

FCC RF Test Report

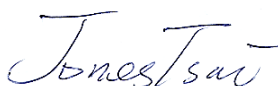
APPLICANT : ZTE CORPORATION
EQUIPMENT : CDMA/LTE Ufi
BRAND NAME : ZTE
MODEL NAME : 306ZT
FCC ID : SRQ-ZTEMF975S
STANDARD : 47 CFR Part 2, 22(H), 24(E), 27(M)
CLASSIFICATION : PCS Licensed Transmitter (PCB)

The product was received on Jun. 18, 2014 and testing was completed on Aug. 26, 2014. We, SPORTON INTERNATIONAL (KUNSHAN) INC., would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI / TIA / EIA-603-C-2004 and shown compliance with the applicable technical standards.

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



Reviewed by: Joseph Lin / Supervisor



Approved by: Jones Tsai / Manager



SPORTON INTERNATIONAL (KUNSHAN) INC.
No. 3-2, PingXiang Road, Kunshan, Jiangsu Province, P.R.C.



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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG461802B	Rev. 01	Initial issue of report	Aug. 26, 2014

SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.1	§2.1046	Conducted Output Power	Reporting Only	PASS	-
3.2	§24.232(d)	Peak-to-Average Ratio	<13 dB	PASS	-
3.3	§22.913(a)(2)	Effective Radiated Power (Band 26)	ERP < 7 Watts	PASS	-
	§24.232(c) §27.50(h)(2)	Equivalent Isotropic Radiated Power (Band 25) (Band 41)	EIRP < 2Watt		
3.4	§2.1049 §22.917(b) §24.238(b) §27.53(m)(6)	99% Occupied Bandwidth and 26dB Bandwidth	Reporting Only	PASS	-
3.5	§2.1051 §22.917(a) §24.238(a)	Conducted Band Edge Measurement (Band 25) (Band 26)	$< 43 + 10\log_{10}(P[\text{Watts}])$	PASS	-
	§2.1051 §27.53(m)(4)	Conducted Band Edge Measurement (Band 41)	< 5MHz: -10 dBm 5 MHz~6MHz or 26dB(BW): -13 dBm ≥6MHz or 26dB(BW): -25 dBm		



Report Section	FCC Rule	Description	Limit	Result	Remark
3.6	§2.1051 §22.917(a) §24.238(a)	Conducted Spurious Emission (Band 25) (Band 26)	$< 43 + 10\log_{10}(P[\text{Watts}])$	PASS	-
	§2.1051 §27.53(m)(4)	Conducted Spurious Emission (Band 41)	$< 55 + 10\log_{10}(P[\text{Watts}])$		
3.7	§2.1053 §22.917(a) §24.238(a)	Radiated Spurious Emission (Band 25) (Band 26)	$< 43 + 10\log_{10}(P[\text{Watts}])$	PASS	Under limit 17.95 dB at 5180.000 MHz
	§2.1053 §27.53(m)(4)	Radiated Spurious Emission (Band 41)	$< 55 + 10\log_{10}(P[\text{Watts}])$		
3.8	§2.1055 §22.355 §24.235 §27.54	Frequency Stability Temperature & Voltage	$< 2.5 \text{ ppm}$	PASS	



1 General Description

1.1 Applicant

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/LTE Ufi
Brand Name	ZTE
Model Name	306ZT
FCC ID	SRQ-ZTEMF975S
EUT supports Radios application	CDMA/EV-DO/LTE/ WLAN 2.4GHz 802.11b/g/n HT20/HT40/ WLAN 5GHz 802.11a/n HT20/HT40/ WLAN 5GHz 802.11ac VHT20/VHT40/VHT80
HW Version	xw3B
SW Version	306ZTV1.0.0B09
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 25 : 1850.7MHz ~ 1914.3 MHz LTE Band 26 : 824.7MHz ~ 848.3 MHz LTE Band 41 : 2498.5 MHz ~ 2687.5 MHz
Rx Frequency	LTE Band 25 : 1930.7MHz ~ 1994.3 MHz LTE Band 26 : 869.7 MHz ~ 893.3 MHz LTE Band 41 : 2498.5 MHz ~ 2687.5 MHz
Bandwidth	1.4MHz/3MHz/5MHz/10MHz/15MHz/20MHz (LTE Band 25) 1.4MHz/3MHz/5MHz/10MHz/15MHz (LTE Band 26) 5MHz/10MHz/15MHz/20MHz (LTE Band 41)
Maximum Output Power to Antenna	LTE Band 25 : 21.93 dBm LTE Band 26 : 22.11 dBm LTE Band 41 : 21.80 dBm
Antenna Type	Monopole Antenna
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	Maximum ERP/EIRP	Frequency Tolerance (ppm)	Emission Designator
Part 24E	LTE Band 25	QPSK	1.4 MHz	0.2704 W	-	1M09G7D
Part 24E	LTE Band 25	16QAM	1.4 MHz	0.2466 W	-	1M10W7D
Part 24E	LTE Band 25	QPSK	3 MHz	-	-	2M72G7D
Part 24E	LTE Band 25	16QAM	3 MHz	-	-	2M72W7D
Part 24E	LTE Band 25	QPSK	5 MHz	-	-	4M49G7D
Part 24E	LTE Band 25	16QAM	5 MHz	-	-	4M50W7D
Part 24E	LTE Band 25	QPSK	10 MHz	-	0.0043 ppm	9M08G7D
Part 24E	LTE Band 25	16QAM	10 MHz	-	-	9M06W7D
Part 24E	LTE Band 25	QPSK	15 MHz	-	-	13M5G7D
Part 24E	LTE Band 25	16QAM	15 MHz	-	-	13M5W7D
Part 24E	LTE Band 25	QPSK	20 MHz	0.2864 W	-	18M6G7D
Part 24E	LTE Band 25	16QAM	20 MHz	0.2799 W	-	18M6W7D
Part 22H	LTE Band 26	QPSK	1.4 MHz	0.1086 W	-	1M09G7D
Part 22H	LTE Band 26	16QAM	1.4 MHz	0.1140 W	-	1M10W7D
Part 22H	LTE Band 26	QPSK	3 MHz	-	-	2M72G7D
Part 22H	LTE Band 26	16QAM	3 MHz	-	-	2M73W7D
Part 22H	LTE Band 26	QPSK	5 MHz	-	-	4M49G7D
Part 22H	LTE Band 26	16QAM	5 MHz	-	-	4M51W7D
Part 22H	LTE Band 26	QPSK	10 MHz	-	0.0129 ppm	9M10G7D
Part 22H	LTE Band 26	16QAM	10 MHz	-	-	9M06W7D
Part 22H	LTE Band 26	QPSK	15 MHz	0.1233 W	-	13M5G7D
Part 22H	LTE Band 26	16QAM	15 MHz	0.1309 W	-	13M5W7D



FCC Rule	System	Type of Modulation	BW	Maximum ERP/EIRP	Frequency Tolerance (ppm)	Emission Designator
Part 27M	LTE Band 41	QPSK	5MHz	0.8185 W	-	4M50G7D
Part 27M	LTE Band 41	16QAM	5MHz	0.6546 W	-	4M50W7D
Part 27M	LTE Band 41	QPSK	10MHz	-	0.0044 ppm	9M10G7D
Part 27M	LTE Band 41	16QAM	10MHz	-	-	9M10W7D
Part 27M	LTE Band 41	QPSK	15MHz	0.7295 W	-	13M6G7D
Part 27M	LTE Band 41	16QAM	15MHz	0.6839 W	-	13M5W7D
Part 27M	LTE Band 41	QPSK	20MHz	0.8147 W	-	18M8G7D
Part 27M	LTE Band 41	16QAM	20MHz	0.7228 W	-	18M7W7D

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	OTA01-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(M)
- ♦ ANSI / TIA / EIA-603-C-2004
- ♦ FCC KDB 971168 D01 Power Meas. License Digital Systems v02r01

Remark:

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



2 Test Configuration of Equipment Under Test

2.1 Test Mode

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

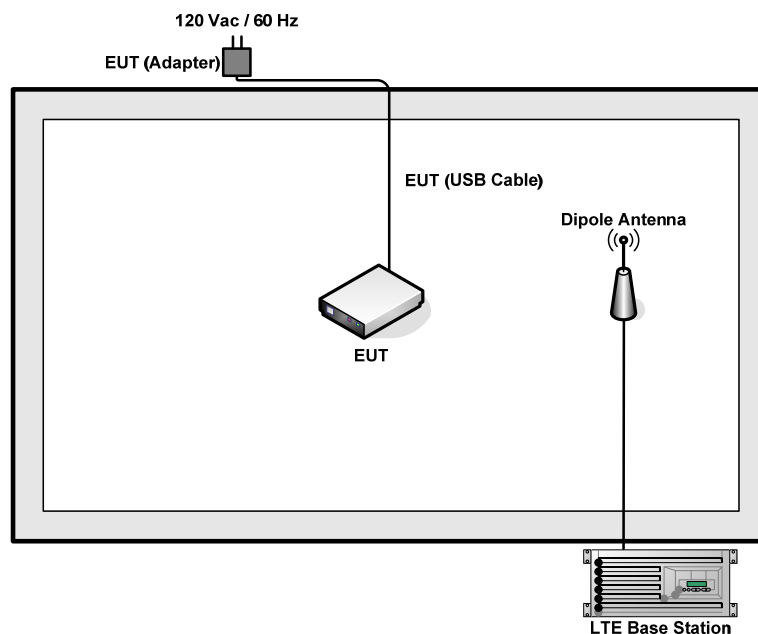
Radiated measurements were performed with rotating EUT in different three orthogonal test planes to find the maximum emission.

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	25	v	v	v	v	v	v	v	v	v	v	v	v	v	v
	26	v	v	v	v	v	-	v	v	v	v	v	v	v	v
	41	-	-	v	v	v	v	v	v	v	v	v	v	v	v
Peak-to-Average Ratio	25						v		v	v		v		v	
	26						-								
	41	-	-												
26dB and 99% Bandwidth	25	v	v	v	v	v	v	v	v			v		v	
	26	v	v	v	v	v	-	v	v			v		v	
	41	-	-	v	v	v	v	v	v			v		v	
Conducted Band Edge	25	v	v	v	v	v	v	v	v	v		v	v		v
	26	v	v	v	v	v	-	v	v	v		v	v		v
	41	-	-	v	v	v	v	v	v	v		v	v		v
Conducted Spurious Emission	25	v	v	v	v	v	v	v	v	v			v	v	v
	26	v	v	v	v	v	-	v	v	v			v	v	v
	41	-	-	v	v	v	v	v	v	v			v	v	v
Frequency Stability	25				v			v				v		v	
	26				v		-	v				v		v	
	41	-	-		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
E.R.P. / E.I.R.P.	25	v					v	v	v	v			v	v	v
	26	v				v	-	v	v	v			v	v	v
	41	-	-	v		v	v	v	v	v			v	v	v
Radiated Spurious Emission	25	v	v	v	v	v	v	v		v				v	
	26	v	v	v	v	v	-	v		v				v	
	41	-	-	v	v	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 bandwidth of highest conducted power and widest bandwidth of each band are 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 between EUT conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly the EUT RF output level.

Example:

The spectrum analyzer offset is derived from RF cable loss.

Offset = RF cable loss.

Following shows an offset computation example with cable loss 6 dB.

$$\begin{aligned}\text{Offset (dB)} &= \text{RF cable loss (dB)} \\ &= 6 \text{ (dB)}\end{aligned}$$

3 Test Result

3.1 Conducted Output Power Measurement

3.1.1 Description of the Conducted Output Power Measurement

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

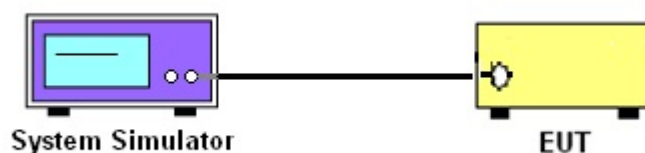
3.1.2 Measuring Instruments

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 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 25 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				26140	26365	26590
Frequency (MHz)				1860	1882.5	1905
20	QPSK	1	0	21.93	21.87	21.83
20	QPSK	1	49	21.56	21.75	21.72
20	QPSK	1	99	21.68	21.66	21.54
20	QPSK	50	0	20.69	20.79	20.82
20	QPSK	50	24	20.76	20.82	20.87
20	QPSK	50	49	20.65	20.81	20.79
20	QPSK	100	0	20.73	20.80	20.82
20	16QAM	1	0	21.90	21.85	21.81
20	16QAM	1	49	21.47	21.44	21.59
20	16QAM	1	99	21.84	21.72	21.30
20	16QAM	50	0	20.40	20.75	20.77
20	16QAM	50	24	20.58	20.65	20.63
20	16QAM	50	49	20.73	20.74	20.63
20	16QAM	100	0	20.66	20.73	20.69
Channel				26115	26365	26615
Frequency (MHz)				1857.5	1882.5	1907.5
15	QPSK	1	0	21.89	21.72	21.78
15	QPSK	1	37	21.39	21.72	21.69
15	QPSK	1	74	21.50	21.67	21.65
15	QPSK	36	0	20.73	20.67	20.80
15	QPSK	36	18	20.62	20.79	20.72
15	QPSK	36	37	20.62	20.77	20.65
15	QPSK	75	0	20.65	20.71	20.68
15	16QAM	1	0	21.83	21.60	21.69
15	16QAM	1	37	21.25	21.56	21.66
15	16QAM	1	74	21.63	21.25	21.50
15	16QAM	36	0	20.27	20.71	20.57
15	16QAM	36	18	20.28	20.59	20.62
15	16QAM	36	37	20.59	20.57	20.64
15	16QAM	75	0	20.47	20.66	20.52



BW [MHz]	Modulation	RB Size	RB Offset	Power (dBm) Low Ch. / Freq.	Power (dBm) Middle Ch. / Freq.	Power (dBm) High Ch. / Freq.
Channel				26090	26365	26640
Frequency (MHz)				1855	1882.5	1910
10	QPSK	1	0	21.62	21.74	21.60
10	QPSK	1	24	21.51	21.71	21.53
10	QPSK	1	49	21.46	21.66	21.50
10	QPSK	25	0	20.74	20.63	20.68
10	QPSK	25	12	20.63	20.73	20.60
10	QPSK	25	24	20.53	20.72	20.67
10	QPSK	50	0	20.50	20.60	20.65
10	16QAM	1	0	21.60	21.60	21.53
10	16QAM	1	24	21.24	21.59	21.47
10	16QAM	1	49	21.40	21.50	20.97
10	16QAM	25	0	20.30	20.66	20.58
10	16QAM	25	12	20.20	20.57	20.52
10	16QAM	25	24	20.21	20.49	20.47
10	16QAM	50	0	20.15	20.45	20.57
Channel				26065	26365	26665
Frequency (MHz)				1852.5	1882.5	1912.5
5	QPSK	1	0	21.65	21.77	21.59
5	QPSK	1	12	21.50	21.64	21.52
5	QPSK	1	24	21.52	21.63	21.56
5	QPSK	12	0	20.68	20.69	20.58
5	QPSK	12	6	20.70	20.74	20.74
5	QPSK	12	11	20.69	20.69	20.71
5	QPSK	25	0	20.73	20.71	20.68
5	16QAM	1	0	21.56	21.71	21.56
5	16QAM	1	12	21.14	21.59	21.16
5	16QAM	1	24	21.54	21.66	20.96
5	16QAM	12	0	20.32	20.65	20.57
5	16QAM	12	6	20.39	20.55	20.45
5	16QAM	12	11	20.22	20.44	20.18
5	16QAM	25	0	20.31	20.53	20.38



BW [MHz]	Modulation	RB Size	RB Offset	Power (dBm) Low Ch. / Freq.	Power (dBm) Middle Ch. / Freq.	Power (dBm) High Ch. / Freq.
Channel				26055	26365	26675
Frequency (MHz)				1851.5	1882.5	1913.5
3	QPSK	1	0	21.70	21.74	21.55
3	QPSK	1	7	21.57	21.66	21.52
3	QPSK	1	14	21.57	21.62	21.54
3	QPSK	8	0	20.57	20.65	20.58
3	QPSK	8	4	20.66	20.74	20.66
3	QPSK	8	7	20.64	20.65	20.63
3	QPSK	15	0	20.64	20.70	20.65
3	16QAM	1	0	21.69	21.71	21.52
3	16QAM	1	7	21.23	21.71	21.29
3	16QAM	1	14	21.60	21.63	21.01
3	16QAM	8	0	20.33	20.55	20.29
3	16QAM	8	4	20.33	20.50	20.22
3	16QAM	8	7	20.37	20.55	20.14
3	16QAM	15	0	20.37	20.41	20.21
Channel				26047	26365	26683
Frequency (MHz)				1850.7	1882.5	1914.3
1.4	QPSK	1	0	21.66	21.79	21.49
1.4	QPSK	1	2	21.54	21.65	21.40
1.4	QPSK	1	5	21.46	21.55	21.45
1.4	QPSK	3	0	21.47	21.60	21.34
1.4	QPSK	3	1	21.53	21.63	21.46
1.4	QPSK	3	2	21.47	21.63	21.44
1.4	QPSK	6	0	20.49	20.63	20.52
1.4	16QAM	1	0	21.62	21.70	21.09
1.4	16QAM	1	2	21.61	21.51	21.02
1.4	16QAM	1	5	21.25	21.44	20.87
1.4	16QAM	3	0	21.22	21.42	20.90
1.4	16QAM	3	1	21.33	21.30	20.92
1.4	16QAM	3	2	21.30	21.29	20.75
1.4	16QAM	6	0	20.21	20.44	19.95



<LTE Band 26 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				26865	26915	26965
Frequency (MHz)				831.5	836.5	841.5
15	QPSK	1	0	22.09	22.08	22.11
15	QPSK	1	37	21.94	21.88	21.89
15	QPSK	1	74	22.00	21.86	21.72
15	QPSK	36	0	21.10	20.68	20.98
15	QPSK	36	18	20.99	20.55	21.00
15	QPSK	36	37	20.96	20.59	20.94
15	QPSK	75	0	20.75	20.53	20.55
15	16QAM	1	0	22.01	22.02	22.00
15	16QAM	1	37	22.02	21.83	21.98
15	16QAM	1	74	21.99	22.00	21.85
15	16QAM	36	0	20.87	20.59	21.03
15	16QAM	36	18	20.73	20.51	21.08
15	16QAM	36	37	20.57	20.51	21.00
15	16QAM	75	0	20.44	20.26	20.65
Channel				26840	26915	26990
Frequency (MHz)				829	836.5	844
10	QPSK	1	0	22.07	21.82	21.97
10	QPSK	1	24	21.94	21.85	21.84
10	QPSK	1	49	21.86	21.94	21.51
10	QPSK	25	0	20.76	20.47	20.98
10	QPSK	25	12	20.73	20.53	20.91
10	QPSK	25	24	20.57	20.53	20.80
10	QPSK	50	0	20.70	20.47	20.83
10	16QAM	1	0	22.06	21.90	21.85
10	16QAM	1	24	22.01	21.83	21.81
10	16QAM	1	49	21.81	21.91	21.40
10	16QAM	25	0	20.82	20.54	21.04
10	16QAM	25	12	20.81	20.58	20.95
10	16QAM	25	24	20.64	20.67	20.80
10	16QAM	50	0	20.69	20.59	20.85



BW [MHz]	Modulation	RB Size	RB Offset	Power (dBm) Low Ch. / Freq.	Power (dBm) Middle Ch. / Freq.	Power (dBm) High Ch. / Freq.
Channel				26815	26915	27015
Frequency (MHz)				826.5	836.5	846.5
5	QPSK	1	0	21.96	21.75	22.04
5	QPSK	1	12	22.05	21.85	21.96
5	QPSK	1	24	21.96	21.89	21.60
5	QPSK	12	0	20.70	20.61	20.89
5	QPSK	12	6	20.80	20.66	20.79
5	QPSK	12	11	20.80	20.65	20.64
5	QPSK	25	0	20.70	20.62	20.70
5	16QAM	1	0	21.92	21.71	22.02
5	16QAM	1	12	22.04	21.67	22.00
5	16QAM	1	24	21.93	21.83	21.65
5	16QAM	12	0	20.75	20.87	20.89
5	16QAM	12	6	20.82	20.96	20.81
5	16QAM	12	11	20.85	20.94	20.64
5	16QAM	25	0	20.65	20.80	20.64
Channel				26805	26915	27025
Frequency (MHz)				825.5	836.5	847.5
3	QPSK	1	0	21.89	21.82	21.83
3	QPSK	1	7	21.92	21.89	21.43
3	QPSK	1	14	21.75	21.99	21.33
3	QPSK	8	0	20.45	20.82	20.66
3	QPSK	8	4	20.45	20.85	20.55
3	QPSK	8	7	20.37	20.84	20.43
3	QPSK	15	0	20.43	20.98	20.55
3	16QAM	1	0	21.19	21.91	21.84
3	16QAM	1	7	21.16	21.86	21.56
3	16QAM	1	14	21.02	21.94	21.42
3	16QAM	8	0	19.50	20.88	20.69
3	16QAM	8	4	19.39	20.91	20.59
3	16QAM	8	7	19.41	20.90	20.21
3	16QAM	15	0	19.43	20.91	20.51
Channel				26797	26915	27033
Frequency (MHz)				824.7	836.5	848.3
1.4	QPSK	1	0	21.84	21.96	21.36
1.4	QPSK	1	2	21.86	21.97	21.27
1.4	QPSK	1	5	21.93	21.93	21.23
1.4	QPSK	3	0	21.74	21.76	21.31
1.4	QPSK	3	1	21.77	21.79	21.30
1.4	QPSK	3	2	21.76	21.80	21.27
1.4	QPSK	6	0	20.79	20.82	20.29
1.4	16QAM	1	0	21.87	22.02	21.31
1.4	16QAM	1	2	21.91	22.05	21.18
1.4	16QAM	1	5	21.92	22.04	21.11
1.4	16QAM	3	0	21.66	21.83	21.21
1.4	16QAM	3	1	21.70	21.89	21.24
1.4	16QAM	3	2	21.70	21.91	21.19
1.4	16QAM	6	0	20.40	20.64	20.55



<LTE Band 41 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				39750	40620	41490
Frequency (MHz)				2506	2593	2680
20	QPSK	1	0	21.48	21.67	21.45
20	QPSK	1	49	21.30	21.57	21.34
20	QPSK	1	99	21.22	21.51	21.38
20	QPSK	50	0	20.40	20.57	20.21
20	QPSK	50	24	20.32	20.55	20.32
20	QPSK	50	49	20.26	20.48	20.01
20	QPSK	100	0	20.35	20.54	20.27
20	16QAM	1	0	20.68	20.87	20.60
20	16QAM	1	49	20.52	20.77	20.51
20	16QAM	1	99	20.32	20.70	20.57
20	16QAM	50	0	19.59	19.70	19.38
20	16QAM	50	24	19.48	19.68	19.49
20	16QAM	50	49	19.45	19.62	19.16
20	16QAM	100	0	19.51	19.66	19.39
Channel				39725	40620	41515
Frequency (MHz)				2503.5	2593	2682.5
15	QPSK	1	0	21.17	21.80	21.48
15	QPSK	1	37	21.22	21.67	21.39
15	QPSK	1	74	21.11	21.69	21.49
15	QPSK	36	0	20.26	20.59	20.36
15	QPSK	36	18	20.30	20.60	20.15
15	QPSK	36	37	20.22	20.54	20.17
15	QPSK	75	0	20.31	20.58	20.43
15	16QAM	1	0	20.42	20.93	20.65
15	16QAM	1	37	20.48	20.81	20.59
15	16QAM	1	74	20.34	20.85	20.71
15	16QAM	36	0	19.41	19.69	19.44
15	16QAM	36	18	19.44	19.70	19.21
15	16QAM	36	37	19.36	19.64	19.24
15	16QAM	75	0	19.52	19.71	19.54



BW [MHz]	Modulation	RB Size	RB Offset	Power (dBm) Low Ch. / Freq.	Power (dBm) Middle Ch. / Freq.	Power (dBm) High Ch. / Freq.
Channel				39700	40620	41540
Frequency (MHz)				2501	2593	2685
10	QPSK	1	0	20.98	21.47	21.31
10	QPSK	1	24	21.18	21.61	21.48
10	QPSK	1	49	21.14	21.28	21.29
10	QPSK	25	0	20.00	20.51	20.14
10	QPSK	25	12	20.19	20.58	20.20
10	QPSK	25	24	20.19	20.48	20.19
10	QPSK	50	0	20.11	20.51	20.12
10	16QAM	1	0	20.11	20.68	20.48
10	16QAM	1	24	20.38	20.81	20.69
10	16QAM	1	49	20.32	20.46	20.48
10	16QAM	25	0	19.20	19.65	19.23
10	16QAM	25	12	19.41	19.72	19.33
10	16QAM	25	24	19.39	19.62	19.33
10	16QAM	50	0	19.33	19.62	19.26
Channel				39675	40620	41565
Frequency (MHz)				2498.5	2593	2687.5
5	QPSK	1	0	20.98	21.58	21.54
5	QPSK	1	12	20.97	21.60	21.57
5	QPSK	1	24	21.00	21.52	21.45
5	QPSK	12	0	19.92	20.53	20.29
5	QPSK	12	6	19.97	20.56	20.34
5	QPSK	12	11	19.97	20.54	20.34
5	QPSK	25	0	19.96	20.55	20.32
5	16QAM	1	0	20.17	20.77	20.71
5	16QAM	1	12	20.17	20.81	20.79
5	16QAM	1	24	20.24	20.74	20.69
5	16QAM	12	0	19.06	19.63	19.37
5	16QAM	12	6	19.12	19.66	19.44
5	16QAM	12	11	19.12	19.64	19.44
5	16QAM	25	0	19.17	19.69	19.47

Note: Maximum average power for LTE.

3.2 Peak-to-Average Ratio

3.2.1 Description of the PAR Measurement

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

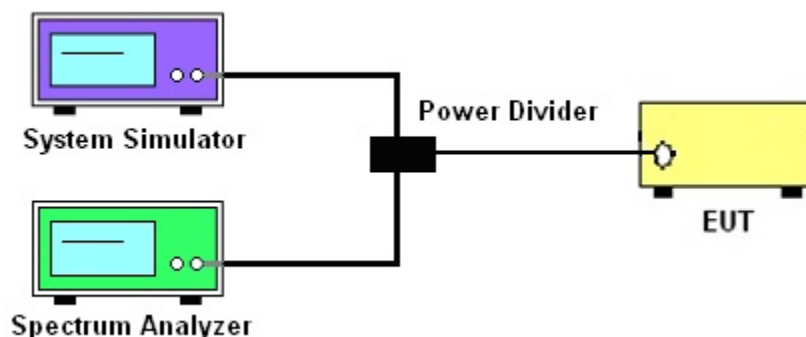
3.2.2 Measuring Instruments

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

3.2.3 Test Procedures

1. The EUT was connected to spectrum 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



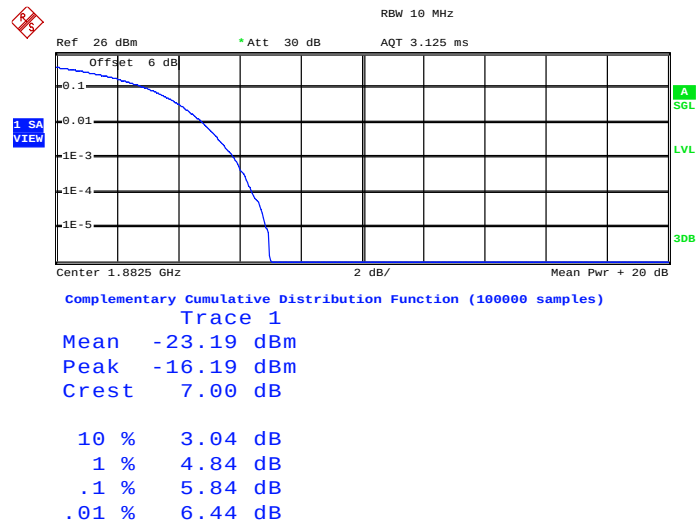
3.2.5 Test Result of Peak-to-Average Ratio

LTE Band 25						
BW [MHz]	Modulation	RB Size	RB Offset	Power (dBm) Low Ch. / Freq.	Power (dBm) Middle Ch. / Freq.	Power (dBm) High Ch. / Freq.
Channel				26365		
Frequency (MHz)				1882.5		
20	16QAM	1	0	5.84		
20	16QAM	100	0	7.16		

3.2.6 Peak to Average Power Ratio

Peak-to-Average Ratio on LTE Band 25

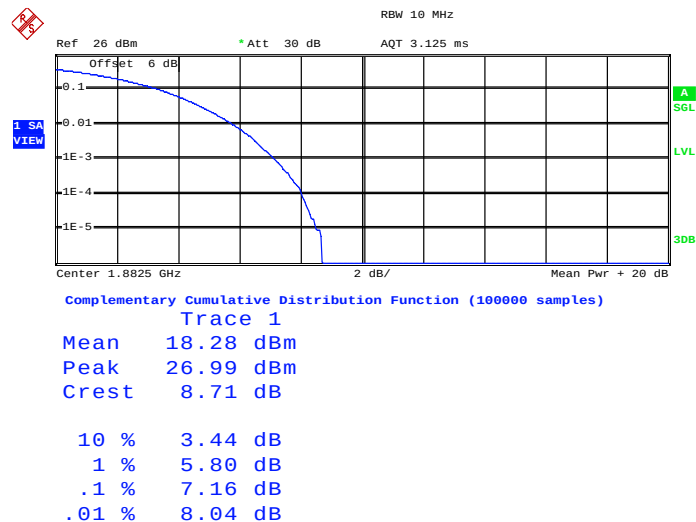
20MHz / 16QAM in Ch. 26365 (1RB Size)



Date: 17.JUL.2014 23:17:11

Peak-to-Average Ratio on LTE Band 25

20MHz / 16QAM in Ch. 26365 (100RB Size)



Date: 17.JUL.2014 23:16:08

3.3 Effective Radiated Power and Equivalent Isotropic Radiated Power Measurement

3.3.1 Description of the ERP/EIRP Measurement

Effective radiated power output measurements by substitution method according to ANSI / TIA / EIA-603-C-2004, and the spectrum analyzer configuration follows KDB 971168 D01 Power Meas. License Digital Systems v02r01. Mobile and portable (hand-held) stations operating are limited to average ERP of 7 watts with LTE band 26.

Equivalent isotropic radiated power output measurements by substitution method according to ANSI / TIA / EIA-603-C-2004, and the spectrum analyzer configuration follows KDB 971168 D01 Power Meas. License Digital Systems v02r01. Mobile and portable (hand-held) stations operating are limited to average EIRP of 2 watts with LTE band 25 and LTE band 41.

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

P_s (dBm) : Input power to substitution antenna.

G_s (dBi or dBd) : Substitution antenna Gain.

$E_t = R_t + AF$

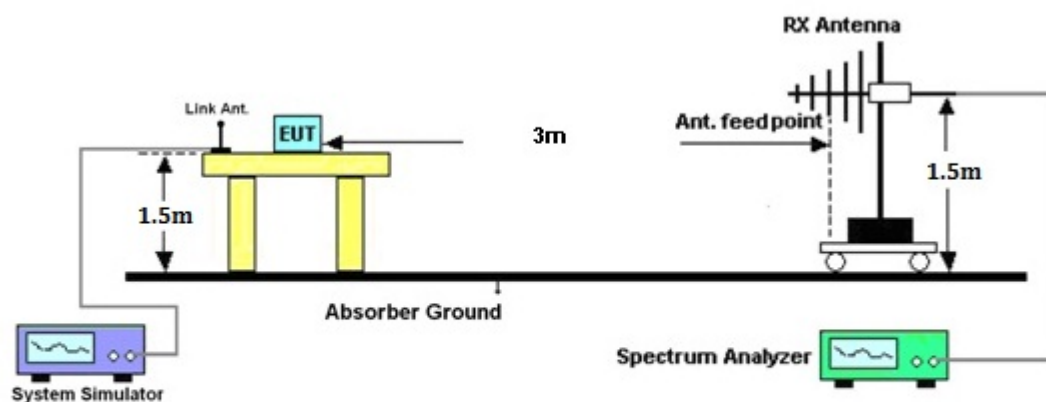
$E_s = R_s + AF$

AF (dB/m) : Receive antenna factor

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

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

3.3.4 Test Setup



3.3.5 Test Result of ERP/EIRP

LTE Band 25 Radiated Power EIRP								
LTE Band	Channel BW (MHz)	Modulation	RB Configuration		Freq. (MHz)	EIRP (dBm)	EIRP (W)	H/V
			RB Size	RB Offset				
25	1.4	QPSK	1	0	1850.7	23.54	0.2259	H
25	1.4	QPSK	1	0	1882.5	23.28	0.2128	H
25	1.4	QPSK	1	0	1914.3	23.62	0.2301	H
25	1.4	QPSK	1	0	1850.7	24.32	0.2704	V
25	1.4	QPSK	1	0	1882.5	23.85	0.2427	V
25	1.4	QPSK	1	0	1914.3	23.88	0.2443	V
25	1.4	16QAM	1	0	1850.7	23.14	0.2061	H
25	1.4	16QAM	1	0	1882.5	23.21	0.2094	H
25	1.4	16QAM	1	0	1914.3	23.26	0.2118	H
25	1.4	16QAM	1	0	1850.7	23.92	0.2466	V
25	1.4	16QAM	1	0	1882.5	23.77	0.2382	V
25	1.4	16QAM	1	0	1914.3	23.53	0.2254	V
25	20	QPSK	1	0	1860	23.36	0.2168	H
25	20	QPSK	1	0	1882.5	23.92	0.2466	H
25	20	QPSK	1	0	1905	24.33	0.2710	H
25	20	QPSK	1	0	1860	24.05	0.2541	V
25	20	QPSK	1	0	1882.5	24.38	0.2742	V
25	20	QPSK	1	0	1905	24.57	0.2864	V
25	20	16QAM	1	0	1860	23.05	0.2018	H
25	20	16QAM	1	0	1882.5	23.97	0.2495	H
25	20	16QAM	1	0	1905	24.24	0.2655	H
25	20	16QAM	1	0	1860	23.79	0.2393	V
25	20	16QAM	1	0	1882.5	24.43	0.2773	V
25	20	16QAM	1	0	1905	24.47	0.2799	V



LTE Band 26 Radiated Power ERP								
LTE Band	Channel BW (MHz)	Modulation	RB Configuration		Freq. (MHz)	ERP (dBm)	ERP (W)	H/V
			RB Size	RB Offset				
26	1.4	QPSK	1	5	824.7	20.33	0.1079	H
26	1.4	QPSK	1	2	836.5	20.36	0.1086	H
26	1.4	QPSK	1	0	848.3	19.36	0.0863	H
26	1.4	QPSK	1	5	824.7	3.14	0.0021	V
26	1.4	QPSK	1	2	836.5	4.78	0.0030	V
26	1.4	QPSK	1	0	848.3	5.94	0.0039	V
26	1.4	16QAM	1	5	824.7	20.36	0.1086	H
26	1.4	16QAM	1	2	836.5	20.57	0.1140	H
26	1.4	16QAM	1	0	848.3	19.56	0.0904	H
26	1.4	16QAM	1	5	824.7	2.82	0.0019	V
26	1.4	16QAM	1	2	836.5	4.98	0.0031	V
26	1.4	16QAM	1	0	848.3	6.11	0.0041	V
26	15	QPSK	1	0	831.5	20.67	0.1167	H
26	15	QPSK	1	0	836.5	20.91	0.1233	H
26	15	QPSK	1	0	841.5	20.34	0.1081	H
26	15	QPSK	1	0	831.5	3.56	0.0023	V
26	15	QPSK	1	0	836.5	4.34	0.0027	V
26	15	QPSK	1	0	841.5	4.51	0.0028	V
26	15	16QAM	1	37	831.5	20.67	0.1167	H
26	15	16QAM	1	0	836.5	21.17	0.1309	H
26	15	16QAM	1	0	841.5	20.47	0.1114	H
26	15	16QAM	1	37	831.5	4.08	0.0026	V
26	15	16QAM	1	0	836.5	4.60	0.0029	V
26	15	16QAM	1	0	841.5	4.67	0.0029	V



LTE Band 41 Radiated Power EIRP								
LTE Band	Channel BW (MHz)	Modulation	RB Configuration		Freq. (MHz)	EIRP (dBm)	EIRP (W)	H/V
			RB Size	RB Offset				
41	5	QPSK	1	24	2498.5	29.13	0.8185	H
41	5	QPSK	1	12	2593	27.36	0.5445	H
41	5	QPSK	1	12	2687.5	27.12	0.5152	H
41	5	QPSK	1	24	2498.5	28.70	0.7413	V
41	5	QPSK	1	12	2593	27.68	0.5861	V
41	5	QPSK	1	12	2687.5	26.65	0.4624	V
41	5	16QAM	1	24	2498.5	28.16	0.6546	H
41	5	16QAM	1	12	2593	26.53	0.4498	H
41	5	16QAM	1	12	2687.5	26.31	0.4276	H
41	5	16QAM	1	24	2498.5	27.49	0.5610	V
41	5	16QAM	1	12	2593	26.82	0.4808	V
41	5	16QAM	1	12	2687.5	25.86	0.3855	V
41	15	QPSK	1	37	2503.5	27.53	0.5662	H
41	15	QPSK	1	0	2593	27.53	0.5662	H
41	15	QPSK	1	74	2682.5	27.53	0.5662	H
41	15	QPSK	1	37	2503.5	28.63	0.7295	V
41	15	QPSK	1	0	2593	28.06	0.6397	V
41	15	QPSK	1	74	2682.5	27.05	0.5070	V
41	15	16QAM	1	37	2503.5	28.35	0.6839	H
41	15	16QAM	1	0	2593	26.86	0.4853	H
41	15	16QAM	1	74	2682.5	26.56	0.4529	H
41	15	16QAM	1	37	2503.5	27.94	0.6223	V
41	15	16QAM	1	0	2593	27.30	0.5370	V
41	15	16QAM	1	74	2682.5	26.10	0.4074	V



LTE Band 41 Radiated Power EIRP								
LTE Band	Channel BW (MHz)	Modulation	RB Configuration		Freq. (MHz)	EIRP (dBm)	EIRP (W)	H/V
			RB Size	RB Offset				
41	20	QPSK	1	0	2506	29.11	0.8147	H
41	20	QPSK	1	0	2593	27.86	0.6109	H
41	20	QPSK	1	0	2680	27.48	0.5598	H
41	20	QPSK	1	0	2506	28.71	0.7430	V
41	20	QPSK	1	0	2593	28.19	0.6592	V
41	20	QPSK	1	0	2680	27.22	0.5272	V
41	20	16QAM	1	0	2506	28.59	0.7228	H
41	20	16QAM	1	0	2593	27.15	0.5188	H
41	20	16QAM	1	0	2680	26.74	0.4721	H
41	20	16QAM	1	0	2506	28.20	0.6607	V
41	20	16QAM	1	0	2593	27.47	0.5585	V
41	20	16QAM	1	0	2680	26.47	0.4436	V

3.4 99% Occupied Bandwidth and 26dB Bandwidth Measurement

3.4.1 Description of 99% Occupied Bandwidth and 26dB Bandwidth Measurement

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

The 26dB occupied bandwidth is the width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal 26 dB.

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

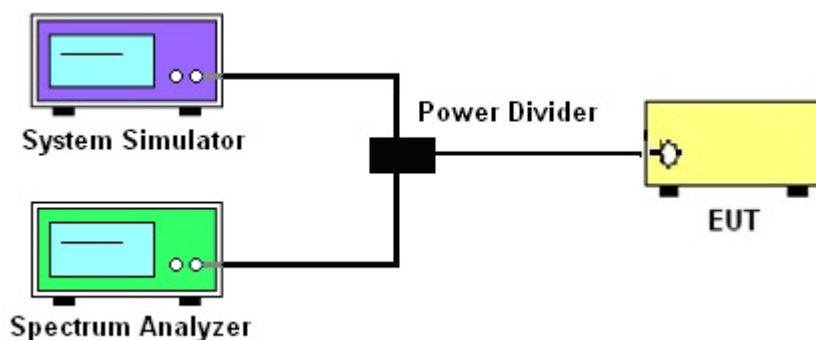
3.4.2 Measuring Instruments

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 26dB and 99% occupied bandwidth (BW) of the middle channel for the highest RF powers with full RB sizes were measured.

3.4.4 Test Setup



3.4.5 Test Result of 99% Occupied Bandwidth and 26dB Bandwidth

Modes	LTE Band 25			
BW / Mod.	1.4MHz / QPSK	1.4MHz / 16QAM	3MHz / QPSK	3MHz / 16QAM
99% OBW (MHz)	1.086	1.098	2.724	2.724
26dB BW (MHz)	1.238	1.238	3.054	3.036
BW / Mod.	5MHz / QPSK	5MHz / 16QAM	10MHz / QPSK	10MHz / 16QAM
99% OBW (MHz)	4.490	4.500	9.080	9.060
26dB BW (MHz)	4.950	4.950	10.000	10.080
BW / Mod.	15MHz / QPSK	15MHz / 16QAM	20MHz / QPSK	20MHz / 16QAM
99% OBW (MHz)	13.470	13.500	18.640	18.600
26dB BW (MHz)	14.850	14.760	21.640	21.320

Modes	LTE Band 26			
BW / Mod.	1.4MHz / QPSK	1.4MHz / 16QAM	3MHz / QPSK	3MHz / 16QAM
99% OBW (MHz)	1.092	1.095	2.718	2.730
26dB BW (MHz)	1.215	1.224	3.054	3.054
BW / Mod.	5MHz / QPSK	5MHz / 16QAM	10MHz / QPSK	10MHz / 16QAM
99% OBW (MHz)	4.490	4.510	9.100	9.060
26dB BW (MHz)	4.820	4.880	9.980	9.960
BW / Mod.	15MHz / QPSK	15MHz / 16QAM		
99% OBW (MHz)	13.470	13.530		
26dB BW (MHz)	14.640	14.520		

Modes	LTE Band 41			
BW / Mod.	5MHz / QPSK	5MHz / 16QAM	10MHz / QPSK	10MHz / 16QAM
99% OBW (MHz)	4.500	4.500	9.100	9.100
26dB BW (MHz)	4.910	4.870	9.920	9.960
BW / Mod.	15MHz / QPSK	15MHz / 16QAM	20MHz / QPSK	20MHz / 16QAM
99% OBW (MHz)	13.560	13.530	18.800	18.720
26dB BW (MHz)	14.430	14.550	21.240	21.120

Note:

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

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

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

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

BW10MHz RB setting : RB Size 50, RB offset 0

BW15MHz RB setting : RB Size 75, RB offset 0

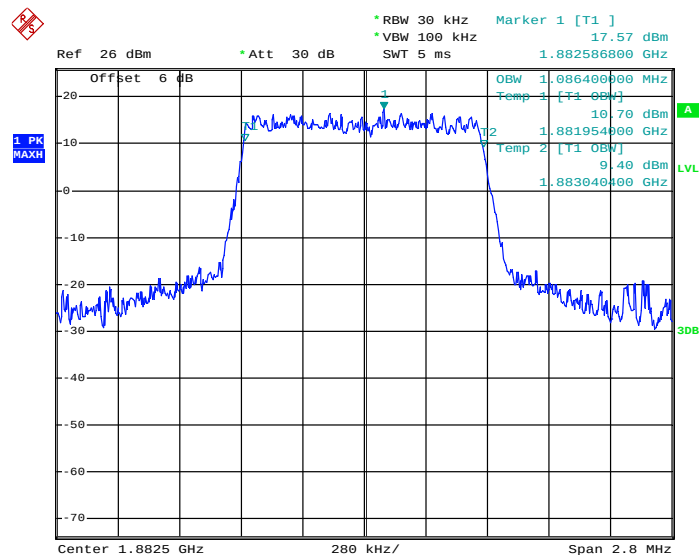
BW20MHz RB setting : RB Size 100, RB offset 0



3.4.6 Test Result (Plots) of 99% Occupied Bandwidth and 26dB Bandwidth

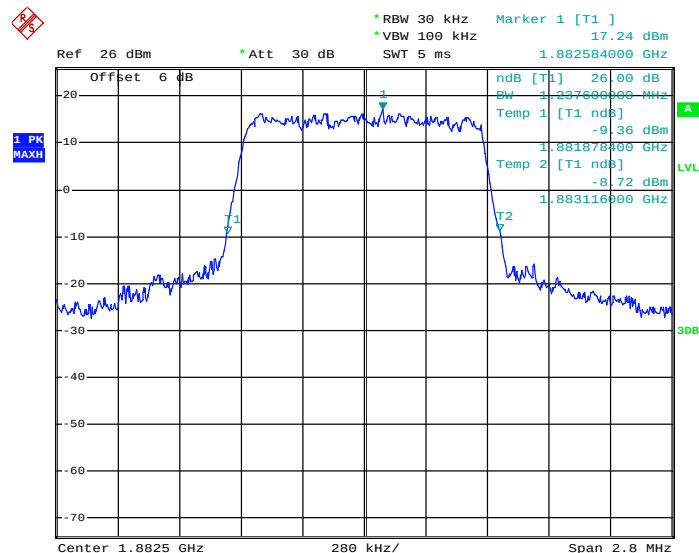
Band :	LTE Band 25	BW / Mod. :	1.4MHz / QPSK
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99% Occupied Bandwidth Plot on Channel 26365

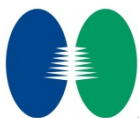


Date: 17.JUL.2014 23:06:34

26dB Bandwidth Plot on Channel 26365

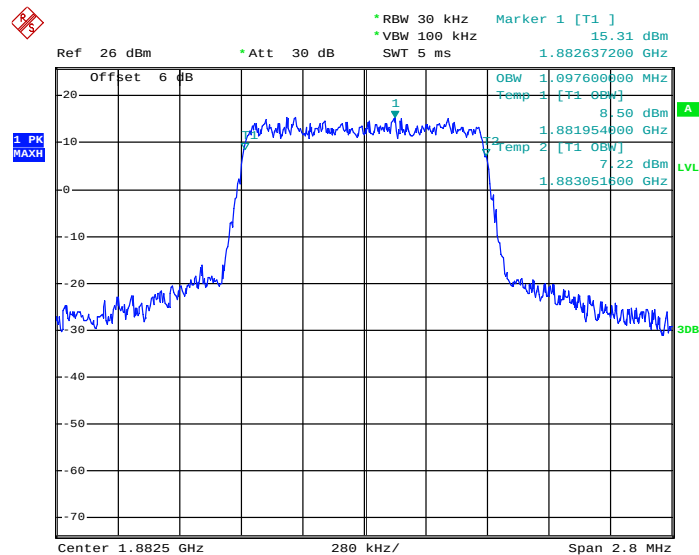


Date: 17.JUL.2014 23:07:33



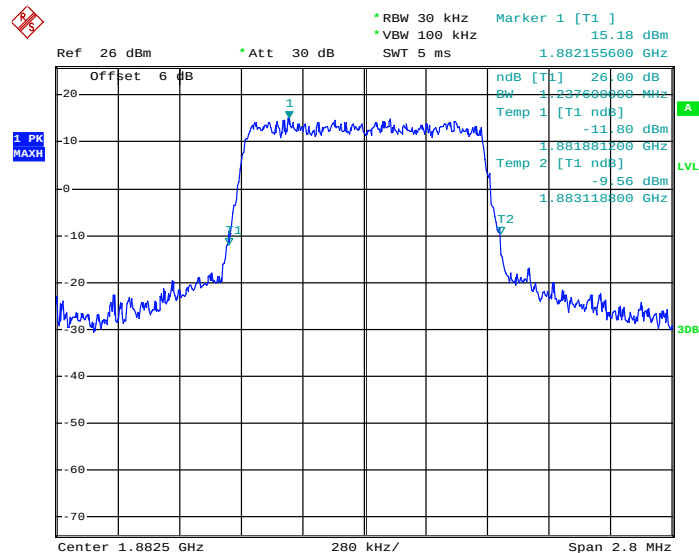
Band :	LTE Band 25	BW / Mod. :	1.4MHz / 16QAM
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99% Occupied Bandwidth Plot on Channel 26365



Date: 17.JUL.2014 23:06:51

26dB Bandwidth Plot on Channel 26365

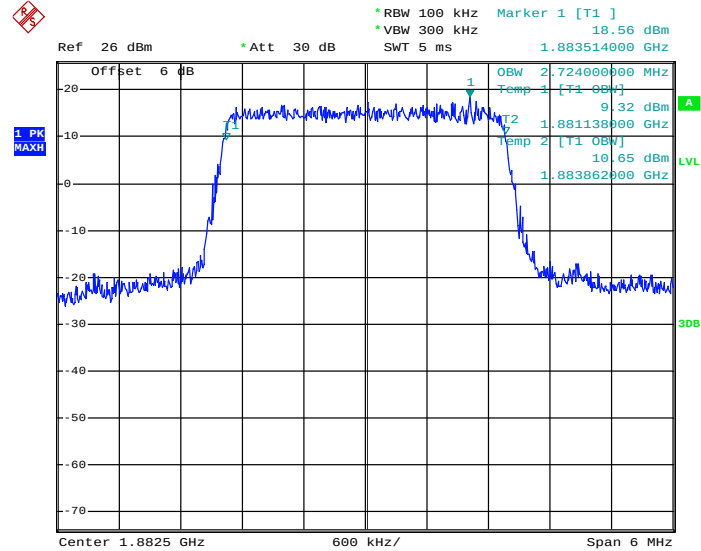


Date: 17.JUL.2014 23:07:06



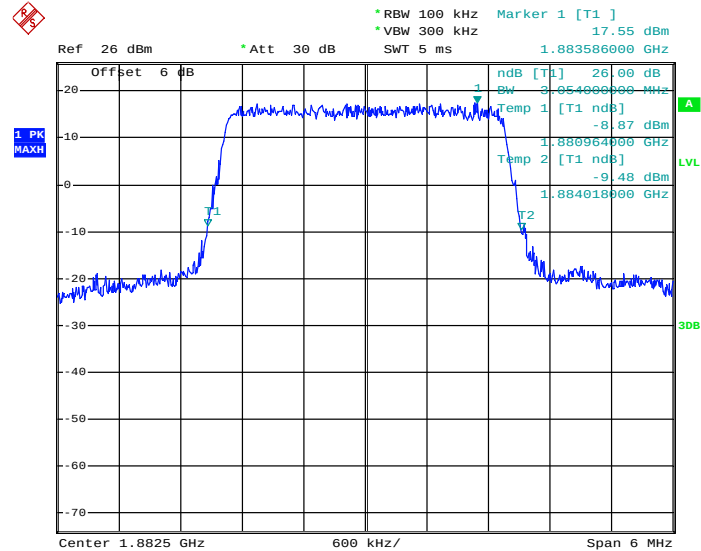
Band :	LTE Band 25	BW / Mod. :	3MHz / QPSK
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99% Occupied Bandwidth Plot on Channel 26365



Date: 17.JUL.2014 23:07:51

26dB Bandwidth Plot on Channel 26365

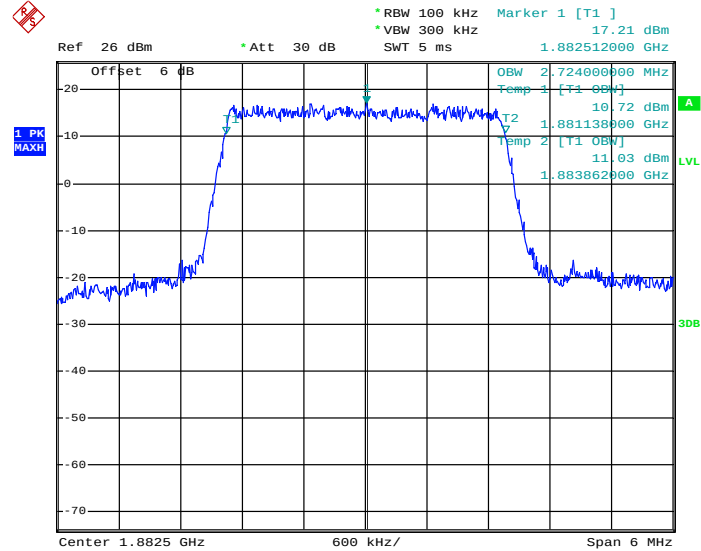


Date: 17.JUL.2014 23:08:07



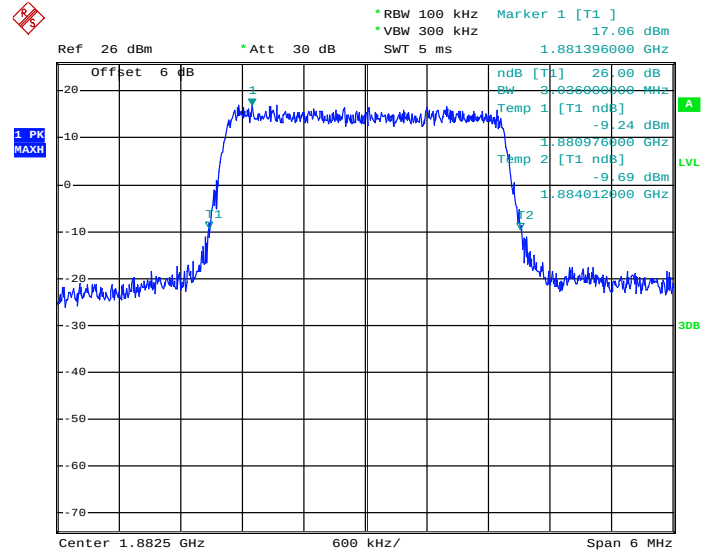
Band :	LTE Band 25	BW / Mod. :	3MHz / 16QAM
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99% Occupied Bandwidth Plot on Channel 26365



Date: 17.JUL.2014 23:08:28

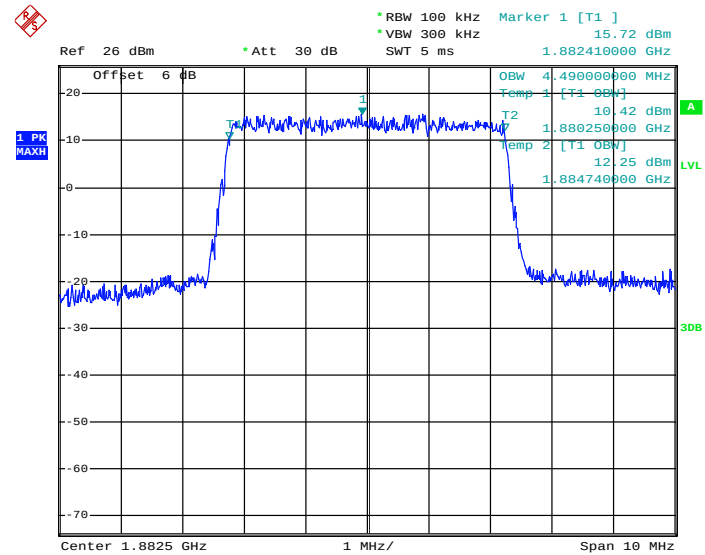
26dB Bandwidth Plot on Channel 26365



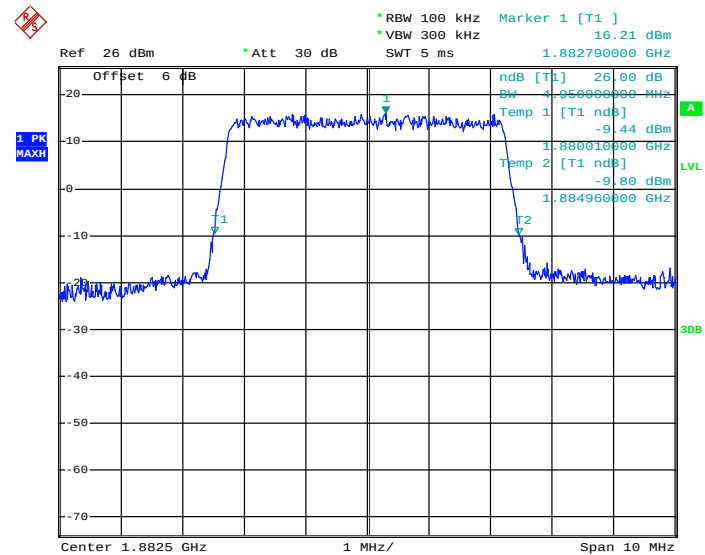
Date: 17.JUL.2014 23:09:27



Band :	LTE Band 25	BW / Mod. :	5MHz / QPSK
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99% Occupied Bandwidth Plot on Channel 26365

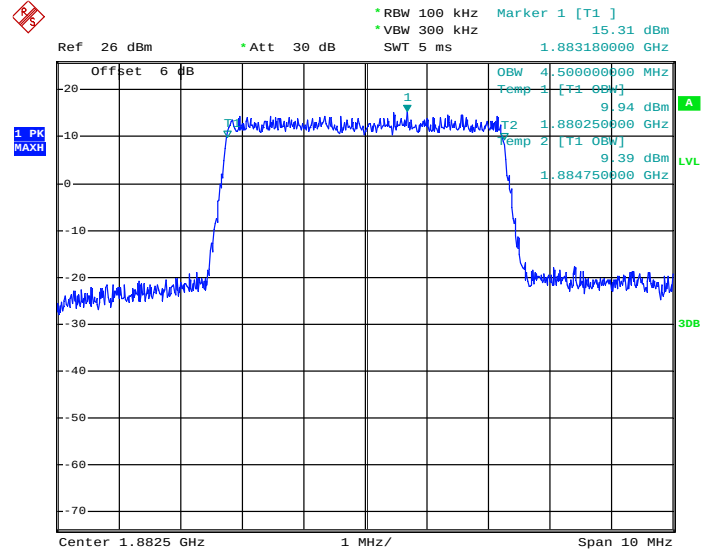
Date: 17.JUL.2014 23:10:27

26dB Bandwidth Plot on Channel 26365

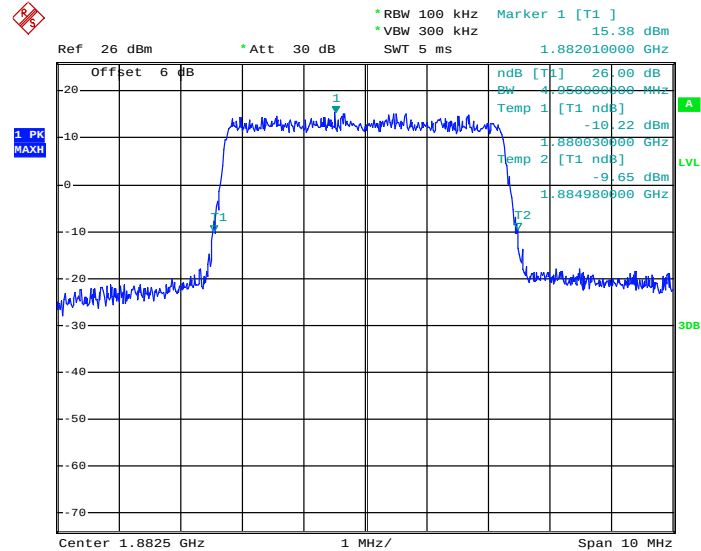
Date: 17.JUL.2014 23:10:51



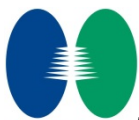
Band :	LTE Band 25	BW / Mod. :	5MHz / 16QAM
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99% Occupied Bandwidth Plot on Channel 26365

Date: 17.JUL.2014 23:09:53

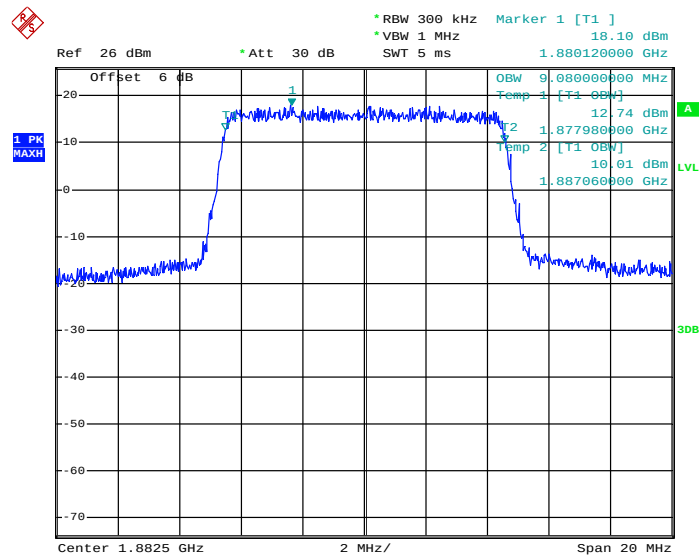
26dB Bandwidth Plot on Channel 26365

Date: 17.JUL.2014 23:10:09



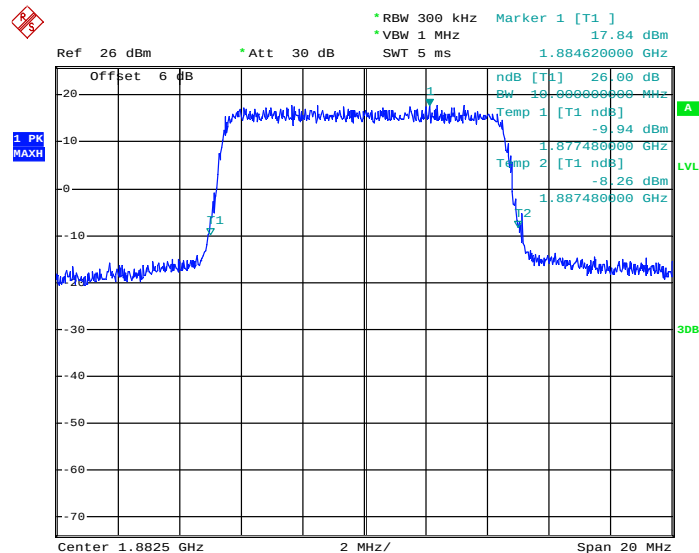
Band :	LTE Band 25	BW / Mod. :	10MHz / QPSK
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99% Occupied Bandwidth Plot on Channel 26365



Date: 17.JUL.2014 23:11:20

26dB Bandwidth Plot on Channel 26365

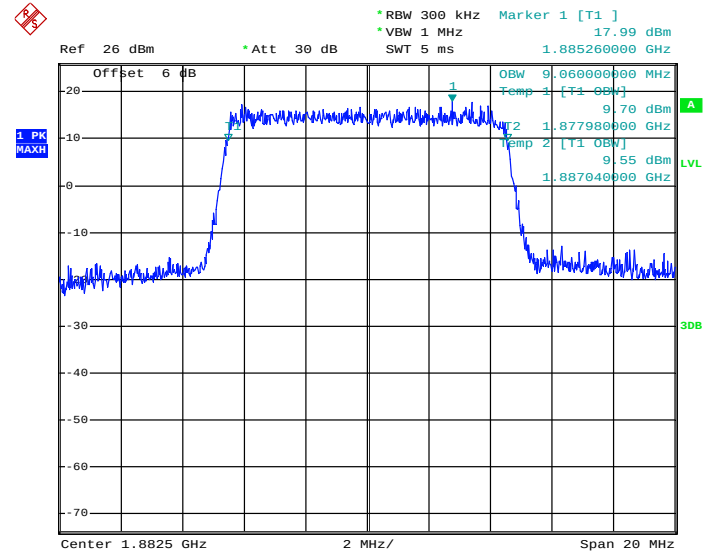


Date: 17.JUL.2014 23:11:41



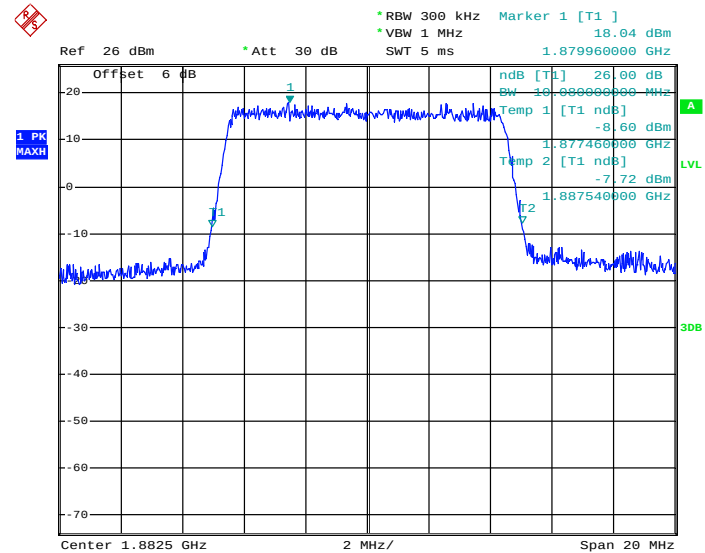
Band :	LTE Band 25	BW / Mod. :	10MHz / 16QAM
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99% Occupied Bandwidth Plot on Channel 26365



Date: 17.JUL.2014 23:11:56

26dB Bandwidth Plot on Channel 26365

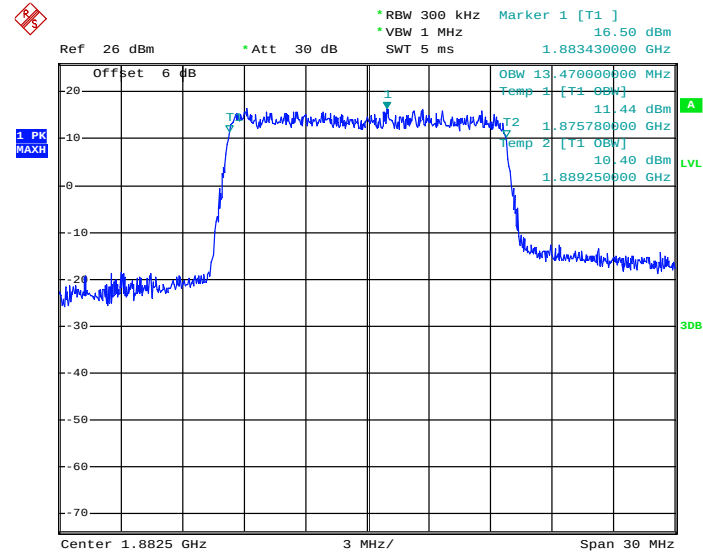


Date: 17.JUL.2014 23:12:15



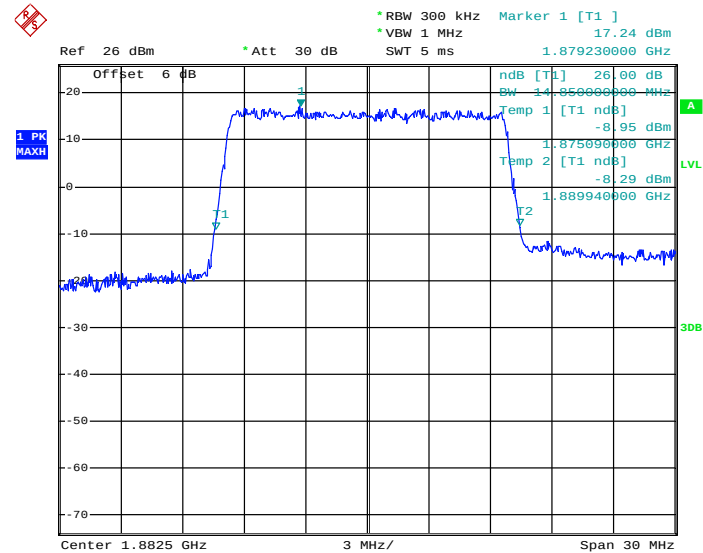
Band :	LTE Band 25	BW / Mod. :	15MHz / QPSK
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99% Occupied Bandwidth Plot on Channel 26365



Date: 17.JUL.2014 23:13:10

26dB Bandwidth Plot on Channel 26365

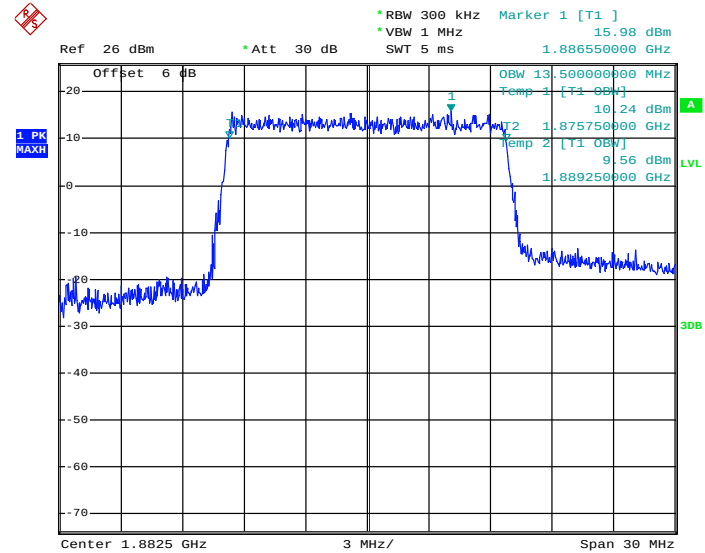


Date: 17.JUL.2014 23:13:47



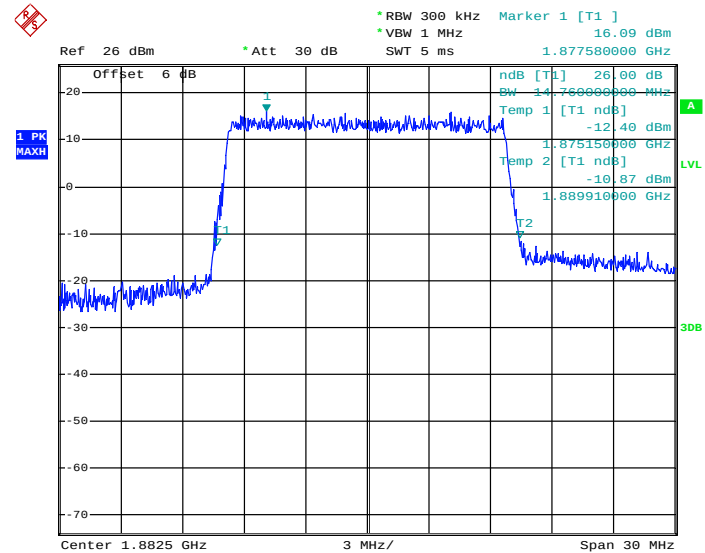
Band :	LTE Band 25	BW / Mod. :	15MHz / 16QAM
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99% Occupied Bandwidth Plot on Channel 26365



Date: 17.JUL.2014 23:12:36

26dB Bandwidth Plot on Channel 26365

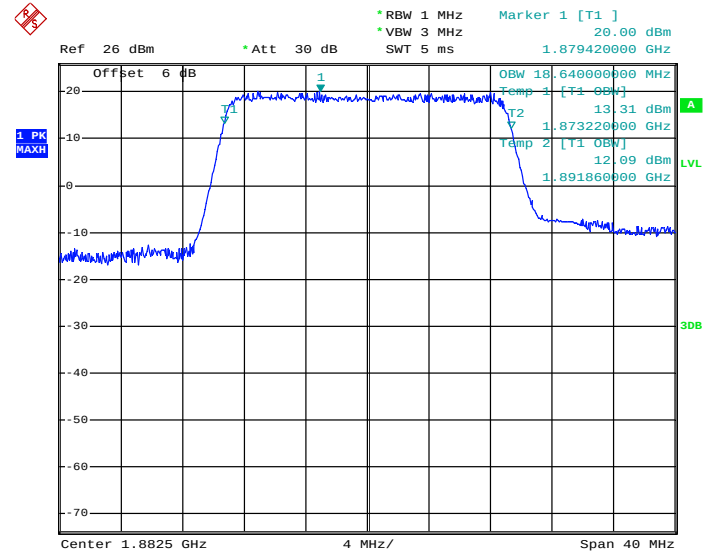


Date: 17.JUL.2014 23:12:49



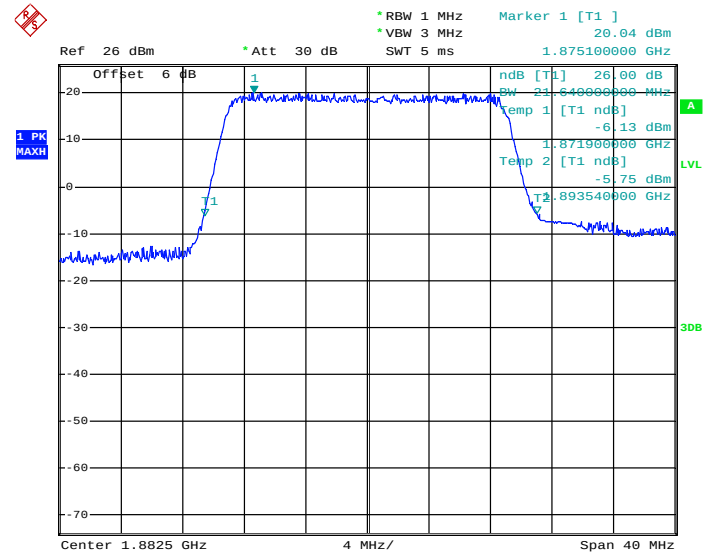
Band :	LTE Band 25	BW / Mod. :	20MHz / QPSK
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99% Occupied Bandwidth Plot on Channel 26365



Date: 17.JUL.2014 23:14:18

26dB Bandwidth Plot on Channel 26365

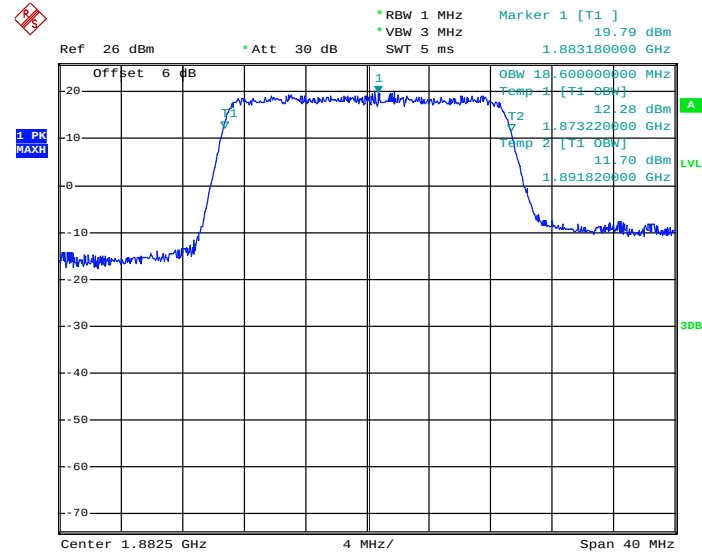


Date: 17.JUL.2014 23:14:40



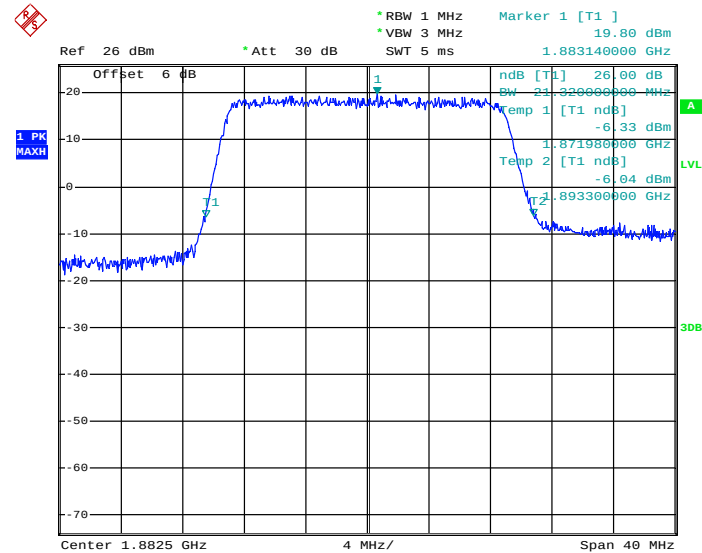
Band :	LTE Band 25	BW / Mod. :	20MHz / 16QAM
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99% Occupied Bandwidth Plot on Channel 26365



Date: 17.JUL.2014 23:15:06

26dB Bandwidth Plot on Channel 26365

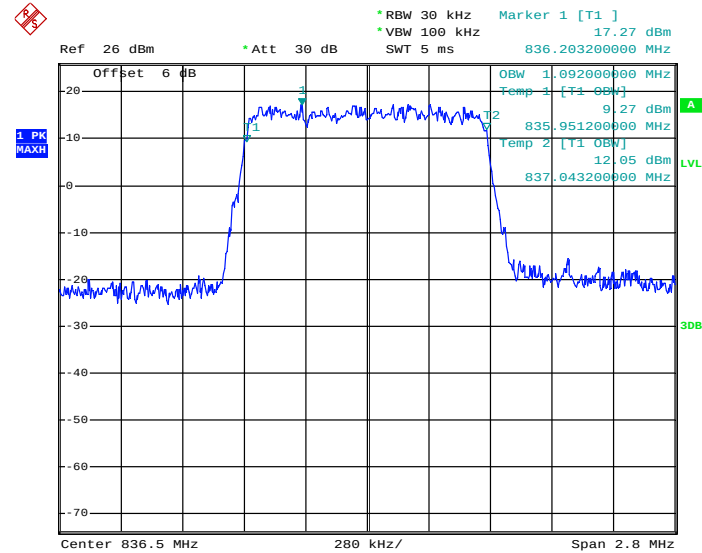


Date: 17.JUL.2014 23:15:23



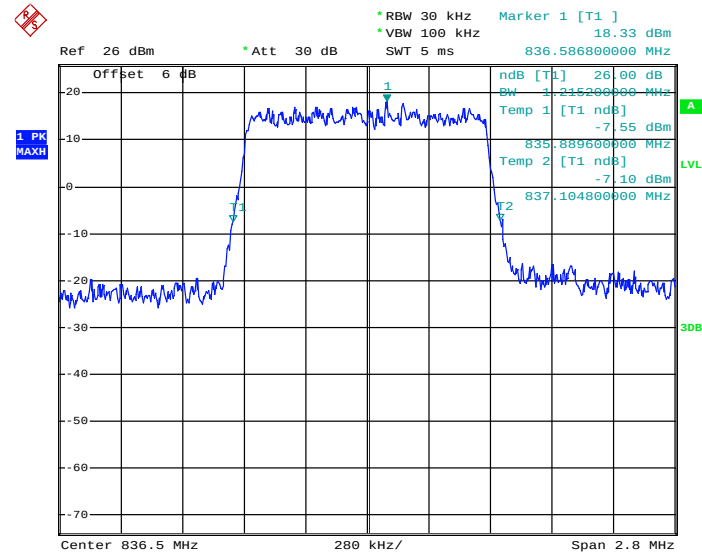
Band :	LTE Band 26	BW / Mod. :	1.4MHz / QPSK
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99% Occupied Bandwidth Plot on Channel 26915



Date: 18.JUL.2014 04:04:59

26dB Bandwidth Plot on Channel 26915

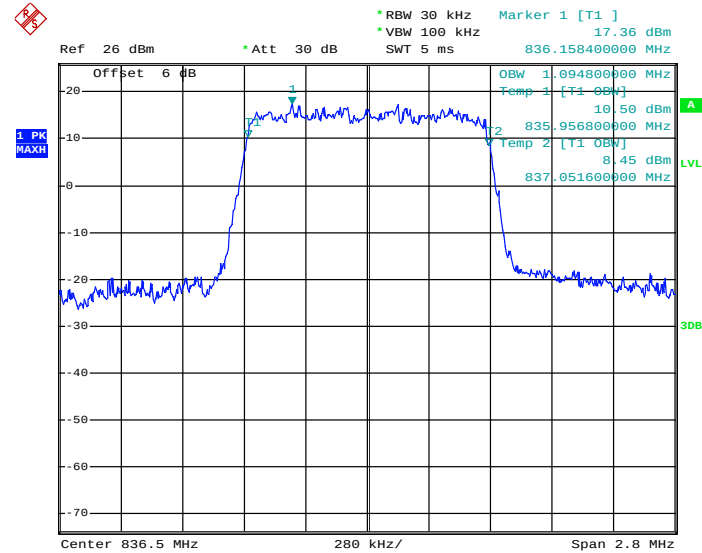


Date: 18.JUL.2014 04:05:12



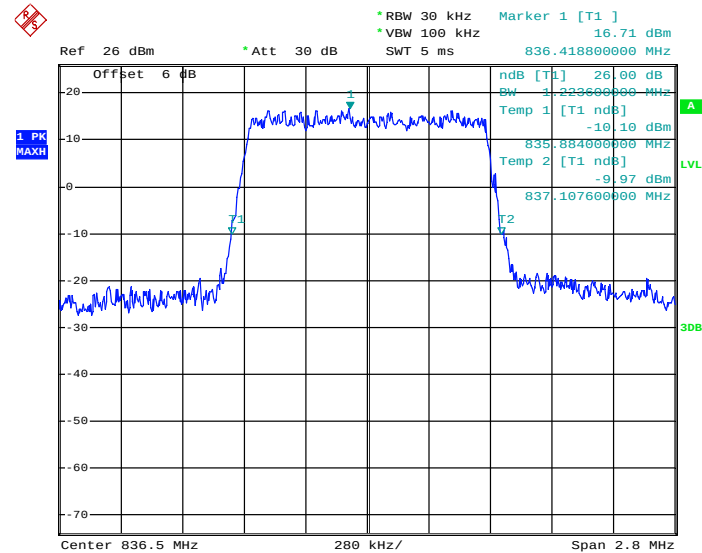
Band :	LTE Band 26	BW / Mod. :	1.4MHz / 16QAM
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99% Occupied Bandwidth Plot on Channel 26915



Date: 18.JUL.2014 04:05:33

26dB Bandwidth Plot on Channel 26915

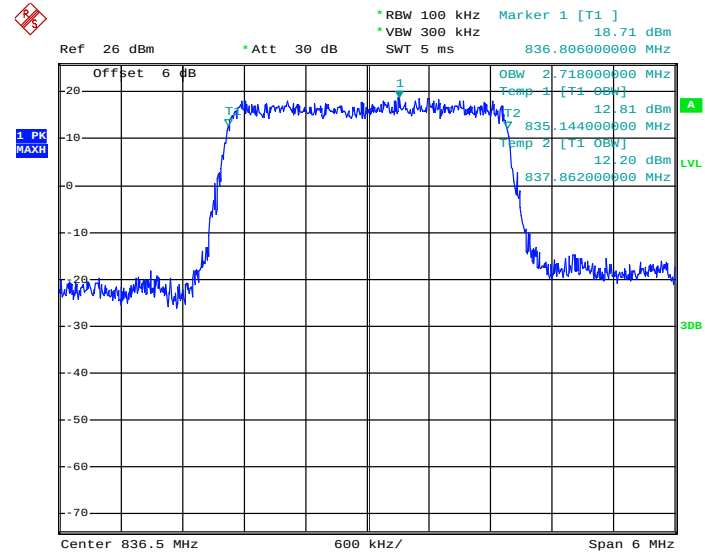


Date: 18.JUL.2014 04:05:48



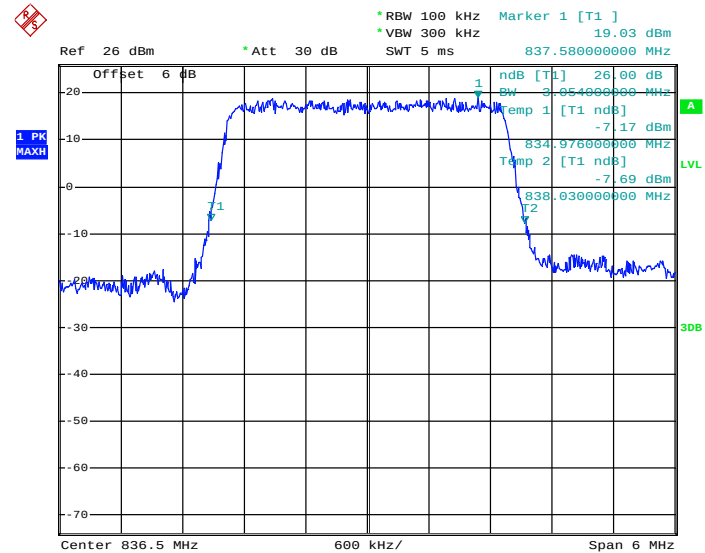
Band :	LTE Band 26	BW / Mod. :	3MHz / QPSK
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99% Occupied Bandwidth Plot on Channel 26915



Date: 18.JUL.2014 04:06:41

26dB Bandwidth Plot on Channel 26915

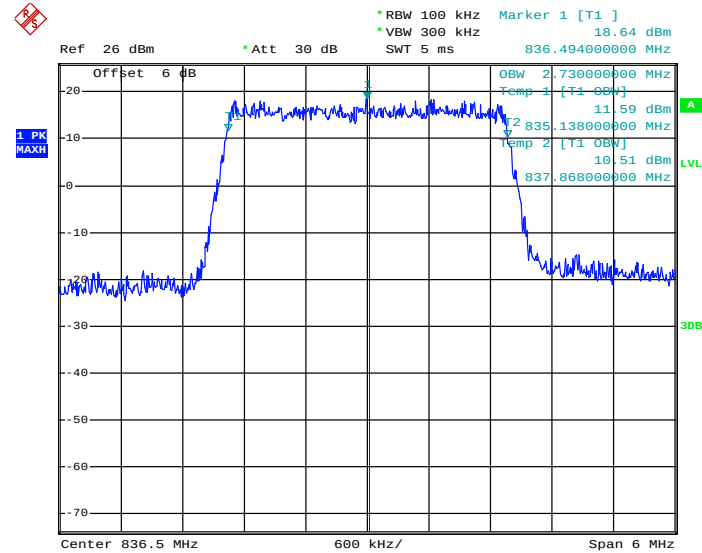


Date: 18.JUL.2014 04:06:59



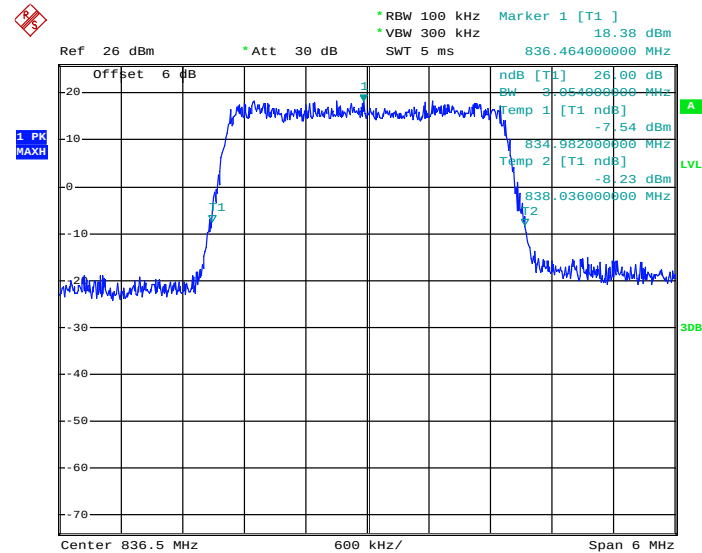
Band :	LTE Band 26	BW / Mod. :	3MHz / 16QAM
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99% Occupied Bandwidth Plot on Channel 26915

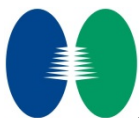


Date: 18.JUL.2014 04:06:07

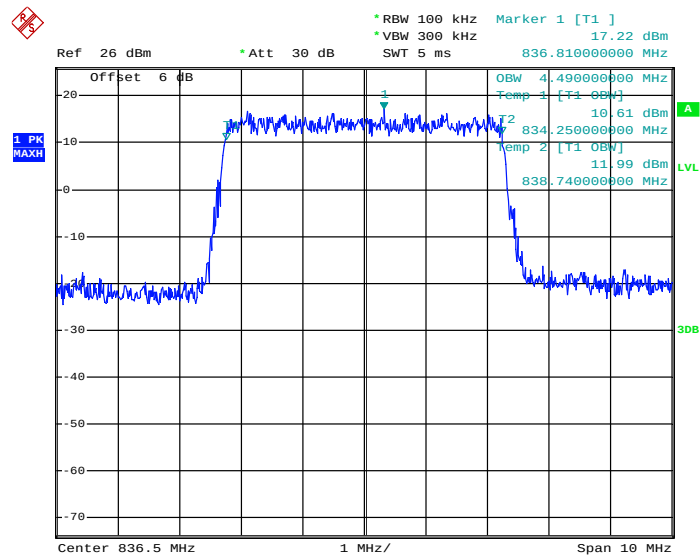
26dB Bandwidth Plot on Channel 26915



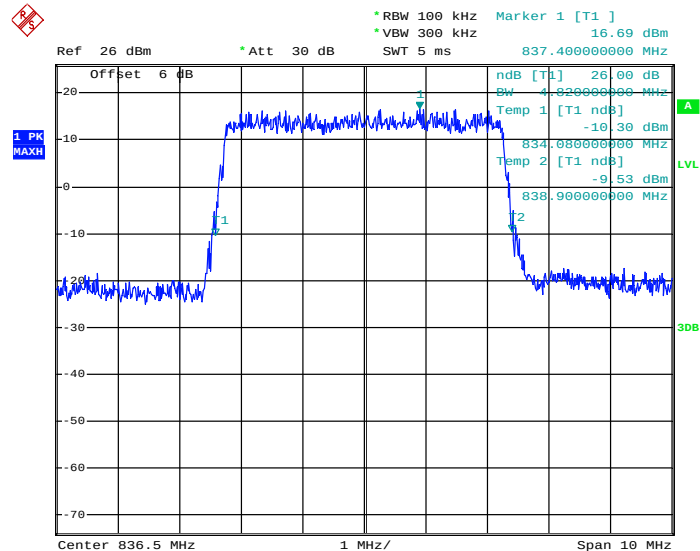
Date: 18.JUL.2014 04:06:23



Band :	LTE Band 26	BW / Mod. :	5MHz / QPSK
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99% Occupied Bandwidth Plot on Channel 26915

Date: 18.JUL.2014 04:07:17

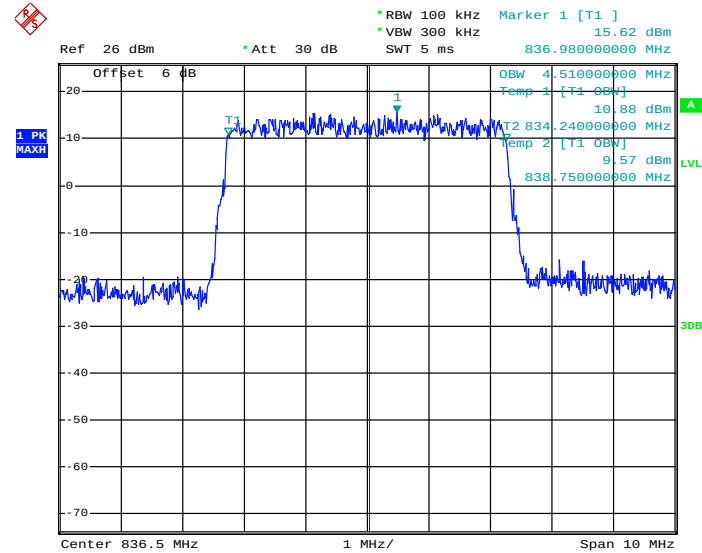
26dB Bandwidth Plot on Channel 26915

Date: 18.JUL.2014 04:07:28



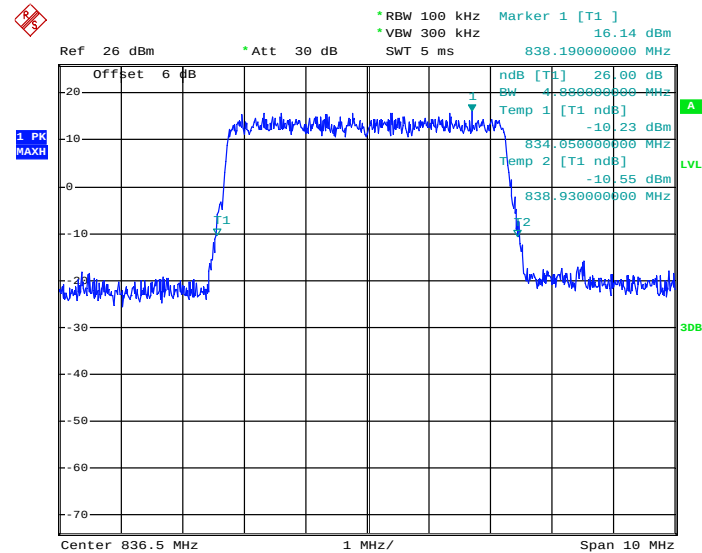
Band :	LTE Band 26	BW / Mod. :	5MHz / 16QAM
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99% Occupied Bandwidth Plot on Channel 26915

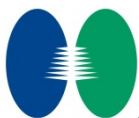


Date: 18.JUL.2014 04:07:41

26dB Bandwidth Plot on Channel 26915

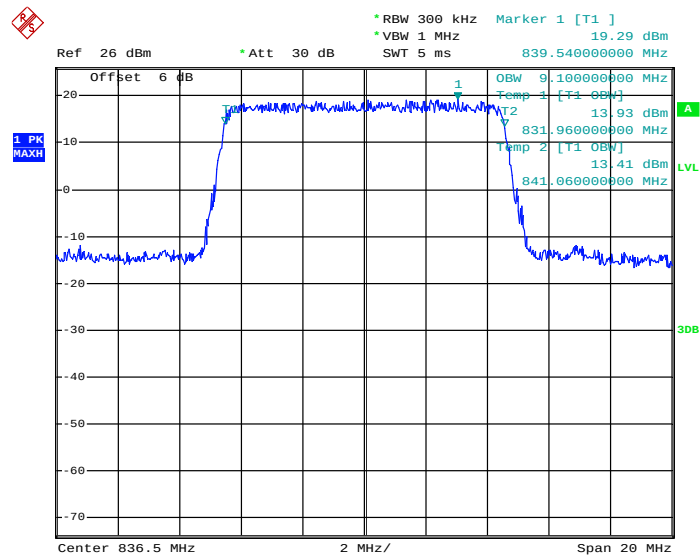


Date: 18.JUL.2014 04:07:54



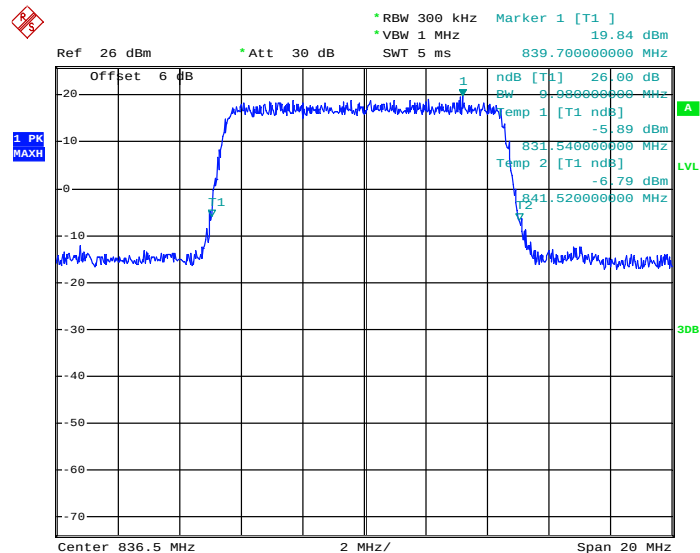
Band :	LTE Band 26	BW / Mod. :	10MHz / QPSK
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99% Occupied Bandwidth Plot on Channel 26915



Date: 18.JUL.2014 04:08:41

26dB Bandwidth Plot on Channel 26915

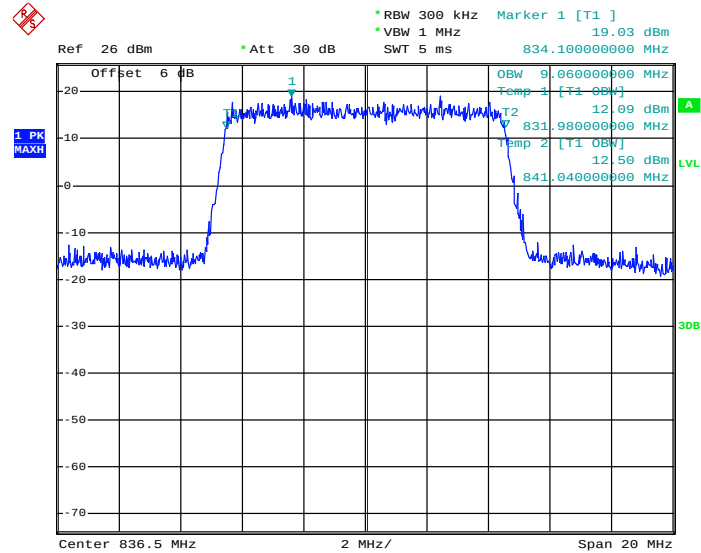


Date: 18.JUL.2014 04:08:56



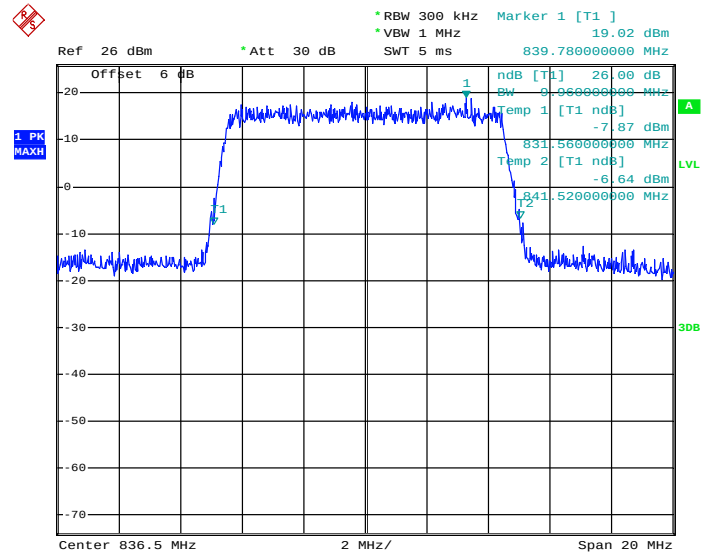
Band :	LTE Band 26	BW / Mod. :	10MHz / 16QAM
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99% Occupied Bandwidth Plot on Channel 26915



Date: 18.JUL.2014 04:08:10

26dB Bandwidth Plot on Channel 26915

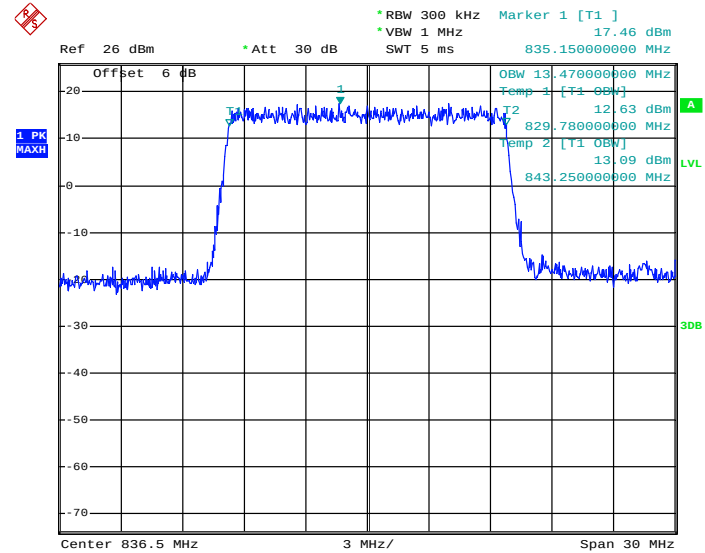


Date: 18.JUL.2014 04:08:21



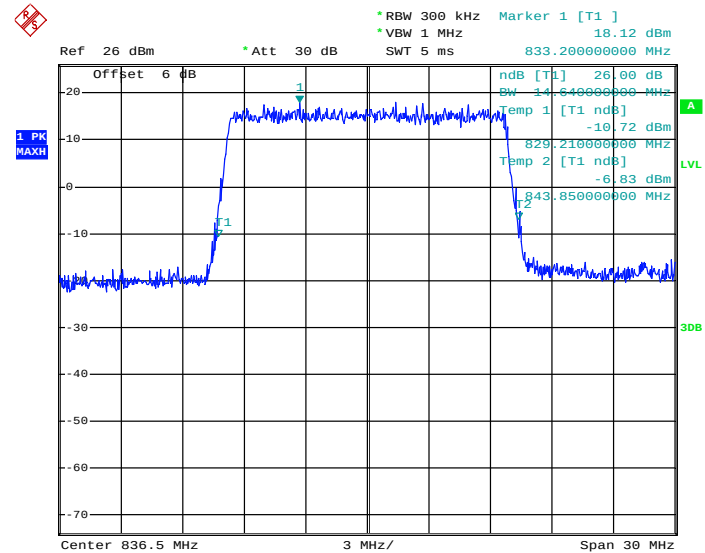
Band :	LTE Band 26	BW / Mod. :	15MHz / QPSK
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99% Occupied Bandwidth Plot on Channel 26915



Date: 18.JUL.2014 04:09:22

26dB Bandwidth Plot on Channel 26915

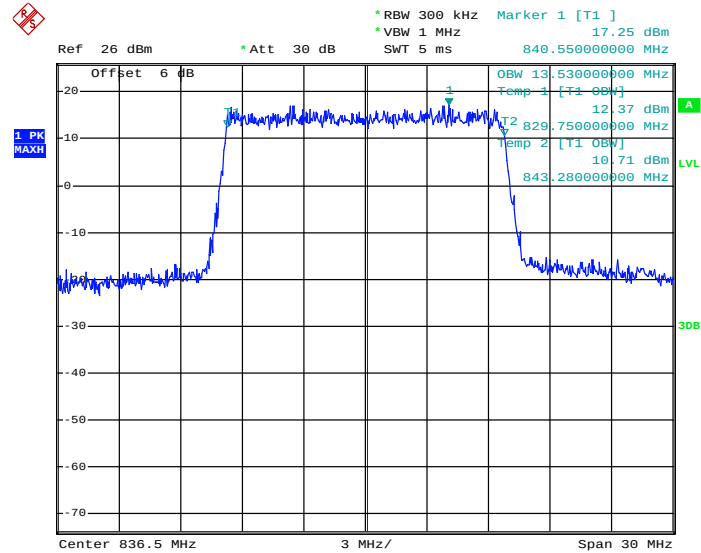


Date: 18.JUL.2014 04:09:34



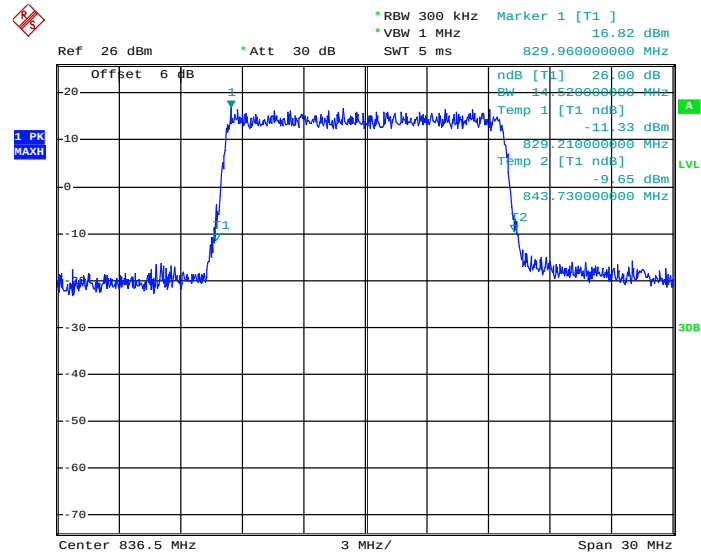
Band :	LTE Band 26	BW / Mod. :	15MHz / 16QAM
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99% Occupied Bandwidth Plot on Channel 26915



Date: 18.JUL.2014 04:09:50

26dB Bandwidth Plot on Channel 26915

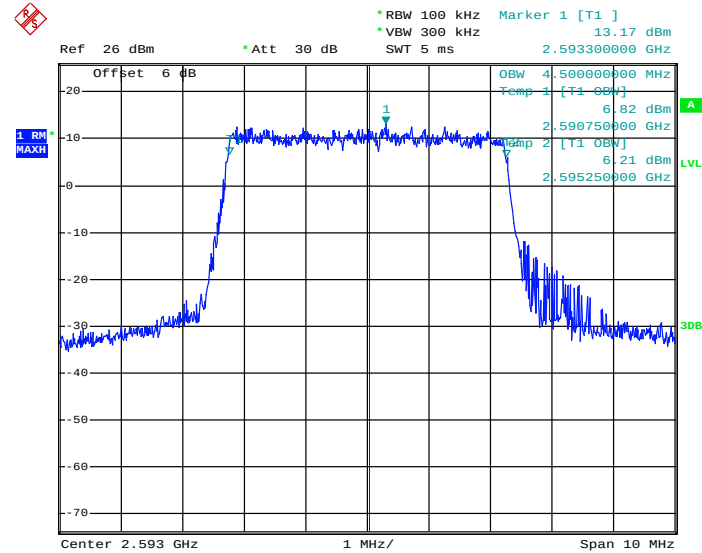


Date: 18.JUL.2014 04:10:02



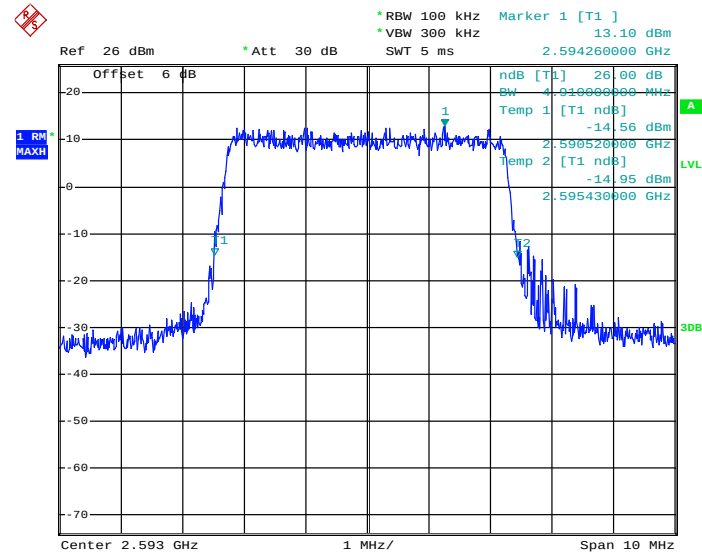
Band :	LTE Band 41	BW / Mod. :	5MHz / QPSK
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99% Occupied Bandwidth Plot on Channel 40620

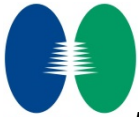


Date: 23.JUL.2014 22:33:56

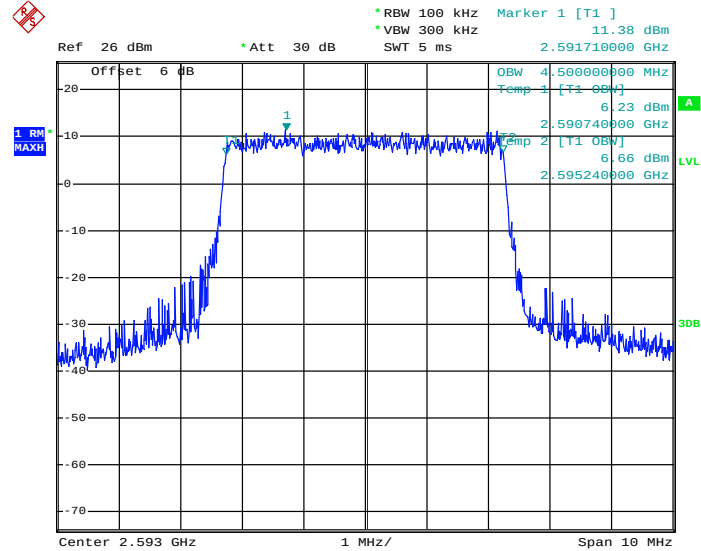
26dB Bandwidth Plot on Channel 40620



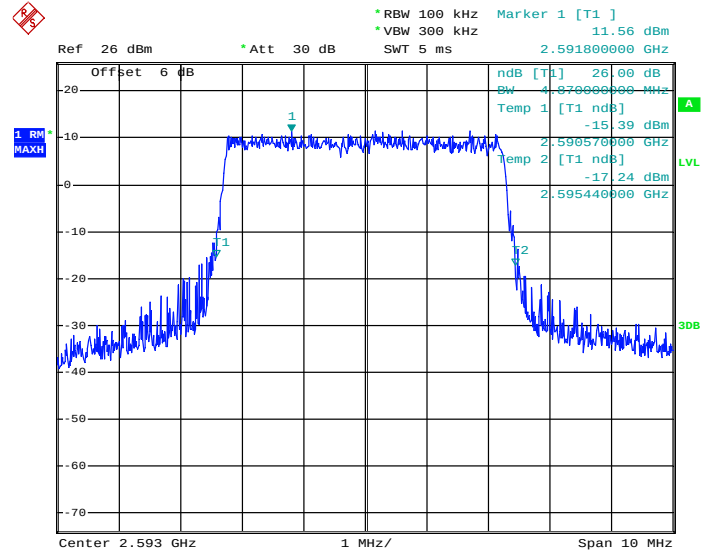
Date: 23.JUL.2014 22:28:32



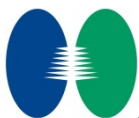
Band :	LTE Band 41	BW / Mod. :	5MHz / 16QAM
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99% Occupied Bandwidth Plot on Channel 40620

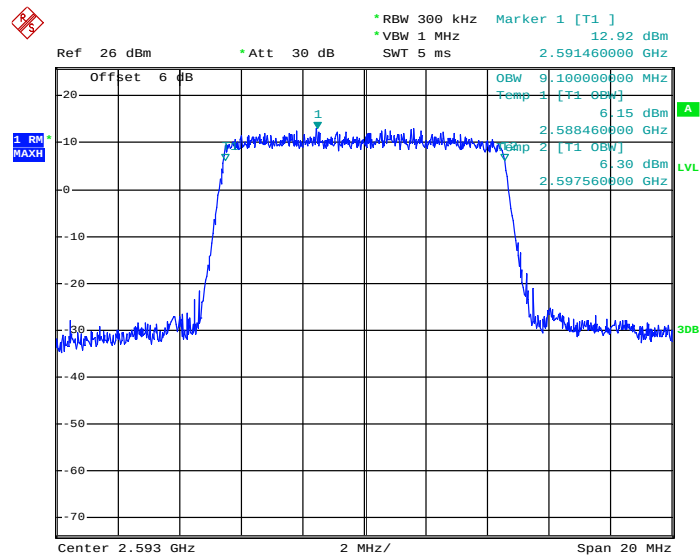
Date: 23.JUL.2014 22:34:08

26dB Bandwidth Plot on Channel 40620

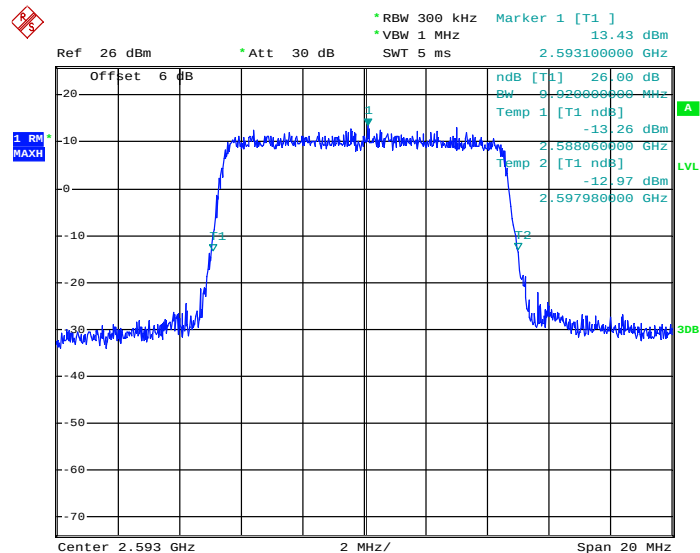
Date: 23.JUL.2014 22:28:20



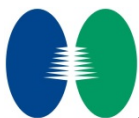
Band :	LTE Band 41	BW / Mod. :	10MHz / QPSK
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99% Occupied Bandwidth Plot on Channel 40620

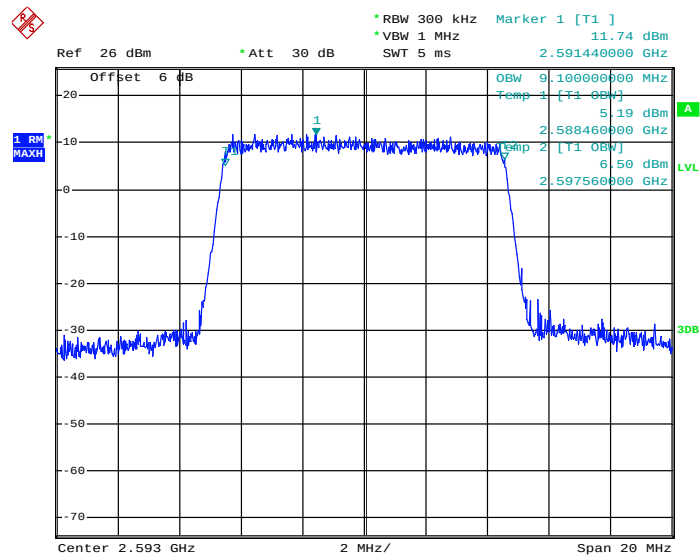
Date: 23.JUL.2014 22:33:20

26dB Bandwidth Plot on Channel 40620

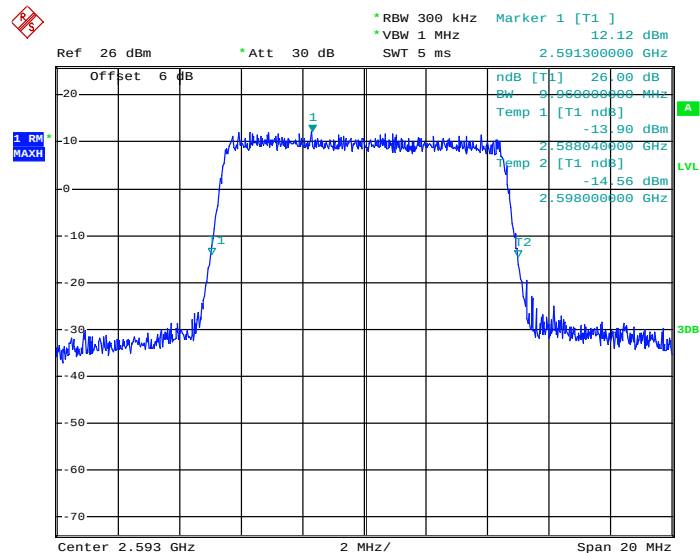
Date: 23.JUL.2014 22:28:58



Band :	LTE Band 41	BW / Mod. :	10MHz / 16QAM
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99% Occupied Bandwidth Plot on Channel 40620

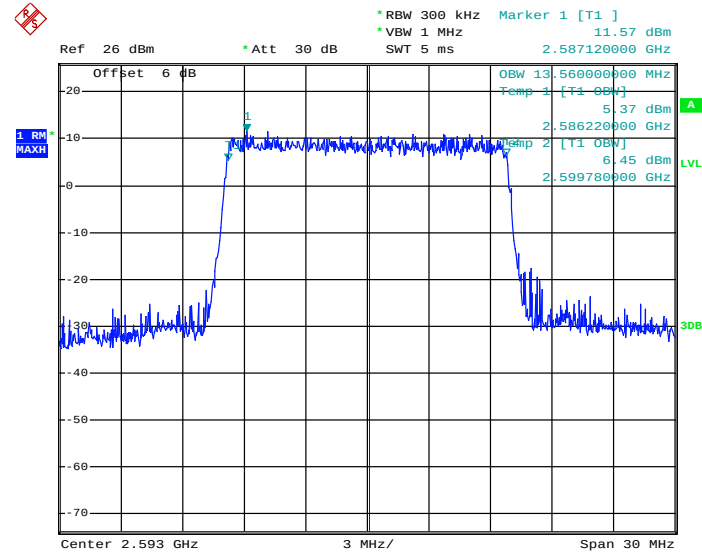
Date: 23.JUL.2014 22:33:03

26dB Bandwidth Plot on Channel 40620

Date: 23.JUL.2014 22:29:12

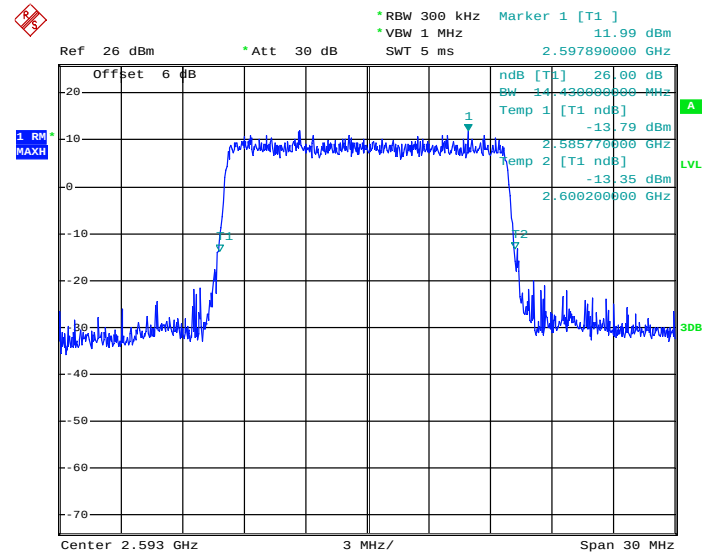
Band :	LTE Band 41	BW / Mod. :	15MHz / QPSK
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99% Occupied Bandwidth Plot on Channel 40620

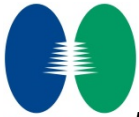


Date: 23.JUL.2014 22:32:01

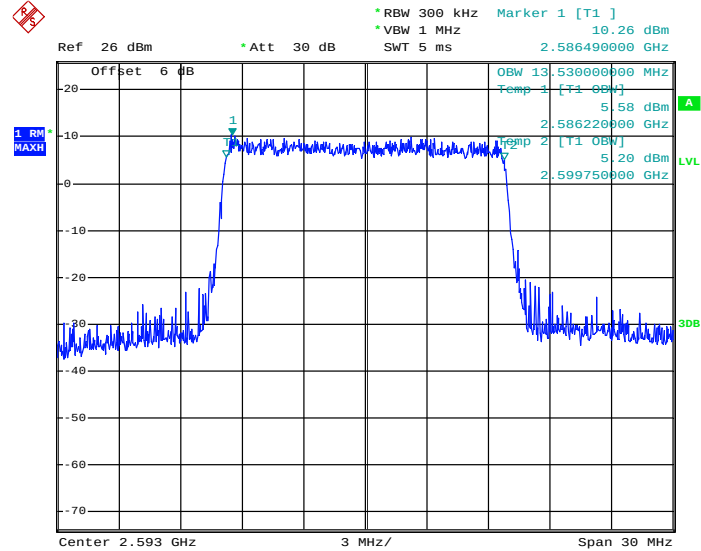
26dB Bandwidth Plot on Channel 40620



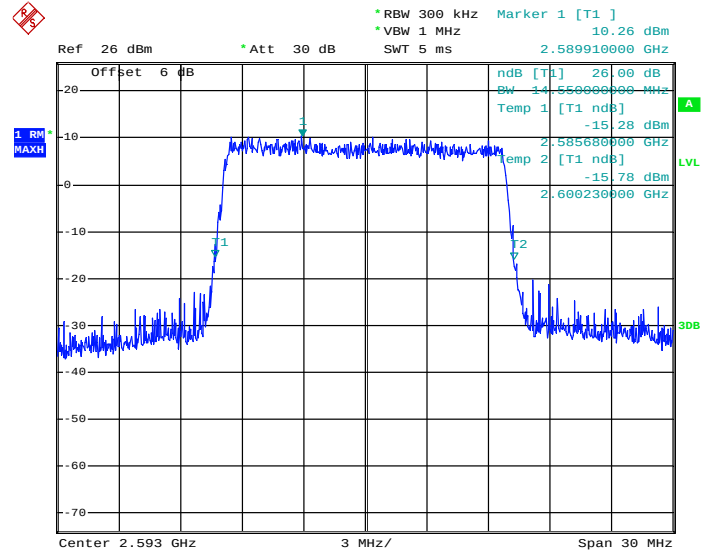
Date: 23.JUL.2014 22:29:45



Band :	LTE Band 41	BW / Mod. :	15MHz / 16QAM
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99% Occupied Bandwidth Plot on Channel 40620

Date: 23.JUL.2014 22:32:12

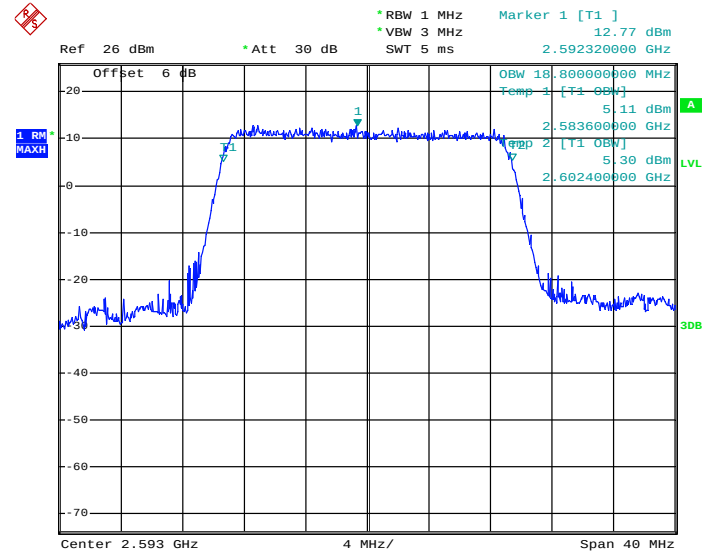
26dB Bandwidth Plot on Channel 40620

Date: 23.JUL.2014 22:29:34



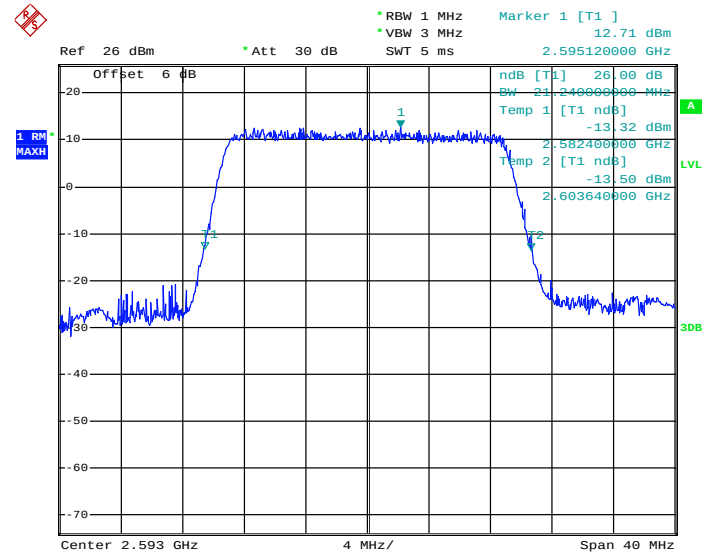
Band :	LTE Band 41	BW / Mod. :	20MHz / QPSK
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99% Occupied Bandwidth Plot on Channel 40620

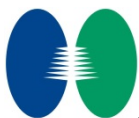
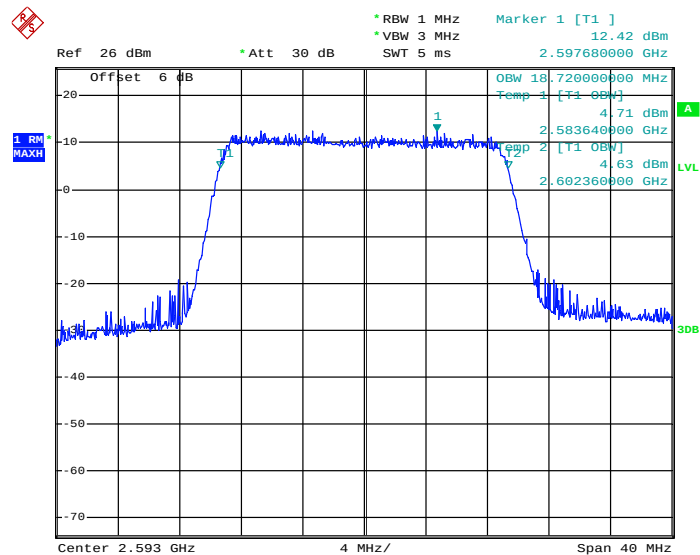


Date: 23.JUL.2014 22:31:31

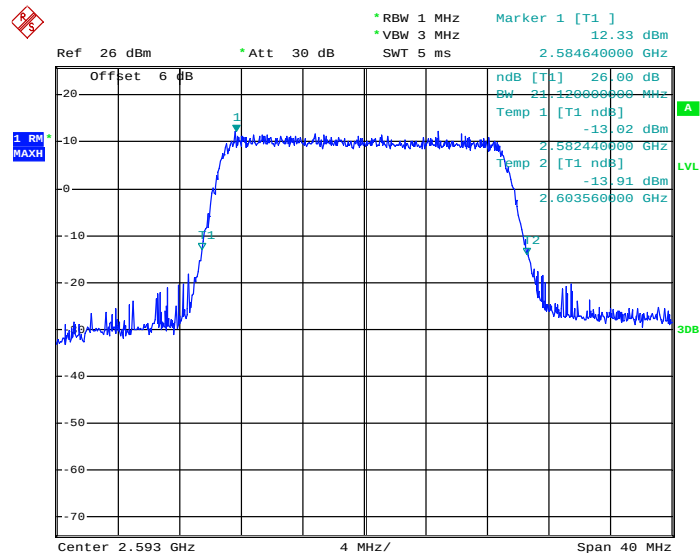
26dB Bandwidth Plot on Channel 40620



Date: 23.JUL.2014 22:30:12

**Band :** LTE Band 41**BW / Mod. :** 20MHz / 16QAM**99% Occupied Bandwidth Plot on Channel 40620**

Date: 23.JUL.2014 22:31:17

26dB Bandwidth Plot on Channel 40620

Date: 23.JUL.2014 22:30:23



3.5 Conducted Band Edge Measurement

3.5.1 Description of Conducted Band Edge Measurement

24.238 (a) For Band 25

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.

22.917(a) For Band 26

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

27.53(m) (4) For Band 41

For mobile digital stations, the attenuation factor shall be not less than $40 + 10 \log (P)$ dB on all frequencies between the channel edge and 5 megahertz from the channel edge, $43 + 10 \log (P)$ dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and $55 + 10 \log (P)$ dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less than $43 + 10 \log (P)$ dB on all frequencies between 2490.5 MHz and 2496 MHz and $55 + 10 \log (P)$ dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.

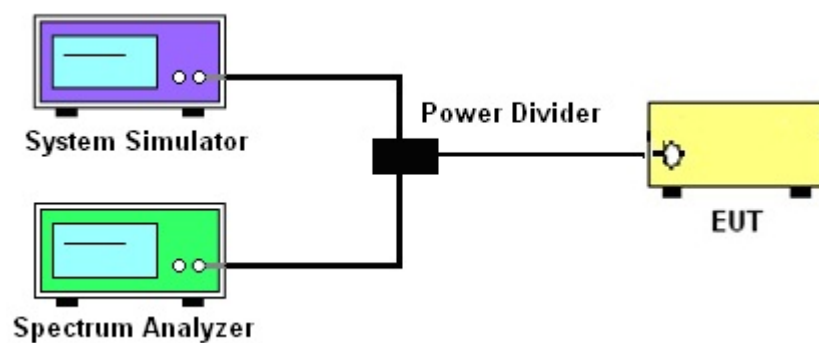
3.5.2 Measuring Instruments

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

3.5.3 Test Procedures

1. The EUT was connected to Spectrum Analyzer and Base Station via power divider.
2. The band edges of low and high channels for the highest RF powers were measured. Setting $RBW \geq 1\% \text{ EBW}$, and measuring bandwidth = 1MHz.
3. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

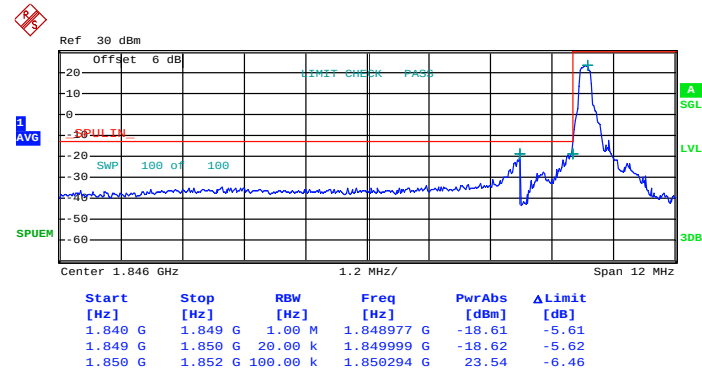
3.5.4 Test Setup



3.5.5 Test Result (Plots) of Conducted Band Edge

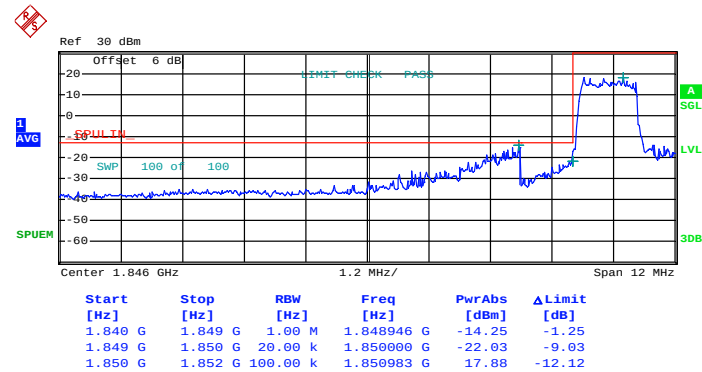
Band :	LTE Band 25	Band Width :	1.4MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



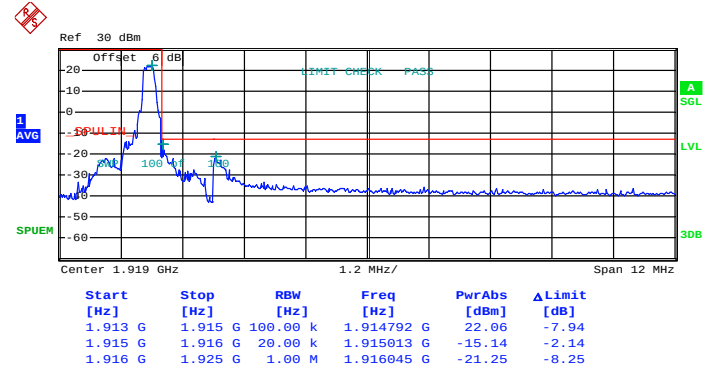
Date: 17.JUL.2014 23:44:19

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



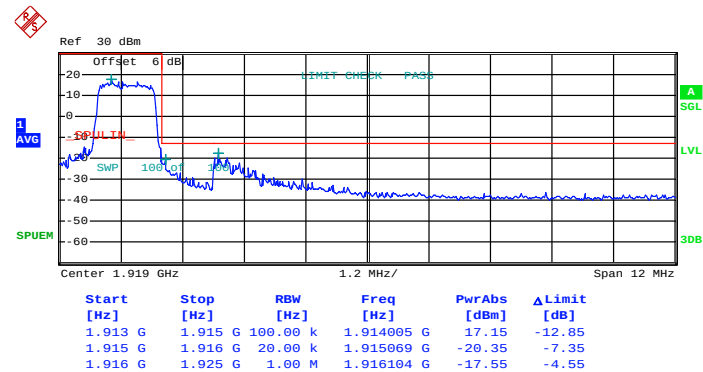
Date: 17.JUL.2014 23:43:27

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



Date: 17.JUL.2014 23:47:15

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

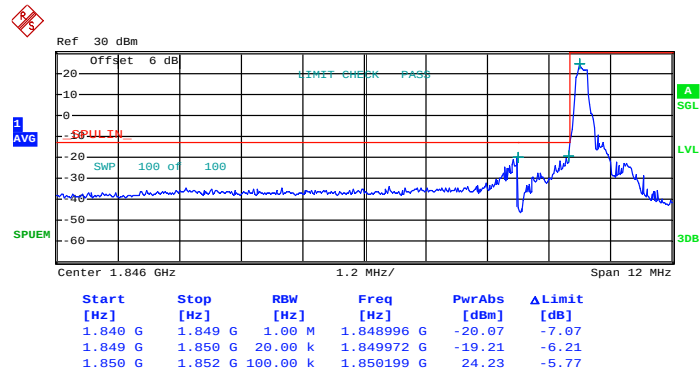


Date: 17.JUL.2014 23:48:03



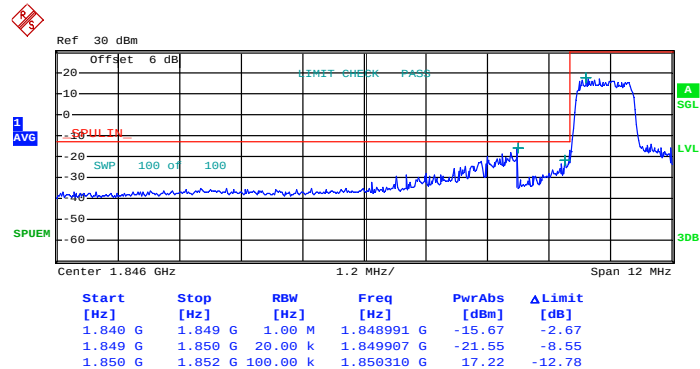
Band :	LTE Band 25	Band Width :	1.4MHz / 16QAM
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Lower Band Edge Plot for 16QAM -RB Size 1, RB Offset 0



Date: 17.JUL.2014 23:45:07

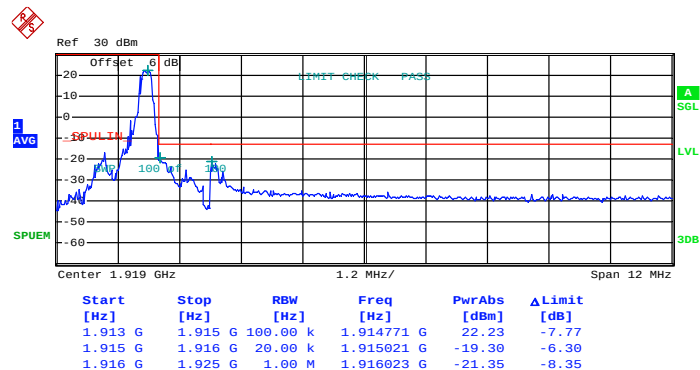
Lower Band Edge Plot for 16QAM -RB Size 6, RB Offset 0



Date: 17.JUL.2014 23:41:34

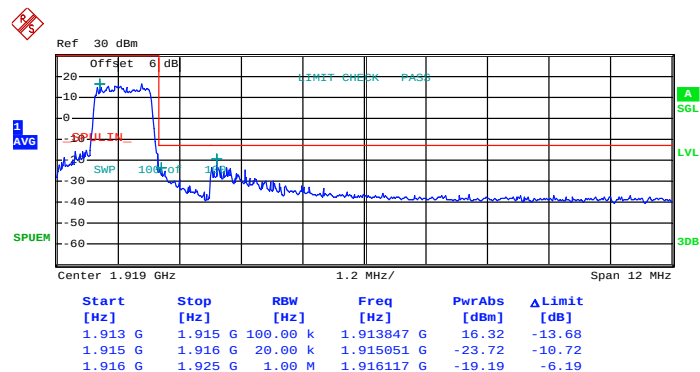


Higher Band Edge Plot for 16QAM -RB Size 1, RB Offset 5



Date: 17.JUL.2014 23:46:31

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

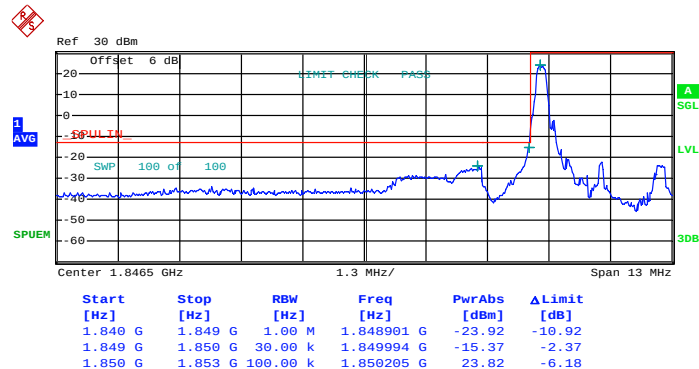


Date: 17.JUL.2014 23:48:53



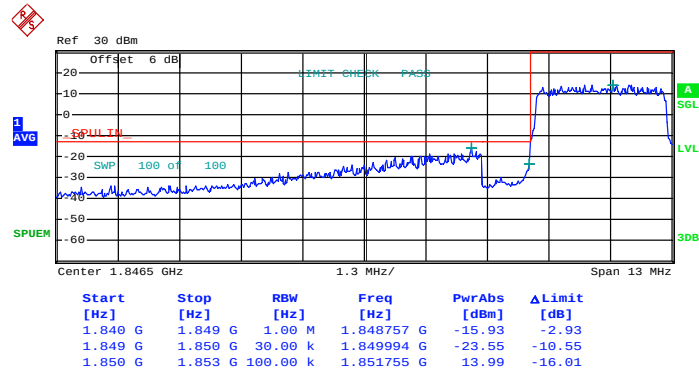
Band :	LTE Band 25	Band Width :	3MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



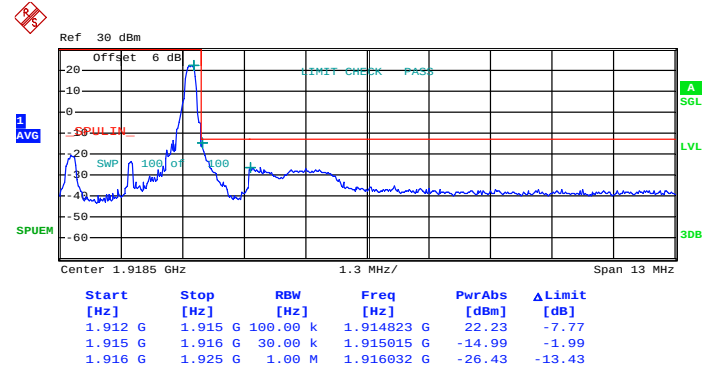
Date: 18.JUL.2014 00:04:46

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



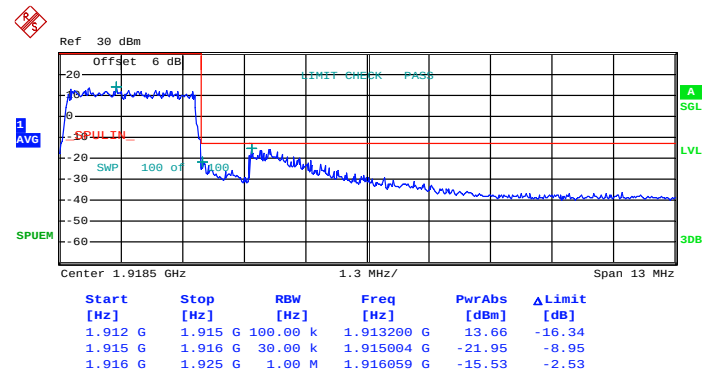
Date: 18.JUL.2014 00:06:09

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



Date: 18.JUL.2014 00:00:00

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

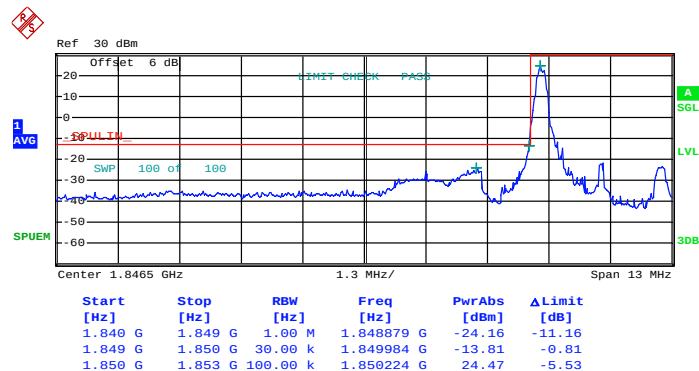


Date: 17.JUL.2014 23:55:29



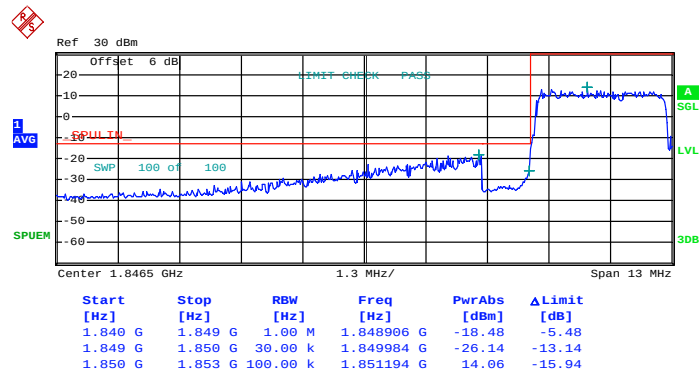
Band :	LTE Band 25	Band Width :	3MHz / 16QAM
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Lower Band Edge Plot for 16QAM -RB Size 1, RB Offset 0



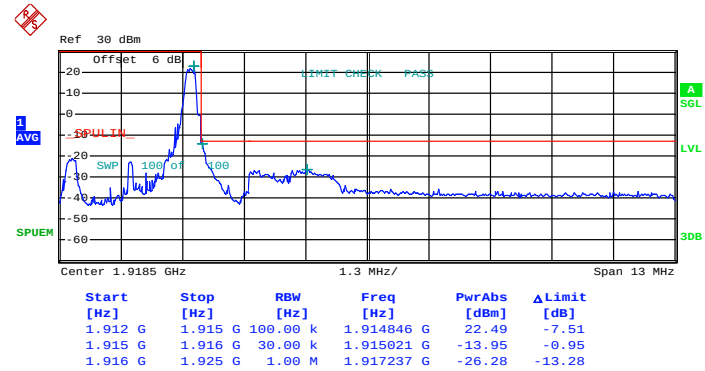
Date: 18.JUL.2014 00:03:20

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



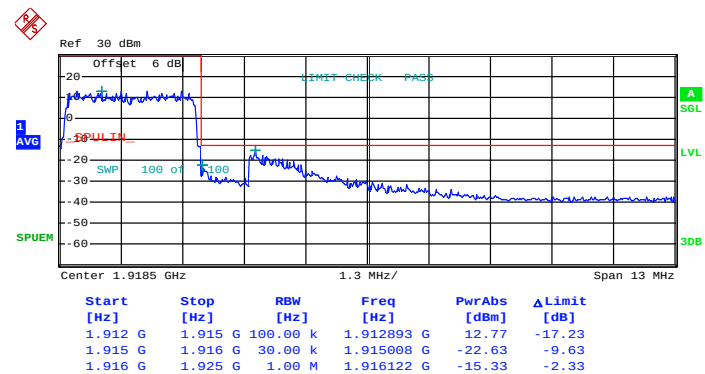
Date: 18.JUL.2014 00:07:32

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



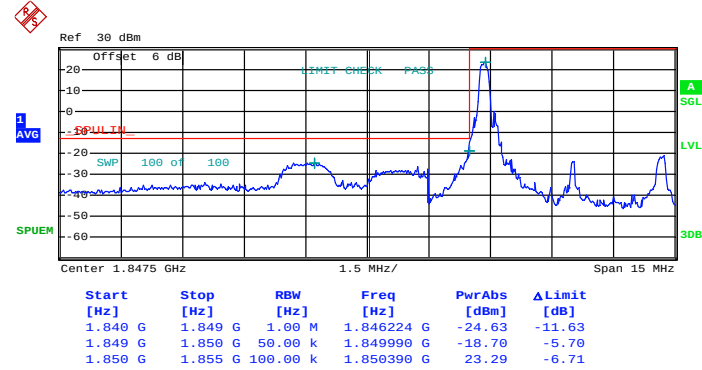
Date: 18.JUL.2014 00:01:26

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

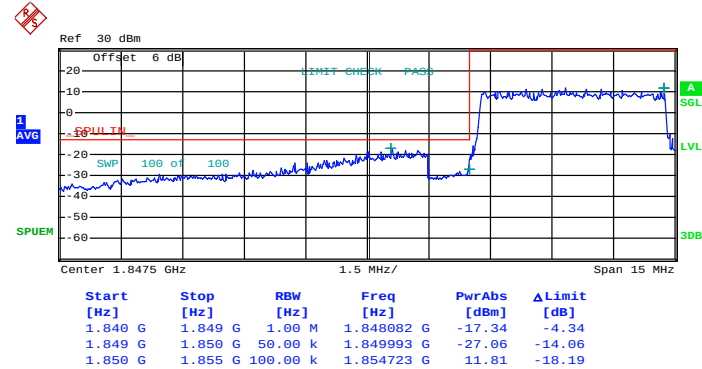


Date: 17.JUL.2014 23:54:49

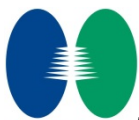
Band :	LTE Band 25	Band Width :	5MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0


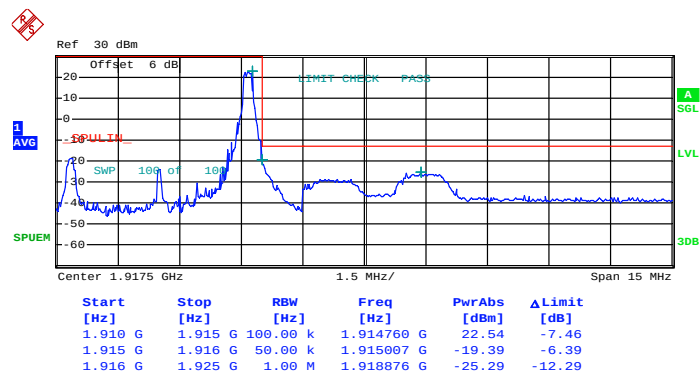
Date: 18.JUL.2014 00:13:26

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


Date: 18.JUL.2014 00:12:00

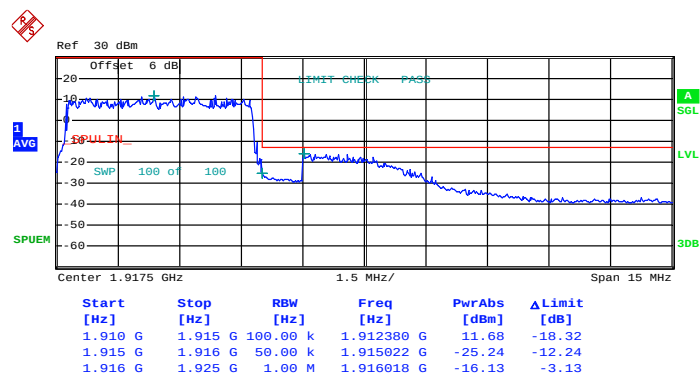


Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 24



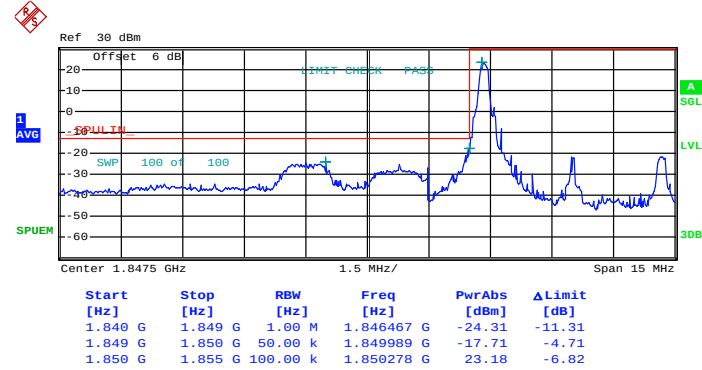
Date: 18.JUL.2014 00:18:07

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

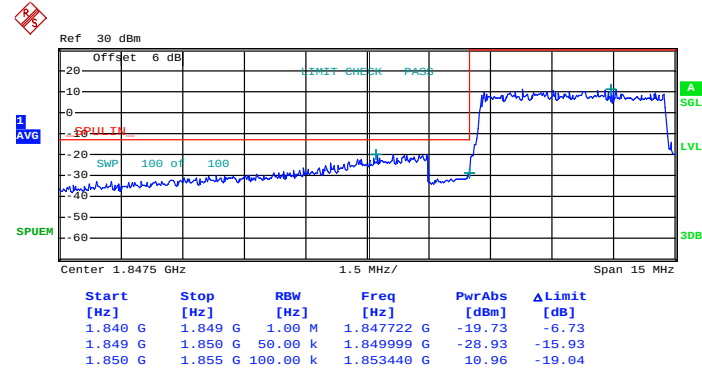


Date: 18.JUL.2014 00:19:33

Band :	LTE Band 25	Band Width :	5MHz / 16QAM
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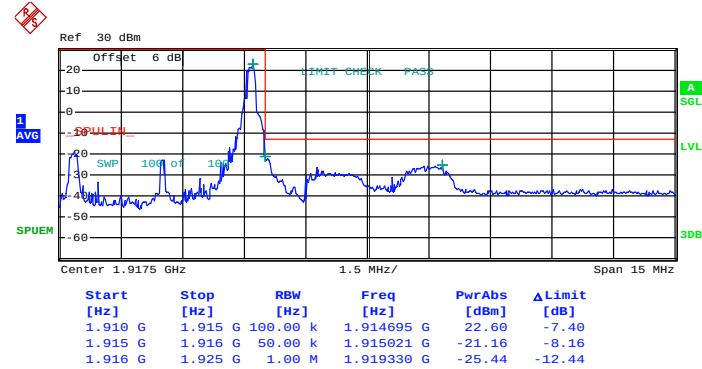
Lower Band Edge Plot for 16QAM -RB Size 1, RB Offset 0


Date: 18.JUL.2014 00:14:49

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


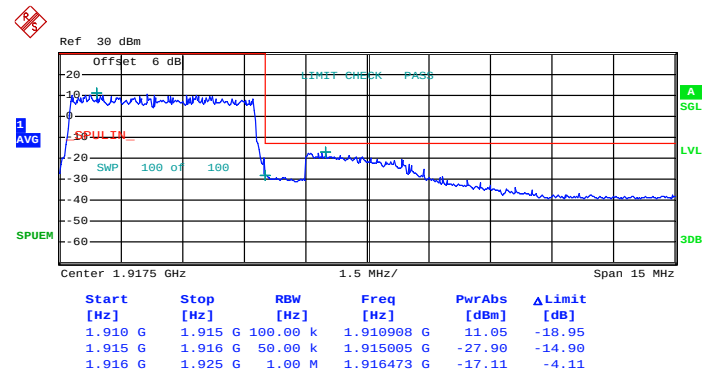
Date: 18.JUL.2014 00:10:40

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



Date: 18.JUL.2014 00:16:46

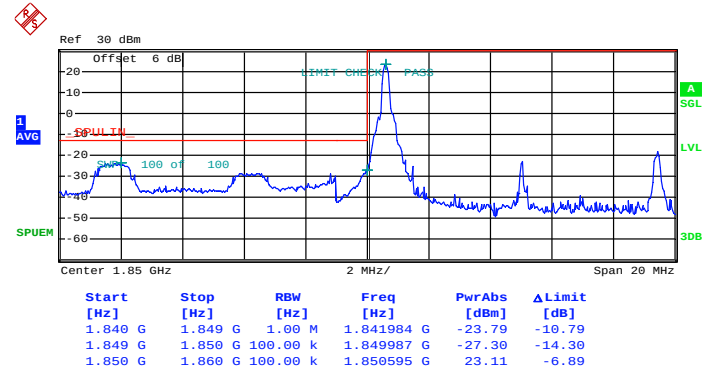
Higher Band Edge Plot for 16QAM -RB Size 25, RB Offset 0



Date: 18.JUL.2014 00:20:58

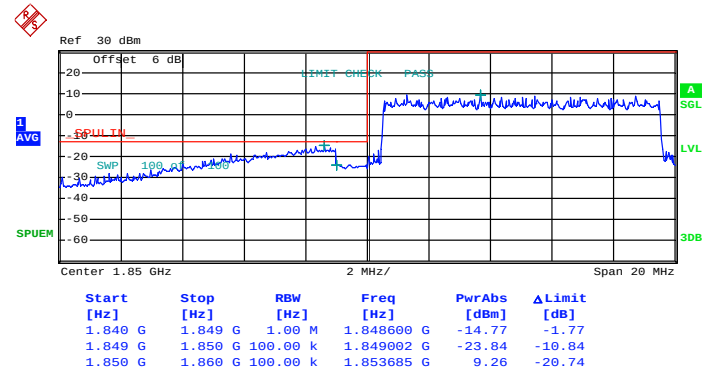
Band :	LTE Band 25	Band Width :	10MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Date: 18.JUL.2014 00:32:00

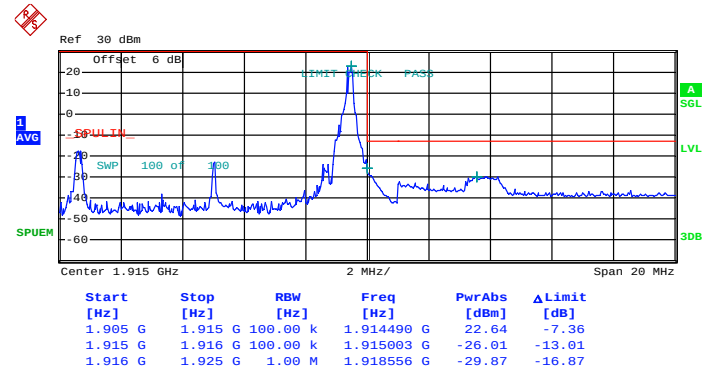
Lower Band Edge Plot for QPSK-RB Size 50, RB Offset 0



Date: 18.JUL.2014 00:33:24

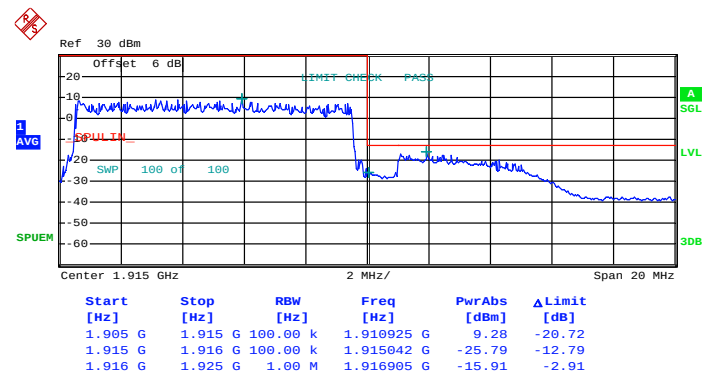


Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 49



Date: 18.JUL.2014 00:27:07

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

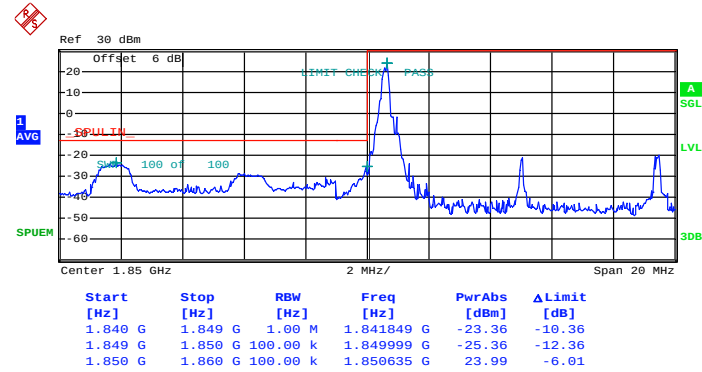


Date: 18.JUL.2014 00:25:35



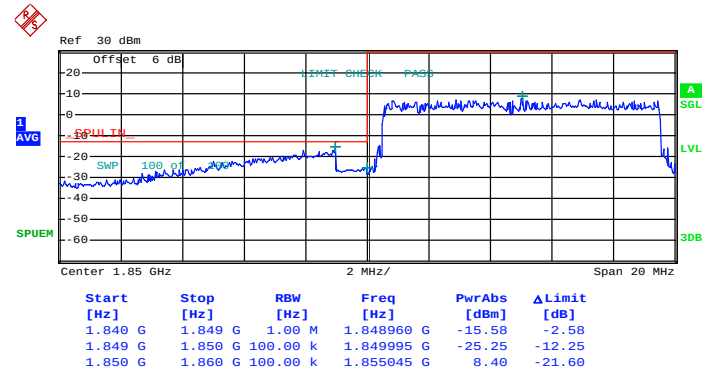
Band :	LTE Band 25	Band Width :	10MHz / 16QAM
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Lower Band Edge Plot for 16QAM -RB Size 1, RB Offset 0



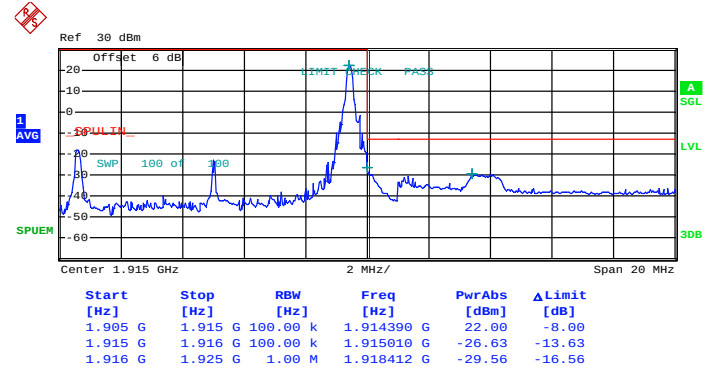
Date: 18.JUL.2014 00:30:26

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



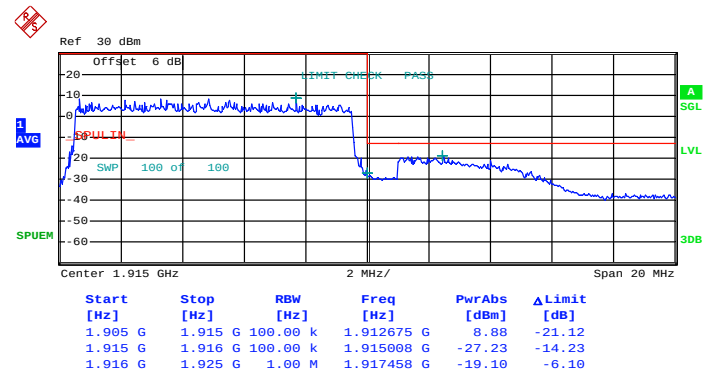
Date: 18.JUL.2014 00:34:52

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



Date: 18.JUL.2014 00:28:28

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

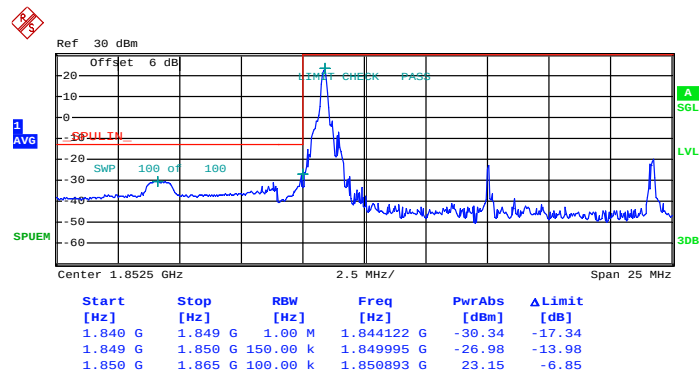


Date: 18.JUL.2014 00:23:38



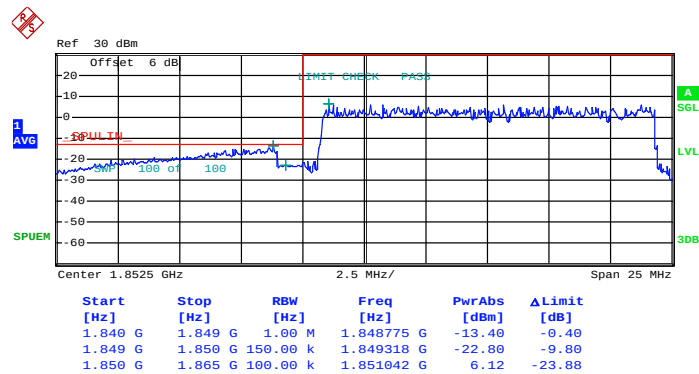
Band :	LTE Band 25	Band Width :	15MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



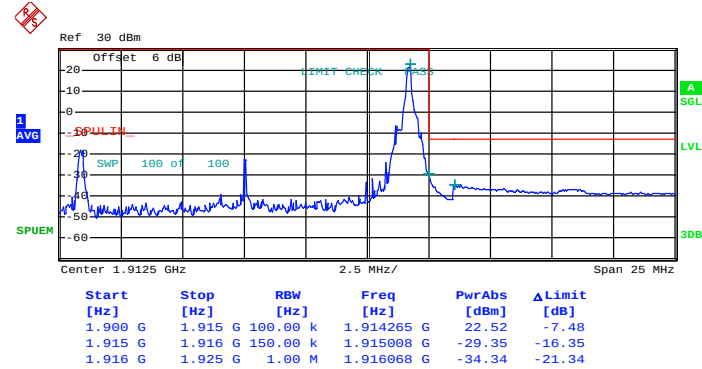
Date: 18.JUL.2014 00:48:45

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



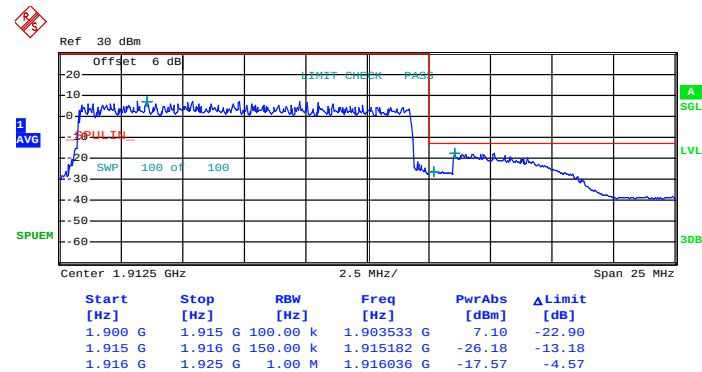
Date: 18.JUL.2014 00:47:06

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



Date: 18.JUL.2014 00:54:10

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

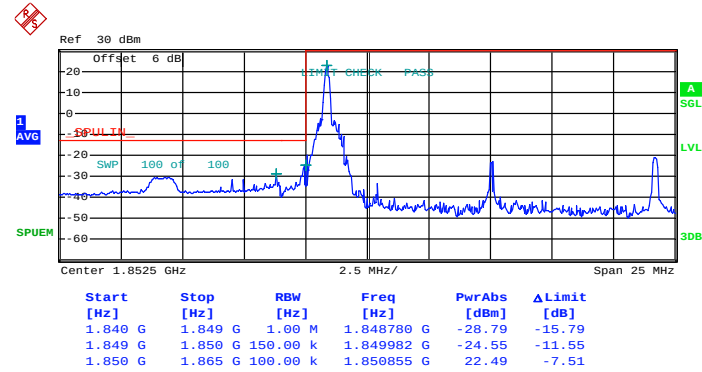


Date: 18.JUL.2014 00:56:13



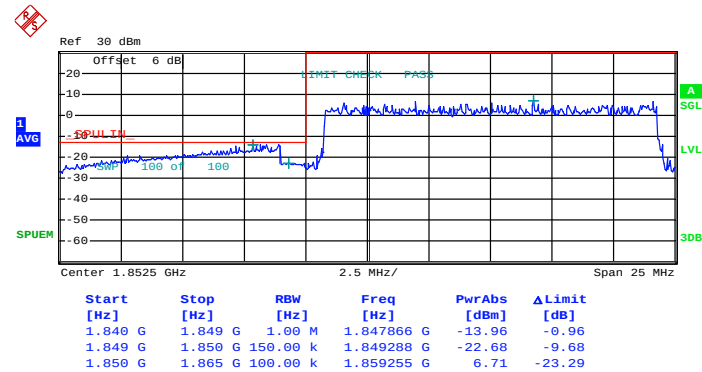
Band :	LTE Band 25	Band Width :	15MHz / 16QAM
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Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



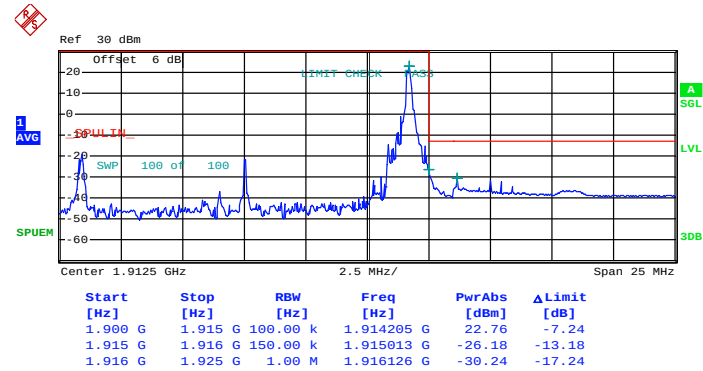
Date: 18.JUL.2014 00:50:23

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



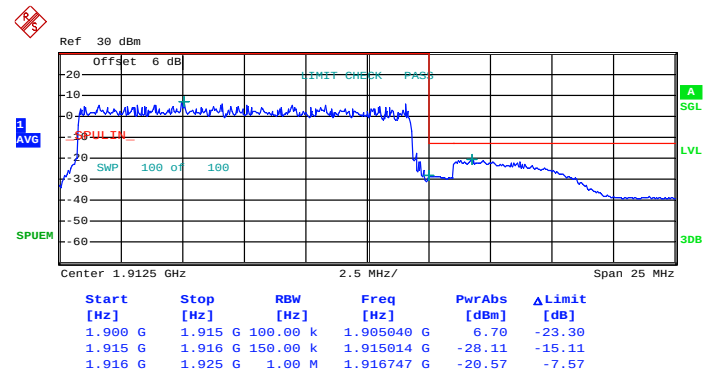
Date: 18.JUL.2014 00:44:14

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



Date: 18.JUL.2014 00:52:31

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

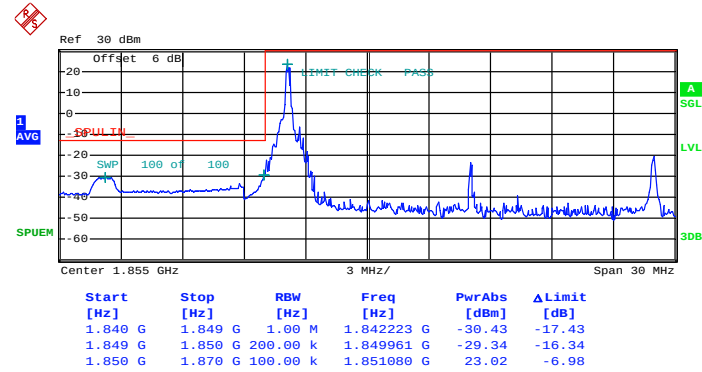


Date: 18.JUL.2014 00:57:53



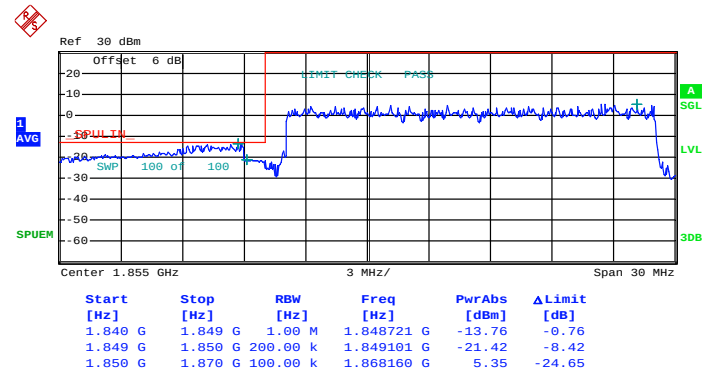
Band :	LTE Band 25	Band Width :	20MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Date: 18.JUL.2014 01:11:31

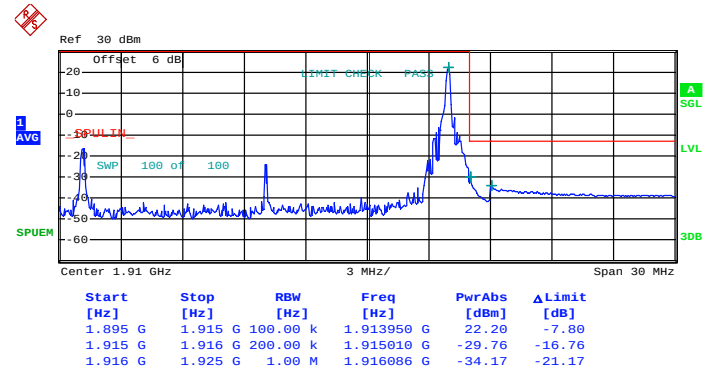
Lower Band Edge Plot for QPSK-RB Size 100, RB Offset 0



Date: 18.JUL.2014 01:13:32

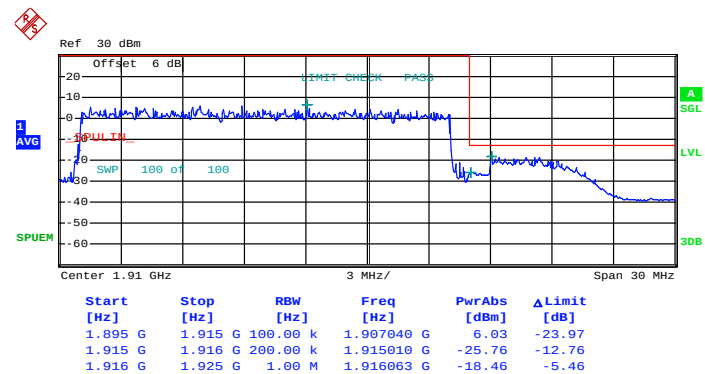


Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 99



Date: 18.JUL.2014 01:05:35

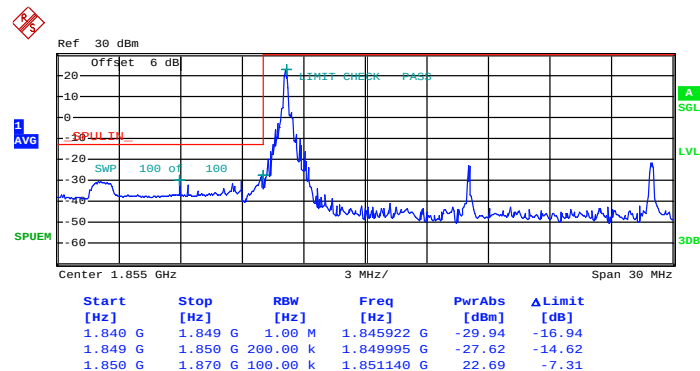
Higher Band Edge Plot for QPSK-RB Size 100, RB Offset 0



Date: 18.JUL.2014 01:03:24

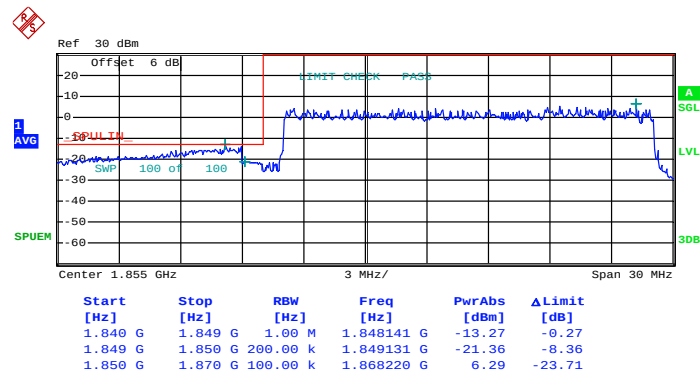
Band :	LTE Band 25	Band Width :	20MHz / 16QAM
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Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



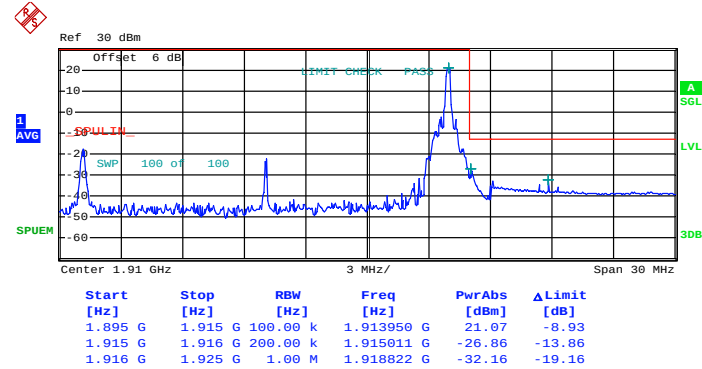
Date: 18.JUL.2014 01:09:25

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



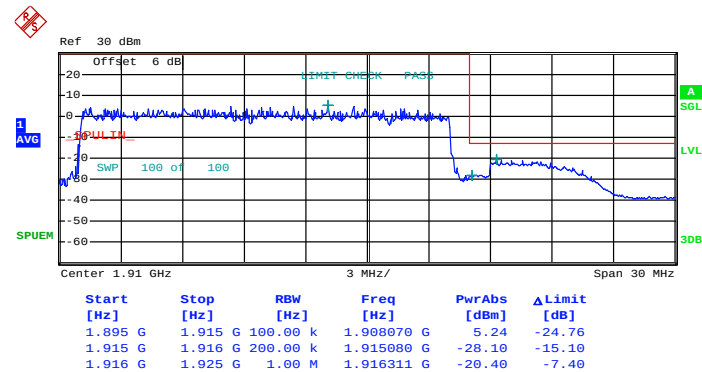
Date: 18.JUL.2014 01:18:49

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



Date: 18.JUL.2014 01:07:18

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

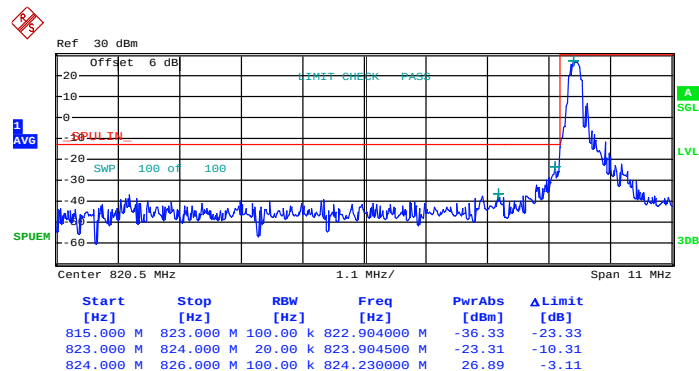


Date: 18.JUL.2014 01:01:40



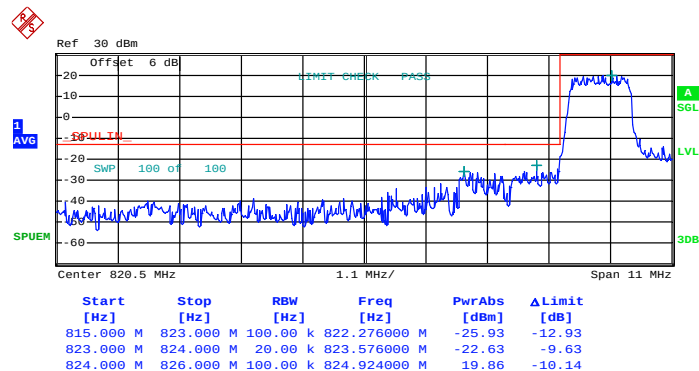
Band :	LTE Band 26	Band Width :	1.4MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Date: 18.JUL.2014 04:28:12

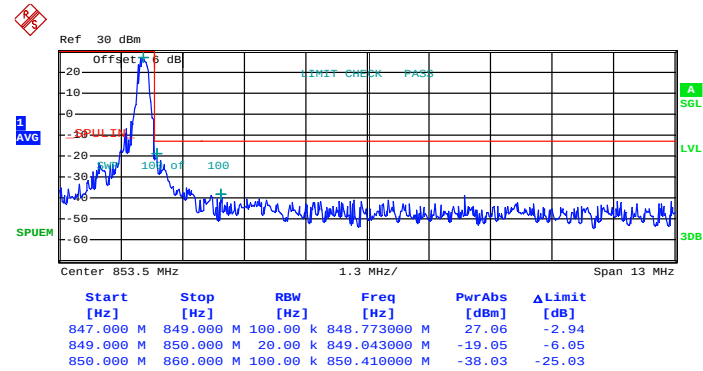
Lower Band Edge Plot for QPSK-RB Size 6, RB Offset 0



Date: 18.JUL.2014 04:30:03

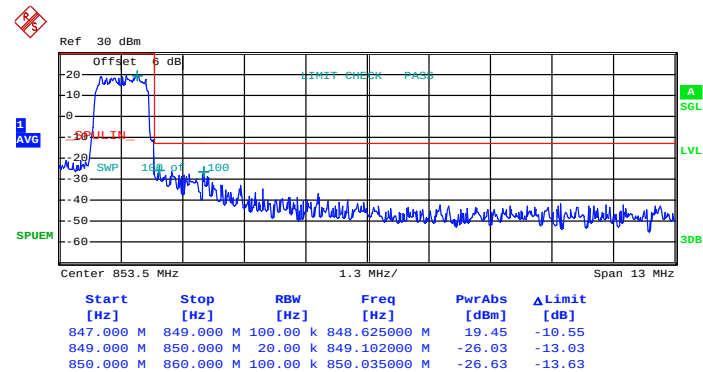


Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 5



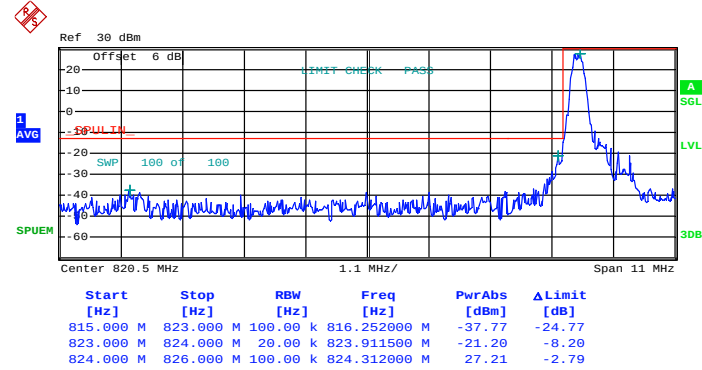
Date: 18.JUL.2014 04:31:26

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

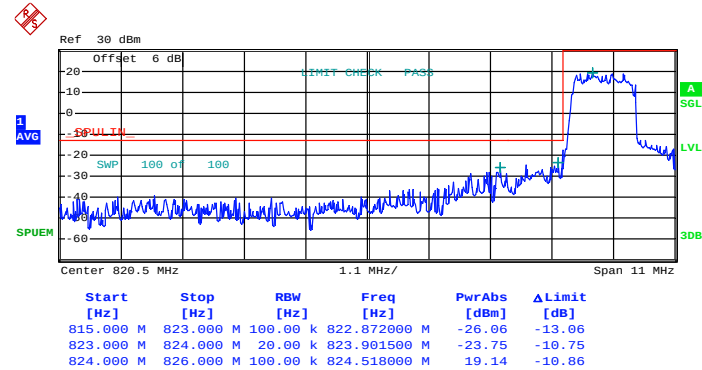


Date: 18.JUL.2014 04:33:42

Band :	LTE Band 26	Band Width :	1.4MHz / 16QAM
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Lower Band Edge Plot for 16QAM -RB Size 1, RB Offset 0


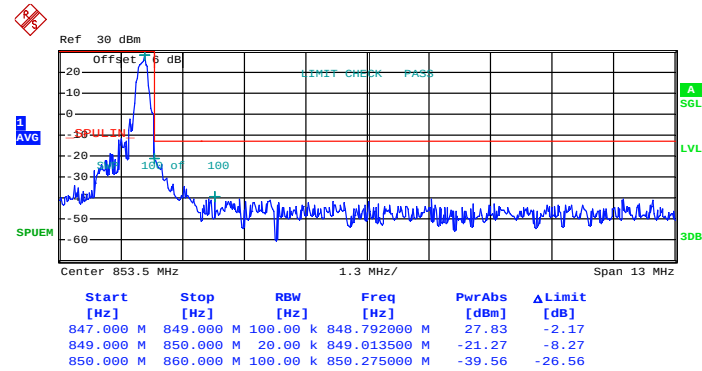
Date: 18.JUL.2014 04:28:59

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


Date: 18.JUL.2014 04:29:32

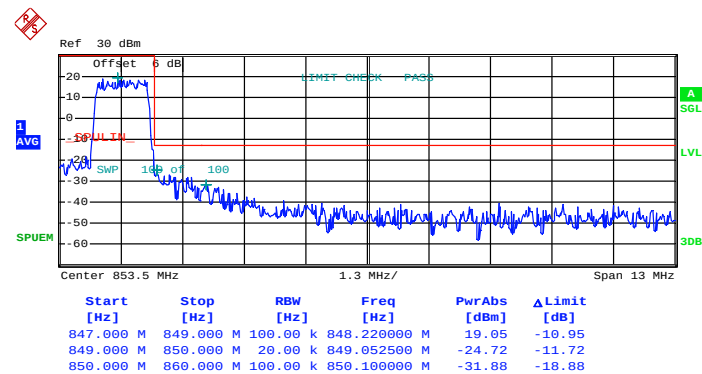


Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 5



Date: 18.JUL.2014 04:32:03

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

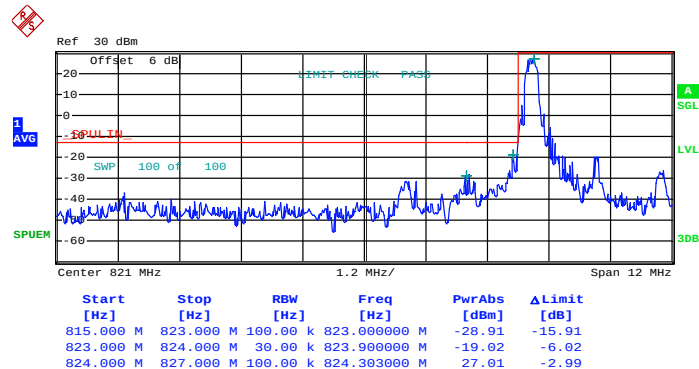


Date: 18.JUL.2014 04:32:55



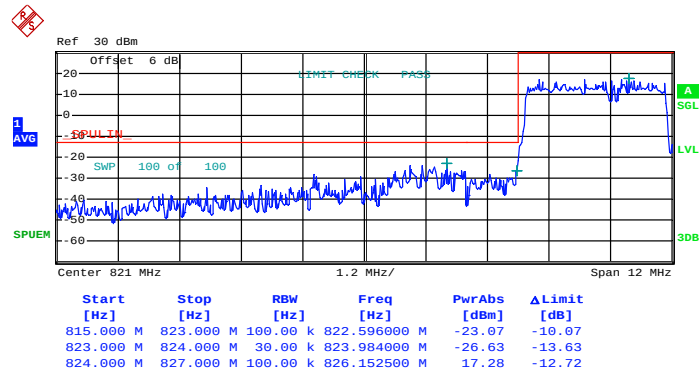
Band :	LTE Band 26	Band Width :	3MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0

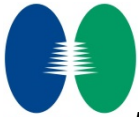


Date: 18.JUL.2014 04:47:07

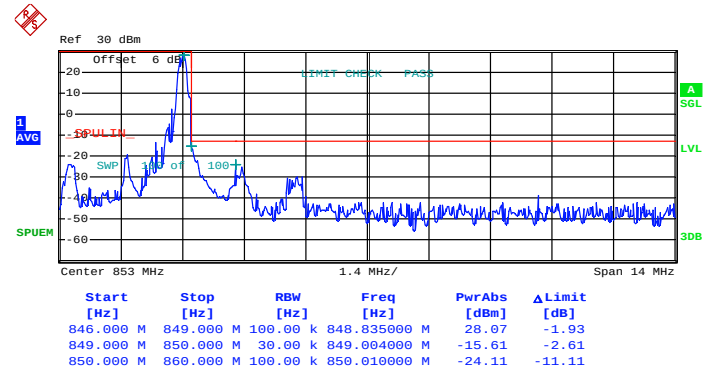
Lower Band Edge Plot for QPSK-RB Size 15, RB Offset 0



Date: 18.JUL.2014 04:45:22

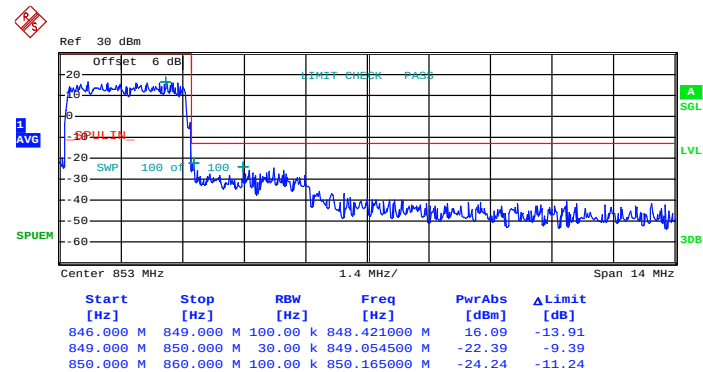


Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 14



Date: 18.JUL.2014 04:54:15

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

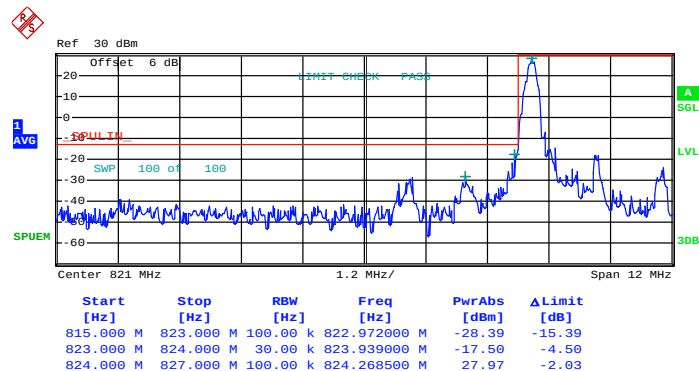


Date: 18.JUL.2014 04:55:12



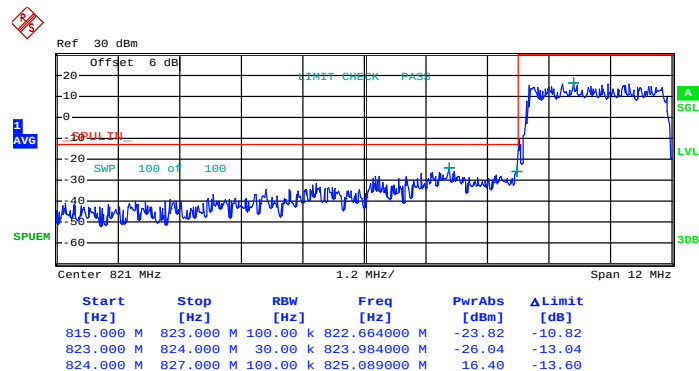
Band :	LTE Band 26	Band Width :	3MHz / 16QAM
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Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



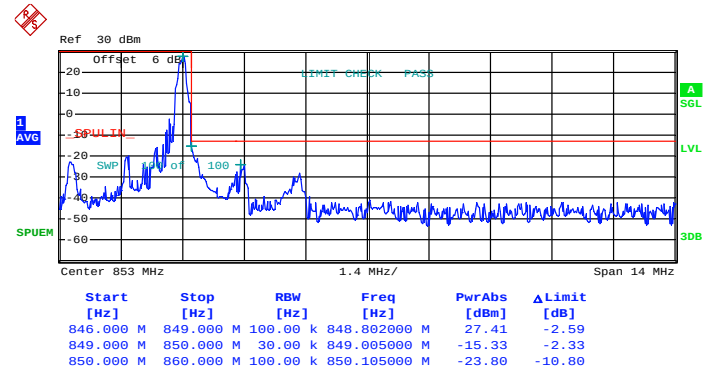
Date: 18.JUL.2014 04:46:21

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



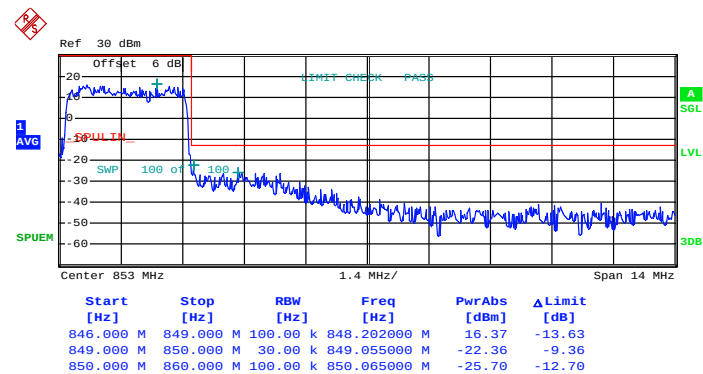
Date: 18.JUL.2014 04:45:52

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



Date: 18.JUL.2014 04:52:43

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

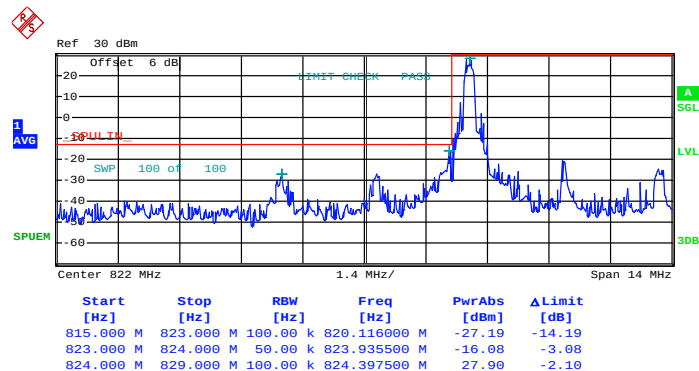


Date: 18.JUL.2014 04:56:43



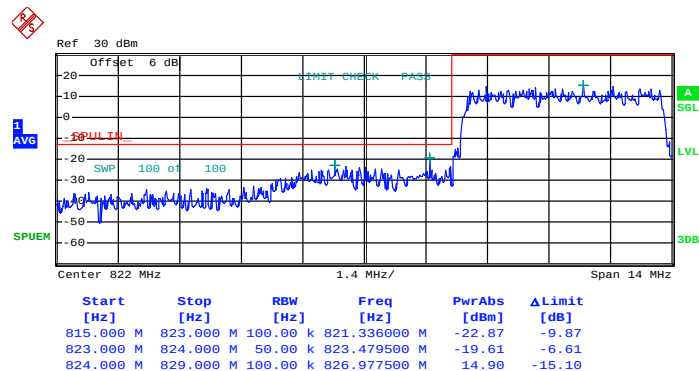
Band :	LTE Band 26	Band Width :	5MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Date: 18.JUL.2014 05:05:14

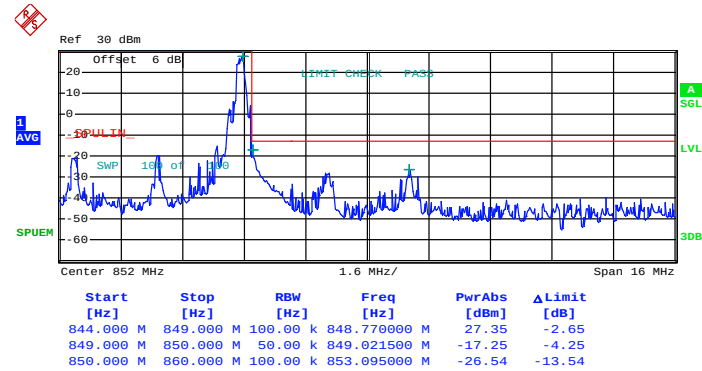
Lower Band Edge Plot for QPSK-RB Size 25, RB Offset 0



Date: 18.JUL.2014 05:05:57

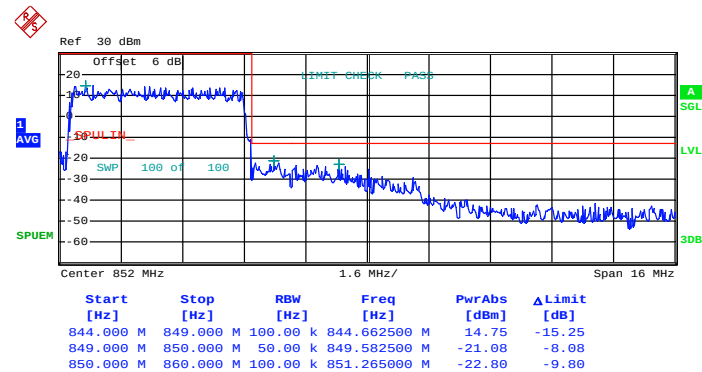


Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 24



Date: 18.JUL.2014 05:02:33

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

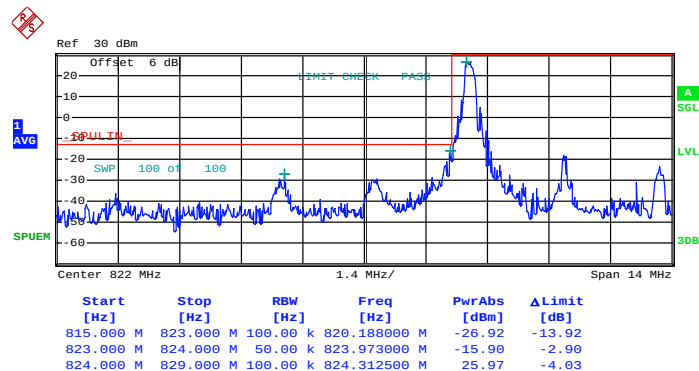


Date: 18.JUL.2014 05:00:18



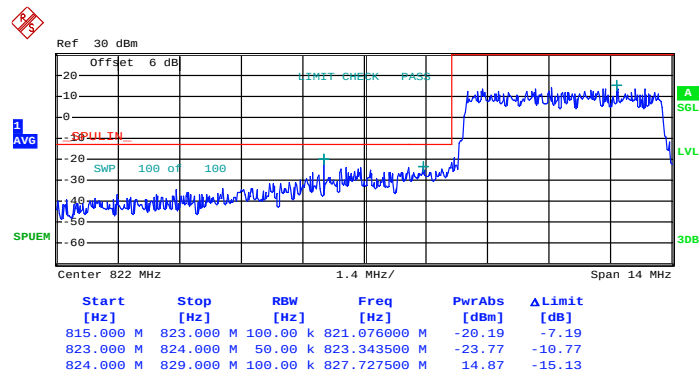
Band :	LTE Band 26	Band Width :	5MHz / 16QAM
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Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



Date: 18.JUL.2014 05:04:32

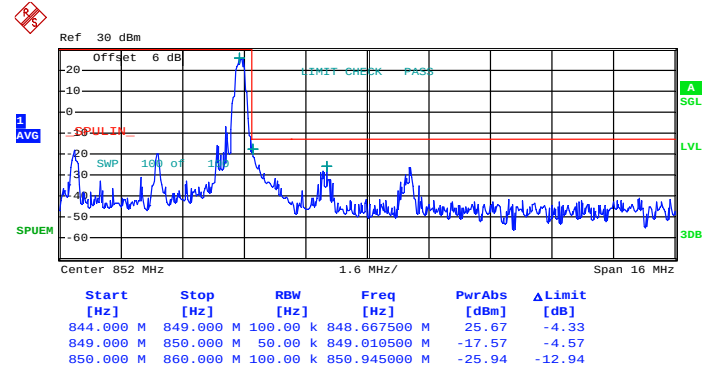
Lower Band Edge Plot for 16QAM-RB Size 25, RB Offset 0



Date: 18.JUL.2014 05:06:30

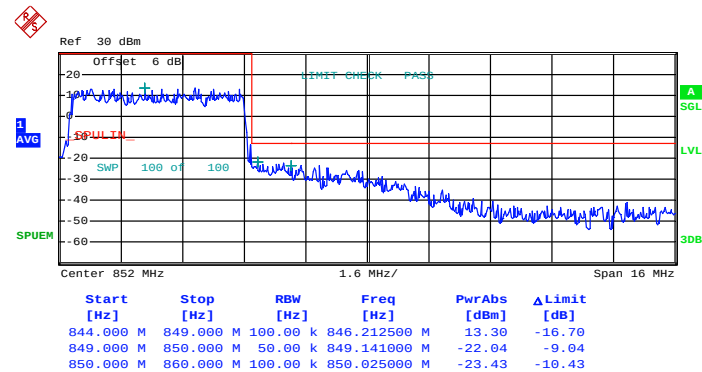


Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 24



Date: 18.JUL.2014 05:03:26

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

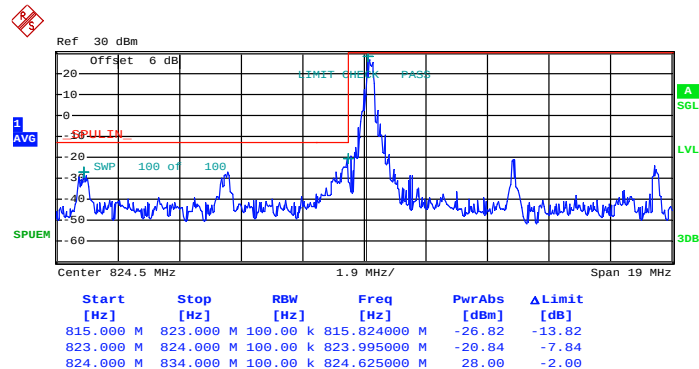


Date: 18.JUL.2014 04:59:44



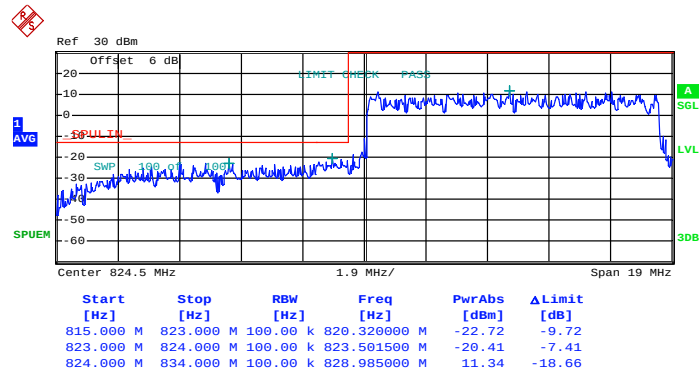
Band :	LTE Band 26	Band Width :	10MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0

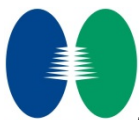


Date: 18.JUL.2014 05:23:35

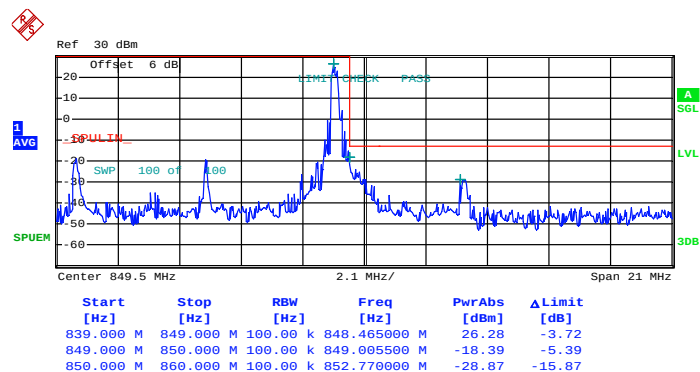
Lower Band Edge Plot for QPSK-RB Size 50, RB Offset 0



Date: 18.JUL.2014 05:21:49

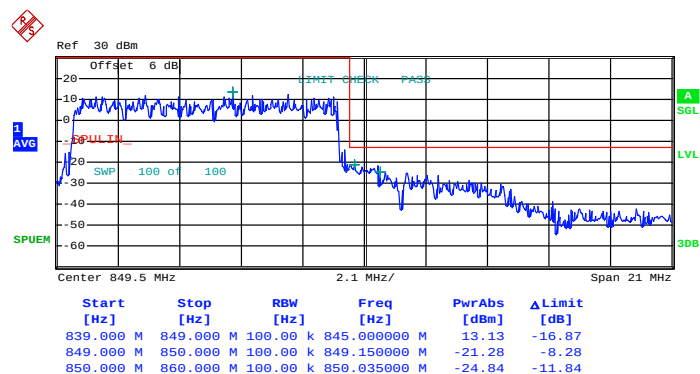


Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 49



Date: 18.JUL.2014 05:18:52

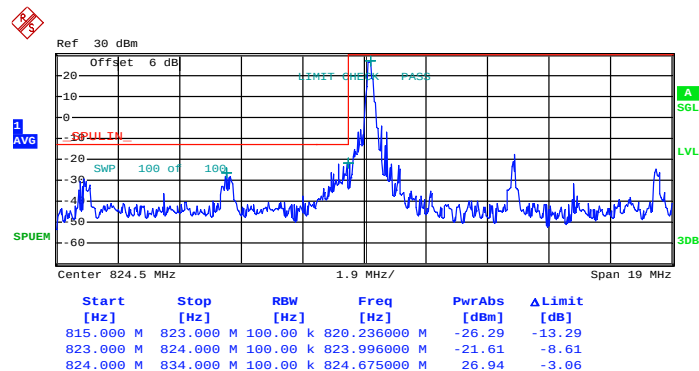
Higher Band Edge Plot for QPSK-RB Size 50, RB Offset 0



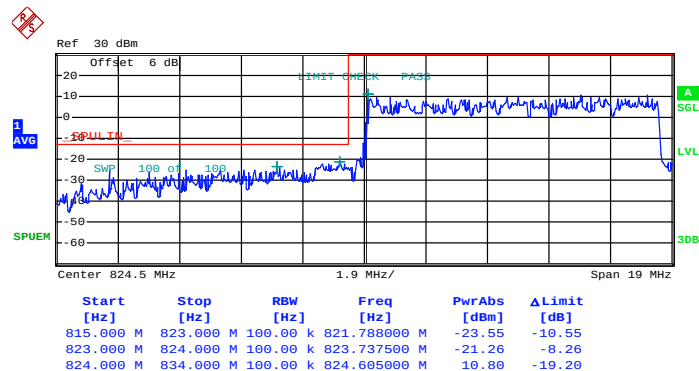
Date: 18.JUL.2014 05:20:45



Band :	LTE Band 26	Band Width :	10MHz / 16QAM
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Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0

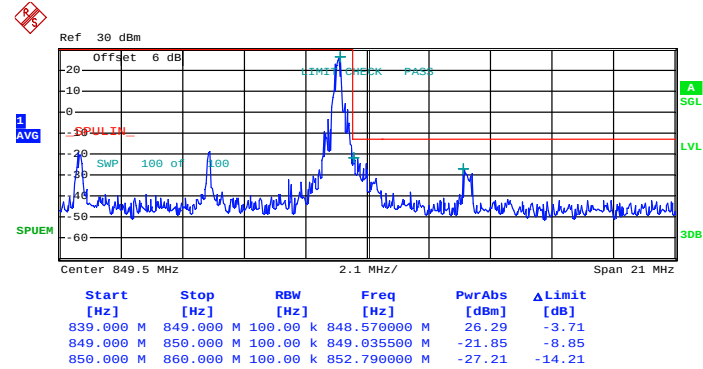
Date: 18.JUL.2014 05:22:58

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

Date: 18.JUL.2014 05:22:26

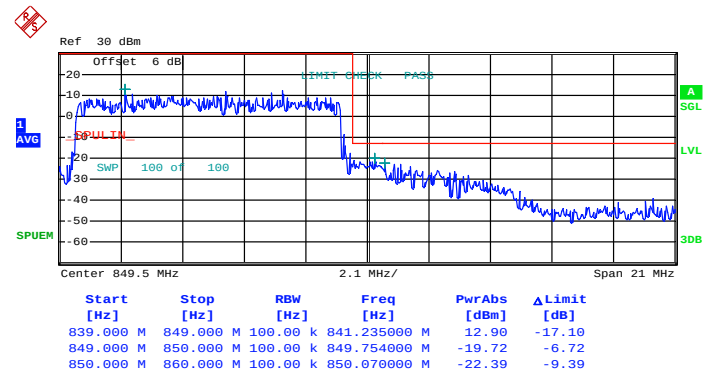


Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 49



Date: 18.JUL.2014 05:19:36

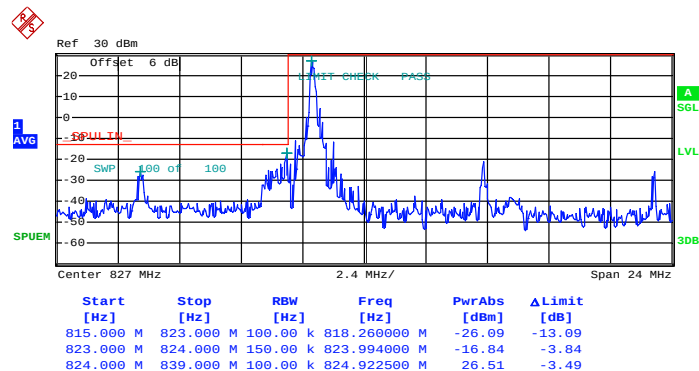
Higher Band Edge Plot for 16QAM-RB Size 50, RB Offset 0



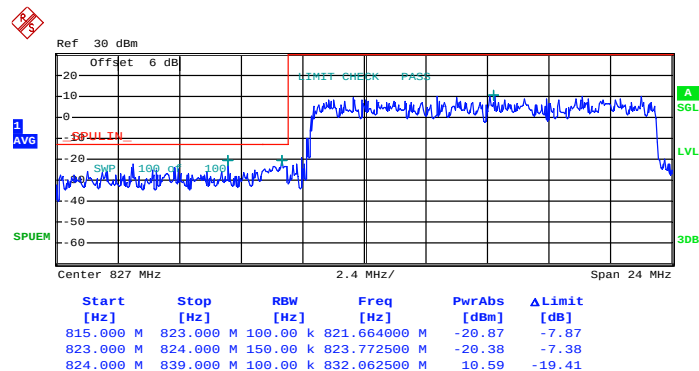
Date: 18.JUL.2014 05:20:15



Band :	LTE Band 26	Band Width :	15MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0

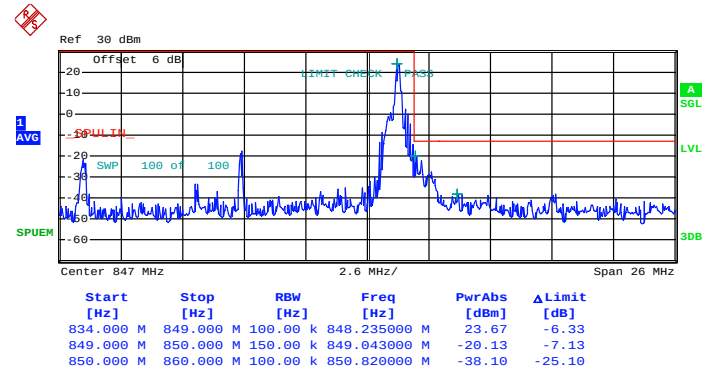
Date: 18.JUL.2014 05:27:00

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

Date: 18.JUL.2014 05:25:16

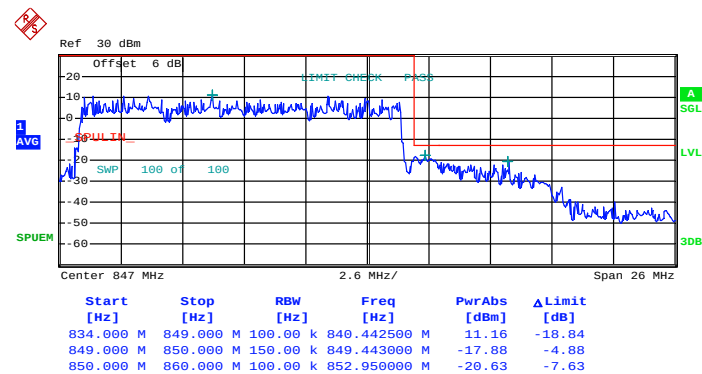


Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 74



Date: 18.JUL.2014 05:28:08

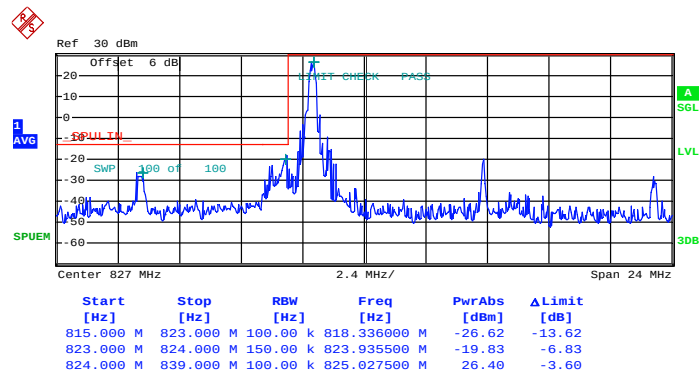
Higher Band Edge Plot for QPSK-RB Size 75, RB Offset 0



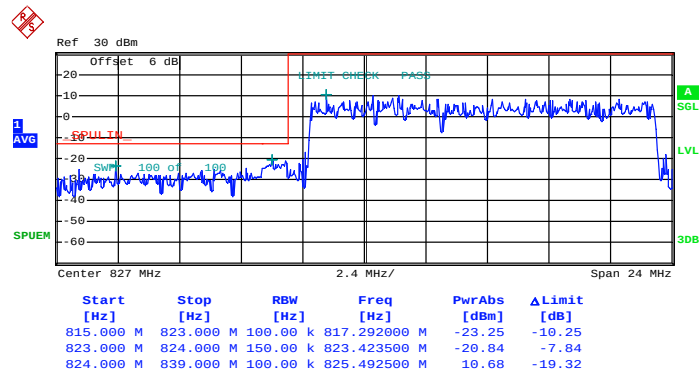
Date: 18.JUL.2014 05:29:46



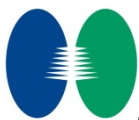
Band :	LTE Band 26	Band Width :	15MHz / 16QAM
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Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0

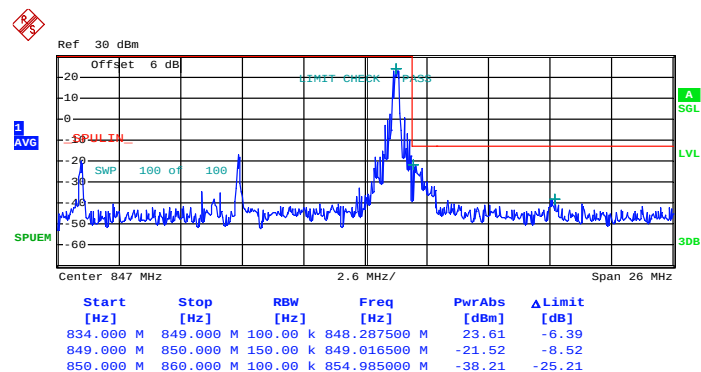
Date: 18.JUL.2014 05:26:26

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

Date: 18.JUL.2014 05:25:47

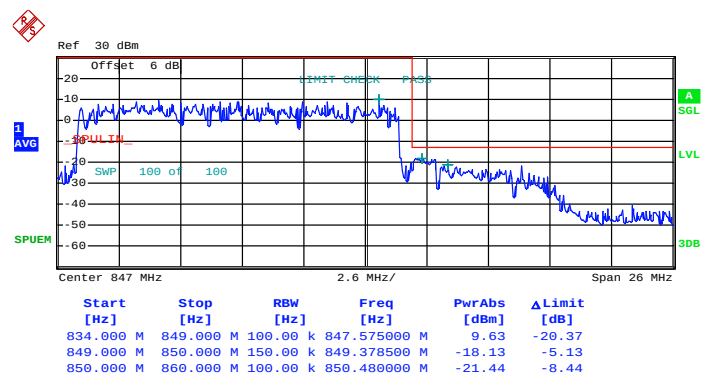


Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 74



Date: 18.JUL.2014 05:28:39

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

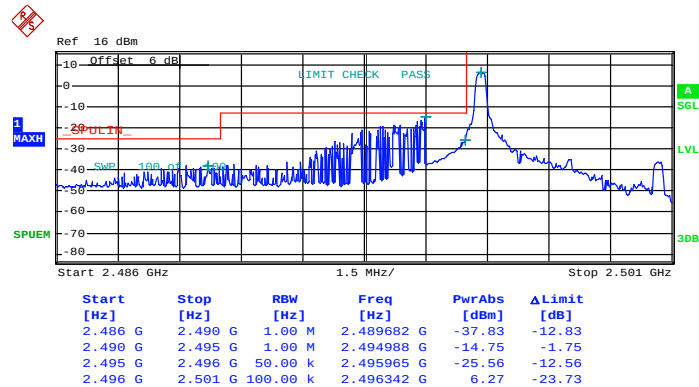


Date: 18.JUL.2014 05:29:14



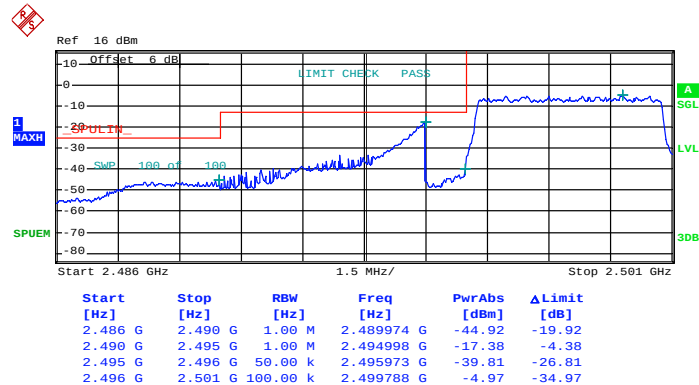
Band :	LTE Band 41	Band Width :	5MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



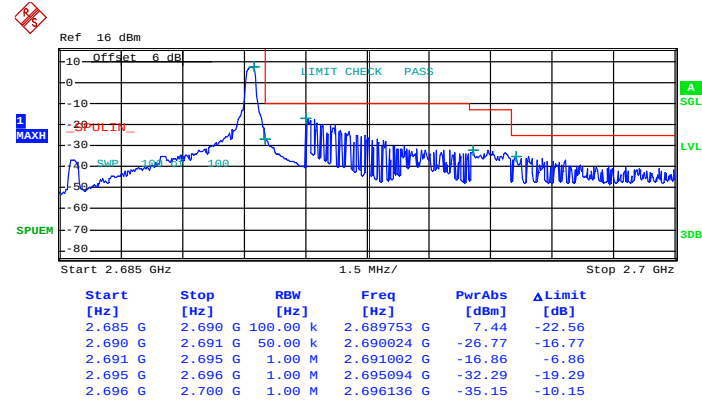
Date: 26.AUG.2014 17:07:32

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



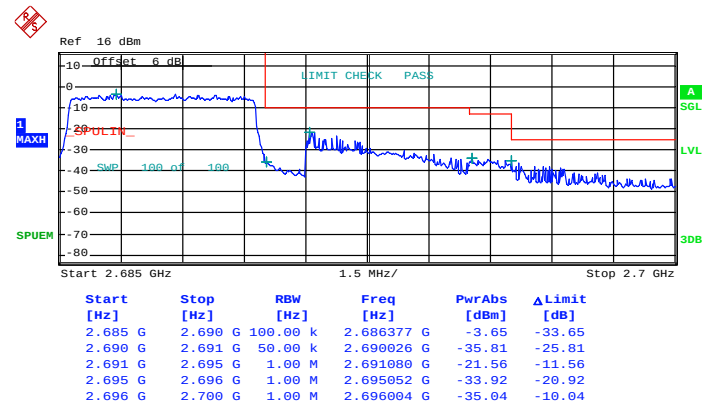
Date: 26.AUG.2014 17:04:21

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



Date: 26.AUG.2014 17:09:46

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

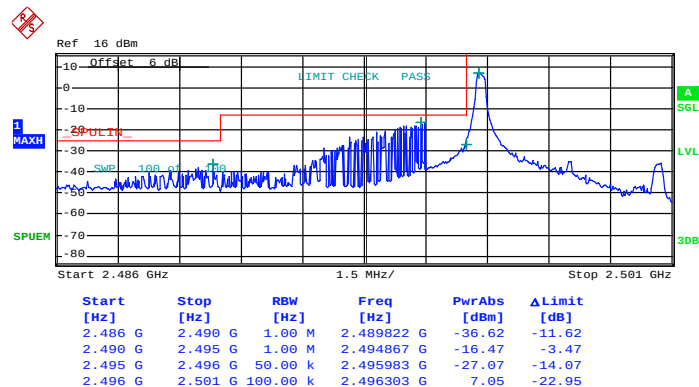


Date: 26.AUG.2014 17:12:22



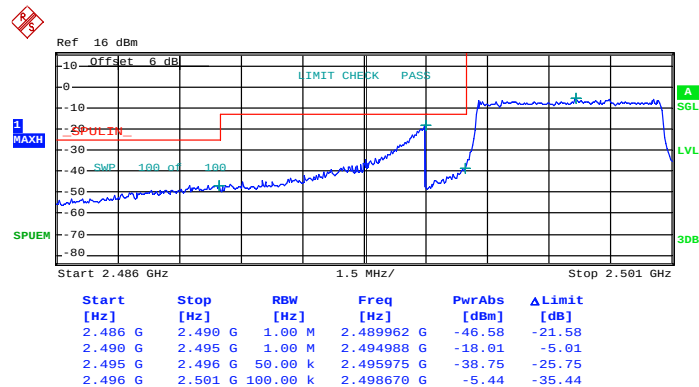
Band :	LTE Band 41	Band Width :	5MHz / 16QAM
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Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



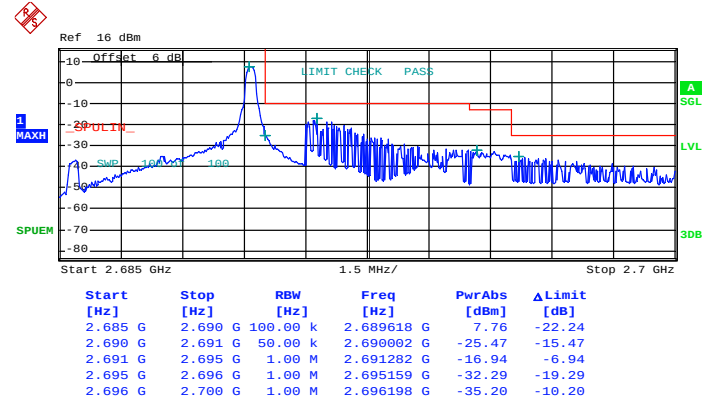
Date: 26.AUG.2014 17:06:16

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



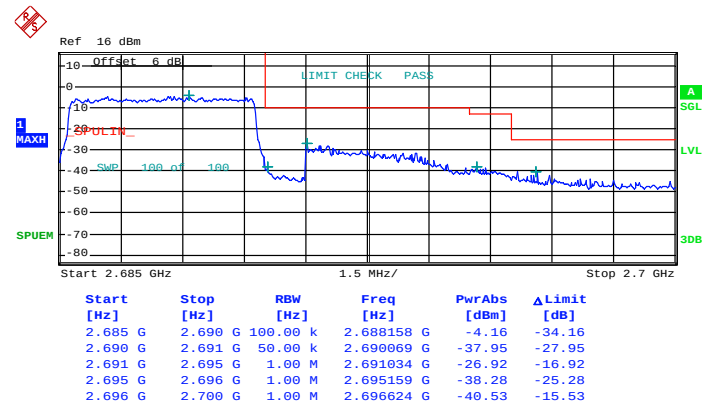
Date: 26.AUG.2014 17:05:06

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



Date: 26.AUG.2014 17:10:31

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

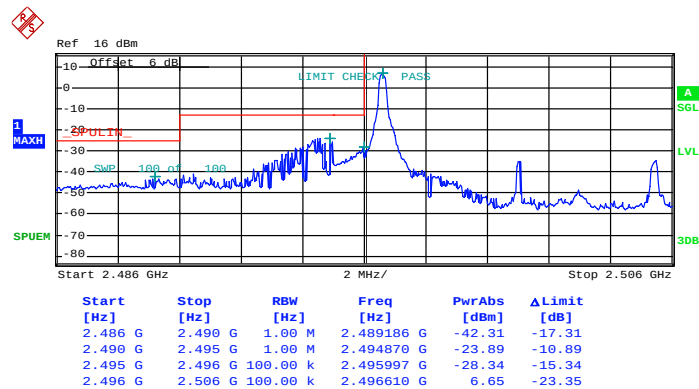


Date: 26.AUG.2014 17:11:32



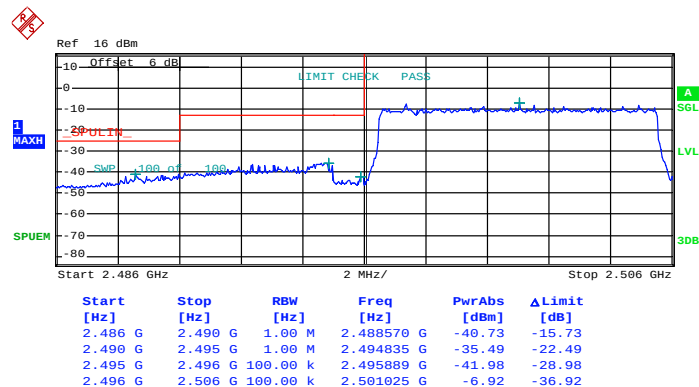
Band :	LTE Band 41	Band Width :	10MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Date: 26.AUG.2014 17:21:23

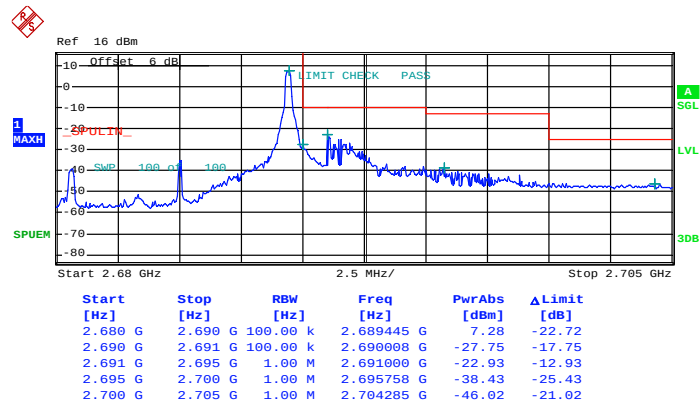
Lower Band Edge Plot for QPSK-RB Size 50, RB Offset 0



Date: 26.AUG.2014 17:22:10

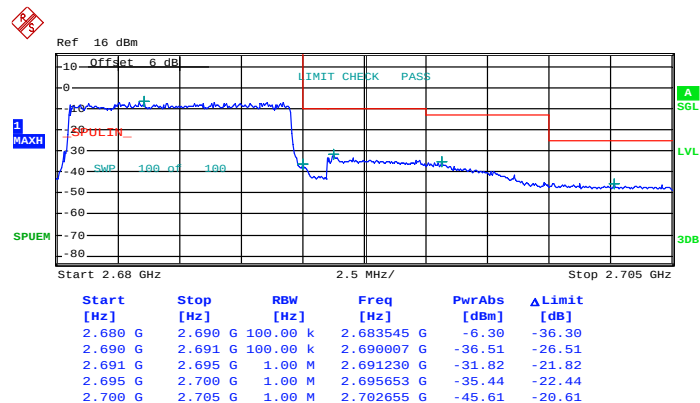


Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 49



Date: 26.AUG.2014 17:19:17

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

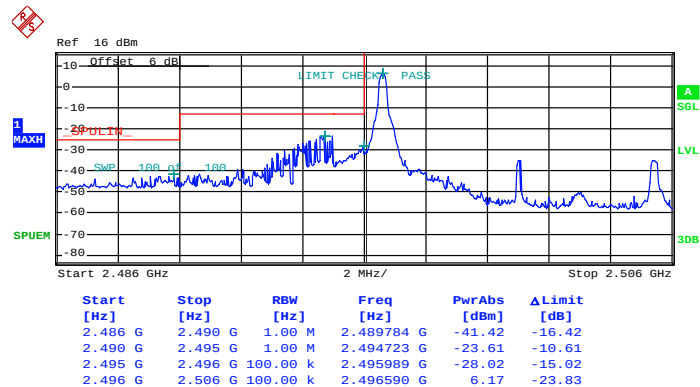


Date: 26.AUG.2014 17:16:51



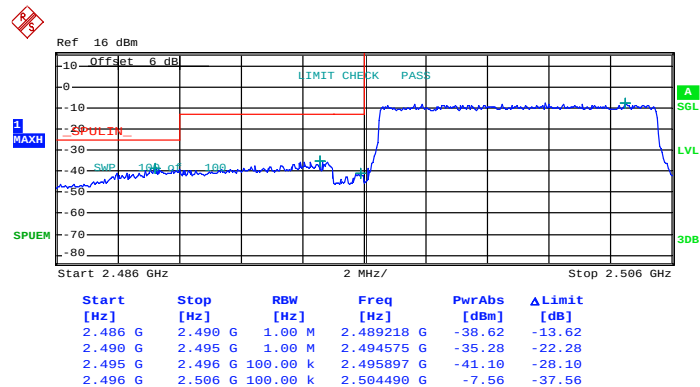
Band :	LTE Band 41	Band Width :	10MHz / 16QAM
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Lower Band Edge Plot for 16QAM -RB Size 1, RB Offset 0



Date: 26.AUG.2014 17:20:39

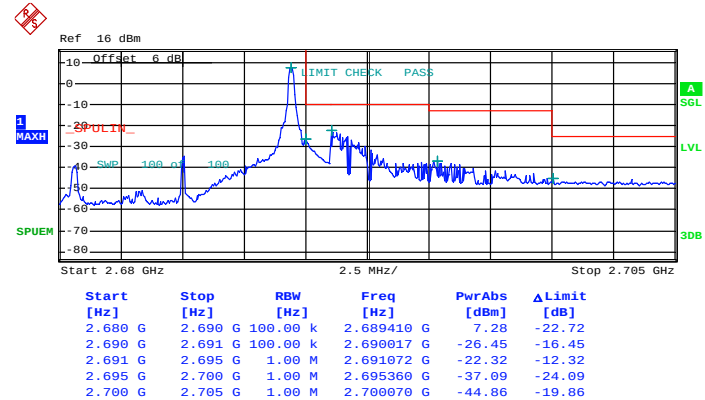
Lower Band Edge Plot for 16QAM -RB Size 50, RB Offset 0



Date: 26.AUG.2014 17:23:05

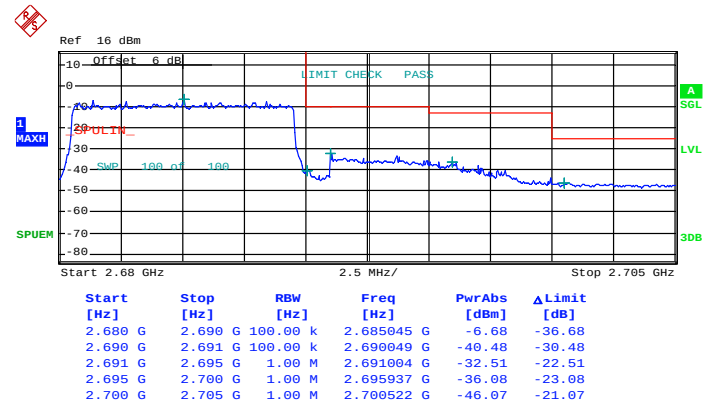


Higher Band Edge Plot for 16QAM -RB Size 1, RB Offset 49



Date: 26.AUG.2014 17:18:32

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

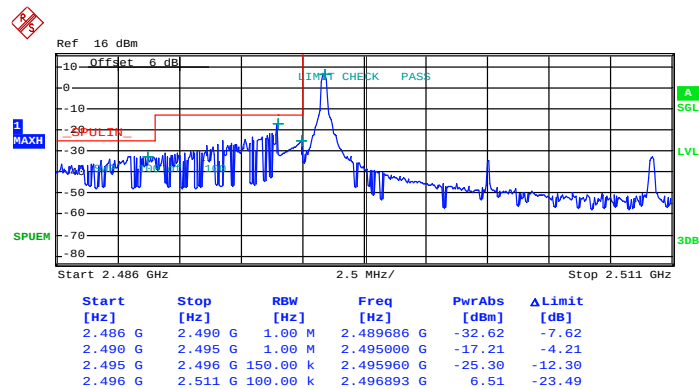


Date: 26.AUG.2014 17:17:39



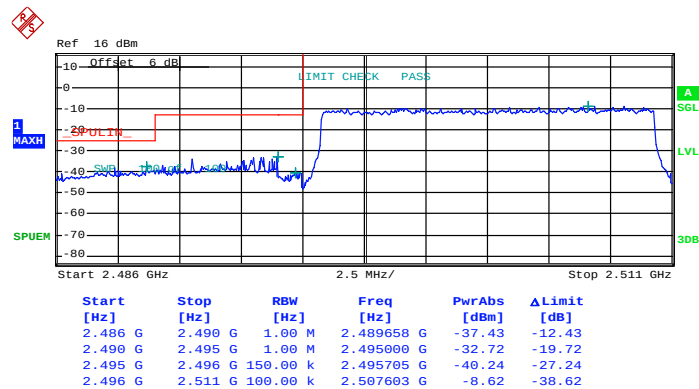
Band :	LTE Band 41	Band Width :	15MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Date: 26.AUG.2014 17:27:18

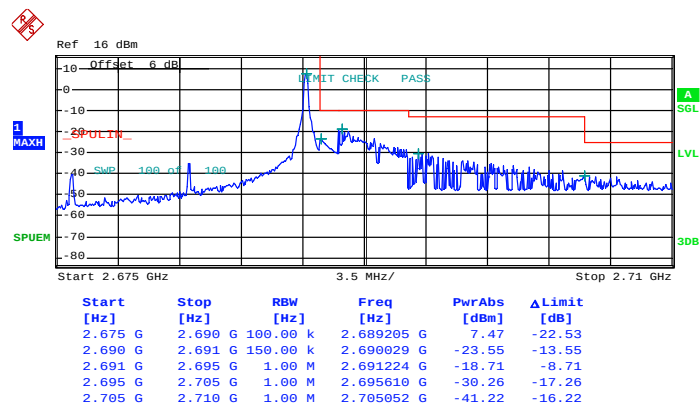
Lower Band Edge Plot for QPSK-RB Size 75, RB Offset 0



Date: 26.AUG.2014 17:26:39

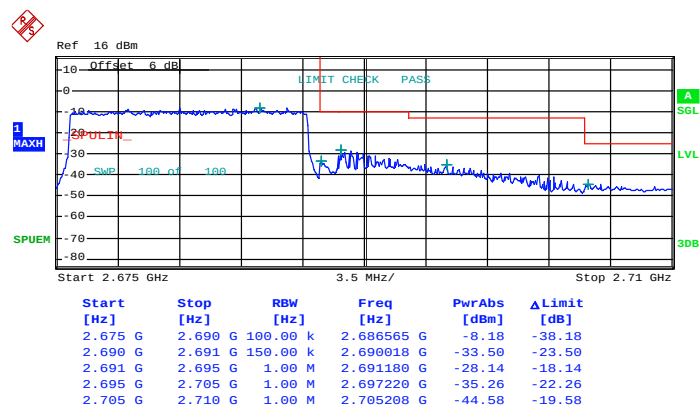


Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 74



Date: 26.AUG.2014 17:30:12

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

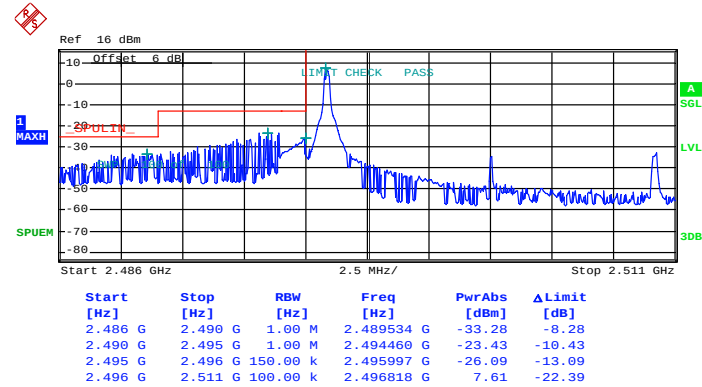


Date: 26.AUG.2014 17:30:59



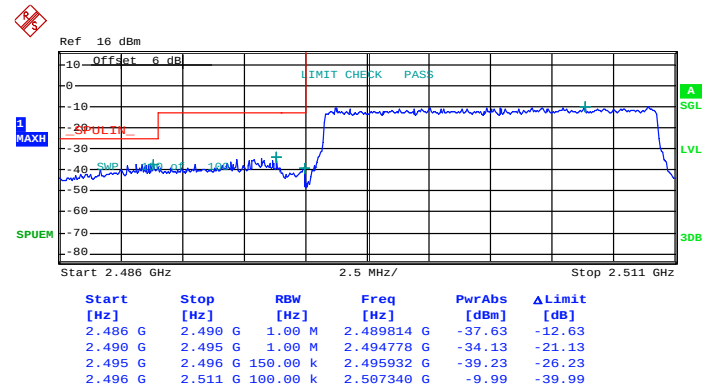
Band :	LTE Band 41	Band Width :	15MHz / 16QAM
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Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



Date: 26.AUG.2014 17:27:56

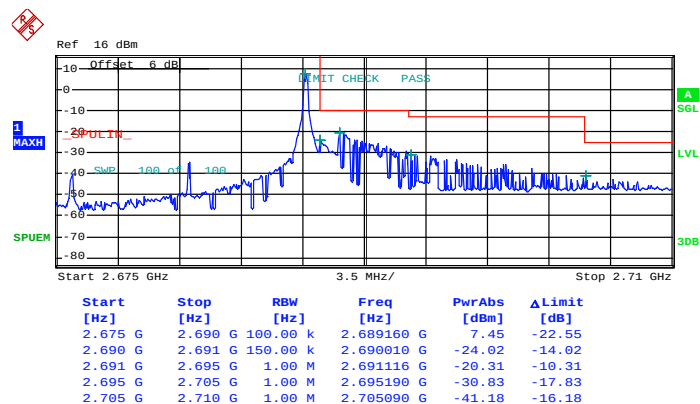
Lower Band Edge Plot for 16QAM-RB Size 75, RB Offset 0



Date: 26.AUG.2014 17:25:51

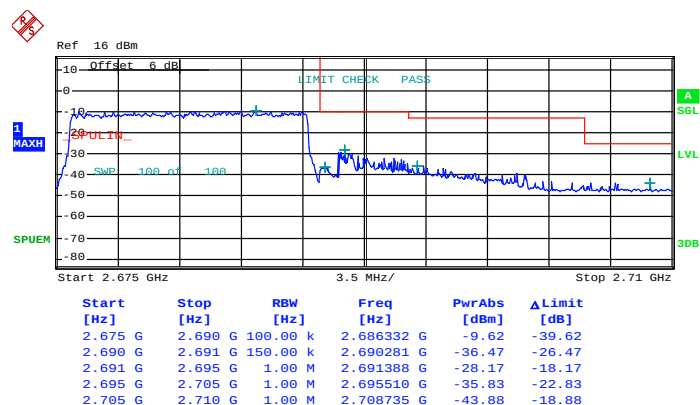


Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 74



Date: 26.AUG.2014 17:29:23

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

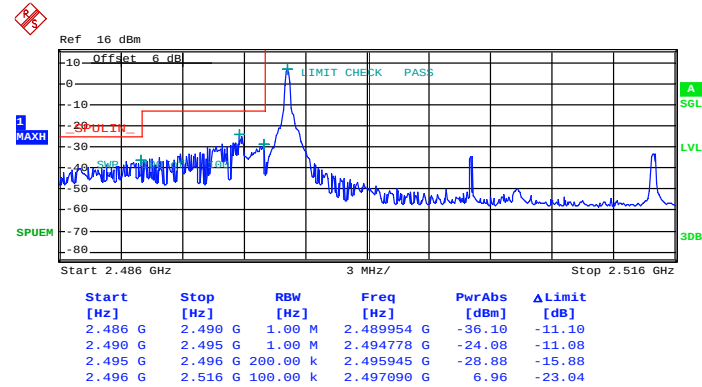


Date: 26.AUG.2014 17:31:45



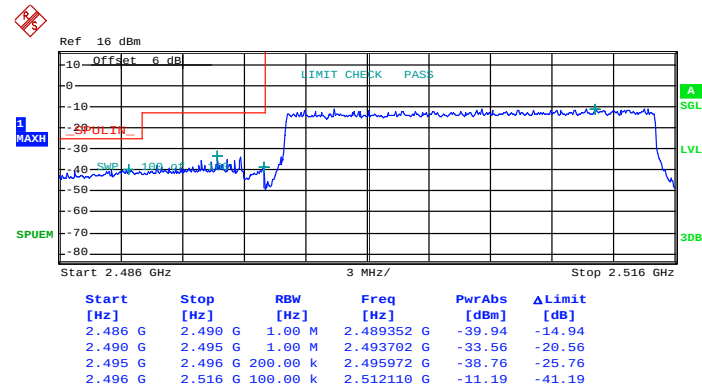
Band :	LTE Band 41	Band Width :	20MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Date: 26.AUG.2014 17:40:39

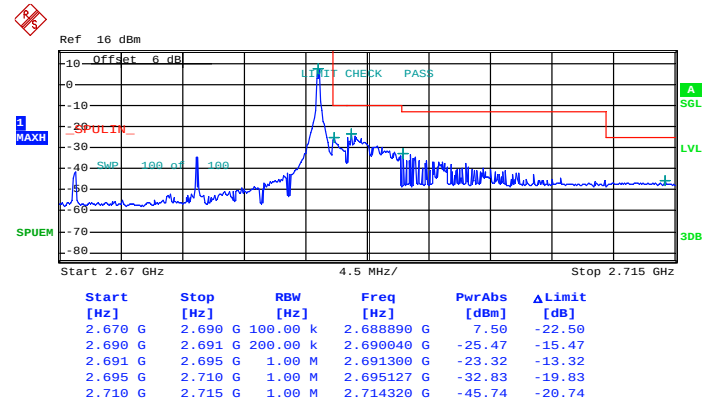
Lower Band Edge Plot for QPSK-RB Size 100, RB Offset 0



Date: 26.AUG.2014 17:41:39

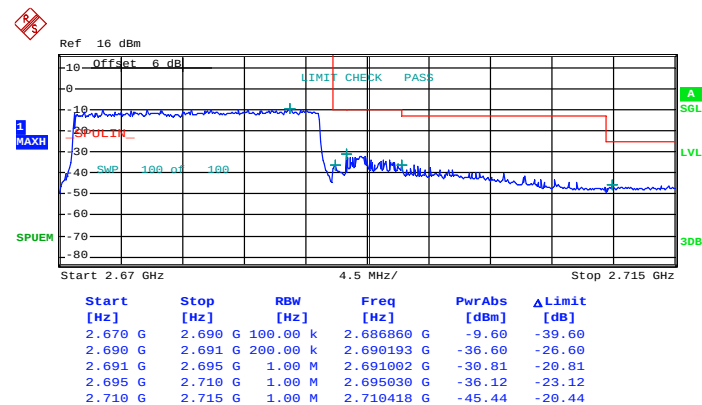


Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 99



Date: 26.AUG.2014 17:36:56

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

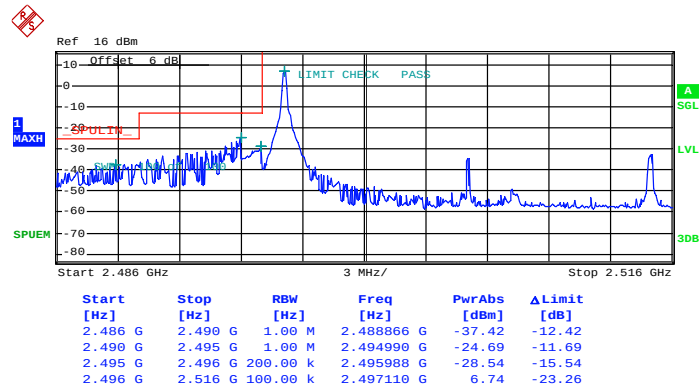


Date: 26.AUG.2014 17:36:05



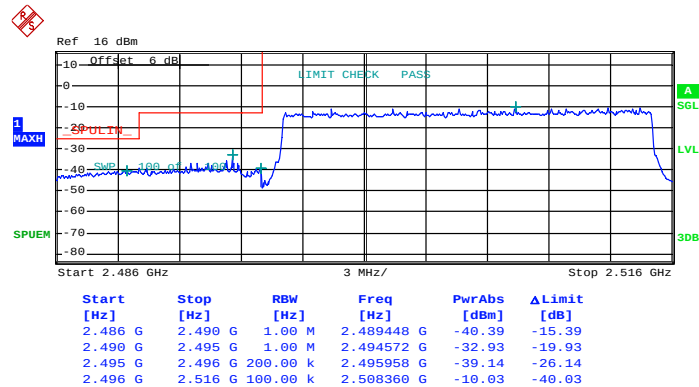
Band :	LTE Band 41	Band Width :	20MHz / 16QAM
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Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



Date: 26.AUG.2014 17:39:56

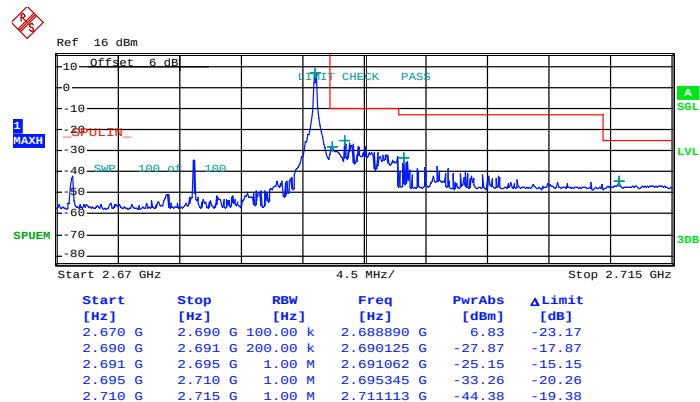
Lower Band Edge Plot for 16QAM-RB Size 100, RB Offset 0



Date: 26.AUG.2014 17:42:29

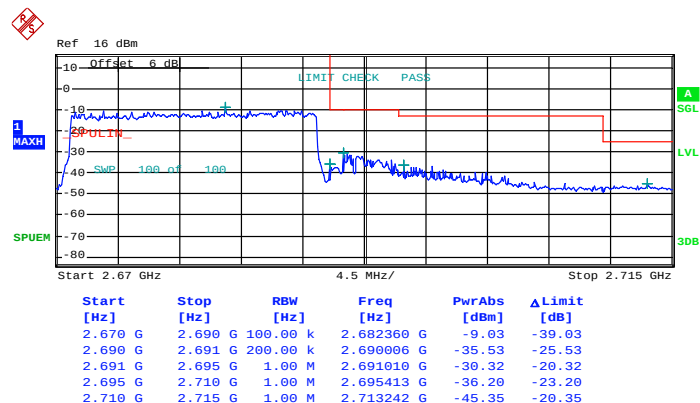


Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 99



Date: 26.AUG.2014 17:38:07

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



Date: 26.AUG.2014 17:35:16

3.6 Conducted Spurious Emission Measurement

3.6.1 Description of Conducted Spurious Emission Measurement

For Band 25/26

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

For Band 41

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 $55 + 10 \log (P)$ dB.

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

3.6.2 Measuring Instruments

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

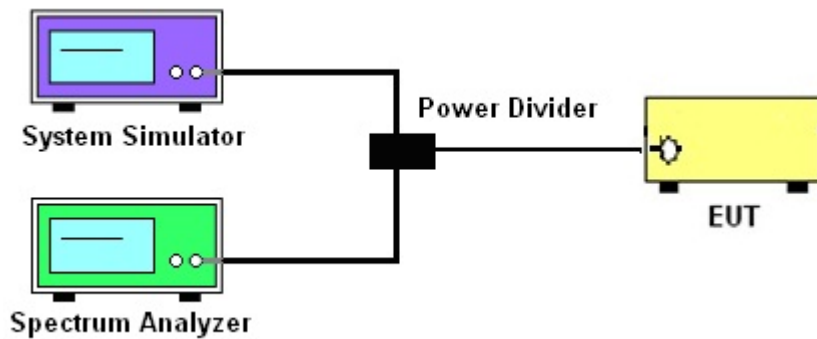
3.6.3 Test Procedures

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

For Band 41

The limit line is derived from $55 + 10\log(P)$ dB below the transmitter power P(Watts)
 $= P(W) - [55 + 10\log(P)]$ (dB)
 $= [30 + 10\log(P)]$ (dBm) - $[55 + 10\log(P)]$ (dB)
 $= -25$ dBm.

3.6.4 Test Setup

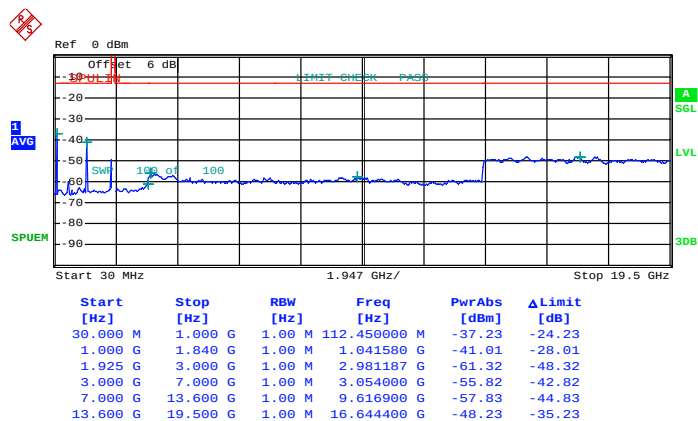




3.6.5 Test Result (Plots) of Conducted Spurious Emission

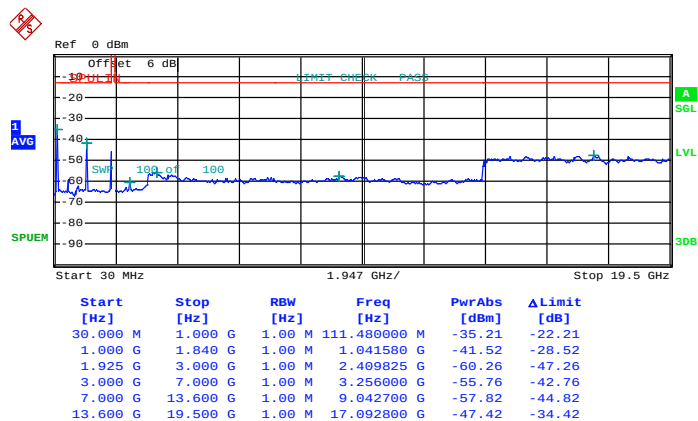
Band :	LTE Band 25	Channel :	CH26047 (Low)
Band Width :	1.4MHz		

QPSK (RB Size 1, RB Offset 0)



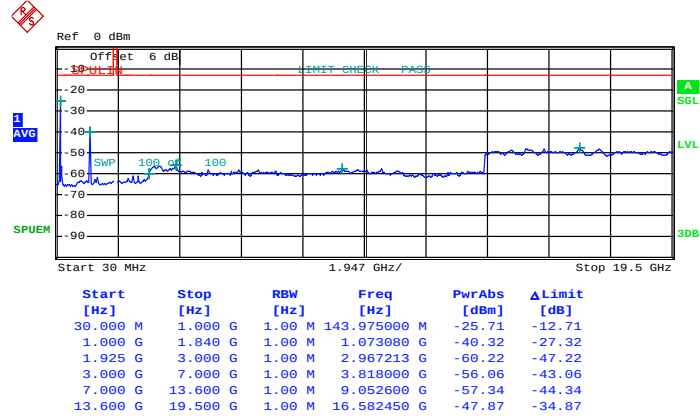
Date: 18.JUL.2014 02:16:59

16QAM (RB Size 1, RB Offset 0)

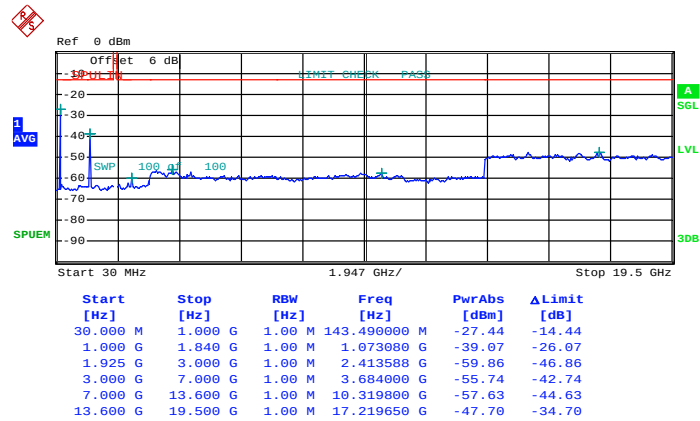


Date: 18.JUL.2014 02:19:43

Band :	LTE Band 25	Channel :	CH26365 (Middle)
Band Width :	1.4MHz		

QPSK (RB Size 1, RB Offset 0)


Date: 18.JUL.2014 02:14:06

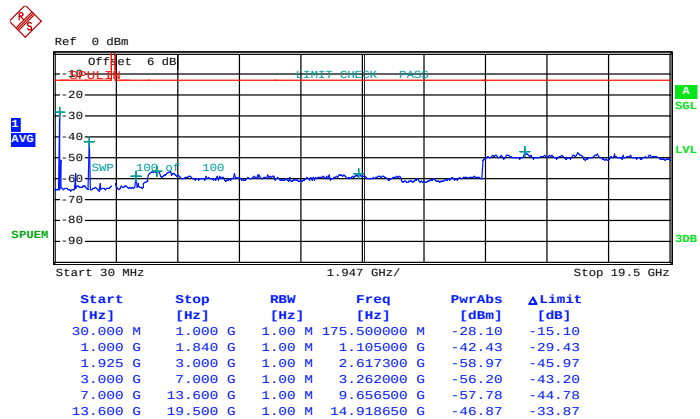
16QAM (RB Size 1, RB Offset 0)


Date: 18.JUL.2014 01:31:58



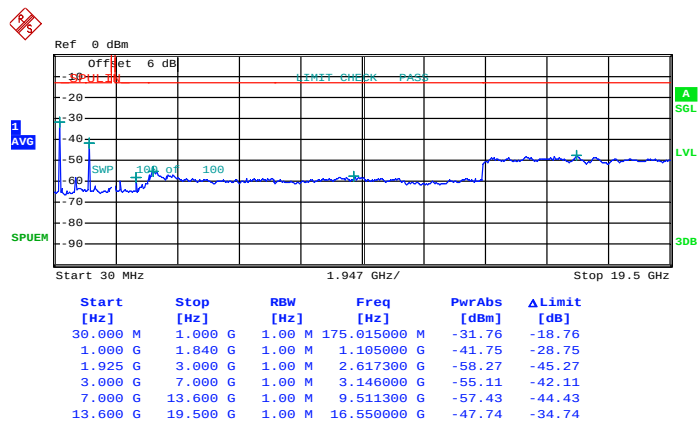
Band :	LTE Band 25	Channel :	CH26683 (High)
Band Width :	1.4MHz		

QPSK (RB Size 1, RB Offset 0)



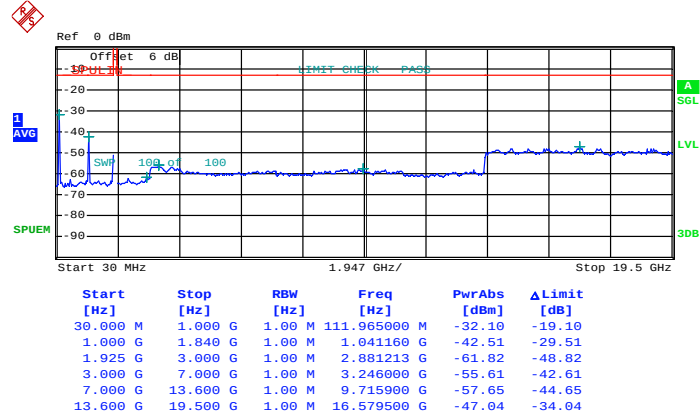
Date: 18.JUL.2014 02:27:13

16QAM (RB Size 1, RB Offset 0)

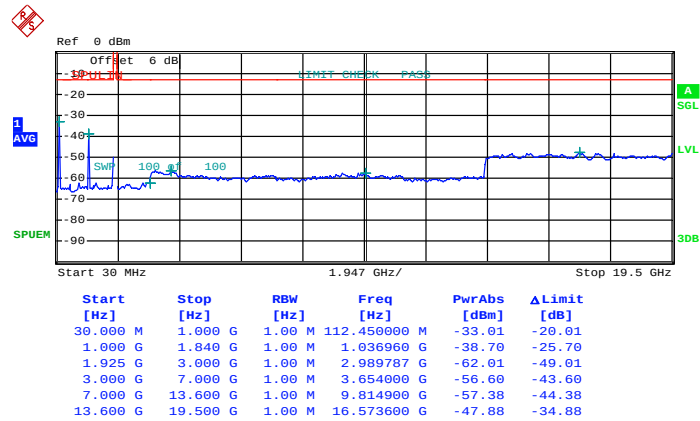


Date: 18.JUL.2014 02:23:20

Band :	LTE Band 25	Channel :	CH26055 (Low)
Band Width :	3MHz		

QPSK (RB Size 1, RB Offset 0)


Date: 18.JUL.2014 02:38:39

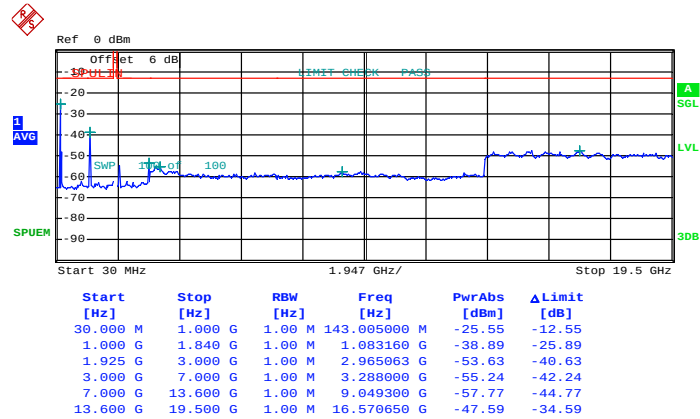
16QAM (RB Size 1, RB Offset 0)


Date: 18.JUL.2014 02:35:55



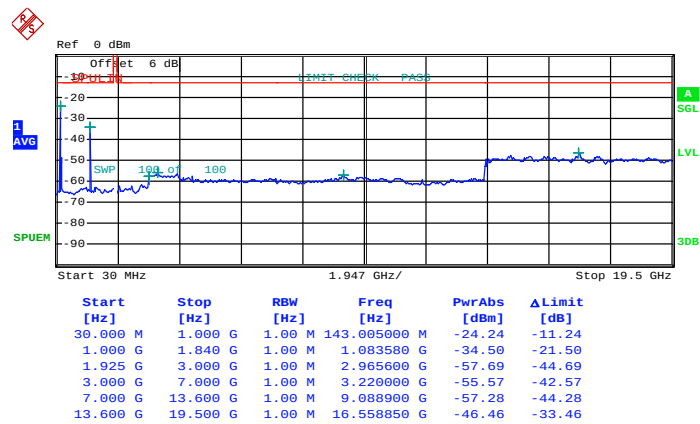
Band :	LTE Band 25	Channel :	CH26365 (Middle)
Band Width :	3MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 18.JUL.2014 02:30:15

16QAM (RB Size 1, RB Offset 0)



Date: 18.JUL.2014 02:32:52



Ref 0 dBm

OffSet 6 dB

1.947 GHz

100.0

100.0

100.0

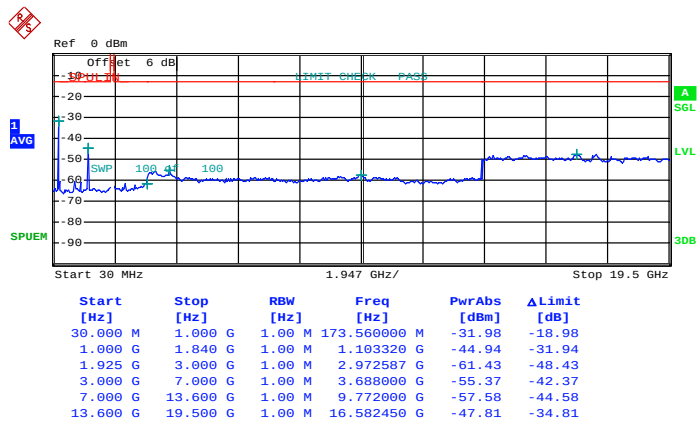
Start 30 MHz

1.947 GHz/

Stop 19.5 GHz

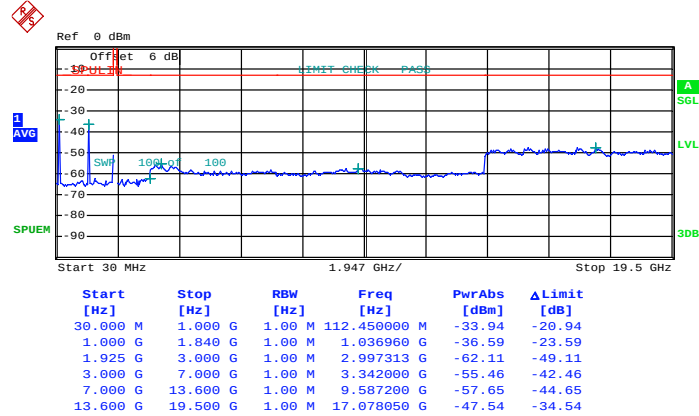
Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	1.000 G	1.00 M	173.560000 M	-34.15	-21.15
1.000 G	1.840 G	1.00 M	1.103320 G	-42.82	-29.82
1.925 G	3.000 G	1.00 M	2.608163 G	-58.96	-45.96
3.000 G	7.000 G	1.00 M	3.702000 G	-56.51	-43.51
7.000 G	13.600 G	1.00 M	9.910600 G	-57.83	-44.83
13.600 G	19.500 G	1.00 M	14.921600 G	-47.52	-34.52

16QAM (RB Size 1, RB Offset 0)

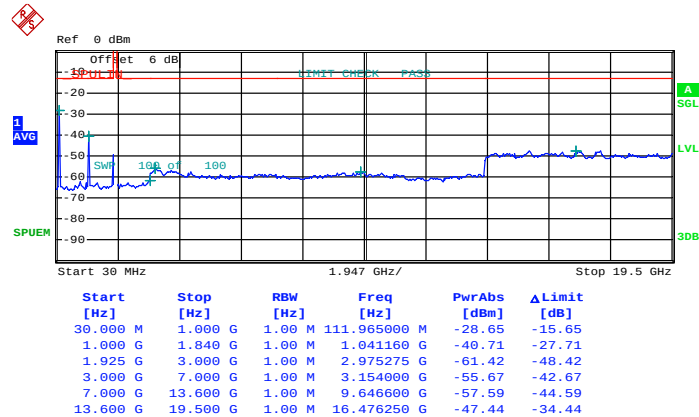


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Band :	LTE Band 25	Channel :	CH26065 (Low)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 0)


Date: 18.JUL.2014 02:53:03

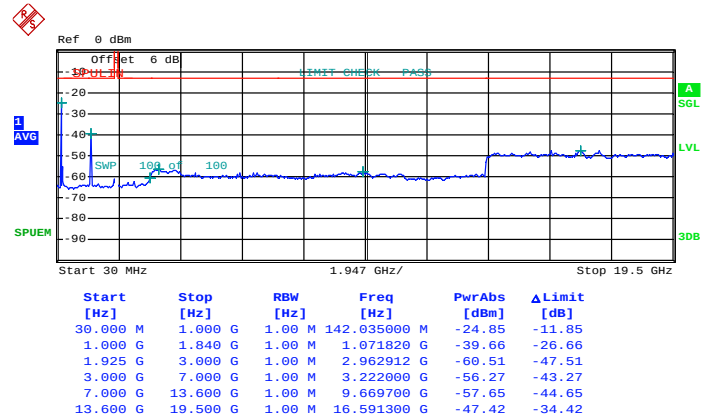
16QAM (RB Size 1, RB Offset 0)


Date: 18.JUL.2014 02:55:51



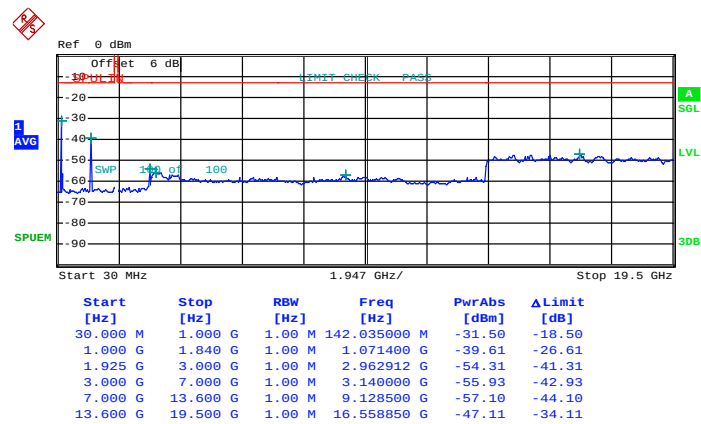
Band :	LTE Band 25	Channel :	CH26365 (Middle)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 18.JUL.2014 03:01:52

16QAM (RB Size 1, RB Offset 0)

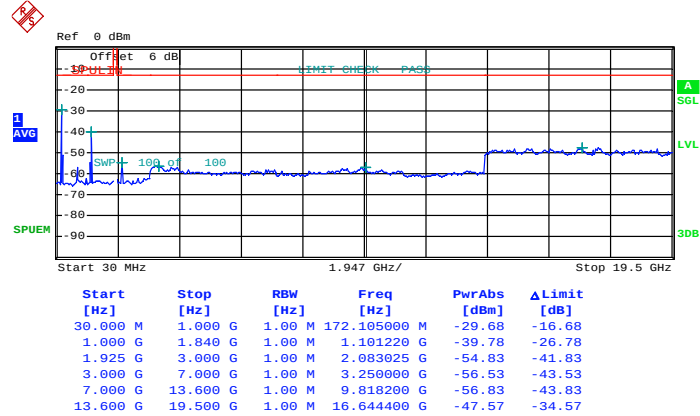


Date: 18.JUL.2014 02:58:39



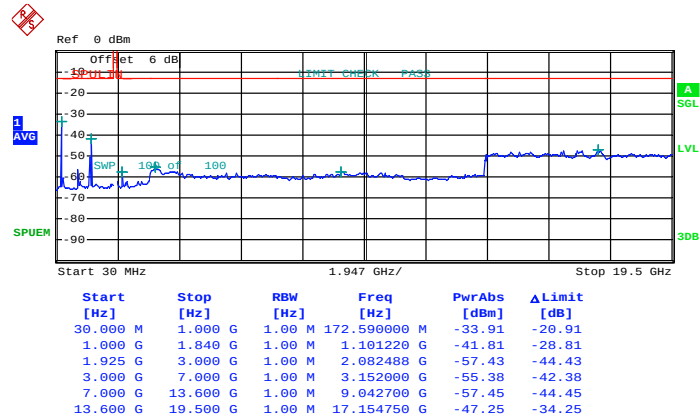
Band :	LTE Band 25	Channel :	CH26665 (High)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 18.JUL.2014 02:50:04

16QAM (RB Size 1, RB Offset 0)

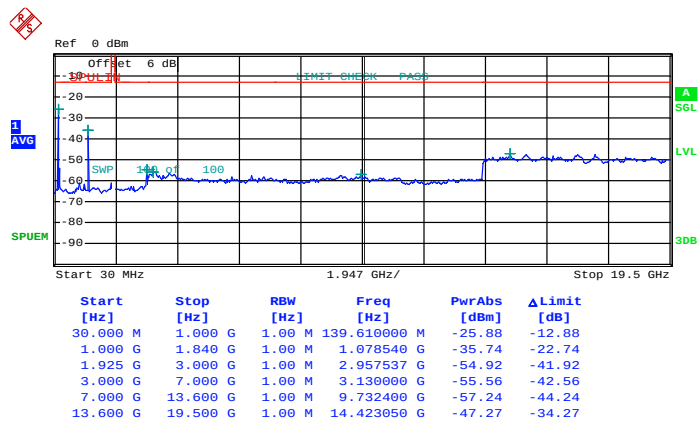


Date: 18.JUL.2014 02:47:21



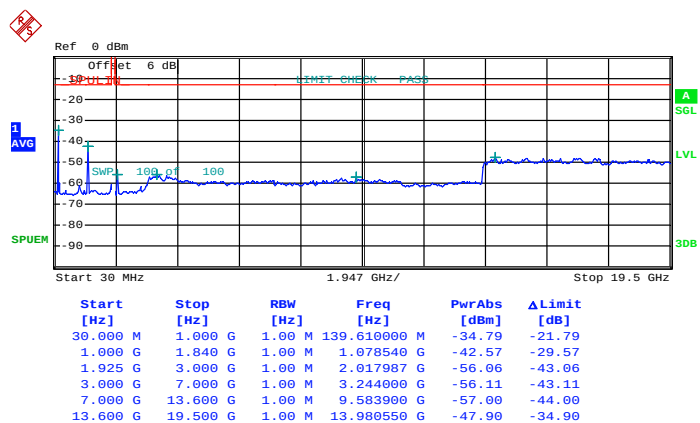
Band :	LTE Band 25	Channel :	CH26090 (Low)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 18.JUL.2014 03:12:40

16QAM (RB Size 1, RB Offset 0)

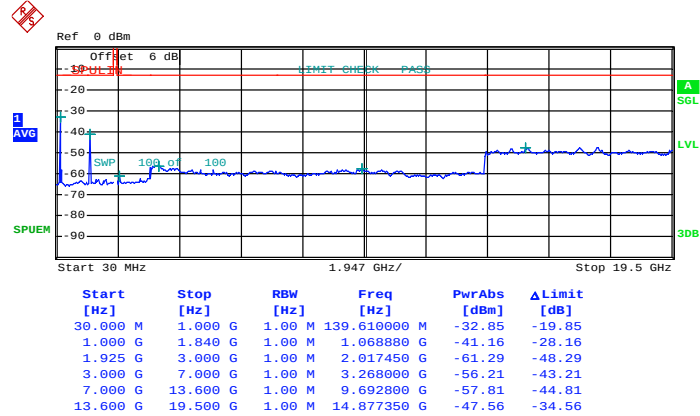


Date: 18.JUL.2014 03:10:04



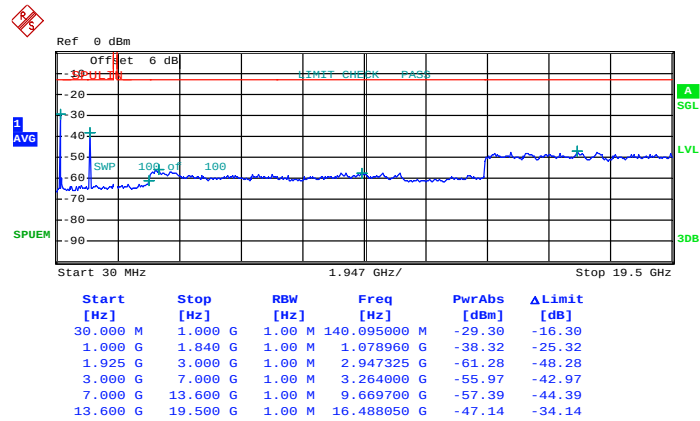
Band :	LTE Band 25	Channel :	CH26365 (Middle)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 18.JUL.2014 03:04:45

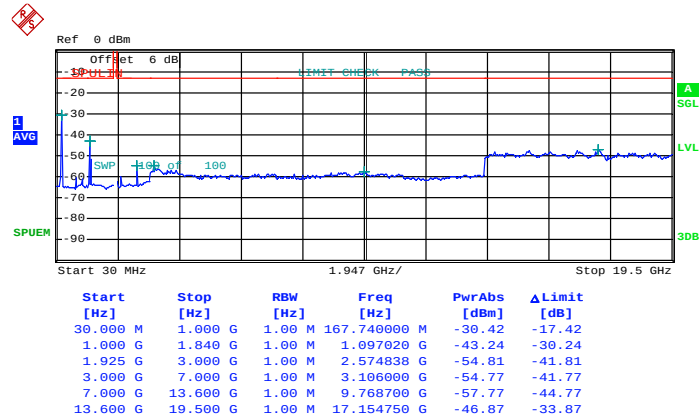
16QAM (RB Size 1, RB Offset 0)



Date: 18.JUL.2014 03:07:23

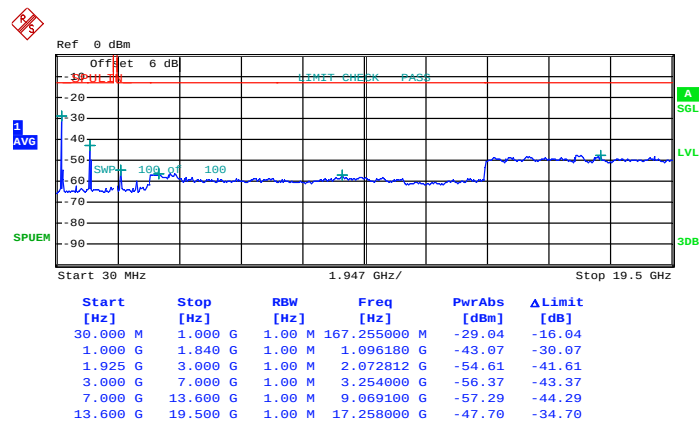
Band :	LTE Band 25	Channel :	CH26640 (High)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 18.JUL.2014 03:15:38

16QAM (RB Size 1, RB Offset 0)

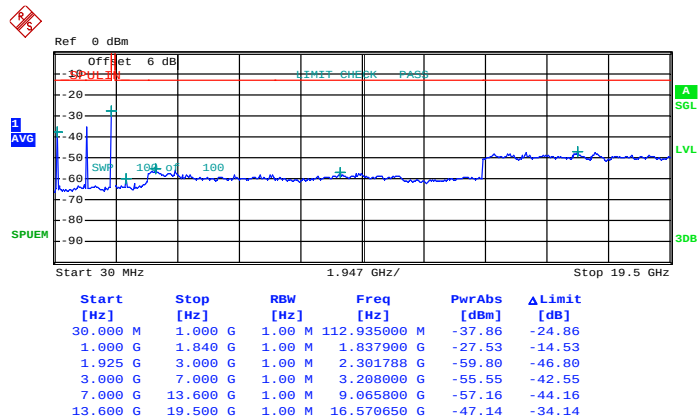


Date: 18.JUL.2014 03:18:19



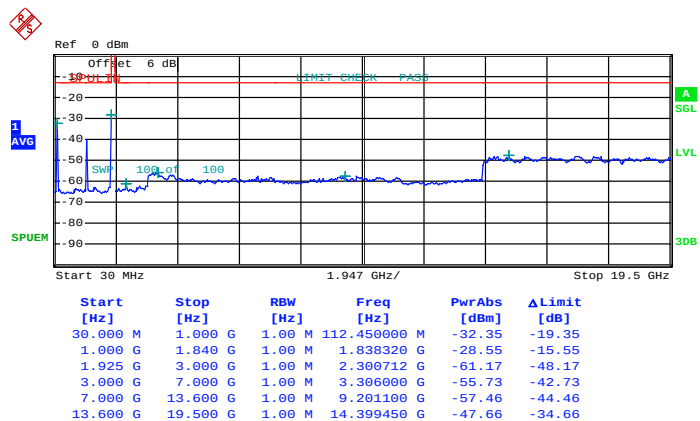
Band :	LTE Band 25	Channel :	CH26115 (Low)
Band Width :	15MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 18.JUL.2014 03:27:47

16QAM (RB Size 1, RB Offset 0)

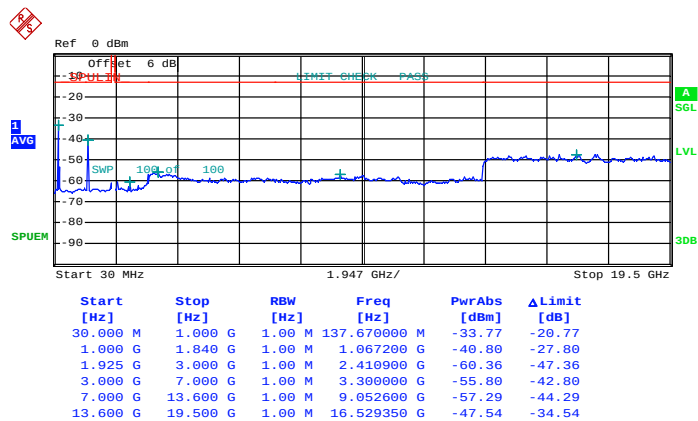


Date: 18.JUL.2014 03:30:22



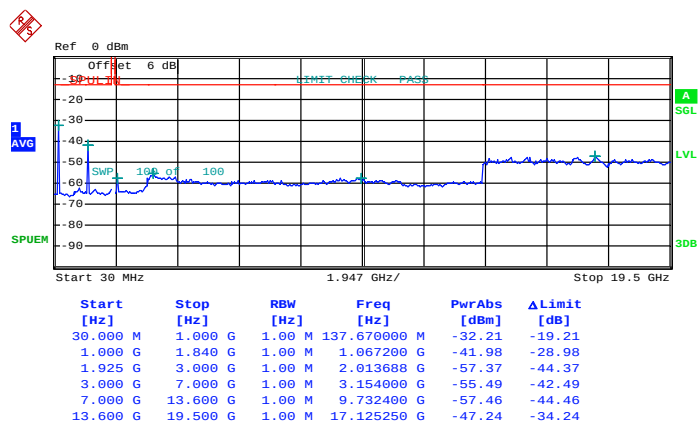
Band :	LTE Band 25	Channel :	CH26365 (Middle)
Band Width :	15MHz		

QPSK (RB Size 1, RB Offset 0)



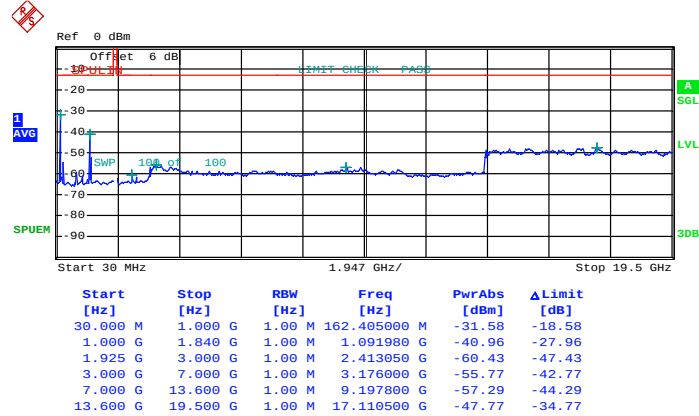
Date: 18.JUL.2014 03:24:44

16QAM (RB Size 1, RB Offset 0)

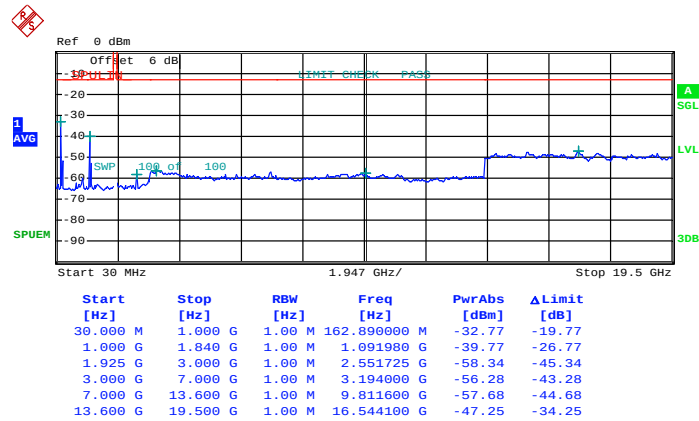


Date: 18.JUL.2014 03:21:52

Band :	LTE Band 25	Channel :	CH26615 (High)
Band Width :	15MHz		

QPSK (RB Size 1, RB Offset 0)


Date: 18.JUL.2014 03:36:01

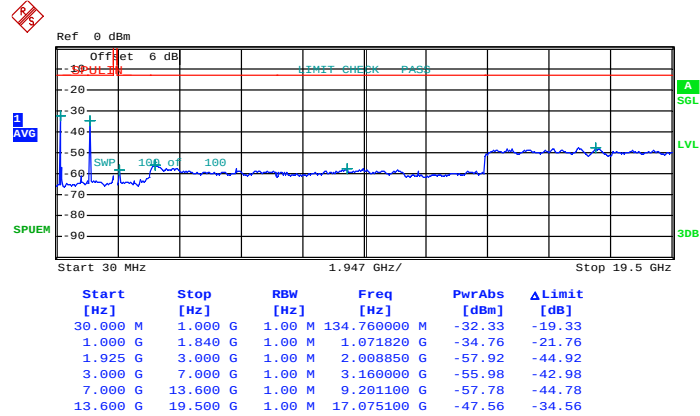
16QAM (RB Size 1, RB Offset 0)


Date: 18.JUL.2014 03:33:11



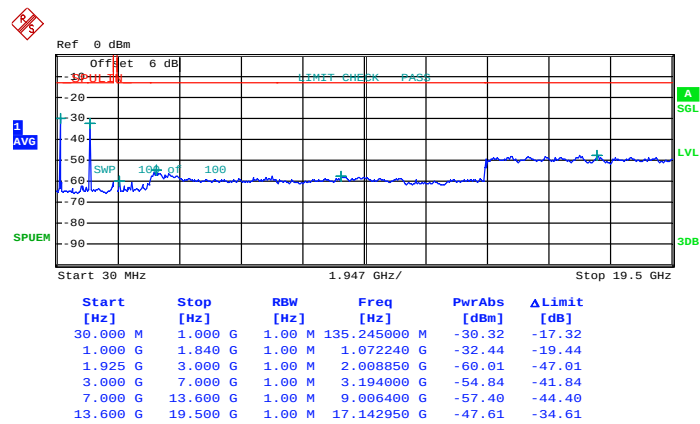
Band :	LTE Band 25	Channel :	CH26140 (Low)
Band Width :	20MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 18.JUL.2014 03:57:44

16QAM (RB Size 1, RB Offset 0)

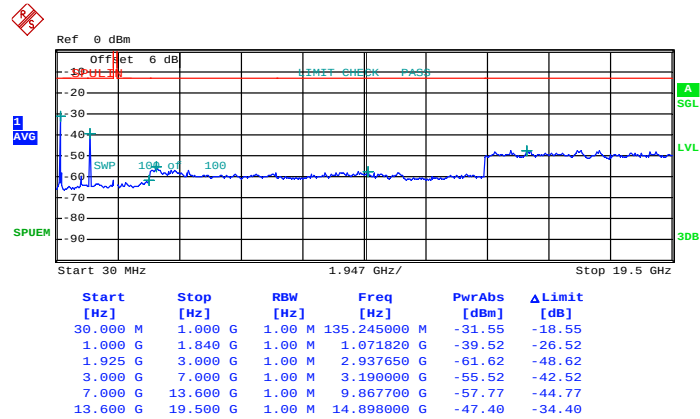


Date: 18.JUL.2014 04:00:19



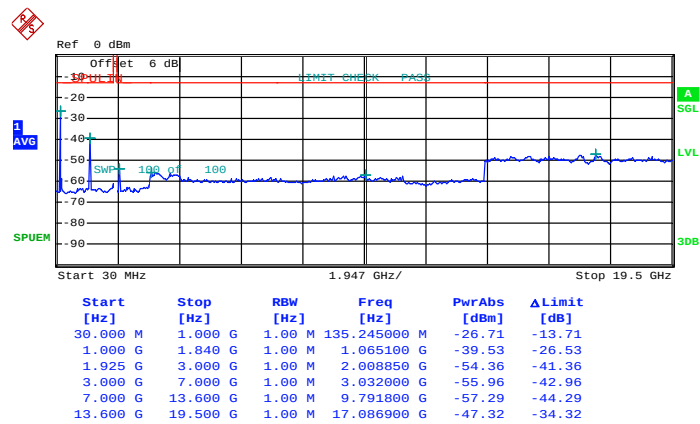
Band :	LTE Band 25	Channel :	CH26365 (Middle)
Band Width :	20MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 18.JUL.2014 03:54:38

16QAM (RB Size 1, RB Offset 0)

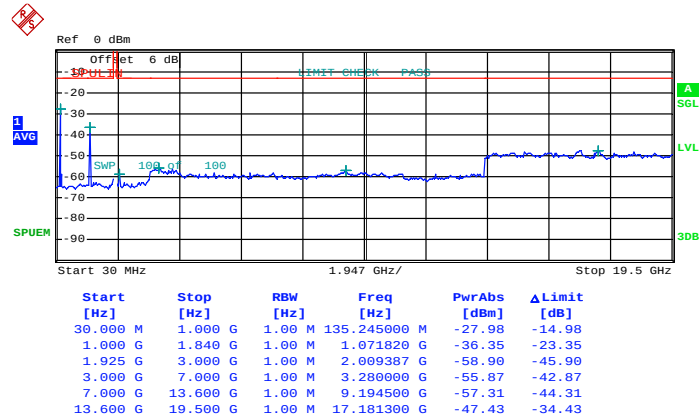


Date: 18.JUL.2014 03:52:06



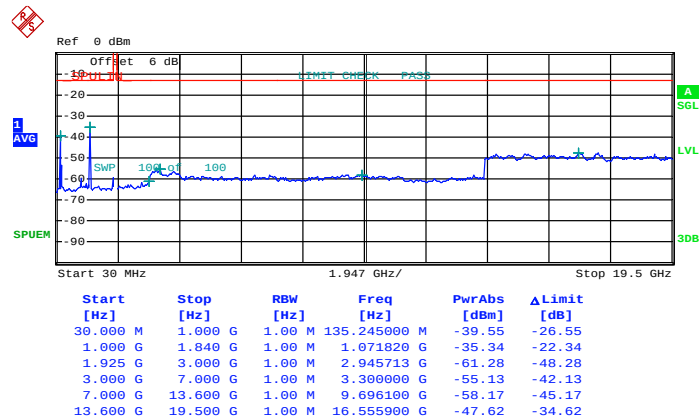
Band :	LTE Band 25	Channel :	CH26590 (High)
Band Width :	20MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 18.JUL.2014 03:39:46

16QAM (RB Size 1, RB Offset 0)

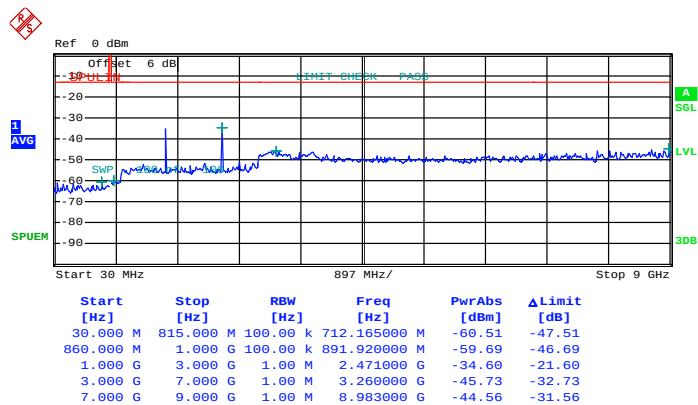


Date: 18.JUL.2014 03:42:22



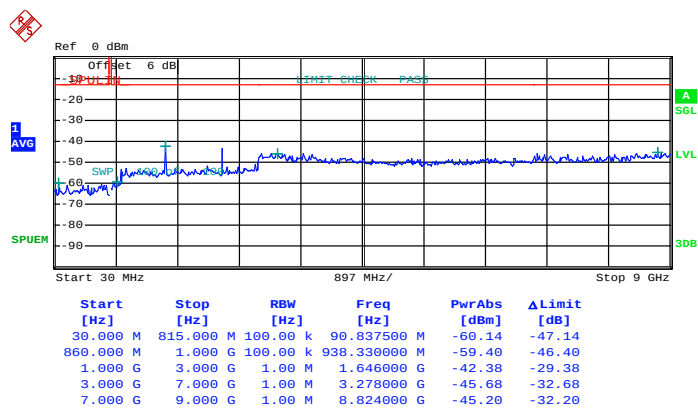
Band :	LTE Band 26	Channel :	CH26797 (Low)
Band Width :	1.4MHz		

QPSK (RB Size 1, RB Offset 5)



Date: 18.JUL.2014 05:57:26

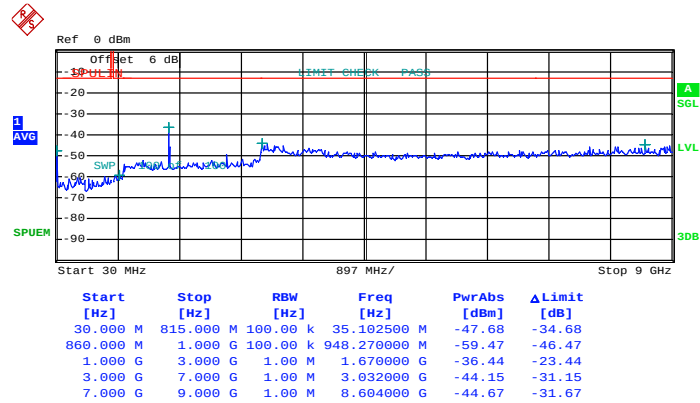
16QAM (RB Size 1, RB Offset 5)



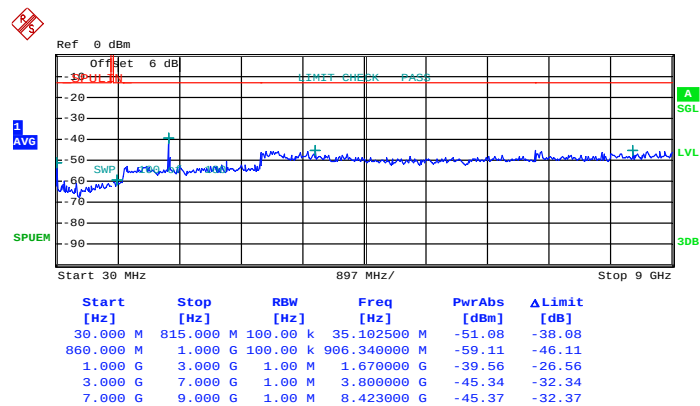
Date: 18.JUL.2014 05:55:21



Band :	LTE Band 26	Channel :	CH26915 (Middle)
Band Width :	1.4MHz		

QPSK (RB Size 1, RB Offset 2)

Date: 18.JUL.2014 05:48:38

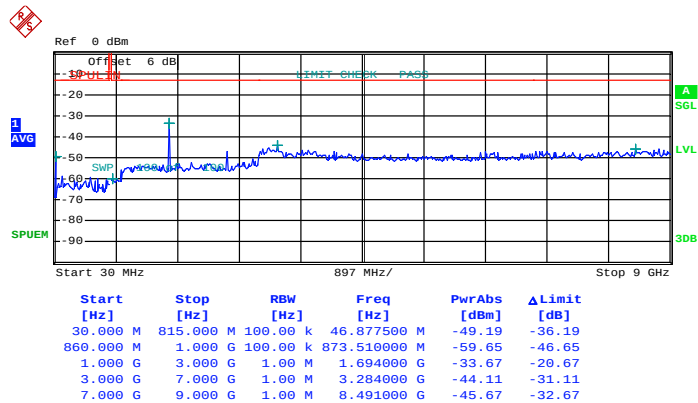
16QAM (RB Size 1, RB Offset 2)

Date: 18.JUL.2014 05:46:42



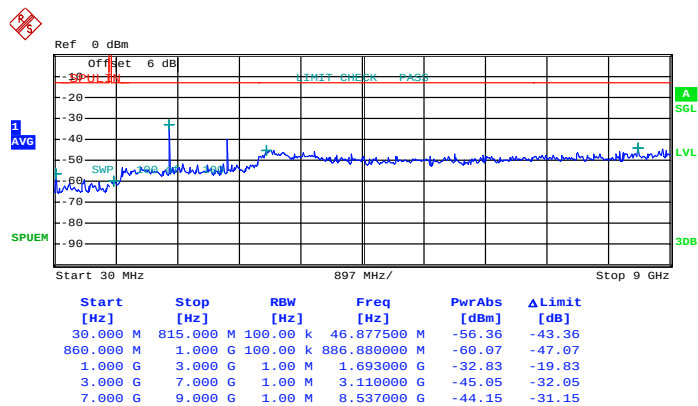
Band :	LTE Band 26	Channel :	CH27033 (High)
Band Width :	1.4MHz		

QPSK (RB Size 1, RB Offset 0)



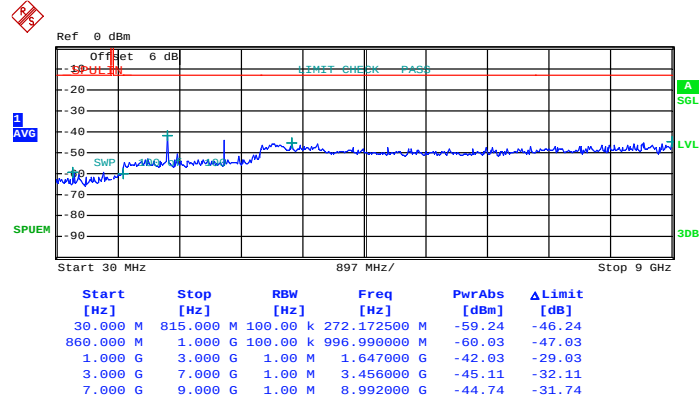
Date: 18.JUL.2014 05:50:50

16QAM (RB Size 1, RB Offset 0)

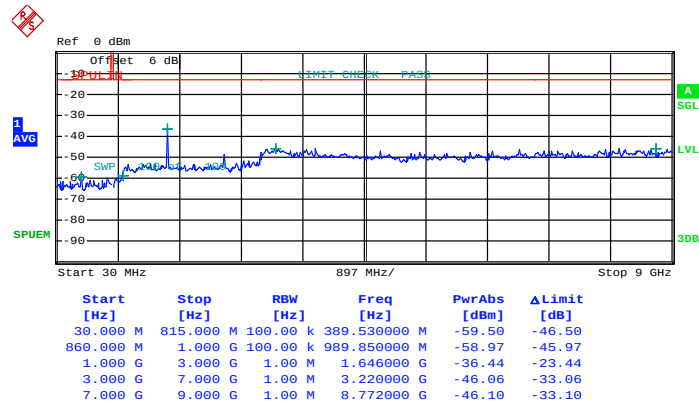


Date: 18.JUL.2014 05:52:47

Band :	LTE Band 26	Channel :	CH26805 (Low)
Band Width :	3MHz		

QPSK (RB Size 1, RB Offset 7)


Date: 18.JUL.2014 05:59:49

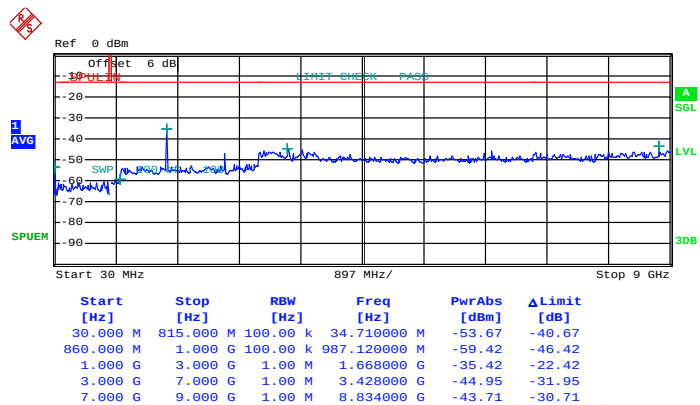
16QAM (RB Size 1, RB Offset 0)


Date: 18.JUL.2014 06:03:15



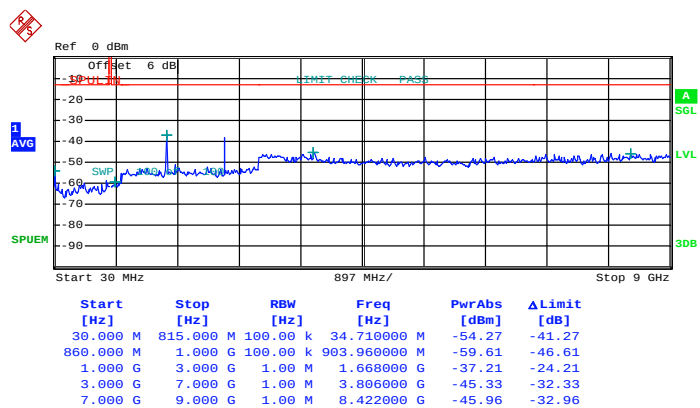
Band :	LTE Band 26	Channel :	CH26915 (Middle)
Band Width :	3MHz		

QPSK (RB Size 1, RB Offset 14)



Date: 18.JUL.2014 06:16:00

16QAM (RB Size 1, RB Offset 14)

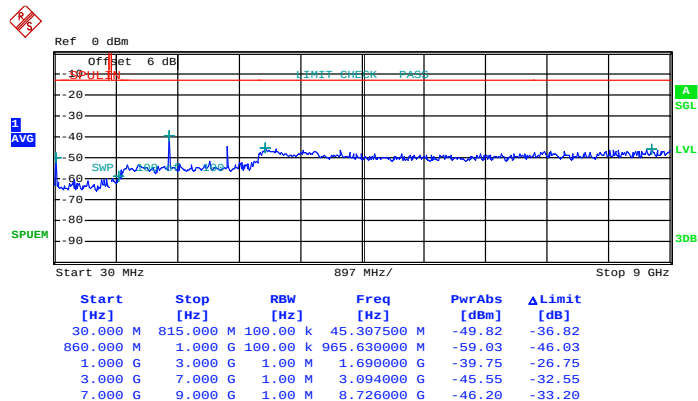


Date: 18.JUL.2014 06:18:49



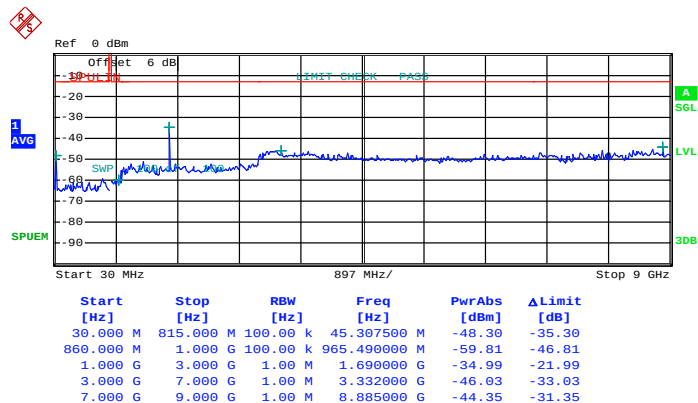
Band :	LTE Band 26	Channel :	CH27025 (High)
Band Width :	3MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 18.JUL.2014 06:13:41

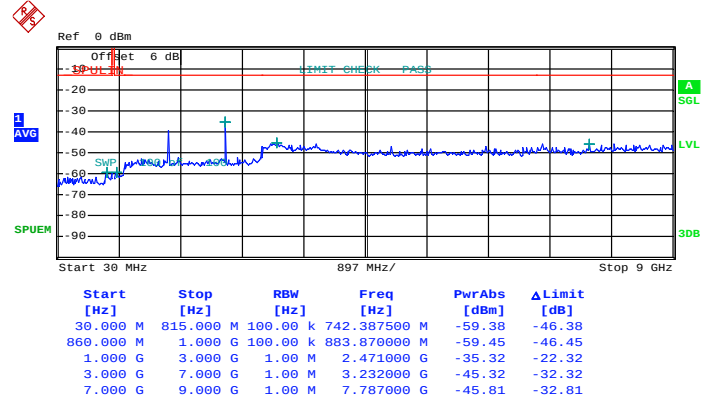
16QAM (RB Size 1, RB Offset 0)



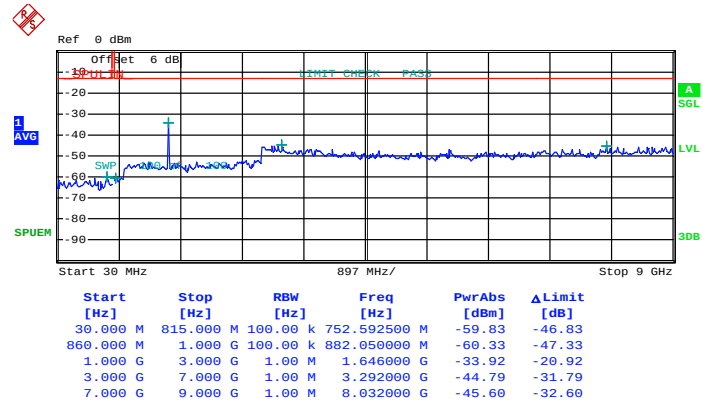
Date: 18.JUL.2014 06:05:59



Band :	LTE Band 26	Channel :	CH26815 (Low)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 12)

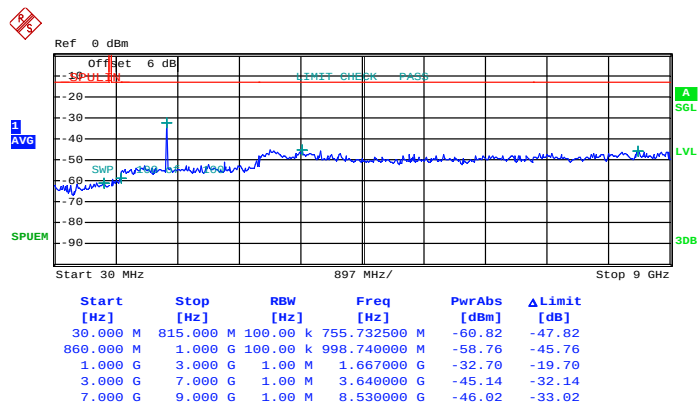
Date: 18.JUL.2014 06:26:19

16QAM (RB Size 1, RB Offset 12)

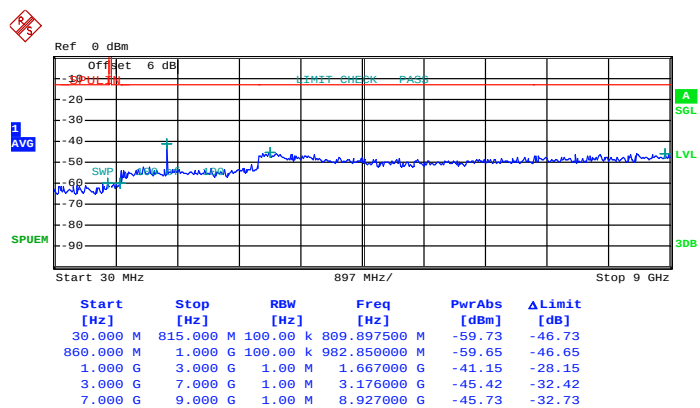
Date: 18.JUL.2014 06:28:17



Band :	LTE Band 26	Channel :	CH26915 (Middle)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 24)

Date: 18.JUL.2014 06:24:05

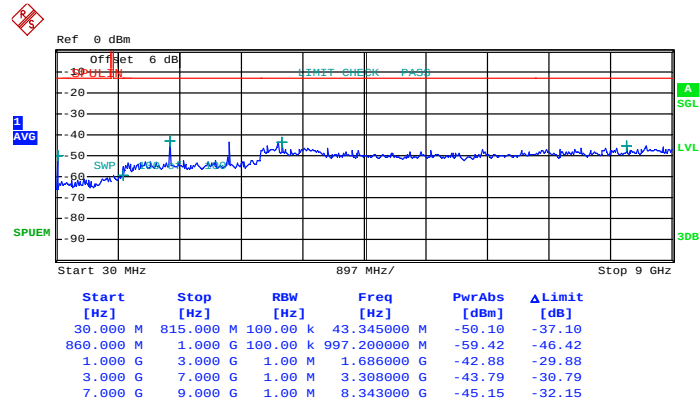
16QAM (RB Size 1, RB Offset 24)

Date: 18.JUL.2014 06:22:07



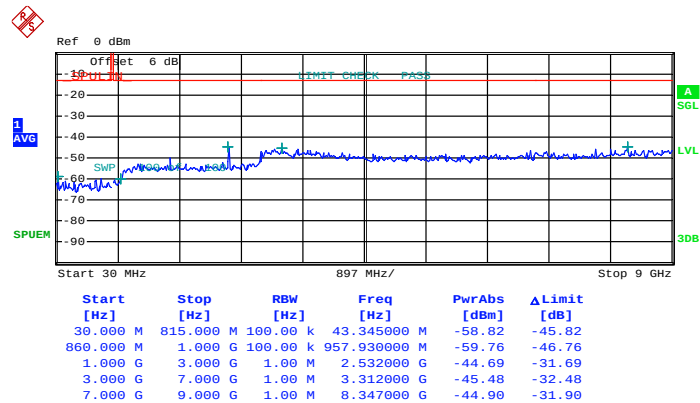
Band :	LTE Band 26	Channel :	CH27015 (High)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 18.JUL.2014 06:32:43

16QAM (RB Size 1, RB Offset 0)

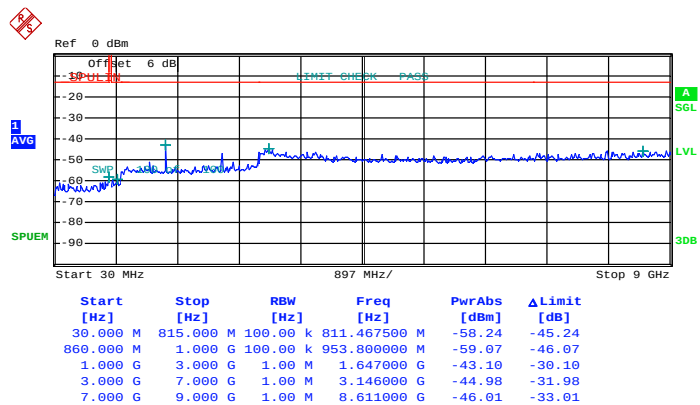


Date: 18.JUL.2014 06:30:34



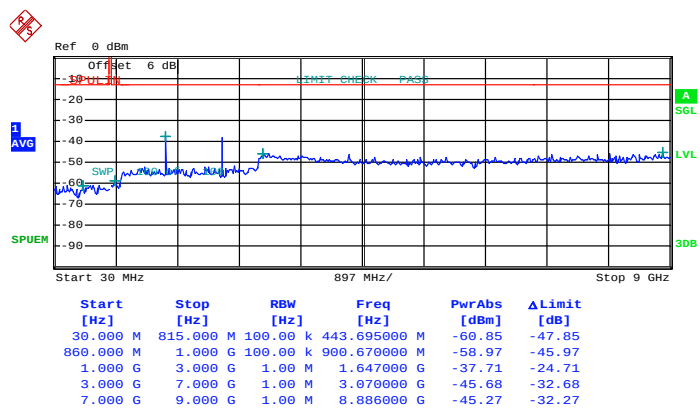
Band :	LTE Band 26	Channel :	CH26840 (Low)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 18.JUL.2014 06:41:19

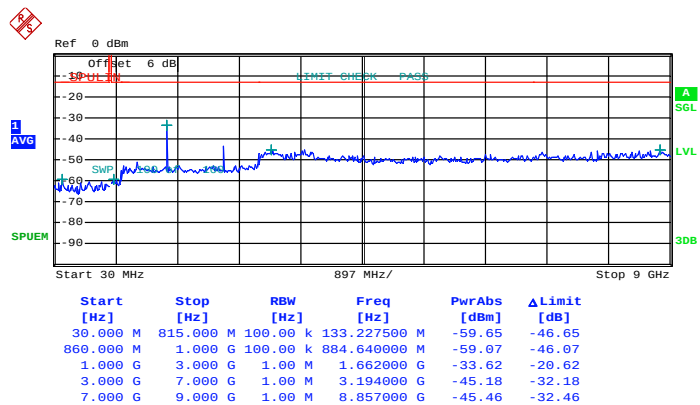
16QAM (RB Size 1, RB Offset 0)



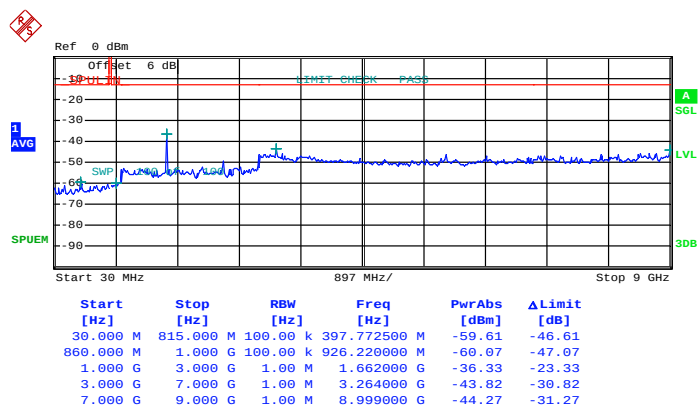
Date: 18.JUL.2014 06:39:23



Band :	LTE Band 26	Channel :	CH26915 (Middle)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 49)

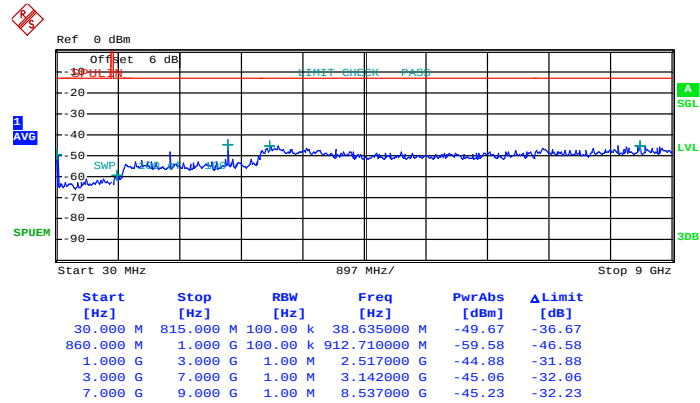
Date: 18.JUL.2014 06:43:35

16QAM (RB Size 1, RB Offset 49)

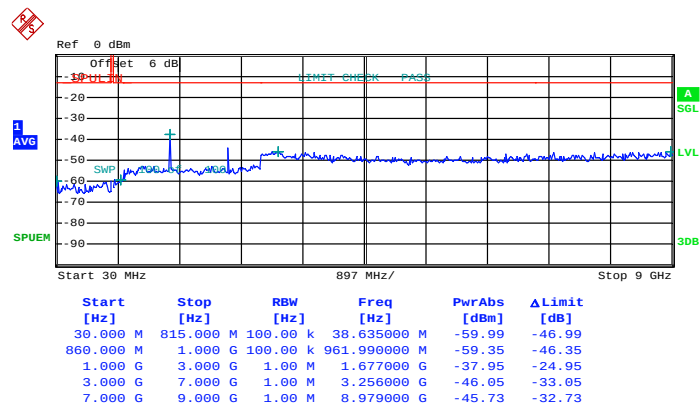
Date: 18.JUL.2014 06:45:37



Band :	LTE Band 26	Channel :	CH26990 (High)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 0)

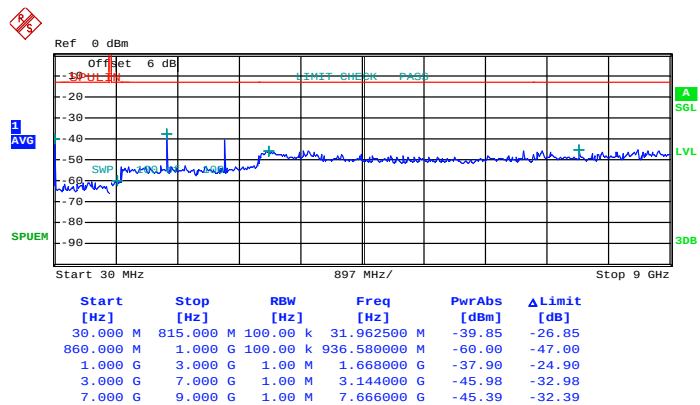
Date: 18.JUL.2014 06:35:09

16QAM (RB Size 1, RB Offset 0)

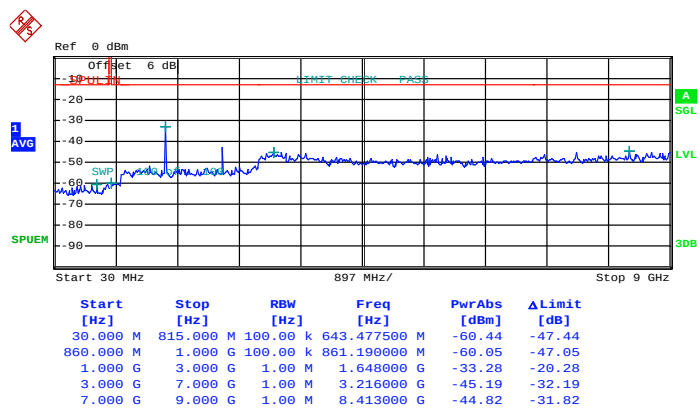
Date: 18.JUL.2014 06:37:07



Band :	LTE Band 26	Channel :	CH26865 (Low)
Band Width :	15MHz		

QPSK (RB Size 1, RB Offset 0)

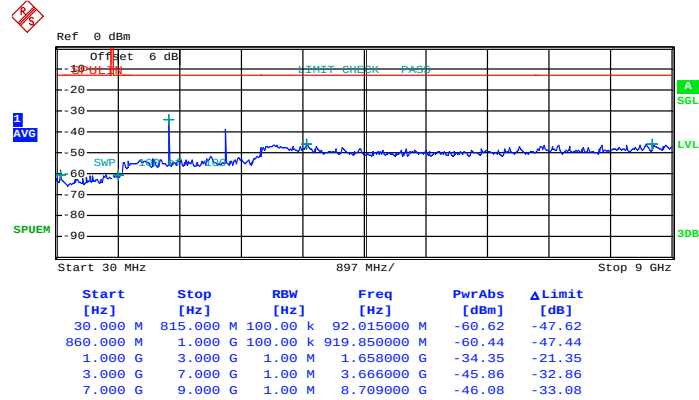
Date: 18.JUL.2014 07:00:20

16QAM (RB Size 1, RB Offset 37)

Date: 18.JUL.2014 06:55:44

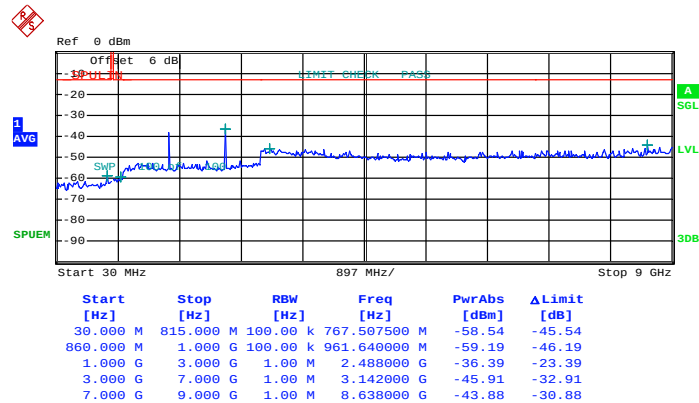
Band :	LTE Band 26	Channel :	CH26915 (Middle)
Band Width :	15MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 18.JUL.2014 06:50:46

16QAM (RB Size 1, RB Offset 0)

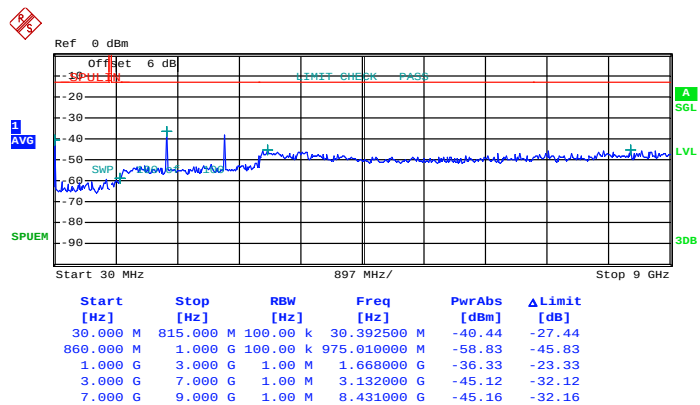


Date: 18.JUL.2014 06:48:50



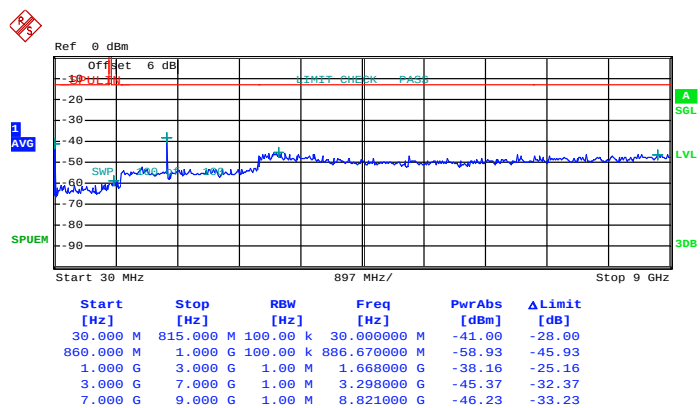
Band :	LTE Band 26	Channel :	CH26965 (High)
Band Width :	15MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 18.JUL.2014 07:03:51

16QAM (RB Size 1, RB Offset 0)

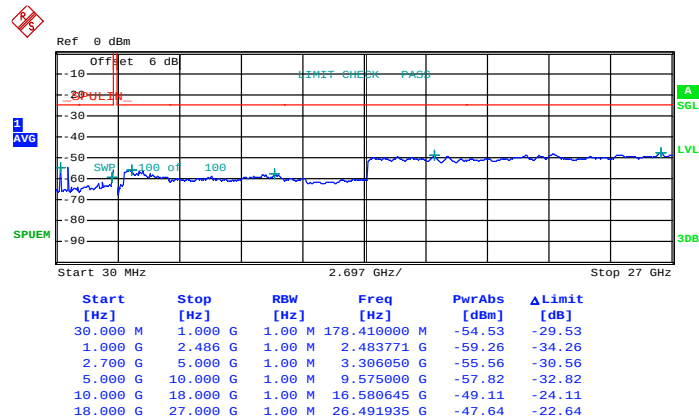


Date: 18.JUL.2014 07:05:54



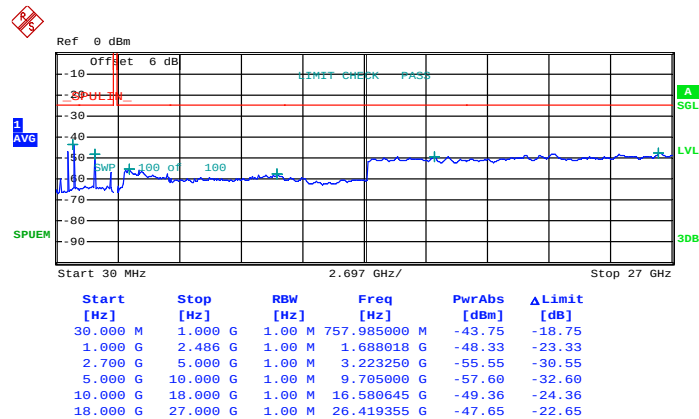
Band :	LTE Band 41	Channel :	CH39675 (Low)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 24)



Date: 26.AUG.2014 19:56:13

16QAM (RB Size 1, RB Offset 24)

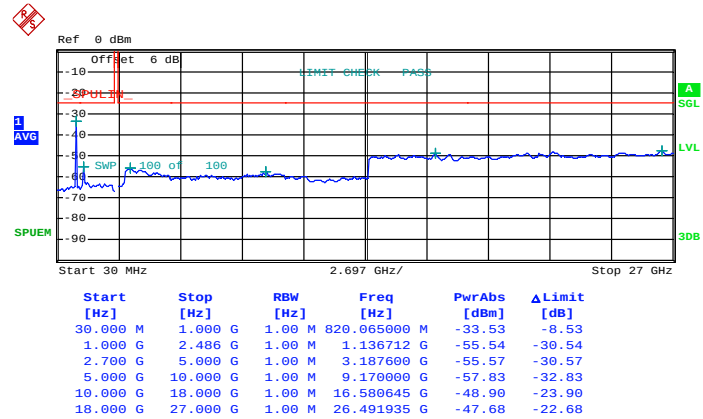


Date: 26.AUG.2014 20:00:17



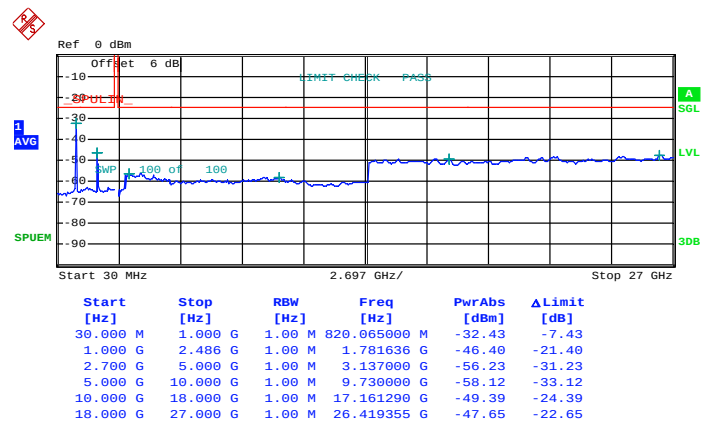
Band :	LTE Band 41	Channel :	CH40620 (Middle)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 12)



Date: 26.AUG.2014 19:40:03

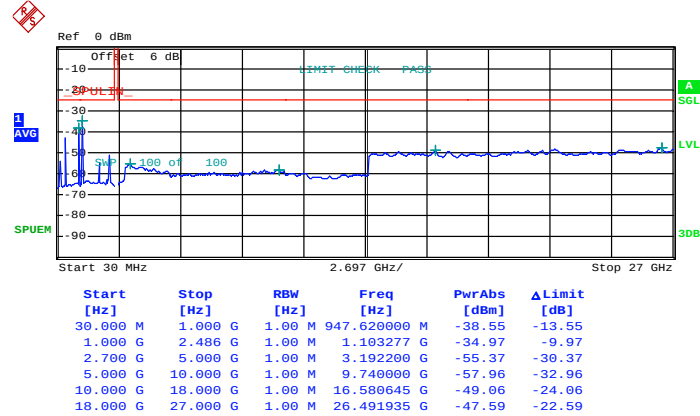
16QAM (RB Size 1, RB Offset 12)



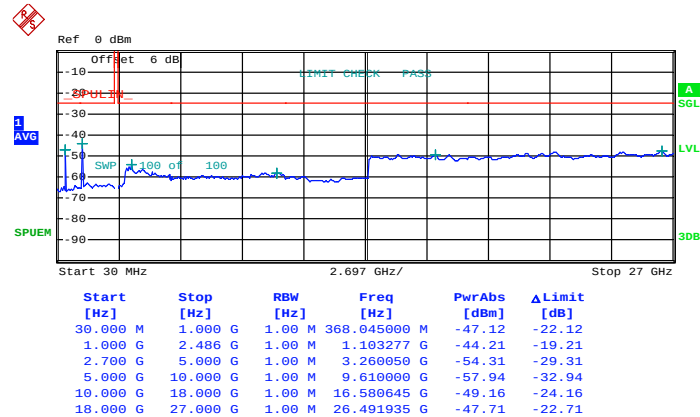
Date: 26.AUG.2014 19:43:37



Band :	LTE Band 41	Channel :	CH41565 (High)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 12)

Date: 26.AUG.2014 19:52:18

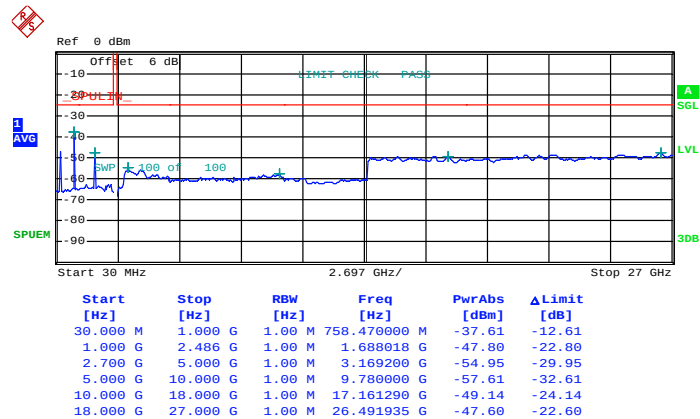
16QAM (RB Size 1, RB Offset 12)

Date: 26.AUG.2014 19:48:26



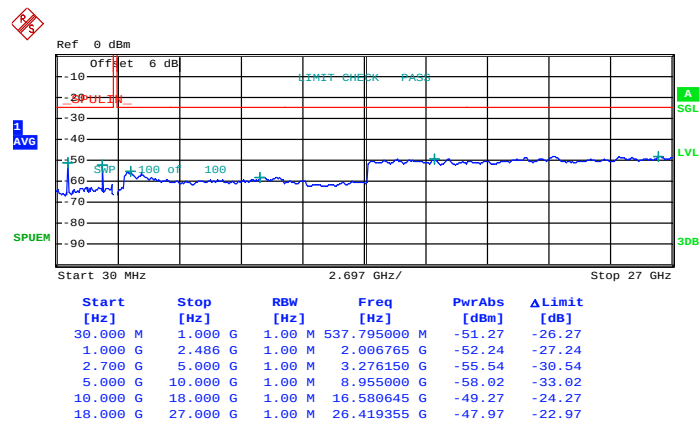
Band :	LTE Band 41	Channel :	CH39700 (Low)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 24)



Date: 26.AUG.2014 19:13:16

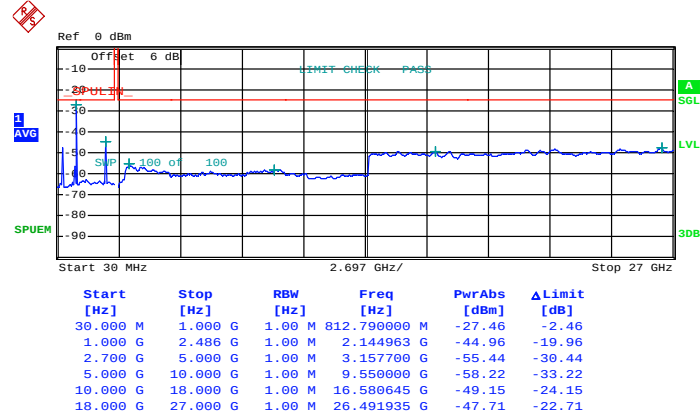
16QAM (RB Size 1, RB Offset 24)



Date: 26.AUG.2014 19:27:18

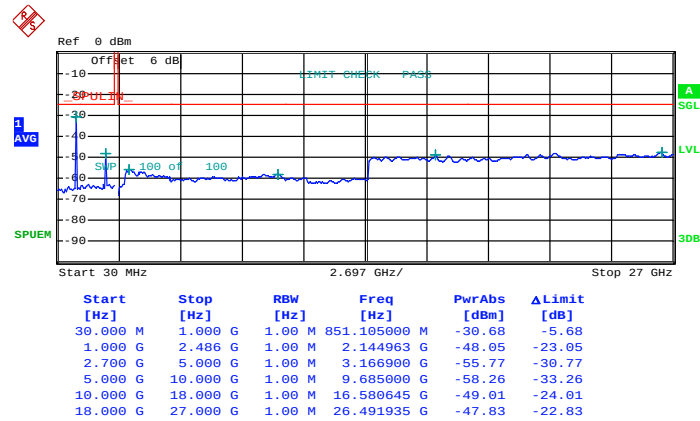
Band :	LTE Band 41	Channel :	CH40620 (Middle)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 24)



Date: 26.AUG.2014 19:08:40

16QAM (RB Size 1, RB Offset 24)

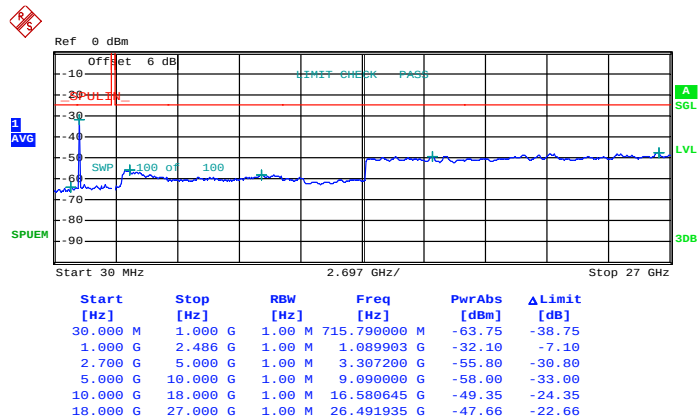


Date: 26.AUG.2014 19:04:06



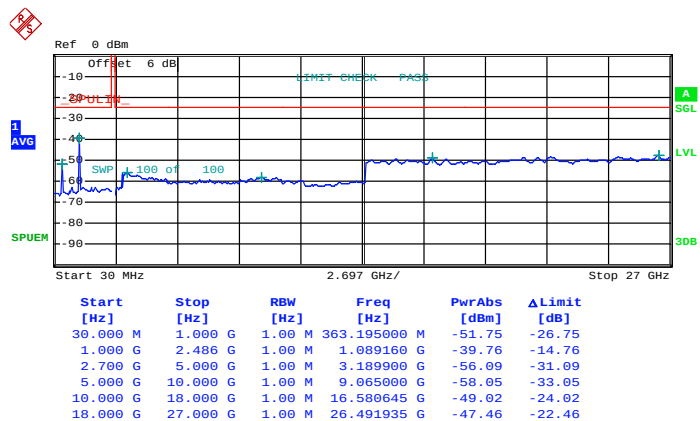
Band :	LTE Band 41	Channel :	CH41540 (High)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 24)



Date: 26.AUG.2014 19:35:20

16QAM (RB Size 1, RB Offset 24)

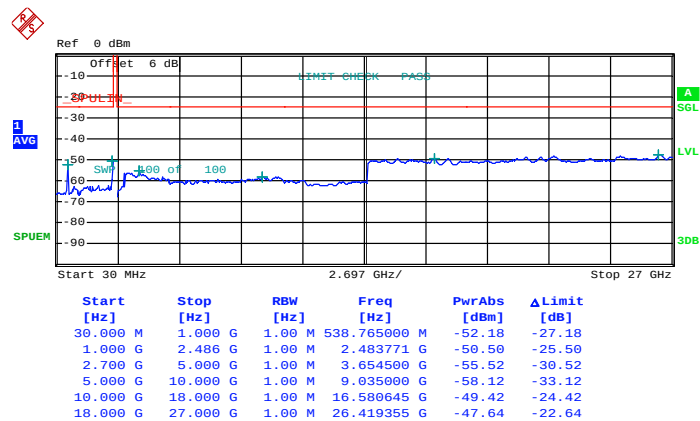


Date: 26.AUG.2014 19:31:22



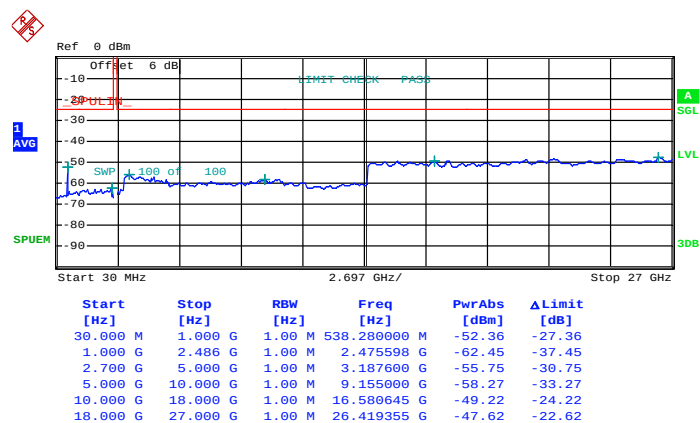
Band :	LTE Band 41	Channel :	CH39725 (Low)
Band Width :	15MHz		

QPSK (RB Size 1, RB Offset 37)



Date: 26.AUG.2014 18:56:15

16QAM (RB Size 1, RB Offset 37)

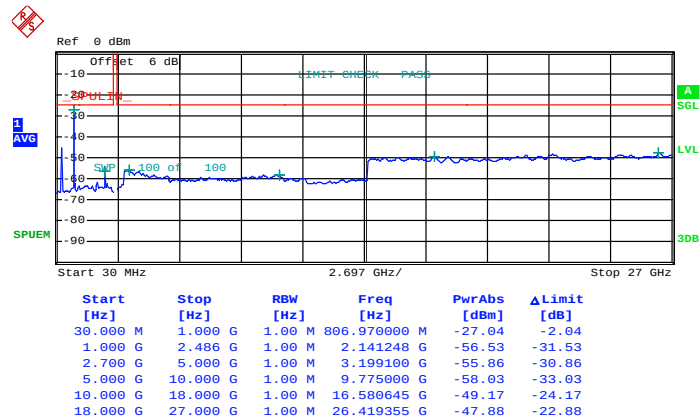


Date: 26.AUG.2014 19:00:14



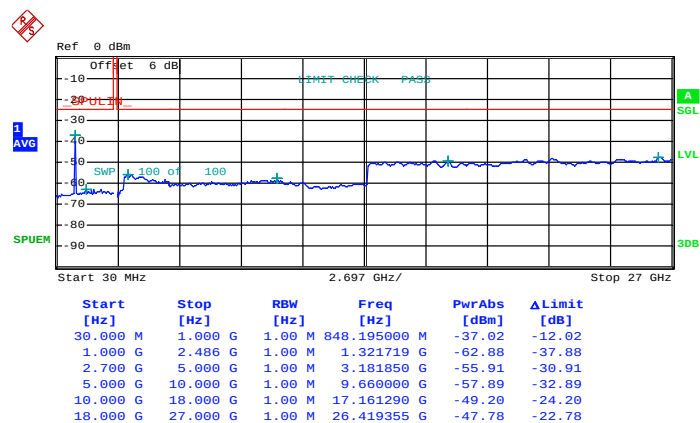
Band :	LTE Band 41	Channel :	CH40620 (Middle)
Band Width :	15MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 26.AUG.2014 18:28:50

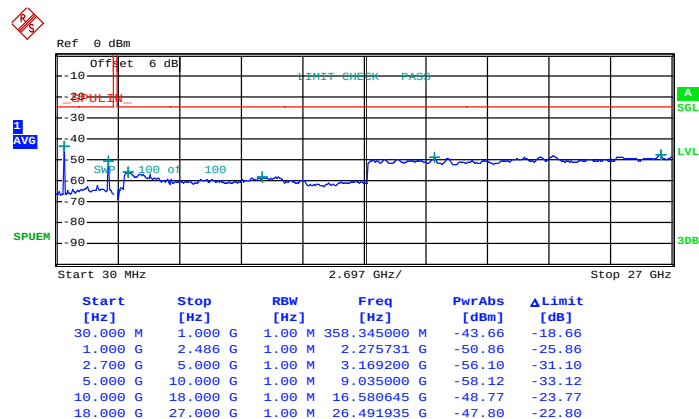
16QAM (RB Size 1, RB Offset 0)



Date: 26.AUG.2014 18:32:35

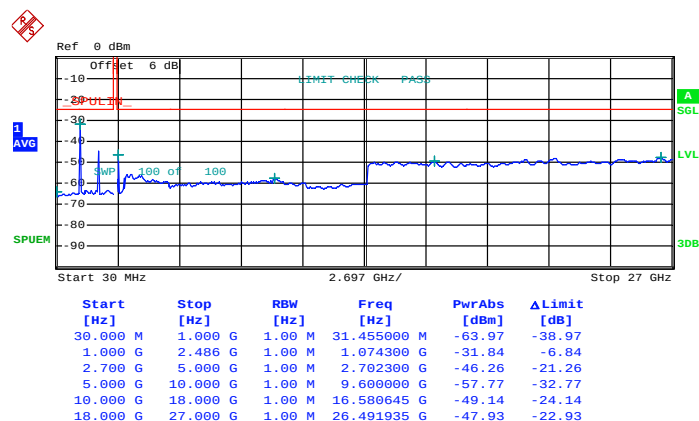
Band :	LTE Band 41	Channel :	CH41515 (High)
Band Width :	15MHz		

QPSK (RB Size 1, RB Offset 74)



Date: 26.AUG.2014 18:39:56

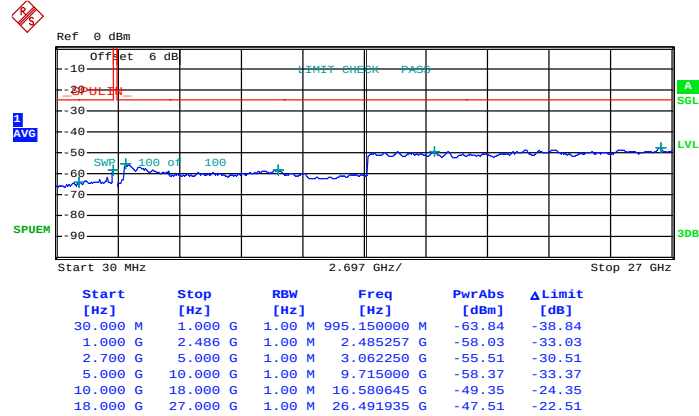
16QAM (RB Size 1, RB Offset 74)



Date: 26.AUG.2014 18:36:23

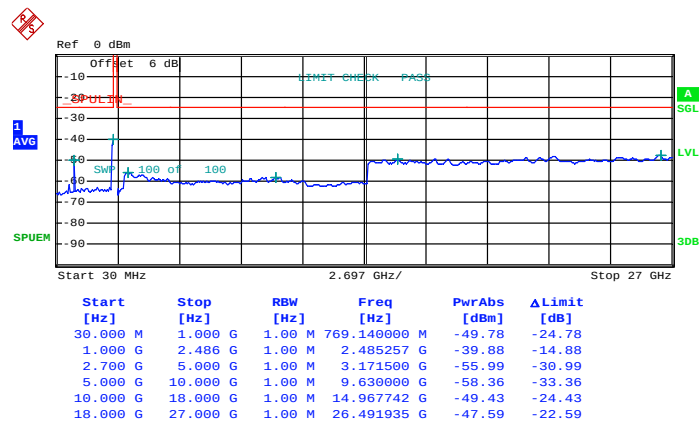
Band :	LTE Band 41	Channel :	CH39750 (Low)
Band Width :	20MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 26.AUG.2014 18:08:50

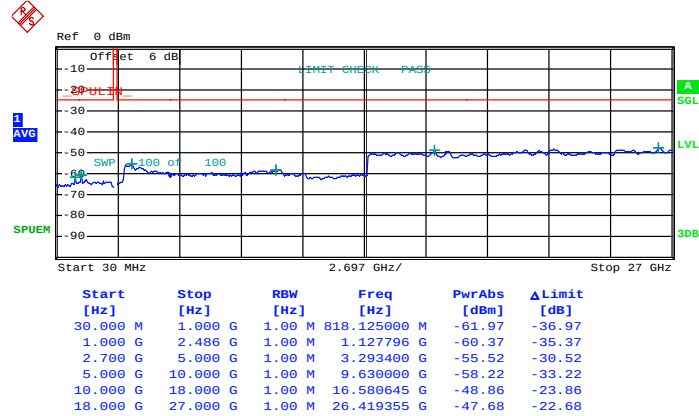
16QAM (RB Size 1, RB Offset 0)



Date: 26.AUG.2014 18:04:47

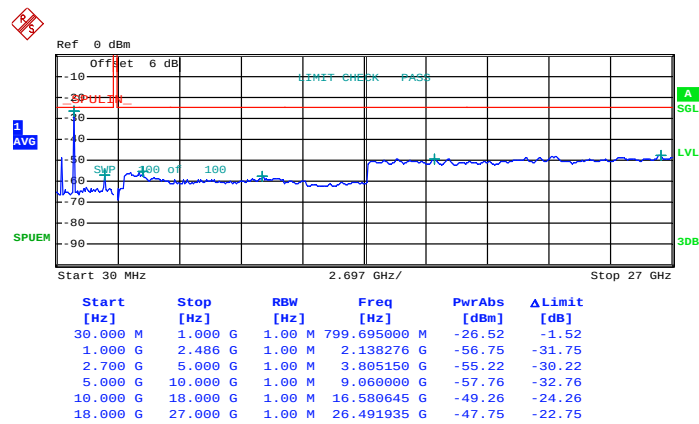
Band :	LTE Band 41	Channel :	CH40620 (Middle)
Band Width :	20MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 26.AUG.2014 18:12:37

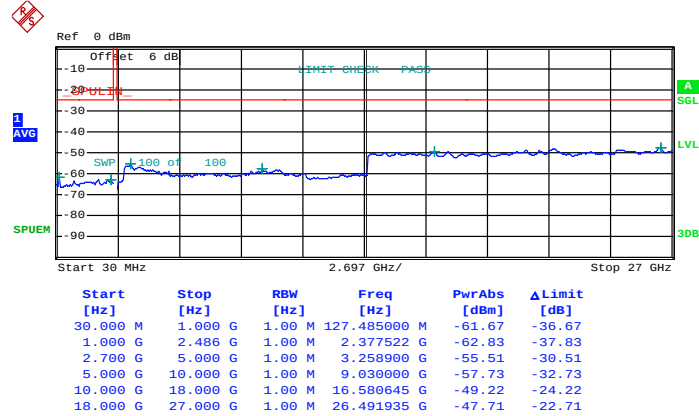
16QAM (RB Size 1, RB Offset 0)



Date: 26.AUG.2014 18:17:04

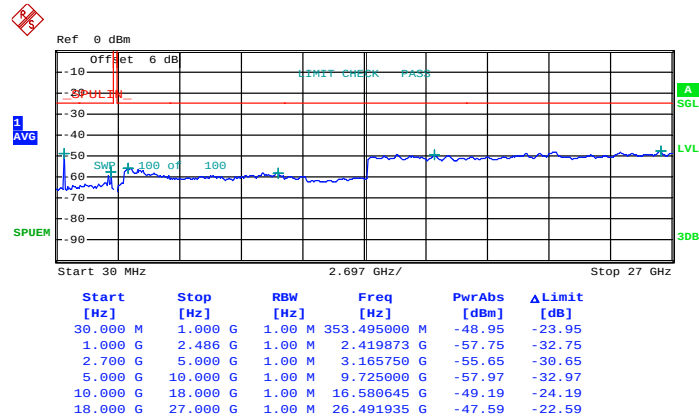
Band :	LTE Band 41	Channel :	CH41490 (High)
Band Width :	20MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 26.AUG.2014 18:24:52

16QAM (RB Size 1, RB Offset 0)



Date: 26.AUG.2014 18:20:56



3.7 Radiated Spurious Emission Measurement

3.7.1 Description of Radiated Spurious Emission

For Band 25/26

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.

For Band 41

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 $55 + 10 \log (P)$ dB.

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

3.7.2 Measuring Instruments

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

3.7.3 Test Procedures

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

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

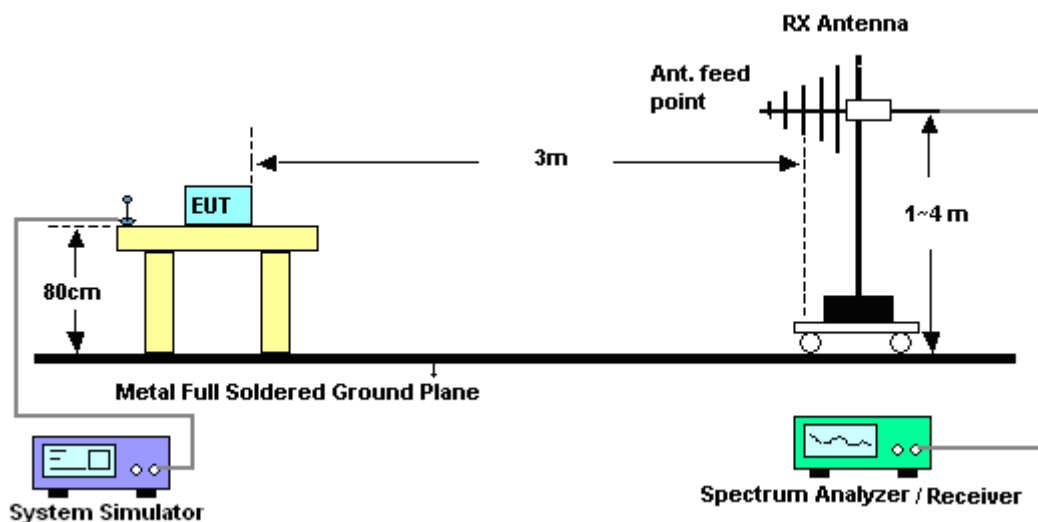
For Band 41

The limit line is derived from $55 + 10\log(P)$ dB below the transmitter power P(Watts)
 $= P(W) - [55 + 10\log(P)] \text{ (dB)}$
 $= [30 + 10\log(P)] \text{ (dBm)} - [55 + 10\log(P)] \text{ (dB)}$
 $= -25\text{dBm}.$

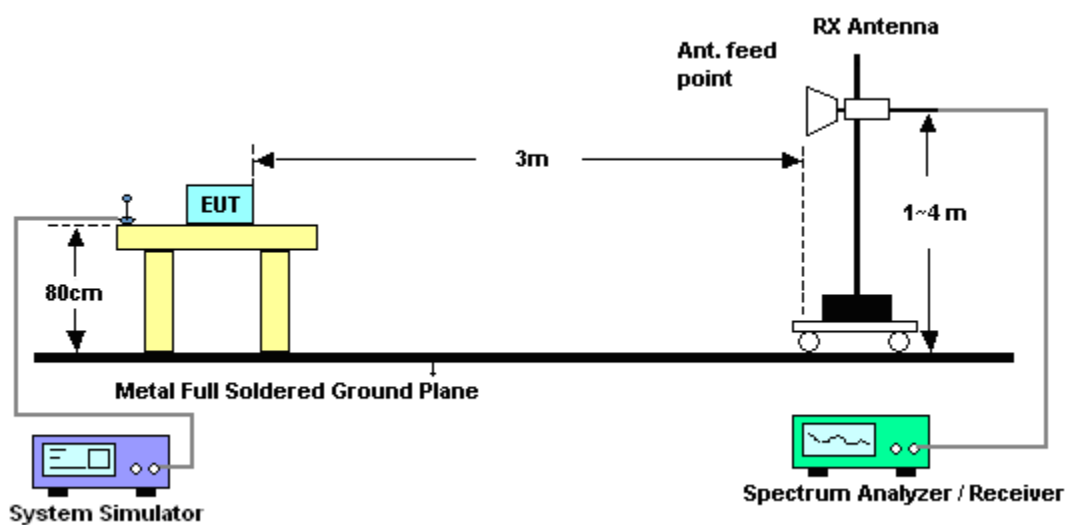
11. EIRP (dBm) = S.G. Power – Tx Cable Loss + Tx Antenna Gain
12. ERP (dBm) = EIRP - 2.15

3.7.4 Test Setup

For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



**3.7.5 Test Result of Field Strength of Spurious Radiated**

Band :	LTE Band 25				Temperature :	22~23°C			
Test Mode :	1.4MHz QPSK RB Size 1 Offset 0				Relative Humidity :	42~43%			
Test Engineer :	Star Wei				Polarization :	Horizontal			
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
Frequency	EIRP	Limit	Over	SPA	S.G.	TX Cable	TX Antenna	Polarization	Result
(MHz)	(dBm)	(dBm)	Limit (dB)	Reading (dBm)	Power (dBm)	loss (dB)	Gain (dBi)	(H/V)	
3759	-45.05	-13	-32.05	-53.90	-51.43	0.78	7.16	H	Pass
5640	-53.33	-13	-40.33	-63.39	-61.87	1.04	9.58	H	Pass
7518	-41.17	-13	-28.17	-56.96	-51.28	1.35	11.46	H	Pass
9396	-48.65	-13	-35.65	-61.31	-59.71	1.75	12.81	H	Pass

Band :	LTE Band 25	Temperature :	22~23°C						
Test Mode :	1.4MHz QPSK RB Size 1 Offset 0	Relative Humidity :	42~43%						
Test Engineer :	Star Wei	Polarization :	Vertical						
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
Frequency	EIRP	Limit	Over	SPA	S.G.	TX Cable	TX Antenna	Polarization	Result
(MHz)	(dBm)	(dBm)	Limit	Reading	Power	loss	Gain	(H/V)	
(dB)			(dB)	(dBm)	(dBm)	(dB)	(dBi)		
3759	-46.13	-13	-33.13	-56.45	-52.51	0.78	7.16	V	Pass
5640	-47.93	-13	-34.93	-61.69	-56.47	1.04	9.58	V	Pass
7518	-41.61	-13	-28.61	-58	-51.72	1.35	11.46	V	Pass
9396	-49.65	-13	-36.65	-62.18	-60.71	1.75	12.81	V	Pass



Band :	LTE Band 25					Temperature :	22~23°C		
Test Mode :	3MHz QPSK RB Size 1 Offset 0					Relative Humidity :	42~43%		
Test Engineer :	Star Wei					Polarization :	Horizontal		
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
Frequency	EIRP	Limit	Over	SPA	S.G.	TX Cable	TX Antenna	Polarization	Result
(MHz)	(dBm)	(dBm)	Limit (dB)	Reading (dBm)	Power (dBm)	loss (dB)	Gain (dBi)	(H/V)	
3756	-48.05	-13	-35.05	-56.07	-54.43	0.78	7.16	H	Pass
5637	-53.72	-13	-40.72	-63.78	-62.26	1.04	9.58	H	Pass
7515	-44.28	-13	-31.28	-58.75	-54.39	1.35	11.46	H	Pass
9387	-51.57	-13	-38.57	-64.00	-62.63	1.75	12.81	H	Pass

Band :	LTE Band 25	Temperature :	22~23℃						
Test Mode :	3MHz QPSK RB Size 1 Offset 0	Relative Humidity :	42~43%						
Test Engineer :	Star Wei	Polarization :	Vertical						
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
Frequency	EIRP	Limit	Over	SPA	S.G.	TX Cable	TX Antenna	Polarization	Result
(MHz)	(dBm)	(dBm)	Limit	Reading	Power	loss	Gain	(H/V)	
3756	-47.36	-13	-34.36	-57.29	-53.74	0.78	7.16	V	Pass
5637	-50.80	-13	-37.80	-63.45	-59.34	1.04	9.58	V	Pass
7515	-43.02	-13	-30.02	-58.59	-53.13	1.35	11.46	V	Pass
9387	-50.61	-13	-37.61	-63.14	-61.67	1.75	12.81	V	Pass



Band :	LTE Band 25					Temperature :	22~23°C		
Test Mode :	5MHz QPSK RB Size 1 Offset 0					Relative Humidity :	42~43%		
Test Engineer :	Star Wei					Polarization :	Horizontal		
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
Frequency	EIRP	Limit	Over	SPA	S.G.	TX Cable	TX Antenna	Polarization	Result
(MHz)	(dBm)	(dBm)	Limit (dB)	Reading (dBm)	Power (dBm)	loss (dB)	Gain (dBi)	(H/V)	
3756	-46.71	-13	-33.71	-55.12	-53.09	0.78	7.16	H	Pass
5637	-54.12	-13	-41.12	-64.18	-62.66	1.04	9.58	H	Pass
7512	-45.67	-13	-32.67	-59.70	-55.78	1.35	11.46	H	Pass
9387	-51.76	-13	-38.76	-64.19	-62.82	1.75	12.81	H	Pass

Band :	LTE Band 25	Temperature :	22~23°C						
Test Mode :	5MHz QPSK RB Size 1 Offset 0	Relative Humidity :	42~43%						
Test Engineer :	Star Wei	Polarization :	Vertical						
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
Frequency	EIRP	Limit	Over	SPA	S.G.	TX Cable	TX Antenna	Polarization	Result
(MHz)	(dBm)	(dBm)	Limit	Reading	Power	loss	Gain	(H/V)	
(dB)	(dBm)	(dBm)	(dB)	(dBm)	(dBm)	(dB)	(dBi)		
3756	-47.95	-13	-34.95	-57.57	-54.33	0.78	7.16	V	Pass
5634	-51.65	-13	-38.65	-64.3	-60.19	1.04	9.58	V	Pass
7512	-43.12	-13	-30.12	-58.69	-53.23	1.35	11.46	V	Pass
9387	-52.23	-13	-39.23	-64.76	-63.29	1.75	12.81	V	Pass



Band :	LTE Band 25						Temperature :	22~23°C	
Test Mode :	10MHz QPSK RB Size 1 Offset 0						Relative Humidity :	42~43%	
Test Engineer :	Star Wei						Polarization :	Horizontal	
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
Frequency	EIRP	Limit	Over	SPA	S.G.	TX Cable	TX Antenna	Polarization	Result
(MHz)	(dBm)	(dBm)	Limit	Reading	Power	loss	Gain	(H/V)	
			(dB)	(dBm)	(dBm)	(dB)	(dBi)		
3750	-47.08	-13	-34.08	-55.38	-53.46	0.78	7.16	H	Pass
5628	-54.96	-13	-41.96	-65.02	-63.50	1.04	9.58	H	Pass
7503	-43.92	-13	-30.92	-58.54	-54.03	1.35	11.46	H	Pass
9378	-49.87	-13	-36.87	-62.30	-60.93	1.75	12.81	H	Pass

Band :	LTE Band 25						Temperature :	22~23℃	
Test Mode :	10MHz QPSK RB Size 1 Offset 0						Relative Humidity :	42~43%	
Test Engineer :	Star Wei						Polarization :	Vertical	
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
Frequency	EIRP	Limit	Over	SPA	S.G.	TX Cable	TX Antenna	Polarization	Result
(MHz)	(dBm)	(dBm)	Limit (dB)	Reading (dBm)	Power (dBm)	loss (dB)	Gain (dBi)	(H/V)	
3750	-44.70	-13	-31.70	-55.39	-51.08	0.78	7.16	V	Pass
5628	-50.64	-13	-37.64	-63.29	-59.18	1.04	9.58	V	Pass
7503	-44.71	-13	-31.71	-59.93	-54.82	1.35	11.46	V	Pass
9378	-52.47	-13	-39.47	-65	-63.53	1.75	12.81	V	Pass



Band :	LTE Band 25					Temperature :	22~23°C		
Test Mode :	15MHz QPSK RB Size 1 Offset 0					Relative Humidity :	42~43%		
Test Engineer :	Star Wei					Polarization :	Horizontal		
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
Frequency	EIRP	Limit	Over	SPA	S.G.	TX Cable	TX Antenna	Polarization	Result
(MHz)	(dBm)	(dBm)	Limit (dB)	Reading (dBm)	Power (dBm)	loss (dB)	Gain (dBi)	(H/V)	
3747	-48.46	-13	-35.46	-56.40	-54.84	0.78	7.16	H	Pass
5616	-56.74	-13	-43.74	-66.80	-65.28	1.04	9.58	H	Pass
7494	-47.61	-13	-34.61	-60.61	-57.72	1.35	11.46	H	Pass
9360	-51.84	-13	-38.84	-64.27	-62.90	1.75	12.81	H	Pass

Band :	LTE Band 25	Temperature :	22~23°C						
Test Mode :	15MHz QPSK RB Size 1 Offset 0	Relative Humidity :	42~43%						
Test Engineer :	Star Wei	Polarization :	Vertical						
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
Frequency	EIRP	Limit	Over	SPA	S.G.	TX Cable	TX Antenna	Polarization	Result
(MHz)	(dBm)	(dBm)	Limit (dB)	Reading (dBm)	Power (dBm)	loss (dB)	Gain (dBi)	(H/V)	
3747	-46.07	-13	-33.07	-56.41	-52.45	0.78	7.16	V	Pass
5622	-47.07	-13	-34.07	-61.12	-55.61	1.04	9.58	V	Pass
7494	-47.02	-13	-34.02	-61.11	-57.13	1.35	11.46	V	Pass
9360	-53.15	-13	-40.15	-65.68	-64.21	1.75	12.81	V	Pass



Band :	LTE Band 25				Temperature :	22~23°C			
Test Mode :	20MHz QPSK RB Size 1 Offset 0				Relative Humidity :	42~43%			
Test Engineer :	Star Wei				Polarization :	Horizontal			
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
Frequency	EIRP	Limit	Over	SPA	S.G.	TX Cable	TX Antenna	Polarization	Result
(MHz)	(dBm)	(dBm)	Limit (dB)	Reading (dBm)	Power (dBm)	loss (dB)	Gain (dBi)	(H/V)	
3741	-47.35	-13	-34.35	-55.57	-53.73	0.78	7.16	H	Pass
5610	-58.10	-13	-45.10	-68.16	-66.64	1.04	9.58	H	Pass
7485	-51.00	-13	-38.00	-62.54	-61.11	1.35	11.46	H	Pass
9351	-52.72	-13	-39.72	-65.15	-63.78	1.75	12.81	H	Pass

Band :	LTE Band 25	Temperature :	22~23°C						
Test Mode :	20MHz QPSK RB Size 1 Offset 0	Relative Humidity :	42~43%						
Test Engineer :	Star Wei	Polarization :	Vertical						
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
Frequency	EIRP	Limit	Over	SPA	S.G.	TX Cable	TX Antenna	Polarization	Result
(MHz)	(dBm)	(dBm)	Limit	Reading	Power	loss	Gain	(H/V)	
3741	-46.97	-13	-33.97	-57.1	-53.35	0.78	7.16	V	Pass
5616	-50.70	-13	-37.70	-63.35	-59.24	1.04	9.58	V	Pass
7485	-48.12	-13	-35.12	-62.21	-58.23	1.35	11.46	V	Pass
9351	-52.73	-13	-39.73	-65.26	-63.79	1.75	12.81	V	Pass



Band :	LTE Band 26	Temperature :	23~24℃						
Test Mode :	1.4MHz QPSK RB Size 1 Offset 2	Relative Humidity :	43~44%						
Test Engineer :	Stone Gu	Polarization :	Horizontal						
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
Frequency	ERP	Limit	Over	SPA	S.G.	TX Cable	TX Antenna	Polarization	Result
(MHz)	(dBm)	(dBm)	Limit (dB)	Reading (dBm)	Power (dBm)	loss (dB)	Gain (dBi)	(H/V)	
1662	-50.56	-13	-37.56	-48.62	-51.21	0.57	3.37	H	Pass
2492	-68.19	-13	-55.19	-66.86	-70.42	0.78	5.16	H	Pass
3324	-66.97	-13	-53.97	-66.60	-70.61	0.87	6.66	H	Pass

Band :	LTE Band 26				Temperature :	22~23℃			
Test Mode :	1.4MHz QPSK RB Size 1 Offset 2				Relative Humidity :	42~43%			
Test Engineer :	Star Wei				Polarization :	Vertical			
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
Frequency	ERP	Limit	Over Limit	SPA	S.G.	TX Cable	TX Antenna	Polarization	Result
(MHz)	(dBm)	(dBm)	(dB)	Reading (dBm)	Power (dBm)	loss (dB)	Gain (dBi)	(H/V)	
1662	-56.31	-13	-43.31	-57.32	-56.96	0.57	3.37	V	Pass
2492	-63.13	-13	-50.13	-65.56	-65.36	0.78	5.16	V	Pass
3324	-64.66	-13	-51.66	-65.72	-68.30	0.87	6.66	V	Pass



Band :	LTE Band 26				Temperature :	22~23℃			
Test Mode :	3MHz QPSK RB Size 1 Offset 14				Relative Humidity :	42~43%			
Test Engineer :	Star Wei				Polarization :	Horizontal			
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
Frequency	ERP	Limit	Over	SPA	S.G.	TX Cable	TX Antenna	Polarization	Result
(MHz)	(dBm)	(dBm)	Limit (dB)	Reading (dBm)	Power (dBm)	loss (dB)	Gain (dBi)	(H/V)	
1660	-50.73	-13	-37.73	-48.78	-51.38	0.57	3.37	H	Pass
2487	-68.53	-13	-55.53	-67.20	-70.76	0.78	5.16	H	Pass
3316	-65.84	-13	-52.84	-65.47	-69.48	0.87	6.66	H	Pass

Band :	LTE Band 26	Temperature :	22~23°C						
Test Mode :	3MHz QPSK RB Size 1 Offset 14	Relative Humidity :	42~43%						
Test Engineer :	Star Wei	Polarization :	Vertical						
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
Frequency	ERP	Limit	Over	SPA	S.G.	TX Cable	TX Antenna	Polarization	Result
(MHz)	(dBm)	(dBm)	Limit (dB)	Reading (dBm)	Power (dBm)	loss (dB)	Gain (dBi)	(H/V)	
1660	-57.75	-13	-44.75	-58.19	-58.40	0.57	3.37	V	Pass
2490	-64.25	-13	-51.25	-66.68	-66.48	0.78	5.16	V	Pass
3320	-65.29	-13	-52.29	-66.35	-68.93	0.87	6.66	V	Pass



Band :	LTE Band 26					Temperature :	22~23℃		
Test Mode :	5MHz QPSK RB Size 1 Offset 24					Relative Humidity :	42~43%		
Test Engineer :	Star Wei					Polarization :	Horizontal		
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
Frequency	ERP	Limit	Over	SPA	S.G.	TX Cable	TX Antenna	Polarization	Result
(MHz)	(dBm)	(dBm)	Limit (dB)	Reading (dBm)	Power (dBm)	loss (dB)	Gain (dBi)	(H/V)	
1660	-52.09	-13	-39.09	-49.91	-52.74	0.57	3.37	H	Pass
2488	-68.41	-13	-55.41	-67.08	-70.64	0.78	5.16	H	Pass
3316	-65.53	-13	-52.53	-65.16	-69.17	0.87	6.66	H	Pass

Band :	LTE Band 26	Temperature :	22~23°C						
Test Mode :	5MHz QPSK RB Size 1 Offset 24	Relative Humidity :	42~43%						
Test Engineer :	Star Wei	Polarization :	Vertical						
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
Frequency	ERP	Limit	Over	SPA	S.G.	TX Cable	TX Antenna	Polarization	Result
(MHz)	(dBm)	(dBm)	Limit (dB)	Reading (dBm)	Power (dBm)	loss (dB)	Gain (dBi)	(H/V)	
1660	-57.91	-13	-44.91	-58.31	-58.56	0.57	3.37	V	Pass
2487	-64.92	-13	-51.92	-67.35	-67.15	0.78	5.16	V	Pass
3316	-64.76	-13	-51.76	-65.82	-68.40	0.87	6.66	V	Pass



Band :	LTE Band 26						Temperature :	22~23℃	
Test Mode :	10MHz QPSK RB Size 1 Offset 49						Relative Humidity :	42~43%	
Test Engineer :	Star Wei						Polarization :	Horizontal	
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
Frequency	ERP	Limit	Over	SPA	S.G.	TX Cable	TX Antenna	Polarization	Result
(MHz)	(dBm)	(dBm)	Limit	Reading	Power	loss	Gain	(H/V)	
(dB)			(dB)	(dBm)	(dBm)	(dB)	(dBi)		
1654	-51.35	-13	-38.35	-49.32	-52.00	0.57	3.37	H	Pass
2480	-68.95	-13	-55.95	-67.62	-71.18	0.78	5.16	H	Pass
3306	-66.27	-13	-53.27	-65.90	-69.91	0.87	6.66	H	Pass

Band :	LTE Band 26	Temperature :	22~23°C						
Test Mode :	10MHz QPSK RB Size 1 Offset 49	Relative Humidity :	42~43%						
Test Engineer :	Star Wei	Polarization :	Vertical						
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
Frequency	ERP	Limit	Over	SPA	S.G.	TX Cable	TX Antenna	Polarization	Result
(MHz)	(dBm)	(dBm)	Limit (dB)	Reading (dBm)	Power (dBm)	loss (dB)	Gain (dBi)	(H/V)	
1654	-55.16	-13	-42.16	-56.52	-55.81	0.57	3.37	V	Pass
2480	-63.89	-13	-50.89	-66.32	-66.12	0.78	5.16	V	Pass
3306	-64.32	-13	-51.32	-65.38	-67.96	0.87	6.66	V	Pass



Band :	LTE Band 26				Temperature :	22~23°C			
Test Mode :	15MHz QPSK RB Size 1 Offset 0				Relative Humidity :	42~43%			
Test Engineer :	Star Wei				Polarization :	Horizontal			
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
Frequency	ERP	Limit	Over	SPA	S.G.	TX Cable	TX Antenna	Polarization	Result
(MHz)	(dBm)	(dBm)	Limit (dB)	Reading (dBm)	Power (dBm)	loss (dB)	Gain (dBi)	(H/V)	
1650	-50.63	-13	-37.63	-48.69	-51.28	0.57	3.37	H	Pass
2472	-67.76	-13	-54.76	-66.43	-69.99	0.78	5.16	H	Pass
3296	-66.49	-13	-53.49	-66.12	-70.13	0.87	6.66	H	Pass

Band :	LTE Band 26	Temperature :	22~23°C						
Test Mode :	15MHz QPSK RB Size 1 Offset 0	Relative Humidity :	42~43%						
Test Engineer :	Star Wei	Polarization :	Vertical						
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
Frequency	ERP	Limit	Over	SPA	S.G.	TX Cable	TX Antenna	Polarization	Result
(MHz)	(dBm)	(dBm)	Limit	Reading	Power	loss	Gain	(H/V)	
(dB)			(dB)	(dBm)	(dBm)	(dB)	(dBi)		
1650	-52.52	-13	-39.52	-54.73	-53.17	0.57	3.37	V	Pass
2472	-63.89	-13	-50.89	-66.32	-66.12	0.78	5.16	V	Pass
3296	-64.75	-13	-51.75	-65.81	-68.39	0.87	6.66	V	Pass



Band :	LTE Band 41				Temperature :	22~23°C			
Test Mode :	5MHz QPSK RB Size 1 Offset 12				Relative Humidity :	42~43%			
Test Engineer :	Star Wei				Polarization :	Horizontal			
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
Frequency	EIRP	Limit	Over	SPA	S.G.	TX Cable	TX Antenna	Polarization	Result
(MHz)	(dBm)	(dBm)	Limit (dB)	Reading (dBm)	Power (dBm)	loss (dB)	Gain (dBi)	(H/V)	
5180	-42.95	-25	-17.95	-58.23	-48.35	2.2	7.60	H	Pass
7775	-55.43	-25	-30.43	-63.43	-62.21	3.12	9.90	H	Pass
10360	-49.42	-25	-24.42	-64.26	-57.31	2.98	10.87	H	Pass

Band :	LTE Band 41	Temperature :	22~23°C						
Test Mode :	5MHz QPSK RB Size 1 Offset 12	Relative Humidity :	42~43%						
Test Engineer :	Star Wei	Polarization :	Vertical						
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
Frequency	EIRP	Limit	Over	SPA	S.G.	TX Cable	TX Antenna	Polarization	Result
(MHz)	(dBm)	(dBm)	Limit	Reading	Power	loss	Gain	(H/V)	
(dB)			(dB)	(dBm)	(dBm)	(dB)	(dBi)		
5180	-54.90	-25	-29.90	-62.9	-60.30	2.2	7.6	V	Pass
7775	-52.83	-25	-27.83	-62.63	-59.61	3.12	9.9	V	Pass
10360	-53.36	-25	-28.36	-66.01	-61.25	2.98	10.87	V	Pass



Band :	LTE Band 41					Temperature :	22~23°C		
Test Mode :	10MHz QPSK RB Size 1 Offset 24					Relative Humidity :	42~43%		
Test Engineer :	Star Wei					Polarization :	Horizontal		
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
Frequency	EIRP	Limit	Over	SPA	S.G.	TX Cable	TX Antenna	Polarization	Result
(MHz)	(dBm)	(dBm)	Limit (dB)	Reading (dBm)	Power (dBm)	loss (dB)	Gain (dBi)	(H/V)	
5177	-45.12	-25	-20.12	-59.50	-50.52	2.2	7.60	H	Pass
7766	-56.54	-25	-31.54	-64.54	-63.32	3.12	9.90	H	Pass
10352	-51.14	-25	-26.14	-65.98	-59.03	2.98	10.87	H	Pass

Band :	LTE Band 41					Temperature :	22~23°C		
Test Mode :	10MHz QPSK RB Size 1 Offset 24					Relative Humidity :	42~43%		
Test Engineer :	Star Wei					Polarization :	Vertical		
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
Frequency	EIRP	Limit	Over	SPA	S.G.	TX Cable	TX Antenna	Polarization	Result
(MHz)	(dBm)	(dBm)	Limit (dB)	Reading (dBm)	Power (dBm)	loss (dB)	Gain (dBi)	(H/V)	
5177	-46.76	-25	-21.76	-58.65	-52.16	2.2	7.6	V	Pass
7766	-45.89	-25	-20.89	-58.01	-52.67	3.12	9.9	V	Pass
10352	-53.58	-25	-28.58	-66.23	-61.47	2.98	10.87	V	Pass



Band :	LTE Band 41					Temperature :	22~23°C		
Test Mode :	15MHz QPSK RB Size 1 Offset 0					Relative Humidity :	42~43%		
Test Engineer :	Star Wei					Polarization :	Horizontal		
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
Frequency	EIRP	Limit	Over	SPA	S.G.	TX Cable	TX Antenna	Polarization	Result
(MHz)	(dBm)	(dBm)	Limit	Reading	Power	loss	Gain		
(MHz)	(dBm)	(dBm)	(dB)	(dBm)	(dBm)	(dB)	(dBi)	(H/V)	
5171	-45.89	-25	-20.89	-59.93	-51.29	2.2	7.60	H	Pass
7760	-54.15	-25	-29.15	-62.15	-60.93	3.12	9.90	H	Pass
10344	-50.51	-25	-25.51	-65.35	-58.40	2.98	10.87	H	Pass

Band :	LTE Band 41	Temperature :	22~23°C						
Test Mode :	15MHz QPSK RB Size 1 Offset 0	Relative Humidity :	42~43%						
Test Engineer :	Star Wei	Polarization :	Vertical						
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
Frequency	EIRP	Limit	Over	SPA	S.G.	TX Cable	TX Antenna	Polarization	Result
(MHz)	(dBm)	(dBm)	Limit (dB)	Reading (dBm)	Power (dBm)	loss (dB)	Gain (dBi)	(H/V)	
5171	-56.37	-25	-31.37	-64.34	-61.77	2.2	7.6	V	Pass
7760	-55.24	-25	-30.24	-65.04	-62.02	3.12	9.9	V	Pass
10344	-52.74	-25	-27.74	-65.39	-60.63	2.98	10.87	V	Pass



Band :	LTE Band 41				Temperature :	22~23°C			
Test Mode :	20MHz QPSK RB Size 1 Offset 0				Relative Humidity :	42~43%			
Test Engineer :	Star Wei				Polarization :	Horizontal			
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
Frequency	EIRP	Limit	Over	SPA	S.G.	TX Cable	TX Antenna	Polarization	Result
(MHz)	(dBm)	(dBm)	Limit (dB)	Reading (dBm)	Power (dBm)	loss (dB)	Gain (dBi)	(H/V)	
5168	-45.37	-25	-20.37	-59.64	-50.77	2.2	7.60	H	Pass
7754	-55.63	-25	-30.63	-63.63	-62.41	3.12	9.90	H	Pass
10332	-51.51	-25	-26.51	-66.35	-59.40	2.98	10.87	H	Pass

Band :	LTE Band 41	Temperature :	22~23℃						
Test Mode :	20MHz QPSK RB Size 1 Offset 0	Relative Humidity :	42~43%						
Test Engineer :	Star Wei	Polarization :	Vertical						
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
Frequency	EIRP	Limit	Over	SPA	S.G.	TX Cable	TX Antenna	Polarization	Result
(MHz)	(dBm)	(dBm)	Limit	Reading	Power	loss	Gain		
(MHz)	(dBm)	(dBm)	(dB)	(dBm)	(dBm)	(dB)	(dBi)	(H/V)	
5168	-55.81	-25	-30.81	-63.78	-61.21	2.2	7.6	V	Pass
7754	-53.04	-25	-28.04	-62.84	-59.82	3.12	9.9	V	Pass
10332	-53.89	-25	-28.89	-66.54	-61.78	2.98	10.87	V	Pass

3.8 Frequency Stability Measurement

3.8.1 Description of Frequency Stability Measurement

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

3.8.2 Measuring Instruments

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

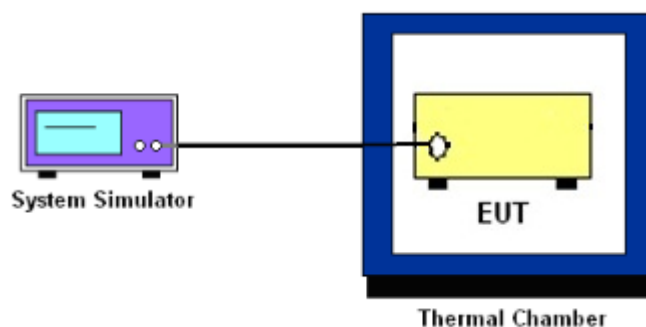
3.8.3 Test Procedures for Temperature Variation

1. The EUT was set up in the thermal chamber and connected with the base station.
2. With power OFF, the temperature was decreased to -30°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.

3.8.4 Test Procedures for Voltage Variation

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

3.8.5 Test Setup



3.8.6 Test Result of Temperature Variation (FCC)

Band :	LTE Band 25 (QPSK)	Limit (ppm) :	2.5
Temperature (°C)	BW 10MHz	Result	
	Deviation (ppm)		
50	0.0043	PASS	
40	0.0003		
30	0.0004		
20(Ref.)	0.0000		
10	0.0039		
0	0.0014		
-10	0.0023		
-20	0.0009		
-30	0.0018		



Band :	LTE Band 26 (QPSK)	Limit (ppm) :	2.5
Temperature (°C)	BW 10MHz	Result	
	Deviation (ppm)		
50	0.0042	PASS	
40	0.0114		
30	0.0057		
20(Ref.)	0.0000		
10	0.0031		
0	0.0115		
-10	0.0124		
-20	0.0129		
-30	0.0001		



Band :	LTE Band 41 (QPSK)	Limit (ppm) :	2.5
Temperature (°C)	BW 10MHz	Result	
	Deviation (ppm)		
50	0.0022	PASS	
40	0.0007		
30	0.0014		
20(Ref.)	0.0000		
10	0.0044		
0	0.0013		
-10	0.0038		
-20	0.0017		
-30	0.0021		

3.8.7 Test Result of Voltage Variation (FCC)

Band	Bandwidth	Voltage (Volt)	Deviation (ppm)	Limit (ppm)	Result
LTE Band 25 (QPSK)	10M	4.35	0.0034	2.5	PASS
		Normal	0.0006		
		3.5	0.0001		
LTE Band 26 (QPSK)	10M	4.35	0.0006		
		Normal	0.0057		
		3.5	0.0045		
LTE Band 41 (QPSK)	10M	4.35	0.0020		
		Normal	0.0018		
		3.5	0.0014		

Remark:

1. Normal Voltage = 3.8V.
2. The manufacturer declared that the EUT could work properly between voltage 3.5V ~ 4.35V.



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	Jul. 17, 2014~ Aug. 26, 2014	Dec. 27, 2014	Conducted (TH01-KS)
Thermal Chamber	Ten Billion	TTC-B3S	TBN-960502	-40~+150°C	Dec. 10, 2013	Jul. 17, 2014~ Aug. 26, 2014	Dec. 09, 2014	Conducted (TH01-KS)
EMI Test Receiver	R&S	ESCI	100534	9kHz~3GHz	Nov. 05, 2013	Aug. 09, 2014	Nov. 04, 2014	Radiation (03CH01-KS)
Spectrum Analyzer	R&S	FSP30	101399	9kHz~30GHz	May 04, 2014	Aug. 09, 2014	May 03, 2015	Radiation (03CH01-KS)
Bilog Antenna	SCHAFFNER	CBL6112D	23182	25MHz~2GHz	Jan. 08, 2014	Aug. 09, 2014	Jan. 07, 2015	Radiation (03CH01-KS)
Double Ridge Horn Antenna	ETS-Lindgren	3117	75959	1GHz~18GHz	Jan. 08, 2014	Aug. 09, 2014	Jan. 07, 2015	Radiation (03CH01-KS)
Active Horn Antenna	com-power	AHA-118	701030	1GHz~18GHz	Nov. 18, 2013	Aug. 09, 2014	Nov. 17, 2014	Radiation (03CH01-KS)
SHF-EHF Horn	Schwarzbeck	BBHA 9170	BBHA17024 9	15GHz~40GHz	Mar. 10, 2014	Aug. 09, 2014	Mar. 09, 2015	Radiation (03CH01-KS)
Amplifier	com-power	PA-103A	161073	1MHz~1GHz	May 04, 2014	Aug. 09, 2014	May 03, 2015	Radiation (03CH01-KS)
Amplifier	Agilent	8449B	3008A02371	1GHz~26.5GHz	Dec. 10, 2013	Aug. 09, 2014	Dec. 09, 2014	Radiation (03CH01-KS)
AC Power Source	Chroma	61601	F104090004	N/A	NCR	Aug. 09, 2014	NCR	Radiation (03CH01-KS)
Turn Table	MF	MF7802	N/A	0~360 degree	NCR	Aug. 09, 2014	NCR	Radiation (03CH01-KS)
Antenna Mast	MF	MF7802	N/A	1 m~4 m	NCR	Aug. 09, 2014	NCR	Radiation (03CH01-KS)



Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSP 7	100819	9kHz~7GHz	May 04, 2014	Aug. 14, 2014	May 03, 2015	ERP/EIRP (OTA01-KS)
Switch Control Manframe	Agilent	3499A	MY42005452	N/A	N/A	Aug. 14, 2014	N/A	ERP/EIRP (OTA01-KS)
Dual 1-to-6(4) MW MUX	Agilent	N2276A	MY42000841	N/A	N/A	Aug. 14, 2014	N/A	ERP/EIRP (OTA01-KS)
Microwave Switch	Agilent	44476A	MY42002573	N/A	N/A	Aug. 14, 2014	N/A	ERP/EIRP (OTA01-KS)
Microwave Switch	Agilent	44476A	MY42002586	N/A	N/A	Aug. 14, 2014	N/A	ERP/EIRP (OTA01-KS)
Diagonal Dual Polarized Horn	ETS-Lindgren	3164-04	00066993	700MHz~6GHz	N/A	Aug. 14, 2014	N/A	ERP/EIRP (OTA01-KS)
Multi-Devices Controller	ETS-Lindgren	2090-OPT1	00066604	N/A	N/A	Aug. 14, 2014	N/A	ERP/EIRP (OTA01-KS)
Conical Log Spiral (Small)	ETS-Lindgren	3102	00066951	1~10GHz	N/A	Aug. 14, 2014	N/A	ERP/EIRP (OTA01-KS)
Turn Table	ETS-Lindgren	2088	N/A	Resolution : 0.1degree	N/A	Aug. 14, 2014	N/A	ERP/EIRP (OTA01-KS)
Limiting Amplifier	ETS-lindgren	109643	920326	10MHz~2.5GHz	N/A	Aug. 14, 2014	N/A	ERP/EIRP (OTA01-KS)
EMQuest	ETS-Lindgren	EMQ-100	1125	N/A	N/A	Aug. 14, 2014	N/A	ERP/EIRP (OTA01-KS)
Medium Duty Holder	ETS-Lindgren	2015	N/A	N/A	N/A	Aug. 14, 2014	N/A	ERP/EIRP (OTA01-KS)



5 Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	2.5
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