FCC RF Test Report

APPLICANT	: FIBOCOM WIRELESS INC.
EQUIPMENT	: LTE Module
BRAND NAME	: Fibocom
MODEL NAME	: L830-EA
FCC ID	: ZMOL830
STANDARD	: 47 CFR Part 2, 22(H), 24(E), 27(L), 27(M), 27(F), 27(H)
CLASSIFICATION	: PCS Licensed Transmitter (PCB)

The product was received on Aug. 25, 2015 and completely tested on Jan. 04, 2016. We, SPORTON INTERNATIONAL (SHENZHEN) INC., would like to declare that the tested sample has been evaluated in accordance with the test procedures given in ANSI / TIA / EIA-603-D-2010 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 (SHENZHEN) INC., the test report shall not be reproduced except in full.

Prepared by: Andy Yeh / Manager

Approved by: Jones Tsai / Manager

SPORTON INTERNATIONAL (SHENZHEN) INC.

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG582503B	Rev. 01	Initial issue of report	Jan. 22, 2016

SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.4	§2.1046	Conducted Output Power	Reporting Only	PASS	-
3.4	§22.913(a)(2)	Effective Radiated Power (Band 5)	ERP < 7 Watt	PASS	-
	§27.50(b)(10) §27.50(c)(10)	Effective Radiated Power (Band 13) (Band 17)	ERP < 3 Watt		
	§24.232(c) §27.50(h)(2)	Equivalent Isotropic Radiated Power (Band 2)(Band 26) (Band 7)	EIRP < 2Watt		
	§27.50(d)(4)	Equivalent Isotropic Radiated Power (Band 4)	EIRP < 1Watt		
3.5	§24.232(d)	Peak-to-Average Ratio	<13 dB	PASS	-
3.6	§2.1049	Occupied Bandwidth	Reporting Only	PASS	-
3.7	§2.1051 §22.917(a) §24.238(a) §27.53(c)(2)(4) §27.53(g) §27.53(h)	Conducted Band Edge Measurement (Band 2) (Band 4) (Band 5) (Band 13) (Band 17)(Band 26)	< 43+10log10(P[Watts])	PASS	-
	§27.53(m)(4)	Conducted Band Edge Measurement (Band 7)	§27.53(m)(4)		

Report Section	FCC Rule	Description	Limit	Result	Remark
3.8	§2.1051 §22.917(a) §24.238(a) §27.53(c)(2) §27.53(g) §27.53(h)	Conducted Spurious Emission (Band 2) (Band 4) (Band 5) (Band 13) (Band 17)(Band 26)	< 43+10log10(P[Watts])	PASS	-
	§2.1051 §27.53(m)(4)	Conducted Spurious Emission (Band 7)	< 55+10log$_{10}$(P[Watts])		
3.9	§2.1055 §22.355	Frequency Stability Temperature & Voltage	< 2.5 ppm for Part 22	PASS	-
	§2.1055 §24.235 §27.54		Within Authorized Band		
4.4	§2.1053 §22.917(a) §24.238(a) §27.53(c)(2) §27.53(f) §27.53(g) §27.53(h)	Radiated Spurious Emission (Band 2) (Band 4) (Band 5) (Band 13) (Band 17)(Band 26)	< 43+10log$_{10}$(P[Watts])	PASS	Under limit 16.89 dB at 5061.180 MHz
	§2.1053 §27.53(m)(4)	Radiated Spurious Emission (Band 7)	< 55+10log$_{10}$(P[Watts])		

1 General Description

1.1 Applicant

FIBOCOM WIRELESS INC.

5/F, Tower A, Technology Building II,1057# Nanhai Blvd, Shenzhen, P. R. China

1.2 Manufacturer

FIBOCOM WIRELESS INC.

5/F, Tower A, Technology Building II,1057# Nanhai Blvd, Shenzhen, P. R. China

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	LTE Module
Brand Name	Fibocom
Model Name	L830-EA
FCC ID	ZMOL830
EUT supports Radios application	GPRS/EGPRS/ WCDMA/HSPA/HSPA+(16QAM uplink is not supported)/DC-HSDPA/LTE
IMEI Code	Conducted: 867603020008770 Radiation: 867603020009190
HW Version	V1.0.2
SW Version	L830_V3E.1C.01.00
EUT Stage	Identical Prototype

1.4 Product Specification of Equipment Under Test

Standards-related Product Specification	
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 13 : 779.5 MHz ~ 784.5 MHz LTE Band 17 : 706.5 MHz ~ 713.5 MHz LTE Band 26 : 824.7 MHz ~ 848.3 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 13 : 748.5 MHz ~ 753.5 MHz LTE Band 17 : 736.5 MHz ~ 743.5 MHz LTE Band 26: 869.7 MHz ~ 893.3 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 13 : 5MHz / 10MHz LTE Band 17 : 5MHz / 10MHz LTE Band 26 : 1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz
Maximum Output Power to Antenna	LTE Band 2 : 22.46 dBm LTE Band 4 : 22.45 dBm LTE Band 5 : 22.33 dBm LTE Band 7 : 22.94 dBm LTE Band 13 : 22.18 dBm LTE Band 17 : 22.11 dBm LTE Band 26 : 22.59 dBm
Antenna Type	Fixed External 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 Conducted Power, Frequency Tolerance, and Emission Designator

LTE Band 2	QPSK			16QAM		
BW(MHz)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum Conducted Power (W)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum Conducted Power (W)
1.4	1M10G7D	-	0.1762	1M10W7D	-	0.1459
3	2M72G7D	-	0.1726	2M73W7D	-	0.1472
5	4M50G7D	-	0.1667	4M51W7D	-	0.1384
10	9M13G7D	0.0133	0.1648	9M11W7D	-	0.1380
15	13M6G7D	-	0.1607	13M5W7D	-	0.1337
20	18M4G7D	-	0.1622	18M5W7D	-	0.1371
LTE Band 4	QPSK			16QAM		
BW(MHz)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum Conducted Power (W)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum Conducted Power (W)
1.4	1M11G7D	-	0.1758	1M09W7D	-	0.1496
3	2M72G7D	-	0.1746	2M71W7D	-	0.1469
5	4M50G7D	-	0.1679	4M50W7D	-	0.1409
10	9M05G7D	0.0139	0.1722	9M07W7D	-	0.1452
15	13M5G7D	-	0.1683	13M5W7D	-	0.1426
20	18M5G7D	-	0.1607	18M5W7D	-	0.1374
LTE Band 5	QPSK			16QAM		
BW(MHz)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum Conducted Power (W)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum Conducted Power (W)
1.4	1M10G7D	-	0.1710	1M10W7D	-	0.1479
3	2M72G7D	-	0.1702	2M73W7D	-	0.1452
5	4M50G7D	-	0.1600	4M49W7D	-	0.1358
10	9M13G7D	0.0191	0.1667	9M09W7D	-	0.1419

LTE Band 7	QPSK			16QAM		
BW(MHz)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum Conducted Power (W)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum Conducted Power (W)
5	4M51G7D	-	0.1945	4M51W7D	-	0.1710
10	9M09G7D	0.0114	0.1936	9M07W7D	-	0.1683
15	13M5G7D	-	0.1941	13M5W7D	-	0.1710
20	18M7G7D	-	0.1968	18M5W7D	-	0.1675
LTE Band 13	QPSK			16QAM		
BW(MHz)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum Conducted Power (W)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum Conducted Power (W)
5	4M50G7D	-	0.1479	4M48W7D	-	0.1256
10	8M97G7D	0.0153	0.1652	8M97W7D	-	0.1358
LTE Band 17	QPSK			16QAM		
BW(MHz)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum Conducted Power (W)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum Conducted Power (W)
5	4M51G7D	-	0.1592	4M51W7D	-	0.1361
10	9M05G7D	0.0155	0.1626	9M05W7D	-	0.1400
LTE Band 26	QPSK			16QAM		
BW(MHz)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum Conducted Power (W)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum Conducted Power (W)
1.4	1M10G7D	-	0.1816	1M10W7D	-	0.1581
3	2M72G7D	-	0.1799	2M73W7D	-	0.1545
5	4M51G7D	-	0.1702	4M50W7D	-	0.1452
10	9M11G7D	0.0116	0.1758	9M05W7D	-	0.1521
15	13M5G7D	-	0.1663	13M7W7D	-	0.1422
15 (ch 26765)	13M4G7D	-	0.1614	13M4W7D	-	0.1380

1.7 Testing Location

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.**
	TH01-SZ

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. China TEL: +86-755- 3320-2398	
Test Site No.	**Sporton Site No.**	**FCC Registration No.**
	03CH01-SZ	831040

Note: The test site complies with ANSI C63.4 2009 requirement.

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(M), 27(F), 27(H)
- ANSI / TIA / EIA-603-D-2010
- FCC KDB 971168 D01 Power Meas. License Digital Systems v02r02
- FCC KDB 412172 D01 Determining ERP and EIRP v01r01

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

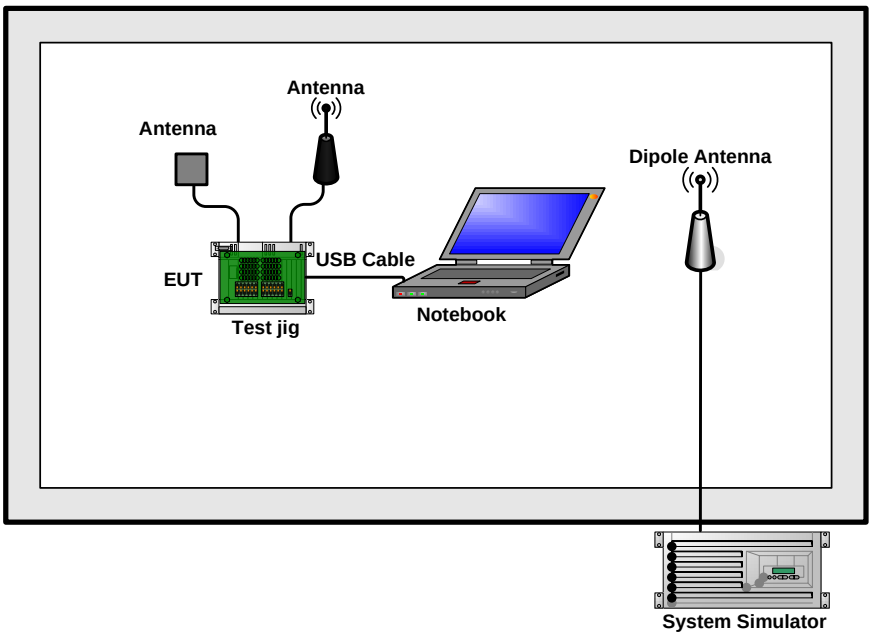
Antenna port conducted and radiated test items listed below are performed according to KDB 971168 D01 Power Meas. License Digital Systems v02r02 with maximum output power.

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
	13	-	-	v		-	-	v	v	v	v	v	v	v	v
	13	-	-		v	-	-	v	v	v	v	v		v	
	17	-	-	v	v	-	-	v	v	v	v	v	v	v	v
	26	v	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
	5				v	-	-	v	v	v		v	v	v	v
	7	-	-				v	v	v	v		v	v	v	v
	13	-	-		v	-	-	v	v	v		v	v	v	v
	17	-	-		v	-	-	v	v	v		v	v	v	v
	26					v	-	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
	13	-	-	v		-	-	v	v			v	v	v	v
	13	-	-		v	-	-	v	v			v		v	
	17	-	-	v	v	-	-	v	v			v	v	v	v
	26	v	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 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
	13	-	-	v		-	-	v	v	v		v	v		v
	13	-	-		v	-	-	v	v	v		v		v	
	17	-	-	v	v	-	-	v	v	v		v	v		v
	26	v	v	v	v	v	-	v	v	v		v	v		v
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
	13	-	-	v		-	-	v	v	v			v	v	v
	13	-	-		v	-	-	v	v	v				v	
	17	-	-	v	v	-	-	v	v	v			v	v	v
	26	v	v	v	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	
	13	-	-		v	-	-	v				v		v	
	17	-	-		v	-	-	v				v		v	
	26				v		-	v				v		v	

Test Items	Band	Bandwidth (MHz)						Modulation		RB #			Test Channel		
		1.4	3	5	10	15	20	QPSK	16QAM	1	Half	Full	L	M	H
E.R.P./ E.I.R.P.	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
	13	-	-	v	v	-	-	v	v	v			v	v	v
	13	-	-	v	v	-	-	v	v	v				v	
	17	-	-	v	v	-	-	v	v	v			v	v	v
	26	v	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	
	5	v	v	v	v	-	-	v		v				v	
	7	-	-	v	v	v	v	v		v				v	
	13	-	-	v	v	-	-	v		v				v	
	17	-	-	v	v	-	-	v		v				v	
	26	v	v	v	v	v	-	v		v				v	
Note	1. The mark "v " means that this configuration is chosen for testing 2. The mark "-" means that this bandwidth is not supported. 3. The device is investigated from 30MHz to 10 times of fundamental signal for radiated spurious emission test under different RB size/offset and modulations in exploratory test. Subsequently, only the worst case emissions are reported.														

2.2 Connection Diagram of Test System



2.3 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model No.	FCC ID	Data Cable	Power Cord
1.	LTE Base Station	Anritsu	MT8820C	N/A	N/A	Unshielded, 1.8 m
2.	DC Power Supply	GW INSTEK	GPS-3030D	N/A	N/A	Unshielded, 1.8 m
3.	Notebook	Lenovo	G480	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
4.	WWAN Antenna	N/A	N/A	N/A	N/A	N/A
5.	WWAN Diversity & GPS & Glonass Antenna	N/A	N/A	N/A	N/A	N/A
6.	Test jig	N/A	N/A	N/A	N/A	N/A
7.	USB Cable	N/A	N/A	N/A	Unshielded, 1.5m	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 5.0 dB and 10dB attenuator.

Example :

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

= 5.0 + 10 = 15.0 (dB)

2.5 Frequency List of Low/Middle/High Channels

LTE Band 2 Channel and Frequency List				
BW [MHz]	**Channel/Frequency(MHz)**	**Lowest**	**Middle**	**Highest**
20	Channel	18700	18900	19100
	Frequency	1860	1880	1900
15	Channel	18675	18900	19125
	Frequency	1857.5	1880	1902.5
10	Channel	18650	18900	19150
	Frequency	1855	1880	1905
5	Channel	18625	18900	19175
	Frequency	1852.5	1880	1907.5
3	Channel	18615	18900	19185
	Frequency	1851.5	1880	1908.5
1.4	Channel	18607	18900	19193
	Frequency	1850.7	1880	1909.3

LTE Band 4 Channel and Frequency List				
BW [MHz]	**Channel/Frequency(MHz)**	**Lowest**	**Middle**	**Highest**
20	Channel	20050	20175	20300
	Frequency	1720	1732.5	1745
15	Channel	20025	20175	20325
	Frequency	1717.5	1732.5	1747.5
10	Channel	20000	20175	20350
	Frequency	1715	1732.5	1750
5	Channel	19975	20175	20375
	Frequency	1712.5	1732.5	1752.5
3	Channel	19965	20175	20385
	Frequency	1711.5	1732.5	1753.5
1.4	Channel	19957	20175	20393
	Frequency	1710.7	1732.5	1754.3

LTE Band 5 Channel and Frequency List				
BW [MHz]	**Channel/Frequency(MHz)**	**Lowest**	**Middle**	**Highest**
10	Channel	20450	20525	20600
	Frequency	829	836.5	844
5	Channel	20425	20525	20625
	Frequency	826.5	836.5	846.5
3	Channel	20415	20525	20635
	Frequency	825.5	836.5	847.5
1.4	Channel	20407	20525	20643
	Frequency	824.7	836.5	848.3

LTE Band 7 Channel and Frequency List				
BW [MHz]	**Channel/Frequency(MHz)**	**Lowest**	**Middle**	**Highest**
20	Channel	20850	21100	21350
	Frequency	2510	2535	2560
15	Channel	20825	21100	21375
	Frequency	2507.5	2535	2562.5
10	Channel	20800	21100	21400
	Frequency	2505	2535	2565
5	Channel	20775	21100	21425
	Frequency	2502.5	2535	2567.5

LTE Band 13 Channel and Frequency List				
BW [MHz]	**Channel/Frequency(MHz)**	**Lowest**	**Middle**	**Highest**
10	Channel	-	23230	-
	Frequency	-	782	-
5	Channel	23205	23230	23255
	Frequency	779.5	782	784.5

LTE Band 17 Channel and Frequency List				
BW [MHz]	**Channel/Frequency(MHz)**	**Lowest**	**Middle**	**Highest**
10	Channel	23780	23790	23800
	Frequency	709	710	711
5	Channel	23755	23790	23825
	Frequency	706.5	710	713.5

LTE Band 26 Channel and Frequency List				
BW [MHz]	**Channel/Frequency(MHz)**	**Lowest**	**Middle**	**Highest**
15	Channel	26865	26915	26965
	Frequency	831.5	836.5	841.5
10	Channel	26840	26915	26990
	Frequency	829	836.5	844
5	Channel	26815	26915	27015
	Frequency	826.5	836.5	846.5
3	Channel	26805	26915	27025
	Frequency	825.5	836.5	847.5
1.4	Channel	26797	26915	27033
	Frequency	824.7	836.5	848.3

3 Conducted Test Items

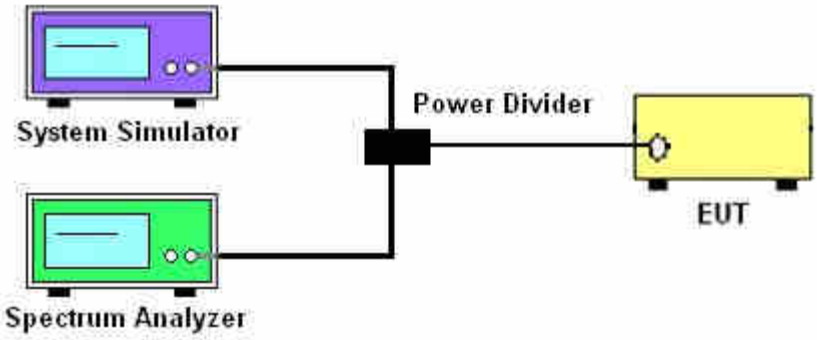
3.1 Measuring Instruments

See list of measuring instruments of this test report.

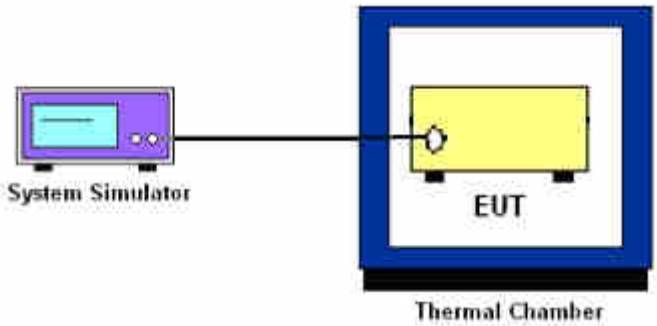
3.2 Test Setup

3.2.1 Conducted Output Power

3.2.2 Peak-to-Average Ratio, Occupied Bandwidth ,Conducted Band-Edge and Conducted Spurious Emission



3.2.3 Frequency Stability



3.3 Test Result of Conducted Test

Please refer to Appendix A.

3.4 Conducted Output Power and ERP/EIRP

3.4.1 Description of the Conducted Output Power Measurement and ERP/EIRP 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.

The ERP of mobile transmitters must not exceed 7 Watts for LTE Band 5 and Band 26.

The ERP of mobile transmitters must not exceed 3 Watts for Band 13 and Band 17.

The EIRP of mobile transmitters must not exceed 2 Watts for LTE Band 2 and Band 7.

The EIRP of mobile transmitters must not exceed 1 Watts for LTE Band 4.

According to KDB 412172 D01 Power Approach,

EIRP = $P_T + G_T – L_C$, ERP = EIRP -2.15, where

P_T = transmitter output power in dBm

G_T = gain of the transmitting antenna in dBi

L_C = signal attenuation in the connecting cable between the transmitter and antenna in dB

3.4.2 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.

3.5 Peak-to-Average Ratio

3.5.1 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.

3.5.2 Test Procedures

1. The testing follows FCC KDB 971168 v02r02 Section 5.7.1.
2. The EUT was connected to spectrum and system simulator via a power divider.
3. Set the CCDF (Complementary Cumulative Distribution Function) option in spectrum analyzer.
4. The highest RF powers were measured and recorded the maximum PAPR level associated with a probability of 0.1 %.
5. Record the deviation as Peak to Average Ratio.

3.6 Occupied Bandwidth

3.6.1 Description of Occupied Bandwidth Measurement

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

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

3.6.2 Test Procedures

1. The testing follows FCC KDB 971168 v02r02 Section 4.2.
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The span range for the spectrum analyzer shall be between two and five times the anticipated OBW.
4. The nominal resolution bandwidth (RBW) shall be in the range of 1 to 5 % of the anticipated OBW, and the VBW shall be at least 3 times the RBW.
5. Set the detection mode to peak, and the trace mode to max hold.
6. Determine the reference value: Set the EUT to transmit a modulated signal. Allow the trace to stabilize. Set the spectrum analyzer marker to the highest level of the displayed trace. (this is the reference value)
7. Determine the “-26 dB down amplitude” as equal to (Reference Value – X).
8. Place two markers, one at the lowest and the other at the highest frequency of the envelope of the spectral display such that each marker is at or slightly below the “–X dB down amplitude” determined in step 6. If a marker is below this “-X dB down amplitude” value it shall be placed as close as possible to this value. The OBW is the positive frequency difference between the two markers.
9. Use the 99 % power bandwidth function of the spectrum analyzer and report the measured bandwidth.

3.7 Conducted Band Edge

3.7.1 Description of Conducted Band Edge Measurement

22.917(a) for Band 5, 26

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

24.238 (a) for Band 2

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

27.53 (c) for Band 13

For operations in the 776-788 MHz band, the FCC limit is 43 + $10\log_{10}$(P[Watts]) dB below the transmitter power P(Watts) in a 100 kHz bandwidth. However, in the 100 kHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of at least 30 kHz may be employed. In addition, the power of any unwanted emissions in any 6.25 kHz bandwidth for all frequencies between 763-775 MHz and 793-806 MHz shall be attenuated below the transmitter power, P (dBW), by at least 65 + 10 log10 p(watts), dB, for mobile and portable equipment.

27.53 (g) for Band 17

For operations in the 698 -746 MHz band, the FCC limit is 43 + 10log10(P[Watts]) dB below the transmitter power P(Watts) in a 100 kHz bandwidth. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

27.53 (h) for Band 4

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

27.53(m)(4) for FCC Band 7:

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

3.7.2 Test Procedures

1. The testing follows FCC KDB 971168 v02r02 Section 6.0.
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. The band edges of low and high channels for the highest RF powers were measured.
4. Set RBW >= 1% EBW in the 1MHz band immediately outside and adjacent to the band edge.
5. Beyond the 1 MHz band from the band edge, RBW=1MHz was used.
6. Set spectrum analyzer with RMS detector.
7. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
8. Checked that all the results comply with the emission limit line.

   Example:

   The limit line is derived from 43 + 10log(P)dB below the transmitter power P(Watts)

   = P(W)- [43 + 10log(P)] (dB)

   = [30 + 10log(P)] (dBm) - [43 + 10log(P)] (dB)

   = -13dBm.
9. For LTE Band 7, the other 40 dB, and 55 dB have additionally applied same calculation above.

   The limit line is derived from 40+ 10log(P)dB below the transmitter power P(Watts)

   = P(W)- [40 + 10log(P)] (dB)

   = [30 + 10log(P)] (dBm) - [40 + 10log(P)] (dB)

   = -10dBm

   The limit line is derived from 43 + 10log(P)dB below the transmitter power P(Watts)

   = P(W)- [43 + 10log(P)] (dB)

   = [30 + 10log(P)] (dBm) - [43 + 10log(P)] (dB)

   = -13dBm.

   The limit line is derived from 55+ 10log(P)dB below the transmitter power P(Watts)

   = P(W)- [55 + 10log(P)] (dB)

   = [55 + 10log(P)] (dBm) - [55 + 10log(P)] (dB)

   = -25dBm

3.8 Conducted Spurious Emission

3.8.1 Description of Conducted Spurious Emission Measurement

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

For Band 7:

The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of at least 55 + 10 log (P) dB.

It is measured by means of a calibrated spectrum analyzer and scanned from 30 MHz up to a frequency including its 10^{th} harmonic.

3.8.2 Test Procedures

1. The testing follows FCC KDB 971168 v02r02 Section 6.0.
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
4. The middle channel for the highest RF power within the transmitting frequency was measured.
5. The conducted spurious emission for the whole frequency range was taken.
6. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz.
7. Set spectrum analyzer with RMS detector.
8. Taking the record of maximum spurious emission.
9. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
10. The limit line is derived from 43 + 10log(P)dB below the transmitter power P(Watts)
    = P(W)- [43 + 10log(P)] (dB)
    = [30 + 10log(P)] (dBm) - [43 + 10log(P)] (dB)
    = -13dBm.
11. For Band 7
    The limit line is derived from 55 + 10log(P)dB below the transmitter power P(Watts)
    = P(W)- [55+ 10log(P)] (dB)
    = [30+ 10log(P)] (dBm) - [55+ 10log(P)] (dB)
    = -25dBm.

3.9 Frequency Stability

3.9.1 Description of Frequency Stability Measurement

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

3.9.2 Test Procedures for Temperature Variation

1. The testing follows FCC KDB 971168 v02r02 Section 9.0.
2. The EUT was set up in the thermal chamber and connected with the system simulator.
3. With power OFF, the temperature was decreased to -30°C and the EUT was stabilized before testing. Power was applied and the maximum change in frequency was recorded within one minute.
4. With power OFF, the temperature was raised in 10°C step up to 50°C. The EUT was stabilized at each step for at least half an hour. Power was applied and the maximum frequency change was recorded within one minute.

3.9.3 Test Procedures for Voltage Variation

1. The testing follows FCC KDB 971168 v02r02 Section 9.0.
2. The EUT was placed in a temperature chamber at 25±5° C and connected with the system simulator.
3. The power supply voltage to the EUT was varied from 85% to 115% of the nominal value measured at the input to the EUT.
4. The variation in frequency was measured for the worst case.

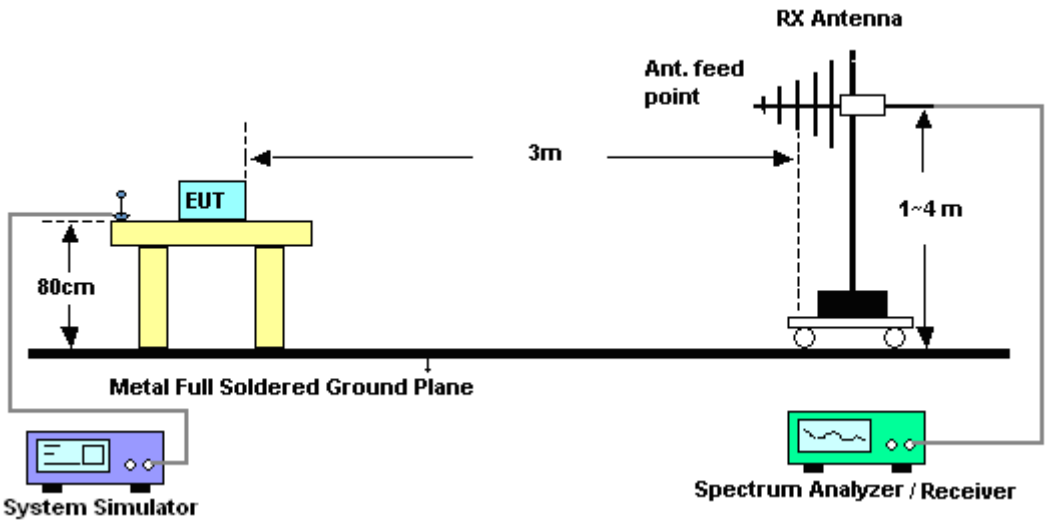
4 Radiated Test Items

4.1 Measuring Instruments

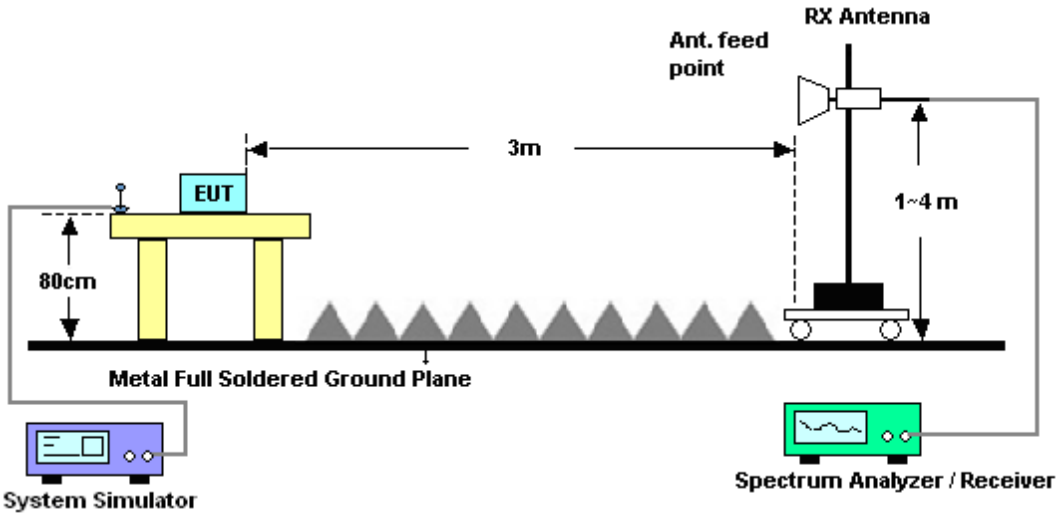
See list of measuring instruments of this test report.

4.2 Test Setup

4.2.1 For radiated test from 30MHz to 1GHz



4.2.2 For radiated test above 1GHz



4.3 Test Result of Radiated Test

Please refer to Appendix B.

4.4 Radiated Spurious Emission

4.4.1 Description of Radiated Spurious Emission

The radiated spurious emission was measured by substitution method according to ANSI / TIA / EIA-603-D-2010. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least 43 + 10 log (P) dB.

For Band 7

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least 55 + 10 log (P) dB.

For LTE Band 13,17

For operations in the 746-758 MHz, 775-788 MHz, and 805-806 MHz bands, emissions in the band 1559-1610 MHz shall be limited to −70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals, and −80 dBW EIRP for discrete emissions of less than 700 Hz bandwidth.

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

4.4.2 Test Procedures

1. The testing follows FCC KDB 971168 v02r02 Section 5.8 and ANSI / TIA-603-D-2010 Section 2.2.12.
2. The EUT was placed on a rotatable wooden table with 0.8 meter above ground.
3. The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.
4. The table was rotated 360 degrees to determine the position of the highest spurious emission.
5. The height of the receiving antenna is varied between one meter and four meters to search the maximum spurious emission for both horizontal and vertical polarizations.
6. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
7. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
8. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
9. Taking the record of output power at antenna port.
10. Repeat step 7 to step 8 for another polarization.
11. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
    The limit line is derived from 43 + 10log(P)dB below the transmitter power P(Watts)
    = P(W)- [43 + 10log(P)] (dB)
    = [30 + 10log(P)] (dBm) - [43 + 10log(P)] (dB)
    = -13dBm.
    For Band 7:
    The limit line is derived from 55 + 10log(P)dB below the transmitter power P(Watts)
12. EIRP (dBm) = S.G. Power – Tx Cable Loss + Tx Antenna Gain
13. ERP (dBm) = EIRP - 2.15

5 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSV40	101078	9kHz~40GHz	May 05, 2015	Oct. 22, 2015~ Dec. 07, 2015	May 04, 2016	Conducted (TH01-SZ)
Thermal Chamber	Ten Billion Hongzhangroup	LP-150U	H2014081803	-40~+150°C	Aug. 07, 2015	Oct. 22, 2015~ Dec. 07, 2015	Aug. 06, 2016	Conducted (TH01-SZ)
EMI Test Receiver&SA	Agilent Technologies	N9038A	MY52260185	20Hz~26.5GHz	May 26, 2015	Oct. 10, 2015~ Jan. 04, 2016	May 25, 2016	Radiation (03CH01-SZ)
Spectrum Analyzer	KEYSIGHT	N9010A	MY55150213	10Hz~44GHz;Max 30dBm	Jun. 07, 2015	Oct. 10, 2015~ Jan. 04, 2016	Jun. 06, 2016	Radiation (03CH01-SZ)
Bilog Antenna	TeseQ	CBL6112D	23188	30MHz-2GHz	Oct. 17, 2015	Oct. 20, 2015~ Jan. 04, 2016	Oct. 16, 2016	Radiation (03CH01-SZ)
Double Ridge Horn Antenna	ETS Lindgren	3117	00119436	1GHz~18GHz	Oct. 17, 2015	Oct. 20, 2015~ Jan. 04, 2016	Oct. 16, 2016	Radiation (03CH01-SZ)
HF Amplifier	MITEQ	TTA1840-35 -HG	1871923	18GHz~40GHz	Jul.18, 2015	Oct. 20, 2015~ Jan. 04, 2016	Jul. 17, 2016	Radiation (03CH01-SZ
SHF-EHF Horn	com-power	AH-840	101071	18Ghz-40GHz	Aug.19, 2015	Oct. 20, 2015~ Jan. 04, 2016	Aug. 18, 2016	Radiation (03CH01-SZ)
Amplifier	ADVANTEST	BB525C	E9007003	9kHz ~3000MHz / 30 dB	Jan. 28, 2015	Oct. 20, 2015~ Jan. 04, 2016	Jan. 27, 2016	Radiation (03CH01-SZ)
Amplifier	Yiai	AV3860B	04030	2GHz~26.5GHz	May 05, 2015	Oct. 20, 2015~ Jan. 04, 2016	May 04, 2016	Radiation (03CH01-SZ)
AC Power Source	Chroma	61601	616010001985	N/A	NCR	Oct. 20, 2015~ Jan. 04, 2016	NCR	Radiation (03CH01-SZ)
Turn Table	EM	EM1000	N/A	0~360 degree	NCR	Oct. 20, 2015~ Jan. 04, 2016	NCR	Radiation (03CH01-SZ)
Antenna Mast	EM	EM1000	N/A	1 m~4 m	NCR	Oct. 20, 2015~ Jan. 04, 2016	NCR	Radiation (03CH01-SZ)

6 Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**4.8 dB**

Appendix A. Test Results of Conducted Test

Conducted Output Power(Average power)

LTE Band 2 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
20	1	0	QPSK	21.61	21.73	21.72
20	1	49		21.92	22.10	22.07
20	1	99		21.34	21.43	21.41
20	50	0		21.21	21.31	21.33
20	50	24		21.07	21.18	21.20
20	50	50		21.00	21.16	21.17
20	100	0		21.11	21.27	21.28
20	1	0	16-QAM	20.83	21.06	21.06
20	1	49		21.19	21.37	21.32
20	1	99		20.56	20.77	20.62
20	50	0		20.21	20.38	20.35
20	50	24		20.06	20.25	20.21
20	50	50		20.25	20.24	20.16
20	100	0		20.25	20.23	20.28
15	1	0	QPSK	21.82	22.03	21.96
15	1	37		21.94	22.06	22.00
15	1	74		21.64	21.78	21.68
15	36	0		21.21	21.36	21.35
15	36	20		21.07	21.19	21.18
15	36	39		21.07	21.19	21.21
15	75	0		21.10	21.26	21.27
15	1	0	16-QAM	21.10	21.26	21.20
15	1	37		21.20	21.25	21.24
15	1	74		20.92	21.02	20.91
15	36	0		20.18	20.33	20.33
15	36	20		20.06	20.18	20.17
15	36	39		20.09	20.24	20.18
15	75	0		20.11	20.12	20.15

LTE Band 2 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK	22.01	22.14	22.17
10	1	25		22.03	22.17	22.10
10	1	49		21.89	22.05	21.94
10	25	0		21.08	21.21	21.14
10	25	12		21.01	21.17	21.13
10	25	25		20.96	21.16	21.07
10	50	0		21.05	21.19	21.13
10	1	0	16-QAM	21.30	21.36	21.39
10	1	25		21.26	21.40	21.36
10	1	49		21.18	21.25	21.18
10	25	0		20.14	20.30	20.22
10	25	12		20.09	20.26	20.18
10	25	25		20.06	20.21	20.13
10	50	0		20.10	20.15	20.23
5	1	0	QPSK	21.96	22.14	22.05
5	1	12		22.04	22.22	22.11
5	1	24		21.91	22.07	21.93
5	12	0		21.11	21.24	21.15
5	12	7		21.09	21.21	21.09
5	12	13		21.08	21.20	21.07
5	25	0		21.10	21.22	21.15
5	1	0	16-QAM	21.17	21.34	21.23
5	1	12		21.24	21.41	21.30
5	1	24		21.09	21.28	21.16
5	12	0		20.18	20.24	20.23
5	12	7		20.11	20.23	20.19
5	12	13		20.11	20.22	20.17
5	25	0		20.08	20.21	20.20

LTE Band 2 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
3	1	0	QPSK	22.13	22.31	22.19
3	1	8		22.19	22.37	22.24
3	1	14		22.10	22.28	22.14
3	8	0		21.07	21.28	21.22
3	8	4		21.10	21.28	21.17
3	8	7		21.14	21.28	21.19
3	15	0		21.03	21.30	21.17
3	1	0	16-QAM	21.42	21.59	21.49
3	1	8		21.47	21.68	21.52
3	1	14		21.39	21.54	21.40
3	8	0		20.25	20.41	20.30
3	8	4		20.19	20.35	20.27
3	8	7		20.21	20.40	20.31
3	15	0		20.22	20.37	20.31
1.4	1	0	QPSK	22.30	22.43	22.31
1.4	1	3		21.90	22.02	21.94
1.4	1	5		22.32	22.46	22.35
1.4	3	0		22.21	22.33	22.25
1.4	3	1		22.08	22.21	22.11
1.4	3	3		22.21	22.40	22.30
1.4	6	0		21.10	21.31	21.23
1.4	1	0	16-QAM	21.45	21.64	21.54
1.4	1	3		21.04	21.27	21.11
1.4	1	5		21.51	21.63	21.49
1.4	3	0		21.20	21.40	21.23
1.4	3	1		21.07	21.26	21.08
1.4	3	3		21.19	21.34	21.19
1.4	6	0		20.23	20.44	20.33

LTE Band 4 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
20	1	0	QPSK	21.94	21.75	21.79
20	1	49		22.02	22.03	22.06
20	1	99		21.52	21.41	21.44
20	50	0		21.47	21.38	21.41
20	50	24		21.25	21.29	21.30
20	50	50		21.15	21.23	21.30
20	100	0		21.26	21.33	21.35
20	1	0	16-QAM	20.91	21.10	21.08
20	1	49		21.36	21.37	21.38
20	1	99		20.49	20.66	20.73
20	50	0		20.34	20.38	20.39
20	50	24		20.18	20.35	20.28
20	50	50		20.02	20.16	20.21
20	100	0		20.21	20.30	20.33
15	1	0	QPSK	22.26	22.14	22.08
15	1	37		22.15	22.18	22.18
15	1	74		21.93	21.84	21.88
15	36	0		21.52	21.48	21.53
15	36	20		21.31	21.32	21.38
15	36	39		21.37	21.38	21.41
15	75	0		21.38	21.45	21.46
15	1	0	16-QAM	21.37	21.45	21.43
15	1	37		21.44	21.47	21.54
15	1	74		21.07	21.20	21.20
15	36	0		20.48	20.52	20.46
15	36	20		20.32	20.38	20.35
15	36	39		20.31	20.37	20.35
15	75	0		20.40	20.36	20.42

LTE Band 4 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK	22.30	22.32	22.28
10	1	25		22.31	22.36	22.30
10	1	49		22.10	22.15	22.15
10	25	0		21.40	21.42	21.40
10	25	12		21.34	21.40	21.38
10	25	25		21.30	21.28	21.34
10	50	0		21.36	21.36	21.38
10	1	0	16-QAM	21.59	21.55	21.60
10	1	25		21.61	21.62	21.61
10	1	49		21.41	21.45	21.42
10	25	0		20.44	20.37	20.48
10	25	12		20.39	20.39	20.44
10	25	25		20.33	20.31	20.39
10	50	0		20.42	20.47	20.44
5	1	0	QPSK	22.15	22.17	22.10
5	1	12		22.23	22.25	22.19
5	1	24		22.07	22.11	22.06
5	12	0		21.38	21.40	21.34
5	12	7		21.33	21.35	21.30
5	12	13		21.32	21.31	21.29
5	25	0		21.34	21.31	21.31
5	1	0	16-QAM	21.44	21.47	21.45
5	1	12		21.49	21.48	21.48
5	1	24		21.36	21.33	21.40
5	12	0		20.36	20.31	20.40
5	12	7		20.33	20.26	20.36
5	12	13		20.30	20.29	20.37
5	25	0		20.32	20.31	20.26

LTE Band 4 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
3	1	0	QPSK	22.37	22.33	22.34
3	1	8		22.38	22.40	22.42
3	1	14		22.29	22.31	22.31
3	8	0		21.37	21.40	21.43
3	8	4		21.34	21.33	21.35
3	8	7		21.34	21.39	21.40
3	15	0		21.37	21.38	21.35
3	1	0	16-QAM	21.59	21.62	21.67
3	1	8		21.62	21.64	21.65
3	1	14		21.53	21.51	21.57
3	8	0		20.47	20.47	20.41
3	8	4		20.40	20.42	20.42
3	8	7		20.43	20.39	20.41
3	15	0		20.42	20.35	20.45
1.4	1	0	QPSK	22.44	22.42	22.40
1.4	1	3		22.01	22.03	21.99
1.4	1	5		22.40	22.45	22.41
1.4	3	0		22.28	22.35	22.35
1.4	3	1		22.16	22.21	22.20
1.4	3	3		22.37	22.36	22.38
1.4	6	0		21.35	21.31	21.36
1.4	1	0	16-QAM	21.73	21.64	21.69
1.4	1	3		21.34	21.28	21.27
1.4	1	5		21.75	21.69	21.72
1.4	3	0		21.40	21.42	21.44
1.4	3	1		21.23	21.27	21.28
1.4	3	3		21.33	21.39	21.39
1.4	6	0		20.41	20.36	20.55

LTE Band 5 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK	22.15	22.18	22.22
10	1	25		22.08	22.14	22.12
10	1	49		22.09	22.13	22.01
10	25	0		21.21	21.24	21.24
10	25	12		21.17	21.23	21.19
10	25	25		21.18	21.20	21.17
10	50	0		21.22	21.18	21.24
10	1	0	16-QAM	21.47	21.48	21.52
10	1	25		21.40	21.41	21.43
10	1	49		21.39	21.39	21.31
10	25	0		20.25	20.30	20.31
10	25	12		20.20	20.23	20.24
10	25	25		20.22	20.27	20.23
10	50	0		20.28	20.28	20.23
5	1	0	QPSK	21.93	21.95	21.98
5	1	12		22.01	22.04	22.04
5	1	24		21.91	21.95	21.87
5	12	0		21.15	21.19	21.20
5	12	7		21.13	21.14	21.16
5	12	13		21.14	21.15	21.14
5	25	0		21.14	21.17	21.07
5	1	0	16-QAM	21.26	21.27	21.28
5	1	12		21.33	21.32	21.32
5	1	24		21.17	21.19	21.15
5	12	0		20.19	20.19	20.25
5	12	7		20.17	20.17	20.20
5	12	13		20.17	20.18	20.17
5	25	0		20.18	20.22	20.20

LTE Band 5 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
3	1	0	QPSK	22.22	22.25	22.20
3	1	8		22.24	22.31	22.23
3	1	14		22.20	22.25	22.11
3	8	0		21.24	21.28	21.26
3	8	4		21.24	21.25	21.23
3	8	7		21.24	21.24	21.21
3	15	0		21.25	21.23	21.22
3	1	0	16-QAM	21.53	21.54	21.50
3	1	8		21.62	21.60	21.49
3	1	14		21.55	21.50	21.39
3	8	0		20.37	20.37	20.34
3	8	4		20.34	20.32	20.27
3	8	7		20.36	20.36	20.29
3	15	0		20.35	20.35	20.29
1.4	1	0	QPSK	22.31	22.29	22.27
1.4	1	3		21.92	21.88	21.84
1.4	1	5		22.33	22.31	22.20
1.4	3	0		22.23	22.21	22.13
1.4	3	1		22.11	22.07	21.99
1.4	3	3		22.29	22.26	22.16
1.4	6	0		21.27	21.25	21.15
1.4	1	0	16-QAM	21.66	21.63	21.55
1.4	1	3		21.30	21.30	21.16
1.4	1	5		21.70	21.68	21.56
1.4	3	0		21.42	21.35	21.28
1.4	3	1		21.27	21.27	21.14
1.4	3	3		21.35	21.39	21.24
1.4	6	0		20.44	20.43	20.35

LTE Band 7 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
20	1	0	QPSK	22.02	22.27	22.34
20	1	49		22.62	22.90	22.94
20	1	99		21.85	21.99	22.08
20	50	0		21.75	22.05	22.01
20	50	24		21.71	21.97	21.99
20	50	50		21.69	21.86	21.96
20	100	0		21.73	21.90	22.00
20	1	0	16-QAM	21.38	21.58	21.58
20	1	49		21.97	22.17	22.24
20	1	99		21.28	21.34	21.49
20	50	0		20.73	21.01	21.03
20	50	24		20.72	20.94	20.98
20	50	50		20.87	20.88	20.89
20	100	0		20.92	20.93	20.97
15	1	0	QPSK	22.17	22.58	22.53
15	1	37		22.50	22.81	22.88
15	1	74		22.16	22.42	22.43
15	36	0		21.75	22.07	22.08
15	36	20		21.68	21.92	21.99
15	36	39		21.74	21.99	22.01
15	75	0		21.78	22.04	21.62
15	1	0	16-QAM	21.57	22.02	22.00
15	1	37		21.86	22.16	22.33
15	1	74		21.60	21.80	21.85
15	36	0		20.75	21.05	21.12
15	36	20		20.58	20.92	21.03
15	36	39		20.67	20.97	21.05
15	75	0		20.72	20.74	20.76

LTE Band 7 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK	22.37	22.77	22.83
10	1	25		22.43	22.77	22.87
10	1	49		22.34	22.66	22.79
10	25	0		21.59	21.90	21.98
10	25	12		21.55	21.92	21.95
10	25	25		21.52	21.85	21.94
10	50	0		21.54	21.90	21.99
10	1	0	16-QAM	21.67	22.17	22.23
10	1	25		21.76	22.19	22.26
10	1	49		21.65	22.06	22.14
10	25	0		20.60	21.00	21.05
10	25	12		20.60	20.97	21.05
10	25	25		20.56	20.97	21.02
10	50	0		20.60	20.65	20.69
5	1	0	QPSK	22.18	22.60	22.68
5	1	12		22.43	22.79	22.89
5	1	24		22.18	22.53	22.65
5	12	0		21.50	21.83	21.95
5	12	7		21.46	21.79	21.95
5	12	13		21.48	21.81	21.90
5	25	0		21.48	21.81	21.89
5	1	0	16-QAM	21.56	21.96	22.07
5	1	12		21.74	22.22	22.33
5	1	24		21.49	21.97	21.99
5	12	0		20.51	20.95	20.99
5	12	7		20.49	20.87	20.99
5	12	13		20.49	20.94	21.00
5	25	0		20.51	20.89	20.98

LTE Band 13 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK		22.18	
10	1	25			21.60	
10	1	49			21.28	
10	25	0			20.88	
10	25	12			20.79	
10	25	25			20.81	
10	50	0			20.89	
10	1	0	16-QAM		21.33	
10	1	25			20.77	
10	1	49			20.46	
10	25	0			19.86	
10	25	12			19.73	
10	25	25			19.79	
10	50	0			9.84	
5	1	0	QPSK	21.67	21.60	21.52
5	1	12		21.70	21.64	21.59
5	1	24		21.54	21.52	21.57
5	12	0		20.84	20.72	20.68
5	12	7		20.76	20.67	20.66
5	12	13		20.72	20.68	20.70
5	25	0		20.74	20.69	20.68
5	1	0	16-QAM	20.88	20.83	20.80
5	1	12		20.99	20.93	20.86
5	1	24		20.85	20.81	20.80
5	12	0		19.92	19.76	19.75
5	12	7		19.80	19.72	19.71
5	12	13		19.74	19.73	19.68
5	25	0		19.78	19.73	19.71

LTE Band 17 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK	22.08	22.11	22.08
10	1	25		22.05	22.08	22.10
10	1	49		22.03	22.07	22.08
10	25	0		21.16	21.17	21.19
10	25	12		21.10	21.15	21.19
10	25	25		21.14	21.18	21.18
10	50	0		21.19	21.19	21.20
10	1	0	16-QAM	21.46	21.40	21.36
10	1	25		21.38	21.33	21.37
10	1	49		21.37	21.36	21.35
10	25	0		20.31	20.31	20.33
10	25	12		20.35	20.31	20.30
10	25	25		20.28	20.30	20.34
10	50	0		20.34	20.33	20.35
5	1	0	QPSK	21.93	21.91	21.88
5	1	12		22.02	22.00	21.97
5	1	24		21.93	21.91	21.88
5	12	0		21.15	21.18	21.10
5	12	7		21.12	21.13	21.08
5	12	13		21.17	21.14	21.13
5	25	0		21.16	21.14	21.10
5	1	0	16-QAM	21.29	21.28	21.19
5	1	12		21.32	21.34	21.30
5	1	24		21.21	21.24	21.23
5	12	0		20.29	20.29	20.22
5	12	7		20.29	20.23	20.19
5	12	13		20.30	20.24	20.22
5	25	0		20.29	20.23	20.24

LTE Band 26 Maximum Average Power [dBm]							
BW [MHz]	RB Size	RB Offset	Mod	Ch26765	Lowest	Middle	Highest
15	1	0	QPSK	22.08	22.21	21.98	21.92
15	1	37		21.99	22.12	22.03	22.13
15	1	74		21.88	22.01	21.92	21.77
15	36	0		21.43	21.56	21.42	21.44
15	36	20		21.24	21.37	21.28	21.30
15	36	39		21.32	21.45	21.38	21.39
15	75	0		21.39	21.52	21.38	21.42
15	1	0	16-QAM	21.40	21.53	21.41	21.45
15	1	37		21.32	21.45	21.41	21.47
15	1	74		21.11	21.24	21.29	21.25
15	36	0		20.43	20.56	20.46	20.51
15	36	20		20.24	20.37	20.29	20.35
15	36	39		20.30	20.43	20.36	20.44
15	75	0		20.37	20.50	20.52	20.50

LTE Band 26 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK	22.45	22.25	22.34
10	1	25		22.36	22.22	22.23
10	1	49		22.27	22.22	22.13
10	25	0		21.48	21.31	21.38
10	25	12		21.43	21.29	21.32
10	25	25		21.41	21.31	21.29
10	50	0		21.48	21.33	21.35
10	1	0	16-QAM	21.82	21.59	21.57
10	1	25		21.66	21.60	21.52
10	1	49		21.61	21.55	21.44
10	25	0		20.57	20.44	20.43
10	25	12		20.49	20.37	20.40
10	25	25		20.47	20.41	20.39
10	50	0		20.50	20.49	20.45
5	1	0	QPSK	22.27	22.04	22.11
5	1	12		22.31	22.13	22.13
5	1	24		22.18	22.04	21.98
5	12	0		21.52	21.26	21.29
5	12	7		21.38	21.23	21.26
5	12	13		21.39	21.27	21.22
5	25	0		21.35	21.24	21.24
5	1	0	16-QAM	21.55	21.40	21.39
5	1	12		21.62	21.50	21.41
5	1	24		21.49	21.38	21.24
5	12	0		20.55	20.31	20.38
5	12	7		20.49	20.27	20.34
5	12	13		20.43	20.29	20.30
5	25	0		20.49	20.27	20.25

LTE Band 26 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
3	1	0	QPSK	22.49	22.31	22.30
3	1	8		22.55	22.40	22.32
3	1	14		22.46	22.33	22.23
3	8	0		21.55	21.37	21.37
3	8	4		21.53	21.39	21.33
3	8	7		21.52	21.39	21.32
3	15	0		21.52	21.38	21.35
3	1	0	16-QAM	21.89	21.72	21.72
3	1	8		21.87	21.71	21.65
3	1	14		21.77	21.57	21.57
3	8	0		20.72	20.50	20.52
3	8	4		20.61	20.41	20.44
3	8	7		20.62	20.46	20.46
3	15	0		20.66	20.44	20.46
1.4	1	0	QPSK	22.55	22.39	22.40
1.4	1	3		22.17	22.00	21.97
1.4	1	5		22.59	22.40	22.38
1.4	3	0		22.52	22.33	22.26
1.4	3	1		22.39	22.21	22.11
1.4	3	3		22.58	22.38	22.27
1.4	6	0		21.56	21.32	21.27
1.4	1	0	16-QAM	21.91	21.72	21.70
1.4	1	3		21.56	21.33	21.25
1.4	1	5		21.99	21.74	21.69
1.4	3	0		21.63	21.40	21.42
1.4	3	1		21.53	21.30	21.27
1.4	3	3		21.66	21.43	21.37
1.4	6	0		20.69	20.46	20.43

LTE Band 2 QPSK (GT - LC =3 dB)									
Bandwidth	1.4M(1RB-5)			3M(1RB-8)			5M(1RB-12)		
Channel	18607	18900	19193	18615	18900	19185	18625	18900	19175
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency (MHz)	1850.7	1880	1909.3	1851.5	1880	1908.5	1852.5	1880	1907.5
Conducted Power (dBm)	22.32	22.46	22.35	22.19	22.37	22.24	22.04	22.22	22.11
Conducted Power (Watts)	0.1706	0.1762	0.1718	0.1656	0.1726	0.1675	0.1600	0.1667	0.1626
EIRP(dBm)	25.32	25.46	25.35	25.19	25.37	25.24	25.04	25.22	25.11
EIRP(Watts)	0.3404	0.3516	0.3428	0.3304	0.3443	0.3342	0.3192	0.3327	0.3243

LTE Band 2 QPSK (GT - LC =3 dB)									
Bandwidth	10M(1RB-25)			15M(1RB-37)			20M(1RB-49)		
Channel	18650	18900	19150	18675	18900	19125	18700	18900	19100
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency (MHz)	1855	1880	1905	1857.5	1880	1902.5	1860	1880	1900
Conducted Power (dBm)	22.03	22.17	22.10	21.94	22.06	22.00	21.92	22.10	22.07
Conducted Power (Watts)	0.1596	0.1648	0.1622	0.1563	0.1607	0.1585	0.1556	0.1622	0.1611
EIRP(dBm)	25.03	25.17	25.1	24.94	25.06	25	24.92	25.1	25.07
EIRP(Watts)	0.3184	0.3289	0.3236	0.3119	0.3206	0.3162	0.3105	0.3236	0.3214

LTE Band 2 16QAM (GT - LC =3 dB)									
Bandwidth	1.4M(1RB-0)			3M(1RB-8)			5M(1RB-12)		
Channel	18607	18900	19193	18615	18900	19185	18625	18900	19175
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency (MHz)	1850.7	1880	1909.3	1851.5	1880	1908.5	1852.5	1880	1907.5
Conducted Power (dBm)	21.45	21.64	21.54	21.47	21.68	21.52	21.24	21.41	21.30
Conducted Power (Watts)	0.1396	0.1459	0.1426	0.1403	0.1472	0.1419	0.1330	0.1384	0.1349
EIRP(dBm)	24.45	24.64	24.54	24.47	24.68	24.52	24.24	24.41	24.30
EIRP(Watts)	0.2786	0.2911	0.2844	0.2799	0.2938	0.2831	0.2655	0.2761	0.2692

LTE Band 2 16QAM (GT - LC =3 dB)									
Bandwidth	10M(1RB-25)			15M(1RB-0)			20M(1RB-49)		
Channel	18650	18900	19150	18675	18900	19125	18650	18900	19100
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency (MHz)	1855	1880	1905	1857.5	1880	1902.5	1860	1880	1900
Conducted Power (dBm)	21.26	21.40	21.36	21.10	21.26	21.20	21.19	21.37	21.32
Conducted Power (Watts)	0.1337	0.1380	0.1368	0.1288	0.1337	0.1318	0.1315	0.1371	0.1355
EIRP(dBm)	24.26	24.4	24.36	24.1	24.26	24.2	24.19	24.37	24.32
EIRP(Watts)	0.2667	0.2754	0.2729	0.2570	0.2667	0.2630	0.2624	0.2735	0.2704

LTE Band 4 QPSK (GT - LC =3 dB)									
Bandwidth	1.4M(1RB-5)			3M(1RB-8)			5M(1RB-12)		
Channel	19957	20175	20393	19965	20175	20385	19975	20175	20375
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency (MHz)	1710.7	1732.5	1754.3	1711.5	1732.5	1753.5	1712.5	1732.5	1752.5
Conducted Power (dBm)	22.40	22.45	22.41	22.38	22.40	22.42	22.23	22.25	22.19
Conducted Power (Watts)	0.1738	0.1758	0.1742	0.1730	0.1738	0.1746	0.1671	0.1679	0.1656
EIRP(dBm)	25.40	25.45	25.41	25.38	25.40	25.42	25.23	25.25	25.19
EIRP(Watts)	0.3467	0.3508	0.3475	0.3451	0.3467	0.3483	0.3334	0.3350	0.3304

LTE Band 4 QPSK (GT - LC =3 dB)									
Bandwidth	10M(1RB-25)			15M(1RB-0)			20M(1RB-49)		
Channel	20000	20175	20350	20025	20175	20325	20050	20175	20300
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency (MHz)	1715	1732.5	1750	1717.5	1732.5	1747.5	1720	1732.5	1745
Conducted Power (dBm)	22.31	22.36	22.30	22.26	22.14	22.08	22.02	22.03	22.06
Conducted Power (Watts)	0.1702	0.1722	0.1698	0.1683	0.1637	0.1614	0.1592	0.1596	0.1607
EIRP(dBm)	25.31	25.36	25.3	25.26	25.14	25.08	25.02	25.03	25.06
EIRP(Watts)	0.3396	0.3436	0.3388	0.3357	0.3266	0.3221	0.3177	0.3184	0.3206

LTE Band 4 16QAM (GT - LC =3 dB)									
Bandwidth	1.4M(1RB-5)			3M(1RB-0)			5M(1RB-12)		
Channel	19957	20175	20393	19965	20175	20385	19975	20175	20375
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency (MHz)	1710.7	1732.5	1754.3	1711.5	1732.5	1753.5	1712.5	1732.5	1752.5
Conducted Power (dBm)	21.75	21.69	21.72	21.59	21.62	21.67	21.49	21.48	21.48
Conducted Power (Watts)	0.1496	0.1476	0.1486	0.1442	0.1452	0.1469	0.1409	0.1406	0.1406
EIRP(dBm)	24.75	24.69	24.72	24.59	24.62	24.67	24.49	24.48	24.48
EIRP(Watts)	0.2985	0.2944	0.2965	0.2877	0.2897	0.2931	0.2812	0.2805	0.2805

LTE Band 4 16QAM (GT - LC =3 dB)									
Bandwidth	10M(1RB-25)			15M(1RB-37)			20M(1RB-49)		
Channel	20000	20175	20350	20025	20175	20325	20050	20175	20300
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency (MHz)	1715	1732.5	1750	1717.5	1732.5	1747.5	1720	1732.5	1745
Conducted Power (dBm)	21.61	21.62	21.61	21.44	21.47	21.54	21.36	21.37	21.38
Conducted Power (Watts)	0.1449	0.1452	0.1449	0.1393	0.1403	0.1426	0.1368	0.1371	0.1374
EIRP(dBm)	24.61	24.62	24.61	24.44	24.47	24.54	24.36	24.37	24.38
EIRP(Watts)	0.2891	0.2897	0.2891	0.2780	0.2799	0.2844	0.2729	0.2735	0.2742

LTE Band 5 QPSK (GT - LC =5 dB)									
Bandwidth	1.4M(1RB-5)			3M(1RB-8)			5M(1RB-12)		
Channel	20407	20525	20643	20415	20525	20635	20450	20525	20600
Frequency	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
(MHz)	824.7	836.5	848.3	825.5	836.5	847.5	829	836.5	844
Conducted Power (dBm)	22.33	22.31	22.20	22.24	22.31	22.23	22.01	22.04	22.04
Conducted Power (Watts)	0.1710	0.1702	0.1660	0.1675	0.1702	0.1671	0.1589	0.1600	0.1600
ERP(dBm)	25.18	25.16	25.05	25.09	25.16	25.08	24.86	24.89	24.89
ERP(Watts)	0.3296	0.3281	0.3199	0.3228	0.3281	0.3221	0.3062	0.3083	0.3083

LTE Band 5 QPSK(GT - LC =5 dB)			
Bandwidth	10M(1RB-0)		
Channel	20450	20525	20600
	(Low)	(Mid)	(High)
Frequency	829	836.5	844
(MHz)			
Conducted Power (dBm)	22.15	22.18	22.22
Conducted Power (Watts)	0.1641	0.1652	0.1667
ERP(dBm)	25	25.03	25.07
ERP(Watts)	0.3162	0.3184	0.3214

LTE Band 5 16QAM(GT - LC =5 dB)									
Bandwidth	**1.4M(1RB-5)**			**3M(1RB-8)**			**5M(1RB-12)**		
Channel	**20407**	**20525**	**20643**	**20415**	**20525**	**20635**	**20425**	**20525**	**20625**
Frequency	**(Low)**	**(Mid)**	**(High)**	**(Low)**	**(Mid)**	**(High)**	**(Low)**	**(Mid)**	**(High)**
(MHz)	**824.7**	**836.5**	**848.3**	**825.5**	**836.5**	**847.5**	**826.5**	**836.5**	**846.5**
Conducted Power (dBm)	21.70	21.68	21.56	21.62	21.60	21.49	21.33	21.32	21.32
Conducted Power (Watts)	0.1479	0.1472	0.1432	0.1452	0.1445	0.1409	0.1358	0.1355	0.1355
ERP(dBm)	24.55	24.53	24.41	24.47	24.45	24.34	24.18	24.17	24.17
ERP(Watts)	0.2851	0.2838	0.2761	0.2799	0.2786	0.2716	0.2618	0.2612	0.2612

LTE Band 5 16QAM (GT - LC =5 dB)			
Bandwidth	**10M(1RB-0)**		
Channel	**20450**	**20525**	**20600**
	(Low)	**(Mid)**	**(High)**
Frequency	**829**	**836.5**	**844**
(MHz)			
Conducted Power (dBm)	21.47	21.48	21.52
Conducted Power (Watts)	0.1403	0.1406	0.1419
ERP(dBm)	24.32	24.33	24.37
ERP(Watts)	0.2704	0.2710	0.2735

LTE Band 7 QPSK (GT - LC =3 dB)									
Bandwidth	**5M(1RB-12)**			**10M(1RB-25)**			**15M(1RB-37)**		
Channel	20775	21100	21425	20800	21100	21400	20825	21100	21375
Frequency	**(Low)**	**(Mid)**	**(High)**	**(Low)**	**(Mid)**	**(High)**	**(Low)**	**(Mid)**	**(High)**
(MHz)	2502.5	2535	2567.5	2505	2535	2565	2507.5	2535	2562.5
Conducted Power (dBm)	22.43	22.79	22.89	22.43	22.77	22.87	22.50	22.81	22.88
Conducted Power (Watts)	0.1750	0.1901	0.1945	0.1750	0.1892	0.1936	0.1778	0.1910	0.1941
EIRP(dBm)	25.43	25.79	25.89	25.43	25.77	25.87	25.5	25.81	25.88
EIRP(Watts)	0.3491	0.3793	0.3882	0.3491	0.3776	0.3864	0.3548	0.3811	0.3873

LTE Band 7 QPSK (GT - LC =3 dB)			
Bandwidth	**20M(1RB-49)**		
Channel	20850	21100	21350
Frequency	**(Low)**	**(Mid)**	**(High)**
(MHz)	2510	2535	2560
Conducted Power (dBm)	22.62	22.90	22.94
Conducted Power (Watts)	0.1828	0.1950	0.1968
EIRP(dBm)	25.62	25.9	25.94
EIRP(Watts)	0.3648	0.3890	0.3926

LTE Band 7 16QAM (GT - LC =3 dB)									
Bandwidth	**5M(1RB-12)**			**10M(1RB-25)**			**15M(1RB-37)**		
Channel	20775	21100	21425	20800	21100	21400	20825	21100	21375
	(Low)	**(Mid)**	**(High)**	**(Low)**	**(Mid)**	**(High)**	**(Low)**	**(Mid)**	**(High)**
Frequency (MHz)	2502.5	2535	2567.5	2505	2535	2565	2508	2535	2562.5
Conducted Power (dBm)	21.74	22.22	22.33	21.76	22.19	22.26	21.86	22.16	22.33
Conducted Power (Watts)	0.1493	0.1667	0.1710	0.1500	0.1656	0.1683	0.1535	0.1644	0.1710
EIRP(dBm)	24.74	25.22	25.33	24.76	25.19	25.26	24.86	25.16	25.33
EIRP(Watts)	0.2979	0.3327	0.3412	0.2992	0.3304	0.3357	0.3062	0.3281	0.3412

LTE Band 7 16QAM (GT - LC =3 dB)			
Bandwidth	**20M(1RB-49)**		
Channel	2510	2535	2560
	(Low)	**(Mid)**	**(High)**
Frequency (MHz)	2510	2535	2560
Conducted Power (dBm)	21.97	22.17	22.24
Conducted Power (Watts)	0.1574	0.1648	0.1675
EIRP(dBm)	24.97	25.17	25.24
EIRP(Watts)	0.3141	0.3289	0.3342

LTE Band 13 QPSK (GT - LC =5 dB)				
Bandwidth	**5M(1RB-12)**			**10M(1RB-0)**
Channel	23205	23230	23255	**23230**
	(Low)	**(Mid)**	**(High)**	**(Mid)**
Frequency (MHz)	779.5	782	784.5	**782**
Conducted Power (dBm)	21.70	21.64	21.59	22.18
Conducted Power (Watts)	0.1479	0.1459	0.1442	0.1652
ERP(dBm)	24.55	24.49	24.44	25.03
ERP(Watts)	0.2851	0.2812	0.2780	0.3184

LTE Band 13 QAM (GT - LC =5 dB)				
Bandwidth	**5M(1RB-12)**			**10M(1RB-0)**
Channel	23205	23230	23255	**23230**
	(Low)	**(Mid)**	**(High)**	**(Mid)**
Frequency (MHz)	779.5	782	784.5	**782**
Conducted Power (dBm)	20.99	20.93	20.86	21.33
Conducted Power (Watts)	0.1256	0.1239	0.1219	0.1358
ERP(dBm)	23.84	23.78	23.71	24.18
ERP(Watts)	0.2421	0.2388	0.2350	0.2618

LTE Band 17 QPSK (GT - LC =5 dB)						
Bandwidth	5M(1RB-12)			10M(1RB-0)		
Channel	23755	23790	23825	23780	23790	23800
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency (MHz)	706.5	710	713.5	709	710	711
Conducted Power (dBm)	22.02	22.00	21.97	22.08	22.11	22.08
Conducted Power (Watts)	0.1592	0.1585	0.1574	0.1614	0.1626	0.1614
ERP(dBm)	24.87	24.85	24.82	24.93	24.96	24.93
ERP(Watts)	0.3069	0.3055	0.3034	0.3112	0.3133	0.3112

LTE Band 17 16QAM (GT - LC =5 dB)						
Bandwidth	5M(1RB-12)			10M(1RB-0)		
Channel	23755	23790	23825	23780	23790	23800
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency (MHz)	706.5	710	713.5	709	710	711
Conducted Power (dBm)	21.32	21.34	21.30	21.46	21.40	21.36
Conducted Power (Watts)	0.1355	0.1361	0.1349	0.1400	0.1380	0.1368
ERP(dBm)	24.17	24.19	24.15	24.31	24.25	24.21
ERP(Watts)	0.2612	0.2624	0.2600	0.2698	0.2661	0.2636

LTE Band 26 QPSK (GT - LC =5 dB)									
Bandwidth	**1.4M(1RB-5)**			**3M(1RB-8)**			**5M(1RB-12)**		
Channel	26797	26915	27033	26805	26915	27025	26815	26915	27015
	(Low)	**(Mid)**	**(High)**	**(Low)**	**(Mid)**	**(High)**	**(Low)**	**(Mid)**	**(High)**
Frequency (MHz)	824.7	836.5	848.3	825.5	836.5	847.5	826.5	836.5	846.5
Conducted Power (dBm)	22.59	22.40	22.38	22.55	22.40	22.32	22.31	22.13	22.13
Conducted Power (Watts)	0.1816	0.1738	0.1730	0.1799	0.1738	0.1706	0.1702	0.1633	0.1633
ERP(dBm)	25.44	25.25	25.23	25.40	25.25	25.17	25.16	24.98	24.98
ERP(Watts)	0.3496	0.3347	0.3331	0.3467	0.3350	0.3289	0.3281	0.3148	0.3148

LTE Band 26 QPSK (GT - LC =5 dB)							
Bandwidth	**10M(1RB-0)**			**15M(1RB-0)**			
Channel	26840	26915	26990	26865	26915	26965	26765
	(Low)	**(Mid)**	**(High)**	**(Low)**	**(Mid)**	**(High)**	
Frequency (MHz)	829	836.5	844	831.5	836.5	841.5	821.5
Conducted Power (dBm)	22.45	22.25	22.34	22.21	21.98	21.92	22.08
Conducted Power (Watts)	0.1758	0.1679	0.1714	0.1663	0.1578	0.1556	0.1614
ERP(dBm)	25.30	25.10	25.19	25.06	24.83	24.77	24.93
ERP(Watts)	0.3388	0.3236	0.3304	0.3206	0.3041	0.2999	0.3112

LTE Band 26 16QAM (GT - LC =5 dB)									
Bandwidth	**1.4M(1RB-5)**			**3M(1RB-0)**			**5M(1RB-12)**		
Channel	26797	26915	27033	26805	26915	27025	26815	26915	27015
	(Low)	**(Mid)**	**(High)**	**(Low)**	**(Mid)**	**(High)**	**(Low)**	**(Mid)**	**(High)**
Frequency (MHz)	824.7	836.5	848.3	825.5	836.5	847.5	826.5	836.5	846.5
Conducted Power (dBm)	21.99	21.74	21.69	21.89	21.72	21.72	21.62	21.50	21.41
Conducted Power (Watts)	0.1581	0.1493	0.1476	0.1545	0.1486	0.1486	0.1452	0.1413	0.1384
ERP(dBm)	24.84	24.59	24.54	24.74	24.57	24.57	24.47	24.35	24.26
ERP(Watts)	0.3048	0.2877	0.2844	0.2979	0.2864	0.2864	0.2799	0.2723	0.2667

LTE Band 26 16QAM (GT - LC =5 dB)							
Bandwidth	**10M(1RB-0)**			**15M(1RB-0)**			
Channel	26840	26915	26990	26865	26915	26965	26765
	(Low)	**(Mid)**	**(High)**	**(Low)**	**(Mid)**	**(High)**	
Frequency (MHz)	829	836.5	844	831.5	836.5	841.5	821.5
Conducted Power (dBm)	21.82	21.59	21.57	21.53	21.41	21.45	21.40
Conducted Power (Watts)	0.1521	0.1442	0.1435	0.1422	0.1384	0.1396	0.1380
ERP(dBm)	24.67	24.44	24.42	24.38	24.26	24.30	24.25
ERP(Watts)	0.2931	0.2780	0.2767	0.2742	0.2667	0.2692	0.2661

Peak-to-Average Ratio

Mode	LTE Band 2 / 20MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	5.07	4.99	5.77	5.91	PASS
Middle CH	5.13	4.99	5.86	5.86	
Highest CH	5.01	4.90	5.74	5.80	

Mode	LTE Band 4 / 20MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	4.84	5.22	5.62	5.97	PASS
Middle CH	4.84	5.04	5.86	5.80	
Highest CH	4.67	5.19	5.42	5.91	

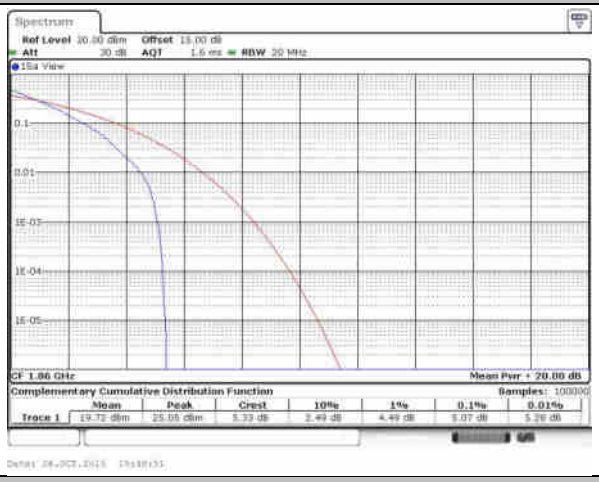
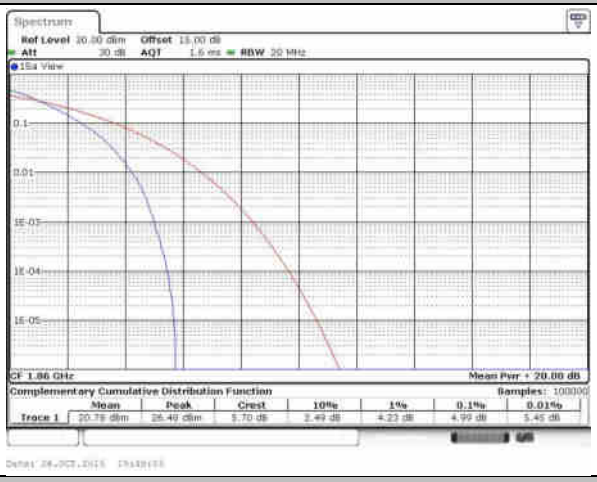
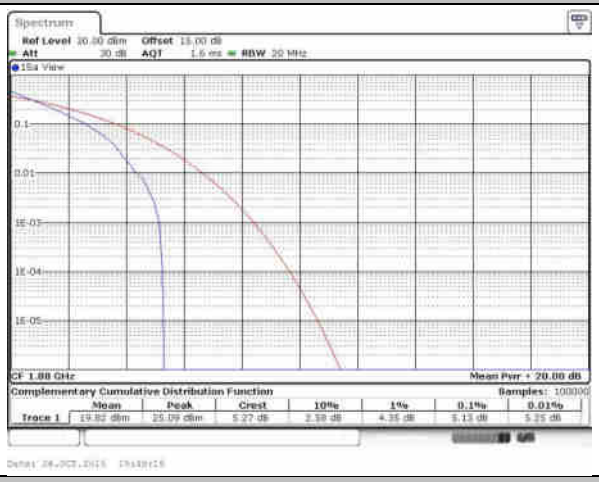
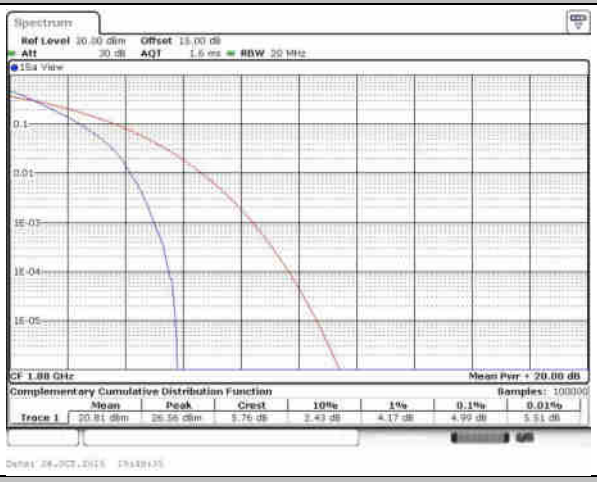
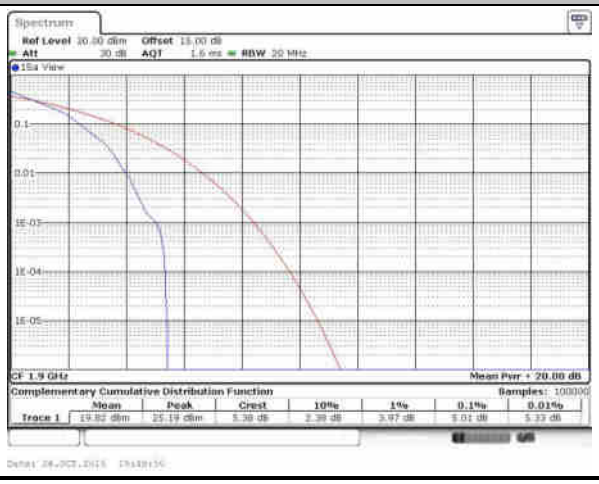
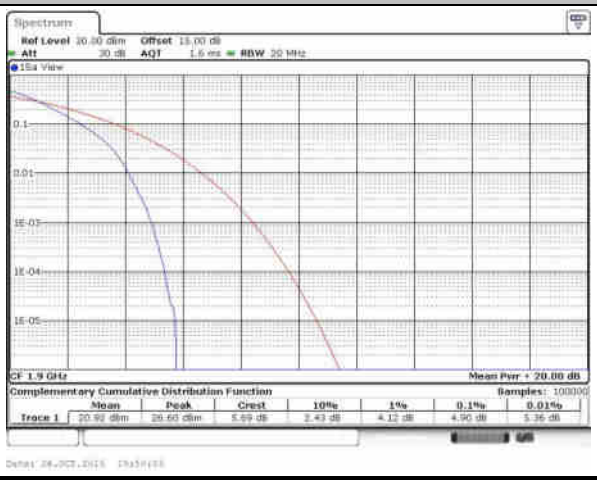
Mode	LTE Band 5 / 10MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	5.01	5.16	5.91	6.03	PASS
Middle CH	5.07	4.96	6.12	5.86	
Highest CH	4.78	5.07	5.71	5.94	

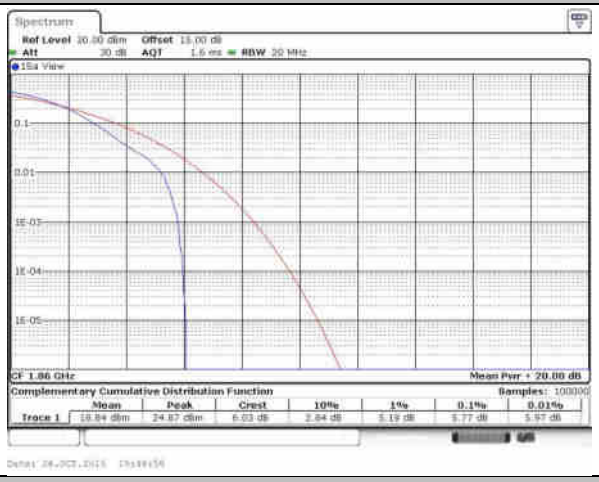
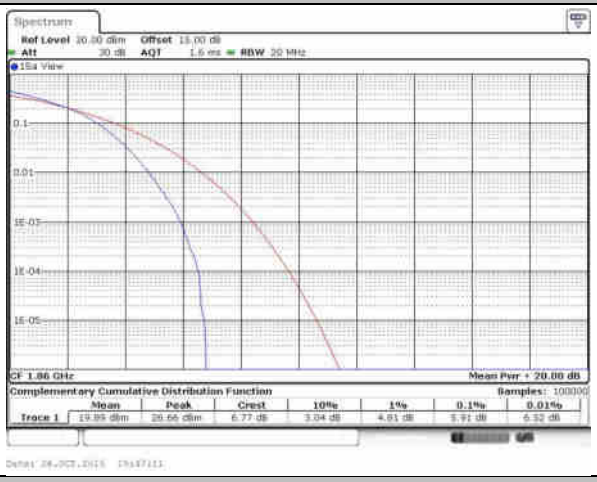
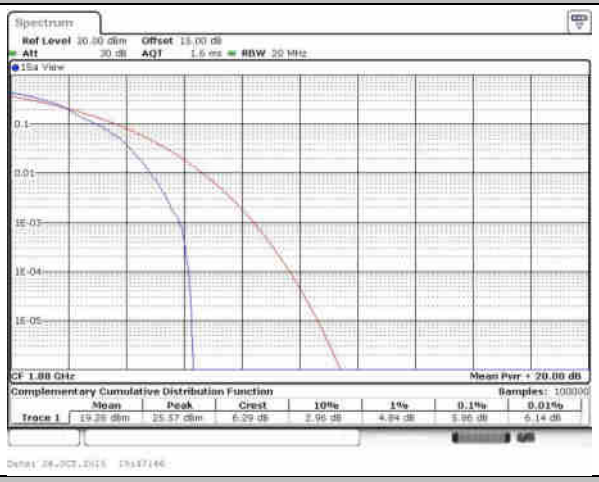
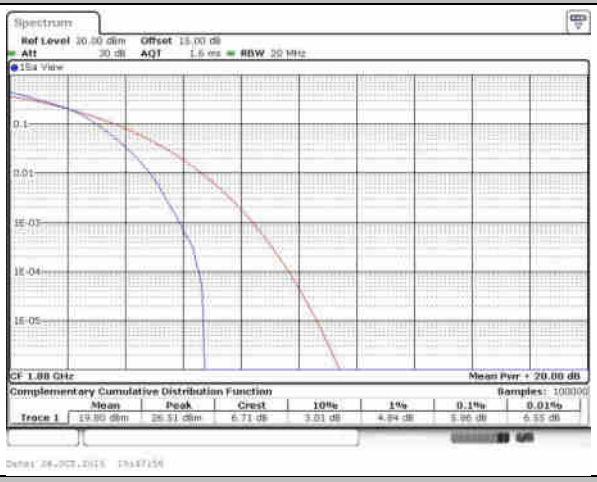
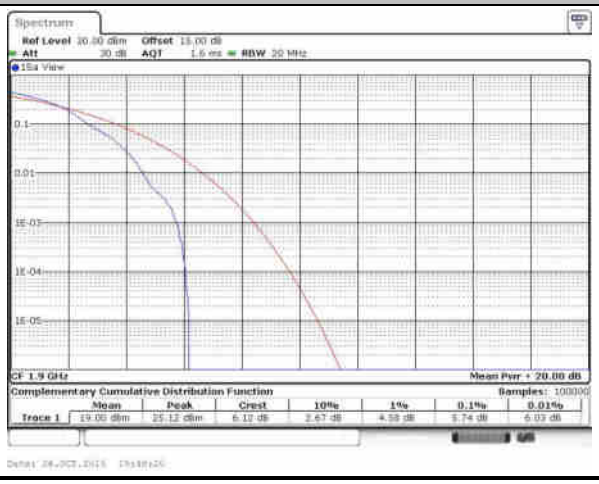
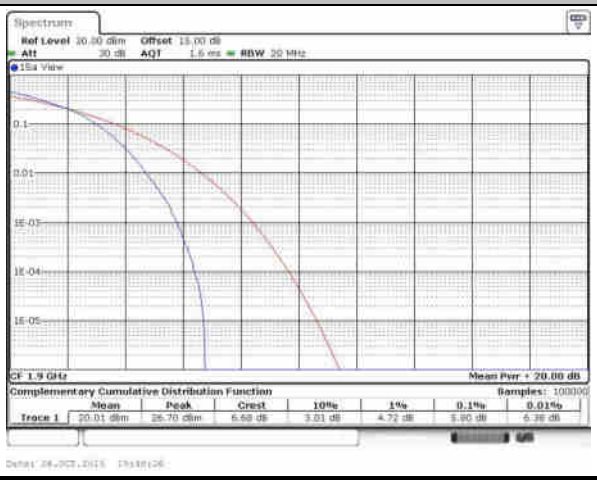
Mode	LTE Band 7 / 20MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	4.78	5.45	5.54	6.43	PASS
Middle CH	5.45	5.71	6.87	6.72	
Highest CH	5.62	5.86	6.67	6.55	

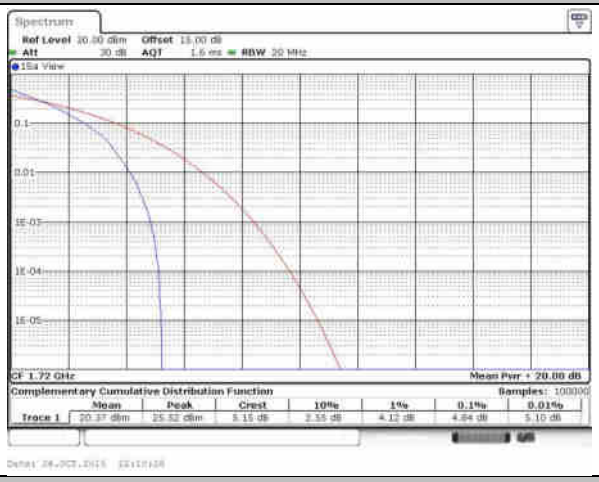
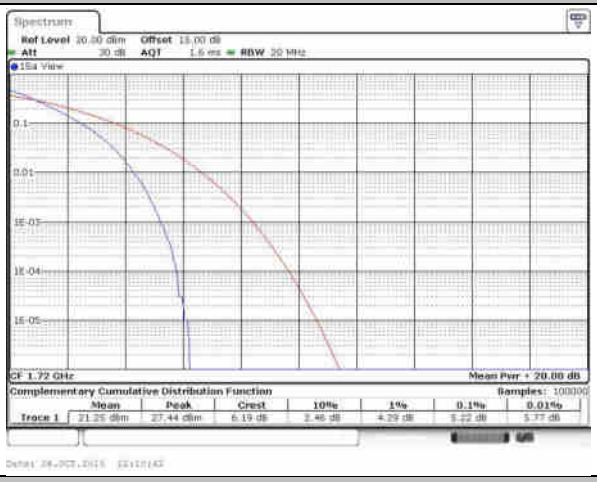
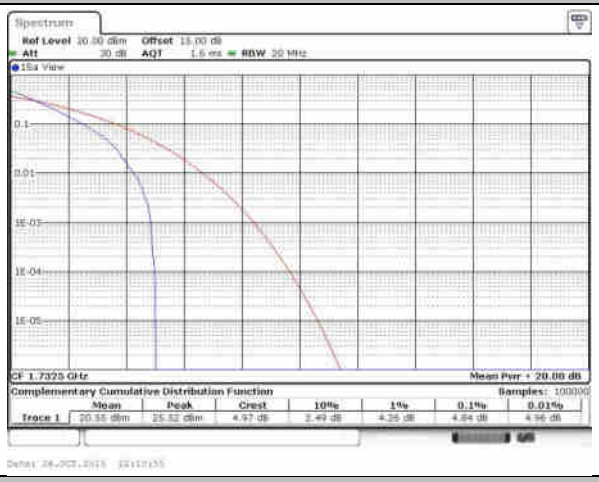
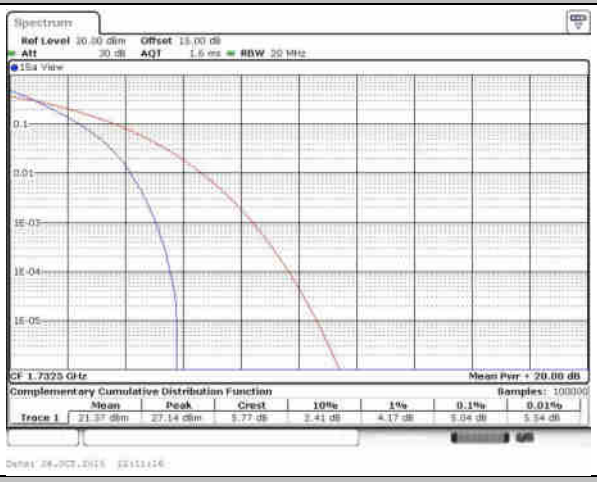
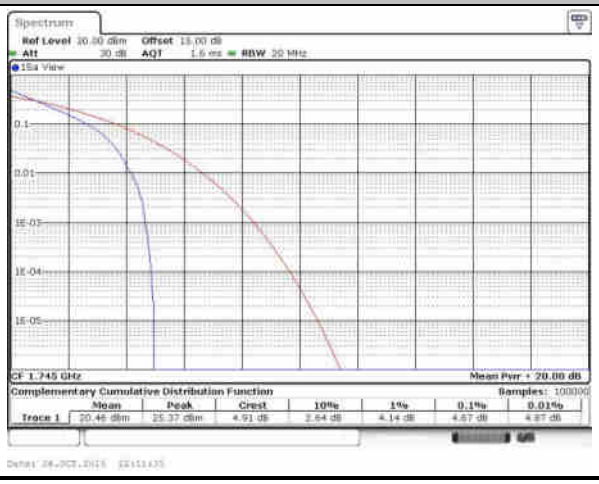
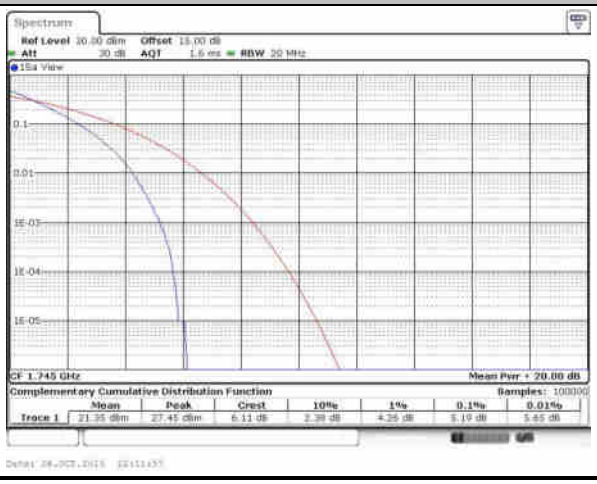
Mode	LTE Band 13 / 10MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	-	-	-	-	PASS
Middle CH	3.16	5.22	4.03	6.09	
Highest CH	-	-	-	-	

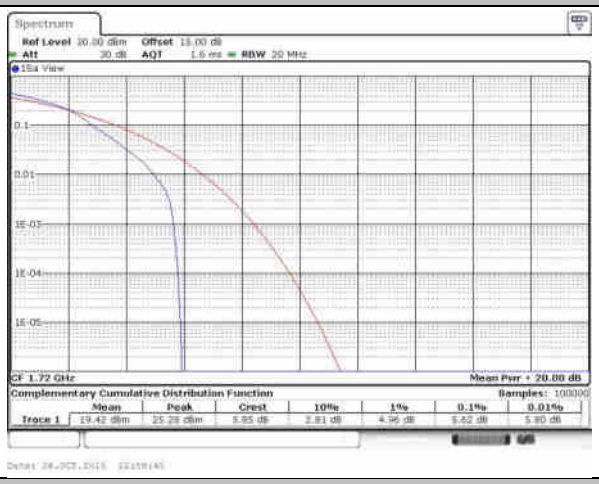
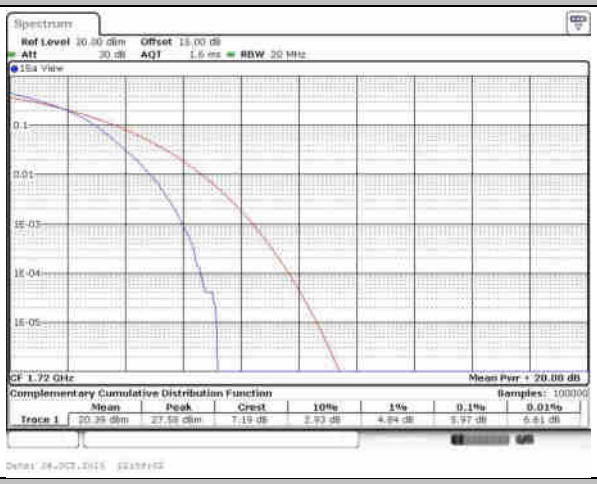
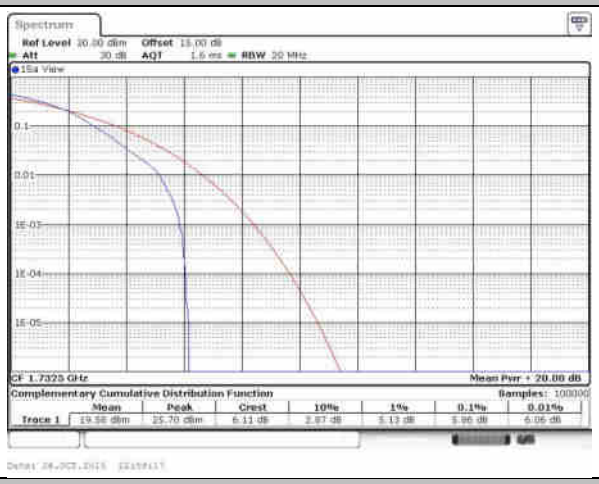
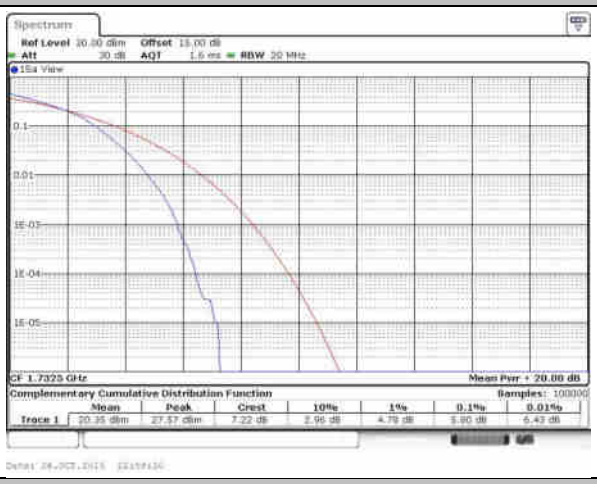
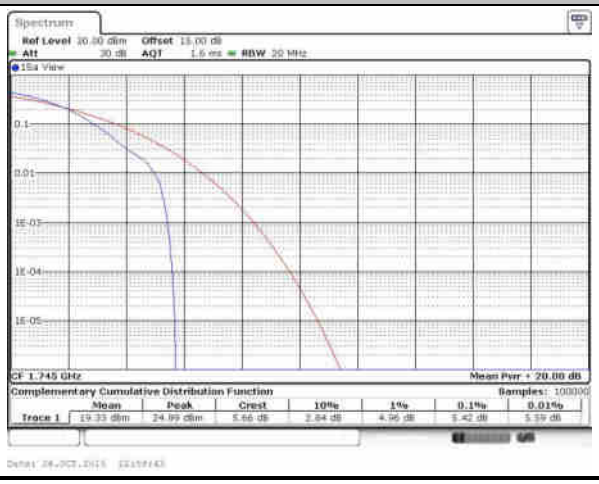
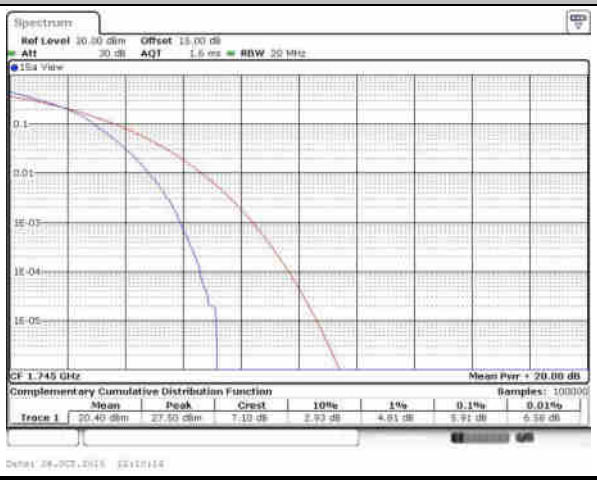
Mode	LTE Band 17 / 10MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	4.84	4.72	5.86	5.51	PASS
Middle CH	4.58	4.64	5.42	5.51	
Highest CH	4.49	4.64	5.77	5.54	

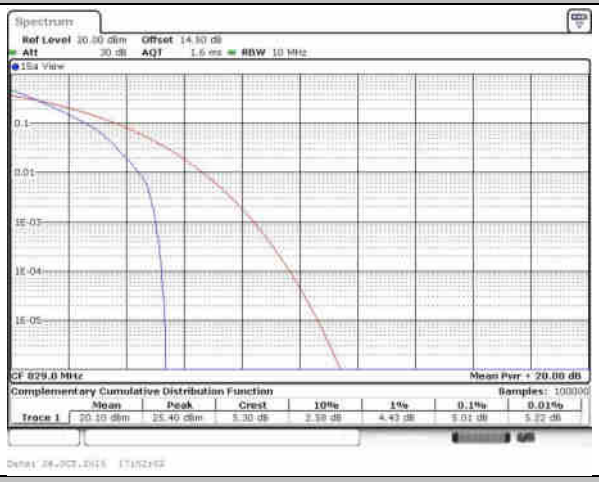
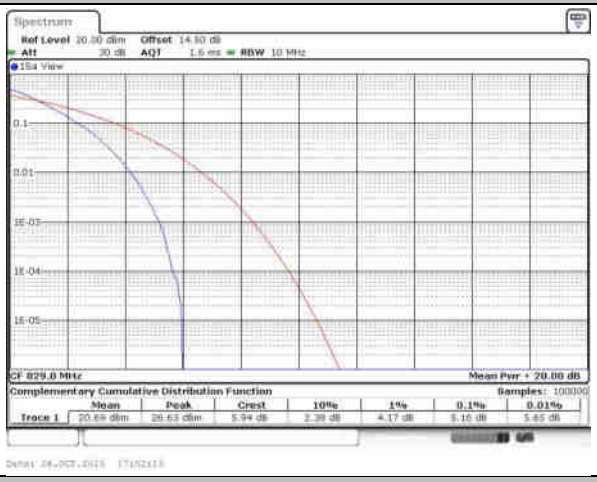
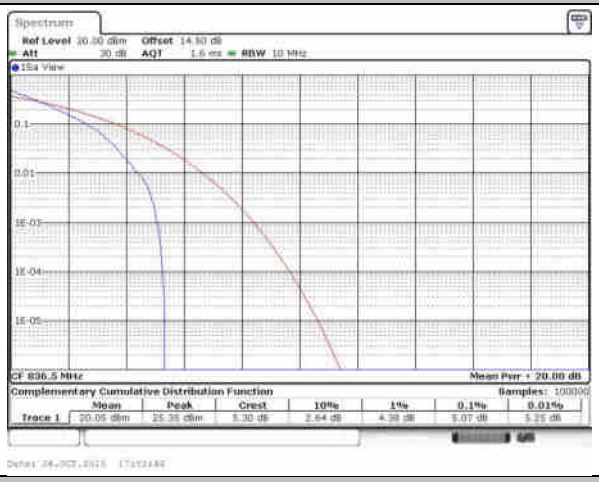
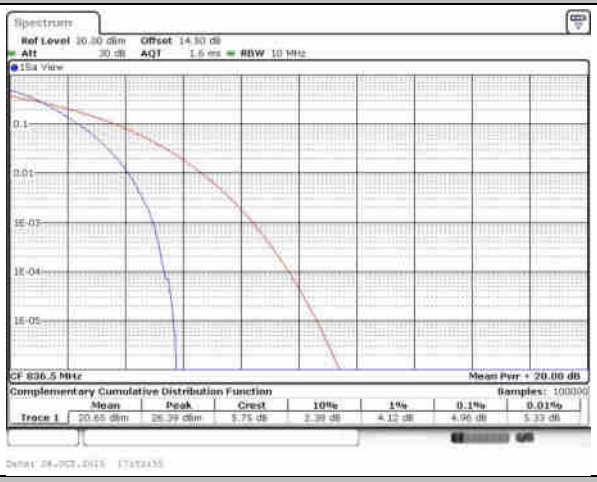
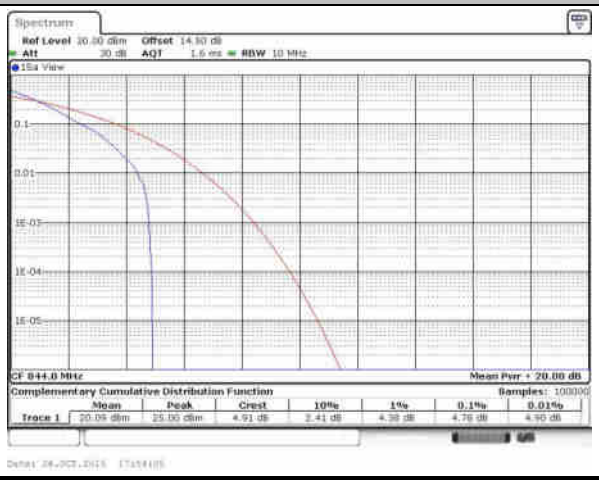
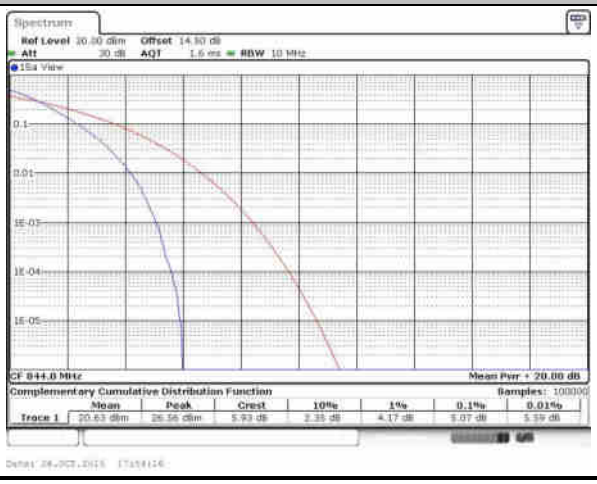
Mode	LTE Band 26 / 15MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	5.16	5.04	6.29	5.94	PASS
Middle CH	4.99	5.04	6.14	5.94	
Highest CH	4.93	5.30	5.97	5.97	

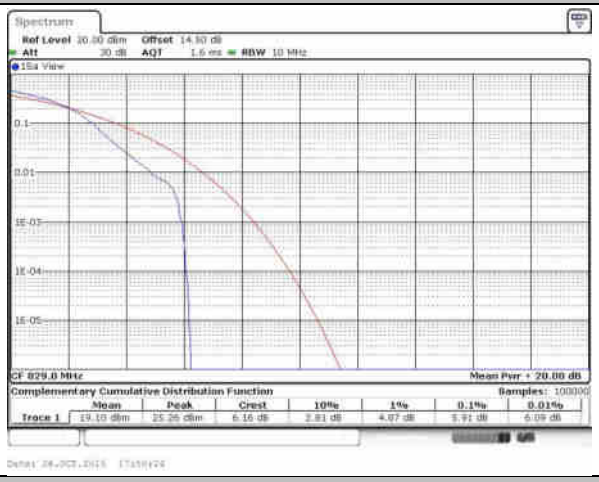
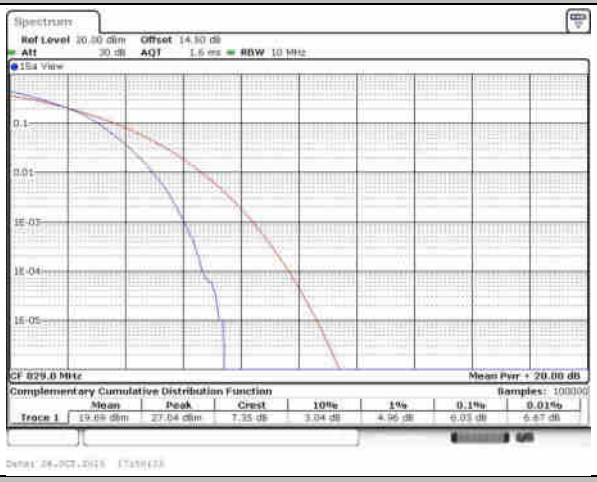
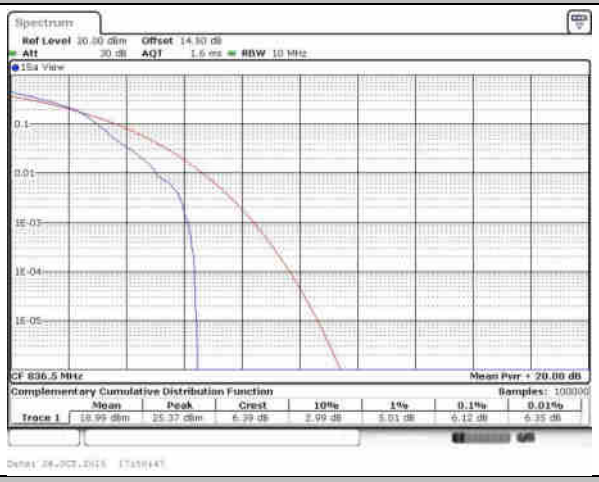
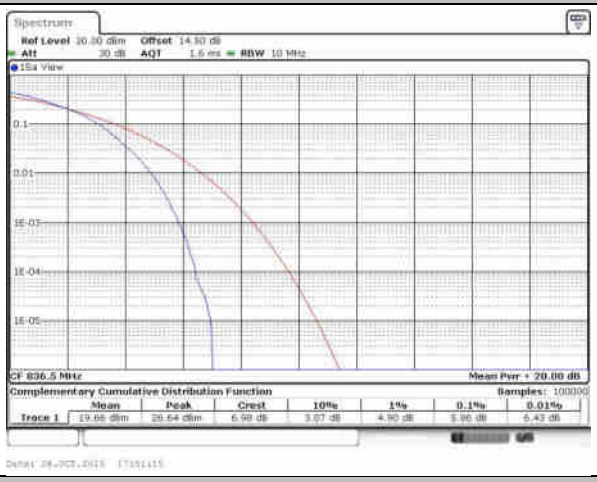
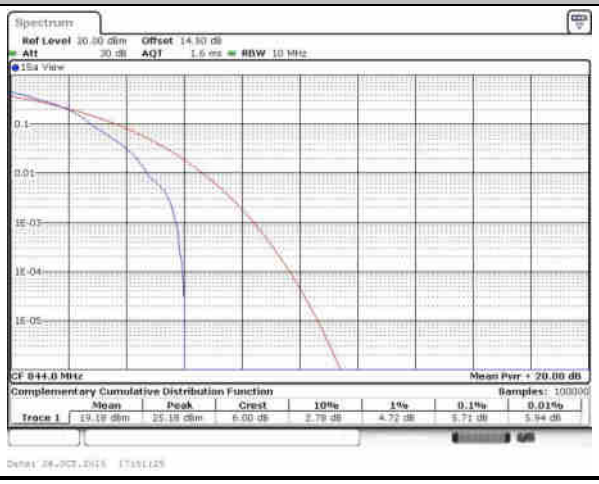
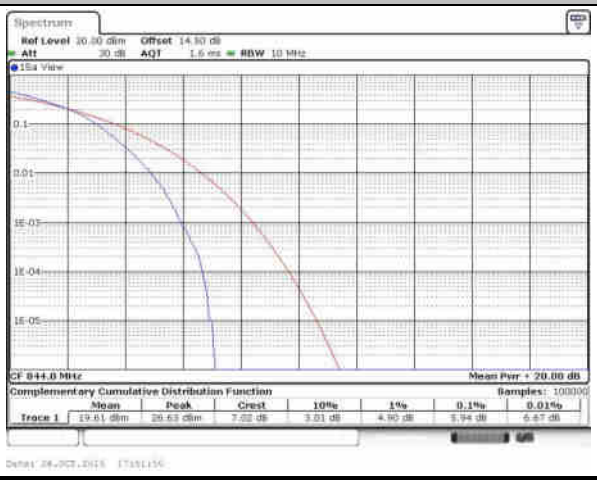
LTE Band 2 / 20MHz / QPSK	
Lowest Channel / 1RB	**Lowest Channel / Full RB**
	
Middle Channel / 1RB	**Middle Channel / Full RB**
	
Highest Channel / 1RB	**Highest Channel / Full RB**
	

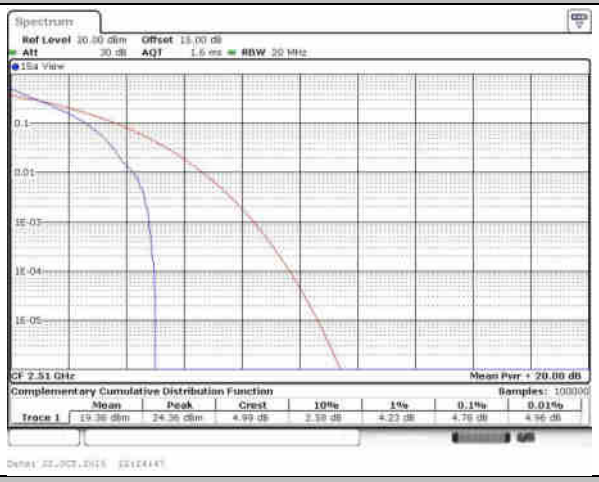
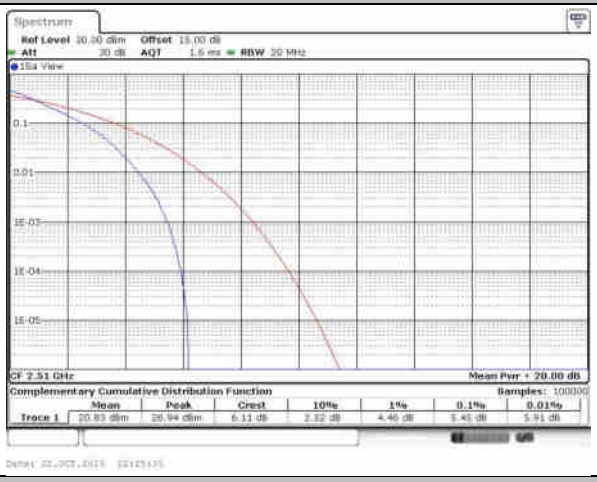
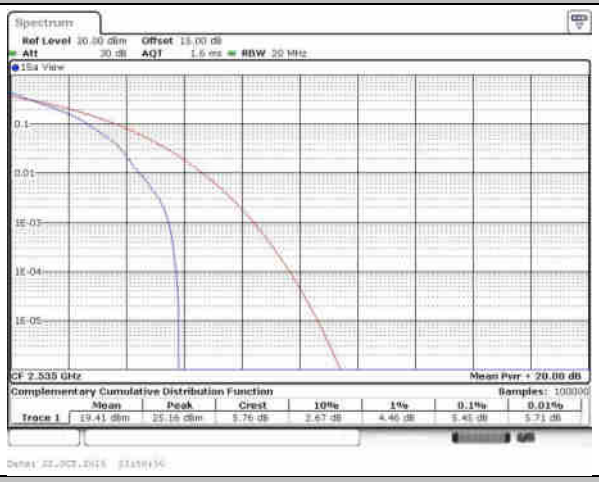
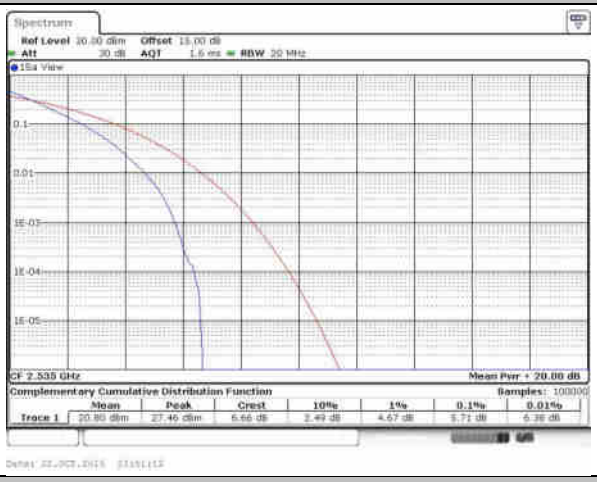
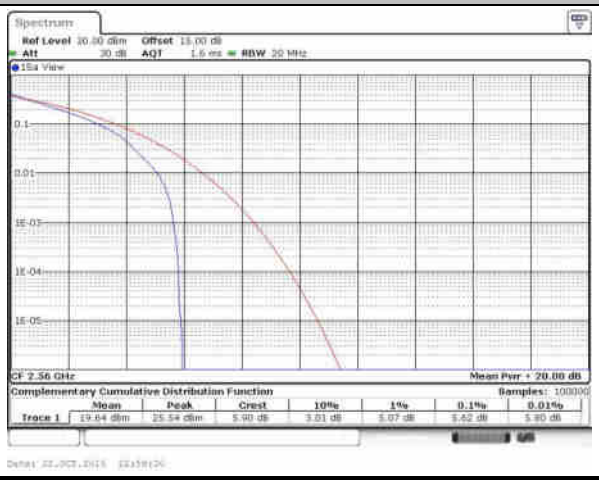
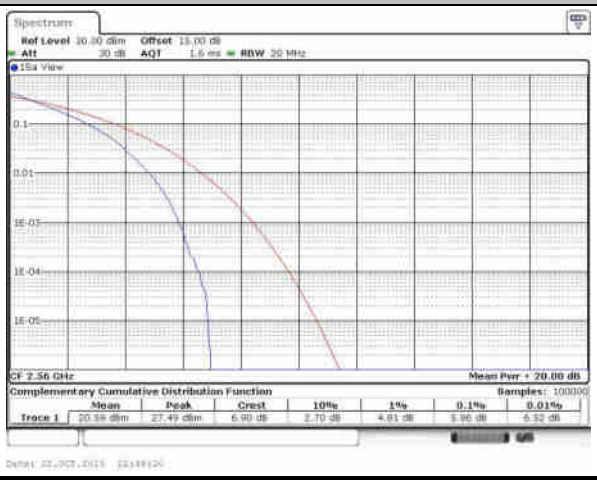
LTE Band 2 / 20MHz / 16QAM	
Lowest Channel / 1RB	**Lowest Channel / Full RB**
	
Middle Channel / 1RB	**Middle Channel / Full RB**
	
Highest Channel / 1RB	**Highest Channel / Full RB**
	

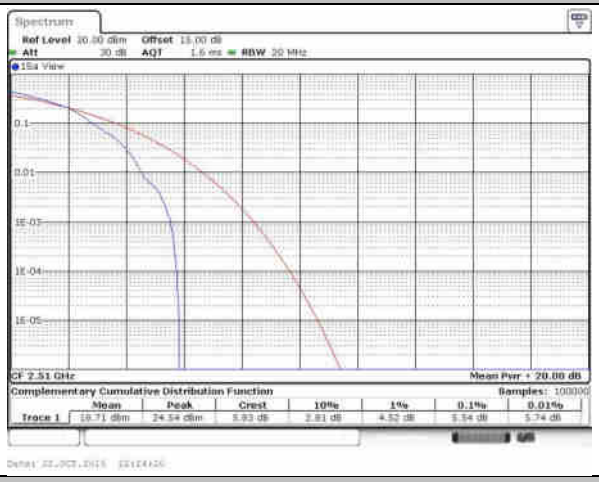
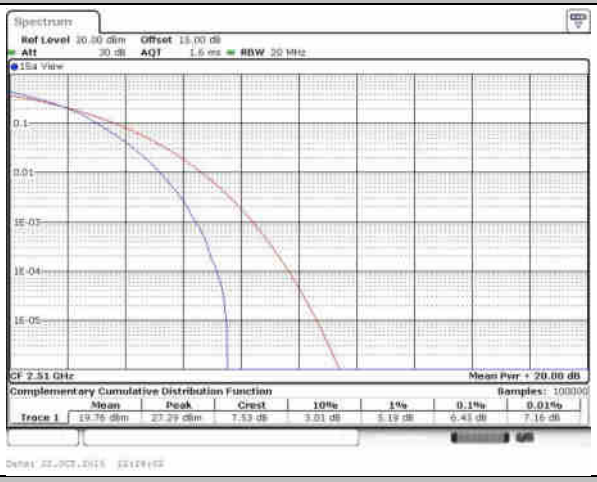
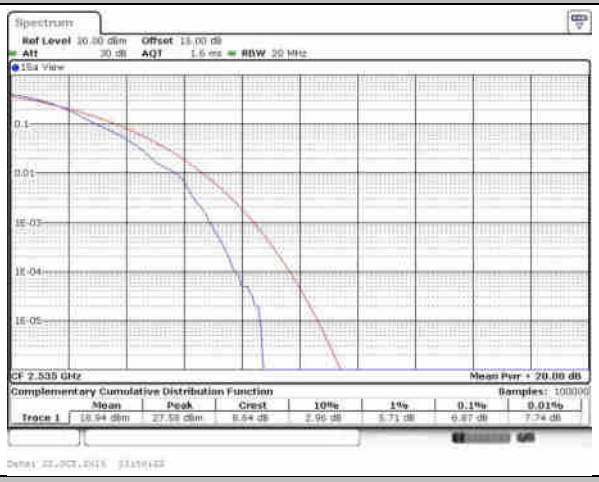
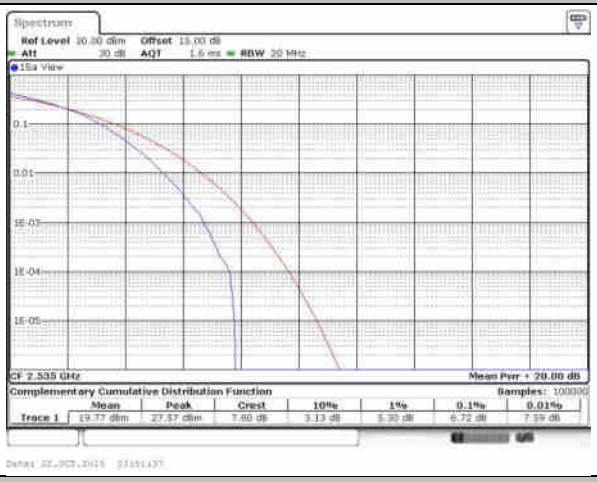
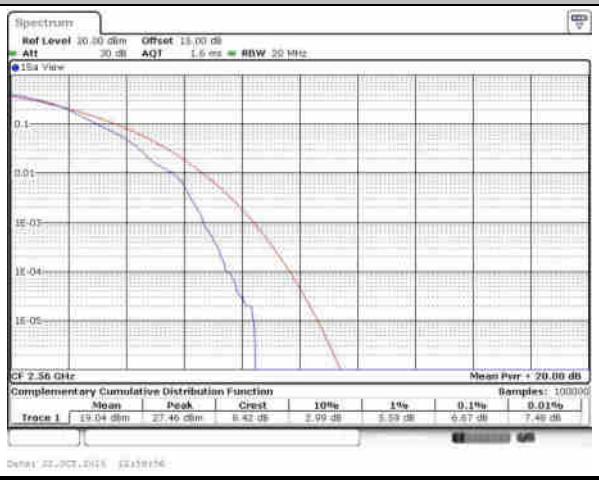
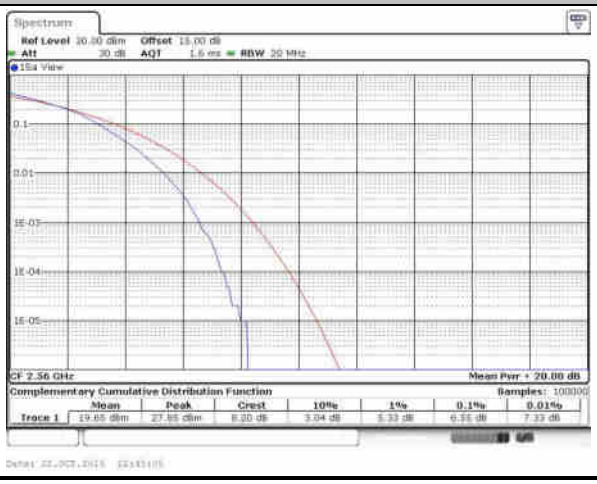
LTE Band 4 / 20MHz / QPSK	
Lowest Channel / 1RB	**Lowest Channel / Full RB**
	
Middle Channel / 1RB	**Middle Channel / Full RB**
	
Highest Channel / 1RB	**Highest Channel / Full RB**
	

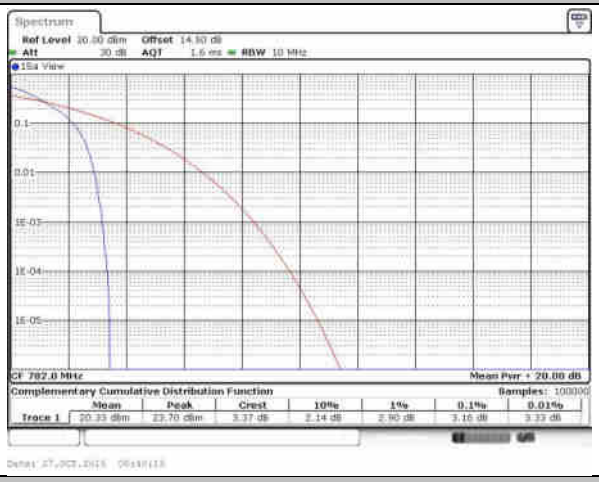
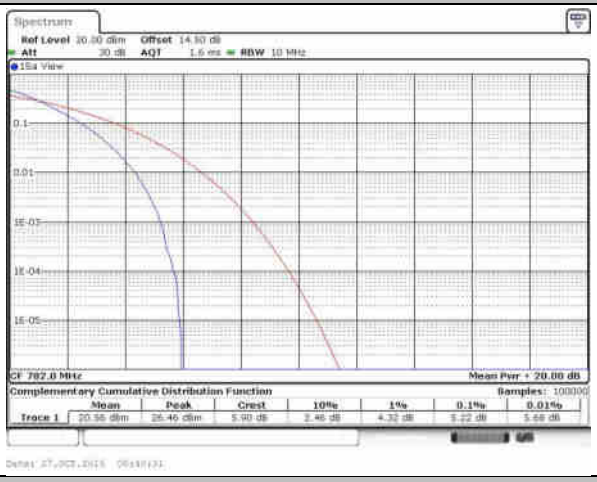
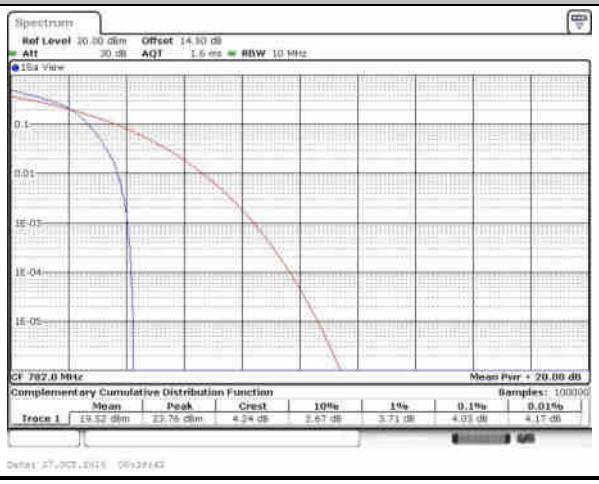
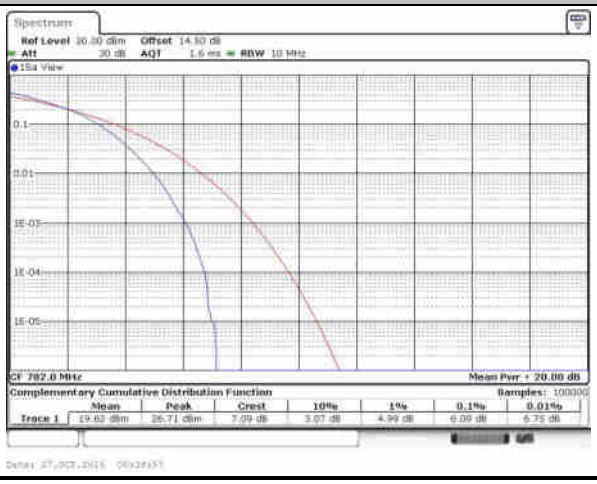
LTE Band 4 / 20MHz / 16QAM	
Lowest Channel / 1RB	**Lowest Channel / Full RB**
	
Middle Channel / 1RB	**Middle Channel / Full RB**
	
Highest Channel / 1RB	**Highest Channel / Full RB**
	

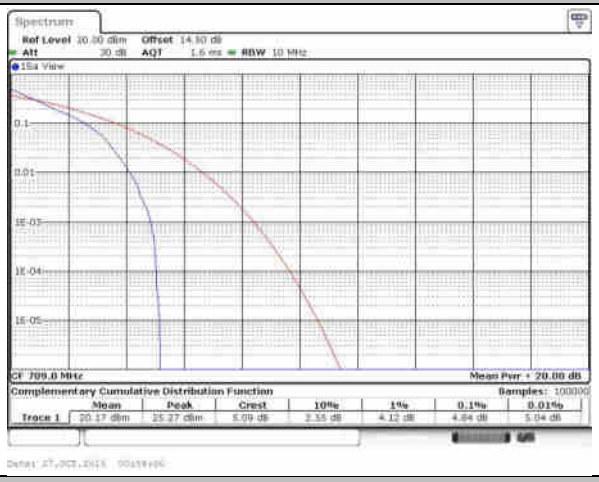
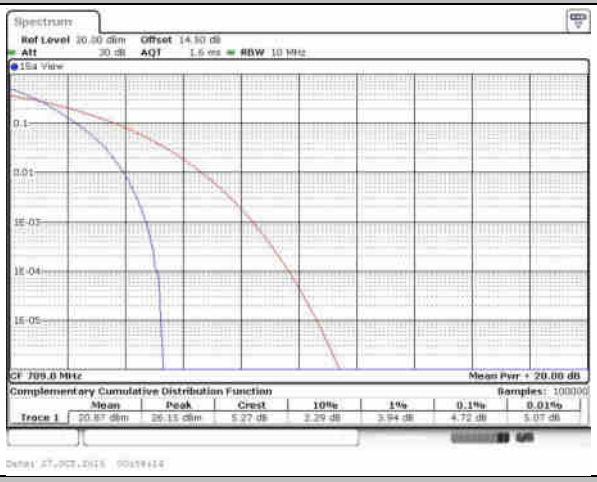
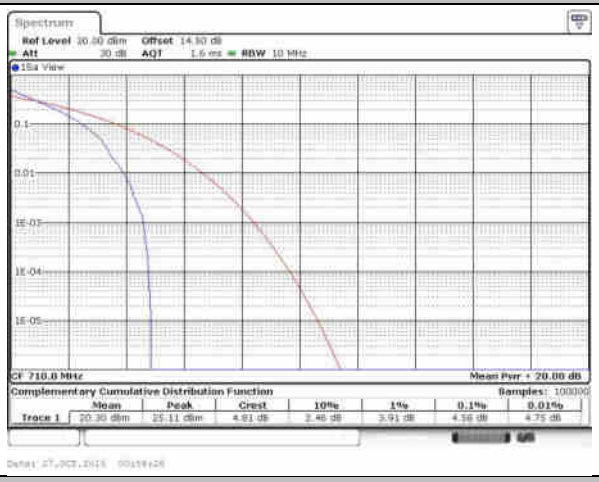
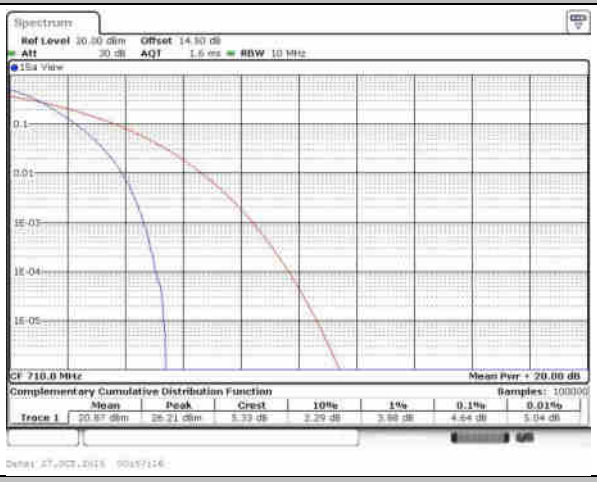
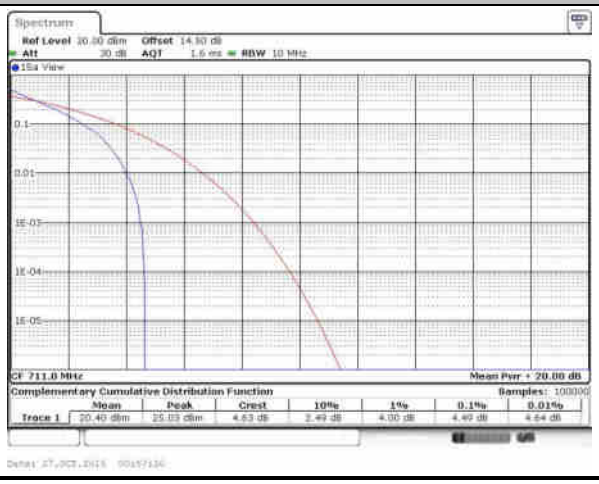
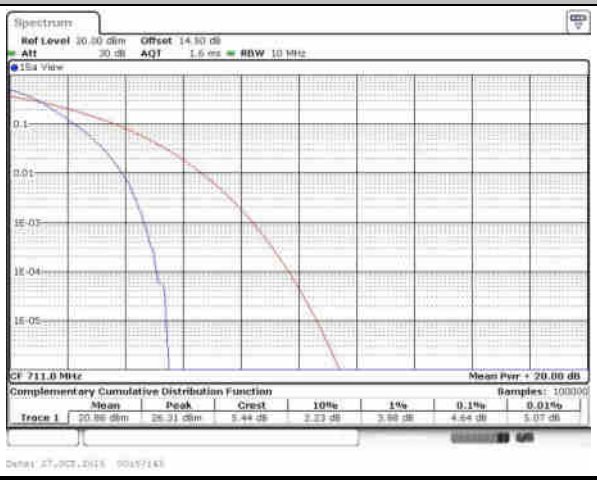
LTE Band 5 / 10MHz / QPSK	
Lowest Channel / 1RB	**Lowest Channel / Full RB**
	
Middle Channel / 1RB	**Middle Channel / Full RB**
	
Highest Channel / 1RB	**Highest Channel / Full RB**
	

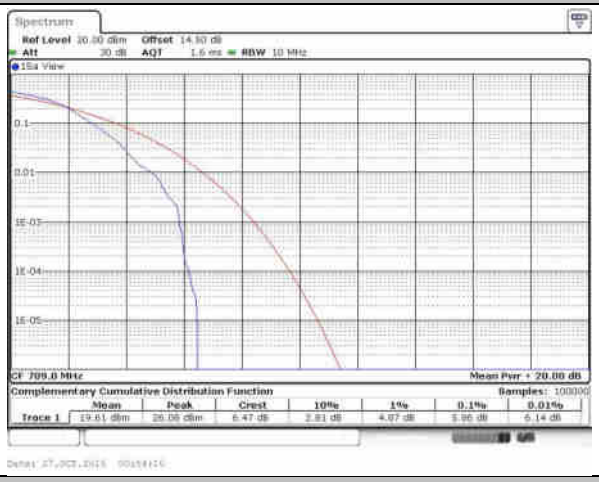
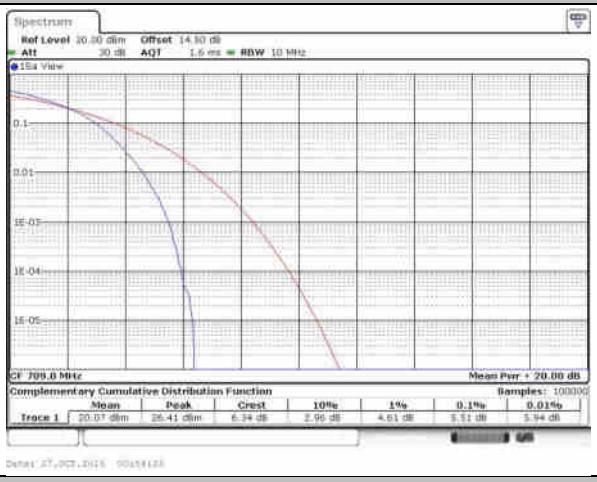
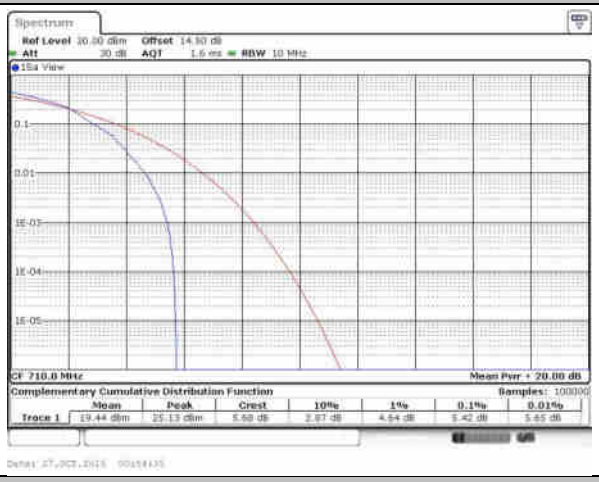
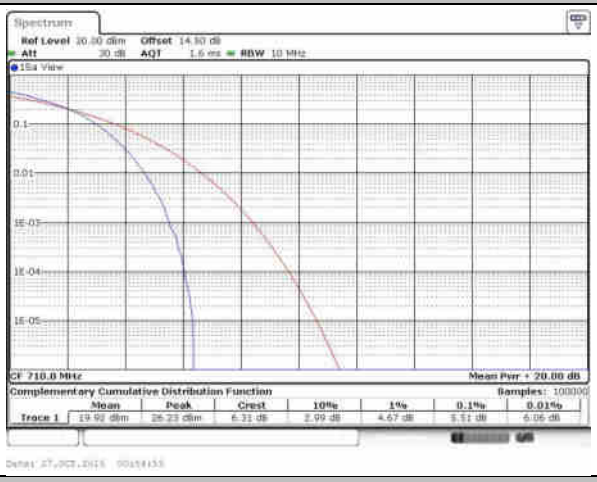
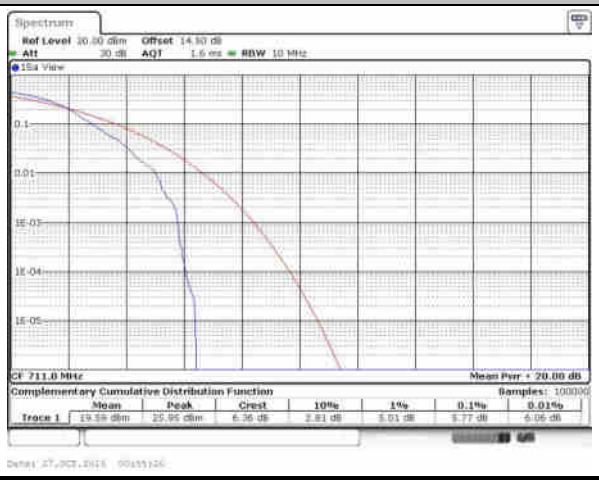
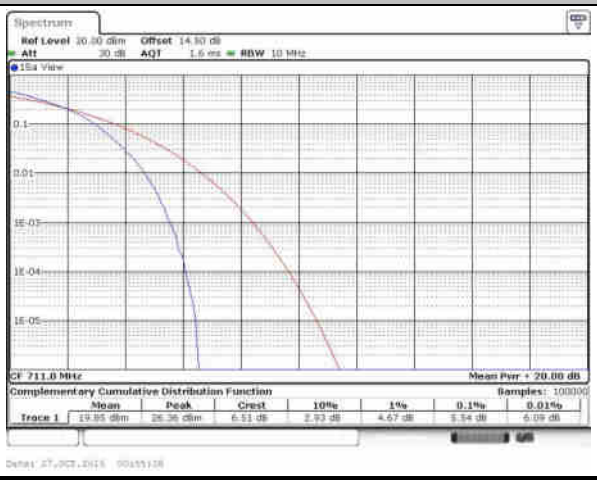
LTE Band 5 / 10MHz / 16QAM	
Lowest Channel / 1RB	**Lowest Channel / Full RB**
	
Middle Channel / 1RB	**Middle Channel / Full RB**
	
Highest Channel / 1RB	**Highest Channel / Full RB**
	

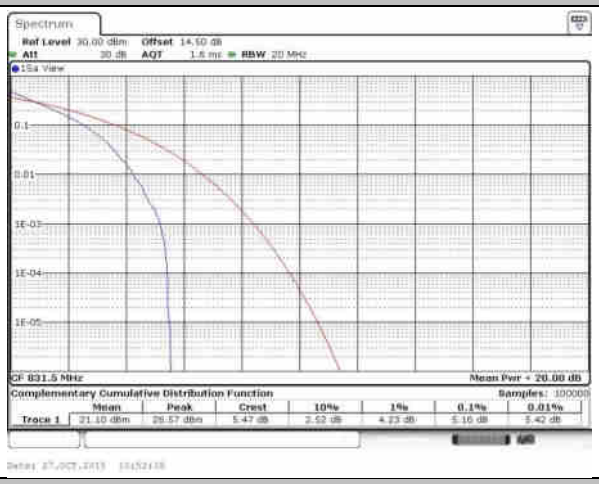
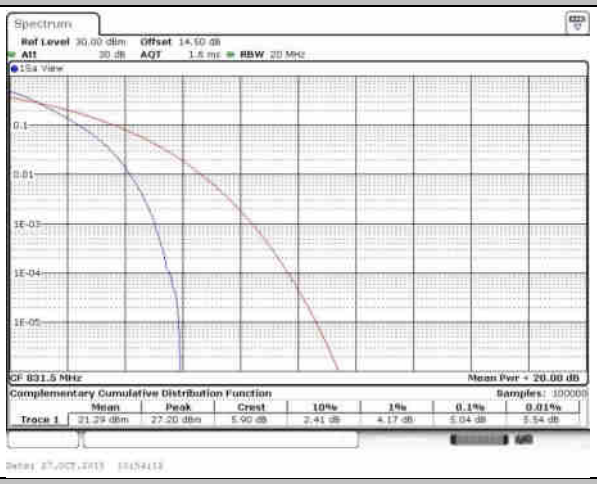
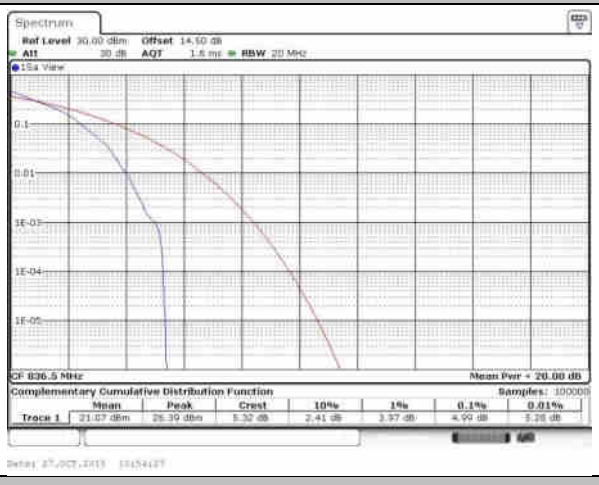
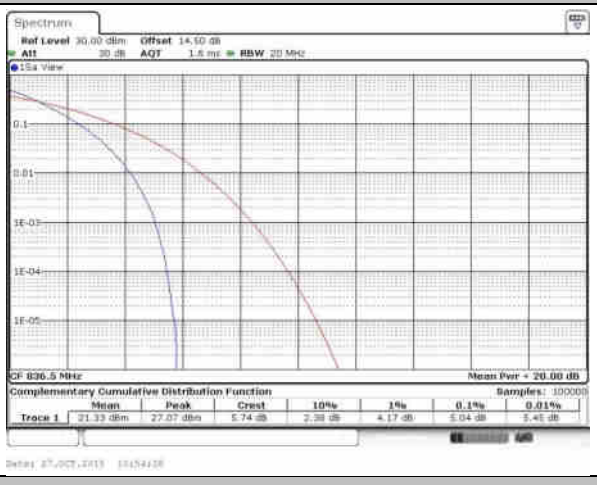
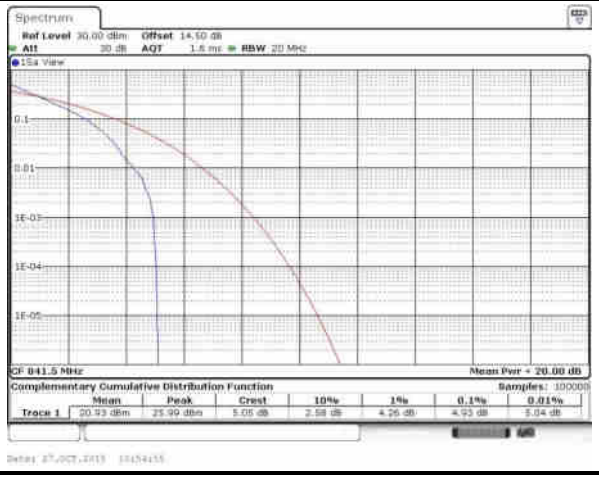
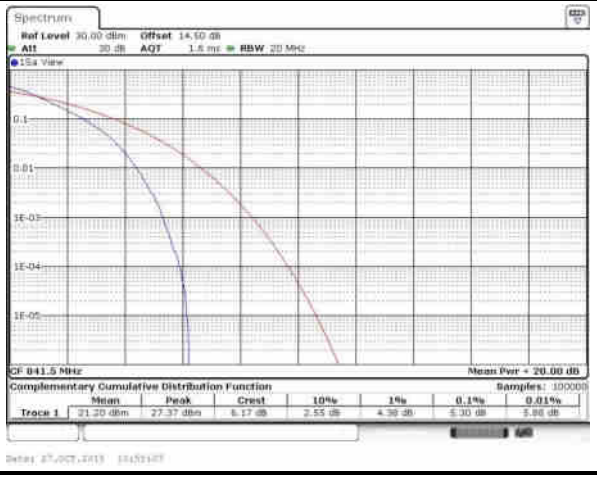
LTE Band 7 / 20MHz / QPSK	
Lowest Channel / 1RB	**Lowest Channel / Full RB**
	
Middle Channel / 1RB	**Middle Channel / Full RB**
	
Highest Channel / 1RB	**Highest Channel / Full RB**
	

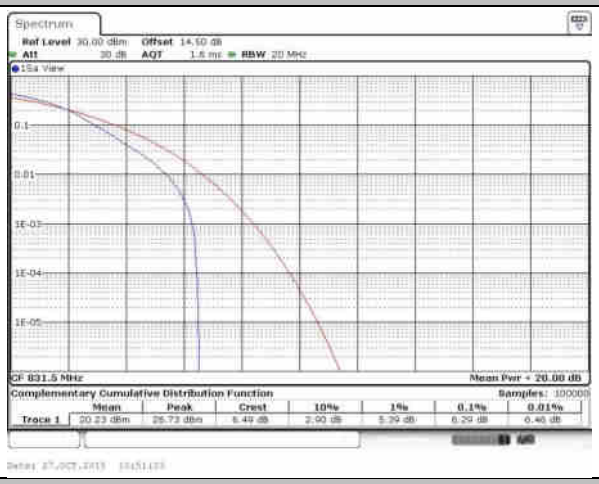
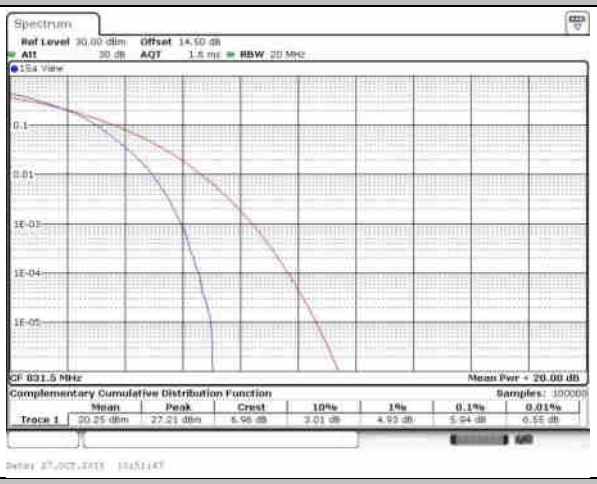
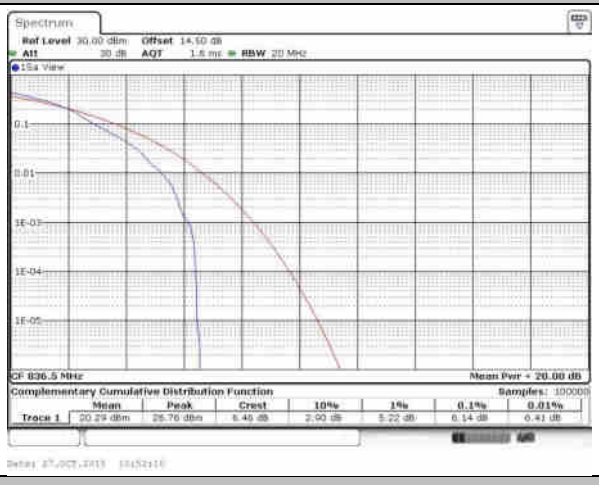
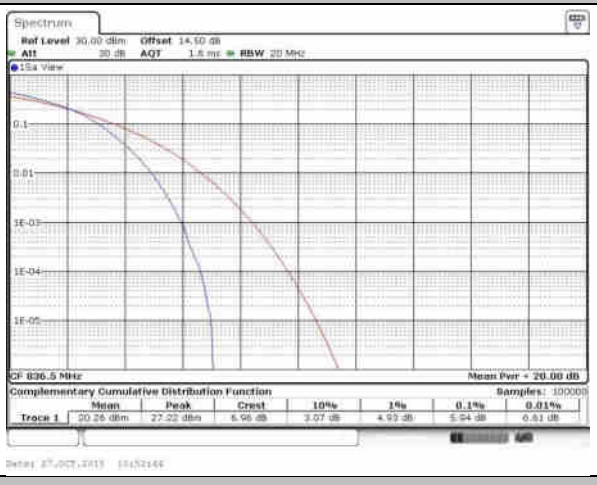
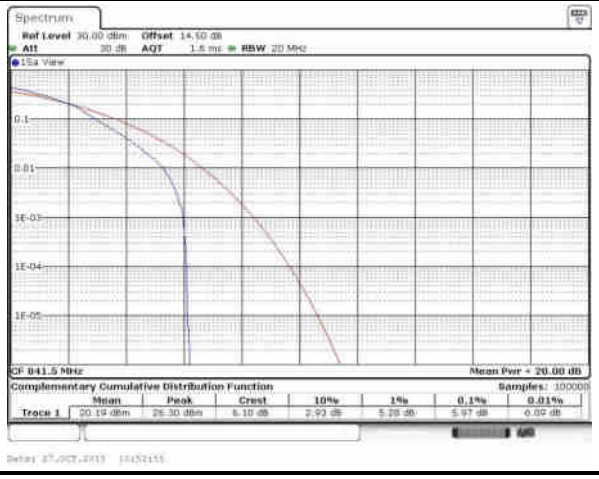
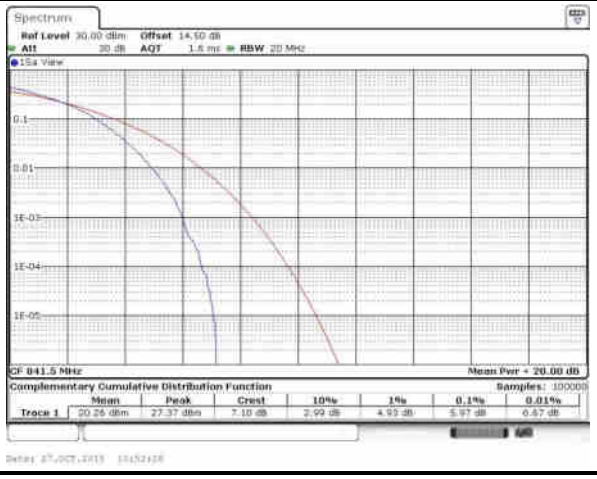
LTE Band 7 / 20MHz / 16QAM	
Lowest Channel / 1RB	**Lowest Channel / Full RB**
	
Middle Channel / 1RB	**Middle Channel / Full RB**
	
Highest Channel / 1RB	**Highest Channel / Full RB**
	

LTE Band 13 / 10MHz / QPSK	
Middle Channel/ 1RB	**Middle Channel / Full RB**
	
LTE Band 13 / 10MHz / 16QAM	
Middle Channel/ 1RB	**Middle Channel / Full RB**
	

LTE Band 17 / 10MHz / QPSK	
Lowest Channel / 1RB	**Lowest Channel / Full RB**
	
Middle Channel/ 1RB	**Middle Channel / Full RB**
	
Highest Channel/ 1RB	**Highest Channel / Full RB**
	

LTE Band 17 / 10MHz / 16QAM	
Lowest Channel / 1RB	**Lowest Channel / Full RB**
	
Middle Channel/ 1RB	**Middle Channel / Full RB**
	
Highest Channel/ 1RB	**Highest Channel / Full RB**
	

LTE Band 26 / 15MHz / QPSK	
Lowest Channel / 1RB	**Lowest Channel / Full RB**
	
Middle Channel / 1RB	**Middle Channel / Full RB**
	
Highest Channel / 1RB	**Highest Channel / Full RB**
	

LTE Band 26 / 15MHz / 16QAM	
Lowest Channel / 1RB	**Lowest Channel / Full RB**
	
Middle Channel / 1RB	**Middle Channel / Full RB**
	
Highest Channel / 1RB	**Highest Channel / Full RB**
	

26dB Bandwidth

Mode	LTE Band 2 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	1.28	1.28	3.09	3.09	4.91	4.91	10.29	9.77	15.29	14.63	20.30	20.42
Middle CH	1.33	1.34	3.02	3.05	4.91	4.98	10.17	10.31	14.57	15.38	20.58	20.86
Highest CH	1.32	1.32	2.99	3.05	5.00	4.89	10.39	10.11	14.48	14.21	20.26	20.14

Mode	LTE Band 4 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	1.33	1.30	3.05	3.01	5.05	5.00	10.03	9.97	15.02	14.27	20.42	20.38
Middle CH	1.32	1.29	2.99	3.02	4.94	5.03	10.03	10.29	14.45	14.69	21.34	20.18
Highest CH	1.31	1.29	2.99	3.00	4.98	4.91	9.87	10.05	14.60	14.78	20.22	20.62

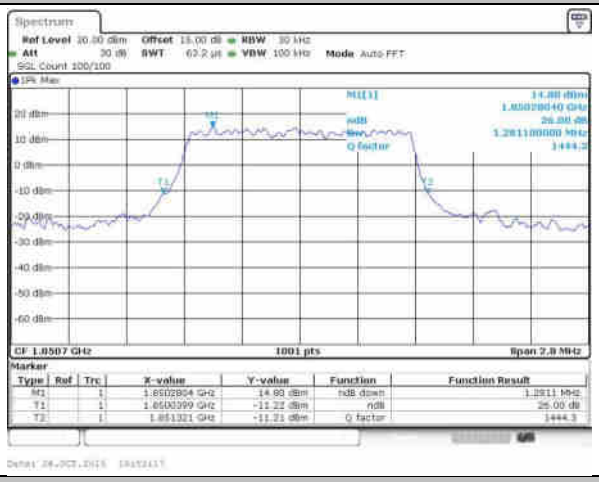
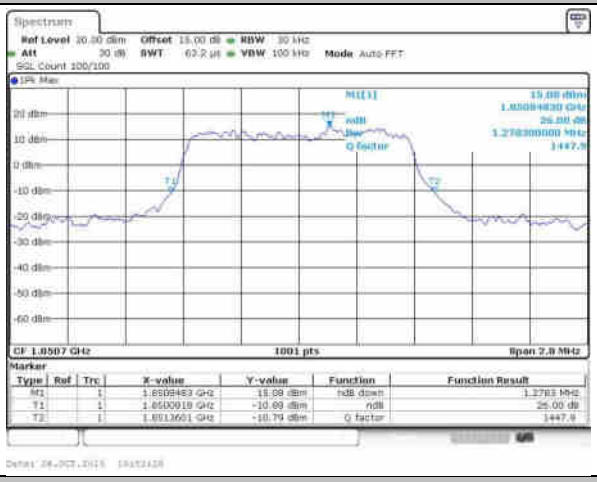
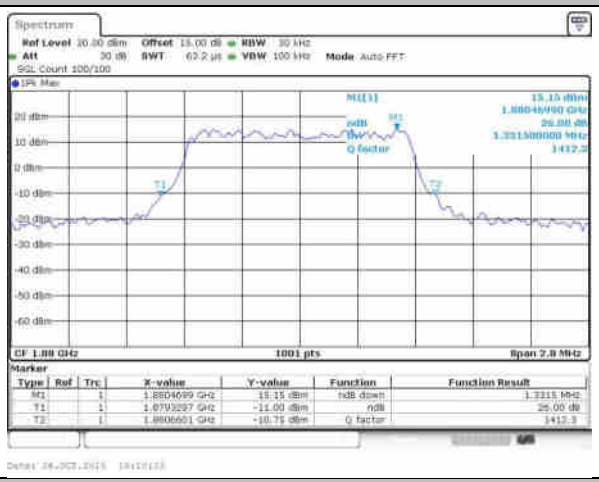
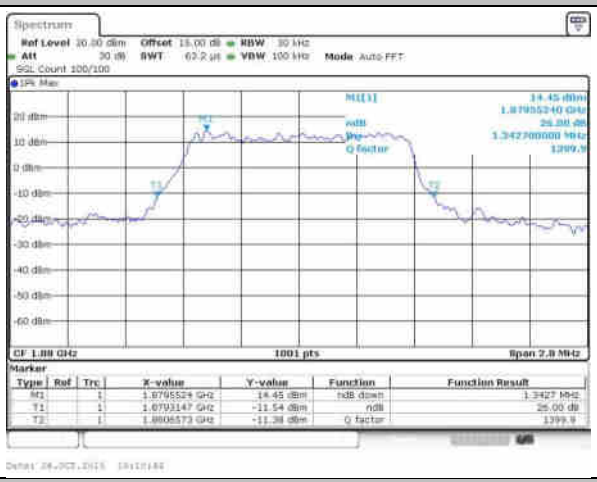
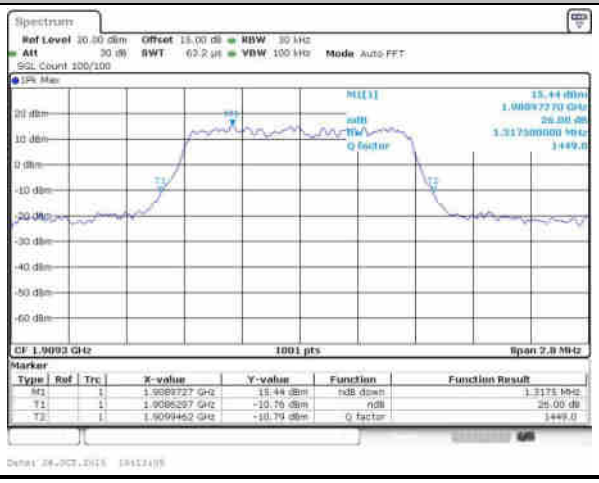
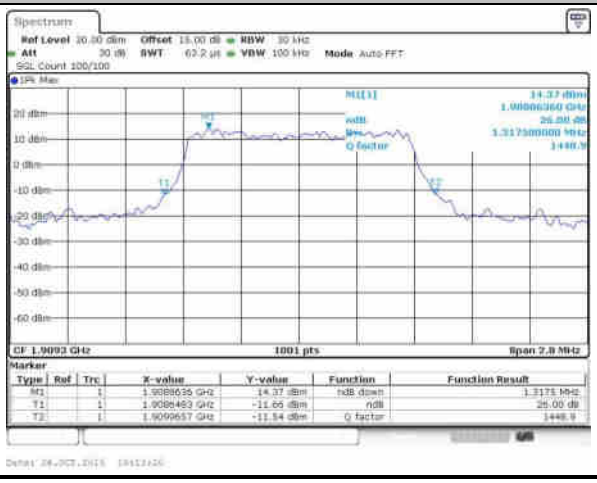
Mode	LTE Band 5 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	1.30	1.30	2.96	3.05	5.03	4.97	9.93	9.73	-	-	-	-
Middle CH	1.28	1.28	3.04	3.07	4.99	4.90	9.89	9.99	-	-	-	-
Highest CH	1.32	1.30	3.00	2.99	4.91	4.89	9.87	10.11	-	-	-	-

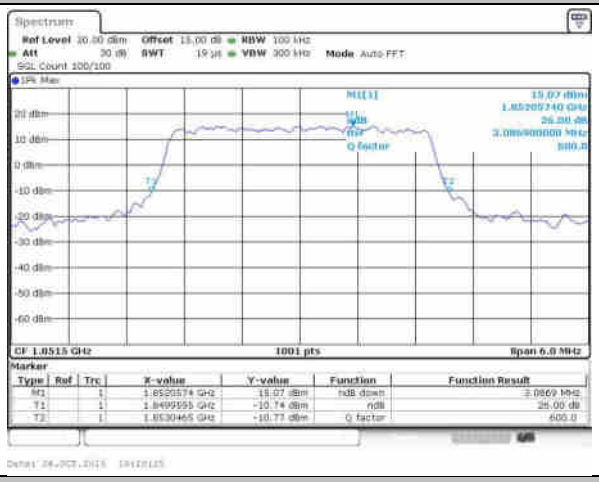
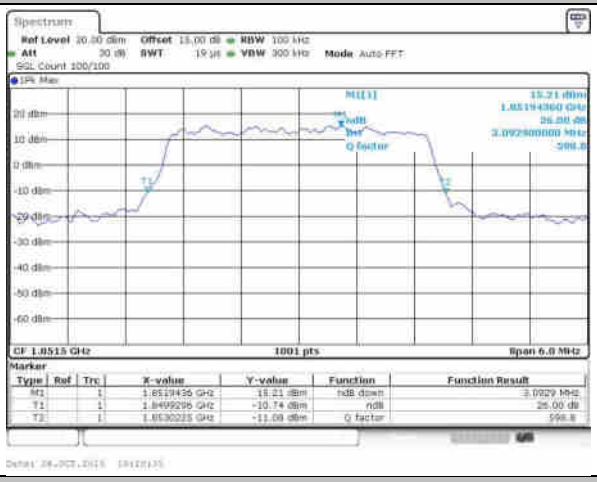
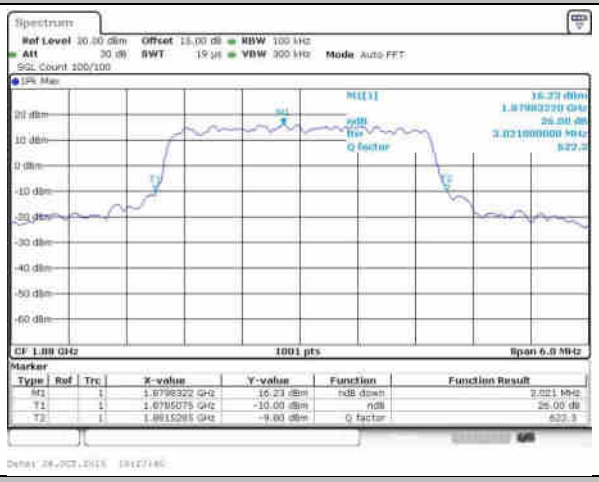
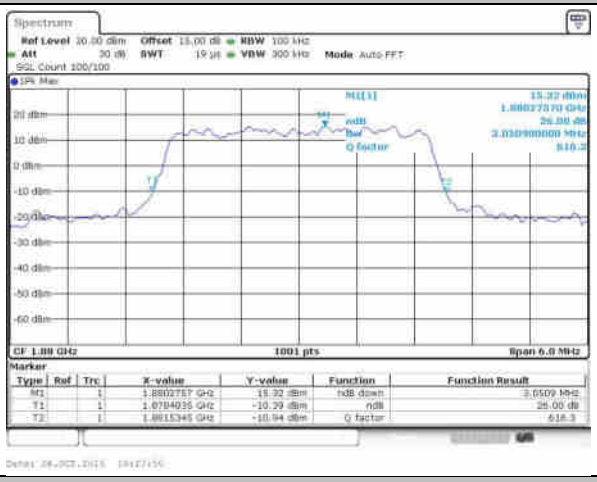
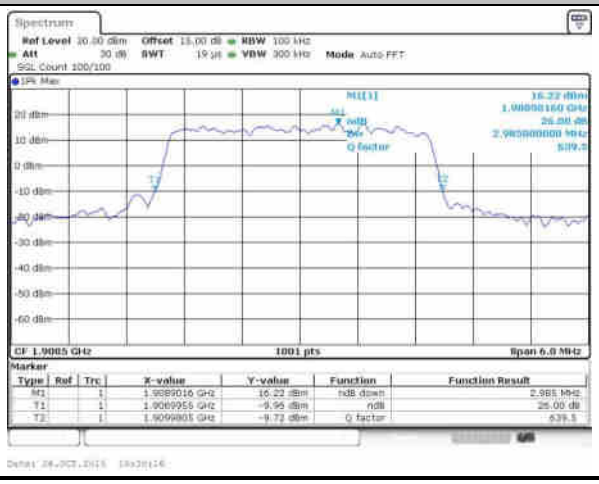
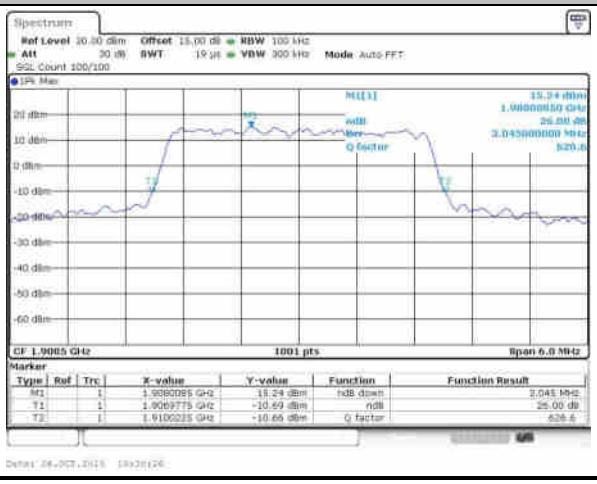
Mode	LTE Band 7 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	4.91	4.86	9.99	10.13	15.44	15.58	20.58	20.58
Middle CH	-	-	-	-	5.00	4.94	9.95	10.11	14.87	14.72	20.10	21.26
Highest CH	-	-	-	-	5.01	4.89	10.37	9.77	14.72	15.50	21.10	21.42

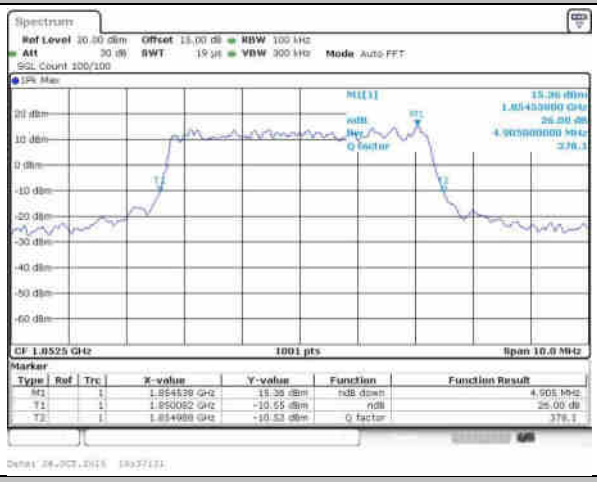
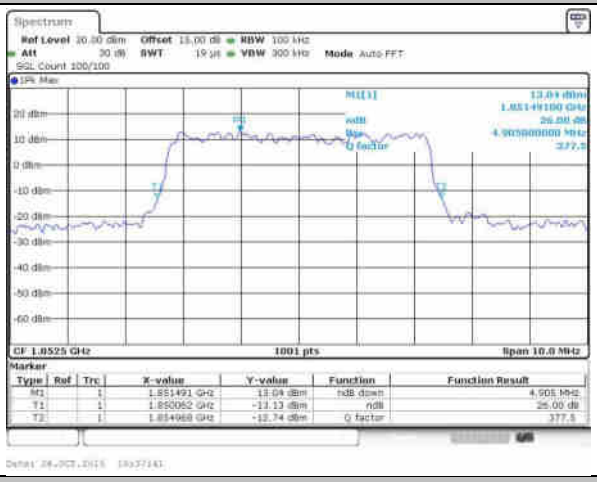
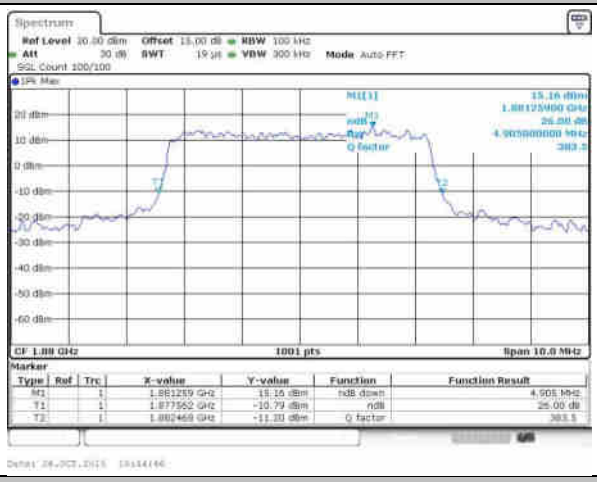
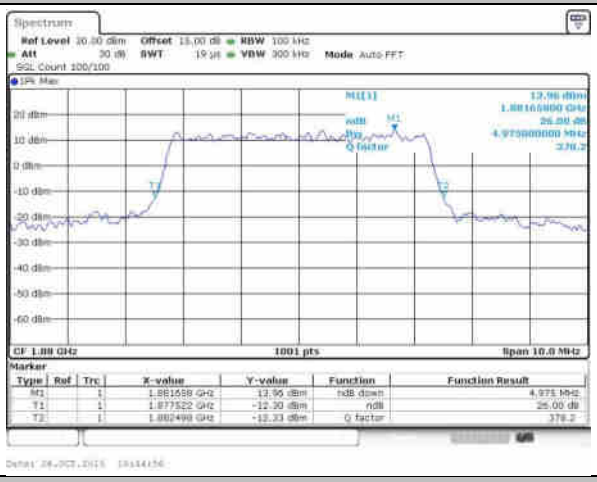
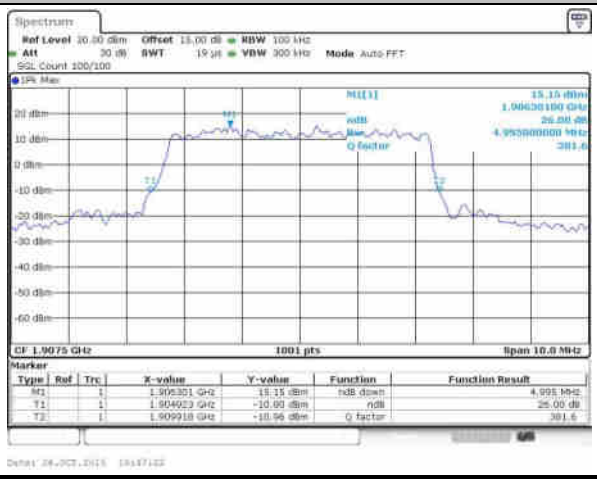
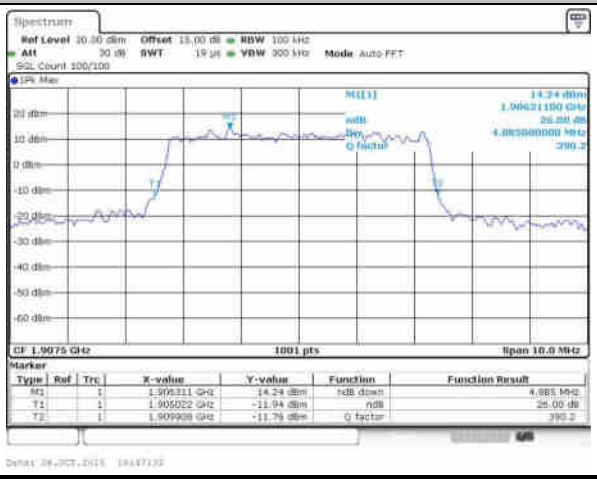
Mode	LTE Band 13 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	4.90	4.98	-	-	-	-	-	-
Middle CH	-	-	-	-	4.79	5.09	9.99	10.09	-	-	-	-
Highest CH	-	-	-	-	4.92	4.87	-	-	-	-	-	-

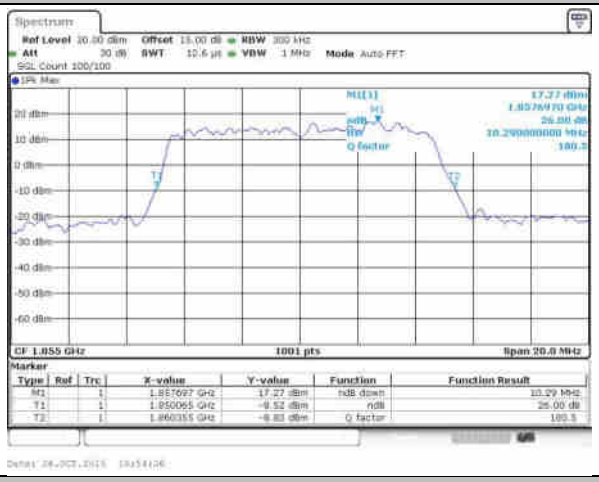
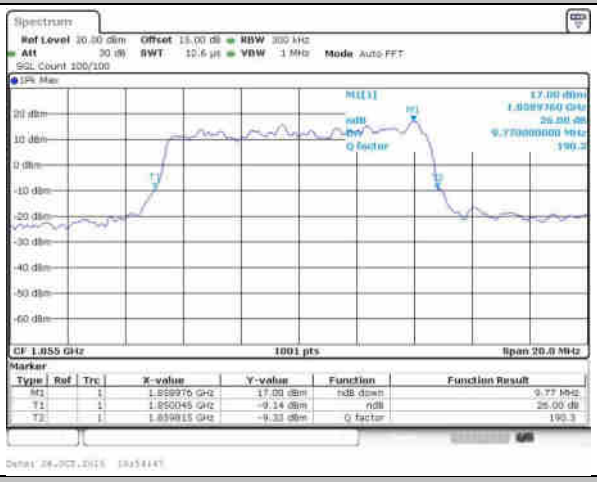
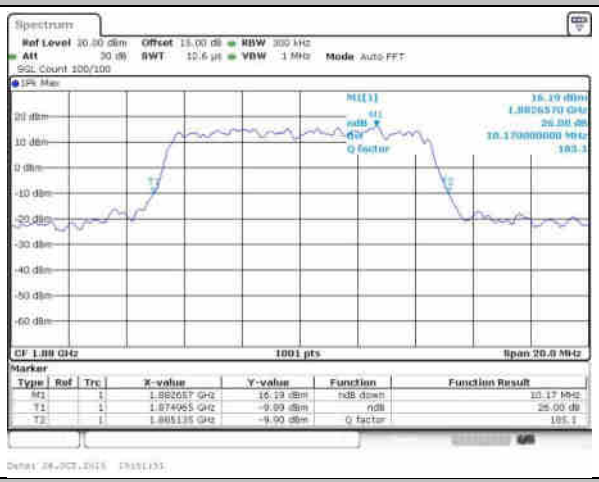
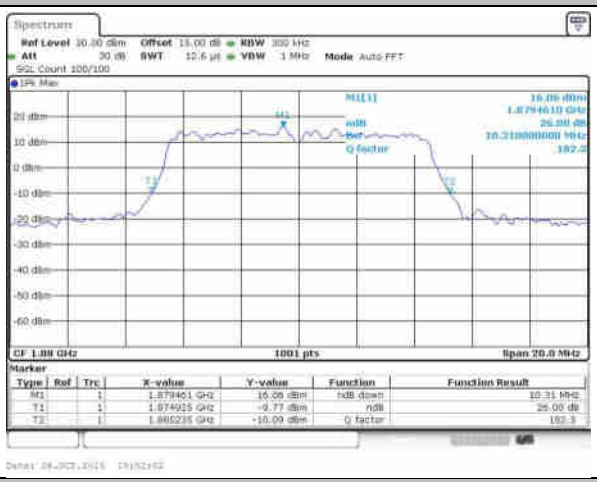
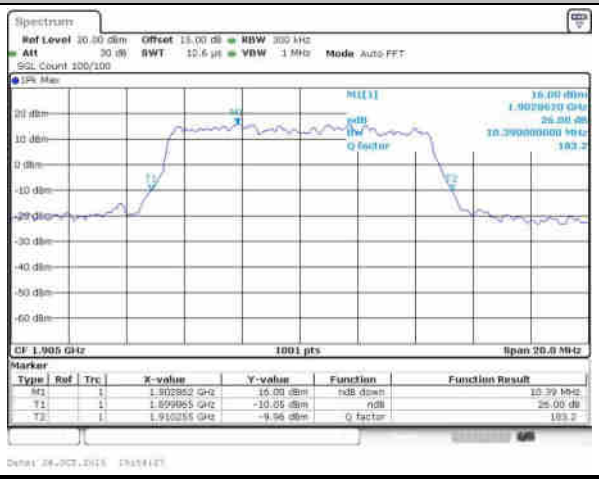
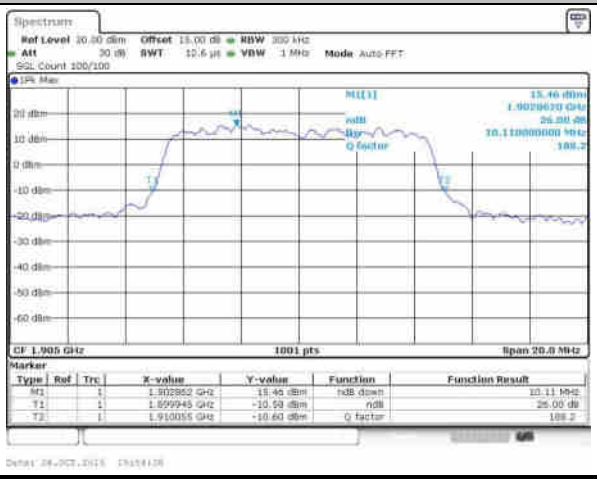
Mode	LTE Band 17 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	4.91	4.79	9.95	9.89	-	-	-	-
Middle CH	-	-	-	-	5.02	4.91	10.33	10.23	-	-	-	-
Highest CH	-	-	-	-	4.92	4.89	9.87	10.01	-	-	-	-

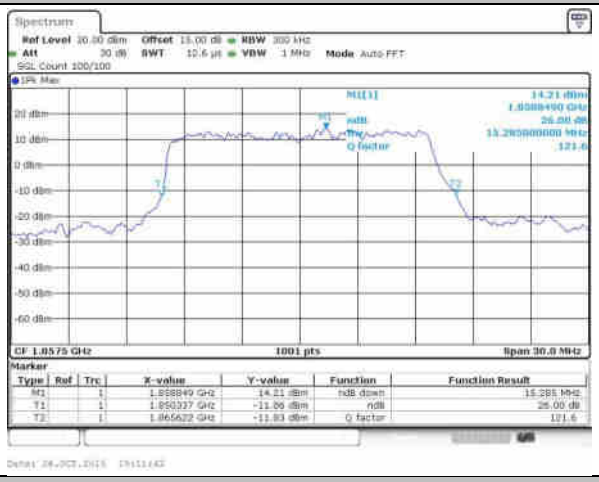
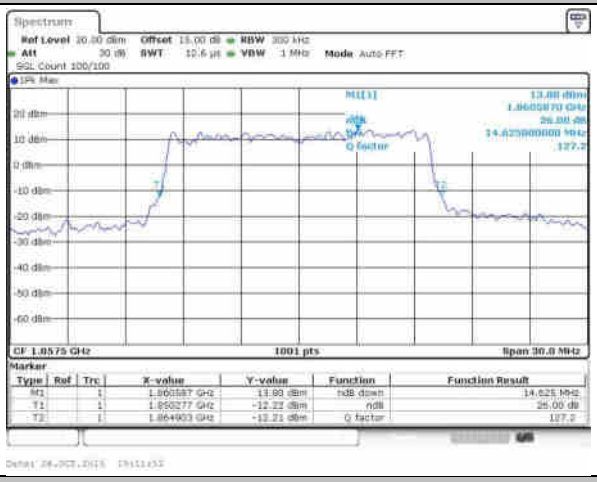
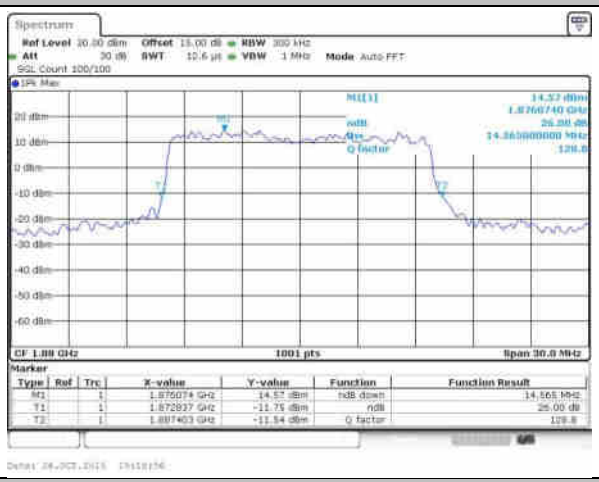
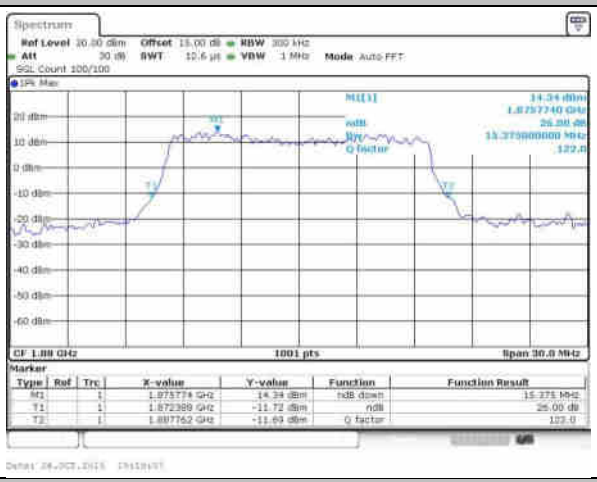
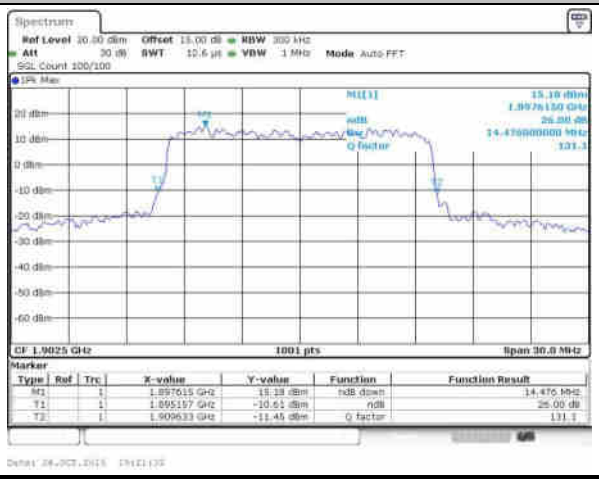
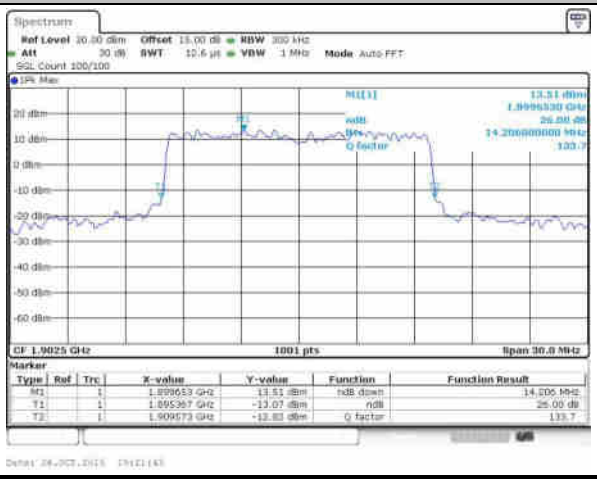
Mode	LTE Band 26 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		Ch26765	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	QPSK	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	1.33	1.30	2.96	2.99	4.94	5.01	9.95	10.07	14.90	14.93	14.87	14.15
Middle CH	1.27	1.29	2.92	3.04	5.03	4.95	9.69	10.01	14.60	15.26	-	-
Highest CH	1.31	1.32	2.99	2.99	4.82	4.96	10.47	9.99	14.45	14.90	-	-

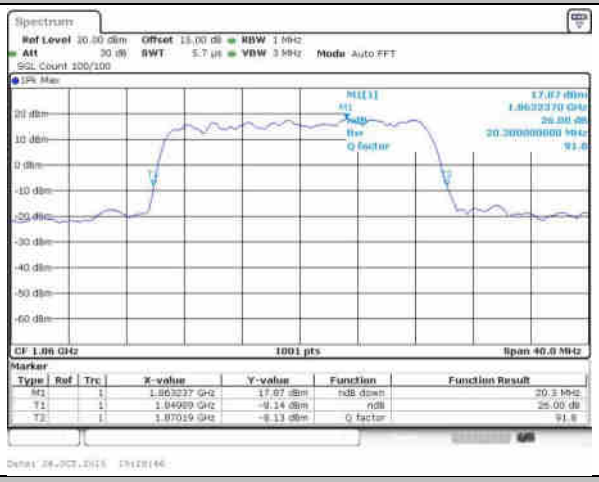
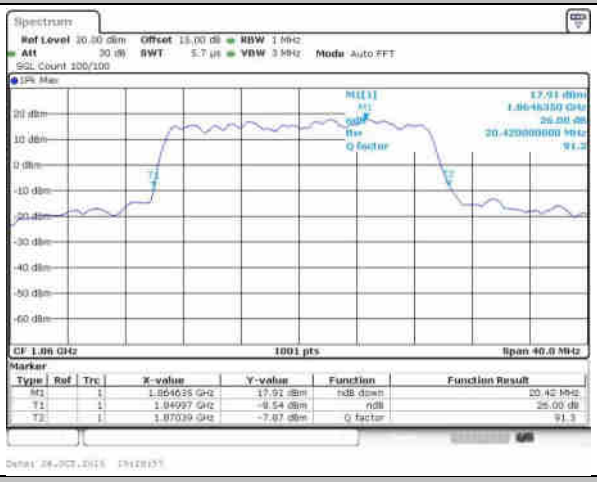
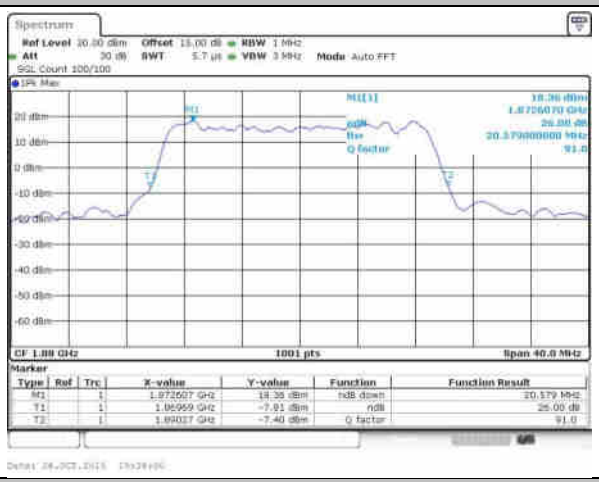
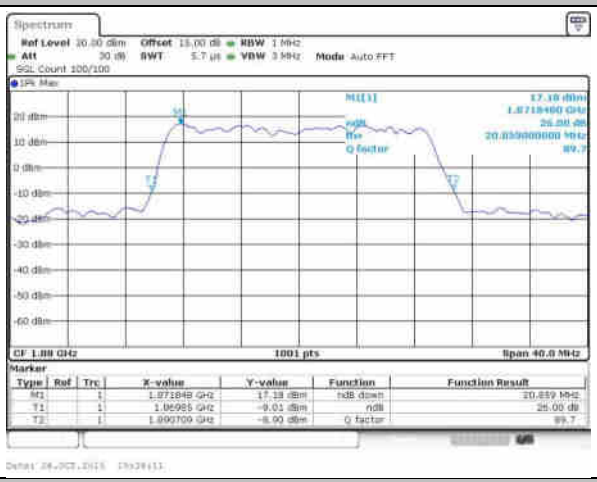
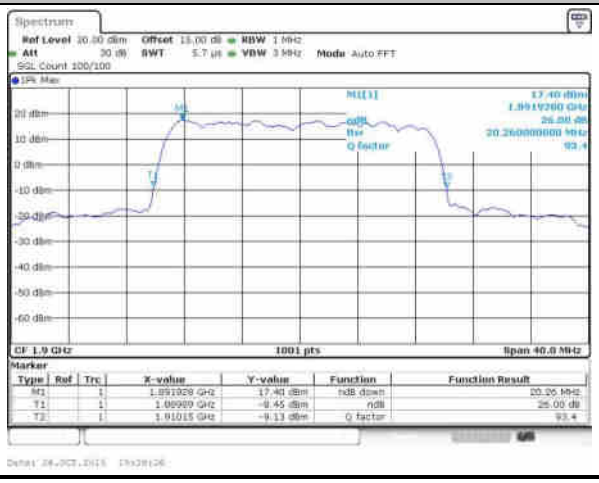
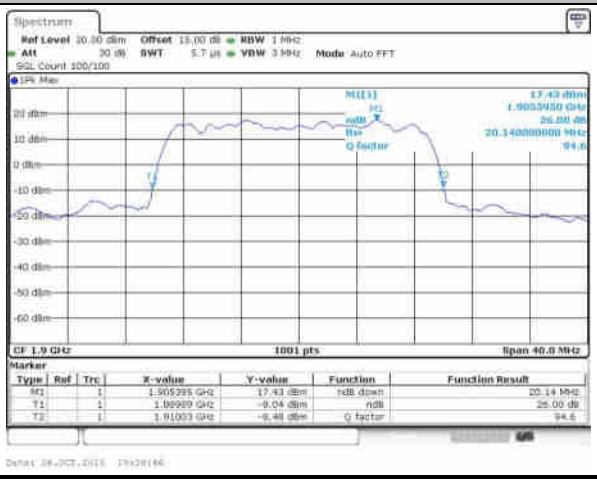
LTE Band 2	
Lowest Channel / 1.4MHz / QPSK	Lowest Channel / 1.4MHz / 16QAM
	
Middle Channel / 1.4MHz / QPSK	Middle Channel / 1.4MHz / 16QAM
	
Highest Channel / 1.4MHz / QPSK	Highest Channel / 1.4MHz / 16QAM
	

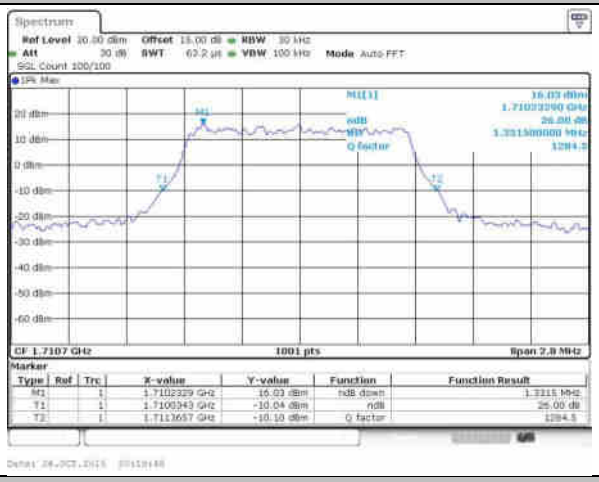
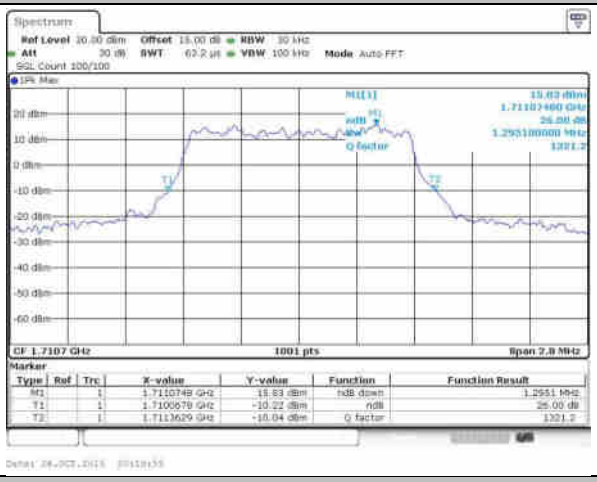
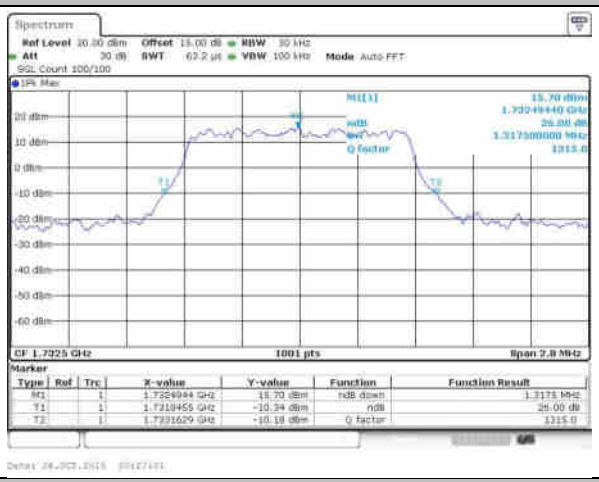
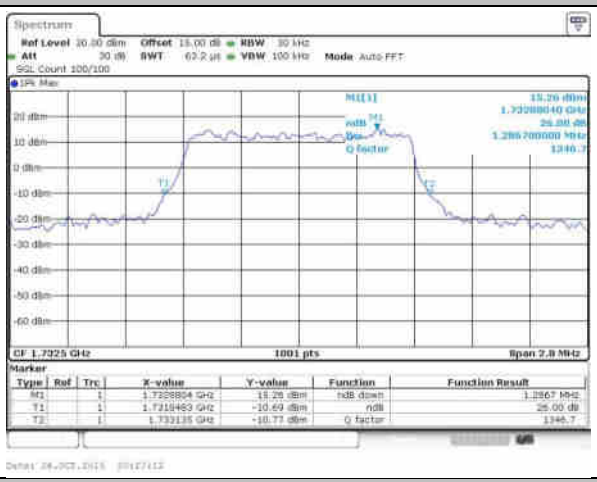
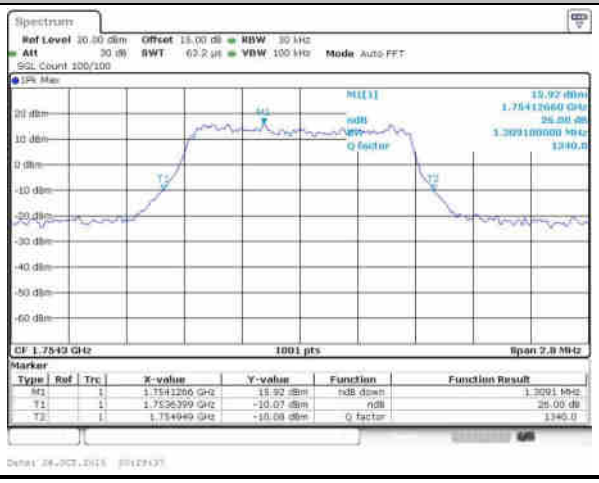
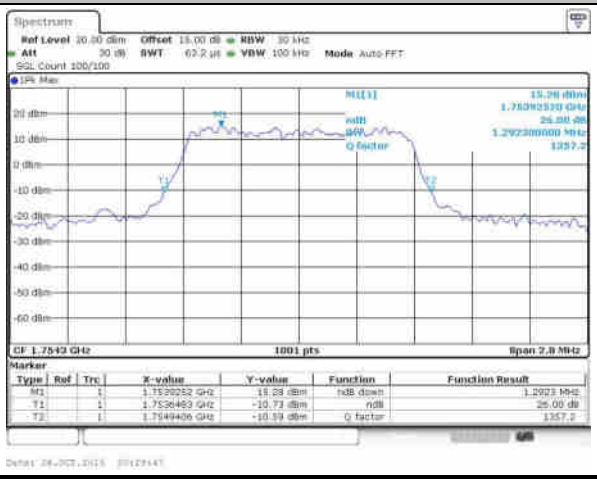
LTE Band 2	
Lowest Channel / 3MHz / QPSK	**Lowest Channel / 3MHz / 16QAM**
	
Middle Channel / 3MHz / QPSK	**Middle Channel /3MHz / 16QAM**
	
Highest Channel /3MHz / QPSK	**Highest Channel /3MHz / 16QAM**
	

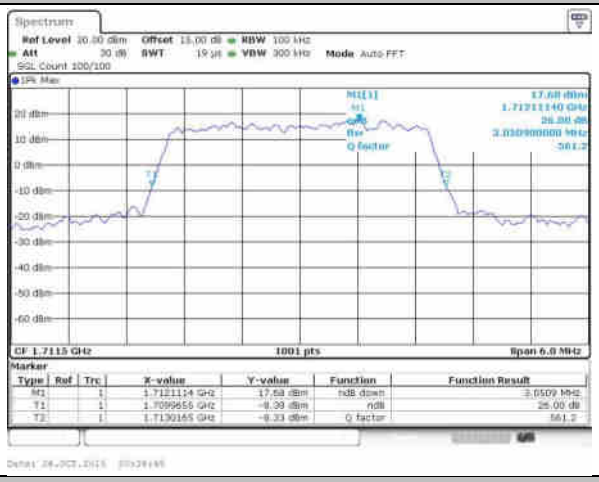
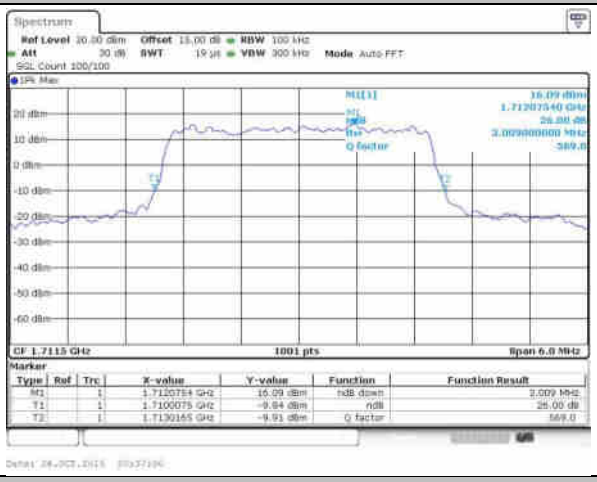
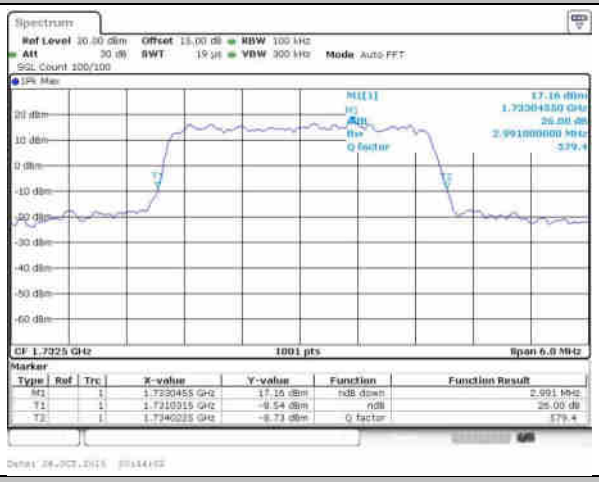
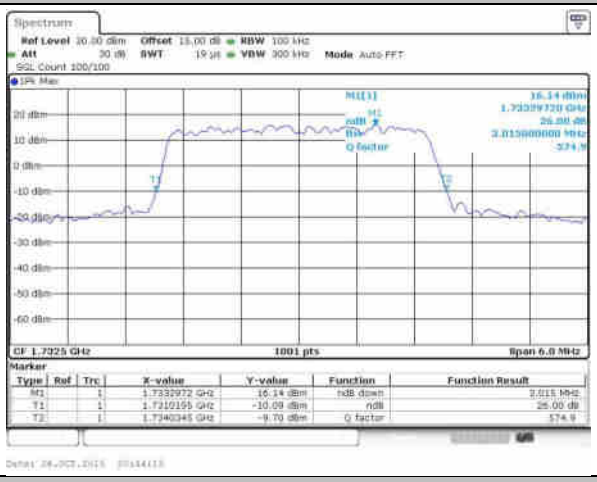
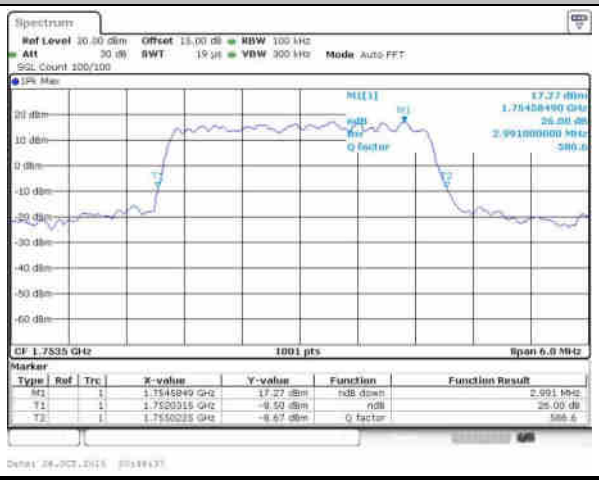
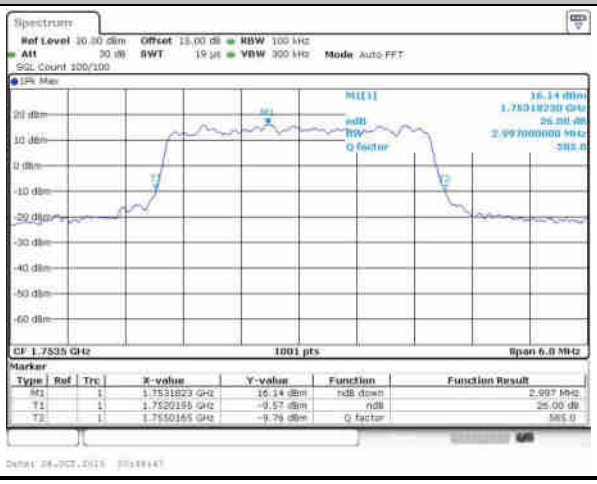
LTE Band 2	
Lowest Channel / 5MHz / QPSK	Lowest Channel / 5MHz / 16QAM
	
Middle Channel / 5MHz / QPSK	Middle Channel / 5MHz / 16QAM
	
Highest Channel / 5MHz / QPSK	Highest Channel / 5MHz / 16QAM
	

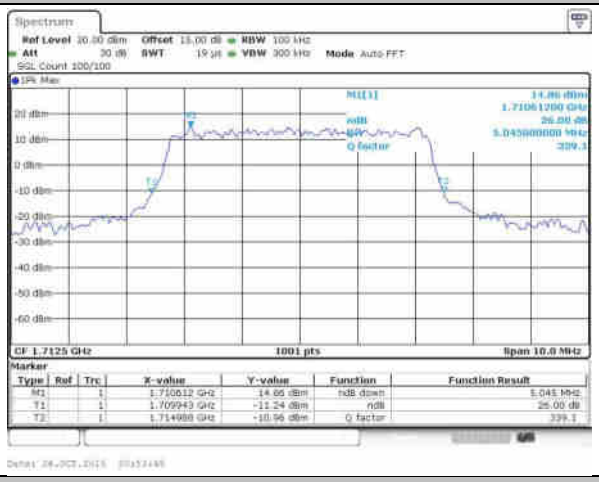
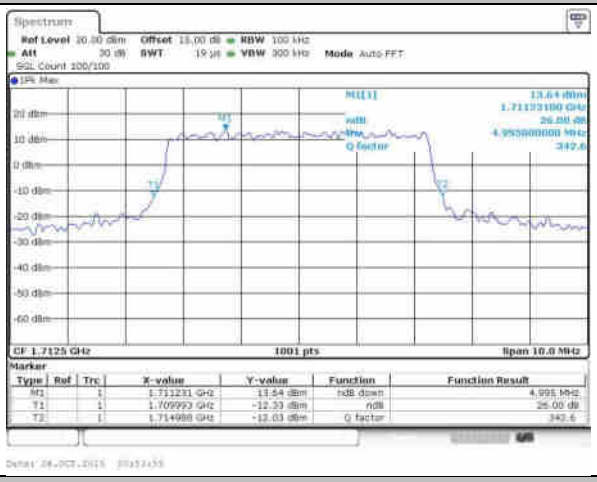
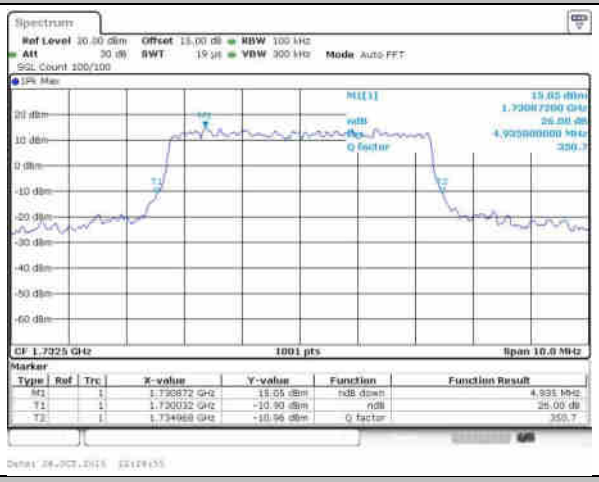
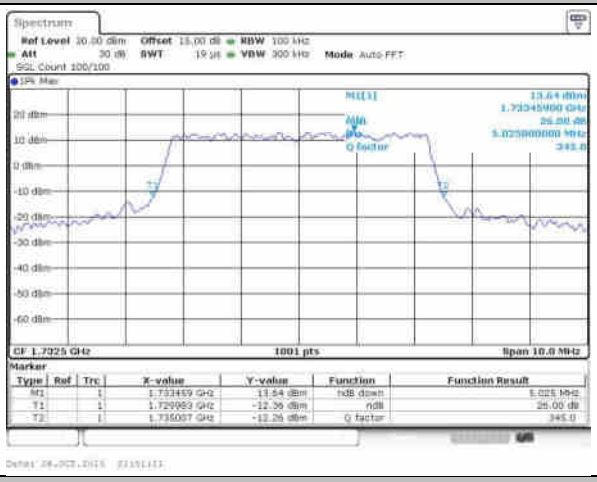
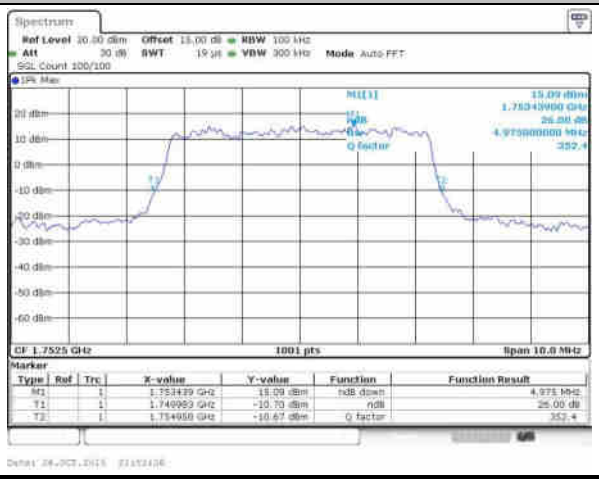
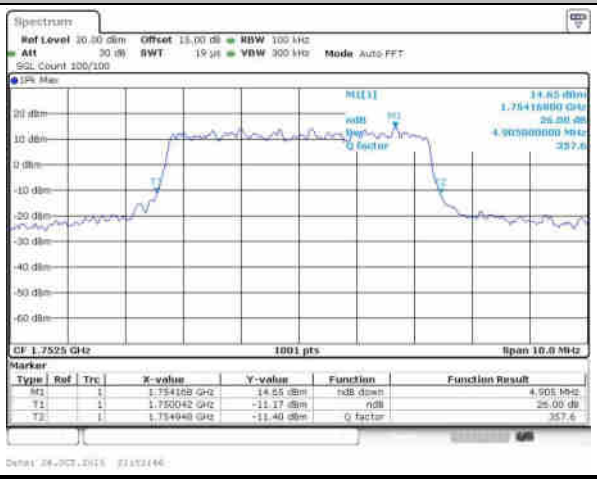
LTE Band 2	
Lowest Channel / 10MHz / QPSK	Lowest Channel / 10MHz / 16QAM
	
Middle Channel / 10MHz / QPSK	Middle Channel / 10MHz / 16QAM
	
Highest Channel / 10MHz / QPSK	Highest Channel / 10MHz / 16QAM
	

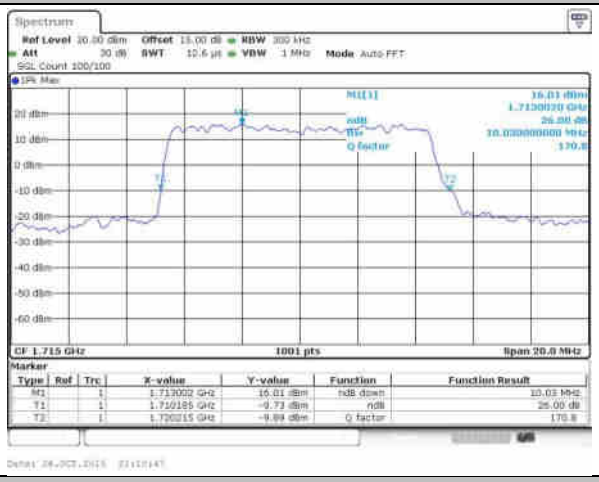
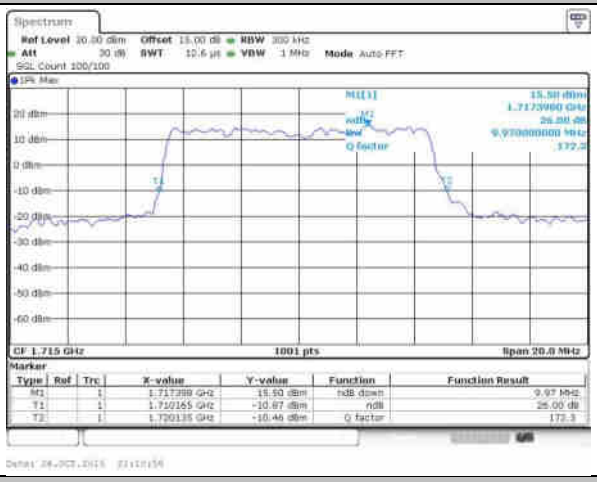
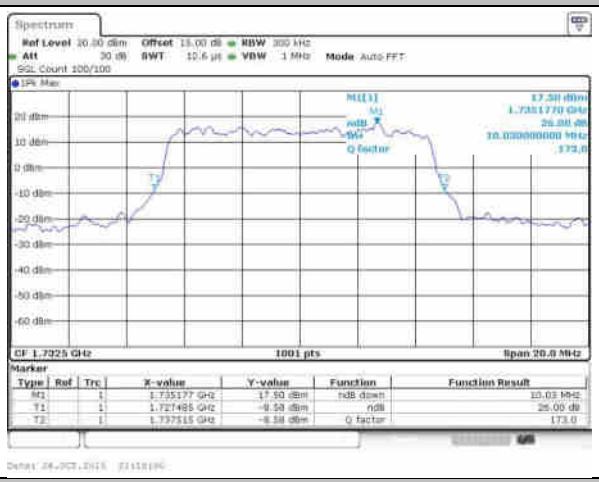
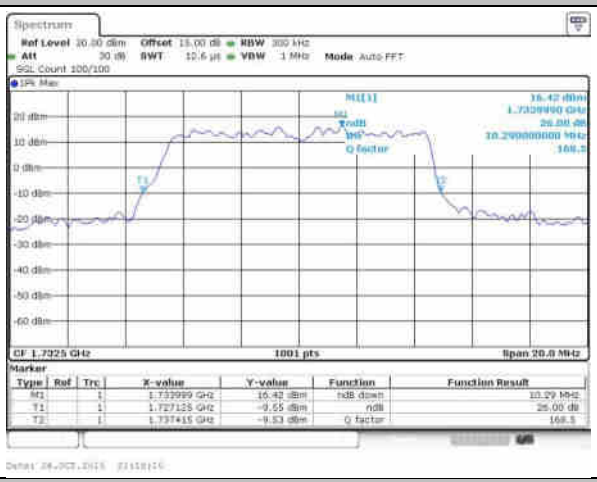
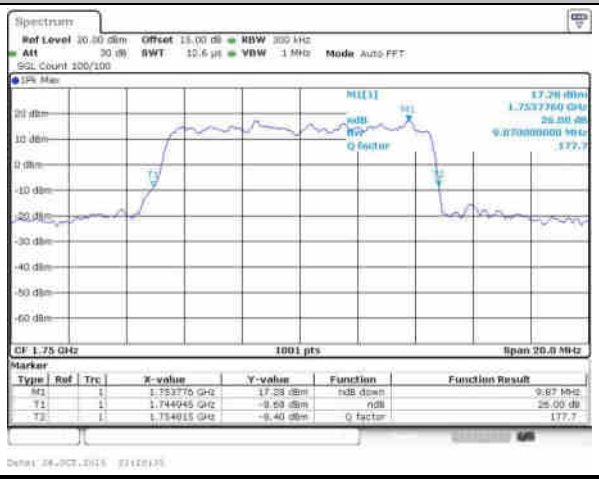
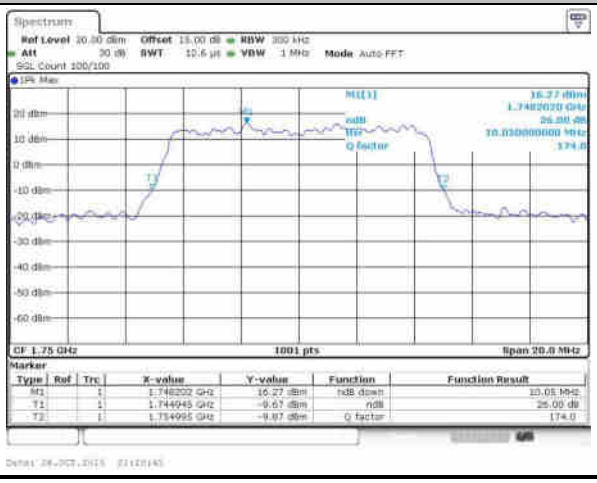
LTE Band 2	
Lowest Channel / 15MHz / QPSK	Lowest Channel / 15MHz / 16QAM
	
Middle Channel / 15MHz / QPSK	Middle Channel / 15MHz / 16QAM
	
Highest Channel / 15MHz / QPSK	Highest Channel / 15MHz / 16QAM
	

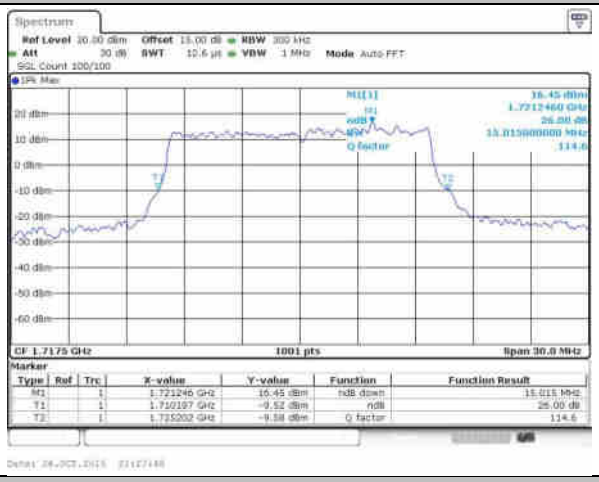
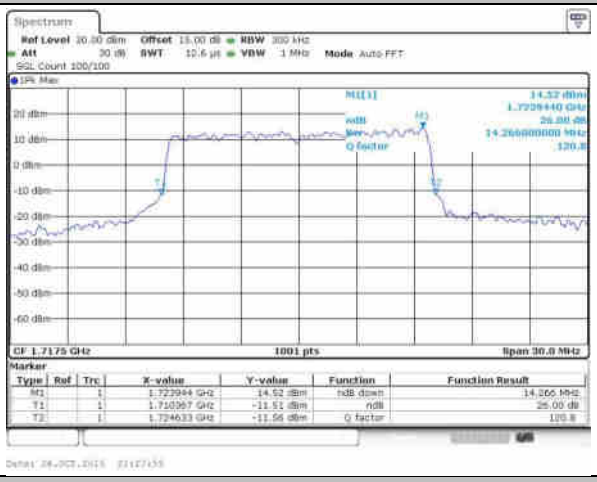
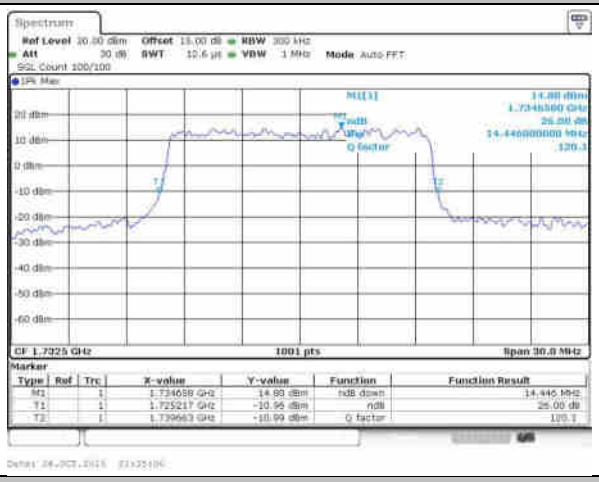
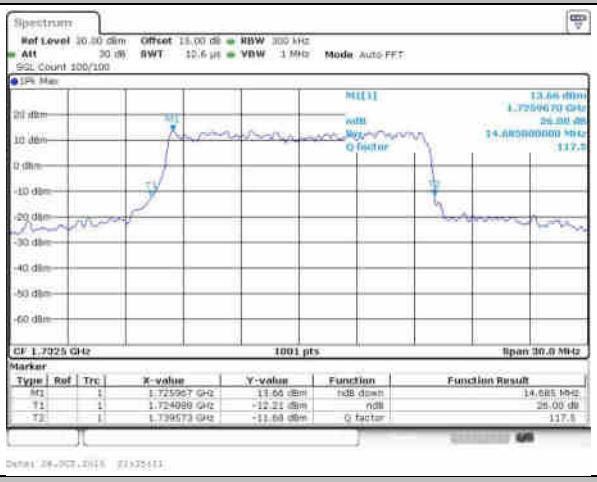
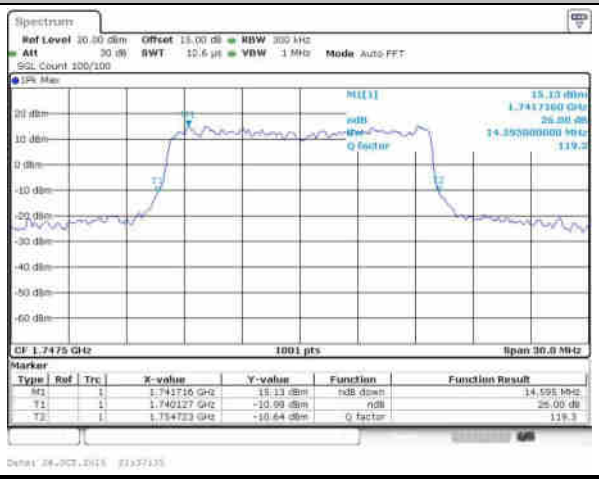
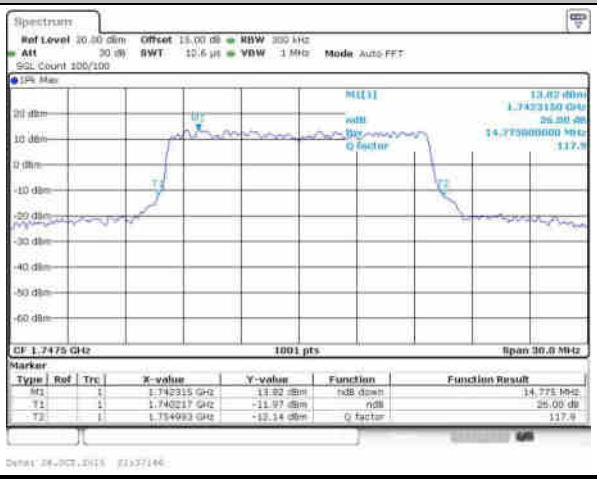
LTE Band 2	
Lowest Channel / 20MHz / QPSK	Lowest Channel / 20MHz / 16QAM
	
Middle Channel / 20MHz / QPSK	Middle Channel / 20MHz / 16QAM
	
Highest Channel / 20MHz / QPSK	Highest Channel / 20MHz / 16QAM
	

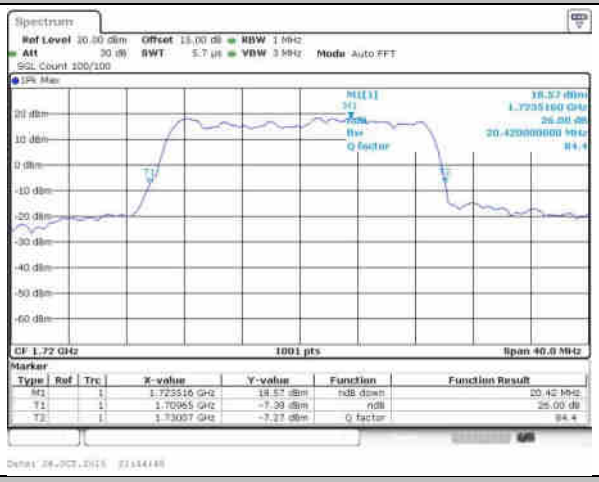
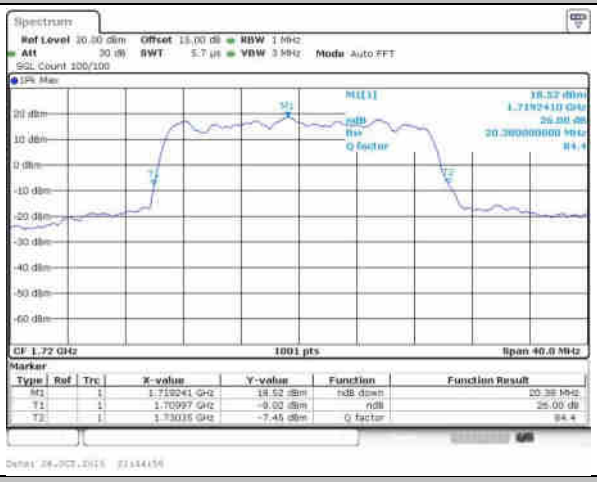
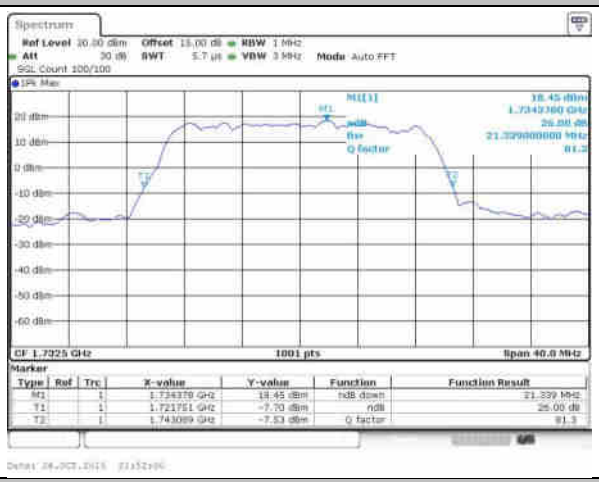
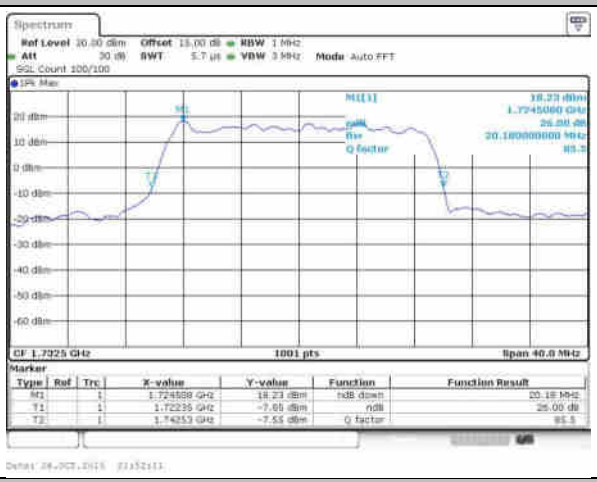
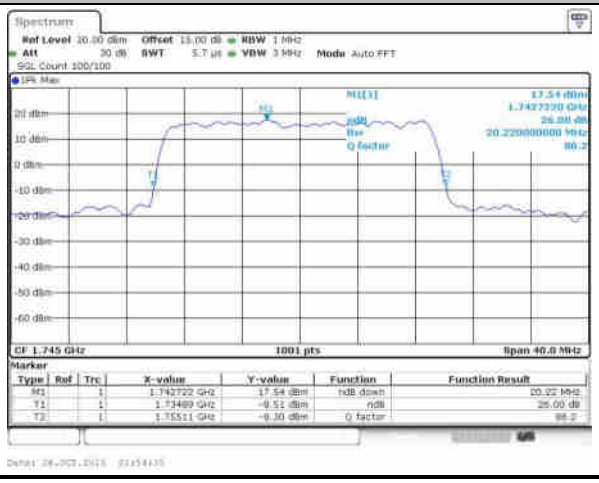
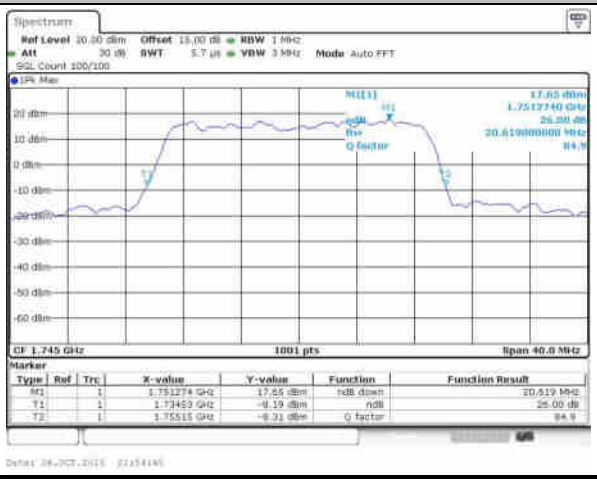
LTE Band 4	
Lowest Channel / 1.4MHz / QPSK	Lowest Channel / 1.4MHz / 16QAM
	
Middle Channel / 1.4MHz / QPSK	Middle Channel / 1.4MHz / 16QAM
	
Highest Channel / 1.4MHz / QPSK	Highest Channel / 1.4MHz / 16QAM
	

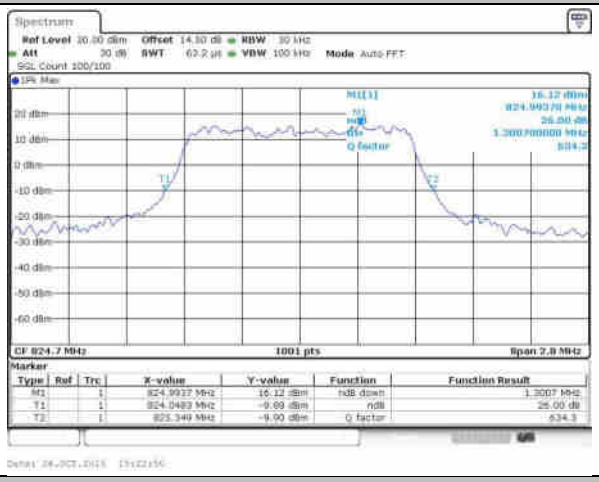
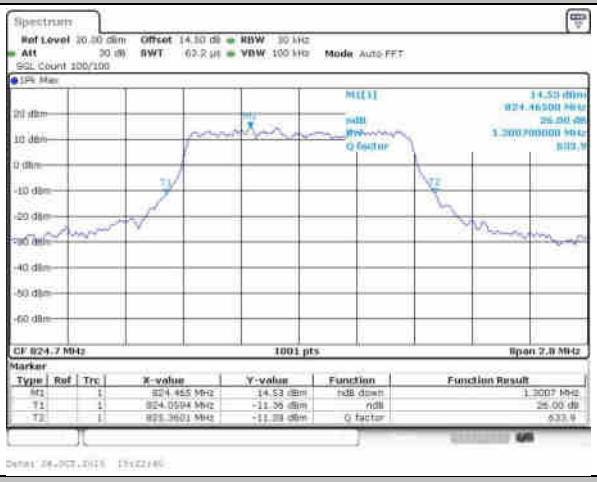
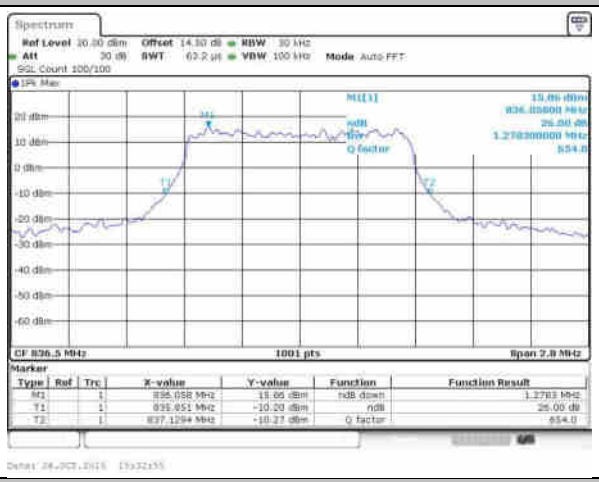
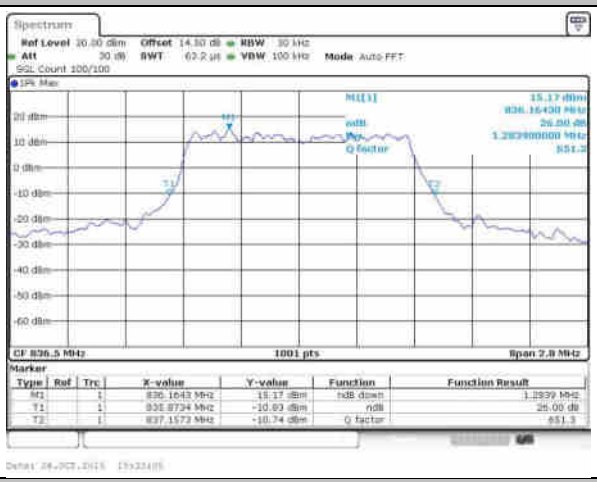
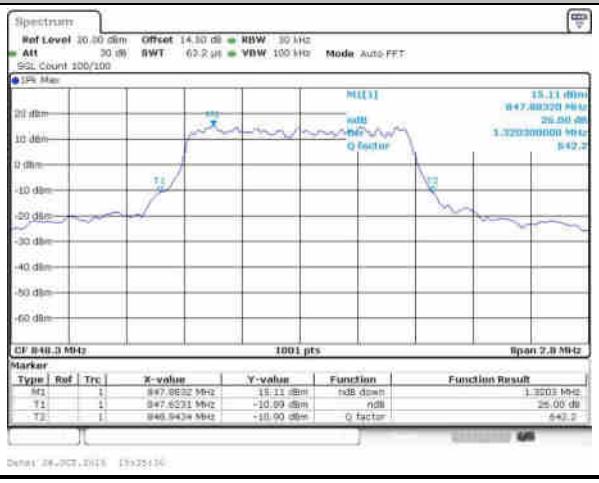
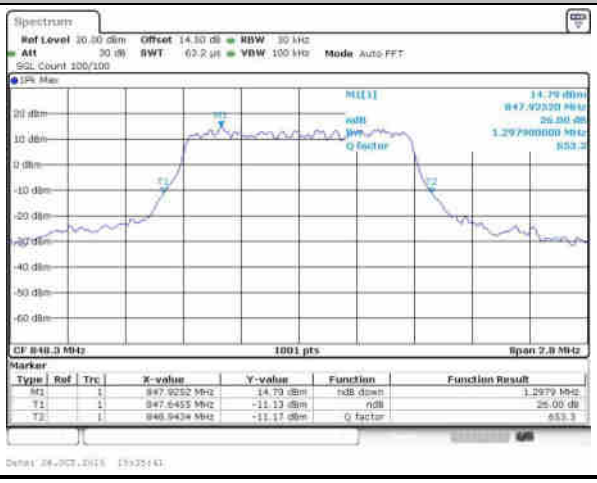
LTE Band 4	
Lowest Channel / 3MHz / QPSK	Lowest Channel / 3MHz / 16QAM
	
Middle Channel / 3MHz / QPSK	Middle Channel /3MHz / 16QAM
	
Highest Channel /3MHz / QPSK	Highest Channel /3MHz / 16QAM
	

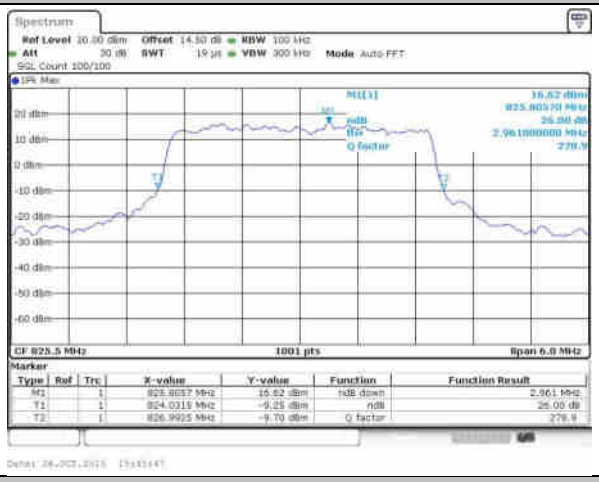
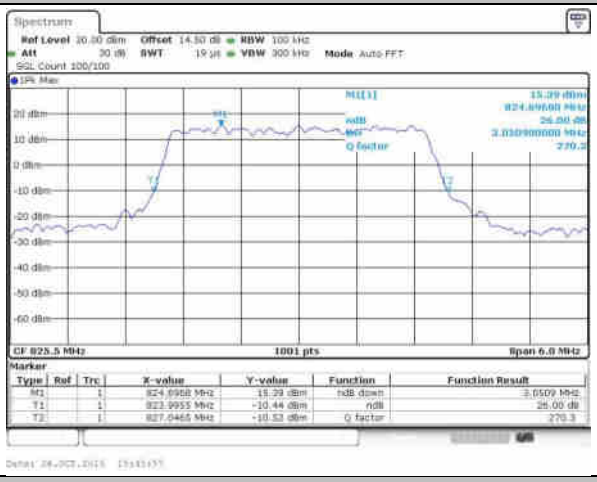
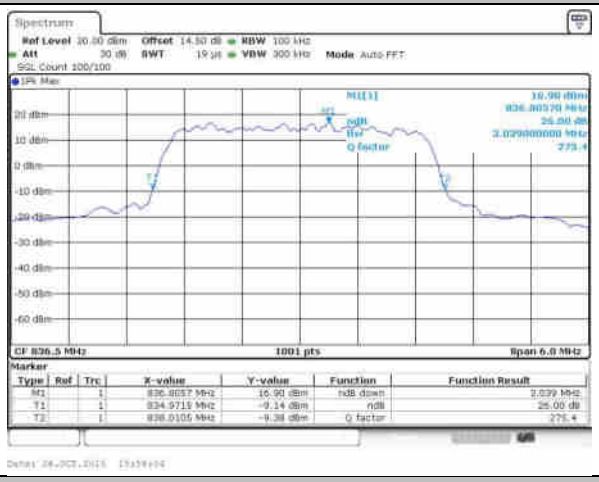
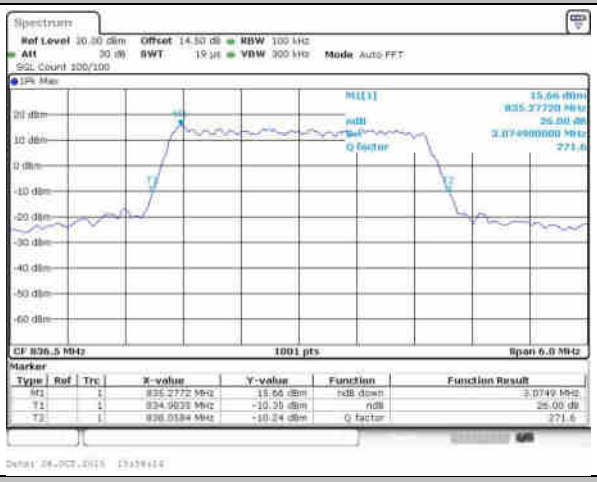
LTE Band 4	
Lowest Channel / 5MHz / QPSK	Lowest Channel / 5MHz / 16QAM
	
Middle Channel / 5MHz / QPSK	Middle Channel / 5MHz / 16QAM
	
Highest Channel / 5MHz / QPSK	Highest Channel / 5MHz / 16QAM
	

LTE Band 4	
Lowest Channel / 10MHz / QPSK	Lowest Channel / 10MHz / 16QAM
	
Middle Channel / 10MHz / QPSK	Middle Channel / 10MHz / 16QAM
	
Highest Channel / 10MHz / QPSK	Highest Channel / 10MHz / 16QAM
	

LTE Band 4	
Lowest Channel / 15MHz / QPSK	Lowest Channel / 15MHz / 16QAM
	
Middle Channel / 15MHz / QPSK	Middle Channel / 15MHz / 16QAM
	
Highest Channel / 15MHz / QPSK	Highest Channel / 15MHz / 16QAM
	

LTE Band 4	
Lowest Channel / 20MHz / QPSK	Lowest Channel / 20MHz / 16QAM
	
Middle Channel / 20MHz / QPSK	Middle Channel / 20MHz / 16QAM
	
Highest Channel / 20MHz / QPSK	Highest Channel / 20MHz / 16QAM
	

LTE Band 5	
Lowest Channel / 1.4MHz / QPSK	Lowest Channel / 1.4MHz / 16QAM
	
Middle Channel / 1.4MHz / QPSK	Middle Channel / 1.4MHz / 16QAM
	
Highest Channel / 1.4MHz / QPSK	Highest Channel / 1.4MHz / 16QAM
	

LTE Band 5	
Lowest Channel / 3MHz / QPSK	**Lowest Channel / 3MHz / 16QAM**
	
Middle Channel / 3MHz / QPSK	**Middle Channel /3MHz / 16QAM**
	
Highest Channel /3MHz / QPSK	**Highest Channel /3MHz / 16QAM**