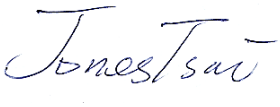
FCC RF Test Report

APPLICANT	: MitraStar Technology Corporation
EQUIPMENT	: M4G-641 LTE FDD module
BRAND NAME	: MitraStar
MODEL NAME	: M4G-641
FCC ID	: ZMYM4G-641
STANDARD	: 47 CFR Part 2, 27
CLASSIFICATION	: PCS Licensed Transmitter (PCB)

The product was received on Oct. 17, 2013 and testing was completed on Nov. 14, 2013. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI / TIA / EIA-603-C-2004 and shown compliance with the applicable technical standards.

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

Reviewed by: Joseph Lin / Supervisor



Approved by: Jones Tsai / Manager

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

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG3O1724	Rev. 01	Initial issue of report	Dec. 09, 2013

SUMMARY OF TEST RESULT

Report Section	FCC Rule	IC Rule	Description	Limit	Result	Remark
3.1	§2.1046	RSS-130(4.4) RSS-139(6.4)	Conducted Output Power	Reporting Only	PASS	-
3.2	§27.53(d)(5)	RSS-130(4.4) RSS-139(6.4)	Peak-to-Average Ratio	<13 dB	PASS	-
3.3	§2.1049 §27.53(h)(3)	RSS-GEN(4.6.1) RSS-139 (3.1)	Occupied Bandwidth	Reporting Only	PASS	-
3.4	§2.1049 §27.53(c)(h)	RSS-130(4.6) RSS-139 (6.5)	Conducted Band Edge Measurement (Band 4) (Band 13)	< 43+10log10(P[Watts])	PASS	-
3.5	§2.1051 §27.53(c)(h)	RSS-130(4.6) RSS-139 (6.5)	Conducted Spurious Emission (Band 4) (Band 13)	< $43+10\log_{10}$(P[Watts])	PASS	-
3.6	§2.1053 §27.53(c)(h)	RSS-130(4.6) RSS-139 (6.5)	Radiated Spurious Emission (Band 4) (Band 13)	< $43+10\log_{10}$(P[Watts])	PASS	Under limit 18.29 dB at 2332.000 MHz
3.7	§2.1055 §27.54	RSS-130(4.3) RSS-139 (6.3)	Frequency Stability Temperature & Voltage	< 2.5 ppm	PASS	-

1 General Description

1.1 Applicant

MitraStar Technology Corporation
No. 6, Innovation Rd II, Science-Based Industrial, Hsin-Chu, Taiwan

1.2 Manufacturer

MitraStar Technology Corporation
No. 6, Innovation Rd II, Science-Based Industrial, Hsin-Chu, Taiwan

1.3 Feature of Equipment Under Test

Product Feature	
Equipment	M4G-641 LTE FDD module
Brand Name	MitraStar
Model Name	M4G-641
FCC ID	ZMYM4G-641
EUT supports Radios application	LTE
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	
Tx Frequency	LTE Band 4 : 1710.7 MHz ~ 1754.3 MHz LTE Band 13 : 779.5 MHz ~ 784.5 MHz
Rx Frequency	LTE Band 4 : 2110.7 MHz ~ 2154.3 MHz LTE Band 13 : 748.5 MHz ~ 753.5 MHz
Bandwidth	1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz / 20MHz (Band 4) 5MHz / 10MHz (Band 13)
Maximum Output Power to Antenna	LTE Band 4 : 23.03 dBm / 0.2009 W LTE Band 13 : 22.58 dBm / 0.1811 W
Type of Modulation	QPSK / 16QAM

1.5 Modification of EUT

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

1.6 Emission Designator

FCC Rule	System	Type of Modulation	BW	Emission Designator	Frequency Tolerance (%, Hz, ppm)
Part 27	LTE Band 4	QPSK	1.4 MHz	1M10G7D	0.009 ppm
Part 27	LTE Band 4	16QAM	1.4 MHz	1M11D7W	0.018 ppm
Part 27	LTE Band 4	QPSK	3 MHz	2M84G7D	0.007 ppm
Part 27	LTE Band 4	16QAM	3 MHz	2M80D7W	0.007 ppm
Part 27	LTE Band 4	QPSK	5MHz	4M50G7D	0.008 ppm
Part 27	LTE Band 4	16QAM	5MHz	4M50D7W	0.011 ppm
Part 27	LTE Band 4	QPSK	10MHz	9M10G7D	0.008 ppm
Part 27	LTE Band 4	16QAM	10MHz	9M07D7W	0.007 ppm
Part 27	LTE Band 4	QPSK	15MHz	13M5G7D	0.007 ppm
Part 27	LTE Band 4	16QAM	15MHz	13M5D7W	0.007 ppm
Part 27	LTE Band 4	QPSK	20MHz	18M6G7D	0.008 ppm
Part 27	LTE Band 4	16QAM	20MHz	18M7D7W	0.007 ppm
Part 27	LTE Band 13	QPSK	5MHz	4M50G7D	0.020 ppm
Part 27	LTE Band 13	16QAM	5MHz	4M50D7W	0.021 ppm
Part 27	LTE Band 13	QPSK	10MHz	9M10G7D	0.022 ppm
Part 27	LTE Band 13	16QAM	10MHz	9M03D7W	0.018 ppm

1.7 Testing Site

Test Site	SPORTON INTERNATIONAL INC.		
Test Site Location	No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C. TEL: +886-3-327-3456 FAX: +886-3-328-4978		
Test Site No.	**Sporton Site No.**		**FCC/IC Registration No.**
	TH02-HY	03CH06-HY	722060/4086B-1

1.8 Applied Standards

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

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

Remark:

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

2 Test Configuration of Equipment Under Test

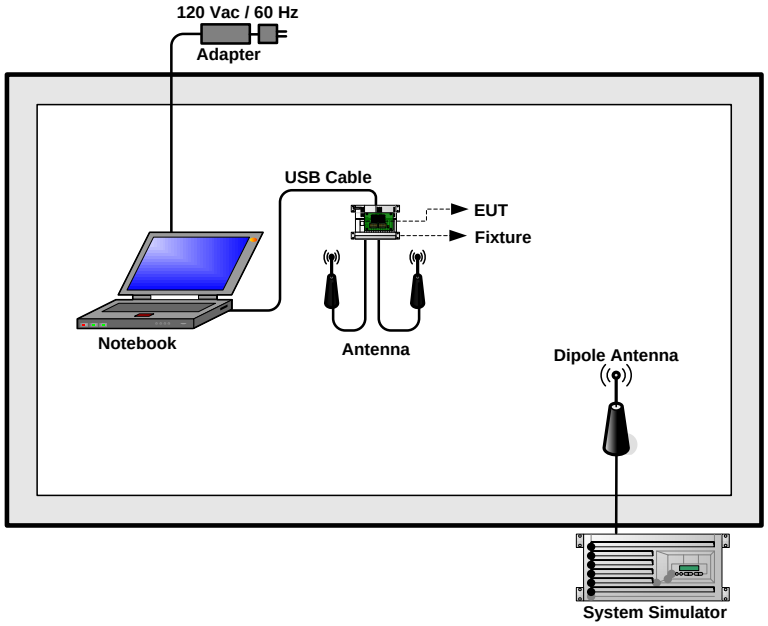
2.1 Test Mode

During all testing, EUT is in link mode with base station emulator at maximum power level. The spurious emission measurements were carried out in semi-anechoic chamber with 3-meter test range.

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

Test Modes			
Band		**Radiated TCs**	**Conducted TCs**
LTE Band 4	**BW 1.4MHz**	■ LTE (RB Size 3) Link	■ LTE (RB Size 1) Link ■ LTE (RB Size 3) Link ■ LTE (RB Size 6) Link
	BW 3MHz	■ LTE (RB Size 8) Link	■ LTE (RB Size 1) Link ■ LTE (RB Size 8) Link ■ LTE (RB Size 15) Link
	BW 5MHz	■ LTE (RB Size 12) Link	■ LTE (RB Size 1) Link ■ LTE (RB Size 12) Link ■ LTE (RB Size 25) Link
	BW 10MHz	■ LTE (RB Size 50) Link	■ LTE (RB Size 1) Link ■ LTE (RB Size 25) Link ■ LTE (RB Size 50) Link
	BW 15MHz	■ LTE (RB Size 75) Link	■ LTE (RB Size 1) Link ■ LTE (RB Size 36) Link ■ LTE (RB Size 75) Link
	BW 20MHz	■ LTE (RB Size 50) Link	■ LTE (RB Size 1) Link ■ LTE (RB Size 50) Link ■ LTE (RB Size 100) Link
LTE Band 13	**BW 5MHz**	■ LTE (RB Size 12) Link	■ LTE (RB Size 1) Link ■ LTE (RB Size 12) Link ■ LTE (RB Size 25) Link
	BW 10MHz	■ LTE (RB Size 1) Link	■ LTE (RB Size 1) Link ■ LTE (RB Size 25) Link ■ LTE (RB Size 50) Link

2.2 Connection Diagram of Test System



2.3 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model No.	FCC ID	Data Cable	Power Cord
1.	System Simulator	Anritsu	MT8820C	N/A	N/A	Unshielded, 1.8 m
2.	Notebook	DELL	Latitude E6320	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
3.	Fixture	N/A	N/A	N/A	N/A	N/A
4.	Antenna	N/A	N/A	N/A	N/A	N/A

2.4 Measurement Results Explanation Example

For all conducted test items:

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

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

Offset = RF cable loss + attenuator factor.

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

Example :

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

= 4.2 + 10 = 14.2 (dB)

3 Test Result

3.1 Conducted Output Power Measurement

3.1.1 Description of the Conducted Output Power Measurement

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

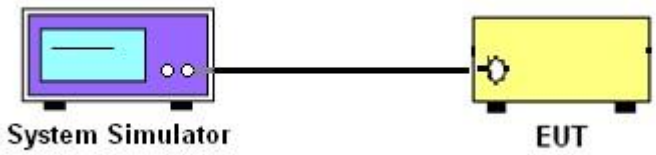
3.1.2 Measuring Instruments

The 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 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.
Channel				**20050**	**20175**	**20300**
Frequency (MHz)				**1720**	**1732.5**	**1745**
20	QPSK	1	0	21.82	22.05	22.27
20	QPSK	1	49	21.71	22.13	22.51
20	QPSK	1	99	21.67	22.33	22.32
20	QPSK	50	0	22.21	22.34	22.88
20	QPSK	50	24	22.12	22.56	22.81
20	QPSK	50	49	21.31	22.50	22.72
20	QPSK	100	0	21.15	22.39	22.69
20	16QAM	1	0	22.02	21.92	21.89
20	16QAM	1	49	22.01	21.92	22.09
20	16QAM	1	99	22.05	22.18	22.06
20	16QAM	50	0	22.08	22.39	22.66
20	16QAM	50	24	22.05	22.30	22.68
20	16QAM	50	49	21.97	22.34	22.72
20	16QAM	100	0	21.99	22.36	22.62
Channel				**20025**	**20175**	**20325**
Frequency (MHz)				**1717.5**	**1732.5**	**1747.5**
15	QPSK	1	0	22.39	21.93	22.34
15	QPSK	1	37	22.58	22.17	22.45
15	QPSK	1	74	22.50	22.19	22.21
15	QPSK	36	0	22.57	22.15	22.78
15	QPSK	36	18	22.60	22.24	22.78
15	QPSK	36	37	22.56	22.49	22.60
15	QPSK	75	0	22.62	22.39	22.90
15	16QAM	1	0	22.40	21.83	22.19
15	16QAM	1	37	22.41	21.77	22.18
15	16QAM	1	74	22.27	22.03	22.08
15	16QAM	36	0	22.46	22.23	22.64
15	16QAM	36	18	22.51	22.32	22.72
15	16QAM	36	37	22.44	22.21	22.42
15	16QAM	75	0	22.49	22.38	22.65

BW [MHz]	Modulation	RB Size	RB Offset	Power (dBm) Low Ch. / Freq.	Power (dBm) Middle Ch. / Freq.	Power (dBm) High Ch. / Freq.
Channel				20000	20175	20350
Frequency (MHz)				1715	1732.5	1750
10	QPSK	1	0	22.06	21.83	22.34
10	QPSK	1	24	22.06	22.07	22.42
10	QPSK	1	49	22.05	22.04	22.29
10	QPSK	25	0	22.50	22.09	22.46
10	QPSK	25	12	22.52	22.12	22.51
10	QPSK	25	24	22.39	22.21	22.61
10	QPSK	50	0	22.40	22.34	**23.03**
10	16QAM	1	0	22.33	21.71	22.03
10	16QAM	1	24	22.19	21.61	22.01
10	16QAM	1	49	22.36	21.67	21.94
10	16QAM	25	0	22.36	22.04	22.41
10	16QAM	25	12	22.38	22.05	22.51
10	16QAM	25	24	22.36	22.06	22.56
10	16QAM	50	0	22.30	22.25	22.68
Channel				19975	20175	20375
Frequency (MHz)				1712.5	1732.5	1752.5
5	QPSK	1	0	22.24	21.95	22.60
5	QPSK	1	12	22.39	22.12	22.48
5	QPSK	1	24	22.27	21.94	22.29
5	QPSK	12	0	22.61	22.21	22.74
5	QPSK	12	6	22.57	22.23	22.53
5	QPSK	12	11	21.78	22.15	22.60
5	QPSK	25	0	21.67	22.22	22.72
5	16QAM	1	0	22.41	21.69	22.07
5	16QAM	1	12	21.92	21.72	22.08
5	16QAM	1	24	22.40	21.65	22.01
5	16QAM	12	0	22.36	22.07	22.41
5	16QAM	12	6	22.39	22.07	22.51
5	16QAM	12	11	22.37	22.03	22.45
5	16QAM	25	0	22.37	22.08	22.46

BW [MHz]	Modulation	RB Size	RB Offset	Power (dBm) Low Ch. / Freq.	Power (dBm) Middle Ch. / Freq.	Power (dBm) High Ch. / Freq.
Channel				**19965**	**20175**	**20385**
Frequency (MHz)				**1711.5**	**1732.5**	**1753.5**
3	QPSK	1	0	22.38	22.03	22.41
3	QPSK	1	7	22.66	22.01	22.38
3	QPSK	1	14	22.42	21.91	22.28
3	QPSK	8	0	22.60	22.30	22.68
3	QPSK	8	4	22.46	22.36	22.53
3	QPSK	8	7	22.55	22.26	22.56
3	QPSK	15	0	22.59	22.29	22.49
3	16QAM	1	0	22.35	21.77	22.30
3	16QAM	1	7	22.55	21.94	22.32
3	16QAM	1	14	22.39	22.03	22.02
3	16QAM	8	0	22.35	22.28	22.61
3	16QAM	8	4	22.51	22.25	22.51
3	16QAM	8	7	22.43	22.13	22.59
3	16QAM	15	0	22.33	22.06	22.64
Channel				**19957**	**20175**	**20393**
Frequency (MHz)				**1710.7**	**1732.5**	**1754.3**
1.4	QPSK	1	0	21.94	22.23	22.67
1.4	QPSK	1	2	21.88	22.26	22.49
1.4	QPSK	1	5	21.88	22.23	22.57
1.4	QPSK	3	0	22.27	22.40	22.72
1.4	QPSK	3	1	22.17	22.39	22.70
1.4	QPSK	3	2	22.14	22.46	22.76
1.4	QPSK	6	0	21.95	22.30	22.59
1.4	16QAM	1	0	21.81	22.01	22.48
1.4	16QAM	1	2	22.08	22.01	22.22
1.4	16QAM	1	5	21.90	22.03	22.29
1.4	16QAM	3	0	22.05	22.05	22.00
1.4	16QAM	3	1	22.09	22.13	22.31
1.4	16QAM	3	2	22.08	22.10	22.34
1.4	16QAM	6	0	22.01	22.09	22.61

<LTE Band 13 Conducted Power>

BW [MHz]	Modulation	RB Size	RB Offset	Power (dBm) Low Ch. / Freq.	Power (dBm) Middle Ch. / Freq.	Power (dBm) High Ch. / Freq.
Channel					**23230**	
Frequency (MHz)					**782**	
10	QPSK	1	0		22.47	
10	QPSK	1	24		22.11	
10	QPSK	1	49		22.15	
10	QPSK	25	0		22.46	
10	QPSK	25	12		22.42	
10	QPSK	25	24		22.26	
10	QPSK	50	0		22.37	
10	16QAM	1	0		22.19	
10	16QAM	1	24		21.78	
10	16QAM	1	49		21.82	
10	16QAM	25	0		21.18	
10	16QAM	25	12		22.12	
10	16QAM	25	24		22.01	
10	16QAM	50	0		22.10	
Channel				**23205**	**23230**	**23255**
Frequency (MHz)				**779.5**	**782**	**784.5**
5	QPSK	1	0	22.30	22.31	21.98
5	QPSK	1	12	22.30	21.99	22.11
5	QPSK	1	24	21.99	21.94	22.03
5	QPSK	12	0	22.45	22.33	22.27
5	QPSK	12	6	**22.58**	22.19	22.26
5	QPSK	12	11	22.42	22.20	22.23
5	QPSK	25	0	22.29	22.31	22.21
5	16QAM	1	0	22.12	21.79	21.58
5	16QAM	1	12	22.13	21.54	21.67
5	16QAM	1	24	21.88	21.58	21.56
5	16QAM	12	0	22.28	22.16	22.02
5	16QAM	12	6	22.43	22.15	22.03
5	16QAM	12	11	22.32	22.08	22.08
5	16QAM	25	0	22.35	22.12	22.09

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.

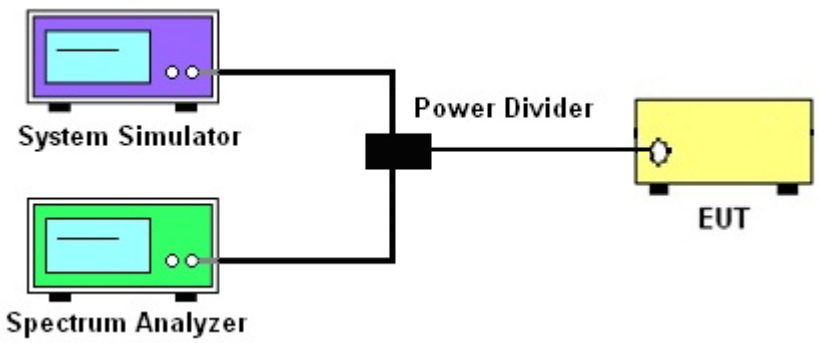
3.2.2 Measuring Instruments

The 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 4			
BW / Mod.	1.4MHz / QPSK	1.4MHz / 16QAM	3MHz / QPSK	3MHz / 16QAM
Peak-to-Average Ratio (dB)	4.78	4.87	5.19	5.54
BW / Mod.	5MHz / QPSK	5MHz / 16QAM	10MHz / QPSK	10MHz / 16QAM
Peak-to-Average Ratio (dB)	5.06	5.16	5.16	5.32
BW / Mod.	15MHz / QPSK	15MHz / 16QAM	20MHz / QPSK	20MHz / 16QAM
Peak-to-Average Ratio (dB)	4.90	5.16	5.99	5.16

Modes	LTE Band 13			
BW / Mod.	5MHz / QPSK	5MHz / 16QAM	10MHz / QPSK	10MHz / 16QAM
Peak-to-Average Ratio (dB)	5.42	5.77	5.35	5.71

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

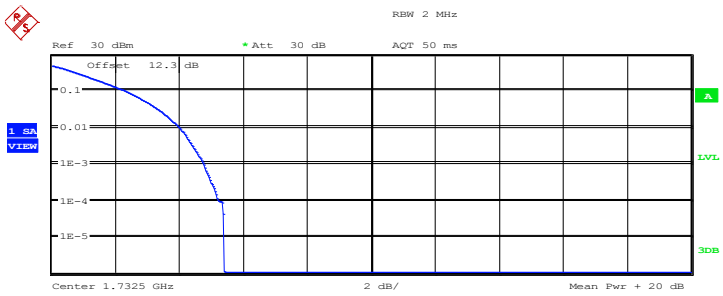
BW10MHz RB setting：RB Size 50, RB offset 0

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 4 1.4MHz / QPSK



Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 1.7MHz

	Trace 1
Mean	21.20 dBm
Peak	26.60 dBm
Crest	5.41 dB
10 %	2.31 dB
1 %	3.97 dB
.1 %	4.78 dB
.01 %	5.32 dB

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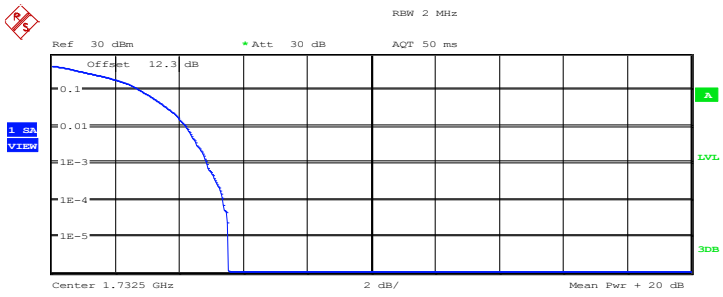
Peak-to-Average Ratio on LTE Band 4 1.4MHz / 16QAM



Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 1.7MHz

	Trace 1
Mean	21.42 dBm
Peak	26.96 dBm
Crest	5.54 dB
10 %	2.76 dB
1 %	4.20 dB
.1 %	4.87 dB
.01 %	5.35 dB

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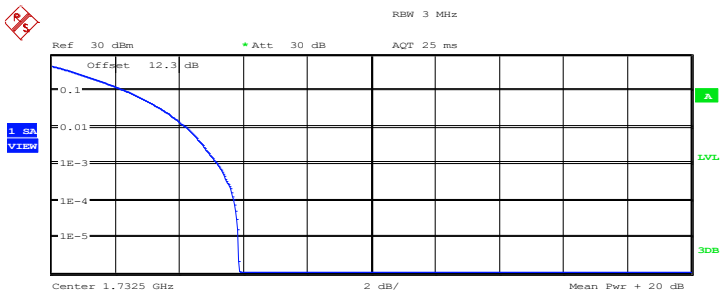
Peak-to-Average Ratio on LTE Band 4 3MHz / QPSK



Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 3.5MHz

	Trace 1
Mean	20.88 dBm
Peak	26.75 dBm
Crest	5.86 dB
10 %	2.34 dB
1 %	4.20 dB
.1 %	5.19 dB
.01 %	5.71 dB

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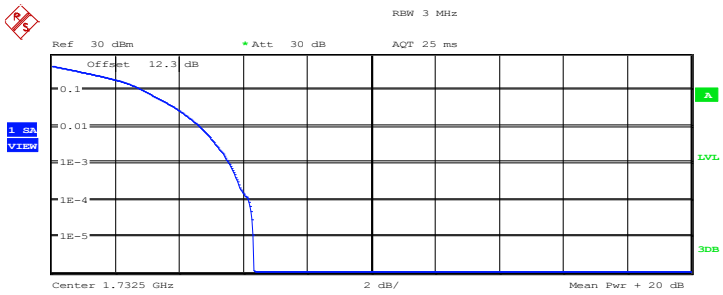
Peak-to-Average Ratio on LTE Band 4 3MHz / 16QAM

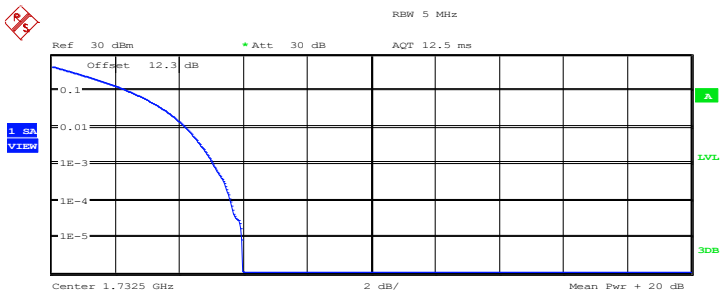


Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 3.5MHz

	Trace 1
Mean	20.99 dBm
Peak	27.31 dBm
Crest	6.32 dB
10 %	2.85 dB
1 %	4.65 dB
.1 %	5.54 dB
.01 %	6.15 dB

Date: 13.NOV.2013 13:15:26

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

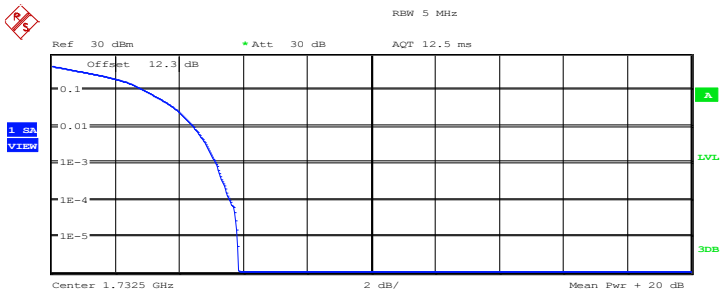


Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 7.1MHz

	Trace 1
Mean	21.54 dBm
Peak	27.52 dBm
Crest	5.98 dB
10 %	2.40 dB
1 %	4.20 dB
.1 %	5.06 dB
.01 %	5.61 dB

Date: 8.NOV.2013 15:24:00

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

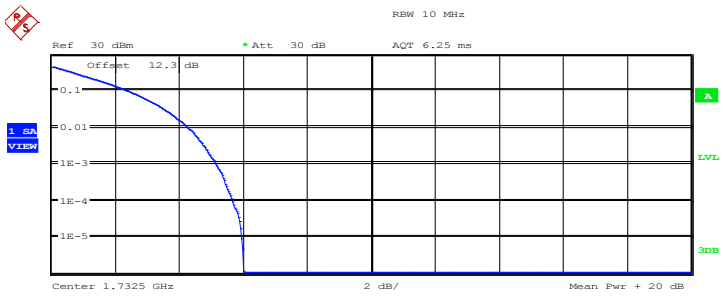


Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 7.1MHz

	Trace 1
Mean	21.75 dBm
Peak	27.59 dBm
Crest	5.84 dB
10 %	2.88 dB
1 %	4.42 dB
.1 %	5.16 dB
.01 %	5.58 dB

Date: 8.NOV.2013 15:23:45

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

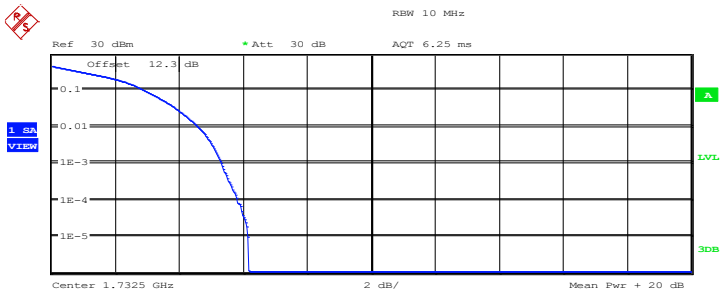


Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 11.2MHz

	Trace 1
Mean	21.82 dBm
Peak	27.84 dBm
Crest	6.02 dB
10 %	2.40 dB
1 %	4.26 dB
.1 %	5.16 dB
.01 %	5.67 dB

Date: 8.NOV.2013 15:10:04

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

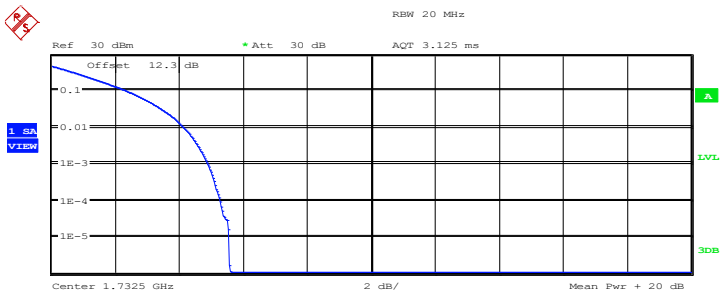


Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 11.2MHz

	Trace 1
Mean	22.09 dBm
Peak	28.26 dBm
Crest	6.18 dB
10 %	2.92 dB
1 %	4.58 dB
.1 %	5.32 dB
.01 %	5.80 dB

Date: 8.NOV.2013 15:09:51

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

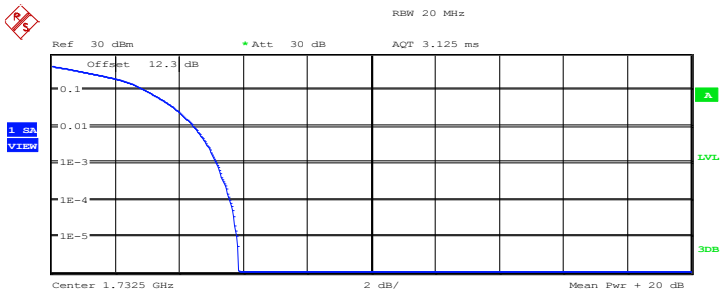


Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 23.7MHz

	Trace 1
Mean	22.04 dBm
Peak	27.61 dBm
Crest	5.57 dB
10 %	2.37 dB
1 %	4.13 dB
.1 %	4.90 dB
.01 %	5.29 dB

Date: 8.NOV.2013 14:29:47

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

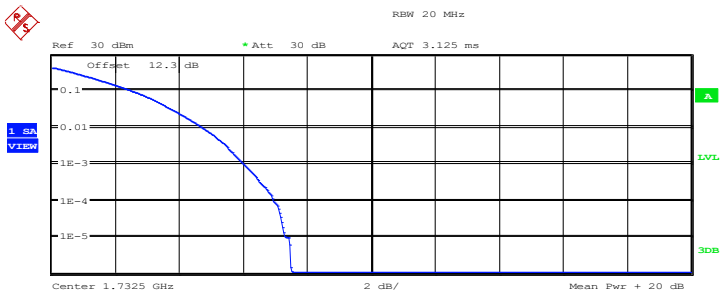


Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 23.7MHz

	Trace 1
Mean	21.96 dBm
Peak	27.82 dBm
Crest	5.86 dB
10 %	2.92 dB
1 %	4.46 dB
.1 %	5.16 dB
.01 %	5.58 dB

Date: 8.NOV.2013 14:30:07

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

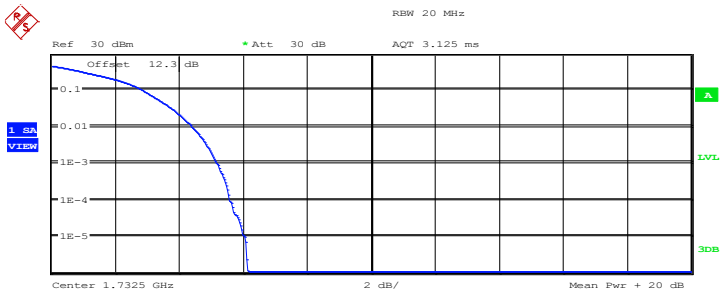


Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 23.7MHz

	Trace 1
Mean	20.39 dBm
Peak	27.89 dBm
Crest	7.50 dB
10 %	2.53 dB
1 %	4.71 dB
.1 %	5.99 dB
.01 %	6.92 dB

Date: 8.NOV.2013 14:04:15

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

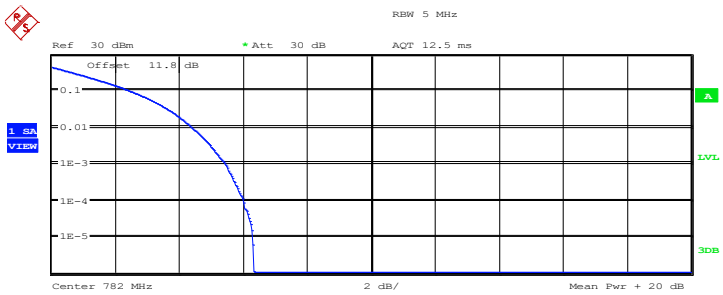


Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 23.7MHz

	Trace 1
Mean	22.61 dBm
Peak	28.74 dBm
Crest	6.13 dB
10 %	2.85 dB
1 %	4.39 dB
.1 %	5.16 dB
.01 %	5.58 dB

Date: 8.NOV.2013 14:03:48

Peak-to-Average Ratio on LTE Band 13 5MHz / QPSK

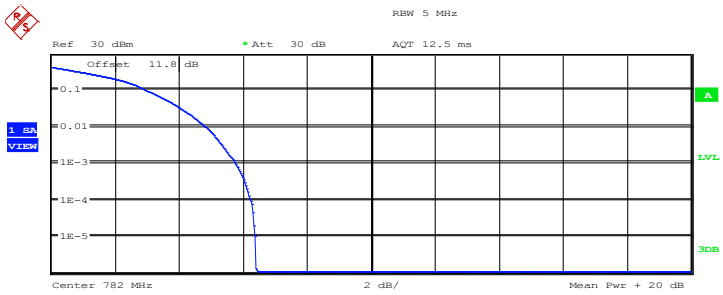


Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 7.1MHz

	Trace 1
Mean	21.76 dBm
Peak	28.09 dBm
Crest	6.33 dB
10 %	2.47 dB
1 %	4.39 dB
.1 %	5.42 dB
.01 %	5.99 dB

Date: 13.NOV.2013 16:11:58

Peak-to-Average Ratio on LTE Band 13 5MHz / 16QAM

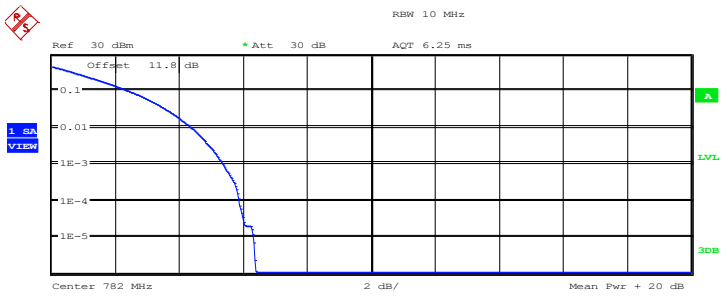


Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 7.1MHz

	Trace 1
Mean	21.82 dBm
Peak	28.23 dBm
Crest	6.40 dB
10 %	2.98 dB
1 %	4.81 dB
.1 %	5.77 dB
.01 %	6.22 dB

Date: 13.NOV.2013 16:11:39

Peak-to-Average Ratio on LTE Band 13 10MHz / QPSK

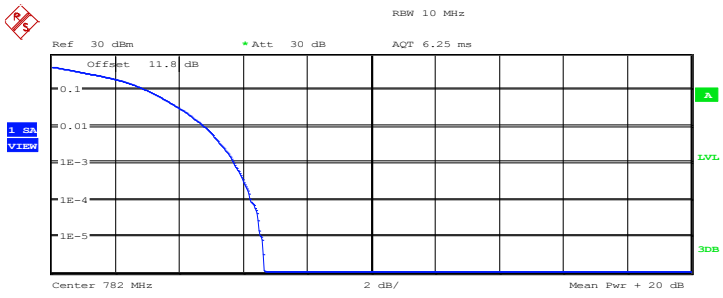


Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 11.2MHz

	Trace 1
Mean	21.82 dBm
Peak	28.21 dBm
Crest	6.38 dB
10 %	2.44 dB
1 %	4.36 dB
.1 %	5.35 dB
.01 %	5.87 dB

Date: 13.NOV.2013 16:20:48

Peak-to-Average Ratio on LTE Band 13 10MHz / 16QAM



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

	Trace 1
Mean	22.19 dBm
Peak	28.84 dBm
Crest	6.65 dB
10 %	2.98 dB
1 %	4.78 dB
.1 %	5.71 dB
.01 %	6.22 dB

Date: 13.NOV.2013 16:21:13

3.3 Occupied Bandwidth

3.3.1 Description of Occupied Bandwidth Measurement

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

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.

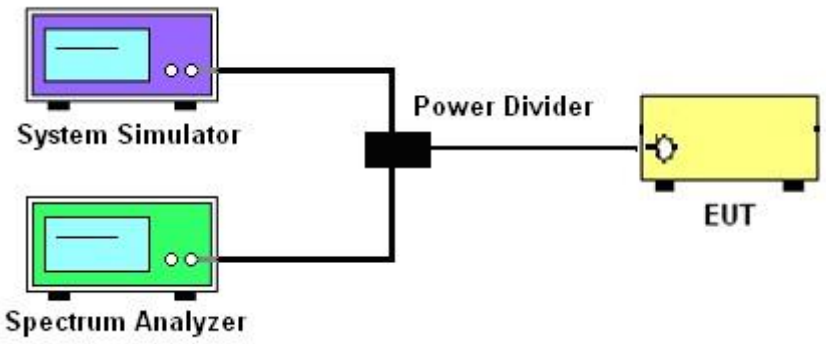
3.3.2 Measuring Instruments

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

3.3.3 Test Procedures

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

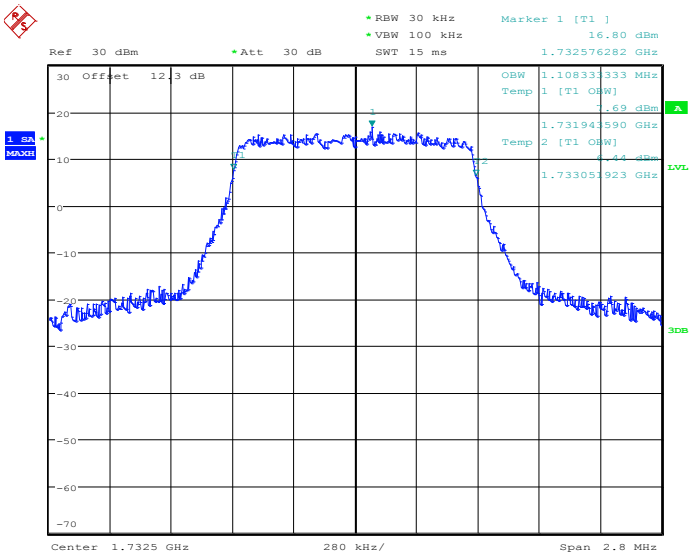
3.3.4 Test Setup



3.3.5 Test Result (Plots) of Occupied Bandwidth

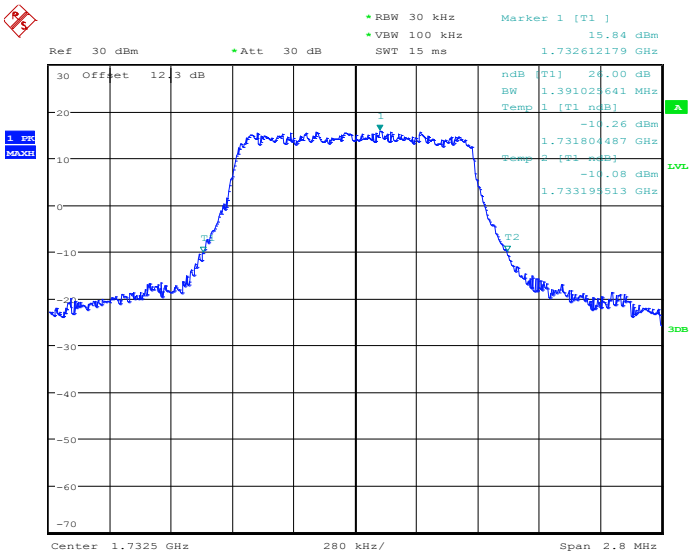
Band :	LTE Band 4	BW / Mod. :	1.4MHz / QPSK

99% Occupied Bandwidth Plot on Channel 20175



Date: 13.NOV.2013 13:29:56

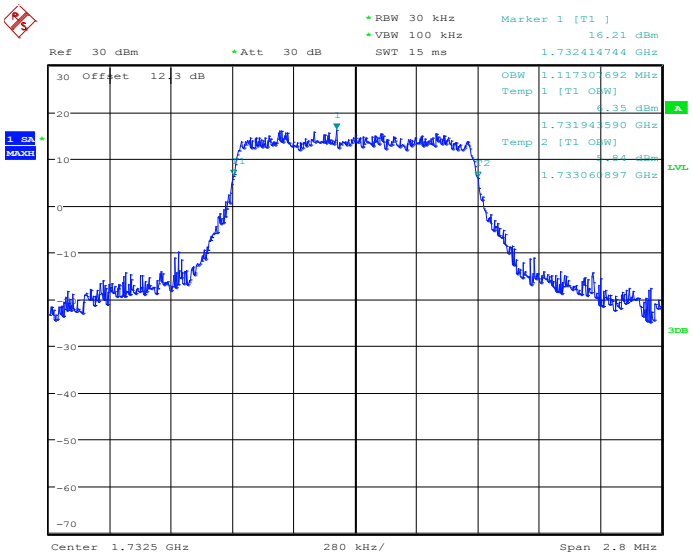
26dB Bandwidth Plot on Channel 20175



Date: 13.NOV.2013 13:30:48

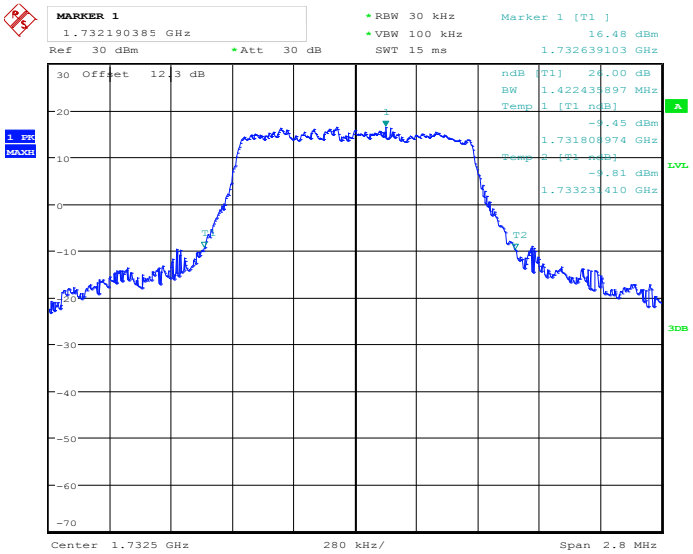
Band :	LTE Band 4	BW / Mod. :	1.4MHz / 16QAM

99% Occupied Bandwidth Plot on Channel 20175



Date: 13.NOV.2013 13:30:12

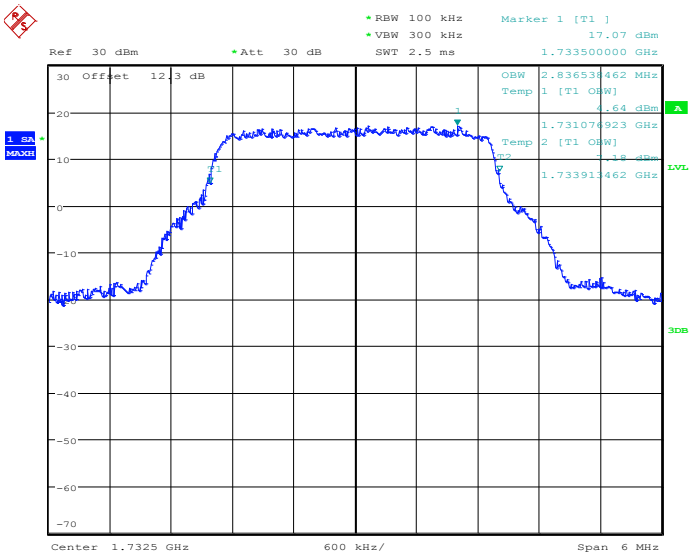
26dB Bandwidth Plot on Channel 20175



Date: 13.NOV.2013 13:30:36

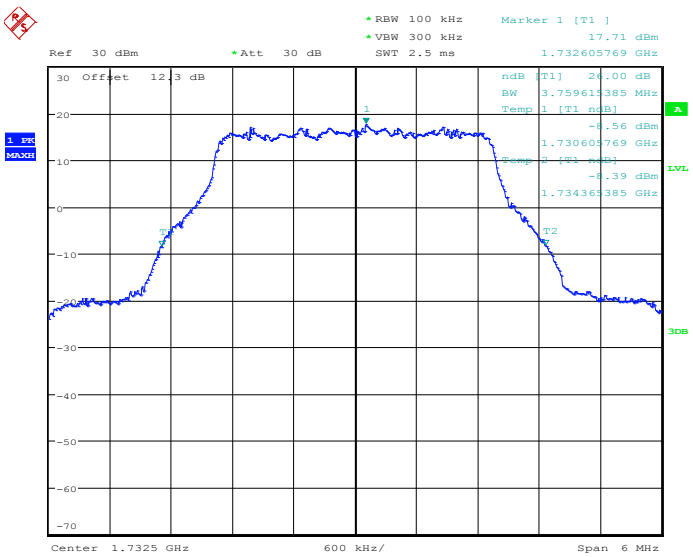
Band :	LTE Band 4	BW / Mod. :	3MHz / QPSK

99% Occupied Bandwidth Plot on Channel 20175



Date: 8.NOV.2013 16:44:51

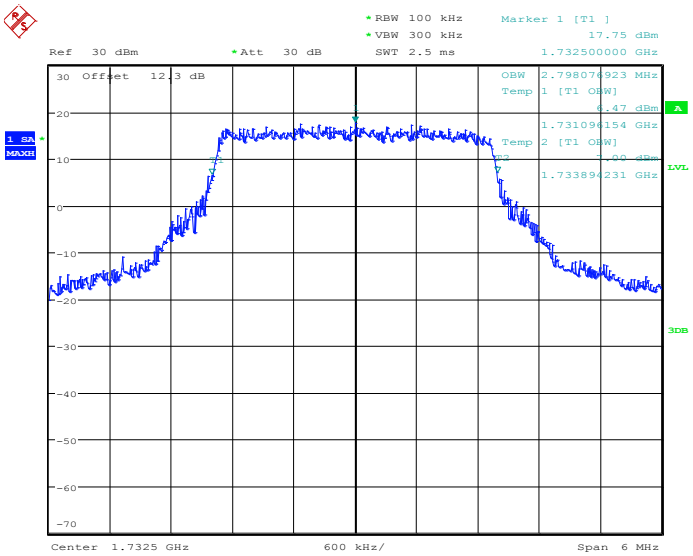
26dB Bandwidth Plot on Channel 20175



Date: 13.NOV.2013 13:14:38

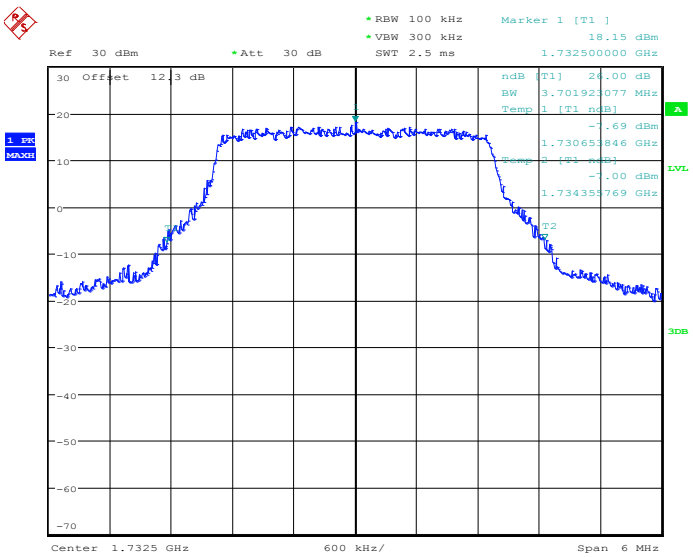
Band :	LTE Band 4	BW / Mod. :	3MHz / 16QAM

99% Occupied Bandwidth Plot on Channel 20175



Date: 8.NOV.2013 16:46:29

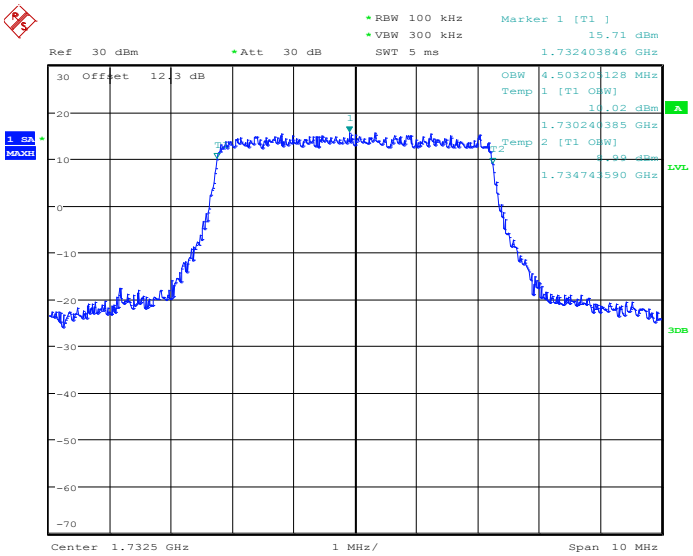
26dB Bandwidth Plot on Channel 20175



Date: 13.NOV.2013 13:14:59

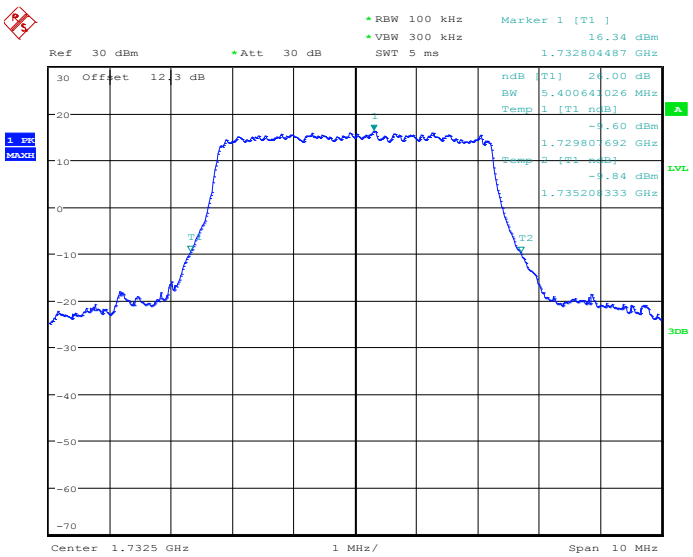
Band :	LTE Band 4	BW / Mod. :	5MHz / QPSK

99% Occupied Bandwidth Plot on Channel 20175



Date: 8.NOV.2013 15:24:27

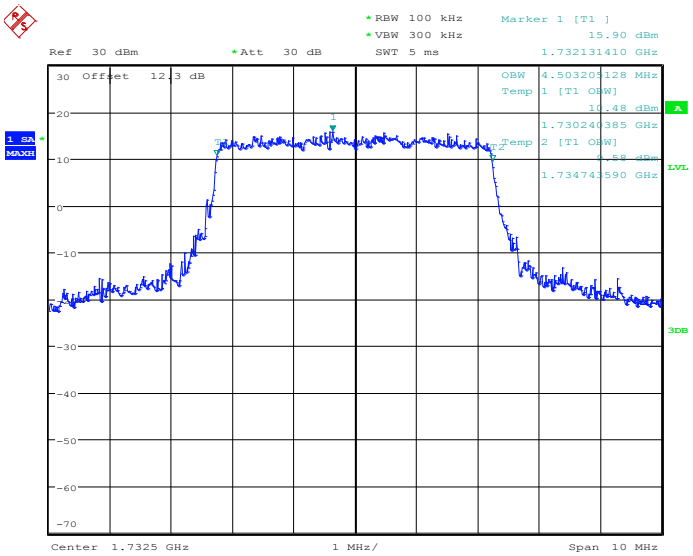
26dB Bandwidth Plot on Channel 20175



Date: 8.NOV.2013 15:16:59

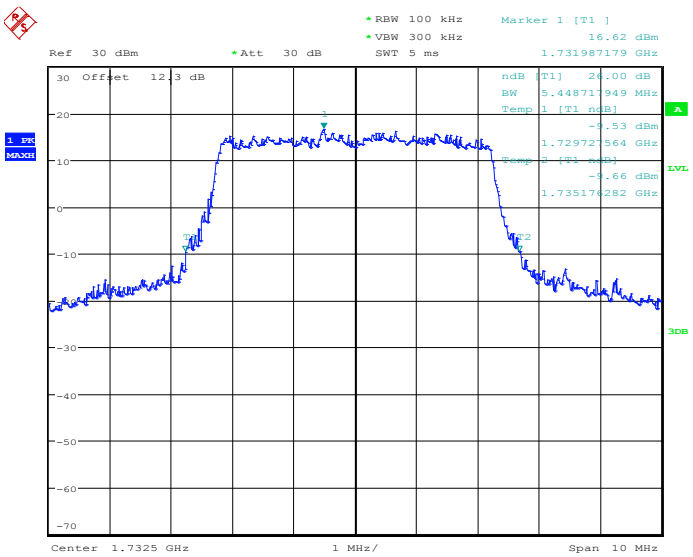
Band :	LTE Band 4	BW / Mod. :	5MHz / 16QAM

99% Occupied Bandwidth Plot on Channel 20175



Date: 8.NOV.2013 15:24:42

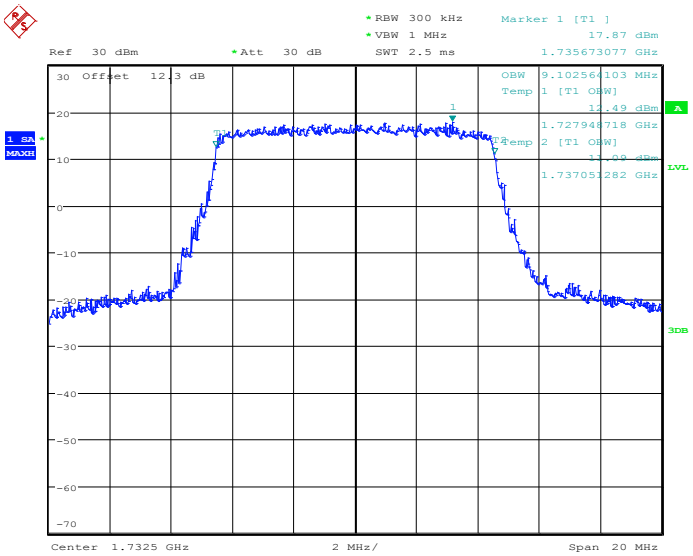
26dB Bandwidth Plot on Channel 20175



Date: 8.NOV.2013 15:17:14

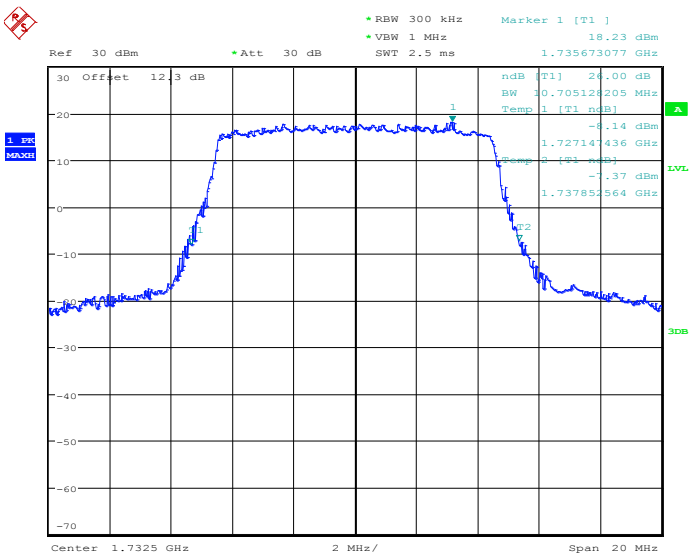
Band :	LTE Band 4	BW / Mod. :	10MHz / QPSK

99% Occupied Bandwidth Plot on Channel 20175



Date: 8.NOV.2013 15:01:27

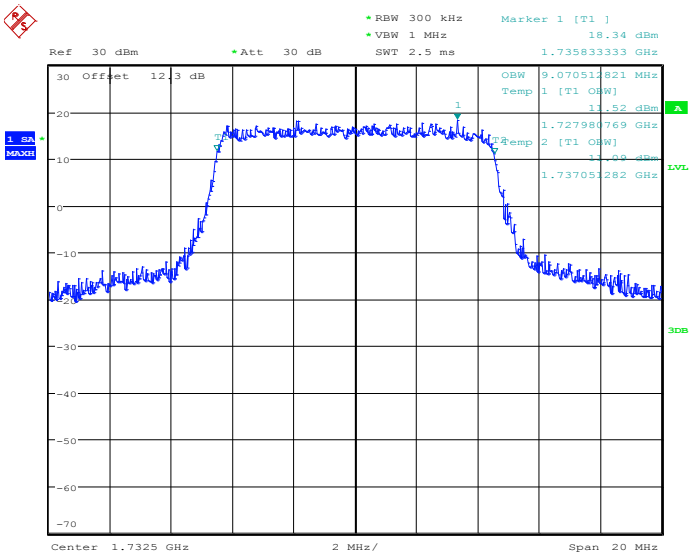
26dB Bandwidth Plot on Channel 20175



Date: 8.NOV.2013 15:08:58

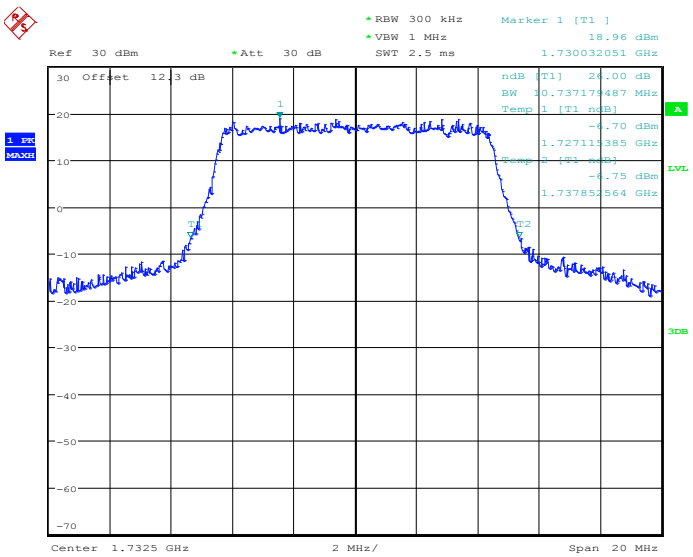
Band :	LTE Band 4	BW / Mod. :	10MHz / 16QAM

99% Occupied Bandwidth Plot on Channel 20175



Date: 8.NOV.2013 15:01:44

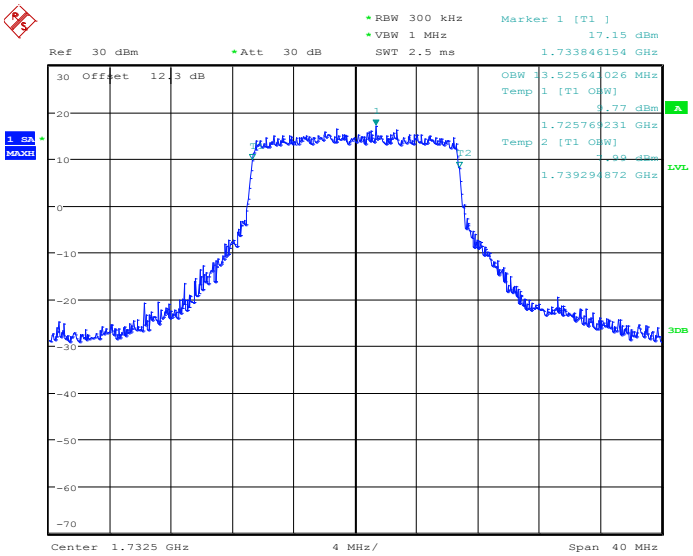
26dB Bandwidth Plot on Channel 20175



Date: 8.NOV.2013 15:09:13

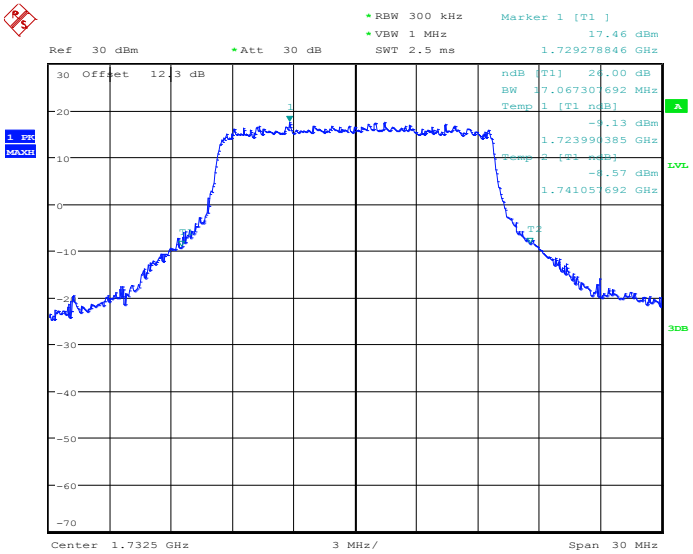
Band :	LTE Band 4	BW / Mod. :	15MHz / QPSK

99% Occupied Bandwidth Plot on Channel 20175



Date: 8.NOV.2013 14:56:36

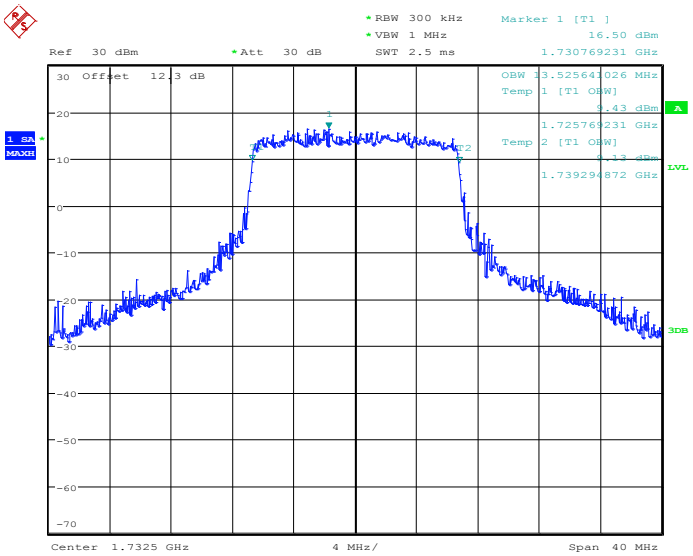
26dB Bandwidth Plot on Channel 20175



Date: 8.NOV.2013 15:13:35

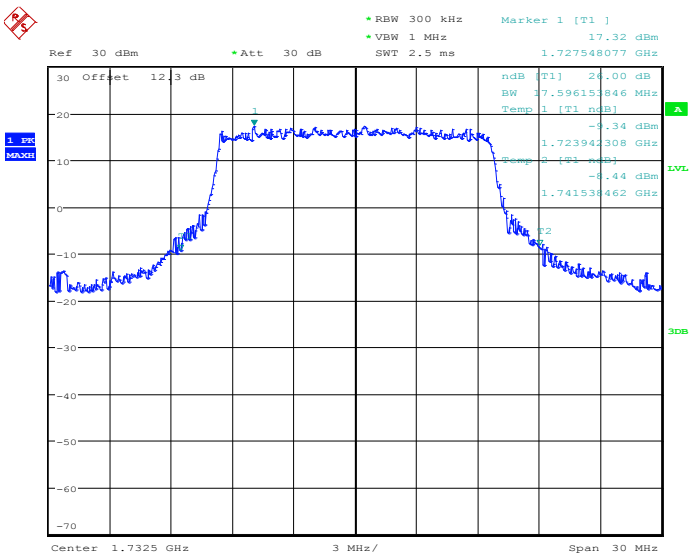
Band :	LTE Band 4	BW / Mod. :	15MHz / 16QAM

99% Occupied Bandwidth Plot on Channel 20175



Date: 8.NOV.2013 14:56:50

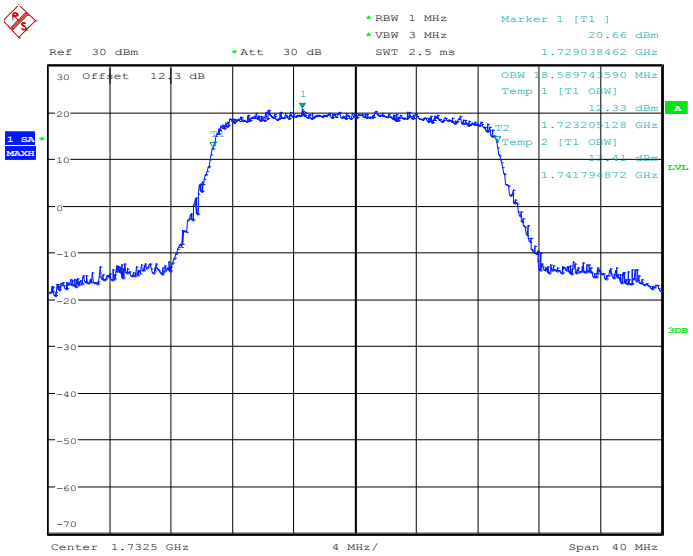
26dB Bandwidth Plot on Channel 20175



Date: 8.NOV.2013 15:13:56

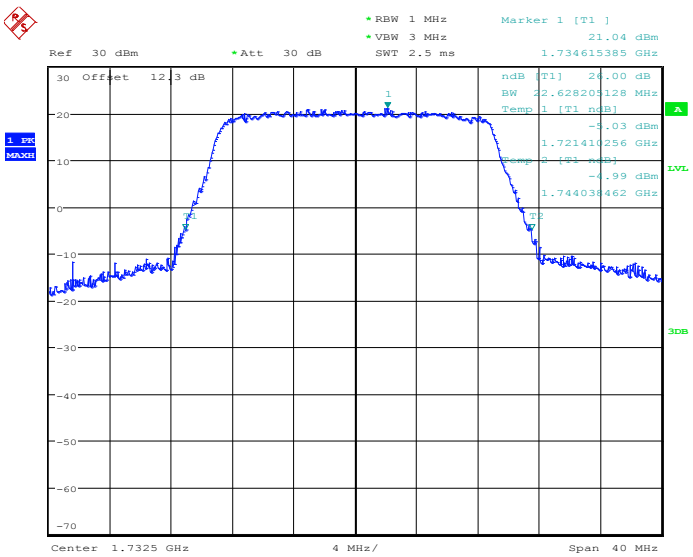
Band :	LTE Band 4	BW / Mod. :	20MHz / QPSK

99% Occupied Bandwidth Plot on Channel 20175



Date: 8.NOV.2013 13:37:29

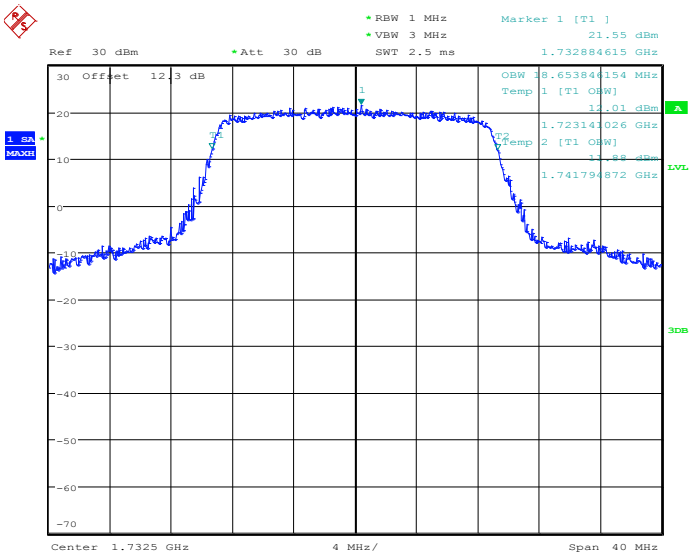
26dB Bandwidth Plot on Channel 20175



Date: 8.NOV.2013 14:01:56

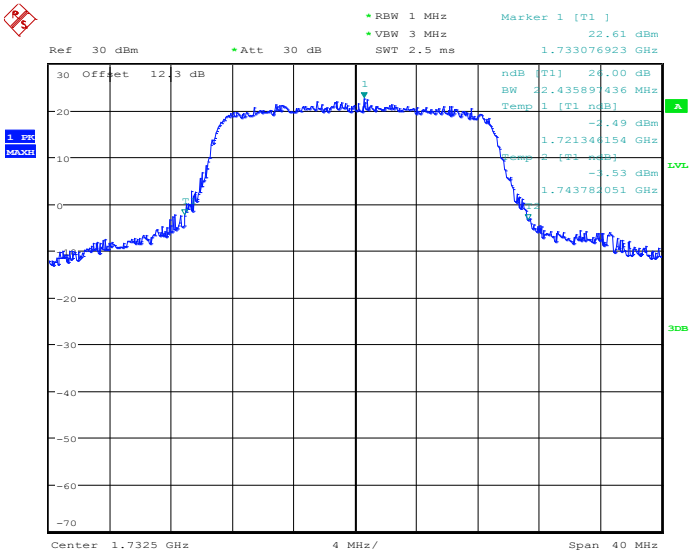
Band :	LTE Band 4	BW / Mod. :	20MHz / 16QAM

99% Occupied Bandwidth Plot on Channel 20175



Date: 8.NOV.2013 13:40:11

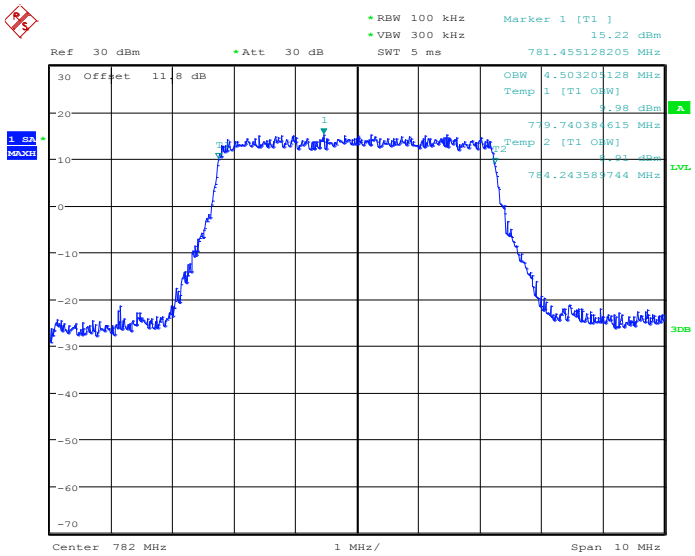
26dB Bandwidth Plot on Channel 20175



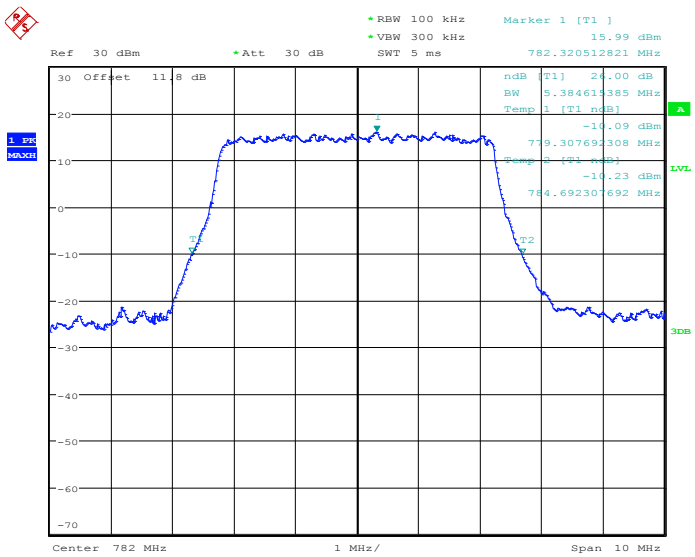
Date: 8.NOV.2013 14:02:12

Band :	LTE Band 13	BW / Mod. :	5MHz / QPSK

99% Occupied Bandwidth Plot on Channel 23230

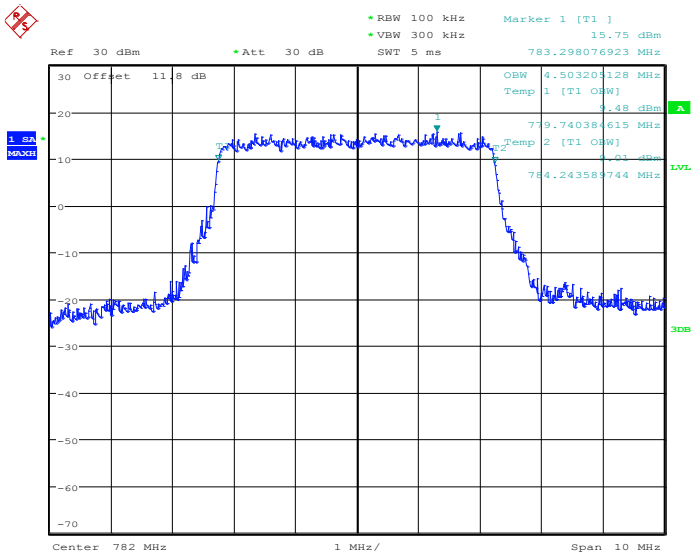


26dB Bandwidth Plot on Channel 23230

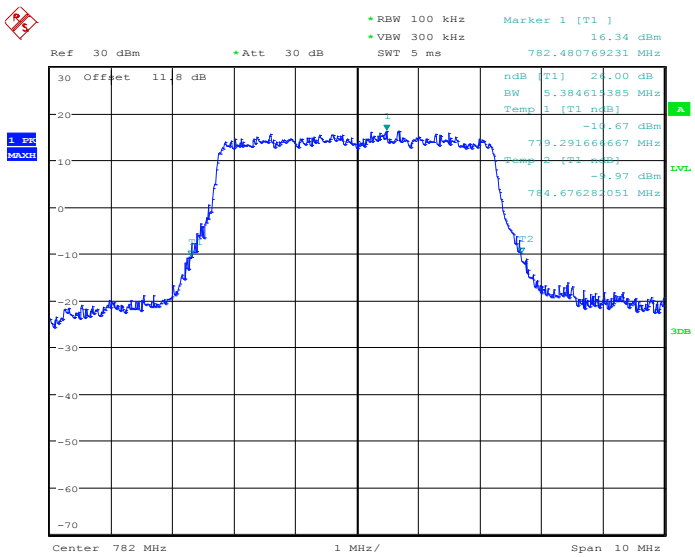


Band :	LTE Band 13	BW / Mod. :	5MHz / 16QAM

99% Occupied Bandwidth Plot on Channel 23230

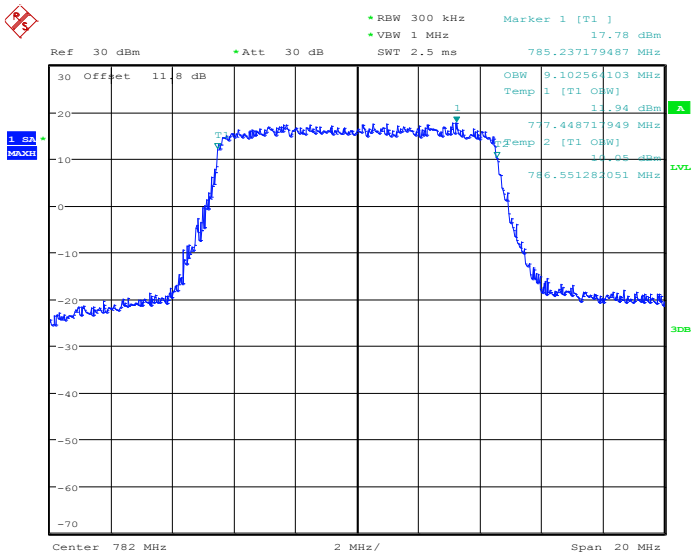


26dB Bandwidth Plot on Channel 23230



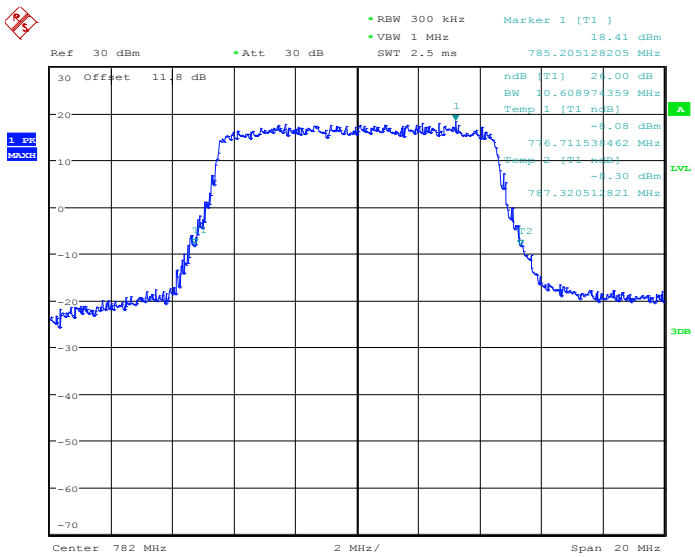
Band :	LTE Band 13	BW / Mod. :	10MHz / QPSK

99% Occupied Bandwidth Plot on Channel 23230



Date: 13.NOV.2013 16:19:21

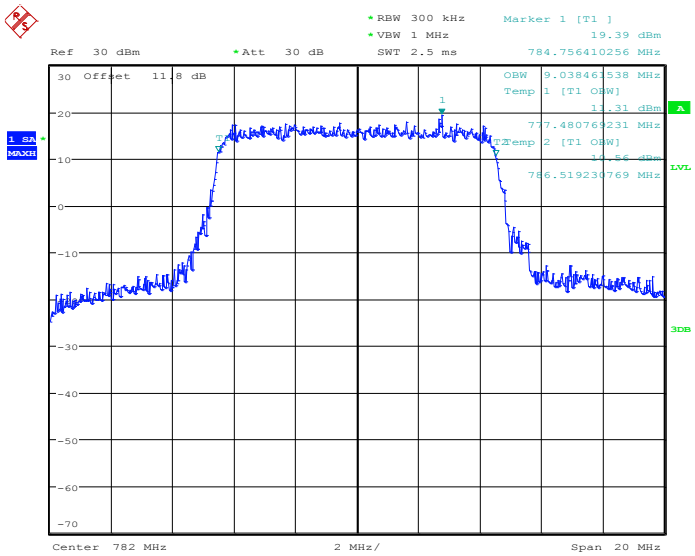
26dB Bandwidth Plot on Channel 23230



Date: 13.NOV.2013 16:20:20

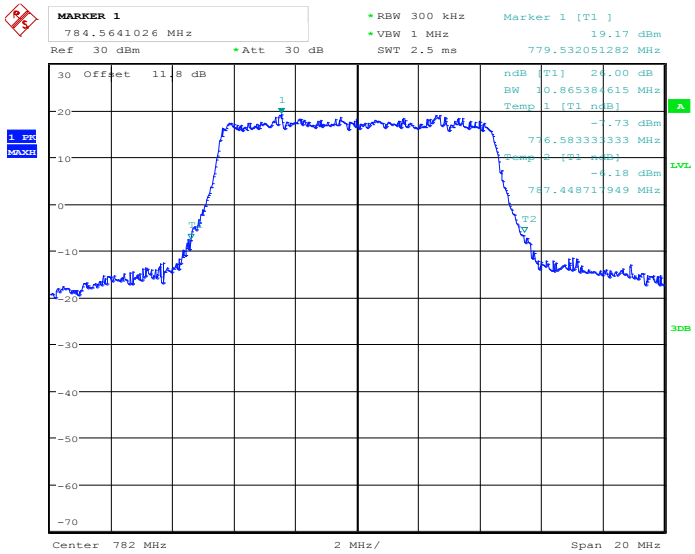
Band :	LTE Band 13	BW / Mod. :	10MHz / 16QAM

99% Occupied Bandwidth Plot on Channel 23230



Date: 13.NOV.2013 16:19:36

26dB Bandwidth Plot on Channel 23230



Date: 13.NOV.2013 16:20:06

3.4 Conducted Band Edge Measurement

3.4.1 Description of Conducted Band Edge Measurement

27.53 (c)

For operations in the 776-788 MHz band, the FCC limit is 43 + $10\log_{10}$(P[Watts]) dB below the transmitter power P(Watts) in a 100 kHz bandwidth. However, in the 100 kHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of at least 30 kHz may be employed.

27.53 (h)

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

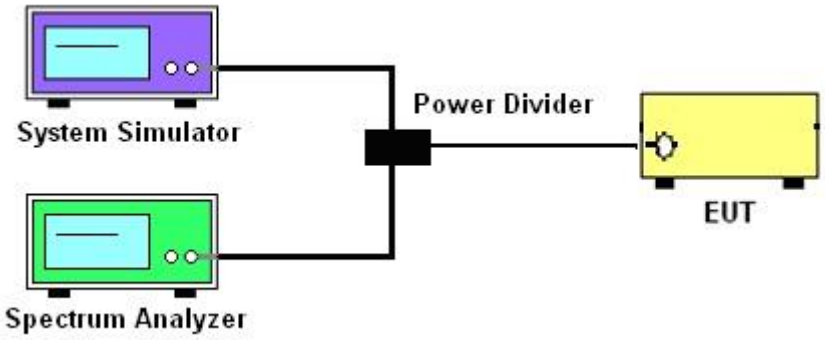
3.4.2 Measuring Instruments

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

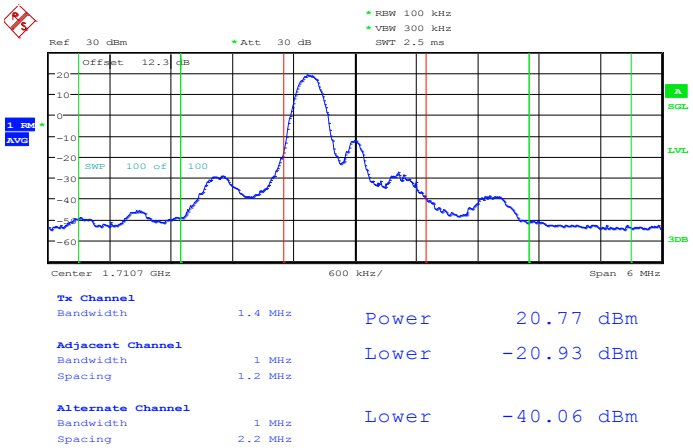
3.4.4 Test Setup



3.4.5 Test Result (Plots) of Conducted Band Edge

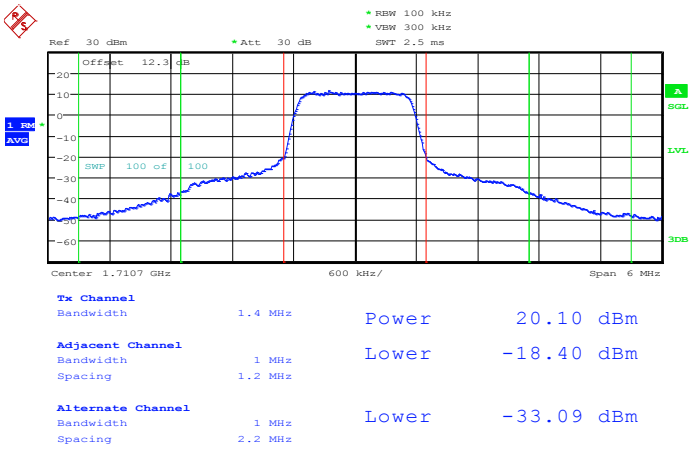
Band :	LTE Band 4	Band Width :	1.4MHz / QPSK

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



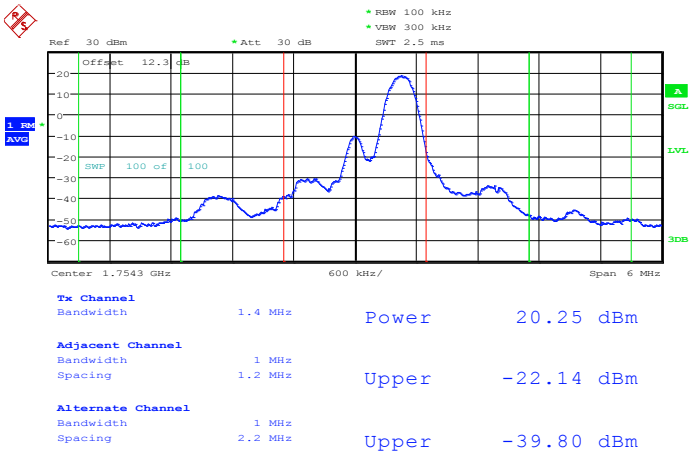
Date: 13.NOV.2013 13:42:27

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



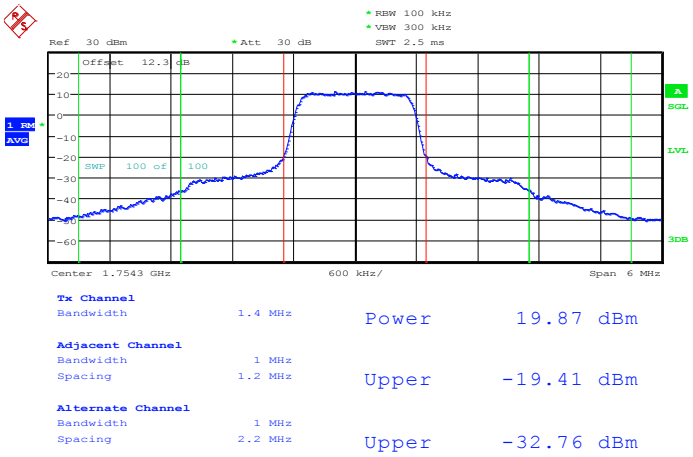
Date: 13.NOV.2013 13:43:10

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



Date: 13.NOV.2013 13:41:47

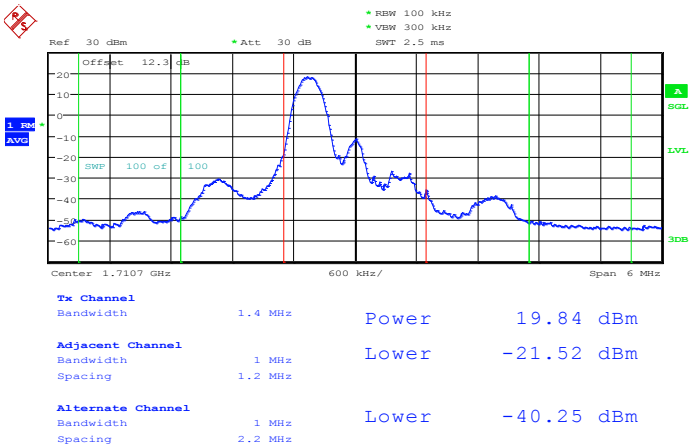
Higher Band Edge Plot for QPSK-RB Size 6, RB Offset 0



Date: 13.NOV.2013 13:40:56

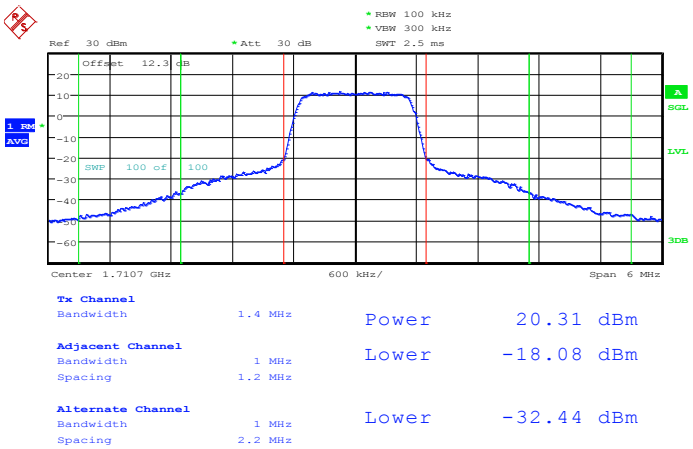
Band :	LTE Band 4	Band Width :	1.4MHz / 16QAM

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



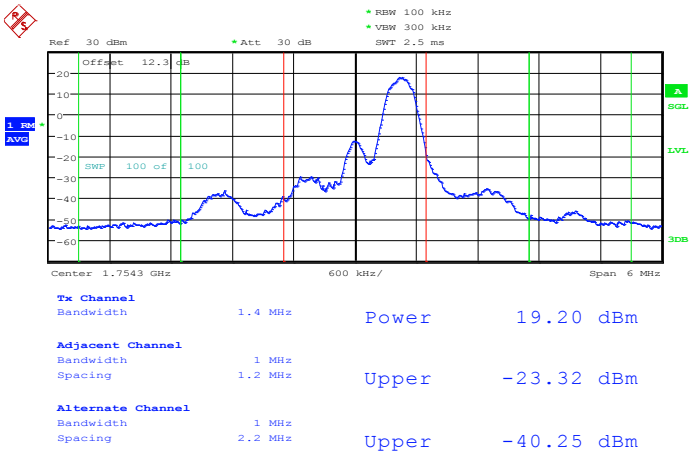
Date: 13.NOV.2013 13:42:39

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



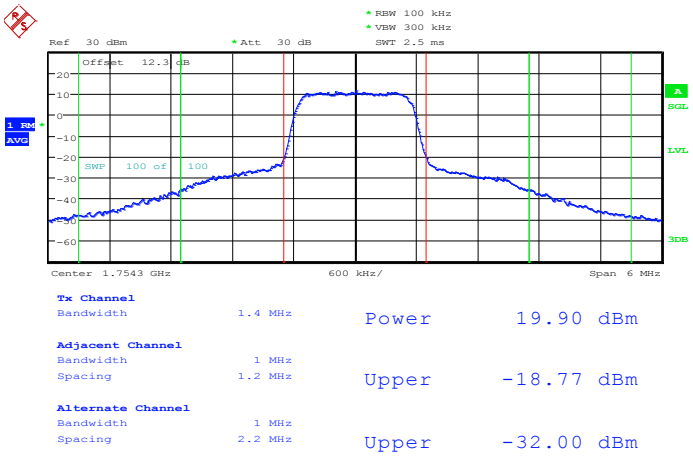
Date: 13.NOV.2013 13:42:58

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



Date: 13.NOV.2013 13:41:34

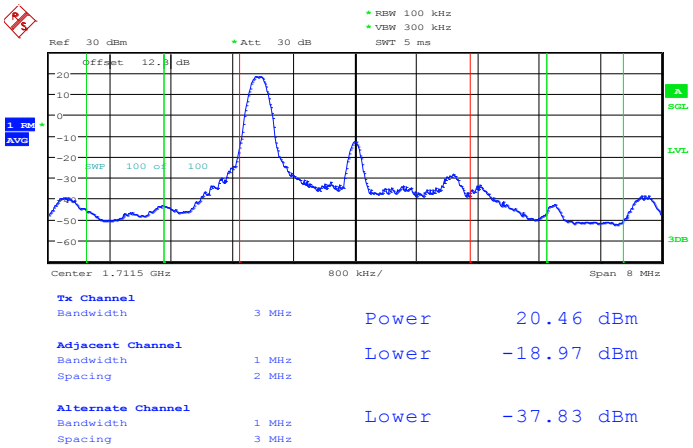
Higher Band Edge Plot for 16QAM-RB Size 6, RB Offset 0



Date: 13.NOV.2013 13:41:11

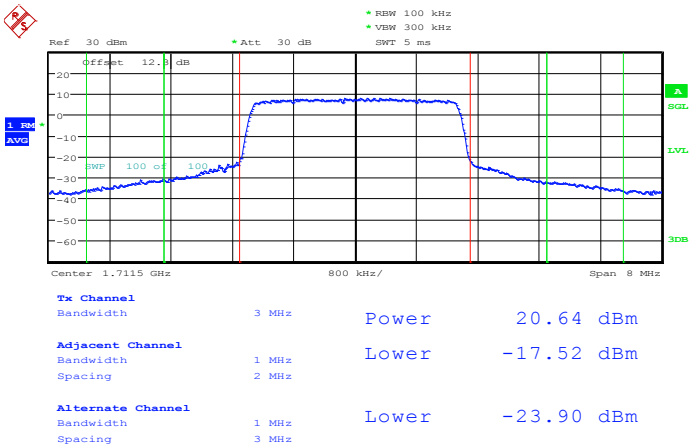
Band :	LTE Band 4	Band Width :	3MHz / QPSK

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



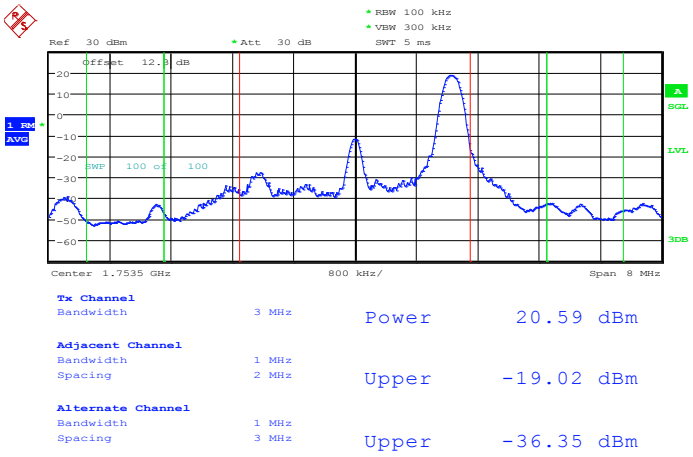
Date: 13.NOV.2013 13:45:39

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



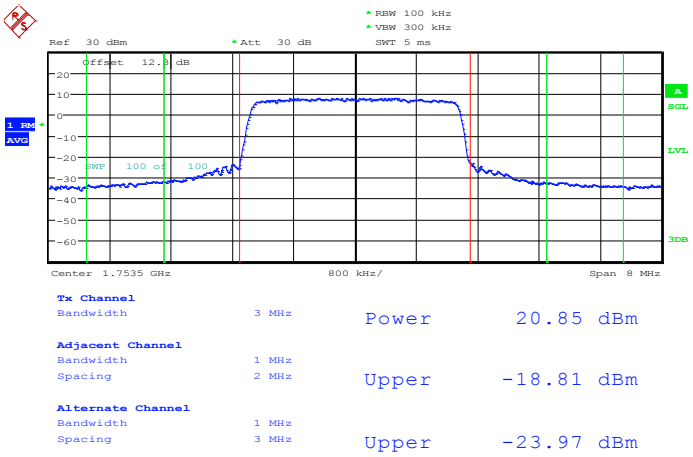
Date: 13.NOV.2013 13:44:41

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



Date: 13.NOV.2013 13:46:38

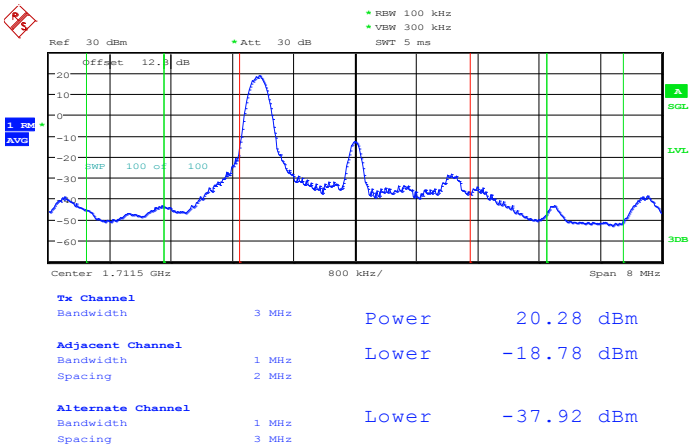
Higher Band Edge Plot for QPSK-RB Size 15, RB Offset 0



Date: 13.NOV.2013 13:47:16

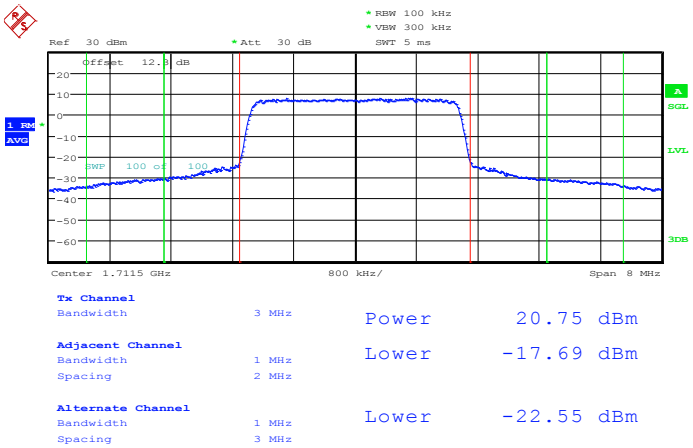
Band :	LTE Band 4	Band Width :	3MHz / 16QAM

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



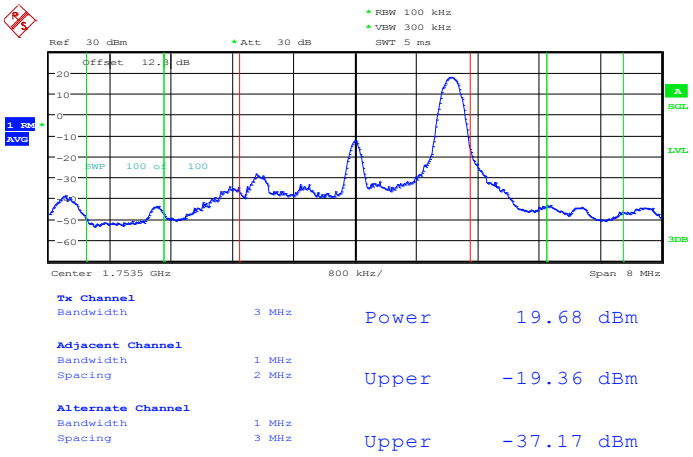
Date: 13.NOV.2013 13:45:23

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



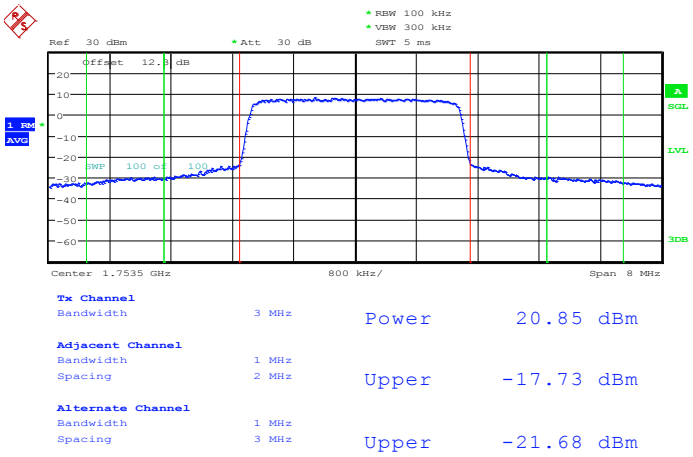
Date: 13.NOV.2013 13:45:07

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



Date: 13.NOV.2013 13:46:51

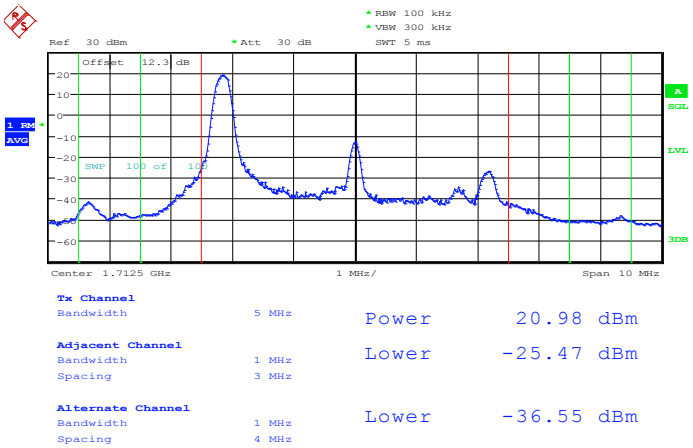
Higher Band Edge Plot for 16QAM-RB Size 15, RB Offset 0



Date: 13.NOV.2013 13:47:05

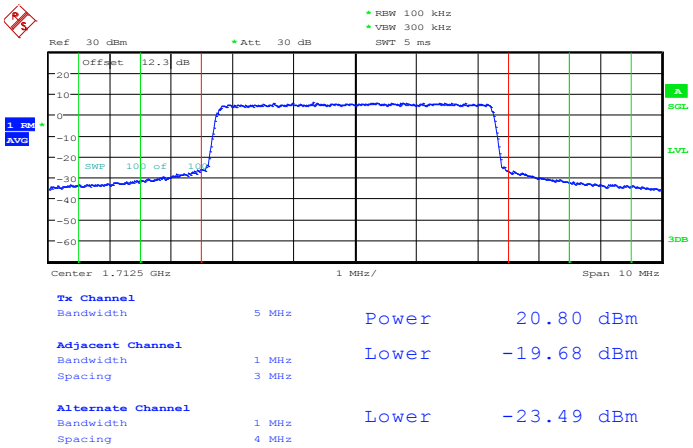
Band :	LTE Band 4	Band Width :	5MHz / QPSK

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



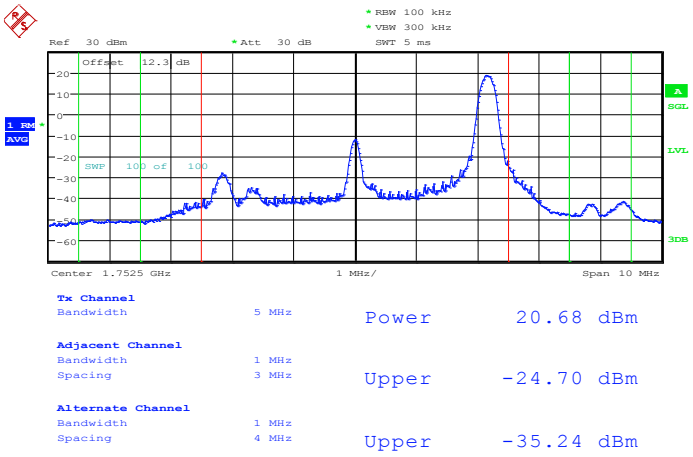
Date: 13.NOV.2013 13:49:25

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



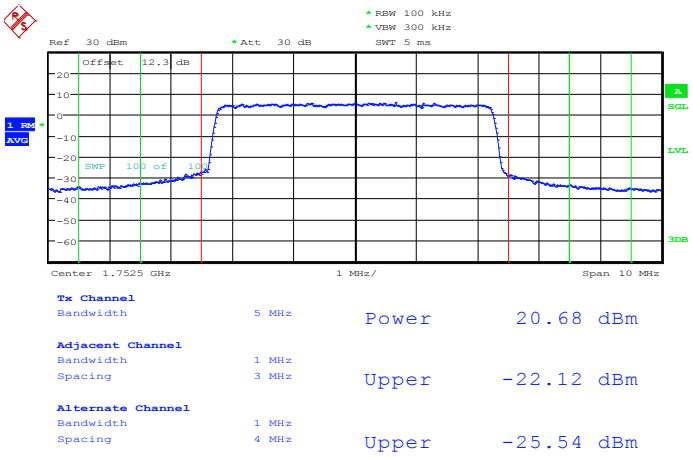
Date: 13.NOV.2013 13:48:41

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



Date: 13.NOV.2013 13:50:11

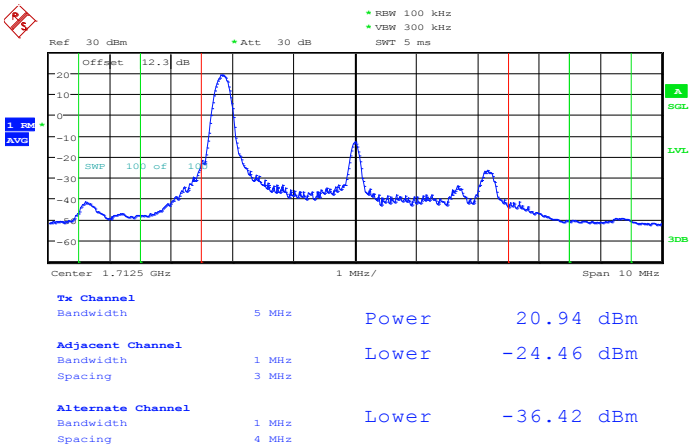
Higher Band Edge Plot for QPSK-RB Size 25, RB Offset 0



Date: 13.NOV.2013 13:50:54

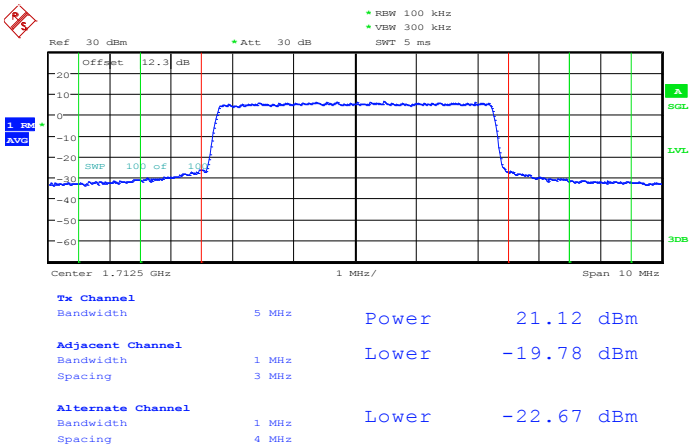
Band :	LTE Band 4	Band Width :	5MHz / 16QAM

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



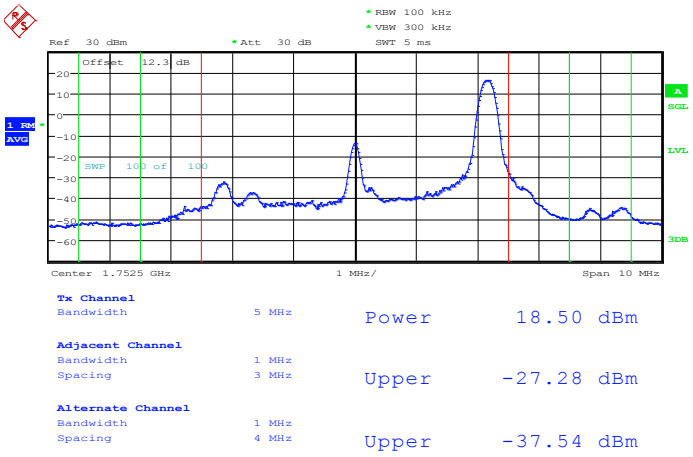
Date: 13.NOV.2013 13:49:12

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



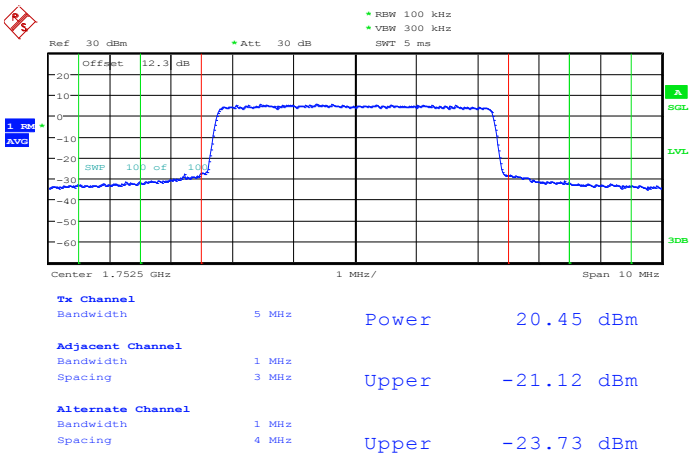
Date: 13.NOV.2013 13:48:57

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



Date: 13.NOV.2013 13:50:25

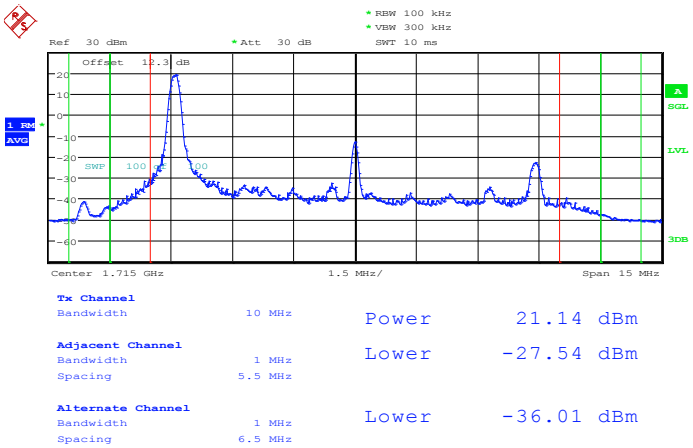
Higher Band Edge Plot for 16QAM-RB Size 25, RB Offset 0



Date: 13.NOV.2013 13:50:41

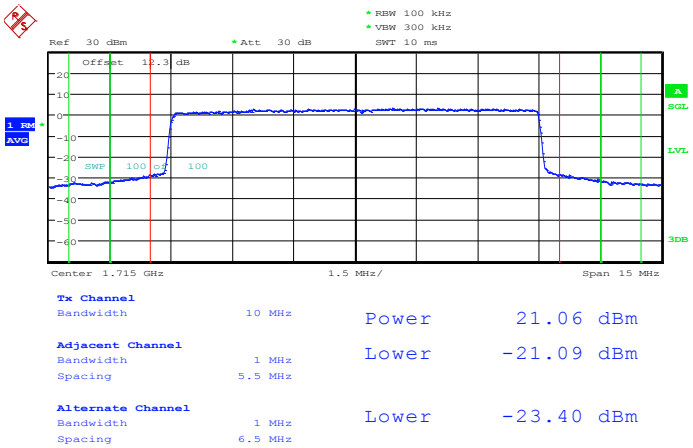
Band :	LTE Band 4	Band Width :	10MHz / QPSK

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



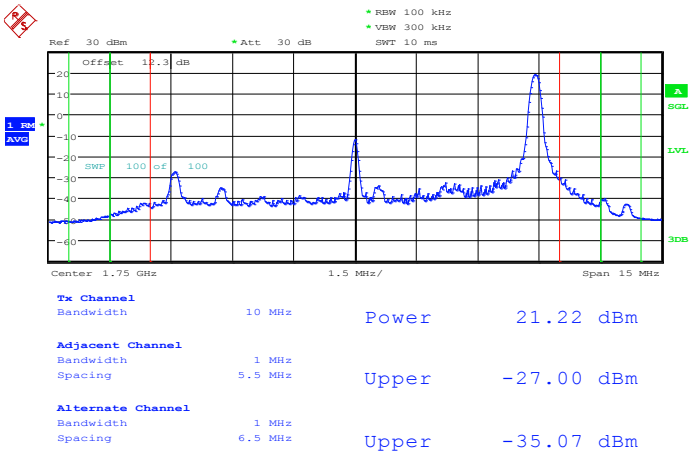
Date: 13.NOV.2013 13:53:22

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



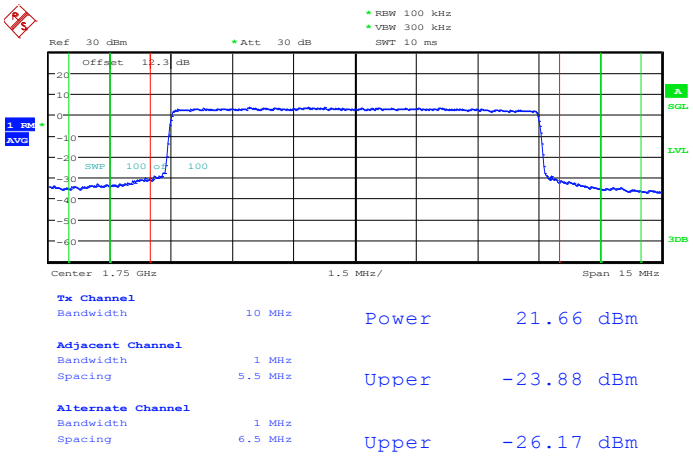
Date: 13.NOV.2013 13:52:33

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



Date: 13.NOV.2013 13:54:11

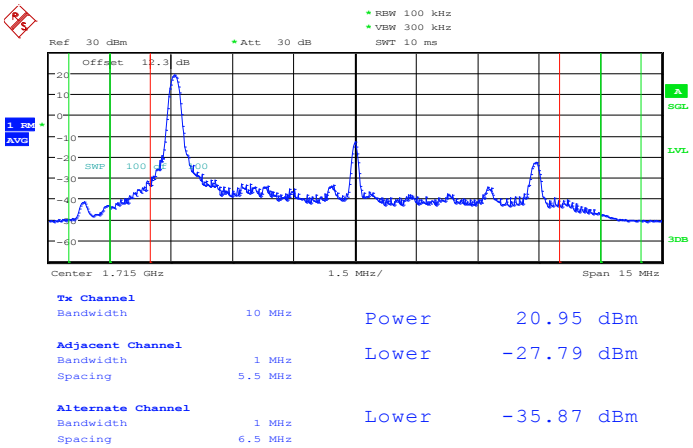
Higher Band Edge Plot for QPSK-RB Size 50, RB Offset 0



Date: 13.NOV.2013 13:54:59

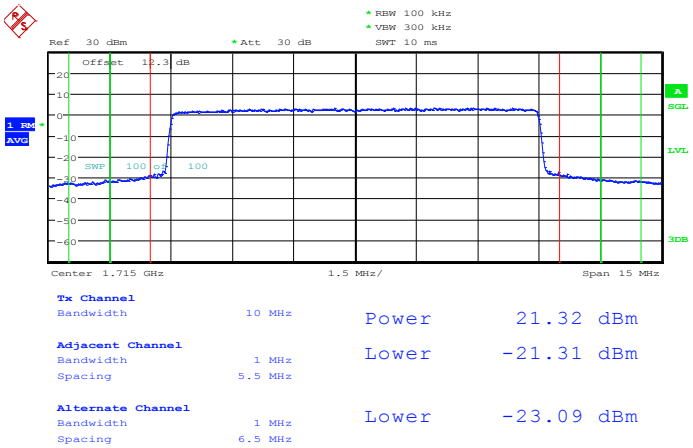
Band :	LTE Band 4	Band Width :	10MHz / 16QAM

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



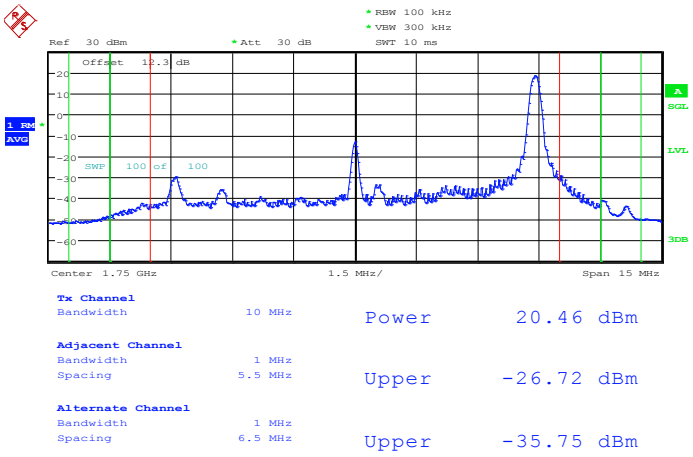
Date: 13.NOV.2013 13:53:06

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



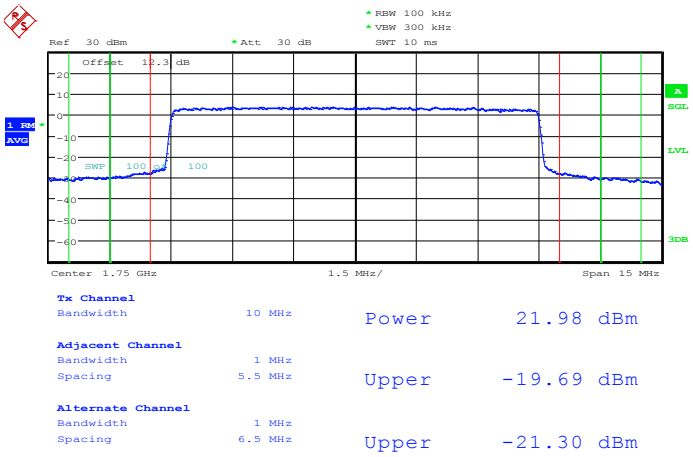
Date: 13.NOV.2013 13:52:50

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



Date: 13.NOV.2013 13:54:27

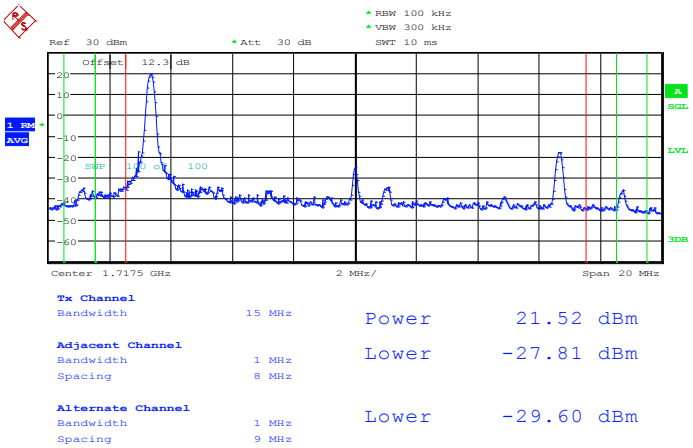
Higher Band Edge Plot for 16QAM-RB Size 50, RB Offset 0



Date: 13.NOV.2013 13:54:45

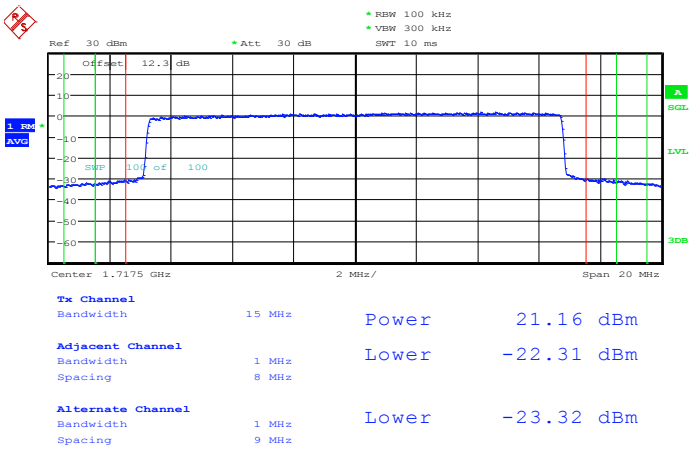
Band :	LTE Band 4	Band Width :	15MHz / QPSK

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



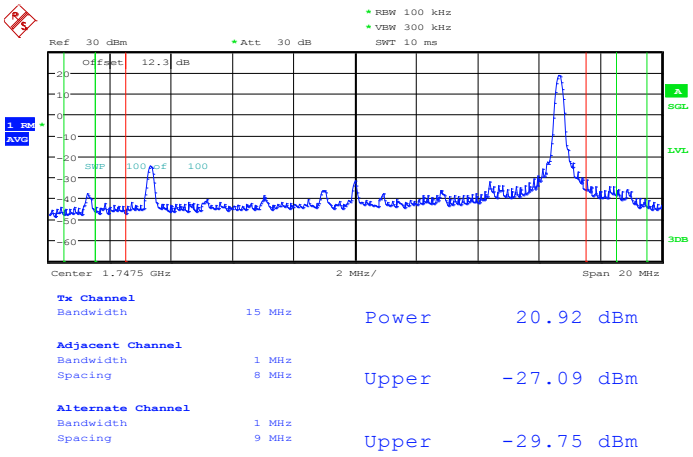
Date: 13.NOV.2013 13:58:31

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



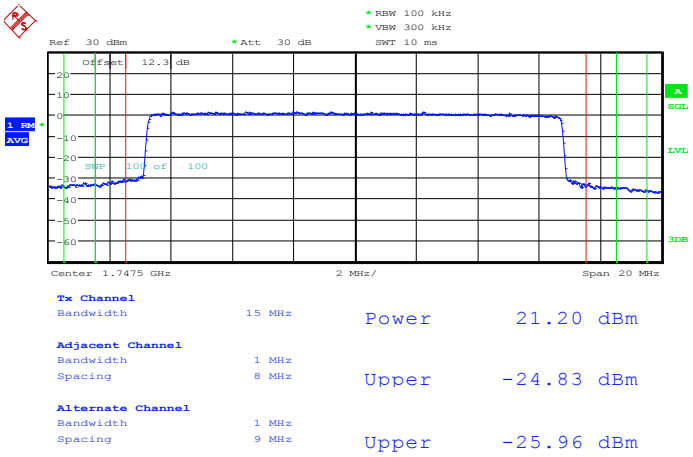
Date: 13.NOV.2013 13:57:35

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



Date: 13.NOV.2013 13:59:10

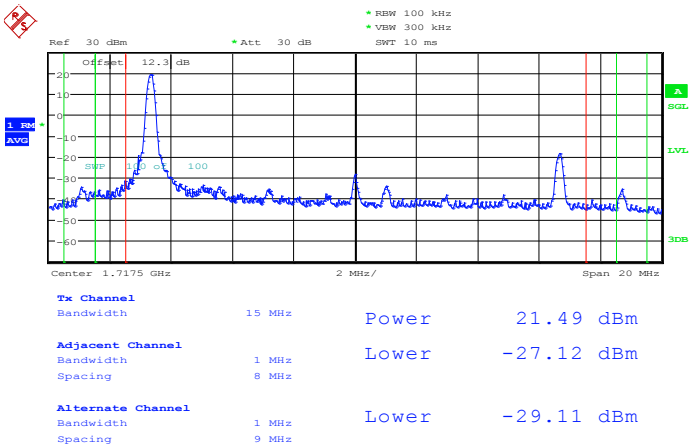
Higher Band Edge Plot for QPSK-RB Size 75, RB Offset 0



Date: 13.NOV.2013 13:59:54

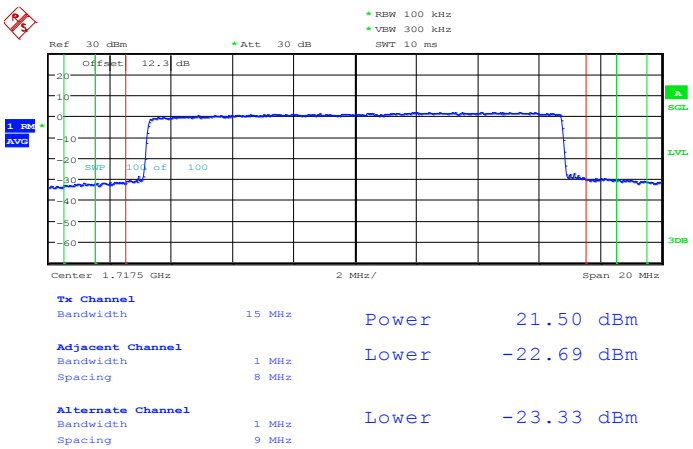
Band :	LTE Band 4	Band Width :	15MHz / 16QAM

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



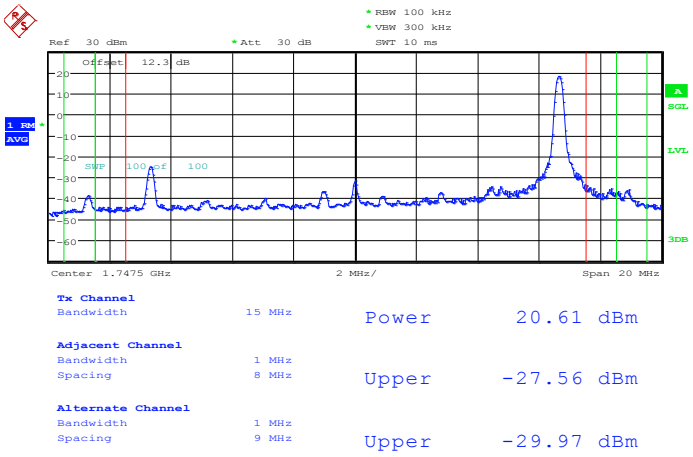
Date: 13.NOV.2013 13:58:13

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



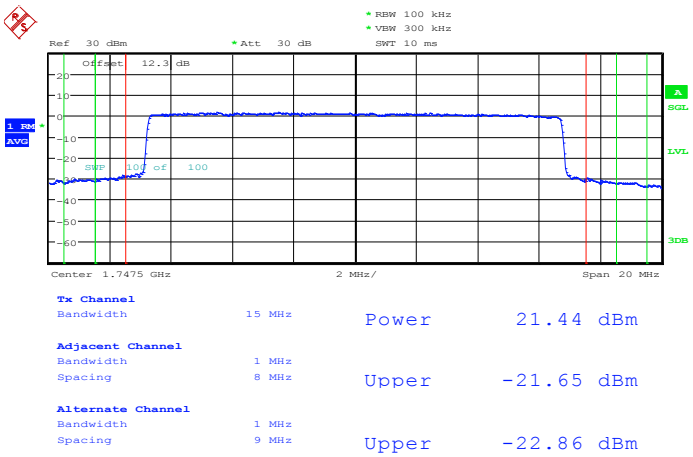
Date: 13.NOV.2013 13:57:53

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



Date: 13.NOV.2013 13:59:23

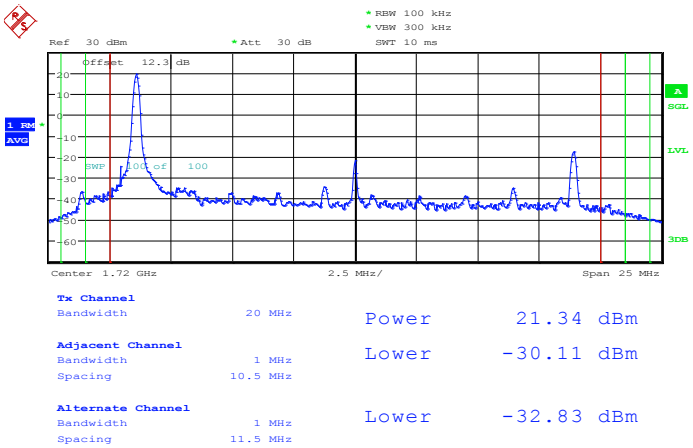
Higher Band Edge Plot for 16QAM-RB Size 75, RB Offset 0



Date: 13.NOV.2013 13:59:40

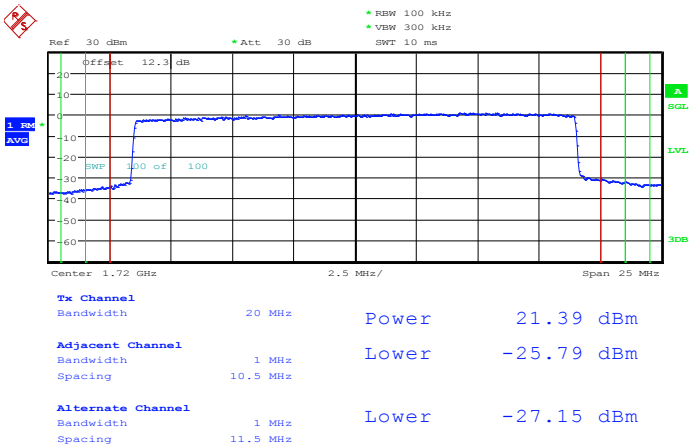
Band :	LTE Band 4	Band Width :	20MHz / QPSK

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



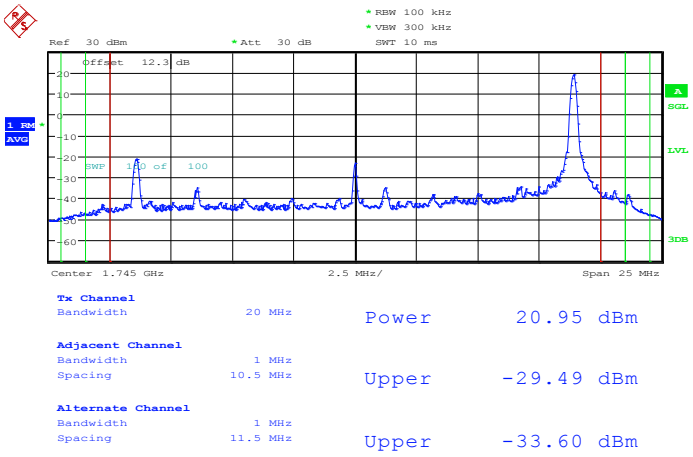
Date: 13.NOV.2013 14:01:48

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



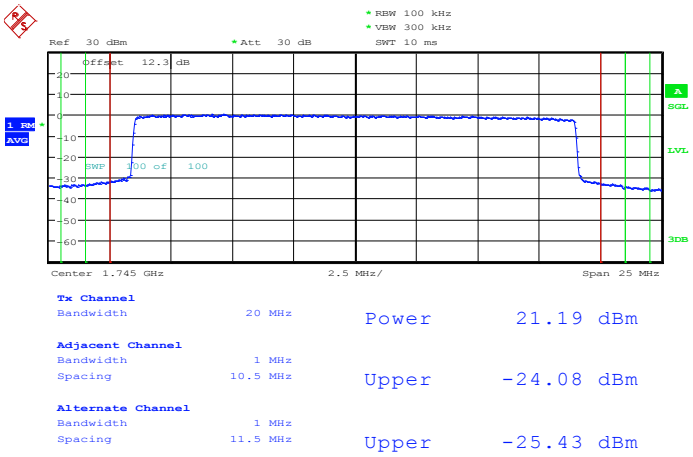
Date: 13.NOV.2013 14:01:07

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



Date: 13.NOV.2013 14:02:53

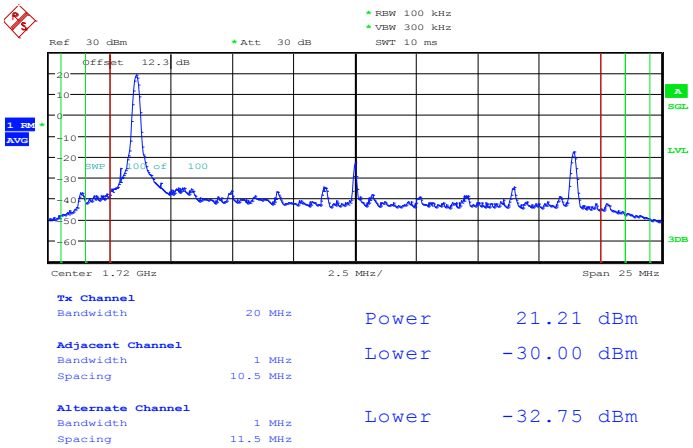
Higher Band Edge Plot for QPSK-RB Size 100, RB Offset 0



Date: 13.NOV.2013 14:03:36

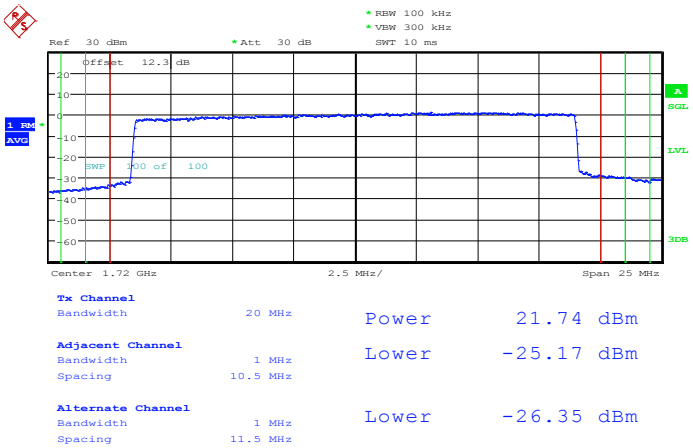
Band :	LTE Band 4	Band Width :	20MHz / 16QAM

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



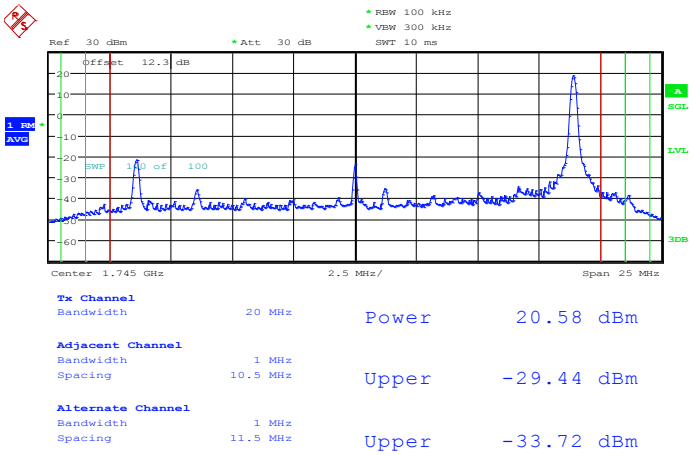
Date: 13.NOV.2013 14:01:35

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



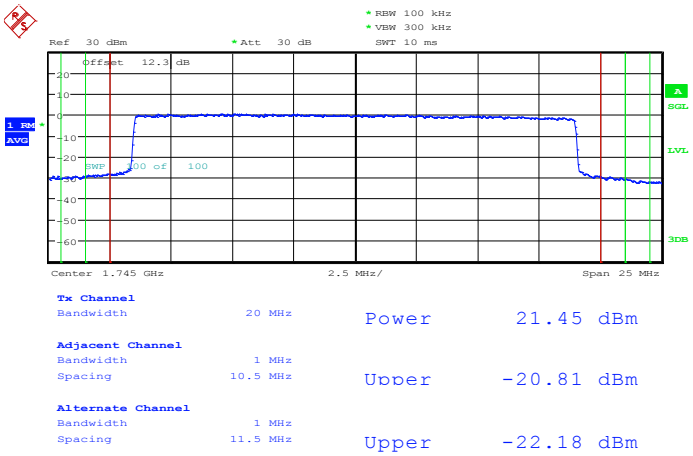
Date: 13.NOV.2013 14:01:20

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



Date: 13.NOV.2013 14:03:06

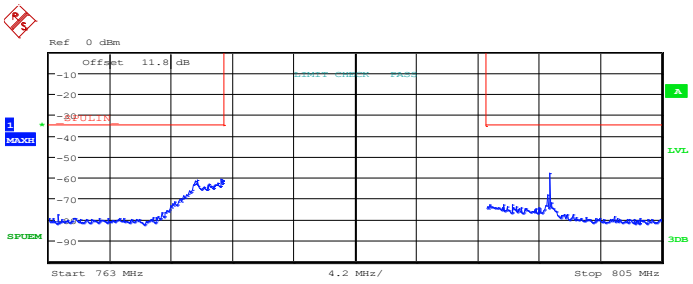
Higher Band Edge Plot for 16QAM-RB Size 100, RB Offset 0



Date: 13.NOV.2013 14:03:22

Band :	LTE Band 13	Band Width :	5MHz / QPSK

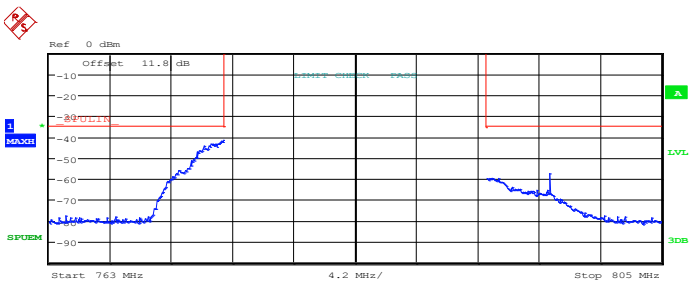
Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
763.000 M	775.000 M	6.25 k	774.784000 M	-60.87	-25.87
793.000 M	805.000 M	6.25 k	797.332000 M	-57.96	-22.96

Date: 13.NOV.2013 16:33:35

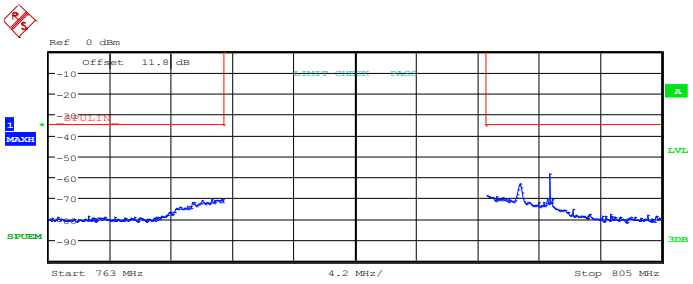
Lower Band Edge Plot for QPSK-RB Size 25, RB Offset 0



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
763.000 M	775.000 M	6.25 k	774.976000 M	-41.76	-6.76
793.000 M	805.000 M	6.25 k	797.332000 M	-57.55	-22.55

Date: 13.NOV.2013 16:32:57

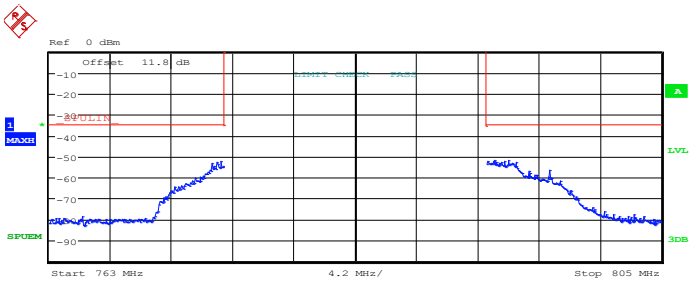
Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 24



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
763.000 M	775.000 M	6.25 k	774.178000 M	-70.70	-35.70
793.000 M	805.000 M	6.25 k	797.332000 M	-58.34	-23.34

Date: 13.NOV.2013 16:34:11

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

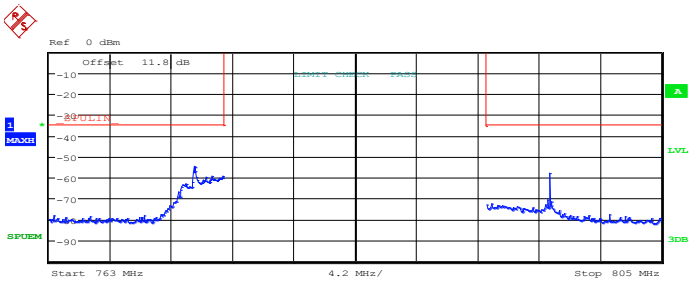


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
763.000 M	775.000 M	6.25 k	774.760000 M	-52.21	-17.21
793.000 M	805.000 M	6.25 k	793.558000 M	-52.10	-17.10

Date: 13.NOV.2013 16:35:05

Band :	LTE Band 13	Band Width :	5MHz / 16QAM

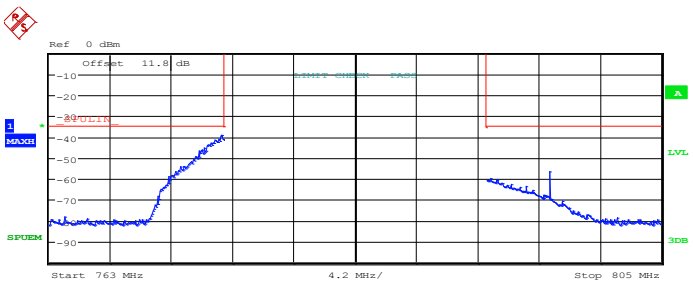
Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
763.000 M	775.000 M	6.25 k	772.942000 M	-54.89	-19.89
793.000 M	805.000 M	6.25 k	797.332000 M	-57.86	-22.86

Date: 13.NOV.2013 16:33:25

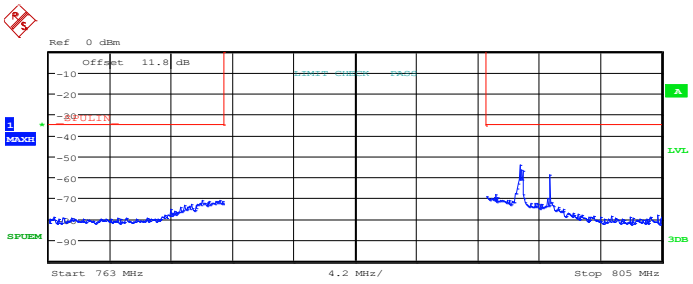
Lower Band Edge Plot for 16QAM-RB Size 25, RB Offset 0



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
763.000 M	775.000 M	6.25 k	774.862000 M	-39.35	-4.35
793.000 M	805.000 M	6.25 k	797.332000 M	-56.64	-21.64

Date: 13.NOV.2013 16:33:11

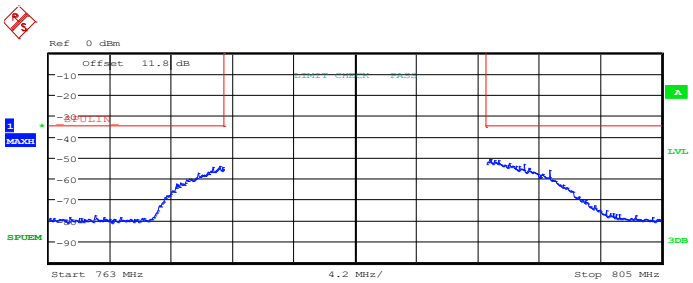
Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 24



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
763.000 M	775.000 M	6.25 k	774.676000 M	-71.09	-36.09
793.000 M	805.000 M	6.25 k	795.274000 M	-54.24	-19.24

Date: 13.NOV.2013 16:34:23

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

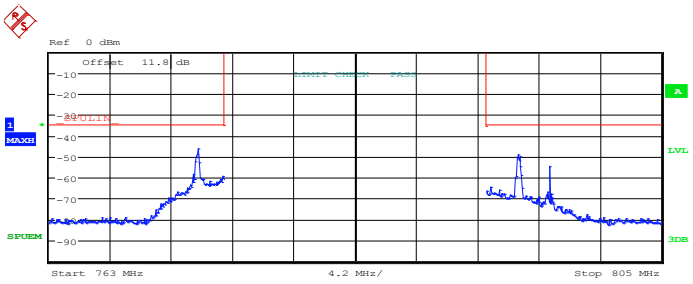


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
763.000 M	775.000 M	6.25 k	774.718000 M	-54.35	-19.35
793.000 M	805.000 M	6.25 k	793.186000 M	-50.86	-15.86

Date: 13.NOV.2013 16:34:54

Band :	LTE Band 13	Band Width :	10MHz / QPSK

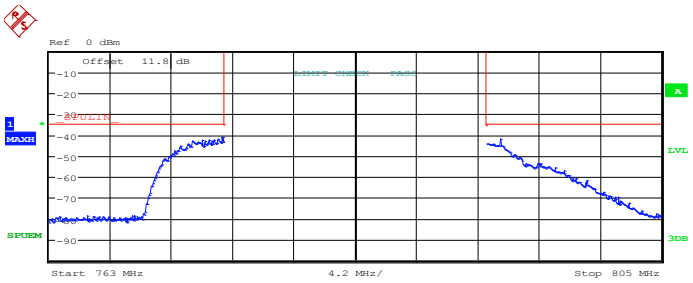
Middle Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
763.000 M	775.000 M	6.25 k	773.206000 M	-46.16	-11.16
793.000 M	805.000 M	6.25 k	795.196000 M	-48.94	-13.94

Date: 13.NOV.2013 16:29:36

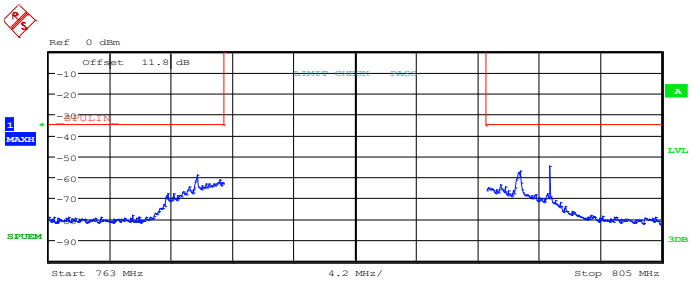
Middle Band Edge Plot for QPSK-RB Size 50, RB Offset 0



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
763.000 M	775.000 M	6.25 k	774.916000 M	-41.10	-6.10
793.000 M	805.000 M	6.25 k	793.978000 M	-42.23	-7.23

Date: 13.NOV.2013 16:28:57

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

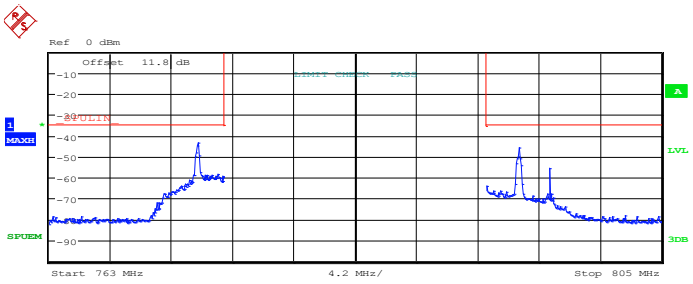


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
763.000 M	775.000 M	6.25 k	773.170000 M	-59.08	-24.08
793.000 M	805.000 M	6.25 k	797.332000 M	-54.76	-19.76

Date: 13.NOV.2013 16:29:50

Band :	LTE Band 13	Band Width :	10MHz / 16QAM

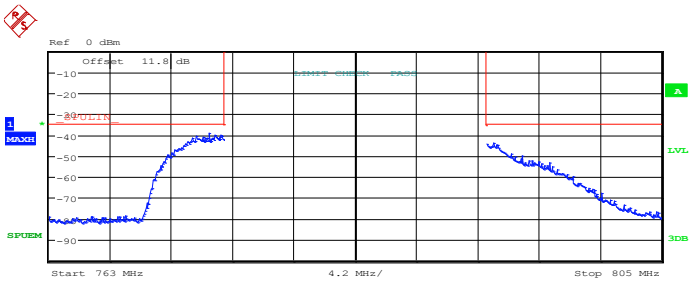
Middle Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
763.000 M	775.000 M	6.25 k	773.212000 M	-43.38	-8.38
793.000 M	805.000 M	6.25 k	795.226000 M	-45.61	-10.61

Date: 13.NOV.2013 16:29:26

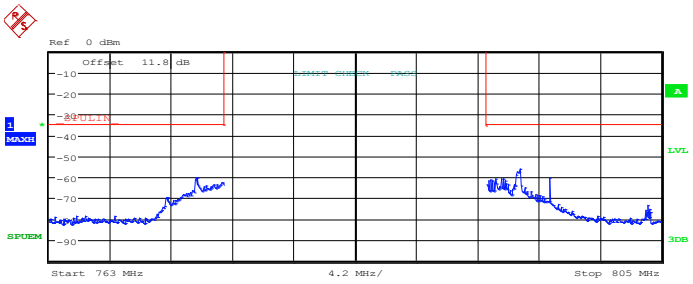
Middle Band Edge Plot for 16QAM-RB Size 50, RB Offset 0



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
763.000 M	775.000 M	6.25 k	773.974000 M	-39.31	-4.31
793.000 M	805.000 M	6.25 k	793.498000 M	-43.71	-8.71

Date: 13.NOV.2013 16:29:11

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



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
763.000 M	775.000 M	6.25 k	773.104000 M	-60.18	-25.18
793.000 M	805.000 M	6.25 k	795.316000 M	-55.87	-20.87

Date: 13.NOV.2013 16:30:03

3.5 Conducted Spurious Emission Measurement

3.5.1 Description of Conducted Spurious Emission Measurement

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

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

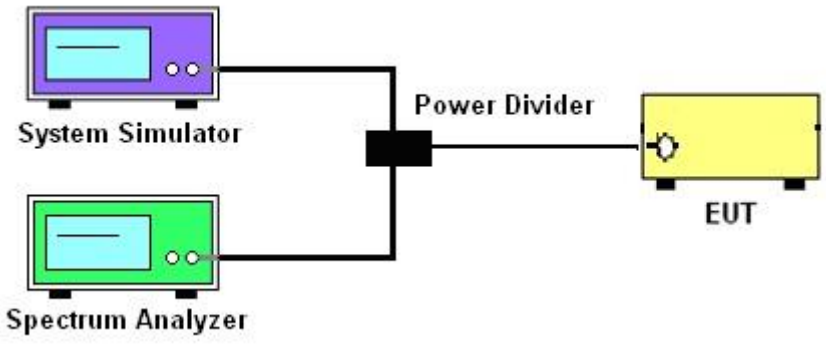
3.5.2 Measuring Instruments

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

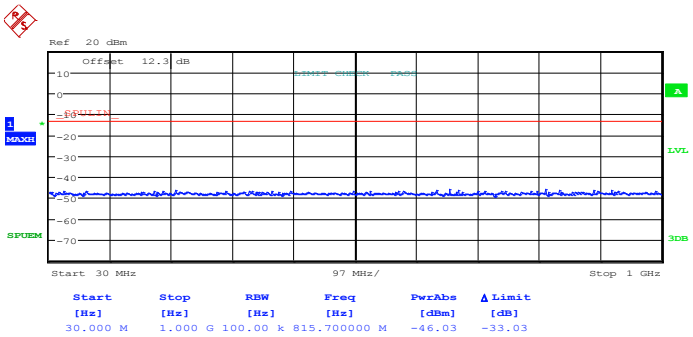
3.5.4 Test Setup



3.5.5 Test Result (Plots) of Conducted Spurious Emission

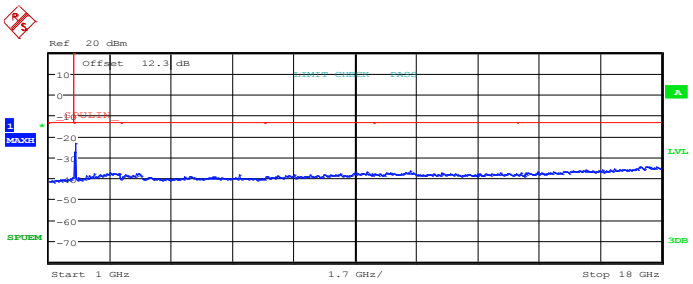
Band :	LTE Band 4	Channel :	CH19957 (Low)
Band Width :	1.4MHz		

QPSK (RB Size 3, RB Offset 0)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	1.000 G	100.00 k	815.700000 M	-46.03	-33.03

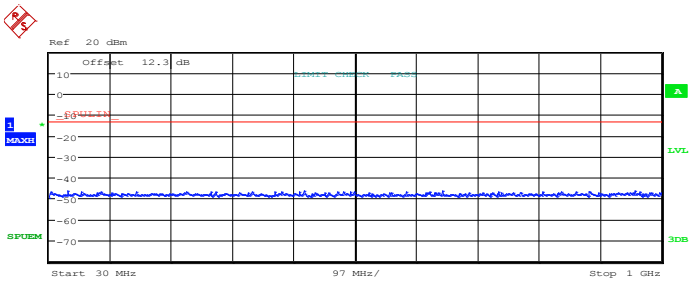
Date: 13.NOV.2013 15:41:17



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	1.707 G	1.00 M	1.706846 G	-31.37	-18.37
1.714 G	3.000 G	1.00 M	1.714843 G	-30.16	-17.16
3.000 G	7.000 G	1.00 M	3.420000 G	-38.03	-25.03
7.000 G	10.000 G	1.00 M	9.829000 G	-37.21	-24.21
10.000 G	14.000 G	1.00 M	11.026000 G	-36.77	-23.77
14.000 G	18.000 G	1.00 M	17.408000 G	-34.50	-21.50

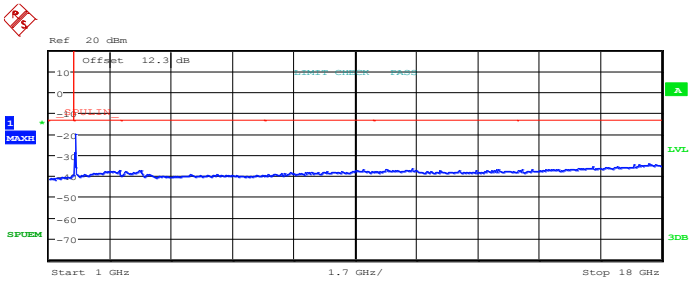
Date: 13.NOV.2013 15:42:09

16QAM (RB Size 3, RB Offset 1)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	1.000 G	100.00 k	957.320000 M	-46.38	-33.38

Date: 13.NOV.2013 15:41:36

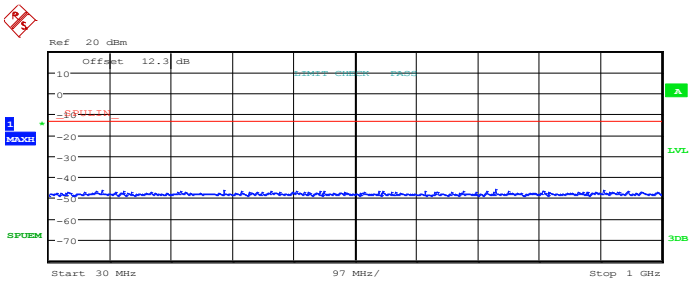


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	1.707 G	1.00 M	1.706846 G	-33.89	-20.89
1.714 G	3.000 G	1.00 M	1.714843 G	-26.40	-13.40
3.000 G	7.000 G	1.00 M	3.500000 G	-37.62	-24.62
7.000 G	10.000 G	1.00 M	9.715000 G	-37.27	-24.27
10.000 G	14.000 G	1.00 M	11.084000 G	-36.53	-23.53
14.000 G	18.000 G	1.00 M	17.638000 G	-34.40	-21.40

Date: 13.NOV.2013 15:41:53

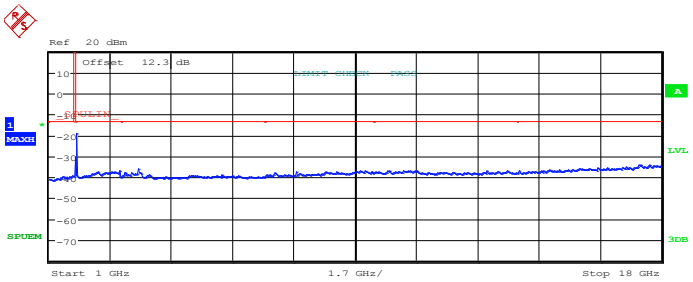
Band :	LTE Band 4	Channel :	CH20175 (Middle)
Band Width :	1.4MHz		

QPSK (RB Size 3, RB Offset 2)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	1.000 G	100.00 k	736.160000 M	-46.14	-33.14

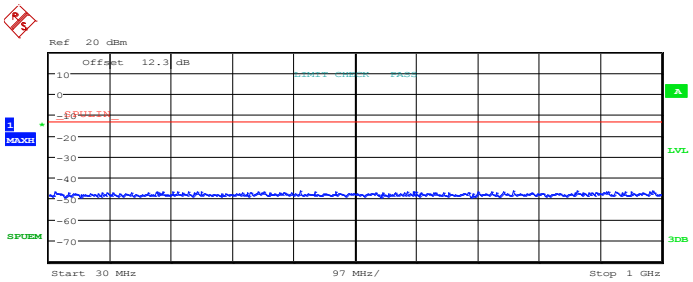
Date: 13.NOV.2013 15:44:07



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	1.729 G	1.00 M	1.728636 G	-36.46	-23.46
1.736 G	3.000 G	1.00 M	1.736632 G	-24.87	-11.87
3.000 G	7.000 G	1.00 M	3.464000 G	-36.05	-23.05
7.000 G	10.000 G	1.00 M	9.641500 G	-37.14	-24.14
10.000 G	14.000 G	1.00 M	11.152000 G	-36.84	-23.84
14.000 G	18.000 G	1.00 M	17.992000 G	-33.94	-20.94

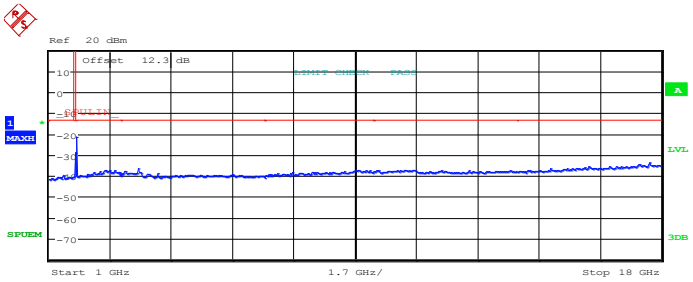
Date: 13.NOV.2013 15:43:22

16QAM (RB Size 3, RB Offset 1)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	1.000 G	100.00 k	427.215000 M	-46.35	-33.35

Date: 13.NOV.2013 15:43:53

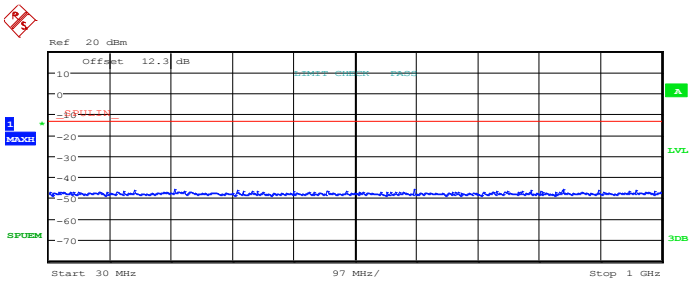


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	1.729 G	1.00 M	1.728636 G	-34.66	-21.66
1.736 G	3.000 G	1.00 M	1.736632 G	-27.10	-14.10
3.000 G	7.000 G	1.00 M	3.464000 G	-36.36	-23.36
7.000 G	10.000 G	1.00 M	9.619000 G	-37.43	-24.43
10.000 G	14.000 G	1.00 M	10.928000 G	-37.30	-24.30
14.000 G	18.000 G	1.00 M	17.672000 G	-33.77	-20.77

Date: 13.NOV.2013 15:43:40

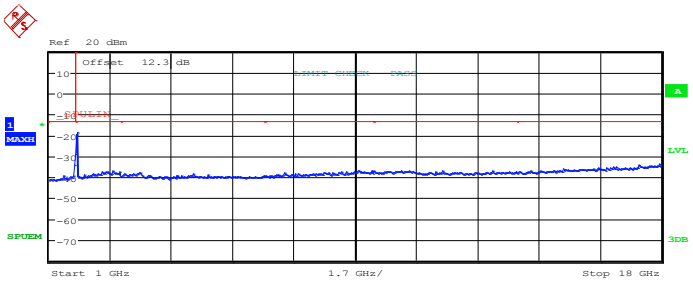
Band :	LTE Band 4	Channel :	CH20393 (High)
Band Width :	1.4MHz		

QPSK (RB Size 3, RB Offset 2)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	1.000 G	100.00 k	608.120000 M	-45.97	-32.97

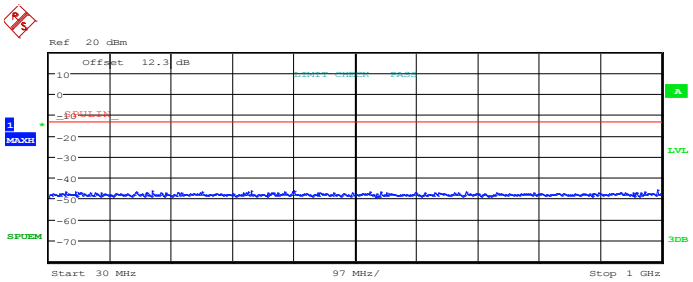
Date: 13.NOV.2013 15:38:40



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	1.751 G	1.00 M	1.749298 G	-27.60	-14.60
1.758 G	3.000 G	1.00 M	1.758421 G	-24.38	-11.38
3.000 G	7.000 G	1.00 M	3.542000 G	-37.87	-24.87
7.000 G	10.000 G	1.00 M	9.587500 G	-36.89	-23.89
10.000 G	14.000 G	1.00 M	10.024000 G	-37.19	-24.19
14.000 G	18.000 G	1.00 M	17.946000 G	-33.83	-20.83

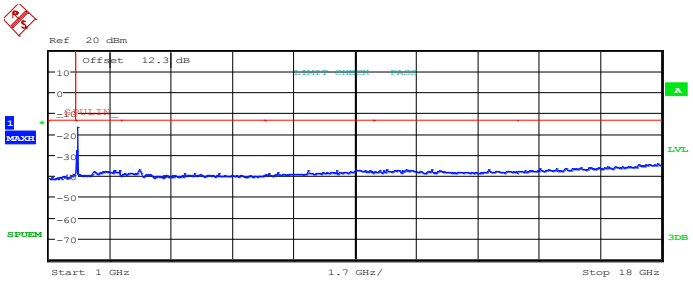
Date: 13.NOV.2013 15:37:43

16QAM (RB Size 6, RB Offset 0)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	1.000 G	100.00 k	993.695000 M	-46.03	-33.03

Date: 13.NOV.2013 15:38:20

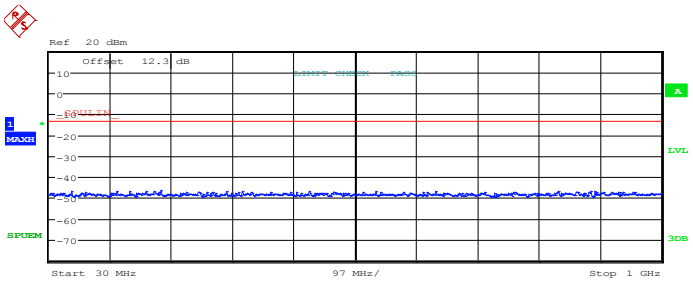


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	1.751 G	1.00 M	1.750425 G	-32.92	-19.92
1.758 G	3.000 G	1.00 M	1.758421 G	-25.32	-12.32
3.000 G	7.000 G	1.00 M	3.508000 G	-37.11	-24.11
7.000 G	10.000 G	1.00 M	8.987500 G	-37.31	-24.31
10.000 G	14.000 G	1.00 M	10.360000 G	-36.88	-23.88
14.000 G	18.000 G	1.00 M	17.886000 G	-34.36	-21.36

Date: 13.NOV.2013 15:38:06

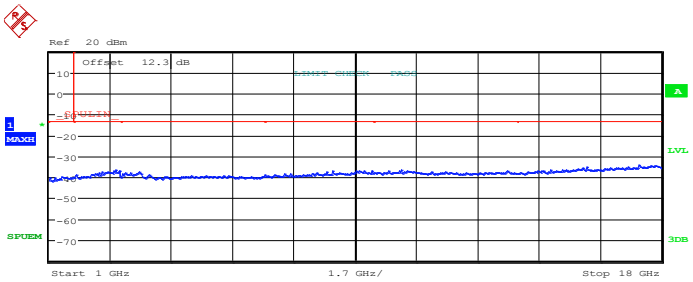
Band :	LTE Band 4	Channel :	CH19965 (Low)
Band Width :	3MHz		

QPSK (RB Size 1, RB Offset 7)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	1.000 G	100.00 k	207.025000 M	-46.48	-33.48

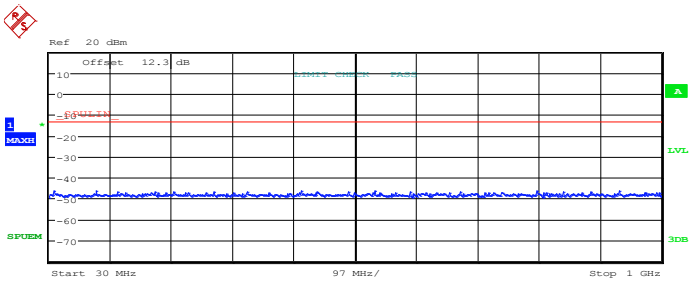
Date: 13.NOV.2013 15:34:01



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	1.704 G	1.00 M	1.343904 G	-39.89	-26.89
1.719 G	3.000 G	1.00 M	2.839875 G	-36.52	-23.52
3.000 G	7.000 G	1.00 M	3.518000 G	-37.71	-24.71
7.000 G	10.000 G	1.00 M	9.619000 G	-37.01	-24.01
10.000 G	14.000 G	1.00 M	10.780000 G	-36.69	-23.69
14.000 G	18.000 G	1.00 M	17.366000 G	-34.29	-21.29

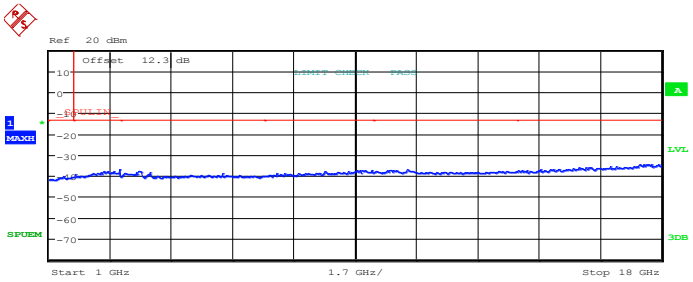
Date: 13.NOV.2013 15:33:09

16QAM (RB Size 1, RB Offset 7)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	1.000 G	100.00 k	37.760000 M	-46.25	-33.25

Date: 13.NOV.2013 15:33:50

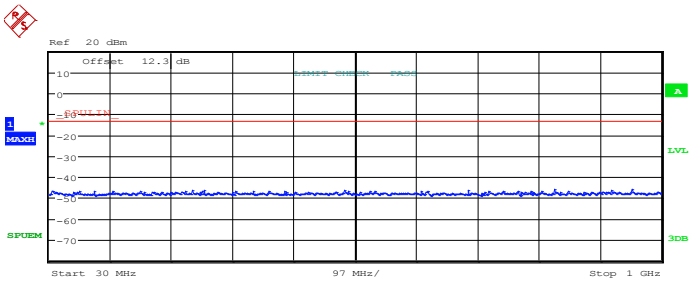


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	1.704 G	1.00 M	1.413248 G	-40.12	-27.12
1.719 G	3.000 G	1.00 M	2.998719 G	-37.25	-24.25
3.000 G	7.000 G	1.00 M	3.532000 G	-37.86	-24.86
7.000 G	10.000 G	1.00 M	9.542500 G	-37.46	-24.46
10.000 G	14.000 G	1.00 M	10.954000 G	-37.11	-24.11
14.000 G	18.000 G	1.00 M	17.394000 G	-34.71	-21.71

Date: 13.NOV.2013 15:33:40

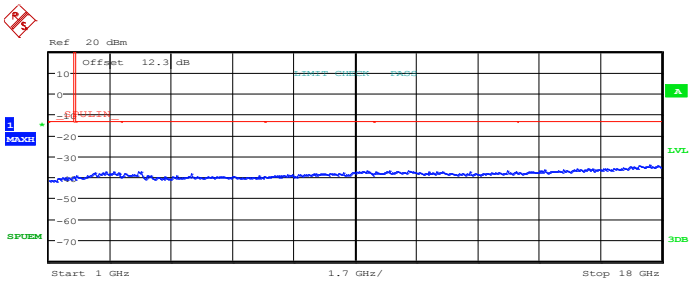
Band :	LTE Band 4	Channel :	CH20175 (Middle)
Band Width :	3MHz		

QPSK (RB Size 8, RB Offset 4)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	1.000 G	100.00 k	829.765000 M	-46.06	-33.06

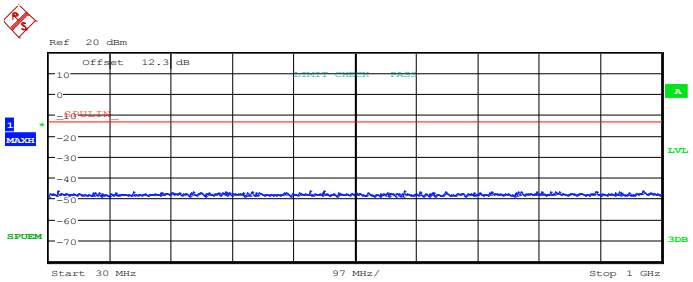
Date: 13.NOV.2013 15:31:12



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	1.725 G	1.00 M	1.694913 G	-39.85	-26.85
1.740 G	3.000 G	1.00 M	2.574750 G	-37.59	-24.59
3.000 G	7.000 G	1.00 M	3.464000 G	-37.68	-24.68
7.000 G	10.000 G	1.00 M	9.829000 G	-37.19	-24.19
10.000 G	14.000 G	1.00 M	13.724000 G	-36.85	-23.85
14.000 G	18.000 G	1.00 M	17.668000 G	-34.35	-21.35

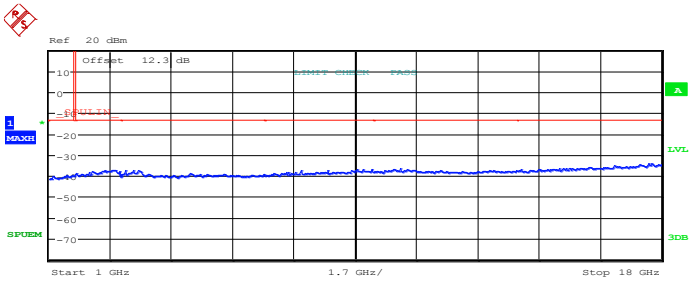
Date: 13.NOV.2013 15:32:08

16QAM (RB Size 8, RB Offset 0)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	1.000 G	100.00 k	43.580000 M	-46.38	-33.38

Date: 13.NOV.2013 15:31:31

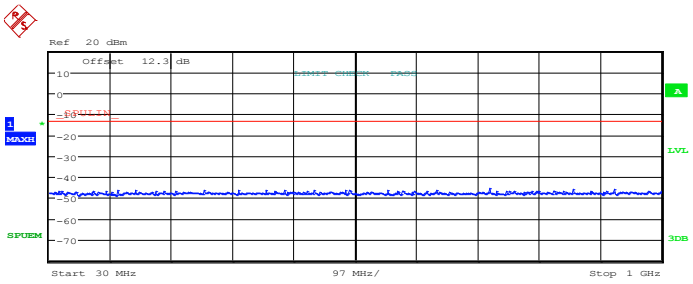


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	1.725 G	1.00 M	1.724638 G	-39.26	-26.26
1.740 G	3.000 G	1.00 M	2.742960 G	-37.49	-24.49
3.000 G	7.000 G	1.00 M	3.114000 G	-37.31	-24.31
7.000 G	10.000 G	1.00 M	9.710500 G	-36.82	-23.82
10.000 G	14.000 G	1.00 M	10.748000 G	-36.46	-23.46
14.000 G	18.000 G	1.00 M	17.712000 G	-34.42	-21.42

Date: 13.NOV.2013 15:31:52

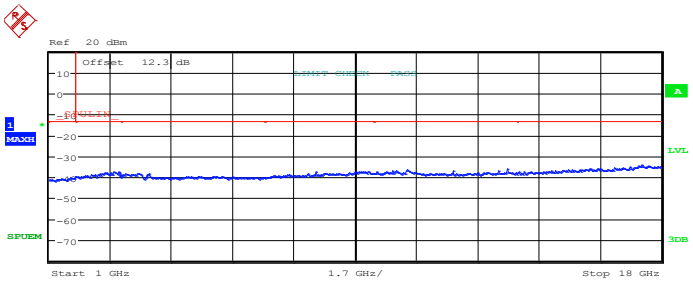
Band :	LTE Band 4	Channel :	CH20385 (High)
Band Width :	3MHz		

QPSK (RB Size 8, RB Offset 0)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	1.000 G	100.00 k	726.945000 M	-45.41	-32.41

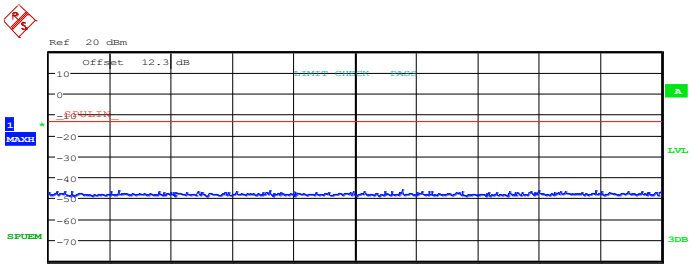
Date: 13.NOV.2013 15:35:18



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	1.746 G	1.00 M	1.737794 G	-39.71	-26.71
1.761 G	3.000 G	1.00 M	2.795565 G	-37.69	-24.69
3.000 G	7.000 G	1.00 M	3.456000 G	-38.30	-25.30
7.000 G	10.000 G	1.00 M	9.874000 G	-37.31	-24.31
10.000 G	14.000 G	1.00 M	13.712000 G	-36.32	-23.32
14.000 G	18.000 G	1.00 M	17.452000 G	-34.31	-21.31

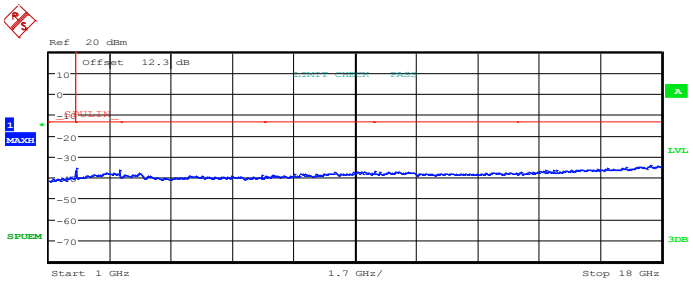
Date: 13.NOV.2013 15:36:04

16QAM (RB Size 15, RB Offset 0)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	1.000 G	100.00 k	589.690000 M	-46.07	-33.07

Date: 13.NOV.2013 15:35:35

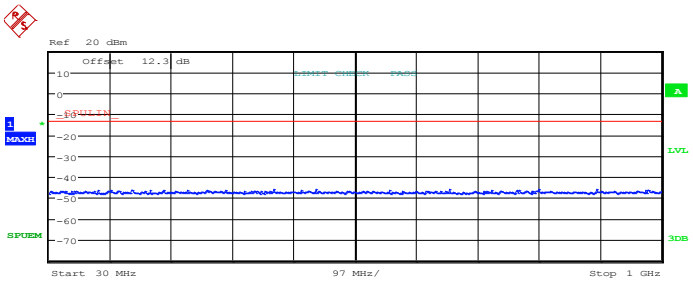


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	1.746 G	1.00 M	1.745254 G	-37.17	-24.17
1.761 G	3.000 G	1.00 M	1.761619 G	-35.49	-22.49
3.000 G	7.000 G	1.00 M	3.518000 G	-37.96	-24.96
7.000 G	10.000 G	1.00 M	9.652000 G	-37.50	-24.50
10.000 G	14.000 G	1.00 M	10.048000 G	-36.91	-23.91
14.000 G	18.000 G	1.00 M	17.708000 G	-34.00	-21.00

Date: 13.NOV.2013 15:35:49

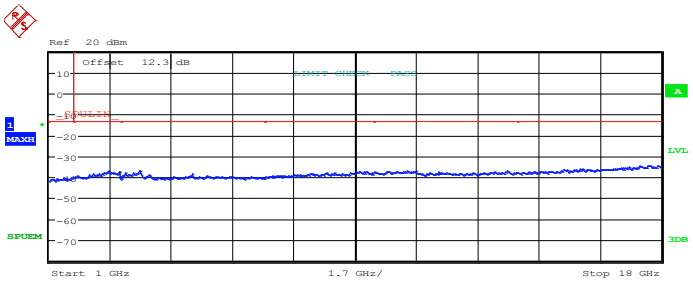
Band :	LTE Band 4	Channel :	CH19975 (Low)
Band Width :	5MHz		

QPSK (RB Size 12, RB Offset 0)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	1.000 G	100.00 k	451.950000 M	-45.97	-32.97

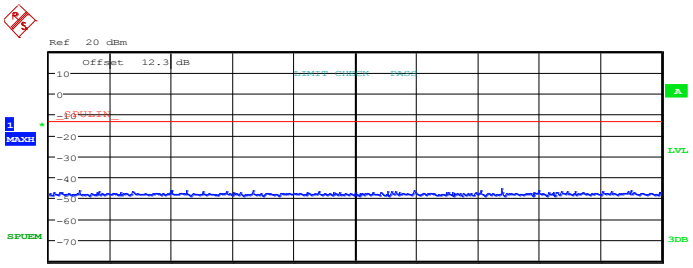
Date: 13.NOV.2013 15:26:48



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	1.700 G	1.00 M	1.684600 G	-40.25	-27.25
1.725 G	3.000 G	1.00 M	2.653837 G	-37.05	-24.05
3.000 G	7.000 G	1.00 M	3.520000 G	-37.21	-24.21
7.000 G	10.000 G	1.00 M	9.746500 G	-37.37	-24.37
10.000 G	14.000 G	1.00 M	10.932000 G	-37.14	-24.14
14.000 G	18.000 G	1.00 M	17.394000 G	-34.48	-21.48

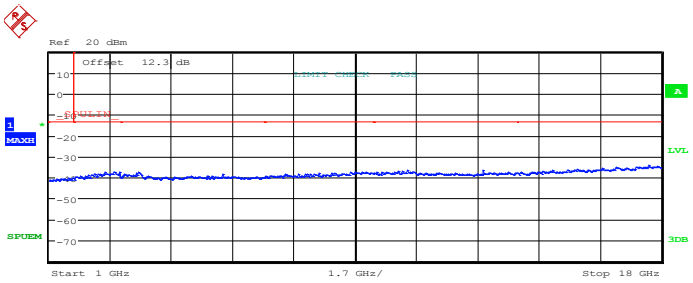
Date: 13.NOV.2013 15:27:40

16QAM (RB Size 1, RB Offset 0)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	1.000 G	100.00 k	746.345000 M	-45.72	-32.72

Date: 13.NOV.2013 15:27:09

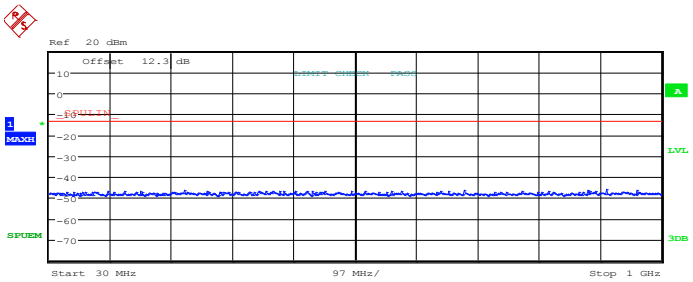


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	1.700 G	1.00 M	1.537600 G	-40.20	-27.20
1.725 G	3.000 G	1.00 M	2.999363 G	-37.32	-24.32
3.000 G	7.000 G	1.00 M	3.486000 G	-37.69	-24.69
7.000 G	10.000 G	1.00 M	9.680500 G	-37.33	-24.33
10.000 G	14.000 G	1.00 M	10.944000 G	-36.58	-23.58
14.000 G	18.000 G	1.00 M	17.642000 G	-34.40	-21.40

Date: 13.NOV.2013 15:27:24

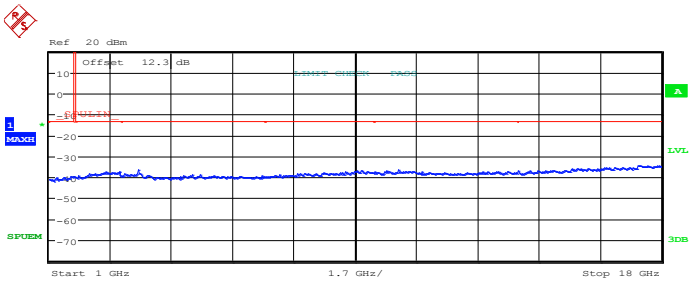
Band :	LTE Band 4	Channel :	CH20175 (Middle)
Band Width :	5MHz		

QPSK (RB Size 12, RB Offset 6)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	1.000 G	100.00 k	913.185000 M	-46.15	-33.15

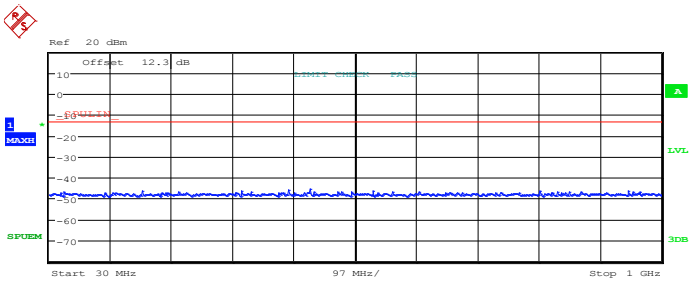
Date: 13.NOV.2013 15:29:57



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	1.720 G	1.00 M	1.675720 G	-39.91	-26.91
1.745 G	3.000 G	1.00 M	2.985568 G	-37.57	-24.57
3.000 G	7.000 G	1.00 M	3.464000 G	-36.75	-23.75
7.000 G	10.000 G	1.00 M	9.665500 G	-37.04	-24.04
10.000 G	14.000 G	1.00 M	10.700000 G	-36.71	-23.71
14.000 G	18.000 G	1.00 M	17.934000 G	-34.60	-21.60

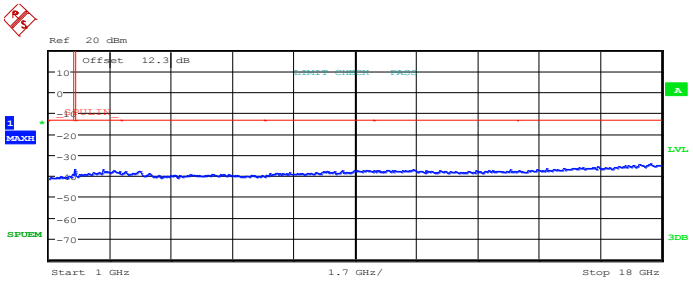
Date: 13.NOV.2013 15:28:56

16QAM (RB Size 25, RB Offset 0)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	1.000 G	100.00 k	442.250000 M	-45.65	-32.65

Date: 13.NOV.2013 15:29:37

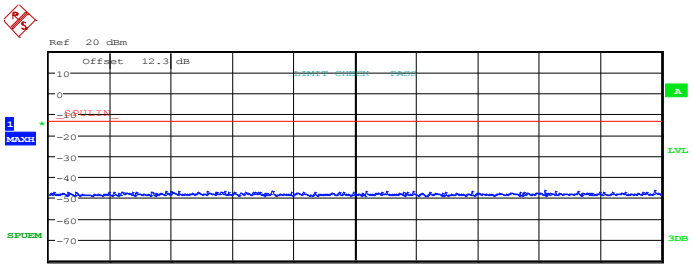


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	1.720 G	1.00 M	1.719280 G	-38.05	-25.05
1.745 G	3.000 G	1.00 M	2.511178 G	-37.14	-24.14
3.000 G	7.000 G	1.00 M	3.536000 G	-37.91	-24.91
7.000 G	10.000 G	1.00 M	9.472000 G	-37.47	-24.47
10.000 G	14.000 G	1.00 M	11.110000 G	-37.01	-24.01
14.000 G	18.000 G	1.00 M	17.702000 G	-34.09	-21.09

Date: 13.NOV.2013 15:29:19

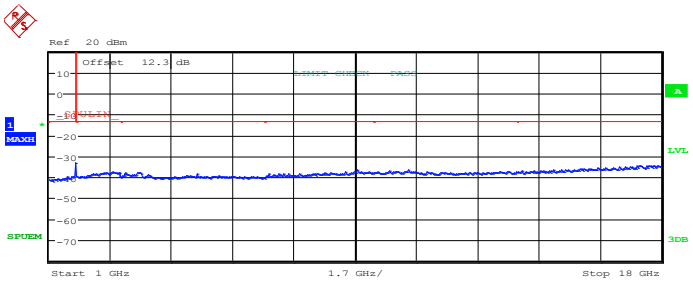
Band :	LTE Band 4	Channel :	CH20375 (High)
Band Width :	5MHz		

QPSK (RB Size 12, RB Offset 0)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	1.000 G	100.00 k	814.245000 M	-46.57	-33.57

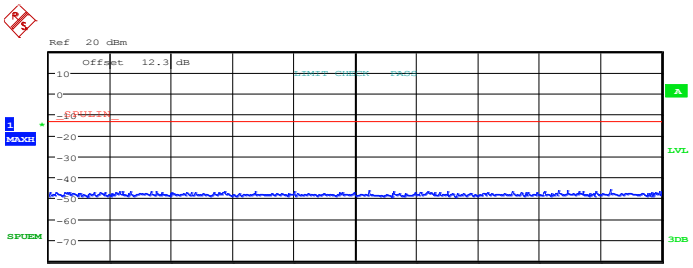
Date: 13.NOV.2013 15:23:13



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	1.740 G	1.00 M	1.734450 G	-33.30	-20.30
1.765 G	3.000 G	1.00 M	2.850565 G	-37.56	-24.56
3.000 G	7.000 G	1.00 M	3.510000 G	-37.88	-24.88
7.000 G	10.000 G	1.00 M	9.548500 G	-36.35	-23.35
10.000 G	14.000 G	1.00 M	10.980000 G	-36.73	-23.73
14.000 G	18.000 G	1.00 M	17.712000 G	-34.60	-21.60

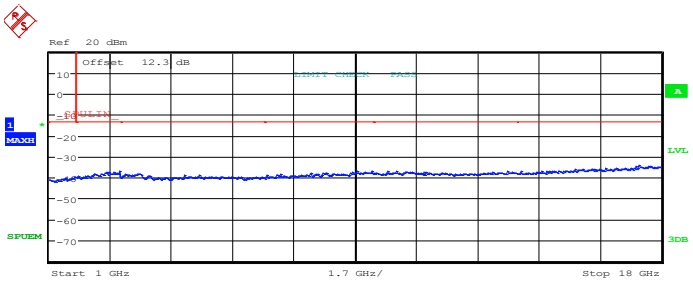
Date: 13.NOV.2013 15:22:23

16QAM (RB Size 12, RB Offset 6)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	1.000 G	100.00 k	918.520000 M	-45.99	-32.99

Date: 13.NOV.2013 15:22:59

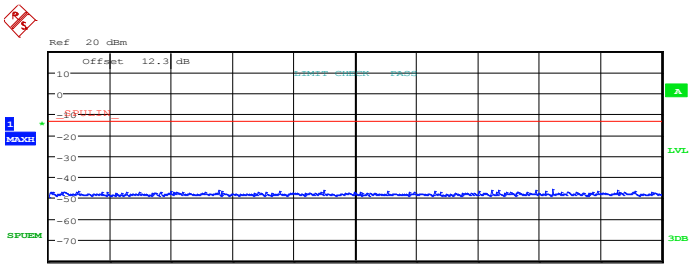


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	1.740 G	1.00 M	1.707440 G	-39.73	-26.73
1.765 G	3.000 G	1.00 M	2.972212 G	-37.15	-24.15
3.000 G	7.000 G	1.00 M	3.476000 G	-38.22	-25.22
7.000 G	10.000 G	1.00 M	9.563500 G	-37.20	-24.20
10.000 G	14.000 G	1.00 M	10.392000 G	-36.85	-23.85
14.000 G	18.000 G	1.00 M	17.366000 G	-34.09	-21.09

Date: 13.NOV.2013 15:22:47

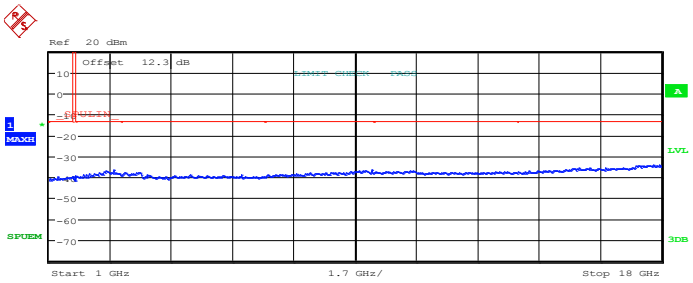
Band :	LTE Band 4	Channel :	CH20000 (Low)
Band Width :	10MHz		

QPSK (RB Size 25, RB Offset 12)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	1.000 G	100.00 k	826.855000 M	-45.99	-32.99

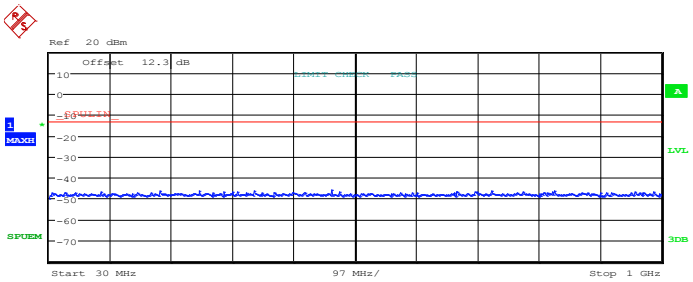
Date: 13.NOV.2013 15:19:30



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	1.695 G	1.00 M	1.232130 G	-39.97	-26.97
1.735 G	3.000 G	1.00 M	2.794437 G	-36.78	-23.78
3.000 G	7.000 G	1.00 M	3.430000 G	-37.78	-24.78
7.000 G	10.000 G	1.00 M	9.988000 G	-36.78	-23.78
10.000 G	14.000 G	1.00 M	10.340000 G	-36.95	-23.95
14.000 G	18.000 G	1.00 M	17.776000 G	-34.37	-21.37

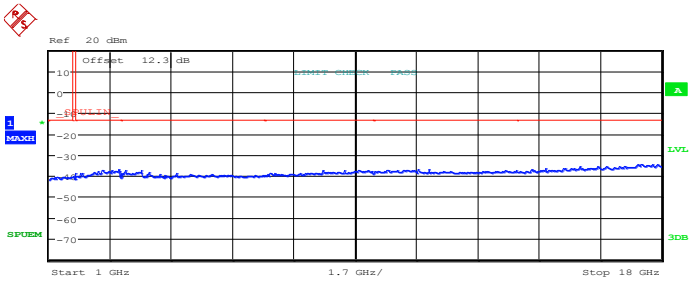
Date: 13.NOV.2013 15:18:48

16QAM (RB Size 25, RB Offset 12)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	1.000 G	100.00 k	477.170000 M	-45.99	-32.99

Date: 13.NOV.2013 15:19:19

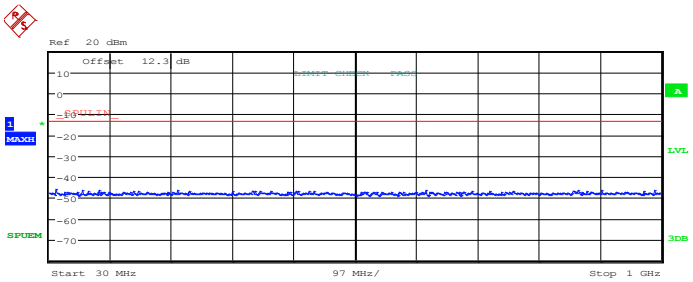


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	1.695 G	1.00 M	1.684923 G	-40.11	-27.11
1.735 G	3.000 G	1.00 M	2.941810 G	-37.22	-24.22
3.000 G	7.000 G	1.00 M	3.110000 G	-37.34	-24.34
7.000 G	10.000 G	1.00 M	9.584500 G	-37.39	-24.39
10.000 G	14.000 G	1.00 M	11.252000 G	-37.01	-24.01
14.000 G	18.000 G	1.00 M	17.414000 G	-34.52	-21.52

Date: 13.NOV.2013 15:19:06

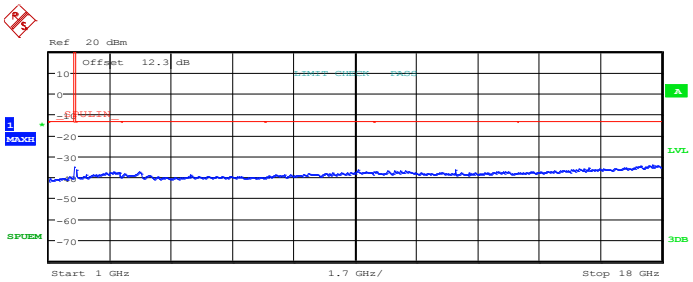
Band :	LTE Band 4	Channel :	CH20175 (Middle)
Band Width :	10MHz		

QPSK (RB Size 50, RB Offset 0)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	1.000 G	100.00 k	41.155000 M	-45.90	-32.90

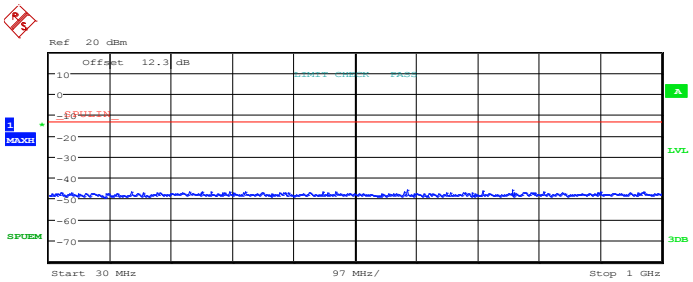
Date: 13.NOV.2013 15:16:52



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	1.712 G	1.00 M	1.711788 G	-36.04	-23.04
1.752 G	3.000 G	1.00 M	2.797905 G	-37.43	-24.43
3.000 G	7.000 G	1.00 M	3.506000 G	-37.47	-24.47
7.000 G	10.000 G	1.00 M	9.583000 G	-36.72	-23.72
10.000 G	14.000 G	1.00 M	12.268000 G	-36.60	-23.60
14.000 G	18.000 G	1.00 M	17.766000 G	-34.40	-21.40

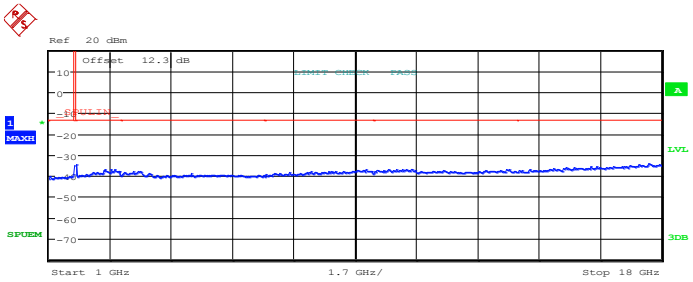
Date: 13.NOV.2013 15:17:40

16QAM (RB Size 50, RB Offset 0)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	1.000 G	100.00 k	763.320000 M	-46.04	-33.04

Date: 13.NOV.2013 15:17:05

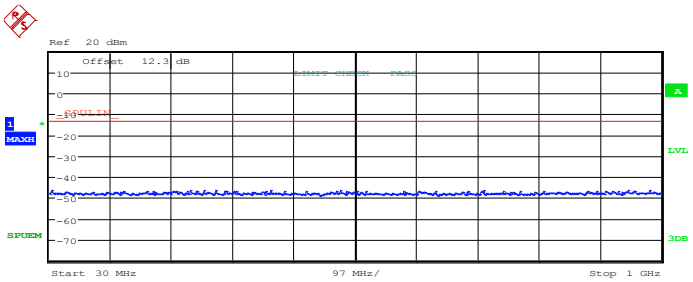


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	1.712 G	1.00 M	1.712144 G	-36.33	-23.33
1.752 G	3.000 G	1.00 M	1.753124 G	-35.55	-22.55
3.000 G	7.000 G	1.00 M	3.346000 G	-37.78	-24.78
7.000 G	10.000 G	1.00 M	9.791500 G	-37.07	-24.07
10.000 G	14.000 G	1.00 M	13.786000 G	-36.90	-23.90
14.000 G	18.000 G	1.00 M	17.656000 G	-34.17	-21.17

Date: 13.NOV.2013 15:17:26

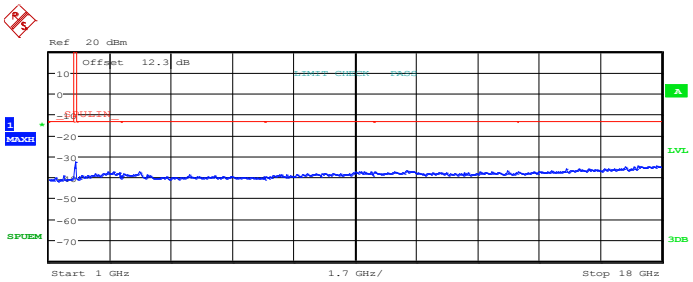
Band :	LTE Band 4	Channel :	CH20350 (High)
Band Width :	10MHz		

QPSK (RB Size 50, RB Offset 0)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	1.000 G	100.00 k	980.115000 M	-46.27	-33.27

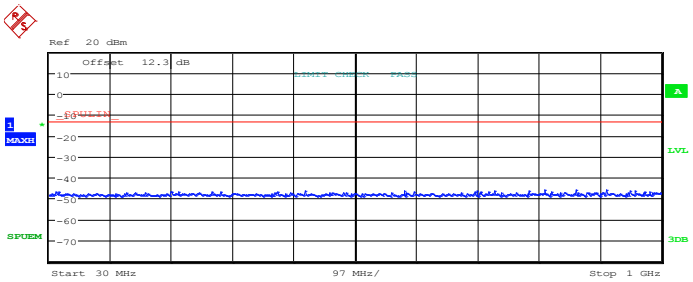
Date: 13.NOV.2013 15:20:26



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	1.730 G	1.00 M	1.728540 G	-32.92	-19.92
1.770 G	3.000 G	1.00 M	1.772460 G	-36.15	-23.15
3.000 G	7.000 G	1.00 M	3.498000 G	-37.73	-24.73
7.000 G	10.000 G	1.00 M	9.739000 G	-37.48	-24.48
10.000 G	14.000 G	1.00 M	13.728000 G	-36.93	-23.93
14.000 G	18.000 G	1.00 M	17.874000 G	-34.57	-21.57

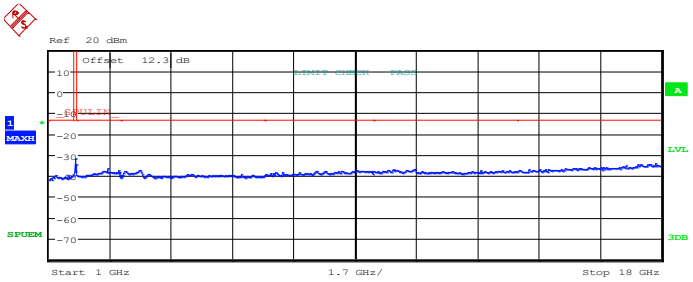
Date: 13.NOV.2013 15:21:04

16QAM (RB Size 50, RB Offset 0)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	1.000 G	100.00 k	911.730000 M	-46.02	-33.02

Date: 13.NOV.2013 15:20:39

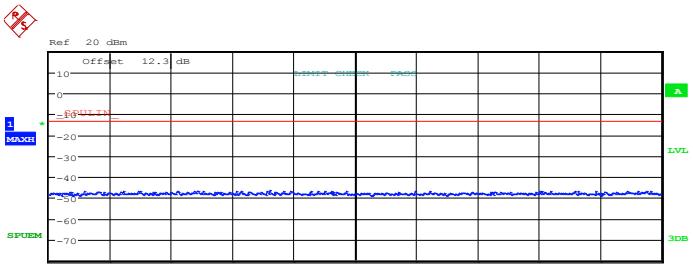


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	1.730 G	1.00 M	1.729635 G	-31.80	-18.80
1.770 G	3.000 G	1.00 M	1.770615 G	-34.88	-21.88
3.000 G	7.000 G	1.00 M	3.534000 G	-37.53	-24.53
7.000 G	10.000 G	1.00 M	9.559000 G	-37.44	-24.44
10.000 G	14.000 G	1.00 M	11.168000 G	-36.98	-23.98
14.000 G	18.000 G	1.00 M	17.844000 G	-34.46	-21.46

Date: 13.NOV.2013 15:20:52

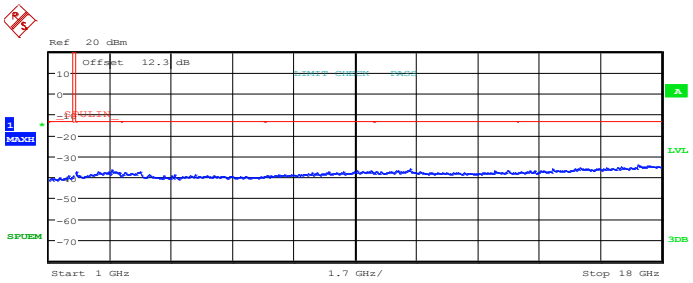
Band :	LTE Band 4	Channel :	CH20025 (Low)
Band Width :	15MHz		

QPSK (RB Size 75, RB Offset 0)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	1.000 G	100.00 k	378.715000 M	-46.54	-33.54

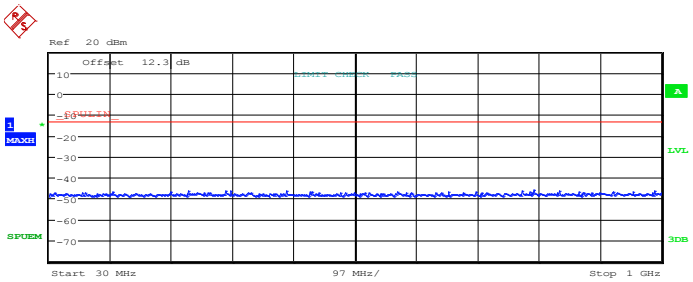
Date: 13.NOV.2013 15:08:30



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	1.690 G	1.00 M	1.682065 G	-39.40	-26.40
1.745 G	3.000 G	1.00 M	2.737077 G	-36.73	-23.73
3.000 G	7.000 G	1.00 M	3.528000 G	-37.51	-24.51
7.000 G	10.000 G	1.00 M	9.925000 G	-37.05	-24.05
10.000 G	14.000 G	1.00 M	11.020000 G	-36.27	-23.27
14.000 G	18.000 G	1.00 M	17.356000 G	-34.27	-21.27

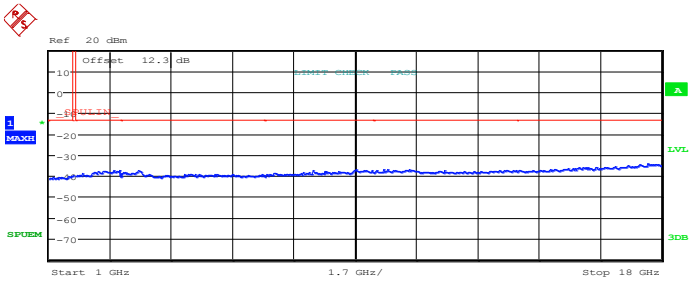
Date: 13.NOV.2013 15:07:33

16QAM (RB Size 36, RB Offset 18)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	1.000 G	100.00 k	796.785000 M	-46.17	-33.17

Date: 13.NOV.2013 15:08:09

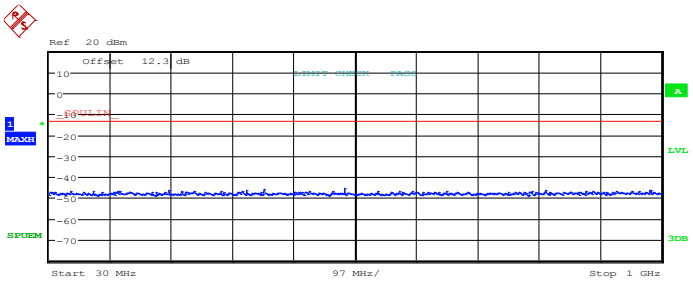


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	1.690 G	1.00 M	1.671715 G	-39.66	-26.66
1.745 G	3.000 G	1.00 M	2.796690 G	-37.42	-24.42
3.000 G	7.000 G	1.00 M	3.480000 G	-37.35	-24.35
7.000 G	10.000 G	1.00 M	9.518500 G	-37.09	-24.09
10.000 G	14.000 G	1.00 M	10.410000 G	-37.09	-24.09
14.000 G	18.000 G	1.00 M	17.622000 G	-34.35	-21.35

Date: 13.NOV.2013 15:07:55

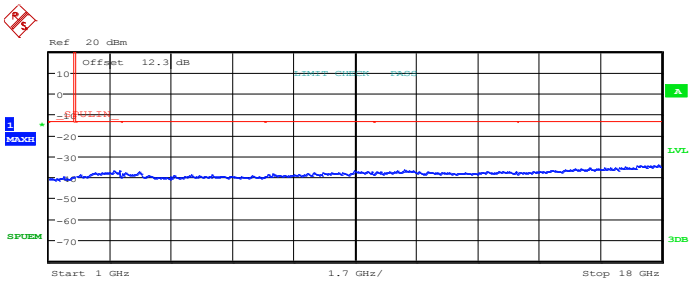
Band :	LTE Band 4	Channel :	CH20175 (Middle)
Band Width :	15MHz		

QPSK (RB Size 36, RB Offset 37)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	1.000 G	100.00 k	498.025000 M	-45.46	-32.46

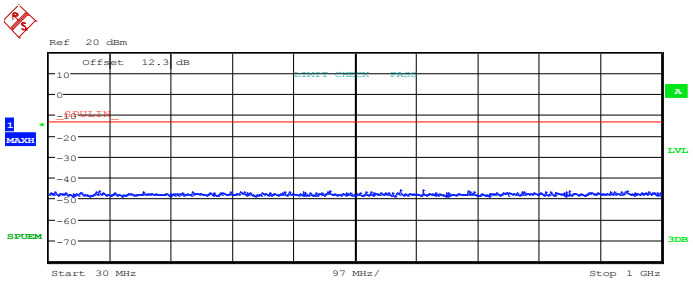
Date: 13.NOV.2013 15:15:58



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	1.705 G	1.00 M	1.395153 G	-39.94	-26.94
1.760 G	3.000 G	1.00 M	2.789200 G	-36.93	-23.93
3.000 G	7.000 G	1.00 M	3.512000 G	-37.47	-24.47
7.000 G	10.000 G	1.00 M	9.482500 G	-37.24	-24.24
10.000 G	14.000 G	1.00 M	10.856000 G	-36.37	-23.37
14.000 G	18.000 G	1.00 M	17.914000 G	-34.11	-21.11

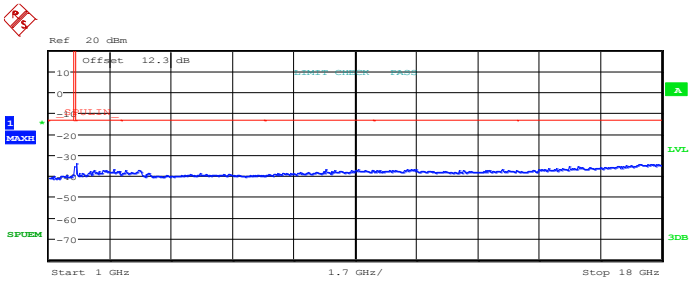
Date: 13.NOV.2013 15:14:13

16QAM (RB Size 75, RB Offset 0)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	1.000 G	100.00 k	622.185000 M	-45.88	-32.88

Date: 13.NOV.2013 15:15:33

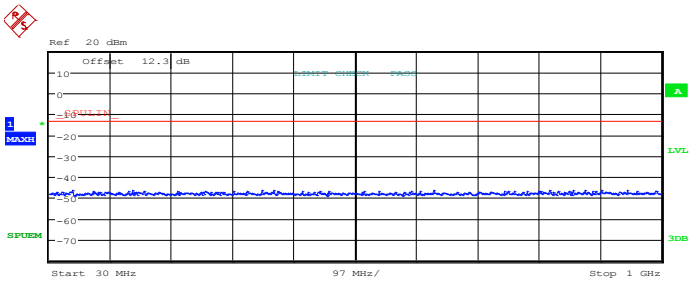


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	1.705 G	1.00 M	1.704648 G	-35.73	-22.73
1.760 G	3.000 G	1.00 M	2.791680 G	-36.91	-23.91
3.000 G	7.000 G	1.00 M	3.118000 G	-37.46	-24.46
7.000 G	10.000 G	1.00 M	9.584500 G	-37.09	-24.09
10.000 G	14.000 G	1.00 M	13.572000 G	-37.15	-24.15
14.000 G	18.000 G	1.00 M	17.420000 G	-34.47	-21.47

Date: 13.NOV.2013 15:14:45

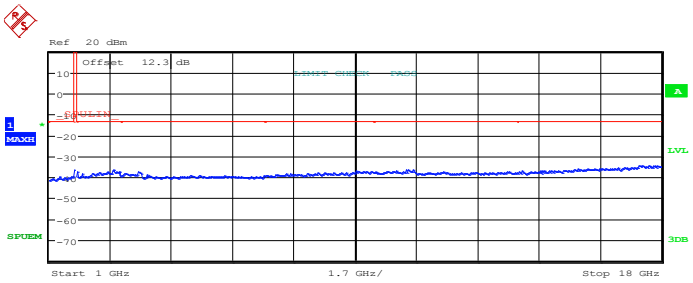
Band :	LTE Band 4	Channel :	CH20325 (High)
Band Width :	15MHz		

QPSK (RB Size 75, RB Offset 0)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	1.000 G	100.00 k	367.075000 M	-46.31	-33.31

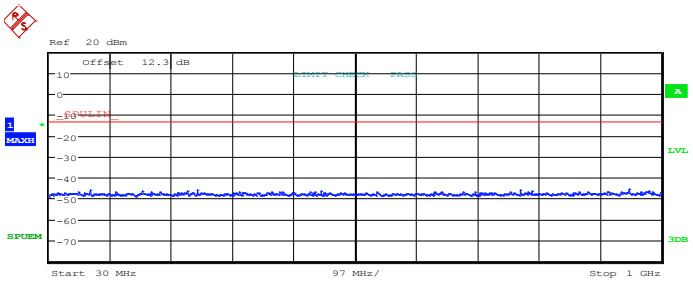
Date: 13.NOV.2013 15:09:43



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	1.720 G	1.00 M	1.714960 G	-36.54	-23.54
1.775 G	3.000 G	1.00 M	2.790525 G	-36.37	-23.37
3.000 G	7.000 G	1.00 M	3.480000 G	-37.65	-24.65
7.000 G	10.000 G	1.00 M	9.532000 G	-37.09	-24.09
10.000 G	14.000 G	1.00 M	11.100000 G	-36.64	-23.64
14.000 G	18.000 G	1.00 M	17.382000 G	-34.49	-21.49

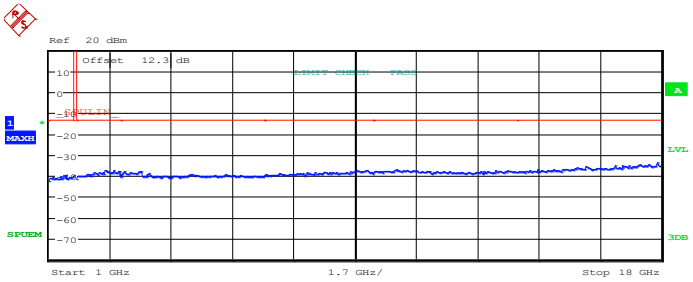
Date: 13.NOV.2013 15:10:45

16QAM (RB Size 36, RB Offset 18)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	1.000 G	100.00 k	948.590000 M	-45.62	-32.62

Date: 13.NOV.2013 15:10:06

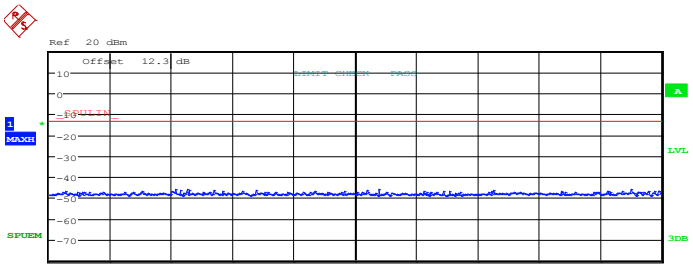


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	1.720 G	1.00 M	1.414360 G	-39.83	-26.83
1.775 G	3.000 G	1.00 M	2.800325 G	-37.48	-24.48
3.000 G	7.000 G	1.00 M	3.494000 G	-37.97	-24.97
7.000 G	10.000 G	1.00 M	9.544000 G	-37.34	-24.34
10.000 G	14.000 G	1.00 M	10.646000 G	-37.20	-24.20
14.000 G	18.000 G	1.00 M	17.888000 G	-33.82	-20.82

Date: 13.NOV.2013 15:10:20

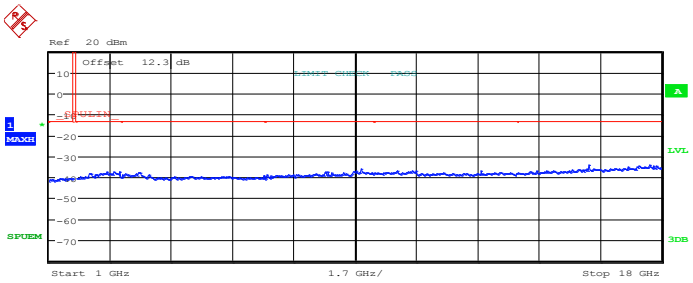
Band :	LTE Band 4	Channel :	CH20050 (Low)
Band Width :	20MHz		

QPSK (RB Size 50, RB Offset 0)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	1.000 G	100.00 k	230.305000 M	-45.93	-32.93

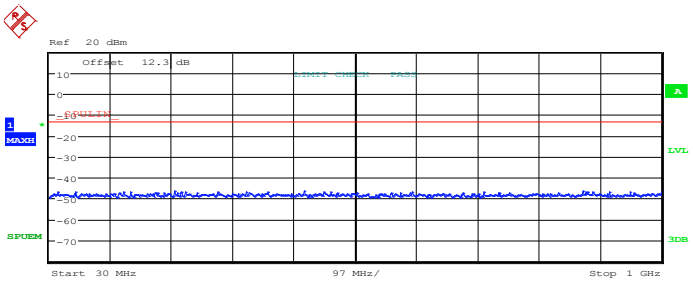
Date: 13.NOV.2013 15:02:53



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	1.685 G	1.00 M	1.562728 G	-40.59	-27.59
1.755 G	3.000 G	1.00 M	2.597865 G	-37.47	-24.47
3.000 G	7.000 G	1.00 M	3.520000 G	-37.97	-24.97
7.000 G	10.000 G	1.00 M	9.674500 G	-36.22	-23.22
10.000 G	14.000 G	1.00 M	10.670000 G	-36.89	-23.89
14.000 G	18.000 G	1.00 M	17.682000 G	-34.38	-21.38

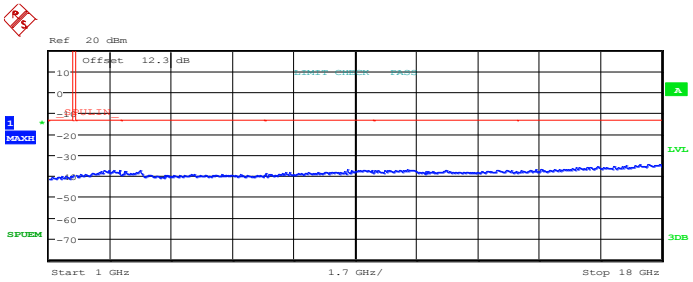
Date: 13.NOV.2013 15:03:29

16QAM (RB Size 50, RB Offset 0)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	1.000 G	100.00 k	434.005000 M	-46.20	-33.20

Date: 13.NOV.2013 15:03:03

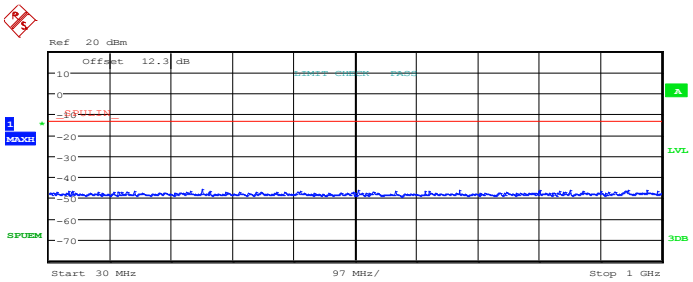


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	1.685 G	1.00 M	1.682945 G	-40.02	-27.02
1.755 G	3.000 G	1.00 M	2.971365 G	-37.32	-24.32
3.000 G	7.000 G	1.00 M	3.544000 G	-37.51	-24.51
7.000 G	10.000 G	1.00 M	9.280000 G	-37.10	-24.10
10.000 G	14.000 G	1.00 M	10.934000 G	-37.00	-24.00
14.000 G	18.000 G	1.00 M	17.628000 G	-34.50	-21.50

Date: 13.NOV.2013 15:03:18

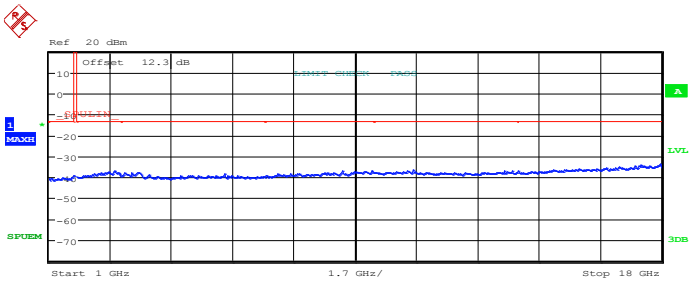
Band :	LTE Band 4	Channel :	CH20175 (Middle)
Band Width :	20MHz		

QPSK (RB Size 50, RB Offset 24)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	1.000 G	100.00 k	271.530000 M	-45.96	-32.96

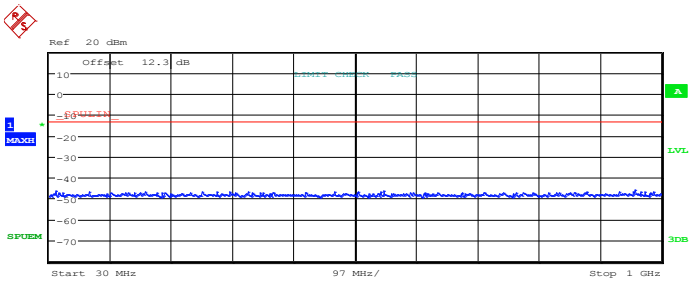
Date: 13.NOV.2013 15:02:15



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	1.698 G	1.00 M	1.696803 G	-39.41	-26.41
1.768 G	3.000 G	1.00 M	2.819439 G	-37.26	-24.26
3.000 G	7.000 G	1.00 M	3.300000 G	-38.10	-25.10
7.000 G	10.000 G	1.00 M	9.149500 G	-37.08	-24.08
10.000 G	14.000 G	1.00 M	11.102000 G	-36.72	-23.72
14.000 G	18.000 G	1.00 M	17.962000 G	-33.76	-20.76

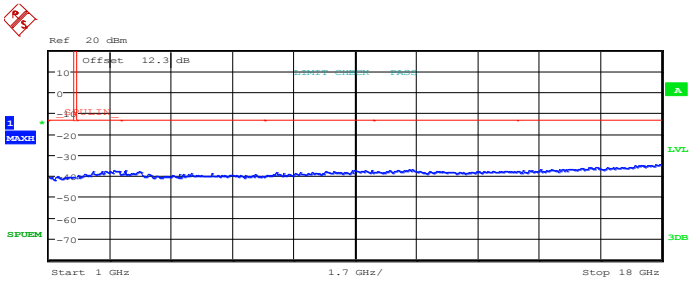
Date: 13.NOV.2013 14:56:11

16QAM (RB Size 50, RB Offset 0)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	1.000 G	100.00 k	956.835000 M	-46.15	-33.15

Date: 13.NOV.2013 15:02:02

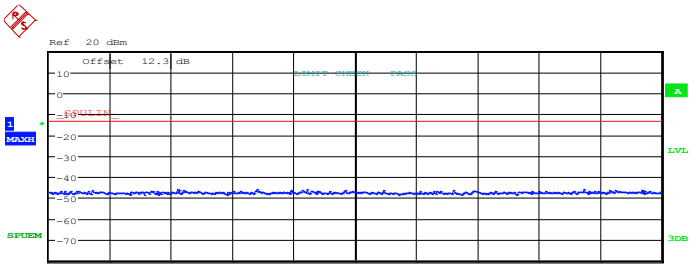


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	1.698 G	1.00 M	1.239243 G	-40.37	-27.37
1.768 G	3.000 G	1.00 M	2.789242 G	-37.68	-24.68
3.000 G	7.000 G	1.00 M	3.116000 G	-37.40	-24.40
7.000 G	10.000 G	1.00 M	9.413500 G	-37.49	-24.49
10.000 G	14.000 G	1.00 M	11.076000 G	-37.19	-24.19
14.000 G	18.000 G	1.00 M	17.938000 G	-34.57	-21.57

Date: 13.NOV.2013 15:01:51

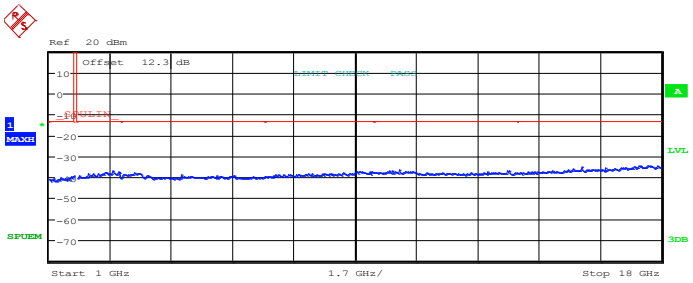
Band :	LTE Band 4	Channel :	CH20300 (High)
Band Width :	20MHz		

QPSK (RB Size 50, RB Offset 0)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	1.000 G	100.00 k	877.295000 M	-45.94	-32.94

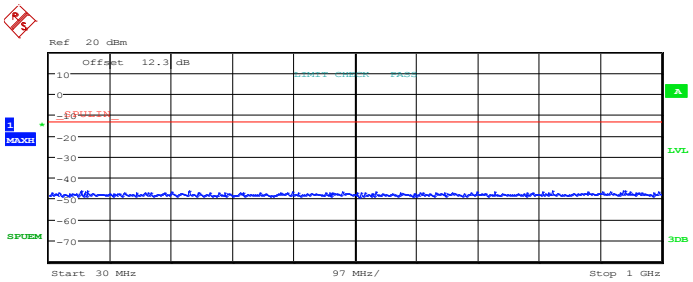
Date: 13.NOV.2013 14:45:49



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	1.710 G	1.00 M	1.704320 G	-39.60	-26.60
1.780 G	3.000 G	1.00 M	2.774300 G	-36.98	-23.98
3.000 G	7.000 G	1.00 M	3.374000 G	-38.21	-25.21
7.000 G	10.000 G	1.00 M	9.595000 G	-37.37	-24.37
10.000 G	14.000 G	1.00 M	10.728000 G	-36.69	-23.69
14.000 G	18.000 G	1.00 M	17.366000 G	-34.50	-21.50

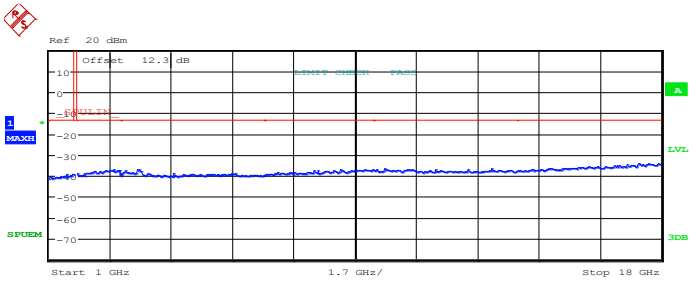
Date: 13.NOV.2013 14:47:10

16QAM (RB Size 50, RB Offset 49)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	1.000 G	100.00 k	941.800000 M	-46.42	-33.42

Date: 13.NOV.2013 14:46:08

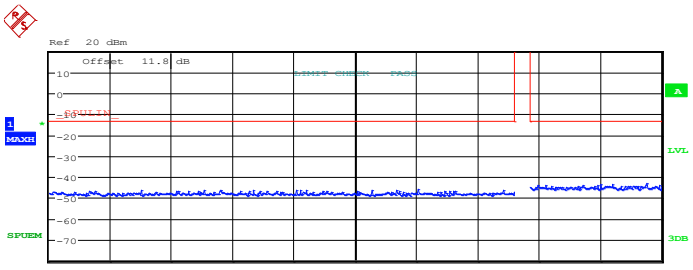


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	1.710 G	1.00 M	1.689055 G	-39.31	-26.31
1.780 G	3.000 G	1.00 M	2.789550 G	-37.13	-24.13
3.000 G	7.000 G	1.00 M	3.454000 G	-36.93	-23.93
7.000 G	10.000 G	1.00 M	9.079000 G	-37.21	-24.21
10.000 G	14.000 G	1.00 M	10.318000 G	-36.51	-23.51
14.000 G	18.000 G	1.00 M	17.642000 G	-34.10	-21.10

Date: 13.NOV.2013 14:46:55

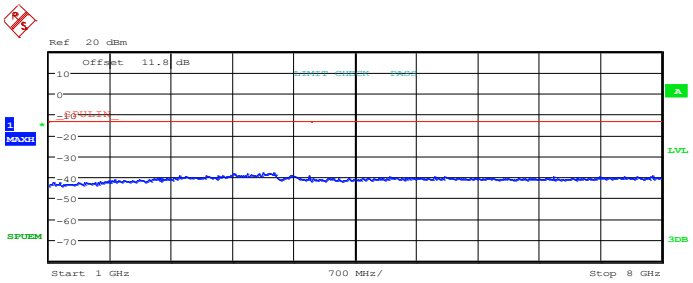
Band :	LTE Band 13	Channel :	CH23205 (Low)
Band Width :	5MHz		

QPSK (RB Size 12, RB Offset 6)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	767.000 M	100.00 k	613.704000 M	-46.16	-33.16
792.000 M	1.000 G	100.00 k	976.808000 M	-43.31	-30.31

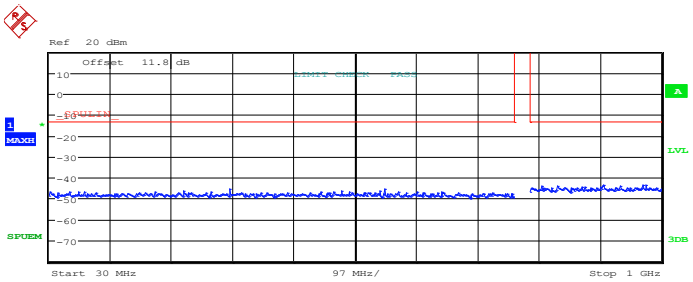
Date: 14.NOV.2013 09:30:17



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	4.000 G	1.00 M	3.445000 G	-37.85	-24.85
4.000 G	8.000 G	1.00 M	7.898000 G	-39.51	-26.51

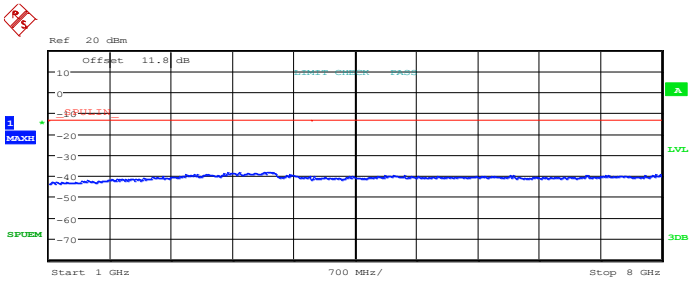
Date: 14.NOV.2013 09:30:53

16QAM (RB Size 12, RB Offset 6)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	767.000 M	100.00 k	561.377000 M	-45.37	-32.37
792.000 M	1.000 G	100.00 k	908.064000 M	-43.55	-30.55

Date: 14.NOV.2013 09:30:28

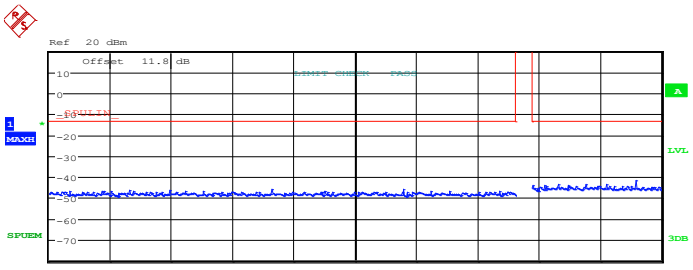


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	4.000 G	1.00 M	3.502000 G	-38.23	-25.23
4.000 G	8.000 G	1.00 M	7.992000 G	-39.20	-26.20

Date: 14.NOV.2013 09:30:42

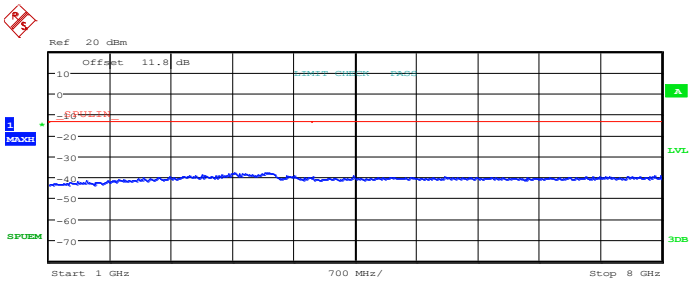
Band :	LTE Band 13	Channel :	CH23230 (Middle)
Band Width :	5MHz		

QPSK (RB Size 12, RB Offset 0)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	769.500 M	100.00 k	590.171250 M	-46.16	-33.16
794.500 M	1.000 G	100.00 k	959.413750 M	-41.95	-28.95

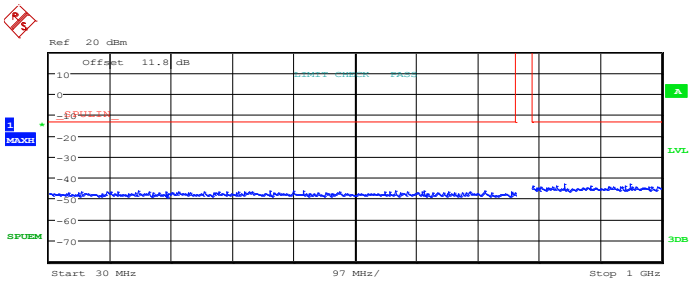
Date: 14.NOV.2013 09:29:19



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	4.000 G	1.00 M	3.512500 G	-37.97	-24.97
4.000 G	8.000 G	1.00 M	7.984000 G	-39.43	-26.43

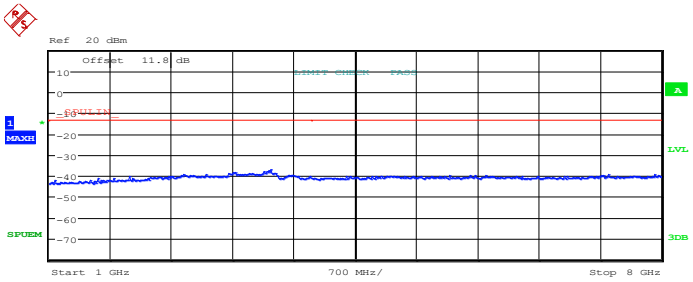
Date: 14.NOV.2013 09:28:38

16QAM (RB Size 12, RB Offset 0)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	769.500 M	100.00 k	379.044000 M	-46.30	-33.30
794.500 M	1.000 G	100.00 k	845.669500 M	-43.05	-30.05

Date: 14.NOV.2013 09:29:06

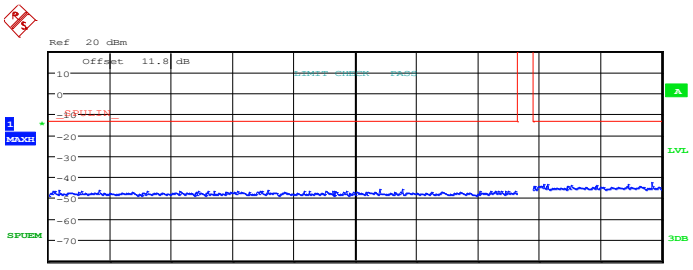


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	4.000 G	1.00 M	3.538000 G	-37.25	-24.25
4.000 G	8.000 G	1.00 M	7.392000 G	-39.58	-26.58

Date: 14.NOV.2013 09:28:51

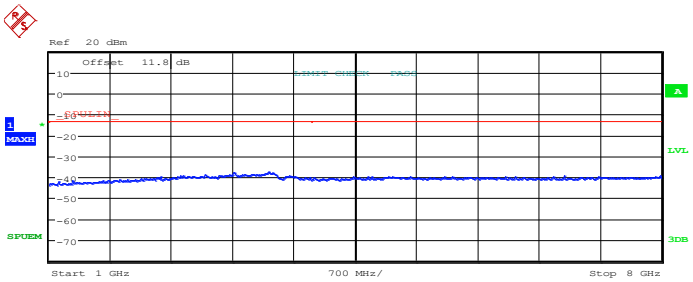
Band :	LTE Band 13	Channel :	CH23255 (High)
Band Width :	5MHz		

QPSK (RB Size 12, RB Offset 0)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	772.000 M	100.00 k	552.739000 M	-46.04	-33.04
797.000 M	1.000 G	100.00 k	983.658500 M	-42.55	-29.55

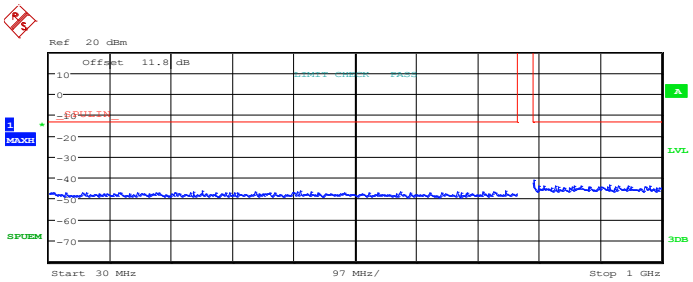
Date: 14.NOV.2013 10:18:22



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	4.000 G	1.00 M	3.508000 G	-37.65	-24.65
4.000 G	8.000 G	1.00 M	6.892000 G	-39.20	-26.20

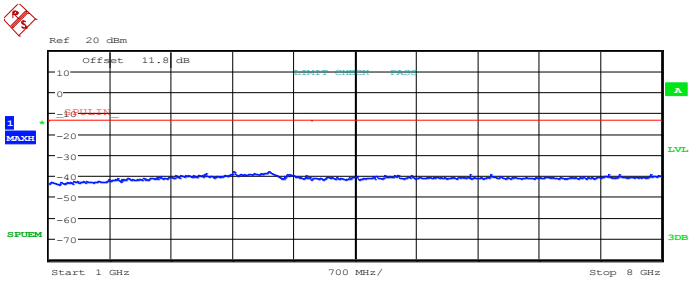
Date: 14.NOV.2013 10:17:25

16QAM (RB Size 25, RB Offset 0)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	772.000 M	100.00 k	427.341000 M	-46.21	-33.21
797.000 M	1.000 G	100.00 k	798.421000 M	-41.13	-28.13

Date: 14.NOV.2013 10:18:00

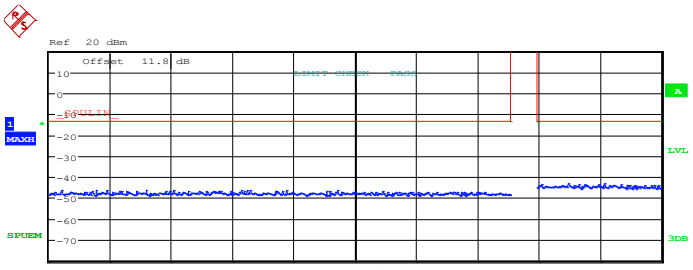


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	4.000 G	1.00 M	3.506500 G	-38.12	-25.12
4.000 G	8.000 G	1.00 M	7.874000 G	-39.17	-26.17

Date: 14.NOV.2013 10:17:37

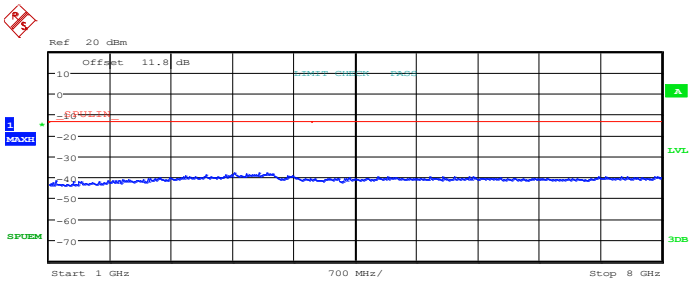
Band :	LTE Band 13	Channel :	CH23230 (Middle)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 0)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	762.000 M	100.00 k	227.274000 M	-46.22	-33.22
802.000 M	1.000 G	100.00 k	851.896000 M	-43.19	-30.19

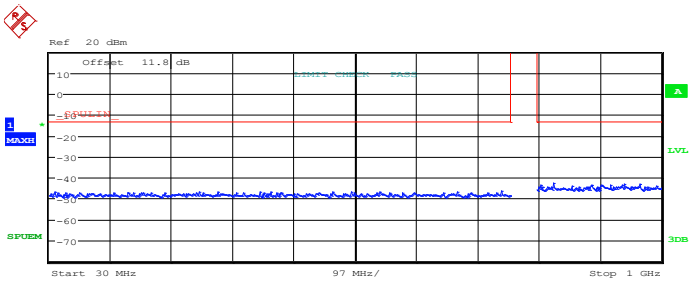
Date: 14.NOV.2013 09:18:58



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	4.000 G	1.00 M	3.493000 G	-37.94	-24.94
4.000 G	8.000 G	1.00 M	5.632000 G	-39.73	-26.73

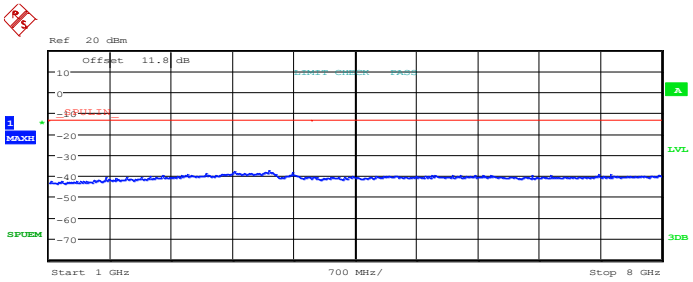
Date: 14.NOV.2013 09:27:23

16QAM (RB Size 1, RB Offset 0)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
30.000 M	762.000 M	100.00 k	745.530000 M	-46.29	-33.29
802.000 M	1.000 G	100.00 k	828.334000 M	-42.66	-29.66

Date: 14.NOV.2013 09:26:42



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.000 G	4.000 G	1.00 M	3.508000 G	-37.63	-24.63
4.000 G	8.000 G	1.00 M	7.418000 G	-39.58	-26.58

Date: 14.NOV.2013 09:27:11

3.6 Radiated Spurious Emission Measurement

3.6.1 Description of Radiated Spurious Emission

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

3.6.2 Measuring Instruments

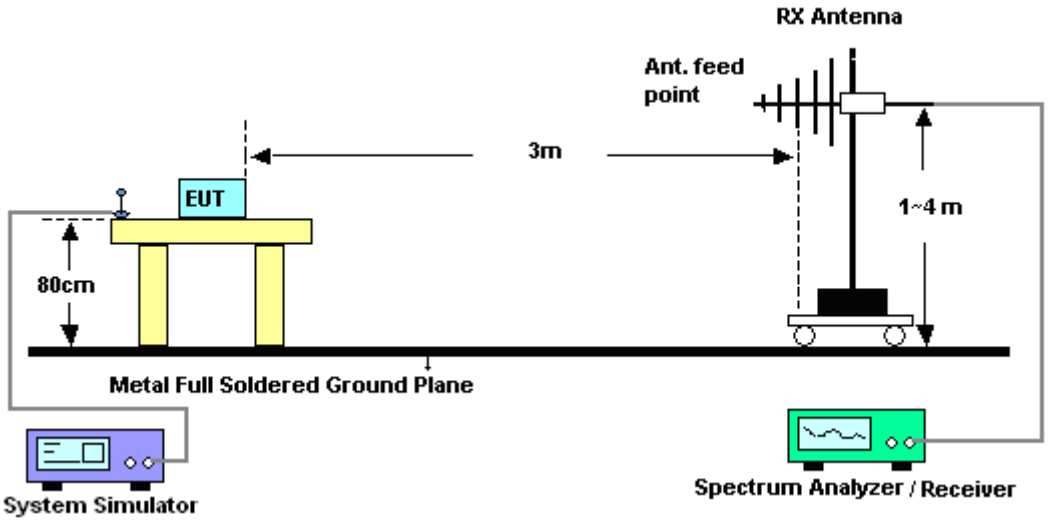
The measuring equipment is listed in the section 4 of this test report.

3.6.3 Test Procedures

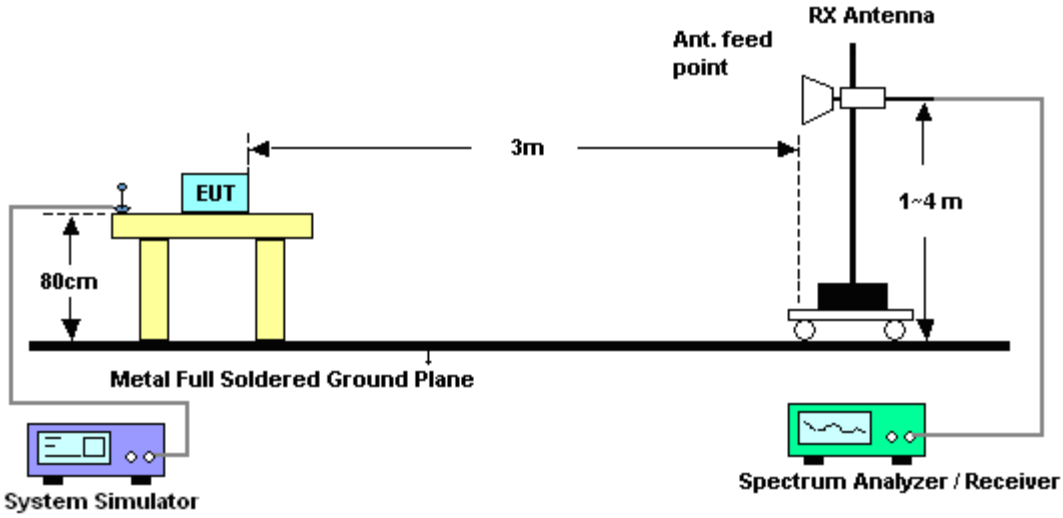
1. The EUT was placed on a rotatable wooden table with 0.8 meter above ground.
2. The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest spurious emission.
4. The height of the receiving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

3.6.4 Test Setup

For radiated emissions from 30MHz to 1GHz

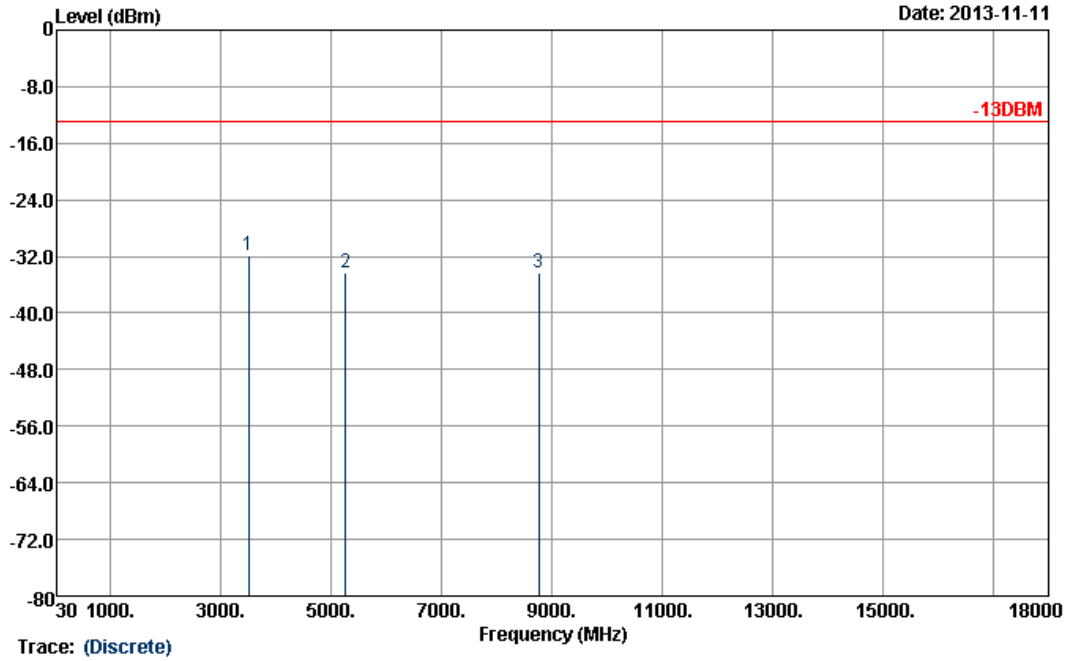


For radiated emissions above 1GHz



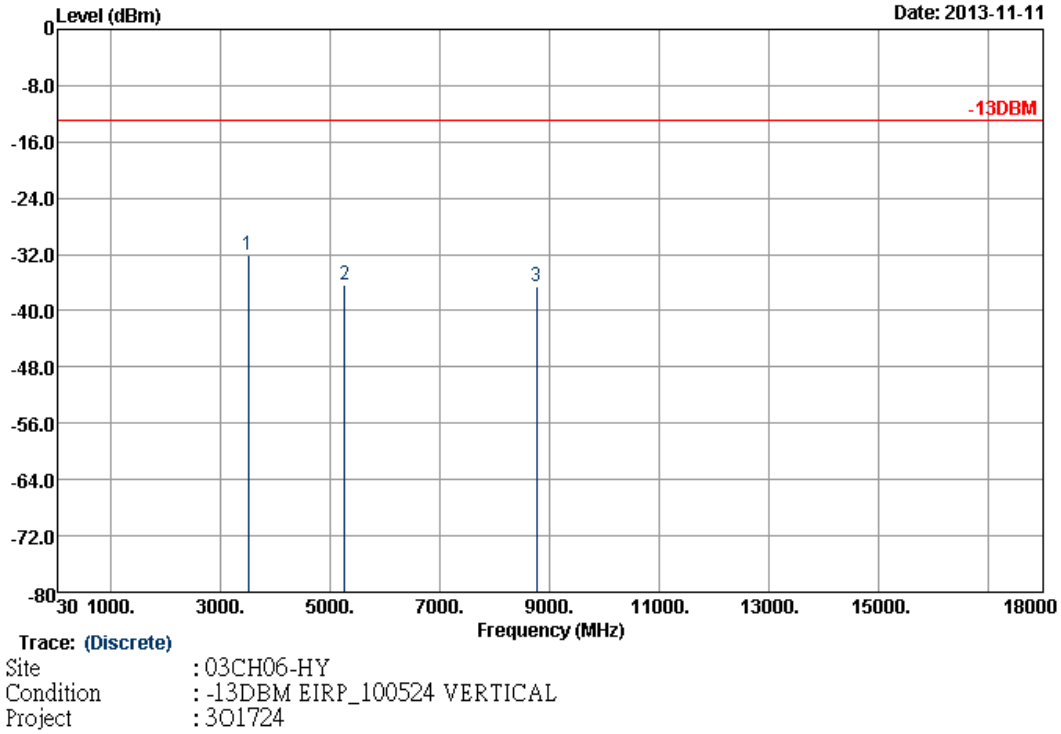
3.6.5 Test Result of Field Strength of Spurious Radiated

Band :	LTE Band 4	**Temperature :**	22~24°C
Test Mode :	1.4MHz QPSK RB Size 3 Offset 2	**Relative Humidity :**	47~49%
Test Engineer :	Marlboro Hsu	**Polarization :**	Horizontal
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



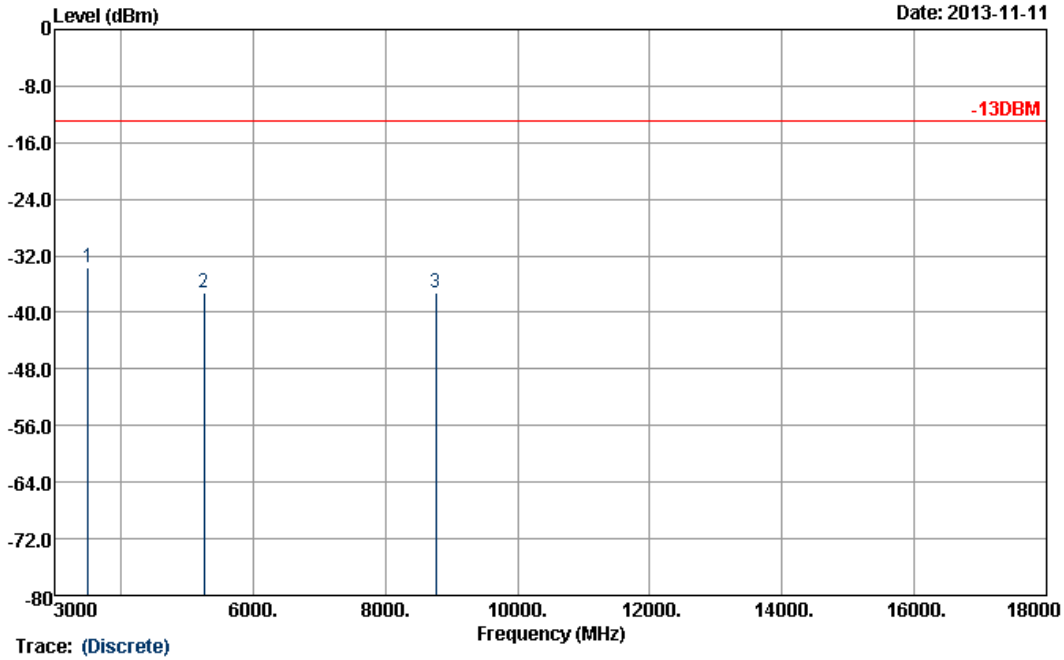
Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3508	-31.83	-13	-18.83	-49.02	-37.7	2.52	8.39	H	Pass
5264	-34.26	-13	-21.26	-56.7	-42	2.74	10.48	H	Pass
8772	-34.37	-13	-21.37	-61.5	-43.8	3.73	13.16	H	Pass

Band :	LTE Band 4	**Temperature :**	22~24°C
Test Mode :	1.4MHz QPSK RB Size 3 Offset 2	**Relative Humidity :**	47~49%
Test Engineer :	Marlboro Hsu	**Polarization :**	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



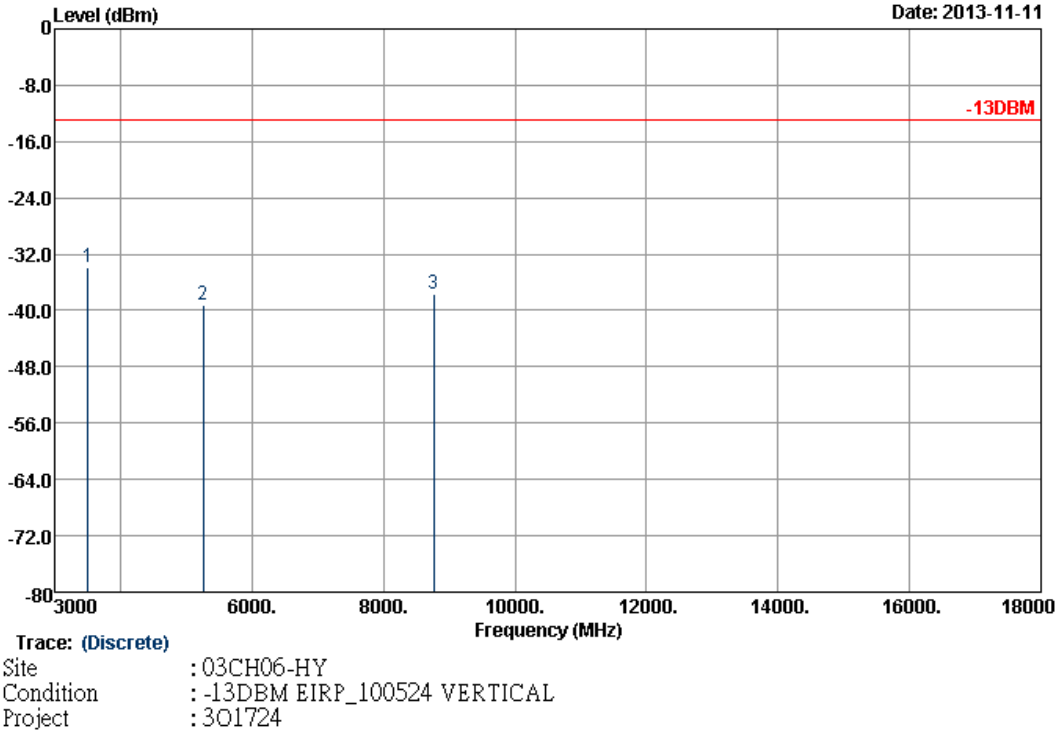
Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3508	-32.13	-13	-19.13	-49.27	-38	2.52	8.39	V	Pass
5264	-36.26	-13	-23.26	-58.88	-44	2.74	10.48	V	Pass
8772	-36.57	-13	-23.57	-63.8	-46	3.73	13.16	V	Pass

Band :	LTE Band 4	Temperature :	22~24°C
Test Mode :	3MHz QPSK RB Size 8 Offset 0	Relative Humidity :	47~49%
Test Engineer :	Marlboro Hsu	Polarization :	Horizontal
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



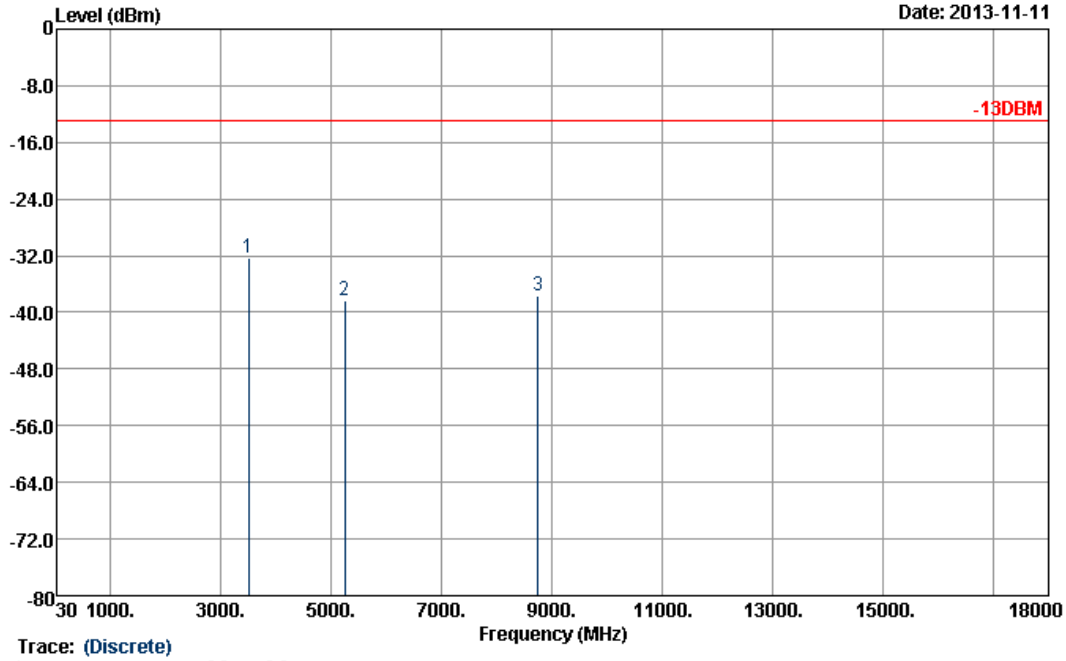
Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3504	-33.72	-13	-20.72	-50.6	-39.59	2.52	8.39	H	Pass
5260	-37.26	-13	-24.26	-59.97	-45	2.74	10.48	H	Pass
8764	-37.27	-13	-24.27	-64.51	-46.7	3.73	13.16	H	Pass

Band :	LTE Band 4	**Temperature :**	22~24°C
Test Mode :	3MHz QPSK RB Size 8 Offset 0	**Relative Humidity :**	47~49%
Test Engineer :	Marlboro Hsu	**Polarization :**	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



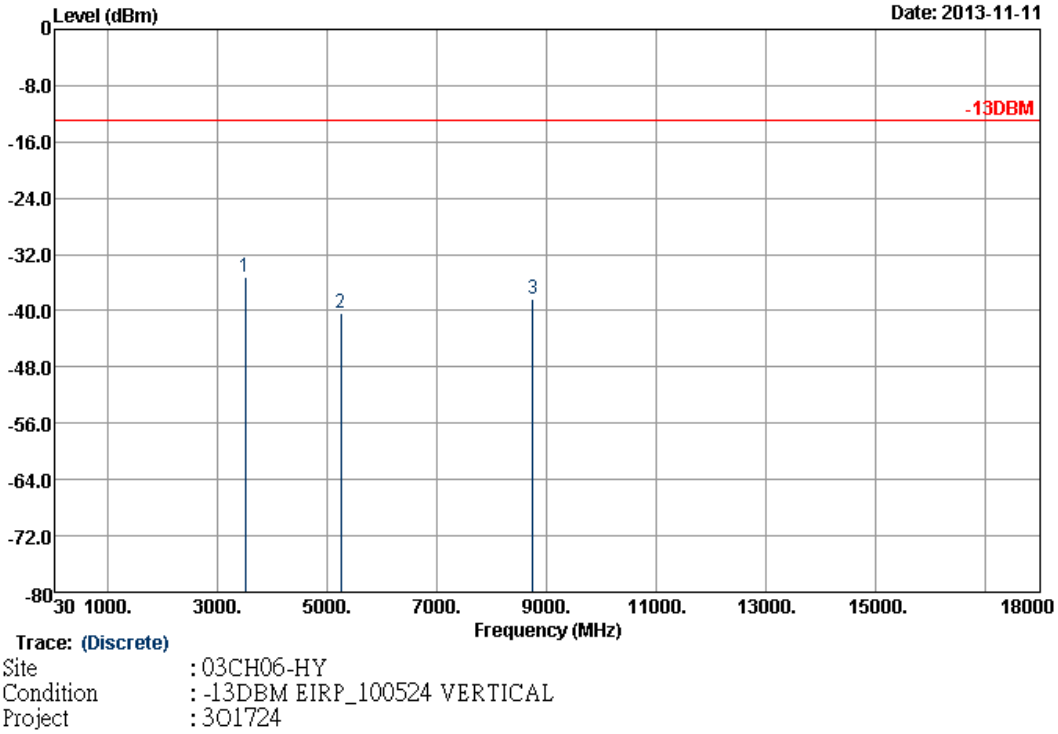
Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3504	-33.84	-13	-20.84	-50.75	-39.71	2.52	8.39	V	Pass
5260	-39.26	-13	-26.26	-61.69	-47	2.74	10.48	V	Pass
8764	-37.77	-13	-24.77	-65.09	-47.2	3.73	13.16	V	Pass

Band :	LTE Band 4	Temperature :	22~24°C
Test Mode :	5MHz QPSK RB Size 12 Offset 0	Relative Humidity :	47~49%
Test Engineer :	Marlboro Hsu	Polarization :	Horizontal
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



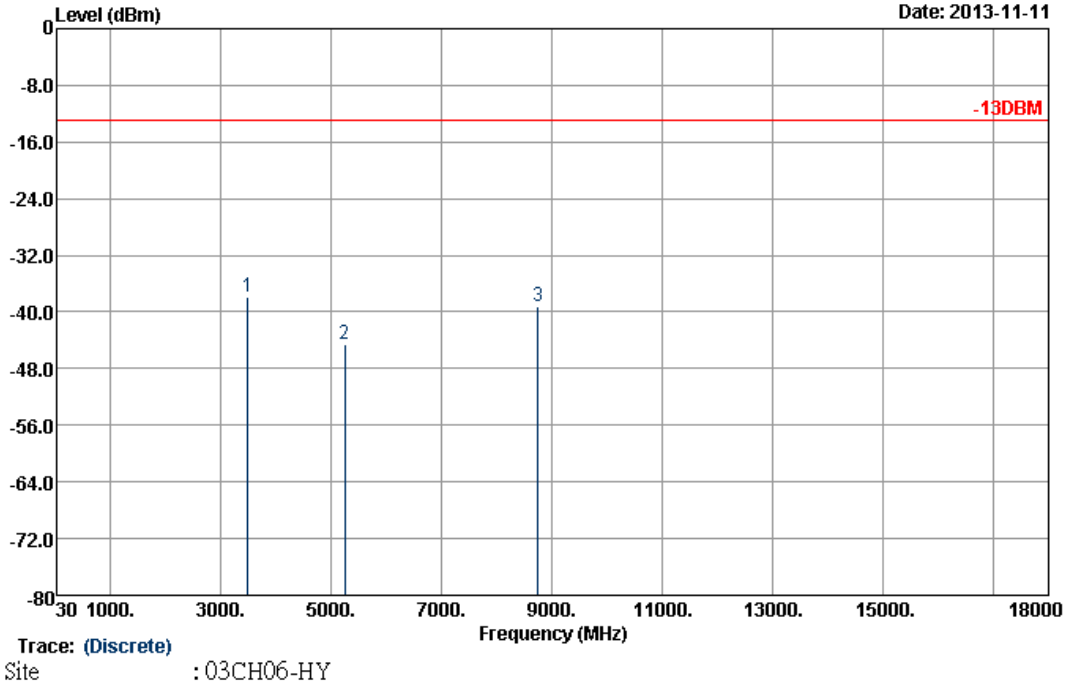
Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3504	-32.23	-13	-19.23	-49.22	-38.1	2.52	8.39	H	Pass
5256	-38.26	-13	-25.26	-60.61	-46	2.74	10.48	H	Pass
8756	-37.57	-13	-24.57	-64.7	-47	3.73	13.16	H	Pass

Band :	LTE Band 4	**Temperature :**	22~24°C
Test Mode :	5MHz QPSK RB Size 12 Offset 0	**Relative Humidity :**	47~49%
Test Engineer :	Marlboro Hsu	**Polarization :**	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



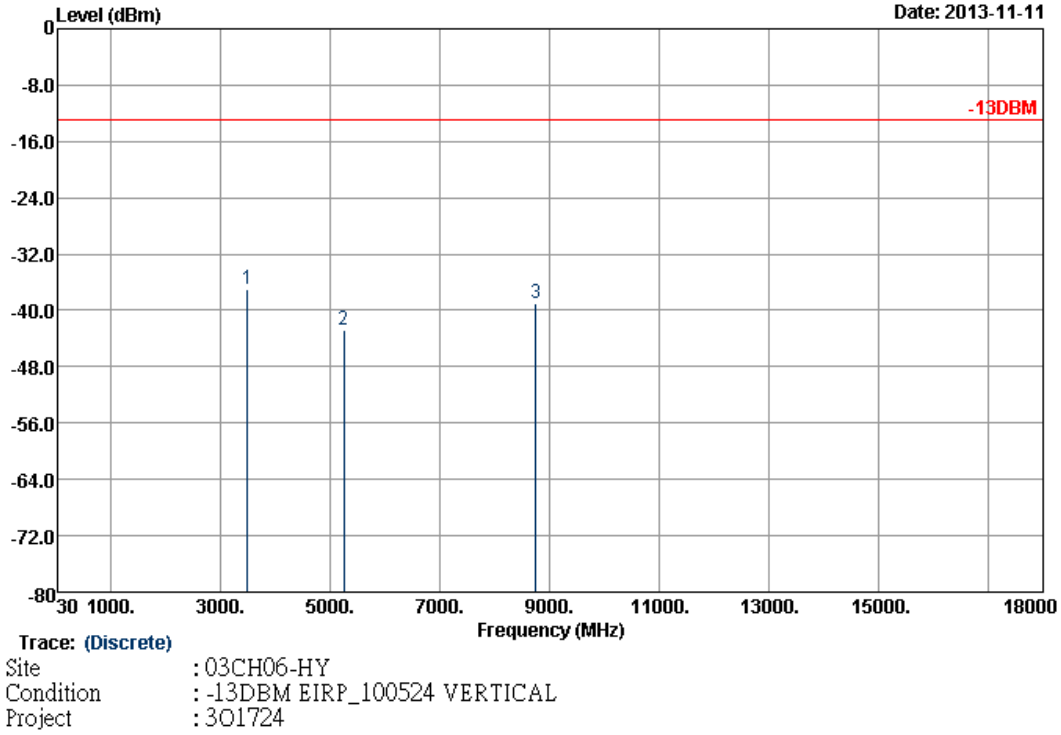
Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3504	-35.13	-13	-22.13	-52.18	-41	2.52	8.39	V	Pass
5256	-40.26	-13	-27.26	-62.71	-48	2.74	10.48	V	Pass
8756	-38.37	-13	-25.37	-65.56	-47.8	3.73	13.16	V	Pass

Band :	LTE Band 4	Temperature :	22~24°C
Test Mode :	10MHz QPSK RB Size 50 Offset 0	Relative Humidity :	47~49%
Test Engineer :	Marlboro Hsu	Polarization :	Horizontal
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



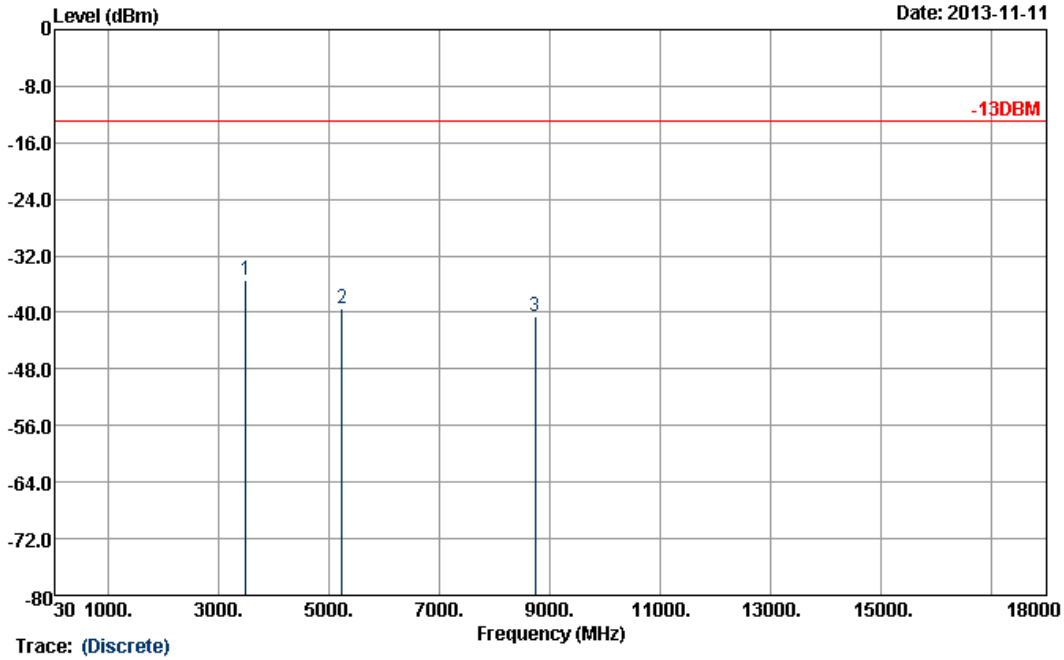
Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3500	-37.90	-13	-24.90	-54.86	-43.76	2.52	8.38	H	Pass
5253	-44.48	-13	-31.48	-66.52	-52.21	2.74	10.48	H	Pass
8753	-39.21	-13	-26.21	-66.35	-48.63	3.73	13.15	H	Pass

Band :	LTE Band 4	Temperature :	22~24°C
Test Mode :	10MHz QPSK RB Size 50 Offset 0	Relative Humidity :	47~49%
Test Engineer :	Marlboro Hsu	Polarization :	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



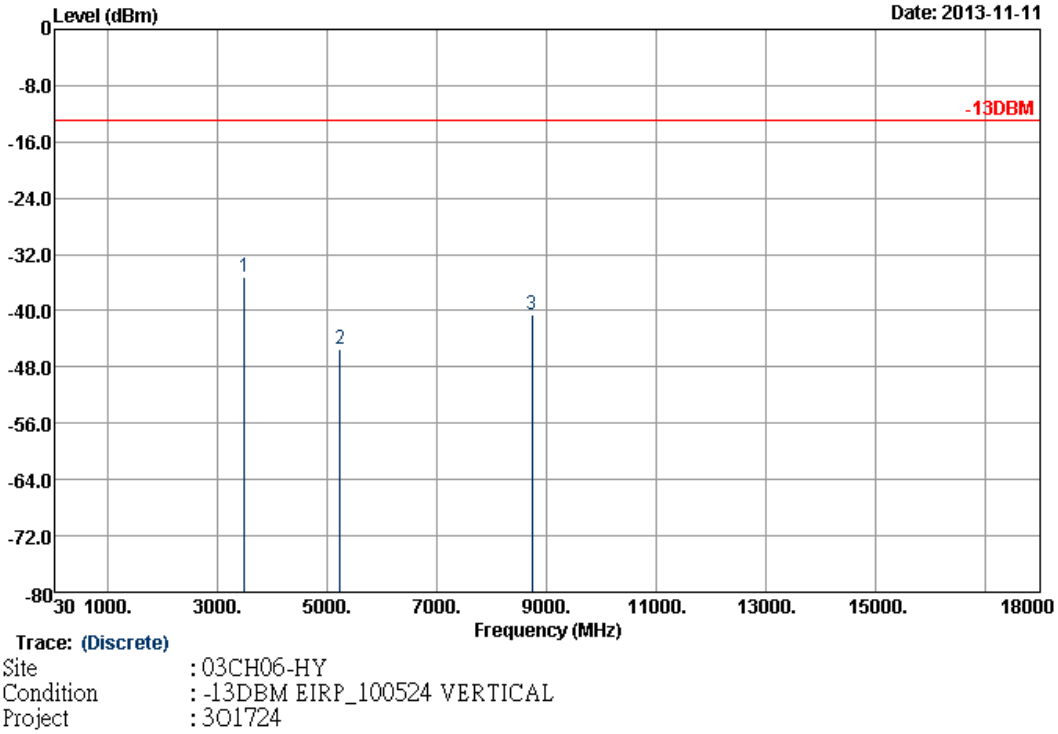
Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3500	-37.02	-13	-24.02	-54.15	-42.88	2.52	8.38	V	Pass
5253	-42.80	-13	-29.80	-64.9	-50.53	2.74	10.48	V	Pass
8753	-38.89	-13	-25.89	-66.02	-48.31	3.73	13.15	V	Pass

Band :	LTE Band 4	**Temperature :**	22~24°C
Test Mode :	15MHz QPSK RB Size 75 Offset 0	**Relative Humidity :**	47~49%
Test Engineer :	Marlboro Hsu	**Polarization :**	Horizontal
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



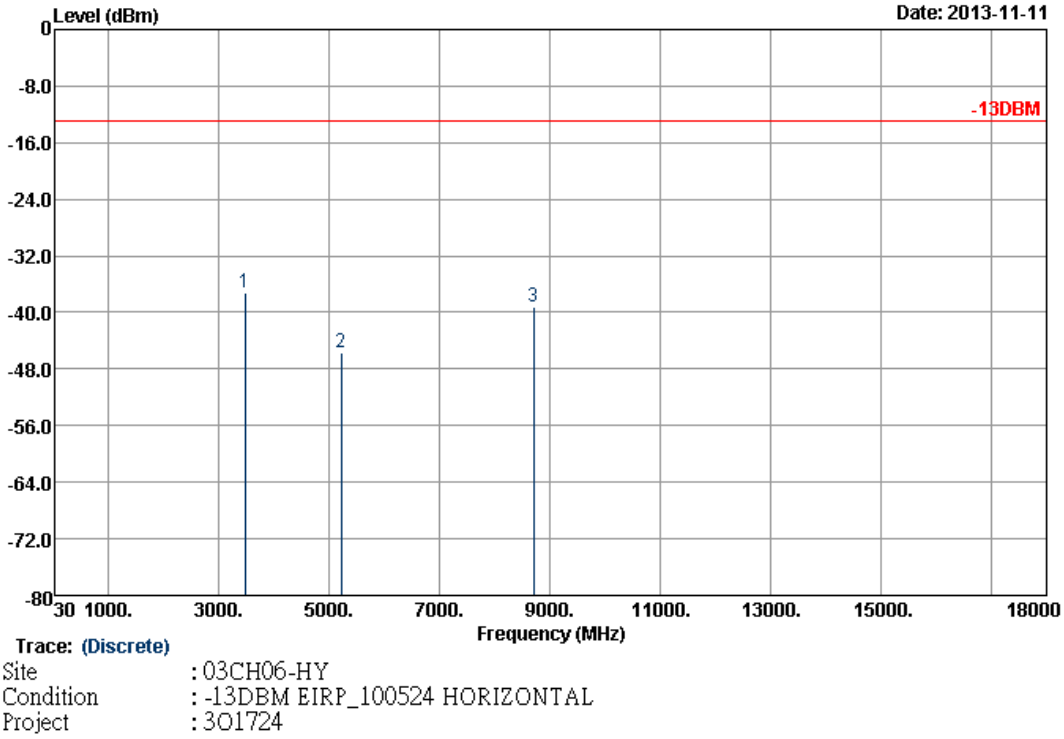
Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3492	-35.53	-13	-22.53	-52.46	-41.38	2.52	8.37	H	Pass
5240	-39.50	-13	-26.50	-61.42	-47.23	2.74	10.47	H	Pass
8738	-40.65	-13	-27.65	-67.64	-50.06	3.74	13.15	H	Pass

Band :	LTE Band 4	**Temperature :**	22~24°C
Test Mode :	15MHz QPSK RB Size 75 Offset 0	**Relative Humidity :**	47~49%
Test Engineer :	Marlboro Hsu	**Polarization :**	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



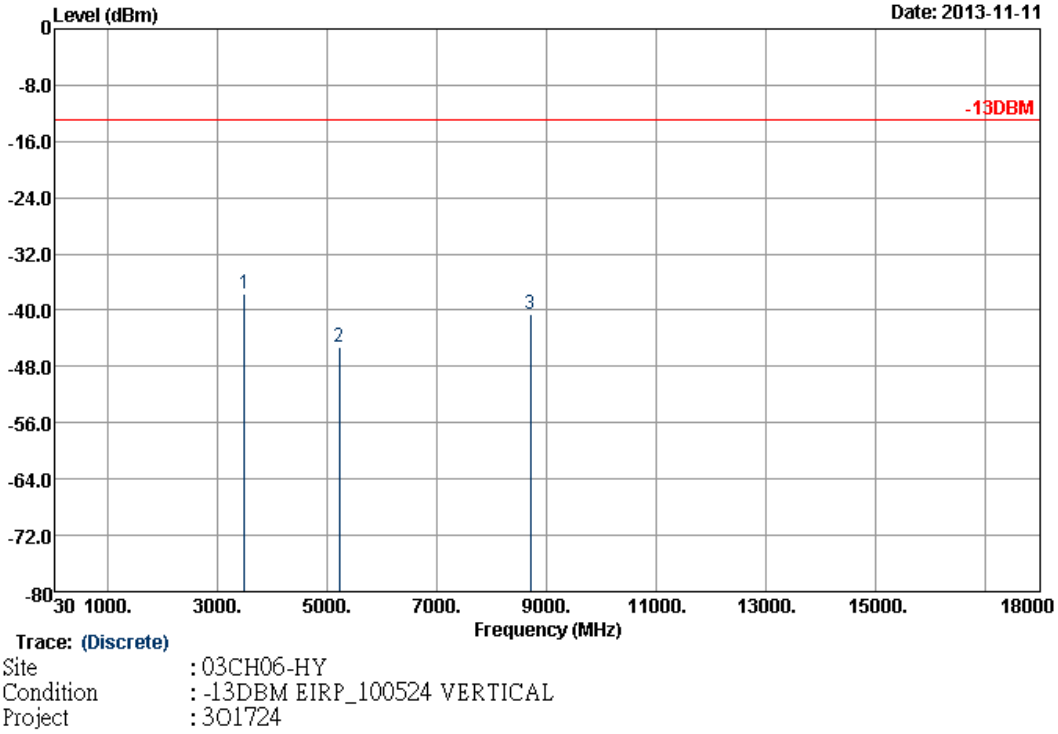
Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3492	-35.29	-13	-22.29	-52.2	-41.14	2.52	8.37	V	Pass
5240	-45.36	-13	-32.36	-67.25	-53.09	2.74	10.47	V	Pass
8738	-40.47	-13	-27.47	-67.52	-49.88	3.74	13.15	V	Pass

Band :	LTE Band 4	**Temperature :**	22~24°C
Test Mode :	20MHz QPSK RB Size 50 Offset 0	**Relative Humidity :**	47~49%
Test Engineer :	Marlboro Hsu	**Polarization :**	Horizontal
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



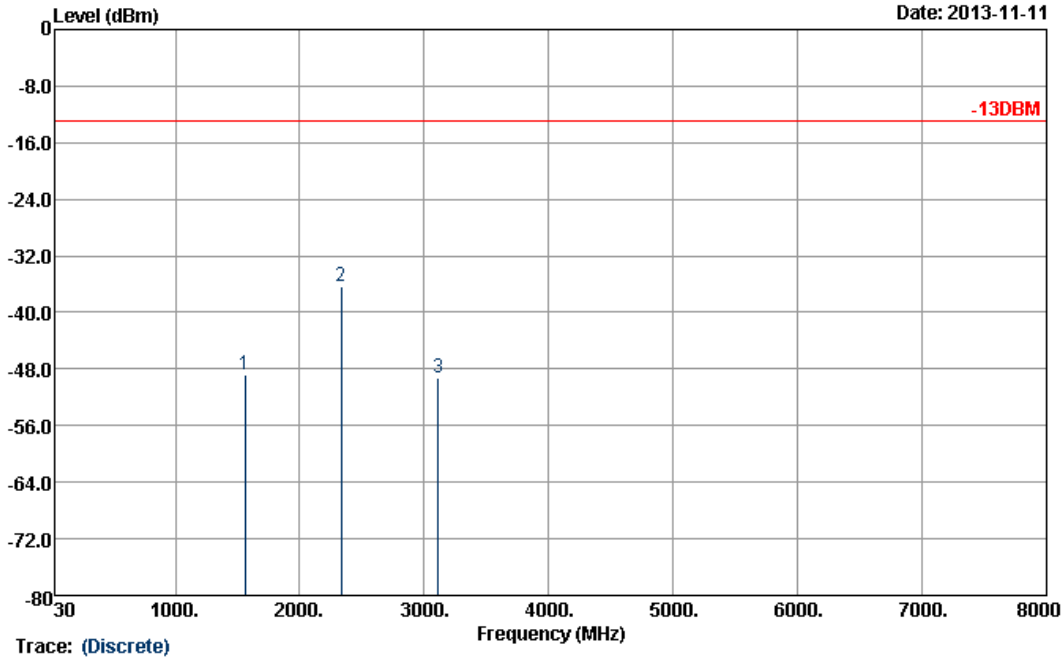
Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3480	-37.32	-13	-24.32	-54.16	-43.16	2.52	8.36	H	Pass
5226	-45.76	-13	-32.76	-67.68	-53.48	2.74	10.47	H	Pass
8714	-39.31	-13	-26.31	-66.47	-48.71	3.74	13.14	H	Pass

Band :	LTE Band 4	**Temperature :**	22~24°C
Test Mode :	20MHz QPSK RB Size 50 Offset 0	**Relative Humidity :**	47~49%
Test Engineer :	Marlboro Hsu	**Polarization :**	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



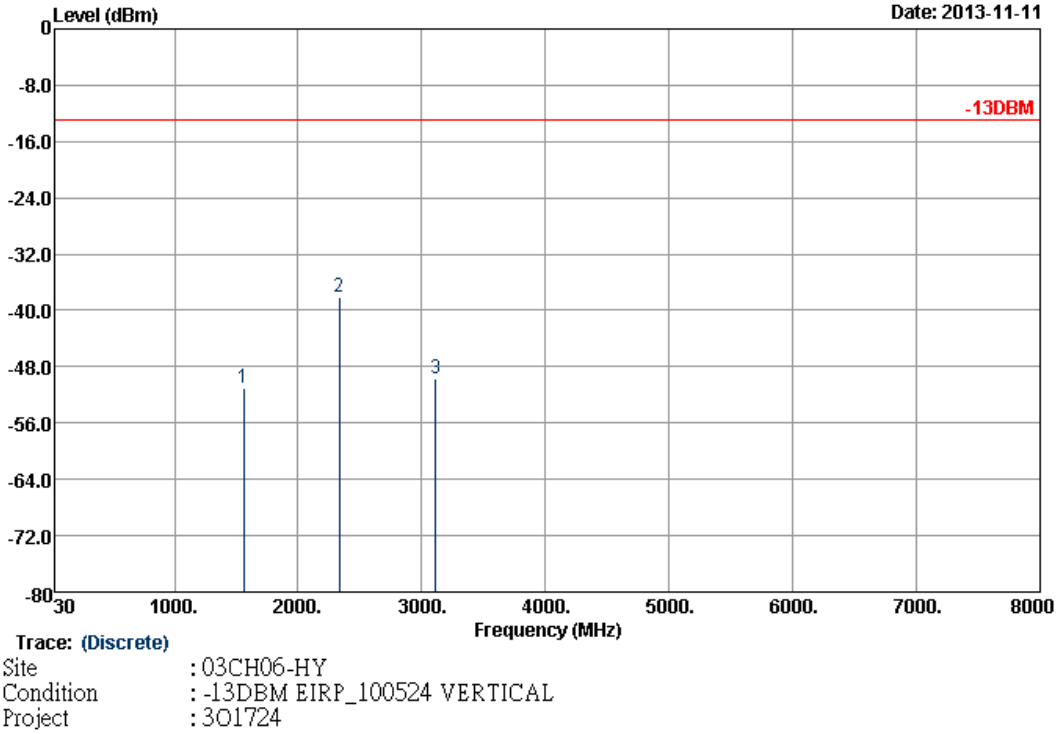
Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3488	-37.73	-13	-24.73	-54.46	-43.57	2.52	8.36	V	Pass
5227	-45.30	-13	-32.30	-67.18	-53.02	2.74	10.47	V	Pass
8715	-40.48	-13	-27.48	-67.52	-49.88	3.74	13.14	V	Pass

Band :	LTE Band 13	**Temperature :**	22~24°C
Test Mode :	5MHz QPSK RB Size 12 Offset 6	**Relative Humidity :**	47~49%
Test Engineer :	Marlboro Hsu	**Polarization :**	Horizontal
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



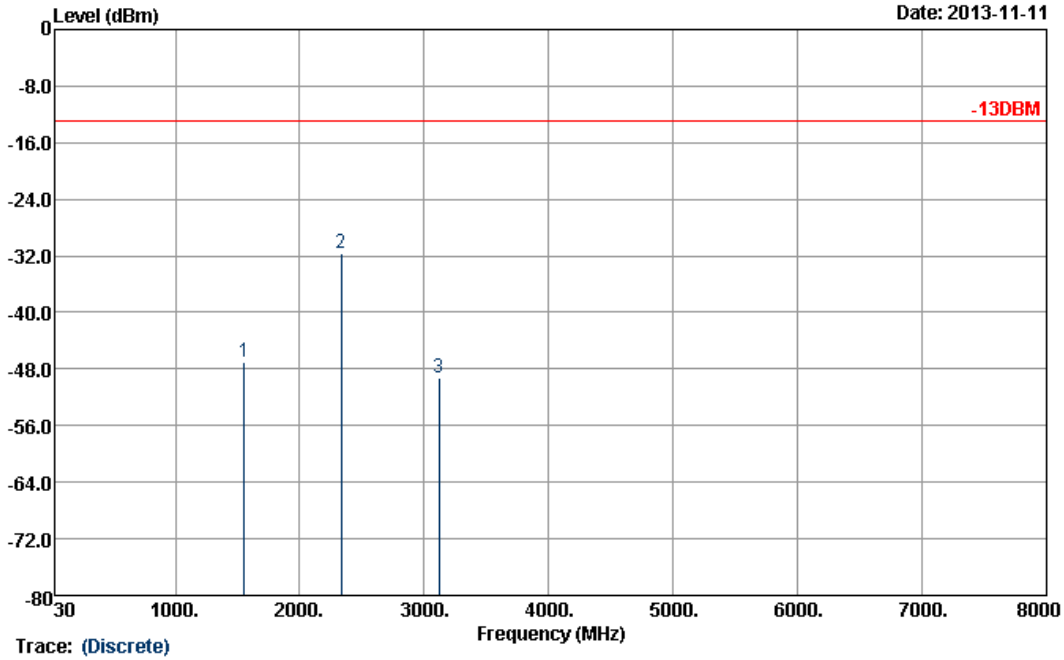
Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1558	-48.76	-13	-35.76	-58.79	-52.56	1.69	5.49	H	Pass
2335	-36.35	-13	-23.35	-49.23	-40.23	2.14	6.02	H	Pass
3115	-49.24	-13	-36.24	-64.81	-54.79	2.25	7.80	H	Pass

Band :	LTE Band 13	**Temperature :**	22~24°C
Test Mode :	5MHz QPSK RB Size 12 Offset 6	**Relative Humidity :**	47~49%
Test Engineer :	Marlboro Hsu	**Polarization :**	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



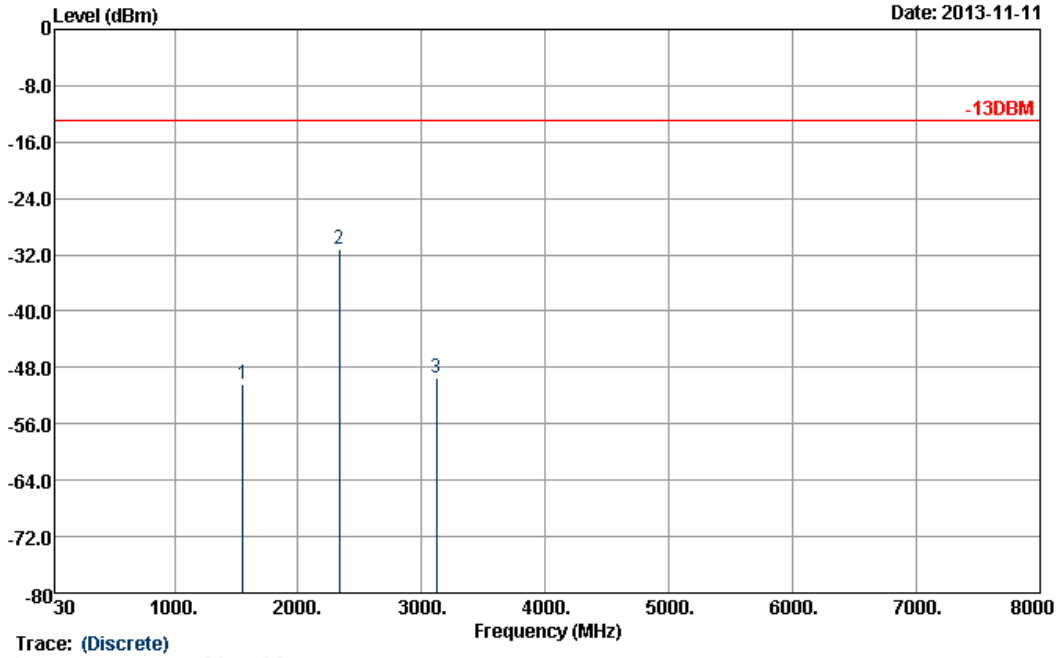
Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1558	-51.03	-13	-38.03	-61.3	-54.83	1.69	5.49	V	Pass
2335	-38.08	-13	-25.08	-50.87	-41.96	2.14	6.02	V	Pass
3115	-49.62	-13	-36.62	-65.31	-55.17	2.25	7.80	V	Pass

Band :	LTE Band 13	**Temperature :**	22~24°C
Test Mode :	10MHz QPSK RB Size 1 Offset 0	**Relative Humidity :**	47~49%
Test Engineer :	Marlboro Hsu	**Polarization :**	Horizontal
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1555	-46.94	-13	-33.94	-56.96	-50.73	1.69	5.48	H	Pass
2332	-31.60	-13	-18.60	-44.61	-35.49	2.14	6.03	H	Pass
3118	-49.25	-13	-36.25	-64.83	-54.81	2.25	7.81	H	Pass

Band :	LTE Band 13	**Temperature :**	22~24°C
Test Mode :	10MHz QPSK RB Size 1 Offset 0	**Relative Humidity :**	47~49%
Test Engineer :	Marlboro Hsu	**Polarization :**	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1555	-50.27	-13	-37.27	-60.44	-54.06	1.69	5.48	V	Pass
2332	-31.29	-13	-18.29	-44.06	-35.18	2.14	6.03	V	Pass
3118	-49.36	-13	-36.36	-64.86	-54.92	2.25	7.81	V	Pass

3.7 Frequency Stability Measurement

3.7.1 Description of Frequency Stability Measurement

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

3.7.2 Measuring Instruments

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

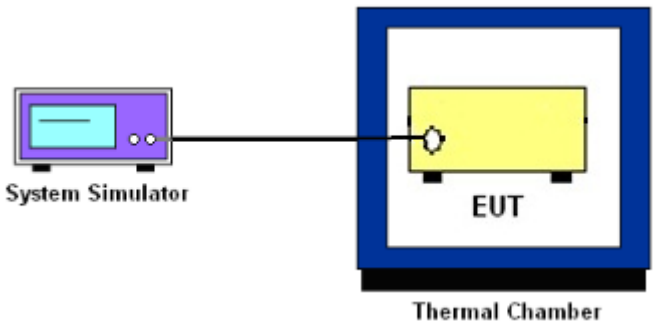
3.7.3 Test Procedures for Temperature Variation

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

3.7.4 Test Procedures for Voltage Variation

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

3.7.5 Test Setup



3.7.6 Test Result of Temperature Variation

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	11.5	0.007	12.1	0.007	PASS
-20	-10.1	-0.006	-9.8	-0.006	
-10	-10.3	-0.006	11.3	0.007	
0	-14.9	-0.009	-10.9	-0.006	
10	-12.9	-0.007	11.8	0.007	
20	13.4	0.008	12.5	0.007	
30	11.3	0.007	8.6	0.005	
40	-10.7	-0.006	-9.2	-0.005	
50	-12.7	-0.007	9.0	0.005	

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	11.3	0.007	-9.9	-0.006	PASS
-20	10.7	0.006	-10.3	-0.006	
-10	12.6	0.007	-10.1	-0.006	
0	-12.3	-0.007	11.0	0.006	
10	-10.6	-0.006	-12.1	-0.007	
20	12.3	0.007	13.5	0.008	
30	10.8	0.006	12.7	0.007	
40	9.7	0.006	9.0	0.005	
50	-11.3	-0.007	-10.7	-0.006	

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	10.3	0.006	11.3	0.007	PASS
-20	-9.2	-0.005	10.6	0.006	
-10	-9.8	-0.006	-12.1	-0.007	
0	-12.0	-0.007	-13.1	-0.008	
10	11.8	0.007	12.3	0.007	
20	11.9	0.007	12.5	0.007	
30	-8.7	-0.005	11.4	0.007	
40	12.3	0.007	-13.1	-0.008	
50	10.7	0.006	-12.8	-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	24.2	0.014	8.9	0.005	PASS
-20	25.6	0.015	-9.1	-0.005	
-10	28.8	0.017	10.0	0.006	
0	-29.2	-0.017	-11.2	-0.006	
10	-28.9	-0.017	10.9	0.006	
20	26.8	0.015	11.7	0.007	
30	27.5	0.016	10.4	0.006	
40	31.3	0.018	12.3	0.007	
50	-28.6	-0.017	-10.7	-0.006	

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	12.6	0.007	-8.8	-0.005	PASS
-20	11.8	0.007	-9.5	-0.005	
-10	12.8	0.007	-10.9	-0.006	
0	-15.3	-0.009	-9.9	-0.006	
10	14.4	0.008	10.0	0.006	
20	19.3	0.011	12.2	0.007	
30	-17.6	-0.010	8.9	0.005	
40	-15.9	-0.009	11.7	0.007	
50	-18.2	-0.010	-9.8	-0.006	

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	7.7	0.004	7.6	0.004	PASS
-20	8.5	0.005	-11.3	-0.007	
-10	12.2	0.007	10.1	0.006	
0	-11.1	-0.006	8.8	0.005	
10	8.9	0.005	-9.9	-0.006	
20	10.2	0.006	-11.4	-0.007	
30	9.2	0.005	10.8	0.006	
40	-11.4	-0.007	-11.3	-0.007	
50	10.6	0.006	-8.6	-0.005	

Band :	LTE Band 13 (QPSK)	Limit (ppm) :	2.5

Temperature (°C)	BW 5MHz		BW 10MHz		Result
	Freq. Dev. (Hz)	Deviation (ppm)	Freq. Dev. (Hz)	Deviation (ppm)	
-30	14.0	0.018	8.9	0.011	PASS
-20	11.6	0.015	-11.4	-0.015	
-10	-10.7	-0.014	10.2	0.013	
0	11.2	0.014	-13.3	-0.017	
10	-12.5	-0.016	8.6	0.011	
20	14.7	0.019	-15.1	-0.019	
30	13.3	0.017	11.2	0.014	
40	-14.1	-0.018	11.0	0.014	
50	-12.9	-0.016	-17.6	-0.022	

Band :	LTE Band 13 (16QAM)	Limit (ppm) :	2.5

Temperature (°C)	BW 5MHz		BW 10MHz		Result
	Freq. Dev. (Hz)	Deviation (ppm)	Freq. Dev. (Hz)	Deviation (ppm)	
-30	12.3	0.016	7.6	0.010	PASS
-20	10.9	0.014	-11.3	-0.014	
-10	-12.1	-0.015	8.9	0.011	
0	-13.9	-0.018	-7.6	-0.010	
10	-14.4	-0.018	7.2	0.009	
20	-15.6	-0.020	-10.0	-0.013	
30	-11.4	-0.015	14.2	0.018	
40	-12.8	-0.016	12.6	0.016	
50	-16.1	-0.021	11.8	0.015	

3.7.7 Test Result of Voltage Variation

Band	Bandwidth	Voltage (Volt)	Freq. Dev. (Hz)	Deviation (ppm)	Limit (ppm)	Result
LTE Band 4 (QPSK)	1.4M	3.6	-8.6	-0.005	2.5	PASS
		Normal	10.8	0.006		
		3.0	9.5	0.006		
	3M	3.6	10.7	0.006		
		Normal	-9.1	-0.005		
		3.0	11.3	0.007		
	5M	3.6	12.2	0.007		
		Normal	-14.6	-0.008		
		3.0	-13.4	-0.008		
	10M	3.6	12.3	0.007		
		Normal	10.9	0.006		
		3.0	-10.7	-0.006		
	15M	3.6	11.6	0.007		
		Normal	-10.1	-0.006		
		3.0	-8.7	-0.005		
	20M	3.6	10.9	0.006		
		Normal	-11.5	-0.007		
		3.0	11.7	0.007		
LTE Band 13 (QPSK)	5M	3.6	-14.7	-0.019	2.5	PASS
		Normal	-15.9	-0.020		
		3.0	14.6	0.019		
	10M	3.6	12.8	0.016		
		Normal	-14.3	-0.018		
		3.0	15.6	0.020		

Band	Bandwidth	Voltage (Volt)	Freq. Dev. (Hz)	Deviation (ppm)	Limit (ppm)	Result
LTE Band 4 (16QAM)	1.4M	3.6	-28.2	-0.016	2.5	PASS
		Normal	27.6	0.016		
		3.0	29.1	0.017		
	3M	3.6	10.7	0.006		
		Normal	-9.8	-0.006		
		3.0	9.6	0.006		
	5M	3.6	-15.6	-0.009		
		Normal	18.8	0.011		
		3.0	18.3	0.011		
	10M	3.6	10.7	0.006		
		Normal	-8.9	-0.005		
		3.0	11.3	0.007		
	15M	3.6	8.7	0.005		
		Normal	-10.6	-0.006		
		3.0	11.1	0.006		
	20M	3.6	9.7	0.006		
		Normal	-10.3	-0.006		
		3.0	9.5	0.005		
LTE Band 13 (16QAM)	5M	3.6	-14.7	-0.019	2.5	PASS
		Normal	-15.1	-0.019		
		3.0	10.8	0.014		
	10M	3.6	-11.0	-0.014		
		Normal	-9.8	-0.013		
		3.0	13.7	0.018		

Remark:

1. Normal Voltage = 3.3V.
2. The manufacturer declared that the EUT could work properly between voltage 3.0V ~ 3.6V.

4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
LTE Base Station	Anritsu	MT8820C	6201026480	30MHz~2.7GHz SISO (FDD Band 1~26)	Jan. 04, 2013	Nov. 08, 2013 ~ Nov. 14, 2013	Jan. 03, 2014	Conducted (TH02-HY)
Spectrum Analyzer	Rohde & Schwarz	FSP40	100055	9kHz~40GHz	Jun. 07, 2013	Nov. 08, 2013 ~ Nov. 14, 2013	Jun. 06, 2014	Conducted (TH02-HY)
Thermal Chamber	Ten Billion	TTH-D3SP	TBN-930701	N/A	Jul. 19, 2013	Nov. 08, 2013 ~ Nov. 14, 2013	Jul. 18, 2014	Conducted (TH02-HY)
Spectrum Analyzer	Rohde & Schwarz	ESU26	100390	20Hz ~ 26.5GHz	Doc. 14, 2012	Nov. 11, 2013	Doc. 13, 2013	Radiation (03CH06-HY)
Spectrum Analyzer	Agilent	E4408B	MY44211030	9kHz ~ 26.5GHz	Nov. 26, 2012	Nov. 11, 2013	Nov. 25, 2013	Radiation (03CH06-HY)
EMI Test Receiver	R&S	ESVS10	834468/0003	20MHz ~ 1000MHz	May 06, 2013	Nov. 11, 2013	May 05, 2014	Radiation (03CH06-HY)
Bilog Antenna	Schaffner	CBL6112B	2885	30MHz -2GHz	Oct. 10, 2013	Nov. 11, 2013	Oct. 09, 2014	Radiation (03CH06-HY)
Double Ridge Horn Antenna	EMCO	3117	00066583	1GHz ~ 18GHz	Aug. 02, 2013	Nov. 11, 2013	Aug. 01, 2014	Radiation (03CH06-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170251	15GHz ~ 40GHz	Oct. 03, 2013	Nov. 11, 2013	Oct. 02, 2014	Radiation (03CH06-HY)
Amplifier	Agilent	310N	186713	9kHz ~ 1GHz	Apr. 12, 2013	Nov. 11, 2013	Apr. 11, 2014	Radiation (03CH06-HY)
Pre Amplifier	EMCI	EMC051845	SN980048	1GHz ~ 18GHz	Jul. 18, 2013	Nov. 11, 2013	Jul. 17, 2014	Radiation (03CH06-HY)
Preamplifier	Agilent	8449B	3008A01917	1GHz ~ 26.5GHz	Apr. 12, 2013	Nov. 11, 2013	Apr. 11, 2014	Radiation (03CH06-HY)
Turn Table	INN-CO	DS2000	420/650/00	0 - 360 degree	N/A	Nov. 11, 2013	N/A	Radiation (03CH06-HY)
Antenna Mast	MF	MF-7802	MF780208212	1 m ~ 4 m	N/A	Nov. 11, 2013	N/A	Radiation (03CH06-HY)

5 Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**4.50**