FCC RF Test Report

APPLICANT	**: Acer Incorporated**
EQUIPMENT	**: Smart HandHeld**
BRAND NAME	**: Acer**
MODEL NAME	**: E600**
MARKETING NAME	**: Liquid E600**
FCC ID	**: HLZDME600**
STANDARD	**: 47 CFR Part 2, 24(E), 27(L), 27(M)**
CLASSIFICATION	**: PCS Licensed Transmitter Held to Ear (PCE)**

The product was received on Jul. 30, 2014 and testing was completed on Aug. 28, 2014. We, SPORTON INTERNATIONAL (KUNSHAN) INC., would like to declare that the tested sample has been evaluated in accordance with the test procedures given in ANSI / TIA / EIA-603-C-2004 and the testing has shown the tested sample to be in compliance with the applicable technical standards.

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

Reviewed by: Joseph Lin / Supervisor

Approved by: Jones Tsai / Manager

Testing Laboratory 2627

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG473084B	Rev. 01	Initial issue of report	Sep. 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-133 (6.4) RSS-139 (6.4) RSS-199 (4.4)	Conducted Output Power	Reporting Only	PASS	-
3.2	§24.232(d)	RSS-133 (6.4) RSS-139 (6.4)	Peak-to-Average Ratio	<13 dB	PASS	-
3.3	§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	PASS	-
	§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(h)(3) §27.53(m)(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(h)	RSS-GEN(4.9) RSS-133 (6.5.1) RSS-139 (6.5)	Conducted Band Edge Measurement (Band 2) (Band 4)	< 43+10log10(P[Watt])	PASS	-
	§2.1051 §27.53(m)(4)	RSS-GEN(4.9) RSS-199 (4.5)	Conducted Band Edge Measurement (Band 7)	< 55+10log10(P[Watts])		

Report Section	FCC Rule	IC Rule	Description	Limit	Result	Remark
3.6	§2.1051 §24.238(a) §27.53(h)	RSS-GEN(4.9) RSS-133 (6.5.1) RSS-139 (6.5)	Conducted Spurious Emission (Band 2) (Band 4)	< 43+10log10(P[Watts])	PASS	-
	§2.1051 §27.53(m)(4)	RSS-GEN(4.9) RSS-199 (4.5)	Conducted Spurious Emission (Band 7)	< 55+10log10(P[Watts])		
3.7	§2.1053 §24.238(a) §27.53(h)	RSS-GEN(4.9) RSS-133 (6.5.1) RSS-139 (6.5)	Radiated Spurious Emission (Band 2) (Band 4)	< 43+10log10(P[Watts])	PASS	Under limit 4.65 dB at 7586.000 MHz
	§2.1053 §27.53(m)(4)	RSS-GEN(4.9) RSS-199 (4.5)	Radiated Spurious Emission (Band 7)	< 55+10log10(P[Watts])		
3.8	§2.1055 §24.235 §27.54	RSS-GEN(4.7) RSS-133(6.3) RSS-139 (6.3) RSS-199 (4.3)	Frequency Stability Temperature & Voltage	< 2.5 ppm	PASS	

1 General Description

1.1 Applicant

Acer Incorporated
8F., No. 88, Sec. 1, Xintai 5th Rd., Xizhi Dist., New Taipei City 22181, Taiwan (R.O.C)

1.2 Manufacturer

Arima Communications Corp.
No.16, Lane 658, Yingtao Rd., Yingge Town, Taipei Country 23943 Taiwan

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	Smart HandHeld
Brand Name	Acer
Model Name	E600
Marketing Name	Liquid E600
FCC ID	HLZDME600
EUT supports Radios application	GSM/GPRS/EGPRS/WCDMA/HSPA/ HSPA+(Downlink Only)/DC-HSDPA/LTE WLAN 2.4GHz 802.11b/g/n HT20 Bluetooth v3.0 + EDR/Bluetooth v4.0 LE
EUT Stage	Identical Prototype

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

1.4 Product Specification subjective to this standard

Product Specification subjective to this standard	
Tx Frequency	LTE Band 2 : 1850.7 MHz ~ 1909.3 MHz LTE Band 4 : 1710.7 MHz ~ 1754.3 MHz LTE Band 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 7 : 2622.5MHz ~ 2687.5 MHz
Bandwidth	LTE Band 2 : 1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz / 20MHz LTE Band 4 : 1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz / 20MHz LTE Band 7 : 5MHz/ 10MHz / 15MHz / 20MHz
Maximum Output Power to Antenna	LTE Band 2 : 23.49 dBm LTE Band 4 : 22.58 dBm LTE Band 7 : 21.85 dBm
Antenna Type	IFA Antenna
Type of Modulation	QPSK / 16QAM / 64QAM

1.5 Modification of EUT

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

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

FCC Rule	System	Type of Modulation	BW	Emission Designator	Frequency Tolerance (ppm)	Maximum EIRP
Part 24E	LTE Band 2	QPSK	1.4 MHz	1M10G7D	-	0.32 W
Part 24E	LTE Band 2	16QAM	1.4 MHz	1M10W7D	-	0.25 W
Part 24E	LTE Band 2	QPSK	3 MHz	2M73G7D	-	-
Part 24E	LTE Band 2	16QAM	3 MHz	2M73W7D	-	-
Part 24E	LTE Band 2	QPSK	5 MHz	4M51G7D	-	-
Part 24E	LTE Band 2	16QAM	5 MHz	4M50W7D	-	-
Part 24E	LTE Band 2	QPSK	10 MHz	9M07G7D	0.0078 ppm	-
Part 24E	LTE Band 2	16QAM	10 MHz	9M05W7D	-	-
Part 24E	LTE Band 2	QPSK	15 MHz	13M5G7D	-	-
Part 24E	LTE Band 2	16QAM	15 MHz	13M5W7D	-	-
Part 24E	LTE Band 2	QPSK	20 MHz	18M4G7D	-	0.31 W
Part 24E	LTE Band 2	16QAM	20 MHz	18M4W7D	-	0.23 W
Part 27L	LTE Band 4	QPSK	1.4 MHz	1M10G7D	-	0.23 W
Part 27L	LTE Band 4	16QAM	1.4 MHz	1M10W7D	-	0.21 W
Part 27L	LTE Band 4	QPSK	3 MHz	2M73G7D	-	-
Part 27L	LTE Band 4	16QAM	3 MHz	2M73W7D	-	-
Part 27L	LTE Band 4	QPSK	5MHz	4M50G7D	-	-
Part 27L	LTE Band 4	16QAM	5MHz	4M50W7D	-	-
Part 27L	LTE Band 4	QPSK	10MHz	9M09G7D	0.0095 ppm	-
Part 27L	LTE Band 4	16QAM	10MHz	9M01W7D	-	-
Part 27L	LTE Band 4	QPSK	15MHz	13M5G7D	-	-
Part 27L	LTE Band 4	16QAM	15MHz	13M5W7D	-	-
Part 27L	LTE Band 4	QPSK	20MHz	18M4G7D	-	0.28 W
Part 27L	LTE Band 4	16QAM	20MHz	18M4W7D	-	0.22 W

FCC Rule	System	Type of Modulation	BW	Emission Designator	Frequency Tolerance (ppm)	Maximum EIRP
Part 27M	LTE Band 7	QPSK	5MHz	4M52G7D	-	0.12 W
Part 27M	LTE Band 7	16QAM	5MHz	4M52W7D	-	0.10 W
Part 27M	LTE Band 7	QPSK	10MHz	9M12G7D	0.0058 ppm	-
Part 27M	LTE Band 7	16QAM	10MHz	9M08W7D	-	-
Part 27M	LTE Band 7	QPSK	15MHz	13M5G7D	-	-
Part 27M	LTE Band 7	16QAM	15MHz	13M6W7D	-	-
Part 27M	LTE Band 7	QPSK	20MHz	18M6G7D	-	0.13 W
Part 27M	LTE Band 7	16QAM	20MHz	18M6W7D	-	0.09 W

1.7 Testing Location

Test Site	SPORTON INTERNATIONAL (KUNSHAN) INC.		
Test Site Location	No. 3-2, PingXiang Road, Kunshan, Jiangsu Province, P.R.C. TEL: +86-0512-5790-0158 FAX: +86-0512-5790-0958		
Test Site No.	**Sporton Site No.**		**FCC/IC Registration No.**
	TH01-KS	03CH01-KS	149928/4086E-1

1.8 Applicable Standards

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

- 47 CFR Part 2, 24(E), 27(L), 27(M)
- ANSI / TIA / EIA-603-C-2004
- FCC KDB 971168 D01 Power Meas. License Digital Systems v02r01
- 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.

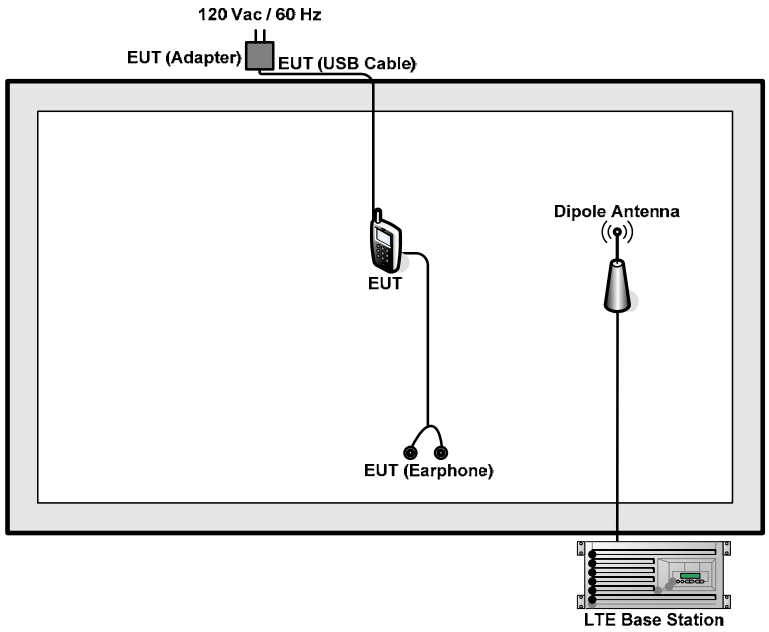
Test Items	Band	Bandwidth (MHz)						Modulation		RB #			Test Channel		
		1.4	3	5	10	15	20	QPSK	16QAM	1	Half	Full	L	M	H
Max. Output Power	2	v	v	v	v	v	v	v	v	v	v	v	v	v	v
	4	v	v	v	v	v	v	v	v	v	v	v	v	v	v
	7	-	-	v	v	v	v	v	v	v	v	v	v	v	v
Peak-to-Average Ratio	2						v		v	v		v	v	v	v
	4						v		v	v		v	v	v	v
	7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

Test Items	Band	Bandwidth (MHz)						Modulation		RB #			Test Channel		
		1.4	3	5	10	15	20	QPSK	16QAM	1	Half	Full	L	M	H
Conducted Spurious Emission	2	v	v	v	v	v	v	v	v	v			v	v	v
	4	v	v	v	v	v	v	v	v	v			v	v	v
	7	-	-	v	v	v	v	v	v	v			v	v	v
Frequency Stability	2				v			v				v		v	
	4				v			v				v		v	
	7	-	-		v			v				v		v	
E.R.P./ E.I.R.P.	2	v					v	v	v	v			v	v	v
	4	v					v	v	v	v			v	v	v
	7	-	-	v			v	v	v	v			v	v	v
Radiated Spurious Emission	2	v	v	v	v	v	v	v		v			v	v	v
	4	v	v	v	v	v	v	v		v			v	v	v
	7	-	-	v	v	v	v	v		v			v	v	v

Note

1. The mark "v " means that this configuration is chosen for testing
2. The mark "-" means that this bandwidth is not supported.
3. For E.R.P/E.I.R.P. measurement, the widest bandwidth of each band is chosen for testing due to highest conducted power. Besides, the lowest bandwidth of each band is also measured for reporting only.
4. The device is investigated from 30MHz to 10 times of fundamental signal for radiated spurious emission test under different RB size/offset and modulations in exploratory test. Subsequently, only the worst case emissions are reported.

2.2 Connection Diagram of Test System



2.3 Support Unit used in test configuration and system

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

2.4 Measurement Results Explanation Example

For all conducted test items:

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

Example:

The spectrum analyzer offset is derived from RF cable loss.

Offset = RF cable loss.

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

Offset (dB) = RF cable loss (dB) = 6 (dB)

3 Test Result

3.1 Conducted Output Power Measurement

3.1.1 Description of the Conducted Output Power Measurement

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

3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

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

3.1.4 Test Setup

3.1.5 Test Result of Conducted Output Power

<LTE Band 2 Conducted Power>

BW [MHz]	Modulation	RB Size	RB Offset	Power (dBm) Low Ch. / Freq.	Power (dBm) Middle Ch. / Freq.	Power (dBm) High Ch. / Freq.
Channel				**18700**	**18900**	**19100**
Frequency (MHz)				**1860**	**1880**	**1900**
20	QPSK	1	0	23.26	23.49	23.31
20	QPSK	1	49	23.25	23.15	23.14
20	QPSK	1	99	22.98	23.23	23.19
20	QPSK	50	0	22.24	22.36	22.34
20	QPSK	50	24	22.12	22.32	22.29
20	QPSK	50	49	22.14	22.28	22.26
20	QPSK	100	0	22.25	22.32	22.31
20	16QAM	1	0	22.60	22.34	22.42
20	16QAM	1	49	21.73	22.07	21.86
20	16QAM	1	99	22.32	22.33	22.30
20	16QAM	50	0	21.35	21.20	21.23
20	16QAM	50	24	21.10	21.17	21.25
20	16QAM	50	49	21.25	21.22	21.26
20	16QAM	100	0	21.15	21.29	21.36
Channel				**18675**	**18900**	**19125**
Frequency (MHz)				**1857.5**	**1880**	**1902.5**
15	QPSK	1	0	23.35	23.30	23.36
15	QPSK	1	37	23.23	23.23	23.21
15	QPSK	1	74	23.16	23.11	23.34
15	QPSK	36	0	22.25	22.30	22.40
15	QPSK	36	18	22.25	22.28	22.36
15	QPSK	36	37	22.16	22.21	22.38
15	QPSK	75	0	22.55	22.26	22.35
15	16QAM	1	0	22.33	22.47	22.27
15	16QAM	1	37	22.00	22.36	22.11
15	16QAM	1	74	22.09	21.61	22.23
15	16QAM	36	0	21.26	21.25	21.24
15	16QAM	36	18	21.19	21.17	21.31
15	16QAM	36	37	21.09	21.20	21.23
15	16QAM	75	0	21.19	21.29	21.29

BW [MHz]	Modulation	RB Size	RB Offset	Power (dBm) Low Ch. / Freq.	Power (dBm) Middle Ch. / Freq.	Power (dBm) High Ch. / Freq.
Channel				**18650**	**18900**	**19150**
Frequency (MHz)				**1855**	**1880**	**1905**
10	QPSK	1	0	23.27	23.25	23.36
10	QPSK	1	24	22.87	23.15	23.15
10	QPSK	1	49	23.18	23.24	23.35
10	QPSK	25	0	22.26	22.28	22.31
10	QPSK	25	12	22.21	22.42	22.25
10	QPSK	25	24	22.20	22.33	22.47
10	QPSK	50	0	22.23	22.35	22.23
10	16QAM	1	0	22.25	22.02	22.12
10	16QAM	1	24	21.96	22.03	21.88
10	16QAM	1	49	22.57	22.14	22.46
10	16QAM	25	0	21.31	21.12	21.02
10	16QAM	25	12	21.26	21.26	21.34
10	16QAM	25	24	21.33	21.42	21.44
10	16QAM	50	0	21.23	21.31	21.28
Channel				**18625**	**18900**	**19175**
Frequency (MHz)				**1852.5**	**1880**	**1907.5**
5	QPSK	1	0	23.26	23.28	23.48
5	QPSK	1	12	23.25	23.02	23.36
5	QPSK	1	24	23.16	23.14	23.44
5	QPSK	12	0	22.23	22.38	22.15
5	QPSK	12	6	22.28	22.26	22.45
5	QPSK	12	11	22.26	22.39	22.46
5	QPSK	25	0	22.17	22.36	22.04
5	16QAM	1	0	22.15	22.42	22.50
5	16QAM	1	12	22.05	21.99	22.41
5	16QAM	1	24	22.03	21.88	22.05
5	16QAM	12	0	21.25	21.20	21.19
5	16QAM	12	6	21.29	21.30	21.17
5	16QAM	12	11	21.09	21.24	21.09
5	16QAM	25	0	21.21	21.20	21.56

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	23.07	23.15	23.28
3	QPSK	1	7	23.16	23.20	23.31
3	QPSK	1	14	23.09	23.06	23.30
3	QPSK	8	0	22.14	22.23	22.30
3	QPSK	8	4	22.18	22.23	22.30
3	QPSK	8	7	22.14	22.26	22.36
3	QPSK	15	0	22.21	22.25	22.32
3	16QAM	1	0	21.92	21.85	22.06
3	16QAM	1	7	21.96	21.96	22.20
3	16QAM	1	14	22.22	22.06	22.21
3	16QAM	8	0	21.20	21.27	21.41
3	16QAM	8	4	21.17	21.30	21.27
3	16QAM	8	7	21.18	21.24	21.32
3	16QAM	15	0	21.14	21.18	21.24
Channel				**18607**	**18900**	**19193**
Frequency (MHz)				**1850.7**	**1880**	**1909.3**
1.4	QPSK	1	0	23.13	23.15	23.29
1.4	QPSK	1	2	23.26	23.25	23.36
1.4	QPSK	1	5	23.24	23.22	23.29
1.4	QPSK	3	0	23.25	23.24	23.31
1.4	QPSK	3	1	23.23	23.24	23.32
1.4	QPSK	3	2	23.23	23.24	23.32
1.4	QPSK	6	0	22.25	22.36	22.39
1.4	16QAM	1	0	21.98	22.50	22.23
1.4	16QAM	1	2	22.31	22.41	22.28
1.4	16QAM	1	5	22.43	22.57	22.30
1.4	16QAM	3	0	22.19	22.17	22.06
1.4	16QAM	3	1	22.14	22.20	22.27
1.4	16QAM	3	2	22.20	22.19	22.25
1.4	16QAM	6	0	21.05	21.19	21.20

<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	22.31	22.58	22.37
20	QPSK	1	49	22.27	22.30	22.28
20	QPSK	1	99	22.15	22.05	22.07
20	QPSK	50	0	21.31	21.45	21.37
20	QPSK	50	24	21.29	21.42	21.27
20	QPSK	50	49	21.28	21.39	21.23
20	QPSK	100	0	21.27	21.38	21.28
20	16QAM	1	0	21.21	21.01	21.18
20	16QAM	1	49	21.43	21.59	21.46
20	16QAM	1	99	21.32	21.02	21.26
20	16QAM	50	0	20.25	20.41	20.37
20	16QAM	50	24	20.26	20.43	20.31
20	16QAM	50	49	20.29	20.29	20.20
20	16QAM	100	0	20.31	20.47	20.34
Channel				**20025**	**20175**	**20325**
Frequency (MHz)				**1717.5**	**1732.5**	**1747.5**
15	QPSK	1	0	22.38	22.50	22.37
15	QPSK	1	37	22.26	22.43	22.21
15	QPSK	1	74	22.19	22.31	22.16
15	QPSK	36	0	21.21	21.47	21.22
15	QPSK	36	18	21.18	21.33	21.18
15	QPSK	36	37	21.24	21.39	21.26
15	QPSK	75	0	21.23	21.45	21.22
15	16QAM	1	0	21.09	21.26	21.28
15	16QAM	1	37	21.17	21.39	21.38
15	16QAM	1	74	21.06	21.34	21.04
15	16QAM	36	0	20.17	20.44	20.37
15	16QAM	36	18	20.24	20.34	20.17
15	16QAM	36	37	20.28	20.38	20.16
15	16QAM	75	0	20.25	20.46	20.28

BW [MHz]	Modulation	RB Size	RB Offset	Power (dBm) Low Ch. / Freq.	Power (dBm) Middle Ch. / Freq.	Power (dBm) High Ch. / Freq.
Channel				**20000**	**20175**	**20350**
Frequency (MHz)				**1715**	**1732.5**	**1750**
10	QPSK	1	0	22.17	22.11	22.26
10	QPSK	1	24	22.17	22.40	22.24
10	QPSK	1	49	22.21	22.54	22.32
10	QPSK	25	0	21.18	21.36	21.22
10	QPSK	25	12	21.18	21.33	21.26
10	QPSK	25	24	21.25	21.38	21.26
10	QPSK	50	0	21.21	21.40	21.31
10	16QAM	1	0	21.25	21.28	21.38
10	16QAM	1	24	21.08	21.05	21.36
10	16QAM	1	49	21.47	21.40	21.41
10	16QAM	25	0	20.26	20.57	20.40
10	16QAM	25	12	20.20	20.44	20.36
10	16QAM	25	24	20.36	20.43	20.31
10	16QAM	50	0	20.36	20.38	20.28
Channel				**19975**	**20175**	**20375**
Frequency (MHz)				**1712.5**	**1732.5**	**1752.5**
5	QPSK	1	0	22.33	22.35	22.33
5	QPSK	1	12	22.16	22.32	22.21
5	QPSK	1	24	22.17	22.34	22.32
5	QPSK	12	0	21.21	21.37	21.27
5	QPSK	12	6	21.18	21.38	21.33
5	QPSK	12	11	21.17	21.38	21.25
5	QPSK	25	0	21.26	21.37	21.23
5	16QAM	1	0	21.15	21.37	21.45
5	16QAM	1	12	21.05	21.31	21.37
5	16QAM	1	24	21.00	21.29	21.40
5	16QAM	12	0	20.42	20.47	20.35
5	16QAM	12	6	20.35	20.41	20.35
5	16QAM	12	11	20.39	20.42	20.32
5	16QAM	25	0	20.53	20.46	20.29

BW [MHz]	Modulation	RB Size	RB Offset	Power (dBm) Low Ch. / Freq.	Power (dBm) Middle Ch. / Freq.	Power (dBm) High Ch. / Freq.
Channel				**19965**	**20175**	**20385**
Frequency (MHz)				**1711.5**	**1732.5**	**1753.5**
3	QPSK	1	0	22.44	22.44	22.32
3	QPSK	1	7	22.17	22.22	22.21
3	QPSK	1	14	22.18	22.41	22.16
3	QPSK	8	0	21.30	21.42	21.33
3	QPSK	8	4	21.15	21.38	21.25
3	QPSK	8	7	21.12	21.34	21.23
3	QPSK	15	0	21.30	21.44	21.25
3	16QAM	1	0	21.01	21.13	21.19
3	16QAM	1	7	21.18	21.02	21.32
3	16QAM	1	14	21.21	21.30	21.37
3	16QAM	8	0	20.33	20.49	20.24
3	16QAM	8	4	20.25	20.49	20.28
3	16QAM	8	7	20.22	20.44	20.28
3	16QAM	15	0	20.34	20.38	20.15
Channel				**19957**	**20175**	**20393**
Frequency (MHz)				**1710.7**	**1732.5**	**1754.3**
1.4	QPSK	1	0	22.35	22.50	22.28
1.4	QPSK	1	2	22.19	22.49	22.18
1.4	QPSK	1	5	22.25	22.41	22.25
1.4	QPSK	3	0	22.34	22.49	22.19
1.4	QPSK	3	1	22.31	22.49	22.23
1.4	QPSK	3	2	22.24	22.29	22.24
1.4	QPSK	6	0	21.25	21.46	21.32
1.4	16QAM	1	0	21.46	21.35	21.06
1.4	16QAM	1	2	21.00	21.26	21.05
1.4	16QAM	1	5	21.47	21.55	21.36
1.4	16QAM	3	0	21.11	21.37	21.23
1.4	16QAM	3	1	21.18	21.31	21.32
1.4	16QAM	3	2	21.27	21.37	21.08
1.4	16QAM	6	0	20.19	20.37	20.17

<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	21.63	21.77	21.85
20	QPSK	1	49	21.58	21.59	21.64
20	QPSK	1	99	21.48	21.61	21.81
20	QPSK	50	0	20.44	20.73	20.78
20	QPSK	50	24	20.54	20.59	20.65
20	QPSK	50	49	20.52	20.57	20.62
20	QPSK	100	0	20.53	20.56	20.59
20	16QAM	1	0	20.22	20.25	20.29
20	16QAM	1	49	20.33	20.25	20.40
20	16QAM	1	99	20.23	20.17	20.45
20	16QAM	50	0	19.26	19.45	19.28
20	16QAM	50	24	19.19	19.31	19.31
20	16QAM	50	49	19.25	19.11	19.18
20	16QAM	100	0	19.21	19.38	19.20
Channel				**20825**	**21100**	**21375**
Frequency (MHz)				**2507.5**	**2535**	**2562.5**
15	QPSK	1	0	21.49	21.66	21.60
15	QPSK	1	37	21.66	21.68	21.49
15	QPSK	1	74	21.70	21.69	21.51
15	QPSK	36	0	20.28	20.57	20.60
15	QPSK	36	18	20.35	20.56	20.68
15	QPSK	36	37	20.51	20.64	20.74
15	QPSK	75	0	20.43	20.63	20.61
15	16QAM	1	0	20.36	20.68	20.69
15	16QAM	1	37	20.50	20.59	20.75
15	16QAM	1	74	20.59	20.68	20.79
15	16QAM	36	0	19.22	19.32	19.30
15	16QAM	36	18	19.11	19.24	19.26
15	16QAM	36	37	19.24	19.30	19.28
15	16QAM	75	0	19.09	19.30	19.23

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	21.44	21.72	21.63
10	QPSK	1	24	21.47	21.56	21.68
10	QPSK	1	49	21.57	21.55	21.55
10	QPSK	25	0	20.30	20.58	20.56
10	QPSK	25	12	20.19	20.51	20.55
10	QPSK	25	24	20.35	20.58	20.72
10	QPSK	50	0	20.30	20.62	20.59
10	16QAM	1	0	20.15	20.53	20.36
10	16QAM	1	24	20.00	20.27	20.49
10	16QAM	1	49	20.25	20.31	20.38
10	16QAM	25	0	18.94	19.44	19.34
10	16QAM	25	12	18.93	19.37	19.22
10	16QAM	25	24	18.98	19.29	19.40
10	16QAM	50	0	18.90	19.30	19.36
Channel				**20775**	**21100**	**21425**
Frequency (MHz)				**2502.5**	**2535**	**2567.5**
5	QPSK	1	0	21.36	21.58	21.50
5	QPSK	1	12	21.35	21.62	21.55
5	QPSK	1	24	21.45	21.68	21.64
5	QPSK	12	0	20.38	20.59	20.63
5	QPSK	12	6	20.28	20.57	20.67
5	QPSK	12	11	20.34	20.58	20.67
5	QPSK	25	0	20.31	20.55	20.64
5	16QAM	1	0	19.99	20.35	20.36
5	16QAM	1	12	19.87	20.36	20.25
5	16QAM	1	24	19.83	20.23	20.33
5	16QAM	12	0	19.01	19.41	19.39
5	16QAM	12	6	18.91	19.38	19.39
5	16QAM	12	11	18.97	19.30	19.42
5	16QAM	25	0	18.99	19.32	19.35

Note: Maximum average power for LTE.

3.2 Peak-to-Average Ratio

3.2.1 Description of the PAR Measurement

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

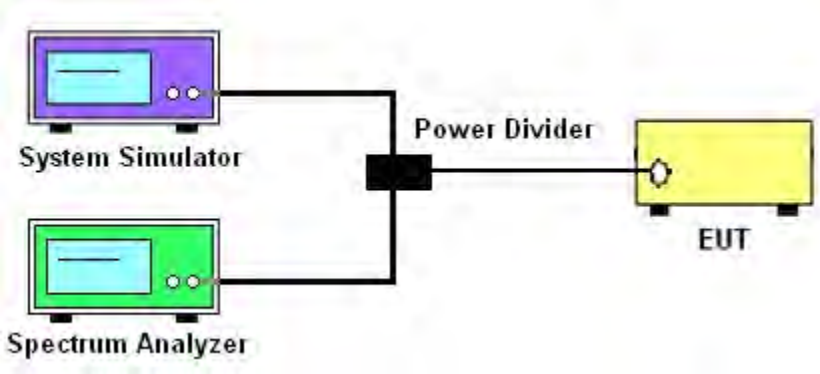
3.2.2 Measuring Instruments

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

3.2.3 Test Procedures

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

3.2.4 Test Setup



3.2.5 Test Result of Peak-to-Average Ratio

LTE Band 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	4.64	3.57	3.80
20	16QAM	100	0	5.07	5.22	5.25

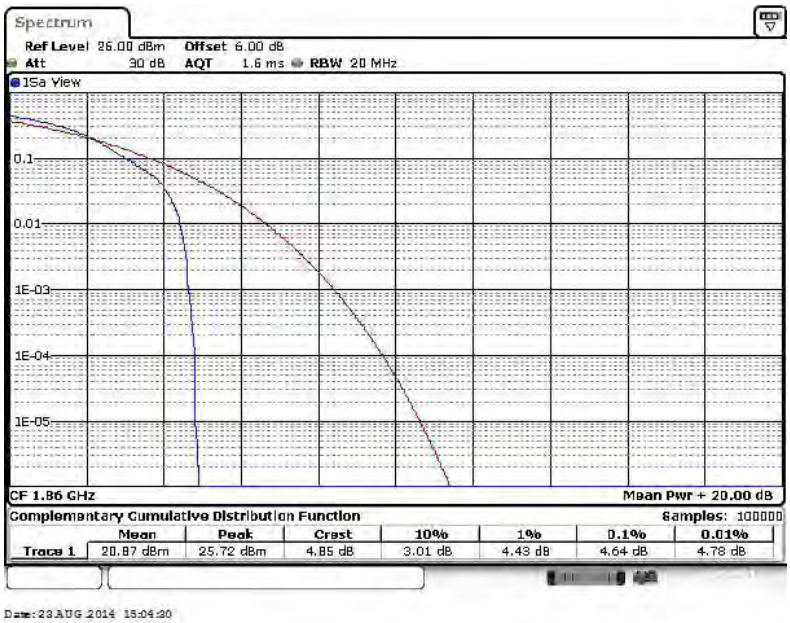
LTE Band 4						
BW [MHz]	Modulation	RB Size	RB Offset	Power (dBm) Low Ch. / Freq.	Power (dBm) Middle Ch. / Freq.	Power (dBm) High Ch. / Freq.
Channel				20050	20175	20300
Frequency (MHz)				1720	1732.5	1745
20	16QAM	1	0	4.72	5.68	4.38
20	16QAM	100	0	6.09	5.59	5.80

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	1.96	1.80	1.92
20	16QAM	100	0	7.20	7.12	7.24

3.2.6 Peak to Average Power Ratio

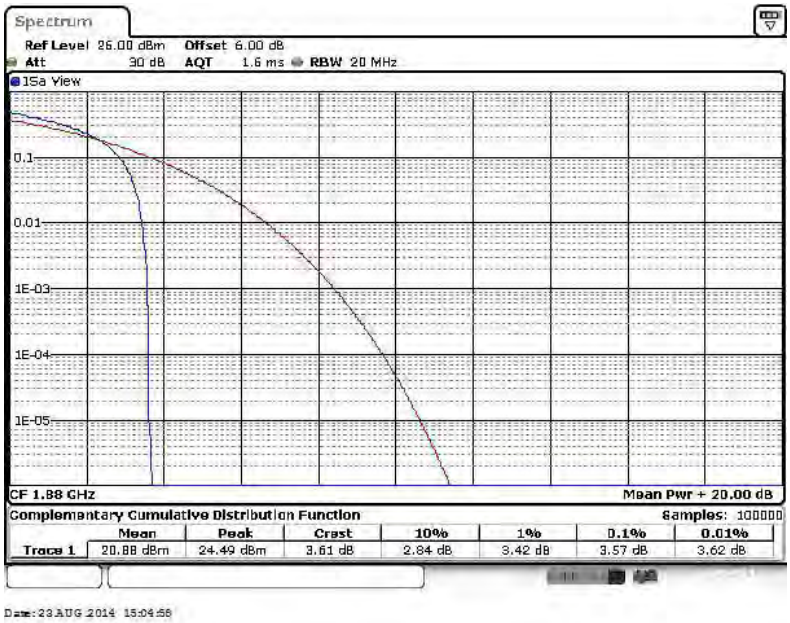
Peak-to-Average Ratio on LTE Band 2

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



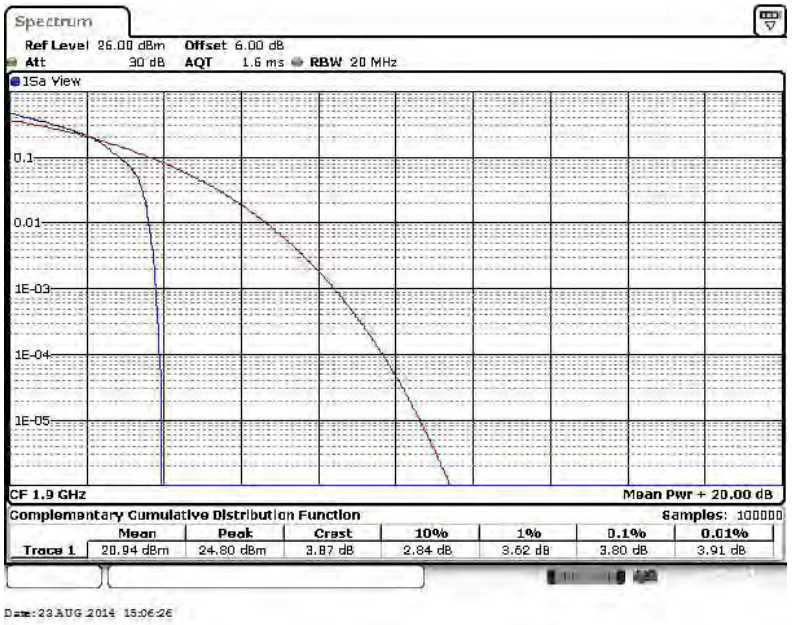
Peak-to-Average Ratio on LTE Band 2

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



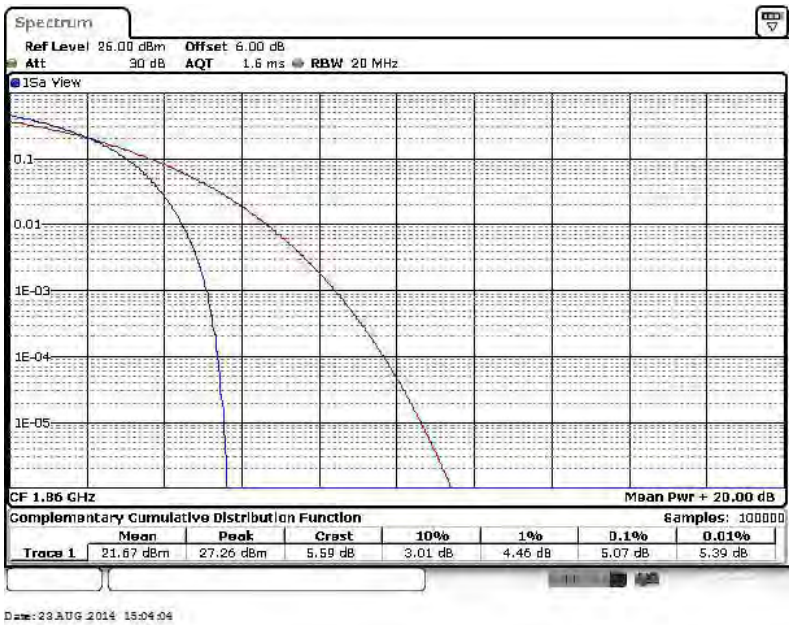
Peak-to-Average Ratio on LTE Band 2

20MHz / 16QAM in Ch. 19100 (1RB Size)



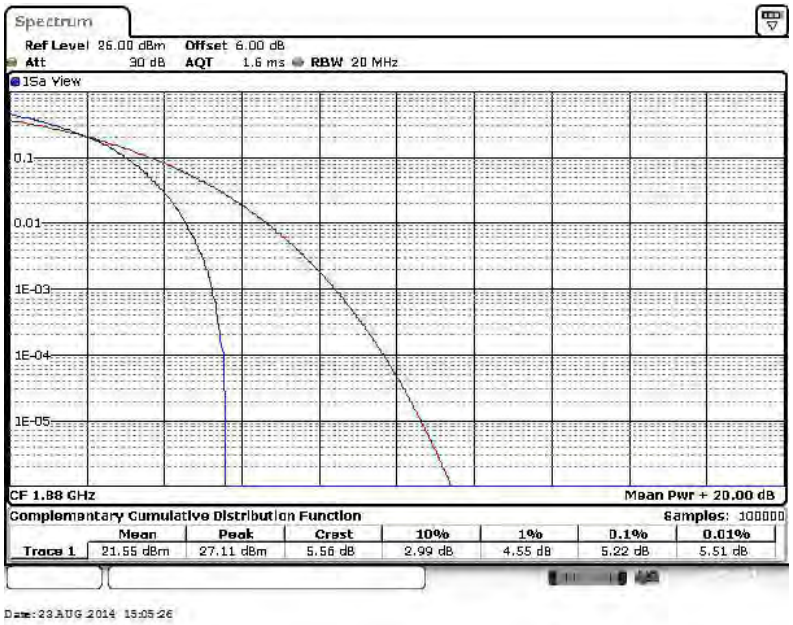
Peak-to-Average Ratio on LTE Band 2

20MHz / 16QAM in Ch. 18700 (100RB Size)



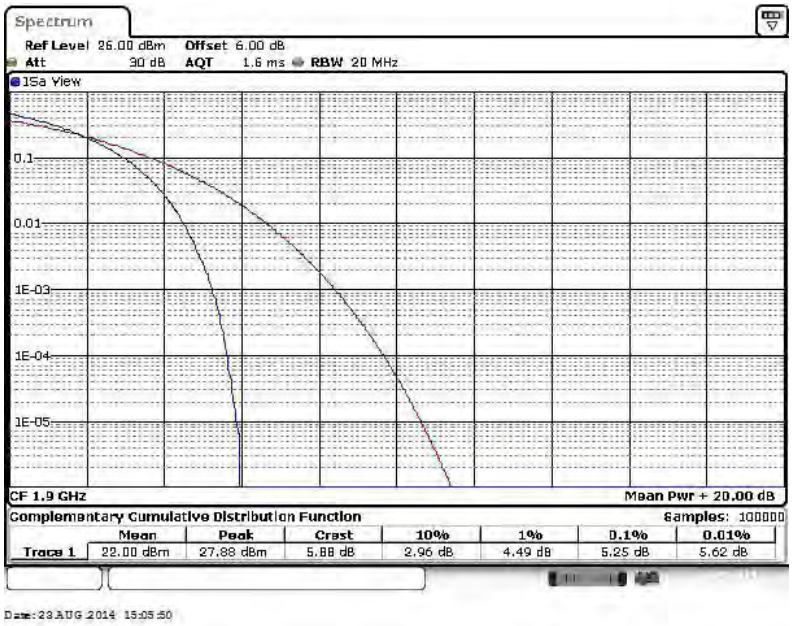
Peak-to-Average Ratio on LTE Band 2

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



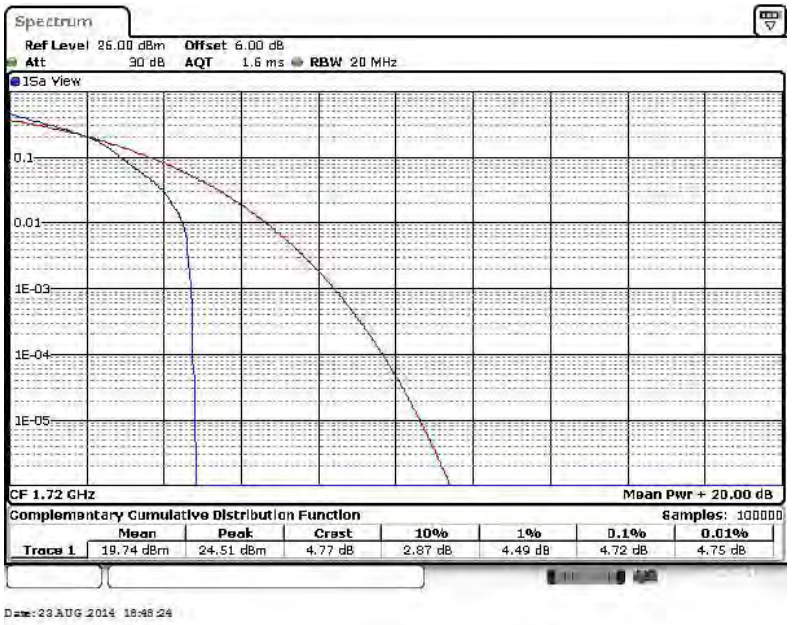
Peak-to-Average Ratio on LTE Band 2

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



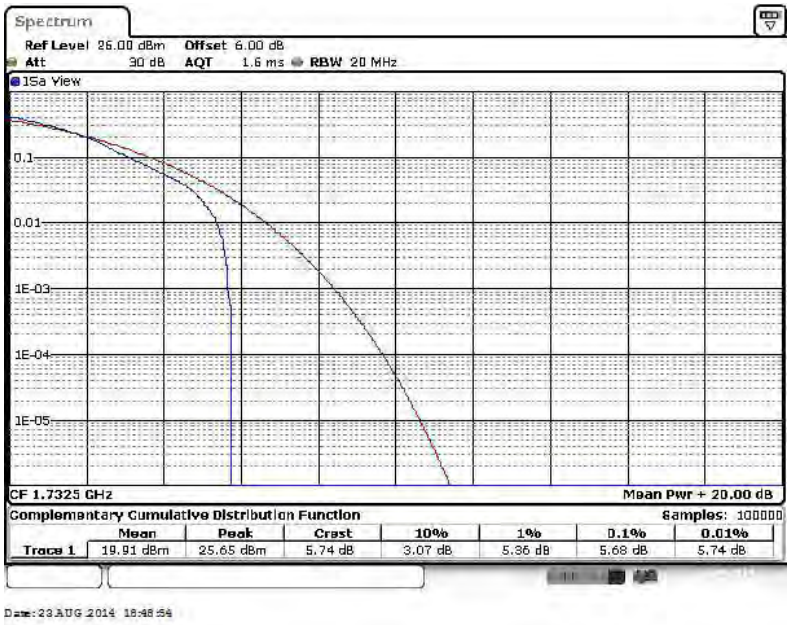
Peak-to-Average Ratio on LTE Band 4

20MHz / 16QAM in Ch. 20050 (1RB Size)



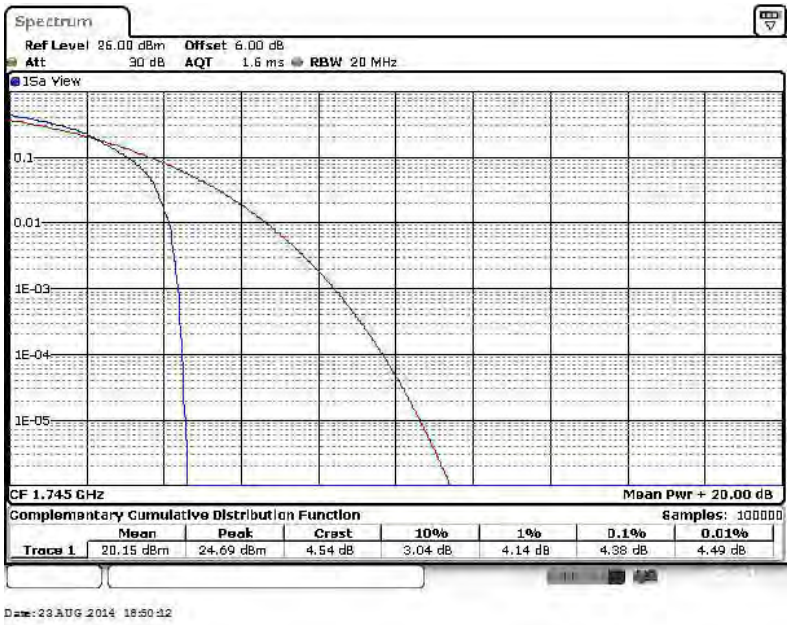
Peak-to-Average Ratio on LTE Band 4

20MHz / 16QAM in Ch. 20175 (1RB Size)



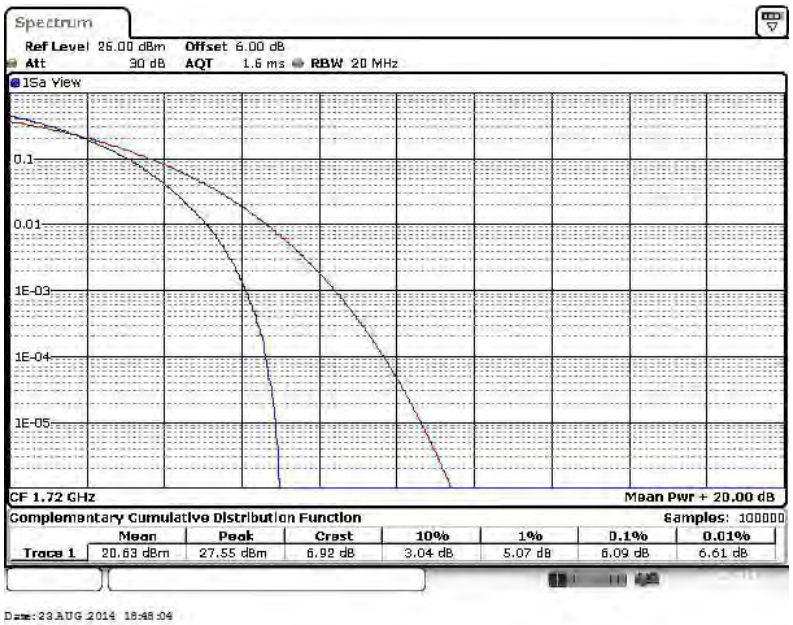
Peak-to-Average Ratio on LTE Band 4

20MHz / 16QAM in Ch. 20300 (1RB Size)



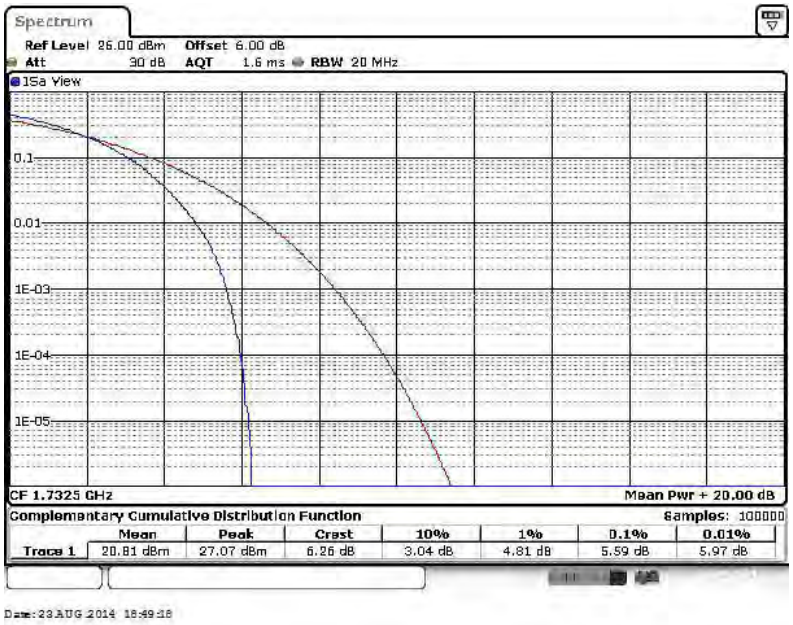
Peak-to-Average Ratio on LTE Band 4

20MHz / 16QAM in Ch. 20500 (100RB Size)



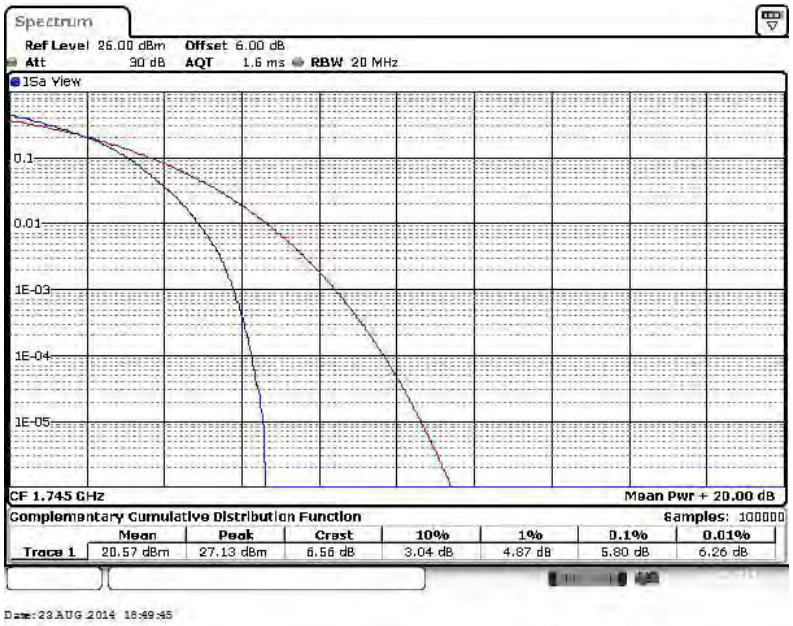
Peak-to-Average Ratio on LTE Band 4

20MHz / 16QAM in Ch. 201750 (100RB Size)



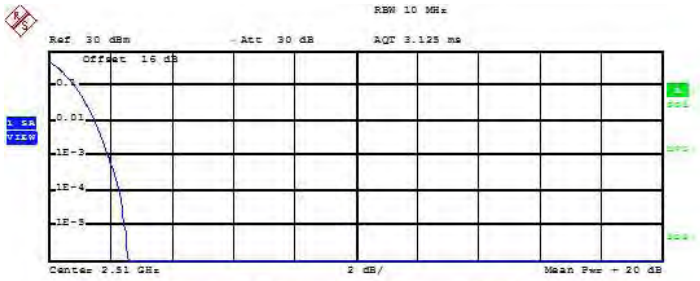
Peak-to-Average Ratio on LTE Band 4

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



Peak-to-Average Ratio on LTE Band 7

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



Complementary Cumulative Distribution Function (100000 samples)

	Trace 1
Mean	-9.25 dBm
Peak	-6.69 dBm
Crest	2.56 dB
10 %	0.88 dB
1 %	1.52 dB
.1 %	1.96 dB
.01 %	2.32 dB

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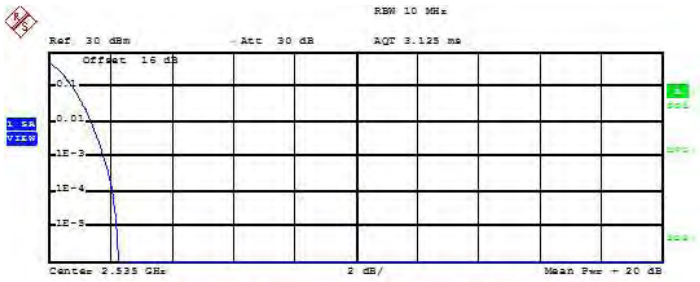
Peak-to-Average Ratio on LTE Band 7

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



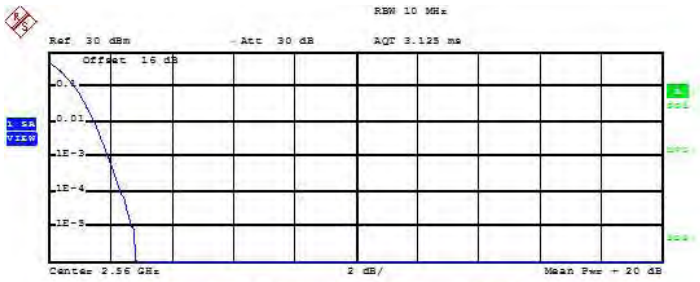
Complementary Cumulative Distribution Function (100000 samples)

	Trace 1
Mean	-8.58 dBm
Peak	-6.33 dBm
Crest	2.25 dB
10 %	0.80 dB
1 %	1.40 dB
.1 %	1.80 dB
.01 %	2.08 dB

Date: 28.AUG.2014 11:45:30

Peak-to-Average Ratio on LTE Band 7

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



Complementary Cumulative Distribution Function (100000 samples)

	Trace 1
Mean	-9.01 dBm
Peak	-6.19 dBm
Crest	2.82 dB
10 %	0.84 dB
1 %	1.48 dB
.1 %	1.92 dB
.01 %	2.36 dB

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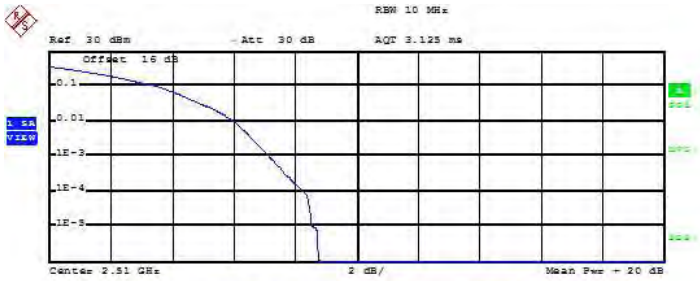
Peak-to-Average Ratio on LTE Band 7

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



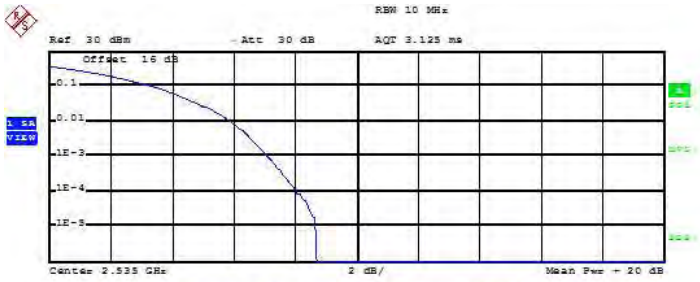
Complementary Cumulative Distribution Function (100000 samples)

	Trace 1
Mean	16.80 dBm
Peak	25.56 dBm
Crest	8.76 dB
10 %	3.60 dB
1 %	6.04 dB
.1 %	7.20 dB
.01 %	8.32 dB

Date: 28.AUG.2014 11:47:23

Peak-to-Average Ratio on LTE Band 7

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



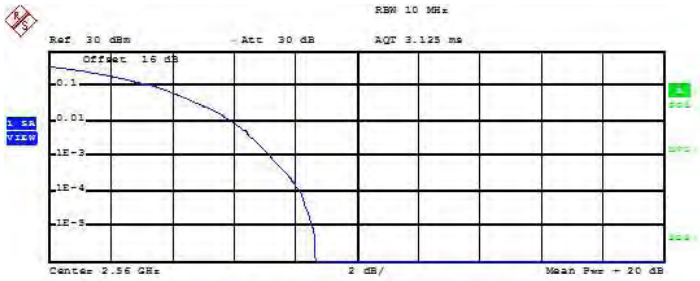
Complementary Cumulative Distribution Function (100000 samples)

	Trace 1
Mean	17.22 dBm
Peak	25.91 dBm
Crest	8.69 dB
10 %	3.48 dB
1 %	5.96 dB
.1 %	7.12 dB
.01 %	8.04 dB

Date: 28.AUG.2014 11:44:56

Peak-to-Average Ratio on LTE Band 7

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



Complementary Cumulative Distribution Function (100000 samples)

	Trace 1
Mean	17.24 dBm
Peak	25.91 dBm
Crest	8.67 dB
10 %	3.52 dB
1 %	6.00 dB
.1 %	7.24 dB
.01 %	8.20 dB

Date: 28.AUG.2014 11:49:25

3.3 Equivalent Isotropic Radiated Power Measurement

3.3.1 Description of the EIRP Measurement

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

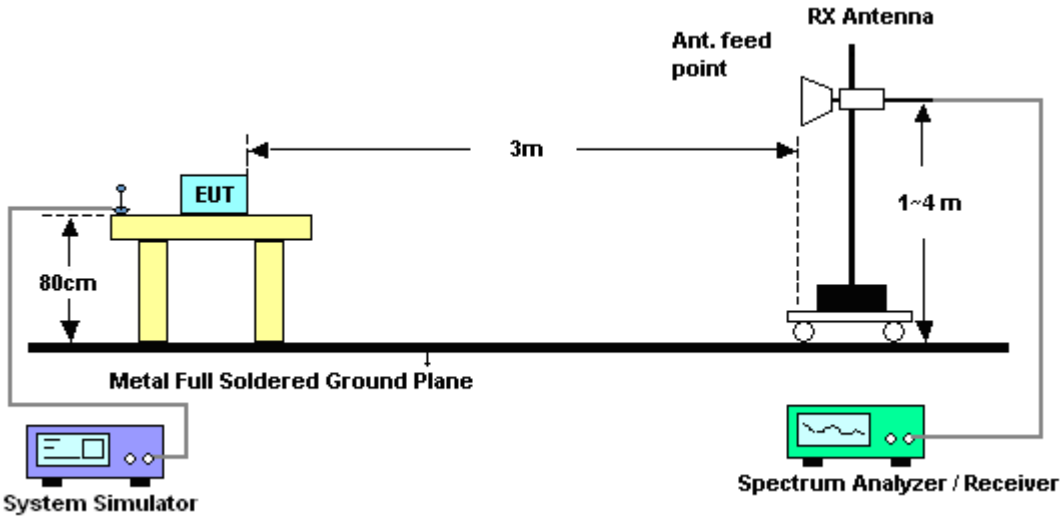
The measuring equipment is listed in the section 4 of this test report.

3.3.3 Test Procedures

1. The EUT was placed on a non-conductive rotating platform 0.8 meters high in a semi-anechoic chamber. The radiated emission at the fundamental frequency was measured at 3 m with a test antenna and a spectrum analyzer with RMS detector per section 5. of KDB 971168 D01.
2. During the measurement, the system simulator parameters were set to force the EUT transmitting at maximum output power. The maximum emission was recorded from analyzer power level (LVL) from the 360 degrees rotation of the turntable and the test antenna raised and lowered over a range from 1 to 4 meters in both horizontally and vertically polarized orientations.
3. Effective Isotropic Radiated Power (EIRP) was measured by substitution method according to TIA/EIA-603-C. The EUT was replaced by dipole antenna (substitution antenna) at same location, and then a known power from S.G. was applied into the dipole antenna through a Tx cable, and then recorded the maximum Analyzer reading through raised and lowered the test antenna. The correction factor (in dB) = S.G. - Tx Cable loss + Substitution antenna gain - Analyzer reading. Then the EUT's EIRP was calculated with the correction factor, EIRP= LVL + Correction factor and ERP = EIRP – 2.15.

3.3.4 Test Setup

For Equivalent Isotropic Radiated Power



3.3.5 Test Result of EIRP

LTE Band 2 Radiated Power EIRP for BW 1.4MHz / QPSK (1RB Size)				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
1850.7	-18.59	42.76	24.17	0.26
1880.0	-17.72	42.32	24.60	0.29
1909.3	-17.15	41.95	24.80	0.30
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
1850.7	-17.82	42.13	24.31	0.27
1880.0	-18.31	42.79	24.48	0.28
1909.3	-17.84	42.83	24.99	0.32

LTE Band 2 Radiated Power EIRP for BW 1.4MHz / 16QAM (1RB Size)				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
1850.7	-19.80	42.76	22.96	0.20
1880.0	-18.82	42.32	23.50	0.22
1909.3	-18.16	41.95	23.79	0.24
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
1850.7	-18.94	42.13	23.19	0.21
1880.0	-19.43	42.79	23.36	0.22
1909.3	-18.92	42.83	23.91	0.25

LTE Band 2 Radiated Power EIRP for BW 20MHz / QPSK (1RB Size)				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
1860	-19.45	42.76	23.31	0.21
1880	-18.89	42.32	23.43	0.22
1900	-18.32	41.95	23.63	0.23
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
1860	-18.50	42.13	23.63	0.23
1880	-19.16	42.79	23.63	0.23
1900	-17.92	42.83	24.91	0.31

LTE Band 2 Radiated Power EIRP for BW 20MHz / 16QAM (1RB Size)				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
1860	-19.75	42.76	23.01	0.20
1880	-18.95	42.32	23.37	0.22
1900	-18.55	41.95	23.40	0.22
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
1860	-18.58	42.13	23.55	0.23
1880	-19.34	42.79	23.45	0.22
1900	-19.13	42.83	23.70	0.23

LTE Band 4 Radiated Power EIRP for BW 1.4MHz / QPSK (1RB Size)				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
1710.7	-16.81	39.98	23.17	0.21
1732.5	-17.15	40.73	23.58	0.23
1754.3	-17.18	40.83	23.65	0.23
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
1710.7	-18.28	41.22	22.94	0.20
1732.5	-17.92	41.41	23.49	0.22
1754.3	-18.25	41.68	23.43	0.22

LTE Band 4 Radiated Power EIRP for BW 1.4MHz / 16QAM (1RB Size)				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
1710.7	-17.29	39.98	22.69	0.19
1732.5	-17.48	40.73	23.25	0.21
1754.3	-17.56	40.83	23.27	0.21
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
1710.7	-18.65	41.22	22.57	0.18
1732.5	-18.40	41.41	23.01	0.20
1754.3	-18.49	41.68	23.19	0.21

LTE Band 4 Radiated Power EIRP for BW 20MHz / QPSK (1RB Size)				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
1720	-16.04	39.98	23.94	0.25
1732.5	-16.61	40.73	24.12	0.26
1745	-16.32	40.83	24.51	0.28
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
1720	-17.43	41.22	23.79	0.24
1732.5	-17.47	41.41	23.94	0.25
1745	-17.31	41.68	24.37	0.27

LTE Band 4 Radiated Power EIRP for BW 20MHz / 16QAM (1RB Size)				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
1720	-17.03	39.98	22.95	0.20
1732.5	-17.62	40.73	23.11	0.20
1745	-17.33	40.83	23.50	0.22
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
1720	-18.49	41.22	22.73	0.19
1732.5	-18.44	41.41	22.97	0.20
1745	-18.47	41.68	23.21	0.21

LTE Band 7 Radiated Power EIRP for BW 5MHz / QPSK (1RB Size)				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
2502.5	-20.50	43.58	20.93	0.12
2535	-20.75	43.84	20.94	0.12
2567.5	-24.53	43.72	17.04	0.05
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
2502.5	-22.73	45.66	20.78	0.12
2535	-23.19	46.02	20.68	0.12
2567.5	-26.25	44.93	16.53	0.04

LTE Band 7 Radiated Power EIRP for BW 5MHz / 16QAM (1RB Size)				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
2502.5	-21.64	43.58	19.79	0.10
2535	-22.01	43.84	19.68	0.09
2567.5	-24.94	43.72	16.63	0.05
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
2502.5	-23.90	45.66	19.61	0.09
2535	-24.49	46.02	19.38	0.09
2567.5	-26.67	44.93	16.11	0.04

LTE Band 7 Radiated Power EIRP for BW 20MHz / QPSK (1RB Size)				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
2510	-20.40	43.58	21.03	0.13
2535	-21.69	43.84	20.00	0.10
2560	-24.93	43.72	16.64	0.05
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
2510	-22.63	45.66	20.88	0.12
2535	-24.07	46.02	19.80	0.10
2560	-26.52	44.93	16.26	0.04

LTE Band 7 Radiated Power EIRP for BW 20MHz / 16QAM (1RB Size)				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
2510	-23.33	43.58	18.10	0.06
2535	-22.05	43.84	19.64	0.09
2560	-25.40	43.72	16.17	0.04
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
2510	-25.64	45.66	17.87	0.06
2535	-24.45	46.02	19.42	0.09
2560	-27.01	44.93	15.77	0.04

3.4 99% Occupied Bandwidth and 26dB Bandwidth Measurement

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

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

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

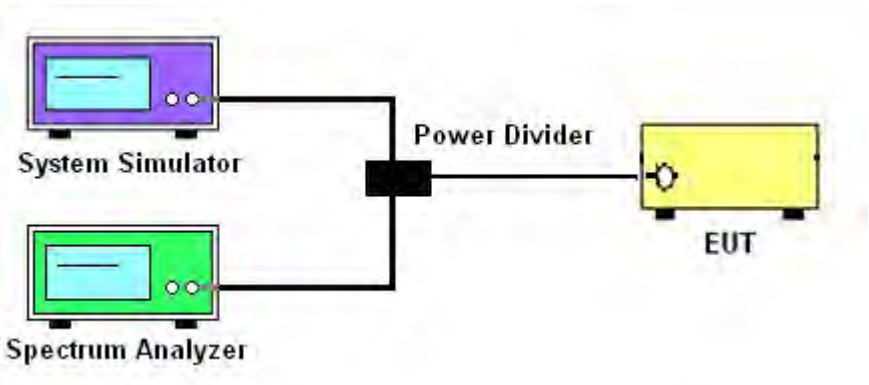
3.4.2 Measuring Instruments

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

3.4.3 Test Procedures

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

3.4.4 Test Setup



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

Modes	LTE Band 2											
BW / Mod.	1.4MHz / QPSK			1.4MHz / 16QAM			3MHz / QPSK			3MHz / 16QAM		
	Low	Mid.	High	Low	Mid.	High	Low	Mid.	High	Low	Mid.	High
99% OBW (MHz)	1.097	1.099	1.097	1.099	1.099	1.099	2.727	2.727	2.727	2.733	2.727	2.727
26dB BW (MHz)	1.292	1.273	1.287	1.298	1.304	1.304	3.039	3.045	3.033	3.051	3.051	3.045
BW / Mod.	5MHz / QPSK			5MHz / 16QAM			10MHz / QPSK			10MHz / 16QAM		
	Low	Mid.	High	Low	Mid.	High	Low	Mid.	High	Low	Mid.	High
99% OBW (MHz)	4.505	4.496	4.505	4.496	4.496	4.496	9.071	9.031	9.051	9.051	9.031	9.011
26dB BW (MHz)	5.045	5.055	5.065	5.045	5.035	5.045	10.030	10.030	10.130	10.050	9.930	9.890
BW / Mod.	15MHz / QPSK			15MHz / 16QAM			20MHz / QPSK			20MHz / 16QAM		
	Low	Mid.	High	Low	Mid.	High	Low	Mid.	High	Low	Mid.	High
99% OBW (MHz)	13.457	13.457	13.427	13.487	13.427	13.457	18.422	18.302	18.222	18.422	18.342	18.382
26dB BW (MHz)	14.955	14.416	14.655	14.775	14.595	14.745	20.220	20.220	20.180	20.779	20.180	20.220

Modes	LTE Band 4											
BW / Mod.	1.4MHz / QPSK			1.4MHz / 16QAM			3MHz / QPSK			3MHz / 16QAM		
	Low	Mid.	High	Low	Mid.	High	Low	Mid.	High	Low	Mid.	High
99% OBW (MHz)	1.097	1.097	1.099	1.097	1.097	1.097	2.733	2.727	2.721	2.727	2.727	2.727
26dB BW (MHz)	1.284	1.292	1.278	1.290	1.290	1.301	3.051	3.051	3.039	3.057	3.051	3.045
BW / Mod.	5MHz / QPSK			5MHz / 16QAM			10MHz / QPSK			10MHz / 16QAM		
	Low	Mid.	High	Low	Mid.	High	Low	Mid.	High	Low	Mid.	High
99% OBW (MHz)	4.496	4.496	4.486	4.496	4.496	4.496	9.051	9.011	9.091	9.011	8.971	9.011
26dB BW (MHz)	5.025	5.045	5.035	5.035	5.015	5.035	10.050	9.890	9.930	9.950	9.950	9.930
BW / Mod.	15MHz / QPSK			15MHz / 16QAM			20MHz / QPSK			20MHz / 16QAM		
	Low	Mid.	High	Low	Mid.	High	Low	Mid.	High	Low	Mid.	High
99% OBW (MHz)	13.457	13.367	13.457	13.487	13.367	13.487	18.342	18.102	18.382	18.382	18.222	18.422
26dB BW (MHz)	14.625	14.595	14.625	14.565	14.595	14.805	20.340	20.180	20.260	20.220	20.220	20.380

Modes	LTE Band 7											
BW / Mod.	5MHz / QPSK			5MHz / 16QAM			10MHz / QPSK			10MHz / 16QAM		
	Low	Mid.	High	Low	Mid.	High	Low	Mid.	High	Low	Mid.	High
99% OBW (MHz)	4.520	4.520	4.520	4.500	4.520	4.520	9.120	9.080	9.080	9.040	9.080	9.080
26dB BW (MHz)	5.020	5.000	5.000	5.000	4.940	5.000	10.240	10.160	10.200	10.080	10.120	10.200
BW / Mod.	15MHz / QPSK			15MHz / 16QAM			20MHz / QPSK			20MHz / 16QAM		
	Low	Mid.	High	Low	Mid.	High	Low	Mid.	High	Low	Mid.	High
99% OBW (MHz)	13.500	13.500	13.500	13.500	13.500	13.560	18.560	18.400	18.560	18.560	18.400	18.560
26dB BW (MHz)	14.880	14.760	14.880	14.940	14.820	14.820	21.280	20.960	21.120	21.120	20.960	21.120

Note:

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

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

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

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

BW10MHz RB setting：RB Size 50, RB offset 0

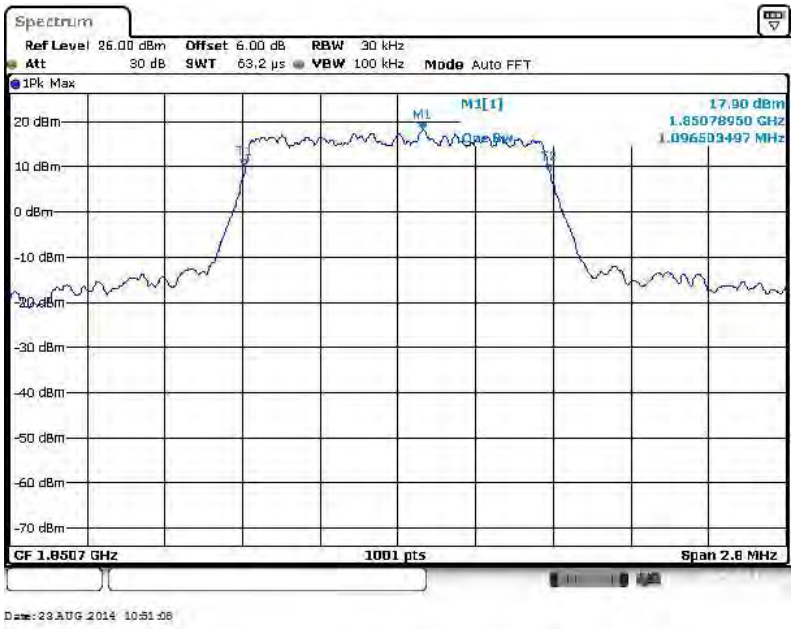
BW15MHz RB setting：RB Size 75, RB offset 0

BW20MHz RB setting：RB Size 100, RB offset 0

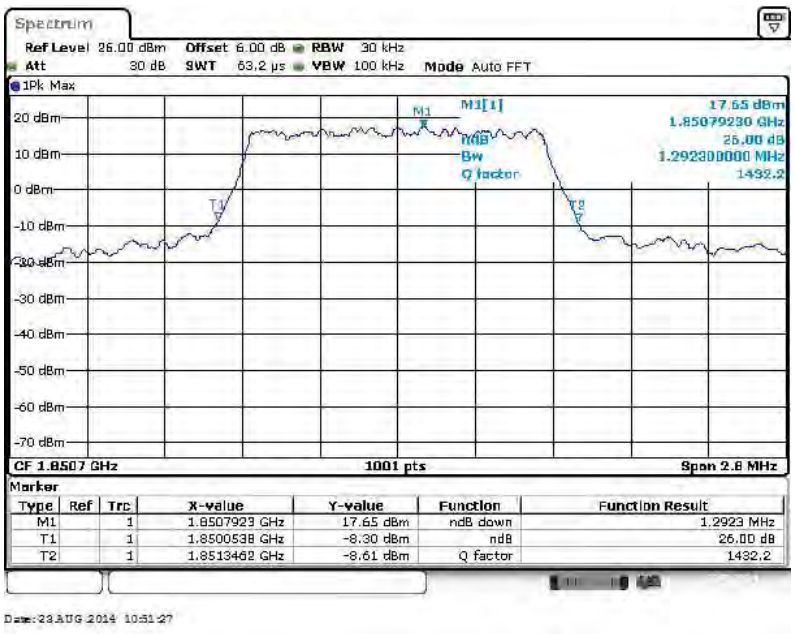
3.4.6 Test Result (Plots) of 99% Occupied Bandwidth and 26dB Bandwidth

Band :	LTE Band 2	BW / Mod. :	1.4MHz / QPSK

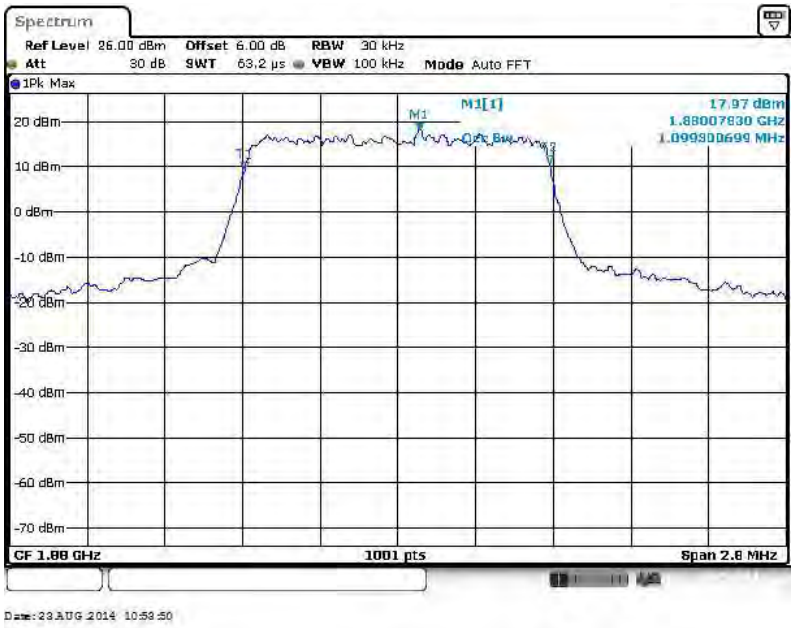
99% Occupied Bandwidth Plot on Channel 18607



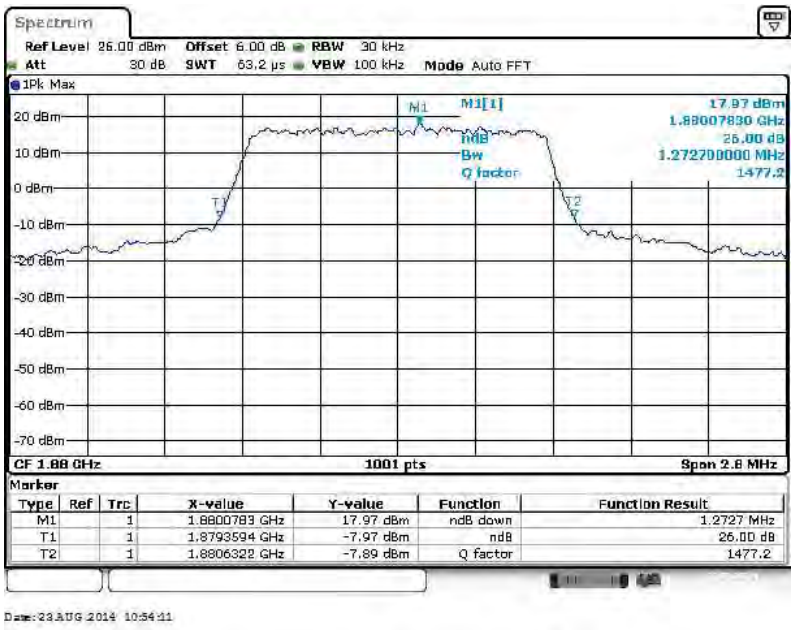
26dB Bandwidth Plot on Channel 18607



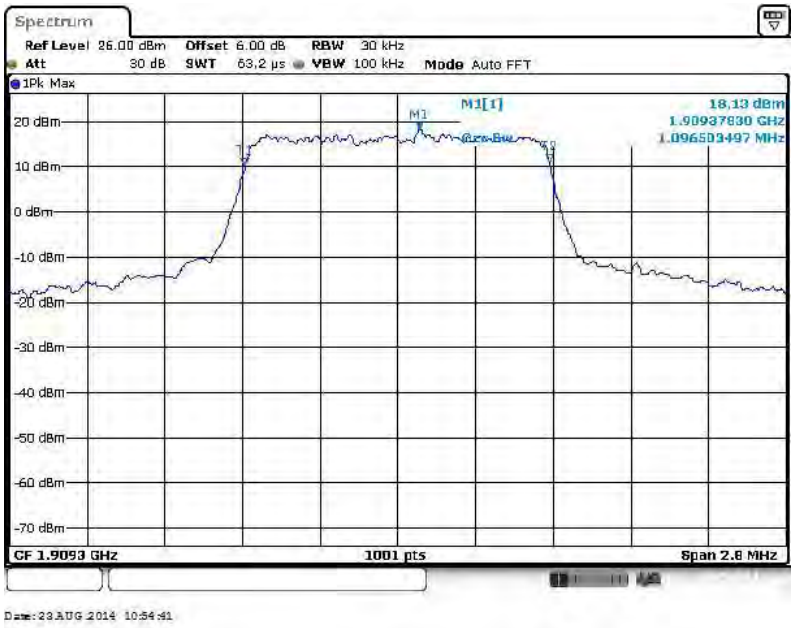
99% Occupied Bandwidth Plot on Channel 18900



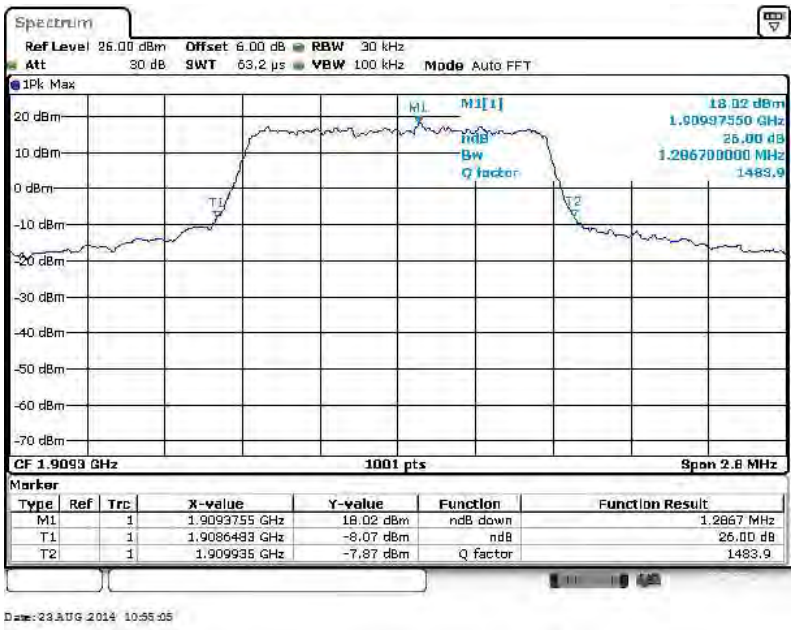
26dB Bandwidth Plot on Channel 18900



99% Occupied Bandwidth Plot on Channel 19193

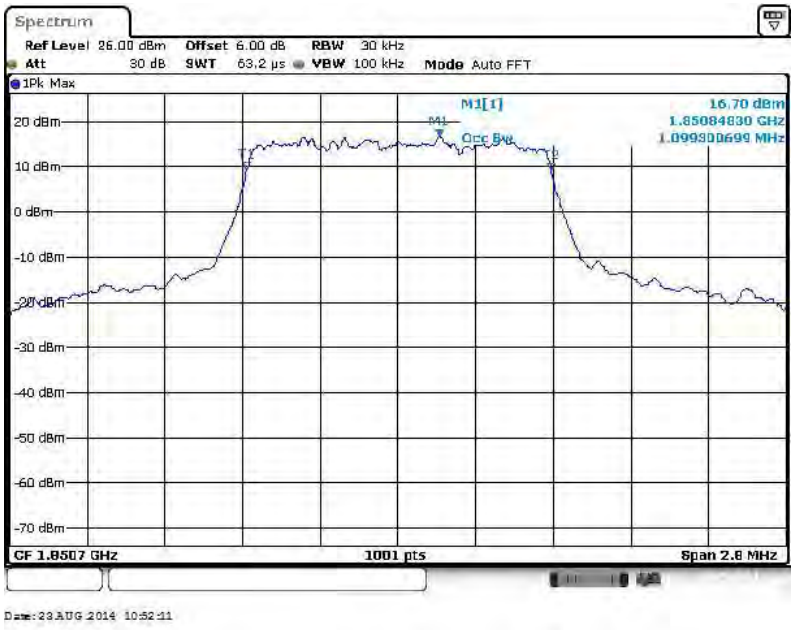


26dB Bandwidth Plot on Channel 19193

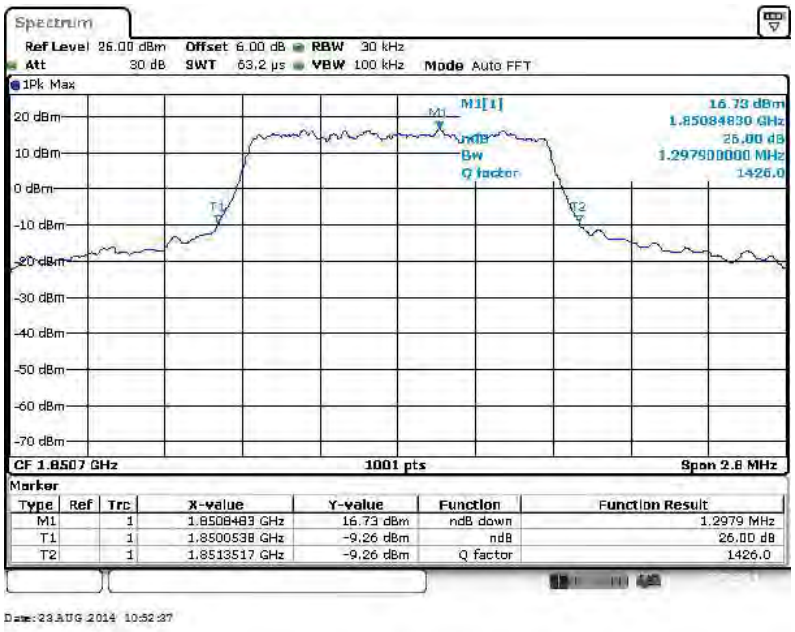


Band :	LTE Band 2	BW / Mod. :	1.4MHz / 16QAM

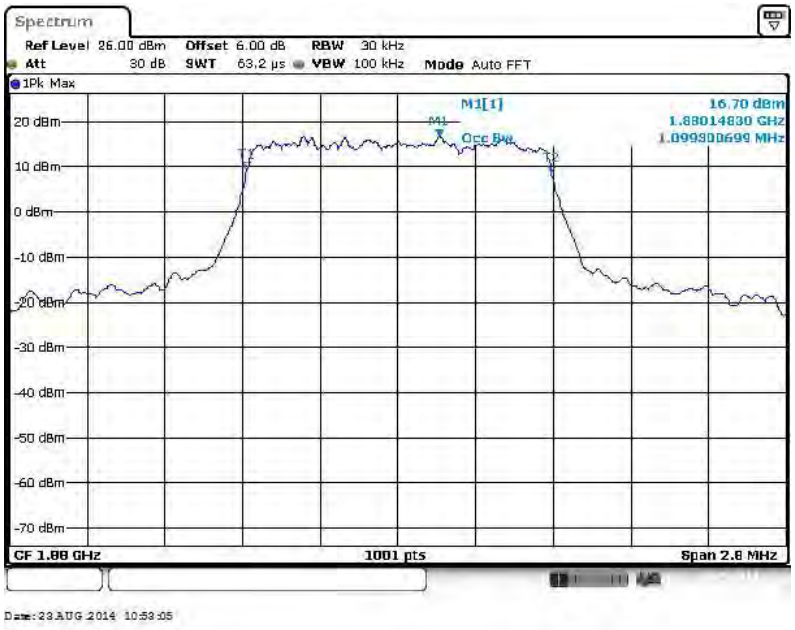
99% Occupied Bandwidth Plot on Channel 18607



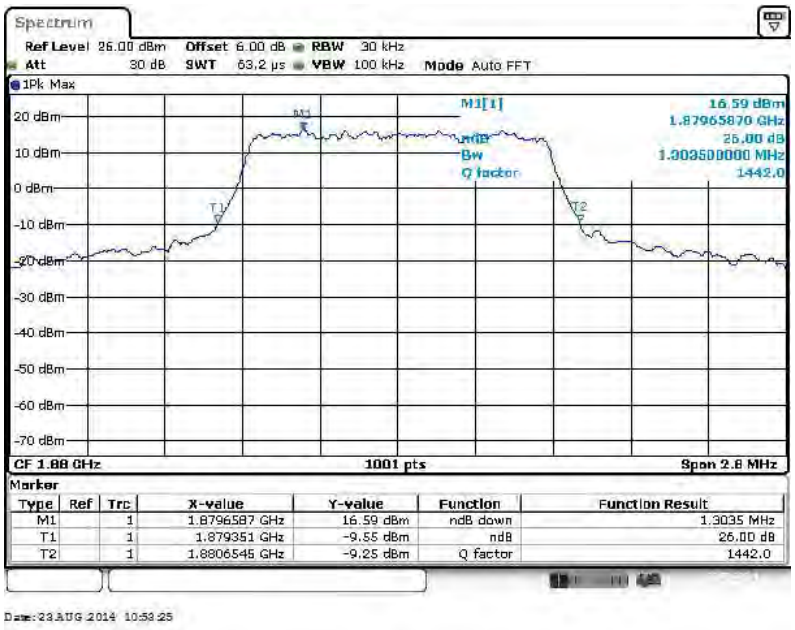
26dB Bandwidth Plot on Channel 18607



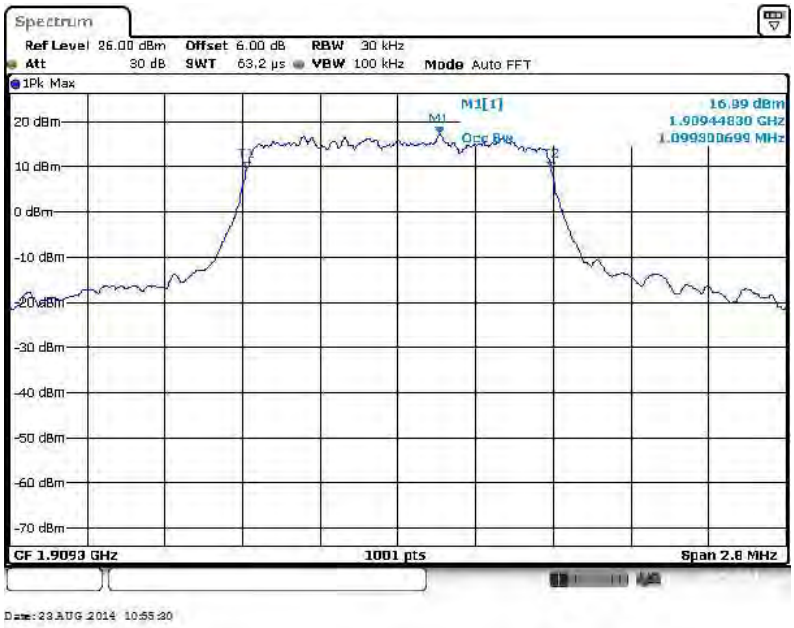
99% Occupied Bandwidth Plot on Channel 18900



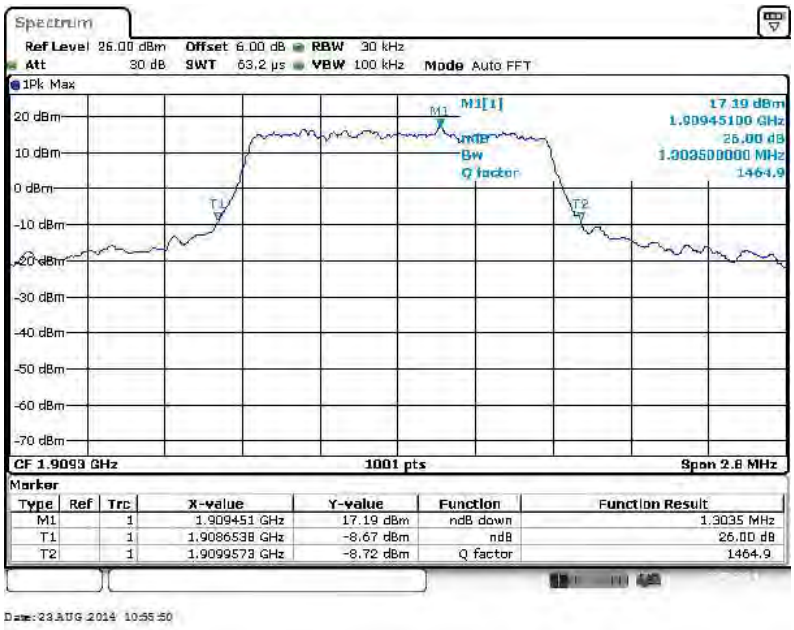
26dB Bandwidth Plot on Channel 18900



99% Occupied Bandwidth Plot on Channel 19193

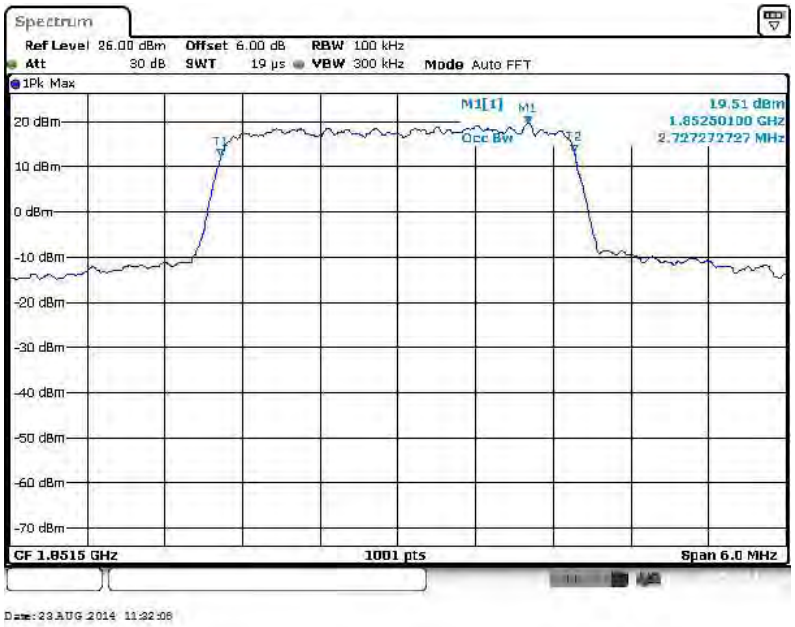


26dB Bandwidth Plot on Channel 19193

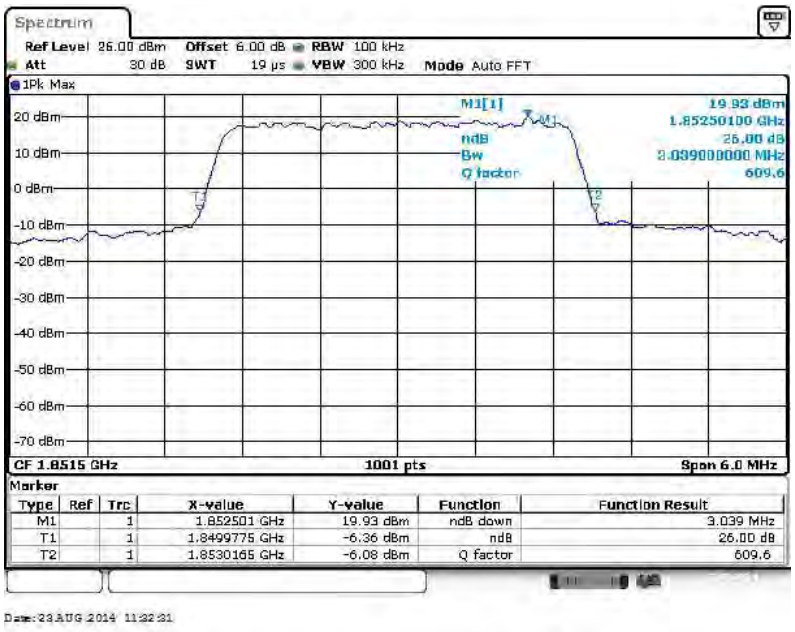


Band :	LTE Band 2	BW / Mod. :	3MHz / QPSK

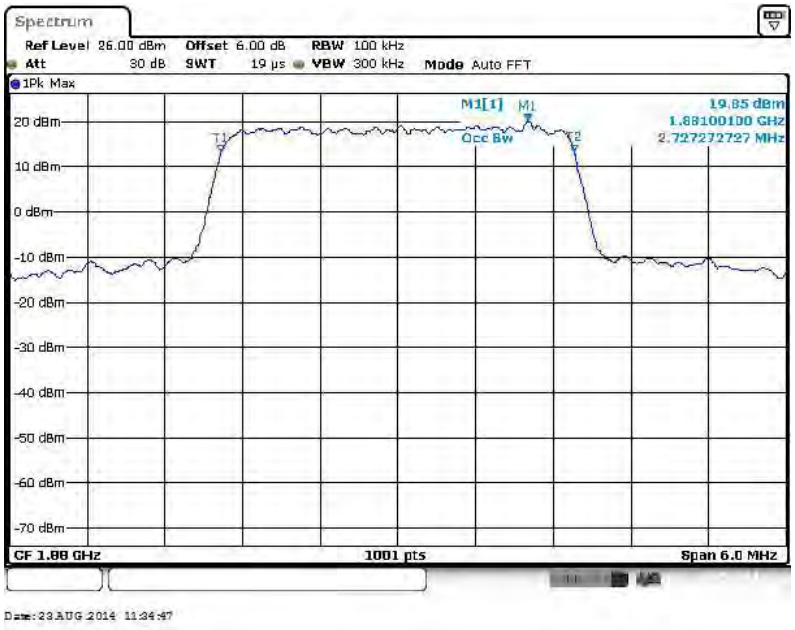
99% Occupied Bandwidth Plot on Channel 18615



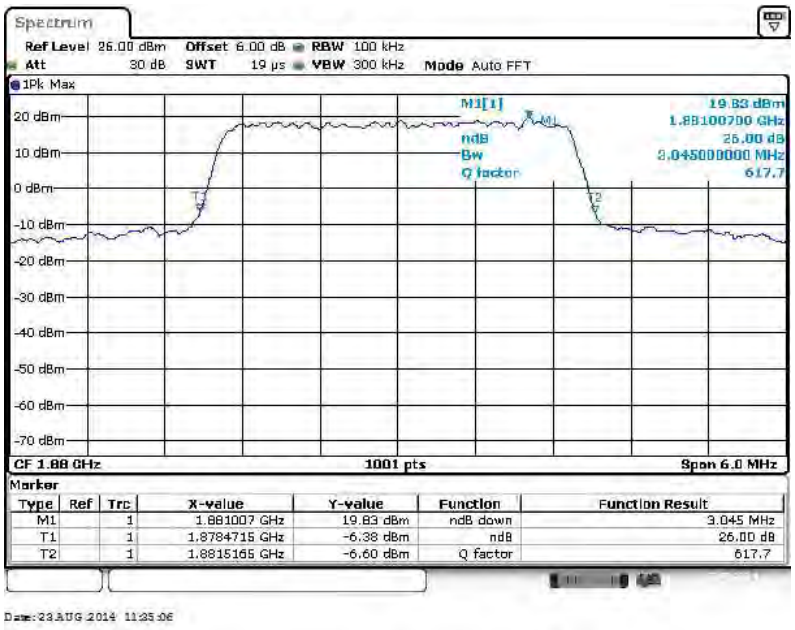
26dB Bandwidth Plot on Channel 18615



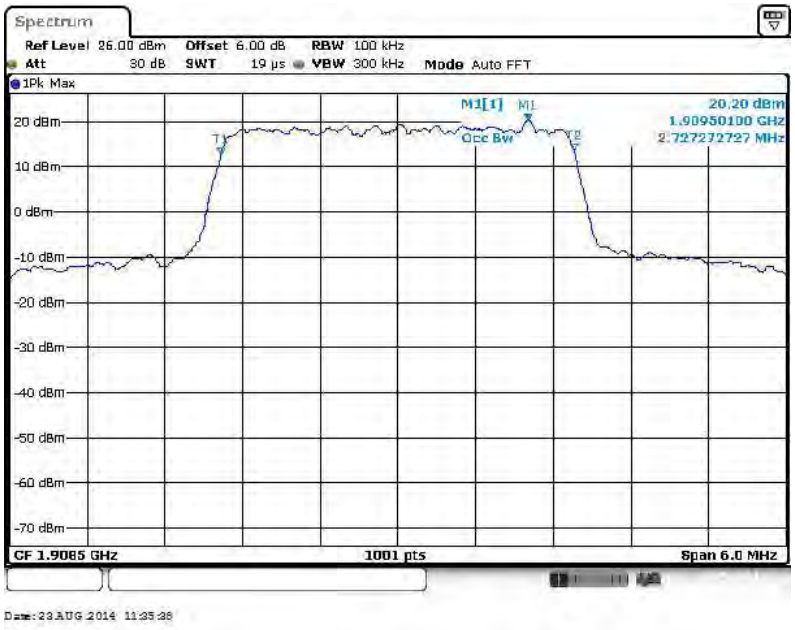
99% Occupied Bandwidth Plot on Channel 18900



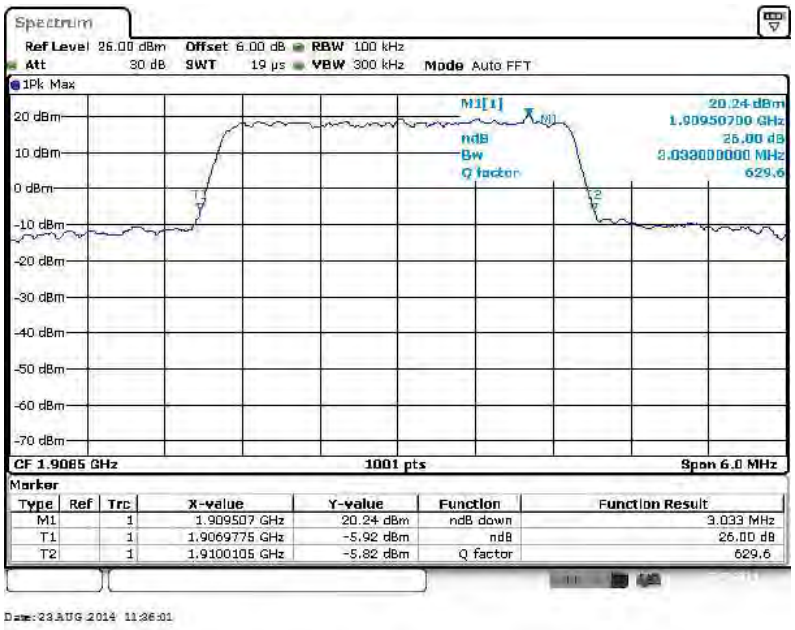
26dB Bandwidth Plot on Channel 18900



99% Occupied Bandwidth Plot on Channel 19185

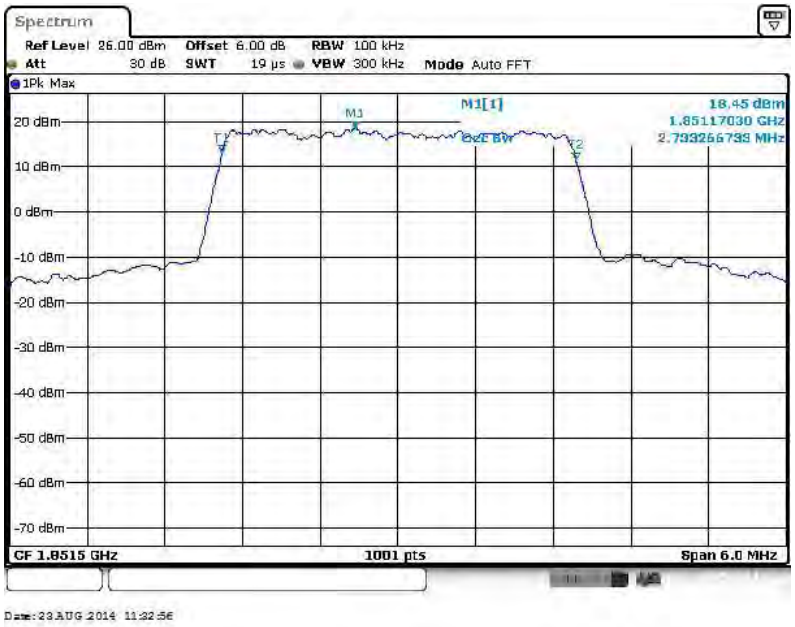


26dB Bandwidth Plot on Channel 19185

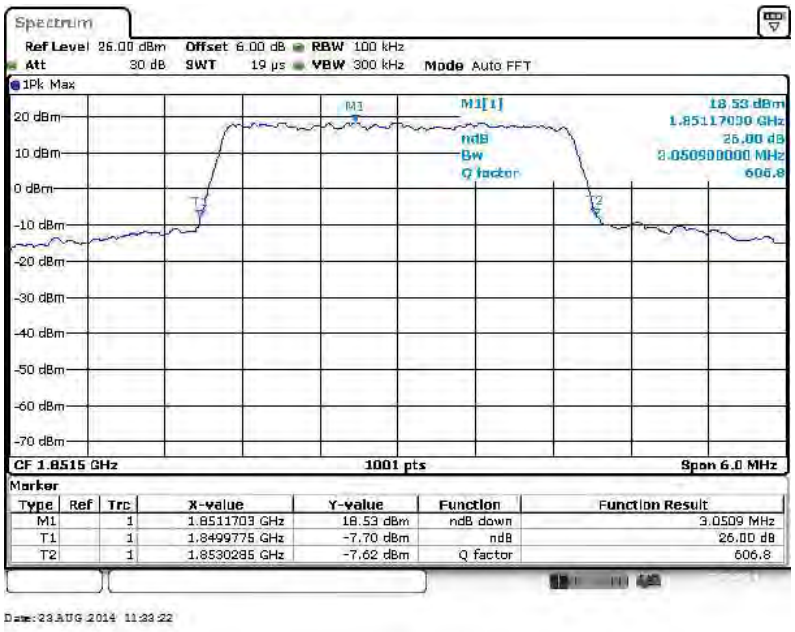


Band :	LTE Band 2	BW / Mod. :	3MHz / 16QAM

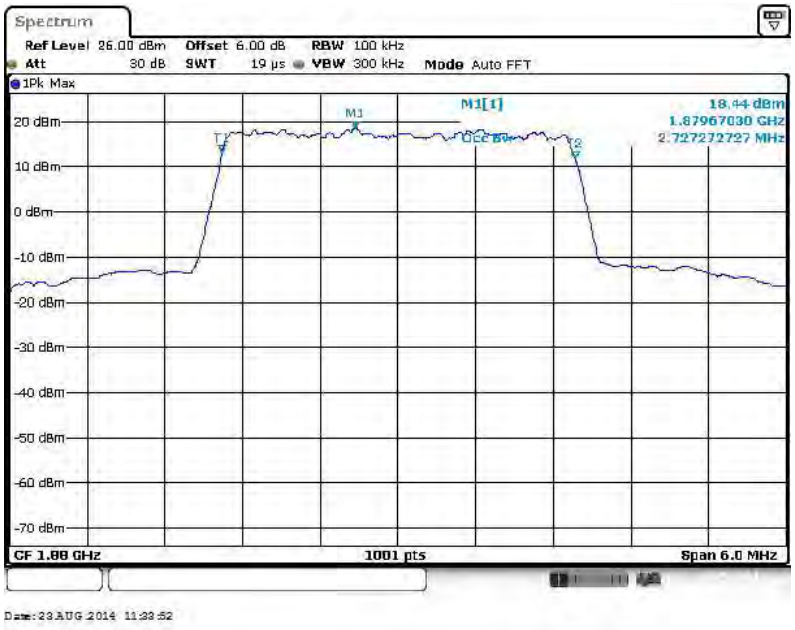
99% Occupied Bandwidth Plot on Channel 18615



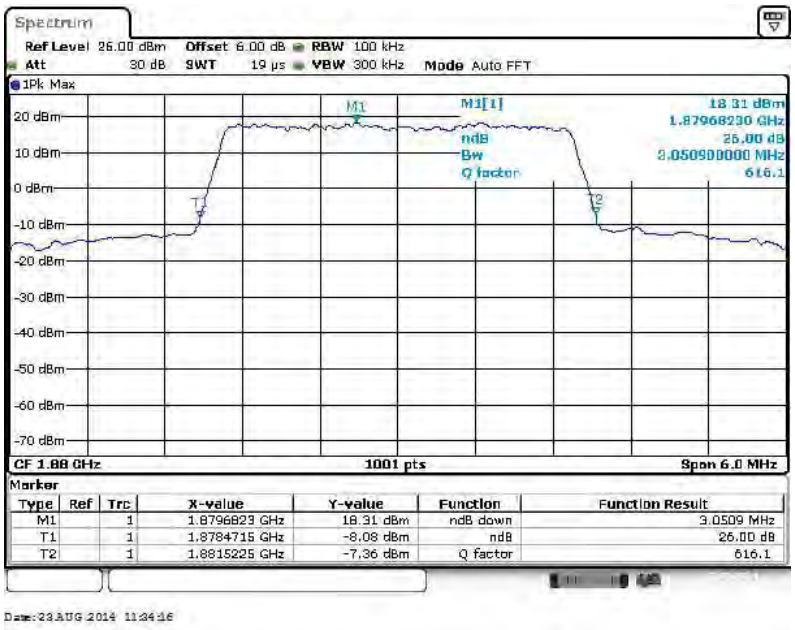
26dB Bandwidth Plot on Channel 18615



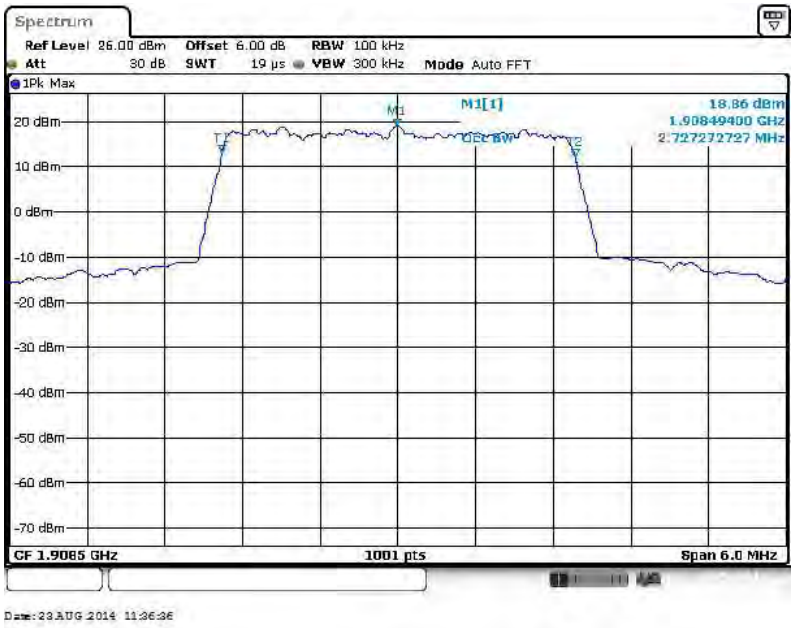
99% Occupied Bandwidth Plot on Channel 18900



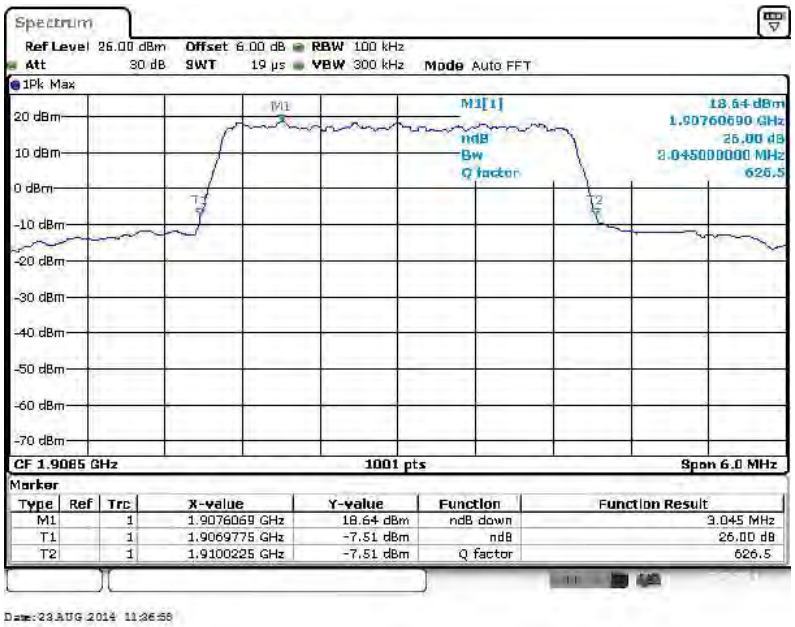
26dB Bandwidth Plot on Channel 18900



99% Occupied Bandwidth Plot on Channel 19185

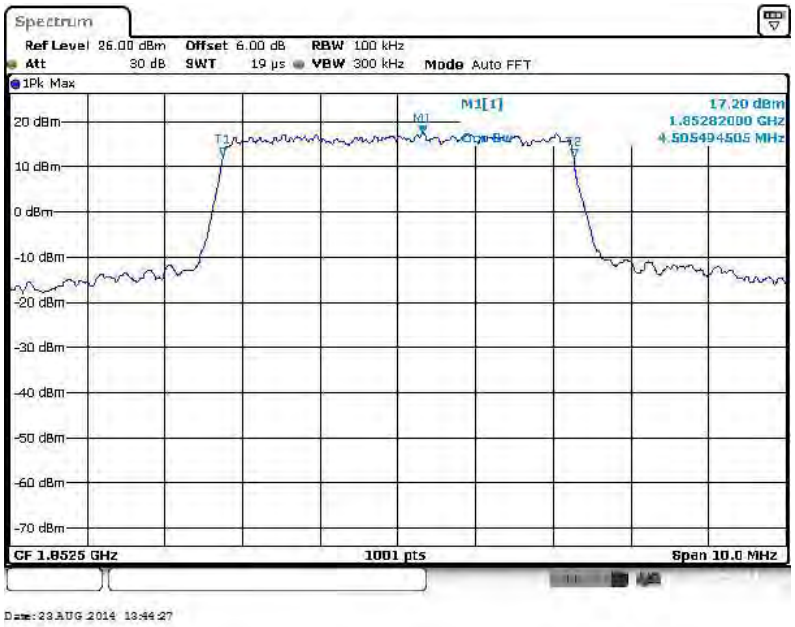


26dB Bandwidth Plot on Channel 19185

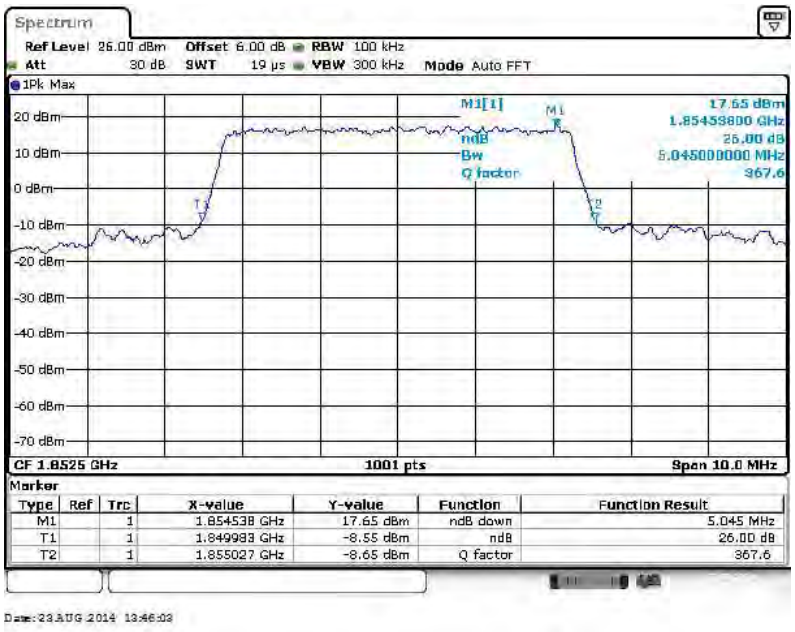


Band :	LTE Band 2	BW / Mod. :	5MHz / QPSK

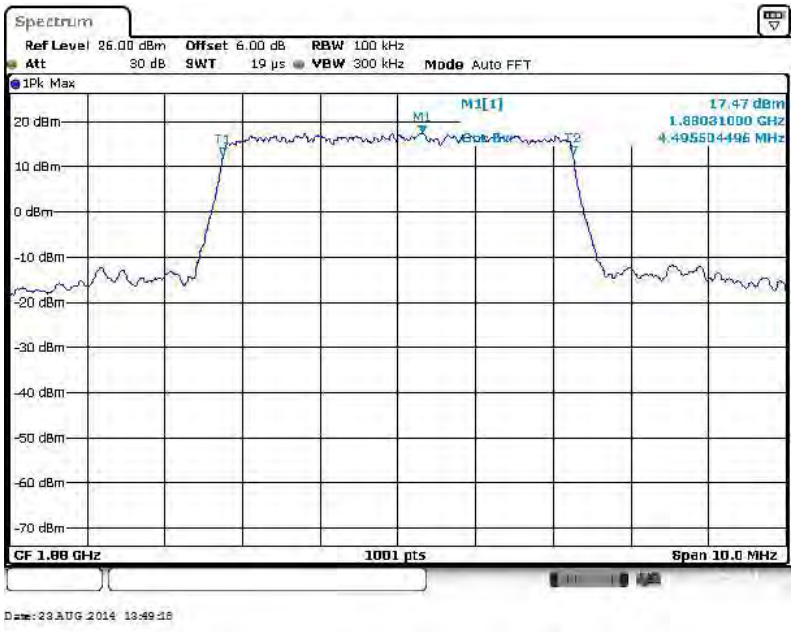
99% Occupied Bandwidth Plot on Channel 18625



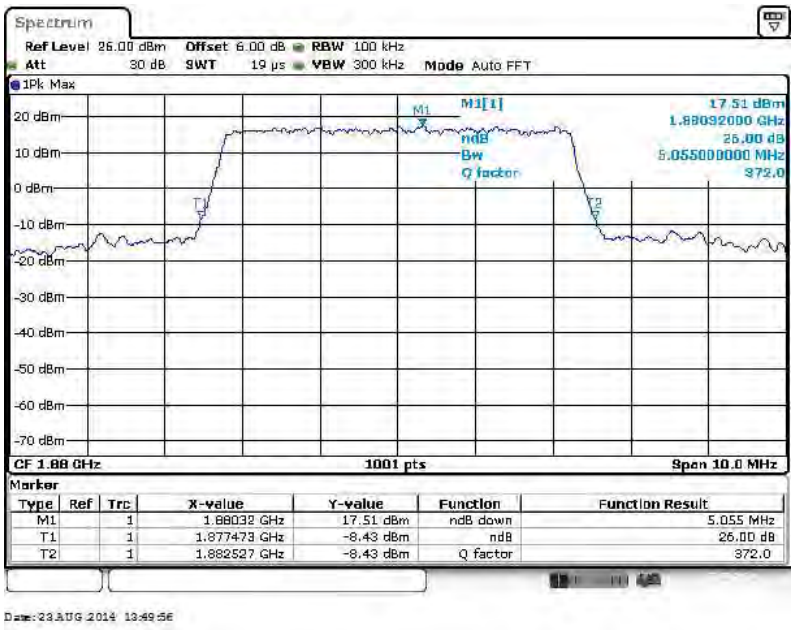
26dB Bandwidth Plot on Channel 18625



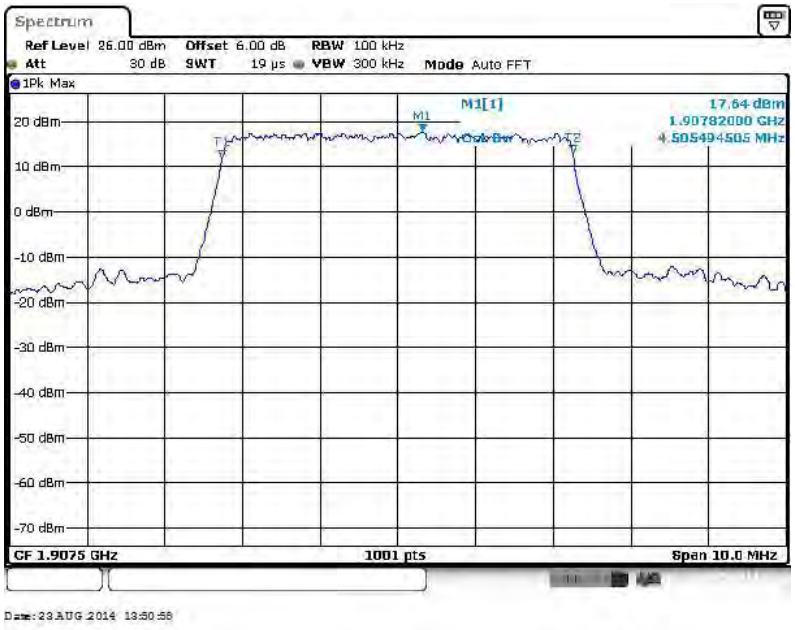
99% Occupied Bandwidth Plot on Channel 18900



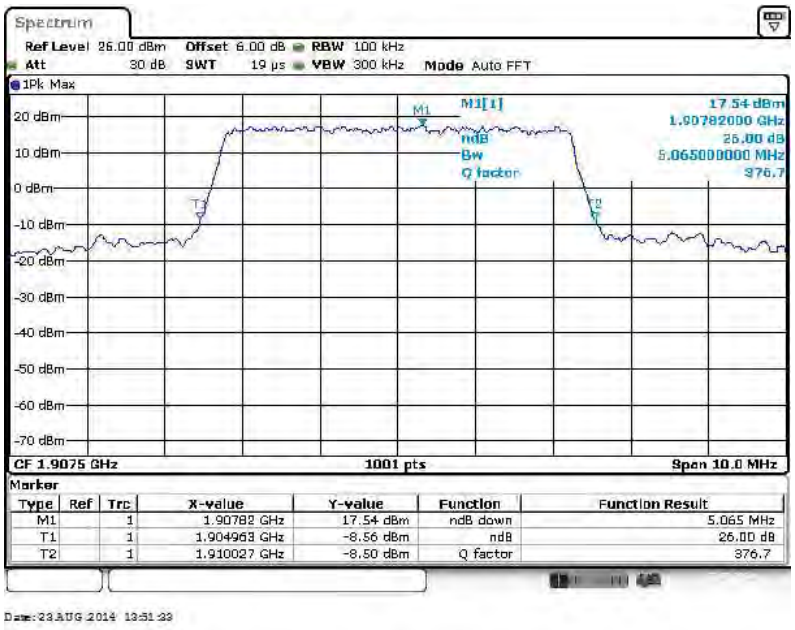
26dB Bandwidth Plot on Channel 18900



99% Occupied Bandwidth Plot on Channel 19175

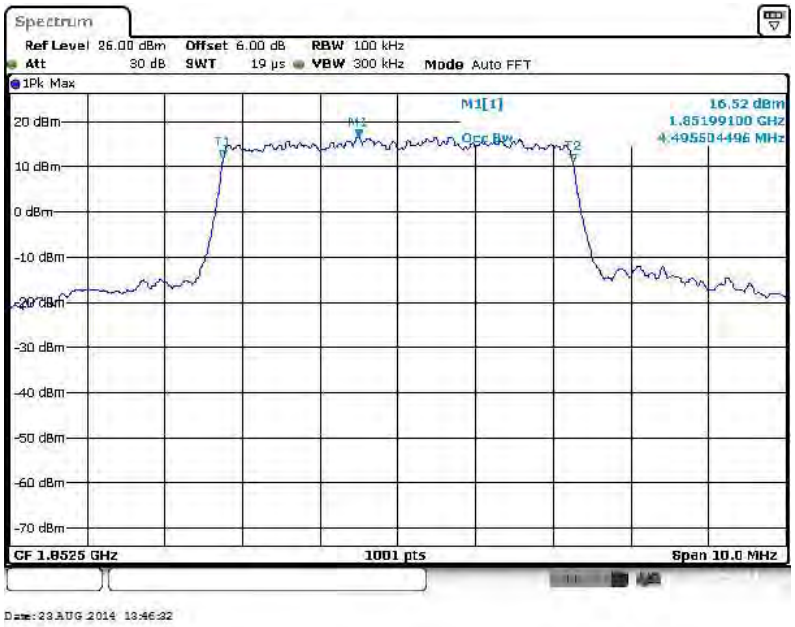


26dB Bandwidth Plot on Channel 19175

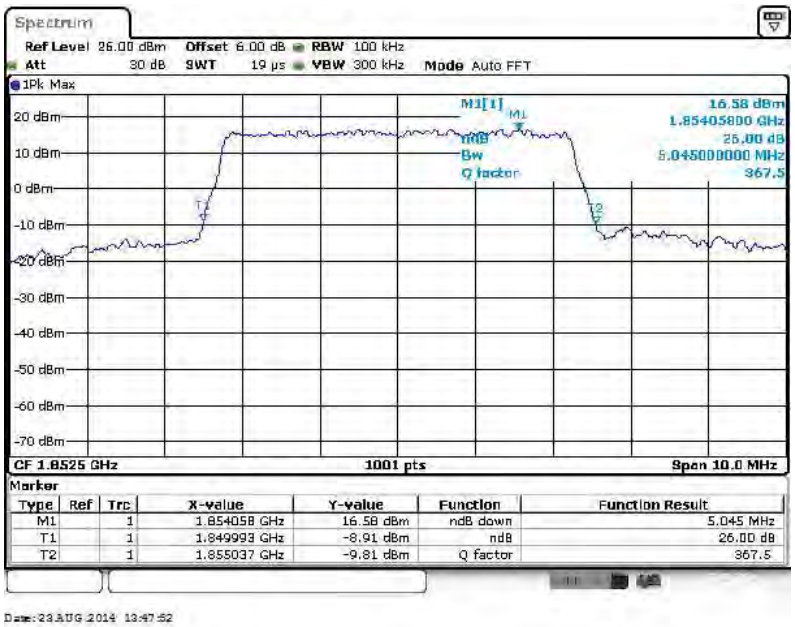


Band :	LTE Band 2	BW / Mod. :	5MHz / 16QAM

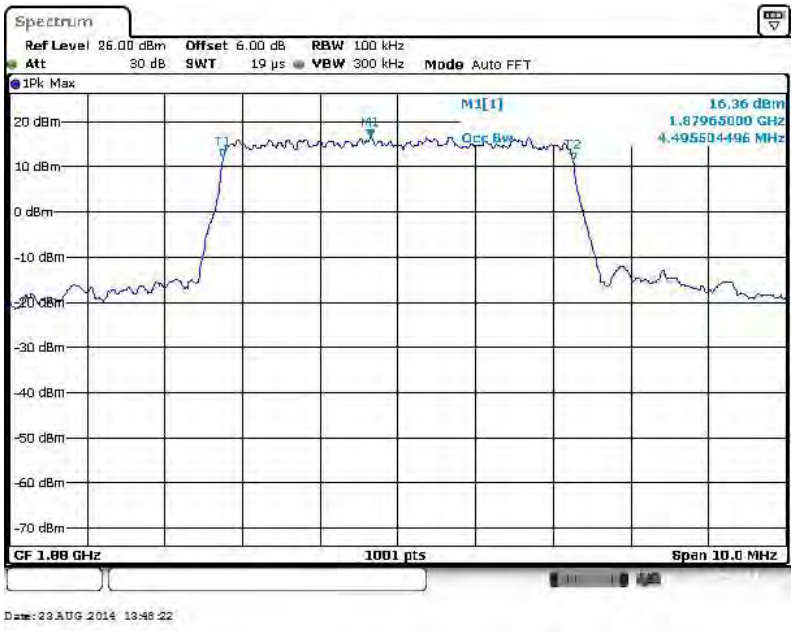
99% Occupied Bandwidth Plot on Channel 18625



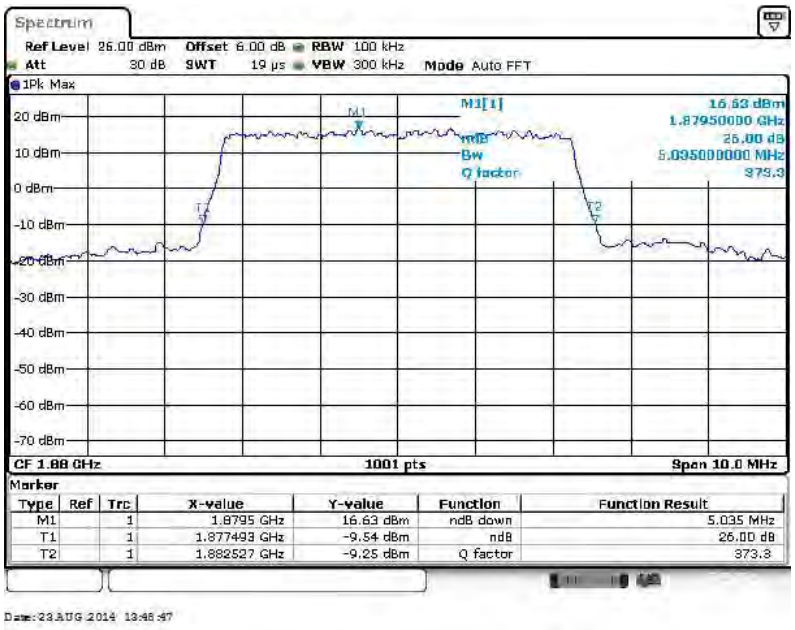
26dB Bandwidth Plot on Channel 18625



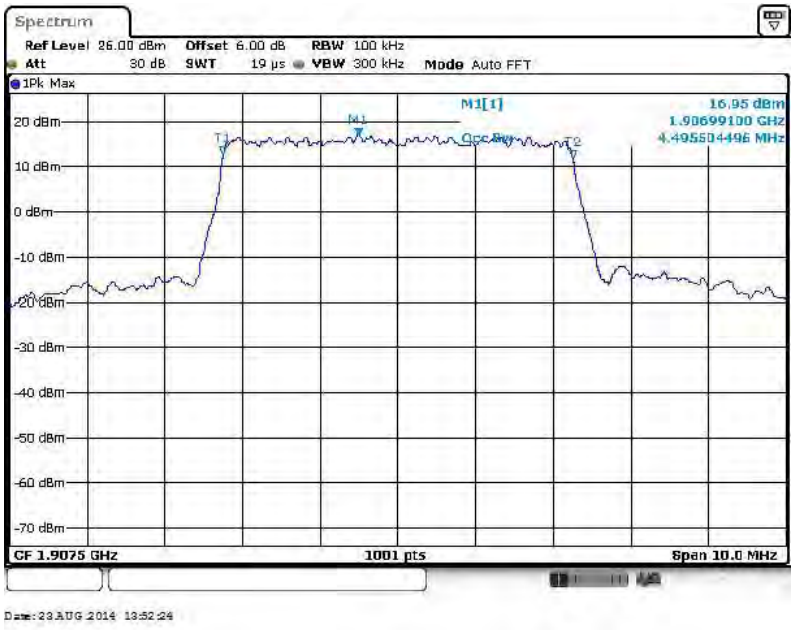
99% Occupied Bandwidth Plot on Channel 18900



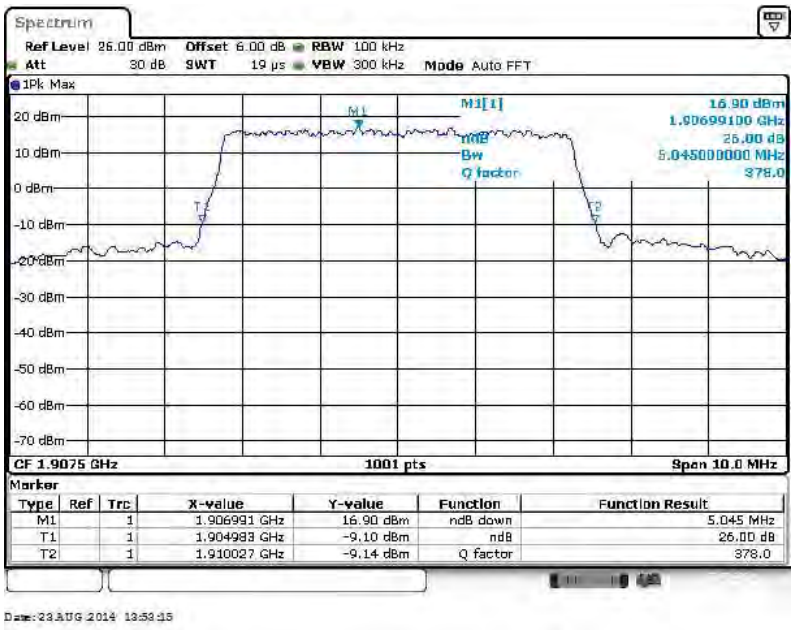
26dB Bandwidth Plot on Channel 18900



99% Occupied Bandwidth Plot on Channel 19175

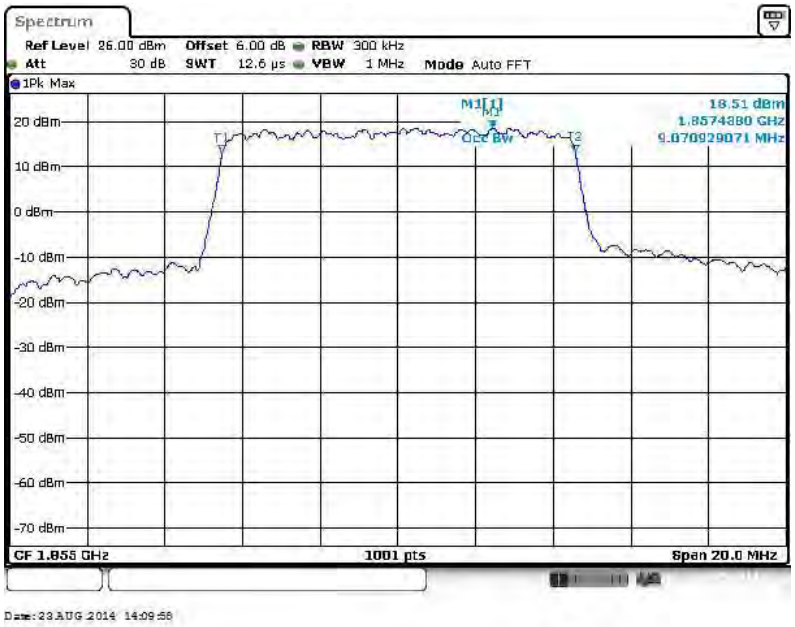


26dB Bandwidth Plot on Channel 19175

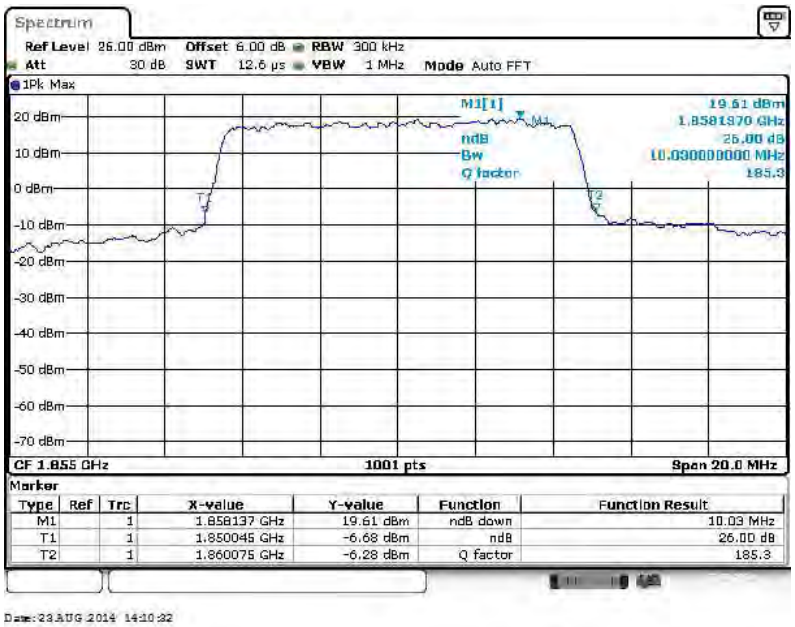


Band :	LTE Band 2	BW / Mod. :	10MHz / QPSK

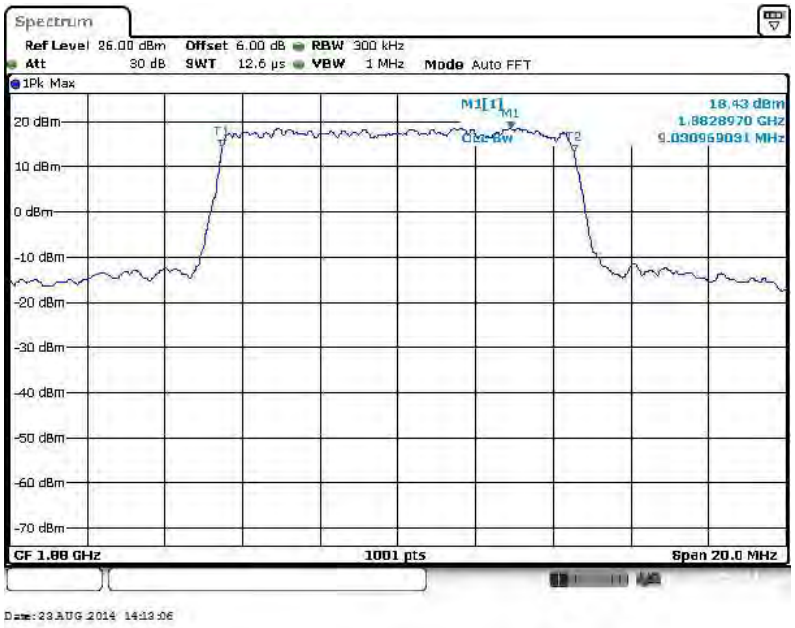
99% Occupied Bandwidth Plot on Channel 18650



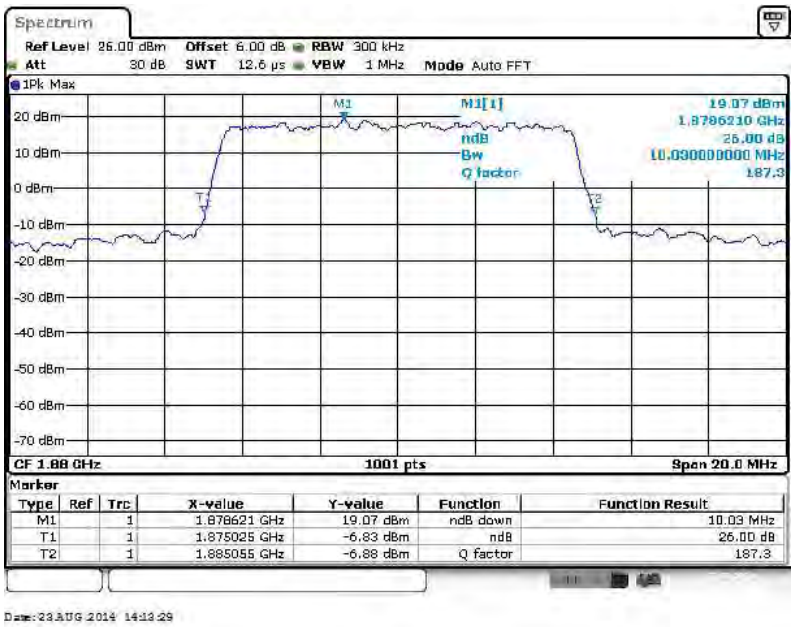
26dB Bandwidth Plot on Channel 18650



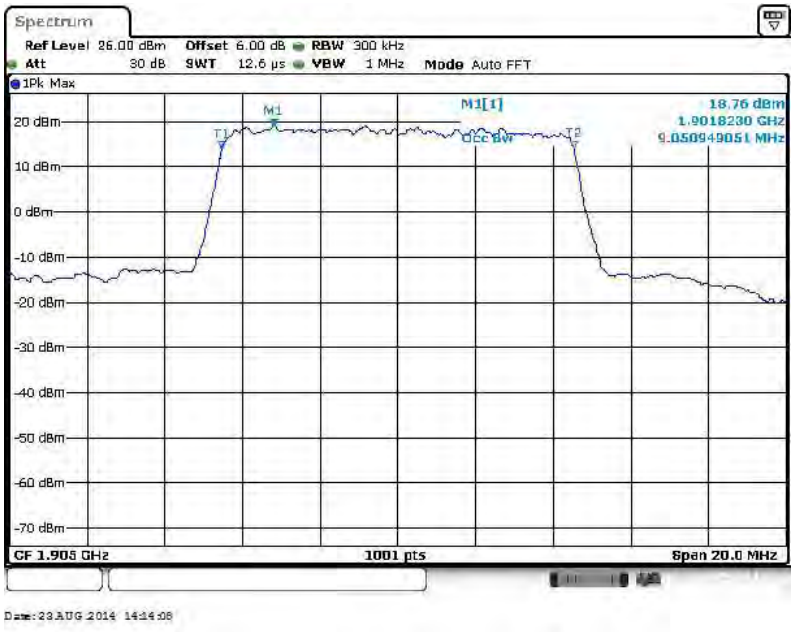
99% Occupied Bandwidth Plot on Channel 18900



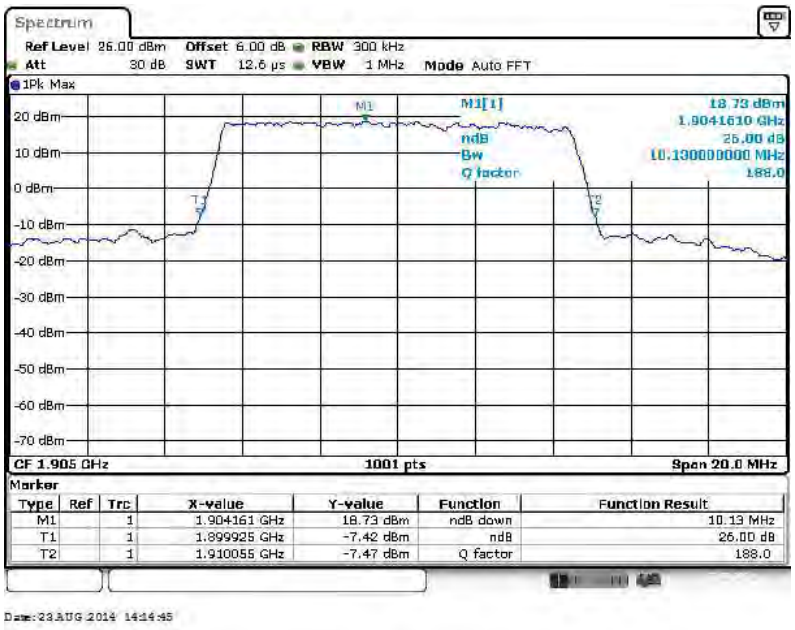
26dB Bandwidth Plot on Channel 18900



99% Occupied Bandwidth Plot on Channel 19150

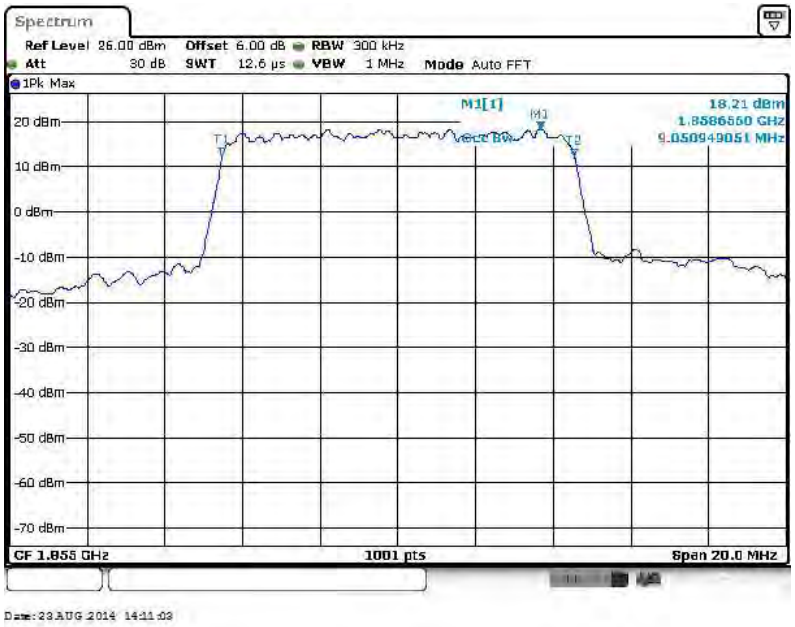


26dB Bandwidth Plot on Channel 19150

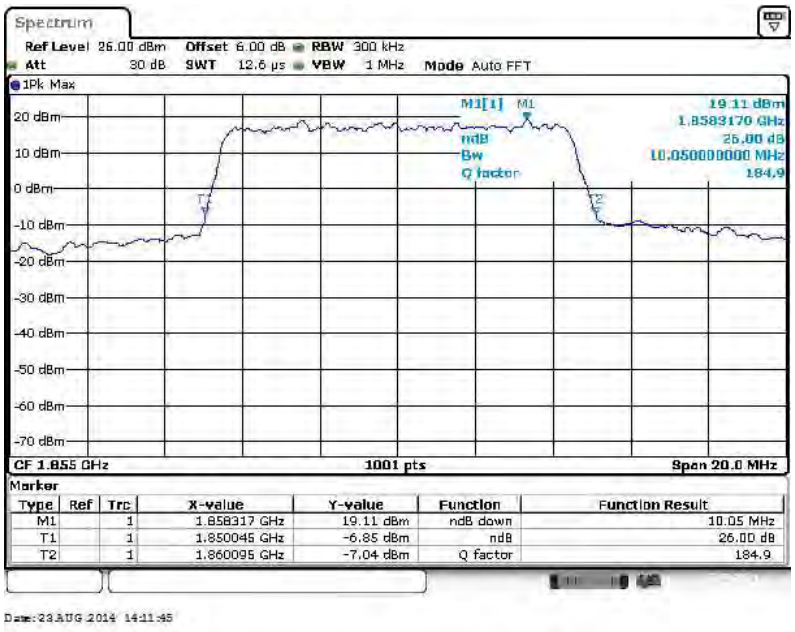


Band :	LTE Band 2	BW / Mod. :	10MHz / 16QAM

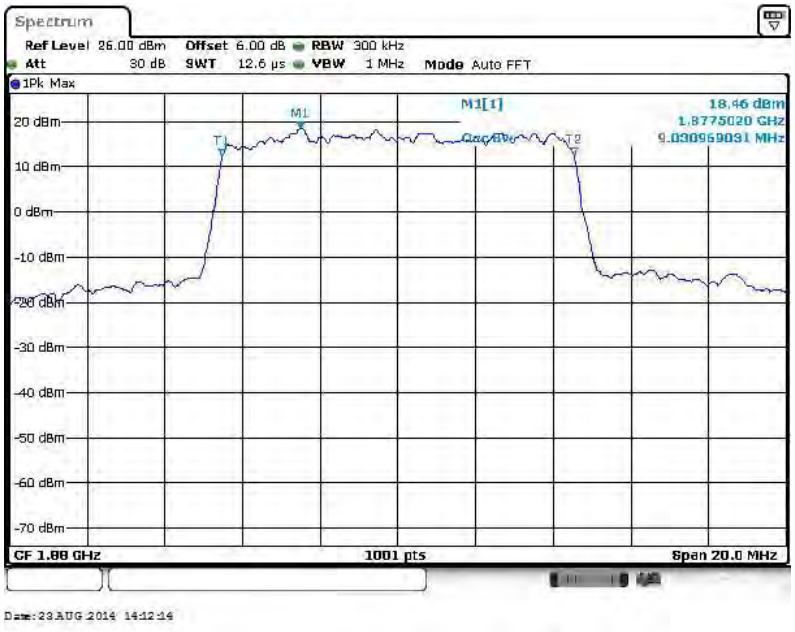
99% Occupied Bandwidth Plot on Channel 18650



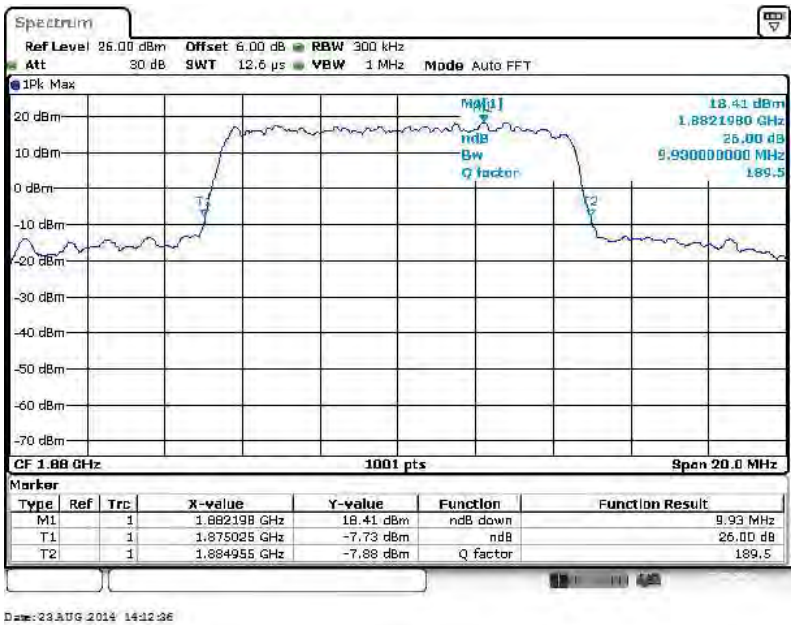
26dB Bandwidth Plot on Channel 18650



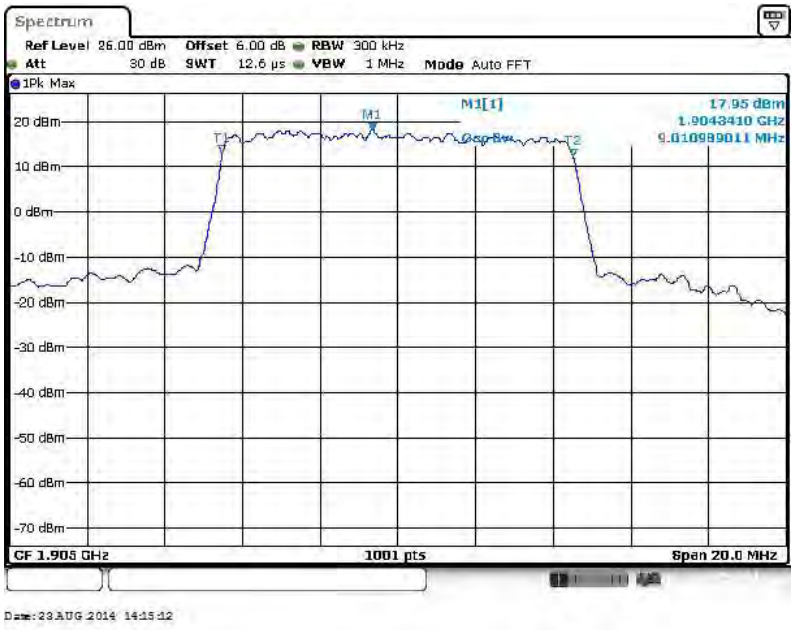
99% Occupied Bandwidth Plot on Channel 18900



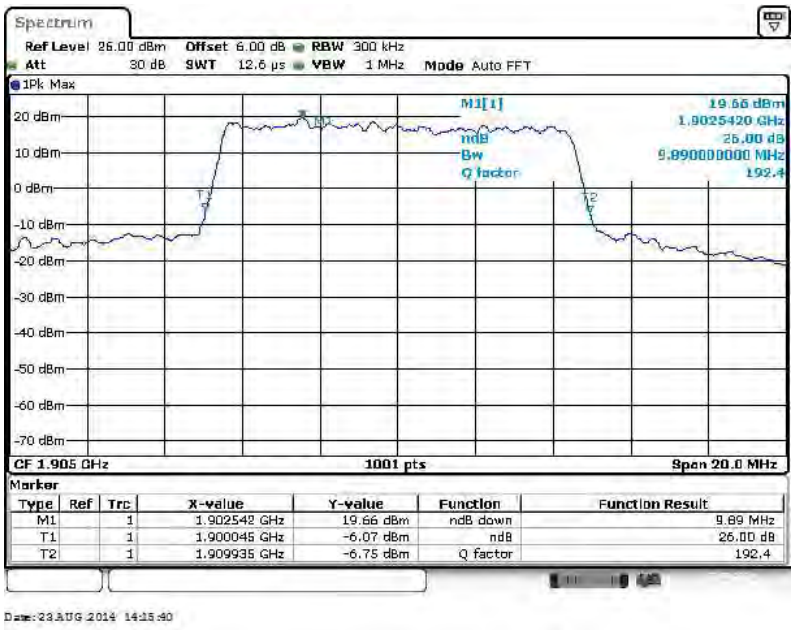
26dB Bandwidth Plot on Channel 18900



99% Occupied Bandwidth Plot on Channel 19150

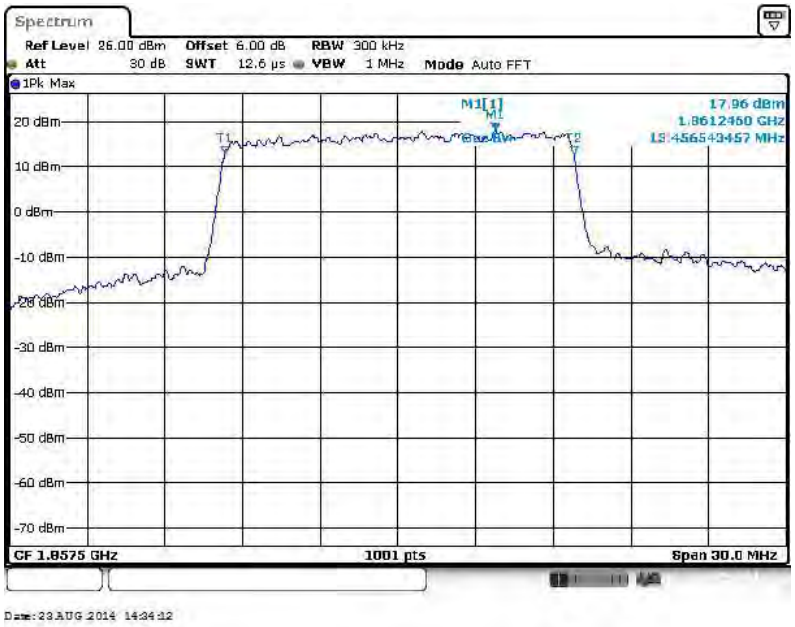


26dB Bandwidth Plot on Channel 19150

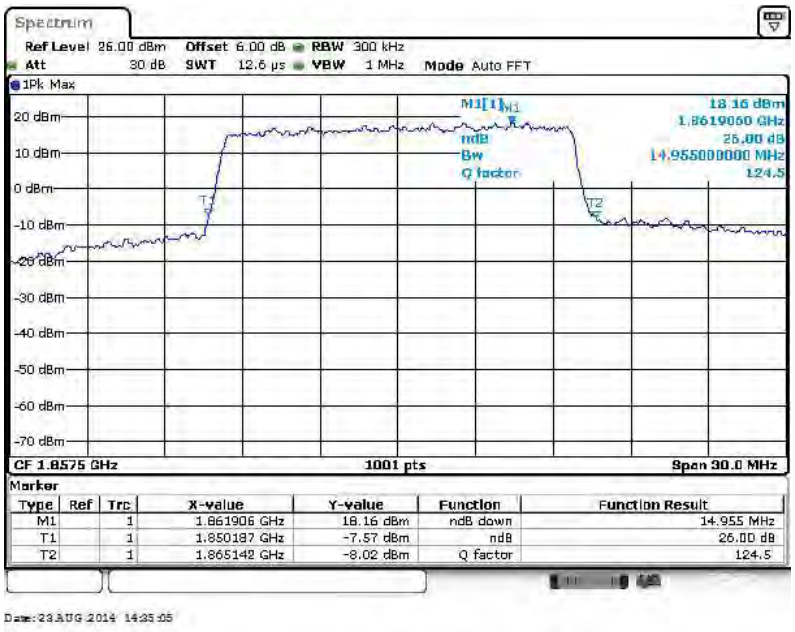


Band :	LTE Band 2	BW / Mod. :	15MHz / QPSK

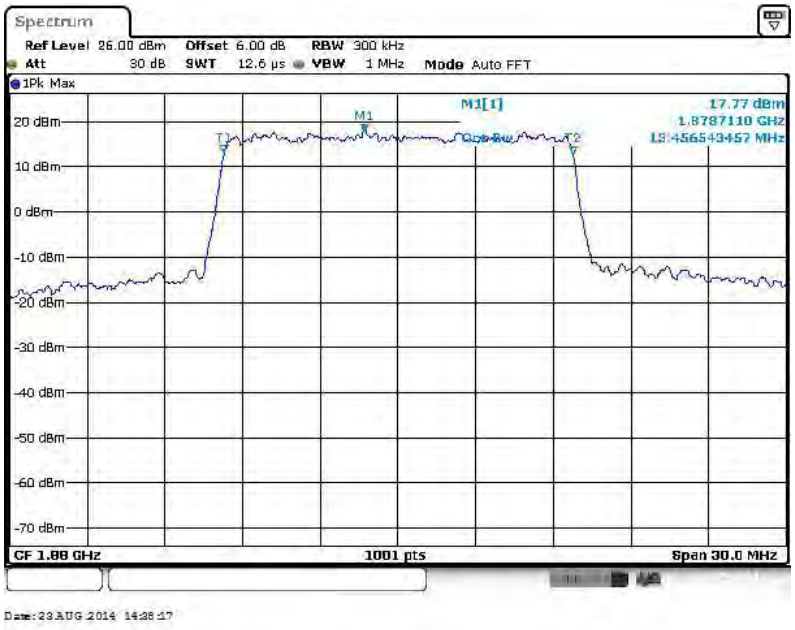
99% Occupied Bandwidth Plot on Channel 18675



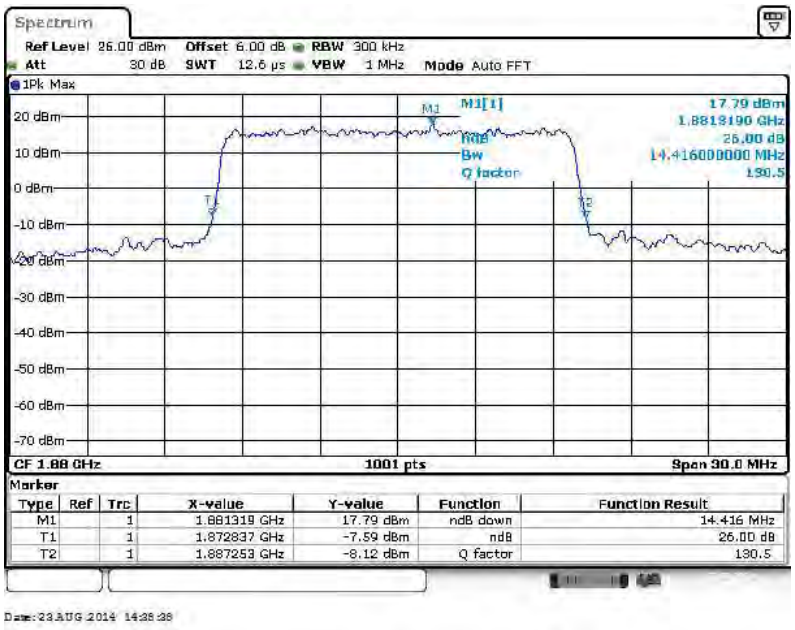
26dB Bandwidth Plot on Channel 18675



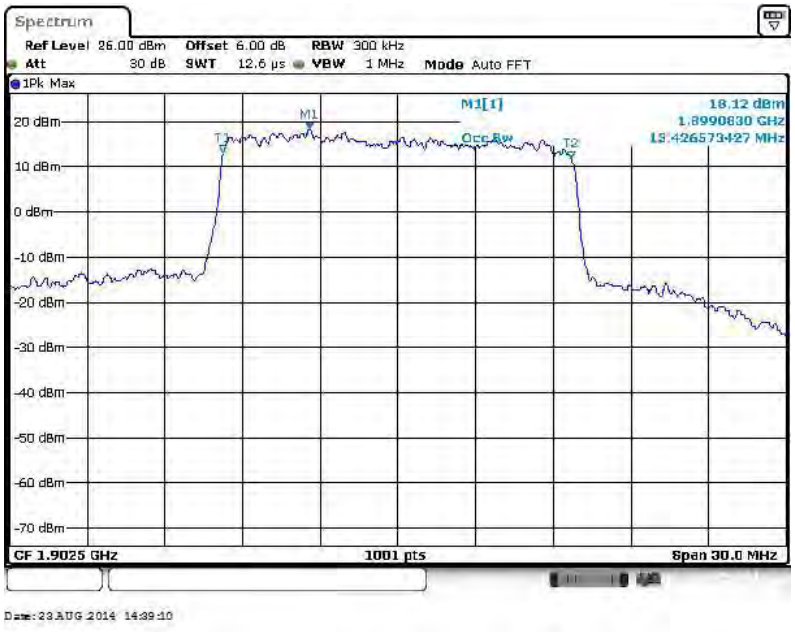
99% Occupied Bandwidth Plot on Channel 18900



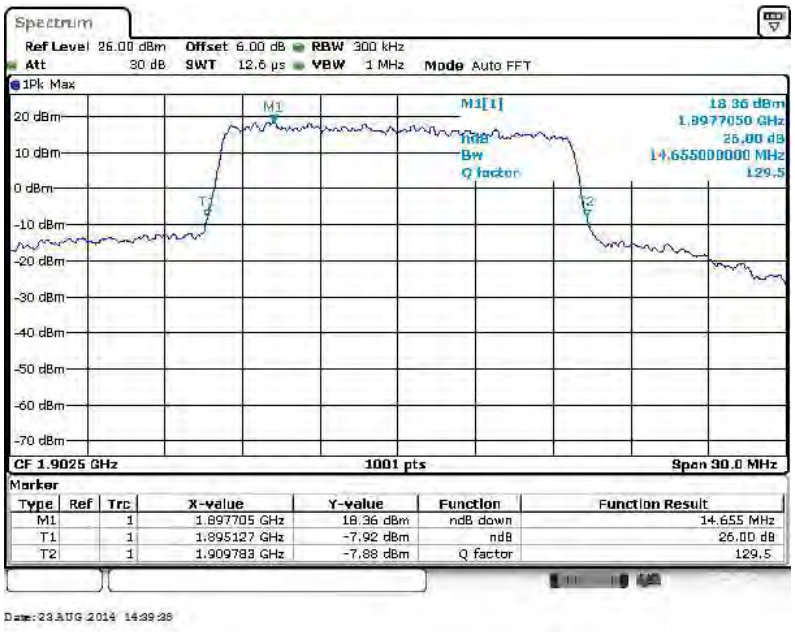
26dB Bandwidth Plot on Channel 18900



99% Occupied Bandwidth Plot on Channel 19125

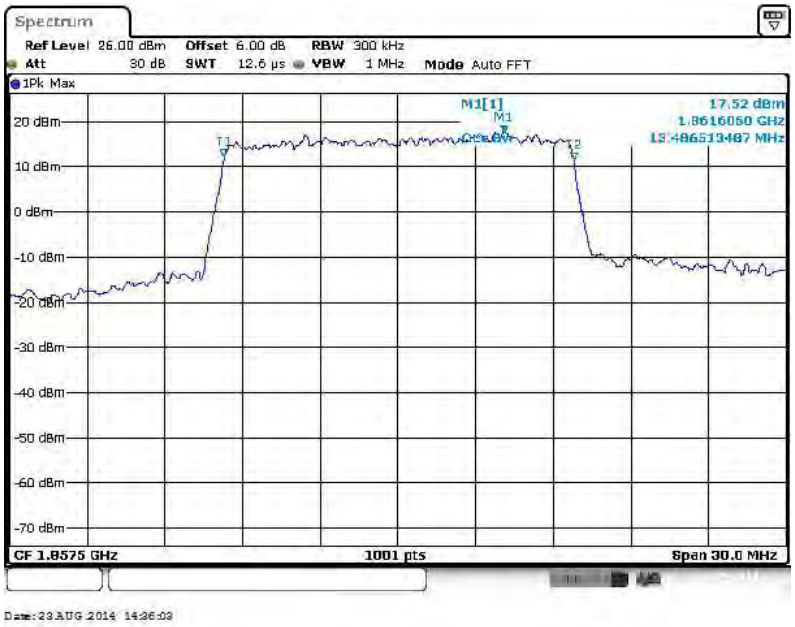


26dB Bandwidth Plot on Channel 19125

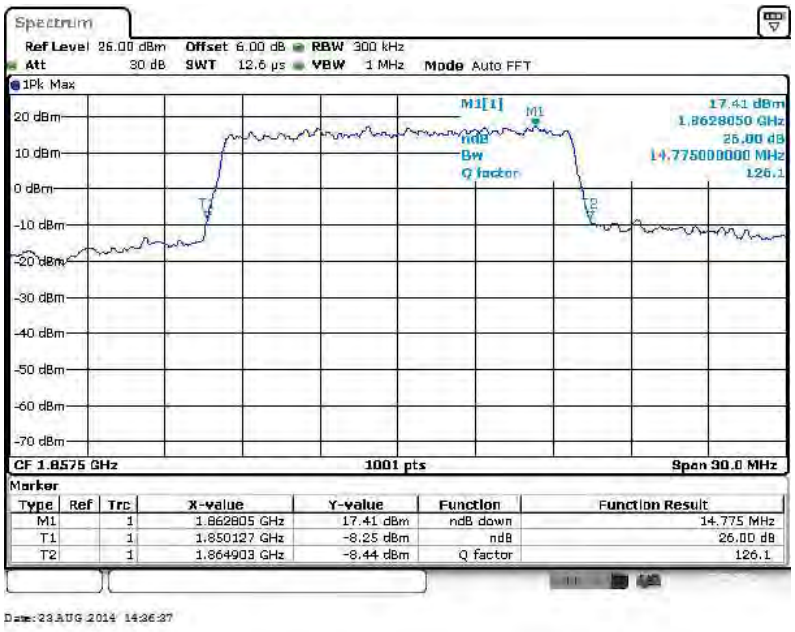


Band :	LTE Band 2	BW / Mod. :	15MHz / 16QAM

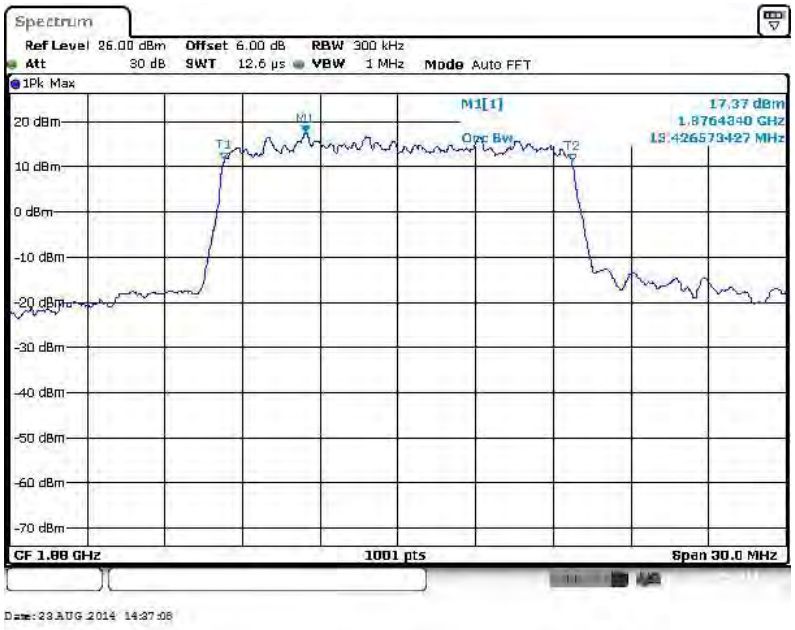
99% Occupied Bandwidth Plot on Channel 18675



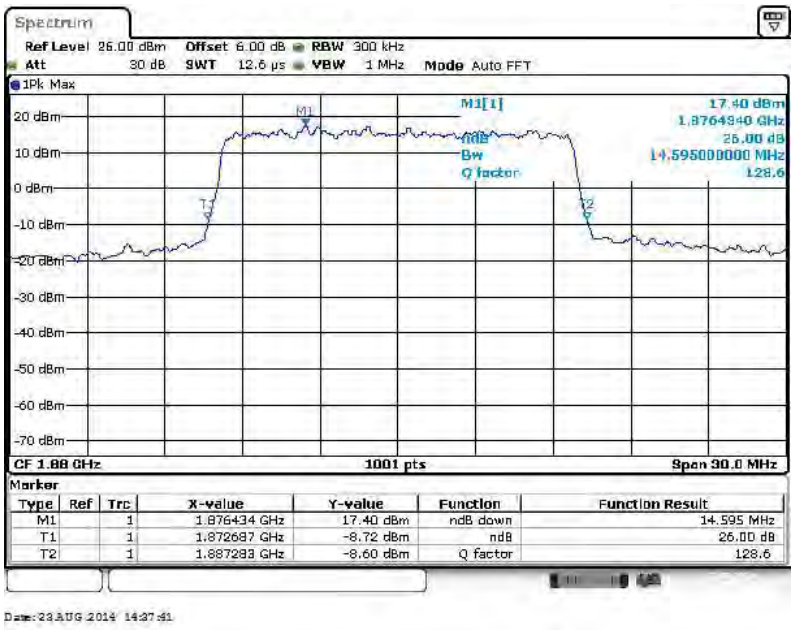
26dB Bandwidth Plot on Channel 18675



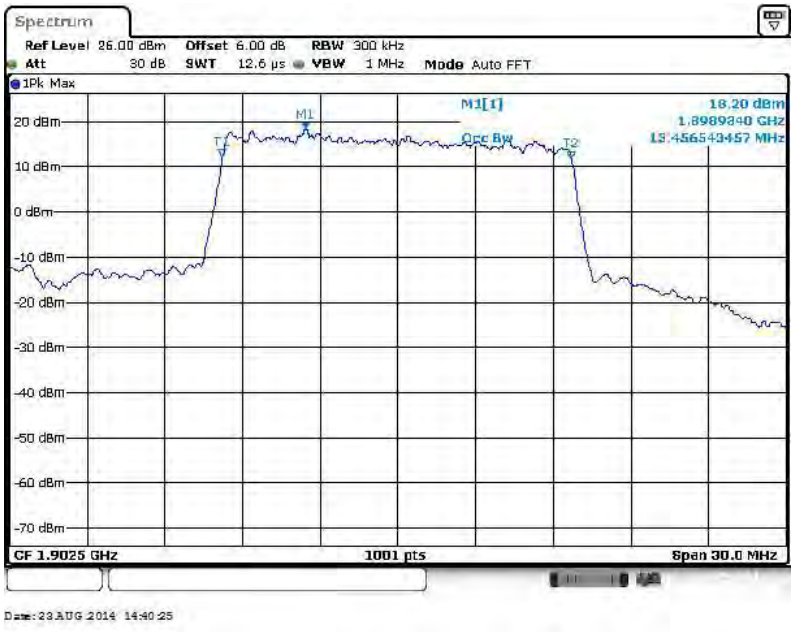
99% Occupied Bandwidth Plot on Channel 18900



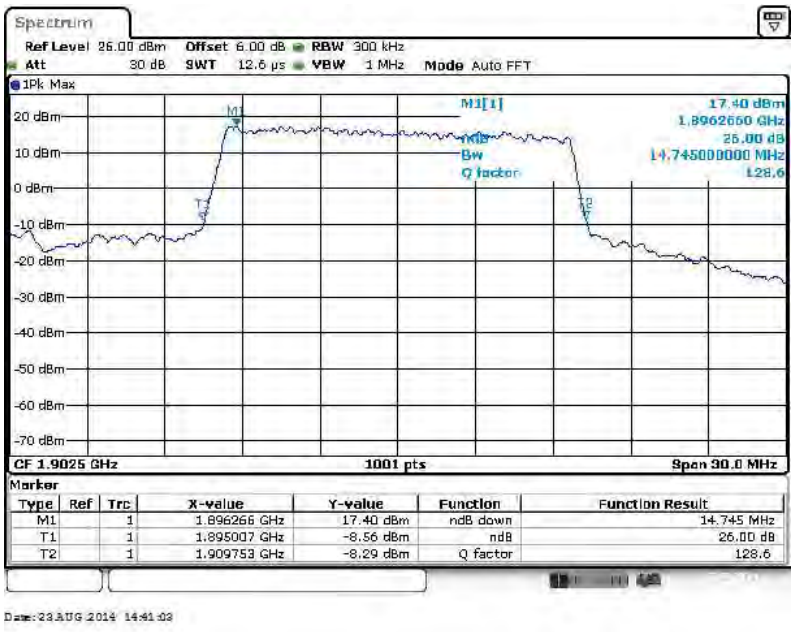
26dB Bandwidth Plot on Channel 18900



99% Occupied Bandwidth Plot on Channel 19125

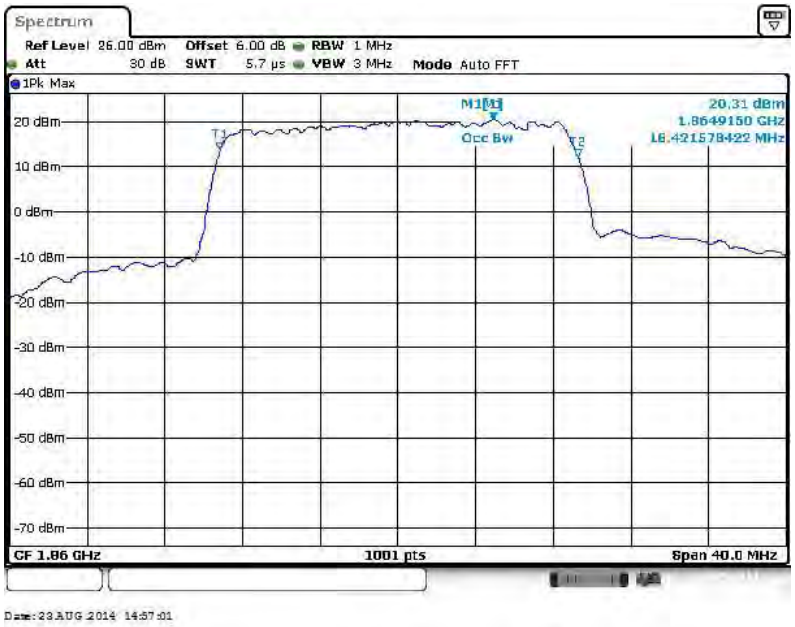


26dB Bandwidth Plot on Channel 19125

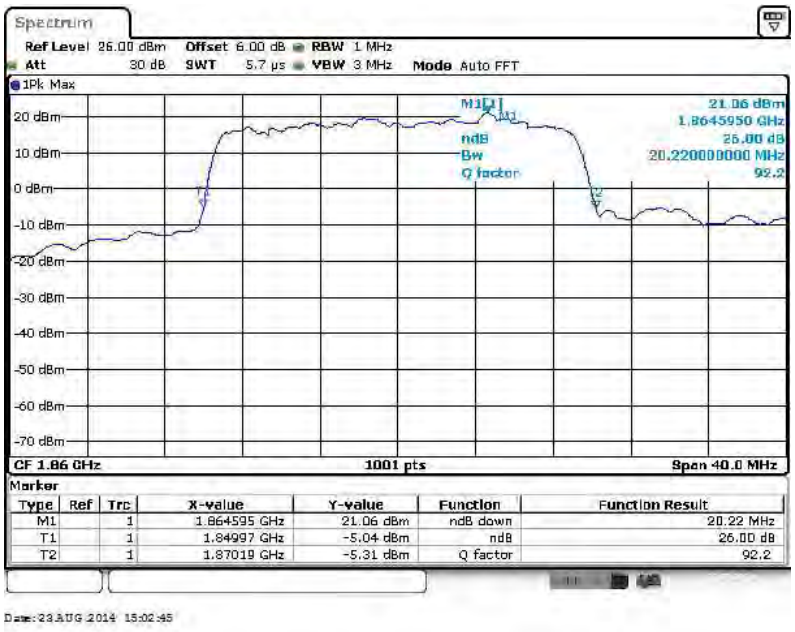


Band :	LTE Band 2	BW / Mod. :	20MHz / QPSK

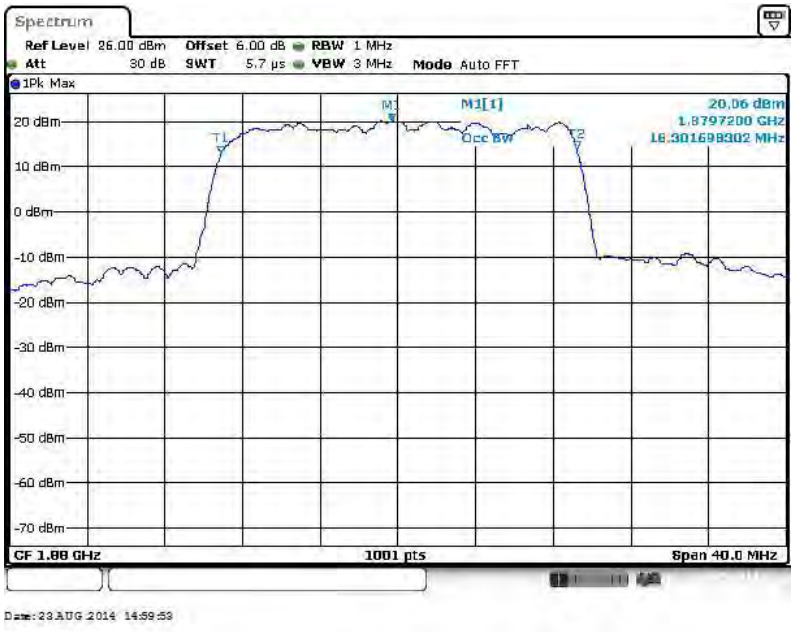
99% Occupied Bandwidth Plot on Channel 18700



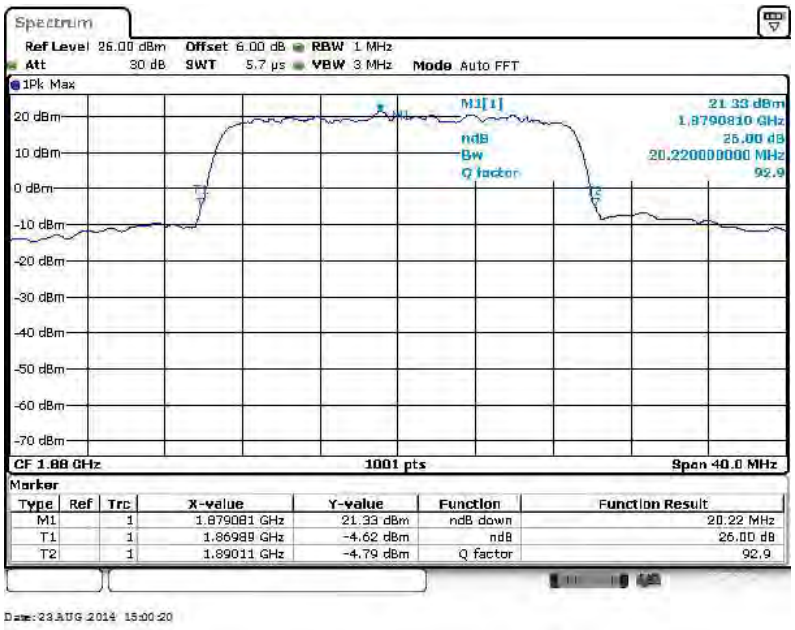
26dB Bandwidth Plot on Channel 18700



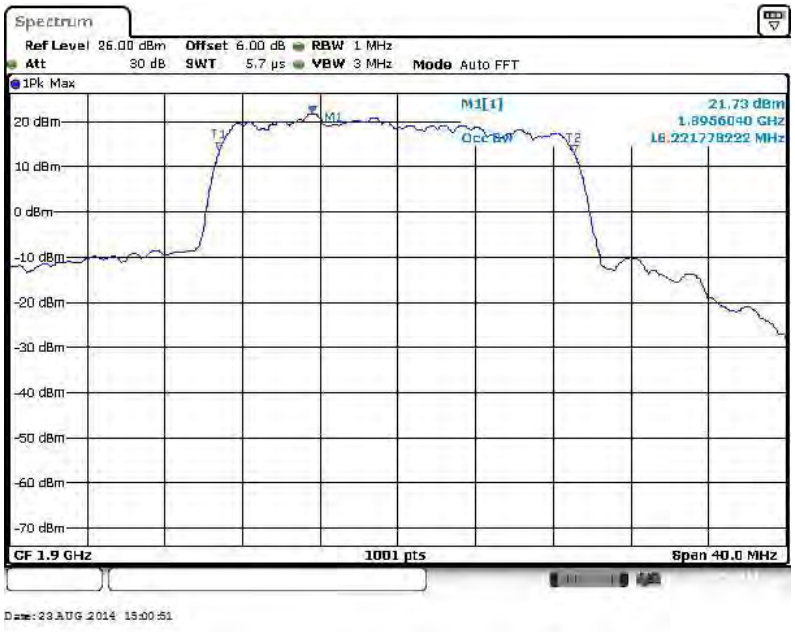
99% Occupied Bandwidth Plot on Channel 18900



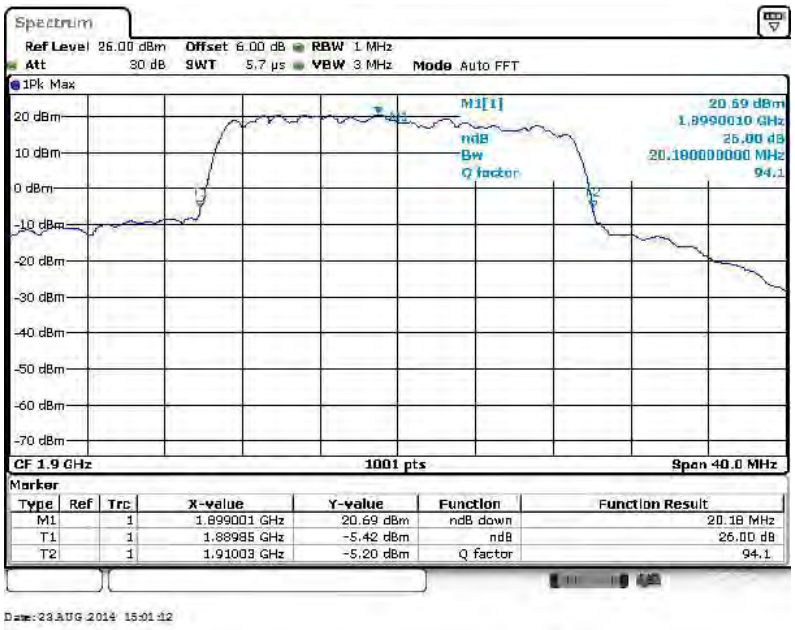
26dB Bandwidth Plot on Channel 18900



99% Occupied Bandwidth Plot on Channel 19100

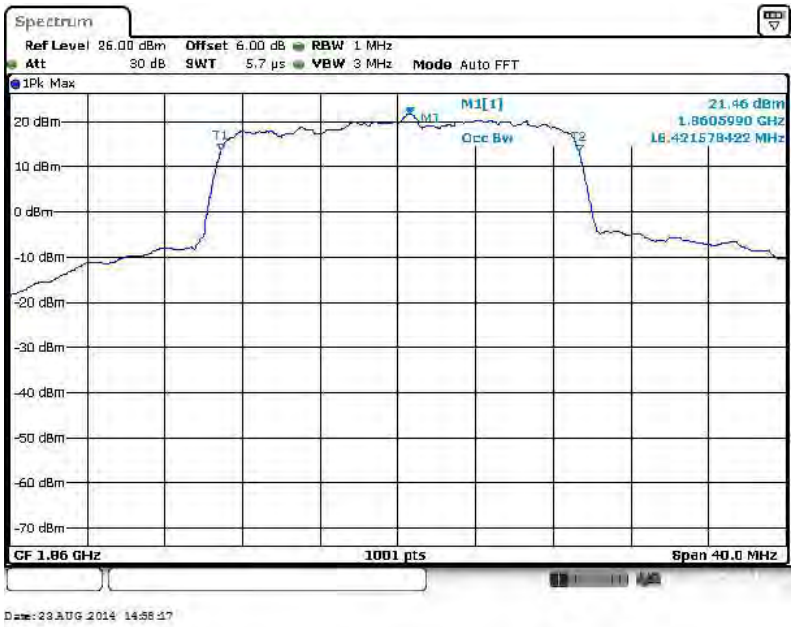


26dB Bandwidth Plot on Channel 19100

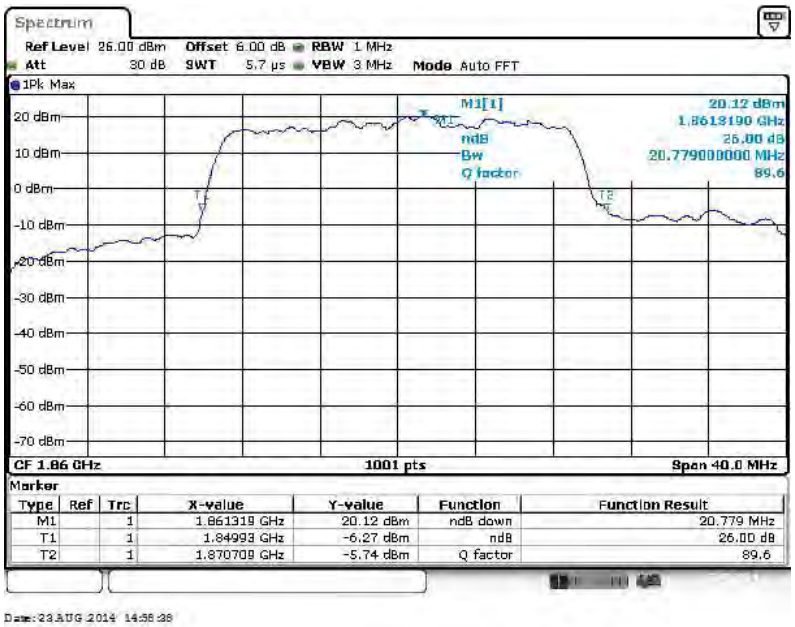


Band :	LTE Band 2	BW / Mod. :	20MHz / 16QAM

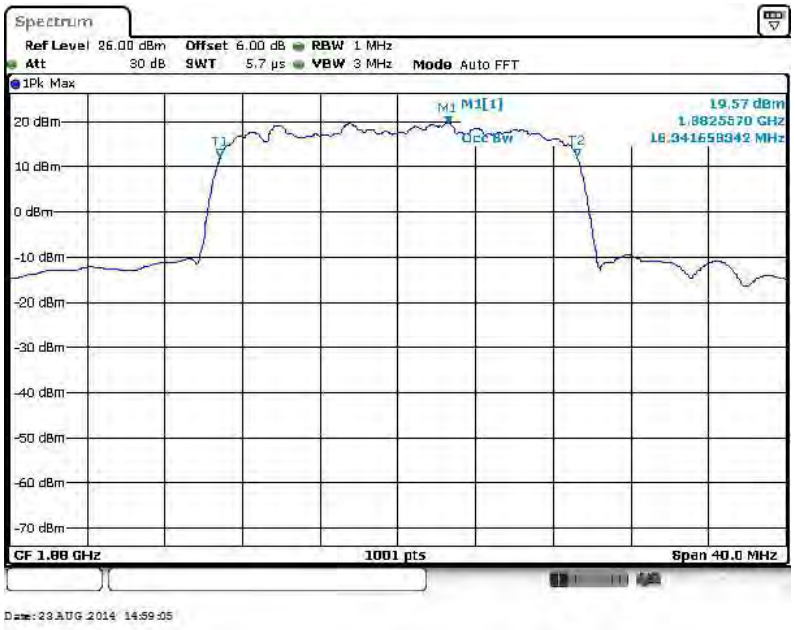
99% Occupied Bandwidth Plot on Channel 18700



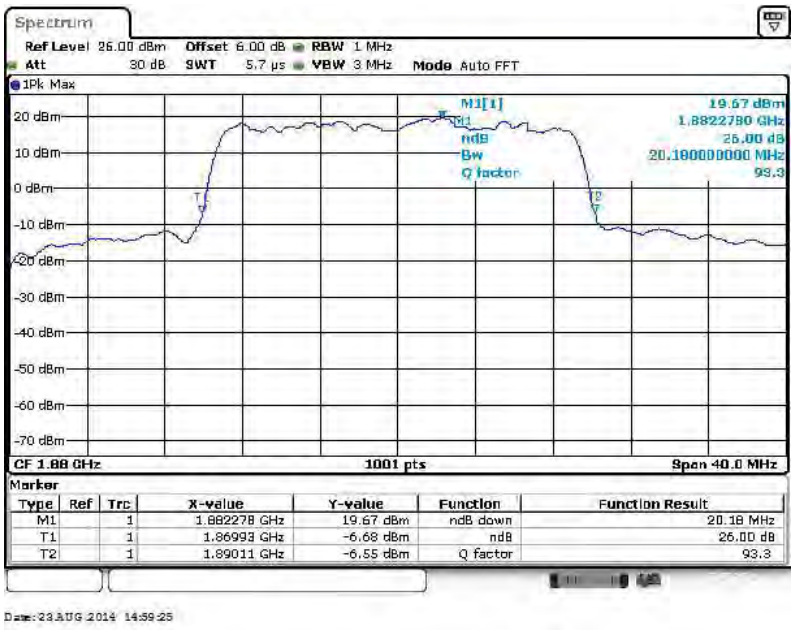
26dB Bandwidth Plot on Channel 18700



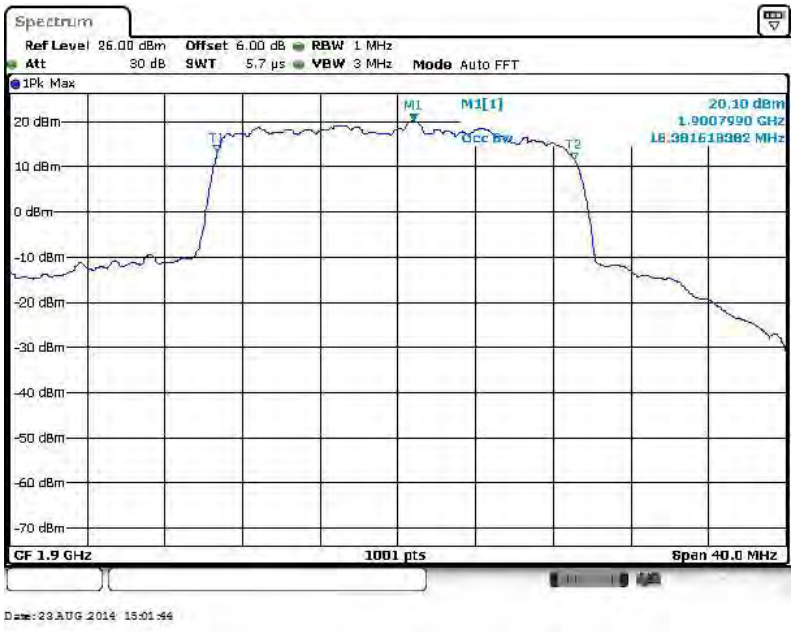
99% Occupied Bandwidth Plot on Channel 18900



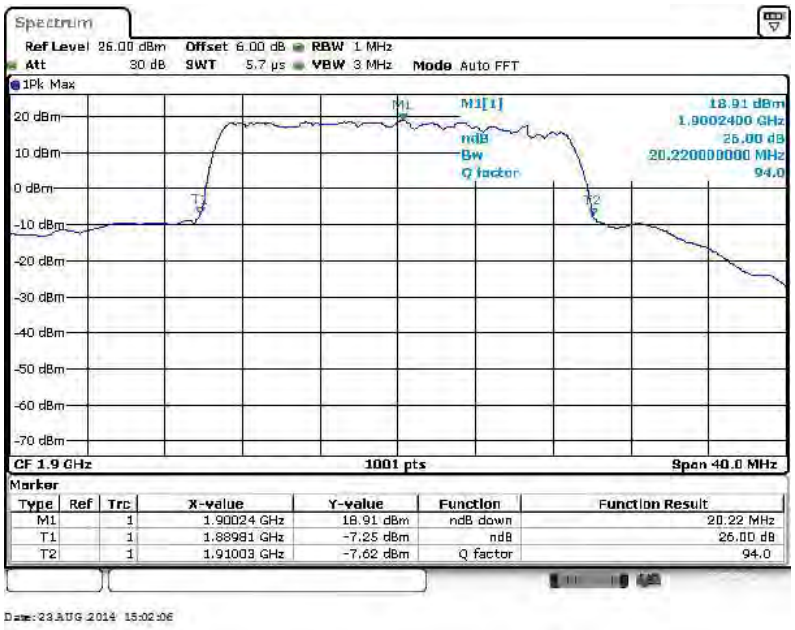
26dB Bandwidth Plot on Channel 18900



99% Occupied Bandwidth Plot on Channel 19100

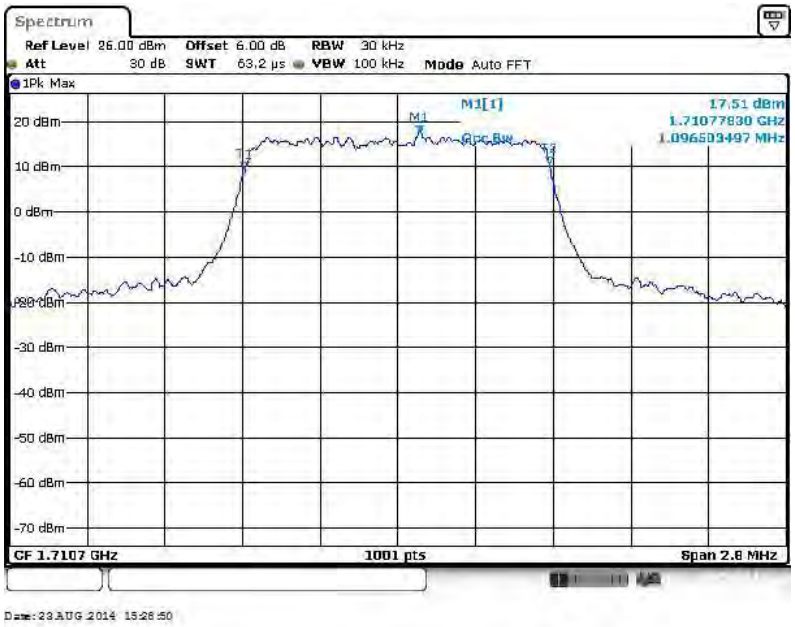


26dB Bandwidth Plot on Channel 19100

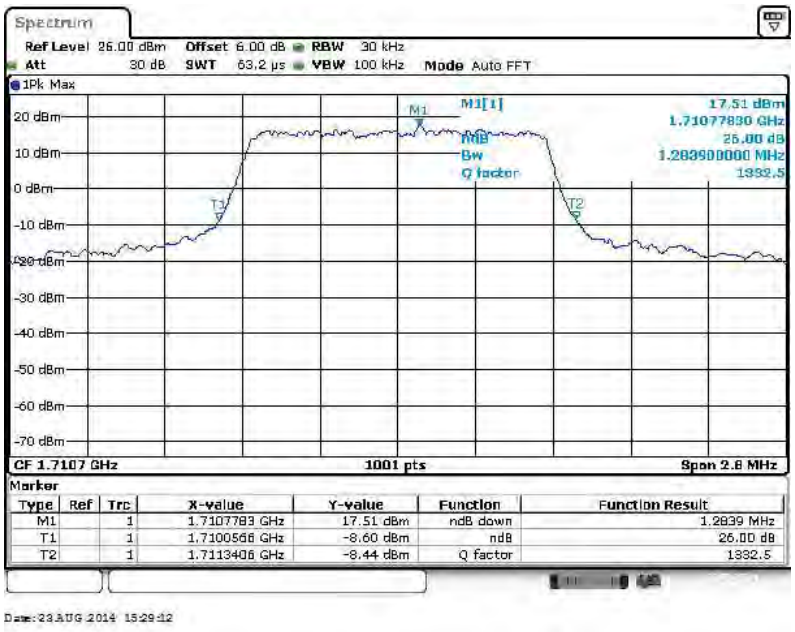


Band :	LTE Band 4	BW / Mod. :	1.4MHz / QPSK

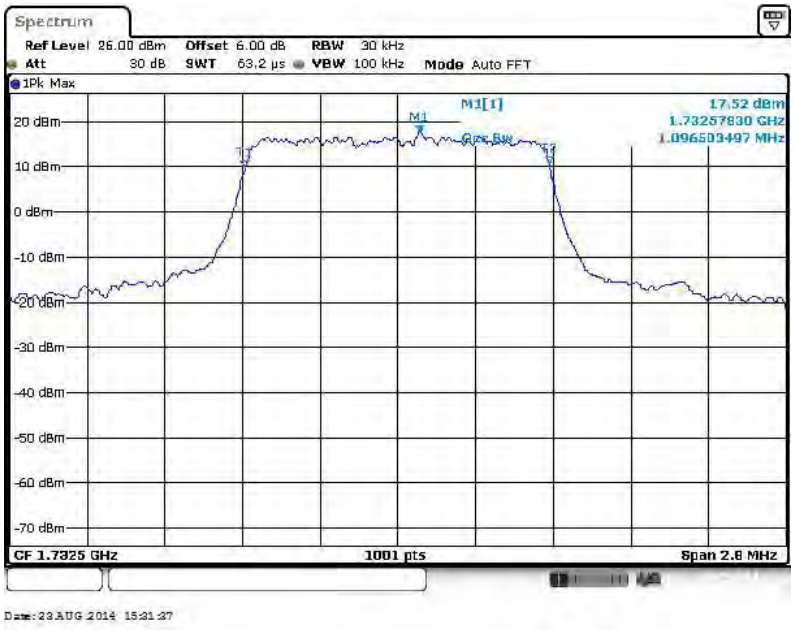
99% Occupied Bandwidth Plot on Channel 19957



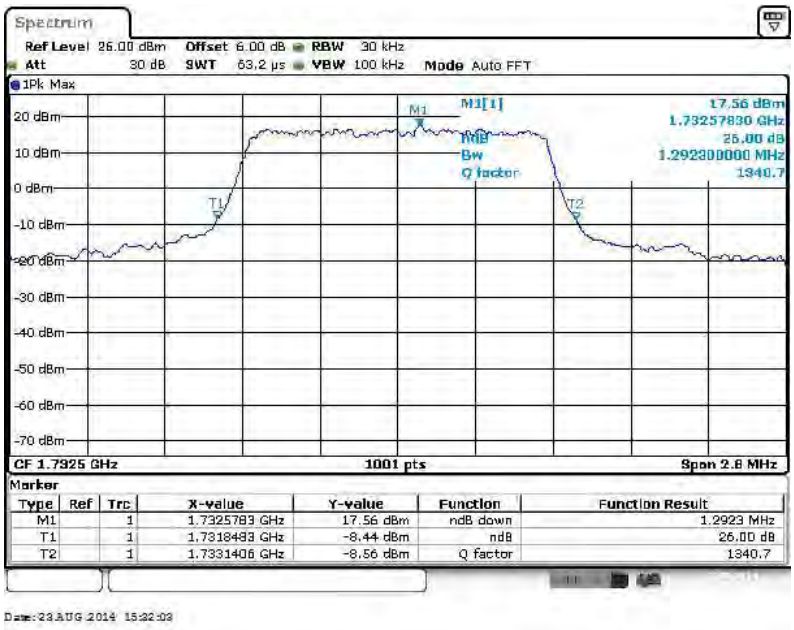
26dB Bandwidth Plot on Channel 19957



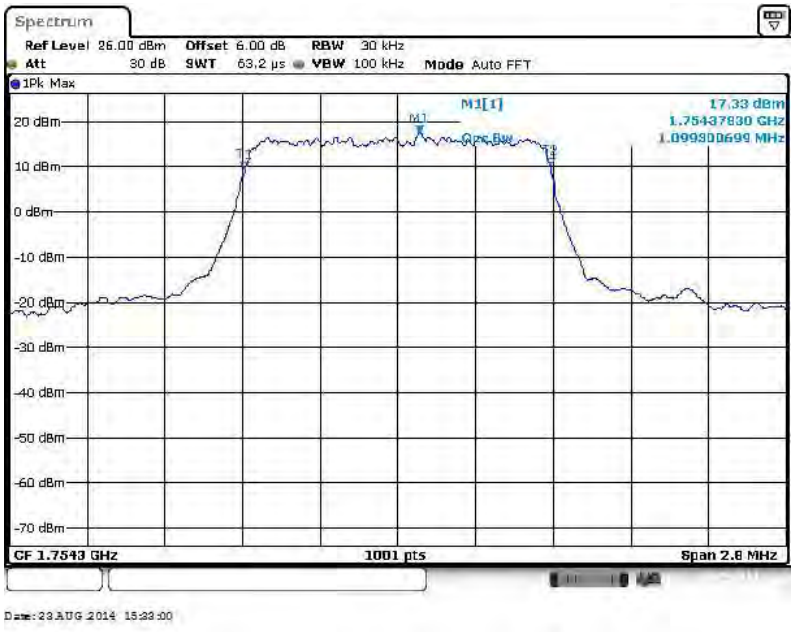
99% Occupied Bandwidth Plot on Channel 20175



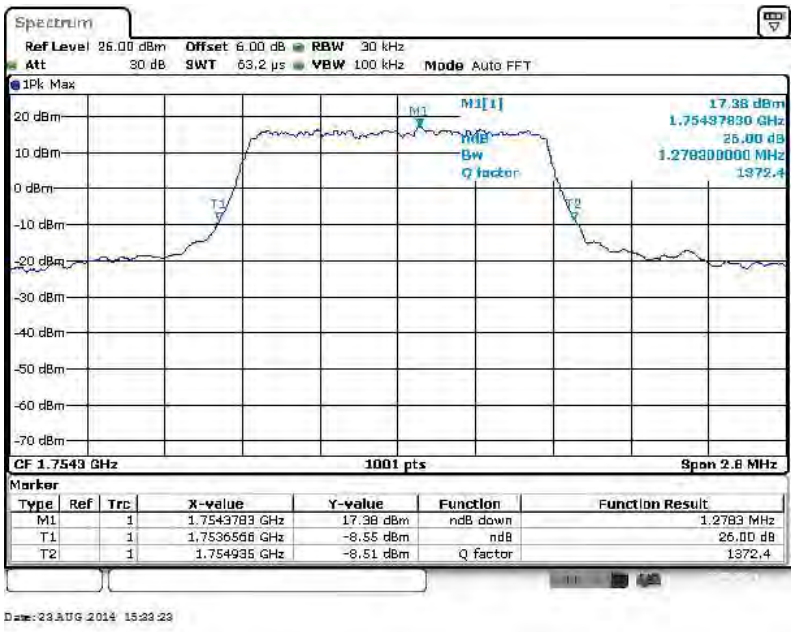
26dB Bandwidth Plot on Channel 20175



99% Occupied Bandwidth Plot on Channel 20393

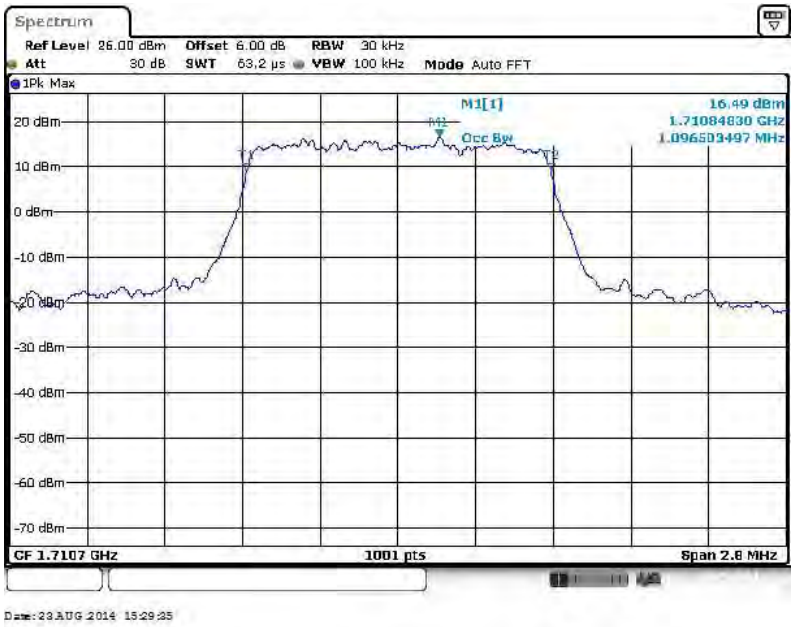


26dB Bandwidth Plot on Channel 20393

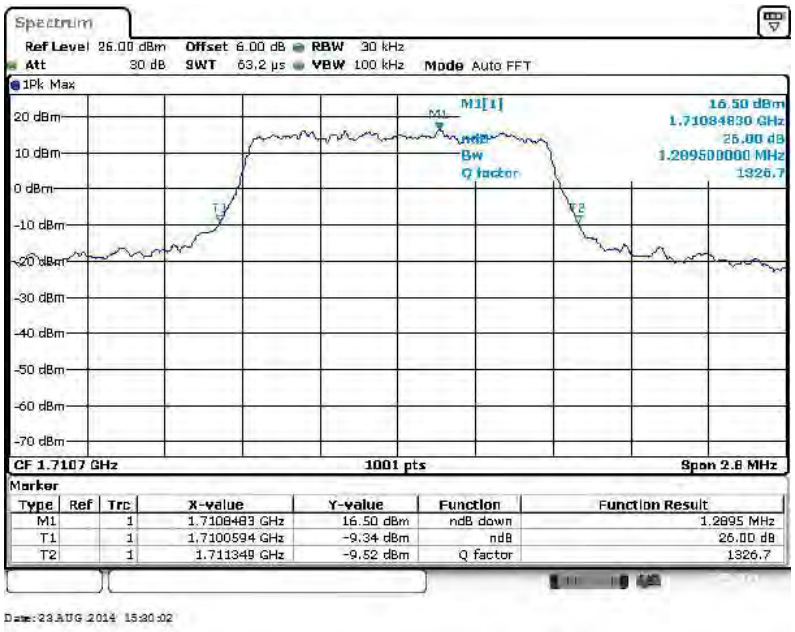


Band :	LTE Band 4	BW / Mod. :	1.4MHz / 16QAM

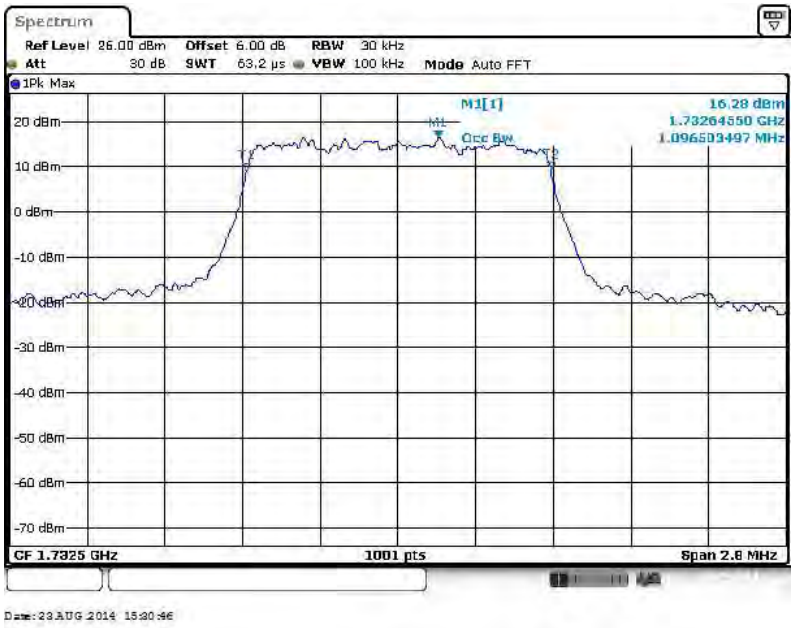
99% Occupied Bandwidth Plot on Channel 19957



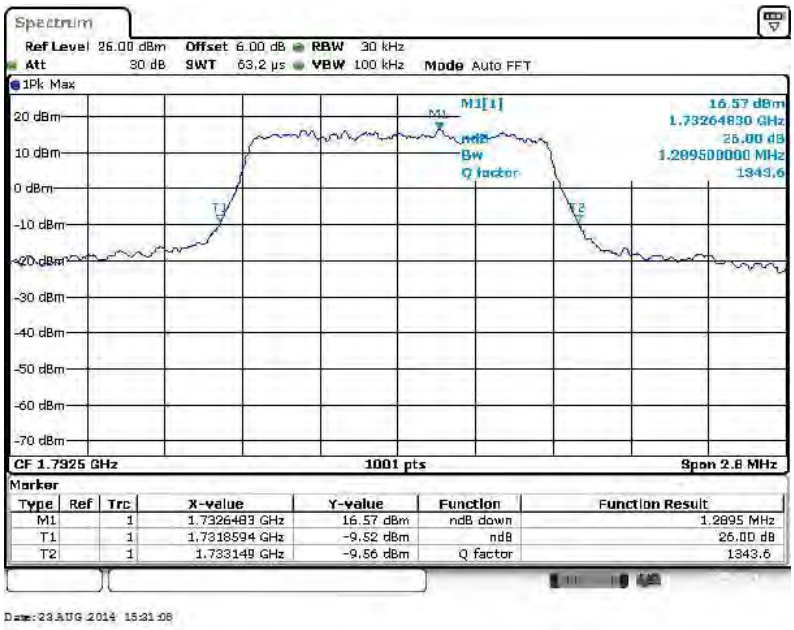
26dB Bandwidth Plot on Channel 19957



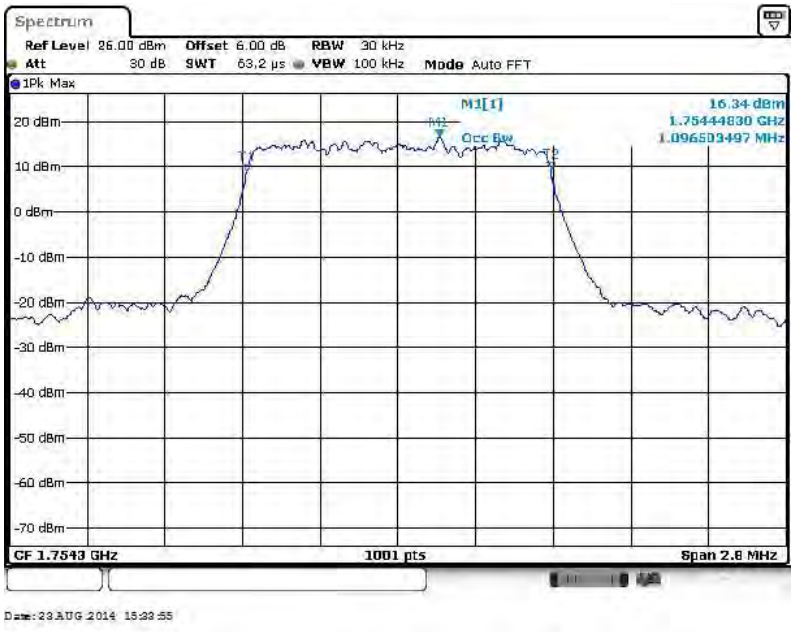
99% Occupied Bandwidth Plot on Channel 20175



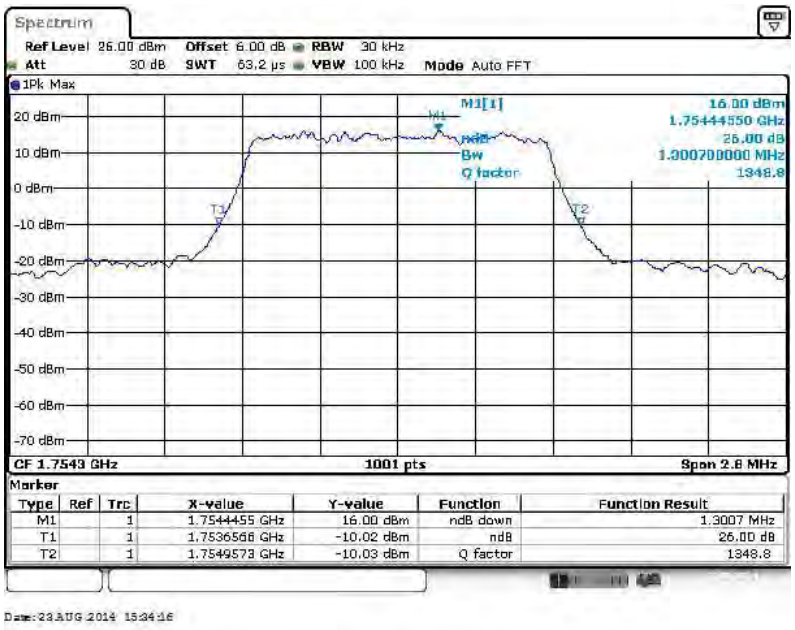
26dB Bandwidth Plot on Channel 20175



99% Occupied Bandwidth Plot on Channel 20393

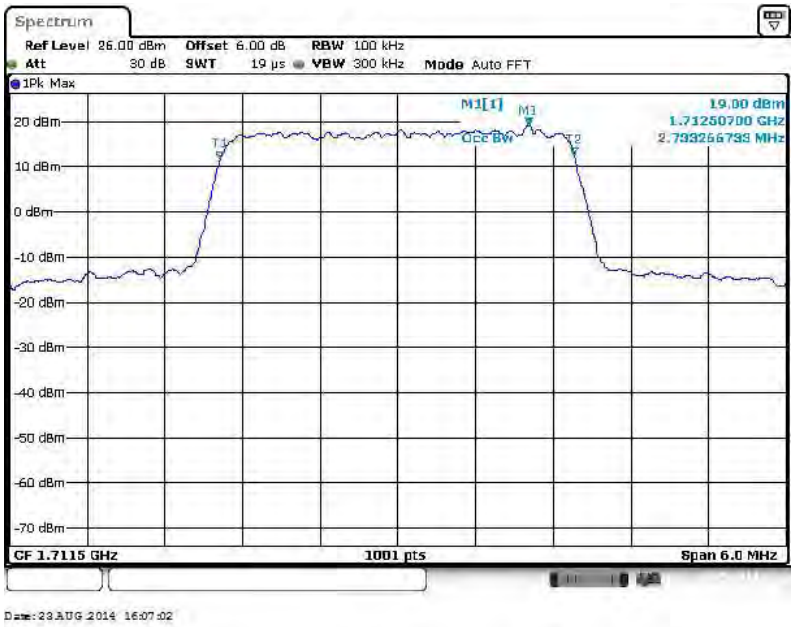


26dB Bandwidth Plot on Channel 20393

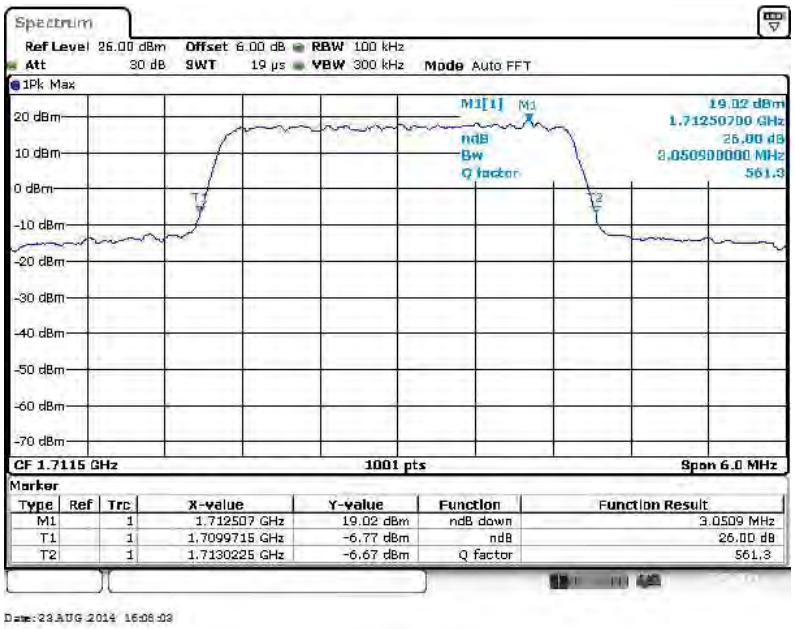


Band :	LTE Band 4	BW / Mod. :	3MHz / QPSK

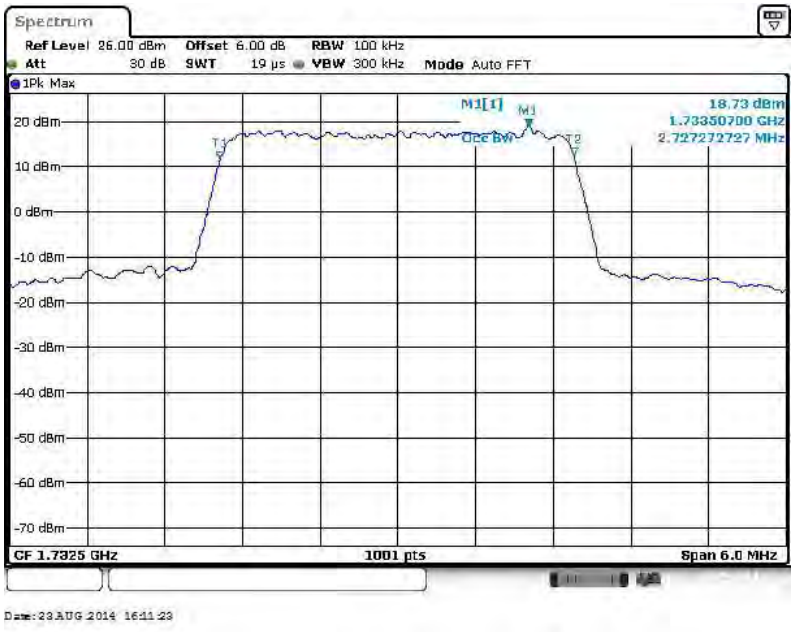
99% Occupied Bandwidth Plot on Channel 19965



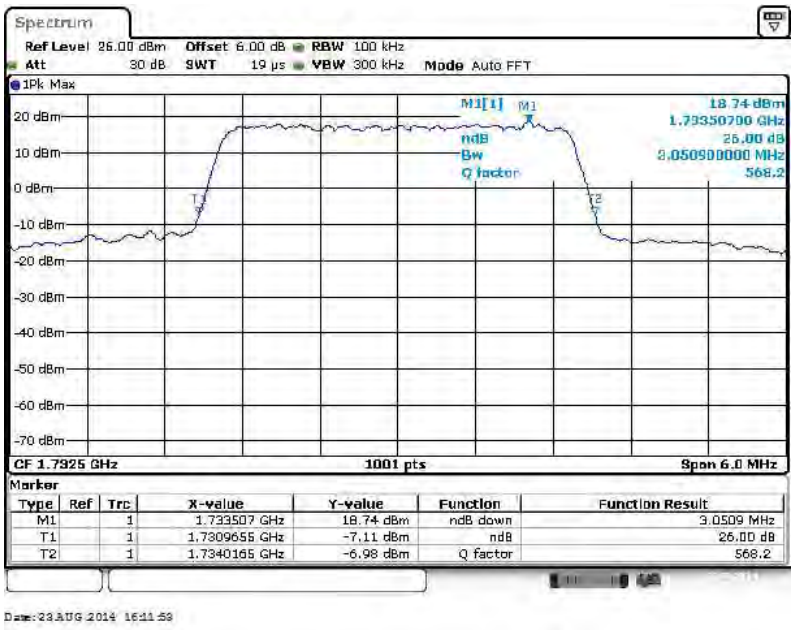
26dB Bandwidth Plot on Channel 19965



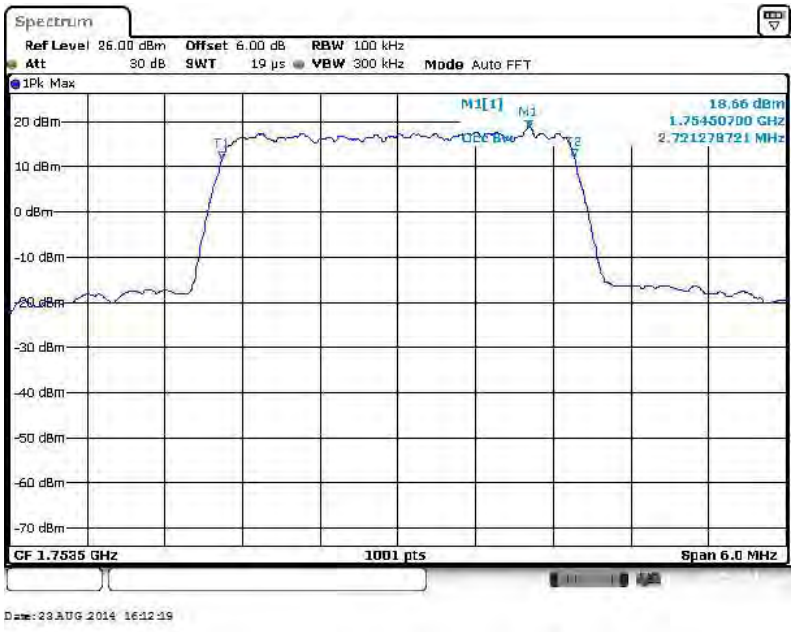
99% Occupied Bandwidth Plot on Channel 20175



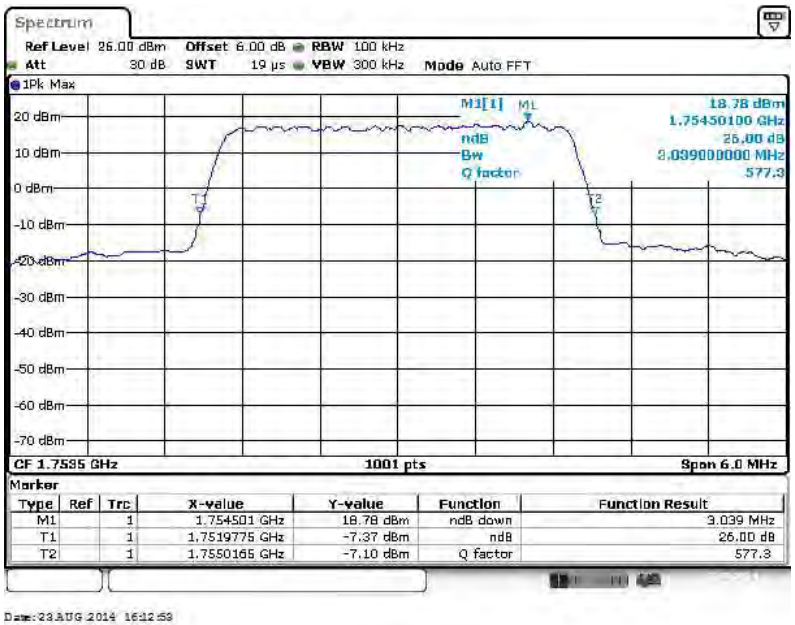
26dB Bandwidth Plot on Channel 20175



99% Occupied Bandwidth Plot on Channel 20385

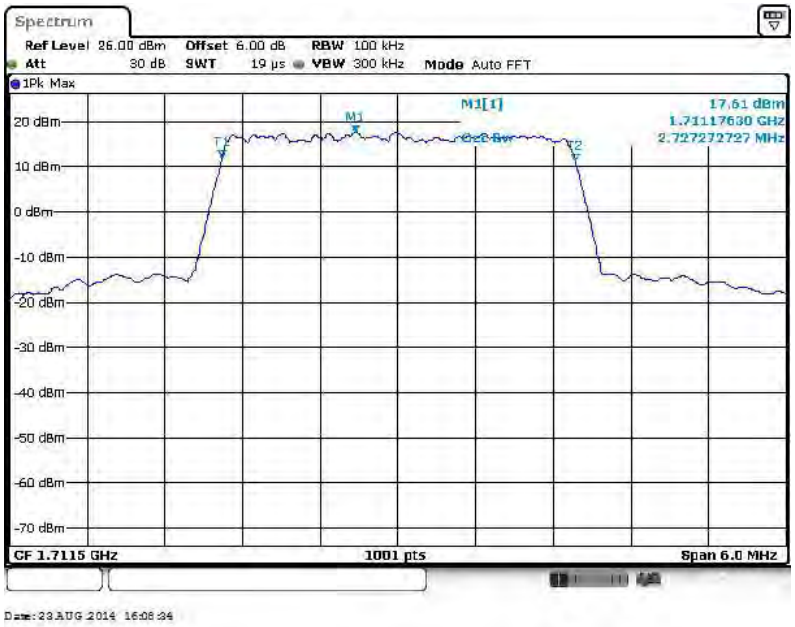


26dB Bandwidth Plot on Channel 20385

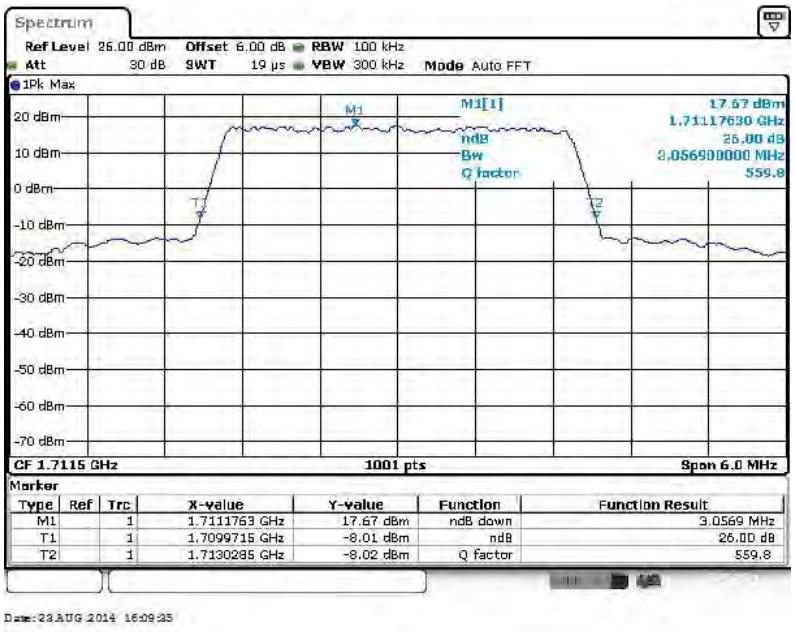


Band :	LTE Band 4	BW / Mod. :	3MHz / 16QAM

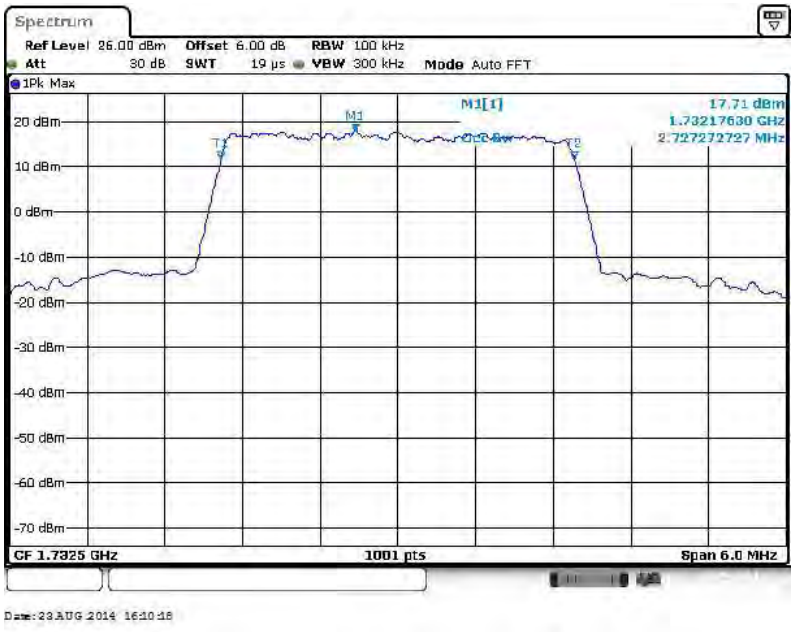
99% Occupied Bandwidth Plot on Channel 19965



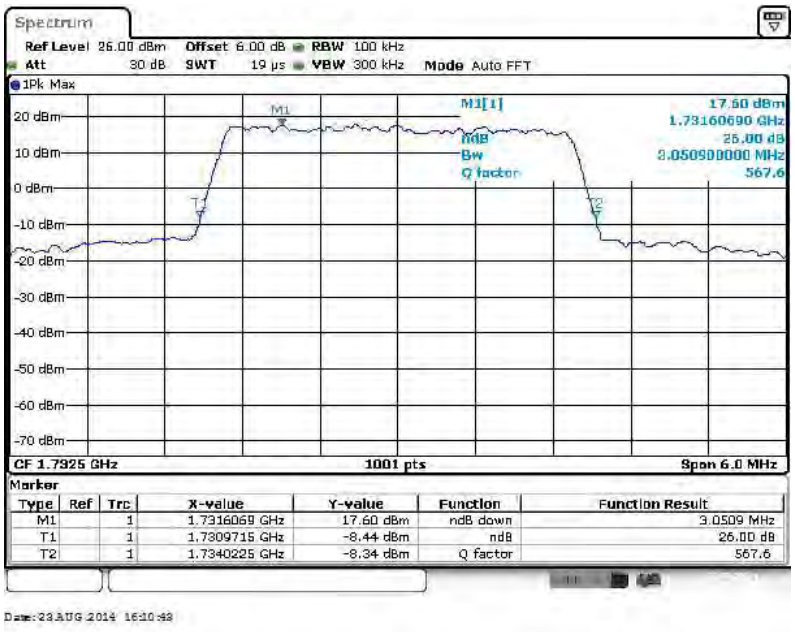
26dB Bandwidth Plot on Channel 19965



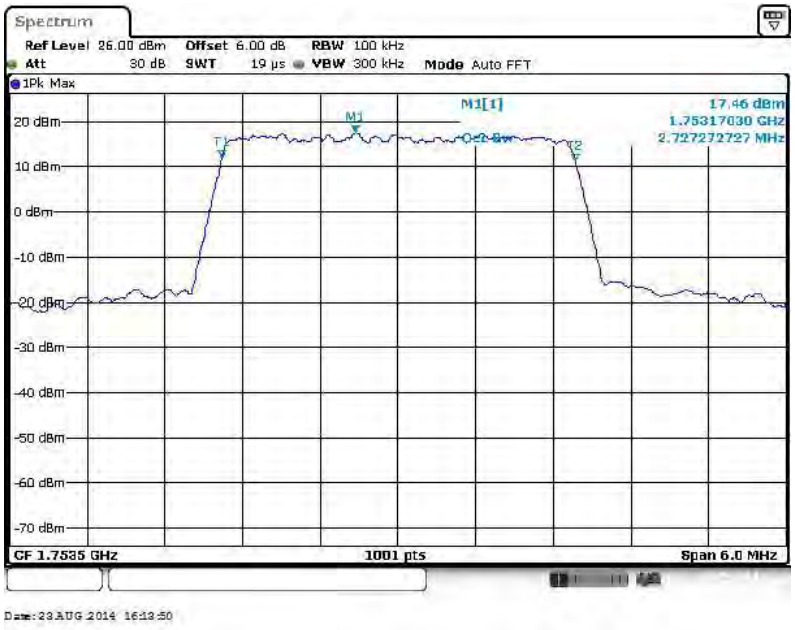
99% Occupied Bandwidth Plot on Channel 20175



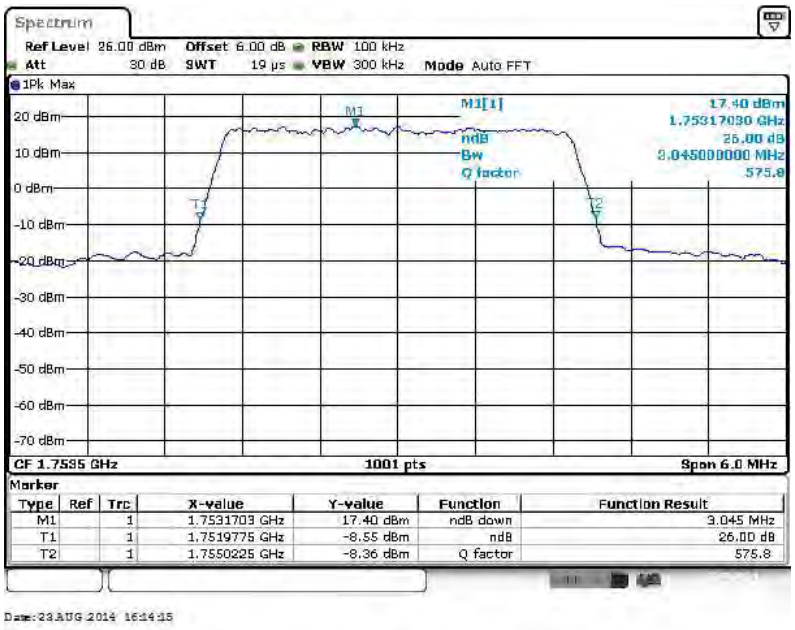
26dB Bandwidth Plot on Channel 20175



99% Occupied Bandwidth Plot on Channel 20385

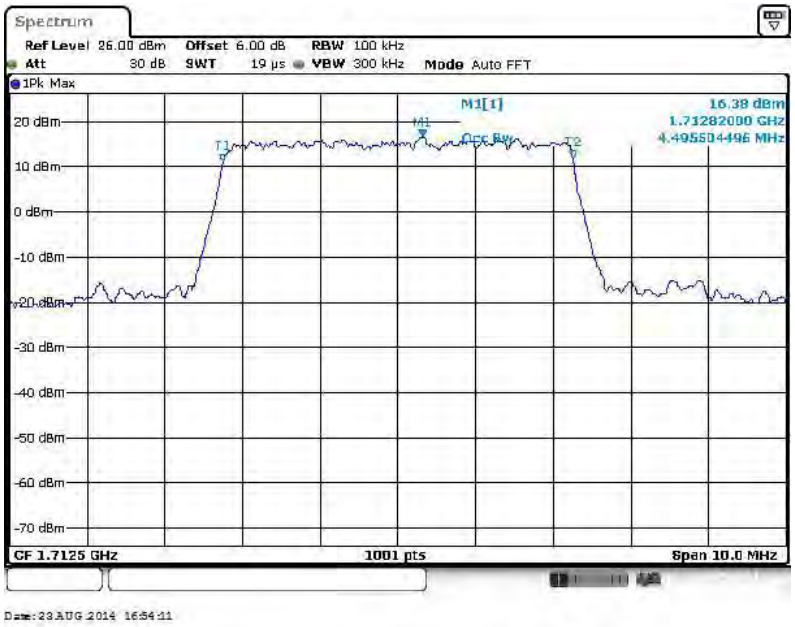


26dB Bandwidth Plot on Channel 20385

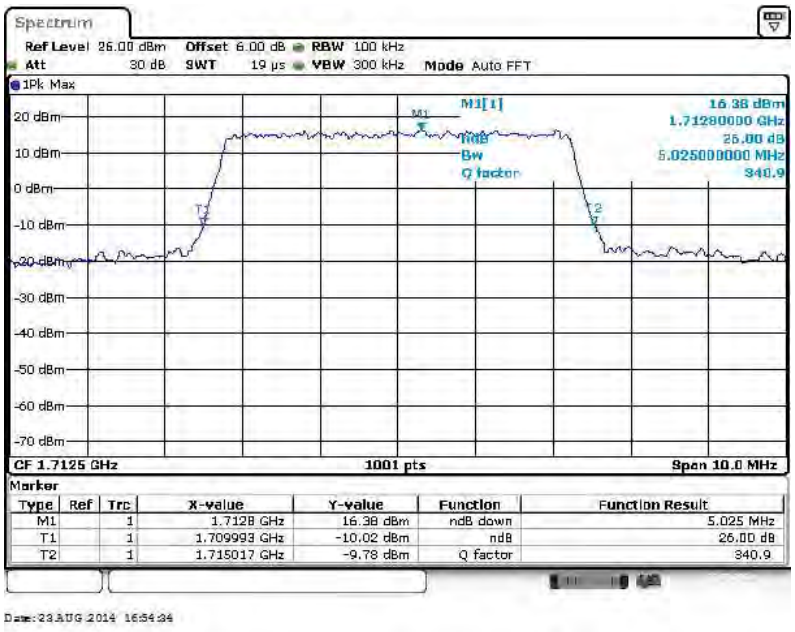


Band :	LTE Band 4	BW / Mod. :	5MHz / QPSK

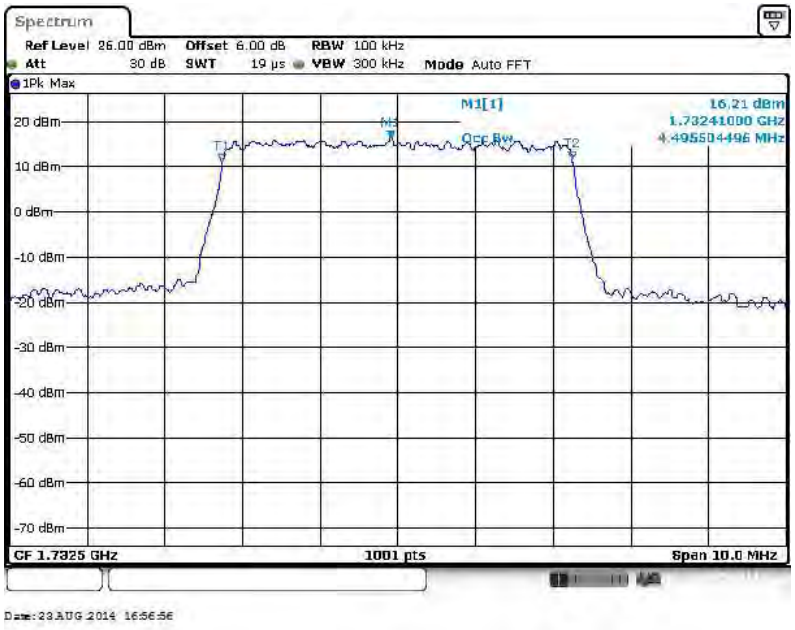
99% Occupied Bandwidth Plot on Channel 19975



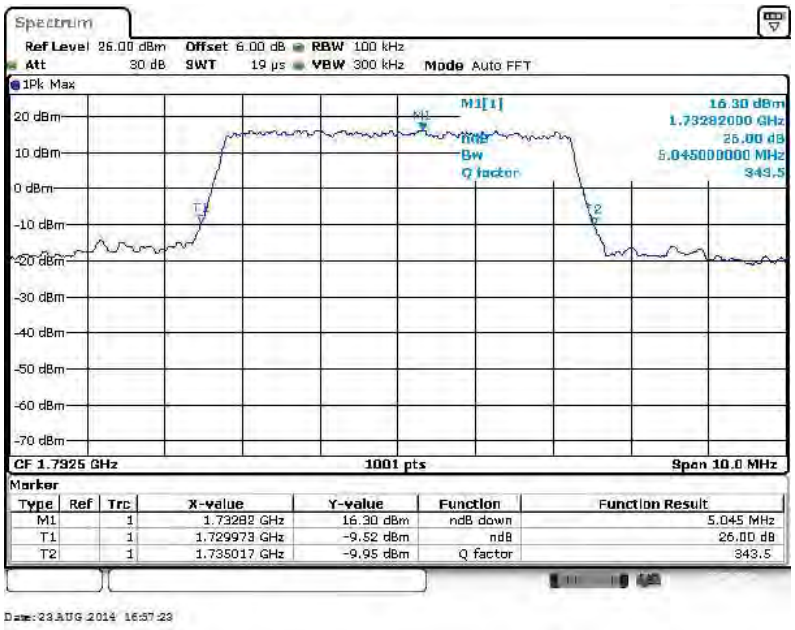
26dB Bandwidth Plot on Channel 19975



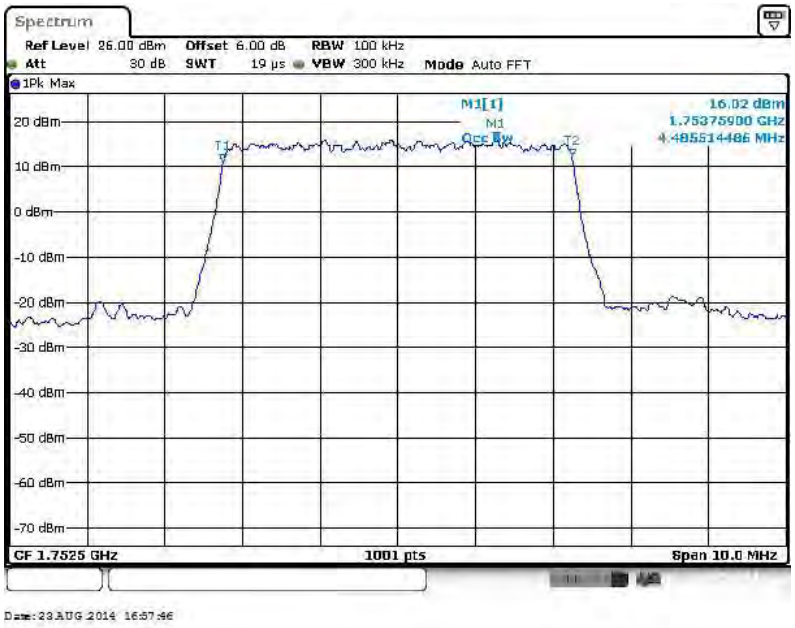
99% Occupied Bandwidth Plot on Channel 20175



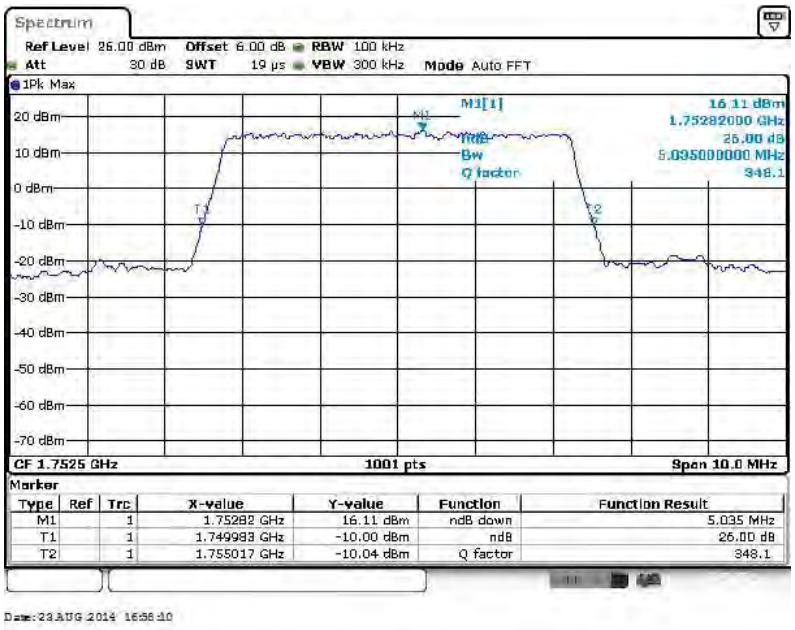
26dB Bandwidth Plot on Channel 20175



99% Occupied Bandwidth Plot on Channel 20375



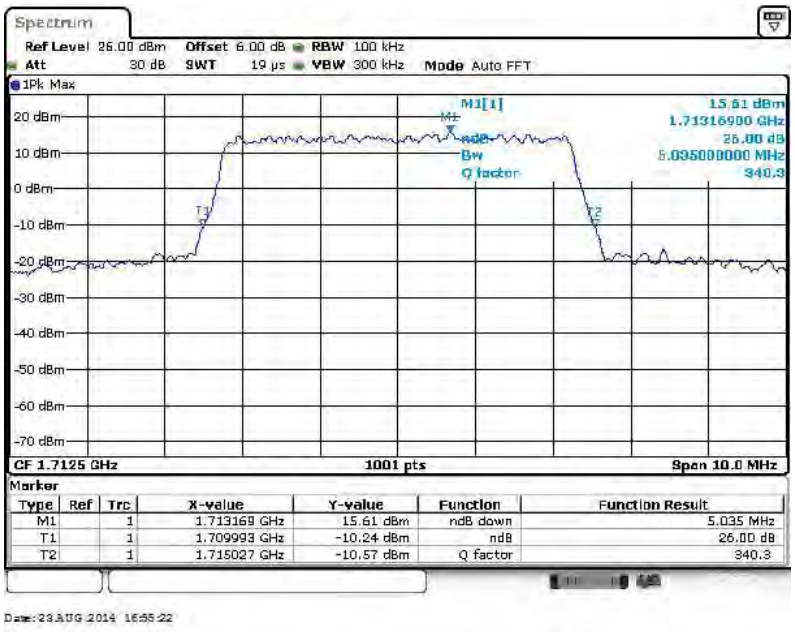
26dB Bandwidth Plot on Channel 20375



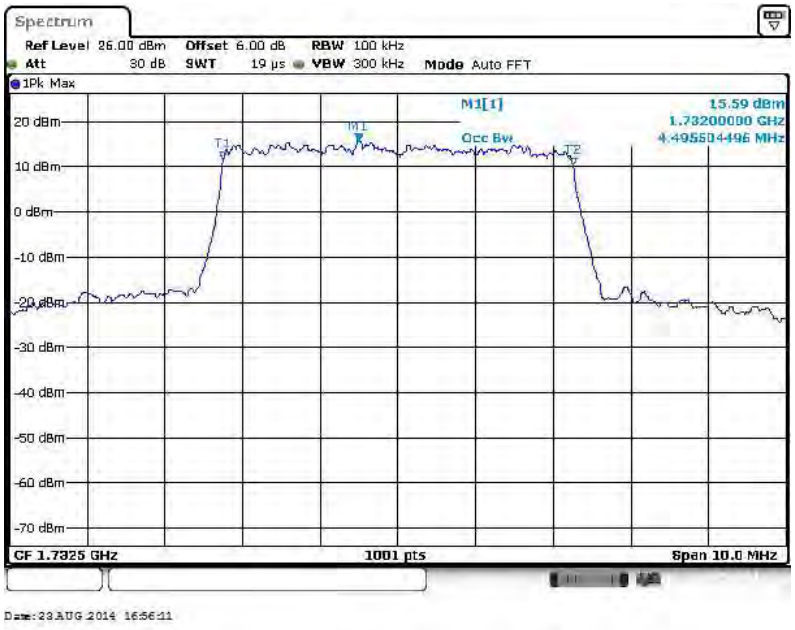
Band :	LTE Band 4	BW / Mod. :	5MHz / 16QAM

99% Occupied Bandwidth Plot on Channel 19975

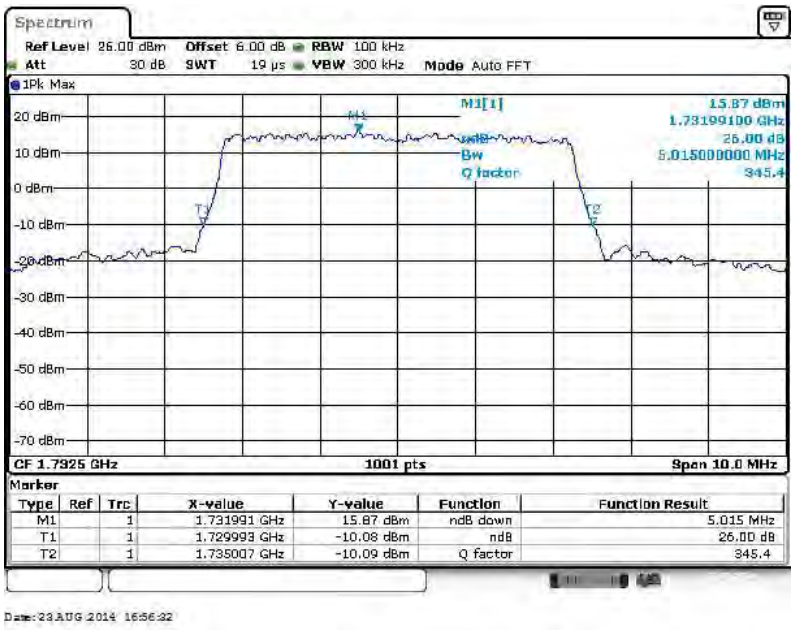
26dB Bandwidth Plot on Channel 19975



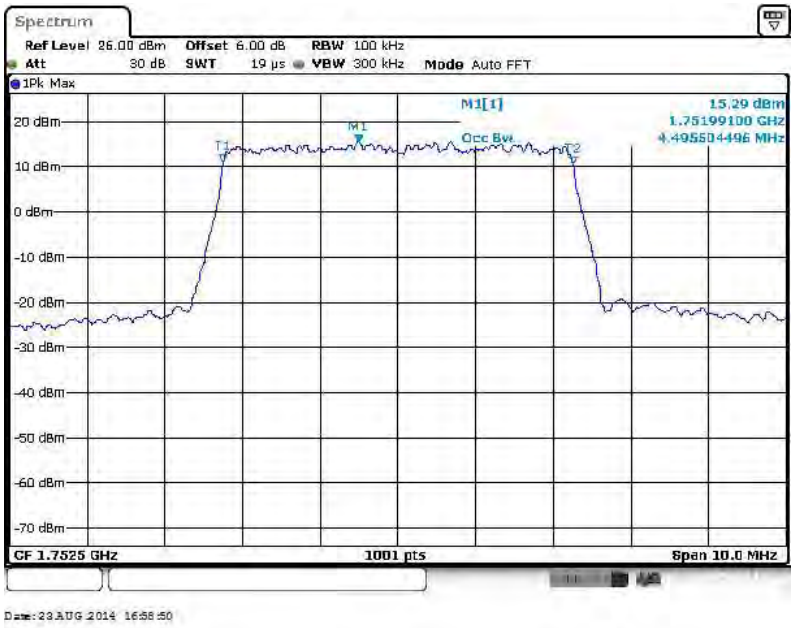
99% Occupied Bandwidth Plot on Channel 20175



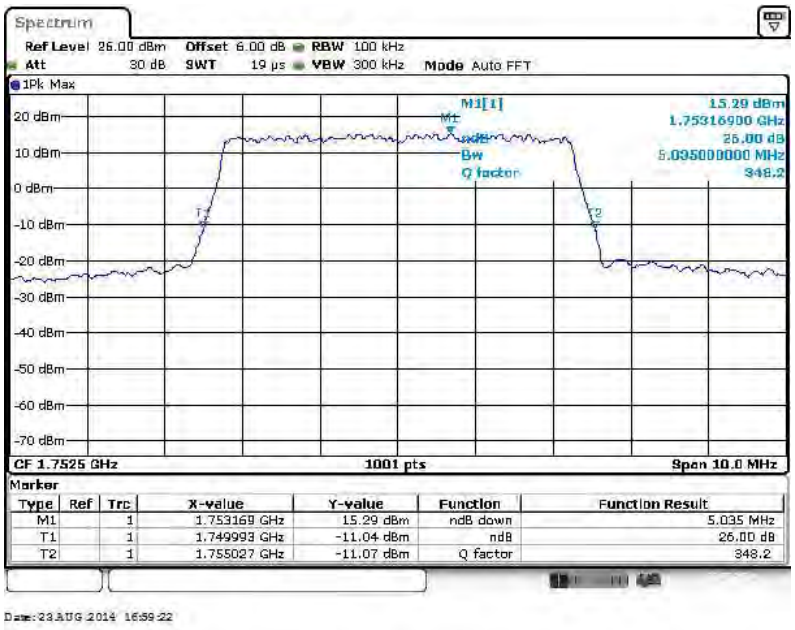
26dB Bandwidth Plot on Channel 20175



99% Occupied Bandwidth Plot on Channel 20375

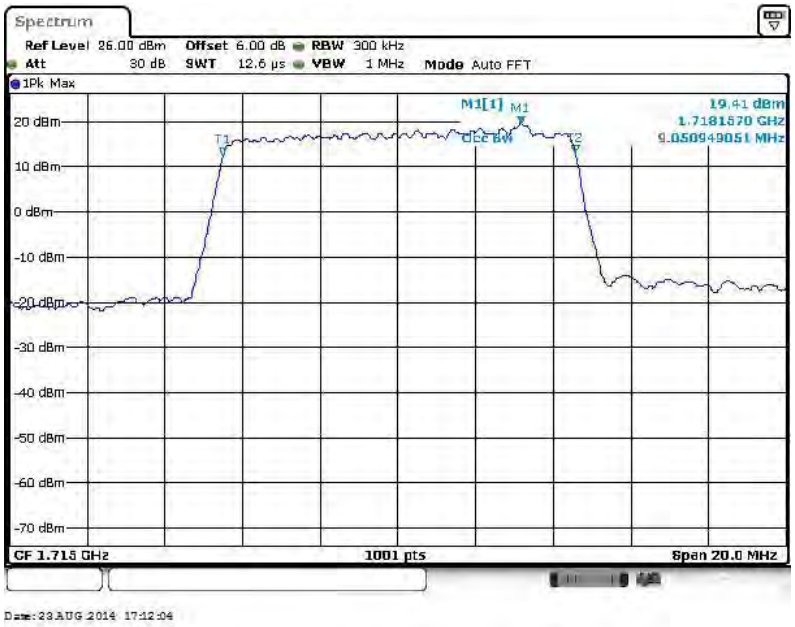


26dB Bandwidth Plot on Channel 20375

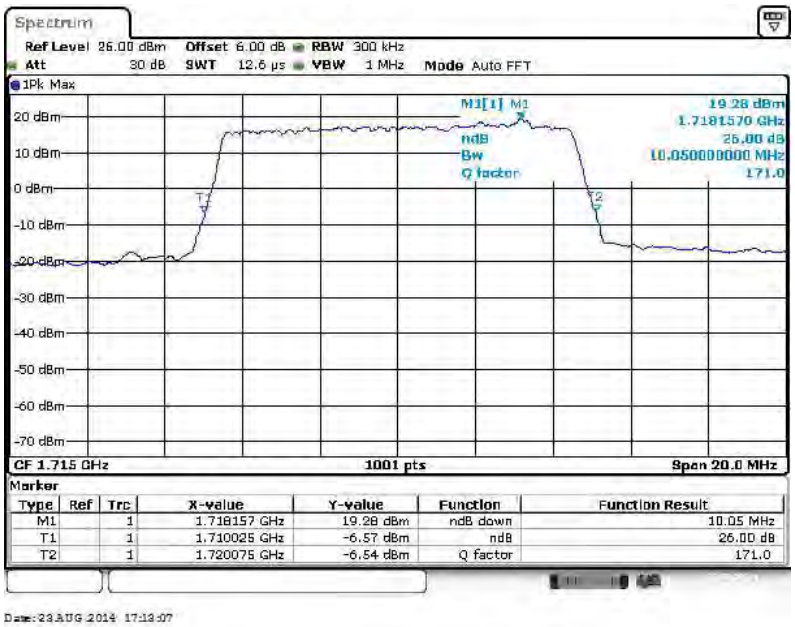


Band :	LTE Band 4	BW / Mod. :	10MHz / QPSK

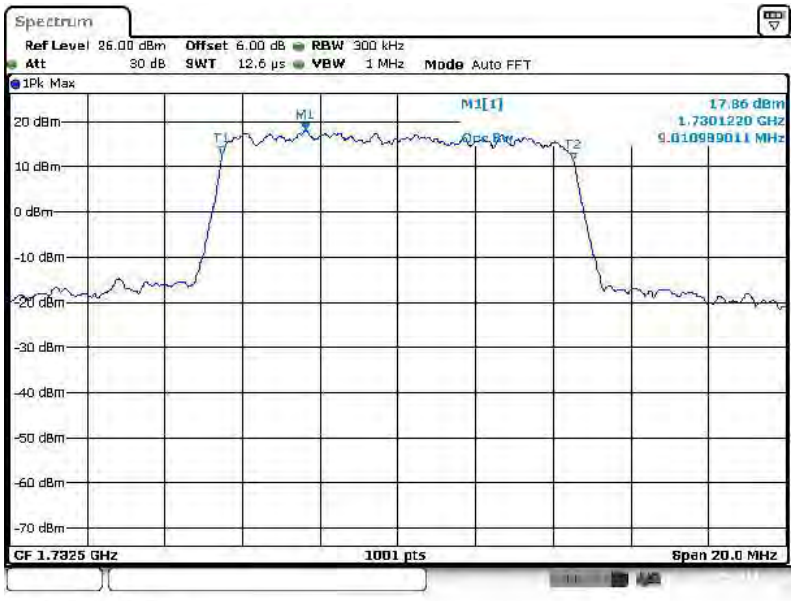
99% Occupied Bandwidth Plot on Channel 20000



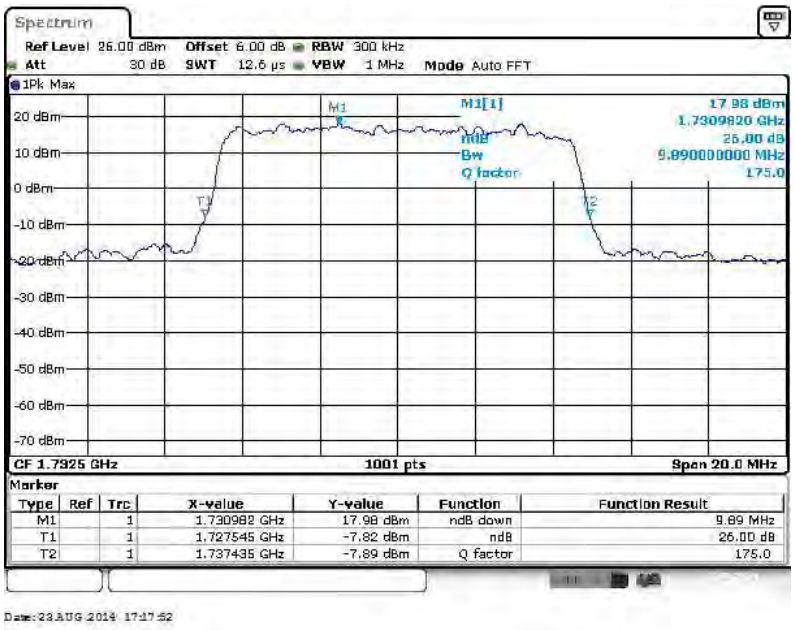
26dB Bandwidth Plot on Channel 20000



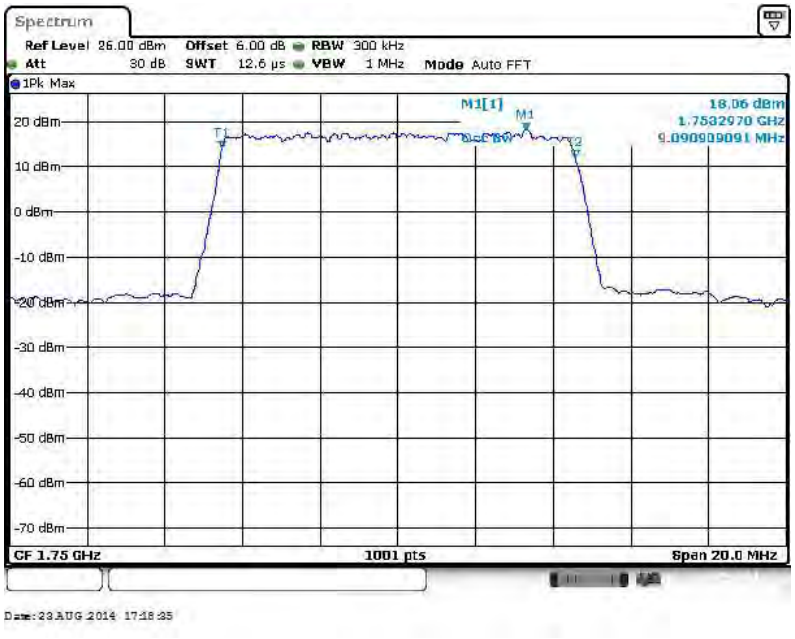
99% Occupied Bandwidth Plot on Channel 20175



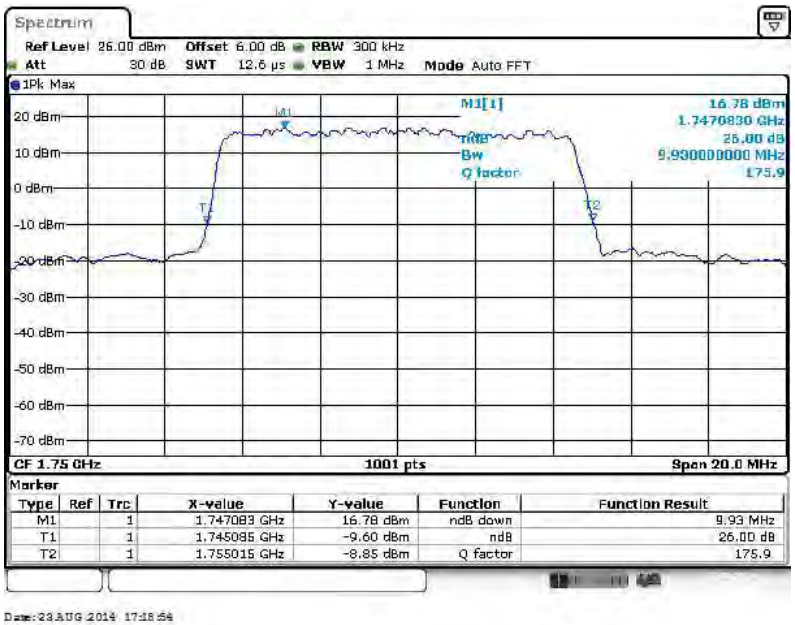
26dB Bandwidth Plot on Channel 20175



99% Occupied Bandwidth Plot on Channel 20350

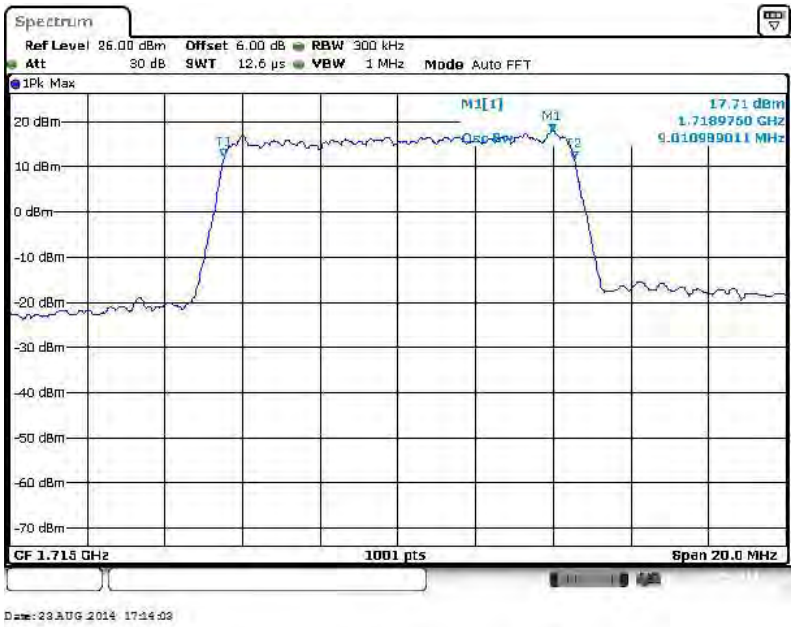


26dB Bandwidth Plot on Channel 20350

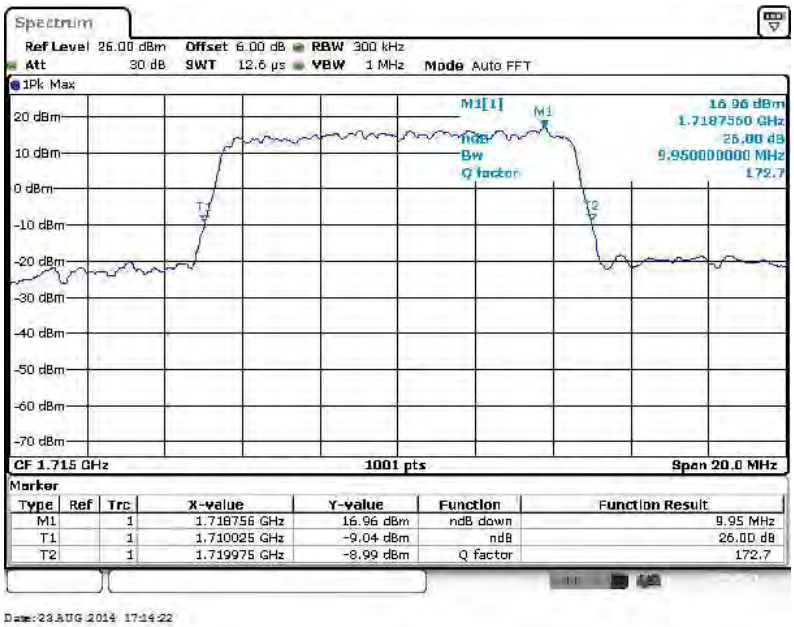


Band :	LTE Band 4	BW / Mod. :	10MHz / 16QAM

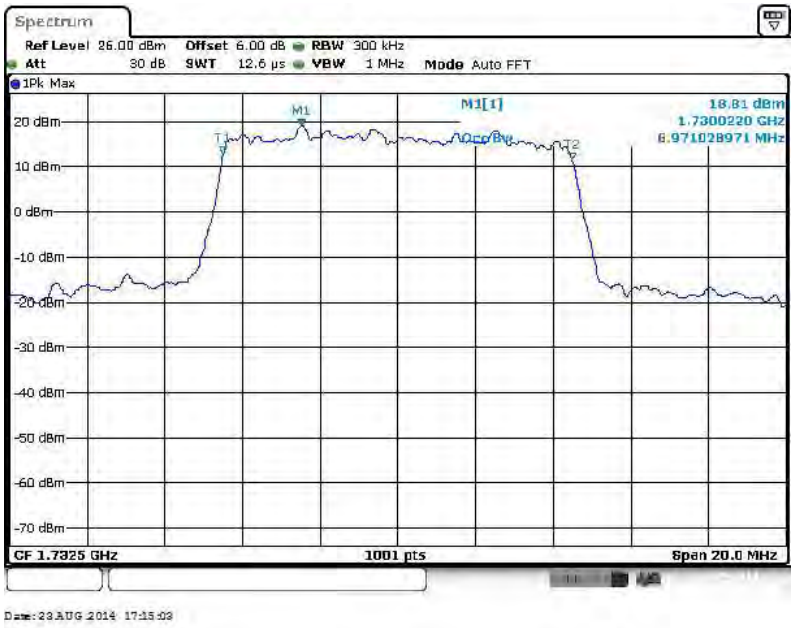
99% Occupied Bandwidth Plot on Channel 20000



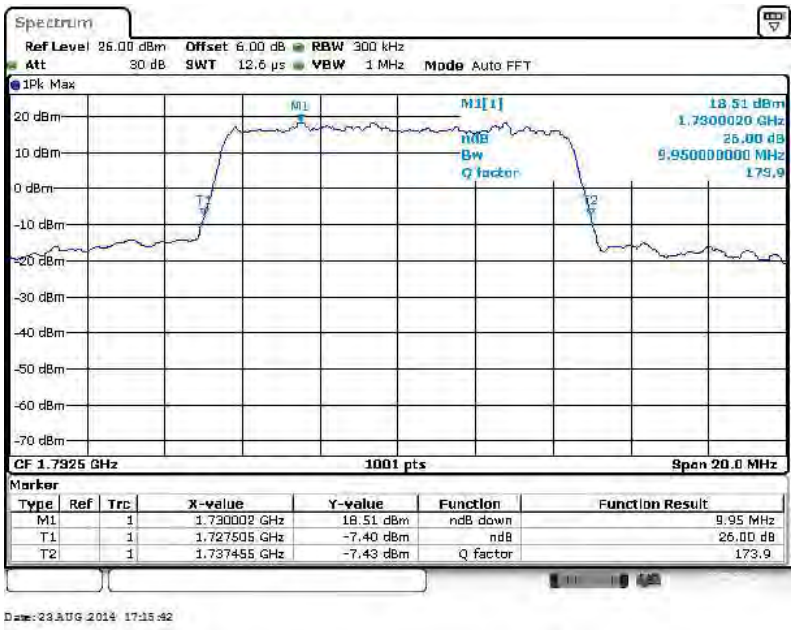
26dB Bandwidth Plot on Channel 20000



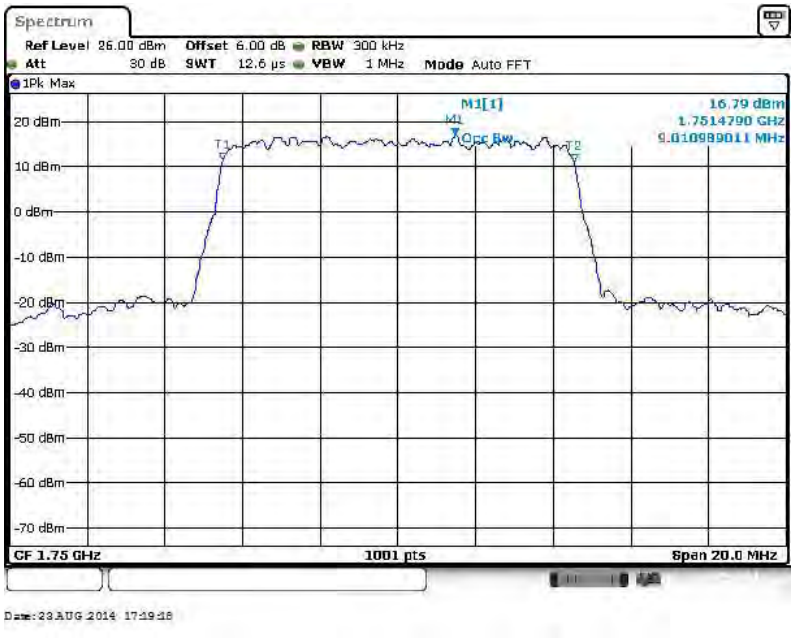
99% Occupied Bandwidth Plot on Channel 20175



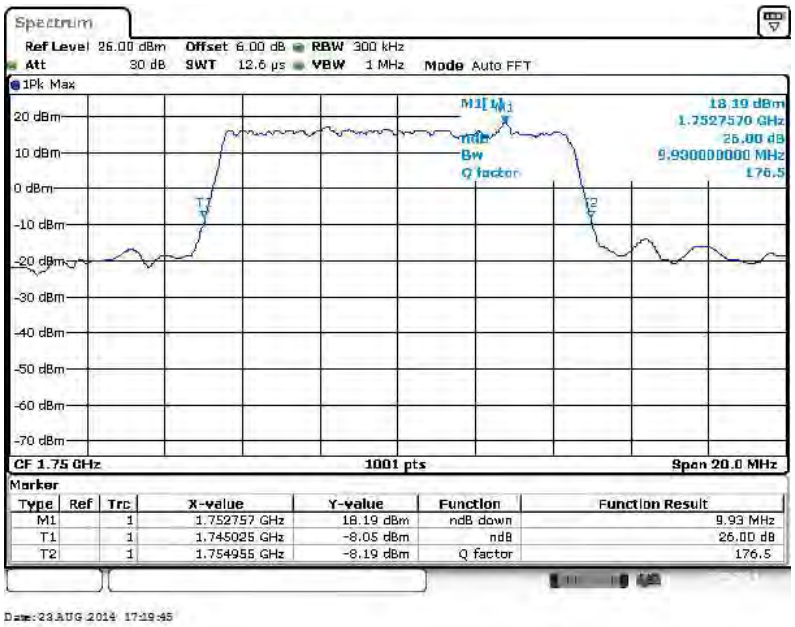
26dB Bandwidth Plot on Channel 20175



99% Occupied Bandwidth Plot on Channel 20350

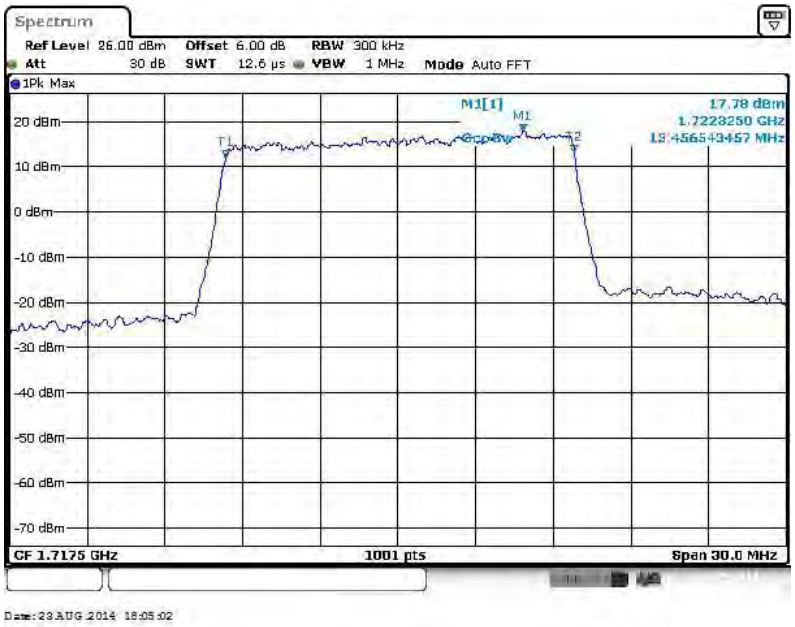


26dB Bandwidth Plot on Channel 20350

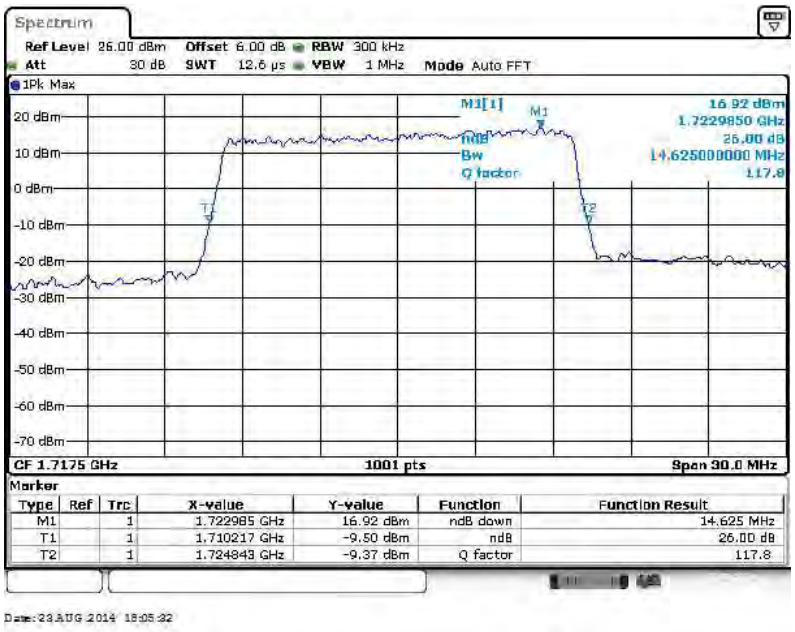


Band :	LTE Band 4	BW / Mod. :	15MHz / QPSK

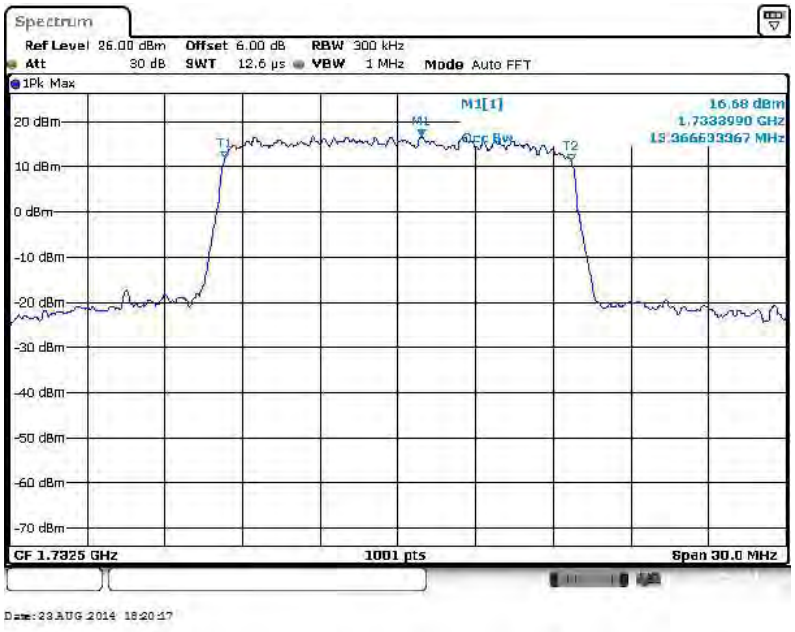
99% Occupied Bandwidth Plot on Channel 20025



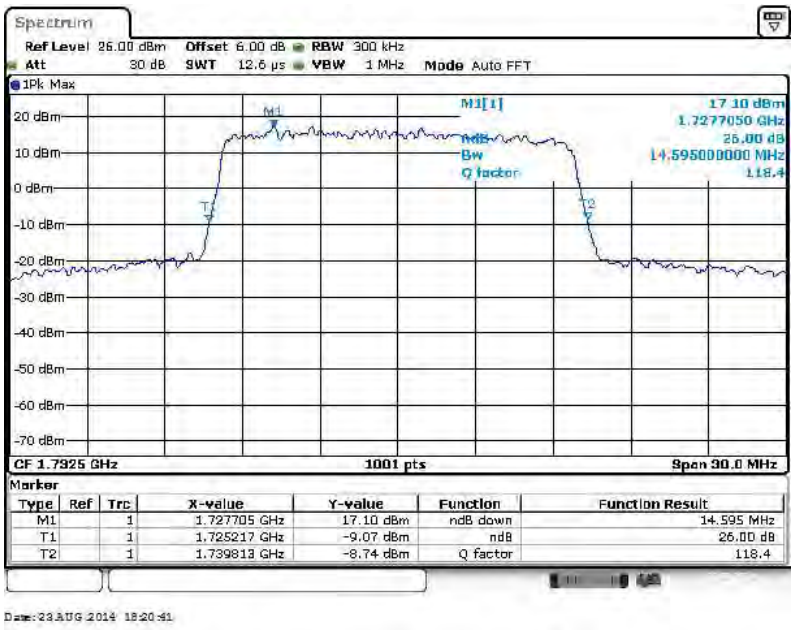
26dB Bandwidth Plot on Channel 20025



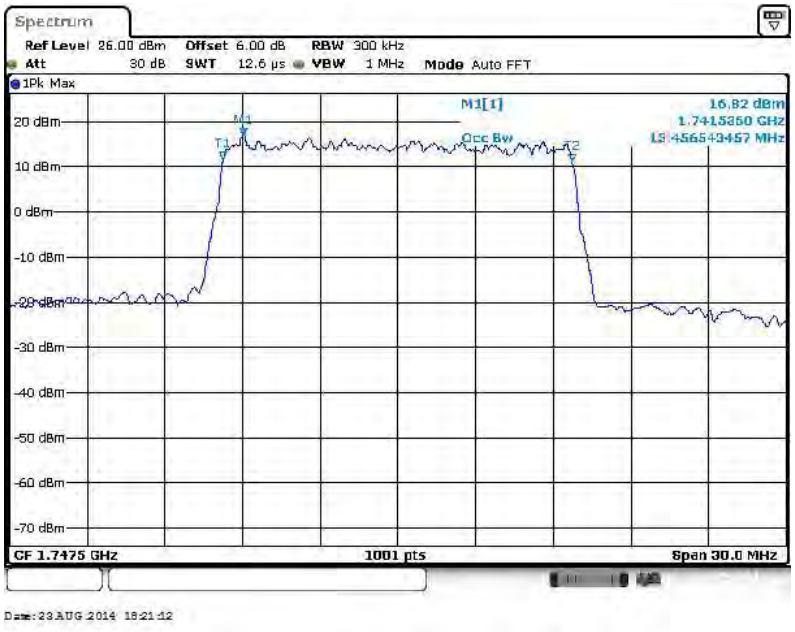
99% Occupied Bandwidth Plot on Channel 20175



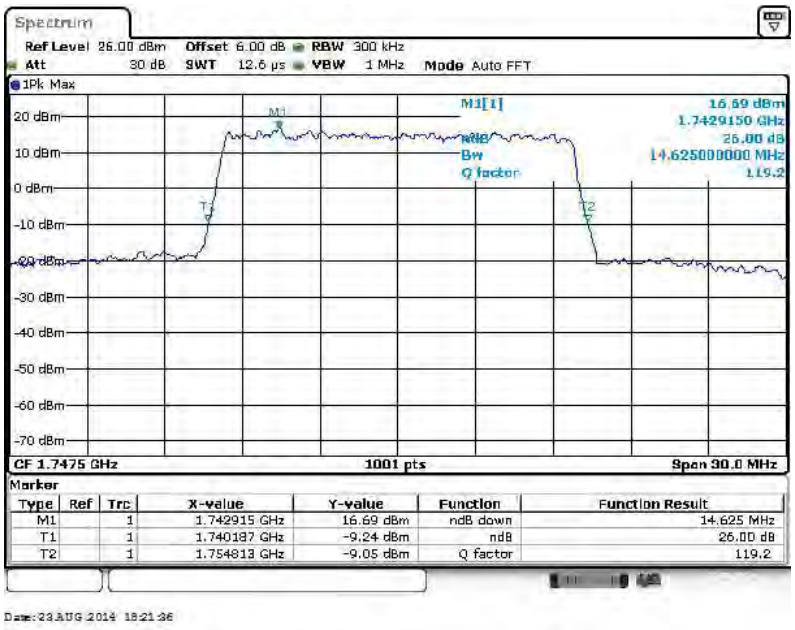
26dB Bandwidth Plot on Channel 20175



99% Occupied Bandwidth Plot on Channel 20325

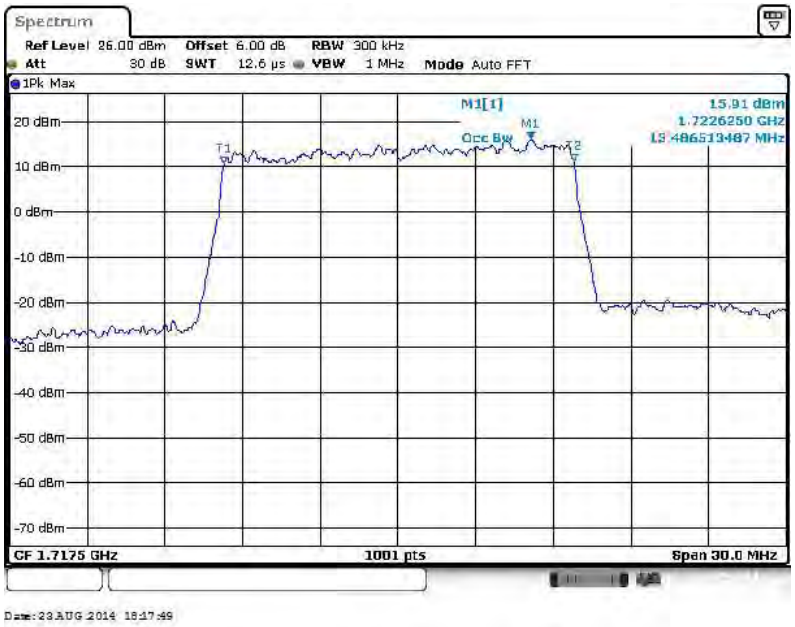


26dB Bandwidth Plot on Channel 20325

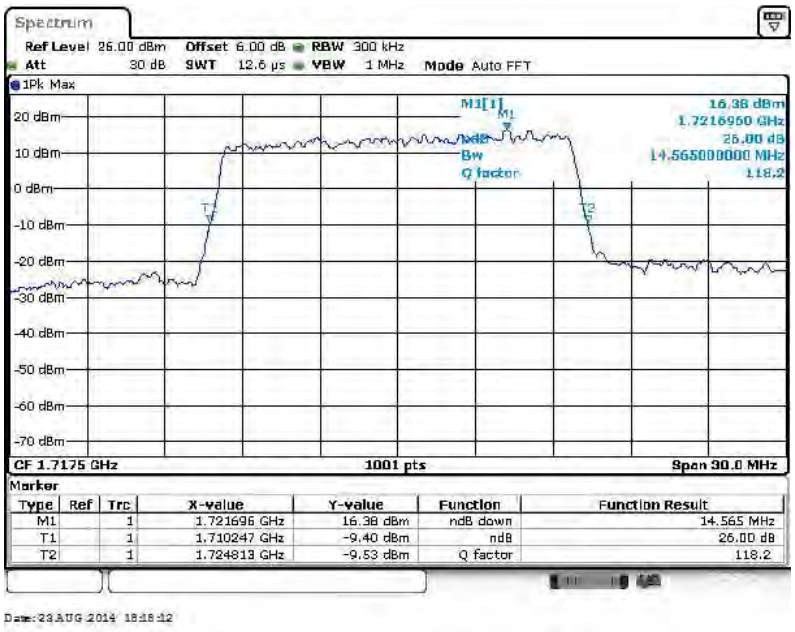


Band :	LTE Band 4	BW / Mod. :	15MHz / 16QAM

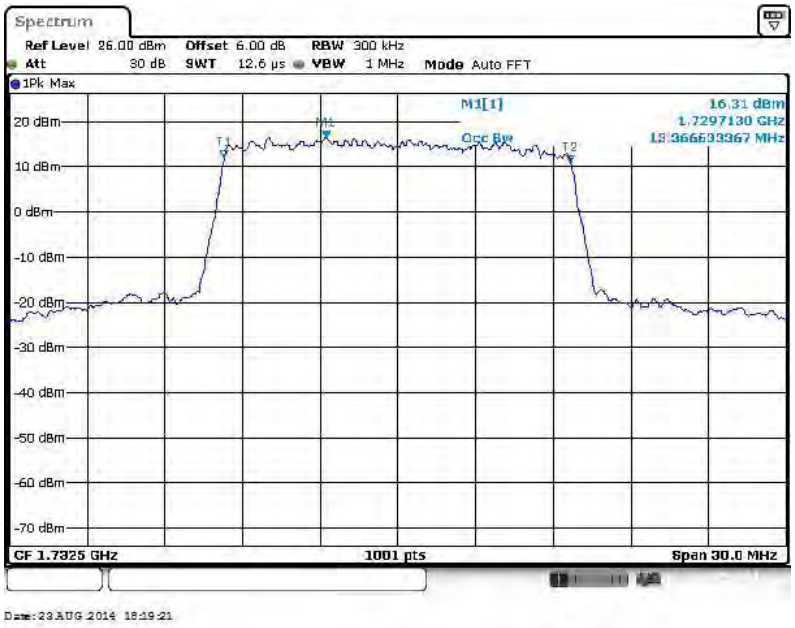
99% Occupied Bandwidth Plot on Channel 20025



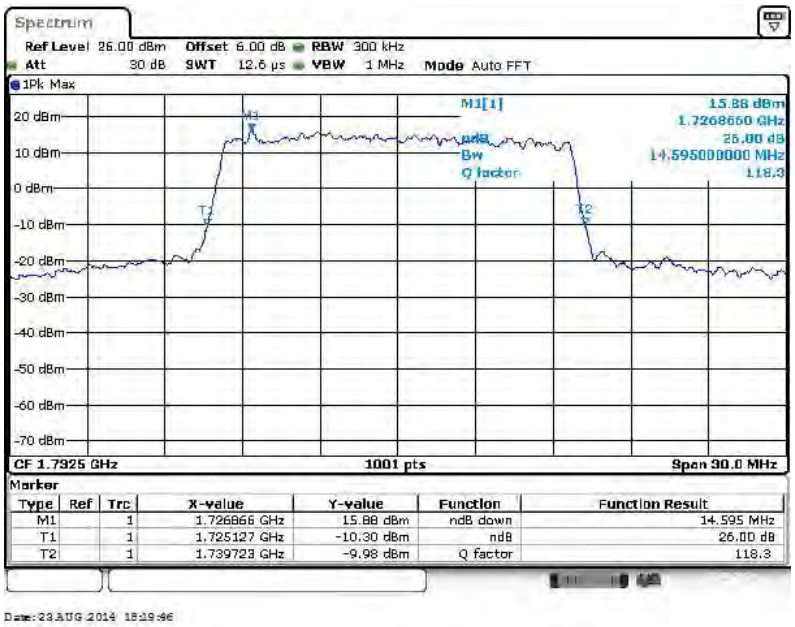
26dB Bandwidth Plot on Channel 20025



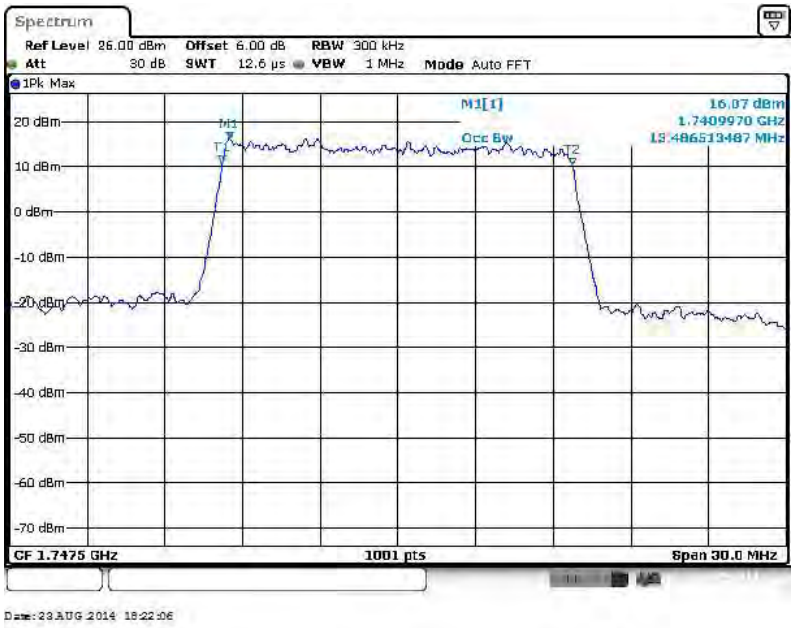
99% Occupied Bandwidth Plot on Channel 20175



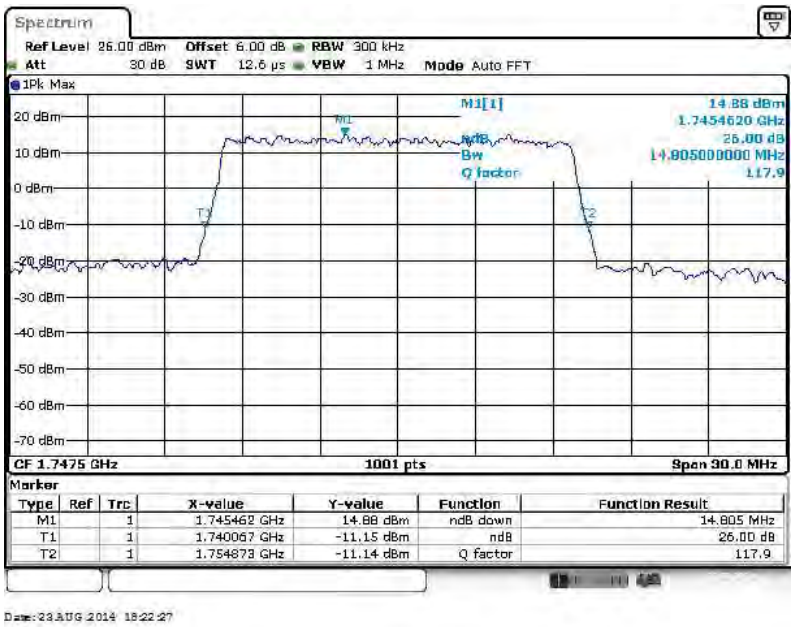
26dB Bandwidth Plot on Channel 20175



99% Occupied Bandwidth Plot on Channel 20325

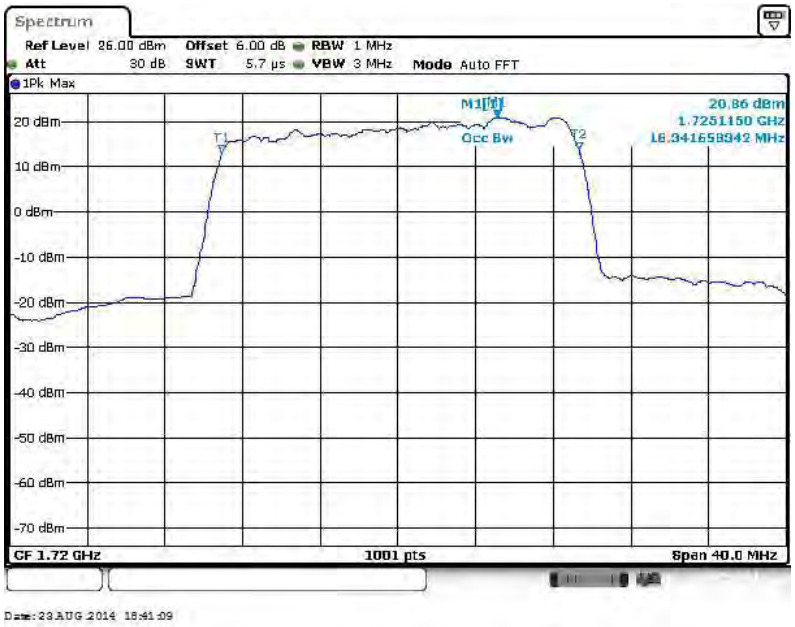


26dB Bandwidth Plot on Channel 20325

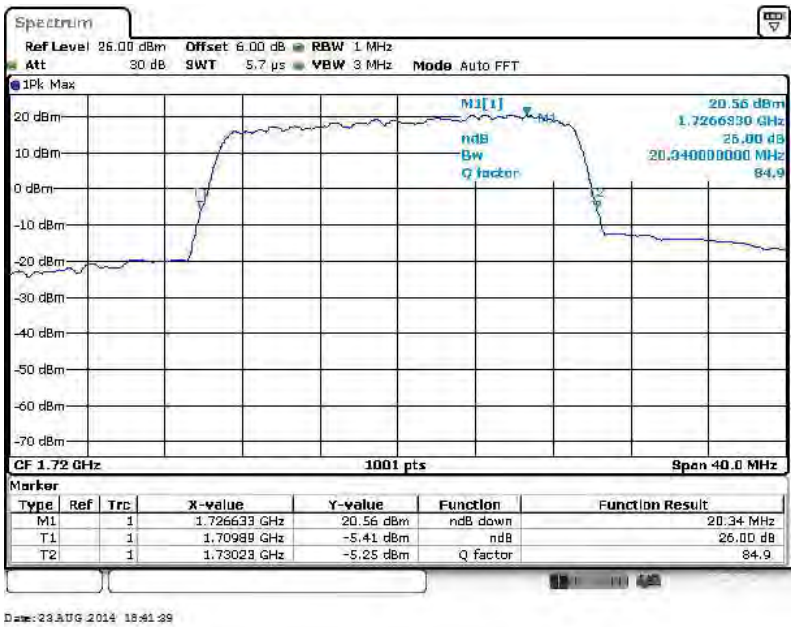


Band :	LTE Band 4	BW / Mod. :	20MHz / QPSK

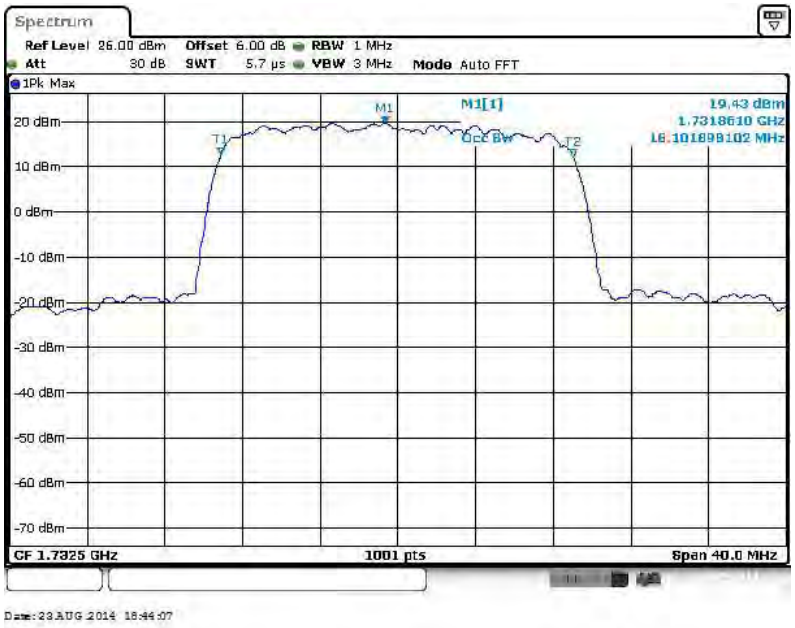
99% Occupied Bandwidth Plot on Channel 20050



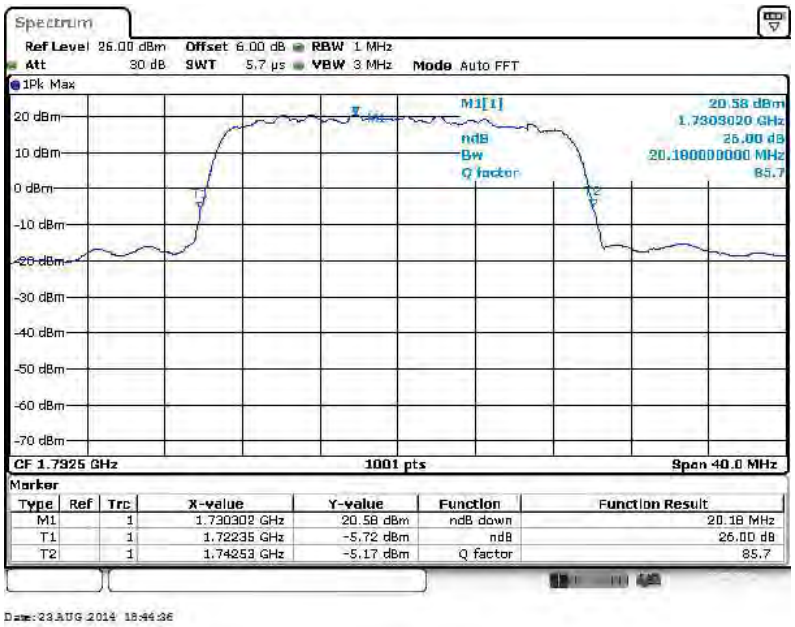
26dB Bandwidth Plot on Channel 20050



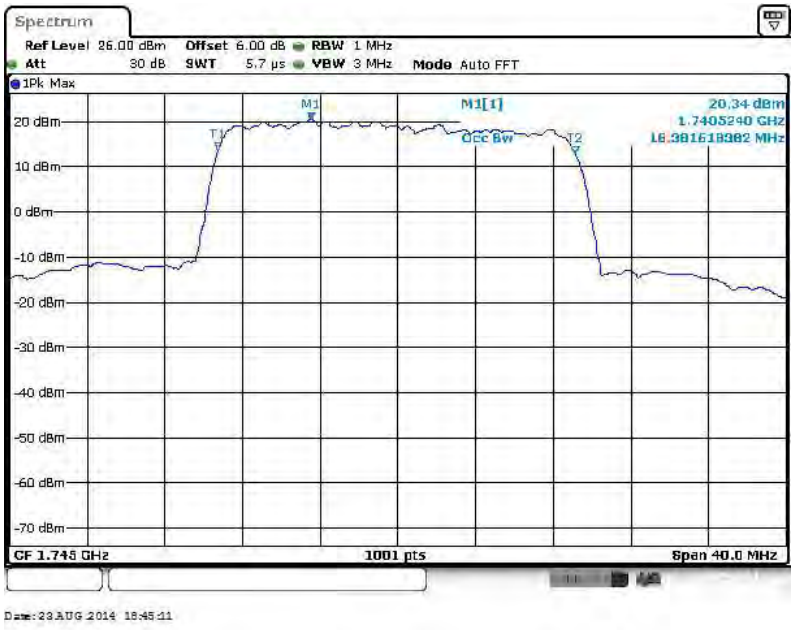
99% Occupied Bandwidth Plot on Channel 20175



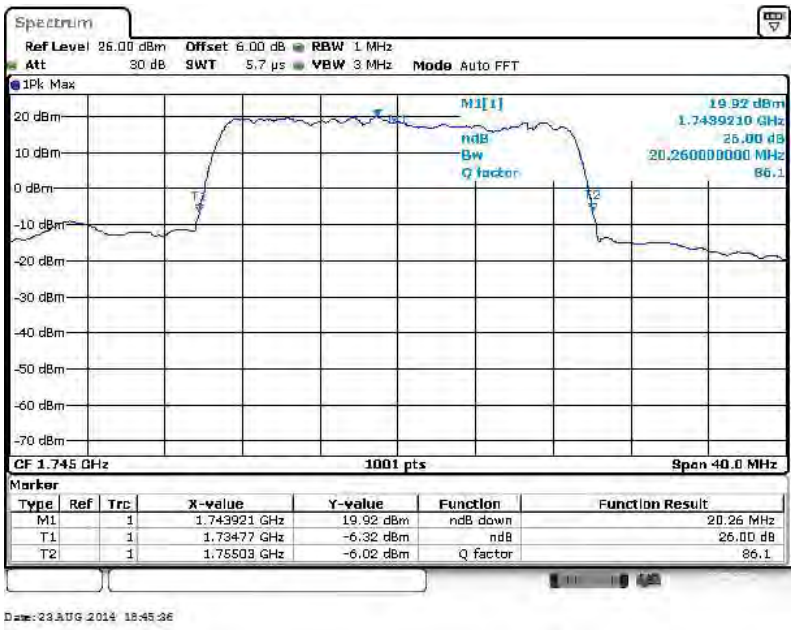
26dB Bandwidth Plot on Channel 20175



99% Occupied Bandwidth Plot on Channel 20300

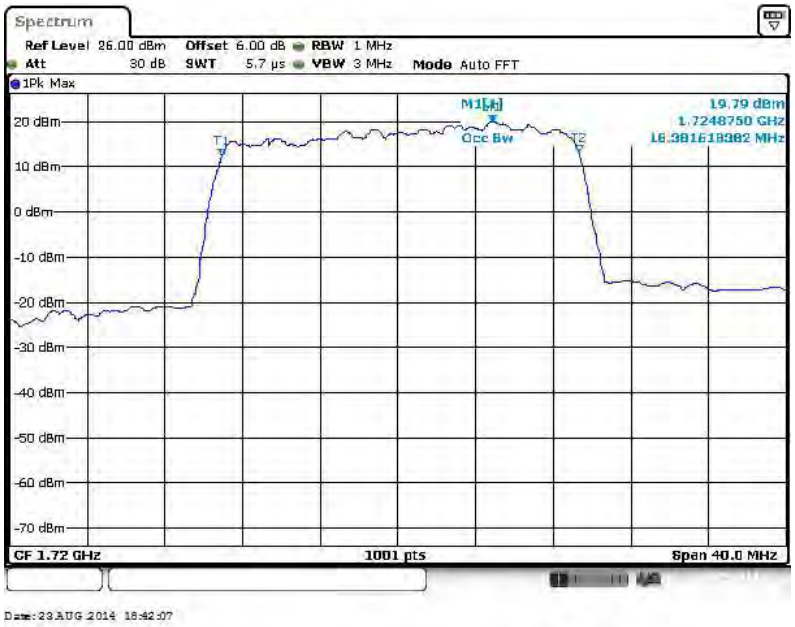


26dB Bandwidth Plot on Channel 20300

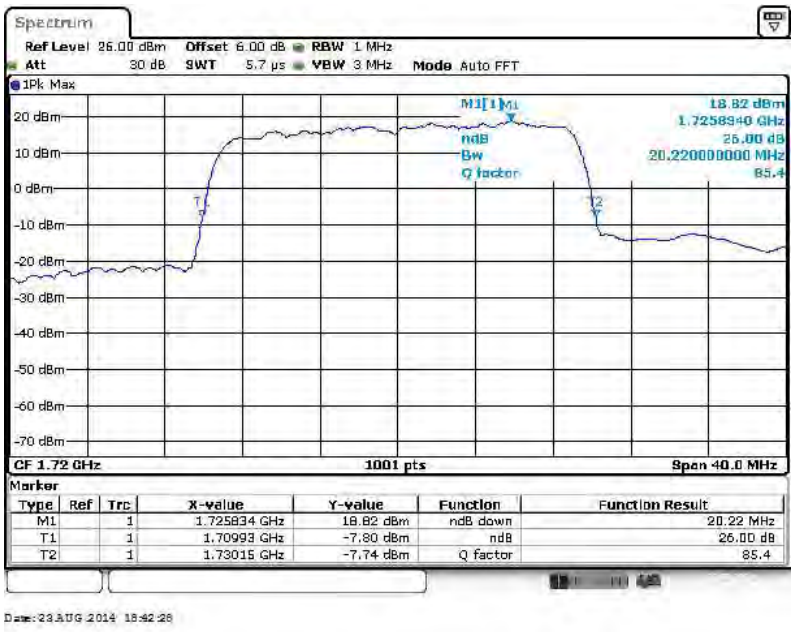


Band :	LTE Band 4	BW / Mod. :	20MHz / 16QAM

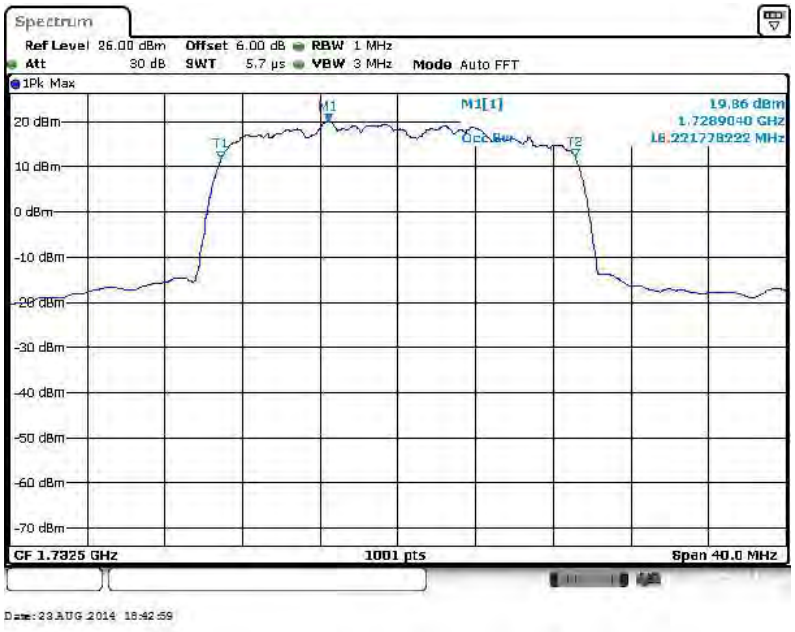
99% Occupied Bandwidth Plot on Channel 20050



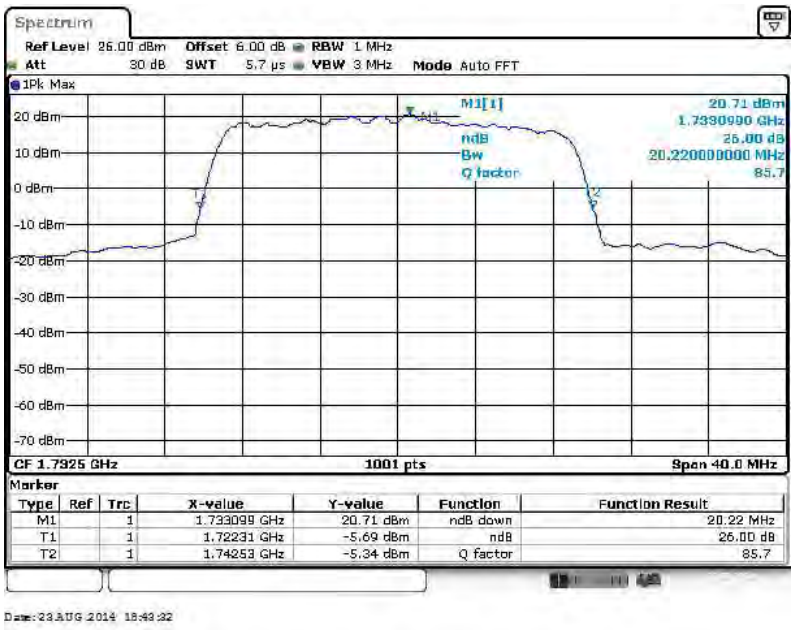
26dB Bandwidth Plot on Channel 20050



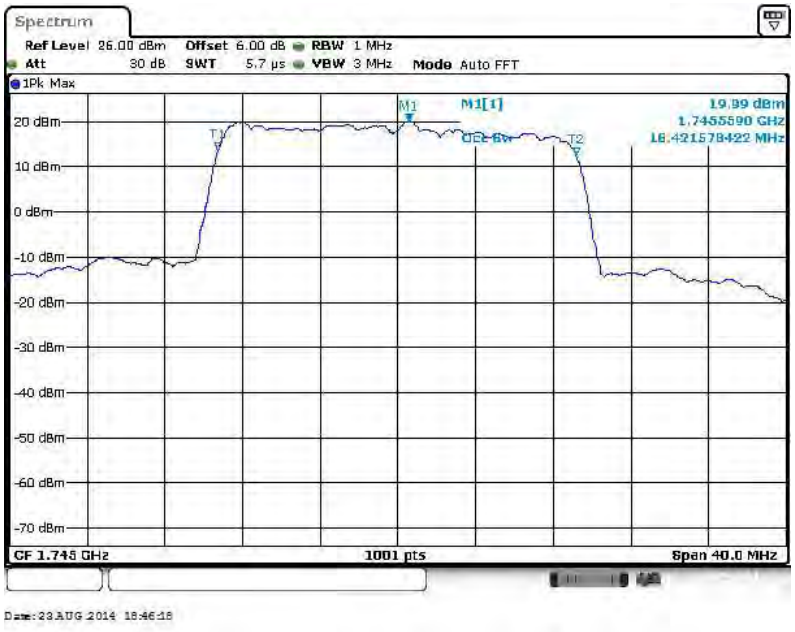
99% Occupied Bandwidth Plot on Channel 20175



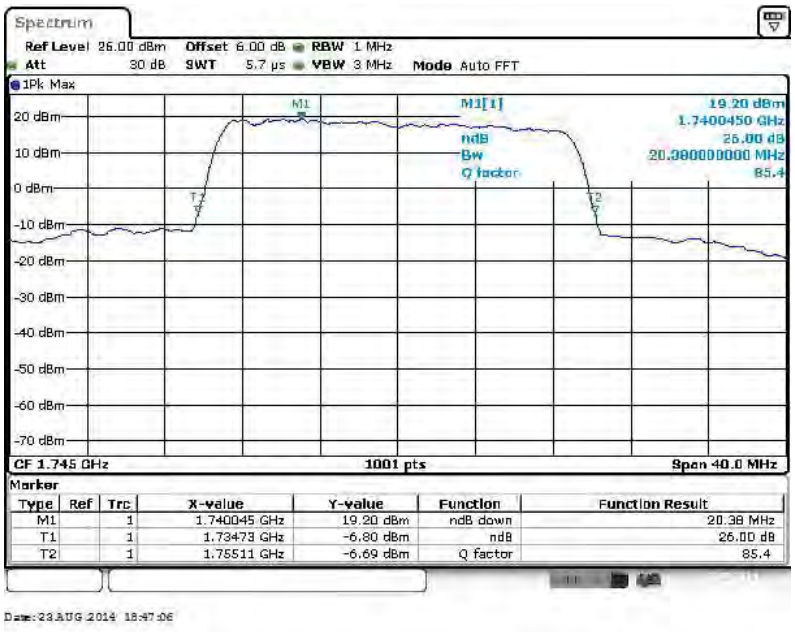
26dB Bandwidth Plot on Channel 20175



99% Occupied Bandwidth Plot on Channel 20300

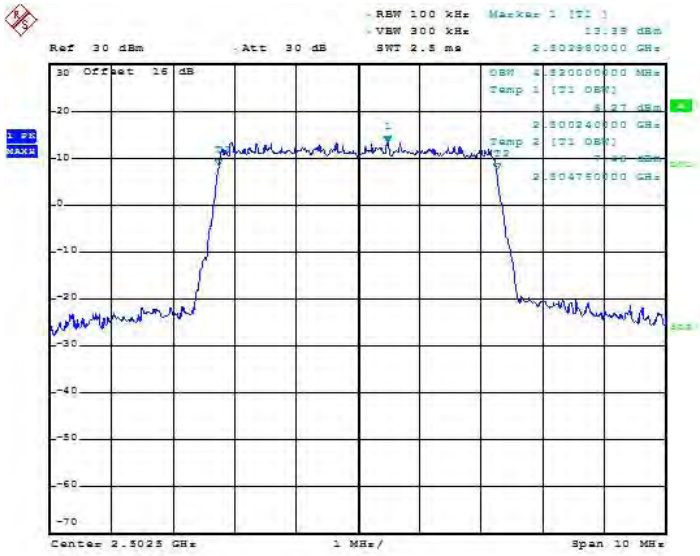


26dB Bandwidth Plot on Channel 20300



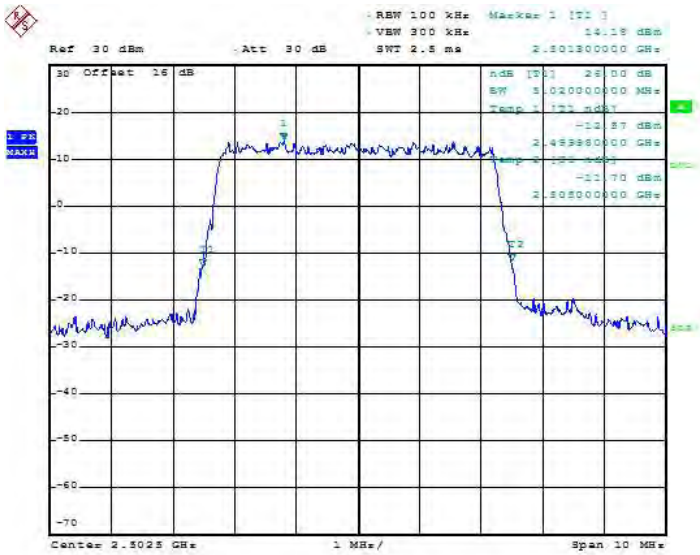
Band :	LTE Band 7	BW / Mod. :	5MHz / QPSK

99% Occupied Bandwidth Plot on Channel 20775



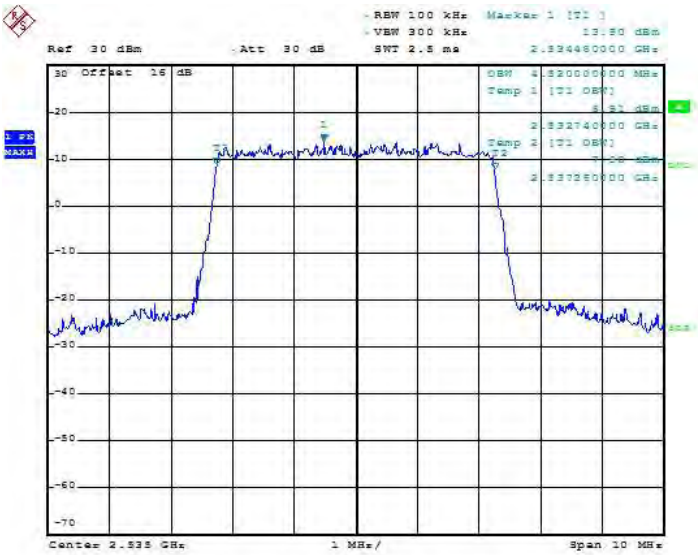
Date: 28.AUG.2014 11:07:20

26dB Bandwidth Plot on Channel 20775



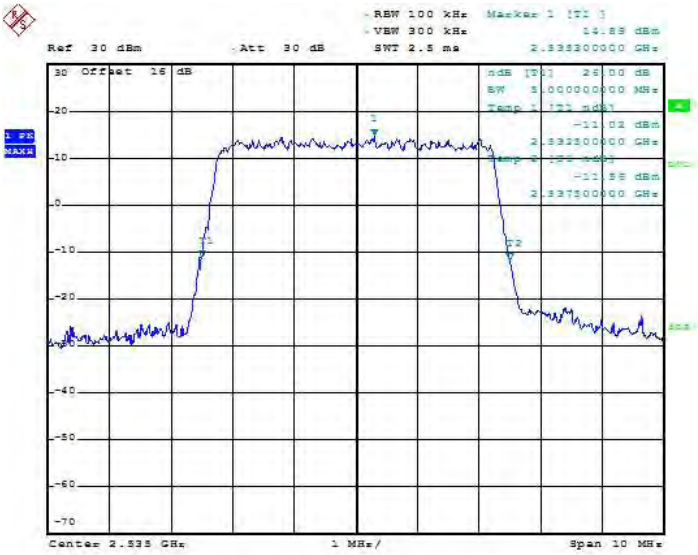
Date: 28.AUG.2014 11:37:17

99% Occupied Bandwidth Plot on Channel 21100



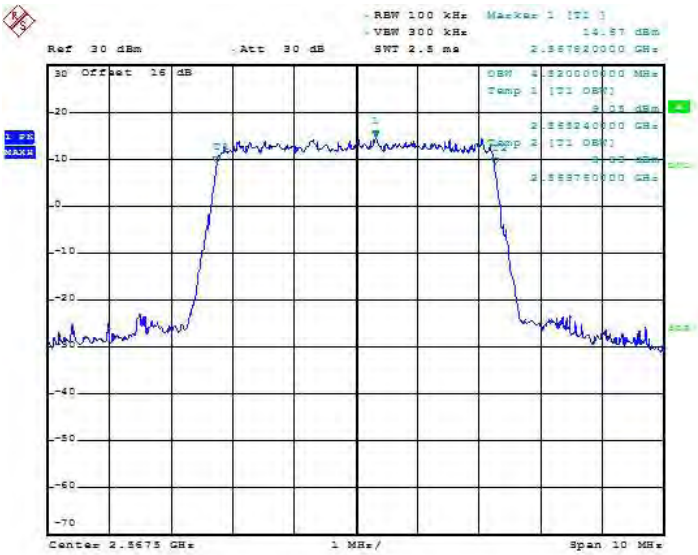
Date: 28.AUG.2014 11:06:39

26dB Bandwidth Plot on Channel 21100



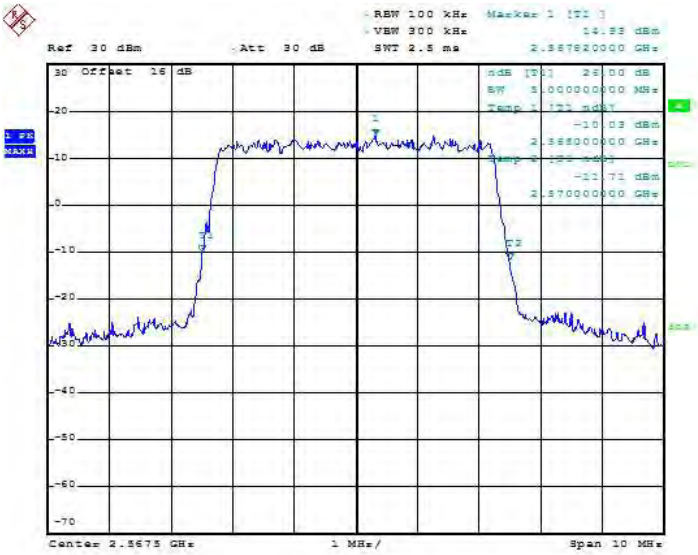
Date: 28.AUG.2014 11:35:44

99% Occupied Bandwidth Plot on Channel 21425



Date: 28.AUG.2014 11:08:40

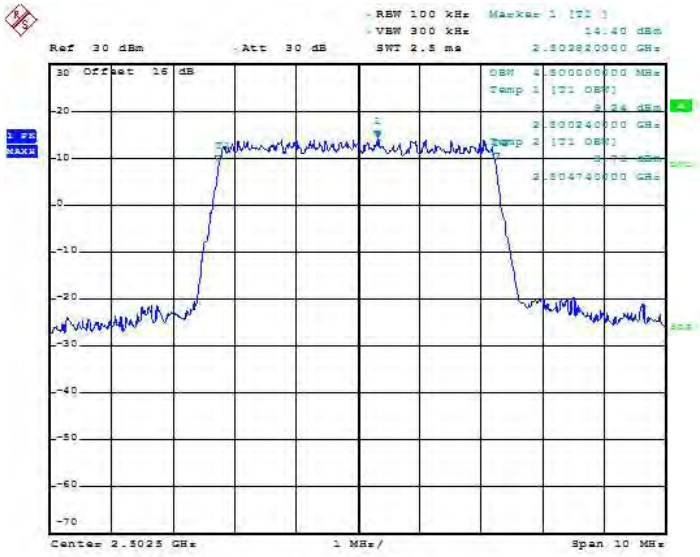
26dB Bandwidth Plot on Channel 21425



Date: 28.AUG.2014 11:37:55

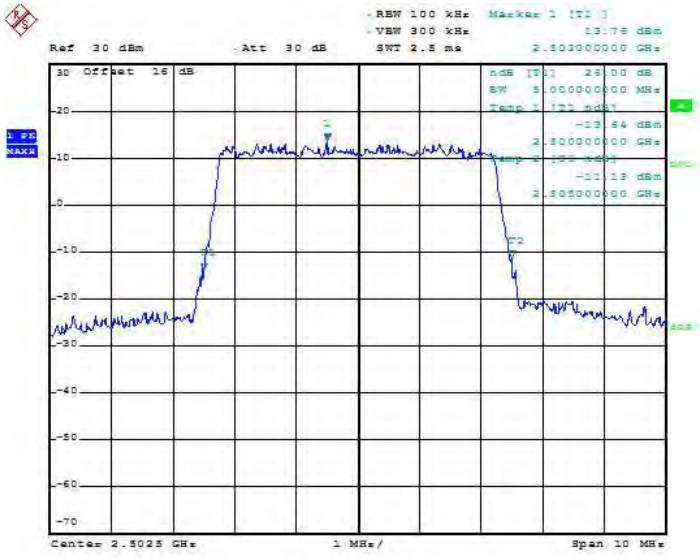
Band :	LTE Band 7	BW / Mod. :	5MHz / 16QAM

99% Occupied Bandwidth Plot on Channel 20775



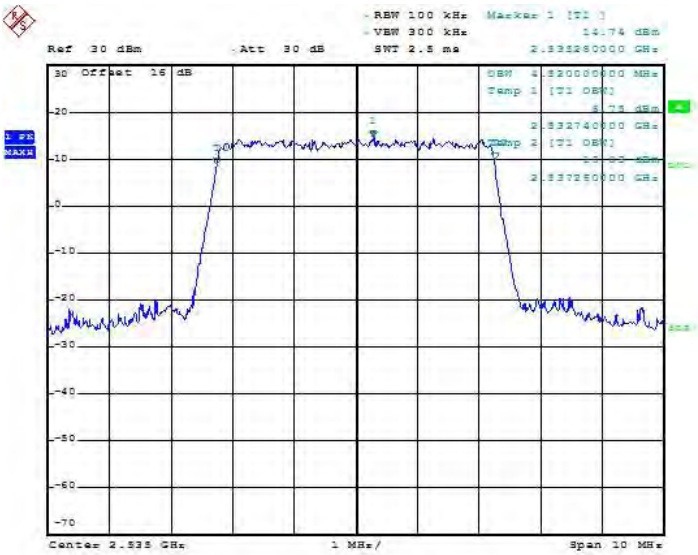
Date: 28.AUG.2014 11:07:37

26dB Bandwidth Plot on Channel 20775



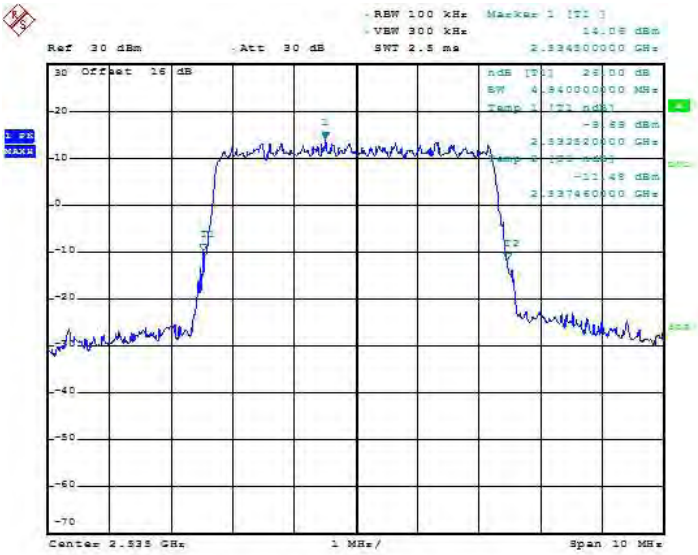
Date: 28.AUG.2014 11:37:03

99% Occupied Bandwidth Plot on Channel 21100



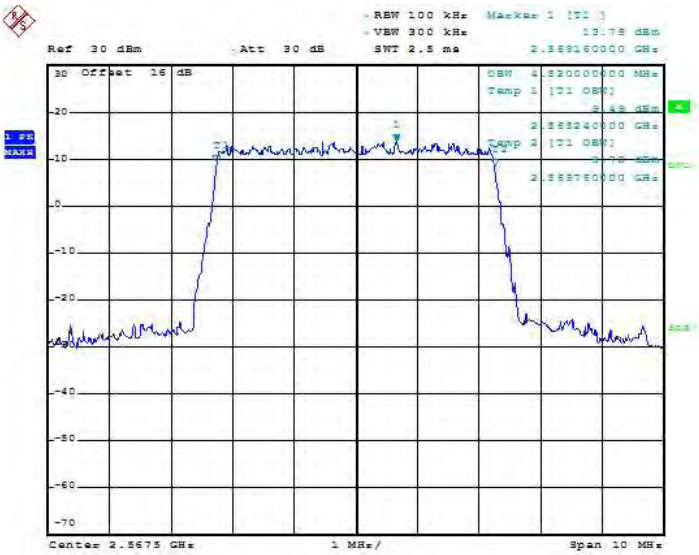
Date: 28.AUG.2014 11:06:22

26dB Bandwidth Plot on Channel 21100



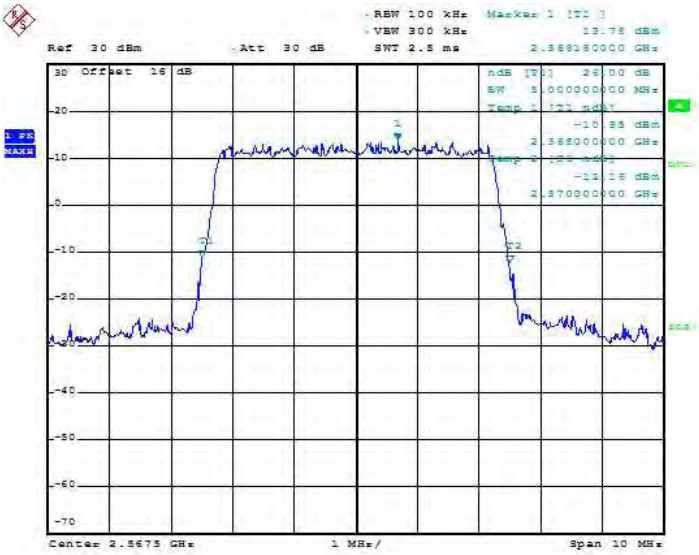
Date: 28.AUG.2014 11:36:00

99% Occupied Bandwidth Plot on Channel 21425



Date: 28.AUG.2014 11:08:14

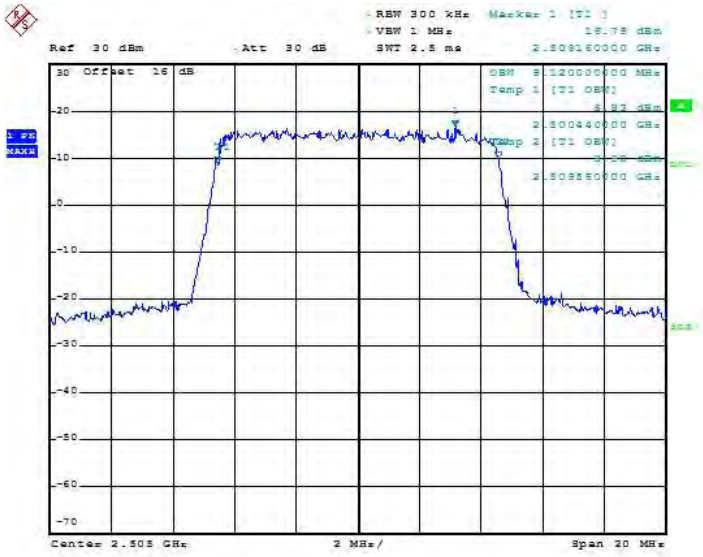
26dB Bandwidth Plot on Channel 21425



Date: 28.AUG.2014 11:38:08

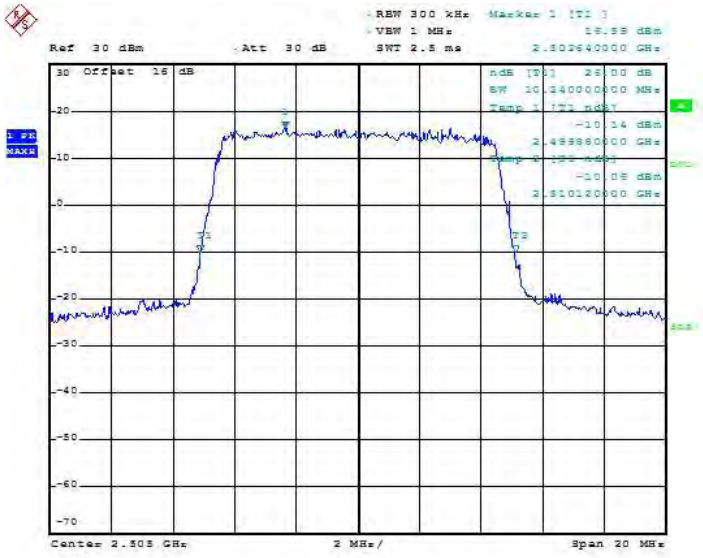
Band :	LTE Band 7	BW / Mod. :	10MHz / QPSK

99% Occupied Bandwidth Plot on Channel 20800



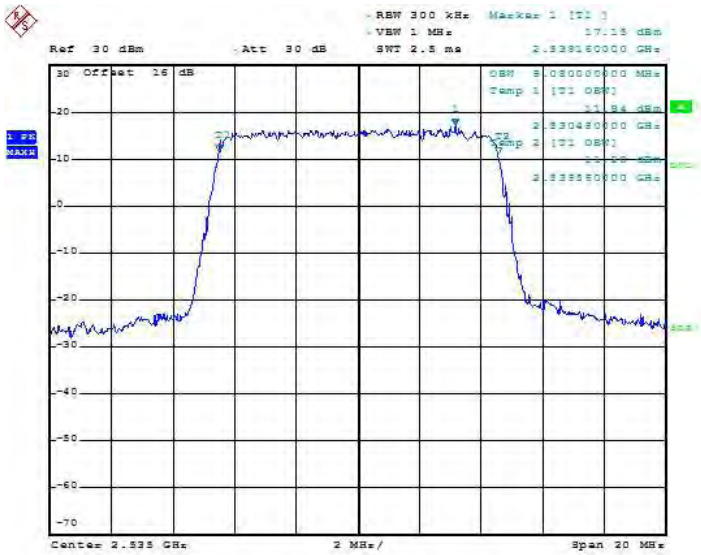
Date: 28.AUG.2014 11:10:37

26dB Bandwidth Plot on Channel 20800



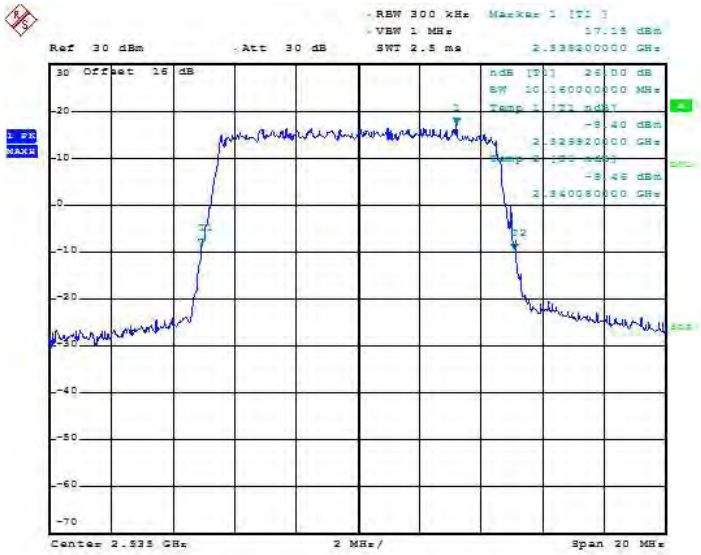
Date: 28.AUG.2014 11:35:02

99% Occupied Bandwidth Plot on Channel 21100



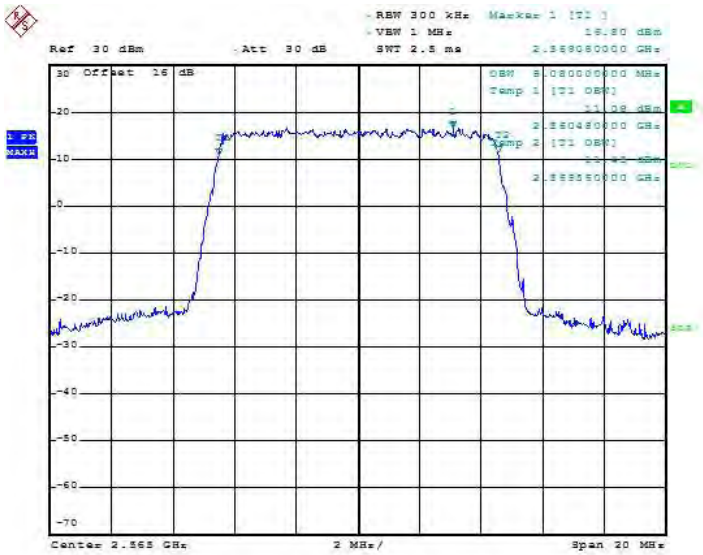
Date: 28.AUG.2014 11:09:36

26dB Bandwidth Plot on Channel 21100



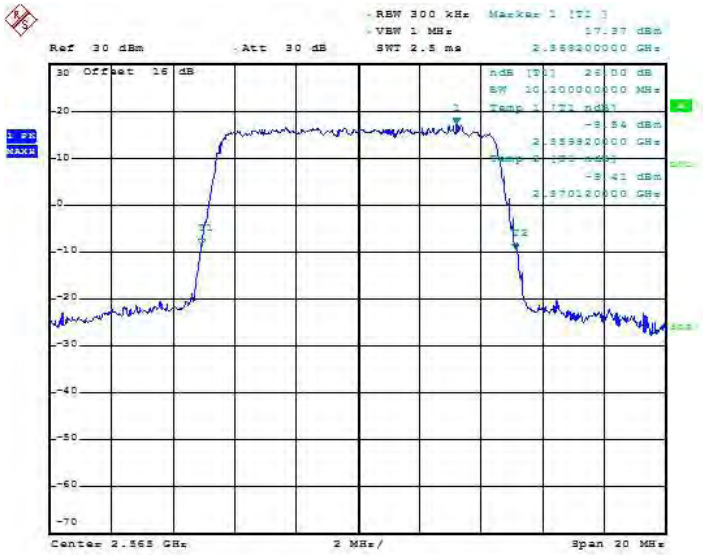
Date: 28.AUG.2014 11:31:53

99% Occupied Bandwidth Plot on Channel 21400



Date: 28.AUG.2014 11:11:08

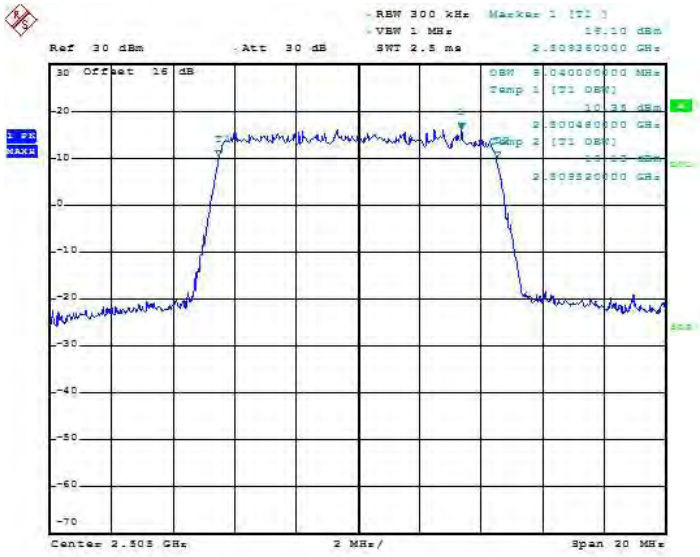
26dB Bandwidth Plot on Channel 21400



Date: 28.AUG.2014 11:32:36

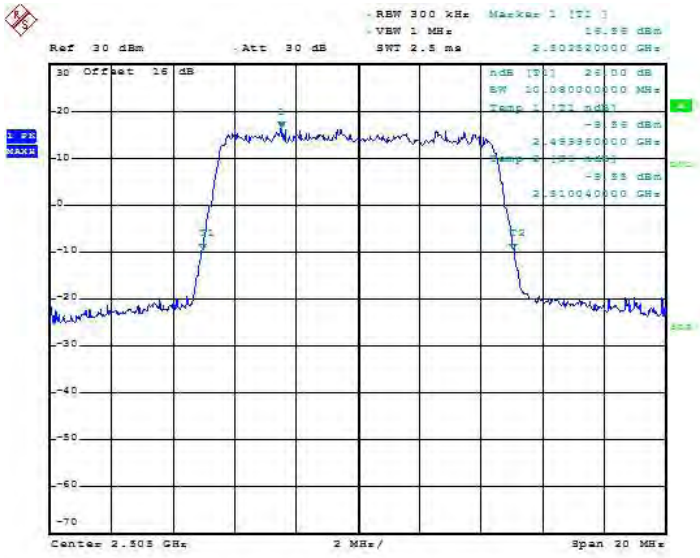
Band :	LTE Band 7	BW / Mod. :	10MHz / 16QAM

99% Occupied Bandwidth Plot on Channel 20800



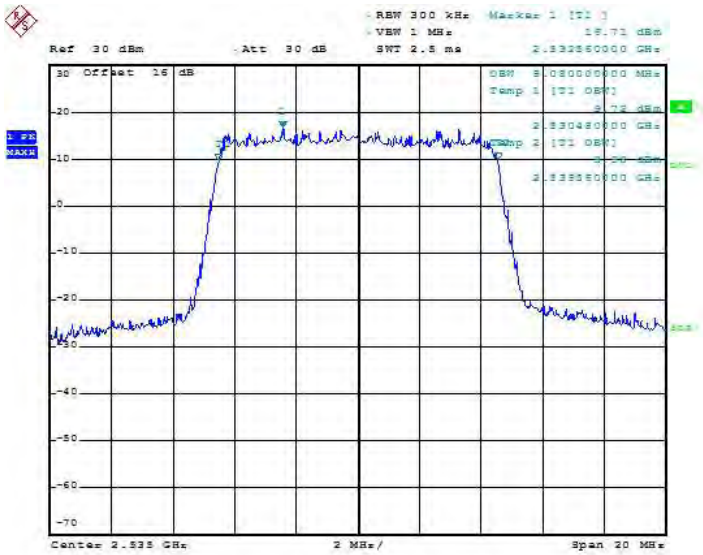
Date: 28.AUG.2014 11:10:22

26dB Bandwidth Plot on Channel 20800



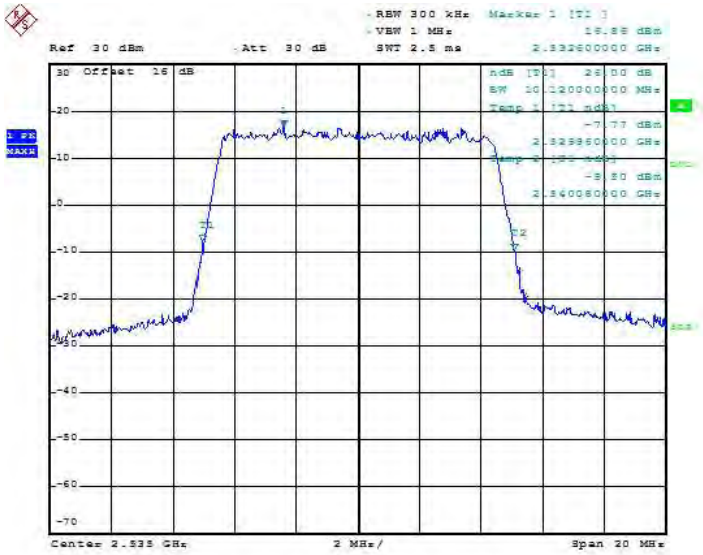
Date: 28.AUG.2014 11:34:25

99% Occupied Bandwidth Plot on Channel 21100



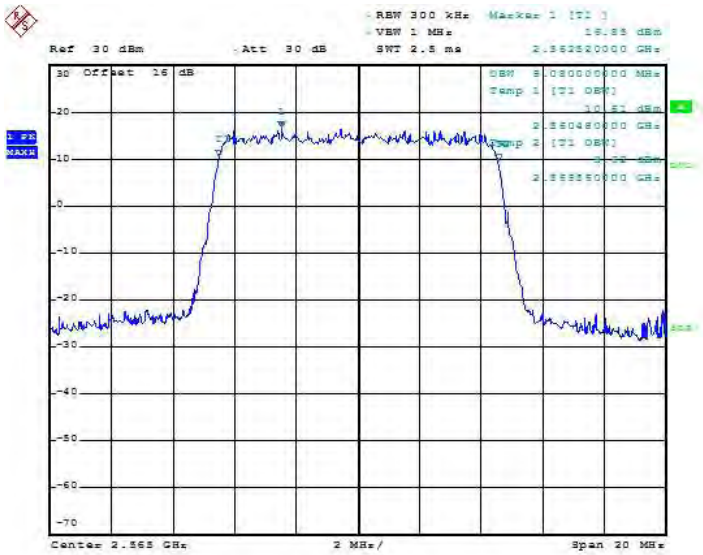
Date: 28.AUG.2014 11:09:50

26dB Bandwidth Plot on Channel 21100



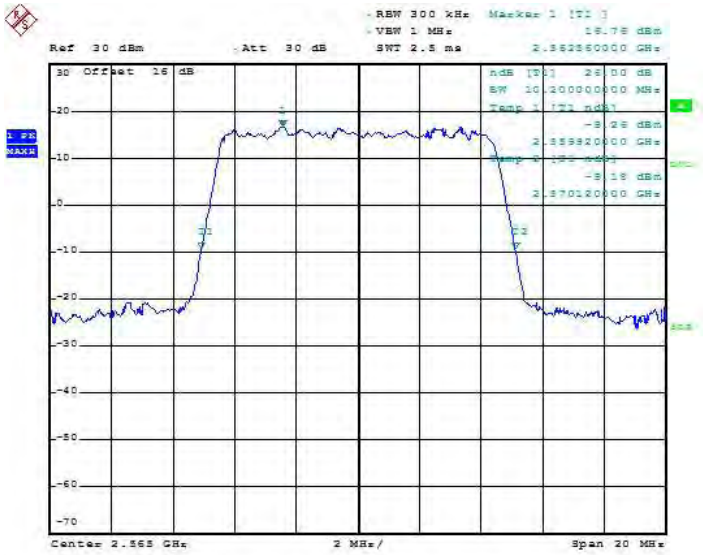
Date: 28.AUG.2014 11:31:42

99% Occupied Bandwidth Plot on Channel 21400



Date: 28.AUG.2014 11:11:20

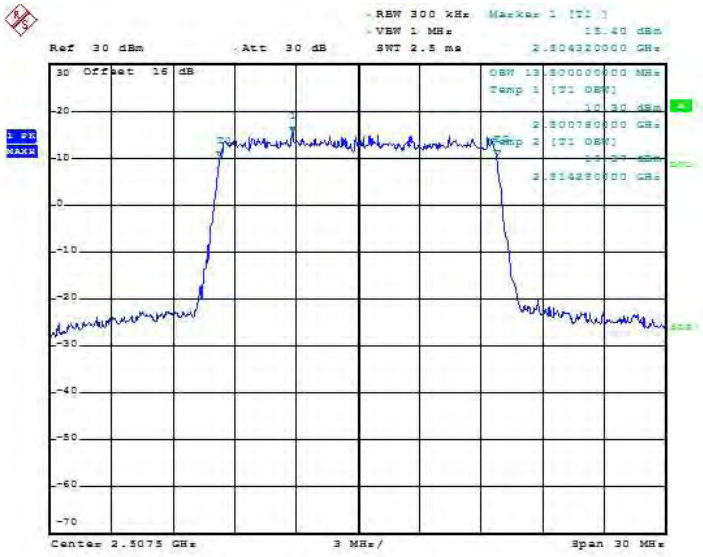
26dB Bandwidth Plot on Channel 21400



Date: 28.AUG.2014 11:33:51

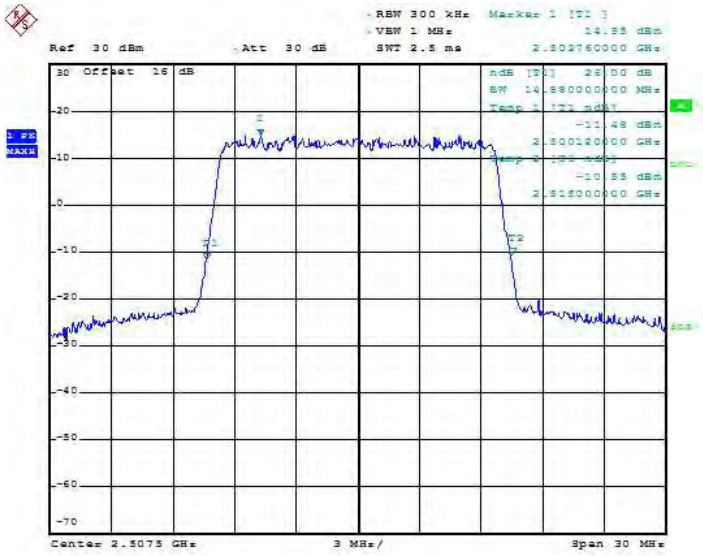
Band :	LTE Band 7	BW / Mod. :	15MHz / QPSK

99% Occupied Bandwidth Plot on Channel 20825



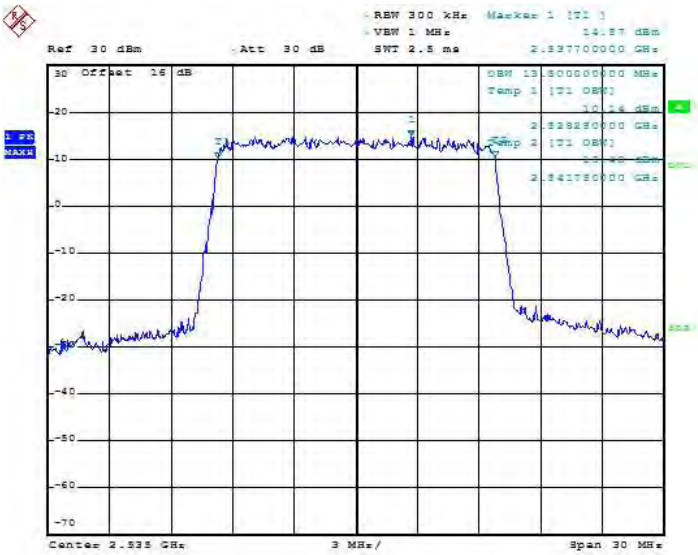
Date: 28.AUG.2014 11:14:42

26dB Bandwidth Plot on Channel 20825



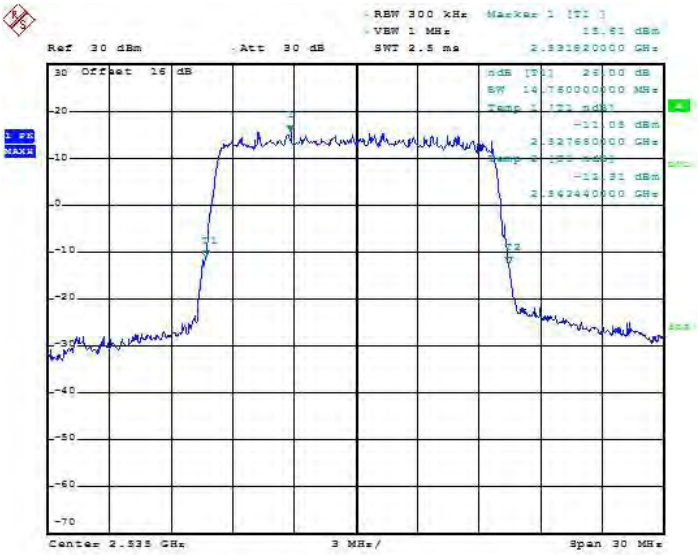
Date: 28.AUG.2014 11:30:09

99% Occupied Bandwidth Plot on Channel 21100



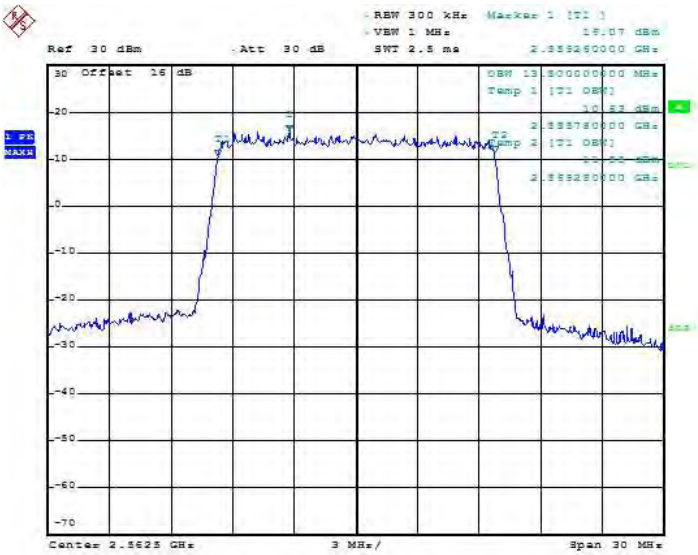
Date: 28.AUG.2014 11:12:07

26dB Bandwidth Plot on Channel 21100



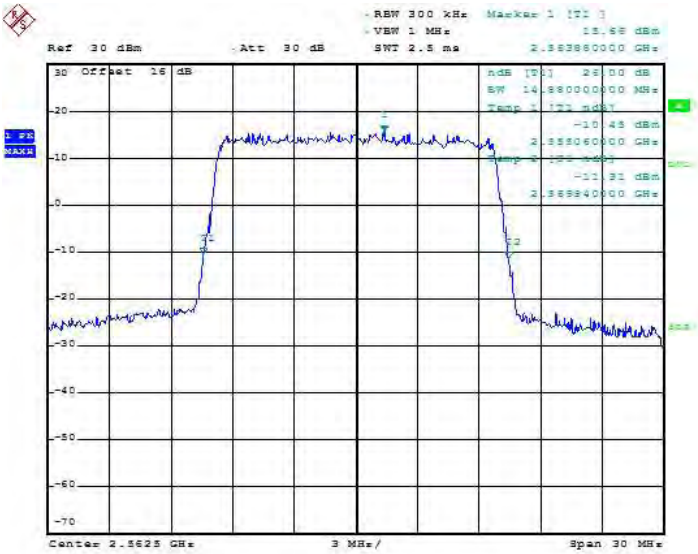
Date: 28.AUG.2014 11:29:10

99% Occupied Bandwidth Plot on Channel 21375



Date: 28.AUG.2014 11:12:39

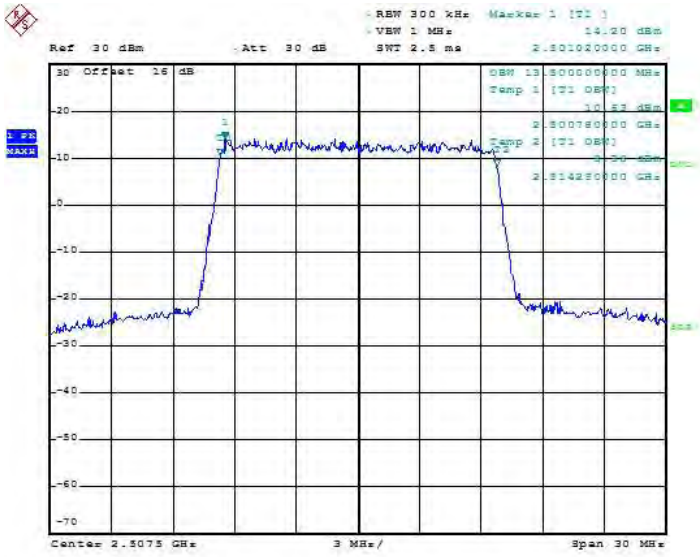
26dB Bandwidth Plot on Channel 21375



Date: 28.AUG.2014 11:30:44

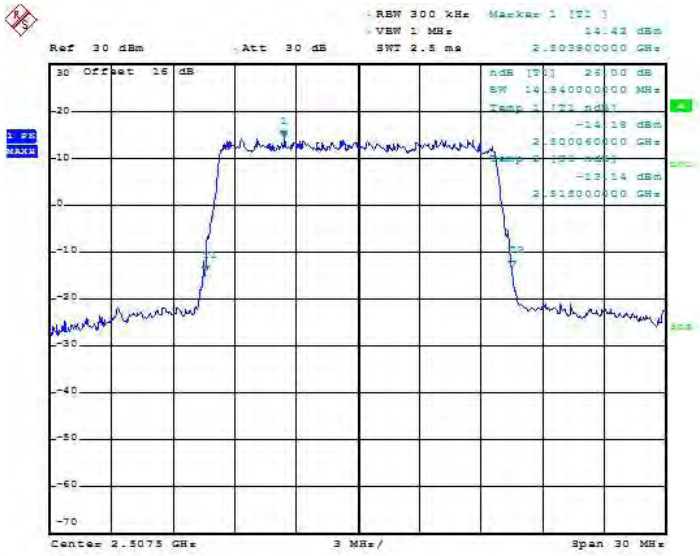
Band :	LTE Band 7	BW / Mod. :	15MHz / 16QAM

99% Occupied Bandwidth Plot on Channel 20825



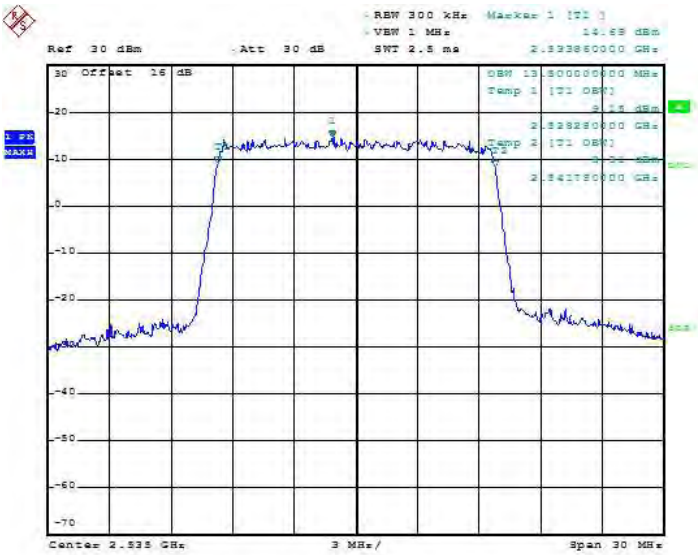
Date: 28.AUG.2014 11:14:28

26dB Bandwidth Plot on Channel 20825



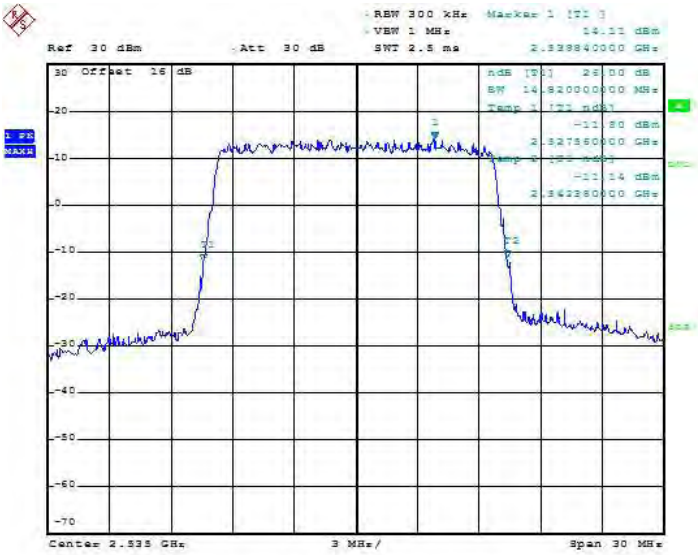
Date: 28.AUG.2014 11:29:57

99% Occupied Bandwidth Plot on Channel 21100



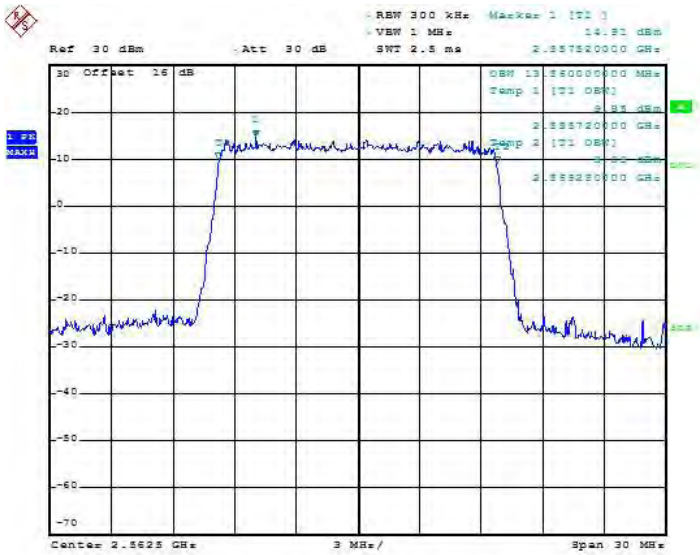
Date: 28.AUG.2014 11:11:54

26dB Bandwidth Plot on Channel 21100



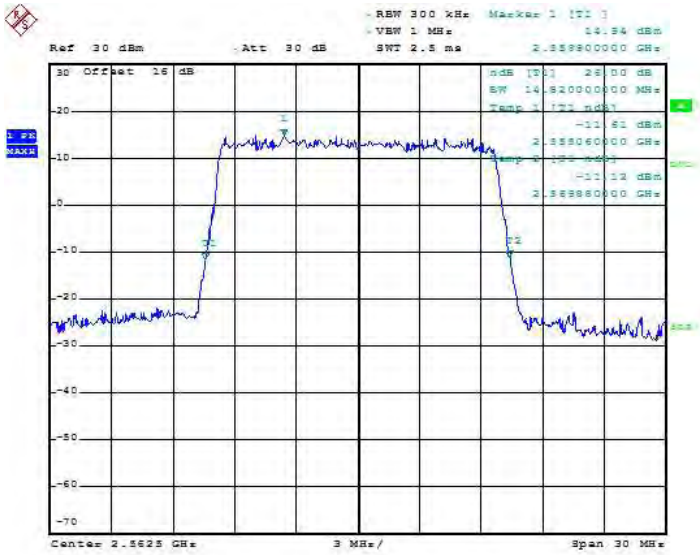
Date: 28.AUG.2014 11:29:24

99% Occupied Bandwidth Plot on Channel 21375



Date: 28.AUG.2014 11:12:52

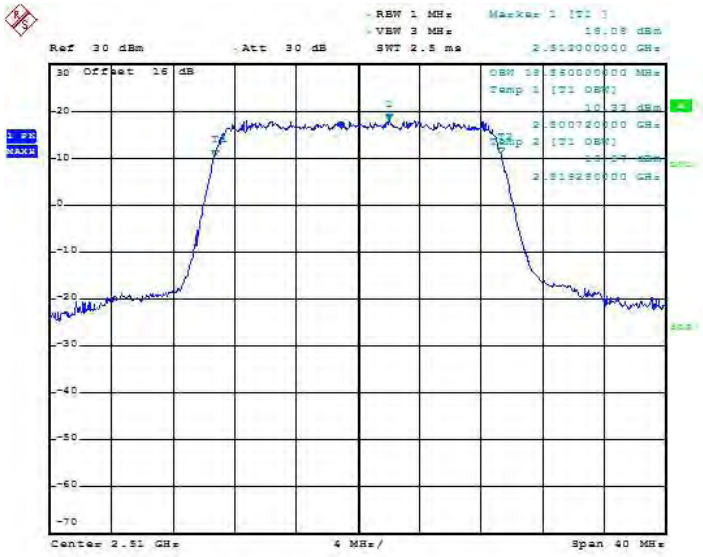
26dB Bandwidth Plot on Channel 21375



Date: 28.AUG.2014 11:31:04

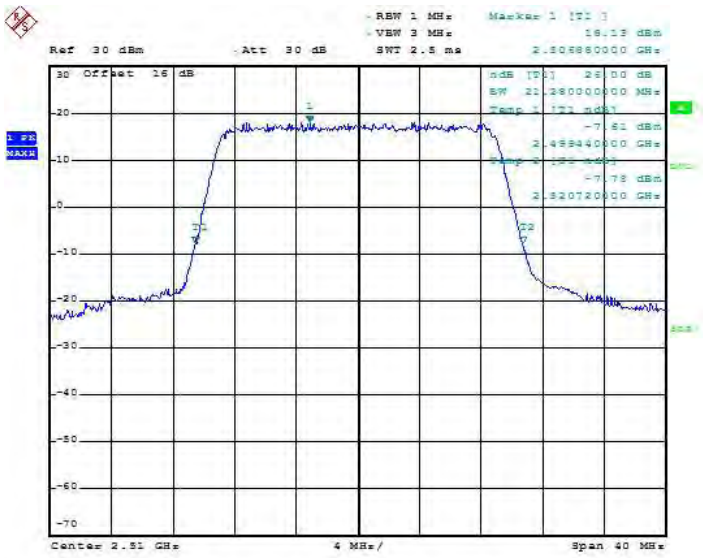
Band :	LTE Band 7	BW / Mod. :	20MHz / QPSK

99% Occupied Bandwidth Plot on Channel 20850



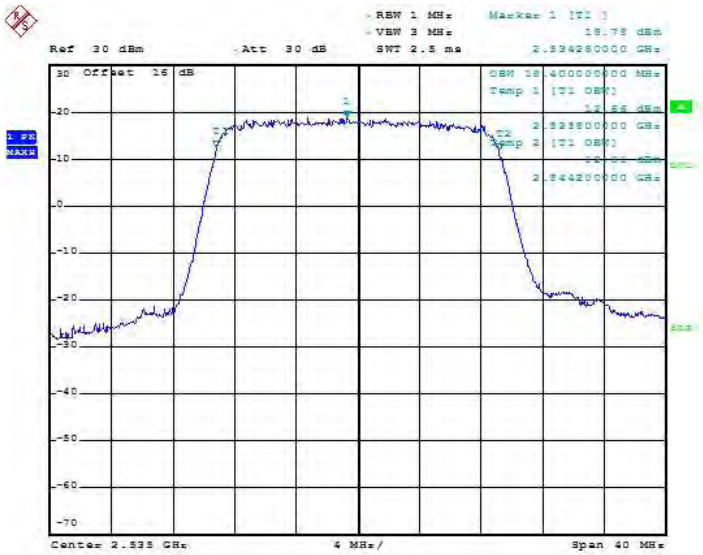
Date: 28.AUG.2014 11:16:22

26dB Bandwidth Plot on Channel 20850



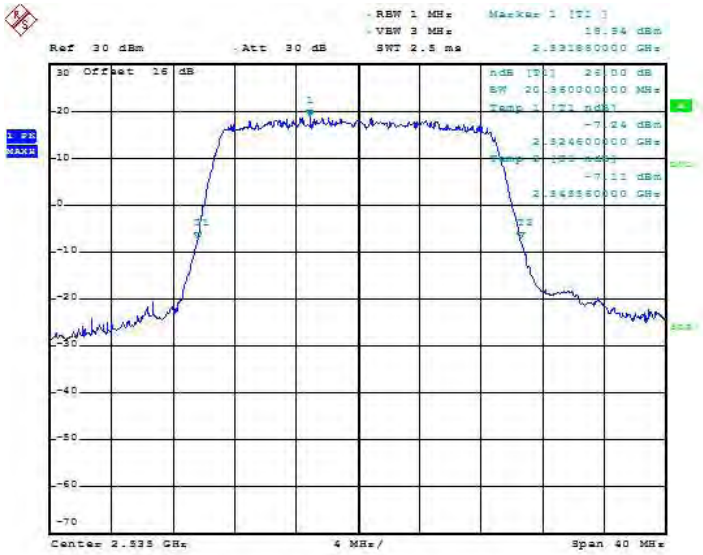
Date: 28.AUG.2014 11:27:43

99% Occupied Bandwidth Plot on Channel 21100



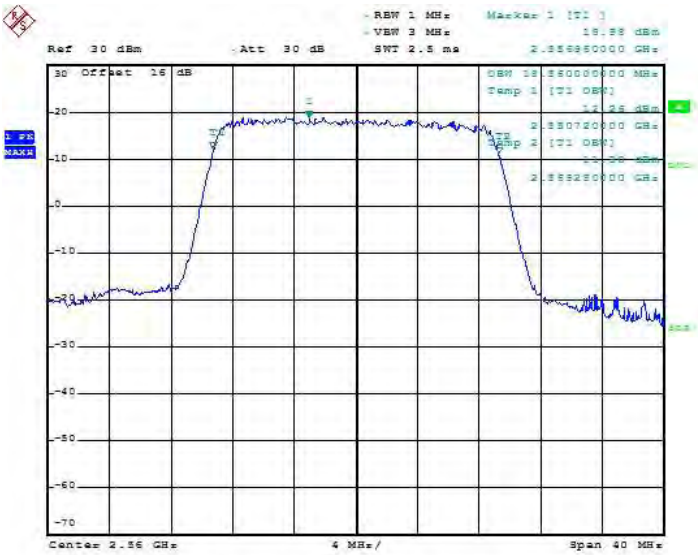
Date: 28.AUG.2014 11:15:17

26dB Bandwidth Plot on Channel 21100



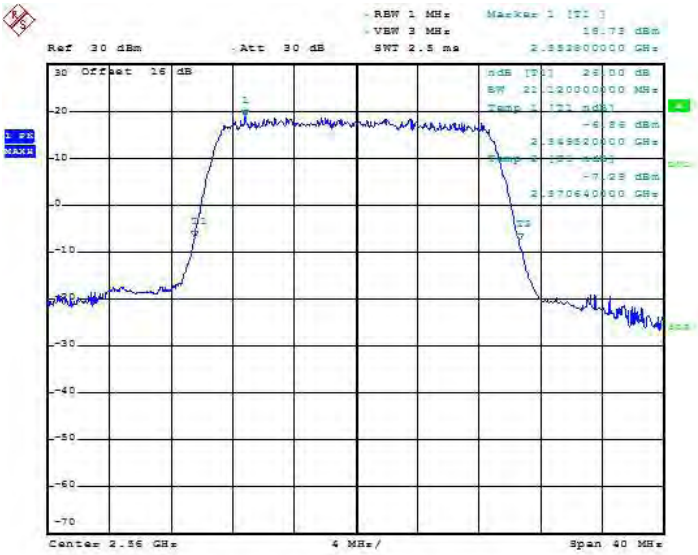
Date: 28.AUG.2014 11:28:49

99% Occupied Bandwidth Plot on Channel 21350



Date: 28.AUG.2014 11:16:52

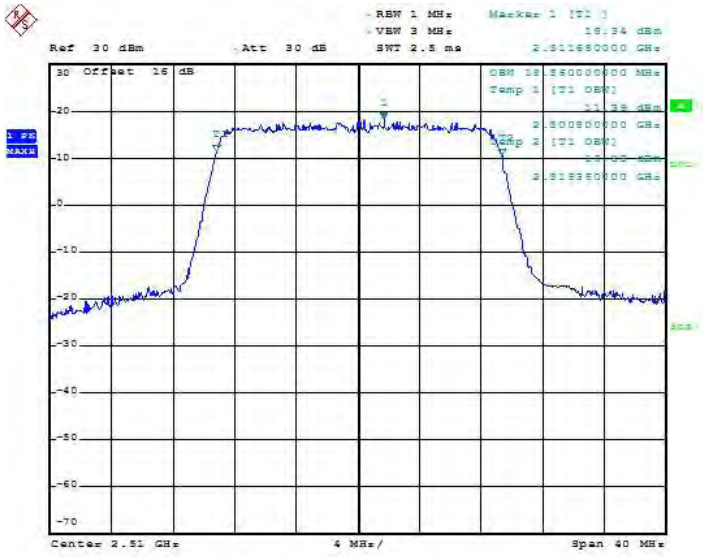
26dB Bandwidth Plot on Channel 21350



Date: 28.AUG.2014 11:27:10

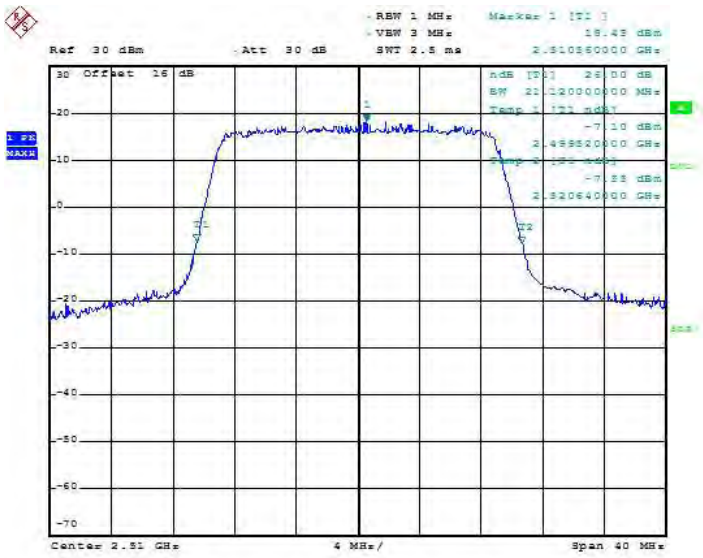
Band :	LTE Band 7	BW / Mod. :	20MHz / 16QAM

99% Occupied Bandwidth Plot on Channel 20850



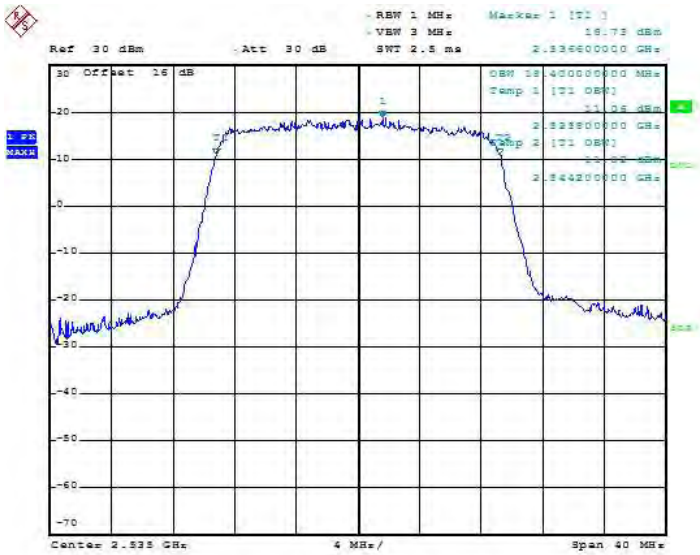
Date: 28.AUG.2014 11:16:05

26dB Bandwidth Plot on Channel 20850



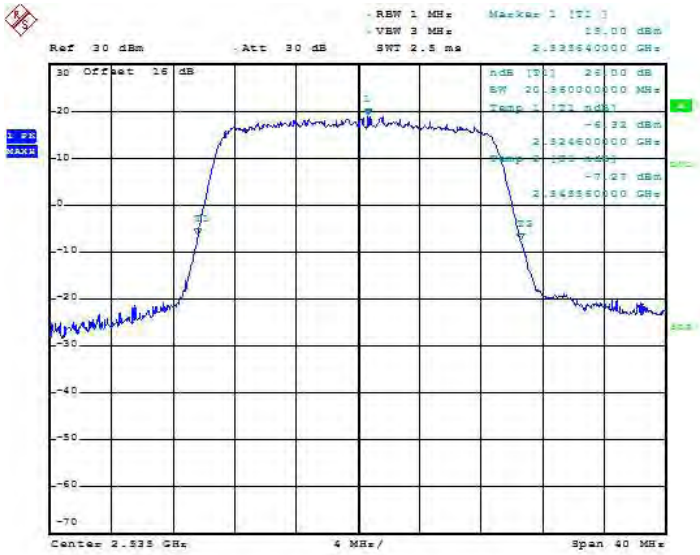
Date: 28.AUG.2014 11:27:59

99% Occupied Bandwidth Plot on Channel 21100



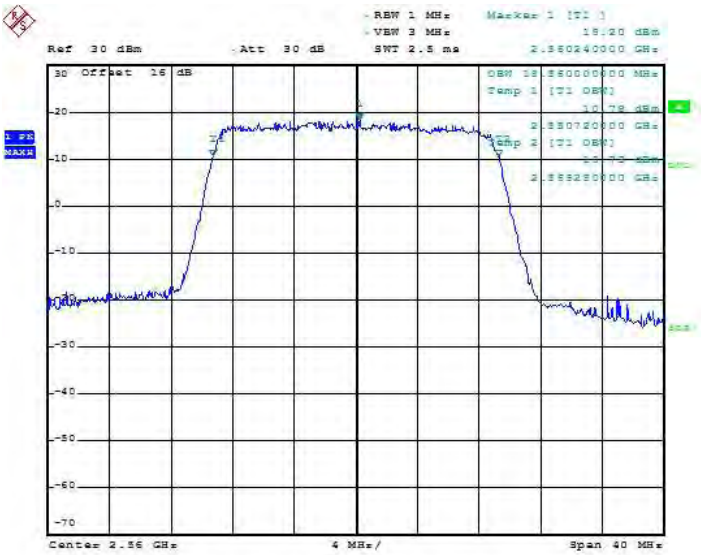
Date: 28.AUG.2014 11:15:33

26dB Bandwidth Plot on Channel 21100



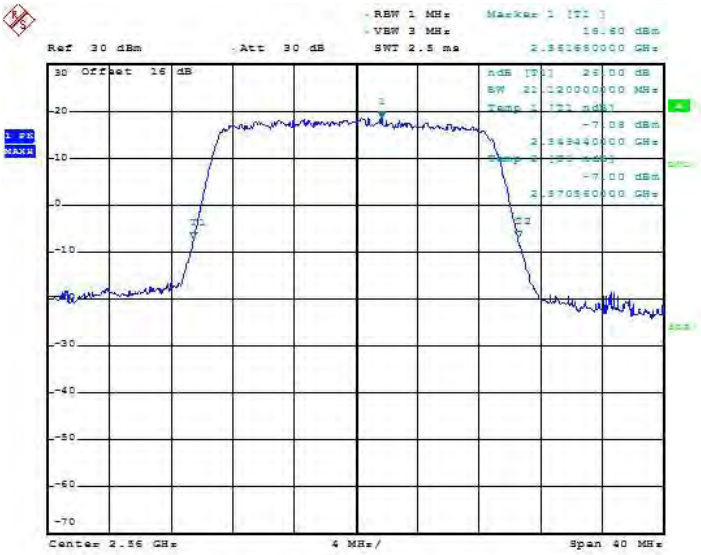
Date: 28.AUG.2014 11:28:38

99% Occupied Bandwidth Plot on Channel 21350



Date: 28.AUG.2014 11:17:05

26dB Bandwidth Plot on Channel 21350



Date: 28.AUG.2014 11:26:59

3.5 Conducted Band Edge Measurement

3.5.1 Description of Conducted Band Edge Measurement

24.238 (a) and RSS – 133

For operations in the 1850-1910 and 1930-1990 MHz band, the FCC limit is 43 + $10\log_{10}$(P[Watts]) dB below the transmitter power P(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 (h) and RSS – 139

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

27.53 (m) (4) and RSS – 199

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

RSS-199:

The emissions be operated in the 2496-2690 MHz band, the attenuation factor shall be not less than 43 + 10 log (P) dB at the channel edge and 55 + 10 log (P) dB at 5.5 megahertz from the channel edges.

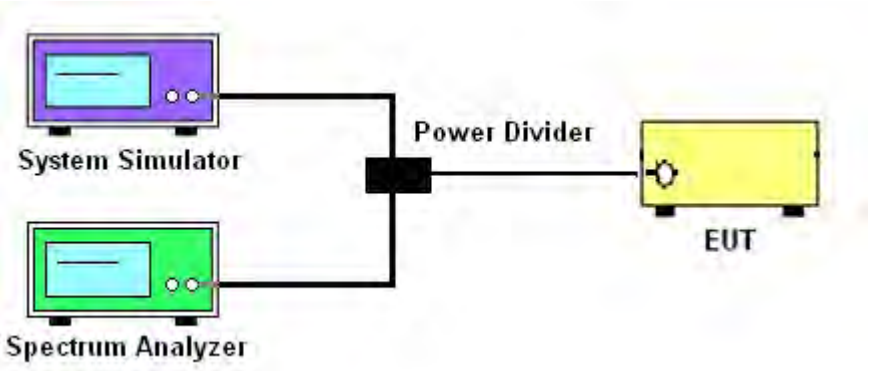
3.5.2 Measuring Instruments

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

3.5.3 Test Procedures

1. The EUT was connected to spectrum analyzer and system simulator via a power divider.
2. The band edges of low and high channels for the highest RF powers were measured. Set RBW >= 1% EBW in the 1MHz band immediately outside and adjacent to the band edge.
3. Set spectrum analyzer with RMS detector.
4. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
5. The limit line is derived from 43 + 10log(P)dB below the transmitter power P(Watts)
   = P(W)- [43 + 10log(P)] (dB)
   = [30 + 10log(P)] (dBm) - [43 + 10log(P)] (dB)
   = -13dBm.
   <For Band 7>
   The limit line is derived from 55+ 10log(P)dB below the transmitter power P(Watts)
   = P(W)- [55 + 10log(P)] (dB)
   = [30 + 10log(P)] (dBm) - [55 + 10log(P)] (dB)
   = -25dBm.

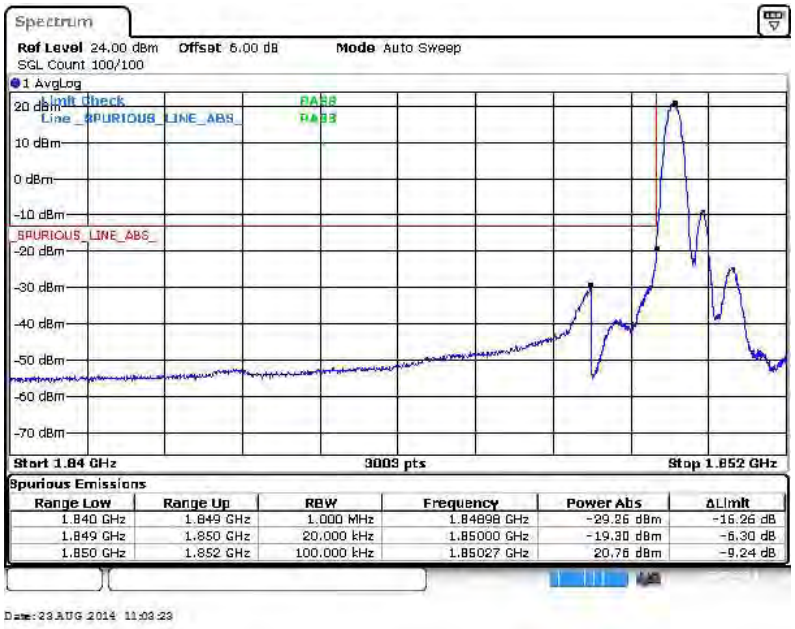
3.5.4 Test Setup



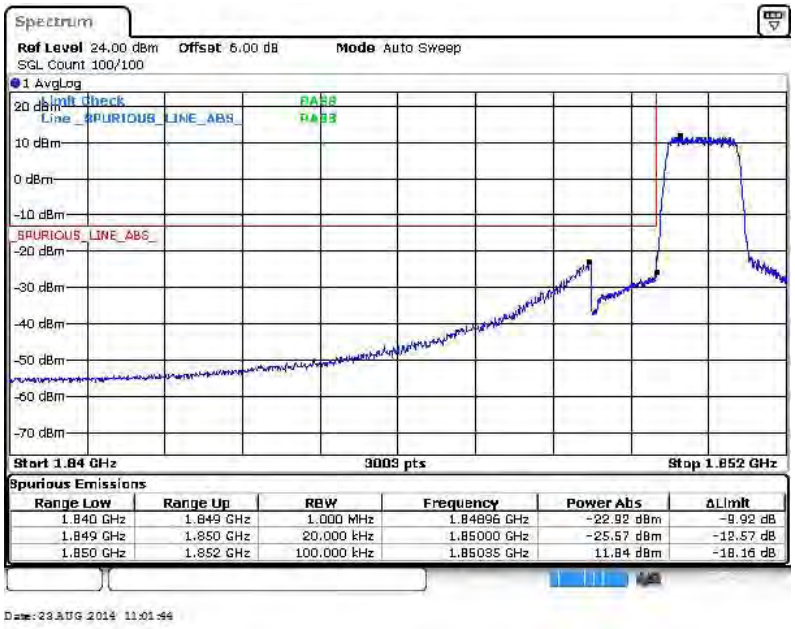
3.5.5 Test Result (Plots) of Conducted Band Edge

Band :	LTE Band 2	Band Width :	1.4MHz / QPSK

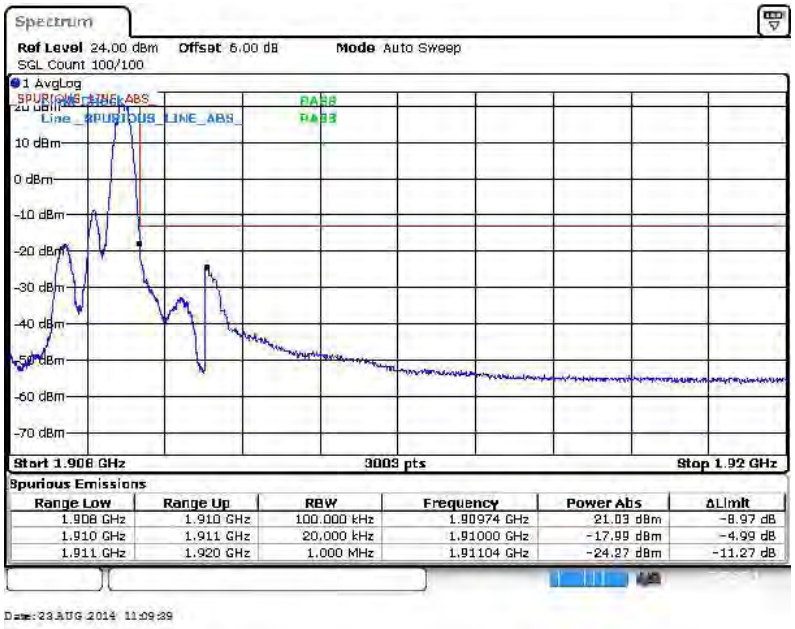
Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



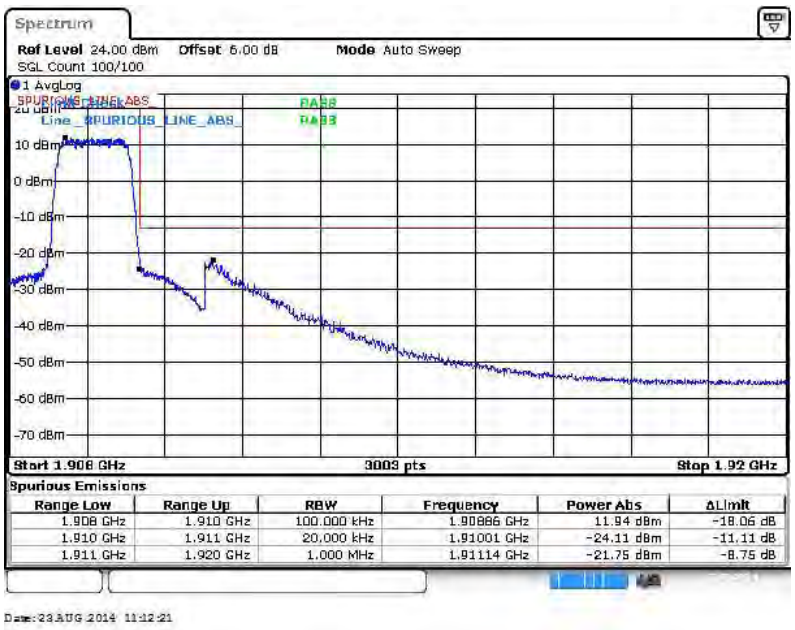
Lower Band Edge Plot for QPSK-RB Size 6, RB Offset 0



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

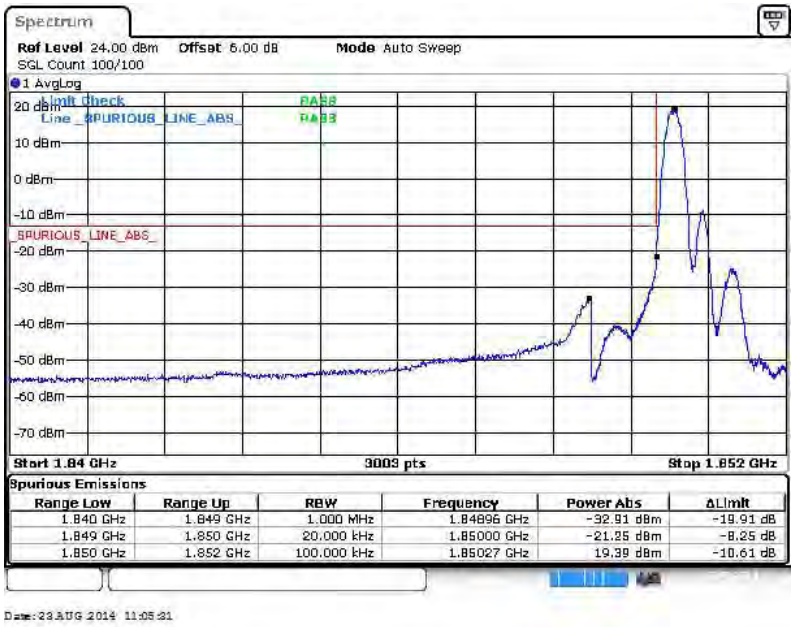


Higher Band Edge Plot for QPSK-RB Size 6, RB Offset 0

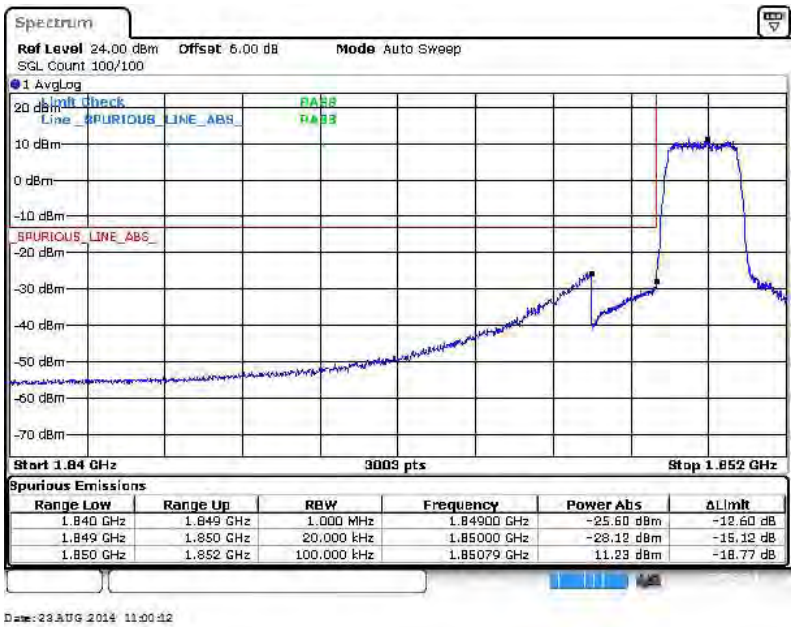


Band :	LTE Band 2	Band Width :	1.4MHz / 16QAM

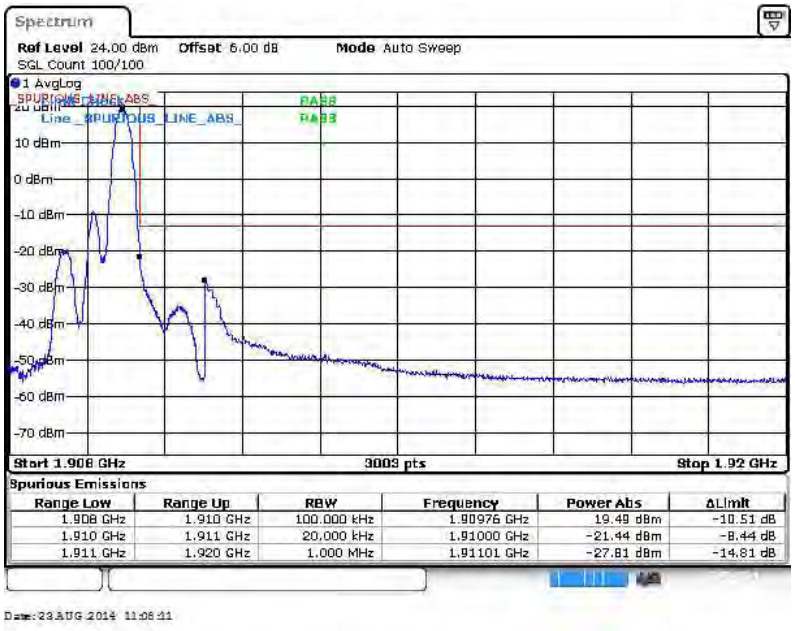
Lower Band Edge Plot for 16QAM -RB Size 1, RB Offset 0



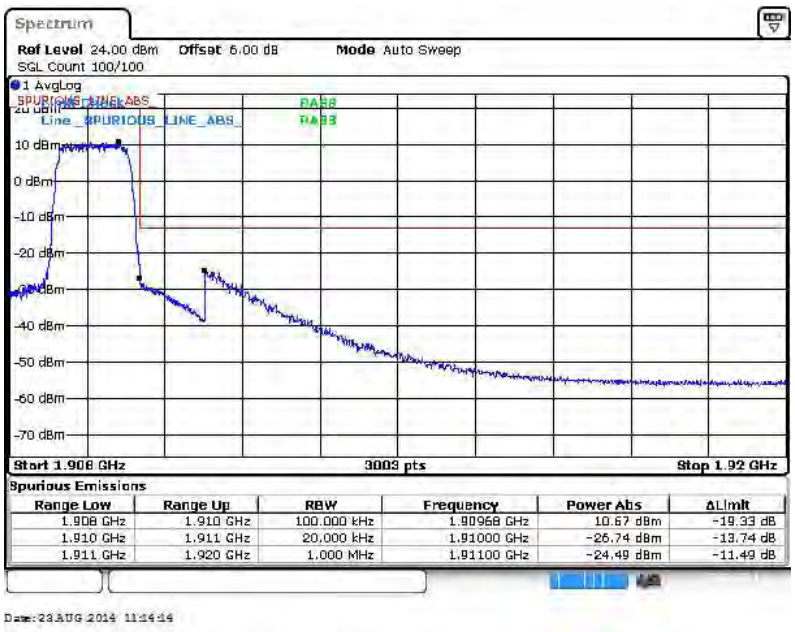
Lower Band Edge Plot for 16QAM -RB Size 6, RB Offset 0



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

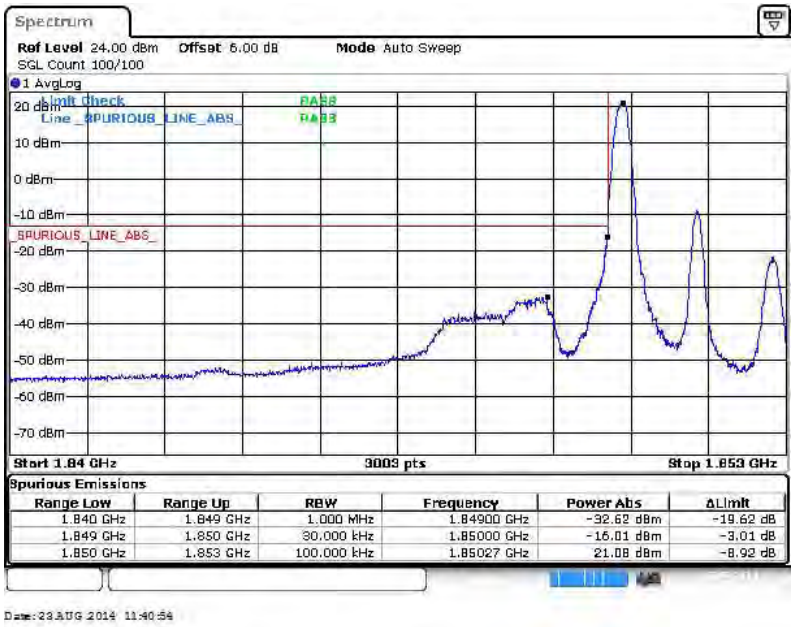


Higher Band Edge Plot for 16QAM -RB Size 6, RB Offset 0

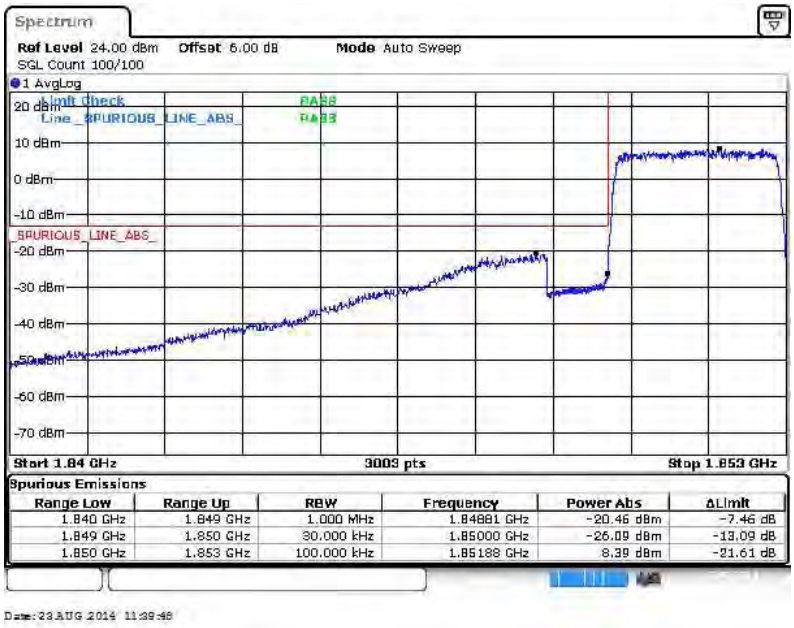


Band :	LTE Band 2	Band Width :	3MHz / QPSK

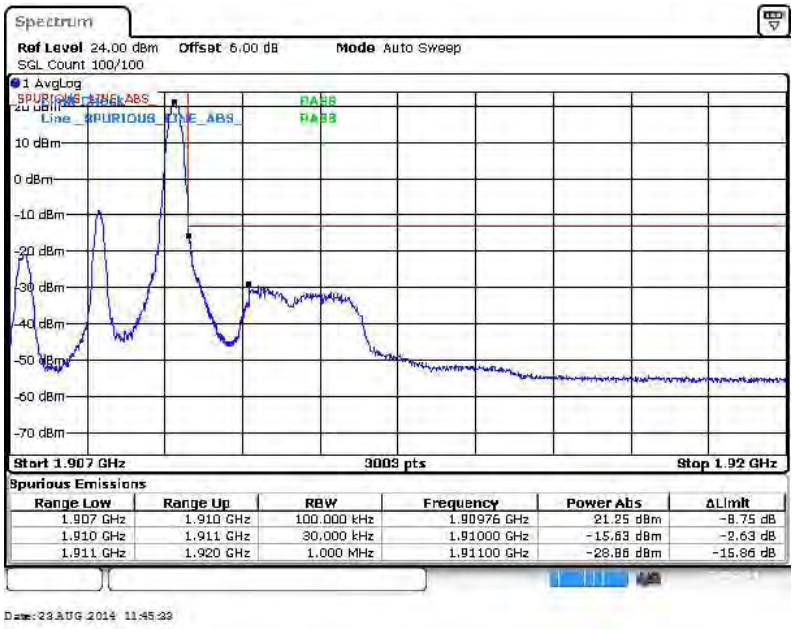
Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



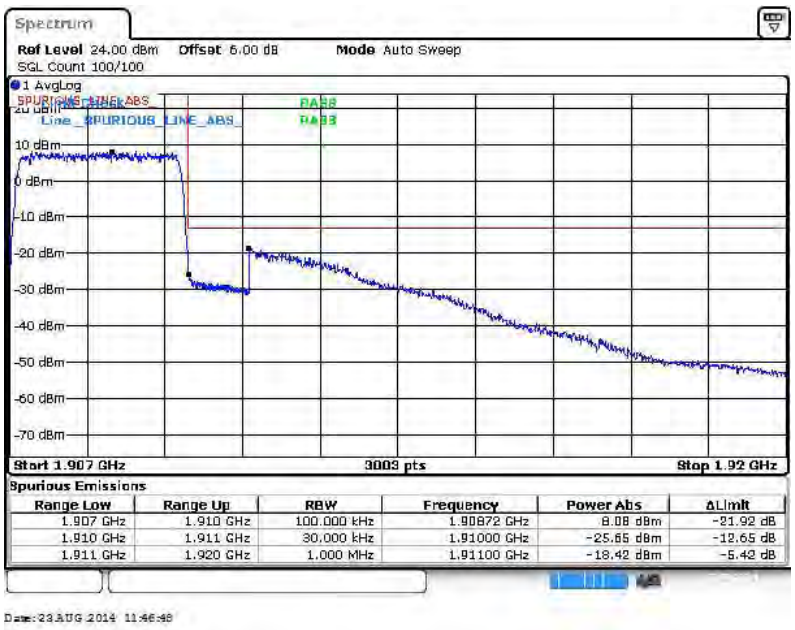
Lower Band Edge Plot for QPSK-RB Size 15, RB Offset 0



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

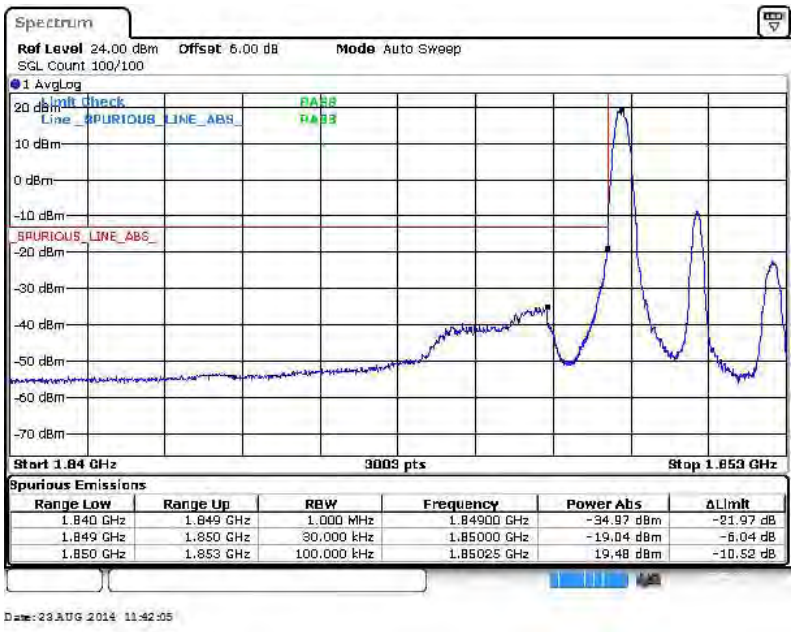


Higher Band Edge Plot for QPSK-RB Size 15, RB Offset 0

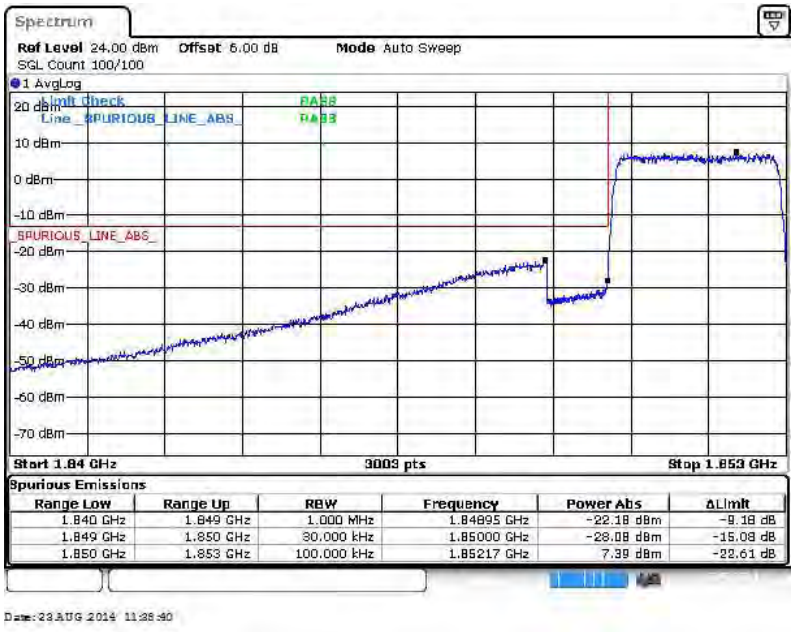


Band :	LTE Band 2	Band Width :	3MHz / 16QAM

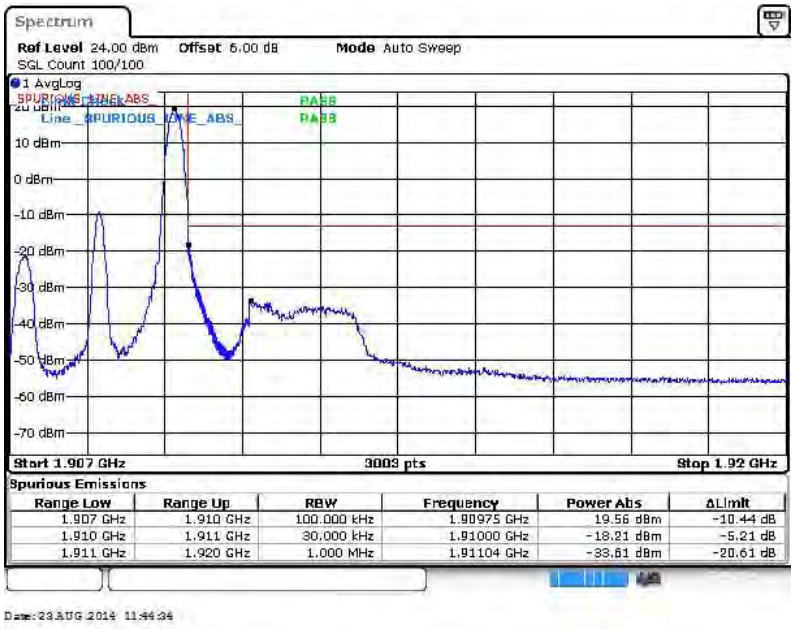
Lower Band Edge Plot for 16QAM -RB Size 1, RB Offset 0



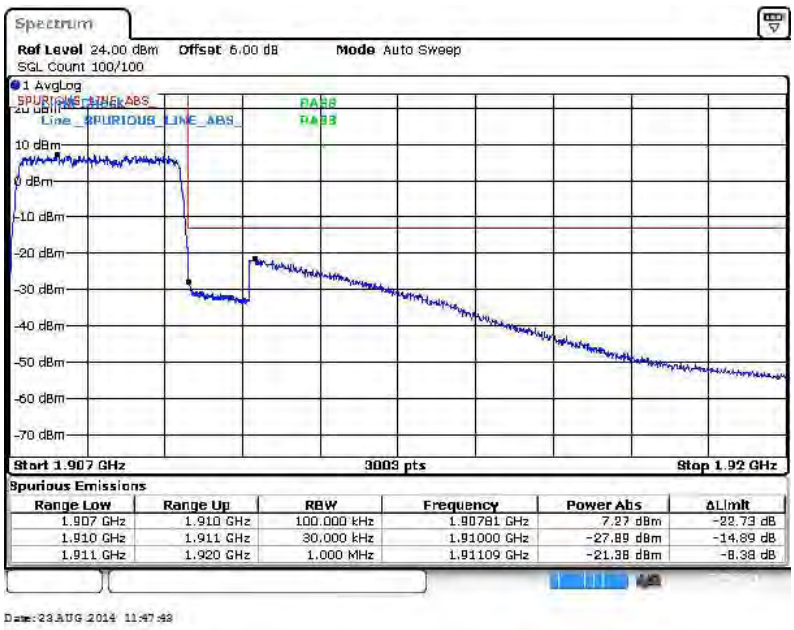
Lower Band Edge Plot for 16QAM -RB Size 15, RB Offset 0



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

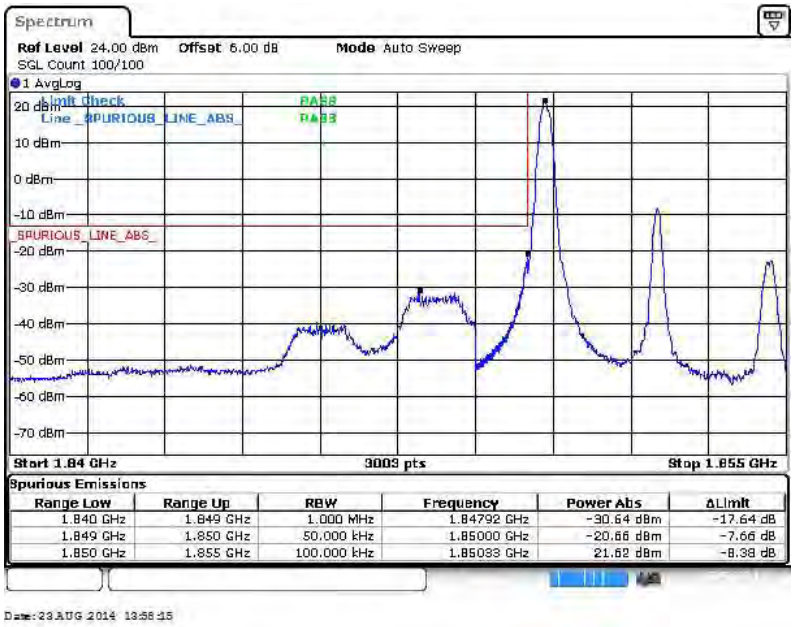


Higher Band Edge Plot for 16QAM -RB Size 15, RB Offset 0

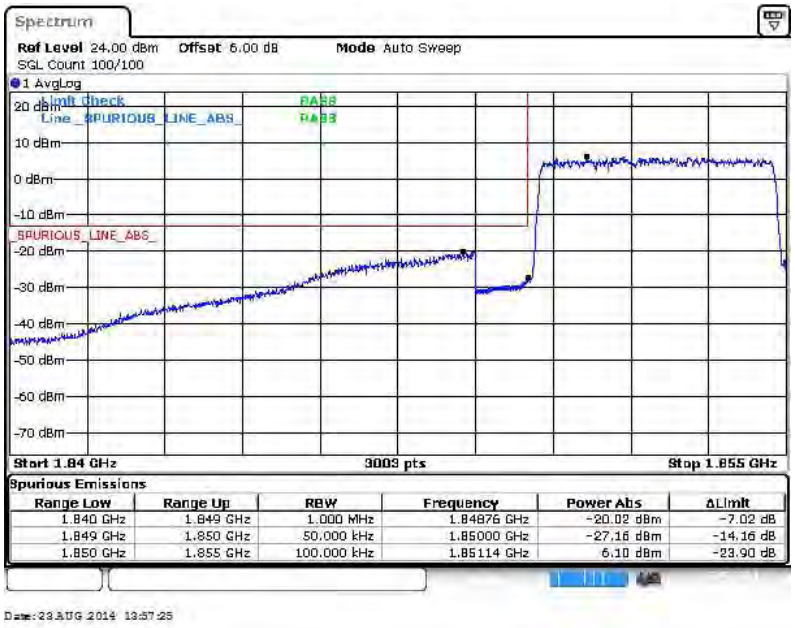


Band :	LTE Band 2	Band Width :	5MHz / QPSK

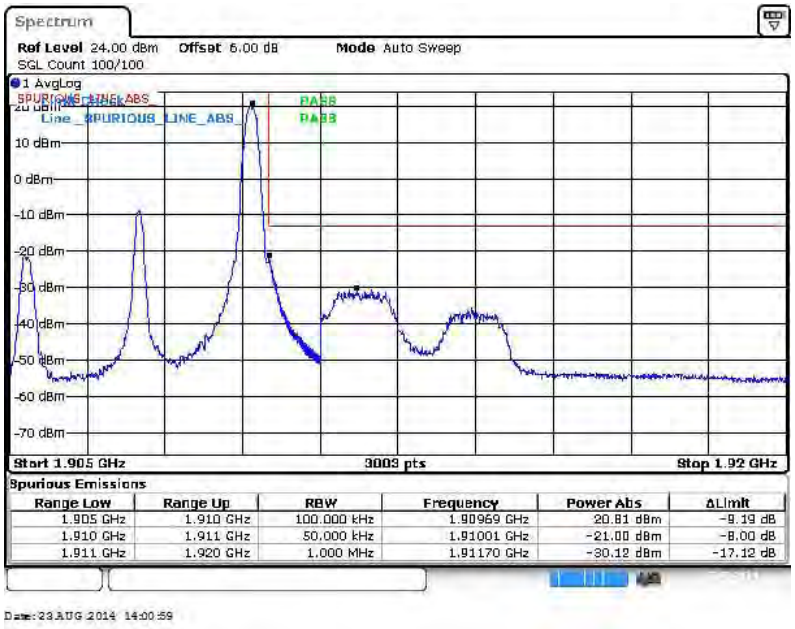
Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



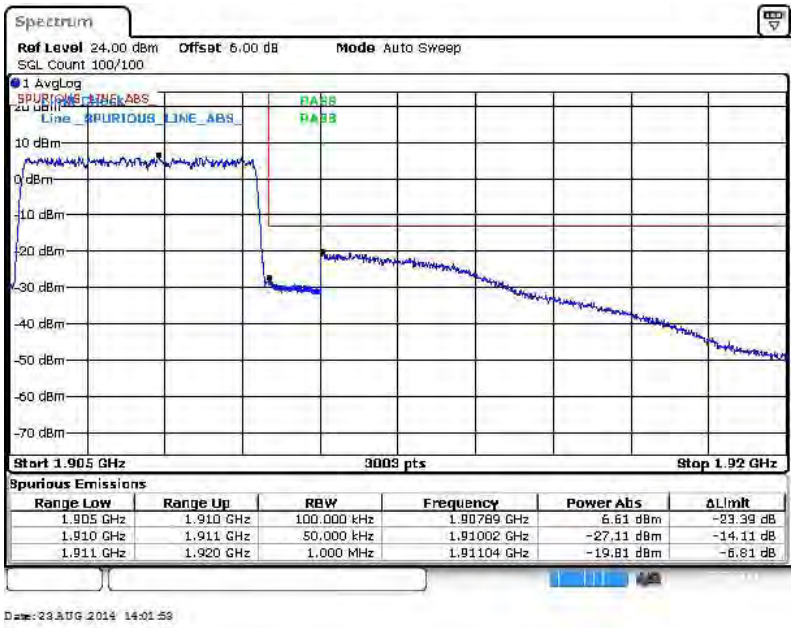
Lower Band Edge Plot for QPSK-RB Size 25, RB Offset 0



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

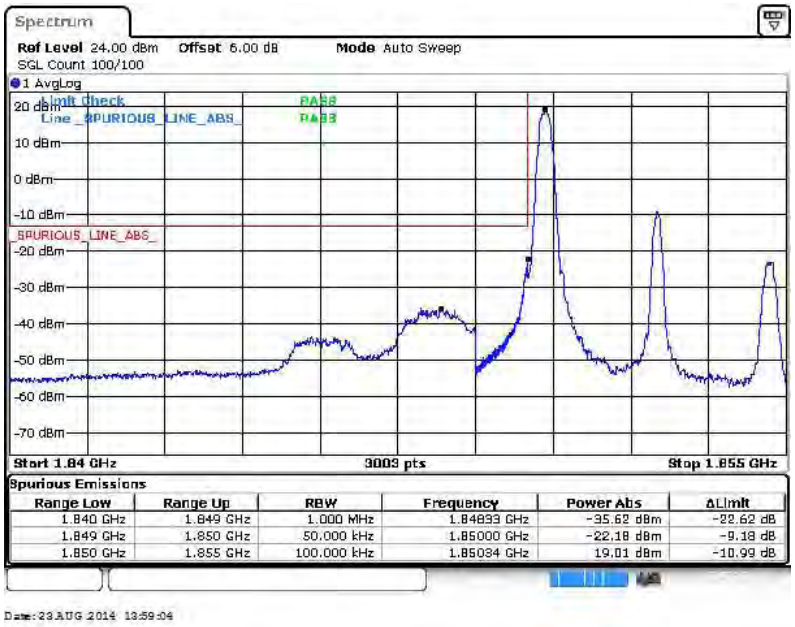


Higher Band Edge Plot for QPSK-RB Size 25, RB Offset 0

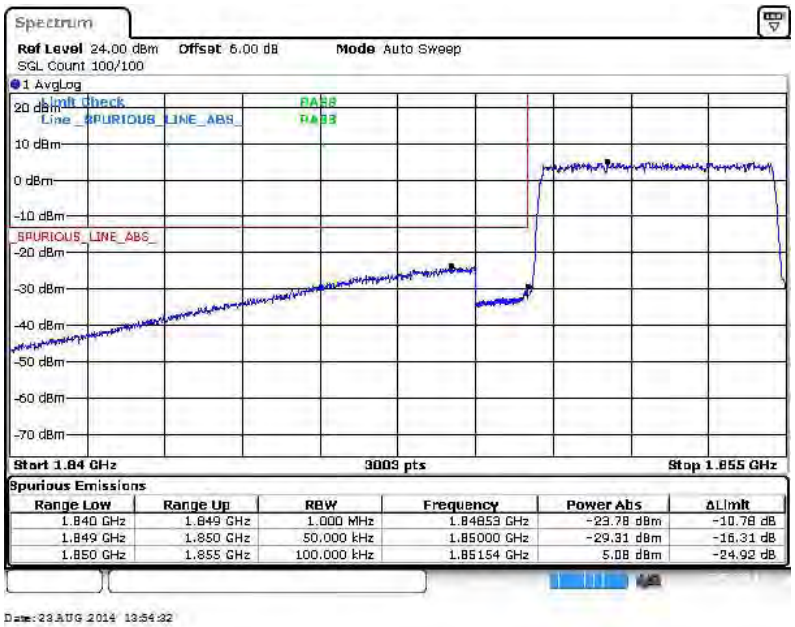


Band :	LTE Band 2	Band Width :	5MHz / 16QAM

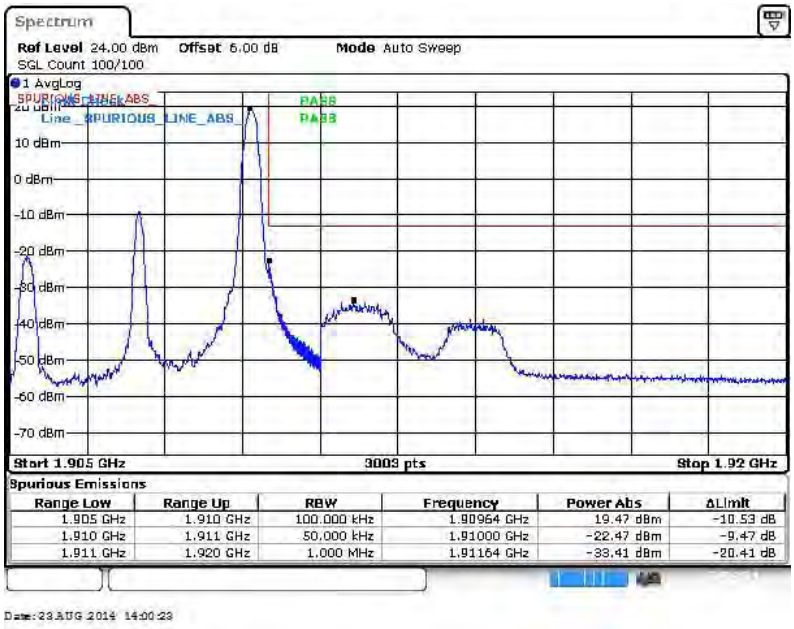
Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



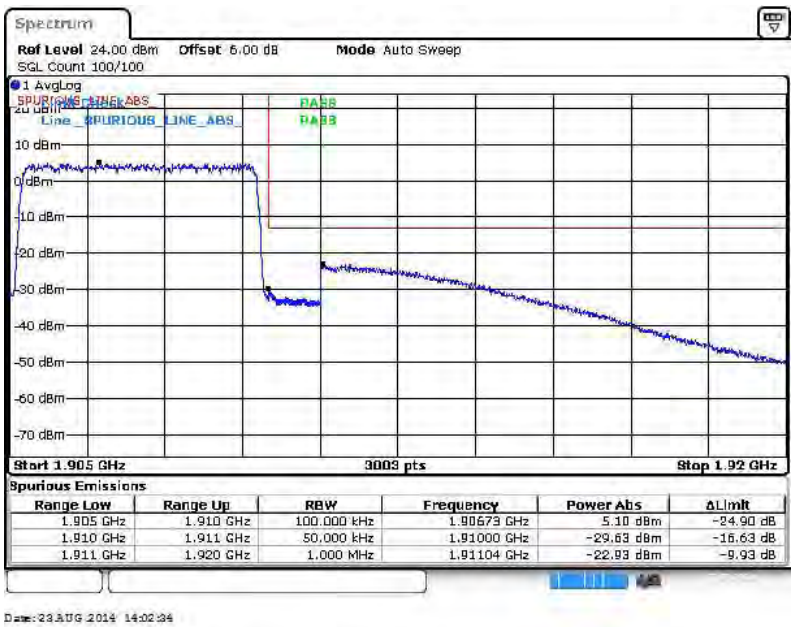
Lower Band Edge Plot for 16QAM-RB Size 25, RB Offset 0



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

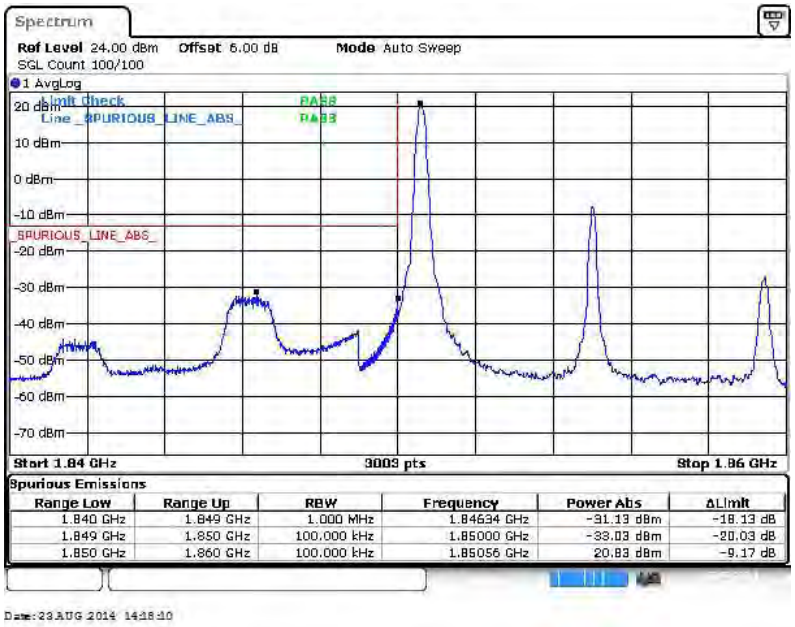


Higher Band Edge Plot for 16QAM-RB Size 25, RB Offset 0

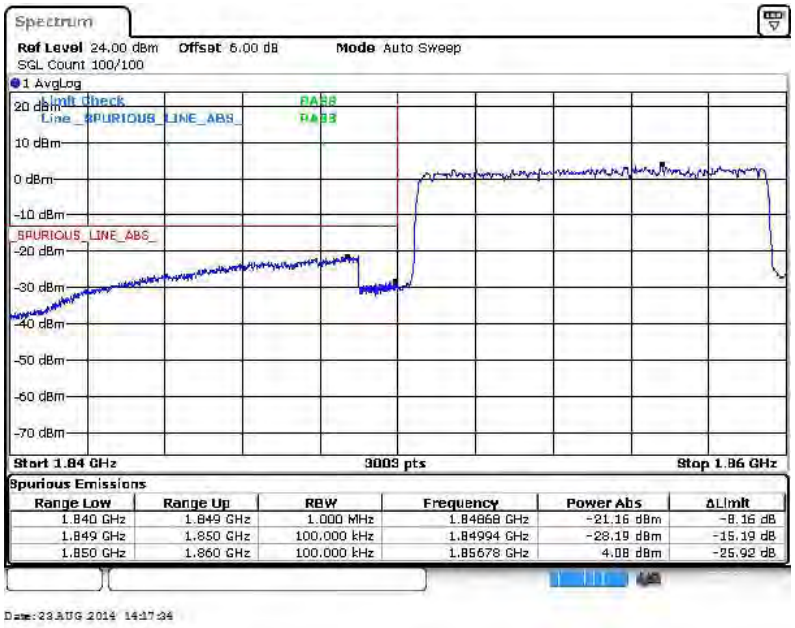


Band :	LTE Band 2	Band Width :	10MHz / QPSK

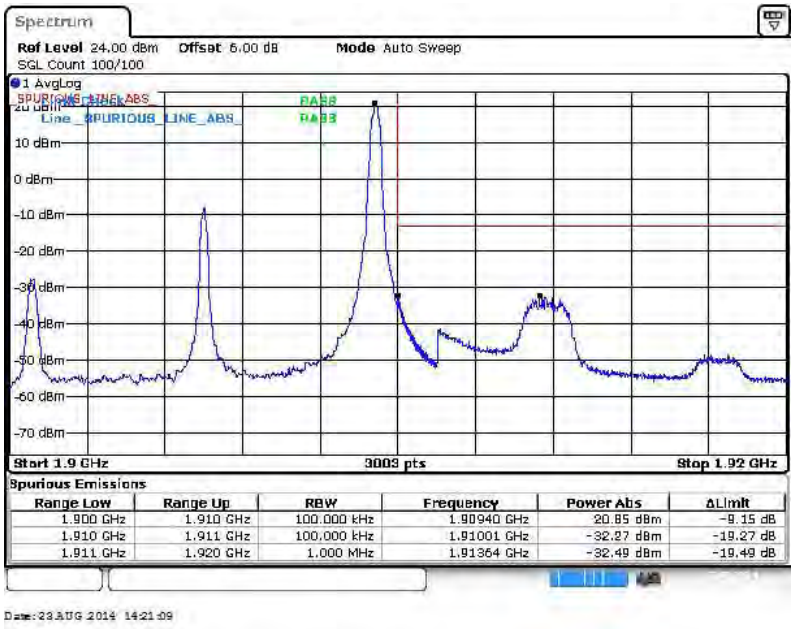
Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



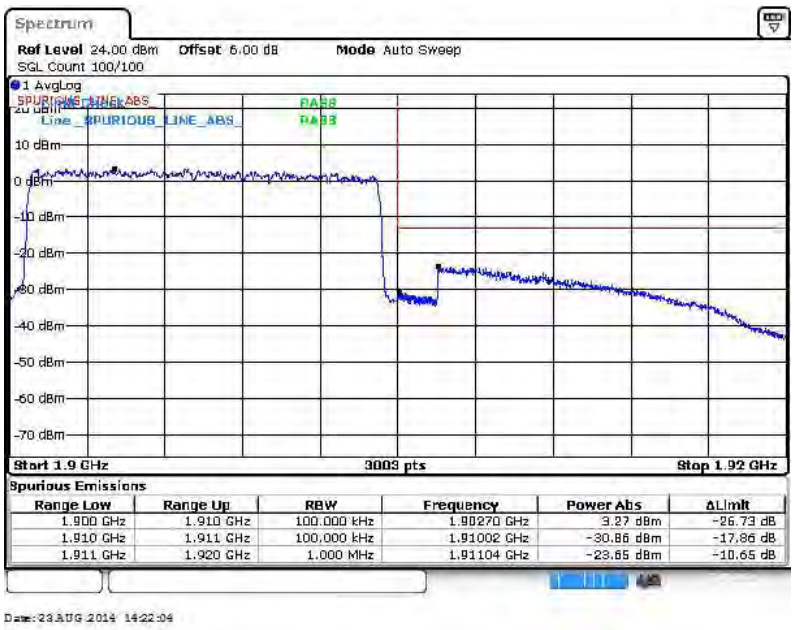
Lower Band Edge Plot for QPSK-RB Size 50, RB Offset 0



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

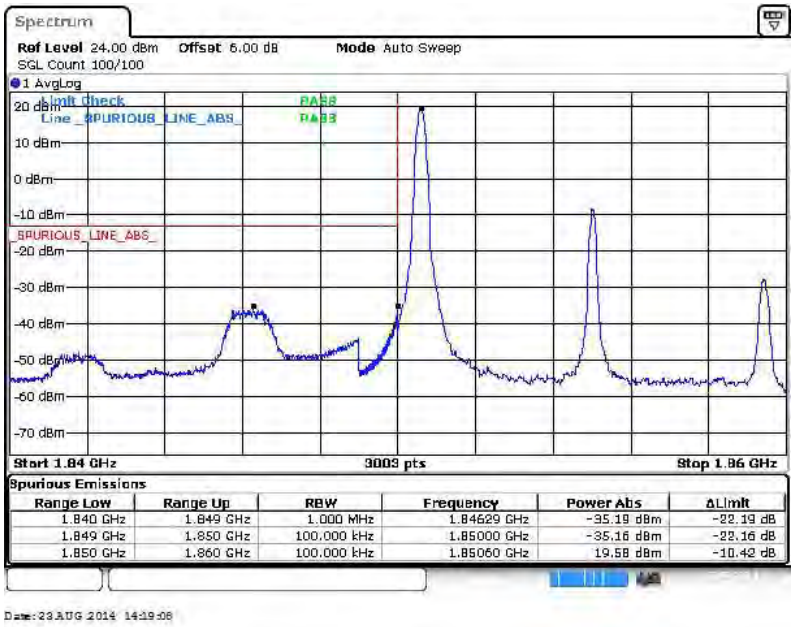


Higher Band Edge Plot for QPSK-RB Size 50, RB Offset 0

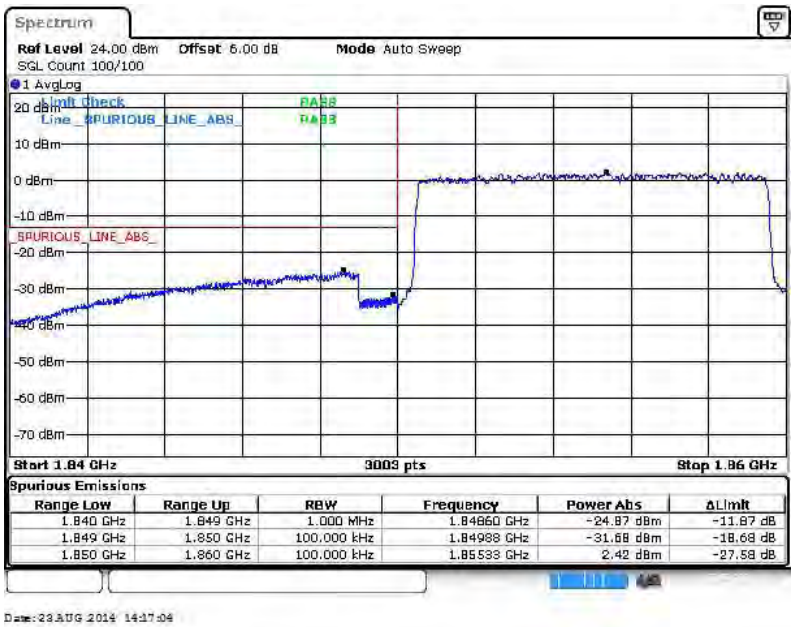


Band :	LTE Band 2	Band Width :	10MHz / 16QAM

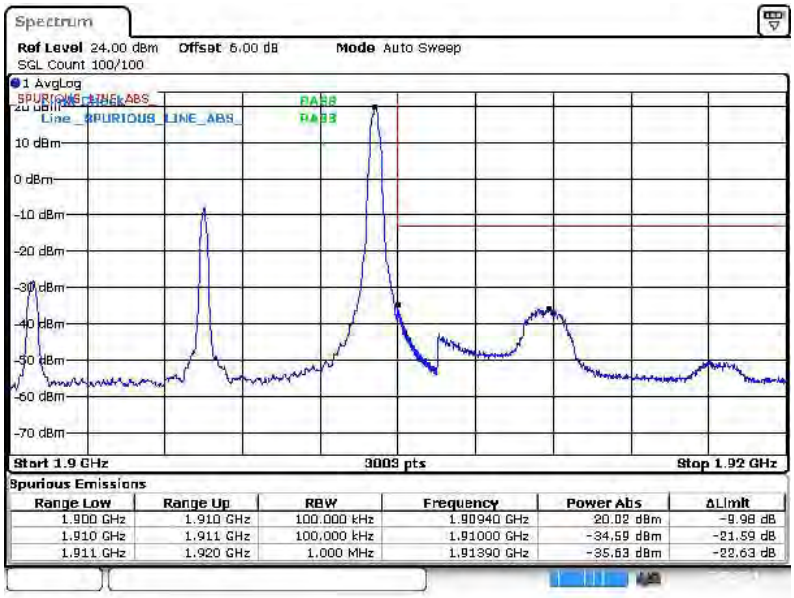
Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



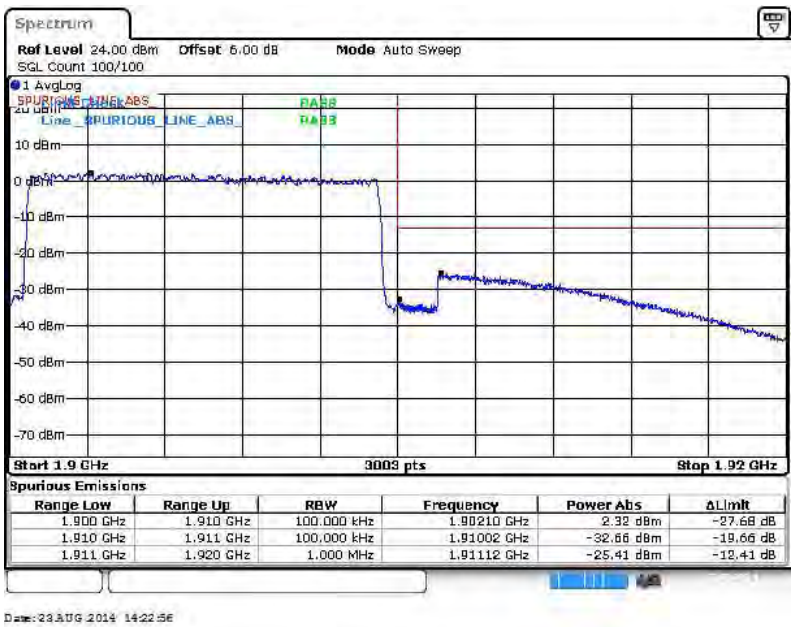
Lower Band Edge Plot for 16QAM-RB Size 50, RB Offset 0



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

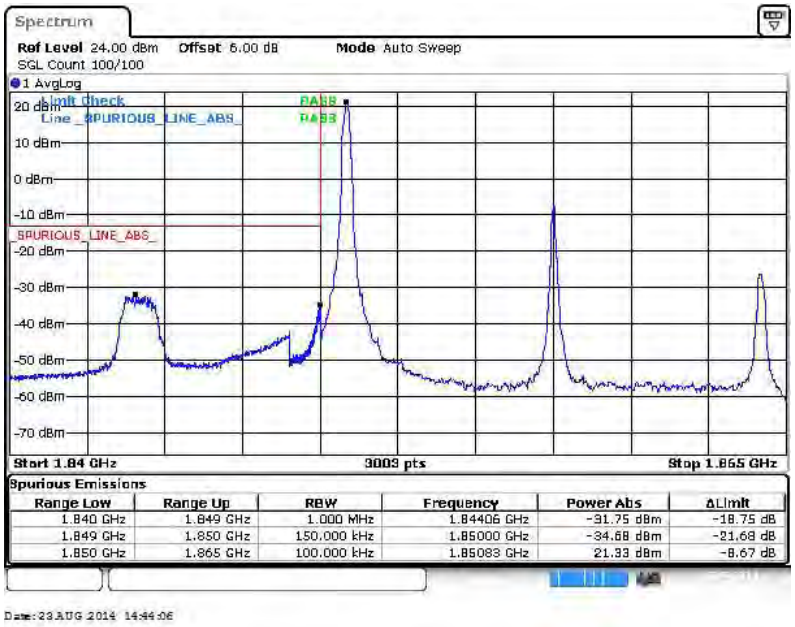


Higher Band Edge Plot for 16QAM-RB Size 50, RB Offset 0

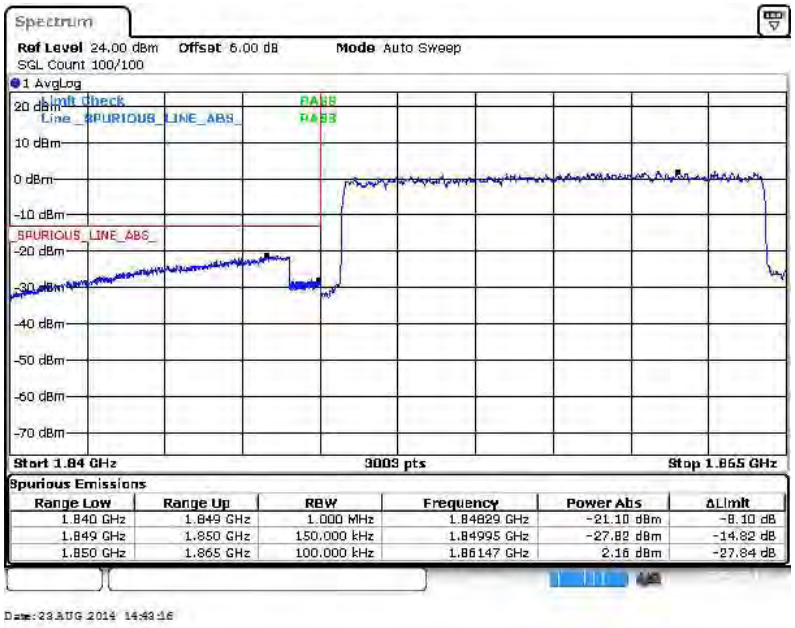


Band :	LTE Band 2	Band Width :	15MHz / QPSK

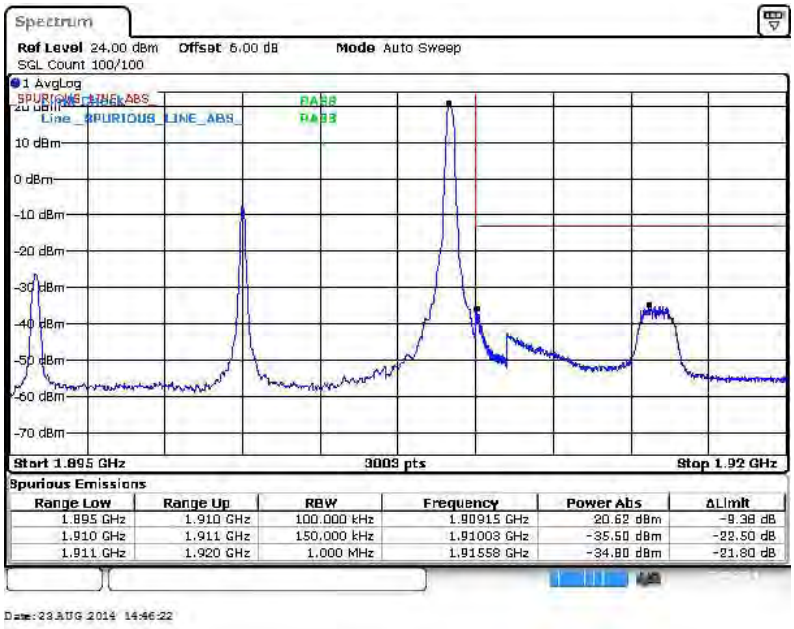
Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



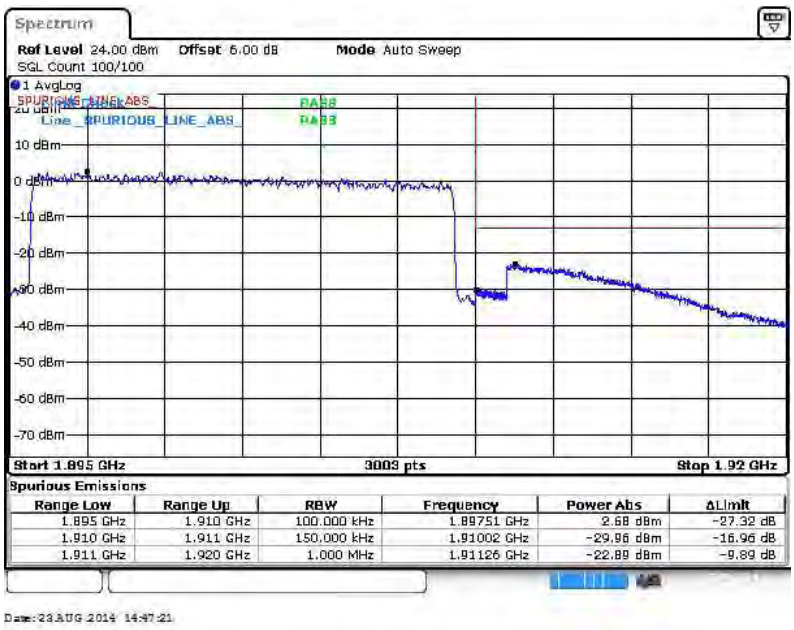
Lower Band Edge Plot for QPSK-RB Size 75, RB Offset 0



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

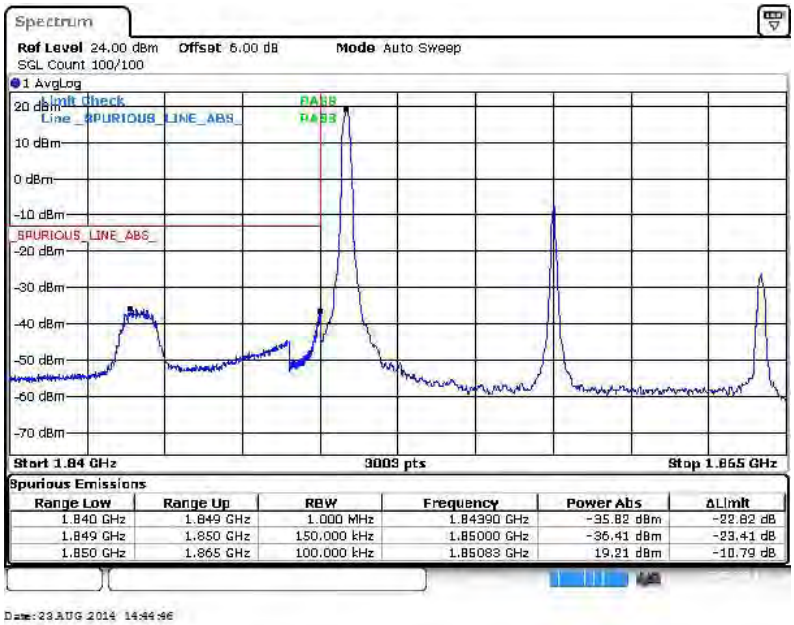


Higher Band Edge Plot for QPSK-RB Size 75, RB Offset 0



Band :	LTE Band 2	Band Width :	15MHz / 16QAM

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



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