FCC RF Test Report

APPLICANT	:	ZTE CORPORATION
EQUIPMENT	:	LTE USB Modem
BRAND NAME	:	ZTE
MODEL NAME	:	MF820B
FCC ID	:	Q78-MF820B
STANDARD	:	47 CFR Part 2, 27L
CLASSIFICATION	:	PCS Licensed Transmitter (PCB)
TX FREQUENCY RANGE	:	LTE Band 17: 704 MHz ~ 716 MHz LTE Band 12: 698 MHz ~ 716 MHz LTE Band 4: 1710MHz ~ 1755 MHz
RX FREQUENCY RANGE	:	LTE Band 17 : 734 MHz ~ 746 MHz LTE Band 12: 728 MHz ~ 746 MHz LTE Band 4 : 2110 MHz ~ 2155 MHz
MAX. ERP/EIRP POWER	:	0.20 W (LTE Band 17, QPSK, BW 5MHz) 0.08 W (LTE Band 17, 16QAM, BW 5MHz) 0.23 W (LTE Band 17, QPSK, BW 10MHz) 0.14 W (LTE Band 17, 16QAM, BW 10MHz) 0.21 W (LTE Band 12, QPSK, BW 1.4MHz) 0.20 W (LTE Band 12, 16QAM, BW 1.4MHz) 0.24 W (LTE Band 12, QPSK, BW 3MHz) 0.16 W (LTE Band 12, 16QAM, BW 3MHz) 0.27 W (LTE Band 12, QPSK, BW 5MHz) 0.19 W (LTE Band 12, 16QAM, BW 5MHz) 0.35 W (LTE Band 12, QPSK, BW 10MHz) 0.29 W (LTE Band 12, 16QAM, BW 10MHz) 0.14 W (LTE Band 4, QPSK, BW 1.4MHz) 0.12 W (LTE Band 4, 16QAM, BW 1.4MHz) 0.14 W (LTE Band 4, QPSK, BW 3MHz) 0.11 W (LTE Band 4, 16QAM, BW 3MHz) 0.11 W (LTE Band 4, QPSK, BW 5MHz) 0.09 W (LTE Band 4, 16QAM, BW 5MHz) 0.11 W (LTE Band 4, QPSK, BW 10MHz) 0.10 W (LTE Band 4, 16QAM, BW 10MHz) 0.09 W (LTE Band 4, QPSK, BW 15MHz) 0.09 W (LTE Band 4, 16QAM, BW 15MHz) 0.08 W (LTE Band 4, QPSK, BW 20MHz) 0.08 W (LTE Band 4, 16QAM, BW 20MHz)

EMISSION DESIGNATOR	**:**	**4M52 G7D (LTE Band 17, QPSK, BW 5MHz)** **4M52 D7W (LTE Band 17, 16QAM, BW 5MHz)** **9M20 G7D (LTE Band 17, QPSK, BW 10MHz)** **9M20 D7W (LTE Band 17, 16QAM, BW 10MHz)** **1M10 G7D (LTE Band 12, QPSK, BW 1.4MHz)** **1M10 D7W (LTE Band 12, 16QAM, BW 1.4MHz)** **2M74 G7D (LTE Band 12, QPSK, BW 3MHz)** **2M74 D7W (LTE Band 12, 16QAM, BW 3MHz)** **4M50 G7D (LTE Band 12, QPSK, BW 5MHz)** **4M48 D7W (LTE Band 12, 16QAM, BW 5MHz)** **9M12 G7D (LTE Band 12, QPSK, BW 10MHz)** **9M12 D7W (LTE Band 12, 16QAM, BW 10MHz)** **1M10 G7D (LTE Band 4, QPSK, BW 1.4MHz)** **1M10 D7W (LTE Band 4, 16QAM, BW 1.4MHz)** **2M75 G7D (LTE Band 4, QPSK, BW 3MHz)** **2M74 D7W (LTE Band 4, 16QAM, BW 3MHz)** **4M50 G7D (LTE Band 4, QPSK, BW 5MHz)** **4M48 D7W (LTE Band 4, 16QAM, BW 5MHz)** **9M16 G7D (LTE Band 4, QPSK, BW 10MHz)** **9M12 D7W (LTE Band 4, 16QAM, BW 10MHz)** **13M6 G7D (LTE Band 4, QPSK, BW 15MHz)** **13M6 D7W (LTE Band 4, 16QAM, BW 15MHz)** **18M7 G7D (LTE Band 4, QPSK, BW 20MHz)** **18M7 D7W (LTE Band 4, 16QAM, BW 20MHz)**

The product was received on Dec. 31, 2011 and completely tested on Mar. 30, 2012. We, SPORTON INTERNATIONAL (KUNSHAN) 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 (KUNSHAN) INC., the test report shall not be reproduced except in full.

Reviewed by:

Jones Tsai

Jones Tsai / Manager

SPORTON INTERNATIONAL (KUNSHA) INC.

No. 3-2, PingXiang Road, Kunshan, Jiangsu Province, P.R.C.

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG1D3102B	Rev. 01	Initial issue of report	Apr. 02, 2012

SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.1	§2.1046	Conducted Output Average Power	NA	PASS	-
3.2	§27.50(d)(5)	Peak-to-Average Ratio	< 13dB	PASS	-
3.3	§27.50(d)(4)	Equivalent Isotropic Radiated Power	< 1 Watt (Band 4)	PASS	-
3.3	§27.50(c)(10)	Equivalent Radiated Power	< 3 Watt (Band 12 and 17)	PASS	-
3.4	§2.1049	Occupied Bandwidth	NA	PASS	-
3.5	§2.1051 §27.53(g)(h)	Band Edge Measurement	< $43+10\log_{10}$(P[Watts])	PASS	-
3.6	§2.1051 §27.53(g)(h)	Conducted Emission	< $43+10\log_{10}$(P[Watts])	PASS	-
3.7	§2.1053 §27.53(h) (g)	Field Strength of Spurious Radiation	< $43+10\log_{10}$(P[Watts])	PASS	Under limit 27.56 dB at 7017.2 MHz
3.8	§2.1055 §27.54	Frequency Stability Temperature & Voltage	< 2.5 ppm	PASS	-

1 General Description

1.1 Applicant

ZTE CORPORATION

ZTE Plaza, Keji Road South, Hi-Tech, Industrial Park, Nanshan District, Shenzhen, Guangdong, 518057, P.R.China

1.2 Manufacturer

ZTE CORPORATION

ZTE Plaza, Keji Road South, Hi-Tech, Industrial Park, Nanshan District, Shenzhen, Guangdong, 518057, P.R.China

1.3 Feature of Equipment Under Test

Product Feature & Specification	
Equipment	LTE USB Modem
Brand Name	ZTE
Model Name	MF820B
FCC ID	Q78-MF820B
Tx Frequency	LTE Band 17: 704 MHz ~ 716 MHz LTE Band 12: 698 MHz ~ 716 MHz LTE Band 4: 1710MHz ~ 1755 MHz
Rx Frequency	LTE Band 17 : 734 MHz ~ 746 MHz LTE Band 12: 728 MHz ~ 746 MHz LTE Band 4 : 2110 MHz ~ 2155 MHz
Maximum Output Average Power to Antenna	LTE Band 17: 23.25 dBm LTE Band 12: 23.51 dBm LTE Band 4: 22.15 dBm
Antenna Type	PIFA Antenna
HW Version	xl3A+xi8A
SW Version	EN_CLA_MF820BV1.0.0B01
EUT Stage	Production Unit

1.4 Emission Designator

FCC Rule	System	Type of Modulation	BW	Emission Designator	Maximum ERP/EIRP
Part 27	LTE Band 17	QPSK	5MHz	4M52G7D	0.20 W
Part 27	LTE Band 17	16QAM	5MHz	4M52D7W	0.08 W
Part 27	LTE Band 17	QPSK	10MHz	9M20G7D	0.23 W
Part 27	LTE Band 17	16QAM	10MHz	9M20D7W	0.14 W
Part 27	LTE Band 12	QPSK	1.4 MHz	1M10G7D	0.21 W
Part 27	LTE Band 12	16QAM	1.4 MHz	1M10D7W	0.20 W
Part 27	LTE Band 12	QPSK	3 MHz	2M74G7D	0.24 W
Part 27	LTE Band 12	16QAM	3 MHz	2M74D7W	0.16 W
Part 27	LTE Band 12	QPSK	5MHz	4M50G7D	0.27 W
Part 27	LTE Band 12	16QAM	5MHz	4M48D7W	0.19 W
Part 27	LTE Band 12	QPSK	10MHz	9M12G7D	0.35 W
Part 27	LTE Band 12	16QAM	10MHz	9M12D7W	0.29 W
Part 27	LTE Band 4	QPSK	1.4 MHz	1M10G7D	0.14 W
Part 27	LTE Band 4	16QAM	1.4 MHz	1M10D7W	0.12 W
Part 27	LTE Band 4	QPSK	3 MHz	2M75G7D	0.14 W
Part 27	LTE Band 4	16QAM	3 MHz	2M74D7W	0.11 W
Part 27	LTE Band 4	QPSK	5MHz	4M50G7D	0.11 W
Part 27	LTE Band 4	16QAM	5MHz	4M48D7W	0.09 W
Part 27	LTE Band 4	QPSK	10MHz	9M16G7D	0.11 W
Part 27	LTE Band 4	16QAM	10MHz	9M12D7W	0.10 W
Part 27	LTE Band 4	QPSK	15MHz	13M6G7D	0.09 W
Part 27	LTE Band 4	16QAM	15MHz	13M6D7W	0.09 W
Part 27	LTE Band 4	QPSK	20MHz	18M7G7D	0.08 W
Part 27	LTE Band 4	16QAM	20MHz	18M7D7W	0.08 W

1.5 Testing Site

Test Site	SPORTON INTERNATIONAL INC.		
Test Site Location	No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C. TEL: +886-3-327-3456 FAX: +886-3-328-4978		
Test Site No.	**Sporton Site No.**		**FCC/IC Registration No.**
	TH02-HY	03CH07-HY	722060/4086B-1

1.6 Applied Standards

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

- 47 CFR Part 2, 27L
- ANSI / TIA / EIA-603-C-2004

Remark:

1. All test items were verified and recorded according to the standards and without any deviation during the test.

2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.

1.7 Ancillary Equipment List

Item	Equipment	Trade Name	Model No.	FCC ID	Data Cable	Power Cord
1.	LTE Station	Anritsu	MT8820C	N/A	N/A	Unshielded, 1.8 m
2.	Notebook	DELL	P20G	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m

2 Test Configuration of Equipment Under Test

2.1 Test Mode

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

Frequency range investigated for radiated emission: 30MHz to 19000 MHz.

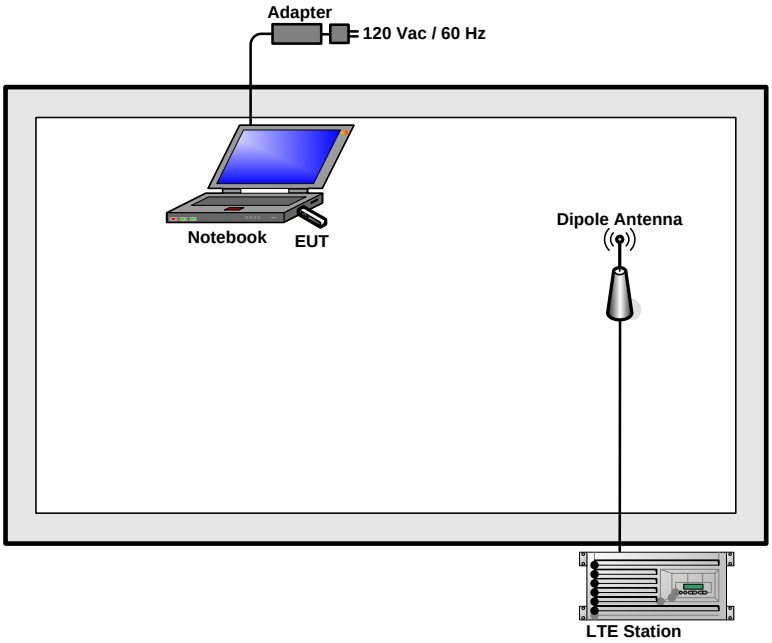
Test Modes			
Band		**Radiated TCs**	**Conducted TCs**
LTE Band 17	**BW 5MHz**	■ LTE (RB Size 1, RB Offset 24) 16QAM Link	■ LTE (RB Size 1, RB Offset 0)Link ■ LTE (RB Size 1, RB Offset 24)Link ■ LTE (RB Size 12, RB Offset 6)Link ■ LTE (RB Size 25, RB Offset 0)Link
	BW 10MHz	■ LTE (RB Size 25, RB Offset 13) 16QAM Link	■ LTE (RB Size 1, RB Offset 0)Link ■ LTE (RB Size 1, RB Offset 49)Link ■ LTE (RB Size 25, RB Offset 13)Link ■ LTE (RB Size 50, RB Offset 0)Link
LTE Band 12	**BW 1.4MHz**	■ LTE (RB Size 1, RB Offset 0) 16QAM Link	■ LTE (RB Size 1, RB Offset 0)Link ■ LTE (RB Size 1, RB Offset 5)Link ■ LTE (RB Size 3, RB Offset 2)Link ■ LTE (RB Size 6, RB Offset 0)Link
	BW 3MHz	■ LTE (RB Size 1, RB Offset 14) 16QAM Link	■ LTE (RB Size 1, RB Offset 0)Link ■ LTE (RB Size 1, RB Offset 14)Link ■ LTE (RB Size 8, RB Offset 4)Link ■ LTE (RB Size 15, RB Offset 0)Link
	BW 5MHz	■ LTE (RB Size 25, RB Offset 0) 16QAM Link	■ LTE (RB Size 1, RB Offset 0)Link ■ LTE (RB Size 1, RB Offset 24)Link ■ LTE (RB Size 12, RB Offset 6)Link ■ LTE (RB Size 25, RB Offset 0)Link
	BW 10MHz	■ LTE (RB Size 1, RB Offset 49) 16QAM Link	■ LTE (RB Size 1, RB Offset 0)Link ■ LTE (RB Size 1, RB Offset 49)Link ■ LTE (RB Size 25, RB Offset 13)Link ■ LTE (RB Size 50, RB Offset 0)Link

Test Modes			
Band		Radiated TCs	Conducted TCs
LTE Band 4	BW 1.4MHz	■ LTE (RB Size 1, RB Offset 0) QPSK Link	■ LTE (RB Size 1, RB Offset 0)Link ■ LTE (RB Size 1, RB Offset 5)Link ■ LTE (RB Size 3, RB Offset 2)Link ■ LTE (RB Size 6, RB Offset 0)Link
	BW 3MHz	■ LTE (RB Size 1, RB Offset 14) QPSK Link	■ LTE (RB Size 1, RB Offset 0)Link ■ LTE (RB Size 1, RB Offset 14)Link ■ LTE (RB Size 8, RB Offset 4)Link ■ LTE (RB Size 15, RB Offset 0)Link
	BW 5MHz	■ LTE (RB Size 1, RB Offset 24) QPSK Link	■ LTE (RB Size 1, RB Offset 0)Link ■ LTE (RB Size 1, RB Offset 24)Link ■ LTE (RB Size 12, RB Offset 6)Link ■ LTE (RB Size 25, RB Offset 0)Link
	BW 10MHz	■ LTE (RB Size 1, RB Offset 49) QPSK Link	■ LTE (RB Size 1, RB Offset 0)Link ■ LTE (RB Size 1, RB Offset 49)Link ■ LTE (RB Size 25, RB Offset 13)Link ■ LTE (RB Size 50, RB Offset 0)Link
	BW 15MHz	■ LTE (RB Size 1, RB Offset 74) QPSK Link	■ LTE (RB Size 1, RB Offset 0)Link ■ LTE (RB Size 1, RB Offset 74)Link ■ LTE (RB Size 36, RB Offset 18)Link ■ LTE (RB Size 75, RB Offset 0)Link
	BW 20MHz	■ LTE (RB Size 1, RB Offset 99) QPSK Link	■ LTE (RB Size 1, RB Offset 0) Link ■ LTE (RB Size 1, RB Offset 99) Link ■ LTE (RB Size 50, RB Offset 25) Link ■ LTE (RB Size 100, RB Offset 0) Link

Note:

1. For conducted test, both two Modulations (QPSK and 16QAM) are tested. For RSE, only the maximum RF output power level is chosen.
2. From conducted spurious emission measurement, the modulation related spurious emission out of the band is not identified. Since MPR is implemented, 1RB-QPSK results in highest RF power, therefore it's chosen for RSE measurement.

2.2 Connection Diagram of Test System



3 Test Result

3.1 Conducted Output Average Power Measurement

3.1.1 Description of the Conducted Output Average Power Measurement

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

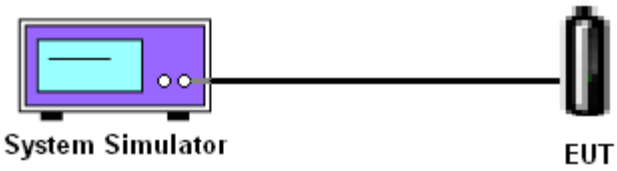
3.1.2 Measuring Instruments

See list of measuring instruments of this test report.

3.1.3 Test Procedures

1. The transmitter output port was connected to base station.
2. Set EUT at maximum average 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

Mode	Band Width	Channel	Frequency (MHz)	Modulation	RB Configuration		Average Power (dBm)	Average Power (Watts)
					RB Size	RB Offset		
LTE Band 17	5MHz	23755	706.5	QPSK	**1**	**0**	**22.58**	**0.181**
					1	24	22.46	0.176
					12	6	22.55	0.180
					25	0	22.36	0.172
				16-QAM	1	0	22.80	0.191
					1	**24**	**23.25**	**0.211**
					12	6	22.54	0.179
					25	0	23.05	0.202
		23790	710	QPSK	1	0	22.24	0.167
					1	24	22.00	0.158
					12	6	22.43	0.175
					25	0	22.36	0.172
				16-QAM	1	0	22.73	0.187
					1	24	22.90	0.195
					12	6	22.47	0.177
					25	0	22.73	0.1877
		23825	713.5	QPSK	1	0	21.70	0.148
					1	24	21.62	0.145
					12	6	22.19	0.166
					25	0	22.28	0.169
				16-QAM	1	0	22.34	0.171
					1	24	22.06	0.161
					12	6	22.08	0.161
					25	0	22.33	0.171

Mode	Band Width	Channel	Frequency (MHz)	Modulation	RB Configuration		Average Power (dBm)	Average Power (Watts)
					RB Size	RB Offset		
LTE Band 17	10MHz	23780	709	QPSK	1	0	22.60	0.182
					1	49	22.59	0.182
					25	13	22.17	0.165
					50	0	22.31	0.170
				16-QAM	1	0	22.81	0.191
					1	49	22.87	0.194
					25	13	22.67	0.185
					50	0	22.19	0.166
		23790	710	QPSK	**1**	**0**	**22.62**	**0.183**
					1	49	22.40	0.174
					25	13	22.18	0.165
					50	0	22.17	0.165
				16-QAM	1	0	22.99	0.199
					1	49	22.74	0.188
					25	**13**	**23.03**	**0.201**
					50	0	22.05	0.160
		23800	711	QPSK	1	0	22.42	0.175
					1	49	21.73	0.149
					25	13	21.97	0.157
					50	0	21.86	0.153
				16-QAM	1	0	23.02	0.200
					1	49	22.30	0.170
					25	13	22.73	0.187
					50	0	21.77	0.150

Mode	Band Width	Channel	Frequency (MHz)	Modulation	RB Configuration		Average Power (dBm)	Average Power (Watts)
					RB Size	RB Offset		
LTE Band 12	1.4MHz	23017	699.7	QPSK	**1**	**0**	**22.67**	**0.185**
					1	5	22.37	0.173
					3	2	22.25	0.168
					6	0	22.23	0.167
				16-QAM	**1**	**0**	**22.90**	**0.195**
					1	5	22.67	0.185
					3	2	22.28	0.1695
					6	0	22.47	0.177
		23095	707.5	QPSK	1	0	22.32	0.171
					1	5	22.32	0.171
					3	2	22.59	0.182
					6	0	22.41	0.174
				16-QAM	1	0	22.80	0.191
					1	5	22.73	0.187
					3	2	22.63	0.183
					6	0	22.64	0.184
		23173	715.3	QPSK	1	0	22.22	0.167
					1	5	21.95	0.157
					3	2	22.14	0.164
					6	0	22.16	0.164
				16-QAM	1	0	22.36	0.172
					1	5	22.50	0.178
					3	2	22.26	0.168
					6	0	22.24	0.167

Mode	Band Width	Channel	Frequency (MHz)	Modulation	RB Configuration		Average Power (dBm)	Average Power (Watts)
					RB Size	RB Offset		
LTE Band 12	3MHz	23025	700.5	QPSK	**1**	**0**	**22.61**	**0.182**
					1	14	22.52	0.179
					8	4	22.36	0.172
					15	0	22.00	0.158
				16-QAM	1	0	22.36	0.172
					1	14	22.42	0.175
					8	4	22.10	0.162
					15	0	21.96	0.157
		23095	707.5	QPSK	1	0	22.52	0.179
					1	14	22.27	0.169
					8	4	22.43	0.175
					15	0	22.52	0.179
				16-QAM	1	0	23.00	0.200
					1	**14**	**23.02**	**0.200**
					8	4	22.66	0.185
					15	0	22.29	0.169
		23165	714.5	QPSK	1	0	22.11	0.163
					1	14	21.95	0.157
					8	4	22.27	0.169
					15	0	22.13	0.163
				16-QAM	1	0	22.58	0.181
					1	14	22.61	0.182
					8	4	22.31	0.170
					15	0	22.00	0.158

Mode	Band Width	Channel	Frequency (MHz)	Modulation	RB Configuration		Average Power (dBm)	Average Power (Watts)
					RB Size	RB Offset		
LTE Band 12	5MHz	23034	701.4	QPSK	1	0	22.41	0.174
					1	24	22.90	0.195
					12	6	22.27	0.169
					25	0	22.40	0.174
				16-QAM	1	0	23.16	0.207
					1	24	23.11	0.205
					12	6	22.22	0.167
					25	0	22.43	0.175
		23095	707.5	QPSK	1	0	22.55	0.180
					1	**24**	**23.03**	**0.201**
					12	6	22.53	0.179
					25	0	22.47	0.177
				16-QAM	1	0	23.16	0.207
					1	24	23.01	0.200
					12	6	22.51	0.178
					25	**0**	**23.51**	**0.224**
		23156	713.6	QPSK	1	0	21.80	0.151
					1	24	22.09	0.162
					12	6	22.06	0.161
					25	0	22.08	0.161
				16-QAM	1	0	22.75	0.188
					1	24	22.53	0.179
					12	6	22.18	0.165
					25	0	22.25	0.168

Mode	Band Width	Channel	Frequency (MHz)	Modulation	RB Configuration		Average Power (dBm)	Average Power (Watts)
					RB Size	RB Offset		
LTE Band 12	10MHz	23057	703.7	QPSK	1	0	22.66	0.185
					1	49	22.36	0.172
					25	13	22.43	0.175
					50	**0**	**22.78**	**0.190**
				16-QAM	1	0	23.00	0.200
					1	**49**	**23.05**	**0.202**
					25	13	22.86	0.193
					50	0	22.58	0.181
		23095	707.5	QPSK	1	0	22.75	0.188
					1	49	22.38	0.173
					25	13	22.15	0.164
					50	0	22.10	0.162
				16-QAM	1	0	22.98	0.199
					1	49	22.95	0.197
					25	13	22.54	0.179
					50	0	22.14	0.164
		23133	711.3	QPSK	1	0	22.73	0.187
					1	49	22.34	0.171
					25	13	22.12	0.163
					50	0	21.95	0.157
				16-QAM	1	0	22.93	0.196
					1	49	22.41	0.174
					25	13	23.00	0.200
					50	0	21.87	0.154

Mode	Band Width	Channel	Frequency (MHz)	Modulation	RB Configuration		Average Power (dBm)	Average Power (Watts)
					RB Size	RB Offset		
LTE Band 4	1.4MHz	19957	1710.7	QPSK	1	0	22.01	0.159
					1	5	21.99	0.158
					3	2	21.86	0.153
					6	0	20.72	0.118
				16-QAM	1	0	21.37	0.137
					1	5	21.35	0.136
					3	2	21.12	0.129
					6	0	20.01	0.100
		20175	1732.5	QPSK	1	0	21.91	0.155
					1	5	21.85	0.153
					3	2	21.78	0.151
					6	0	20.77	0.119
				16-QAM	1	0	21.17	0.131
					1	5	21.25	0.133
					3	2	21.04	0.127
					6	0	20.02	0.100
		20393	1754.3	QPSK	**1**	**0**	**22.06**	**0.161**
					1	5	22.03	0.160
					3	2	21.94	0.156
					6	0	21.02	0.126
				16-QAM	1	0	21.44	0.139
					1	5	21.47	0.140
					3	**2**	**21.50**	**0.141**
					6	0	20.17	0.104

Mode	Band Width	Channel	Frequency (MHz)	Modulation	RB Configuration		Average Power (dBm)	Average Power (Watts)
					RB Size	RB Offset		
LTE Band 4	3MHz	19965	1711.5	QPSK	1	0	21.96	0.157
					1	14	21.98	0.158
					8	4	20.73	0.118
					15	0	20.75	0.119
				16-QAM	1	0	21.20	0.132
					1	**14**	**21.34**	**0.136**
					8	4	19.93	0.098
					15	0	19.81	0.096
		20175	1732.5	QPSK	1	0	21.85	0.153
					1	14	21.90	0.155
					8	4	20.71	0.118
					15	0	20.66	0.116
				16-QAM	1	0	21.19	0.132
					1	14	21.23	0.133
					8	4	19.93	0.098
					15	0	19.68	0.093
		20385	1753.5	QPSK	1	0	22.01	0.159
					1	**14**	**22.02**	**0.159**
					8	4	20.96	0.125
					15	0	20.87	0.122
				16-QAM	1	0	21.18	0.131
					1	14	21.01	0.126
					8	4	20.15	0.104
					15	0	20.00	0.100

Mode	Band Width	Channel	Frequency (MHz)	Modulation	RB Configuration		Average Power (dBm)	Average Power (Watts)
					RB Size	RB Offset		
LTE Band 4	5MHz	19975	1712.5	QPSK	1	0	21.94	0.156
					1	24	21.87	0.154
					12	6	20.64	0.116
					25	0	20.69	0.117
				16-QAM	1	0	21.22	0.132
					1	24	21.12	0.129
					12	6	19.75	0.094
					25	0	20.17	0.104
		20175	1732.5	QPSK	1	0	21.85	0.153
					1	24	21.91	0.155
					12	6	20.70	0.117
					25	0	20.68	0.117
				16-QAM	1	0	21.12	0.129
					1	24	21.20	0.132
					12	6	19.70	0.093
					25	0	20.13	0.103
		20375	1752.5	QPSK	1	0	21.98	0.158
					1	**24**	**22.04**	**0.160**
					12	6	20.77	0.119
					25	0	20.86	0.122
				16-QAM	**1**	**0**	**21.34**	**0.136**
					1	24	21.31	0.135
					12	6	19.93	0.098
					25	0	20.37	0.109

Mode	Band Width	Channel	Frequency (MHz)	Modulation	RB Configuration		Average Power (dBm)	Average Power (Watts)
					RB Size	RB Offset		
LTE Band 4	10MHz	20000	1715	QPSK	1	0	22.04	0.160
					1	49	21.81	0.152
					25	13	20.94	0.124
					50	0	20.88	0.122
				16-QAM	1	0	21.32	0.136
					1	49	21.30	0.135
					25	13	20.15	0.104
					50	0	20.04	0.101
		20175	1732.5	QPSK	1	0	21.86	0.153
					1	49	21.81	0.152
					25	13	20.67	0.117
					50	0	20.75	0.119
				16-QAM	1	0	21.20	0.132
					1	49	21.21	0.132
					25	13	20.18	0.104
					50	0	19.90	0.098
		20350	1750	QPSK	1	0	22.03	0.160
					1	**49**	**22.13**	**0.163**
					25	13	20.95	0.124
					50	0	20.91	0.123
				16-QAM	**1**	**0**	**21.65**	**0.146**
					1	49	21.52	0.142
					25	13	20.24	0.106
					50	0	20.06	0.101

Mode	Band Width	Channel	Frequency (MHz)	Modulation	RB Configuration		Average Power (dBm)	Average Power (Watts)
					RB Size	RB Offset		
LTE Band 4	15MHz	20025	1717.5	QPSK	1	0	22.06	0.161
					1	74	21.74	0.149
					36	18	20.80	0.120
					75	0	20.81	0.121
				16-QAM	1	0	21.44	0.139
					1	74	21.09	0.129
					36	18	19.92	0.098
					75	0	19.84	0.096
		20175	1732.5	QPSK	1	0	21.94	0.156
					1	74	21.95	0.157
					36	18	20.86	0.122
					75	0	20.91	0.123
				16-QAM	1	0	21.22	0.132
					1	74	21.44	0.139
					36	18	19.96	0.099
					75	0	19.86	0.097
		20325	1747.5	QPSK	1	0	22.05	0.160
					1	**74**	**22.14**	**0.164**
					36	18	21.02	0.126
					75	0	21.10	0.129
				16-QAM	1	0	21.37	0.137
					1	**74**	**21.48**	**0.141**
					36	18	20.24	0.106
					75	0	20.13	0.103

Mode	Band Width	Channel	Frequency (MHz)	Modulation	RB Configuration		Average Power (dBm)	Average Power (Watts)
					RB Size	RB Offset		
LTE Band 4	20MHz	20050	1720	QPSK	1	0	22.07	0.161
					1	99	21.73	0.149
					50	25	20.81	0.121
					100	0	20.94	0.124
				16-QAM	1	0	21.35	0.136
					1	99	21.12	0.129
					50	25	20.02	0.100
					100	0	19.95	0.099
		20175	1732.5	QPSK	1	0	21.81	0.152
					1	99	22.06	0.161
					50	25	20.77	0.119
					100	0	20.82	0.121
				16-QAM	1	0	21.25	0.133
					1	99	21.32	0.136
					50	25	20.07	0.102
					100	0	19.98	0.100
		20300	1745	QPSK	1	0	21.99	0.158
					1	**99**	**22.15**	**0.164**
					50	25	21.08	0.128
					100	0	21.14	0.130
				16-QAM	**1**	**0**	**21.51**	**0.142**
					1	99	21.33	0.136
					50	25	20.19	0.104
					100	0	20.26	0.106

3.2 Peak-to-Average Ratio

3.2.1 Description of the PAR Measurement

Power Complementary Cumulative Distribution Function (CCDF) curves provide a means for characterizing the power peaks of a digitally modulated signal on a statistical basis. A CCDF curve depicts the probability of the peak signal amplitude exceeding the average power level. Most contemporary measurement instrumentation include the capability to produce CCDF curves for an input signal provided that the instrument's resolution bandwidth can be set wide enough to accommodate the entire input signal bandwidth. The following guidelines are offered for performing a CCDF measurement.

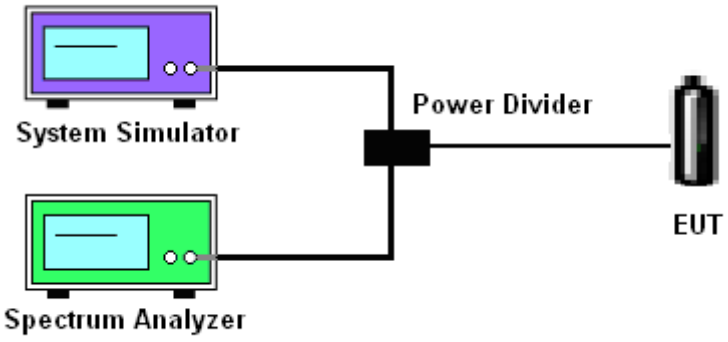
3.2.2 Measuring Instruments

See list of measuring instruments of this test report.

3.2.3 Test Procedures

1. The EUT was connected to Spectrum Analyzer and Base Station via power divider.
2. The CCDF (Complementary Cumulative Distribution Function) of the middle channel for the highest RF powers were measured.

3.2.4 Test Setup



3.2.5 Test Result of Peak-to-Average Ratio

Band	Band Width	Channel	Frequency (MHz)	Modulation	PAR (dB)
LTE Band 17	5MHz	23790	710	QPSK	5.88
				16-QAM	6.60
	10MHz	23790	710	QPSK	6.00
				16-QAM	6.72
LTE Band 12	1.4MHz	23095	707.5	QPSK	6.00
				16-QAM	6.56
	3MHz	23095	707.5	QPSK	5.80
				16-QAM	6.88
	5MHz	23095	707.5	QPSK	5.96
				16-QAM	6.44
	10MHz	23095	707.5	QPSK	5.52
				16-QAM	6.40
LTE Band 4	1.4MHz	20175	1732.5	QPSK	5.60
				16-QAM	6.32
	3MHz	20175	1732.5	QPSK	5.52
				16-QAM	6.32
	5MHz	20175	1732.5	QPSK	5.48
				16-QAM	6.12
	10MHz	20175	1732.5	QPSK	5.40
				16-QAM	6.32
	15MHz	20175	1732.5	QPSK	5.76
				16-QAM	6.76
	20MHz	20175	1732.5	QPSK	6.48
				16-QAM	7.16

3.3 Equivalent Isotropic Radiated Power Measurement

3.3.1 Description of the ERP/EIRP Measurement

Equivalent isotropic radiated power output measurements by substitution method according to ANSI / TIA / EIA-603-C-2004. Mobile and portable (hand-held) stations operating in each channel are limited to average ERP of 3 watt with band 12 and ERP of 3 watt with band 17 and EIRP of 1 watts with band 4.

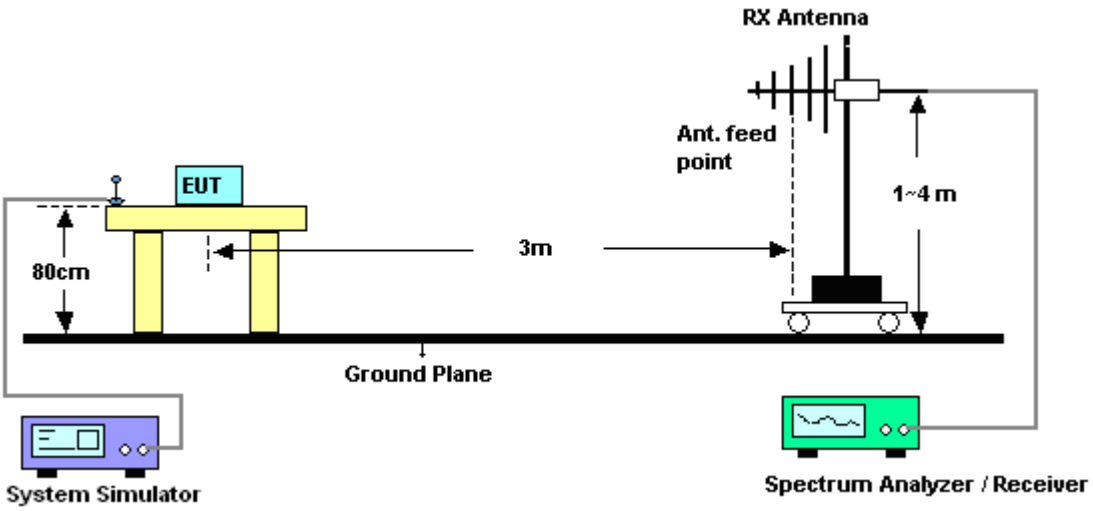
3.3.2 Measuring Instruments

See list of measuring instruments of this test report.

3.3.3 Test Procedures

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

3.3.4 Test Setup



3.3.5 Test Result of ERP/EIRP

LTE Band 17 Radiated Power ERP for BW 5MHz (QPSK)				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (W)**
706.50	-5.69	30.84	23.00	0.20
710.00	-10.31	30.86	18.40	0.07
713.50	-9.66	30.81	19.00	0.08
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (W)**
706.50	-10.49	34.59	21.95	0.16
710.00	-16.37	34.03	15.51	0.04
713.50	-15.37	33.68	16.16	0.04

LTE Band 17 Radiated Power ERP for BW 5MHz (16QAM)				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (W)**
706.50	-9.50	30.84	19.19	0.08
710.00	-9.48	30.86	19.23	0.08
713.50	-9.86	30.81	18.80	0.08
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (W)**
706.50	-15.44	34.59	17.00	0.05
710.00	-15.24	34.03	16.64	0.05
713.50	-15.73	33.68	15.80	0.04

LTE Band 17 Radiated Power ERP for BW 10MHz (QPSK)				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (W)**
709.00	-5.06	30.77	23.56	0.23
710.00	-5.10	30.86	23.61	0.23
711.00	-6.85	30.82	21.82	0.15
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (W)**
709.00	-11.73	34.16	20.28	0.11
710.00	-11.63	34.03	20.25	0.11
711.00	-12.63	33.94	19.16	0.08

LTE Band 17 Radiated Power ERP for BW 10MHz (16QAM)				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (W)**
709.00	-8.76	30.77	19.86	0.10
710.00	-10.07	30.86	18.64	0.07
711.00	-7.14	30.82	21.53	0.14
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (W)**
709.00	-14.50	34.16	17.51	0.06
710.00	-16.81	34.03	15.07	0.03
711.00	-13.16	33.94	18.63	0.07

LTE Band 12 Radiated Power ERP for BW 1.4MHz (QPSK)				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (W)**
699.70	-7.82	32.74	22.77	0.19
707.50	-7.05	32.45	23.25	0.21
715.30	-8.57	32.03	21.31	0.14
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (W)**
699.70	-13.81	36.16	20.20	0.10
707.50	-13.22	36.04	20.67	0.12
715.30	-14.25	35.08	18.68	0.07

LTE Band 12 Radiated Power ERP for BW 1.4MHz (16QAM)				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (W)**
699.70	-7.96	32.74	22.63	0.18
707.50	-7.23	32.45	23.07	0.20
715.30	-9.60	32.03	20.28	0.11
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (W)**
699.70	-14.66	36.16	19.35	0.09
707.50	-13.63	36.04	20.26	0.11
715.30	-15.21	35.08	17.72	0.06

LTE Band 12 Radiated Power ERP for BW 3MHz (QPSK)				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (W)**
700.50	-7.82	32.8	22.83	0.19
707.50	-6.53	32.45	23.77	0.24
714.50	-8.72	32.04	21.17	0.13
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (W)**
700.50	-13.40	35.94	20.39	0.11
707.50	-12.62	36.04	21.27	0.13
714.50	-14.77	35.24	18.32	0.07

LTE Band 12 Radiated Power ERP for BW 3MHz (16QAM)				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (W)**
700.50	-8.84	32.8	21.81	0.15
707.50	-8.36	32.45	21.94	0.16
714.50	-9.80	32.04	20.09	0.10
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (W)**
700.50	-14.03	35.94	19.76	0.09
707.50	-14.27	36.04	19.62	0.09
714.50	-15.19	35.24	17.90	0.06

LTE Band 12 Radiated Power ERP for BW 5MHz (QPSK)				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (W)**
701.50	-6.33	32.83	24.35	0.27
707.50	-7.97	32.45	22.33	0.17
713.50	-8.82	32.07	21.10	0.13
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (W)**
701.50	-11.89	35.94	21.90	0.15
707.50	-14.12	36.04	19.77	0.09
713.50	-14.99	35.15	18.01	0.06

LTE Band 12 Radiated Power ERP for BW 5MHz (16QAM)				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (W)**
701.50	-7.89	32.83	22.79	0.19
707.50	-8.70	32.45	21.60	0.14
713.50	-8.90	32.07	21.02	0.13
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (W)**
701.50	-14.55	35.94	19.24	0.08
707.50	-15.31	36.04	18.58	0.07
713.50	-15.13	35.15	17.87	0.06

LTE Band 12 Radiated Power ERP for BW 10MHz (QPSK)				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (W)**
704.00	-7.21	32.82	23.46	0.22
707.50	-4.87	32.45	25.43	0.35
711.00	-6.85	32.37	23.37	0.22
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (W)**
704.00	-13.92	35.87	19.80	0.10
707.50	-12.01	36.04	21.88	0.15
711.00	-12.60	35.39	20.64	0.12

LTE Band 12 Radiated Power ERP for BW 10MHz (16QAM)				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (W)**
704.00	-7.34	32.82	23.33	0.22
707.50	-5.69	32.45	24.61	0.29
711.00	-9.48	32.37	20.74	0.12
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (W)**
704.00	-14.11	35.87	19.61	0.09
707.50	-12.12	36.04	21.77	0.15
711.00	-16.01	35.39	17.23	0.05

LTE Band 4 Radiated Power EIRP for BW 1.4MHz (QPSK)				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
1710.70	-19.19	41.65	20.31	0.11
1732.50	-19.22	42.95	21.58	0.14
1754.30	-19.48	42.28	20.65	0.12
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
1710.70	-22.32	43.57	19.10	0.08
1732.50	-24.21	45.94	19.58	0.09
1754.30	-24.33	45.2	18.72	0.07

LTE Band 4 Radiated Power EIRP for BW 1.4MHz (16QAM)				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
1710.70	-19.42	41.65	20.08	0.10
1732.50	-19.89	42.95	20.91	0.12
1754.30	-20.35	42.28	19.78	0.10
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
1710.70	-22.58	43.57	18.84	0.08
1732.50	-24.82	45.94	18.97	0.08
1754.30	-25.00	45.2	18.05	0.06

LTE Band 4 Radiated Power EIRP for BW 3MHz (QPSK)				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
1711.50	-19.42	41.58	20.01	0.10
1732.50	-19.19	42.95	21.61	0.14
1753.50	-19.60	42.12	20.37	0.11
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
1711.50	-22.16	43.49	19.18	0.08
1732.50	-24.07	45.94	19.72	0.09
1753.50	-24.04	44.94	18.75	0.07

LTE Band 4 Radiated Power EIRP for BW 3MHz (16QAM)				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
1711.50	-20.47	41.58	18.96	0.08
1732.50	-20.27	42.95	20.53	0.11
1753.50	-20.62	42.12	19.35	0.09
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
1711.50	-23.14	43.49	18.20	0.07
1732.50	-25.09	45.94	18.70	0.07
1753.50	-25.38	44.94	17.41	0.06

LTE Band 4 Radiated Power EIRP for BW 5MHz (QPSK)				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
1712.50	-19.53	41.62	19.94	0.10
1732.50	-19.58	42.06	20.33	0.11
1752.50	-20.19	41.73	19.39	0.09
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
1712.50	-22.51	43.45	18.79	0.08
1732.50	-24.30	45.68	19.23	0.08
1752.50	-24.74	44.88	17.99	0.06

LTE Band 4 Radiated Power EIRP for BW 5MHz (16QAM)				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
1712.50	-20.04	41.62	19.43	0.09
1732.50	-20.50	42.06	19.41	0.09
1752.50	-20.36	41.73	19.22	0.08
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
1712.50	-22.88	43.45	18.42	0.07
1732.50	-25.24	45.68	18.29	0.07
1752.50	-24.88	44.88	17.85	0.06

LTE Band 4 Radiated Power EIRP for BW 10MHz (QPSK)				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
1715.00	-19.54	42.12	20.43	0.11
1732.50	-19.78	42.06	20.13	0.10
1750.00	-19.64	41.57	19.78	0.10
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
1715.00	-22.39	44.81	20.27	0.11
1732.50	-24.34	45.68	19.19	0.08
1750.00	-24.27	44.74	18.32	0.07

LTE Band 4 Radiated Power EIRP for BW 10MHz (16QAM)				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
1715.00	-20.07	42.12	19.90	0.10
1732.50	-20.52	42.06	19.39	0.09
1750.00	-19.92	41.57	19.50	0.09
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
1715.00	-22.94	44.81	19.72	0.09
1732.50	-24.66	45.68	18.87	0.08
1750.00	-24.60	44.74	17.99	0.06

LTE Band 4 Radiated Power EIRP for BW 15MHz (QPSK)				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
1717.50	-20.05	41.79	19.59	0.09
1732.50	-21.46	42.06	18.45	0.07
1747.50	-20.58	41.31	18.58	0.07
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
1717.50	-24.97	44.99	17.87	0.06
1732.50	-26.78	45.68	16.75	0.05
1747.50	-25.45	44.95	17.35	0.05

LTE Band 4 Radiated Power EIRP for BW 15MHz (16QAM)				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
1717.50	-20.24	41.79	19.40	0.09
1732.50	-21.69	42.06	18.22	0.07
1747.50	-21.14	41.31	18.02	0.06
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
1717.50	-25.57	44.99	17.27	0.05
1732.50	-27.07	45.68	16.46	0.04
1747.50	-27.89	44.95	14.91	0.03

LTE Band 4 Radiated Power EIRP for BW 20MHz (QPSK)				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
1720.00	-20.00	41.43	19.28	0.08
1732.50	-21.78	42.06	18.13	0.07
1745.00	-20.33	41.15	18.67	0.07
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
1720.00	-25.13	43.87	16.59	0.05
1732.50	-26.84	45.68	16.69	0.05
1745.00	-27.06	44.39	15.18	0.03

LTE Band 4 Radiated Power EIRP for BW 20MHz (16QAM)				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
1720.00	-20.10	41.43	19.18	0.08
1732.50	-21.98	42.06	17.93	0.06
1745.00	-21.04	41.15	17.96	0.06
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
1720.00	-25.42	43.87	16.30	0.04
1732.50	-27.83	45.68	15.70	0.04
1745.00	-27.26	44.39	14.98	0.03

3.4 26dB Bandwidth and Occupied Bandwidth Measurement

3.4.1 Description of Occupied Bandwidth Measurement

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

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

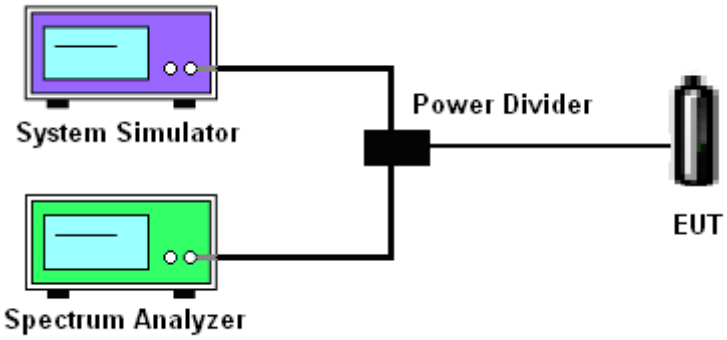
3.4.2 Measuring Instruments

See list of measuring instruments of this test report.

3.4.3 Test Procedures

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

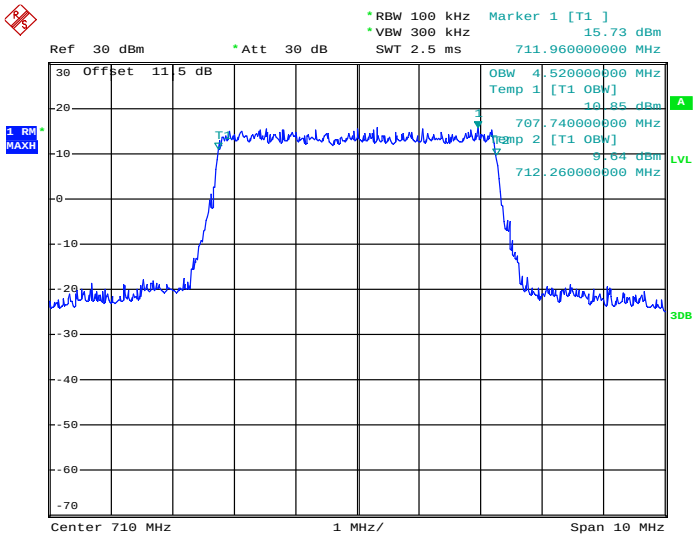
3.4.4 Test Setup



3.4.5 Test Result (Plots) of Occupied Bandwidth

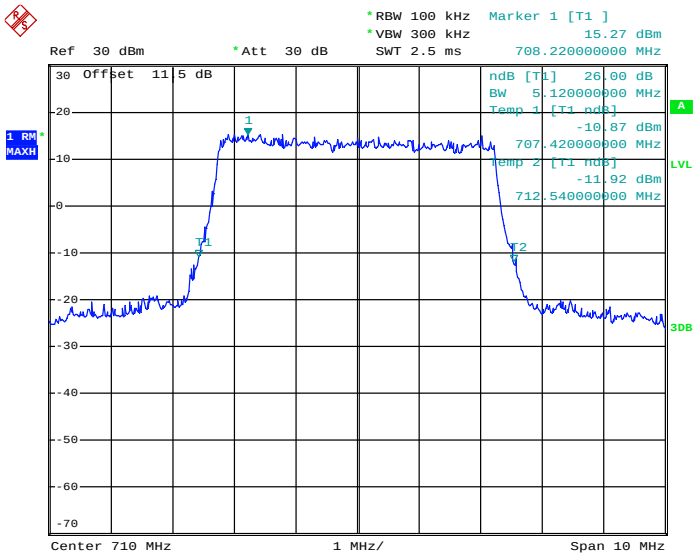
Band :	LTE Band 17	BW / Mod. :	5MHz / QPSK

99% Occupied Bandwidth Plot on Channel 23790



Date: 21.MAR.2012 02:39:37

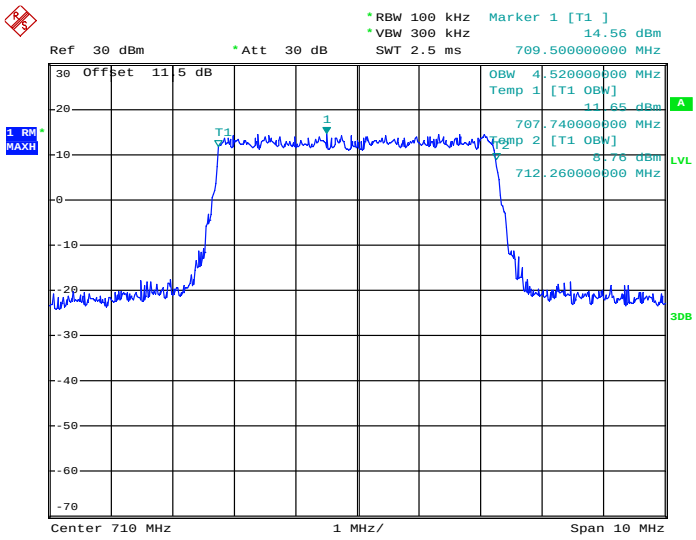
26dB Bandwidth Plot on Channel 23790



Date: 29.MAR.2012 01:37:09

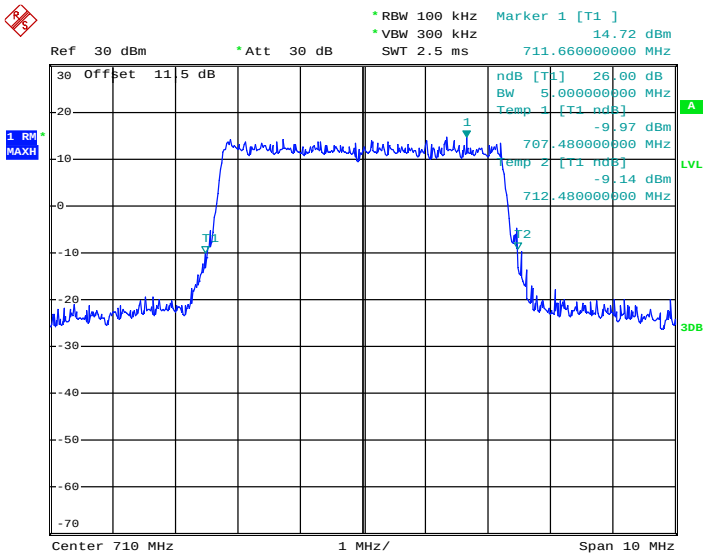
Band :	LTE Band 17	BW / Mod. :	5MHz / 16QAM

99% Occupied Bandwidth Plot on Channel 23790



Date: 21.MAR.2012 02:40:02

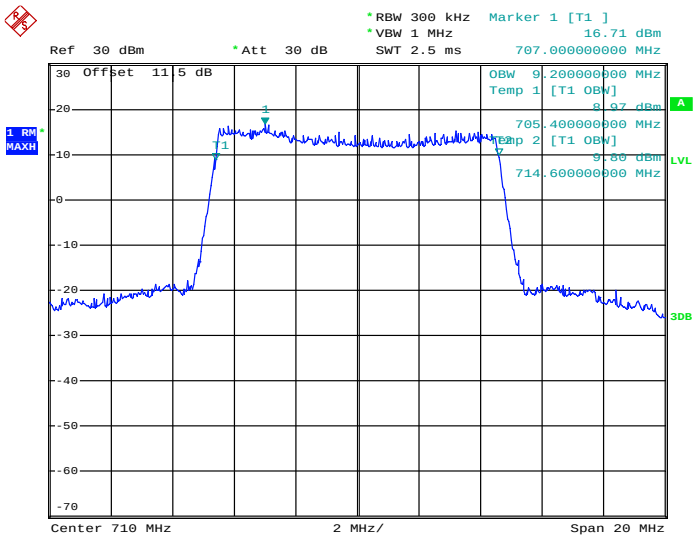
26dB Bandwidth Plot on Channel 23790



Date: 29.MAR.2012 01:37:26

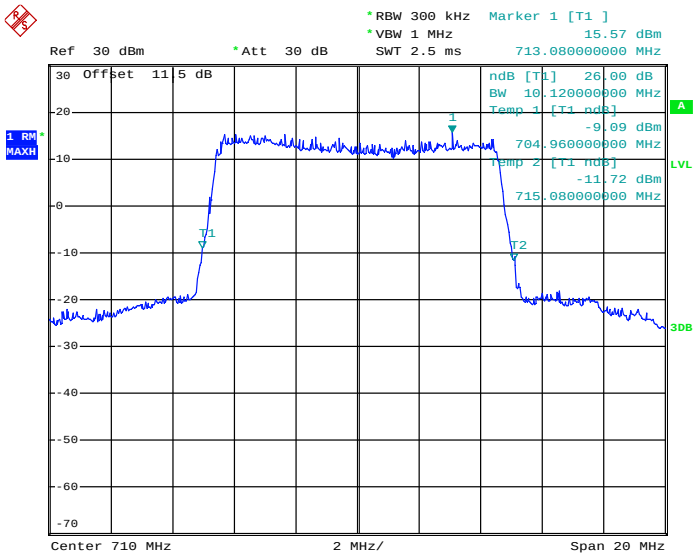
Band :	LTE Band 17	BW / Mod. :	10MHz / QPSK

99% Occupied Bandwidth Plot on Channel 23790



Date: 21.MAR.2012 02:44:07

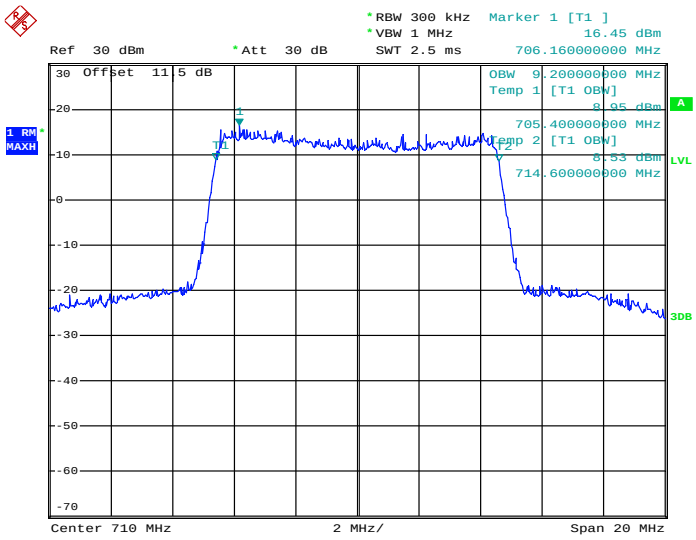
26dB Bandwidth Plot on Channel 23790



Date: 29.MAR.2012 01:38:17

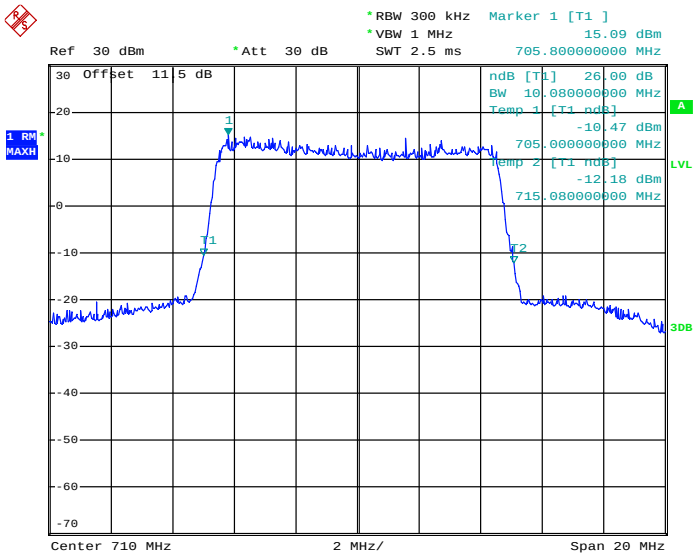
Band :	LTE Band 17	BW / Mod. :	10MHz / 16QAM

99% Occupied Bandwidth Plot on Channel 23790



Date: 21.MAR.2012 02:44:31

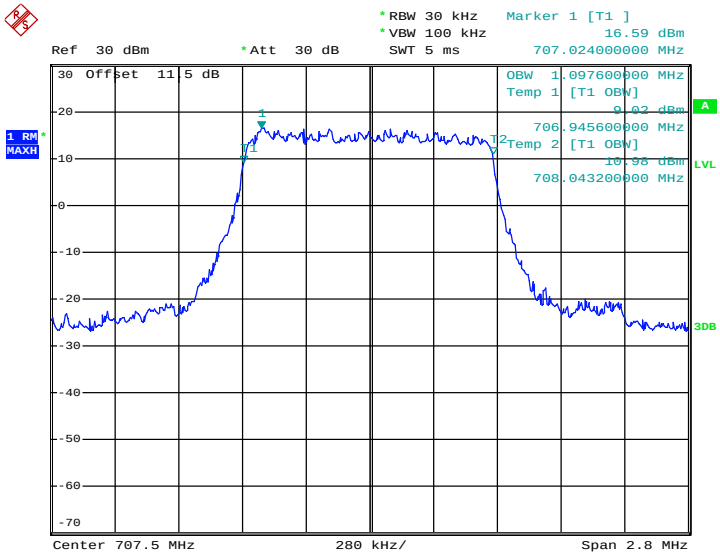
26dB Bandwidth Plot on Channel 23790



Date: 29.MAR.2012 01:38:49

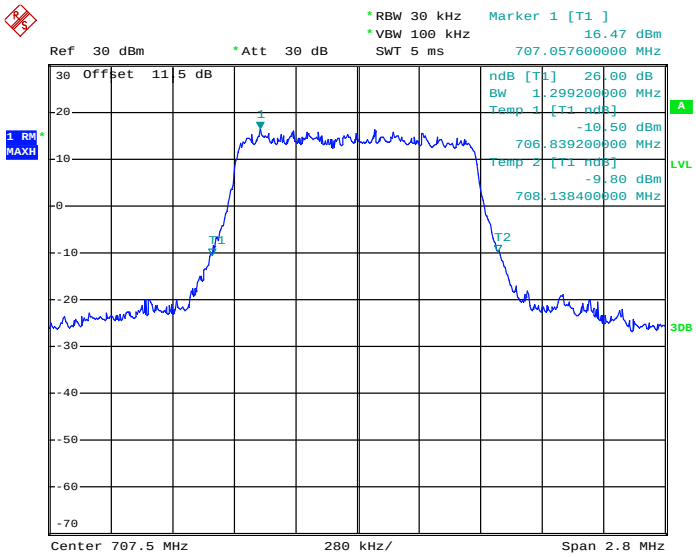
Band :	LTE Band 12	BW / Mod. :	1.4MHz / QPSK

99% Occupied Bandwidth Plot on Channel 23095



Date: 22.MAR.2012 02:39:14

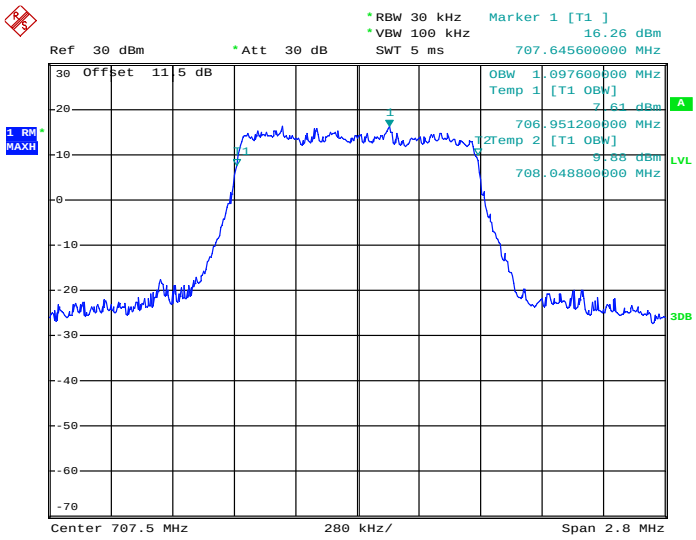
26dB Bandwidth Plot on Channel 23095



Date: 29.MAR.2012 01:32:05

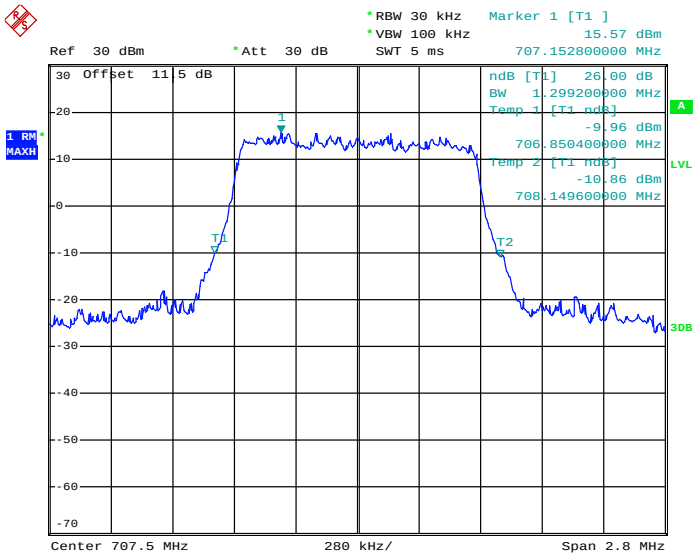
Band :	LTE Band 12	BW / Mod. :	1.4MHz / 16QAM

99% Occupied Bandwidth Plot on Channel 23095



Date: 22.MAR.2012 02:39:38

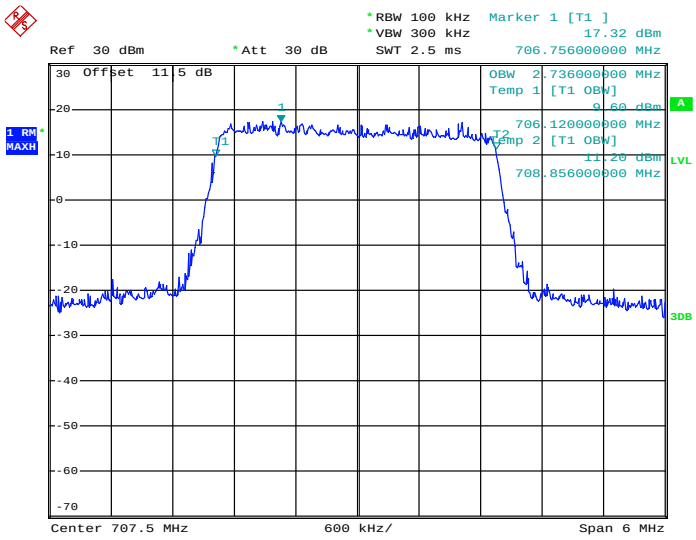
26dB Bandwidth Plot on Channel 23095



Date: 29.MAR.2012 01:32:30

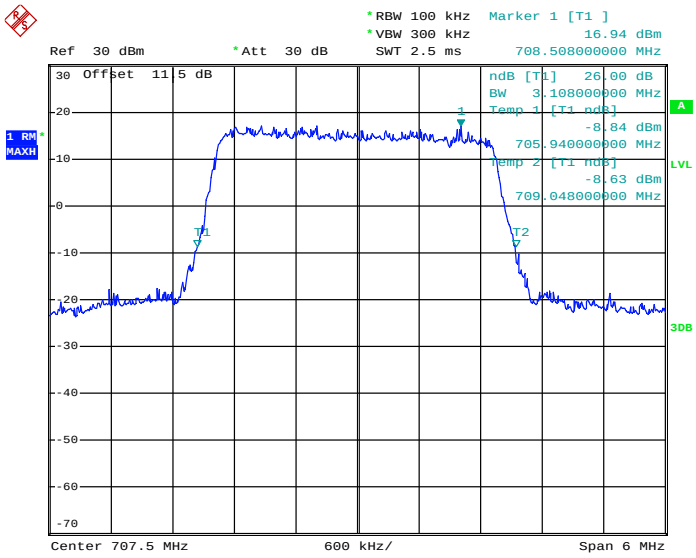
Band :	LTE Band 12	BW / Mod. :	3MHz / QPSK

99% Occupied Bandwidth Plot on Channel 23095



Date: 22.MAR.2012 02:35:09

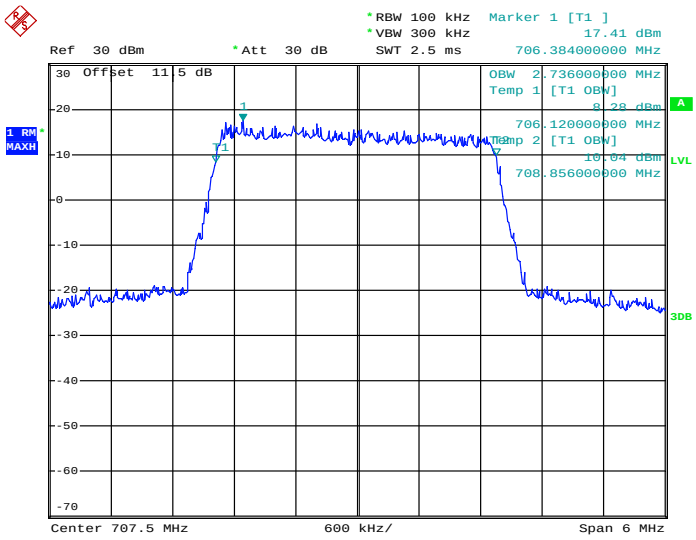
26dB Bandwidth Plot on Channel 23095



Date: 29.MAR.2012 01:30:40

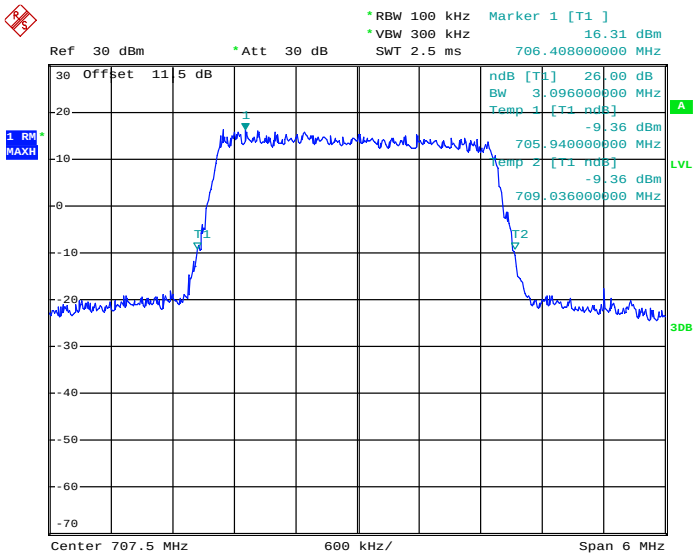
Band :	LTE Band 12	BW / Mod. :	3MHz / 16QAM

99% Occupied Bandwidth Plot on Channel 23095



Date: 22.MAR.2012 02:35:22

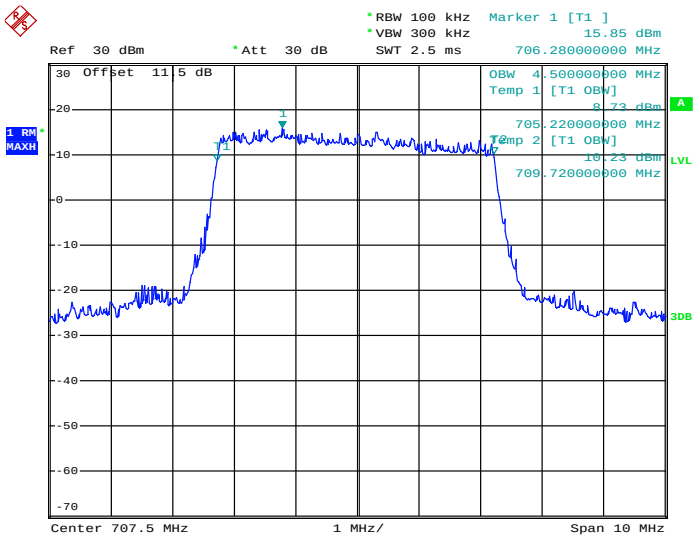
26dB Bandwidth Plot on Channel 23095



Date: 29.MAR.2012 01:31:03

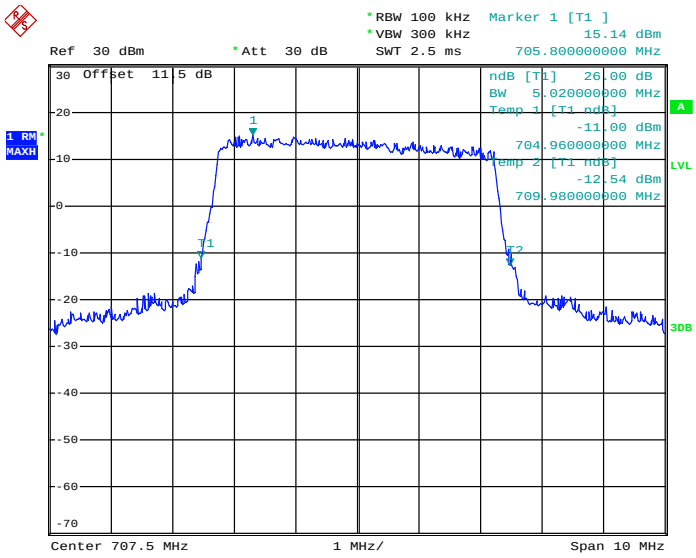
Band :	LTE Band 12	BW / Mod. :	5MHz / QPSK

99% Occupied Bandwidth Plot on Channel 23095



Date: 22.MAR.2012 02:28:58

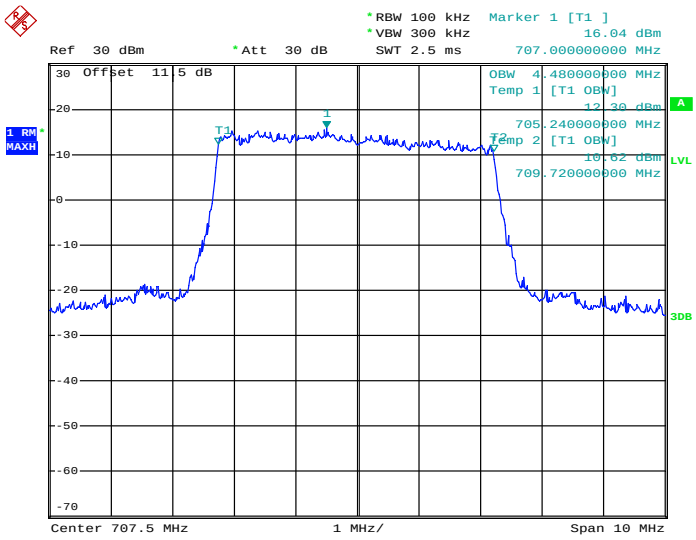
26dB Bandwidth Plot on Channel 23095



Date: 29.MAR.2012 01:33:32

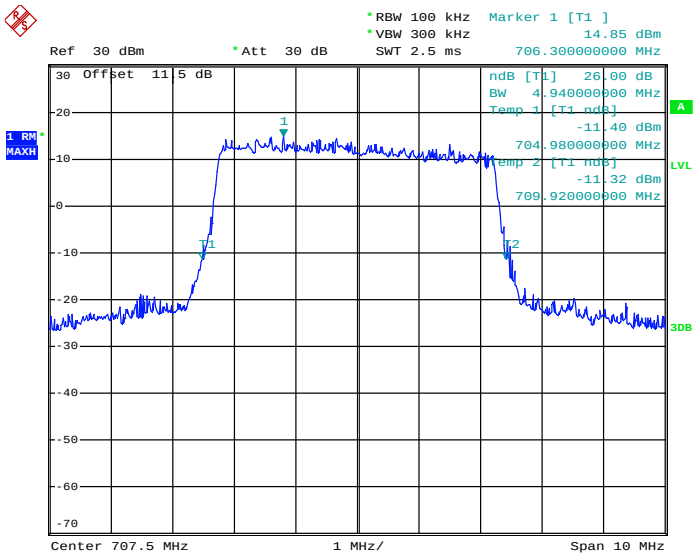
Band :	LTE Band 12	BW / Mod. :	5MHz / 16QAM

99% Occupied Bandwidth Plot on Channel 23095



Date: 22.MAR.2012 02:29:50

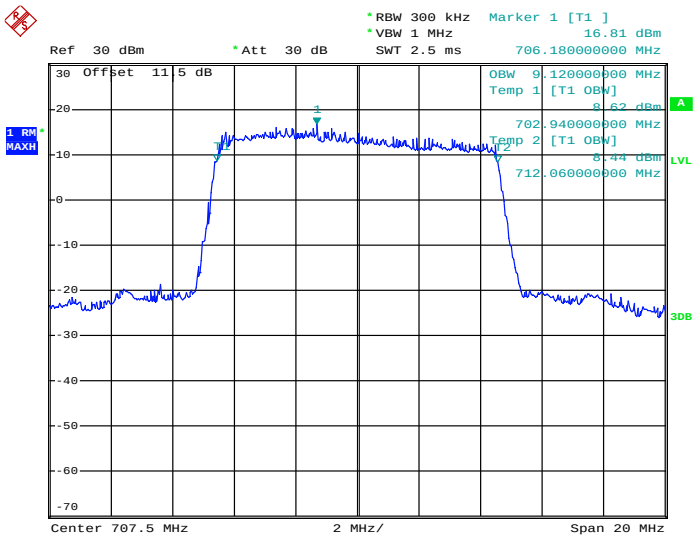
26dB Bandwidth Plot on Channel 23095



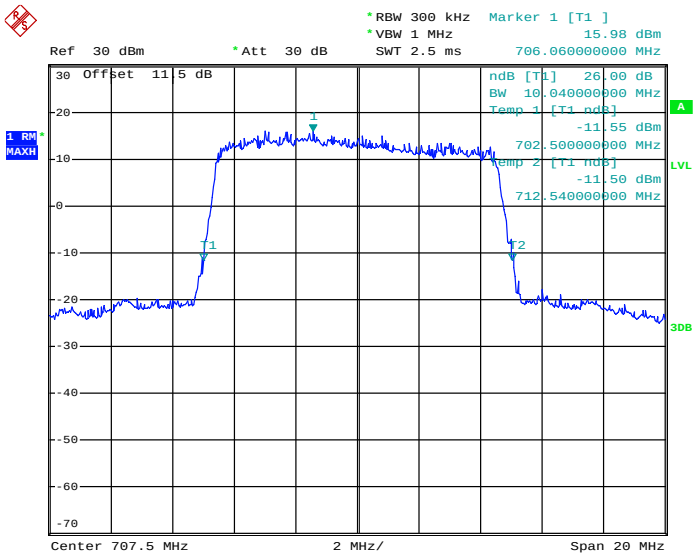
Date: 29.MAR.2012 01:33:51

Band :	LTE Band 12	BW / Mod. :	10MHz / QPSK

99% Occupied Bandwidth Plot on Channel 23095

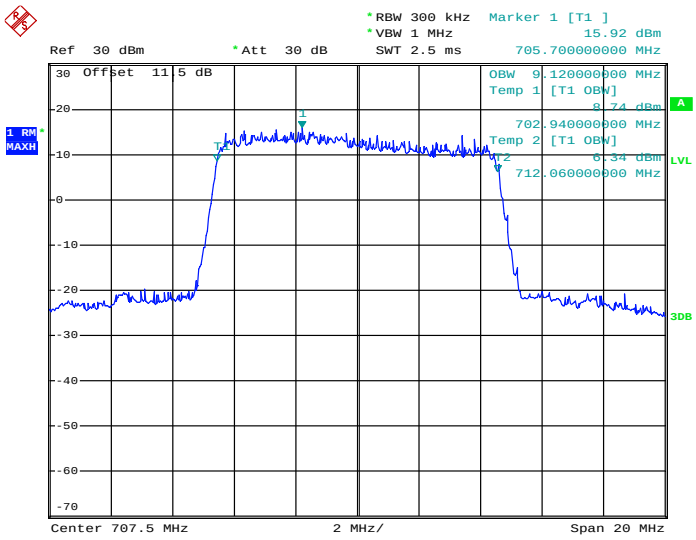


26dB Bandwidth Plot on Channel 23095



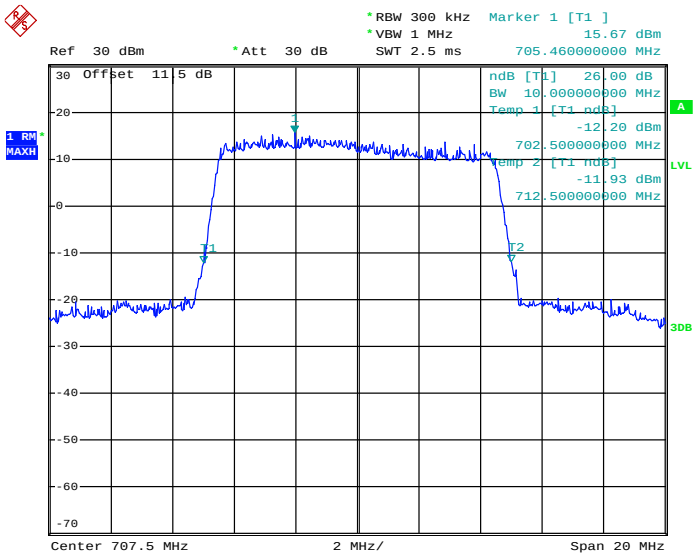
Band :	LTE Band 12	BW / Mod. :	10MHz / 16QAM

99% Occupied Bandwidth Plot on Channel 23095



Date: 22.MAR.2012 02:24:50

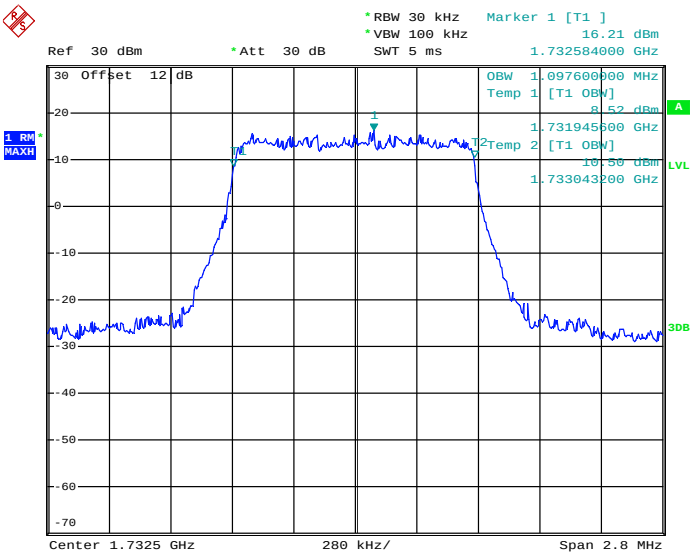
26dB Bandwidth Plot on Channel 23095



Date: 29.MAR.2012 01:35:28

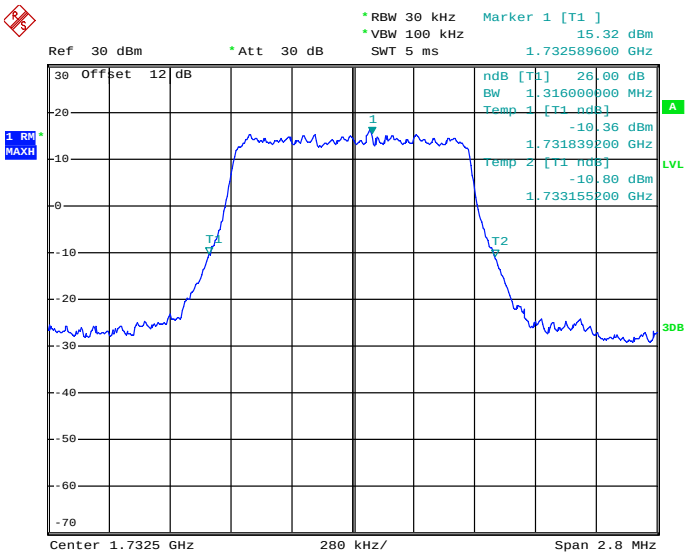
Band :	LTE Band 4	BW / Mod. :	1.4MHz / QPSK

99% Occupied Bandwidth Plot on Channel 20175



Date: 21.MAR.2012 17:52:28

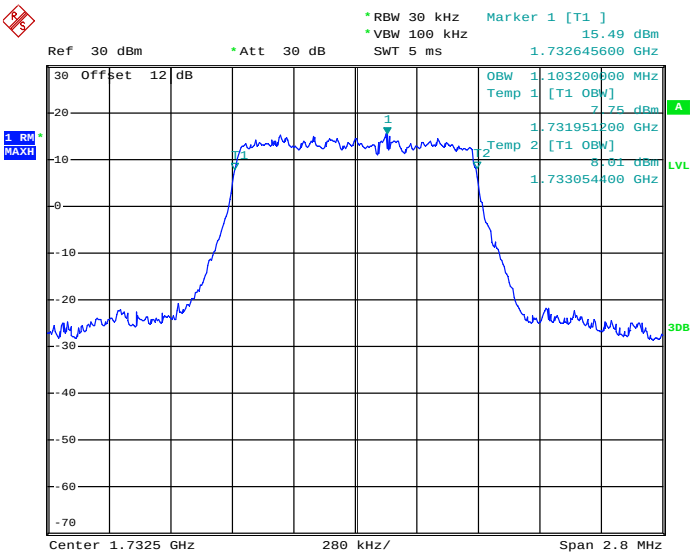
26dB Bandwidth Plot on Channel 20175



Date: 29.MAR.2012 01:14:57

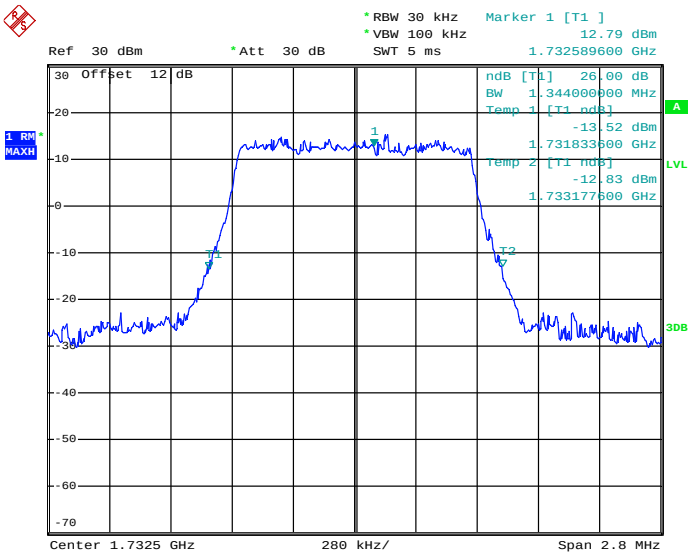
Band :	LTE Band 4	BW / Mod. :	1.4MHz / 16QAM

99% Occupied Bandwidth Plot on Channel 20175



Date: 21.MAR.2012 17:53:12

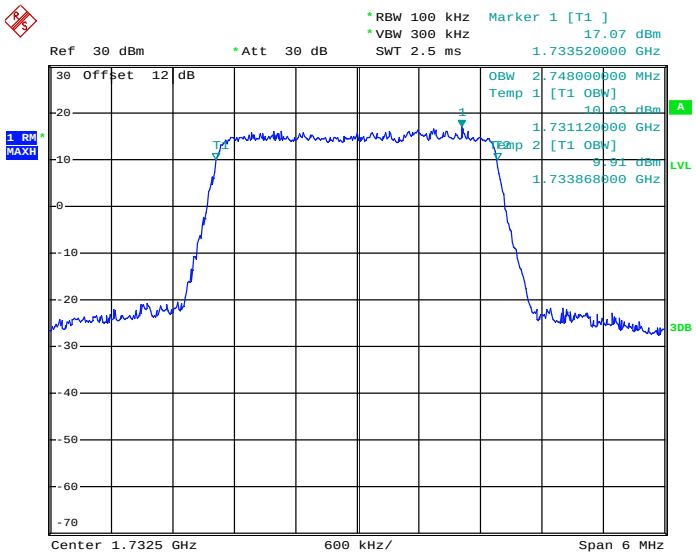
26dB Bandwidth Plot on Channel 20175



Date: 29.MAR.2012 01:15:22

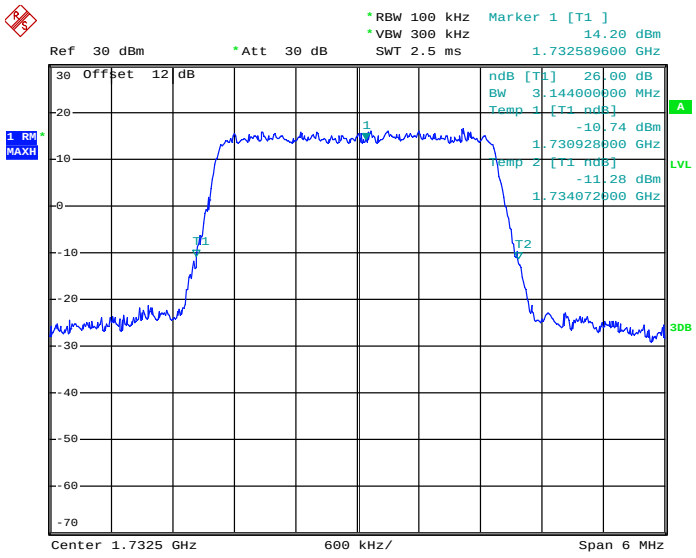
Band :	LTE Band 4	BW / Mod. :	3MHz / QPSK

99% Occupied Bandwidth Plot on Channel 20175



Date: 21.MAR.2012 17:59:54

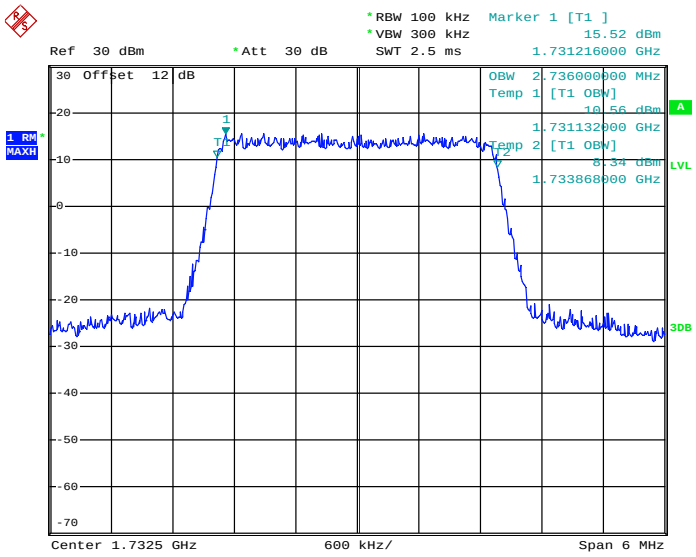
26dB Bandwidth Plot on Channel 20175



Date: 29.MAR.2012 01:16:58

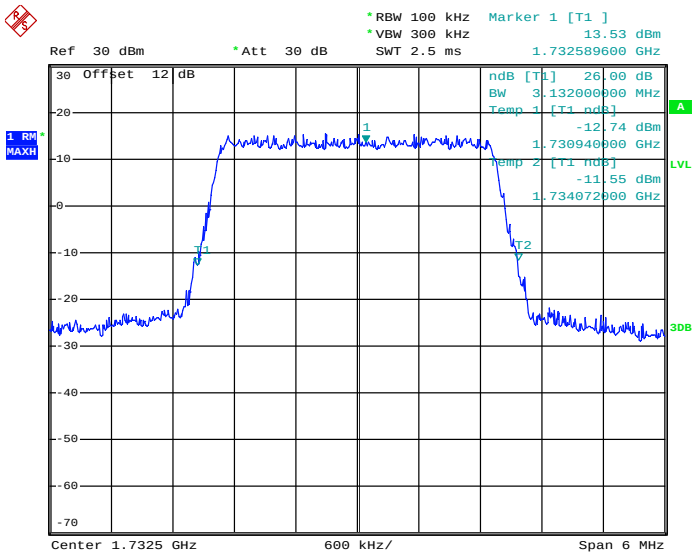
Band :	LTE Band 4	BW / Mod. :	3MHz / 16QAM

99% Occupied Bandwidth Plot on Channel 20175



Date: 21.MAR.2012 18:00:16

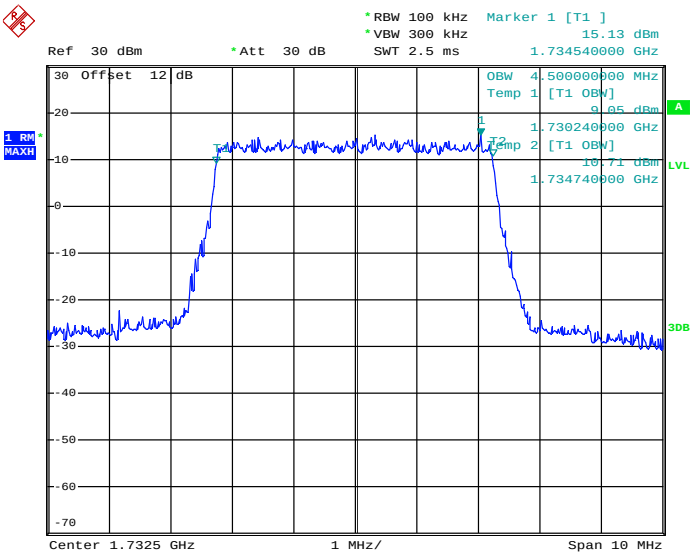
26dB Bandwidth Plot on Channel 20175



Date: 29.MAR.2012 01:17:21

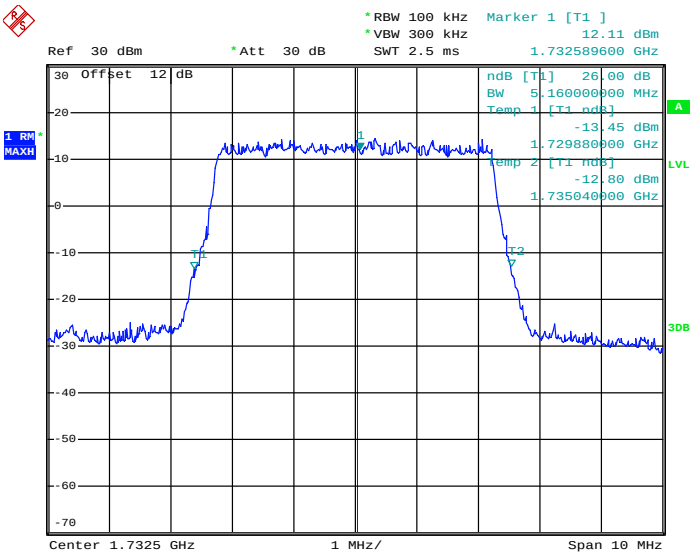
Band :	LTE Band 4	BW / Mod. :	5MHz / QPSK

99% Occupied Bandwidth Plot on Channel 20175



Date: 21.MAR.2012 01:16:54

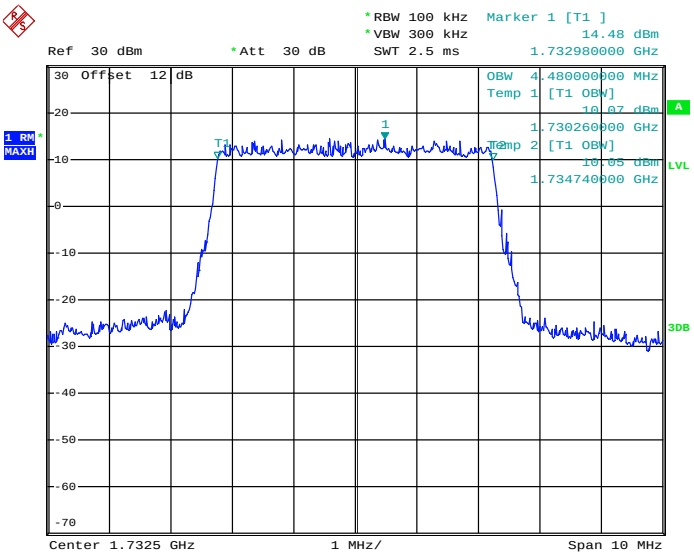
26dB Bandwidth Plot on Channel 20175



Date: 29.MAR.2012 01:18:49

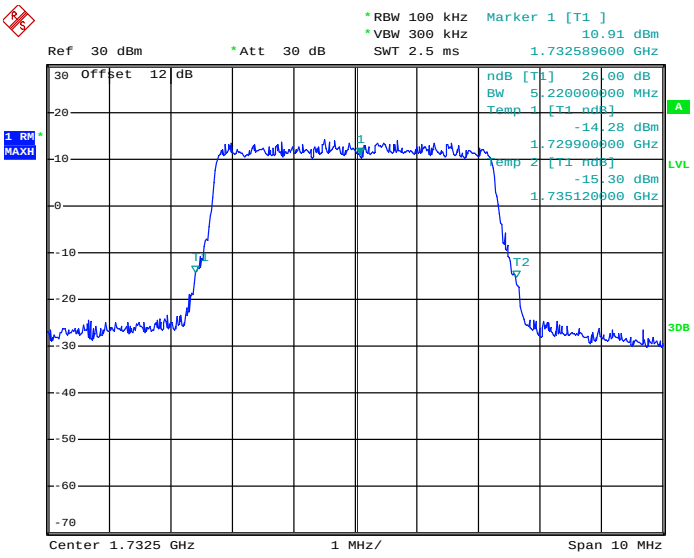
Band :	LTE Band 4	BW / Mod. :	5MHz / 16QAM

99% Occupied Bandwidth Plot on Channel 20175



Date: 21.MAR.2012 01:17:12

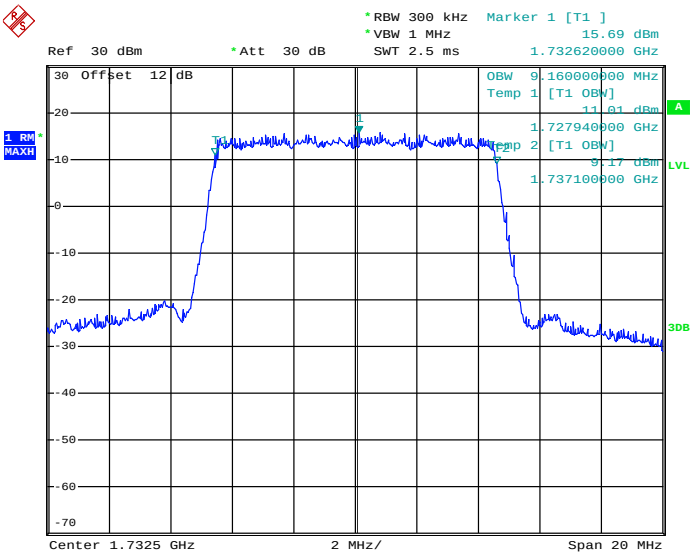
26dB Bandwidth Plot on Channel 20175



Date: 29.MAR.2012 01:19:16

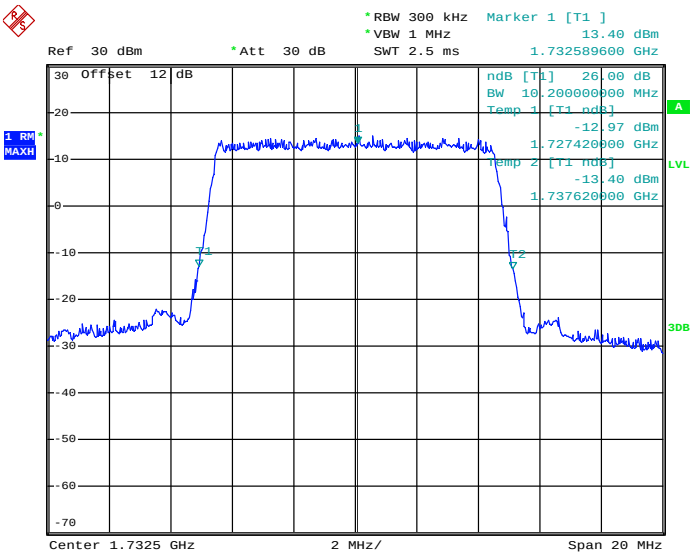
Band :	LTE Band 4	BW / Mod. :	10MHz / QPSK

99% Occupied Bandwidth Plot on Channel 20175



Date: 21.MAR.2012 01:26:29

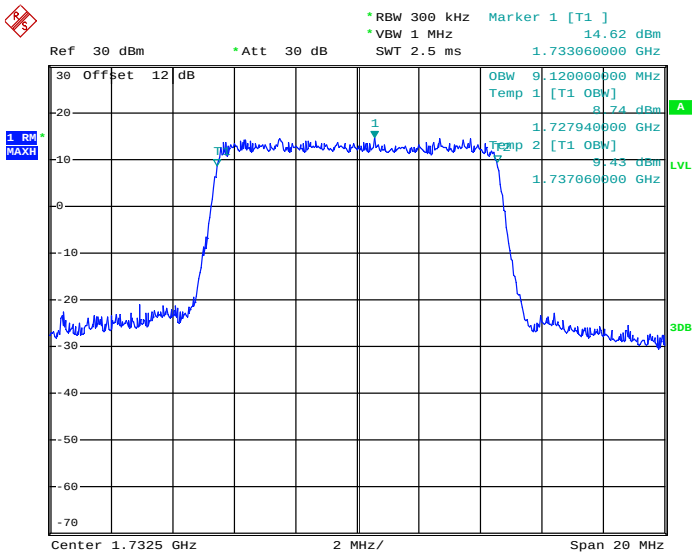
26dB Bandwidth Plot on Channel 20175



Date: 29.MAR.2012 01:20:49

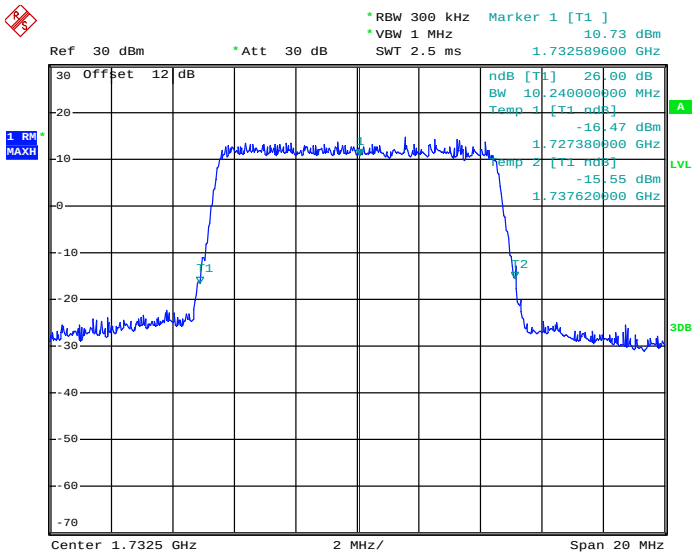
Band :	LTE Band 4	BW / Mod. :	10MHz / 16QAM

99% Occupied Bandwidth Plot on Channel 20175



Date: 21.MAR.2012 01:26:48

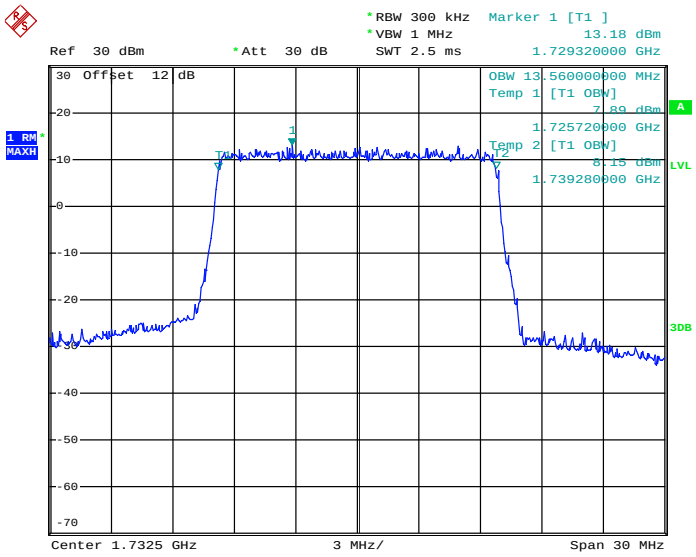
26dB Bandwidth Plot on Channel 20175



Date: 29.MAR.2012 01:21:12

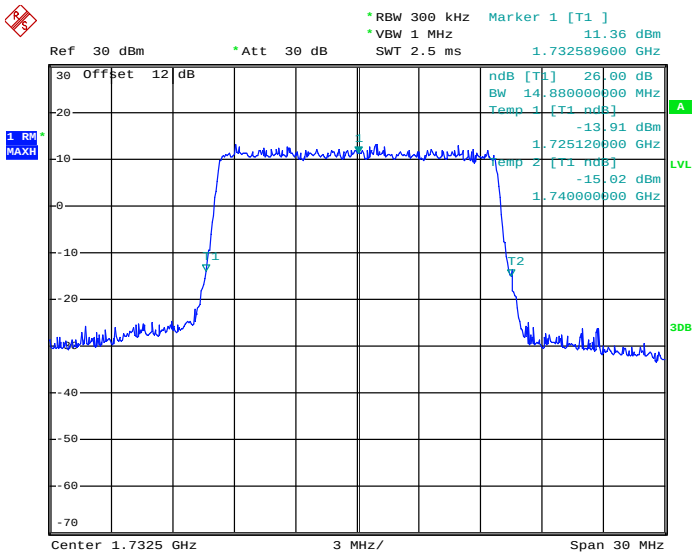
Band :	LTE Band 4	BW / Mod. :	15MHz / QPSK

99% Occupied Bandwidth Plot on Channel 20175



Date: 21.MAR.2012 17:33:34

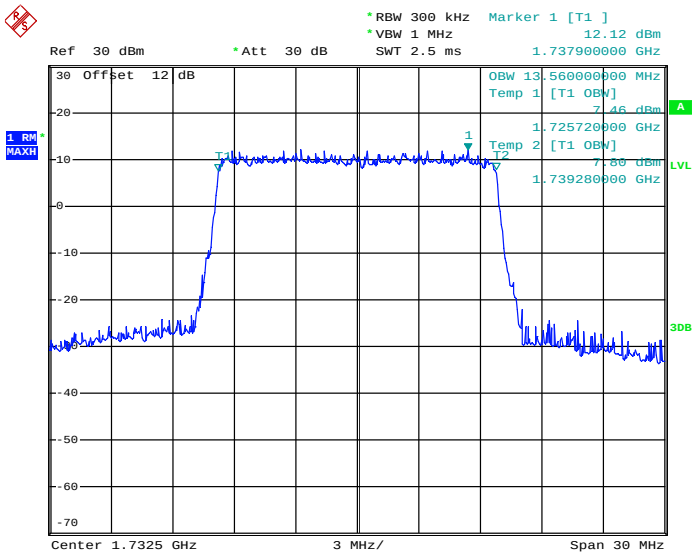
26dB Bandwidth Plot on Channel 20175



Date: 29.MAR.2012 01:22:28

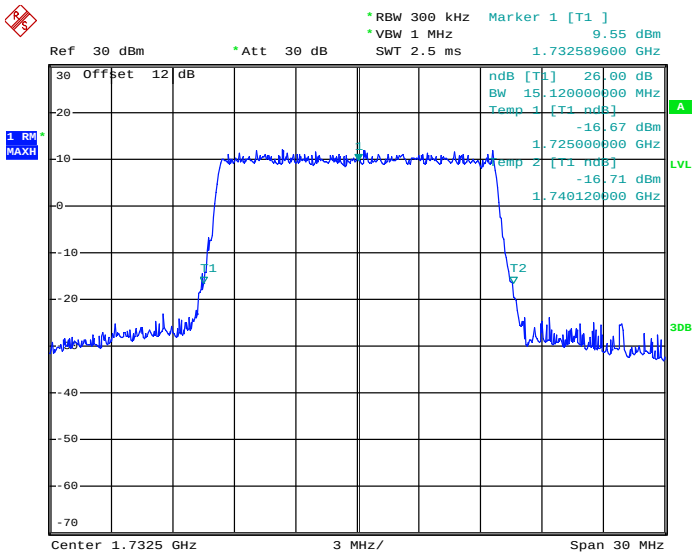
Band :	LTE Band 4	BW / Mod. :	15MHz / 16QAM

99% Occupied Bandwidth Plot on Channel 20175



Date: 21.MAR.2012 17:33:55

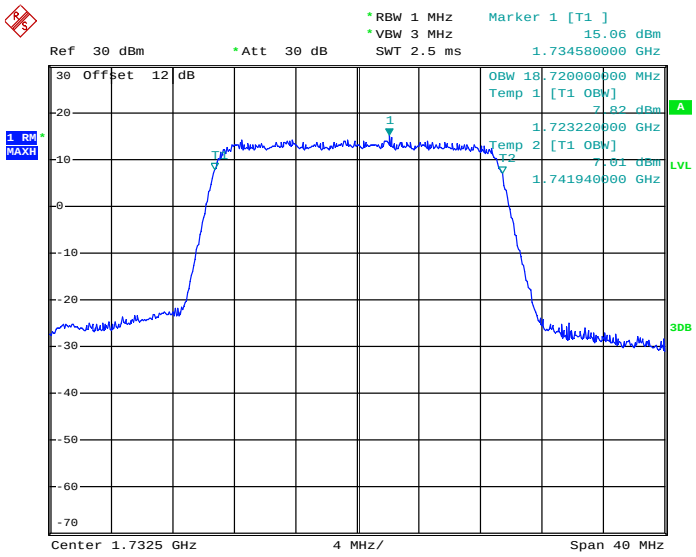
26dB Bandwidth Plot on Channel 20175



Date: 29.MAR.2012 01:22:52

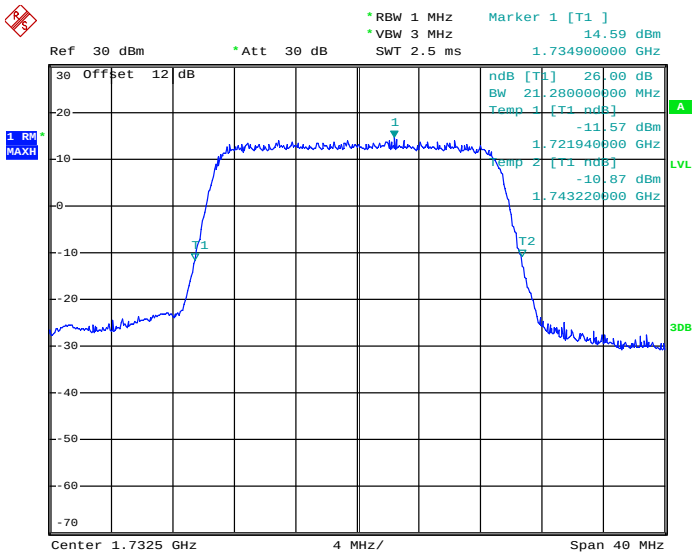
Band :	LTE Band 4	BW / Mod. :	20MHz / QPSK

99% Occupied Bandwidth Plot on Channel 20175



Date: 21.MAR.2012 17:43:52

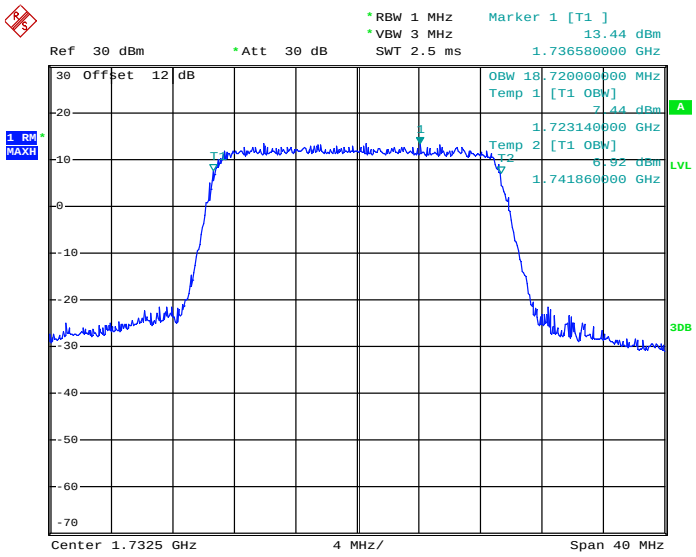
26dB Bandwidth Plot on Channel 20175



Date: 29.MAR.2012 01:25:43

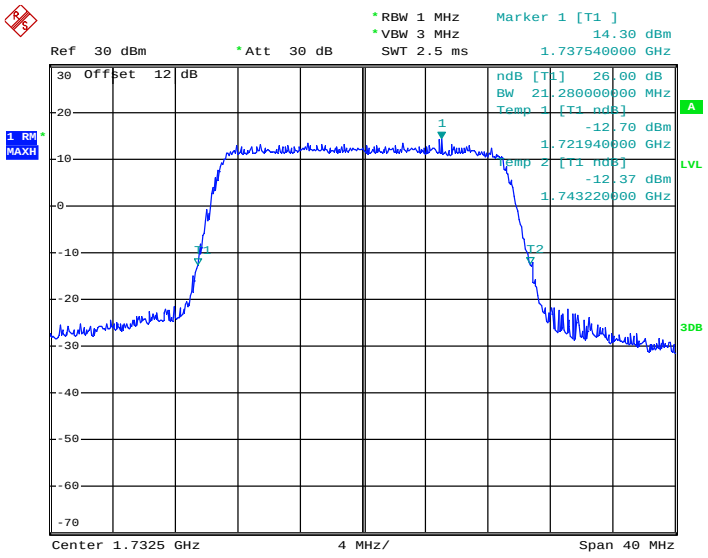
Band :	LTE Band 4	BW / Mod. :	20MHz / 16QAM

99% Occupied Bandwidth Plot on Channel 20175



Date: 21.MAR.2012 17:44:11

26dB Bandwidth Plot on Channel 20175



Date: 29.MAR.2012 01:26:06

3.5 Band Edge and Emission Mask Measurement

3.5.1 Limit

For operations in 698 – 746 MHz bands , the FCC limit is

43 + 10log10(P[Watts]) dB = -13 dBm in a 100 kHz bandwidth.

For operations in the PCS and 1710 – 1755 MHz bands , the FCC limit is

43 + 10$\log_{10}$(P[Watts]) dB = -13 dBm in a 1 MHz bandwidth.

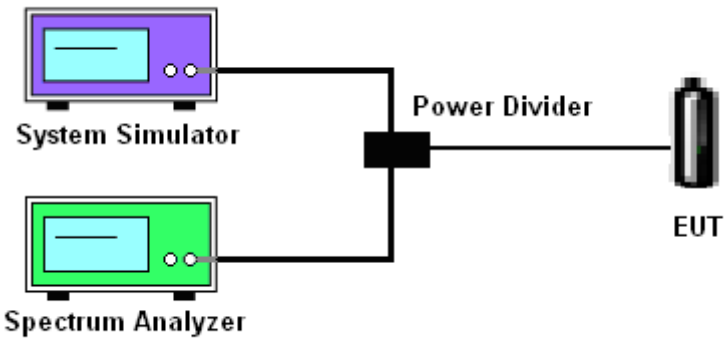
3.5.2 Measuring Instruments

See list of measuring instruments of this test report.

3.5.3 Test Procedures

1. The EUT was connected to Spectrum Analyzer and Base Station via power divider.
2. The band edges of low and high channels for the highest RF powers were measured. The RBW is set larger than 1% of 26dB bandwidth.
   For LTE bandwidth 1.4MHz ~ 10MHz, RBW=100 kHz; for LTE bandwidth 15MHz ~ 20MHz, RBW=300 kHz.

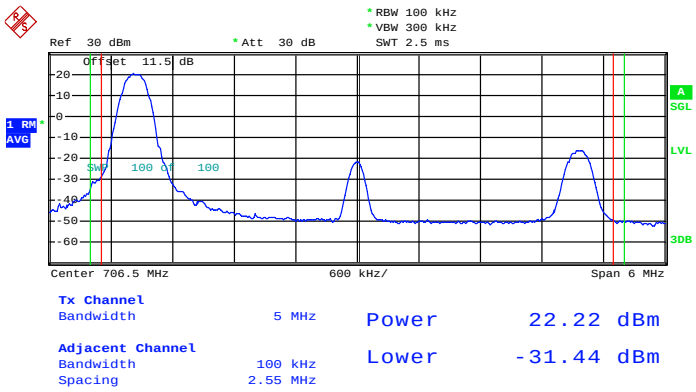
3.5.4 Test Setup



3.5.5 Test Result (Plots) of Conducted Band Edge

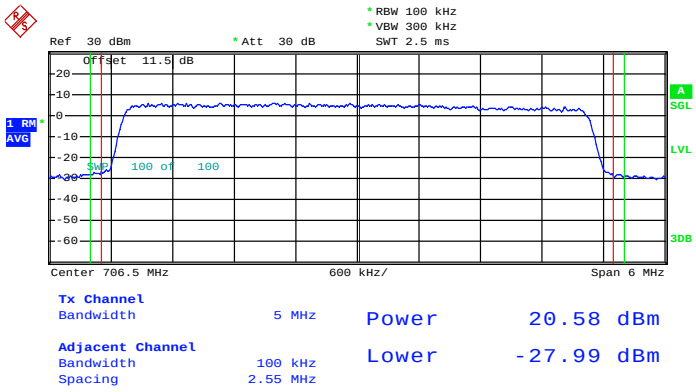
Band :	LTE Band 17	Band Width	5MHz / QPSK

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



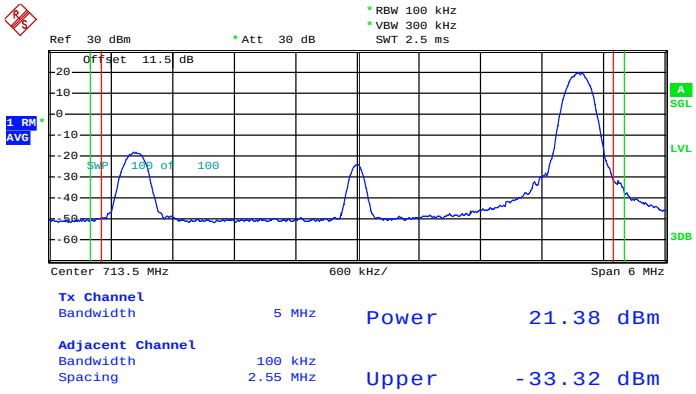
Date: 21.MAR.2012 02:21:24

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



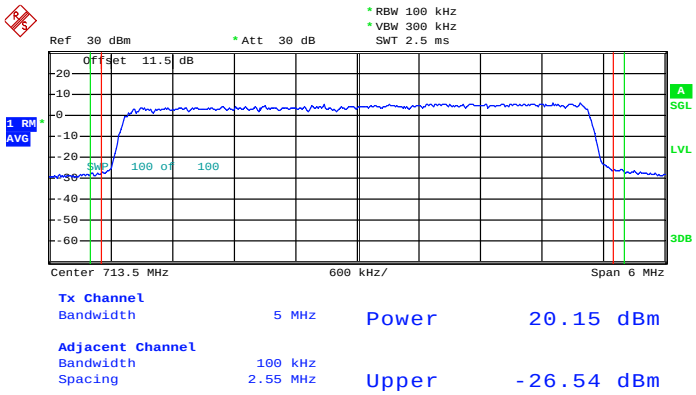
Date: 21.MAR.2012 02:22:11

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



Date: 21.MAR.2012 02:23:22

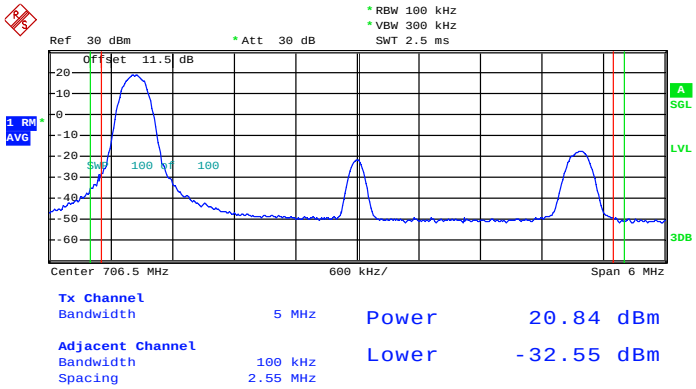
Higher Band Edge Plot for QPSK-RB Size 25, RB Offset 0



Date: 21.MAR.2012 02:24:18

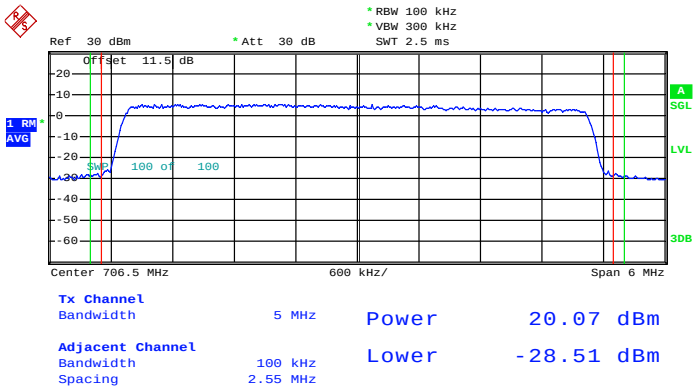
Band :	LTE Band 17	Band Width	5MHz / 16QAM

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



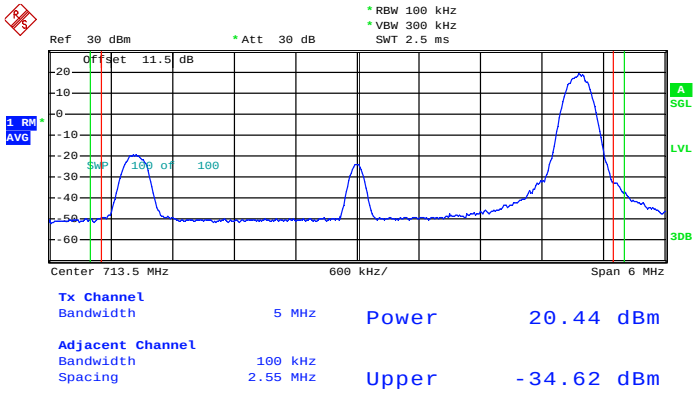
Date: 21.MAR.2012 02:21:43

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



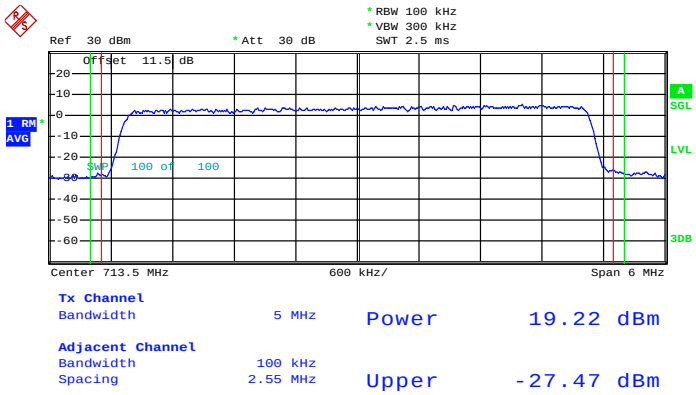
Date: 21.MAR.2012 02:22:27

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



Date: 21.MAR.2012 02:23:51

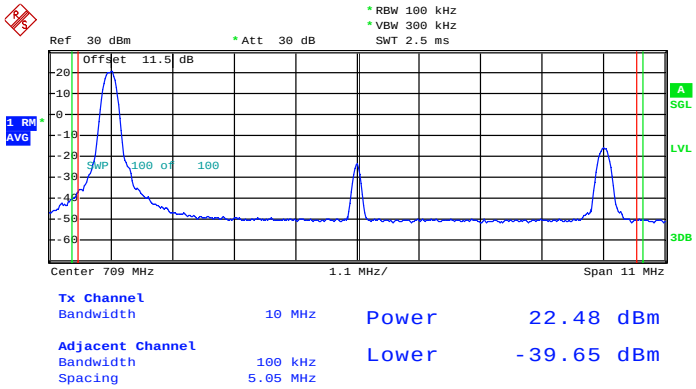
Higher Band Edge Plot for 16QAM -RB Size 25, RB Offset 0



Date: 21.MAR.2012 02:24:34

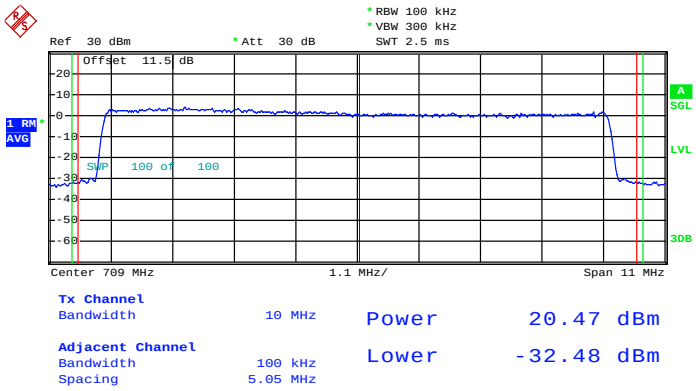
Band :	LTE Band 17	Band Width	10MHz / QPSK

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



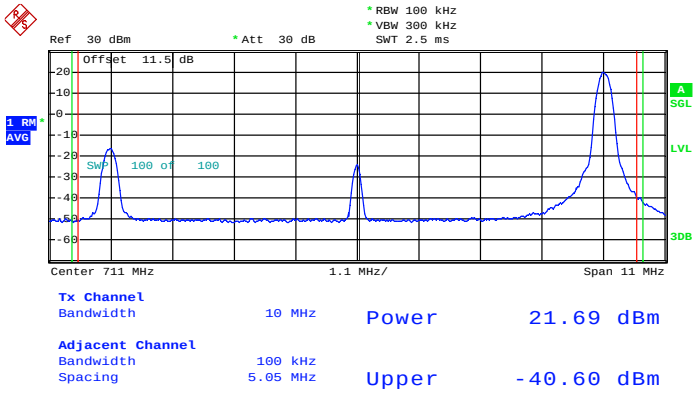
Date: 21.MAR.2012 02:27:14

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



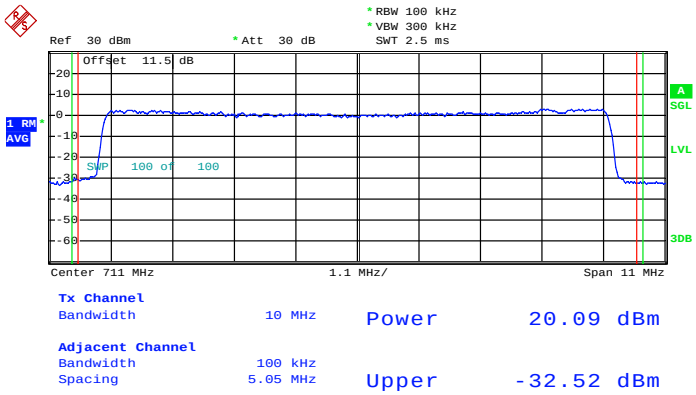
Date: 21.MAR.2012 02:27:57

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



Date: 21.MAR.2012 02:29:49

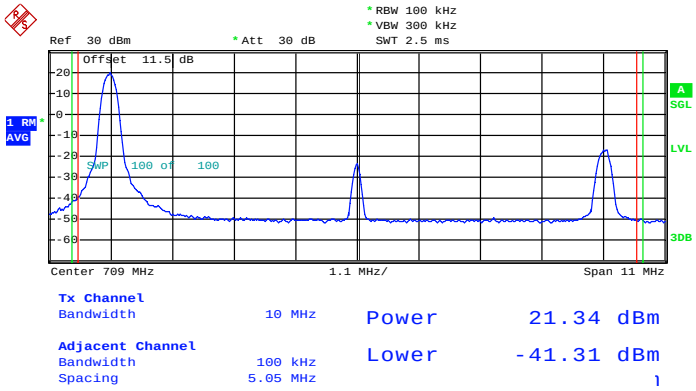
Higher Band Edge Plot for QPSK-RB Size 50, RB Offset 0



Date: 21.MAR.2012 02:30:35

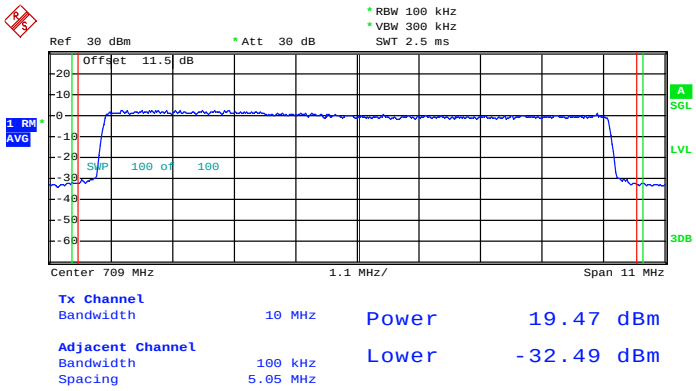
Band :	LTE Band 17	Band Width	10MHz / 16QAM

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



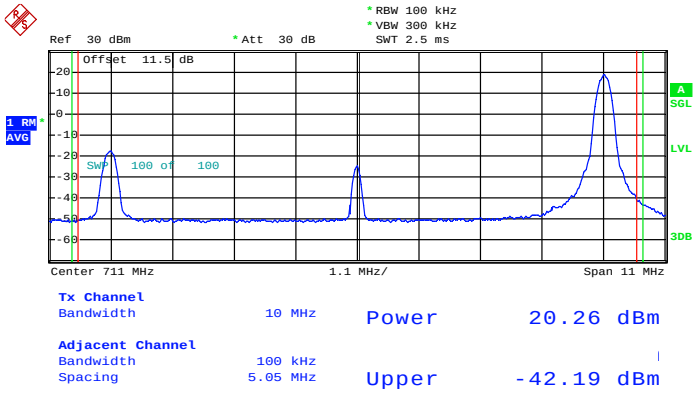
Date: 21.MAR.2012 02:27:29

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



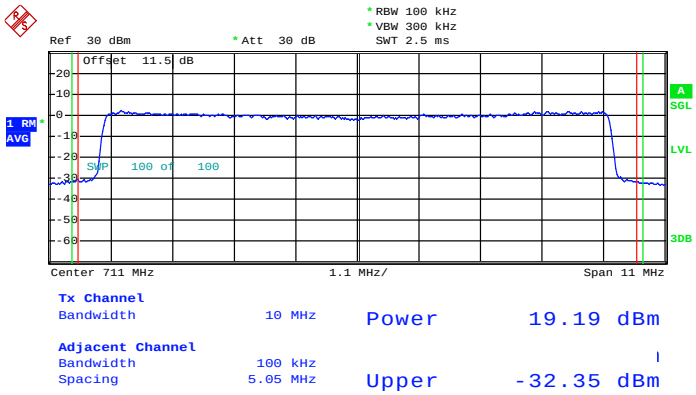
Date: 21.MAR.2012 02:28:18

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



Date: 21.MAR.2012 02:30:09

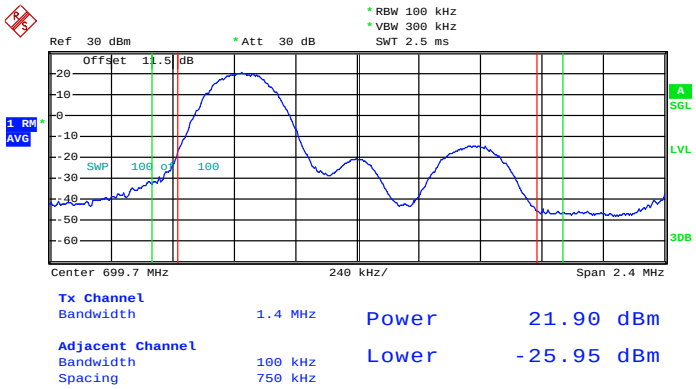
Higher Band Edge Plot for 16QAM -RB Size 50, RB Offset 0



Date: 21.MAR.2012 02:30:53

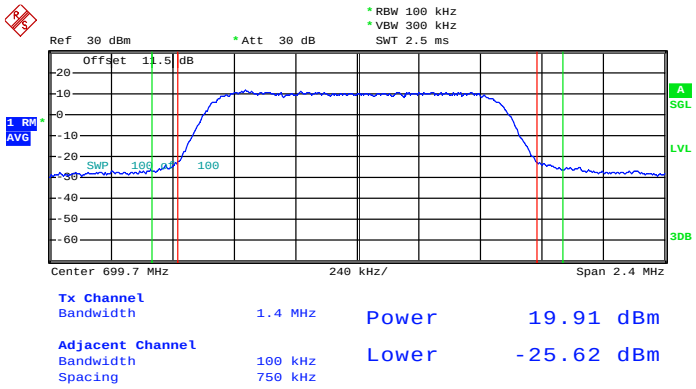
Band :	LTE Band 12	Band Width	1.4MHz / QPSK

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



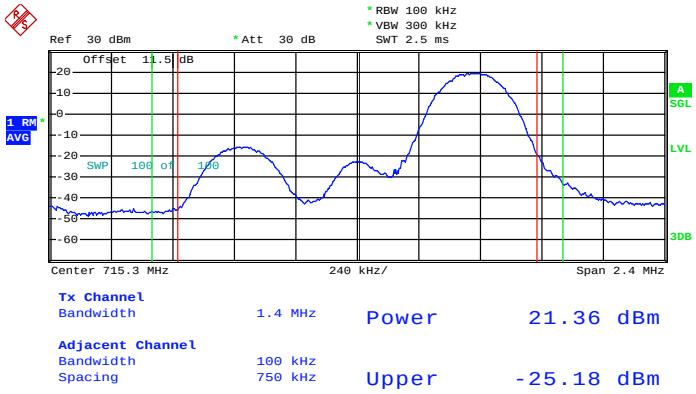
Date: 22.MAR.2012 00:41:18

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



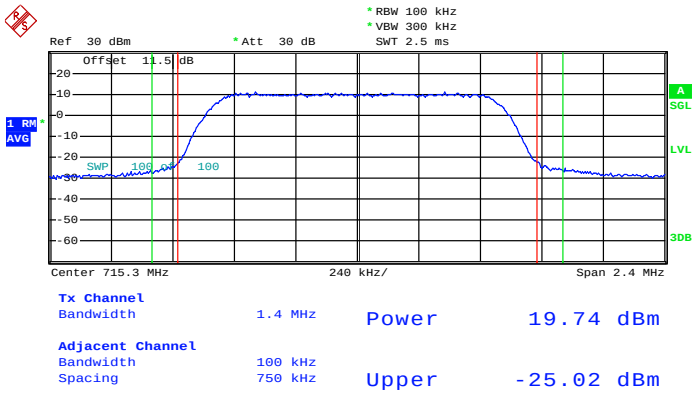
Date: 22.MAR.2012 00:42:04

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



Date: 22.MAR.2012 00:43:25

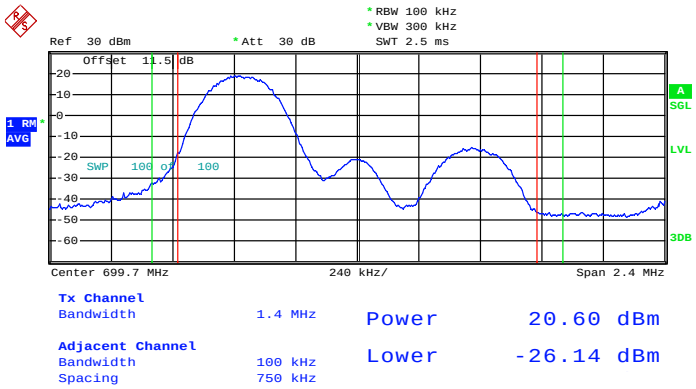
Higher Band Edge Plot for QPSK-RB Size 6, RB Offset 0



Date: 22.MAR.2012 00:44:10

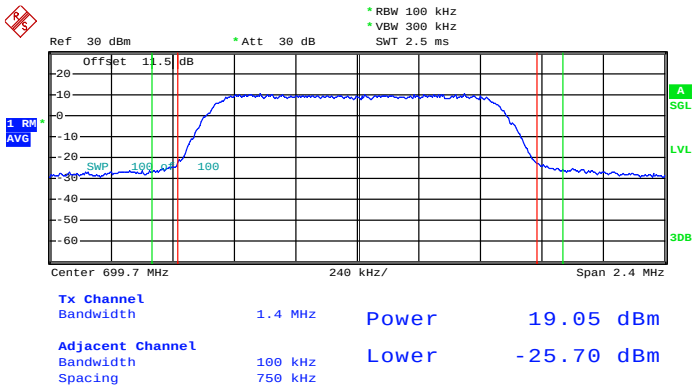
Band :	LTE Band 12	Band Width	1.4MHz / 16QAM

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



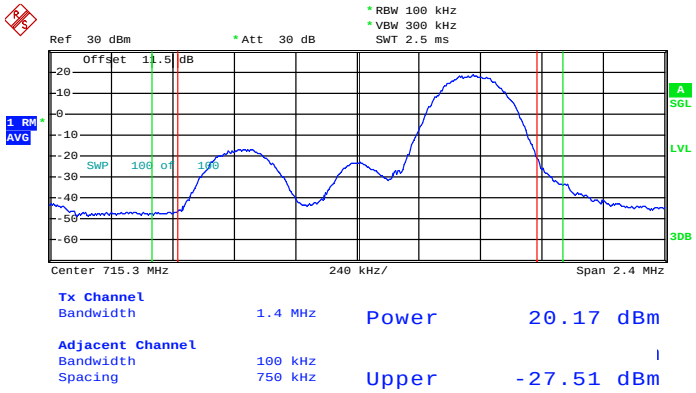
Date: 22.MAR.2012 00:41:42

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



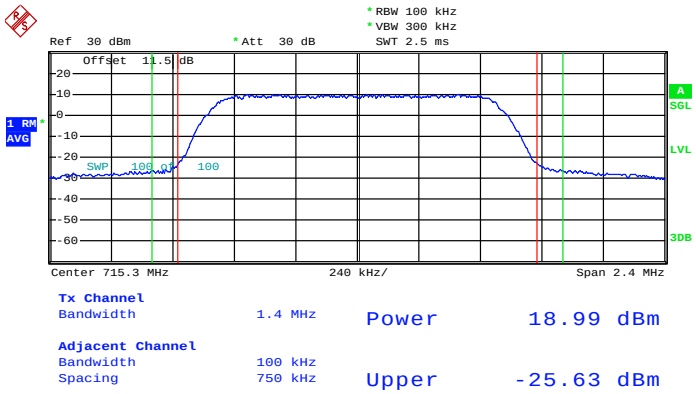
Date: 22.MAR.2012 00:42:21

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



Date: 22.MAR.2012 00:43:44

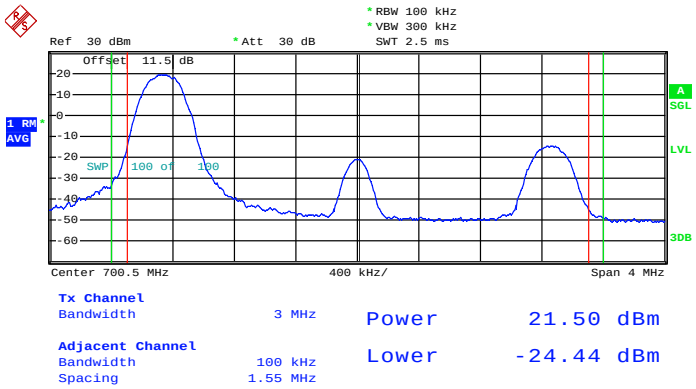
Higher Band Edge Plot for 16QAM -RB Size 6, RB Offset 0



Date: 22.MAR.2012 00:44:41

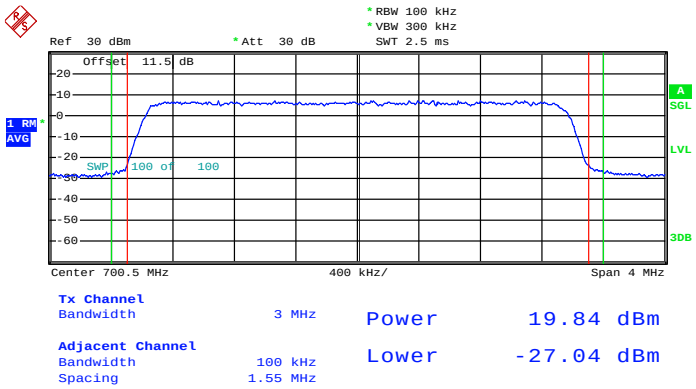
Band :	LTE Band 12	Band Width	3MHz / QPSK

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



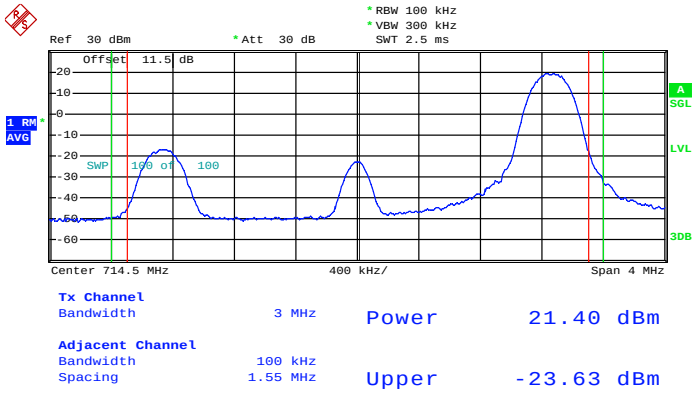
Date: 22.MAR.2012 00:47:37

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



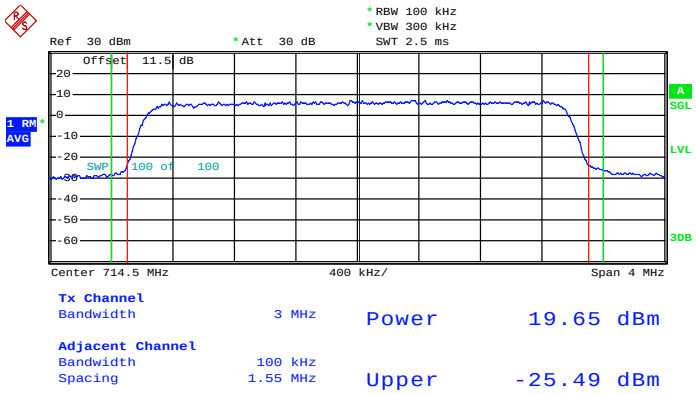
Date: 22.MAR.2012 00:48:24

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



Date: 22.MAR.2012 00:49:58

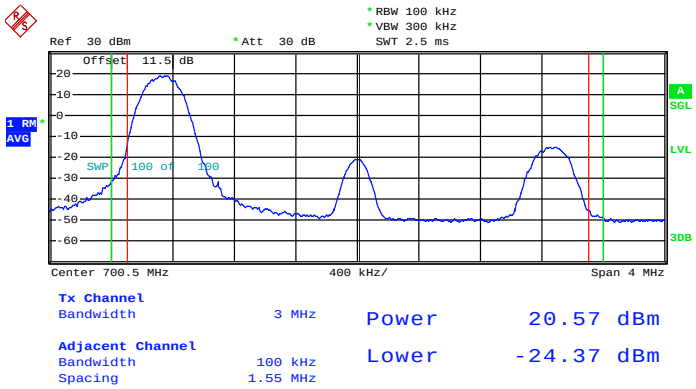
Higher Band Edge Plot for QPSK-RB Size 15, RB Offset 0



Date: 22.MAR.2012 00:50:39

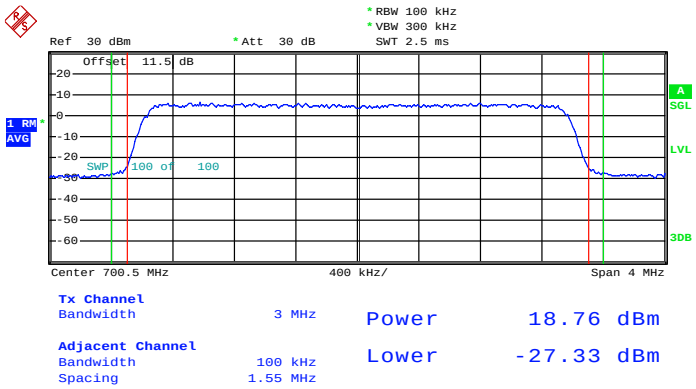
Band :	LTE Band 12	Band Width	3MHz / 16QAM

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



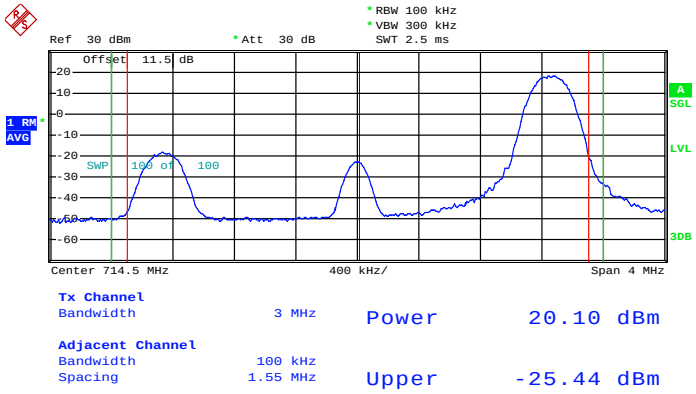
Date: 22.MAR.2012 00:47:58

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



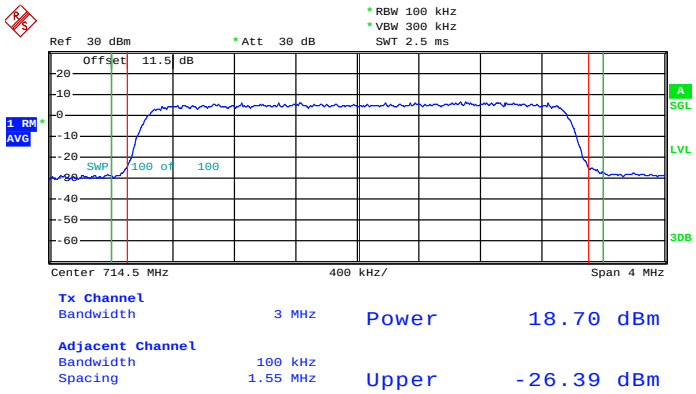
Date: 22.MAR.2012 00:48:44

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



Date: 22.MAR.2012 00:50:14

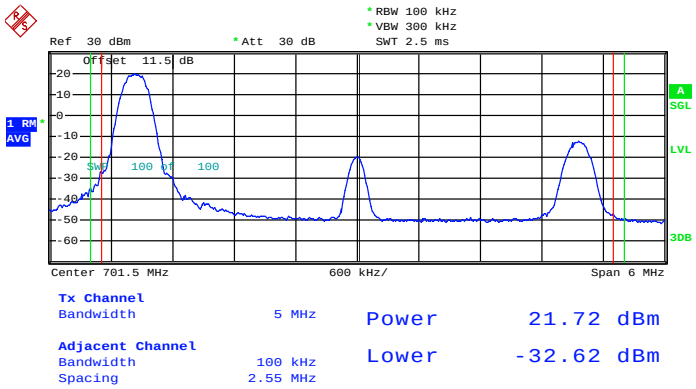
Higher Band Edge Plot for 16QAM -RB Size 15, RB Offset 0



Date: 22.MAR.2012 00:50:59

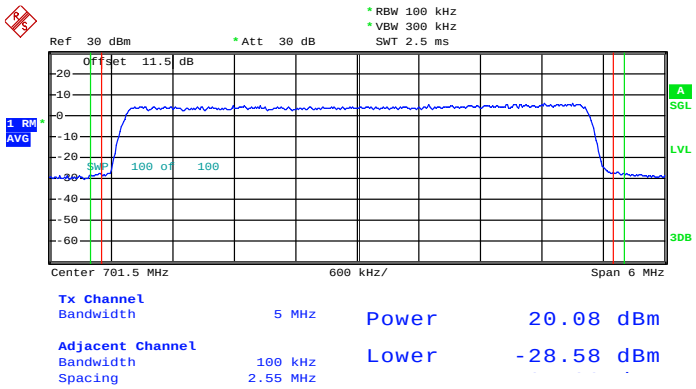
Band :	LTE Band 12	Band Width	5MHz / QPSK

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



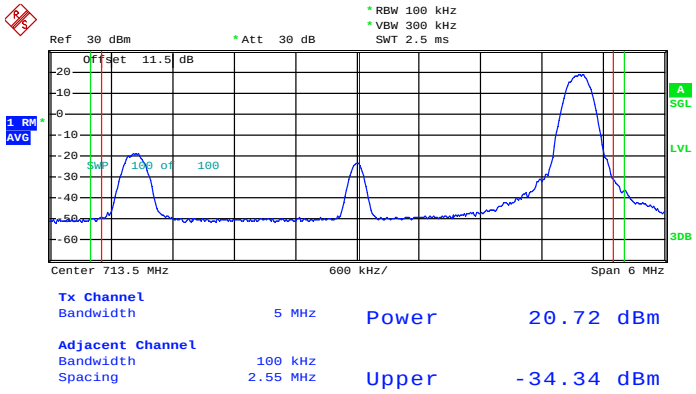
Date: 22.MAR.2012 00:56:20

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



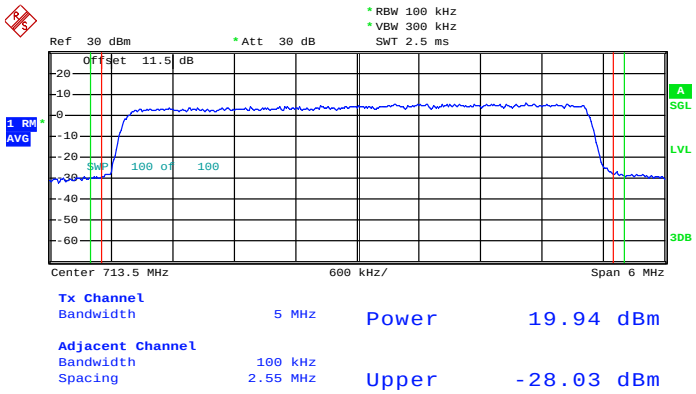
Date: 22.MAR.2012 00:57:27

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



Date: 22.MAR.2012 00:59:32

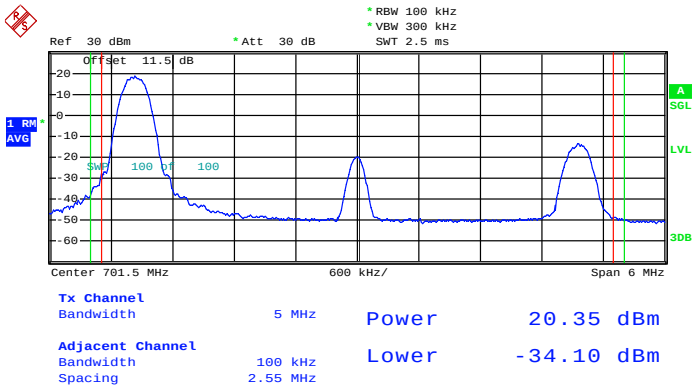
Higher Band Edge Plot for QPSK-RB Size 25, RB Offset 0



Date: 22.MAR.2012 01:00:12

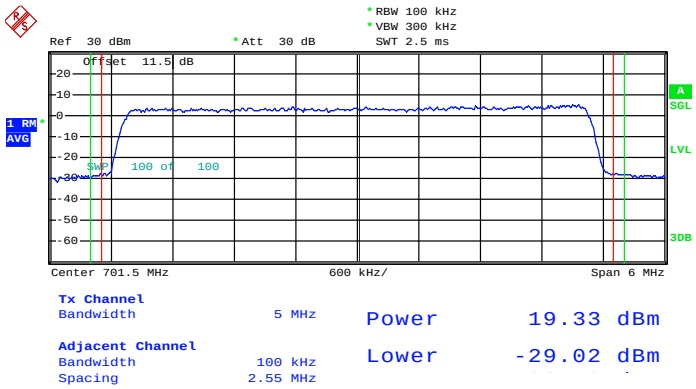
Band :	LTE Band 12	Band Width	5MHz / 16QAM

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



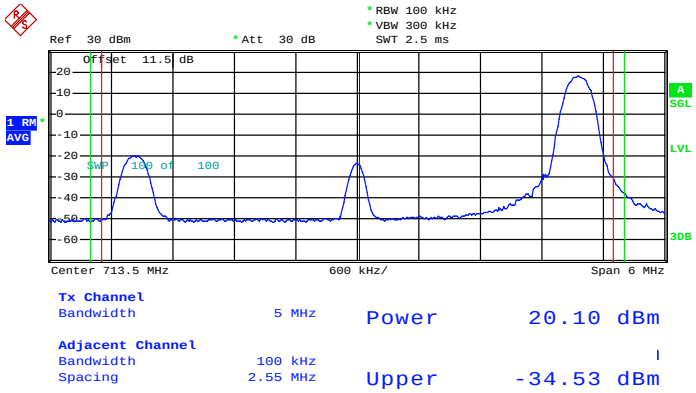
Date: 22.MAR.2012 00:56:47

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



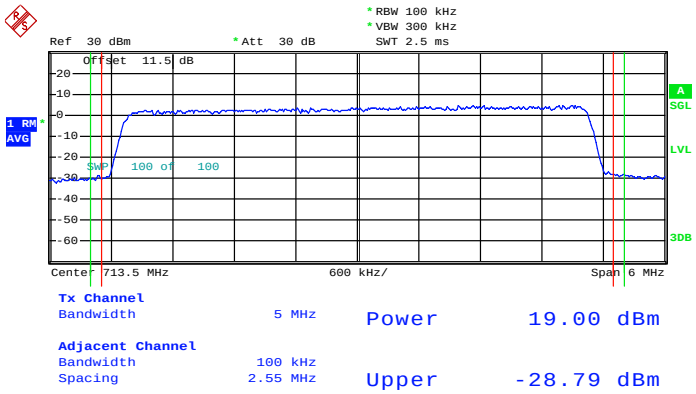
Date: 22.MAR.2012 00:57:47

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



Date: 22.MAR.2012 00:59:47

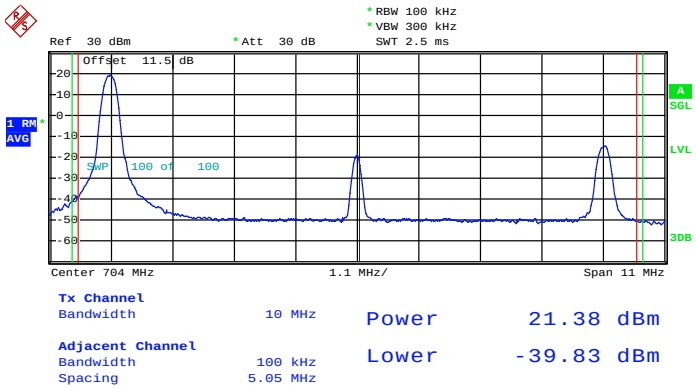
Higher Band Edge Plot for 16QAM -RB Size 25, RB Offset 0



Date: 22.MAR.2012 01:00:28

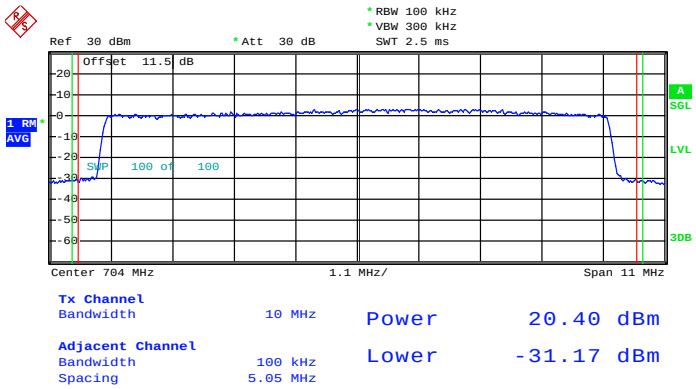
Band :	LTE Band 12	Band Width	10MHz / QPSK

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



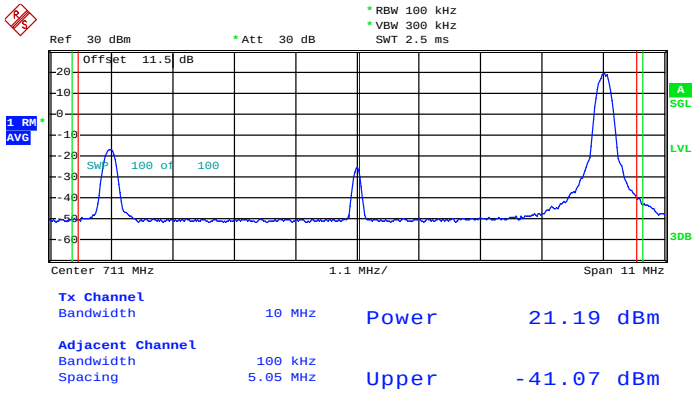
Date: 22.MAR.2012 01:38:45

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



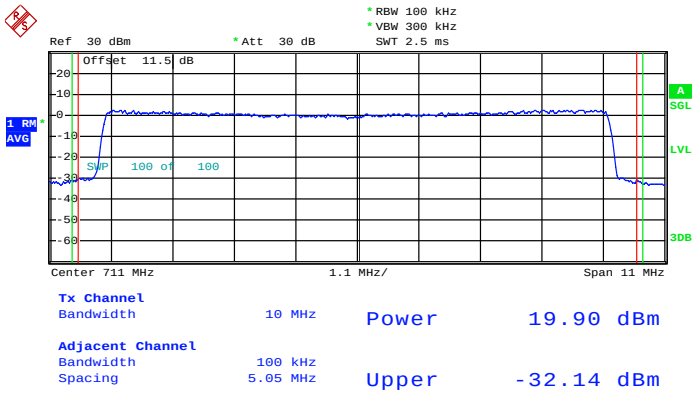
Date: 22.MAR.2012 01:39:20

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



Date: 22.MAR.2012 01:36:56

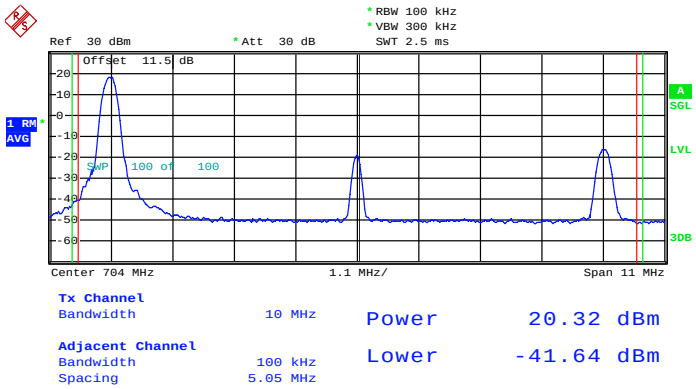
Higher Band Edge Plot for QPSK-RB Size 50, RB Offset 0



Date: 22.MAR.2012 01:37:37

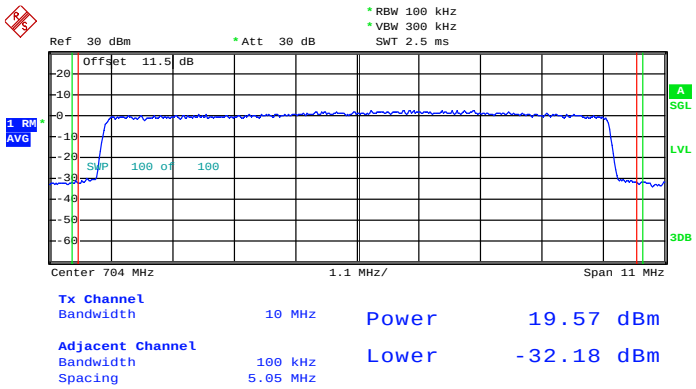
Band :	LTE Band 12	Band Width	10MHz / 16QAM

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



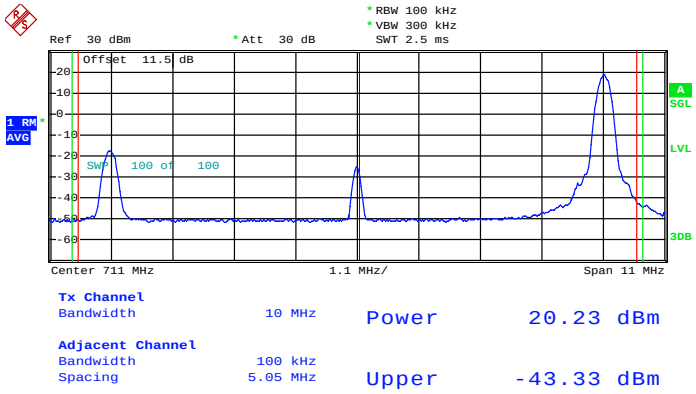
Date: 22.MAR.2012 01:39:01

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



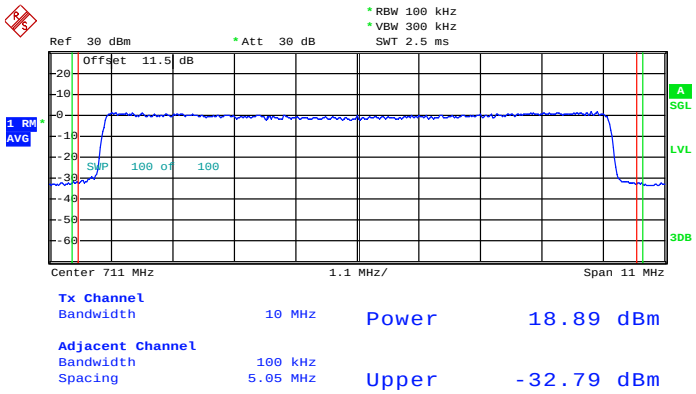
Date: 22.MAR.2012 01:39:36

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



Date: 22.MAR.2012 01:37:16

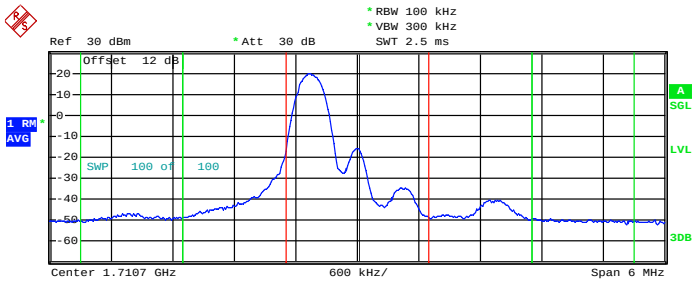
Higher Band Edge Plot for 16QAM -RB Size 50, RB Offset 0



Date: 22.MAR.2012 01:37:54

Band :	LTE Band 4	Band Width	1.4MHz / QPSK

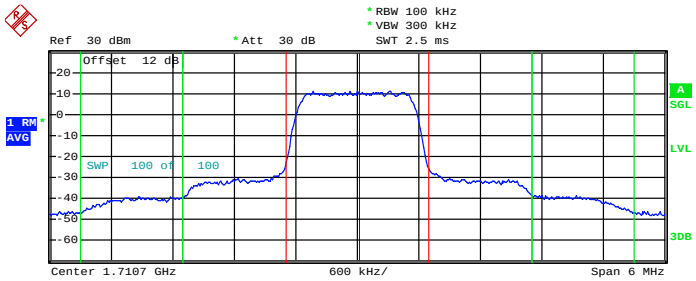
Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Tx Channel			
Bandwidth	1.4 MHz	Power	21.63 dBm
Adjacent Channel			
Bandwidth	1 MHz	Lower	-23.24 dBm
Spacing	1.2 MHz		
Alternate Channel			
Bandwidth	1 MHz	Lower	-38.93 dBm
Spacing	2.2 MHz		

Date: 21.MAR.2012 19:19:34

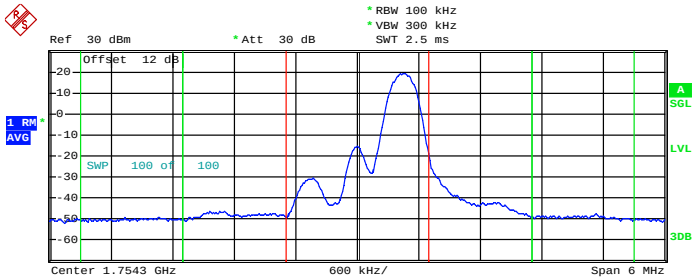
Lower Band Edge Plot for QPSK-RB Size 6, RB Offset 0



Tx Channel			
Bandwidth	1.4 MHz	Power	19.97 dBm
Adjacent Channel			
Bandwidth	1 MHz	Lower	-21.87 dBm
Spacing	1.2 MHz		
Alternate Channel			
Bandwidth	1 MHz	Lower	-31.39 dBm
Spacing	2.2 MHz		

Date: 21.MAR.2012 19:20:20

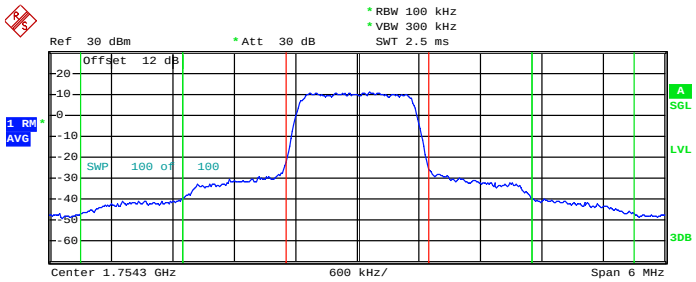
Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 5



Tx Channel			
Bandwidth	1.4 MHz	Power	21.20 dBm
Adjacent Channel			
Bandwidth	1 MHz		
Spacing	1.2 MHz	Upper	-24.08 dBm
Alternate Channel			
Bandwidth	1 MHz		
Spacing	2.2 MHz	Upper	-39.44 dBm

Date: 21.MAR.2012 19:22:29

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

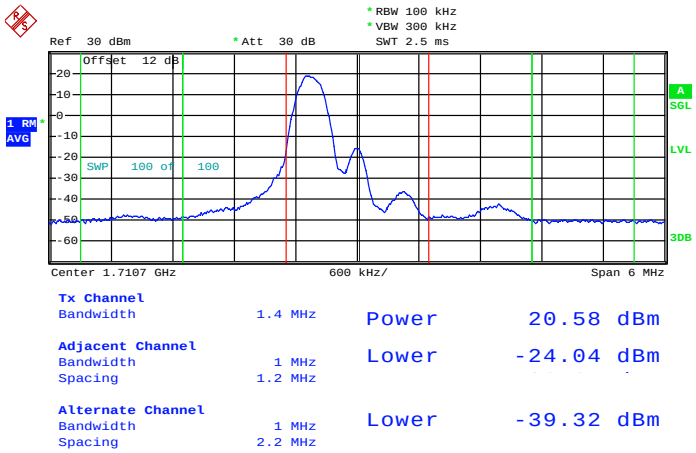


Tx Channel			
Bandwidth	1.4 MHz	Power	19.93 dBm
Adjacent Channel			
Bandwidth	1 MHz		
Spacing	1.2 MHz	Upper	-21.53 dBm
Alternate Channel			
Bandwidth	1 MHz		
Spacing	2.2 MHz	Upper	-32.71 dBm

Date: 21.MAR.2012 19:23:10

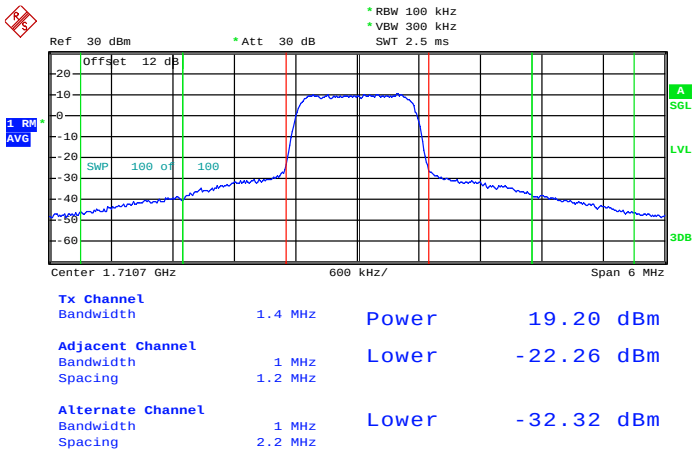
Band :	LTE Band 4	Band Width	1.4MHz / 16QAM

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



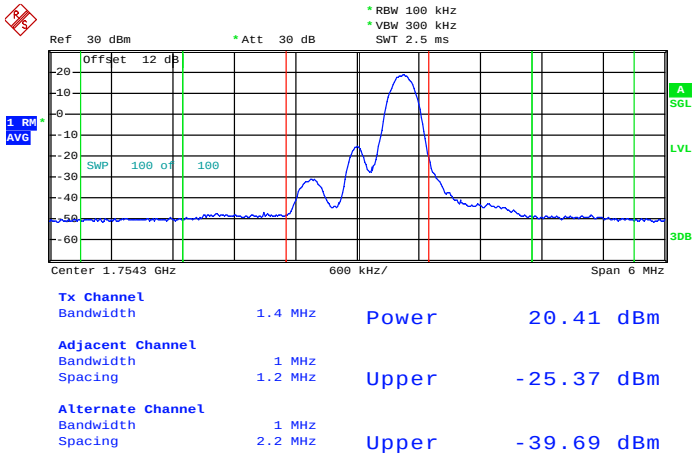
Date: 21.MAR.2012 19:19:52

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



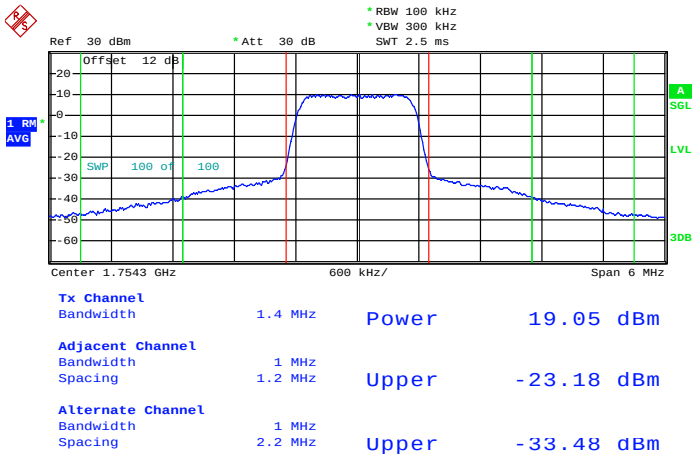
Date: 21.MAR.2012 19:20:37

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



Date: 21.MAR.2012 19:22:46

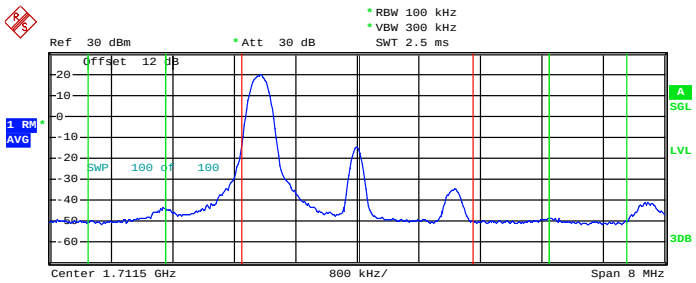
Higher Band Edge Plot for 16QAM -RB Size 6, RB Offset 0



Date: 21.MAR.2012 19:23:34

Band :	LTE Band 4	Band Width	3MHz / QPSK

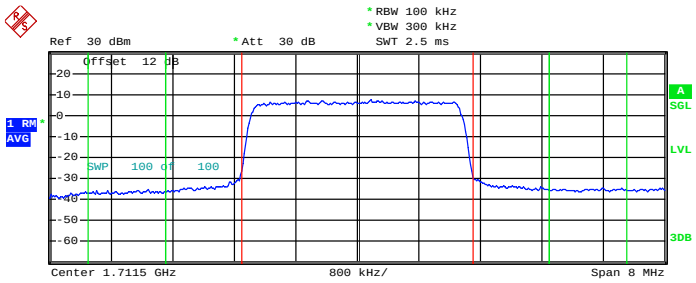
Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Tx Channel			
Bandwidth	3 MHz	Power	21.71 dBm
Adjacent Channel			
Bandwidth	1 MHz	Lower	-20.17 dBm
Spacing	2 MHz		
Alternate Channel			
Bandwidth	1 MHz	Lower	-38.69 dBm
Spacing	3 MHz		

Date: 21.MAR.2012 19:32:07

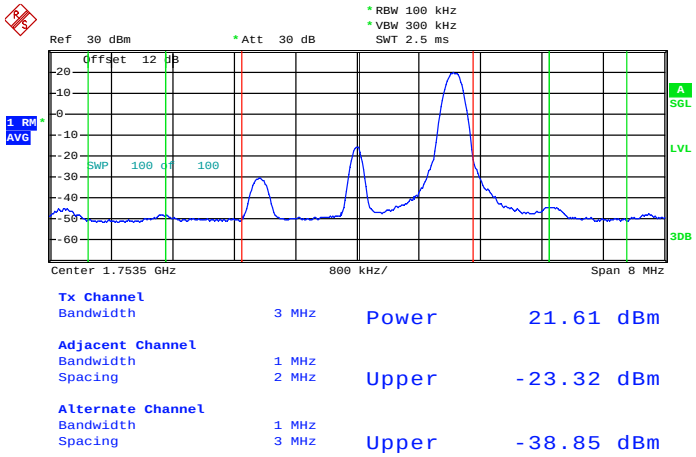
Lower Band Edge Plot for QPSK-RB Size 15, RB Offset 0



Tx Channel			
Bandwidth	3 MHz	Power	19.95 dBm
Adjacent Channel			
Bandwidth	1 MHz	Lower	-24.10 dBm
Spacing	2 MHz		
Alternate Channel			
Bandwidth	1 MHz	Lower	-26.84 dBm
Spacing	3 MHz		

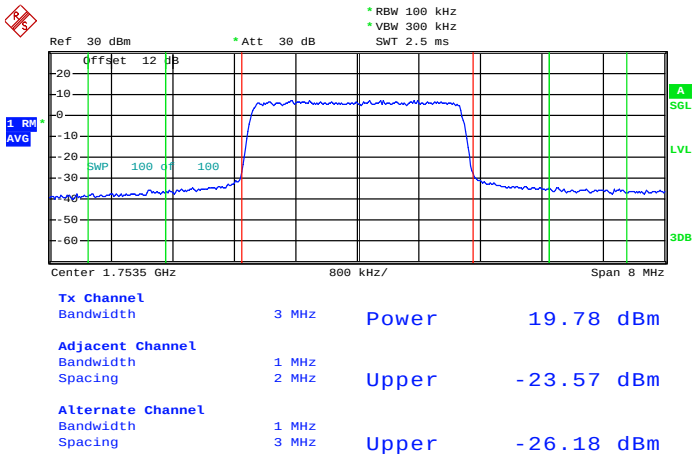
Date: 21.MAR.2012 19:32:57

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



Date: 21.MAR.2012 19:34:36

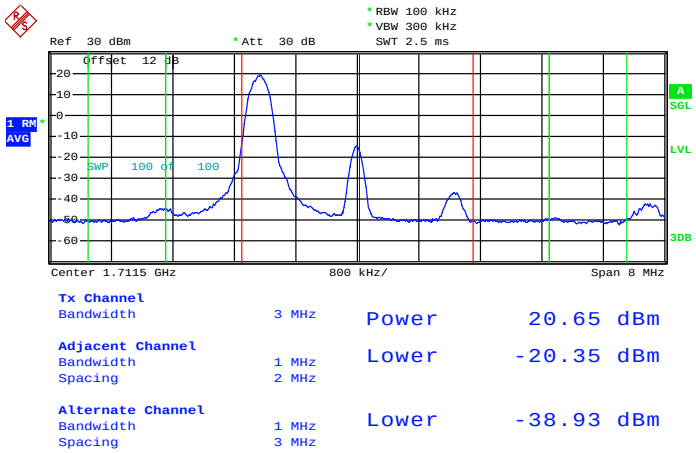
Higher Band Edge Plot for QPSK-RB Size 15, RB Offset 0



Date: 21.MAR.2012 19:35:26

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

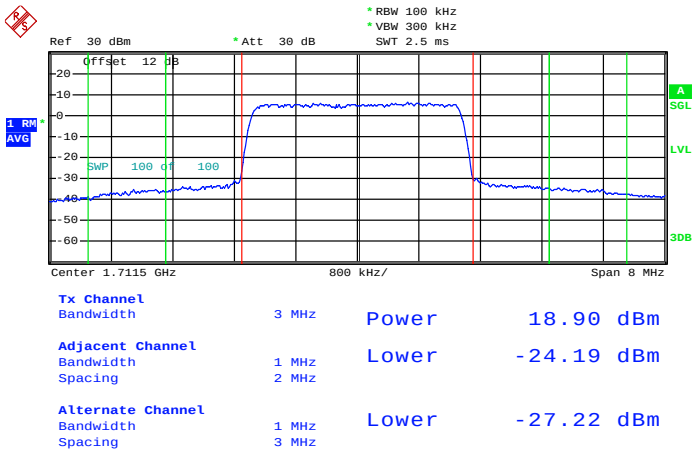
Lower Band Edge Plot for 16QAM -RB Size 1, RB Offset 0



Tx Channel			
Bandwidth	3 MHz	Power	20.65 dBm
Adjacent Channel			
Bandwidth	1 MHz	Lower	-20.35 dBm
Spacing	2 MHz		
Alternate Channel			
Bandwidth	1 MHz	Lower	-38.93 dBm
Spacing	3 MHz		

Date: 21.MAR.2012 19:32:25

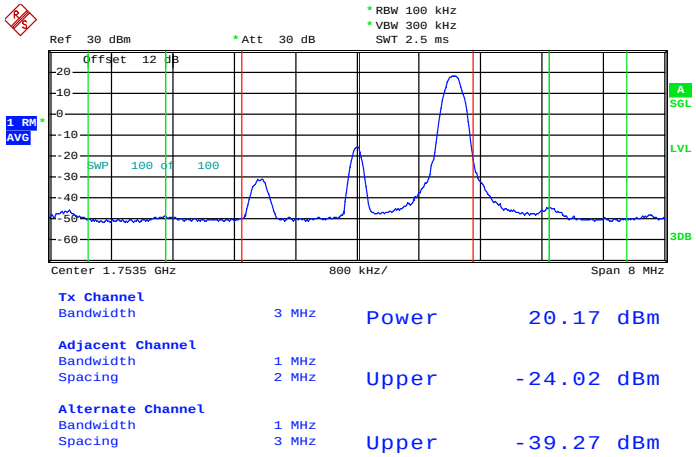
Lower Band Edge Plot for 16QAM -RB Size 15, RB Offset 0



Tx Channel			
Bandwidth	3 MHz	Power	18.90 dBm
Adjacent Channel			
Bandwidth	1 MHz	Lower	-24.19 dBm
Spacing	2 MHz		
Alternate Channel			
Bandwidth	1 MHz	Lower	-27.22 dBm
Spacing	3 MHz		

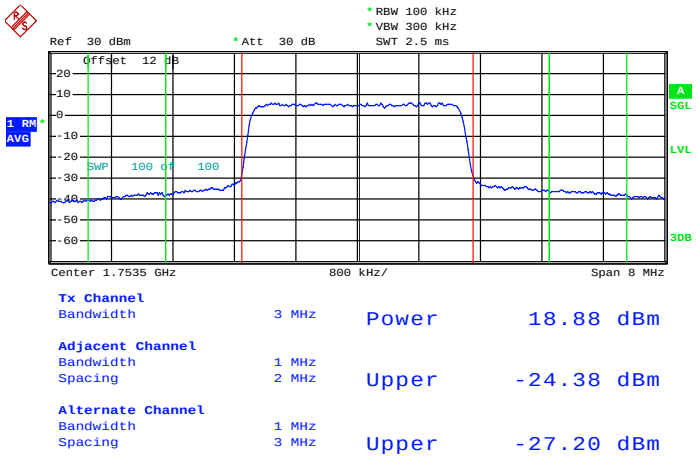
Date: 21.MAR.2012 19:33:14

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



Date: 21.MAR.2012 19:35:01

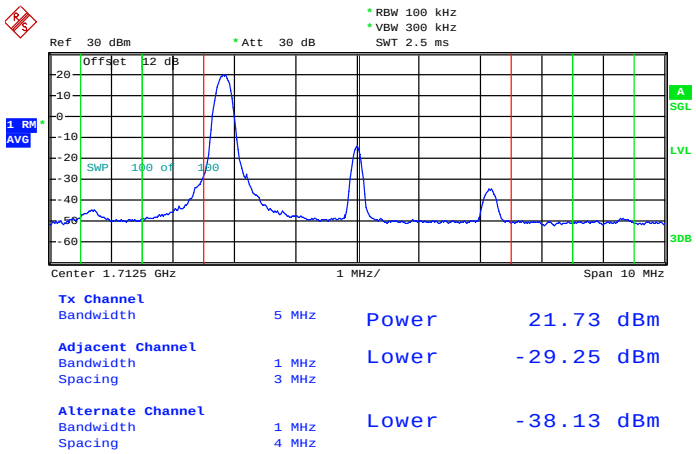
Higher Band Edge Plot for 16QAM -RB Size 15, RB Offset 0



Date: 21.MAR.2012 19:35:45

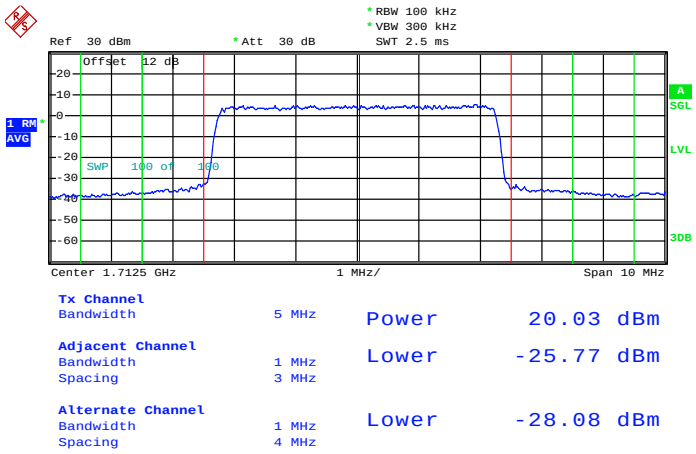
Band :	LTE Band 4	Band Width	5MHz / QPSK

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



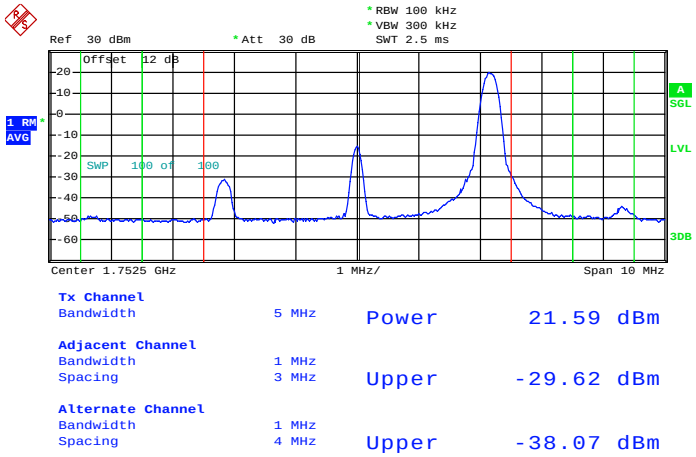
Date: 21.MAR.2012 03:24:24

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



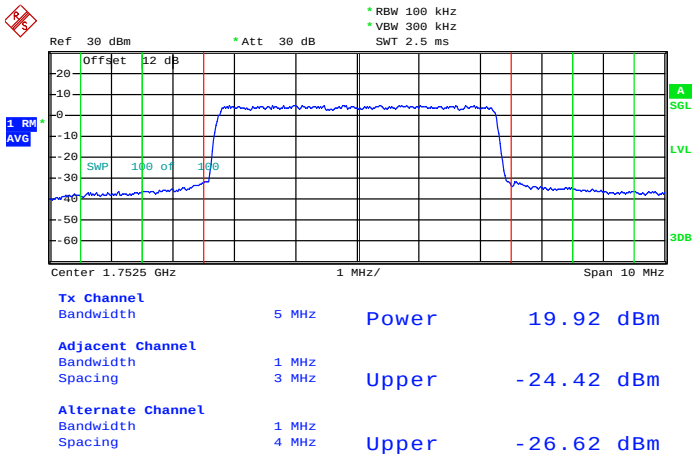
Date: 21.MAR.2012 03:25:07

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



Date: 21.MAR.2012 03:26:25

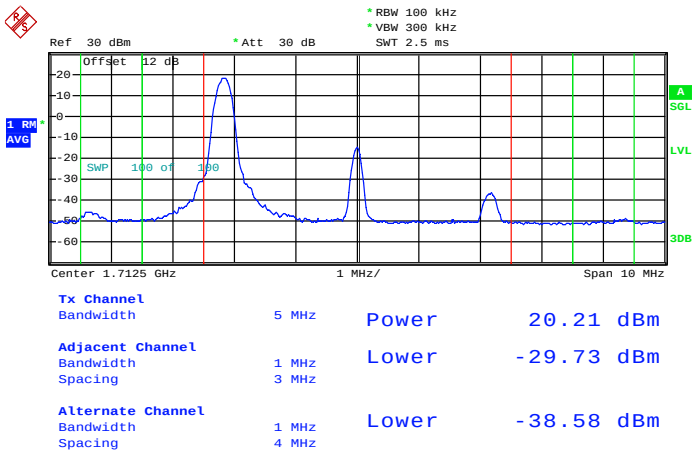
Higher Band Edge Plot for QPSK-RB Size 25, RB Offset 0



Date: 21.MAR.2012 03:27:02

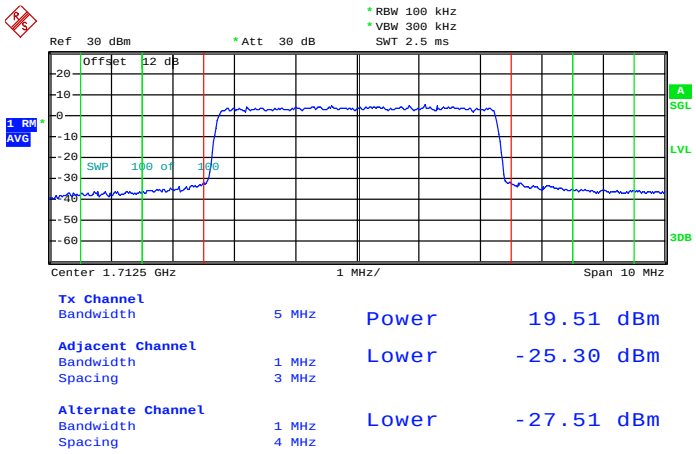
Band :	LTE Band 4	Band Width	5MHz / 16QAM

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



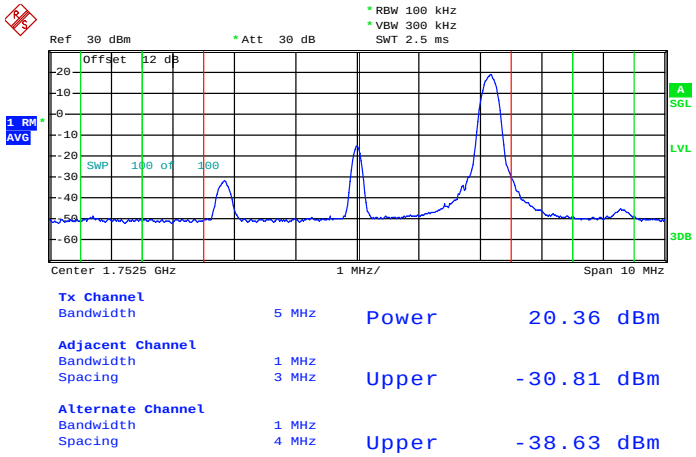
Date: 21.MAR.2012 03:24:45

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



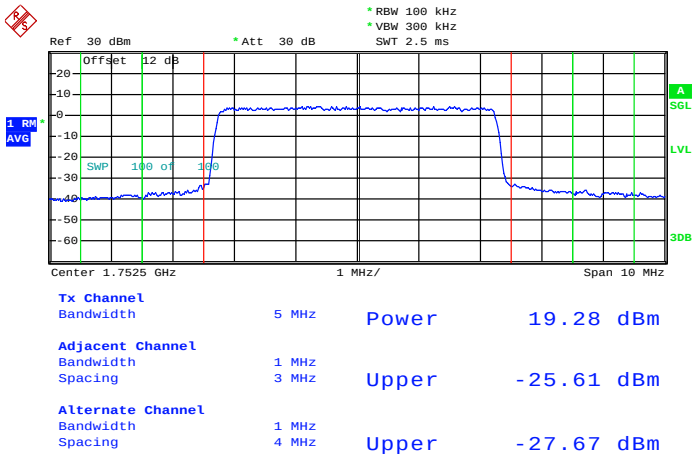
Date: 21.MAR.2012 03:25:23

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



Date: 21.MAR.2012 03:26:43

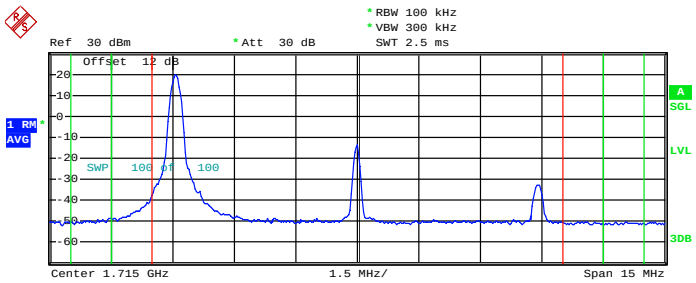
Higher Band Edge Plot for 16QAM -RB Size 25, RB Offset 0



Date: 21.MAR.2012 03:27:17

Band :	LTE Band 4	Band Width	10MHz / QPSK

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



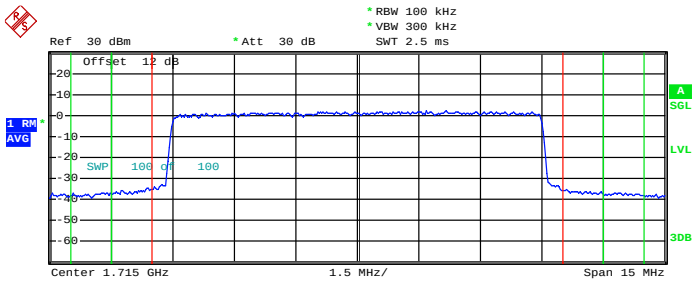
Tx Channel
Bandwidth 10 MHz Power 21.50 dBm

Adjacent Channel
Bandwidth 1 MHz Lower -35.00 dBm
Spacing 5.5 MHz

Alternate Channel
Bandwidth 1 MHz Lower -40.40 dBm
Spacing 6.5 MHz

Date: 21.MAR.2012 03:35:59

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



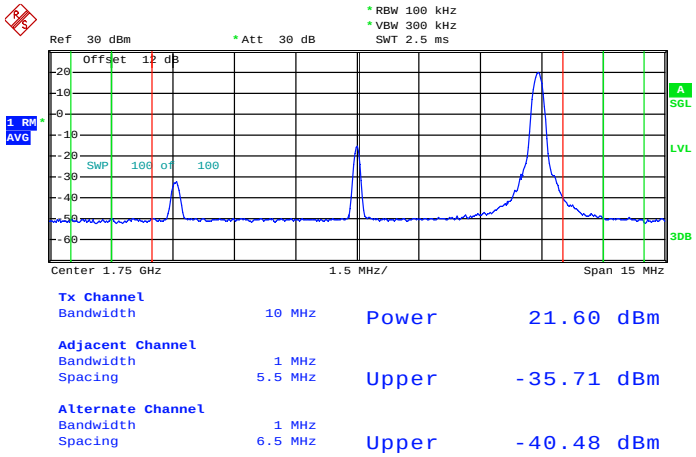
Tx Channel
Bandwidth 10 MHz Power 20.07 dBm

Adjacent Channel
Bandwidth 1 MHz Lower -26.59 dBm
Spacing 5.5 MHz

Alternate Channel
Bandwidth 1 MHz Lower -28.07 dBm
Spacing 6.5 MHz

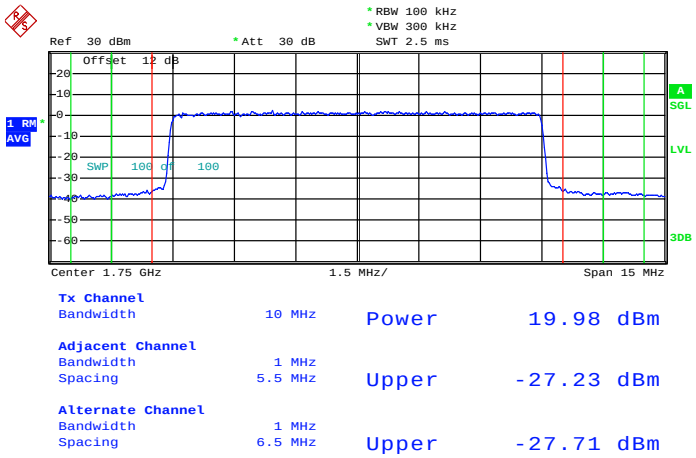
Date: 21.MAR.2012 03:36:38

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



Date: 21.MAR.2012 03:37:48

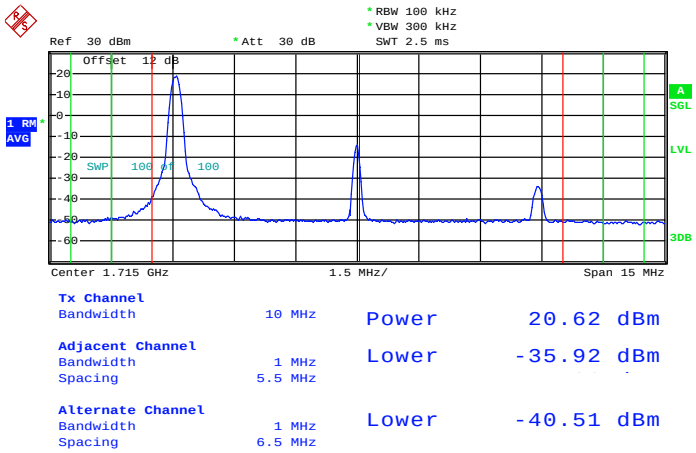
Higher Band Edge Plot for QPSK-RB Size 50, RB Offset 0



Date: 21.MAR.2012 03:38:32

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

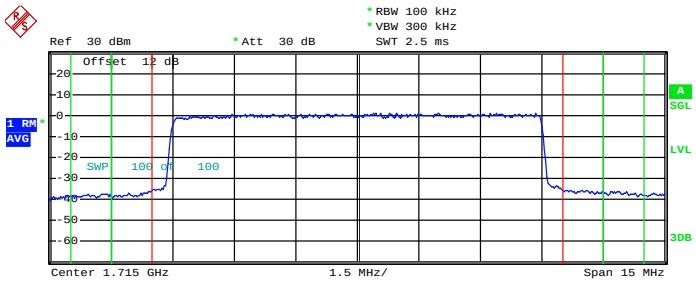
Lower Band Edge Plot for 16QAM -RB Size 1, RB Offset 0



Tx Channel			
Bandwidth	10 MHz	Power	20.62 dBm
Adjacent Channel			
Bandwidth	1 MHz	Lower	-35.92 dBm
Spacing	5.5 MHz		
Alternate Channel			
Bandwidth	1 MHz	Lower	-40.51 dBm
Spacing	6.5 MHz		

Date: 21.MAR.2012 03:36:19

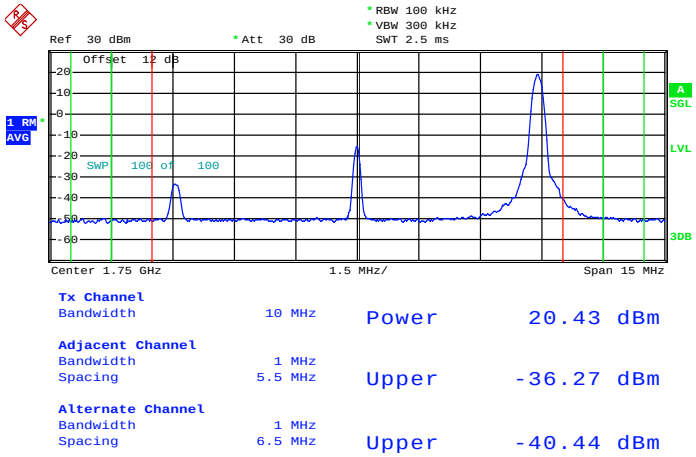
Lower Band Edge Plot for 16QAM -RB Size 50, RB Offset 0



Tx Channel			
Bandwidth	10 MHz	Power	19.08 dBm
Adjacent Channel			
Bandwidth	1 MHz	Lower	-28.00 dBm
Spacing	5.5 MHz		
Alternate Channel			
Bandwidth	1 MHz	Lower	-28.53 dBm
Spacing	6.5 MHz		

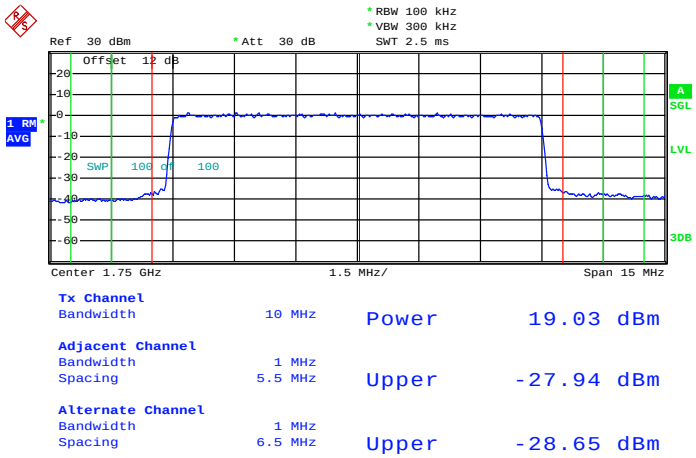
Date: 21.MAR.2012 03:36:56

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



Date: 21.MAR.2012 03:38:08

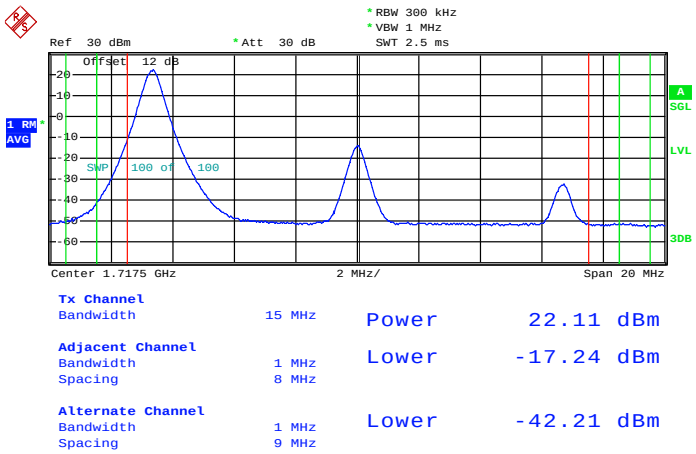
Higher Band Edge Plot for 16QAM -RB Size 50, RB Offset 0



Date: 21.MAR.2012 03:38:49

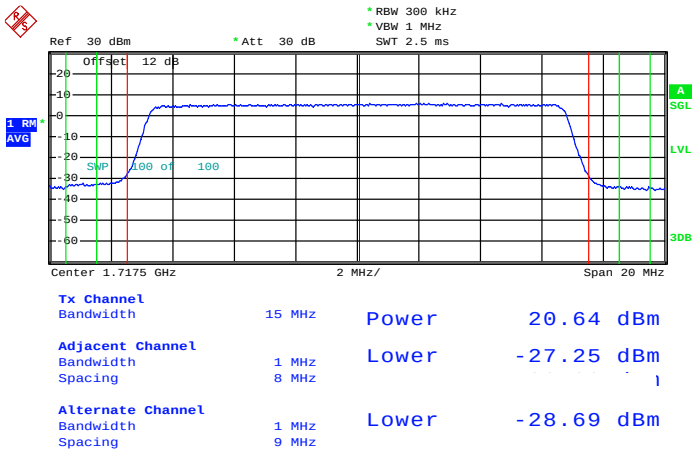
Band :	LTE Band 4	Band Width	15MHz / QPSK

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



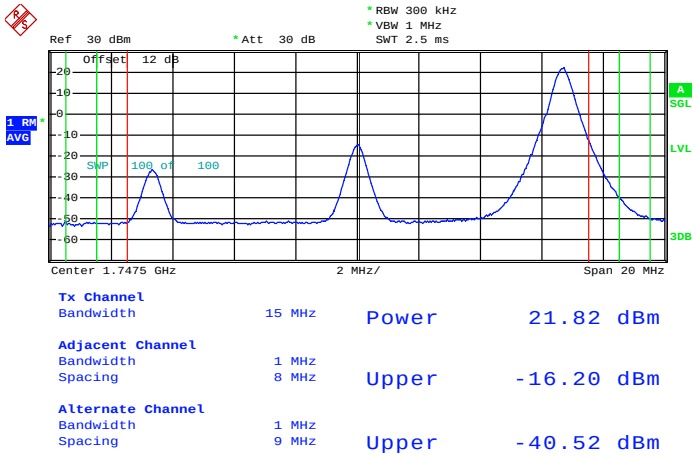
Date: 21.MAR.2012 19:42:47

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



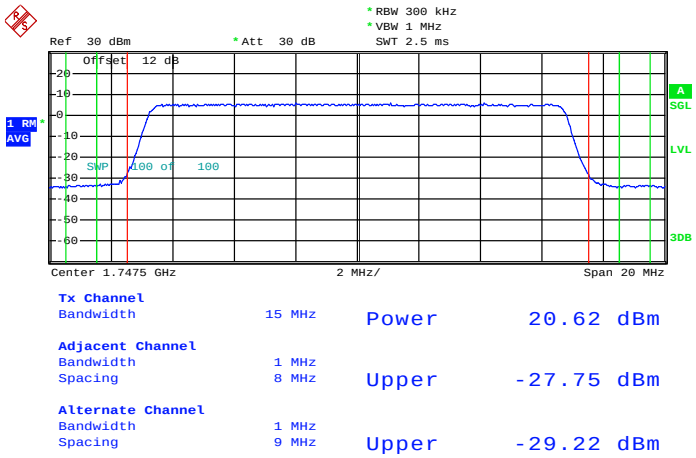
Date: 21.MAR.2012 19:43:34

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



Date: 21.MAR.2012 19:46:07

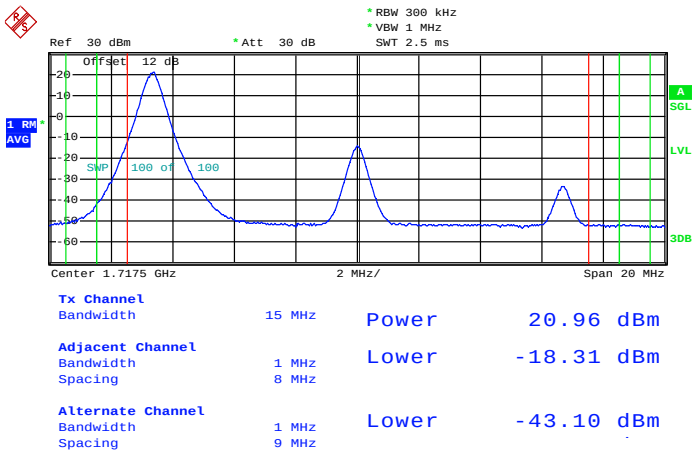
Higher Band Edge Plot for QPSK-RB Size 75, RB Offset 0



Date: 21.MAR.2012 19:46:54

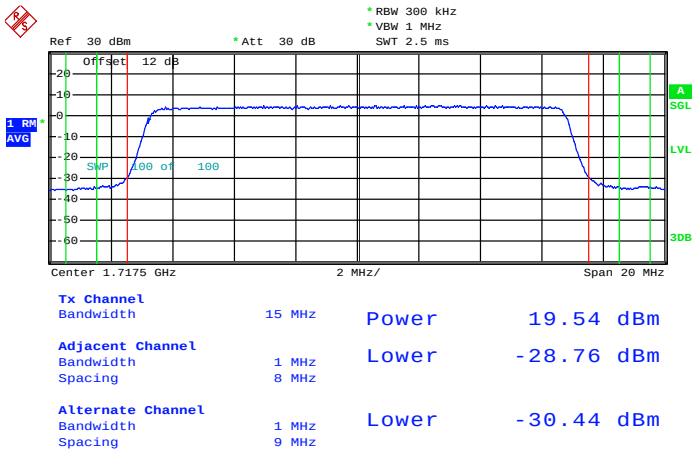
Band :	LTE Band 4	Band Width	15MHz / 16QAM

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



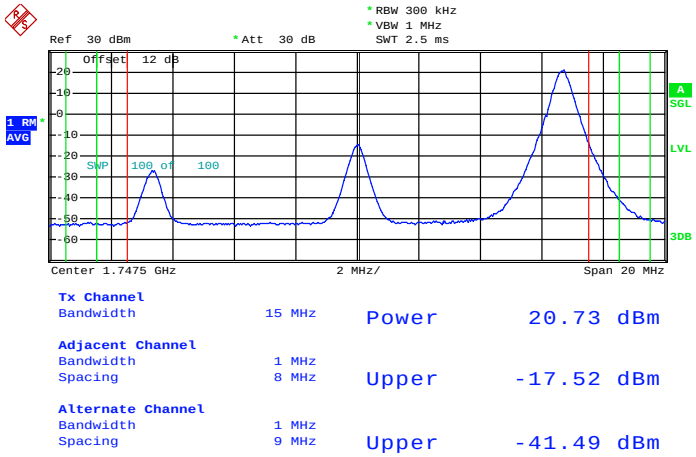
Date: 21.MAR.2012 19:43:09

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



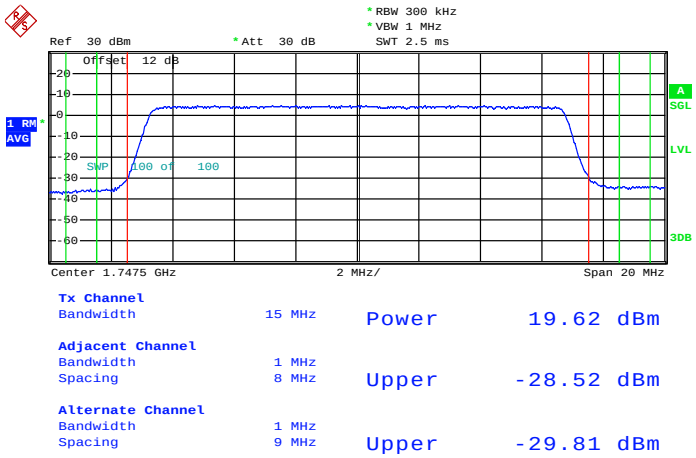
Date: 21.MAR.2012 19:43:49

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



Date: 21.MAR.2012 19:46:29

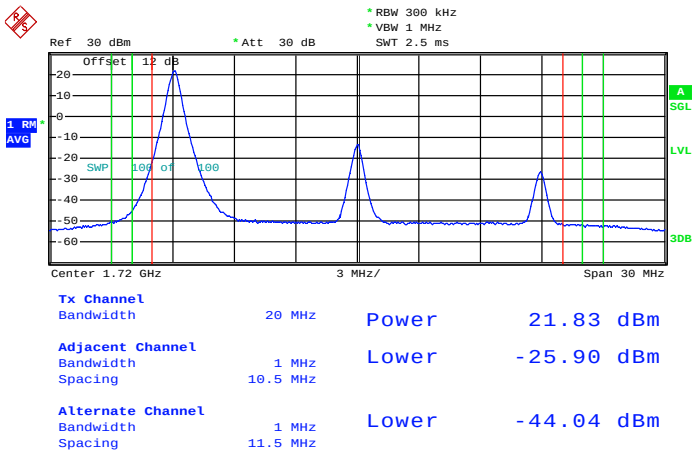
Higher Band Edge Plot for 16QAM-RB Size 75, RB Offset 0



Date: 21.MAR.2012 19:47:15

Band :	LTE Band 4	Band Width	20MHz / QPSK

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



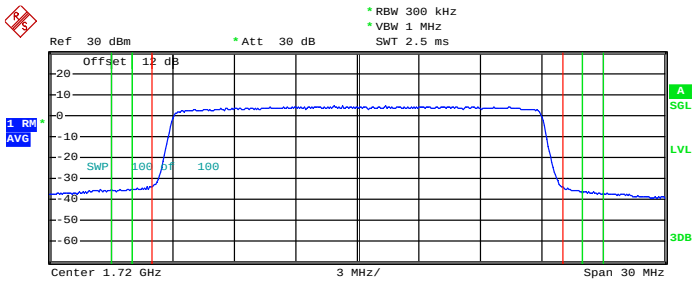
Tx Channel
Bandwidth 20 MHz — Power 21.83 dBm

Adjacent Channel
Bandwidth 1 MHz
Spacing 10.5 MHz — Lower -25.90 dBm

Alternate Channel
Bandwidth 1 MHz
Spacing 11.5 MHz — Lower -44.04 dBm

Date: 21.MAR.2012 20:36:19

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



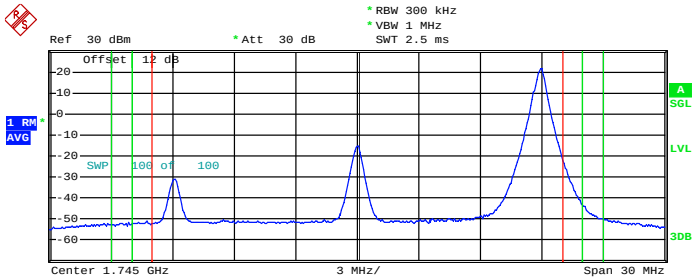
Tx Channel
Bandwidth 20 MHz — Power 20.46 dBm

Adjacent Channel
Bandwidth 1 MHz
Spacing 10.5 MHz — Lower -30.28 dBm

Alternate Channel
Bandwidth 1 MHz
Spacing 11.5 MHz — Lower -31.16 dBm

Date: 21.MAR.2012 20:37:15

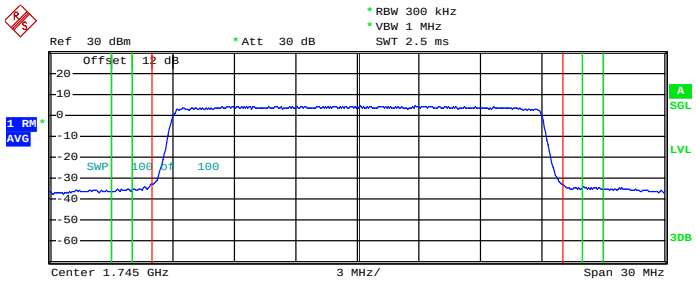
Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 99



Tx Channel			
Bandwidth	20 MHz	Power	21.41 dBm
Adjacent Channel			
Bandwidth	1 MHz		
Spacing	10.5 MHz	Upper	-24.31 dBm
Alternate Channel			
Bandwidth	1 MHz		
Spacing	11.5 MHz	Upper	-42.77 dBm

Date: 21.MAR.2012 20:39:27

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

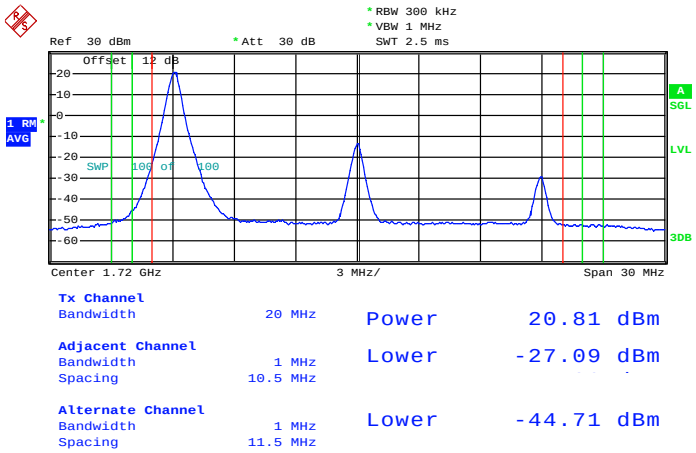


Tx Channel			
Bandwidth	20 MHz	Power	20.54 dBm
Adjacent Channel			
Bandwidth	1 MHz		
Spacing	10.5 MHz	Upper	-30.12 dBm
Alternate Channel			
Bandwidth	1 MHz		
Spacing	11.5 MHz	Upper	-30.37 dBm

Date: 21.MAR.2012 20:40:39

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

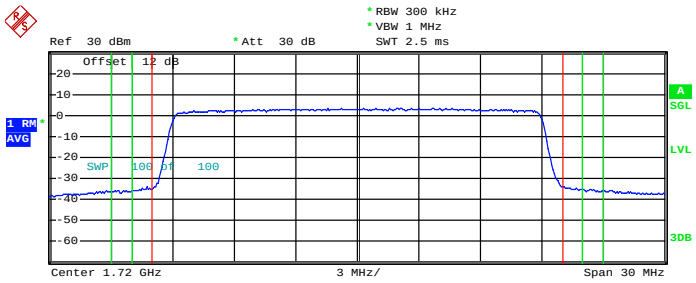
Lower Band Edge Plot for 16QAM -RB Size 1, RB Offset 0



Tx Channel			
Bandwidth	20 MHz	Power	20.81 dBm
Adjacent Channel			
Bandwidth	1 MHz	Lower	-27.09 dBm
Spacing	10.5 MHz		
Alternate Channel			
Bandwidth	1 MHz	Lower	-44.71 dBm
Spacing	11.5 MHz		

Date: 21.MAR.2012 20:36:40

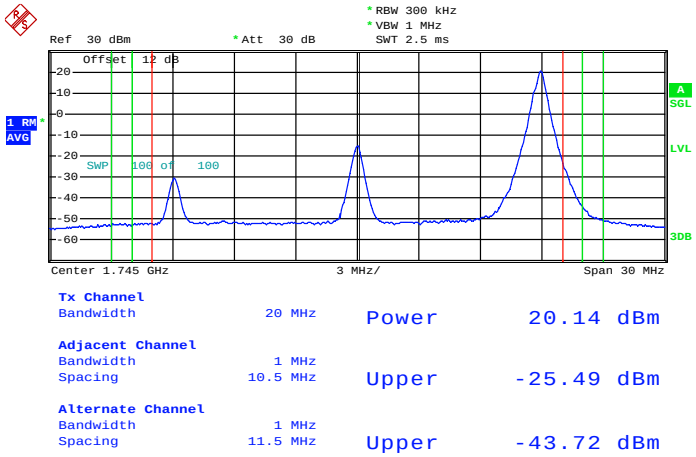
Lower Band Edge Plot for 16QAM -RB Size 100, RB Offset 0



Tx Channel			
Bandwidth	20 MHz	Power	19.55 dBm
Adjacent Channel			
Bandwidth	1 MHz	Lower	-30.79 dBm
Spacing	10.5 MHz		
Alternate Channel			
Bandwidth	1 MHz	Lower	-31.71 dBm
Spacing	11.5 MHz		

Date: 21.MAR.2012 20:37:43

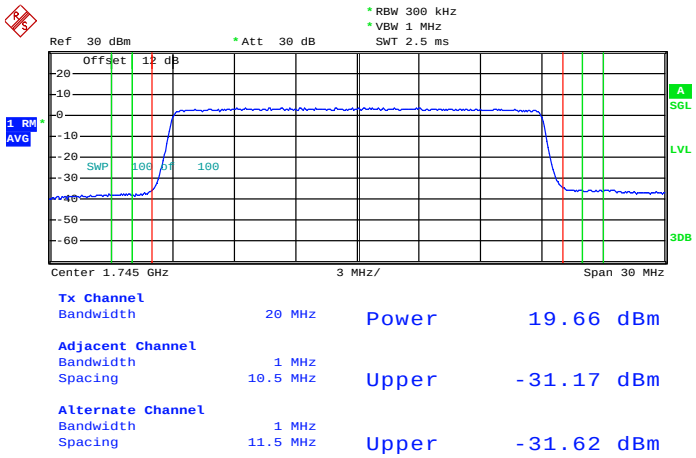
Higher Band Edge Plot for 16QAM -RB Size 1, RB Offset 99



Tx Channel			
Bandwidth	20 MHz	Power	20.14 dBm
Adjacent Channel			
Bandwidth	1 MHz		
Spacing	10.5 MHz	Upper	-25.49 dBm
Alternate Channel			
Bandwidth	1 MHz		
Spacing	11.5 MHz	Upper	-43.72 dBm

Date: 21.MAR.2012 20:40:05

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



Tx Channel			
Bandwidth	20 MHz	Power	19.66 dBm
Adjacent Channel			
Bandwidth	1 MHz		
Spacing	10.5 MHz	Upper	-31.17 dBm
Alternate Channel			
Bandwidth	1 MHz		
Spacing	11.5 MHz	Upper	-31.62 dBm

Date: 21.MAR.2012 20:41:00

3.6 Conducted Emission Measurement

3.6.1 Description of Conducted 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 30 MHz up to a frequency including its 10^{th} harmonic.

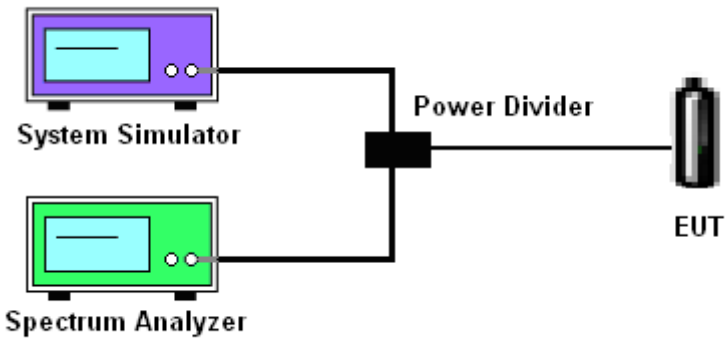
3.6.2 Measuring Instruments

See list of measuring instruments of this test report.

3.6.3 Test Procedures

1. The EUT was connected to spectrum analyzer and base station via power divider.
2. The middle channel for the highest RF power within the transmitting frequency was measured.
3. The conducted spurious emission for the whole frequency range was taken.

3.6.4 Test Setup

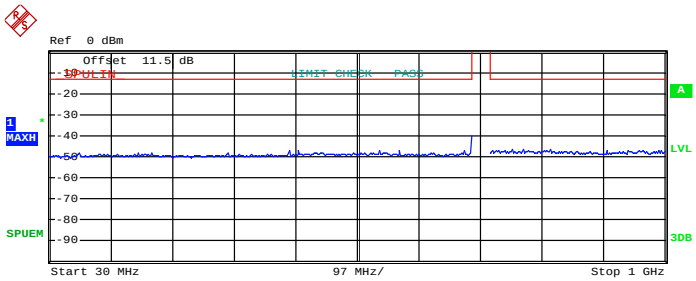


3.6.5 Test Result (Plots) of Conducted Emission

Band :	LTE Band 17	Bandwidth:	5MHz / QPSK
Frequency :	706.5	Channel :	23755

Conducted Emission Plot (30MHz ~ 1GHz) for

QPSK (RB Size 1, RB Offset 0)

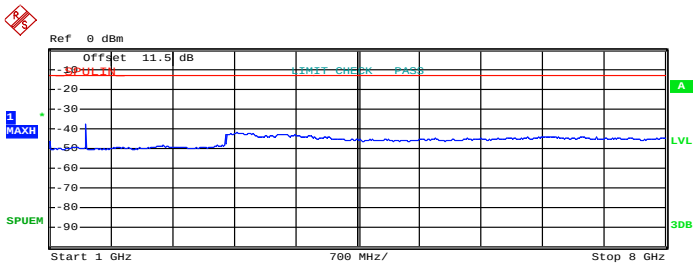


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	695.000 M	1.00 M	694.667500 M	-46.86	-33.86
725.000 M	1.000 G	1.00 M	775.875000 M	-46.48	-33.48

Date: 21.MAR.2012 03:13:24

Conducted Emission Plot (1GHz ~ 8GHz) for

QPSK (RB Size 1, RB Offset 0)



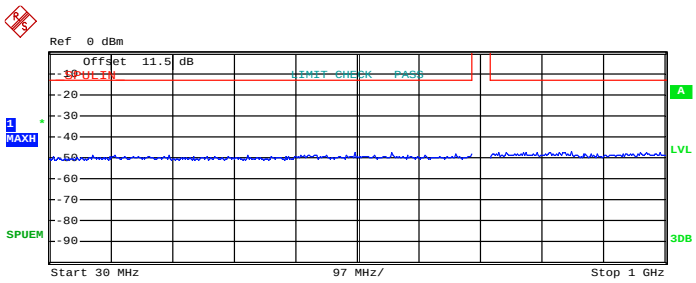
Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
1.000 G	1.000 G	1.00 M	1.000000 G	-46.23	-33.23
1.000 G	4.000 G	1.00 M	1.408000 G	-37.45	-24.45
4.000 G	8.000 G	1.00 M	4.166000 G	-43.93	-30.93

Date: 21.MAR.2012 03:04:59

Band :	LTE Band 17	Bandwidth:	5MHz / 16QAM
Frequency :	706.5	Channel :	23755

Conducted Emission Plot (30MHz ~ 1GHz) for

16-QAM (RB Size 1, RB Offset 24)

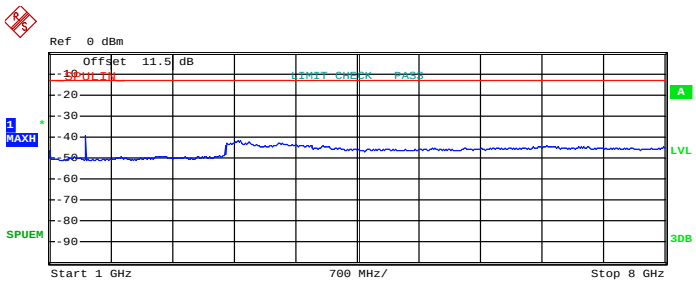


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	695.000 M	1.00 M	569.315000 M	-47.53	-34.53
725.000 M	1.000 G	1.00 M	852.600000 M	-46.98	-33.98

Date: 21.MAR.2012 03:13:54

Conducted Emission Plot (1GHz ~ 8GHz) for

16-QAM (RB Size 1, RB Offset 24)



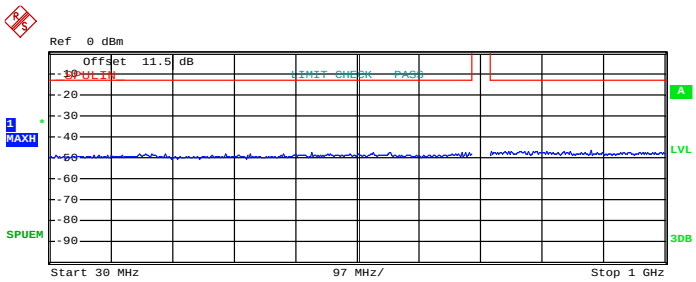
Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
1.000 G	1.000 G	1.00 M	1.000000 G	-46.75	-33.75
1.000 G	4.000 G	1.00 M	1.408000 G	-39.48	-26.48
4.000 G	8.000 G	1.00 M	4.102000 G	-44.24	-31.24

Date: 21.MAR.2012 03:05:30

Band :	LTE Band 17	Bandwidth:	10MHz / QPSK
Frequency :	710	Channel :	23790

Conducted Emission Plot (30MHz ~ 1GHz) for

QPSK (RB Size 1, RB Offset 0)

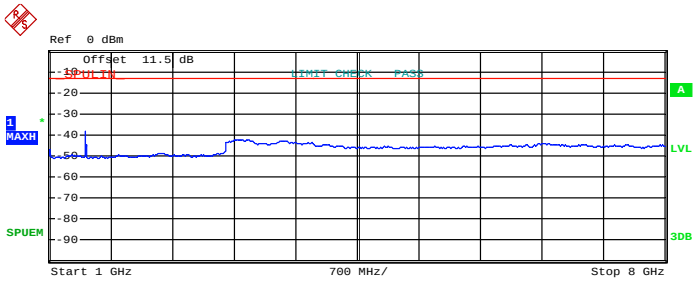


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	695.000 M	1.00 M	540.387500 M	-47.38	-34.38
725.000 M	1.000 G	1.00 M	884.362500 M	-46.76	-33.76

Date: 21.MAR.2012 02:50:25

Conducted Emission Plot (1GHz ~ 8GHz) for

QPSK (RB Size 1, RB Offset 0)



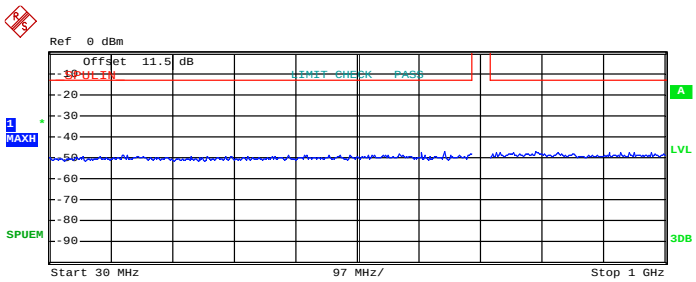
Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
1.000 G	1.000 G	1.00 M	1.000000 G	-47.25	-34.25
1.000 G	4.000 G	1.00 M	1.411000 G	-38.02	-25.02
4.000 G	8.000 G	1.00 M	6.562000 G	-44.00	-31.00

Date: 21.MAR.2012 02:55:14

Band :	LTE Band 17	Bandwidth :	10MHz / 16QAM
Frequency :	710	Channel :	23790

Conducted Emission Plot (30MHz ~ 1GHz) for

16-QAM (RB Size 25, RB Offset 13)

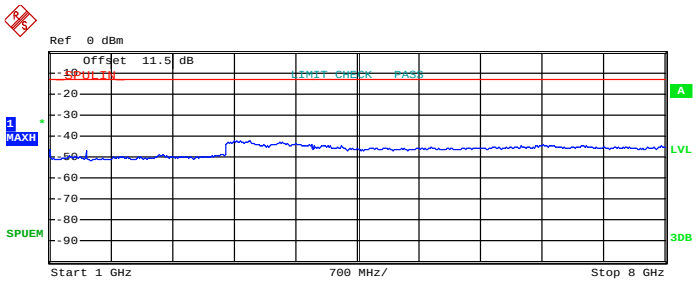


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	695.000 M	1.00 M	651.775000 M	-47.32	-34.32
725.000 M	1.000 G	1.00 M	796.500000 M	-46.91	-33.91

Date: 21.MAR.2012 02:50:57

Conducted Emission Plot (1GHz ~ 8GHz) for

16-QAM (RB Size 25, RB Offset 13)



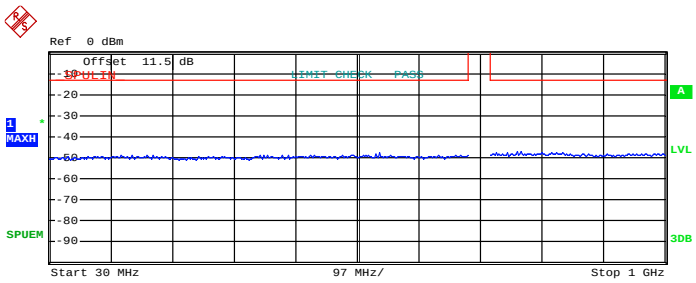
Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
1.000 G	1.000 G	1.00 M	1.000000 G	-46.77	-33.77
1.000 G	4.000 G	1.00 M	3.100000 G	-42.31	-29.31
4.000 G	8.000 G	1.00 M	6.610000 G	-44.12	-31.12

Date: 21.MAR.2012 02:56:02

Band :	LTE Band 12	Bandwidth :	1.4MHz / QPSK
Frequency :	699.7	Channel :	23017

Conducted Emission Plot (30MHz ~ 1GHz) for

QPSK (RB Size 1, RB Offset 0)

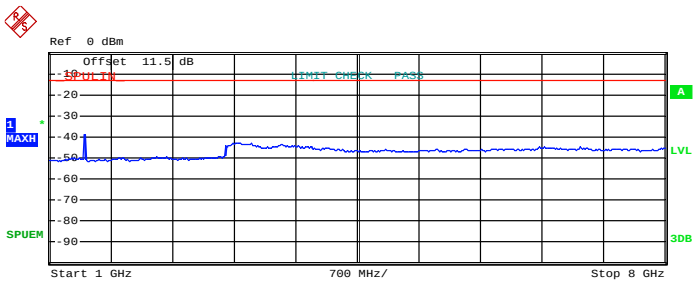


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	690.000 M	1.00 M	550.410000 M	-47.74	-34.74
725.000 M	1.000 G	1.00 M	772.987500 M	-47.07	-34.07

Date: 22.MAR.2012 00:23:16

Conducted Emission Plot (1GHz ~ 8GHz) for

QPSK (RB Size 1, RB Offset 0)



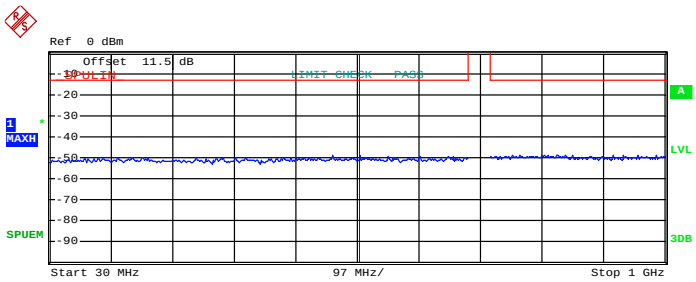
Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
1.000 G	4.000 G	1.00 M	1.399000 G	-38.68	-25.68
4.000 G	8.000 G	1.00 M	6.620000 G	-44.58	-31.58

Date: 21.MAR.2012 23:26:31

Band :	LTE Band 12	Bandwidth :	1.4MHz / 16QAM
Frequency :	699.7	Channel :	23017

Conducted Emission Plot (30MHz ~ 1GHz) for

16-QAM (RB Size 1, RB Offset 0)

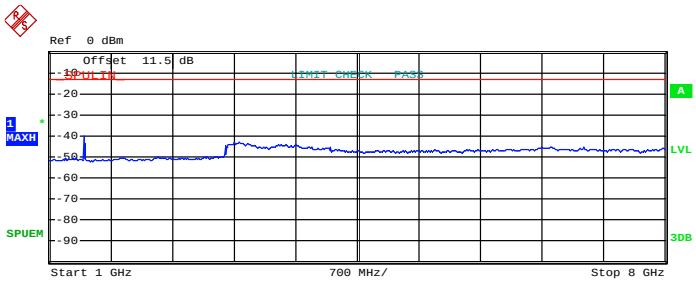


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	690.000 M	1.00 M	476.490000 M	-49.02	-36.02
725.000 M	1.000 G	1.00 M	934.000000 M	-48.59	-35.59

Date: 22.MAR.2012 00:23:37

Conducted Emission Plot (1GHz ~ 8GHz) for

16-QAM (RB Size 1, RB Offset 0)



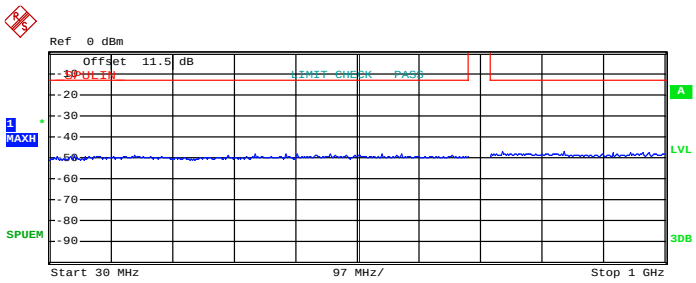
Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
1.000 G	4.000 G	1.00 M	1.397500 G	-39.85	-26.85
4.000 G	8.000 G	1.00 M	7.068000 G	-45.06	-32.06

Date: 21.MAR.2012 23:26:46

Band :	LTE Band 12	Bandwidth :	3MHz / QPSK
Frequency :	700.5	Channel :	23025

Conducted Emission Plot (30MHz ~ 1GHz) for

QPSK (RB Size 1, RB Offset 0)

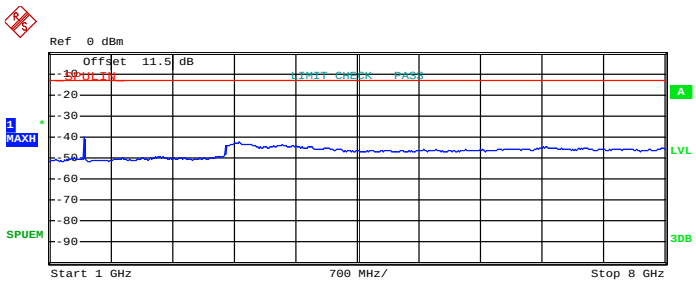


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	690.000 M	1.00 M	472.200000 M	-48.12	-35.12
725.000 M	1.000 G	1.00 M	840.775000 M	-47.10	-34.10

Date: 22.MAR.2012 00:16:42

Conducted Emission Plot (1GHz ~ 8GHz) for

QPSK (RB Size 1, RB Offset 0)



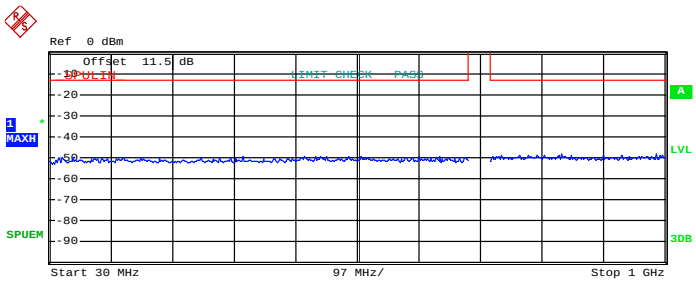
Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
1.000 G	4.000 G	1.00 M	1.397500 G	-39.78	-26.78
4.000 G	8.000 G	1.00 M	6.636000 G	-44.93	-31.93

Date: 21.MAR.2012 23:28:30

Band :	LTE Band 12	Bandwidth :	3MHz / 16QAM
Frequency :	707.5	Channel :	23095

Conducted Emission Plot (30MHz ~ 1GHz) for

16-QAM (RB Size 1, RB Offset 14)

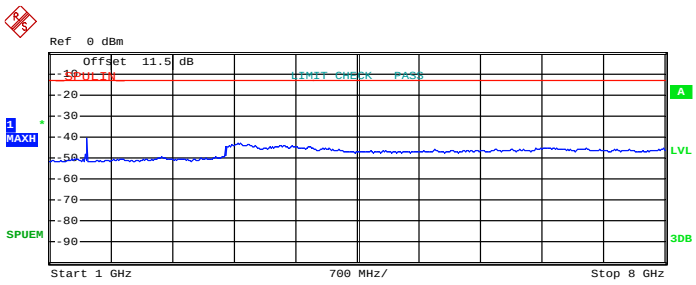


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	690.000 M	1.00 M	500.250000 M	-49.18	-36.18
725.000 M	1.000 G	1.00 M	837.200000 M	-48.36	-35.36

Date: 22.MAR.2012 00:18:45

Conducted Emission Plot (1GHz ~ 8GHz) for

16-QAM (RB Size 1, RB Offset 14)



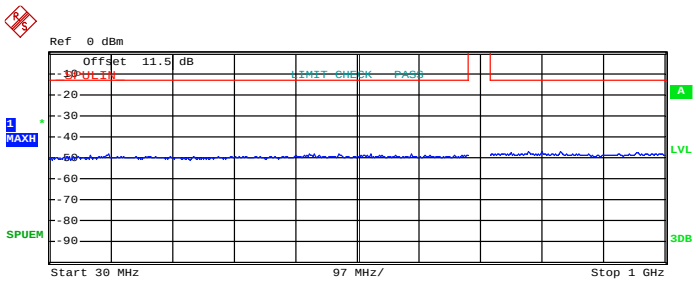
Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
1.000 G	4.000 G	1.00 M	1.412500 G	-40.73	-27.73
4.000 G	8.000 G	1.00 M	6.624000 G	-45.10	-32.10

Date: 21.MAR.2012 23:30:43

Band :	LTE Band 12	Bandwidth :	5MHz / QPSK
Frequency :	707.5	Channel :	23095

Conducted Emission Plot (30MHz ~ 1GHz) for

QPSK (RB Size 1, RB Offset 24)

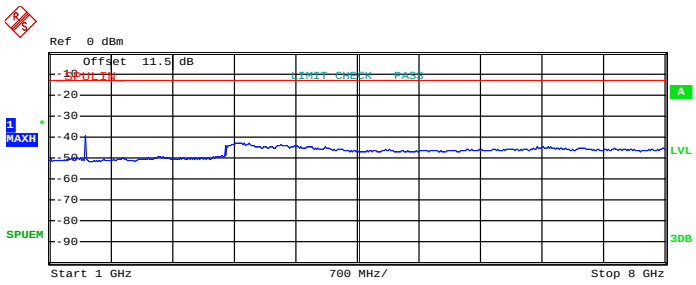


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	690.000 M	1.00 M	447.450000 M	-47.99	-34.99
725.000 M	1.000 G	1.00 M	784.400000 M	-47.08	-34.08

Date: 22.MAR.2012 00:12:57

Conducted Emission Plot (1GHz ~ 8GHz) for

QPSK (RB Size 1, RB Offset 24)



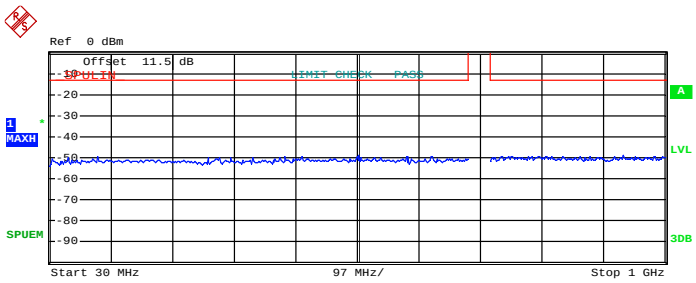
Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
1.000 G	4.000 G	1.00 M	1.411000 G	-39.19	-26.19
4.000 G	8.000 G	1.00 M	6.594000 G	-44.61	-31.61

Date: 21.MAR.2012 23:39:18

Band :	LTE Band 12	Bandwidth :	5MHz / 16QAM
Frequency :	707.5	Channel :	23095

Conducted Emission Plot (30MHz ~ 1GHz) for

16-QAM (RB Size 25, RB Offset 0)

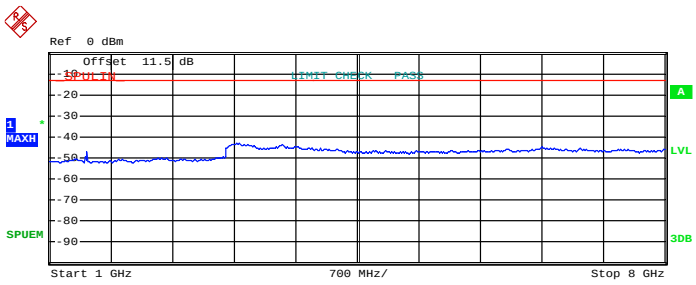


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	690.000 M	1.00 M	517.080000 M	-48.90	-35.90
725.000 M	1.000 G	1.00 M	933.862500 M	-48.94	-35.94

Date: 22.MAR.2012 00:13:26

Conducted Emission Plot (1GHz ~ 8GHz) for

16-QAM (RB Size 25, RB Offset 0)



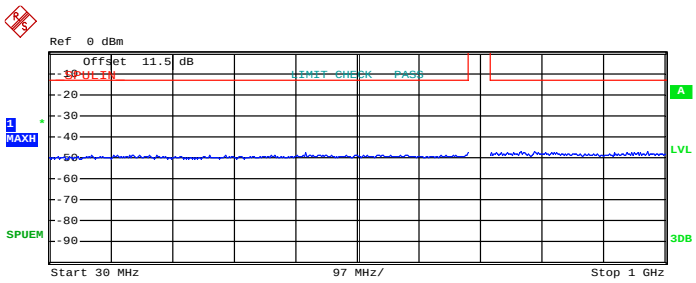
Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
1.000 G	4.000 G	1.00 M	3.130000 G	-42.93	-29.93
4.000 G	8.000 G	1.00 M	6.602000 G	-44.99	-31.99

Date: 21.MAR.2012 23:42:27

Band :	LTE Band 12	Bandwidth:	10MHz / QPSK
Frequency :	703.7	Channel :	23057

Conducted Emission Plot (30MHz ~ 1GHz) for

QPSK (RB Size 50, RB Offset 0)

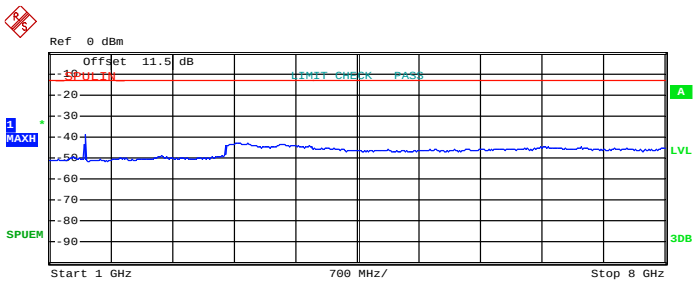


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	690.000 M	1.00 M	433.260000 M	-47.39	-34.39
725.000 M	1.000 G	1.00 M	772.987500 M	-46.98	-33.98

Date: 21.MAR.2012 23:56:31

Conducted Emission Plot (1GHz ~ 8GHz) for

QPSK (RB Size 50, RB Offset 0)



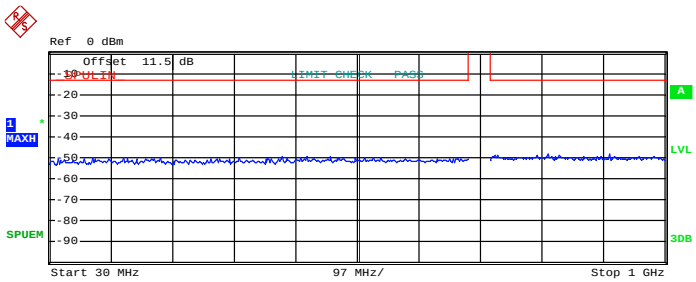
Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
1.000 G	4.000 G	1.00 M	1.399000 G	-38.78	-25.78
4.000 G	8.000 G	1.00 M	6.630000 G	-44.66	-31.66

Date: 21.MAR.2012 23:46:49

Band :	LTE Band 12	Bandwidth:	10MHz / 16QAM
Frequency :	703.7	Channel :	23057

Conducted Emission Plot (30MHz ~ 1GHz) for

16-QAM (RB Size 1, RB Offset 49)

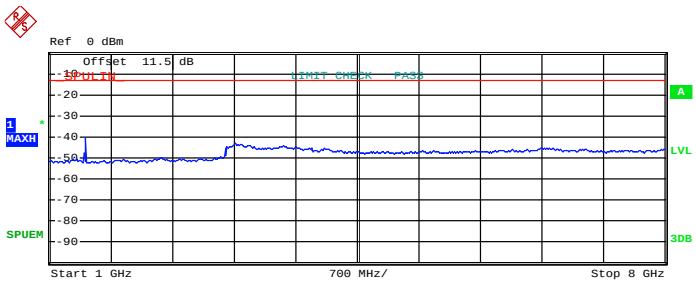


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	690.000 M	1.00 M	435.900000 M	-49.44	-36.44
725.000 M	1.000 G	1.00 M	816.300000 M	-48.21	-35.21

Date: 21.MAR.2012 23:56:59

Conducted Emission Plot (1GHz ~ 8GHz) for

16-QAM (RB Size 1, RB Offset 49)



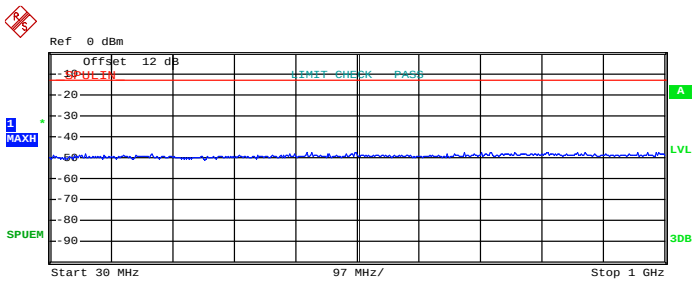
Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
1.000 G	4.000 G	1.00 M	1.399000 G	-40.92	-27.92
4.000 G	8.000 G	1.00 M	6.592000 G	-45.12	-32.12

Date: 21.MAR.2012 23:47:09

Band :	LTE Band 4	Bandwidth :	1.4MHz / QPSK
Frequency :	1754.3	Channel :	20393

Conducted Emission Plot (30MHz ~ 1GHz) for

QPSK (RB Size 1, RB Offset 0)

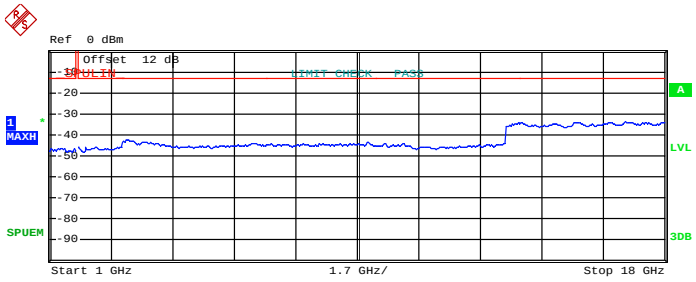


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	1.000 G	1.00 M	510.150000 M	-47.41	-34.41

Date: 21.MAR.2012 21:44:30

Conducted Emission Plot (1GHz ~ 18GHz) for

QPSK (RB Size 1, RB Offset 0)



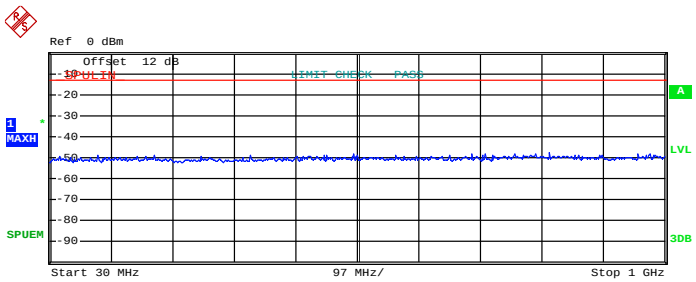
Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
1.000 G	1.700 G	1.00 M	1.348950 G	-46.24	-33.24
1.765 G	3.000 G	1.00 M	1.765618 G	-45.68	-32.68
3.000 G	7.000 G	1.00 M	3.102000 G	-42.34	-29.34
7.000 G	10.000 G	1.00 M	9.806500 G	-43.70	-30.70
10.000 G	14.000 G	1.00 M	13.972000 G	-33.98	-20.98
14.000 G	18.000 G	1.00 M	16.926000 G	-33.86	-20.86

Date: 21.MAR.2012 22:32:18

Band :	LTE Band 4	Bandwidth :	1.4MHz / 16QAM
Frequency :	1754.3	Channel :	20393

Conducted Emission Plot (30MHz ~ 1GHz) for

16-QAM (RB Size 3, RB Offset 2)

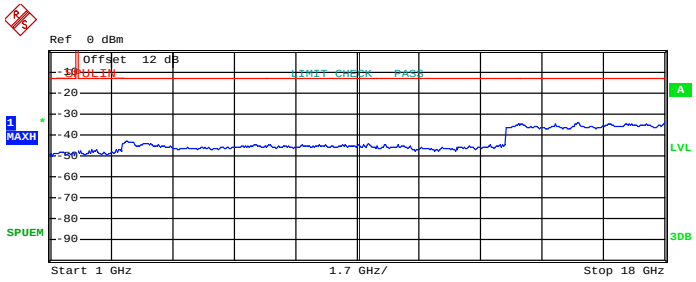


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	1.000 G	1.00 M	817.640000 M	-47.79	-34.79

Date: 21.MAR.2012 21:44:57

Conducted Emission Plot (1GHz ~ 18GHz) for

16-QAM (RB Size 3, RB Offset 2)



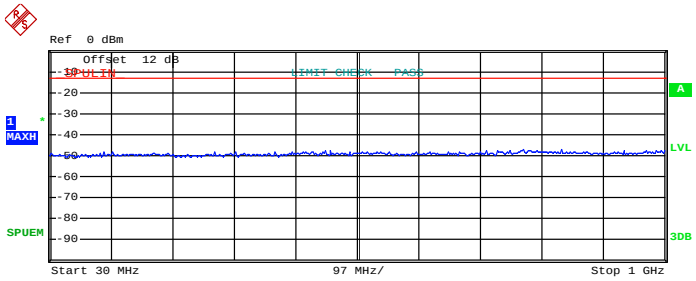
Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
1.000 G	1.700 G	1.00 M	1.286650 G	-48.09	-35.09
1.765 G	3.000 G	1.00 M	2.839450 G	-47.05	-34.05
3.000 G	7.000 G	1.00 M	3.140000 G	-43.05	-30.05
7.000 G	10.000 G	1.00 M	9.805000 G	-44.13	-31.13
10.000 G	14.000 G	1.00 M	13.982000 G	-34.97	-21.97
14.000 G	18.000 G	1.00 M	15.574000 G	-34.14	-21.14

Date: 21.MAR.2012 22:32:49

Band :	LTE Band 4	Bandwidth :	3MHz / QPSK
Frequency :	1753.5	Channel :	20385

Conducted Emission Plot (30MHz ~ 1GHz) for

QPSK (RB Size 1, RB Offset 14)

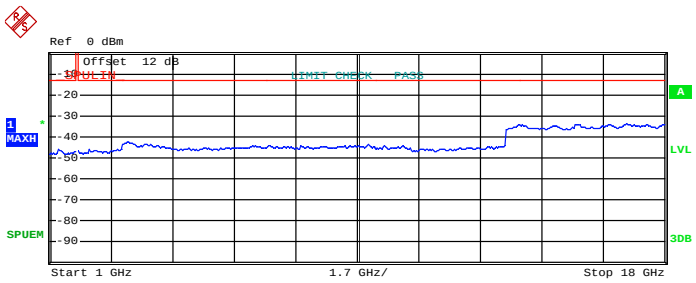


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	1.000 G	1.00 M	836.070000 M	-47.25	-34.25

Date: 21.MAR.2012 21:48:22

Conducted Emission Plot (1GHz ~ 18GHz) for

QPSK (RB Size 1, RB Offset 14)



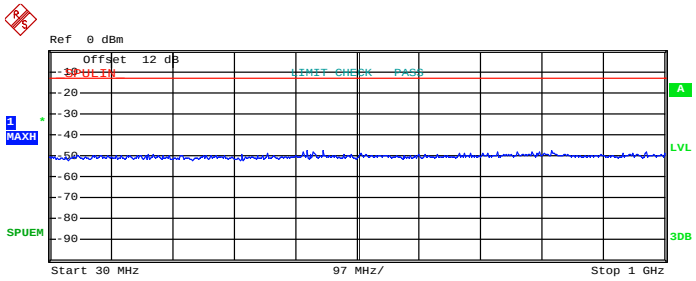
Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
1.000 G	1.700 G	1.00 M	1.248500 G	-45.94	-32.94
1.765 G	3.000 G	1.00 M	2.954922 G	-46.03	-33.03
3.000 G	7.000 G	1.00 M	3.144000 G	-42.48	-29.48
7.000 G	10.000 G	1.00 M	9.815500 G	-43.34	-30.34
10.000 G	14.000 G	1.00 M	13.978000 G	-34.34	-21.34
14.000 G	18.000 G	1.00 M	16.934000 G	-33.61	-20.61

Date: 21.MAR.2012 22:24:10

Band :	LTE Band 4	Bandwidth :	3MHz / 16QAM
Frequency :	1711.5	Channel :	19965

Conducted Emission Plot (30MHz ~ 1GHz) for

16-QAM (RB Size 1, RB Offset 14)

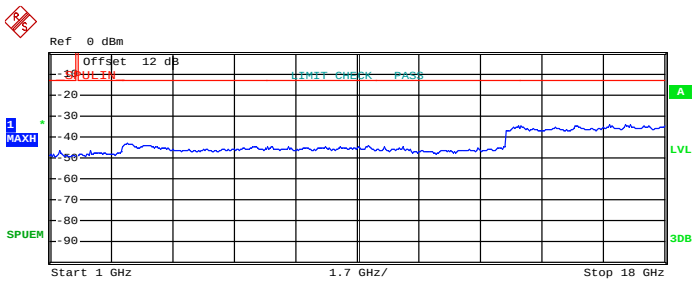


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	1.000 G	1.00 M	821.520000 M	-47.48	-34.48

Date: 21.MAR.2012 21:46:39

Conducted Emission Plot (1GHz ~ 18GHz) for

16-QAM (RB Size 1, RB Offset 14)



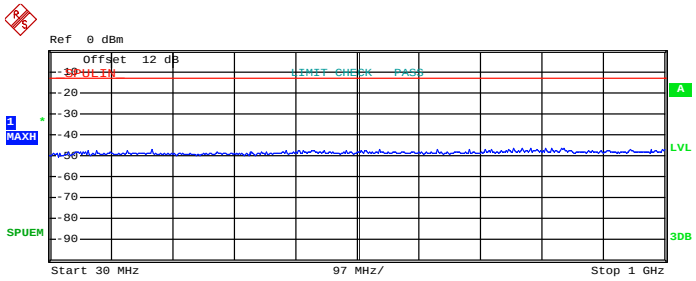
Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
1.000 G	1.700 G	1.00 M	1.266350 G	-46.40	-33.40
1.765 G	3.000 G	1.00 M	2.107095 G	-46.76	-33.76
3.000 G	7.000 G	1.00 M	3.142000 G	-42.99	-29.99
7.000 G	10.000 G	1.00 M	9.796000 G	-44.28	-31.28
10.000 G	14.000 G	1.00 M	13.990000 G	-34.63	-21.63
14.000 G	18.000 G	1.00 M	16.916000 G	-34.08	-21.08

Date: 21.MAR.2012 22:21:14

Band :	LTE Band 4	Bandwidth :	5MHz / QPSK
Frequency :	1752.5	Channel :	20375

Conducted Emission Plot (30MHz ~ 1GHz) for

QPSK (RB Size 1, RB Offset 24)

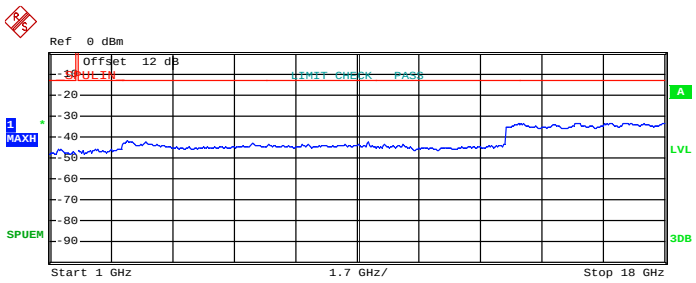


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	1.000 G	1.00 M	811.335000 M	-46.44	-33.44

Date: 21.MAR.2012 01:57:21

Conducted Emission Plot (1GHz ~ 18GHz) for

QPSK (RB Size 1, RB Offset 24)



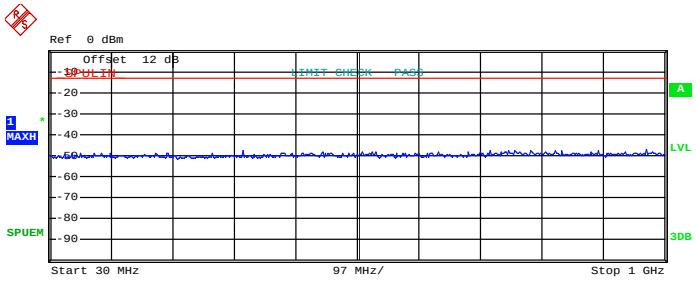
Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
1.000 G	1.700 G	1.00 M	1.227500 G	-45.67	-32.67
1.765 G	3.000 G	1.00 M	2.982710 G	-45.64	-32.64
3.000 G	7.000 G	1.00 M	3.146000 G	-41.87	-28.87
7.000 G	10.000 G	1.00 M	9.790000 G	-42.40	-29.40
10.000 G	14.000 G	1.00 M	13.974000 G	-33.92	-20.92
14.000 G	18.000 G	1.00 M	15.612000 G	-33.34	-20.34

Date: 21.MAR.2012 01:51:46

Band :	LTE Band 4	Bandwidth :	5MHz / 16QAM
Frequency :	1752.5	Channel :	20375

Conducted Emission Plot (30MHz ~ 1GHz) for

16-QAM (RB Size 1, RB Offset 0)

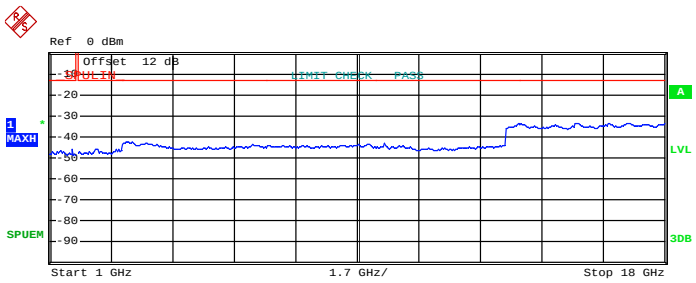


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	1.000 G	1.00 M	970.900000 M	-47.35	-34.35

Date: 21.MAR.2012 01:57:48

Conducted Emission Plot (1GHz ~ 18GHz) for

16-QAM (RB Size 1, RB Offset 0)



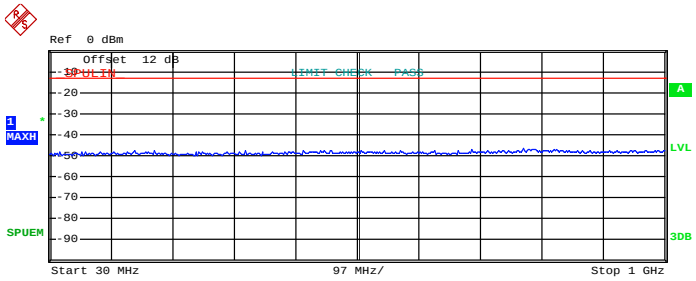
Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
1.000 G	1.700 G	1.00 M	1.597450 G	-46.17	-33.17
1.765 G	3.000 G	1.00 M	2.309017 G	-45.68	-32.68
3.000 G	7.000 G	1.00 M	3.120000 G	-42.16	-29.16
7.000 G	10.000 G	1.00 M	9.827500 G	-43.28	-30.28
10.000 G	14.000 G	1.00 M	13.956000 G	-33.91	-20.91
14.000 G	18.000 G	1.00 M	16.974000 G	-33.49	-20.49

Date: 21.MAR.2012 01:52:25

Band :	LTE Band 4	Bandwidth:	10MHz / QPSK
Frequency :	1750	Channel :	20350

Conducted Emission Plot (30MHz ~ 1GHz) for

QPSK (RB Size 1, RB Offset 49)

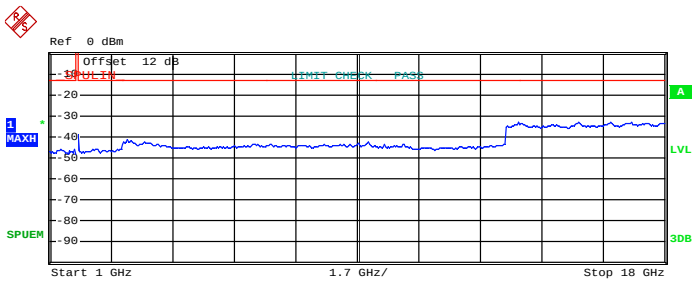


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	1.000 G	1.00 M	775.930000 M	-46.77	-33.77

Date: 21.MAR.2012 01:35:10

Conducted Emission Plot (1GHz ~ 18GHz) for

QPSK (RB Size 1, RB Offset 49)



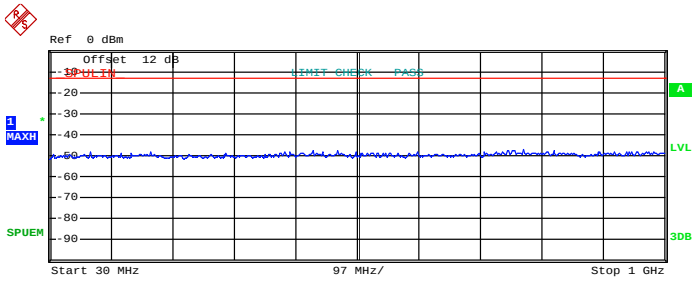
Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
1.000 G	1.700 G	1.00 M	1.303800 G	-45.79	-32.79
1.765 G	3.000 G	1.00 M	1.771793 G	-38.91	-25.91
3.000 G	7.000 G	1.00 M	3.148000 G	-41.42	-28.42
7.000 G	10.000 G	1.00 M	9.797500 G	-42.50	-29.50
10.000 G	14.000 G	1.00 M	13.974000 G	-33.11	-20.11
14.000 G	18.000 G	1.00 M	16.504000 G	-33.11	-20.11

Date: 21.MAR.2012 01:42:55

Band :	LTE Band 4	Bandwidth:	10MHz / 16QAM
Frequency :	1750	Channel :	20350

Conducted Emission Plot (30MHz ~ 1GHz) for

16-QAM (RB Size 1, RB Offset 0)

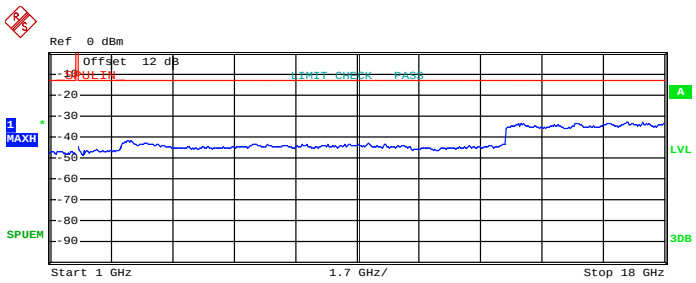


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	1.000 G	1.00 M	775.930000 M	-47.16	-34.16

Date: 21.MAR.2012 01:36:05

Conducted Emission Plot (1GHz ~ 18GHz) for

16-QAM (RB Size 1, RB Offset 0)



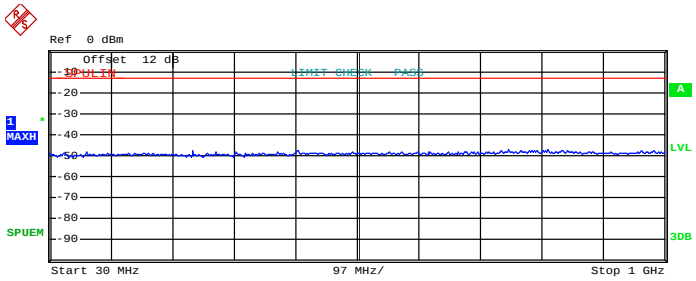
Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
1.000 G	1.700 G	1.00 M	1.249200 G	-46.80	-33.80
1.765 G	3.000 G	1.00 M	2.997530 G	-43.89	-30.89
3.000 G	7.000 G	1.00 M	3.126000 G	-41.73	-28.73
7.000 G	10.000 G	1.00 M	9.796000 G	-42.87	-29.87
10.000 G	14.000 G	1.00 M	13.960000 G	-33.62	-20.62
14.000 G	18.000 G	1.00 M	16.938000 G	-33.06	-20.06

Date: 21.MAR.2012 01:43:53

Band :	LTE Band 4	Bandwidth:	15MHz / QPSK
Frequency :	1747.5	Channel :	20325

Conducted Emission Plot (30MHz ~ 1GHz) for

QPSK (RB Size 1, RB Offset 74)

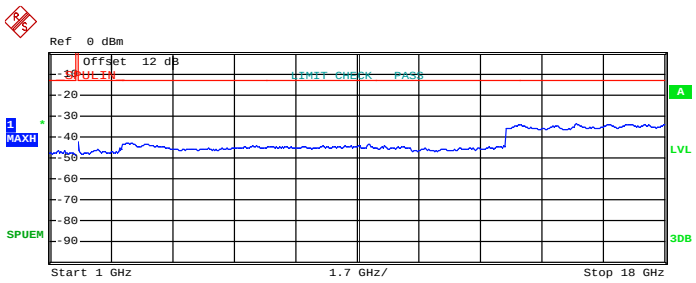


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	1.000 G	1.00 M	753.135000 M	-47.25	-34.25

Date: 21.MAR.2012 21:57:35

Conducted Emission Plot (1GHz ~ 18GHz) for

QPSK (RB Size 1, RB Offset 74)



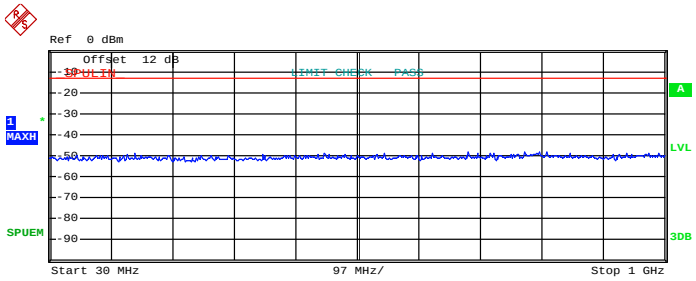
Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
1.000 G	1.700 G	1.00 M	1.239750 G	-46.72	-33.72
1.765 G	3.000 G	1.00 M	1.766852 G	-42.22	-29.22
3.000 G	7.000 G	1.00 M	3.124000 G	-42.71	-29.71
7.000 G	10.000 G	1.00 M	9.817000 G	-43.80	-30.80
10.000 G	14.000 G	1.00 M	13.964000 G	-34.31	-21.31
14.000 G	18.000 G	1.00 M	15.564000 G	-33.71	-20.71

Date: 21.MAR.2012 22:17:28

Band :	LTE Band 4	Bandwidth:	15MHz / 16QAM
Frequency :	1747.5	Channel :	20325

Conducted Emission Plot (30MHz ~ 1GHz) for

16-QAM (RB Size 1, RB Offset 74)

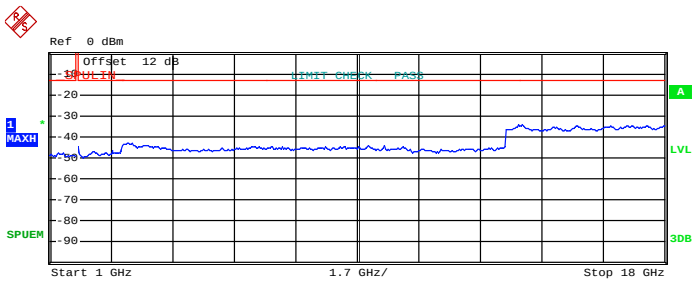


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	1.000 G	1.00 M	813.275000 M	-48.33	-35.33

Date: 21.MAR.2012 21:57:51

Conducted Emission Plot (1GHz ~ 18GHz) for

16-QAM (RB Size 1, RB Offset 74)



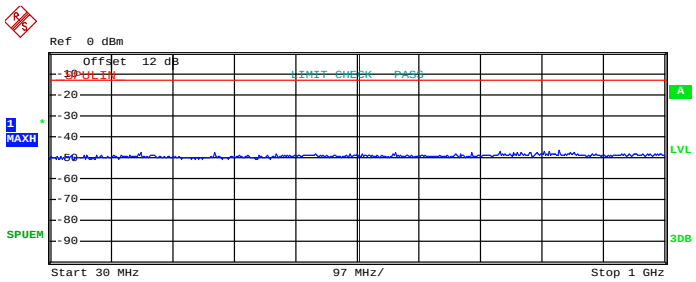
Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
1.000 G	1.700 G	1.00 M	1.387800 G	-47.79	-34.79
1.765 G	3.000 G	1.00 M	1.766852 G	-44.92	-31.92
3.000 G	7.000 G	1.00 M	3.290000 G	-43.11	-30.11
7.000 G	10.000 G	1.00 M	9.788500 G	-44.29	-31.29
10.000 G	14.000 G	1.00 M	13.968000 G	-34.50	-21.50
14.000 G	18.000 G	1.00 M	14.060000 G	-34.46	-21.46

Date: 21.MAR.2012 22:17:51

Band :	LTE Band 4	Bandwidth:	20MHz / QPSK
Frequency :	1745	Channel :	20300

Conducted Emission Plot (30MHz ~ 1GHz) for

QPSK (RB Size 1, RB Offset 99)

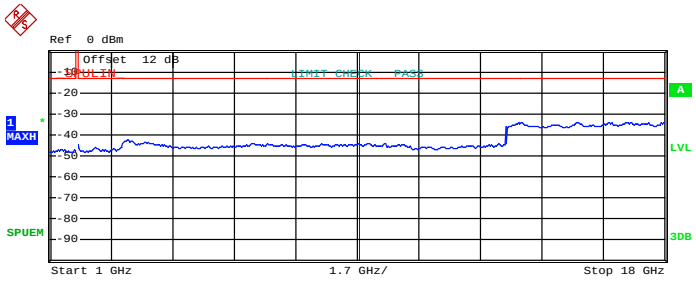


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	1.000 G	1.00 M	832.675000 M	-46.78	-33.78

Date: 21.MAR.2012 21:59:59

Conducted Emission Plot (1GHz ~ 18GHz) for

QPSK (RB Size 1, RB Offset 99)



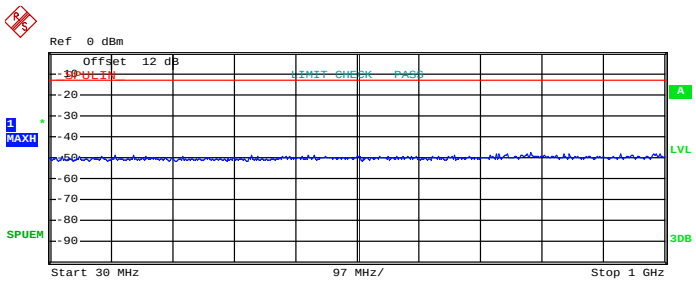
Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
1.000 G	1.700 G	1.00 M	1.317800 G	-47.00	-34.00
1.765 G	3.000 G	1.00 M	1.771793 G	-44.76	-31.76
3.000 G	7.000 G	1.00 M	3.142000 G	-42.20	-29.20
7.000 G	10.000 G	1.00 M	9.788500 G	-43.89	-30.89
10.000 G	14.000 G	1.00 M	13.982000 G	-34.03	-21.03
14.000 G	18.000 G	1.00 M	16.910000 G	-33.94	-20.94

Date: 21.MAR.2012 22:08:25

Band :	LTE Band 4	Bandwidth:	20MHz / 16QAM
Frequency :	1745	Channel :	20300

Conducted Emission Plot (30MHz ~ 1GHz) for

16-QAM (RB Size 1, RB Offset 0)

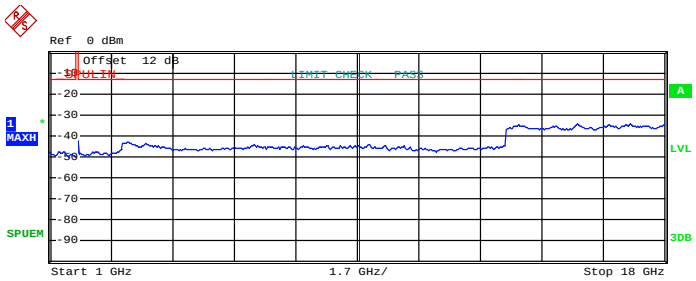


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	1.000 G	1.00 M	789.025000 M	-47.69	-34.69

Date: 21.MAR.2012 22:00:15

Conducted Emission Plot (1GHz ~ 18GHz) for

16-QAM (RB Size 1, RB Offset 0)



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
1.000 G	1.700 G	1.00 M	1.361200 G	-47.39	-34.39
1.765 G	3.000 G	1.00 M	1.771793 G	-42.39	-29.39
3.000 G	7.000 G	1.00 M	3.170000 G	-43.03	-30.03
7.000 G	10.000 G	1.00 M	9.839500 G	-44.19	-31.19
10.000 G	14.000 G	1.00 M	13.974000 G	-34.90	-21.90
14.000 G	18.000 G	1.00 M	17.040000 G	-34.03	-21.03

Date: 21.MAR.2012 22:08:53

3.7 Field Strength of Spurious Radiation Measurement

3.7.1 Description of Field Strength of Spurious Radiated Measurement

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

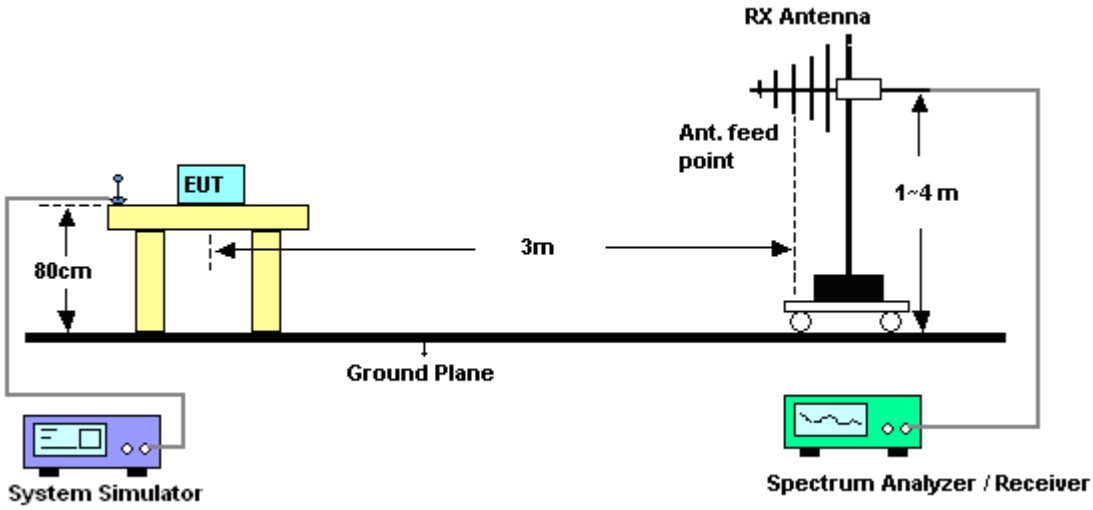
3.7.2 Measuring Instruments

See list of measuring instruments of this test report.

3.7.3 Test Procedures

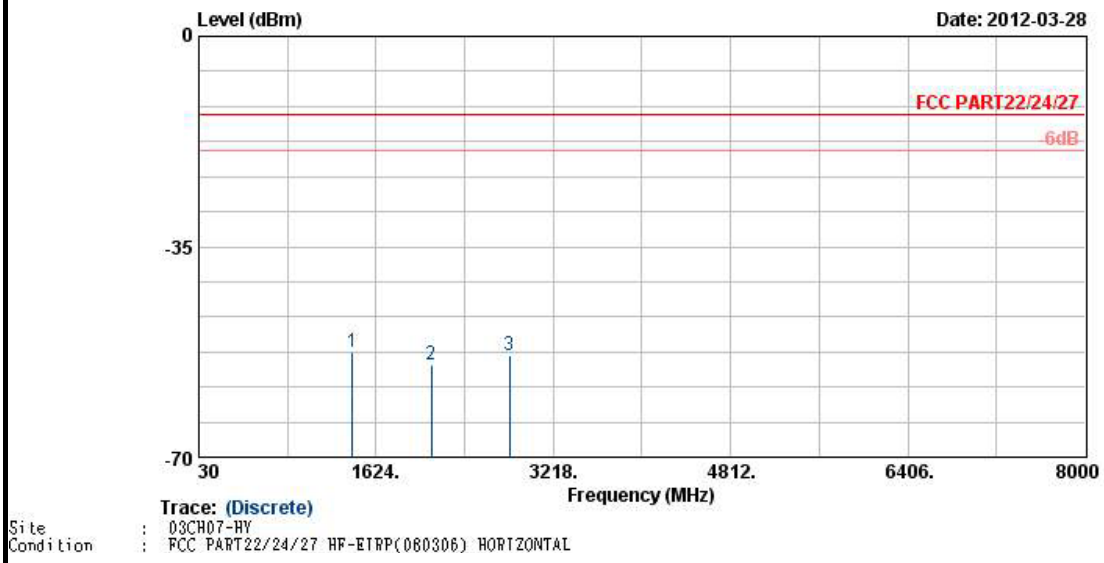
1. The EUT was placed on a rotatable wooden table with 0.8 meter about ground.
2. The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest spurious emission.
4. The height of the receiving antenna is varied between one meter and four meters to search the maximum spurious emission for both horizontal and vertical polarizations.
5. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, Sweep = 500ms, Taking the record of maximum spurious emission.
6. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
7. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
8. Taking the record of output power at antenna port.
9. Repeat step 7 to step 8 for another polarization.
10. Emission level (dBm) = output power + substitution Gain.

3.7.4 Test Setup



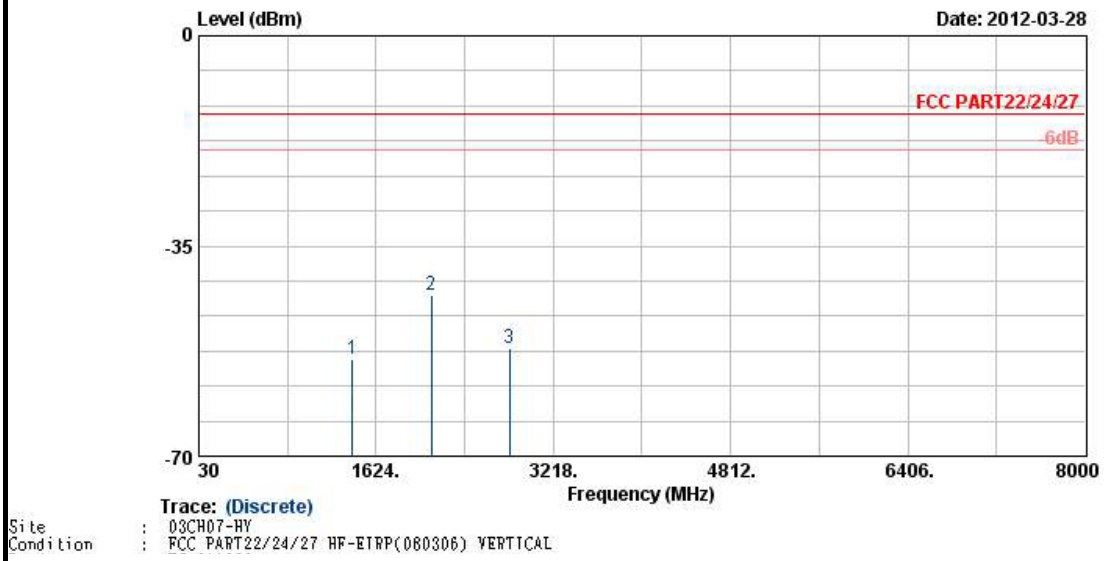
3.7.5 Test Result of Field Strength of Spurious Radiated

Band :	LTE Band 17	**Temperature :**	20~22°C
Test Mode :	5MHz, 16QAM, RB Size 1, RB Offset 24	**Relative Humidity :**	50~52%
Test Engineer :	Kyle Chuang	**Polarization :**	Horizontal
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



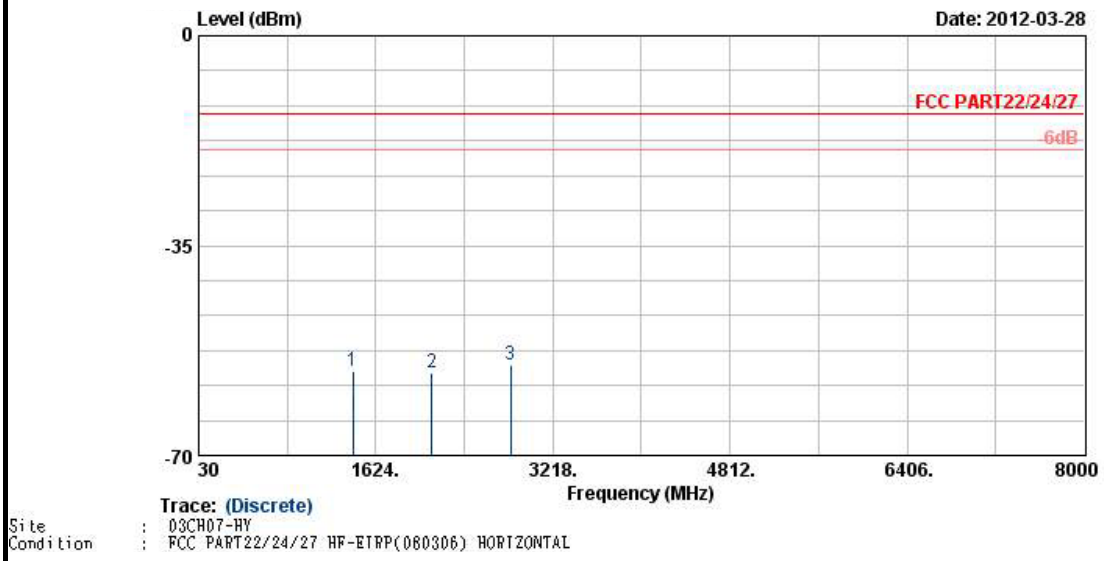
Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1413	-52.50	-13	-39.50	-60.76	-54.44	1.51	5.60	H	Pass
2119.5	-54.76	-13	-41.76	-65.94	-56.79	1.82	6.00	H	Pass
2826	-53.10	-13	-40.10	-67.08	-55.73	2.2	6.98	H	Pass

Band :	LTE Band 17	**Temperature :**	20~22°C
Test Mode :	5MHz, 16QAM, RB Size 1, RB Offset 24	**Relative Humidity :**	50~52%
Test Engineer :	Kyle Chuang	**Polarization :**	Vertical
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



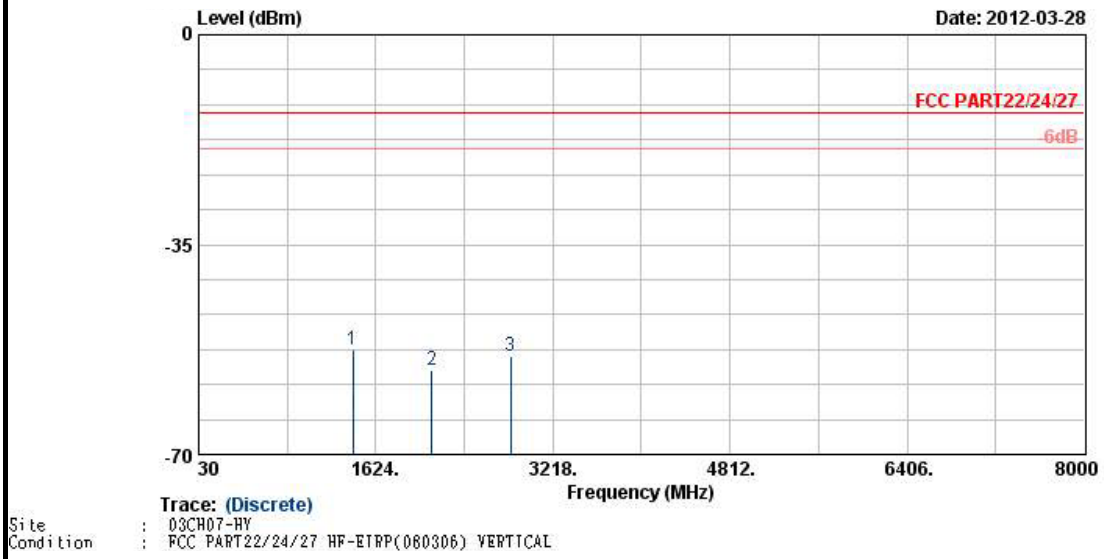
Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1413	-53.74	-13	-40.74	-64.27	-55.68	1.51	5.60	V	Pass
2119.5	-43.12	-13	-30.12	-56.73	-45.15	1.82	6.00	V	Pass
2826	-52.09	-13	-39.09	-67.22	-54.72	2.2	6.98	V	Pass

Band :	LTE Band 17	Temperature :	21~22°C
Test Mode :	10MHz, 16QAM, RB Size 25, RB Offset 13	Relative Humidity :	41~42%
Test Engineer :	Kyle Chuang	Polarization :	Horizontal
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



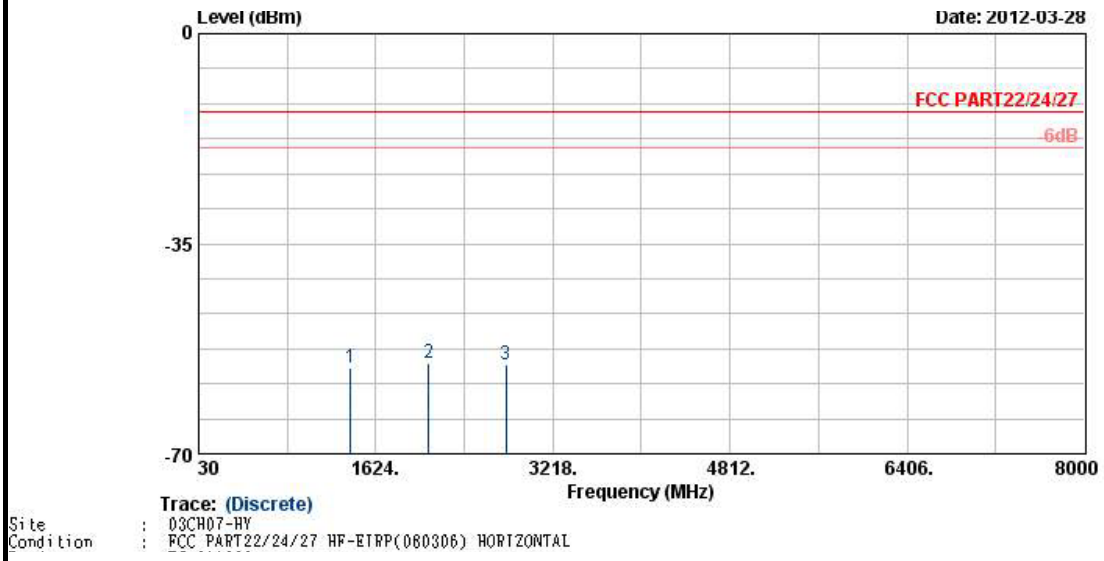
Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1420	-55.91	-13	-42.91	-64.19	-57.84	1.53	5.61	H	Pass
2130	-56.19	-13	-43.19	-67.89	-58.21	1.85	6.02	H	Pass
2840	-54.95	-13	-41.95	-68.93	-57.56	2.24	7.00	H	Pass

Band :	LTE Band I7	Temperature :	20~22°C
Test Mode :	10MHz, 16QAM, RB Size 25, RB Offset 13	Relative Humidity :	50~52%
Test Engineer :	Kyle Chuang	Polarization :	Vertical
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



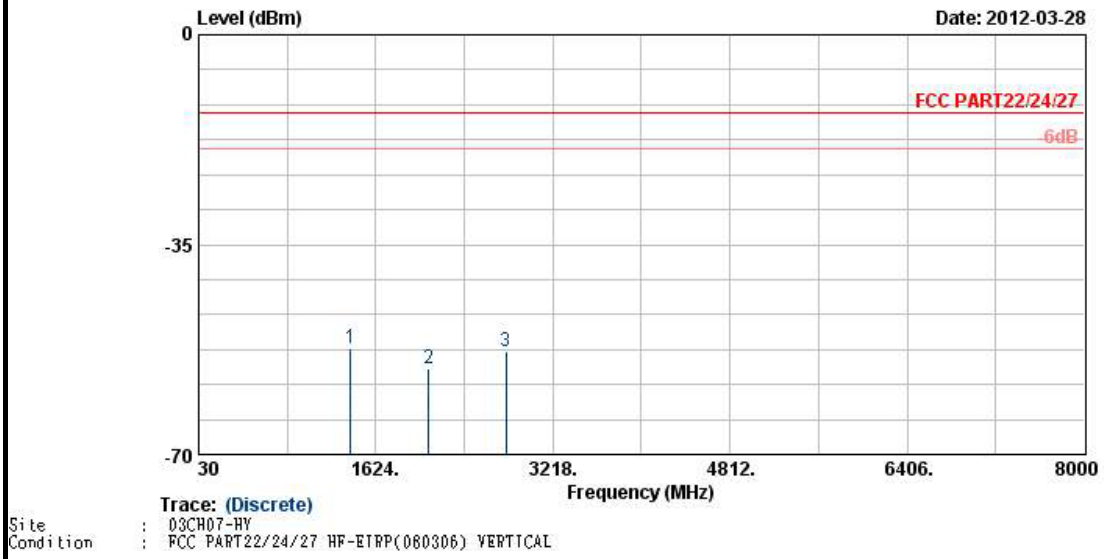
Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1420	-52.64	-13	-39.64	-63.09	-54.57	1.53	5.61	V	Pass
2130	-55.91	-13	-42.91	-68.86	-57.93	1.85	6.02	V	Pass
2840	-53.67	-13	-40.67	-68.86	-56.28	2.24	7.00	V	Pass

Band :	LTE Band 12	**Temperature :**	20~22°C
Test Mode :	1.4MHz, 16QAM, RB Size 1, RB Offset 0	**Relative Humidity :**	50~52%
Test Engineer :	Kyle Chuang	**Polarization :**	Horizontal
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



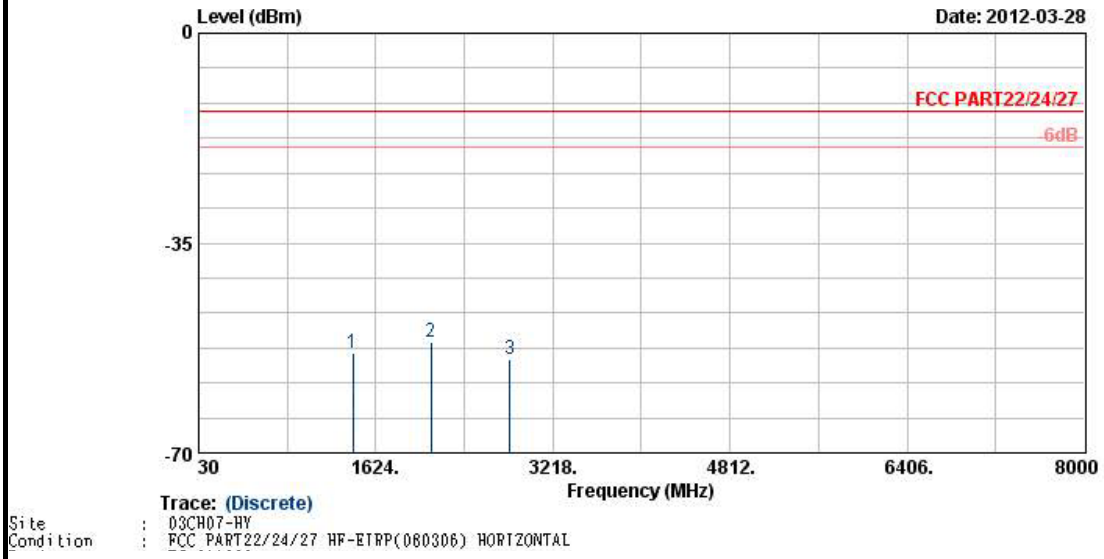
Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1399.4	-55.62	-13	-42.62	-64.16	-57.62	1.42	5.57	H	Pass
2099.1	-54.79	-13	-41.79	-65.52	-56.86	1.75	5.97	H	Pass
2798.8	-55.05	-13	-42.05	-68.61	-57.69	2.15	6.94	H	Pass

Band :	LTE Band 12	**Temperature :**	20~22°C
Test Mode :	1.4MHz, 16QAM, RB Size 1, RB Offset 0	**Relative Humidity :**	50~52%
Test Engineer :	Kyle Chuang	**Polarization :**	Vertical
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



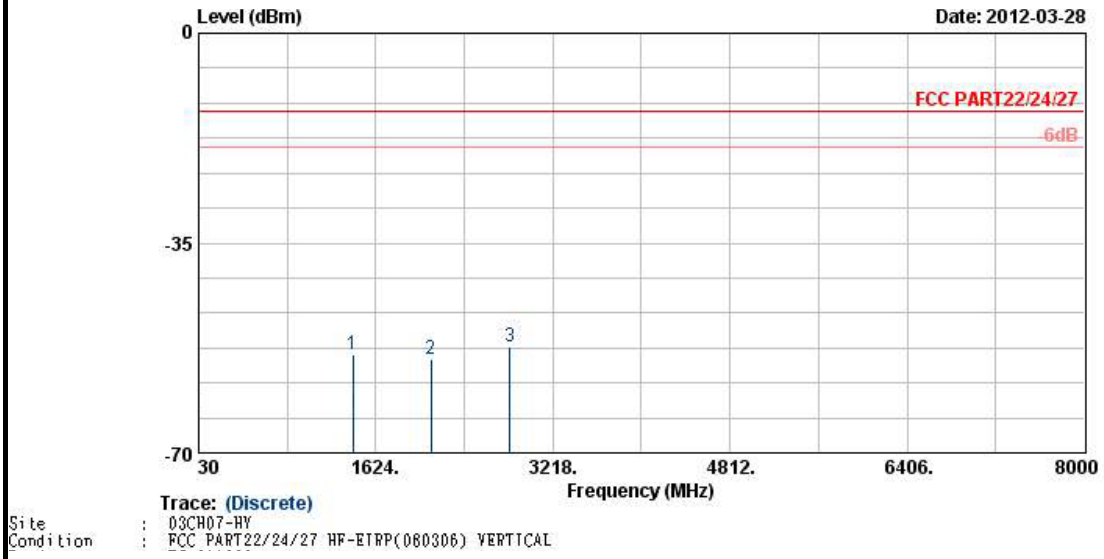
Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1399.4	-52.18	-13	-39.18	-63.26	-54.18	1.42	5.57	V	Pass
2099.1	-55.77	-13	-42.77	-68.46	-57.84	1.75	5.97	V	Pass
2798.8	-52.89	-13	-39.89	-67.72	-55.53	2.15	6.94	V	Pass

Band :	LTE Band 12	**Temperature :**	20~22°C
Test Mode :	3MHz, 16QAM, RB Size 1, RB Offset 14	**Relative Humidity :**	50~52%
Test Engineer :	Kyle Chuang	**Polarization :**	Horizontal
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



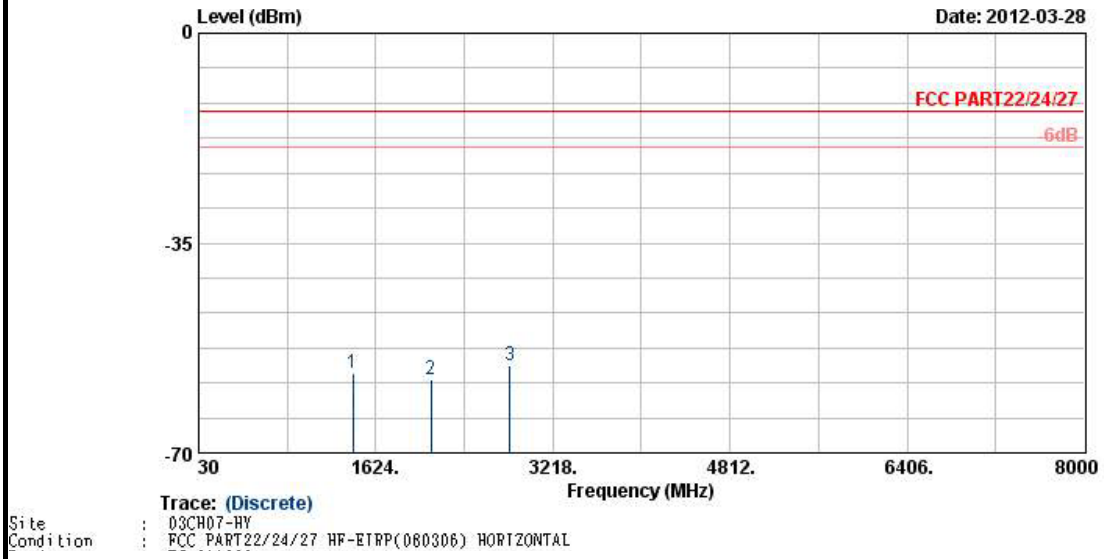
Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1415	-53.40	-13	-40.40	-61.42	-55.34	1.51	5.60	H	Pass
2122.5	-51.65	-13	-38.65	-63.24	-53.68	1.82	6.00	H	Pass
2830	-54.28	-13	-41.28	-67.66	-56.91	2.2	6.98	H	Pass

Band :	LTE Band 12	**Temperature :**	20~22°C
Test Mode :	3MHz, 16QAM, RB Size 1, RB Offset 14	**Relative Humidity :**	50~52%
Test Engineer :	Kyle Chuang	**Polarization :**	Vertical
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



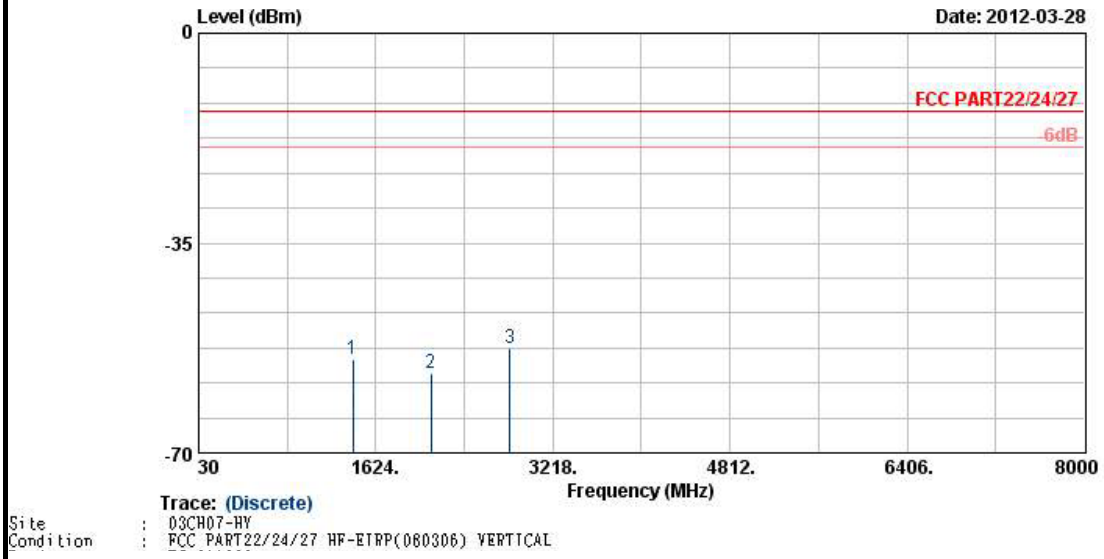
Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1415	-53.48	-13	-40.48	-64.68	-55.42	1.51	5.60	V	Pass
2122.5	-54.28	-13	-41.28	-67.76	-56.31	1.82	6.00	V	Pass
2830	-52.30	-13	-39.30	-67.22	-54.93	2.2	6.98	V	Pass

Band :	LTE Band 12	**Temperature :**	20~22°C
Test Mode :	5MHz, 16QAM, RB Size 25, RB Offset 0	**Relative Humidity :**	50~52%
Test Engineer :	Kyle Chuang	**Polarization :**	Horizontal
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



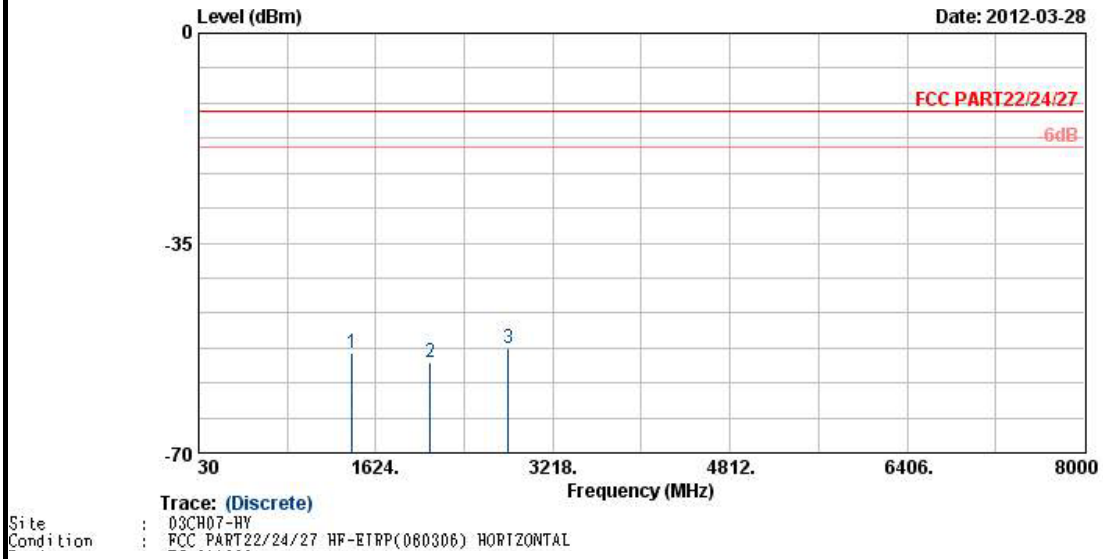
Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1415	-56.70	-13	-43.70	-65.42	-58.64	1.51	5.60	H	Pass
2122.5	-57.75	-13	-44.75	-68.95	-59.78	1.82	6.00	H	Pass
2830	-55.50	-13	-42.50	-68.66	-58.13	2.2	6.98	H	Pass

Band :	LTE Band 12	**Temperature :**	20~22°C
Test Mode :	5MHz, 16QAM, RB Size 25, RB Offset 0	**Relative Humidity :**	50~52%
Test Engineer :	Kyle Chuang	**Polarization :**	Vertical
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



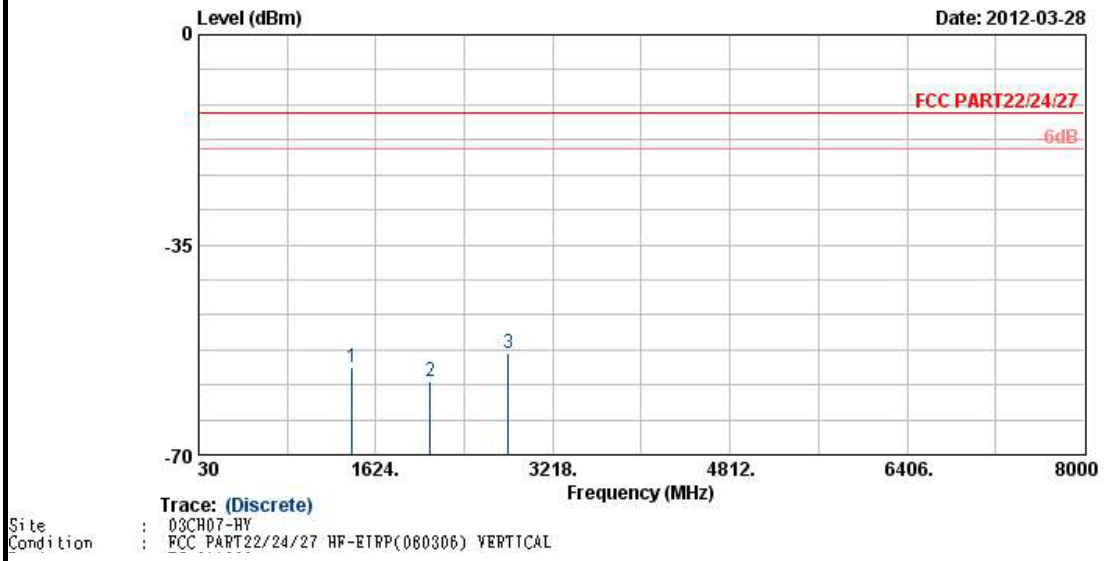
Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1415	-54.48	-13	-41.48	-64.6	-56.42	1.51	5.60	V	Pass
2122.5	-56.70	-13	-43.70	-69.49	-58.73	1.82	6.00	V	Pass
2830	-52.66	-13	-39.66	-67.82	-55.29	2.2	6.98	V	Pass

Band :	LTE Band 12	**Temperature :**	20~22°C
Test Mode :	10MHz, 16QAM, RB Size 1, RB Offset 49	**Relative Humidity :**	50~52%
Test Engineer :	Kyle Chuang	**Polarization :**	Horizontal
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



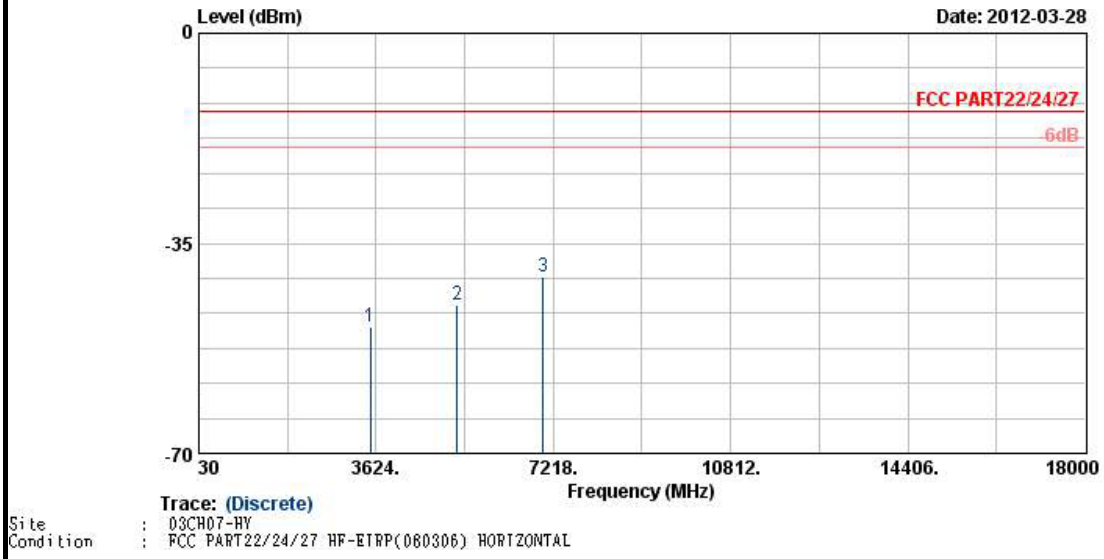
Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1408	-53.32	-13	-40.32	-62.48	-55.26	1.5	5.59	H	Pass
2112	-54.82	-13	-41.82	-65.45	-56.85	1.8	5.98	H	Pass
2816	-52.53	-13	-39.53	-66.04	-55.17	2.18	6.97	H	Pass

Band :	LTE Band 12	Temperature :	20~22°C
Test Mode :	10MHz, 16QAM, RB Size 1, RB Offset 49	Relative Humidity :	50~52%
Test Engineer :	Kyle Chuang	Polarization :	Vertical
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



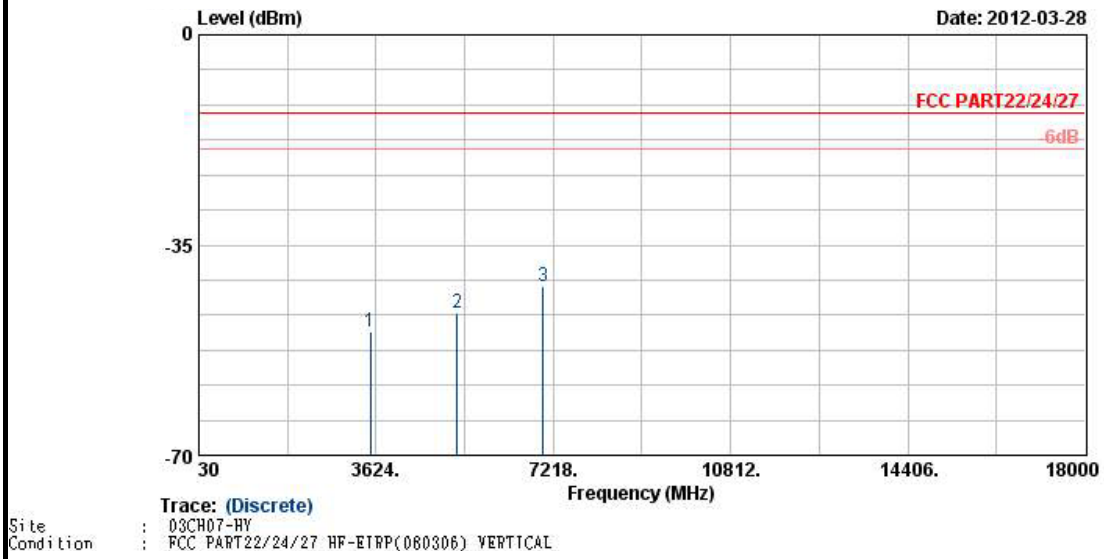
Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1408	-55.32	-13	-42.32	-65.72	-57.26	1.5	5.59	V	Pass
2112	-57.74	-13	-44.74	-70.1	-59.77	1.8	5.98	V	Pass
2816	-53.04	-13	-40.04	-68.72	-55.68	2.18	6.97	V	Pass

Band :	LTE Band 4	**Temperature :**	20~22°C
Test Mode :	1.4MHz, QPSK, RB Size 1, RB Offset 0	**Relative Humidity :**	50~52%
Test Engineer :	Kyle Chuang	**Polarization :**	Horizontal
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



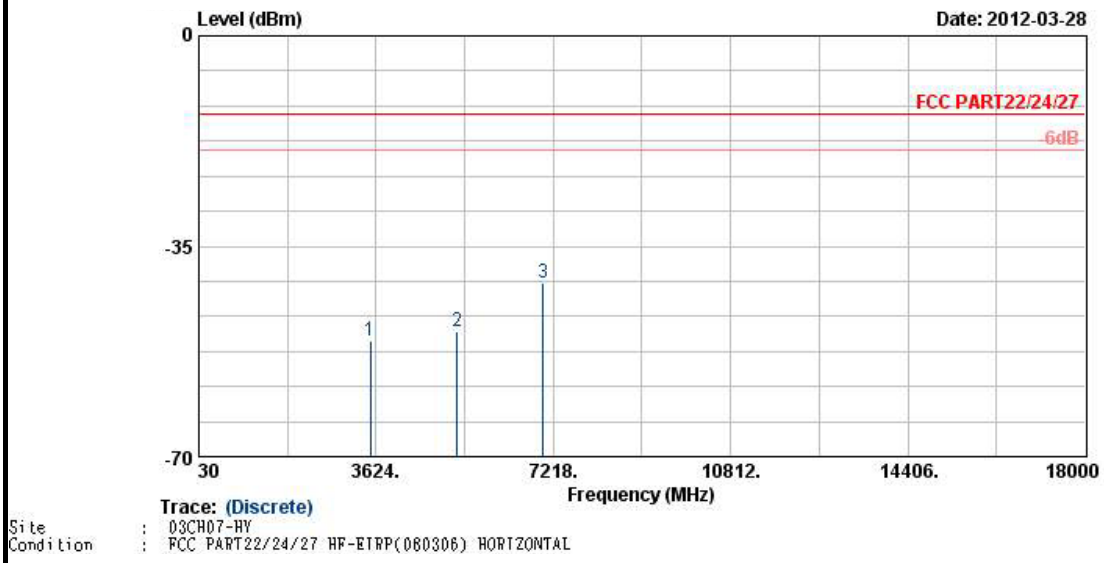
Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3508.6	-49.01	-13	-36.01	-63.78	-53.28	4.14	8.41	H	Pass
5262.9	-45.28	-13	-32.28	-64.9	-50.23	5.12	10.07	H	Pass
7017.2	-40.56	-13	-27.56	-67.37	-45.85	6.13	11.42	H	Pass

Band :	LTE Band 4	**Temperature :**	20~22°C
Test Mode :	1.4MHz, QPSK, RB Size 1, RB Offset 0	**Relative Humidity :**	50~52%
Test Engineer :	Kyle Chuang	**Polarization :**	Vertical
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



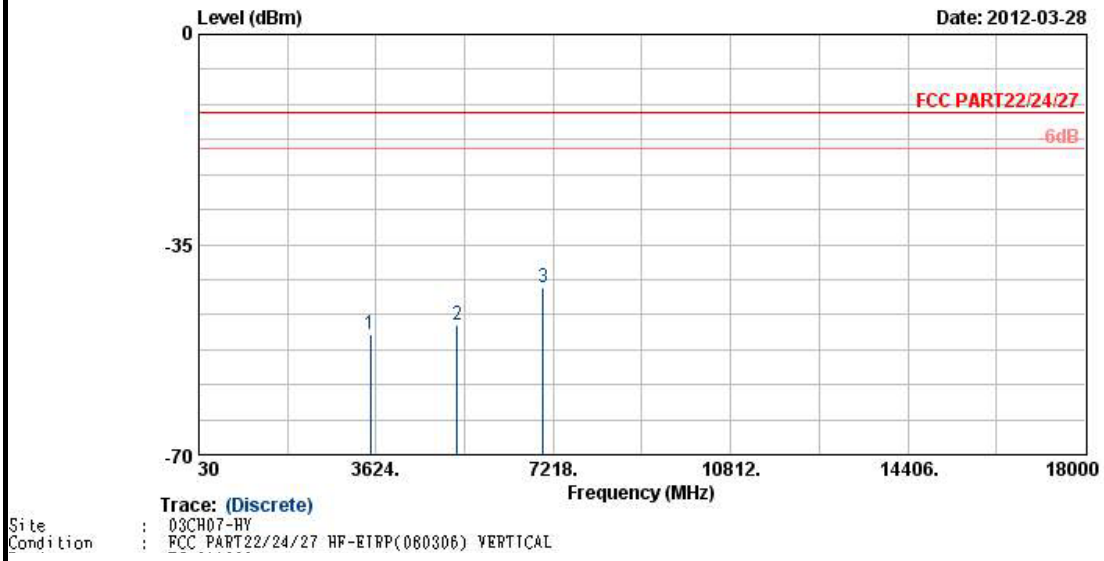
Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3508.6	-49.40	-13	-36.40	-65.24	-53.67	4.14	8.41	V	Pass
5262.9	-46.31	-13	-33.31	-65.95	-51.26	5.12	10.07	V	Pass
7017.2	-41.86	-13	-28.86	-67.69	-47.15	6.13	11.42	V	Pass

Band :	LTE Band 4	Temperature :	20~22°C
Test Mode :	3MHz, QPSK, RB Size 1, RB Offset 14	Relative Humidity :	50~52%
Test Engineer :	Kyle Chuang	Polarization :	Horizontal
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



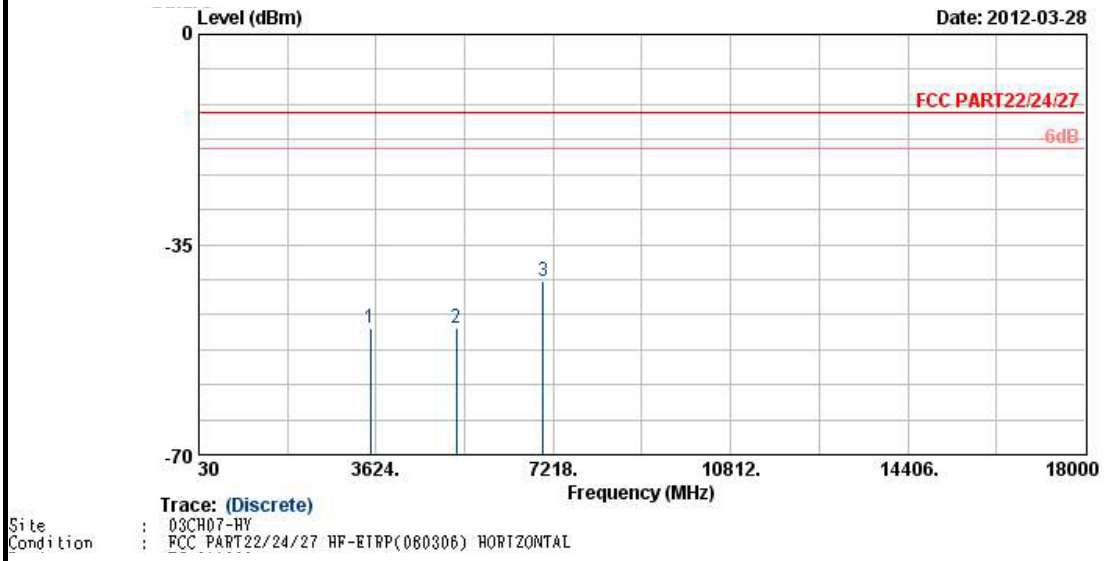
Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3507	-50.74	-13	-37.74	-65.19	-55.01	4.14	8.41	H	Pass
5260.5	-49.07	-13	-36.07	-68.24	-54.02	5.12	10.07	H	Pass
7014	-41.01	-13	-28.01	-67.72	-46.3	6.13	11.42	H	Pass

Band :	LTE Band 4	**Temperature :**	20~22°C
Test Mode :	3MHz, QPSK, RB Size 1, RB Offset 14	**Relative Humidity :**	50~52%
Test Engineer :	Kyle Chuang	**Polarization :**	Vertical
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



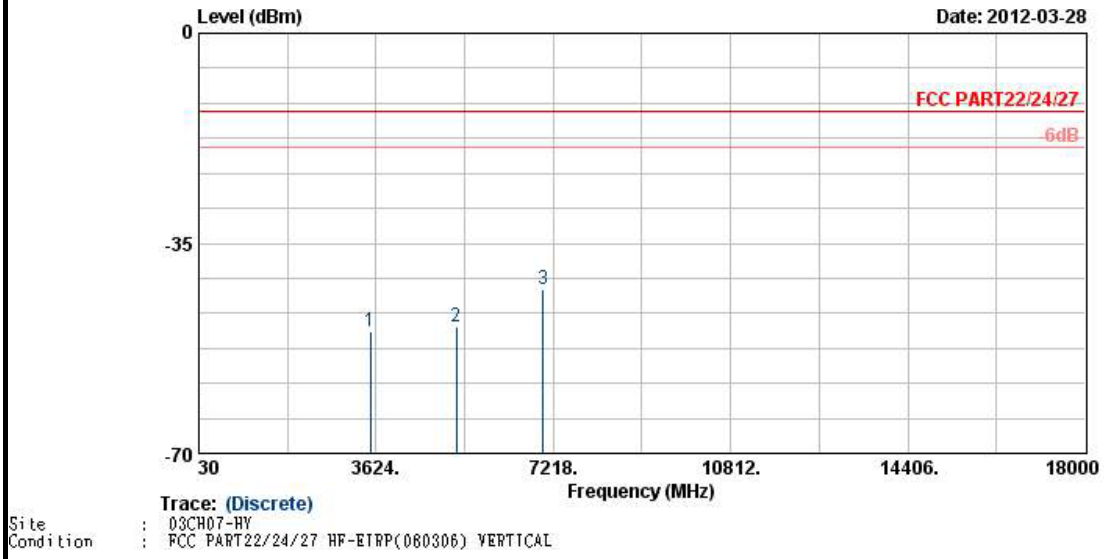
Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3507	-49.85	-13	-36.85	-65.65	-54.12	4.14	8.41	V	Pass
5260.5	-48.33	-13	-35.33	-68.03	-53.28	5.12	10.07	V	Pass
7014	-42.23	-13	-29.23	-68.11	-47.52	6.13	11.42	V	Pass

Band :	LTE Band 4	**Temperature :**	20~22°C
Test Mode :	5MHz, QPSK, RB Size 1, RB Offset 24	**Relative Humidity :**	50~52%
Test Engineer :	Kyle Chuang	**Polarization :**	Horizontal
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



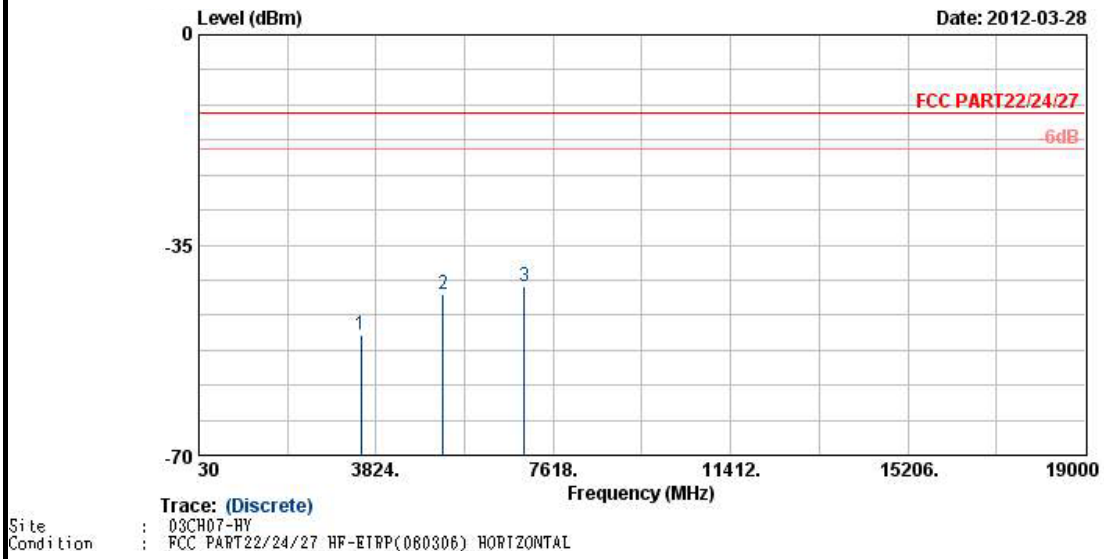
Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3505	-48.97	-13	-35.97	-63.63	-53.24	4.16	8.43	H	Pass
5257.5	-49.05	-13	-36.05	-68.24	-54.01	5.13	10.09	H	Pass
7015	-41.15	-13	-28.15	-67.85	-46.43	6.15	11.43	H	Pass

Band :	LTE Band 4	**Temperature :**	20~22°C
Test Mode :	5MHz, QPSK, RB Size 1, RB Offset 24	**Relative Humidity :**	50~52%
Test Engineer :	Kyle Chuang	**Polarization :**	Vertical
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



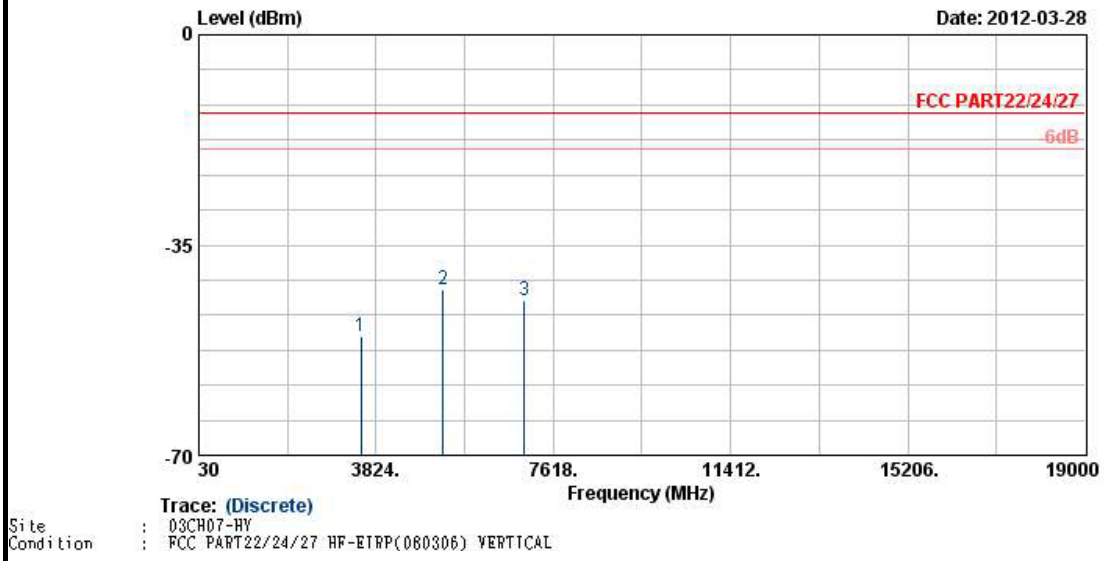
Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3505	-49.59	-13	-36.59	-65.24	-53.86	4.16	8.43	V	Pass
5257.5	-48.80	-13	-35.80	-68.08	-53.76	5.13	10.09	V	Pass
7015	-42.75	-13	-29.75	-68.54	-48.03	6.15	11.43	V	Pass

Band :	LTE Band 4	**Temperature :**	20~22°C
Test Mode :	10MHz, QPSK, RB Size 1, RB Offset 49	**Relative Humidity :**	50~52%
Test Engineer :	Kyle Chuang	**Polarization :**	Horizontal
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



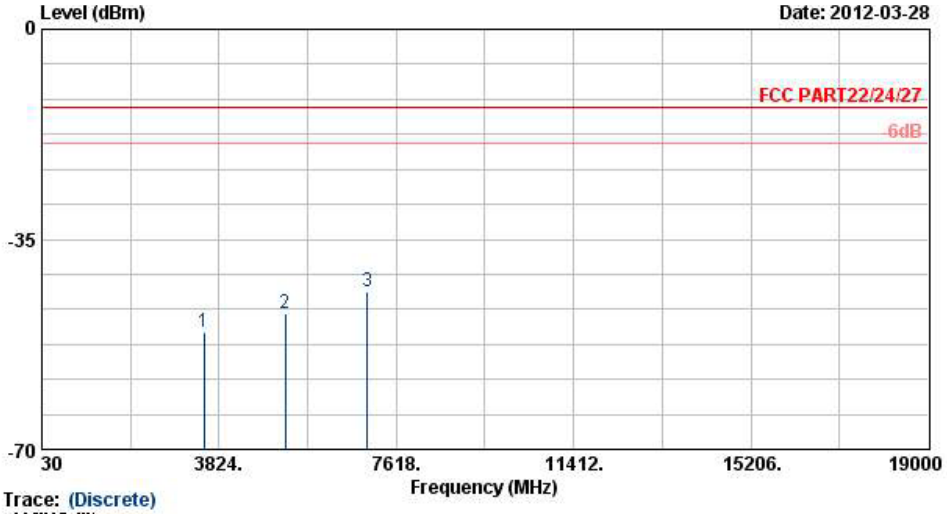
Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3500	-50.02	-13	-37.02	-65.12	-54.21	4.2	8.39	H	Pass
5250	-43.23	-13	-30.23	-62.66	-48.11	5.17	10.05	H	Pass
7000	-42.00	-13	-29.00	-69.21	-47.2	6.2	11.40	H	Pass

Band :	LTE Band 4	Temperature :	20~22°C
Test Mode :	10MHz, QPSK, RB Size 1, RB Offset 49	Relative Humidity :	50~52%
Test Engineer :	Kyle Chuang	Polarization :	Vertical
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



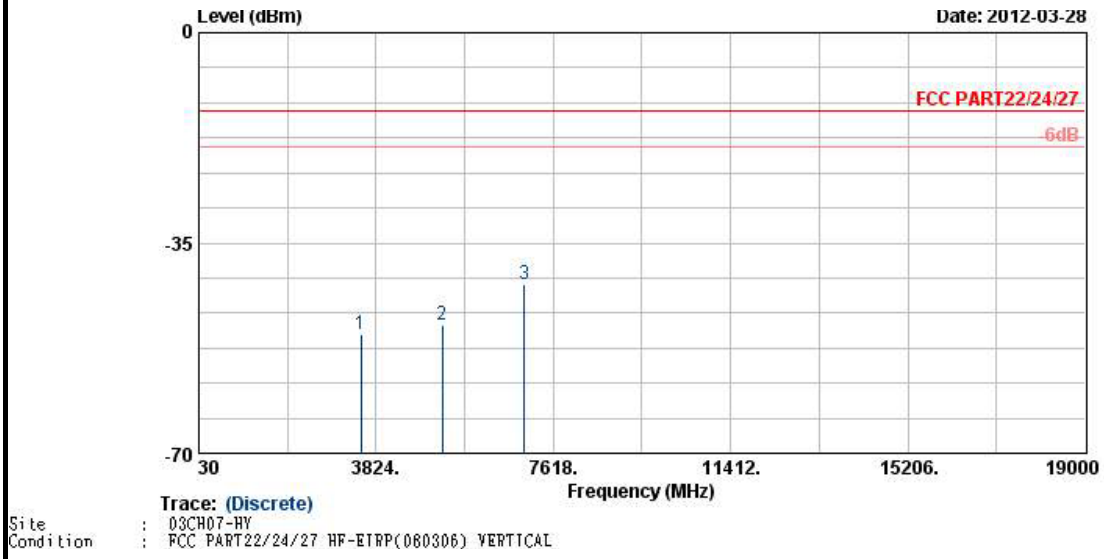
Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3500	-50.14	-13	-37.14	-65.67	-54.33	4.2	8.39	V	Pass
5250	-42.53	-13	-29.53	-62	-47.41	5.17	10.05	V	Pass
7000	-44.27	-13	-31.27	-69.63	-49.47	6.2	11.40	V	Pass

Band :	LTE Band 4	Temperature :	20~22°C
Test Mode :	15MHz, QPSK, RB Size 1, RB Offset 74	Relative Humidity :	50~52%
Test Engineer :	Kyle Chuang	Polarization :	Horizontal
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



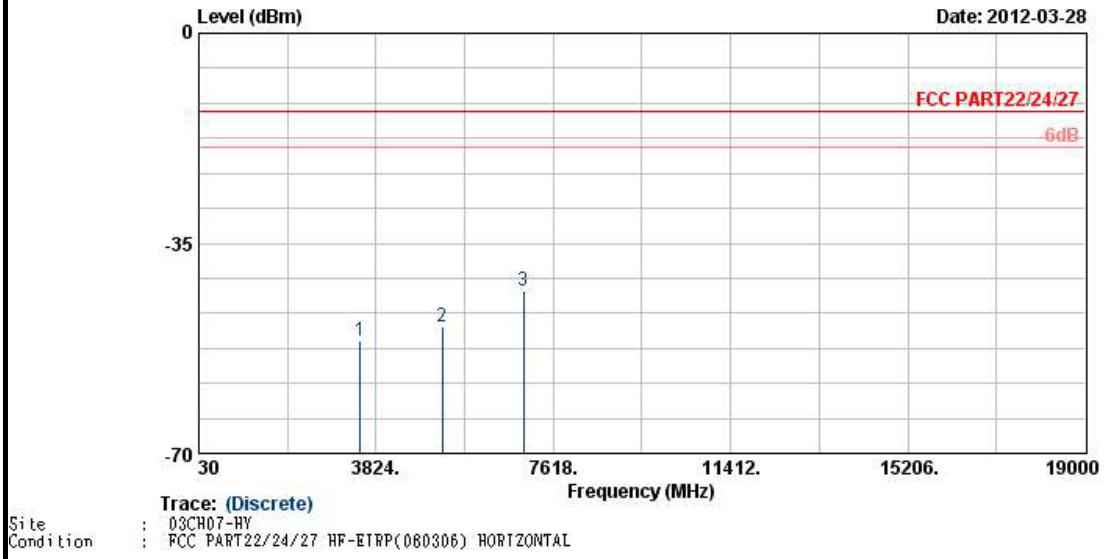
Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3495	-50.52	-13	-37.52	-66.16	-54.66	4.24	8.38	H	Pass
5242.5	-47.31	-13	-34.31	-68.02	-52.18	5.18	10.05	H	Pass
6990	-43.68	-13	-30.68	-69.59	-48.87	6.19	11.38	H	Pass

Band :	LTE Band 4	**Temperature :**	20~22°C
Test Mode :	15MHz, QPSK, RB Size 1, RB Offset 74	**Relative Humidity :**	50~52%
Test Engineer :	Kyle Chuang	**Polarization :**	Vertical
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



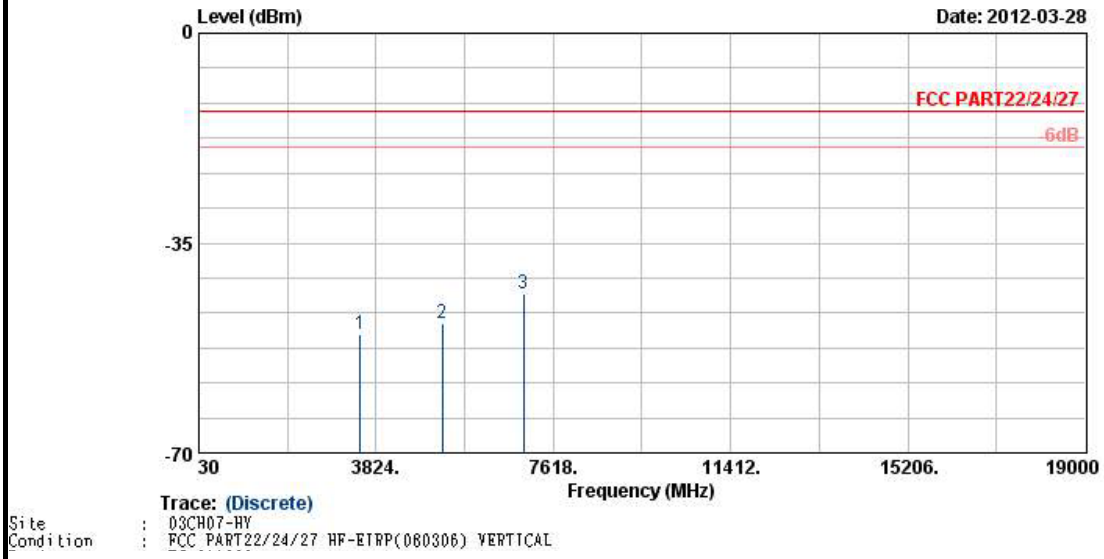
Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3495	-50.10	-13	-37.10	-66.55	-54.24	4.24	8.38	V	Pass
5242.5	-48.67	-13	-35.67	-67.79	-53.54	5.18	10.05	V	Pass
6990	-41.92	-13	-28.92	-67.89	-47.11	6.19	11.38	V	Pass

Band :	LTE Band 4	Temperature :	20~22°C
Test Mode :	20MHz, QPSK, RB Size 1, RB Offset 99	Relative Humidity :	50~52%
Test Engineer :	Kyle Chuang	Polarization :	Horizontal
Remark :	Spurious emissions within 30-1000MHz 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
3490	-51.38	-13	-38.38	-66.5	-55.47	4.28	8.37	H	Pass
5235	-48.87	-13	-35.87	-67.77	-53.68	5.22	10.03	H	Pass
6980	-42.86	-13	-29.86	-68.88	-47.99	6.23	11.36	H	Pass

Band :	LTE Band 4	**Temperature :**	20~22°C
Test Mode :	20MHz, QPSK, RB Size 1, RB Offset 99	**Relative Humidity :**	50~52%
Test Engineer :	Kyle Chuang	**Polarization :**	Vertical
Remark :	Spurious emissions within 30-1000MHz 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
3490	-50.15	-13	-37.15	-66.05	-54.24	4.28	8.37	V	Pass
5235	-48.35	-13	-35.35	-67.75	-53.16	5.22	10.03	V	Pass
6980	-43.42	-13	-30.42	-69.48	-48.55	6.23	11.36	V	Pass

3.8 Frequency Stability Measurement

3.8.1 Description of Frequency Stability Measurement

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

3.8.2 Measuring Instruments

See list of measuring instruments of this test report.

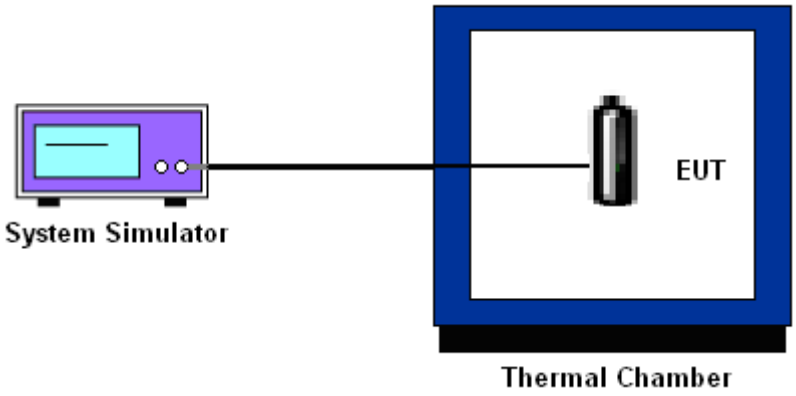
3.8.3 Test Procedures for Temperature Variation

1. The EUT was set up in the thermal chamber and connected with the base station.
2. With power OFF, the temperature was decreased to -30°C and the EUT was stabilized for three hours. Power was applied and the maximum change in frequency was recorded within one minute.
3. With power OFF, the temperature was raised in 10°C step up to 50°C. The EUT was stabilized at each step for at least half an hour. Power was applied and the maximum frequency change was recorded within one minute.
4. If the EUT can not be turned on at -30°C, the testing lowest temperature will be raised in 10°C step until the EUT can be turned on.

3.8.4 Test Procedures for Voltage Variation

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

3.8.5 Test Setup



3.8.6 Test Result of Temperature Variation

Band :	LTE Band 17	Limit (ppm) :	2.5

Temperature (°C)	5MHz		10MHz		Result
	Freq. Dev. (Hz)	Deviation (ppm)	Freq. Dev. (Hz)	Deviation (ppm)	
-30	N/A	N/A	N/A	N/A	PASS
-20	N/A	N/A	N/A	N/A	
-10	1.3	0.002	1.2	0.002	
0	1.4	0.002	1.2	0.002	
10	1.3	0.002	1.6	0.002	
20	1.6	0.002	2.0	0.003	
30	1.5	0.002	1.1	0.002	
40	2.0	0.003	-2.0	-0.003	
50	1.7	0.002	1.0	0.001	
55	0.9	0.001	2.2	0.003	

Note: The manufacturer declared that the EUT could work properly between temperatures -10°C~55°C.

Band :	LTE Band 12	Limit (ppm) :	2.5

Temperature (°C)	1.4MHz		3MHz		Result
	Freq. Dev. (Hz)	Deviation (ppm)	Freq. Dev. (Hz)	Deviation (ppm)	
-30	N/A	N/A	N/A	N/A	PASS
-20	N/A	N/A	N/A	N/A	
-10	1.0	0.001	0.9	0.001	
0	1.3	0.002	1.0	0.001	
10	1.3	0.002	-1.0	-0.001	
20	1.1	0.002	-0.8	-0.001	
30	0.9	0.001	0.9	0.001	
40	1.3	0.002	1.0	0.001	
50	1.3	0.002	1.6	0.002	
55	-1.3	-0.002	-1.9	-0.003	

Note: The manufacturer declared that the EUT could work properly between temperatures -10°C~55°C.

Band :	LTE Band 12	Limit (ppm) :	2.5

Temperature (°C)	5MHz		10MHz		Result
	Freq. Dev. (Hz)	Deviation (ppm)	Freq. Dev. (Hz)	Deviation (ppm)	
-30	N/A	N/A	N/A	N/A	PASS
-20	N/A	N/A	N/A	N/A	
-10	-1.2	-0.002	0.7	0.001	
0	-1.6	-0.002	0.9	0.001	
10	0.9	0.001	0.8	0.001	
20	1.0	0.001	0.7	0.001	
30	1.1	0.002	-0.5	-0.001	
40	1.4	0.002	-1.2	-0.002	
50	1.2	0.002	-1.1	-0.002	
55	-1.0	-0.001	-1.1	-0.002	

Note: The manufacturer declared that the EUT could work properly between temperatures -10°C~55°C.

Band :	LTE Band 4	Limit (ppm) :	2.5

Temperature (°C)	1.4MHz		3MHz		Result
	Freq. Dev. (Hz)	Deviation (ppm)	Freq. Dev. (Hz)	Deviation (ppm)	
-30	N/A	N/A	N/A	N/A	PASS
-20	N/A	N/A	N/A	N/A	
-10	-4.7	-0.007	-0.9	-0.001	
0	-2.0	-0.003	-1.1	-0.002	
10	-1.6	-0.002	-0.8	-0.001	
20	-1.6	-0.002	-0.8	-0.001	
30	1.4	0.002	-1.0	-0.001	
40	3.7	0.005	-1.0	-0.001	
50	4.6	0.006	0.9	0.001	
55	-2.6	-0.004	-1.5	-0.002	

Note: The manufacturer declared that the EUT could work properly between temperatures -10°C~55°C.

Band :	LTE Band 4	Limit (ppm) :	2.5

Temperature (°C)	5MHz		10MHz		Result
	Freq. Dev. (Hz)	Deviation (ppm)	Freq. Dev. (Hz)	Deviation (ppm)	
-30	N/A	N/A	N/A	N/A	PASS
-20	N/A	N/A	N/A	N/A	
-10	1.1	0.002	0.8	0.001	
0	1.1	0.001	1.5	0.002	
10	-1.2	-0.002	1.0	0.001	
20	1.0	0.001	0.8	0.001	
30	1.2	0.002	0.7	0.001	
40	0.9	0.001	-1.3	-0.002	
50	-1.7	-0.002	-2.7	-0.004	
55	-1.3	-0.002	2.1	0.003	

Note: The manufacturer declared that the EUT could work properly between temperatures -10°C~55°C.

Band :	LTE Band 4	Limit (ppm) :	2.5

Temperature (°C)	15MHz		20MHz		Result
	Freq. Dev. (Hz)	Deviation (ppm)	Freq. Dev. (Hz)	Deviation (ppm)	
-30	N/A	N/A	N/A	N/A	PASS
-20	N/A	N/A	N/A	N/A	
-10	0.8	0.001	0.9	0.001	
0	0.7	0.001	-0.8	-0.001	
10	0.9	0.001	-0.6	-0.001	
20	0.8	0.001	0.9	0.001	
30	-1.1	-0.002	0.8	0.001	
40	-1.5	-0.002	-2.6	-0.004	
50	-1.4	-0.002	-2.0	-0.003	
55	-1.9	-0.003	-4.0	-0.006	

Note: The manufacturer declared that the EUT could work properly between temperatures -10°C~55°C.

3.8.7 Test Result of Voltage Variation

Band	Band Width & Channel	Voltage (Volt)	Freq. Dev. (Hz)	Deviation (ppm)	Limit (ppm)	Result
LTE Band 17	5MHz	5.2	6.0	0.008	2.5	PASS
		5	4.6	0.006		
		4.8	3.2	0.005		
	10MHz	5.2	4.1	0.006		
		5	4.4	0.006		
		4.8	3.3	0.005		

Remark: Normal Voltage = 5.0V.

Band	Band Width & Channel	Voltage (Volt)	Freq. Dev. (Hz)	Deviation (ppm)	Limit (ppm)	Result
LTE Band 12	1.4MHz	5.2	8.2	0.012	2.5	PASS
		5	11.5	0.016		
		4.8	9.7	0.014		
	3MHz	5.2	7.8	0.011		
		5	7.1	0.010		
		4.8	-6.2	-0.009		
	5MHz	5.2	3.4	0.005		
		5	2.6	0.004		
		4.8	3.4	0.005		
	10MHz	5.2	4.3	0.006		
		5	3.2	0.005		
		4.8	5.1	0.007		

Remark: Normal Voltage = 5.0V.

Band	Band Width	Voltage (Volt)	Freq. Dev. (Hz)	Deviation (ppm)	Limit (ppm)	Result
LTE Band 4	1.4MHz	4.8	10.3	0.015	2.5	PASS
		5	-12.8	-0.018		
		5.2	12.2	0.017		
	3MHz	4.8	-9.1	-0.013		
		5	10.0	0.014		
		5.2	14.6	0.021		
	5MHz	4.8	-6.6	-0.009		
		5	10.9	0.015		
		5.2	7.2	0.010		
	10MHz	4.8	8.9	0.013		
		5	6.9	0.010		
		5.2	9.9	0.014		
	15MHz	4.8	8.8	0.012		
		5	8.3	0.012		
		5.2	9.1	0.013		
	20MHz	4.8	-7.2	-0.010		
		5	5.8	0.008		
		5.2	-6.7	-0.009		

Remark: Normal Voltage = 5.0V.

4 List of Measuring Equipments

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSP40	100055	9kHz~40GHz	Jun. 13, 2011	Mar. 30, 2012	Jun. 12, 2012	Conducted (TH02-HY)
LTE Base Station	Anritsu	MT8820C	6200930978	N/A	Dec. 27, 2011	Mar. 30, 2012	Dec. 28, 2012	Conducted (TH02-HY)
DC Power Supply	TOPWARD	3303D	740889	N/A	Jun. 07, 2011	Mar. 30, 2012	Jun. 08, 2012	Conducted (TH02-HY)
Thermal	Ten Billion	TTH-D35P	TBN-930701	N/A	Jul. 27, 2011	Mar. 30, 2012	Jul. 26, 2012	Conducted (TH02-HY)
Bilog Antenna	SCHAFFNER	CBL6111C	2726	30MHz ~ 1GHz	Oct. 22, 2011	Mar. 28, 2012	Oct. 21, 2012	Radiation (03CH07-HY)
Spectrum Analyzer	R&S	FSP30	101067	9KHz ~ 30GHz	Dec. 06, 2011	Mar. 28, 2012	Dec. 05, 2012	Radiation (03CH07-HY)
Double Ridge Horn Antenna	ESCO	3117	00075962	1GHz ~ 18GHz	Aug. 10, 2011	Mar. 28, 2012	Aug. 09, 2012	Radiation (03CH07-HY)
Pre Amplifier	Agilent	8449B	3008A02362	1GHz ~ 26.5Gz	Dec. 05, 2011	Mar. 28, 2012	Dec. 04, 2012	Radiation (03CH07-HY)
Pre Amplifier	COM-POWER	PA-103A	161241	10-1000MHz.32dB.GAIN	Mar. 29, 2011	Mar. 28, 2012	Mar. 28, 2012	Radiation (03CH07-HY)
EMI TEST RECEIVER	R&S	ESCI 7	100724	9kHz~7GHz	Aug. 22, 2011	Mar. 28, 2012	Aug. 21, 2012	Radiation (03CH07-HY)
Pre Amplifier	MITEQ	AMF-7D-00101800-30-10	159088	1GHz ~ 18GHz	Feb. 21, 2011	Mar. 28, 2012	Feb. 20, 2012	Radiation (03CH07-HY)
LTE Base Station	Anritsu	MT8820C	6201074414	N/A	Jan. 05, 2012	Mar. 28, 2012	Jan. 04, 2013	Radiation (03CH07-HY)

5 Uncertainty of Evaluation

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

Contribution	Uncertainty of X_i		$u(X_i)$
	dB	Probability Distribution	
Receiver Reading	0.41	Normal (k=2)	0.21
Antenna Factor Calibration	0.83	Normal (k=2)	0.42
Cable Loss Calibration	0.25	Normal (k=2)	0.13
Pre-Amplifier Gain Calibration	0.27	Normal (k=2)	0.14
RCV/SPA Specification	2.50	Rectangular	0.72
Antenna Factor Interpolation for Frequency	1.00	Rectangular	0.29
Site Imperfection	1.43	Rectangular	0.83
Mismatch	+0.39 / -0.41	U-Shape	0.28
Combined Standard Uncertainty Uc(y)	**1.27**		
Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**2.54**		

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

Contribution	Uncertainty of X_i		$u(X_i)$	C_i	$C_i * u(X_i)$
	dB	Probability Distribution			
Receiver Reading	±0.10	Normal (k=2)	0.10	1	0.10
Antenna Factor Calibration	±1.70	Normal (k=2)	0.85	1	0.85
Cable Loss Calibration	±0.50	Normal (k=2)	0.25	1	0.25
Receiver Correction	±2.00	Rectangular	1.15	1	1.15
Antenna Factor Directional	±1.50	Rectangular	0.87	1	0.87
Site Imperfection	±2.80	Triangular	1.14	1	1.14
Mismatch Receiver VSWR Γ1 = 0.197 Antenna VSWR Γ2 = 0.194 Uncertainty = 20Log(1-Γ1*Γ2)	+0.34 / -0.35	U-Shape	0.244	1	0.244
Combined Standard Uncertainty Uc(y)	**2.36**				
Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**4.72**				

Appendix A. Photographs of EUT

Please refer to Sporton report number EP1D3102 as below.