

FCC RF/IC Test Report

APPLICANT : Sony Mobile Communications AB
EQUIPMENT : Smart phone
BRAND NAME : SONY
TYPE NAME : PM-0771-BV
FCC ID : PY7PM-0771
IC : 4170B-PM0771
STANDARD : 47 CFR Part 2, 24(E), 27
IC RSS-130 issue 1
IC RSS-133 issue 6
IC RSS-139 issue 2
IC RSS-199 issue 1

CLASSIFICATION : PCS Licensed Transmitter Held to Ear (PCE)

The product was received on Apr. 02, 2014 and testing was completed on May 09, 2014. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the test procedures given in ANSI / TIA / EIA-603-C-2004 and the testing has shown the tested sample to be in compliance with the applicable technical standards.

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



Reviewed by: Joseph Lin / Supervisor



Approved by: Jones Tsai / Manager



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FCC ID : PY7PM-0771

IC: 4170B-PM0771

Page Number : 1 of 421

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Report Version : Rev. 01



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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG440284B	Rev. 01	Initial issue of report	Jun. 09, 2014

SUMMARY OF TEST RESULT

Report Section	FCC Rule	IC Rule	Description	Limit	Result	Remark
3.1	§2.1046	RSS-Gen(4.8) RSS-130(4.4) RSS-133 (6.4) RSS-139 (6.4) RSS-199 (4.4)	Conducted Output Power	Reporting Only	PASS	-
3.2	§24.232(d) §27.50(d)(5)	RSS-130(4.4) RSS-133 (6.4) RSS-139 (6.4)	Peak-to-Average Ratio	<13 dB	PASS	-
3.3	§27.50(c)(10)	N/A	Effective Radiated Power (Band 17)	ERP < 3 Watt	PASS	-
	N/A	RSS-130(4.4)	Equivalent Isotropic Radiated Power (Band 17)	EIRP < 5 Watt		
	§24.232(c) §27.50(h)(2)	RSS-133 (6.4) SRSP-510(5.1.2) RSS-199 (4.4)	Equivalent Isotropic Radiated Power (Band 2) (Band 7)	EIRP < 2Watt		
	§27.50(d)(4)	RSS-139 (6.4) SRSP-513(5.1.2)	Equivalent Isotropic Radiated Power (Band 4)	EIRP < 1Watt		
3.4	§2.1049 §24.238(b) §27.53(g)(3) §27.53(l)(6)	RSS-GEN(4.6.1) RSS-133 (3.1) RSS-139 (3.1) RSS-199 (4.2)	Occupied Bandwidth	Reporting Only	PASS	-
3.5	§2.1051 §24.238(a) §27.53(f) §27.53(g) §27.53(l)(4)	RSS-GEN(4.9) RSS-133 (6.5.1) RSS-130(4.6) RSS-139 (6.5) RSS-199 (4.5)	Conducted Band Edge Measurement (Band 2) (Band 4) (Band 17) (Band 7)	< 43+10log10(P[Watt])	PASS	-



Report Section	FCC Rule	IC Rule	Description	Limit	Result	Remark
3.6	§2.1051 §24.238(a) §27.53(f) §27.53(g)	RSS-GEN(4.9) RSS-133 (6.5.1) RSS-130(4.6) RSS-139 (6.5)	Conducted Spurious Emission (Band 2) (Band 4) (Band 17)	$< 43+10\log_{10}(P[\text{Watts}])$	PASS	-
	§2.1051 §27.53(l)(4)	RSS-GEN(4.9) RSS-199 (4.5)	Conducted Spurious Emission (Band 7)	$< 55+10\log_{10}(P[\text{Watts}])$	PASS	-
3.7	§2.1053 §24.238(a) §27.53(f) §27.53(g)	RSS-GEN(4.9) RSS-133 (6.5.1) RSS-130(4.6) RSS-139 (6.5)	Radiated Spurious Emission (Band 2) (Band 4) (Band 17)	$< 43+10\log_{10}(P[\text{Watts}])$	PASS	Under limit 3.04 dB at 7680.000 MHz
	§2.1053 §27.53(l)(4)	RSS-GEN(4.9) RSS-199 (4.5)	Radiated Spurious Emission (Band 7)	$< 55+10\log_{10}(P[\text{Watts}])$	PASS	
3.8	§2.1055 §24.235 §27.54	RSS-GEN(4.7) RSS-133(6.3) RSS-130(4.3) RSS-139 (6.3) RSS-199 (4.3)	Frequency Stability Temperature & Voltage	$< 2.5 \text{ ppm}$	PASS	-

1 General Description

1.1 Applicant

Sony Mobile Communications AB
Nya Vattentorget, 22188 Lund, Sweden

1.2 Manufacturer

Compal Communications, INC.
No. 385, Yangguang Street, Neihu, Taipei 11491, Taiwan

1.3 Feature of Equipment Under Test

The Equipment Under Test (hereafter called: EUT) is Smart phone supporting, GSM / WCDMA / LTE, Wi-Fi 2.4GHz 802.11b/g/n, Wi-Fi 5GHz 802.11a/n, Bluetooth with FM Receiver, ANT+, NFC, and GPS features, and below is details of information.

Product Feature	
Equipment	Smart phone
Brand Name	SONY
Type name	PM-0771-BV
FCC ID	PY7PM-0771
IC	4170B-PM0771
GSM Operating Band(s)	GSM 850/900/1800/1900MHz
GPRS / EGPRS Multi Slot Class	GPRS Class 33 , EGPRS Class 33
WCDMA Operating Band(s)	FDD Band I / II / IV / V
WCDMA Rel. Version	Rel. 8
LTE Operating Band(s)	FDD Band II / IV / VII / XVII
LTE Rel. Version	Rel. 10
Wi-Fi Specification	802.11b/g/n (HT20) 802.11a/n (HT20/HT40)
Bluetooth Version	Bluetooth v4.0 EDR/LE
NFC Specification	ISO14443A / ISO14443B / Felica
ANT+	ANT+
Power Supply	Battery / AC Adapter / Car Charger
EUT Stage	Production Unit

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

1.4 Product Specification of Equipment Under Test

Product Specification subjective to this standard	
Tx Frequency	LTE Band 2 : 1850.7 MHz ~ 1909.3 MHz LTE Band 4 : 1710.7 MHz ~ 1754.3 MHz LTE Band 17 : 706.5 MHz ~ 713.5 MHz LTE Band 7 : 2502.5 MHz ~ 2567.5 MHz
Rx Frequency	LTE Band 2 : 1930.7 MHz ~ 1989.3 MHz LTE Band 4 : 2110.7 MHz ~ 2154.3 MHz LTE Band 17 : 736.5 MHz ~ 743.5 MHz LTE Band 7 : 2622.5MHz ~ 2687.5 MHz
Bandwidth	1.4MHz / 3MHz / 5MHz/ 10MHz / 15MHz / 20MHz (Band 2) 1.4MHz / 3MHz / 5MHz/ 10MHz / 15MHz / 20MHz (Band 4) 5MHz/ 10MHz / 15MHz / 20MHz (Band 7) 5MHz / 10MHz (Band 17)
Maximum Output Power to Antenna	LTE Band 2 : 23.45 dBm LTE Band 4 : 23.66 dBm LTE Band 7 : 23.36 dBm LTE Band 17 : 23.26 dBm
Antenna Type	PIFA Antenna
Type of Modulation	QPSK / 16QAM
H/W	A
S/W	18.3.C.0.8
EUT Stage	Production Unit

EUT Information List				
IMEI	HW Version	SW Version	S/N	Performed Test Item
IMEI : 004402452473907	A	18.3.C.0.8	ZH8002JUQQ	RF conducted measurement
IMEI : 004402452474822			ZH80037V1J	Radiated Spurious Emission, EIRP test

Accessory List	
AC Adapter	Model No. : EP800
	Type No. : CAA-0002016-US B
	S/N : 1112W28 321732
Battery	Model No. : LIS1551ERPC
	Type No. : F-4993-128-0
Earphone	Model No. : MH410c
	Type No. : AG-1100
	S/N: 12481A1600364E0
USB Cable	Model No. : AHAB EC450
	Part No. : AI-0700
	S/N: 132512D44063718A

Note:

1. Above EUT list and accessory list used are electrically identical per declared by manufacturer.
2. Above the accessories list are used to exercise the EUT during test, and the serial number of each type of accessories is listed in each section of this report.
3. For other wireless features of this EUT, test report will be issued separately.

1.5 Modification of EUT

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

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

FCC Rule	System	Type of Modulation	BW	Emission Designator	Frequency Tolerance (ppm)	Maximum ERP/EIRP
Part 24	LTE Band 2	QPSK	1.4 MHz	1M10G7D	-	0.23 W
Part 24	LTE Band 2	16QAM	1.4 MHz	1M11D7W	-	0.18 W
Part 24	LTE Band 2	QPSK	3 MHz	2M72G7D	-	0.25 W
Part 24	LTE Band 2	16QAM	3 MHz	2M73D7W	-	0.18 W
Part 24	LTE Band 2	QPSK	5 MHz	4M50G7D	-	0.23 W
Part 24	LTE Band 2	16QAM	5 MHz	4M50D7W	-	0.20 W
Part 24	LTE Band 2	QPSK	10 MHz	9M08G7D	0.0020 ppm	0.24 W
Part 24	LTE Band 2	16QAM	10 MHz	9M04D7W	-	0.18 W
Part 24	LTE Band 2	QPSK	15 MHz	13M5G7D	-	0.24 W
Part 24	LTE Band 2	16QAM	15 MHz	13M5D7W	-	0.20 W
Part 24	LTE Band 2	QPSK	20 MHz	18M5G7D	-	0.22 W
Part 24	LTE Band 2	16QAM	20 MHz	18M4D7W	-	0.16 W
Part 27	LTE Band 4	QPSK	1.4 MHz	1M11G7D	-	0.20 W
Part 27	LTE Band 4	16QAM	1.4 MHz	1M11D7W	-	0.17 W
Part 27	LTE Band 4	QPSK	3 MHz	2M75G7D	-	0.27 W
Part 27	LTE Band 4	16QAM	3 MHz	2M74D7W	-	0.20 W
Part 27	LTE Band 4	QPSK	5MHz	4M52G7D	-	0.22 W
Part 27	LTE Band 4	16QAM	5MHz	4M51D7W	-	0.17 W
Part 27	LTE Band 4	QPSK	10MHz	9M08G7D	0.0051 ppm	0.27 W
Part 27	LTE Band 4	16QAM	10MHz	9M06D7W	-	0.23 W
Part 27	LTE Band 4	QPSK	15MHz	13M5G7D	-	0.23 W
Part 27	LTE Band 4	16QAM	15MHz	13M5D7W	-	0.20 W
Part 27	LTE Band 4	QPSK	20MHz	18M6G7D	-	0.24 W
Part 27	LTE Band 4	16QAM	20MHz	18M6D7W	-	0.21 W

FCC Rule	System	Type of Modulation	BW	Emission Designator	Frequency Tolerance (ppm)	Maximum ERP/EIRP
Part 27	LTE Band 17	QPSK	5MHz	4M51G7D	-	0.06 W
Part 27	LTE Band 17	16QAM	5MHz	4M51D7W	-	0.05 W
Part 27	LTE Band 17	QPSK	10MHz	9M10G7D	0.0044 ppm	0.06 W
Part 27	LTE Band 17	16QAM	10MHz	9M06D7W	-	0.05 W
Part 27	LTE Band 7	QPSK	5MHz	4M50G7D	-	0.21 W
Part 27	LTE Band 7	16QAM	5MHz	4M51D7W	-	0.16 W
Part 27	LTE Band 7	QPSK	10MHz	9M06G7D	0.0061 ppm	0.20 W
Part 27	LTE Band 7	16QAM	10MHz	9M04D7W	-	0.16 W
Part 27	LTE Band 7	QPSK	15MHz	13M5G7D	-	0.16 W
Part 27	LTE Band 7	16QAM	15MHz	13M5D7W	-	0.12 W
Part 27	LTE Band 7	QPSK	20MHz	18M5G7D	-	0.19 W
Part 27	LTE Band 7	16QAM	20MHz	18M6D7W	-	0.15 W

1.7 Testing Site

Sporton Lab is accredited to ISO 17025 by Taiwan Accreditation Foundation (TAF code : 1190) and the FCC designation No. TW1022 under the FCC 2.948(e) by Mutual Recognition Agreement (MRA) in FCC Test.

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

1.8 Applied Standards

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

- ♦ 47 CFR Part 2, 27
- ♦ ANSI / TIA / EIA-603-C-2004
- ♦ FCC KDB 971168 D01 Power Meas. License Digital Systems v02r01
- ♦ IC RSS-130 Issue1
- ♦ IC RSS-133 Issue 6
- ♦ IC RSS-139 Issue 2
- ♦ IC RSS-199 Issue 1
- ♦ IC RSS-Gen Issue 3
- ♦ NOTICE 2012-DRS0126
- ♦

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.
3. Per the section 2.2.3 of Notice of 2012-DRS0126, " Receivers Excluded from Industry Canada Requirements", only radiocommunication receivers operating in stand-alone mode within the band 30-960 MHz and scanner receivers are subject to Industry Canada requirements.



2 Test Configuration of Equipment Under Test

2.1 Test Mode

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

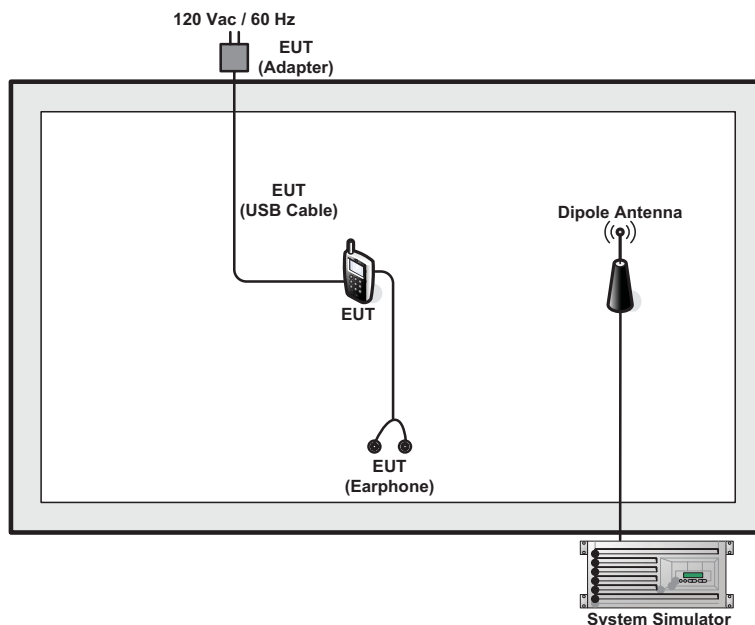
Radiated measurements are performed by rotating the EUT in three different orthogonal test planes to find the maximum emission.

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	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	7	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	17	-	-	✓	✓	-	-	✓	✓	✓	✓	✓	✓	✓	✓
Peak-to-Average Ratio	2						✓		✓	✓		✓	✓	✓	✓
	4						✓		✓	✓		✓	✓	✓	✓
	7	-	-				✓		✓	✓		✓	✓	✓	✓
	17	-	-		✓	-	-		✓	✓		✓	✓	✓	✓
26dB and 99% Bandwidth	2	✓	✓	✓	✓	✓	✓	✓	✓			✓	✓	✓	✓
	4	✓	✓	✓	✓	✓	✓	✓	✓			✓	✓	✓	✓
	7	-	-	✓	✓	✓	✓	✓	✓			✓	✓	✓	✓
	17	-	-	✓	✓	-	-	✓	✓			✓	✓	✓	✓
Conducted Band Edge	2	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓		✓
	4	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓		✓
	7	-	-	✓	✓	✓	✓	✓	✓	✓		✓	✓		✓
	17	-	-	✓	✓	-	-	✓	✓	✓		✓	✓		✓



Test Items	Band	Bandwidth (MHz)						Modulation		RB #			Test Channel		
		1.4	3	5	10	15	20	QPSK	16QAM	1	Half	Full	L	M	H
Conducted Spurious Emission	2	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓	✓	✓
	4	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓	✓	✓
	7	-	-	✓	✓	✓	✓	✓	✓	✓			✓	✓	✓
	17	-	-	✓	✓	-	-	✓	✓	✓			✓	✓	✓
Frequency Stability	2				✓			✓				✓		✓	
	4				✓			✓				✓		✓	
	7	-	-		✓			✓				✓		✓	
	17	-	-		✓	-	-	✓				✓		✓	
Frequency Stability for RSS-130	17	-	-	✓		-	-	✓				✓	✓		✓
E.R.P./ E.I.R.P.	2	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓	✓	✓
	4	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓	✓	✓
	7	-	-	✓	✓	✓	✓	✓	✓	✓			✓	✓	✓
	17	-	-	✓	✓	-	-	✓	✓	✓			✓	✓	✓
Radiated Spurious Emission	2	✓	✓	✓	✓	✓	✓	✓		✓			✓	✓	✓
	4	✓	✓	✓	✓	✓	✓	✓		✓			✓	✓	✓
	7	-	-	✓	✓	✓	✓	✓		✓			✓	✓	✓
	17	-	-	✓	✓	-	-	✓		✓			✓	✓	✓
Note	1. The mark "✓" means that this configuration is chosen for testing 2. The mark "-" means that this bandwidth is not supported. 3. 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.	System Simulator	Anritsu	MT8820C	N/A	N/A	Unshielded, 1.8 m

2.4 Measurement Results Explanation Example

For all conducted test items:

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

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

Offset = RF cable loss + attenuator factor.

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

Example :

$$\begin{aligned} \text{Offset(dB)} &= \text{RF cable loss(dB)} + \text{attenuator factor(dB)}. \\ &= 4.2 + 10 = 14.2 \text{ (dB)} \end{aligned}$$

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.

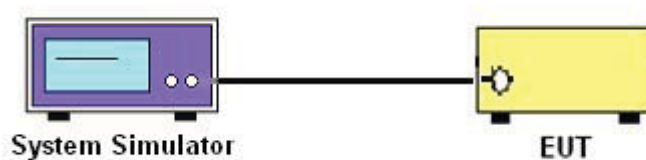
3.1.2 Measuring Instruments

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 base station.
2. Set EUT at maximum power through base station.
3. Select lowest, middle, and highest channels for each band and different modulation.

3.1.4 Test Setup



3.1.5 Test Result of Conducted Output Power

<LTE Band 2 Conducted Power>

BW [MHz]	Modulation	RB Size	RB Offset	Power (dBm) Low Ch. / Freq.	Power (dBm) Middle Ch. / Freq.	Power (dBm) High Ch. / Freq.
Channel				18700	18900	19100
Frequency (MHz)				1860.0	1880.0	1900.0
20	QPSK	1	0	23.45	23.15	23.11
20	QPSK	1	49	23.32	23.00	23.07
20	QPSK	1	99	23.08	22.97	23.06
20	QPSK	50	0	22.20	22.16	22.13
20	QPSK	50	24	22.18	22.12	22.08
20	QPSK	50	49	22.06	22.04	22.06
20	QPSK	100	0	22.14	22.02	22.05
20	16QAM	1	0	22.07	21.93	21.89
20	16QAM	1	49	22.05	21.91	21.93
20	16QAM	1	99	21.86	21.89	22.14
20	16QAM	50	0	21.26	21.00	21.13
20	16QAM	50	24	21.23	21.08	21.16
20	16QAM	50	49	21.13	21.00	21.21
20	16QAM	100	0	21.28	21.11	21.18
Channel				18675	18900	19125
Frequency (MHz)				1857.5	1880	1902.5
15	QPSK	1	0	23.09	22.90	22.99
15	QPSK	1	37	23.09	22.95	23.08
15	QPSK	1	74	22.97	22.87	23.17
15	QPSK	36	0	22.12	21.97	22.16
15	QPSK	36	18	22.06	22.02	22.20
15	QPSK	36	37	22.07	21.94	22.15
15	QPSK	75	0	22.16	22.03	22.16
15	16QAM	1	0	22.02	21.88	21.99
15	16QAM	1	37	22.03	21.90	21.97
15	16QAM	1	74	21.91	21.85	22.11
15	16QAM	36	0	21.23	21.00	21.12
15	16QAM	36	18	21.18	21.06	21.16
15	16QAM	36	37	21.19	20.99	21.16
15	16QAM	75	0	21.25	21.07	21.20



BW [MHz]	Modulation	RB Size	RB Offset	Power (dBm) Low Ch. / Freq.	Power (dBm) Middle Ch. / Freq.	Power (dBm) High Ch. / Freq.
Channel				18650	18900	19150
Frequency (MHz)				1855	1880	1905
10	QPSK	1	0	22.99	22.88	23.20
10	QPSK	1	24	23.10	22.95	23.11
10	QPSK	1	49	23.11	22.91	23.13
10	QPSK	25	0	22.05	21.94	22.18
10	QPSK	25	12	22.06	21.98	22.17
10	QPSK	25	24	22.06	21.98	22.26
10	QPSK	50	0	22.16	22.03	22.19
10	16QAM	1	0	22.02	21.89	22.20
10	16QAM	1	24	22.02	21.87	22.09
10	16QAM	1	49	22.01	21.91	22.09
10	16QAM	25	0	21.17	21.01	21.24
10	16QAM	25	12	21.20	21.05	21.22
10	16QAM	25	24	21.21	21.06	21.27
10	16QAM	50	0	21.20	21.06	21.21
Channel				18625	18900	19175
Frequency (MHz)				1852.5	1880	1907.5
5	QPSK	1	0	23.05	22.99	23.18
5	QPSK	1	12	23.01	22.99	23.21
5	QPSK	1	24	23.05	23.03	23.29
5	QPSK	12	0	22.04	22.03	22.34
5	QPSK	12	6	21.99	21.94	22.28
5	QPSK	12	11	22.09	22.01	22.24
5	QPSK	25	0	21.99	21.96	22.38
5	16QAM	1	0	21.94	21.91	22.23
5	16QAM	1	12	21.89	21.95	22.10
5	16QAM	1	24	22.00	21.97	22.08
5	16QAM	12	0	21.12	21.15	21.39
5	16QAM	12	6	21.09	21.15	21.32
5	16QAM	12	11	21.19	21.16	21.31
5	16QAM	25	0	21.09	21.12	21.34



BW [MHz]	Modulation	RB Size	RB Offset	Power (dBm) Low Ch. / Freq.	Power (dBm) Middle Ch. / Freq.	Power (dBm) High Ch. / Freq.
Channel				18615	18900	19185
Frequency (MHz)				1851.5	1880	1908.5
3	QPSK	1	0	23.14	23.05	23.21
3	QPSK	1	7	23.12	23.05	23.26
3	QPSK	1	14	23.12	23.13	23.36
3	QPSK	8	0	22.03	22.07	22.36
3	QPSK	8	4	22.03	22.01	22.31
3	QPSK	8	7	22.04	22.06	22.30
3	QPSK	15	0	22.10	22.11	22.31
3	16QAM	1	0	22.09	21.95	22.17
3	16QAM	1	7	21.99	21.95	22.28
3	16QAM	1	14	22.03	22.03	22.20
3	16QAM	8	0	21.21	21.25	21.38
3	16QAM	8	4	21.25	21.13	21.40
3	16QAM	8	7	21.19	21.10	21.36
3	16QAM	15	0	21.18	21.08	21.36
Channel				18607	18900	19193
Frequency (MHz)				1850.7	1880	1909.3
1.4	QPSK	1	0	23.19	23.10	23.29
1.4	QPSK	1	2	23.14	23.07	23.27
1.4	QPSK	1	5	23.18	23.15	23.37
1.4	QPSK	3	0	23.22	23.08	23.29
1.4	QPSK	3	1	23.17	23.12	23.26
1.4	QPSK	3	2	23.16	23.13	23.26
1.4	QPSK	6	0	22.14	22.12	22.32
1.4	16QAM	1	0	22.09	22.03	22.26
1.4	16QAM	1	2	22.08	22.08	22.23
1.4	16QAM	1	5	22.10	22.03	22.25
1.4	16QAM	3	0	22.06	22.02	22.24
1.4	16QAM	3	1	22.06	22.05	22.22
1.4	16QAM	3	2	22.05	22.09	22.24
1.4	16QAM	6	0	21.10	21.13	21.23

<LTE Band 4 Conducted Power>

BW [MHz]	Modulation	RB Size	RB Offset	Power (dBm) Low Ch. / Freq.	Power (dBm) Middle Ch. / Freq.	Power (dBm) High Ch. / Freq.
Channel				20050	20175	20300
Frequency (MHz)				1720	1732.5	1745
20	QPSK	1	0	23.66	23.58	23.65
20	QPSK	1	49	23.64	23.60	23.64
20	QPSK	1	99	23.63	23.50	23.49
20	QPSK	50	0	22.79	22.86	22.84
20	QPSK	50	24	22.75	22.89	22.71
20	QPSK	50	49	22.74	22.73	22.63
20	QPSK	100	0	22.76	22.80	22.69
20	16QAM	1	0	22.68	22.66	22.81
20	16QAM	1	49	22.54	22.70	22.68
20	16QAM	1	99	22.60	22.57	22.45
20	16QAM	50	0	21.75	21.86	21.82
20	16QAM	50	24	21.69	21.85	21.70
20	16QAM	50	49	21.73	21.76	21.70
20	16QAM	100	0	21.73	21.75	21.70
Channel				20025	20175	20325
Frequency (MHz)				1717.5	1732.5	1747.5
15	QPSK	1	0	23.57	23.66	23.62
15	QPSK	1	37	23.59	23.64	23.52
15	QPSK	1	74	23.62	23.58	23.45
15	QPSK	36	0	22.67	22.82	22.74
15	QPSK	36	18	22.66	22.80	22.58
15	QPSK	36	37	22.63	22.71	22.57
15	QPSK	75	0	22.69	22.76	22.72
15	16QAM	1	0	22.68	22.77	22.71
15	16QAM	1	37	22.58	22.65	22.55
15	16QAM	1	74	22.57	22.55	22.52
15	16QAM	36	0	21.64	21.91	21.74
15	16QAM	36	18	21.64	21.89	21.64
15	16QAM	36	37	21.65	21.69	21.58
15	16QAM	75	0	21.74	21.84	21.79



BW [MHz]	Modulation	RB Size	RB Offset	Power (dBm) Low Ch. / Freq.	Power (dBm) Middle Ch. / Freq.	Power (dBm) High Ch. / Freq.
Channel				20000	20175	20350
Frequency (MHz)				1715	1732.5	1750
10	QPSK	1	0	23.47	23.62	23.49
10	QPSK	1	24	23.46	23.61	23.47
10	QPSK	1	49	23.46	23.59	23.40
10	QPSK	25	0	22.56	22.70	22.52
10	QPSK	25	12	22.49	22.74	22.50
10	QPSK	25	24	22.52	22.70	22.50
10	QPSK	50	0	22.60	22.67	22.64
10	16QAM	1	0	22.51	22.67	22.59
10	16QAM	1	24	22.44	22.64	22.44
10	16QAM	1	49	22.41	22.51	22.41
10	16QAM	25	0	21.58	21.69	21.58
10	16QAM	25	12	21.49	21.66	21.49
10	16QAM	25	24	21.49	21.66	21.56
10	16QAM	50	0	21.53	21.67	21.55
Channel				19975	20175	20375
Frequency (MHz)				1712.5	1732.5	1752.5
5	QPSK	1	0	23.43	23.63	23.52
5	QPSK	1	12	23.38	23.61	23.37
5	QPSK	1	24	23.31	23.60	23.42
5	QPSK	12	0	22.54	22.74	22.51
5	QPSK	12	6	22.55	22.71	22.44
5	QPSK	12	11	22.47	22.68	22.42
5	QPSK	25	0	22.52	22.68	22.51
5	16QAM	1	0	22.45	22.64	22.50
5	16QAM	1	12	22.26	22.52	22.37
5	16QAM	1	24	22.33	22.62	22.35
5	16QAM	12	0	21.61	21.70	21.64
5	16QAM	12	6	21.70	21.66	21.45
5	16QAM	12	11	21.54	21.69	21.48
5	16QAM	25	0	21.66	21.63	21.41



BW [MHz]	Modulation	RB Size	RB Offset	Power (dBm) Low Ch. / Freq.	Power (dBm) Middle Ch. / Freq.	Power (dBm) High Ch. / Freq.
Channel				19965	20175	20385
Frequency (MHz)				1711.5	1732.5	1753.5
3	QPSK	1	0	23.44	23.64	23.43
3	QPSK	1	7	23.47	23.61	23.36
3	QPSK	1	14	23.53	23.61	23.49
3	QPSK	8	0	22.53	22.66	22.50
3	QPSK	8	4	22.54	22.65	22.49
3	QPSK	8	7	22.53	22.69	22.53
3	QPSK	15	0	22.56	22.71	22.59
3	16QAM	1	0	22.47	22.70	22.39
3	16QAM	1	7	22.58	22.64	22.39
3	16QAM	1	14	22.44	22.68	22.42
3	16QAM	8	0	21.65	21.71	21.51
3	16QAM	8	4	21.67	21.68	21.55
3	16QAM	8	7	21.66	21.74	21.53
3	16QAM	15	0	21.59	21.68	21.44
Channel				19957	20175	20393
Frequency (MHz)				1710.7	1732.5	1754.3
1.4	QPSK	1	0	23.49	23.65	23.59
1.4	QPSK	1	2	23.52	23.61	23.58
1.4	QPSK	1	5	23.53	23.62	23.60
1.4	QPSK	3	0	23.56	23.61	23.61
1.4	QPSK	3	1	23.55	23.60	23.59
1.4	QPSK	3	2	23.56	23.56	23.59
1.4	QPSK	6	0	22.55	22.70	22.70
1.4	16QAM	1	0	22.58	22.71	22.52
1.4	16QAM	1	2	22.59	22.66	22.46
1.4	16QAM	1	5	22.53	22.69	22.51
1.4	16QAM	3	0	22.47	22.66	22.46
1.4	16QAM	3	1	22.55	22.65	22.47
1.4	16QAM	3	2	22.56	22.68	22.39
1.4	16QAM	6	0	21.56	21.72	21.47



<LTE Band 7 Conducted Power>

BW [MHz]	Modulation	RB Size	RB Offset	Power (dBm) Low Ch. / Freq.	Power (dBm) Middle Ch. / Freq.	Power (dBm) High Ch. / Freq.
Channel				20850	21100	21350
Frequency (MHz)				2510	2535	2560
20	QPSK	1	0	23.33	23.29	22.85
20	QPSK	1	49	23.24	23.18	22.94
20	QPSK	1	99	23.36	23.20	23.08
20	QPSK	50	0	21.06	21.16	21.17
20	QPSK	50	24	21.04	21.08	21.10
20	QPSK	50	49	21.21	21.02	21.05
20	QPSK	100	0	21.06	21.04	21.05
20	16QAM	1	0	22.02	22.21	21.76
20	16QAM	1	49	22.17	22.20	21.97
20	16QAM	1	99	22.27	22.06	22.05
20	16QAM	50	0	20.05	20.02	20.00
20	16QAM	50	24	20.08	20.00	20.06
20	16QAM	50	49	20.07	20.09	20.10
20	16QAM	100	0	20.06	20.04	20.13
Channel				20825	21100	21375
Frequency (MHz)				2507.5	2535	2562.5
15	QPSK	1	0	23.07	23.29	23.02
15	QPSK	1	37	23.24	23.28	22.96
15	QPSK	1	74	23.26	23.31	23.13
15	QPSK	36	0	21.03	21.24	21.20
15	QPSK	36	18	21.01	21.10	21.03
15	QPSK	36	37	21.14	21.07	21.13
15	QPSK	75	0	21.06	21.02	21.07
15	16QAM	1	0	22.10	22.33	21.86
15	16QAM	1	37	22.20	22.23	21.93
15	16QAM	1	74	22.36	22.32	22.01
15	16QAM	36	0	20.08	20.02	20.09
15	16QAM	36	18	20.06	20.00	20.02
15	16QAM	36	37	20.06	20.04	20.08
15	16QAM	75	0	20.05	20.01	20.05



BW [MHz]	Modulation	RB Size	RB Offset	Power (dBm) Low Ch. / Freq.	Power (dBm) Middle Ch. / Freq.	Power (dBm) High Ch. / Freq.
Channel				20800	21100	21400
Frequency (MHz)				2505	2535	2565
10	QPSK	1	0	23.06	23.29	22.97
10	QPSK	1	24	23.12	23.26	22.97
10	QPSK	1	49	23.26	23.27	23.04
10	QPSK	25	0	21.07	21.05	21.07
10	QPSK	25	12	21.09	21.10	21.14
10	QPSK	25	24	21.12	21.06	21.08
10	QPSK	50	0	21.11	21.07	21.05
10	16QAM	1	0	22.08	22.31	21.89
10	16QAM	1	24	21.96	22.25	21.97
10	16QAM	1	49	22.14	22.24	21.92
10	16QAM	25	0	20.03	20.28	20.13
10	16QAM	25	12	20.07	20.27	20.12
10	16QAM	25	24	20.06	20.28	20.10
10	16QAM	50	0	20.05	20.22	20.09
Channel				20775	21100	21425
Frequency (MHz)				2502.5	2535	2567.5
5	QPSK	1	0	23.07	23.32	23.01
5	QPSK	1	12	23.11	23.23	23.00
5	QPSK	1	24	23.06	23.22	22.99
5	QPSK	12	0	21.07	21.08	21.03
5	QPSK	12	6	21.07	21.07	21.02
5	QPSK	12	11	21.05	21.13	21.08
5	QPSK	25	0	21.07	21.07	21.01
5	16QAM	1	0	22.07	22.36	21.95
5	16QAM	1	12	22.05	22.23	21.90
5	16QAM	1	24	22.07	22.28	21.87
5	16QAM	12	0	20.02	20.25	20.04
5	16QAM	12	6	20.02	20.24	20.03
5	16QAM	12	11	20.02	20.26	20.03
5	16QAM	25	0	20.03	20.24	20.01



<LTE Band 17 Conducted Power>

BW [MHz]	Modulation	RB Size	RB Offset	Power (dBm) Low Ch. / Freq.	Power (dBm) Middle Ch. / Freq.	Power (dBm) High Ch. / Freq.
Channel				23780	23790	23800
Frequency (MHz)				709	710	711
10	QPSK	1	0	23.22	22.91	23.06
10	QPSK	1	24	23.21	22.99	23.11
10	QPSK	1	49	23.26	23.21	23.19
10	QPSK	25	0	22.10	22.09	22.11
10	QPSK	25	12	22.11	22.06	22.13
10	QPSK	25	24	22.10	22.22	22.23
10	QPSK	50	0	22.14	22.16	22.16
10	16QAM	1	0	22.02	21.93	22.01
10	16QAM	1	24	22.00	21.98	22.07
10	16QAM	1	49	22.18	22.18	22.21
10	16QAM	25	0	21.12	21.10	21.12
10	16QAM	25	12	21.11	21.13	21.14
10	16QAM	25	24	21.15	21.27	21.30
10	16QAM	50	0	21.16	21.13	21.13
Channel				23755	23790	23825
Frequency (MHz)				706.5	710	713.5
5	QPSK	1	0	23.08	23.00	23.06
5	QPSK	1	12	23.05	22.93	23.11
5	QPSK	1	24	22.99	23.12	23.17
5	QPSK	12	0	22.18	22.09	22.17
5	QPSK	12	6	22.17	22.02	22.15
5	QPSK	12	11	22.10	22.05	22.19
5	QPSK	25	0	22.16	22.11	22.22
5	16QAM	1	0	22.03	21.94	22.00
5	16QAM	1	12	22.00	21.90	22.06
5	16QAM	1	24	22.03	22.08	22.11
5	16QAM	12	0	21.18	21.09	21.18
5	16QAM	12	6	21.15	21.08	21.16
5	16QAM	12	11	21.16	21.10	21.22
5	16QAM	25	0	21.14	21.11	21.18

Note: maximum average power for LTE.

3.2 Peak-to-Average Ratio

3.2.1 Description of the PAR Measurement

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

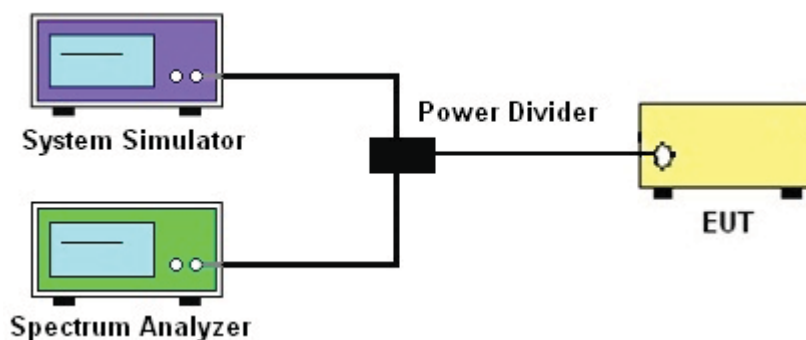
3.2.2 Measuring Instruments

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

3.2.3 Test Procedures

1. The EUT was connected to Spectrum Analyzer and Base Station via power divider.
2. For LTE operating modes:
 - a. Set the CCDF (Complementary Cumulative Distribution Function) option in spectrum analyzer.
 - b. The highest RF powers were measured and recorded the maximum PAPR level associated with a probability of 0.1 %.
3. Record the deviation as Peak to Average Ratio.

3.2.4 Test Setup



3.2.5 Test Result of Peak-to-Average Ratio

LTE Band 2						
BW [MHz]	Modulation	RB Size	RB Offset	Power (dBm) Low Ch. / Freq.	Power (dBm) Middle Ch. / Freq.	Power (dBm) High Ch. / Freq.
Channel				18700	18900	19100
Frequency (MHz)				1860	1880	1900
20	16QAM	1	0	6.09	6.51	6.12
20	16QAM	100	0	6.15	6.12	6.35

LTE Band 4						
BW [MHz]	Modulation	RB Size	RB Offset	Power (dBm) Low Ch. / Freq.	Power (dBm) Middle Ch. / Freq.	Power (dBm) High Ch. / Freq.
Channel				20050	20175	20300
Frequency (MHz)				1720	1732.5	1745
20	16QAM	1	0	5.29	6.38	4.81
20	16QAM	100	0	6.25	6.25	5.93

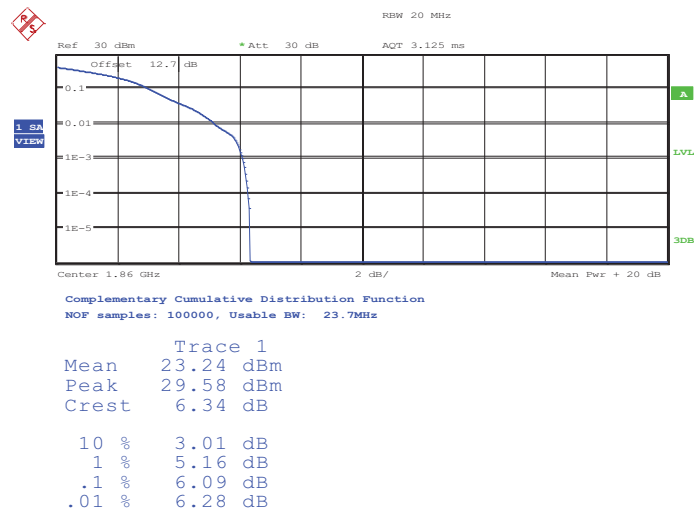
LTE Band 7						
BW [MHz]	Modulation	RB Size	RB Offset	Power (dBm) Low Ch. / Freq.	Power (dBm) Middle Ch. / Freq.	Power (dBm) High Ch. / Freq.
Channel				20850	21100	21350
Frequency (MHz)				2510	2535	2560
20	16QAM	1	0	5.16	5.22	5.74
20	16QAM	100	0	6.22	6.35	6.35

LTE Band 17						
BW [MHz]	Modulation	RB Size	RB Offset	Power (dBm) Low Ch. / Freq.	Power (dBm) Middle Ch. / Freq.	Power (dBm) High Ch. / Freq.
Channel				23780	23790	23800
Frequency (MHz)				709	710	711
10	16QAM	1	0	5.99	6.19	6.25
10	16QAM	50	0	6.47	6.41	6.41

3.2.6 Peak to Average Power Ratio

Peak-to-Average Ratio on LTE Band 2

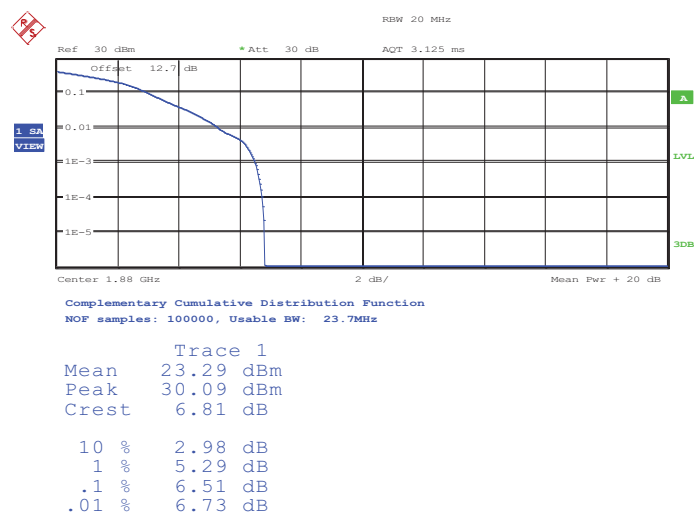
20MHz / 16QAM in Ch. 18700 (1RB Size)



Date: 14.APR.2014 14:57:20

Peak-to-Average Ratio on LTE Band 2

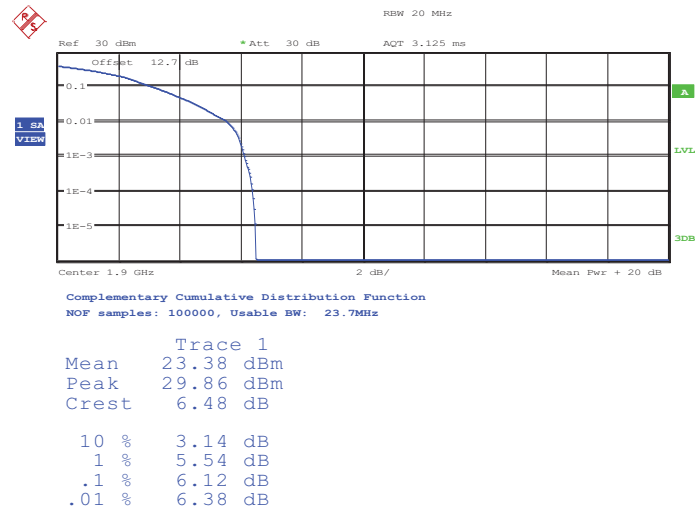
20MHz / 16QAM in Ch. 18900 (1RB Size)



Date: 14.APR.2014 15:00:00

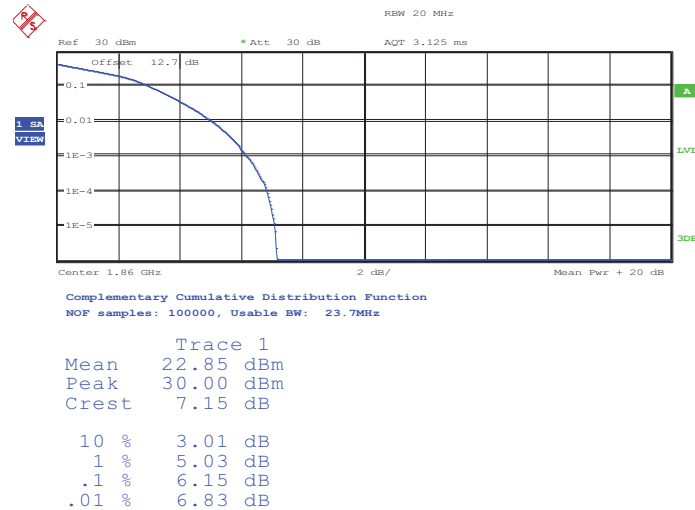


Peak-to-Average Ratio on LTE Band 2
20MHz / 16QAM in Ch. 19100 (1RB Size)



Date: 14.APR.2014 15:00:31

Peak-to-Average Ratio on LTE Band 2
20MHz / 16QAM in Ch. 18700 (100RB Size)

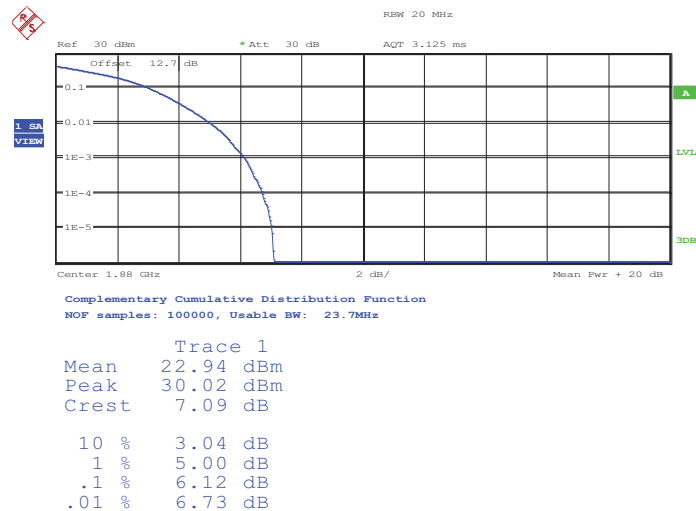


Date: 14.APR.2014 14:58:47



Peak-to-Average Ratio on LTE Band 2

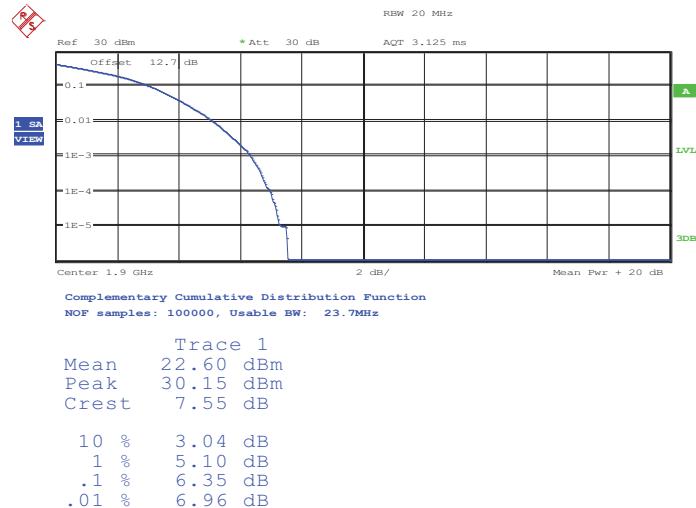
20MHz / 16QAM in Ch. 18900 (100RB Size)



Date: 14.APR.2014 14:59:18

Peak-to-Average Ratio on LTE Band 2

20MHz / 16QAM in Ch. 19100 (100RB Size)



Date: 14.APR.2014 15:00:59

Note: The total loss is 12.7 dB of the RF cable and attenuator for LTE Band

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IC: 4170B-PM0771

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Report Issued Date : Jun. 09, 2014

Report Version : Rev. 01

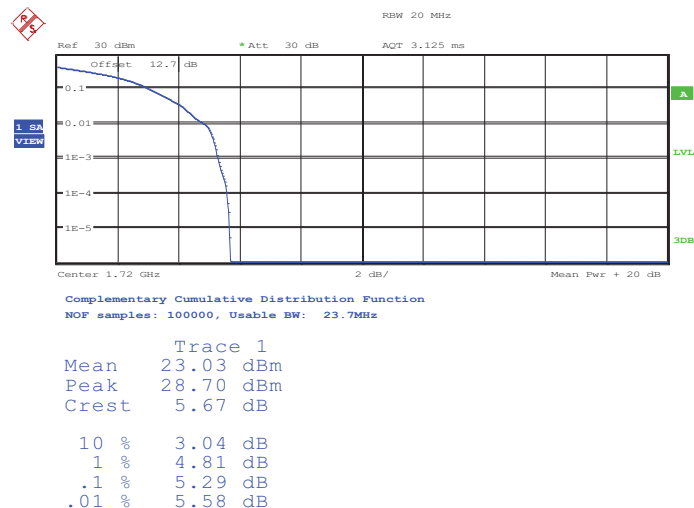
Report Template No.: BU5-FGLTE Version 1.0



2, and has been compensated to the spectrum analyzer offset.

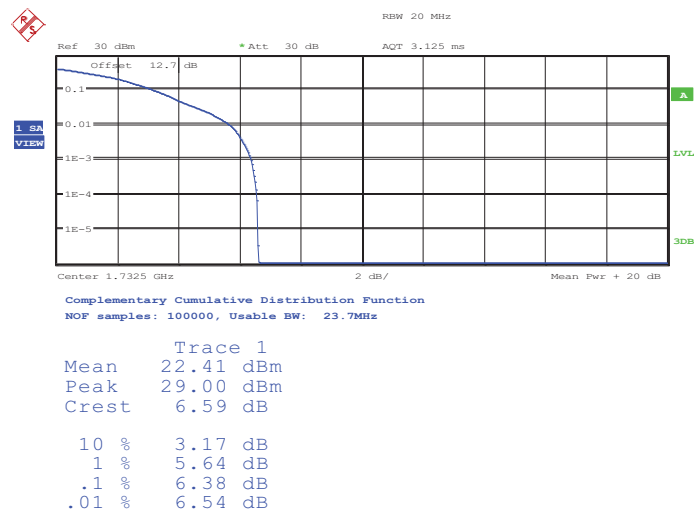


Peak-to-Average Ratio on LTE Band 4
20MHz / 16QAM in Ch. 20050 (1RB Size)



Date: 14.APR.2014 15:10:12

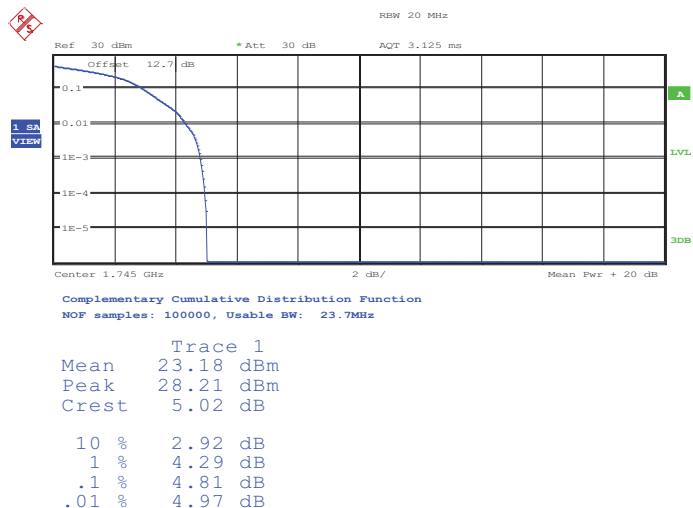
Peak-to-Average Ratio on LTE Band 4
20MHz / 16QAM in Ch. 20175 (1RB Size)



Date: 14.APR.2014 15:10:51

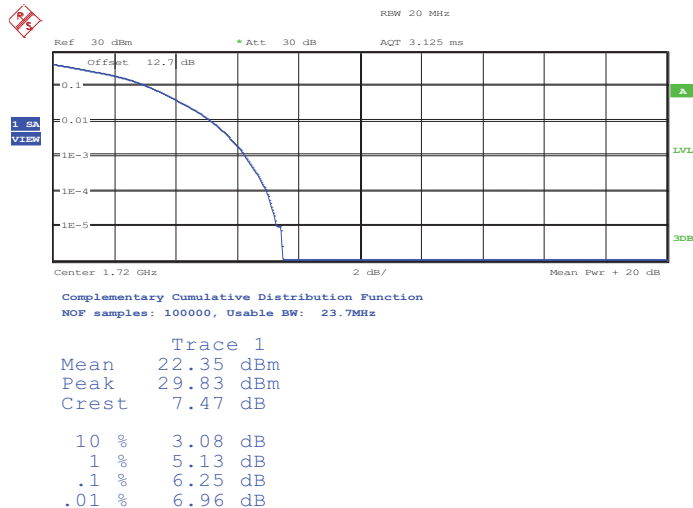


Peak-to-Average Ratio on LTE Band 4
20MHz / 16QAM in Ch. 20300 (1RB Size)



Date: 14.APR.2014 15:13:29

Peak-to-Average Ratio on LTE Band 4
20MHz / 16QAM in Ch. 20050 (100RB Size)

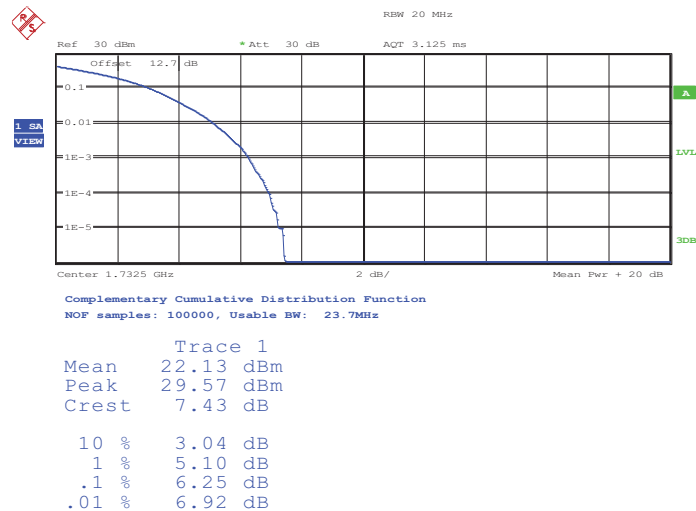


Date: 14.APR.2014 15:09:28



Peak-to-Average Ratio on LTE Band 4

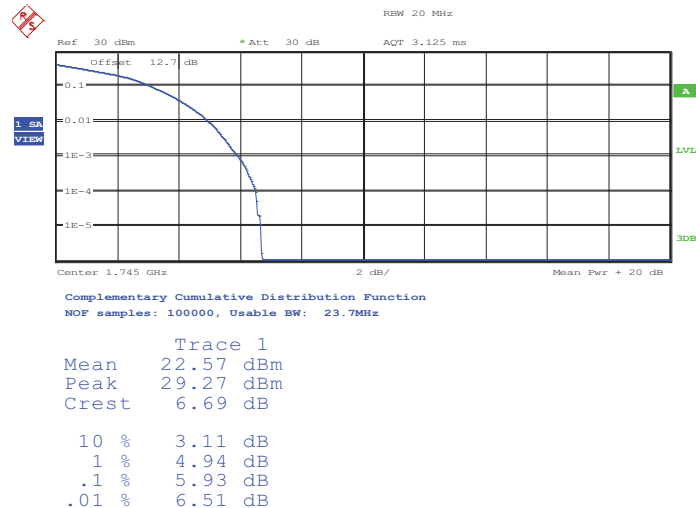
20MHz / 16QAM in Ch. 20175 (100RB Size)



Date: 14.APR.2014 15:11:26

Peak-to-Average Ratio on LTE Band 4

20MHz / 16QAM in Ch. 20300 (100RB Size)



Date: 14.APR.2014 15:12:13

Note: The total loss is 12.7 dB of the RF cable and attenuator for LTE Band

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FCC ID : PY7PM-0771

IC: 4170B-PM0771

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Report Issued Date : Jun. 09, 2014

Report Version : Rev. 01

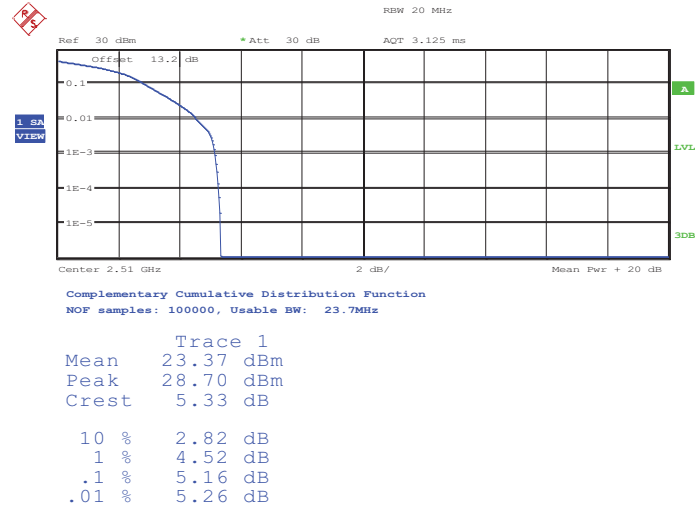
Report Template No.: BU5-FGLTE Version 1.0



4, and has been compensated to the spectrum analyzer offset.

Peak-to-Average Ratio on LTE Band 7

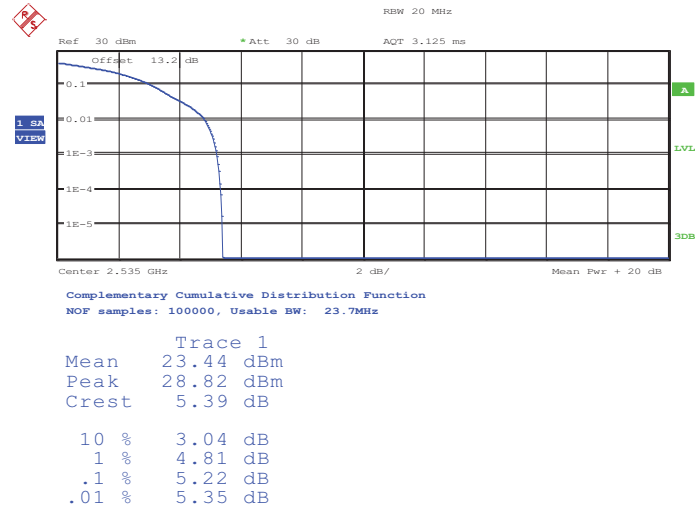
20MHz / 16QAM in Ch. 20850 (1RB Size)



Date: 14.APR.2014 15:14:52

Peak-to-Average Ratio on LTE Band 7

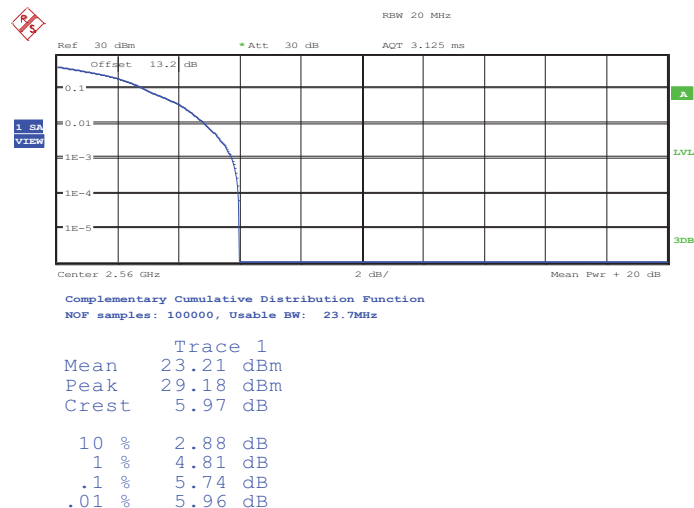
20MHz / 16QAM in Ch. 21100 (1RB Size)



Date: 14.APR.2014 15:16:42

Peak-to-Average Ratio on LTE Band 7

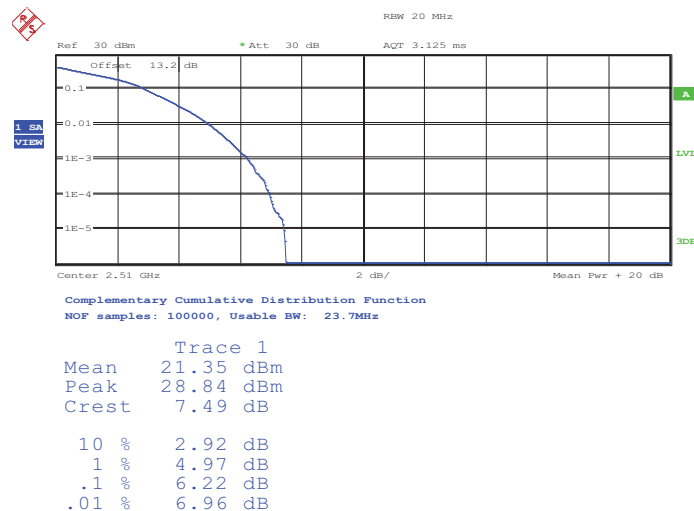
20MHz / 16QAM in Ch. 21350 (1RB Size)



Date: 14.APR.2014 15:17:36

Peak-to-Average Ratio on LTE Band 7

20MHz / 16QAM in Ch. 20850 (100RB Size)

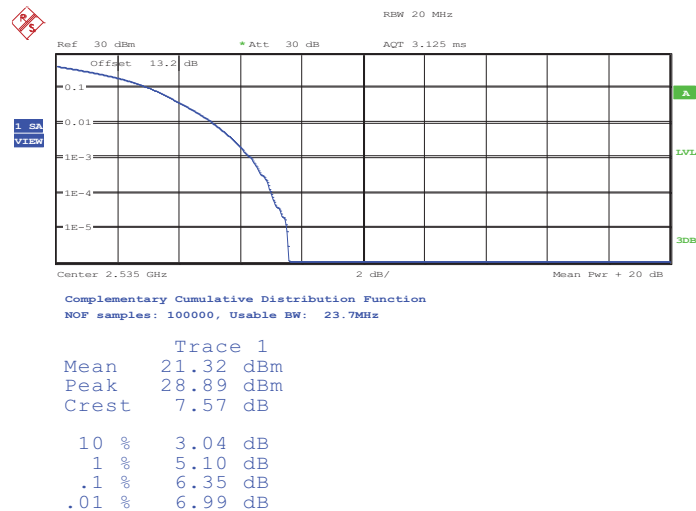


Date: 14.APR.2014 15:15:41



Peak-to-Average Ratio on LTE Band 7

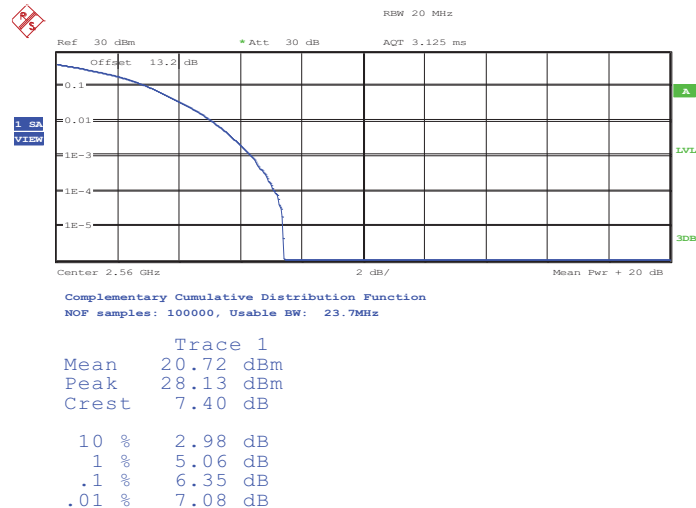
20MHz / 16QAM in Ch. 21100 (100RB Size)



Date: 14.APR.2014 15:16:11

Peak-to-Average Ratio on LTE Band 7

20MHz / 16QAM in Ch. 21350 (100RB Size)



Date: 14.APR.2014 15:18:03

Note: The total loss is 13.2 dB of the RF cable and attenuator for LTE Band

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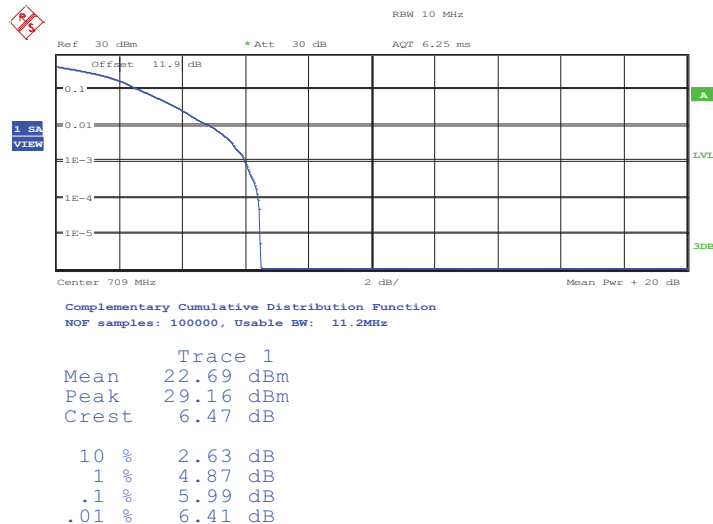


7, and has been compensated to the spectrum analyzer offset.



Peak-to-Average Ratio on LTE Band 17

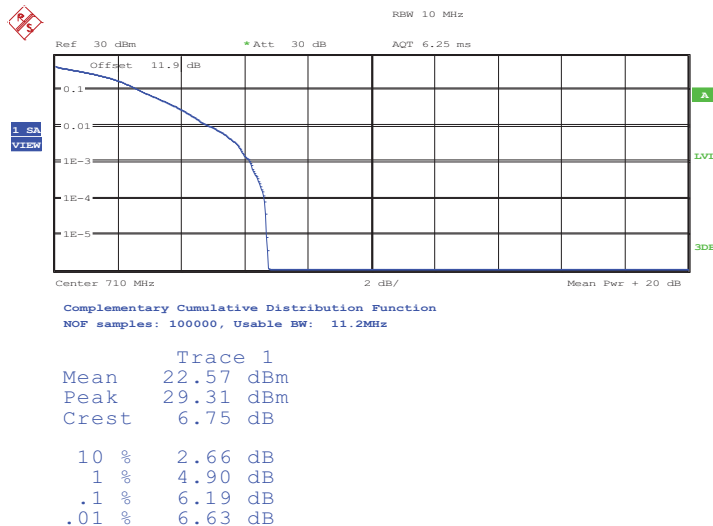
10MHz / 16QAM in Ch. 23780 (1RB Size)



Date: 14.APR.2014 15:20:06

Peak-to-Average Ratio on LTE Band 17

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

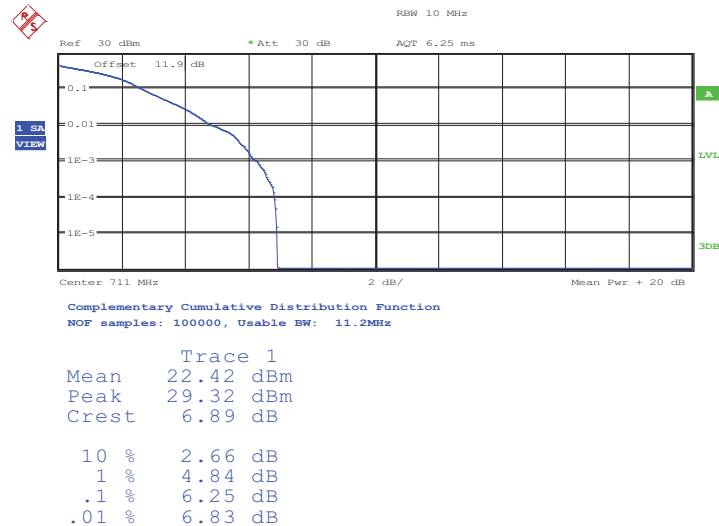


Date: 14.APR.2014 15:20:31



Peak-to-Average Ratio on LTE Band 17

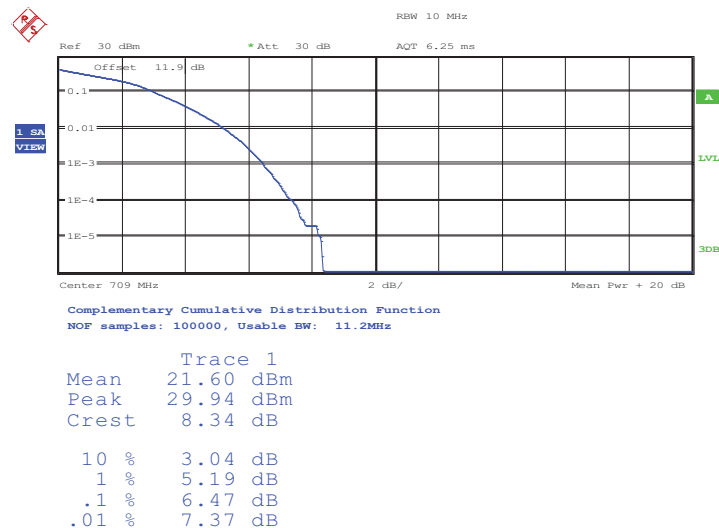
10MHz / 16QAM in Ch. 23800 (1RB Size)



Date: 14.APR.2014 15:22:23

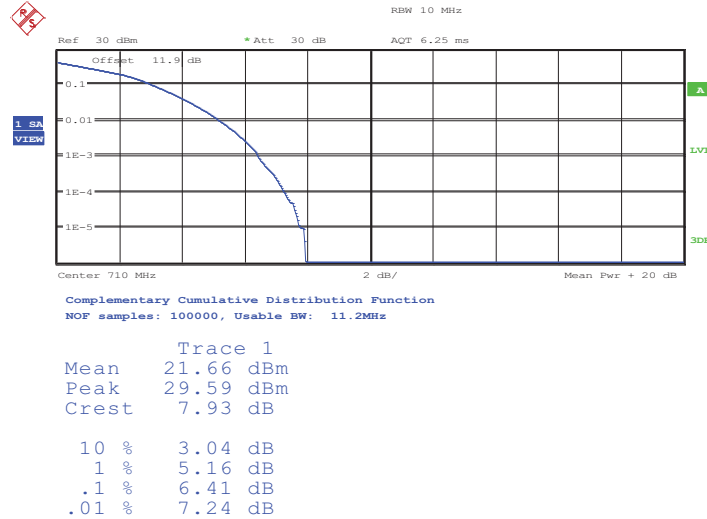
Peak-to-Average Ratio on LTE Band 17

10MHz / 16QAM in Ch. 23780 (50RB Size)



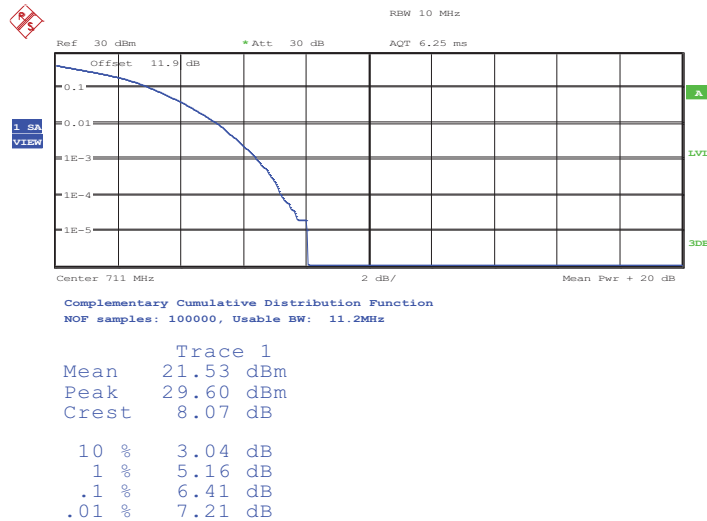
Date: 14.APR.2014 15:19:41

Peak-to-Average Ratio on LTE Band 17
10MHz / 16QAM in Ch. 23790 (50RB Size)



Date: 14.APR.2014 15:21:06

Peak-to-Average Ratio on LTE Band 17
10MHz / 16QAM in Ch. 23800 (50RB Size)



Date: 14.APR.2014 15:21:49

Note: The total loss is 11.9 dB of the RF cable and attenuator for LTE Band 17,



and has been compensated to the spectrum analyzer offset.

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 3 watts with LTE band 17.

Equivalent isotropic radiated power output measurements by substitution method according to ANSI / TIA / EIA-603-C-2004, and the spectrum analyzer configuration follows KDB 971168 D01 Power Meas. License Digital Systems v02r01. Mobile and portable (hand-held) stations operating are limited to average EIRP of 2 watts with LTE band 2 / 7 and 1 watt with LTE band 4.

3.3.2 Measuring Instruments

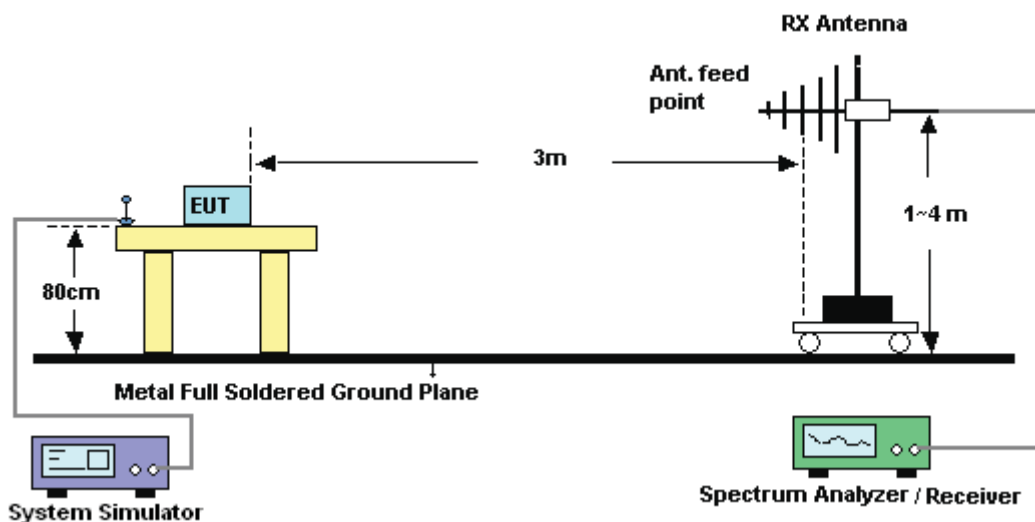
The measuring equipment is listed in the section 4 of this test report.

3.3.3 Test Procedures

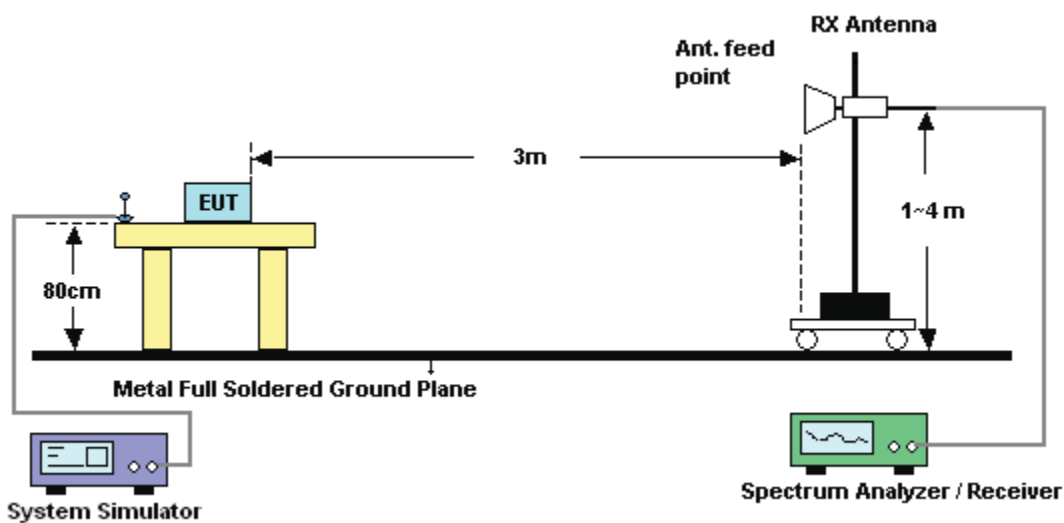
1. The EUT was placed on a non-conductive rotating platform with 0.8 meter height in a semi-anechoic chamber. The radiated emission at the fundamental frequency was measured at 3 m with a test antenna and a spectrum analyzer which used a channel power option across EUT's signal bandwidth per section 4.0 of KDB 971168 D01.
2. During the measurement, the EUT was enforced in maximum power and linked with a base station. The highest emission was recorded from analyzer power level (LVL) from the 360 degrees rotation of the turntable and the test antenna raised and lowered over a range from 1 to 4 meters in both horizontally and vertically polarized orientations.
3. Effective Isotropic Radiated Power (EIRP) was measured by substitution method according to TIA/EIA-603-C. The EUT was replaced by dipole antenna (substitution antenna) at same location, and then a known power from S.G. was applied into the dipole antenna through a Tx cable, and then recorded the maximum Analyzer reading through raised and lowered the test antenna. The correction factor (in dB) = S.G. - Tx Cable loss + Substitution antenna gain - Analyzer reading. Then the EUT's EIRP was calculated with the correction factor, $EIRP = LVL + \text{Correction factor}$ and $ERP = EIRP - 2.15$.

3.3.4 Test Setup

For Effective Radiated Power



For Equivalent Isotropic Radiated Power



3.3.5 Test Result of ERP/EIRP

LTE Band 2 Radiated Power EIRP for BW 1.4MHz / QPSK				
Horizontal Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1850.7	-22.20	45.68	23.48	0.22
1880.0	-22.38	46.01	23.63	0.23
1909.3	-22.65	45.76	23.11	0.20
Vertical Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1850.7	-27.99	49.18	21.19	0.13
1880.0	-27.50	50.42	22.92	0.20
1909.3	-26.77	48.94	22.17	0.16

LTE Band 2 Radiated Power EIRP for BW 1.4MHz / 16QAM				
Horizontal Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1850.7	-23.42	45.68	22.26	0.17
1880.0	-23.54	46.01	22.47	0.18
1909.3	-23.96	45.76	21.80	0.15
Vertical Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1850.7	-28.88	49.18	20.30	0.11
1880.0	-28.59	50.42	21.83	0.15
1909.3	-27.35	48.94	21.59	0.14

LTE Band 2 Radiated Power EIRP for BW 3MHz / QPSK				
Horizontal Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1851.5	-22.66	45.76	23.10	0.20
1880.0	-22.27	46.01	23.74	0.24
1908.5	-21.97	45.95	23.98	0.25
Vertical Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1851.5	-26.83	49.03	22.20	0.17
1880.0	-27.07	50.42	23.35	0.22
1908.5	-26.99	48.86	21.87	0.15

LTE Band 2 Radiated Power EIRP for BW 3MHz / 16QAM				
Horizontal Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1851.5	-23.46	45.76	22.30	0.17
1880.0	-23.49	46.01	22.52	0.18
1908.5	-23.54	45.95	22.41	0.17
Vertical Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1851.5	-28.04	49.03	20.99	0.13
1880.0	-28.83	50.42	21.59	0.14
1908.5	-27.55	48.86	21.31	0.14

LTE Band 2 Radiated Power EIRP for BW 5MHz / QPSK				
Horizontal Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1852.5	-22.73	46.11	23.38	0.22
1880.0	-22.48	46.04	23.56	0.23
1907.5	-23.28	46.14	22.86	0.19
Vertical Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1852.5	-27.78	49.17	21.39	0.14
1880.0	-27.54	50.42	22.88	0.19
1907.5	-26.62	48.78	22.16	0.16

LTE Band 2 Radiated Power EIRP for BW 5MHz / 16QAM				
Horizontal Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1852.5	-23.26	46.11	22.85	0.19
1880.0	-23.03	46.04	23.01	0.20
1907.5	-24.73	46.14	21.41	0.14
Vertical Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1852.5	-28.29	49.17	20.88	0.12
1880.0	-28.32	50.42	22.10	0.16
1907.5	-27.56	48.78	21.22	0.13

LTE Band 2 Radiated Power EIRP for BW 10MHz / QPSK				
Horizontal Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1855.0	-22.94	46.10	23.16	0.21
1880.0	-22.28	46.01	23.73	0.24
1905.0	-23.39	46.39	23.00	0.20
Vertical Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1855.0	-27.90	49.73	21.83	0.15
1880.0	-27.20	50.42	23.22	0.21
1905.0	-25.73	48.30	22.57	0.18

LTE Band 2 Radiated Power EIRP for BW 10MHz / 16QAM				
Horizontal Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1855.0	-23.94	46.10	22.16	0.16
1880.0	-23.38	46.01	22.63	0.18
1905.0	-24.38	46.39	22.01	0.16
Vertical Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1855.0	-28.82	49.73	20.91	0.12
1880.0	-28.45	50.42	21.97	0.16
1905.0	-26.85	48.30	21.45	0.14

LTE Band 2 Radiated Power EIRP for BW 15MHz / QPSK				
Horizontal Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1857.5	-22.38	46.24	23.86	0.24
1880.0	-22.57	46.01	23.44	0.22
1902.5	-23.58	46.18	22.60	0.18
Vertical Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1857.5	-26.74	49.68	22.94	0.20
1880.0	-27.16	50.42	23.26	0.21
1902.5	-26.81	48.20	21.39	0.14

LTE Band 2 Radiated Power EIRP for BW 15MHz / 16QAM				
Horizontal Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1857.5	-23.29	46.24	22.95	0.20
1880.0	-23.76	46.01	22.25	0.17
1902.5	-24.22	46.18	21.96	0.16
Vertical Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1857.5	-27.62	49.68	22.06	0.16
1880.0	-28.19	50.42	22.23	0.17
1902.5	-27.15	48.20	21.05	0.13

LTE Band 2 Radiated Power EIRP for BW 20MHz / QPSK				
Horizontal Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1860.0	-23.39	46.88	23.49	0.22
1880.0	-22.57	46.01	23.44	0.22
1900.0	-23.32	46.57	23.25	0.21
Vertical Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1860.0	-26.86	49.69	22.83	0.19
1880.0	-27.33	50.42	23.09	0.20
1900.0	-26.00	48.87	22.87	0.19

LTE Band 2 Radiated Power EIRP for BW 20MHz / 16QAM				
Horizontal Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1860.0	-24.99	46.88	21.89	0.15
1880.0	-24.00	46.01	22.01	0.16
1900.0	-24.79	46.57	21.78	0.15
Vertical Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1860.0	-28.57	49.69	21.12	0.13
1880.0	-28.62	50.42	21.80	0.15
1900.0	-27.34	48.87	21.53	0.14

LTE Band 4 Radiated Power EIRP for BW 1.4MHz / QPSK				
Horizontal Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1710.70	-21.58	43.43	21.85	0.15
1732.50	-21.57	43.34	21.77	0.15
1754.30	-20.56	43.65	23.09	0.20
Vertical Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1710.70	-28.08	46.93	18.85	0.08
1732.50	-28.86	46.19	17.33	0.05
1754.30	-28.12	47.3	19.18	0.08

LTE Band 4 Radiated Power EIRP for BW 1.4MHz / 16QAM				
Horizontal Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1710.70	-22.66	43.43	20.77	0.12
1732.50	-22.29	43.34	21.05	0.13
1754.30	-21.45	43.65	22.20	0.17
Vertical Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1710.70	-29.08	46.93	17.85	0.06
1732.50	-29.79	46.19	16.40	0.04
1754.30	-29.32	47.3	17.98	0.06

LTE Band 4 Radiated Power EIRP for BW 3MHz / QPSK				
Horizontal Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1711.50	-20.13	43.38	23.25	0.21
1732.50	-19.68	43.34	23.66	0.23
1753.50	-19.12	43.51	24.39	0.27
Vertical Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1711.50	-28.10	46.65	18.55	0.07
1732.50	-29.23	46.19	16.96	0.05
1753.50	-28.64	47.65	19.01	0.08

LTE Band 4 Radiated Power EIRP for BW 3MHz / 16QAM				
Horizontal Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1711.50	-21.16	43.38	22.22	0.17
1732.50	-20.54	43.34	22.80	0.19
1753.50	-20.45	43.51	23.06	0.20
Vertical Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1711.50	-29.39	46.65	17.26	0.05
1732.50	-30.13	46.19	16.06	0.04
1753.50	-29.87	47.65	17.78	0.06

LTE Band 4 Radiated Power EIRP for BW 5MHz / QPSK				
Horizontal Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1712.50	-20.03	42.75	22.72	0.19
1732.50	-19.98	43.34	23.36	0.22
1752.50	-19.96	43.28	23.32	0.21
Vertical Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1712.50	-28.25	46.26	18.01	0.06
1732.50	-29.51	46.19	16.68	0.05
1752.50	-29.07	47.72	18.65	0.07

LTE Band 4 Radiated Power EIRP for BW 5MHz / 16QAM				
Horizontal Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1712.50	-21.34	42.75	21.41	0.14
1732.50	-20.92	43.34	22.42	0.17
1752.50	-21.09	43.28	22.19	0.17
Vertical Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1712.50	-29.30	46.26	16.96	0.05
1732.50	-30.36	46.19	15.83	0.04
1752.50	-30.18	47.72	17.54	0.06

LTE Band 4 Radiated Power EIRP for BW 10MHz / QPSK				
Horizontal Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1715.00	-20.32	42.22	21.90	0.15
1732.50	-19.96	43.34	23.38	0.22
1750.00	-20.11	44.37	24.26	0.27
Vertical Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1715.00	-29.47	45.79	16.32	0.04
1732.50	-29.05	46.19	17.14	0.05
1750.00	-29.15	47.21	18.06	0.06

LTE Band 4 Radiated Power EIRP for BW 10MHz / 16QAM				
Horizontal Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1715.00	-21.47	42.22	20.75	0.12
1732.50	-20.66	43.34	22.68	0.19
1750.00	-20.68	44.37	23.69	0.23
Vertical Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1715.00	-30.56	45.79	15.23	0.03
1732.50	-29.99	46.19	16.20	0.04
1750.00	-30.19	47.21	17.02	0.05

LTE Band 4 Radiated Power EIRP for BW 15MHz / QPSK				
Horizontal Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1717.50	-20.18	42.93	22.75	0.19
1732.50	-19.67	43.34	23.67	0.23
1747.50	-19.95	43.58	23.63	0.23
Vertical Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1717.50	-29.80	46.52	16.72	0.05
1732.50	-29.08	46.19	17.11	0.05
1747.50	-29.49	47.08	17.59	0.06

LTE Band 4 Radiated Power EIRP for BW 15MHz / 16QAM				
Horizontal Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1717.50	-21.19	42.93	21.74	0.15
1732.50	-20.24	43.34	23.10	0.20
1747.50	-20.83	43.58	22.75	0.19
Vertical Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1717.50	-30.88	46.52	15.64	0.04
1732.50	-29.64	46.19	16.55	0.05
1747.50	-30.19	47.08	16.89	0.05

LTE Band 4 Radiated Power EIRP for BW 20MHz / QPSK				
Horizontal Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1720.00	-20.28	43.42	23.14	0.21
1732.50	-19.58	43.34	23.76	0.24
1745.00	-19.91	43.62	23.71	0.23
Vertical Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1720.00	-30.22	46.18	15.96	0.04
1732.50	-29.67	46.19	16.52	0.04
1745.00	-29.98	46.54	16.56	0.05

LTE Band 4 Radiated Power EIRP for BW 20MHz / 16QAM				
Horizontal Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1720.00	-21.11	43.42	22.31	0.17
1732.50	-20.21	43.34	23.13	0.21
1745.00	-20.88	43.62	22.74	0.19
Vertical Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1720.00	-31.43	46.18	14.75	0.03
1732.50	-30.18	46.19	16.01	0.04
1745.00	-30.28	46.54	16.26	0.04

LTE Band 7 Radiated Power EIRP for BW 5MHz / QPSK				
Horizontal Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
2502.5	-23.72	46.44	22.72	0.19
2535.0	-23.59	46.85	23.26	0.21
2567.5	-24.65	46.93	22.28	0.17
Vertical Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
2502.5	-30.24	48.49	18.25	0.07
2535.0	-30.47	47.50	17.03	0.05
2567.5	-30.71	48.26	17.55	0.06

LTE Band 7 Radiated Power EIRP for BW 5MHz / 16QAM				
Horizontal Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
2502.5	-24.70	46.44	21.74	0.15
2535.0	-24.86	46.85	21.99	0.16
2567.5	-25.84	46.93	21.09	0.13
Vertical Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
2502.5	-31.37	48.49	17.12	0.05
2535.0	-31.62	47.50	15.88	0.04
2567.5	-31.57	48.26	16.69	0.05

LTE Band 7 Radiated Power EIRP for BW 10MHz / QPSK				
Horizontal Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
2505.0	-23.79	46.38	22.59	0.18
2535.0	-23.86	46.85	22.99	0.20
2565.0	-24.19	46.89	22.70	0.19
Vertical Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
2505.0	-29.67	48.26	18.59	0.07
2535.0	-29.58	47.50	17.92	0.06
2565.0	-31.01	48.10	17.09	0.05

LTE Band 7 Radiated Power EIRP for BW 10MHz / 16QAM				
Horizontal Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
2505.0	-24.88	46.38	21.50	0.14
2535.0	-24.91	46.85	21.94	0.16
2565.0	-25.11	46.89	21.78	0.15
Vertical Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
2505.0	-30.81	48.26	17.45	0.06
2535.0	-30.68	47.50	16.82	0.05
2565.0	-31.98	48.10	16.12	0.04

LTE Band 7 Radiated Power EIRP for BW 15MHz / QPSK				
Horizontal Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
2507.5	-24.63	46.51	21.88	0.15
2535.0	-24.89	46.85	21.96	0.16
2562.5	-25.94	46.44	20.50	0.11
Vertical Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
2507.5	-29.57	47.86	18.29	0.07
2535.0	-29.50	47.50	18.00	0.06
2562.5	-30.41	48.09	17.68	0.06

LTE Band 7 Radiated Power EIRP for BW 15MHz / 16QAM				
Horizontal Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
2507.5	-25.84	46.51	20.67	0.12
2535.0	-26.00	46.85	20.85	0.12
2562.5	-27.07	46.44	19.37	0.09
Vertical Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
2507.5	-30.81	47.86	17.05	0.05
2535.0	-30.53	47.50	16.97	0.05
2562.5	-31.47	48.09	16.62	0.05

LTE Band 7 Radiated Power EIRP for BW 20MHz / QPSK				
Horizontal Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
2510.0	-24.44	46.54	22.10	0.16
2535.0	-24.17	46.85	22.68	0.19
2560.0	-25.63	46.49	20.86	0.12
Vertical Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
2510.0	-29.52	47.75	18.23	0.07
2535.0	-29.33	47.50	18.17	0.07
2560.0	-30.06	48.43	18.37	0.07

LTE Band 7 Radiated Power EIRP for BW 20MHz / 16QAM				
Horizontal Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
2510.0	-25.54	46.54	21.00	0.13
2535.0	-25.19	46.85	21.66	0.15
2560.0	-26.73	46.49	19.76	0.09
Vertical Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
2510.0	-30.67	47.75	17.08	0.05
2535.0	-30.68	47.50	16.82	0.05
2560.0	-31.30	48.43	17.13	0.05

LTE Band 17 Radiated Power ERP/EIRP for BW 5MHz / QPSK						
Horizontal Polarization						
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	ERP (dBm)	ERP (W)	EIRP (dBm)	EIRP (W)
706.50	-13.51	30.84	15.18	0.03	17.33	0.05
710.00	-12.84	30.86	15.87	0.04	18.02	0.06
713.50	-12.72	30.81	15.94	0.04	18.09	0.06
Vertical Polarization						
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	ERP (dBm)	ERP (W)	EIRP (dBm)	EIRP (W)
706.50	-18.92	34.59	13.52	0.02	15.67	0.04
710.00	-18.64	34.03	13.24	0.02	15.39	0.03
713.50	-18.94	33.68	12.59	0.02	14.74	0.03

* ERP = LVL (dBm) + Correction Factor (dB) - 2.15

LTE Band 17 Radiated Power ERP/EIRP for BW 5MHz / 16QAM						
Horizontal Polarization						
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	ERP (dBm)	ERP (W)	EIRP (dBm)	EIRP (W)
706.50	-14.72	30.84	13.97	0.02	16.12	0.04
710.00	-13.92	30.86	14.79	0.03	16.94	0.05
713.50	-13.94	30.81	14.72	0.03	16.87	0.05
Vertical Polarization						
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	ERP (dBm)	ERP (W)	EIRP (dBm)	EIRP (W)
706.50	-20.48	34.59	11.96	0.02	14.11	0.03
710.00	-20.02	34.03	11.86	0.02	14.01	0.03
713.50	-20.36	33.68	11.17	0.01	13.32	0.02

* ERP = LVL (dBm) + Correction Factor (dB) - 2.15

LTE Band 17 Radiated Power ERP/EIRP for BW 10MHz / QPSK						
Horizontal Polarization						
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	ERP (dBm)	ERP (W)	EIRP (dBm)	EIRP (W)
709.00	-12.91	30.77	15.71	0.04	17.86	0.06
710.00	-12.76	30.86	15.95	0.04	18.10	0.06
711.00	-12.70	30.82	15.97	0.04	18.12	0.06
Vertical Polarization						
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	ERP (dBm)	ERP (W)	EIRP (dBm)	EIRP (W)
709.00	-18.93	34.16	13.08	0.02	15.23	0.03
710.00	-18.98	34.03	12.90	0.02	15.05	0.03
711.00	-19.03	33.94	12.76	0.02	14.91	0.03

* ERP = LVL (dBm) + Correction Factor (dB) - 2.15

LTE Band 17 Radiated Power ERP/EIRP for BW 10MHz / 16QAM						
Horizontal Polarization						
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	ERP (dBm)	ERP (W)	EIRP (dBm)	EIRP (W)
709.00	-14.01	30.77	14.61	0.03	16.76	0.05
710.00	-13.86	30.86	14.85	0.03	17.00	0.05
711.00	-13.97	30.82	14.70	0.03	16.85	0.05
Vertical Polarization						
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	ERP (dBm)	ERP (W)	EIRP (dBm)	EIRP (W)
709.00	-19.97	34.16	12.04	0.02	14.19	0.03
710.00	-20.11	34.03	11.77	0.02	13.92	0.02
711.00	-20.19	33.94	11.60	0.01	13.75	0.02

* ERP = LVL (dBm) + Correction Factor (dB) - 2.15

3.4 Occupied Bandwidth

3.4.1 Description of Occupied Bandwidth Measurement

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

The 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.

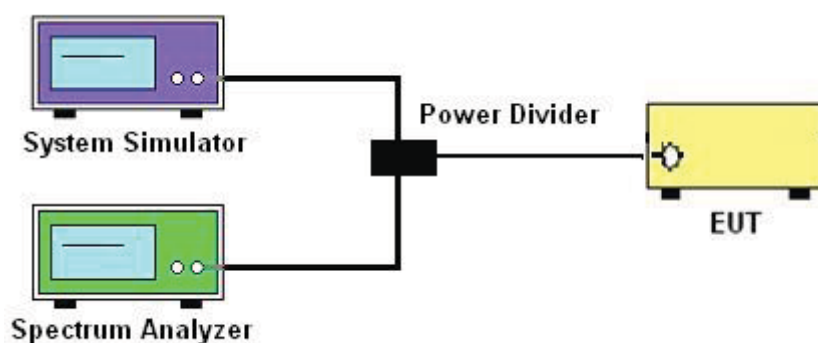
3.4.2 Measuring Instruments

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

3.4.4 Test Setup

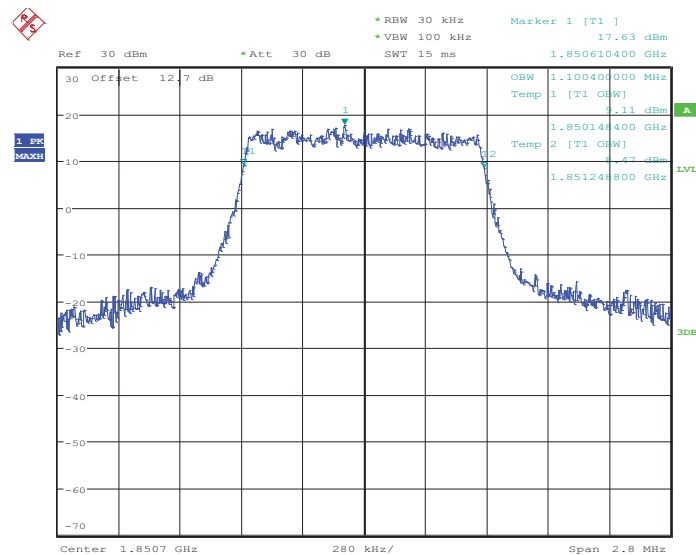




3.4.5 Test Result (Plots) of Occupied Bandwidth

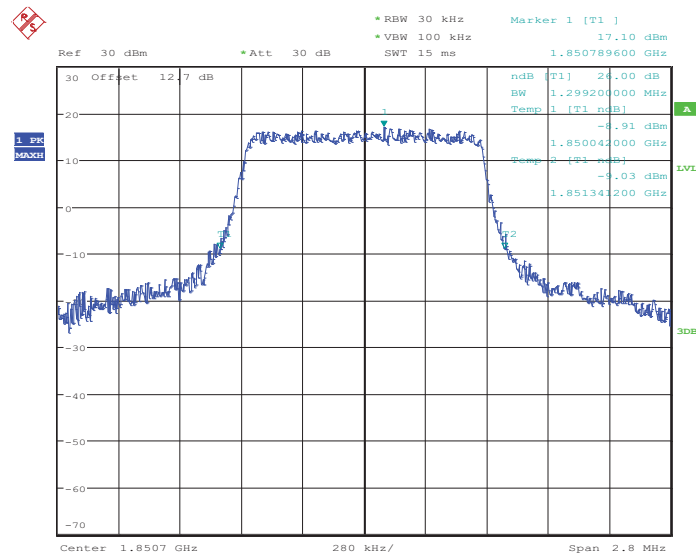
Band :	LTE Band 2	BW / Mod. :	1.4MHz / QPSK
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99% Occupied Bandwidth Plot on Channel 18607



Date: 11.APR.2014 16:37:30

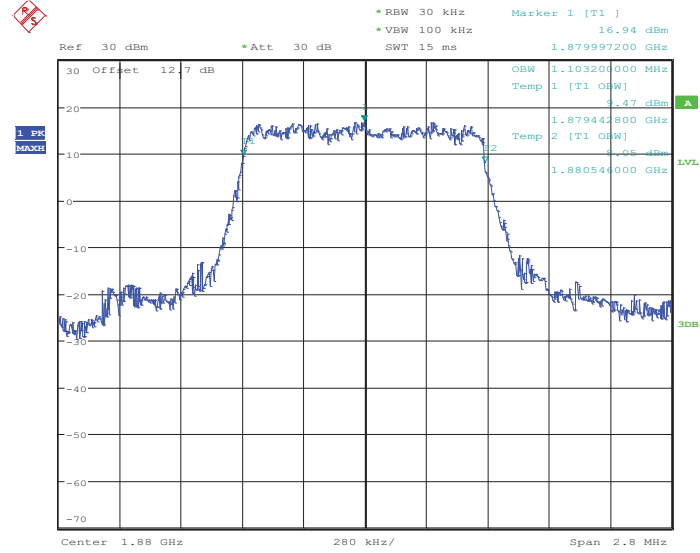
26dB Bandwidth Plot on Channel 18607



Date: 11.APR.2014 16:38:03

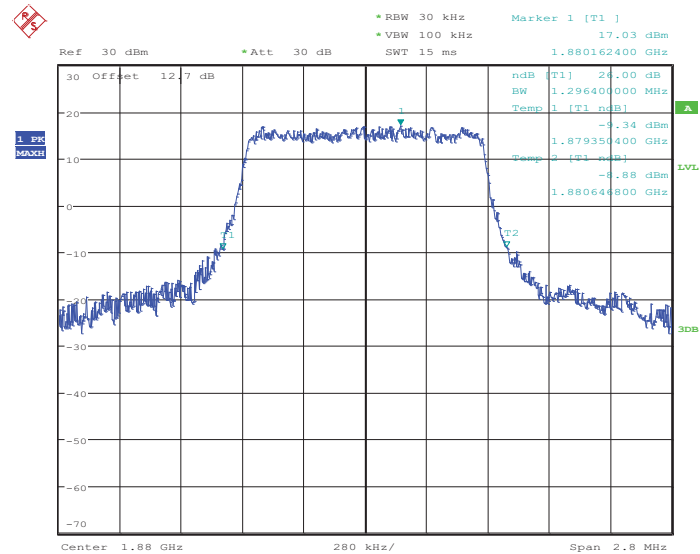


99% Occupied Bandwidth Plot on Channel 18900



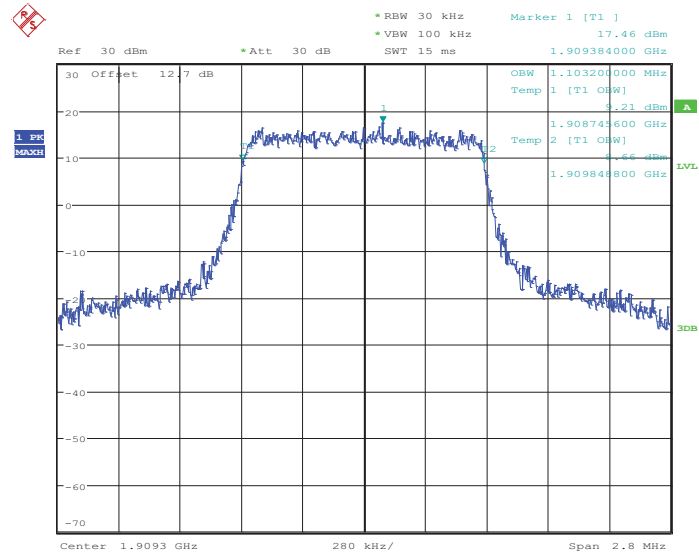
Date: 11.APR.2014 16:43:44

26dB Bandwidth Plot on Channel 18900



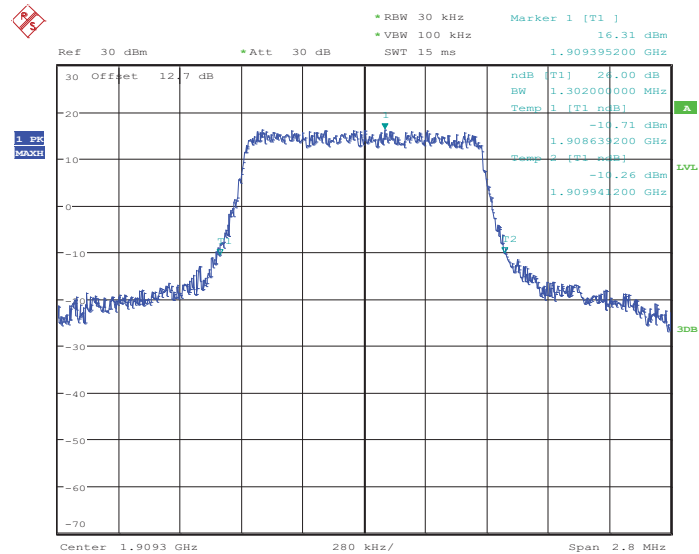
Date: 11.APR.2014 16:44:17

99% Occupied Bandwidth Plot on Channel 19193



Date: 11.APR.2014 16:46:50

26dB Bandwidth Plot on Channel 19193

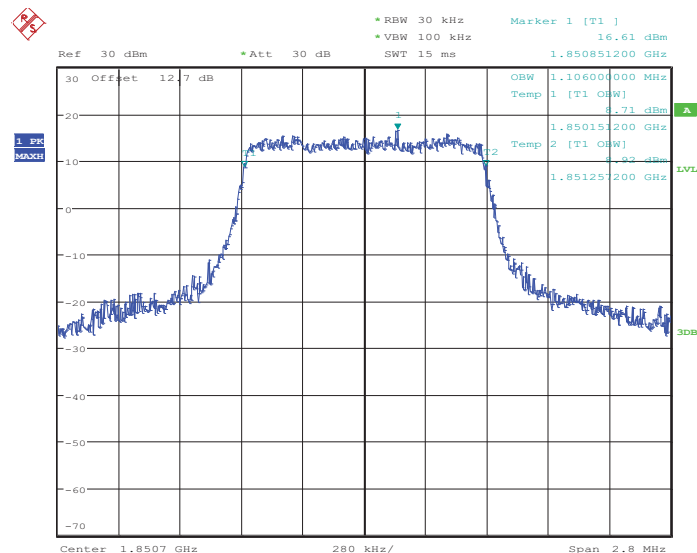


Date: 11.APR.2014 16:47:22



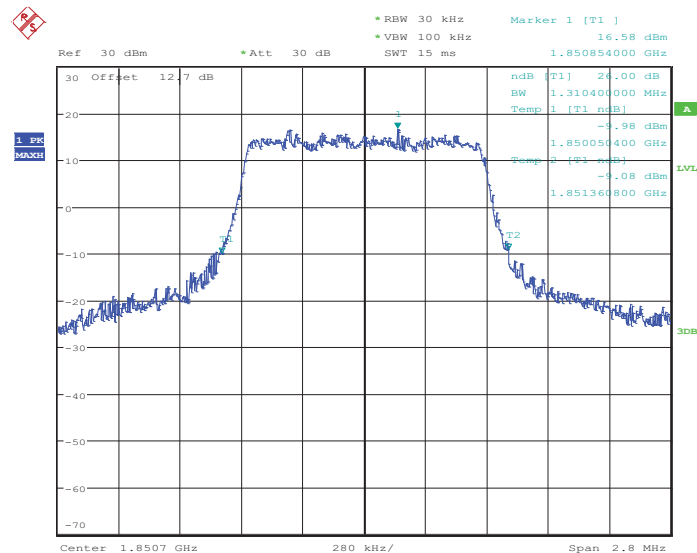
Band :	LTE Band 2	BW / Mod. :	1.4MHz / 16QAM
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99% Occupied Bandwidth Plot on Channel 18607



Date: 11.APR.2014 16:37:46

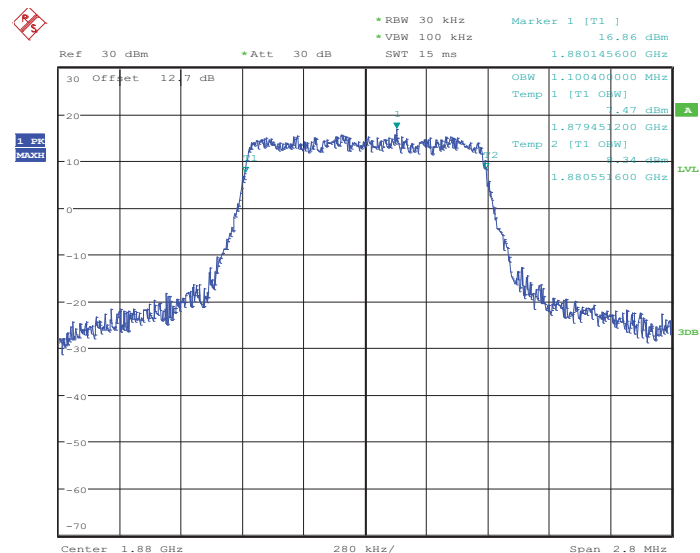
26dB Bandwidth Plot on Channel 18607



Date: 11.APR.2014 16:38:21

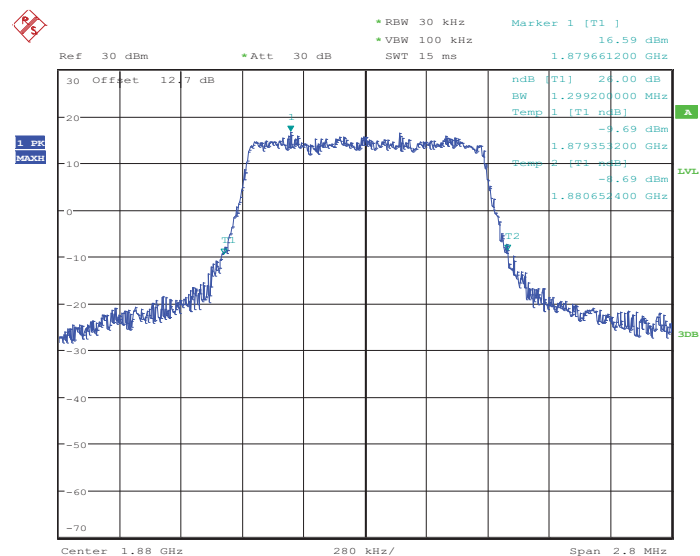


99% Occupied Bandwidth Plot on Channel 18900



Date: 11.APR.2014 16:43:59

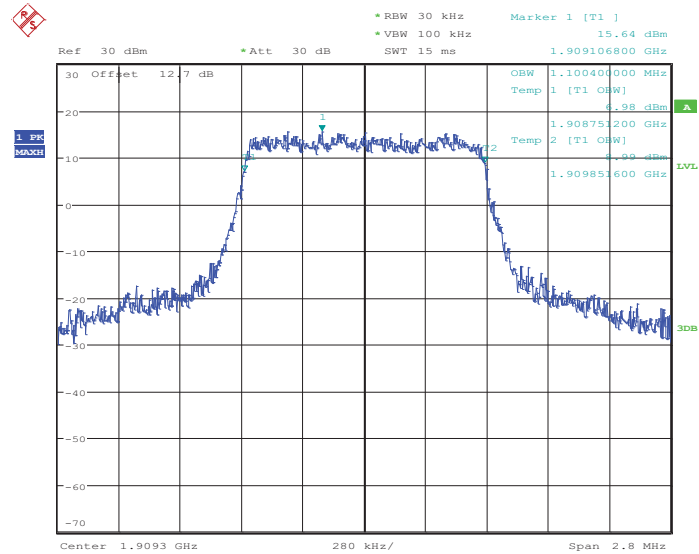
26dB Bandwidth Plot on Channel 18900



Date: 11.APR.2014 16:44:34

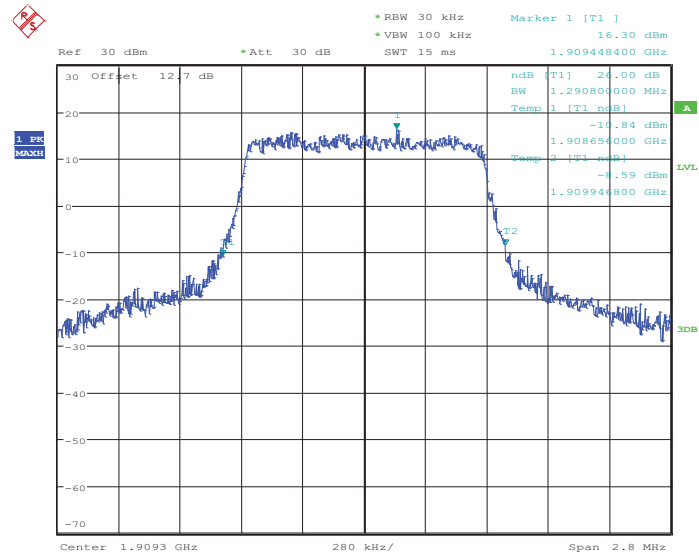


99% Occupied Bandwidth Plot on Channel 19193



Date: 11.APR.2014 16:47:05

26dB Bandwidth Plot on Channel 19193

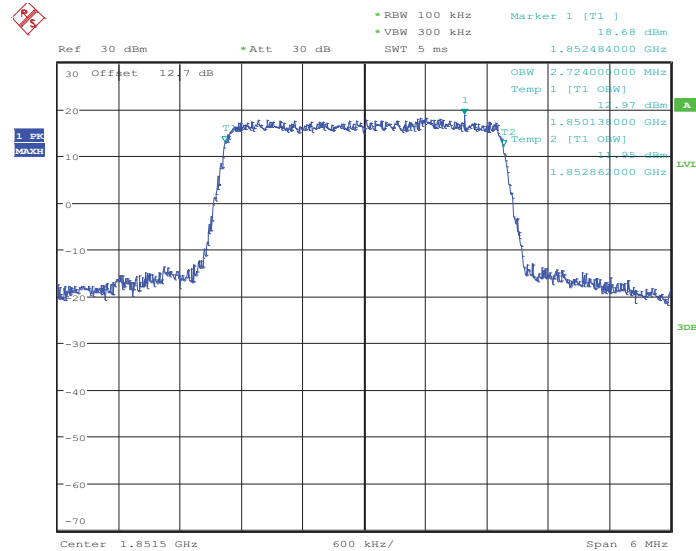


Date: 11.APR.2014 16:47:40



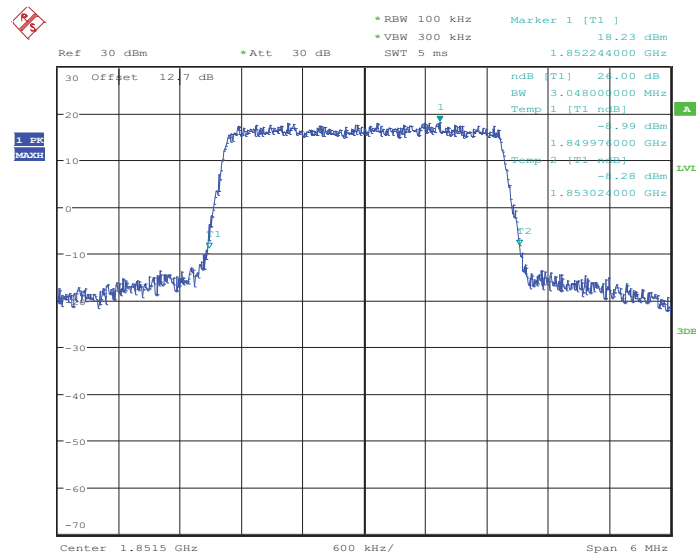
Band :	LTE Band 2	BW / Mod. :	3MHz / QPSK
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99% Occupied Bandwidth Plot on Channel 18615



Date: 11.APR.2014 17:25:52

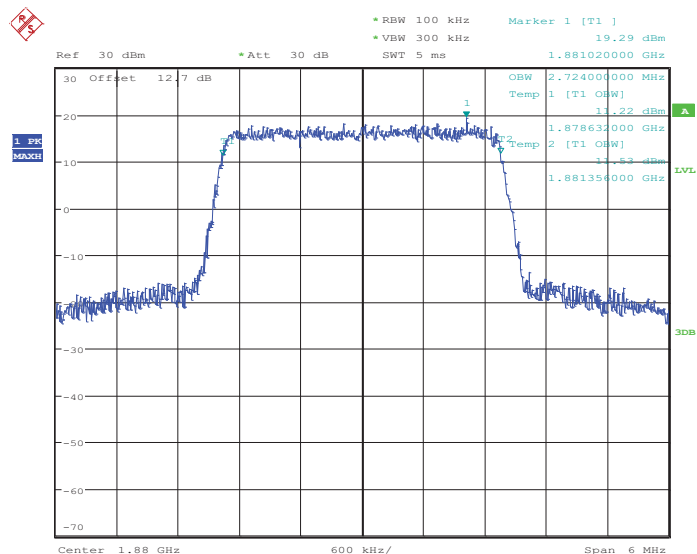
26dB Bandwidth Plot on Channel 18615



Date: 11.APR.2014 17:07:17

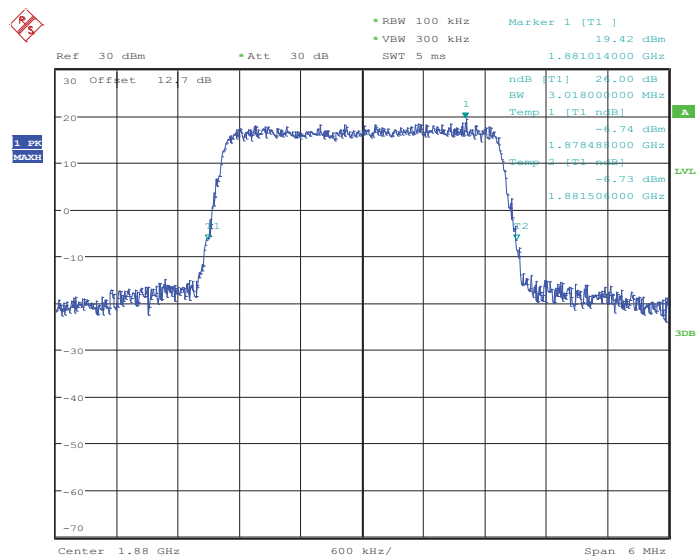


99% Occupied Bandwidth Plot on Channel 18900



Date: 11.APR.2014 17:12:58

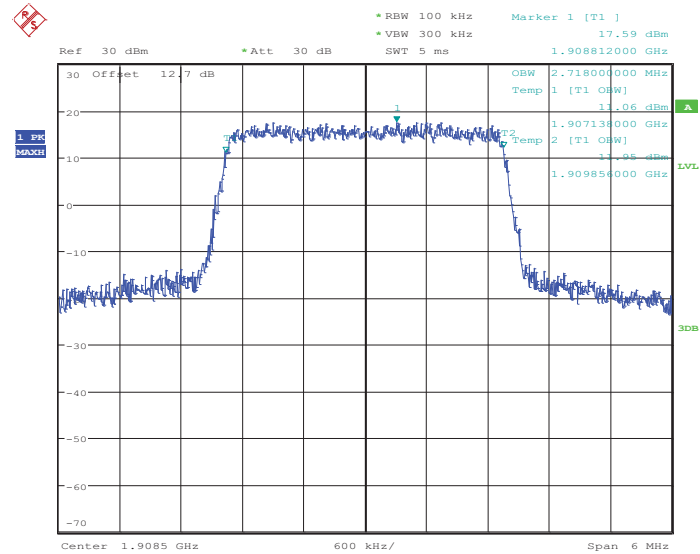
26dB Bandwidth Plot on Channel 18900



Date: 11.APR.2014 17:13:31

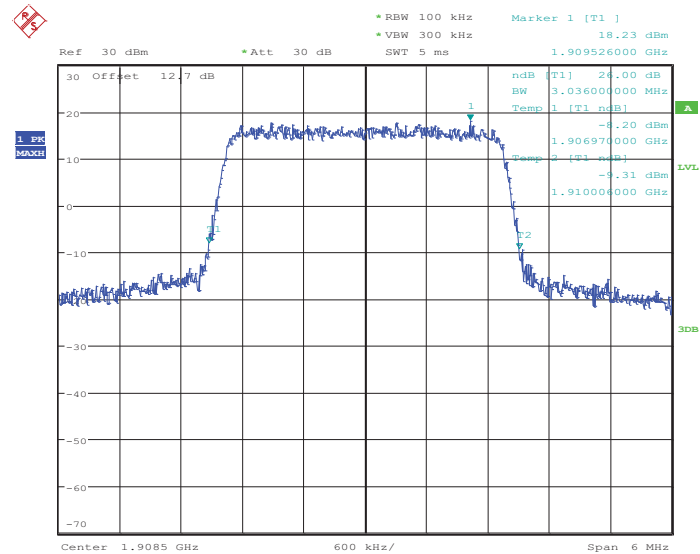


99% Occupied Bandwidth Plot on Channel 19185



Date: 11.APR.2014 17:16:02

26dB Bandwidth Plot on Channel 19185

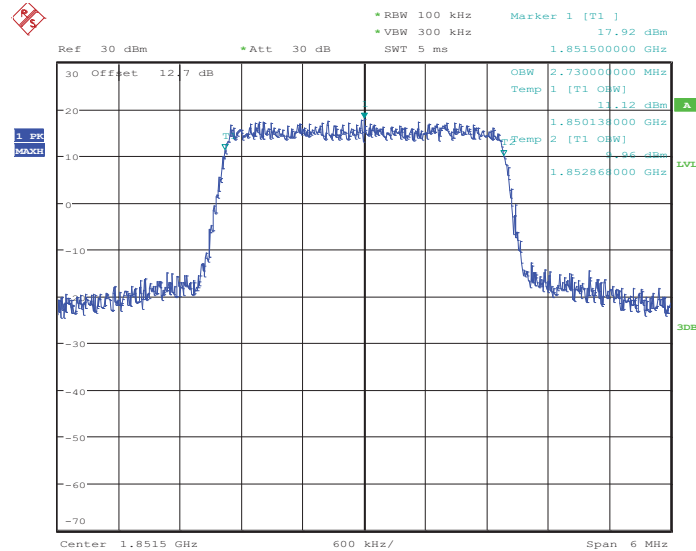


Date: 11.APR.2014 17:16:34



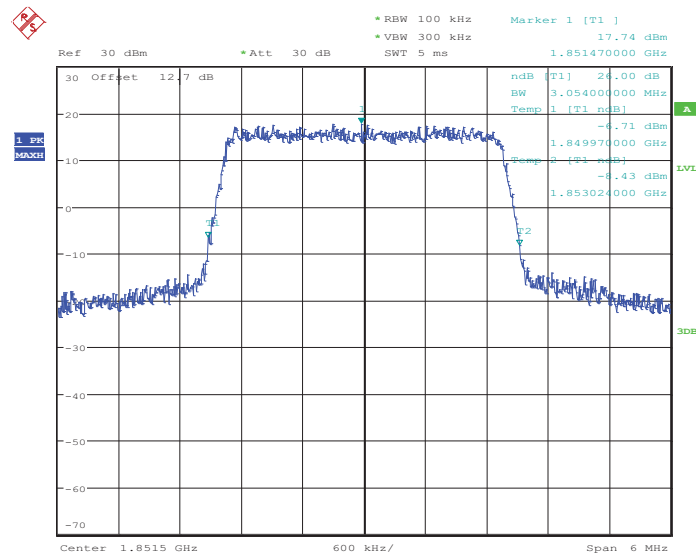
Band :	LTE Band 2	BW / Mod. :	3MHz / 16QAM
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99% Occupied Bandwidth Plot on Channel 18615



Date: 11.APR.2014 17:07:00

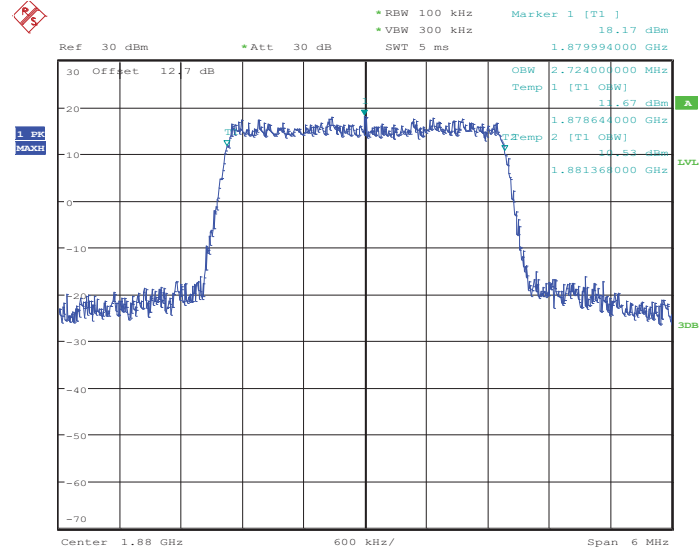
26dB Bandwidth Plot on Channel 18615



Date: 11.APR.2014 17:07:35

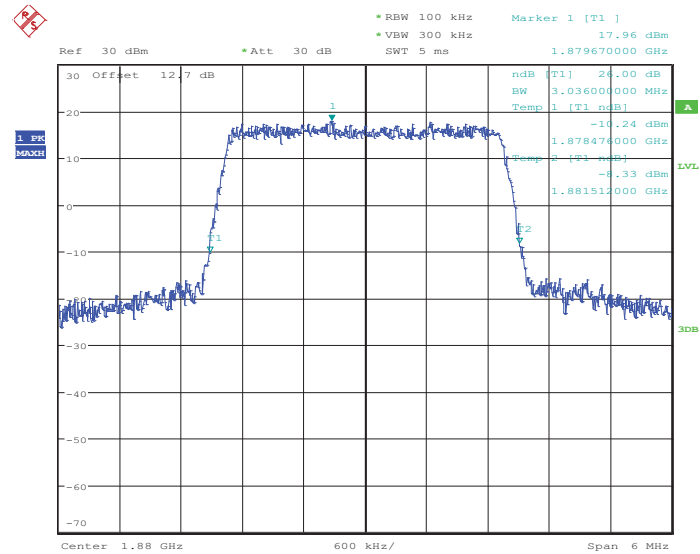


99% Occupied Bandwidth Plot on Channel 18900



Date: 11.APR.2014 17:13:13

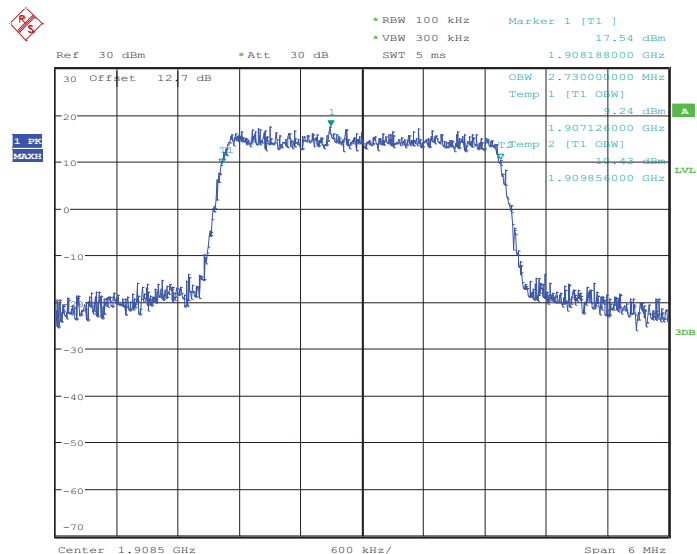
26dB Bandwidth Plot on Channel 18900



Date: 11.APR.2014 17:13:48

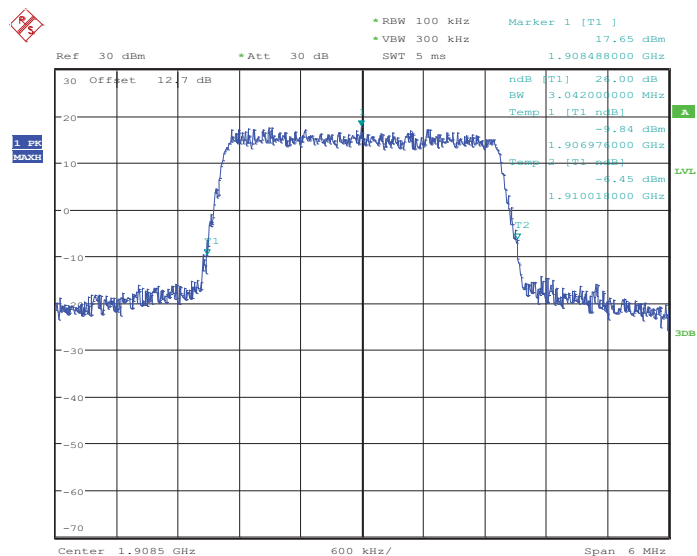


99% Occupied Bandwidth Plot on Channel 19185



Date: 11.APR.2014 17:16:17

26dB Bandwidth Plot on Channel 19185

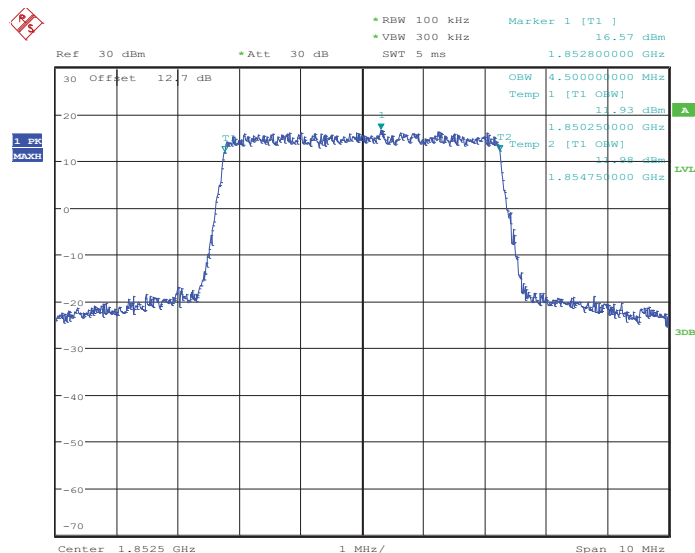


Date: 11.APR.2014 17:16:51



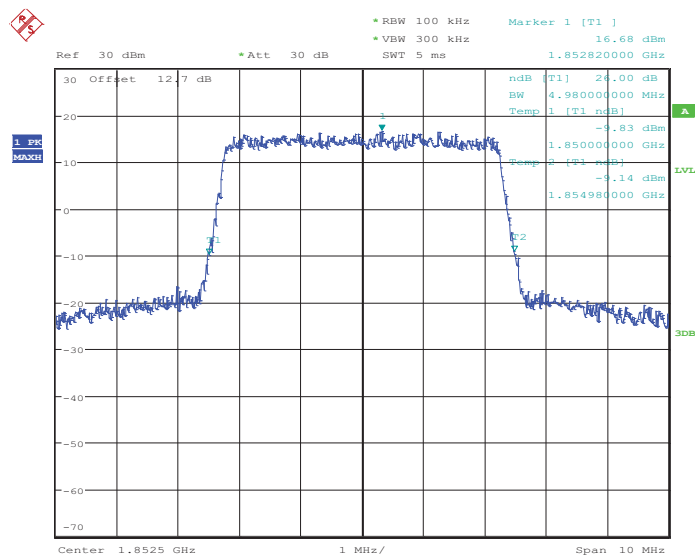
Band :	LTE Band 2	BW / Mod. :	5MHz / QPSK
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99% Occupied Bandwidth Plot on Channel 18625



Date: 11.APR.2014 17:58:44

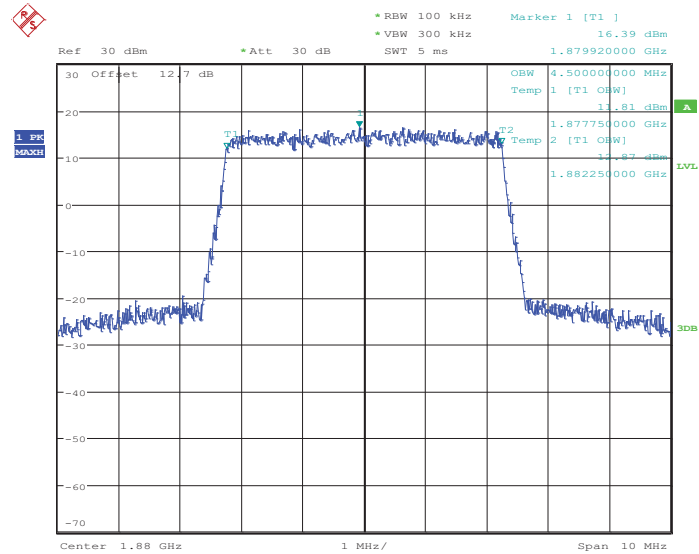
26dB Bandwidth Plot on Channel 18625



Date: 11.APR.2014 17:30:05

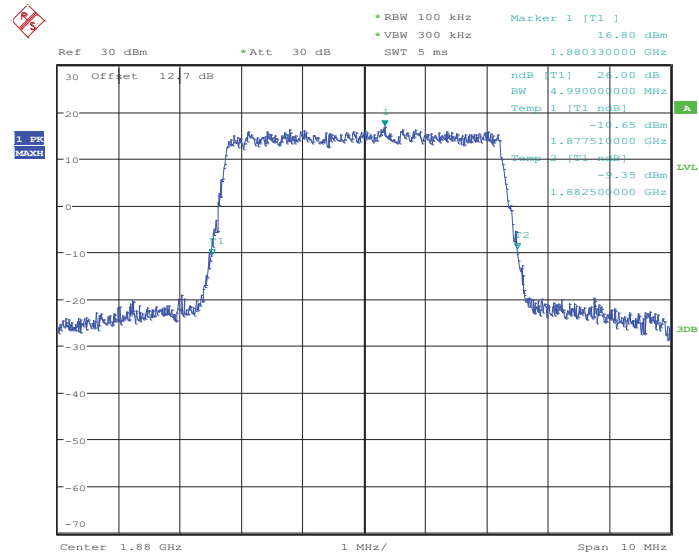


99% Occupied Bandwidth Plot on Channel 18900



Date: 11.APR.2014 17:35:45

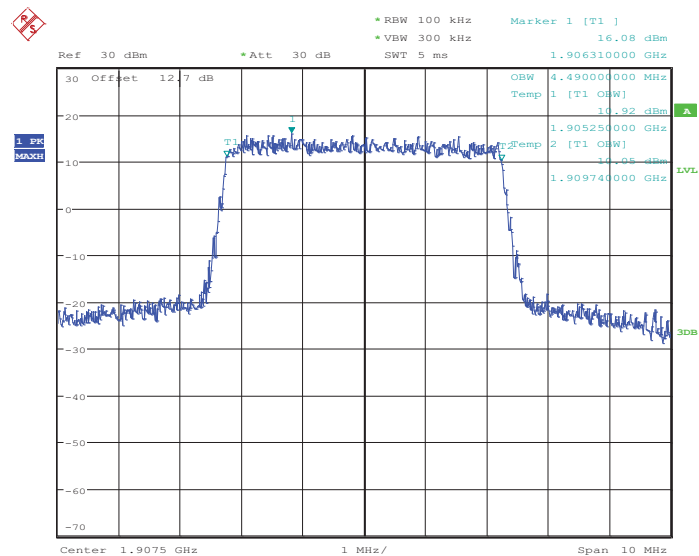
26dB Bandwidth Plot on Channel 18900



Date: 11.APR.2014 17:36:18

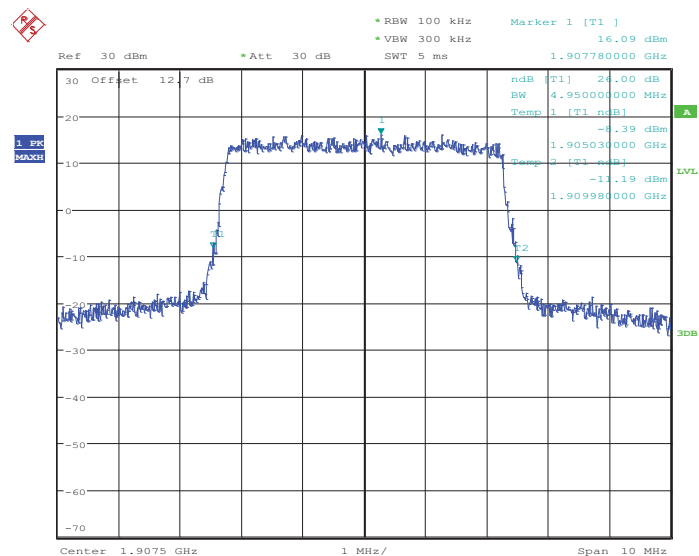


99% Occupied Bandwidth Plot on Channel 19175



Date: 11.APR.2014 17:38:51

26dB Bandwidth Plot on Channel 19175

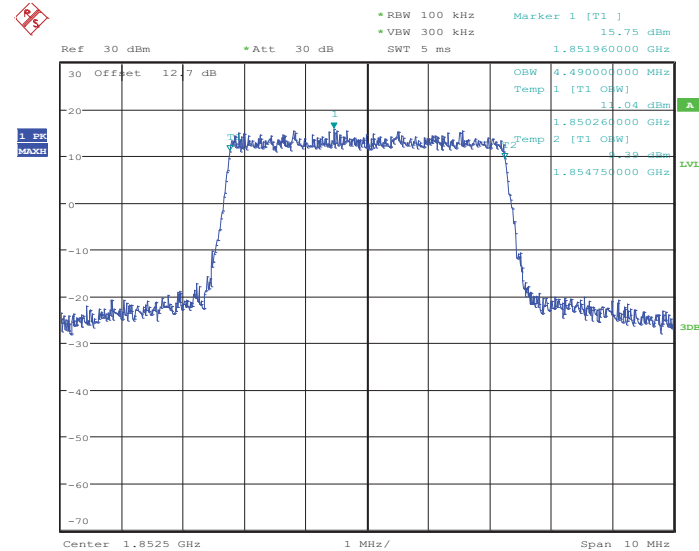


Date: 11.APR.2014 17:39:24



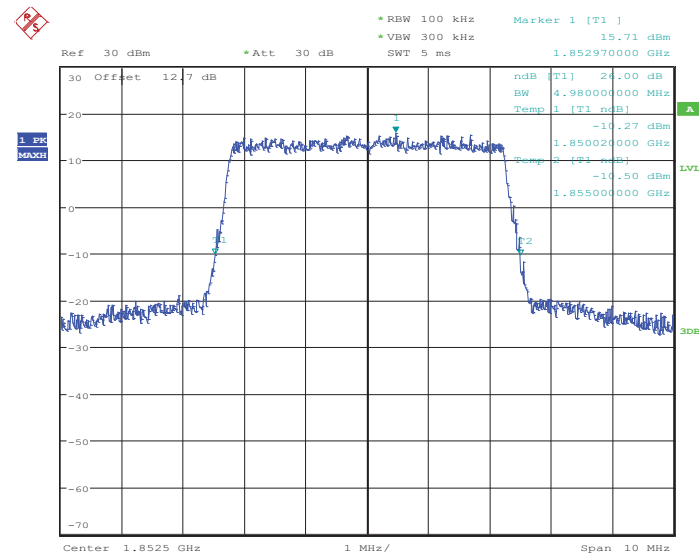
Band :	LTE Band 2	BW / Mod. :	5MHz / 16QAM
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99% Occupied Bandwidth Plot on Channel 18625



Date: 11.APR.2014 17:29:48

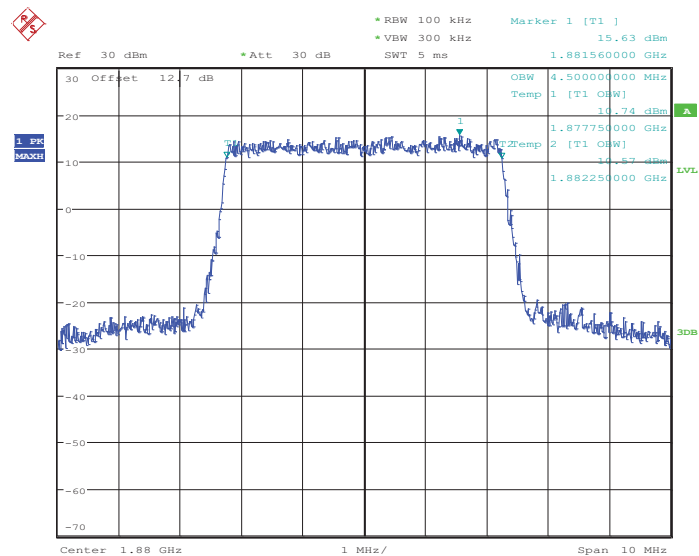
26dB Bandwidth Plot on Channel 18625



Date: 11.APR.2014 17:30:23

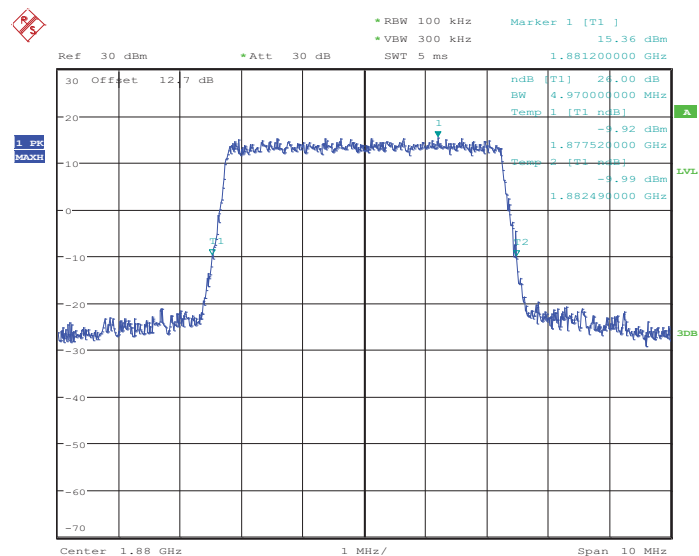


99% Occupied Bandwidth Plot on Channel 18900



Date: 11.APR.2014 17:36:01

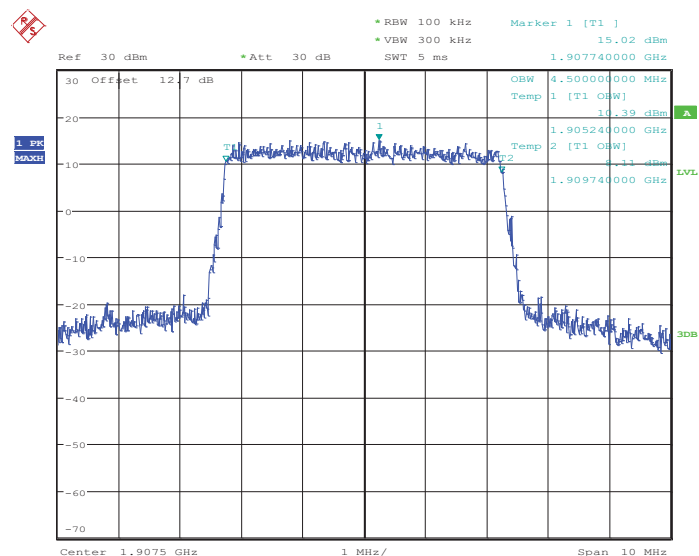
26dB Bandwidth Plot on Channel 18900



Date: 11.APR.2014 17:36:35

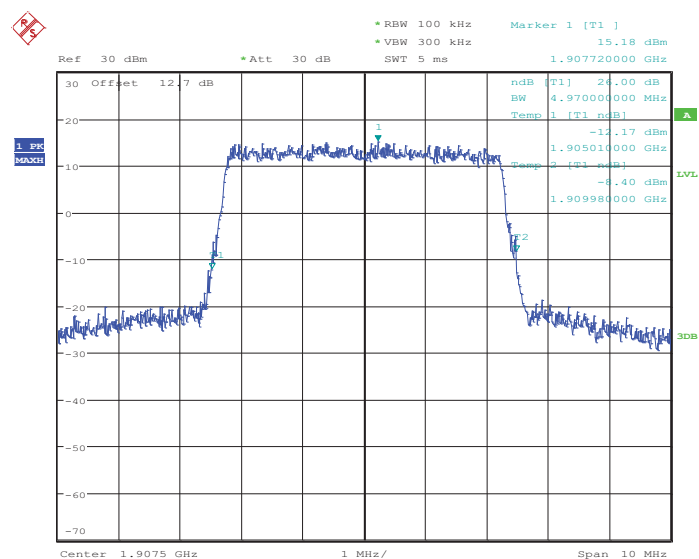


99% Occupied Bandwidth Plot on Channel 19175



Date: 11.APR.2014 17:39:06

26dB Bandwidth Plot on Channel 19175

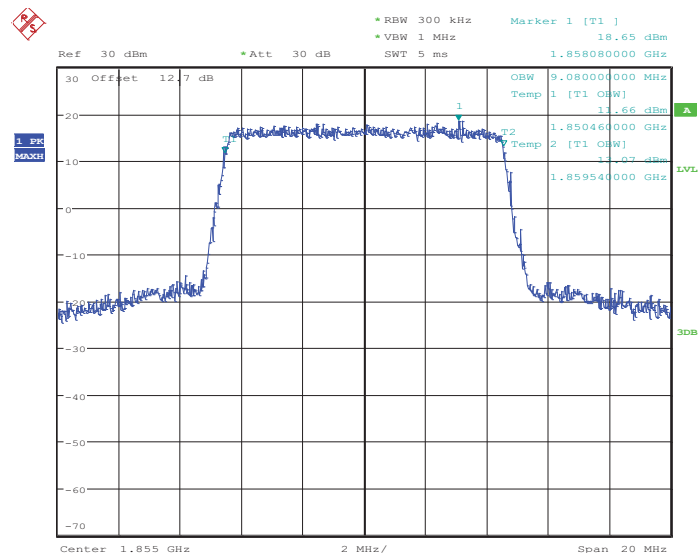


Date: 11.APR.2014 17:39:41



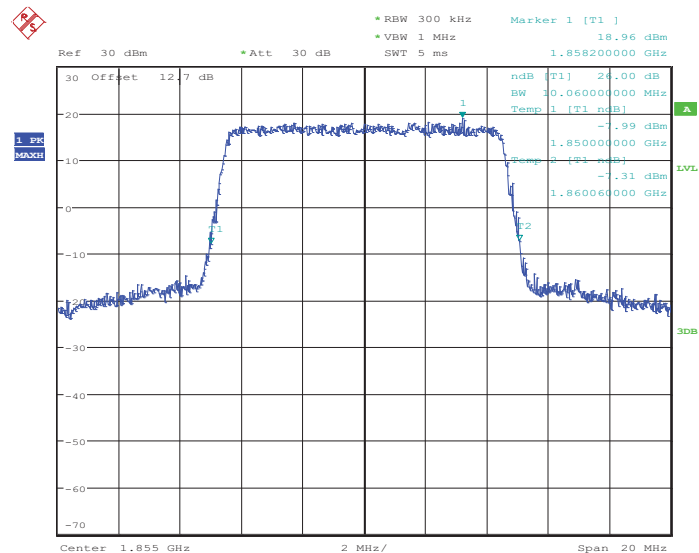
Band :	LTE Band 2	BW / Mod. :	10MHz / QPSK
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99% Occupied Bandwidth Plot on Channel 18650



Date: 11.APR.2014 17:59:27

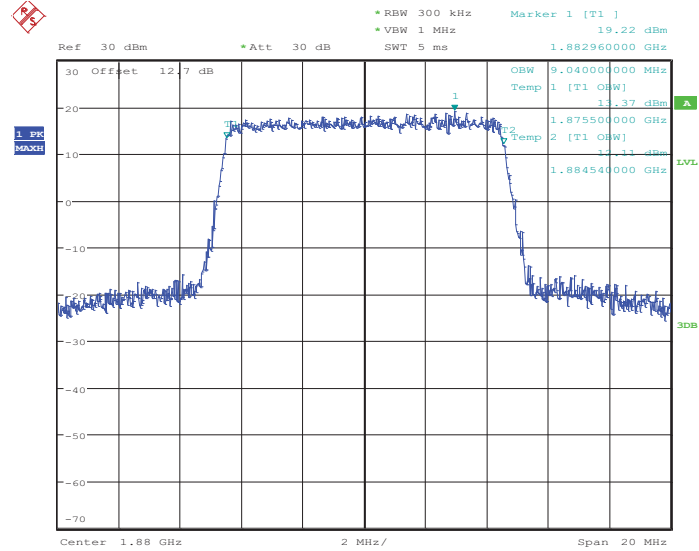
26dB Bandwidth Plot on Channel 18650



Date: 11.APR.2014 18:00:00

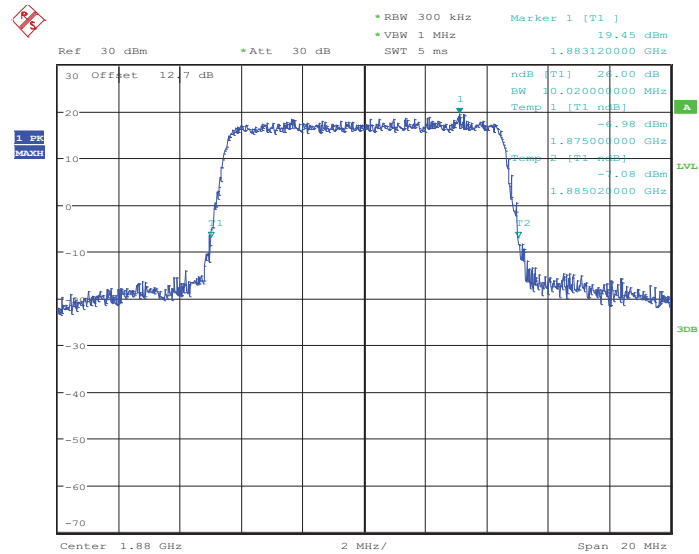


99% Occupied Bandwidth Plot on Channel 18900



Date: 11.APR.2014 18:05:40

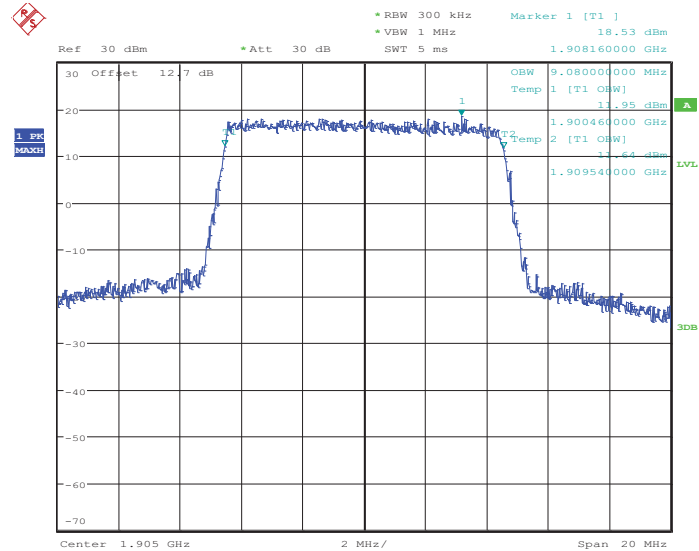
26dB Bandwidth Plot on Channel 18900



Date: 11.APR.2014 18:06:13

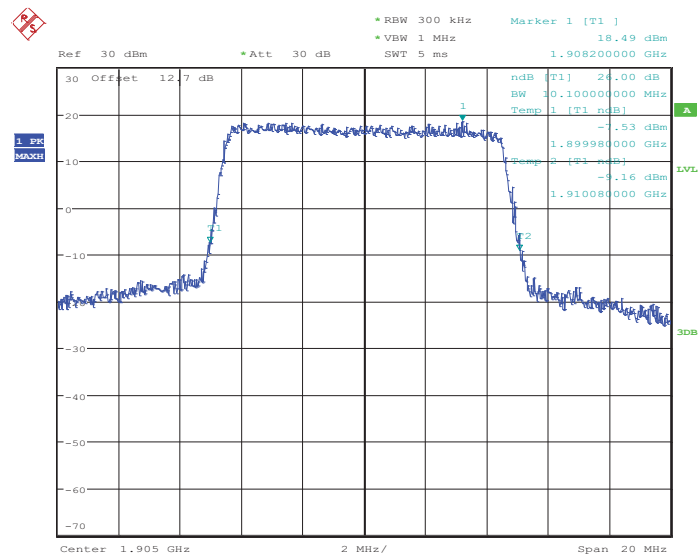


99% Occupied Bandwidth Plot on Channel 19150



Date: 11.APR.2014 18:08:46

26dB Bandwidth Plot on Channel 19150

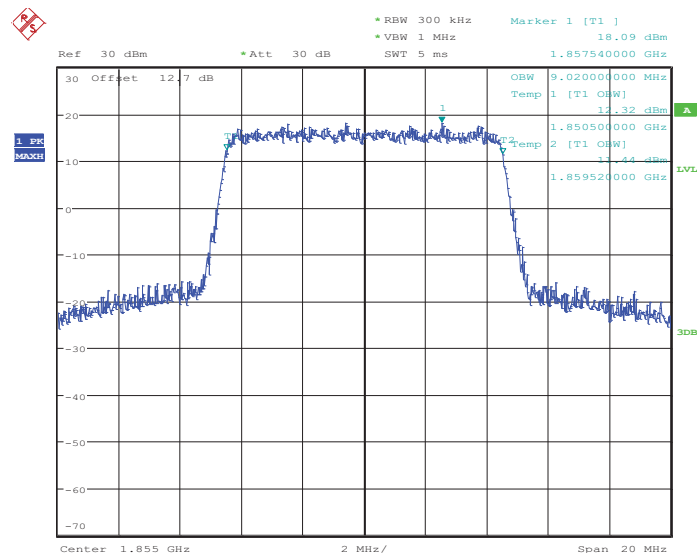


Date: 11.APR.2014 18:09:19



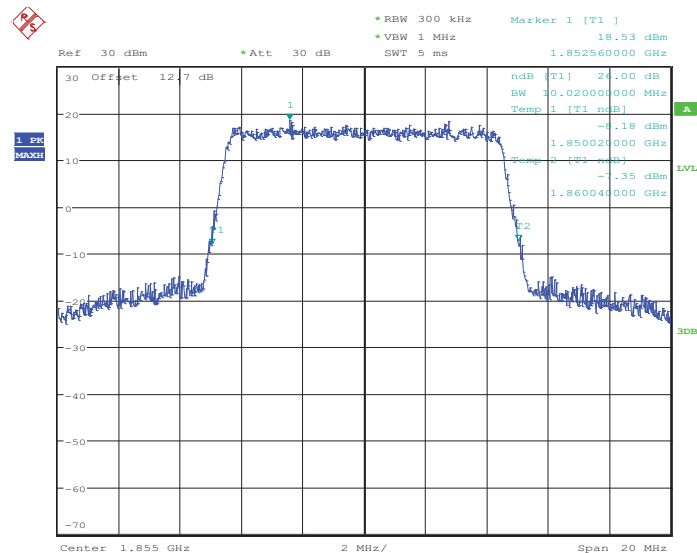
Band :	LTE Band 2	BW / Mod. :	10MHz / 16QAM
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99% Occupied Bandwidth Plot on Channel 18650



Date: 11.APR.2014 17:59:43

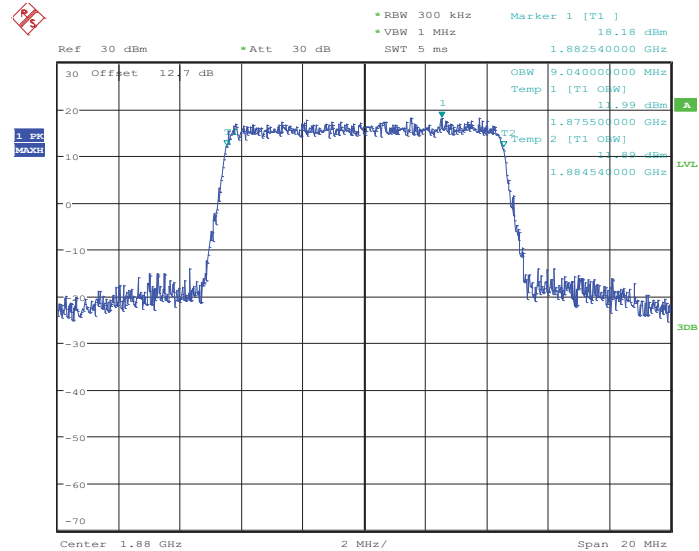
26dB Bandwidth Plot on Channel 18650



Date: 11.APR.2014 18:00:18

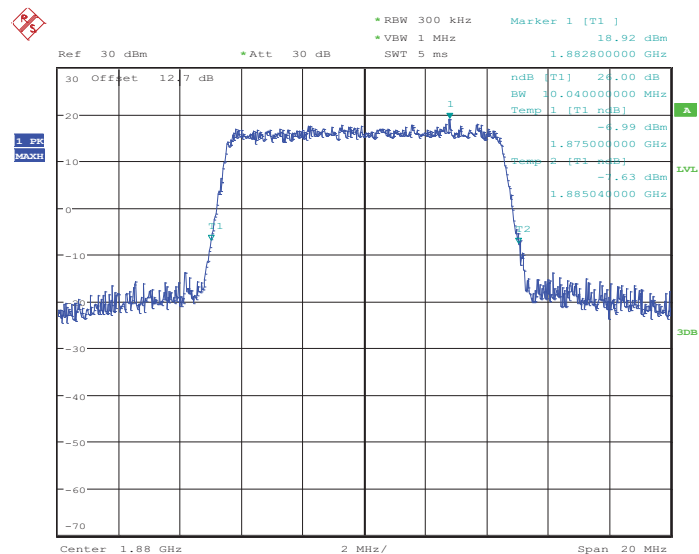


99% Occupied Bandwidth Plot on Channel 18900



Date: 11.APR.2014 18:05:55

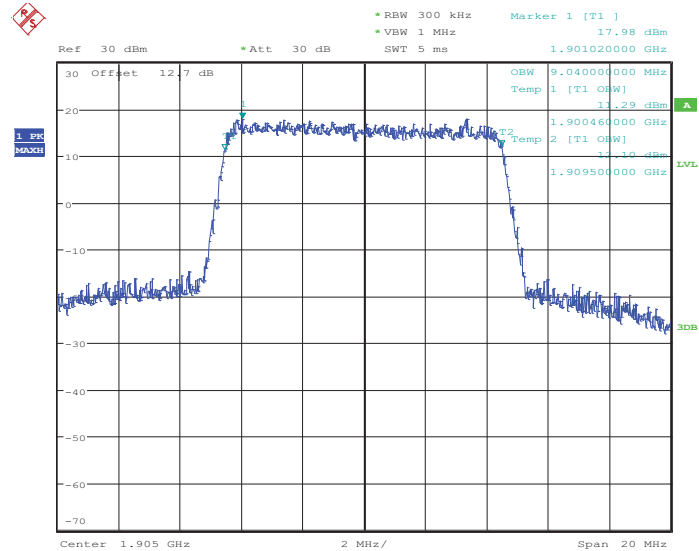
26dB Bandwidth Plot on Channel 18900



Date: 11.APR.2014 18:06:30

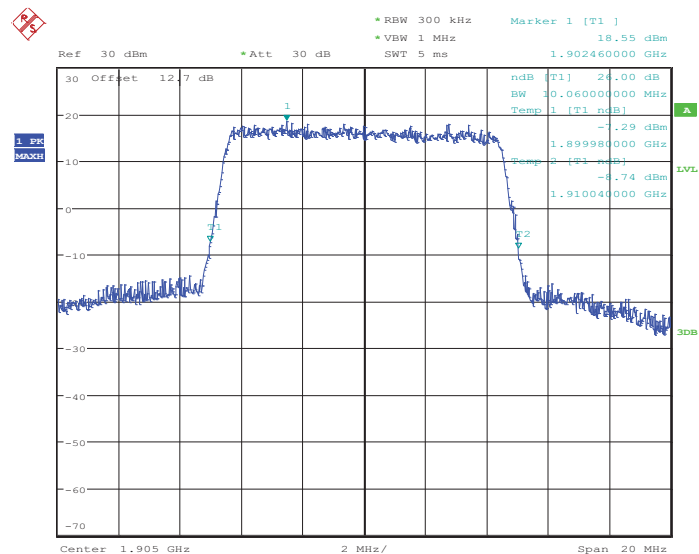


99% Occupied Bandwidth Plot on Channel 19150



Date: 11.APR.2014 18:09:01

26dB Bandwidth Plot on Channel 19150

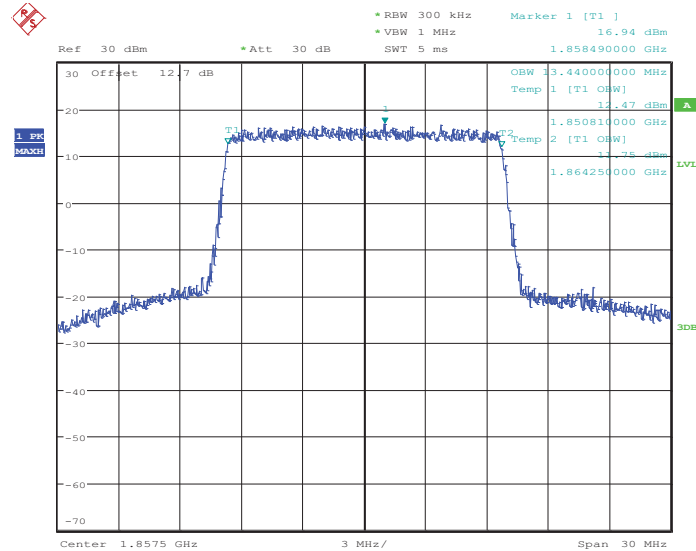


Date: 11.APR.2014 18:09:36



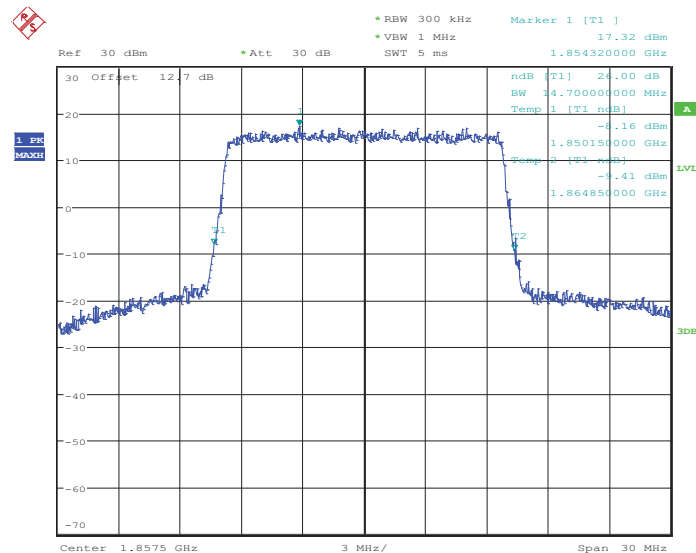
Band :	LTE Band 2	BW / Mod. :	15MHz / QPSK
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99% Occupied Bandwidth Plot on Channel 18675



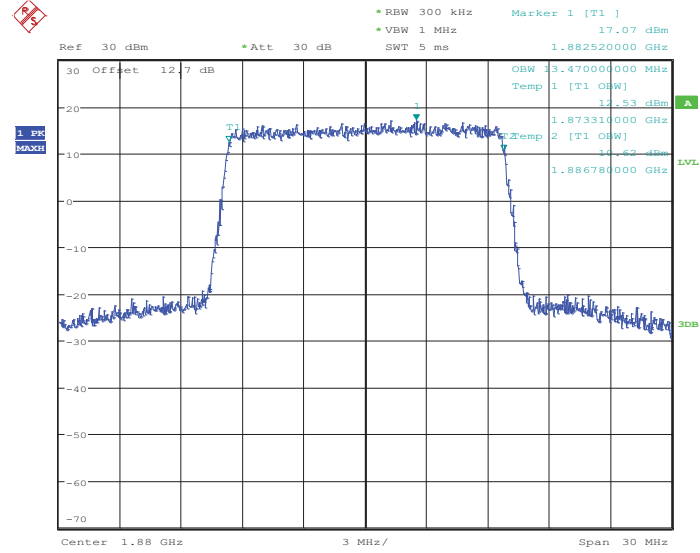
Date: 11.APR.2014 18:15:42

26dB Bandwidth Plot on Channel 18675



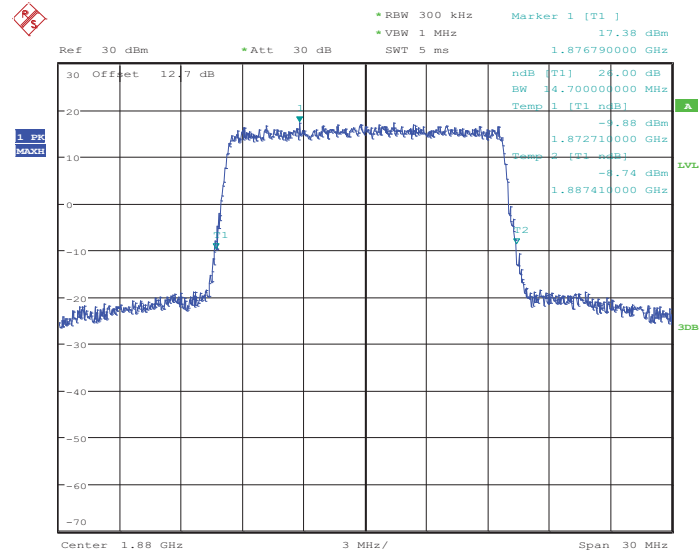
Date: 11.APR.2014 18:16:15

99% Occupied Bandwidth Plot on Channel 18900



Date: 11.APR.2014 18:21:56

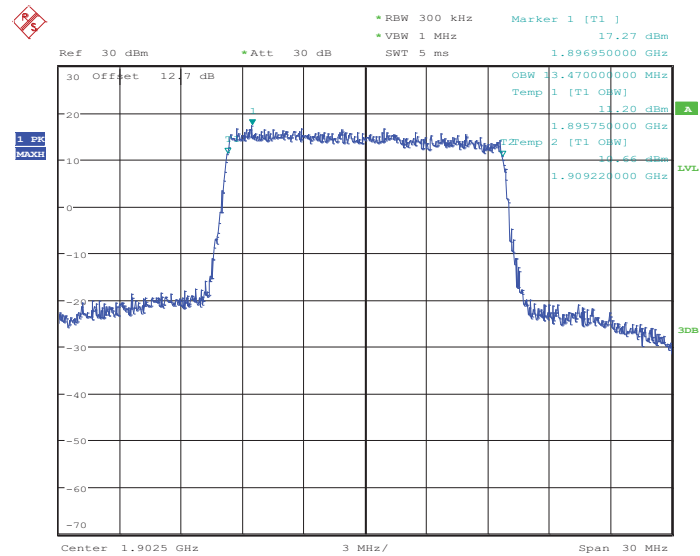
26dB Bandwidth Plot on Channel 18900



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

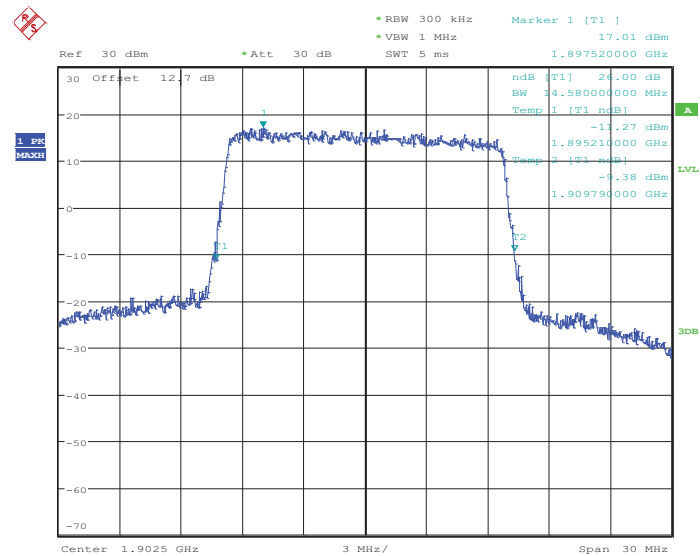


99% Occupied Bandwidth Plot on Channel 19125



Date: 11.APR.2014 18:25:02

26dB Bandwidth Plot on Channel 19125

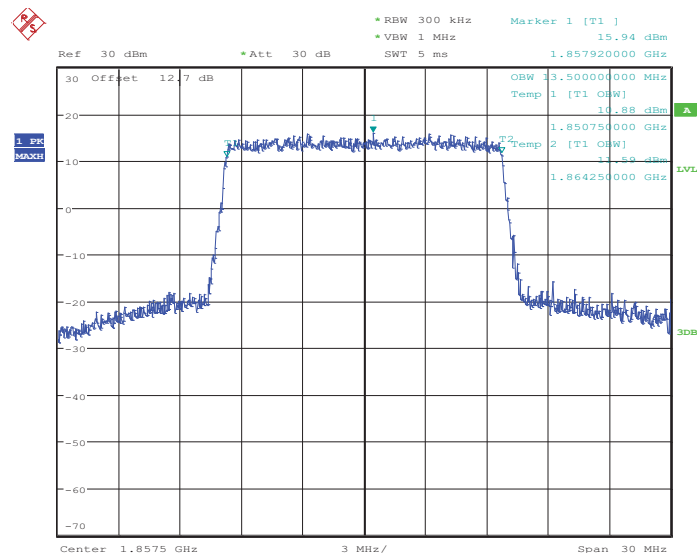


Date: 11.APR.2014 18:25:35



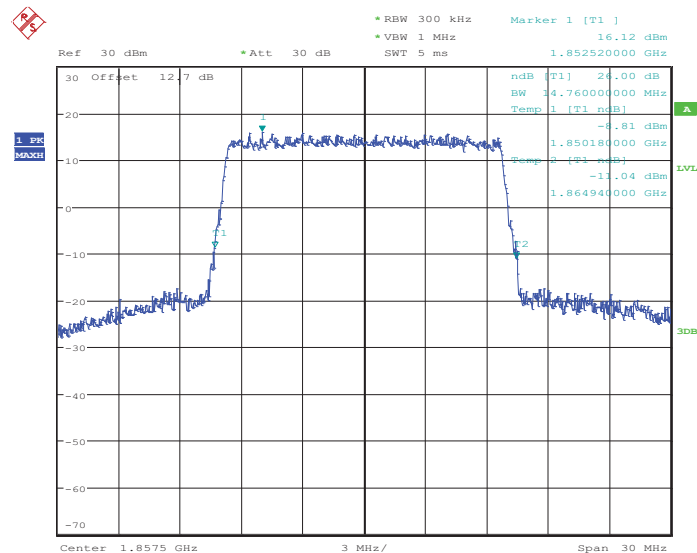
Band :	LTE Band 2	BW / Mod. :	15MHz / 16QAM
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99% Occupied Bandwidth Plot on Channel 18675



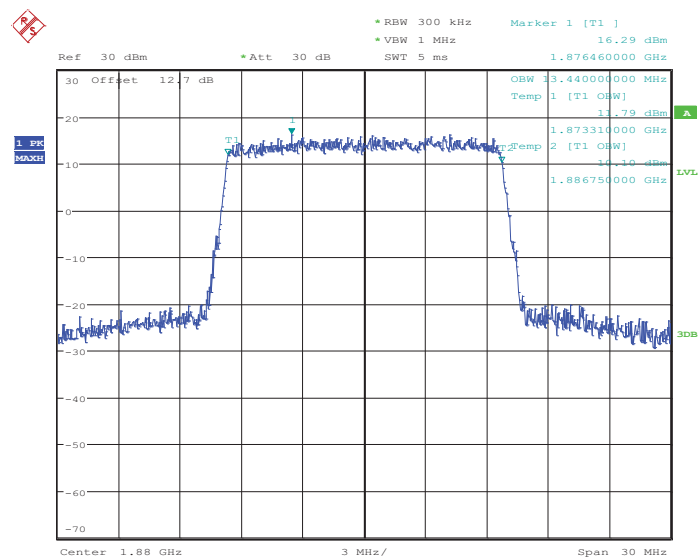
Date: 11.APR.2014 18:15:58

26dB Bandwidth Plot on Channel 18675



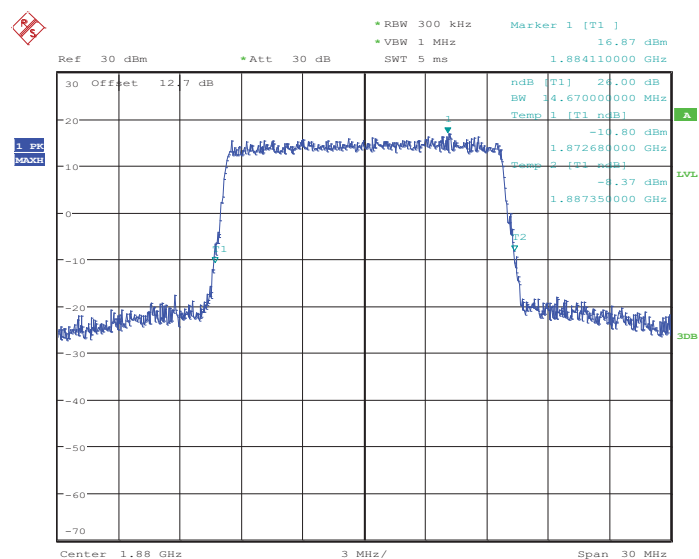
Date: 11.APR.2014 18:16:32

99% Occupied Bandwidth Plot on Channel 18900



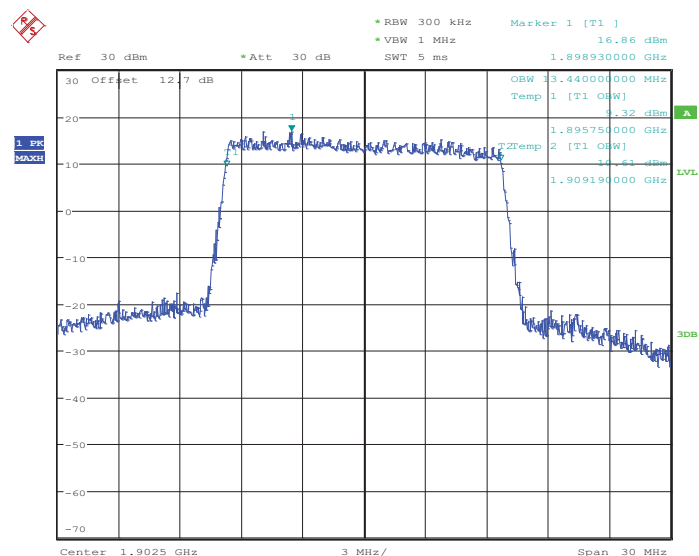
Date: 11.APR.2014 18:22:11

26dB Bandwidth Plot on Channel 18900



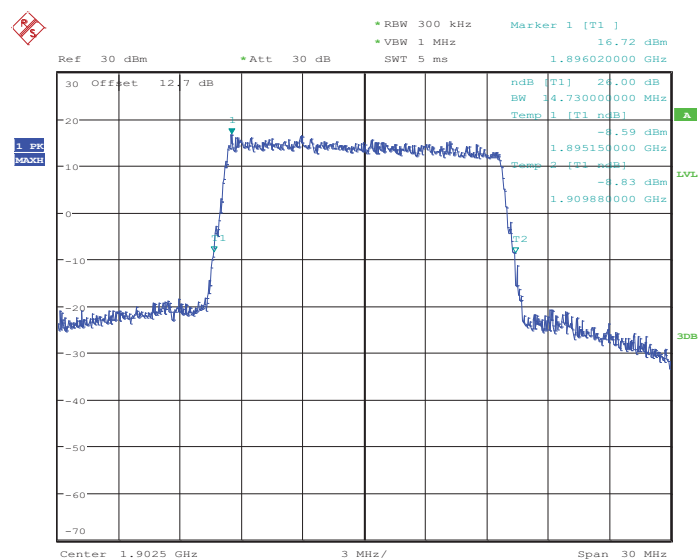
Date: 11.APR.2014 18:22:46

99% Occupied Bandwidth Plot on Channel 19125



Date: 11.APR.2014 18:25:17

26dB Bandwidth Plot on Channel 19125

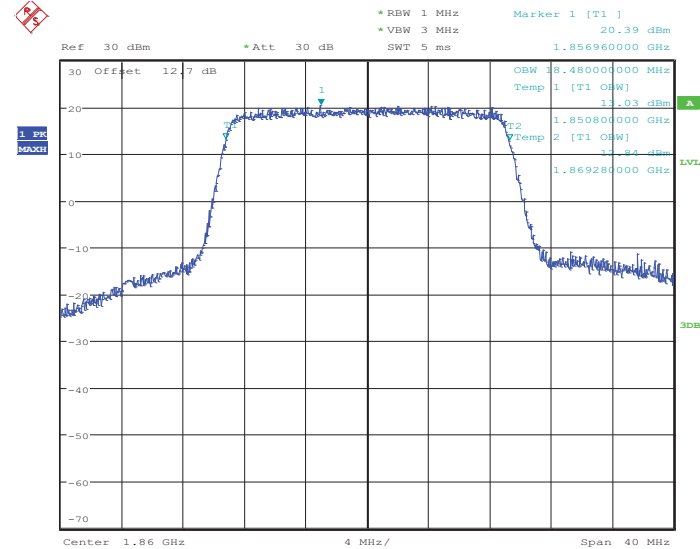


Date: 11.APR.2014 18:25:52



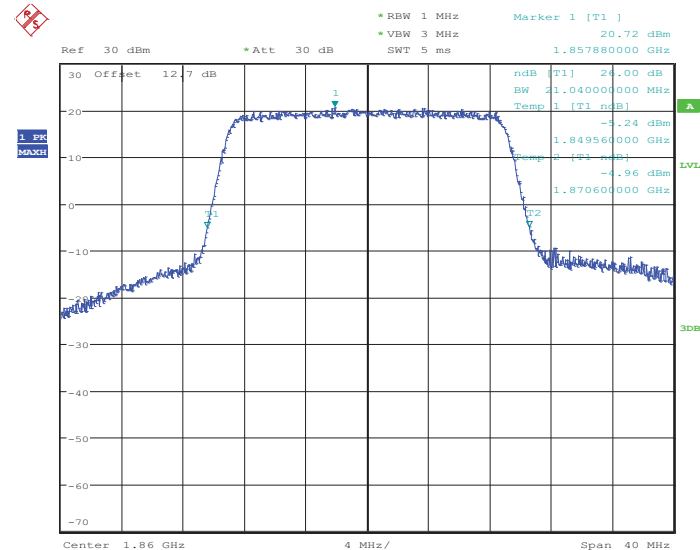
Band :	LTE Band 2	BW / Mod. :	20MHz / QPSK
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99% Occupied Bandwidth Plot on Channel 18700

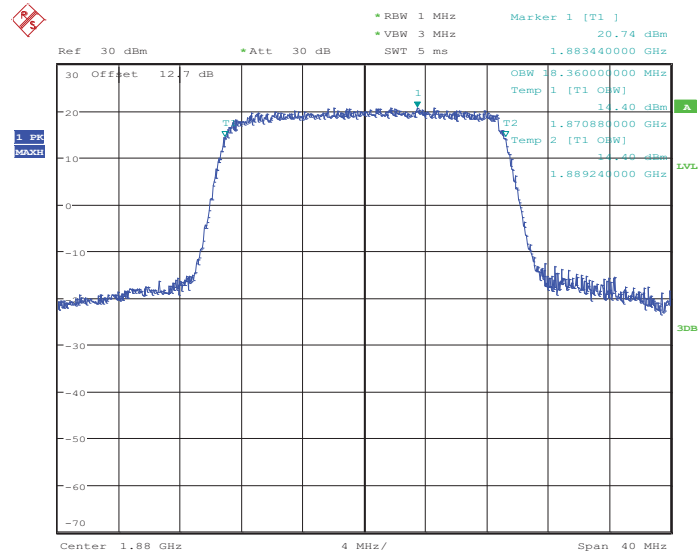


Date: 11.APR.2014 18:33:33

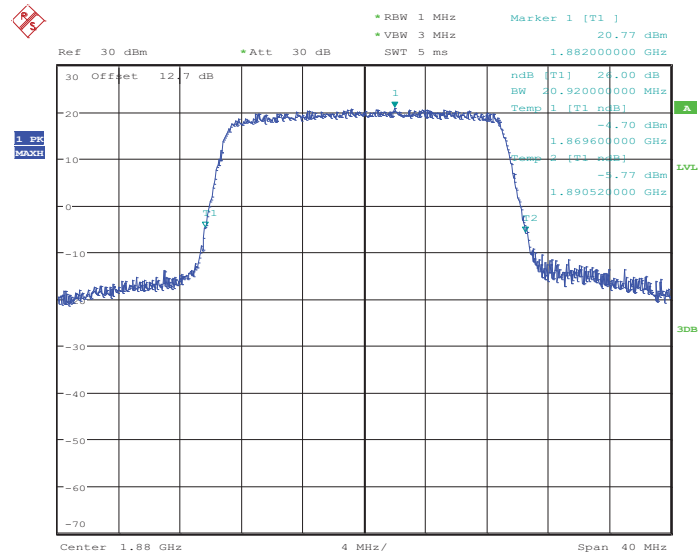
26dB Bandwidth Plot on Channel 18700



Date: 11.APR.2014 18:34:06

99% Occupied Bandwidth Plot on Channel 18900


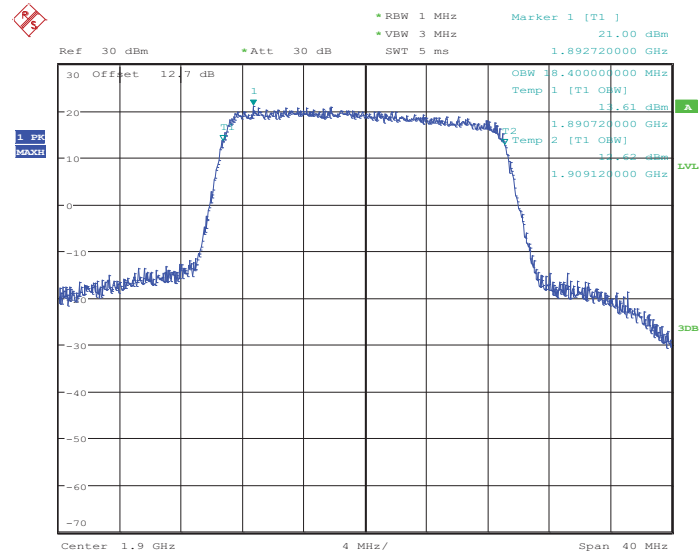
Date: 11.APR.2014 18:39:46

26dB Bandwidth Plot on Channel 18900


Date: 11.APR.2014 18:40:19

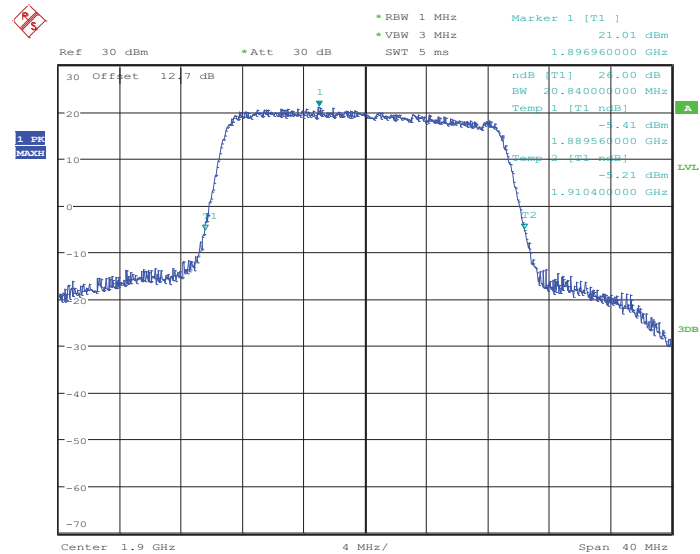


99% Occupied Bandwidth Plot on Channel 19100



Date: 11.APR.2014 18:42:52

26dB Bandwidth Plot on Channel 19100

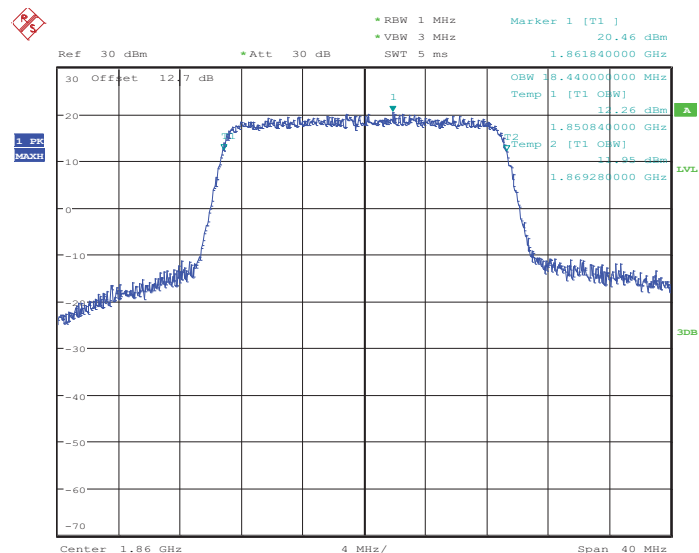


Date: 11.APR.2014 18:43:25



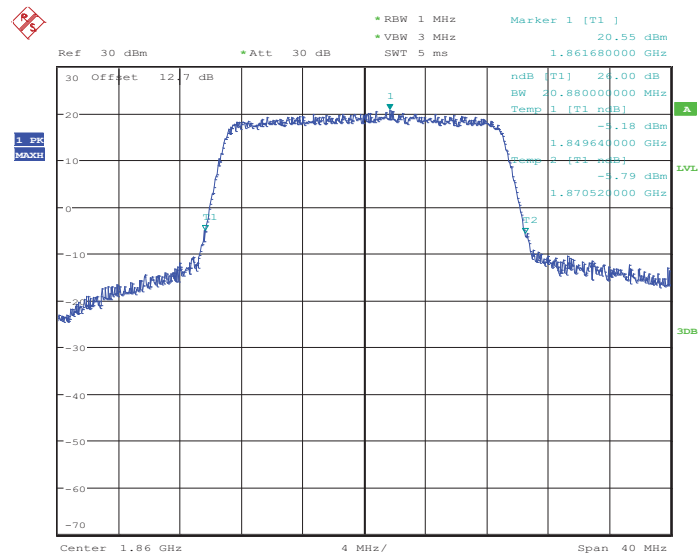
Band :	LTE Band 2	BW / Mod. :	20MHz / 16QAM
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99% Occupied Bandwidth Plot on Channel 18700



Date: 11.APR.2014 18:33:49

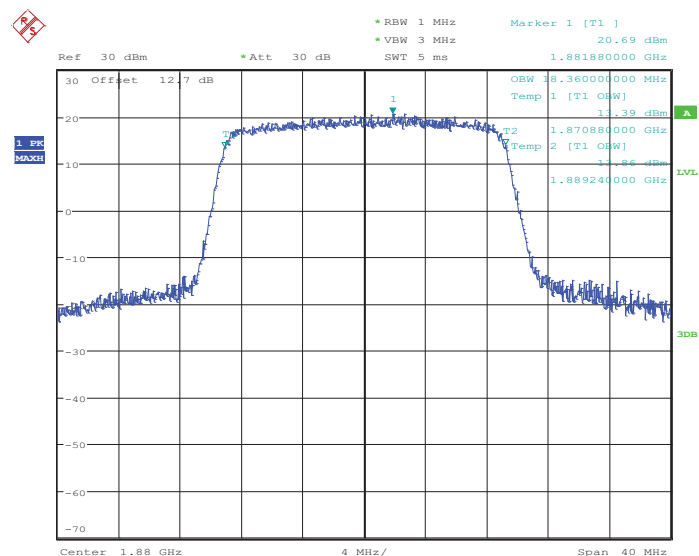
26dB Bandwidth Plot on Channel 18700



Date: 11.APR.2014 18:34:23

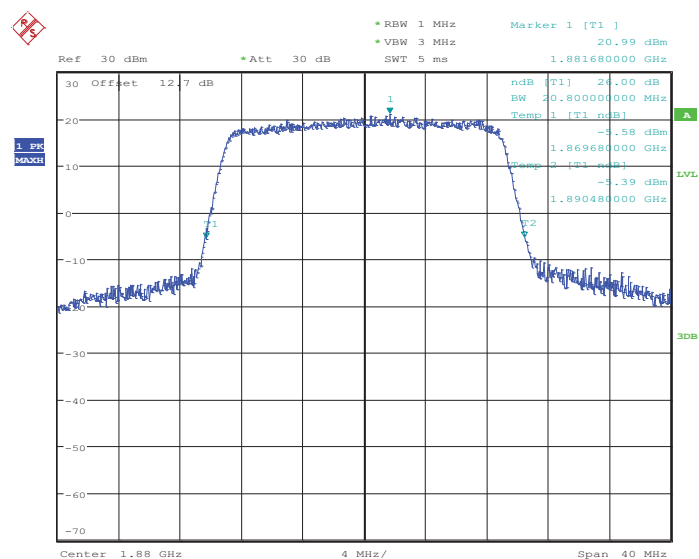


99% Occupied Bandwidth Plot on Channel 18900



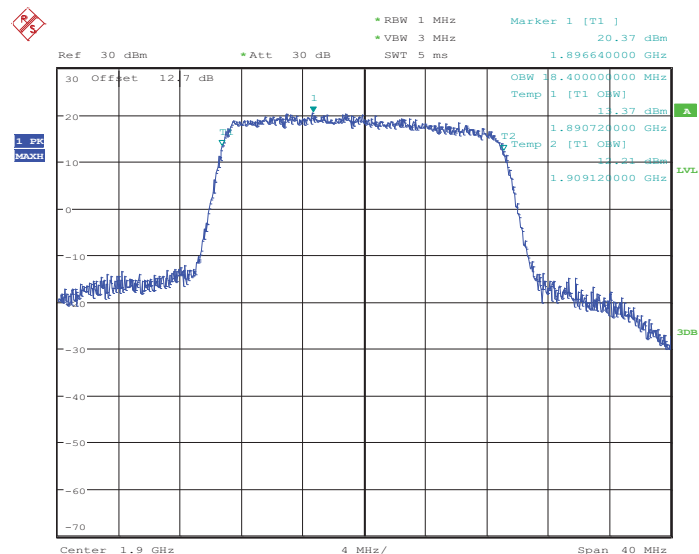
Date: 11.APR.2014 18:40:01

26dB Bandwidth Plot on Channel 18900



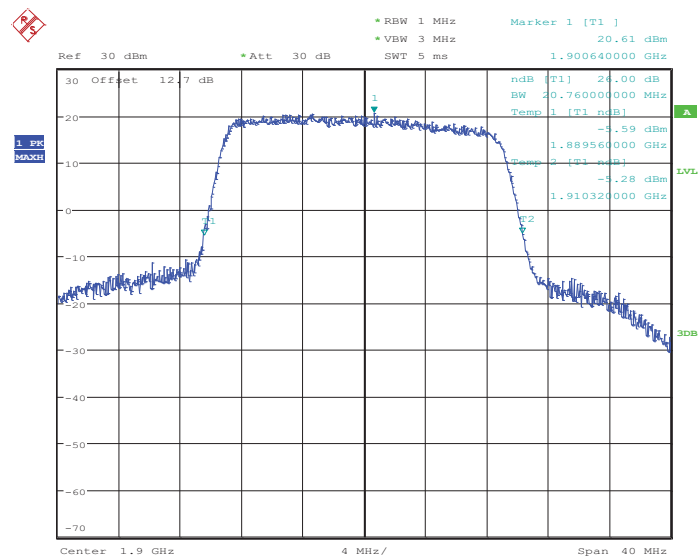
Date: 11.APR.2014 18:40:36

99% Occupied Bandwidth Plot on Channel 19100



Date: 11.APR.2014 18:43:07

26dB Bandwidth Plot on Channel 19100



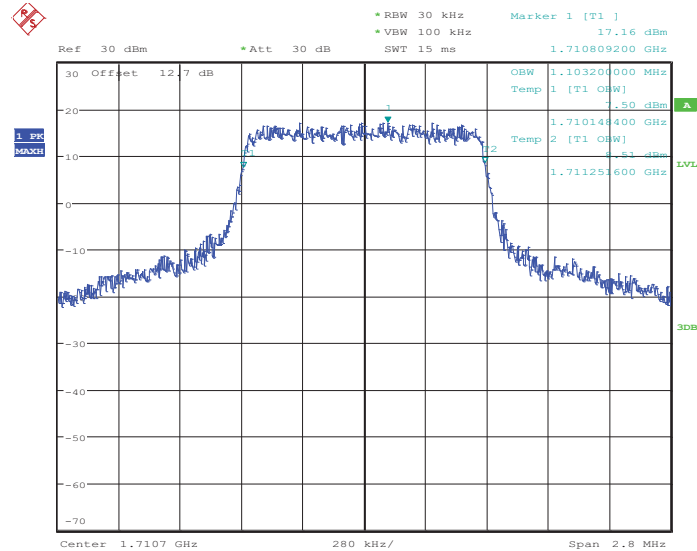
Date: 11.APR.2014 18:43:42

Note: The total loss is 12.7 dB of the RF cable and attenuator of LTE Band 2, and has been compensated to the spectrum analyzer offset.



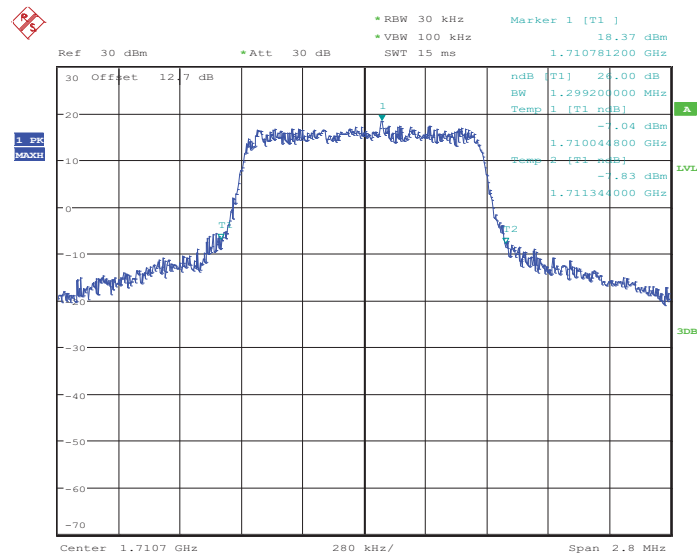
Band :	LTE Band 4	BW / Mod. :	1.4MHz / QPSK
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99% Occupied Bandwidth Plot on Channel 1957



Date: 11.APR.2014 18:54:04

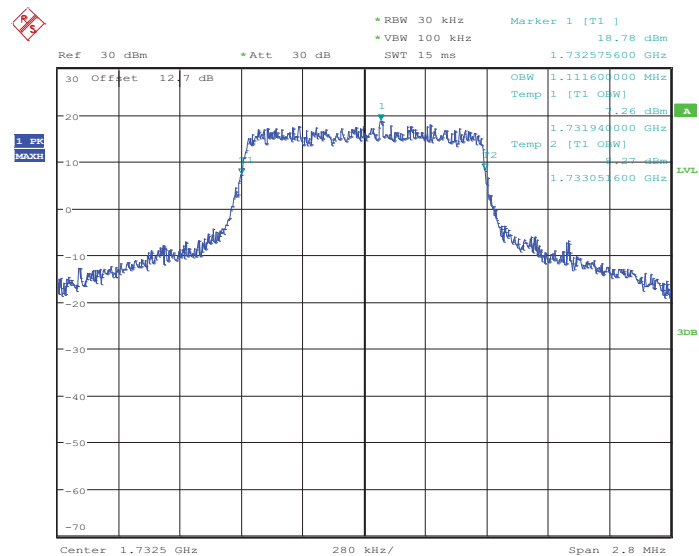
26dB Bandwidth Plot on Channel 1957



Date: 11.APR.2014 18:54:37

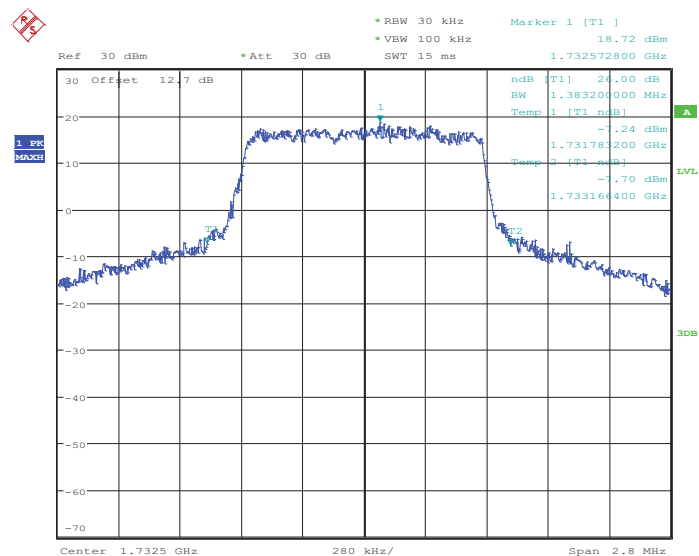


99% Occupied Bandwidth Plot on Channel 20175



Date: 11.APR.2014 19:00:17

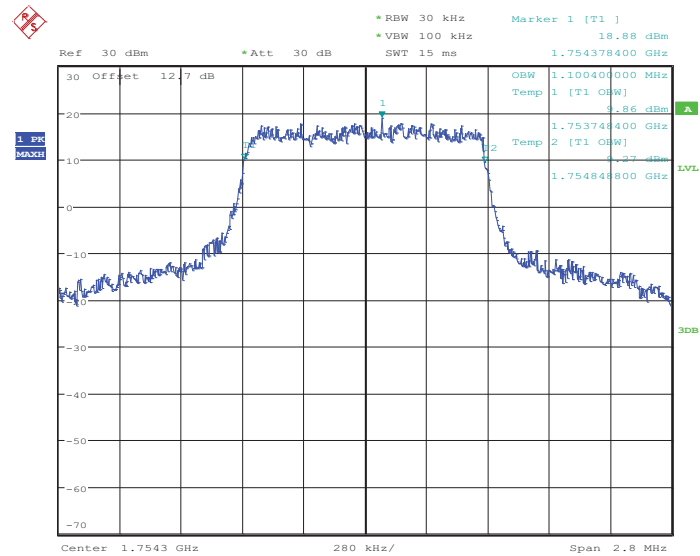
26dB Bandwidth Plot on Channel 20175



Date: 11.APR.2014 19:00:50

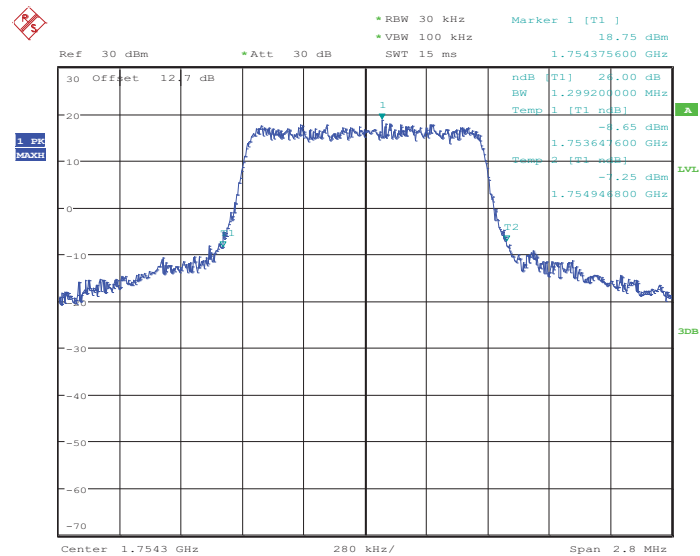


99% Occupied Bandwidth Plot on Channel 20393



Date: 11.APR.2014 19:03:23

26dB Bandwidth Plot on Channel 20393

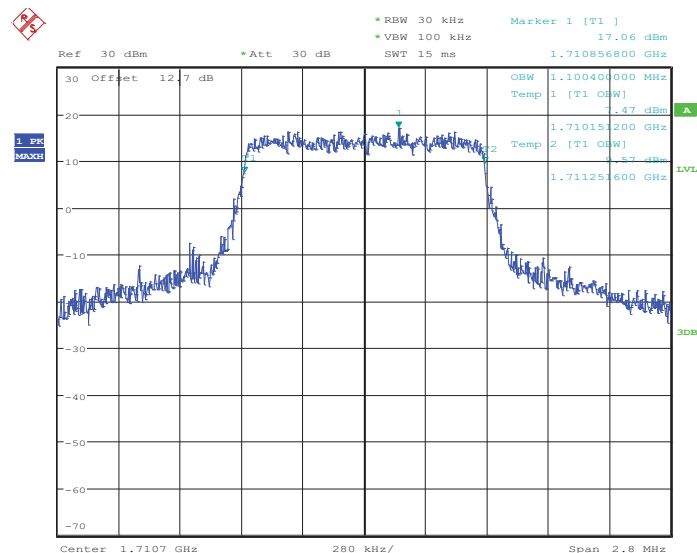


Date: 11.APR.2014 19:03:56



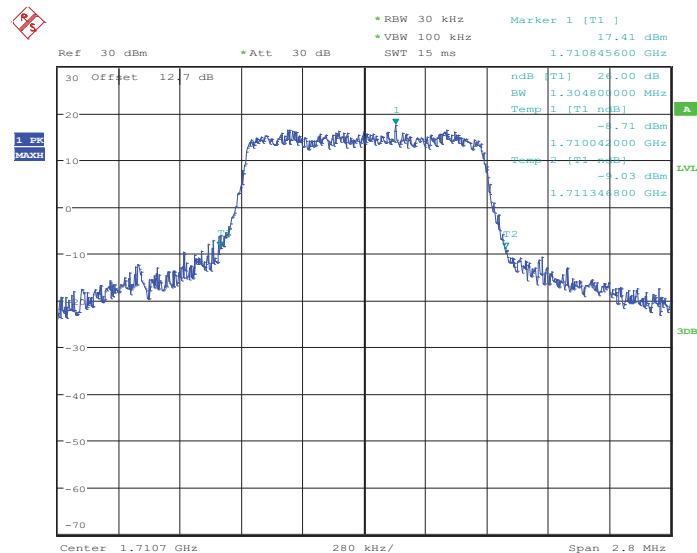
Band :	LTE Band 4	BW / Mod. :	1.4MHz / 16QAM
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99% Occupied Bandwidth Plot on Channel 1957



Date: 11.APR.2014 18:54:20

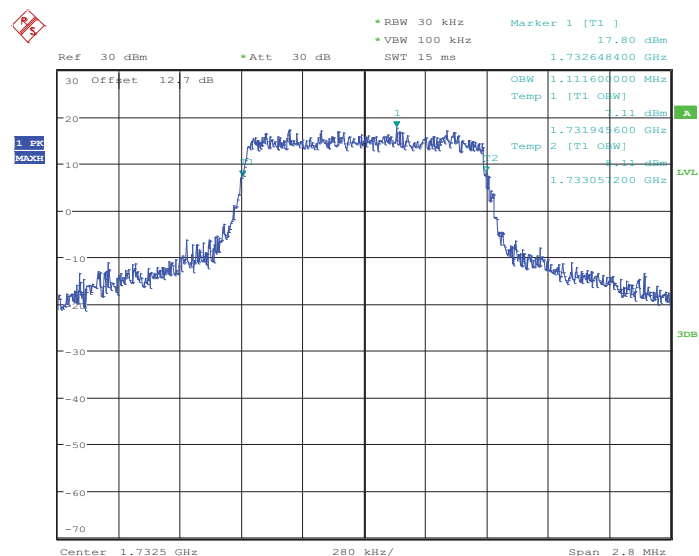
26dB Bandwidth Plot on Channel 1957



Date: 11.APR.2014 18:54:54

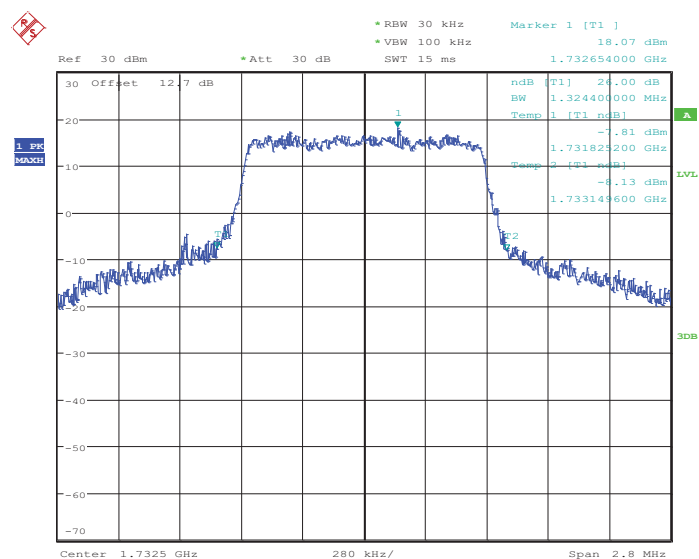


99% Occupied Bandwidth Plot on Channel 20175



Date: 11.APR.2014 19:00:33

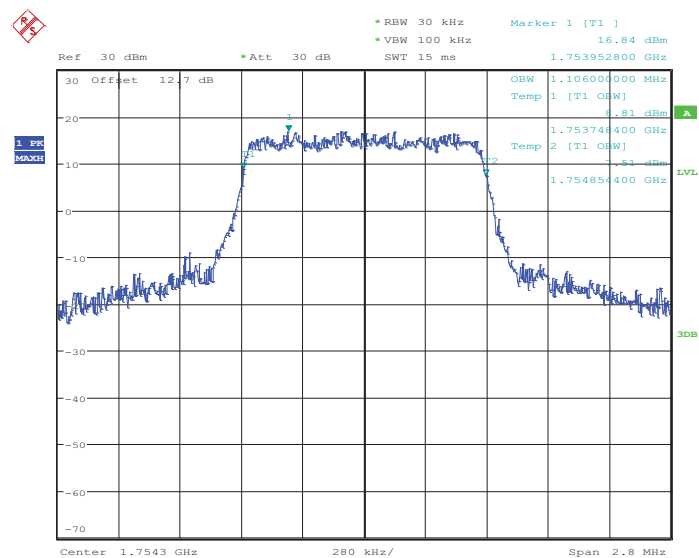
26dB Bandwidth Plot on Channel 20175



Date: 11.APR.2014 19:01:07

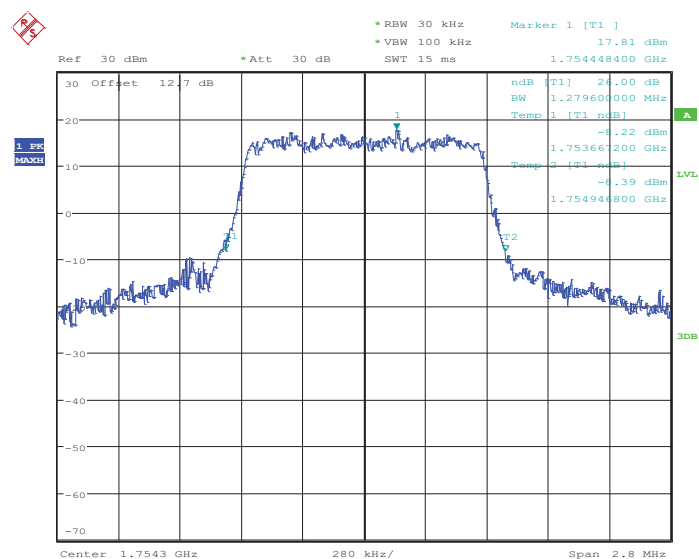


99% Occupied Bandwidth Plot on Channel 20393



Date: 11.APR.2014 19:03:38

26dB Bandwidth Plot on Channel 20393

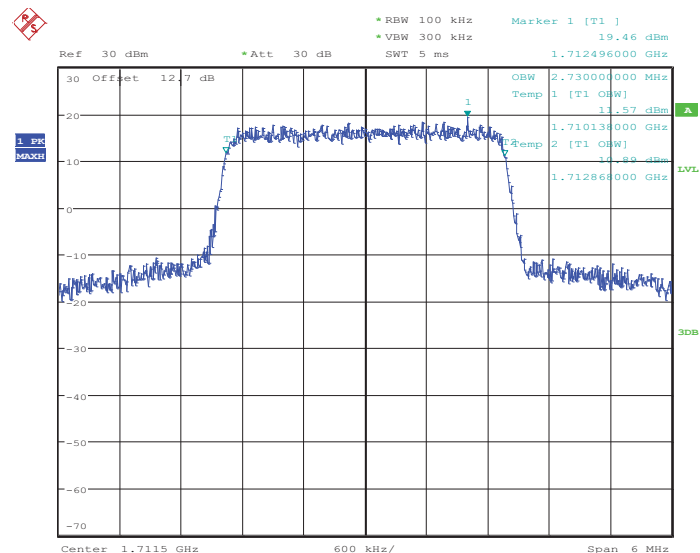


Date: 11.APR.2014 19:04:13



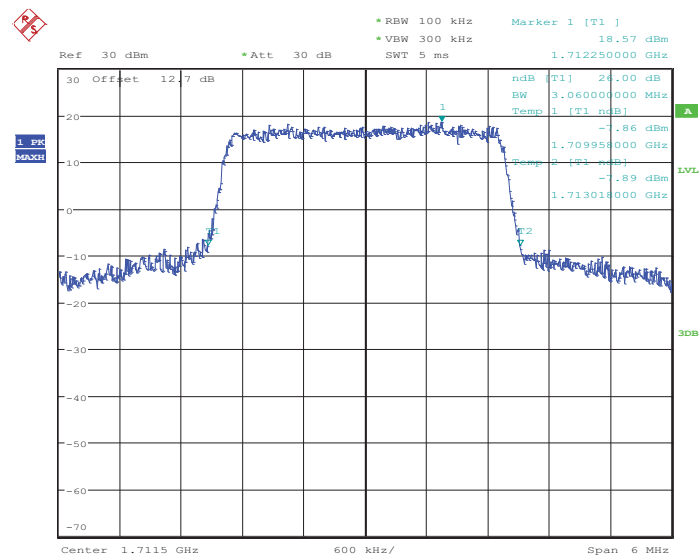
Band :	LTE Band 4	BW / Mod. :	3MHz / QPSK
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99% Occupied Bandwidth Plot on Channel 19965



Date: 11.APR.2014 19:14:25

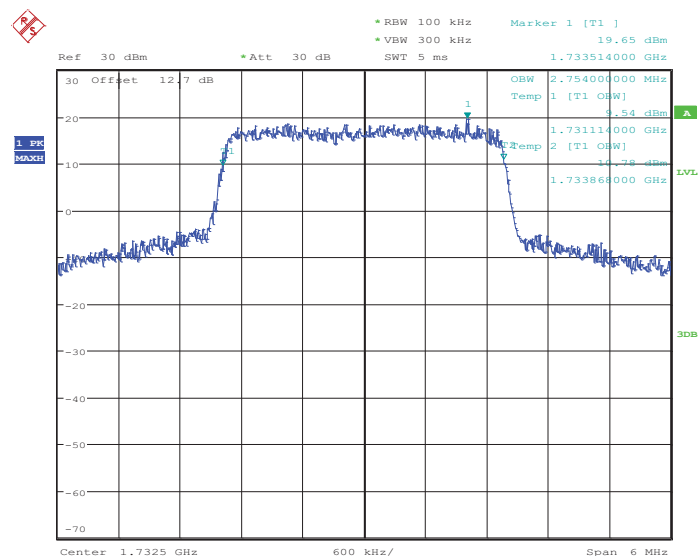
26dB Bandwidth Plot on Channel 19965



Date: 11.APR.2014 19:14:58

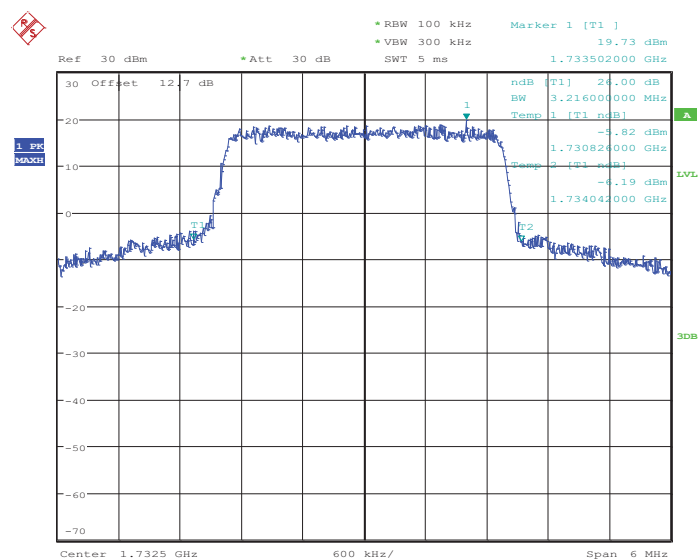


99% Occupied Bandwidth Plot on Channel 20175



Date: 11.APR.2014 19:20:42

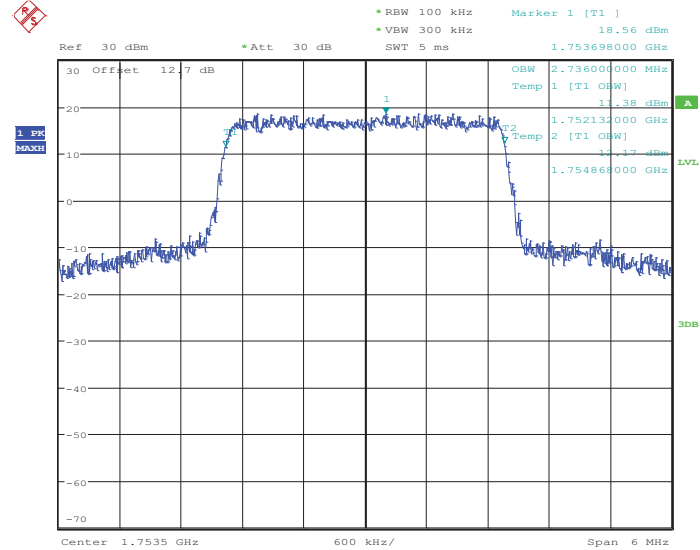
26dB Bandwidth Plot on Channel 20175



Date: 11.APR.2014 19:21:15

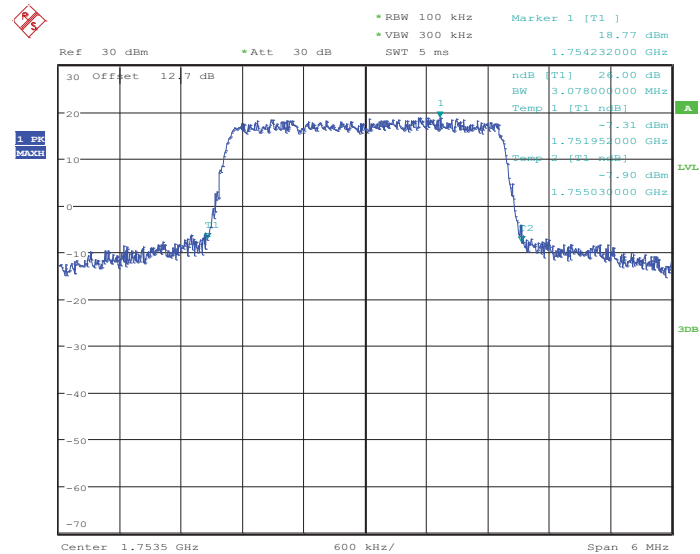


99% Occupied Bandwidth Plot on Channel 20385



Date: 11.APR.2014 19:23:48

26dB Bandwidth Plot on Channel 20385

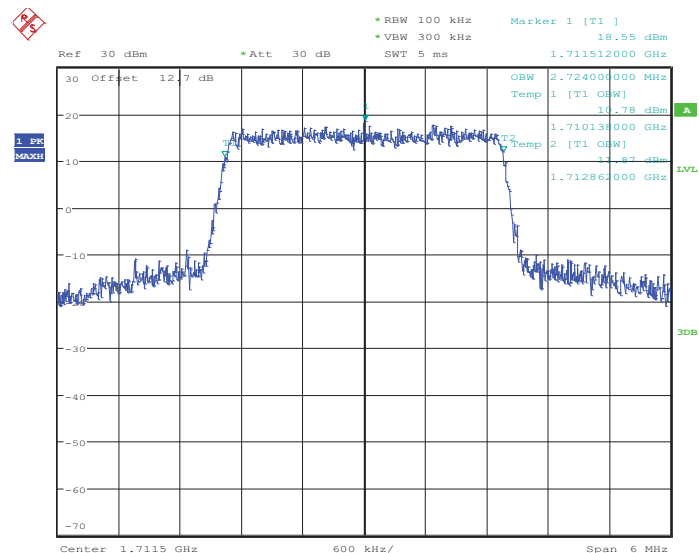


Date: 11.APR.2014 19:24:21



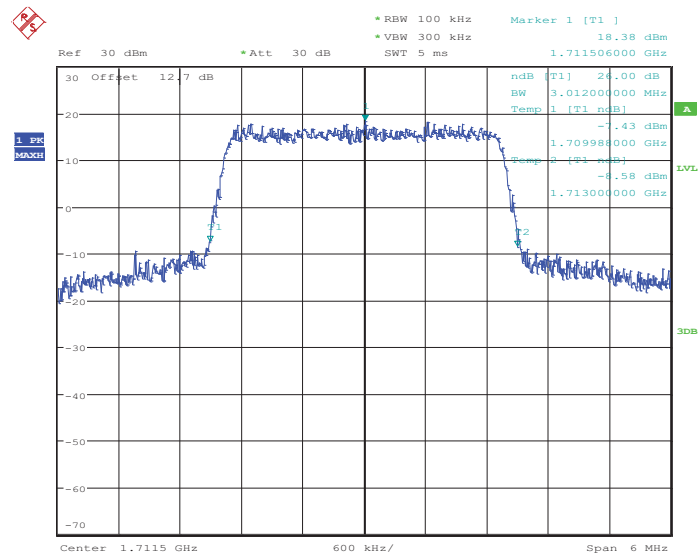
Band :	LTE Band 4	BW / Mod. :	3MHz / 16QAM
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99% Occupied Bandwidth Plot on Channel 19965



Date: 11.APR.2014 19:14:41

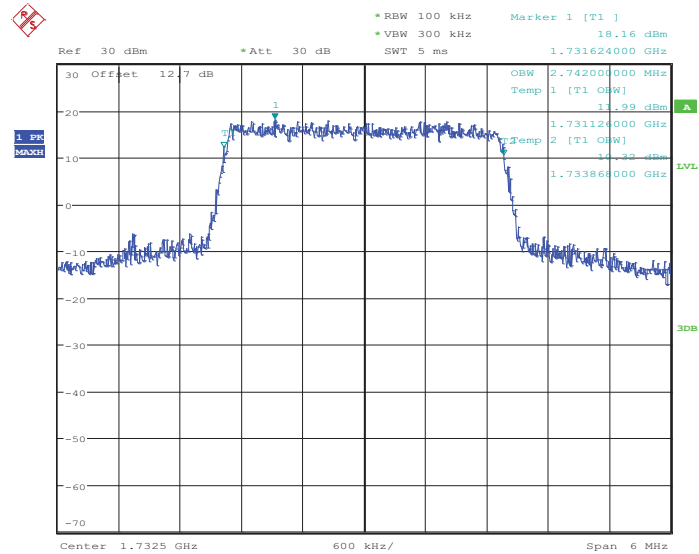
26dB Bandwidth Plot on Channel 19965



Date: 11.APR.2014 19:15:15

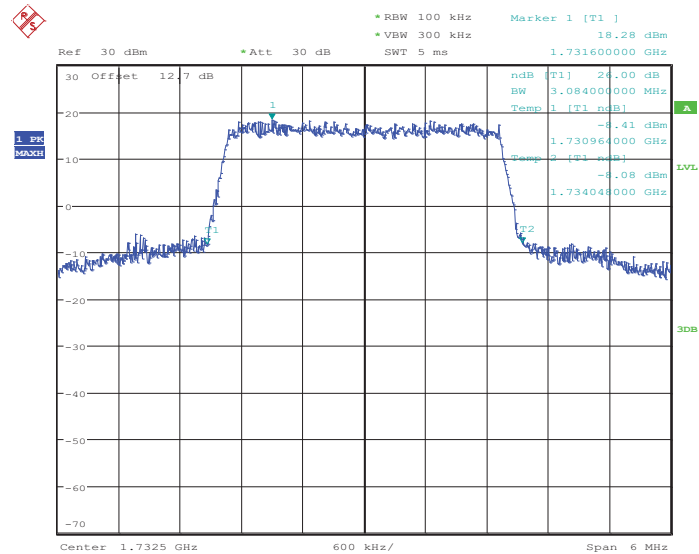


99% Occupied Bandwidth Plot on Channel 20175



Date: 11.APR.2014 19:20:58

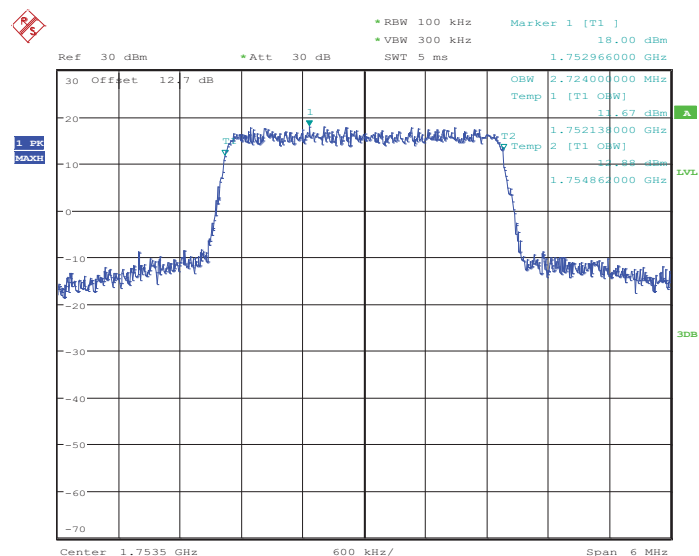
26dB Bandwidth Plot on Channel 20175



Date: 11.APR.2014 19:21:32

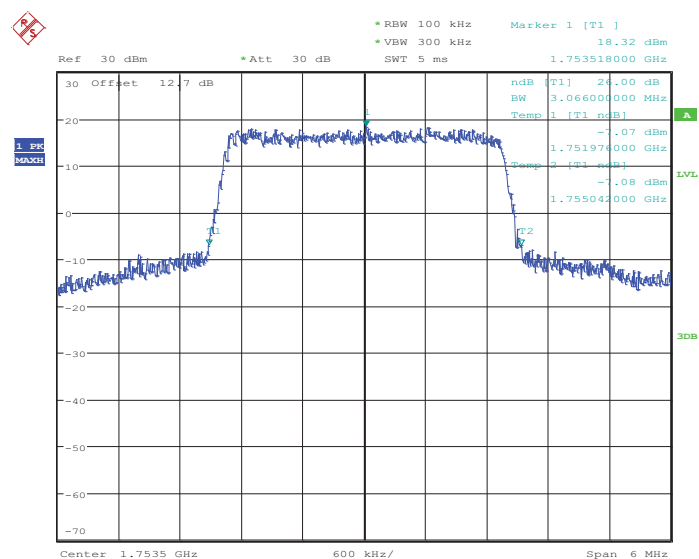


99% Occupied Bandwidth Plot on Channel 20385



Date: 11.APR.2014 19:24:03

26dB Bandwidth Plot on Channel 20385

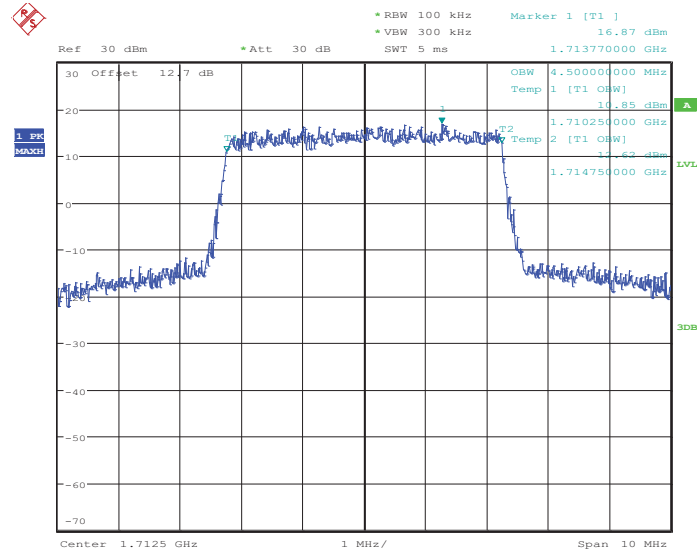


Date: 11.APR.2014 19:24:38



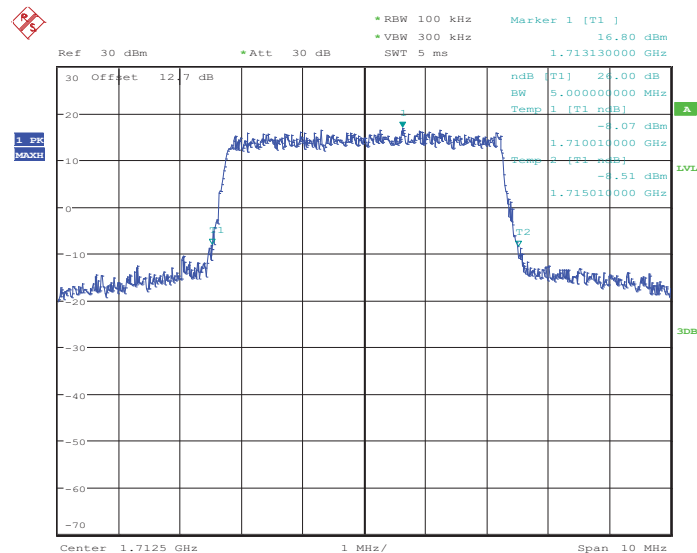
Band :	LTE Band 4	BW / Mod. :	5MHz / QPSK
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99% Occupied Bandwidth Plot on Channel 19975



Date: 11.APR.2014 19:34:26

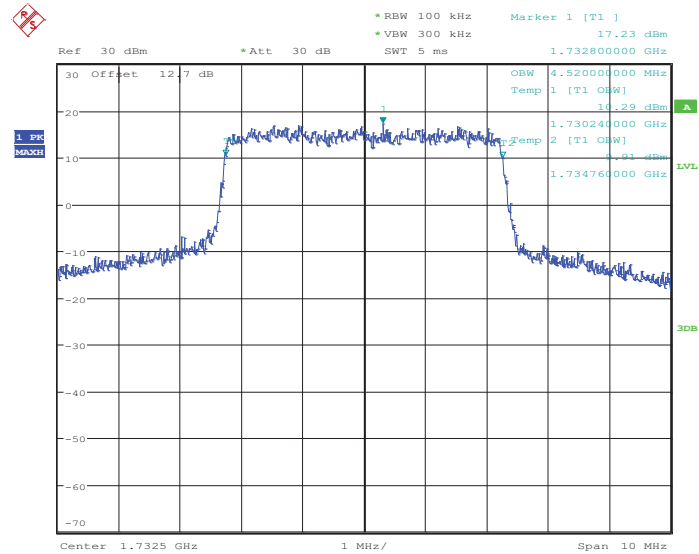
26dB Bandwidth Plot on Channel 19975



Date: 11.APR.2014 19:34:59

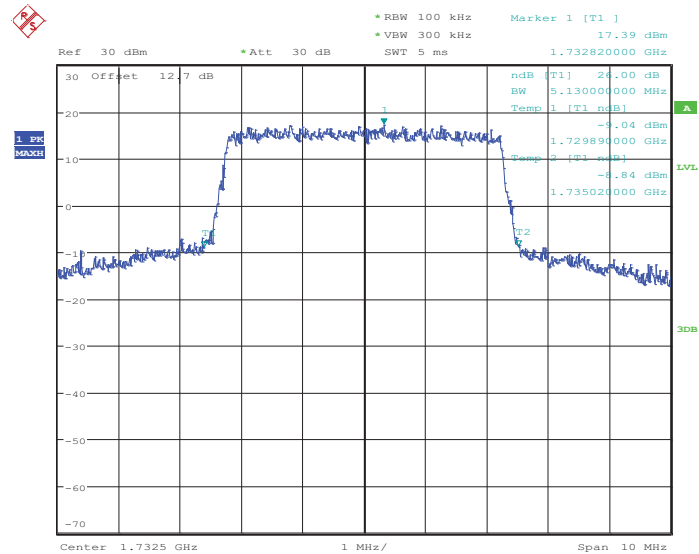


99% Occupied Bandwidth Plot on Channel 20175



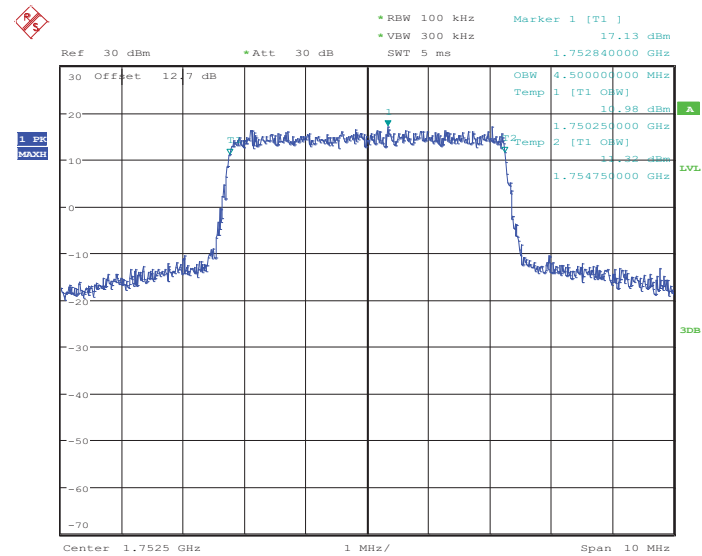
Date: 11.APR.2014 19:40:39

26dB Bandwidth Plot on Channel 20175



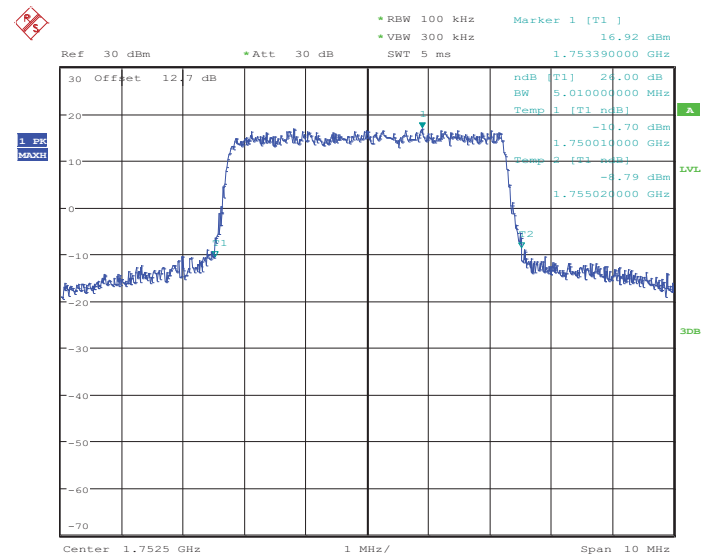
Date: 11.APR.2014 19:41:12

99% Occupied Bandwidth Plot on Channel 20375



Date: 11.APR.2014 19:43:45

26dB Bandwidth Plot on Channel 20375

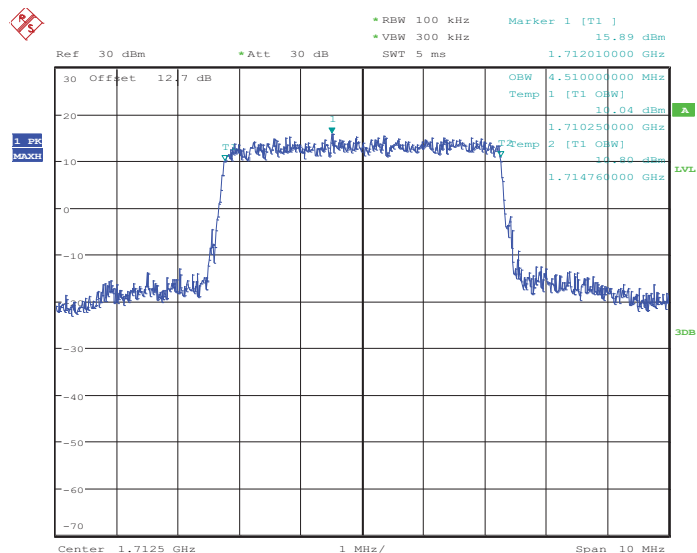


Date: 11.APR.2014 19:44:18



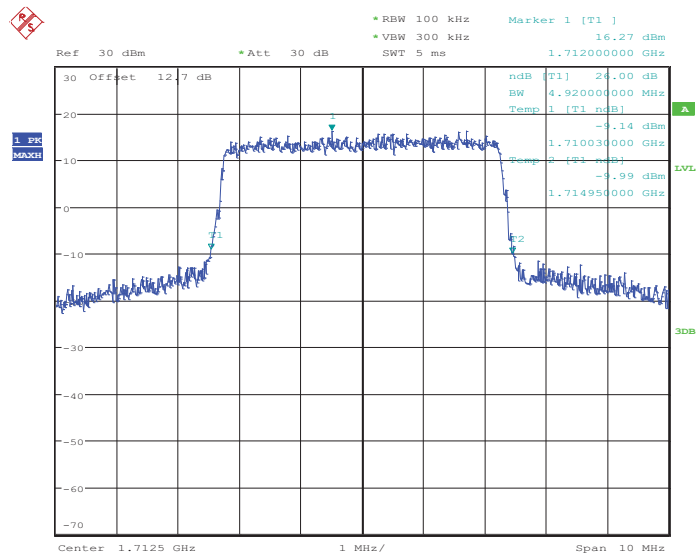
Band :	LTE Band 4	BW / Mod. :	5MHz / 16QAM
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99% Occupied Bandwidth Plot on Channel 19975



Date: 11.APR.2014 19:34:42

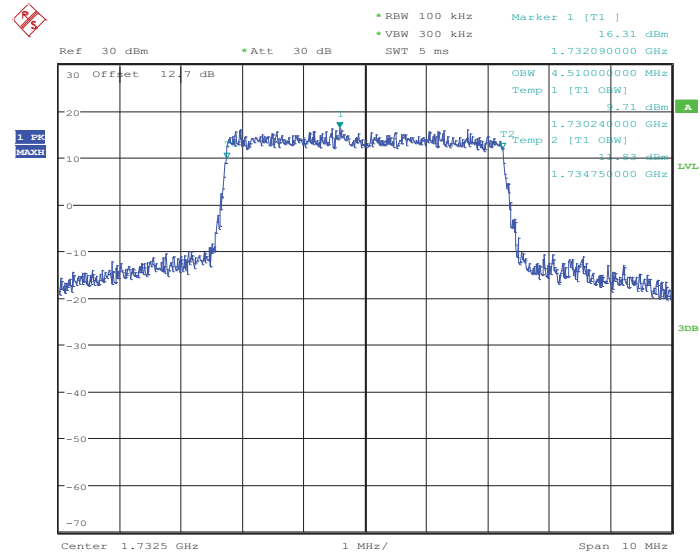
26dB Bandwidth Plot on Channel 19975



Date: 11.APR.2014 19:35:16

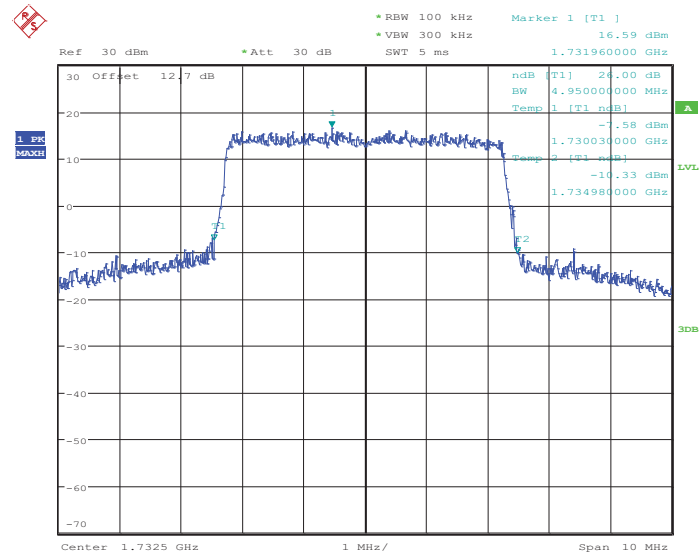


99% Occupied Bandwidth Plot on Channel 20175



Date: 11.APR.2014 19:40:54

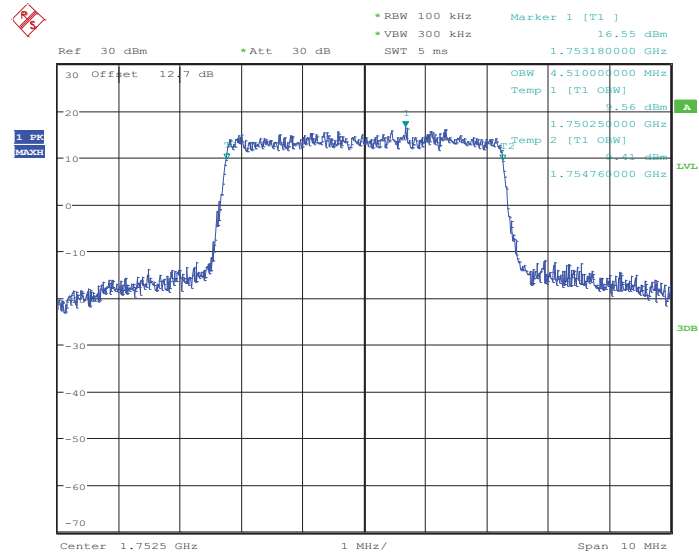
26dB Bandwidth Plot on Channel 20175



Date: 11.APR.2014 19:41:29

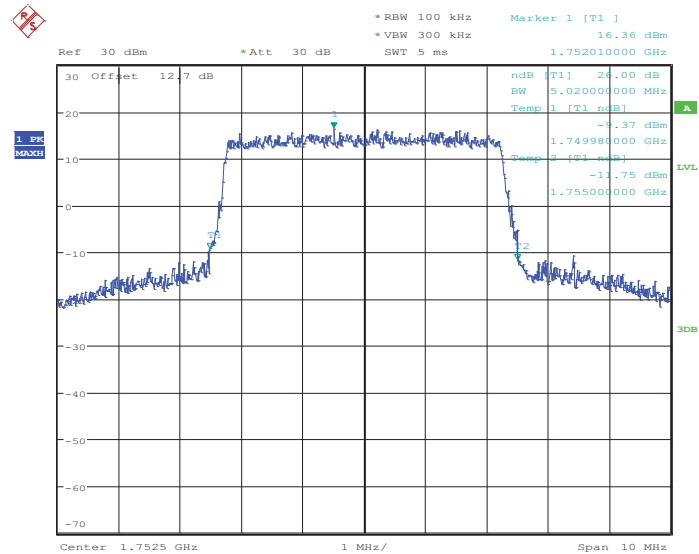


99% Occupied Bandwidth Plot on Channel 20375



Date: 11.APR.2014 19:44:00

26dB Bandwidth Plot on Channel 20375

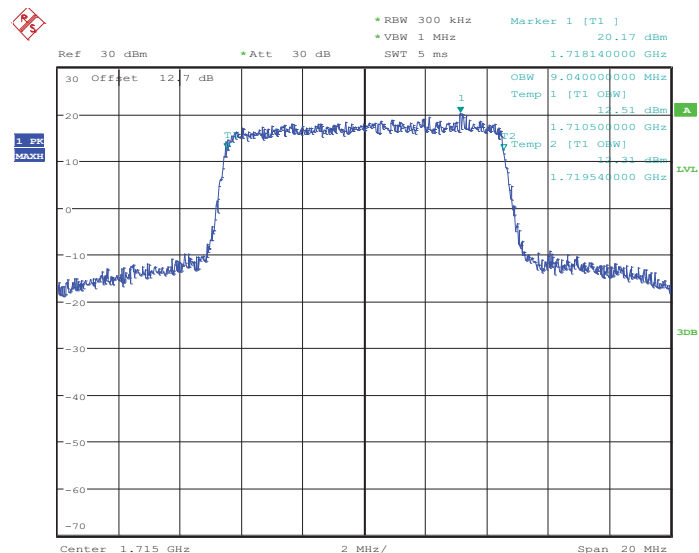


Date: 11.APR.2014 19:44:35



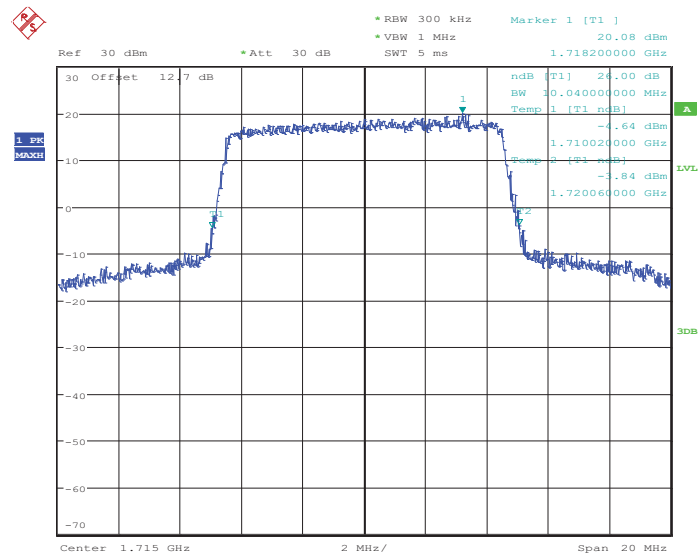
Band :	LTE Band 4	BW / Mod. :	10MHz / QPSK
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99% Occupied Bandwidth Plot on Channel 20000



Date: 11.APR.2014 19:50:14

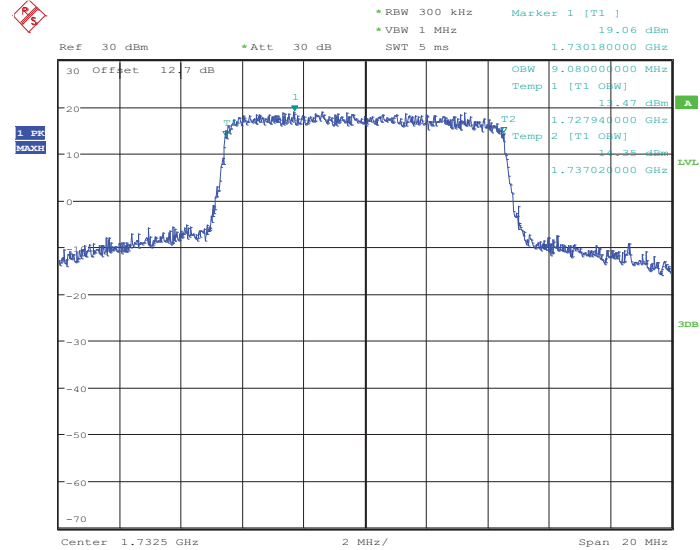
26dB Bandwidth Plot on Channel 20000



Date: 11.APR.2014 19:50:47

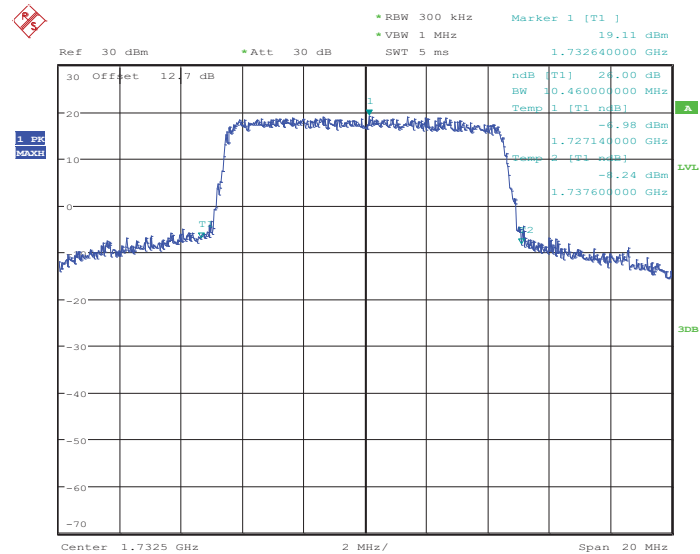


99% Occupied Bandwidth Plot on Channel 20175



Date: 11.APR.2014 19:56:27

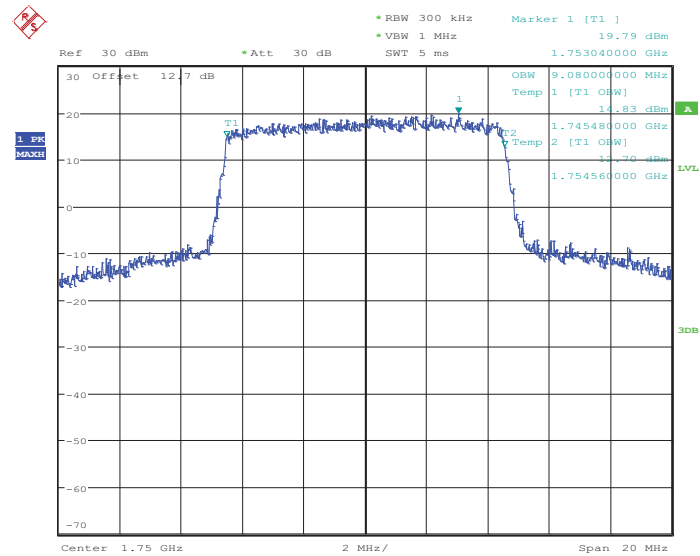
26dB Bandwidth Plot on Channel 20175



Date: 11.APR.2014 19:57:00

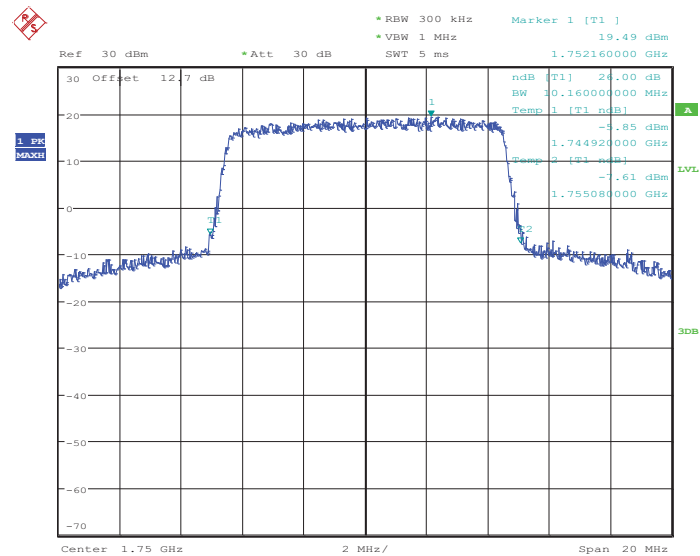


99% Occupied Bandwidth Plot on Channel 20350



Date: 11.APR.2014 19:59:33

26dB Bandwidth Plot on Channel 20350

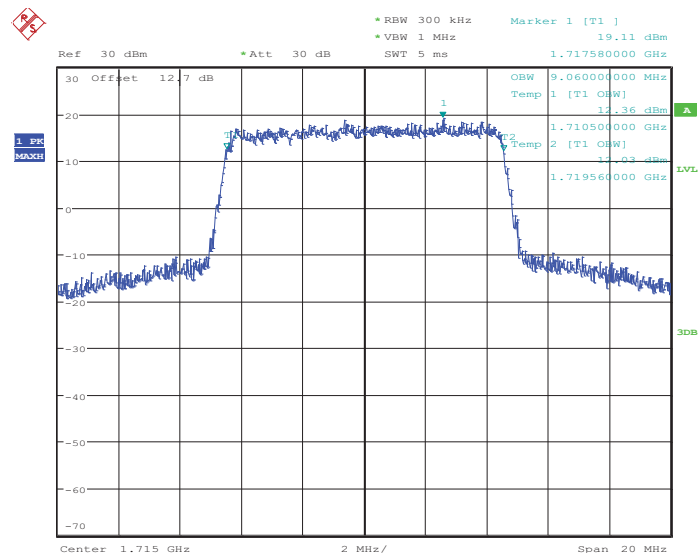


Date: 11.APR.2014 20:00:06



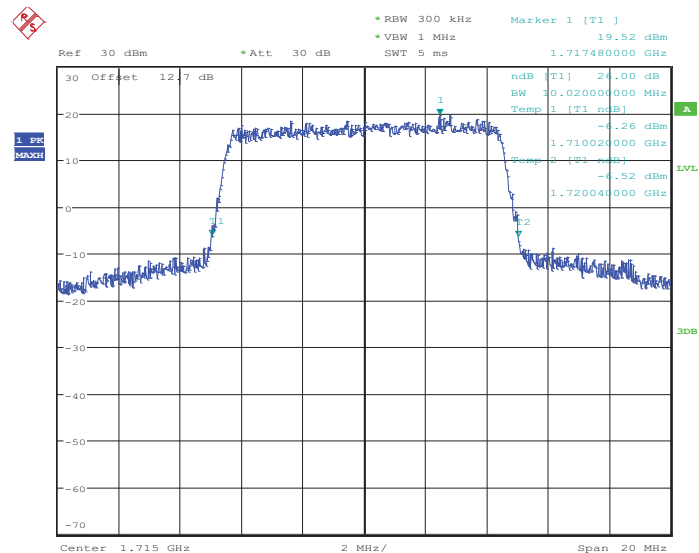
Band :	LTE Band 4	BW / Mod. :	10MHz / 16QAM
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99% Occupied Bandwidth Plot on Channel 20000



Date: 11.APR.2014 19:50:29

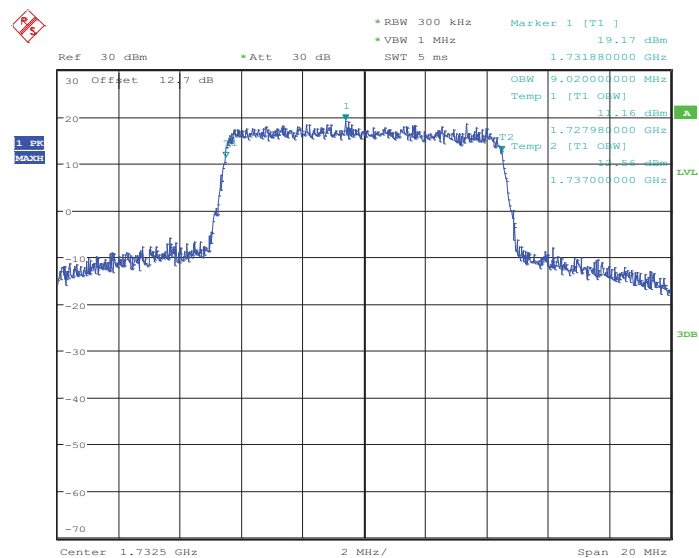
26dB Bandwidth Plot on Channel 20000



Date: 11.APR.2014 19:51:04

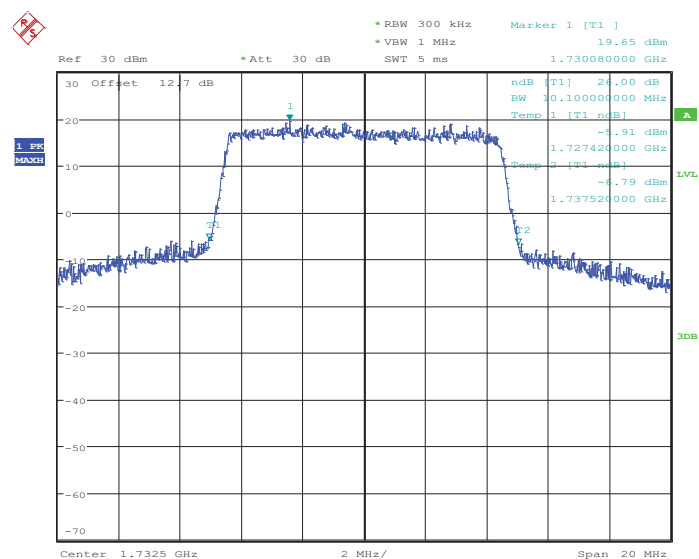


99% Occupied Bandwidth Plot on Channel 20175



Date: 11.APR.2014 19:56:42

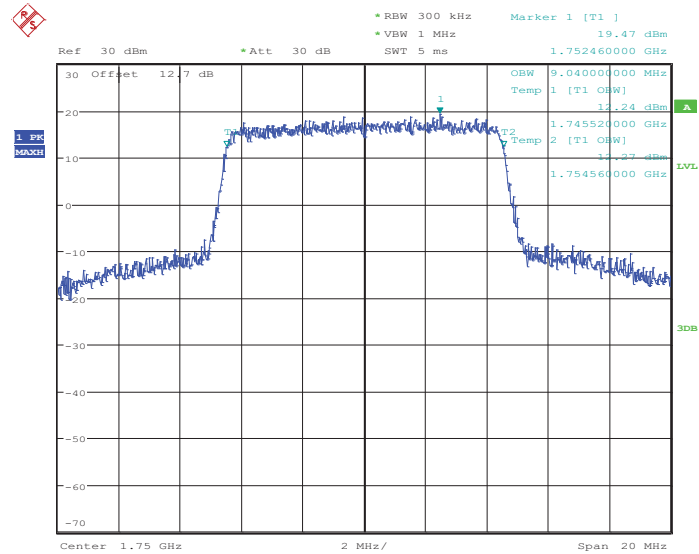
26dB Bandwidth Plot on Channel 20175



Date: 11.APR.2014 19:57:17

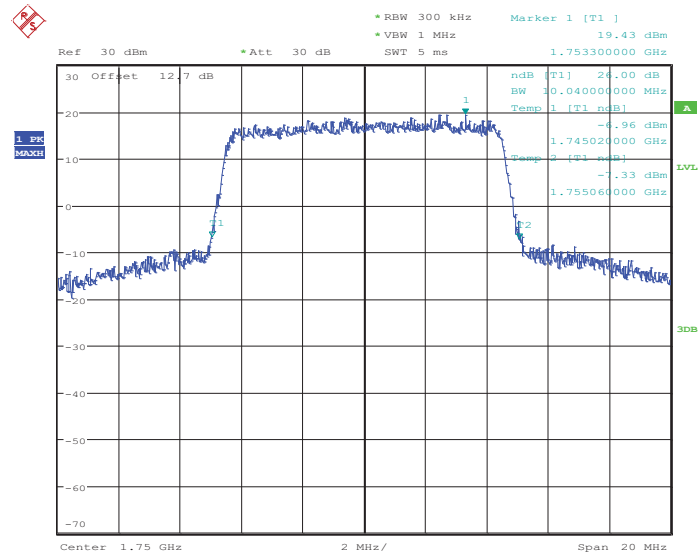


99% Occupied Bandwidth Plot on Channel 20350



Date: 11.APR.2014 19:59:48

26dB Bandwidth Plot on Channel 20350

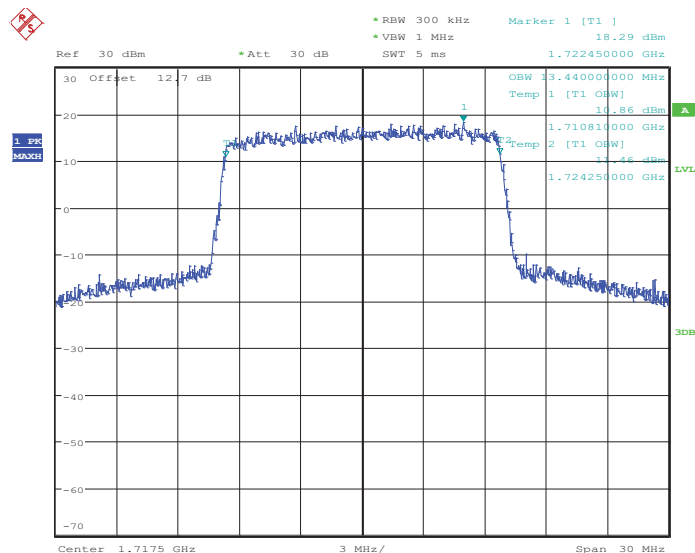


Date: 11.APR.2014 20:00:23



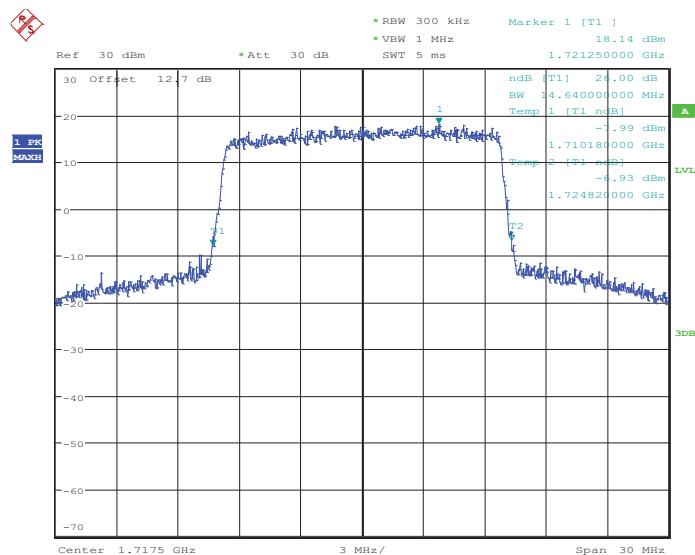
Band :	LTE Band 4	BW / Mod. :	15MHz / QPSK
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99% Occupied Bandwidth Plot on Channel 20025



Date: 11.APR.2014 20:06:46

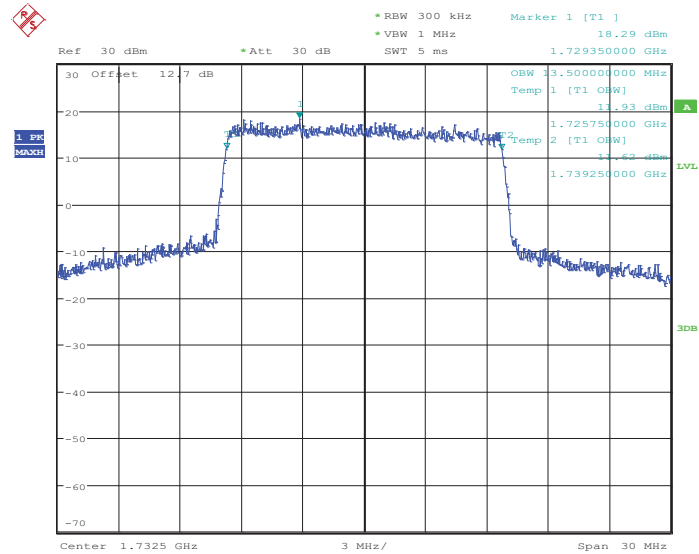
26dB Bandwidth Plot on Channel 20025



Date: 11.APR.2014 20:07:19

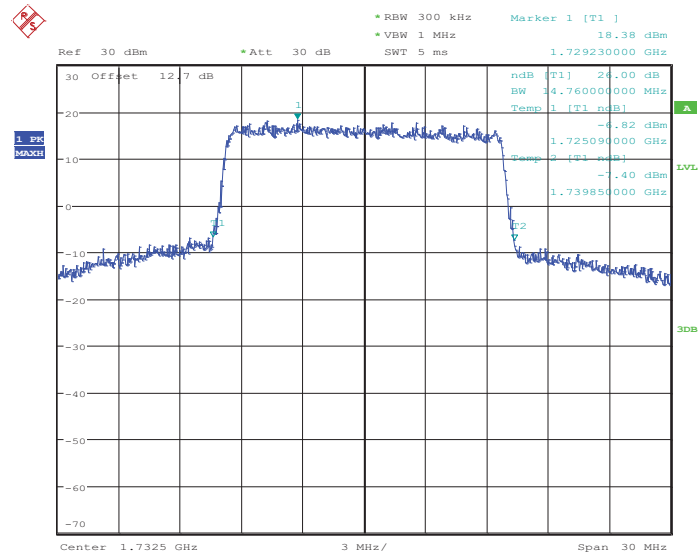


99% Occupied Bandwidth Plot on Channel 20175



Date: 11.APR.2014 20:12:59

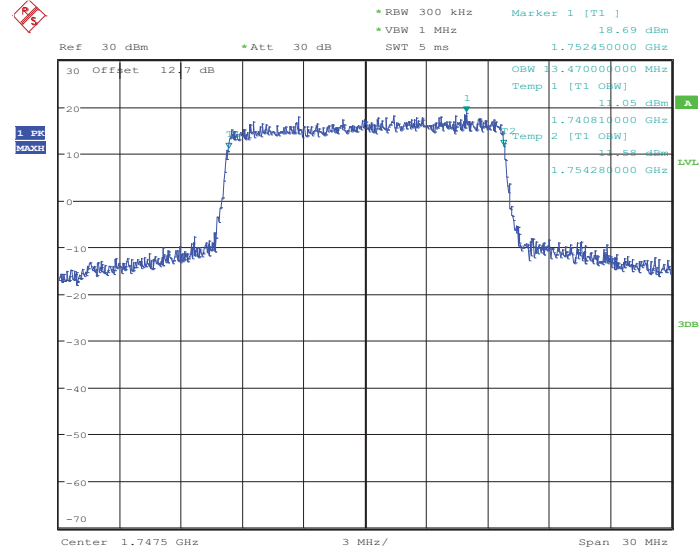
26dB Bandwidth Plot on Channel 20175



Date: 11.APR.2014 20:13:32

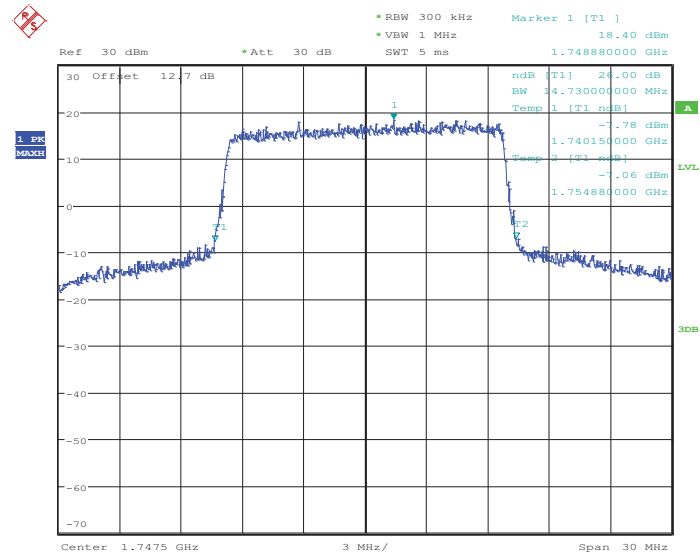


99% Occupied Bandwidth Plot on Channel 20325



Date: 11.APR.2014 20:16:05

26dB Bandwidth Plot on Channel 20325

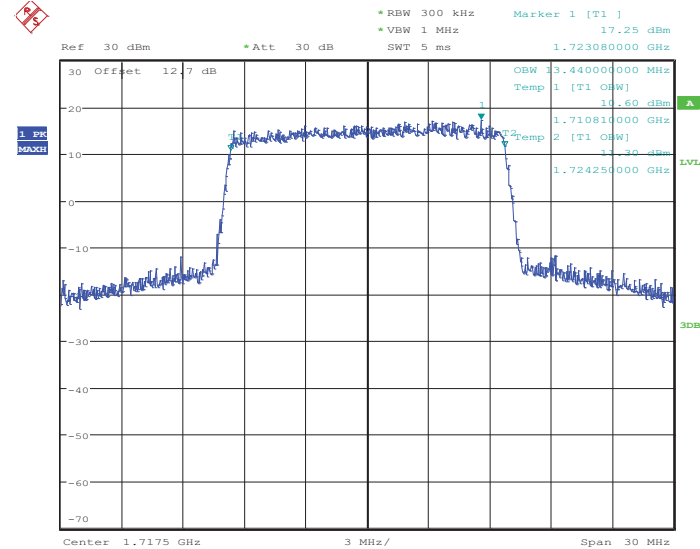


Date: 11.APR.2014 20:16:38



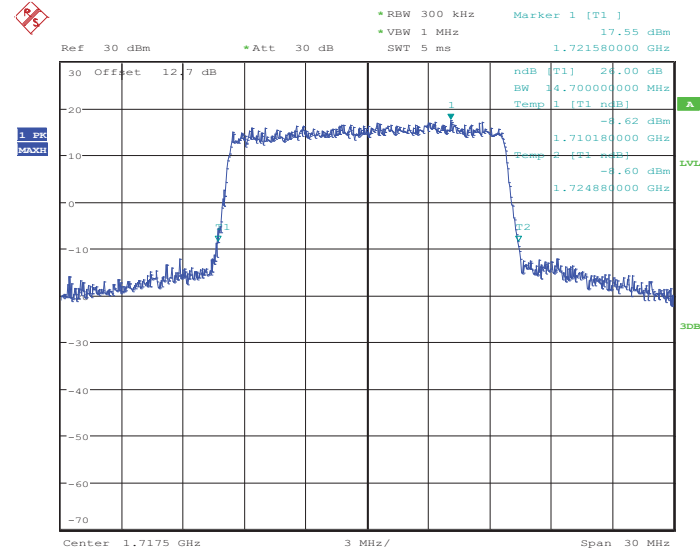
Band :	LTE Band 4	BW / Mod. :	15MHz / 16QAM
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99% Occupied Bandwidth Plot on Channel 20025



Date: 11.APR.2014 20:07:02

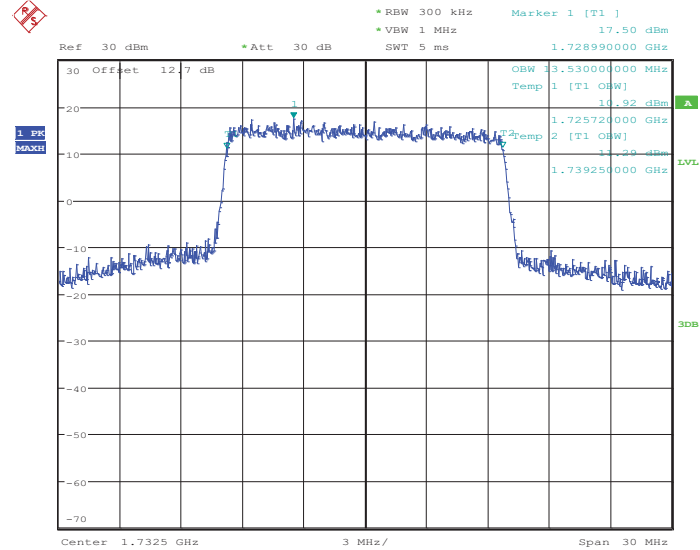
26dB Bandwidth Plot on Channel 20025



Date: 11.APR.2014 20:07:36

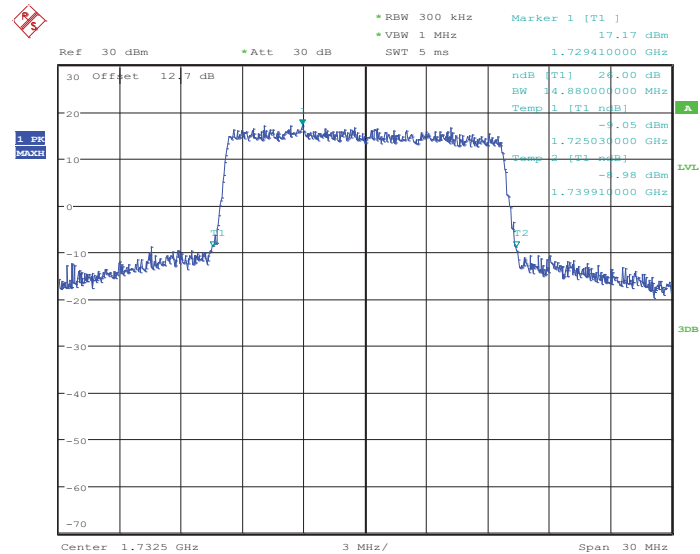


99% Occupied Bandwidth Plot on Channel 20175



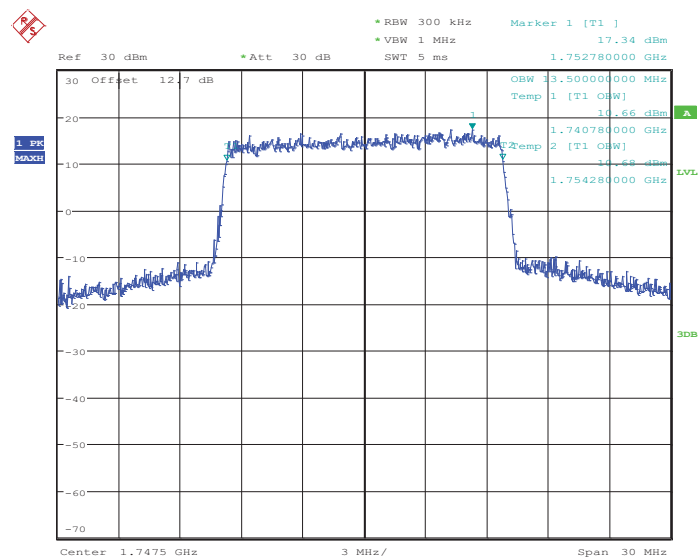
Date: 11.APR.2014 20:13:14

26dB Bandwidth Plot on Channel 20175



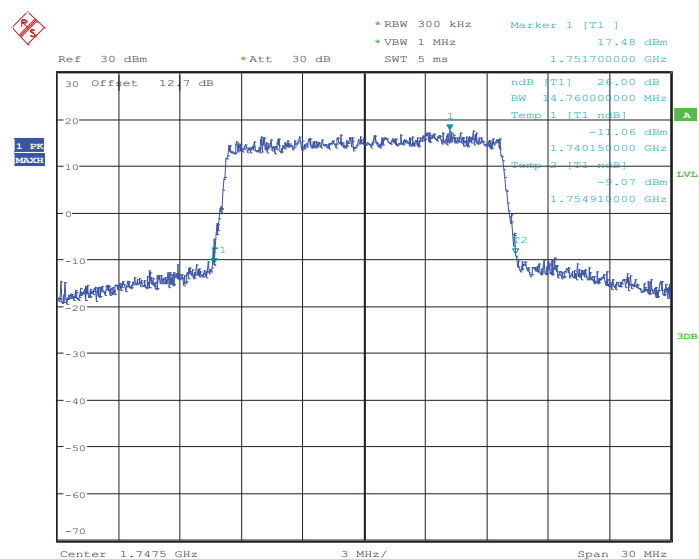
Date: 11.APR.2014 20:13:49

99% Occupied Bandwidth Plot on Channel 20325



Date: 11.APR.2014 20:16:20

26dB Bandwidth Plot on Channel 20325

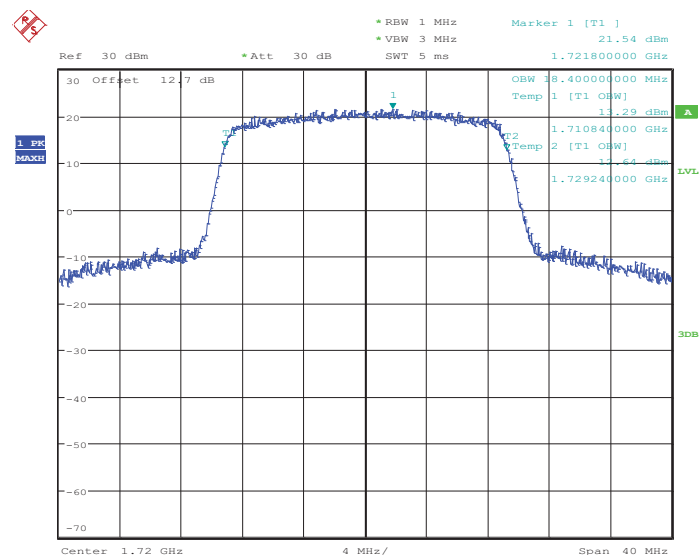


Date: 11.APR.2014 20:16:55



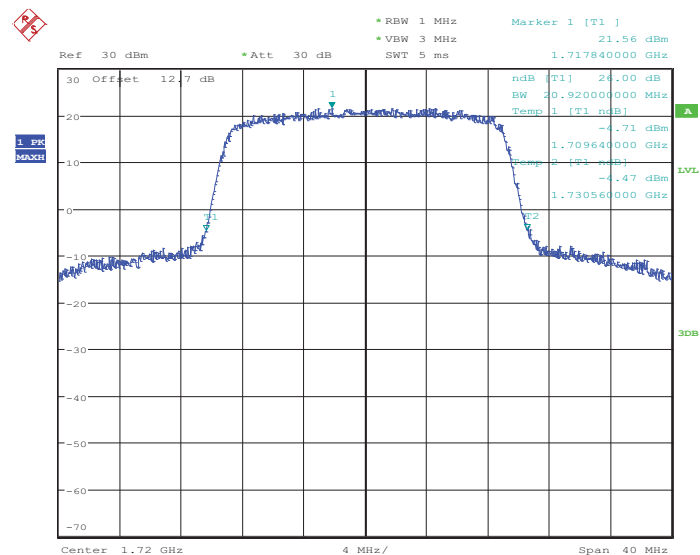
Band :	LTE Band 4	BW / Mod. :	20MHz / QPSK
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99% Occupied Bandwidth Plot on Channel 20050



Date: 11.APR.2014 20:25:16

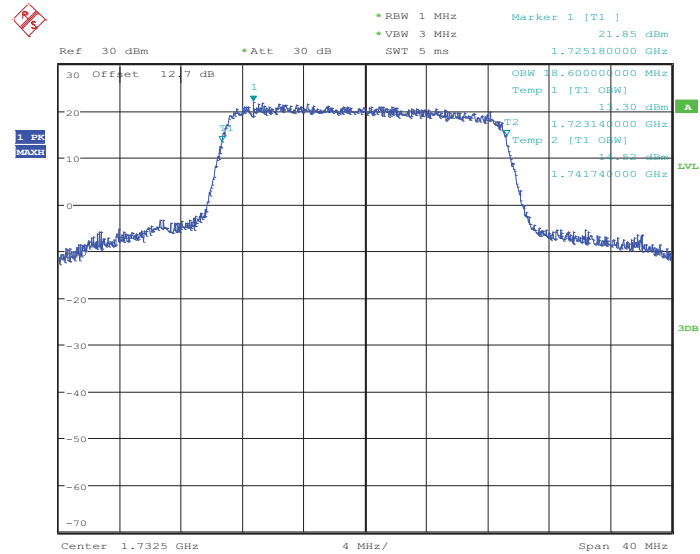
26dB Bandwidth Plot on Channel 20050



Date: 11.APR.2014 20:25:49

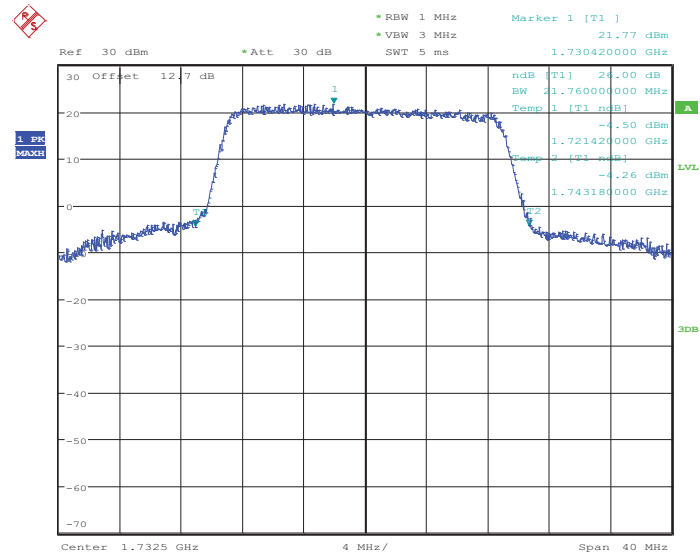


99% Occupied Bandwidth Plot on Channel 20175



Date: 11.APR.2014 20:31:29

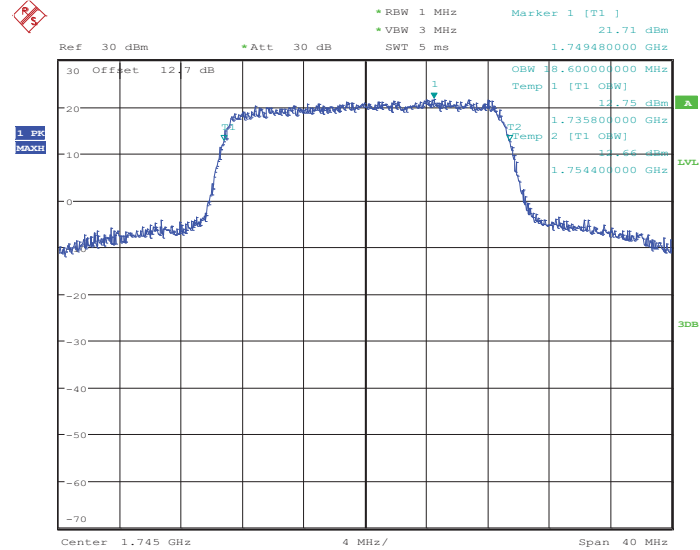
26dB Bandwidth Plot on Channel 20175



Date: 11.APR.2014 20:32:02

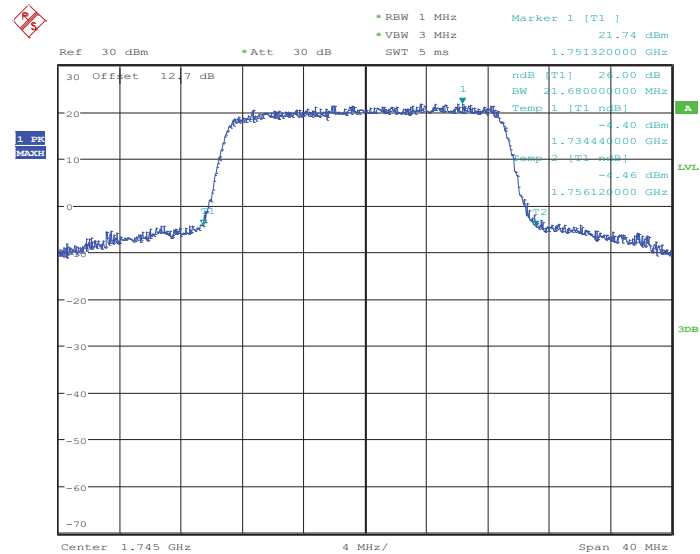


99% Occupied Bandwidth Plot on Channel 20300



Date: 11.APR.2014 20:34:35

26dB Bandwidth Plot on Channel 20300

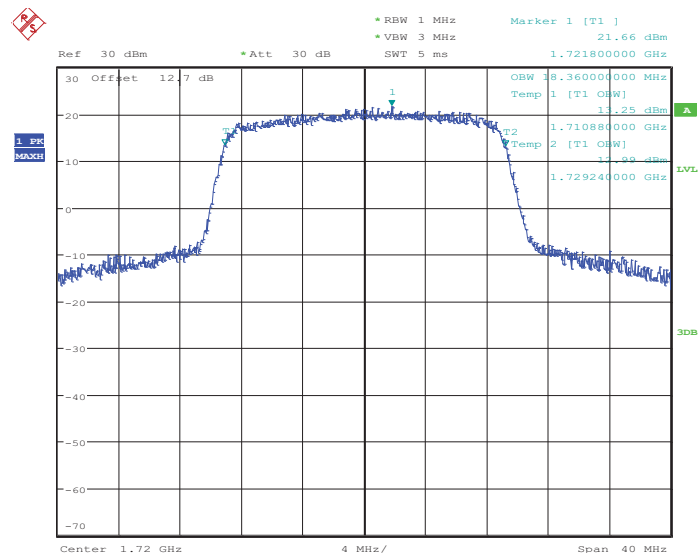


Date: 11.APR.2014 20:35:08



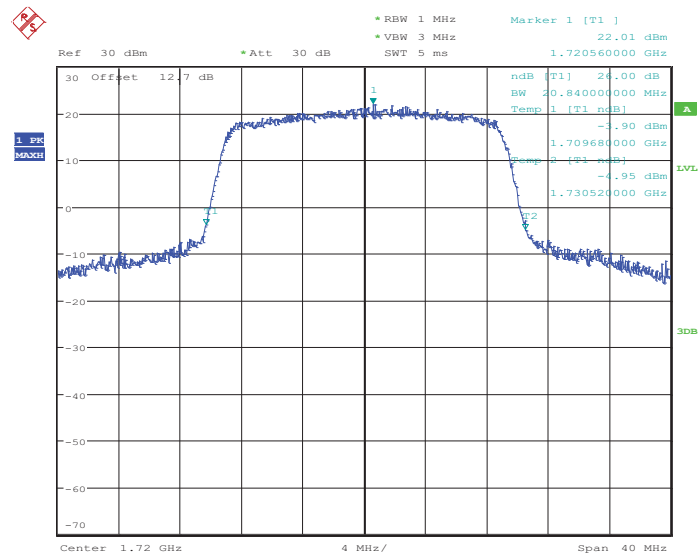
Band :	LTE Band 4	BW / Mod. :	20MHz / 16QAM
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99% Occupied Bandwidth Plot on Channel 20050



Date: 11.APR.2014 20:25:31

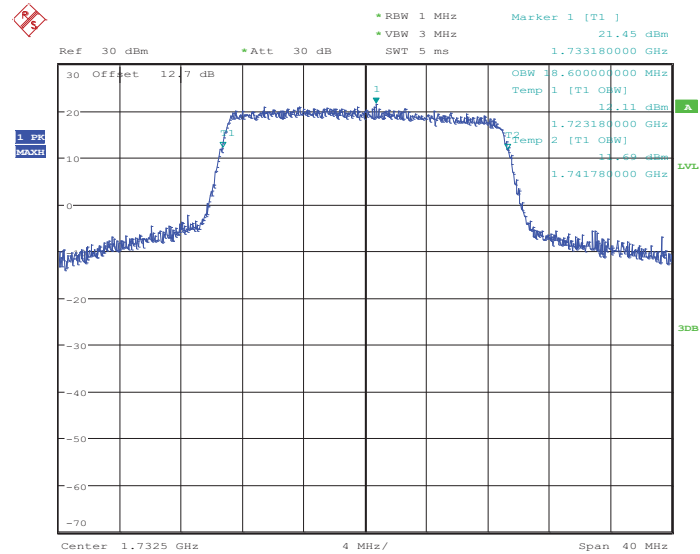
26dB Bandwidth Plot on Channel 20050



Date: 11.APR.2014 20:26:06

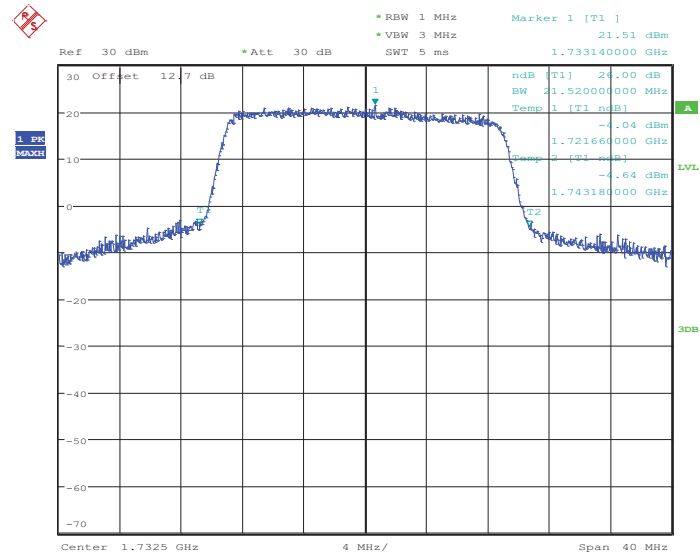


99% Occupied Bandwidth Plot on Channel 20175



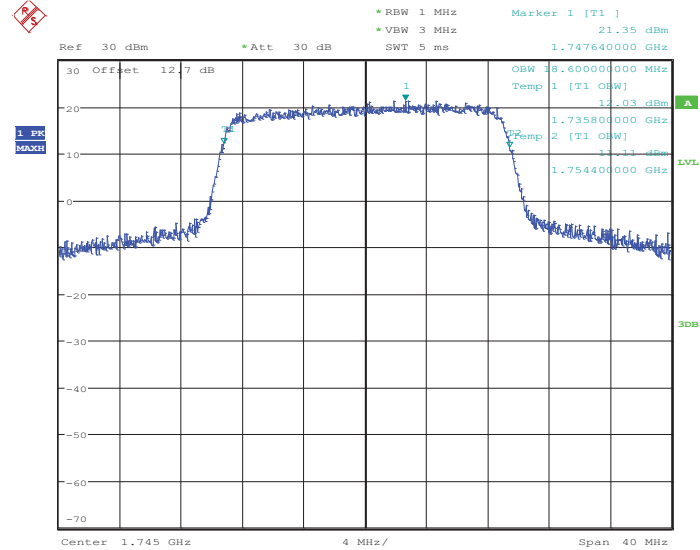
Date: 11.APR.2014 20:31:45

26dB Bandwidth Plot on Channel 20175



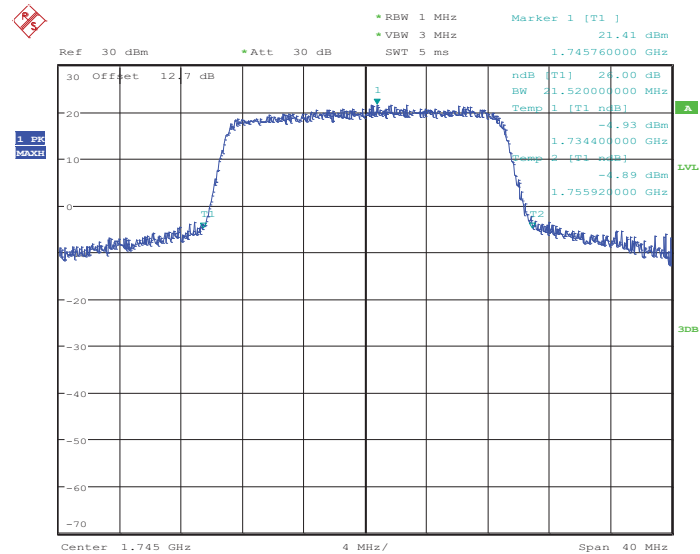
Date: 11.APR.2014 20:32:19

99% Occupied Bandwidth Plot on Channel 20300



Date: 11.APR.2014 20:34:50

26dB Bandwidth Plot on Channel 20300



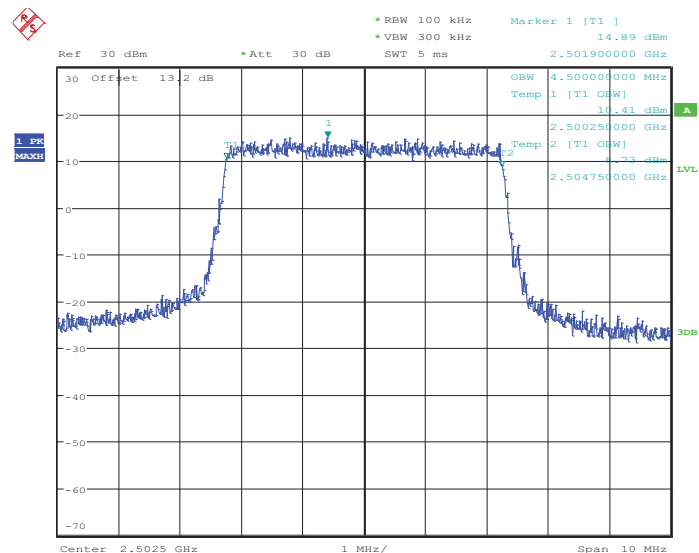
Date: 11.APR.2014 20:35:25

Note: The total loss is 12.7 dB of the RF cable and attenuator of LTE Band 4, and has been compensated to the spectrum analyzer offset.



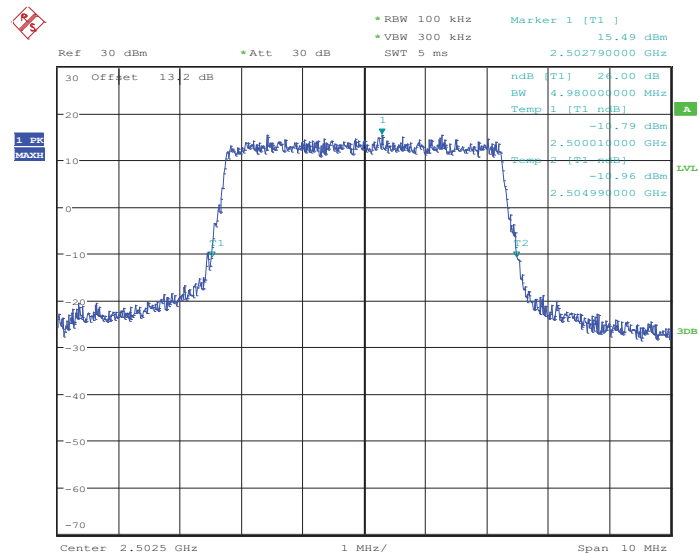
Band :	LTE Band 7	BW / Mod. :	5MHz / QPSK
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99% Occupied Bandwidth Plot on Channel 20775



Date: 12.APR.2014 16:27:22

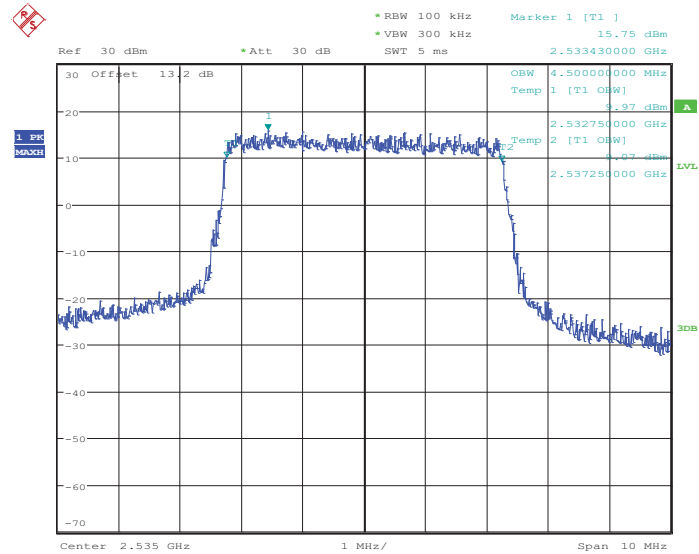
26dB Bandwidth Plot on Channel 20775



Date: 12.APR.2014 16:27:55

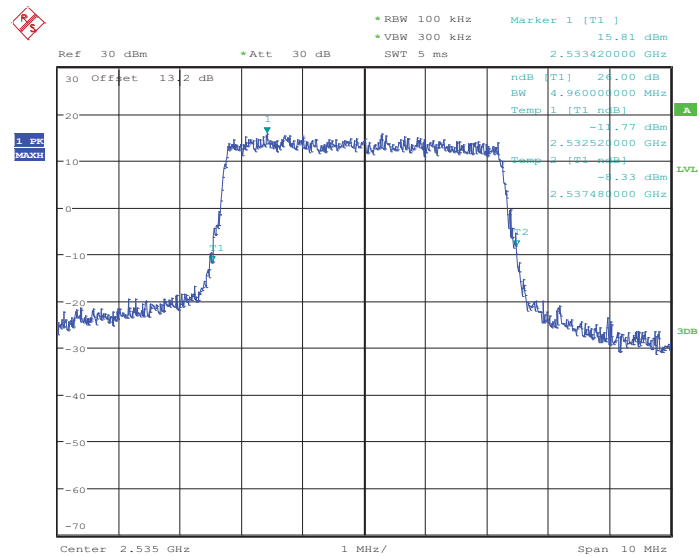


99% Occupied Bandwidth Plot on Channel 21100



Date: 12.APR.2014 16:33:40

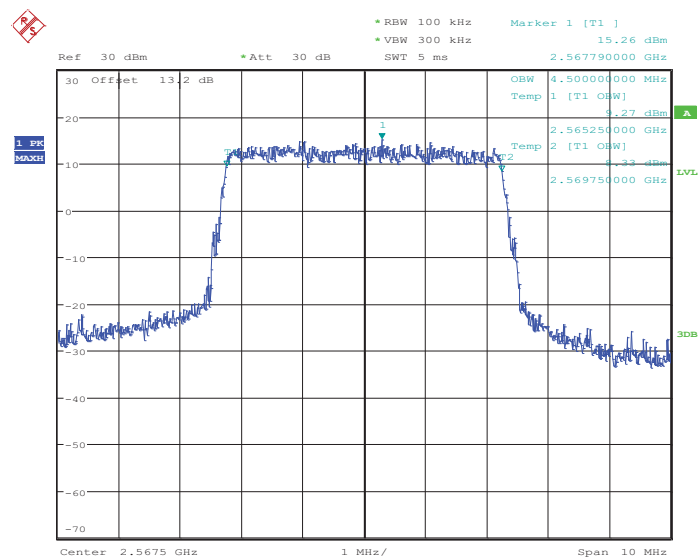
26dB Bandwidth Plot on Channel 21100



Date: 12.APR.2014 16:34:13

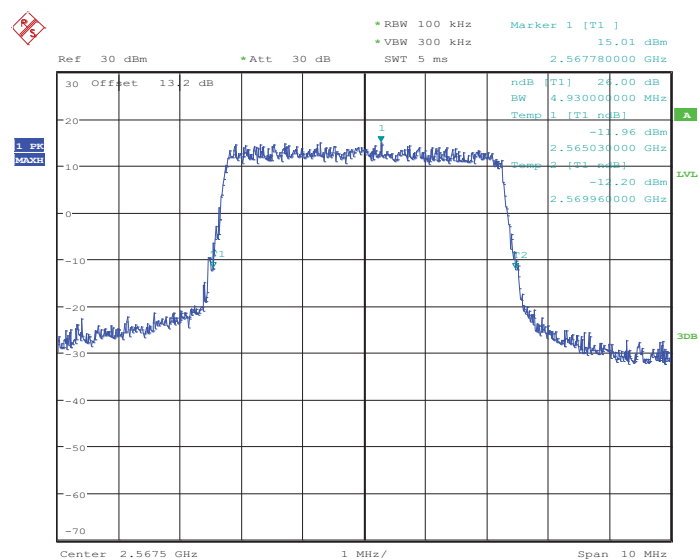


99% Occupied Bandwidth Plot on Channel 21425



Date: 12.APR.2014 16:36:51

26dB Bandwidth Plot on Channel 21425

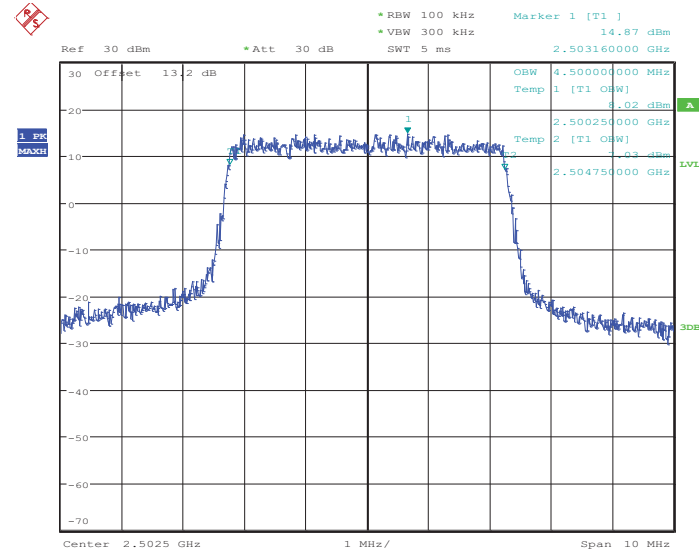


Date: 12.APR.2014 16:37:25



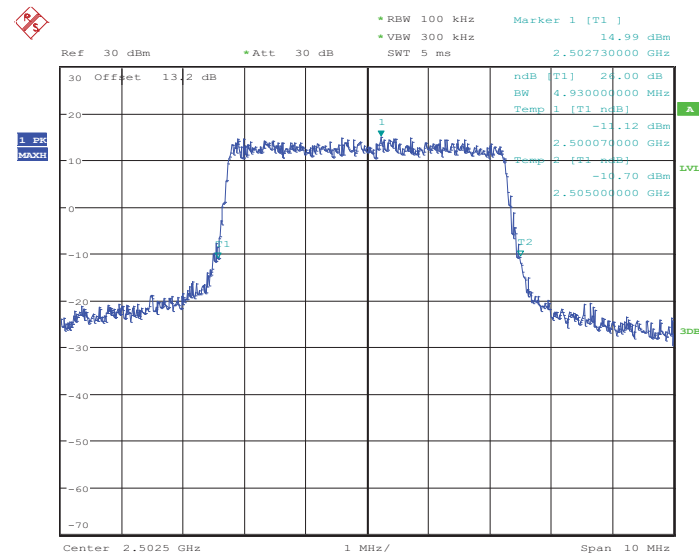
Band :	LTE Band 7	BW / Mod. :	5MHz / 16QAM
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99% Occupied Bandwidth Plot on Channel 20775



Date: 12.APR.2014 16:27:38

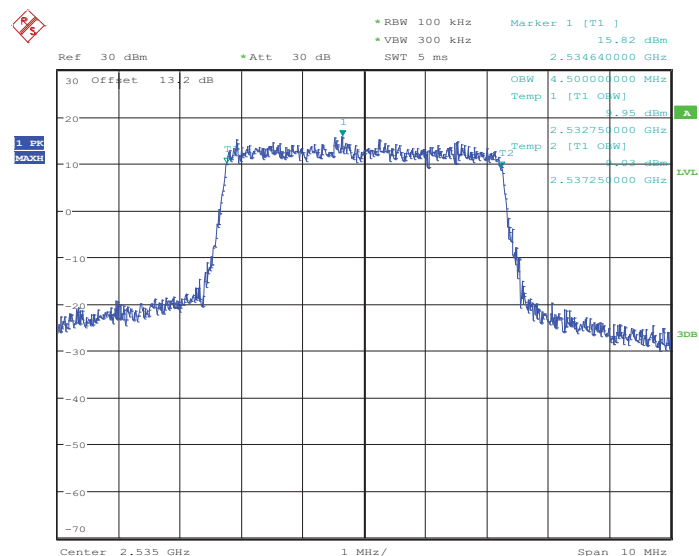
26dB Bandwidth Plot on Channel 20775



Date: 12.APR.2014 16:28:13

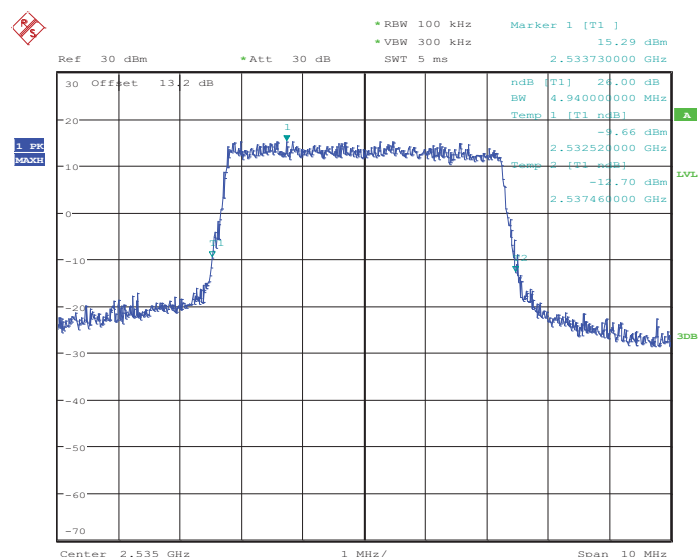


99% Occupied Bandwidth Plot on Channel 21100



Date: 12.APR.2014 16:33:55

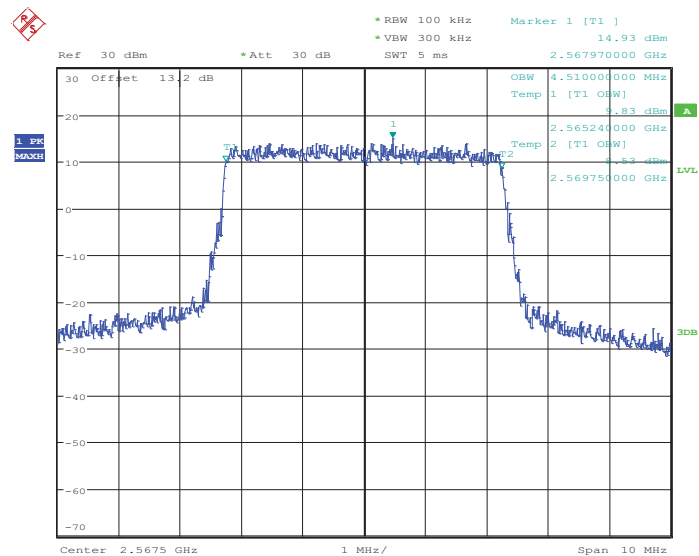
26dB Bandwidth Plot on Channel 21100



Date: 12.APR.2014 16:34:30

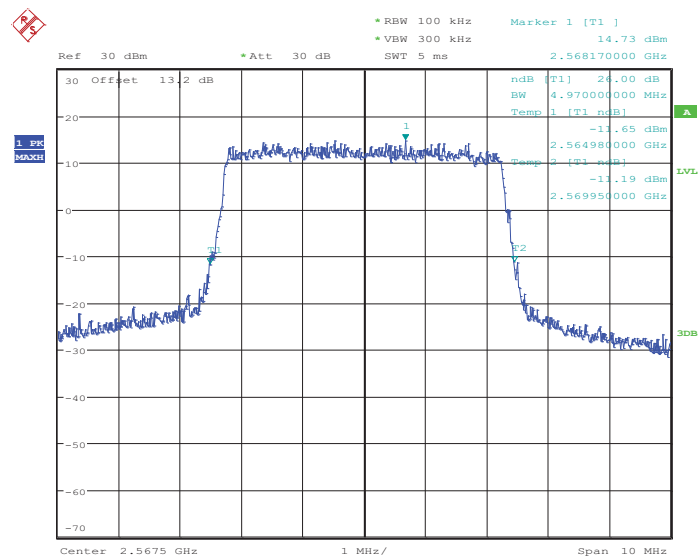


99% Occupied Bandwidth Plot on Channel 21425



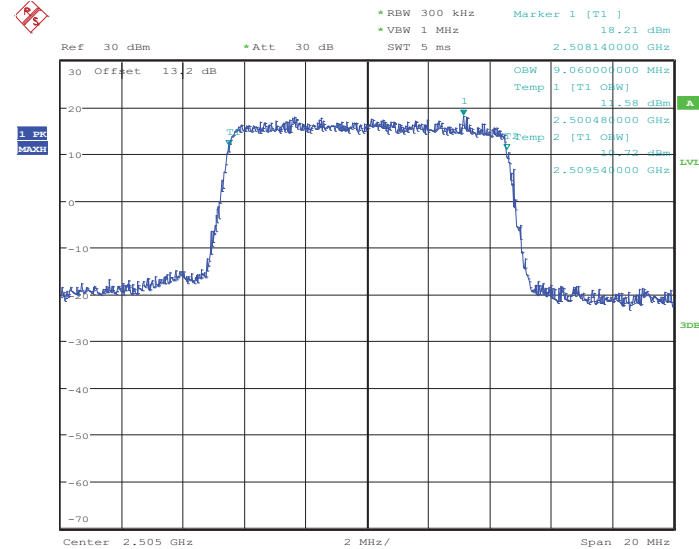
Date: 12.APR.2014 16:37:07

26dB Bandwidth Plot on Channel 21425

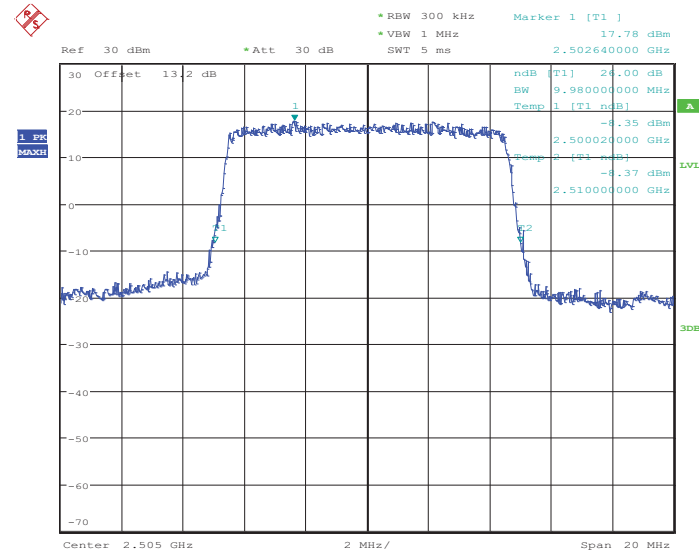


Date: 12.APR.2014 16:37:42

Band :	LTE Band 7	BW / Mod. :	10MHz / QPSK
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99% Occupied Bandwidth Plot on Channel 20800


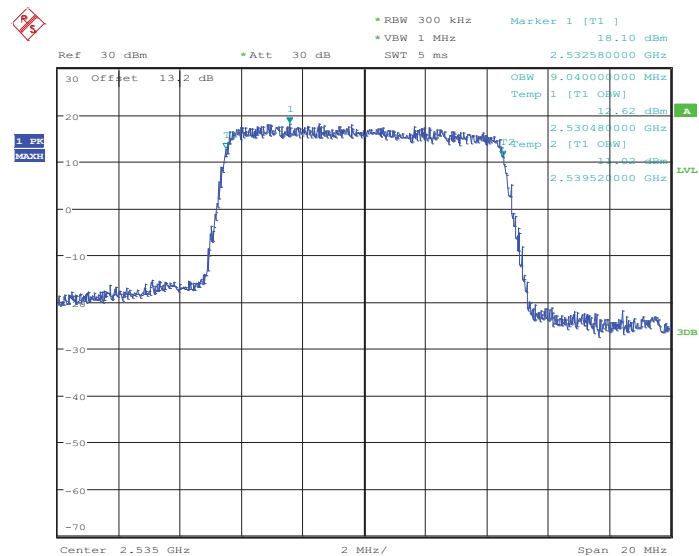
Date: 12.APR.2014 16:43:14

26dB Bandwidth Plot on Channel 20800


Date: 12.APR.2014 16:43:47

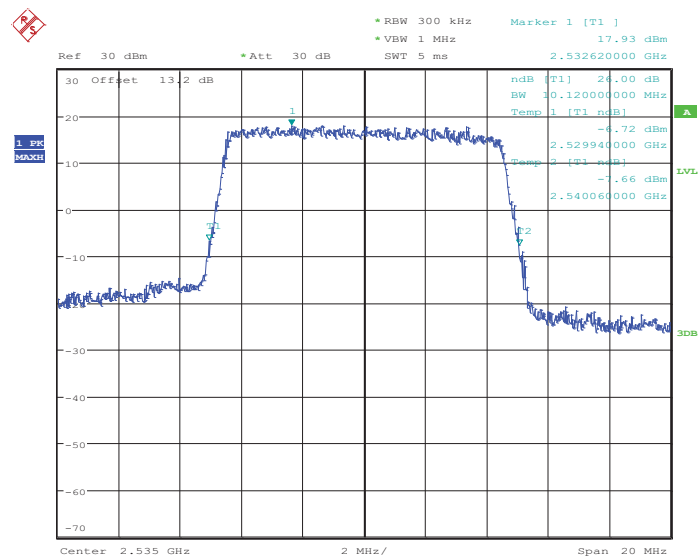


99% Occupied Bandwidth Plot on Channel 21100



Date: 12.APR.2014 16:49:32

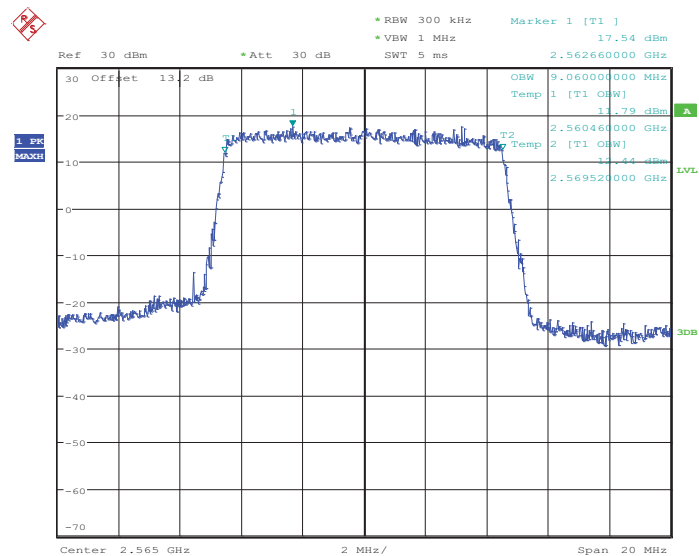
26dB Bandwidth Plot on Channel 21100



Date: 12.APR.2014 16:50:05

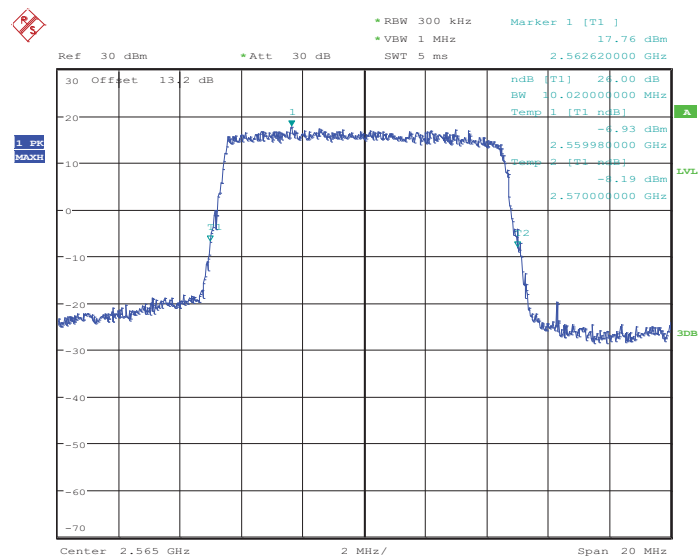


99% Occupied Bandwidth Plot on Channel 21400



Date: 12.APR.2014 16:52:43

26dB Bandwidth Plot on Channel 21400

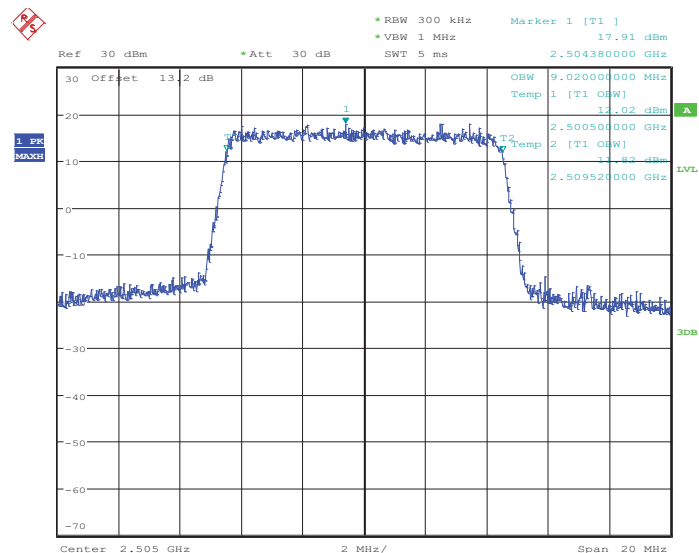


Date: 12.APR.2014 16:53:16



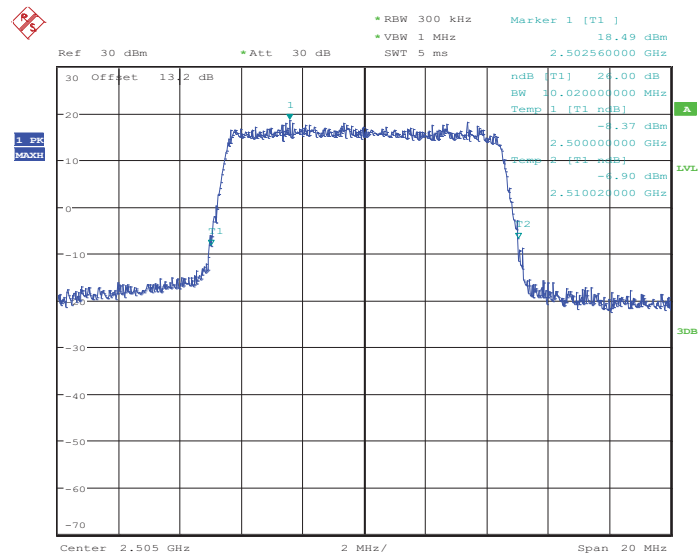
Band :	LTE Band 7	BW / Mod. :	10MHz / 16QAM
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99% Occupied Bandwidth Plot on Channel 20800



Date: 12.APR.2014 16:43:29

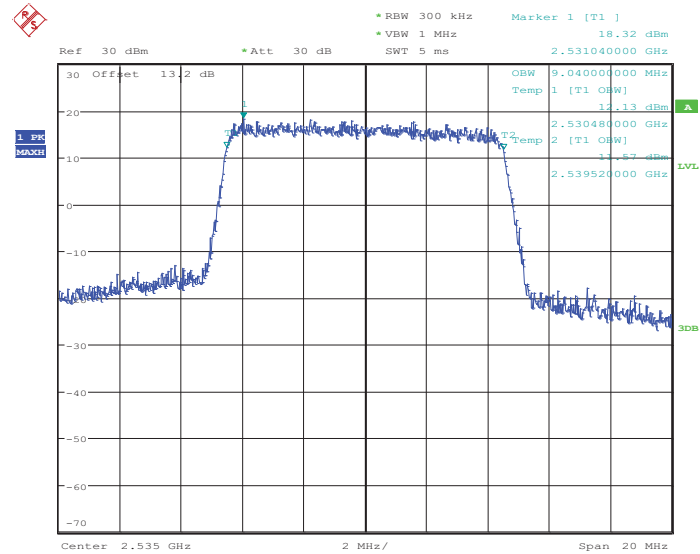
26dB Bandwidth Plot on Channel 20800



Date: 12.APR.2014 16:44:04

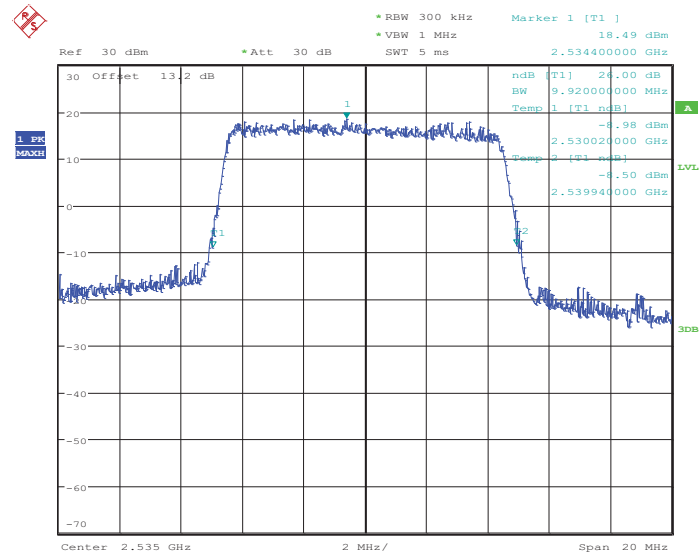


99% Occupied Bandwidth Plot on Channel 21100



Date: 12.APR.2014 16:49:47

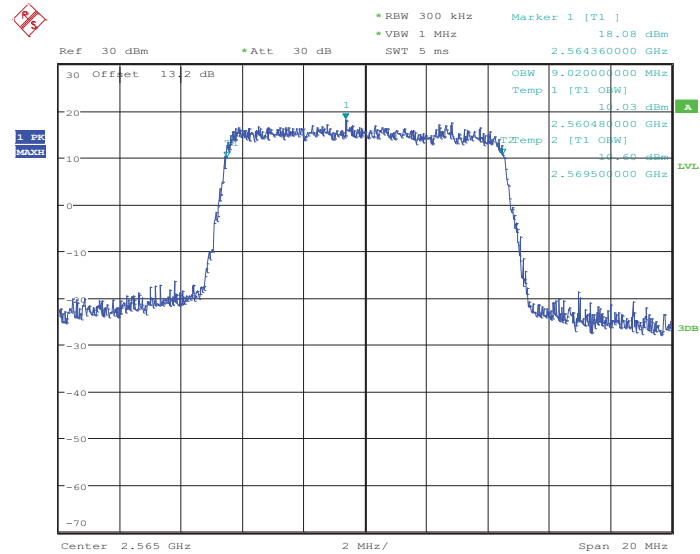
26dB Bandwidth Plot on Channel 21100



Date: 12.APR.2014 16:50:22

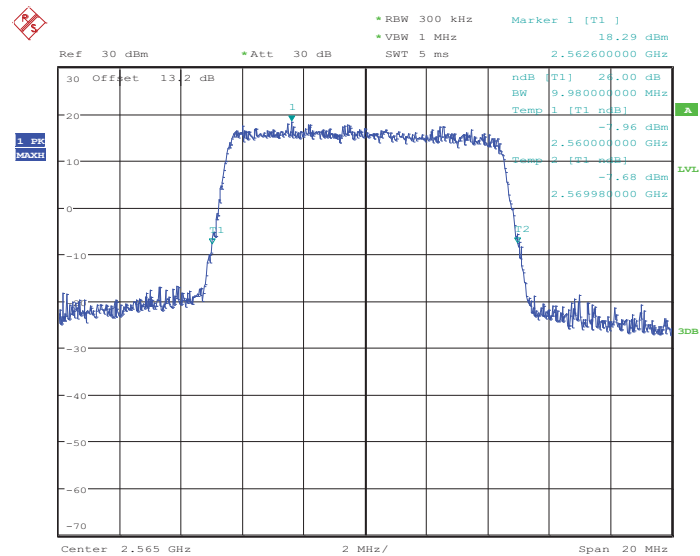


99% Occupied Bandwidth Plot on Channel 21400



Date: 12.APR.2014 16:52:59

26dB Bandwidth Plot on Channel 21400

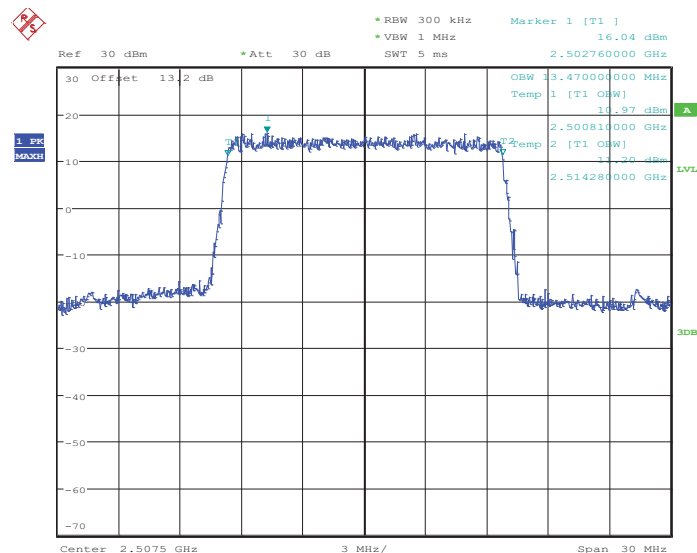


Date: 12.APR.2014 16:53:34



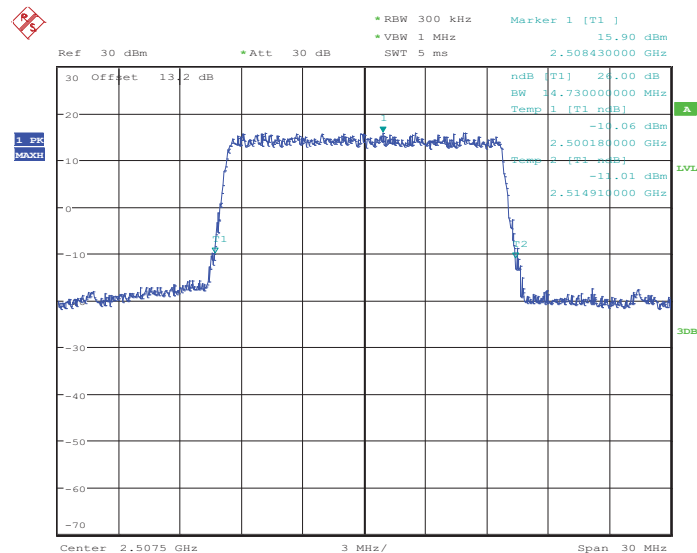
Band :	LTE Band 7	BW / Mod. :	15MHz / QPSK
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99% Occupied Bandwidth Plot on Channel 20825



Date: 12.APR.2014 16:59:06

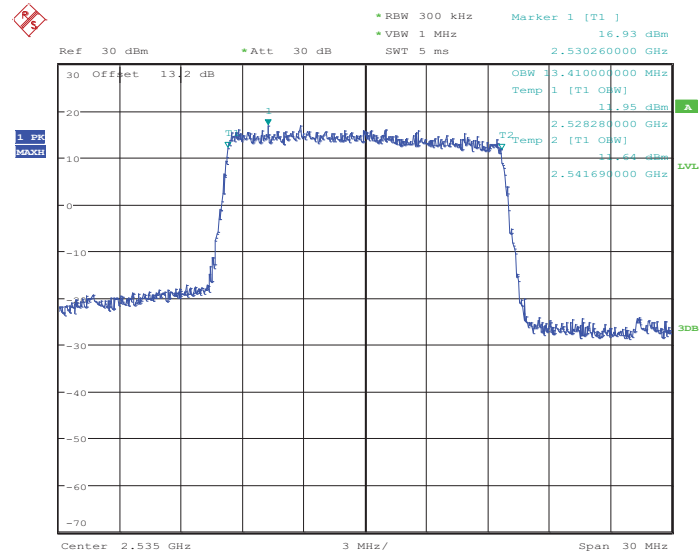
26dB Bandwidth Plot on Channel 20825



Date: 12.APR.2014 16:59:39

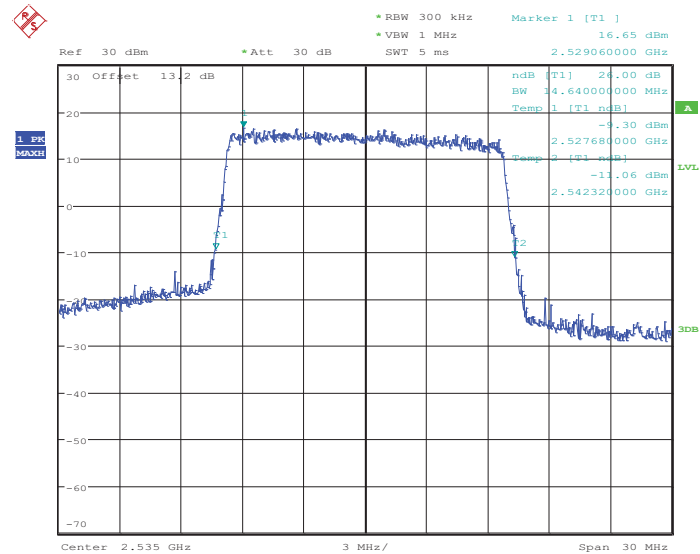


99% Occupied Bandwidth Plot on Channel 21100



Date: 12.APR.2014 17:06:40

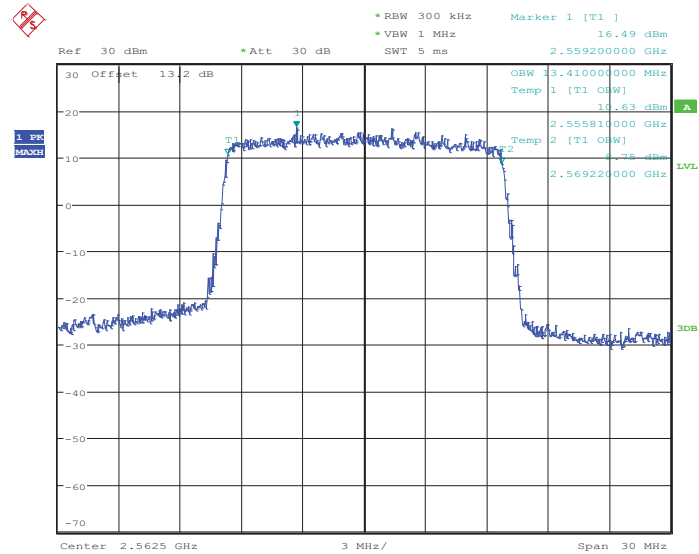
26dB Bandwidth Plot on Channel 21100



Date: 12.APR.2014 17:07:13

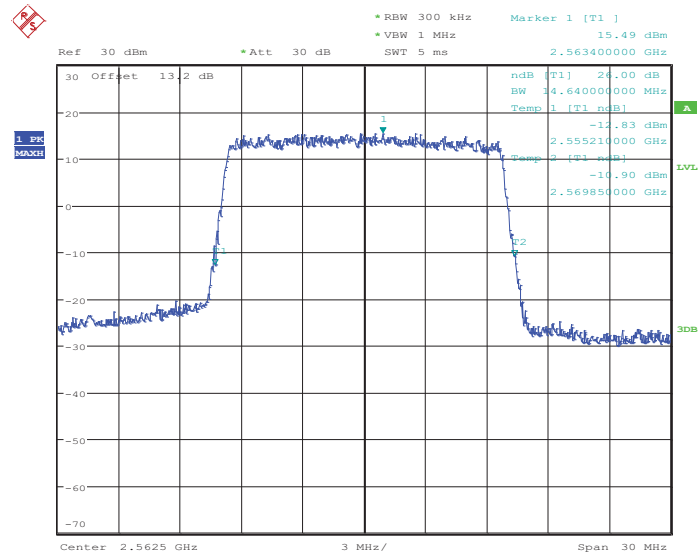


99% Occupied Bandwidth Plot on Channel 21375



Date: 12.APR.2014 17:09:52

26dB Bandwidth Plot on Channel 21375

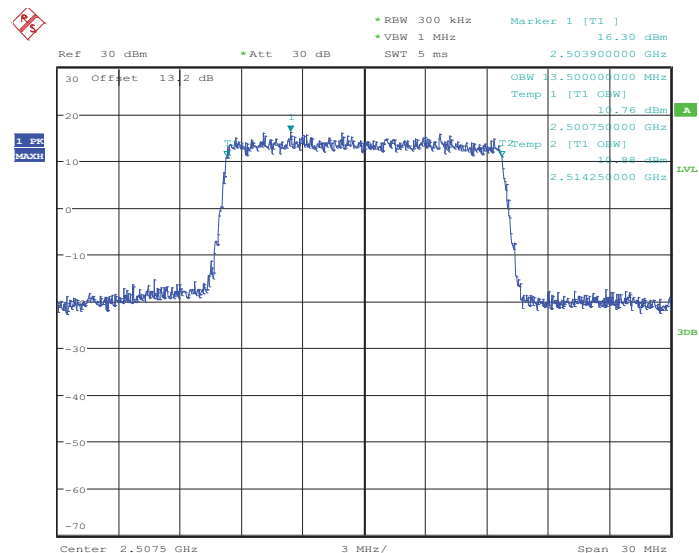


Date: 12.APR.2014 17:10:25



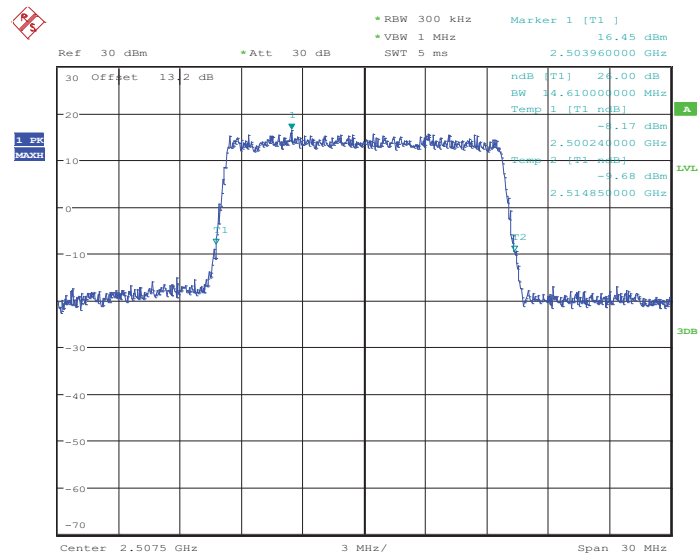
Band :	LTE Band 7	BW / Mod. :	15MHz / 16QAM
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99% Occupied Bandwidth Plot on Channel 20825



Date: 12.APR.2014 16:59:21

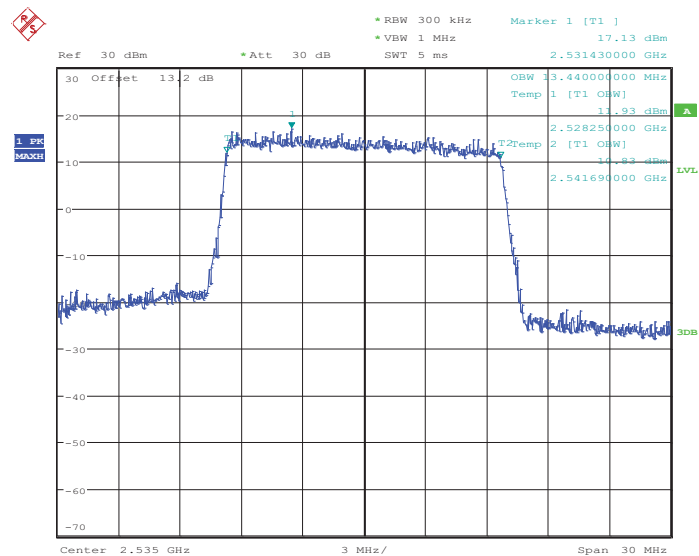
26dB Bandwidth Plot on Channel 20825



Date: 12.APR.2014 16:59:56

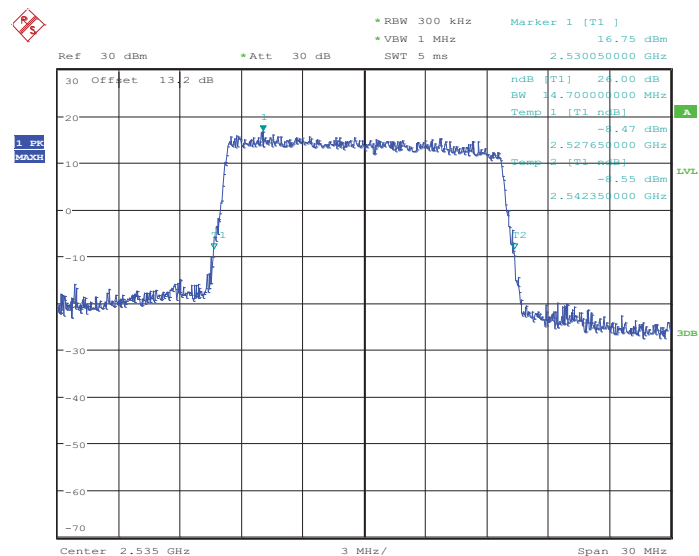


99% Occupied Bandwidth Plot on Channel 21100



Date: 12.APR.2014 17:06:55

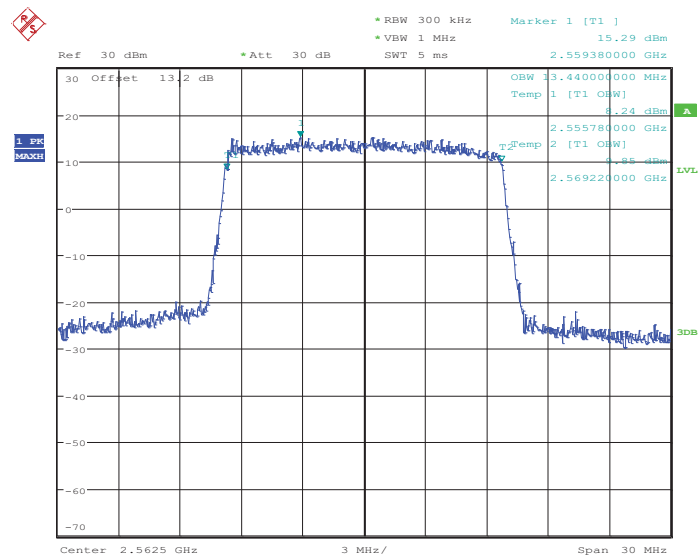
26dB Bandwidth Plot on Channel 21100



Date: 12.APR.2014 17:07:30

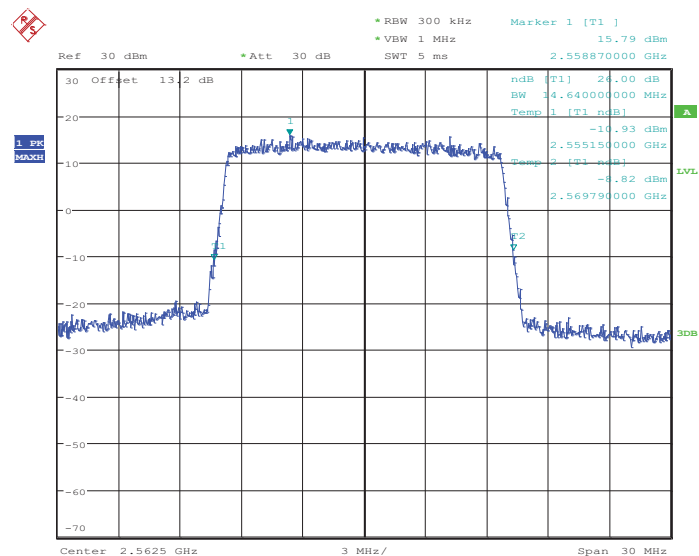


99% Occupied Bandwidth Plot on Channel 21375



Date: 12.APR.2014 17:10:07

26dB Bandwidth Plot on Channel 21375

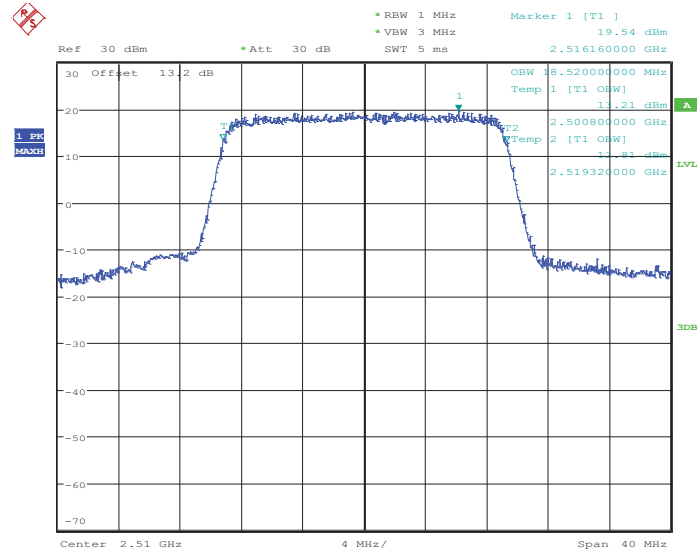


Date: 12.APR.2014 17:10:42



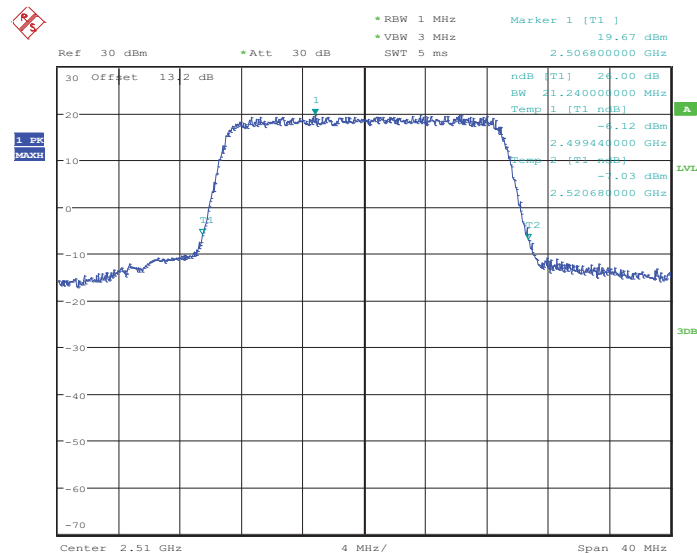
Band :	LTE Band 7	BW / Mod. :	20MHz / QPSK
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99% Occupied Bandwidth Plot on Channel 20850



Date: 12.APR.2014 17:16:14

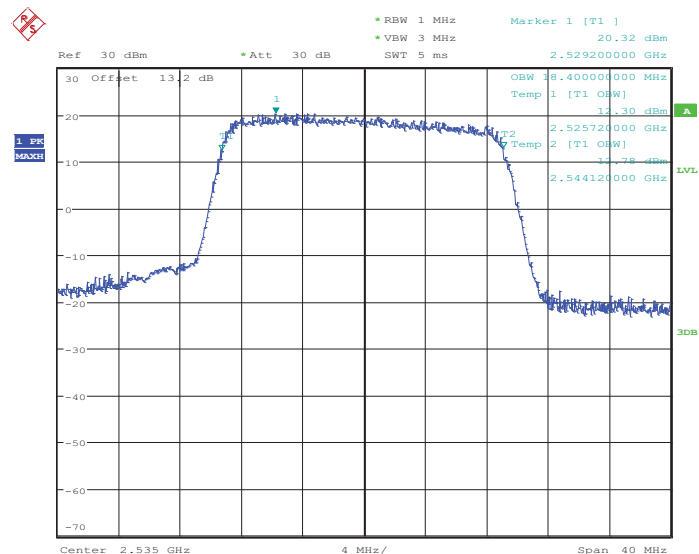
26dB Bandwidth Plot on Channel 20850



Date: 12.APR.2014 17:16:47

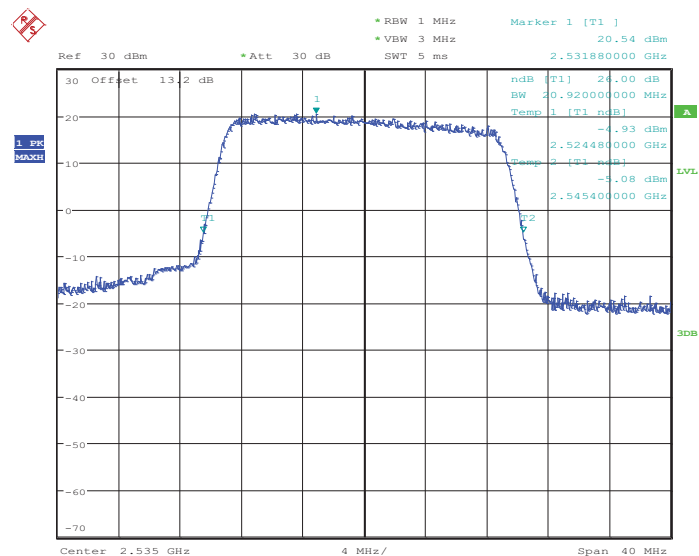


99% Occupied Bandwidth Plot on Channel 21100



Date: 12.APR.2014 17:22:32

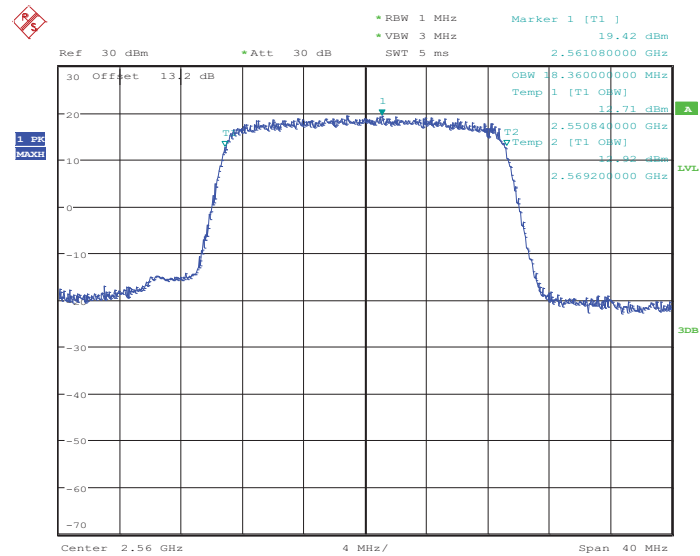
26dB Bandwidth Plot on Channel 21100



Date: 12.APR.2014 17:23:05

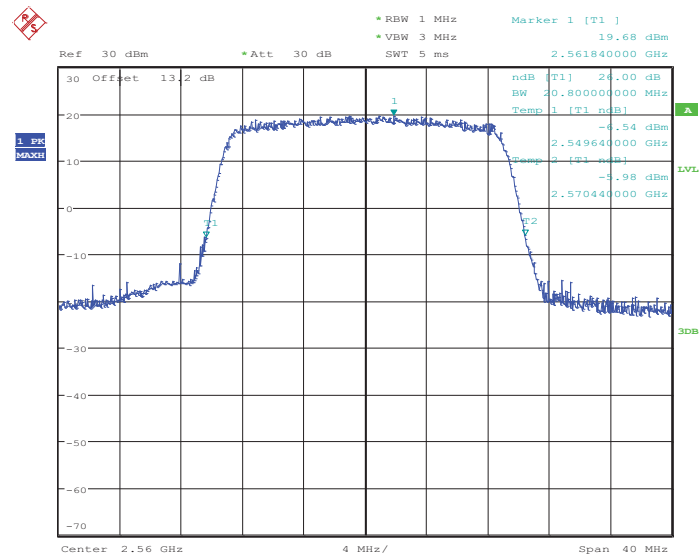


99% Occupied Bandwidth Plot on Channel 21350



Date: 12.APR.2014 17:25:43

26dB Bandwidth Plot on Channel 21350

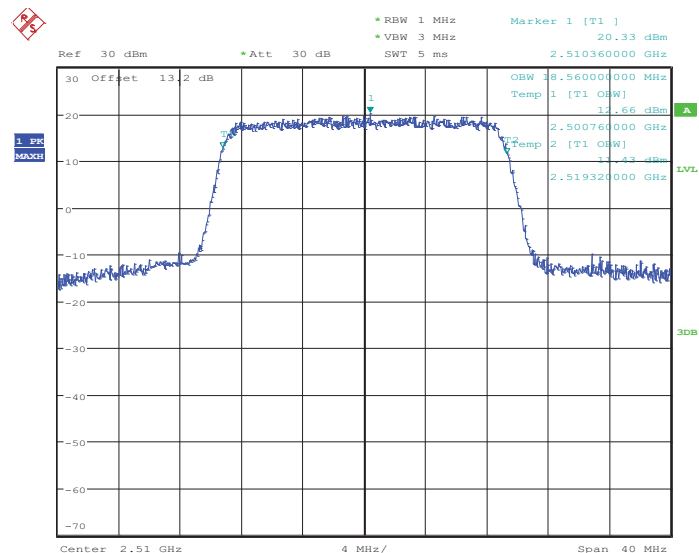


Date: 12.APR.2014 17:26:16



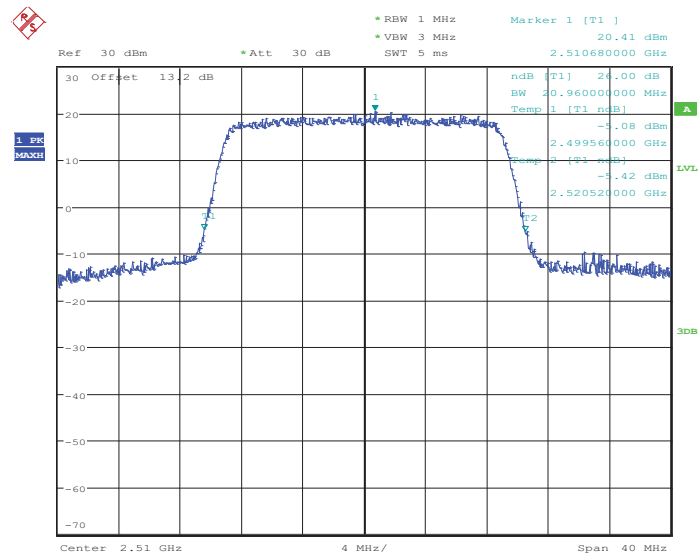
Band :	LTE Band 7	BW / Mod. :	20MHz / 16QAM
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99% Occupied Bandwidth Plot on Channel 20850



Date: 12.APR.2014 17:16:29

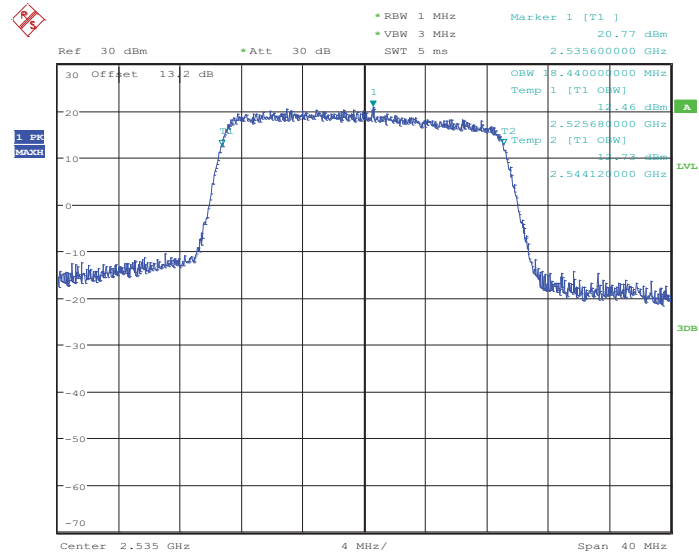
26dB Bandwidth Plot on Channel 20850



Date: 12.APR.2014 17:17:04

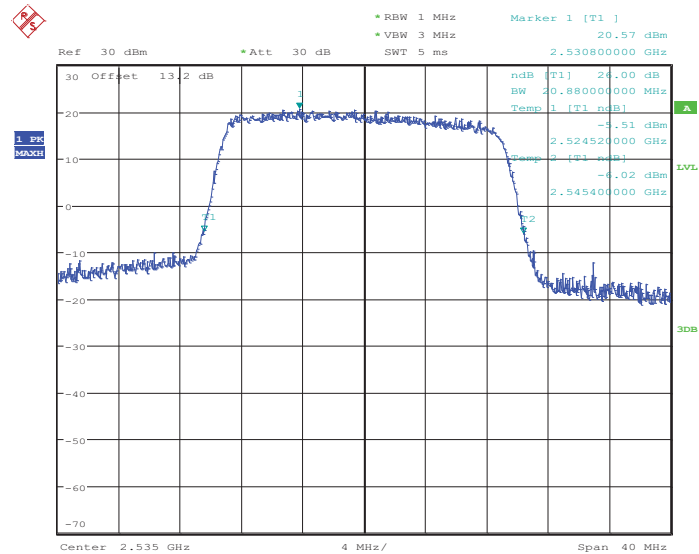


99% Occupied Bandwidth Plot on Channel 21100

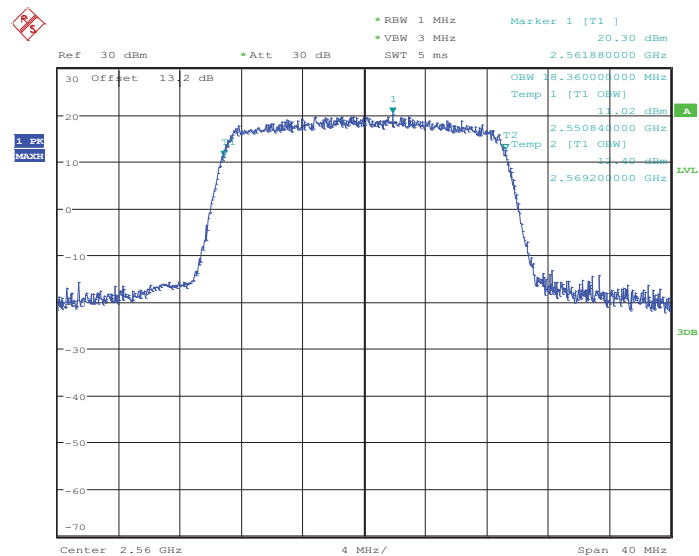


Date: 12.APR.2014 17:22:47

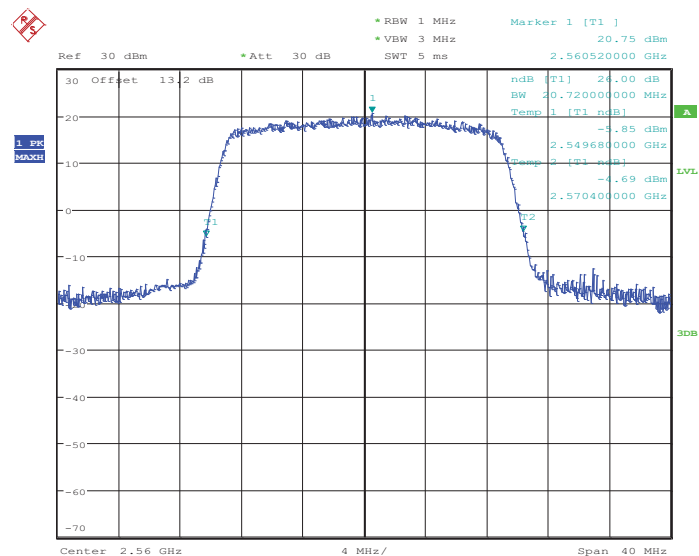
26dB Bandwidth Plot on Channel 21100



Date: 12.APR.2014 17:23:22

99% Occupied Bandwidth Plot on Channel 21350


Date: 12.APR.2014 17:25:58

26dB Bandwidth Plot on Channel 21350


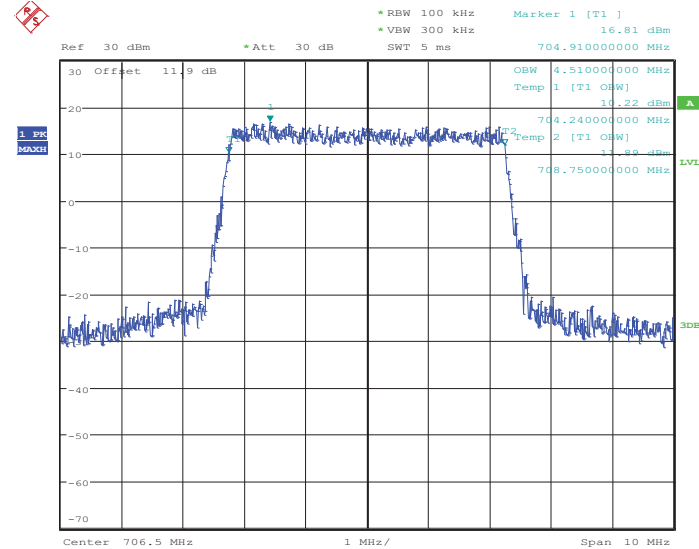
Date: 12.APR.2014 17:26:33

Note: The total loss is 13.2 dB of the RF cable and attenuator of LTE Band 7, and has been compensated to the spectrum analyzer offset.



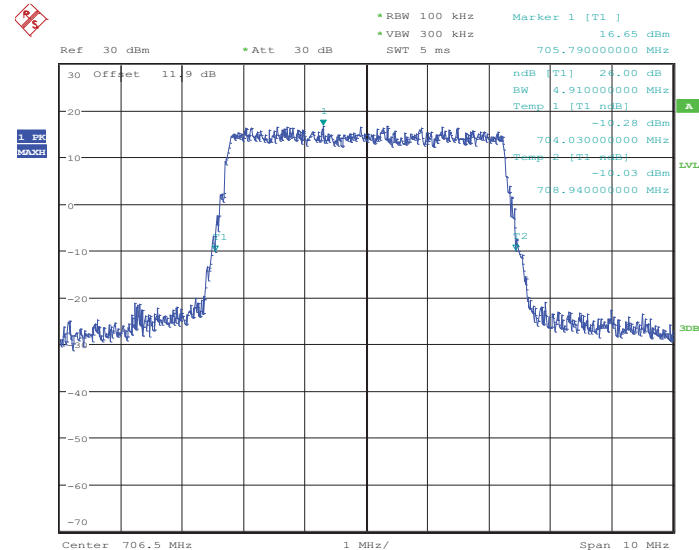
Band :	LTE Band 17	BW / Mod. :	5MHz / QPSK
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99% Occupied Bandwidth Plot on Channel 23755



Date: 12.APR.2014 17:42:30

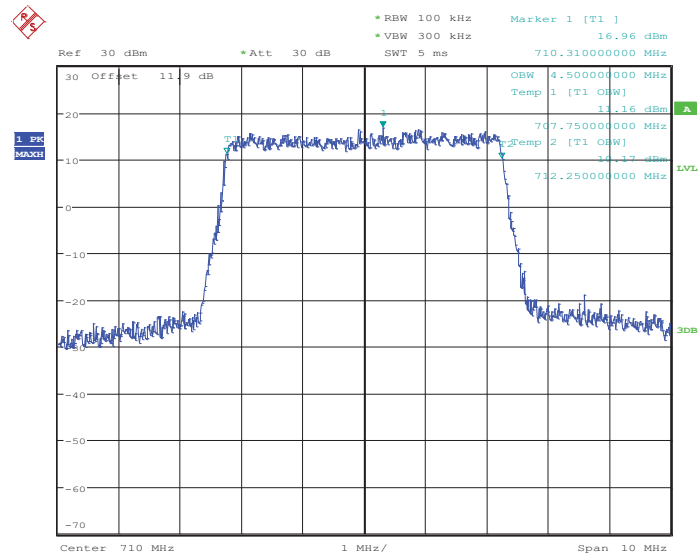
26dB Bandwidth Plot on Channel 23755



Date: 12.APR.2014 17:43:03

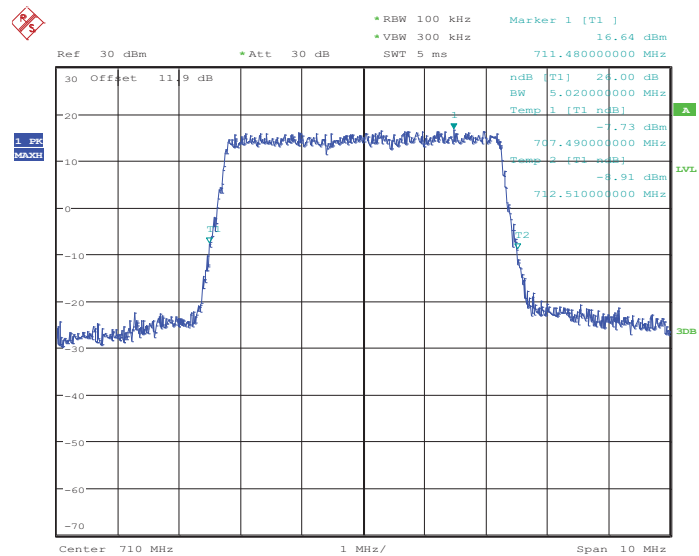


99% Occupied Bandwidth Plot on Channel 23790



Date: 12.APR.2014 17:48:41

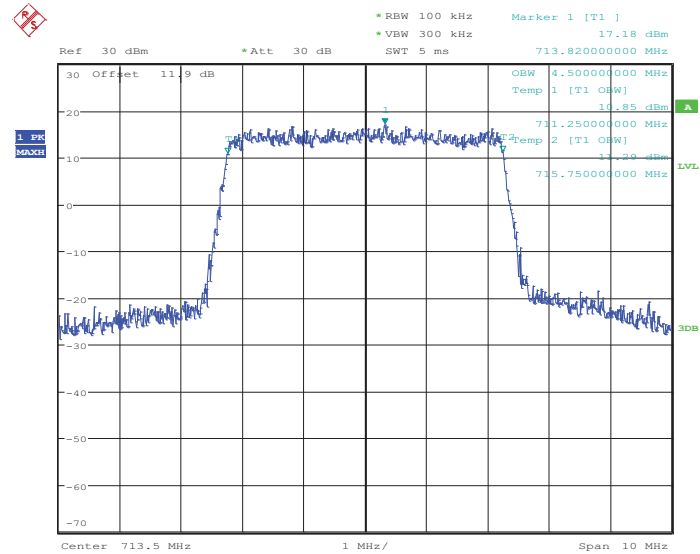
26dB Bandwidth Plot on Channel 23790



Date: 12.APR.2014 17:49:14

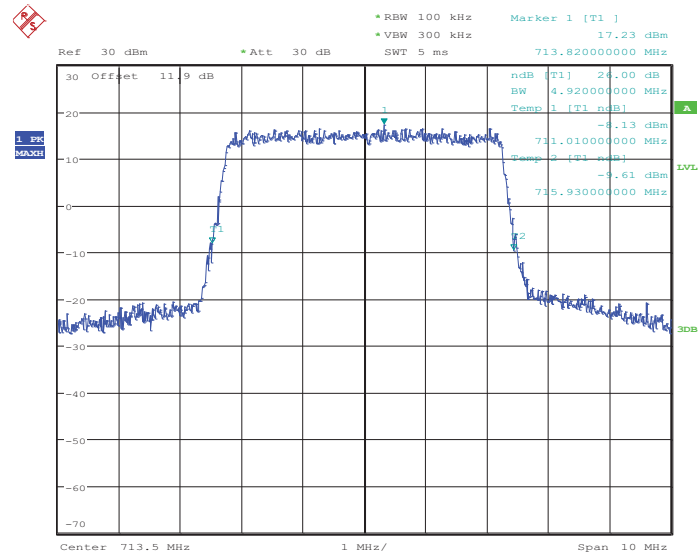


99% Occupied Bandwidth Plot on Channel 23825



Date: 12.APR.2014 17:51:46

26dB Bandwidth Plot on Channel 23825

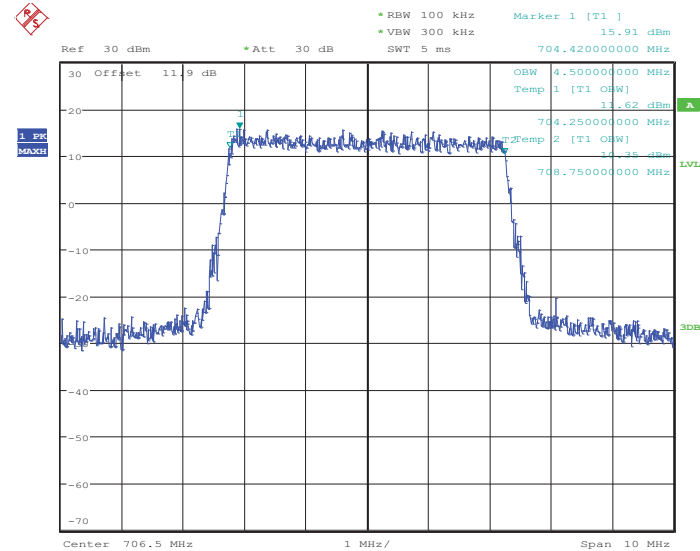


Date: 12.APR.2014 17:52:19



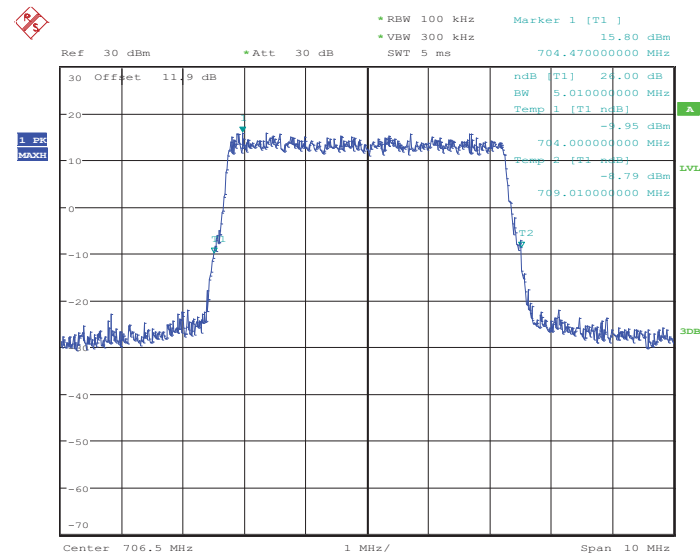
Band :	LTE Band 17	BW / Mod. :	5MHz / 16QAM
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99% Occupied Bandwidth Plot on Channel 23755



Date: 12.APR.2014 17:42:46

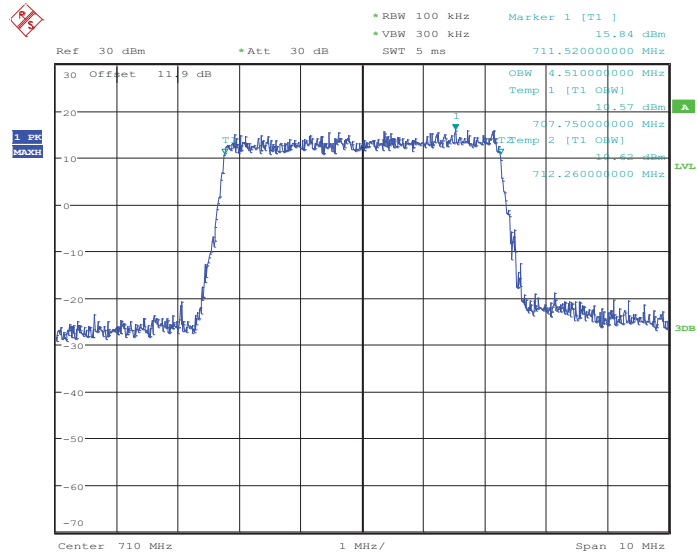
26dB Bandwidth Plot on Channel 23755



Date: 12.APR.2014 17:43:21

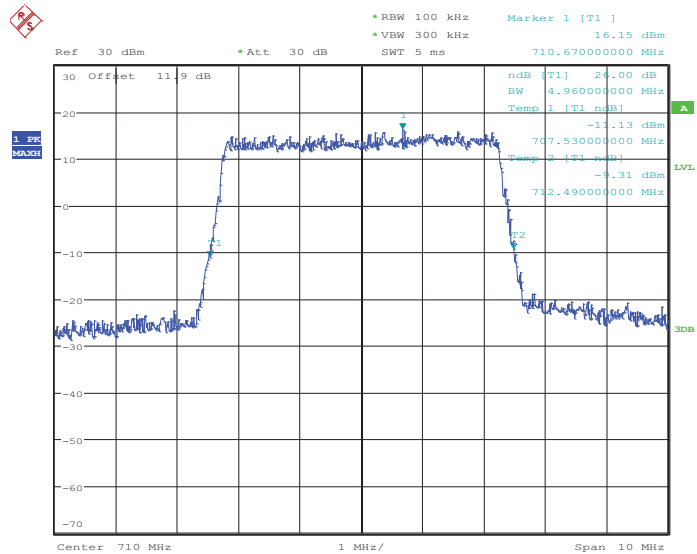


99% Occupied Bandwidth Plot on Channel 23790



Date: 12.APR.2014 17:48:56

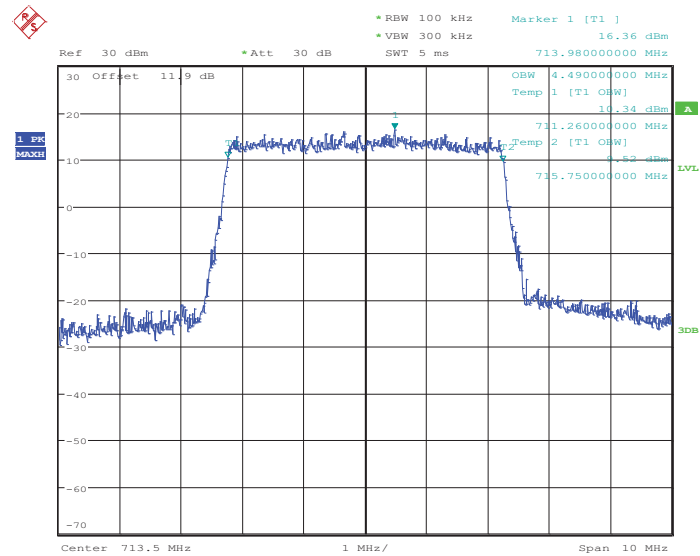
26dB Bandwidth Plot on Channel 23790



Date: 12.APR.2014 17:49:31

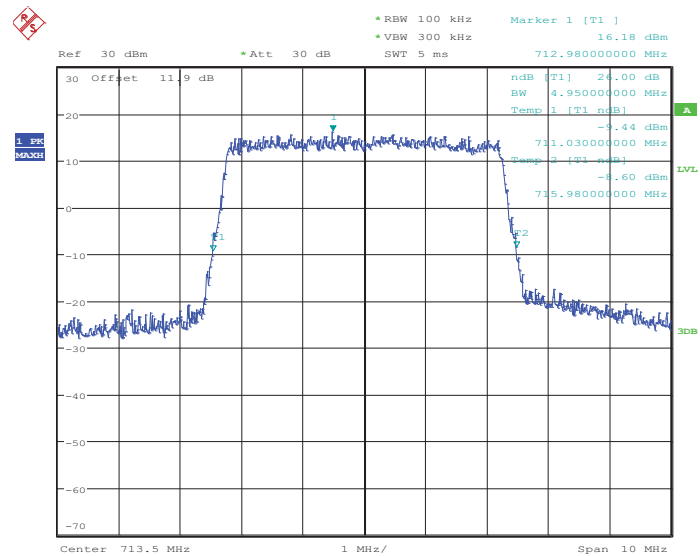


99% Occupied Bandwidth Plot on Channel 23825



Date: 12.APR.2014 17:52:02

26dB Bandwidth Plot on Channel 23825

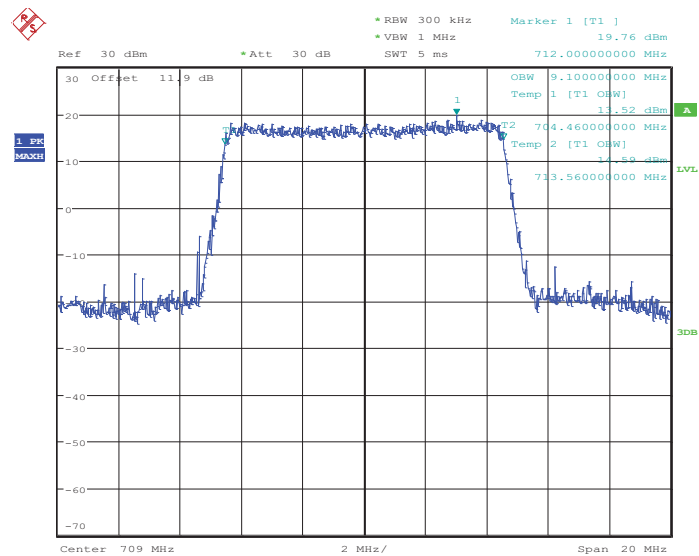


Date: 12.APR.2014 17:52:37



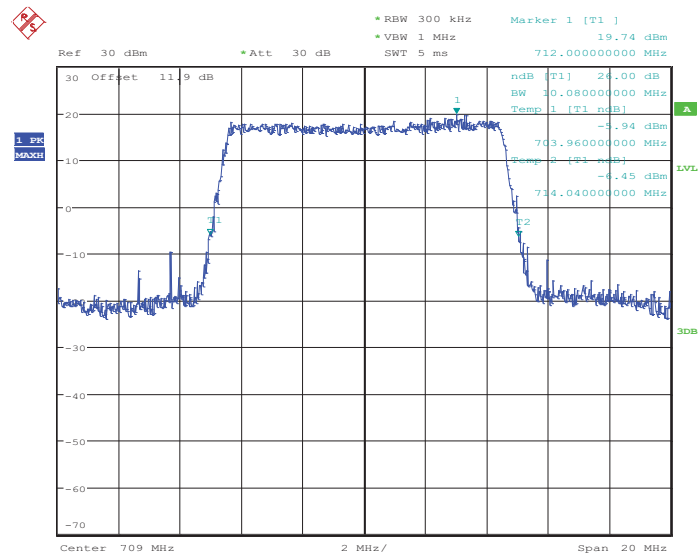
Band :	LTE Band 17	BW / Mod. :	10MHz / QPSK
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99% Occupied Bandwidth Plot on Channel 23780



Date: 12.APR.2014 17:58:01

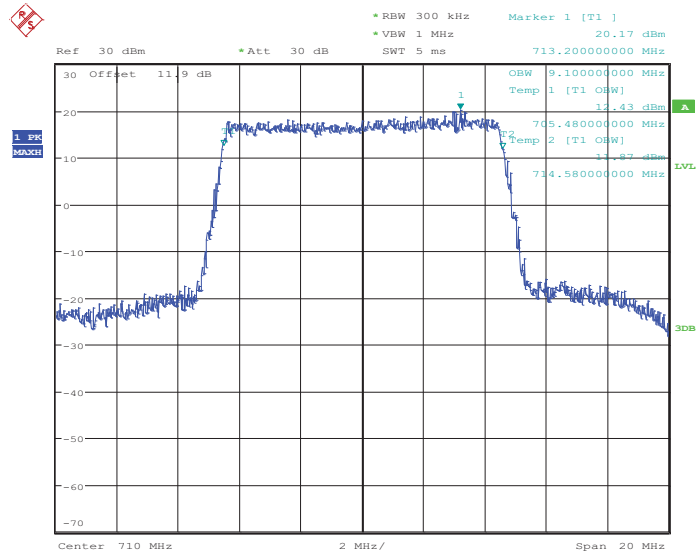
26dB Bandwidth Plot on Channel 23780



Date: 12.APR.2014 17:58:34

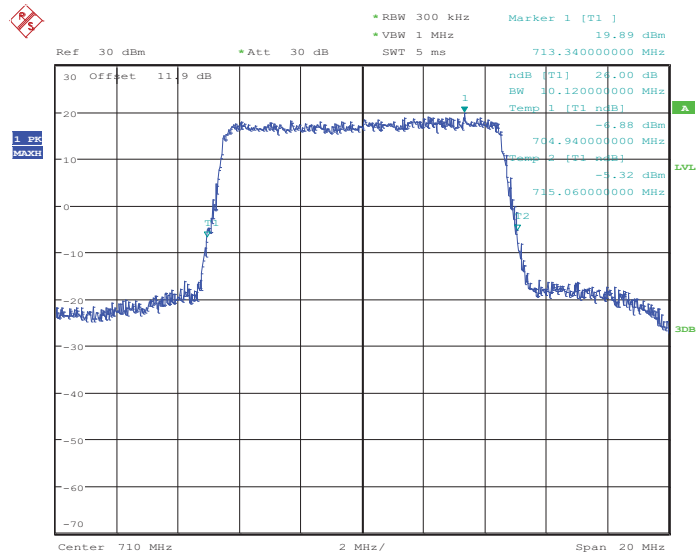


99% Occupied Bandwidth Plot on Channel 23790



Date: 12.APR.2014 18:04:12

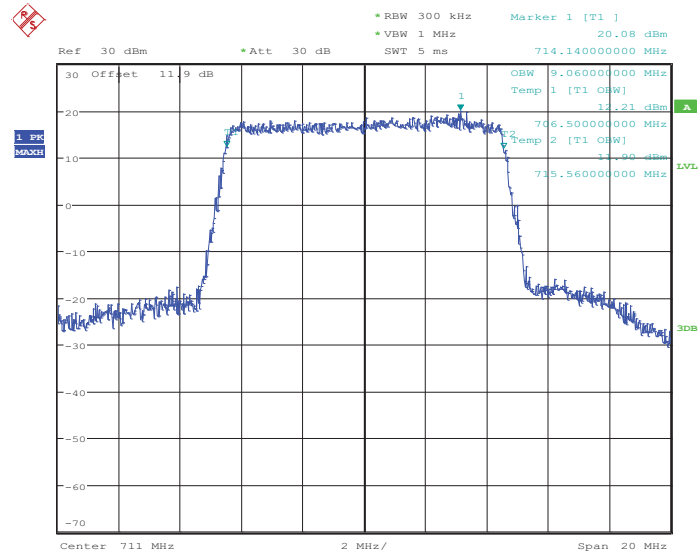
26dB Bandwidth Plot on Channel 23790



Date: 12.APR.2014 18:04:45

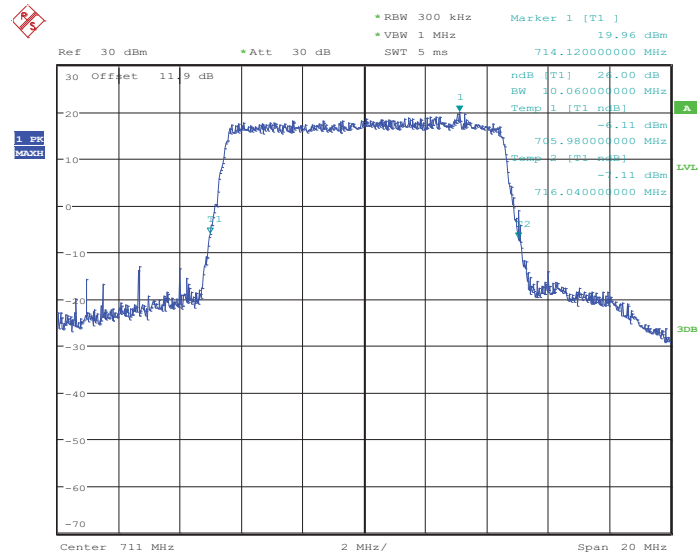


99% Occupied Bandwidth Plot on Channel 23800



Date: 12.APR.2014 18:07:17

26dB Bandwidth Plot on Channel 23800

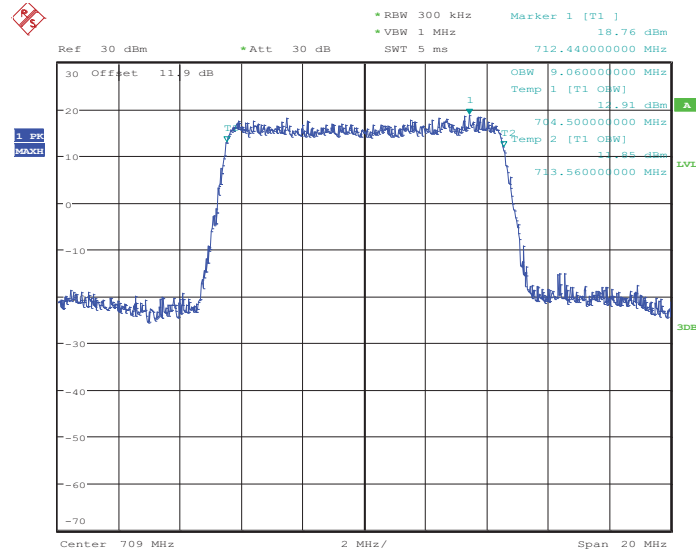


Date: 12.APR.2014 18:07:50



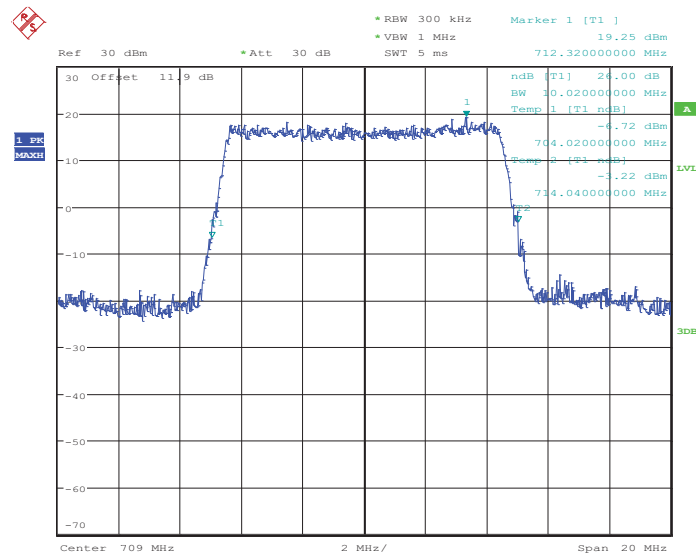
Band :	LTE Band 17	BW / Mod. :	10MHz / 16QAM
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99% Occupied Bandwidth Plot on Channel 23780



Date: 12.APR.2014 17:58:17

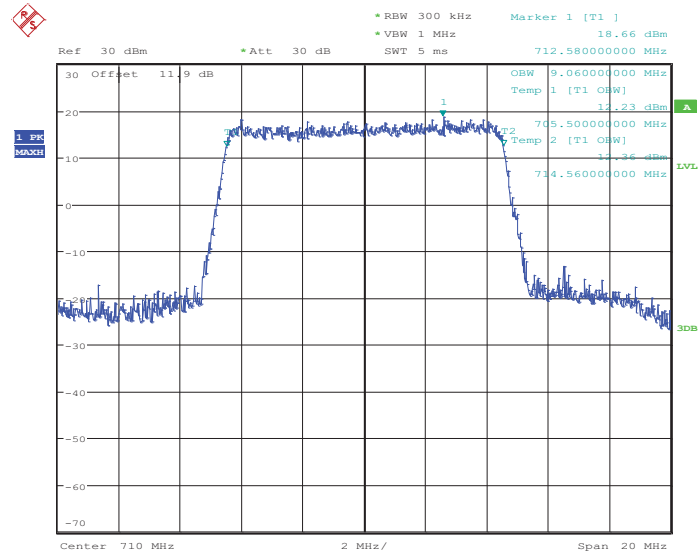
26dB Bandwidth Plot on Channel 23780



Date: 12.APR.2014 17:58:52

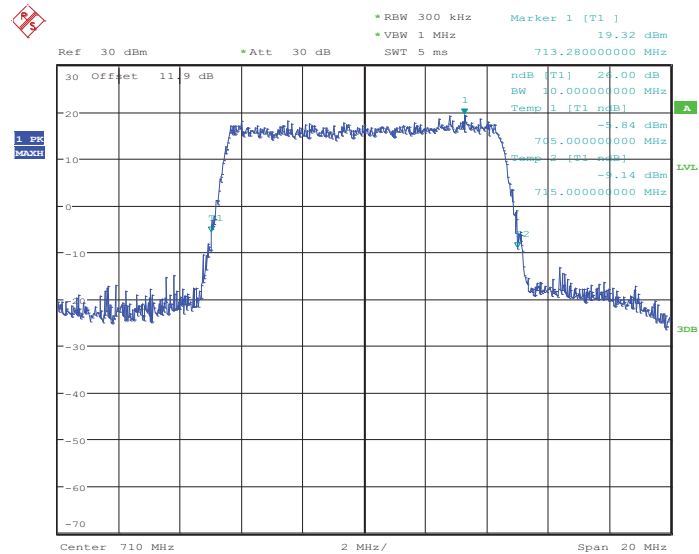


99% Occupied Bandwidth Plot on Channel 23790



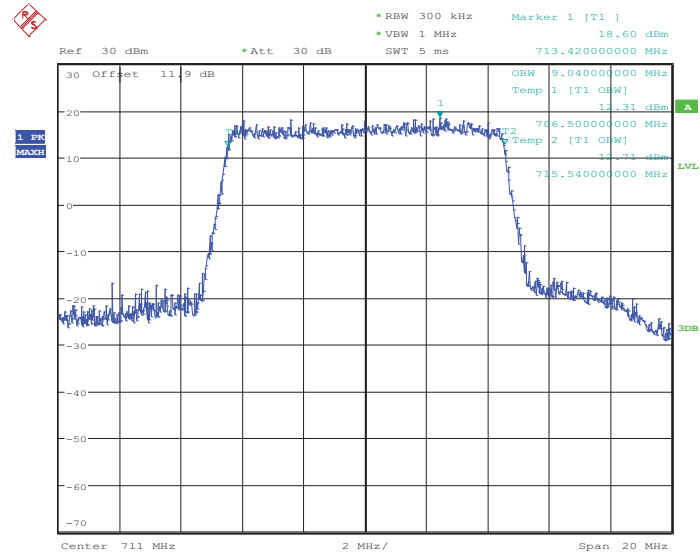
Date: 12.APR.2014 18:04:27

26dB Bandwidth Plot on Channel 23790



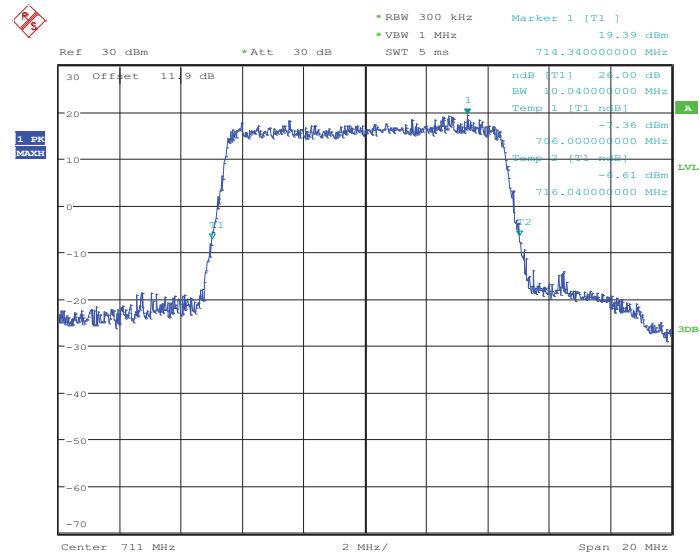
Date: 12.APR.2014 18:05:02

99% Occupied Bandwidth Plot on Channel 23800



Date: 12.APR.2014 18:07:32

26dB Bandwidth Plot on Channel 23800



Date: 12.APR.2014 18:08:07

Note: The total loss is 11.9 dB of the RF cable and attenuator of LTE Band 17, and has been compensated to the spectrum analyzer offset.

3.5 Conducted Band Edge Measurement

3.5.1 Description of Conducted Band Edge Measurement

24.238 (a) and RSS – 133 for Band 2

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

27.53 (f) and RSS – 130 for Band 17

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

27.53 (g) and RSS – 139 for Band 4

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

27.53 (l)(4) and RSS – 199 for Band 7

The emissions be operated in the 2496-2690 MHz band, the attenuation factor of transmitter Power (P) shall be not less than $55 + 10 \log (P)$ dB at the channel edge

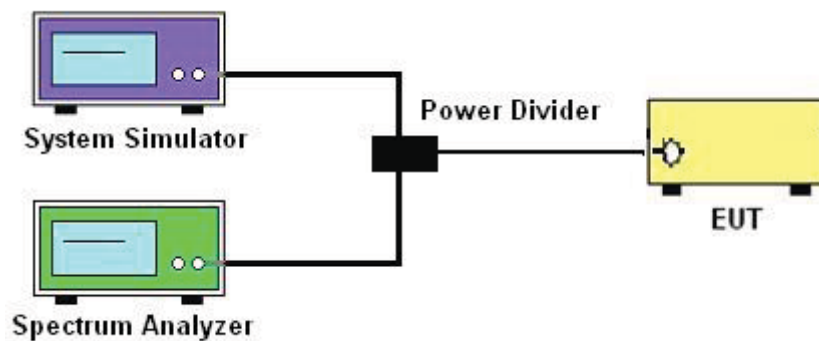
3.5.2 Measuring Instruments

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 $RBW \geq 1\%$ EBW, and measuring bandwidth = 1MHz.
3. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
4. The limit line is derived from $43 + 10\log(P)$ 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.

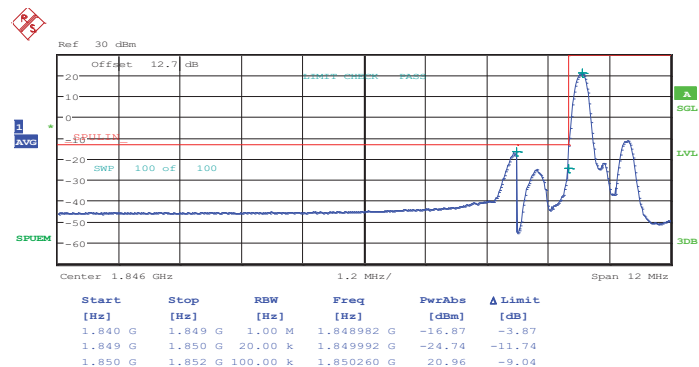
3.5.4 Test Setup



3.5.5 Test Result (Plots) of Conducted Band Edge

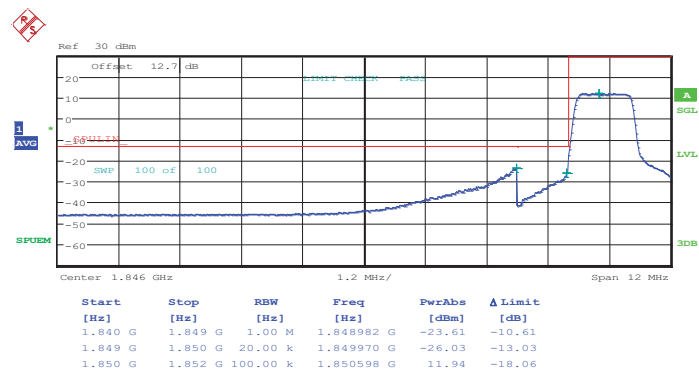
Band :	LTE Band 2	Band Width :	1.4MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



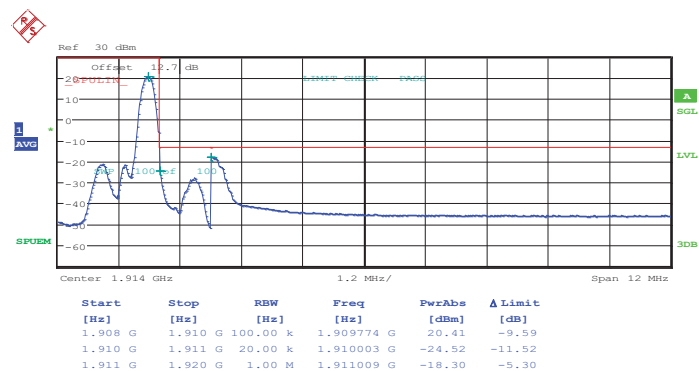
Date: 11.APR.2014 16:39:07

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



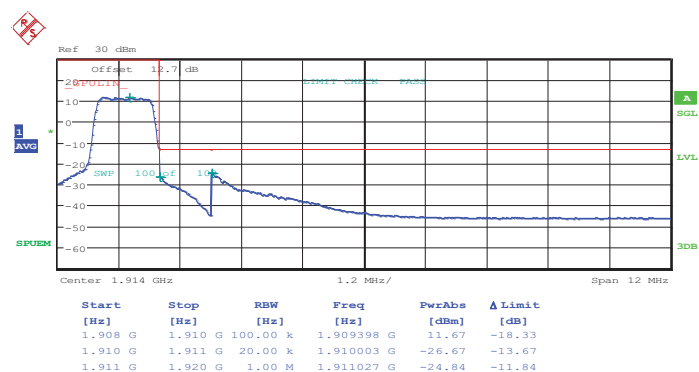
Date: 11.APR.2014 16:40:41

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



Date: 11.APR.2014 16:48:26

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

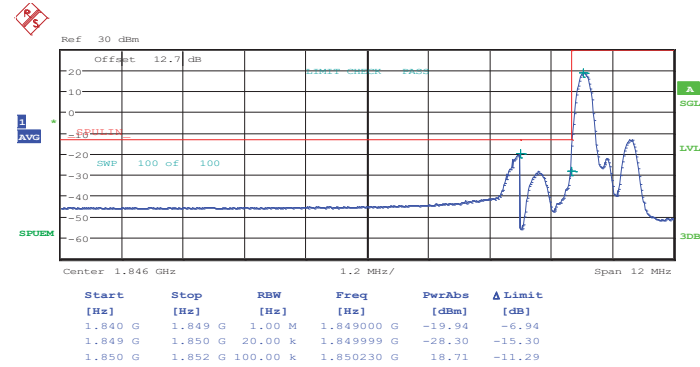


Date: 11.APR.2014 16:50:00



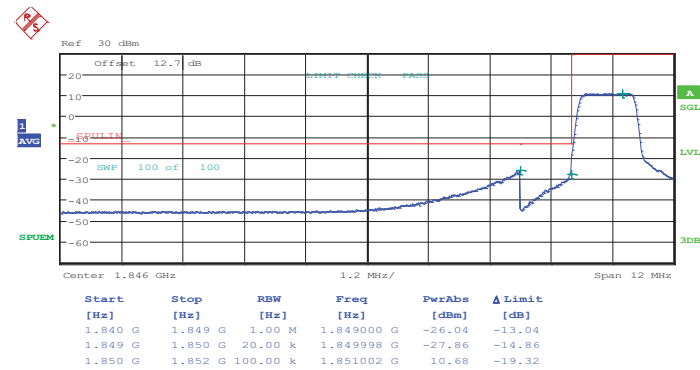
Band :	LTE Band 2	Band Width :	1.4MHz / 16QAM
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Lower Band Edge Plot for 16QAM -RB Size 1, RB Offset 0



Date: 11.APR.2014 16:39:54

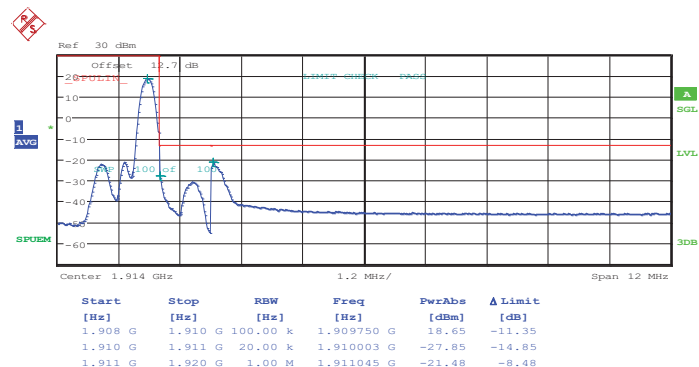
Lower Band Edge Plot for 16QAM -RB Size 6, RB Offset 0



Date: 11.APR.2014 16:41:28

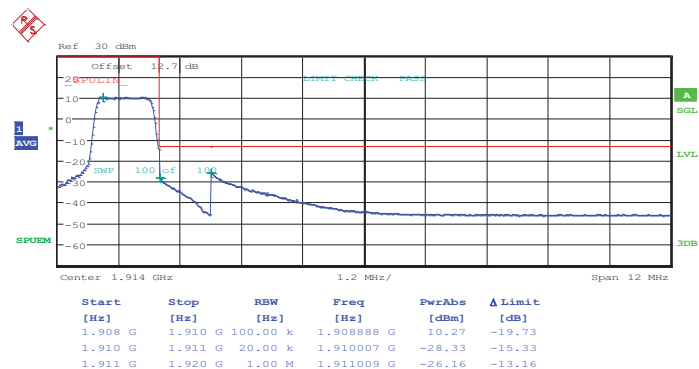


Higher Band Edge Plot for 16QAM -RB Size 1, RB Offset 5



Date: 11.APR.2014 16:49:13

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

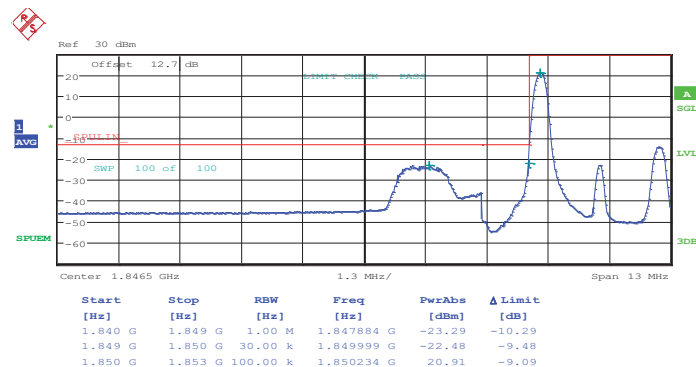


Date: 11.APR.2014 16:50:47



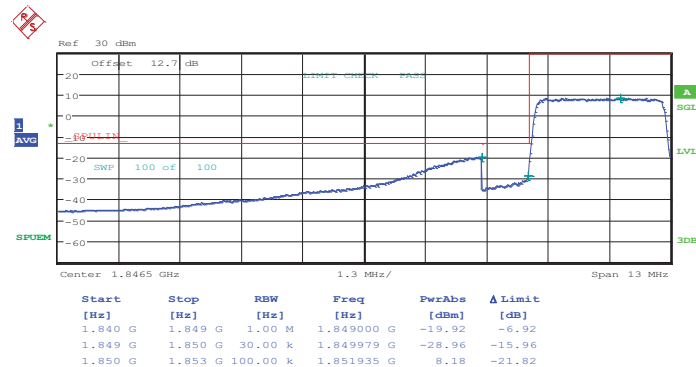
Band :	LTE Band 2	Band Width :	3MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Date: 11.APR.2014 17:08:21

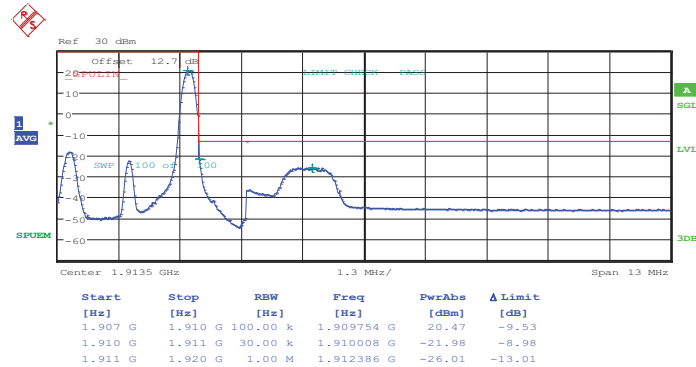
Lower Band Edge Plot for QPSK-RB Size 15, RB Offset 0



Date: 11.APR.2014 17:09:55

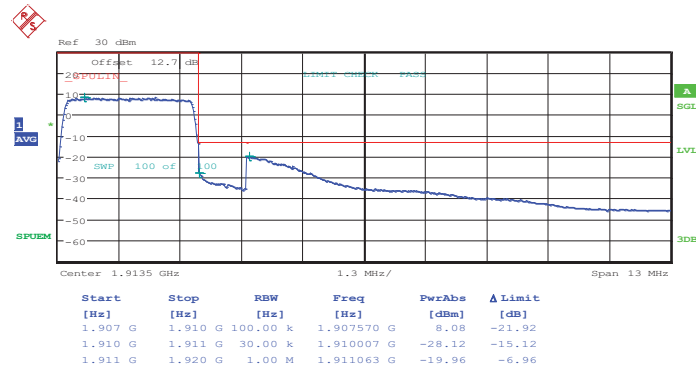


Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 14



Date: 11.APR.2014 17:17:37

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

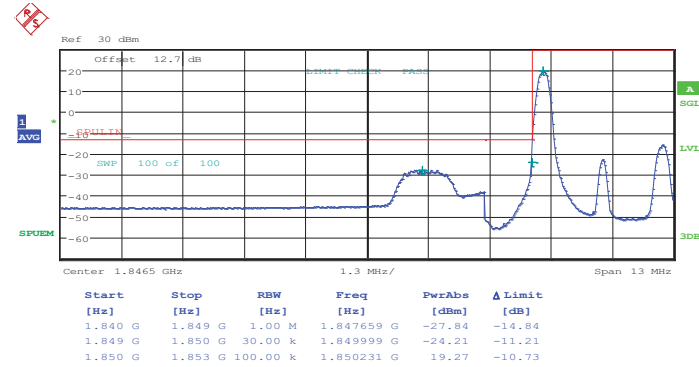


Date: 11.APR.2014 17:19:09



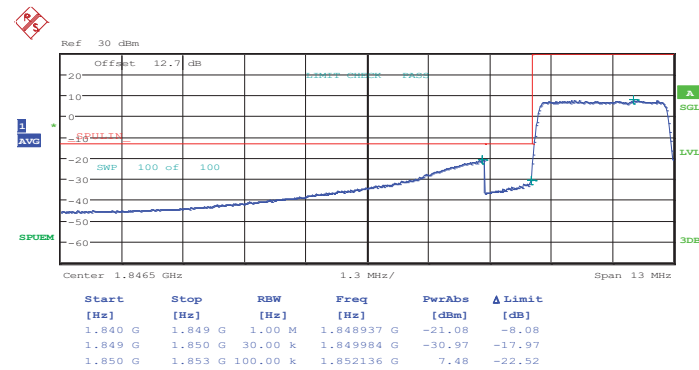
Band :	LTE Band 2	Band Width :	3MHz / 16QAM
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Lower Band Edge Plot for 16QAM -RB Size 1, RB Offset 0



Date: 11.APR.2014 17:09:08

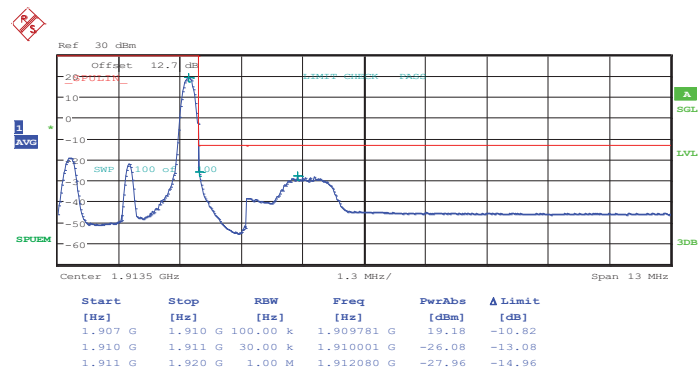
Lower Band Edge Plot for 16QAM -RB Size 15, RB Offset 0



Date: 11.APR.2014 17:10:42

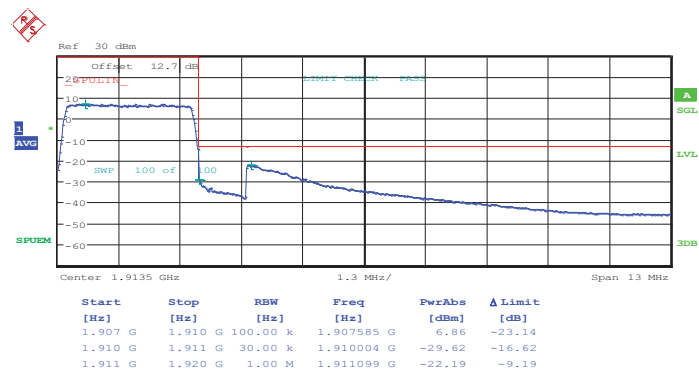


Higher Band Edge Plot for 16QAM -RB Size 1, RB Offset 14



Date: 11.APR.2014 17:18:23

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

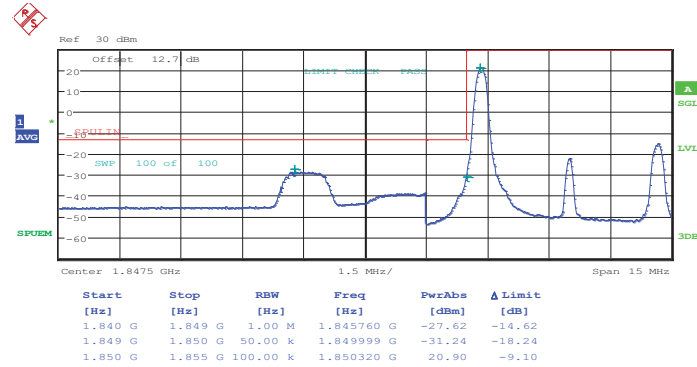


Date: 11.APR.2014 17:19:56



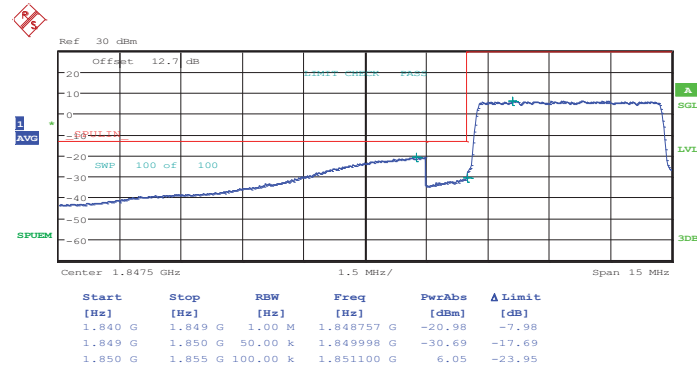
Band :	LTE Band 2	Band Width :	5MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



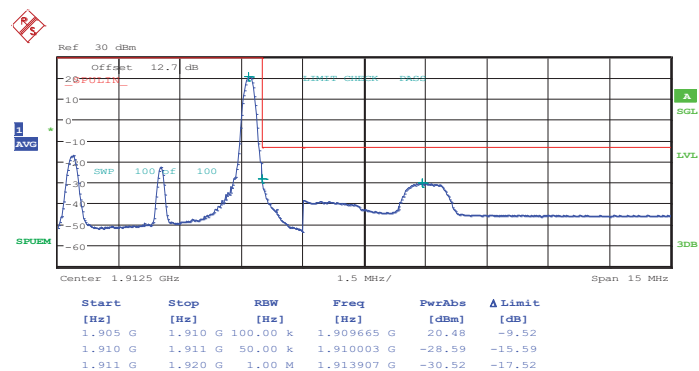
Date: 11.APR.2014 17:31:09

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



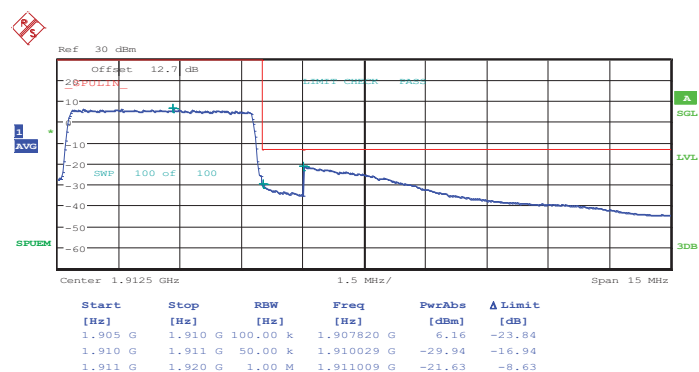
Date: 11.APR.2014 17:32:43

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



Date: 11.APR.2014 17:40:28

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

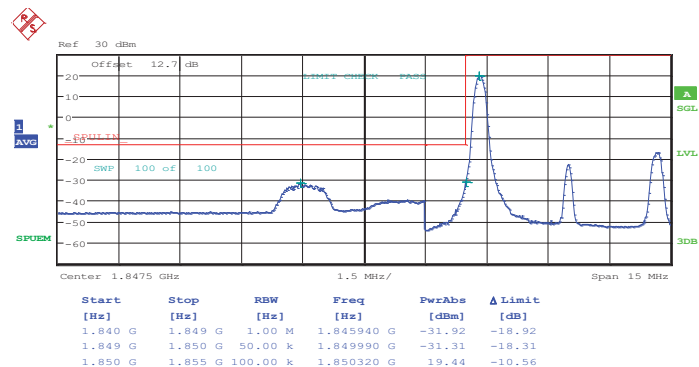


Date: 11.APR.2014 17:42:01



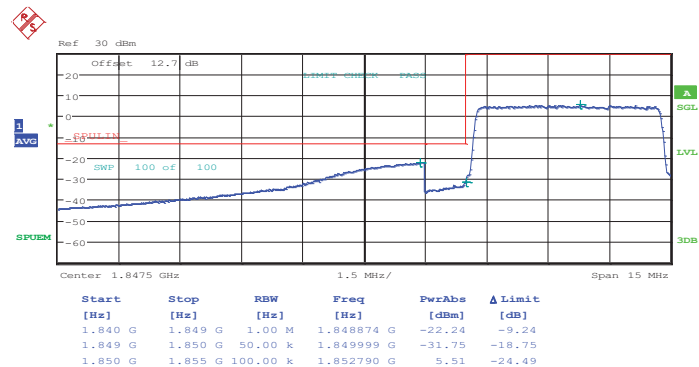
Band :	LTE Band 2	Band Width :	5MHz / 16QAM
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Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



Date: 11.APR.2014 17:31:56

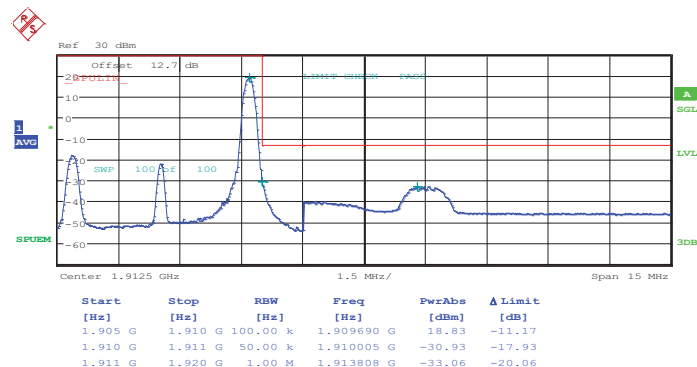
Lower Band Edge Plot for 16QAM-RB Size 25, RB Offset 0



Date: 11.APR.2014 17:33:30

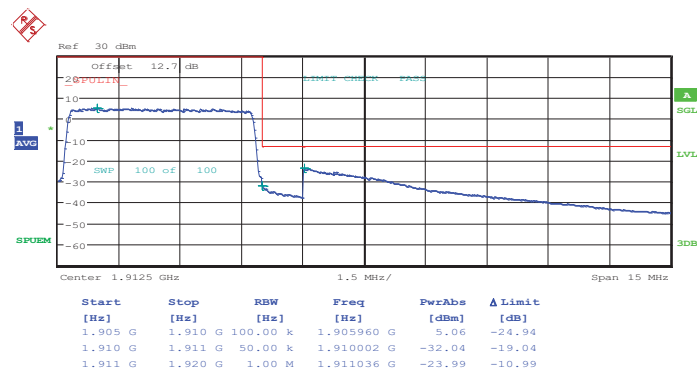


Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 24



Date: 11.APR.2014 17:41:15

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

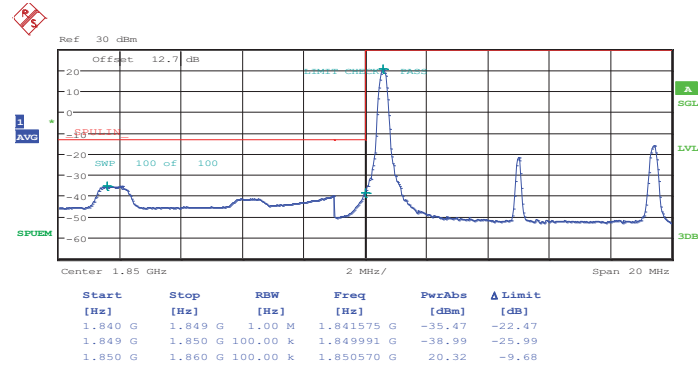


Date: 11.APR.2014 17:42:48



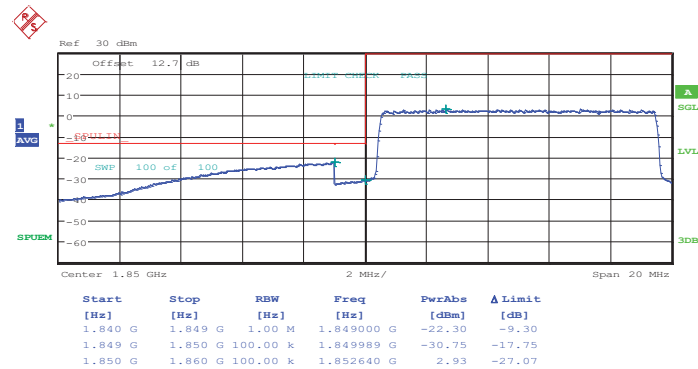
Band :	LTE Band 2	Band Width :	10MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Date: 11.APR.2014 18:01:04

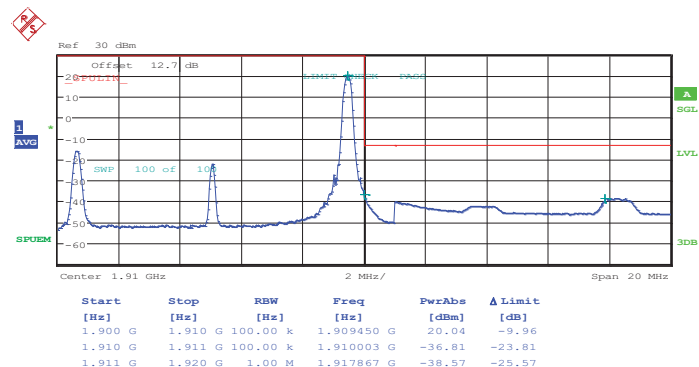
Lower Band Edge Plot for QPSK-RB Size 50, RB Offset 0



Date: 11.APR.2014 18:02:38

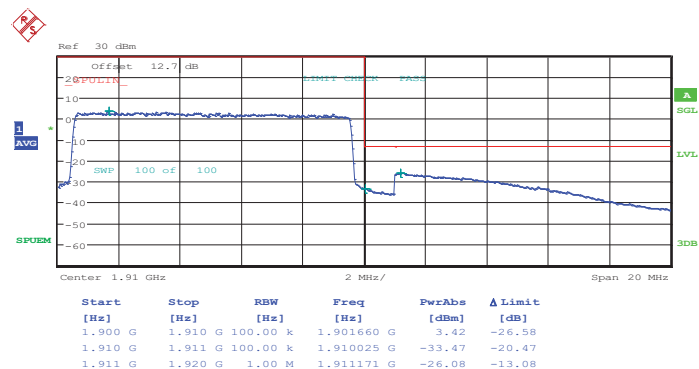


Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 49



Date: 11.APR.2014 18:10:23

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

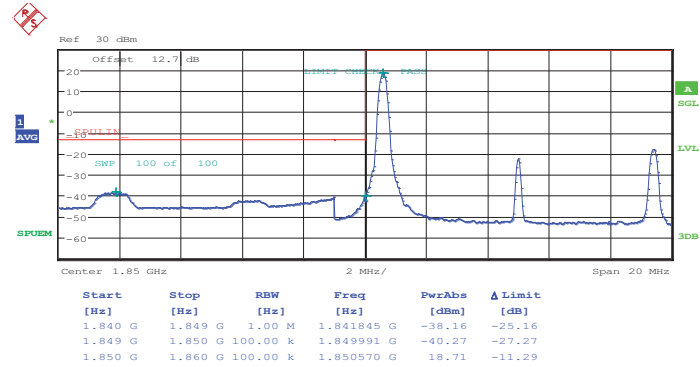


Date: 11.APR.2014 18:11:56



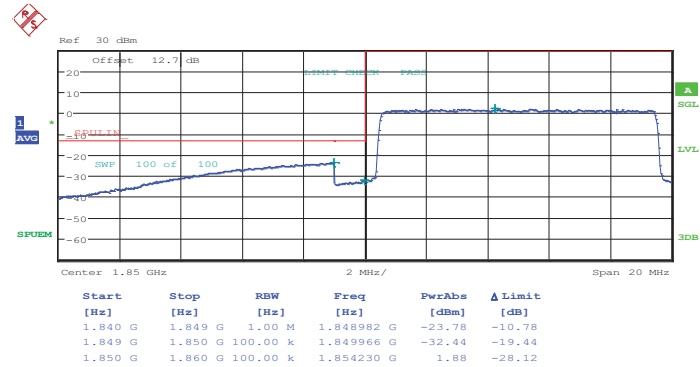
Band :	LTE Band 2	Band Width :	10MHz / 16QAM
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Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



Date: 11.APR.2014 18:01:51

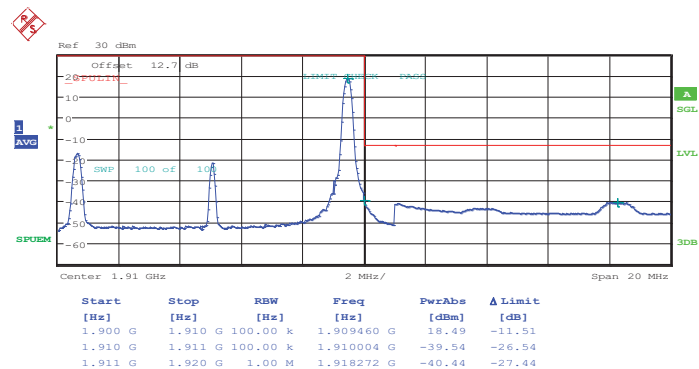
Lower Band Edge Plot for 16QAM-RB Size 50, RB Offset 0



Date: 11.APR.2014 18:03:25

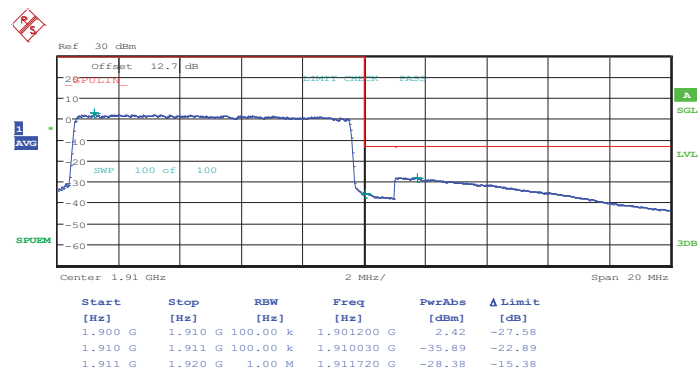


Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 49



Date: 11.APR.2014 18:11:10

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

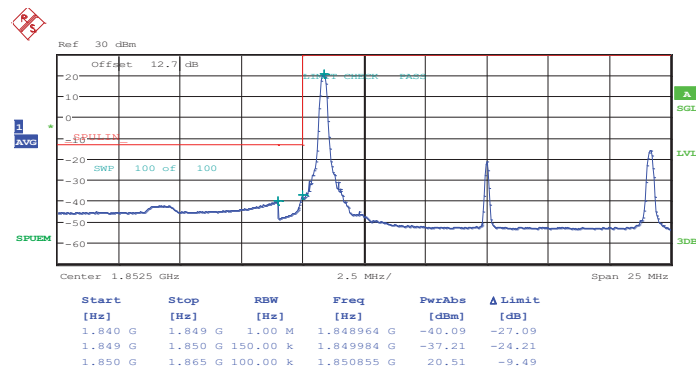


Date: 11.APR.2014 18:12:43



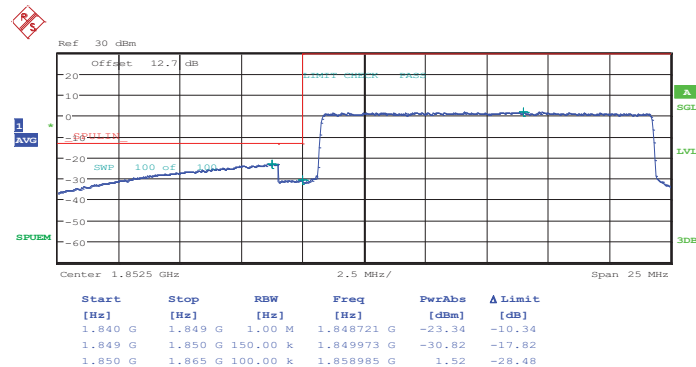
Band :	LTE Band 2	Band Width :	15MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Date: 11.APR.2014 18:17:19

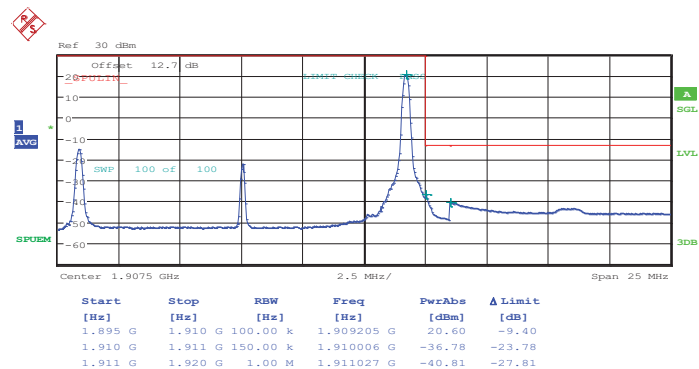
Lower Band Edge Plot for QPSK-RB Size 75, RB Offset 0



Date: 11.APR.2014 18:18:53

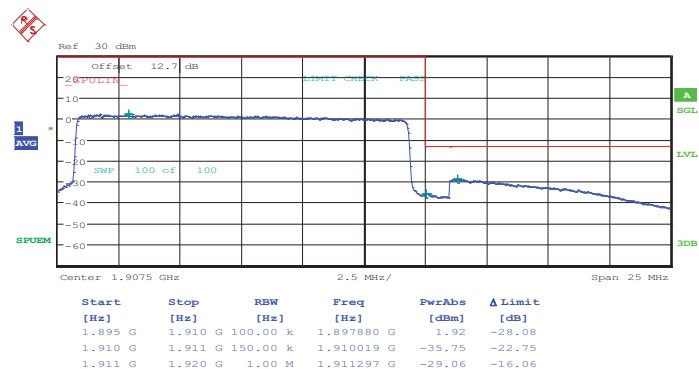


Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 74



Date: 11.APR.2014 18:26:39

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

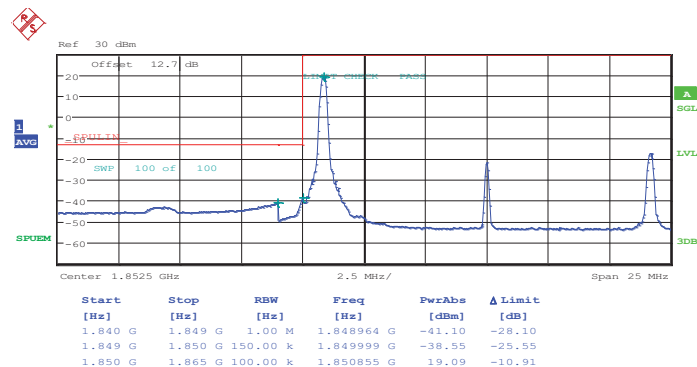


Date: 11.APR.2014 18:28:13



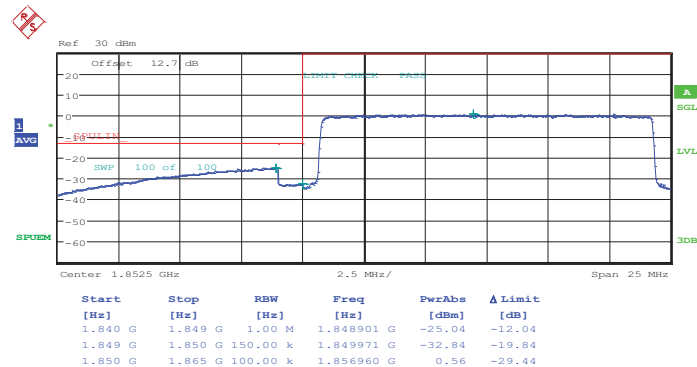
Band :	LTE Band 2	Band Width :	15MHz / 16QAM
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Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



Date: 11.APR.2014 18:18:06

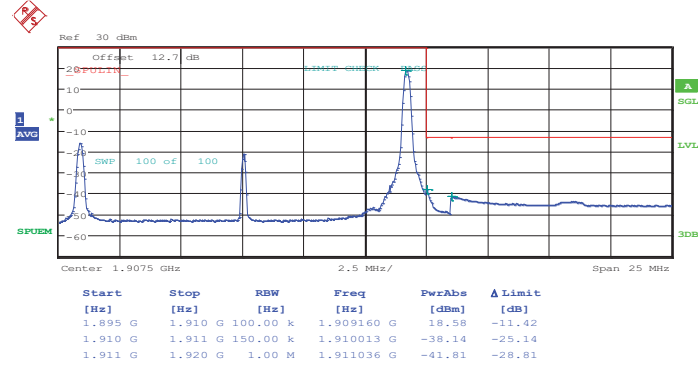
Lower Band Edge Plot for 16QAM-RB Size 75, RB Offset 0



Date: 11.APR.2014 18:19:40

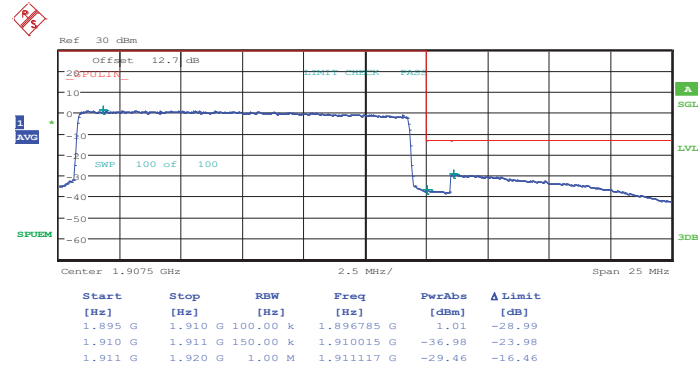


Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 74



Date: 11.APR.2014 18:27:26

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

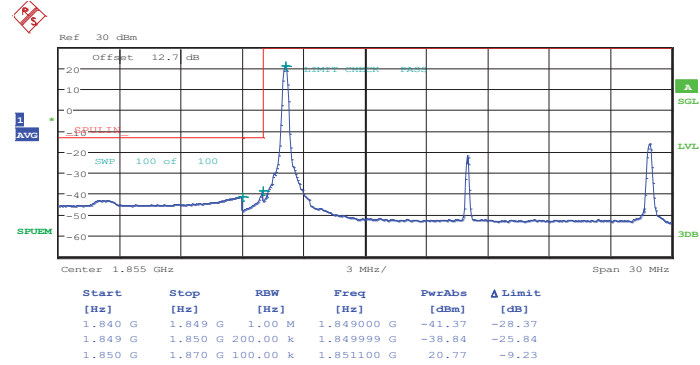


Date: 11.APR.2014 18:29:00



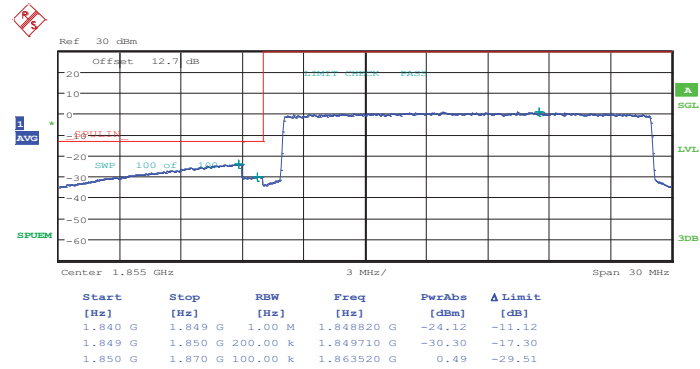
Band :	LTE Band 2	Band Width :	20MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Date: 11.APR.2014 18:35:10

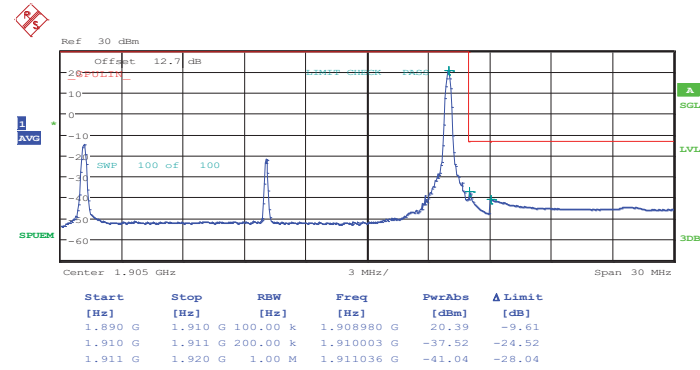
Lower Band Edge Plot for QPSK-RB Size 100, RB Offset 0



Date: 11.APR.2014 18:36:44

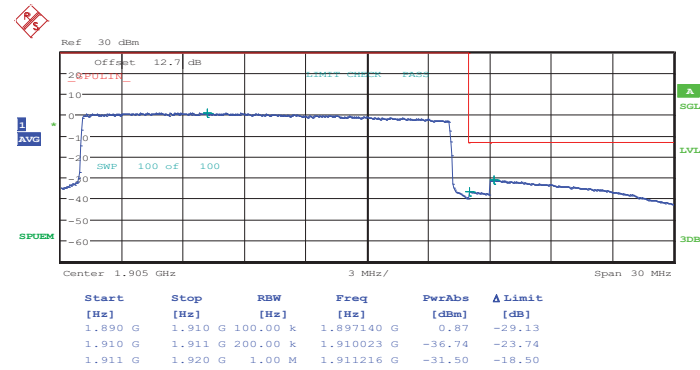


Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 99



Date: 11.APR.2014 18:44:29

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

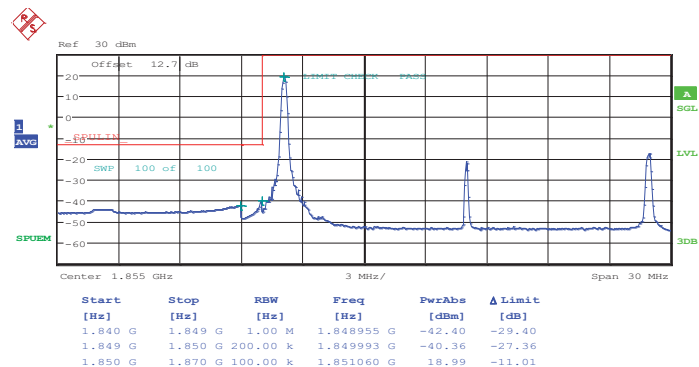


Date: 11.APR.2014 18:46:03



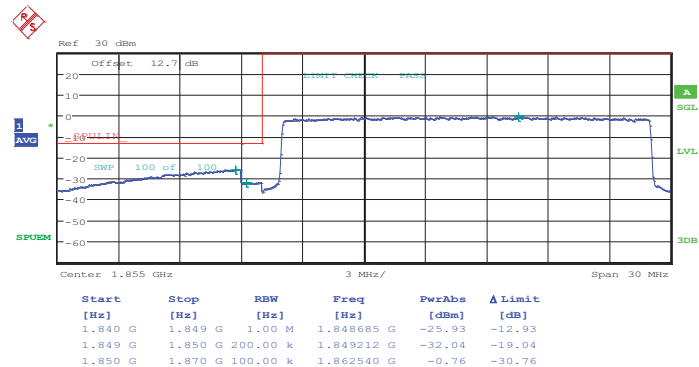
Band :	LTE Band 2	Band Width :	20MHz / 16QAM
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Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



Date: 11.APR.2014 18:35:57

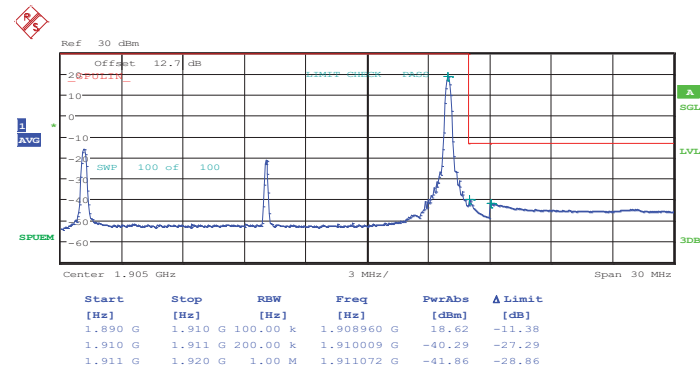
Lower Band Edge Plot for 16QAM-RB Size 100, RB Offset 0



Date: 11.APR.2014 18:37:30

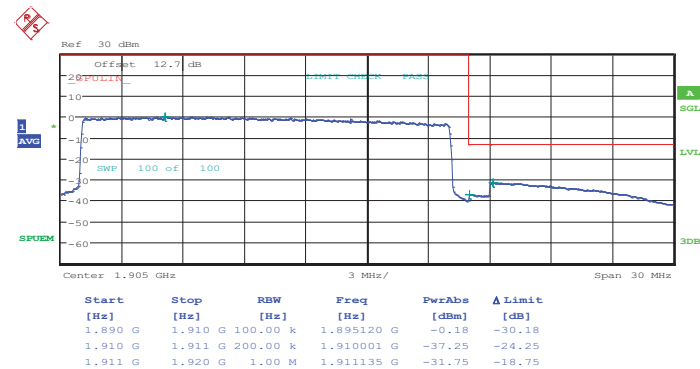


Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 99



Date: 11.APR.2014 18:45:16

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



Date: 11.APR.2014 18:46:50

Note: The total loss is 12.7 dB of the RF cable and attenuator of LTE Band 2, and has been compensated to the spectrum analyzer offset.