

FCC RF Test Report

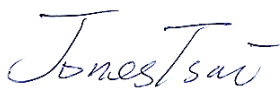
APPLICANT : ZTE CORPORATION
EQUIPMENT : CDMA/EVDO/LTE CPE
BRAND NAME : ZTE
MODEL NAME : MF275U
FCC ID : SRQ-MF275U
STANDARD : 47 CFR Part 2, 22(H), 24(E), 27(L), 27(H)
CLASSIFICATION : PCS Licensed Transmitter (PCB)

The product was received on May 06, 2014 and testing was completed on May 30, 2014. We, SPORTON INTERNATIONAL (KUNSHAN) INC., would like to declare that the tested sample has been evaluated in accordance with the test procedures given in ANSI / TIA / EIA-603-C-2004 and the testing has shown the tested sample to be in 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: Joseph Lin / Supervisor



Approved by: Jones Tsai / Manager



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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG450602B	Rev. 01	Initial issue of report	Jun. 06, 2014

SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.1	§2.1046	Conducted Output Power	Reporting Only	PASS	-
3.1	§22.913(a)(2)	Effective Radiated Power (Band 5)	ERP < 7 Watt	PASS	-
	§27.50(c)(10)	Effective Radiated Power (Band 12) (Band 17)	ERP < 3 Watt		
	§24.232(c)	Equivalent Isotropic Radiated Power (Band 2)	EIRP < 2Watt		
	§27.50(d)(4)	Equivalent Isotropic Radiated Power (Band 4)	EIRP < 1Watt		
3.2	§24.232(d) §27.50(d)(5)	Peak-to-Average Ratio	<13 dB	PASS	-
3.3	§2.1049 §22.917(b) §24.238(b) §27.53(g)(3)	Occupied Bandwidth & 26dB Bandwidth	Reporting Only	PASS	-
3.4	§2.1051 §22.917(a) §24.238(a) §27.53(f) §27.53(g)	Conducted Band Edge Measurement (Band 2) (Band 4) (Band 5) (Band 12) (Band 17)	< 43+10log10(P[Watt])	PASS	-

Report Section	FCC Rule	Description	Limit	Result	Remark
3.5	§2.1051 §22.917(a) §24.238(a) §27.53(f) §27.53(g)	Conducted Spurious Emission (Band 2) (Band 4) (Band 5) (Band 12) (Band 17)	$< 43 + 10 \log_{10}(P[\text{Watts}])$	PASS	-
3.6	§2.1053 §22.917(a) §24.238(a) §27.53(f) §27.53(g)	Radiated Spurious Emission (Band 2) (Band 4) (Band 5) (Band 12) (Band 17)	$< 43 + 10 \log_{10}(P[\text{Watts}])$	PASS	Under limit 26.47 dB at 10368.000 MHz
3.7	§2.1055 §22.355 §24.235 §27.54	Frequency Stability Temperature & Voltage	$< 2.5 \text{ ppm}$	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 Product Feature of Equipment Under Test

Product Feature	
Equipment	CDMA/EVDO/LTE CPE
Brand Name	ZTE
Model Name	MF275U
FCC ID	SRQ-MF275U
EUT supports Radios application	CDMA/EV-DO/LTE/ WLAN 2.4GHz 802.11b/g/n HT20/HT40/ WLAN 5GHz 802.11a/n HT20/HT40
HW Version	dcmB
SW Version	MF275U1.0.3
EUT Stage	Identical Prototype

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

1.4 Product Specification subjective to this standard

Product Specification subjective to this standard	
Tx Frequency	LTE Band 2 : 1850.7 MHz ~ 1909.3 MHz LTE Band 4 : 1710.7 MHz ~ 1754.3 MHz LTE Band 5 : 824.7 MHz ~ 848.3 MHz LTE Band 12 : 699.7 MHz ~ 715.3 MHz LTE Band 17 : 706.5 MHz ~ 713.5 MHz
Rx Frequency	LTE Band 2 : 1930.7 MHz ~ 1989.3 MHz LTE Band 4 : 2110.7 MHz ~ 2154.3 MHz LTE Band 5 : 869.7 MHz ~ 893.3 MHz LTE Band 12 : 729.7 MHz ~ 745.3 MHz LTE Band 17 : 736.5 MHz ~ 743.5 MHz
Bandwidth	LTE Band 2 : 1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz / 20MHz LTE Band 4 : 1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz / 20MHz LTE Band 5 : 1.4MHz / 3MHz / 5MHz / 10MHz LTE Band 12 : 1.4MHz / 3MHz / 5MHz / 10MHz LTE Band 17 : 5MHz / 10MHz
Maximum Output Power to Antenna	LTE Band 2 : 23.40 dBm LTE Band 4 : 23.78 dBm LTE Band 5 : 23.39 dBm LTE Band 12 : 23.10 dBm LTE Band 17 : 23.38 dBm
Antenna Type	Dipole Antenna
Antenna Gain	LTE Band 2 : 3.00 dBi LTE Band 4 : 3.70 dBi LTE Band 5 : 0.10 dBi LTE Band 12 : -1.69 dBi LTE Band 17 : -1.69 dBi
Type of Modulation	QPSK / 16QAM

1.5 Modification of EUT

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

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

FCC Rule	System	Type of Modulation	BW	Emission Designator	Frequency Tolerance (ppm)	Maximum ERP/EIRP
Part 24E	LTE Band 2	QPSK	1.4 MHz	1M09G7D	-	0.43 W
Part 24E	LTE Band 2	16QAM	1.4 MHz	1M10D7W	-	0.35 W
Part 24E	LTE Band 2	QPSK	3 MHz	2M73G7D	-	-
Part 24E	LTE Band 2	16QAM	3 MHz	2M74D7W	-	-
Part 24E	LTE Band 2	QPSK	5 MHz	4M50G7D	-	-
Part 24E	LTE Band 2	16QAM	5 MHz	4M51D7W	-	-
Part 24E	LTE Band 2	QPSK	10 MHz	9M10G7D	0.005 ppm	-
Part 24E	LTE Band 2	16QAM	10 MHz	9M02D7W	-	-
Part 24E	LTE Band 2	QPSK	15 MHz	13M5G7D	-	-
Part 24E	LTE Band 2	16QAM	15 MHz	13M5D7W	-	-
Part 24E	LTE Band 2	QPSK	20 MHz	18M5G7D	-	0.44 W
Part 24E	LTE Band 2	16QAM	20 MHz	18M4D7W	-	0.44 W
Part 27L	LTE Band 4	QPSK	1.4 MHz	1M10G7D	-	0.55 W
Part 27L	LTE Band 4	16QAM	1.4 MHz	1M10D7W	-	0.45 W
Part 27L	LTE Band 4	QPSK	3 MHz	2M74G7D	-	-
Part 27L	LTE Band 4	16QAM	3 MHz	2M73D7W	-	-
Part 27L	LTE Band 4	QPSK	5MHz	4M50G7D	-	-
Part 27L	LTE Band 4	16QAM	5MHz	4M50D7W	-	-
Part 27L	LTE Band 4	QPSK	10MHz	9M12G7D	0.006 ppm	-
Part 27L	LTE Band 4	16QAM	10MHz	9M04D7W	-	-
Part 27L	LTE Band 4	QPSK	15MHz	13M5G7D	-	0.56 W
Part 27L	LTE Band 4	16QAM	15MHz	13M5D7W	-	0.47 W
Part 27L	LTE Band 4	QPSK	20MHz	18M5G7D	-	0.54 W
Part 27L	LTE Band 4	16QAM	20MHz	18M5D7W	-	0.44 W

FCC Rule	System	Type of Modulation	BW	Emission Designator	Frequency Tolerance (ppm)	Maximum ERP/EIRP
Part 22H	LTE Band 5	QPSK	1.4 MHz	1M10G7D	-	0.13 W
Part 22H	LTE Band 5	16QAM	1.4 MHz	1M10D7W	-	0.11 W
Part 22H	LTE Band 5	QPSK	3 MHz	2M72G7D	-	-
Part 22H	LTE Band 5	16QAM	3 MHz	2M72D7W	-	-
Part 22H	LTE Band 5	QPSK	5 MHz	4M50G7D	-	0.14 W
Part 22H	LTE Band 5	16QAM	5 MHz	4M50D7W	-	0.11 W
Part 22H	LTE Band 5	QPSK	10 MHz	9M10G7D	0.012 ppm	0.13 W
Part 22H	LTE Band 5	16QAM	10 MHz	9M04D7W	-	0.11 W
Part 27H	LTE Band 12	QPSK	1.4 MHz	1M10G7D	-	0.08 W
Part 27H	LTE Band 12	16QAM	1.4 MHz	1M09D7W	-	0.07 W
Part 27H	LTE Band 12	QPSK	3 MHz	2M72G7D	-	-
Part 27H	LTE Band 12	16QAM	3 MHz	2M74D7W	-	-
Part 27H	LTE Band 12	QPSK	5 MHz	4M51G7D	-	0.08 W
Part 27H	LTE Band 12	16QAM	5 MHz	4M50D7W	-	0.07 W
Part 27H	LTE Band 12	QPSK	10 MHz	9M10G7D	0.017 ppm	0.08 W
Part 27H	LTE Band 12	16QAM	10 MHz	9M06D7W	-	0.07 W
Part 27H	LTE Band 17	QPSK	5MHz	4M50G7D	-	0.09 W
Part 27H	LTE Band 17	16QAM	5MHz	4M50D7W	-	0.08 W
Part 27H	LTE Band 17	QPSK	10MHz	9M10G7D	0.012 ppm	0.09 W
Part 27H	LTE Band 17	16QAM	10MHz	9M04D7W	-	0.07 W

1.7 Testing Location

Test Site	SPORTON INTERNATIONAL (KUNSHAN) INC.		
Test Site Location	No. 3-2, PingXiang Road, Kunshan, Jiangsu Province, P.R.C. TEL: +86-0512-5790-0158 FAX: +86-0512-5790-0958		
Test Site No.	Sporton Site No.		FCC Registration No.
	TH01-KS	03CH01-KS	149928

1.8 Applicable Standards

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

- ♦ 47 CFR Part 2, 22(H), 24(E), 27(L), 27(H)
- ♦ ANSI / TIA / EIA-603-C-2004
- ♦ FCC KDB 971168 D01 Power Meas. License Digital Systems v02r01
- ♦ FCC KDB 412172 D01 Determining ERP and EIRP v01

Remark:

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

2 Test Configuration of Equipment Under Test

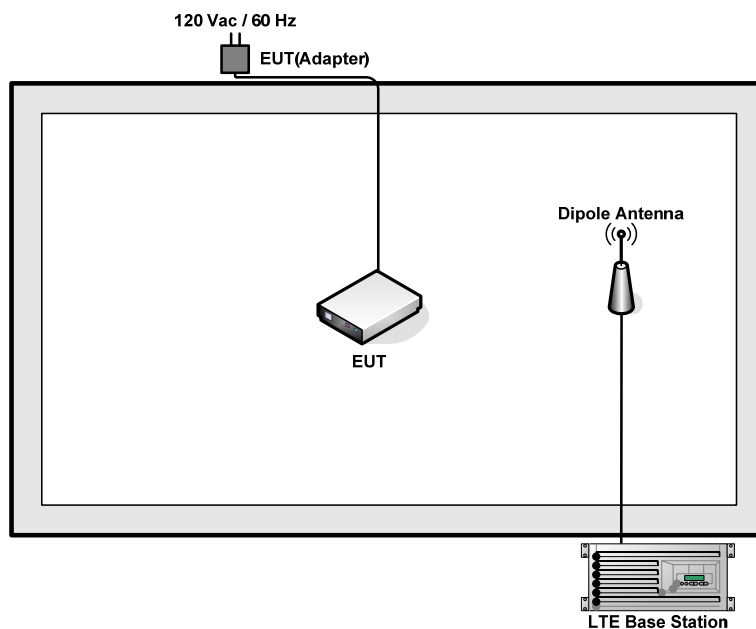
2.1 Test Mode

Antenna port conducted and radiated test items listed below are performed according to KDB 971168 D01 Power Meas. License Digital Systems v02r01 with maximum output power.

Test Items	Band	Bandwidth (MHz)						Modulation		RB #			Test Channel		
		1.4	3	5	10	15	20	QPSK	16QAM	1	Half	Full	L	M	H
Max. Output Power	2	v	v	v	v	v	v	v	v	v	v	v	v	v	v
	4	v	v	v	v	v	v	v	v	v	v	v	v	v	v
	5	v	v	v	v	-	-	v	v	v	v	v	v	v	v
	12	v	v	v	v	-	-	v	v	v	v	v	v	v	v
	17	-	-	v	v	-	-	v	v	v	v	v	v	v	v
Peak-to-Average Ratio	2						v		v	v		v		v	
	4						v		v	v		v		v	
	5				v	-	-		v	v		v		v	
	12				v	-	-		v	v		v		v	
	17	-	-		v	-	-		v	v		v		v	
26dB and 99% Bandwidth	2	v	v	v	v	v	v	v	v			v		v	
	4	v	v	v	v	v	v	v	v			v		v	
	5	v	v	v	v	-	-	v	v			v		v	
	12	v	v	v	v	-	-	v	v			v		v	
	17	-	-	v	v	-	-	v	v			v		v	
Conducted Band Edge	2	v	v	v	v	v	v	v	v	v		v	v		v
	4	v	v	v	v	v	v	v	v	v		v	v		v
	5	v	v	v	v	-	-	v	v	v		v	v		v
	12	v	v	v	v	-	-	v	v	v		v	v		v
	17	-	-	v	v	-	-	v	v	v		v	v		v

Test Items	Band	Bandwidth (MHz)						Modulation		RB #			Test Channel		
		1.4	3	5	10	15	20	QPSK	16QAM	1	Half	Full	L	M	H
Conducted Spurious Emission	2	v	v	v	v	v	v	v	v	v			v	v	v
	4	v	v	v	v	v	v	v	v	v			v	v	v
	5	v	v	v	v	-	-	v	v	v			v	v	v
	12	v	v	v	v	-	-	v	v	v			v	v	v
	17	-	-	v	v	-	-	v	v	v			v	v	v
Frequency Stability	2				v			v				v		v	
	4				v			v				v		v	
	5				v	-	-	v				v		v	
	12				v	-	-	v				v		v	
	17	-	-		v	-	-	v				v		v	
E.R.P./ E.I.R.P.	2	v					v	v	v	v			v	v	v
	4	v				v	v	v	v	v			v	v	v
	5	v	v		v	-	-	v	v	v			v	v	v
	12	v		v	v	-	-	v	v	v			v	v	v
	17	-	-	v	v	-	-	v	v	v			v	v	v
Radiated Spurious Emission	2	v	v	v	v	v	v	v		v				v	
	4	v	v	v	v	v	v	v		v				v	
	5	v	v	v	v	-	-	v		v				v	
	12	v	v	v	v	-	-	v		v				v	
	17	-	-	v	v	-	-	v		v				v	
Note	- The mark "v" means that this configuration is chosen for testing - The mark "-" means that this bandwidth is not supported. - For E.R.P./E.I.R.P. measurement, the widest bandwidth and the bandwidth with the highest conducted power of each band is chosen for testing. Besides, the lowest bandwidth of each band is also measured for reporting only. - The device is investigated from 30MHz to 10 times of fundamental signal for radiated spurious emission test under different RB size/offset and modulations in exploratory test. Subsequently, only the worst case emissions are reported.														

2.2 Connection Diagram of Test System



2.3 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model No.	FCC ID	Data Cable	Power Cord
1.	LTE Base Station	Anritsu	MT8820C	N/A	N/A	Unshielded, 1.8 m
2.	DC Power Supply	GWINSTEK	GPS-3030D	N/A	N/A	Unshielded, 1.8 m

2.4 Measurement Results Explanation Example

For all conducted test items:

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

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

Offset = RF cable loss + attenuator factor.

Following shows an offset computation example with cable loss 5.2 dB and 10dB attenuator.

Example :

$$\begin{aligned}\text{Offset(dB)} &= \text{RF cable loss(dB)} + \text{attenuator factor(dB)} \\ &= 5.2 + 10 = 15.2 \text{ (dB)}\end{aligned}$$

3 Test Result

3.1 Conducted Output Power Measurement and ERP/EIRP Measurement

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

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

The ERP of mobile transmitters must not exceed 7 Watts for LTE Band 5.

The ERP of mobile transmitters must not exceed 3 Watts for LTE Band 12 and Band 17.

The EIRP of mobile transmitters must not exceed 2 Watts for LTE Band 2.

The EIRP of mobile transmitters must not exceed 1 Watts for LTE Band 4.

According to KDB 412172 D01 Power Approach,

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

P_T = transmitter output power in dBm

G_T = gain of the transmitting antenna in dBi

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

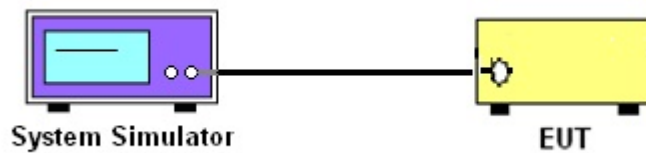
3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

1. The transmitter output port was connected to the system simulator.
2. Set EUT at maximum power through the system simulator.
3. Select lowest, middle, and highest channels for each band and different modulation.
4. Measure and record the power level from the system simulator.

3.1.4 Test Setup



3.1.5 Test Result of Conducted Output Power

<LTE Band 2 Conducted Power>

BW [MHz]	Modulation	RB Size	RB Offset	Power (dBm) Low Ch. / Freq.	Power (dBm) Middle Ch. / Freq.	Power (dBm) High Ch. / Freq.
Channel				18700	18900	19100
Frequency (MHz)				1860	1880	1900
20	QPSK	1	0	23.29	23.10	23.19
20	QPSK	1	49	23.40	23.25	23.33
20	QPSK	1	99	23.10	23.15	22.75
20	QPSK	50	0	22.15	22.06	21.95
20	QPSK	50	24	22.05	22.01	21.94
20	QPSK	50	49	22.09	22.05	21.78
20	QPSK	100	0	22.07	22.04	21.89
20	16QAM	1	0	21.97	22.20	22.17
20	16QAM	1	49	22.11	22.52	22.44
20	16QAM	1	99	22.04	22.58	21.81
20	16QAM	50	0	21.07	20.98	20.97
20	16QAM	50	24	21.07	20.93	20.94
20	16QAM	50	49	21.09	21.04	20.98
20	16QAM	100	0	20.99	21.01	20.86
Channel				18675	18900	19125
Frequency (MHz)				1857.5	1880	1902.5
15	QPSK	1	0	23.19	23.28	23.14
15	QPSK	1	37	23.36	23.26	23.24
15	QPSK	1	74	23.27	23.23	22.72
15	QPSK	36	0	22.06	22.08	22.07
15	QPSK	36	18	22.09	22.09	22.02
15	QPSK	36	37	22.10	22.07	21.87
15	QPSK	75	0	22.04	22.02	21.92
15	16QAM	1	0	22.25	22.23	22.49
15	16QAM	1	37	22.16	22.04	22.23
15	16QAM	1	74	22.25	22.38	21.66
15	16QAM	36	0	21.03	21.07	21.04
15	16QAM	36	18	21.08	21.03	21.02
15	16QAM	36	37	21.11	21.06	20.93
15	16QAM	75	0	21.00	21.04	20.92

BW [MHz]	Modulation	RB Size	RB Offset	Power (dBm) Low Ch. / Freq.	Power (dBm) Middle Ch. / Freq.	Power (dBm) High Ch. / Freq.
Channel				18650	18900	19150
Frequency (MHz)				1855	1880	1905
10	QPSK	1	0	23.18	23.24	23.23
10	QPSK	1	24	23.15	23.12	23.10
10	QPSK	1	49	23.08	23.26	22.76
10	QPSK	25	0	22.12	22.08	22.08
10	QPSK	25	12	22.14	22.12	21.96
10	QPSK	25	24	22.10	22.11	21.81
10	QPSK	50	0	22.07	21.93	21.84
10	16QAM	1	0	22.10	21.94	22.58
10	16QAM	1	24	22.55	22.51	21.96
10	16QAM	1	49	22.52	22.46	21.56
10	16QAM	25	0	21.12	21.06	21.02
10	16QAM	25	12	21.15	21.14	21.04
10	16QAM	25	24	21.12	21.02	20.77
10	16QAM	50	0	21.01	20.96	20.85
Channel				18625	18900	19175
Frequency (MHz)				1852.5	1880	1907.5
5	QPSK	1	0	23.12	22.98	22.92
5	QPSK	1	12	23.33	23.17	22.88
5	QPSK	1	24	23.24	23.27	22.68
5	QPSK	12	0	22.23	22.18	21.91
5	QPSK	12	6	22.26	22.24	21.90
5	QPSK	12	11	22.30	22.21	21.80
5	QPSK	25	0	22.12	22.07	21.77
5	16QAM	1	0	21.95	22.43	22.21
5	16QAM	1	12	22.49	22.39	22.06
5	16QAM	1	24	22.12	21.88	21.44
5	16QAM	12	0	21.30	21.27	21.03
5	16QAM	12	6	21.34	21.31	20.92
5	16QAM	12	11	21.40	21.30	20.77
5	16QAM	25	0	21.08	21.06	20.74

BW [MHz]	Modulation	RB Size	RB Offset	Power (dBm) Low Ch. / Freq.	Power (dBm) Middle Ch. / Freq.	Power (dBm) High Ch. / Freq.
Channel				18615	18900	19185
Frequency (MHz)				1851.5	1880	1908.5
3	QPSK	1	0	23.16	23.17	22.81
3	QPSK	1	7	23.34	23.24	22.72
3	QPSK	1	14	23.27	23.33	22.61
3	QPSK	8	0	22.21	22.23	21.89
3	QPSK	8	4	22.31	22.20	21.80
3	QPSK	8	7	22.31	22.21	21.67
3	QPSK	15	0	22.21	22.24	21.75
3	16QAM	1	0	22.39	22.44	21.79
3	16QAM	1	7	22.14	21.95	21.71
3	16QAM	1	14	22.33	22.09	21.48
3	16QAM	8	0	21.30	21.25	20.98
3	16QAM	8	4	21.33	21.30	20.88
3	16QAM	8	7	21.33	21.19	20.82
3	16QAM	15	0	21.24	21.32	20.92
Channel				18607	18900	19193
Frequency (MHz)				1850.7	1880	1909.3
1.4	QPSK	1	0	22.94	23.19	22.68
1.4	QPSK	1	2	23.20	23.24	22.69
1.4	QPSK	1	5	23.34	23.16	22.64
1.4	QPSK	3	0	23.14	23.18	22.67
1.4	QPSK	3	1	23.19	23.14	22.69
1.4	QPSK	3	2	23.19	23.28	22.65
1.4	QPSK	6	0	22.16	22.31	21.67
1.4	16QAM	1	0	22.32	22.46	21.66
1.4	16QAM	1	2	22.41	22.01	21.95
1.4	16QAM	1	5	22.06	22.48	21.52
1.4	16QAM	3	0	22.16	22.37	21.71
1.4	16QAM	3	1	22.31	22.33	21.80
1.4	16QAM	3	2	22.09	22.35	21.59
1.4	16QAM	6	0	21.25	21.27	20.76

<LTE Band 4 Conducted Power>

BW [MHz]	Modulation	RB Size	RB Offset	Power (dBm) Low Ch. / Freq.	Power (dBm) Middle Ch. / Freq.	Power (dBm) High Ch. / Freq.
Channel				20050	20175	20300
Frequency (MHz)				1720	1732.5	1745
20	QPSK	1	0	23.66	23.46	23.29
20	QPSK	1	49	23.51	23.22	23.39
20	QPSK	1	99	23.33	23.42	23.26
20	QPSK	50	0	22.27	22.25	22.18
20	QPSK	50	24	22.18	22.16	22.06
20	QPSK	50	49	22.19	22.00	21.99
20	QPSK	100	0	22.16	22.13	22.17
20	16QAM	1	0	22.46	22.45	22.10
20	16QAM	1	49	22.74	22.32	22.64
20	16QAM	1	99	22.56	22.50	21.97
20	16QAM	50	0	21.12	21.24	21.14
20	16QAM	50	24	21.22	21.08	21.19
20	16QAM	50	49	21.20	21.00	21.12
20	16QAM	100	0	21.17	21.08	21.18
Channel				20025	20175	20325
Frequency (MHz)				1717.5	1732.5	1747.5
15	QPSK	1	0	23.78	23.41	23.47
15	QPSK	1	37	23.50	23.39	23.38
15	QPSK	1	74	23.45	23.35	23.23
15	QPSK	36	0	22.28	22.25	22.24
15	QPSK	36	18	22.22	22.19	22.27
15	QPSK	36	37	22.29	22.13	22.19
15	QPSK	75	0	22.15	22.15	22.13
15	16QAM	1	0	22.26	22.26	22.60
15	16QAM	1	37	22.98	22.68	22.32
15	16QAM	1	74	22.78	22.66	22.67
15	16QAM	36	0	21.32	21.27	21.21
15	16QAM	36	18	21.30	21.16	21.15
15	16QAM	36	37	21.30	21.08	21.24
15	16QAM	75	0	21.15	21.09	21.01



BW [MHz]	Modulation	RB Size	RB Offset	Power (dBm) Low Ch. / Freq.	Power (dBm) Middle Ch. / Freq.	Power (dBm) High Ch. / Freq.
Channel				20000	20175	20350
Frequency (MHz)				1715	1732.5	1750
10	QPSK	1	0	23.43	23.28	23.34
10	QPSK	1	24	23.40	23.31	23.34
10	QPSK	1	49	23.37	23.34	23.35
10	QPSK	25	0	22.36	22.23	22.25
10	QPSK	25	12	22.39	22.25	22.23
10	QPSK	25	24	22.38	22.21	22.20
10	QPSK	50	0	22.12	22.16	21.99
10	16QAM	1	0	22.79	22.73	22.71
10	16QAM	1	24	22.47	22.58	22.24
10	16QAM	1	49	22.19	22.57	21.92
10	16QAM	25	0	21.40	21.32	21.20
10	16QAM	25	12	21.20	21.25	21.29
10	16QAM	25	24	21.19	21.20	21.17
10	16QAM	50	0	21.13	21.10	21.11
Channel				19975	20175	20375
Frequency (MHz)				1712.5	1732.5	1752.5
5	QPSK	1	0	23.41	23.31	23.25
5	QPSK	1	12	23.54	23.35	23.30
5	QPSK	1	24	23.34	23.38	23.25
5	QPSK	12	0	22.53	22.44	22.42
5	QPSK	12	6	22.48	22.36	22.38
5	QPSK	12	11	22.51	22.37	22.30
5	QPSK	25	0	22.34	22.21	22.23
5	16QAM	1	0	22.58	22.10	22.55
5	16QAM	1	12	22.83	22.63	22.55
5	16QAM	1	24	22.48	22.47	22.41
5	16QAM	12	0	21.64	21.34	21.43
5	16QAM	12	6	21.48	21.48	21.40
5	16QAM	12	11	21.64	21.47	21.35
5	16QAM	25	0	21.28	21.30	21.26

BW [MHz]	Modulation	RB Size	RB Offset	Power (dBm) Low Ch. / Freq.	Power (dBm) Middle Ch. / Freq.	Power (dBm) High Ch. / Freq.
Channel				19965	20175	20385
Frequency (MHz)				1711.5	1732.5	1753.5
3	QPSK	1	0	23.49	23.39	23.61
3	QPSK	1	7	23.40	23.34	23.14
3	QPSK	1	14	23.56	23.38	23.43
3	QPSK	8	0	22.57	22.38	22.34
3	QPSK	8	4	22.56	22.46	22.37
3	QPSK	8	7	22.51	22.38	22.33
3	QPSK	15	0	22.39	22.39	22.31
3	16QAM	1	0	22.55	22.32	22.63
3	16QAM	1	7	22.82	22.19	22.55
3	16QAM	1	14	22.15	21.87	22.54
3	16QAM	8	0	21.52	21.44	21.25
3	16QAM	8	4	21.52	21.44	21.27
3	16QAM	8	7	21.44	21.29	21.29
3	16QAM	15	0	21.44	21.35	21.36
Channel				19957	20175	20393
Frequency (MHz)				1710.7	1732.5	1754.3
1.4	QPSK	1	0	23.51	23.35	23.21
1.4	QPSK	1	2	23.56	23.34	23.67
1.4	QPSK	1	5	23.54	23.34	23.16
1.4	QPSK	3	0	23.57	23.37	23.20
1.4	QPSK	3	1	23.56	23.39	23.67
1.4	QPSK	3	2	23.53	23.37	23.19
1.4	QPSK	6	0	22.57	22.39	22.33
1.4	16QAM	1	0	22.51	22.58	22.47
1.4	16QAM	1	2	22.81	22.06	22.25
1.4	16QAM	1	5	22.31	22.61	22.32
1.4	16QAM	3	0	22.61	22.31	22.66
1.4	16QAM	3	1	22.58	22.51	22.31
1.4	16QAM	3	2	22.60	22.49	22.20
1.4	16QAM	6	0	21.52	21.53	21.38

<LTE Band 5 Conducted Power>

BW [MHz]	Modulation	RB Size	RB Offset	Power (dBm) Low Ch. / Freq.	Power (dBm) Middle Ch. / Freq.	Power (dBm) High Ch. / Freq.
Channel				20450	20525	20600
Frequency (MHz)				829	836.5	844
10	QPSK	1	0	23.07	22.96	22.75
10	QPSK	1	24	23.08	22.83	22.86
10	QPSK	1	49	23.09	22.72	23.20
10	QPSK	25	0	21.84	21.79	21.64
10	QPSK	25	12	21.93	21.71	21.66
10	QPSK	25	24	21.86	21.66	21.90
10	QPSK	50	0	21.76	21.53	21.57
10	16QAM	1	0	21.79	22.25	22.00
10	16QAM	1	24	22.10	21.80	21.75
10	16QAM	1	49	22.05	21.61	22.37
10	16QAM	25	0	20.69	20.74	20.61
10	16QAM	25	12	20.78	20.73	20.60
10	16QAM	25	24	20.71	20.70	20.86
10	16QAM	50	0	20.69	20.57	20.54
Channel				20425	20525	20625
Frequency (MHz)				826.5	836.5	846.5
5	QPSK	1	0	23.02	22.80	22.93
5	QPSK	1	12	22.87	22.93	22.99
5	QPSK	1	24	22.86	22.69	23.28
5	QPSK	12	0	21.95	22.00	22.02
5	QPSK	12	6	21.94	21.93	22.01
5	QPSK	12	11	21.91	21.81	22.19
5	QPSK	25	0	21.73	21.68	21.90
5	16QAM	1	0	21.49	21.95	21.70
5	16QAM	1	12	21.76	21.80	22.06
5	16QAM	1	24	21.90	22.04	22.12
5	16QAM	12	0	20.96	21.03	21.07
5	16QAM	12	6	20.93	20.97	21.12
5	16QAM	12	11	20.94	20.84	21.18
5	16QAM	25	0	20.79	20.71	20.74

BW [MHz]	Modulation	RB Size	RB Offset	Power (dBm) Low Ch. / Freq.	Power (dBm) Middle Ch. / Freq.	Power (dBm) High Ch. / Freq.
Channel				20415	20525	20635
Frequency (MHz)				825.5	836.5	847.5
3	QPSK	1	0	23.39	23.05	23.05
3	QPSK	1	7	22.96	22.91	23.13
3	QPSK	1	14	22.91	22.90	23.22
3	QPSK	8	0	22.01	22.01	22.07
3	QPSK	8	4	21.94	21.89	22.17
3	QPSK	8	7	22.01	21.83	22.22
3	QPSK	15	0	21.93	21.87	22.12
3	16QAM	1	0	22.19	21.96	21.98
3	16QAM	1	7	21.85	22.05	22.49
3	16QAM	1	14	21.93	21.97	22.10
3	16QAM	8	0	20.89	20.84	21.04
3	16QAM	8	4	20.74	20.93	21.24
3	16QAM	8	7	20.95	20.74	21.18
3	16QAM	15	0	20.98	20.88	21.08
Channel				20407	20525	20643
Frequency (MHz)				824.7	836.5	848.3
1.4	QPSK	1	0	23.01	22.86	23.19
1.4	QPSK	1	2	23.03	22.91	23.18
1.4	QPSK	1	5	22.90	22.74	23.22
1.4	QPSK	3	0	22.96	22.94	23.15
1.4	QPSK	3	1	23.04	22.81	23.21
1.4	QPSK	3	2	22.96	22.80	23.19
1.4	QPSK	6	0	22.01	21.88	22.23
1.4	16QAM	1	0	22.17	21.86	22.04
1.4	16QAM	1	2	22.25	21.69	22.32
1.4	16QAM	1	5	21.63	21.74	21.98
1.4	16QAM	3	0	22.19	22.02	22.07
1.4	16QAM	3	1	22.00	21.94	22.26
1.4	16QAM	3	2	22.14	21.88	22.29
1.4	16QAM	6	0	21.13	20.89	21.19

<LTE Band 12 Conducted Power>

BW [MHz]	Modulation	RB Size	RB Offset	Power (dBm) Low Ch. / Freq.	Power (dBm) Middle Ch. / Freq.	Power (dBm) High Ch. / Freq.
Channel				23060	23095	23130
Frequency (MHz)				704	707.5	711
10	QPSK	1	0	22.80	22.59	22.51
10	QPSK	1	24	22.85	22.69	22.92
10	QPSK	1	49	22.61	22.94	22.91
10	QPSK	25	0	21.66	21.50	21.63
10	QPSK	25	12	21.54	21.53	21.73
10	QPSK	25	24	21.44	21.72	21.73
10	QPSK	50	0	21.39	21.35	21.46
10	16QAM	1	0	22.14	21.91	21.84
10	16QAM	1	24	21.73	21.64	21.88
10	16QAM	1	49	21.70	21.93	22.17
10	16QAM	25	0	20.76	20.47	20.55
10	16QAM	25	12	20.60	20.45	20.67
10	16QAM	25	24	20.56	20.74	20.79
10	16QAM	50	0	20.44	20.35	20.37
Channel				23035	23095	23155
Frequency (MHz)				701.5	707.5	713.5
5	QPSK	1	0	22.83	22.48	22.86
5	QPSK	1	12	23.10	22.78	22.66
5	QPSK	1	24	22.65	22.95	22.83
5	QPSK	12	0	21.92	21.71	21.91
5	QPSK	12	6	21.83	21.67	21.82
5	QPSK	12	11	21.74	21.76	21.78
5	QPSK	25	0	21.63	21.48	21.71
5	16QAM	1	0	22.15	21.79	22.10
5	16QAM	1	12	22.06	22.01	22.05
5	16QAM	1	24	22.10	21.89	21.95
5	16QAM	12	0	21.03	20.77	21.01
5	16QAM	12	6	20.93	20.74	20.90
5	16QAM	12	11	20.75	20.85	20.88
5	16QAM	25	0	20.67	20.58	20.69



BW [MHz]	Modulation	RB Size	RB Offset	Power (dBm) Low Ch. / Freq.	Power (dBm) Middle Ch. / Freq.	Power (dBm) High Ch. / Freq.
Channel				23025	23095	23165
Frequency (MHz)				700.5	707.5	714.5
3	QPSK	1	0	22.84	22.62	22.67
3	QPSK	1	7	23.05	22.73	22.96
3	QPSK	1	14	22.93	22.79	22.88
3	QPSK	8	0	21.96	21.68	21.82
3	QPSK	8	4	21.91	21.67	21.91
3	QPSK	8	7	21.99	21.71	21.80
3	QPSK	15	0	21.91	21.64	21.78
3	16QAM	1	0	22.16	21.63	21.80
3	16QAM	1	7	21.83	21.64	21.71
3	16QAM	1	14	21.75	21.89	21.60
3	16QAM	8	0	20.87	20.75	20.74
3	16QAM	8	4	20.88	20.71	20.76
3	16QAM	8	7	21.03	20.59	20.72
3	16QAM	15	0	20.95	20.62	20.81
Channel				23017	23095	23173
Frequency (MHz)				699.7	707.5	715.3
1.4	QPSK	1	0	22.90	22.66	22.85
1.4	QPSK	1	2	22.89	22.73	22.90
1.4	QPSK	1	5	22.81	22.73	22.76
1.4	QPSK	3	0	23.03	22.68	22.85
1.4	QPSK	3	1	22.95	22.71	22.78
1.4	QPSK	3	2	22.91	22.75	22.95
1.4	QPSK	6	0	21.99	21.73	21.87
1.4	16QAM	1	0	22.01	22.00	22.00
1.4	16QAM	1	2	21.84	21.67	21.70
1.4	16QAM	1	5	21.64	21.68	21.78
1.4	16QAM	3	0	21.94	21.76	21.76
1.4	16QAM	3	1	22.10	21.60	21.85
1.4	16QAM	3	2	21.84	21.77	21.94
1.4	16QAM	6	0	21.06	20.94	20.85

<LTE Band 17 Conducted Power>

BW [MHz]	Modulation	RB Size	RB Offset	Power (dBm) Low Ch. / Freq.	Power (dBm) Middle Ch. / Freq.	Power (dBm) High Ch. / Freq.
Channel				23780	23790	23800
Frequency (MHz)				709	710	711
10	QPSK	1	0	22.78	22.89	22.77
10	QPSK	1	24	23.04	23.19	23.35
10	QPSK	1	49	23.11	23.31	23.01
10	QPSK	25	0	22.71	22.77	22.88
10	QPSK	25	12	22.94	23.00	22.99
10	QPSK	25	24	23.05	22.98	22.87
10	QPSK	50	0	22.75	22.79	22.77
10	16QAM	1	0	21.78	21.88	21.82
10	16QAM	1	24	22.01	22.20	22.53
10	16QAM	1	49	21.99	22.17	22.28
10	16QAM	25	0	20.70	20.87	20.78
10	16QAM	25	12	20.91	20.90	21.00
10	16QAM	25	24	21.10	21.05	20.98
10	16QAM	50	0	20.81	20.78	20.72
Channel				23755	23790	23825
Frequency (MHz)				706.5	710	713.5
5	QPSK	1	0	22.78	22.77	23.22
5	QPSK	1	12	22.96	23.28	23.20
5	QPSK	1	24	23.17	23.38	22.99
5	QPSK	12	0	22.91	23.00	23.31
5	QPSK	12	6	23.06	23.15	23.09
5	QPSK	12	11	23.04	23.23	23.15
5	QPSK	25	0	22.72	23.03	22.94
5	16QAM	1	0	22.16	21.92	22.04
5	16QAM	1	12	21.85	22.19	21.95
5	16QAM	1	24	22.09	22.61	21.74
5	16QAM	12	0	20.91	21.05	21.23
5	16QAM	12	6	21.02	21.24	21.11
5	16QAM	12	11	21.04	21.33	21.12
5	16QAM	25	0	20.71	21.00	20.79

Note: maximum average power for LTE.

3.1.6 Test Result of Conducted Output Power and ERP/EIRP

PCS Band ($G_T - L_C = 3.00$ dB)						
Modes	LTE Band 2 (QPSK, BW=1.4M)			LTE Band 2 (16QAM, BW=1.4M)		
Channel	18607(Low)	18900 (Mid)	19193 (High)	18607(Low)	18900 (Mid)	19193 (High)
Frequency (MHz)	1850.7	1880	1909.3	1850.7	1880	1909.3
Conducted Power P_T (dBm)	23.34	23.28	22.69	22.41	22.48	21.95
Conducted Power P_T (Watts)	0.22	0.21	0.19	0.17	0.18	0.16
EIRP(dBm)	26.34	26.28	25.69	25.41	25.48	24.95
EIRP(Watts)	0.43	0.42	0.37	0.35	0.35	0.31

PCS Band ($G_T - L_C = 3.00$ dB)						
Modes	LTE Band 2 (QPSK, BW=20M)			LTE Band 2 (16QAM, BW=20M)		
Channel	18700(Low)	18900 (Mid)	19100 (High)	18700(Low)	18900 (Mid)	19100 (High)
Frequency (MHz)	1860	1880	1900	1860	1880	1900
Conducted Power P_T (dBm)	23.40	23.25	23.33	23.40	23.25	22.44
Conducted Power P_T (Watts)	0.22	0.21	0.22	0.22	0.21	0.18
EIRP(dBm)	26.40	26.25	26.33	26.40	26.25	25.44
EIRP(Watts)	0.44	0.42	0.43	0.44	0.42	0.35

PCS Band ($G_T - L_C = 3.70$ dB)						
Modes	LTE Band 4 (QPSK, BW=1.4M)			LTE Band 4 (16QAM, BW=1.4M)		
Channel	19957 (Low)	20175 (Mid)	20393 (High)	19957 (Low)	20175 (Mid)	20393 (High)
Frequency (MHz)	1710.7	1732.5	1754.3	1710.7	1732.5	1754.3
Conducted Power P_T (dBm)	23.57	23.39	23.67	22.81	22.61	22.66
Conducted Power P_T (Watts)	0.23	0.22	0.23	0.19	0.18	0.18
EIRP(dBm)	27.27	27.09	27.37	26.51	26.31	26.36
EIRP(Watts)	0.53	0.51	0.55	0.45	0.43	0.43

PCS Band ($G_T - L_C = 3.70$ dB)						
Modes	LTE Band 4 (QPSK, BW=15M)			LTE Band 4 (16QAM, BW=15M)		
Channel	20025 (Low)	20175 (Mid)	20325 (High)	20025 (Low)	20175 (Mid)	20325 (High)
Frequency (MHz)	1717.5	1732.5	1747.5	1717.5	1732.5	1747.5
Conducted Power P_T (dBm)	23.78	23.41	23.47	22.98	22.68	22.67
Conducted Power P_T (Watts)	0.24	0.22	0.22	0.20	0.19	0.18
EIRP(dBm)	27.48	27.11	27.17	26.68	26.38	26.37
EIRP(Watts)	0.56	0.51	0.52	0.47	0.43	0.43

PCS Band ($G_T - L_C = 3.70$ dB)						
Modes	LTE Band 4 (QPSK,BW=20M)			LTE Band 4 (16QAM,BW=20M)		
Channel	20050 (Low)	20175 (Mid)	20300 (High)	20050 (Low)	20175 (Mid)	20300 (High)
Frequency (MHz)	1720	1732.5	1745	1720	1732.5	1745
Conducted Power P_T (dBm)	23.66	23.46	23.39	22.74	22.50	22.64
Conducted Power P_T (Watts)	0.23	0.22	0.22	0.19	0.18	0.18
EIRP(dBm)	27.36	27.16	27.09	26.44	26.20	26.34
EIRP(Watts)	0.54	0.52	0.51	0.44	0.42	0.43

Cellular Band ($G_T - L_C = 0.10$ dB)						
Modes	LTE Band 5 (QPSK, BW=1.4M)			LTE Band 5 (16QAM, BW=1.4M)		
Channel	20407 (Low)	20525 (Mid)	20643 (High)	20407 (Low)	20525 (Mid)	20643 (High)
Frequency (MHz)	824.7	836.5	848.3	824.7	836.5	848.3
Conducted Power P_T (dBm)	23.04	22.94	23.22	22.25	22.02	22.32
Conducted Power P_T (Watts)	0.20	0.20	0.21	0.17	0.16	0.17
ERP(dBm)	20.99	20.89	21.17	20.20	19.97	20.27
ERP(Watts)	0.13	0.12	0.13	0.10	0.10	0.11

Cellular Band ($G_T - L_C = 0.10$ dB)						
Modes	LTE Band 5 (QPSK, BW=3M)			LTE Band 5 (16QAM, BW=3M)		
Channel	20415 (Low)	20525 (Mid)	20635 (High)	20415 (Low)	20525 (Mid)	20635 (High)
Frequency (MHz)	825.5	836.5	847.5	825.5	836.5	847.5
Conducted Power P_T (dBm)	23.39	23.05	23.22	22.19	22.05	22.49
Conducted Power P_T (Watts)	0.22	0.20	0.21	0.17	0.16	0.18
ERP(dBm)	21.34	21.00	21.17	20.14	20.00	20.44
ERP(Watts)	0.14	0.13	0.13	0.10	0.10	0.11

Cellular Band ($G_T - L_C = 0.10$ dB)						
Modes	LTE Band 5 (QPSK,BW=10M)			LTE Band 5 (16QAM,BW=10M)		
Channel	20450 (Low)	20525 (Mid)	20600 (High)	20450 (Low)	20525 (Mid)	20600 (High)
Frequency (MHz)	829	836.5	844	829	836.5	844
Conducted Power P_T (dBm)	23.09	22.96	23.20	22.10	22.25	22.37
Conducted Power P_T (Watts)	0.20	0.20	0.21	0.16	0.17	0.17
ERP(dBm)	21.04	20.91	21.15	20.05	20.20	20.32
ERP(Watts)	0.13	0.12	0.13	0.10	0.10	0.11

Cellular Band ($G_T - L_C = -1.69$ dB)						
Modes	LTE Band 12 (QPSK,BW=1.4M)			LTE Band 12 (16QAM,BW=1.4M)		
Channel	23017 (Low)	23095 (Mid)	23173 (High)	23017 (Low)	23095 (Mid)	23173 (High)
Frequency (MHz)	699.7	707.5	715.3	699.7	707.5	715.3
Conducted Power P_T (dBm)	23.03	22.75	22.95	22.10	22.00	22.00
Conducted Power P_T (Watts)	0.20	0.19	0.20	0.16	0.16	0.16
ERP(dBm)	19.19	18.91	19.11	18.26	18.16	18.16
ERP(Watts)	0.08	0.08	0.08	0.07	0.07	0.07

Cellular Band ($G_T - L_C = -1.69$ dB)						
Modes	LTE Band 12 (QPSK,BW=5M)			LTE Band 12 (16QAM,BW=5M)		
Channel	23035 (Low)	23095 (Mid)	23155 (High)	23035 (Low)	23095 (Mid)	23155 (High)
Frequency (MHz)	701.5	707.5	713.5	701.5	707.5	713.5
Conducted Power P_T (dBm)	23.10	22.95	22.86	22.15	22.01	22.10
Conducted Power P_T (Watts)	0.20	0.20	0.19	0.16	0.16	0.16
ERP(dBm)	19.26	19.11	19.02	18.31	18.17	18.26
ERP(Watts)	0.08	0.08	0.08	0.07	0.07	0.07

Cellular Band ($G_T - L_C = -1.69$ dB)						
Modes	LTE Band 12 (QPSK,BW=10M)			LTE Band 12 (16QAM,BW=10M)		
Channel	23060 (Low)	23095 (Mid)	23130 (High)	23060 (Low)	23095 (Mid)	23130 (High)
Frequency (MHz)	704	707.5	711	704	707.5	711
Conducted Power P_T (dBm)	22.85	22.94	22.92	22.14	21.93	22.17
Conducted Power P_T (Watts)	0.19	0.20	0.20	0.16	0.16	0.16
ERP(dBm)	19.01	19.10	19.08	18.30	18.09	18.33
ERP(Watts)	0.08	0.08	0.08	0.07	0.06	0.07

Cellular Band ($G_T - L_C = -1.69$ dB)						
Modes	LTE Band 17 (QPSK,BW=5M)			LTE Band 17 (16QAM,BW=5M)		
Channel	23755(Low)	23790 (Mid)	23825 (High)	23755(Low)	23790 (Mid)	23825 (High)
Frequency (MHz)	706.5	710	713.5	706.5	710	713.5
Conducted Power P_T (dBm)	23.17	23.38	23.31	22.16	22.61	22.04
Conducted Power P_T (Watts)	0.21	0.22	0.21	0.16	0.18	0.16
ERP(dBm)	19.33	19.54	19.47	18.32	18.77	18.20
ERP(Watts)	0.09	0.09	0.09	0.07	0.08	0.07

Cellular Band ($G_T - L_C = -1.69$ dB)						
Modes	LTE Band 17 (QPSK,BW=10M)			LTE Band 17 (16QAM,BW=10M)		
Channel	23780(Low)	23790 (Mid)	23800 (High)	23780(Low)	23790 (Mid)	23800 (High)
Frequency (MHz)	709	710	711	709	710	711
Conducted Power P_T (dBm)	23.11	23.31	23.35	22.01	22.20	22.53
Conducted Power P_T (Watts)	0.20	0.21	0.22	0.16	0.17	0.18
ERP(dBm)	19.27	19.47	19.51	18.17	18.36	18.69
ERP(Watts)	0.08	0.09	0.09	0.07	0.07	0.07

3.2 Peak-to-Average Ratio

3.2.1 Description of the PAR Measurement

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

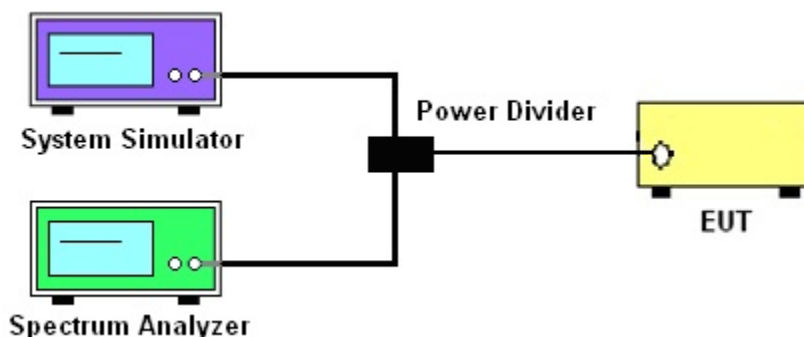
3.2.2 Measuring Instruments

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

3.2.3 Test Procedures

1. The EUT was connected to spectrum and system simulator via a power divider.
2. Set the CCDF (Complementary Cumulative Distribution Function) option in spectrum analyzer.
3. The highest RF powers were measured and recorded the maximum PAPR level associated with a probability of 0.1 %.
4. Record the deviation as Peak to Average Ratio.

3.2.4 Test Setup



3.2.5 Test Result of Peak-to-Average Ratio

LTE Band 2				
BW [MHz]	Modulation	RB Size	RB Offset	Power (dBm) Middle Ch. / Freq.
Channel				18900
Frequency (MHz)				1880
20	16QAM	1	0	2.80
20	16QAM	100	0	7.24

LTE Band 4				
BW [MHz]	Modulation	RB Size	RB Offset	Power (dBm) Middle Ch. / Freq.
Channel				20175
Frequency (MHz)				1732.5
20	16QAM	1	0	2.32
20	16QAM	100	0	7.12

LTE Band 5				
BW [MHz]	Modulation	RB Size	RB Offset	Power (dBm) Middle Ch. / Freq.
Channel				20525
Frequency (MHz)				836.5
10	16QAM	1	0	5.96
10	16QAM	50	0	6.48

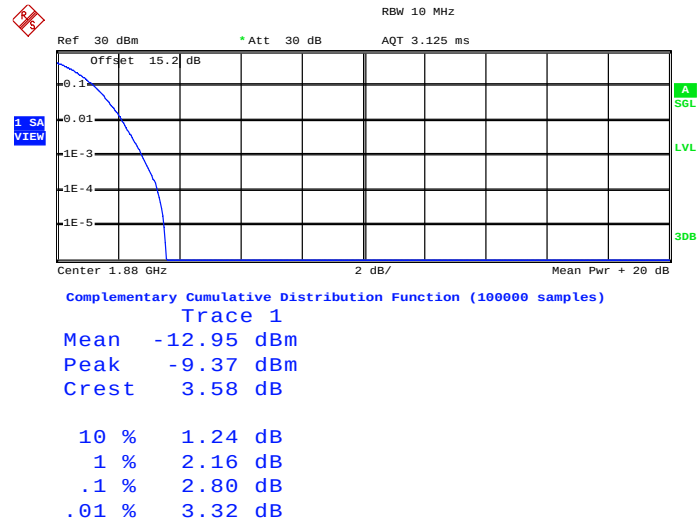
LTE Band 12				
BW [MHz]	Modulation	RB Size	RB Offset	Power (dBm) Middle Ch. / Freq.
Channel				23095
Frequency (MHz)				707.5
10	16QAM	1	0	7.44
10	16QAM	50	0	6.72

LTE Band 17				
BW [MHz]	Modulation	RB Size	RB Offset	Power (dBm) Middle Ch. / Freq.
Channel				23790
Frequency (MHz)				710
10	16QAM	1	0	6.92
10	16QAM	50	0	6.52

3.2.6 Peak to Average Power Ratio

Peak-to-Average Ratio on LTE Band 2

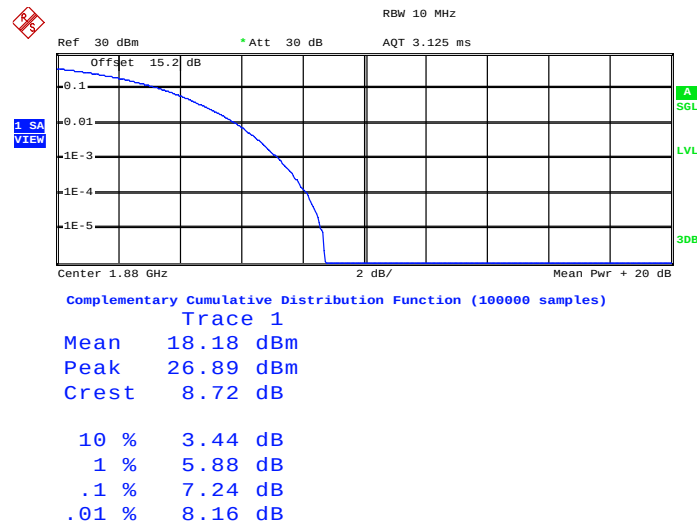
20MHz / 16QAM in Ch. 18900 (1RB Size)



Date: 29.MAY.2014 12:47:14

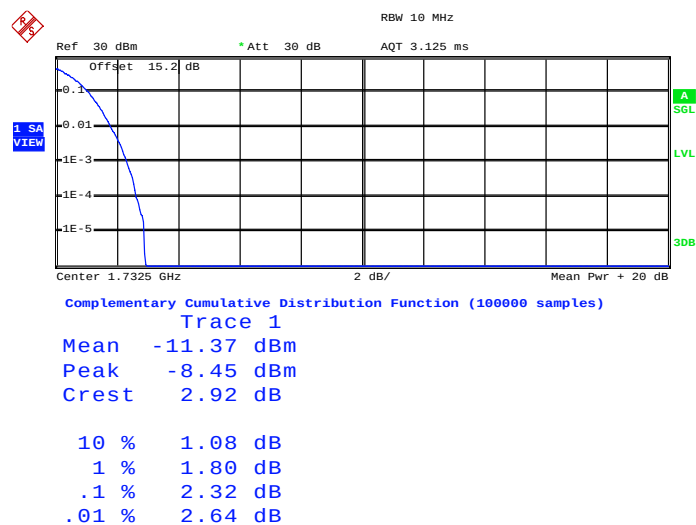
Peak-to-Average Ratio on LTE Band 2

20MHz / 16QAM in Ch. 18900 (100RB Size)



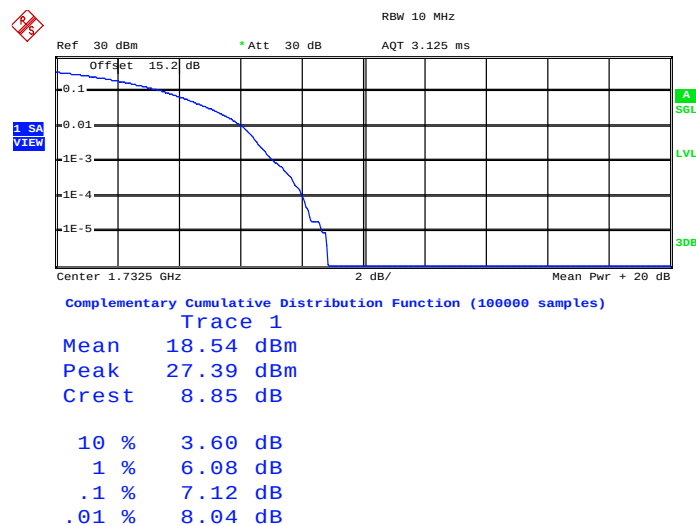
Date: 29.MAY.2014 12:47:56

Peak-to-Average Ratio on LTE Band 4 20MHz / 16QAM in Ch. 20175 (1RB Size)

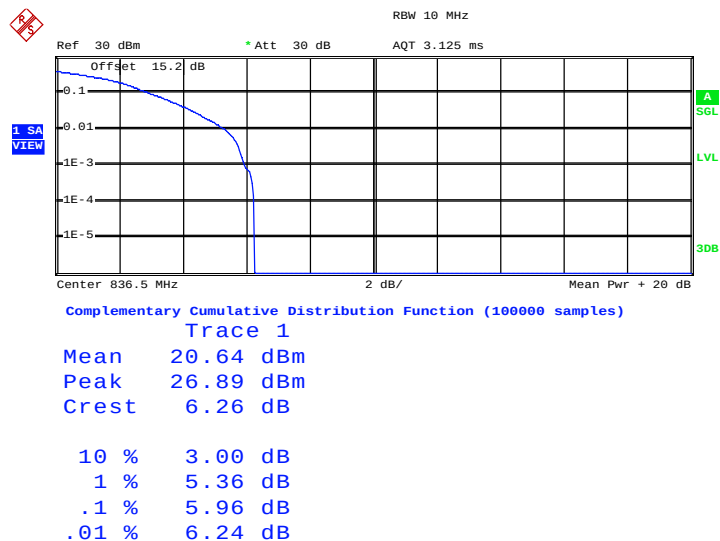


Date: 30.MAY.2014 15:00:03

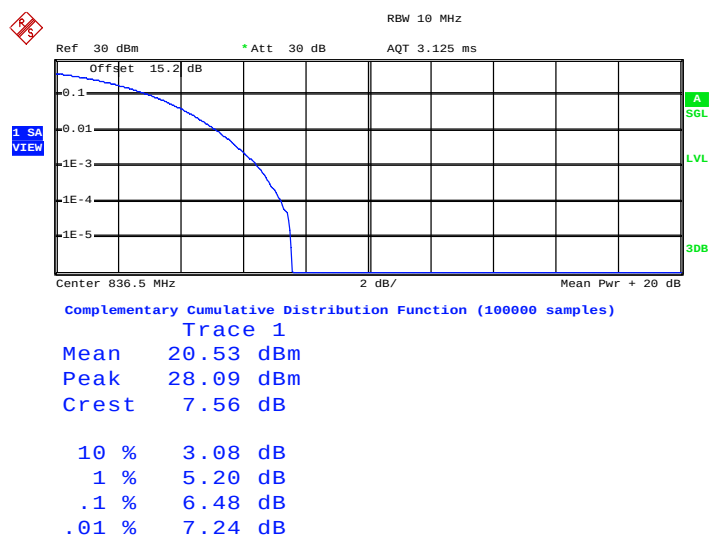
Peak-to-Average Ratio on LTE Band 4 20MHz / 16QAM in Ch. 201750 (100RB Size)



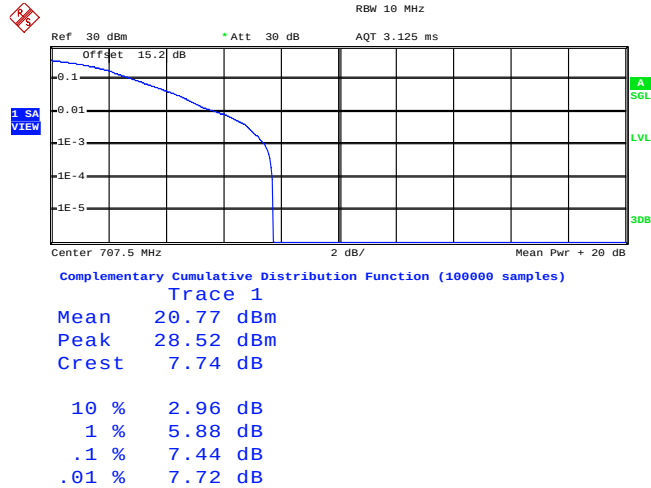
Date: 30.MAY.2014 14:59:36

Peak-to-Average Ratio on LTE Band 5
10MHz / 16QAM in Ch. 20525 (1RB Size)


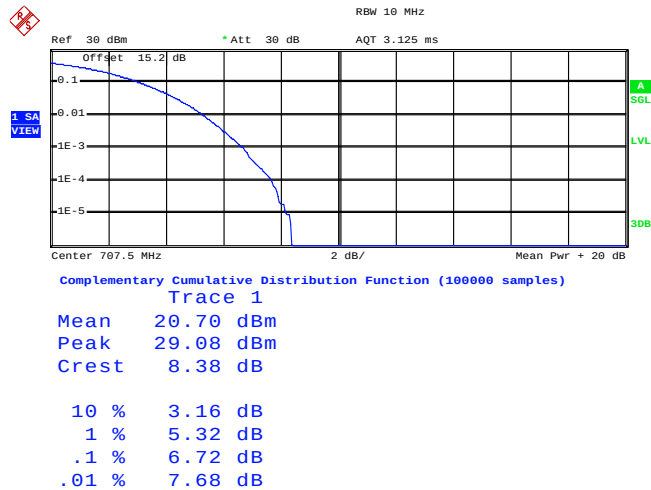
Date: 29.MAY.2014 21:07:24

Peak-to-Average Ratio on LTE Band 5
10MHz / 16QAM in Ch. 20525 (50RB Size)


Date: 29.MAY.2014 21:07:56

Peak-to-Average Ratio on LTE Band 12
10MHz / 16QAM in Ch. 23095 (1RB Size)


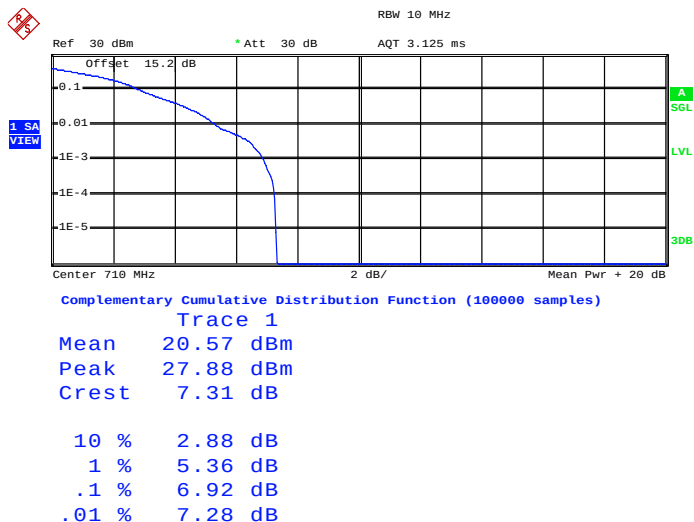
Date: 30.MAY.2014 16:24:41

Peak-to-Average Ratio on LTE Band 12
10MHz / 16QAM in Ch. 23095 (50RB Size)


Date: 30.MAY.2014 16:25:27

Peak-to-Average Ratio on LTE Band 17

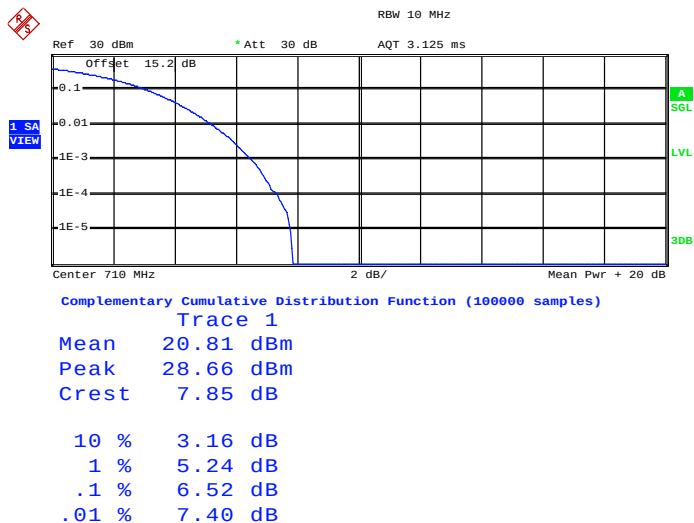
10MHz / 16QAM in Ch. 23790 (1RB Size)



Date: 29.MAY.2014 16:24:48

Peak-to-Average Ratio on LTE Band 17

10MHz / 16QAM in Ch. 23790 (50RB Size)



Date: 29.MAY.2014 16:24:25

3.3 Occupied Bandwidth

3.3.1 Description of Occupied Bandwidth Measurement

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

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

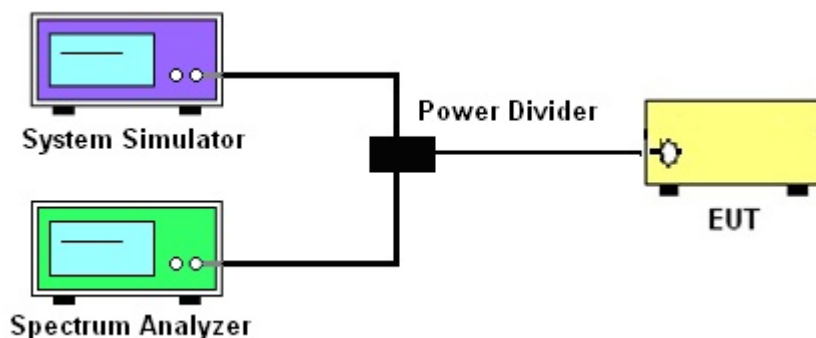
3.3.2 Measuring Instruments

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

3.3.3 Test Procedures

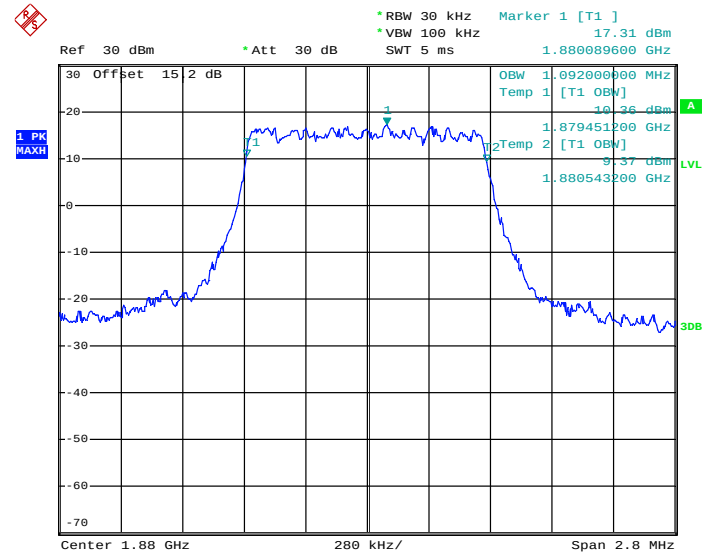
1. The EUT was connected to spectrum analyzer and system simulator via a power divider.
2. The 26dB and 99% occupied bandwidth (BW) of the middle channel for the highest RF power with full RB sizes were measured.

3.3.4 Test Setup

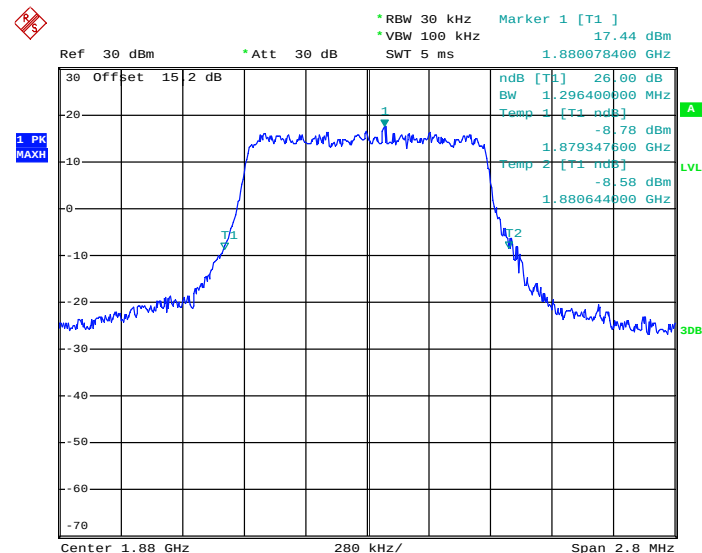


3.3.5 Test Result (Plots) of Occupied Bandwidth

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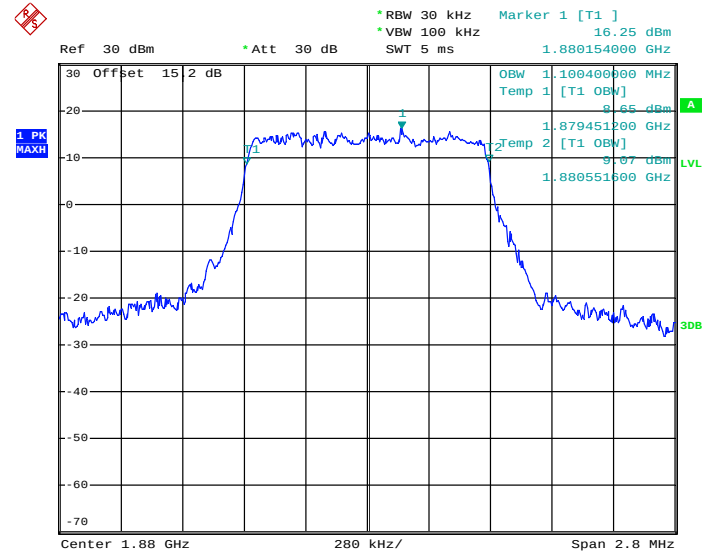
99% Occupied Bandwidth Plot on Channel 18900


Date: 28.MAY.2014 20:10:22

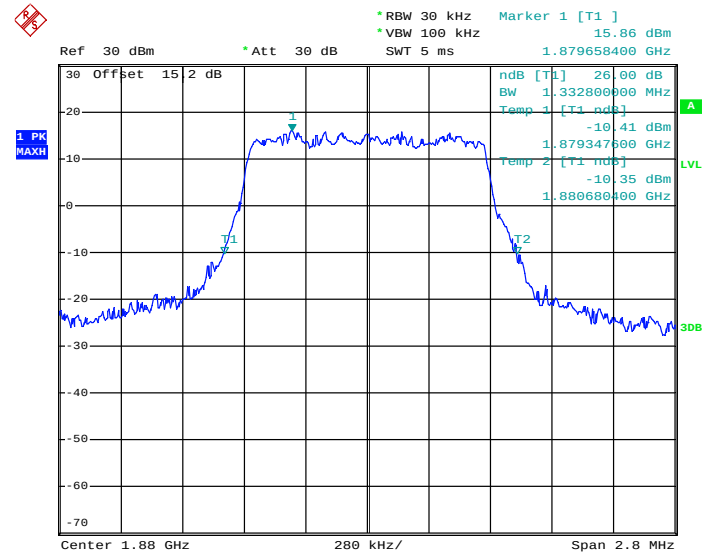
26dB Bandwidth Plot on Channel 18900


Date: 28.MAY.2014 20:14:17

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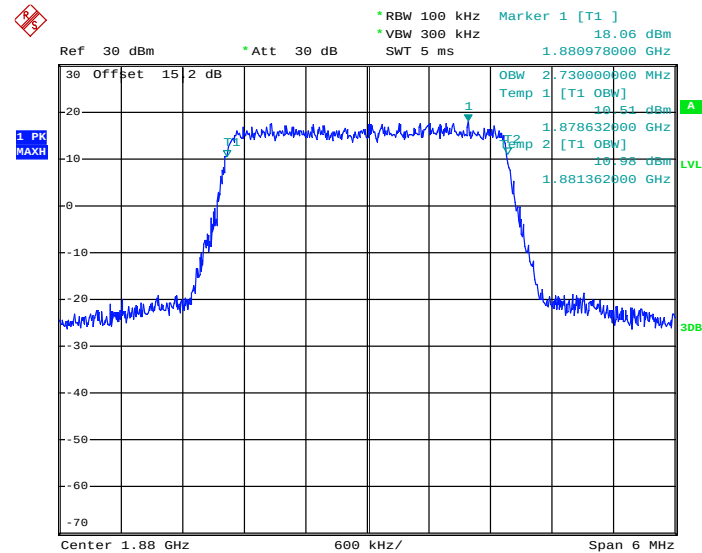
99% Occupied Bandwidth Plot on Channel 18900


Date: 28.MAY.2014 20:12:44

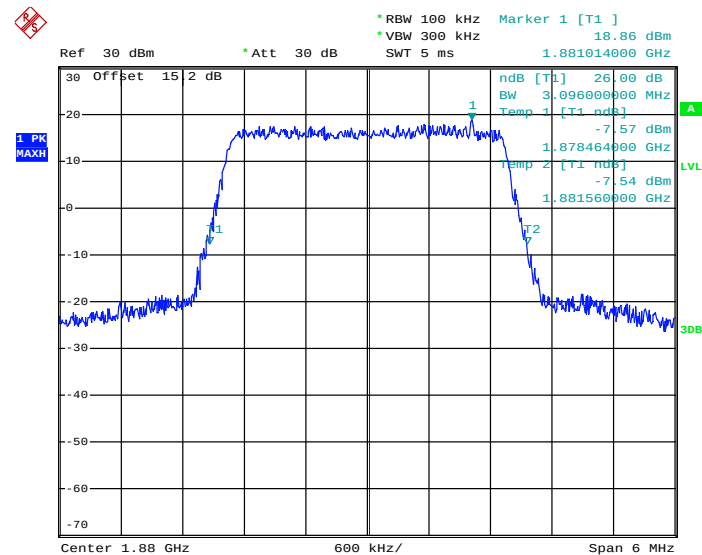
26dB Bandwidth Plot on Channel 18900


Date: 28.MAY.2014 20:14:49

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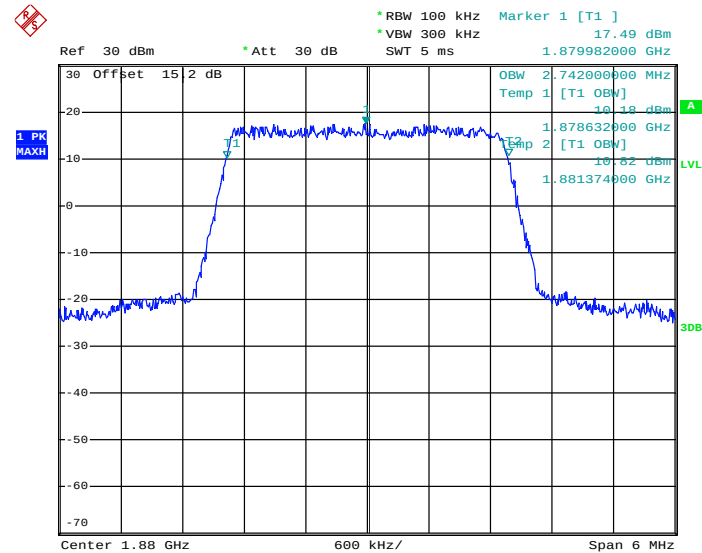
99% Occupied Bandwidth Plot on Channel 18900


Date: 28.MAY.2014 21:14:02

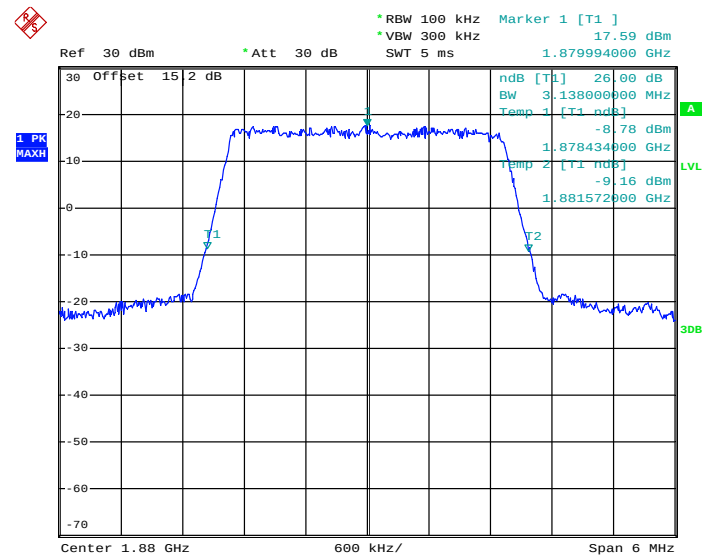
26dB Bandwidth Plot on Channel 18900


Date: 28.MAY.2014 21:19:17

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


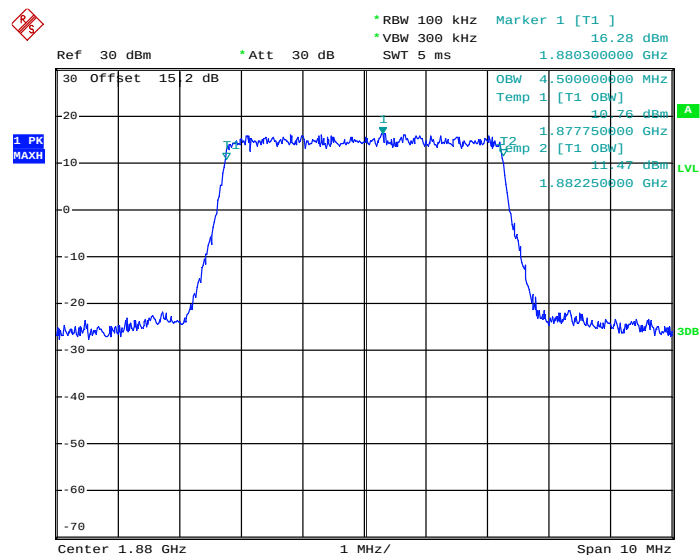
Date: 28.MAY.2014 21:14:29

26dB Bandwidth Plot on Channel 18900


Date: 28.MAY.2014 21:20:04

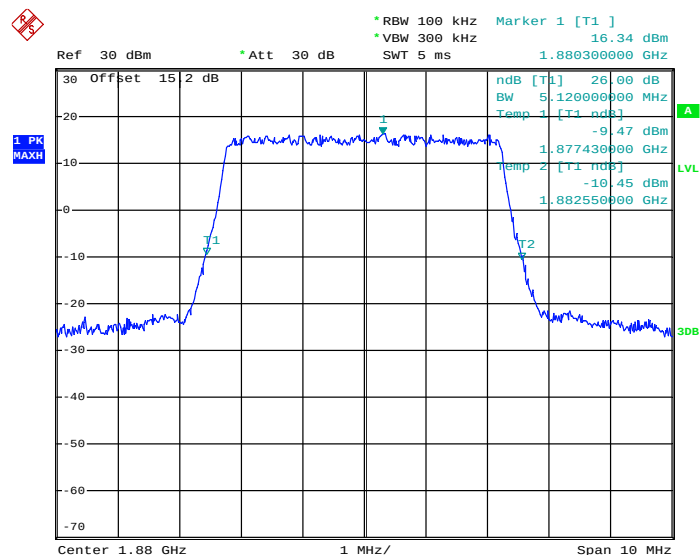
Band :	LTE Band 2	BW / Mod. :	5MHz / QPSK
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99% Occupied Bandwidth Plot on Channel 18900



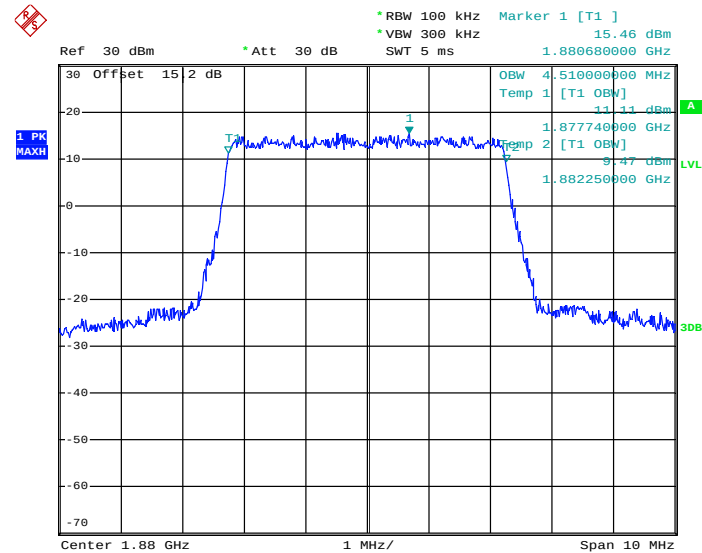
Date: 28.MAY.2014 22:22:31

26dB Bandwidth Plot on Channel 18900

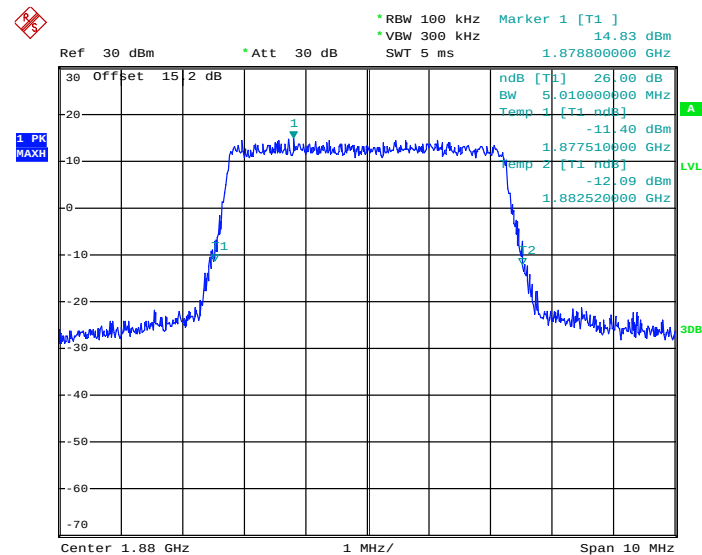


Date: 28.MAY.2014 22:30:05

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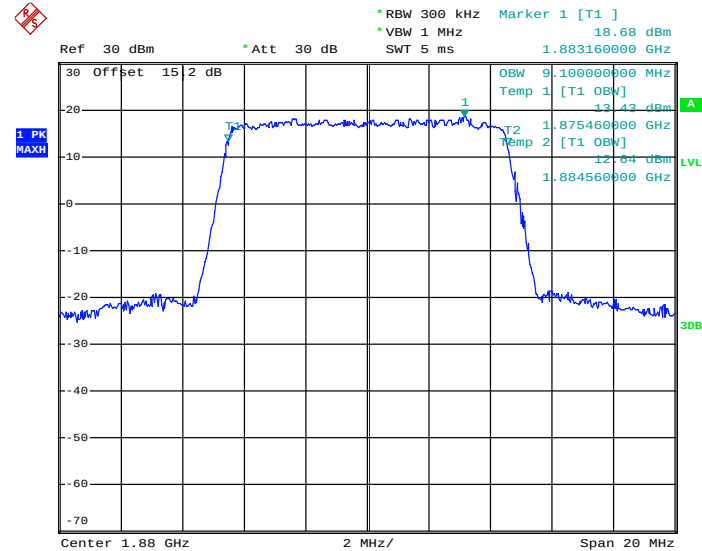
99% Occupied Bandwidth Plot on Channel 18900


Date: 28.MAY.2014 22:21:33

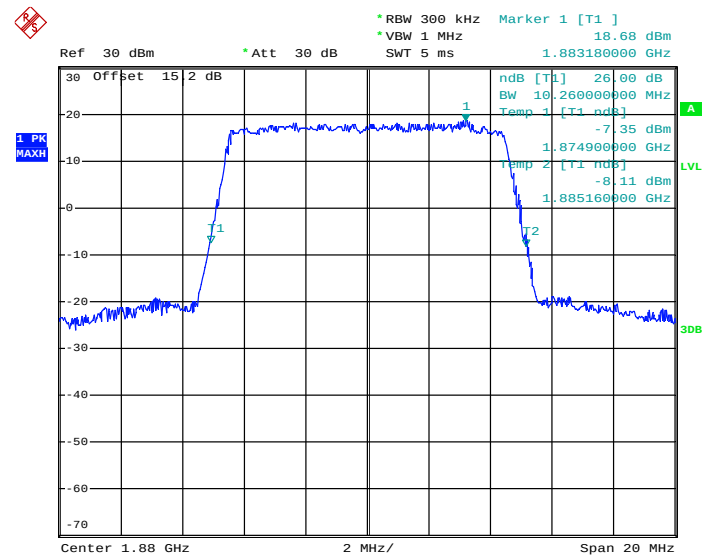
26dB Bandwidth Plot on Channel 18900


Date: 28.MAY.2014 22:30:24

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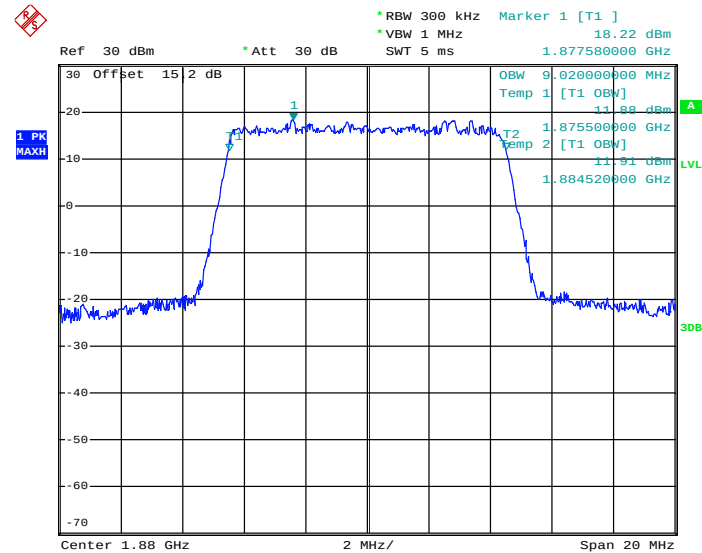
99% Occupied Bandwidth Plot on Channel 18900


Date: 28.MAY.2014 23:30:55

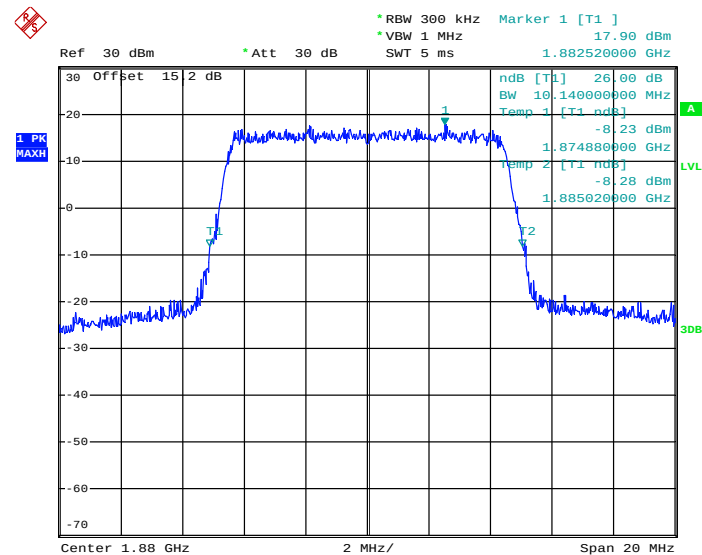
26dB Bandwidth Plot on Channel 18900


Date: 28.MAY.2014 23:35:23

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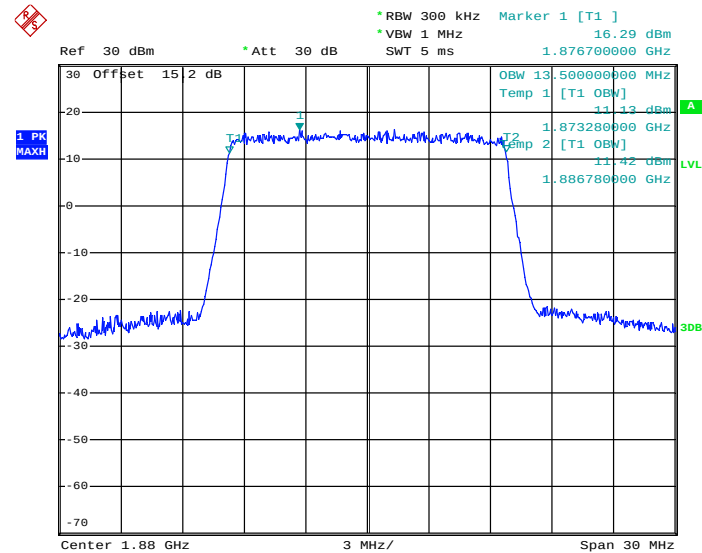
99% Occupied Bandwidth Plot on Channel 18900


Date: 28.MAY.2014 23:31:44

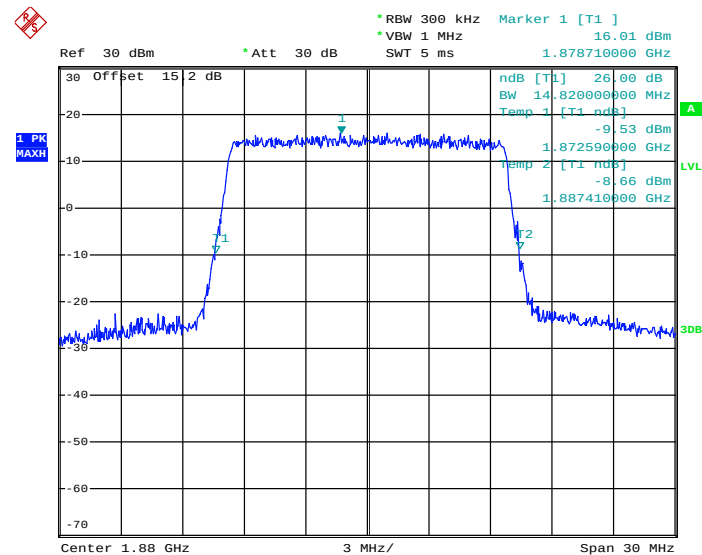
26dB Bandwidth Plot on Channel 18900


Date: 28.MAY.2014 23:34:41

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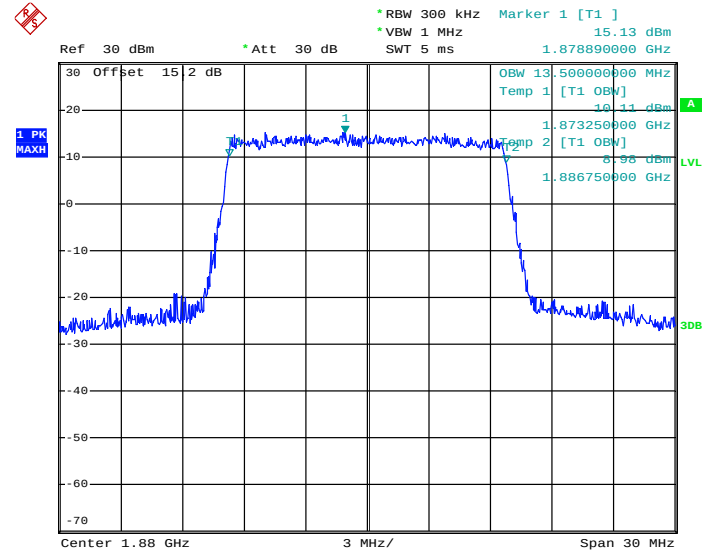
99% Occupied Bandwidth Plot on Channel 18900


Date: 29.MAY.2014 11:17:06

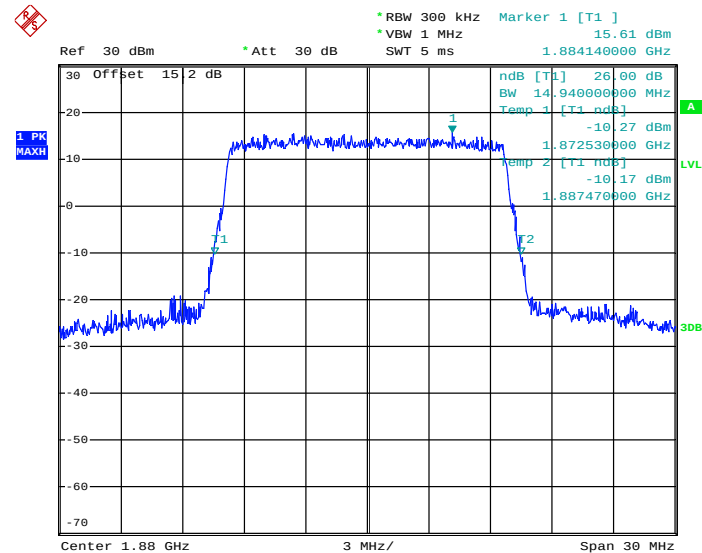
26dB Bandwidth Plot on Channel 18900


Date: 29.MAY.2014 11:20:41

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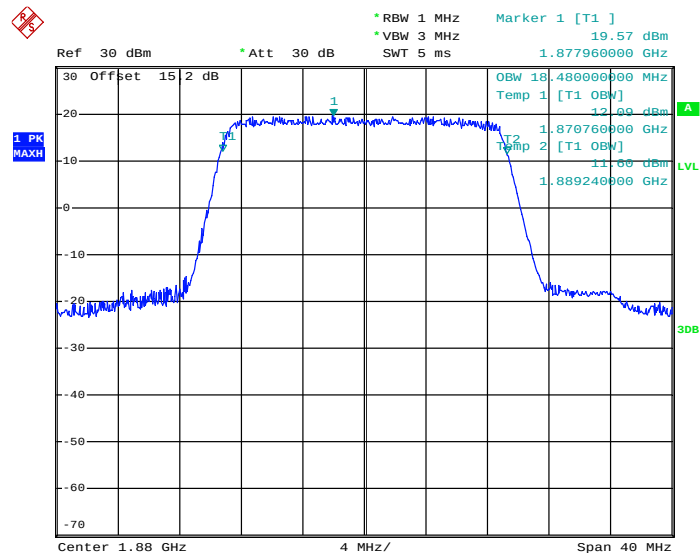
99% Occupied Bandwidth Plot on Channel 18900


Date: 29.MAY.2014 11:17:43

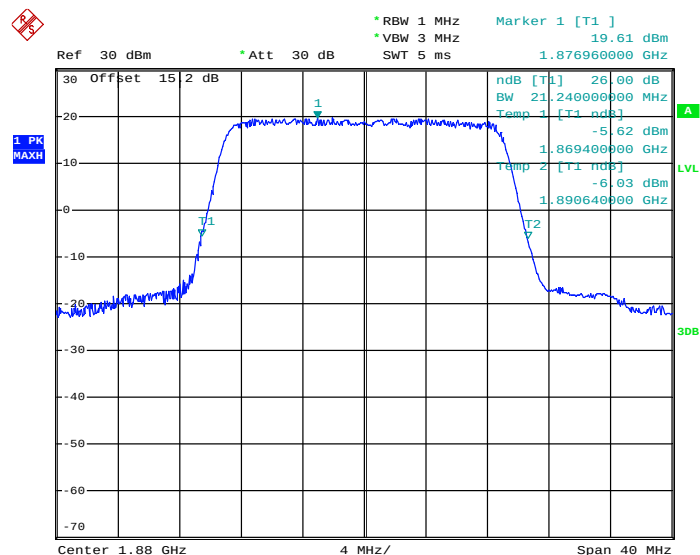
26dB Bandwidth Plot on Channel 18900


Date: 29.MAY.2014 11:20:17

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


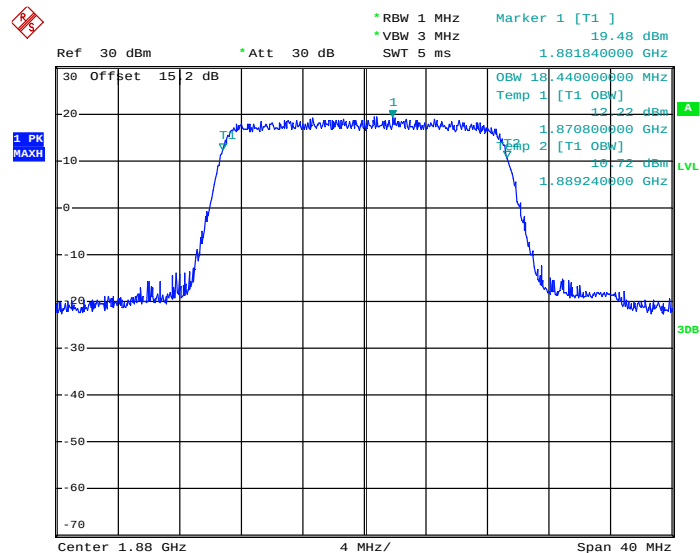
Date: 29.MAY.2014 12:15:28

26dB Bandwidth Plot on Channel 18900


Date: 29.MAY.2014 12:18:20

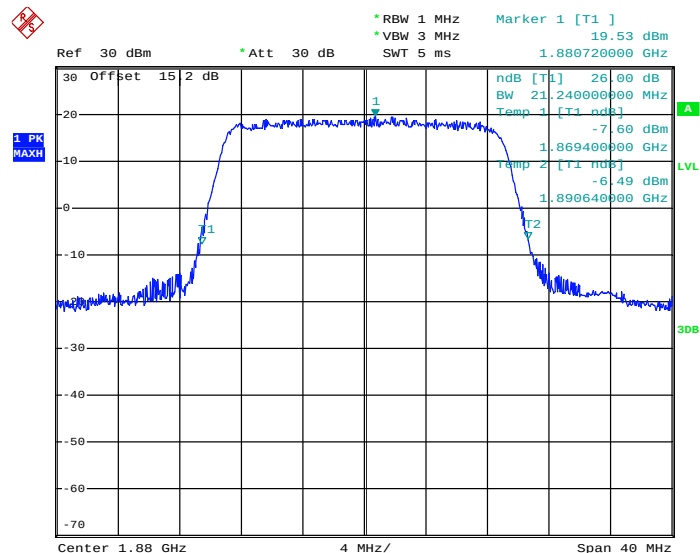
Band :	LTE Band 2	BW / Mod. :	20MHz / 16QAM
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99% Occupied Bandwidth Plot on Channel 18900



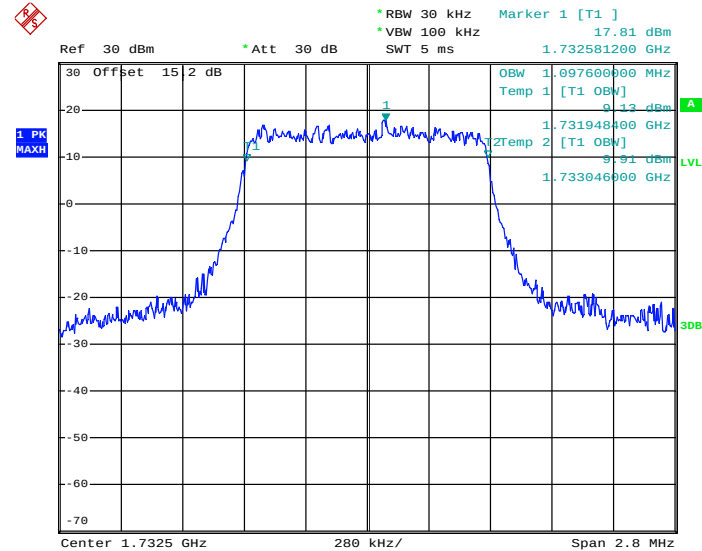
Date: 29.MAY.2014 12:15:04

26dB Bandwidth Plot on Channel 18900

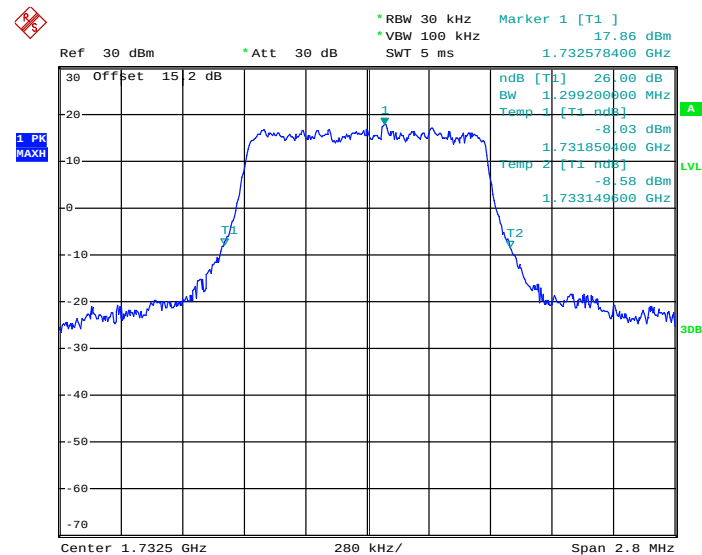


Date: 29.MAY.2014 12:18:57

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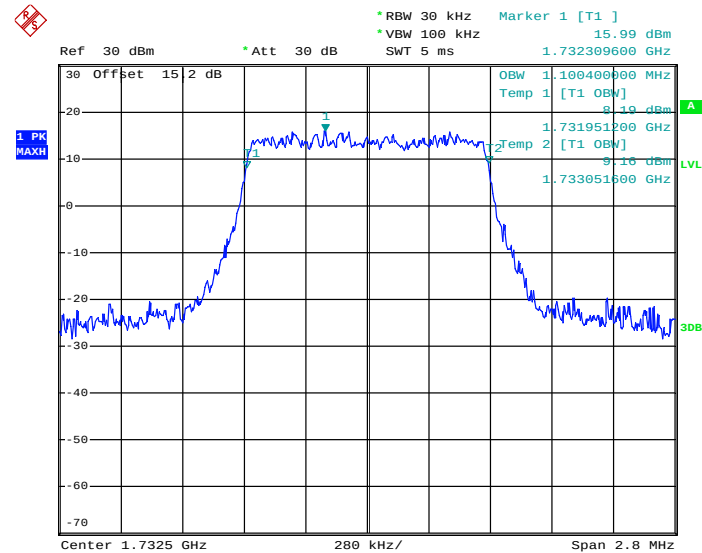
99% Occupied Bandwidth Plot on Channel 20175


Date: 29.MAY.2014 21:50:08

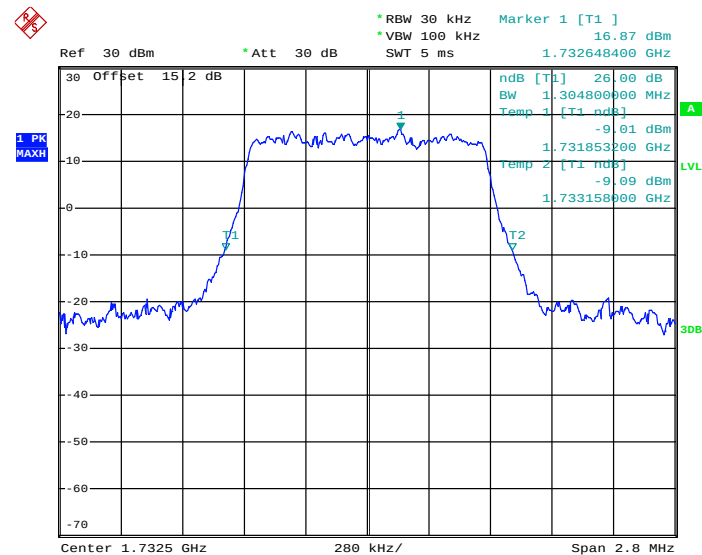
26dB Bandwidth Plot on Channel 20175


Date: 29.MAY.2014 21:54:24

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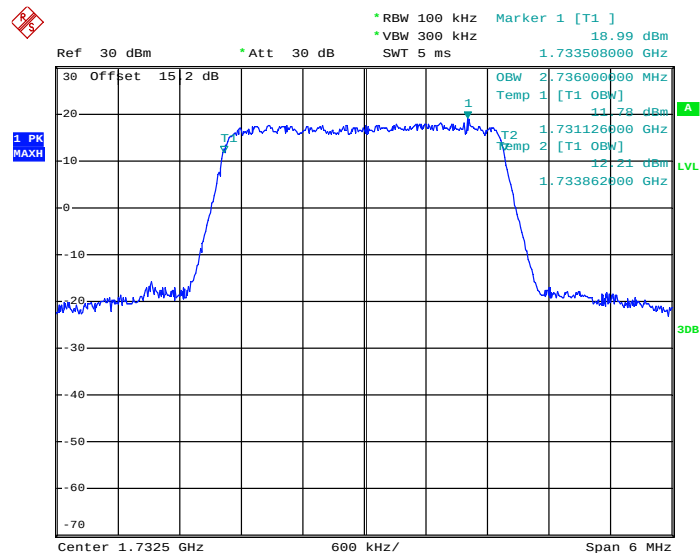
99% Occupied Bandwidth Plot on Channel 20175


Date: 29.MAY.2014 21:49:44

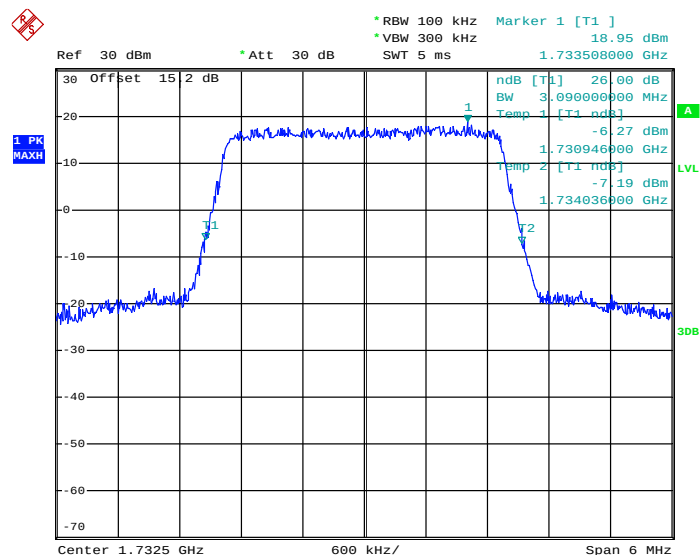
26dB Bandwidth Plot on Channel 20175


Date: 29.MAY.2014 21:55:16

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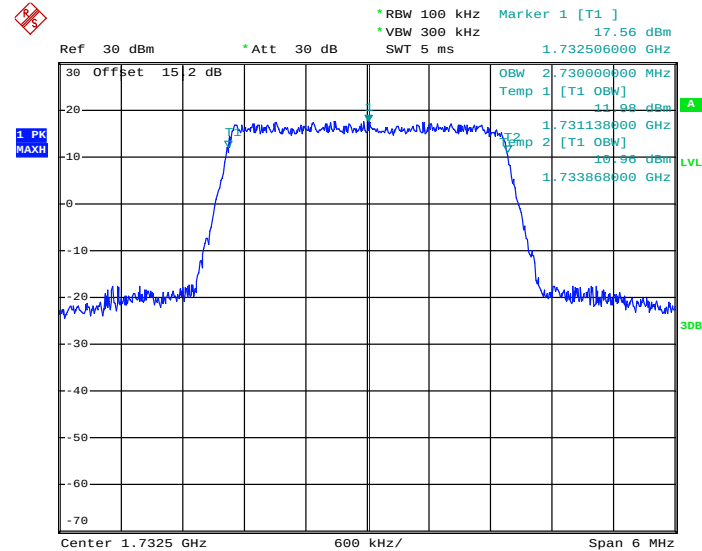
99% Occupied Bandwidth Plot on Channel 20175


Date: 29.MAY.2014 23:03:55

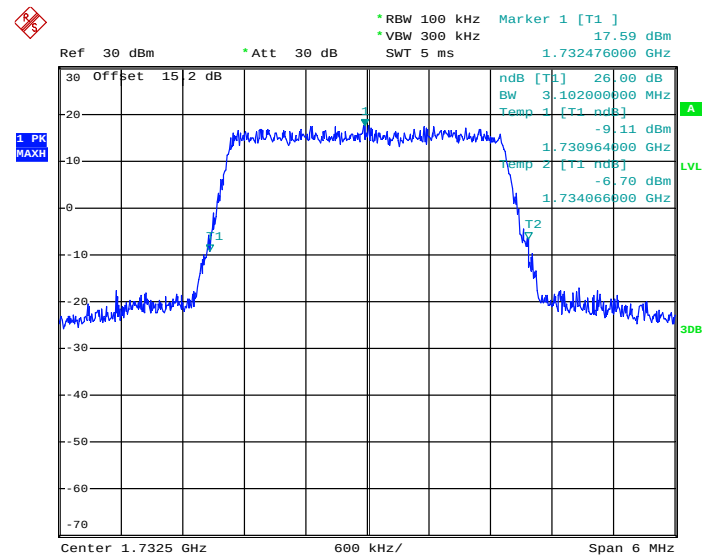
26dB Bandwidth Plot on Channel 20175


Date: 29.MAY.2014 23:07:30

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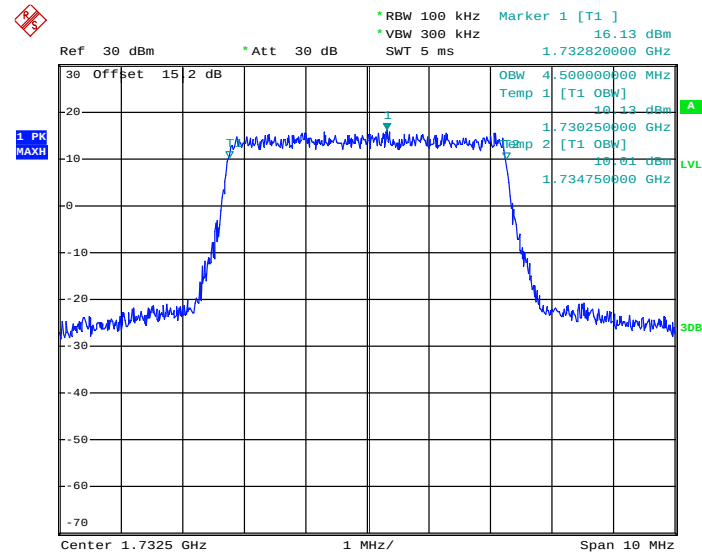
99% Occupied Bandwidth Plot on Channel 20175


Date: 29.MAY.2014 23:04:31

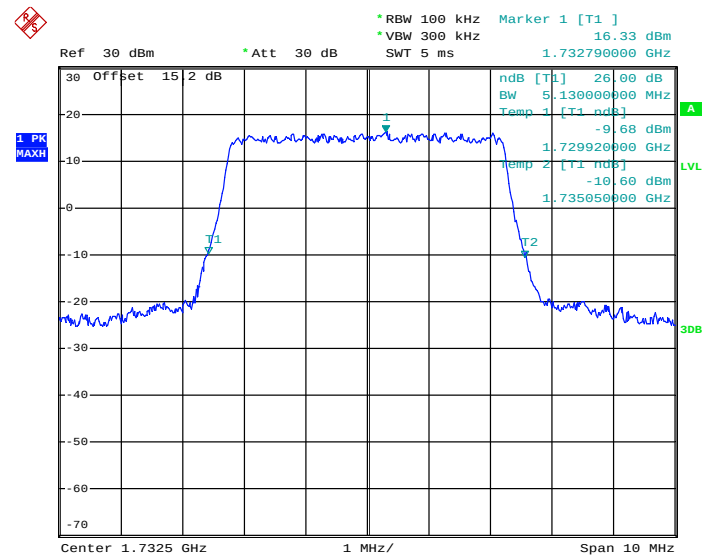
26dB Bandwidth Plot on Channel 20175


Date: 29.MAY.2014 23:07:02

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


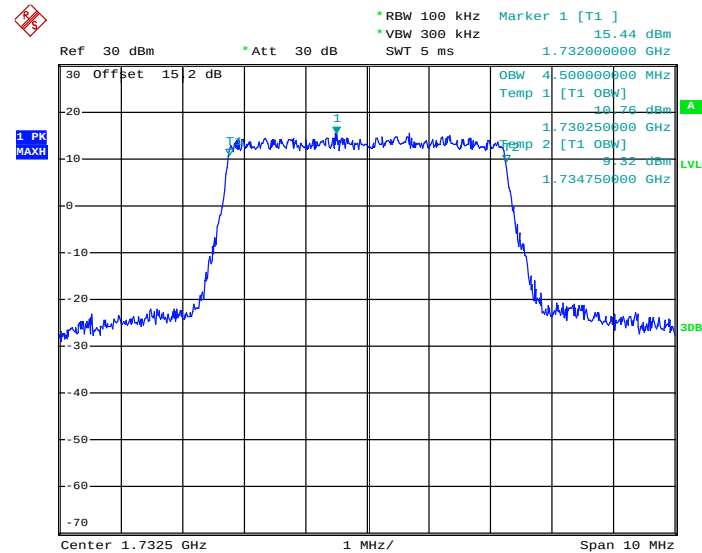
Date: 30.MAY.2014 10:10:17

26dB Bandwidth Plot on Channel 20175


Date: 30.MAY.2014 10:16:10

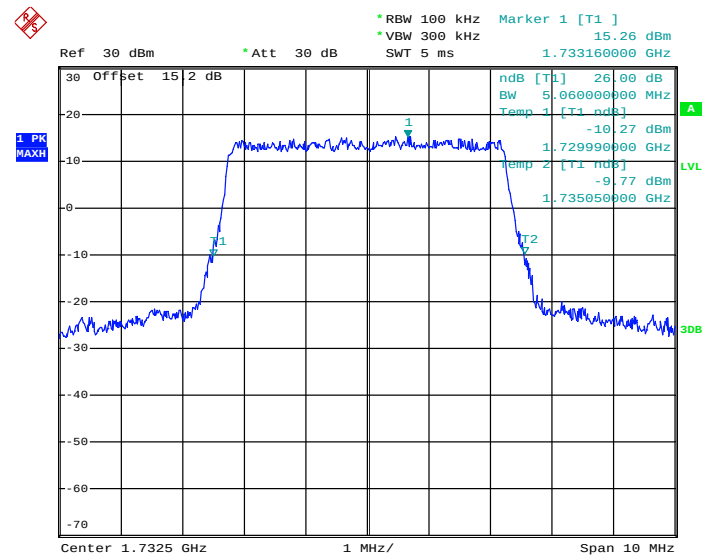
Band :	LTE Band 4	BW / Mod. :	5MHz / 16QAM
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99% Occupied Bandwidth Plot on Channel 20175



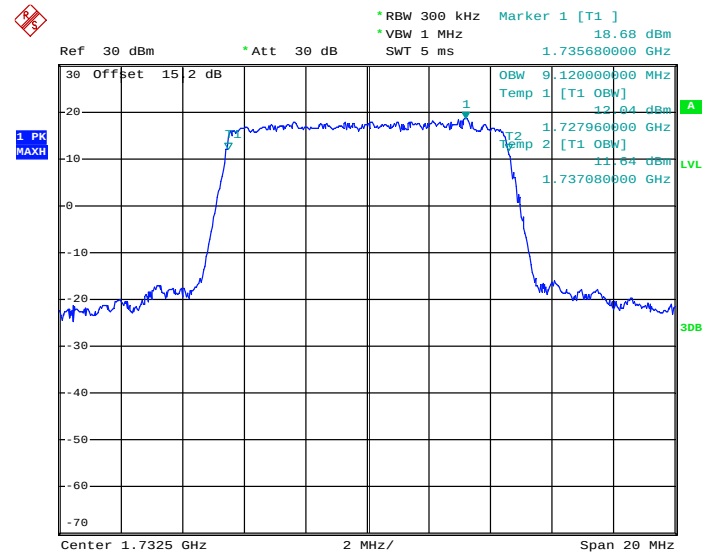
Date: 30.MAY.2014 10:09:50

26dB Bandwidth Plot on Channel 20175

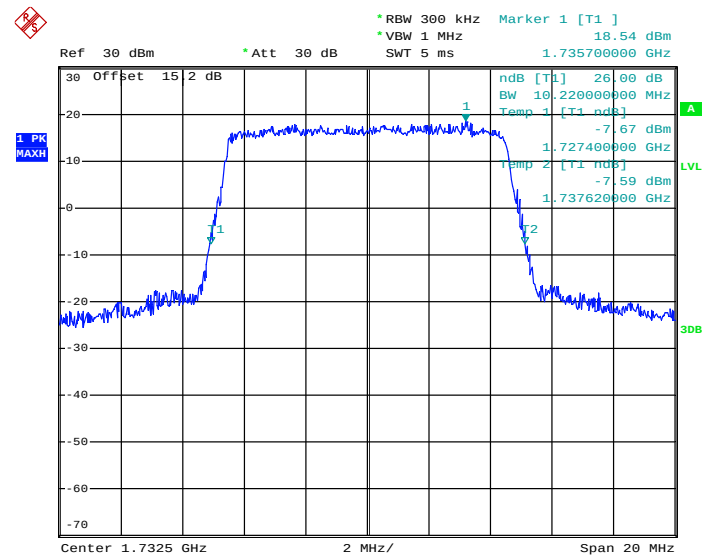


Date: 30.MAY.2014 10:16:46

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


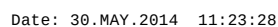
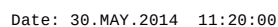
Date: 30.MAY.2014 11:19:36

26dB Bandwidth Plot on Channel 20175


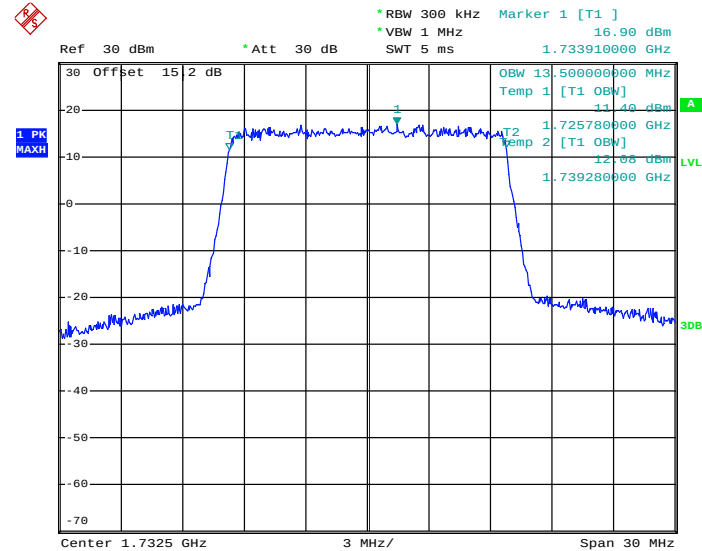
Date: 30.MAY.2014 11:23:51



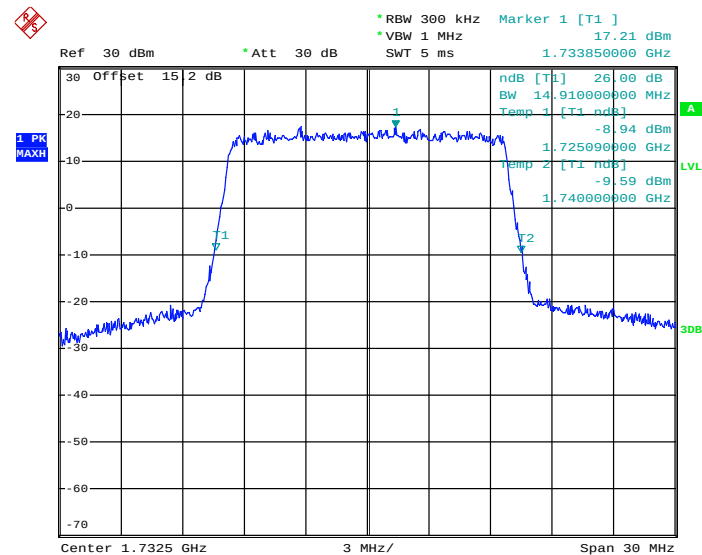
99% Occupied Bandwidth Plot on Channel 20175



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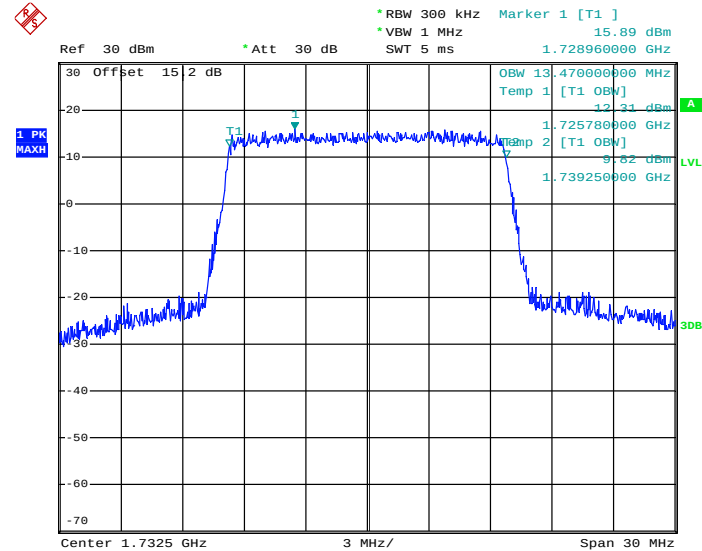
99% Occupied Bandwidth Plot on Channel 20175


Date: 30.MAY.2014 12:40:53

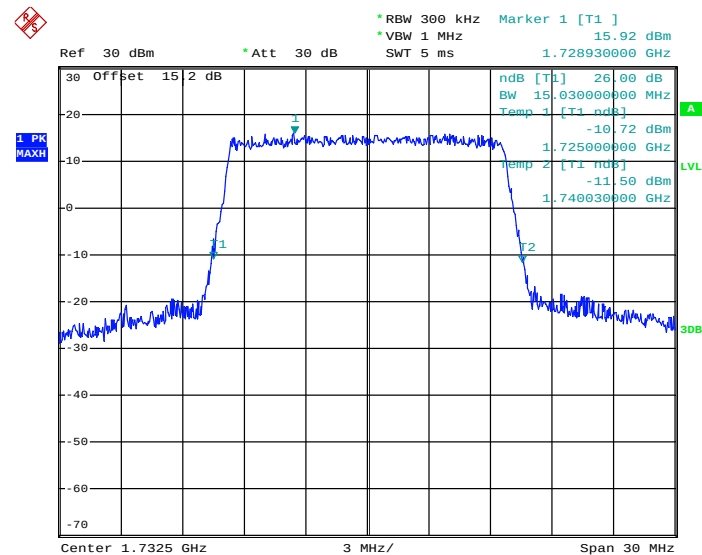
26dB Bandwidth Plot on Channel 20175


Date: 30.MAY.2014 12:45:43

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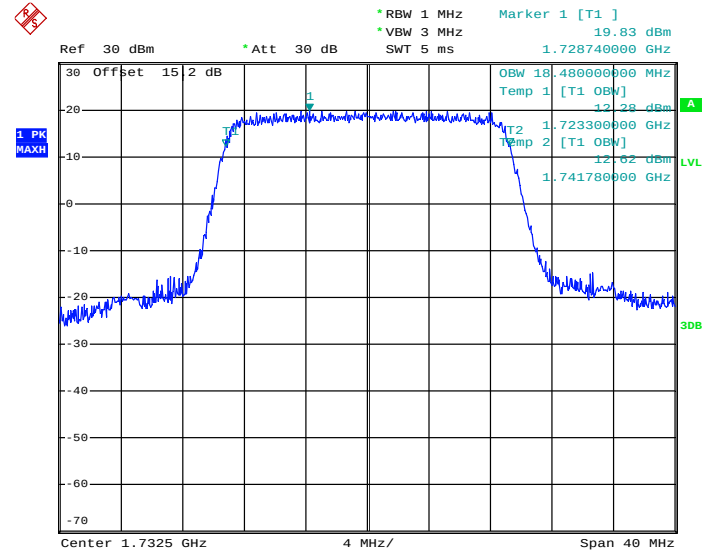
99% Occupied Bandwidth Plot on Channel 20175


Date: 30.MAY.2014 12:41:16

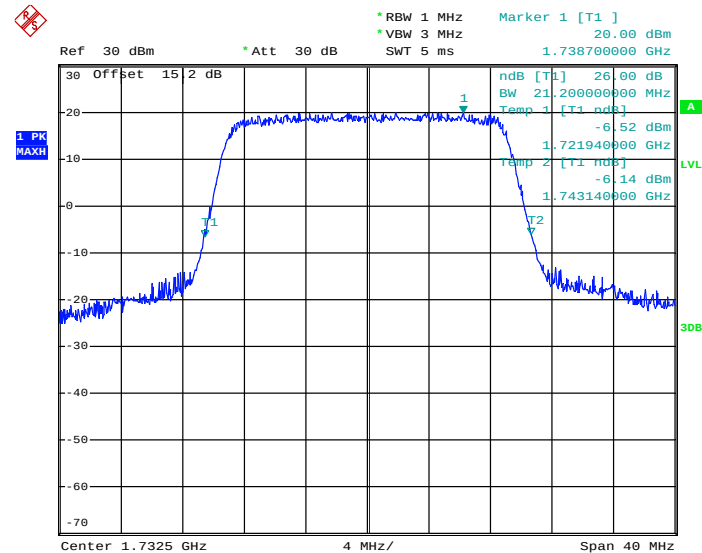
26dB Bandwidth Plot on Channel 20175


Date: 30.MAY.2014 12:45:12

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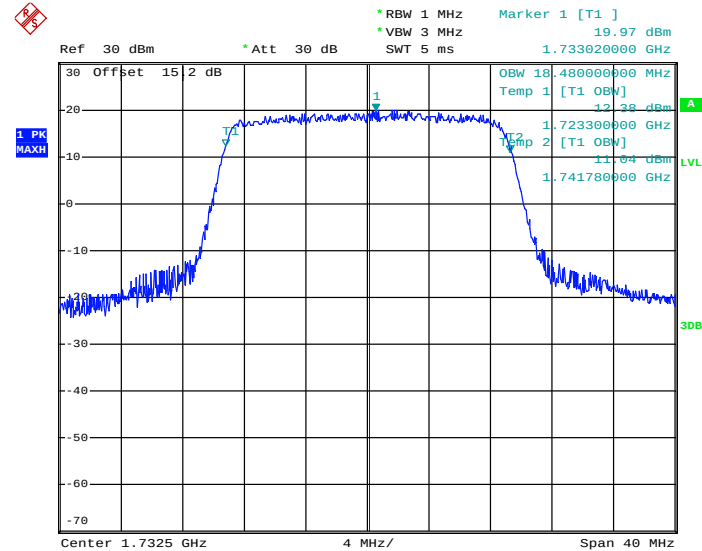
99% Occupied Bandwidth Plot on Channel 20175


Date: 30.MAY.2014 14:26:30

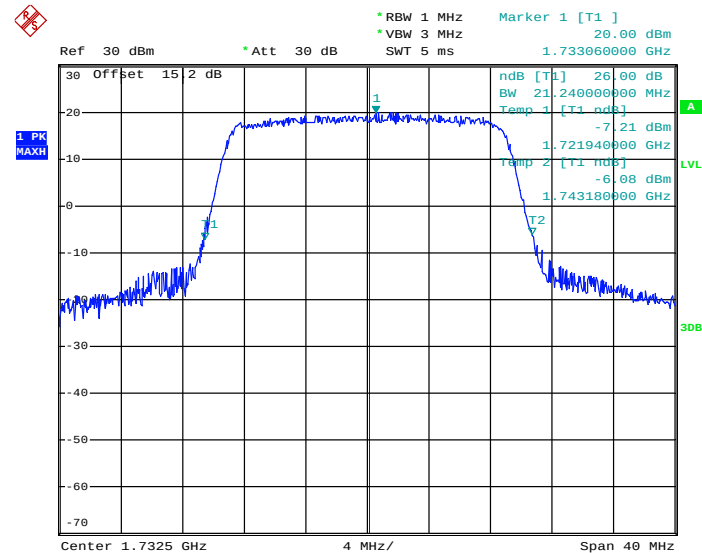
26dB Bandwidth Plot on Channel 20175


Date: 30.MAY.2014 14:29:40

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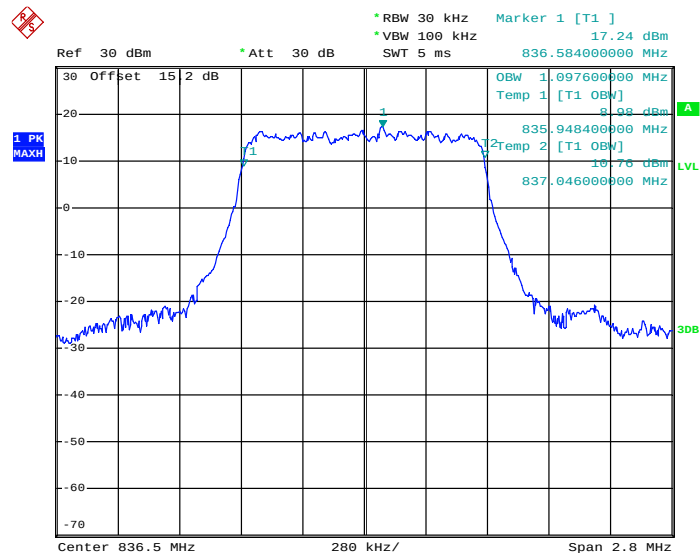
99% Occupied Bandwidth Plot on Channel 20175


Date: 30.MAY.2014 14:26:56

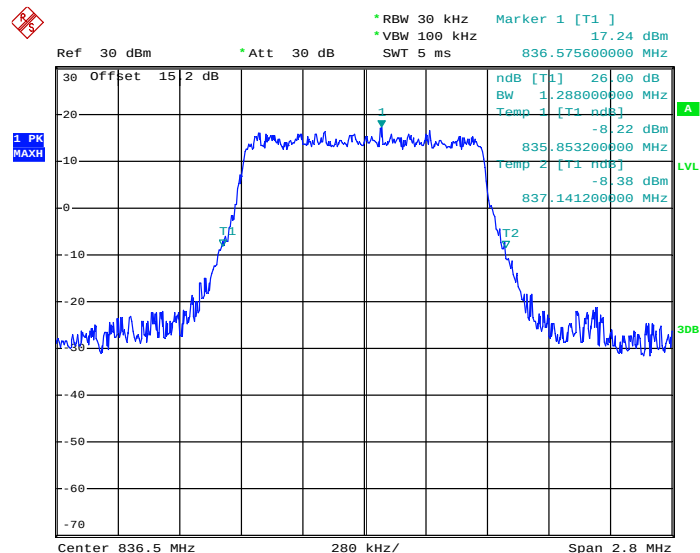
26dB Bandwidth Plot on Channel 20175


Date: 30.MAY.2014 14:29:16

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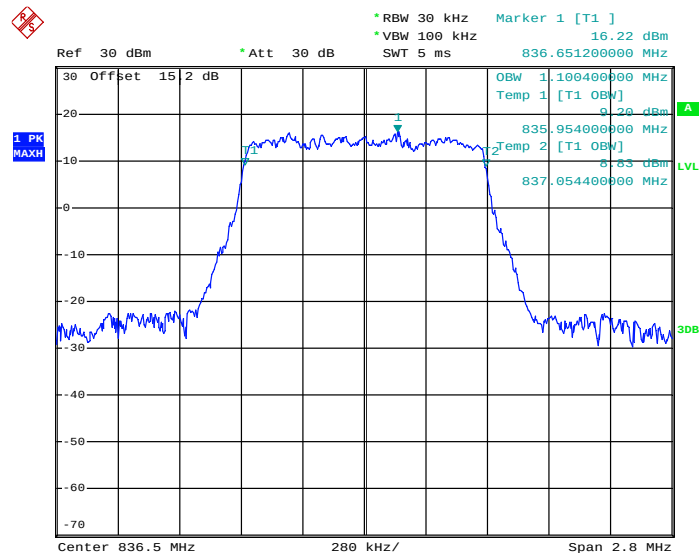
99% Occupied Bandwidth Plot on Channel 20525


Date: 29.MAY.2014 17:03:23

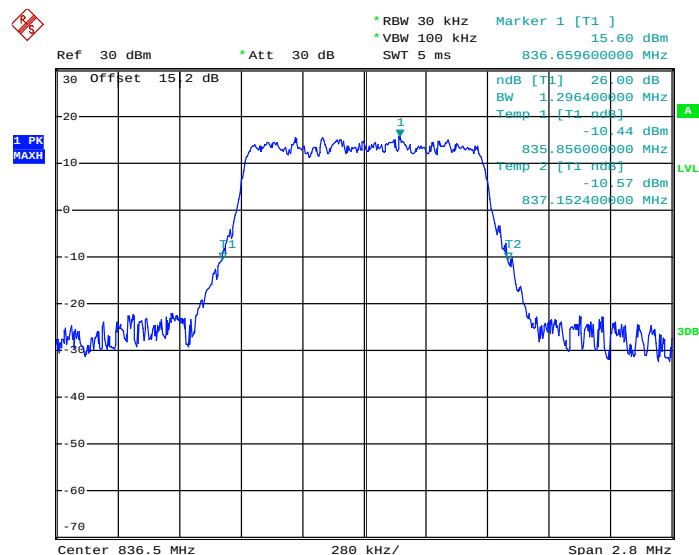
26dB Bandwidth Plot on Channel 20525


Date: 29.MAY.2014 17:05:51

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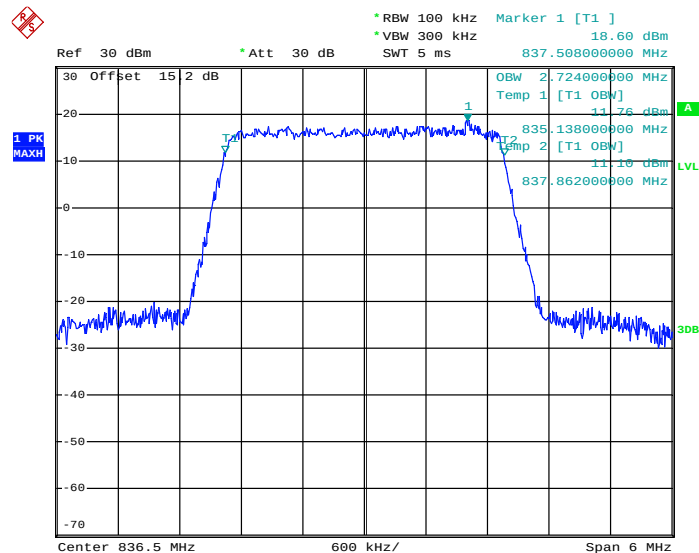
99% Occupied Bandwidth Plot on Channel 20525


Date: 29.MAY.2014 17:02:23

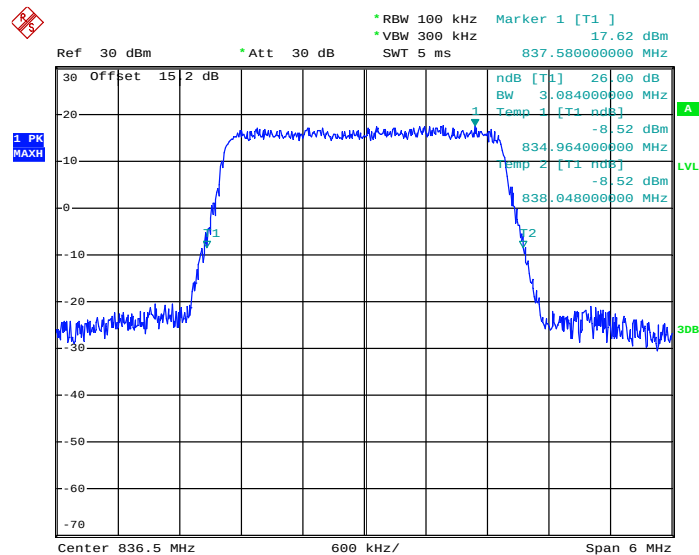
26dB Bandwidth Plot on Channel 20525


Date: 29.MAY.2014 17:06:11

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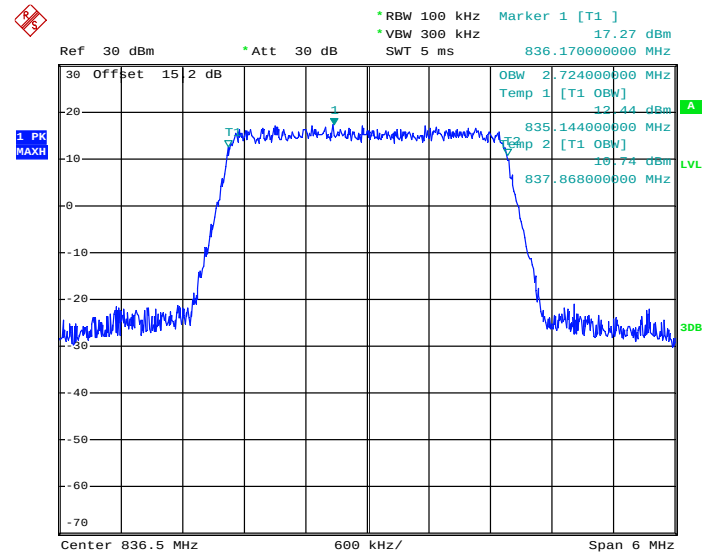
99% Occupied Bandwidth Plot on Channel 20525


Date: 29.MAY.2014 18:14:04

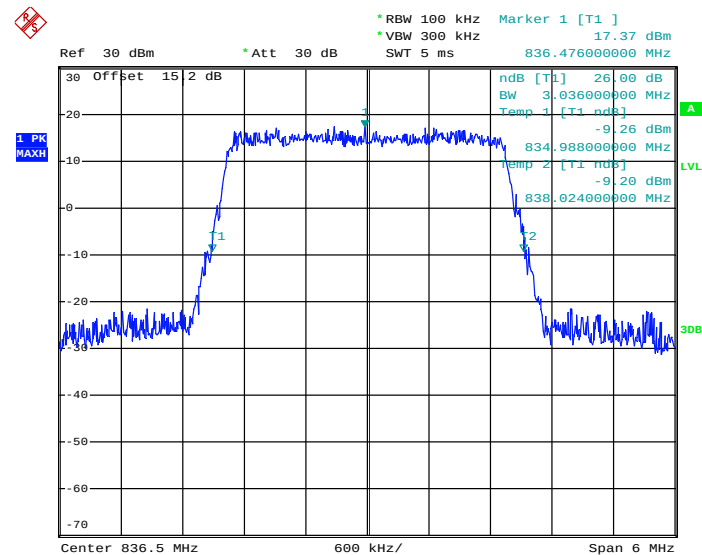
26dB Bandwidth Plot on Channel 20525


Date: 29.MAY.2014 18:17:14

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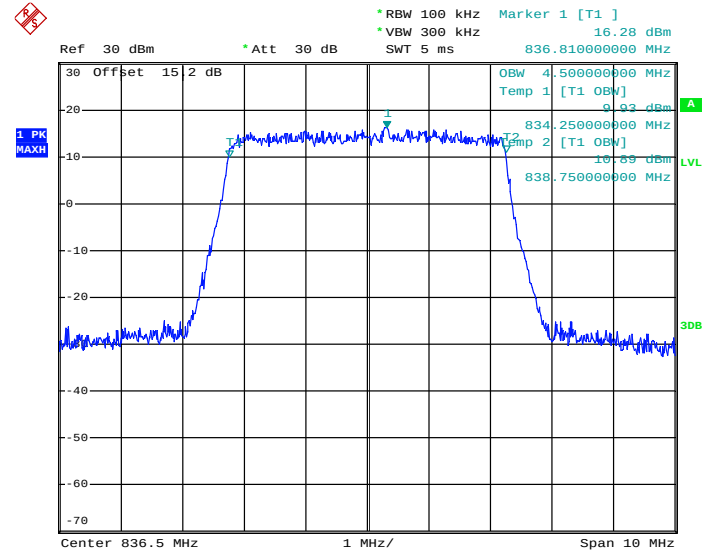
99% Occupied Bandwidth Plot on Channel 20525


Date: 29.MAY.2014 18:14:31

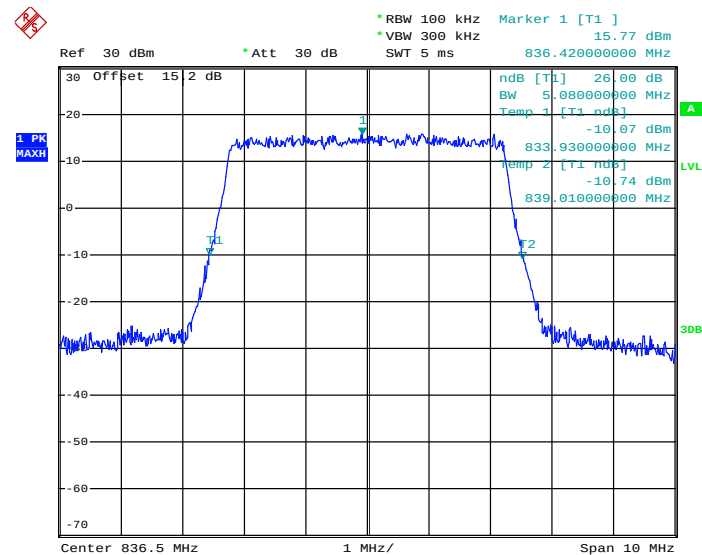
26dB Bandwidth Plot on Channel 20525


Date: 29.MAY.2014 18:16:52

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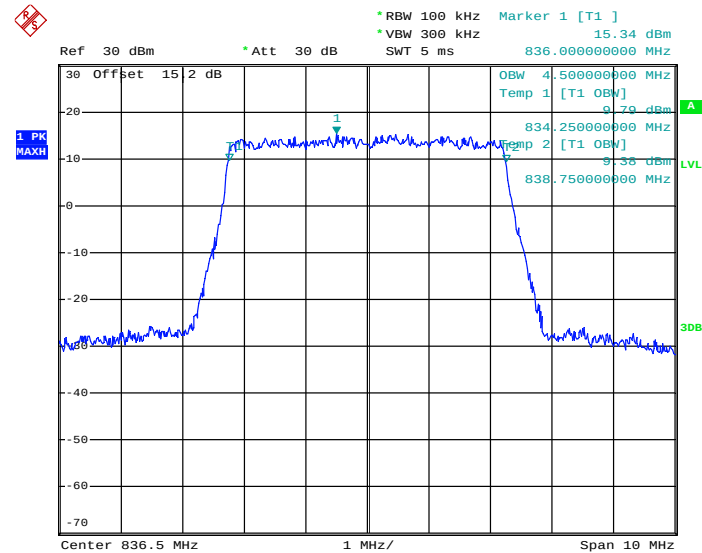
99% Occupied Bandwidth Plot on Channel 20525


Date: 29.MAY.2014 19:48:59

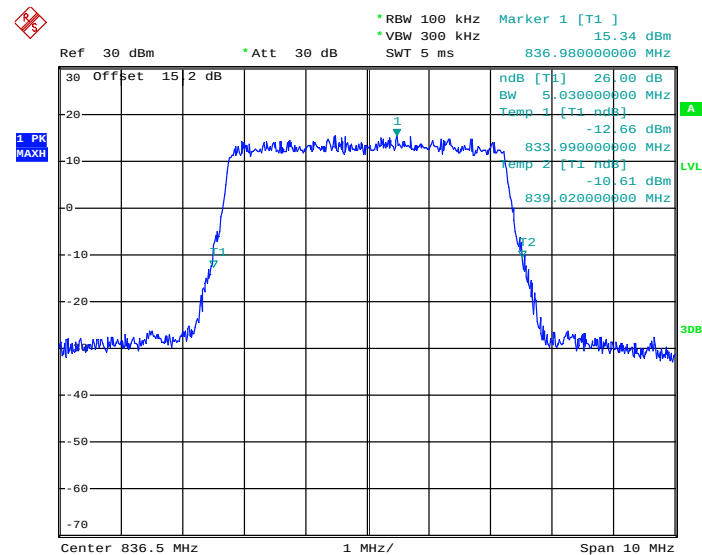
26dB Bandwidth Plot on Channel 20525


Date: 29.MAY.2014 19:56:03

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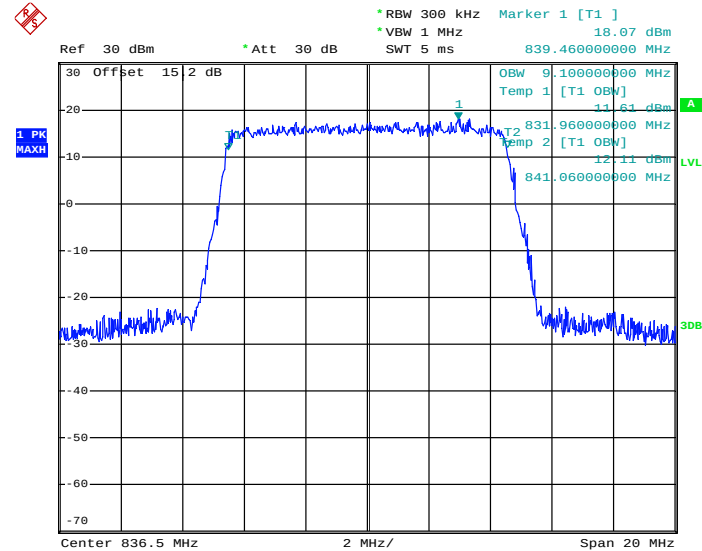
99% Occupied Bandwidth Plot on Channel 20525


Date: 29.MAY.2014 19:49:47

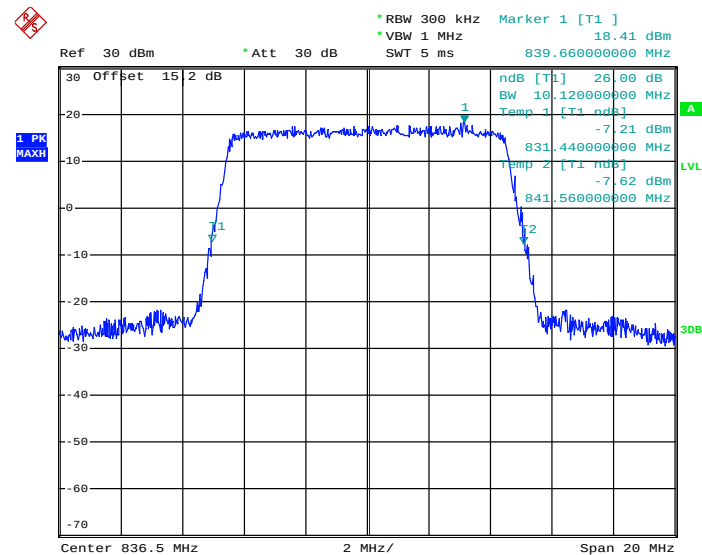
26dB Bandwidth Plot on Channel 20525


Date: 29.MAY.2014 19:55:02

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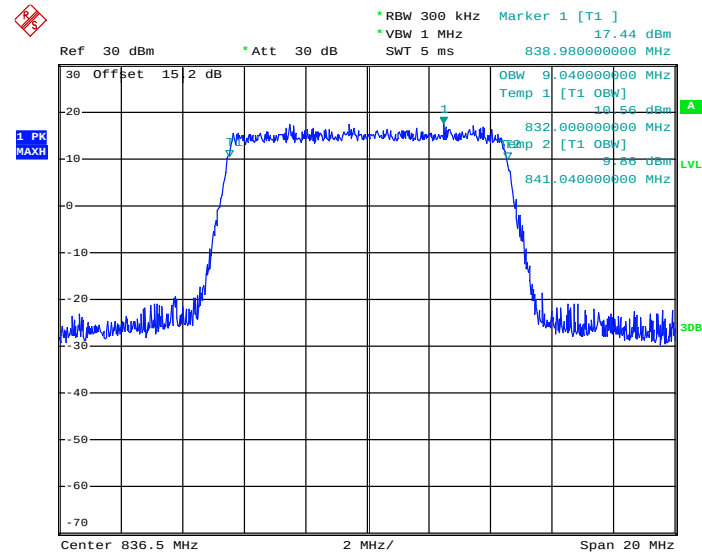
99% Occupied Bandwidth Plot on Channel 20525


Date: 29.MAY.2014 20:39:36

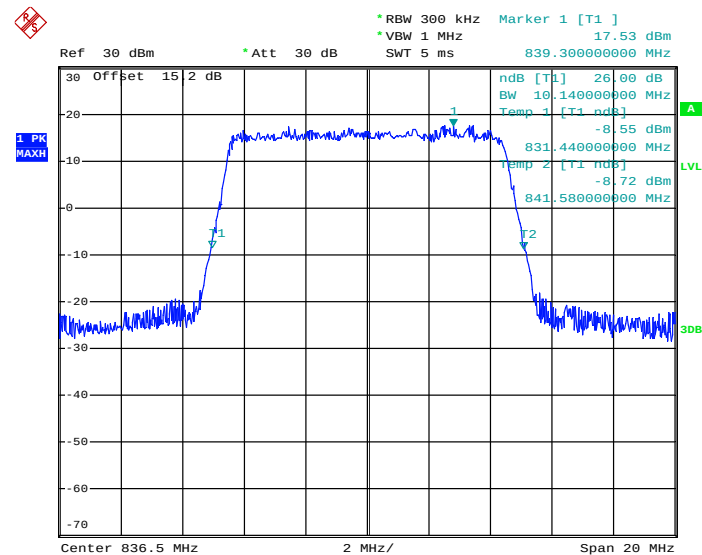
26dB Bandwidth Plot on Channel 20525


Date: 29.MAY.2014 20:41:55

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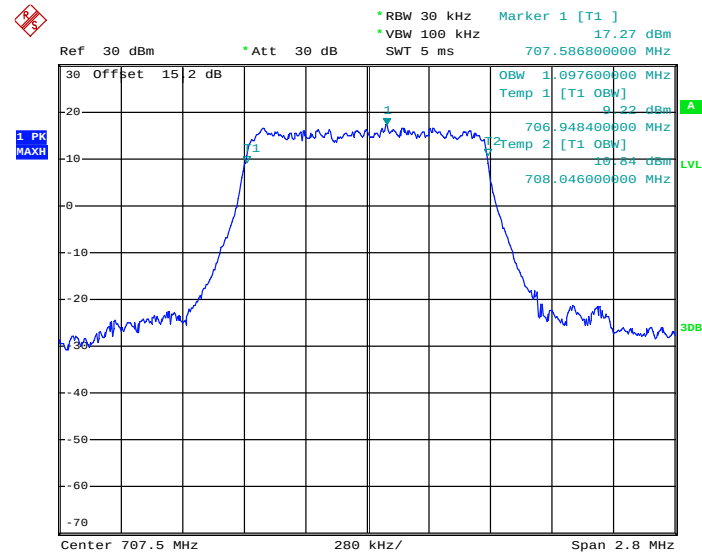
99% Occupied Bandwidth Plot on Channel 20525


Date: 29.MAY.2014 20:39:15

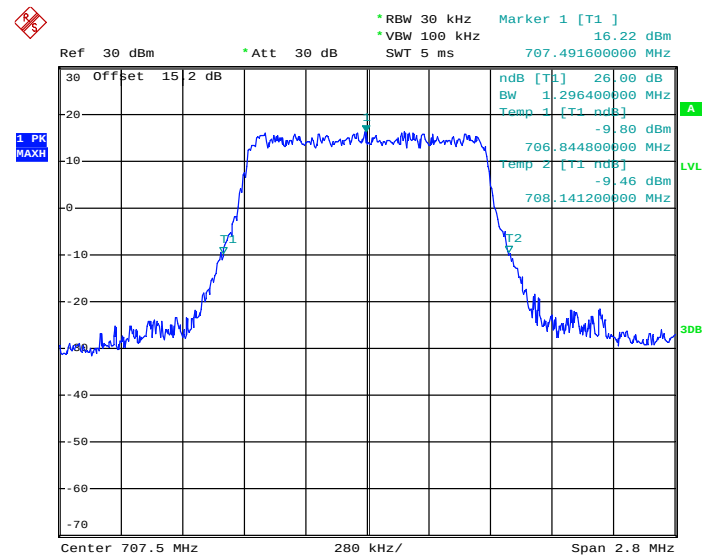
26dB Bandwidth Plot on Channel 20525


Date: 29.MAY.2014 20:42:26

Band :	LTE Band 12	BW / Mod. :	1.4MHz / QPSK
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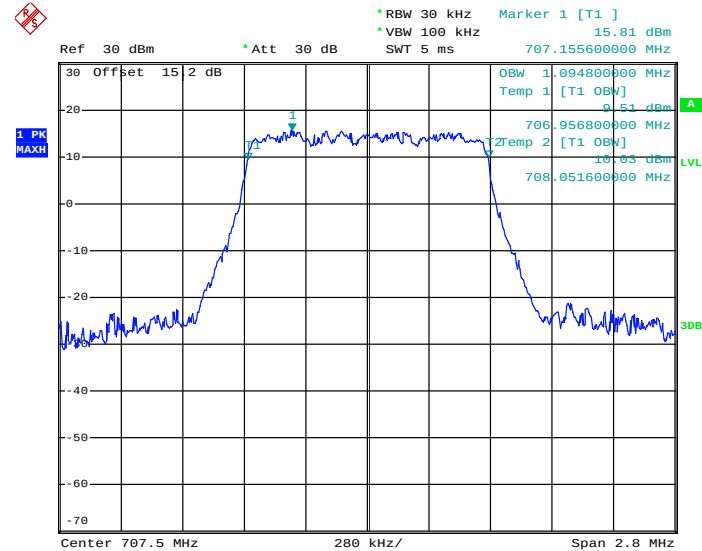
99% Occupied Bandwidth Plot on Channel 23095


Date: 29.MAY.2014 21:39:03

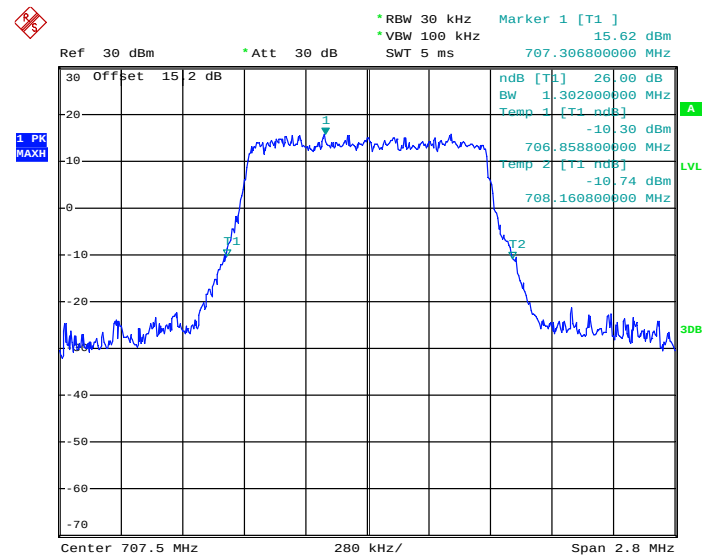
26dB Bandwidth Plot on Channel 23095


Date: 29.MAY.2014 21:42:40

Band :	LTE Band 12	BW / Mod. :	1.4MHz / 16QAM
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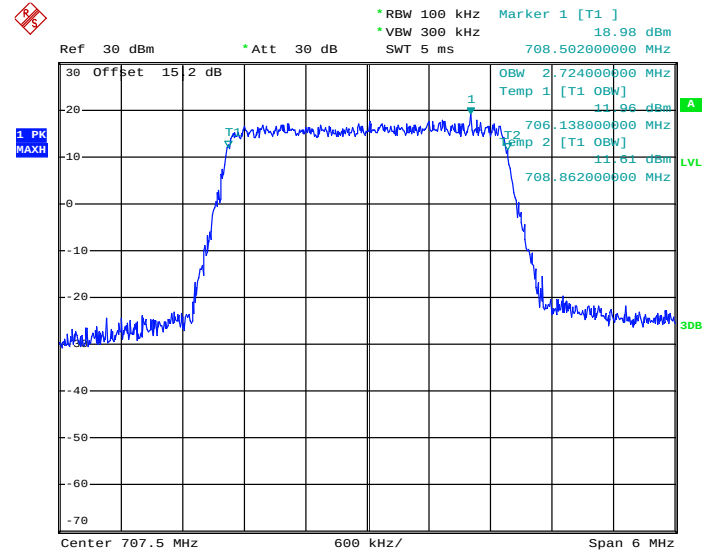
99% Occupied Bandwidth Plot on Channel 23095


Date: 29.MAY.2014 21:38:05

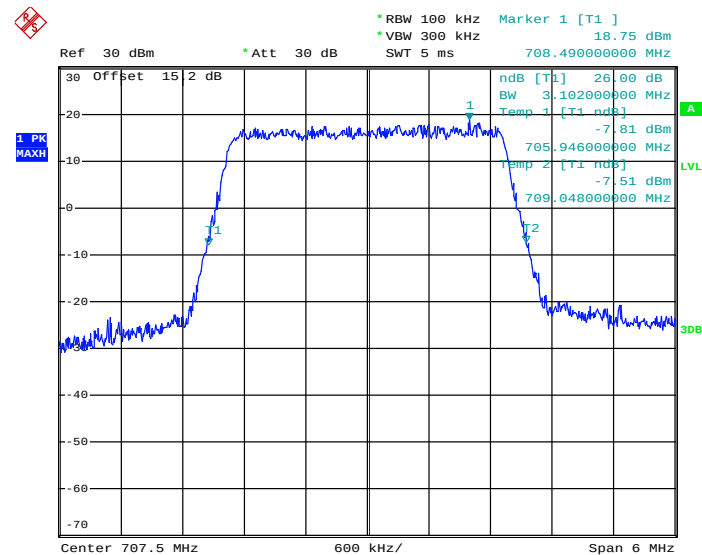
26dB Bandwidth Plot on Channel 23095


Date: 29.MAY.2014 21:43:00

Band :	LTE Band 12	BW / Mod. :	3MHz / QPSK
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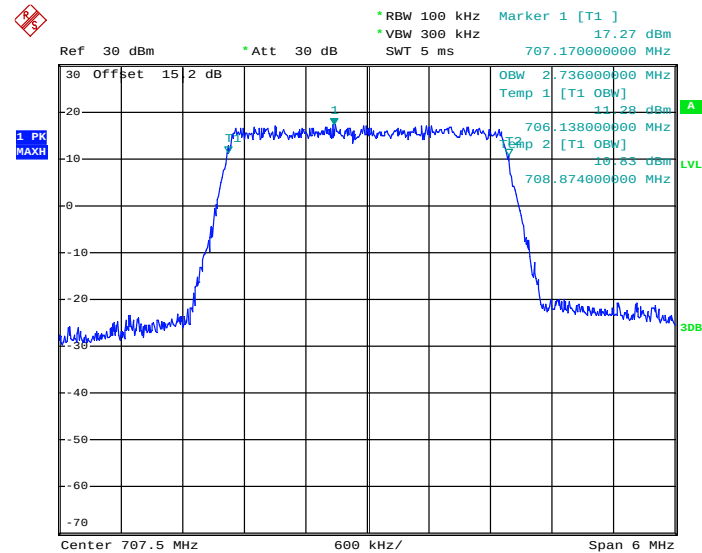
99% Occupied Bandwidth Plot on Channel 23095


Date: 30.MAY.2014 15:54:59

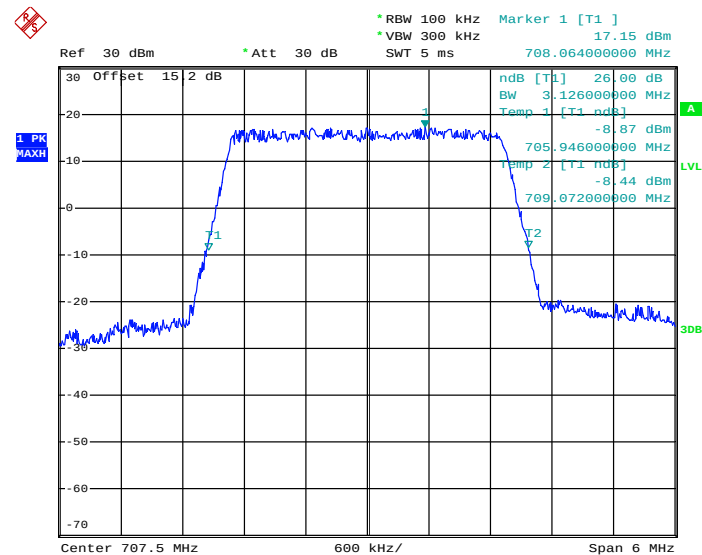
26dB Bandwidth Plot on Channel 23095


Date: 30.MAY.2014 16:00:29

Band :	LTE Band 12	BW / Mod. :	3MHz / 16QAM
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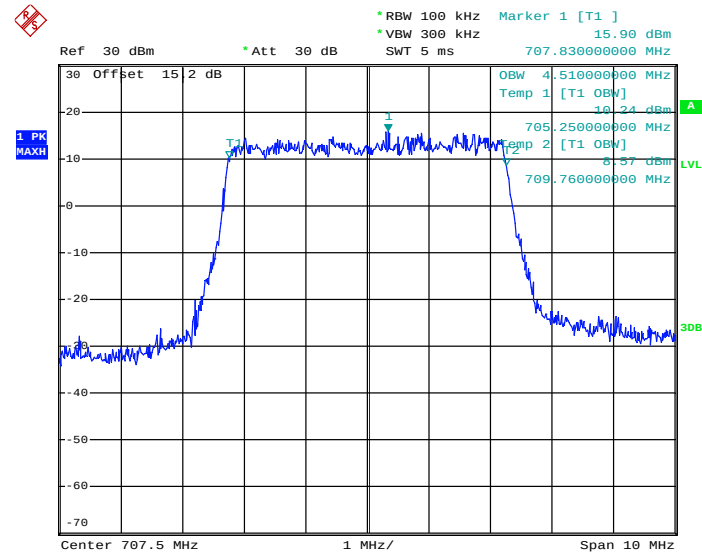
99% Occupied Bandwidth Plot on Channel 23095


Date: 30.MAY.2014 15:55:26

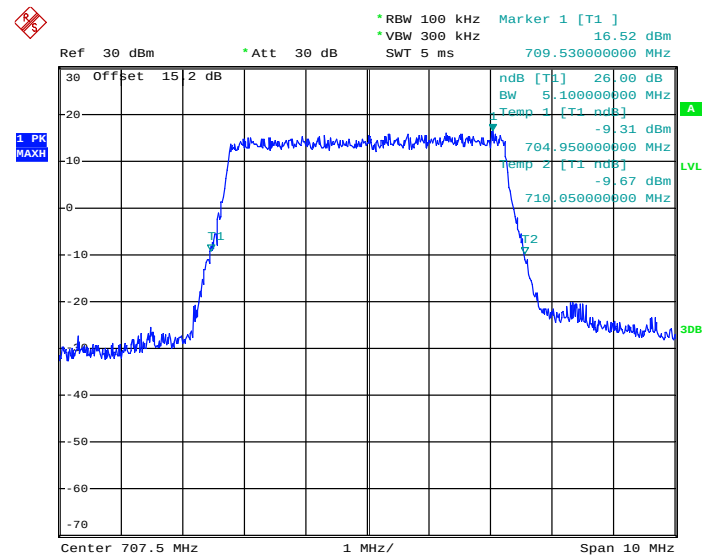
26dB Bandwidth Plot on Channel 23095


Date: 30.MAY.2014 16:00:05

Band :	LTE Band 12	BW / Mod. :	5MHz / QPSK
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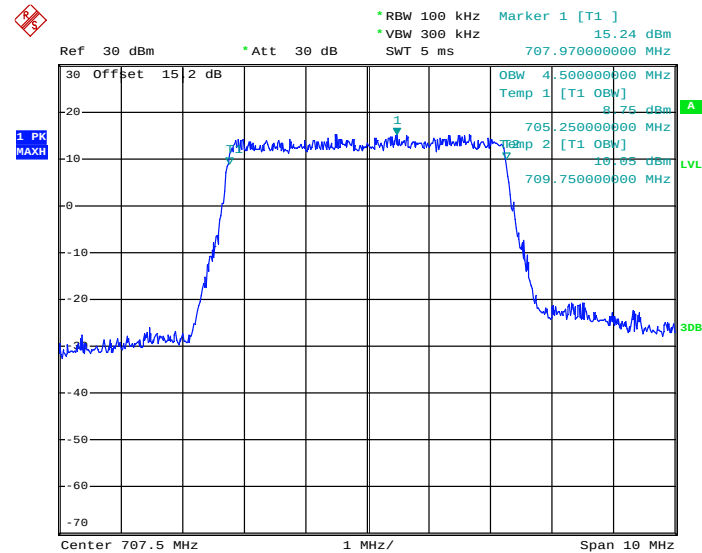
99% Occupied Bandwidth Plot on Channel 23095


Date: 30.MAY.2014 16:09:35

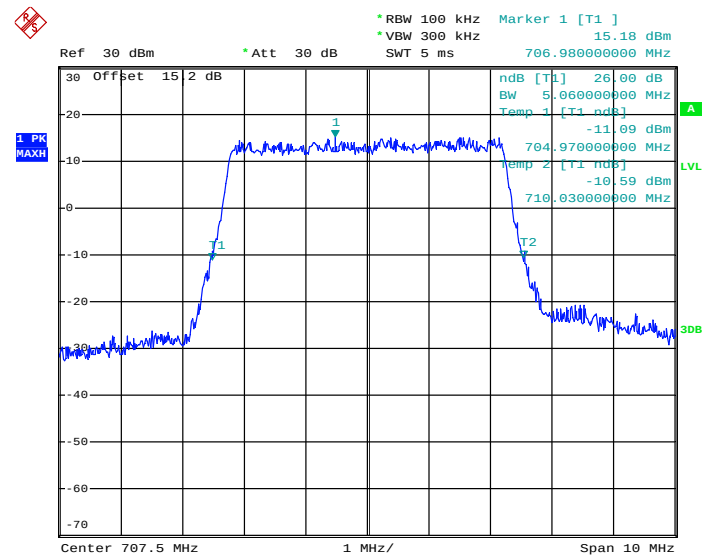
26dB Bandwidth Plot on Channel 23095


Date: 30.MAY.2014 16:12:51

Band :	LTE Band 12	BW / Mod. :	5MHz / 16QAM
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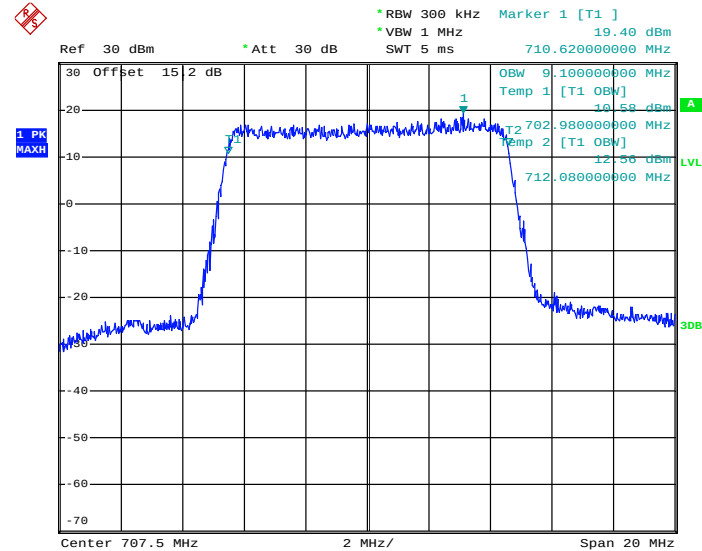
99% Occupied Bandwidth Plot on Channel 23095


Date: 30.MAY.2014 16:10:05

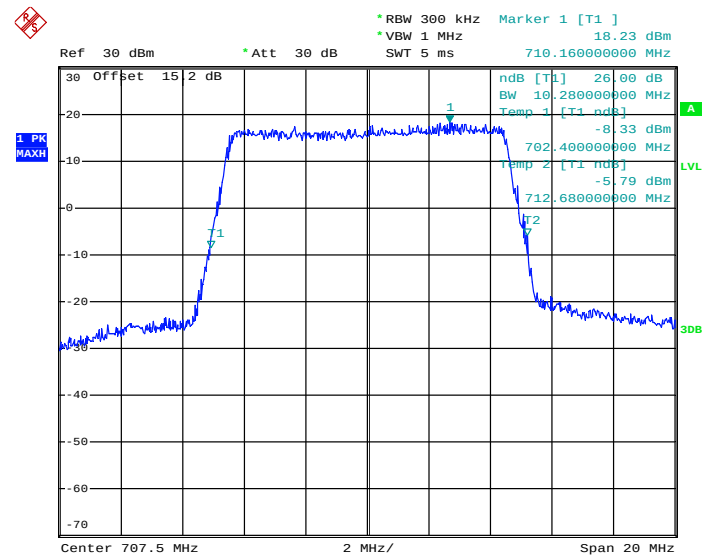
26dB Bandwidth Plot on Channel 23095


Date: 30.MAY.2014 16:12:24

Band :	LTE Band 12	BW / Mod. :	10MHz / QPSK
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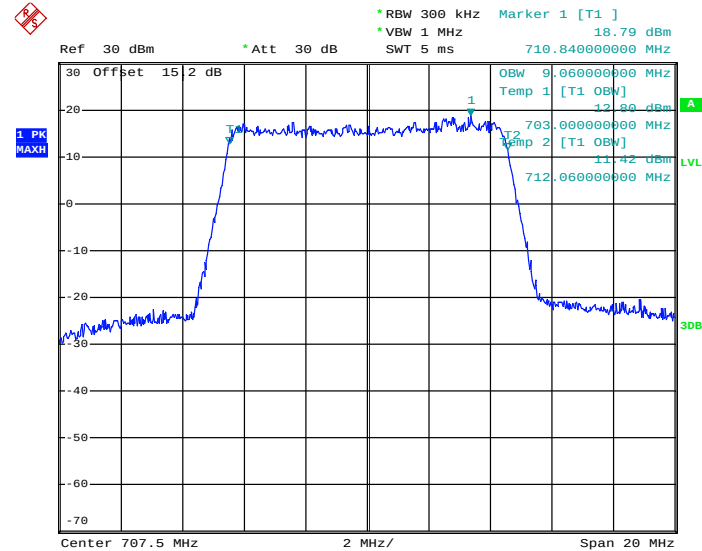
99% Occupied Bandwidth Plot on Channel 23095


Date: 30.MAY.2014 16:17:32

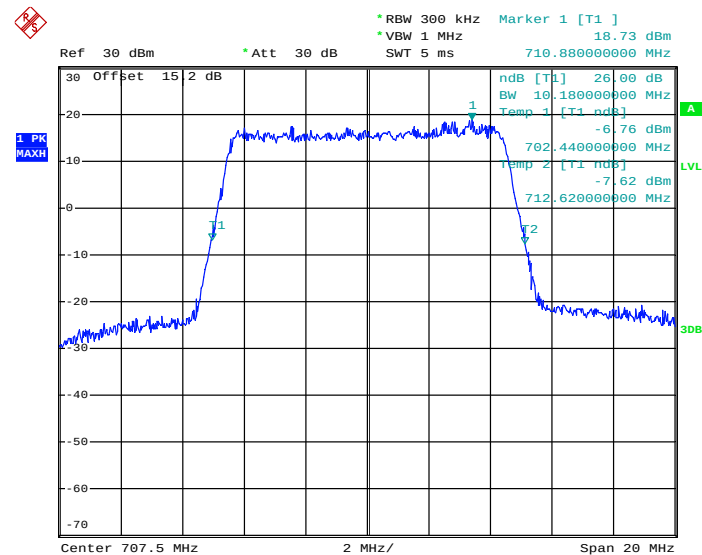
26dB Bandwidth Plot on Channel 23095


Date: 30.MAY.2014 16:21:53

Band :	LTE Band 12	BW / Mod. :	10MHz / 16QAM
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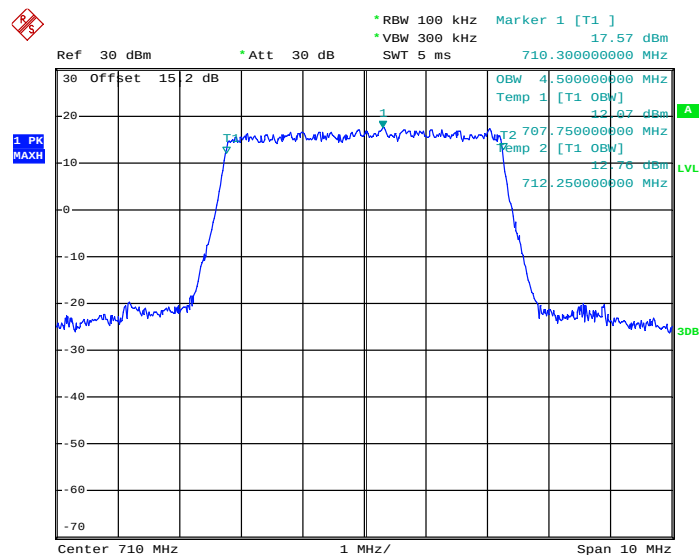
99% Occupied Bandwidth Plot on Channel 23095


Date: 30.MAY.2014 16:18:11

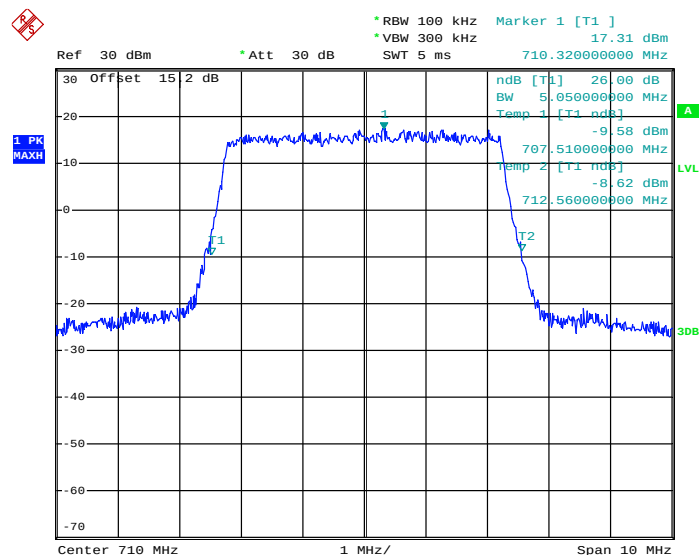
26dB Bandwidth Plot on Channel 23095


Date: 30.MAY.2014 16:20:54

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


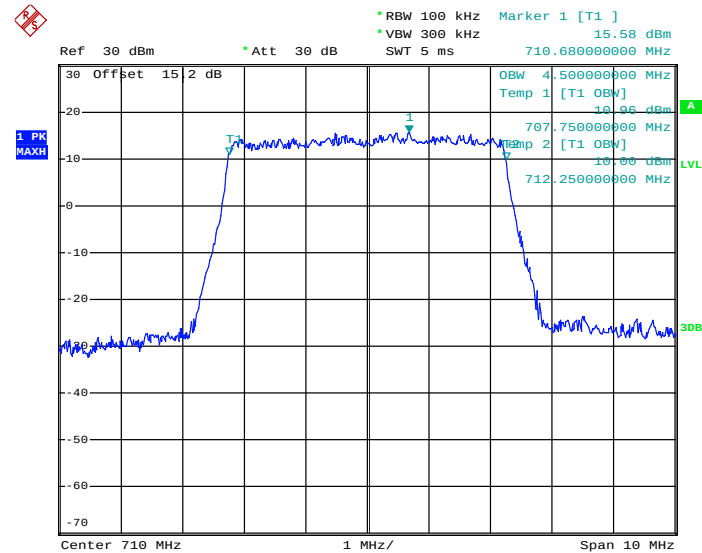
Date: 29.MAY.2014 14:36:05

26dB Bandwidth Plot on Channel 23790


Date: 29.MAY.2014 14:39:51

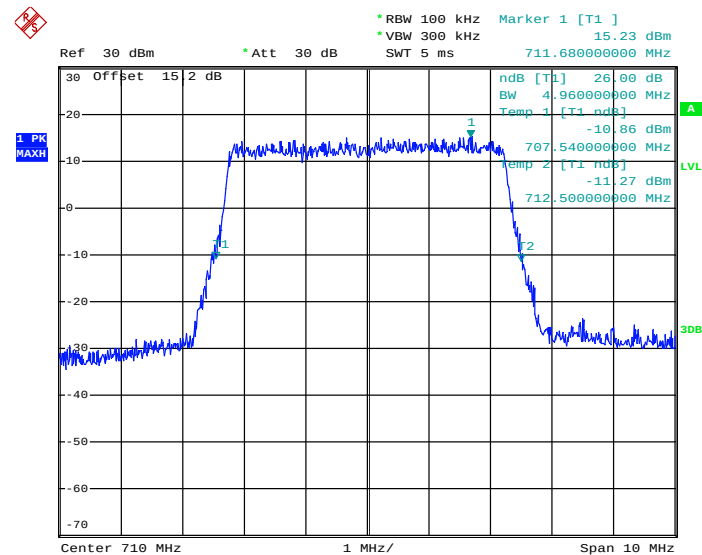
Band :	LTE Band 17	BW / Mod. :	5MHz / 16QAM
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99% Occupied Bandwidth Plot on Channel 23790



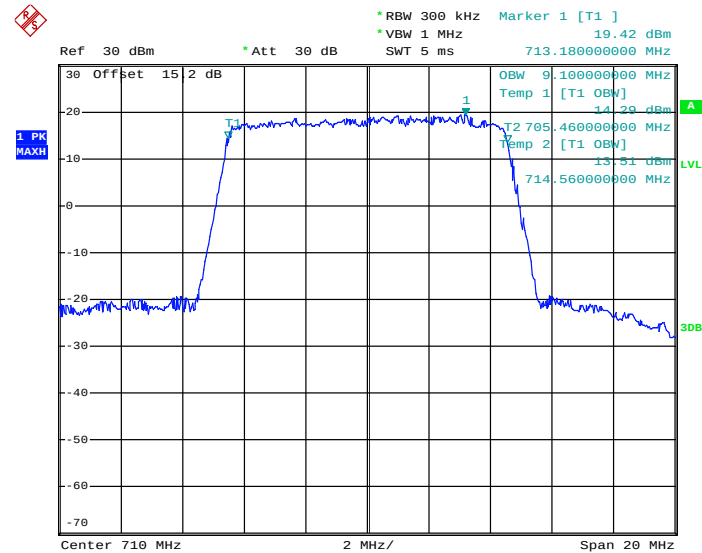
Date: 29.MAY.2014 14:35:05

26dB Bandwidth Plot on Channel 23790

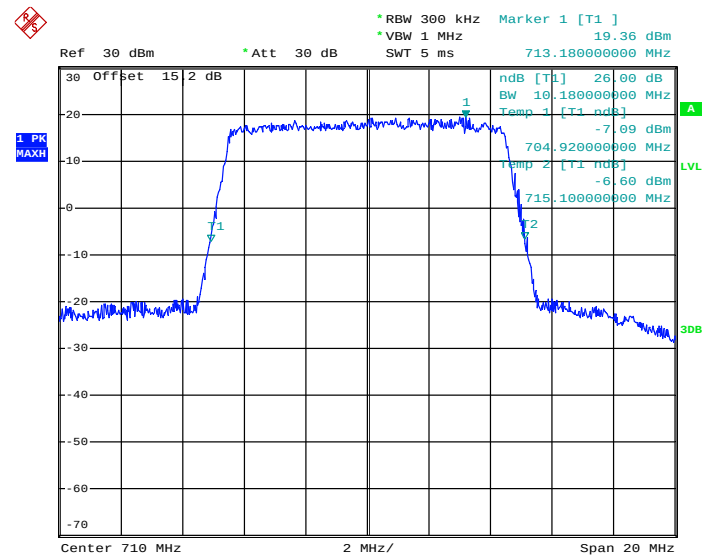


Date: 29.MAY.2014 14:40:15

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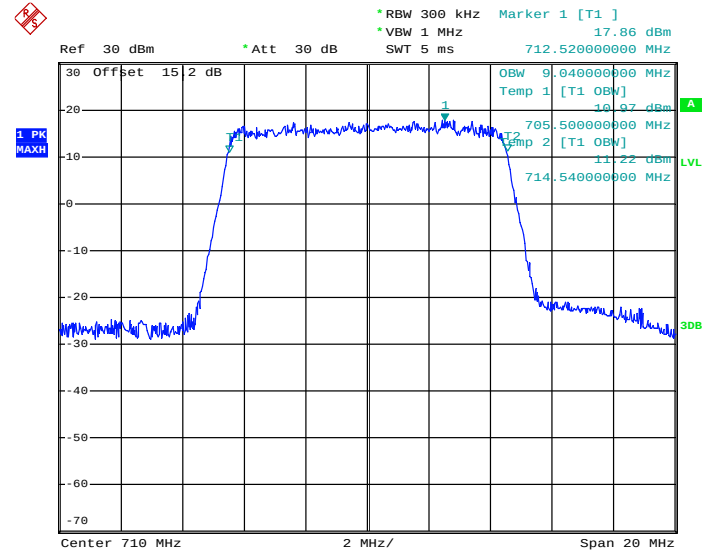
99% Occupied Bandwidth Plot on Channel 23790


Date: 29.MAY.2014 15:32:11

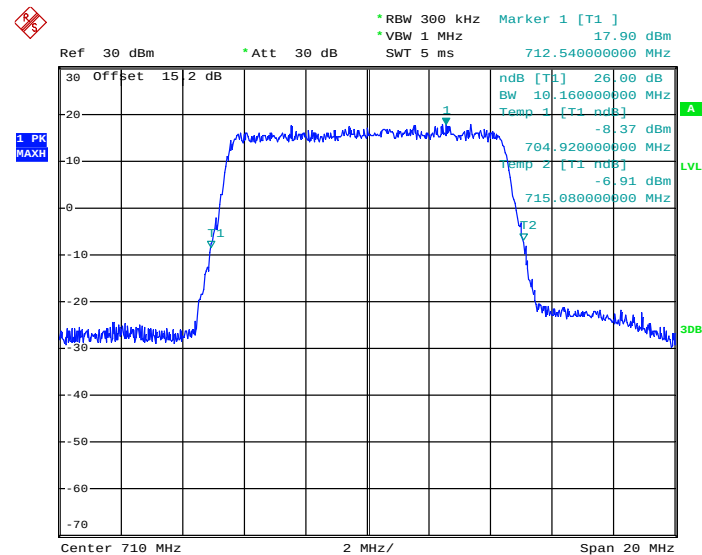
26dB Bandwidth Plot on Channel 23790


Date: 29.MAY.2014 15:39:18

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


Date: 29.MAY.2014 15:32:47

26dB Bandwidth Plot on Channel 23790


Date: 29.MAY.2014 15:38:46

3.4 Conducted Band Edge Measurement

3.4.1 Description of Conducted Band Edge Measurement

22.917(a) for Band 5

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

24.238 (a) for Band 2

For operations in the 1850-1910 and 1930-1990 MHz band, the FCC limit is $43 + 10\log_{10}(P[\text{Watts}])$ dB below the transmitter power $P(\text{Watts})$ in a 1MHz bandwidth. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

27.53 (f) for Band 12, 17

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

27.53 (g) for Band 4

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

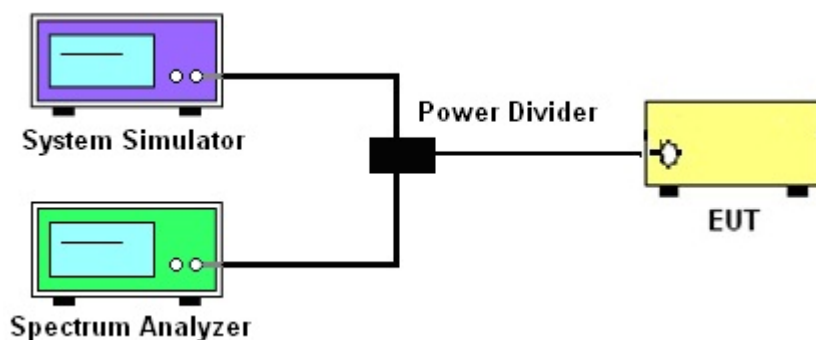
3.4.2 Measuring Instruments

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

3.4.3 Test Procedures

1. The EUT was connected to spectrum analyzer and system simulator via a power divider.
2. The band edges of low and high channels for the highest RF powers were measured. Set RBW $\geq 1\%$ EBW in the 1MHz band immediately outside and adjacent to the band edge.
3. Set spectrum analyzer with RMS detector.
4. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
5. The limit line is derived from $43 + 10\log(P)$ dB below the transmitter power P(Watts)
 $= P(W) - [43 + 10\log(P)] \text{ (dB)}$
 $= [30 + 10\log(P)] \text{ (dBm)} - [43 + 10\log(P)] \text{ (dB)}$
 $= -13\text{dBm}.$

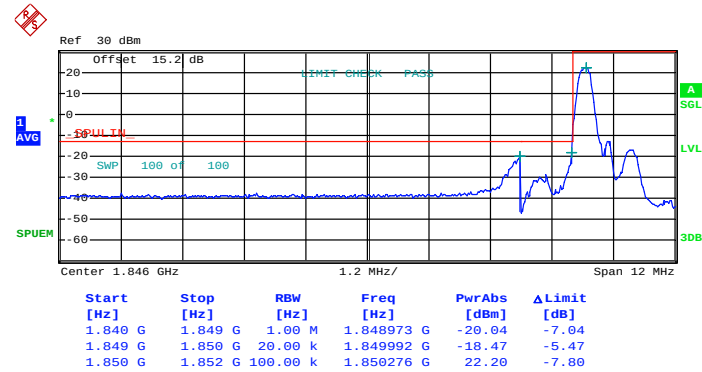
3.4.4 Test Setup



3.4.5 Test Result (Plots) of Conducted Band Edge

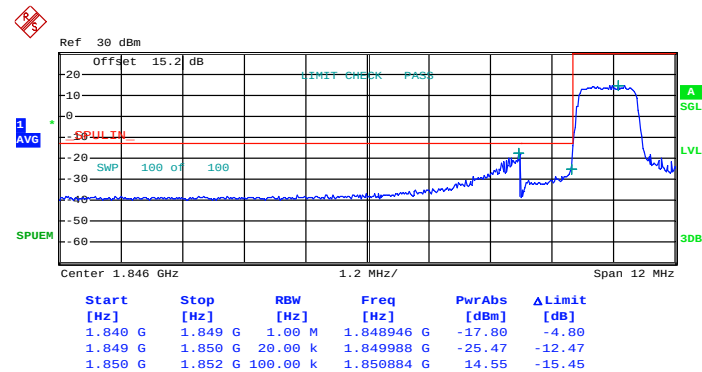
Band :	LTE Band 2	Band Width :	1.4MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



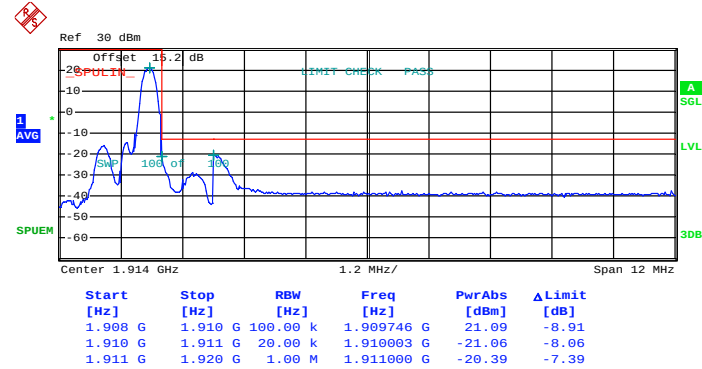
Date: 28.MAY.2014 20:22:39

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



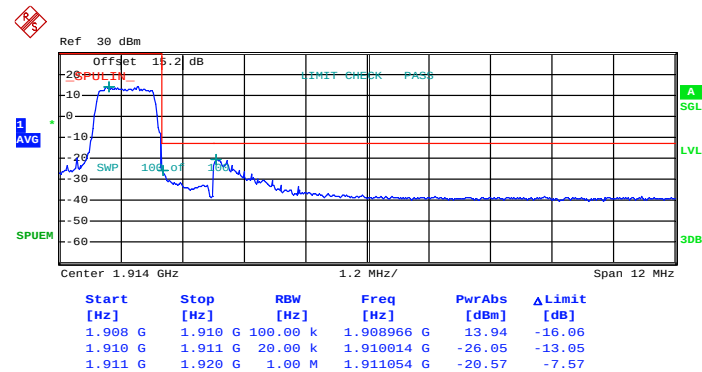
Date: 28.MAY.2014 20:17:42

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



Date: 28.MAY.2014 20:24:28

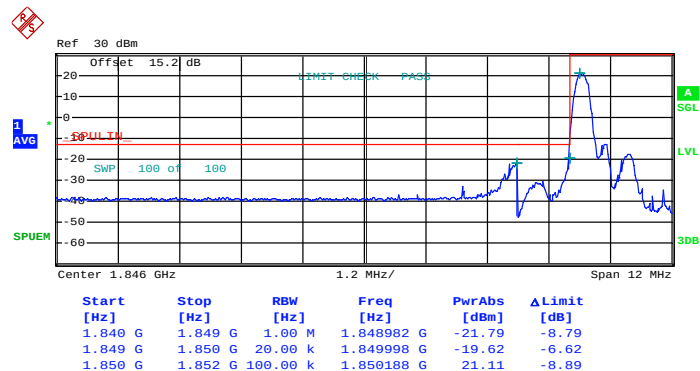
Higher Band Edge Plot for QPSK-RB Size 6, RB Offset 0



Date: 28.MAY.2014 20:33:22

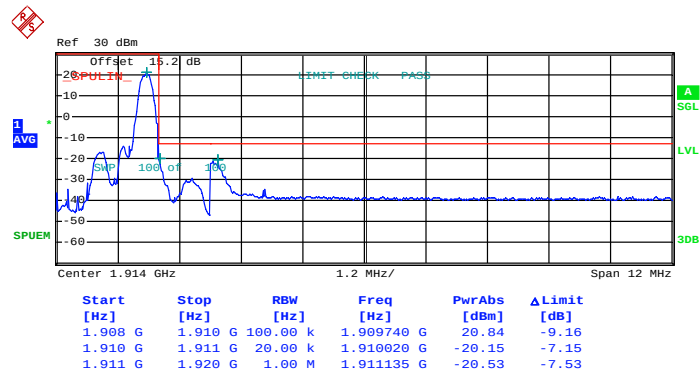
Band :	LTE Band 2	Band Width :	1.4MHz / 16QAM
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Lower Band Edge Plot for 16QAM -RB Size 1, RB Offset 0



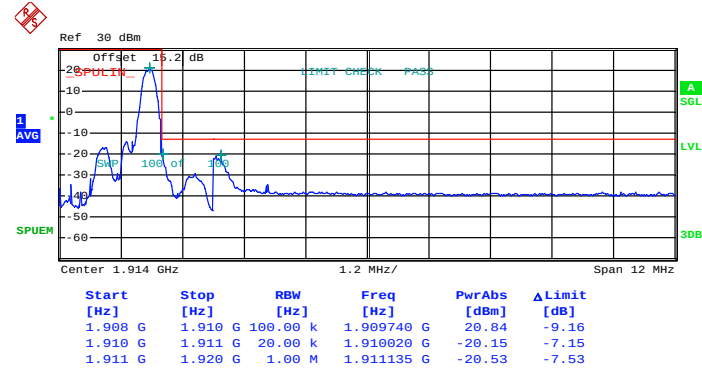
Date: 28.MAY.2014 20:21:05

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



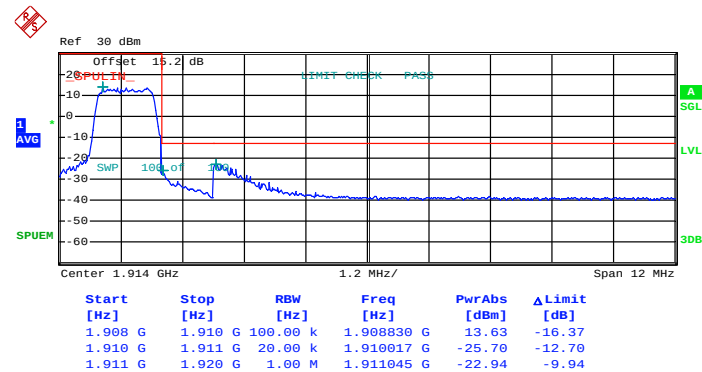
Date: 28.MAY.2014 20:29:02

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



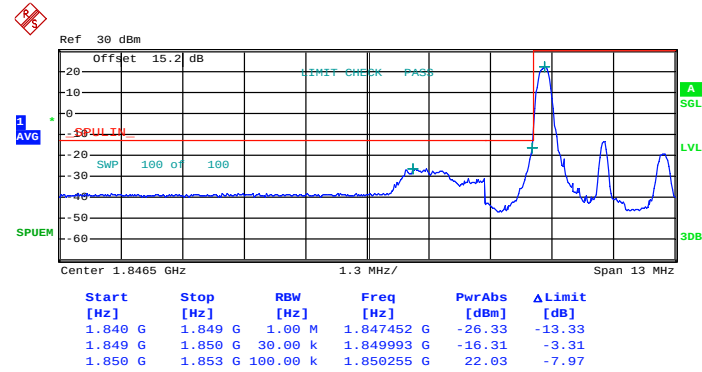
Date: 28.MAY.2014 20:29:02

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

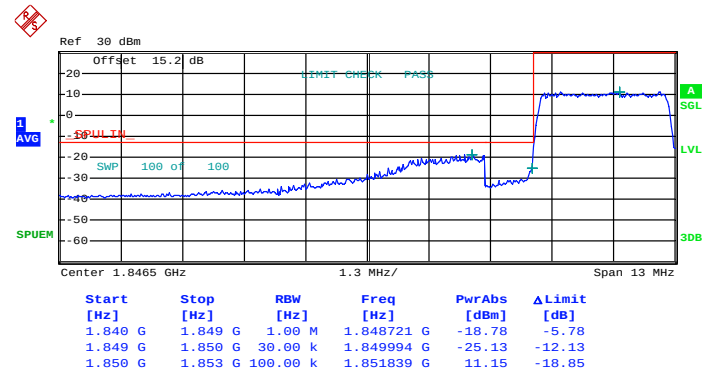


Date: 28.MAY.2014 20:30:49

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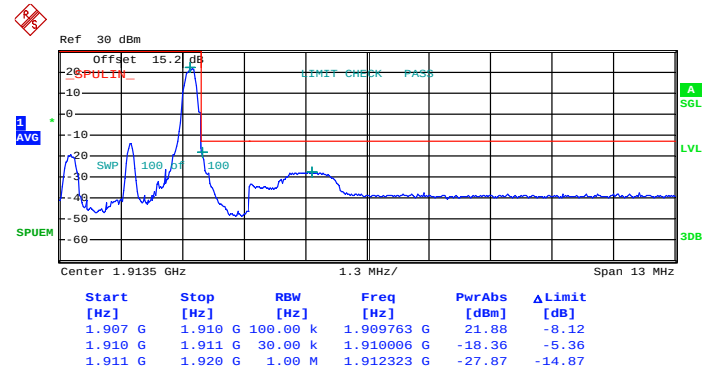
Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0


Date: 28.MAY.2014 21:25:44

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


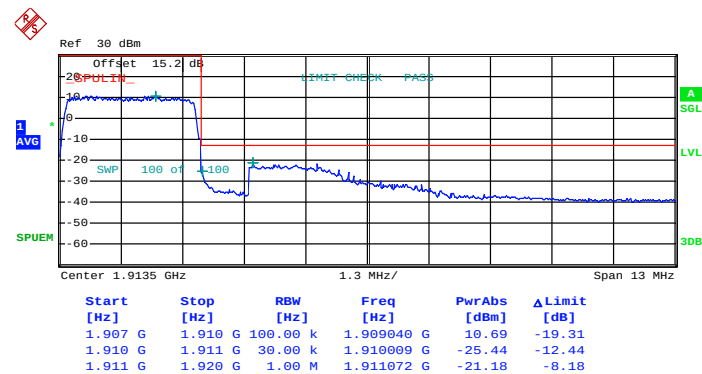
Date: 28.MAY.2014 21:24:05

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



Date: 28.MAY.2014 21:32:13

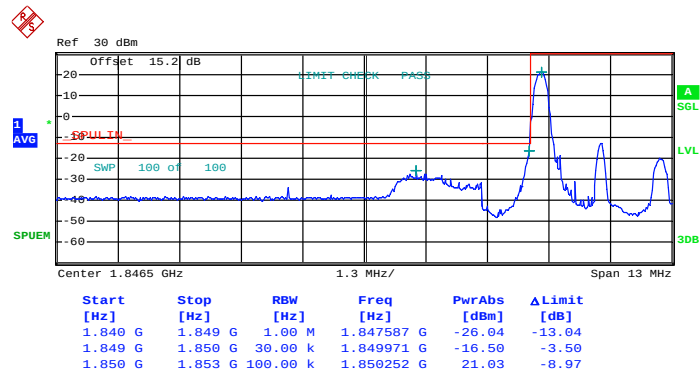
Higher Band Edge Plot for QPSK-RB Size 15, RB Offset 0



Date: 28.MAY.2014 21:34:22

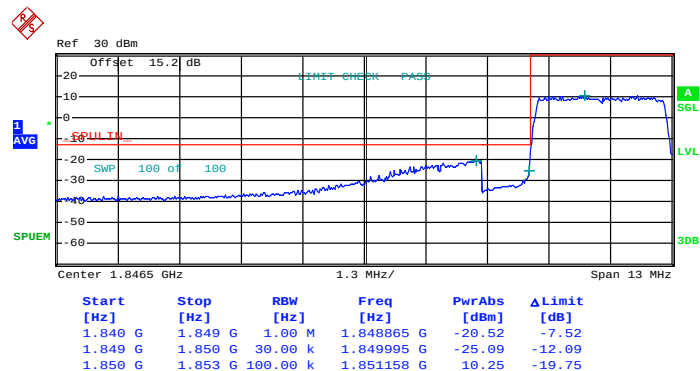
Band :	LTE Band 2	Band Width :	3MHz / 16QAM
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Lower Band Edge Plot for 16QAM -RB Size 1, RB Offset 0



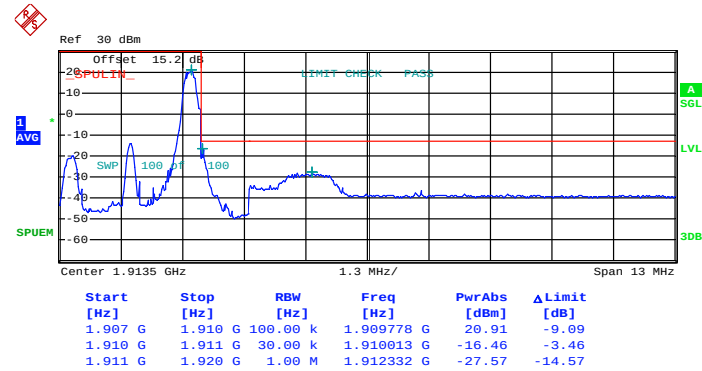
Date: 28.MAY.2014 21:28:08

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



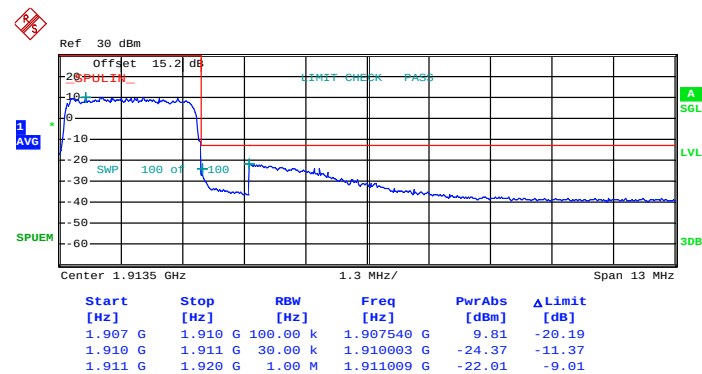
Date: 28.MAY.2014 21:22:33

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



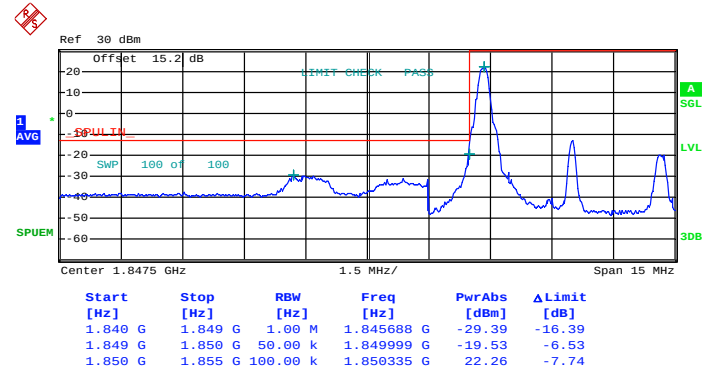
Date: 28.MAY.2014 21:30:10

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

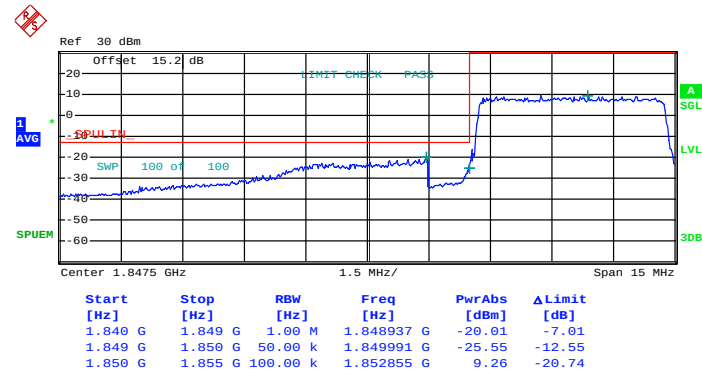


Date: 28.MAY.2014 21:35:59

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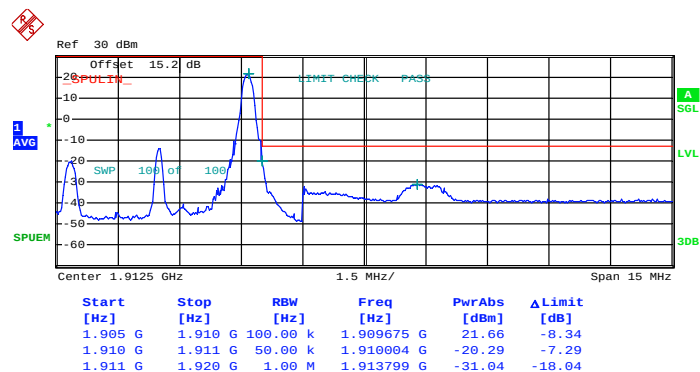
Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0


Date: 28.MAY.2014 22:39:28

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


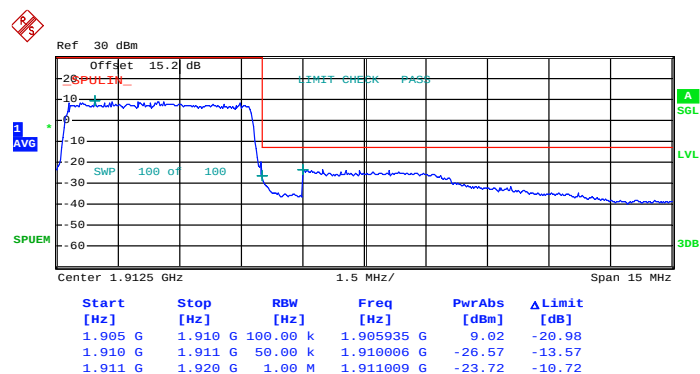
Date: 28.MAY.2014 22:34:01

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



Date: 28.MAY.2014 22:41:30

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

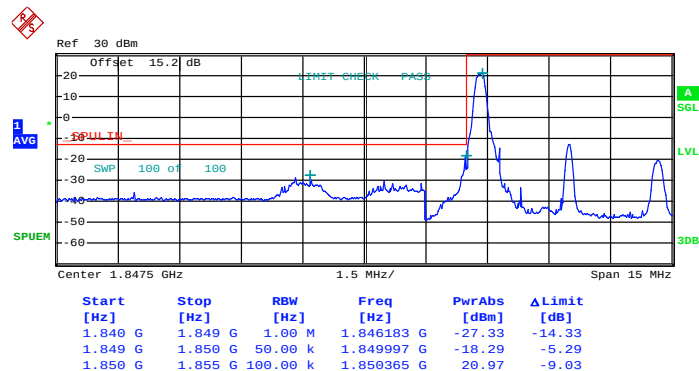


Date: 28.MAY.2014 22:47:59



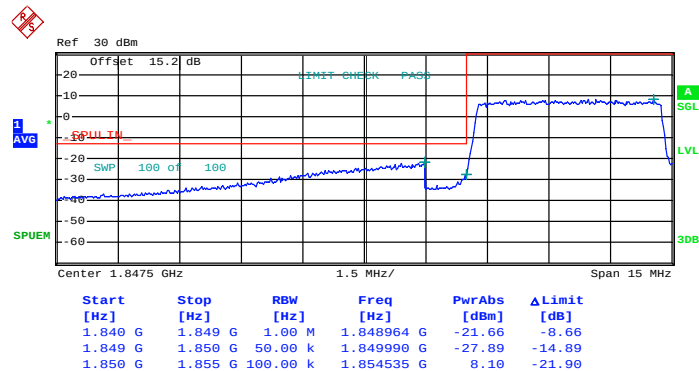
Band :	LTE Band 2	Band Width :	5MHz / 16QAM
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Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



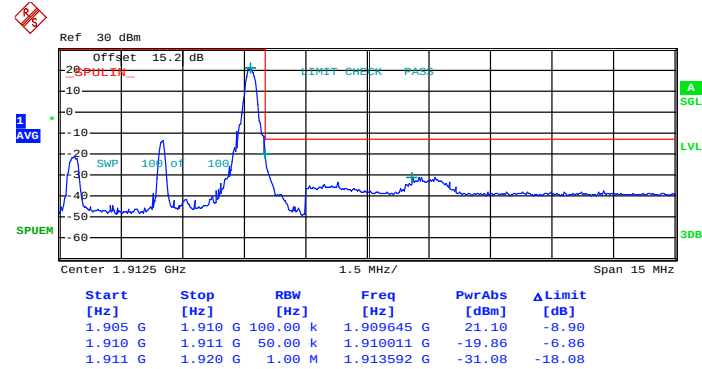
Date: 28.MAY.2014 22:37:47

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



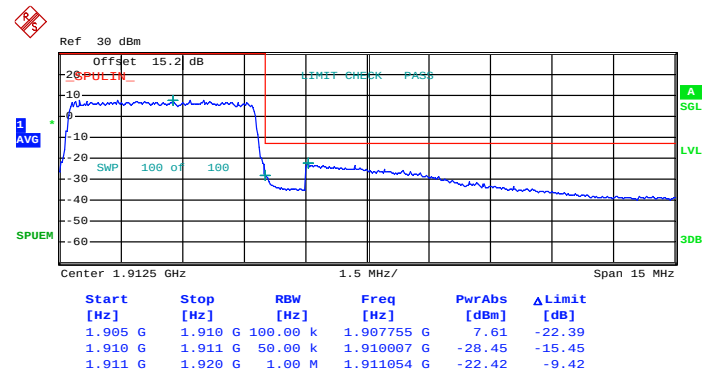
Date: 28.MAY.2014 22:35:44

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



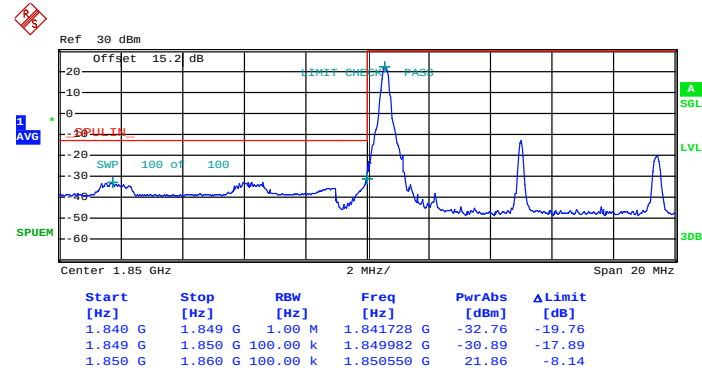
Date: 28.MAY.2014 22:43:08

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

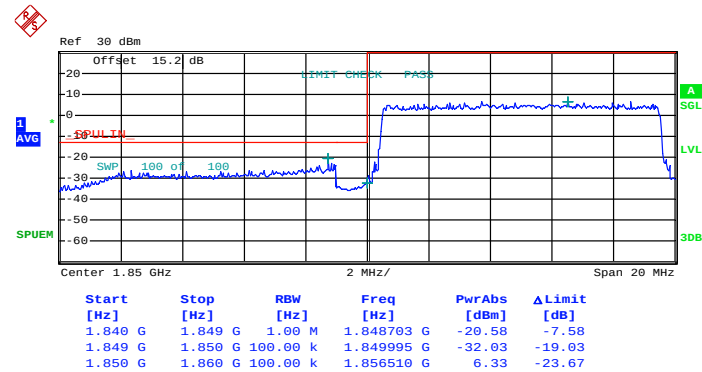


Date: 28.MAY.2014 22:45:23

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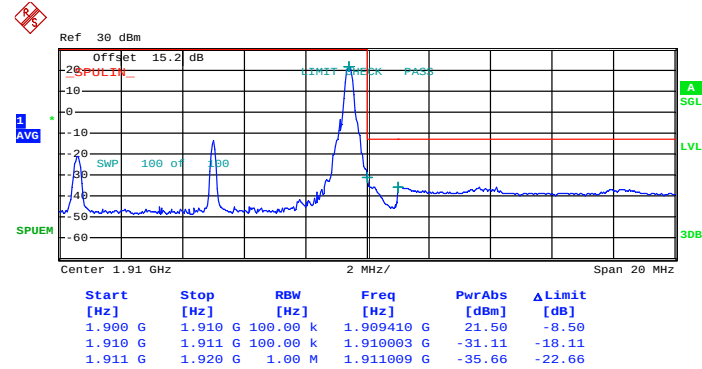
Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0


Date: 28.MAY.2014 23:43:03

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


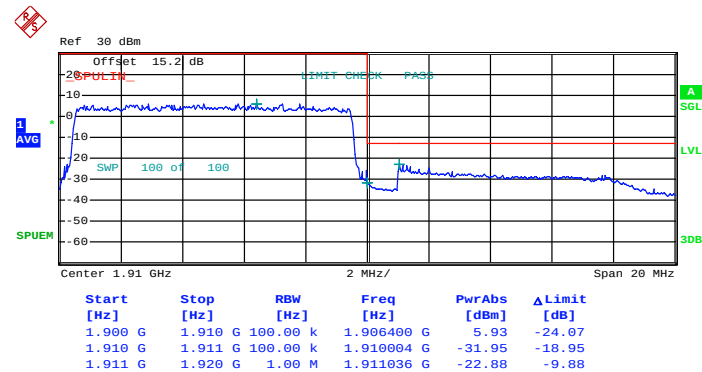
Date: 28.MAY.2014 23:40:05

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



Date: 28.MAY.2014 23:51:25

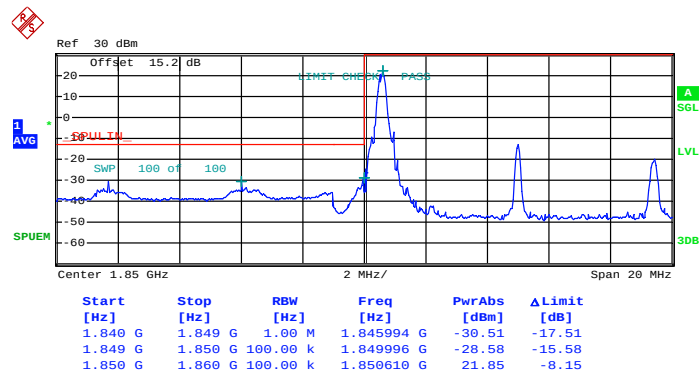
Higher Band Edge Plot for QPSK-RB Size 50, RB Offset 0



Date: 28.MAY.2014 23:54:18

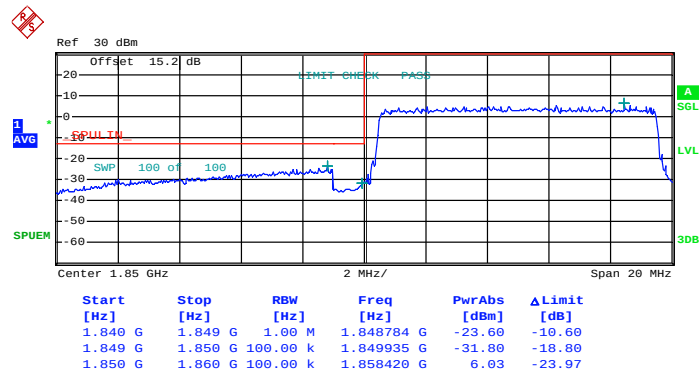
Band :	LTE Band 2	Band Width :	10MHz / 16QAM
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Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



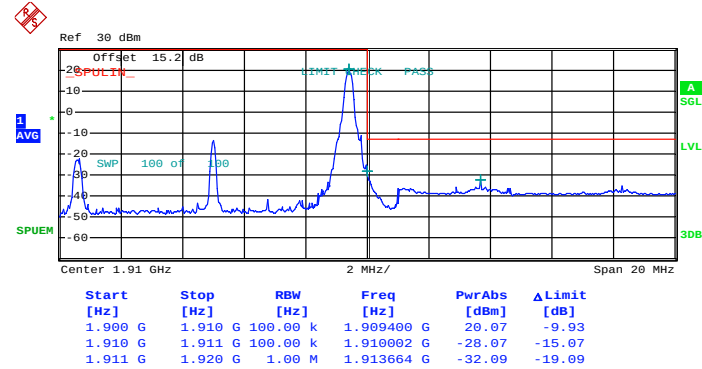
Date: 28.MAY.2014 23:45:23

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



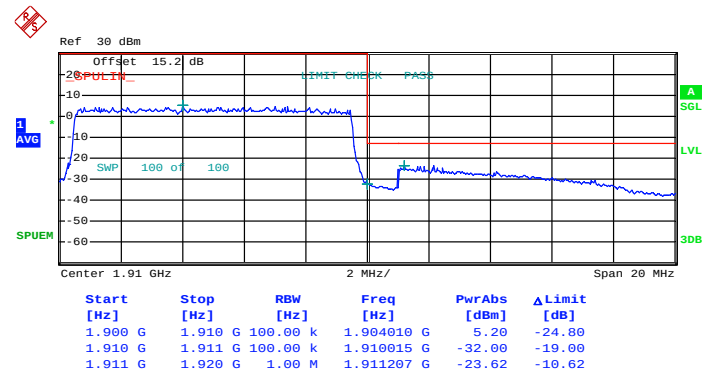
Date: 28.MAY.2014 23:38:23

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



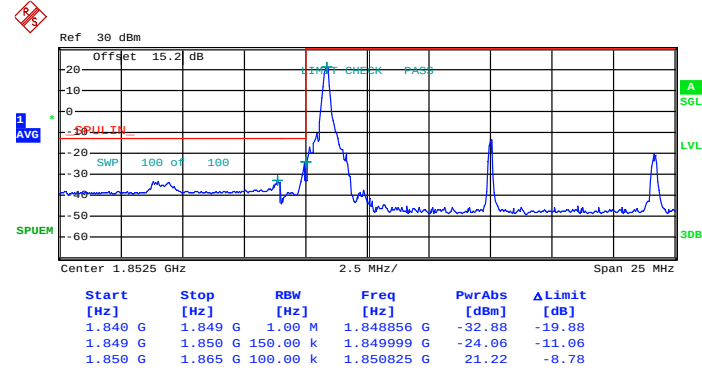
Date: 28.MAY.2014 23:48:47

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

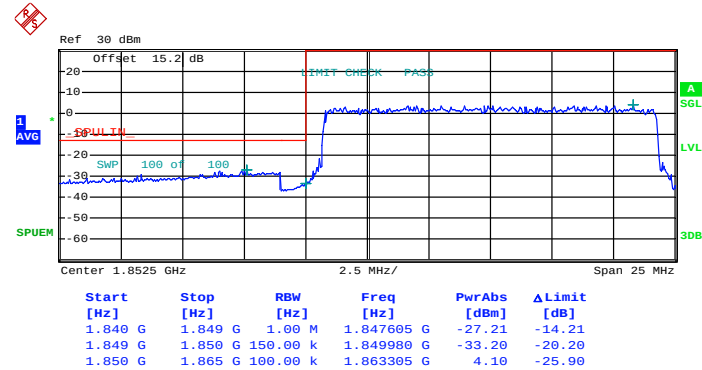


Date: 28.MAY.2014 23:57:19

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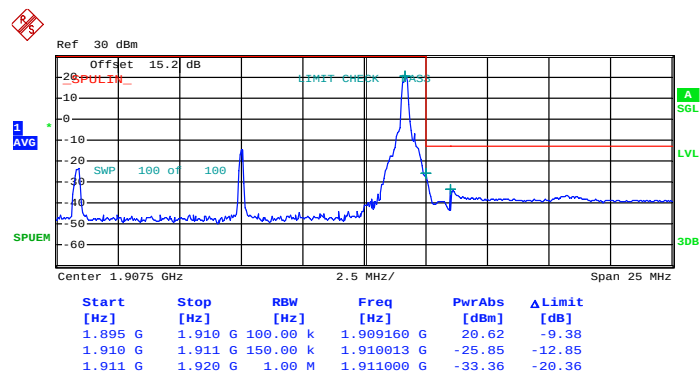
Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0


Date: 29.MAY.2014 11:26:48

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


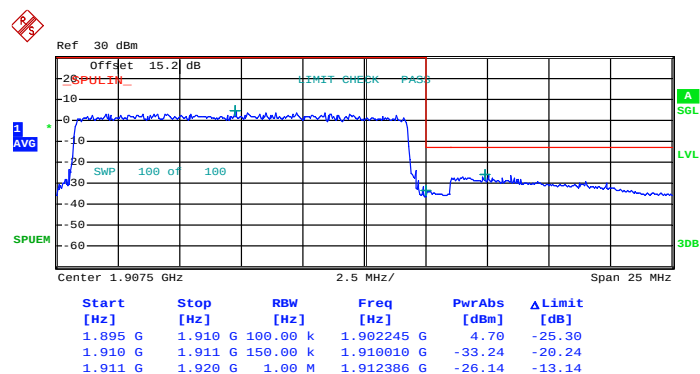
Date: 29.MAY.2014 11:25:05

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



Date: 29.MAY.2014 11:32:08

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

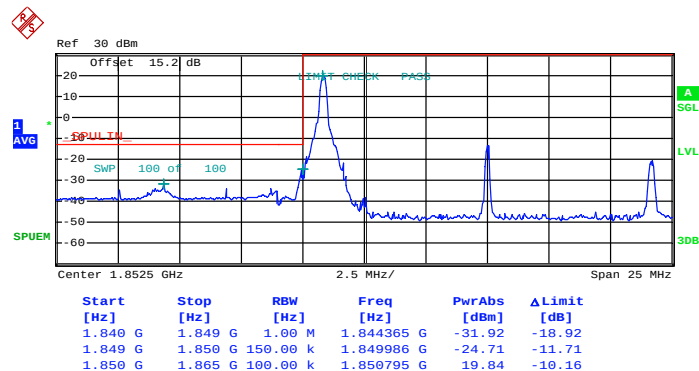


Date: 29.MAY.2014 11:34:59



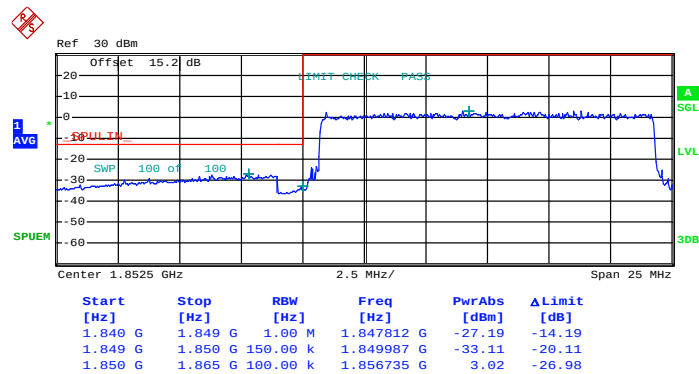
Band :	LTE Band 2	Band Width :	15MHz / 16QAM
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Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0

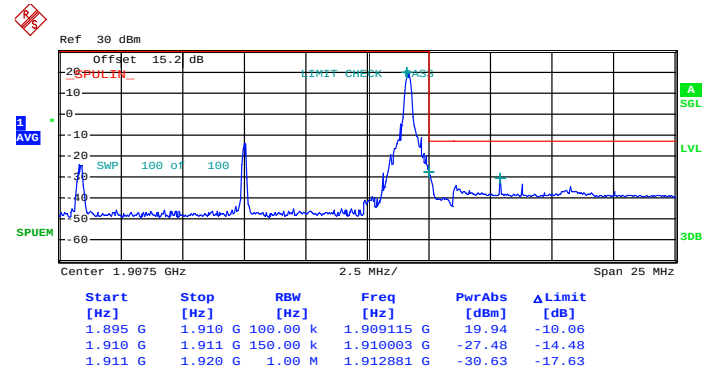


Date: 29.MAY.2014 11:28:43

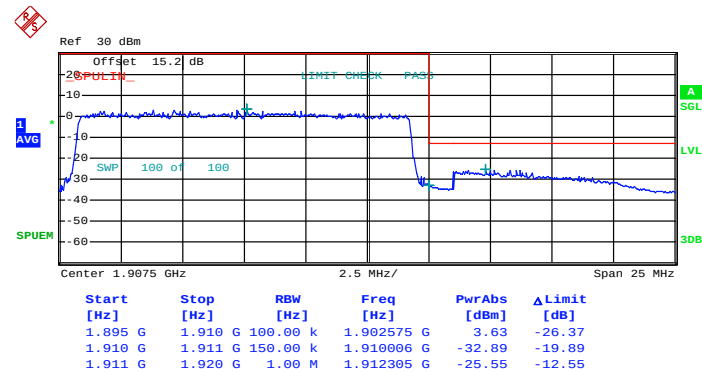
Lower Band Edge Plot for 16QAM-RB Size 75, RB Offset 0



Date: 29.MAY.2014 11:23:26

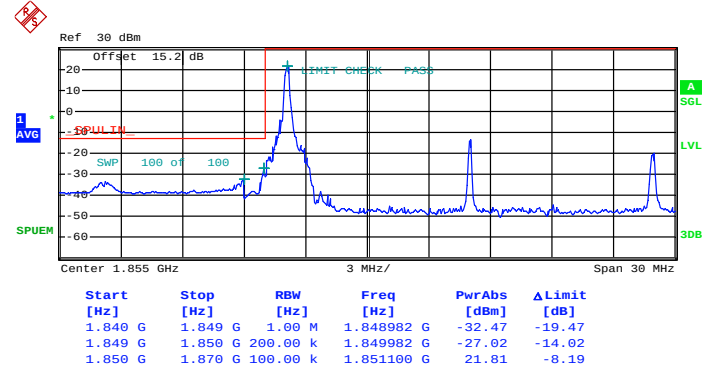
Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 74


Date: 29.MAY.2014 11:30:31

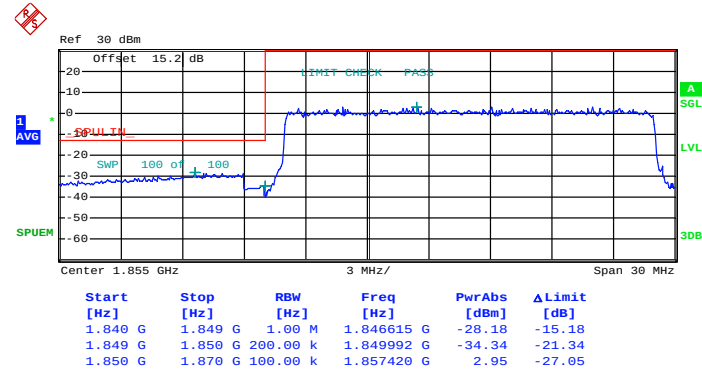
Higher Band Edge Plot for 16QAM-RB Size 75, RB Offset 0


Date: 29.MAY.2014 11:36:42

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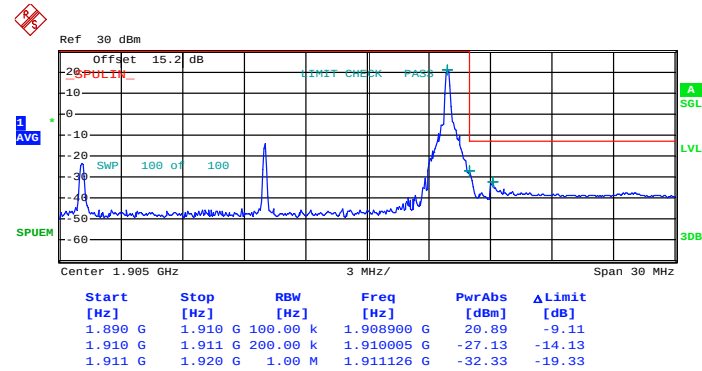
Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0


Date: 29.MAY.2014 12:34:40

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


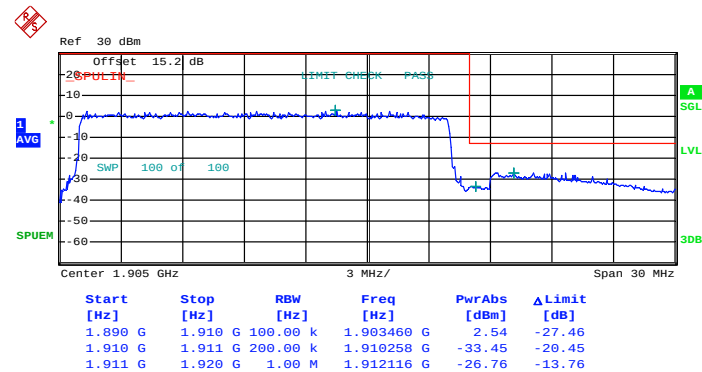
Date: 29.MAY.2014 12:23:23

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



Date: 29.MAY.2014 12:36:34

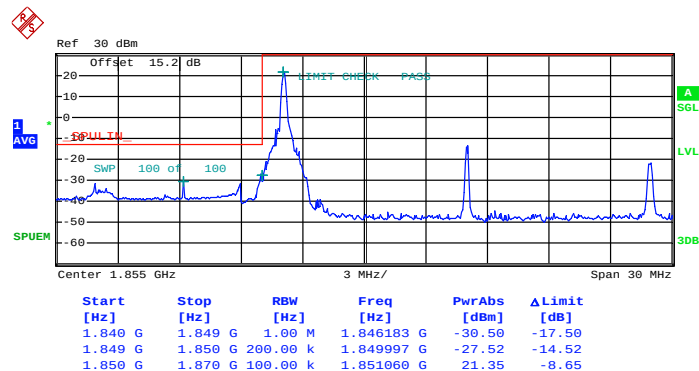
Higher Band Edge Plot for QPSK-RB Size 100, RB Offset 0



Date: 29.MAY.2014 12:42:51

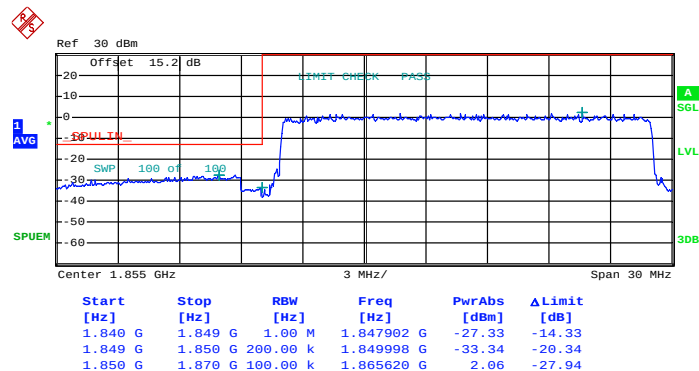
Band :	LTE Band 2	Band Width :	20MHz / 16QAM
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Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0

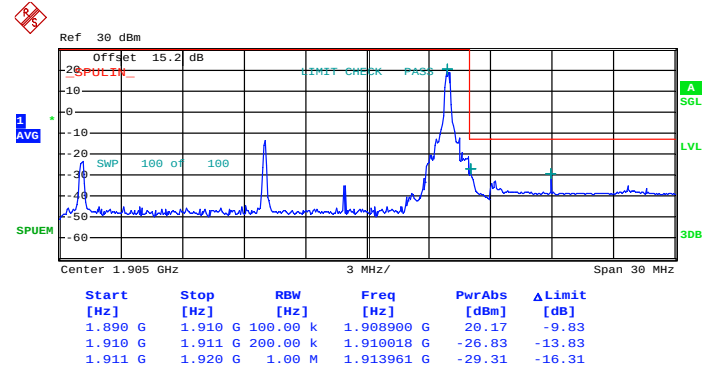


Date: 29.MAY.2014 12:32:58

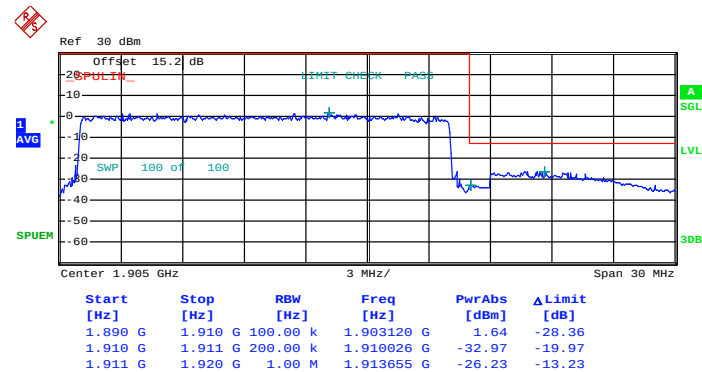
Lower Band Edge Plot for 16QAM-RB Size 100, RB Offset 0



Date: 29.MAY.2014 12:30:26

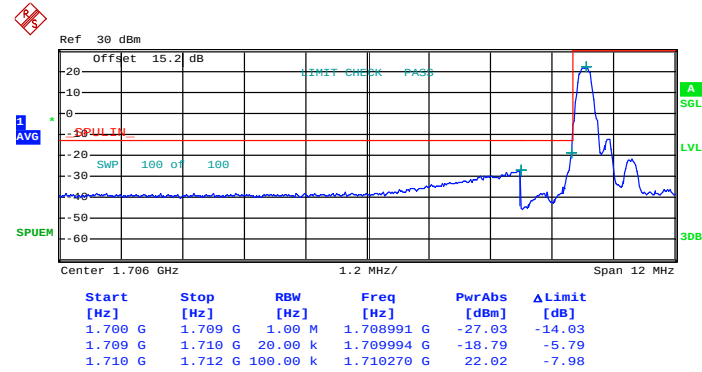
Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 99


Date: 29.MAY.2014 12:39:03

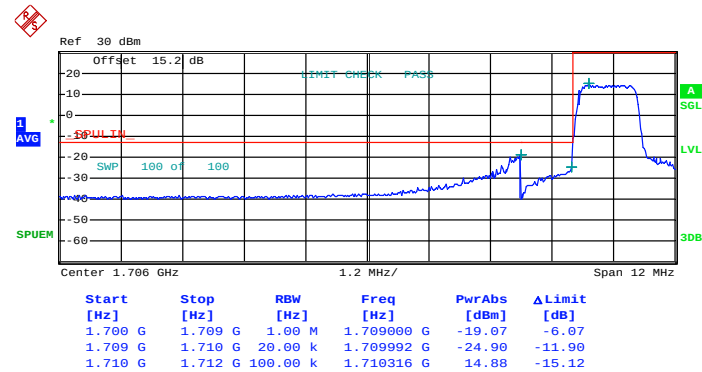
Higher Band Edge Plot for 16QAM-RB Size 100, RB Offset 0


Date: 29.MAY.2014 12:41:02

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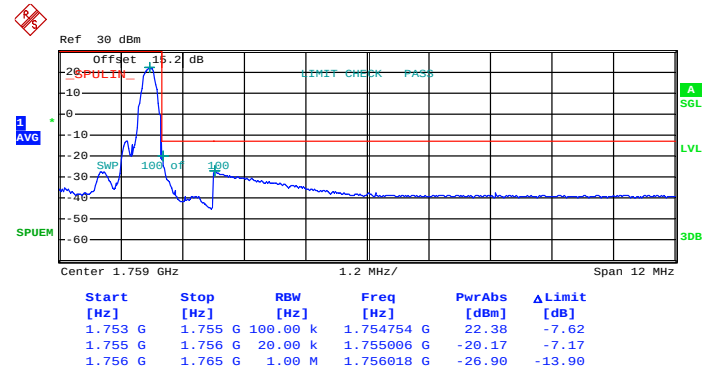
Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0


Date: 29.MAY.2014 22:08:21

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


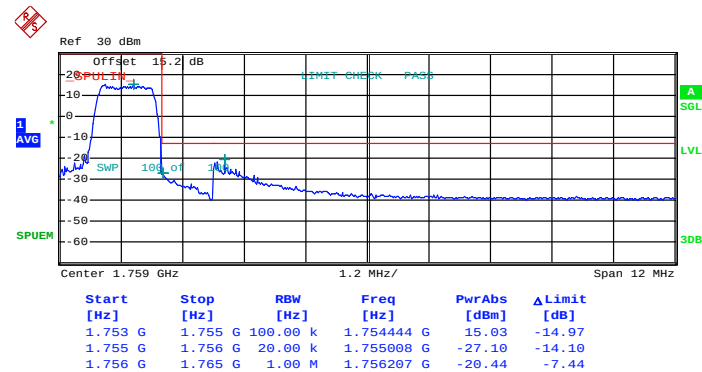
Date: 29.MAY.2014 21:58:30

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



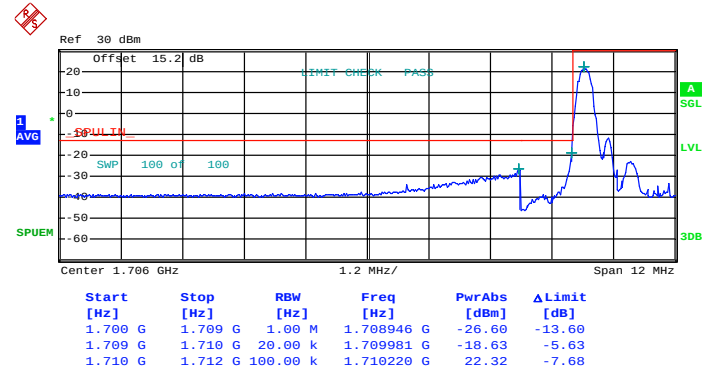
Date: 29.MAY.2014 22:10:03

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

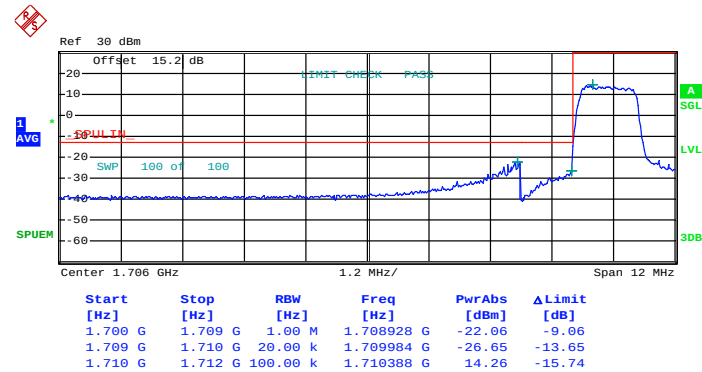


Date: 29.MAY.2014 22:20:37

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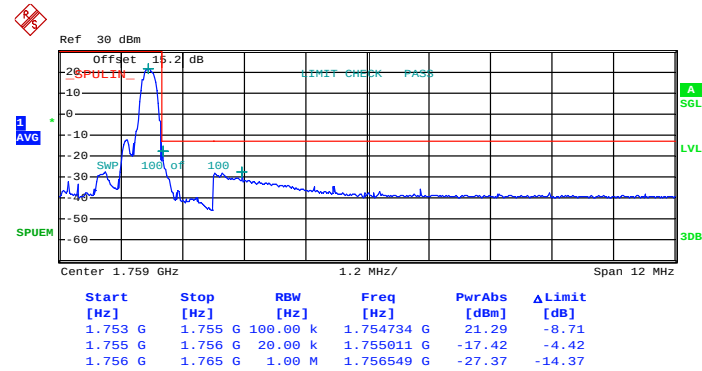
Lower Band Edge Plot for 16QAM -RB Size 1, RB Offset 0


Date: 29.MAY.2014 22:02:19

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


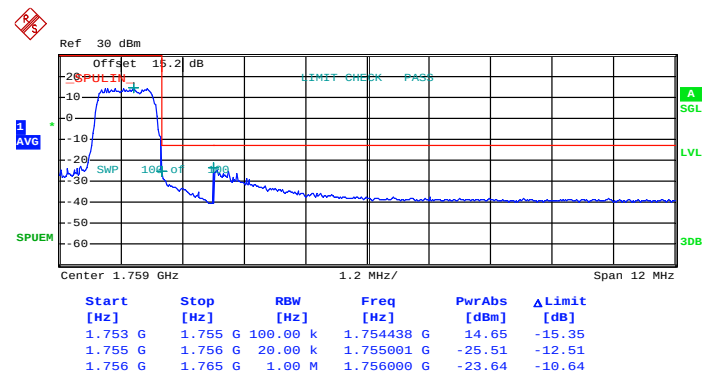
Date: 29.MAY.2014 22:00:04

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



Date: 29.MAY.2014 22:13:00

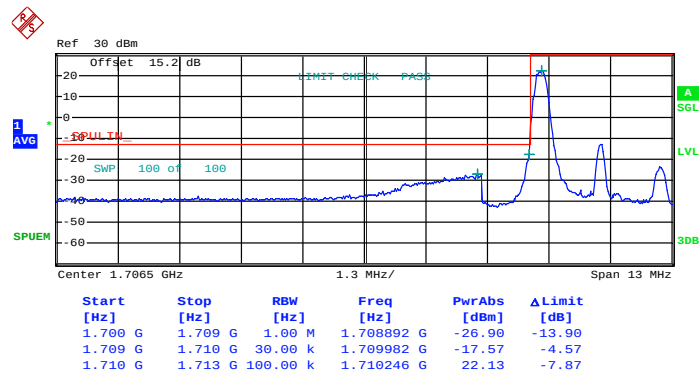
Higher Band Edge Plot for 16QAM-RB Size 6, RB Offset 0



Date: 29.MAY.2014 22:18:51

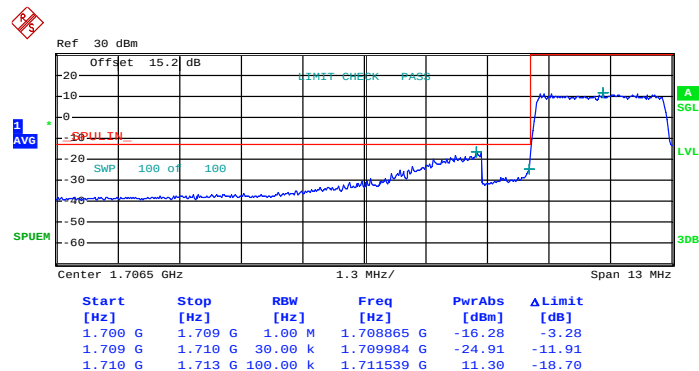
Band :	LTE Band 4	Band Width :	3MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



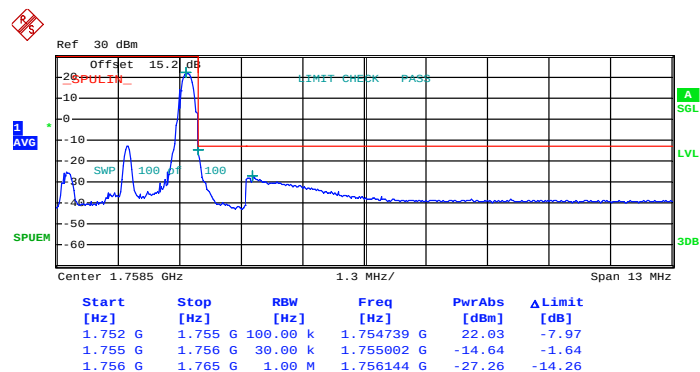
Date: 29.MAY.2014 23:13:50

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



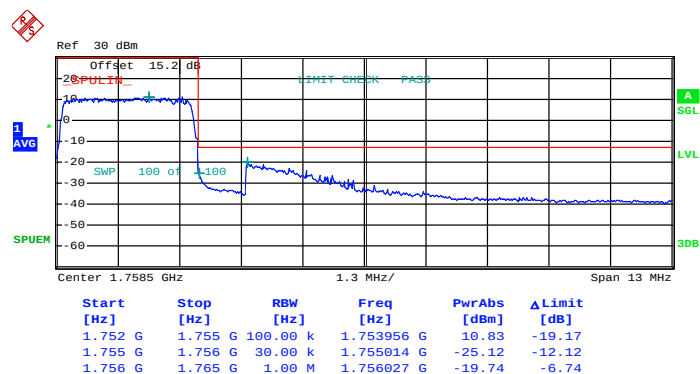
Date: 29.MAY.2014 23:12:06

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



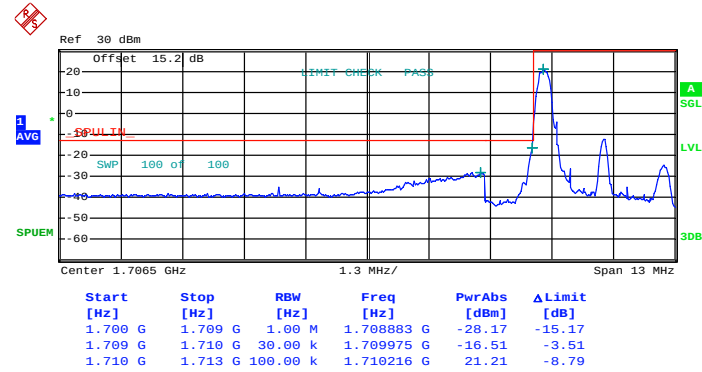
Date: 29.MAY.2014 23:18:58

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

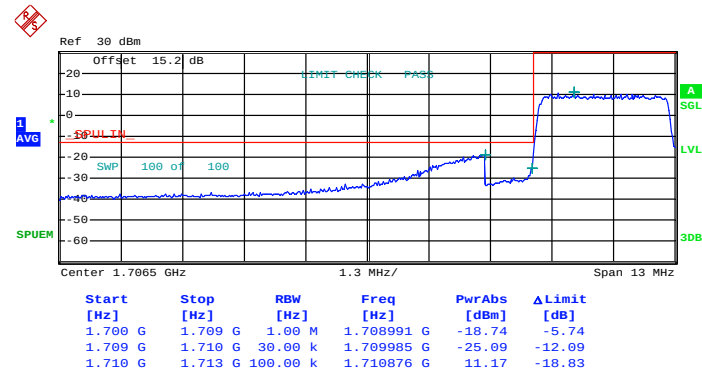


Date: 29.MAY.2014 23:20:37

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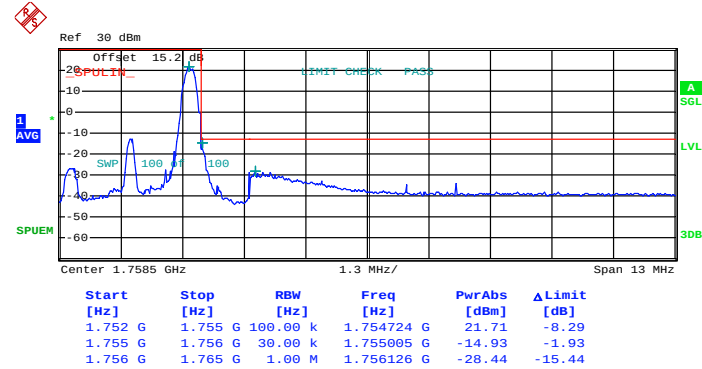
Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0


Date: 29.MAY.2014 23:15:25

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


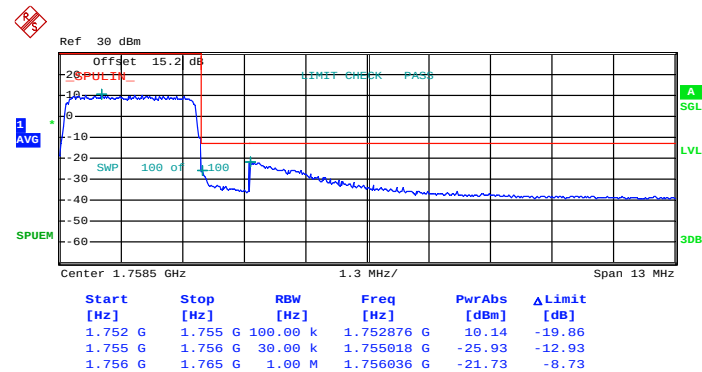
Date: 29.MAY.2014 23:10:17

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



Date: 29.MAY.2014 23:17:11

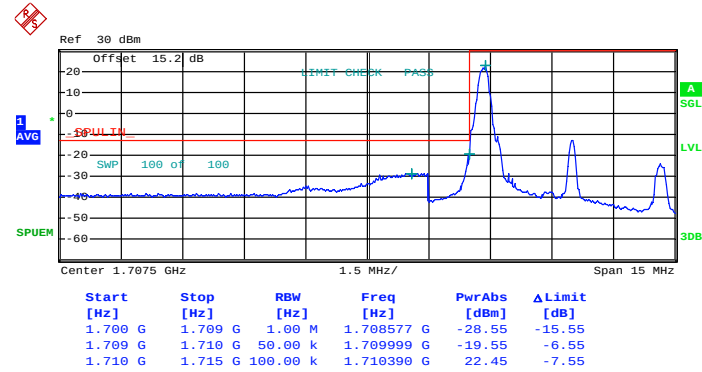
Higher Band Edge Plot for 16QAM-RB Size 15, RB Offset 0



Date: 29.MAY.2014 23:22:14

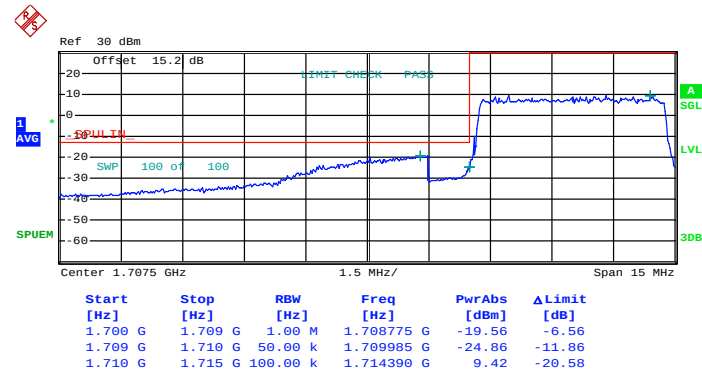
Band :	LTE Band 4	Band Width :	5MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



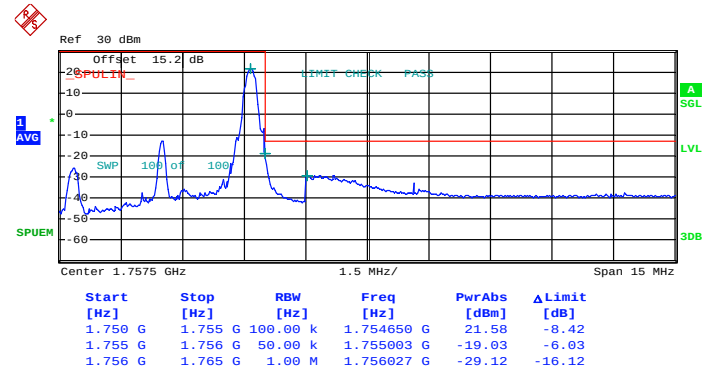
Date: 30.MAY.2014 10:30:18

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



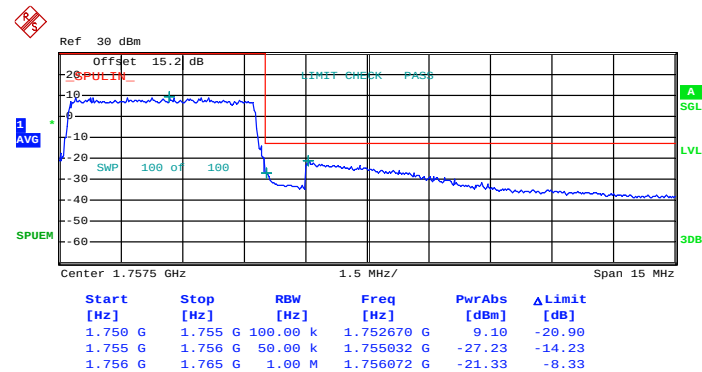
Date: 30.MAY.2014 10:19:41

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



Date: 30.MAY.2014 10:32:02

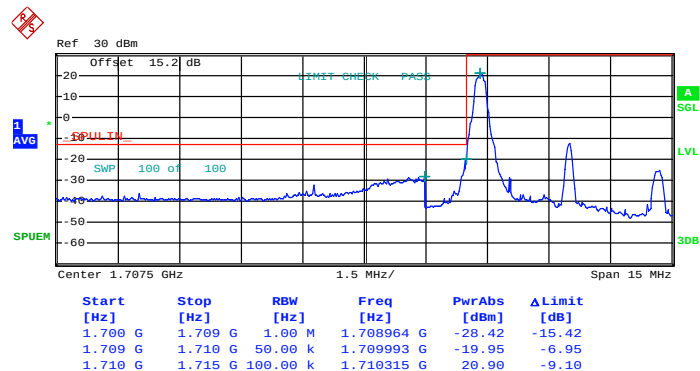
Higher Band Edge Plot for QPSK-RB Size 25, RB Offset 0



Date: 30.MAY.2014 10:38:04

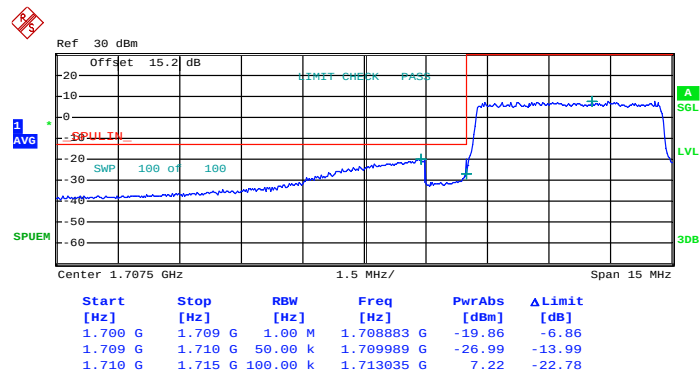
Band :	LTE Band 4	Band Width :	5MHz / 16QAM
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Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



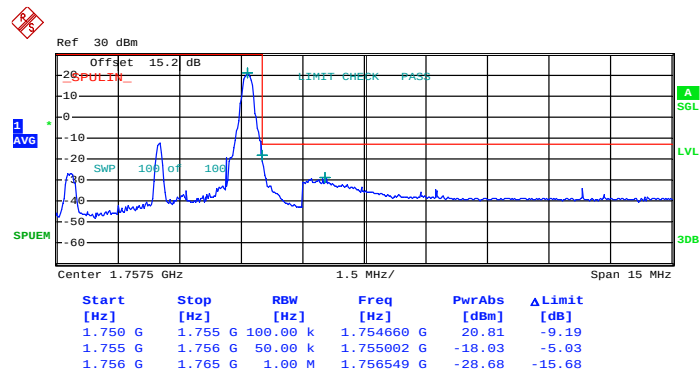
Date: 30.MAY.2014 10:26:19

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



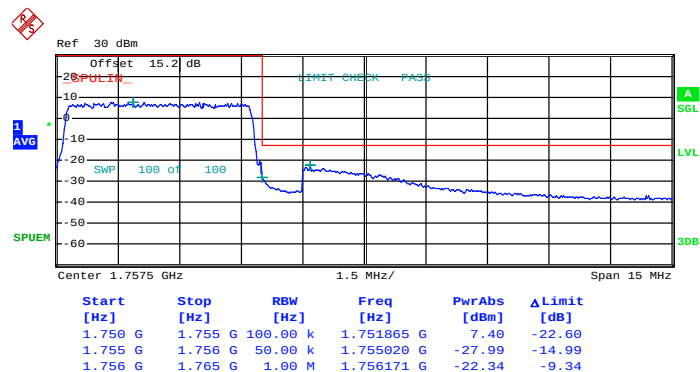
Date: 30.MAY.2014 10:21:25

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



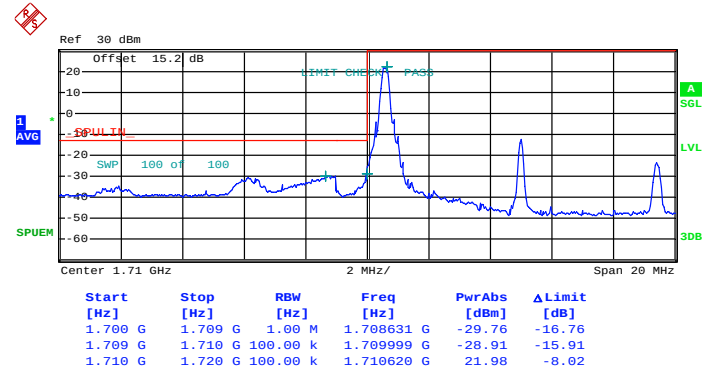
Date: 30.MAY.2014 10:33:51

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

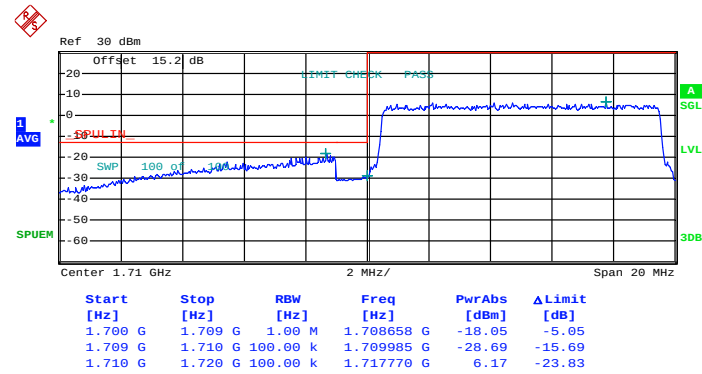


Date: 30.MAY.2014 10:35:42

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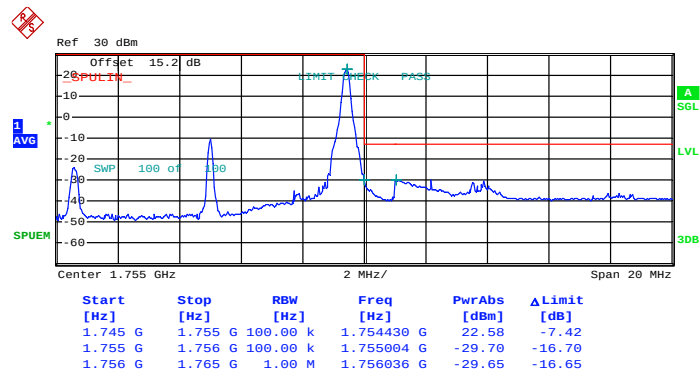
Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0


Date: 30.MAY.2014 11:33:59

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


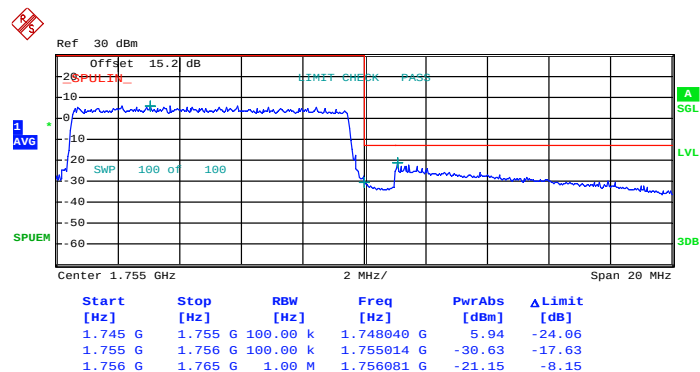
Date: 30.MAY.2014 11:28:23

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



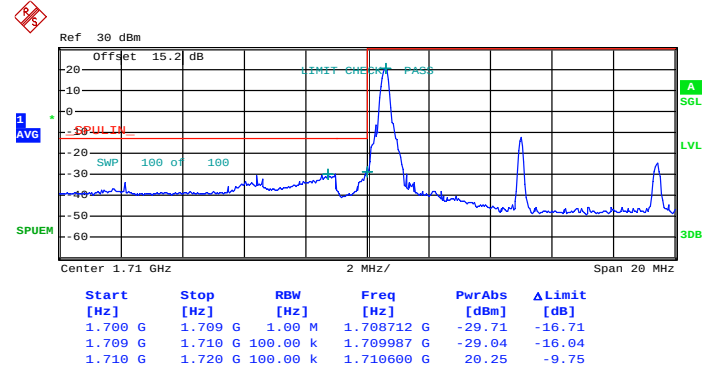
Date: 30.MAY.2014 12:02:38

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

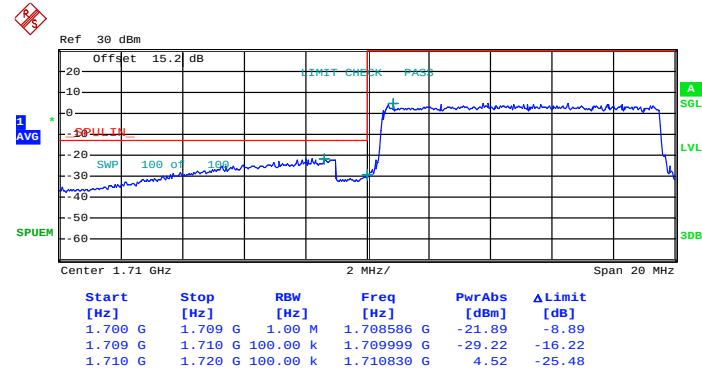


Date: 30.MAY.2014 11:38:06

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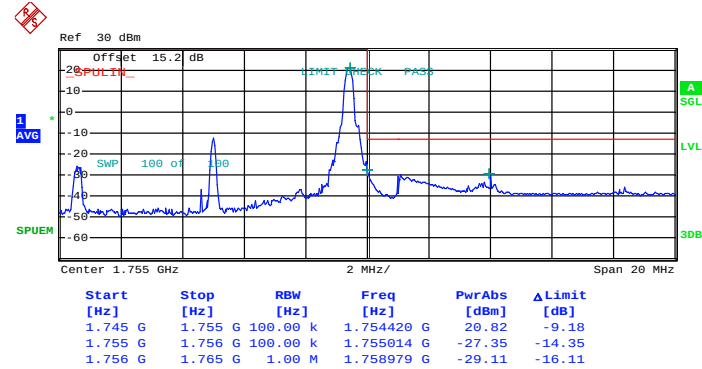
Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0


Date: 30.MAY.2014 11:32:19

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


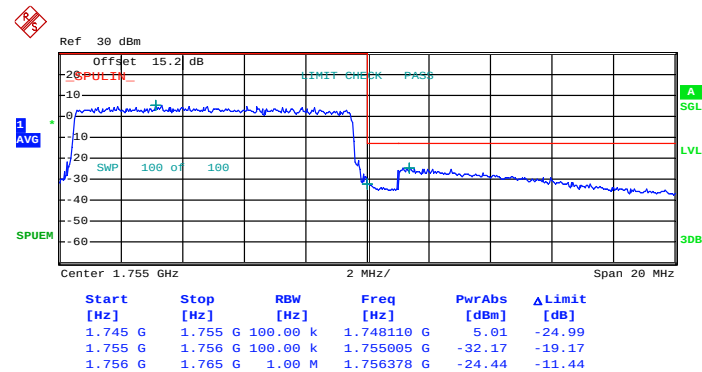
Date: 30.MAY.2014 11:30:27

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



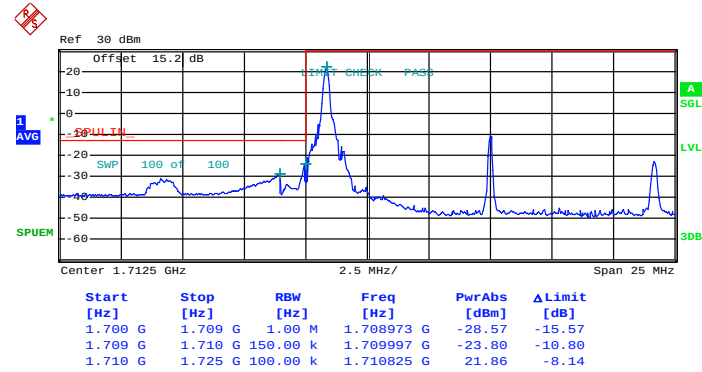
Date: 30.MAY.2014 11:59:19

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

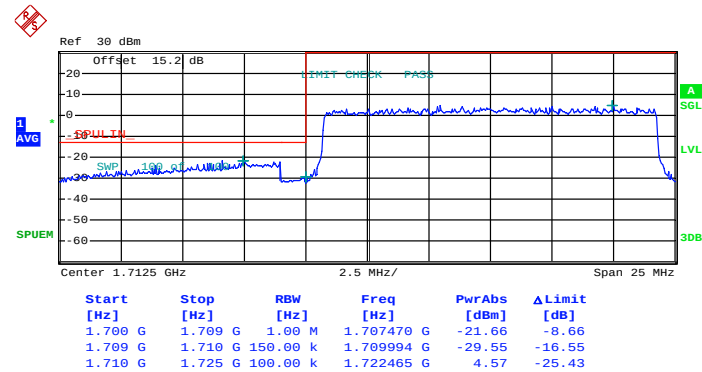


Date: 30.MAY.2014 11:39:42

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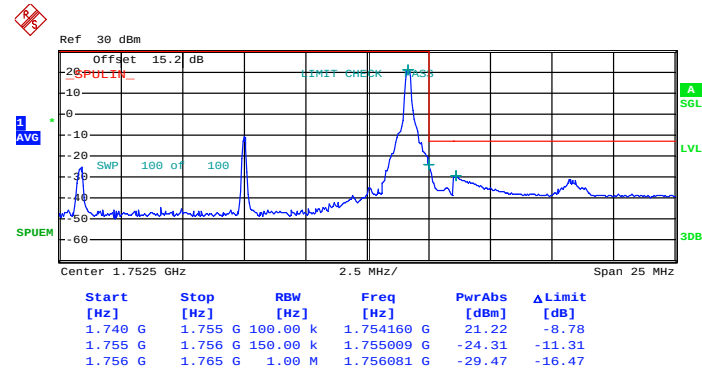
Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0


Date: 30.MAY.2014 12:54:36

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


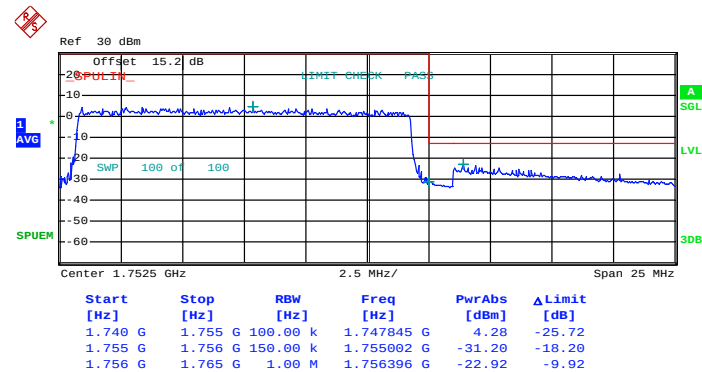
Date: 30.MAY.2014 12:49:13

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



Date: 30.MAY.2014 12:56:49

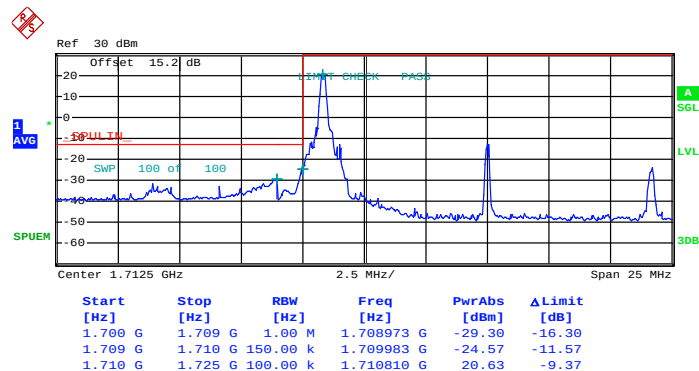
Higher Band Edge Plot for QPSK-RB Size 75, RB Offset 0



Date: 30.MAY.2014 13:03:02

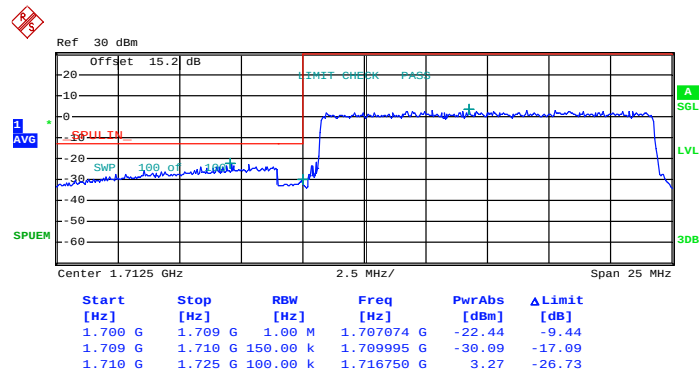
Band :	LTE Band 4	Band Width :	15MHz / 16QAM
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Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



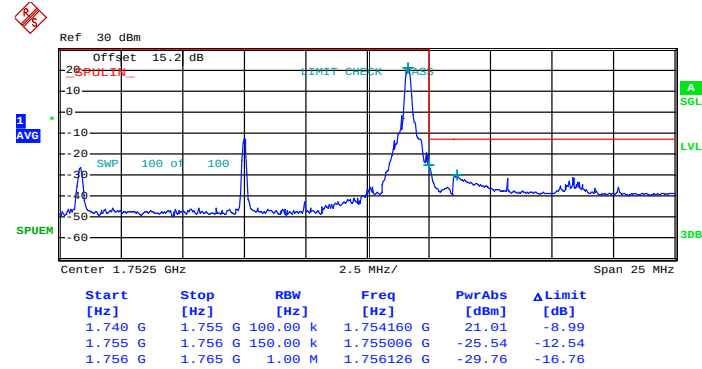
Date: 30.MAY.2014 12:52:49

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



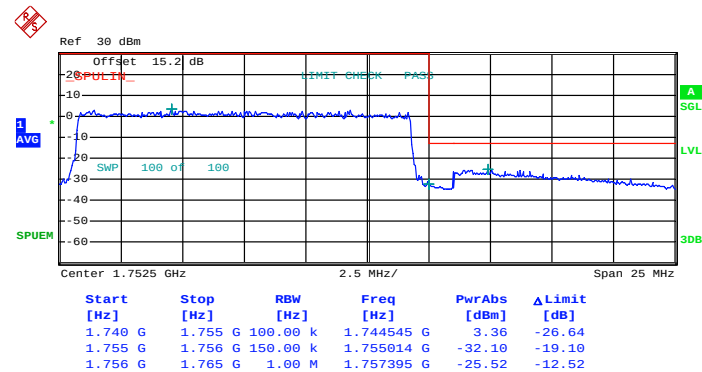
Date: 30.MAY.2014 12:51:03

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



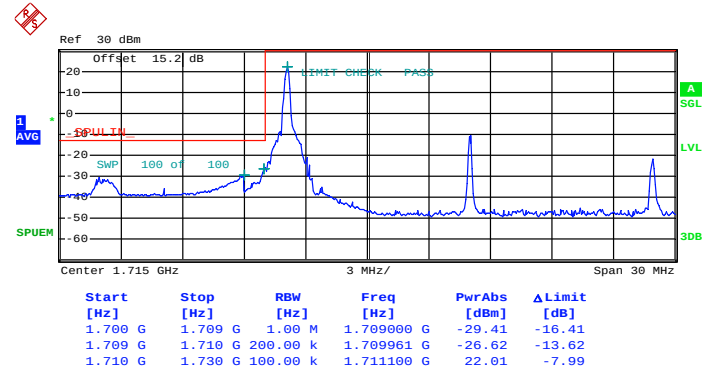
Date: 30.MAY.2014 12:58:29

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

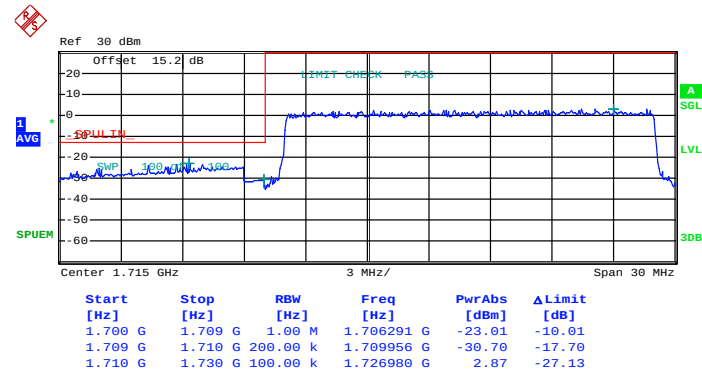


Date: 30.MAY.2014 13:01:20

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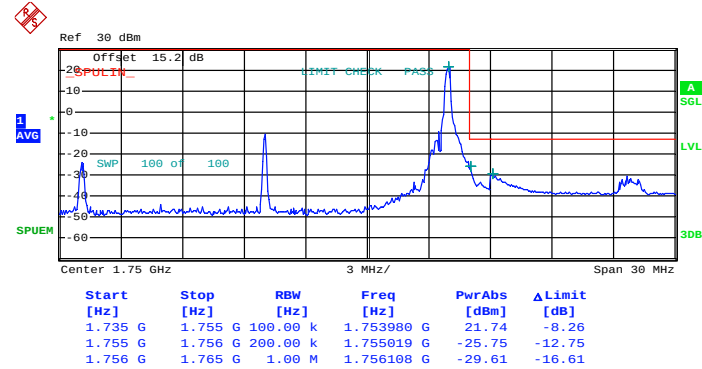
Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0


Date: 30.MAY.2014 14:42:10

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


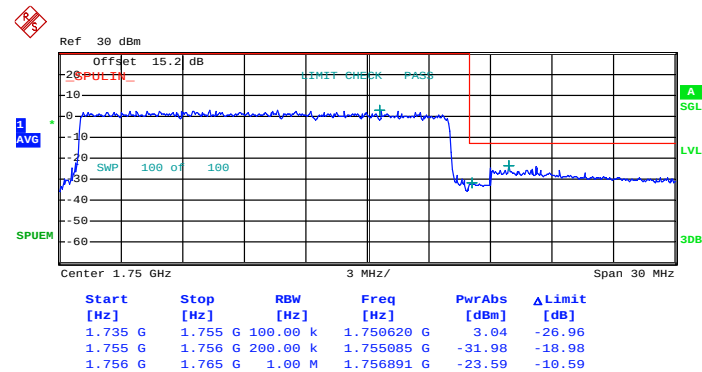
Date: 30.MAY.2014 14:39:18

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



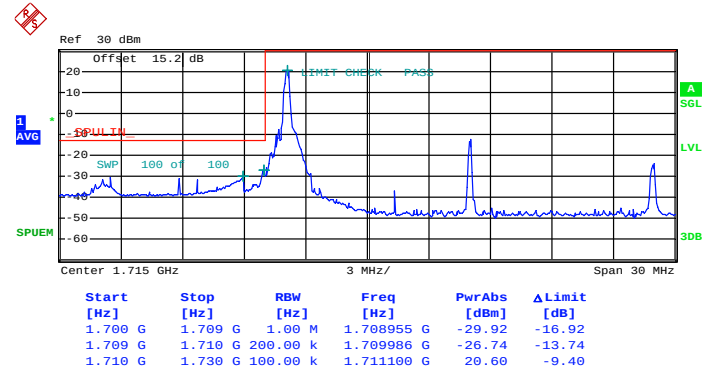
Date: 30.MAY.2014 14:51:32

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

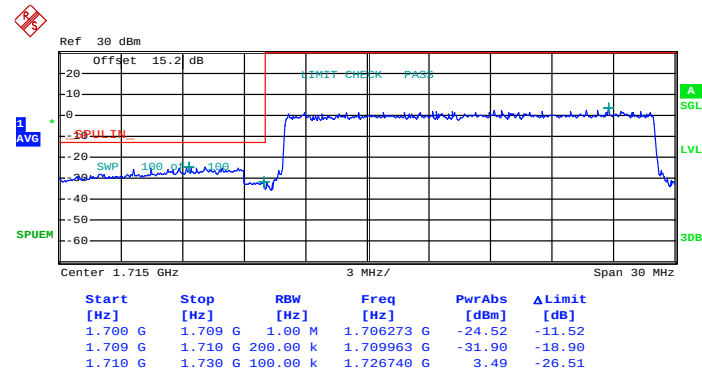


Date: 30.MAY.2014 14:56:26

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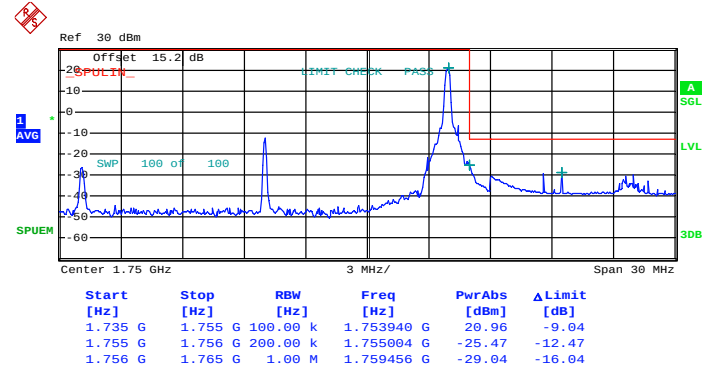
Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0


Date: 30.MAY.2014 14:46:41

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


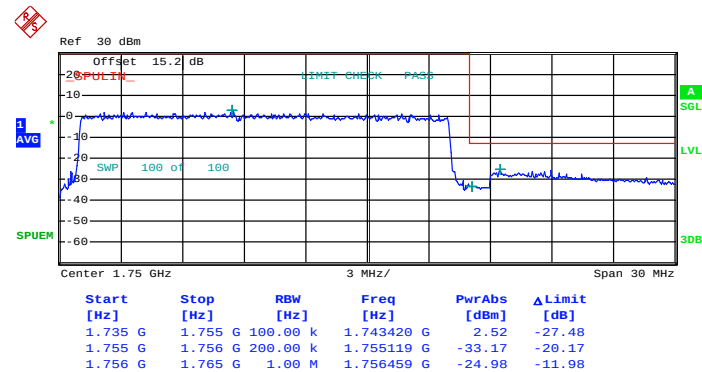
Date: 30.MAY.2014 14:37:33

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



Date: 30.MAY.2014 14:48:47

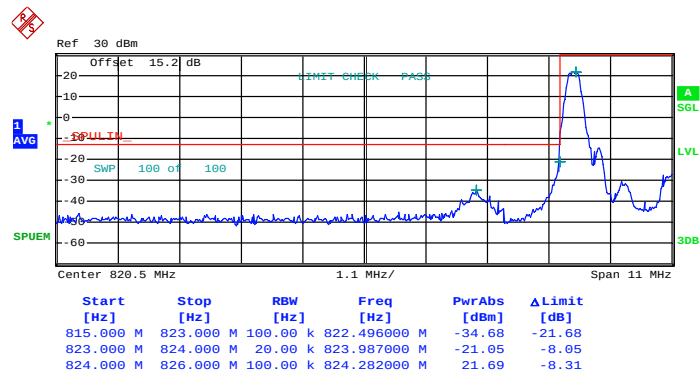
Higher Band Edge Plot for 16QAM-RB Size 100, RB Offset 0



Date: 30.MAY.2014 14:58:05

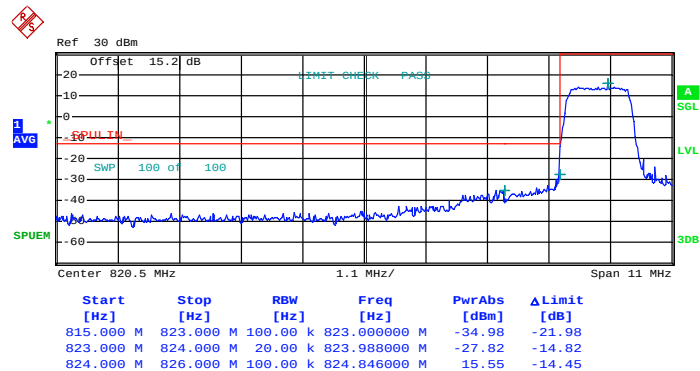
Band :	LTE Band 5	Band Width :	1.4MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



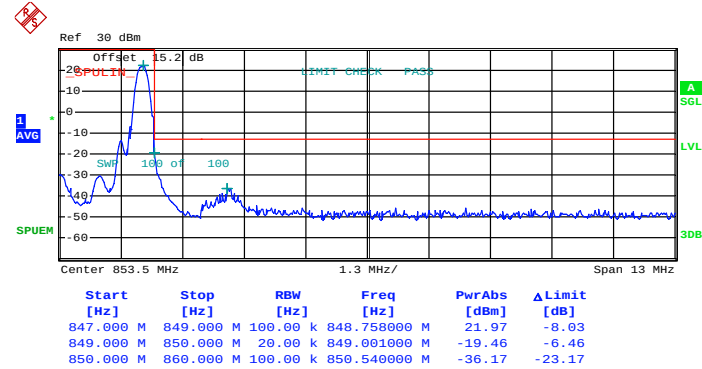
Date: 29.MAY.2014 17:15:00

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



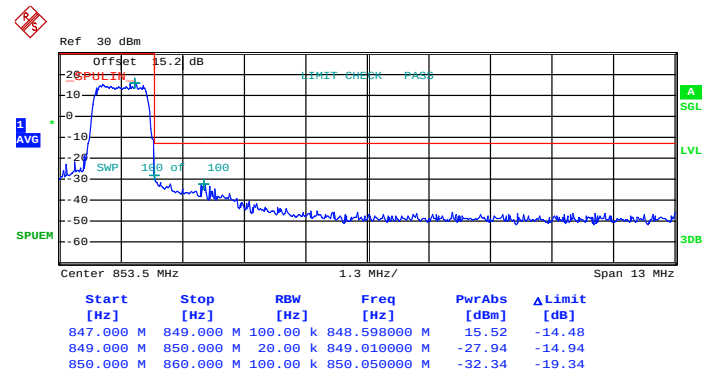
Date: 29.MAY.2014 17:09:10

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



Date: 29.MAY.2014 17:17:03

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

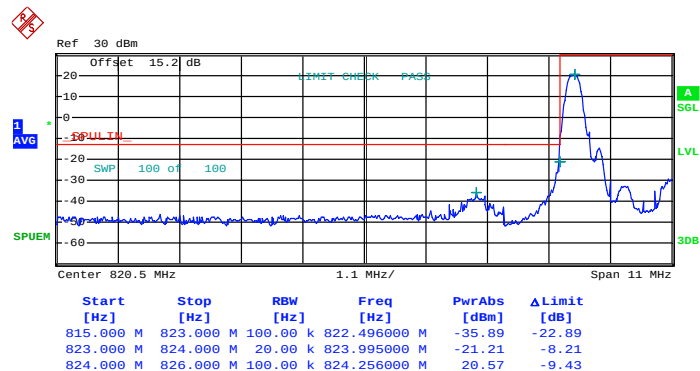


Date: 29.MAY.2014 17:35:17



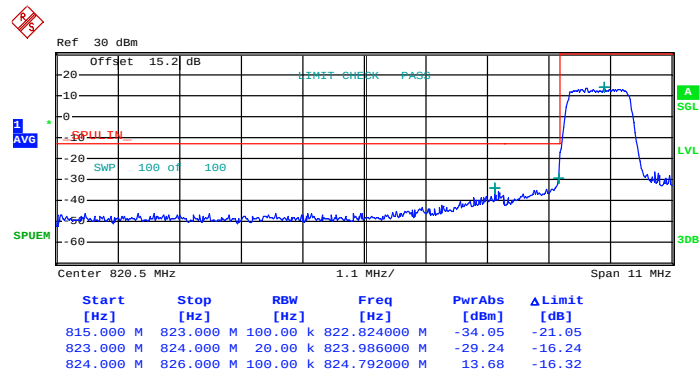
Band :	LTE Band 5	Band Width :	1.4MHz / 16QAM
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Lower Band Edge Plot for 16QAM -RB Size 1, RB Offset 0



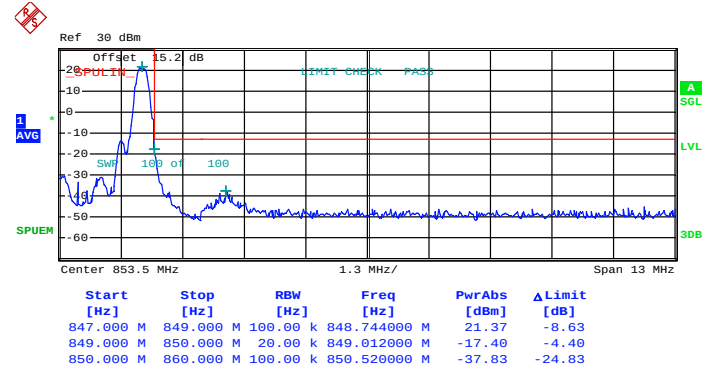
Date: 29.MAY.2014 17:13:08

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



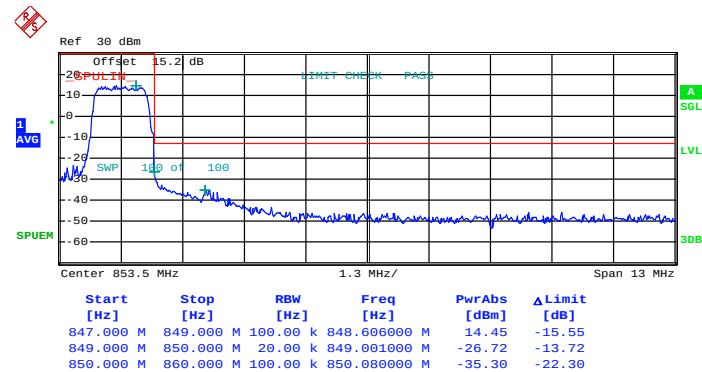
Date: 29.MAY.2014 17:11:17

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



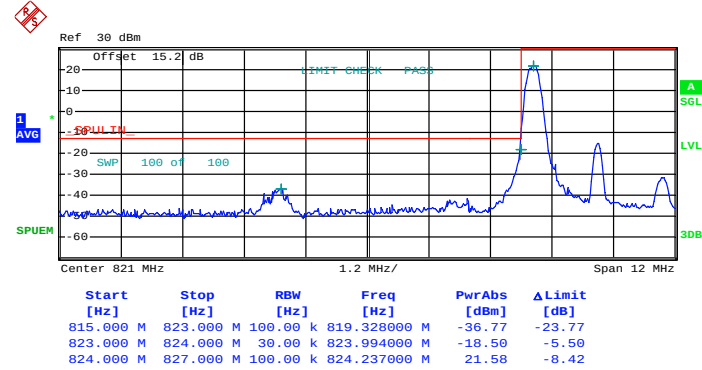
Date: 29.MAY.2014 17:28:40

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

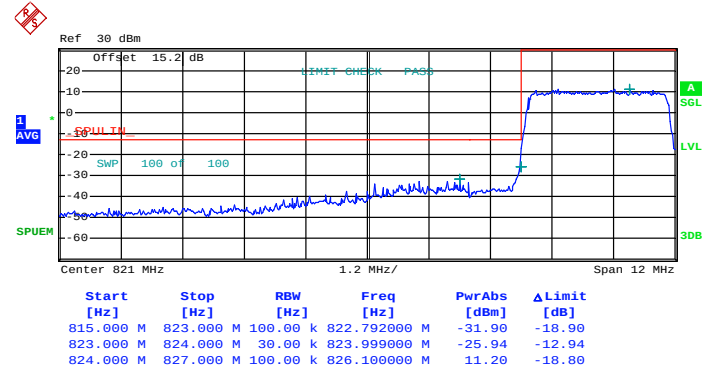


Date: 29.MAY.2014 17:33:37

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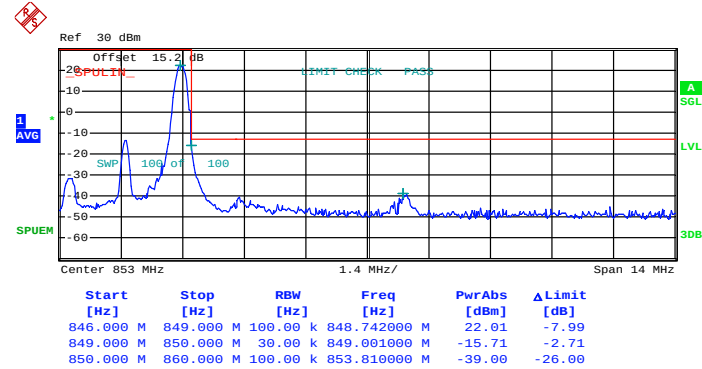
Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0


Date: 29.MAY.2014 18:24:43

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


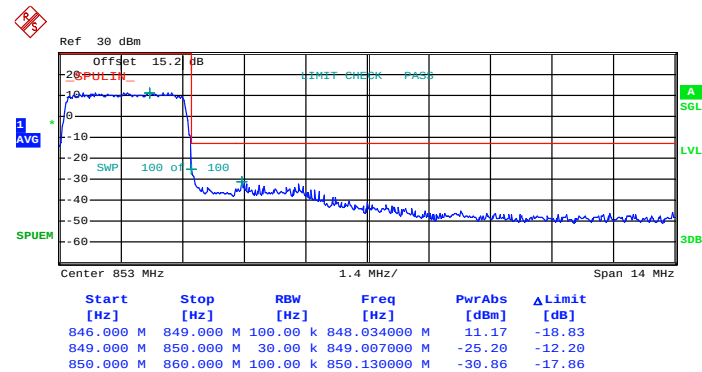
Date: 29.MAY.2014 18:22:11

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



Date: 29.MAY.2014 18:38:59

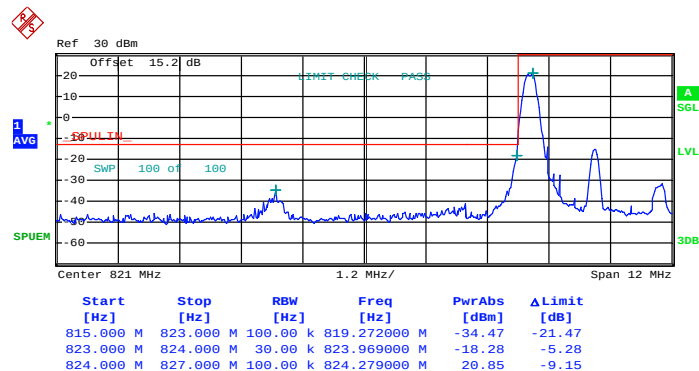
Higher Band Edge Plot for QPSK-RB Size 15, RB Offset 0



Date: 29.MAY.2014 19:13:55

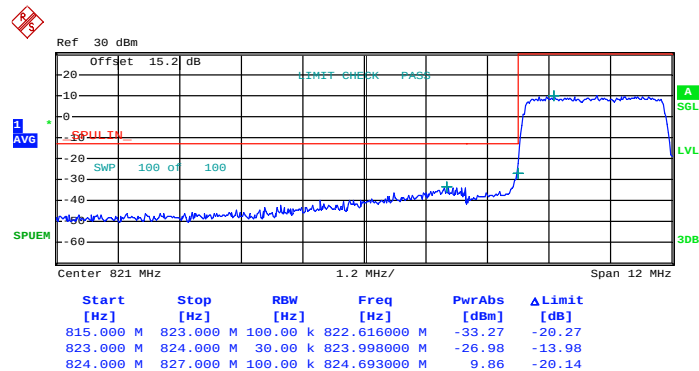
Band :	LTE Band 5	Band Width :	3MHz / 16QAM
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Lower Band Edge Plot for 16QAM -RB Size 1, RB Offset 0



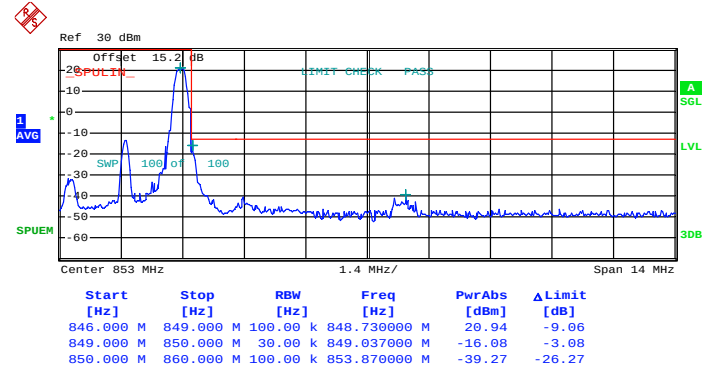
Date: 29.MAY.2014 18:31:41

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



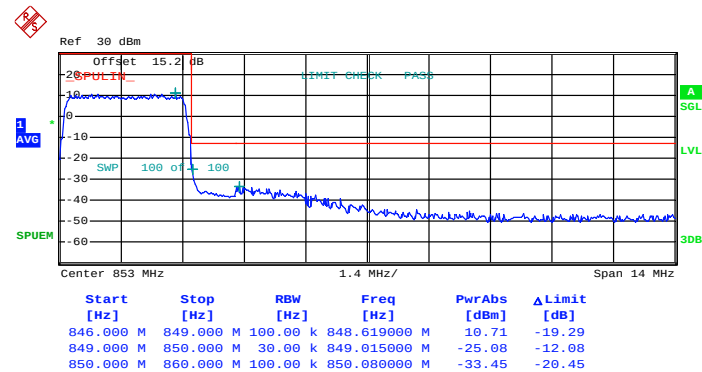
Date: 29.MAY.2014 18:20:13

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



Date: 29.MAY.2014 18:37:23

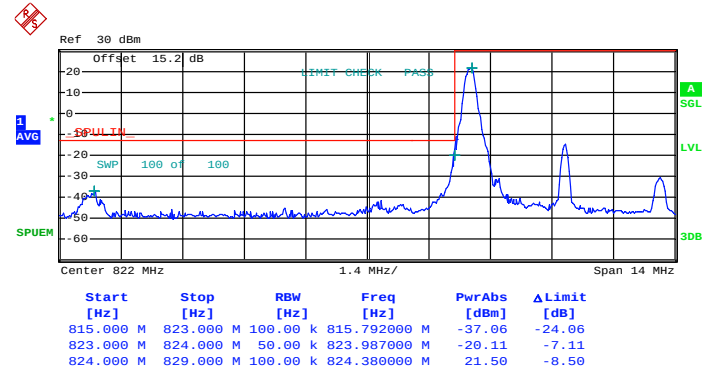
Higher Band Edge Plot for 16QAM -RB Size 15, RB Offset 0



Date: 29.MAY.2014 19:17:00

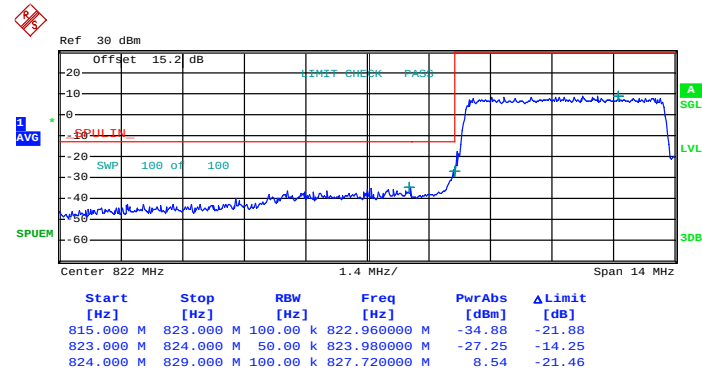
Band :	LTE Band 5	Band Width :	5MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



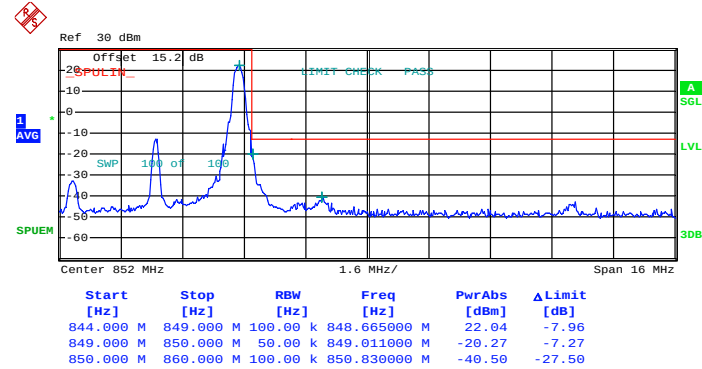
Date: 29.MAY.2014 20:03:43

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



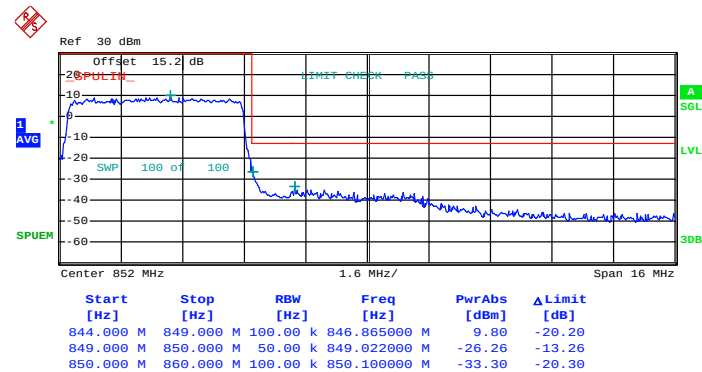
Date: 29.MAY.2014 20:02:02

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



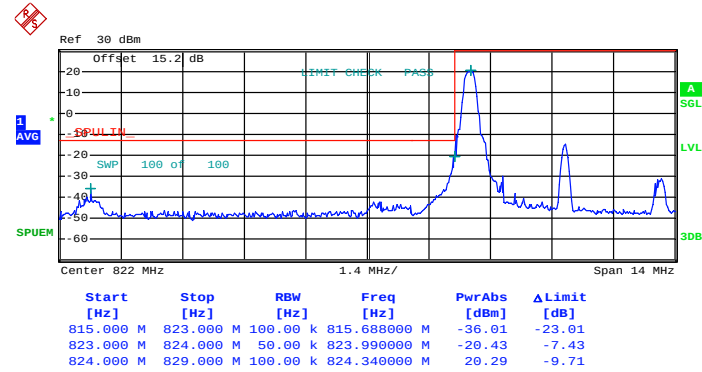
Date: 29.MAY.2014 20:11:49

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

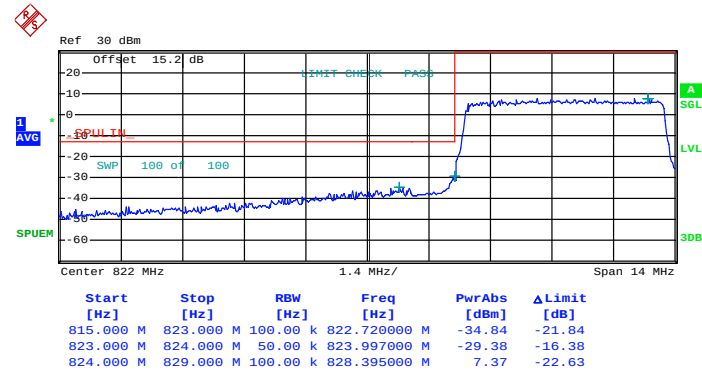


Date: 29.MAY.2014 20:14:02

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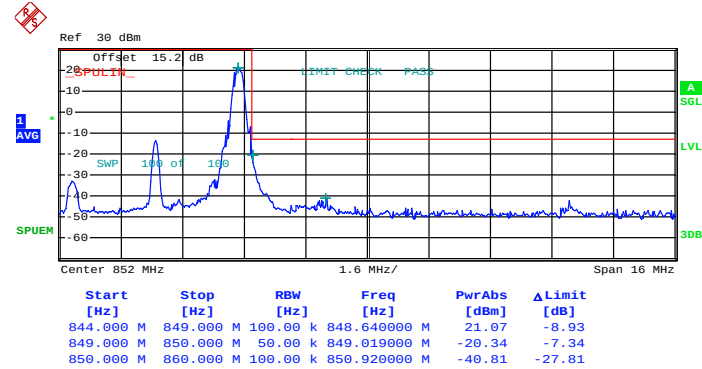
Lower Band Edge Plot for 16QAM -RB Size 1, RB Offset 0


Date: 29.MAY.2014 20:05:20

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


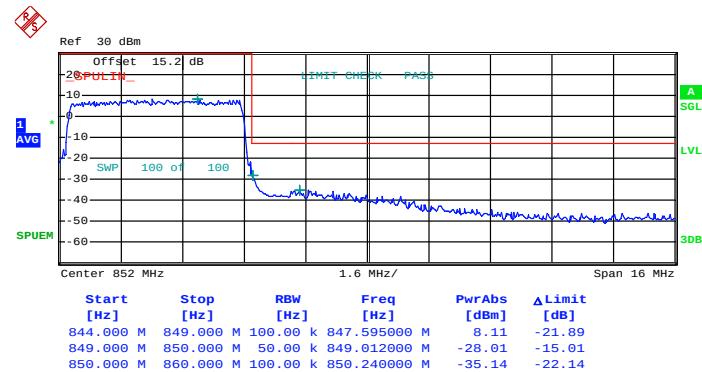
Date: 29.MAY.2014 20:00:02

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



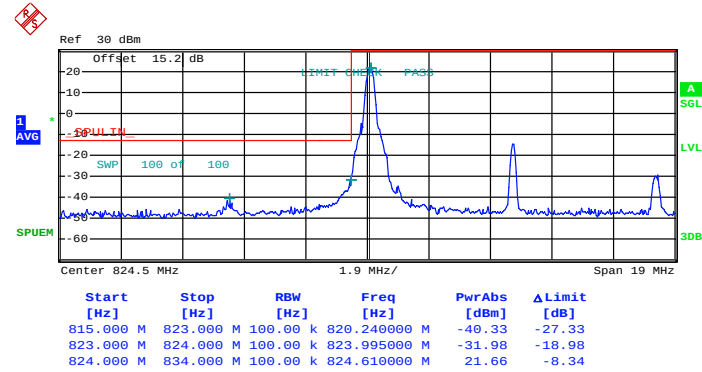
Date: 29.MAY.2014 20:09:55

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

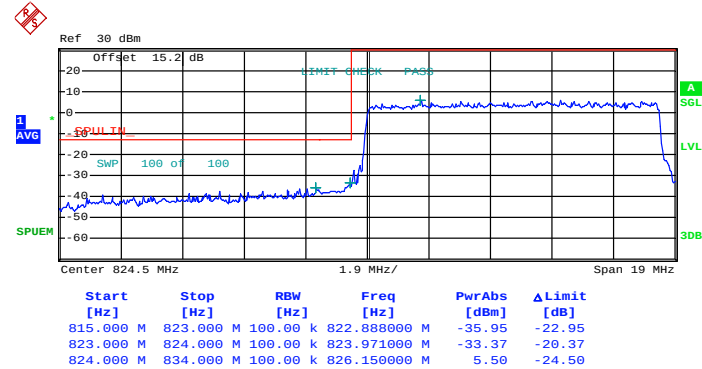


Date: 29.MAY.2014 20:15:41

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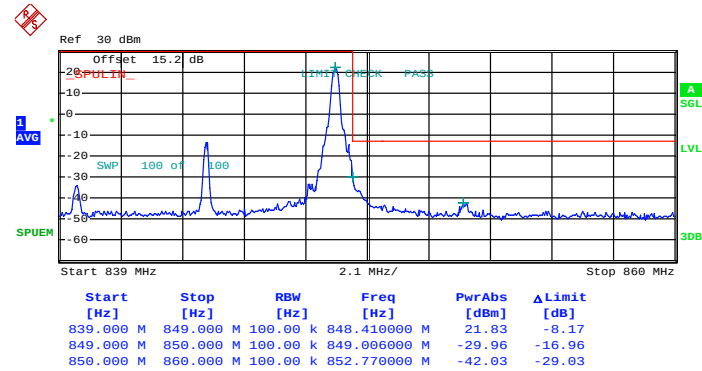
Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0


Date: 29.MAY.2014 20:51:15

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


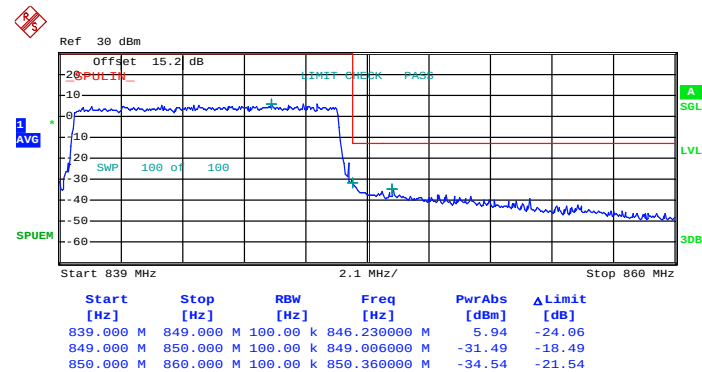
Date: 29.MAY.2014 20:45:41

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



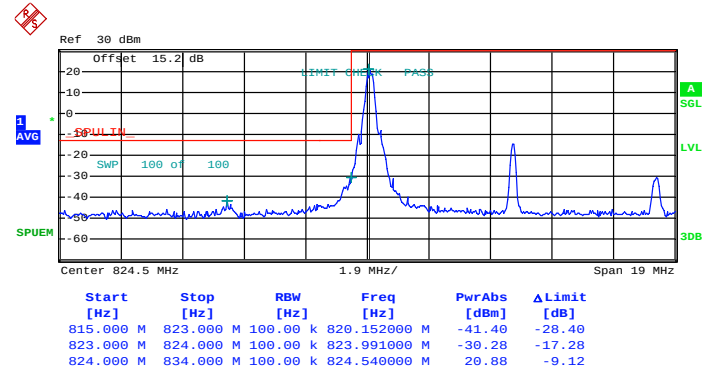
Date: 29.MAY.2014 21:00:28

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

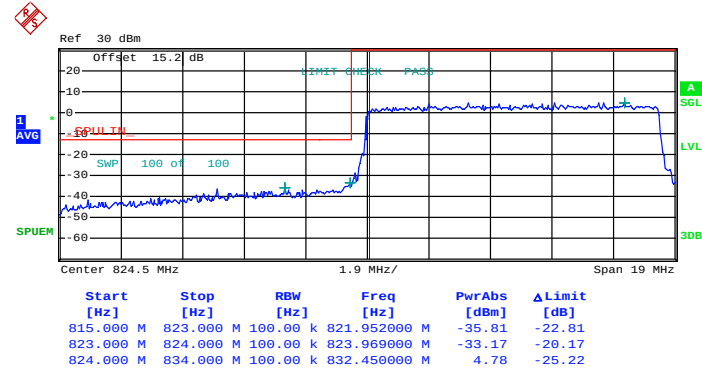


Date: 29.MAY.2014 21:02:35

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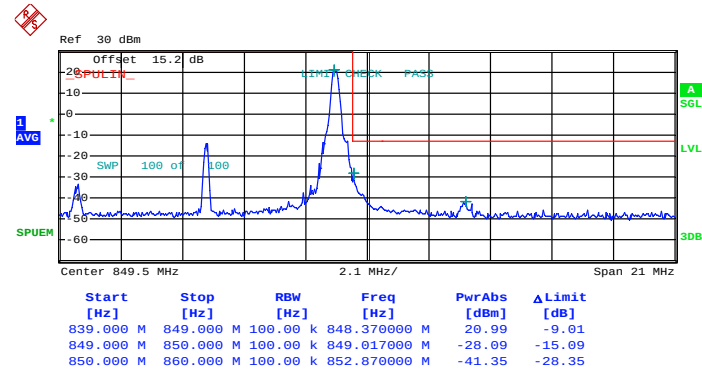
Lower Band Edge Plot for 16QAM -RB Size 1, RB Offset 0


Date: 29.MAY.2014 20:49:18

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


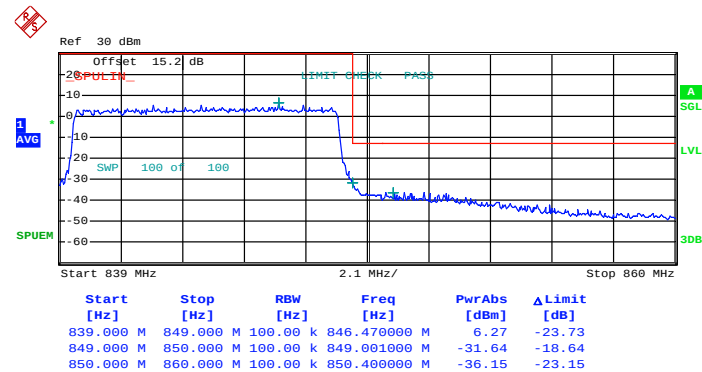
Date: 29.MAY.2014 20:47:22

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



Date: 29.MAY.2014 20:55:26

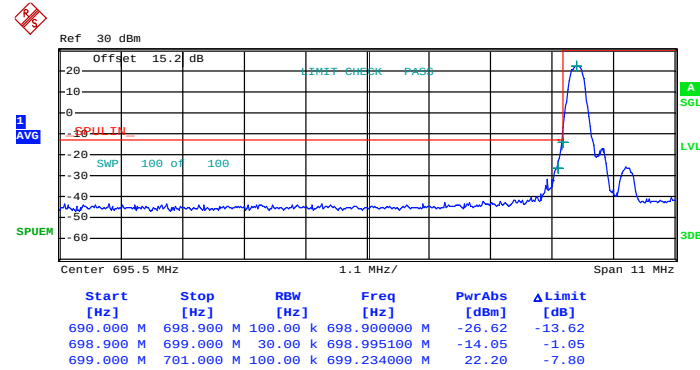
Higher Band Edge Plot for 16QAM -RB Size 50, RB Offset 0



Date: 29.MAY.2014 21:05:14

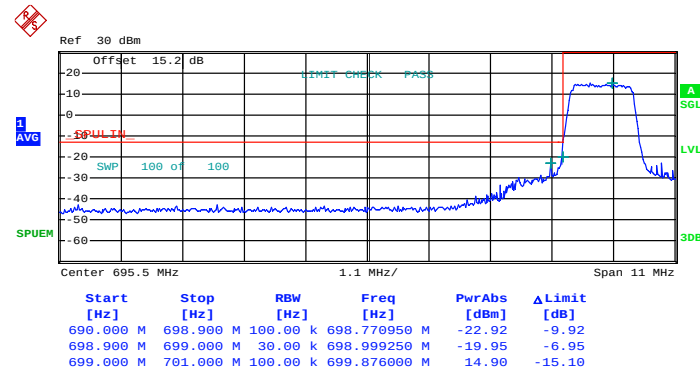
Band :	LTE Band 12	Band Width :	1.4MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



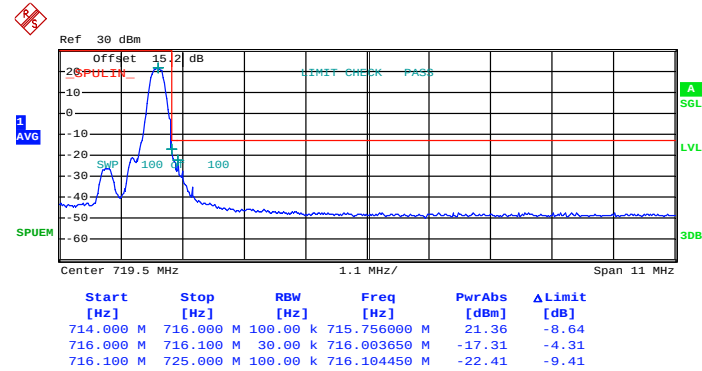
Date: 30.MAY.2014 17:26:37

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



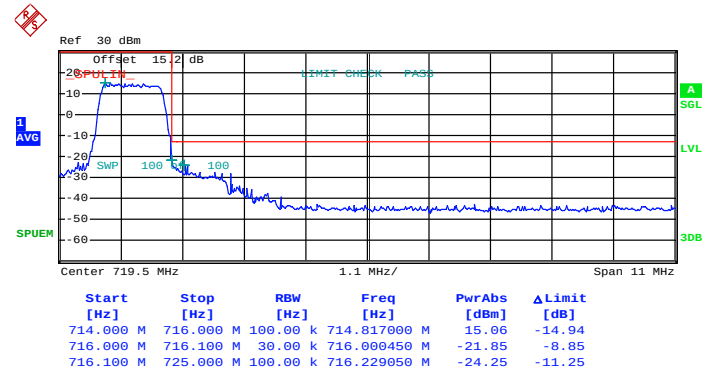
Date: 30.MAY.2014 17:33:03

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



Date: 30.MAY.2014 17:52:35

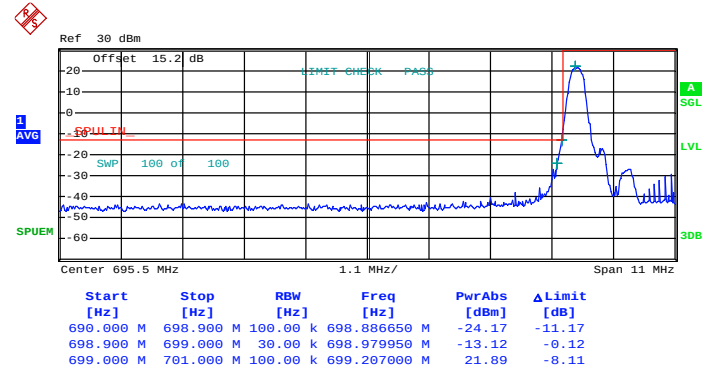
Higher Band Edge Plot for QPSK-RB Size 6, RB Offset 0



Date: 30.MAY.2014 17:41:33

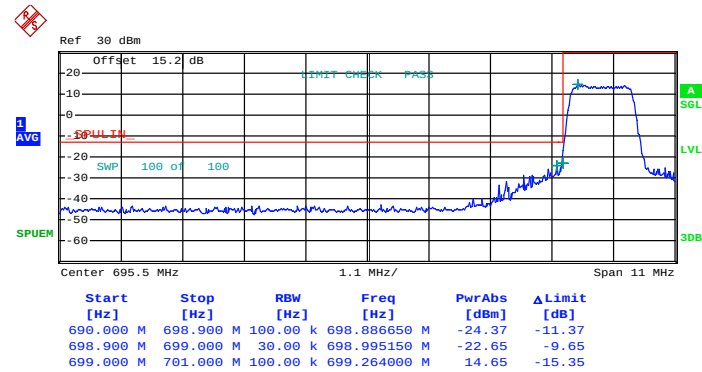
Band :	LTE Band 12	Band Width :	1.4MHz / 16QAM
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Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



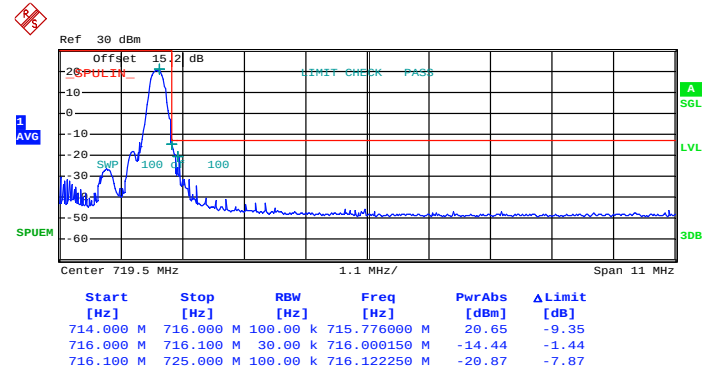
Date: 30.MAY.2014 17:28:02

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



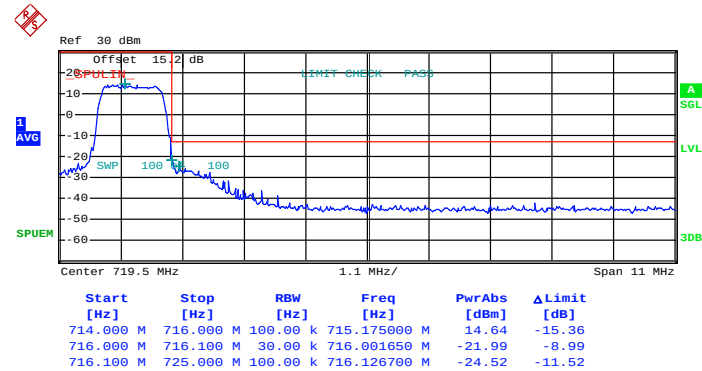
Date: 30.MAY.2014 17:31:40

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



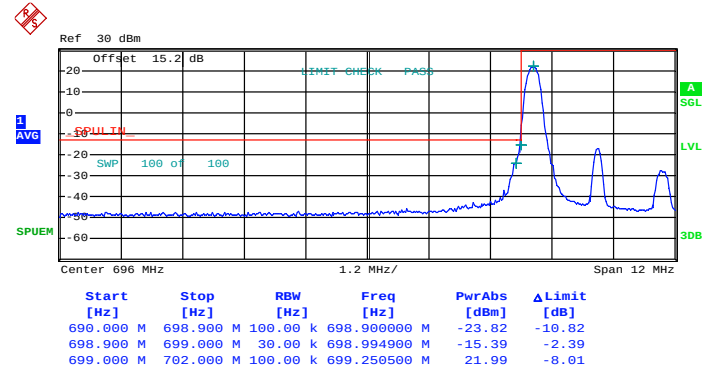
Date: 30.MAY.2014 17:48:52

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

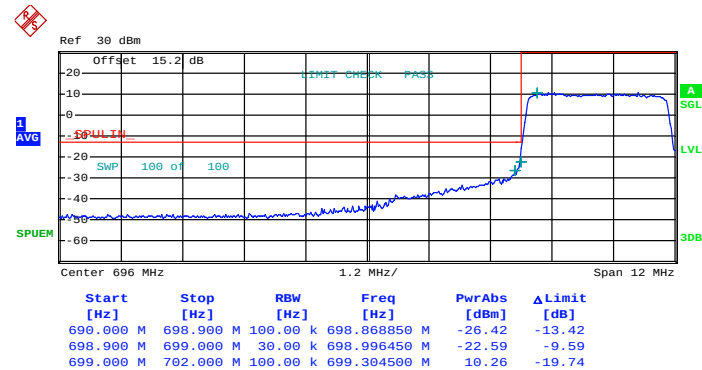


Date: 30.MAY.2014 17:43:04

Band :	LTE Band 12	Band Width :	3MHz / QPSK
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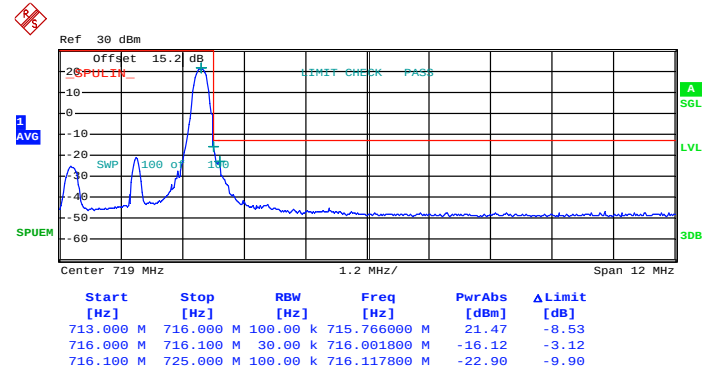
Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0


Date: 30.MAY.2014 18:09:53

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


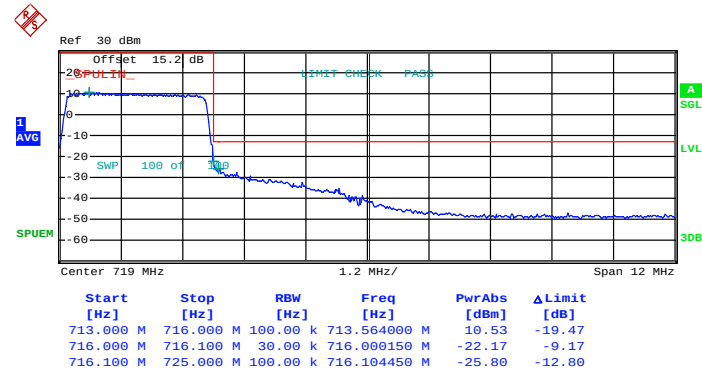
Date: 30.MAY.2014 17:58:27

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



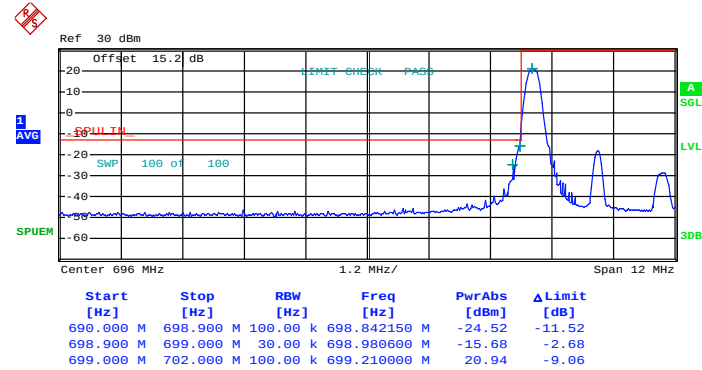
Date: 30.MAY.2014 18:14:11

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

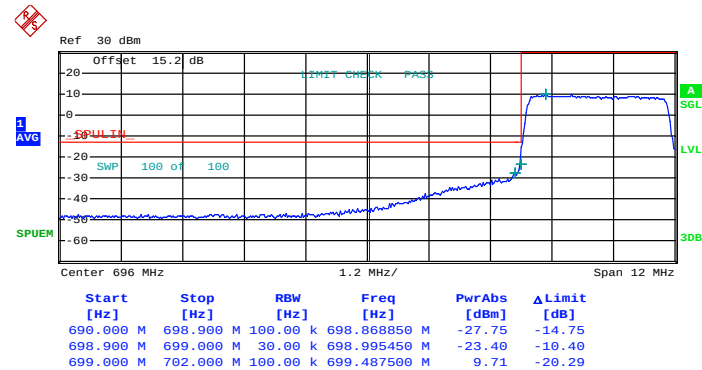


Date: 30.MAY.2014 18:23:27

Band :	LTE Band 12	Band Width :	3MHz /16QAM
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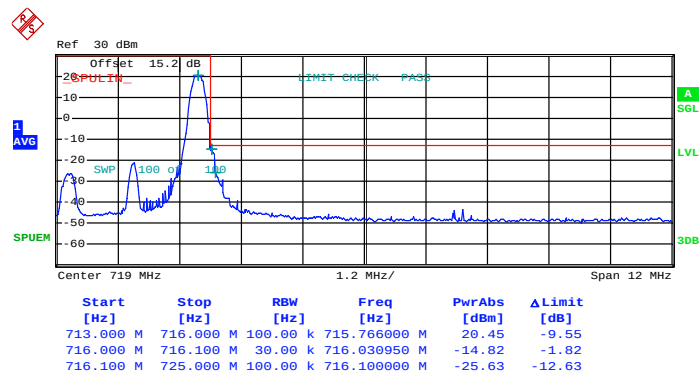
Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0


Date: 30.MAY.2014 18:06:56

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


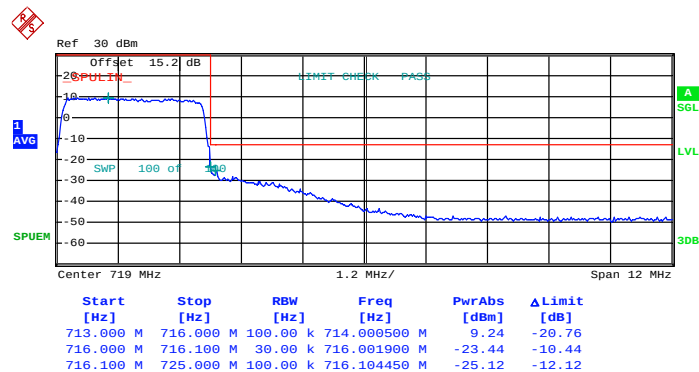
Date: 30.MAY.2014 18:01:28

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



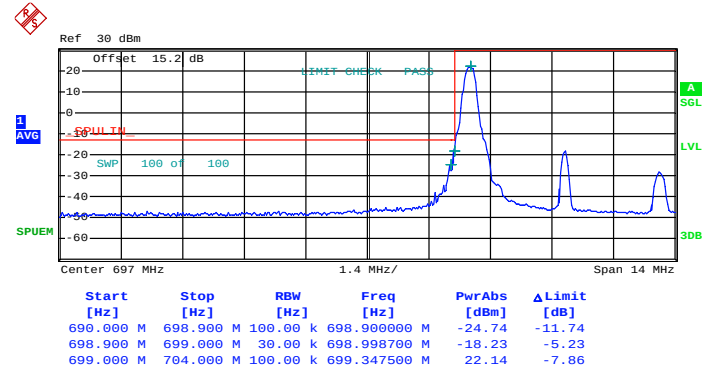
Date: 30.MAY.2014 18:17:26

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

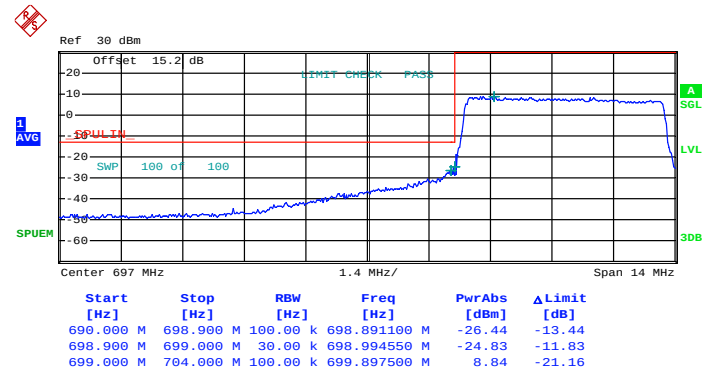


Date: 30.MAY.2014 18:20:33

Band :	LTE Band 12	Band Width :	5MHz / QPSK
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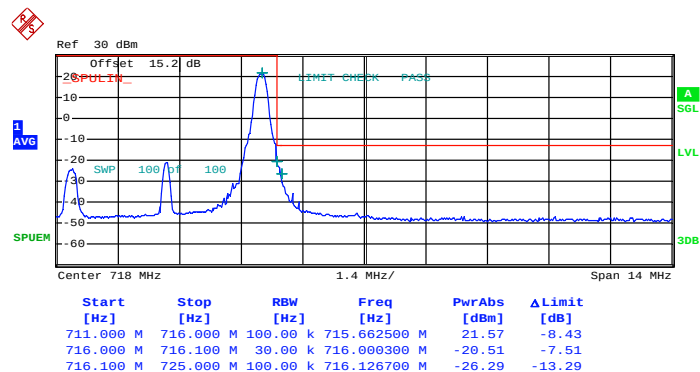
Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0


Date: 30.MAY.2014 19:17:00

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


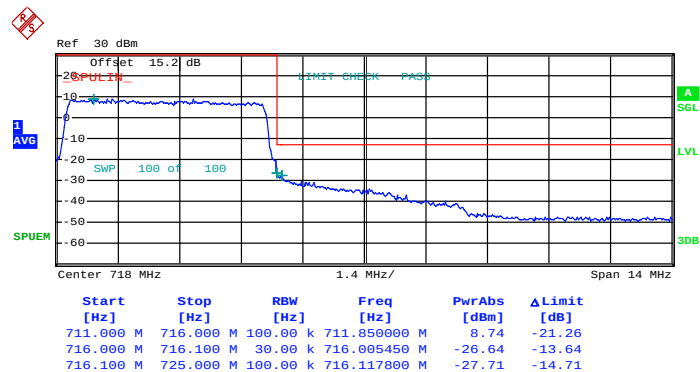
Date: 30.MAY.2014 19:25:54

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



Date: 30.MAY.2014 18:39:41

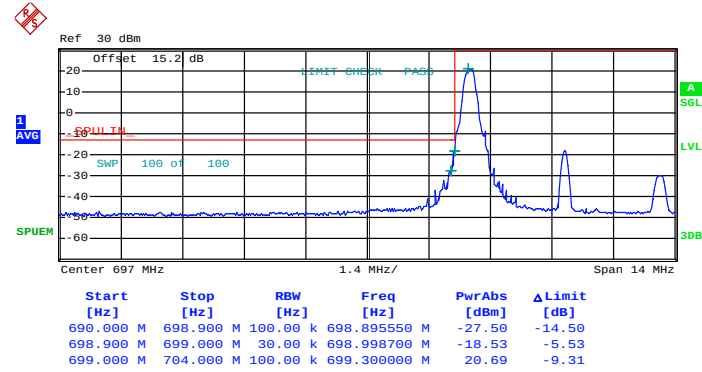
Higher Band Edge Plot for QPSK-RB Size 25, RB Offset 0



Date: 30.MAY.2014 18:30:43

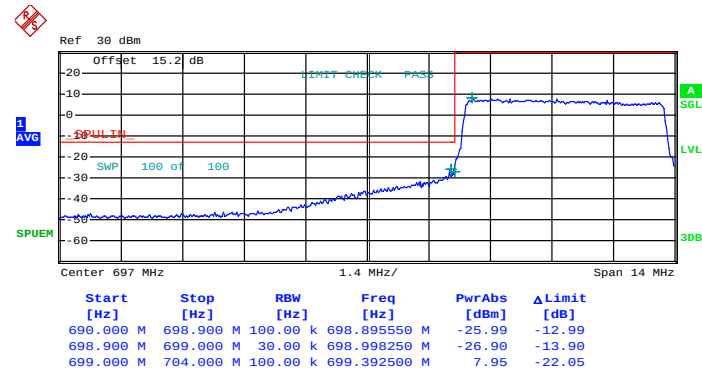
Band :	LTE Band 12	Band Width :	5MHz /16QAM
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Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



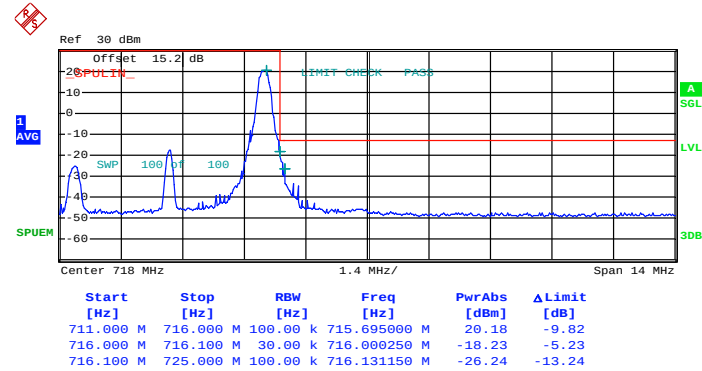
Date: 30.MAY.2014 19:19:54

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



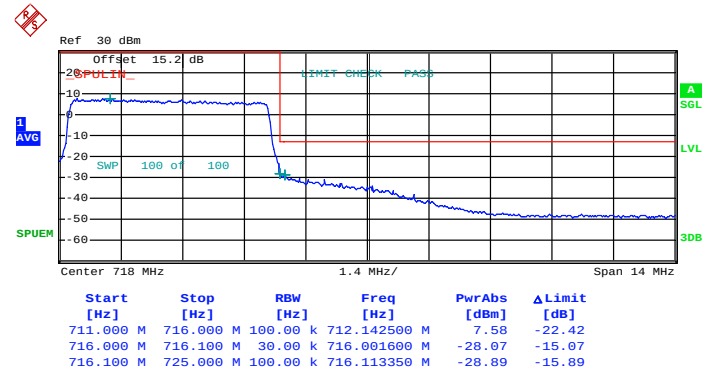
Date: 30.MAY.2014 19:22:58

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



Date: 30.MAY.2014 18:36:47

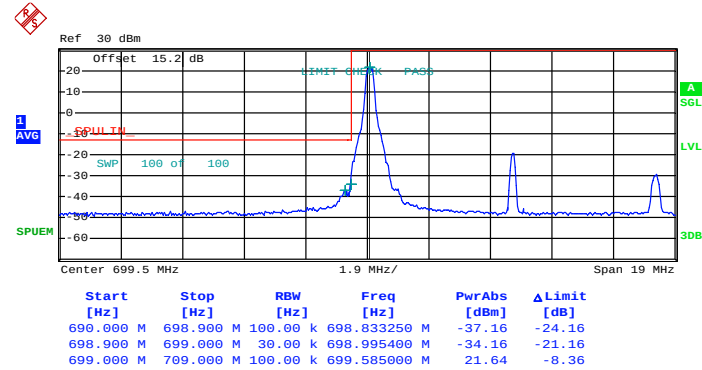
Higher Band Edge Plot for 16QAM-RB Size 25, RB Offset 0



Date: 30.MAY.2014 18:33:47

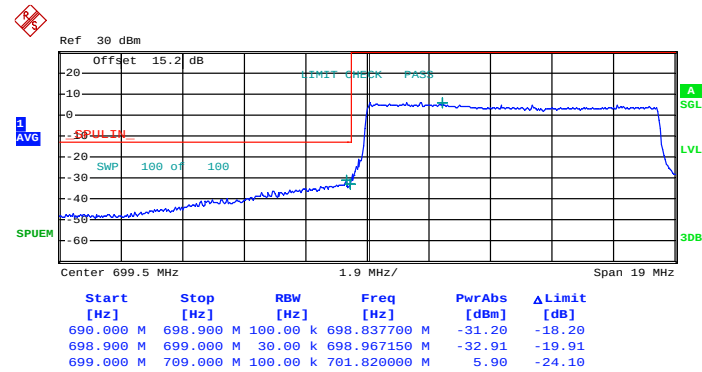
Band :	LTE Band 12	Band Width :	10MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



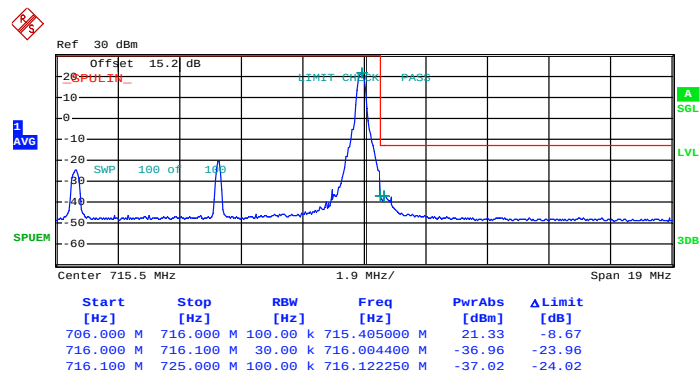
Date: 30.MAY.2014 19:40:30

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



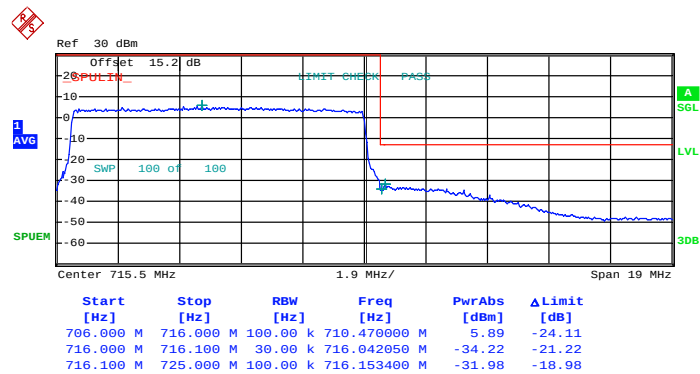
Date: 30.MAY.2014 19:30:39

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



Date: 30.MAY.2014 19:49:18

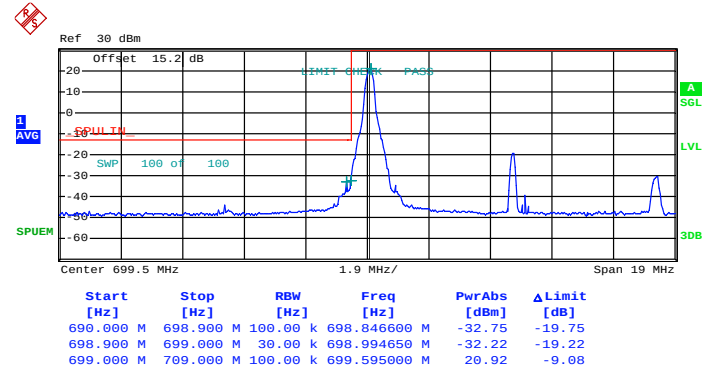
Higher Band Edge Plot for QPSK-RB Size 50, RB Offset 0



Date: 30.MAY.2014 19:58:48

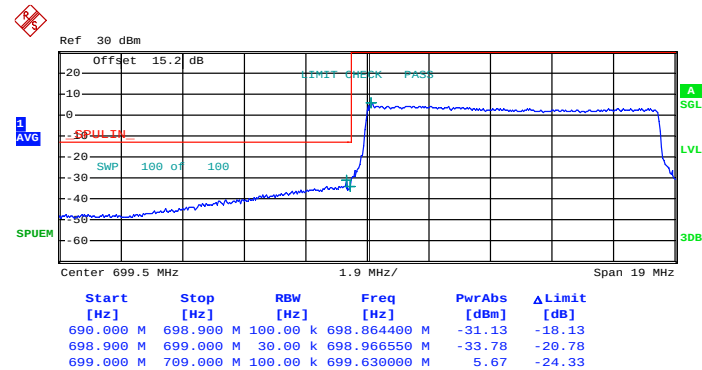
Band :	LTE Band 12	Band Width :	10MHz /16QAM
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Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



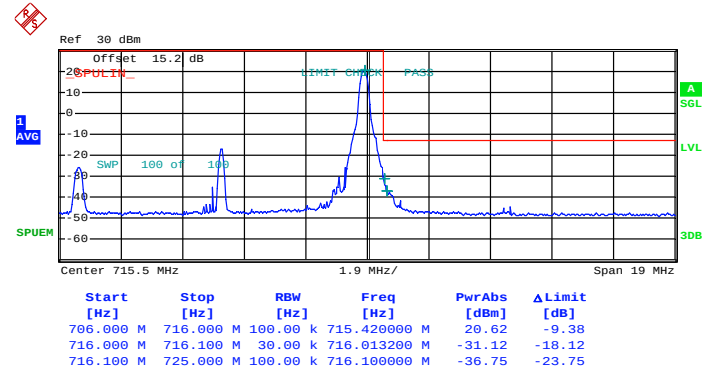
Date: 30.MAY.2014 19:36:38

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



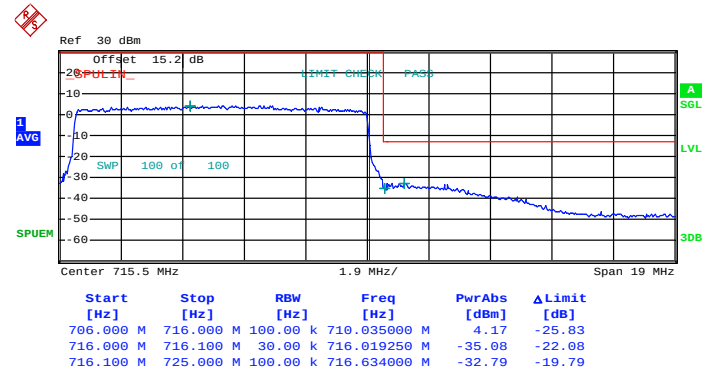
Date: 30.MAY.2014 19:33:34

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



Date: 30.MAY.2014 19:52:14

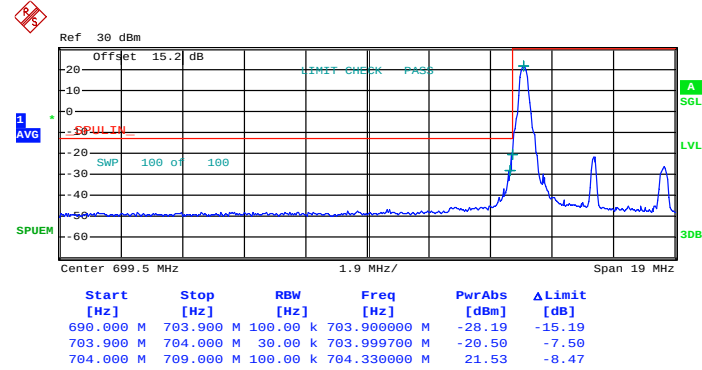
Higher Band Edge Plot for 16QAM-RB Size 50, RB Offset 0



Date: 30.MAY.2014 19:55:27

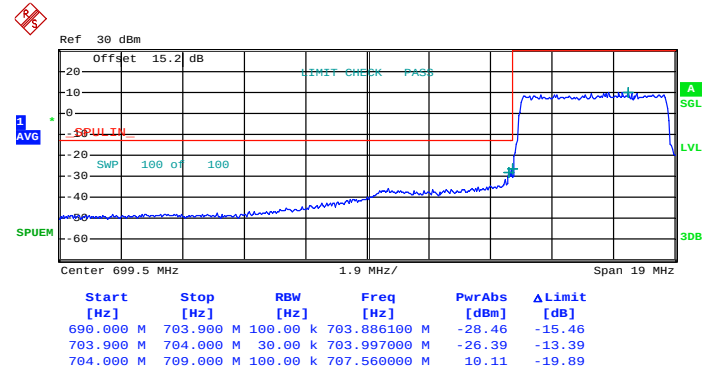
Band :	LTE Band 17	Band Width :	5MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



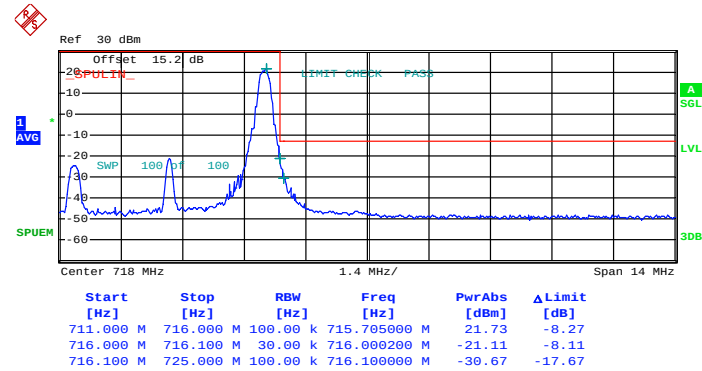
Date: 29.MAY.2014 14:51:42

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



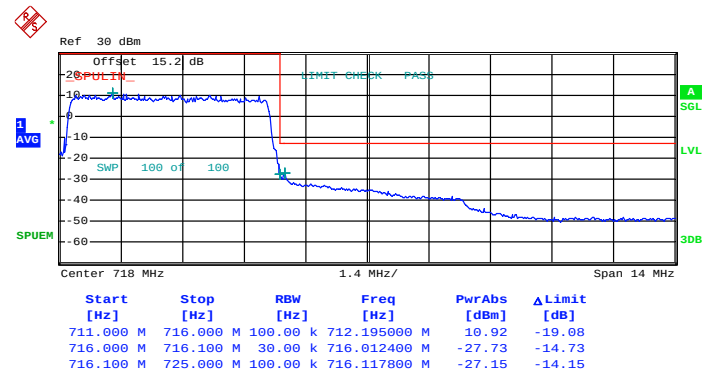
Date: 29.MAY.2014 14:44:01

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



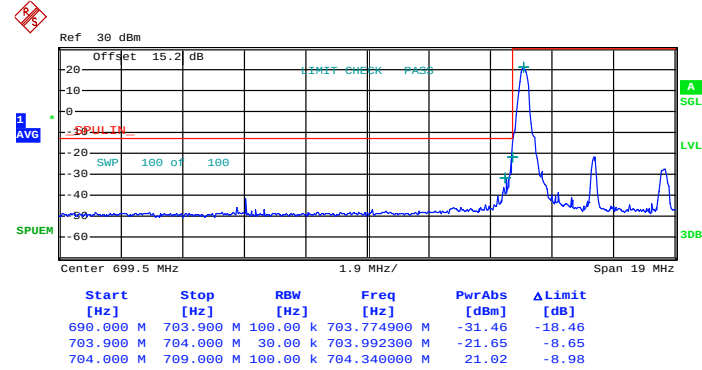
Date: 29.MAY.2014 14:54:28

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

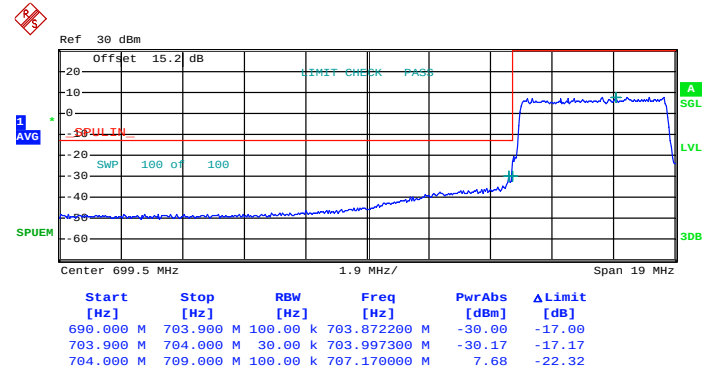


Date: 29.MAY.2014 15:02:11

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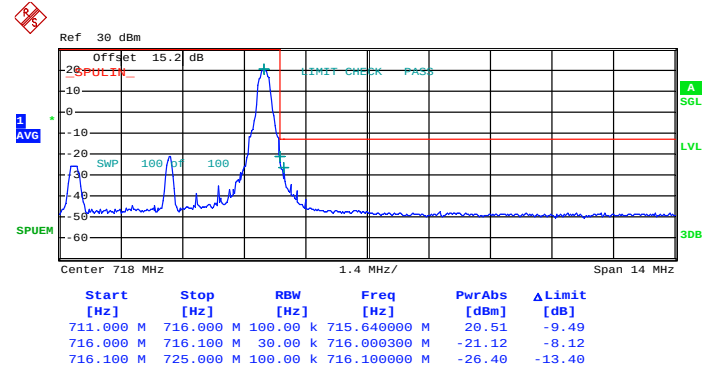
Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0


Date: 29.MAY.2014 14:49:01

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


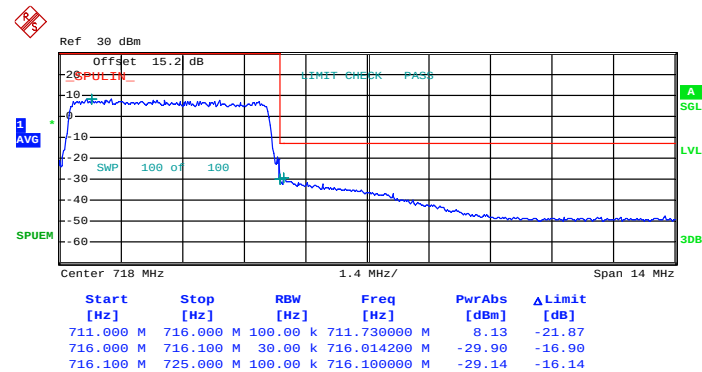
Date: 29.MAY.2014 14:46:37

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



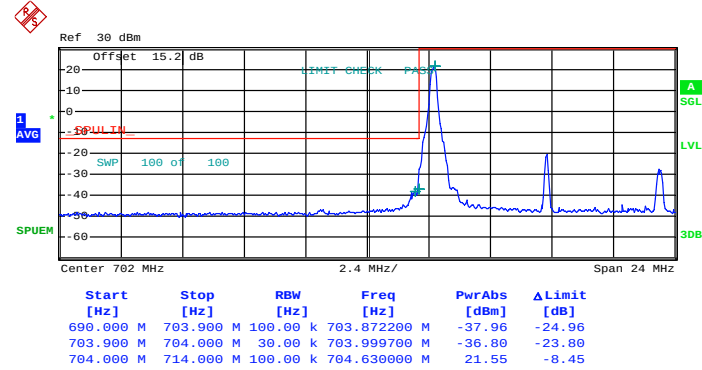
Date: 29.MAY.2014 14:57:11

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

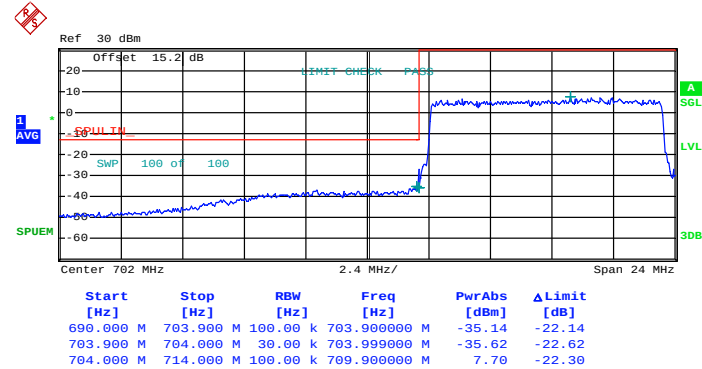


Date: 29.MAY.2014 14:59:32

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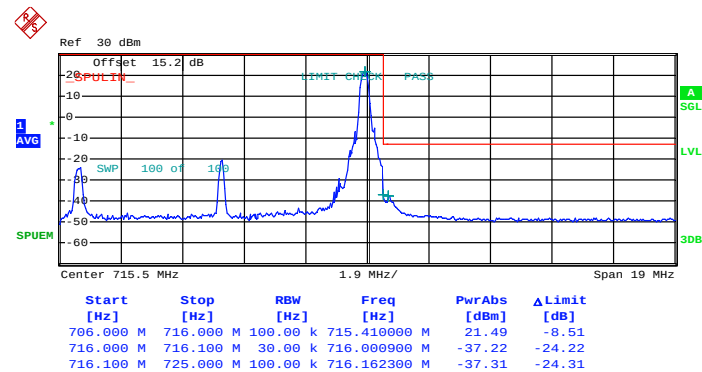
Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0


Date: 29.MAY.2014 16:03:27

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


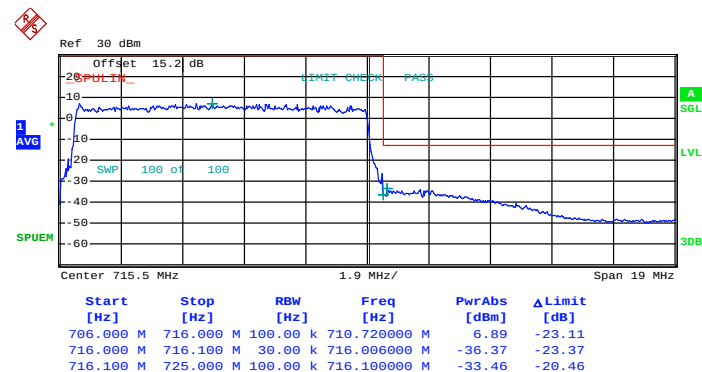
Date: 29.MAY.2014 15:49:39

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



Date: 29.MAY.2014 16:11:22

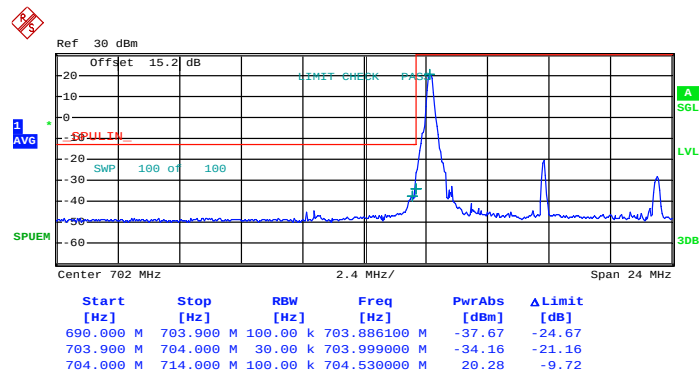
Higher Band Edge Plot for QPSK-RB Size 50, RB Offset 0



Date: 29.MAY.2014 16:14:28

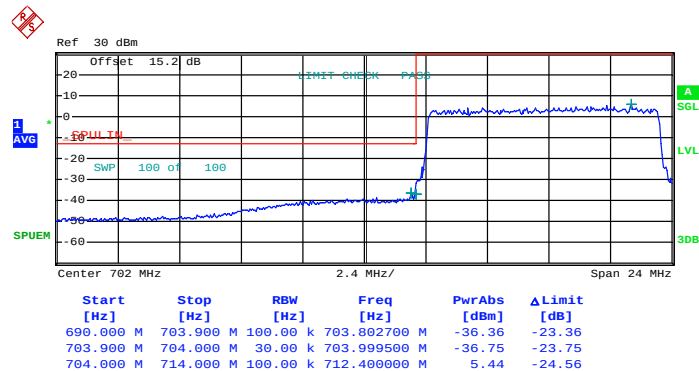
Band :	LTE Band 17	Band Width :	10MHz / 16QAM
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Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0

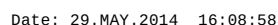


Date: 29.MAY.2014 16:06:03

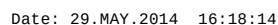
Lower Band Edge Plot for 16QAM-RB Size 50, RB Offset 0



Date: 29.MAY.2014 15:43:45



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



3.5 Conducted Spurious Emission Measurement

3.5.1 Description of Conducted Spurious Emission Measurement

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

It is measured by means of a calibrated spectrum analyzer and scanned from 30MHz up to a frequency including its 10th harmonic.

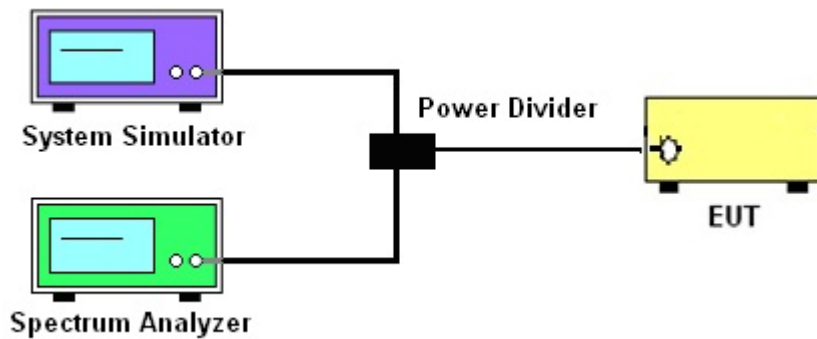
3.5.2 Measuring Instruments

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

3.5.3 Test Procedures

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

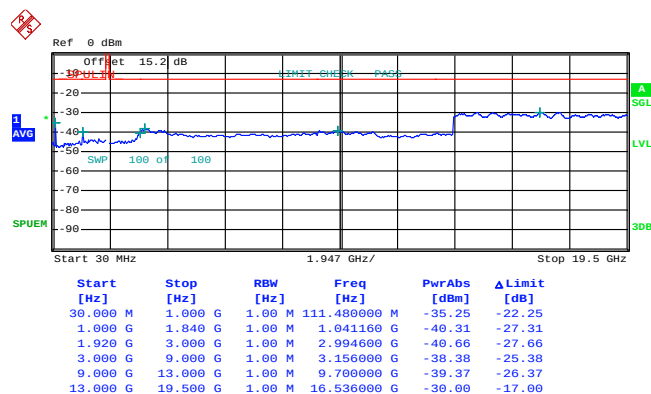
3.5.4 Test Setup



3.5.5 Test Result (Plots) of Conducted Spurious Emission

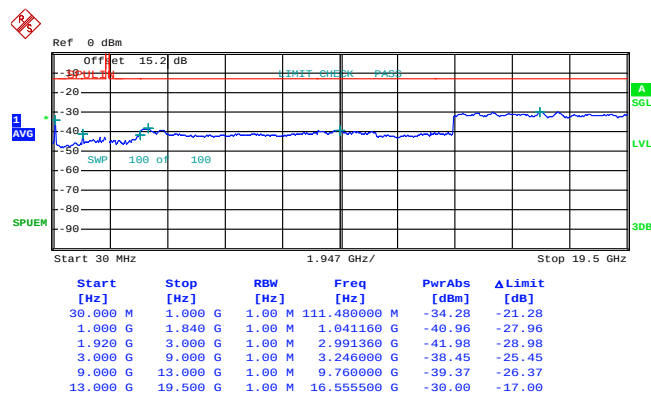
Band :	LTE Band 2	Channel :	CH18607 (Low)
Band Width :	1.4MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 28.MAY.2014 20:40:39

16QAM (RB Size 1, RB Offset 0)

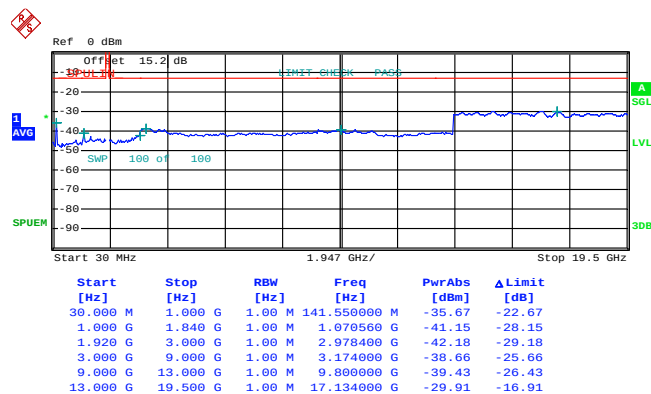


Date: 28.MAY.2014 20:49:09



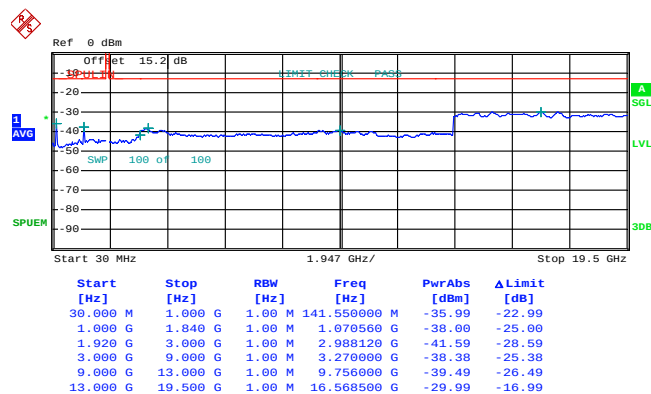
Band :	LTE Band 2	Channel :	CH18900 (Middle)
Band Width :	1.4MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 28.MAY.2014 21:01:02

16QAM (RB Size 1, RB Offset 0)

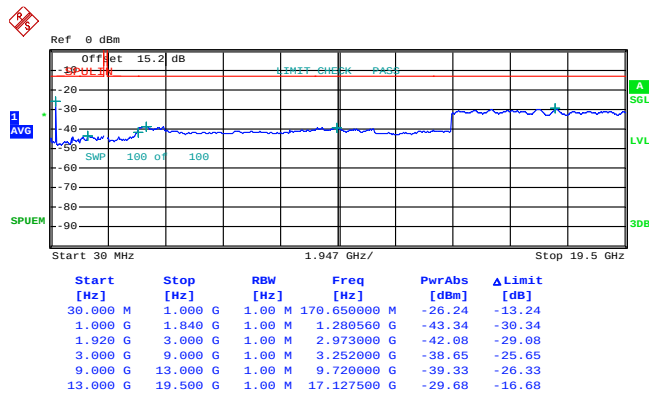


Date: 28.MAY.2014 20:55:15



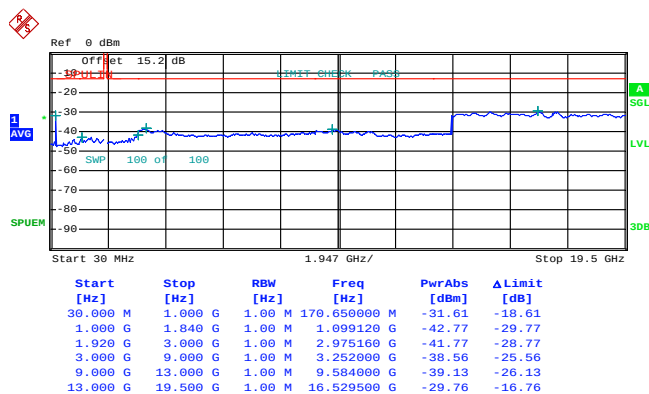
Band :	LTE Band 2	Channel :	CH19193 (High)
Band Width :	1.4MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 28.MAY.2014 21:06:38

16QAM (RB Size 1, RB Offset 0)

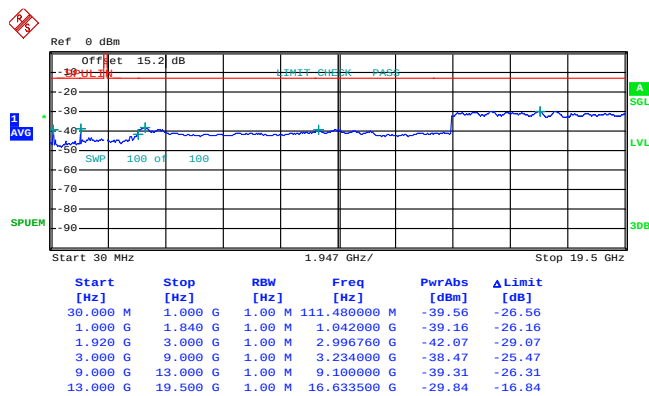


Date: 28.MAY.2014 21:12:24



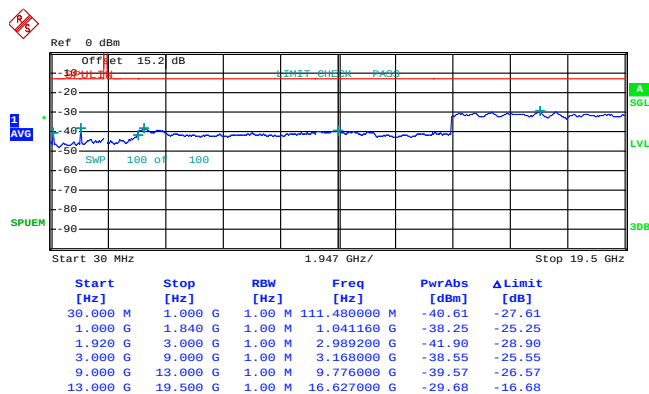
Band :	LTE Band 2	Channel :	CH18615 (Low)
Band Width :	3MHz		

QPSK (RB Size 1, RB Offset 0)



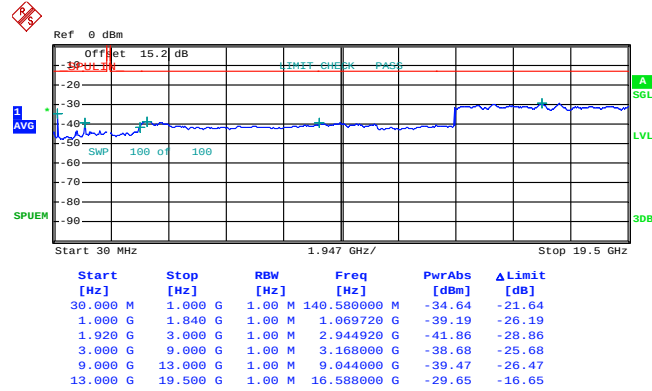
Date: 28.MAY.2014 21:49:46

16QAM (RB Size 1, RB Offset 0)

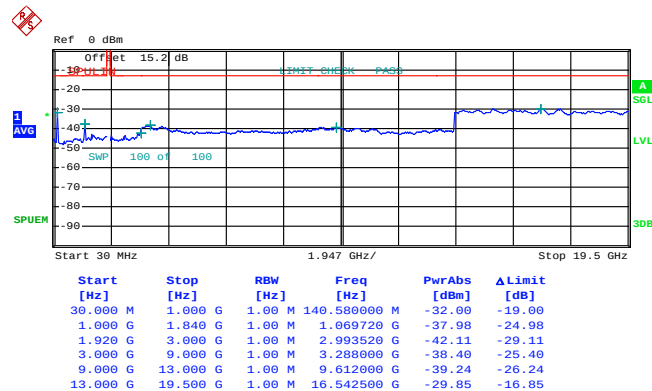


Date: 28.MAY.2014 21:43:44

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

QPSK (RB Size 1, RB Offset 0)


Date: 28.MAY.2014 21:55:22

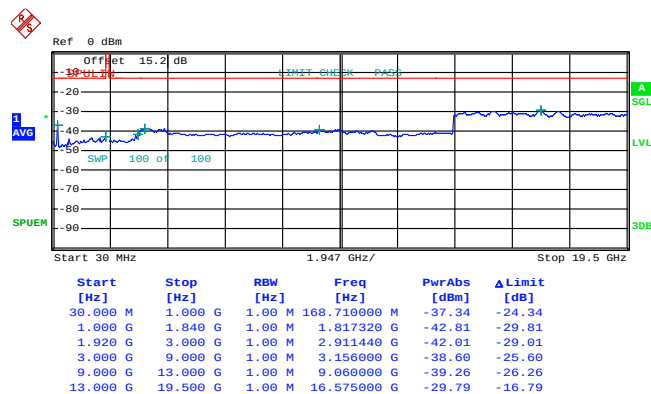
16QAM (RB Size 1, RB Offset 0)


Date: 28.MAY.2014 22:00:55



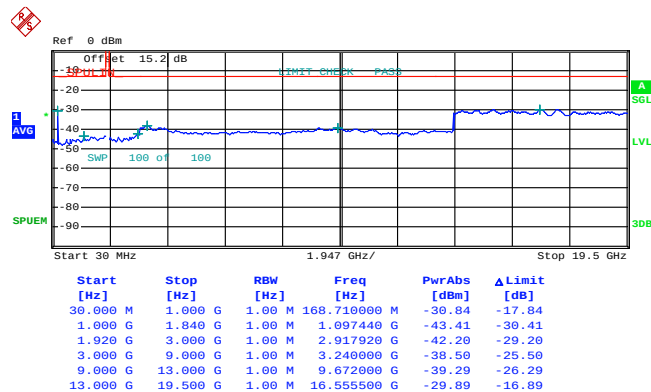
Band :	LTE Band 2	Channel :	CH19185 (High)
Band Width :	3MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 28.MAY.2014 22:17:00

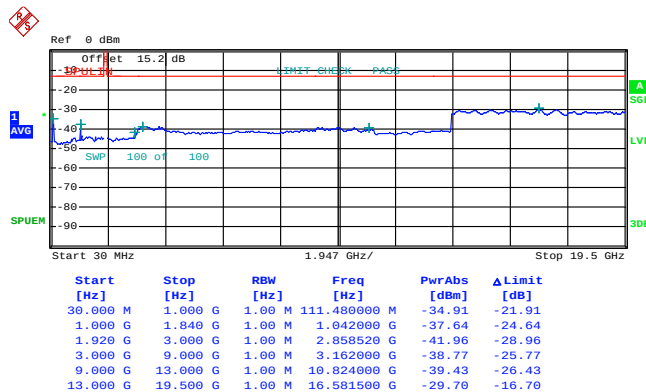
16QAM (RB Size 1, RB Offset 0)



Date: 28.MAY.2014 22:09:10

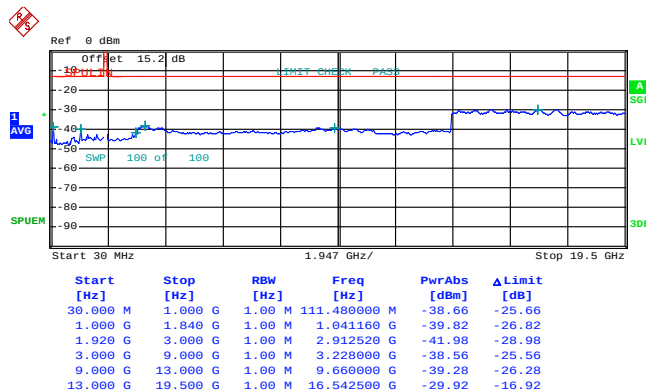
Band :	LTE Band 2	Channel :	CH18625 (Low)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 0)



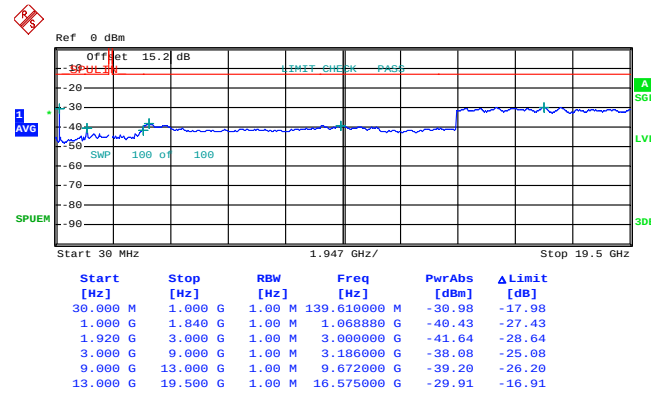
Date: 28.MAY.2014 22:54:32

16QAM (RB Size 1, RB Offset 0)

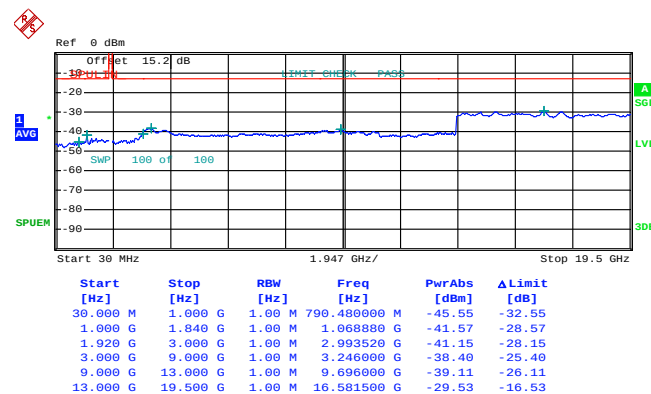


Date: 28.MAY.2014 23:00:29

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

QPSK (RB Size 1, RB Offset 0)


Date: 28.MAY.2014 23:12:44

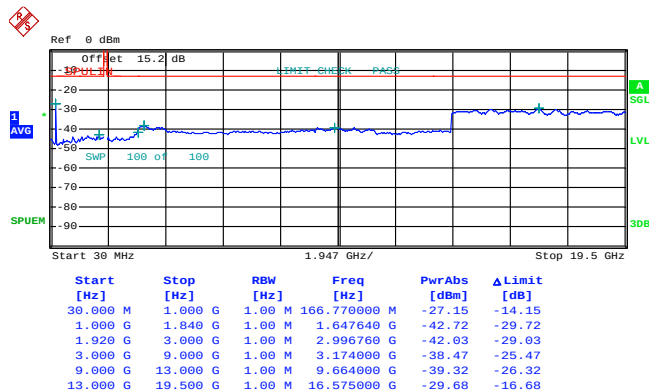
16QAM (RB Size 1, RB Offset 0)


Date: 28.MAY.2014 23:06:34



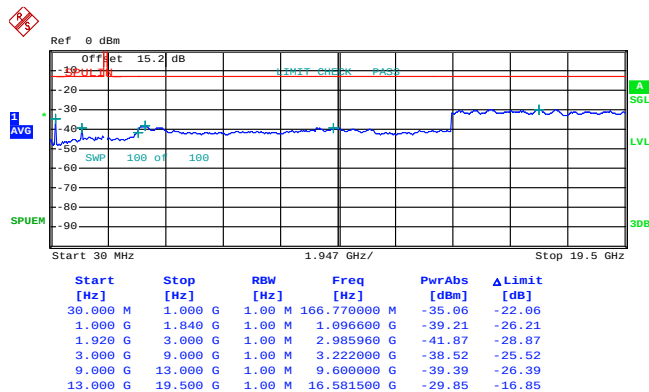
Band :	LTE Band 2	Channel :	CH19175 (High)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 0)



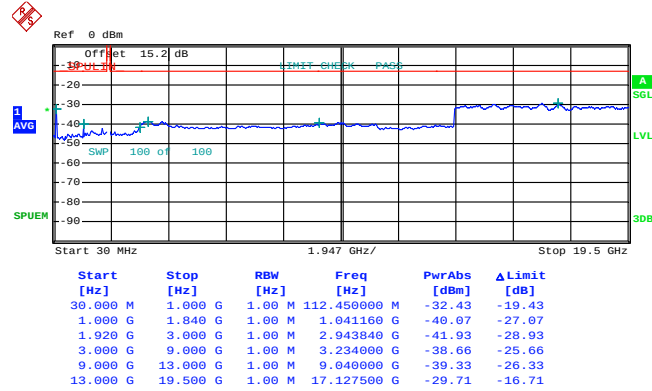
Date: 28.MAY.2014 23:18:21

16QAM (RB Size 1, RB Offset 0)

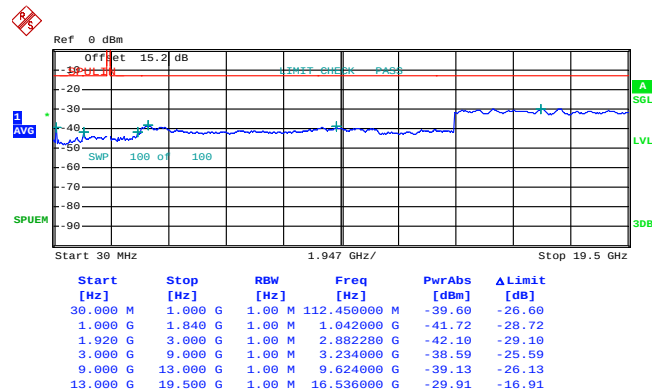


Date: 28.MAY.2014 23:25:07

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

QPSK (RB Size 1, RB Offset 0)


Date: 29.MAY.2014 10:46:28

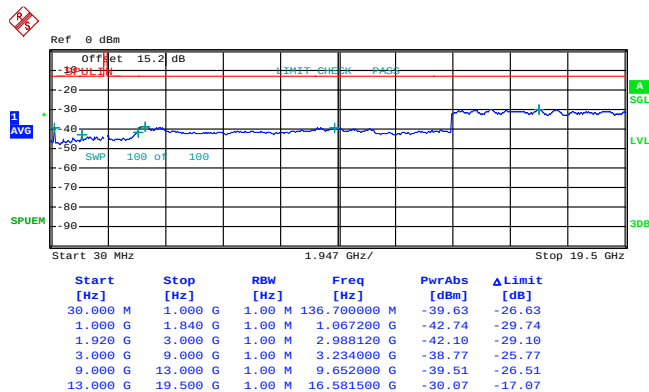
16QAM (RB Size 1, RB Offset 0)


Date: 29.MAY.2014 10:52:20



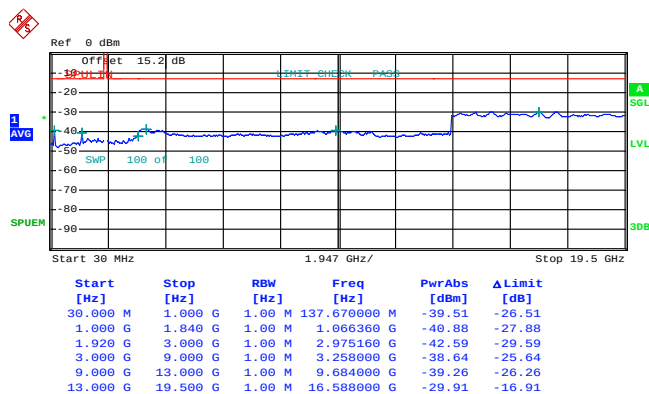
Band :	LTE Band 2	Channel :	CH18900 (Middle)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 0)



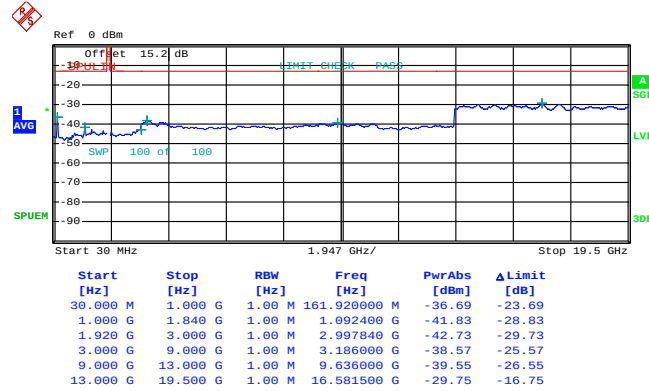
Date: 29.MAY.2014 11:04:27

16QAM (RB Size 1, RB Offset 0)

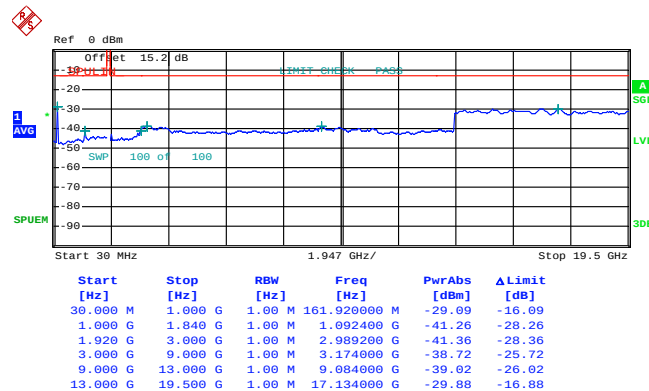


Date: 29.MAY.2014 10:57:58

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

QPSK (RB Size 1, RB Offset 0)


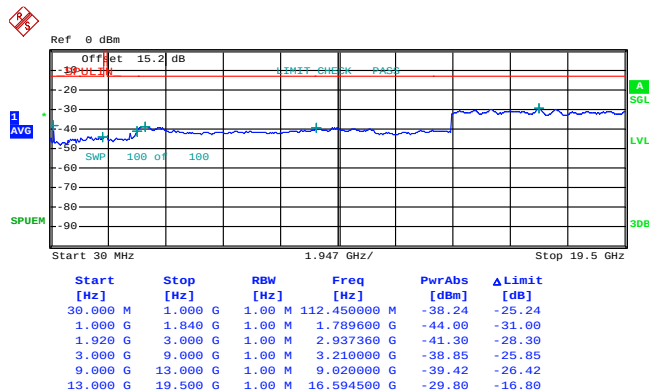
Date: 29.MAY.2014 11:09:56

16QAM (RB Size 1, RB Offset 0)


Date: 29.MAY.2014 11:15:21

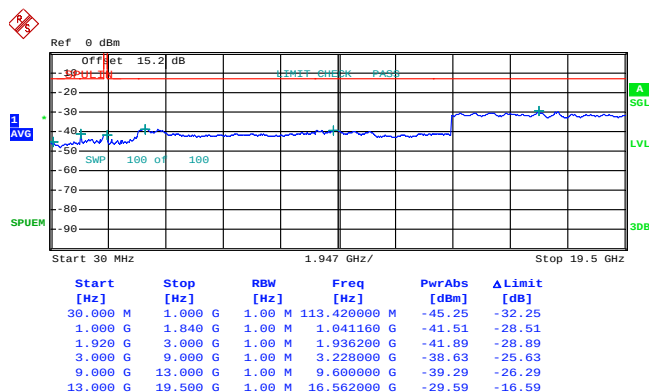
Band :	LTE Band 2	Channel :	CH18675 (Low)
Band Width :	15MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 29.MAY.2014 11:48:20

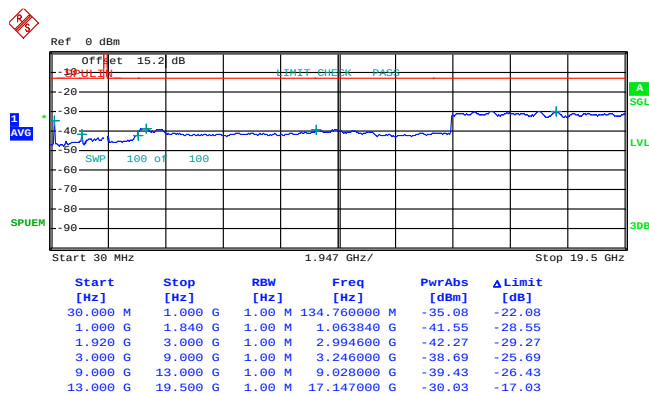
16QAM (RB Size 1, RB Offset 0)



Date: 29.MAY.2014 11:42:39

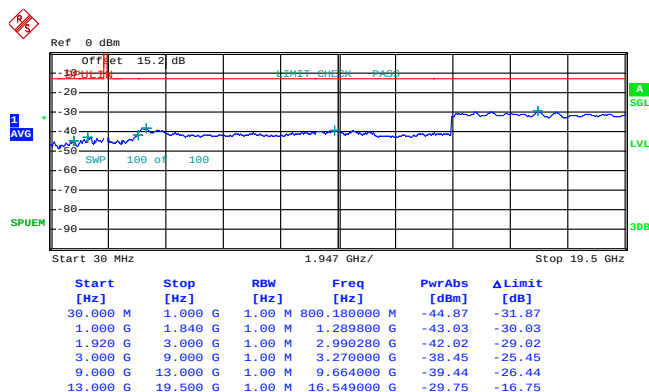
Band :	LTE Band 2	Channel :	CH18900 (Middle)
Band Width :	15MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 29.MAY.2014 11:54:14

16QAM (RB Size 1, RB Offset 0)

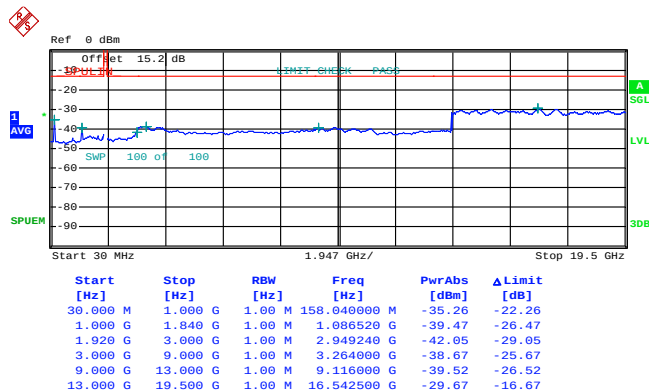


Date: 29.MAY.2014 11:59:51



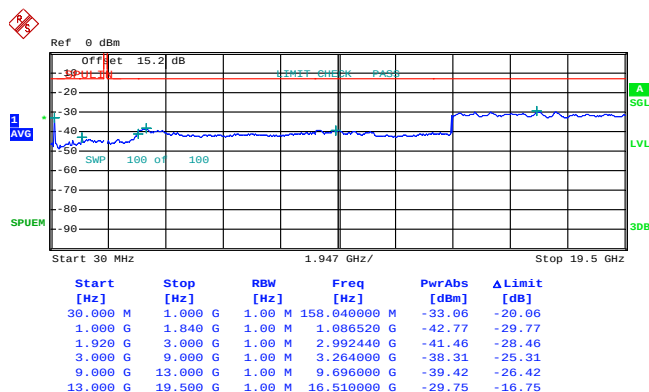
Band :	LTE Band 2	Channel :	CH19125 (High)
Band Width :	15MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 29.MAY.2014 12:13:19

16QAM (RB Size 1, RB Offset 0)

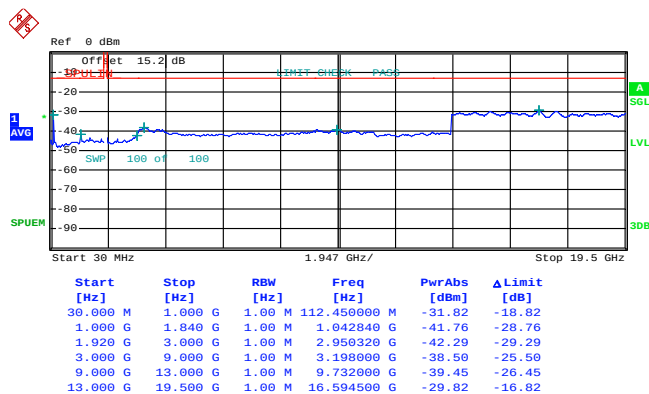


Date: 29.MAY.2014 12:07:39



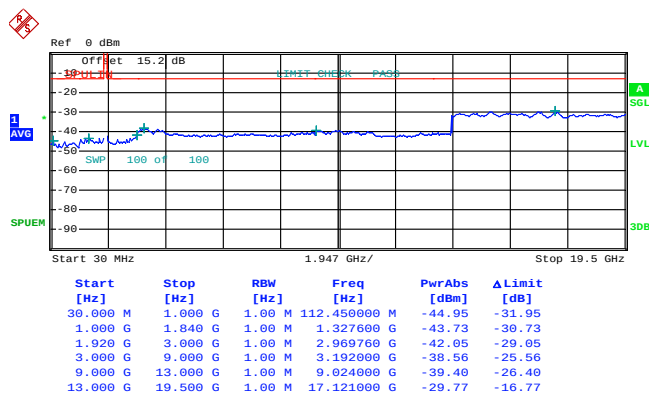
Band :	LTE Band 2	Channel :	CH18700 (Low)
Band Width :	20MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 29.MAY.2014 12:59:28

16QAM (RB Size 1, RB Offset 0)

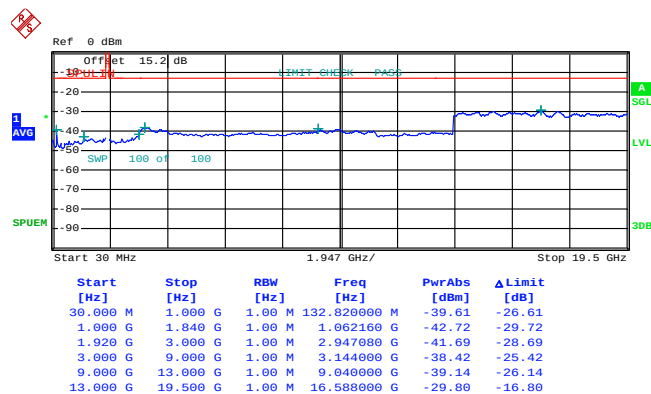


Date: 29.MAY.2014 12:53:51



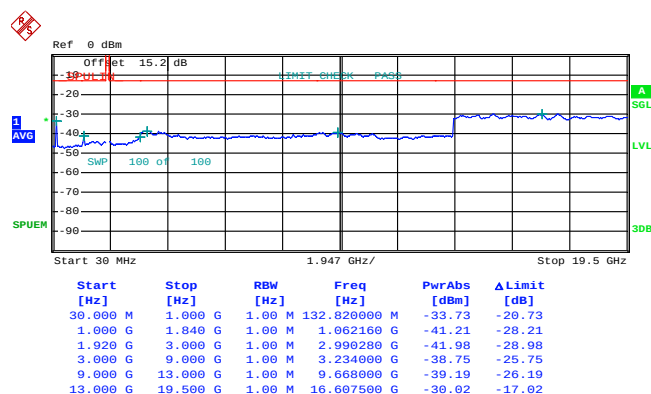
Band :	LTE Band 2	Channel :	CH18900 (Middle)
Band Width :	20MHz		

QPSK (RB Size 1, RB Offset 0)



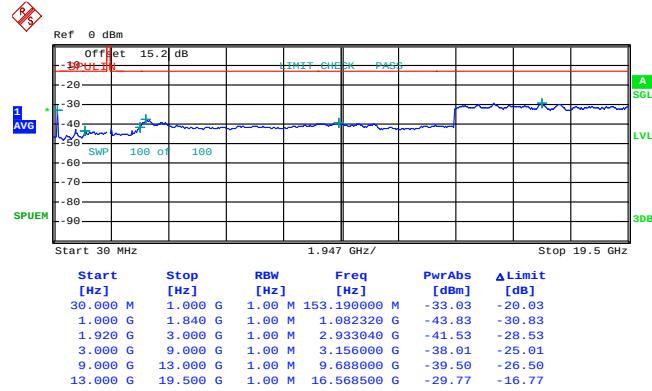
Date: 29.MAY.2014 14:11:46

16QAM (RB Size 1, RB Offset 0)

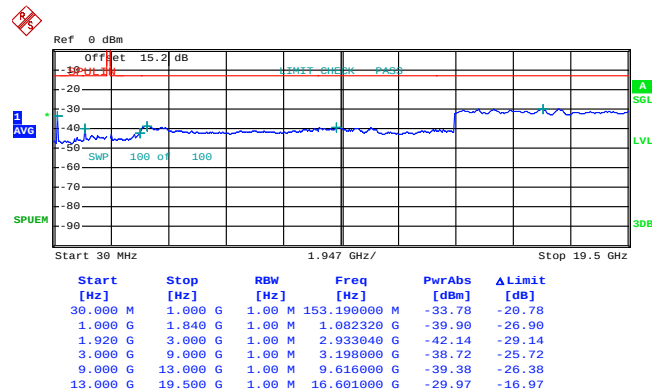


Date: 29.MAY.2014 14:17:40

Band :	LTE Band 2	Channel :	CH19100 (High)
Band Width :	20MHz		

QPSK (RB Size 1, RB Offset 0)


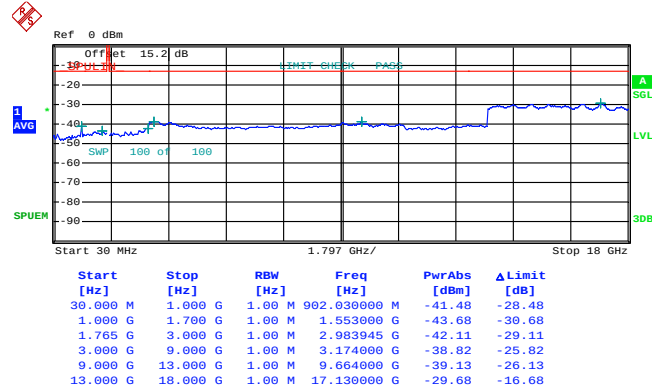
Date: 29.MAY.2014 14:30:19

16QAM (RB Size 1, RB Offset 0)


Date: 29.MAY.2014 14:23:20

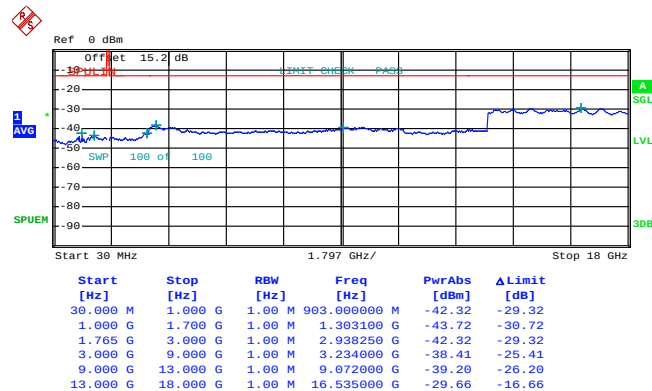
Band :	LTE Band 4	Channel :	CH19957 (Low)
Band Width :	1.4MHz		

QPSK (RB Size 1, RB Offset 0)



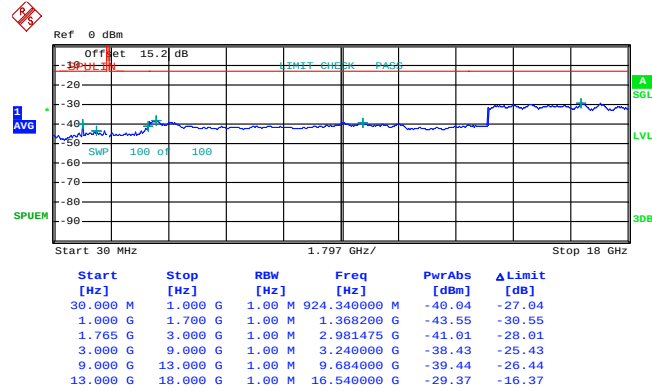
Date: 29.MAY.2014 22:30:55

16QAM (RB Size 1, RB Offset 0)

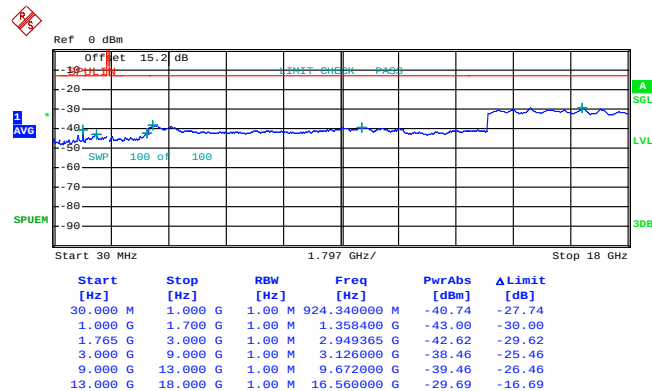


Date: 29.MAY.2014 22:39:27

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

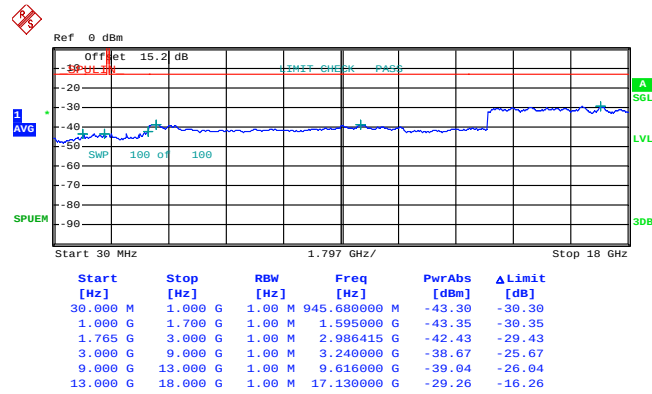
QPSK (RB Size 1, RB Offset 0)


Date: 29.MAY.2014 22:50:45

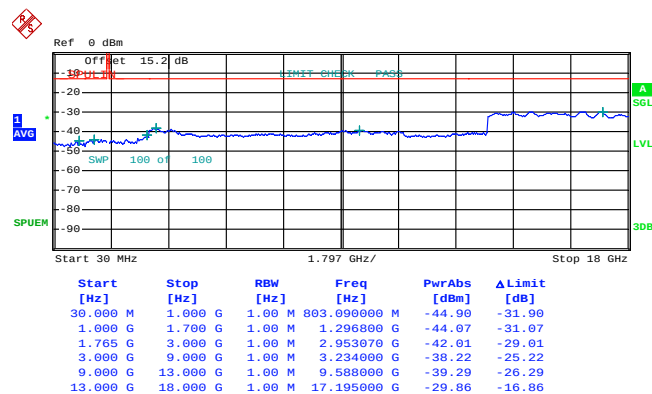
16QAM (RB Size 1, RB Offset 0)


Date: 29.MAY.2014 22:45:40

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

QPSK (RB Size 1, RB Offset 0)


Date: 29.MAY.2014 22:56:01

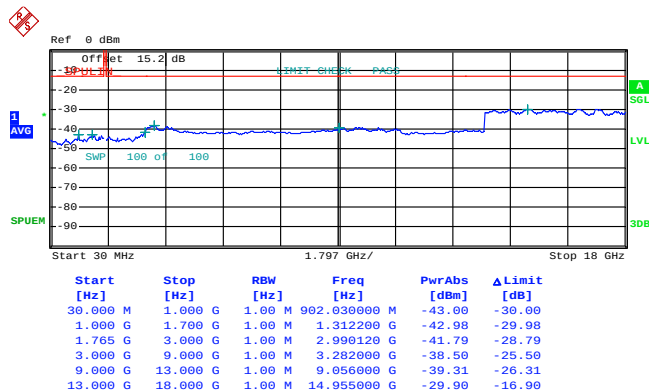
16QAM (RB Size 1, RB Offset 0)


Date: 29.MAY.2014 23:01:58



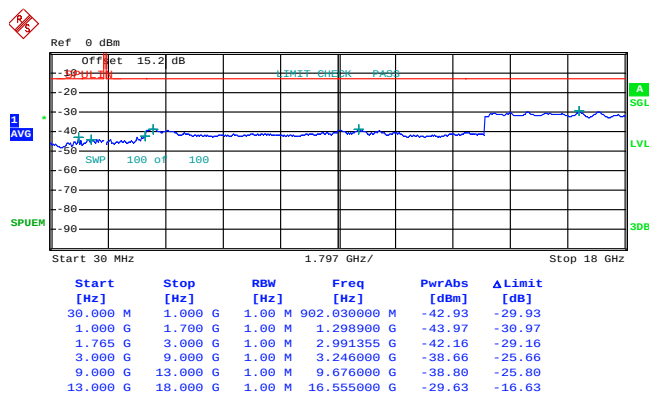
Band :	LTE Band 4	Channel :	CH19965 (Low)
Band Width :	3MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 29.MAY.2014 23:33:10

16QAM (RB Size 1, RB Offset 0)

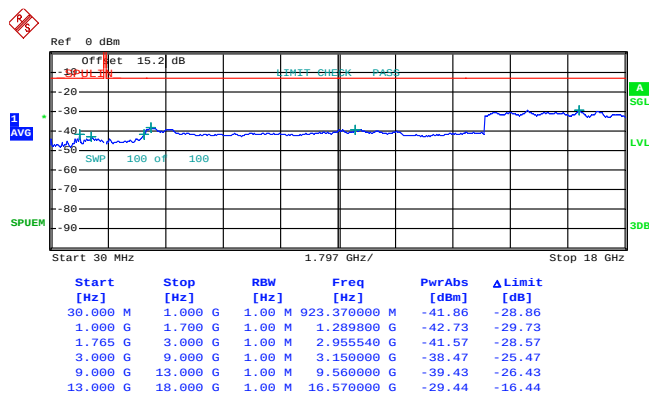


Date: 29.MAY.2014 23:27:26



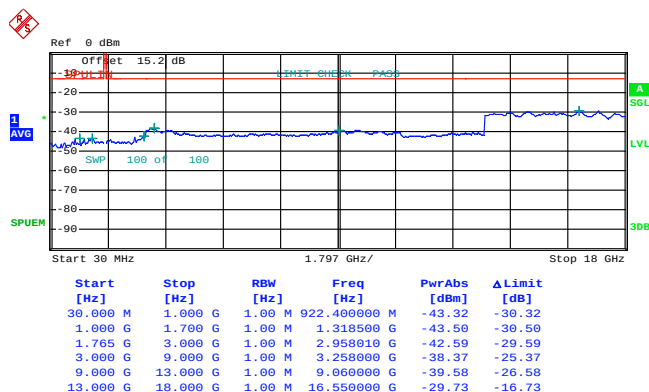
Band :	LTE Band 4	Channel :	CH20175 (Middle)
Band Width :	3MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 29.MAY.2014 23:38:39

16QAM (RB Size 1, RB Offset 0)

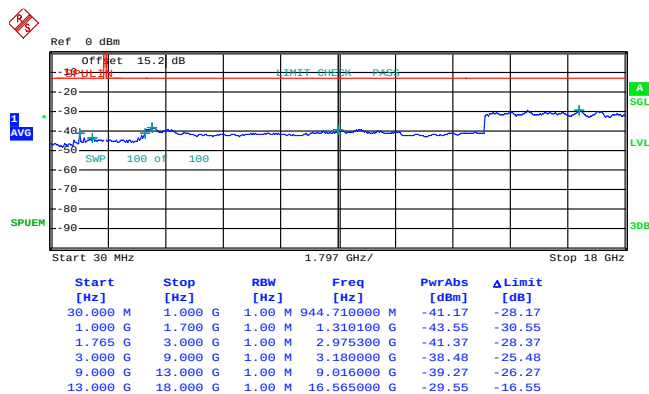


Date: 29.MAY.2014 23:47:34



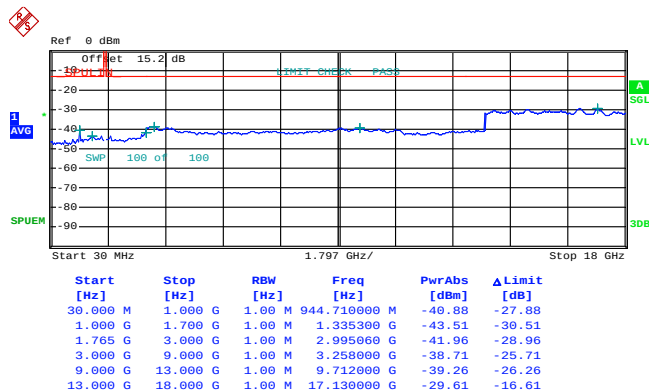
Band :	LTE Band 4	Channel :	CH20385 (High)
Band Width :	3MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 29.MAY.2014 23:58:05

16QAM (RB Size 1, RB Offset 0)

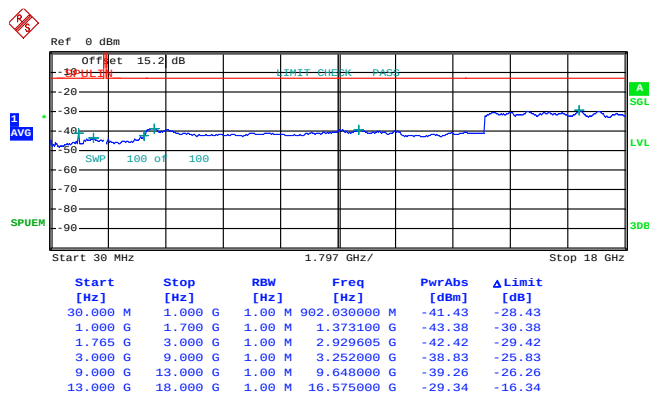


Date: 29.MAY.2014 23:53:03



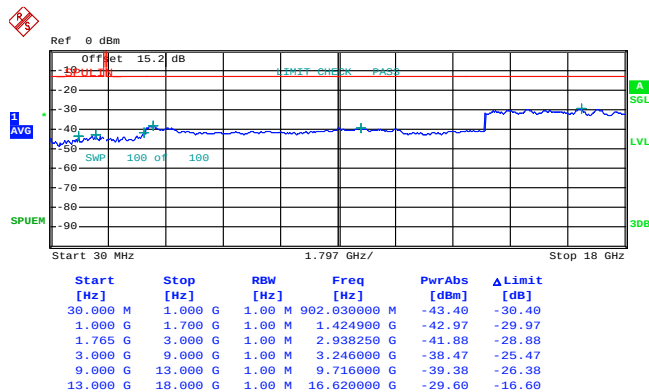
Band :	LTE Band 4	Channel :	CH19975 (Low)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 30.MAY.2014 10:50:38

16QAM (RB Size 1, RB Offset 0)

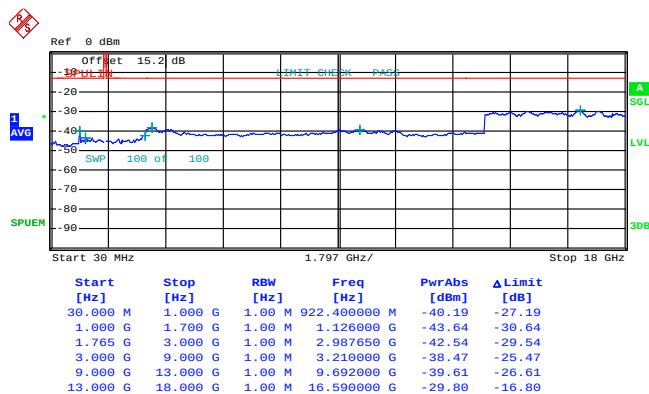


Date: 30.MAY.2014 10:55:51



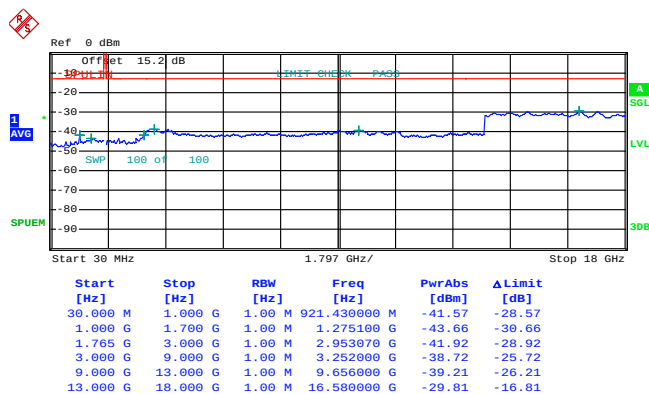
Band :	LTE Band 4	Channel :	CH20175 (Middle)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 30.MAY.2014 11:06:37

16QAM (RB Size 1, RB Offset 0)

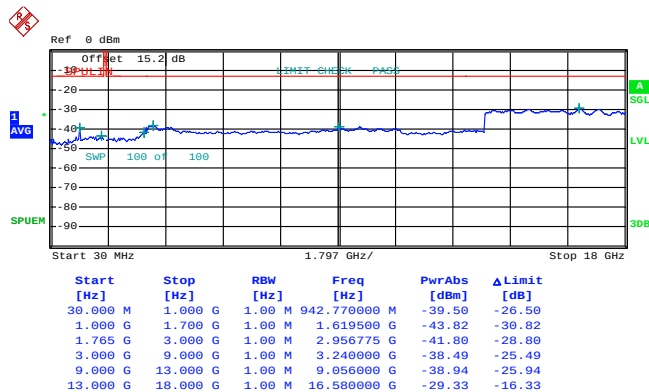


Date: 30.MAY.2014 11:00:55



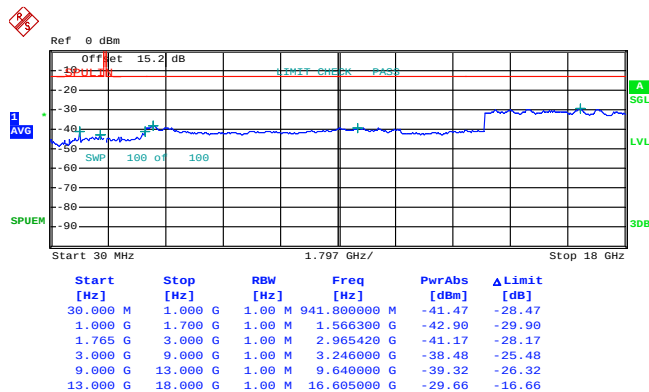
Band :	LTE Band 4	Channel :	CH20375 (High)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 30.MAY.2014 11:11:57

16QAM (RB Size 1, RB Offset 0)

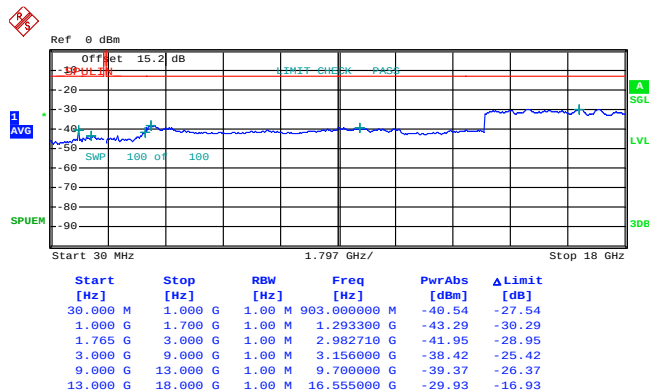


Date: 30.MAY.2014 11:17:11



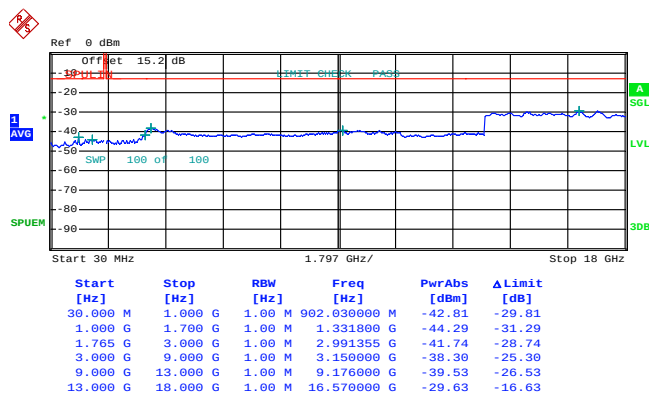
Band :	LTE Band 4	Channel :	CH20000 (Low)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 30.MAY.2014 12:08:27

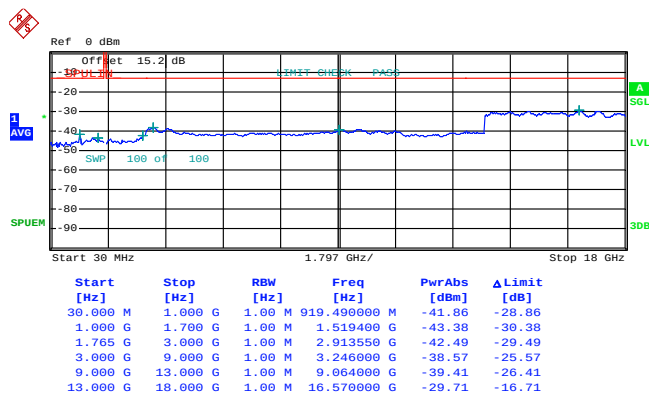
16QAM (RB Size 1, RB Offset 0)



Date: 30.MAY.2014 12:13:49

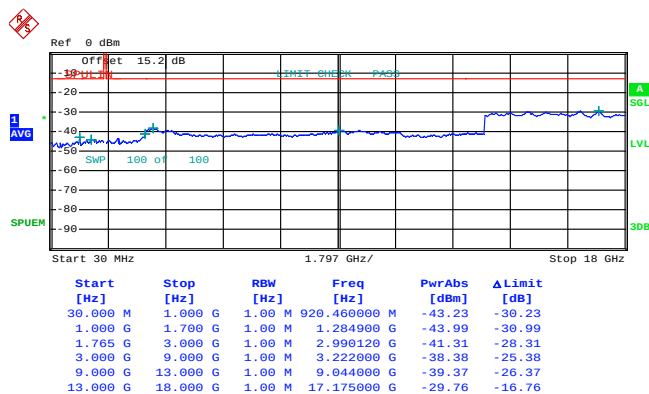
Band :	LTE Band 4	Channel :	CH20175 (Middle)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 30.MAY.2014 12:28:19

16QAM (RB Size 1, RB Offset 0)

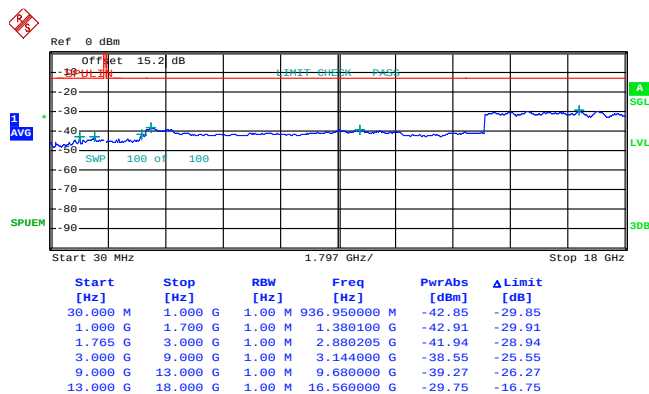


Date: 30.MAY.2014 12:19:00



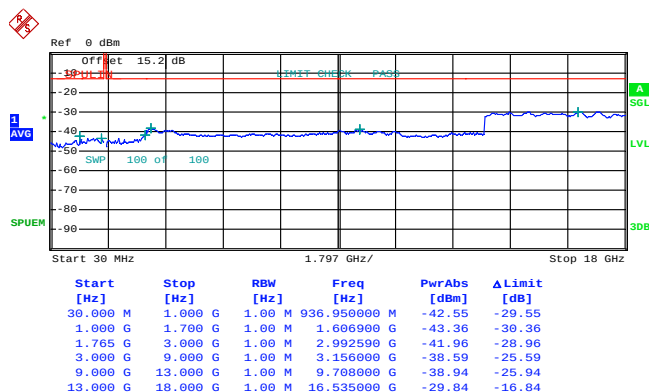
Band :	LTE Band 4	Channel :	CH20350 (High)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 30.MAY.2014 12:33:14

16QAM (RB Size 1, RB Offset 0)

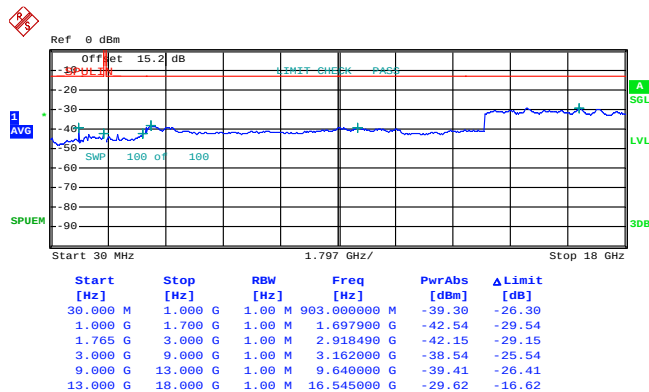


Date: 30.MAY.2014 12:38:14



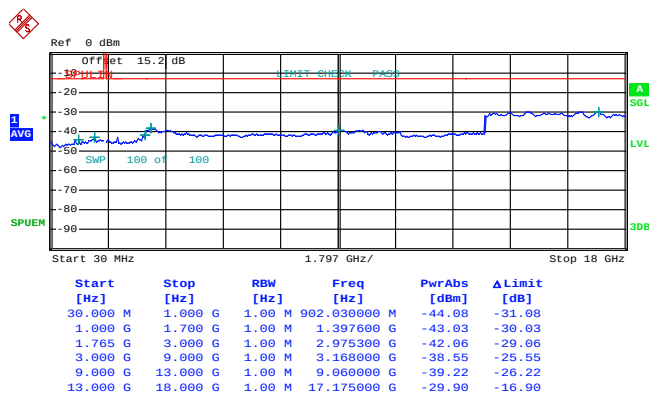
Band :	LTE Band 4	Channel :	CH20025 (Low)
Band Width :	15MHz		

QPSK (RB Size 1, RB Offset 0)



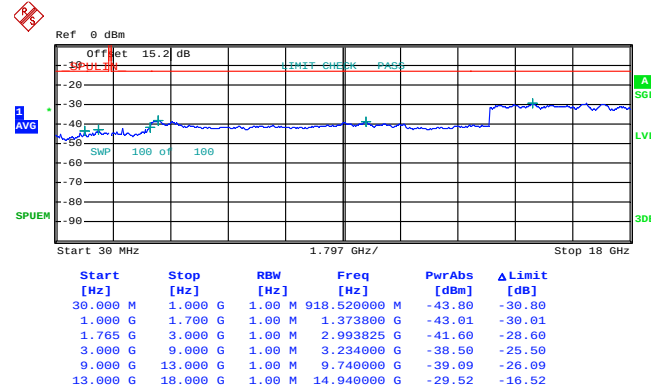
Date: 30.MAY.2014 13:08:17

16QAM (RB Size 1, RB Offset 0)

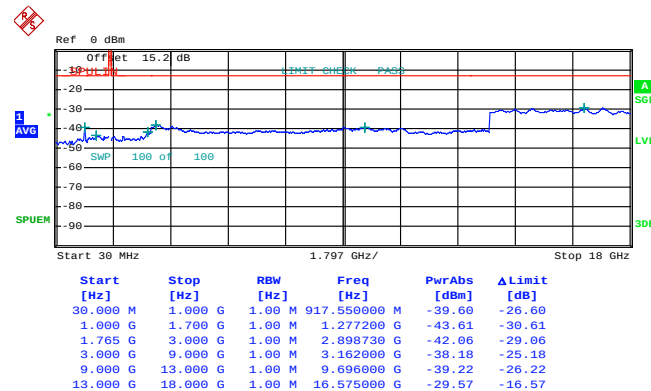


Date: 30.MAY.2014 13:39:57

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

QPSK (RB Size 1, RB Offset 0)


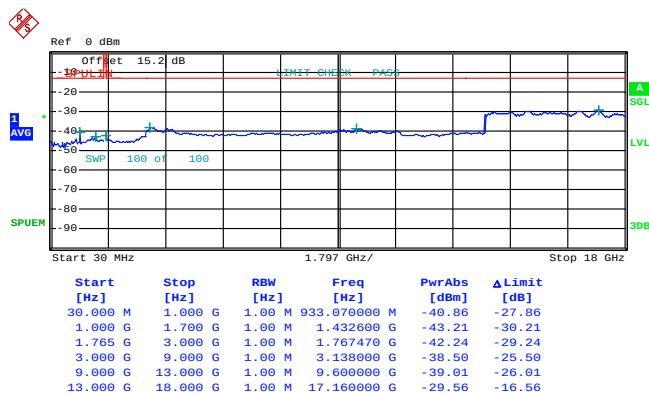
Date: 30.MAY.2014 14:13:05

16QAM (RB Size 1, RB Offset 0)


Date: 30.MAY.2014 13:48:13

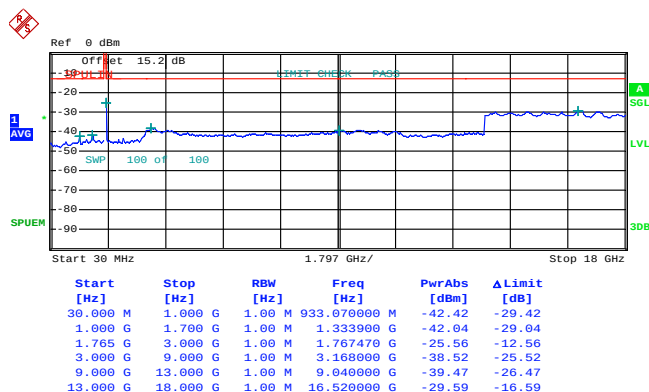
Band :	LTE Band 4	Channel :	CH20325 (High)
Band Width :	15MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 30.MAY.2014 14:18:24

16QAM (RB Size 1, RB Offset 0)

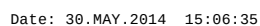
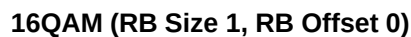
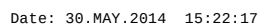


Date: 30.MAY.2014 14:23:28



Report No. : FG450602B

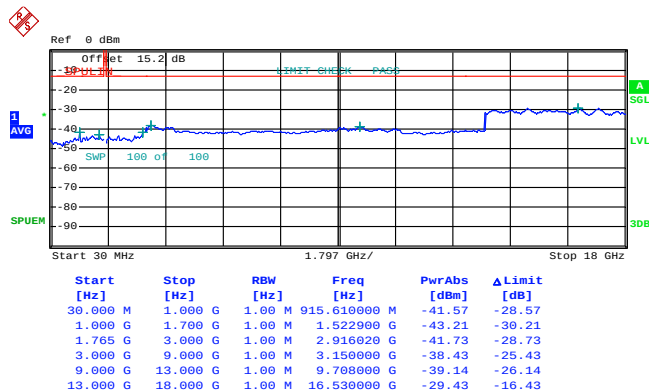
QPSK (RB Size 1, RB Offset 0)





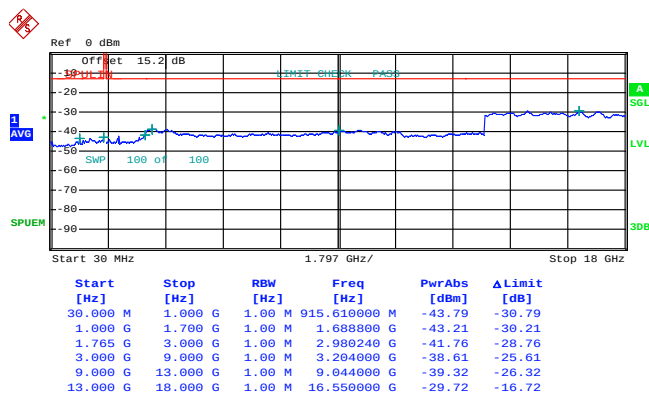
Band :	LTE Band 4	Channel :	CH20175 (Middle)
Band Width :	20MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 30.MAY.2014 15:30:57

16QAM (RB Size 1, RB Offset 0)

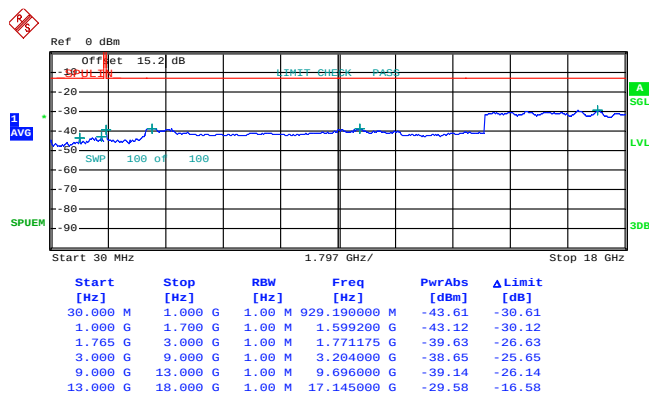


Date: 30.MAY.2014 15:35:52



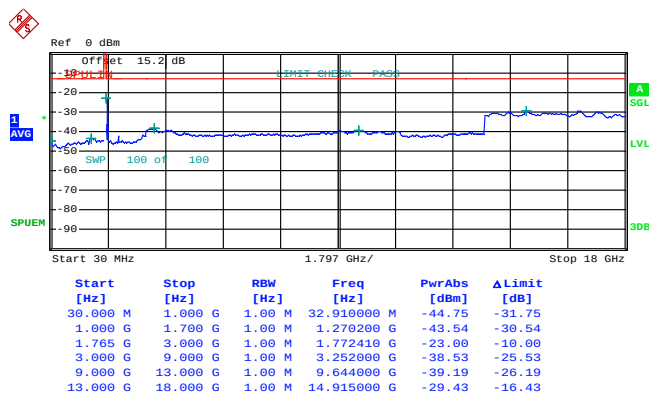
Band :	LTE Band 4	Channel :	CH20300 (High)
Band Width :	20MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 30.MAY.2014 15:47:16

16QAM (RB Size 1, RB Offset 0)

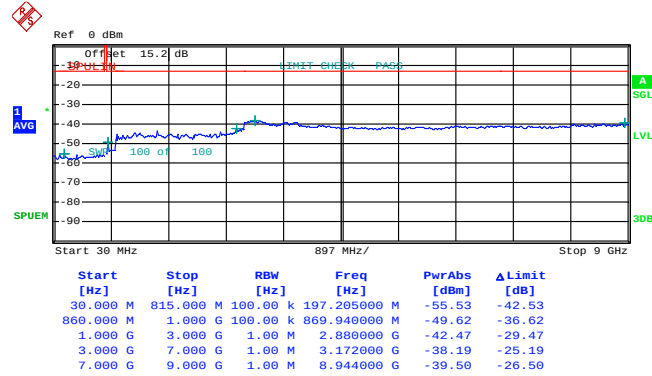


Date: 30.MAY.2014 15:41:12



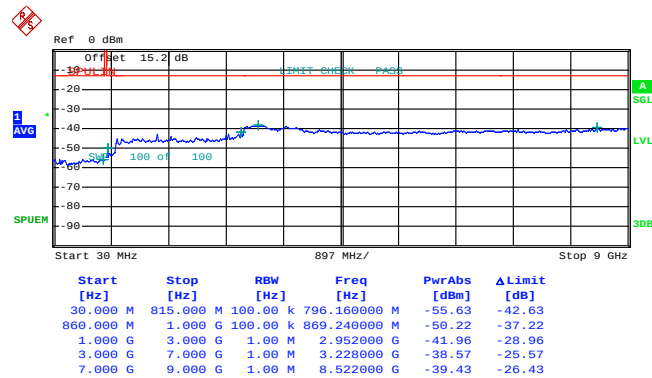
Band :	LTE Band 5	Channel :	CH20407 (Low)
Band Width :	1.4MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 29.MAY.2014 17:39:15

16QAM (RB Size 1, RB Offset 0)

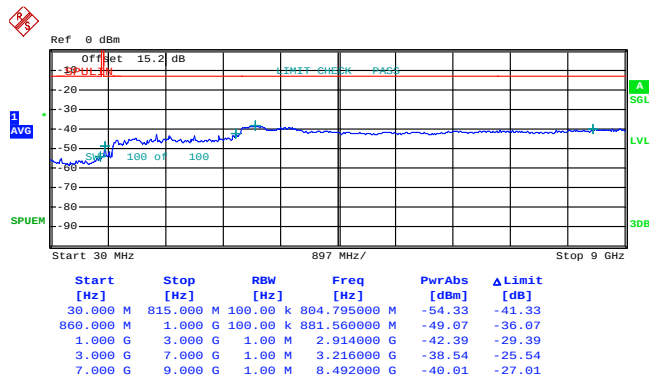


Date: 29.MAY.2014 17:42:50



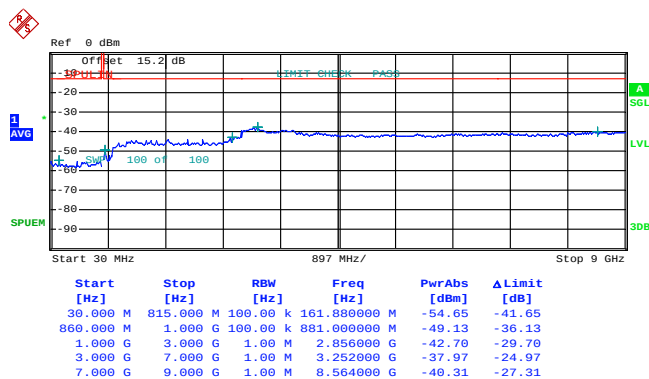
Band :	LTE Band 5	Channel :	CH20525 (Middle)
Band Width :	1.4MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 29.MAY.2014 17:59:23

16QAM (RB Size 1, RB Offset 0)

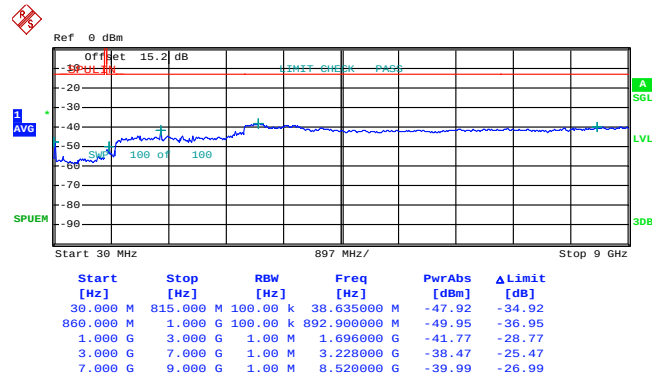


Date: 29.MAY.2014 17:56:04



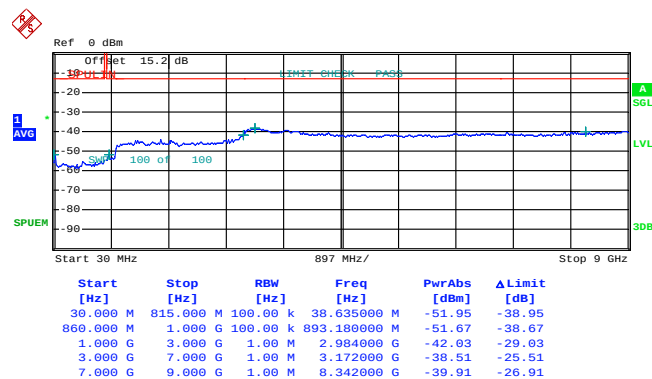
Band :	LTE Band 5	Channel :	CH20643 (High)
Band Width :	1.4MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 29.MAY.2014 18:03:39

16QAM (RB Size 1, RB Offset 0)

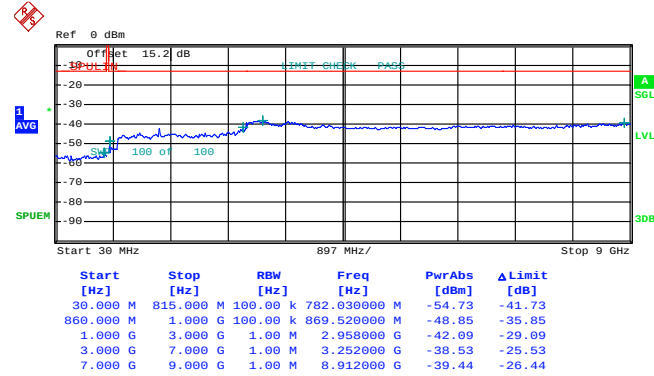


Date: 29.MAY.2014 18:08:04



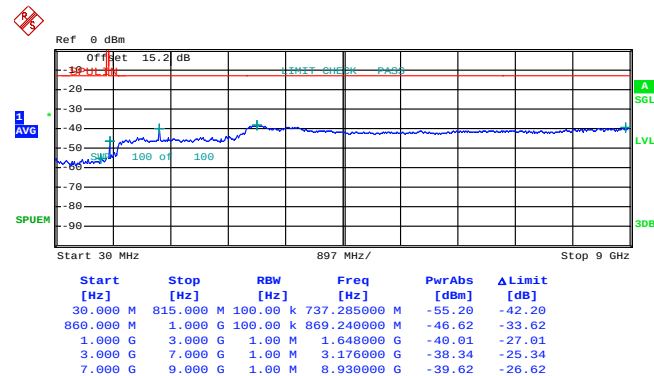
Band :	LTE Band 5	Channel :	CH20415 (Low)
Band Width :	3MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 29.MAY.2014 19:20:34

16QAM (RB Size 1, RB Offset 0)

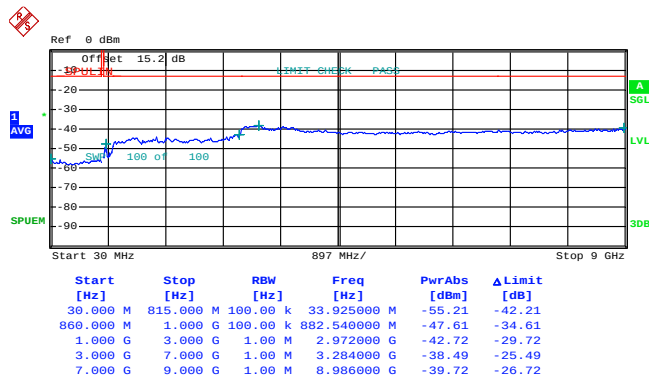


Date: 29.MAY.2014 19:24:17



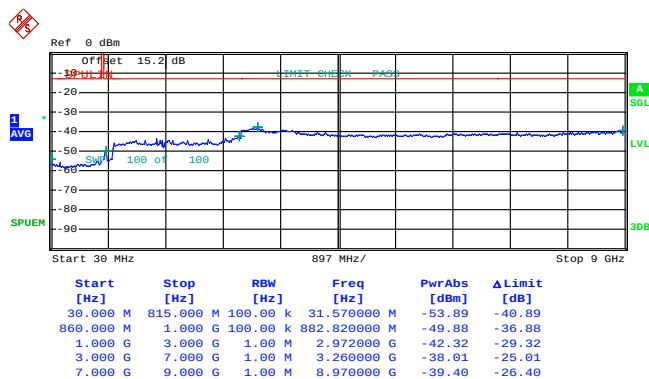
Band :	LTE Band 5	Channel :	CH20525 (Middle)
Band Width :	3MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 29.MAY.2014 19:39:59

16QAM (RB Size 1, RB Offset 0)

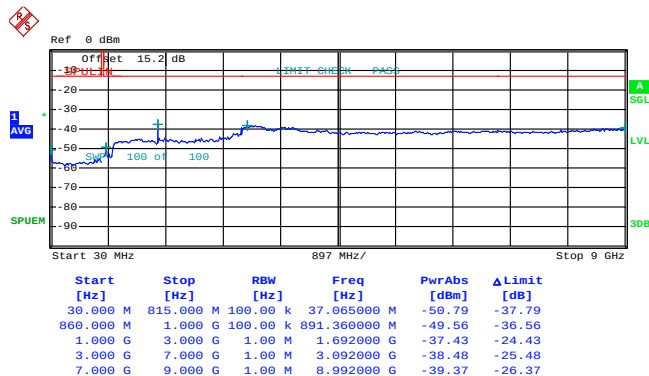


Date: 29.MAY.2014 19:36:15



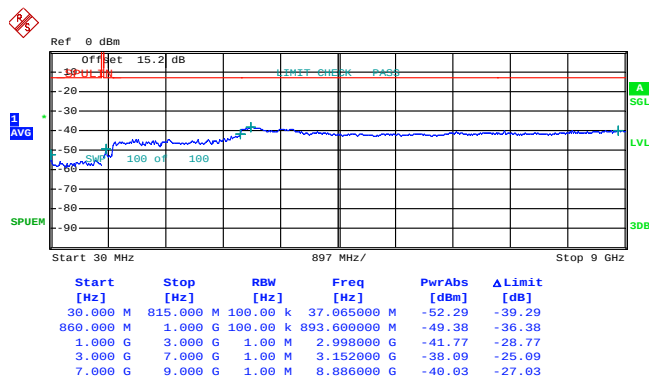
Band :	LTE Band 5	Channel :	CH20635 (High)
Band Width :	3MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 29.MAY.2014 19:43:34

16QAM (RB Size 1, RB Offset 0)

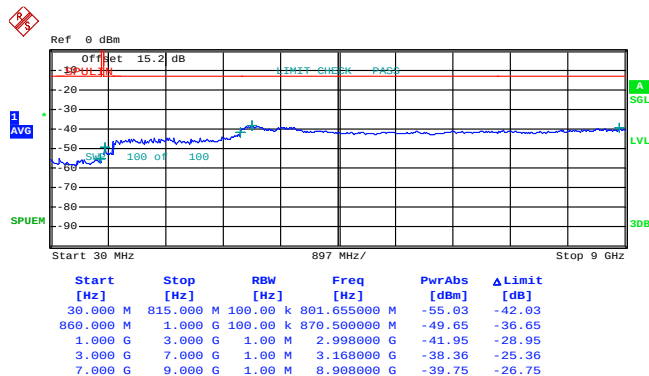


Date: 29.MAY.2014 19:47:10



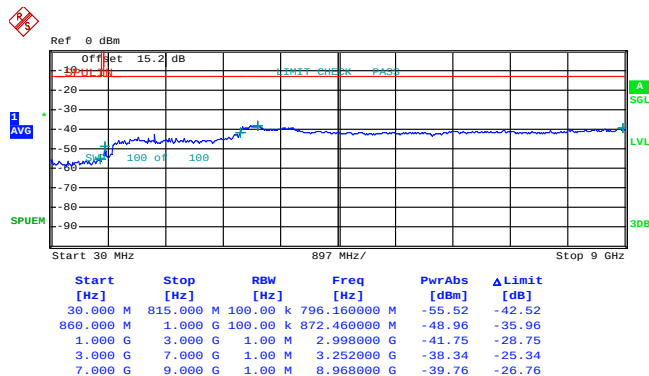
Band :	LTE Band 5	Channel :	CH20425 (Low)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 29.MAY.2014 20:23:46

16QAM (RB Size 1, RB Offset 0)

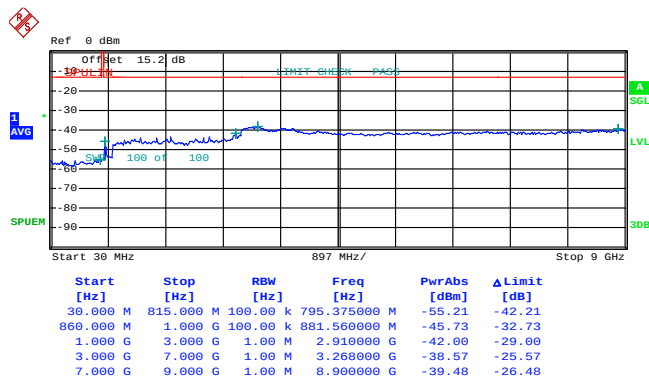


Date: 29.MAY.2014 20:19:48



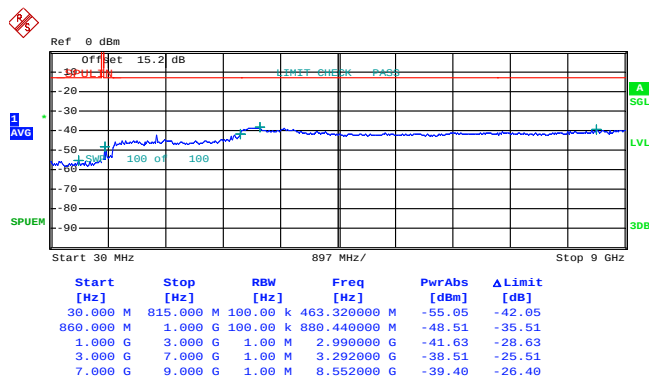
Band :	LTE Band 5	Channel :	CH20525 (Middle)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 29.MAY.2014 20:27:02

16QAM (RB Size 1, RB Offset 0)

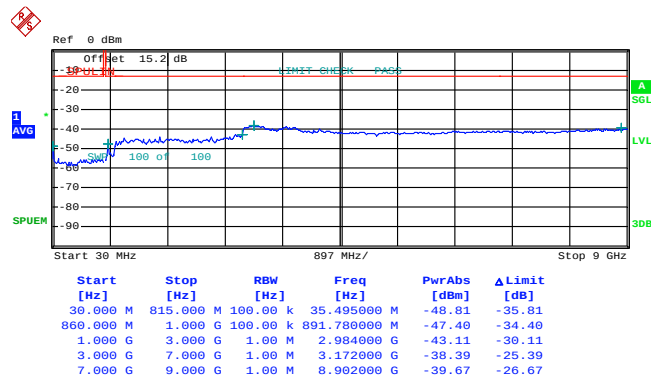


Date: 29.MAY.2014 20:30:44



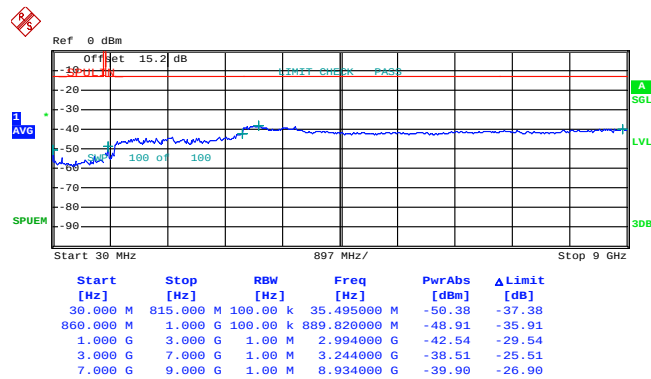
Band :	LTE Band 5	Channel :	CH20625 (High)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 29.MAY.2014 20:37:46

16QAM (RB Size 1, RB Offset 0)

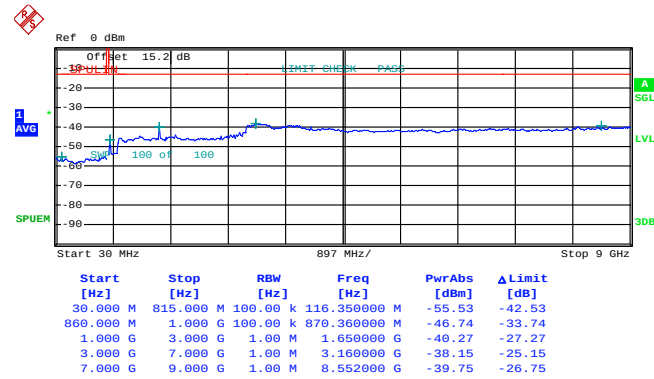


Date: 29.MAY.2014 20:34:10



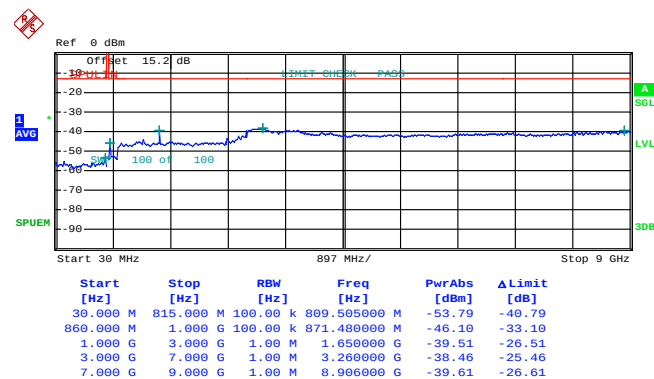
Band :	LTE Band 5	Channel :	CH20450 (Low)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 29.MAY.2014 21:19:10

16QAM (RB Size 1, RB Offset 0)

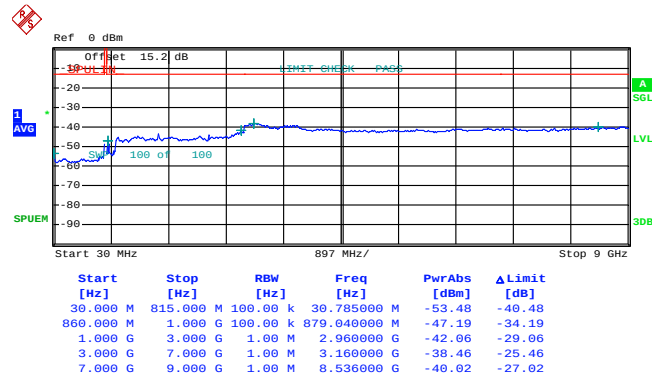


Date: 29.MAY.2014 21:15:44



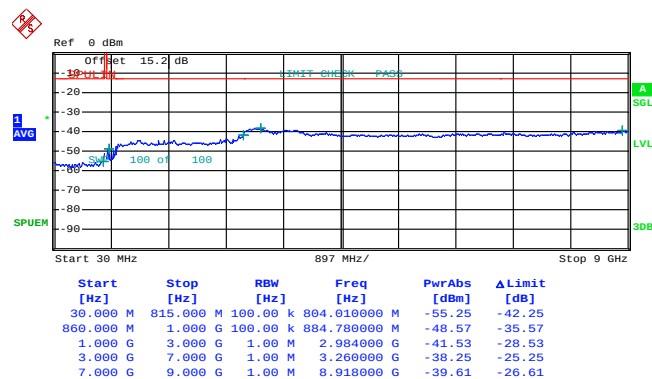
Band :	LTE Band 5	Channel :	CH20525 (Middle)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 29.MAY.2014 21:22:36

16QAM (RB Size 1, RB Offset 0)

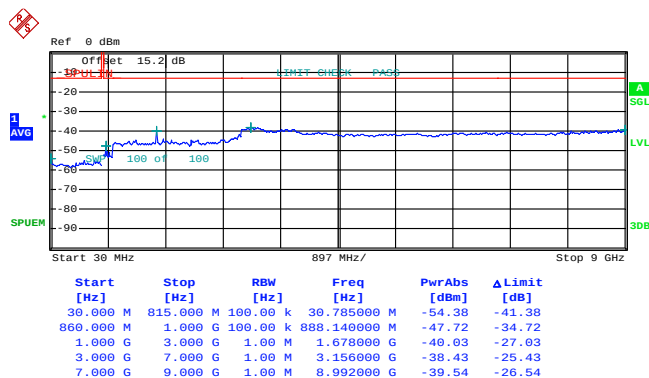


Date: 29.MAY.2014 21:26:06



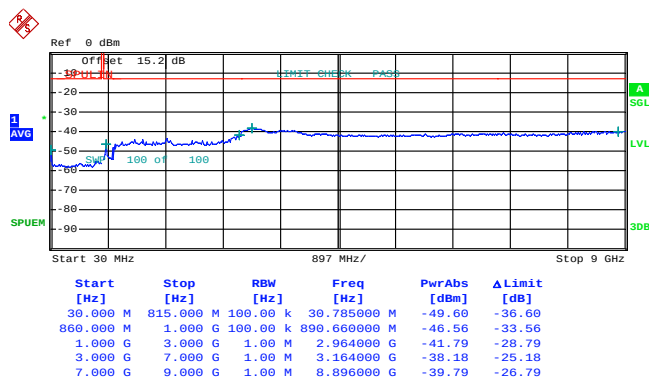
Band :	LTE Band 5	Channel :	CH20600 (High)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 29.MAY.2014 21:33:48

16QAM (RB Size 1, RB Offset 0)

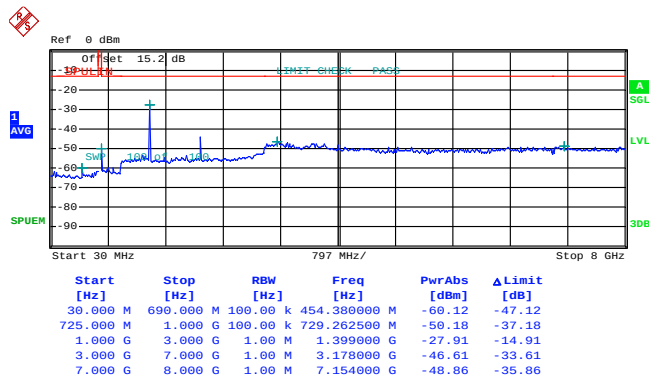


Date: 29.MAY.2014 21:30:14



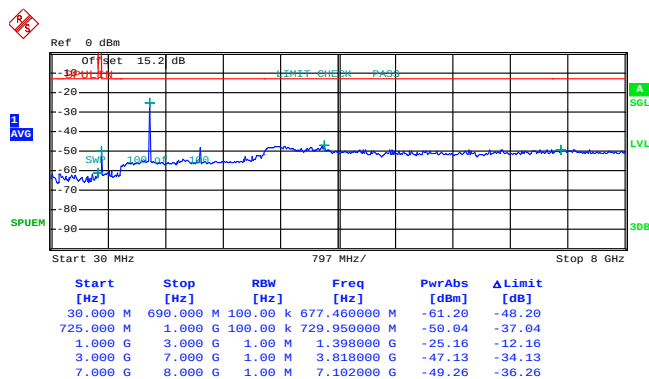
Band :	LTE Band 12	Channel :	CH23017 (Low)
Band Width :	1.4MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 30.MAY.2014 20:10:27

16QAM (RB Size 1, RB Offset 0)

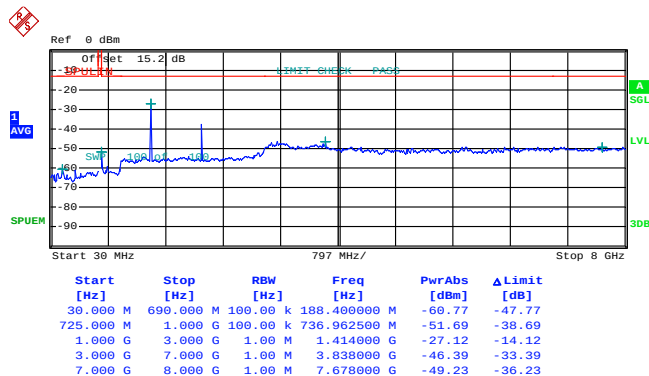


Date: 30.MAY.2014 20:13:52



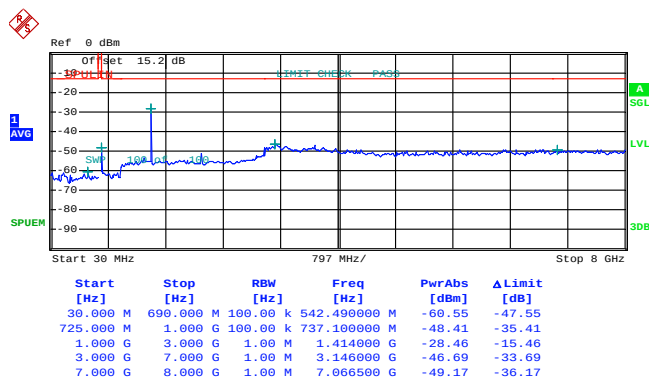
Band :	LTE Band 12	Channel :	CH23095 (Middle)
Band Width :	1.4MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 30.MAY.2014 20:19:34

16QAM (RB Size 1, RB Offset 0)

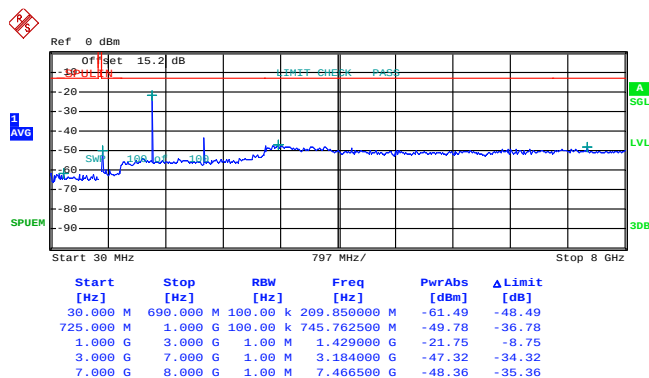


Date: 30.MAY.2014 20:16:38



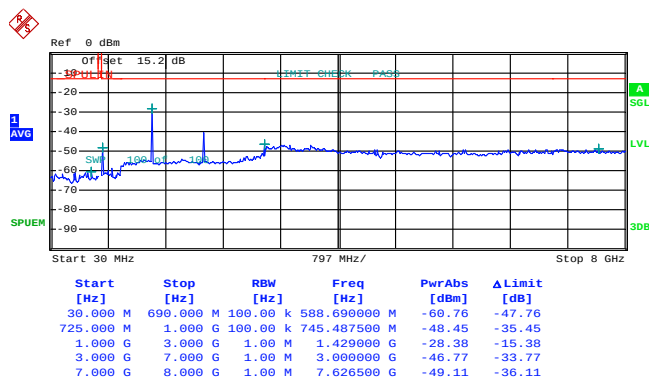
Band :	LTE Band 12	Channel :	CH23173 (High)
Band Width :	1.4MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 30.MAY.2014 20:21:50

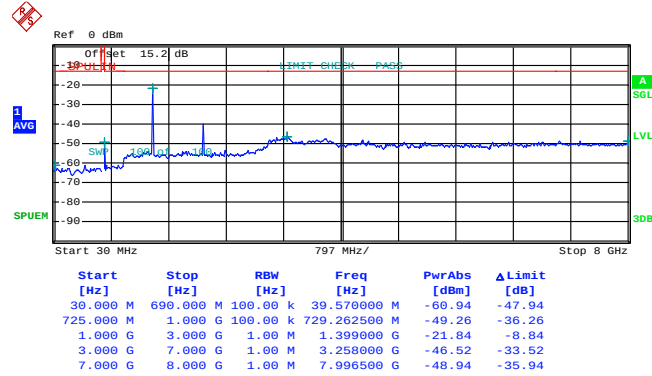
16QAM (RB Size 1, RB Offset 0)



Date: 30.MAY.2014 20:23:49

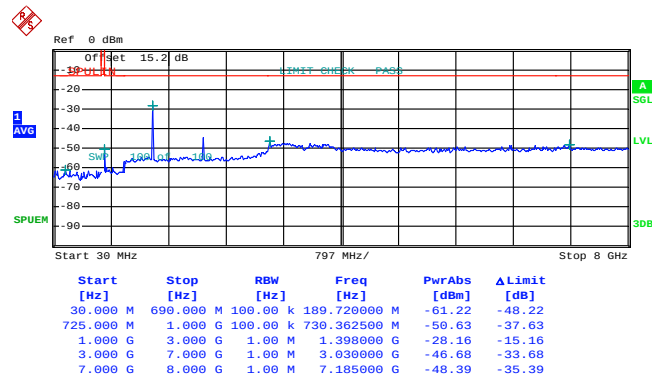
Band :	LTE Band 12	Channel :	CH23025 (Low)
Band Width :	3MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 30.MAY.2014 20:37:47

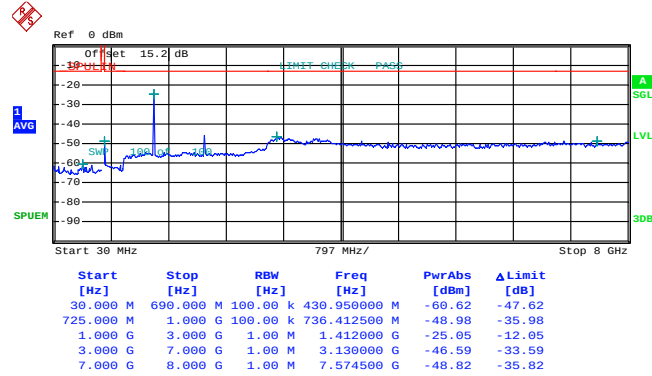
16QAM (RB Size 1, RB Offset 0)



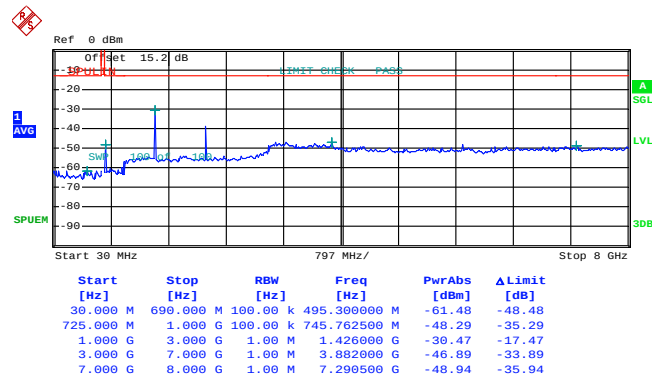
Date: 30.MAY.2014 20:39:46



Band :	LTE Band 12	Channel :	CH23095 (Middle)
Band Width :	3MHz		

QPSK (RB Size 1, RB Offset 0)

Date: 30.MAY.2014 20:31:14

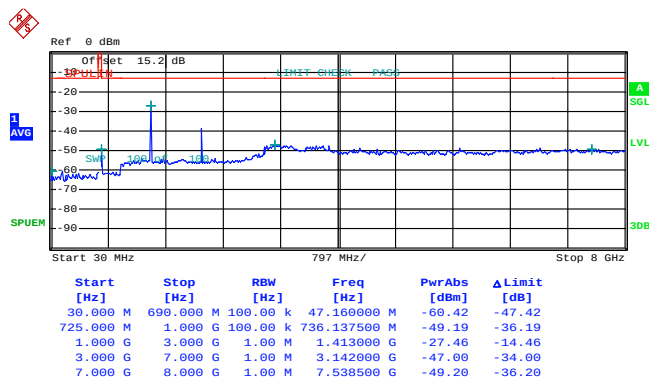
16QAM (RB Size 1, RB Offset 0)

Date: 30.MAY.2014 20:28:52



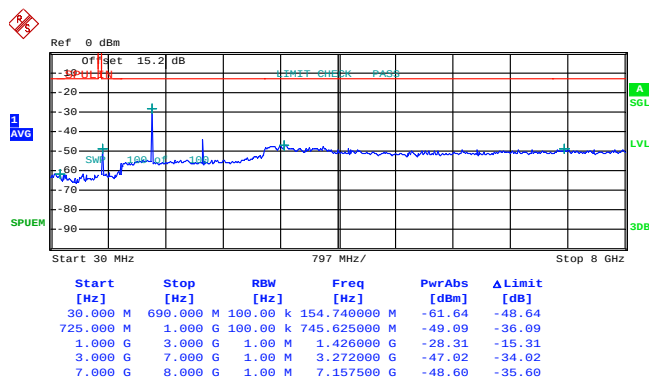
Band :	LTE Band 12	Channel :	CH23165 (High)
Band Width :	3MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 30.MAY.2014 20:33:48

16QAM (RB Size 1, RB Offset 0)

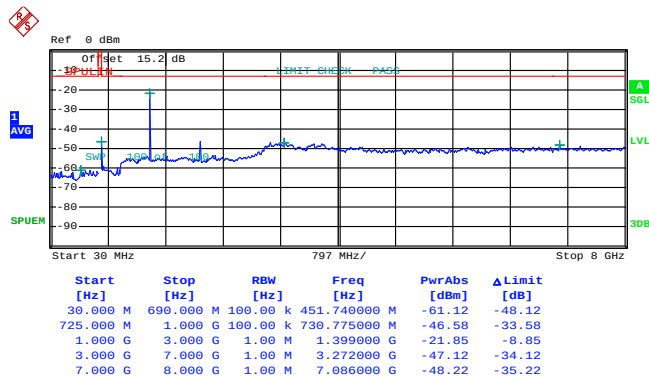


Date: 30.MAY.2014 20:26:54



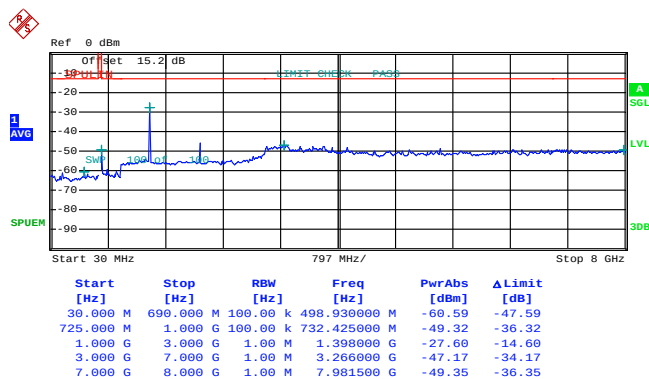
Band :	LTE Band 12	Channel :	CH23035 (Low)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 30.MAY.2014 20:43:49

16QAM (RB Size 1, RB Offset 0)

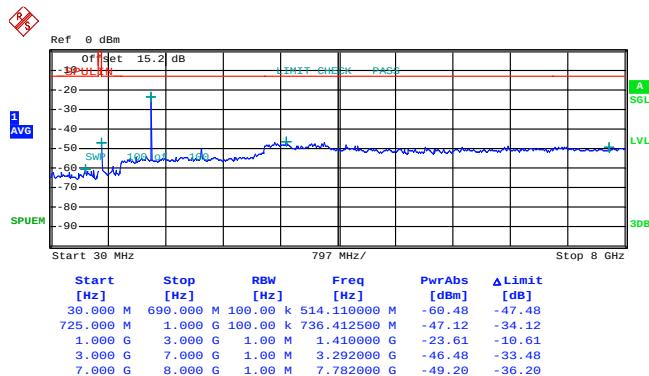


Date: 30.MAY.2014 20:41:55



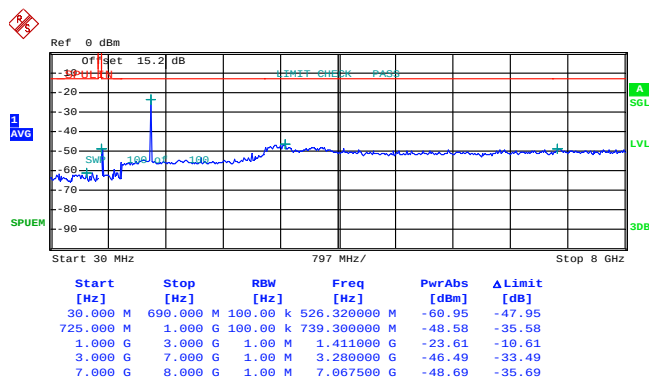
Band :	LTE Band 12	Channel :	CH23095 (Middle)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 30.MAY.2014 20:46:53

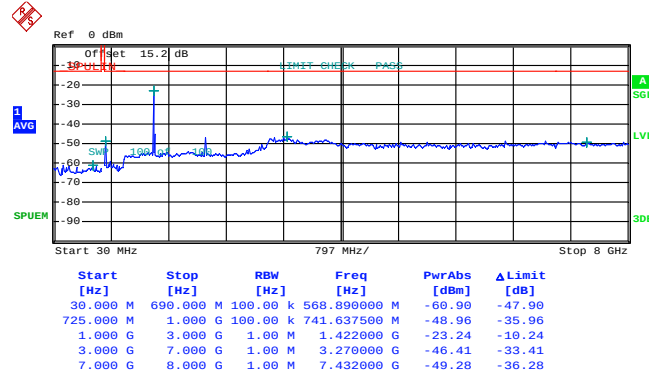
16QAM (RB Size 1, RB Offset 0)



Date: 30.MAY.2014 20:48:52

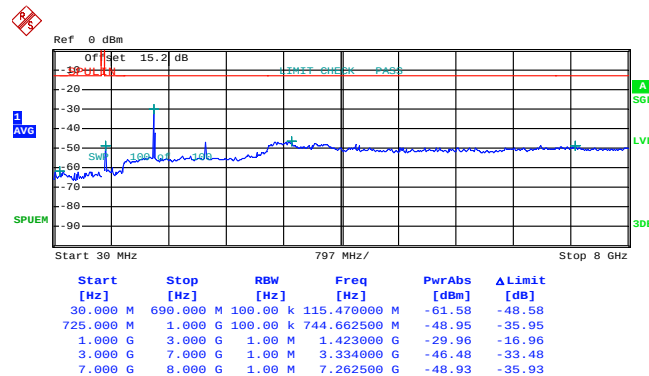
Band :	LTE Band 12	Channel :	CH23155 (High)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 30.MAY.2014 20:53:03

16QAM (RB Size 1, RB Offset 0)

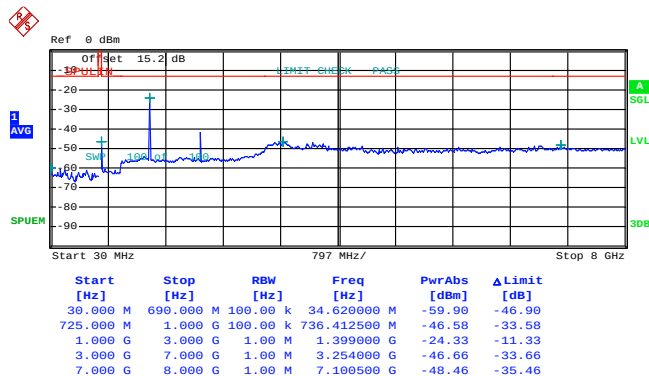


Date: 30.MAY.2014 20:51:03



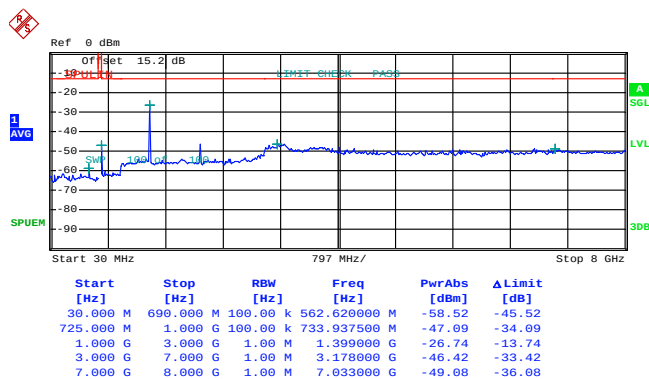
Band :	LTE Band 12	Channel :	CH23060 (Low)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 30.MAY.2014 21:04:34

16QAM (RB Size 1, RB Offset 0)

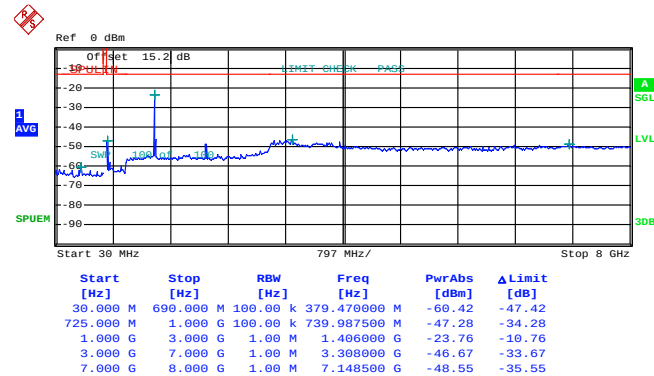


Date: 30.MAY.2014 21:07:28



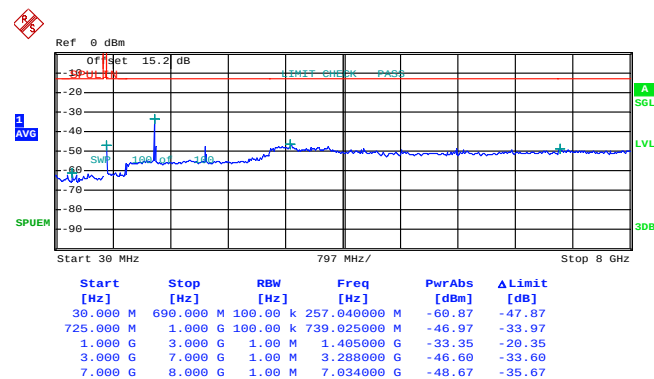
Band :	LTE Band 12	Channel :	CH23095 (Middle)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 30.MAY.2014 21:02:03

16QAM (RB Size 1, RB Offset 0)

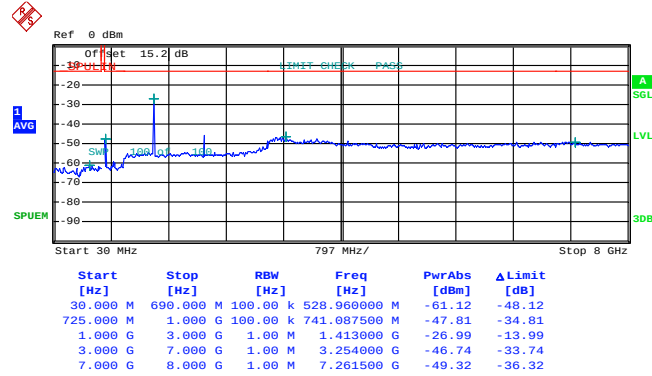


Date: 30.MAY.2014 20:59:56



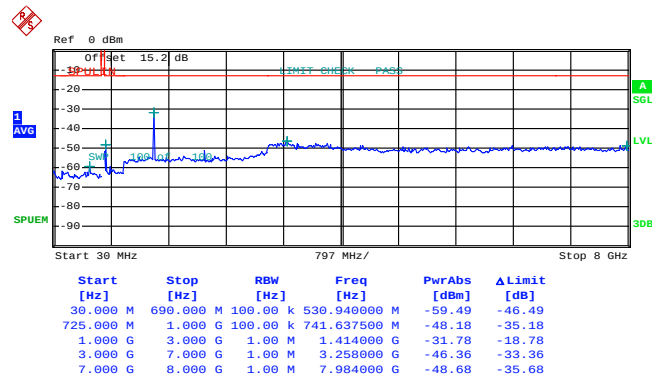
Band :	LTE Band 12	Channel :	CH23130 (High)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 30.MAY.2014 20:55:25

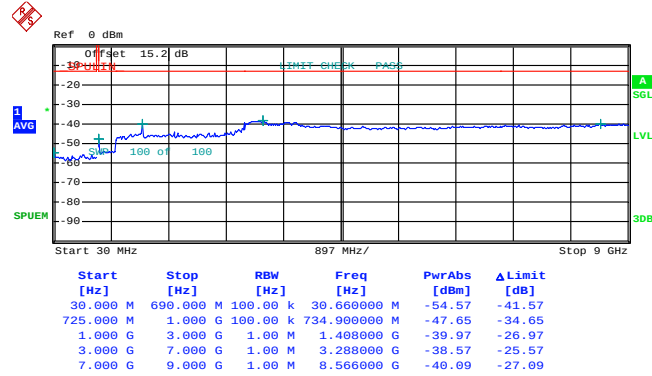
16QAM (RB Size 1, RB Offset 0)



Date: 30.MAY.2014 20:57:21

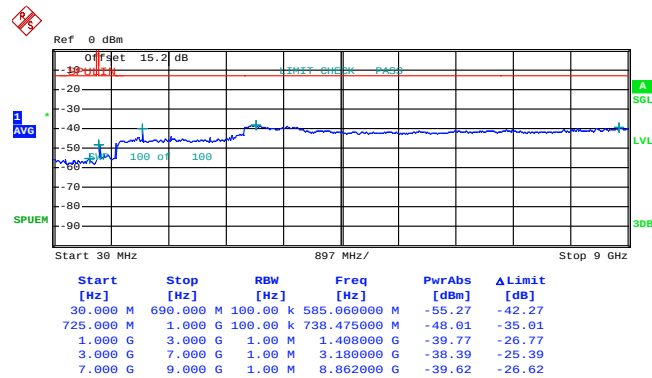
Band :	LTE Band 17	Channel :	CH23755 (Low)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 29.MAY.2014 15:05:59

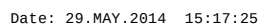
16QAM (RB Size 1, RB Offset 0)



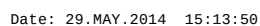
Date: 29.MAY.2014 15:09:49



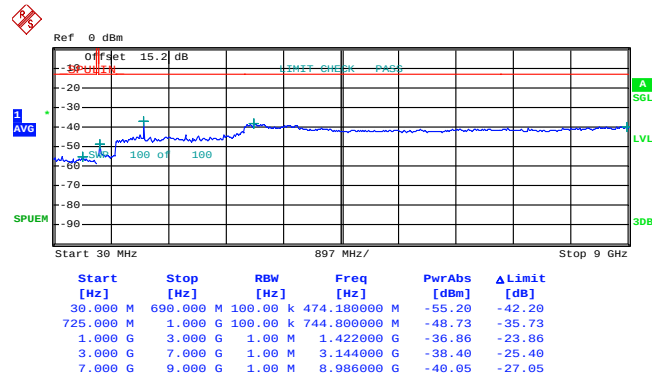
QPSK (RB Size 1, RB Offset 0)



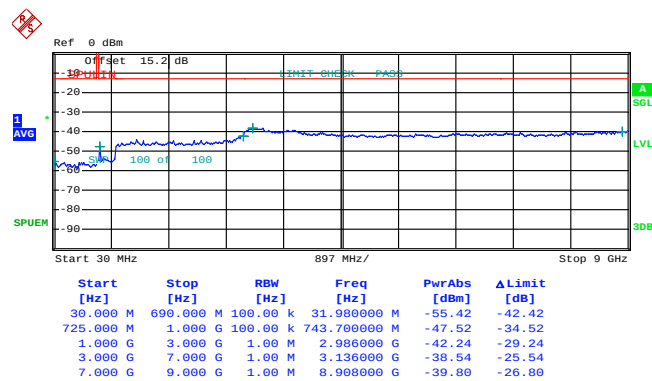
16QAM (RB Size 1, RB Offset 0)



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

QPSK (RB Size 1, RB Offset 0)


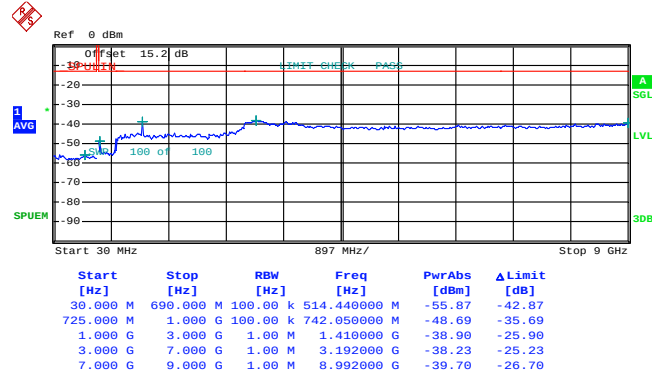
Date: 29.MAY.2014 15:21:42

16QAM (RB Size 1, RB Offset 0)


Date: 29.MAY.2014 15:25:03

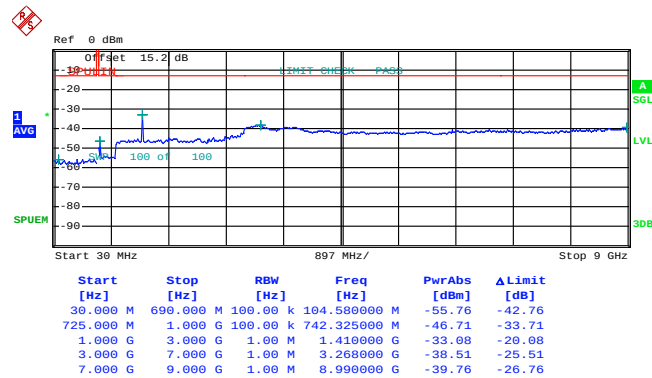
Band :	LTE Band 17	Channel :	CH23780 (Low)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 29.MAY.2014 16:41:48

16QAM (RB Size 1, RB Offset 0)

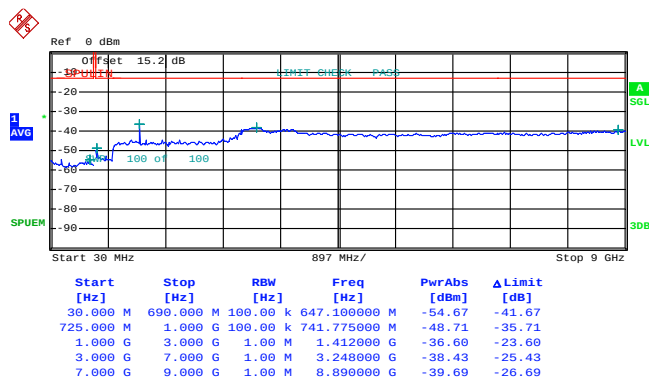


Date: 29.MAY.2014 16:37:49



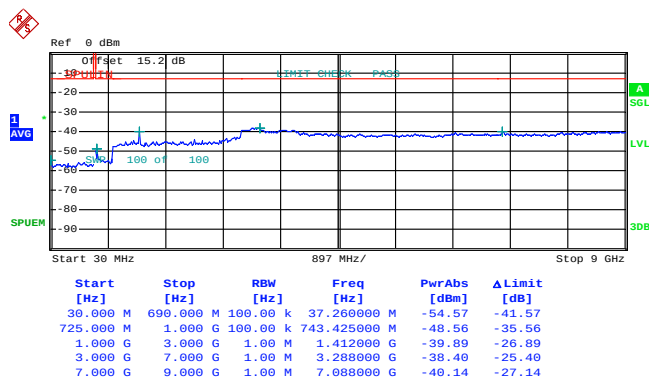
Band :	LTE Band 17	Channel :	CH23790 (Middle)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 0)



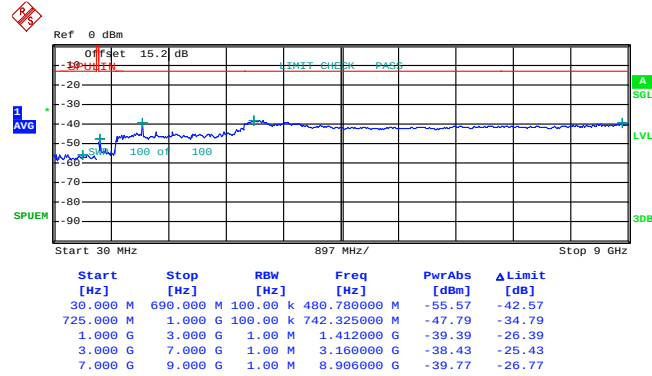
Date: 29.MAY.2014 16:45:16

16QAM (RB Size 1, RB Offset 0)

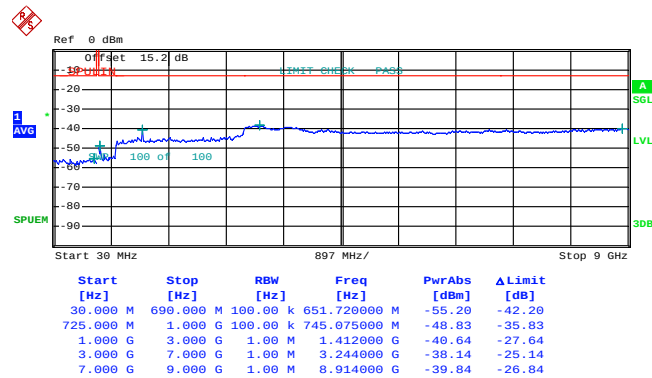


Date: 29.MAY.2014 16:48:32

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

QPSK (RB Size 1, RB Offset 0)


Date: 29.MAY.2014 16:56:51

16QAM (RB Size 1, RB Offset 0)


Date: 29.MAY.2014 16:53:26

3.6 Radiated Spurious Emission Measurement

3.6.1 Description of Radiated Spurious Emission

The radiated spurious emission was measured by substitution method according to ANSI / TIA / EIA-603-C-2004. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least $43 + 10 \log (P)$ dB.

The spectrum is scanned from 30 MHz up to a frequency including its 10th harmonic.

3.6.2 Measuring Instruments

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

3.6.3 Test Procedures

1. The EUT was placed on a rotatable wooden table with 0.8 meter above ground.
2. The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest spurious emission.
4. The height of the receiving antenna is varied between one meter and four meters to search the maximum spurious emission for both horizontal and vertical polarizations.
5. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
6. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
7. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
8. Taking the record of output power at antenna port.
9. Repeat step 7 to step 8 for another polarization.
10. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

The limit line is derived from $43 + 10\log(P)$ dB below the transmitter power P(Watts)

$$= P(W) - [43 + 10\log(P)] \text{ (dB)}$$

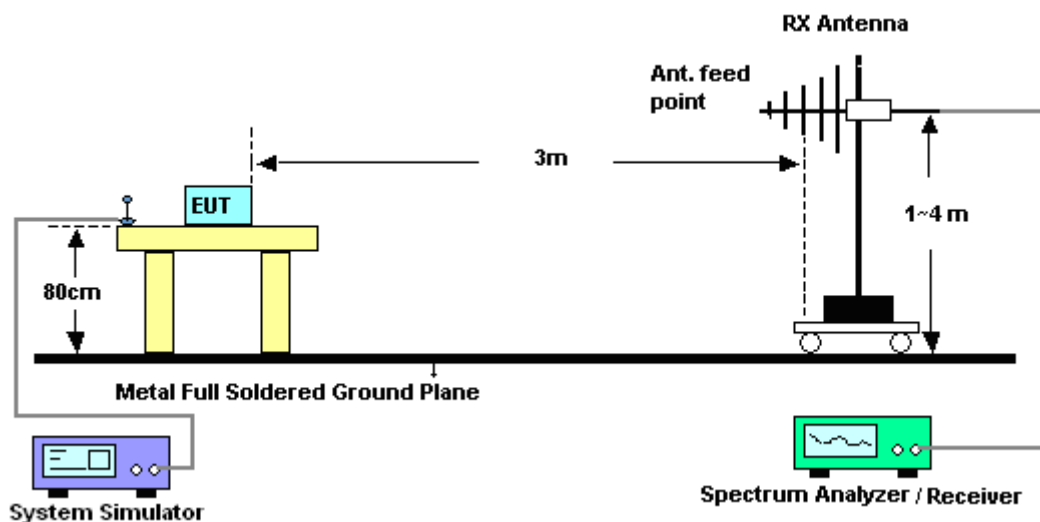
$$= [30 + 10\log(P)] \text{ (dBm)} - [43 + 10\log(P)] \text{ (dB)}$$

$$= -13\text{dBm}.$$

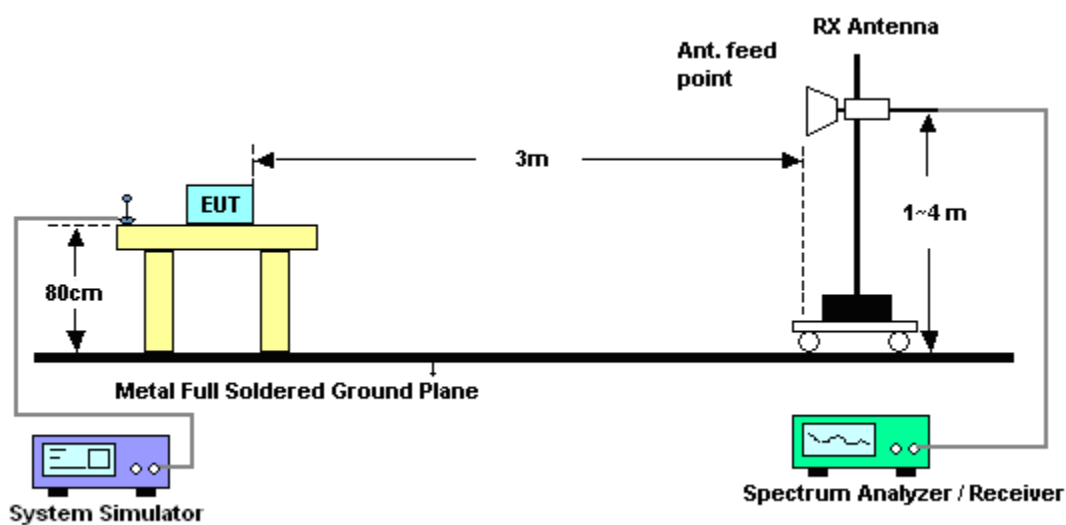
11. $\text{EIRP (dBm)} = \text{S.G. Power} - \text{Tx Cable Loss} + \text{Tx Antenna Gain}$
12. $\text{ERP (dBm)} = \text{EIRP} - 2.15$

3.6.4 Test Setup

For radiated emissions from 30MHz to 1GHz

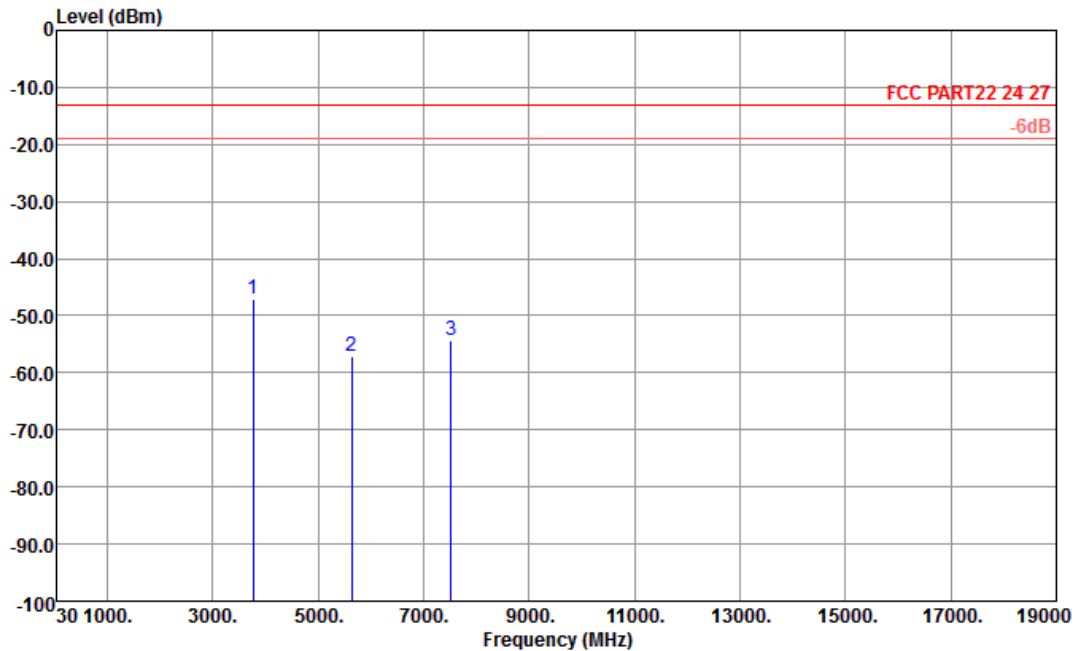


For radiated emissions above 1GHz



3.6.5 Test Result of Field Strength of Spurious Radiated

Band :	LTE Band 2	Temperature :	22~23°C
Test Mode :	1.4MHz QPSK RB Size 1 Offset 0	Relative Humidity :	42~43%
Test Engineer :	Jun Liu	Polarization :	Horizontal
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



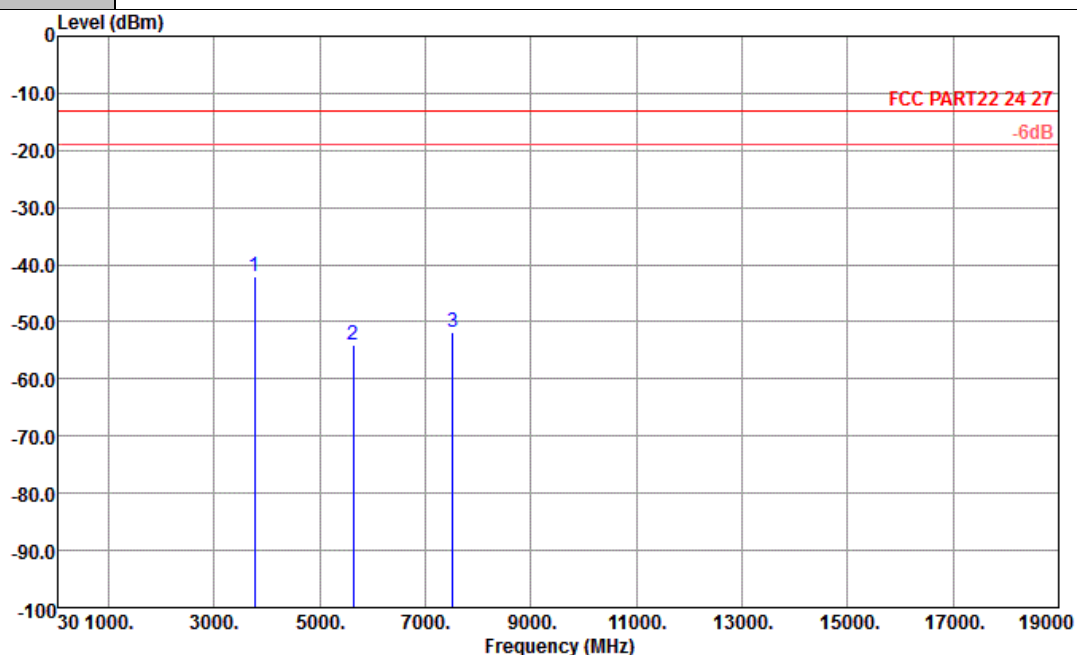
Site : 03CH01-KS

Condition : FCC PART22 24 27 HF_EIRP_FACTOR130726 HORIZONTAL

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3759	-47.19	-13	-34.19	-55.46	-53.57	0.78	7.16	H	Pass
5637	-57.06	-13	-44.06	-67.12	-65.60	1.04	9.58	H	Pass
7518	-54.42	-13	-41.42	-65.96	-64.53	1.35	11.46	H	Pass



Band :	LTE Band 2	Temperature :	22~23°C
Test Mode :	1.4MHz QPSK RB Size 1 Offset 0	Relative Humidity :	42~43%
Test Engineer :	Jun Liu	Polarization :	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		

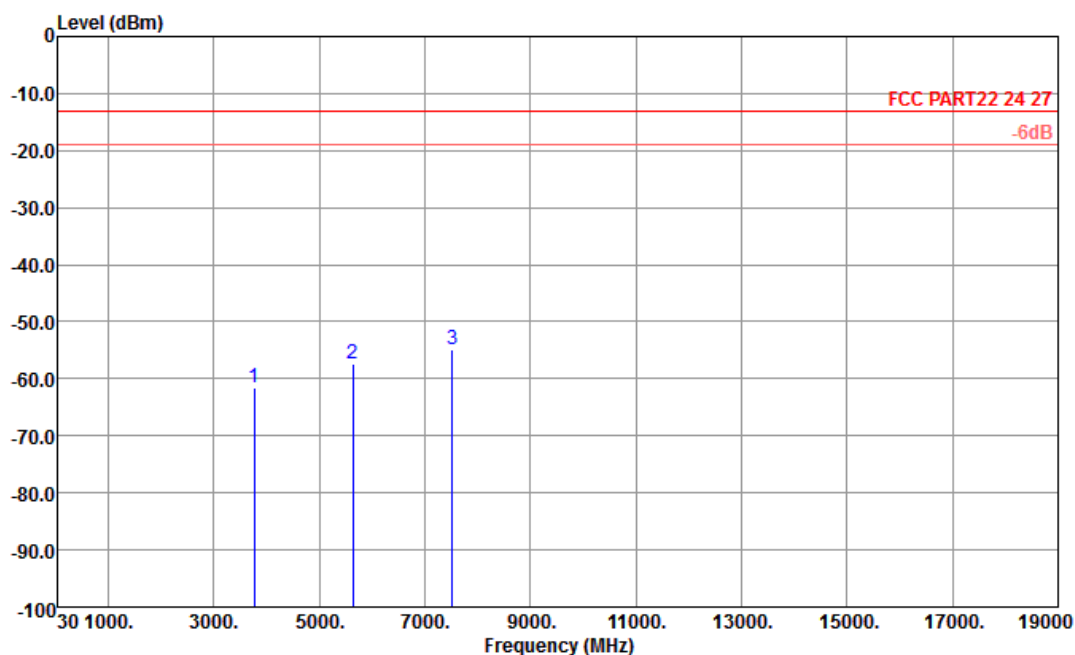


Site : 03CH01-KS

Condition : FCC PART22 24 27 HF_EIRP_FACTOR130726 VERTICAL

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3759	-42.01	-13	-29.01	-53.09	-48.39	0.78	7.16	V	Pass
5637	-54.17	-13	-41.17	-66.82	-62.71	1.04	9.58	V	Pass
7517	-51.81	-13	-38.81	-65.9	-61.92	1.35	11.46	V	Pass

Band :	LTE Band 2	Temperature :	22~23°C
Test Mode :	3MHz QPSK RB Size 1 Offset 0	Relative Humidity :	42~43%
Test Engineer :	Jun Liu	Polarization :	Horizontal
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



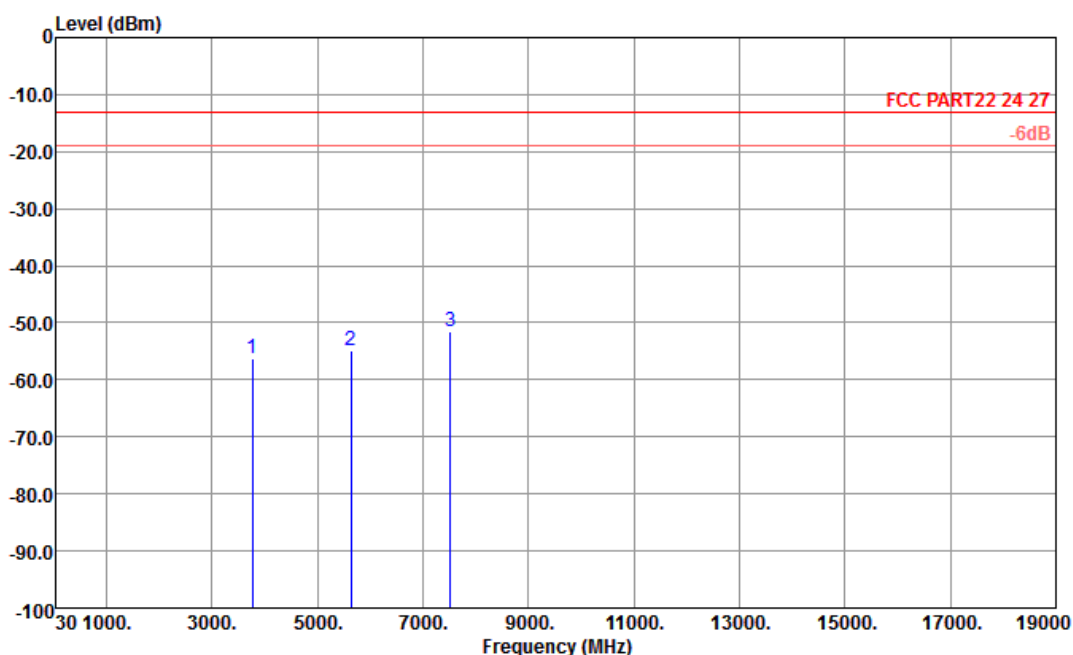
Site : 03CH01-KS

Condition : FCC PART22 24 27 HF_EIRP_FACTOR130726 HORIZONTAL

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3756	-61.45	-13	-48.45	-64.80	-67.83	0.78	7.16	H	Pass
5634	-57.27	-13	-44.27	-67.33	-65.81	1.04	9.58	H	Pass
7515	-54.81	-13	-41.81	-66.35	-64.92	1.35	11.46	H	Pass



Band :	LTE Band 2	Temperature :	22~23°C
Test Mode :	3MHz QPSK RB Size 1 Offset 0	Relative Humidity :	42~43%
Test Engineer :	Jun Liu	Polarization :	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



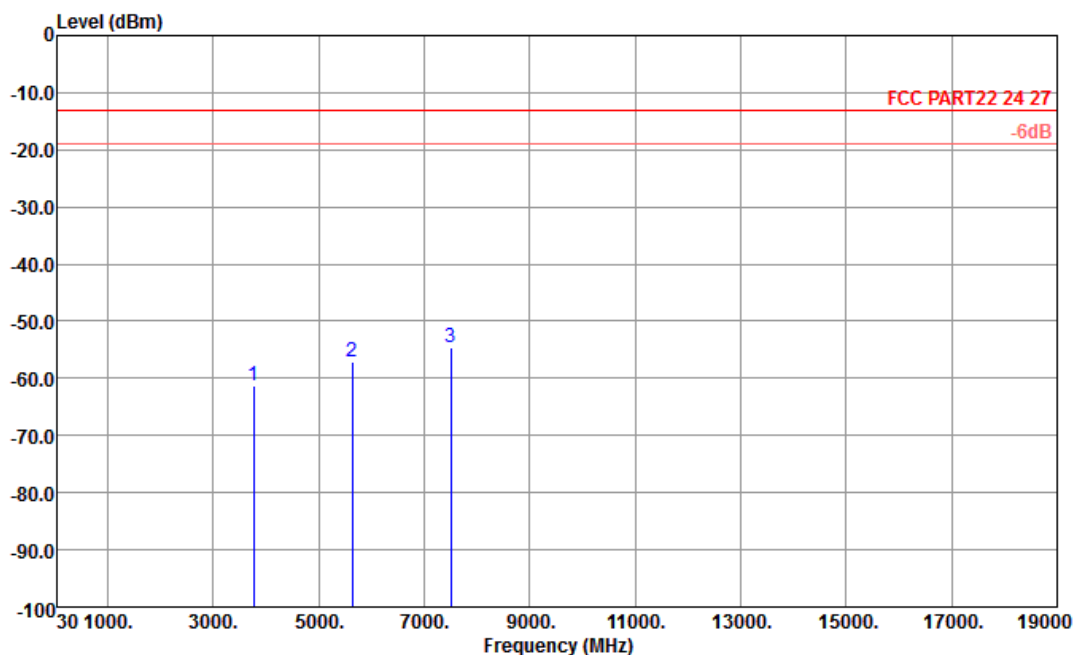
Site : 03CH01-KS

Condition : FCC PART22 24 27 HF_EIRP_FACTOR130726 VERTICAL

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3756	-56.31	-13	-43.31	-64.71	-62.69	0.78	7.16	V	Pass
5634	-54.83	-13	-41.83	-67.48	-63.37	1.04	9.58	V	Pass
7515	-51.43	-13	-38.43	-65.52	-61.54	1.35	11.46	V	Pass



Band :	LTE Band 2	Temperature :	22~23°C
Test Mode :	5MHz QPSK RB Size 1 Offset 0	Relative Humidity :	42~43%
Test Engineer :	Jun Liu	Polarization :	Horizontal
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		

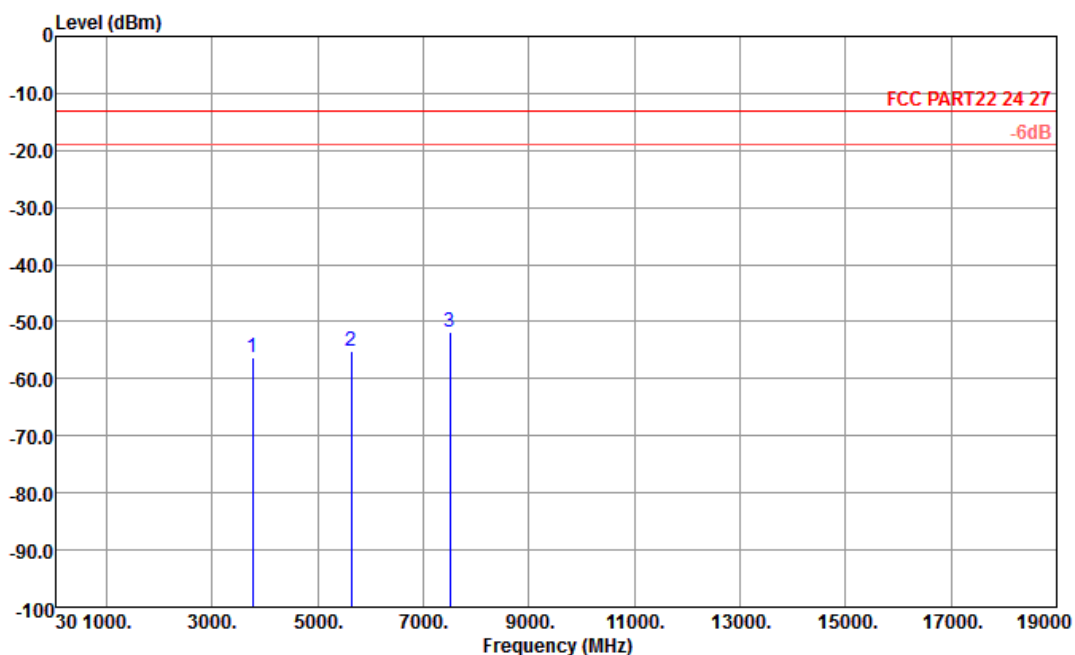


Site : 03CH01-KS

Condition : FCC PART22 24 27 HF_EIRP_FACTOR130726 HORIZONTAL

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3756	-61.37	-13	-48.37	-64.72	-67.75	0.78	7.16	H	Pass
5632.5	-57.01	-13	-44.01	-67.07	-65.55	1.04	9.58	H	Pass
7509	-54.49	-13	-41.49	-66.03	-64.60	1.35	11.46	H	Pass

Band :	LTE Band 2	Temperature :	22~23°C
Test Mode :	5MHz QPSK RB Size 1 Offset 0	Relative Humidity :	42~43%
Test Engineer :	Jun Liu	Polarization :	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



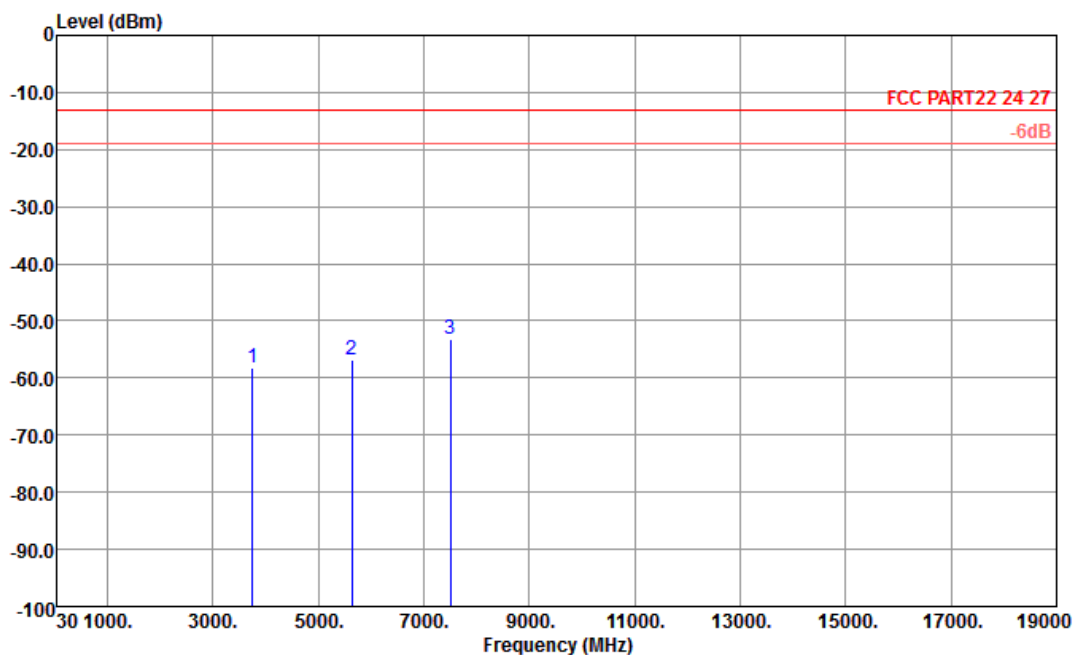
Site : 03CH01-KS

Condition : FCC PART22 24 27 HF_EIRP_FACTOR130726 VERTICAL

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3756	-56.37	-13	-43.37	-64.77	-62.75	0.78	7.16	V	Pass
5632.5	-55.26	-13	-42.26	-67.91	-63.80	1.04	9.58	V	Pass
7509	-51.80	-13	-38.80	-65.89	-61.91	1.35	11.46	V	Pass



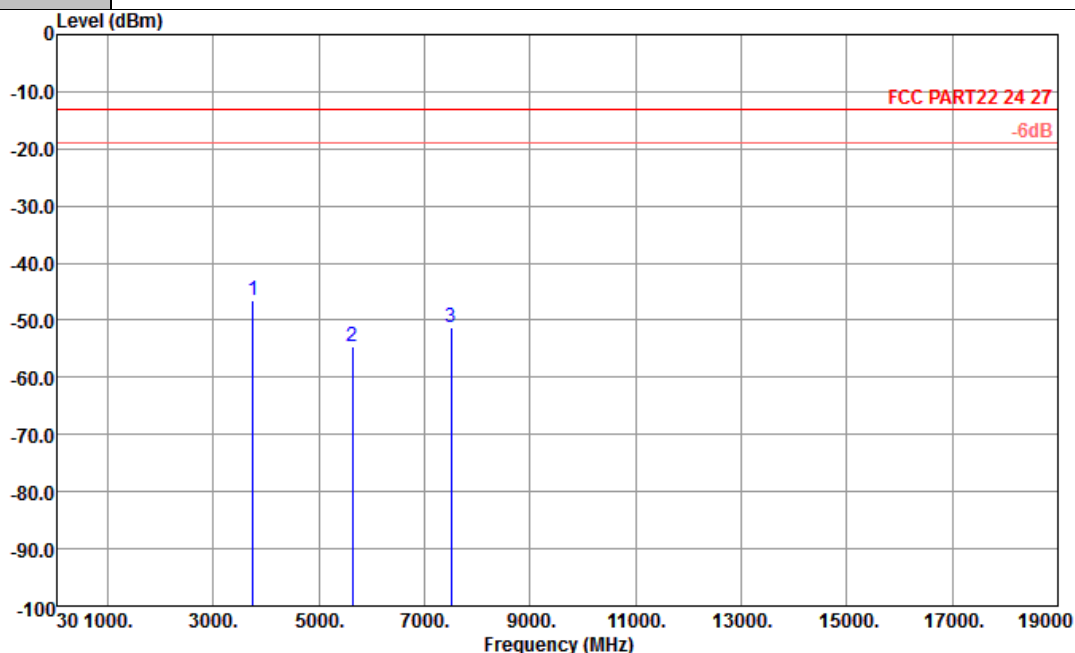
Band :	LTE Band 2	Temperature :	22~23°C
Test Mode :	10MHz QPSK RB Size 1 Offset 0	Relative Humidity :	42~43%
Test Engineer :	Jun Liu	Polarization :	Horizontal
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3750	-58.27	-13	-45.27	-61.85	-64.65	0.78	7.16	H	Pass
5625	-56.91	-13	-43.91	-66.97	-65.45	1.04	9.58	H	Pass
7500	-53.34	-13	-40.34	-64.88	-63.45	1.35	11.46	H	Pass



Band :	LTE Band 2	Temperature :	22~23°C
Test Mode :	10MHz QPSK RB Size 1 Offset 0	Relative Humidity :	42~43%
Test Engineer :	Jun Liu	Polarization :	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		

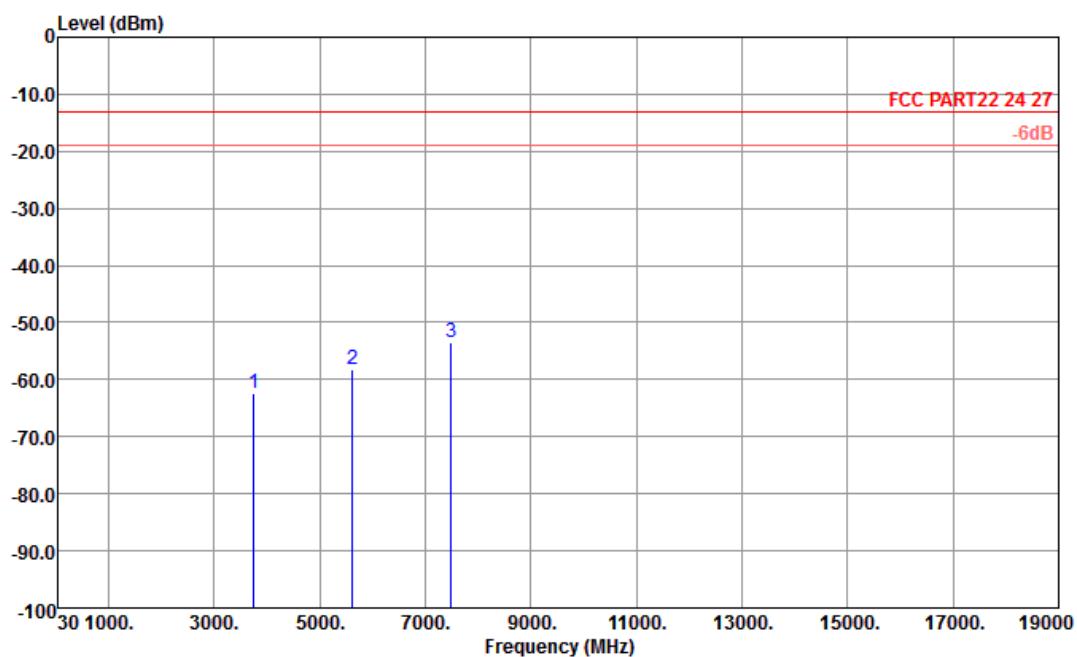


Site : 03CH01-KS

Condition : FCC PART22 24 27 HF_EIRP_FACTOR130726 VERTICAL

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3750	-46.40	-13	-33.40	-56.66	-52.78	0.78	7.16	V	Pass
5625	-54.60	-13	-41.60	-67.25	-63.14	1.04	9.58	V	Pass
7500	-51.17	-13	-38.17	-65.26	-61.28	1.35	11.46	V	Pass

Band :	LTE Band 2	Temperature :	22~23°C
Test Mode :	15MHz QPSK RB Size 1 Offset 0	Relative Humidity :	42~43%
Test Engineer :	Jun Liu	Polarization :	Horizontal
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		

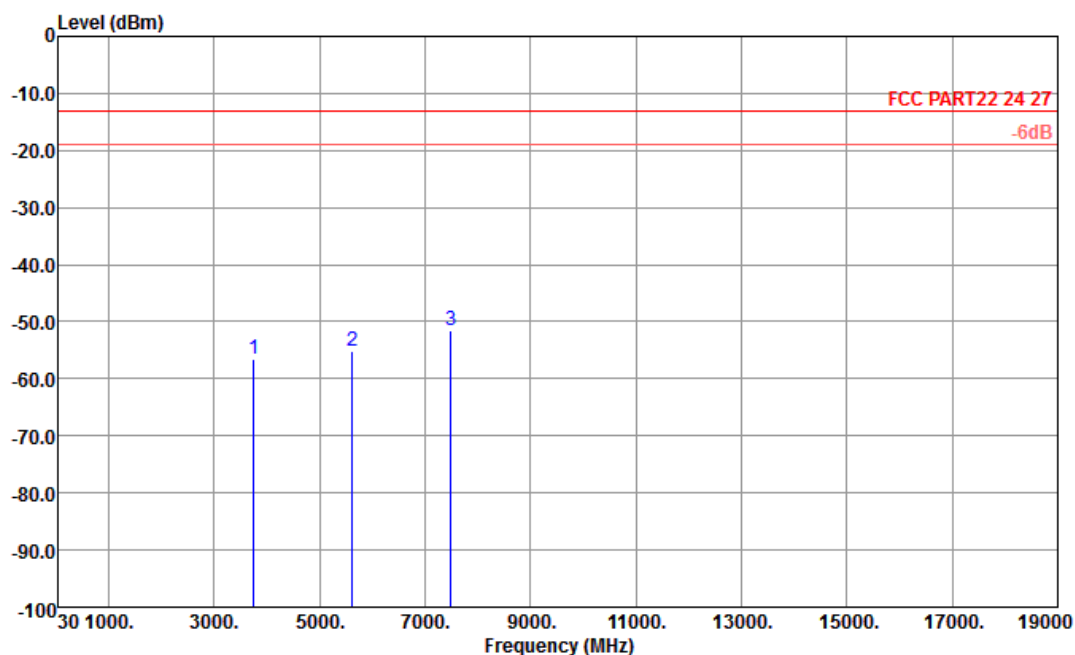


Site : 03CH01-KS

Condition : FCC PART22 24 27 HF_EIRP_FACTOR130726 HORIZONTAL

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3744	-62.37	-13	-49.37	-65.72	-68.75	0.78	7.16	H	Pass
5617.5	-58.09	-13	-45.09	-68.15	-66.63	1.04	9.58	H	Pass
7491	-53.35	-13	-40.35	-64.89	-63.46	1.35	11.46	H	Pass

Band :	LTE Band 2	Temperature :	22~23°C
Test Mode :	15MHz QPSK RB Size 1 Offset 0	Relative Humidity :	42~43%
Test Engineer :	Jun Liu	Polarization :	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		

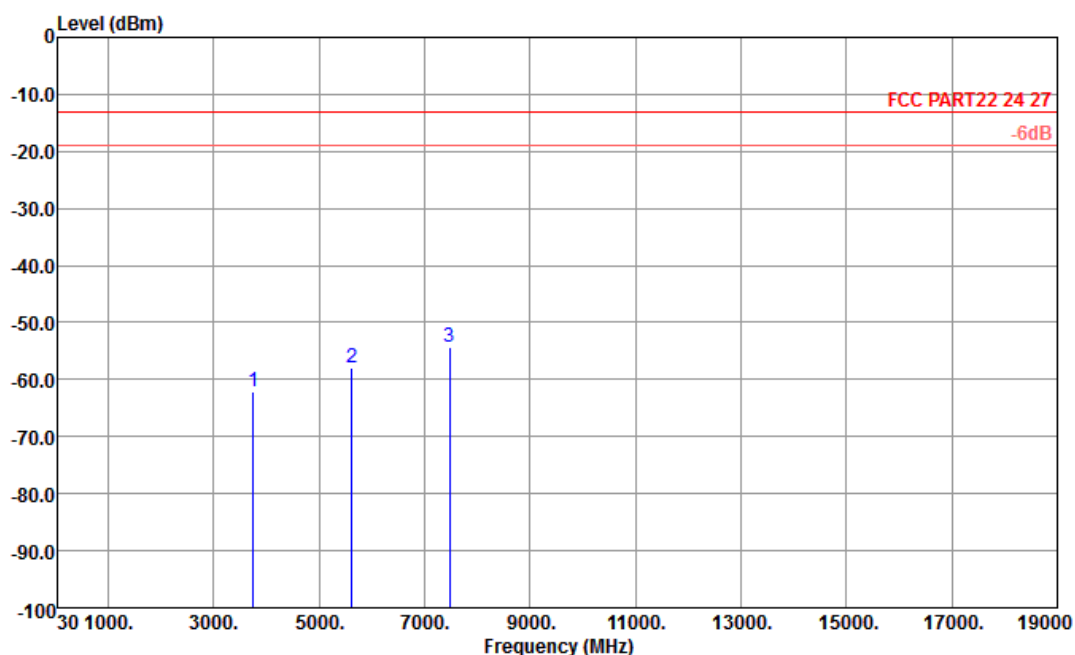


Site : 03CH01-KS

Condition : FCC PART22 24 27 HF_EIRP_FACTOR130726 VERTICAL

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3744	-56.65	-13	-43.65	-65.05	-63.03	0.78	7.16	V	Pass
5617	-55.21	-13	-42.21	-67.86	-63.75	1.04	9.58	V	Pass
7491	-51.41	-13	-38.41	-65.5	-61.52	1.35	11.46	V	Pass

Band :	LTE Band 2	Temperature :	22~23°C
Test Mode :	20MHz QPSK RB Size 1 Offset 0	Relative Humidity :	42~43%
Test Engineer :	Jun Liu	Polarization :	Horizontal
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



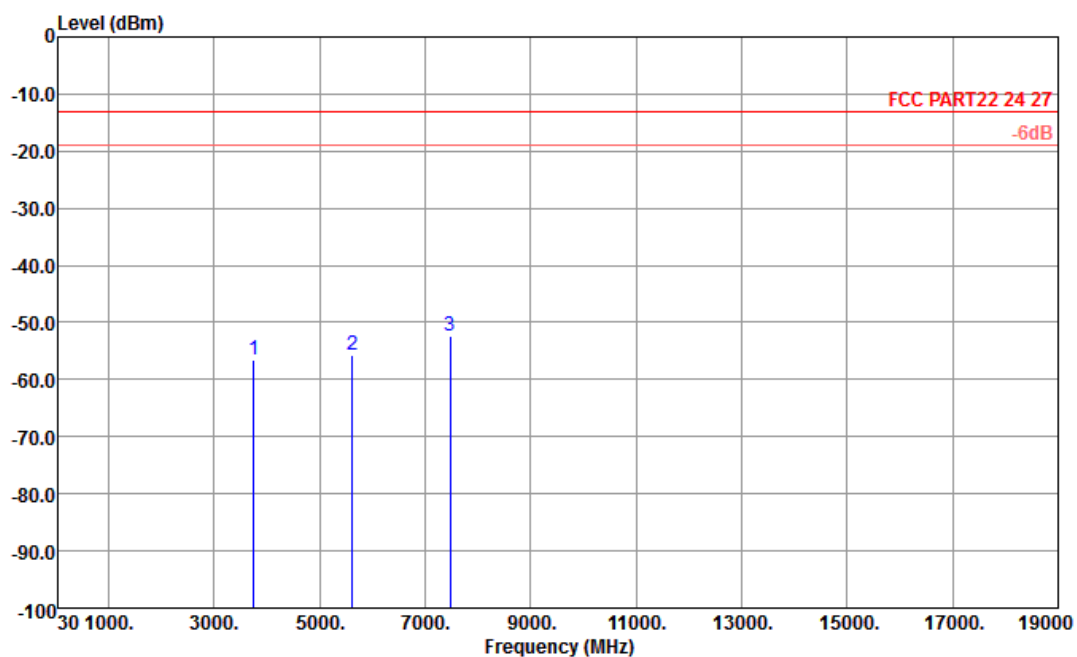
Site : 03CH01-KS

Condition : FCC PART22 24 27 HF_EIRP_FACTOR130726 HORIZONTAL

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3741	-62.19	-13	-49.19	-65.54	-68.57	0.78	7.16	H	Pass
5610	-57.96	-13	-44.96	-68.02	-66.50	1.04	9.58	H	Pass
7479	-54.19	-13	-41.19	-65.73	-64.30	1.35	11.46	H	Pass



Band :	LTE Band 2	Temperature :	22~23°C
Test Mode :	20MHz QPSK RB Size 1 Offset 0	Relative Humidity :	42~43%
Test Engineer :	Jun Liu	Polarization :	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



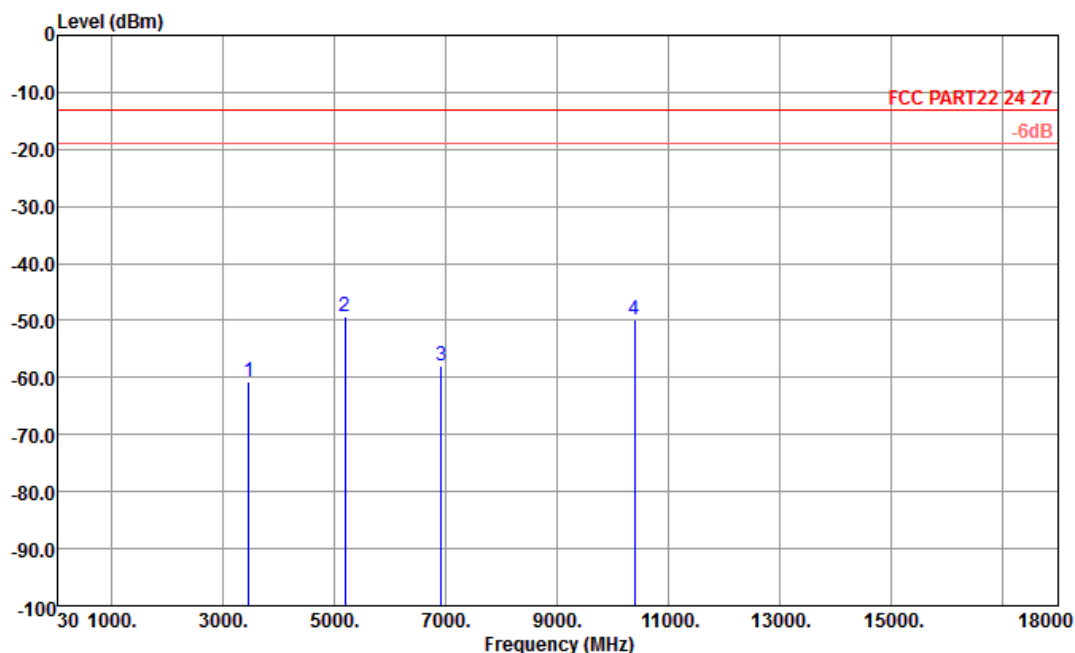
Site : 03CH01-KS

Condition : FCC PART22 24 27 HF_EIRP_FACTOR130726 VERTICAL

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3741	-56.52	-13	-43.52	-64.92	-62.90	0.78	7.16	V	Pass
5610	-55.74	-13	-42.74	-68.39	-64.28	1.04	9.58	V	Pass
7479	-52.43	-13	-39.43	-66.52	-62.54	1.35	11.46	V	Pass



Band :	LTE Band 4	Temperature :	22~23°C
Test Mode :	1.4MHz QPSK RB Size 1 Offset 0	Relative Humidity :	42~43%
Test Engineer :	Jun Liu	Polarization :	Horizontal
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



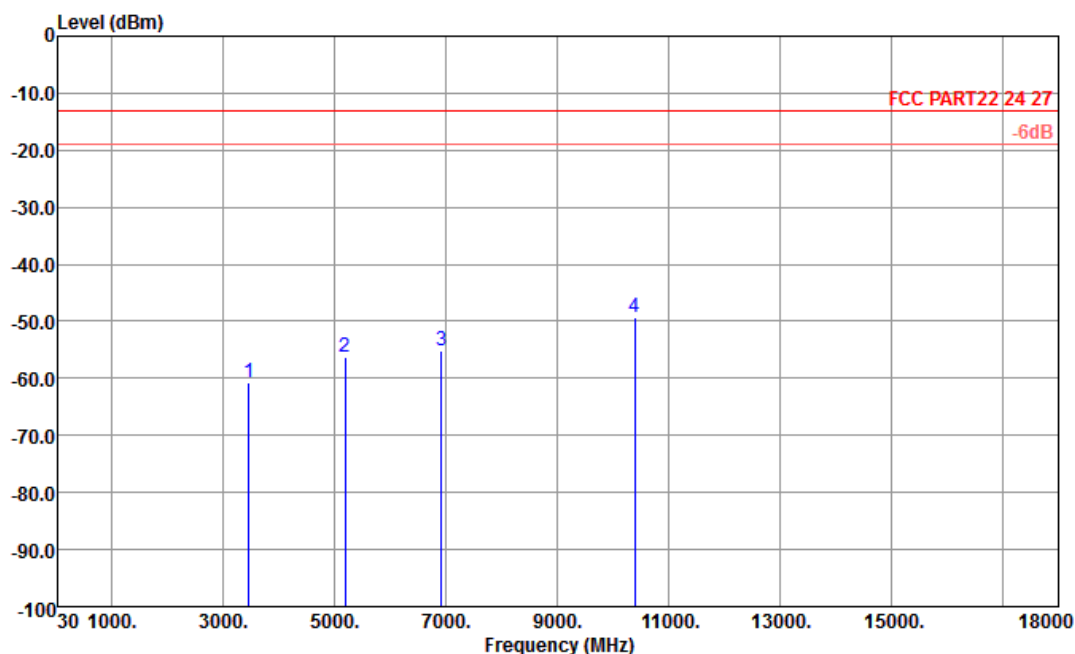
Site : 03CH01-KS

Condition : FCC PART22 24 27 HF_EIRP_FACTOR130726 HORIZONTAL

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3465	-60.85	-13	-47.85	-63.08	-66.25	2.2	7.60	H	Pass
5196	-49.41	-13	-36.41	-61.81	-56.19	3.12	9.90	H	Pass
6927	-57.97	-13	-44.97	-66.26	-65.86	2.98	10.87	H	Pass
10389	-49.73	-13	-36.73	-64.57	-59.22	2.97	12.46	H	Pass



Band :	LTE Band 4	Temperature :	22~23°C
Test Mode :	1.4MHz QPSK RB Size 1 Offset 0	Relative Humidity :	42~43%
Test Engineer :	Jun Liu	Polarization :	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



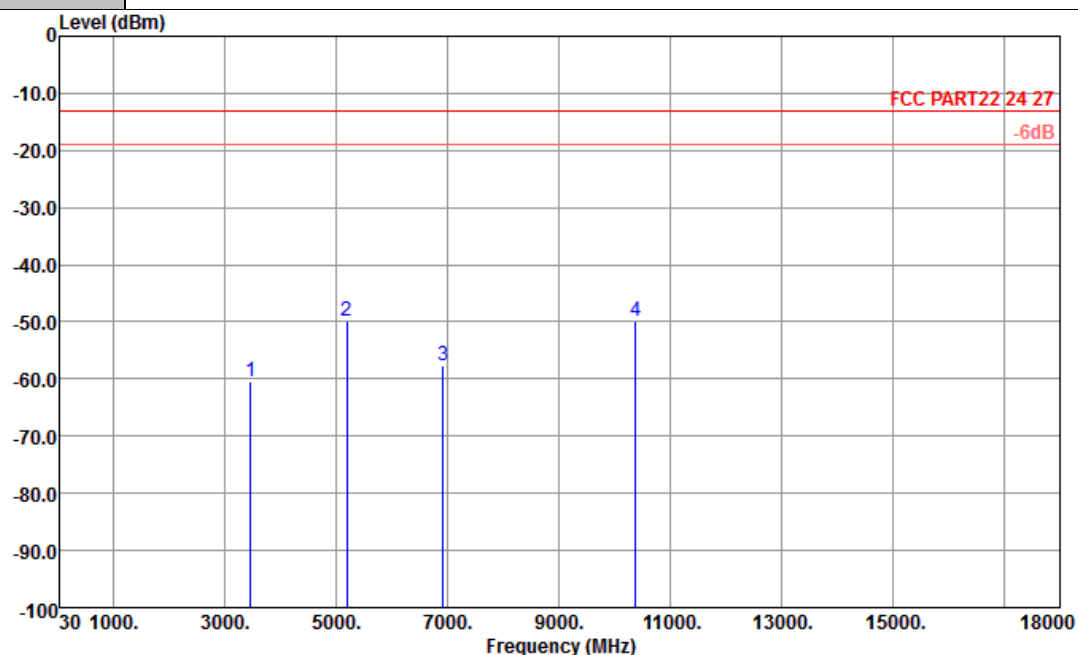
Site : 03CH01-KS

Condition : FCC PART22 24 27 HF_EIRP_FACTOR130726 VERTICAL

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3462	-60.60	-13	-47.60	-61.62	-66.00	2.2	7.6	V	Pass
5196	-56.14	-13	-43.14	-64.11	-62.92	3.12	9.9	V	Pass
6927	-55.16	-13	-42.16	-65.68	-63.05	2.98	10.87	V	Pass
10392	-49.38	-13	-36.38	-62.03	-58.87	2.97	12.46	V	Pass



Band :	LTE Band 4	Temperature :	22~23°C
Test Mode :	3MHz QPSK RB Size 1 Offset 0	Relative Humidity :	42~43%
Test Engineer :	Jun Liu	Polarization :	Horizontal
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



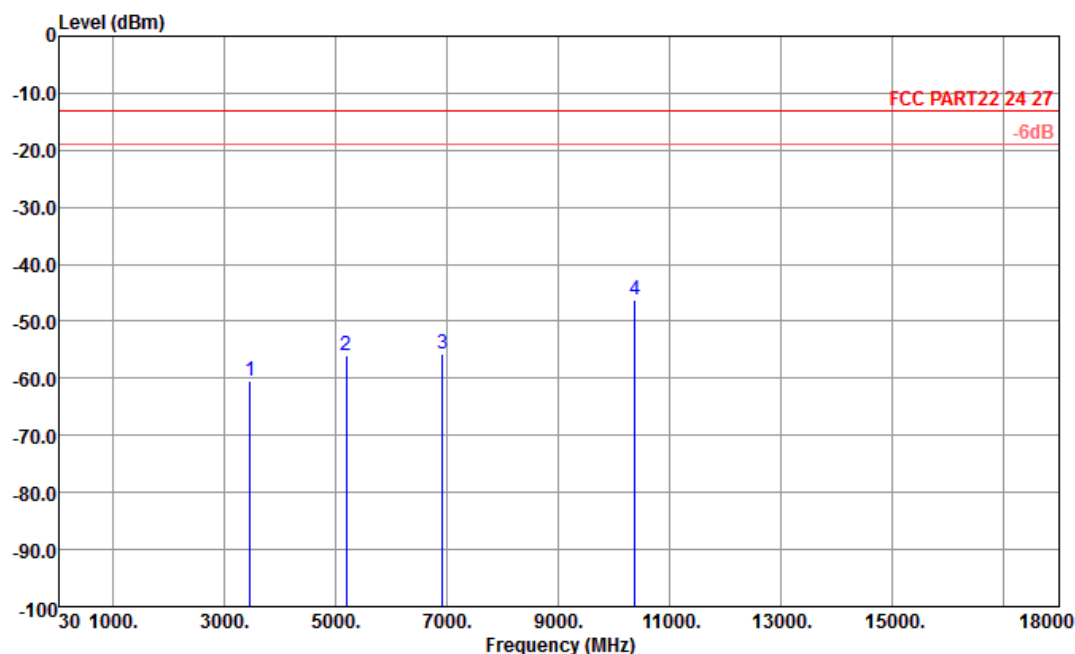
Site : 03CH01-KS

Condition : FCC PART22 24 27 HF_EIRP_FACTOR130726 HORIZONTAL

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3462	-60.58	-13	-47.58	-62.81	-65.98	2.2	7.60	H	Pass
5196	-49.79	-13	-36.79	-62.26	-56.57	3.12	9.90	H	Pass
6924	-57.63	-13	-44.63	-65.92	-65.52	2.98	10.87	H	Pass
10386	-49.88	-13	-36.88	-64.72	-59.37	2.97	12.46	H	Pass



Band :	LTE Band 4	Temperature :	22~23°C
Test Mode :	3MHz QPSK RB Size 1 Offset 0	Relative Humidity :	42~43%
Test Engineer :	Jun Liu	Polarization :	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



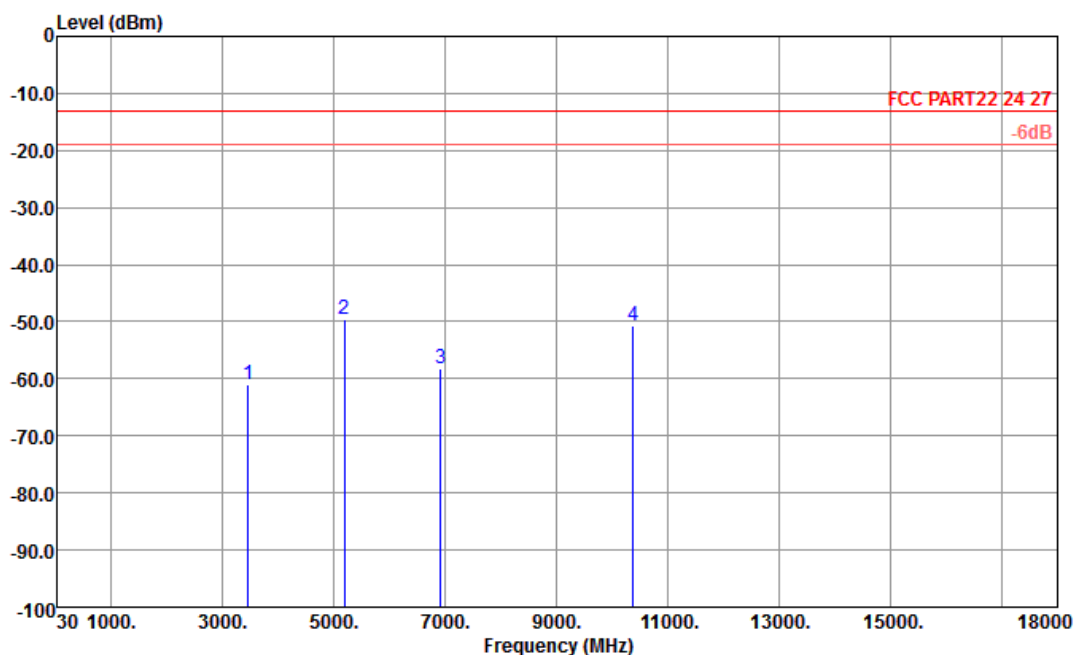
Site : 03CH01-KS

Condition : FCC PART22 24 27 HF_EIRP_FACTOR130726 VERTICAL

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3462	-60.46	-13	-47.46	-61.48	-65.86	2.2	7.6	V	Pass
5196	-56.09	-13	-43.09	-64.06	-62.87	3.12	9.9	V	Pass
6924	-55.64	-13	-42.64	-66.16	-63.53	2.98	10.87	V	Pass
10386	-46.19	-13	-33.19	-59.71	-55.68	2.97	12.46	V	Pass



Band :	LTE Band 4	Temperature :	22~23°C
Test Mode :	5MHz QPSK RB Size 1 Offset 0	Relative Humidity :	42~43%
Test Engineer :	Jun Liu	Polarization :	Horizontal
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		

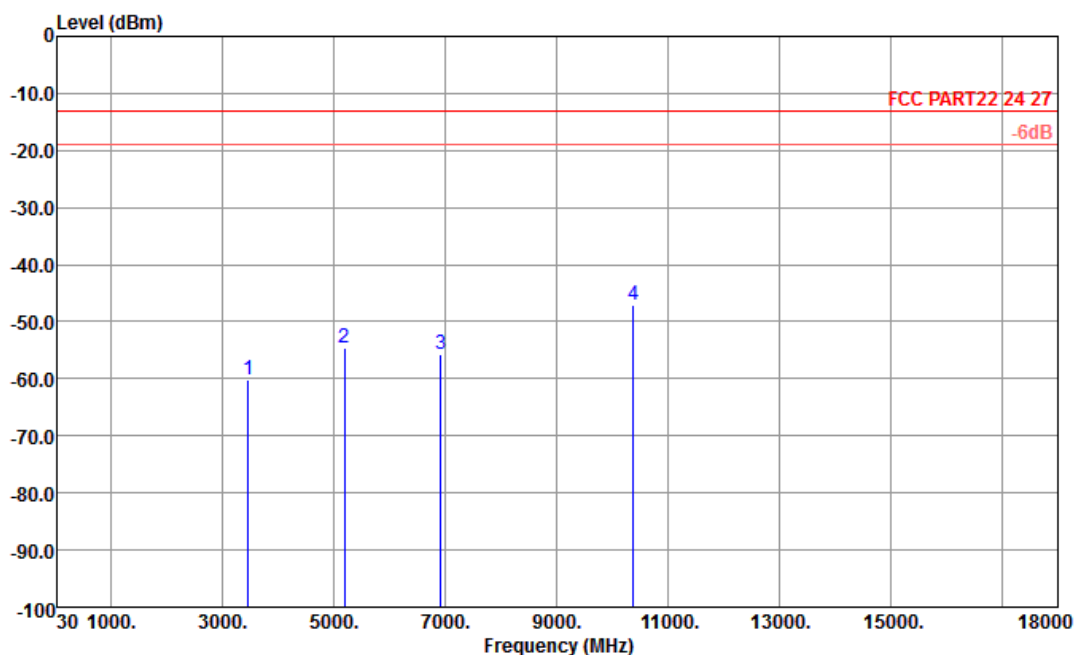


Site : 03CH01-KS

Condition : FCC PART22 24 27 HF_EIRP_FACTOR130726 HORIZONTAL

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3460	-60.87	-13	-47.87	-63.10	-66.27	2.2	7.60	H	Pass
5193	-49.64	-13	-36.64	-62.08	-56.42	3.12	9.90	H	Pass
6921	-58.19	-13	-45.19	-66.48	-66.08	2.98	10.87	H	Pass
10380	-50.72	-13	-37.72	-65.56	-60.21	2.97	12.46	H	Pass

Band :	LTE Band 4	Temperature :	22~23°C
Test Mode :	5MHz QPSK RB Size 1 Offset 0	Relative Humidity :	42~43%
Test Engineer :	Jun Liu	Polarization :	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



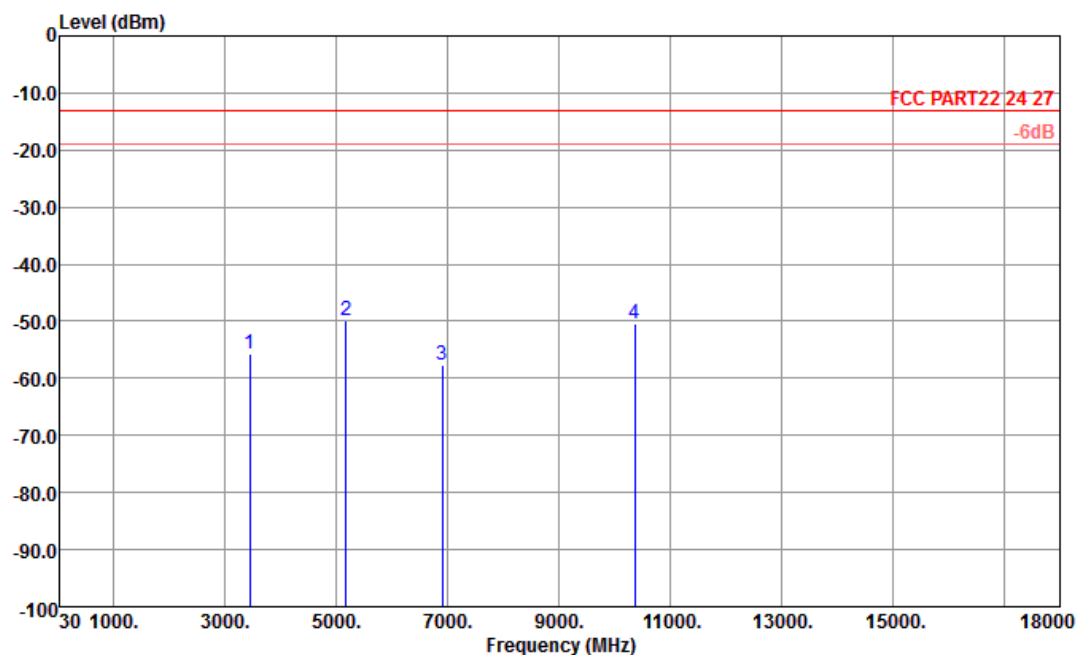
Site : 03CH01-KS

Condition : FCC PART22 24 27 HF_EIRP_FACTOR130726 VERTICAL

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3459	-60.07	-13	-47.07	-61.09	-65.47	2.2	7.6	V	Pass
5193	-54.71	-13	-41.71	-62.77	-61.49	3.12	9.9	V	Pass
6921	-55.78	-13	-42.78	-66.3	-63.67	2.98	10.87	V	Pass
10383	-46.96	-13	-33.96	-60.41	-56.45	2.97	12.46	V	Pass



Band :	LTE Band 4	Temperature :	22~23°C
Test Mode :	10MHz QPSK RB Size 1 Offset 0	Relative Humidity :	42~43%
Test Engineer :	Jun Liu	Polarization :	Horizontal
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		

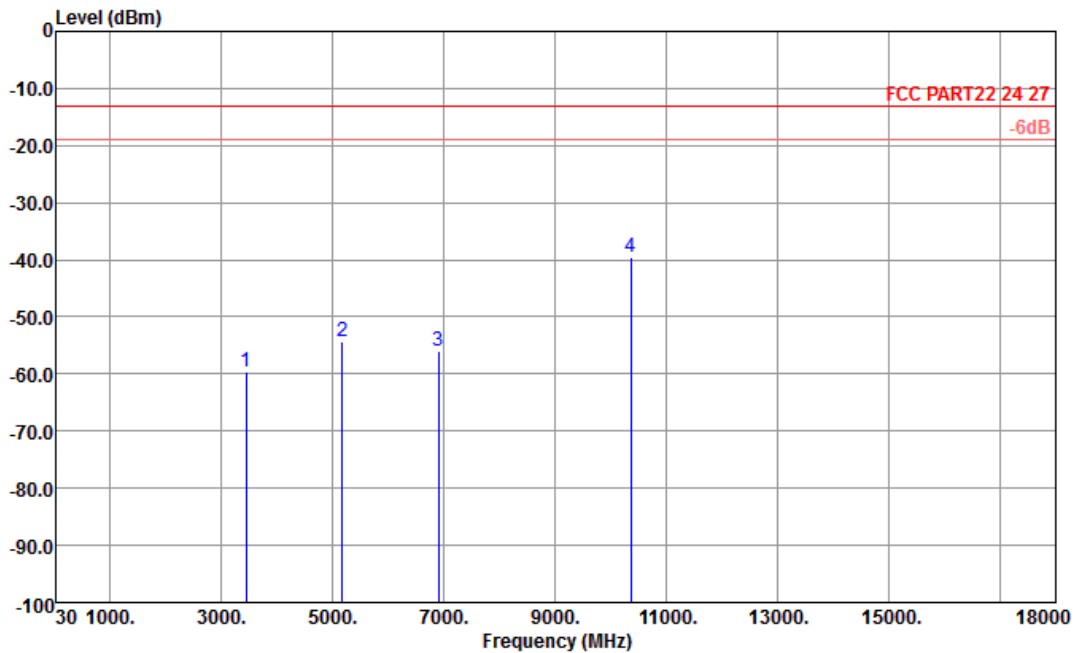


Site : 03CH01-KS

Condition : FCC PART22 24 27 HF_EIRP_FACTOR130726 HORIZONTAL

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3456	-55.71	-13	-42.71	-58.95	-61.11	2.2	7.60	H	Pass
5184	-49.85	-13	-36.85	-62.33	-56.63	3.12	9.90	H	Pass
6909	-57.67	-13	-44.67	-65.96	-65.56	2.98	10.87	H	Pass
10365	-50.53	-13	-37.53	-65.37	-60.02	2.97	12.46	H	Pass

Band :	LTE Band 4	Temperature :	22~23°C
Test Mode :	10MHz QPSK RB Size 1 Offset 0	Relative Humidity :	42~43%
Test Engineer :	Jun Liu	Polarization :	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		

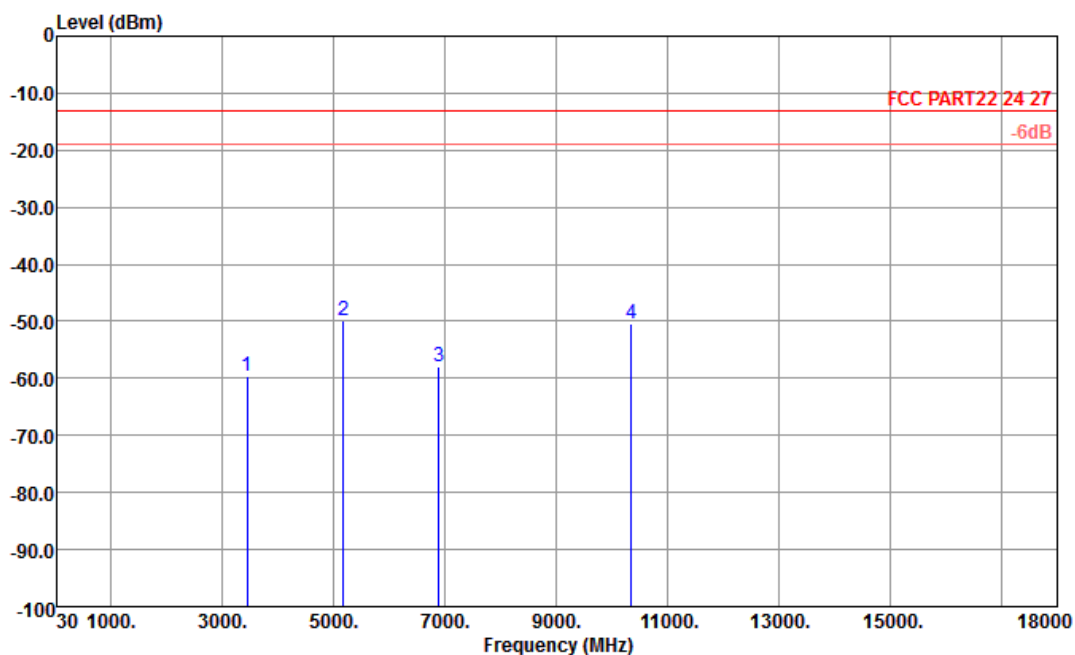


Site : 03CH01-KS

Condition : FCC PART22 24 27 HF_EIRP_FACTOR130726 VERTICAL

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3456	-59.52	-13	-46.52	-60.61	-64.92	2.2	7.6	V	Pass
5184	-54.43	-13	-41.43	-62.57	-61.21	3.12	9.9	V	Pass
6909	-56.11	-13	-43.11	-66.63	-64.00	2.98	10.87	V	Pass
10368	-39.47	-13	-26.47	-56.46	-48.96	2.97	12.46	V	Pass

Band :	LTE Band 4	Temperature :	22~23°C
Test Mode :	15MHz QPSK RB Size 1 Offset 0	Relative Humidity :	42~43%
Test Engineer :	Jun Liu	Polarization :	Horizontal
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



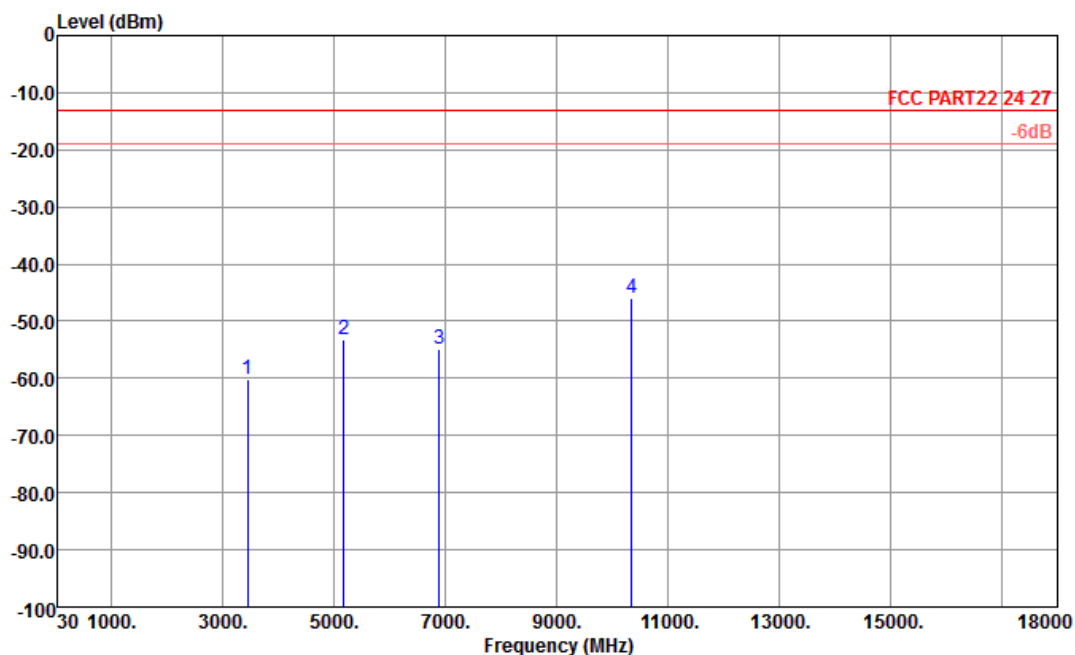
Site : 03CH01-KS

Condition : FCC PART22 24 27 HF_EIRP_FACTOR130726 HORIZONTAL

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3450	-59.50	-13	-46.50	-61.73	-64.90	2.2	7.60	H	Pass
5178	-49.78	-13	-36.78	-62.24	-56.56	3.12	9.90	H	Pass
6900	-57.84	-13	-44.84	-66.13	-65.73	2.98	10.87	H	Pass
10350	-50.49	-13	-37.49	-65.33	-59.98	2.97	12.46	H	Pass



Band :	LTE Band 4	Temperature :	22~23°C
Test Mode :	15MHz QPSK RB Size 1 Offset 0	Relative Humidity :	42~43%
Test Engineer :	Jun Liu	Polarization :	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



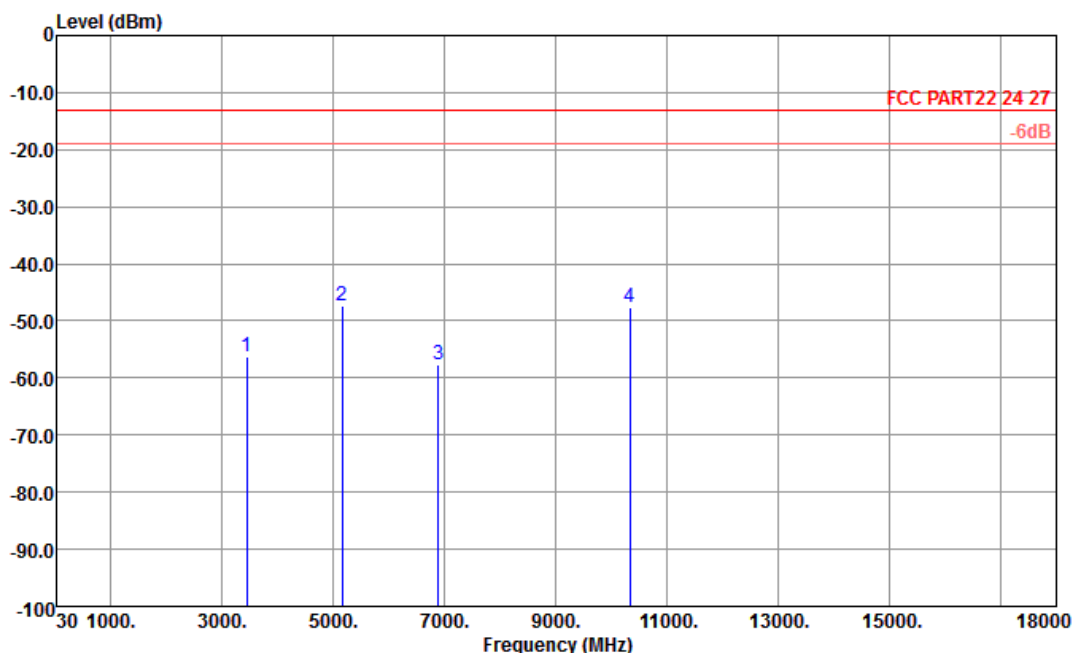
Site : 03CH01-KS

Condition : FCC PART22 24 27 HF_EIRP_FACTOR130726 VERTICAL

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3450	-60.25	-13	-47.25	-61.27	-65.65	2.2	7.6	V	Pass
5178	-53.12	-13	-40.12	-61.98	-59.90	3.12	9.9	V	Pass
6900	-55.00	-13	-42.00	-65.52	-62.89	2.98	10.87	V	Pass
10356	-46.06	-13	-33.06	-59.59	-55.55	2.97	12.46	V	Pass



Band :	LTE Band 4	Temperature :	22~23°C
Test Mode :	20MHz QPSK RB Size 1 Offset 0	Relative Humidity :	42~43%
Test Engineer :	Jun Liu	Polarization :	Horizontal
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



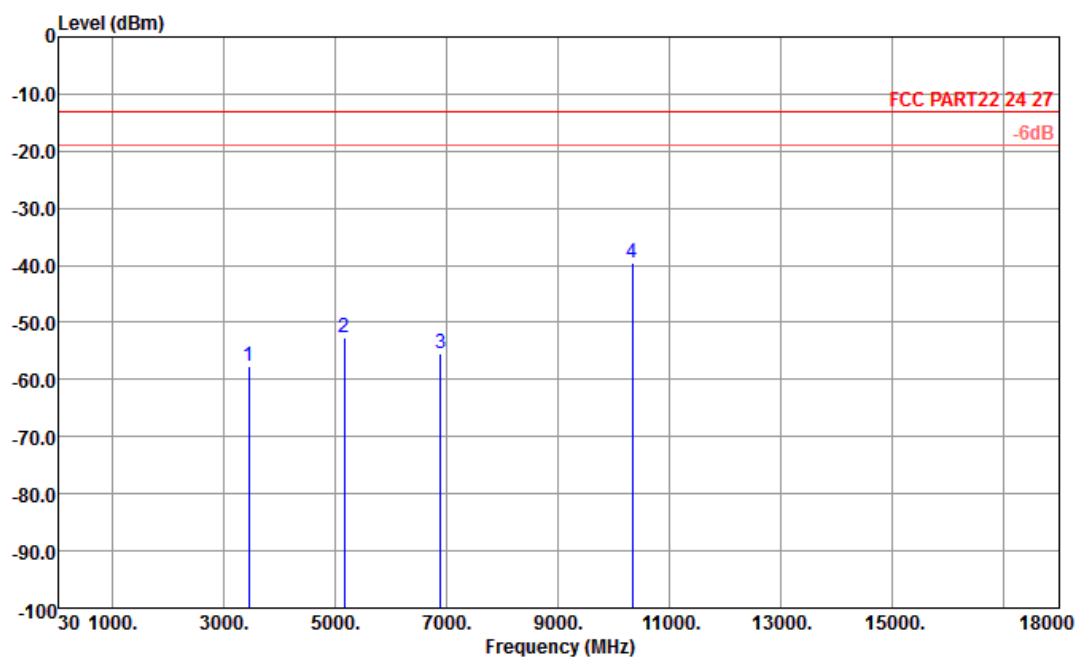
Site : 03CH01-KS

Condition : FCC PART22 24 27 HF_EIRP_FACTOR130726 HORIZONTAL

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3447	-56.18	-13	-43.18	-59.24	-61.58	2.2	7.60	H	Pass
5172	-47.32	-13	-34.32	-60.77	-54.10	3.12	9.90	H	Pass
6891	-57.77	-13	-44.77	-66.06	-65.66	2.98	10.87	H	Pass
10341	-47.60	-13	-34.60	-62.44	-57.09	2.97	12.46	H	Pass



Band :	LTE Band 4	Temperature :	22~23°C
Test Mode :	20MHz QPSK RB Size 1 Offset 0	Relative Humidity :	42~43%
Test Engineer :	Jun Liu	Polarization :	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		

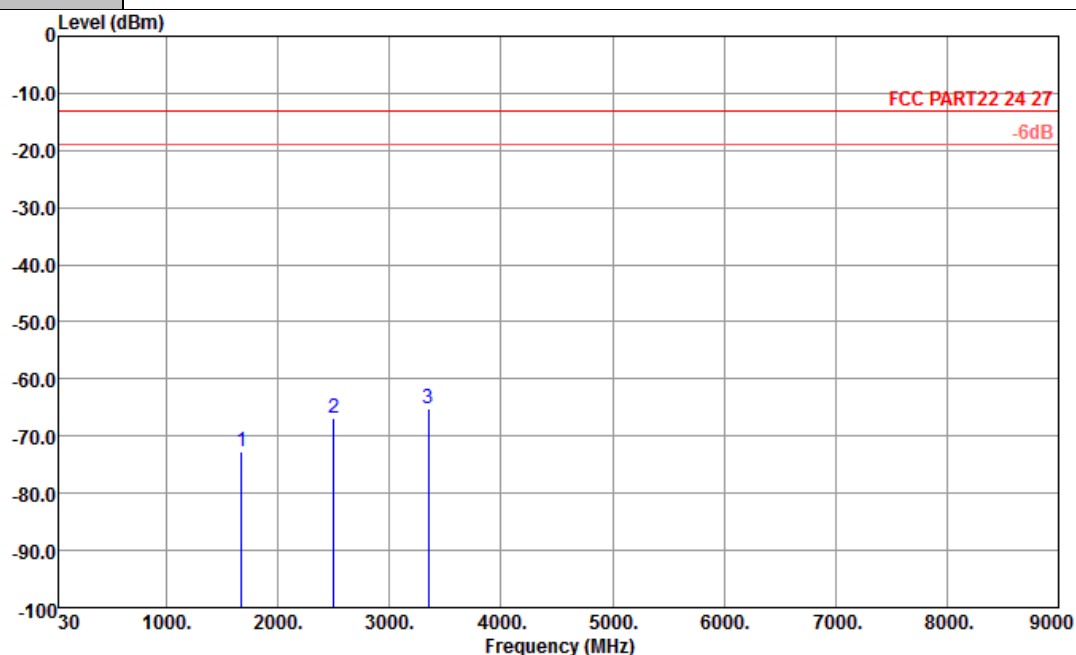


Site : 03CH01-KS

Condition : FCC PART22 24 27 HF_EIRP_FACTOR130726 VERTICAL

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3447	-57.79	-13	-44.79	-60	-63.19	2.2	7.6	V	Pass
5172	-52.60	-13	-39.60	-61.81	-59.38	3.12	9.9	V	Pass
6891	-55.56	-13	-42.56	-66.08	-63.45	2.98	10.87	V	Pass
10341	-39.64	-13	-26.64	-56.59	-49.13	2.97	12.46	V	Pass

Band :	LTE Band 5	Temperature :	22~23°C
Test Mode :	1.4MHz QPSK RB Size 1 Offset 0	Relative Humidity :	42~43%
Test Engineer :	Jun Liu	Polarization :	Horizontal
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		

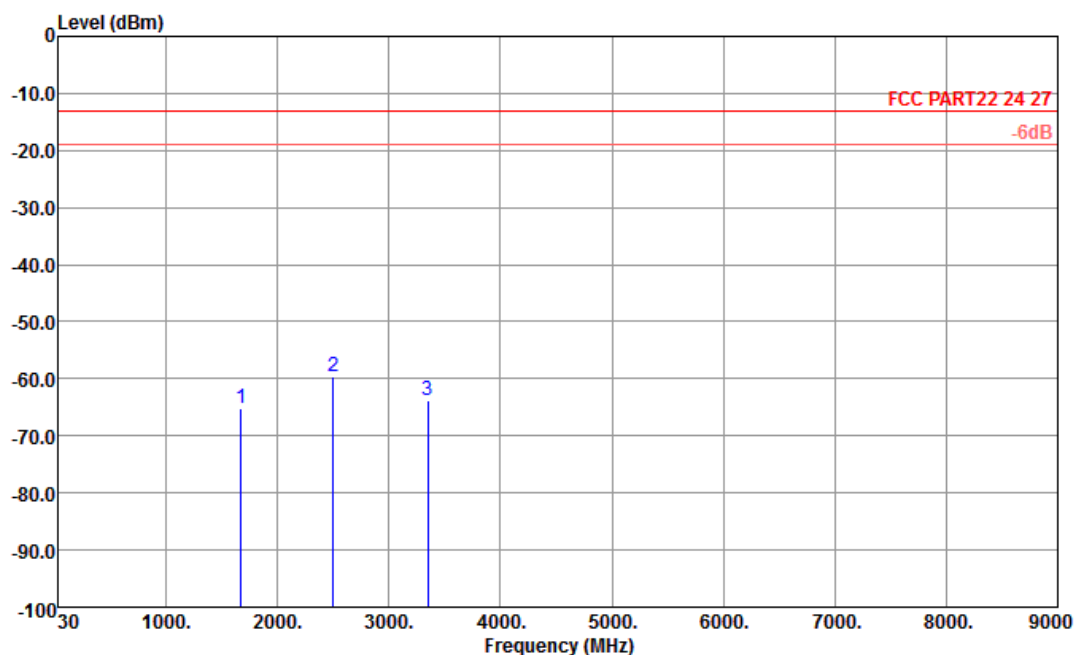


Site : 03CH01-KS

Condition : FCC PART22 24 27 HF_EIRP_FACTOR130726 HORIZONTAL

Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1672	-72.73	-13	-59.73	-63.85	-73.38	0.57	3.37	H	Pass
2502	-66.89	-13	-53.89	-65.56	-69.12	0.78	5.16	H	Pass
3346	-65.11	-13	-52.11	-64.74	-68.75	0.87	6.66	H	Pass

Band :	LTE Band 5	Temperature :	22~23°C
Test Mode :	1.4MHz QPSK RB Size 1 Offset 0	Relative Humidity :	42~43%
Test Engineer :	Jun Liu	Polarization :	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		

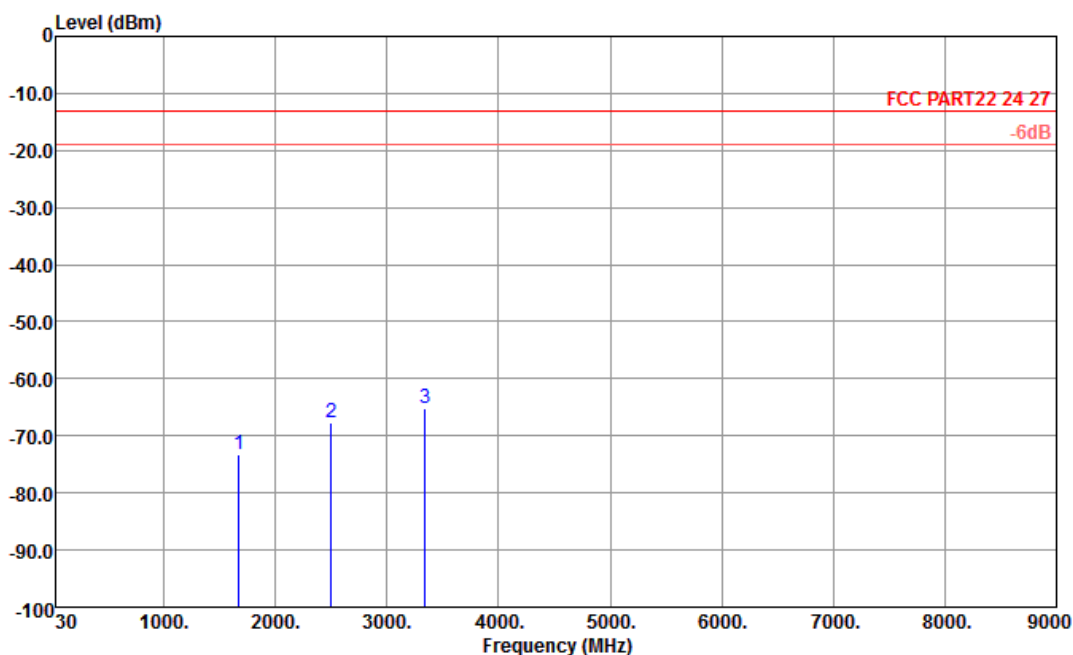


Site : 03CH01-KS

Condition : FCC PART22 24 27 HF_EIRP_FACTOR130726 VERTICAL

Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1672	-65.07	-13	-52.07	-61.83	-65.72	0.57	3.37	V	Pass
2502	-59.58	-13	-46.58	-62.24	-61.81	0.78	5.16	V	Pass
3348	-63.81	-13	-50.81	-64.87	-67.45	0.87	6.66	V	Pass

Band :	LTE Band 5	Temperature :	22~23°C
Test Mode :	3MHz QPSK RB Size 1 Offset 0	Relative Humidity :	42~43%
Test Engineer :	Jun Liu	Polarization :	Horizontal
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		

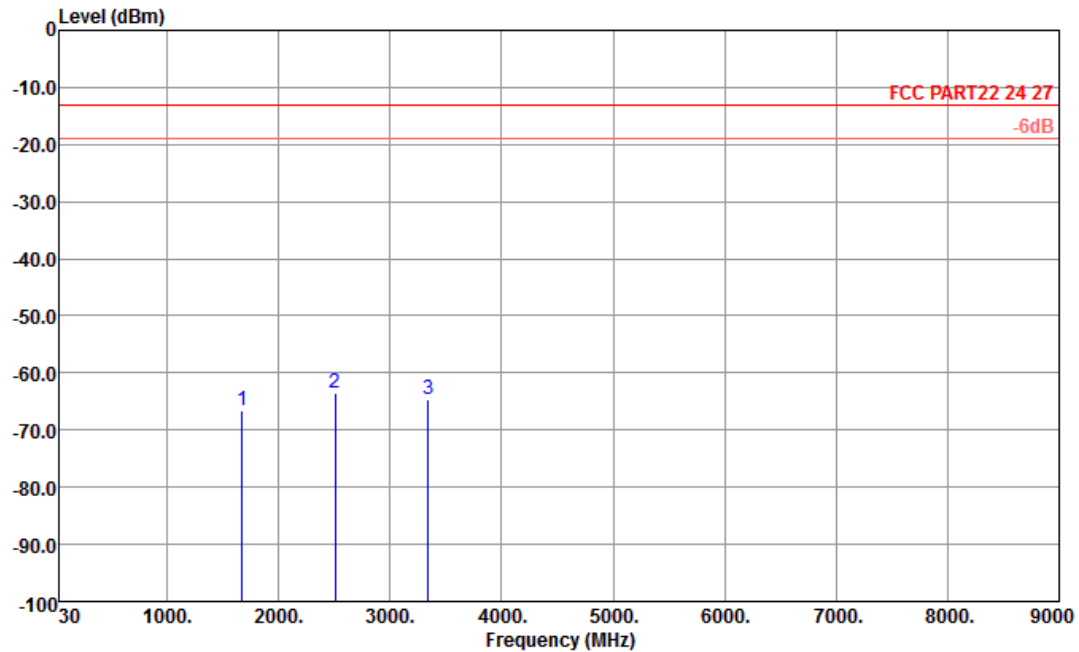


Site : 03CH01-KS

Condition : FCC PART22 24 27 HF_EIRP_FACTOR130726 HORIZONTAL

Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1670	-73.21	-13	-60.21	-64.33	-73.86	0.57	3.37	H	Pass
2504	-67.71	-13	-54.71	-66.38	-69.94	0.78	5.16	H	Pass
3340	-65.23	-13	-52.23	-64.86	-68.87	0.87	6.66	H	Pass

Band :	LTE Band 5	Temperature :	22~23°C
Test Mode :	3MHz QPSK RB Size 1 Offset 0	Relative Humidity :	42~43%
Test Engineer :	Jun Liu	Polarization :	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



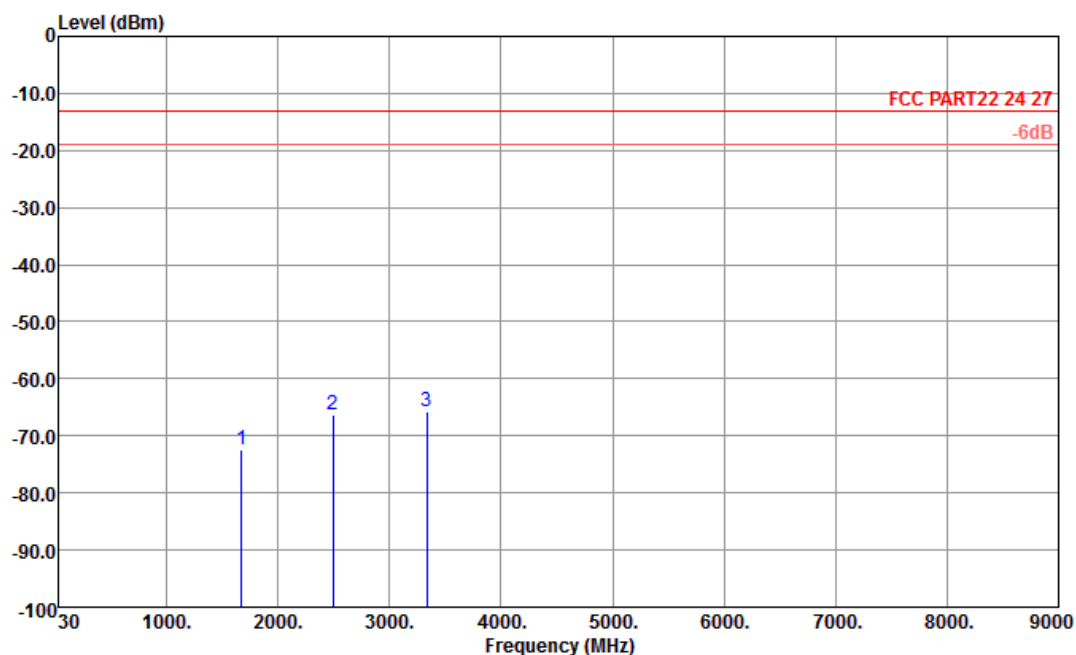
Site : 03CH01-KS

Condition : FCC PART22 24 27 HF_EIRP_FACTOR130726 VERTICAL

Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1670	-66.60	-13	-53.60	-62.80	-67.25	0.57	3.37	V	Pass
2506	-63.50	-13	-50.50	-65.93	-65.73	0.78	5.16	V	Pass
3340	-64.64	-13	-51.64	-65.70	-68.28	0.87	6.66	V	Pass



Band :	LTE Band 5	Temperature :	22~23°C
Test Mode :	5MHz QPSK RB Size 1 Offset 0	Relative Humidity :	42~43%
Test Engineer :	Jun Liu	Polarization :	Horizontal
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		

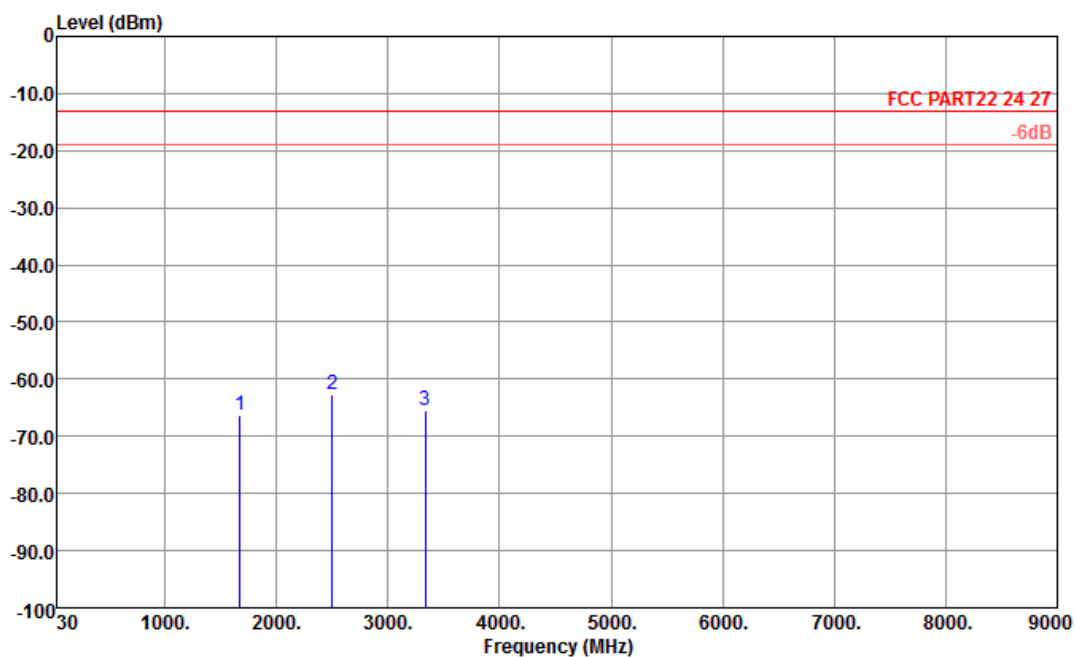


Site : 03CH01-KS

Condition : FCC PART22 24 27 HF_EIRP_FACTOR130726 HORIZONTAL

Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1670	-72.39	-13	-59.39	-63.51	-73.04	0.57	3.37	H	Pass
2494	-66.32	-13	-53.32	-64.99	-68.55	0.78	5.16	H	Pass
3336	-65.84	-13	-52.84	-65.47	-69.48	0.87	6.66	H	Pass

Band :	LTE Band 5	Temperature :	22~23°C
Test Mode :	5MHz QPSK RB Size 1 Offset 0	Relative Humidity :	42~43%
Test Engineer :	Jun Liu	Polarization :	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



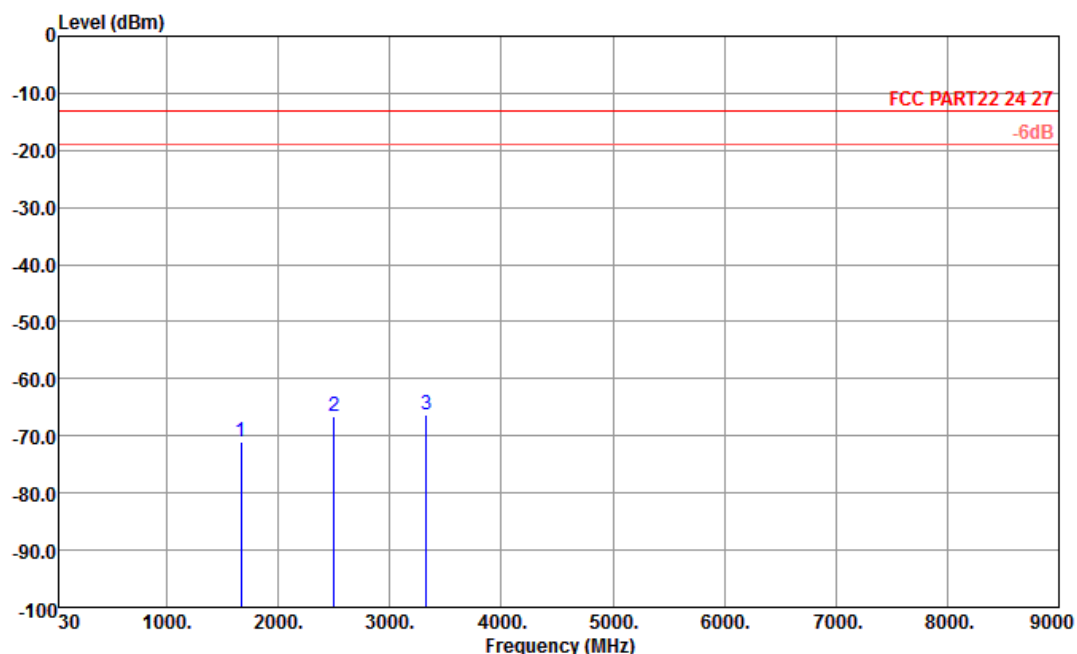
Site : 03CH01-KS

Condition : FCC PART22 24 27 HF_EIRP_FACTOR130726 VERTICAL

Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1670	-66.42	-13	-53.42	-62.62	-67.07	0.57	3.37	V	Pass
2500	-62.72	-13	-49.72	-65.15	-64.95	0.78	5.16	V	Pass
3336	-65.44	-13	-52.44	-66.50	-69.08	0.87	6.66	V	Pass



Band :	LTE Band 5	Temperature :	22~23°C
Test Mode :	10MHz QPSK RB Size 1 Offset 0	Relative Humidity :	42~43%
Test Engineer :	Jun Liu	Polarization :	Horizontal
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		

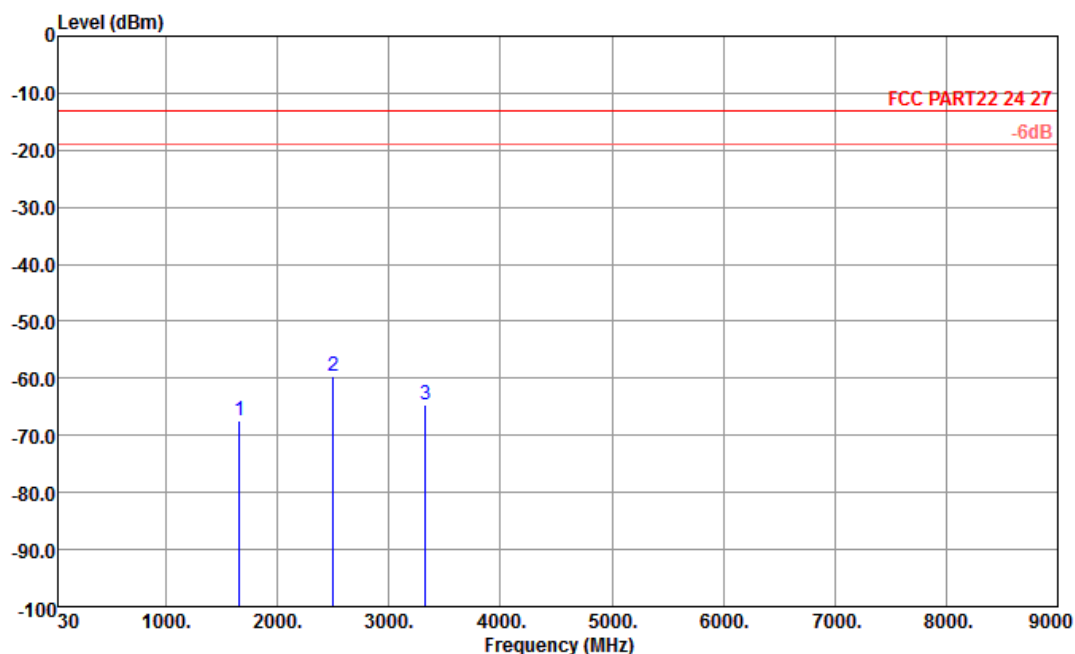


Site : 03CH01-KS

Condition : FCC PART22 24 27 HF_EIRP_FACTOR130726 HORIZONTAL

Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1664	-71.05	-13	-58.05	-62.17	-71.70	0.57	3.37	H	Pass
2498	-66.62	-13	-53.62	-65.29	-68.85	0.78	5.16	H	Pass
3326	-66.38	-13	-53.38	-66.01	-70.02	0.87	6.66	H	Pass

Band :	LTE Band 5	Temperature :	22~23°C
Test Mode :	10MHz QPSK RB Size 1 Offset 0	Relative Humidity :	42~43%
Test Engineer :	Jun Liu	Polarization :	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



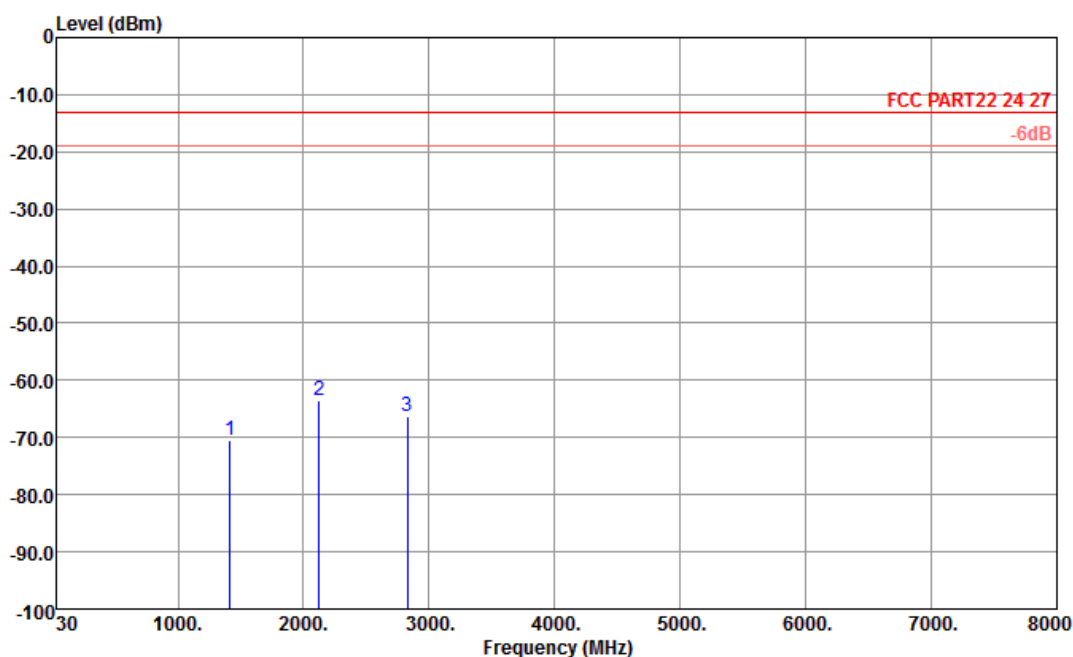
Site : 03CH01-KS

Condition : FCC PART22 24 27 HF_EIRP_FACTOR130726 VERTICAL

Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1660	-67.37	-13	-54.37	-63.57	-68.02	0.57	3.37	V	Pass
2498	-59.67	-13	-46.67	-62.28	-61.90	0.78	5.16	V	Pass
3326	-64.58	-13	-51.58	-65.64	-68.22	0.87	6.66	V	Pass



Band :	LTE Band 12	Temperature :	22~23°C
Test Mode :	1.4MHz QPSK RB Size 1 Offset 0	Relative Humidity :	42~43%
Test Engineer :	Jun Liu	Polarization :	Horizontal
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		

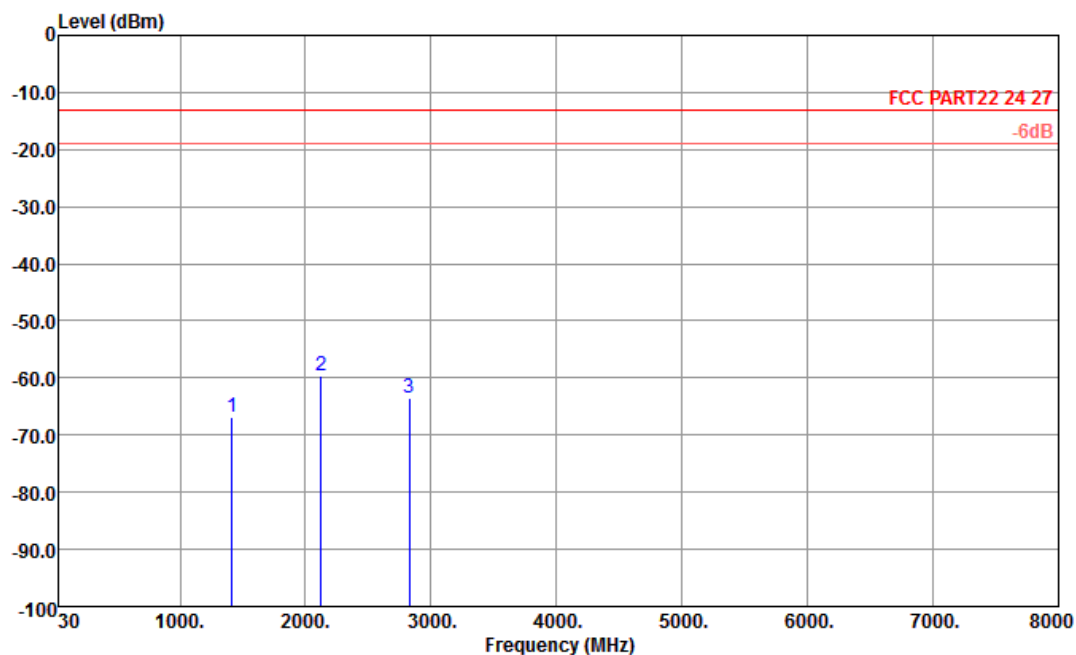


Site : 03CH01-KS

Condition : FCC PART22 24 27 HF_EIRP_FACTOR130726 HORIZONTAL

Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1414	-70.56	-13	-57.56	-61.68	-71.21	0.57	3.37	H	Pass
2122	-63.42	-13	-50.42	-62.09	-65.65	0.78	5.16	H	Pass
2828	-66.21	-13	-53.21	-65.84	-69.85	0.87	6.66	H	Pass

Band :	LTE Band 12	Temperature :	22~23°C
Test Mode :	1.4MHz QPSK RB Size 1 Offset 0	Relative Humidity :	42~43%
Test Engineer :	Jun Liu	Polarization :	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		

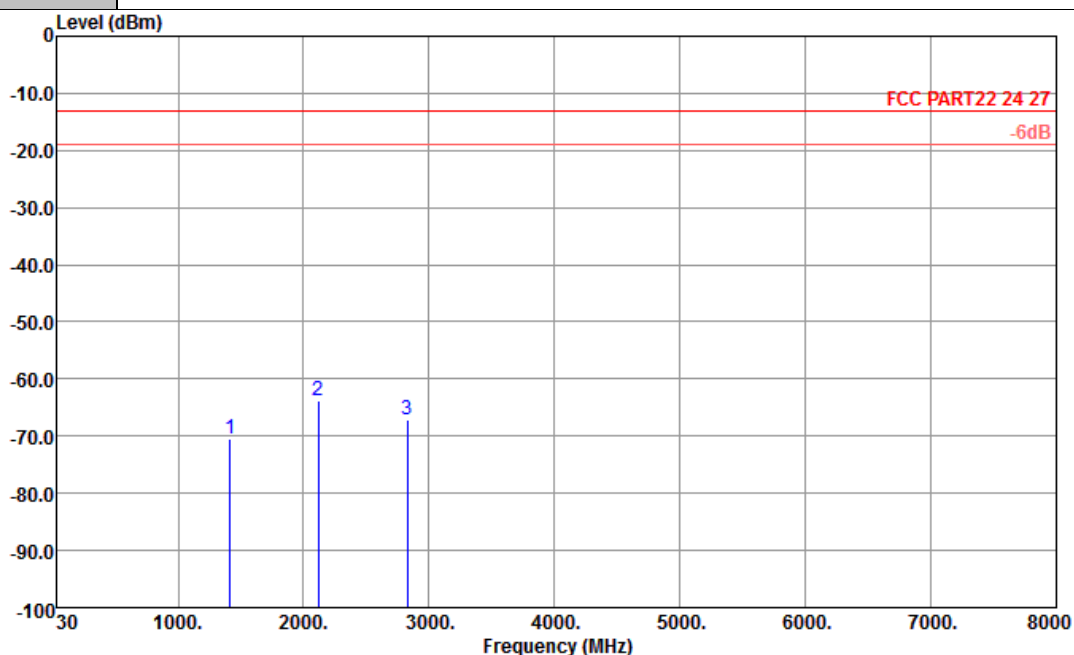


Site : 03CH01-KS

Condition : FCC PART22 24 27 HF_EIRP_FACTOR130726 VERTICAL

Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1412	-66.73	-13	-53.73	-62.93	-67.38	0.57	3.37	V	Pass
2122	-59.58	-13	-46.58	-62.24	-61.81	0.78	5.16	V	Pass
2828	-63.43	-13	-50.43	-64.49	-67.07	0.87	6.66	V	Pass

Band :	LTE Band 12	Temperature :	22~23°C
Test Mode :	3MHz QPSK RB Size 1 Offset 0	Relative Humidity :	42~43%
Test Engineer :	Jun Liu	Polarization :	Horizontal
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



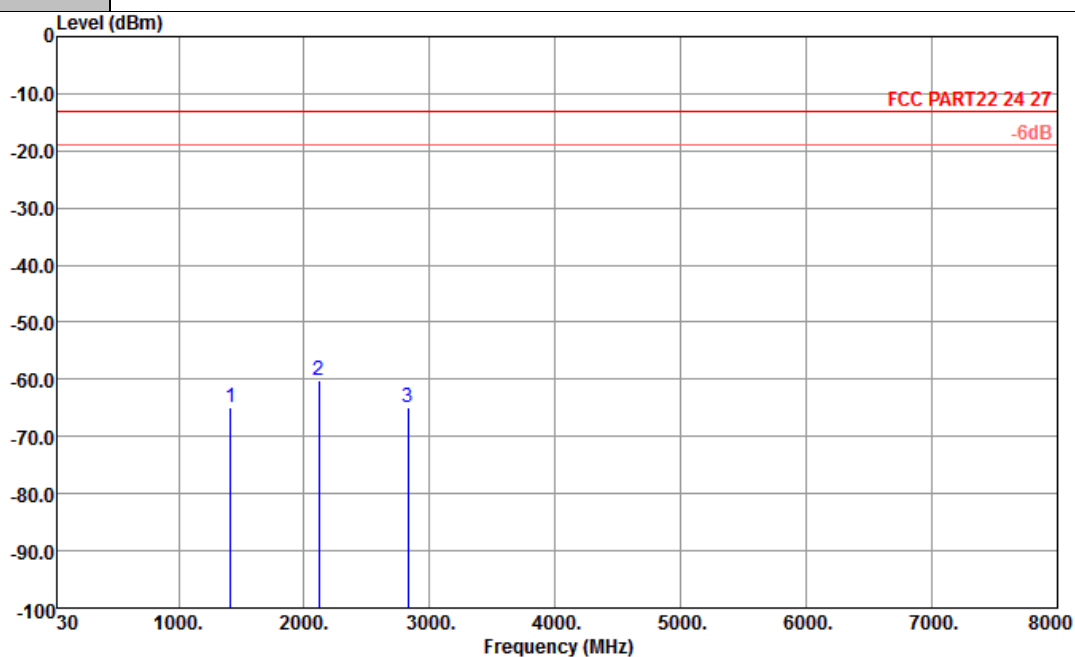
Site : 03CH01-KS

Condition : FCC PART22 24 27 HF_EIRP_FACTOR130726 HORIZONTAL

Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1412	-70.39	-13	-57.39	-61.51	-71.04	0.57	3.37	H	Pass
2120	-63.72	-13	-50.72	-62.39	-65.95	0.78	5.16	H	Pass
2824	-67.04	-13	-54.04	-66.67	-70.68	0.87	6.66	H	Pass



Band :	LTE Band 12	Temperature :	22~23°C
Test Mode :	3MHz QPSK RB Size 1 Offset 0	Relative Humidity :	42~43%
Test Engineer :	Jun Liu	Polarization :	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



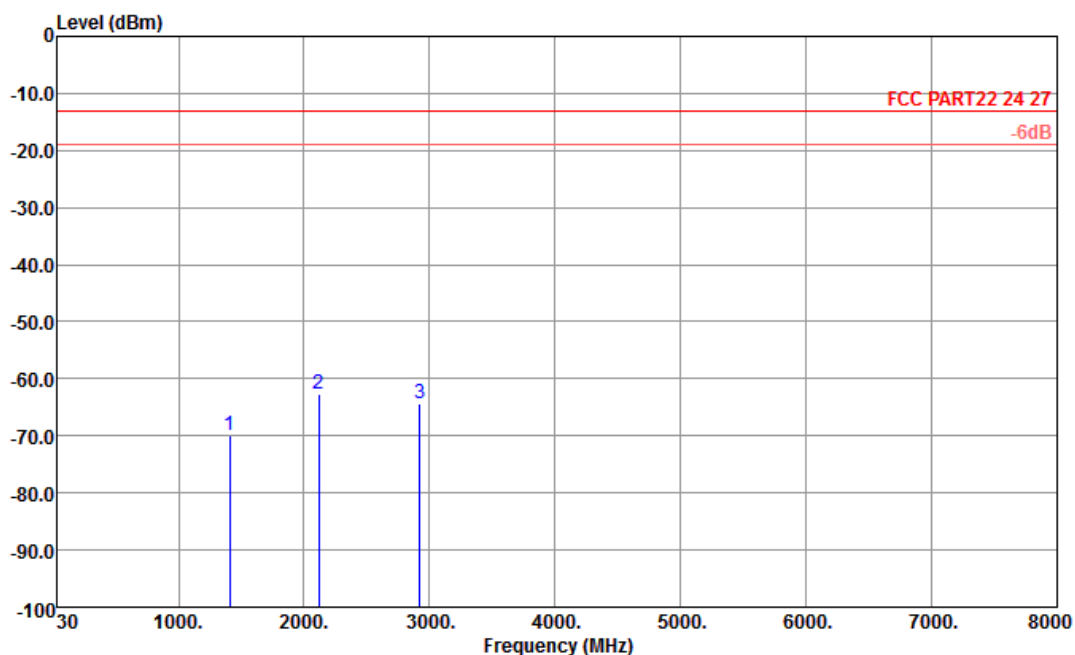
Site : 03CH01-KS

Condition : FCC PART22 24 27 HF_EIRP_FACTOR130726 VERTICAL

Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1412	-64.91	-13	-51.91	-61.76	-65.56	0.57	3.37	V	Pass
2120	-60.03	-13	-47.03	-62.46	-62.26	0.78	5.16	V	Pass
2824	-64.87	-13	-51.87	-65.93	-68.51	0.87	6.66	V	Pass



Band :	LTE Band 12	Temperature :	22~23°C
Test Mode :	5MHz QPSK RB Size 1 Offset 0	Relative Humidity :	42~43%
Test Engineer :	Jun Liu	Polarization :	Horizontal
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		

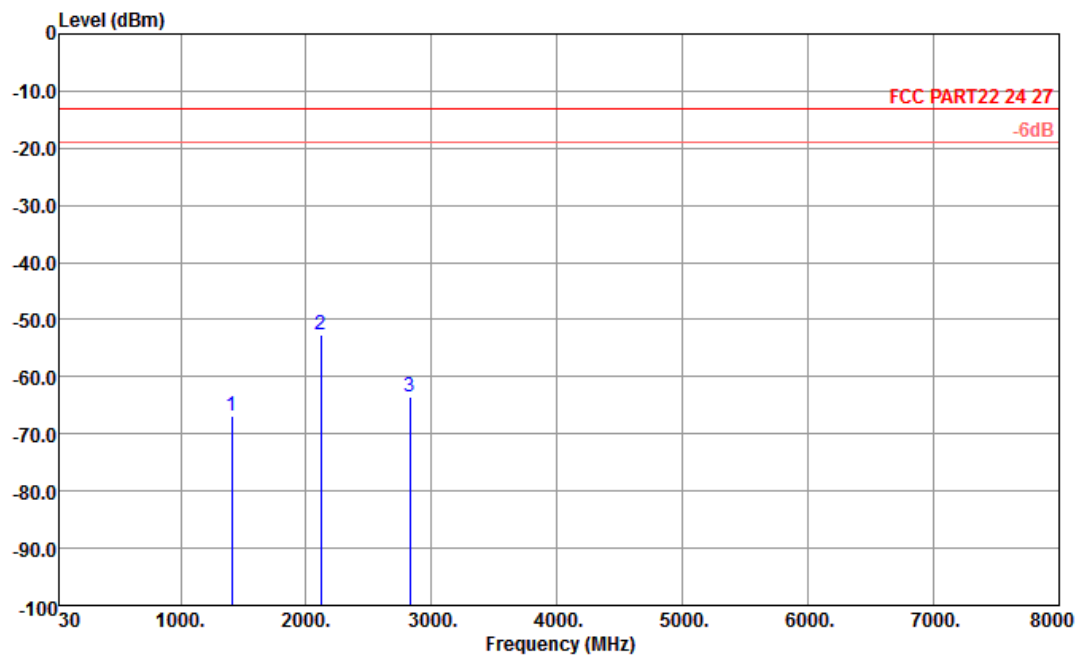


Site : 03CH01-KS

Condition : FCC PART22 24 27 HF_EIRP_FACTOR130726 HORIZONTAL

Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1410	-70.02	-13	-57.02	-61.14	-70.67	0.57	3.37	H	Pass
2116	-62.68	-13	-49.68	-61.35	-64.91	0.78	5.16	H	Pass
2920	-64.33	-13	-51.33	-63.96	-67.97	0.87	6.66	H	Pass

Band :	LTE Band 12	Temperature :	22~23°C
Test Mode :	5MHz QPSK RB Size 1 Offset 0	Relative Humidity :	42~43%
Test Engineer :	Jun Liu	Polarization :	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		

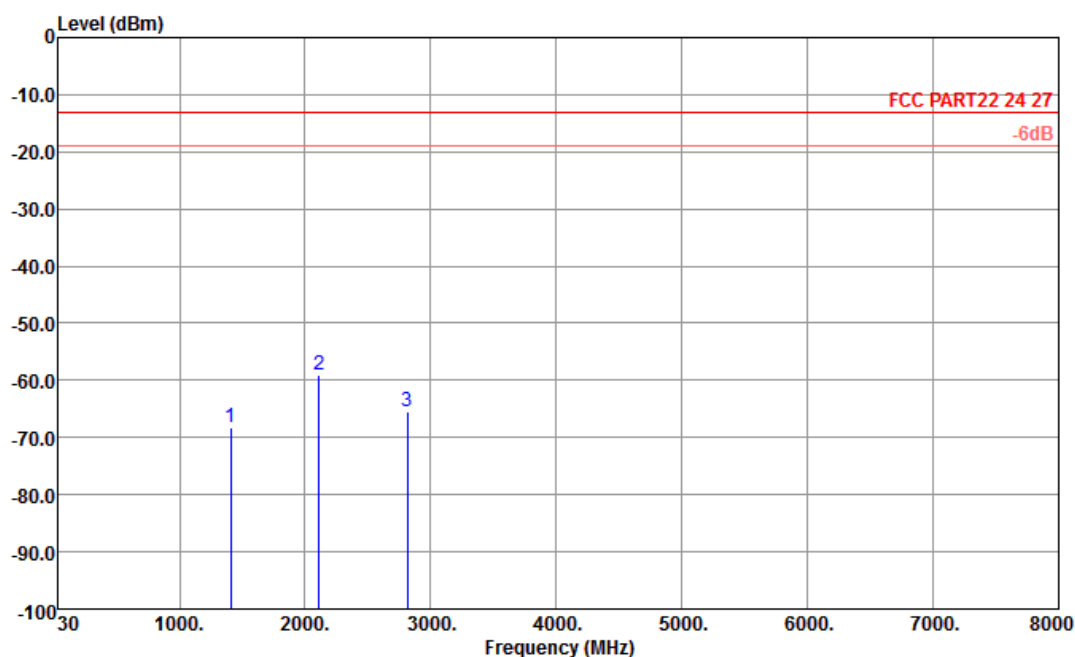


Site : 03CH01-KS

Condition : FCC PART22 24 27 HF_EIRP_FACTOR130726 VERTICAL

Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1410	-66.87	-13	-53.87	-63.07	-67.52	0.57	3.37	V	Pass
2116	-52.57	-13	-39.57	-58.61	-54.80	0.78	5.16	V	Pass
2824	-63.46	-13	-50.46	-64.52	-67.10	0.87	6.66	V	Pass

Band :	LTE Band 12	Temperature :	22~23°C
Test Mode :	10MHz QPSK RB Size 1 Offset 0	Relative Humidity :	42~43%
Test Engineer :	Jun Liu	Polarization :	Horizontal
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



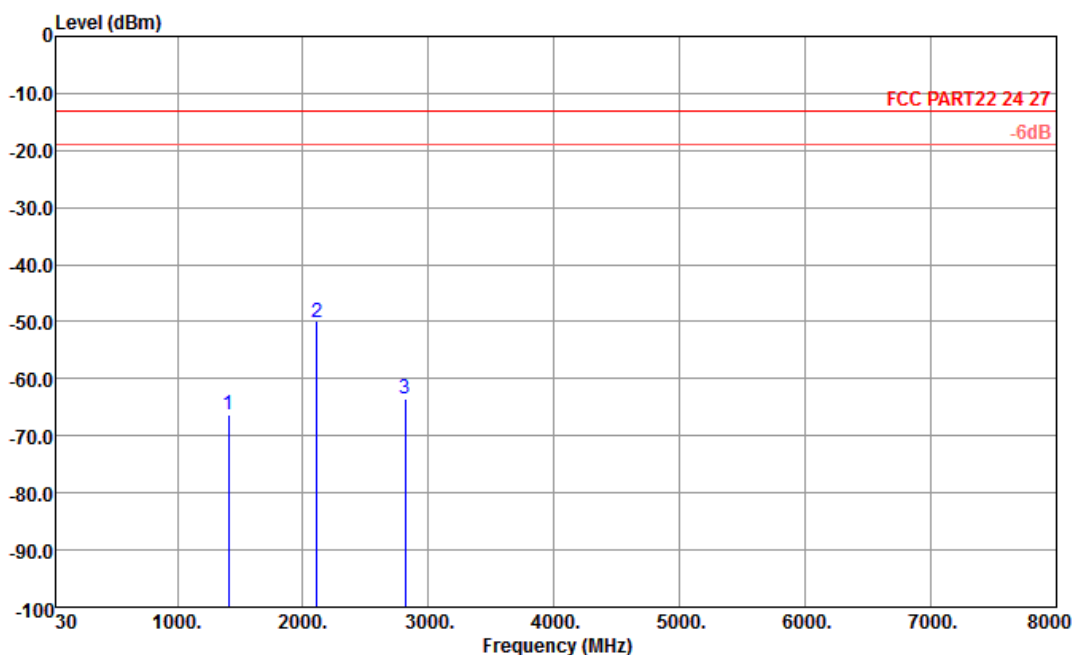
Site : 03CH01-KS

Condition : FCC PART22 24 27 HF_EIRP_FACTOR130726 HORIZONTAL

Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1406	-68.24	-13	-55.24	-59.74	-68.89	0.57	3.37	H	Pass
2110	-59.06	-13	-46.06	-58.69	-61.29	0.78	5.16	H	Pass
2814	-65.41	-13	-52.41	-65.04	-69.05	0.87	6.66	H	Pass



Band :	LTE Band 12	Temperature :	22~23°C
Test Mode :	10MHz QPSK RB Size 1 Offset 0	Relative Humidity :	42~43%
Test Engineer :	Jun Liu	Polarization :	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		

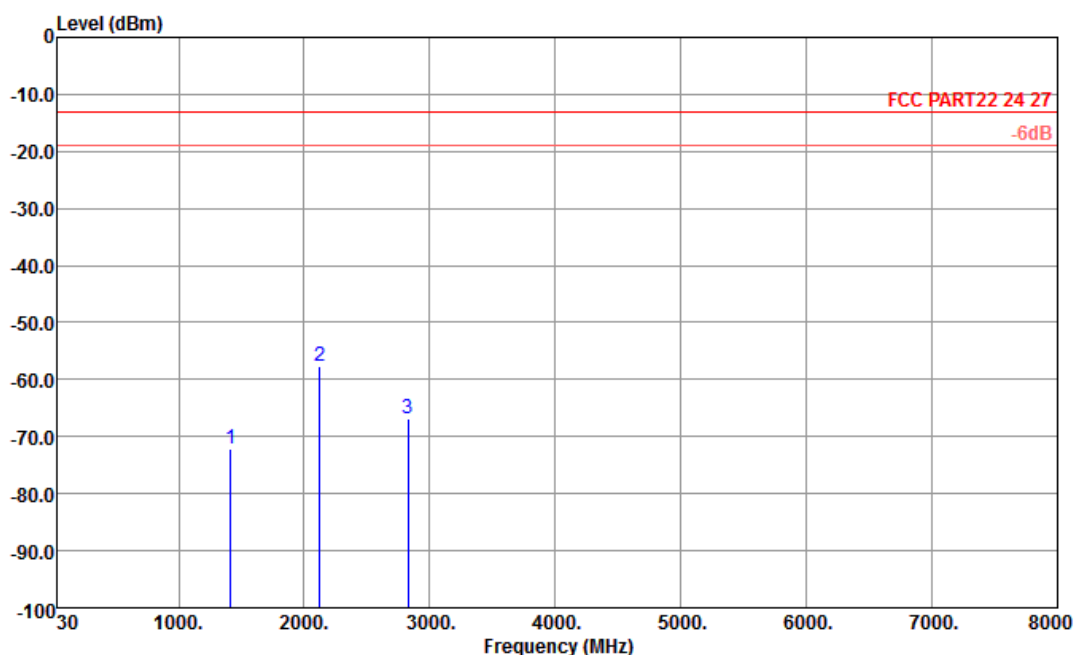


Site : 03CH01-KS

Condition : FCC PART22 24 27 HF_EIRP_FACTOR130726 VERTICAL

Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1406	-66.25	-13	-53.25	-62.45	-66.90	0.57	3.37	V	Pass
2110	-50.00	-13	-37.00	-56.84	-52.23	0.78	5.16	V	Pass
2812	-63.54	-13	-50.54	-64.60	-67.18	0.87	6.66	V	Pass

Band :	LTE Band 17	Temperature :	22~23°C
Test Mode :	5MHz QPSK RB Size 1 Offset 0	Relative Humidity :	42~43%
Test Engineer :	Jun Liu	Polarization :	Horizontal
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		

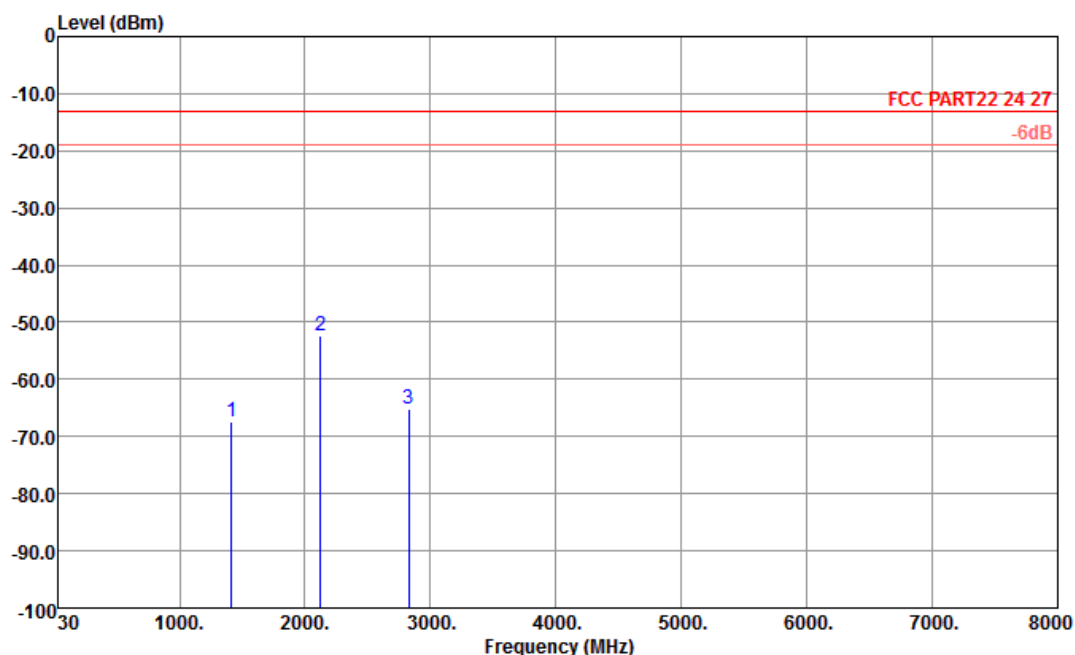


Site : 03CH01-KS

Condition : FCC PART22 24 27 HF_EIRP_FACTOR130726 HORIZONTAL

Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1416	-72.05	-13	-59.05	-63.17	-72.70	0.57	3.37	H	Pass
2124	-57.60	-13	-44.60	-57.87	-59.83	0.78	5.16	H	Pass
2830	-66.83	-13	-53.83	-66.46	-70.47	0.87	6.66	H	Pass

Band :	LTE Band 17	Temperature :	22~23°C
Test Mode :	5MHz QPSK RB Size 1 Offset 0	Relative Humidity :	42~43%
Test Engineer :	Jun Liu	Polarization :	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



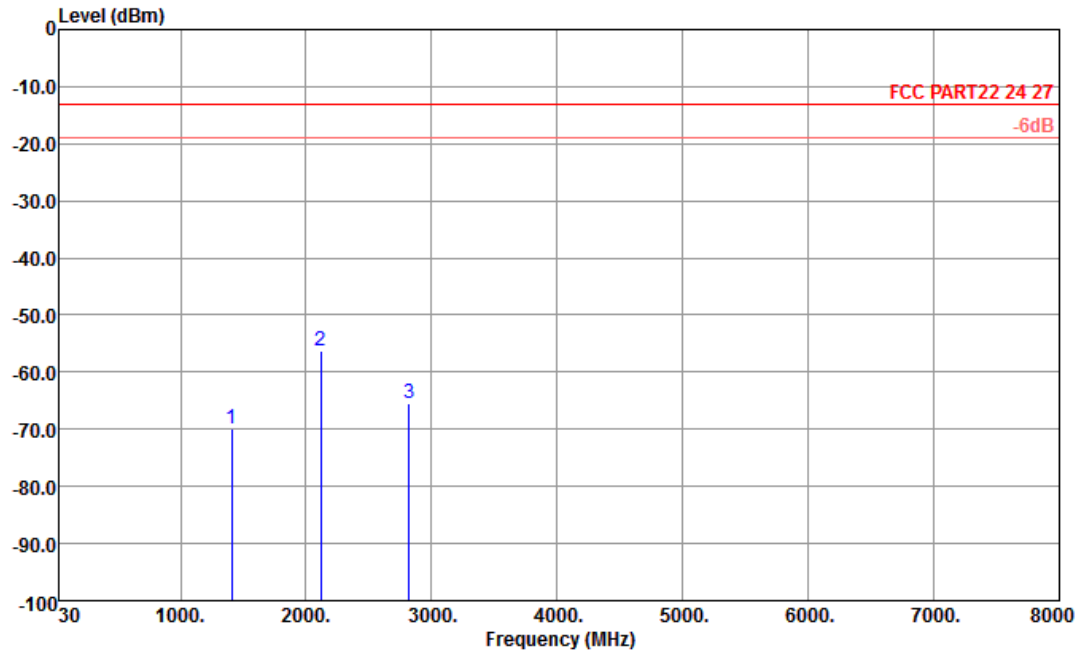
Site : 03CH01-KS

Condition : FCC PART22 24 27 HF_EIRP_FACTOR130726 VERTICAL

Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1416	-67.40	-13	-54.40	-63.60	-68.05	0.57	3.37	V	Pass
2124	-52.41	-13	-39.41	-58.47	-54.64	0.78	5.16	V	Pass
2830	-65.26	-13	-52.26	-66.32	-68.90	0.87	6.66	V	Pass



Band :	LTE Band 17	Temperature :	22~23°C
Test Mode :	10MHz QPSK RB Size 1 Offset 0	Relative Humidity :	42~43%
Test Engineer :	Jun Liu	Polarization :	Horizontal
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		

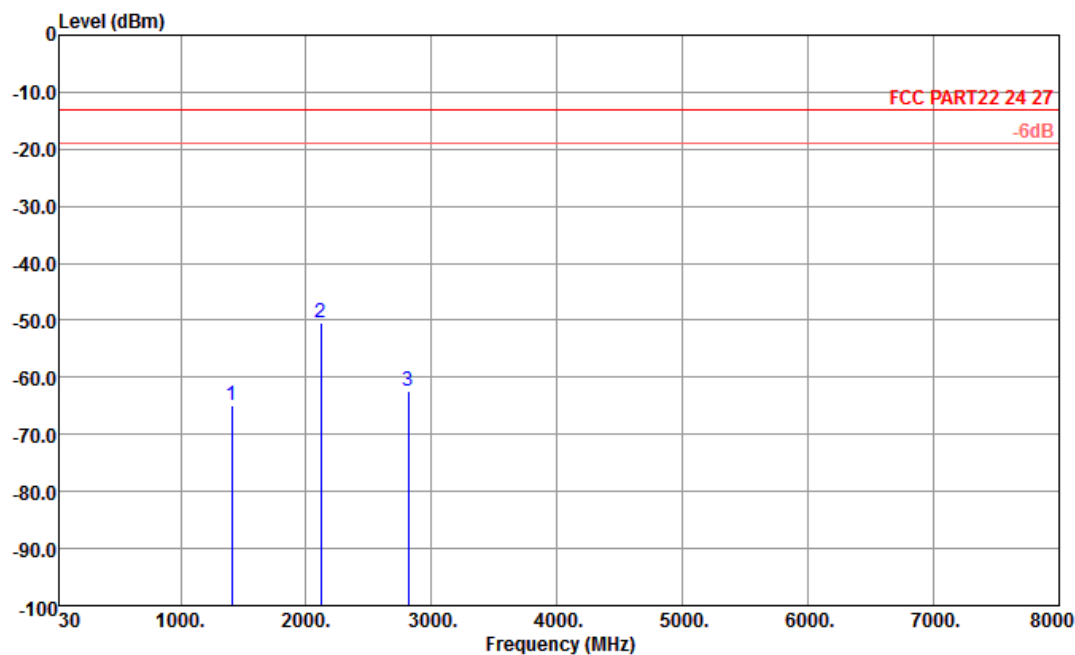


Site : 03CH01-KS

Condition : FCC PART22 24 27 HF_EIRP_FACTOR130726 HORIZONTAL

Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1410	-69.87	-13	-56.87	-60.99	-70.52	0.57	3.37	H	Pass
2118	-56.27	-13	-43.27	-56.99	-58.50	0.78	5.16	H	Pass
2820	-65.34	-13	-52.34	-64.97	-68.98	0.87	6.66	H	Pass

Band :	LTE Band 17	Temperature :	22~23°C
Test Mode :	10MHz QPSK RB Size 1 Offset 0	Relative Humidity :	42~43%
Test Engineer :	Jun Liu	Polarization :	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



Site : 03CH01-KS

Condition : FCC PART22 24 27 HF_EIRP_FACTOR130726 VERTICAL

Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1410	-64.89	-13	-51.89	-61.75	-65.54	0.57	3.37	V	Pass
2118	-50.40	-13	-37.40	-57.14	-52.63	0.78	5.16	V	Pass
2814	-62.29	-13	-49.29	-63.35	-65.93	0.87	6.66	V	Pass

3.7 Frequency Stability Measurement

3.7.1 Description of Frequency Stability Measurement

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

3.7.2 Measuring Instruments

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

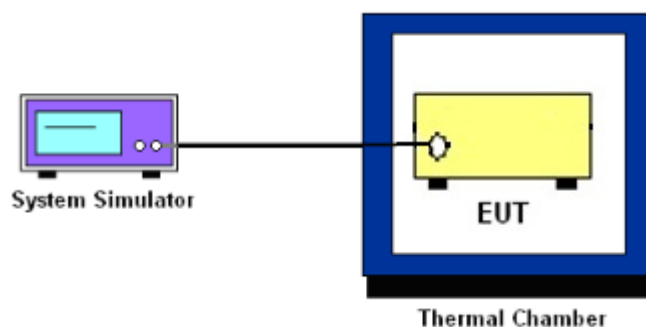
3.7.3 Test Procedures for Temperature Variation

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

3.7.4 Test Procedures for Voltage Variation

1. The EUT was placed in a temperature chamber at $25\pm 5^{\circ}\text{C}$ and connected with the system simulator.
2. The power supply voltage to the EUT was varied from 85% to 115% of the nominal value measured at the input to the EUT.
3. The variation in frequency was measured for the worst case.

3.7.5 Test Setup



3.7.6 Test Result of Temperature Variation (FCC)

Band :	LTE Band 2 (QPSK)	Limit (ppm) :	2.5
Temperature (°C)	BW 10MHz		Result
	Freq. Dev. (Hz)	Deviation (ppm)	
-30	5.6	+0.003	PASS
-20	-9.8	-0.005	
-10	7.5	+0.004	
0	3.6	+0.002	
10	-6.8	-0.004	
20	4.2	+0.002	
30	1.8	+0.001	
40	5.6	+0.003	
50	-9.8	-0.005	

Band :	LTE Band 4 (QPSK)	Limit (ppm) :	2.5
Temperature (°C)	BW 10MHz		Result
	Freq. Dev. (Hz)	Deviation (ppm)	
-30	-7.1	-0.004	PASS
-20	-9.8	-0.006	
-10	-6.9	-0.004	
0	-5.3	-0.003	
10	-2.9	-0.002	
20	-8.7	-0.005	
30	-4.5	-0.003	
40	-5.6	-0.003	
50	-8.0	-0.005	

Band :	LTE Band 5 (QPSK)	Limit (ppm) :	2.5
Temperature (°C)	BW 10MHz		Result
	Freq. Dev. (Hz)	Deviation (ppm)	
-30	-8.7	-0.010	PASS
-20	-6.5	-0.008	
-10	-7.8	-0.009	
0	-3.8	-0.005	
10	-5.7	-0.007	
20	10.2	+0.012	
30	5.8	+0.007	
40	7.6	+0.009	
50	-3.5	-0.004	

Band :	LTE Band 12 (QPSK)	Limit (ppm) :	2.5
Temperature (°C)	BW 10MHz		Result
	Freq. Dev. (Hz)	Deviation (ppm)	
-30	-12.3	-0.017	PASS
-20	-5.4	-0.008	
-10	-12.3	-0.017	
0	-10.3	-0.015	
10	8.3	+0.012	
20	-10.3	-0.015	
30	-7.1	-0.010	
40	-8.3	-0.012	
50	6.4	+0.009	

Band :	LTE Band 17 (QPSK)		Limit (ppm) :	2.5
Temperature (°C)	BW 10MHz		Result	
	Freq. Dev. (Hz)	Deviation (ppm)		
-30	7.5	+0.011	PASS	
-20	-6.9	-0.010		
-10	-5.4	-0.008		
0	-8.7	-0.012		
10	-4.2	-0.006		
20	-6.5	-0.009		
30	-8.1	-0.011		
40	-7.6	-0.011		
50	-6.5	-0.009		

3.7.7 Test Result of Voltage Variation (FCC)

Band	Bandwidth	Voltage (Volt)	Freq. Dev (Hz)	Deviation (ppm)	Limit (ppm)	Result
LTE Band 2	10M	3.5	-6.3	-0.003	2.5	PASS
		Normal	6.8	+0.004		
		4.2	-3.8	-0.002		
LTE Band 4	10M	3.5	11.2	+0.006	2.5	PASS
		Normal	-8.5	-0.005		
		4.2	3.6	+0.002		
LTE Band 5	10M	3.5	3.2	+0.004	2.5	PASS
		Normal	2.1	+0.003		
		4.2	1.5	+0.002		
LTE Band 12	10M	3.5	7.6	+0.011	2.5	PASS
		Normal	6.9	+0.010		
		4.2	4.3	+0.006		
LTE Band 17	10M	3.5	3.2	+0.005	2.5	PASS
		Normal	-1.2	-0.002		
		4.2	6.5	+0.009		

Remark:

1. Normal Voltage = 3.7V.
2. The manufacturer declared that the EUT could work properly between voltage 3.5V ~ 4.2V.

4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSP40	100319	9kHz~40GHz	Dec. 28, 2013	May 28, 2014~ May 30, 2014	Dec. 27, 2014	Conducted (TH01-KS)
Thermal Chamber	Ten Billion	TTC-B3S	TBN-960502	-40~+150°C	Dec. 10, 2013	May 28, 2014~ May 30, 2014	Dec. 09, 2014	Conducted (TH01-KS)
EMI Test Receiver	R&S	ESCI	100534	9kHz~3GHz	Nov. 05, 2013	May 28, 2014	Nov. 04, 2014	Radiation (03CH01-KS)
Spectrum Analyzer	R&S	FSP30	101399	9kHz~30GHz	May 04, 2014	May 28, 2014	May 03, 2015	Radiation (03CH01-KS)
Bilog Antenna	SCHAFFNER	CBL6112D	23182	25MHz~2GHz	Jan. 08, 2014	May 28, 2014	Jan. 07, 2015	Radiation (03CH01-KS)
Double Ridge Horn Antenna	ETS-Lindgren	3117	75959	1GHz~18GHz	Jan. 08, 2014	May 28, 2014	Jan. 07, 2015	Radiation (03CH01-KS)
Active Horn Antenna	com-power	AHA-118	701030	1GHz~18GHz	Nov. 18, 2013	May 28, 2014	Nov. 17, 2014	Radiation (03CH01-KS)
SHF-EHF Horn	Schwarzbeck	BBHA 9170	BBHA17024 9	15GHz~40GHz	Mar. 10, 2014	May 28, 2014	Mar. 09, 2015	Radiation (03CH01-KS)
Amplifier	com-power	PA-103A	161073	1MHz~1GHz	May 04, 2014	May 28, 2014	May 03, 2015	Radiation (03CH01-KS)
Amplifier	Agilent	8449B	3008A02371	1GHz~26.5GHz	Dec. 10, 2013	May 28, 2014	Dec. 09, 2014	Radiation (03CH01-KS)
AC Power Source	Chroma	61601	F104090004	N/A	NCR	May 28, 2014	NCR	Radiation (03CH01-KS)
Turn Table	MF	MF7802	N/A	0~360 degree	NCR	May 28, 2014	NCR	Radiation (03CH01-KS)
Antenna Mast	MF	MF7802	N/A	1 m~4 m	NCR	May 28, 2014	NCR	Radiation (03CH01-KS)

5 Uncertainty of Evaluation

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

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