FCC RF Test Report

APPLICANT	:	TCL Communication Ltd
EQUIPMENT	:	GSM Quad-band / UMTS Quad-band / LTE 6 band mobile phone
BRAND NAME	:	ALCATEL ONETOUCH
MODEL NAME	:	6045B
MARKETING NAME	:	ALCATEL ONETOUCH IDOL 3 (5.5)
FCC ID	:	2ACCJN001
STANDARD	:	47 CFR Part 2, 24(E), 27(L), 27(M)
CLASSIFICATION	:	PCS Licensed Transmitter Held to Ear (PCE)

The product was received on Jan. 13, 2015 and testing was completed on Feb. 14, 2015. We, SPORTON INTERNATIONAL (KUNSHAN) INC., would like to declare that the tested sample has been evaluated in accordance with the test procedures given in ANSI / TIA / EIA-603-C-2004 and the testing has shown the tested sample to be in compliance with the applicable technical standards.

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

Reviewed by: Joseph Lin / Supervisor

Approved by: Jones Tsai / Manager

Testing Laboratory
2627

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APPENDIX A. SETUP PHOTOGRAPHS

REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG511301B	Rev. 01	Initial issue of report	Apr. 06, 2015
FG511301B	Rev. 02	Revised the equipment to "GSM Quad-band / UMTS Quad-band / LTE 6 band mobile phone".	Apr. 14, 2015
FG511301B	Rev. 03	Update report for revising Brand Name to ALCATEL ONETOUCH	Apr. 20, 2015

SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.1	§2.1046	Conducted Output Power	Reporting Only	PASS	-
3.2	§24.232(d)	Peak-to-Average Ratio	<13 dB	PASS	-
3.3	§24.232(c) §27.50(h)(2)	Equivalent Isotropic Radiated Power (Band 2) (Band 7)	EIRP < 2Watt	PASS	-
	§27.50(d)(4)	Equivalent Isotropic Radiated Power (Band 4)	EIRP < 1Watt		
3.4	§2.1049 §24.238(b) §27.53(h)(3) §27.53(m)(6)	99% Occupied Bandwidth and 26dB Bandwidth	Reporting Only	PASS	-
3.5	§2.1051 §24.238(a) §27.53(h)	Conducted Band Edge Measurement (Band 2) (Band 4)	< 43+10log10(P[Watt])	PASS	-
	§2.1051 §27.53(m)(4)	Conducted Band Edge Measurement (Band 7)	< 5MHz: -10 dBm 5 MHz~6MHz or 26dB(BW): -13 dBm ≥6MHz or 26dB(BW): -25 dBm		

Report Section	FCC Rule	Description	Limit	Result	Remark
3.6	§2.1051 §24.238(a) §27.53(h)	Conducted Spurious Emission (Band 2) (Band 4)	< 43+10log$_{10}$(P[Watts])	PASS	-
	§2.1051 §27.53(m)(4)	Conducted Spurious Emission (Band 7)	< 55+10log10(P[Watts])	PASS	-
3.7	§2.1053 §24.238(a) §27.53(h)	Radiated Spurious Emission (Band 2) (Band 4)	< 43+10log$_{10}$(P[Watts])	PASS	Under limit 16.95 dB at 7592.000 MHz
	§2.1053 §27.53(m)(4)	Radiated Spurious Emission (Band 7)	< 55+10log$_{10}$(P[Watts])	PASS	
3.8	§2.1055 §24.235 §27.54	Frequency Stability Temperature & Voltage	within authorized band	PASS	-

1 General Description

1.1 Applicant

TCL Communication Ltd
FLAT/RM 1910-12A BLOCK 3 19/F CHINA HONG KONG CITY 33 CANTON ROAD TSIMSHATSUI KL

1.2 Manufacturer

TCL Communication Ltd
FLAT/RM 1910-12A BLOCK 3 19/F CHINA HONG KONG CITY 33 CANTON ROAD TSIMSHATSUI KL

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	GSM Quad-band / UMTS Quad-band / LTE 6 band mobile phone
Brand Name	ALCATEL ONETOUCH
Model Name	6045B
Marketing Name	ALCATEL ONETOUCH IDOL 3 (5.5)
FCC ID	2ACCJN001
EUT supports Radios application	GSM/GPRS/EGPRS/WCDMA/HSPA/ HSPA+(Downlink Only)/DC-HSDPA/LTE/NFC/ WLAN2.4GHz 802.11b/g/n HT20/ WLAN5GHz 802.11a/n HT20/HT40/ Bluetooth v3.0+EDR/Bluetooth v4.1 LE
HW Version	PIO
SW Version	7S25
EUT Stage	Identical Prototype

Remark:

1. The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.
2. The device has two acoustic receives function, when a voice call is coming, user can choose any one receiver to response. And only when receiver on the bottom of the EUT is enabled, the power reduction will be activated to limit the maximum power of any cellular band.

1.4 Product Specification subjective to this standard

Product Specification subjective to this standard	
Tx Frequency	LTE Band 2 : 1850.7 MHz ~ 1909.3 MHz LTE Band 4 : 1710.7 MHz ~ 1754.3 MHz LTE Band 7 : 2502.5 MHz ~ 2567.5 MHz
Rx Frequency	LTE Band 2 : 1930.7 MHz ~ 1989.3 MHz LTE Band 4 : 2110.7 MHz ~ 2154.3 MHz LTE Band 7 : 2622.5MHz ~ 2687.5 MHz
Bandwidth	LTE Band 2 : 1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz / 20MHz LTE Band 4 : 1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz / 20MHz LTE Band 7 : 5MHz/ 10MHz / 15MHz / 20MHz
Maximum Output Power to Antenna	LTE Band 2 : 23.51 dBm LTE Band 4 : 23.70 dBm LTE Band 7 : 21.82 dBm
Antenna Type	PIFA 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 EIRP Power, Frequency Tolerance, and Emission Designator

FCC Rule	System	Type of Modulation	BW	Emission Designator	Frequency Tolerance (ppm)	Maximum EIRP
Part 24	LTE Band 2	QPSK	1.4 MHz	1M09G7D	-	0.2547 W
Part 24	LTE Band 2	16QAM	1.4 MHz	1M10W7D	-	0.2104 W
Part 24	LTE Band 2	QPSK	3 MHz	2M73G7D	-	0.2624 W
Part 24	LTE Band 2	16QAM	3 MHz	2M74W7D	-	0.2075 W
Part 24	LTE Band 2	QPSK	5 MHz	4M51G7D	-	0.2506 W
Part 24	LTE Band 2	16QAM	5 MHz	4M50W7D	-	0.2259 W
Part 24	LTE Band 2	QPSK	10 MHz	9M05G7D	0.0085 ppm	0.2427 W
Part 24	LTE Band 2	16QAM	10 MHz	9M05W7D	-	0.2138 W
Part 24	LTE Band 2	QPSK	15 MHz	13M5G7D	-	0.2455 W
Part 24	LTE Band 2	16QAM	15 MHz	13M4W7D	-	0.2143 W
Part 24	LTE Band 2	QPSK	20 MHz	18M4G7D	-	0.2427 W
Part 24	LTE Band 2	16QAM	20 MHz	18M3W7D	-	0.2000 W

FCC Rule	System	Type of Modulation	BW	Emission Designator	Frequency Tolerance (ppm)	Maximum EIRP
Part 27	LTE Band 4	QPSK	1.4 MHz	1M11G7D	-	0.2858 W
Part 27	LTE Band 4	16QAM	1.4 MHz	1M10W7D	-	0.2642 W
Part 27	LTE Band 4	QPSK	3 MHz	2M73G7D	-	0.2831 W
Part 27	LTE Band 4	16QAM	3 MHz	2M73W7D	-	0.2594 W
Part 27	LTE Band 4	QPSK	5MHz	4M52G7D	-	0.2588 W
Part 27	LTE Band 4	16QAM	5MHz	4M51W7D	-	0.2655 W
Part 27	LTE Band 4	QPSK	10MHz	9M07G7D	0.0066 ppm	0.2844 W
Part 27	LTE Band 4	16QAM	10MHz	9M09W7D	-	0.2301 W
Part 27	LTE Band 4	QPSK	15MHz	13M5G7D	-	0.2812 W
Part 27	LTE Band 4	16QAM	15MHz	13M5W7D	-	0.2466 W
Part 27	LTE Band 4	QPSK	20MHz	18M5G7D	-	0.2723 W
Part 27	LTE Band 4	16QAM	20MHz	18M5W7D	-	0.2360 W
Part 27	LTE Band 7	QPSK	5MHz	4M51G7D	-	0.4385 W
Part 27	LTE Band 7	16QAM	5MHz	4M52W7D	-	0.3656 W
Part 27	LTE Band 7	QPSK	10MHz	9M07G7D	0.0069 ppm	0.4246 W
Part 27	LTE Band 7	16QAM	10MHz	9M03W7D	-	0.3311 W
Part 27	LTE Band 7	QPSK	15MHz	13M5G7D	-	0.4385 W
Part 27	LTE Band 7	16QAM	15MHz	13M5W7D	-	0.3614 W
Part 27	LTE Band 7	QPSK	20MHz	18M4G7D	-	0.4345 W
Part 27	LTE Band 7	16QAM	20MHz	18M4W7D	-	0.3639 W

1.7 Testing Location

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

Test Site	SPORTON INTERNATIONAL (SHENZHEN) INC.
Test Site Location	1F & 2F,Building A, Morning Business Center, No. 4003 ShiGu Rd., Xili Town, Nanshan District, Shenzhen, Guangdong, P. R. China TEL: +86-755-8637-9589 FAX: +86-755-8637-9595
Test Site No.	**Sporton Site No.**
	OTA02-SZ

1.8 Applicable Standards

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

- 47 CFR Part 2, 24(E), 27(L), 27(M)
- ANSI / TIA / EIA-603-C-2004
- FCC KDB 971168 D01 Power Meas. License Digital Systems v02r02

Remark:

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

2 Test Configuration of Equipment Under Test

2.1 Test Mode

Antenna port conducted and radiated test items listed below are performed according to KDB 971168 D01 Power Meas. License Digital Systems v02r02 with maximum output power.

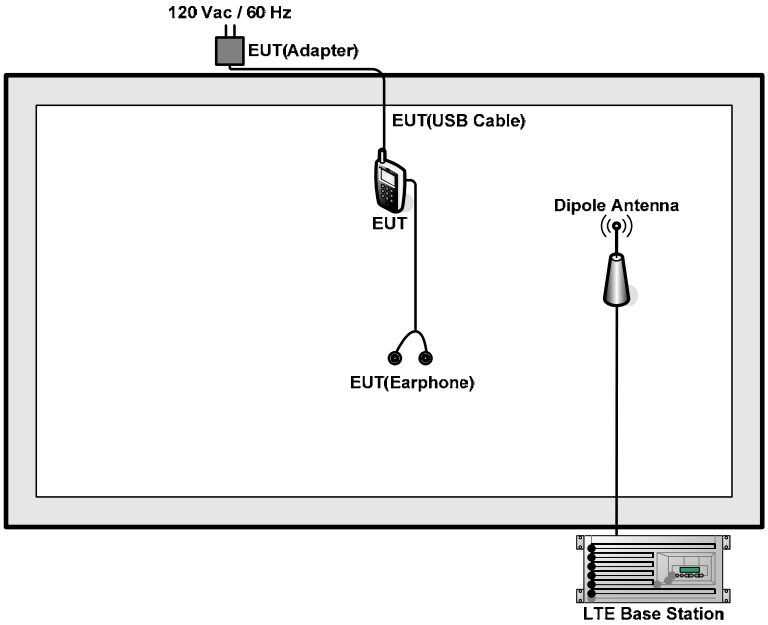
Radiated measurements are performed by rotating the EUT in three different orthogonal test planes to find the maximum emission.

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

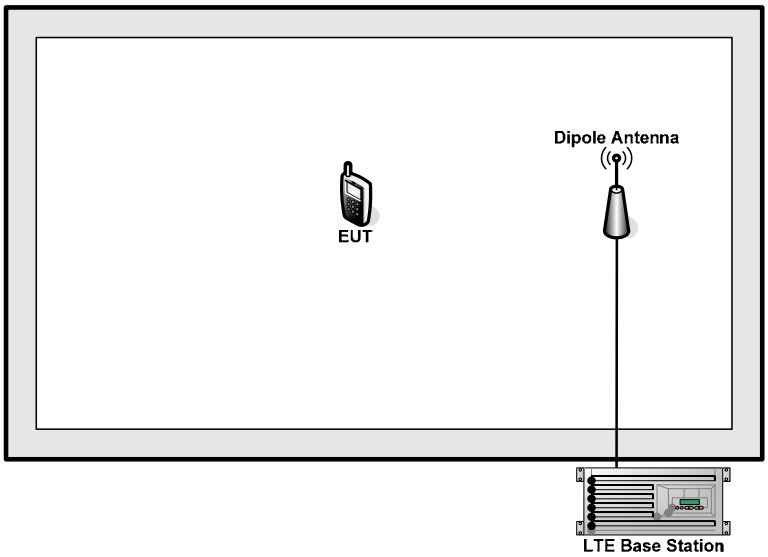
Test Items	Band	Bandwidth (MHz)						Modulation		RB #			Test Channel		
		1.4	3	5	10	15	20	QPSK	16QAM	1	Half	Full	L	M	H
Conducted Spurious Emission	2	v	v	v	v	v	v	v	v	v	v		v	v	v
	4	v	v	v	v	v	v	v	v	v	v		v	v	v
	7	-	-	v	v	v	v	v	v	v			v	v	v
Frequency Stability	2				v			v				v		v	
	4				v			v				v		v	
	7	-	-		v			v				v		v	
E.I.R.P.	2	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
	7	-	-	v	v	v	v	v	v	v			v	v	v
Radiated Spurious Emission	2	v	v	v	v	v	v	v		v				v	
	4	v	v	v	v	v	v	v		v				v	
	7	-	-	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. 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. 4. According the functionality of the EUT, the maximum power levels are chosen to test all test cases listed in this report as the worst case configuration is when top acoustic receiver works.														

2.2 Connection Diagram of Test System

For 24E



For 27L, 27M



2.3 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model No.	FCC ID	Data Cable	Power Cord
1.	LTE Base Station	Anritsu	MT8820C	N/A	N/A	Unshielded, 1.8 m
2.	DC Power Supply	GW INSTEK	GPD-2303S	N/A	N/A	Unshielded, 1.8 m

2.4 Measurement Results Explanation Example

For all conducted test items:

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

The spectrum analyzer offset is derived from RF cable loss.

Offset = RF cable loss.

Following shows an offset computation example with cable loss 5 dB.

Example :

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

= 5 (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.

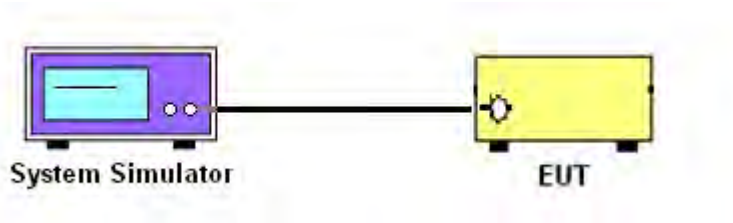
3.1.2 Measuring Instruments

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

<Full Power Mode>:

<LTE Band 2 Conducted Power>

BW [MHz]	Modulation	RB Size	RB Offset	Power (dBm) Low Ch. / Freq.	Power (dBm) Middle Ch. / Freq.	Power (dBm) High Ch. / Freq.
Channel				**18700**	**18900**	**19100**
Frequency (MHz)				**1860**	**1880**	**1900**
20	QPSK	1	0	23.41	23.35	**23.51**
20	QPSK	1	49	23.28	23.14	23.22
20	QPSK	1	99	23.18	23.19	23.20
20	QPSK	50	0	21.21	21.29	21.49
20	QPSK	50	24	21.11	21.27	21.26
20	QPSK	50	49	21.04	21.28	21.40
20	QPSK	100	0	21.07	21.30	21.13
20	16QAM	1	0	22.52	22.53	22.61
20	16QAM	1	49	22.26	22.61	22.63
20	16QAM	1	99	22.18	22.32	22.55
20	16QAM	50	0	20.12	20.18	20.35
20	16QAM	50	24	20.03	20.19	20.18
20	16QAM	50	49	20.12	20.28	20.12
20	16QAM	100	0	20.34	20.31	20.06
Channel				**18675**	**18900**	**19125**
Frequency (MHz)				**1857.5**	**1880**	**1902.5**
15	QPSK	1	0	23.17	23.25	23.30
15	QPSK	1	37	23.15	23.20	23.24
15	QPSK	1	74	23.02	23.22	22.80
15	QPSK	36	0	21.12	21.18	21.33
15	QPSK	36	18	21.03	21.18	21.41
15	QPSK	36	37	21.08	21.21	21.33
15	QPSK	75	0	21.04	21.18	21.30
15	16QAM	1	0	22.14	22.88	22.96
15	16QAM	1	37	21.88	22.71	22.90
15	16QAM	1	74	21.51	22.63	22.85
15	16QAM	36	0	20.11	20.15	20.11
15	16QAM	36	18	20.12	20.03	20.10
15	16QAM	36	37	20.01	20.07	20.13
15	16QAM	75	0	20.09	20.14	20.22

BW [MHz]	Modulation	RB Size	RB Offset	Power (dBm) Low Ch. / Freq.	Power (dBm) Middle Ch. / Freq.	Power (dBm) High Ch. / Freq.
Channel				**18650**	**18900**	**19150**
Frequency (MHz)				**1855**	**1880**	**1905**
10	QPSK	1	0	23.44	23.47	23.48
10	QPSK	1	24	23.41	23.40	23.41
10	QPSK	1	49	23.25	23.30	23.35
10	QPSK	25	0	21.18	21.21	21.31
10	QPSK	25	12	21.14	21.17	21.27
10	QPSK	25	24	21.11	21.25	21.42
10	QPSK	50	0	21.20	21.31	21.52
10	16QAM	1	0	22.93	22.79	22.56
10	16QAM	1	24	22.82	22.32	22.12
10	16QAM	1	49	22.89	22.36	22.24
10	16QAM	25	0	20.42	20.38	20.65
10	16QAM	25	12	20.26	20.35	20.62
10	16QAM	25	24	20.35	20.45	20.58
10	16QAM	50	0	20.25	20.26	20.55
Channel				**18625**	**18900**	**19175**
Frequency (MHz)				**1852.5**	**1880**	**1907.5**
5	QPSK	1	0	22.95	23.04	23.25
5	QPSK	1	12	23.14	23.08	23.46
5	QPSK	1	24	22.99	23.07	23.24
5	QPSK	12	0	21.21	21.19	21.18
5	QPSK	12	6	21.15	21.19	21.31
5	QPSK	12	11	21.16	21.15	21.42
5	QPSK	25	0	21.18	21.23	21.40
5	16QAM	1	0	22.19	22.23	22.51
5	16QAM	1	12	22.87	22.39	22.79
5	16QAM	1	24	22.78	22.28	22.37
5	16QAM	12	0	20.13	20.33	20.12
5	16QAM	12	6	20.18	20.31	20.23
5	16QAM	12	11	20.20	20.40	20.17
5	16QAM	25	0	20.45	20.13	20.39

BW [MHz]	Modulation	RB Size	RB Offset	Power (dBm) Low Ch. / Freq.	Power (dBm) Middle Ch. / Freq.	Power (dBm) High Ch. / Freq.
Channel				**18615**	**18900**	**19185**
Frequency (MHz)				**1851.5**	**1880**	**1908.5**
3	QPSK	1	0	23.18	23.11	23.24
3	QPSK	1	7	23.14	23.02	23.45
3	QPSK	1	14	22.82	23.11	23.17
3	QPSK	8	0	21.10	21.26	21.45
3	QPSK	8	4	21.20	21.31	21.46
3	QPSK	8	7	21.10	21.28	21.37
3	QPSK	15	0	21.12	21.21	21.33
3	16QAM	1	0	21.81	22.41	22.40
3	16QAM	1	7	21.95	22.48	22.20
3	16QAM	1	14	21.87	23.09	22.26
3	16QAM	8	0	20.11	20.01	20.49
3	16QAM	8	4	20.13	20.10	20.41
3	16QAM	8	7	20.08	20.08	20.43
3	16QAM	15	0	20.25	20.11	20.38
Channel				**18607**	**18900**	**19193**
Frequency (MHz)				**1850.7**	**1880**	**1909.3**
1.4	QPSK	1	0	22.76	23.31	23.26
1.4	QPSK	1	2	22.84	23.30	23.23
1.4	QPSK	1	5	22.74	23.17	23.36
1.4	QPSK	3	0	23.11	23.14	23.39
1.4	QPSK	3	1	23.25	23.37	23.36
1.4	QPSK	3	2	23.18	23.28	23.31
1.4	QPSK	6	0	21.44	21.21	21.44
1.4	16QAM	1	0	22.88	22.38	22.80
1.4	16QAM	1	2	22.94	22.42	22.81
1.4	16QAM	1	5	22.94	22.36	22.75
1.4	16QAM	3	0	22.60	22.16	22.48
1.4	16QAM	3	1	22.97	22.28	22.46
1.4	16QAM	3	2	22.88	22.87	22.39
1.4	16QAM	6	0	20.23	20.21	20.12

<LTE Band 4 Conducted Power>

BW [MHz]	Modulation	RB Size	RB Offset	Power (dBm) Low Ch. / Freq.	Power (dBm) Middle Ch. / Freq.	Power (dBm) High Ch. / Freq.
Channel				**20050**	**20175**	**20300**
Frequency (MHz)				**1720**	**1732.5**	**1745**
20	QPSK	1	0	23.65	**23.70**	23.50
20	QPSK	1	49	23.53	23.65	23.33
20	QPSK	1	99	23.16	23.17	23.28
20	QPSK	50	0	22.51	22.62	22.41
20	QPSK	50	24	22.28	22.48	22.39
20	QPSK	50	49	22.20	22.46	22.44
20	QPSK	100	0	22.27	22.51	22.41
20	16QAM	1	0	22.68	22.95	22.74
20	16QAM	1	49	22.32	22.90	22.72
20	16QAM	1	99	21.98	22.75	22.89
20	16QAM	50	0	21.45	21.62	21.38
20	16QAM	50	24	21.16	21.52	21.40
20	16QAM	50	49	21.19	21.46	21.46
20	16QAM	100	0	21.28	21.60	21.33
Channel				**20025**	**20175**	**20325**
Frequency (MHz)				**1717.5**	**1732.5**	**1747.5**
15	QPSK	1	0	23.52	23.41	23.63
15	QPSK	1	37	23.33	23.35	23.32
15	QPSK	1	74	23.09	23.40	23.35
15	QPSK	36	0	22.67	22.36	22.64
15	QPSK	36	18	22.34	22.32	22.44
15	QPSK	36	37	22.25	22.42	22.42
15	QPSK	75	0	22.30	22.38	22.62
15	16QAM	1	0	22.50	22.56	22.77
15	16QAM	1	37	22.17	22.35	22.30
15	16QAM	1	74	22.19	22.54	22.30
15	16QAM	36	0	21.57	21.38	21.57
15	16QAM	36	18	21.26	21.36	21.45
15	16QAM	36	37	21.25	21.41	21.42
15	16QAM	75	0	21.42	21.35	21.54

BW [MHz]	Modulation	RB Size	RB Offset	Power (dBm) Low Ch. / Freq.	Power (dBm) Middle Ch. / Freq.	Power (dBm) High Ch. / Freq.
Channel				**20000**	**20175**	**20350**
Frequency (MHz)				**1715**	**1732.5**	**1750**
10	QPSK	1	0	23.25	23.33	23.65
10	QPSK	1	24	23.49	23.51	23.45
10	QPSK	1	49	22.87	23.41	23.26
10	QPSK	25	0	22.42	22.24	22.49
10	QPSK	25	12	22.34	22.35	22.45
10	QPSK	25	24	22.30	22.51	22.23
10	QPSK	50	0	22.26	22.34	22.46
10	16QAM	1	0	22.85	22.68	22.95
10	16QAM	1	24	22.74	22.46	22.94
10	16QAM	1	49	22.59	22.75	22.26
10	16QAM	25	0	21.35	21.23	21.60
10	16QAM	25	12	21.31	21.22	21.54
10	16QAM	25	24	21.23	21.39	21.45
10	16QAM	50	0	21.39	21.34	21.31
Channel				**19975**	**20175**	**20375**
Frequency (MHz)				**1712.5**	**1732.5**	**1752.5**
5	QPSK	1	0	23.38	23.06	23.18
5	QPSK	1	12	23.17	23.02	23.67
5	QPSK	1	24	23.04	23.17	23.11
5	QPSK	12	0	22.33	22.25	22.30
5	QPSK	12	6	22.39	22.31	22.32
5	QPSK	12	11	22.33	22.31	22.31
5	QPSK	25	0	22.27	22.26	22.29
5	16QAM	1	0	22.96	22.08	22.73
5	16QAM	1	12	22.83	22.57	22.86
5	16QAM	1	24	22.89	22.58	22.83
5	16QAM	12	0	21.25	21.24	21.23
5	16QAM	12	6	21.29	21.25	21.16
5	16QAM	12	11	21.27	21.37	21.18
5	16QAM	25	0	21.27	21.30	21.52

BW [MHz]	Modulation	RB Size	RB Offset	Power (dBm) Low Ch. / Freq.	Power (dBm) Middle Ch. / Freq.	Power (dBm) High Ch. / Freq.
Channel				**19965**	**20175**	**20385**
Frequency (MHz)				**1711.5**	**1732.5**	**1753.5**
3	QPSK	1	0	23.30	23.20	23.18
3	QPSK	1	7	23.60	23.35	23.28
3	QPSK	1	14	23.45	23.27	23.20
3	QPSK	8	0	22.34	22.34	22.35
3	QPSK	8	4	22.39	22.25	22.32
3	QPSK	8	7	22.40	22.37	22.36
3	QPSK	15	0	22.30	22.32	22.23
3	16QAM	1	0	22.46	22.87	22.90
3	16QAM	1	7	22.95	22.82	22.99
3	16QAM	1	14	22.88	22.67	22.92
3	16QAM	8	0	21.43	21.58	21.37
3	16QAM	8	4	21.59	21.50	21.46
3	16QAM	8	7	21.31	21.54	21.48
3	16QAM	15	0	21.24	21.18	21.38
Channel				**19957**	**20175**	**20393**
Frequency (MHz)				**1710.7**	**1732.5**	**1754.3**
1.4	QPSK	1	0	23.22	23.12	23.23
1.4	QPSK	1	2	23.26	23.24	23.37
1.4	QPSK	1	5	23.13	23.21	23.24
1.4	QPSK	3	0	23.25	23.37	23.27
1.4	QPSK	3	1	23.25	23.45	23.21
1.4	QPSK	3	2	23.29	23.26	23.34
1.4	QPSK	6	0	22.37	22.36	22.40
1.4	16QAM	1	0	21.92	22.78	22.57
1.4	16QAM	1	2	22.03	22.41	22.21
1.4	16QAM	1	5	21.87	22.58	22.32
1.4	16QAM	3	0	22.70	22.12	22.50
1.4	16QAM	3	1	22.71	22.45	22.55
1.4	16QAM	3	2	22.74	22.27	22.59
1.4	16QAM	6	0	21.32	20.89	21.41

<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	21.59	**21.82**	21.80
20	QPSK	1	49	21.48	21.67	21.60
20	QPSK	1	99	21.24	21.25	21.15
20	QPSK	50	0	20.45	20.60	20.57
20	QPSK	50	24	20.39	20.54	20.51
20	QPSK	50	49	20.35	20.48	20.43
20	QPSK	100	0	20.43	20.55	20.54
20	16QAM	1	0	20.80	20.98	20.70
20	16QAM	1	49	20.74	20.90	20.81
20	16QAM	1	99	20.96	20.82	20.64
20	16QAM	50	0	19.62	19.49	19.45
20	16QAM	50	24	19.45	19.44	19.40
20	16QAM	50	49	19.40	19.46	19.30
20	16QAM	100	0	19.48	19.60	19.51
Channel				**20825**	**21100**	**21375**
Frequency (MHz)				**2507.5**	**2535**	**2562.5**
15	QPSK	1	0	21.64	21.60	21.56
15	QPSK	1	37	21.69	21.44	21.38
15	QPSK	1	74	21.63	21.47	21.39
15	QPSK	36	0	20.39	20.51	20.48
15	QPSK	36	18	20.41	20.47	20.39
15	QPSK	36	37	20.43	20.47	20.36
15	QPSK	75	0	20.43	20.44	20.43
15	16QAM	1	0	20.95	20.47	20.91
15	16QAM	1	37	20.92	20.46	20.66
15	16QAM	1	74	20.90	20.44	20.69
15	16QAM	36	0	19.57	19.60	19.48
15	16QAM	36	18	19.47	19.47	19.38
15	16QAM	36	37	19.49	19.46	19.36
15	16QAM	75	0	19.48	19.45	19.52

BW [MHz]	Modulation	RB Size	RB Offset	Power (dBm) Low Ch. / Freq.	Power (dBm) Middle Ch. / Freq.	Power (dBm) High Ch. / Freq.
Channel				**20800**	**21100**	**21400**
Frequency (MHz)				**2505**	**2535**	**2565**
10	QPSK	1	0	21.48	21.62	21.62
10	QPSK	1	24	21.73	21.60	21.53
10	QPSK	1	49	21.39	21.53	21.17
10	QPSK	25	0	20.49	20.47	20.51
10	QPSK	25	12	20.38	20.43	20.40
10	QPSK	25	24	20.44	20.40	20.43
10	QPSK	50	0	20.45	20.42	20.39
10	16QAM	1	0	20.96	20.79	20.46
10	16QAM	1	24	20.92	20.90	20.91
10	16QAM	1	49	20.94	20.67	20.42
10	16QAM	25	0	19.53	19.54	19.67
10	16QAM	25	12	19.42	19.50	19.58
10	16QAM	25	24	19.48	19.42	19.51
10	16QAM	50	0	19.49	19.49	19.54
Channel				**20775**	**21100**	**21425**
Frequency (MHz)				**2502.5**	**2535**	**2567.5**
5	QPSK	1	0	21.35	21.29	21.37
5	QPSK	1	12	21.48	21.55	21.60
5	QPSK	1	24	21.31	21.26	21.23
5	QPSK	12	0	20.35	20.40	20.34
5	QPSK	12	6	20.35	20.50	20.43
5	QPSK	12	11	20.34	20.45	20.42
5	QPSK	25	0	20.41	20.48	20.37
5	16QAM	1	0	20.92	20.43	20.41
5	16QAM	1	12	20.98	20.62	20.68
5	16QAM	1	24	20.88	20.59	20.40
5	16QAM	12	0	19.69	19.59	19.28
5	16QAM	12	6	19.41	19.49	19.23
5	16QAM	12	11	19.42	19.43	19.22
5	16QAM	25	0	19.49	19.75	19.27

Note: Maximum average power for LTE.

<Reduced Power Mode>:

<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	15.52	15.44	15.66
20	QPSK	1	49	15.45	15.32	15.54
20	QPSK	1	99	15.51	15.29	15.29
20	QPSK	50	0	15.11	15.22	15.35
20	QPSK	50	24	15.08	15.10	15.08
20	QPSK	50	49	15.02	15.11	15.10
20	QPSK	100	0	15.12	15.23	15.35
20	16QAM	1	0	15.01	15.19	15.08
20	16QAM	1	49	15.27	15.02	15.06
20	16QAM	1	99	15.03	15.08	15.01
20	16QAM	50	0	15.11	15.20	15.32
20	16QAM	50	24	15.07	15.15	15.24
20	16QAM	50	49	15.02	15.10	15.25
20	16QAM	100	0	15.13	15.14	15.20
Channel				**18675**	**18900**	**19125**
Frequency (MHz)				**1857.5**	**1880**	**1902.5**
15	QPSK	1	0	15.17	15.21	15.18
15	QPSK	1	37	15.09	15.44	15.18
15	QPSK	1	74	15.03	15.27	15.20
15	QPSK	36	0	15.09	15.01	15.19
15	QPSK	36	18	15.05	15.10	15.16
15	QPSK	36	37	15.08	15.05	15.11
15	QPSK	75	0	15.00	15.16	15.18
15	16QAM	1	0	15.11	15.59	15.45
15	16QAM	1	37	15.06	15.62	15.43
15	16QAM	1	74	15.08	15.60	15.38
15	16QAM	36	0	15.03	15.00	15.12
15	16QAM	36	18	15.03	15.04	15.08
15	16QAM	36	37	15.05	15.03	15.14
15	16QAM	75	0	15.09	15.06	15.10

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	15.35	15.03	15.08
10	QPSK	1	24	15.18	15.06	15.11
10	QPSK	1	49	15.11	15.08	15.07
10	QPSK	25	0	15.12	15.03	15.18
10	QPSK	25	12	15.08	15.09	15.15
10	QPSK	25	24	15.07	15.06	15.15
10	QPSK	50	0	15.03	15.11	15.10
10	16QAM	1	0	15.63	15.11	15.57
10	16QAM	1	24	15.60	15.04	15.50
10	16QAM	1	49	15.62	15.05	15.32
10	16QAM	25	0	15.21	15.17	15.11
10	16QAM	25	12	15.15	15.16	15.08
10	16QAM	25	24	15.03	15.24	15.08
10	16QAM	50	0	15.08	15.10	15.04
Channel				**18625**	**18900**	**19175**
Frequency (MHz)				**1852.5**	**1880**	**1907.5**
5	QPSK	1	0	15.05	15.11	15.22
5	QPSK	1	12	15.14	15.01	15.51
5	QPSK	1	24	15.03	15.08	15.21
5	QPSK	12	0	15.12	15.03	15.11
5	QPSK	12	6	15.09	15.06	15.09
5	QPSK	12	11	15.02	15.03	15.17
5	QPSK	25	0	15.06	15.04	15.09
5	16QAM	1	0	15.04	15.33	15.31
5	16QAM	1	12	15.18	15.42	15.20
5	16QAM	1	24	15.02	15.10	15.07
5	16QAM	12	0	15.11	15.05	15.10
5	16QAM	12	6	15.05	15.03	15.13
5	16QAM	12	11	15.01	15.01	15.03
5	16QAM	25	0	15.04	15.09	15.09

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	15.11	15.15	15.02
3	QPSK	1	7	15.15	15.20	15.03
3	QPSK	1	14	15.06	15.06	15.02
3	QPSK	8	0	15.03	15.02	15.19
3	QPSK	8	4	15.10	15.08	15.12
3	QPSK	8	7	15.16	15.05	15.18
3	QPSK	15	0	15.02	15.08	15.04
3	16QAM	1	0	15.12	15.19	15.15
3	16QAM	1	7	15.27	15.21	15.63
3	16QAM	1	14	15.22	15.29	15.65
3	16QAM	8	0	15.02	15.02	15.06
3	16QAM	8	4	15.02	15.11	15.01
3	16QAM	8	7	15.02	15.08	15.08
3	16QAM	15	0	15.08	15.03	15.08
Channel				**18607**	**18900**	**19193**
Frequency (MHz)				**1850.7**	**1880**	**1909.3**
1.4	QPSK	1	0	15.03	15.03	15.07
1.4	QPSK	1	2	15.02	15.10	15.01
1.4	QPSK	1	5	15.08	15.02	15.04
1.4	QPSK	3	0	15.11	15.01	15.02
1.4	QPSK	3	1	15.16	15.04	15.11
1.4	QPSK	3	2	15.04	15.03	15.05
1.4	QPSK	6	0	15.06	15.02	15.04
1.4	16QAM	1	0	15.01	15.32	15.43
1.4	16QAM	1	2	15.37	15.23	15.15
1.4	16QAM	1	5	15.04	15.11	15.38
1.4	16QAM	3	0	15.29	15.42	15.45
1.4	16QAM	3	1	15.30	15.44	15.08
1.4	16QAM	3	2	15.30	15.43	15.56
1.4	16QAM	6	0	15.12	15.13	15.03

<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	18.36	18.46	18.38
20	QPSK	1	49	18.23	18.39	18.36
20	QPSK	1	99	17.87	17.99	18.34
20	QPSK	50	0	17.97	18.06	17.94
20	QPSK	50	24	17.84	17.95	17.84
20	QPSK	50	49	17.76	17.84	17.90
20	QPSK	100	0	17.82	17.98	17.92
20	16QAM	1	0	17.89	17.98	18.15
20	16QAM	1	49	18.17	17.90	18.37
20	16QAM	1	99	17.72	17.95	17.93
20	16QAM	50	0	18.01	17.86	18.09
20	16QAM	50	24	17.86	17.88	17.88
20	16QAM	50	49	17.77	17.96	17.87
20	16QAM	100	0	17.93	17.95	17.91
Channel				**20025**	**20175**	**20325**
Frequency (MHz)				**1717.5**	**1732.5**	**1747.5**
15	QPSK	1	0	18.17	18.07	18.15
15	QPSK	1	37	18.13	18.20	17.83
15	QPSK	1	74	17.90	18.00	17.81
15	QPSK	36	0	18.09	17.87	17.98
15	QPSK	36	18	17.88	17.89	17.89
15	QPSK	36	37	17.76	17.96	17.86
15	QPSK	75	0	17.88	17.83	17.97
15	16QAM	1	0	18.31	17.87	18.31
15	16QAM	1	37	18.30	17.78	18.08
15	16QAM	1	74	18.21	17.70	17.98
15	16QAM	36	0	18.14	17.90	17.84
15	16QAM	36	18	17.92	17.91	17.66
15	16QAM	36	37	17.76	18.05	17.63
15	16QAM	75	0	17.90	17.73	17.94

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	18.07	17.99	17.93
10	QPSK	1	24	18.18	18.10	18.20
10	QPSK	1	49	17.63	18.17	17.67
10	QPSK	25	0	17.84	17.80	17.94
10	QPSK	25	12	17.93	17.88	17.95
10	QPSK	25	24	17.82	18.01	17.78
10	QPSK	50	0	17.88	17.86	17.92
10	16QAM	1	0	18.33	17.64	18.32
10	16QAM	1	24	18.41	17.54	18.33
10	16QAM	1	49	18.12	17.66	18.10
10	16QAM	25	0	17.74	18.05	17.78
10	16QAM	25	12	17.80	18.04	17.79
10	16QAM	25	24	17.65	18.26	17.63
10	16QAM	50	0	17.87	17.73	17.89
Channel				**19975**	**20175**	**20375**
Frequency (MHz)				**1712.5**	**1732.5**	**1752.5**
5	QPSK	1	0	18.01	17.66	18.07
5	QPSK	1	12	17.86	17.81	17.93
5	QPSK	1	24	17.83	17.79	17.38
5	QPSK	12	0	17.81	17.83	17.80
5	QPSK	12	6	18.01	17.88	17.77
5	QPSK	12	11	17.91	17.97	17.73
5	QPSK	25	0	17.85	17.85	17.75
5	16QAM	1	0	17.97	17.73	18.36
5	16QAM	1	12	18.15	18.04	17.55
5	16QAM	1	24	18.30	18.11	17.39
5	16QAM	12	0	17.86	17.60	17.66
5	16QAM	12	6	17.87	17.67	17.55
5	16QAM	12	11	17.87	17.79	17.61
5	16QAM	25	0	17.99	17.74	17.72

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	17.75	17.83	17.73
3	QPSK	1	7	17.89	17.86	17.84
3	QPSK	1	14	18.07	17.98	17.60
3	QPSK	8	0	17.77	17.79	17.79
3	QPSK	8	4	17.75	17.82	17.74
3	QPSK	8	7	17.98	17.94	17.83
3	QPSK	15	0	17.68	17.84	17.83
3	16QAM	1	0	17.38	17.39	18.31
3	16QAM	1	7	17.45	17.55	17.94
3	16QAM	1	14	17.54	17.54	18.16
3	16QAM	8	0	17.71	17.75	17.68
3	16QAM	8	4	17.75	17.67	17.79
3	16QAM	8	7	17.85	17.81	17.76
3	16QAM	15	0	17.44	17.74	17.64
Channel				**19957**	**20175**	**20393**
Frequency (MHz)				**1710.7**	**1732.5**	**1754.3**
1.4	QPSK	1	0	17.64	17.74	17.82
1.4	QPSK	1	2	17.90	17.84	17.85
1.4	QPSK	1	5	17.73	17.82	17.81
1.4	QPSK	3	0	17.80	17.69	17.89
1.4	QPSK	3	1	17.91	17.76	17.82
1.4	QPSK	3	2	17.77	17.79	17.71
1.4	QPSK	6	0	17.76	17.74	17.79
1.4	16QAM	1	0	17.99	18.26	18.06
1.4	16QAM	1	2	18.28	17.97	18.15
1.4	16QAM	1	5	17.96	18.15	18.25
1.4	16QAM	3	0	18.06	17.56	17.66
1.4	16QAM	3	1	18.38	18.18	17.83
1.4	16QAM	3	2	17.30	18.33	17.68
1.4	16QAM	6	0	17.64	17.61	17.51

<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	17.92	17.94	17.86
20	QPSK	1	49	17.91	17.65	17.67
20	QPSK	1	99	17.88	17.57	17.59
20	QPSK	50	0	17.54	17.60	17.56
20	QPSK	50	24	17.53	17.45	17.45
20	QPSK	50	49	17.51	17.47	17.47
20	QPSK	100	0	17.50	17.58	17.45
20	16QAM	1	0	17.48	17.65	17.49
20	16QAM	1	49	17.67	17.72	17.56
20	16QAM	1	99	17.31	17.54	17.30
20	16QAM	50	0	17.50	17.51	17.53
20	16QAM	50	24	17.47	17.49	17.45
20	16QAM	50	49	17.51	17.39	17.41
20	16QAM	100	0	17.56	17.48	17.50
Channel				**20825**	**21100**	**21375**
Frequency (MHz)				**2507.5**	**2535**	**2562.5**
15	QPSK	1	0	17.65	17.63	17.56
15	QPSK	1	37	17.68	17.83	17.77
15	QPSK	1	74	17.63	17.49	17.47
15	QPSK	36	0	17.43	17.43	17.47
15	QPSK	36	18	17.45	17.38	17.45
15	QPSK	36	37	17.44	17.35	17.34
15	QPSK	75	0	17.47	17.43	17.48
15	16QAM	1	0	17.79	17.81	17.52
15	16QAM	1	37	17.63	17.59	17.33
15	16QAM	1	74	17.43	17.65	17.21
15	16QAM	36	0	17.55	17.50	17.52
15	16QAM	36	18	17.60	17.43	17.42
15	16QAM	36	37	17.56	17.39	17.32
15	16QAM	75	0	17.44	17.47	17.53

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	17.42	17.51	17.53
10	QPSK	1	24	17.45	17.75	17.40
10	QPSK	1	49	17.36	17.49	17.43
10	QPSK	25	0	17.44	17.49	17.48
10	QPSK	25	12	17.39	17.40	17.37
10	QPSK	25	24	17.39	17.41	17.39
10	QPSK	50	0	17.41	17.41	17.43
10	16QAM	1	0	17.79	17.82	17.45
10	16QAM	1	24	17.77	17.89	17.29
10	16QAM	1	49	17.69	17.86	17.38
10	16QAM	25	0	17.68	17.42	17.71
10	16QAM	25	12	17.51	17.36	17.59
10	16QAM	25	24	17.65	17.28	17.61
10	16QAM	50	0	17.42	17.57	17.30
Channel				**20775**	**21100**	**21425**
Frequency (MHz)				**2502.5**	**2535**	**2567.5**
5	QPSK	1	0	17.61	17.30	17.23
5	QPSK	1	12	17.43	17.55	17.68
5	QPSK	1	24	17.47	17.23	17.27
5	QPSK	12	0	17.44	17.41	17.40
5	QPSK	12	6	17.52	17.36	17.28
5	QPSK	12	11	17.50	17.37	17.26
5	QPSK	25	0	17.49	17.44	17.33
5	16QAM	1	0	17.72	17.83	17.52
5	16QAM	1	12	17.51	17.88	17.58
5	16QAM	1	24	17.21	17.35	17.37
5	16QAM	12	0	17.38	17.38	17.32
5	16QAM	12	6	17.50	17.26	17.33
5	16QAM	12	11	17.44	17.27	17.33
5	16QAM	25	0	17.38	17.33	17.33

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.

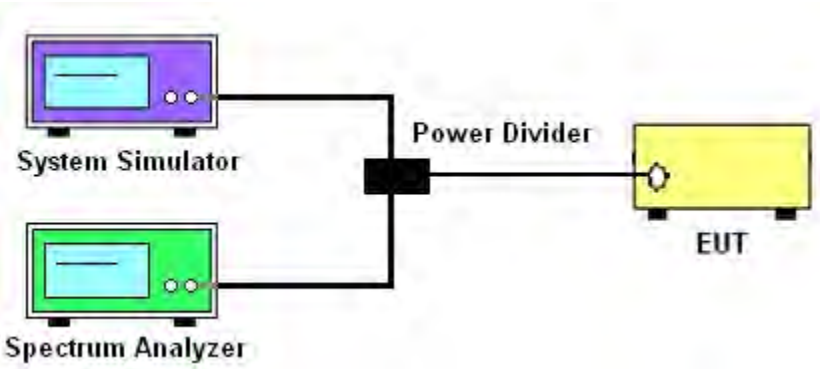
3.2.2 Measuring Instruments

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	QPSK	1	0	3.22	4.12	3.22
20	QPSK	100	0	4.84	4.58	4.90
20	16QAM	1	0	4.23	4.55	3.62
20	16QAM	100	0	5.77	5.51	6.00

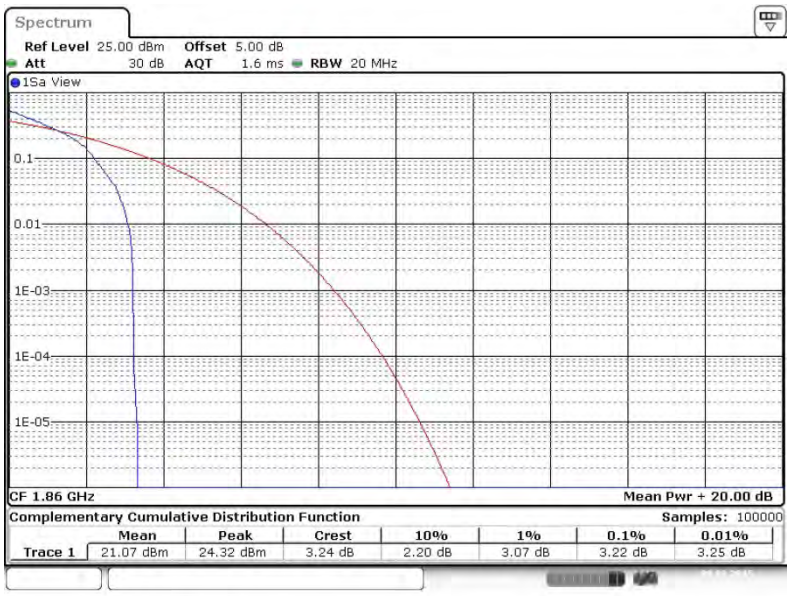
LTE Band 4						
BW [MHz]	Modulation	RB Size	RB Offset	Power (dBm) Low Ch. / Freq.	Power (dBm) Middle Ch. / Freq.	Power (dBm) High Ch. / Freq.
Channel				20050	20175	20300
Frequency (MHz)				1720	1732.5	1745
20	QPSK	1	0	2.35	4.43	2.32
20	QPSK	100	0	4.55	4.49	4.29
20	16QAM	1	0	3.39	5.19	3.36
20	16QAM	100	0	5.54	5.48	5.30

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	QPSK	1	0	3.57	4.06	3.94
20	QPSK	100	0	4.67	4.58	4.55
20	16QAM	1	0	4.49	4.81	4.61
20	16QAM	100	0	5.57	5.51	5.48

3.2.7 Peak to Average Power Ratio

Peak-to-Average Ratio on LTE Band 2

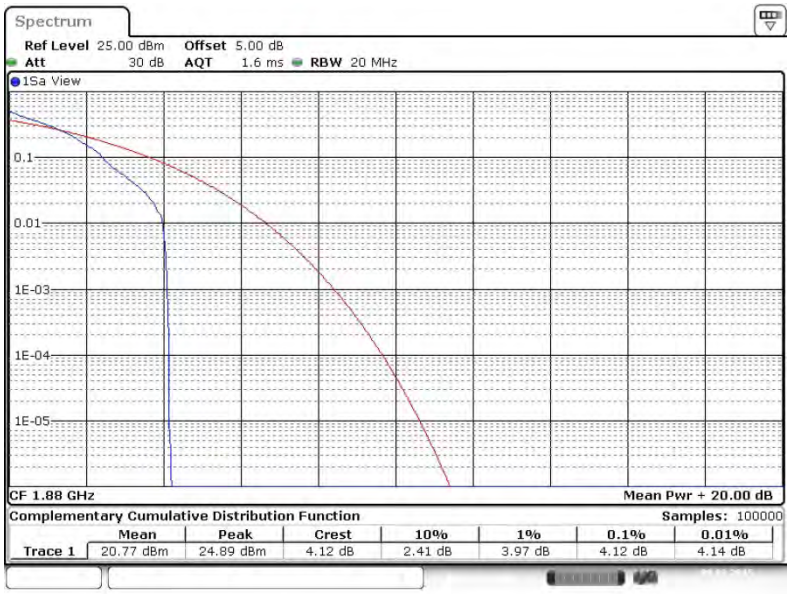
20MHz / QPSK in Ch. 18700 (1RB Size)



Date: 9.FEB.2015 18:05:05

Peak-to-Average Ratio on LTE Band 2

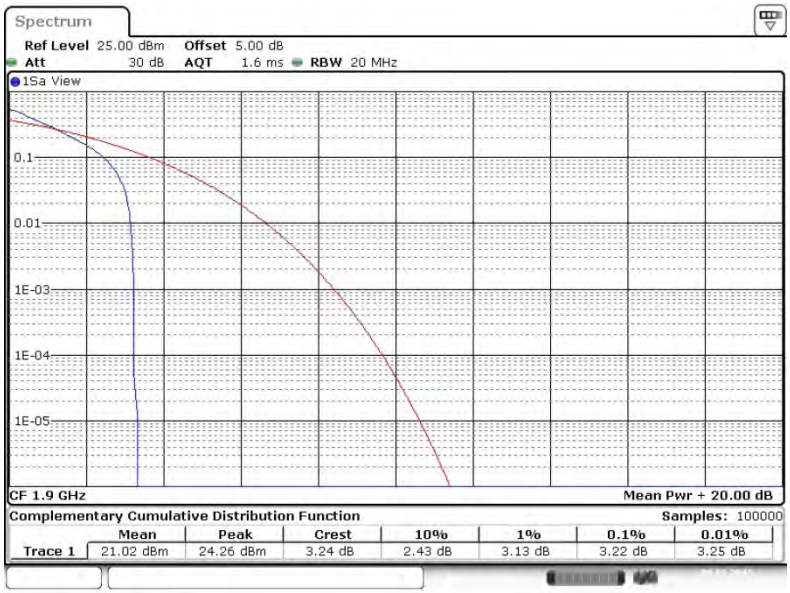
20MHz / QPSK in Ch. 18900 (1RB Size)



Date: 9.FEB.2015 18:06:59

Peak-to-Average Ratio on LTE Band 2

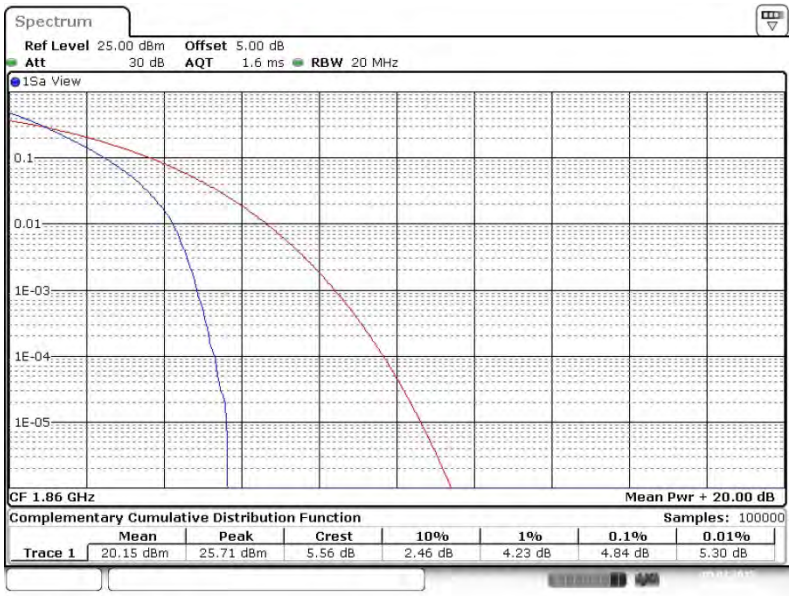
20MHz / QPSK in Ch. 19100 (1RB Size)



Date: 9.FEB.2015 18:09:55

Peak-to-Average Ratio on LTE Band 2

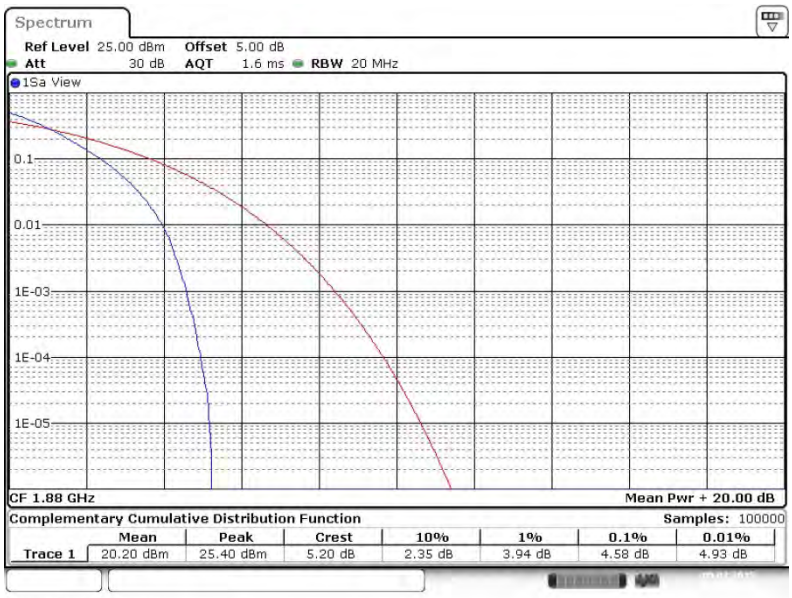
20MHz / QPSK in Ch. 18700 (100RB Size)



Date: 9.FEB.2015 18:06:28

Peak-to-Average Ratio on LTE Band 2

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



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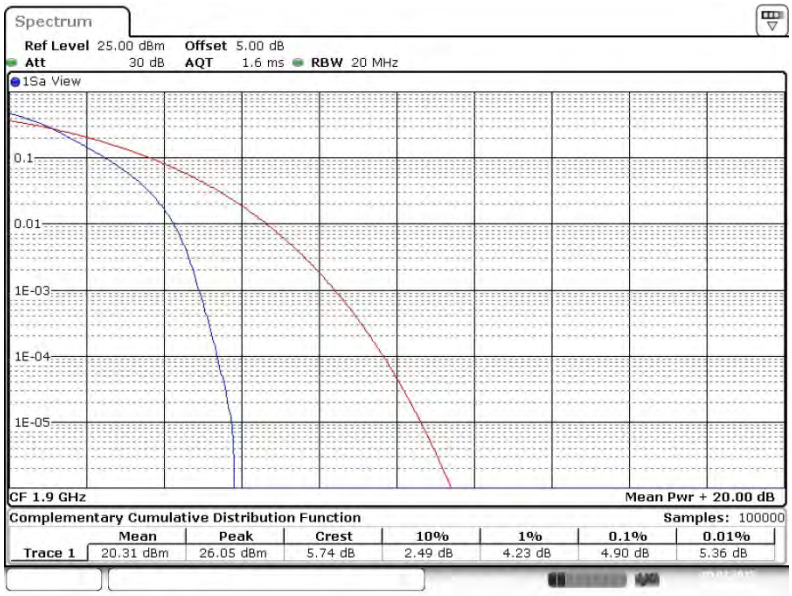
Peak-to-Average Ratio on LTE Band 2

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



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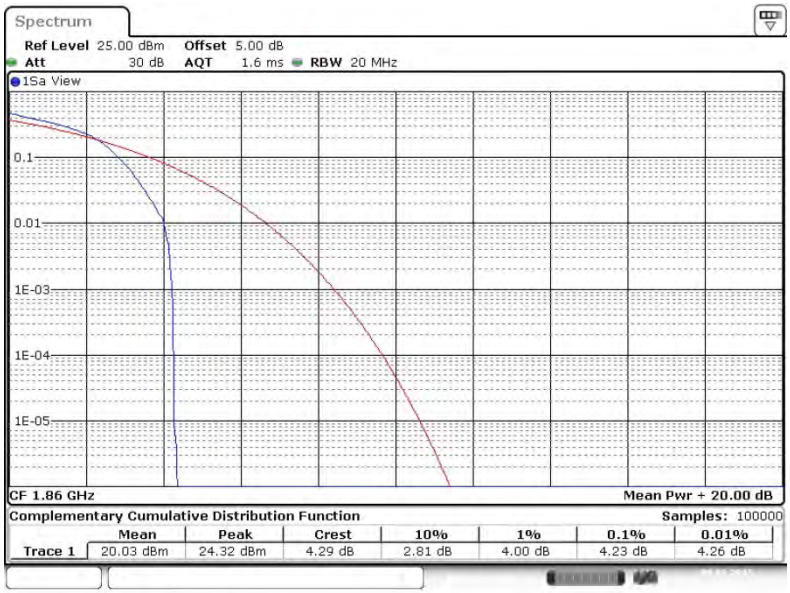
Peak-to-Average Ratio on LTE Band 2

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



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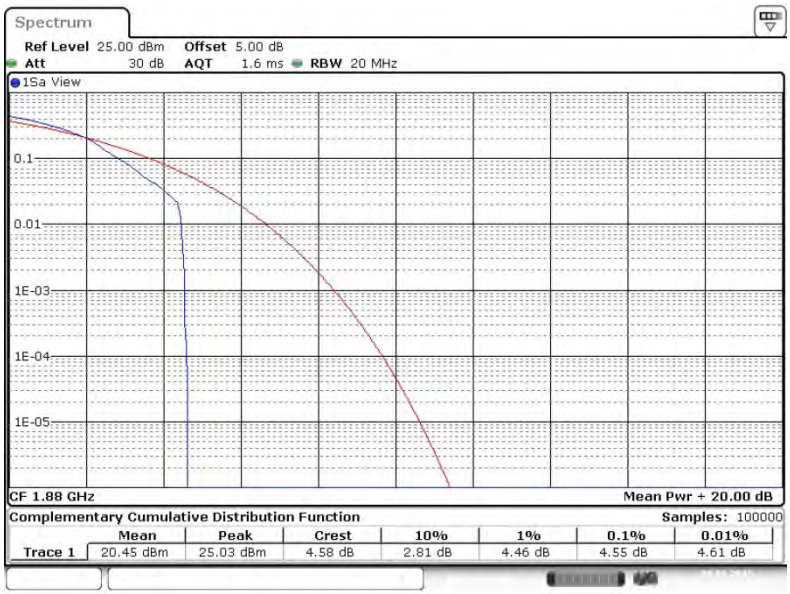
Peak-to-Average Ratio on LTE Band 2

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



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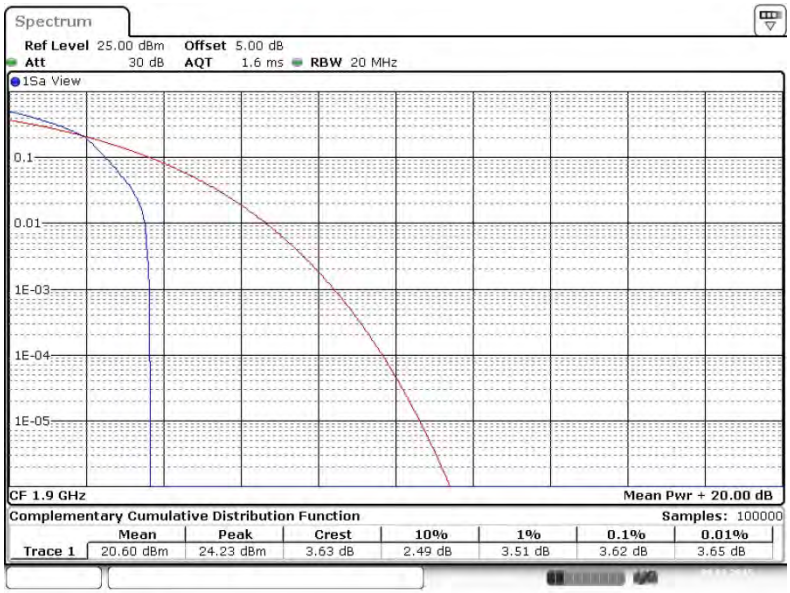
Peak-to-Average Ratio on LTE Band 2

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



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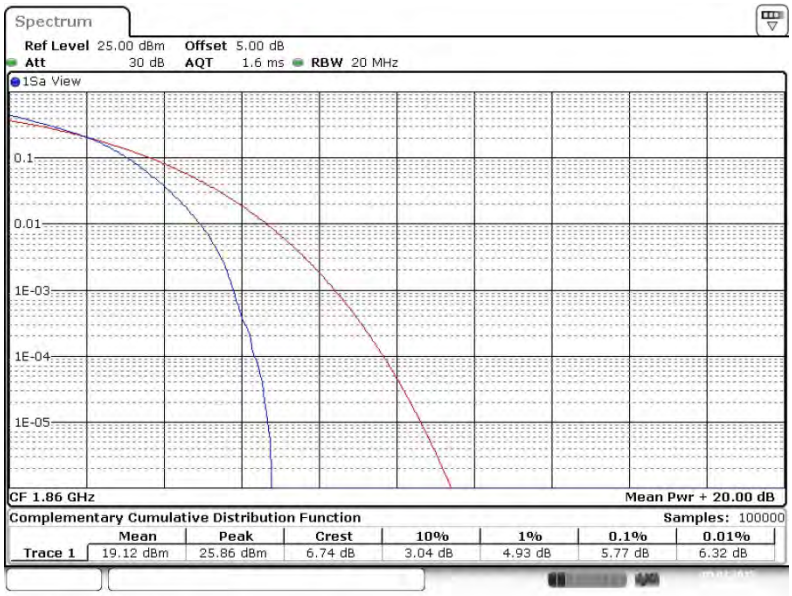
Peak-to-Average Ratio on LTE Band 2

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



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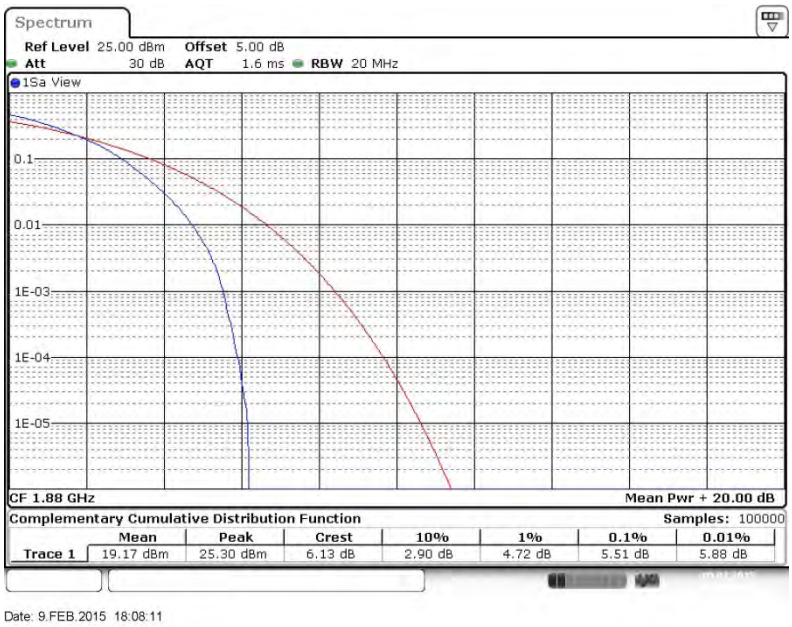
Peak-to-Average Ratio on LTE Band 2

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



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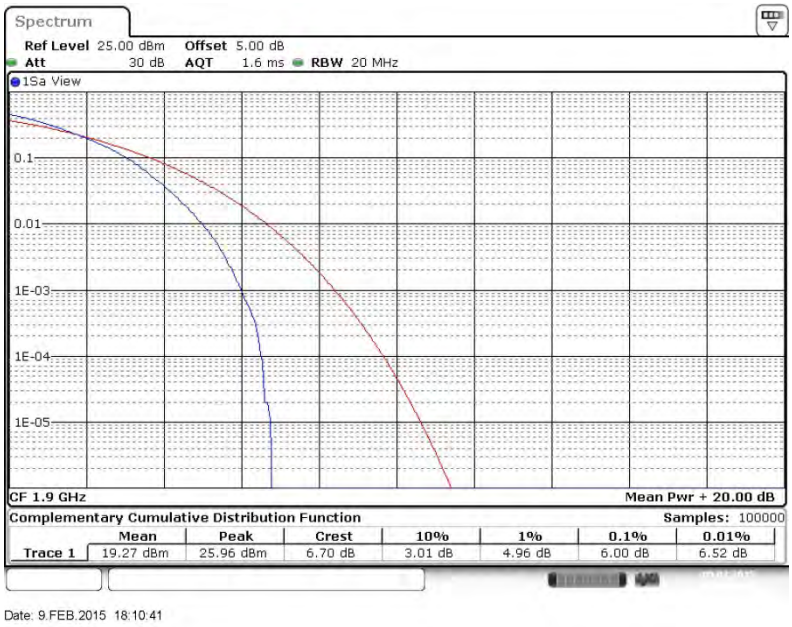
Peak-to-Average Ratio on LTE Band 2

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



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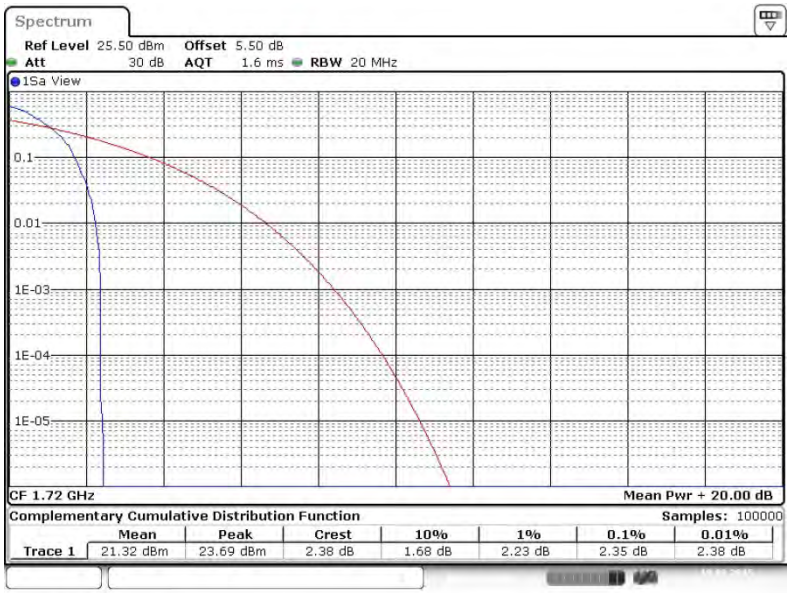
Peak-to-Average Ratio on LTE Band 4

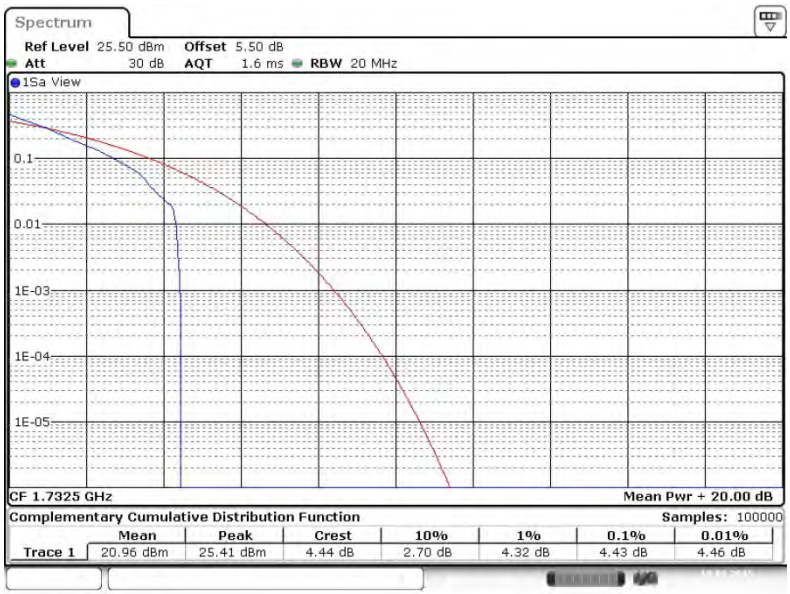
20MHz / QPSK in Ch. 20050 (1RB Size)



Date: 10.FEB.2015 14:35:51

Peak-to-Average Ratio on LTE Band 4

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



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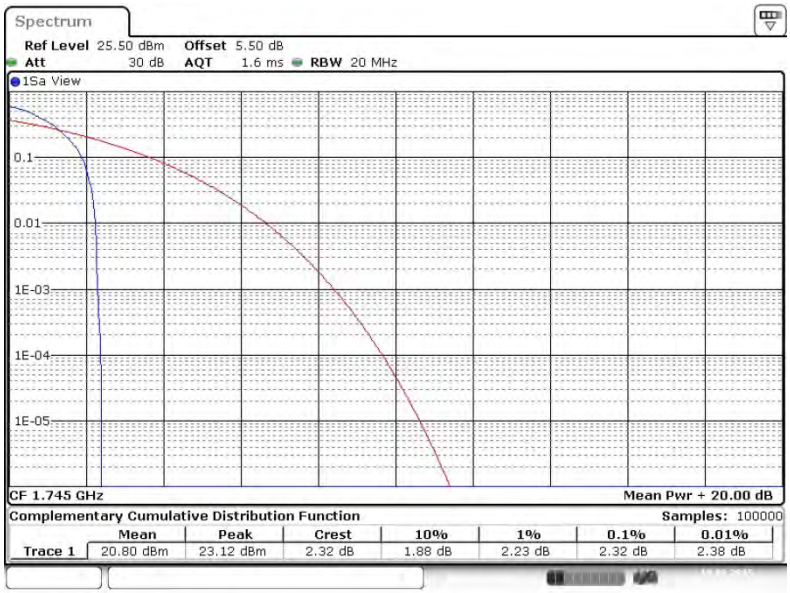
Peak-to-Average Ratio on LTE Band 4

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



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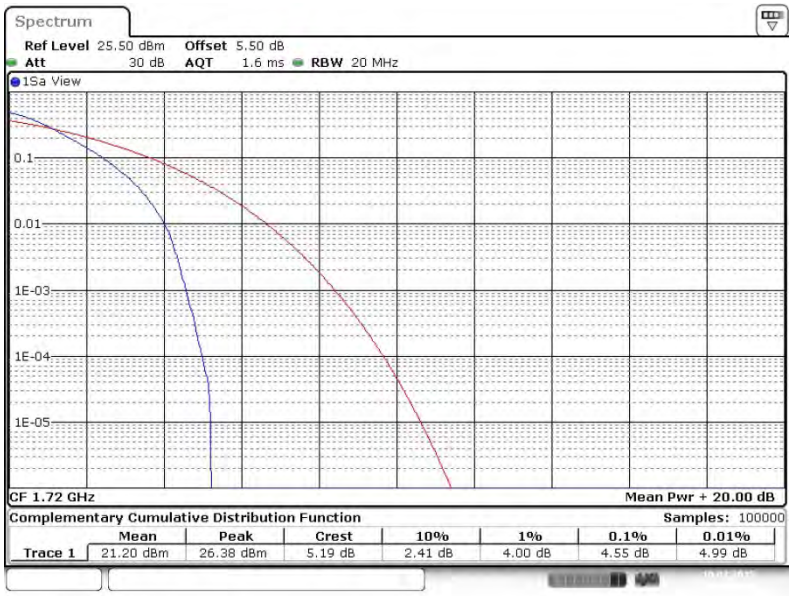
Peak-to-Average Ratio on LTE Band 4

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



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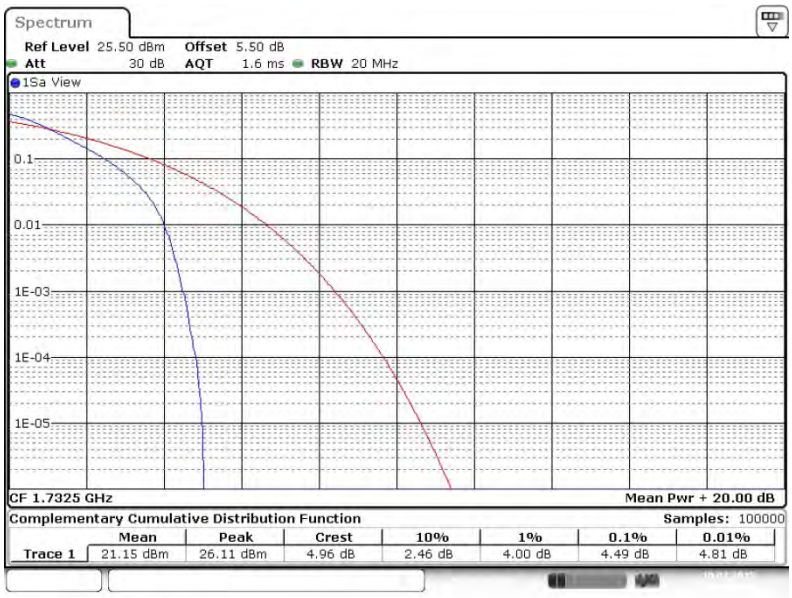
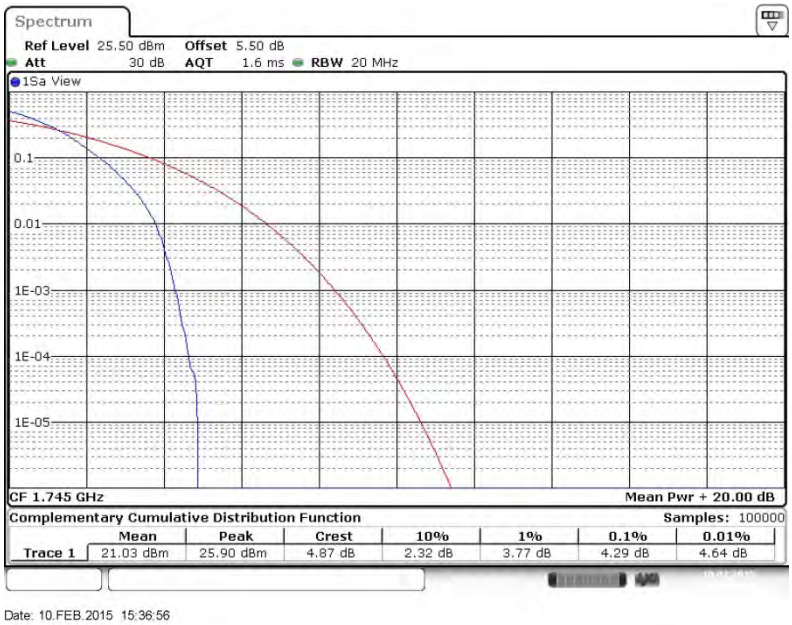
Peak-to-Average Ratio on LTE Band 4

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



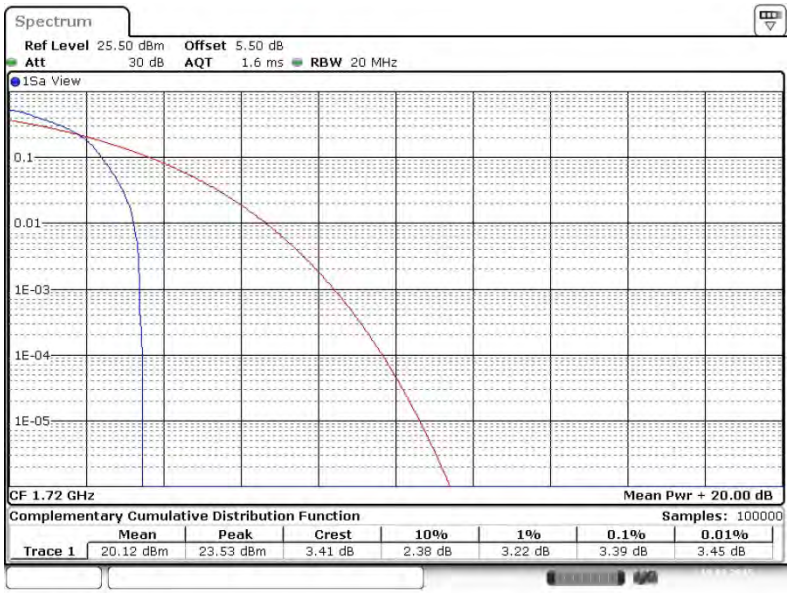
Peak-to-Average Ratio on LTE Band 4

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



Peak-to-Average Ratio on LTE Band 4

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



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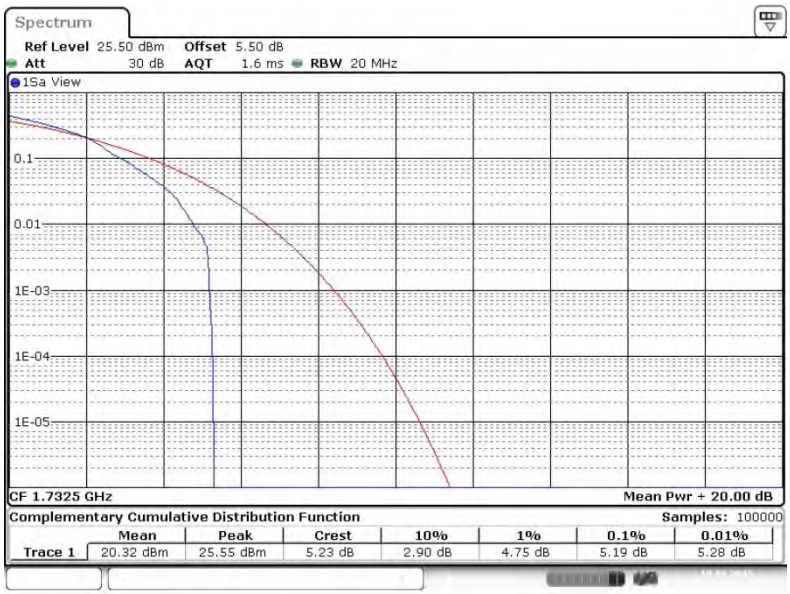
Peak-to-Average Ratio on LTE Band 4

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



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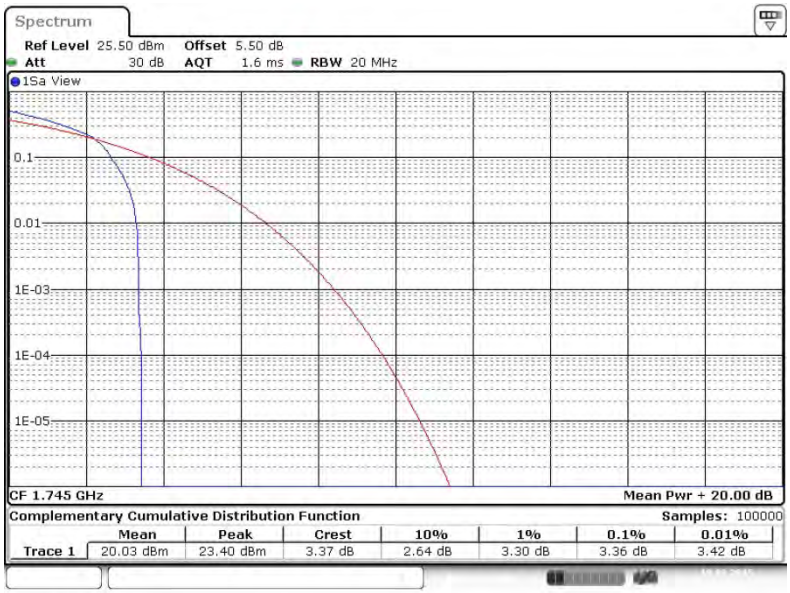
Peak-to-Average Ratio on LTE Band 4

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



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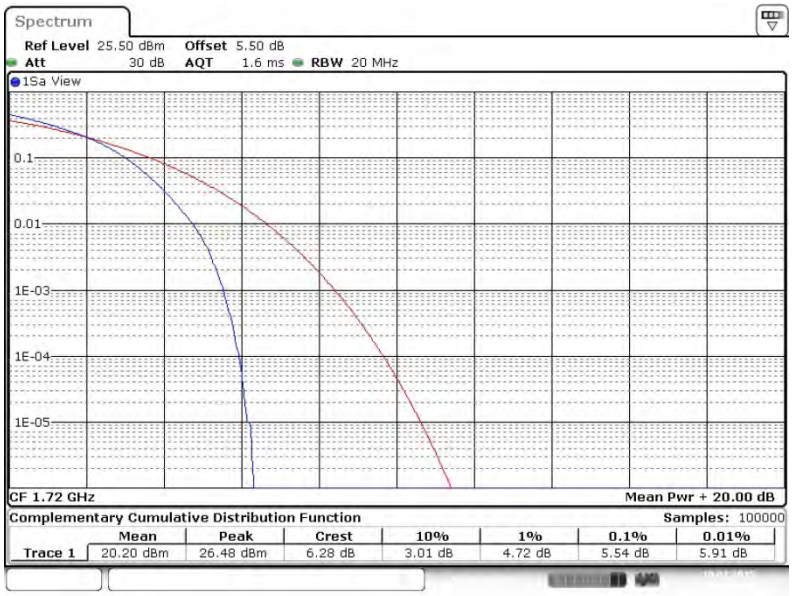
Peak-to-Average Ratio on LTE Band 4

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



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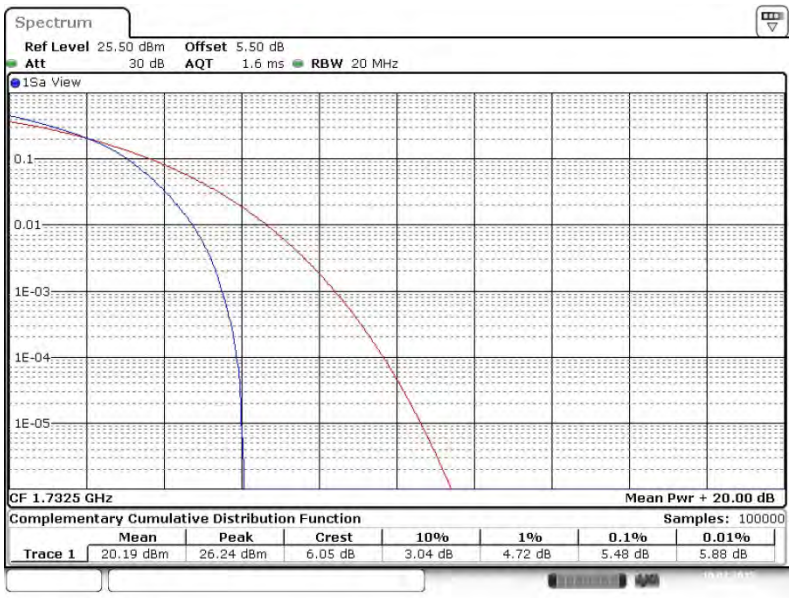
Peak-to-Average Ratio on LTE Band 4

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



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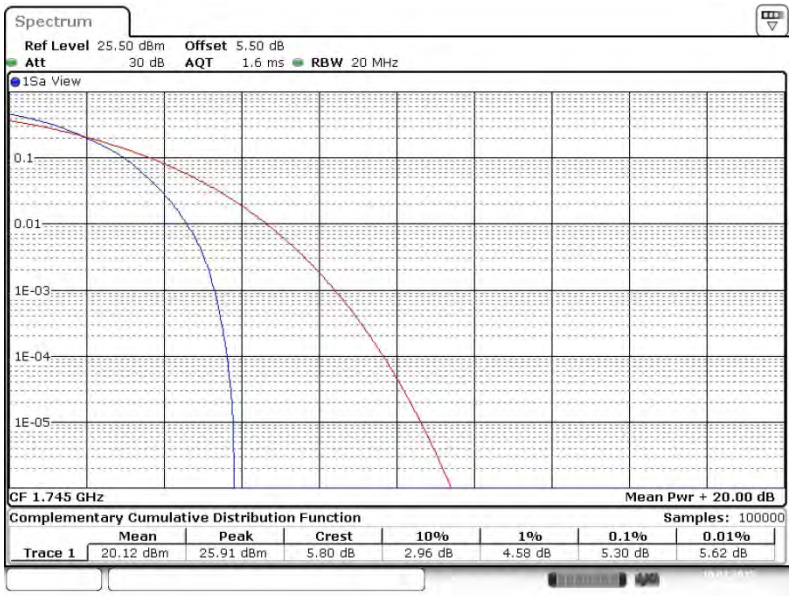
Peak-to-Average Ratio on LTE Band 4

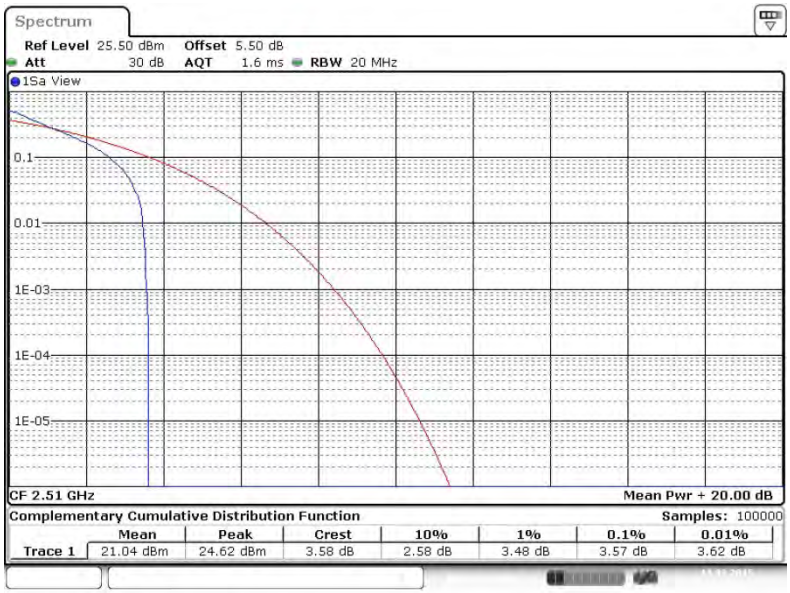
20MHz / 16QAM in Ch. 20300 (100RB Size)



Date: 10.FEB.2015 15:37:23

Peak-to-Average Ratio on LTE Band 7

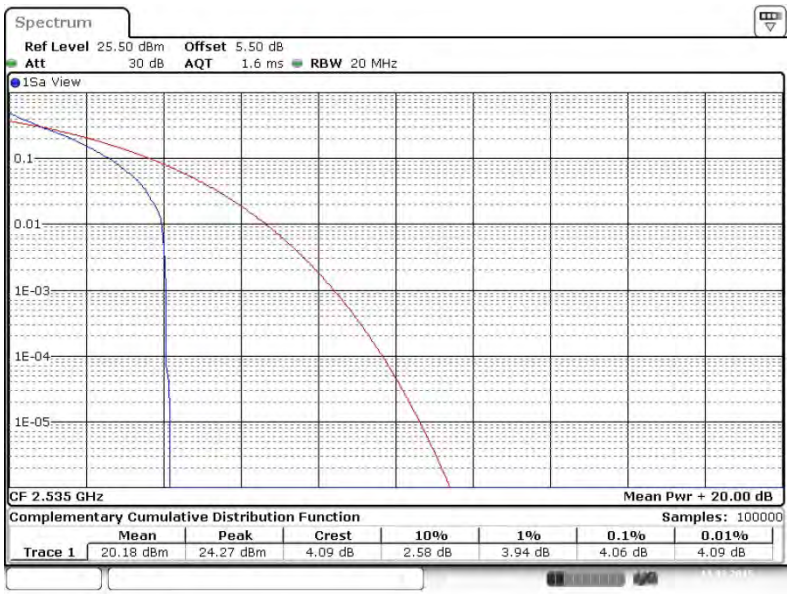
20MHz / QPSK in Ch. 20850 (1RB Size)



Date: 11.FEB.2015 15:52:35

Peak-to-Average Ratio on LTE Band 7

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



Date: 11.FEB.2015 15:54:31

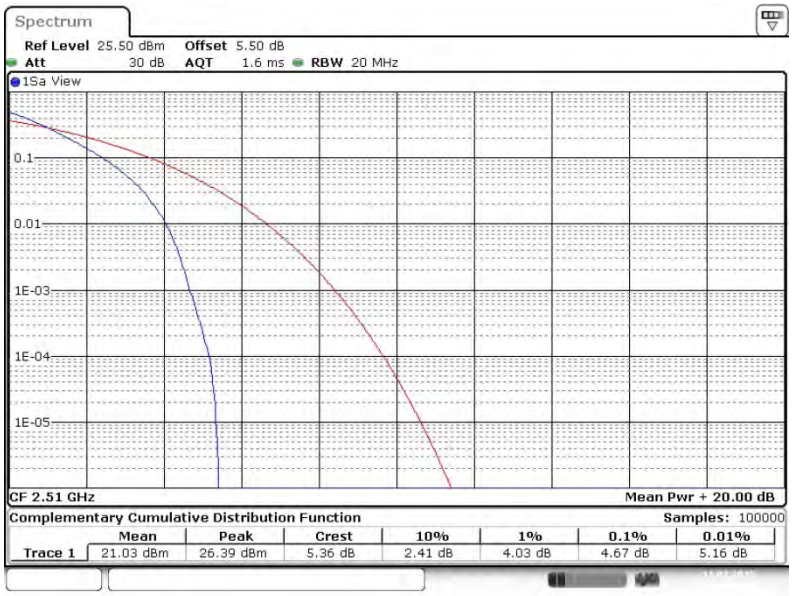
Peak-to-Average Ratio on LTE Band 7

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

Date: 11.FEB.2015 15:58:14

Peak-to-Average Ratio on LTE Band 7

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



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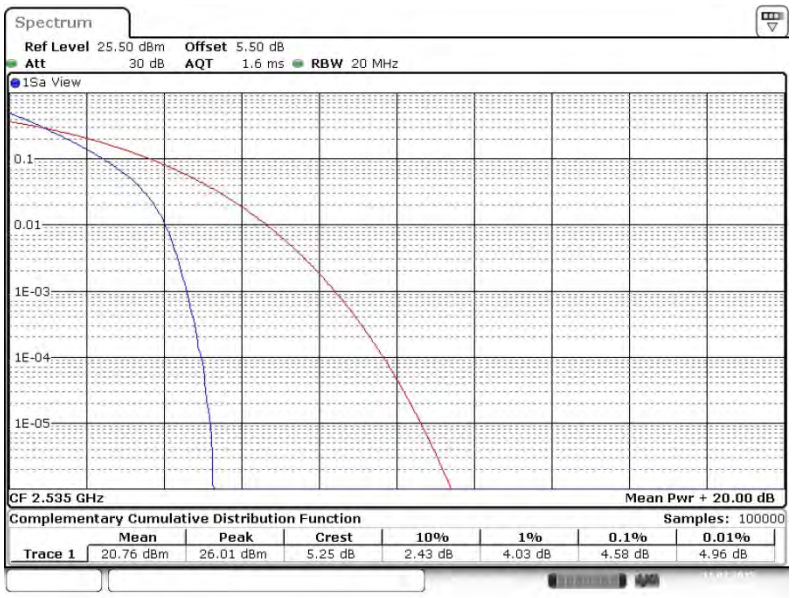
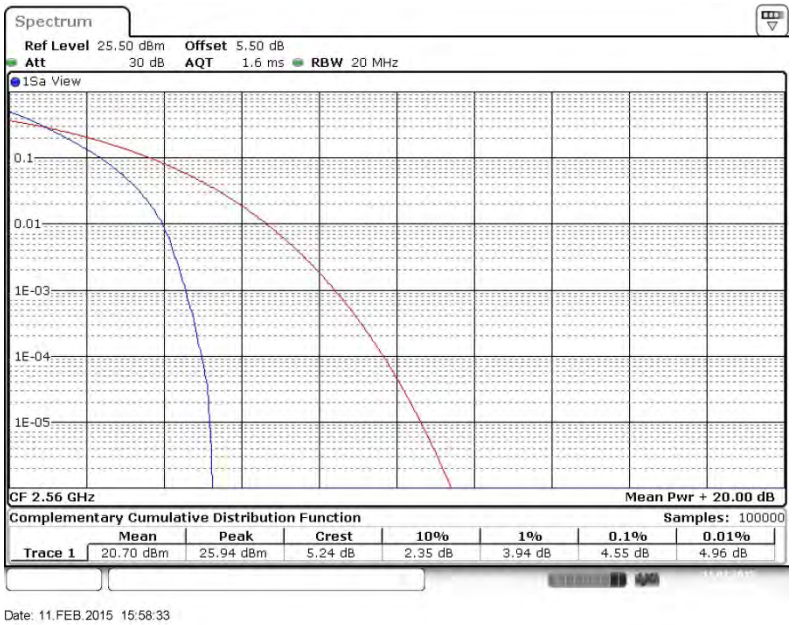
Peak-to-Average Ratio on LTE Band 7

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



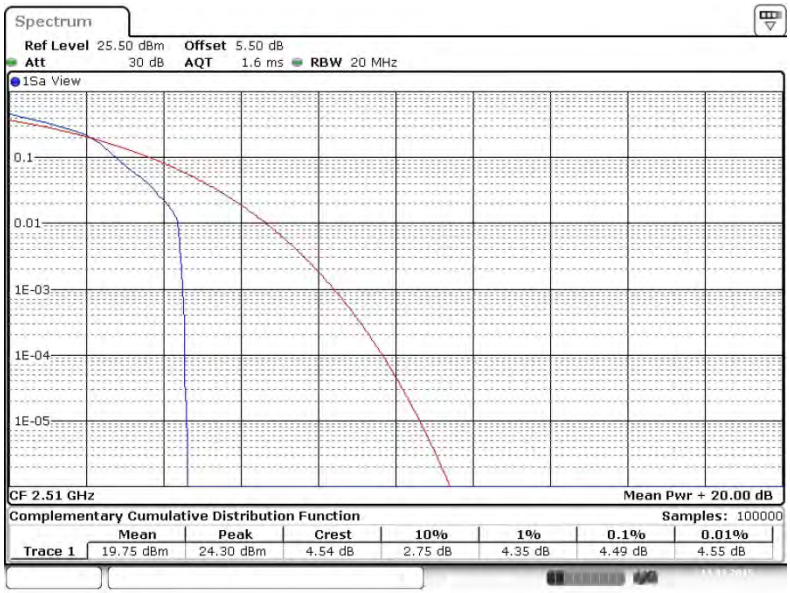
Peak-to-Average Ratio on LTE Band 7

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



Peak-to-Average Ratio on LTE Band 7

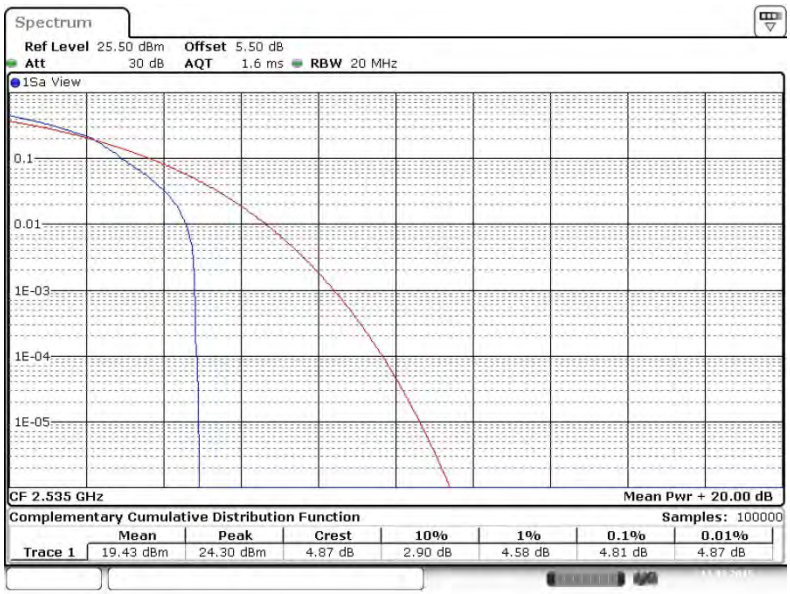
20MHz / 16QAM in Ch. 20850 (1RB Size)



Date: 11.FEB.2015 15:52:21

Peak-to-Average Ratio on LTE Band 7

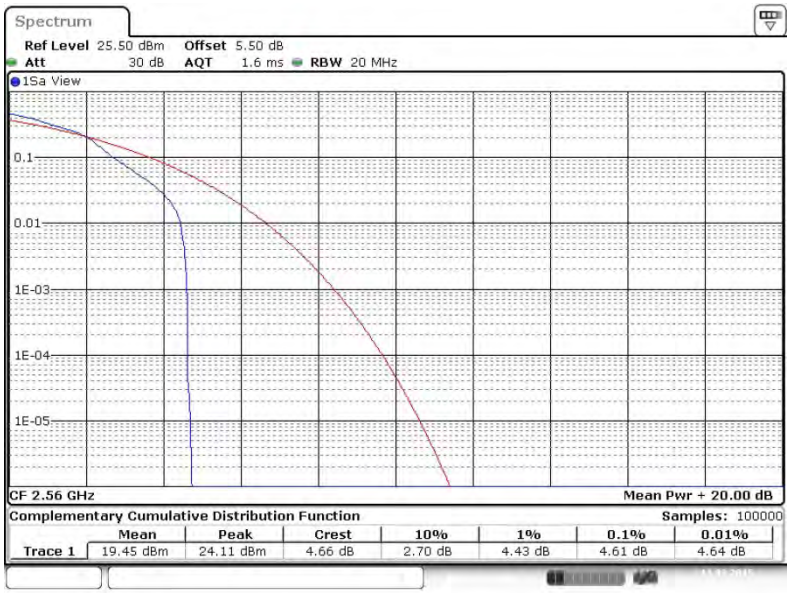
20MHz / 16QAM in Ch. 21100 (1RB Size)



Date: 11.FEB.2015 15:54:18

Peak-to-Average Ratio on LTE Band 7

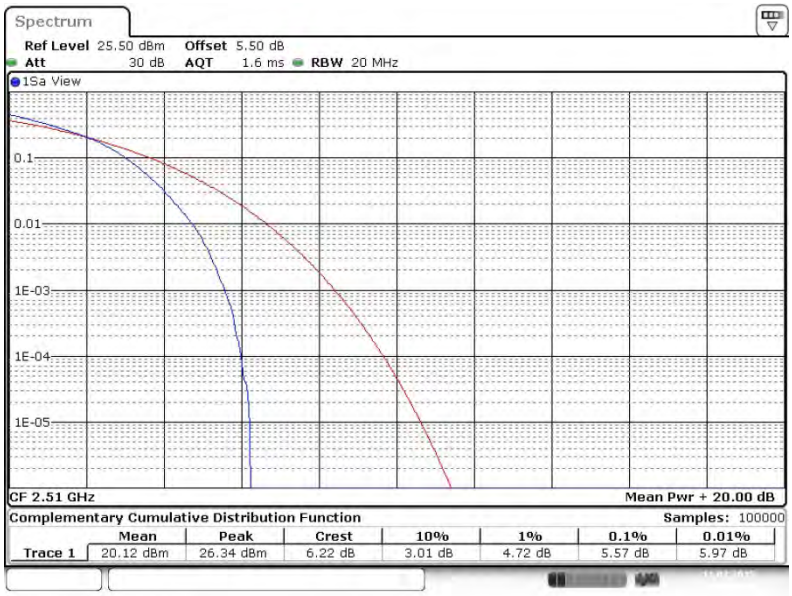
20MHz / 16QAM in Ch. 21350 (1RB Size)



Date: 11.FEB.2015 15:57:54

Peak-to-Average Ratio on LTE Band 7

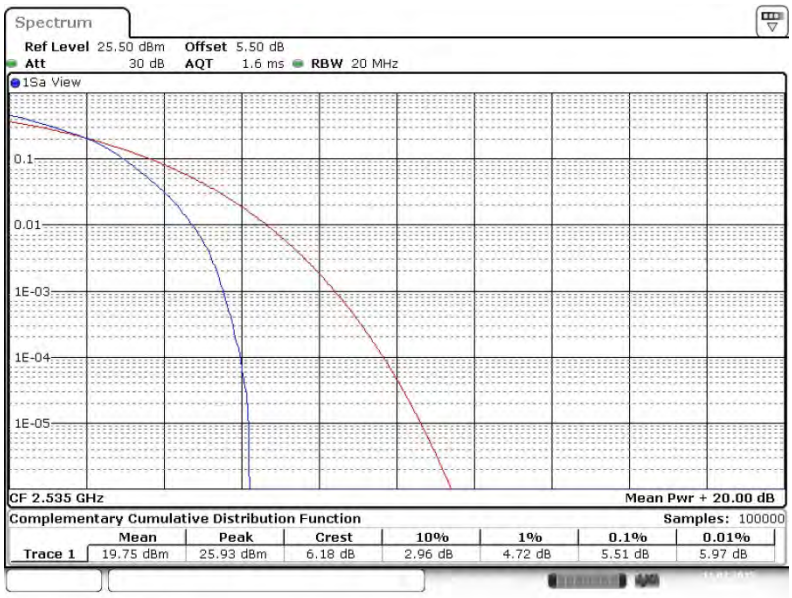
20MHz / 16QAM in Ch. 20850 (100RB Size)



Date: 11.FEB.2015 15:53:21

Peak-to-Average Ratio on LTE Band 7

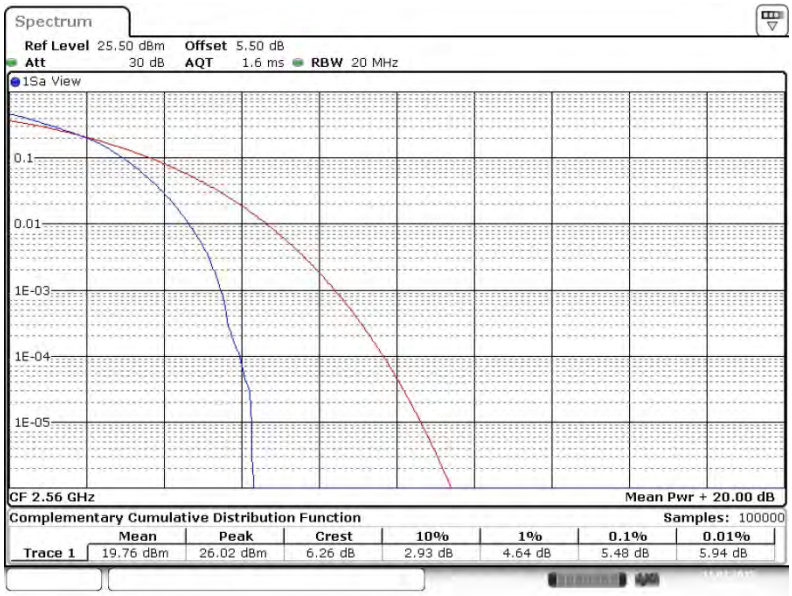
20MHz / 16QAM in Ch. 21100 (100RB Size)



Date: 11.FEB.2015 15:57:21

Peak-to-Average Ratio on LTE Band 7

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



Date: 11.FEB.2015 15:58:56

3.3 Equivalent Isotropic Radiated Power Measurement

3.3.1 Description of the EIRP Measurement

Equivalent isotropic radiated power output measurements by substitution method according to ANSI / TIA / EIA-603-C-2004, and the spectrum analyzer configuration follows KDB 971168 D01 Power Meas. License Digital Systems v02r02. 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.

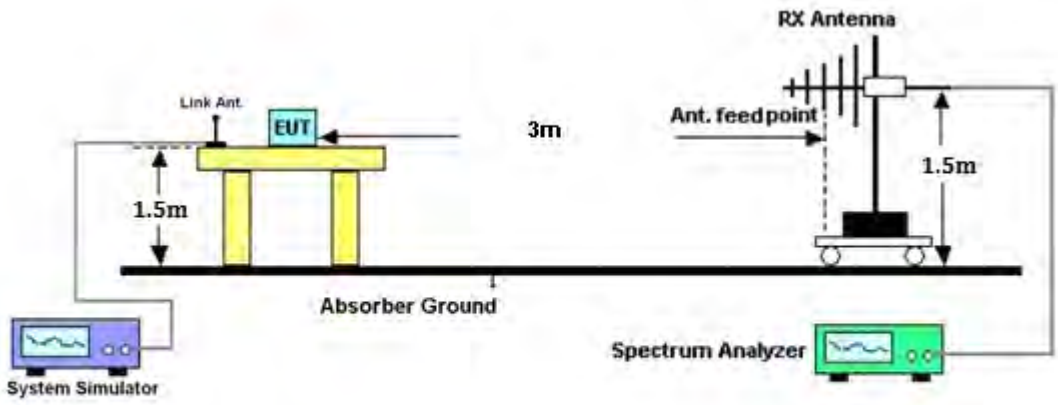
3.3.2 Measuring Instruments

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 turntable with 1.5 meter height in a fully anechoic chamber.
2. The EUT was set at 3 meters from the receiving antenna, which was mounted on the antenna tower.
3. The radiated emission at the fundamental frequency was measured at 3 m with a test antenna and a spectrum analyzer which used a channel power option across EUT's signal bandwidth per section 4.0 of KDB 971168 D01.
4. The table was rotated 360 degrees to determine the position of the highest radiated power.
5. The height of the receiving antenna is adjusted to look for the maximum EIRP.
6. Taking the record of maximum EIRP.
7. A dipole antenna was substituted in place of the EUT and was driven by a signal generator.
8. The conducted power at the terminal of the dipole antenna is measured.
9. Repeat step 3 to step 5 to get the maximum EIRP of the substitution antenna.
10. EIRP = Ps + Et – Es + Gs = Ps + Rt – Rs + Gs
    Ps (dBm)：Input power to substitution antenna.
    Gs (dBi or dBd)：Substitution antenna Gain.
    Et = Rt + AF
    Es = Rs + AF
    AF (dB/m)：Receive antenna factor
    Rt：The highest received signal in spectrum analyzer for EUT.
    Rs：The highest received signal in spectrum analyzer for substitution antenna.

3.3.4 Test Setup



3.3.5 Test Result of EIRP

LTE Band 2 Radiated Power EIRP								
LTE Band	Channel BW (MHz)	Modulation	RB Configuration		Freq. (MHz)	EIRP (dBm)	EIRP (W)	H/V
			RB Size	RB Offset				
2	1.4	QPSK	3	1	1850.7	23.63	0.2307	H
2	1.4	QPSK	3	1	1880	23.53	0.2254	H
2	1.4	QPSK	3	0	1909.3	23.76	0.2377	H
2	1.4	QPSK	3	1	1850.7	24.06	0.2547	V
2	1.4	QPSK	3	1	1880	23.97	0.2495	V
2	1.4	QPSK	3	0	1909.3	23.53	0.2254	V
2	1.4	16QAM	3	1	1850.7	22.73	0.1875	H
2	1.4	16QAM	3	2	1880	22.90	0.1950	H
2	1.4	16QAM	1	2	1909.3	23.23	0.2104	H
2	1.4	16QAM	3	1	1850.7	23.20	0.2089	V
2	1.4	16QAM	3	2	1880	22.75	0.1884	V
2	1.4	16QAM	1	2	1909.3	22.83	0.1919	V
2	3	QPSK	1	0	1851.5	23.54	0.2259	H
2	3	QPSK	1	0	1880	23.31	0.2143	H
2	3	QPSK	1	7	1908.5	23.76	0.2377	H
2	3	QPSK	1	0	1851.5	24.19	0.2624	V
2	3	QPSK	1	0	1880	23.65	0.2317	V
2	3	QPSK	1	7	1908.5	23.92	0.2466	V
2	3	16QAM	1	7	1851.5	22.72	0.1871	H
2	3	16QAM	1	14	1880	22.99	0.1991	H
2	3	16QAM	1	0	1908.5	22.78	0.1897	H
2	3	16QAM	1	7	1851.5	22.95	0.1972	V
2	3	16QAM	1	14	1880	22.46	0.1762	V
2	3	16QAM	1	0	1908.5	23.17	0.2075	V

LTE Band 2 Radiated Power EIRP								
LTE Band	Channel BW (MHz)	Modulation	RB Configuration		Freq. (MHz)	EIRP (dBm)	EIRP (W)	H/V
			RB Size	RB Offset				
2	5	QPSK	1	12	1852.5	23.44	0.2208	H
2	5	QPSK	1	12	1880	23.67	0.2328	H
2	5	QPSK	1	12	1907.5	23.85	0.2427	H
2	5	QPSK	1	12	1852.5	23.87	0.2438	V
2	5	QPSK	1	12	1880	23.99	0.2506	V
2	5	QPSK	1	12	1907.5	23.84	0.2421	V
2	5	16QAM	1	12	1852.5	23.29	0.2133	H
2	5	16QAM	1	12	1880	22.57	0.1807	H
2	5	16QAM	1	12	1907.5	23.54	0.2259	H
2	5	16QAM	1	12	1852.5	23.00	0.1995	V
2	5	16QAM	1	12	1880	22.09	0.1618	V
2	5	16QAM	1	12	1907.5	23.23	0.2104	V
2	10	QPSK	1	0	1855	23.42	0.2198	H
2	10	QPSK	1	0	1880	23.07	0.2028	H
2	10	QPSK	1	0	1905	23.46	0.2218	H
2	10	QPSK	1	0	1855	23.85	0.2427	V
2	10	QPSK	1	0	1880	23.42	0.2198	V
2	10	QPSK	1	0	1905	23.67	0.2328	V
2	10	16QAM	1	49	1855	22.58	0.1811	H
2	10	16QAM	1	0	1880	22.75	0.1884	H
2	10	16QAM	1	0	1905	22.25	0.1679	H
2	10	16QAM	1	49	1855	23.30	0.2138	V
2	10	16QAM	1	0	1880	22.29	0.1694	V
2	10	16QAM	1	0	1905	22.28	0.1690	V

LTE Band 2 Radiated Power EIRP								
LTE Band	Channel BW (MHz)	Modulation	RB Configuration		Freq. (MHz)	EIRP (dBm)	EIRP (W)	H/V
			RB Size	RB Offset				
2	15	QPSK	1	0	1857.5	23.60	0.2291	H
2	15	QPSK	1	0	1880	23.03	0.2009	H
2	15	QPSK	1	0	1902.5	23.33	0.2153	H
2	15	QPSK	1	0	1857.5	23.90	0.2455	V
2	15	QPSK	1	0	1880	23.46	0.2218	V
2	15	QPSK	1	0	1902.5	23.66	0.2323	V
2	15	16QAM	1	0	1857.5	21.91	0.1552	H
2	15	16QAM	1	0	1880	22.77	0.1892	H
2	15	16QAM	1	0	1902.5	23.15	0.2065	H
2	15	16QAM	1	0	1857.5	22.24	0.1675	V
2	15	16QAM	1	0	1880	23.28	0.2128	V
2	15	16QAM	1	0	1902.5	23.31	0.2143	V
2	20	QPSK	1	0	1860	23.41	0.2193	H
2	20	QPSK	1	0	1880	23.39	0.2183	H
2	20	QPSK	1	0	1900	23.51	0.2244	H
2	20	QPSK	1	0	1860	23.75	0.2371	V
2	20	QPSK	1	0	1880	23.78	0.2388	V
2	20	QPSK	1	0	1900	23.85	0.2427	V
2	20	16QAM	1	0	1860	21.75	0.1496	H
2	20	16QAM	1	49	1880	22.73	0.1875	H
2	20	16QAM	1	49	1900	21.96	0.1570	H
2	20	16QAM	1	0	1860	22.19	0.1656	V
2	20	16QAM	1	49	1880	23.01	0.2000	V
2	20	16QAM	1	49	1900	22.21	0.1663	V

LTE Band 4 Radiated Power EIRP								
LTE Band	Channel BW (MHz)	Modulation	RB Configuration		Freq. (MHz)	EIRP (dBm)	EIRP (W)	H/V
			RB Size	RB Offset				
4	1.4	QPSK	3	2	1710.7	23.99	0.2506	H
4	1.4	QPSK	3	1	1732.5	24.10	0.2570	H
4	1.4	QPSK	1	2	1754.3	24.05	0.2541	H
4	1.4	QPSK	3	2	1710.7	24.40	0.2754	V
4	1.4	QPSK	3	1	1732.5	24.56	0.2858	V
4	1.4	QPSK	1	2	1754.3	24.46	0.2793	V
4	1.4	16QAM	3	2	1710.7	23.79	0.2393	H
4	1.4	16QAM	1	0	1732.5	23.20	0.2089	H
4	1.4	16QAM	3	2	1754.3	23.28	0.2128	H
4	1.4	16QAM	3	2	1710.7	23.78	0.2388	V
4	1.4	16QAM	1	0	1732.5	23.29	0.2133	V
4	1.4	16QAM	3	2	1754.3	24.22	0.2642	V
4	3	QPSK	1	7	1711.5	24.20	0.2630	H
4	3	QPSK	1	7	1732.5	23.83	0.2415	H
4	3	QPSK	1	7	1753.5	24.05	0.2541	H
4	3	QPSK	1	7	1711.5	24.47	0.2799	V
4	3	QPSK	1	7	1732.5	24.52	0.2831	V
4	3	QPSK	1	7	1753.5	24.23	0.2649	V
4	3	16QAM	1	7	1711.5	23.25	0.2113	H
4	3	16QAM	1	0	1732.5	22.77	0.1892	H
4	3	16QAM	1	7	1753.5	23.18	0.2080	H
4	3	16QAM	1	7	1711.5	24.14	0.2594	V
4	3	16QAM	1	0	1732.5	23.32	0.2148	V
4	3	16QAM	1	7	1753.5	23.73	0.2360	V

LTE Band 4 Radiated Power EIRP								
LTE Band	Channel BW (MHz)	Modulation	RB Configuration		Freq. (MHz)	EIRP (dBm)	EIRP (W)	H/V
			RB Size	RB Offset				
4	5	QPSK	1	0	1712.5	23.52	0.2249	H
4	5	QPSK	1	24	1732.5	23.57	0.2275	H
4	5	QPSK	1	12	1752.5	23.83	0.2415	H
4	5	QPSK	1	0	1712.5	23.94	0.2477	V
4	5	QPSK	1	24	1732.5	24.05	0.2541	V
4	5	QPSK	1	12	1752.5	24.13	0.2588	V
4	5	16QAM	1	0	1712.5	23.26	0.2118	H
4	5	16QAM	1	24	1732.5	23.27	0.2123	H
4	5	16QAM	1	12	1752.5	23.39	0.2183	H
4	5	16QAM	1	0	1712.5	23.36	0.2168	V
4	5	16QAM	1	24	1732.5	23.41	0.2193	V
4	5	16QAM	1	12	1752.5	24.24	0.2655	V
4	10	QPSK	1	24	1715	23.78	0.2388	H
4	10	QPSK	1	24	1732.5	23.95	0.2483	H
4	10	QPSK	1	0	1750	24.08	0.2559	H
4	10	QPSK	1	24	1715	24.28	0.2679	V
4	10	QPSK	1	24	1732.5	24.30	0.2692	V
4	10	QPSK	1	0	1750	24.54	0.2844	V
4	10	16QAM	1	0	1715	23.46	0.2218	H
4	10	16QAM	1	49	1732.5	23.32	0.2148	H
4	10	16QAM	1	0	1750	23.50	0.2239	H
4	10	16QAM	1	0	1715	23.39	0.2183	V
4	10	16QAM	1	49	1732.5	23.30	0.2138	V
4	10	16QAM	1	0	1750	23.62	0.2301	V

LTE Band 4 Radiated Power EIRP								
LTE Band	Channel BW (MHz)	Modulation	RB Configuration		Freq. (MHz)	EIRP (dBm)	EIRP (W)	H/V
			RB Size	RB Offset				
4	15	QPSK	1	0	1717.5	23.87	0.2438	H
4	15	QPSK	1	0	1732.5	24.00	0.2512	H
4	15	QPSK	1	0	1747.5	24.02	0.2523	H
4	15	QPSK	1	0	1717.5	24.29	0.2685	V
4	15	QPSK	1	0	1732.5	24.30	0.2692	V
4	15	QPSK	1	0	1747.5	24.49	0.2812	V
4	15	16QAM	1	0	1717.5	23.43	0.2203	H
4	15	16QAM	1	0	1732.5	22.50	0.1778	H
4	15	16QAM	1	0	1747.5	23.39	0.2183	H
4	15	16QAM	1	0	1717.5	23.85	0.2427	V
4	15	16QAM	1	0	1732.5	23.74	0.2366	V
4	15	16QAM	1	0	1747.5	23.92	0.2466	V
4	20	QPSK	1	0	1720	23.76	0.2377	H
4	20	QPSK	1	0	1732.5	23.74	0.2366	H
4	20	QPSK	1	0	1745	23.88	0.2443	H
4	20	QPSK	1	0	1720	24.22	0.2642	V
4	20	QPSK	1	0	1732.5	24.11	0.2576	V
4	20	QPSK	1	0	1745	24.35	0.2723	V
4	20	16QAM	1	0	1720	22.20	0.1660	H
4	20	16QAM	1	0	1732.5	21.98	0.1578	H
4	20	16QAM	1	99	1745	22.06	0.1607	H
4	20	16QAM	1	0	1720	23.73	0.2360	V
4	20	16QAM	1	0	1732.5	22.53	0.1791	V
4	20	16QAM	1	99	1745	22.42	0.1746	V

LTE Band 7 Radiated Power EIRP								
LTE Band	Channel BW (MHz)	Modulation	RB Configuration		Freq. (MHz)	EIRP (dBm)	EIRP (W)	H/V
			RB Size	RB Offset				
7	5	QPSK	1	12	2502.5	25.88	0.3873	H
7	5	QPSK	1	12	2535	26.28	0.4246	H
7	5	QPSK	1	12	2567.5	25.30	0.3388	H
7	5	QPSK	1	12	2502.5	26.09	0.4064	V
7	5	QPSK	1	12	2535	26.42	0.4385	V
7	5	QPSK	1	12	2567.5	25.34	0.3420	V
7	5	16QAM	1	12	2502.5	25.12	0.3251	H
7	5	16QAM	1	12	2535	25.33	0.3412	H
7	5	16QAM	1	12	2567.5	24.93	0.3112	H
7	5	16QAM	1	12	2502.5	25.63	0.3656	V
7	5	16QAM	1	12	2535	24.92	0.3105	V
7	5	16QAM	1	12	2567.5	25.11	0.3243	V
7	10	QPSK	1	24	2505	26.00	0.3981	H
7	10	QPSK	1	0	2535	26.07	0.4046	H
7	10	QPSK	1	0	2565	25.34	0.3420	H
7	10	QPSK	1	24	2505	26.28	0.4246	V
7	10	QPSK	1	0	2535	26.22	0.4188	V
7	10	QPSK	1	0	2565	25.19	0.3304	V
7	10	16QAM	1	0	2505	24.62	0.2897	H
7	10	16QAM	1	24	2535	24.67	0.2931	H
7	10	16QAM	1	24	2565	24.00	0.2512	H
7	10	16QAM	1	0	2505	25.02	0.3177	V
7	10	16QAM	1	24	2535	25.20	0.3311	V
7	10	16QAM	1	24	2565	24.29	0.2685	V

LTE Band 7 Radiated Power EIRP								
LTE Band	Channel BW (MHz)	Modulation	RB Configuration		Freq. (MHz)	EIRP (dBm)	EIRP (W)	H/V
			RB Size	RB Offset				
7	15	QPSK	1	37	2507.5	26.12	0.4093	H
7	15	QPSK	1	0	2535	26.09	0.4064	H
7	15	QPSK	1	0	2562.5	25.99	0.3972	H
7	15	QPSK	1	37	2507.5	26.42	0.4385	V
7	15	QPSK	1	0	2535	26.12	0.4093	V
7	15	QPSK	1	0	2562.5	25.83	0.3828	V
7	15	16QAM	1	0	2507.5	25.27	0.3365	H
7	15	16QAM	1	0	2535	25.07	0.3214	H
7	15	16QAM	1	0	2562.5	24.06	0.2547	H
7	15	16QAM	1	0	2507.5	25.58	0.3614	V
7	15	16QAM	1	0	2535	25.11	0.3243	V
7	15	16QAM	1	0	2562.5	23.97	0.2495	V
7	20	QPSK	1	0	2510	26.12	0.4093	H
7	20	QPSK	1	0	2535	26.08	0.4055	H
7	20	QPSK	1	0	2560	25.97	0.3954	H
7	20	QPSK	1	0	2510	26.38	0.4345	V
7	20	QPSK	1	0	2535	26.07	0.4046	V
7	20	QPSK	1	0	2560	25.74	0.3750	V
7	20	16QAM	1	99	2510	24.65	0.2917	H
7	20	16QAM	1	0	2535	24.82	0.3034	H
7	20	16QAM	1	49	2560	25.57	0.3606	H
7	20	16QAM	1	99	2510	25.10	0.3236	V
7	20	16QAM	1	0	2535	25.00	0.3162	V
7	20	16QAM	1	49	2560	25.61	0.3639	V

3.4 99% Occupied Bandwidth and 26dB Bandwidth Measurement

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

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

The 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.

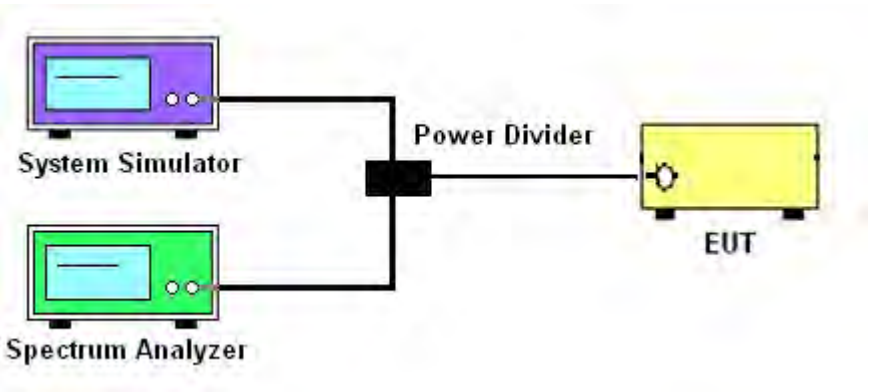
3.4.2 Measuring Instruments

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
99% OBW (MHz)	1.094	1.097	2.727	2.739
26dB BW (MHz)	1.306	1.306	3.051	3.057
BW / Mod.	5MHz / QPSK	5MHz / 16QAM	10MHz / QPSK	10MHz / 16QAM
99% OBW (MHz)	4.505	4.496	9.051	9.051
26dB BW (MHz)	5.035	5.045	10.070	10.010
BW / Mod.	15MHz / QPSK	15MHz / 16QAM	20MHz / QPSK	20MHz / 16QAM
99% OBW (MHz)	13.487	13.427	18.422	18.342
26dB BW (MHz)	14.595	14.625	20.460	20.180

Modes	LTE Band 4			
BW / Mod.	1.4MHz / QPSK	1.4MHz / 16QAM	3MHz / QPSK	3MHz / 16QAM
99% OBW (MHz)	1.105	1.102	2.733	2.727
26dB BW (MHz)	1.315	1.320	3.051	3.051
BW / Mod.	5MHz / QPSK	5MHz / 16QAM	10MHz / QPSK	10MHz / 16QAM
99% OBW (MHz)	4.515	4.505	9.071	9.091
26dB BW (MHz)	5.045	5.055	10.090	10.050
BW / Mod.	15MHz / QPSK	15MHz / 16QAM	20MHz / QPSK	20MHz / 16QAM
99% OBW (MHz)	13.457	13.487	18.501	18.501
26dB BW (MHz)	14.925	14.625	20.579	20.420

Modes	LTE Band 7			
BW / Mod.	**5MHz / QPSK**	**5MHz / 16QAM**	**10MHz / QPSK**	**10MHz / 16QAM**
99% OBW (MHz)	4.505	4.515	9.071	9.031
26dB BW (MHz)	5.035	5.005	10.150	10.090
BW / Mod.	**15MHz / QPSK**	**15MHz / 16QAM**	**20MHz / QPSK**	**20MHz / 16QAM**
99% OBW (MHz)	13.487	13.487	18.422	18.382
26dB BW (MHz)	14.775	14.685	20.420	20.300

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

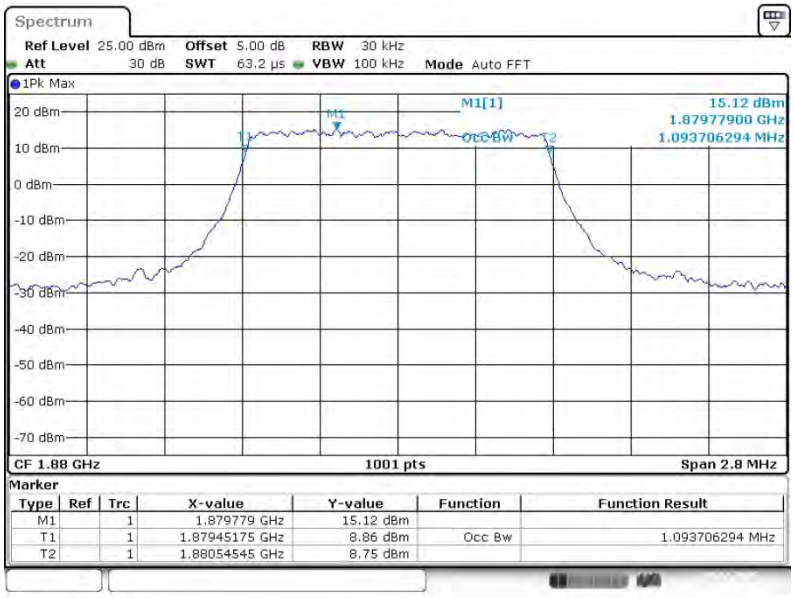
BW15MHz RB setting：RB Size 75, RB offset 0

BW20MHz RB setting：RB Size 100, RB offset 0

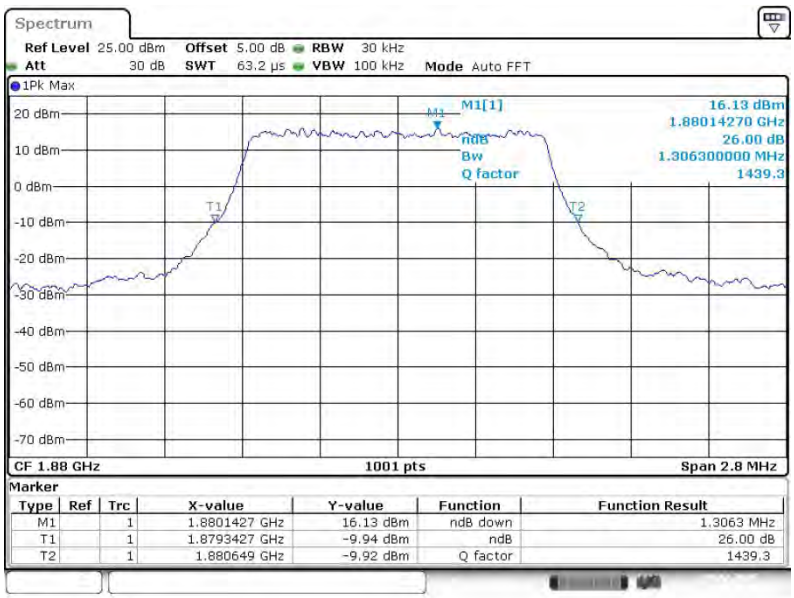
3.4.6 Test Result (Plots) of Occupied Bandwidth

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

99% Occupied Bandwidth Plot on Channel 18900

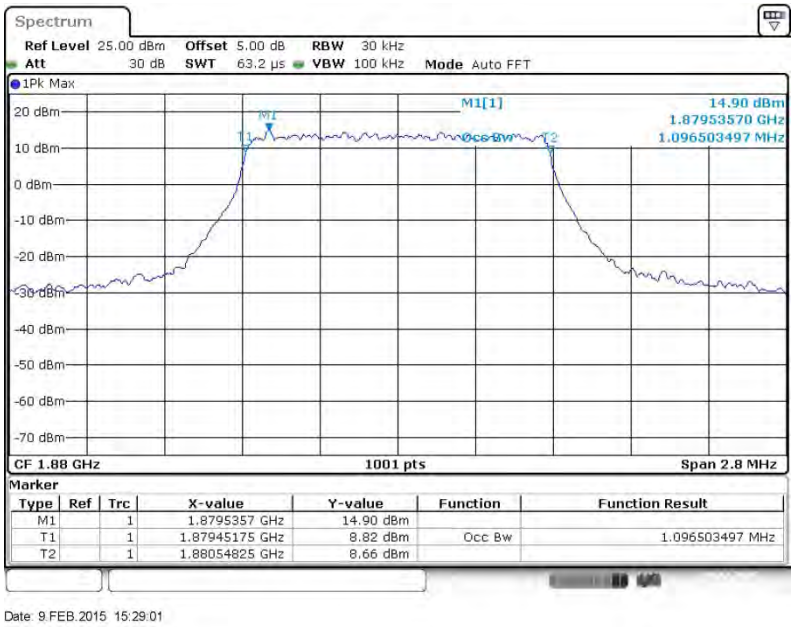


26dB Bandwidth Plot on Channel 18900

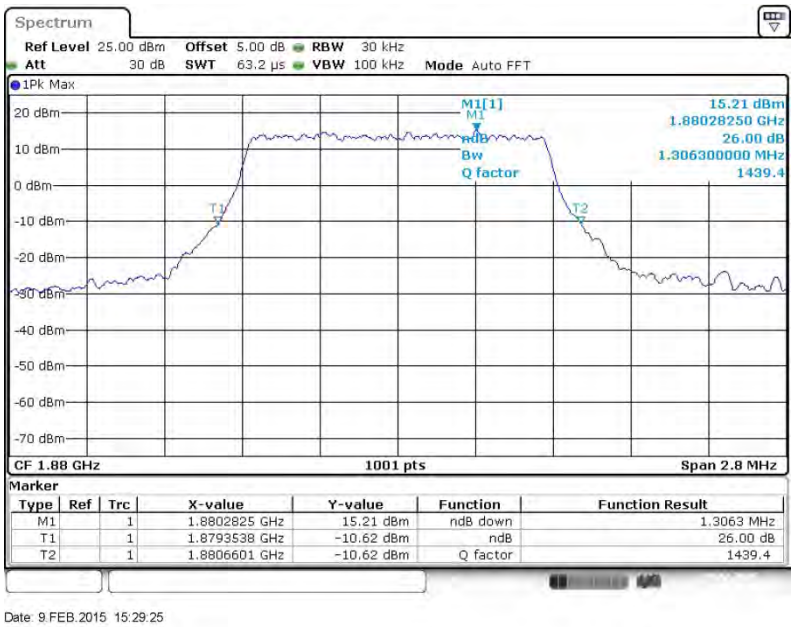


Band :	LTE Band 2	BW / Mod. :	1.4MHz / 16QAM

99% Occupied Bandwidth Plot on Channel 18900

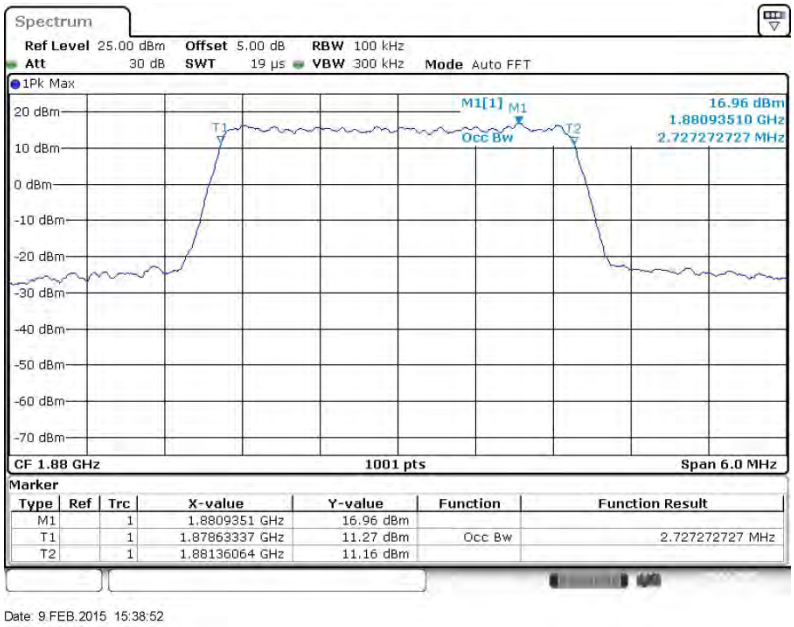


26dB Bandwidth Plot on Channel 18900

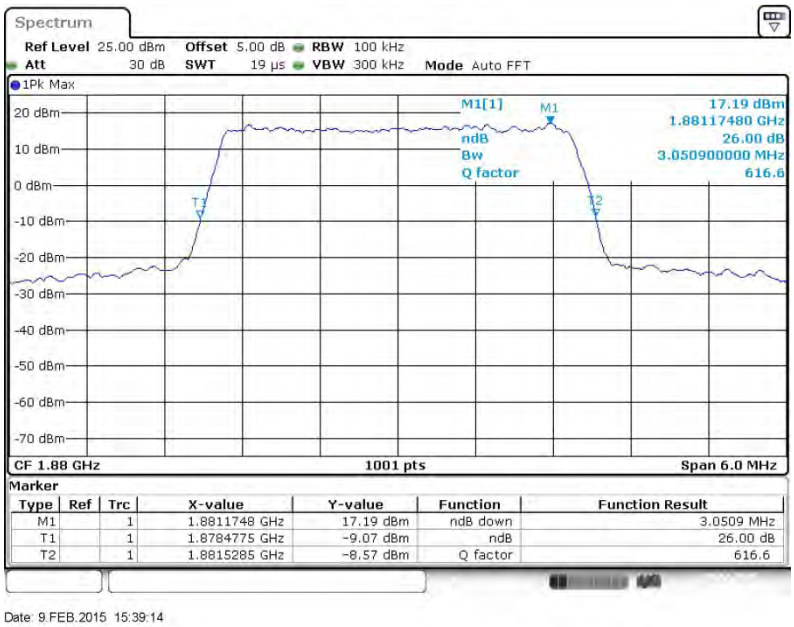


Band :	LTE Band 2	BW / Mod. :	3MHz / QPSK

99% Occupied Bandwidth Plot on Channel 18900

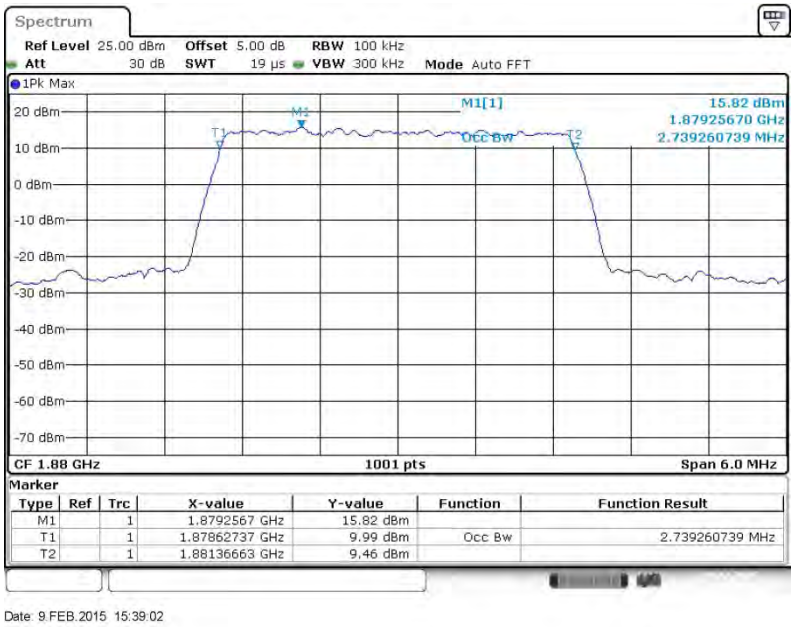


26dB Bandwidth Plot on Channel 18900

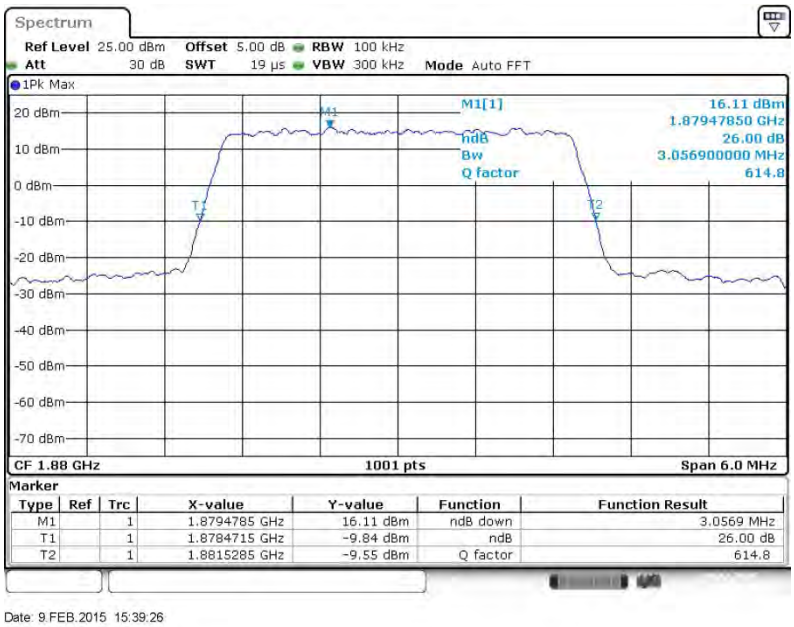


Band :	LTE Band 2	BW / Mod. :	3MHz / 16QAM

99% Occupied Bandwidth Plot on Channel 18900

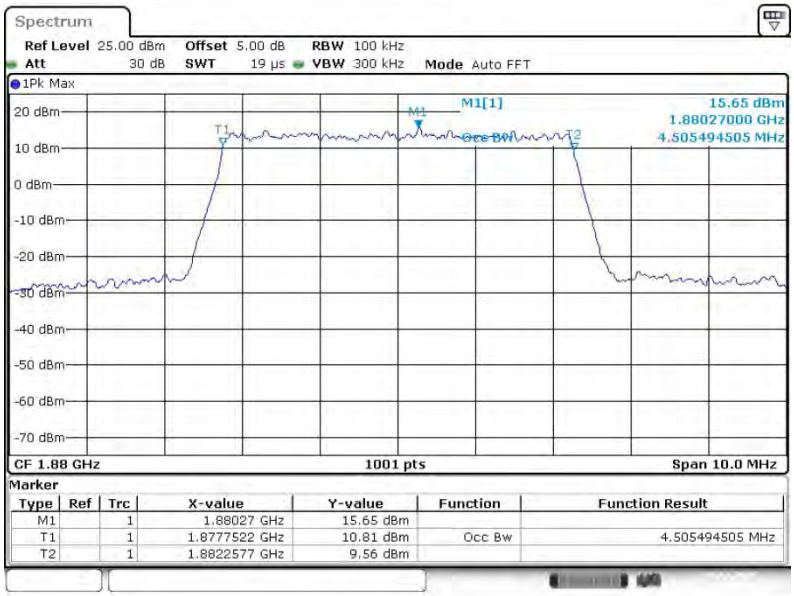


26dB Bandwidth Plot on Channel 18900



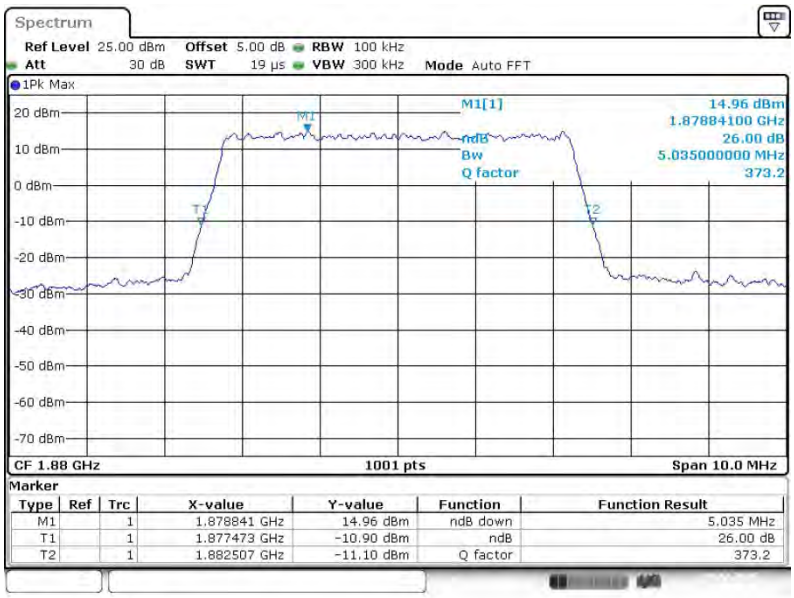
Band :	LTE Band 2	BW / Mod. :	5MHz / QPSK

99% Occupied Bandwidth Plot on Channel 18900



Date: 9.FEB.2015 15:49:00

26dB Bandwidth Plot on Channel 18900



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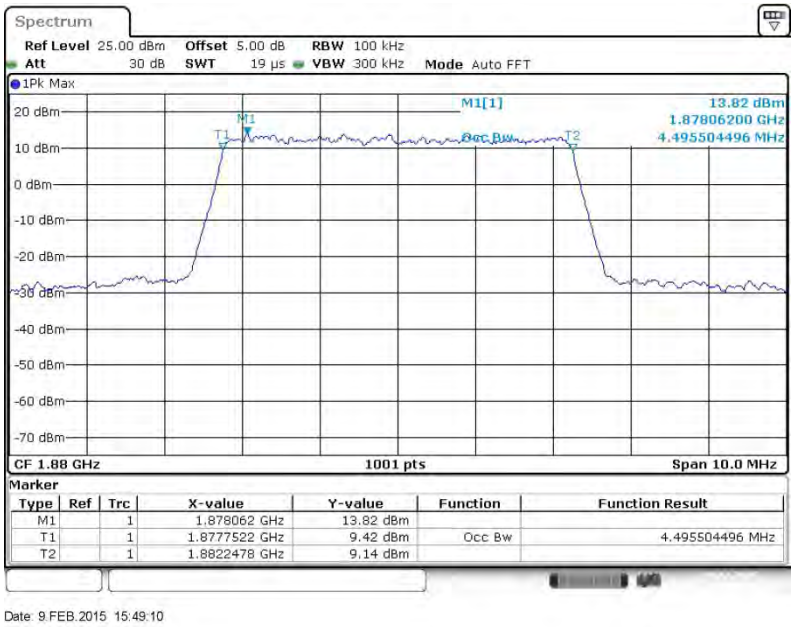
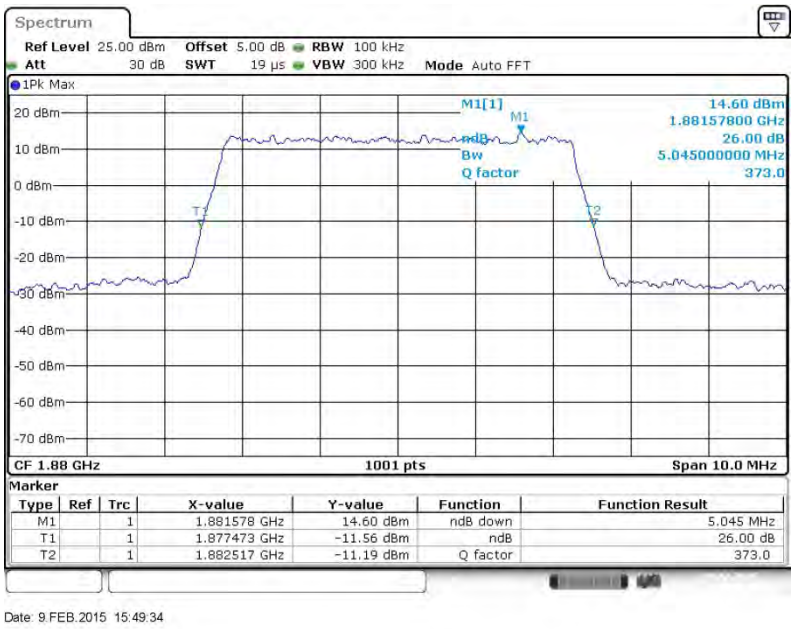
Band :	LTE Band 2	BW / Mod. :	5MHz / 16QAM

99% Occupied Bandwidth Plot on Channel 18900

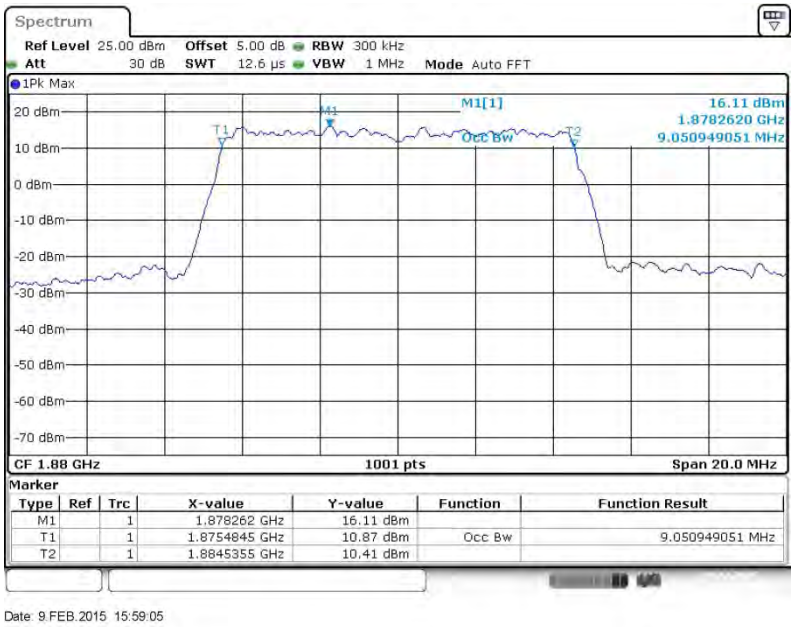


26dB Bandwidth Plot on Channel 18900

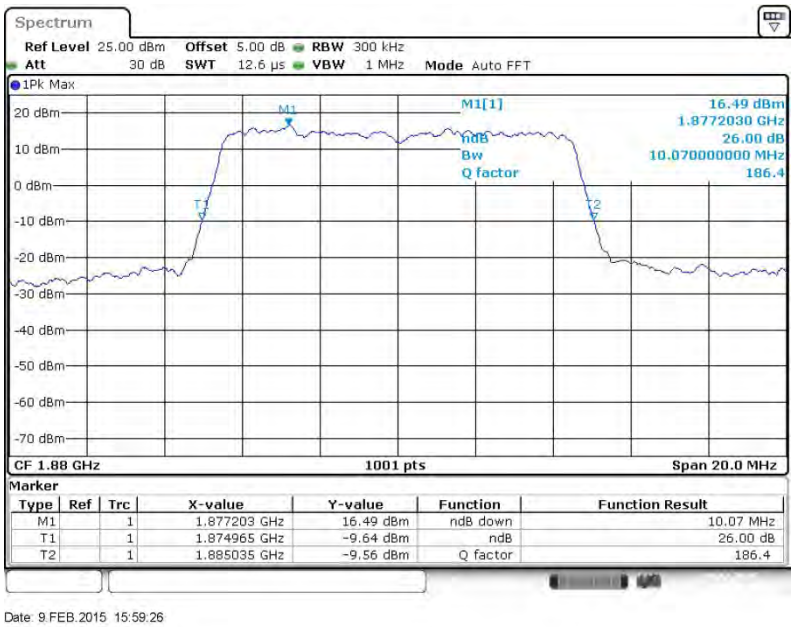


Band :	LTE Band 2	BW / Mod. :	10MHz / QPSK

99% Occupied Bandwidth Plot on Channel 18900

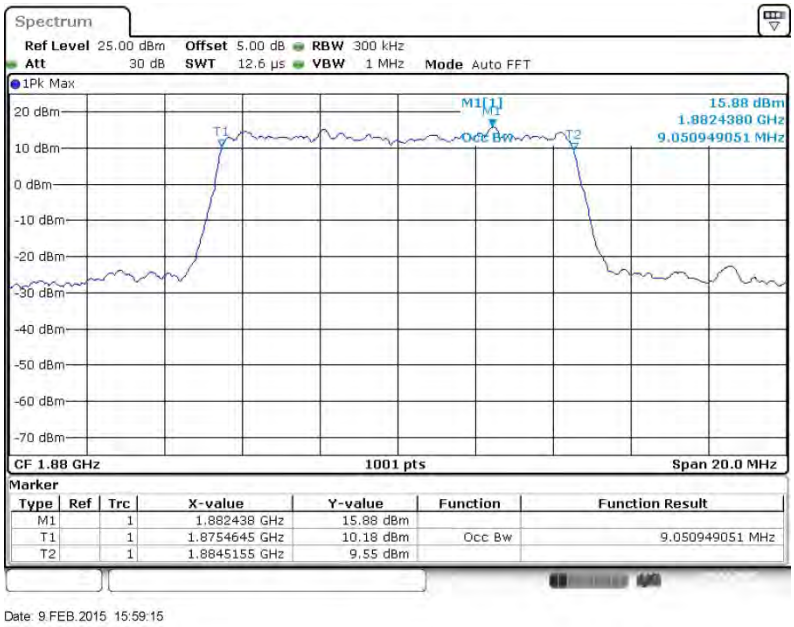


26dB Bandwidth Plot on Channel 18900

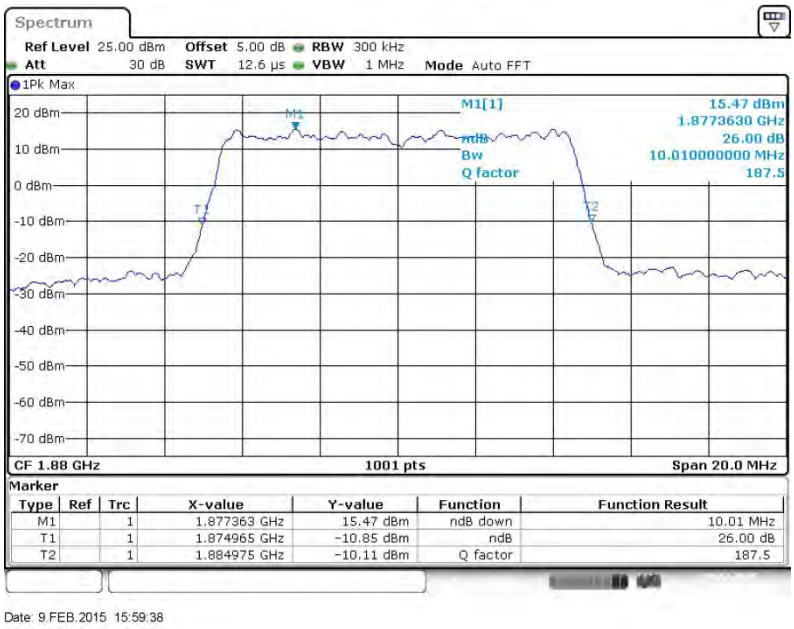


Band :	LTE Band 2	BW / Mod. :	10MHz / 16QAM

99% Occupied Bandwidth Plot on Channel 18900

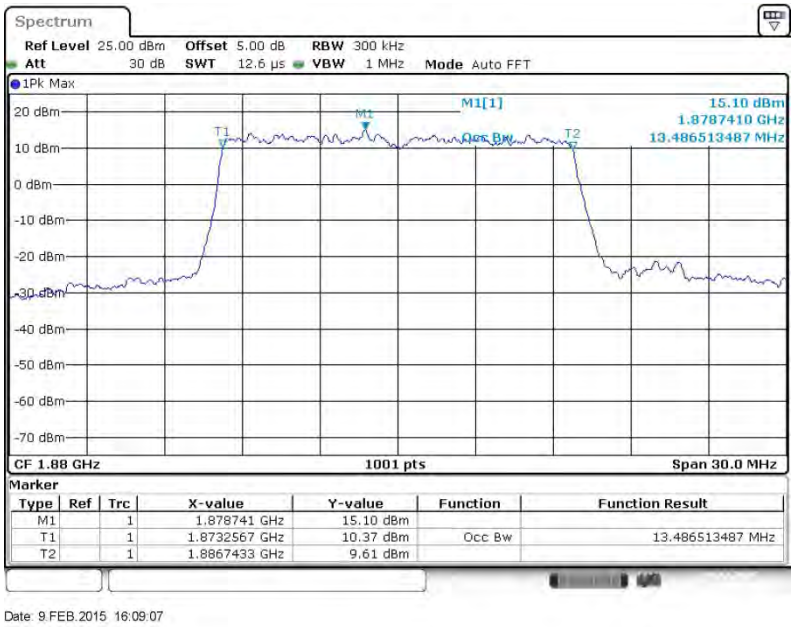


26dB Bandwidth Plot on Channel 18900

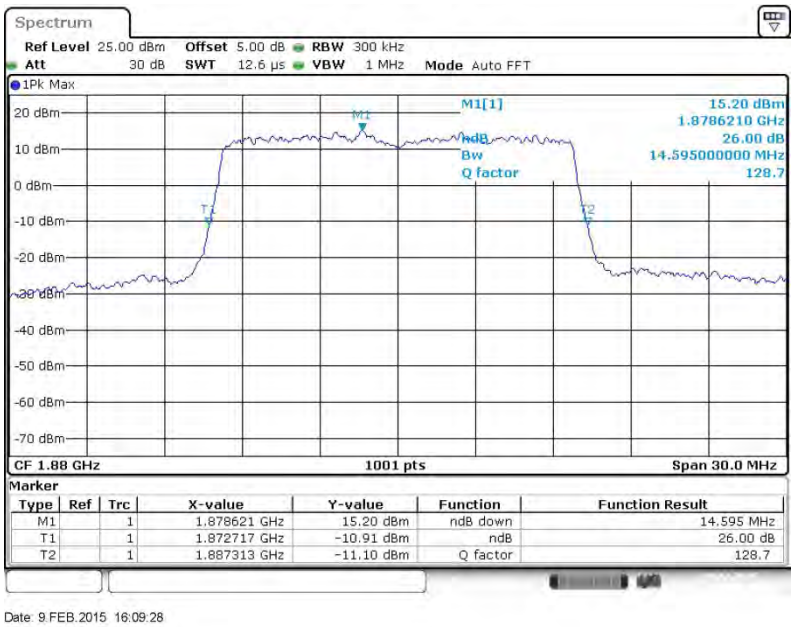


Band :	LTE Band 2	BW / Mod. :	15MHz / QPSK

99% Occupied Bandwidth Plot on Channel 18900

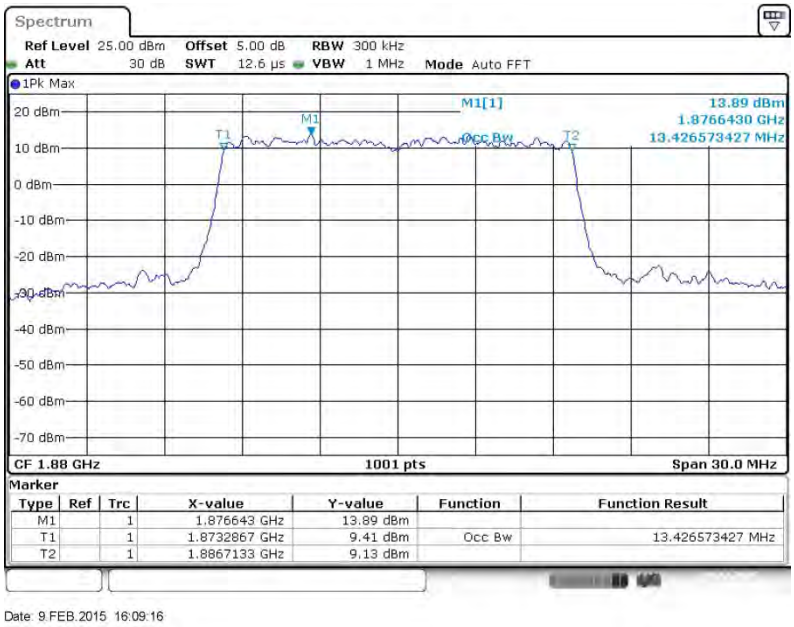


26dB Bandwidth Plot on Channel 18900

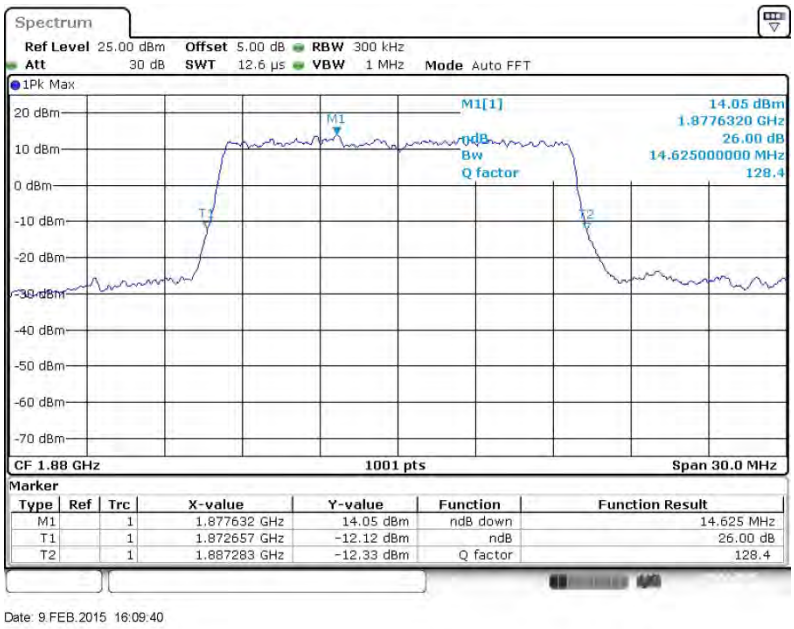


Band :	LTE Band 2	BW / Mod. :	15MHz / 16QAM

99% Occupied Bandwidth Plot on Channel 18900

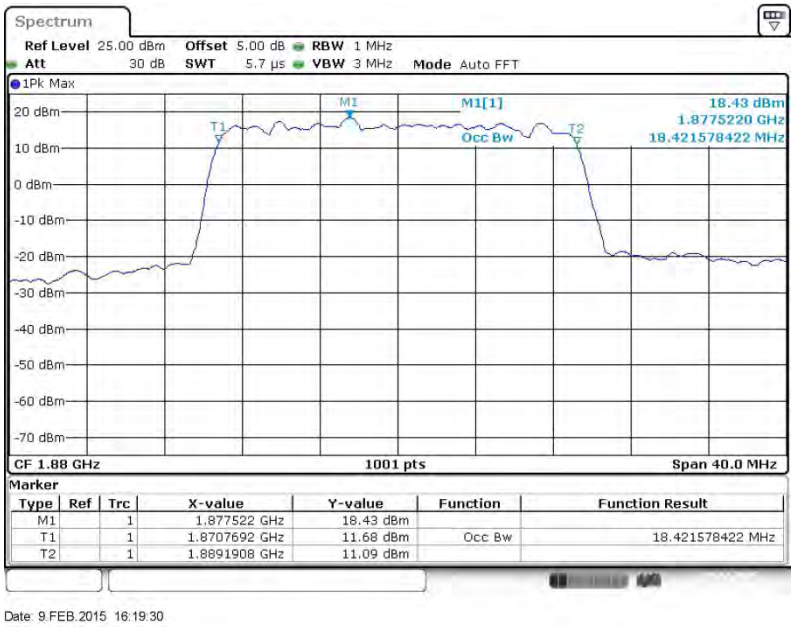


26dB Bandwidth Plot on Channel 18900

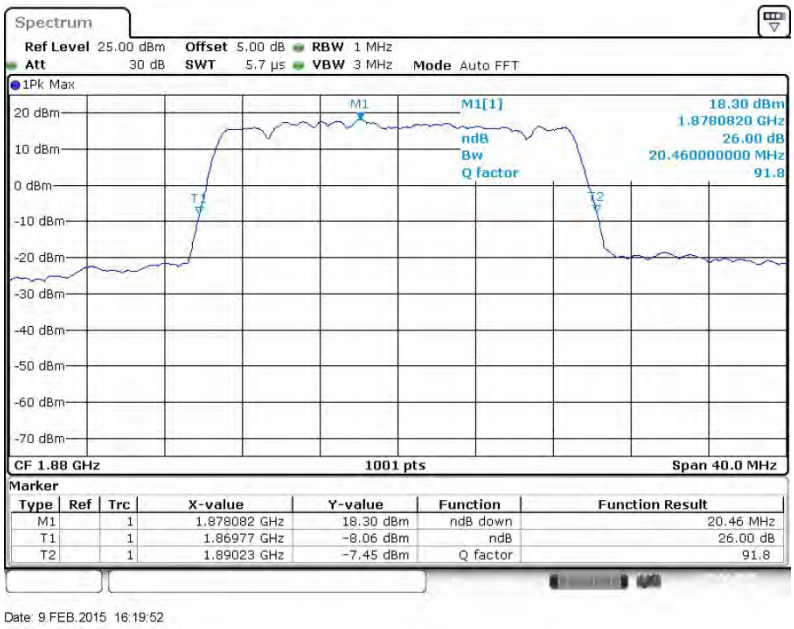


Band :	LTE Band 2	BW / Mod. :	20MHz / QPSK

99% Occupied Bandwidth Plot on Channel 18900

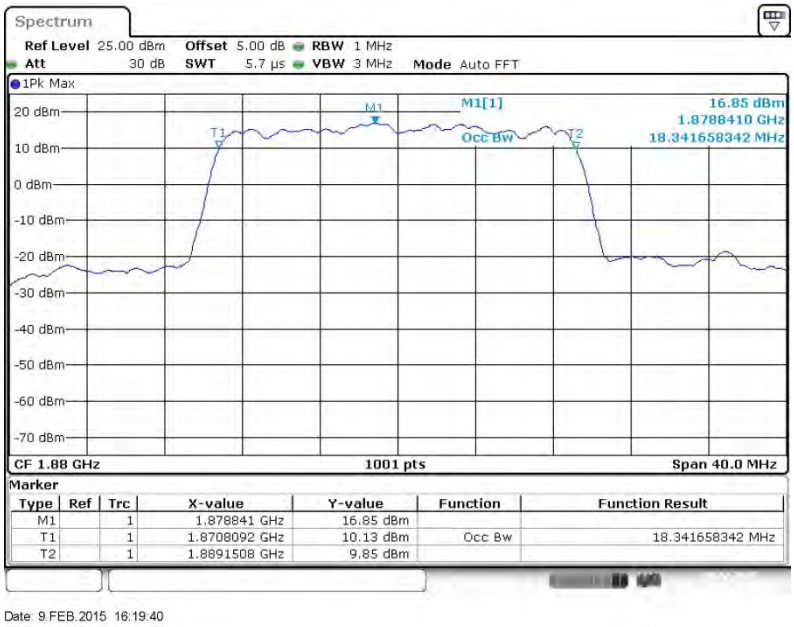


26dB Bandwidth Plot on Channel 18900

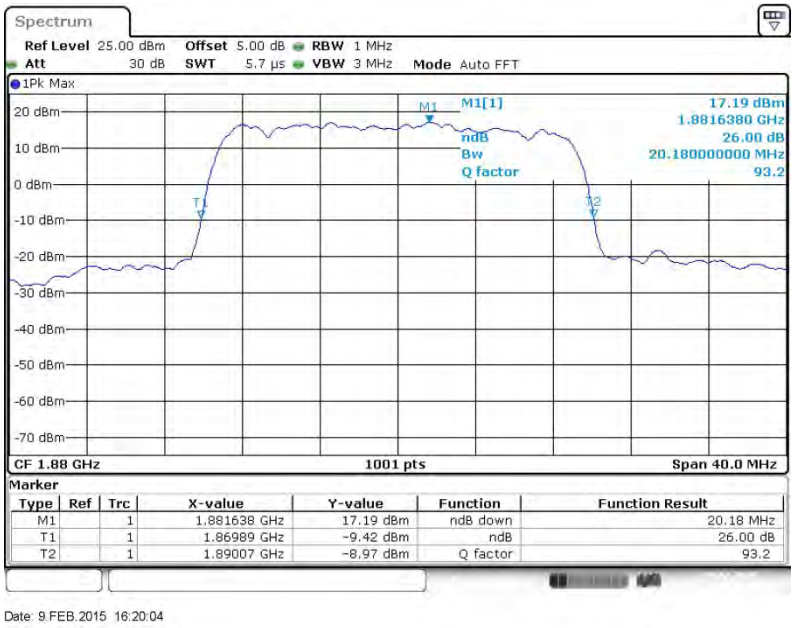


Band :	LTE Band 2	BW / Mod. :	20MHz / 16QAM

99% Occupied Bandwidth Plot on Channel 18900

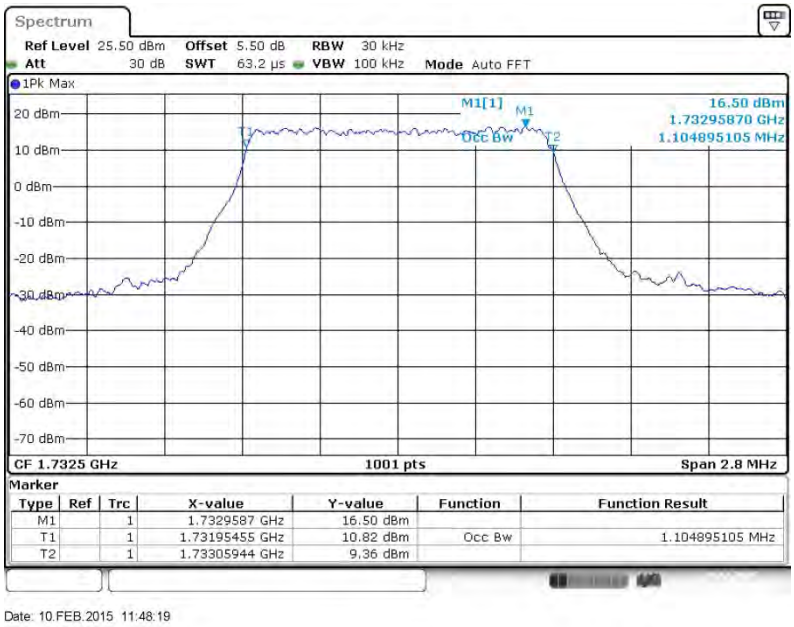


26dB Bandwidth Plot on Channel 18900

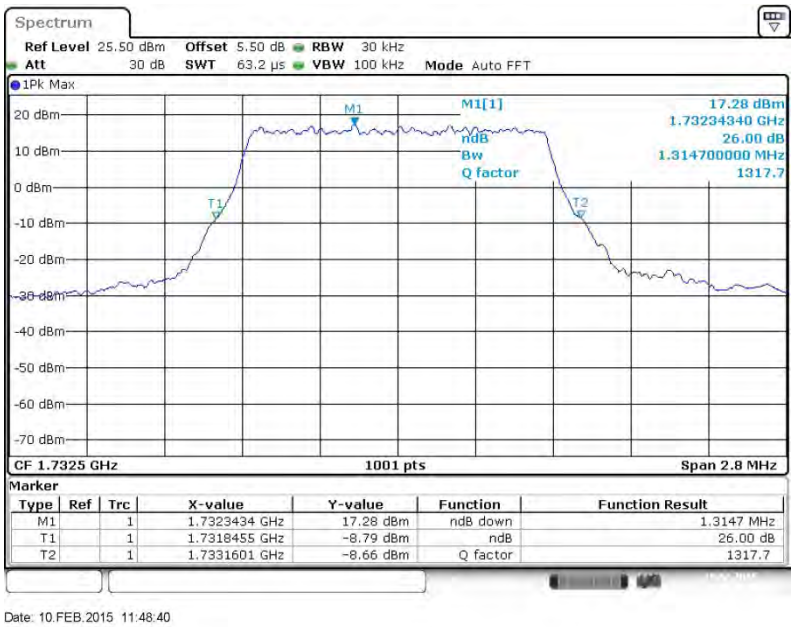


Band :	LTE Band 4	BW / Mod. :	1.4MHz / QPSK

99% Occupied Bandwidth Plot on Channel 20175

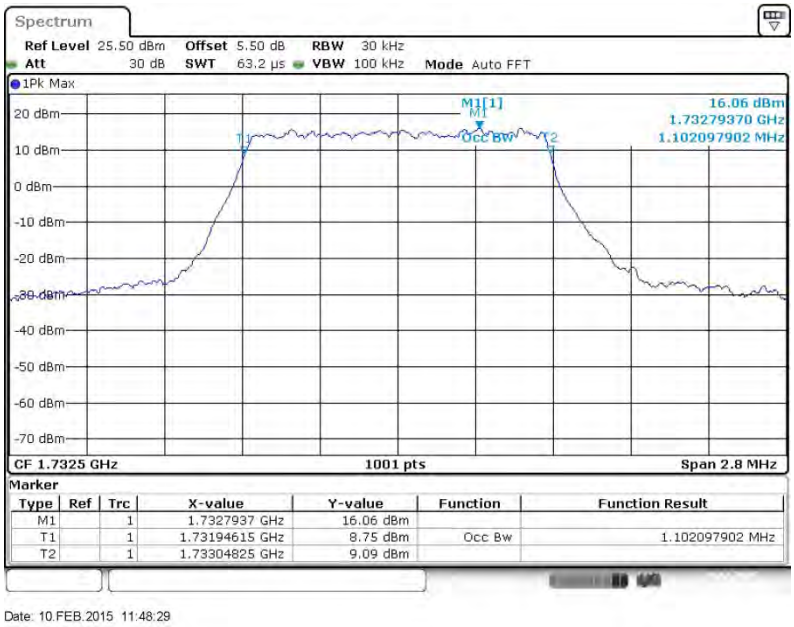


26dB Bandwidth Plot on Channel 20175

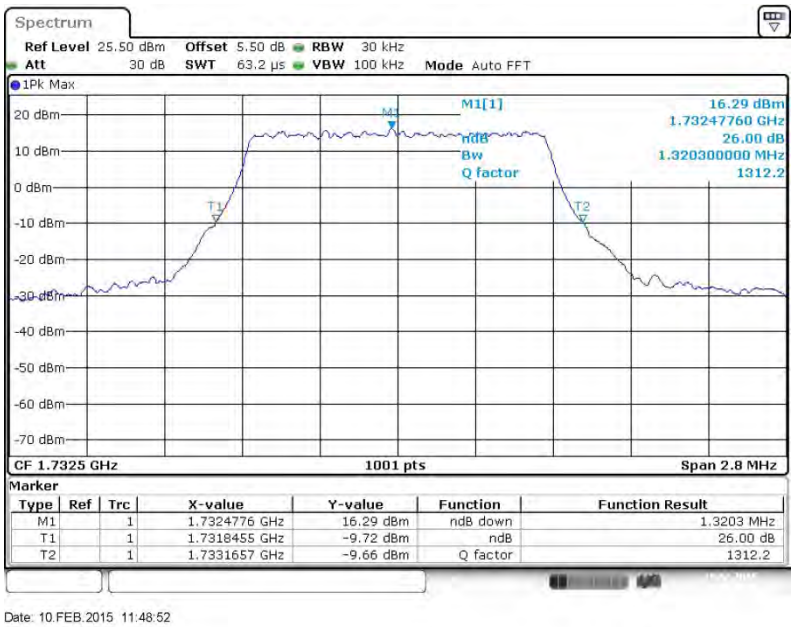


Band :	LTE Band 4	BW / Mod. :	1.4MHz / 16QAM

99% Occupied Bandwidth Plot on Channel 20175

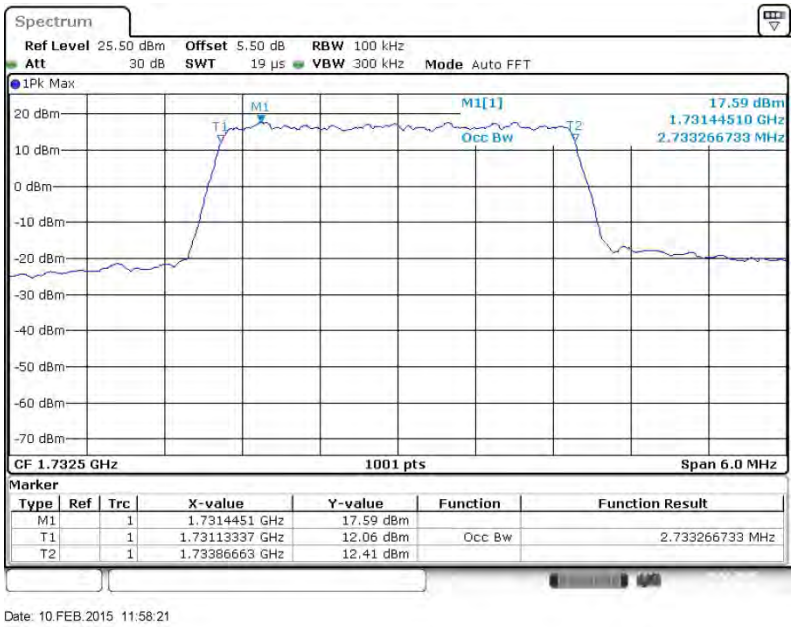


26dB Bandwidth Plot on Channel 20175

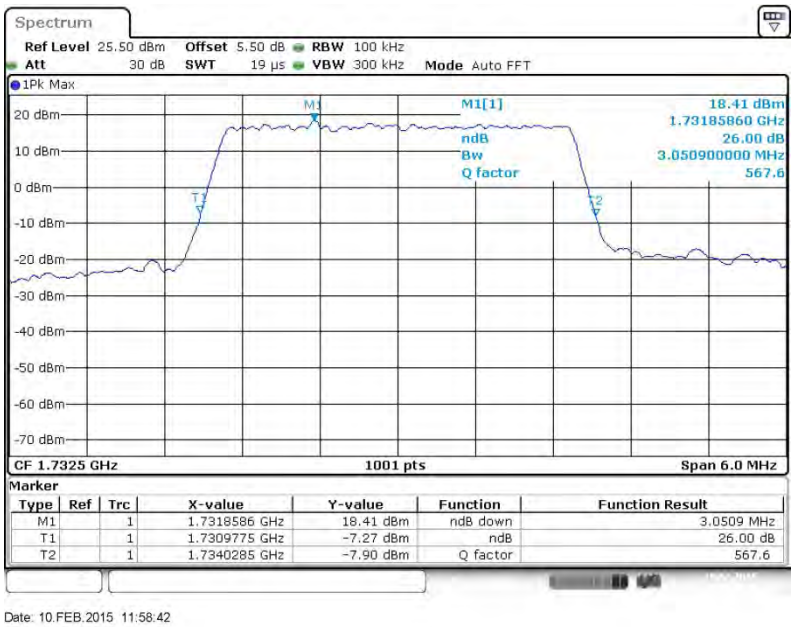


Band :	LTE Band 4	BW / Mod. :	3MHz / QPSK

99% Occupied Bandwidth Plot on Channel 20175

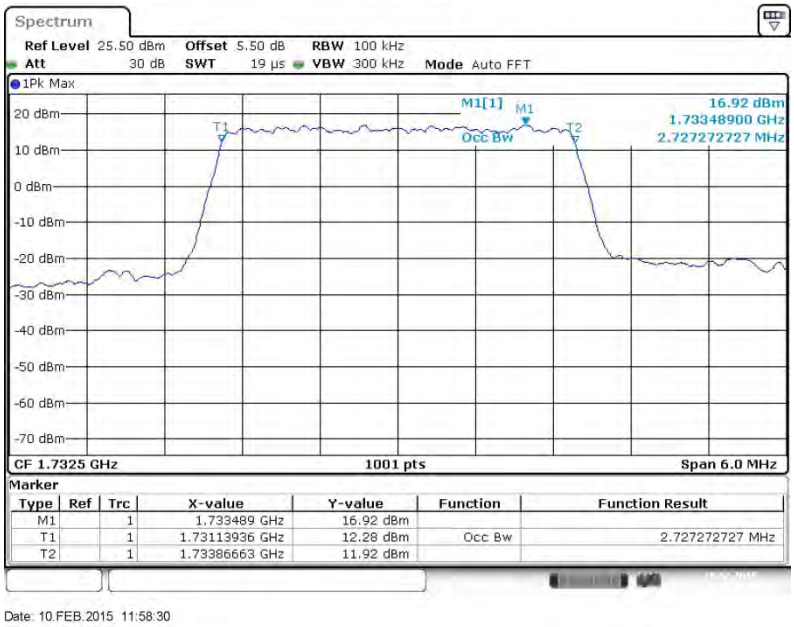


26dB Bandwidth Plot on Channel 20175

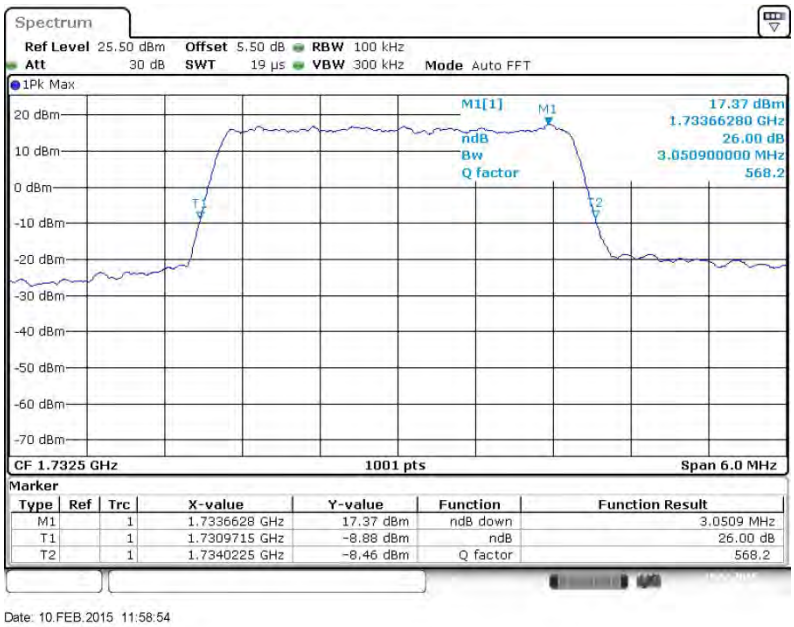


Band :	LTE Band 4	BW / Mod. :	3MHz / 16QAM

99% Occupied Bandwidth Plot on Channel 20175

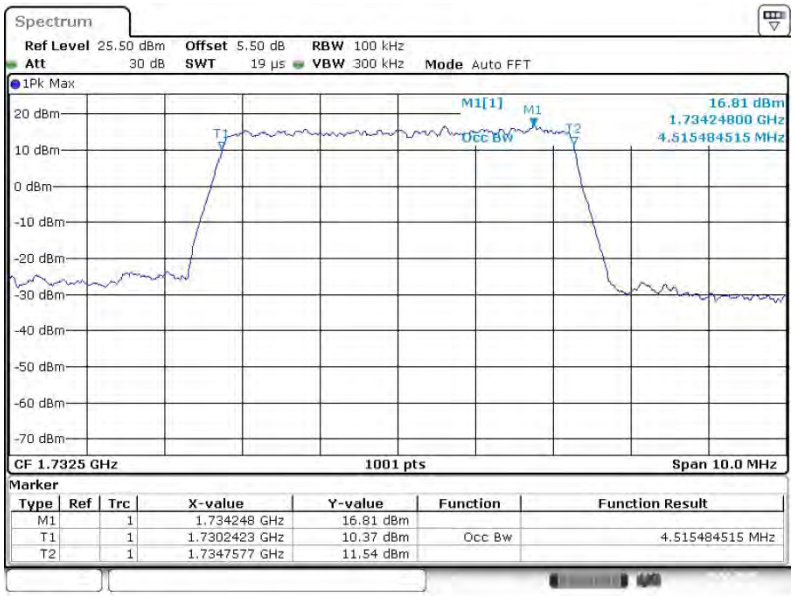


26dB Bandwidth Plot on Channel 20175



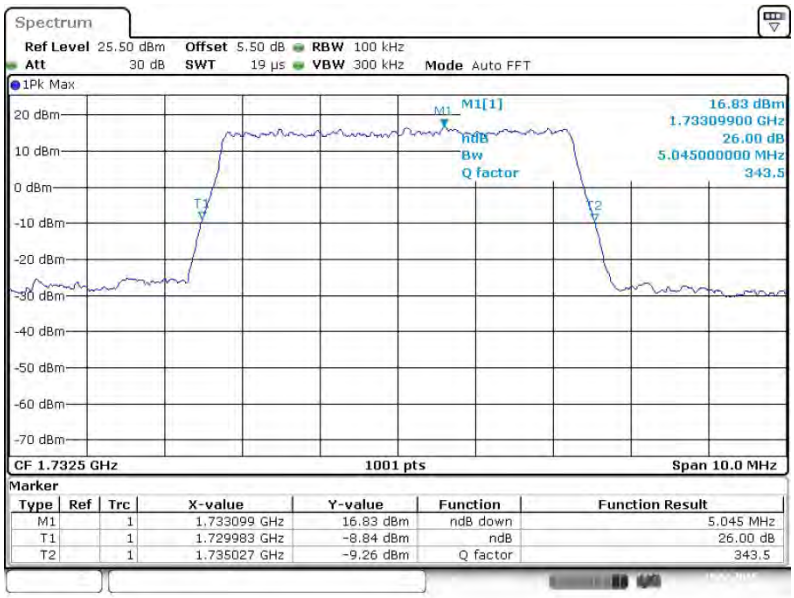
Band :	LTE Band 4	BW / Mod. :	5MHz / QPSK

99% Occupied Bandwidth Plot on Channel 20175



Date: 10.FEB.2015 15:38:31

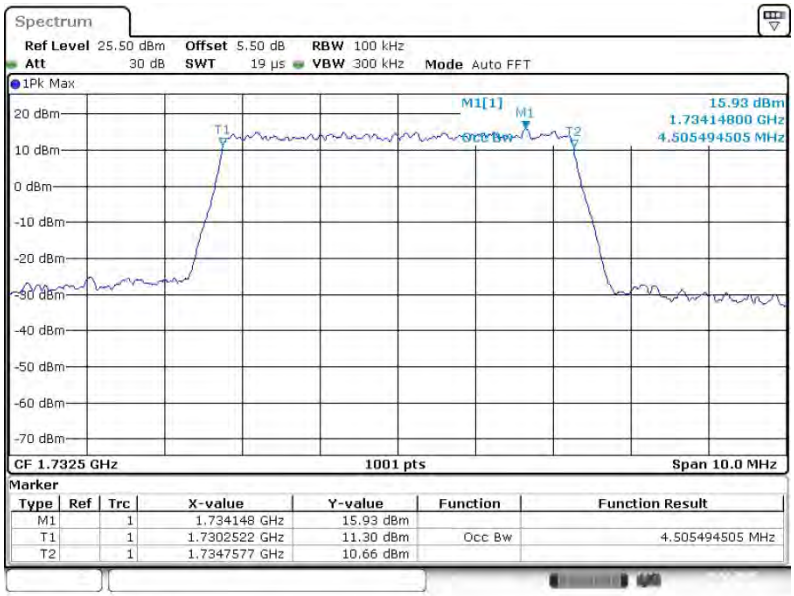
26dB Bandwidth Plot on Channel 20175



Date: 10.FEB.2015 13:19:26

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

99% Occupied Bandwidth Plot on Channel 20175



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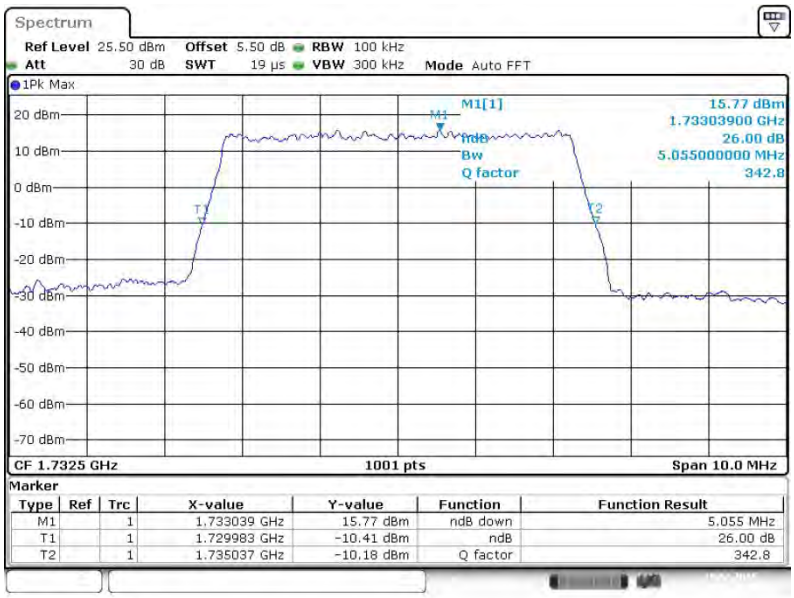
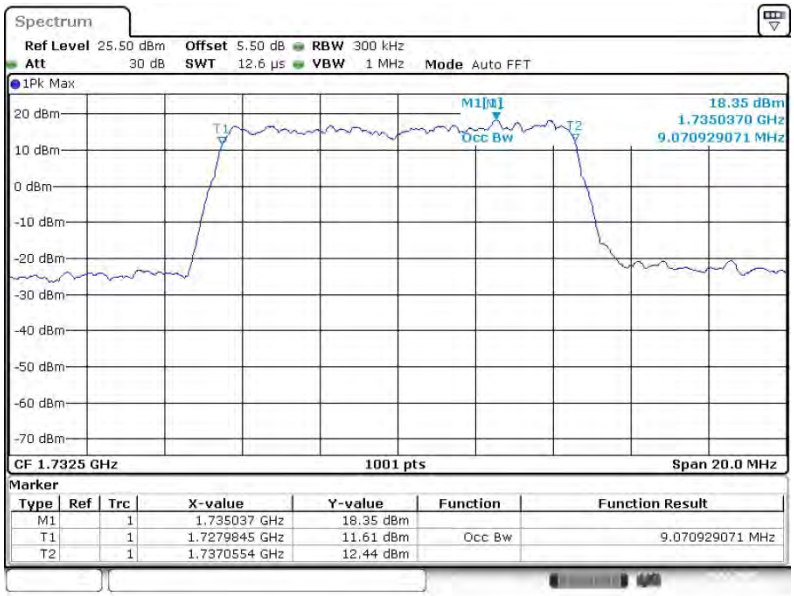
26dB Bandwidth Plot on Channel 20175



Date: 10.FEB.2015 13:19:38

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

99% Occupied Bandwidth Plot on Channel 20175



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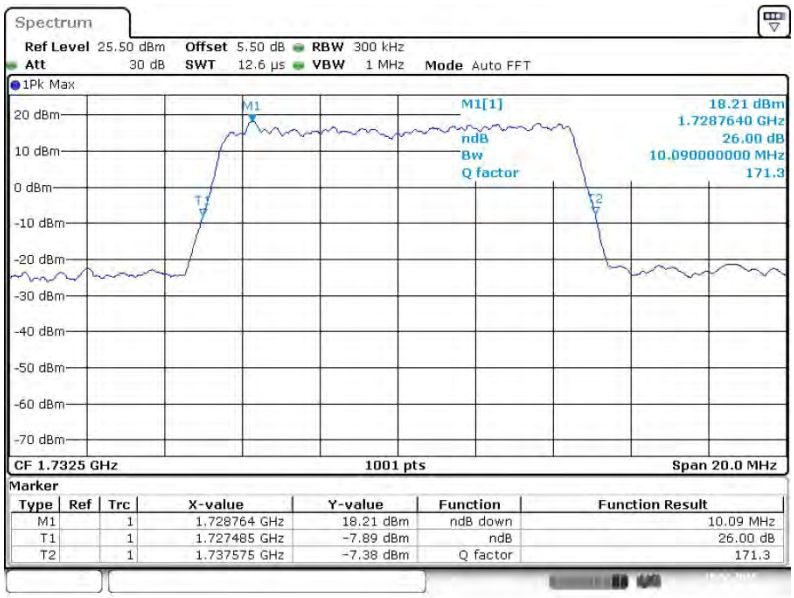
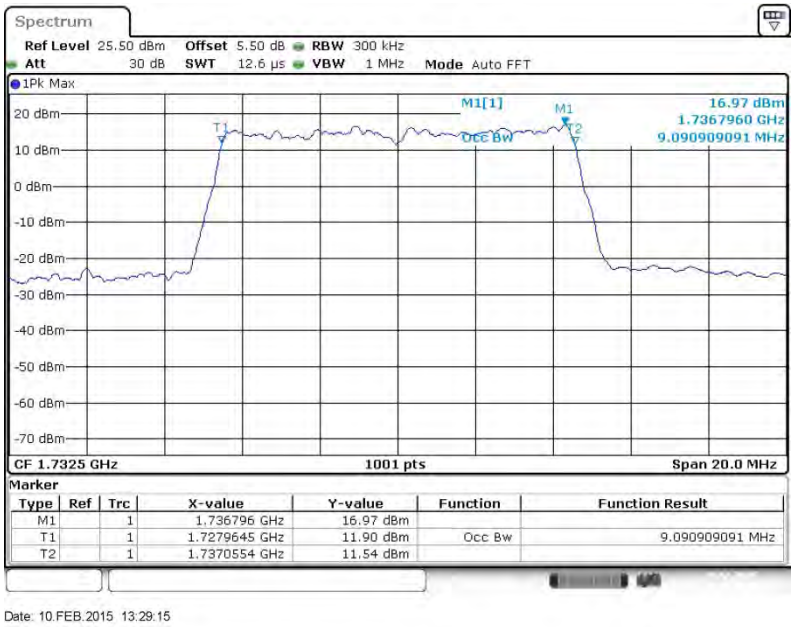
26dB Bandwidth Plot on Channel 20175



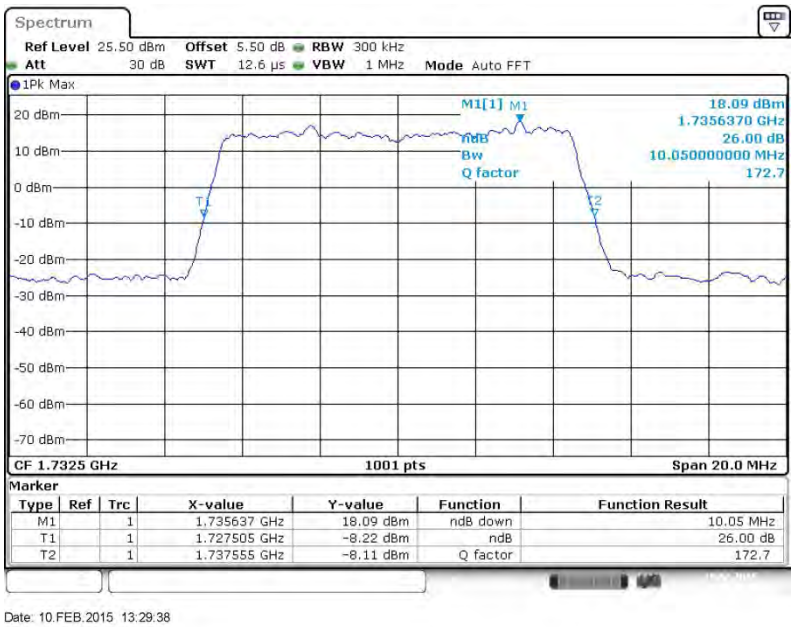
Date: 10.FEB.2015 13:29:26

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

99% Occupied Bandwidth Plot on Channel 20175

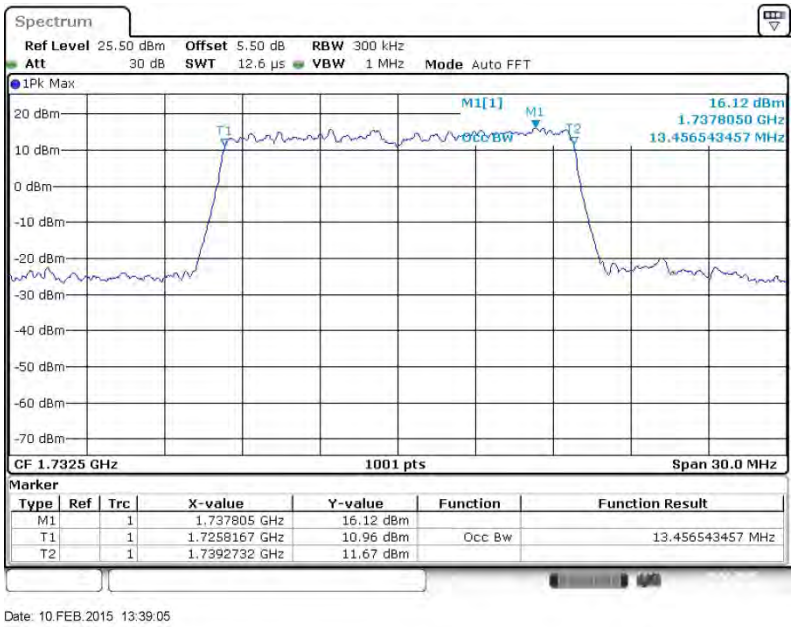


26dB Bandwidth Plot on Channel 20175

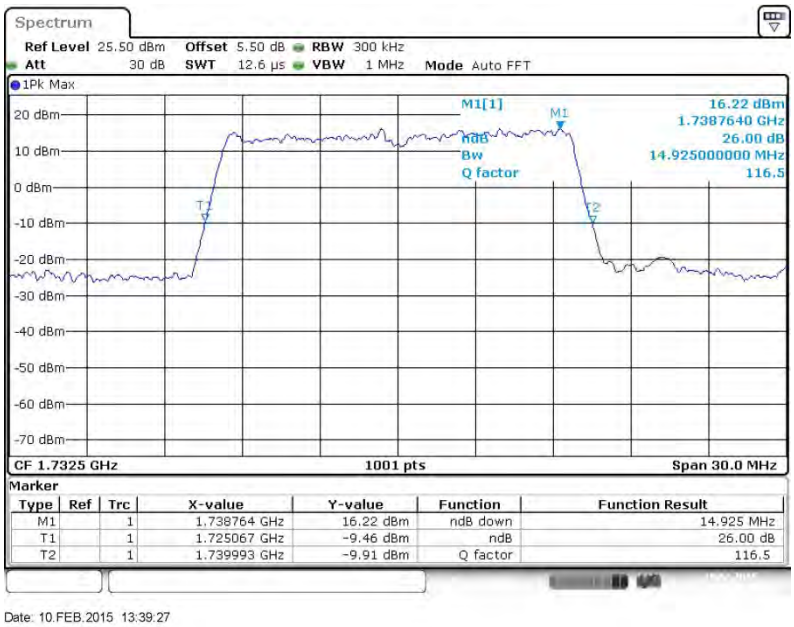


Band :	LTE Band 4	BW / Mod. :	15MHz / QPSK

99% Occupied Bandwidth Plot on Channel 20175

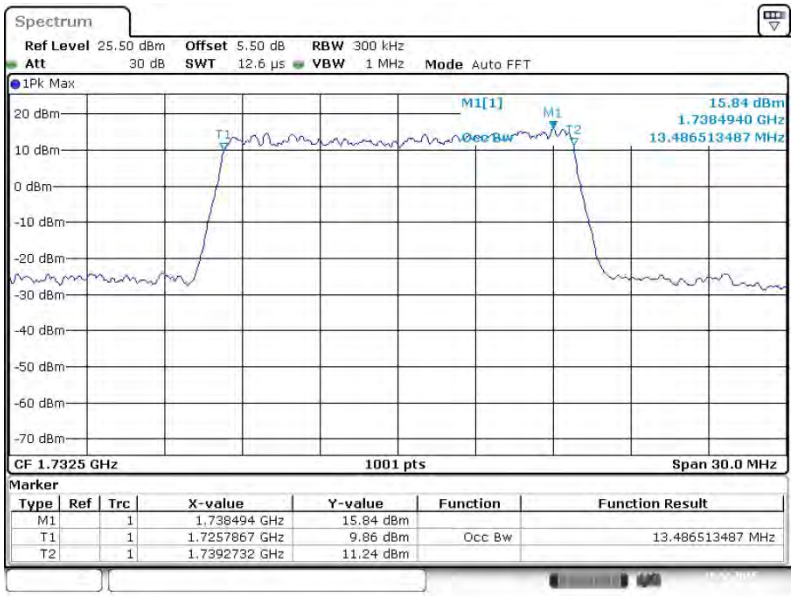


26dB Bandwidth Plot on Channel 20175



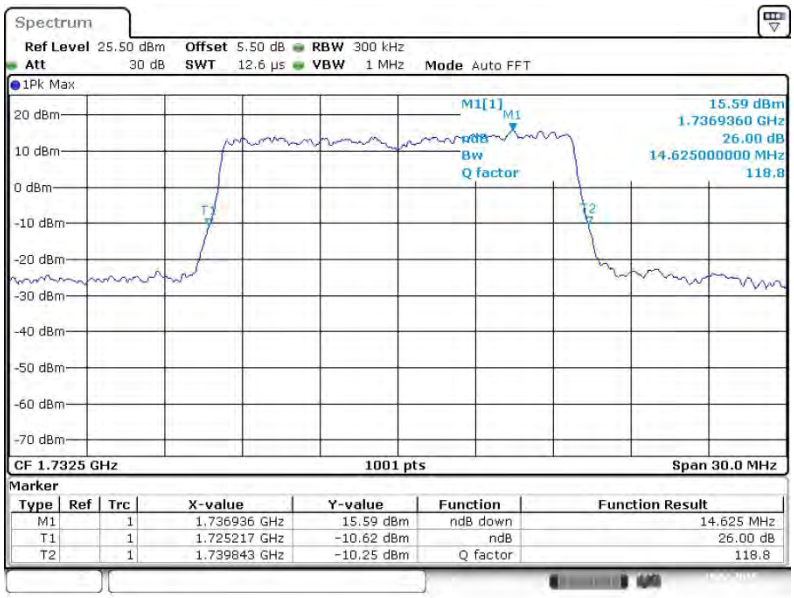
Band :	LTE Band 4	BW / Mod. :	15MHz / 16QAM

99% Occupied Bandwidth Plot on Channel 20175



Date: 10.FEB.2015 13:39:15

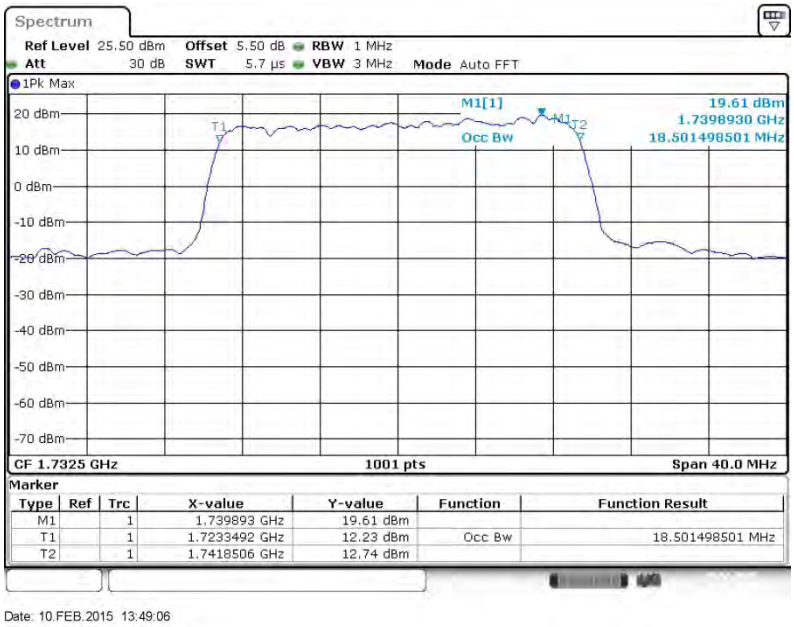
26dB Bandwidth Plot on Channel 20175



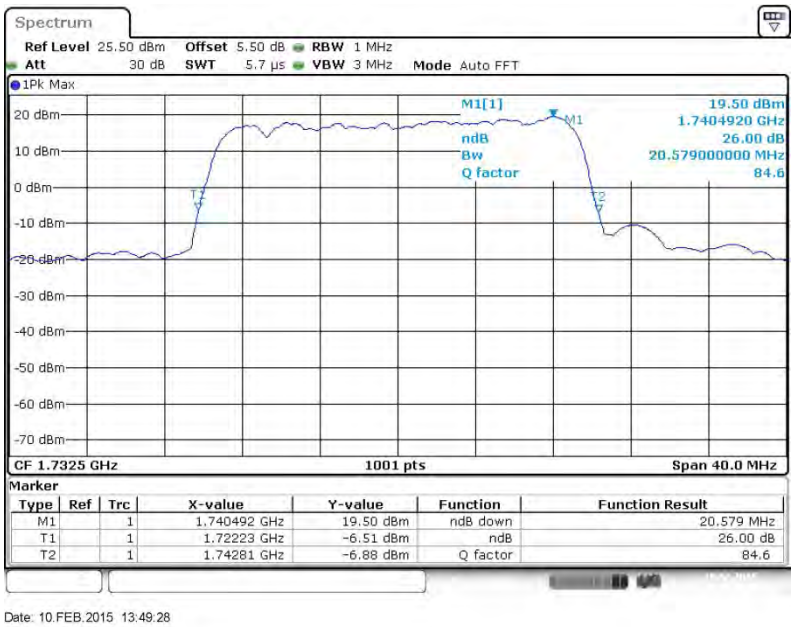
Date: 10.FEB.2015 13:39:39

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

99% Occupied Bandwidth Plot on Channel 20175

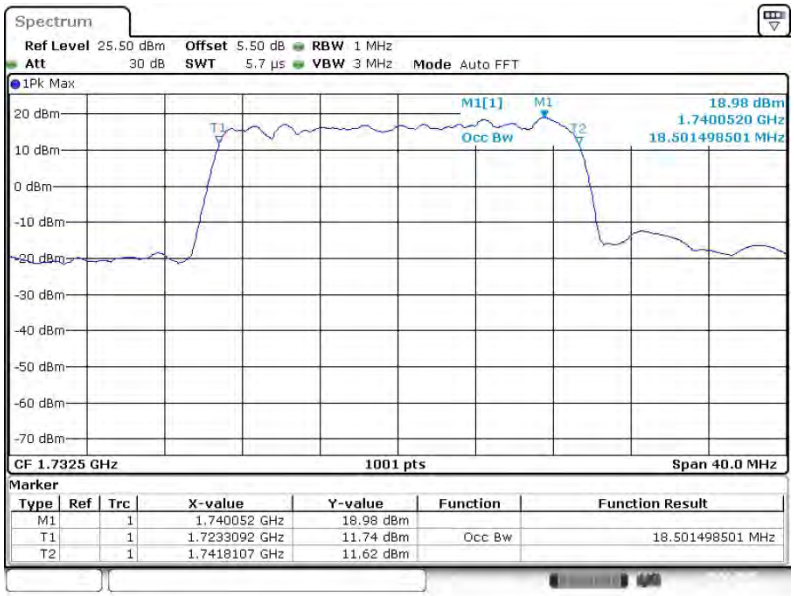


26dB Bandwidth Plot on Channel 20175



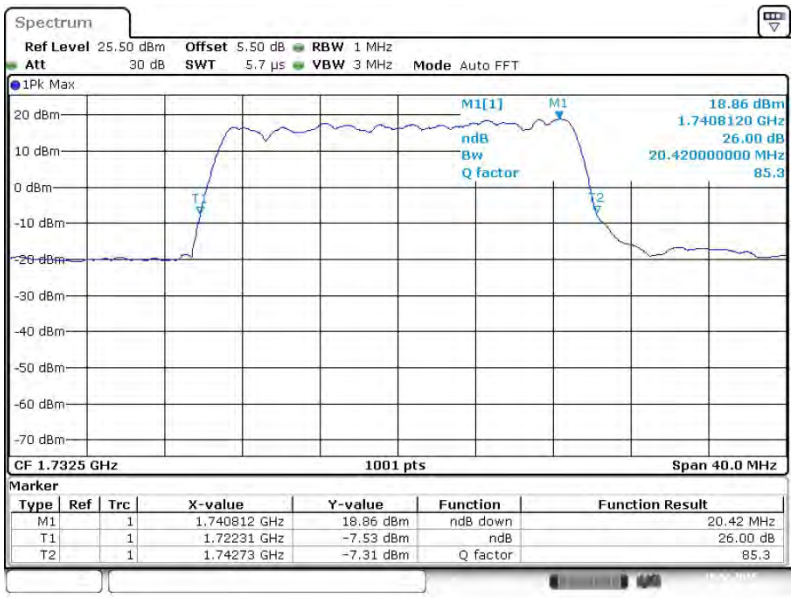
Band :	LTE Band 4	BW / Mod. :	20MHz / 16QAM

99% Occupied Bandwidth Plot on Channel 20175



Date: 10.FEB.2015 13:49:16

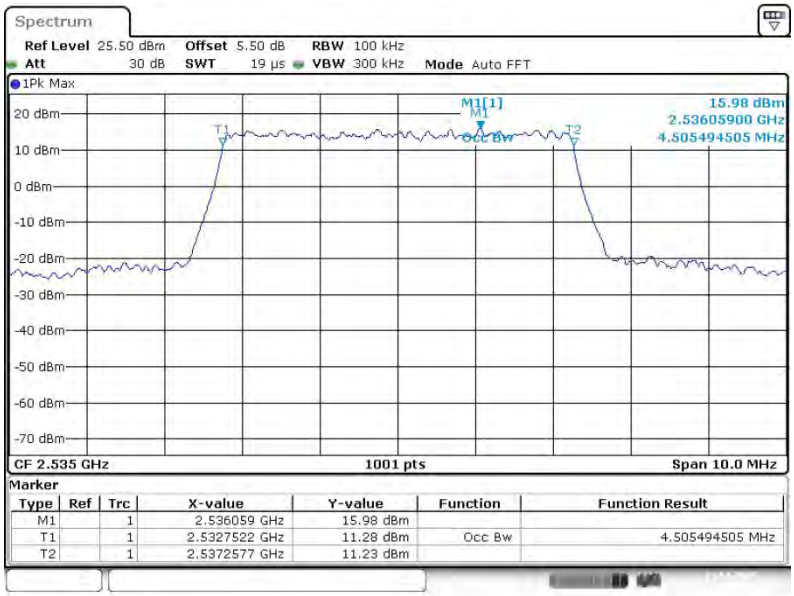
26dB Bandwidth Plot on Channel 20175



Date: 10.FEB.2015 13:49:40

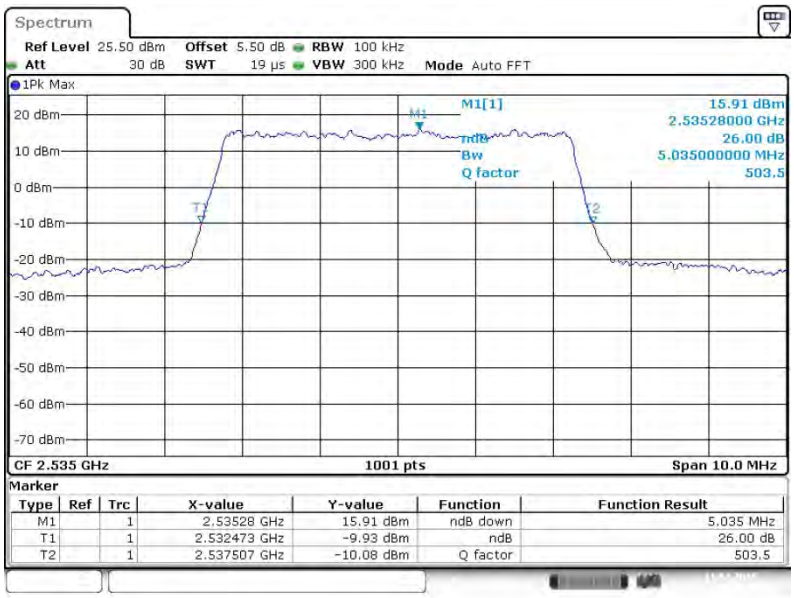
Band :	LTE Band 7	BW / Mod. :	5MHz / QPSK

99% Occupied Bandwidth Plot on Channel 21100



Date: 11.FEB.2015 14:49:52

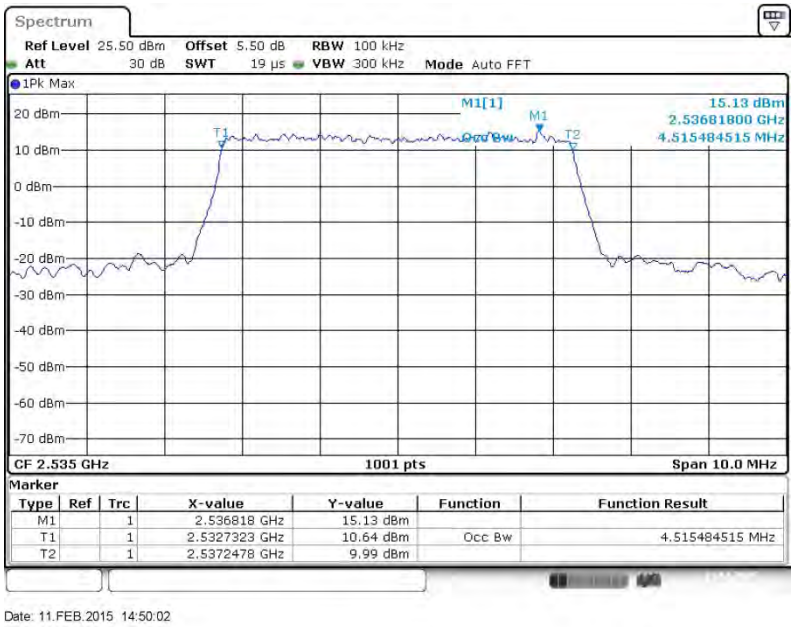
26dB Bandwidth Plot on Channel 21100



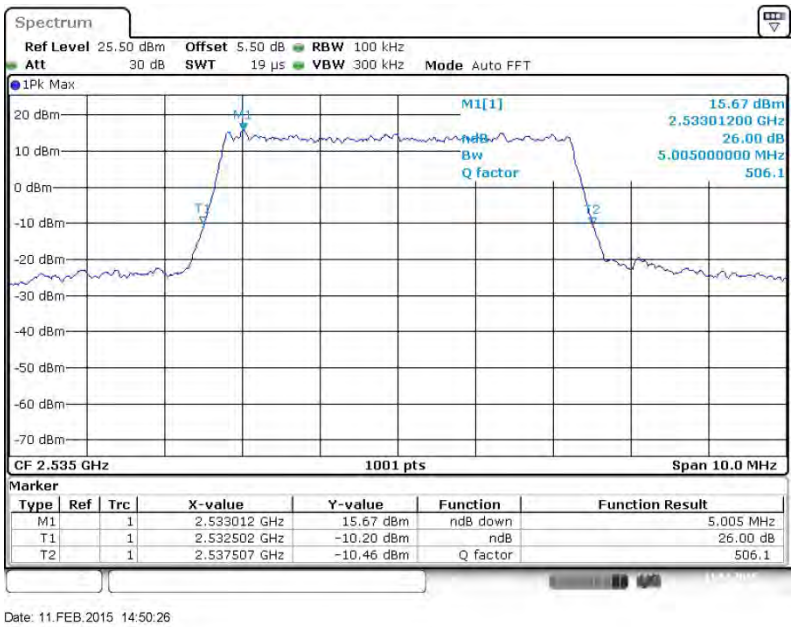
Date: 11.FEB.2015 14:50:14

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

99% Occupied Bandwidth Plot on Channel 21100

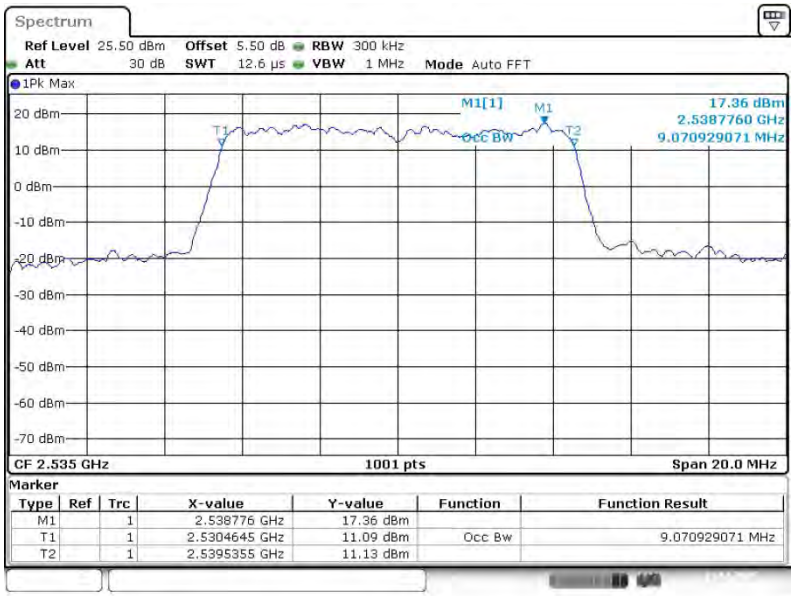


26dB Bandwidth Plot on Channel 21100



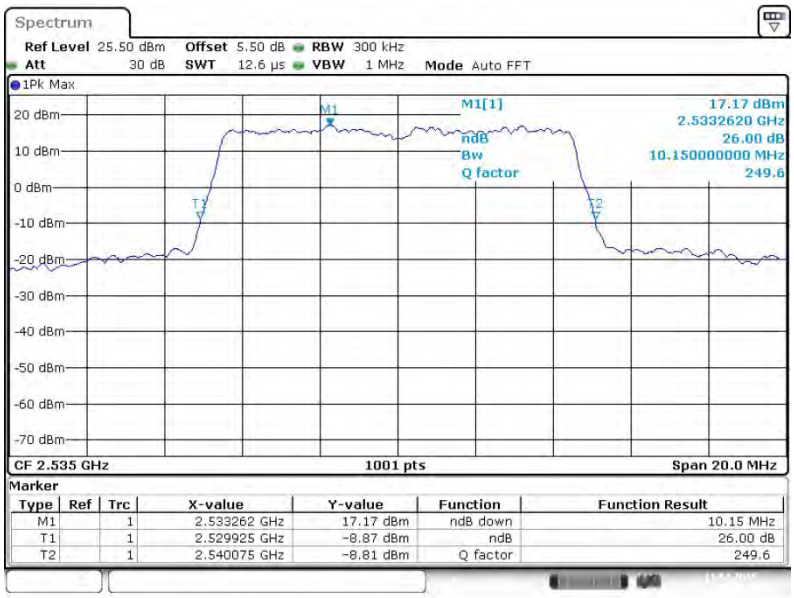
Band :	LTE Band 7	BW / Mod. :	10MHz / QPSK

99% Occupied Bandwidth Plot on Channel 21100



Date: 11.FEB.2015 14:59:54

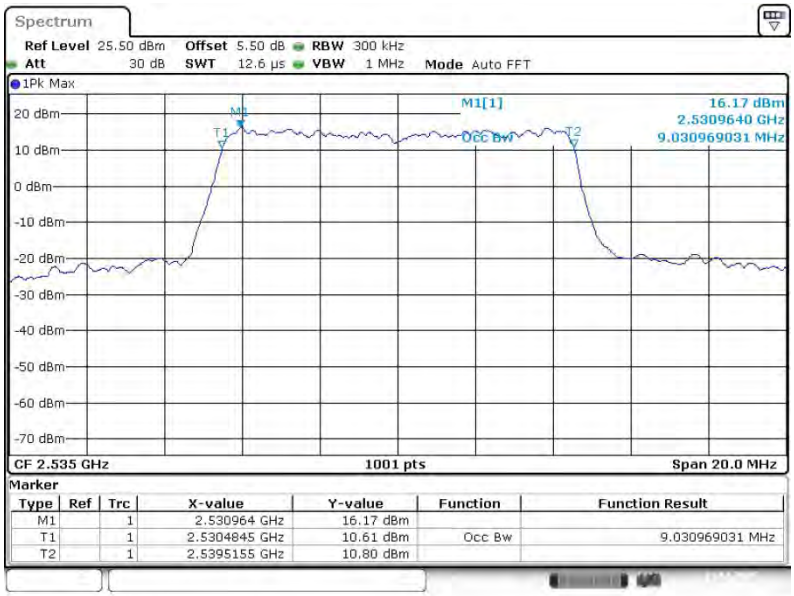
26dB Bandwidth Plot on Channel 21100



Date: 11.FEB.2015 15:00:16

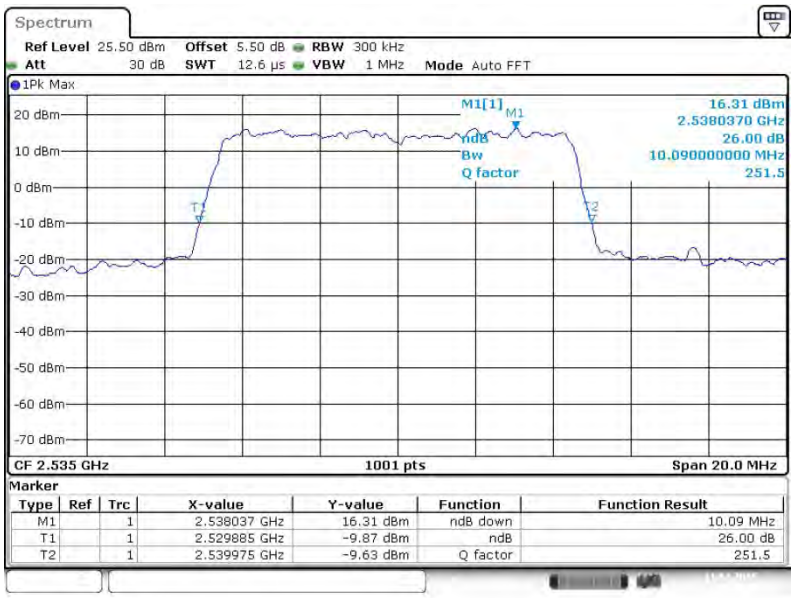
Band :	LTE Band 7	BW / Mod. :	10MHz / 16QAM

99% Occupied Bandwidth Plot on Channel 21100



Date: 11.FEB.2015 15:27:22

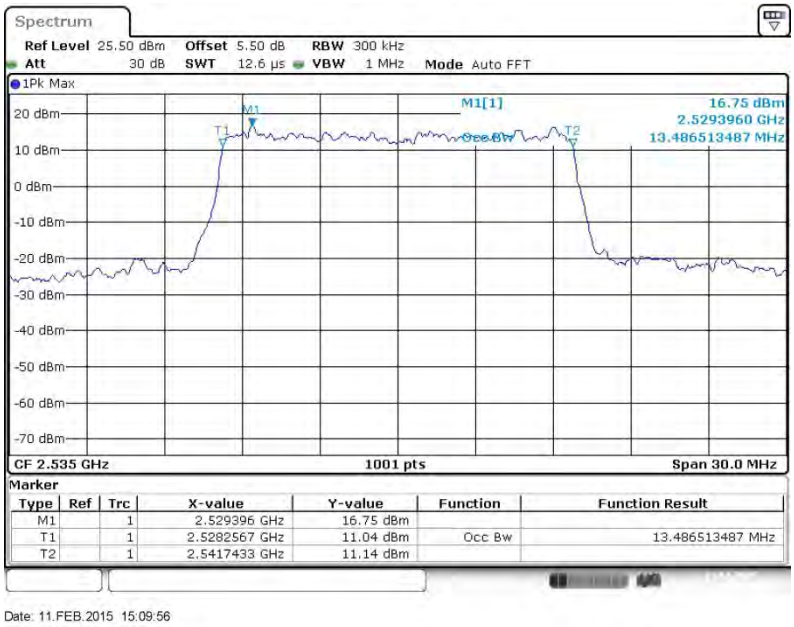
26dB Bandwidth Plot on Channel 21100



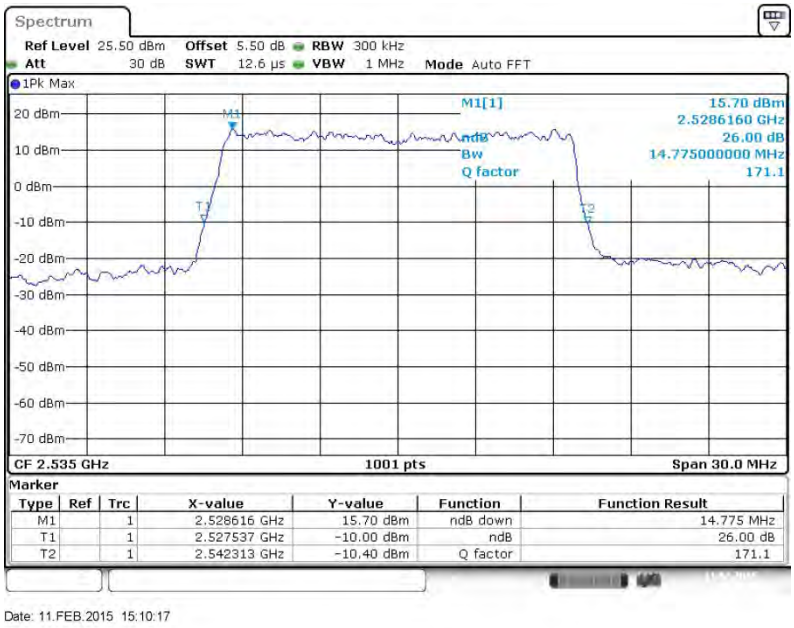
Date: 11.FEB.2015 15:00:27

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

99% Occupied Bandwidth Plot on Channel 21100

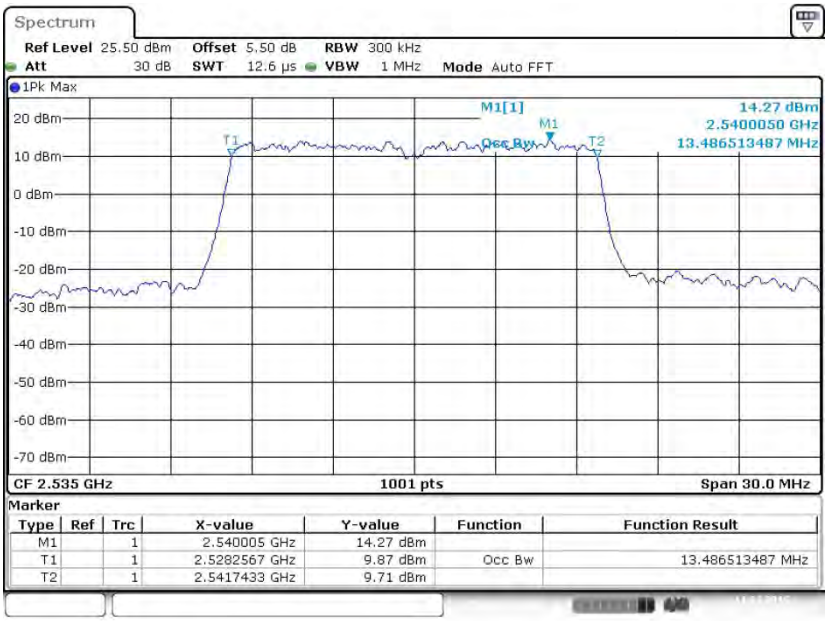


26dB Bandwidth Plot on Channel 21100



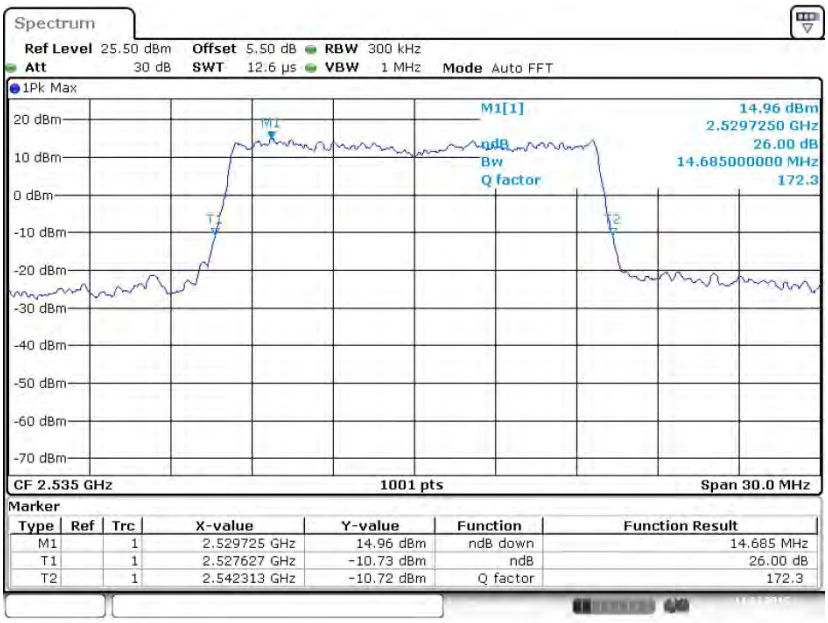
Band :	LTE Band 7	BW / Mod. :	15MHz / 16QAM

99% Occupied Bandwidth Plot on Channel 21100



Date: 11.FEB.2015 15:10:05

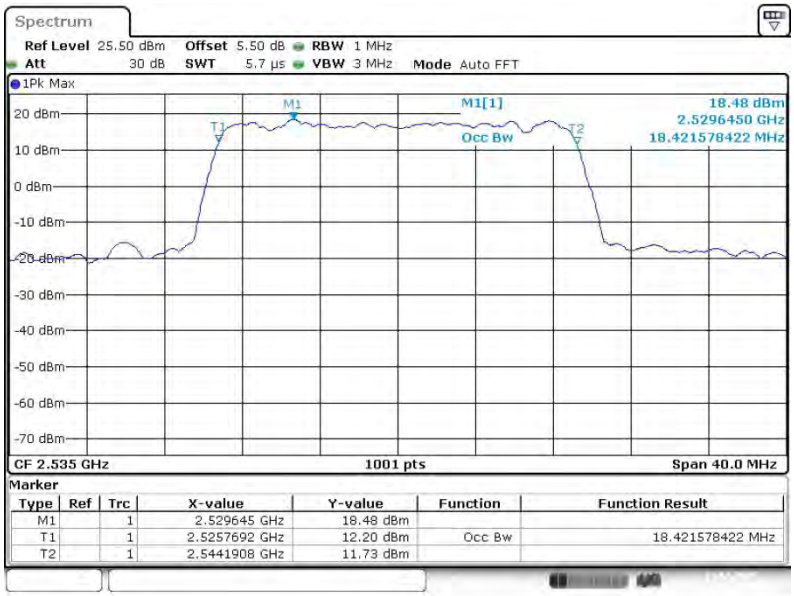
26dB Bandwidth Plot on Channel 21100



Date: 11.FEB.2015 15:10:29

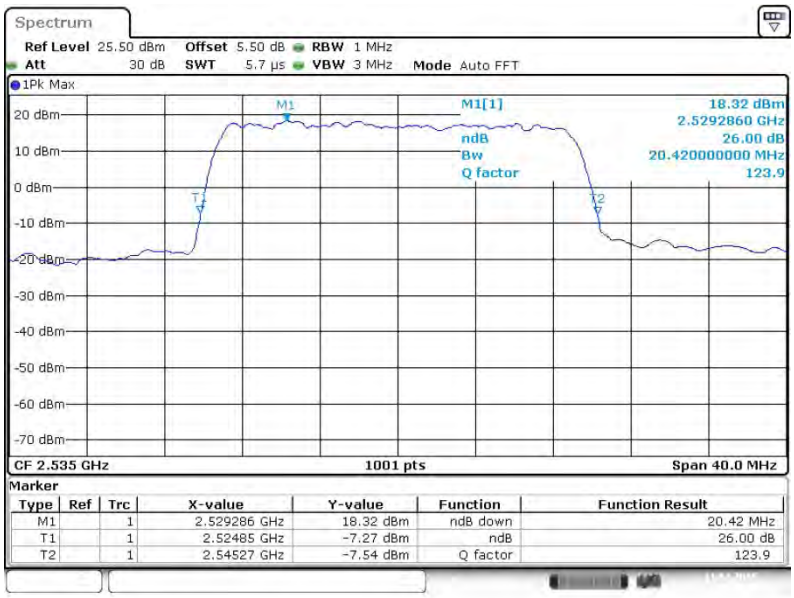
Band :	LTE Band 7	BW / Mod. :	20MHz / QPSK

99% Occupied Bandwidth Plot on Channel 21100



Date: 11.FEB.2015 15:19:57

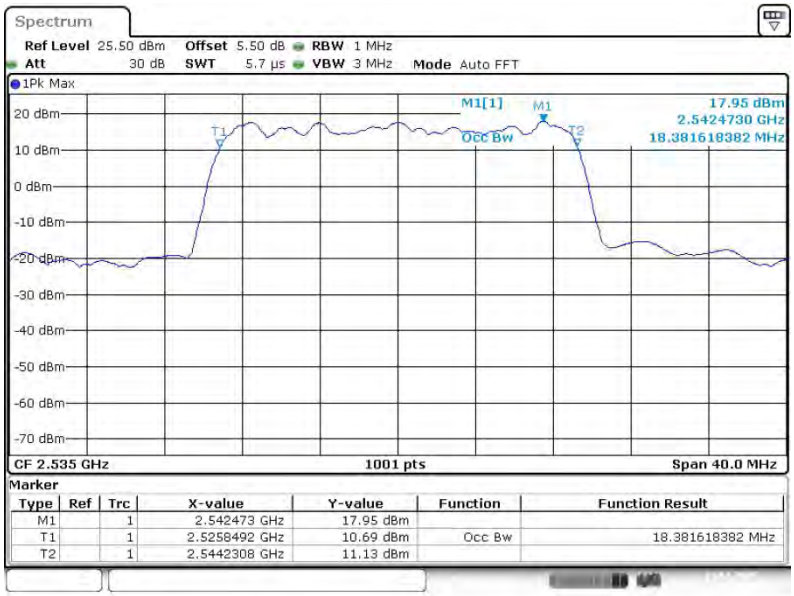
26dB Bandwidth Plot on Channel 21100



Date: 11.FEB.2015 15:20:19

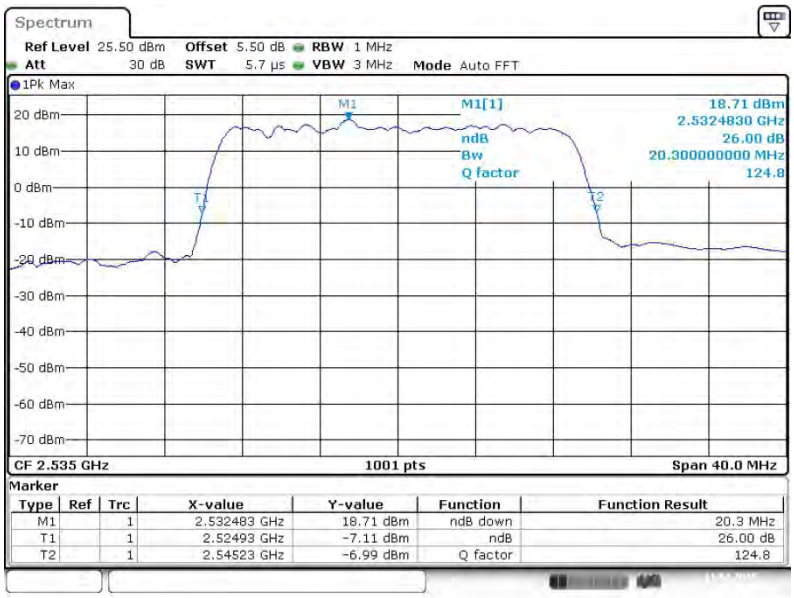
Band :	LTE Band 7	BW / Mod. :	20MHz / 16QAM

99% Occupied Bandwidth Plot on Channel 21100



Date: 11.FEB.2015 15:20:07

26dB Bandwidth Plot on Channel 21100



Date: 11.FEB.2015 15:20:31