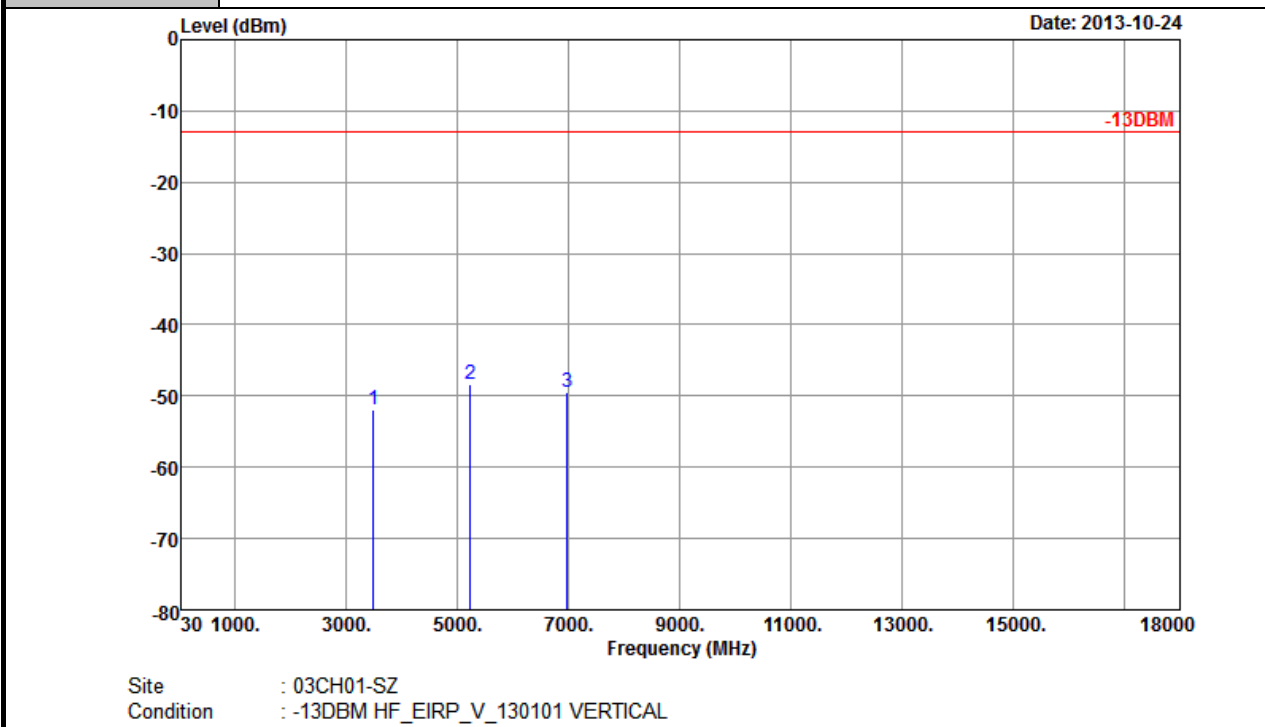


Site : 03CH01-SZ  
 Condition : -13DBM HF\_EIRP\_H\_130101 HORIZONTAL

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
3491	-53.70	-13	-40.70	-66.37	-60.70	1.3	8.30	H	Pass
5236	-48.48	-13	-35.48	-66.21	-57.00	1.6	10.12	H	Pass
6982	-50.35	-13	-37.35	-72.09	-60.75	1.7	12.10	H	Pass



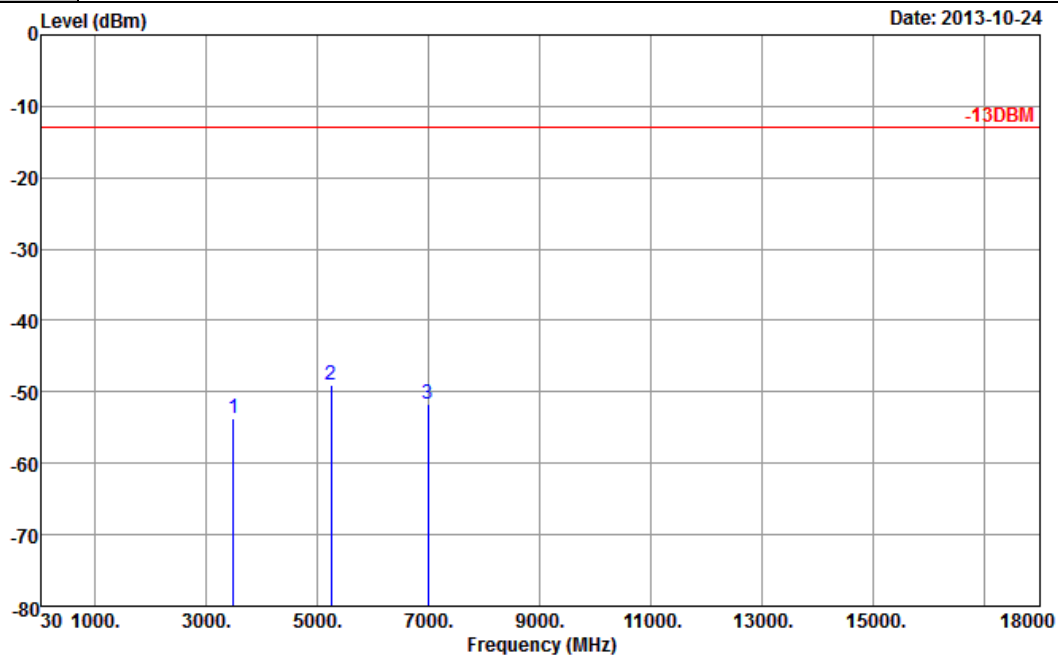
<b>Band :</b>	LTE Band 4	<b>Temperature :</b>	24~26°C
<b>Test Mode :</b>	10MHz QPSK RB Size 1 Offset 0	<b>Relative Humidity :</b>	49~52%
<b>Test Engineer :</b>	Robin Luo	<b>Polarization :</b>	Vertical
<b>Remark :</b>	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



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
3491	-52.03	-13	-39.03	-67.58	-59.03	1.3	8.3	V	Pass
5236	-48.34	-13	-35.34	-65.16	-56.86	1.6	10.12	V	Pass
6982	-49.36	-13	-36.36	-71.41	-59.76	1.7	12.1	V	Pass



<b>Band :</b>	LTE Band 4	<b>Temperature :</b>	24~26°C
<b>Test Mode :</b>	15MHz QPSK RB Size 1 Offset 37	<b>Relative Humidity :</b>	49~52%
<b>Test Engineer :</b>	Robin Luo	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



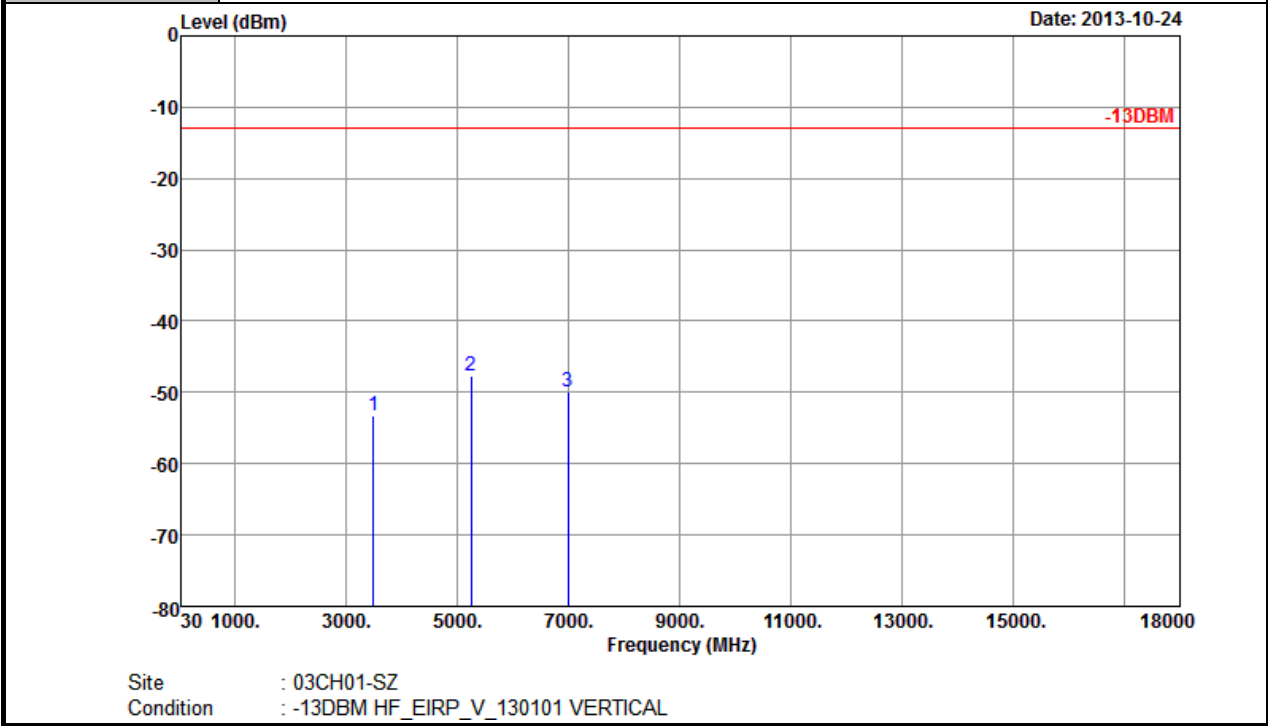
Site : 03CH01-SZ  
 Condition : -13DBM HF\_EIRP\_H\_130101 HORIZONTAL

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
3496	-53.73	-13	-40.73	-66.40	-60.73	1.3	8.30	H	Pass
5244	-48.93	-13	-35.93	-66.66	-57.45	1.6	10.12	H	Pass
6992	-51.68	-13	-38.68	-73.42	-62.08	1.7	12.10	H	Pass





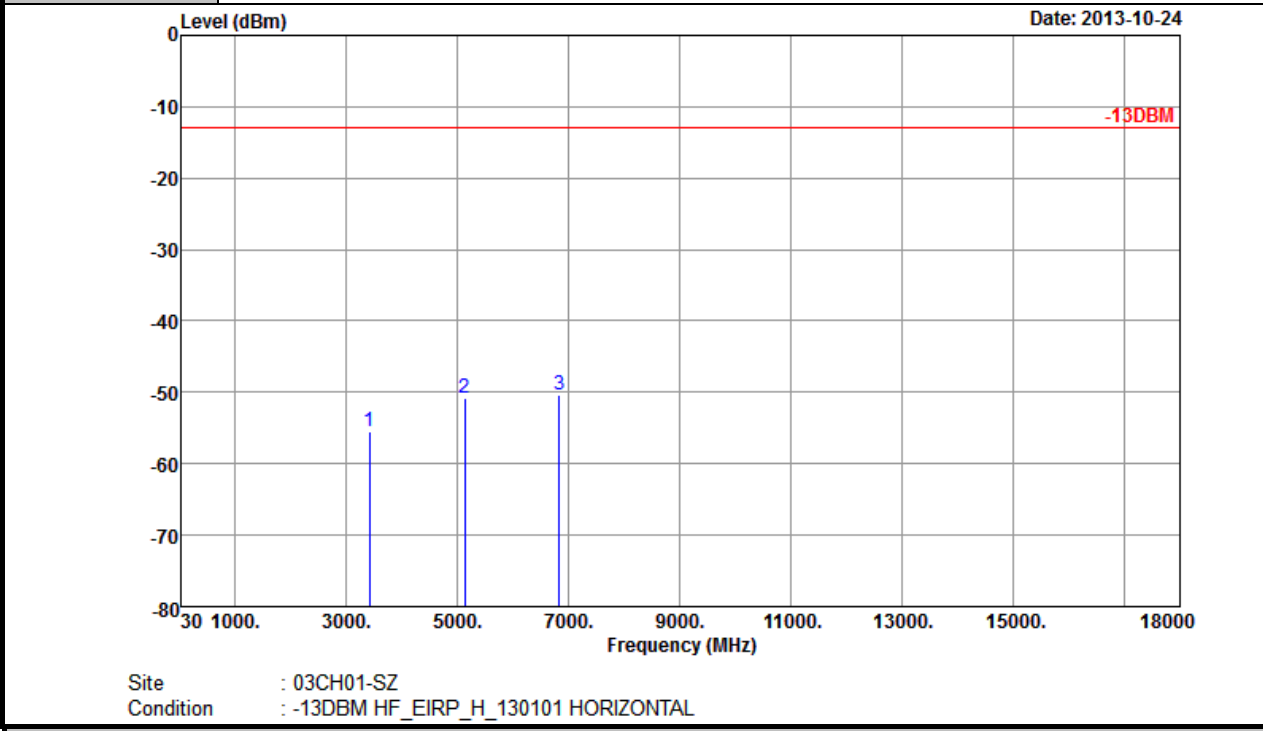
<b>Band :</b>	LTE Band 4	<b>Temperature :</b>	24~26°C
<b>Test Mode :</b>	15MHz QPSK RB Size 1 Offset 37	<b>Relative Humidity :</b>	49~52%
<b>Test Engineer :</b>	Robin Luo	<b>Polarization :</b>	Vertical
<b>Remark :</b>	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



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
3496	-53.31	-13	-40.31	-68.86	-60.31	1.3	8.3	V	Pass
5244	-47.74	-13	-34.74	-64.56	-56.26	1.6	10.12	V	Pass
6992	-49.96	-13	-36.96	-71.51	-59.86	1.7	12.1	V	Pass



<b>Band :</b>	LTE Band 4	<b>Temperature :</b>	24~26°C
<b>Test Mode :</b>	20MHz QPSK RB Size 1 Offset 0	<b>Relative Humidity :</b>	49~52%
<b>Test Engineer :</b>	Robin Luo	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		

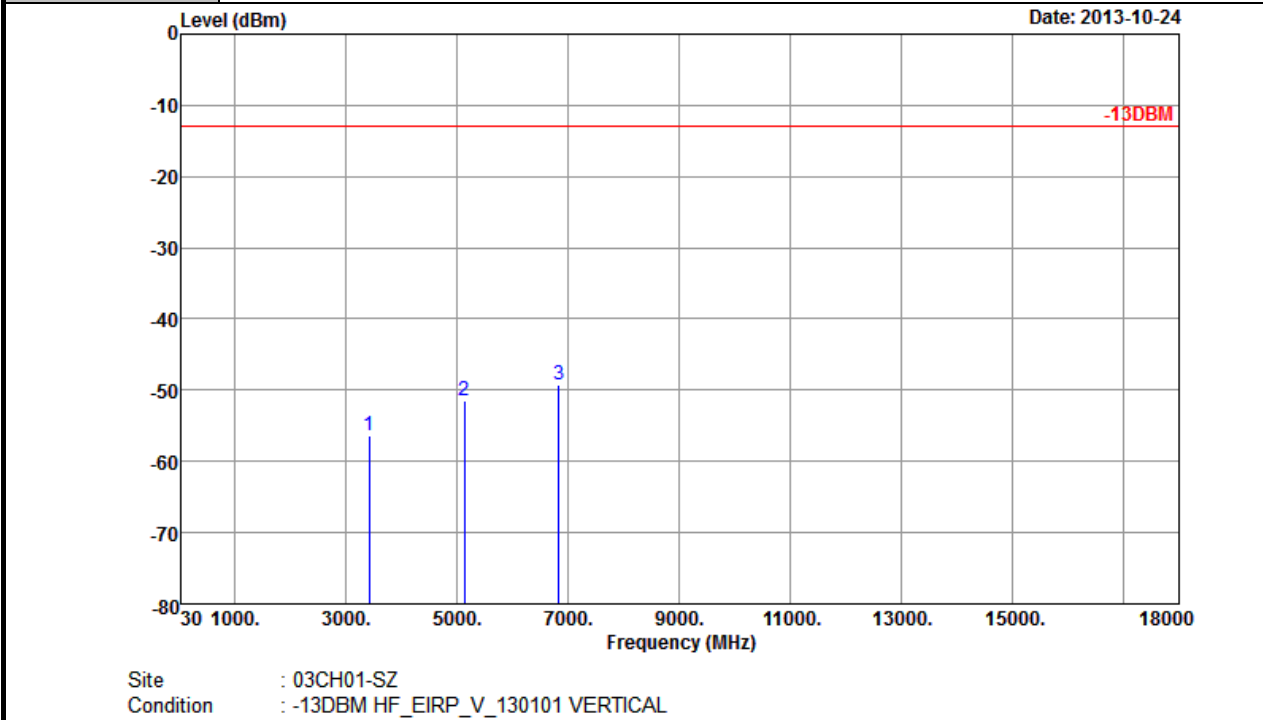


Site : 03CH01-SZ  
 Condition : -13DBM HF\_EIRP\_H\_130101 HORIZONTAL

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
3420	-55.58	-13	-42.58	-68.25	-62.58	1.3	8.30	H	Pass
5130	-50.74	-13	-37.74	-68.47	-59.26	1.6	10.12	H	Pass
6840	-50.30	-13	-37.30	-72.04	-60.70	1.7	12.10	H	Pass



<b>Band :</b>	LTE Band 4	<b>Temperature :</b>	24~26°C
<b>Test Mode :</b>	20MHz QPSK RB Size 1 Offset 0	<b>Relative Humidity :</b>	49~52%
<b>Test Engineer :</b>	Robin Luo	<b>Polarization :</b>	Vertical
<b>Remark :</b>	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		

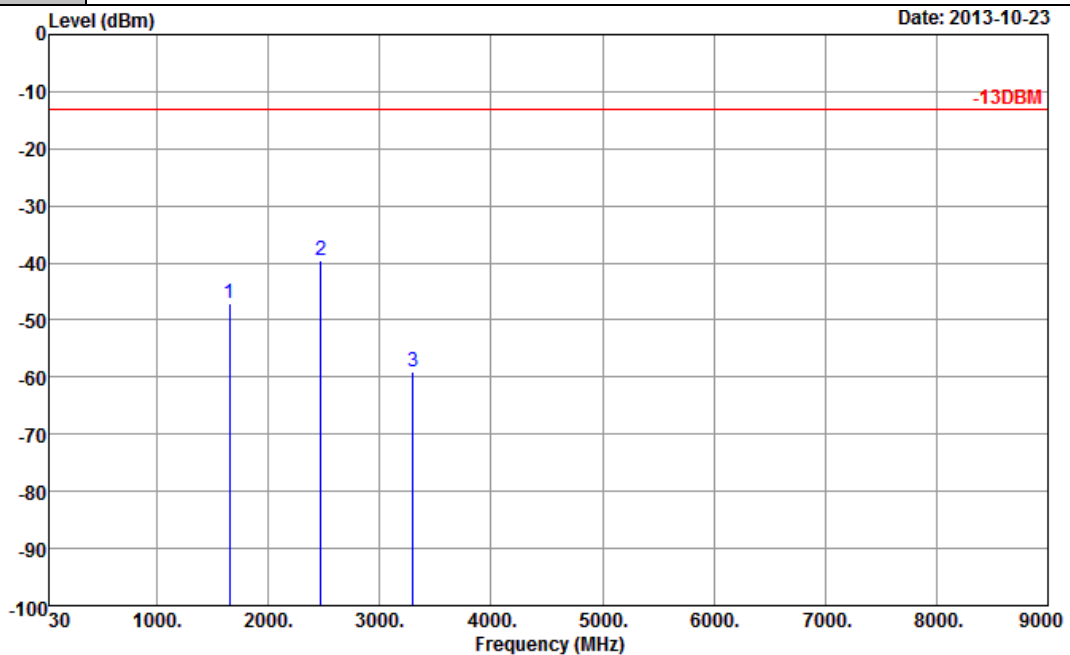


Site : 03CH01-SZ  
 Condition : -13DBM HF\_EIRP\_V\_130101 VERTICAL

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
3420	-56.34	-13	-43.34	-71.89	-63.34	1.3	8.3	V	Pass
5130	-51.52	-13	-38.52	-68.34	-60.04	1.6	10.12	V	Pass
6840	-49.21	-13	-36.21	-71.26	-59.61	1.7	12.1	V	Pass



<b>Band :</b>	LTE Band 5	<b>Temperature :</b>	24~26°C
<b>Test Mode :</b>	1.4MHz QPSK RB Size 1 Offset 5	<b>Relative Humidity :</b>	49~52%
<b>Test Engineer :</b>	Robin Luo	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		

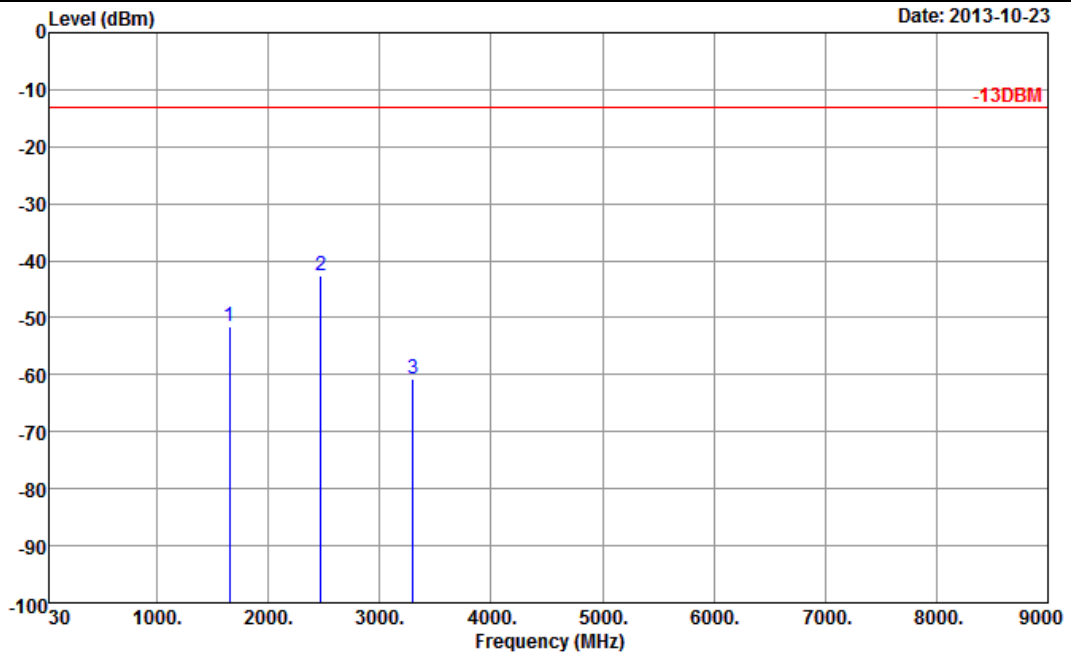


Site : 03CH01-SZ  
 Condition : -13DBM LF\_EIRP\_H\_130101 HORIZONTAL

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
1650	-46.99	-13	-33.99	-62.16	-50.24	0.92	6.32	H	Pass
2475	-39.48	-13	-26.48	-63.78	-42.03	1.2	5.90	H	Pass
3300	-59.05	-13	-46.05	-70.25	-63.50	1.2	7.80	H	Pass



<b>Band :</b>	LTE Band 5	<b>Temperature :</b>	24~26°C
<b>Test Mode :</b>	1.4MHz QPSK RB Size 1 Offset 5	<b>Relative Humidity :</b>	49~52%
<b>Test Engineer :</b>	Robin Luo	<b>Polarization :</b>	Vertical
<b>Remark :</b>	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		

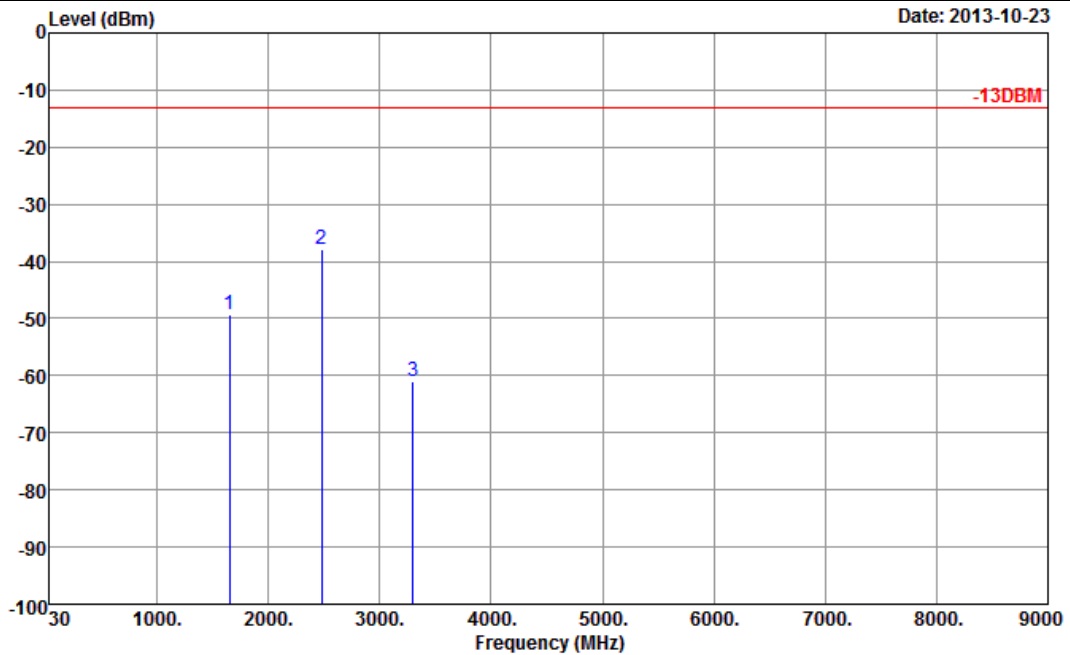


Site : 03CH01-SZ  
 Condition : -13DBM LF\_EIRP\_V\_130101 VERTICAL

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
1650	-51.53	-13	-38.53	-63.14	-54.78	0.92	6.32	V	Pass
2475	-42.56	-13	-29.56	-64.24	-45.11	1.20	5.90	V	Pass
3300	-60.63	-13	-47.63	-73.06	-65.08	1.20	7.80	V	Pass



<b>Band :</b>	LTE Band 5	<b>Temperature :</b>	24~26°C
<b>Test Mode :</b>	3MHz QPSK RB Size 1 Offset 7	<b>Relative Humidity :</b>	49~52%
<b>Test Engineer :</b>	Robin Luo	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		

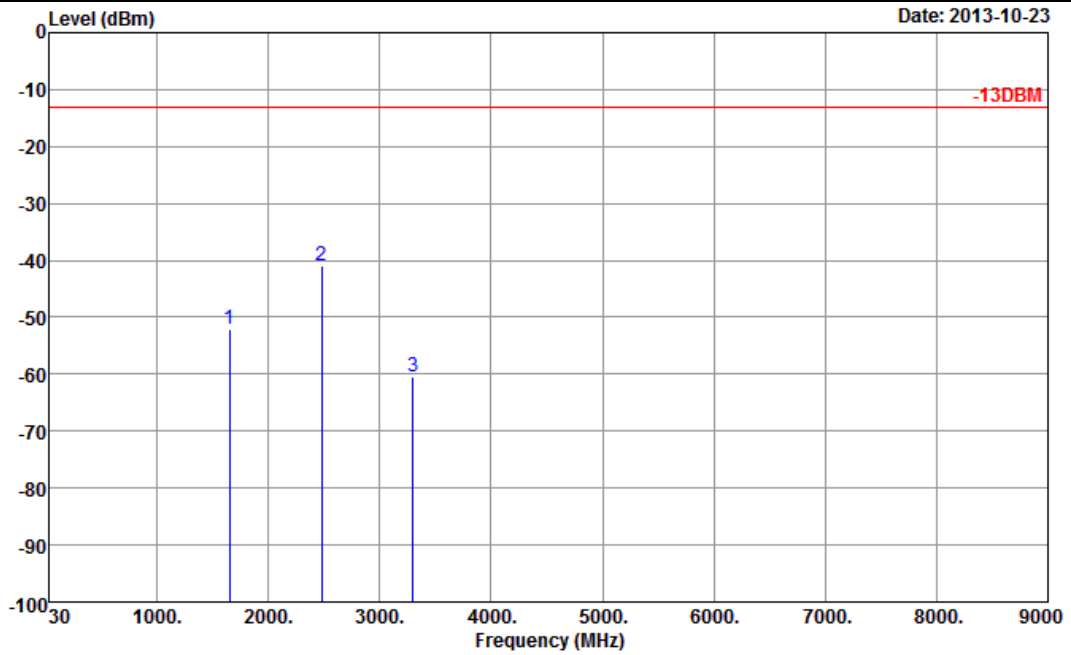


Site : 03CH01-SZ  
 Condition : -13DBM LF\_EIRP\_H\_130101 HORIZONTAL

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
1651	-49.38	-13	-36.38	-64.14	-52.63	0.92	6.32	H	Pass
2476	-38.01	-13	-25.01	-62.64	-40.56	1.2	5.90	H	Pass
3301	-61.04	-13	-48.04	-71.64	-65.49	1.2	7.80	H	Pass



<b>Band :</b>	LTE Band 5	<b>Temperature :</b>	24~26°C
<b>Test Mode :</b>	3MHz QPSK RB Size 1 Offset 7	<b>Relative Humidity :</b>	49~52%
<b>Test Engineer :</b>	Robin Luo	<b>Polarization :</b>	Vertical
<b>Remark :</b>	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		

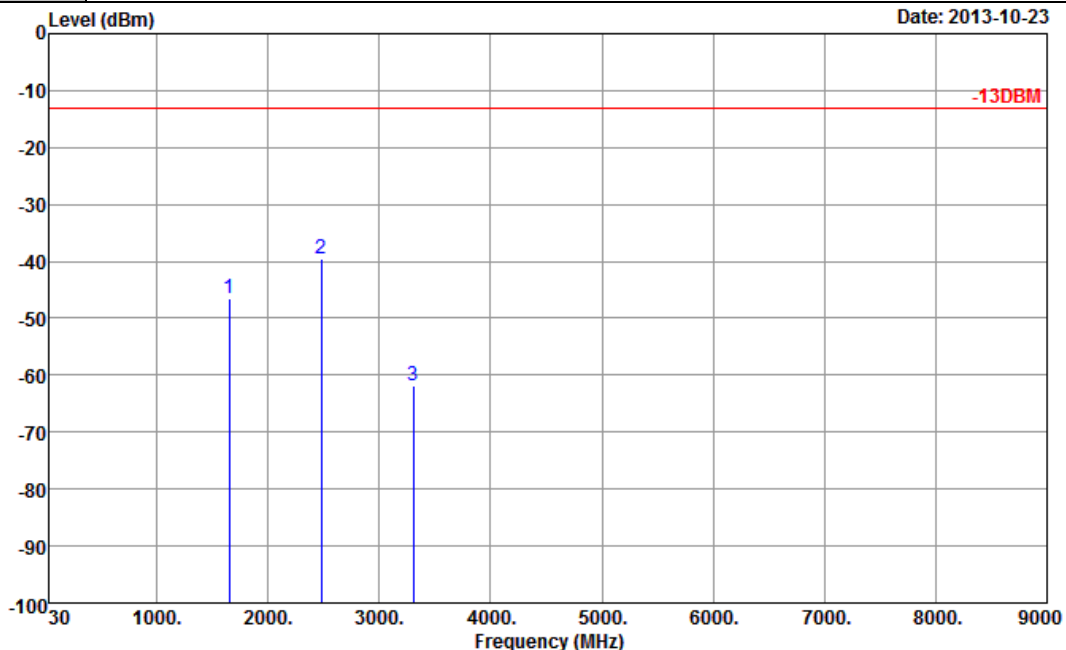


Site : 03CH01-SZ  
 Condition : -13DBM LF\_EIRP\_V\_130101 VERTICAL

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
1651	-51.95	-13	-38.95	-63.93	-55.20	0.92	6.32	V	Pass
2476	-40.96	-13	-27.96	-63.04	-43.51	1.20	5.90	V	Pass
3301	-60.49	-13	-47.49	-72.32	-64.94	1.20	7.80	V	Pass



<b>Band :</b>	LTE Band 5	<b>Temperature :</b>	24~26°C
<b>Test Mode :</b>	5MHz QPSK RB Size 1 Offset 12	<b>Relative Humidity :</b>	49~52%
<b>Test Engineer :</b>	Robin Luo	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



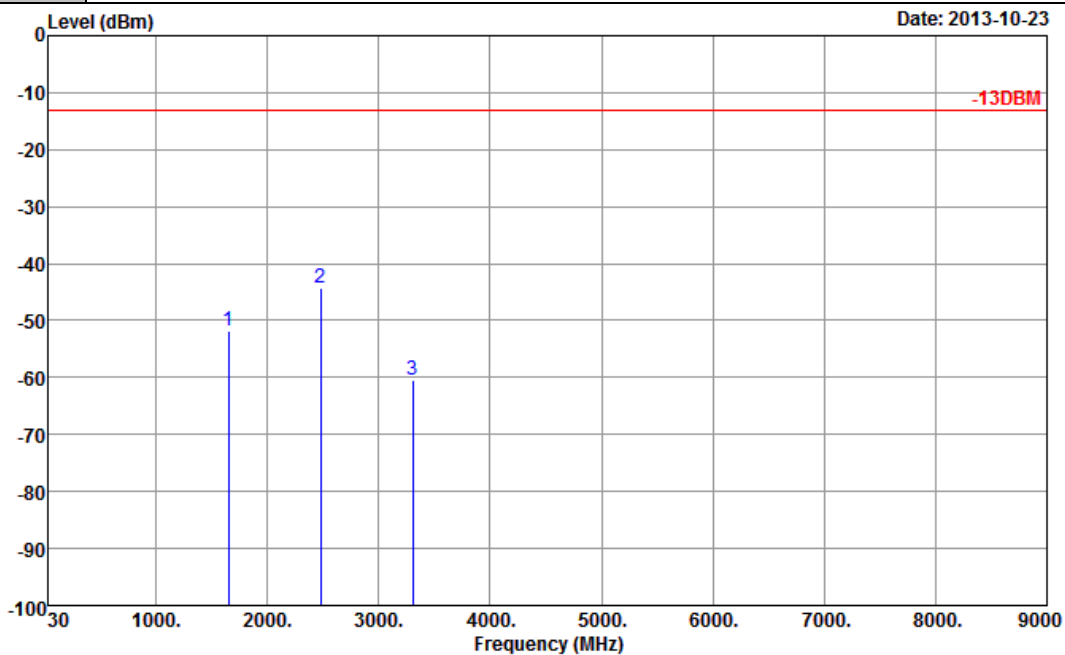
Site : 03CH01-SZ  
 Condition : -13DBM LF\_EIRP\_H\_130101 HORIZONTAL

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
1653	-46.65	-13	-33.65	-62.33	-49.90	0.92	6.32	H	Pass
2480	-39.58	-13	-26.58	-63.89	-42.13	1.2	5.90	H	Pass
3306	-61.87	-13	-48.87	-72.47	-66.32	1.2	7.80	H	Pass





<b>Band :</b>	LTE Band 5	<b>Temperature :</b>	24~26°C
<b>Test Mode :</b>	5MHz QPSK RB Size 1 Offset 12	<b>Relative Humidity :</b>	49~52%
<b>Test Engineer :</b>	Robin Luo	<b>Polarization :</b>	Vertical
<b>Remark :</b>	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		

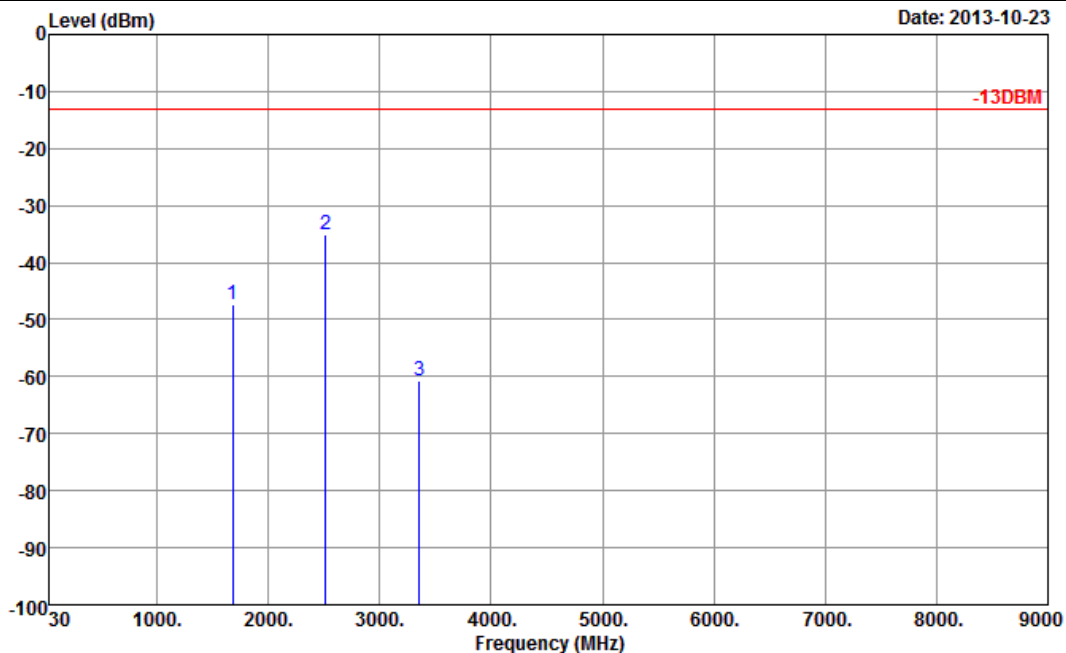


Site : 03CH01-SZ  
 Condition : -13DBM LF\_EIRP\_V\_130101 VERTICAL

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
1653	-51.87	-13	-38.87	-63.87	-55.12	0.92	6.32	V	Pass
2480	-44.28	-13	-31.28	-65.68	-46.83	1.20	5.90	V	Pass
3306	-60.46	-13	-47.46	-72.29	-64.91	1.20	7.80	V	Pass



<b>Band :</b>	LTE Band 5	<b>Temperature :</b>	24~26°C
<b>Test Mode :</b>	10MHz QPSK RB Size 1 Offset 0	<b>Relative Humidity :</b>	49~52%
<b>Test Engineer :</b>	Robin Luo	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		

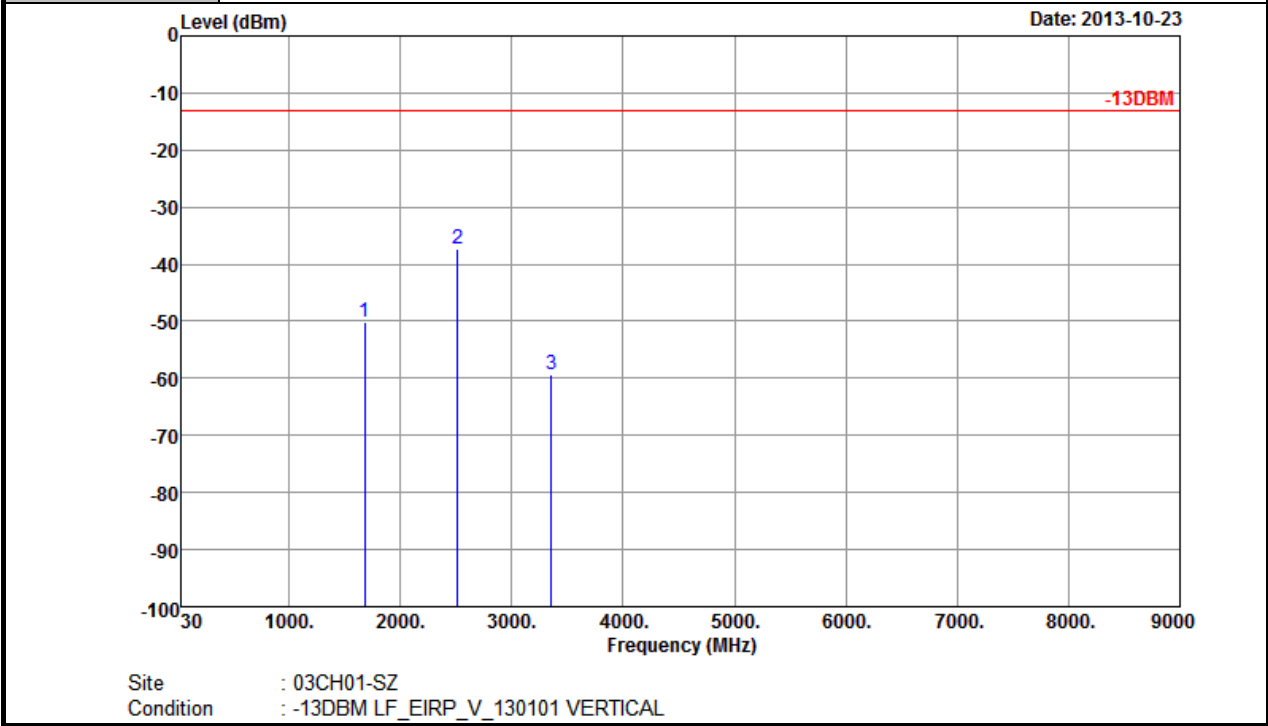


Site : 03CH01-SZ  
 Condition : -13DBM LF\_EIRP\_H\_130101 HORIZONTAL

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
1679	-47.47	-13	-34.47	-63.24	-50.46	0.75	5.89	H	Pass
2518	-35.01	-13	-22.01	-60.36	-37.72	1.12	5.98	H	Pass
3358	-60.66	-13	-47.66	-71.86	-65.06	1.25	7.80	H	Pass



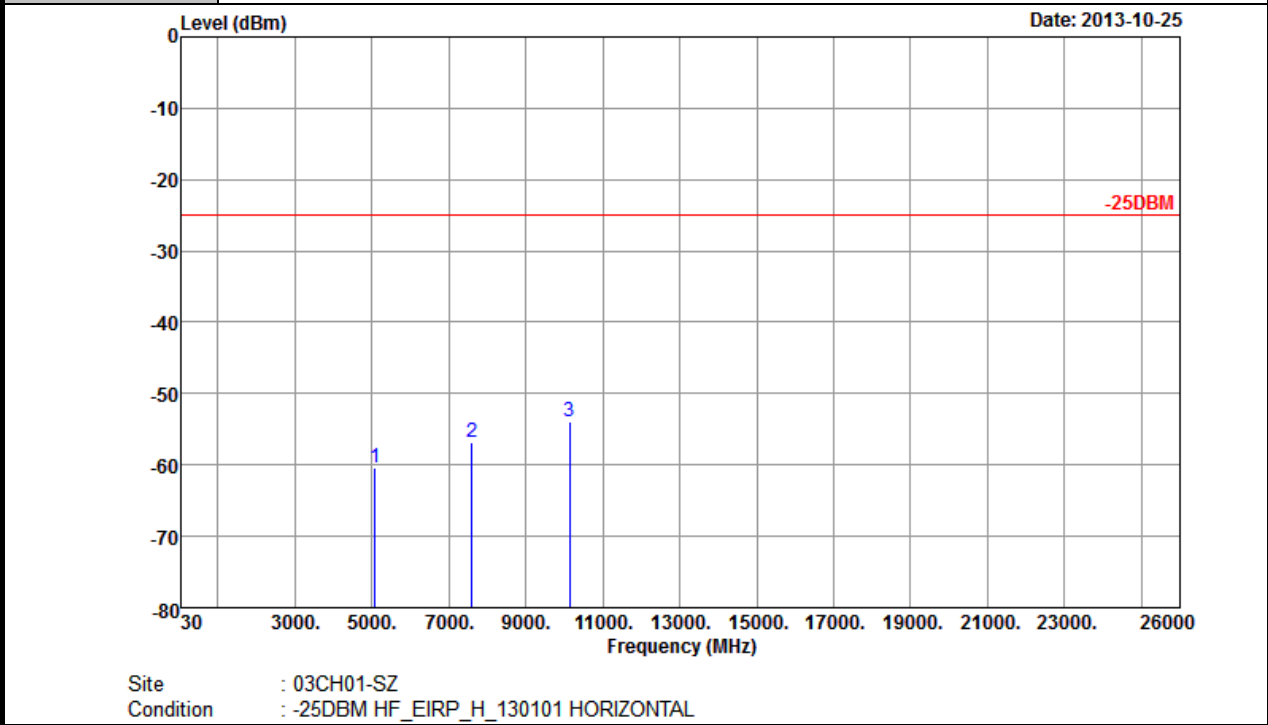
<b>Band :</b>	LTE Band 5	<b>Temperature :</b>	24~26°C
<b>Test Mode :</b>	10MHz QPSK RB Size 1 Offset 0	<b>Relative Humidity :</b>	49~52%
<b>Test Engineer :</b>	Robin Luo	<b>Polarization :</b>	Vertical
<b>Remark :</b>	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



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
1679	-50.01	-13	-37.01	-62.75	-53.00	0.75	5.89	V	Pass
2518	-37.34	-13	-24.34	-60.23	-40.05	1.12	5.98	V	Pass
3358	-59.21	-13	-46.21	-71.64	-63.61	1.25	7.80	V	Pass



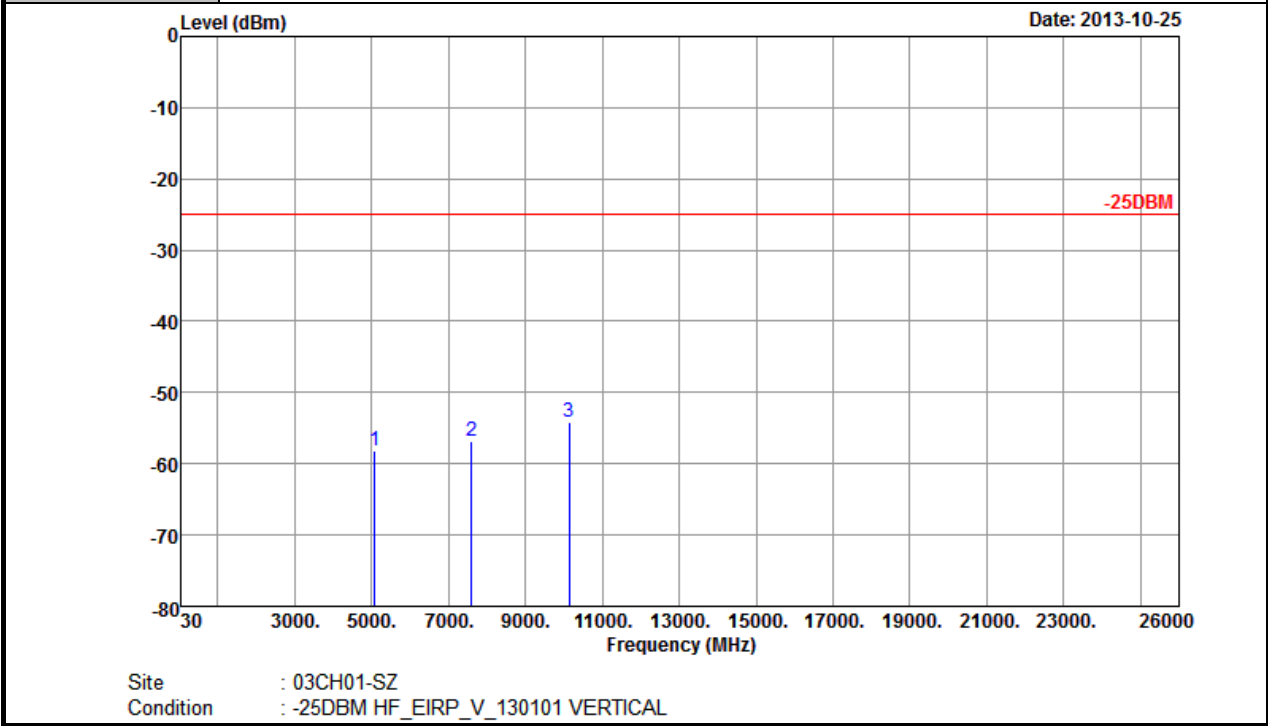
<b>Band :</b>	LTE Band 7	<b>Temperature :</b>	24~26°C
<b>Test Mode :</b>	5MHz QPSK RB Size 1 Offset 12	<b>Relative Humidity :</b>	49~52%
<b>Test Engineer :</b>	Robin Luo	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



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
5070.00	-60.47	-25	-35.47	-71.41	-38.20	1.2	7.60	H	Pass
7605.00	-56.82	-25	-31.82	-75.63	-68.60	1.56	9.90	H	Pass
10140.00	-53.90	-25	-28.90	-77.42	-67.90	1.78	11.60	H	Pass



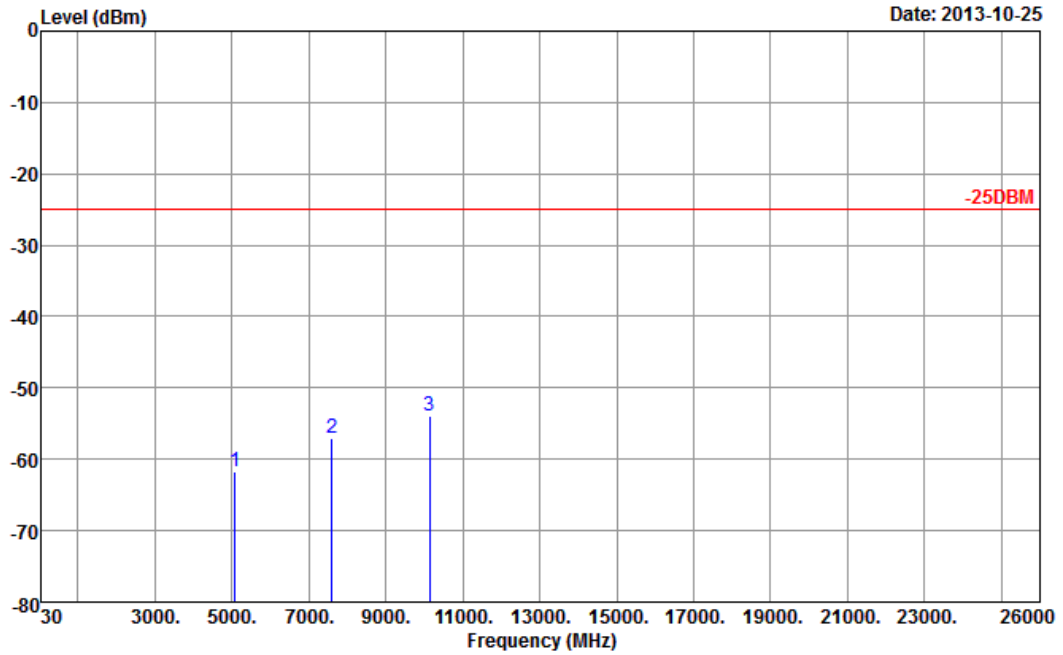
<b>Band :</b>	LTE Band 7	<b>Temperature :</b>	24~26°C
<b>Test Mode :</b>	5MHz QPSK RB Size 1 Offset 12	<b>Relative Humidity :</b>	49~52%
<b>Test Engineer :</b>	Robin Luo	<b>Polarization :</b>	Vertical
<b>Remark :</b>	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



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
5070	-58.15	-25	-33.15	-70.87	-43.20	1.2	7.60	V	Pass
7605	-56.78	-25	-31.78	-76.03	-70.30	1.56	9.90	V	Pass
10140	-54.19	-25	-29.19	-77.42	-64.60	1.78	11.60	V	Pass



<b>Band :</b>	LTE Band 7	<b>Temperature :</b>	24~26°C
<b>Test Mode :</b>	10MHz QPSK RB Size 1 Offset 24	<b>Relative Humidity :</b>	49~52%
<b>Test Engineer :</b>	Robin Luo	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



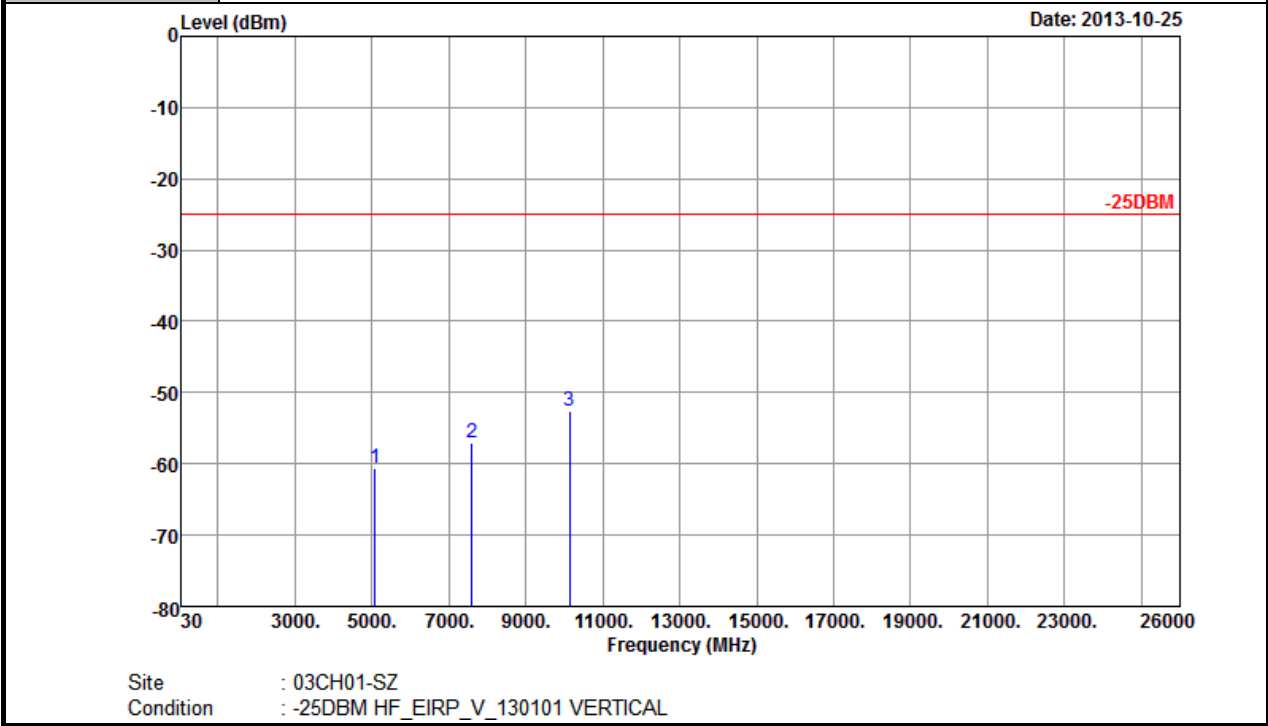
Site : 03CH01-SZ  
 Condition : -25DBM HF\_EIRP\_H\_130101 HORIZONTAL

Date: 2013-10-25

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
5070.00	-61.76	-25	-36.76	-72.70	-38.20	1.2	7.60	H	Pass
7605.00	-56.96	-25	-31.96	-75.77	-68.60	1.56	9.90	H	Pass
10140.00	-53.94	-25	-28.94	-77.46	-67.90	1.78	11.60	H	Pass



<b>Band :</b>	LTE Band 7	<b>Temperature :</b>	24~26°C
<b>Test Mode :</b>	10MHz QPSK RB Size 1 Offset 24	<b>Relative Humidity :</b>	49~52%
<b>Test Engineer :</b>	Robin Luo	<b>Polarization :</b>	Vertical
<b>Remark :</b>	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		

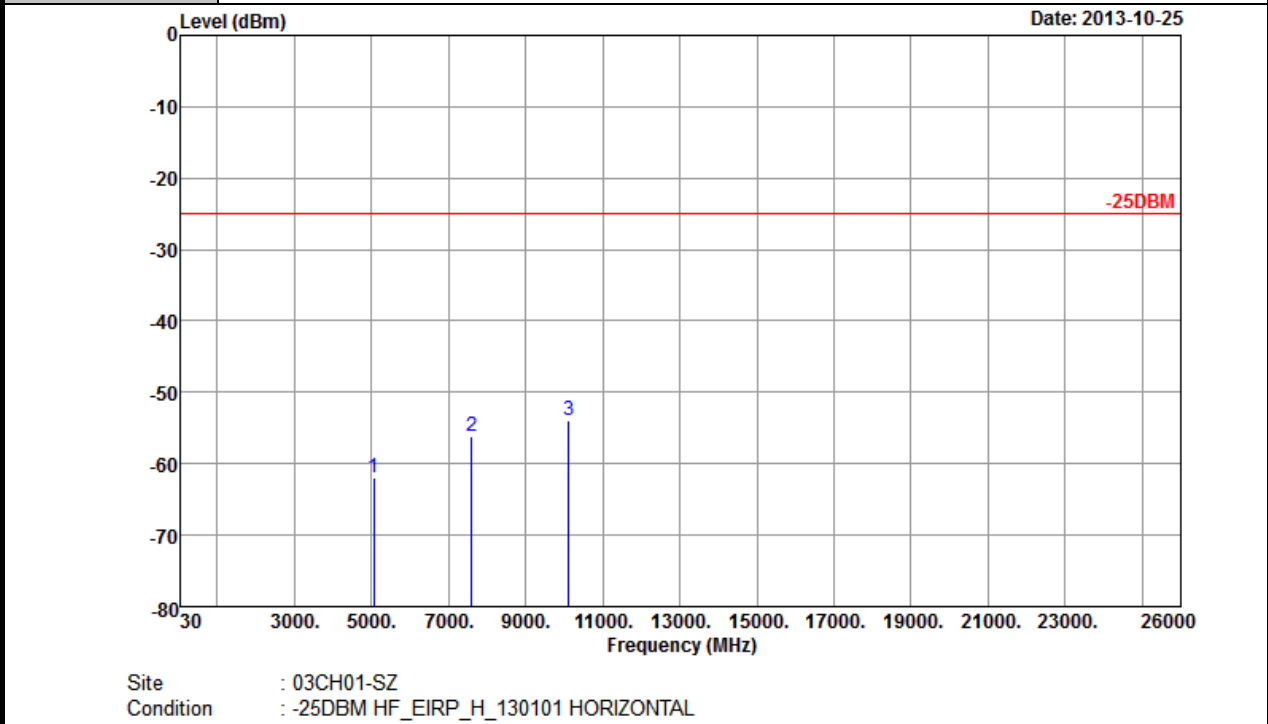


Site : 03CH01-SZ  
 Condition : -25DBM HF\_EIRP\_V\_130101 VERTICAL

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
5070	-60.68	-25	-35.68	-73.4	-43.20	1.2	7.60	V	Pass
7605	-57.02	-25	-32.02	-76.27	-70.30	1.56	9.90	V	Pass
10140	-52.70	-25	-27.70	-75.93	-64.60	1.78	11.60	V	Pass



<b>Band :</b>	LTE Band 7	<b>Temperature :</b>	24~26°C
<b>Test Mode :</b>	15MHz QPSK RB Size 1 Offset 74	<b>Relative Humidity :</b>	49~52%
<b>Test Engineer :</b>	Robin Luo	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		

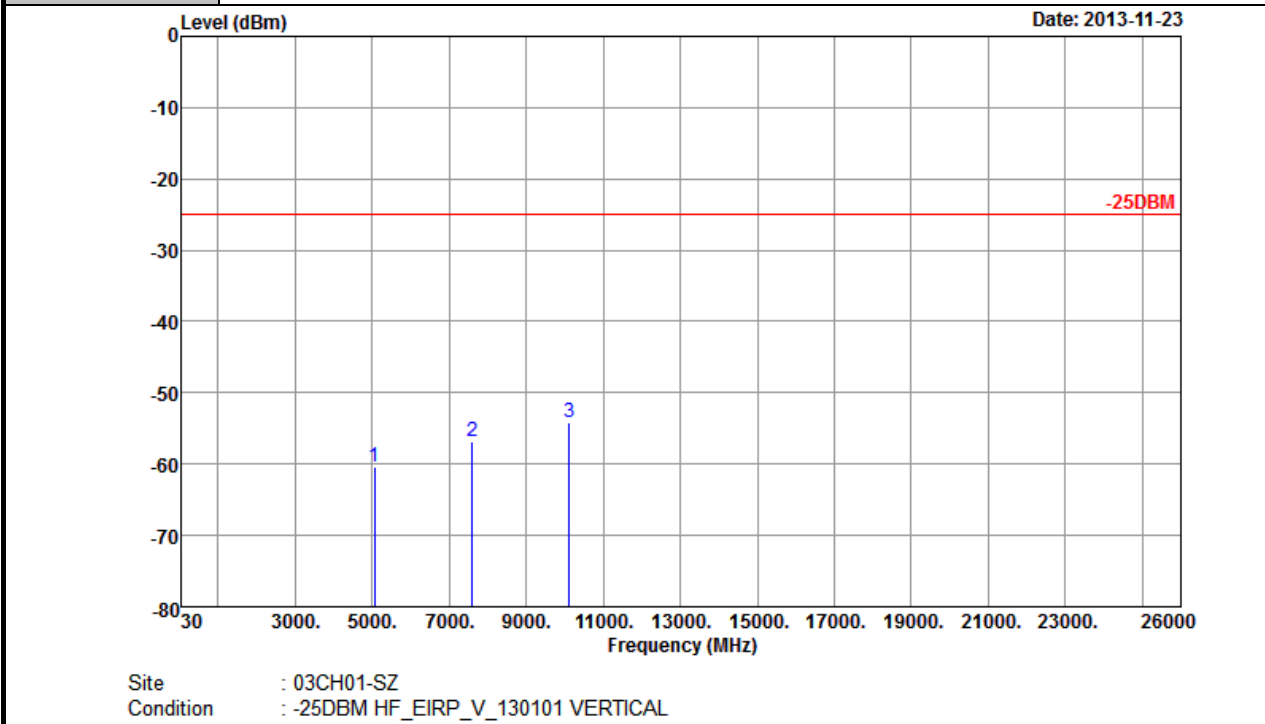


Frequency ( MHz )	EIRP ( dBm )	Limit ( dBm )	Over Limit ( dB )	SPA Reading ( dBm )	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain ( dBi )	Polarization ( H/V )	Result
5060.00	-62.00	-25	-37.00	-72.94	-38.20	1.2	7.60	H	Pass
7590.00	-56.16	-25	-31.16	-74.97	-68.60	1.56	9.90	H	Pass
10120.00	-54.01	-25	-29.01	-77.53	-67.90	1.78	11.60	H	Pass





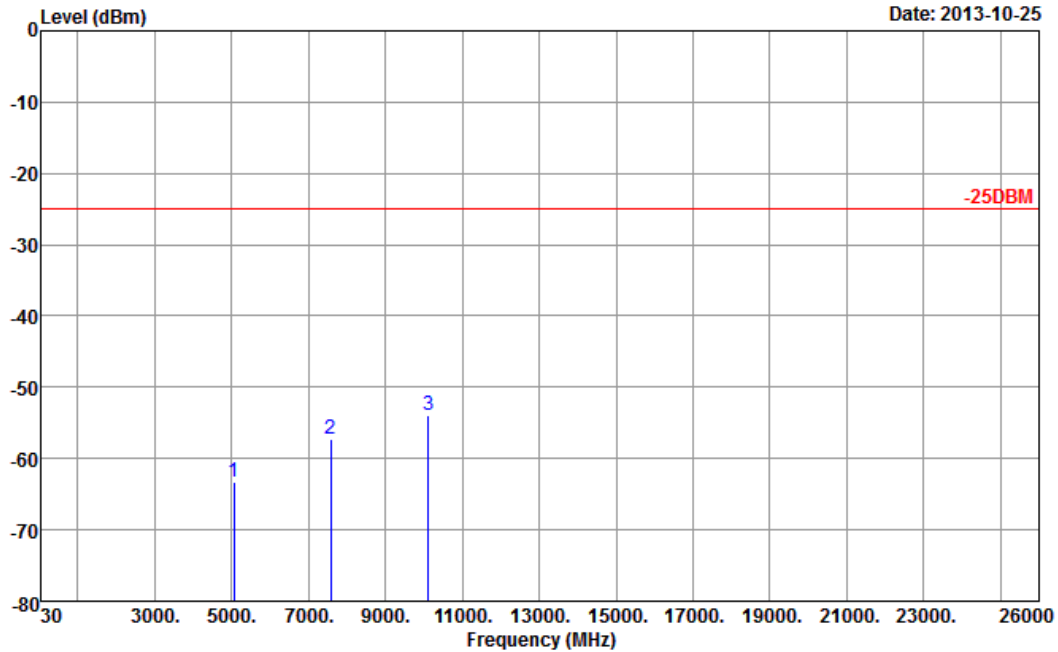
<b>Band :</b>	LTE Band 7	<b>Temperature :</b>	24~26°C
<b>Test Mode :</b>	15MHz QPSK RB Size 1 Offset 74	<b>Relative Humidity :</b>	49~52%
<b>Test Engineer :</b>	Robin Luo	<b>Polarization :</b>	Vertical
<b>Remark :</b>	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



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
5060	-60.40	-25	-35.40	-73.12	-43.20	1.2	7.60	V	Pass
7590	-56.93	-25	-31.93	-76.18	-70.30	1.56	9.90	V	Pass
10120	-54.16	-25	-29.16	-77.39	-64.60	1.78	11.60	V	Pass



<b>Band :</b>	LTE Band 7	<b>Temperature :</b>	24~26°C
<b>Test Mode :</b>	20MHz QPSK RB Size 1 Offset 99	<b>Relative Humidity :</b>	49~52%
<b>Test Engineer :</b>	Robin Luo	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



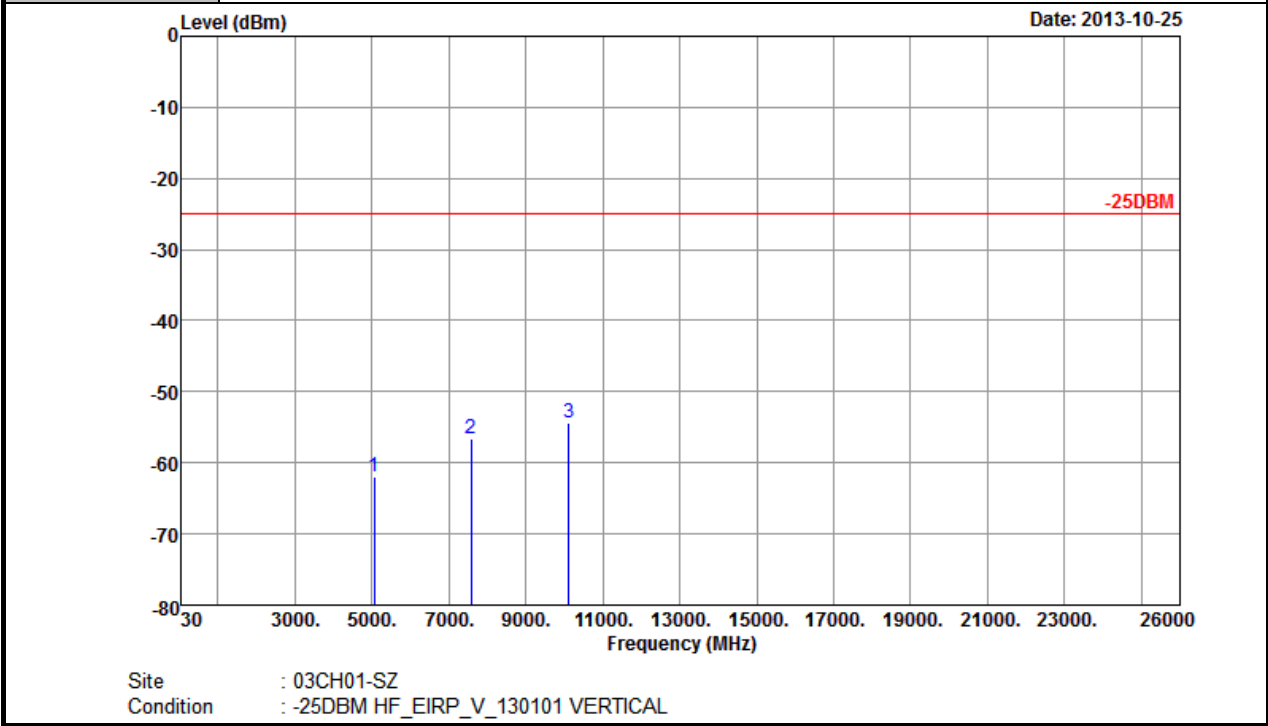
Site : 03CH01-SZ  
 Condition : -25DBM HF\_EIRP\_H\_130101 HORIZONTAL

Date: 2013-10-25

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
5054.00	-63.29	-25	-38.29	-74.23	-38.20	1.2	7.60	H	Pass
7581.00	-57.18	-25	-32.18	-75.99	-68.60	1.56	9.90	H	Pass
10108.00	-53.93	-25	-28.93	-77.45	-67.90	1.78	11.60	H	Pass



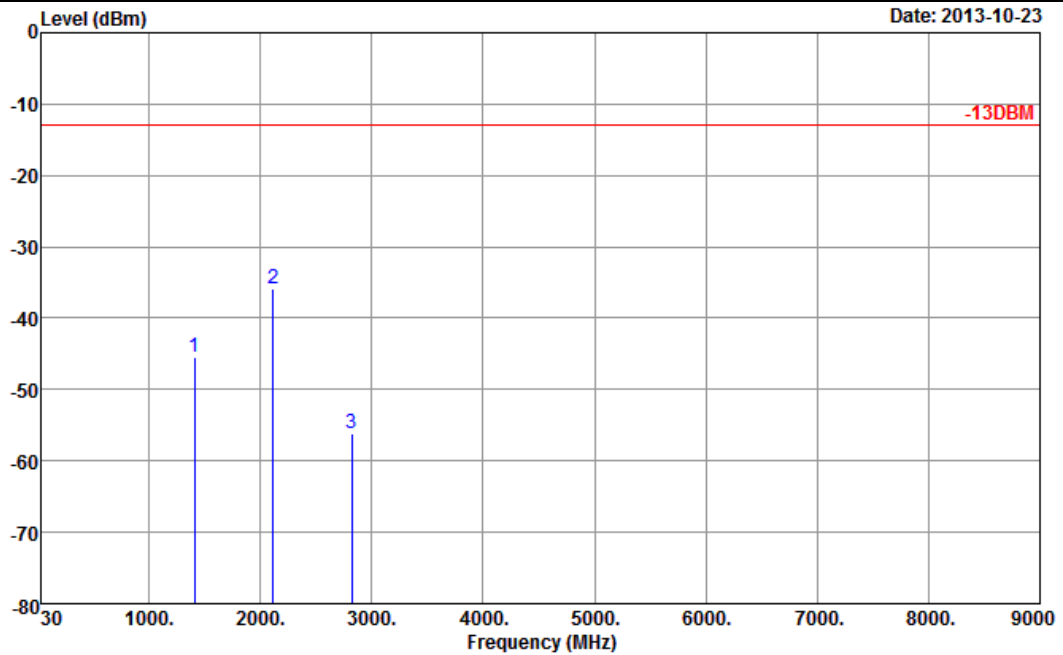
<b>Band :</b>	LTE Band 7	<b>Temperature :</b>	24~26°C
<b>Test Mode :</b>	20MHz QPSK RB Size 1 Offset 99	<b>Relative Humidity :</b>	49~52%
<b>Test Engineer :</b>	Robin Luo	<b>Polarization :</b>	Vertical
<b>Remark :</b>	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



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
5054	-61.87	-25	-36.87	-74.59	-43.20	1.2	7.60	V	Pass
7581	-56.54	-25	-31.54	-75.79	-70.30	1.56	9.90	V	Pass
10108	-54.28	-25	-29.28	-77.51	-64.60	1.78	11.60	V	Pass



<b>Band :</b>	LTE Band 17	<b>Temperature :</b>	24~26°C
<b>Test Mode :</b>	5MHz QPSK RB Size 1 Offset 0	<b>Relative Humidity :</b>	49~52%
<b>Test Engineer :</b>	Robin Luo	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		

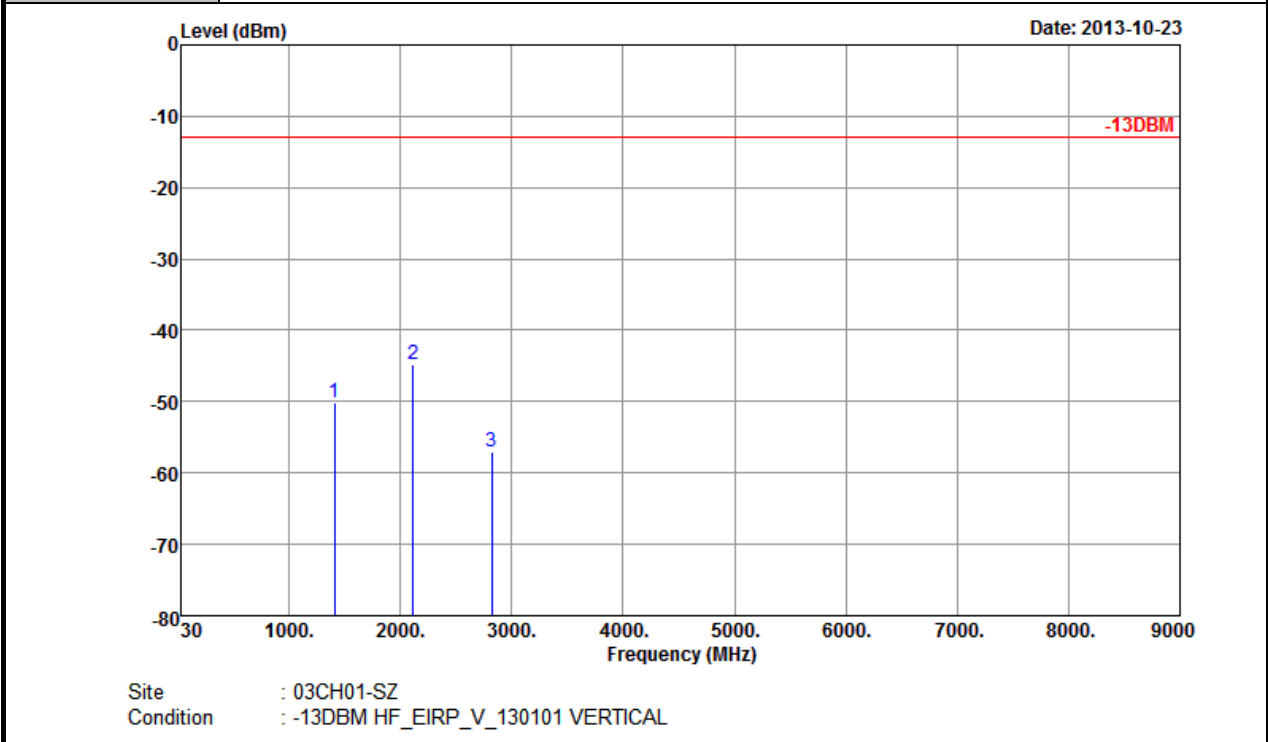


Site : 03CH01-SZ  
 Condition : -13DBM HF\_EIRP\_H\_130101 HORIZONTAL

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
1408	-45.44	-13	-32.44	-61.18	-48.37	0.78	5.86	H	Pass
2113	-35.93	-13	-22.93	-60.63	-38.53	1	5.75	H	Pass
2818	-56.17	-13	-43.17	-66.53	-60.47	1.05	7.50	H	Pass



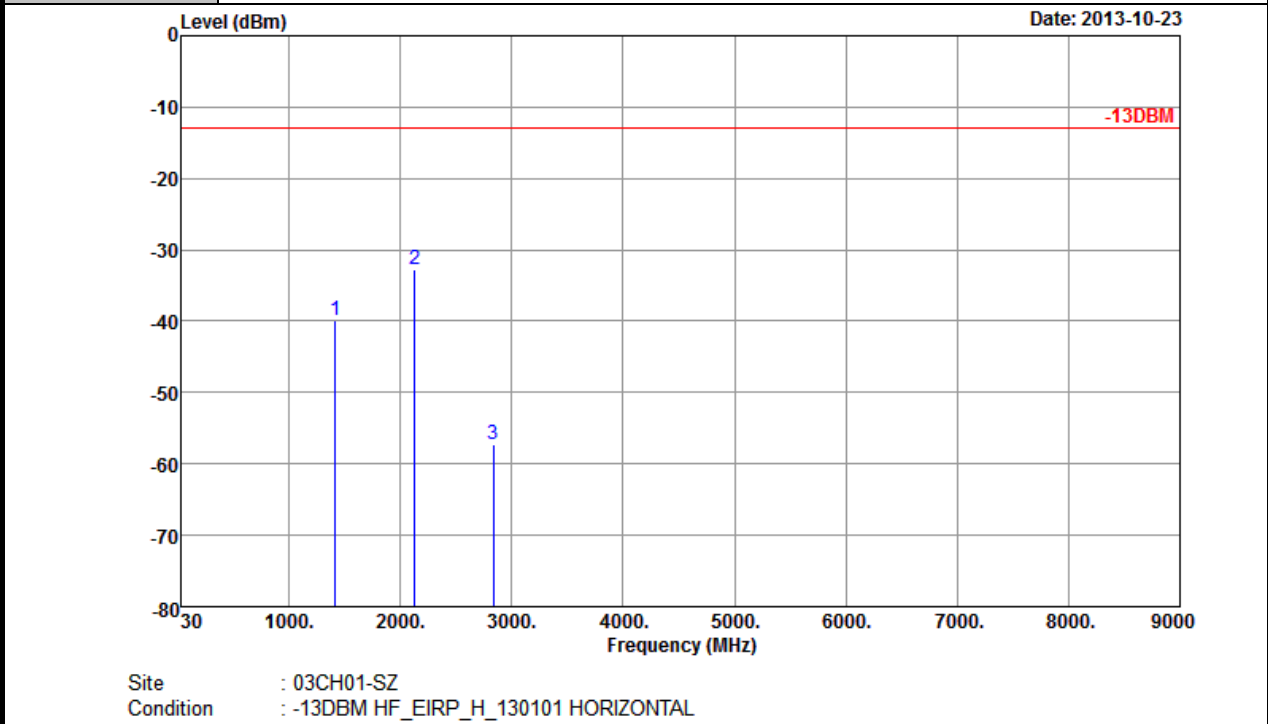
<b>Band :</b>	LTE Band 17	<b>Temperature :</b>	24~26°C
<b>Test Mode :</b>	5MHz QPSK RB Size 1 Offset 0	<b>Relative Humidity :</b>	49~52%
<b>Test Engineer :</b>	Robin Luo	<b>Polarization :</b>	Vertical
<b>Remark :</b>	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



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
1408	-50.06	-13	-37.06	-62.35	-52.99	0.78	5.86	V	Pass
2113	-44.80	-13	-31.80	-66.07	-47.40	1.00	5.75	V	Pass
2818	-57.07	-13	-44.07	-68.66	-61.37	1.05	7.50	V	Pass



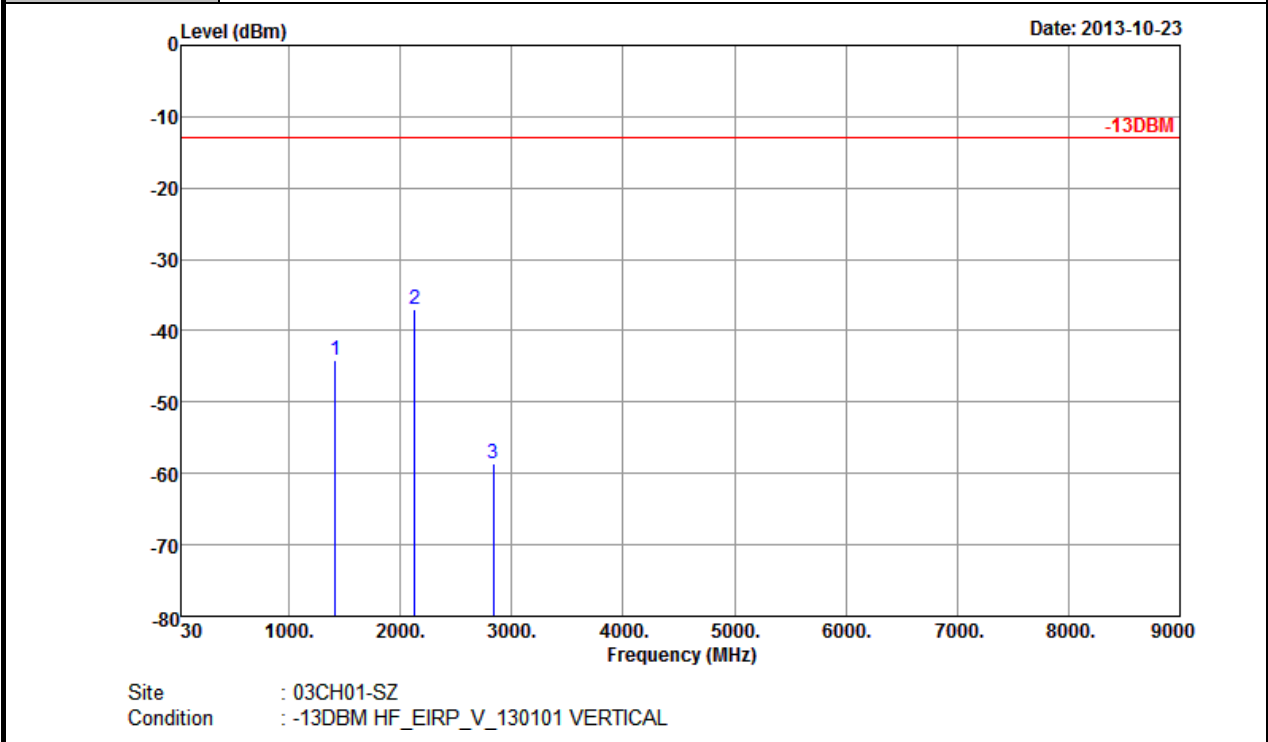
<b>Band :</b>	LTE Band 17	<b>Temperature :</b>	24~26°C
<b>Test Mode :</b>	10MHz QPSK RB Size 1 Offset 24	<b>Relative Humidity :</b>	49~52%
<b>Test Engineer :</b>	Robin Luo	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	Spurious emissions within 30-10th harmonic were found more than 20dB below limit 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
1417	-39.98	-13	-26.98	-56.54	-42.91	0.78	5.86	H	Pass
2128	-32.73	-13	-19.73	-57.80	-35.33	1	5.75	H	Pass
2836	-57.32	-13	-44.32	-67.68	-61.62	1.05	7.50	H	Pass



<b>Band :</b>	LTE Band 17	<b>Temperature :</b>	24~26°C
<b>Test Mode :</b>	10MHz QPSK RB Size 1 Offset 24	<b>Relative Humidity :</b>	49~52%
<b>Test Engineer :</b>	Robin Luo	<b>Polarization :</b>	Vertical
<b>Remark :</b>	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
1417	-44.21	-13	-31.21	-57.50	-47.14	0.78	5.86	V	Pass
2128	-37.05	-13	-24.05	-59.43	-39.65	1.00	5.75	V	Pass
2836	-58.64	-13	-45.64	-70.23	-62.94	1.05	7.50	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  $\pm 0.00025\%$  ( $\pm 2.5\text{ppm}$ ) of the center frequency.

### 3.8.2 Measuring Instruments

Measuring equipment is listed in the section 4 of this test report.

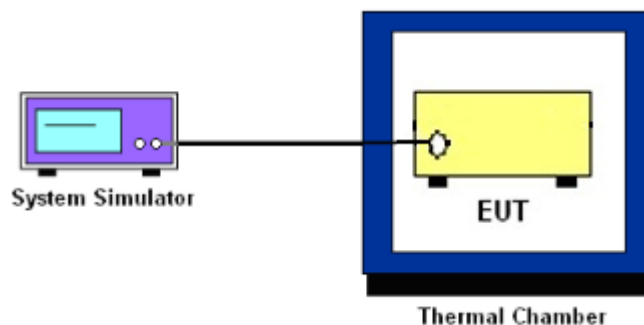
### 3.8.3 Test Procedures for Temperature Variation

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  $-30^{\circ}\text{C}$  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  $10^{\circ}\text{C}$  step up to  $50^{\circ}\text{C}$ . 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  $25\pm 5^{\circ}\text{C}$  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.

### 3.8.5 Test Setup





3.8.6 Test Result of Temperature Variation

Band :	LTE Band 2 (QPSK)		Limit (ppm) :	2.5	
Temperature (°C)	BW 1.4MHz		BW 3MHz		Result
	Freq. Dev. (Hz)	Deviation (ppm)	Freq. Dev. (Hz)	Deviation (ppm)	
-30	-22.3	-0.012	-23.4	-0.012	PASS
-20	-21.5	-0.011	-23.1	-0.012	
-10	-22.1	-0.012	-22.7	-0.012	
0	-21.4	-0.011	-22.3	-0.012	
10	-21.8	-0.012	-21.9	-0.012	
20	-21.7	-0.012	-21.5	-0.011	
30	-23.4	-0.012	-21.2	-0.011	
40	-22.3	-0.012	-21.8	-0.012	
50	-25.1	-0.013	-22.2	-0.012	

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	-19.9	-0.011	-19.2	-0.010	PASS
-20	-20.5	-0.011	-20.3	-0.011	
-10	-18.5	-0.010	-19.2	-0.010	
0	-17.6	-0.009	-20.8	-0.011	
10	18.3	+0.010	-20.3	-0.011	
20	-20.3	-0.011	-21.1	-0.011	
30	-21.8	-0.012	-20.4	-0.011	
40	-21.4	-0.011	-20.9	-0.011	
50	-22.0	-0.012	-21.4	-0.011	



Band :	LTE Band 2 (QPSK)		Limit (ppm) :	2.5	
Temperature (°C)	BW 15MHz		BW 20MHz		Result
	Freq. Dev. (Hz)	Deviation (ppm)	Freq. Dev. (Hz)	Deviation (ppm)	
-30	-22.5	-0.012	-18.8	-0.010	PASS
-20	-21.3	-0.011	-18.2	-0.010	
-10	-20.8	-0.011	-16.7	-0.009	
0	-21.3	-0.011	-17.5	-0.009	
10	-21.7	-0.012	-18.7	-0.010	
20	-20.6	-0.011	19.9	+0.011	
30	-20.7	-0.011	-21.5	-0.011	
40	-19.7	-0.010	-20.8	-0.011	
50	-21.7	-0.012	-24.2	-0.013	

Band :	LTE Band 2 (16QAM)		Limit (ppm) :	2.5	
Temperature (°C)	BW 1.4MHz		BW 3MHz		Result
	Freq. Dev. (Hz)	Deviation (ppm)	Freq. Dev. (Hz)	Deviation (ppm)	
-30	-22.0	-0.012	-21.3	-0.011	PASS
-20	-20.4	-0.011	-20.8	-0.011	
-10	-19.7	-0.010	-20.2	-0.011	
0	-20.7	-0.011	-18.6	-0.010	
10	-20.4	-0.011	-19.7	-0.010	
20	-21.1	-0.011	-17.9	-0.010	
30	-21.8	-0.012	-19.2	-0.010	
40	-21.3	-0.011	-18.7	-0.010	
50	-23.4	-0.012	-20.6	-0.011	



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	-20.7	-0.011	-22.0	-0.012	PASS
-20	-18.9	-0.010	-21.3	-0.011	
-10	-19.2	-0.010	-20.8	-0.011	
0	-18.4	-0.010	-19.7	-0.010	
10	-20.7	-0.011	-20.3	-0.011	
20	-21.0	-0.011	-21.8	-0.012	
30	-22.4	-0.012	-19.7	-0.010	
40	-21.4	-0.011	-20.6	-0.011	
50	-23.3	-0.012	-22.8	-0.012	

Band :	LTE Band 2 (16QAM)		Limit (ppm) :	2.5	
Temperature (°C)	BW 15MHz		BW 20MHz		Result
	Freq. Dev. (Hz)	Deviation (ppm)	Freq. Dev. (Hz)	Deviation (ppm)	
-30	-20.4	-0.011	-23.6	-0.013	PASS
-20	-20.1	-0.011	-21.4	-0.011	
-10	-18.5	-0.010	-20.9	-0.011	
0	-17.2	-0.009	-22.3	-0.012	
10	-19.5	-0.010	-21.5	-0.011	
20	-18.7	-0.010	-20.7	-0.011	
30	-18.9	-0.010	-25.3	-0.013	
40	-20.3	-0.011	-22.6	-0.012	
50	-21.9	-0.012	-27.6	-0.015	



Band :	LTE Band 4 (QPSK)		Limit (ppm) :	2.5	
Temperature (°C)	BW 1.4MHz		BW 3MHz		Result
	Freq. Dev. (Hz)	Deviation (ppm)	Freq. Dev. (Hz)	Deviation (ppm)	
-30	11.6	+0.007	10.5	+0.006	PASS
-20	10.3	+0.006	9.5	+0.005	
-10	11.5	+0.007	10.5	+0.006	
0	10.2	+0.006	9.8	+0.006	
10	10.7	+0.006	10.2	+0.006	
20	10.9	+0.006	10.6	+0.006	
30	9.8	+0.006	9.7	+0.006	
40	9.5	+0.005	11.6	+0.007	
50	11.2	+0.006	12.6	+0.007	

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	10.7	+0.006	14.7	+0.008	PASS
-20	10.5	+0.006	12.8	+0.007	
-10	11.3	+0.007	13.7	+0.008	
0	10.7	+0.006	11.8	+0.007	
10	10.6	+0.006	12.5	+0.007	
20	11.6	+0.007	13.2	+0.008	
30	10.2	+0.006	12.4	+0.007	
40	10.7	+0.006	13.7	+0.008	
50	11.2	+0.006	14.7	+0.008	



Band :	LTE Band 4 (QPSK)		Limit (ppm) :	2.5	
Temperature (°C)	BW 15MHz		BW 20MHz		Result
	Freq. Dev. (Hz)	Deviation (ppm)	Freq. Dev. (Hz)	Deviation (ppm)	
-30	-10.6	-0.006	10.9	+0.006	PASS
-20	-10.2	-0.006	10.2	+0.006	
-10	-9.5	-0.005	9.8	+0.006	
0	-9.8	-0.006	10.3	+0.006	
10	10.2	+0.006	9.7	+0.006	
20	10.9	+0.006	9.4	+0.005	
30	10.5	+0.006	10.2	+0.006	
40	10.2	+0.006	11.5	+0.007	
50	10.7	+0.006	11.9	+0.007	

Band :	LTE Band 4 (16QAM)		Limit (ppm) :	2.5	
Temperature (°C)	BW 1.4MHz		BW 3MHz		Result
	Freq. Dev. (Hz)	Deviation (ppm)	Freq. Dev. (Hz)	Deviation (ppm)	
-30	13.3	+0.008	12.0	+0.007	PASS
-20	11.8	+0.007	11.2	+0.006	
-10	12.4	+0.007	10.8	+0.006	
0	11.8	+0.007	11.5	+0.007	
10	12.4	+0.007	10.9	+0.006	
20	11.3	+0.007	11.7	+0.007	
30	11.4	+0.007	11.5	+0.007	
40	12.3	+0.007	11.7	+0.007	
50	13.0	+0.008	12.2	+0.007	



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	11.1	+0.006	14.5	+0.008	PASS
-20	10.5	+0.006	12.8	+0.007	
-10	9.7	+0.006	13.5	+0.008	
0	10.6	+0.006	12.7	+0.007	
10	9.8	+0.006	13.2	+0.008	
20	10.4	+0.006	12.8	+0.007	
30	11.2	+0.006	11.2	+0.006	
40	10.9	+0.006	10.9	+0.006	
50	12.1	+0.007	12.5	+0.007	

Band :	LTE Band 4 (16QAM)		Limit (ppm) :	2.5	
Temperature (°C)	BW 15MHz		BW 20MHz		Result
	Freq. Dev. (Hz)	Deviation (ppm)	Freq. Dev. (Hz)	Deviation (ppm)	
-30	11.8	+0.007	11.0	+0.006	PASS
-20	11.6	+0.007	10.6	+0.006	
-10	10.7	+0.006	9.7	+0.006	
0	9.3	+0.005	8.6	+0.005	
10	10.8	+0.006	9.2	+0.005	
20	11.6	+0.007	7.8	+0.005	
30	10.9	+0.006	8.7	+0.005	
40	12.3	+0.007	9.8	+0.006	
50	13.1	+0.008	11.5	+0.007	



Band :	LTE Band 5 (QPSK)		Limit (ppm) :	2.5	
Temperature (°C)	BW 1.4MHz		BW 3MHz		Result
	Freq. Dev. (Hz)	Deviation (ppm)	Freq. Dev. (Hz)	Deviation (ppm)	
-30	7.1	+0.008	5.3	+0.006	PASS
-20	6.8	+0.008	4.7	+0.006	
-10	6.4	+0.008	5.1	+0.006	
0	6.7	+0.008	5.5	+0.007	
10	6.2	+0.007	5.7	+0.007	
20	6.9	+0.008	5.9	+0.007	
30	6.3	+0.008	5.2	+0.006	
40	6.8	+0.008	5.4	+0.006	
50	7.5	+0.009	5.7	+0.007	

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	6.7	+0.008	5.6	+0.007	PASS
-20	6.2	+0.007	5.1	+0.006	
-10	5.5	+0.007	5.2	+0.006	
0	5.1	+0.006	5.7	+0.007	
10	4.9	+0.006	5.2	+0.006	
20	5.6	+0.007	5.4	+0.006	
30	5.2	+0.006	4.9	+0.006	
40	5.7	+0.007	5.3	+0.006	
50	6.3	+0.008	5.8	+0.007	



<b>Band :</b>	LTE Band 5 (16QAM)		<b>Limit (ppm) :</b>	2.5	
Temperature (°C)	BW 1.4MHz		BW 3MHz		Result
	Freq. Dev. (Hz)	Deviation (ppm)	Freq. Dev. (Hz)	Deviation (ppm)	
-30	6.1	+0.007	5.6	+0.007	PASS
-20	5.4	+0.006	5.2	+0.006	
-10	5.6	+0.007	5.3	+0.006	
0	6.2	+0.007	5.8	+0.007	
10	4.8	+0.006	5.4	+0.006	
20	5.8	+0.007	5.7	+0.007	
30	5.3	+0.006	5.2	+0.006	
40	5.7	+0.007	5.5	+0.007	
50	6.4	+0.008	5.7	+0.007	

<b>Band :</b>	LTE Band 5 (16QAM)		<b>Limit (ppm) :</b>	2.5	
Temperature (°C)	BW 5MHz		BW 10MHz		Result
	Freq. Dev. (Hz)	Deviation (ppm)	Freq. Dev. (Hz)	Deviation (ppm)	
-30	7.2	+0.009	6.3	+0.008	PASS
-20	6.5	+0.008	6.2	+0.007	
-10	6.7	+0.008	5.8	+0.007	
0	6.1	+0.007	5.4	+0.006	
10	5.8	+0.007	6.2	+0.007	
20	6.4	+0.008	6.0	+0.007	
30	5.7	+0.007	5.2	+0.006	
40	5.4	+0.006	6.5	+0.008	
50	6.0	+0.007	7.0	+0.008	





Band :	LTE Band 7 (QPSK)		Limit (ppm) :	2.5	
Temperature (°C)	BW 5MHz		BW 10MHz		Result
	Freq. Dev. (Hz)	Deviation (ppm)	Freq. Dev. (Hz)	Deviation (ppm)	
-30	24.0	+0.009	20.8	+0.008	PASS
-20	23.4	+0.009	18.5	+0.007	
-10	22.7	+0.009	17.9	+0.007	
0	21.7	+0.009	20.2	+0.008	
10	22.6	+0.009	18.9	+0.007	
20	22.5	+0.009	18.5	+0.007	
30	21.7	+0.009	19.6	+0.008	
40	22.7	+0.009	21.4	+0.008	
50	23.9	+0.009	22.2	+0.009	

Band :	LTE Band 7 (QPSK)		Limit (ppm) :	2.5	
Temperature (°C)	BW 15MHz		BW 20MHz		Result
	Freq. Dev. (Hz)	Deviation (ppm)	Freq. Dev. (Hz)	Deviation (ppm)	
-30	-19.1	-0.008	21.1	+0.008	PASS
-20	-18.5	-0.007	19.5	+0.008	
-10	-20.1	-0.008	20.7	+0.008	
0	-18.3	-0.007	19.3	+0.008	
10	-19.2	-0.008	20.4	+0.008	
20	-19.8	-0.008	20.8	+0.008	
30	-19.5	-0.008	19.5	+0.008	
40	-18.7	-0.007	20.6	+0.008	
50	-20.6	-0.008	21.6	+0.009	



Band :	LTE Band 7 (16QAM)		Limit (ppm) :	2.5	
Temperature (°C)	BW 5MHz		BW 10MHz		Result
	Freq. Dev. (Hz)	Deviation (ppm)	Freq. Dev. (Hz)	Deviation (ppm)	
-30	22.4	+0.009	21.4	+0.008	PASS
-20	21.8	+0.009	20.1	+0.008	
-10	20.5	+0.008	21.2	+0.008	
0	19.7	+0.008	19.7	+0.008	
10	21.6	+0.009	20.4	+0.008	
20	22.4	+0.009	20.9	+0.008	
30	21.9	+0.009	19.5	+0.008	
40	22.8	+0.009	20.8	+0.008	
50	24.2	+0.010	22.0	+0.009	

Band :	LTE Band 7 (16QAM)		Limit (ppm) :	2.5	
Temperature (°C)	BW 15MHz		BW 20MHz		Result
	Freq. Dev. (Hz)	Deviation (ppm)	Freq. Dev. (Hz)	Deviation (ppm)	
-30	23.7	+0.009	22.6	+0.009	PASS
-20	22.4	+0.009	21.4	+0.008	
-10	21.7	+0.009	21.1	+0.008	
0	22.4	+0.009	20.7	+0.008	
10	20.7	+0.008	19.7	+0.008	
20	20.3	+0.008	19.9	+0.008	
30	-21.4	-0.008	20.7	+0.008	
40	-21.6	-0.009	21.4	+0.008	
50	-22.7	-0.009	21.0	+0.008	



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	-4.5	-0.006	-4.9	-0.007	PASS
-20	-4.7	-0.007	-4.7	-0.007	
-10	4.6	+0.006	-4.3	-0.006	
0	-4.2	-0.006	4.6	+0.006	
10	4.7	+0.007	4.5	+0.006	
20	4.9	+0.007	-4.4	-0.006	
30	5.3	+0.007	-4.8	-0.007	
40	4.8	+0.007	4.5	+0.006	
50	5.1	+0.007	-4.2	-0.006	

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	5.0	+0.007	4.6	+0.006	PASS
-20	4.7	+0.007	4.3	+0.006	
-10	4.6	+0.006	4.5	+0.006	
0	-4.8	-0.007	4.1	+0.006	
10	-4.3	-0.006	4.5	+0.006	
20	4.1	+0.006	4.6	+0.006	
30	4.7	+0.007	-4.3	-0.006	
40	-4.4	-0.006	-4.7	-0.007	
50	-4.7	-0.007	-4.8	-0.007	

3.8.7 Test Result of Voltage Variation

Band	Bandwidth	Voltage (Volt)	Freq. Dev. (Hz)	Deviation (ppm)	Limit (ppm)	Result
LTE Band 2 (QPSK)	1.4M	4.2	-22.4	-0.012	2.5	PASS
		Normal	-21.7	-0.012		
		3.45	-20.3	-0.011		
	3M	4.2	-20.7	-0.011		
		Normal	-21.5	-0.011		
		3.45	-19.3	-0.010		
	5M	4.2	-20.1	-0.011		
		Normal	-20.3	-0.011		
		3.45	-19.7	-0.010		
	10M	4.2	-20.8	-0.011		
		Normal	-21.1	-0.011		
		3.45	-21.3	-0.011		
	15M	4.2	-20.1	-0.011		
		Normal	-20.6	-0.011		
		3.45	-21.1	-0.011		
20M	4.2	-19.6	-0.010			
	Normal	-19.9	-0.011			
	3.45	-20.3	-0.011			
LTE Band 4 (QPSK)	1.4M	4.2	9.7	+0.006	2.5	PASS
		Normal	10.9	+0.006		
		3.45	10.5	+0.006		
	3M	4.2	10.3	+0.006		
		Normal	10.6	+0.006		
		3.45	10.1	+0.006		
	5M	4.2	10.7	+0.006		
		Normal	11.6	+0.007		
		3.45	12.7	+0.007		
	10M	4.2	11.7	+0.007		
		Normal	13.2	+0.008		
		3.45	12.4	+0.007		
	15M	4.2	11.3	+0.007		
		Normal	10.9	+0.006		
		3.45	10.5	+0.006		
20M	4.2	10.2	+0.006			
	Normal	9.4	+0.005			
	3.45	9.8	+0.006			



Band	Bandwidth	Voltage (Volt)	Freq. Dev. (Hz)	Deviation (ppm)	Limit (ppm)	Result
LTE Band 5 (QPSK)	1.4M	4.2	6.2	+0.007	2.5	PASS
		Normal	6.9	+0.008		
		3.45	7.2	+0.009		
	3M	4.2	5.6	+0.007		
		Normal	5.9	+0.007		
		3.45	5.4	+0.006		
	5M	4.2	6.1	+0.007		
		Normal	5.6	+0.007		
		3.45	5.8	+0.007		
	10M	4.2	5.2	+0.006		
		Normal	5.4	+0.006		
		3.45	5.7	+0.007		
LTE Band 7 (QPSK)	5M	4.2	21.4	+0.008	2.5	PASS
		Normal	22.5	+0.009		
		3.45	21.9	+0.009		
	10M	4.2	19.4	+0.008		
		Normal	18.5	+0.007		
		3.45	18.2	+0.007		
	15M	4.2	-18.5	-0.007		
		Normal	-19.8	-0.008		
		3.45	-19.9	-0.008		
	20M	4.2	20.4	+0.008		
		Normal	20.8	+0.008		
		3.45	21.3	+0.008		
LTE Band 17 (QPSK)	5M	4.2	4.2	+0.006	2.5	PASS
		Normal	4.9	+0.007		
		3.45	4.6	+0.006		
	10M	4.2	-4.2	-0.006		
		Normal	-4.4	-0.006		
		3.45	-3.8	-0.005		



Band	Bandwidth	Voltage (Volt)	Freq. Dev. (Hz)	Deviation (ppm)	Limit (ppm)	Result
LTE Band 2 (16QAM)	1.4M	4.2	-20.3	-0.011	2.5	PASS
		Normal	-21.1	-0.011		
		3.45	-20.7	-0.011		
	3M	4.2	-17.2	-0.009		
		Normal	-17.9	-0.010		
		3.45	-18.5	-0.010		
	5M	4.2	-21.1	-0.011		
		Normal	-21.0	-0.011		
		3.45	-19.9	-0.011		
	10M	4.2	-20.5	-0.011		
		Normal	21.8	+0.012		
		3.45	-21.3	-0.011		
	15M	4.2	-18.6	-0.010		
		Normal	-18.7	-0.010		
		3.45	-17.9	-0.010		
20M	4.2	-20.3	-0.011			
	Normal	-20.7	-0.011			
	3.45	-19.8	-0.011			
LTE Band 4 (16QAM)	1.4M	4.2	10.8	+0.006	2.5	PASS
		Normal	11.3	+0.007		
		3.45	11.7	+0.007		
	3M	4.2	10.8	+0.006		
		Normal	11.7	+0.007		
		3.45	11.9	+0.007		
	5M	4.2	10.7	+0.006		
		Normal	10.4	+0.006		
		3.45	11.2	+0.006		
	10M	4.2	12.5	+0.007		
		Normal	12.8	+0.007		
		3.45	13.5	+0.008		
	15M	4.2	12.2	+0.007		
		Normal	11.6	+0.007		
		3.45	11.3	+0.007		
20M	4.2	8.9	+0.005			
	Normal	7.8	+0.005			
	3.45	8.2	+0.005			



Band	Bandwidth	Voltage (Volt)	Freq. Dev. (Hz)	Deviation (ppm)	Limit (ppm)	Result
LTE Band 5 (16QAM)	1.4M	4.2	5.2	+0.006	2.5	PASS
		Normal	5.8	+0.007		
		3.45	5.7	+0.007		
	3M	4.2	5.3	+0.006		
		Normal	5.7	+0.007		
		3.45	5.9	+0.007		
	5M	4.2	6.1	+0.007		
		Normal	6.4	+0.008		
		3.45	6.7	+0.008		
	10M	4.2	5.4	+0.006		
		Normal	6.0	+0.007		
		3.45	6.3	+0.008		
LTE Band 7 (16QAM)	5M	4.2	20.9	+0.008	2.5	PASS
		Normal	22.4	+0.009		
		3.45	21.7	+0.009		
	10M	4.2	20.5	+0.008		
		Normal	20.9	+0.008		
		3.45	19.6	+0.008		
	15M	4.2	20.7	+0.008		
		Normal	20.3	+0.008		
		3.45	19.6	+0.008		
	20M	4.2	18.4	+0.007		
		Normal	19.9	+0.008		
		3.45	19.4	+0.008		
LTE Band 17 (16QAM)	5M	4.2	4.3	+0.006	2.5	PASS
		Normal	4.1	+0.006		
		3.45	3.7	+0.005		
	10M	4.2	4.2	+0.006		
		Normal	4.6	+0.006		
		3.45	4.5	+0.006		

Remark:

1. Normal Voltage = 3.8V.
2. The manufacturer declared that the EUT could work properly between voltage 3.45V ~ 4.2V.



## 4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSP30	101400	9kHz~30GHz	Mar. 28, 2013	Oct. 23, 2013~ Oct. 28, 2013	Mar. 27, 2014	Conducted (TH01-SZ)
Power Meter	Anritsu	ML2495A	1218010	N/A	Mar. 28, 2013	Oct. 23, 2013~ Oct. 28, 2013	Mar. 27, 2014	Conducted (TH01-SZ)
Power Sensor	Anritsu	MA2411B	1207253	N/A	Mar. 28, 2013	Oct. 23, 2013~ Oct. 28, 2013	Mar. 27, 2014	Conducted (TH01-SZ)
Thermal Chamber	Hongzhan	LP-150U	HD20120425	N/A	Mar. 28, 2013	Oct. 23, 2013~ Oct. 28, 2013	Mar. 27, 2014	Conducted (TH01-SZ)
ESCI TEST Receiver	R&S	ESCI	100724	9kHz~3GHz	Mar. 28, 2013	Oct. 23, 2013~ Nov. 23, 2013	Mar. 27, 2014	Radiation (03CH01-SZ)
Spectrum Analyzer	Agilent Technologies	N9038A	MY52260185	20Hz~26.5GHz	Apr. 04, 2013	Oct. 23, 2013~ Nov. 23, 2013	Apr. 03, 2014	Radiation (03CH01-SZ)
Double Ridge Horn Antenna	ETS Lindgren	3117	00119436	1GHz~18GHz	Oct. 11, 2013	Oct. 23, 2013~ Nov. 23, 2013	Oct. 10, 2014	Radiation (03CH01-SZ)
Bilog Antenna	SCHAFFNER	CBL6112B	2614	30MHz~2GHz	Nov. 03, 2012	Oct. 23, 2013	Nov. 02, 2013	Radiation (03CH01-SZ)
Bilog Antenna	SCHAFFNER	CBL6112B	2614	30MHz~2GHz	Nov. 02, 2013	Nov. 23, 2013	Nov. 01, 2014	Radiation (03CH01-SZ)
Amplifier	ADVANTEST	BB525C	E9007003	9kHz~3GHz Gain 30dB	Mar. 28, 2013	Oct. 23, 2013~ Nov. 23, 2013	Mar. 27, 2014	Radiation (03CH01-SZ)
Amplifier	Yiai	AV3860B	04030	2GHz~26.5GHz	Mar. 28, 2013	Oct. 23, 2013~ Nov. 23, 2013	Mar. 27, 2014	Radiation (03CH01-SZ)
SHF-EHF-Horn	Schwarzbeck	BBHA9170	BBHA9170249	14GHz~40GHz	Nov. 23, 2012	Oct. 23, 2013	Nov. 22, 2013	Radiation (03CH01-SZ)
SHF-EHF-Horn	Schwarzbeck	BBHA9170	BBHA9170249	14GHz~40GHz	Nov. 22, 2013	Nov. 23, 2013	Nov. 21, 2014	Radiation (03CH01-SZ)
Turn Table	EM Electronics	EM 1000	N/A	0 ~ 360 degree	N/A	Oct. 23, 2013~ Nov. 23, 2013	N/A	Radiation (03CH01-SZ)
Antenna Mast	EM electronics	EM 1000	N/A	1 m ~ 4 m	N/A	Oct. 23, 2013~ Nov. 23, 2013	N/A	Radiation (03CH01-SZ)
Spectrum Analyzer	R&S	FSP 7	100818	9kHz~7GHz	Aug. 21, 2013	Nov. 25, 2013	Aug. 20, 2014	ERP/EIRP (OTA01-SZ)
Quad-Ridged Horn	ETS-Lindgren	3164-08	00102954	700MHz~10000 MHz	N/A	Nov. 25, 2013	N/A	ERP/EIRP (OTA01-SZ)
Multi-Devices Controller	ETS-Lindgren	2090-OPT1	00108147	N/A	N/A	Nov. 25, 2013	N/A	ERP/EIRP (OTA01-SZ)
Switch Control Mainframe	Agilent	3499A	MY42005451	N/A	N/A	Nov. 25, 2013	N/A	ERP/EIRP (OTA01-SZ)





## 5 Uncertainty of Evaluation

### Uncertainty of Conducted Emission Measurement (150 kHz ~ 30 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ )	2.26
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### Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ )	3.90
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