FCC RF Test Report

APPLICANT	: DELL Inc.
EQUIPMENT	: Tablet PC
BRAND NAME	: Dell
MODEL NAME	: T02D;T02D004
TYPE NAME	: T02D004
FCC ID	: E2K-T02D004
STANDARD	: 47 CFR Part 2, 22(H), 24(E), 27(L), 27(H), 27(M)
CLASSIFICATION	: PCS Licensed Transmitter (PCB)

The product was received on Mar. 18, 2014 and testing was completed on Aug. 29, 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

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

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG431806-01B	Rev. 01	Initial issue of report	Aug. 29, 2014

SUMMARY OF TEST RESULT

Report Section	FCC Rule	IC Rule	Description	Limit	Result	Remark
3.1	§2.1046	RSS-Gen(4.8) RSS-130(4.4) RSS-132 (5.4) RSS-133 (6.4) RSS-139 (6.4) RSS-199 (4.4)	Conducted Output Power	Reporting Only	PASS	-
3.2	§24.232(d)	RSS-130(4.4) RSS-132 (5.4) RSS-133 (6.4) RSS-139 (6.4)	Peak-to-Average Ratio	<13 dB	PASS	-
3.3	§22.913(a)(2)	RSS-132(5.4) SRSP-503(5.1.3)	Effective Radiated Power (Band 5)	ERP < 7 Watt	PASS	-
	§27.50(b)(10) §27.50(c)(10) §27.50(c)(9)	N/A	Effective Radiated Power (Band 17)	ERP < 3 Watt		
	§24.232(c) §27.50(h)(2)	RSS-133 (6.4) SRSP-510(5.1.2) RSS-199 (4.4)	Equivalent Isotropic Radiated Power (Band 2) (Band 7)	EIRP < 2Watt		
	§27.50(d)(4)	RSS-139 (6.4) SRSP-513(5.1.2)	Equivalent Isotropic Radiated Power (Band 4)	EIRP < 1Watt		
3.4	§2.1049 §22.917(b) §24.238(b) §27.53(h)(3) §27.53(m)(6)	RSS-GEN(4.6.1) RSS-132 (3.1) RSS-133 (3.1) RSS-139 (3.1) RSS-199 (4.2)	99% Occupied Bandwidth and 26dB Bandwidth	Reporting Only	PASS	-

Report Section	FCC Rule	IC Rule	Description	Limit	Result	Remark
3.5	§2.1051 §22.917(a) §24.238(a) §27.53(g) §27.53(h) §27.53(m)(4)	RSS-GEN(4.9) RSS-132 (5.5) RSS-133 (6.5.1) RSS-130(4.6) RSS-139 (6.5) RSS-199 (4.5)	Conducted Band Edge Measurement (Band 2) (Band 4) (Band 5) (Band 17)(Band 7)	< 43+10log10(P[Watt])	PASS	-
3.6	§2.1051 §22.917(a) §24.238(a) §27.53(f) §27.53(g) §27.53(h)	RSS-GEN(4.9) RSS-132 (5.5) RSS-133 (6.5.1) RSS-130(4.6) RSS-139 (6.5)	Conducted Spurious Emission (Band 2) (Band 4) (Band 5) (Band 17)	< $43+10\log_{10}$(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])	PASS	-
3.7	§2.1053 §22.917(a) §24.238(a) §27.53(f) §27.53(g) §27.53(h)	RSS-GEN(4.9) RSS-132 (5.5) RSS-133 (6.5.1) RSS-130(4.6) RSS-139 (6.5)	Radiated Spurious Emission (Band 2) (Band 4) (Band 5) (Band 17)	< $43+10\log_{10}$(P[Watts])	PASS	Under limit 23.26 dB at 7592.000 MHz
	§2.1053 §27.53(m)(4)	RSS-GEN(4.9) RSS-199 (4.5)	Radiated Spurious Emission (Band 7)	< $55+10\log_{10}$(P[Watts])	PASS	
3.8	§2.1055 §22.355 §24.235 §27.54	RSS-GEN(4.7) RSS-132(5.3) RSS-133(6.3) RSS-130(4.3) RSS-139 (6.3) RSS-199 (4.3)	Frequency Stability Temperature & Voltage	< 2.5 ppm	PASS	

1 General Description

1.1 Applicant

DELL Inc.
One Dell Way, Round Rock, Texas 78682, United States

1.2 Manufacturer

DELL Inc.
One Dell Way, Round Rock, Texas 78682, United States

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	Tablet PC
Brand Name	Dell
Model Name	T02D;T02D004
Type Name	T02D004
FCC ID	E2K-T02D004
EUT supports Radios application	GSM/GPRS/EGPRS/WCDMA/HSPA/DC-HSDPA/ HSPA+(Downlink Only)/LTE WLAN2.4GHz 802.11b/g/n HT20/HT40 WLAN5GHz 802.11a/n HT20/HT40 WLAN5GHz 802.11ac VHT20/VHT40/VHT80 Bluetooth v3.0+EDR Bluetooth v4.0 LE
HW Version	DVT-B-V0.40
SW Version	YTP802A410830
EUT Stage	Identical Prototype

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

1.4 Product Specification subjective to this standard

Product Specification subjective to this standard	
Tx Frequency	LTE Band 2 : 1850.7 MHz ~ 1909.3 MHz LTE Band 4 : 1710.7 MHz ~ 1754.3 MHz LTE Band 5 : 824.7 MHz ~ 848.3 MHz LTE Band 7 : 2502.5 MHz ~ 2567.5 MHz LTE Band 17 : 706.5 MHz ~ 713.5 MHz
Rx Frequency	LTE Band 2 : 1930.7 MHz ~ 1989.3 MHz LTE Band 4 : 2110.7 MHz ~ 2154.3 MHz LTE Band 5 : 869.7 MHz ~ 893.3 MHz LTE Band 7 : 2622.5MHz ~ 2687.5 MHz LTE Band 17 : 736.5 MHz ~ 743.5 MHz
Bandwidth	LTE Band 2 : 1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz / 20MHz LTE Band 4 : 1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz / 20MHz LTE Band 5 : 1.4MHz / 3MHz / 5MHz / 10MHz LTE Band 7 : 5MHz/ 10MHz / 15MHz / 20MHz LTE Band 17 : 5MHz / 10MHz
Maximum Output Power to Antenna	LTE Band 2 : 22.88 dBm LTE Band 4 : 22.63 dBm LTE Band 5 : 23.16 dBm LTE Band 7 : 21.46 dBm LTE Band 17 : 22.61 dBm
Antenna Type	Fixed Internal Antenna
Type of Modulation	QPSK / 16QAM

1.5 Modification of EUT

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

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

FCC Rule	System	Type of Modulation	BW	Emission Designator	Frequency Tolerance (ppm)	Maximum ERP/EIRP
Part 24	LTE Band 2	QPSK	1.4 MHz	1M11G7D	-	0.26 W
Part 24	LTE Band 2	16QAM	1.4 MHz	1M11W7D	-	0.21 W
Part 24	LTE Band 2	QPSK	3 MHz	2M75G7D	-	-
Part 24	LTE Band 2	16QAM	3 MHz	2M74W7D	-	-
Part 24	LTE Band 2	QPSK	5 MHz	4M50G7D	-	-
Part 24	LTE Band 2	16QAM	5 MHz	4M50W7D	-	-
Part 24	LTE Band 2	QPSK	10 MHz	9M13G7D	0.0027 ppm	-
Part 24	LTE Band 2	16QAM	10 MHz	9M05W7D	-	-
Part 24	LTE Band 2	QPSK	15 MHz	13M5G7D	-	-
Part 24	LTE Band 2	16QAM	15 MHz	13M5W7D	-	-
Part 24	LTE Band 2	QPSK	20 MHz	18M5G7D	-	0.27 W
Part 24	LTE Band 2	16QAM	20 MHz	18M5W7D	-	0.22 W
Part 27	LTE Band 4	QPSK	1.4 MHz	1M11G7D	-	0.29 W
Part 27	LTE Band 4	16QAM	1.4 MHz	1M11W7D	-	0.25 W
Part 27	LTE Band 4	QPSK	3 MHz	2M73G7D	-	-
Part 27	LTE Band 4	16QAM	3 MHz	2M73W7D	-	-
Part 27	LTE Band 4	QPSK	5MHz	4M50G7D	-	-
Part 27	LTE Band 4	16QAM	5MHz	4M50W7D	-	-
Part 27	LTE Band 4	QPSK	10MHz	9M11G7D	0.0029 ppm	-
Part 27	LTE Band 4	16QAM	10MHz	9M05W7D	-	-
Part 27	LTE Band 4	QPSK	15MHz	13M5G7D	-	-
Part 27	LTE Band 4	16QAM	15MHz	13M5W7D	-	-
Part 27	LTE Band 4	QPSK	20MHz	18M5G7D	-	0.28 W
Part 27	LTE Band 4	16QAM	20MHz	18M6W7D	-	0.25 W

FCC Rule	System	Type of Modulation	BW	Emission Designator	Frequency Tolerance (ppm)	Maximum ERP/EIRP
Part 22	LTE Band 5	QPSK	1.4 MHz	1M10G7D	-	0.11 W
Part 22	LTE Band 5	16QAM	1.4 MHz	1M10W7D	-	0.09 W
Part 22	LTE Band 5	QPSK	3 MHz	2M73G7D	-	-
Part 22	LTE Band 5	16QAM	3 MHz	2M73W7D	-	-
Part 22	LTE Band 5	QPSK	5 MHz	4M49G7D	-	-
Part 22	LTE Band 5	16QAM	5 MHz	4M49W7D	-	-
Part 22	LTE Band 5	QPSK	10 MHz	9M13G7D	0.0048 ppm	0.11 W
Part 22	LTE Band 5	16QAM	10 MHz	9M03W7D	-	0.09 W
Part 27	LTE Band 7	QPSK	5MHz	4M51G7D	-	0.12 W
Part 27	LTE Band 7	16QAM	5MHz	4M50W7D	-	0.10 W
Part 27	LTE Band 7	QPSK	10MHz	9M17G7D	0.0028 ppm	-
Part 27	LTE Band 7	16QAM	10MHz	9M07W7D	-	-
Part 27	LTE Band 7	QPSK	15MHz	13M5G7D	-	0.13 W
Part 27	LTE Band 7	16QAM	15MHz	13M5W7D	-	0.11 W
Part 27	LTE Band 7	QPSK	20MHz	18M6G7D	-	0.13 W
Part 27	LTE Band 7	16QAM	20MHz	18M6W7D	-	0.10 W
Part 27	LTE Band 17	QPSK	5MHz	4M50G7D	-	0.08 W
Part 27	LTE Band 17	16QAM	5MHz	4M50W7D	-	0.07 W
Part 27	LTE Band 17	QPSK	10MHz	9M13G7D	0.0056 ppm	0.09 W
Part 27	LTE Band 17	16QAM	10MHz	9M07W7D	-	0.07 W

1.7 Testing Location

Test Site	SPORTON INTERNATIONAL (SHENZHEN) INC.	
Test Site Location	No. 3 Building, the third floor of south, Shahe River west, Fengzeyuan warehouse, Nanshan District, Shenzhen, Guangdong, P.R.C. TEL: +86-755- 3320-2398	
Test Site No.	**Sporton Site No.**	**FCC/IC Registration No.**
	TH01-SZ	831040/4086F-1

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.**
	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, 22(H), 24(E), 27(L), 27(H), 27(M)
- ANSI / TIA / EIA-603-C-2004
- FCC KDB 971168 D01 Power Meas. License Digital Systems v02r01
- IC RSS-130 Issue1
- IC RSS-132 Issue 3
- 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

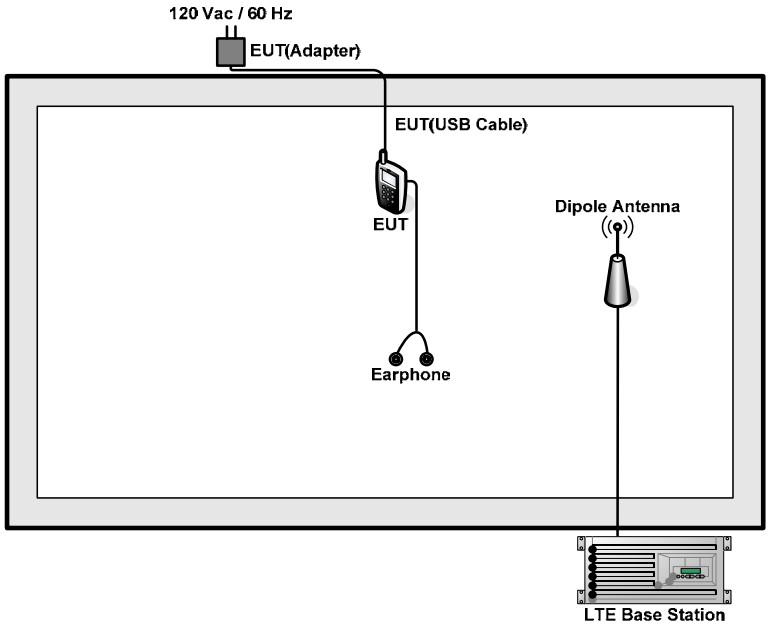
Antenna port conducted and radiated test items listed below are performed according to KDB 971168 D01 Power Meas. License Digital Systems v02r01 with maximum output power.

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
	5	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
	17	-	-	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
	5				v	-	-		v	v		v	v	v	v
	7	-	-				v		v	v		v	v	v	v
	17	-	-		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
	5	v	v	v	v	-	-	v	v			v	v	v	v
	7	-	-	v	v	v	v	v	v			v	v	v	v
	17	-	-	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
	5	v	v	v	v	-	-	v	v	v		v	v		v
	7	-	-	v	v	v	v	v	v	v		v	v		v
	17	-	-	v	v	-	-	v	v	v		v	v		v

Test Items	Band	Bandwidth (MHz)						Modulation		RB #			Test Channel		
		1.4	3	5	10	15	20	QPSK	16QAM	1	Half	Full	L	M	H
Conducted Spurious Emission	2	v	v	v	v	v	v	v	v	v			v	v	v
	4	v	v	v	v	v	v	v	v	v			v	v	v
	5	v	v	v	v	-	-	v	v	v			v	v	v
	7	-	-	v	v	v	v	v	v	v			v	v	v
	17	-	-	v	v	-	-	v	v	v			v	v	v
Frequency Stability	2				v			v				v		v	
	4				v			v				v		v	
	5				v	-	-	v				v		v	
	7	-	-		v			v				v		v	
	17	-	-		v	-	-	v				v		v	
E.R.P./ E.I.R.P.	2	v					v	v	v	v			v	v	v
	4	v					v	v	v	v			v	v	v
	5	v			v	-	-	v	v	v			v	v	v
	7	-	-	v		v	v	v	v	v			v	v	v
	17	-	-	v	v	-	-	v	v	v			v	v	v
Radiated Spurious Emission	2	v	v	v	v	v	v	v		v			v	v	v
	4	v	v	v	v	v	v	v		v			v	v	v
	5	v	v	v	v	-	-	v		v			v	v	v
	7	-	-	v	v	v	v	v		v			v	v	v
	17	-	-	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 and the bandwidth with the highest conducted power of each band is chosen for testing. Besides, the lowest bandwidth of each band is also measured for reporting only. 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.	Earphone	Lenovo	SH100	N/A	Shielded,1.0m	N/A
3.	DC Power Supply	GWINSTEK	GPS-3030D	N/A	N/A	N/A

2.4 Measurement Results Explanation Example

For all conducted test items:

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

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

Offset = RF cable loss + attenuator factor.

Following shows an offset computation example with cable loss 7 dB and 10dB attenuator.

Example :

Offset(dB) = RF cable loss(dB) + attenuator factor(dB).

= 7 + 10 = 17 (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.

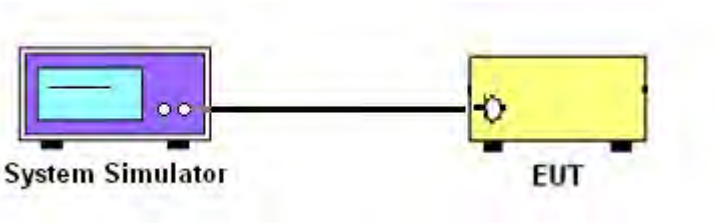
3.1.2 Measuring Instruments

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	22.58	22.66	**22.88**
20	QPSK	1	49	22.51	22.62	22.55
20	QPSK	1	99	22.34	22.36	22.39
20	QPSK	50	0	21.80	21.84	21.97
20	QPSK	50	24	21.68	21.73	21.83
20	QPSK	50	49	21.51	21.58	21.76
20	QPSK	100	0	21.62	21.73	21.75
20	16QAM	1	0	21.83	21.90	21.98
20	16QAM	1	49	21.53	22.22	21.92
20	16QAM	1	99	21.61	21.78	21.69
20	16QAM	50	0	20.63	20.87	20.94
20	16QAM	50	24	20.51	20.70	20.74
20	16QAM	50	49	20.39	20.50	20.74
20	16QAM	100	0	20.57	20.68	20.84
Channel				**18675**	**18900**	**19125**
Frequency (MHz)				**1857.5**	**1880**	**1902.5**
15	QPSK	1	0	22.55	22.78	22.77
15	QPSK	1	37	22.48	22.53	22.63
15	QPSK	1	74	22.23	22.31	22.46
15	QPSK	36	0	21.67	21.85	22.01
15	QPSK	36	18	21.54	21.67	21.77
15	QPSK	36	37	21.42	21.64	21.64
15	QPSK	75	0	21.58	21.66	21.81
15	16QAM	1	0	22.22	21.73	22.24
15	16QAM	1	37	21.65	22.06	22.10
15	16QAM	1	74	21.44	21.58	21.74
15	16QAM	36	0	20.60	20.86	20.92
15	16QAM	36	18	20.55	20.75	20.82
15	16QAM	36	37	20.44	20.59	20.66
15	16QAM	75	0	20.54	20.71	20.80

BW [MHz]	Modulation	RB Size	RB Offset	Power (dBm) Low Ch. / Freq.	Power (dBm) Middle Ch. / Freq.	Power (dBm) High Ch. / Freq.
Channel				**18650**	**18900**	**19150**
Frequency (MHz)				**1855**	**1880**	**1905**
10	QPSK	1	0	22.49	22.61	22.56
10	QPSK	1	24	22.47	22.27	22.24
10	QPSK	1	49	22.12	22.21	21.87
10	QPSK	25	0	21.56	21.67	21.63
10	QPSK	25	12	21.37	21.48	21.51
10	QPSK	25	24	21.35	21.50	21.40
10	QPSK	50	0	21.44	21.57	21.48
10	16QAM	1	0	22.04	22.18	22.03
10	16QAM	1	24	21.38	21.38	21.89
10	16QAM	1	49	21.78	21.64	21.08
10	16QAM	25	0	20.60	20.65	20.62
10	16QAM	25	12	20.44	20.67	20.44
10	16QAM	25	24	20.37	20.43	20.39
10	16QAM	50	0	20.49	20.63	20.61
Channel				**18625**	**18900**	**19175**
Frequency (MHz)				**1852.5**	**1880**	**1907.5**
5	QPSK	1	0	22.23	22.59	22.30
5	QPSK	1	12	22.16	22.40	21.99
5	QPSK	1	24	22.43	22.45	22.51
5	QPSK	12	0	21.35	21.60	21.43
5	QPSK	12	6	21.40	21.57	21.45
5	QPSK	12	11	21.40	21.50	21.46
5	QPSK	25	0	22.40	22.57	22.49
5	16QAM	1	0	21.56	21.77	21.58
5	16QAM	1	12	21.26	21.54	21.44
5	16QAM	1	24	21.36	22.00	21.61
5	16QAM	12	0	20.46	20.60	20.43
5	16QAM	12	6	20.38	20.57	20.48
5	16QAM	12	11	20.46	20.59	20.55
5	16QAM	25	0	21.54	21.69	21.53

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	22.41	22.45	22.30
3	QPSK	1	7	22.57	22.42	22.24
3	QPSK	1	14	22.36	22.57	22.45
3	QPSK	8	0	22.42	22.52	22.42
3	QPSK	8	4	22.51	22.54	22.42
3	QPSK	8	7	22.47	22.48	22.43
3	QPSK	15	0	22.54	22.54	22.31
3	16QAM	1	0	21.84	21.68	21.59
3	16QAM	1	7	21.98	21.92	21.55
3	16QAM	1	14	21.64	21.69	21.18
3	16QAM	8	0	21.45	21.73	21.54
3	16QAM	8	4	21.42	21.64	21.38
3	16QAM	8	7	21.44	21.77	21.58
3	16QAM	15	0	21.67	21.75	21.38
Channel				**18607**	**18900**	**19193**
Frequency (MHz)				**1850.7**	**1880**	**1909.3**
1.4	QPSK	1	0	22.33	22.45	22.28
1.4	QPSK	1	2	22.33	22.52	22.30
1.4	QPSK	1	5	22.40	22.44	22.50
1.4	QPSK	3	0	22.23	22.50	22.23
1.4	QPSK	3	1	22.27	22.39	22.25
1.4	QPSK	3	2	22.23	22.50	22.26
1.4	QPSK	6	0	22.29	22.49	22.21
1.4	16QAM	1	0	21.80	21.88	21.71
1.4	16QAM	1	2	21.80	21.71	21.60
1.4	16QAM	1	5	21.99	21.87	21.59
1.4	16QAM	3	0	21.65	21.64	21.40
1.4	16QAM	3	1	21.61	21.53	21.37
1.4	16QAM	3	2	21.53	21.66	21.26
1.4	16QAM	6	0	21.61	21.52	21.40

<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	22.34	22.41	22.16
20	QPSK	1	49	22.57	**22.63**	22.18
20	QPSK	1	99	22.08	21.95	21.79
20	QPSK	50	0	21.71	21.76	21.56
20	QPSK	50	24	21.60	21.63	21.49
20	QPSK	50	49	21.39	21.33	21.26
20	QPSK	100	0	21.48	21.53	21.30
20	16QAM	1	0	22.01	21.73	22.00
20	16QAM	1	49	21.99	21.94	21.95
20	16QAM	1	99	21.36	21.63	21.03
20	16QAM	50	0	20.87	20.86	20.69
20	16QAM	50	24	20.75	20.74	20.70
20	16QAM	50	49	20.49	20.45	20.30
20	16QAM	100	0	20.72	20.68	20.58
Channel				**20025**	**20175**	**20325**
Frequency (MHz)				**1717.5**	**1732.5**	**1747.5**
15	QPSK	1	0	22.32	22.53	22.31
15	QPSK	1	37	22.19	22.20	22.27
15	QPSK	1	74	22.04	21.99	21.87
15	QPSK	36	0	21.48	21.65	21.57
15	QPSK	36	18	21.39	21.38	21.38
15	QPSK	36	37	21.30	21.25	21.17
15	QPSK	75	0	21.41	21.53	21.35
15	16QAM	1	0	21.47	22.37	21.89
15	16QAM	1	37	21.97	21.93	21.98
15	16QAM	1	74	21.45	21.46	21.21
15	16QAM	36	0	20.74	20.81	20.60
15	16QAM	36	18	20.53	20.74	20.42
15	16QAM	36	37	20.51	20.48	20.38
15	16QAM	75	0	20.57	20.60	20.51

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	22.44	22.40	22.24
10	QPSK	1	24	22.17	21.91	22.14
10	QPSK	1	49	22.01	21.96	21.93
10	QPSK	25	0	21.42	21.44	21.36
10	QPSK	25	12	21.28	21.28	21.25
10	QPSK	25	24	21.16	21.36	21.09
10	QPSK	50	0	21.35	21.27	21.26
10	16QAM	1	0	22.09	21.77	21.80
10	16QAM	1	24	21.24	21.80	21.78
10	16QAM	1	49	21.74	21.67	21.67
10	16QAM	25	0	20.59	20.61	20.50
10	16QAM	25	12	20.42	20.50	20.34
10	16QAM	25	24	20.52	20.53	20.33
10	16QAM	50	0	20.61	20.48	20.40
Channel				**19975**	**20175**	**20375**
Frequency (MHz)				**1712.5**	**1732.5**	**1752.5**
5	QPSK	1	0	22.25	22.13	22.10
5	QPSK	1	12	21.98	21.79	21.90
5	QPSK	1	24	22.07	22.11	21.95
5	QPSK	12	0	21.29	21.26	21.14
5	QPSK	12	6	21.29	21.44	21.22
5	QPSK	12	11	21.30	21.26	21.14
5	QPSK	25	0	22.19	22.06	22.09
5	16QAM	1	0	21.88	21.38	21.19
5	16QAM	1	12	21.27	20.90	21.31
5	16QAM	1	24	21.44	21.11	21.48
5	16QAM	12	0	20.37	20.44	20.34
5	16QAM	12	6	20.50	20.37	20.43
5	16QAM	12	11	20.37	20.45	20.37
5	16QAM	25	0	21.58	21.35	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				**19965**	**20175**	**20385**
Frequency (MHz)				**1711.5**	**1732.5**	**1753.5**
3	QPSK	1	0	22.08	22.14	22.15
3	QPSK	1	7	22.29	22.21	22.10
3	QPSK	1	14	22.10	22.28	22.00
3	QPSK	8	0	22.24	22.23	22.01
3	QPSK	8	4	22.23	22.25	22.12
3	QPSK	8	7	22.26	22.27	22.06
3	QPSK	15	0	22.27	22.26	22.11
3	16QAM	1	0	21.58	21.51	21.72
3	16QAM	1	7	21.81	21.52	21.71
3	16QAM	1	14	21.76	21.65	21.79
3	16QAM	8	0	21.53	21.63	21.47
3	16QAM	8	4	21.41	21.37	21.28
3	16QAM	8	7	21.80	21.55	21.40
3	16QAM	15	0	21.45	21.53	21.40
Channel				**19957**	**20175**	**20393**
Frequency (MHz)				**1710.7**	**1732.5**	**1754.3**
1.4	QPSK	1	0	22.14	22.15	22.12
1.4	QPSK	1	2	22.17	22.18	21.97
1.4	QPSK	1	5	22.16	22.19	21.98
1.4	QPSK	3	0	22.06	22.11	22.03
1.4	QPSK	3	1	22.02	22.17	21.96
1.4	QPSK	3	2	22.08	22.16	22.03
1.4	QPSK	6	0	22.00	22.12	22.02
1.4	16QAM	1	0	21.68	22.01	21.11
1.4	16QAM	1	2	21.48	21.55	21.11
1.4	16QAM	1	5	21.55	21.75	21.69
1.4	16QAM	3	0	21.45	21.38	21.28
1.4	16QAM	3	1	21.46	21.44	21.25
1.4	16QAM	3	2	21.52	21.20	21.25
1.4	16QAM	6	0	21.52	21.39	21.26

<LTE Band 5 Conducted Power>

BW [MHz]	Modulation	RB Size	RB Offset	Power (dBm) Low Ch. / Freq.	Power (dBm) Middle Ch. / Freq.	Power (dBm) High Ch. / Freq.
Channel				**20450**	**20525**	**20600**
Frequency (MHz)				**829**	**836.5**	**844**
10	QPSK	1	0	22.79	22.87	22.66
10	QPSK	1	24	**23.16**	23.00	22.72
10	QPSK	1	49	22.70	22.56	22.51
10	QPSK	25	0	22.15	22.11	21.91
10	QPSK	25	12	22.11	22.05	21.83
10	QPSK	25	24	22.00	21.91	21.70
10	QPSK	50	0	22.05	22.00	21.86
10	16QAM	1	0	21.92	21.90	22.34
10	16QAM	1	24	22.69	21.98	21.97
10	16QAM	1	49	22.28	21.79	21.83
10	16QAM	25	0	21.28	21.22	20.97
10	16QAM	25	12	21.28	21.07	21.00
10	16QAM	25	24	21.13	20.94	20.78
10	16QAM	50	0	21.15	21.11	20.89
Channel				**20425**	**20525**	**20625**
Frequency (MHz)				**826.5**	**836.5**	**846.5**
5	QPSK	1	0	22.86	22.81	22.70
5	QPSK	1	12	23.04	22.78	22.54
5	QPSK	1	24	22.89	22.94	22.61
5	QPSK	12	0	22.22	22.01	21.79
5	QPSK	12	6	22.21	22.02	21.81
5	QPSK	12	11	22.21	22.02	21.75
5	QPSK	25	0	23.01	22.90	22.70
5	16QAM	1	0	22.48	22.40	21.84
5	16QAM	1	12	21.99	22.29	21.87
5	16QAM	1	24	21.88	22.12	21.62
5	16QAM	12	0	21.27	21.13	20.94
5	16QAM	12	6	21.25	21.11	20.96
5	16QAM	12	11	21.32	21.14	20.98
5	16QAM	25	0	22.23	22.20	21.61

BW [MHz]	Modulation	RB Size	RB Offset	Power (dBm) Low Ch. / Freq.	Power (dBm) Middle Ch. / Freq.	Power (dBm) High Ch. / Freq.
Channel				**20415**	**20525**	**20635**
Frequency (MHz)				**825.5**	**836.5**	**847.5**
3	QPSK	1	0	22.88	22.85	22.44
3	QPSK	1	7	23.14	22.88	22.82
3	QPSK	1	14	23.00	23.03	22.48
3	QPSK	8	0	23.10	23.00	22.76
3	QPSK	8	4	23.12	22.96	22.77
3	QPSK	8	7	23.11	22.99	22.78
3	QPSK	15	0	23.06	22.97	22.78
3	16QAM	1	0	22.32	22.24	22.19
3	16QAM	1	7	21.83	21.85	22.49
3	16QAM	1	14	21.83	22.05	22.19
3	16QAM	8	0	22.29	22.18	21.91
3	16QAM	8	4	22.30	22.23	22.17
3	16QAM	8	7	22.28	22.22	21.91
3	16QAM	15	0	22.24	22.22	21.89
Channel				**20407**	**20525**	**20643**
Frequency (MHz)				**824.7**	**836.5**	**848.3**
1.4	QPSK	1	0	23.03	22.99	22.66
1.4	QPSK	1	2	23.13	22.89	22.72
1.4	QPSK	1	5	23.04	22.97	22.75
1.4	QPSK	3	0	23.07	22.91	22.71
1.4	QPSK	3	1	23.12	22.84	22.71
1.4	QPSK	3	2	23.07	22.89	22.74
1.4	QPSK	6	0	22.98	22.92	22.65
1.4	16QAM	1	0	22.29	22.39	21.74
1.4	16QAM	1	2	22.62	22.51	22.01
1.4	16QAM	1	5	22.57	22.47	22.02
1.4	16QAM	3	0	22.23	22.11	21.97
1.4	16QAM	3	1	22.21	22.11	21.91
1.4	16QAM	3	2	22.18	22.09	21.89
1.4	16QAM	6	0	22.24	22.09	21.91

<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	21.02	21.14	21.42
20	QPSK	1	49	20.72	21.05	20.93
20	QPSK	1	99	20.39	20.50	20.87
20	QPSK	50	0	20.17	20.34	20.45
20	QPSK	50	24	19.83	20.08	20.08
20	QPSK	50	49	19.77	19.95	20.05
20	QPSK	100	0	19.97	20.15	20.21
20	16QAM	1	0	20.26	20.45	20.79
20	16QAM	1	49	20.33	20.20	19.94
20	16QAM	1	99	19.91	19.98	19.95
20	16QAM	50	0	18.88	19.13	19.15
20	16QAM	50	24	18.65	18.73	18.81
20	16QAM	50	49	18.55	18.66	18.88
20	16QAM	100	0	18.76	18.85	18.93
Channel				**20825**	**21100**	**21375**
Frequency (MHz)				**2507.5**	**2535**	**2562.5**
15	QPSK	1	0	21.32	**21.46**	**21.46**
15	QPSK	1	37	20.73	20.84	20.91
15	QPSK	1	74	20.62	20.85	20.95
15	QPSK	36	0	20.13	20.36	20.46
15	QPSK	36	18	19.79	20.07	20.22
15	QPSK	36	37	19.83	20.06	20.18
15	QPSK	75	0	20.00	20.20	20.31
15	16QAM	1	0	20.69	20.91	20.63
15	16QAM	1	37	19.87	20.46	20.03
15	16QAM	1	74	20.02	20.06	19.94
15	16QAM	36	0	18.93	19.01	19.14
15	16QAM	36	18	18.63	18.83	18.87
15	16QAM	36	37	18.65	18.80	18.76
15	16QAM	75	0	18.74	18.87	18.96

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	20.86	21.17	21.18
10	QPSK	1	24	20.72	20.88	20.99
10	QPSK	1	49	20.59	20.77	20.86
10	QPSK	25	0	19.90	20.22	20.20
10	QPSK	25	12	19.70	19.99	20.03
10	QPSK	25	24	19.71	20.06	20.00
10	QPSK	50	0	19.85	20.14	20.12
10	16QAM	1	0	20.49	20.23	20.69
10	16QAM	1	24	20.02	20.61	20.08
10	16QAM	1	49	19.85	20.37	20.11
10	16QAM	25	0	18.69	19.00	18.90
10	16QAM	25	12	18.56	18.80	18.92
10	16QAM	25	24	18.44	18.80	18.77
10	16QAM	50	0	18.56	18.84	18.84
Channel				**20775**	**21100**	**21425**
Frequency (MHz)				**2502.5**	**2535**	**2567.5**
5	QPSK	1	0	20.57	20.95	20.95
5	QPSK	1	12	20.74	20.85	20.92
5	QPSK	1	24	20.52	20.89	20.76
5	QPSK	12	0	19.79	20.07	20.14
5	QPSK	12	6	19.68	19.98	20.06
5	QPSK	12	11	19.70	20.01	20.14
5	QPSK	25	0	19.70	20.06	20.22
5	16QAM	1	0	19.94	20.16	20.16
5	16QAM	1	12	20.26	20.05	20.42
5	16QAM	1	24	19.85	20.07	20.36
5	16QAM	12	0	18.63	18.91	18.98
5	16QAM	12	6	18.59	18.75	18.93
5	16QAM	12	11	18.49	18.80	18.92
5	16QAM	25	0	18.54	18.91	18.95

<LTE Band 17 Conducted Power>

BW [MHz]	Modulation	RB Size	RB Offset	Power (dBm) Low Ch. / Freq.	Power (dBm) Middle Ch. / Freq.	Power (dBm) High Ch. / Freq.
Channel				**23780**	**23790**	**23800**
Frequency (MHz)				**709**	**710**	**711**
10	QPSK	1	0	22.59	**22.61**	22.48
10	QPSK	1	24	22.54	22.34	22.59
10	QPSK	1	49	22.27	22.26	22.26
10	QPSK	25	0	21.79	21.80	21.78
10	QPSK	25	12	21.68	21.66	21.63
10	QPSK	25	24	21.68	21.75	21.51
10	QPSK	50	0	21.67	21.78	21.72
10	16QAM	1	0	21.88	22.29	21.91
10	16QAM	1	24	22.21	21.89	21.61
10	16QAM	1	49	21.71	21.83	21.47
10	16QAM	25	0	20.91	21.03	20.92
10	16QAM	25	12	20.85	20.84	20.61
10	16QAM	25	24	20.92	21.03	20.76
10	16QAM	50	0	20.81	20.93	20.91
Channel				**23755**	**23790**	**23825**
Frequency (MHz)				**706.5**	**710**	**713.5**
5	QPSK	1	0	22.46	22.59	22.35
5	QPSK	1	12	22.31	22.24	22.15
5	QPSK	1	24	22.58	22.45	22.19
5	QPSK	12	0	21.72	21.72	21.58
5	QPSK	12	6	21.77	21.65	21.54
5	QPSK	12	11	21.71	21.67	21.52
5	QPSK	25	0	22.54	22.54	22.34
5	16QAM	1	0	22.17	22.10	21.83
5	16QAM	1	12	22.12	21.62	21.62
5	16QAM	1	24	21.74	21.59	21.27
5	16QAM	12	0	20.83	20.61	20.74
5	16QAM	12	6	20.86	20.74	20.73
5	16QAM	12	11	20.84	20.68	20.76
5	16QAM	25	0	21.95	21.77	21.49

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.

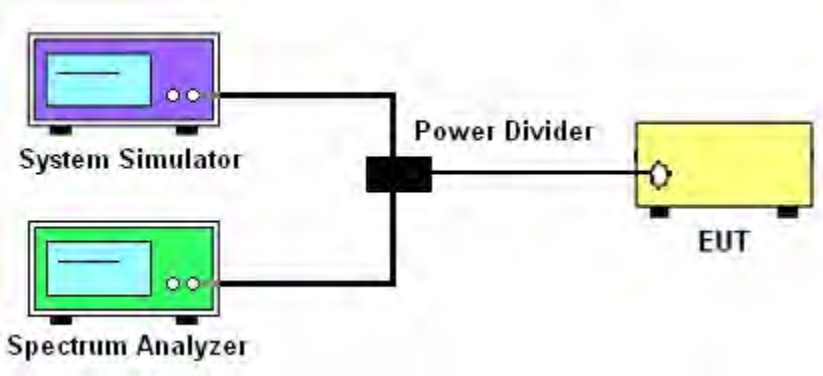
3.2.2 Measuring Instruments

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	5.48	4.87	4.75
20	16QAM	100	0	6.20	5.97	5.80

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	4.58	5.10	5.68
20	16QAM	100	0	5.97	6.38	6.26

LTE Band 5						
BW [MHz]	Modulation	RB Size	RB Offset	Power (dBm) Low Ch. / Freq.	Power (dBm) Middle Ch. / Freq.	Power (dBm) High Ch. / Freq.
Channel				20450	20525	20600
Frequency (MHz)				829	836.5	844
10	16QAM	1	0	6.09	5.86	6.14
10	16QAM	50	0	5.97	6.03	6.00

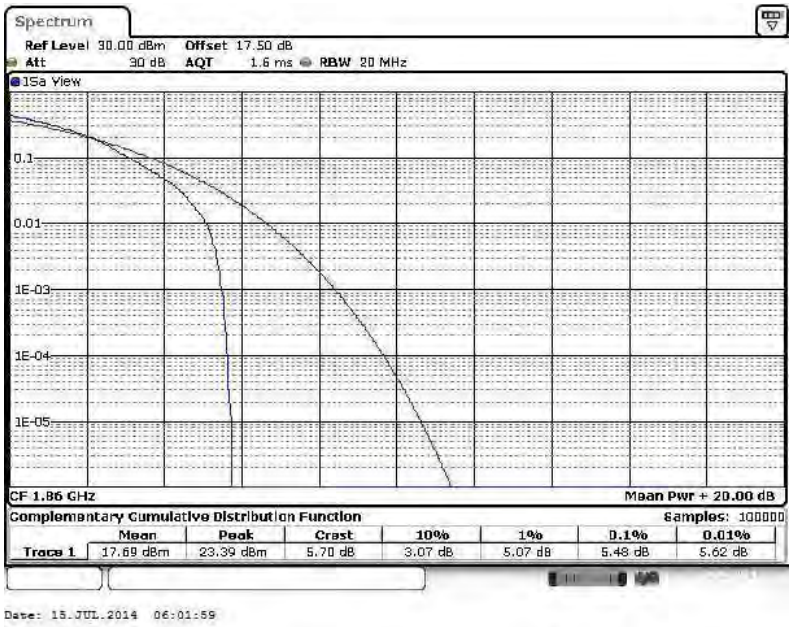
LTE Band 7						
BW [MHz]	Modulation	RB Size	RB Offset	Power (dBm) Low Ch. / Freq.	Power (dBm) Middle Ch. / Freq.	Power (dBm) High Ch. / Freq.
Channel				20850	21100	21350
Frequency (MHz)				2510	2535	2560
20	16QAM	1	0	5.68	5.30	5.22
20	16QAM	100	0	6.00	5.65	5.88

LTE Band 17						
BW [MHz]	Modulation	RB Size	RB Offset	Power (dBm) Low Ch. / Freq.	Power (dBm) Middle Ch. / Freq.	Power (dBm) High Ch. / Freq.
Channel				23780	23790	23800
Frequency (MHz)				709	710	711
10	16QAM	1	0	6.14	6.52	6.26
10	16QAM	50	0	6.09	6.09	6.06

3.2.6 Peak to Average Power Ratio

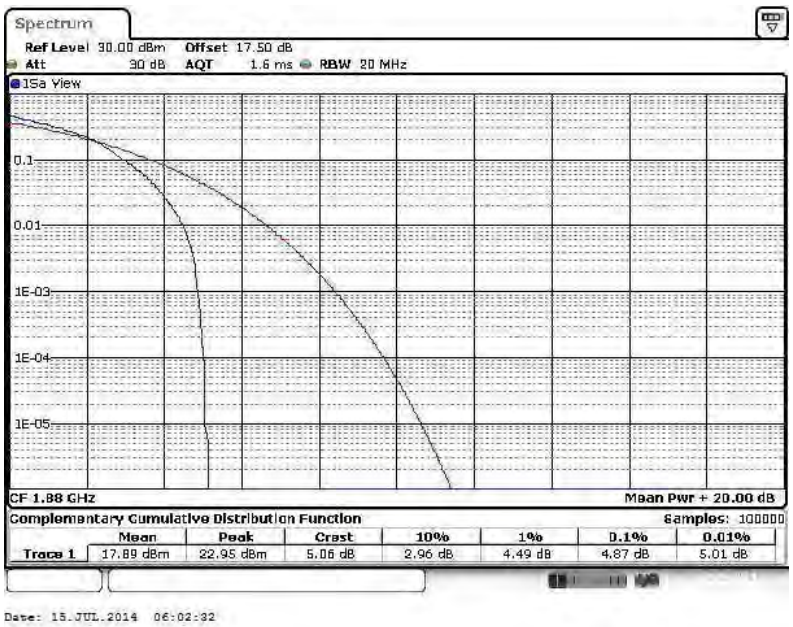
Peak-to-Average Ratio on LTE Band 2

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



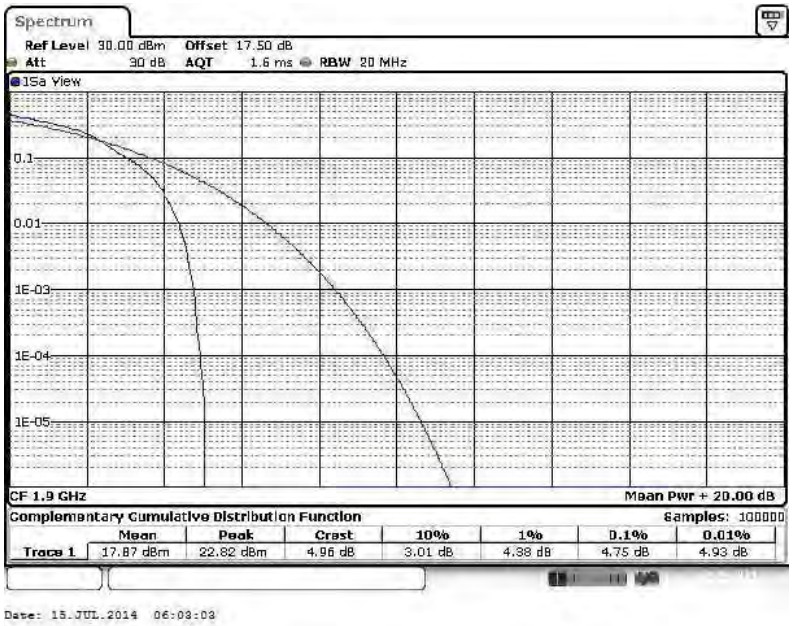
Peak-to-Average Ratio on LTE Band 2

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



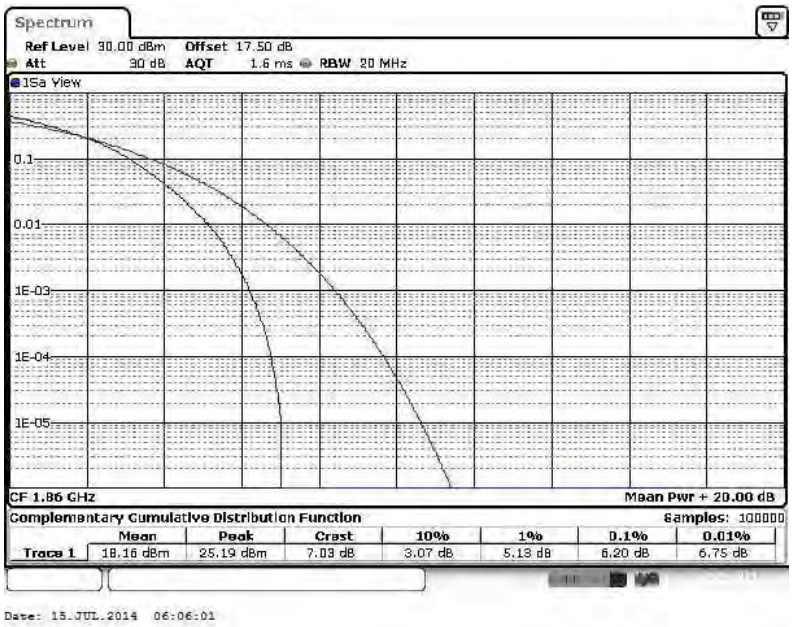
Peak-to-Average Ratio on LTE Band 2

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



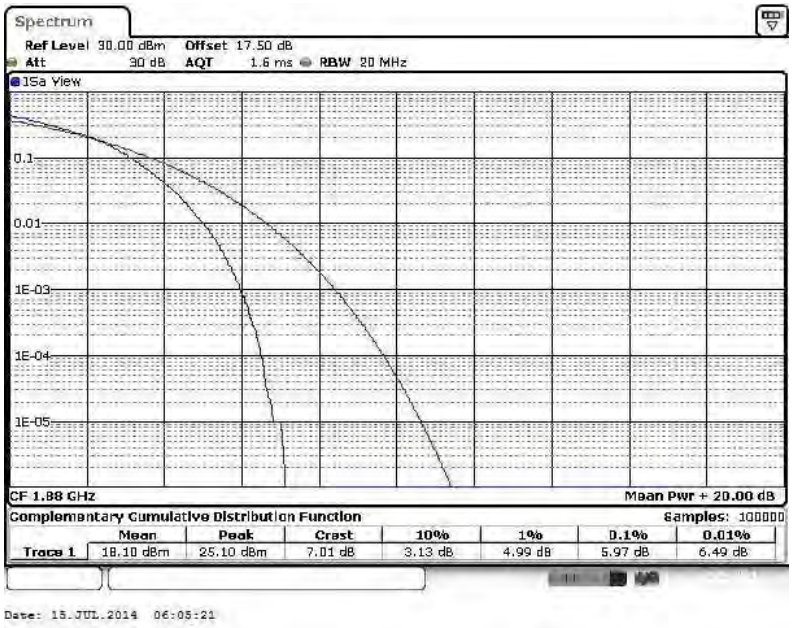
Peak-to-Average Ratio on LTE Band 2

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



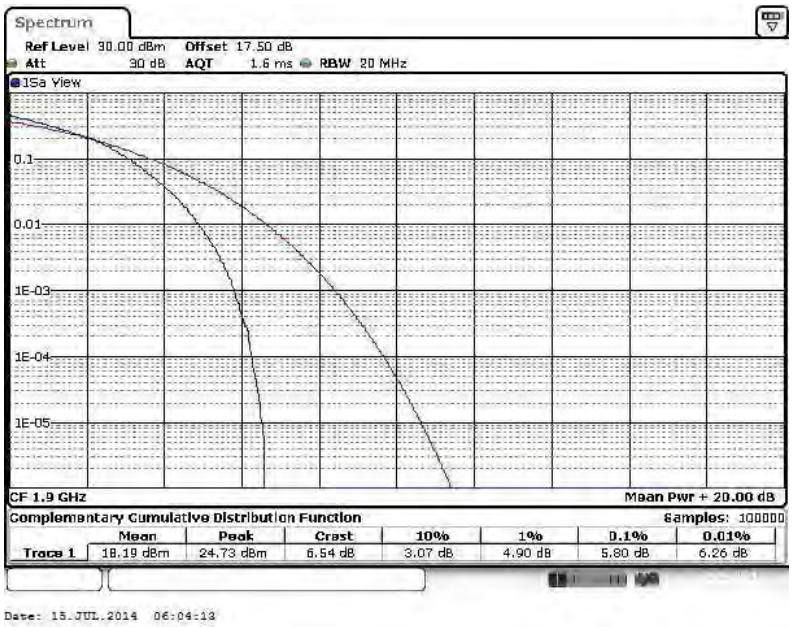
Peak-to-Average Ratio on LTE Band 2

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



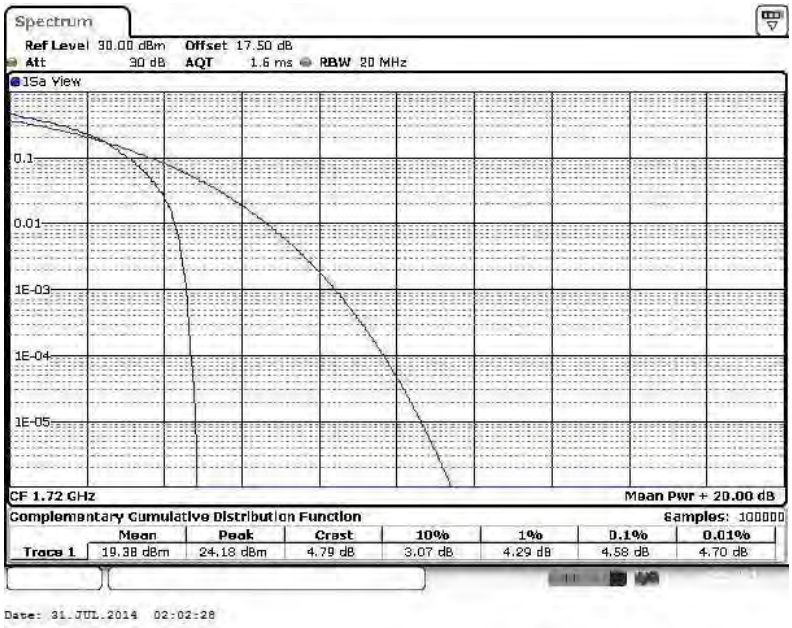
Peak-to-Average Ratio on LTE Band 2

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



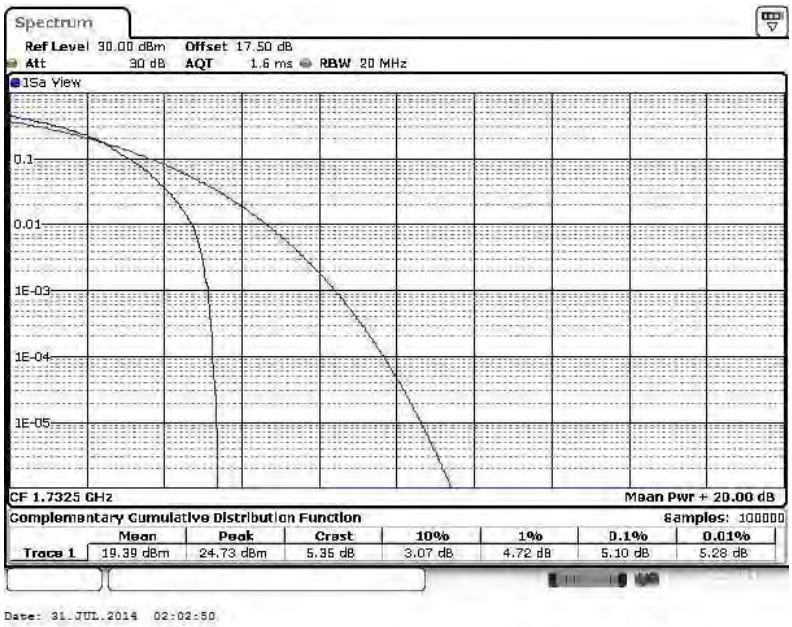
Peak-to-Average Ratio on LTE Band 4

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



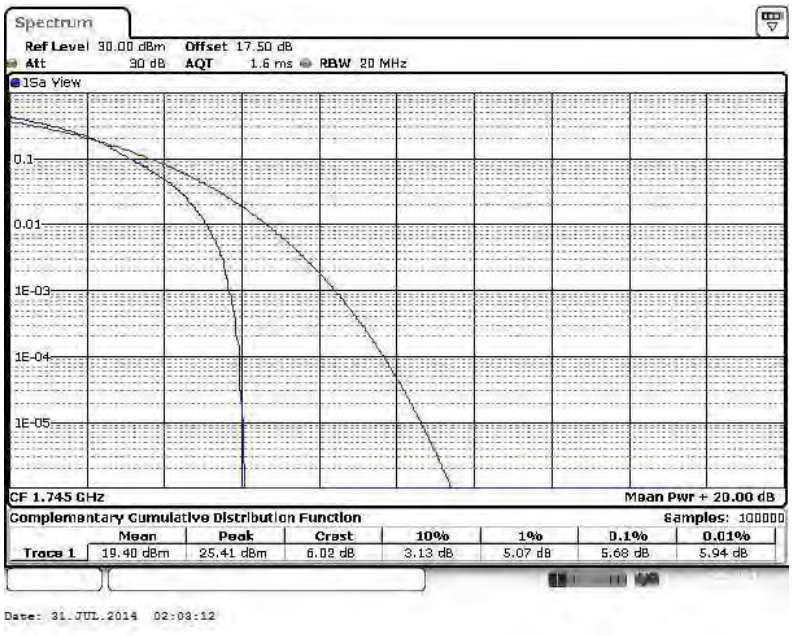
Peak-to-Average Ratio on LTE Band 4

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



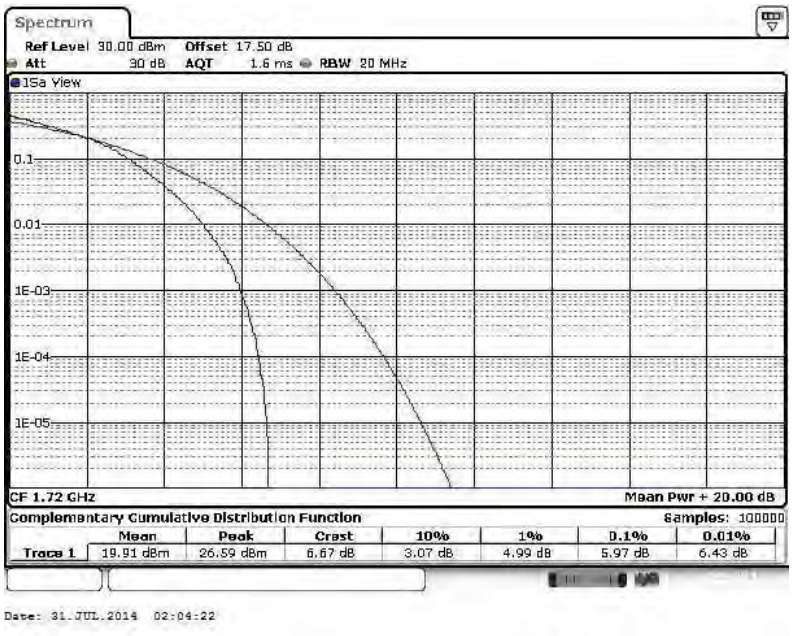
Peak-to-Average Ratio on LTE Band 4

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



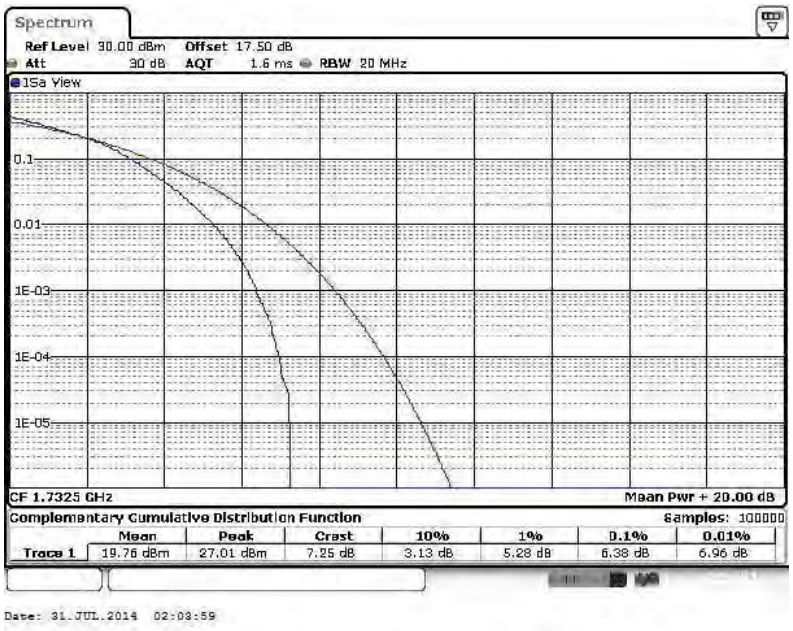
Peak-to-Average Ratio on LTE Band 4

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



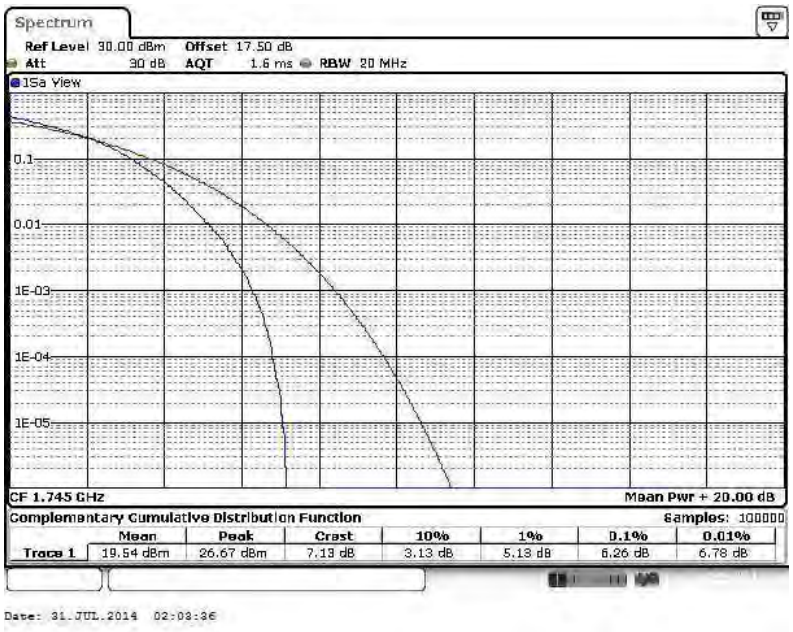
Peak-to-Average Ratio on LTE Band 4

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



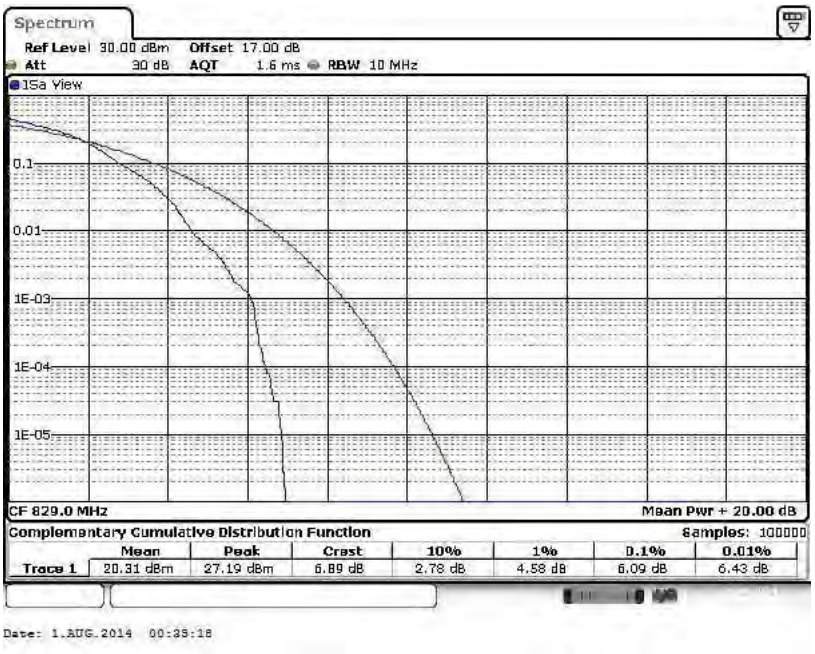
Peak-to-Average Ratio on LTE Band 4

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



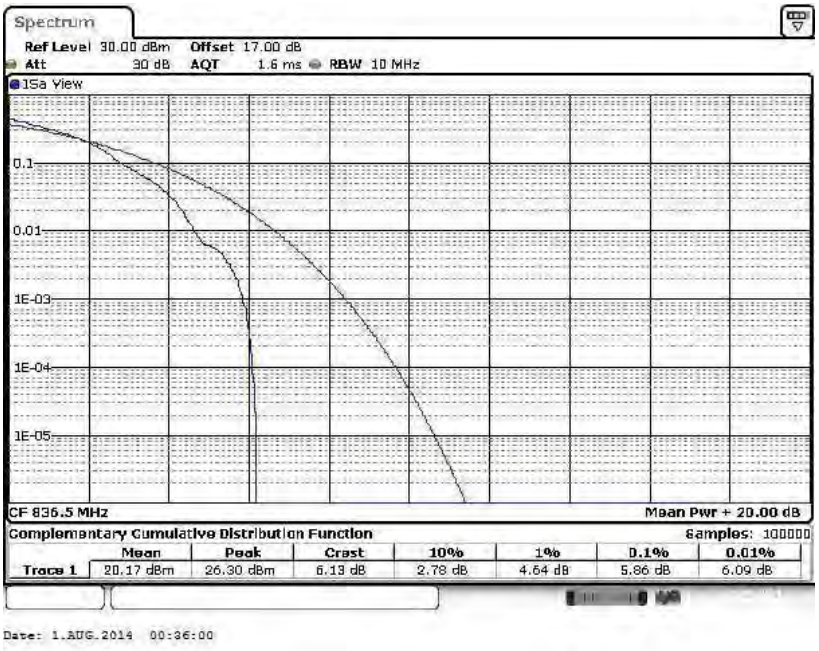
Peak-to-Average Ratio on LTE Band 5

10MHz / 16QAM in Ch. 20450 (1RB Size)



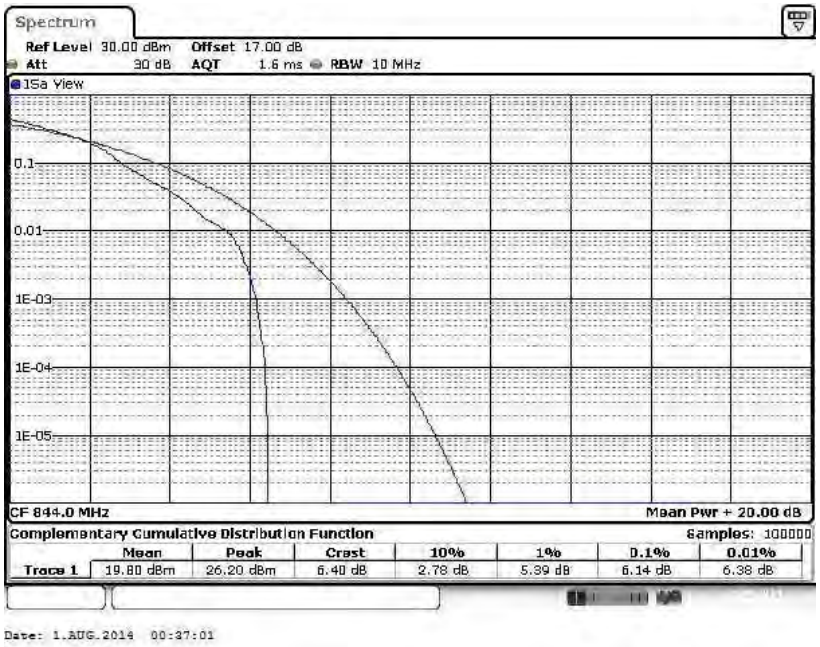
Peak-to-Average Ratio on LTE Band 5

10MHz / 16QAM in Ch. 20525 (1RB Size)



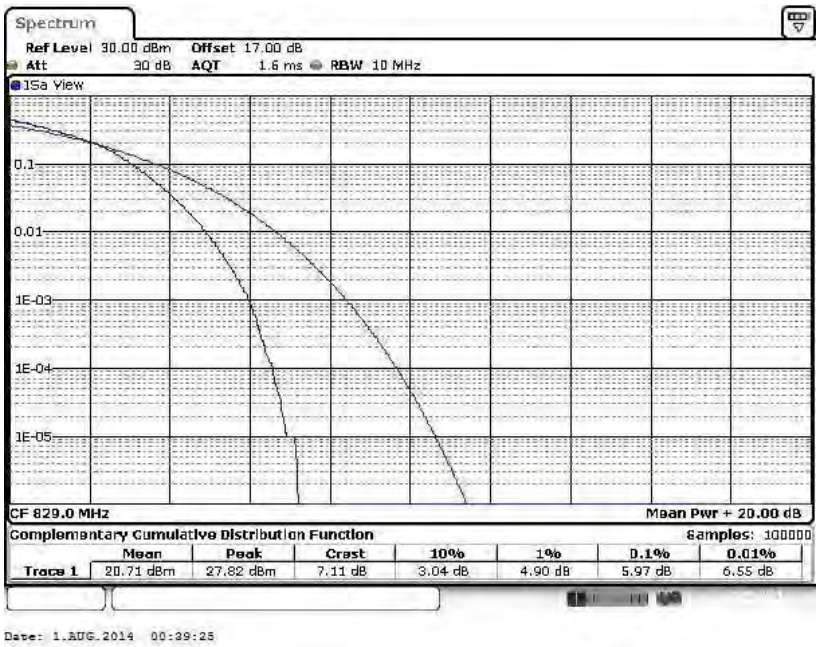
Peak-to-Average Ratio on LTE Band 5

10MHz / 16QAM in Ch. 20600 (1RB Size)



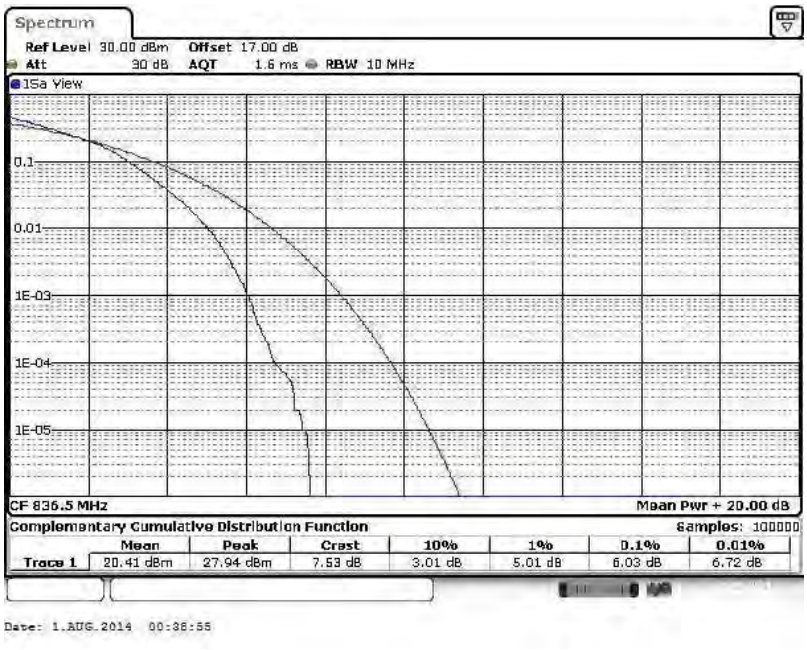
Peak-to-Average Ratio on LTE Band 5

10MHz / 16QAM in Ch. 20450 (50RB Size)



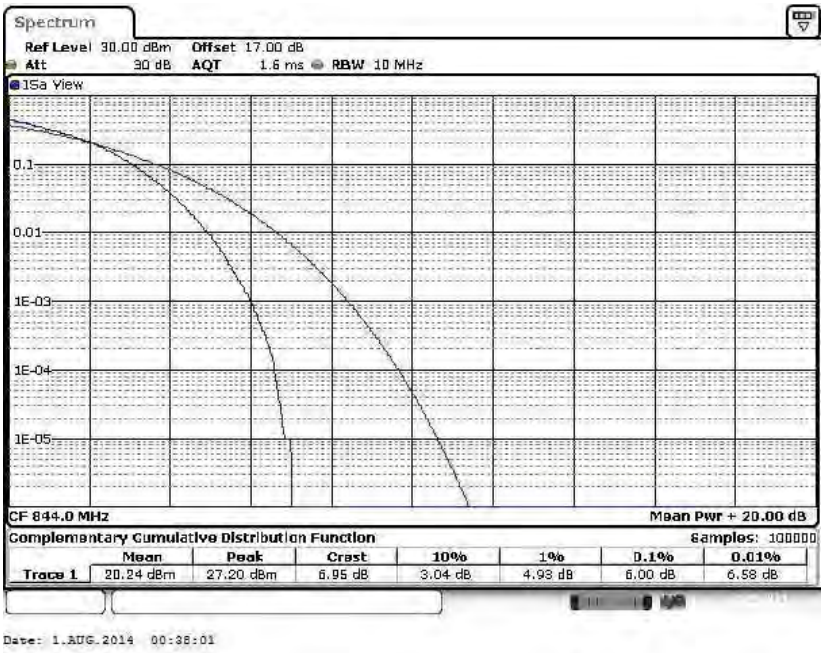
Peak-to-Average Ratio on LTE Band 5

10MHz / 16QAM in Ch. 20525 (50RB Size)



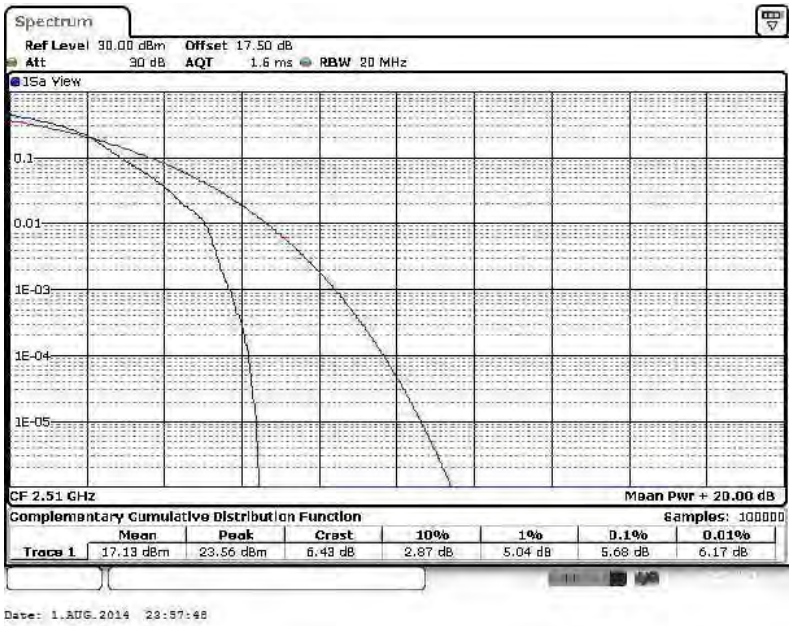
Peak-to-Average Ratio on LTE Band 5

10MHz / 16QAM in Ch. 20600 (50RB Size)



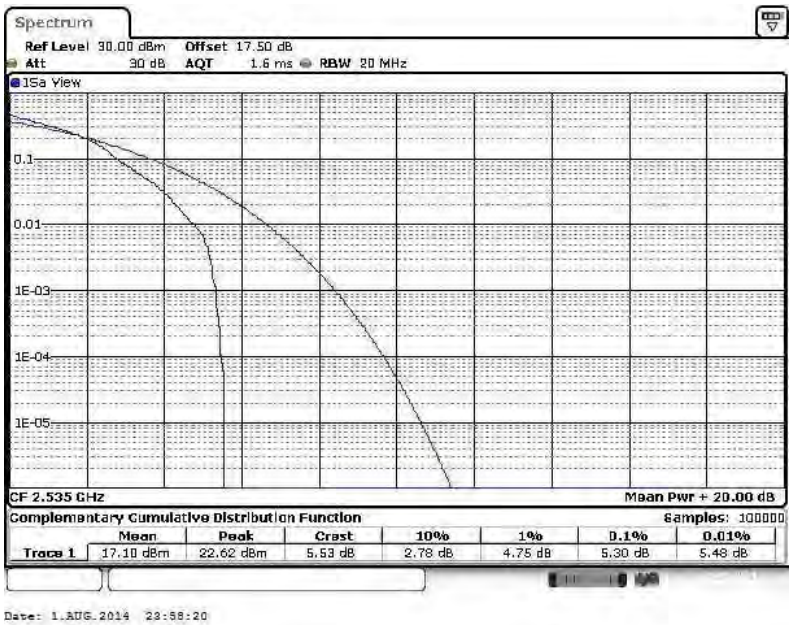
Peak-to-Average Ratio on LTE Band 7

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



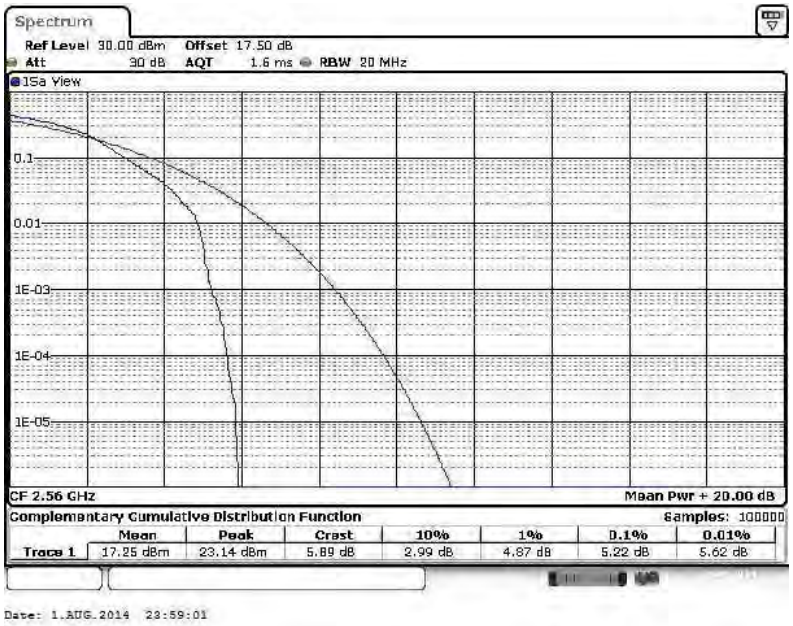
Peak-to-Average Ratio on LTE Band 7

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



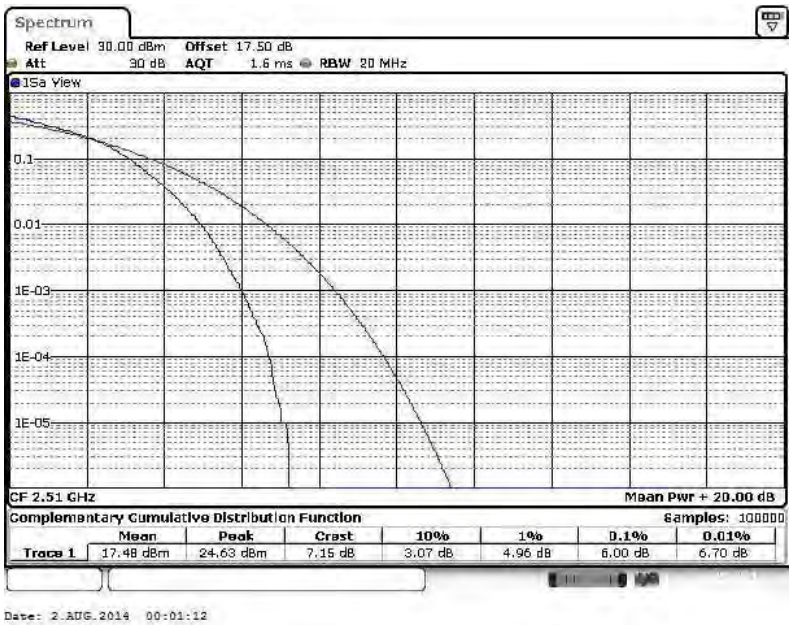
Peak-to-Average Ratio on LTE Band 7

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



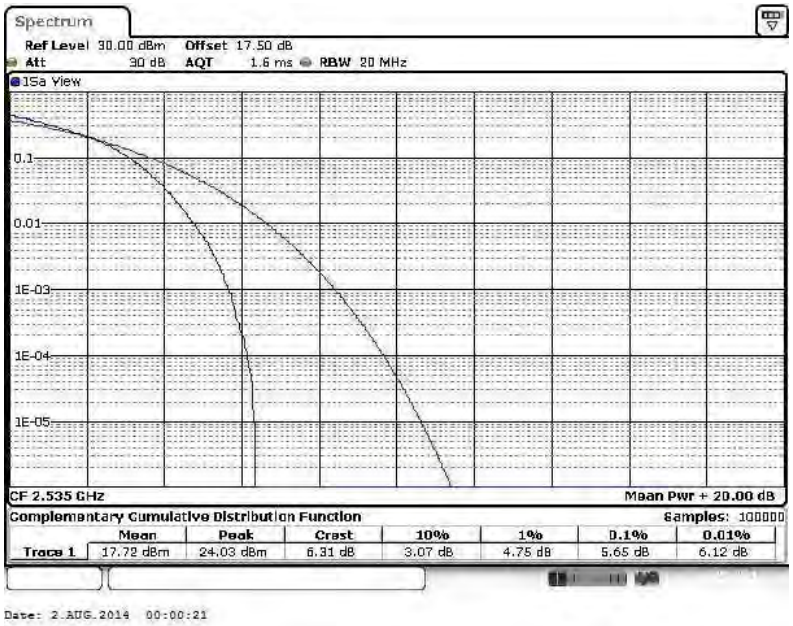
Peak-to-Average Ratio on LTE Band 7

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



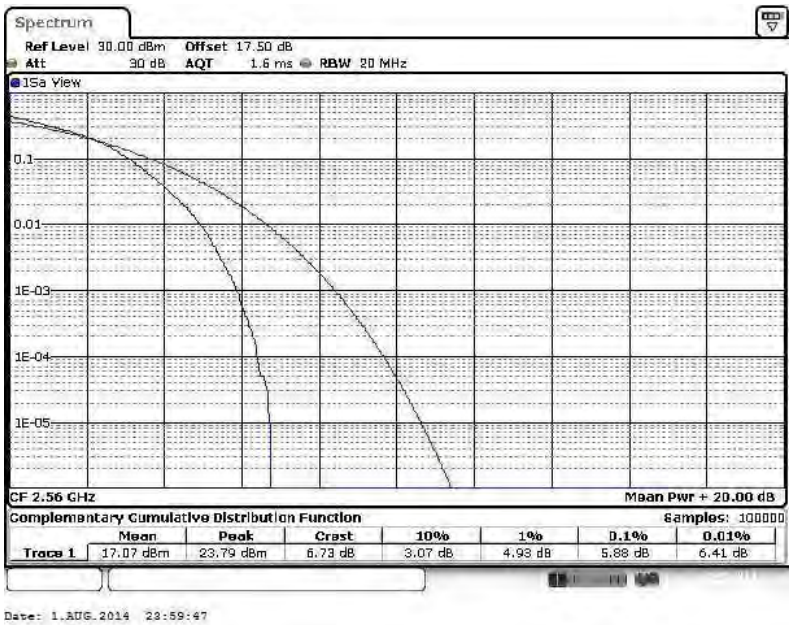
Peak-to-Average Ratio on LTE Band 7

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



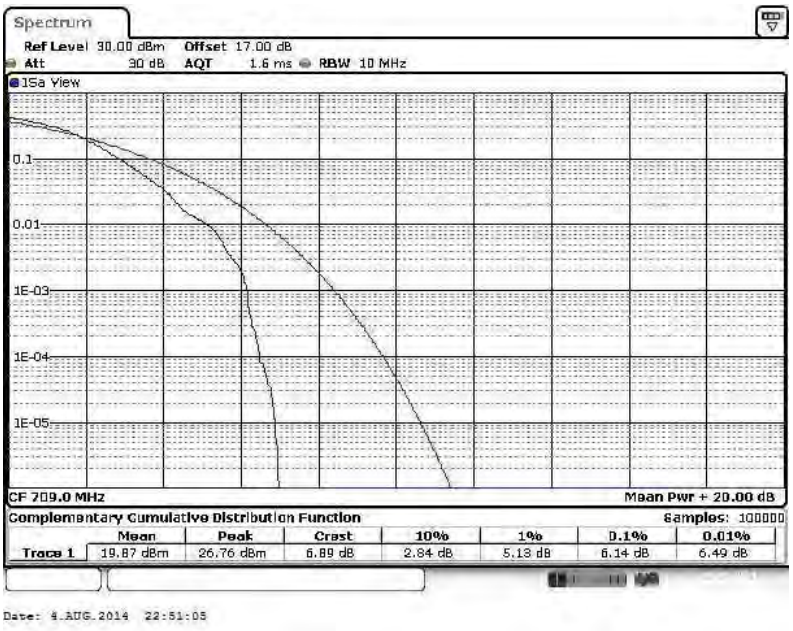
Peak-to-Average Ratio on LTE Band 7

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



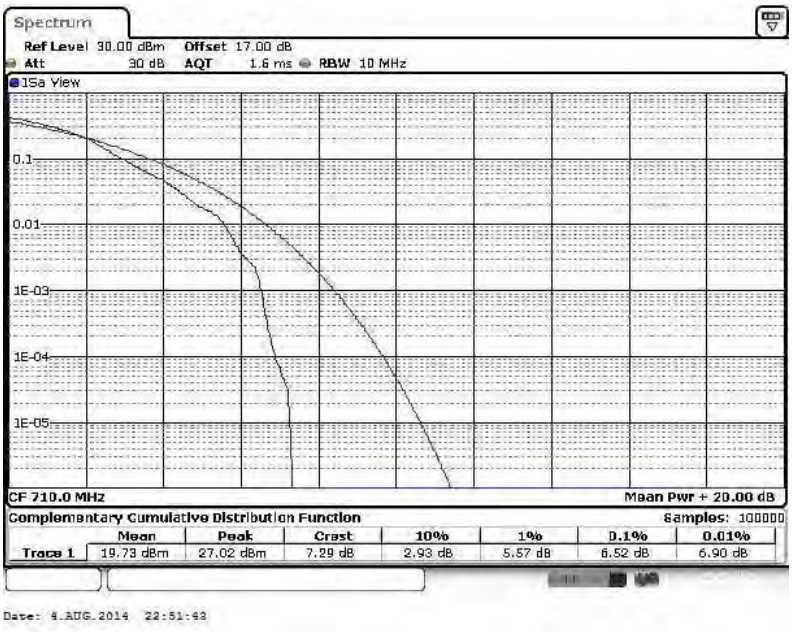
Peak-to-Average Ratio on LTE Band 17

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



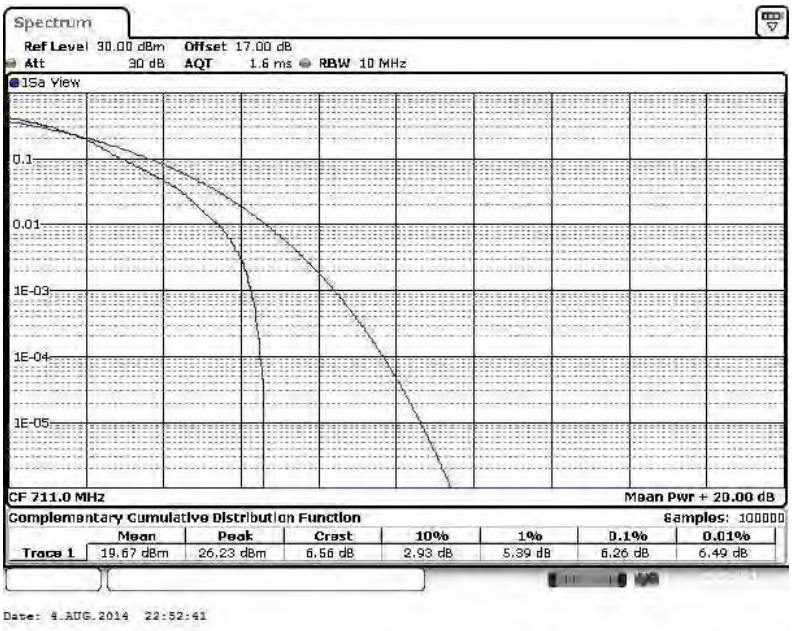
Peak-to-Average Ratio on LTE Band 17

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



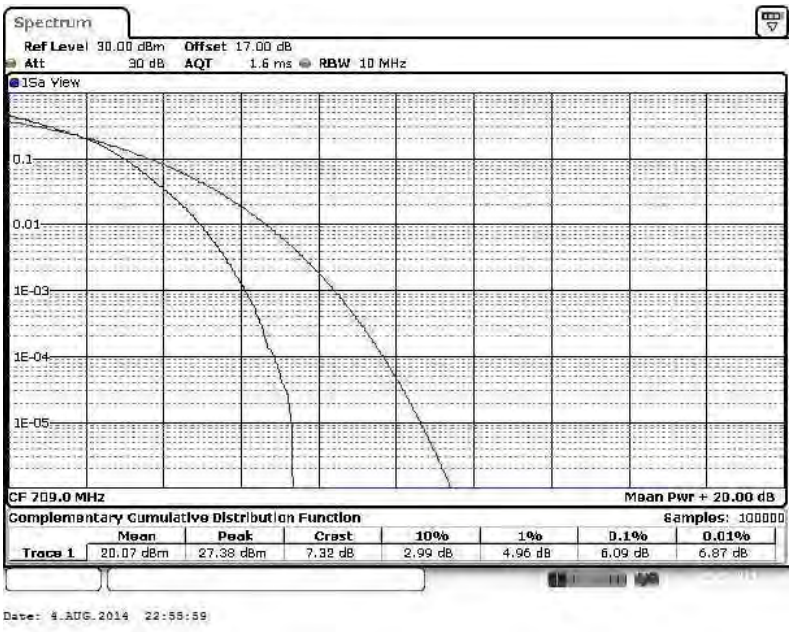
Peak-to-Average Ratio on LTE Band 17

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



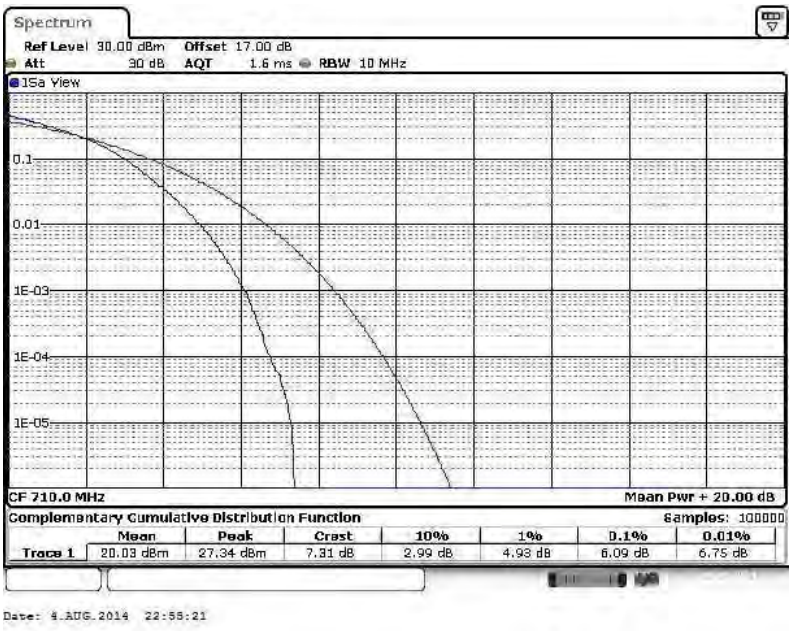
Peak-to-Average Ratio on LTE Band 17

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



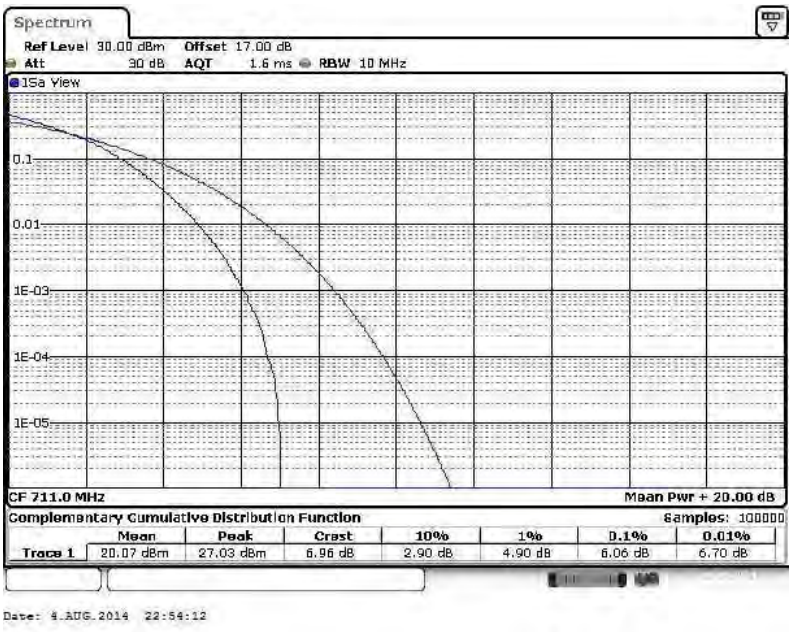
Peak-to-Average Ratio on LTE Band 17

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



Peak-to-Average Ratio on LTE Band 17

10MHz / 16QAM in Ch. 23800 (50RB Size)



3.3 Effective Radiated Power and Equivalent Isotropic Radiated Power Measurement

3.3.1 Description of the ERP/EIRP Measurement

Effective radiated power output measurements by substitution method according to ANSI / TIA / EIA-603-C-2004, and the spectrum analyzer configuration follows KDB 971168 D01 Power Meas. License Digital Systems v02r01. Mobile and portable (hand-held) stations operating are limited to average ERP of 7 watts with LTE band 5 and 3 watts with LTE band 17.

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

3.3.2 Measuring Instruments

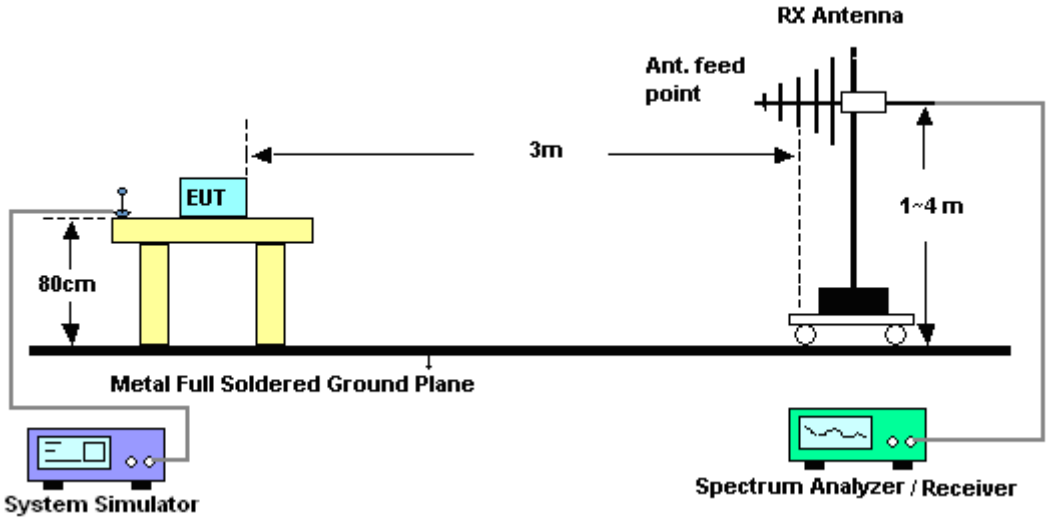
The measuring equipment is listed in the section 4 of this test report.

3.3.3 Test Procedures

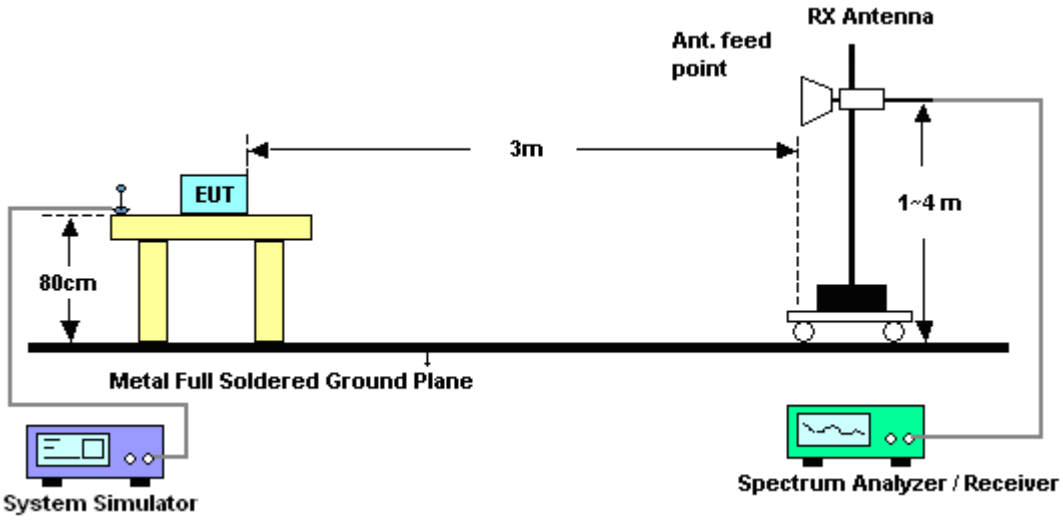
1. The EUT was placed on a non-conductive rotating platform 0.8 meters high in a semi-anechoic chamber. The radiated emission at the fundamental frequency was measured at 3 m with a test antenna and a spectrum analyzer with RMS detector per section 5. of KDB 971168 D01.
2. During the measurement, the 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 Effective Radiated Power



For Equivalent Isotropic Radiated Power



3.3.5 Test Result of ERP/EIRP

LTE Band 2 Radiated Power EIRP for BW 1.4MHz / QPSK				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
1850.7	-22.62	42.60	19.98	0.10
1880.0	-23.25	42.89	19.64	0.09
1909.3	-22.65	42.16	19.51	0.09
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
1850.7	-17.84	42.03	24.19	0.26
1880.0	-18.55	42.35	23.80	0.24
1909.3	-20.65	43.32	22.67	0.19

LTE Band 2 Radiated Power EIRP for BW 1.4MHz / 16QAM				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
1850.7	-23.54	42.60	19.06	0.08
1880.0	-24.09	42.89	18.80	0.08
1909.3	-23.24	42.16	18.92	0.08
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
1850.7	-18.77	42.03	23.26	0.21
1880.0	-19.43	42.35	22.92	0.20
1909.3	-21.27	43.32	22.05	0.16

LTE Band 2 Radiated Power EIRP for BW 20MHz / QPSK				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
1860.0	-22.52	42.60	20.08	0.10
1880.0	-23.49	42.89	19.40	0.09
1900.0	-22.36	42.16	19.80	0.10
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
1860.0	-17.76	42.03	24.27	0.27
1880.0	-18.91	42.35	23.44	0.22
1900.0	-19.78	43.32	23.54	0.23

LTE Band 2 Radiated Power EIRP for BW 20MHz / 16QAM				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
1860.0	-23.31	42.60	19.29	0.08
1880.0	-24.28	42.89	18.61	0.07
1900.0	-23.11	42.16	19.05	0.08
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
1860.0	-18.64	42.03	23.39	0.22
1880.0	-19.73	42.35	22.62	0.18
1900.0	-20.71	43.32	22.61	0.18

LTE Band 4 Radiated Power EIRP for BW 1.4MHz / QPSK				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
1710.7	-17.62	39.98	22.36	0.17
1732.5	-18.17	40.73	22.56	0.18
1754.3	-18.22	40.83	22.61	0.18
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
1710.7	-16.58	41.22	24.64	0.29
1732.5	-16.81	41.41	24.60	0.29
1754.3	-16.99	41.68	24.69	0.29

LTE Band 4 Radiated Power EIRP for BW 1.4MHz / 16QAM				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
1710.7	-18.63	39.98	21.35	0.14
1732.5	-19.09	40.73	21.64	0.15
1754.3	-19.17	40.83	21.66	0.15
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
1710.7	-17.27	41.22	23.95	0.25
1732.5	-17.43	41.41	23.98	0.25
1754.3	-17.88	41.68	23.80	0.24

LTE Band 4 Radiated Power EIRP for BW 20MHz / QPSK				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
1720.0	-17.68	39.98	22.30	0.17
1732.5	-18.38	40.73	22.35	0.17
1745.0	-18.46	40.83	22.37	0.17
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
1720.0	-16.71	41.22	24.51	0.28
1732.5	-17.00	41.41	24.41	0.28
1745.0	-17.30	41.68	24.38	0.27

LTE Band 4 Radiated Power EIRP for BW 20MHz / 16QAM				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
1720.0	-18.64	39.98	21.34	0.14
1732.5	-19.31	40.73	21.42	0.14
1745.0	-18.98	40.83	21.85	0.15
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
1720.0	-17.26	41.22	23.96	0.25
1732.5	-17.67	41.41	23.74	0.24
1745.0	-17.65	41.68	24.03	0.25

LTE Band 5 Radiated Power ERP for BW 1.4MHz / QPSK				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (W)**
824.7	-7.33	29.11	19.63	0.09
836.5	-10.20	29.20	16.85	0.05
848.3	-8.30	29.40	18.95	0.08
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (W)**
824.7	-10.75	33.23	20.33	0.11
836.5	-13.71	33.00	17.14	0.05
848.3	-10.98	32.95	19.82	0.10

LTE Band 5 Radiated Power ERP for BW 1.4MHz / 16QAM				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (W)**
824.7	-8.37	29.11	18.59	0.07
836.5	-8.82	29.20	18.23	0.07
848.3	-9.24	29.40	18.01	0.06
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (W)**
824.7	-11.36	33.23	19.72	0.09
836.5	-11.70	33.00	19.15	0.08
848.3	-11.66	32.95	19.14	0.08

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

LTE Band 5 Radiated Power ERP for BW 10MHz / QPSK				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (W)**
829.0	-7.50	29.11	19.46	0.09
836.5	-7.66	29.20	19.39	0.09
844.0	-8.02	29.40	19.23	0.08
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (W)**
829.0	-10.72	33.23	20.36	0.11
836.5	-10.46	33.00	20.39	0.11
844.0	-10.62	32.95	20.18	0.10

LTE Band 5 Radiated Power ERP for BW 10MHz / 16QAM				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (W)**
829.0	-8.59	29.11	18.37	0.07
836.5	-8.66	29.20	18.39	0.07
844.0	-9.07	29.40	18.18	0.07
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (W)**
829.0	-11.73	33.23	19.36	0.09
836.5	-11.52	33.00	19.33	0.09
844.0	-11.69	32.95	19.11	0.08

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

LTE Band 7 Radiated Power EIRP for BW 5MHz / QPSK				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
2502.5	-25.05	43.58	16.38	0.04
2535.0	-24.71	43.84	16.98	0.05
2567.5	-25.15	43.72	16.42	0.04
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
2502.5	-22.72	45.66	20.79	0.12
2535.0	-23.56	46.02	20.31	0.11
2567.5	-23.50	44.93	19.28	0.08

LTE Band 7 Radiated Power EIRP for BW 5MHz / 16QAM				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
2502.5	-25.98	43.58	15.45	0.04
2535.0	-25.52	43.84	16.17	0.04
2567.5	-26.06	43.72	15.51	0.04
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
2502.5	-23.32	45.66	20.19	0.10
2535.0	-23.94	46.02	19.93	0.10
2567.5	-23.92	44.93	18.86	0.08

LTE Band 7 Radiated Power EIRP for BW 15MHz / QPSK				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
2507.5	-24.69	43.58	16.74	0.05
2535.0	-24.46	43.84	17.24	0.05
2562.5	-24.56	43.72	17.01	0.05
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
2507.5	-22.34	45.66	21.17	0.13
2535.0	-23.11	46.02	20.76	0.12
2562.5	-22.84	44.93	19.94	0.10

LTE Band 7 Radiated Power EIRP for BW 15MHz / 16QAM				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
2507.5	-25.38	43.58	16.05	0.04
2535.0	-25.34	43.84	16.35	0.04
2562.5	-25.49	43.72	16.08	0.04
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
2507.5	-23.03	45.66	20.48	0.11
2535.0	-23.70	46.02	20.17	0.10
2562.5	-23.32	44.93	19.46	0.09

LTE Band 7 Radiated Power EIRP for BW 20MHz / QPSK				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
2510.0	-24.86	43.58	16.57	0.05
2535.0	-24.62	43.84	17.07	0.05
2560.0	-24.54	43.72	17.03	0.05
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
2510.0	-22.42	45.66	21.09	0.13
2535.0	-22.99	46.02	20.88	0.12
2560.0	-22.65	44.93	20.13	0.10

LTE Band 7 Radiated Power EIRP for BW 20MHz / 16QAM				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
2510.0	-25.64	43.58	15.79	0.04
2535.0	-25.56	43.84	16.13	0.04
2560.0	-25.43	43.72	16.14	0.04
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
2510.0	-23.67	45.66	19.84	0.10
2535.0	-23.99	46.02	19.88	0.10
2560.0	-23.10	44.93	19.68	0.09

LTE Band 17 Radiated Power ERP for BW 5MHz / QPSK				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (W)**
706.50	-6.99	27.37	18.23	0.07
710.00	-7.05	27.52	18.32	0.07
713.50	-7.10	27.63	18.38	0.07
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (W)**
706.50	-8.61	29.71	18.95	0.08
710.00	-8.64	29.78	18.99	0.08
713.50	-8.84	29.95	18.96	0.08

LTE Band 17 Radiated Power ERP for BW 5MHz / 16QAM				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (W)**
706.50	-7.44	27.37	17.78	0.06
710.00	-7.65	27.52	17.72	0.06
713.50	-7.96	27.63	17.52	0.06
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (W)**
706.50	-8.93	29.71	18.63	0.07
710.00	-9.19	29.78	18.44	0.07
713.50	-9.63	29.95	18.17	0.07

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

LTE Band 17 Radiated Power ERP for BW 10MHz / QPSK				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (W)**
709.00	-6.49	27.37	18.73	0.07
710.00	-6.72	27.52	18.65	0.07
711.00	-6.99	27.63	18.49	0.07
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (W)**
709.00	-8.22	29.71	19.34	0.09
710.00	-8.32	29.78	19.31	0.09
711.00	-8.72	29.95	19.08	0.08

LTE Band 17 Radiated Power ERP for BW 10MHz / 16QAM				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (W)**
709.00	-7.58	27.37	17.64	0.06
710.00	-7.45	27.52	17.92	0.06
711.00	-7.65	27.63	17.83	0.06
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (W)**
709.00	-9.19	29.71	18.37	0.07
710.00	-8.96	29.78	18.67	0.07
711.00	-9.34	29.95	18.46	0.07

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

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.

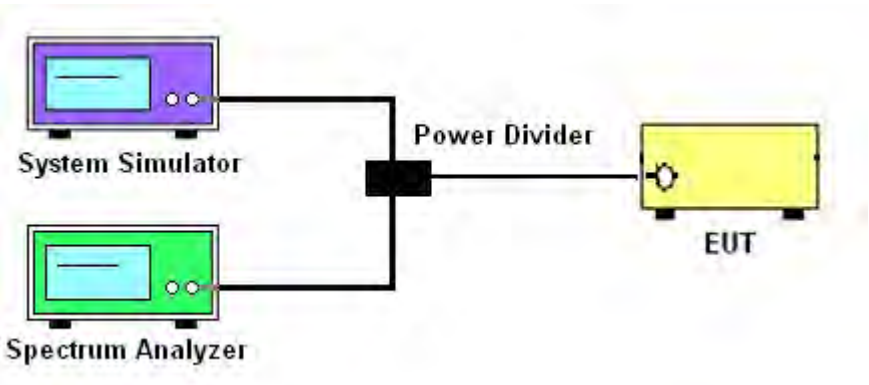
3.4.2 Measuring Instruments

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)	1.105	1.105	1.108	1.105	1.102	1.108	2.739	2.739	2.745	2.733	2.733	2.739
26dB BW (MHz)	1.359	1.382	1.415	1.387	1.371	1.371	3.159	3.153	3.279	3.195	3.165	3.357
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)	4.486	4.496	4.496	4.486	4.496	4.496	9.111	9.111	9.131	9.031	9.031	9.051
26dB BW (MHz)	5.095	5.085	5.095	5.045	5.055	5.115	10.490	10.470	10.549	10.330	10.330	10.470
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)	13.516	13.516	13.546	13.516	13.516	13.546	18.501	18.462	18.462	18.501	18.422	18.542
26dB BW (MHz)	15.854	15.914	15.944	15.944	16.094	16.124	21.658	21.818	21.698	21.538	21.499	21.299

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)	1.105	1.102	1.102	1.102	1.102	1.105	2.727	2.727	2.733	2.733	2.733	2.733
26dB BW (MHz)	1.371	1.359	1.368	1.351	1.359	1.362	3.105	3.111	3.105	3.165	3.159	3.165
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	4.486	9.111	9.111	9.111	9.031	9.051	9.031
26dB BW (MHz)	5.085	5.105	5.085	5.095	5.095	5.095	10.549	10.569	10.450	10.350	10.310	10.370
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)	13.487	13.546	13.516	13.516	13.487	13.516	18.422	18.501	18.462	18.462	18.581	18.422
26dB BW (MHz)	15.704	15.914	15.704	15.974	16.124	16.184	21.658	21.339	21.379	22.138	21.658	21.379

Modes	LTE Band 5											
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)	1.099	1.099	1.099	1.099	1.102	1.102	2.727	2.727	2.727	2.727	2.727	2.727
26dB BW (MHz)	1.340	1.351	1.343	1.357	1.354	1.351	3.069	3.081	3.075	3.141	3.135	3.129
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)	4.486	4.486	4.486	4.486	4.486	4.486	9.091	9.131	9.091	9.011	9.031	9.031
26dB BW (MHz)	5.095	5.105	5.085	5.095	5.095	5.055	10.450	10.629	10.569	10.410	10.470	10.391

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)	4.496	4.496	4.505	4.496	4.496	4.496	9.131	9.111	9.171	9.031	9.051	9.071
26dB BW (MHz)	5.145	5.185	5.205	5.235	5.205	5.175	10.569	10.649	10.649	10.470	10.509	10.470
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)	13.516	13.546	13.516	13.516	13.487	13.516	18.462	18.501	18.621	18.462	18.541	18.581
26dB BW (MHz)	15.974	16.064	16.064	15.884	16.004	15.734	21.578	21.538	21.698	21.538	21.339	21.778

Modes	LTE Band 17											
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	4.486	4.476	4.496	4.486	4.476	9.131	9.091	9.091	9.071	9.011	9.011
26dB BW (MHz)	5.115	5.095	5.075	5.065	5.065	5.085	10.529	10.490	10.509	10.410	10.290	10.290

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

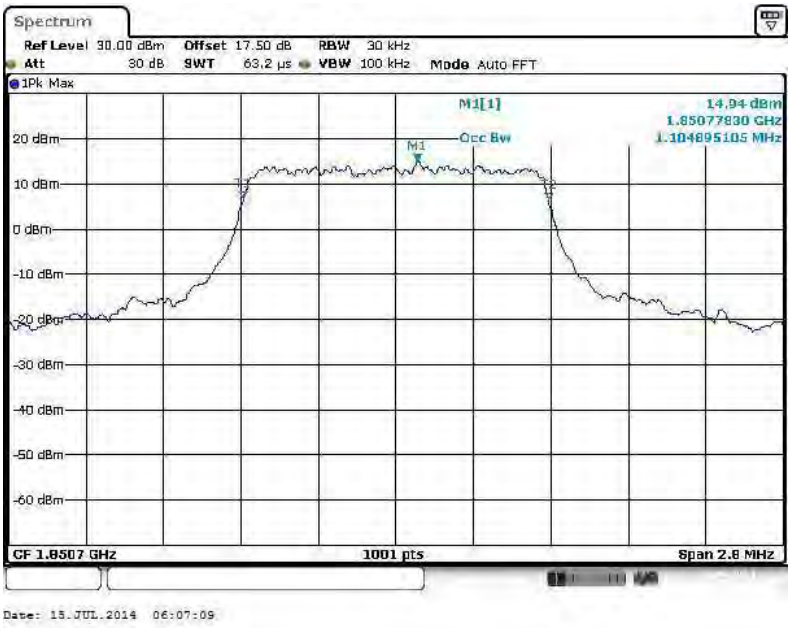
BW15MHz RB setting：RB Size 75, RB offset 0

BW20MHz RB setting：RB Size 100, RB offset 0

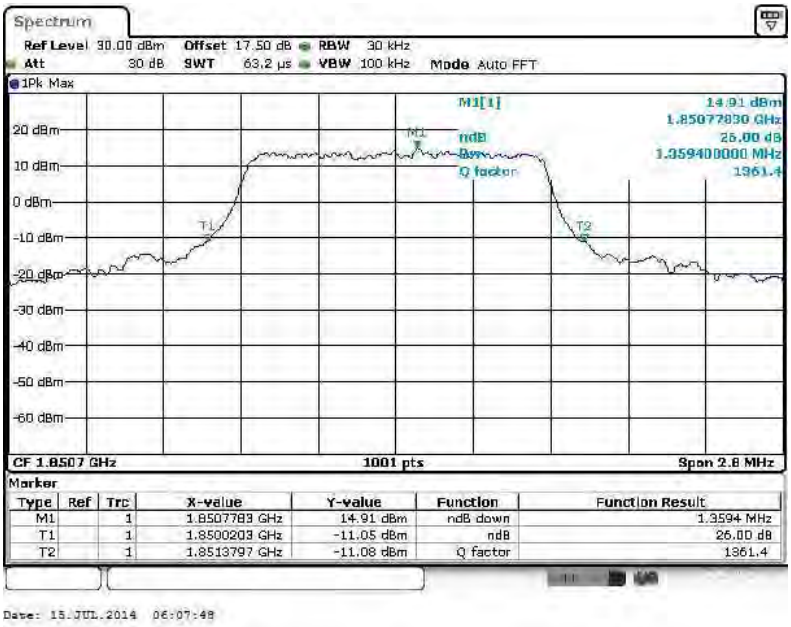
3.4.6 Test Result (Plots) of Occupied Bandwidth

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

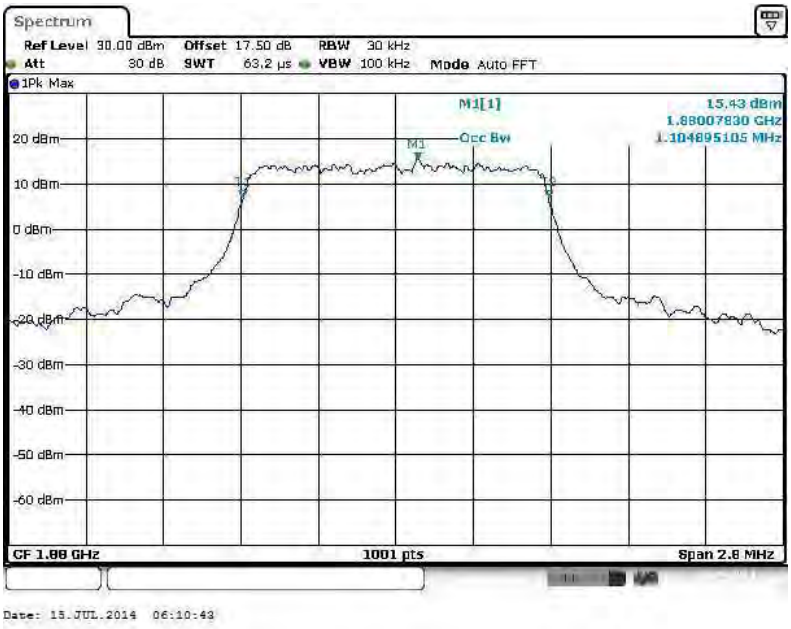
99% Occupied Bandwidth Plot on Channel 18607



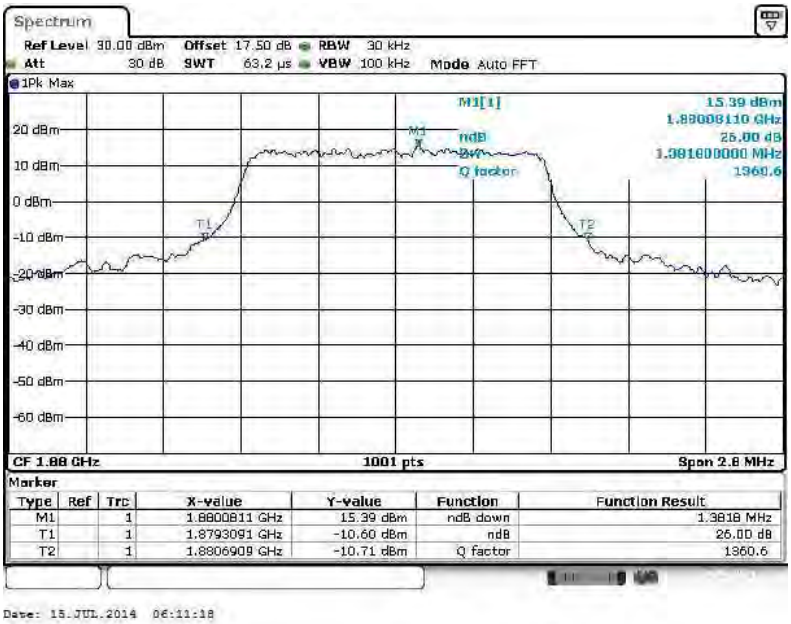
26dB Bandwidth Plot on Channel 18607



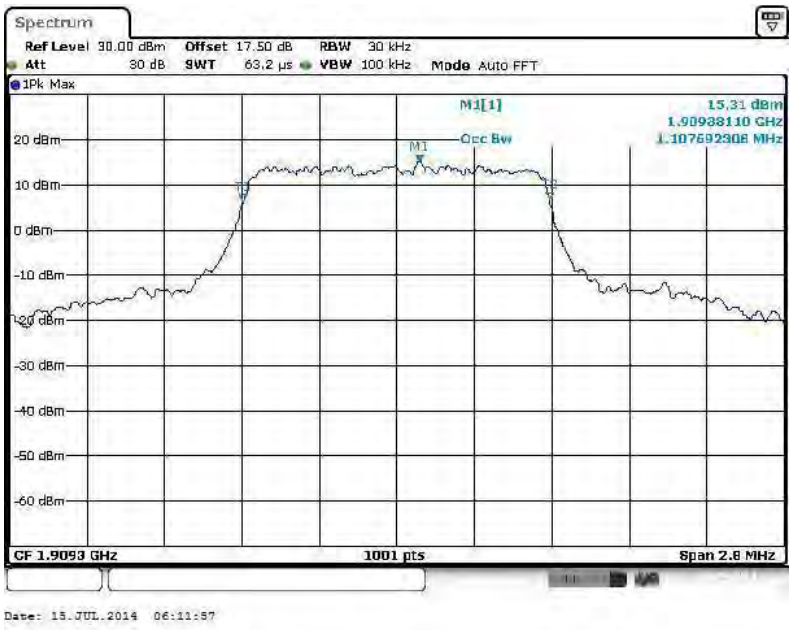
99% Occupied Bandwidth Plot on Channel 18900



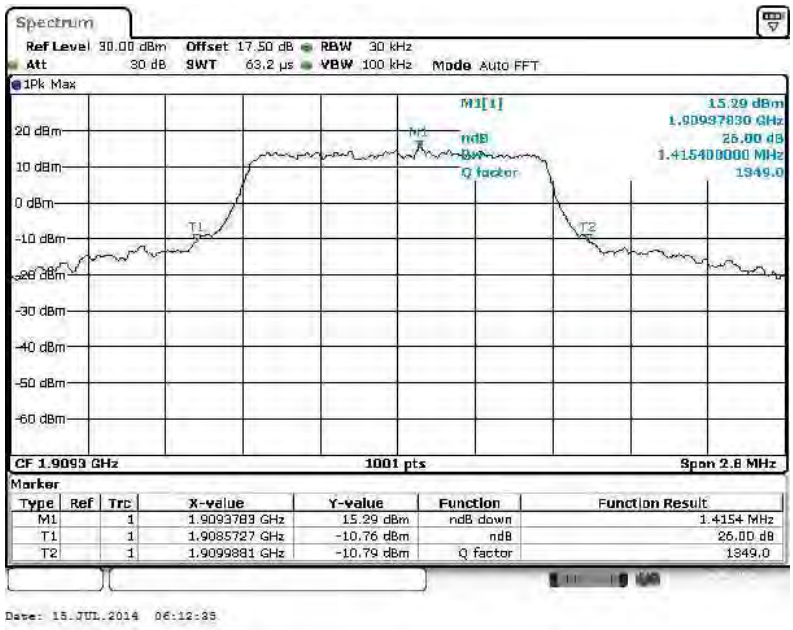
26dB Bandwidth Plot on Channel 18900



99% Occupied Bandwidth Plot on Channel 19193

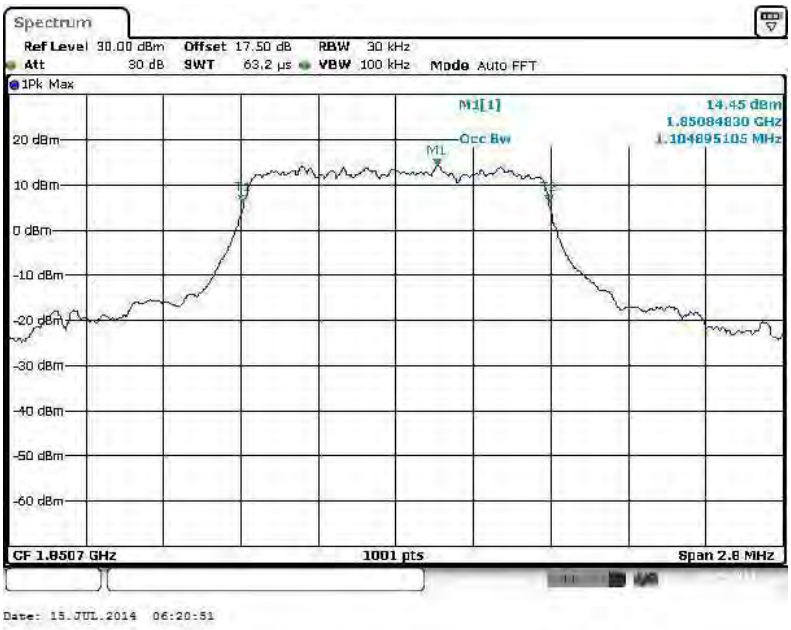


26dB Bandwidth Plot on Channel 19193

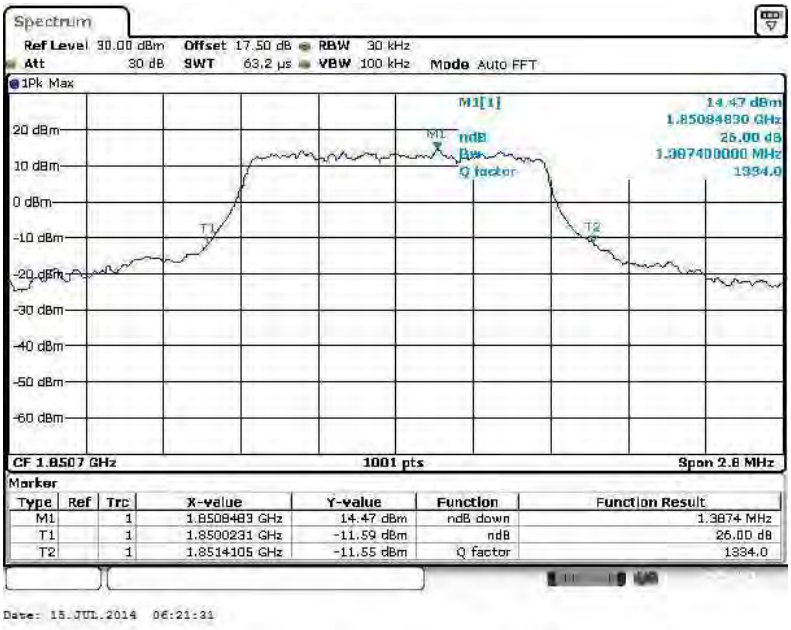


Band :	LTE Band 2	BW / Mod. :	1.4MHz / 16QAM

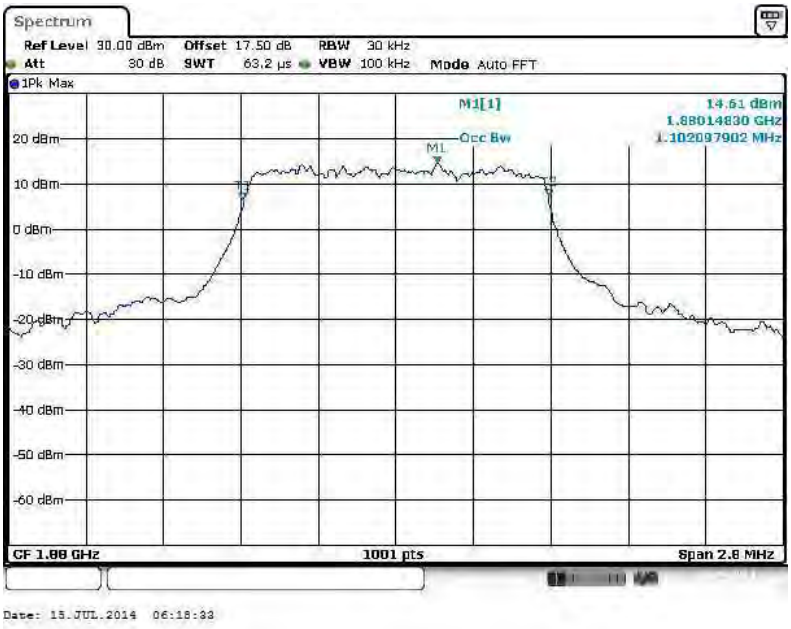
99% Occupied Bandwidth Plot on Channel 18607



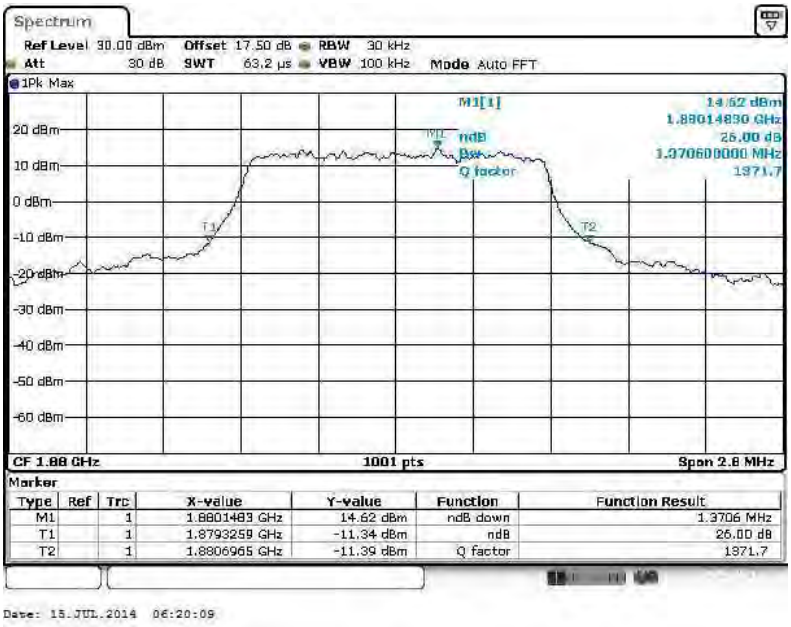
26dB Bandwidth Plot on Channel 18607



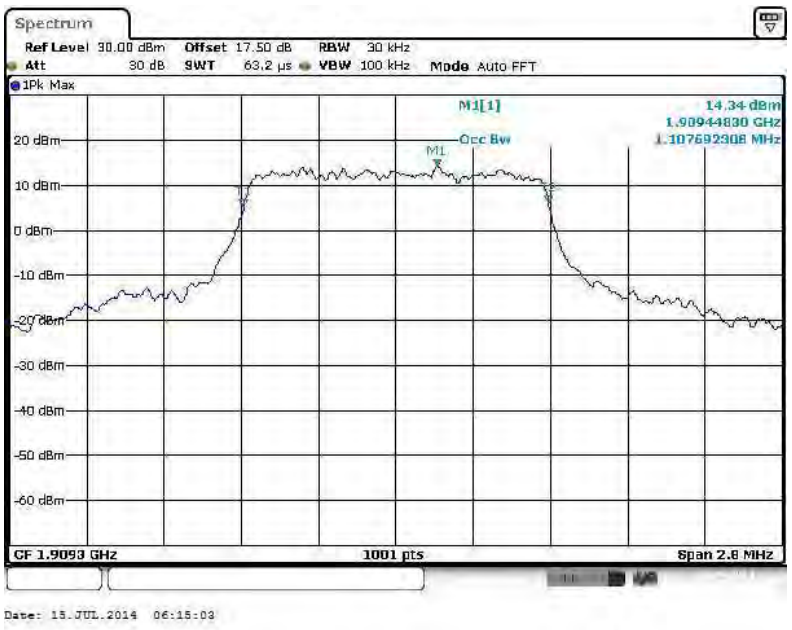
99% Occupied Bandwidth Plot on Channel 18900



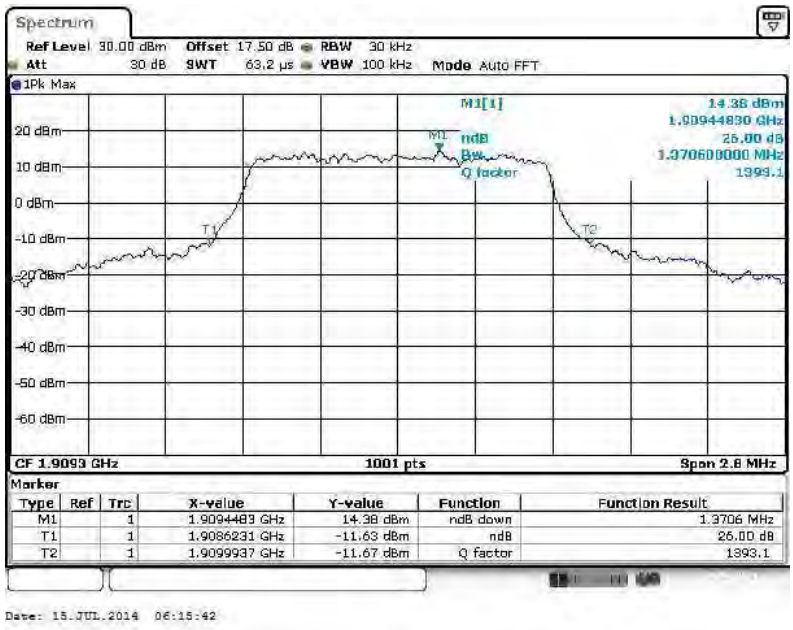
26dB Bandwidth Plot on Channel 18900



99% Occupied Bandwidth Plot on Channel 19193

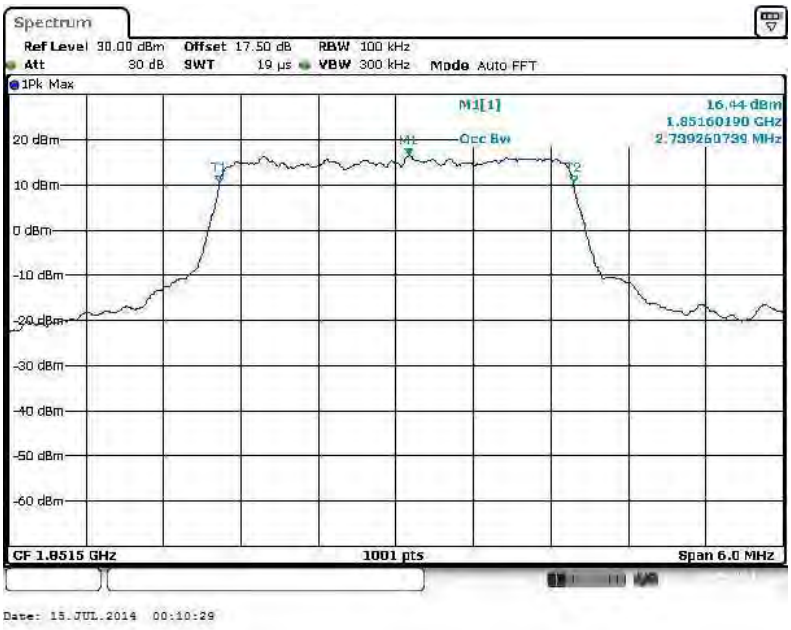


26dB Bandwidth Plot on Channel 19193

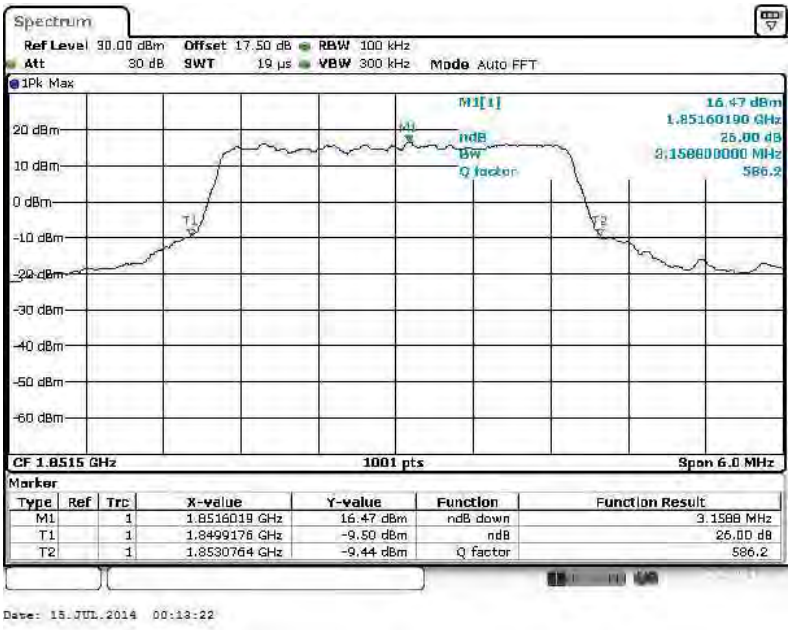


Band :	LTE Band 2	BW / Mod. :	3MHz / QPSK

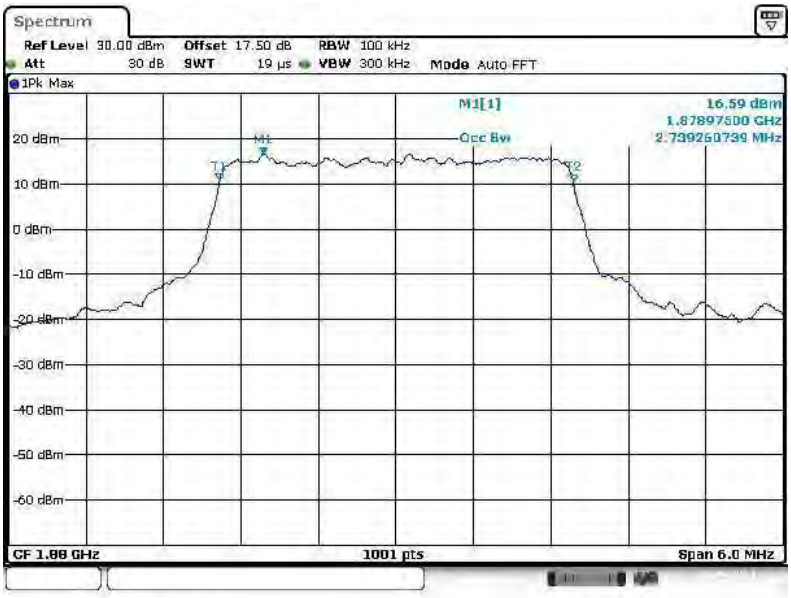
99% Occupied Bandwidth Plot on Channel 18615



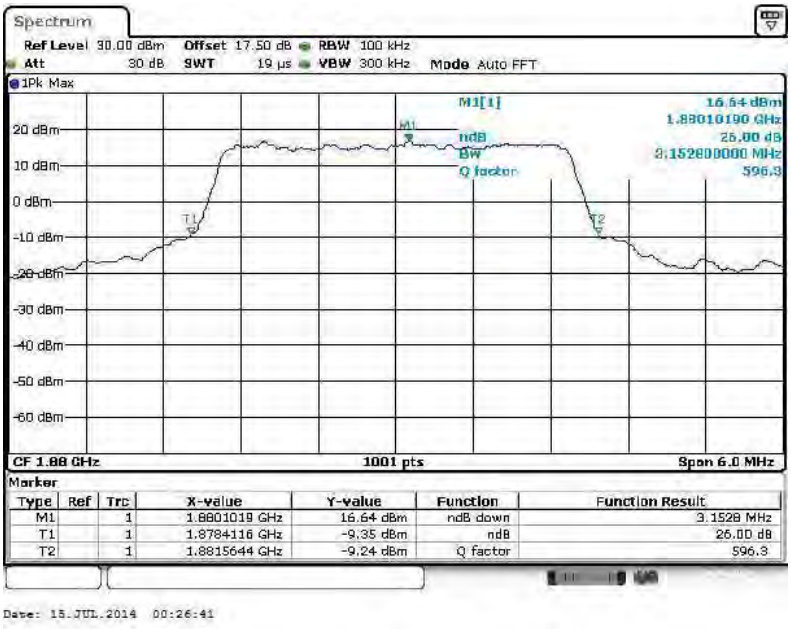
26dB Bandwidth Plot on Channel 18615



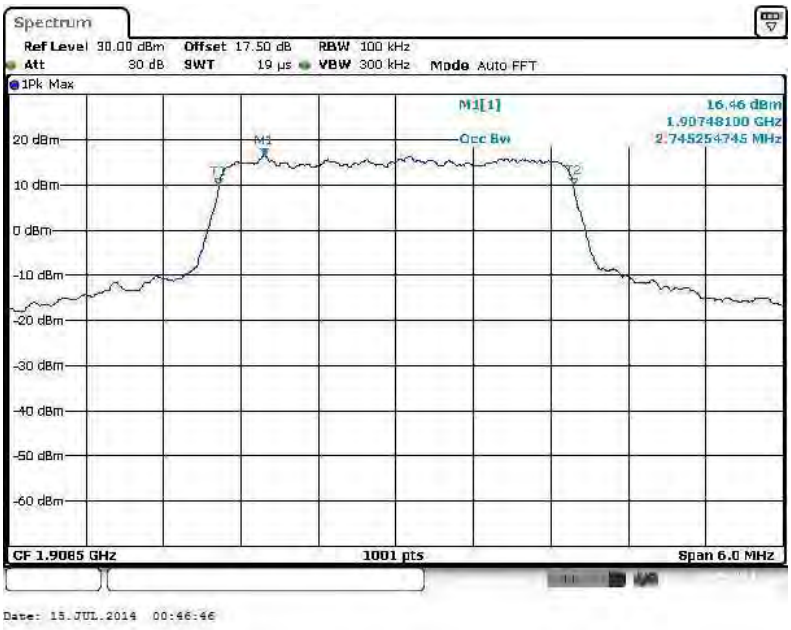
99% Occupied Bandwidth Plot on Channel 18900



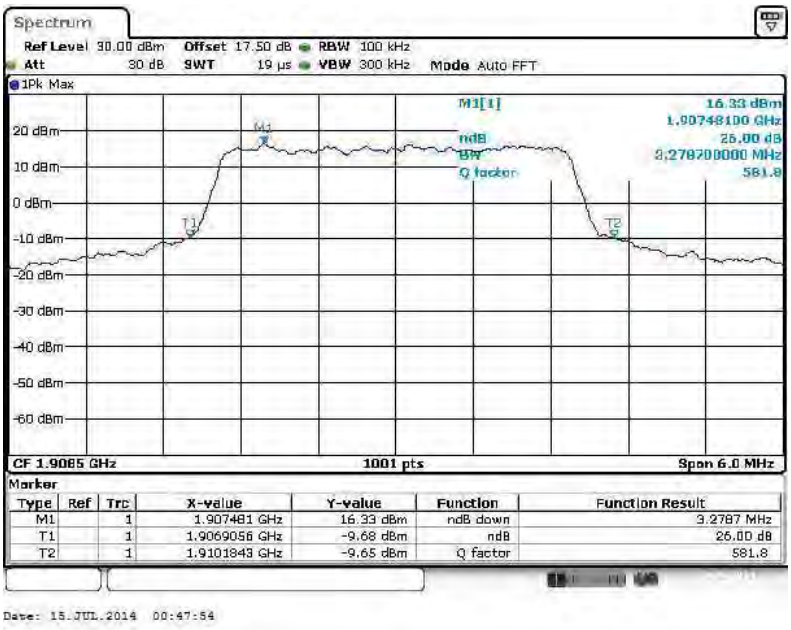
26dB Bandwidth Plot on Channel 18900



99% Occupied Bandwidth Plot on Channel 19185

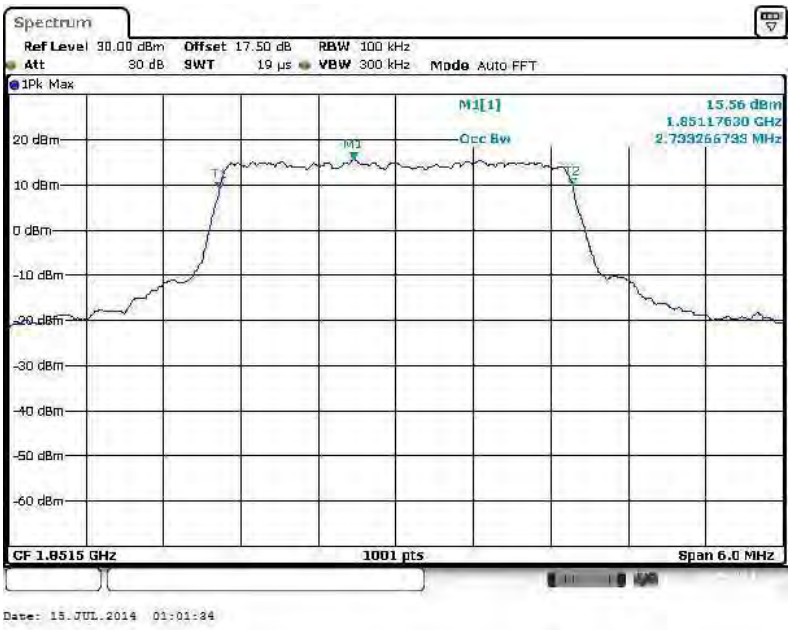


26dB Bandwidth Plot on Channel 19185

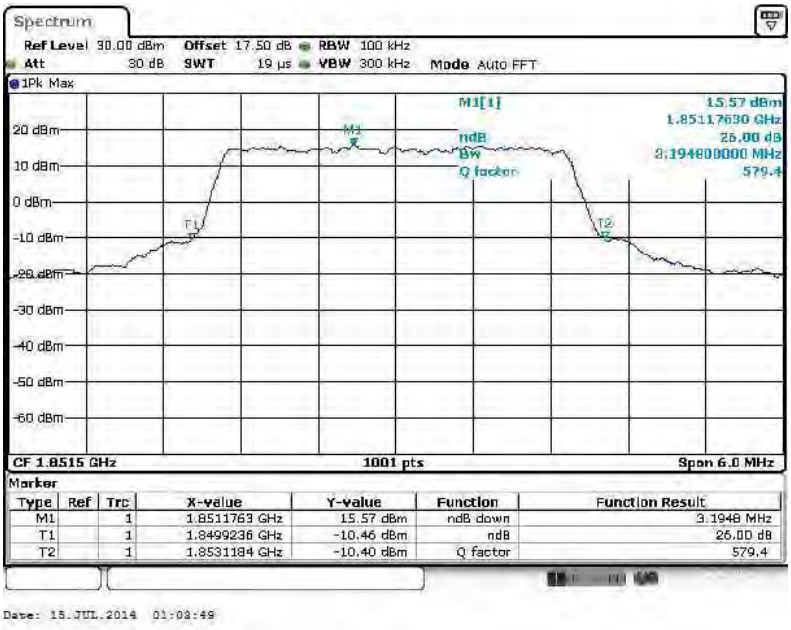


Band :	LTE Band 2	BW / Mod. :	3MHz / 16QAM

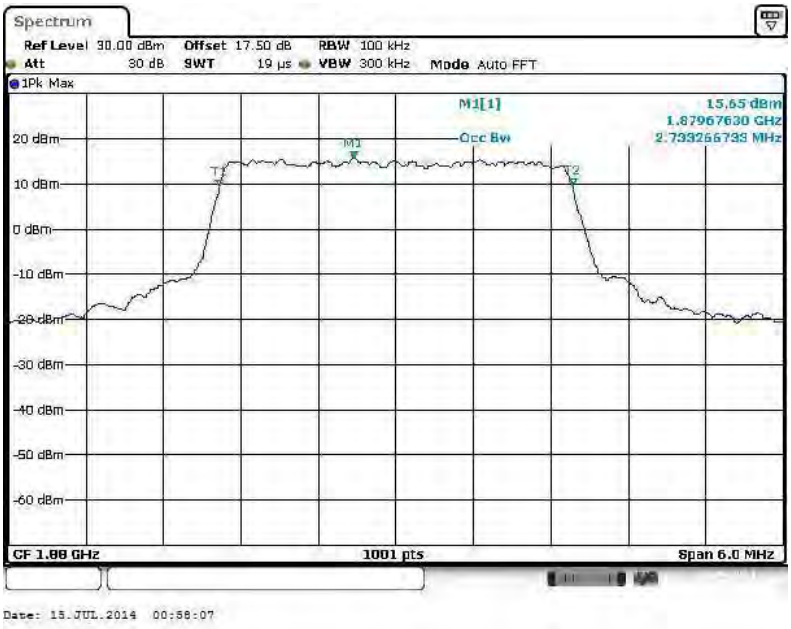
99% Occupied Bandwidth Plot on Channel 18615



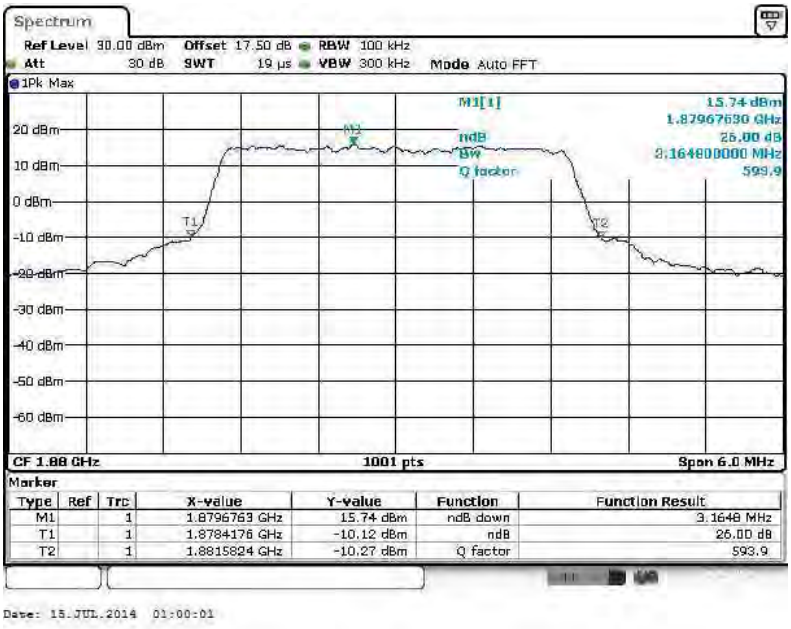
26dB Bandwidth Plot on Channel 18615



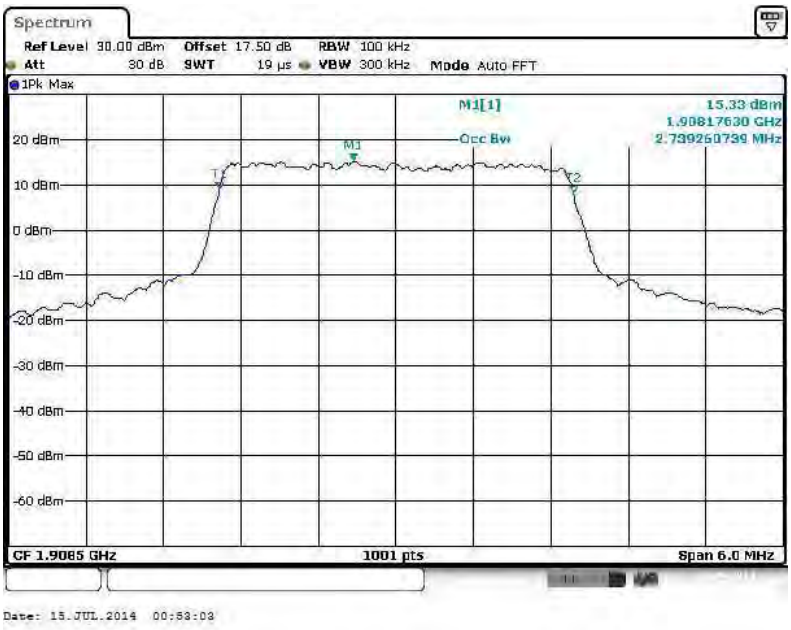
99% Occupied Bandwidth Plot on Channel 18900



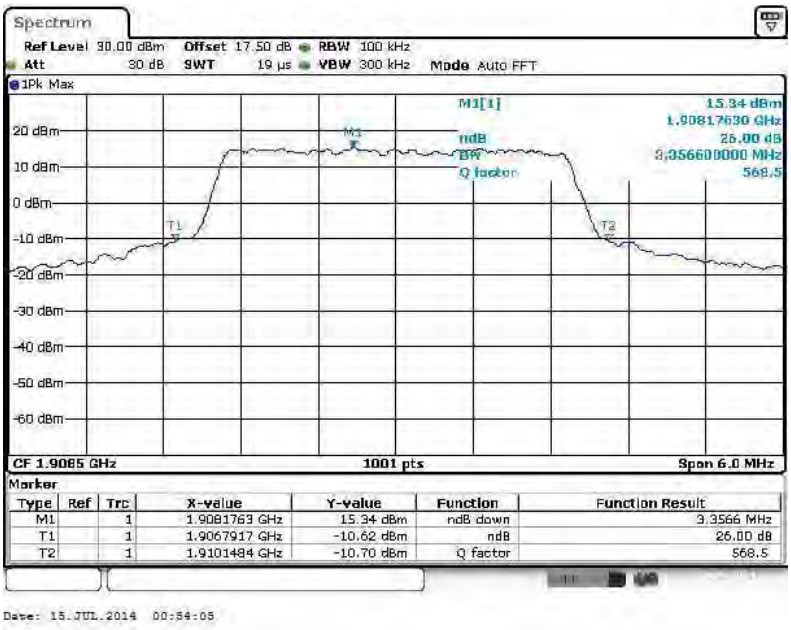
26dB Bandwidth Plot on Channel 18900



99% Occupied Bandwidth Plot on Channel 19185

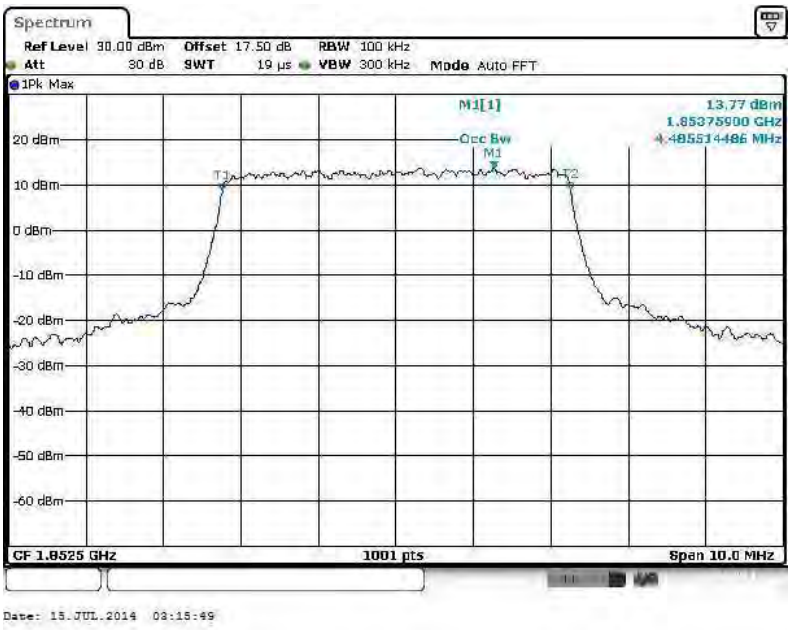


26dB Bandwidth Plot on Channel 19185

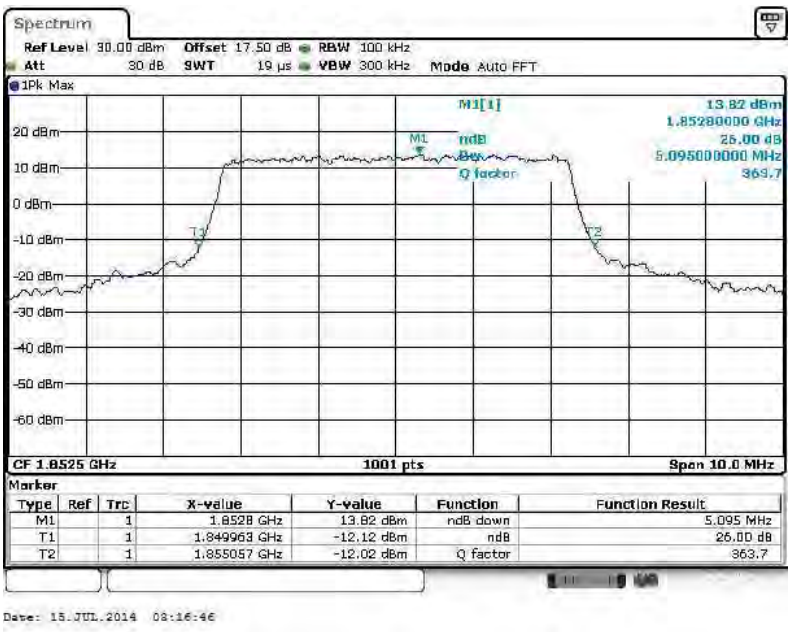


Band :	LTE Band 2	BW / Mod. :	5MHz / QPSK

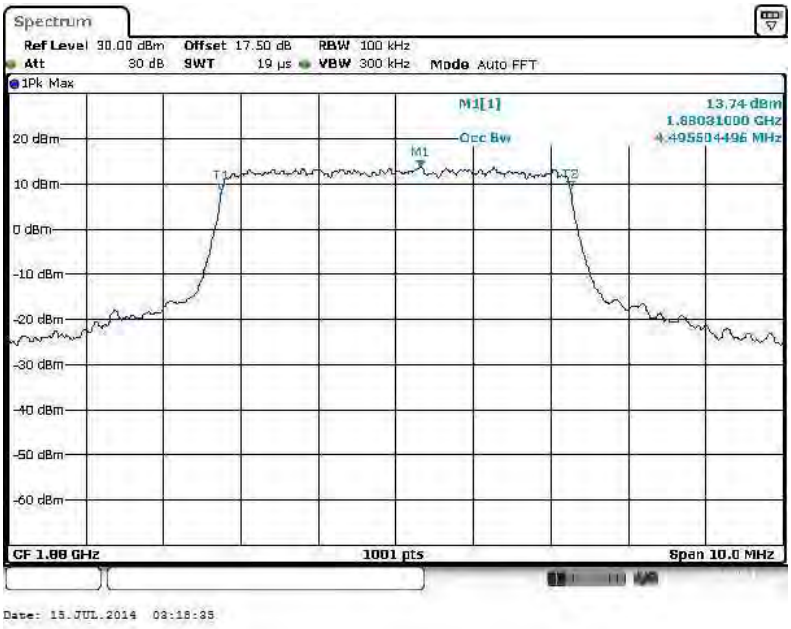
99% Occupied Bandwidth Plot on Channel 18625



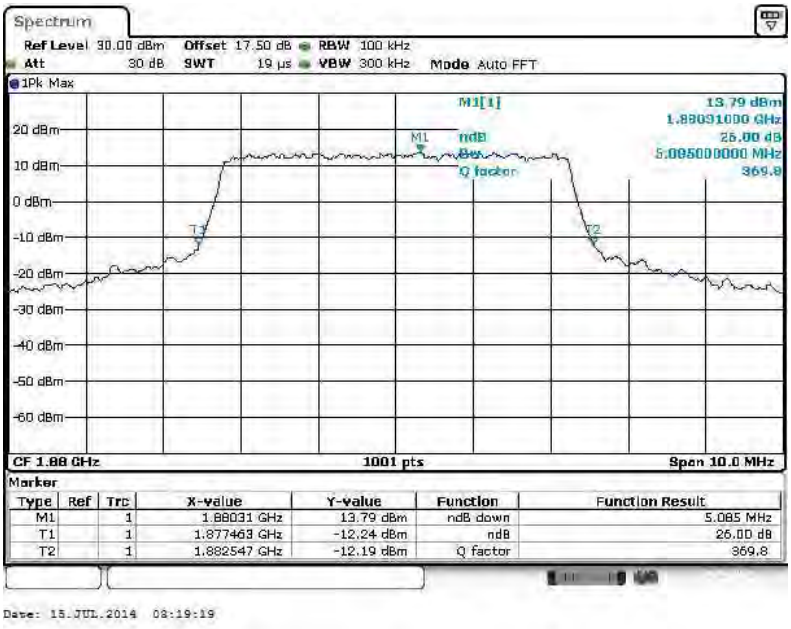
26dB Bandwidth Plot on Channel 18625



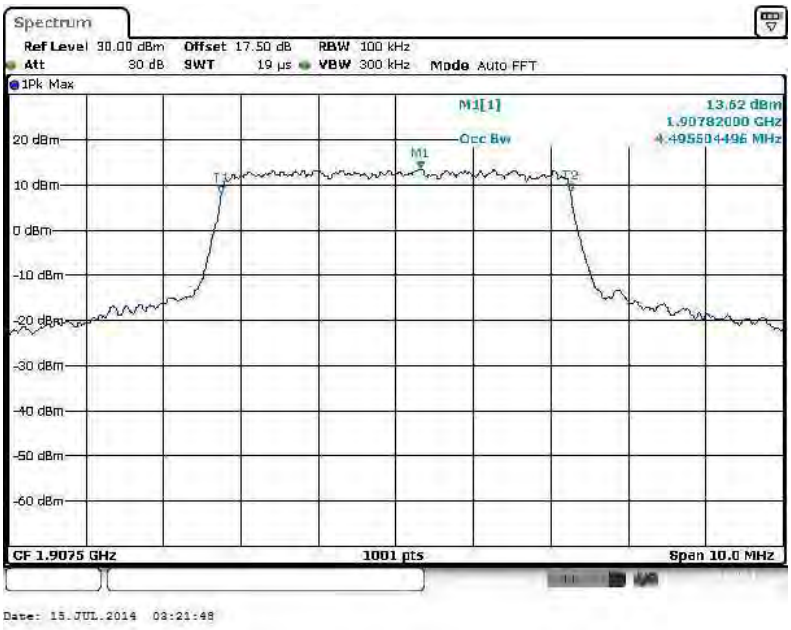
99% Occupied Bandwidth Plot on Channel 18900



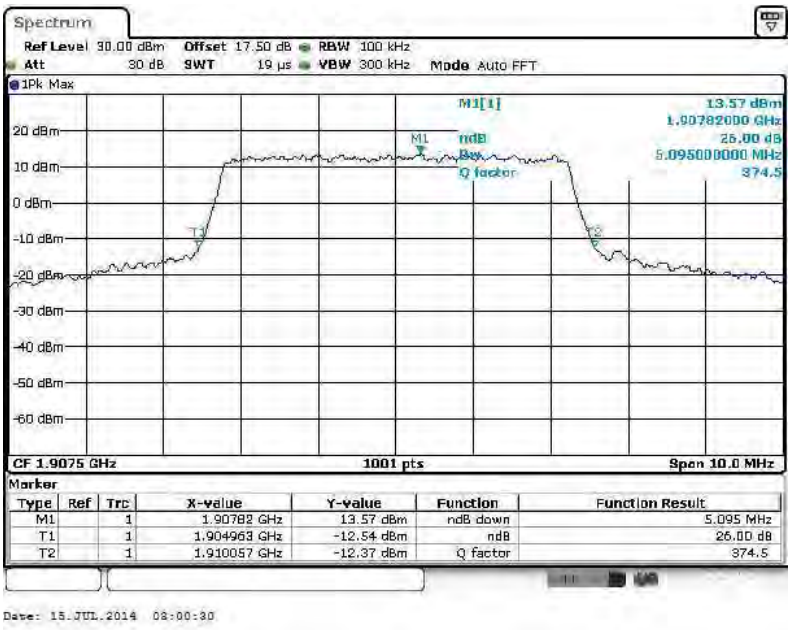
26dB Bandwidth Plot on Channel 18900



99% Occupied Bandwidth Plot on Channel 19175

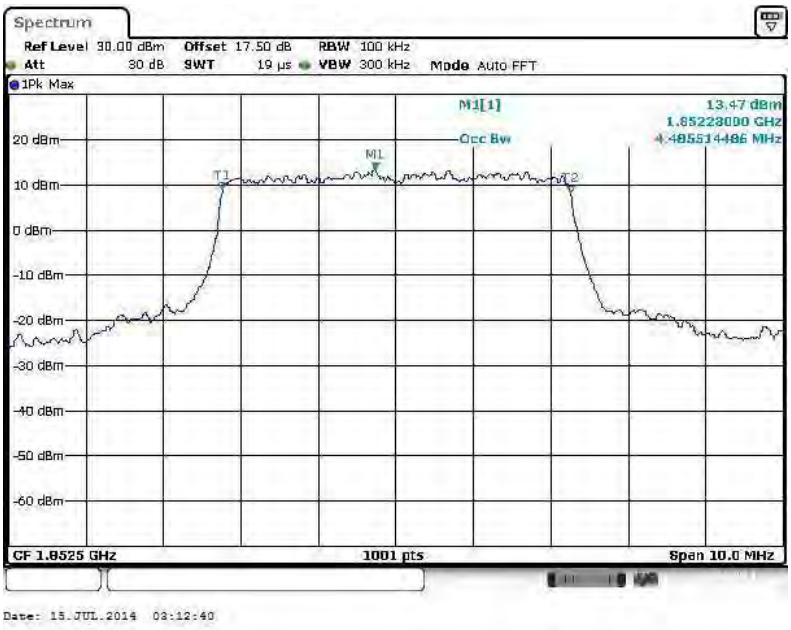


26dB Bandwidth Plot on Channel 19175

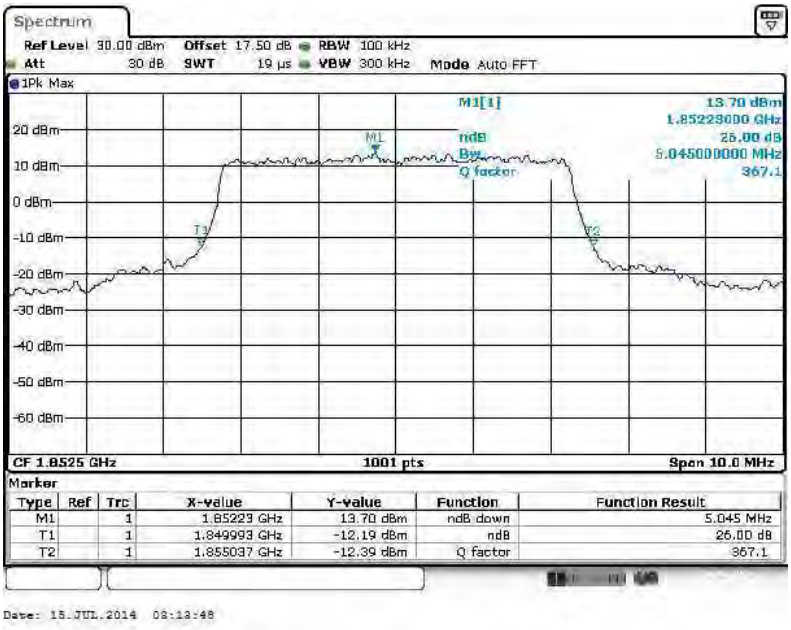


Band :	LTE Band 2	BW / Mod. :	5MHz / 16QAM

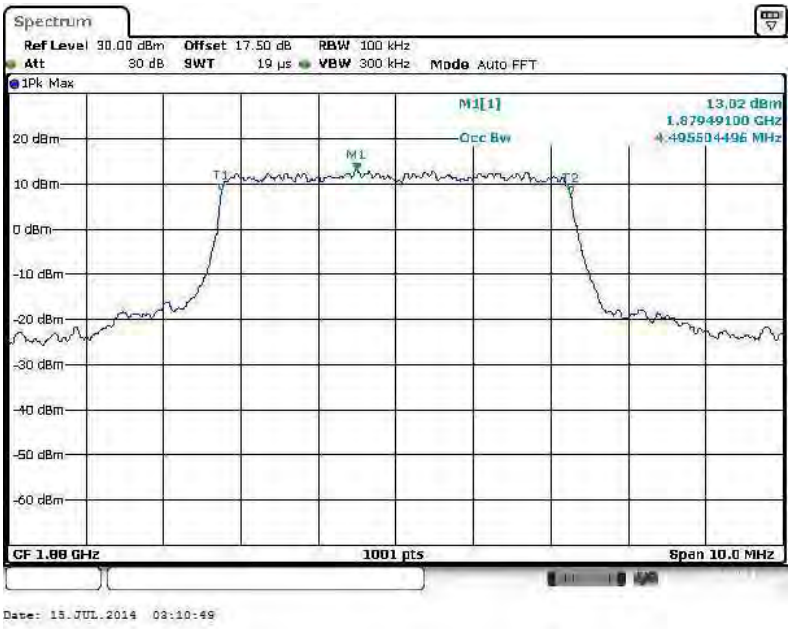
99% Occupied Bandwidth Plot on Channel 18625



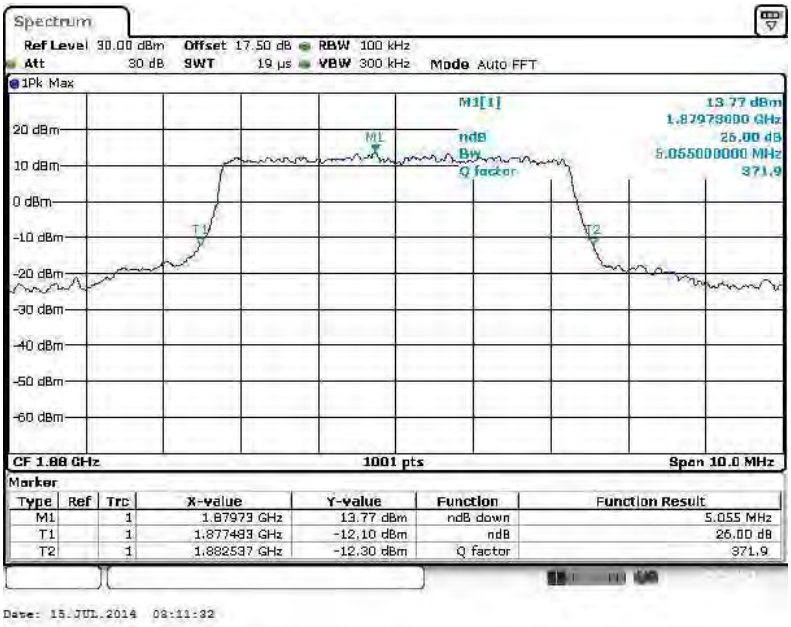
26dB Bandwidth Plot on Channel 18625



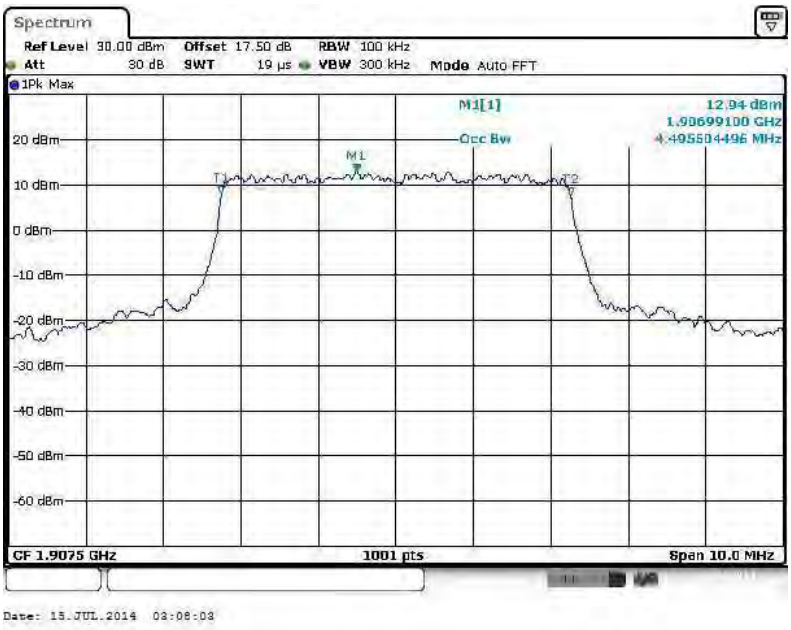
99% Occupied Bandwidth Plot on Channel 18900



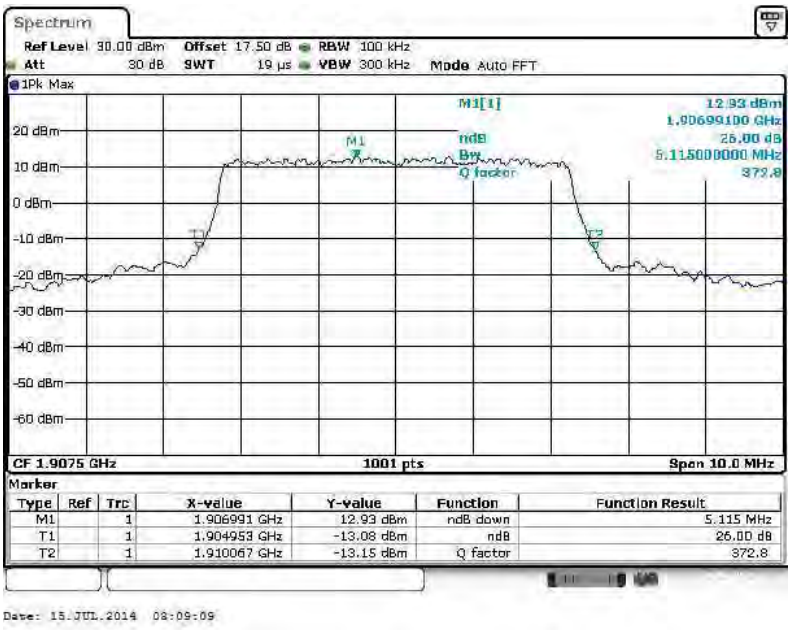
26dB Bandwidth Plot on Channel 18900



99% Occupied Bandwidth Plot on Channel 19175

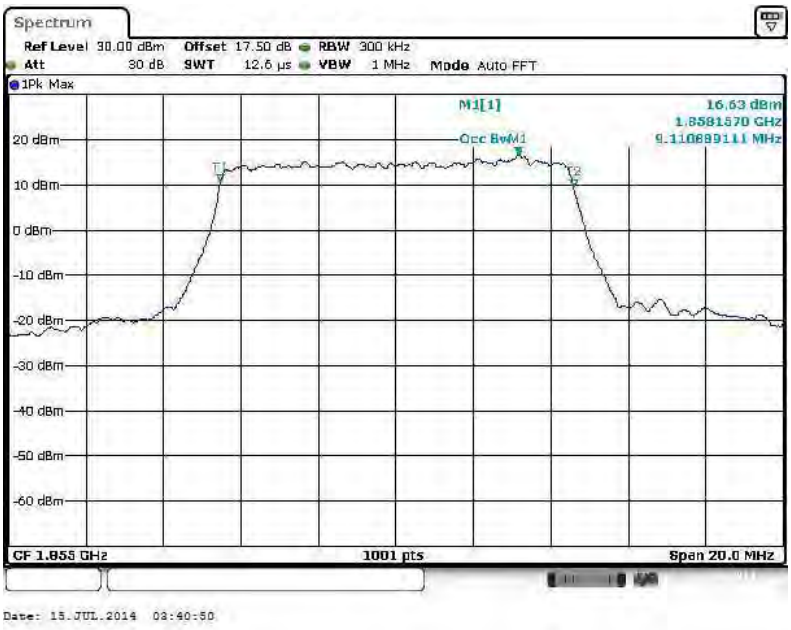


26dB Bandwidth Plot on Channel 19175

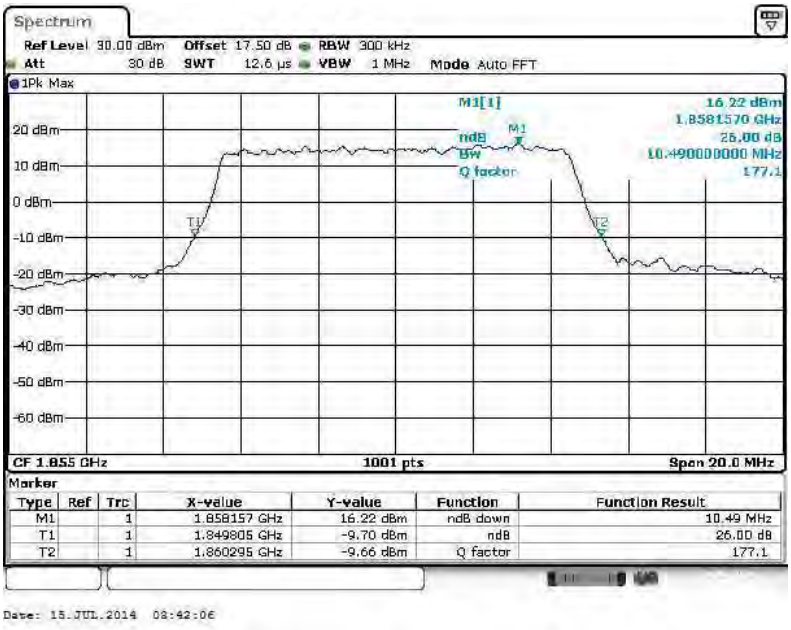


Band :	LTE Band 2	BW / Mod. :	10MHz / QPSK

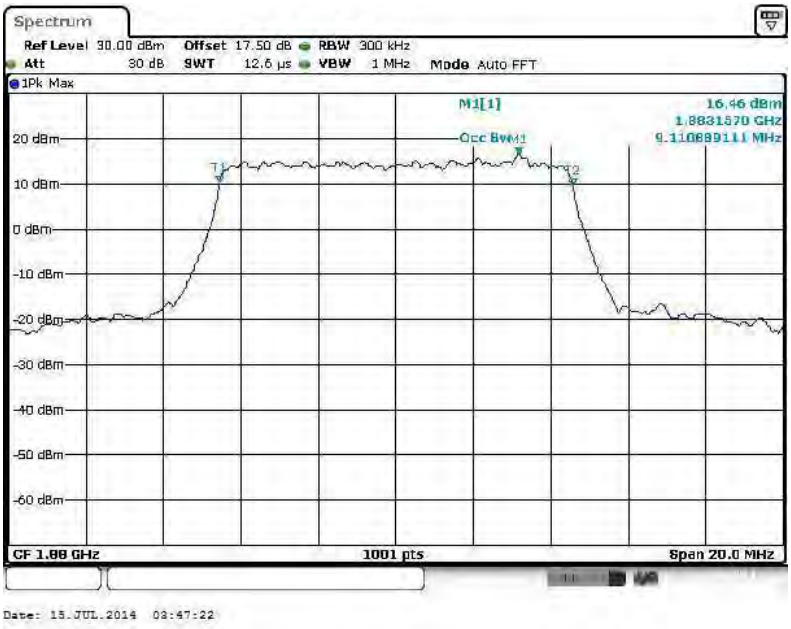
99% Occupied Bandwidth Plot on Channel 18650



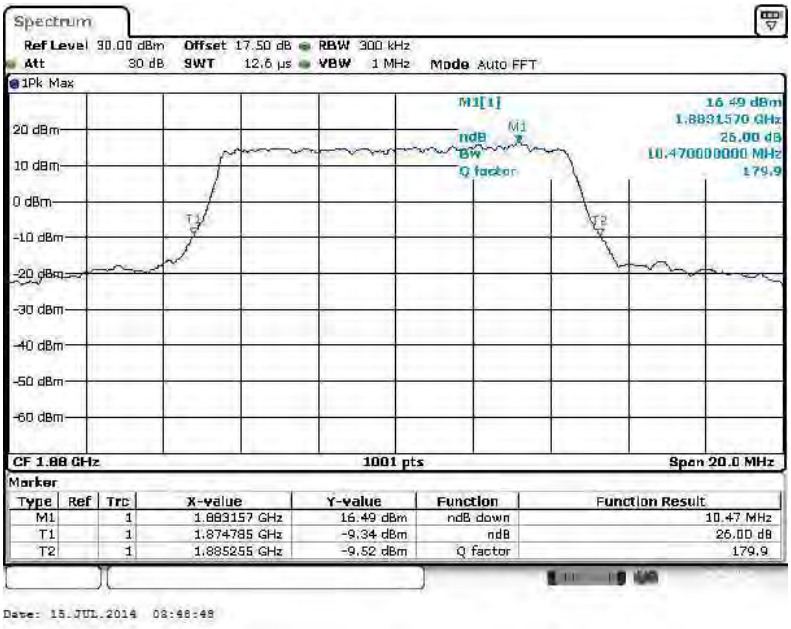
26dB Bandwidth Plot on Channel 18650



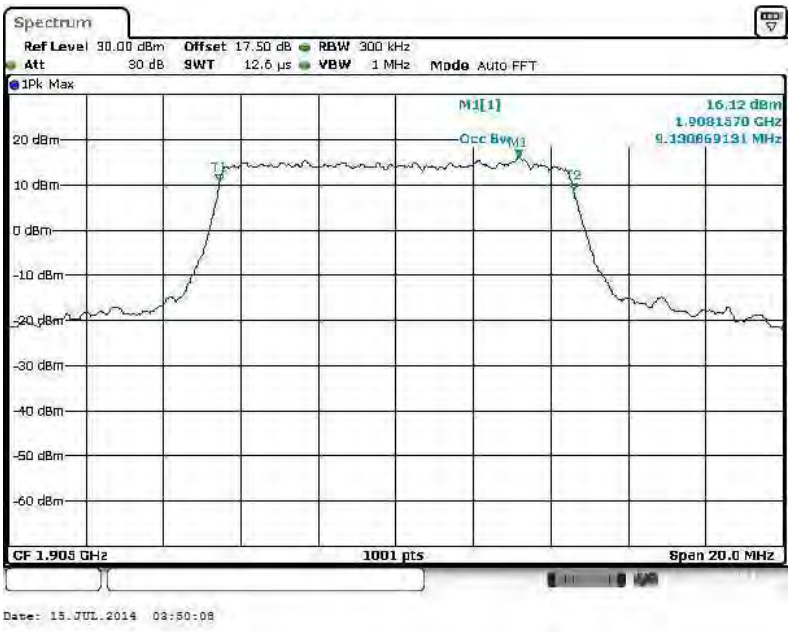
99% Occupied Bandwidth Plot on Channel 18900



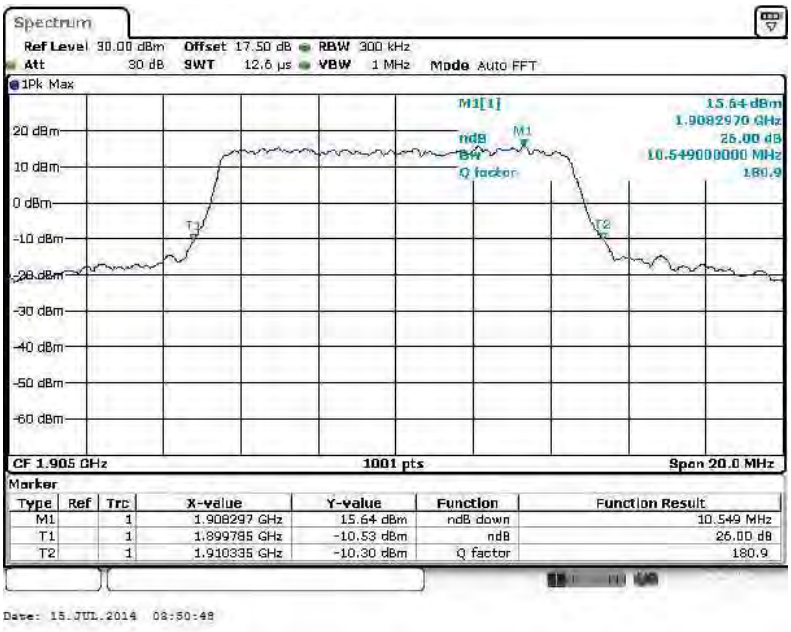
26dB Bandwidth Plot on Channel 18900



99% Occupied Bandwidth Plot on Channel 19150

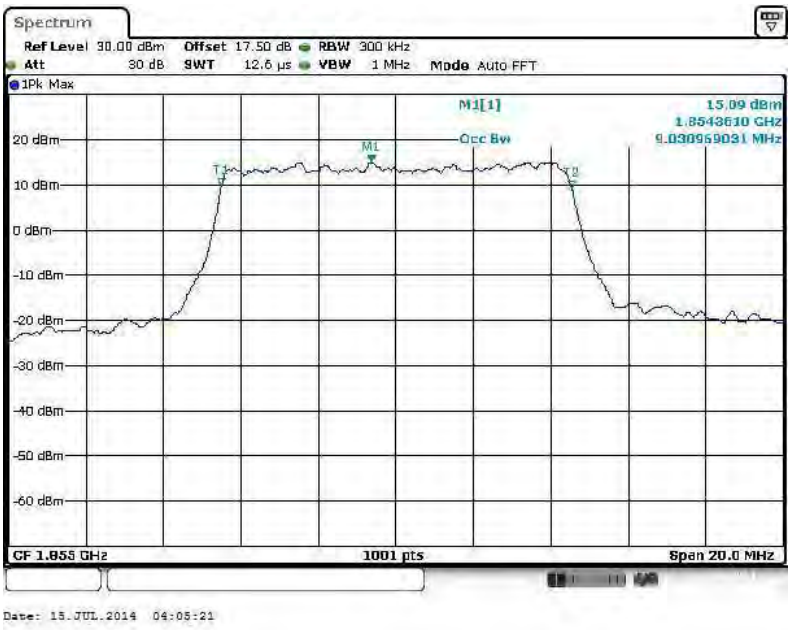


26dB Bandwidth Plot on Channel 19150

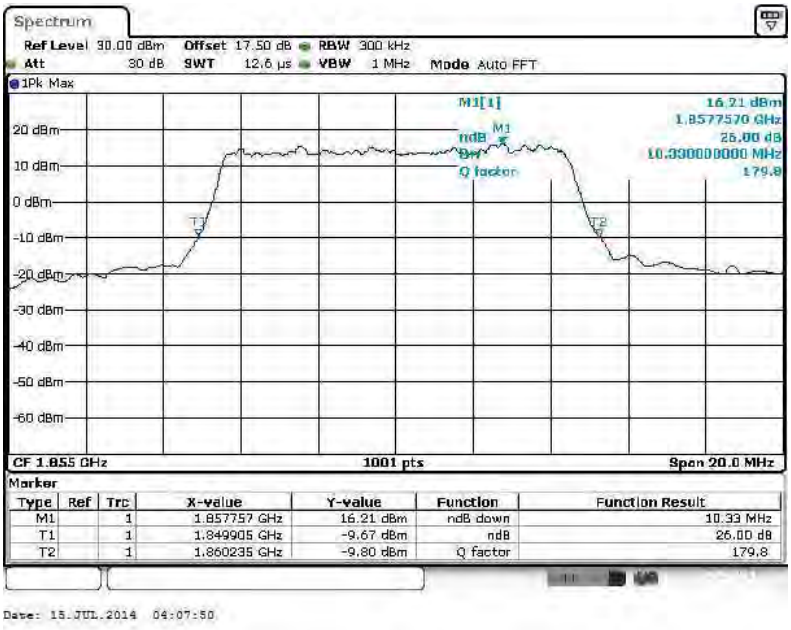


Band :	LTE Band 2	BW / Mod. :	10MHz / 16QAM

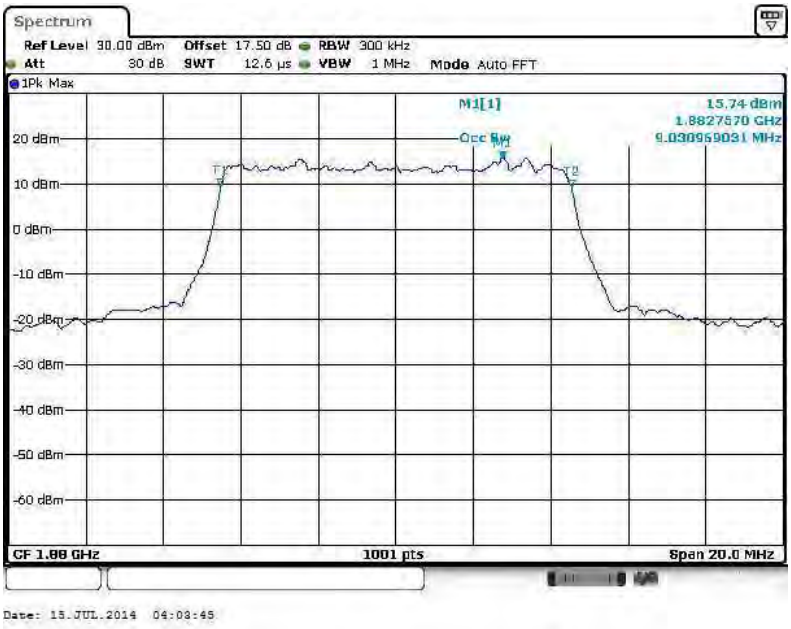
99% Occupied Bandwidth Plot on Channel 18650



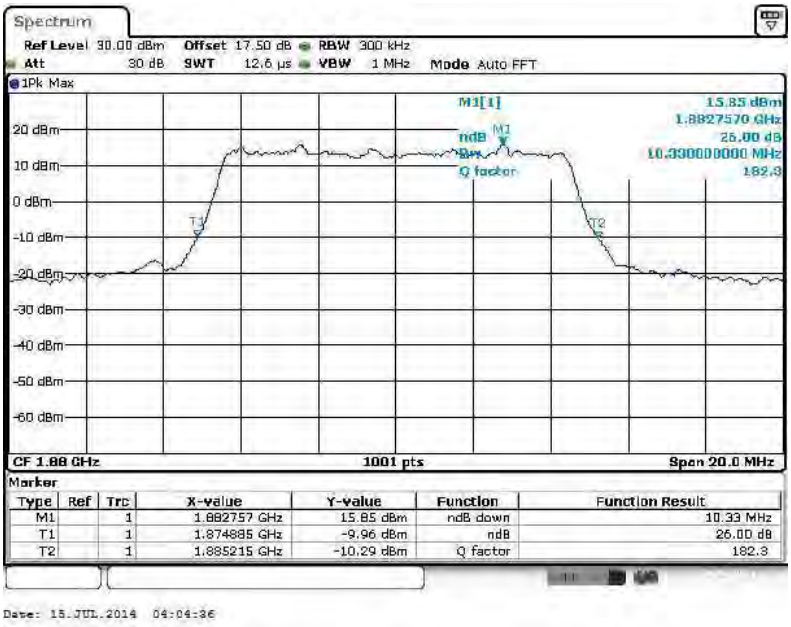
26dB Bandwidth Plot on Channel 18650



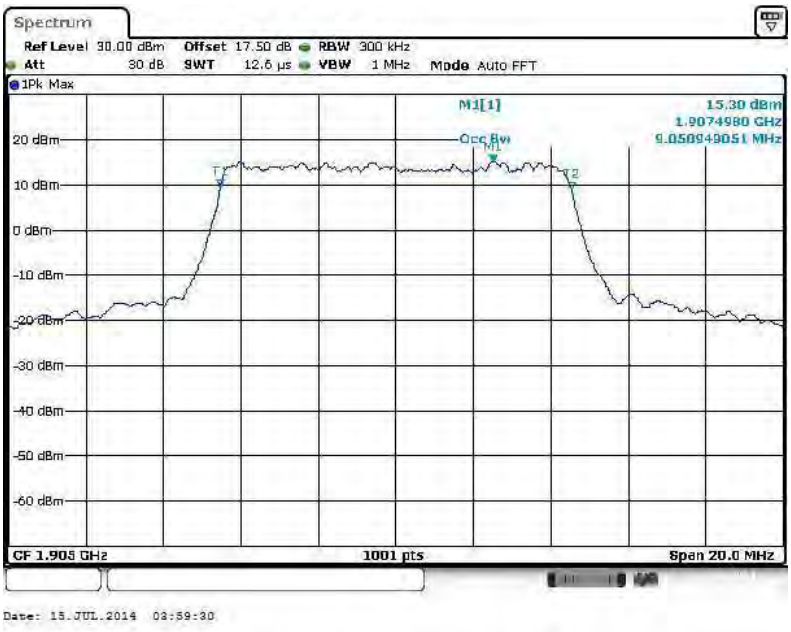
99% Occupied Bandwidth Plot on Channel 18900



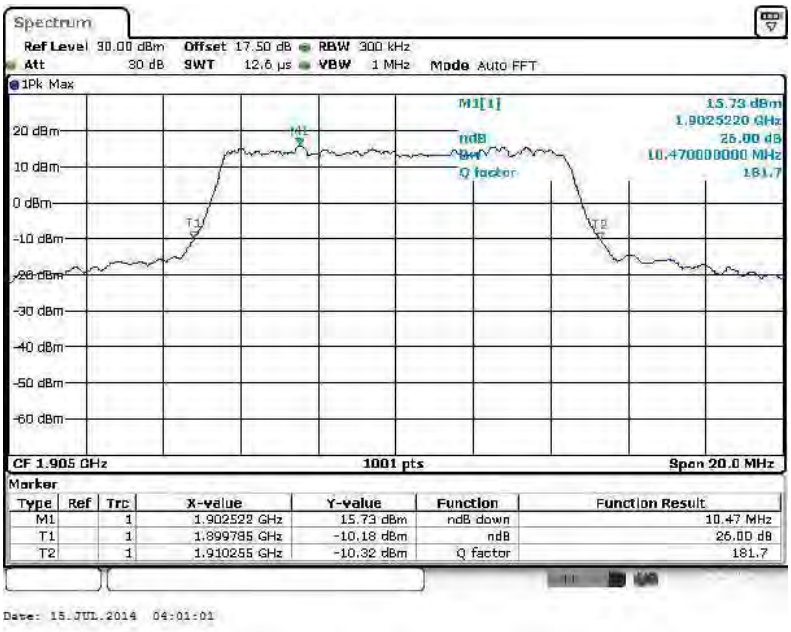
26dB Bandwidth Plot on Channel 18900



99% Occupied Bandwidth Plot on Channel 19150

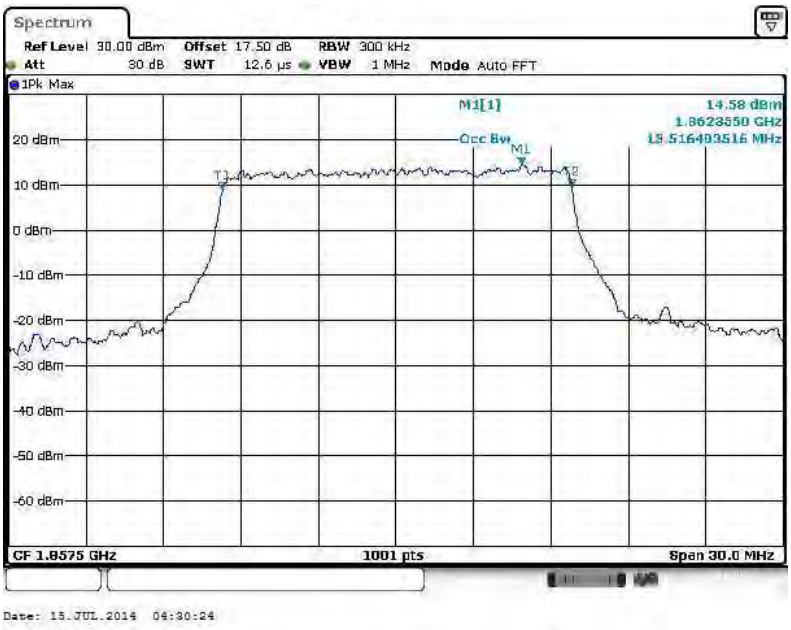


26dB Bandwidth Plot on Channel 19150

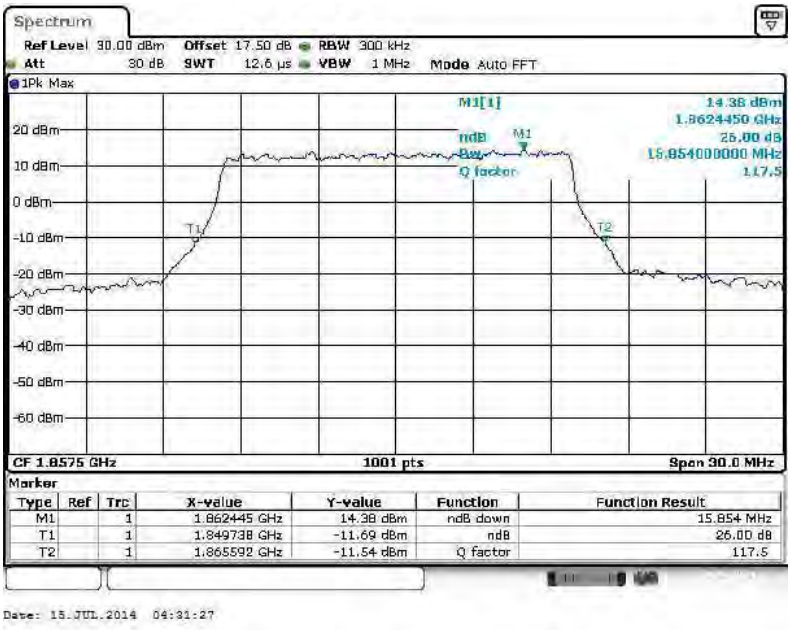


Band :	LTE Band 2	BW / Mod. :	15MHz / QPSK

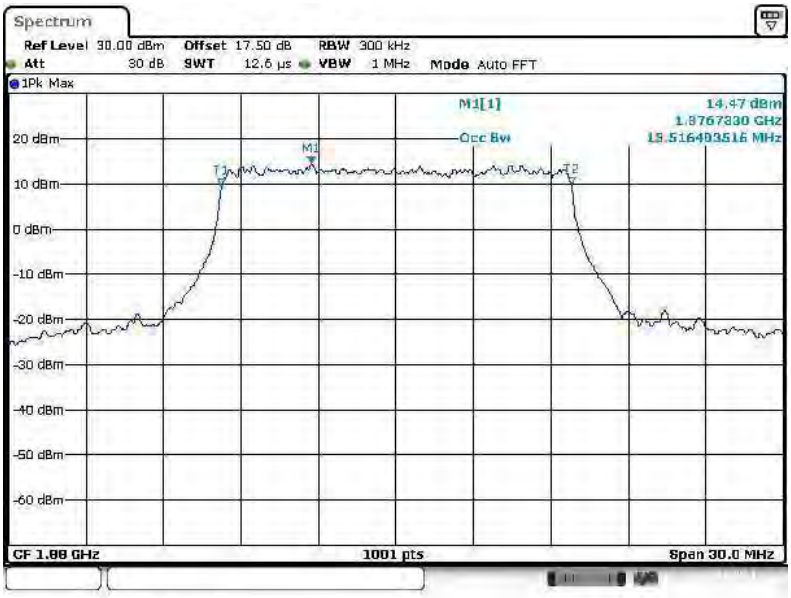
99% Occupied Bandwidth Plot on Channel 18675



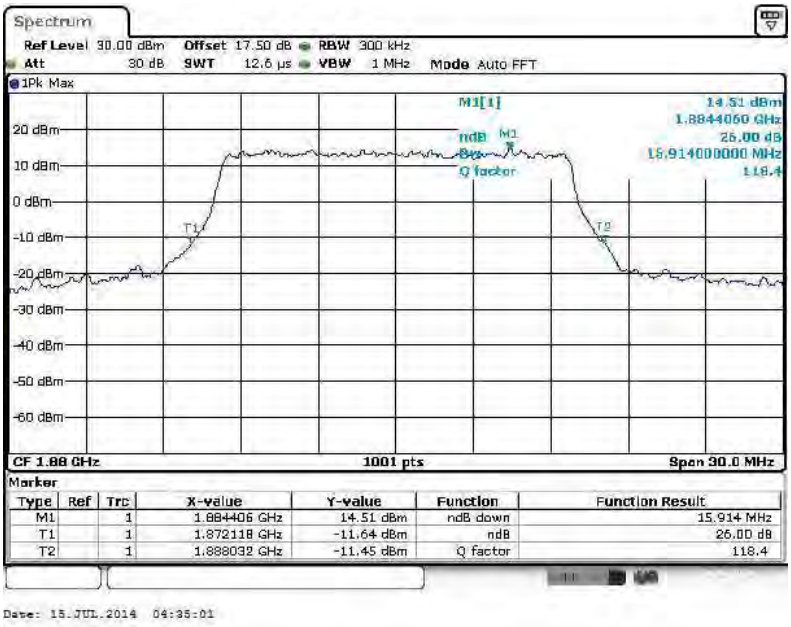
26dB Bandwidth Plot on Channel 18675



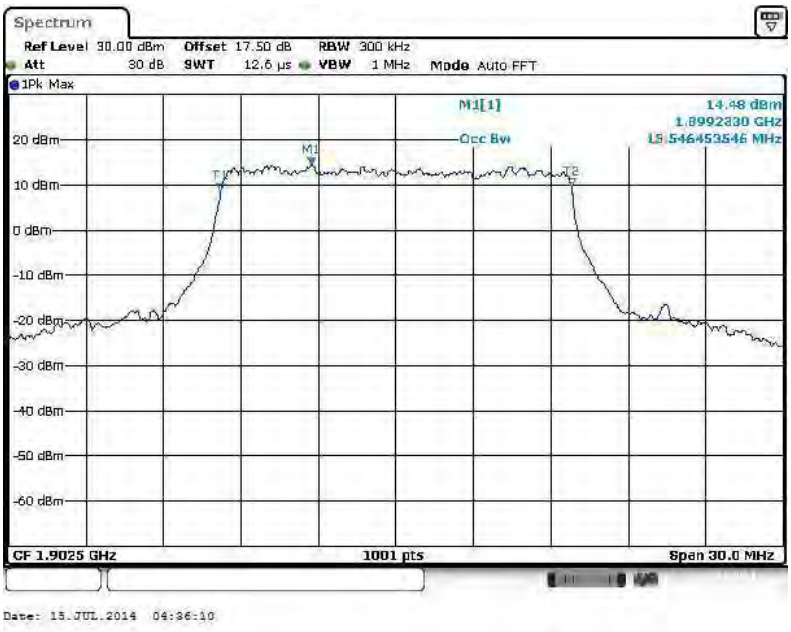
99% Occupied Bandwidth Plot on Channel 18900



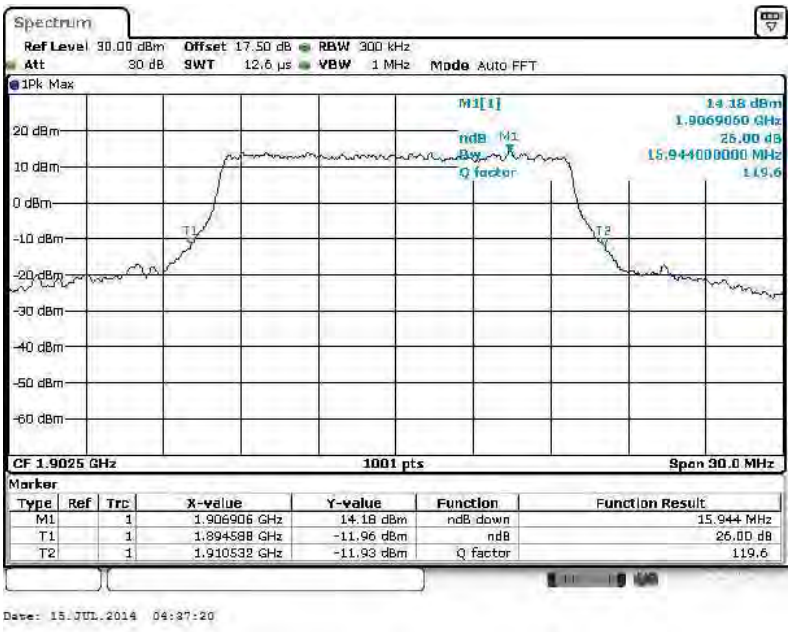
26dB Bandwidth Plot on Channel 18900



99% Occupied Bandwidth Plot on Channel 19125

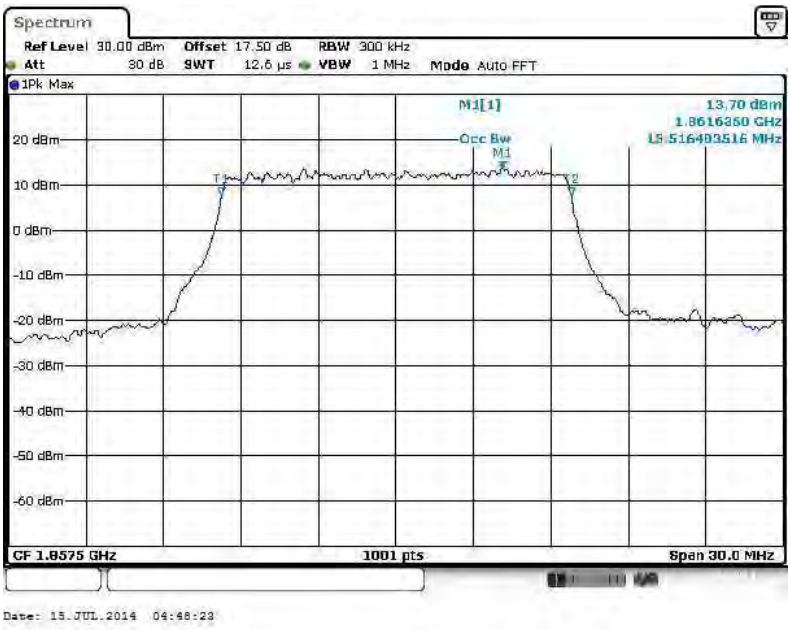


26dB Bandwidth Plot on Channel 19125

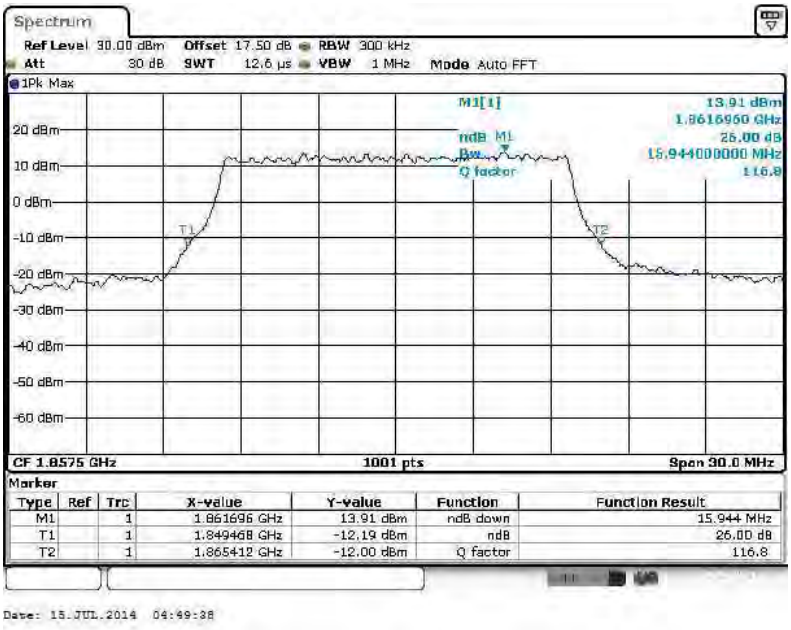


Band :	LTE Band 2	BW / Mod. :	15MHz / 16QAM

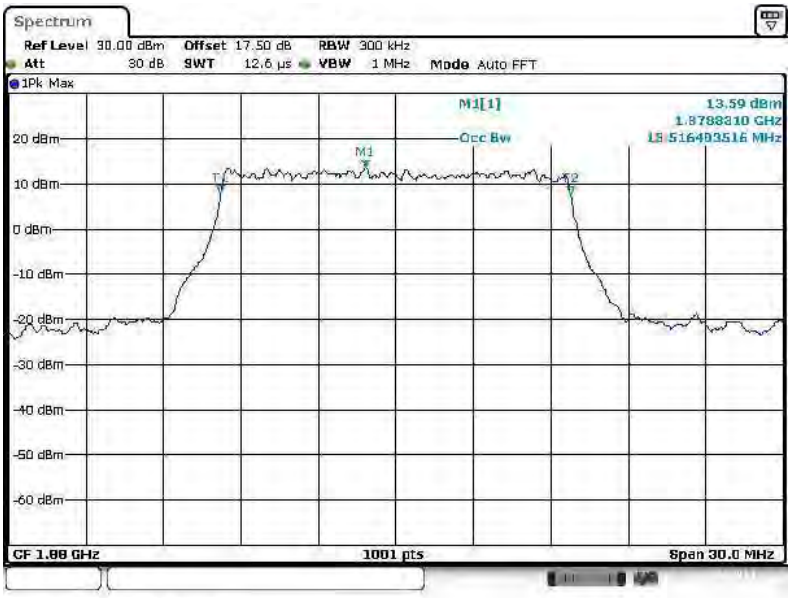
99% Occupied Bandwidth Plot on Channel 18675



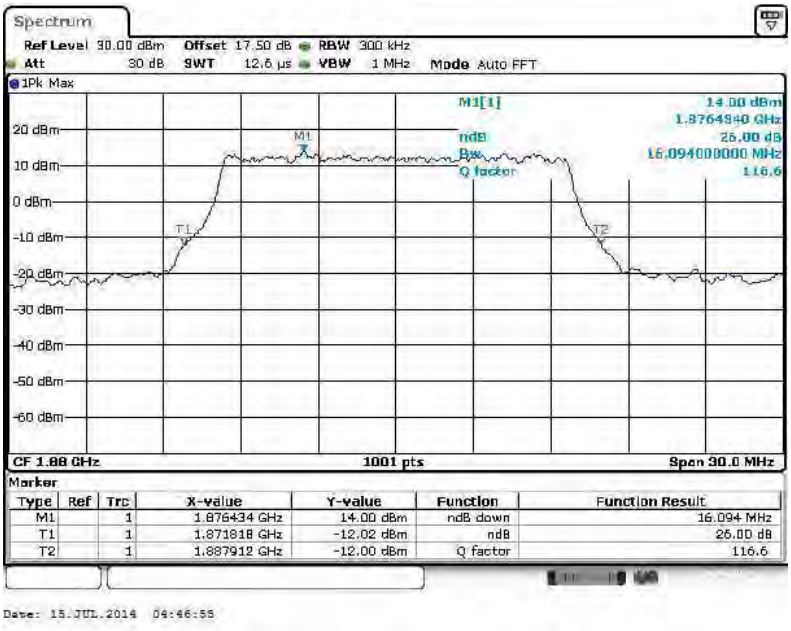
26dB Bandwidth Plot on Channel 18675



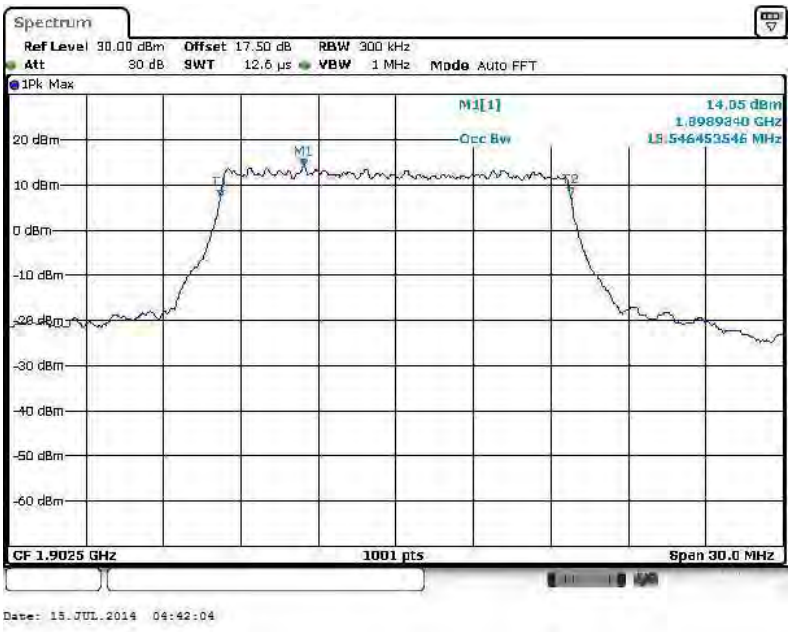
99% Occupied Bandwidth Plot on Channel 18900



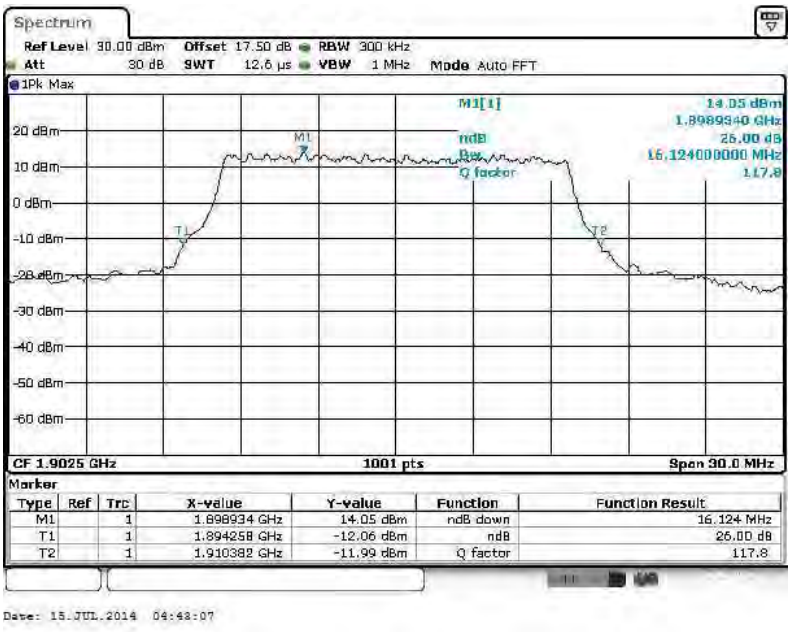
26dB Bandwidth Plot on Channel 18900



99% Occupied Bandwidth Plot on Channel 19125

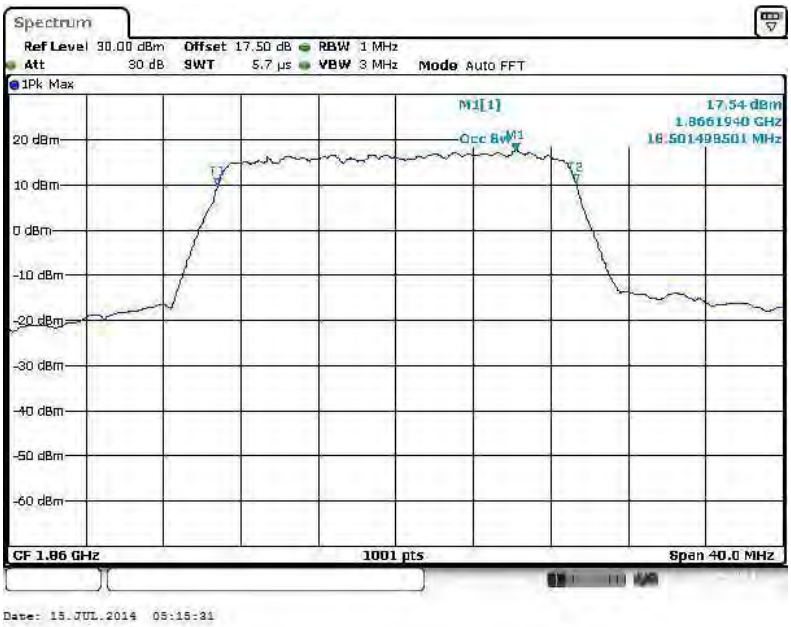


26dB Bandwidth Plot on Channel 19125

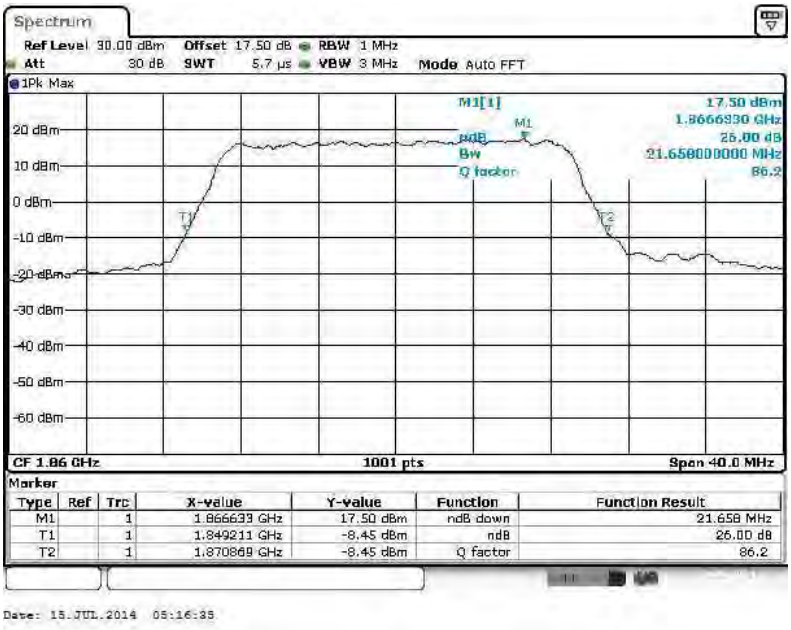


Band :	LTE Band 2	BW / Mod. :	20MHz / QPSK

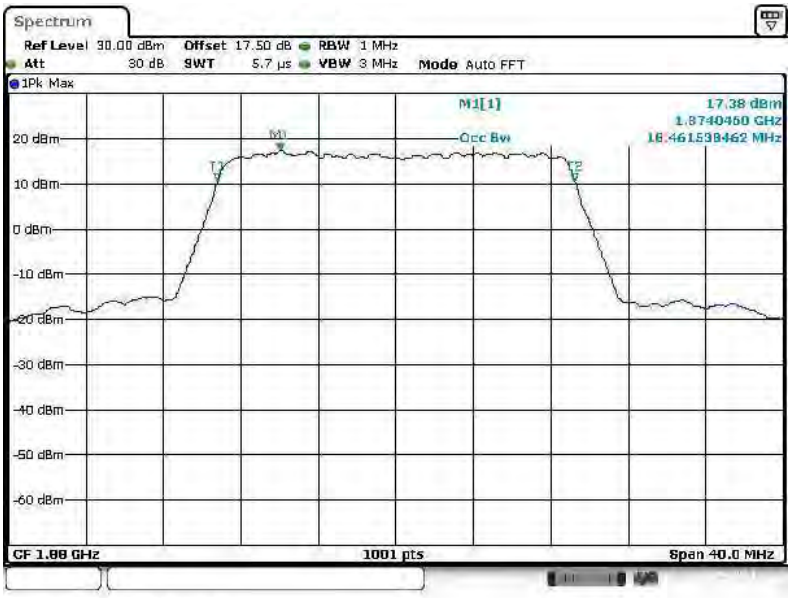
99% Occupied Bandwidth Plot on Channel 18700



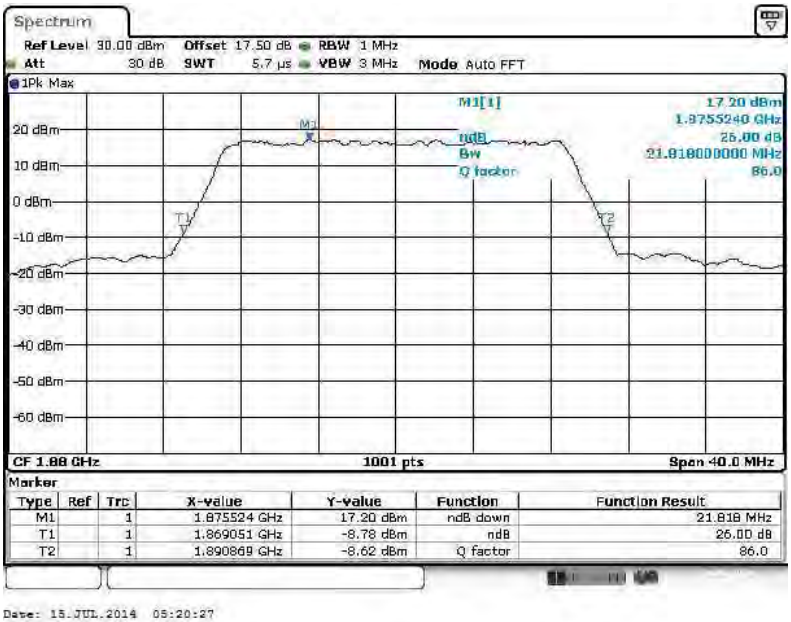
26dB Bandwidth Plot on Channel 18700



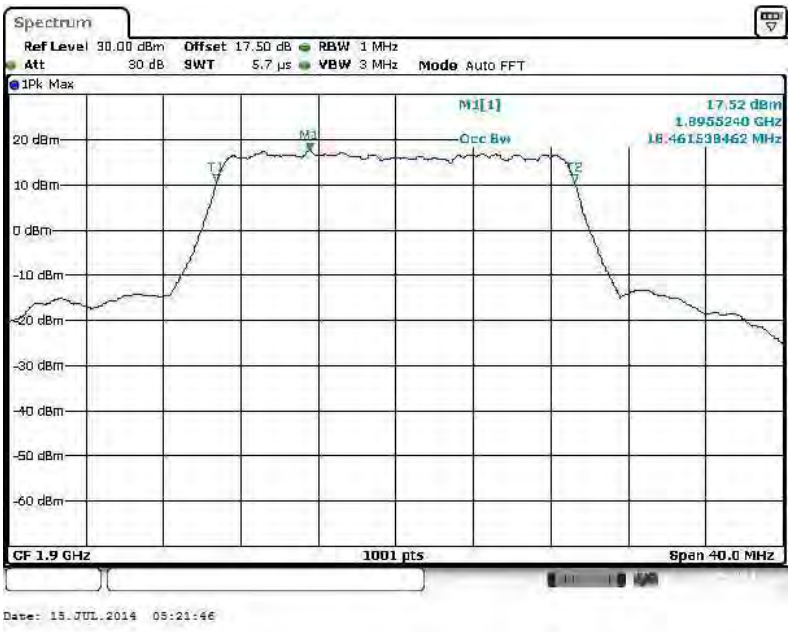
99% Occupied Bandwidth Plot on Channel 18900



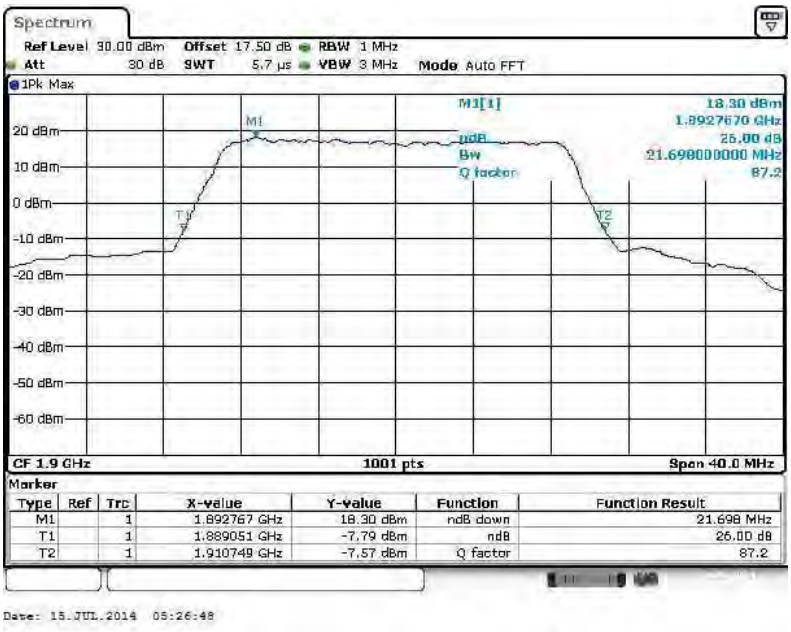
26dB Bandwidth Plot on Channel 18900



99% Occupied Bandwidth Plot on Channel 19100

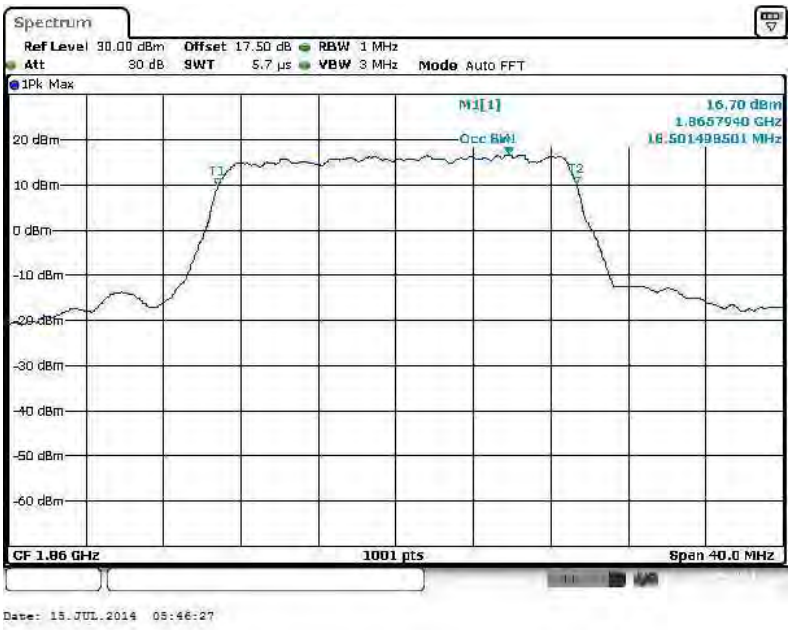


26dB Bandwidth Plot on Channel 19100

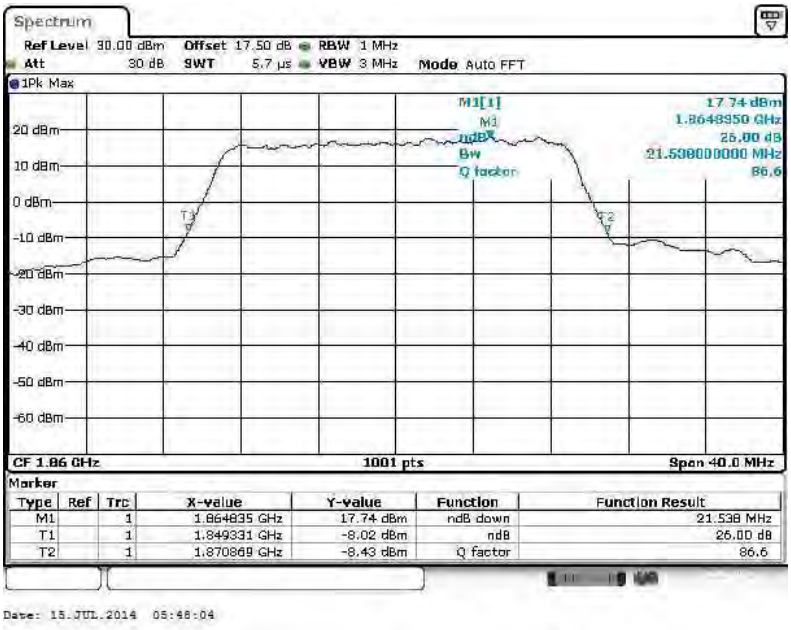


Band :	LTE Band 2	BW / Mod. :	20MHz / 16QAM

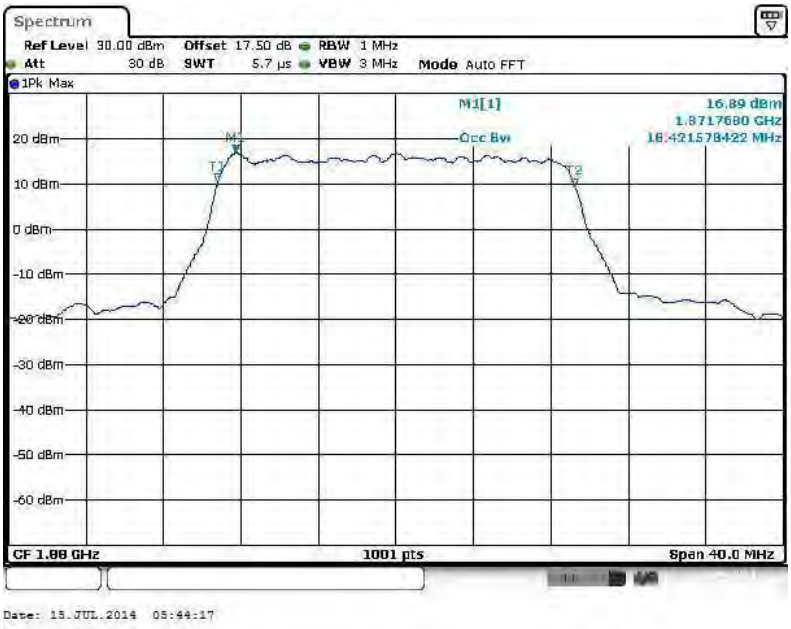
99% Occupied Bandwidth Plot on Channel 18700



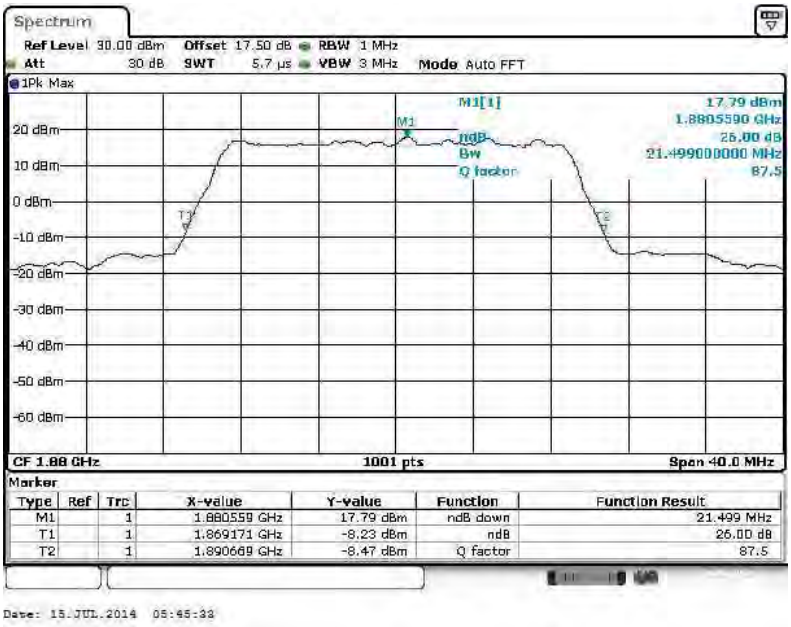
26dB Bandwidth Plot on Channel 18700



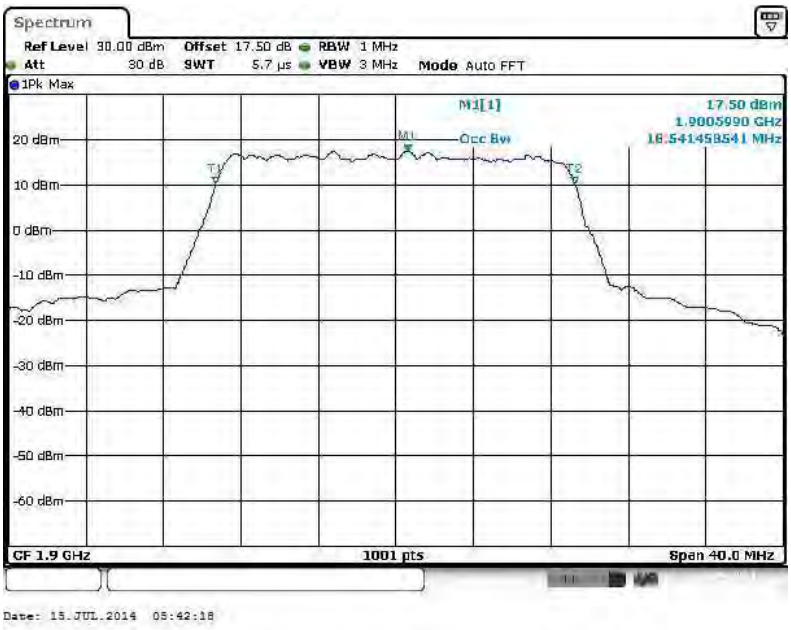
99% Occupied Bandwidth Plot on Channel 18900



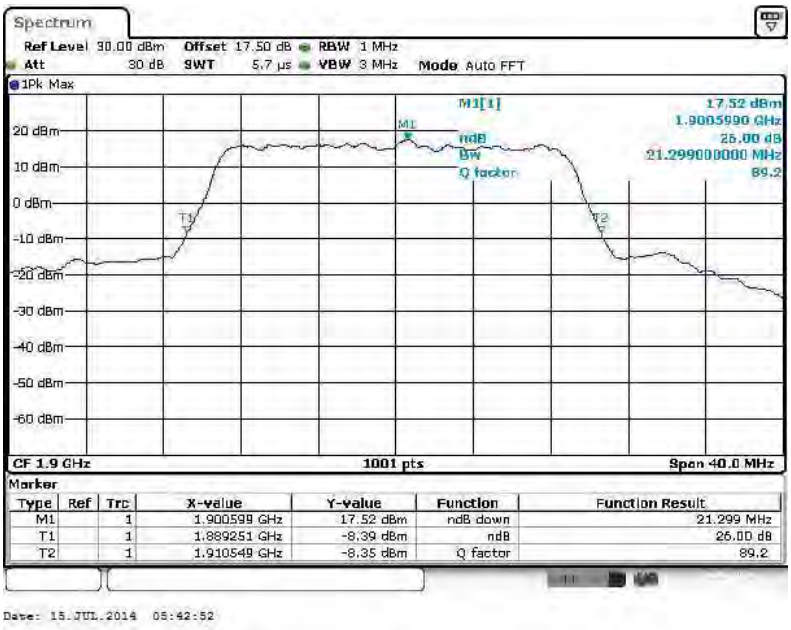
26dB Bandwidth Plot on Channel 18900



99% Occupied Bandwidth Plot on Channel 19100

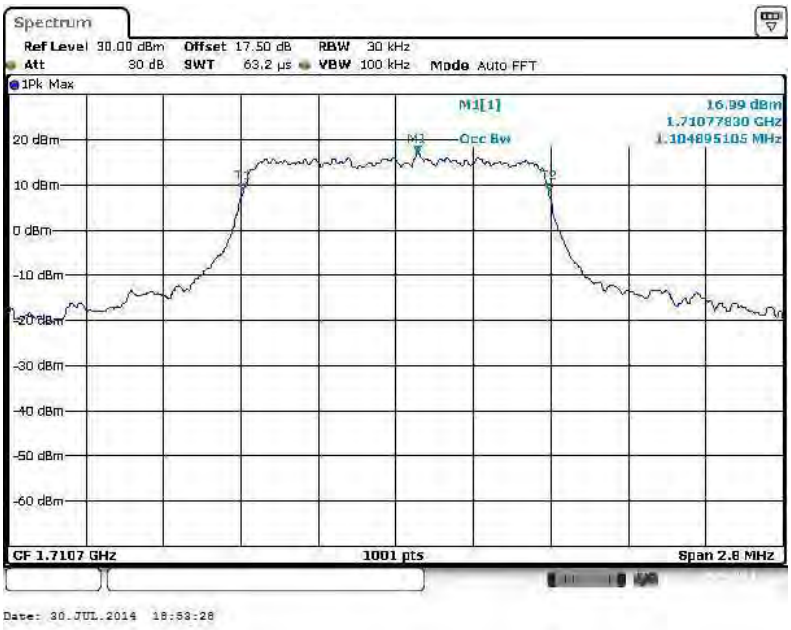


26dB Bandwidth Plot on Channel 19100

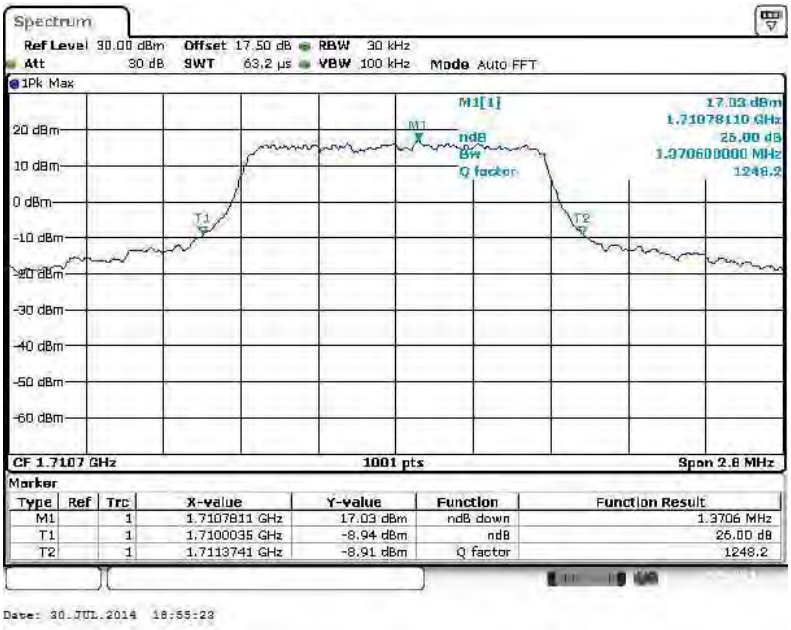


Band :	LTE Band 4	BW / Mod. :	1.4MHz / QPSK

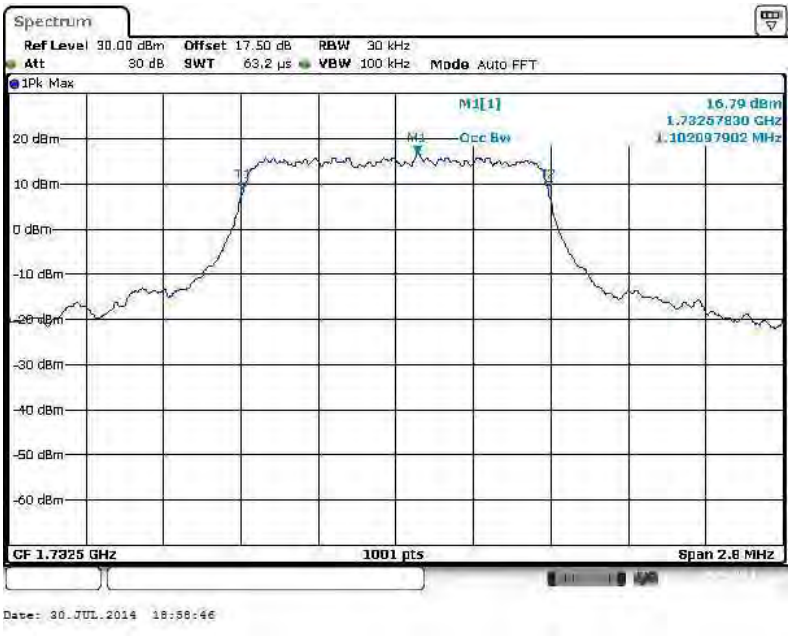
99% Occupied Bandwidth Plot on Channel 19957



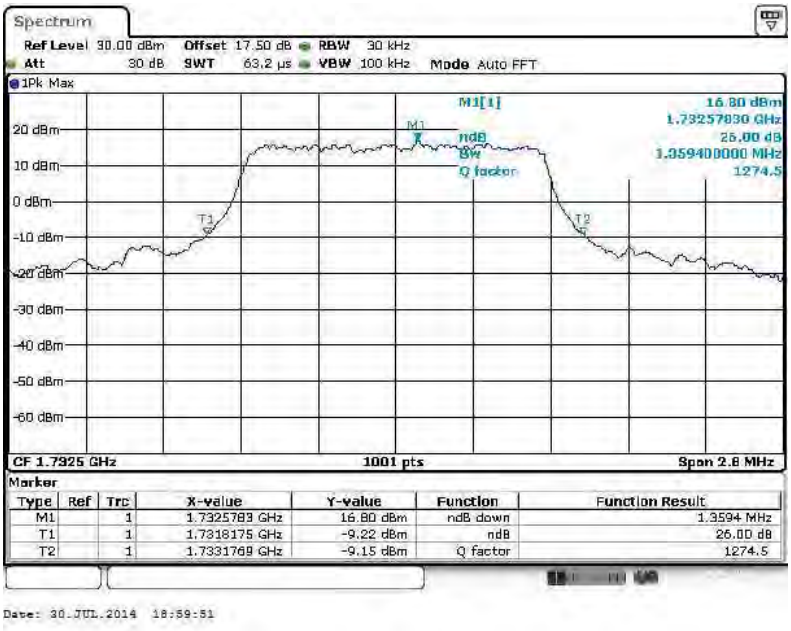
26dB Bandwidth Plot on Channel 19957



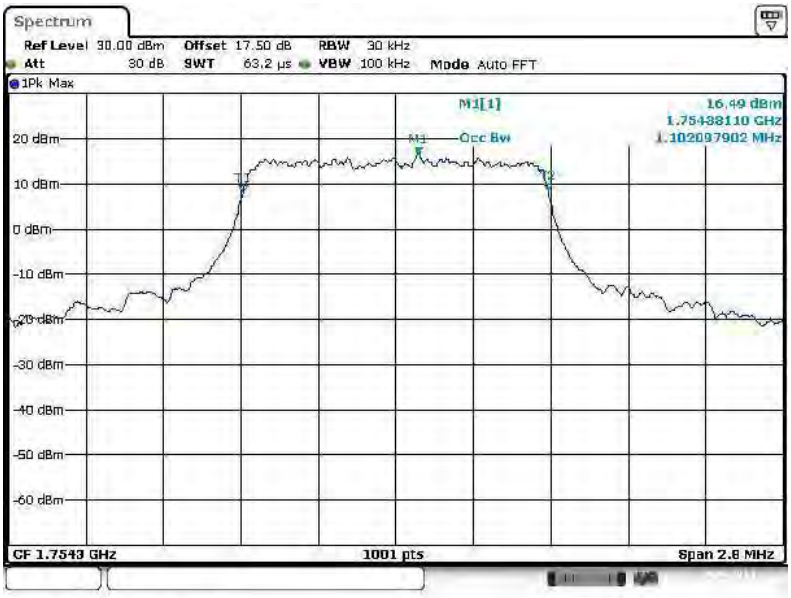
99% Occupied Bandwidth Plot on Channel 20175



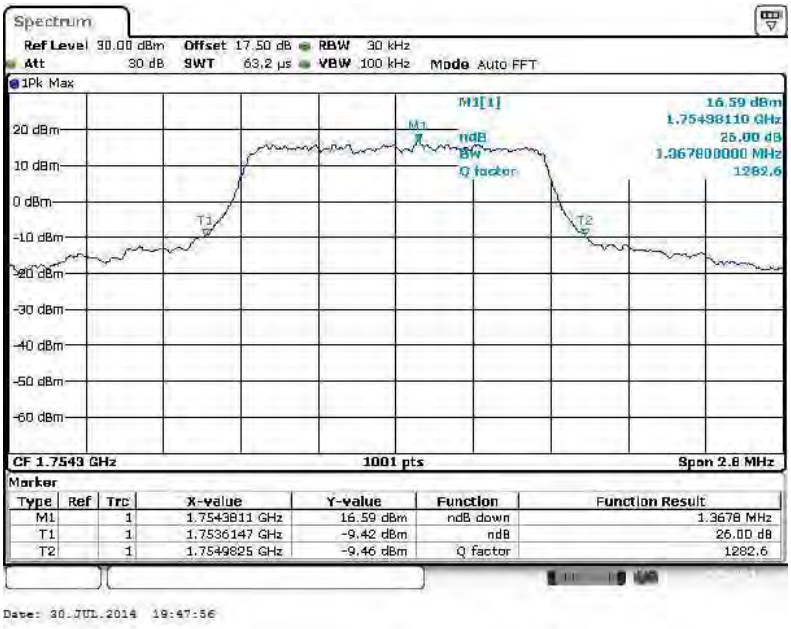
26dB Bandwidth Plot on Channel 20175



99% Occupied Bandwidth Plot on Channel 20393

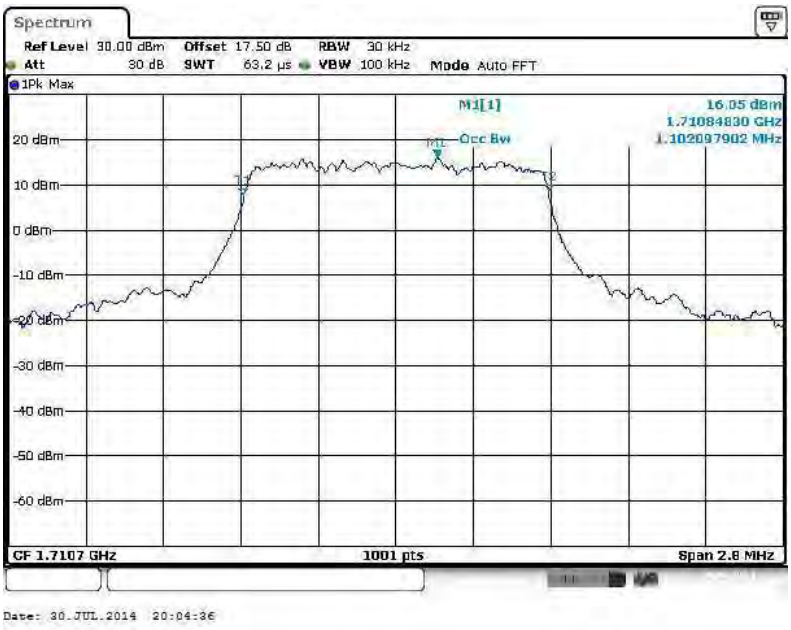


26dB Bandwidth Plot on Channel 20393

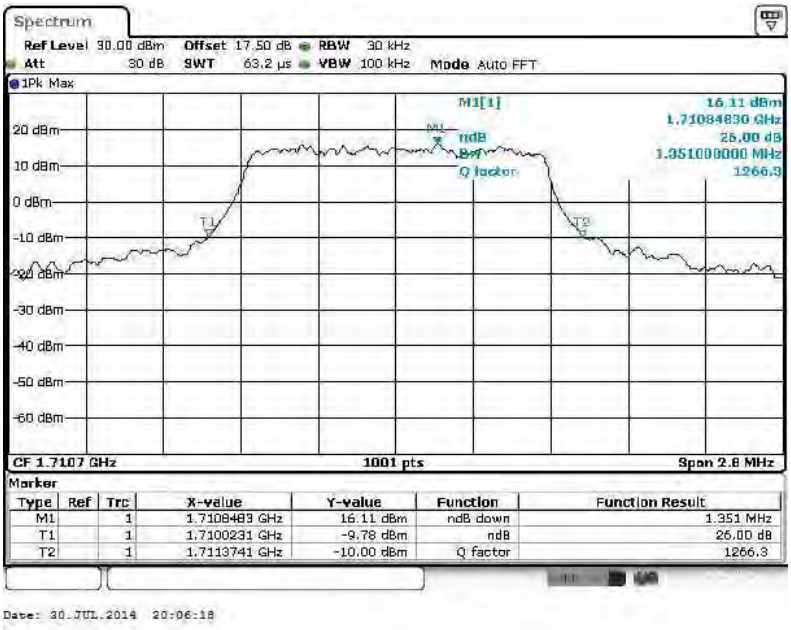


Band :	LTE Band 4	BW / Mod. :	1.4MHz / 16QAM

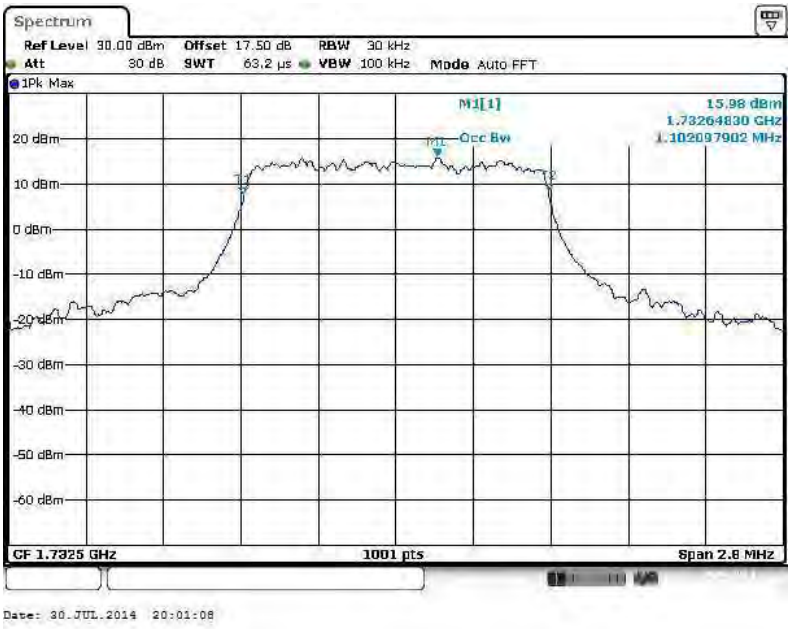
99% Occupied Bandwidth Plot on Channel 19957



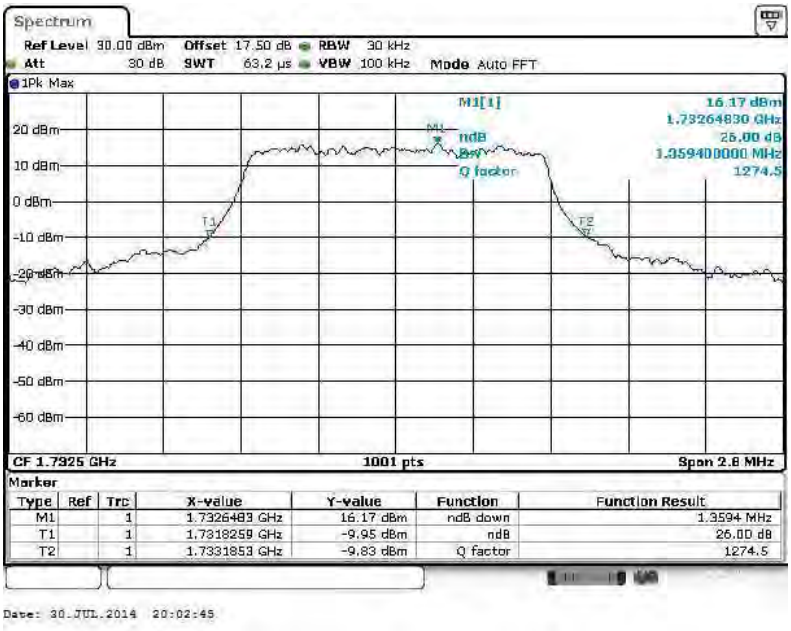
26dB Bandwidth Plot on Channel 19957



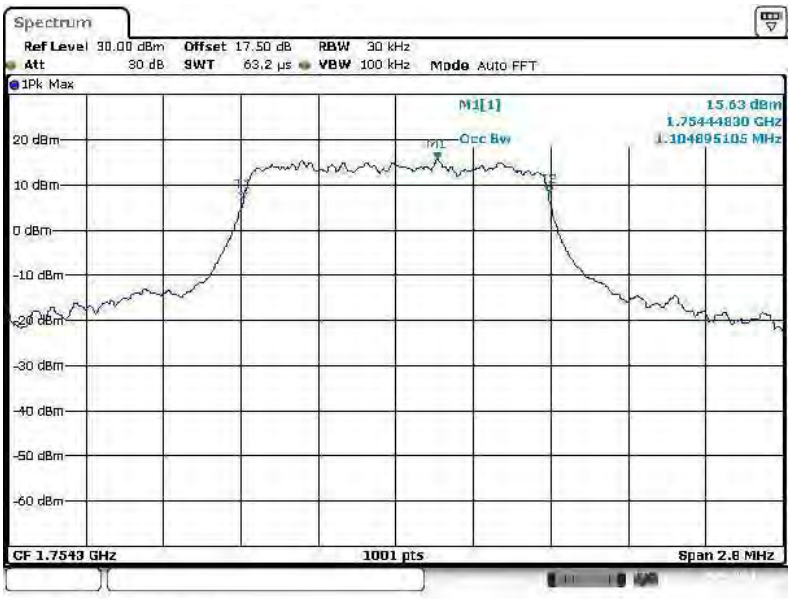
99% Occupied Bandwidth Plot on Channel 20175



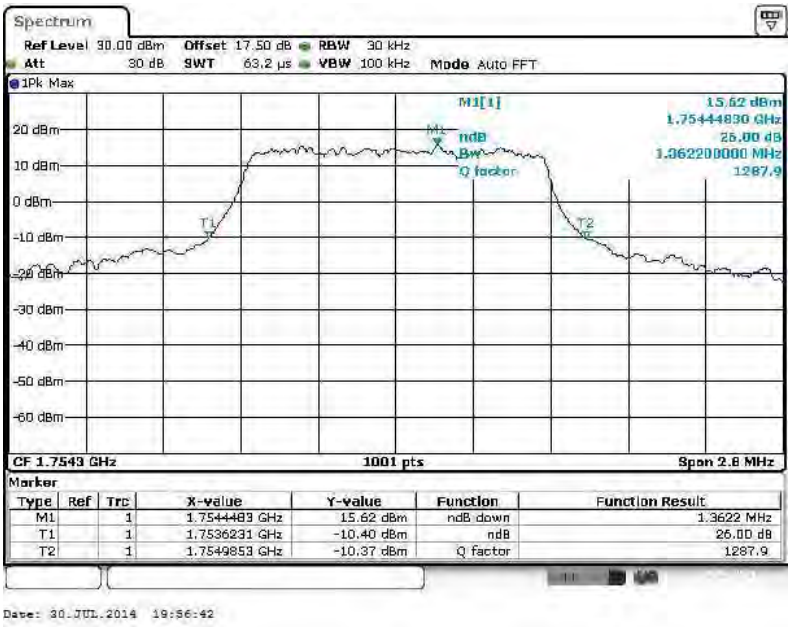
26dB Bandwidth Plot on Channel 20175



99% Occupied Bandwidth Plot on Channel 20393

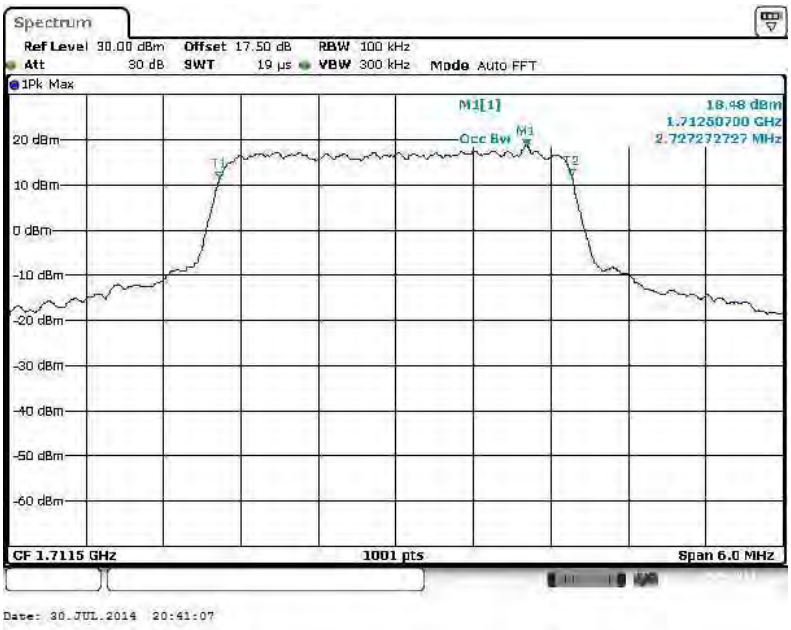


26dB Bandwidth Plot on Channel 20393

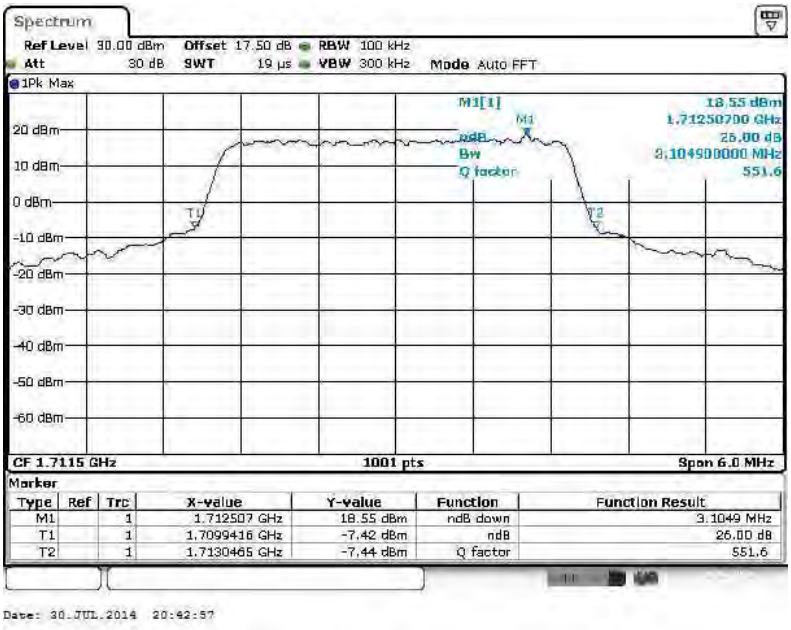


Band :	LTE Band 4	BW / Mod. :	3MHz / QPSK

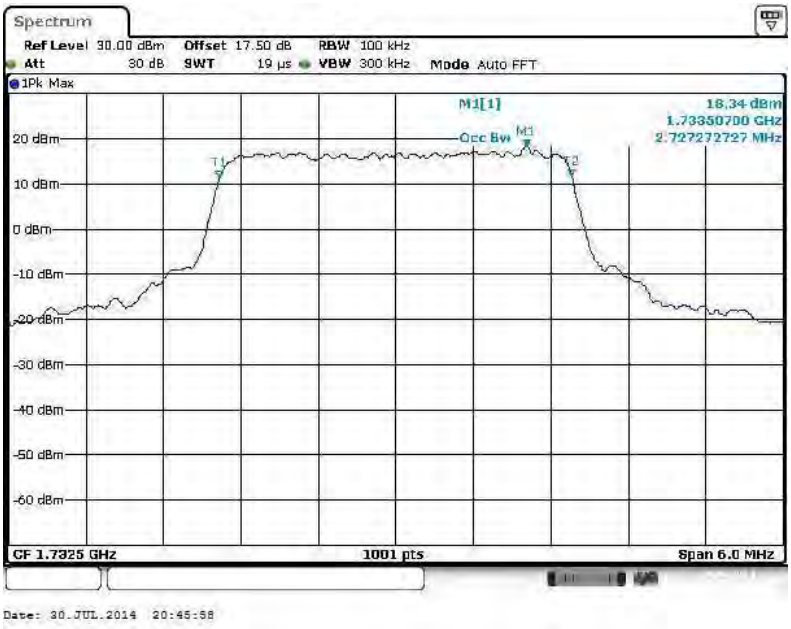
99% Occupied Bandwidth Plot on Channel 19965



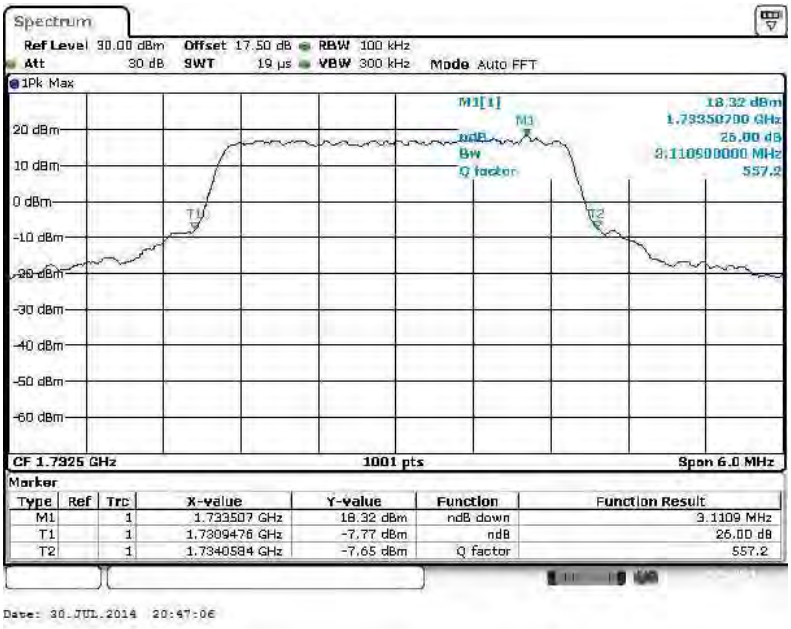
26dB Bandwidth Plot on Channel 19965



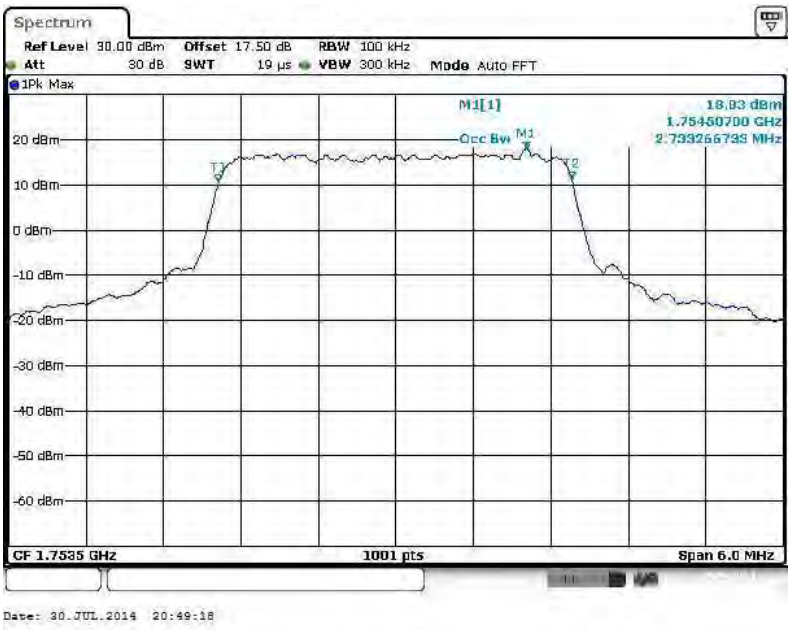
99% Occupied Bandwidth Plot on Channel 20175



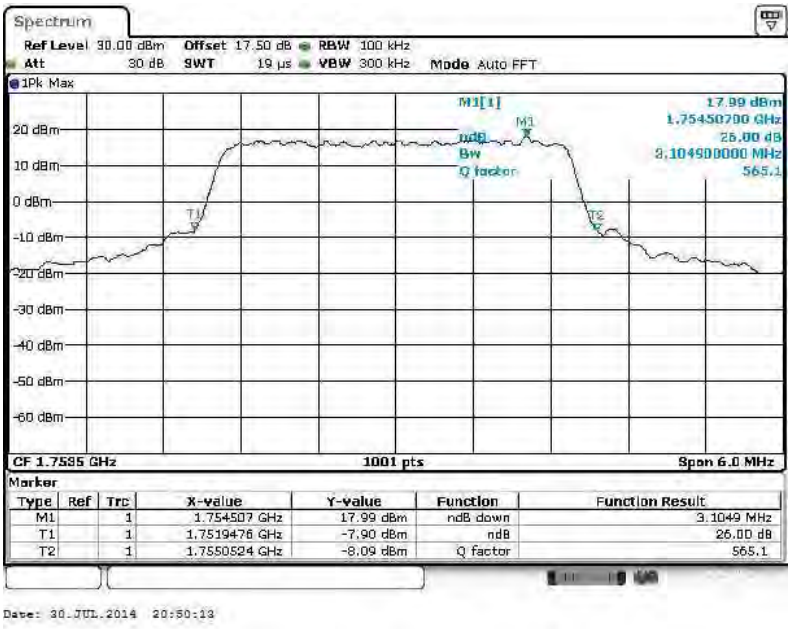
26dB Bandwidth Plot on Channel 20175



99% Occupied Bandwidth Plot on Channel 20385

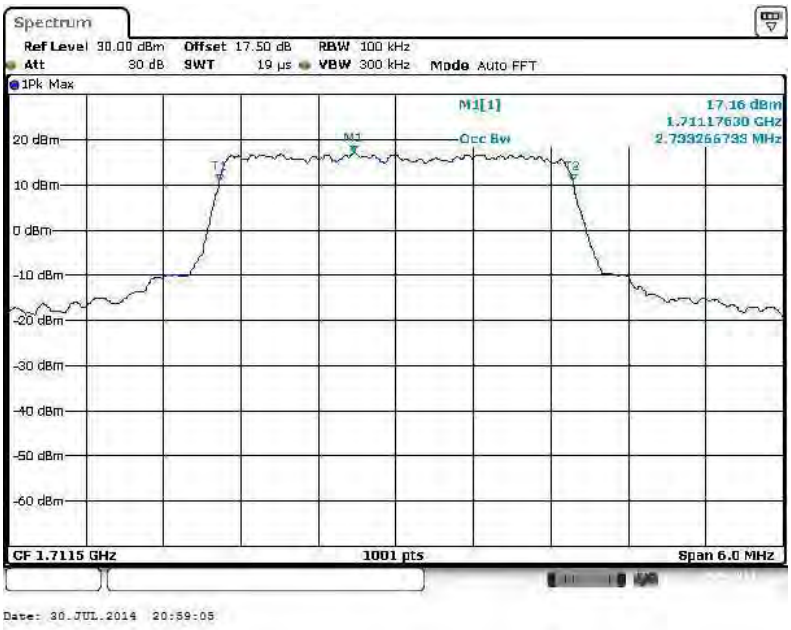


26dB Bandwidth Plot on Channel 20385

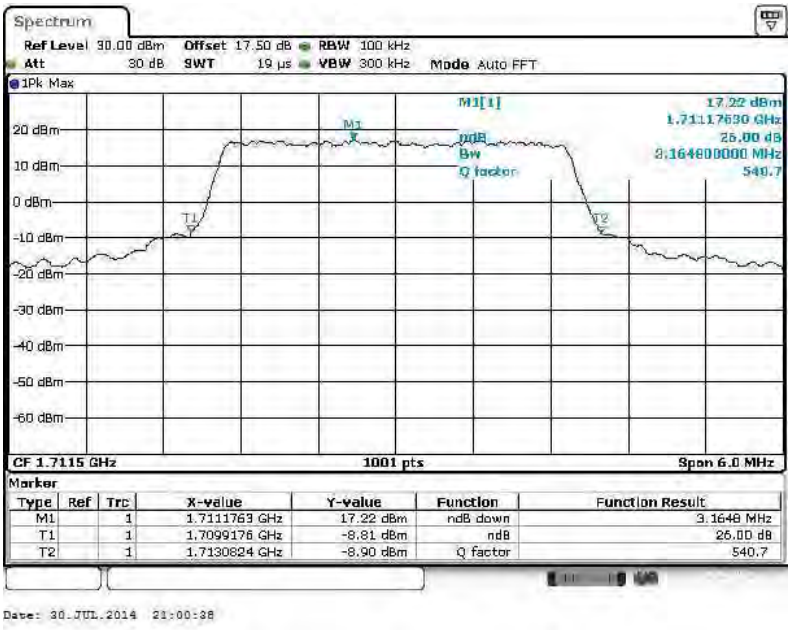


Band :	LTE Band 4	BW / Mod. :	3MHz / 16QAM

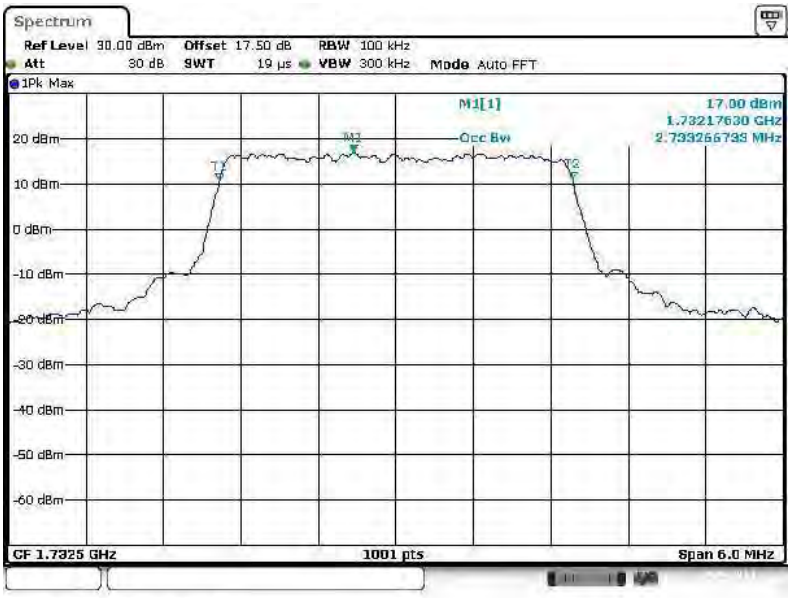
99% Occupied Bandwidth Plot on Channel 19965



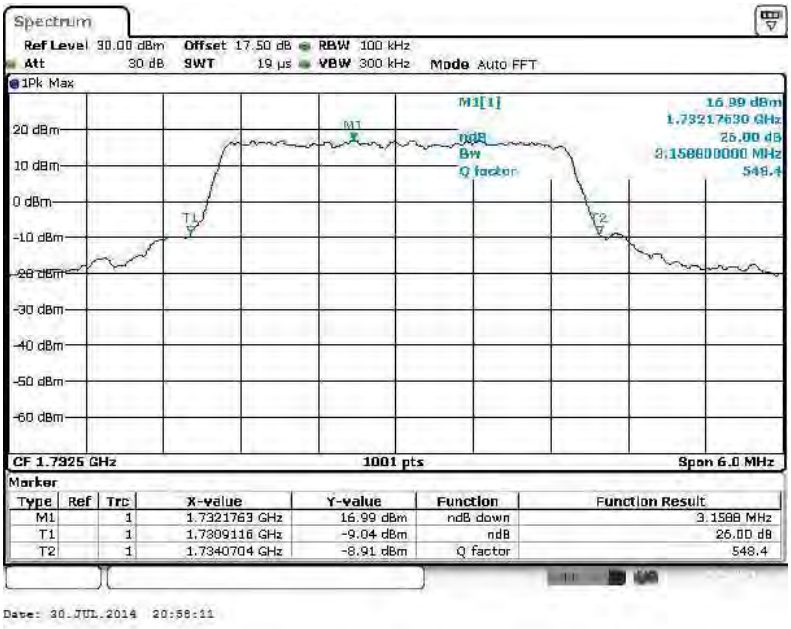
26dB Bandwidth Plot on Channel 19965



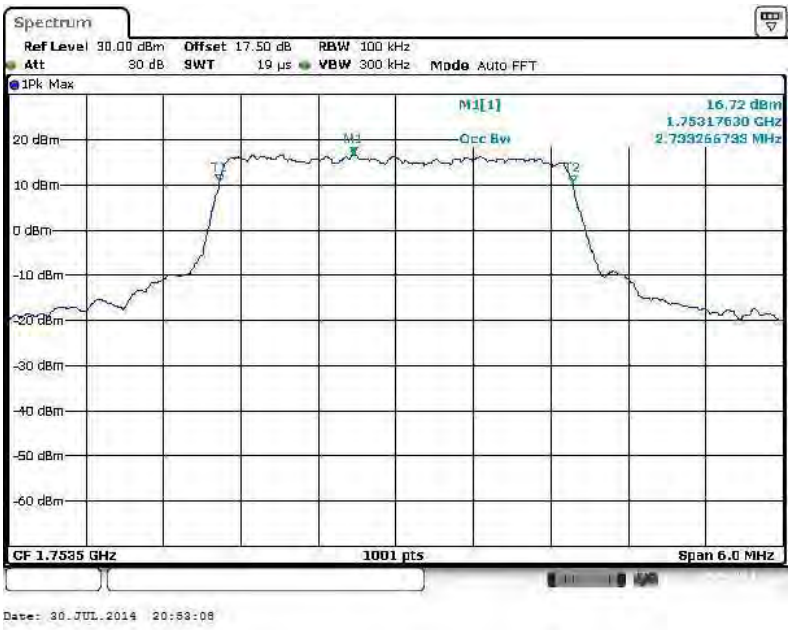
99% Occupied Bandwidth Plot on Channel 20175



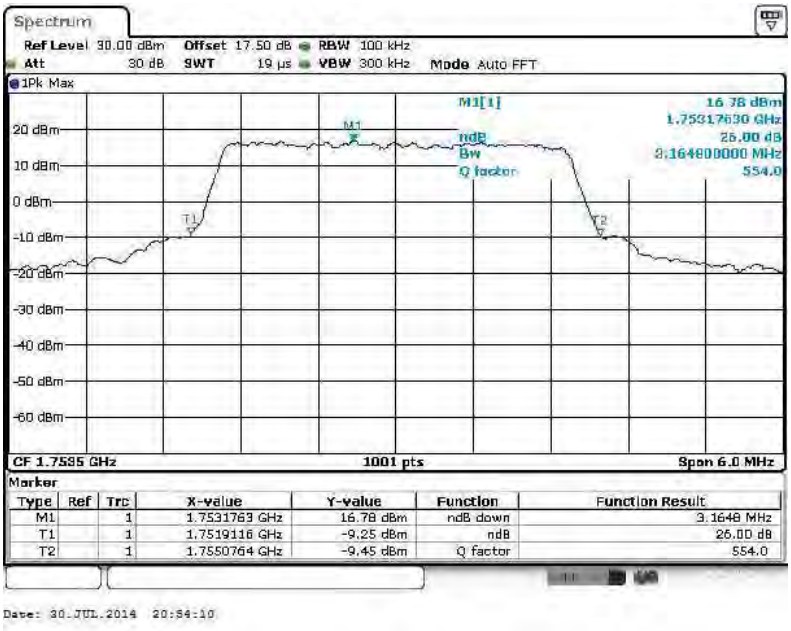
26dB Bandwidth Plot on Channel 20175



99% Occupied Bandwidth Plot on Channel 20385

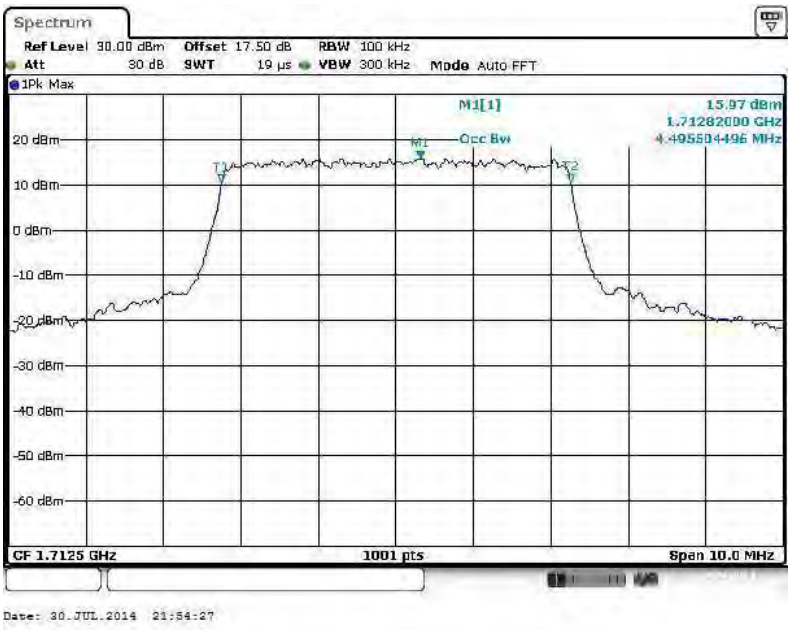


26dB Bandwidth Plot on Channel 20385

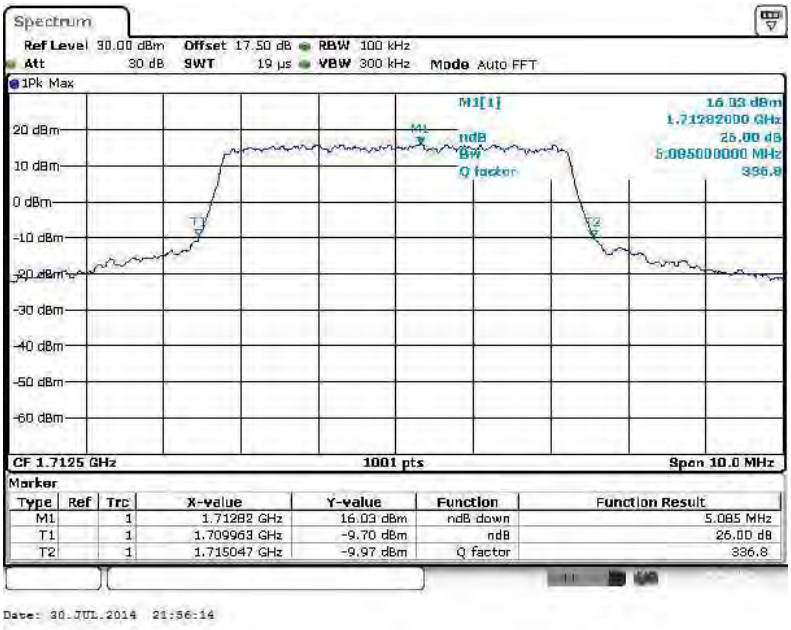


Band :	LTE Band 4	BW / Mod. :	5MHz / QPSK

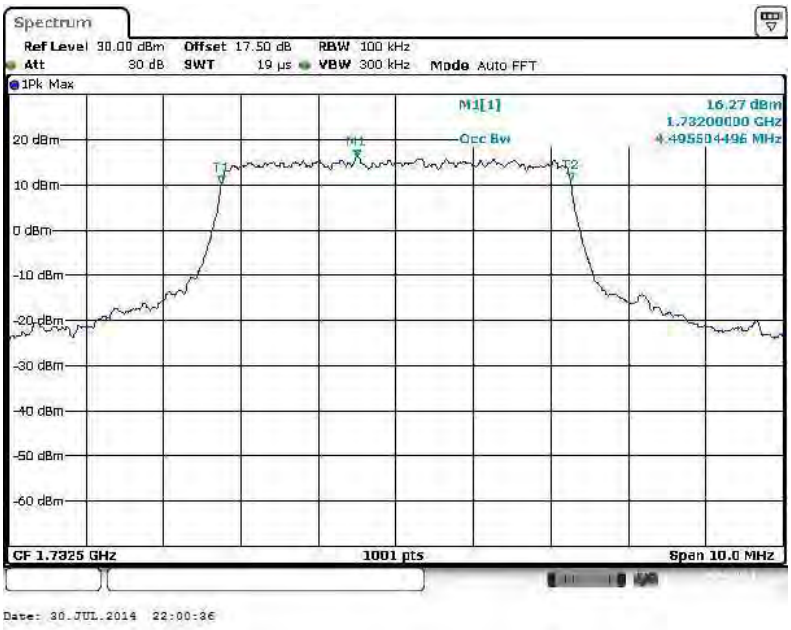
99% Occupied Bandwidth Plot on Channel 19975



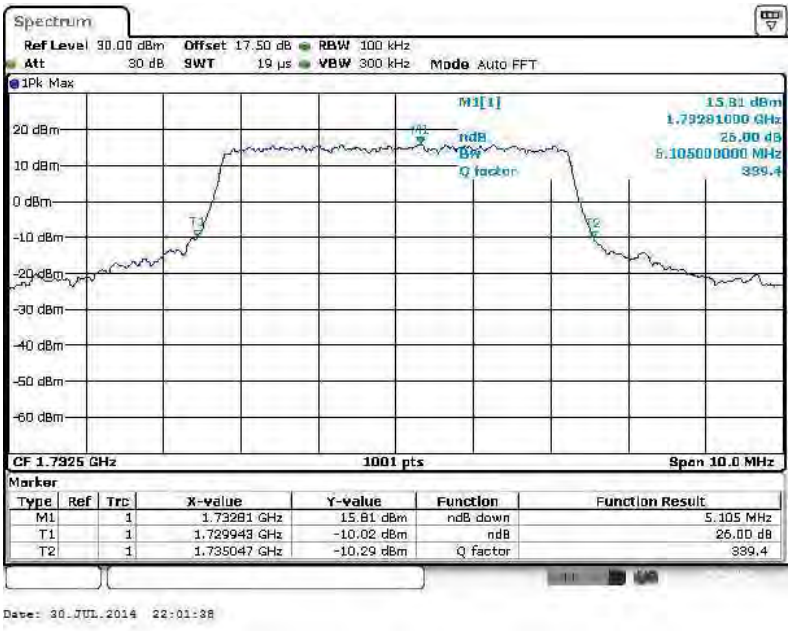
26dB Bandwidth Plot on Channel 19975



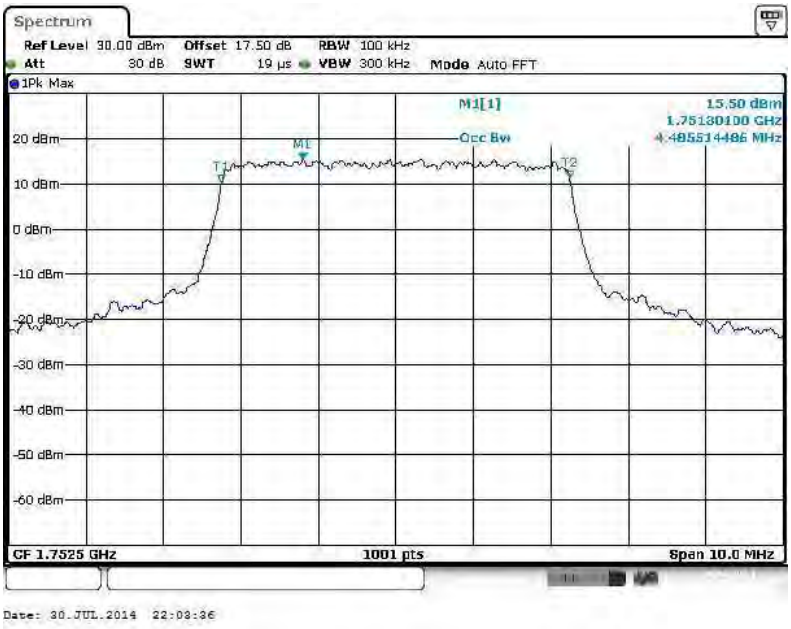
99% Occupied Bandwidth Plot on Channel 20175



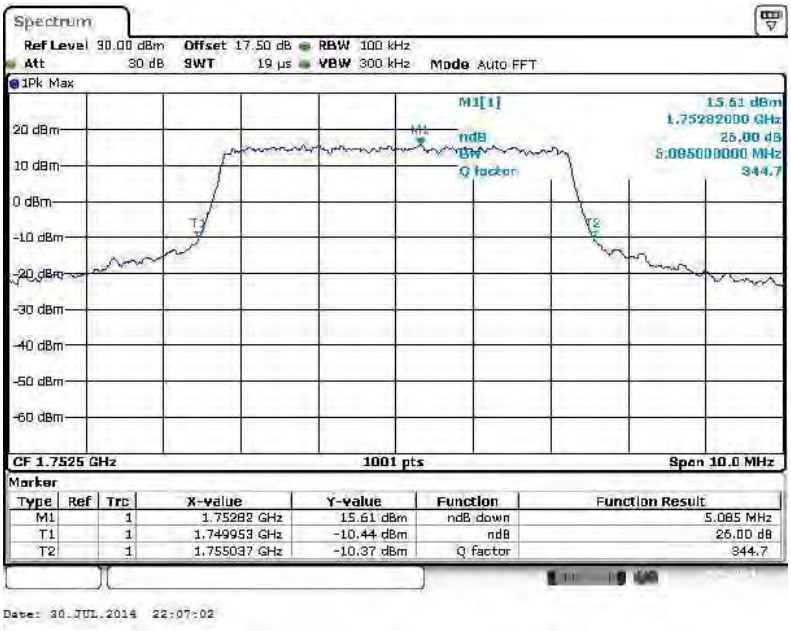
26dB Bandwidth Plot on Channel 20175



99% Occupied Bandwidth Plot on Channel 20375

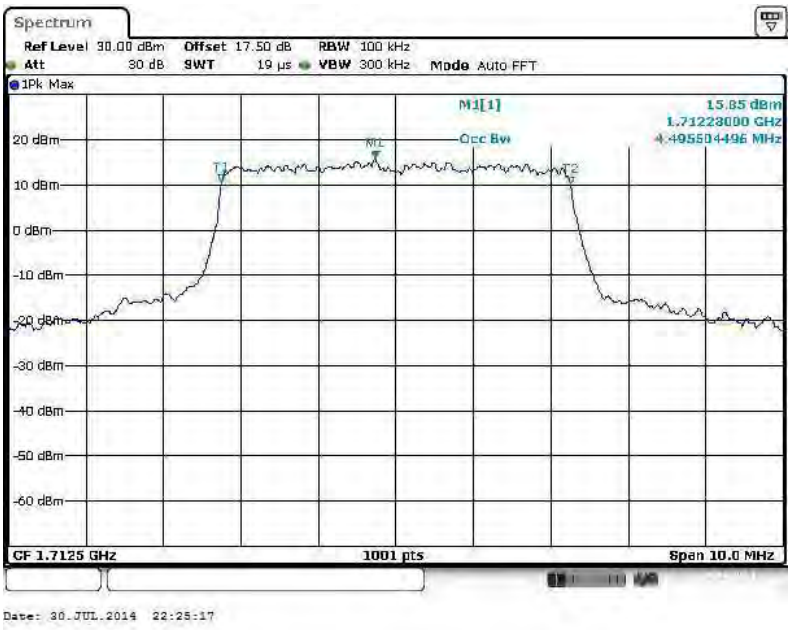


26dB Bandwidth Plot on Channel 20375

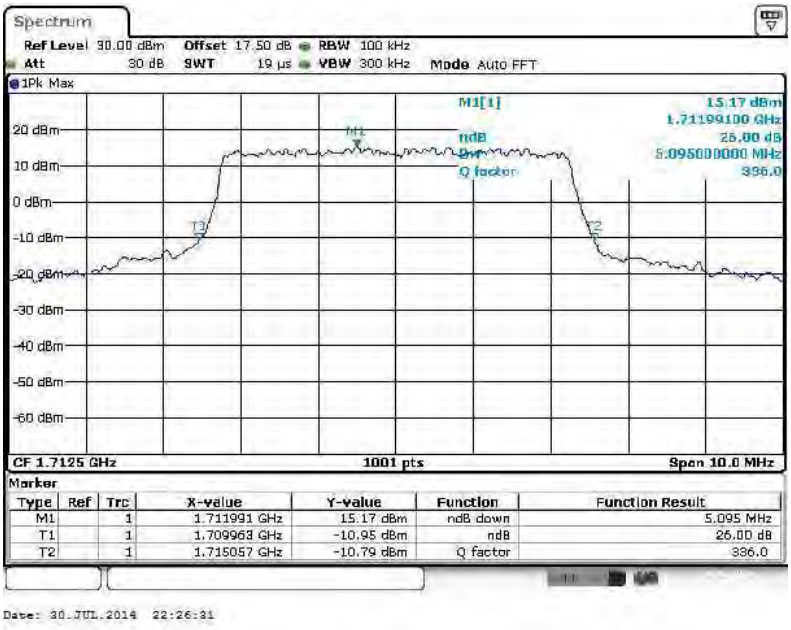


Band :	LTE Band 4	BW / Mod. :	5MHz / 16QAM

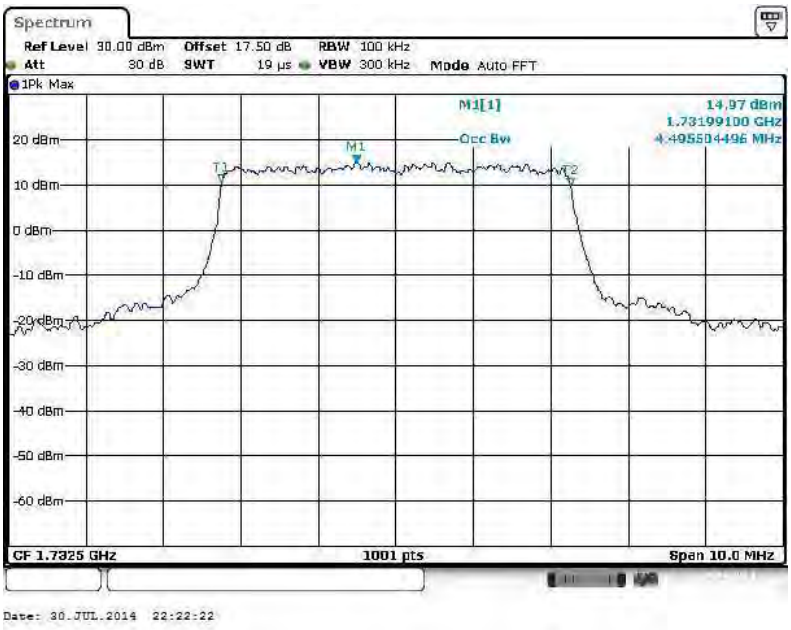
99% Occupied Bandwidth Plot on Channel 19975



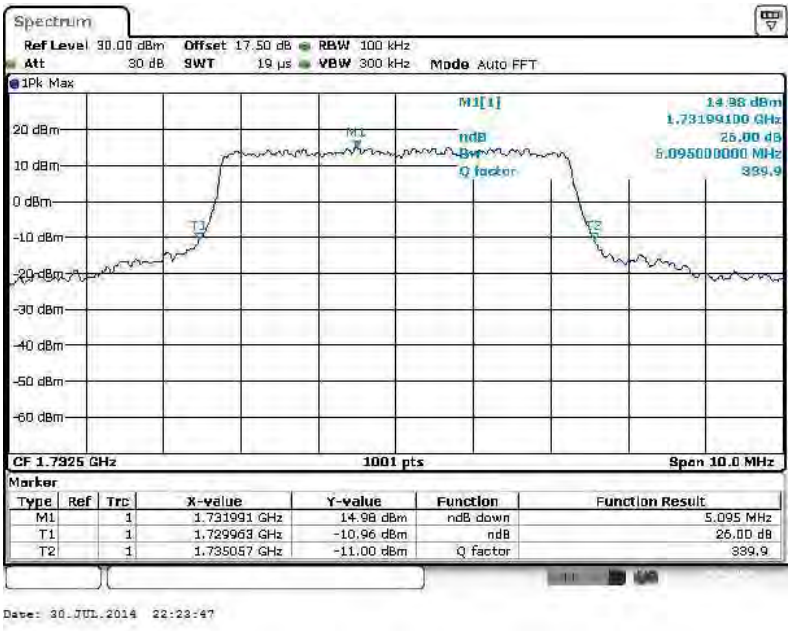
26dB Bandwidth Plot on Channel 19975



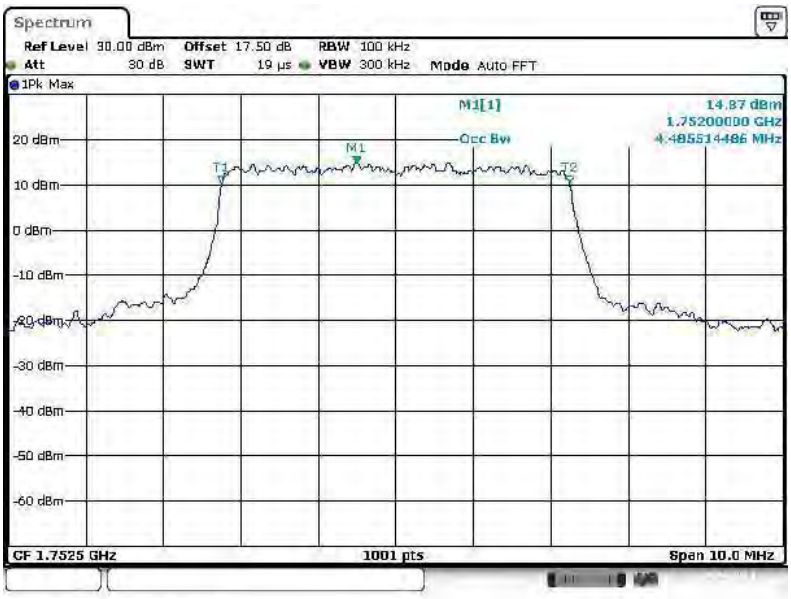
99% Occupied Bandwidth Plot on Channel 20175



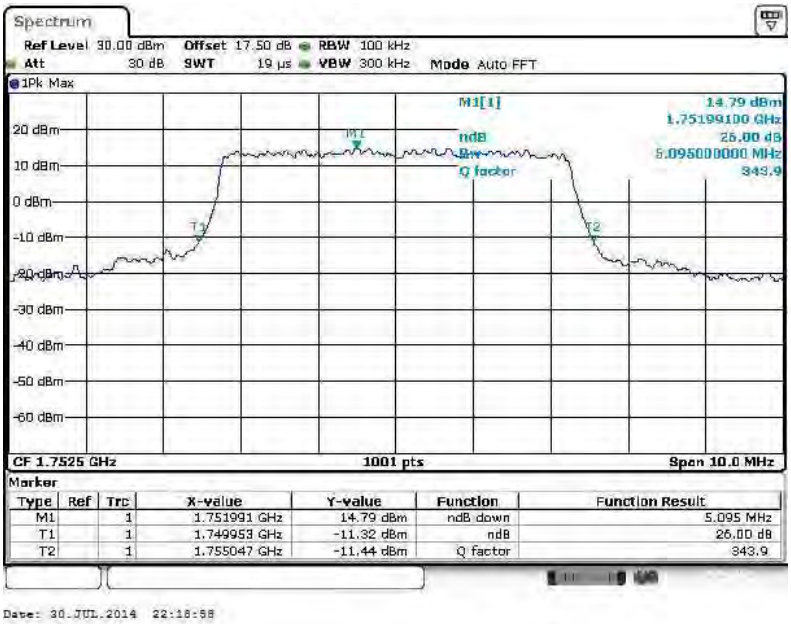
26dB Bandwidth Plot on Channel 20175



99% Occupied Bandwidth Plot on Channel 20375

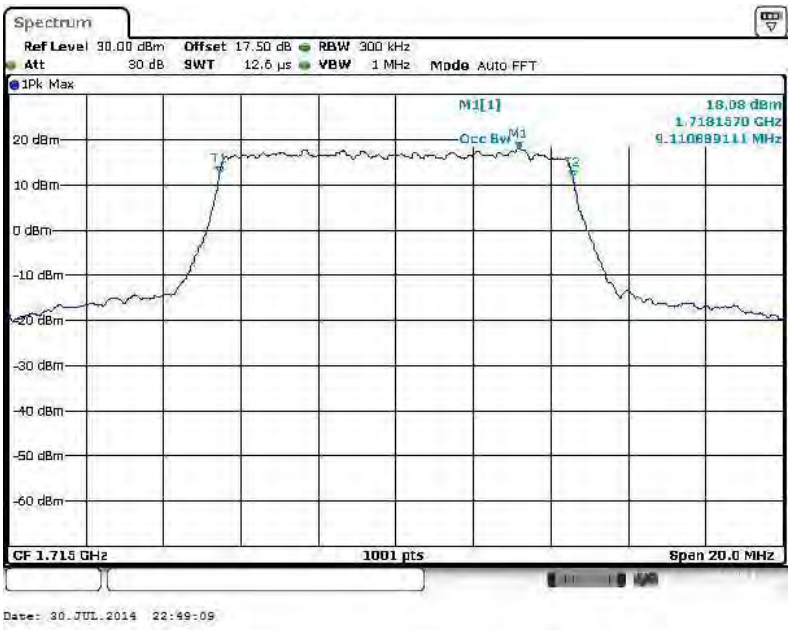


26dB Bandwidth Plot on Channel 20375

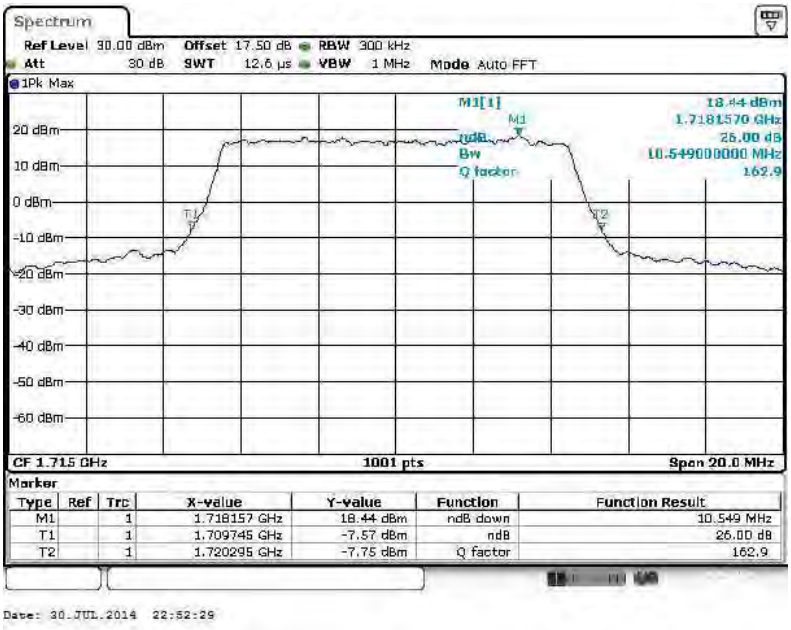


Band :	LTE Band 4	BW / Mod. :	10MHz / QPSK

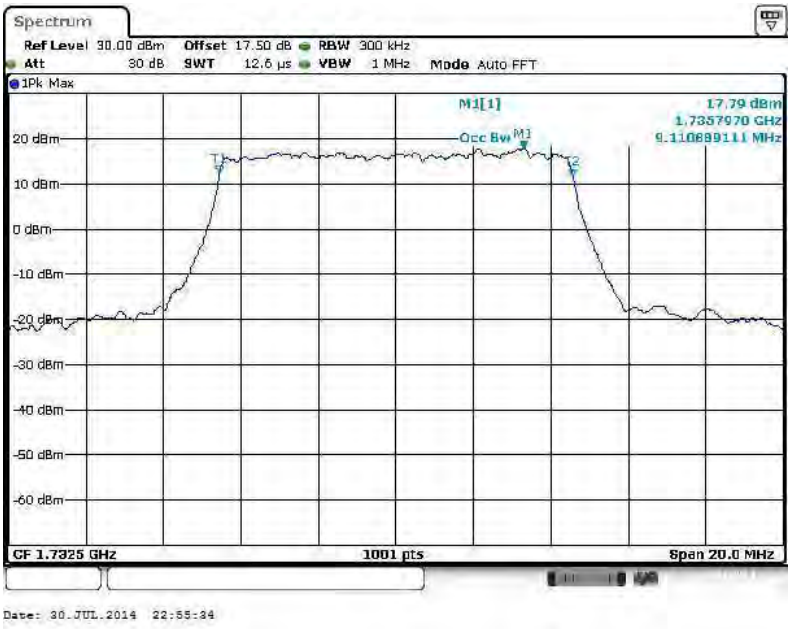
99% Occupied Bandwidth Plot on Channel 20000



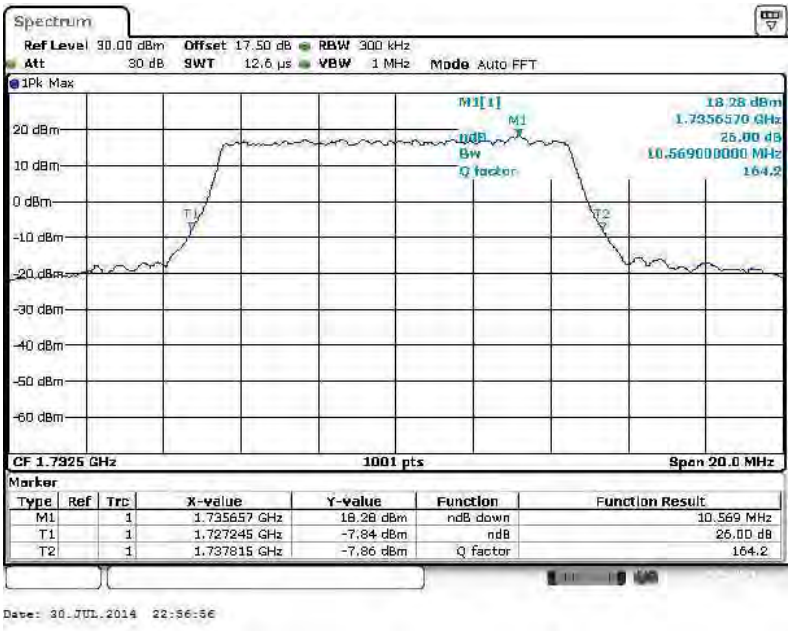
26dB Bandwidth Plot on Channel 20000



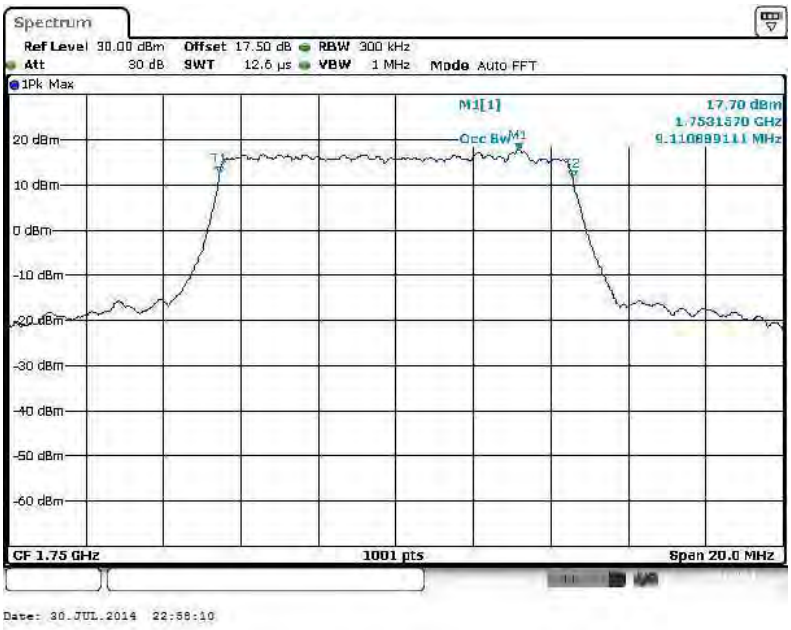
99% Occupied Bandwidth Plot on Channel 20175



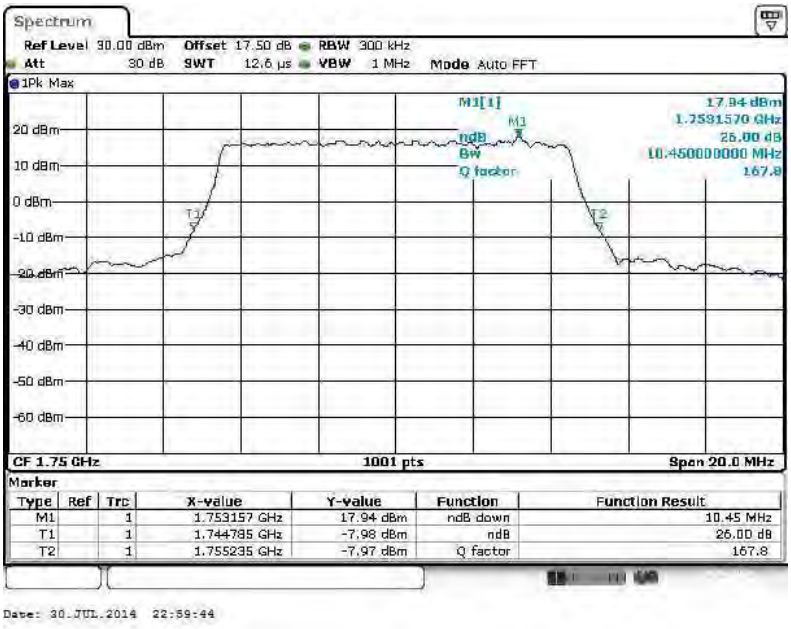
26dB Bandwidth Plot on Channel 20175



99% Occupied Bandwidth Plot on Channel 20350

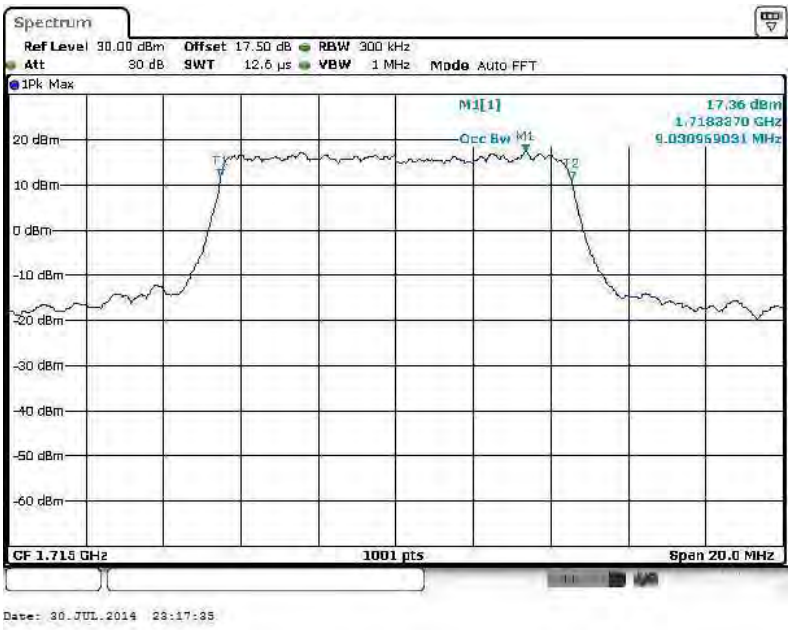


26dB Bandwidth Plot on Channel 20350

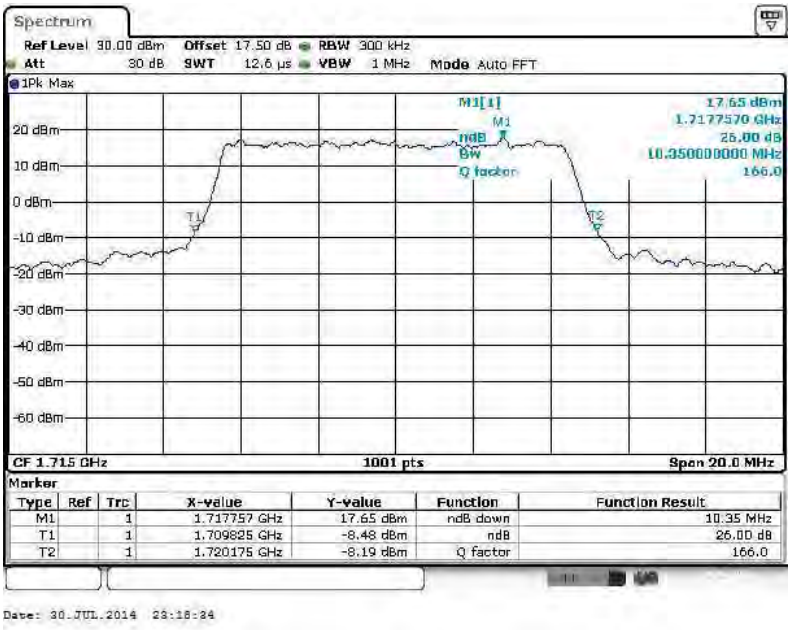


Band :	LTE Band 4	BW / Mod. :	10MHz / 16QAM

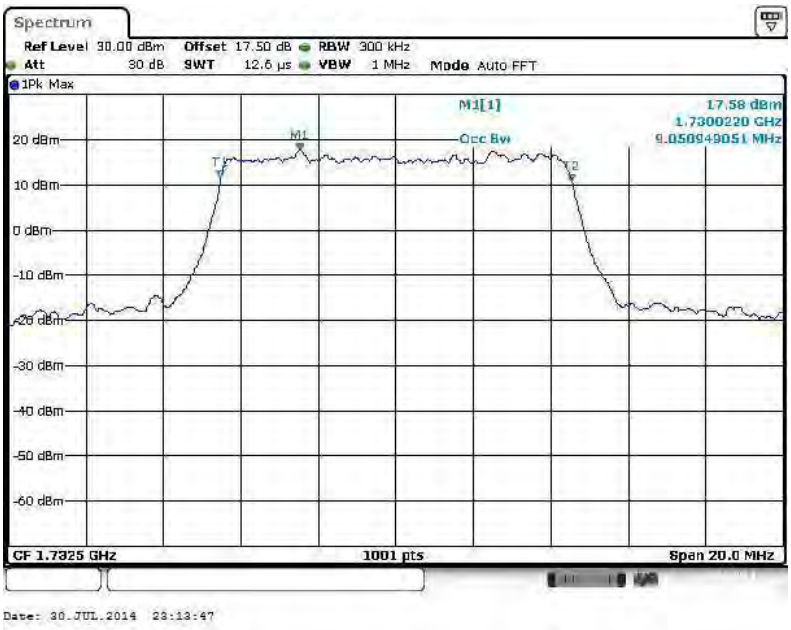
99% Occupied Bandwidth Plot on Channel 20000



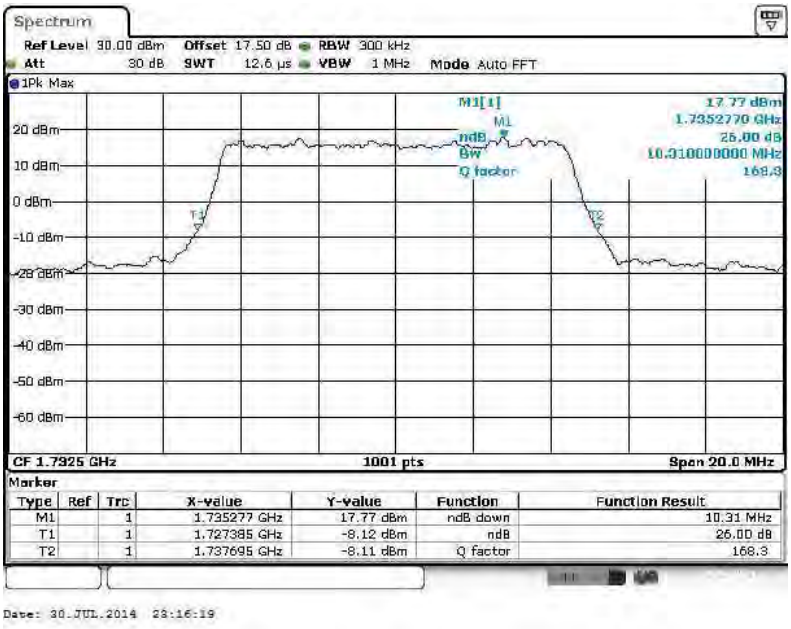
26dB Bandwidth Plot on Channel 20000



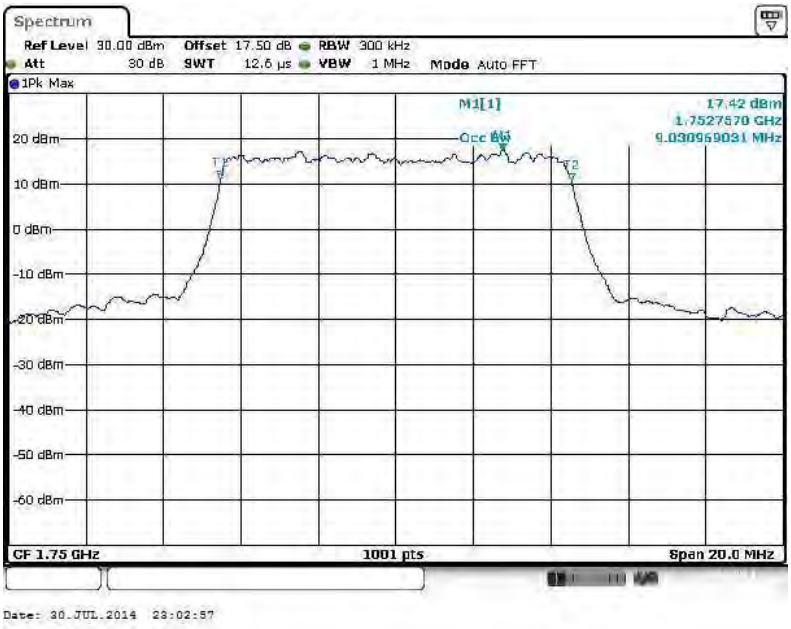
99% Occupied Bandwidth Plot on Channel 20175



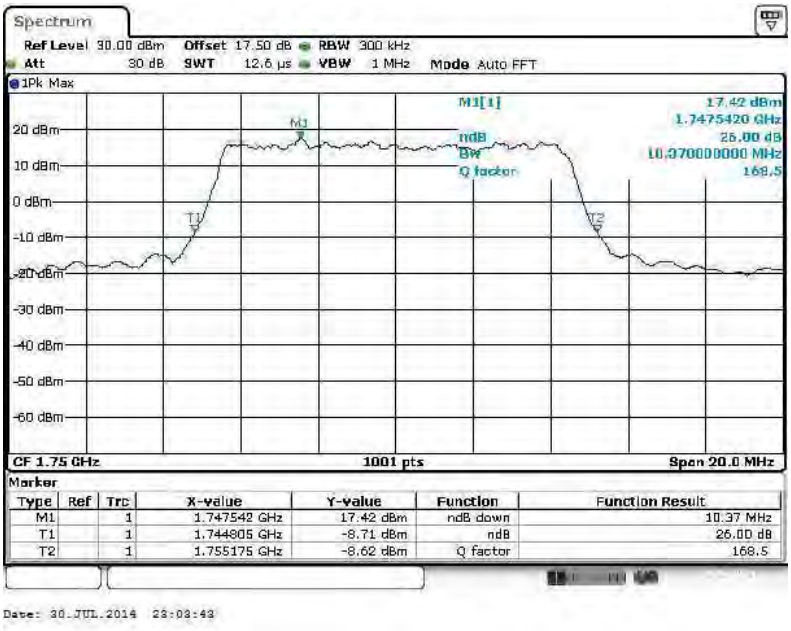
26dB Bandwidth Plot on Channel 20175



99% Occupied Bandwidth Plot on Channel 20350

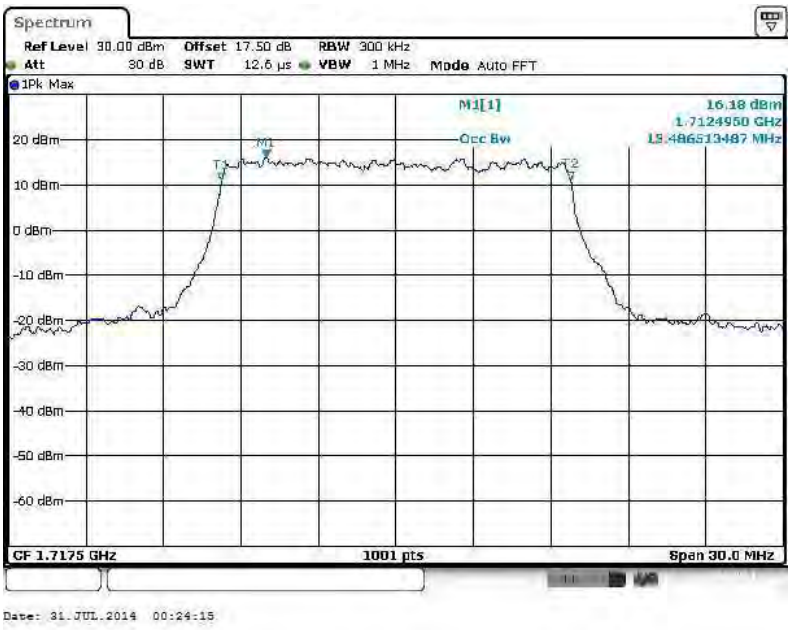


26dB Bandwidth Plot on Channel 20350

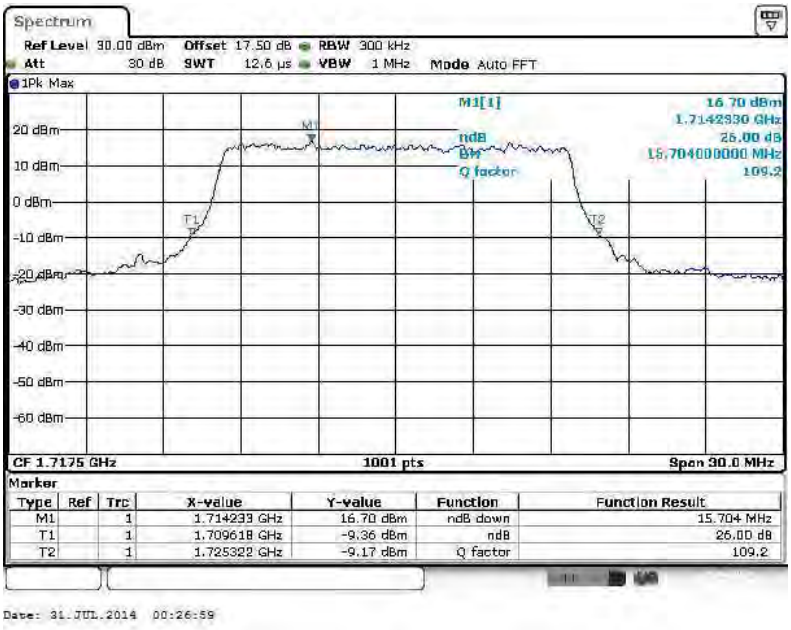


Band :	LTE Band 4	BW / Mod. :	15MHz / QPSK

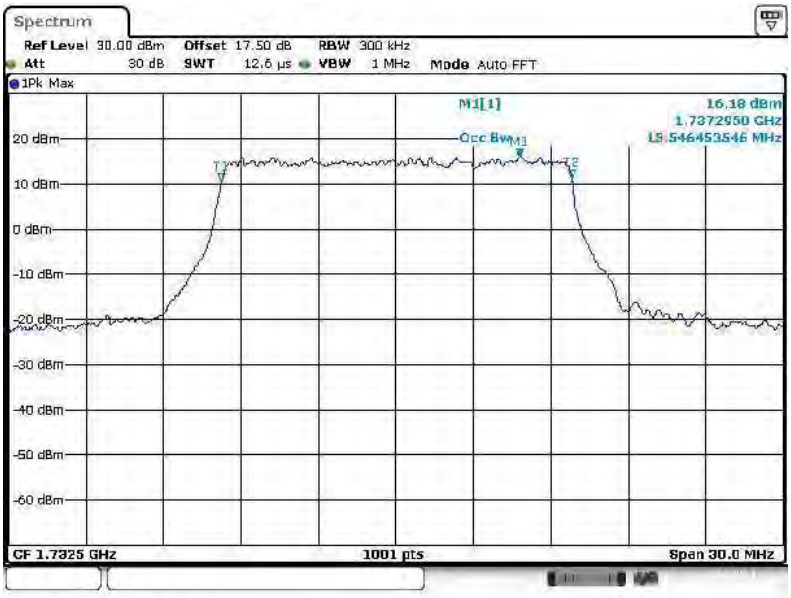
99% Occupied Bandwidth Plot on Channel 20025



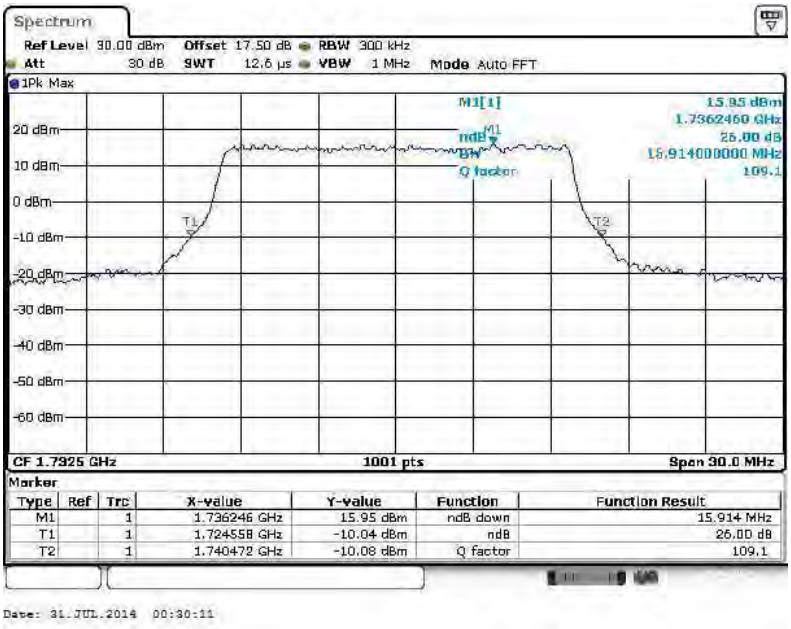
26dB Bandwidth Plot on Channel 20025



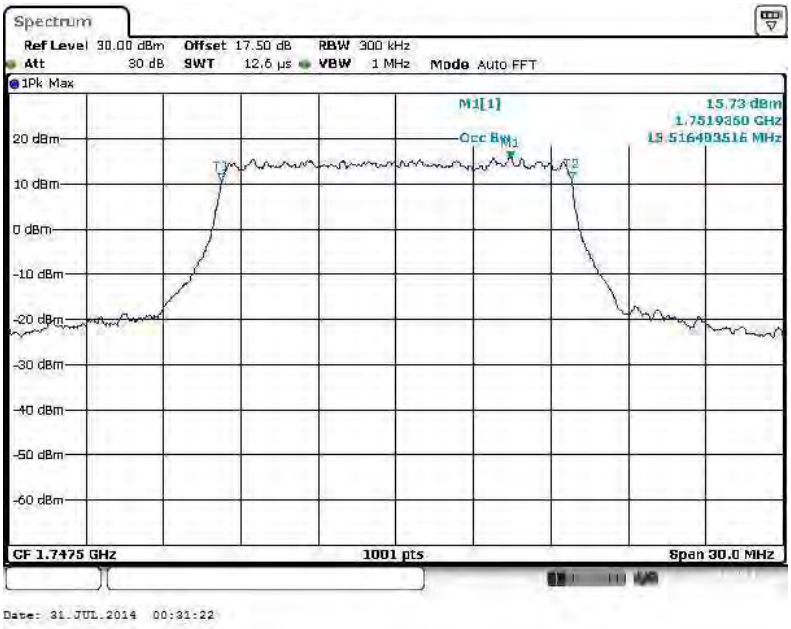
99% Occupied Bandwidth Plot on Channel 20175



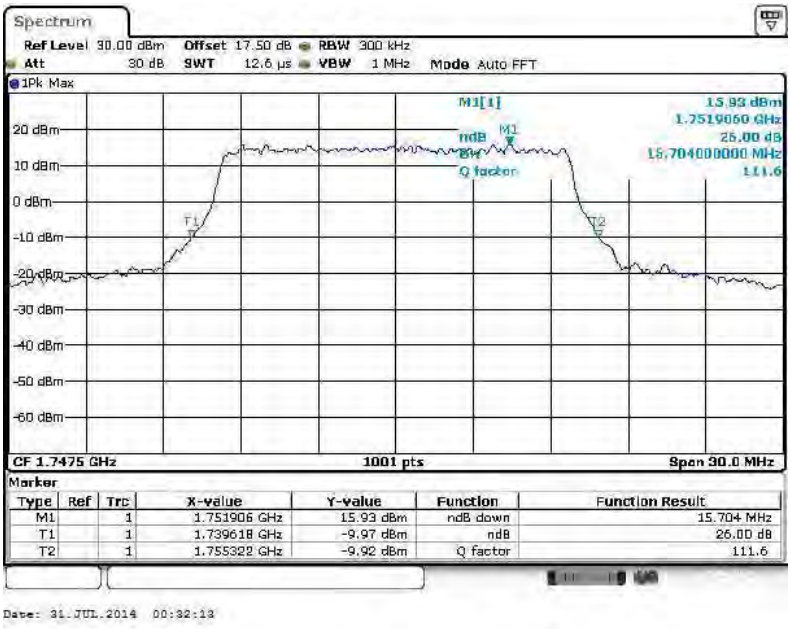
26dB Bandwidth Plot on Channel 20175



99% Occupied Bandwidth Plot on Channel 20325

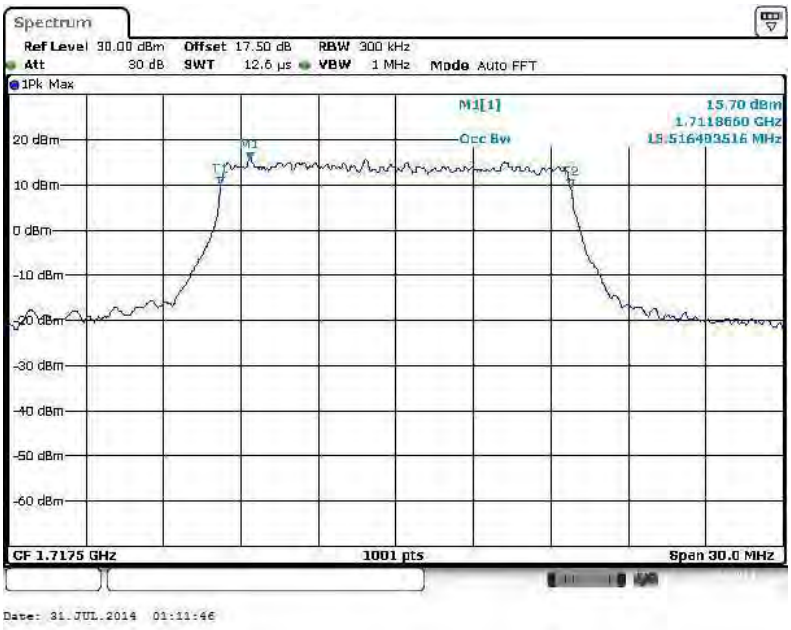


26dB Bandwidth Plot on Channel 20325

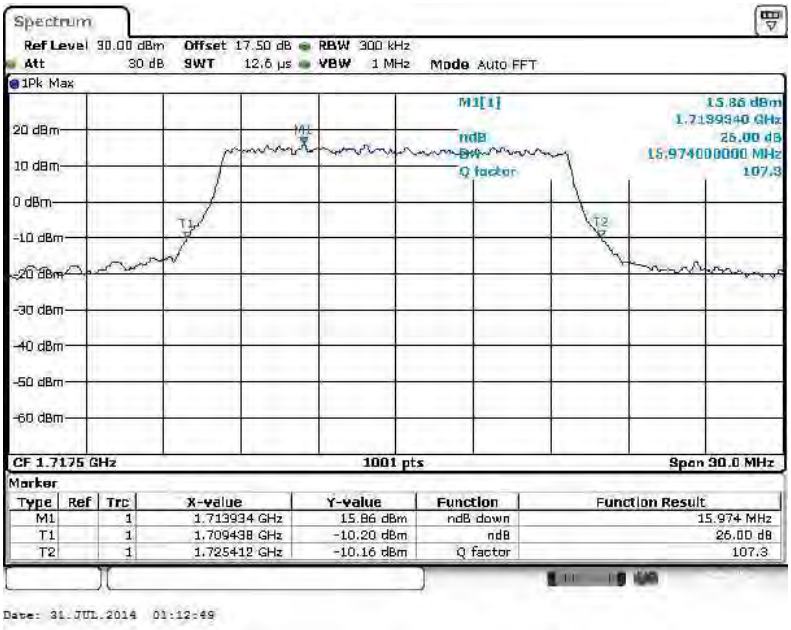


Band :	LTE Band 4	BW / Mod. :	15MHz / 16QAM

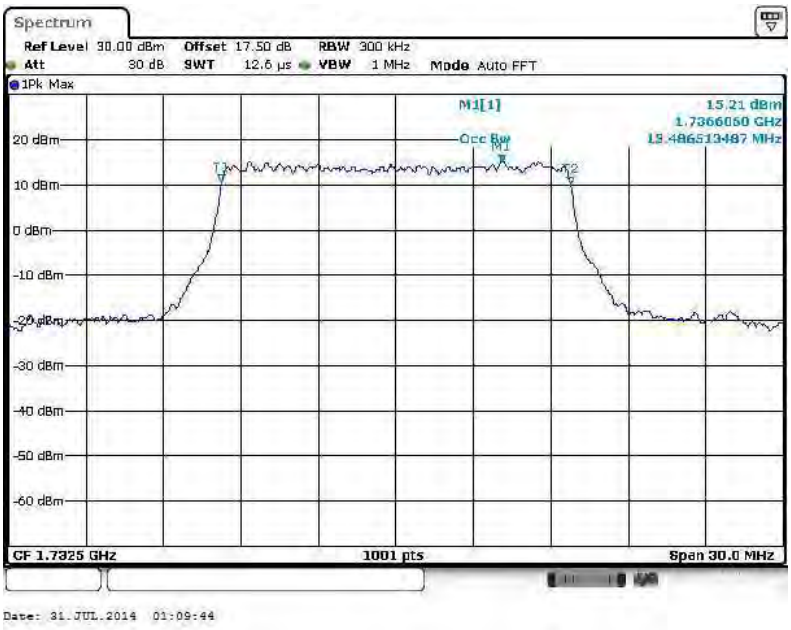
99% Occupied Bandwidth Plot on Channel 20025



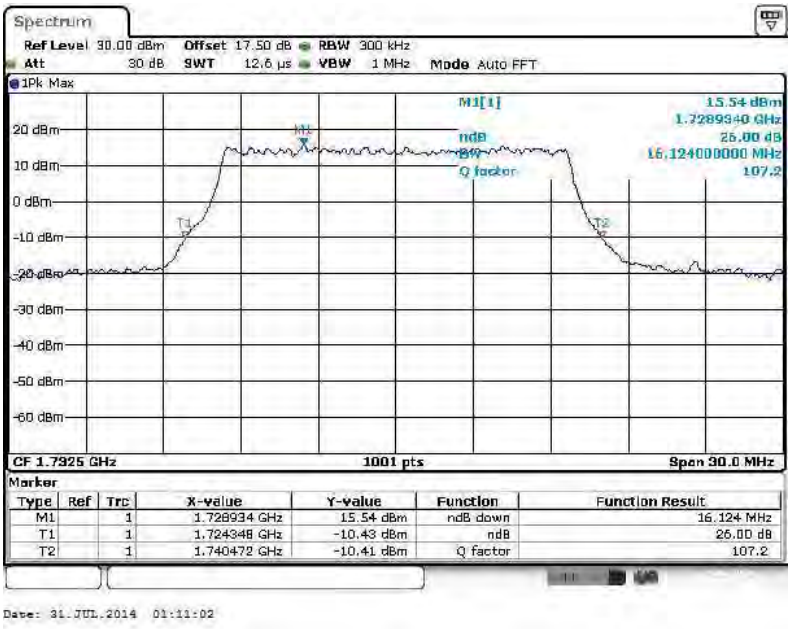
26dB Bandwidth Plot on Channel 20025



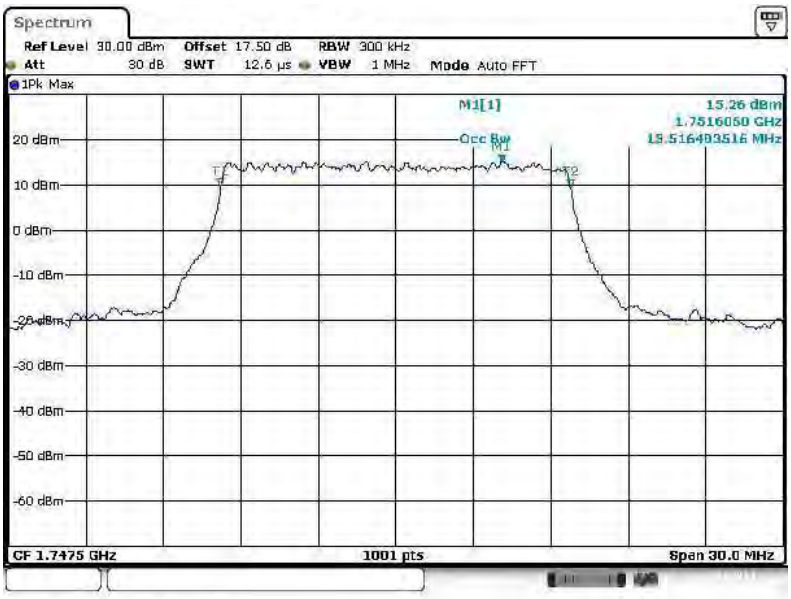
99% Occupied Bandwidth Plot on Channel 20175



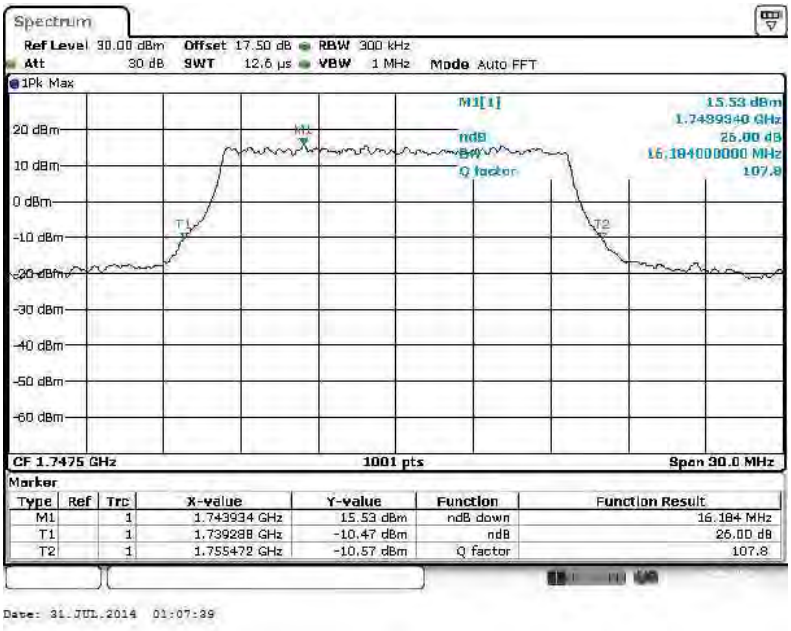
26dB Bandwidth Plot on Channel 20175



99% Occupied Bandwidth Plot on Channel 20325

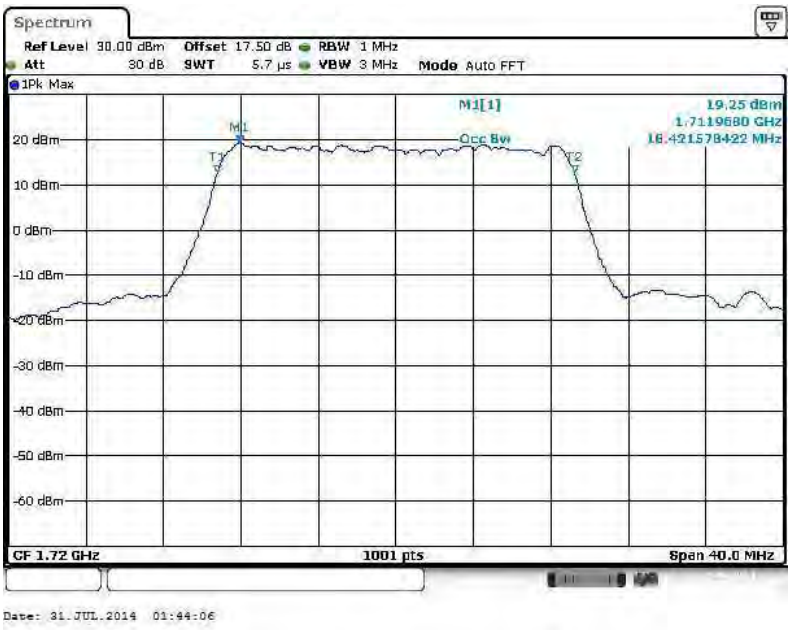


26dB Bandwidth Plot on Channel 20325

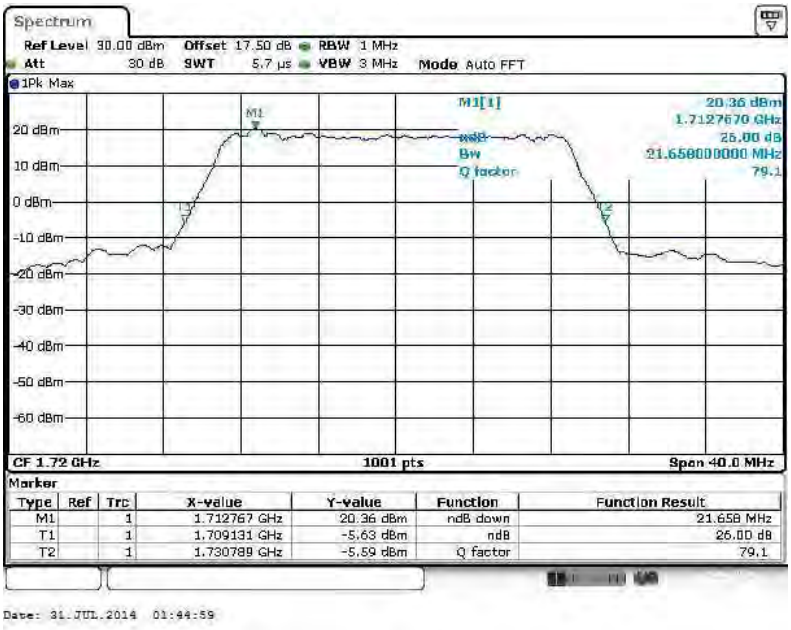


Band :	LTE Band 4	BW / Mod. :	20MHz / QPSK

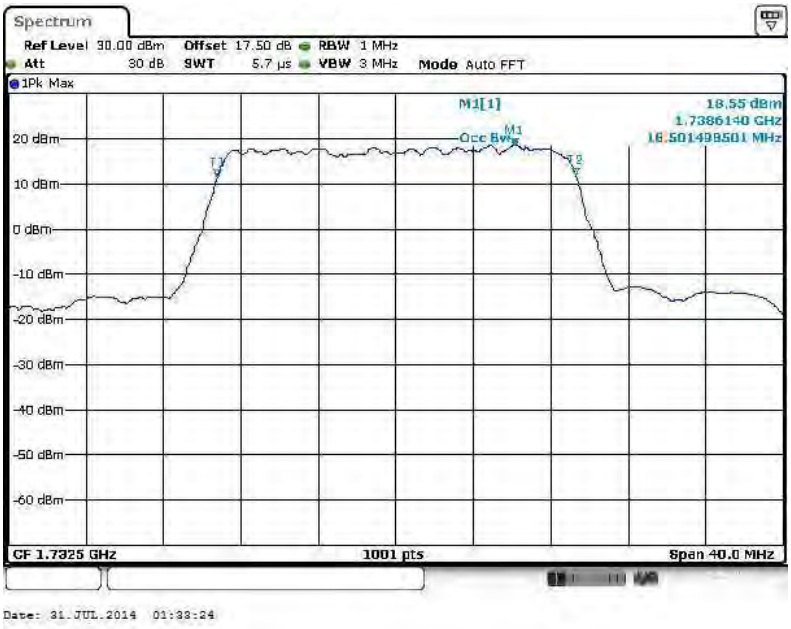
99% Occupied Bandwidth Plot on Channel 20050



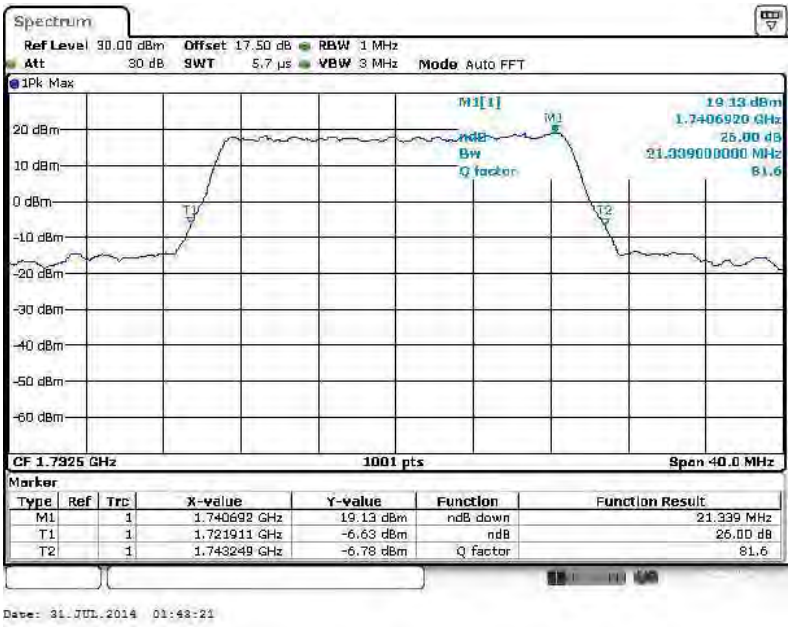
26dB Bandwidth Plot on Channel 20050



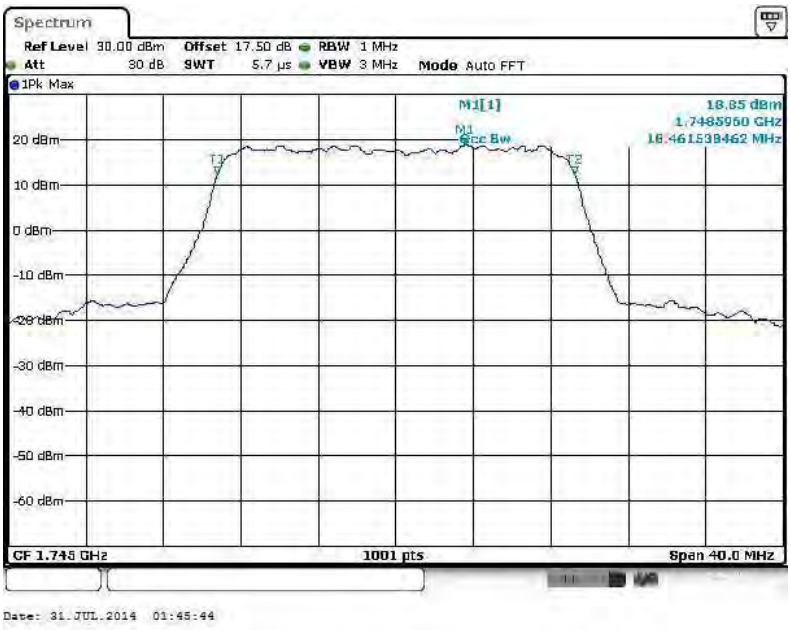
99% Occupied Bandwidth Plot on Channel 20175



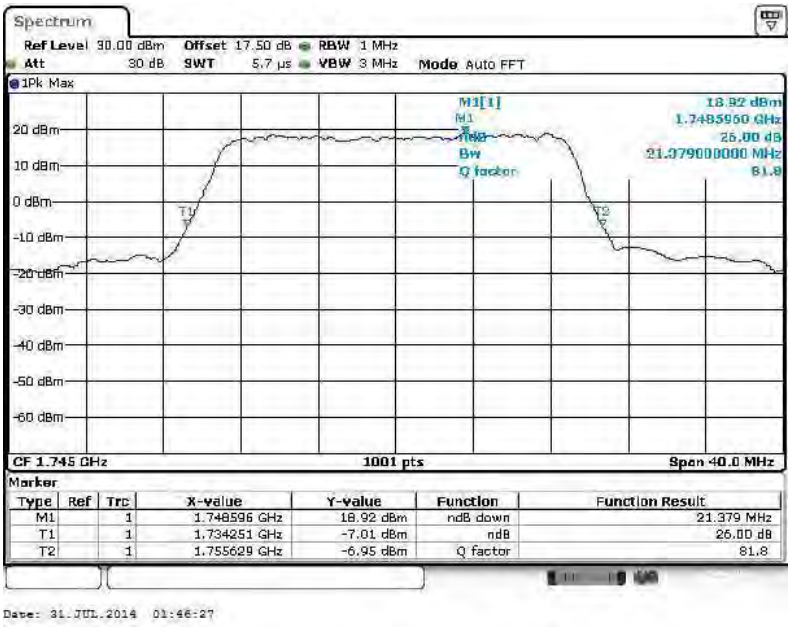
26dB Bandwidth Plot on Channel 20175



99% Occupied Bandwidth Plot on Channel 20300

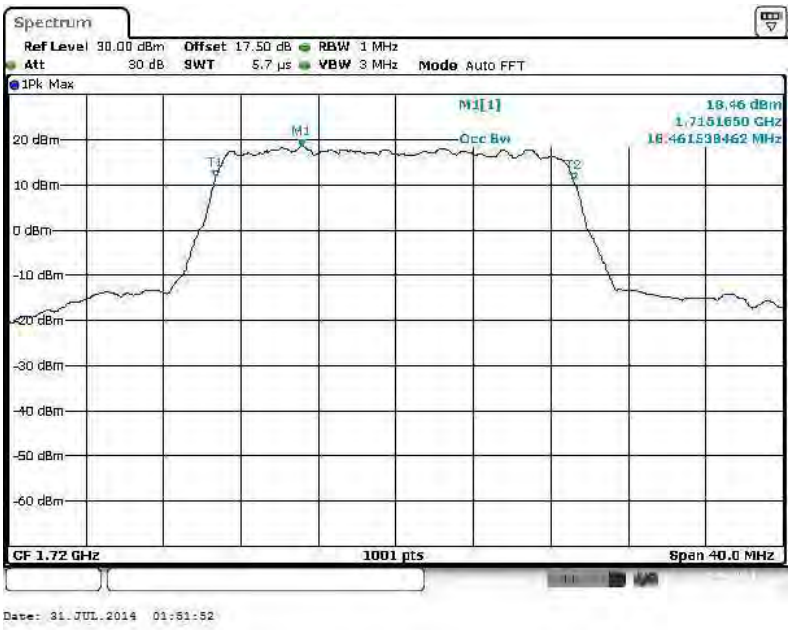


26dB Bandwidth Plot on Channel 20300

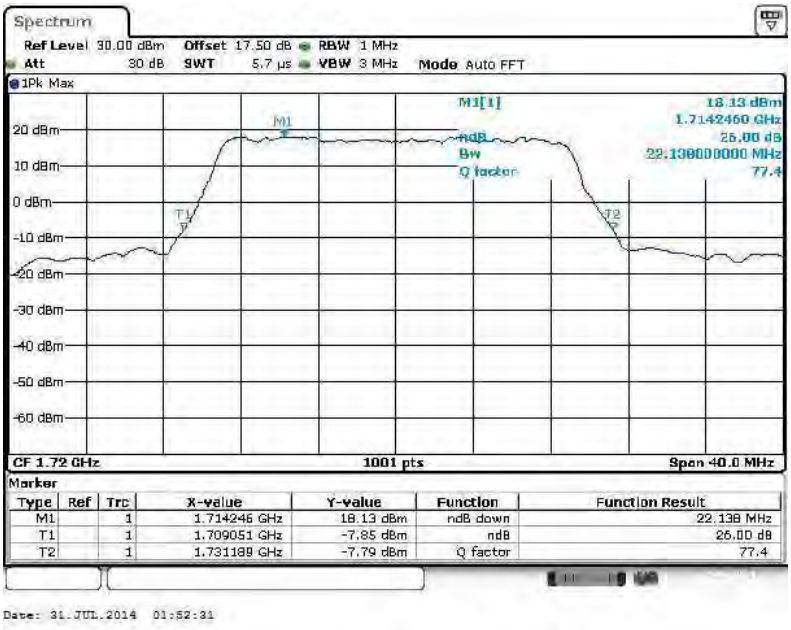


Band :	LTE Band 4	BW / Mod. :	20MHz / 16QAM

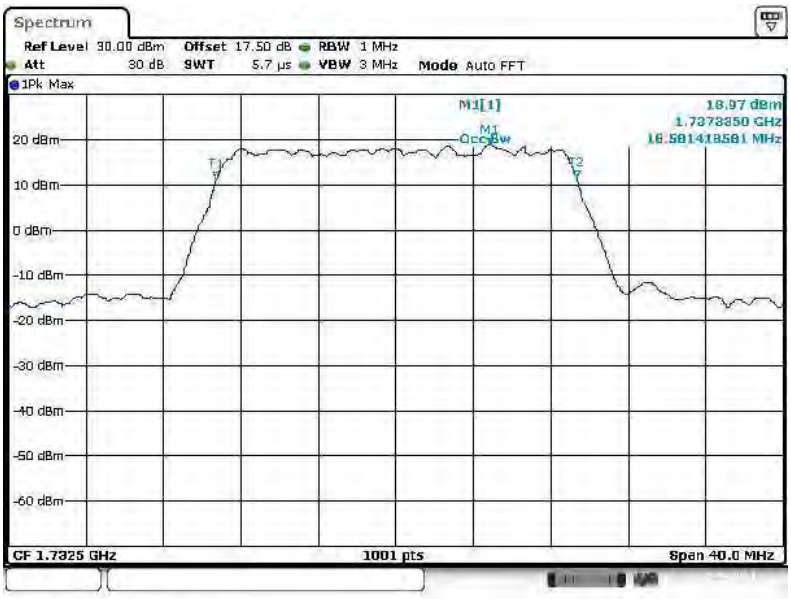
99% Occupied Bandwidth Plot on Channel 20050



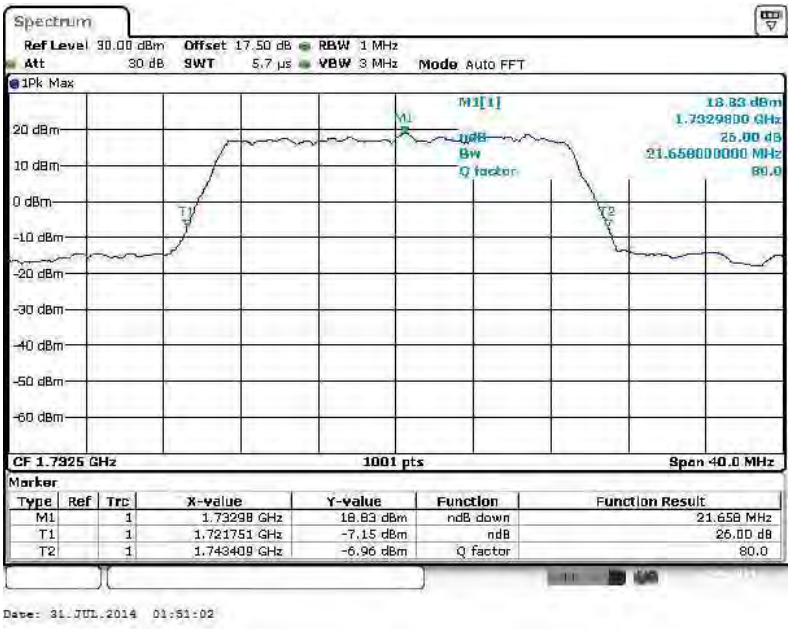
26dB Bandwidth Plot on Channel 20050



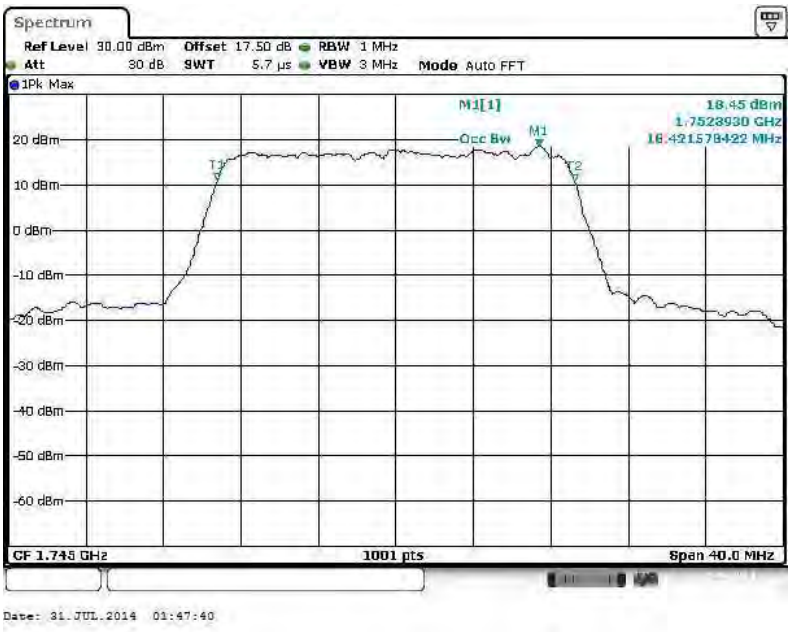
99% Occupied Bandwidth Plot on Channel 20175



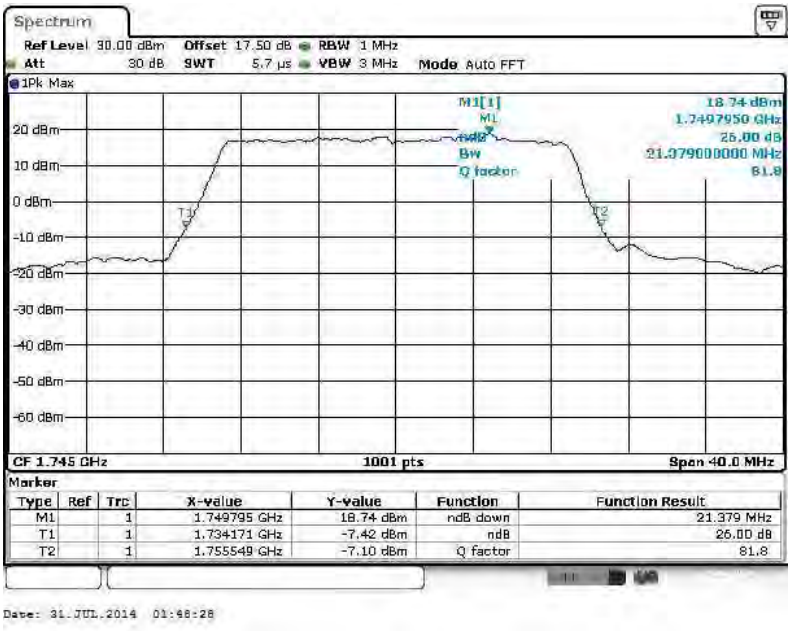
26dB Bandwidth Plot on Channel 20175



99% Occupied Bandwidth Plot on Channel 20300

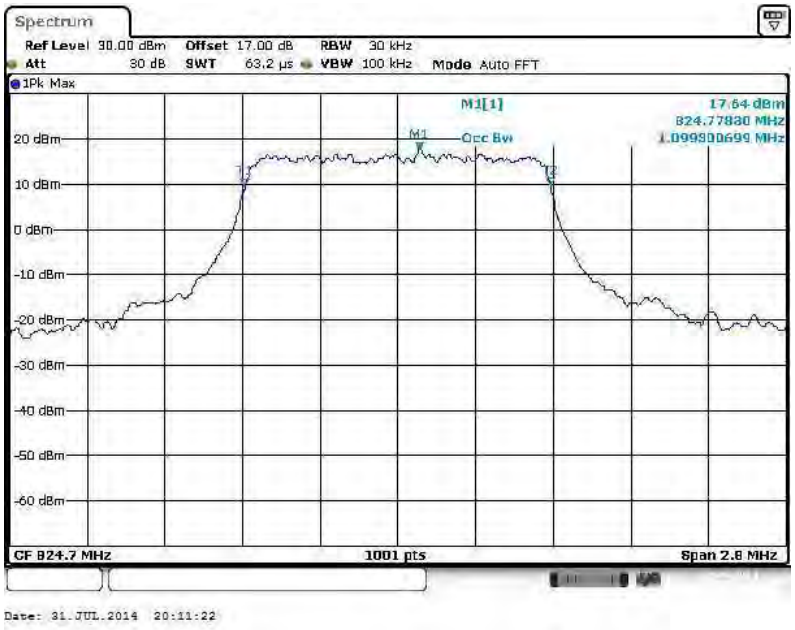


26dB Bandwidth Plot on Channel 20300

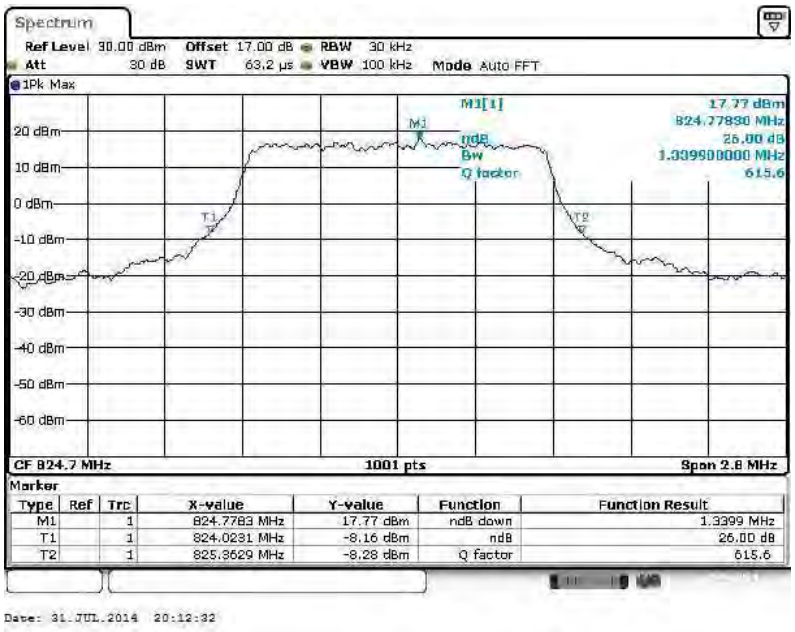


Band :	LTE Band 5	BW / Mod. :	1.4MHz / QPSK

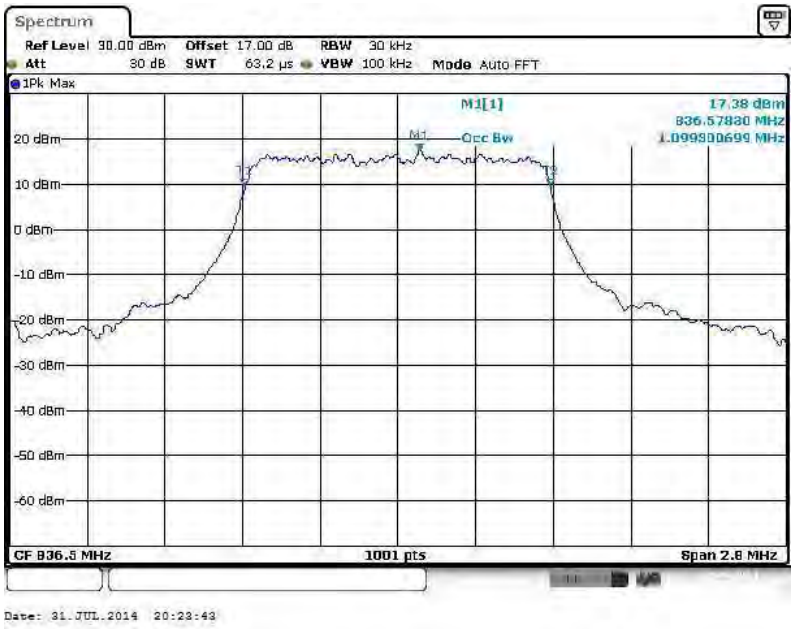
99% Occupied Bandwidth Plot on Channel 20407



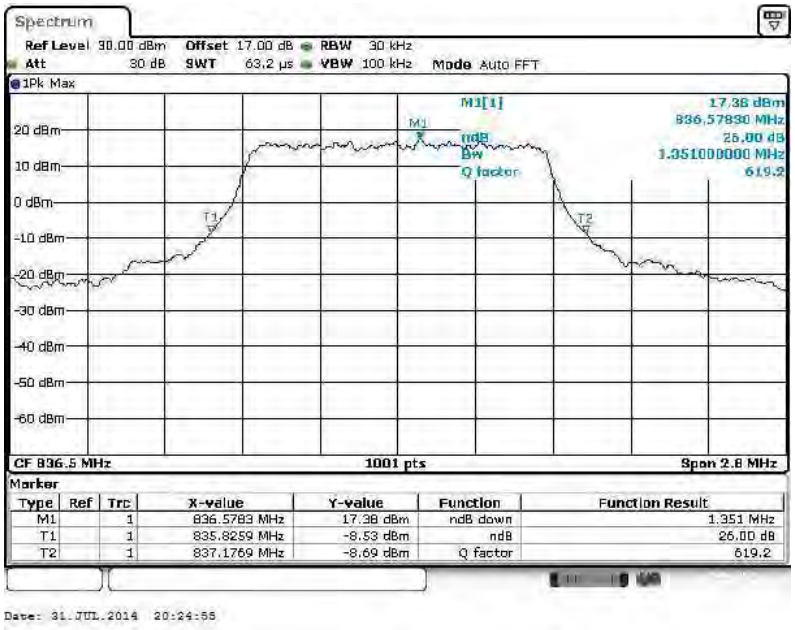
26dB Bandwidth Plot on Channel 20407



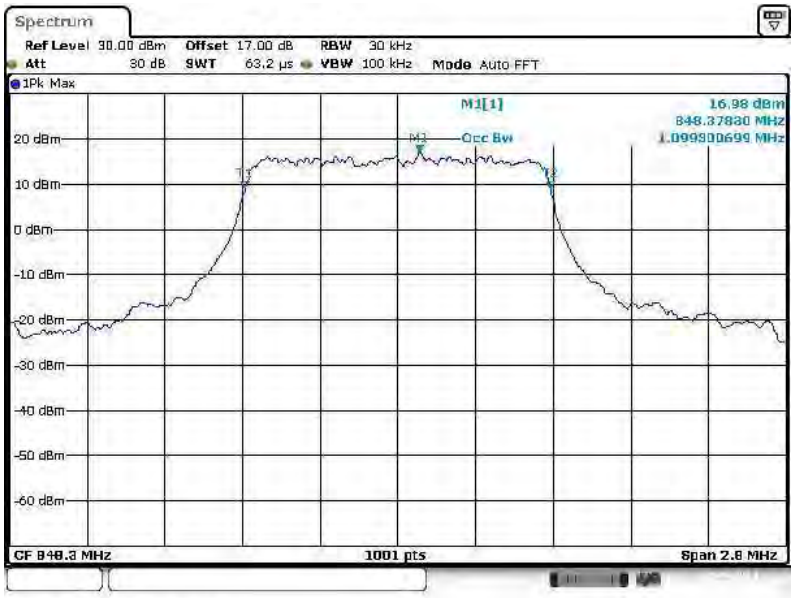
99% Occupied Bandwidth Plot on Channel 20525



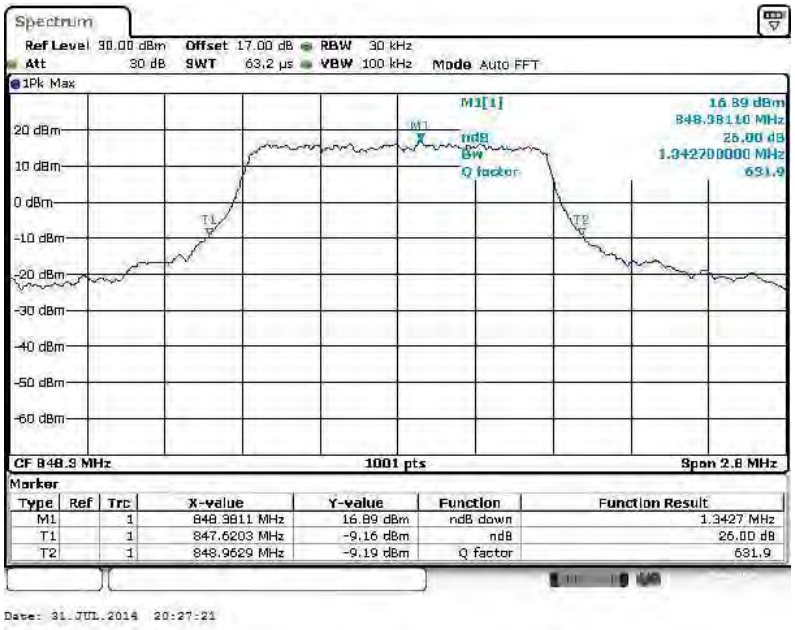
26dB Bandwidth Plot on Channel 20525



99% Occupied Bandwidth Plot on Channel 20643

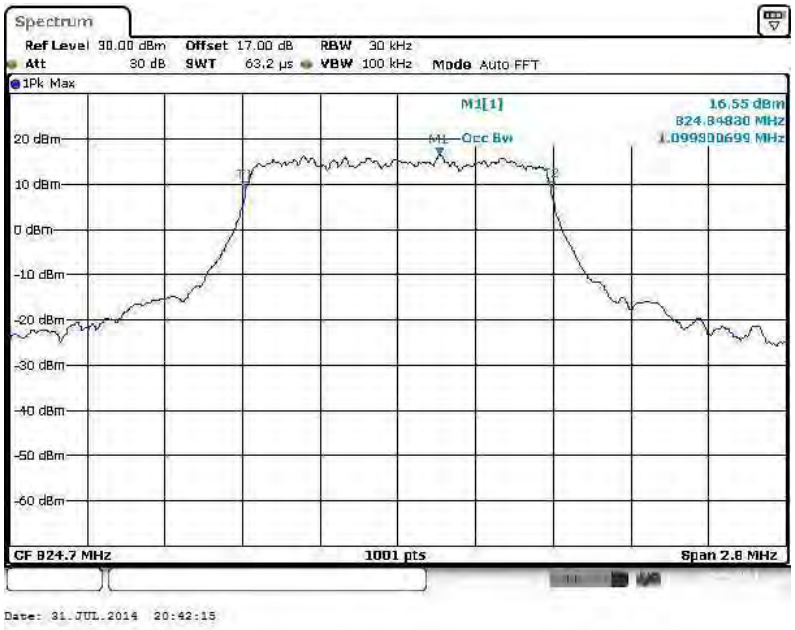


26dB Bandwidth Plot on Channel 20643

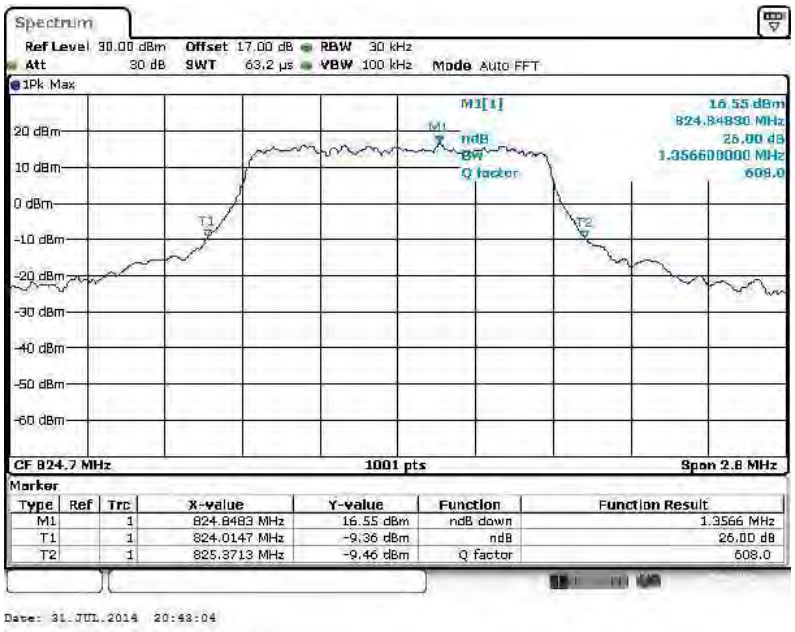


Band :	LTE Band 5	BW / Mod. :	1.4MHz / 16QAM

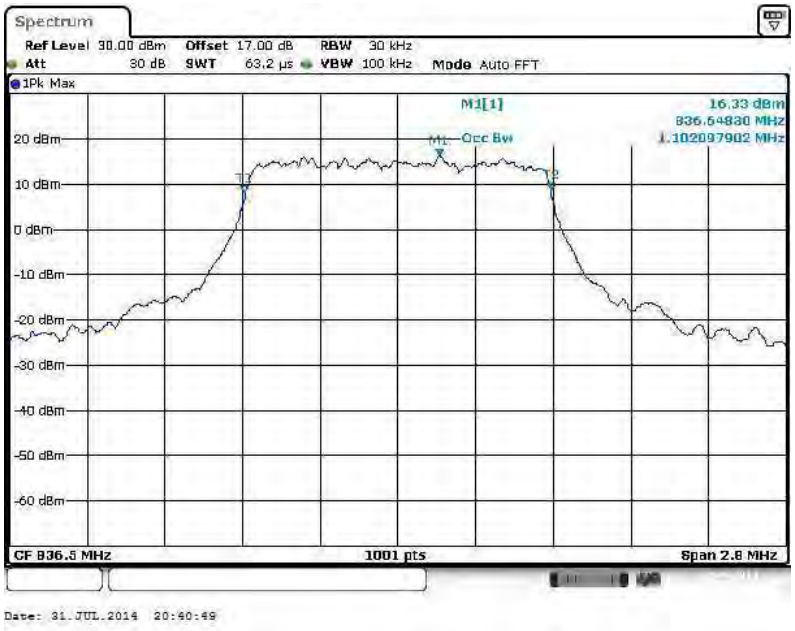
99% Occupied Bandwidth Plot on Channel 20407



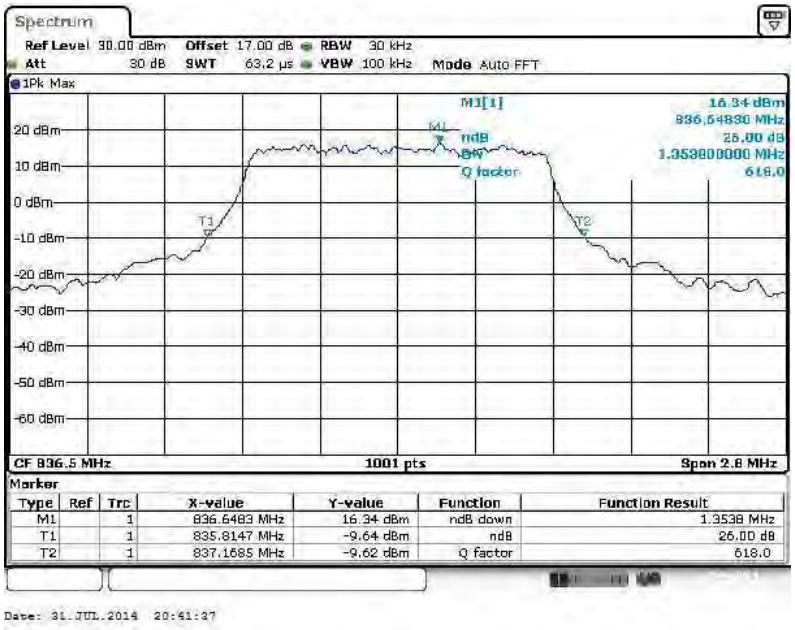
26dB Bandwidth Plot on Channel 20407



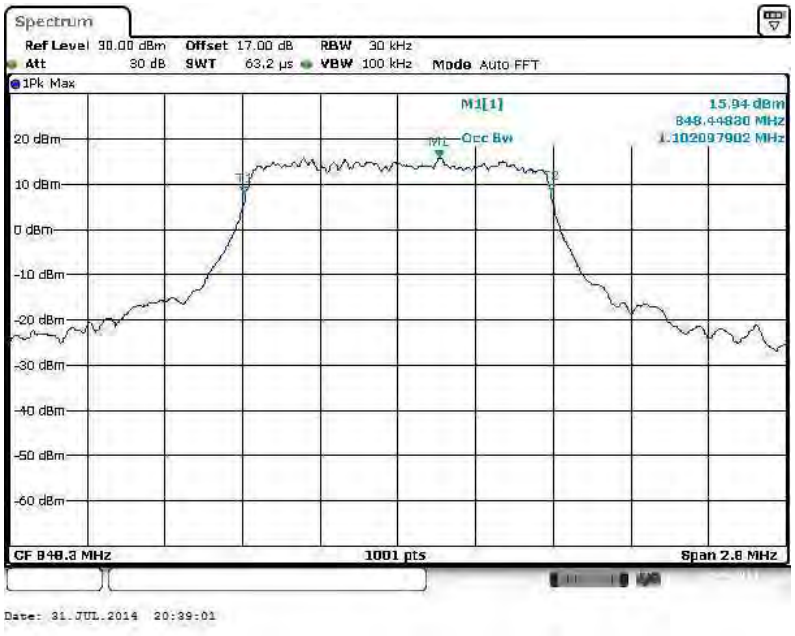
99% Occupied Bandwidth Plot on Channel 20525



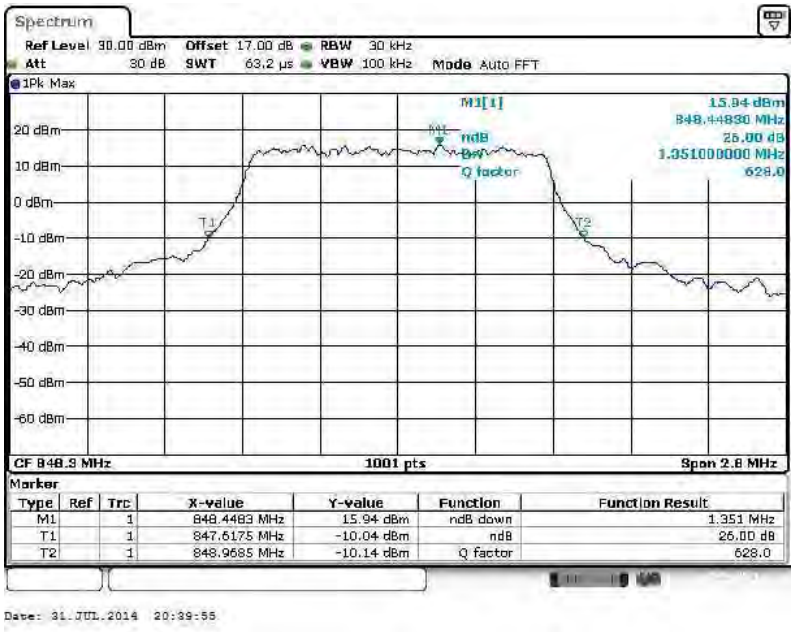
26dB Bandwidth Plot on Channel 20525



99% Occupied Bandwidth Plot on Channel 20643

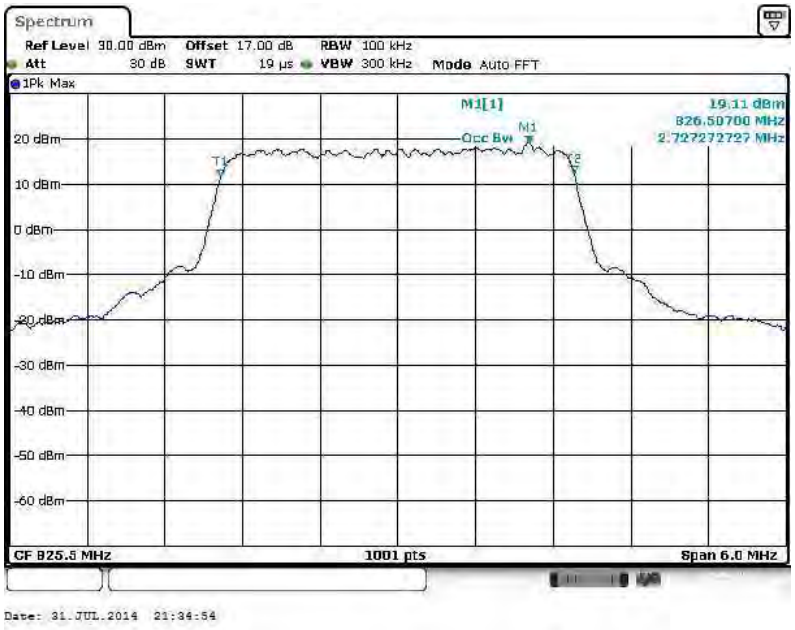


26dB Bandwidth Plot on Channel 20643

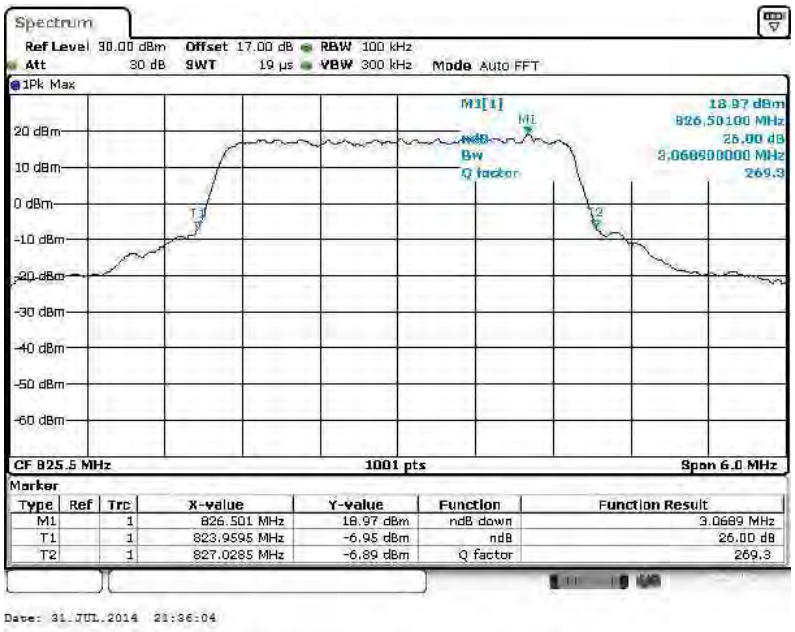


Band :	LTE Band 5	BW / Mod. :	3MHz / QPSK

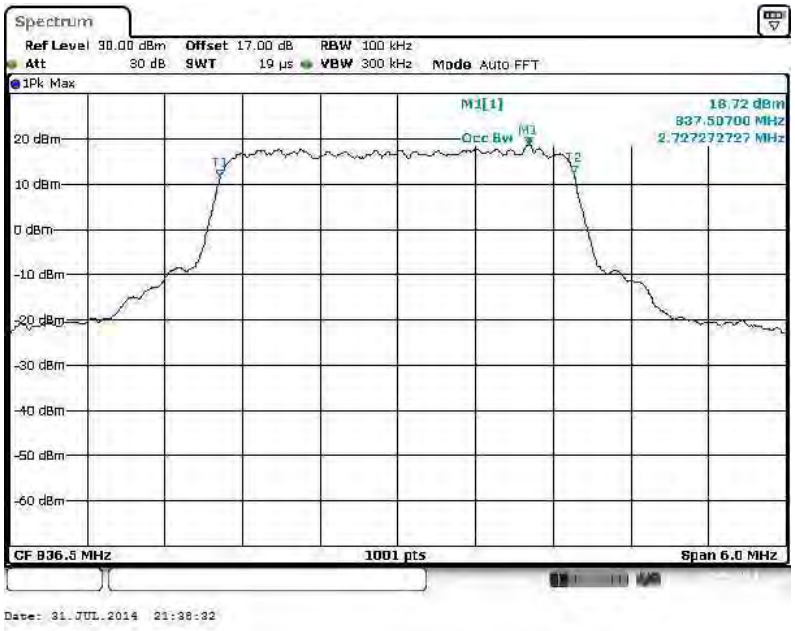
99% Occupied Bandwidth Plot on Channel 20415



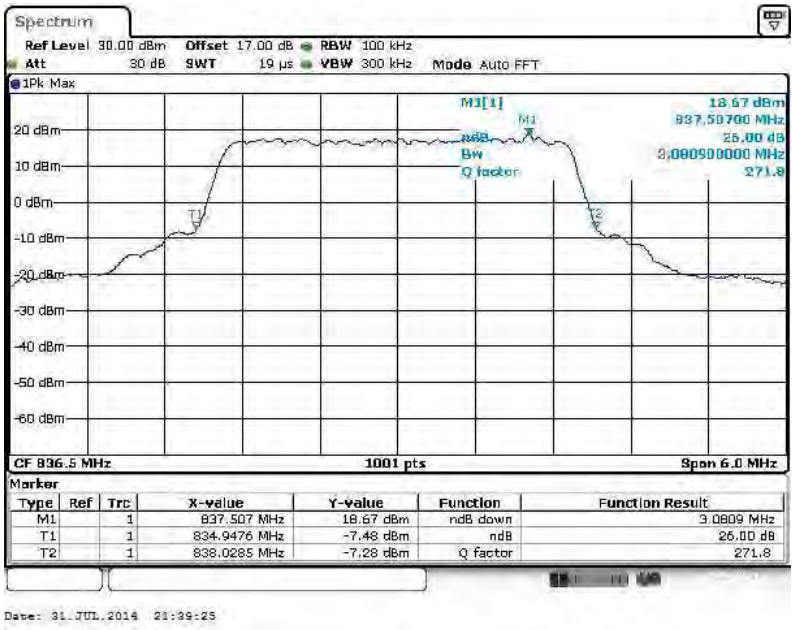
26dB Bandwidth Plot on Channel 20415



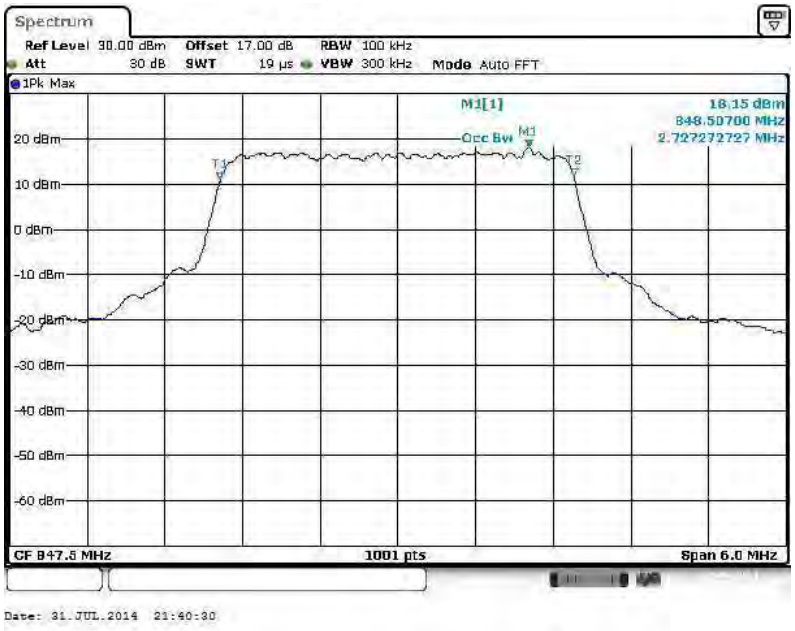
99% Occupied Bandwidth Plot on Channel 20525



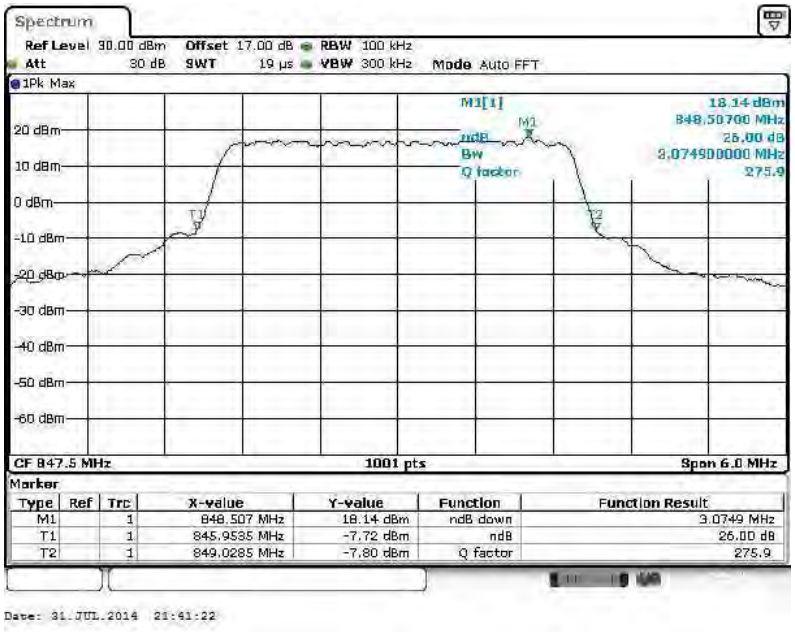
26dB Bandwidth Plot on Channel 20525



99% Occupied Bandwidth Plot on Channel 20635

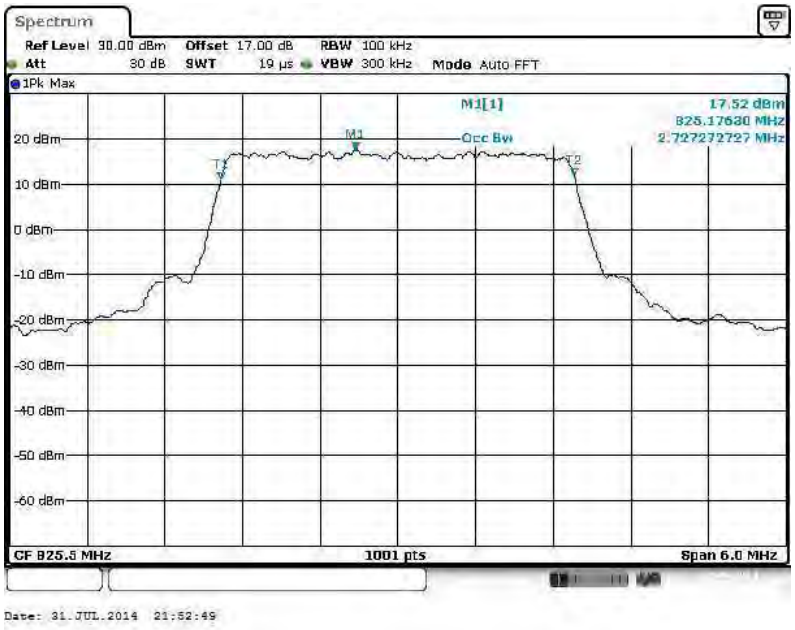


26dB Bandwidth Plot on Channel 20635

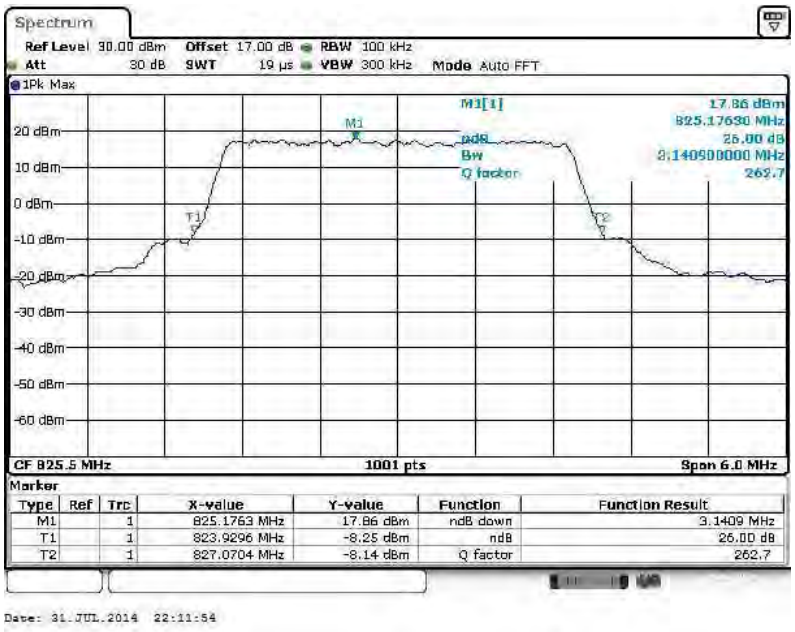


Band :	LTE Band 5	BW / Mod. :	3MHz / 16QAM

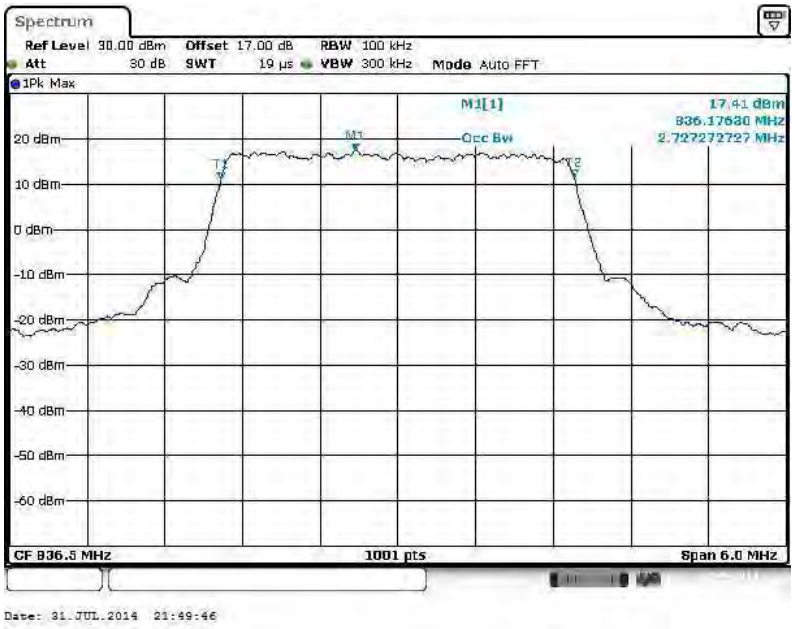
99% Occupied Bandwidth Plot on Channel 20415



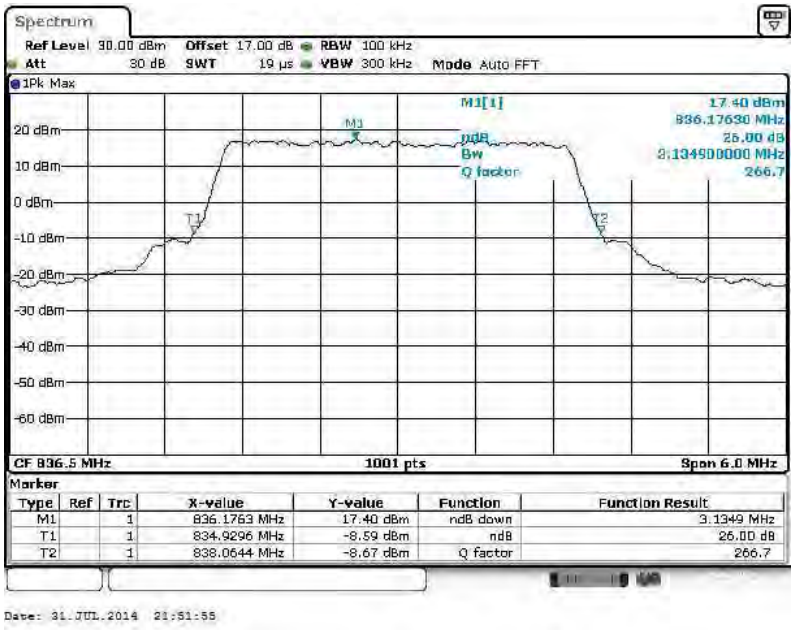
26dB Bandwidth Plot on Channel 20415



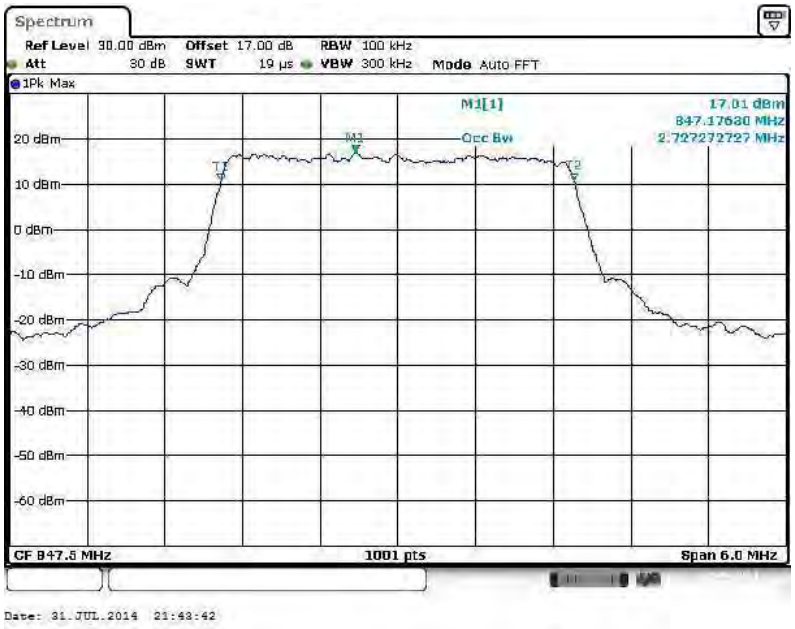
99% Occupied Bandwidth Plot on Channel 20525



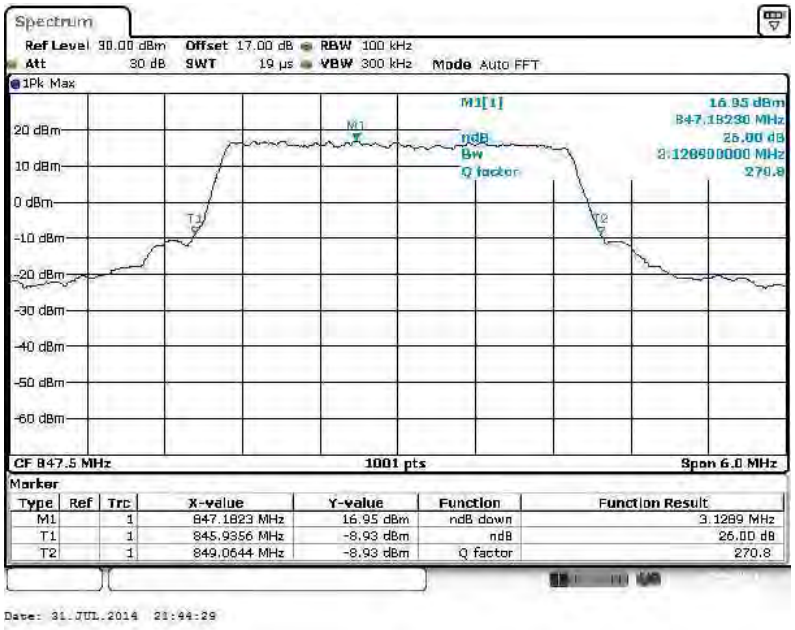
26dB Bandwidth Plot on Channel 20525



99% Occupied Bandwidth Plot on Channel 20635

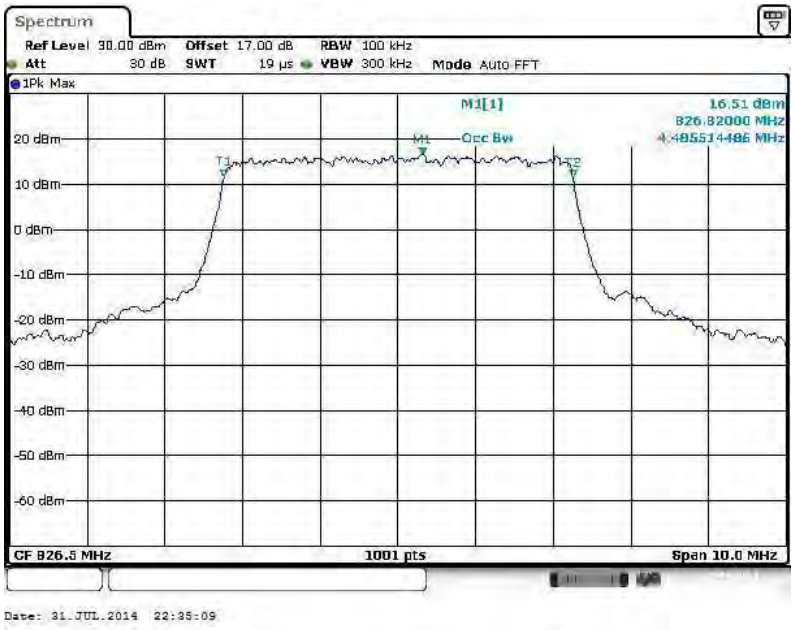


26dB Bandwidth Plot on Channel 20635

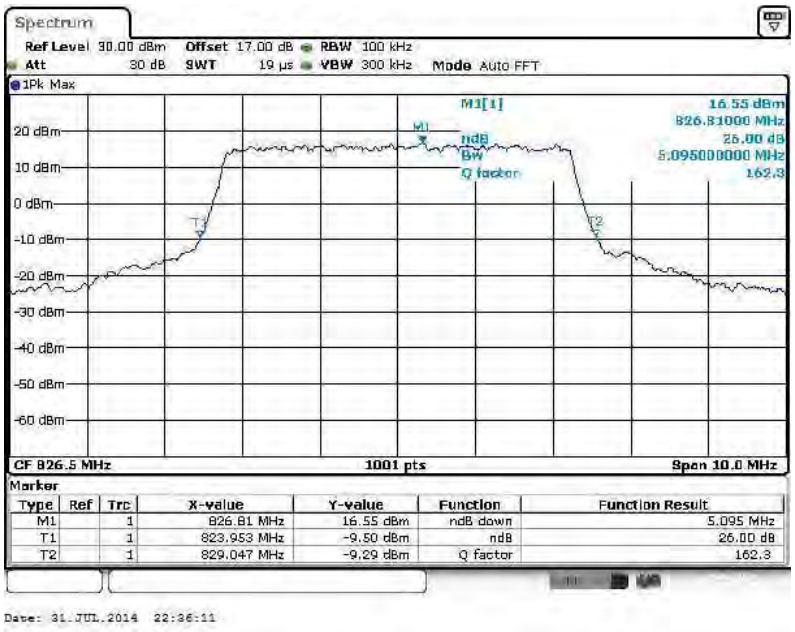


Band :	LTE Band 5	BW / Mod. :	5MHz / QPSK

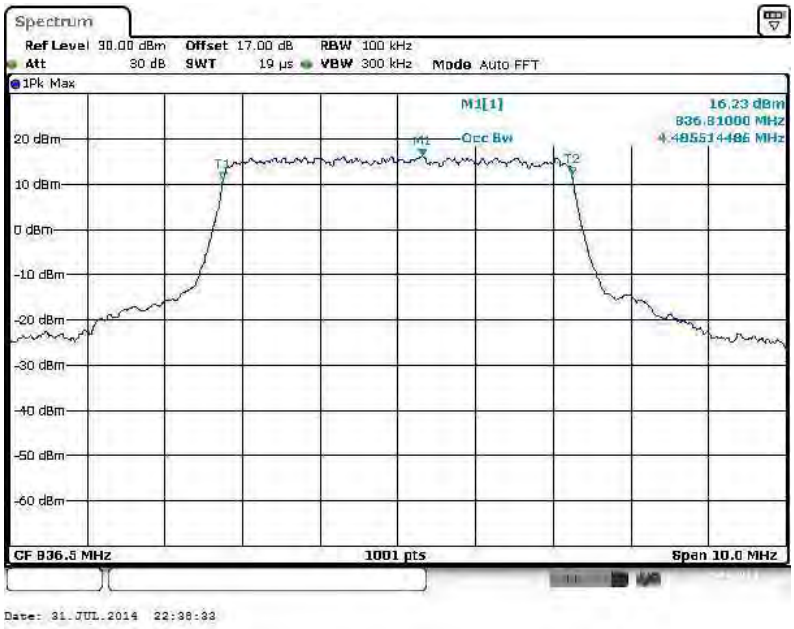
99% Occupied Bandwidth Plot on Channel 20425



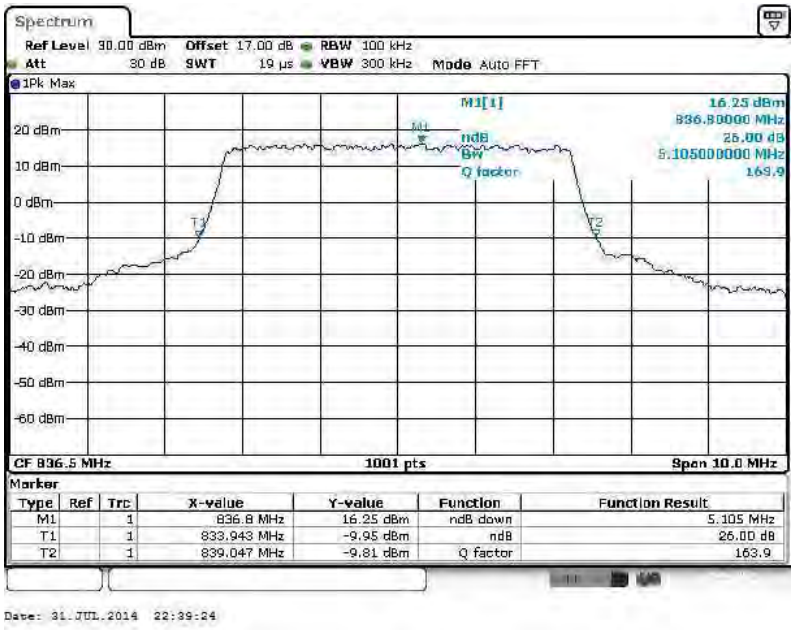
26dB Bandwidth Plot on Channel 20425



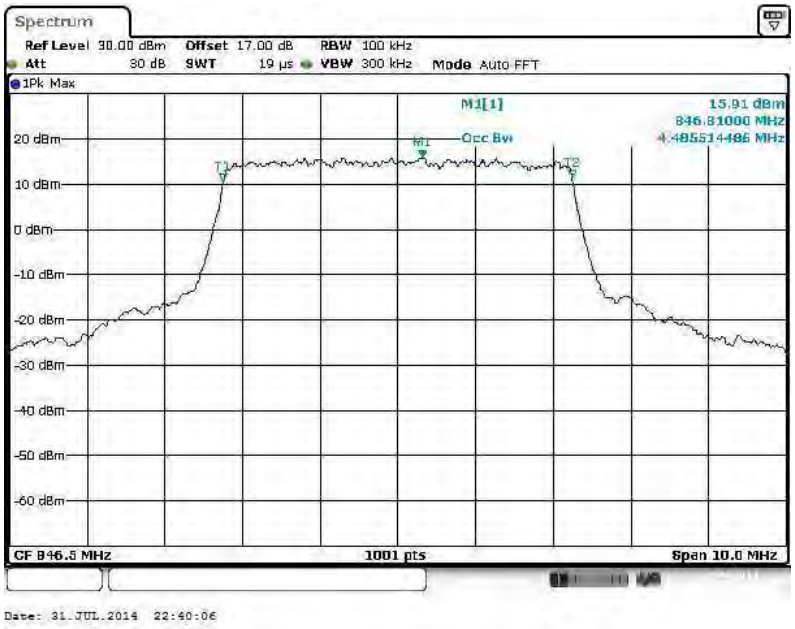
99% Occupied Bandwidth Plot on Channel 20525



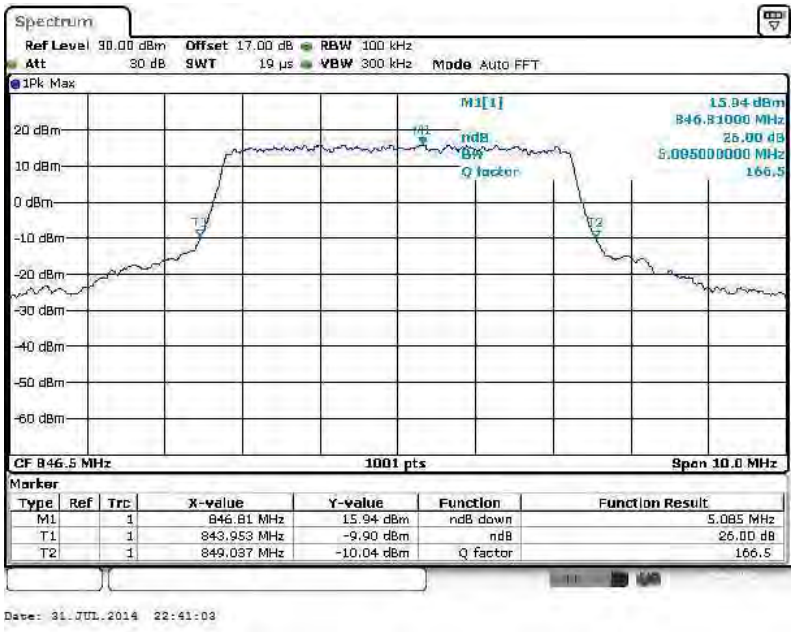
26dB Bandwidth Plot on Channel 20525



99% Occupied Bandwidth Plot on Channel 20625

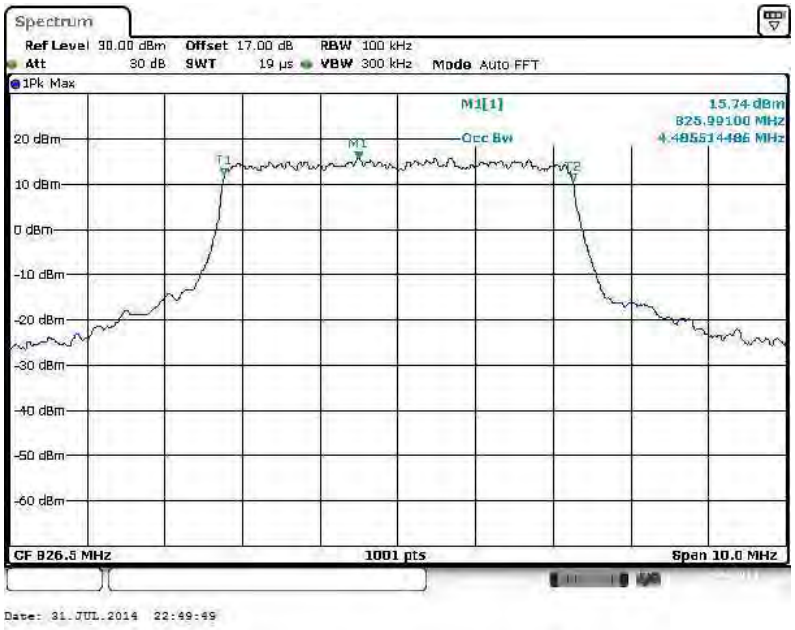


26dB Bandwidth Plot on Channel 20625

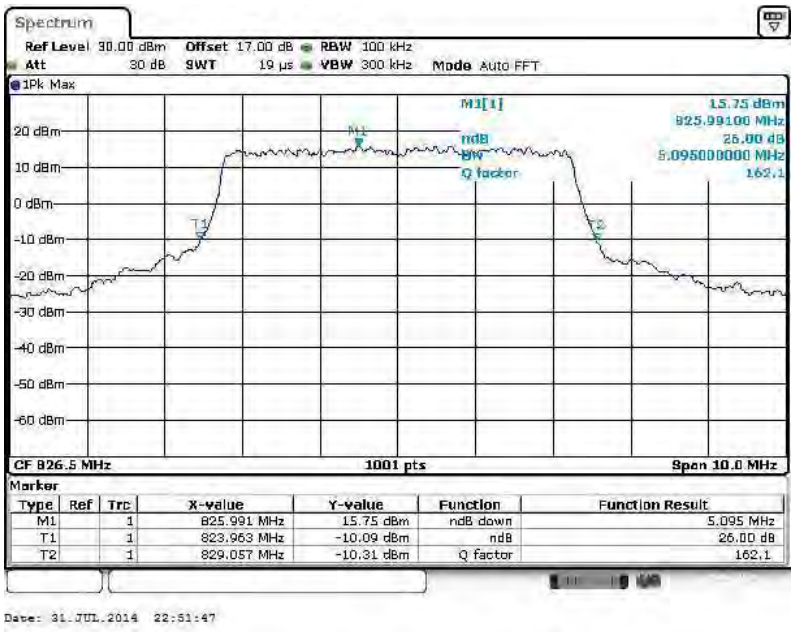


Band :	LTE Band 5	BW / Mod. :	5MHz / 16QAM

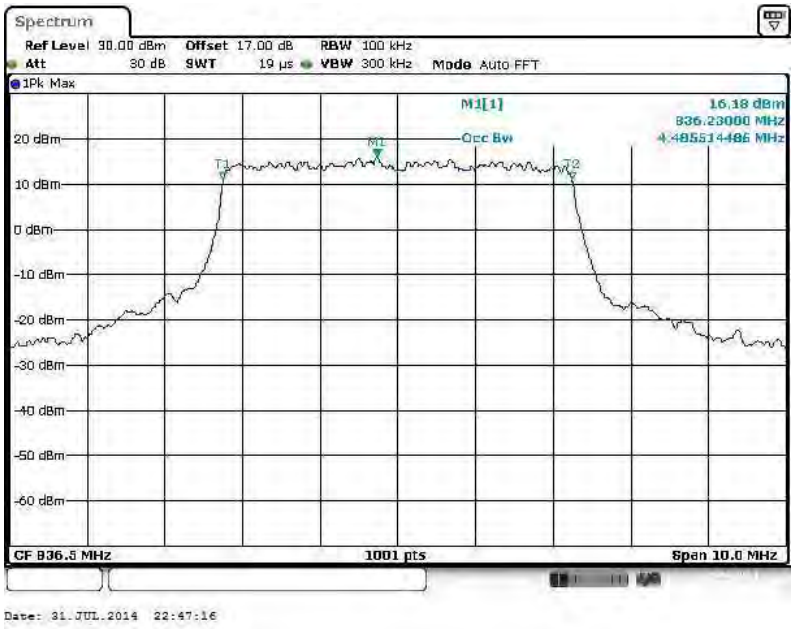
99% Occupied Bandwidth Plot on Channel 20425



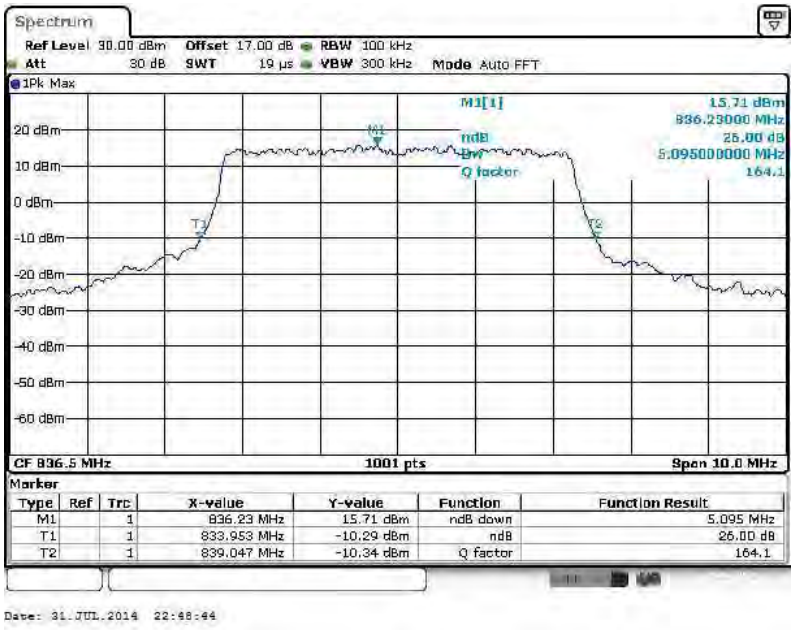
26dB Bandwidth Plot on Channel 20425



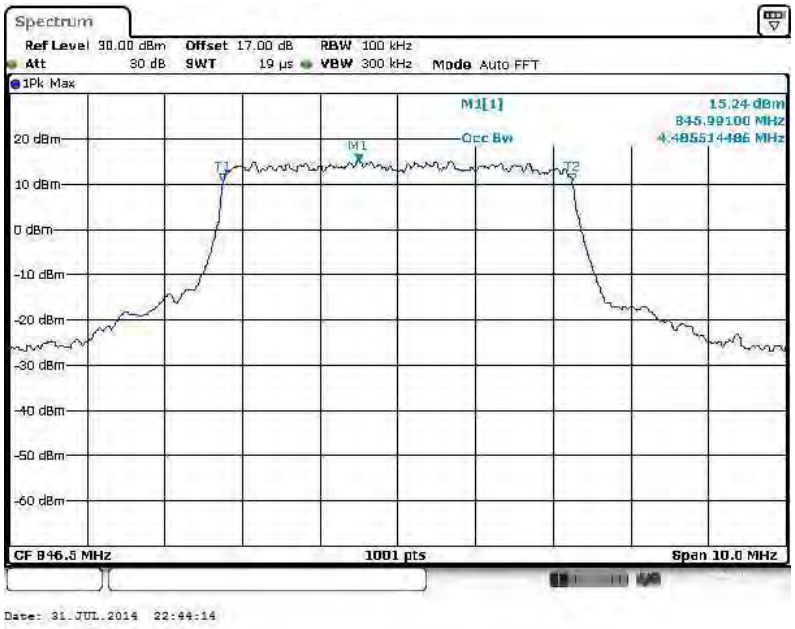
99% Occupied Bandwidth Plot on Channel 20525



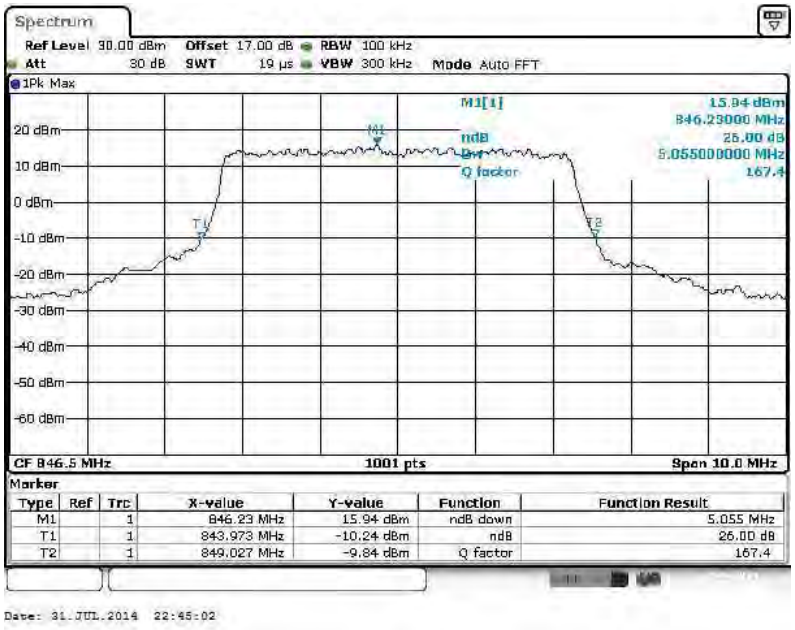
26dB Bandwidth Plot on Channel 20525



99% Occupied Bandwidth Plot on Channel 20625

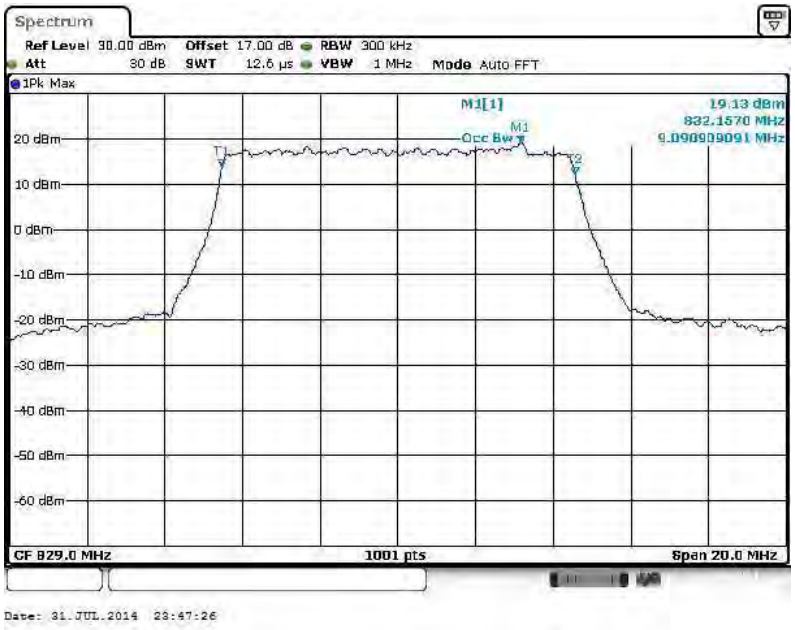


26dB Bandwidth Plot on Channel 20625

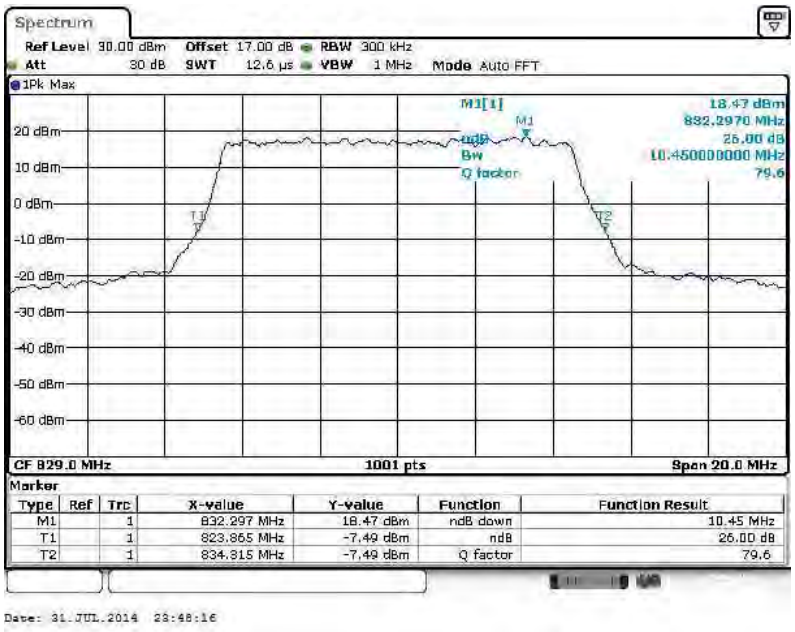


Band :	LTE Band 5	BW / Mod. :	10MHz / QPSK

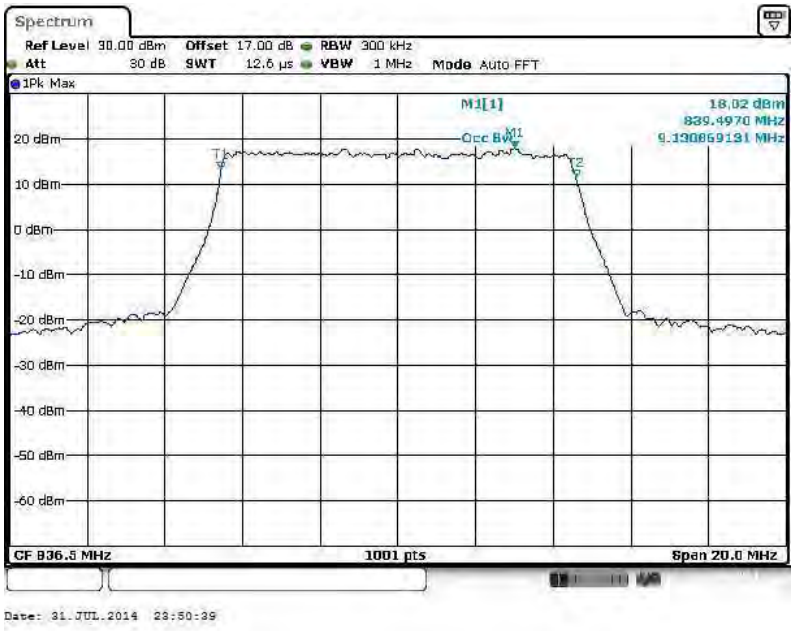
99% Occupied Bandwidth Plot on Channel 20450



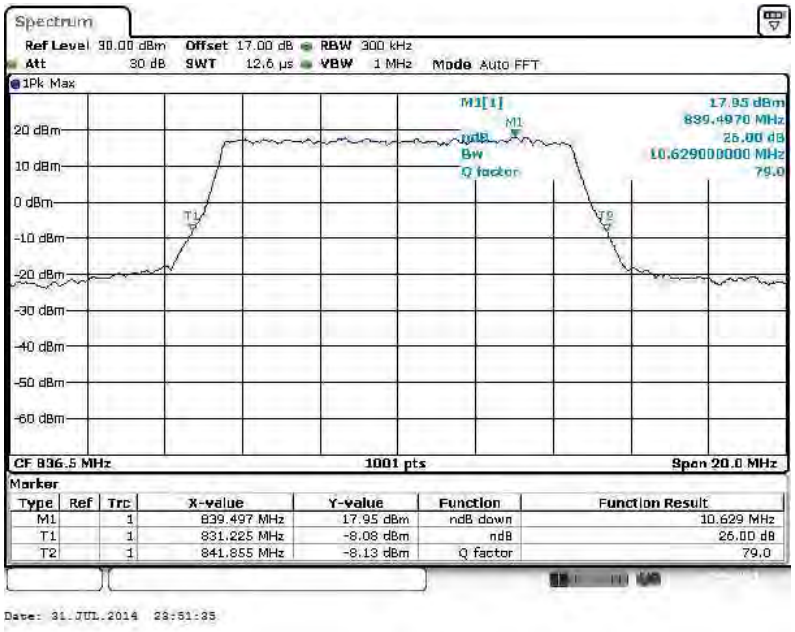
26dB Bandwidth Plot on Channel 20450



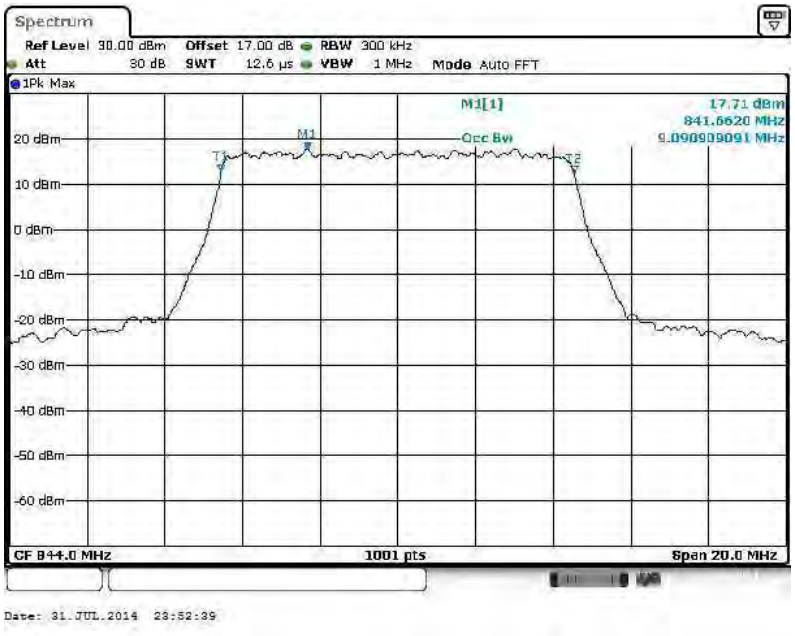
99% Occupied Bandwidth Plot on Channel 20525



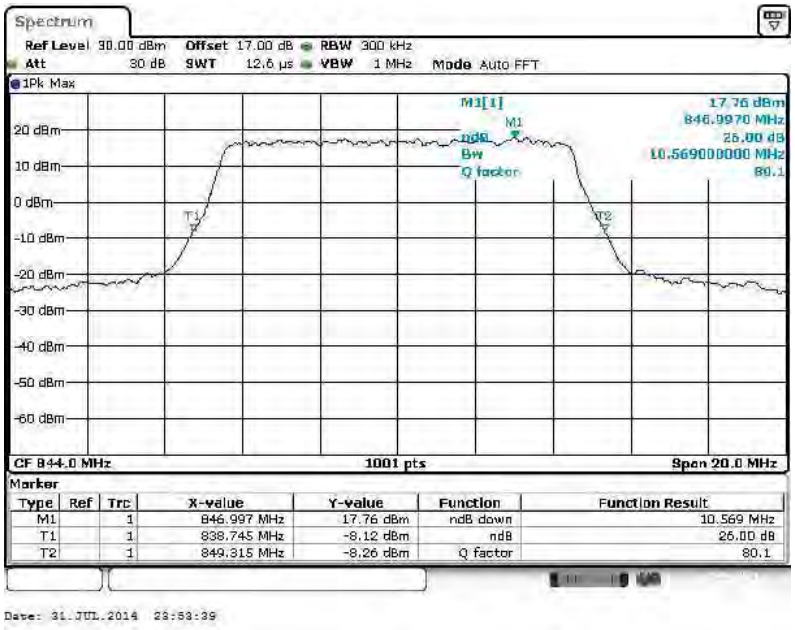
26dB Bandwidth Plot on Channel 20525



99% Occupied Bandwidth Plot on Channel 20600

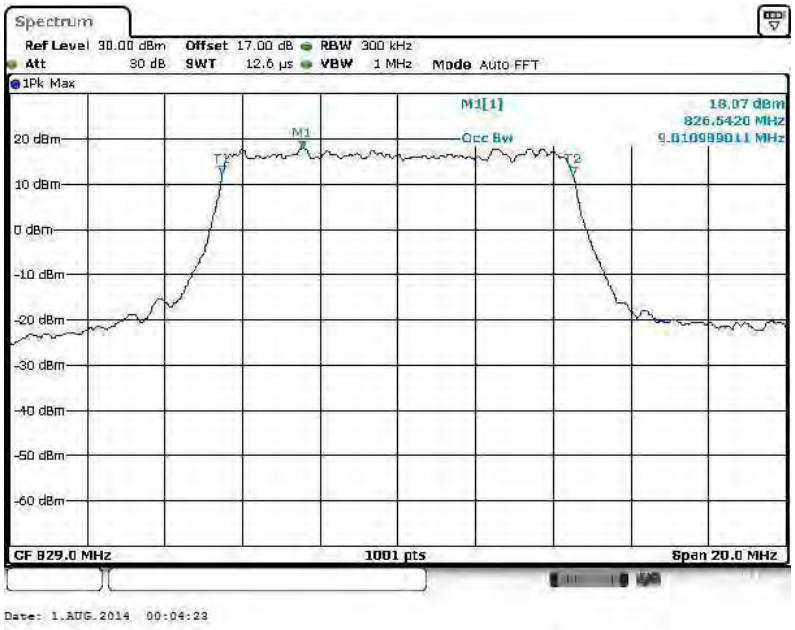


26dB Bandwidth Plot on Channel 20600

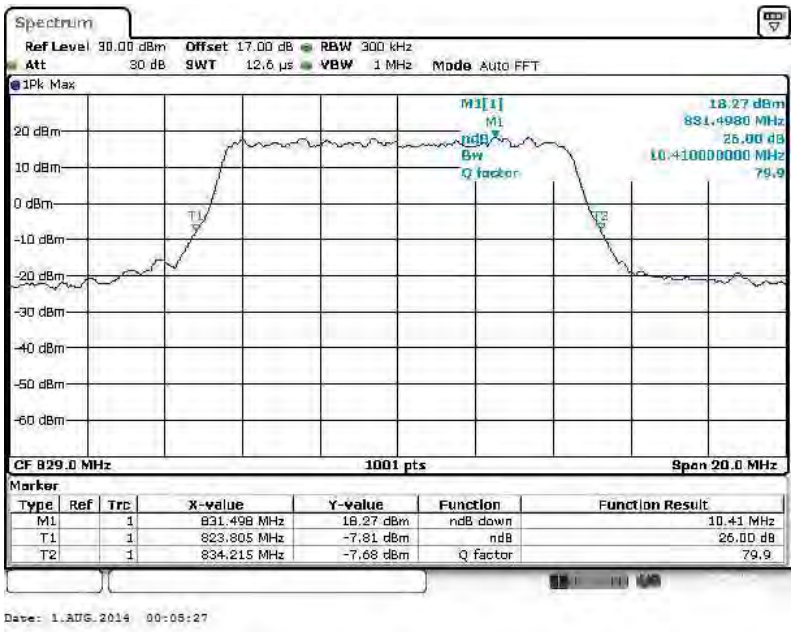


Band :	LTE Band 5	BW / Mod. :	10MHz / 16QAM

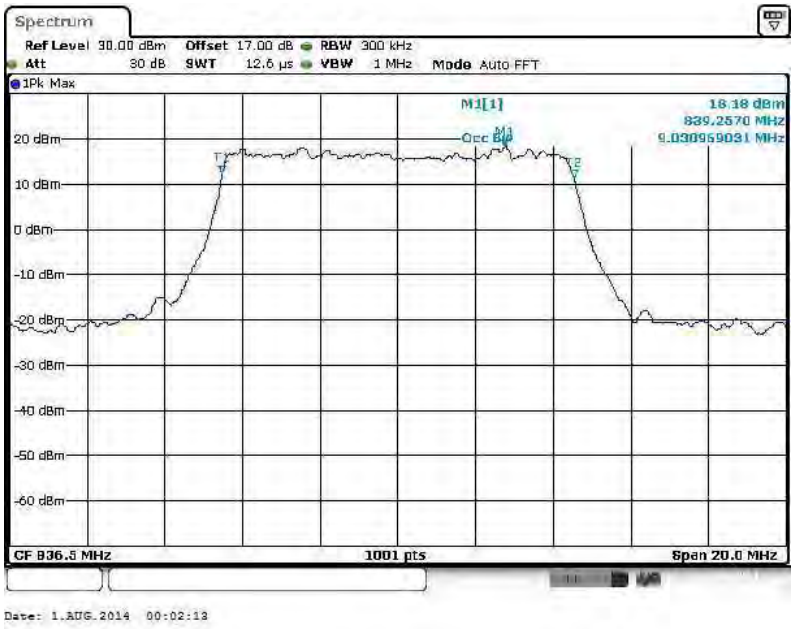
99% Occupied Bandwidth Plot on Channel 20450



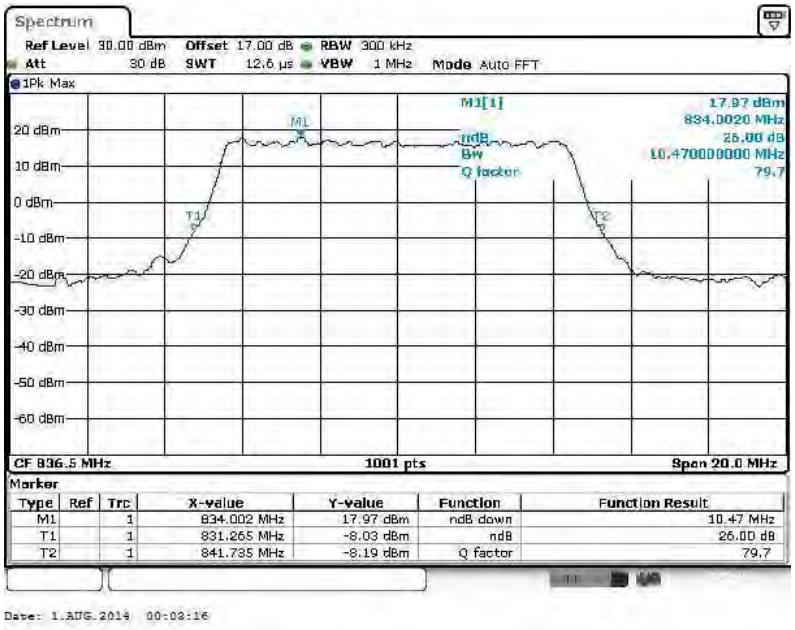
26dB Bandwidth Plot on Channel 20450



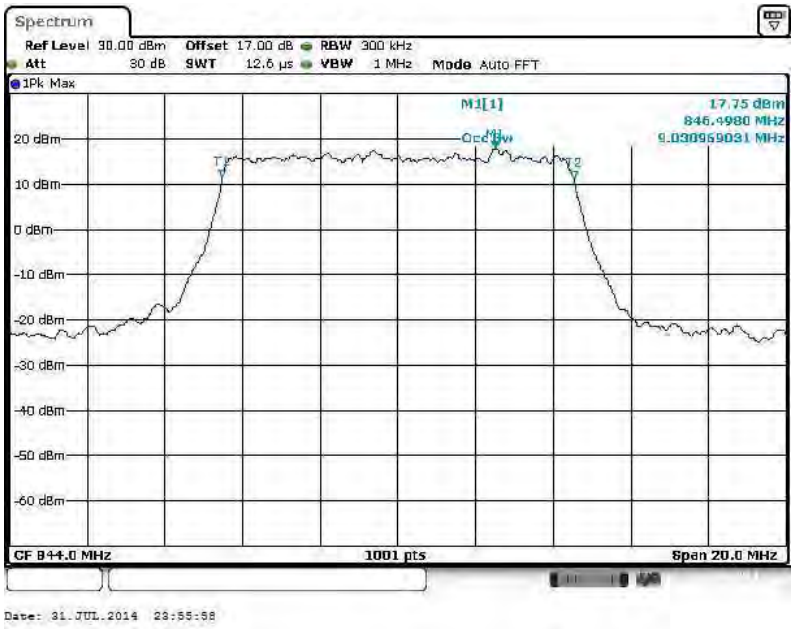
99% Occupied Bandwidth Plot on Channel 20525



26dB Bandwidth Plot on Channel 20525



99% Occupied Bandwidth Plot on Channel 20600



26dB Bandwidth Plot on Channel 20600