FCC RF Test Report

APPLICANT	:	Xiaomi Communications Co., Ltd.
EQUIPMENT	:	Mobile Phone
BRAND NAME	:	Redmi
MODEL NAME	:	M2003J15SG
FCC ID	:	2AFZZJ15SG
STANDARD	:	47 CFR Part 2, 22(H), 24(E), 27(L), 27(M)
CLASSIFICATION	:	PCS Licensed Transmitter Held to Ear (PCE)

The product was received on Mar. 10, 2020 and completely tested on Apr. 22, 2020. We, Sporton International (Kunshan) Inc., would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.26-2015 and shown compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of Sporton International (Kunshan) Inc., the test report shall not be reproduced except in full.

Jason Jia

Reviewed by: Jason Jia / Supervisor

James Huang

Approved by: James Huang / Manager

ACCREDITED
Cert #5145.02

Sporton International (Kunshan) Inc.
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APPENDIX A. TEST RESULTS OF CONDUCTED TEST

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG031014B	Rev. 01	Initial issue of report	Apr. 22, 2020

SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.4	§2.1046	Conducted Output Power	Reporting Only	PASS	-
	§22.913(a)(5)	Effective Radiated Power (Band 5)	ERP < 7 Watt	PASS	-
	§24.232(c) §27.50(h)(2)	Equivalent Isotropic Radiated Power (Band 2) (Band 7) (Band 38) (Band 41)	EIRP < 2Watt	PASS	-
	§27.50(d)(4)	Equivalent Isotropic Radiated Power (Band 4)	EIRP < 1Watt	PASS	-
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(h)	Conducted Band Edge Measurement (Band 2) (Band 4) (Band 5)	< 43+10log10(P[Watts])	PASS	-
	§27.53(m)(4)	Conducted Band Edge Measurement (Band 7) (Band 38) (Band 41)	§27.53(m)(4)		
3.8	§2.1051 §22.917(a) §24.238(a) §27.53(h)	Conducted Spurious Emission (Band 2) (Band 4) (Band 5)	< 43+10log10(P[Watts])	PASS	-
	§2.1051 §27.53(m)(4)	Conducted Spurious Emission (Band 7) (Band 38) (Band 41)	< 55+10log$_{10}$(P[Watts])		
3.9	§2.1055 §22.355	Frequency Stability Temperature & Voltage	< 2.5 ppm for Part 22H	PASS	-
	§2.1055 §24.235 §27.54		Within Authorized Band		

Report Section	FCC Rule	Description	Limit	Result	Remark
4.4	§2.1053 §22.917(a) §24.238(a) §27.53(h)	Radiated Spurious Emission (Band 2) (Band 4) (Band 5)	< 43+10log$_{10}$(P[Watts])	PASS	Under limit 25.08 dB at 7578.270 MHz
	§2.1053 §27.53(m)(4)	Radiated Spurious Emission (Band 7) (Band 38) (Band 41)	< 55+10log$_{10}$(P[Watts])		

Declaration of Conformity:

The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.

Comments and Explanations:

The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

1 General Description

1.1 Applicant

Xiaomi Communications Co., Ltd.
#019, 9th Floor, Building 6, 33 Xi'erqi Middle Road, Haidian District, Beijing, China, 100085

1.2 Manufacturer

Xiaomi Communications Co., Ltd.
#019, 9th Floor, Building 6, 33 Xi'erqi Middle Road, Haidian District, Beijing, China, 100085

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	Mobile Phone
Brand Name	Redmi
Model Name	M2003J15SG
FCC ID	2AFZZJ15SG
EUT supports Radios application	GSM/WCDMA/LTE/NFC WLAN 2.4GHz 802.11b/g/n HT20 WLAN 5GHz 802.11a/n HT20/HT40 WLAN 5GHz 802.11ac VHT20/VHT40/VHT80 Bluetooth BR/EDR/LE FM Receiver /GNSS
IMEI Code	Conducted: 865977040060777/865977040070776 Radiation: 865977040060785/865977040070784
HW Version	P2
SW Version	MIUI11
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 38 : 2572.5MHz ~ 2617.5MHz LTE Band 41 : 2537.5 MHz ~ 2652.5 MHz
Rx Frequency	LTE Band 2 : 1930.7 MHz ~ 1989.3 MHz LTE Band 4 : 2110.7 MHz ~ 2154.3 MHz LTE Band 5 : 869.7 MHz ~ 893.3 MHz LTE Band 7 : 2622.5MHz ~ 2687.5 MHz LTE Band 38 : 2572.5MHz ~ 2617.5MHz LTE Band 41 : 2537.5 MHz ~ 2652.5 MHz
Bandwidth	LTE Band 2 : 1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz / 20MHz LTE Band 4 : 1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz / 20MHz LTE Band 5 : 1.4MHz / 3MHz / 5MHz / 10MHz LTE Band 7 : 5MHz/ 10MHz / 15MHz / 20MHz LTE Band 38 : 5MHz / 10MHz / 15MHz / 20MHz LTE Band 41 : 5MHz / 10MHz / 15MHz / 20MHz
Maximum Output Power to Antenna	LTE Band 2 : 22.86 dBm LTE Band 4 : 22.76 dBm LTE Band 5 : 24.35 dBm LTE Band 7 : 22.99 dBm; Band 7C_CA : 22.76 dBm LTE Band 38 : 23.89 dBm; Band 38C_CA : 23.36 dBm LTE Band 41 : 23.99 dBm;
Antenna Gain	LTE Band 2 : 0.30 dBi LTE Band 4 : -1.10 dBi LTE Band 5 : -5.60 dBi LTE Band 7 : -0.30 dBi LTE Band 38 : -0.30 dBi LTE Band 41 : -0.30 dBi
Type of Modulation	QPSK / 16QAM / 64QAM

Note:

1. The Maximum ERP/EIRP is calculated from Max Output power and Max antenna gain.

1.5 Modification of EUT

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

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

LTE Band 2		QPSK			16QAM		
BW (MHz)	Frequency Range (MHz)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)
1.4	1850.7 ~ 1909.3	1M10G7D	-	0.1995	1M09W7D	-	0.1694
3	1851.5 ~ 1908.5	2M72G7D	-	0.1959	2M71W7D	-	0.1671
5	1852.5 ~ 1907.5	4M51G7D	-	0.1995	4M50W7D	-	0.1687
10	1855.0 ~ 1905.0	9M09G7D	0.0020	0.1986	9M07W7D	-	0.1671
15	1857.5 ~ 1902.5	13M5G7D	-	0.2070	13M5W7D	-	0.1730
20	1860.0 ~ 1900.0	18M5G7D	-	0.2061	18M5W7D	-	0.1770

LTE Band 2		64QAM		
BW (MHz)	Frequency Range (MHz)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)
1.4	1850.7 ~ 1909.3	1M10W7D	-	0.1321
3	1851.5 ~ 1908.5	2M72W7D	-	0.1315
5	1852.5 ~ 1907.5	4M51W7D	-	0.1368
10	1855.0 ~ 1905.0	9M05W7D	-	0.1324
15	1857.5 ~ 1902.5	13M5W7D	-	0.1396
20	1860.0 ~ 1900.0	18M5W7D	-	0.1409

LTE Band 4		QPSK			16QAM		
BW (MHz)	Frequency Range (MHz)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)
1.4	1710.7 ~ 1754.3	1M09G7D	-	0.1429	1M10W7D	-	0.1216
3	1711.5 ~ 1753.5	2M71G7D	-	0.1371	2M72W7D	-	0.1175
5	1712.5 ~ 1752.5	4M49G7D	-	0.1466	4M50W7D	-	0.1236
10	1715.0 ~ 1750.0	9M05G7D	0.0034	0.1422	9M05W7D	-	0.1213
15	1717.5 ~ 1747.5	13M5G7D	-	0.1442	13M5W7D	-	0.1227
20	1720.0 ~ 1745.0	18M4G7D	-	0.1455	18M5W7D	-	0.1239

LTE Band 4		64QAM		
BW (MHz)	Frequency Range (MHz)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)
1.4	1710.7 ~ 1754.3	1M09W7D	-	0.0951
3	1711.5 ~ 1753.5	2M73W7D	-	0.0920
5	1712.5 ~ 1752.5	4M49W7D	-	0.0982
10	1715.0 ~ 1750.0	9M05W7D	-	0.0953
15	1717.5 ~ 1747.5	13M4W7D	-	0.0955
20	1720.0 ~ 1745.0	18M5W7D	-	0.0977

LTE Band 5		QPSK			16QAM		
BW (MHz)	Frequency Range (MHz)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum ERP(W)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum ERP(W)
1.4	824.7 ~ 848.3	1M10G7D	-	0.0452	1M10W7D	-	0.0364
3	825.5 ~ 847.5	2M72G7D	-	0.0442	2M73W7D	-	0.0362
5	826.5 ~ 846.5	4M50G7D	-	0.0455	4M48W7D	-	0.0378
10	829.0 ~ 844.0	9M05G7D	0.0071	0.0457	9M05W7D	-	0.0373

LTE Band 5		64QAM		
BW (MHz)	Frequency Range (MHz)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum ERP(W)
1.4	824.7 ~ 848.3	1M09W7D	-	0.0291
3	825.5 ~ 847.5	2M72W7D	-	0.0287
5	826.5 ~ 846.5	4M50W7D	-	0.0292
10	829.0 ~ 844.0	9M03W7D	-	0.0294

LTE Band 7		QPSK			16QAM		
BW (MHz)	Frequency Range (MHz)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)
5	2502.5 ~ 2567.5	4M50G7D	-	0.1858	4M49W7D	-	0.1524
10	2505.0 ~ 2565.0	9M03G7D	0.0023	0.1774	9M07W7D	-	0.1483
15	2507.5 ~ 2562.5	13M5G7D	-	0.1816	13M5W7D	-	0.1510
20	2510.0 ~ 2560.0	18M4G7D	-	0.1770	18M4W7D	-	0.1503

LTE Band 7		64QAM		
BW (MHz)	Frequency Range (MHz)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)
5	2502.5 ~ 2567.5	4M50W7D	-	0.1211
10	2505.0 ~ 2565.0	9M03W7D	-	0.1199
15	2507.5 ~ 2562.5	13M5W7D	-	0.1183
20	2510.0 ~ 2560.0	18M4W7D	-	0.1175

LTE Band 38		QPSK			16QAM		
BW (MHz)	Frequency Range (MHz)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)
5	2572.5 ~ 2617.5	4M49G7D	-	0.2333	4M50W7D	-	0.1884
10	2575.0 ~ 2615.0	9M05G7D	0.0042	0.2286	9M09W7D	-	0.1824
15	2577.5 ~ 2612.5	13M5G7D	-	0.2328	13M5W7D	-	0.1862
20	2580.0 ~ 2610.0	18M4G7D	-	0.2339	18M5W7D	-	0.1892

LTE Band 38		64QAM		
BW (MHz)	Frequency Range (MHz)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)
5	2572.5 ~ 2617.5	4M49W7D	-	0.1432
10	2575.0 ~ 2615.0	9M05W7D	-	0.1390
15	2577.5 ~ 2612.5	13M5W7D	-	0.1406
20	2580.0 ~ 2610.0	18M5W7D	-	0.1419

LTE Band 41		QPSK			16QAM		
BW (MHz)	Frequency Range (MHz)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)
5	2537.5 ~ 2652.5	4M49G7D	-	0.2333	4M50W7D	-	0.1884
10	2540.0 ~ 2650.0	9M05G7D	0.0042	0.2286	9M09W7D	-	0.1824
15	2542.5 ~ 2647.5	13M5G7D	-	0.2328	13M5W7D	-	0.1862
20	2545.0 ~ 2645.0	18M4G7D	-	0.2339	18M5W7D	-	0.1892

LTE Band 41		64QAM		
BW (MHz)	Frequency Range (MHz)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)
5	2537.5 ~ 2652.5	4M49W7D	-	0.1432
10	2540.0 ~ 2650.0	9M05W7D	-	0.1390
15	2542.5 ~ 2647.5	13M5W7D	-	0.1406
20	2545.0 ~ 2645.0	18M5W7D	-	0.1419

Note:

1. LTE Band 41 overlaps the entire frequency range of LTE Band 38. Therefore, the test results provided in this report covers Band 41 as well as Band 38.

LTE Band 7 CA	QPSK			16QAM		
BW (MHz)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)
20MHz+20MHz	37M6G7D	-	0.1762	37M7W7D	-	0.1489

LTE Band 7 CA	64QAM		
BW (MHz)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)
20MHz+20MHz	37M9W7D	-	0.1199

LTE Band 38 CA	QPSK			16QAM		
BW (MHz)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)
20MHz+20MHz	37M6G7D	-	0.2023	37M7W7D	-	0.1644

LTE Band 38 CA	64QAM		
BW (MHz)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)
20MHz+20MHz	37M8W7D	-	0.1239

1.7 Testing Location

Sporton International (Kunshan) Inc. is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.02.

Test Firm	Sporton International (Kunshan) Inc.		
Test Site Location	No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300 People's Republic of China TEL : +86-512-57900158 FAX : +86-512-57900958		
Test Site No.	**Sporton Site No.**	**FCC Designation No.**	**FCC Test Firm Registration No.**
	03CH04KS 03CH06-KS TH01-KS	CN1257	314309

1.8 Test Software

Item	Site	Manufacture	Name	Version
1.	03CH04-KS	AUDIX	E3	6.2009-8-24a
2.	03CH06-KS	AUDIX	E3	6.2009-8-24al

1.9 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)
- ANSI C63.26-2015
- FCC KDB 971168 D01 Power Meas License Digital Systems v03r01
- 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 v03r01 with maximum output power.

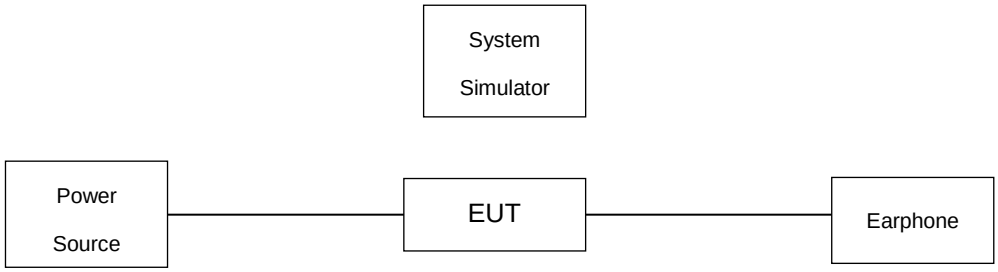
Radiated measurements are performed by rotating the EUT in three different orthogonal test planes to find the maximum emission.

Test Items	Band	Bandwidth (MHz)						Modulation			RB #			Test Channel		
		1.4	3	5	10	15	20	QPSK	16QAM	64QAM	1	Half	Full	L	M	H
Max. Output Power	2	v	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	v
	5	v	v	v	v	-	-	v	v	v	v	v	v	v	v	v
	7	-	-	v	v	v	v	v	v	v	v	v	v	v	v	v
	38	-	-	v	v	v	v	v	v	v	v	v	v	v	v	v
	41	-	-	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	v
	4						v	v	v	v	v		v	v	v	v
	5				v	-	-	v	v	v	v		v	v	v	v
	7	-	-				v	v	v	v	v		v	v	v	v
	41	-	-				v	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	v
	4	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
	7	-	-	v	v	v	v	v	v	v			v	v	v	v
	41	-	-	v	v	v	v	v	v	v			v	v	v	v
Conducted Band Edge	2	v	v	v	v	v	v	v	v	v	v		v	v		v
	4	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
	7	-	-	v	v	v	v	v	v	v	v		v	v		v
	41	-	-	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	64QAM	1	Half	Full	L	M	H
Conducted Spurious Emission	2	v	v	v	v	v	v	v	v	v	v			v	v	v
	4	v	v	v	v	v	v	v	v	v	v			v	v	v
	5	v	v	v	v	-	-	v	v	v	v			v	v	v
	7	-	-	v	v	v	v	v	v	v	v			v	v	v
	41	-	-	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	
	41	-	-		v			v					v		v	
E.R.P / E.I.R.P	2	v	v	v	v	v	v	v	v	v	v			v	v	v
	4	v	v	v	v	v	v	v	v	v	v			v	v	v
	5	v	v	v	v	-	-	v	v	v	v			v	v	v
	7	-	-	v	v	v	v	v	v	v	v			v	v	v
	41	-	-	v	v	v	v	v	v	v	v			v	v	v
Radiated Spurious Emission	2	Worst Case												v	v	v
	4	Worst Case												v	v	v
	5	Worst Case												v	v	v
	7	Worst Case												v	v	v
	41	Worst Case												v	v	v
Note	1. The mark "**v** " means that this configuration is chosen for testing 2. The mark "-" means that this bandwidth is not supported. 3. The device is investigated from 30MHz to 10 times of fundamental signal for radiated spurious emission test under different RB size/offset and modulations in exploratory test. Subsequently, only the worst case emissions are reported. 4. LTE Band 41 overlaps the entire frequency range of LTE Band 38. Therefore, the test results provided in this report covers Band 41 as well as Band 38.															

Test Items	Band	Bandwidth (MHz)										Modulation			RB #			Test Channel		
		20+20	20+15	15+20	20+10	10+20	20+5	5+20	15+15	15+10	10+15	QPSK	16QAM	64QAM	1	Half	Full	L	M	H
Max. Output Power	7C_CA	v	v	v	v	v	-	-	v	v	-	v	v	v	v	v	v	v	v	v
	38C_CA	v	-	-	-	-	-	-	v	-	-	v	v	v	v	v	v	v	v	v
26dB and 99% Bandwidth	7C_CA	v	v	v	v	v	-	-	v	v	-	v	v	v			v	v	v	v
	38C_CA	v	-	-	-	-	-	-	v	-	-	v	v	v			v	v	v	v
Conducted Band Edge	7C_CA	v	v	v	v	v	-	-	v	v	-	v	v	v	v		v	v		v
	38C_CA	v	-	-	-	-	-	-	v	-	-	v	v	v	v		v	v		v
Conducted Spurious Emission	7C_CA	v	v	v	v	v	-	-	v	v	-	v	v	v	v			v	v	v
	38C_CA	v	-	-	-	-	-	-	v	-	-	v	v	v	v			v	v	v
E.I.R.P.	7C_CA	v	v	v	v	v	-	-	v	v	-	v	v	v	v			v	v	v
	38C_CA	v	-	-	-	-	-	-	v	-	-	v	v	v	v			v	v	v
Radiated Spurious Emission	7C_CA	Worst Case																v	v	v
	38C_CA	Worst Case																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



This example is connection diagram of EUT test configurations.

. For detail, please refer to test mode configuration and setup photographs for each test item.

2.3 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model No.	FCC ID	Data Cable	Power Cord
1.	Power Supply	GWINSTEK	PSS-2002	N/A	N/A	Unshielded, 1.8m
2.	LTE Base Station	Anritsu	MT8820C	N/A	N/A	Unshielded, 1.8m

2.4 Measurement Results Explanation Example

For all conducted test items:

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

The spectrum analyzer offset is derived from RF cable loss.

Offset = RF cable loss.

Following shows an offset computation example with cable loss 6.00 dB.

Example :

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

= 6.00 (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 38 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
20	Channel	37850	38000	38150
	Frequency	2580	2595	2610
15	Channel	37825	38000	38175
	Frequency	2577.5	2595	2612.5
10	Channel	37800	38000	38200
	Frequency	2575	2595	2615
5	Channel	37775	38000	38225
	Frequency	2572.5	2595	2617.5

LTE Band 41 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
20	Channel	40140	40640	41140
	Frequency	2545	2595	2645
15	Channel	40115	40640	41165
	Frequency	2542.5	2595	2647.5
10	Channel	40090	40640	41190
	Frequency	2540	2595	2650
5	Channel	40065	40640	41215
	Frequency	2537.5	2595	2652.5

LTE Band 7C_CA Channel and Frequency List					
BW [MHz]	Channel/Frequency(MHz)		Lowest	Middle	Highest
20 + 20	PCC	Channel	20850	21001	21152
		Frequency	2510.0	2525.1	2540.2
	SCC	Channel	21048	21199	21350
		Frequency	2529.8	2544.9	2560.0
20 + 15	PCC	Channel	20850	21026	21201
		Frequency	2510.0	2527.6	2545.1
	SCC	Channel	21021	21197	21372
		Frequency	2527.1	2544.7	2562.2
15 + 20	PCC	Channel	20828	21003	21179
		Frequency	2507.8	2525.3	2542.9
	SCC	Channel	20999	21174	21350
		Frequency	2524.9	2542.4	2560.0
20 + 10	PCC	Channel	20850	21051	21251
		Frequency	2510.0	2530.1	2550.1
	SCC	Channel	20994	21195	21395
		Frequency	2524.4	2544.5	2564.5
10 + 20	PCC	Channel	20805	21006	21206
		Frequency	2505.5	2525.6	2545.6
	SCC	Channel	20949	21150	21350
		Frequency	2519.9	2540.0	2560.0
15 + 15	PCC	Channel	20825	21025	21225
		Frequency	2507.5	2527.5	2547.5
	SCC	Channel	20975	21175	21375
		Frequency	2522.5	2542.5	2562.5
15 + 10	PCC	Channel	20825	21051	21277
		Frequency	2507.5	2530.1	2552.7
	SCC	Channel	20945	21171	21397
		Frequency	2519.5	2542.1	2564.7

LTE Band 38C_CA Channel and Frequency List					
BW [MHz]	Channel/Frequency(MHz)		Lowest	Middle	Highest
20 + 20	PCC	Channel	37850	37901	37952
		Frequency	2580.0	2585.1	2590.2
	SCC	Channel	38048	38099	38150
		Frequency	2599.8	2604.9	2610.0
15+ 15	PCC	Channel	37825	37925	38025
		Frequency	2577.5	2587.5	2597.5
	SCC	Channel	37975	38075	38175
		Frequency	2592.5	2602.5	2612.5

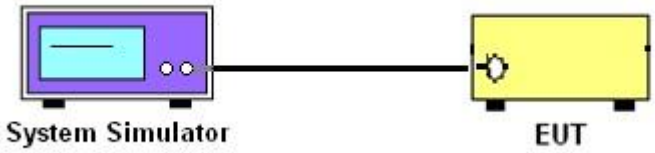
3 Conducted Test Items

3.1 Measuring Instruments

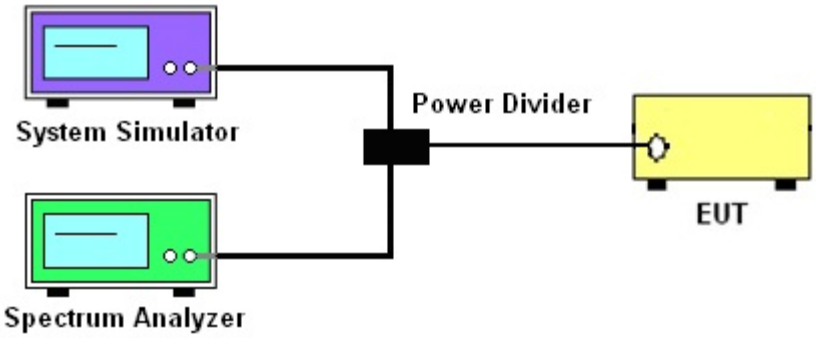
See list of measuring instruments of this test report.

3.2 Test Setup

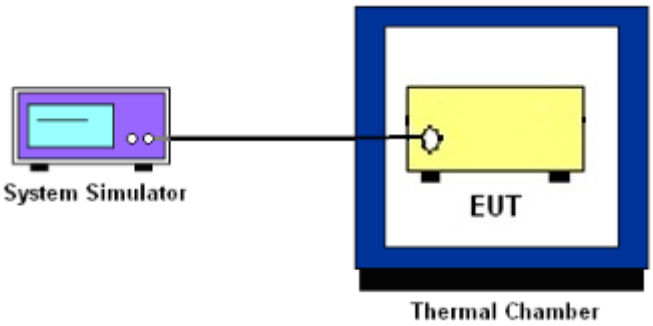
3.2.1 Conducted Output Power



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.

The EIRP of mobile transmitters must not exceed 2 Watts for LTE Band 2 and Band 7and Band 38 and Band 41.

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 testing follows ANSI C63.26 Section 5.2
2. The transmitter output port was connected to the system simulator.
3. Set EUT at maximum power through the system simulator.
4. Select lowest, middle, and highest channels for each band and different modulation.
5. 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 ANSI C63.26 Section 5.2.3.4 (CCDF).
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 ANSI C63.26 Section 5.4
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 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 operations in the 1850-1910 and 1930-1990 MHz band, the FCC limit is 43 + $10\log_{10}$(P[Watts]) dB below the transmitter power P(Watts) in a 1MHz bandwidth. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

27.53 (h)

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 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 ANSI C63.26 section 5.7
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 or a narrower RBW was used and the measured power was integrated over the full required measurement bandwidth of 1 MHz.
6. Set spectrum analyzer with RMS detector.
7. Offset has included the duty factor for LTE Band 38/41. Duty factor =10 log (1/x), where x is the measured duty cycle
8. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
9. 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.
10. For LTE Band 7, 38, 41, the other 40 dB, and 55 dB have additionally applied same calculation above.

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 7,38,41:

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 10th harmonic.

3.8.2 Test Procedures

1. The testing follows ANSI C63.26 section 5.7
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. Offset has included the duty factor for LTE Band 38/41. Duty factor =10 log (1/x), where x is the measured duty cycle
9. Taking the record of maximum spurious emission.
10. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
11. 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.
12. For Band 7, 38, 41
    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 ANSI C63.26 section 5.6.4
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 ANSI C63.26 section 5.6.5
2. The EUT was placed in a temperature chamber at 20±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 for other than hand carried battery equipment.
4. For hand carried, battery powered equipment, reduce the primary ac or dc supply voltage to the battery operating end point, which shall be specified by the manufacturer.
5. The variation in frequency was measured for the worst case.

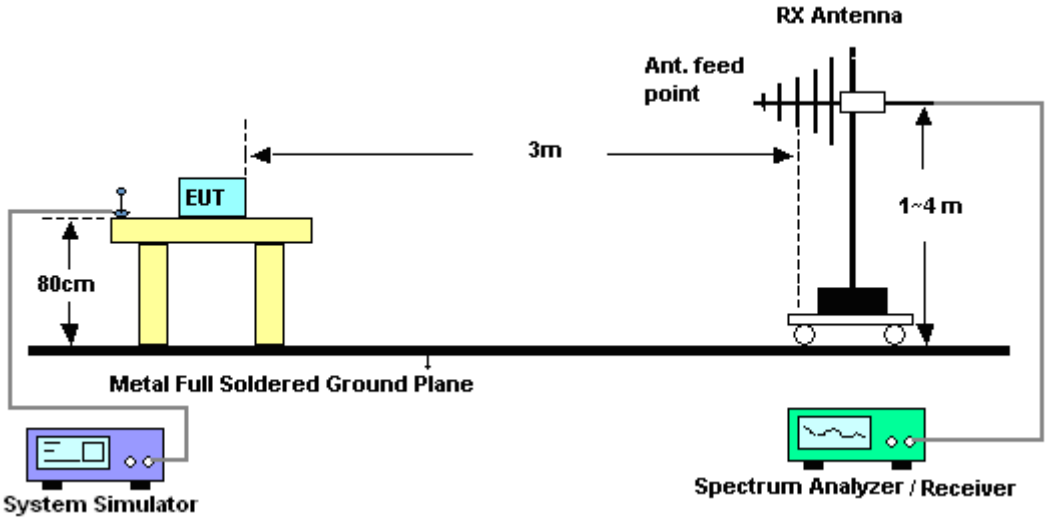
4 Radiated Test Items

4.1 Measuring Instruments

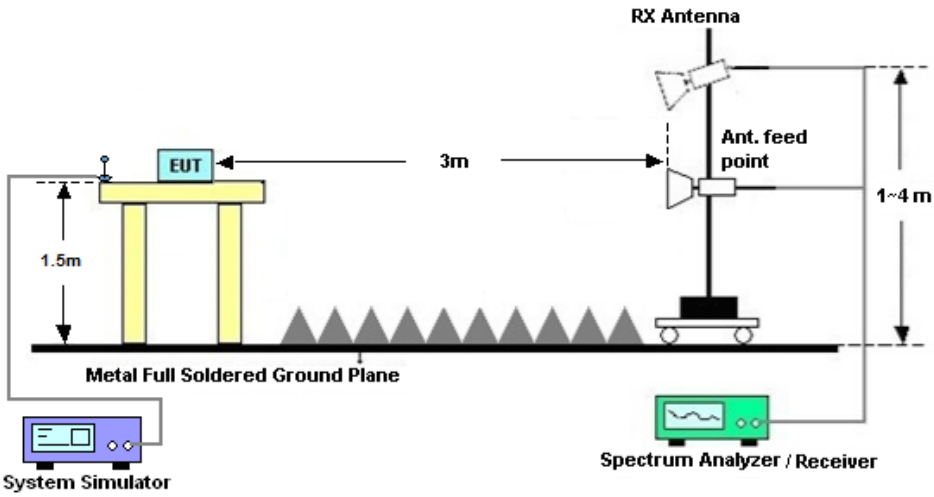
See list of measuring instruments of this test report.

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 C63.26. 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, 38, 41

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.

4.4.2 Test Procedures

1. The testing follows ANSI C63.26 Section 5.5
2. The EUT was placed on a turntable with 0.8 meter height for frequency below 1GHz and 1.5 meter height for frequency above 1GHz respectively above ground.
3. The EUT was set 3 meters from the receiving antenna 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 1m to 4m to search the maximum spurious emission for both horizontal and vertical polarizations.
6. During the measurement, the system simulator parameters were set to force the EUT transmitting at maximum output power.
7. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
8. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
9. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
10. EIRP (dBm) = S.G. Power – Tx Cable Loss + Tx Antenna Gain
11. ERP (dBm) = EIRP - 2.15
12. 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.
13. For Band 7, 38, 41:
    The limit line is derived from 55 + 10log(P)dB below the transmitter power P(Watts)

5 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSV40	101040	10Hz~40GHz	Nov. 02, 2019	Mar. 19, 2020~ Apr. 22, 2020	Nov. 01, 2020	Conducted (TH01-KS)
Temperature & humidity chamber	Hongzhan	LP-150U	H2014011440	-40~+150°C 20%~95%RH	Jul. 04, 2019	Mar. 19, 2020~ Apr. 22, 2020	Jul. 03, 2020	Conducted (TH01-KS)
EXA Spectrum Analyzer	Keysight	N9010A	MY55150244	10Hz-44G,MAX 30dB	Apr. 16, 2019	Mar. 18, 2020	Apr. 15, 2020	Radiation (03CH04-KS)
Bilog Antenna	TeseQ	CBL6111D	49922	30MHz-1GHz	May 30, 2019	Mar. 18, 2020	May 29, 2020	Radiation (03CH04-KS)
Horn Antenna	Schwarzbeck	BBHA9120D	1356	1GHz~18GHz	Apr. 21, 2019	Mar. 18, 2020	Apr. 20, 2020	Radiation (03CH04-KS)
SHF-EHF Horn	Com-power	AH-840	101115	18GHz~40GHz	Nov. 10, 2019	Mar. 18, 2020	Nov. 09, 2020	Radiation (03CH04-KS)
Amplifier	SONOMA	310N	187289	9KHz-1GHz	Aug. 06, 2019	Mar. 18, 2020	Aug. 05, 2020	Radiation (03CH04-KS)
Amplifier	MITEQ	EM18G40G GA	060728	18~40GHz	Jan. 08, 2020	Mar. 18, 2020	Jan. 07, 2021	Radiation (03CH04-KS)
high gain Amplifier	MITEQ	AMF-7D-00 101800-30-1 0P	2025788	1Ghz-18Ghz	Aug.16, 2019	Mar. 18, 2020	Aug.15, 2020	Radiation (03CH04-KS)
Amplifier	Keysight	83017A	MY57280106	500MHz~26.5GHz	Apr. 15, 2019	Mar. 18, 2020	Apr. 14, 2020	Radiation (03CH04-KS)
AC Power Source	Chroma	61601	F104090004	N/A	NCR	Mar. 18, 2020	NCR	Radiation (03CH04-KS)
Turn Table	ChamPro	EM 1000-T	060762-T	0~360 degree	NCR	Mar. 18, 2020	NCR	Radiation (03CH04-KS)
Antenna Mast	ChamPro	EM 1000-A	060762-A	1 m~4 m	NCR	Mar. 18, 2020	NCR	Radiation (03CH04-KS)
EXA Spectrum Analyzer	Keysight	N9010A	MY55150208	10Hz-44GHz	Apr. 16, 2019	Mar. 18, 2020	Apr. 15, 2020	Radiation (03CH06-KS)
Bilog Antenna	TeseQ	CBL6111D	49921	30MHz-1GHz	May 30, 2019	Mar. 18, 2020	May 29, 2020	Radiation (03CH06-KS)
Double Ridge Horn Antenna	ETS-Lindgren	3117	00218652	1GHz~18GHz	Apr. 27, 2019	Mar. 18, 2020	Apr. 26, 2020	Radiation (03CH06-KS)
SHF-EHF Horn	Com-power	AH-840	101115	18GHz~40GHz	Nov. 10, 2019	Mar. 18, 2020	Nov. 09, 2020	Radiation (03CH06-KS)
Amplifier	SONOMA	310N	187289	9KHz ~1GHZ	Aug. 06, 2019	Mar. 18, 2020	Aug. 05, 2020	Radiation (03CH06-KS)
Amplifier	MITEQ	EM18G40G GA	060728	18~40GHz	Jan. 08, 2020	Mar. 18, 2020	Jan. 07, 2021	Radiation (03CH06-KS)
high gain Amplifier	MITEQ	AMF-7D-00 101800-30-1 0P	2025788	1Ghz-18Ghz	Apr. 17, 2019	Mar. 18, 2020	Apr. 16, 2020	Radiation (03CH06-KS)
Amplifier	Keysight	83017A	MY53270203	500MHz~26.5GHz	Apr. 15, 2019	Mar. 18, 2020	Apr. 14. 2020	Radiation (03CH06-KS)
AC Power Source	Chroma	61601	F104090004	N/A	NCR	Mar. 18, 2020	NCR	Radiation (03CH06-KS)
Turn Table	ChamPro	EM 1000-T	060762-T	0~360 degree	NCR	Mar. 18, 2020	NCR	Radiation (03CH06-KS)
Antenna Mast	ChamPro	EM 1000-A	060762-A	1 m~4 m	NCR	Mar. 18, 2020	NCR	Radiation (03CH06-KS)

NCR: No Calibration Required

6 Uncertainty of Evaluation

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI 63.26-2015. All the measurement uncertainty value were shown with a coverage K=2 to indicate 95% level of confidence. The measurement data show herein meets or exceeds the CISPR measurement uncertainty values specified in CISPR 16-4-2 and can be compared directly to specified limit to determine compliance.

For 03ch04-ks:

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**3.3dB**

Uncertainty of Radiated Emission Measurement (1 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**2.8dB**

For 03ch06-ks:

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**2.5dB**

Uncertainty of Radiated Emission Measurement (1 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**2.1dB**

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	22.53	22.84	22.61
20	1	49		22.73	22.65	22.81
20	1	99		22.55	22.60	22.54
20	50	0		21.68	21.79	21.78
20	50	24		21.72	21.80	21.80
20	50	50		21.63	21.76	21.62
20	100	0		21.65	21.78	21.72
20	1	0	16-QAM	21.82	21.90	21.98
20	1	49		22.04	22.18	22.18
20	1	99		21.77	21.88	21.86
20	50	0		20.77	20.88	20.89
20	50	24		20.80	20.91	20.89
20	50	50		20.70	20.86	20.71
20	100	0		20.73	20.87	20.80
20	1	0	64-QAM	20.81	20.82	20.83
20	1	49		21.03	21.19	21.16
20	1	99		20.85	20.92	20.75
20	50	0		19.76	19.88	19.87
20	50	24		19.81	19.87	19.89
20	50	50		19.74	19.86	19.68
20	100	0		19.75	19.86	19.78
15	1	0	QPSK	22.53	22.58	22.62
15	1	37		22.76	**22.86**	22.80
15	1	74		22.52	22.59	22.52
15	36	0		21.62	21.72	21.75
15	36	20		21.67	21.73	21.73
15	36	39		21.64	21.71	21.64
15	75	0		21.64	21.70	21.70
15	1	0	16-QAM	21.82	21.84	21.88

15	1	37		21.96	22.08	21.98
15	1	74		21.80	21.92	21.77
15	36	0		20.69	20.77	20.79
15	36	20		20.73	20.80	20.78
15	36	39		20.70	20.77	20.71
15	75	0		20.72	20.78	20.76
15	1	0		20.78	20.83	20.88
15	1	37		21.07	21.15	21.03
15	1	74		20.79	20.82	20.77
15	36	0	**64-QAM**	19.71	19.81	19.83
15	36	20		19.75	19.82	19.80
15	36	39		19.72	19.80	19.72
15	75	0		19.71	19.77	19.76

LTE Band 2 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK	22.45	22.53	22.53
10	1	25		22.59	22.68	22.63
10	1	49		22.45	22.54	22.47
10	25	0		21.51	21.63	21.69
10	25	12		21.52	21.62	21.61
10	25	25		21.54	21.63	21.54
10	50	0		21.54	21.63	21.63
10	1	0	16-QAM	21.79	21.85	21.72
10	1	25		21.86	21.92	21.93
10	1	49		21.79	21.78	21.67
10	25	0		20.62	20.73	20.78
10	25	12		20.63	20.70	20.70
10	25	25		20.63	20.71	20.62
10	50	0		20.63	20.74	20.72
10	1	0	64-QAM	20.65	20.83	20.75
10	1	25		20.90	20.88	20.92
10	1	49		20.73	20.78	20.72
10	25	0		19.62	19.72	19.75
10	25	12		19.63	19.73	19.71
10	25	25		19.64	19.72	19.60
10	50	0		19.63	19.71	19.68
5	1	0	QPSK	22.41	22.45	22.44
5	1	12		22.66	22.69	22.70
5	1	24		22.42	22.49	22.41
5	12	0		21.48	21.59	21.59
5	12	7		21.56	21.62	21.59
5	12	13		21.49	21.59	21.52
5	25	0		21.51	21.60	21.58
5	1	0	16-QAM	21.64	21.79	21.72
5	1	12		21.87	21.90	21.97
5	1	24		21.59	21.80	21.68
5	12	0		20.58	20.67	20.68
5	12	7		20.63	20.71	20.68

5	12	13		20.59	20.66	20.61
5	25	0		20.59	20.70	20.66
5	1	0	64-QAM	20.63	20.80	20.65
5	1	12		20.88	21.06	20.97
5	1	24		20.62	20.79	20.58
5	12	0		19.62	19.70	19.71
5	12	7		19.68	19.75	19.73
5	12	13		19.61	19.70	19.62
5	25	0		19.61	19.70	19.67

LTE Band 2 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
3	1	0	QPSK	22.52	22.58	22.51
3	1	8		22.48	22.62	22.51
3	1	14		22.49	22.54	22.50
3	8	0		21.49	21.57	21.55
3	8	4		21.53	21.62	21.56
3	8	7		21.50	21.59	21.53
3	15	0		21.49	21.56	21.55
3	1	0	16-QAM	21.84	21.93	21.69
3	1	8		21.73	21.87	21.72
3	1	14		21.83	21.89	21.68
3	8	0		20.66	20.75	20.66
3	8	4		20.72	20.75	20.73
3	8	7		20.67	20.75	20.66
3	15	0		20.62	20.67	20.61
3	1	0	64-QAM	20.75	20.82	20.74
3	1	8		20.76	20.89	20.73
3	1	14		20.77	20.81	20.69
3	8	0		19.65	19.71	19.67
3	8	4		19.66	19.72	19.70
3	8	7		19.65	19.74	19.65
3	15	0		19.59	19.66	19.63
1.4	1	0	QPSK	22.43	22.52	22.47
1.4	1	3		22.61	22.67	22.61
1.4	1	5		22.44	22.55	22.46
1.4	3	0		22.59	22.67	22.58
1.4	3	1		22.61	22.70	22.64
1.4	3	3		22.59	22.62	22.59
1.4	6	0		21.57	21.62	21.61
1.4	1	0	16-QAM	21.71	21.83	21.68
1.4	1	3		21.81	21.99	21.85
1.4	1	5		21.82	21.93	21.67
1.4	3	0		21.53	21.70	21.55
1.4	3	1		21.65	21.66	21.56

1.4	3	3		21.57	21.65	21.53
1.4	6	0		20.71	20.83	20.75
1.4	1	0	64-QAM	20.75	20.79	20.71
1.4	1	3		20.91	20.90	20.76
1.4	1	5		20.77	20.83	20.76
1.4	3	0		20.72	20.87	20.77
1.4	3	1		20.78	20.88	20.78
1.4	3	3		20.70	20.79	20.75
1.4	6	0		19.63	19.73	19.61

LTE Band 4 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
20	1	0	QPSK	22.51	22.73	22.49
20	1	49		22.66	22.71	22.71
20	1	99		22.42	22.43	22.47
20	50	0		21.62	21.59	21.62
20	50	24		21.63	21.64	21.66
20	50	50		21.61	21.62	21.61
20	100	0		21.62	21.63	21.62
20	1	0	16-QAM	21.73	21.68	21.71
20	1	49		22.03	21.93	22.01
20	1	99		21.63	21.61	21.72
20	50	0		20.68	20.67	20.72
20	50	24		20.72	20.73	20.72
20	50	50		20.69	20.69	20.68
20	100	0		20.66	20.69	20.67
20	1	0	64-QAM	20.73	20.67	20.78
20	1	49		20.85	20.96	21.00
20	1	99		20.71	20.75	20.71
20	50	0		19.67	19.68	19.69
20	50	24		19.70	19.72	19.72
20	50	50		19.68	19.66	19.66
20	100	0		19.68	19.67	19.66
15	1	0	QPSK	22.42	22.43	22.40
15	1	37		22.63	22.64	22.69
15	1	74		22.37	22.37	22.39
15	36	0		21.51	21.54	21.54
15	36	20		21.53	21.55	21.59
15	36	39		21.50	21.51	21.56
15	75	0		21.50	21.54	21.54
15	1	0	16-QAM	21.69	21.67	21.72
15	1	37		21.93	21.99	21.88
15	1	74		21.70	21.64	21.64
15	36	0		20.55	20.56	20.58
15	36	20		20.54	20.59	20.63

15	36	39		20.55	20.56	20.59
15	75	0		20.57	20.61	20.58
15	1	0	64-QAM	20.63	20.68	20.66
15	1	37		20.82	20.90	20.86
15	1	74		20.64	20.61	20.64
15	36	0		19.55	19.60	19.58
15	36	20		19.60	19.61	19.64
15	36	39		19.56	19.56	19.60
15	75	0		19.55	19.58	19.55

LTE Band 4 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK	22.45	22.46	22.51
10	1	25		22.57	22.59	22.63
10	1	49		22.39	22.47	22.48
10	25	0		21.55	21.55	21.66
10	25	12		21.53	21.57	21.60
10	25	25		21.52	21.59	21.56
10	50	0		21.53	21.59	21.64
10	1	0	16-QAM	21.63	21.65	21.84
10	1	25		21.89	21.81	21.94
10	1	49		21.62	21.74	21.67
10	25	0		20.62	20.64	20.72
10	25	12		20.61	20.67	20.70
10	25	25		20.59	20.65	20.64
10	50	0		20.61	20.66	20.70
10	1	0	64-QAM	20.72	20.77	20.79
10	1	25		20.73	20.89	20.86
10	1	49		20.60	20.74	20.74
10	25	0		19.62	19.64	19.71
10	25	12		19.61	19.64	19.69
10	25	25		19.59	19.64	19.63
10	50	0		19.61	19.63	19.66
5	1	0	QPSK	22.49	22.48	22.55
5	1	12		22.76	**22.76**	22.76
5	1	24		22.45	22.51	22.52
5	12	0		21.60	21.61	21.67
5	12	7		21.66	21.67	21.68
5	12	13		21.57	21.63	21.61
5	25	0		21.62	21.62	21.63
5	1	0	16-QAM	21.68	21.73	21.74
5	1	12		22.02	21.99	21.95
5	1	24		21.62	21.70	21.67
5	12	0		20.65	20.66	20.72
5	12	7		20.70	20.74	20.75

5	12	13		20.61	20.68	20.67
5	25	0		20.69	20.70	20.72
5	1	0	64-QAM	20.71	20.81	20.82
5	1	12		20.95	21.01	21.02
5	1	24		20.68	20.72	20.79
5	12	0		19.68	19.69	19.76
5	12	7		19.76	19.75	19.80
5	12	13		19.68	19.72	19.71
5	25	0		19.69	19.69	19.70

LTE Band 4 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
3	1	0	QPSK	22.45	22.45	22.47
3	1	8		22.40	22.43	22.47
3	1	14		22.43	22.43	22.47
3	8	0		21.46	21.45	21.49
3	8	4		21.48	21.51	21.51
3	8	7		21.46	21.46	21.48
3	15	0		21.45	21.47	21.47
3	1	0	16-QAM	21.68	21.76	21.80
3	1	8		21.64	21.75	21.70
3	1	14		21.65	21.76	21.75
3	8	0		20.61	20.62	20.64
3	8	4		20.62	20.64	20.65
3	8	7		20.60	20.61	20.62
3	15	0		20.54	20.54	20.58
3	1	0	64-QAM	20.67	20.71	20.73
3	1	8		20.62	20.71	20.70
3	1	14		20.66	20.74	20.71
3	8	0		19.59	19.58	19.61
3	8	4		19.58	19.61	19.62
3	8	7		19.58	19.60	19.58
3	15	0		19.54	19.51	19.55
1.4	1	0	QPSK	22.43	22.46	22.49
1.4	1	3		22.57	22.63	22.61
1.4	1	5		22.45	22.49	22.49
1.4	3	0		22.59	22.58	22.61
1.4	3	1		22.63	22.61	22.65
1.4	3	3		22.58	22.59	22.59
1.4	6	0		21.57	21.55	21.60
1.4	1	0	16-QAM	21.79	21.73	21.72
1.4	1	3		21.82	21.79	21.95
1.4	1	5		21.75	21.79	21.70
1.4	3	0		21.50	21.52	21.55
1.4	3	1		21.65	21.54	21.59

1.4	3	3		21.58	21.54	21.53
1.4	6	0		20.74	20.75	20.76
1.4	1	0	64-QAM	20.71	20.83	20.79
1.4	1	3		20.88	20.80	20.86
1.4	1	5		20.72	20.74	20.80
1.4	3	0		20.57	20.71	20.77
1.4	3	1		20.79	20.77	20.81
1.4	3	3		20.73	20.66	20.73
1.4	6	0		19.62	19.65	19.68

LTE Band 5 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK	24.19	24.35	24.22
10	1	25		24.31	24.28	24.30
10	1	49		24.13	24.17	24.18
10	25	0		23.27	23.34	23.33
10	25	12		23.29	23.29	23.33
10	25	25		23.26	23.28	23.24
10	50	0		23.29	23.33	23.31
10	1	0	16-QAM	23.41	23.39	23.27
10	1	25		23.47	23.39	23.39
10	1	49		23.22	23.32	23.29
10	25	0		22.23	22.30	22.30
10	25	12		22.26	22.24	22.28
10	25	25		22.23	22.23	22.22
10	50	0		22.26	22.29	22.28
10	1	0	64-QAM	22.34	22.37	22.28
10	1	25		22.43	22.42	22.26
10	1	49		22.19	22.24	22.23
10	25	0		21.27	21.33	21.32
10	25	12		21.29	21.28	21.32
10	25	25		21.26	21.25	21.26
10	50	0		21.29	21.32	21.30
5	1	0	QPSK	24.08	24.09	24.11
5	1	12		24.27	24.32	24.33
5	1	24		24.10	24.07	24.09
5	12	0		23.19	23.22	23.24
5	12	7		23.22	23.26	23.24
5	12	13		23.20	23.17	23.16
5	25	0		23.22	23.24	23.22
5	1	0	16-QAM	23.31	23.18	23.28
5	1	12		23.38	23.47	23.52
5	1	24		23.24	23.08	23.16
5	12	0		22.14	22.18	22.21
5	12	7		22.15	22.18	22.21

5	12	13		22.13	22.10	22.15
5	25	0		22.19	22.19	22.18
5	1	0	64-QAM	22.20	22.20	22.26
5	1	12		22.36	22.38	22.41
5	1	24		22.18	22.08	22.23
5	12	0		21.21	21.26	21.27
5	12	7		21.25	21.28	21.29
5	12	13		21.23	21.16	21.21
5	25	0		21.22	21.23	21.23

LTE Band 5 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
3	1	0	QPSK	24.18	24.20	24.18
3	1	8		24.15	24.16	24.13
3	1	14		24.18	24.17	24.17
3	8	0		23.17	23.15	23.19
3	8	4		23.22	23.23	23.21
3	8	7		23.15	23.18	23.18
3	15	0		23.19	23.21	23.22
3	1	0	16-QAM	23.34	23.32	23.33
3	1	8		23.29	23.25	23.25
3	1	14		23.28	23.23	23.22
3	8	0		22.21	22.17	22.19
3	8	4		22.24	22.24	22.27
3	8	7		22.20	22.18	22.19
3	15	0		22.17	22.19	22.21
3	1	0	64-QAM	22.31	22.17	22.33
3	1	8		22.23	22.23	22.20
3	1	14		22.24	22.28	22.24
3	8	0		21.23	21.23	21.24
3	8	4		21.27	21.26	21.26
3	8	7		21.22	21.22	21.20
3	15	0		21.18	21.20	21.24
1.4	1	0	QPSK	24.11	24.14	24.08
1.4	1	3		24.22	24.24	24.24
1.4	1	5		24.11	24.14	24.11
1.4	3	0		24.21	24.23	24.22
1.4	3	1		24.27	24.30	24.27
1.4	3	3		24.20	24.25	24.21
1.4	6	0		23.22	23.24	23.25
1.4	1	0	16-QAM	23.31	23.18	23.21
1.4	1	3		23.36	23.36	23.36
1.4	1	5		23.19	23.27	23.24
1.4	3	0		23.12	23.10	23.07
1.4	3	1		23.20	23.18	23.18

1.4	3	3		23.08	23.08	23.07
1.4	6	0		22.28	22.27	22.29
1.4	1	0	64-QAM	22.19	22.25	22.18
1.4	1	3		22.26	22.35	22.39
1.4	1	5		22.30	22.20	22.20
1.4	3	0		22.29	22.22	22.26
1.4	3	1		22.29	22.26	22.32
1.4	3	3		22.29	22.25	22.22
1.4	6	0		21.16	21.22	21.24

LTE Band 7 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
20	1	0	QPSK	22.62	22.52	22.55
20	1	49		22.78	22.76	22.74
20	1	99		22.50	22.43	22.45
20	50	0		21.77	21.73	21.78
20	50	24		21.82	21.71	21.79
20	50	50		21.75	21.66	21.71
20	100	0		21.74	21.68	21.72
20	1	0	16-QAM	21.80	21.90	21.72
20	1	49		22.07	21.88	22.03
20	1	99		21.68	21.61	21.70
20	50	0		20.71	20.77	20.76
20	50	24		20.81	20.77	20.77
20	50	50		20.72	20.73	20.66
20	100	0		20.72	20.74	20.70
20	1	0	64-QAM	20.83	20.76	20.79
20	1	49		21.00	20.96	20.96
20	1	99		20.69	20.67	20.66
20	50	0		19.74	19.78	19.76
20	50	24		19.81	19.77	19.77
20	50	50		19.75	19.75	19.69
20	100	0		19.73	19.77	19.73
15	1	0	QPSK	22.69	22.60	22.58
15	1	37		22.89	22.80	22.79
15	1	74		22.55	22.49	22.50
15	36	0		21.78	21.72	21.81
15	36	20		21.85	21.72	21.79
15	36	39		21.82	21.67	21.73
15	75	0		21.81	21.68	21.78
15	1	0	16-QAM	21.86	21.91	21.87
15	1	37		22.09	22.03	22.06
15	1	74		21.90	21.77	21.65
15	36	0		20.79	20.74	20.76
15	36	20		20.80	20.74	20.75
15	36	39		20.75	20.71	20.68

15	75	0		20.80	20.75	20.73
15	1	0	64-QAM	20.82	20.85	20.77
15	1	37		21.03	21.01	21.01
15	1	74		20.75	20.73	20.71
15	36	0		19.82	19.79	19.79
15	36	20		19.85	19.77	19.77
15	36	39		19.79	19.73	19.72
15	75	0		19.81	19.73	19.75

LTE Band 7 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK	22.73	22.63	22.61
10	1	25		22.79	22.70	22.72
10	1	49		22.65	22.54	22.60
10	25	0		21.78	21.71	21.82
10	25	12		21.80	21.70	21.78
10	25	25		21.88	21.68	21.77
10	50	0		21.87	21.72	21.80
10	1	0	16-QAM	21.95	21.92	21.88
10	1	25		22.01	21.97	21.90
10	1	49		21.97	21.86	21.72
10	25	0		20.83	20.79	20.82
10	25	12		20.85	20.76	20.75
10	25	25		20.87	20.75	20.74
10	50	0		20.85	20.78	20.78
10	1	0	64-QAM	20.87	20.83	20.79
10	1	25		21.09	21.01	20.86
10	1	49		20.87	20.77	20.81
10	25	0		19.84	19.79	19.80
10	25	12		19.87	19.75	19.77
10	25	25		19.87	19.77	19.75
10	50	0		19.87	19.80	19.79
5	1	0	QPSK	22.73	22.56	22.65
5	1	12		22.93	22.81	**22.99**
5	1	24		22.66	22.54	22.68
5	12	0		21.81	21.67	21.78
5	12	7		21.89	21.72	21.81
5	12	13		21.82	21.66	21.79
5	25	0		21.85	21.70	21.79
5	1	0	16-QAM	21.94	21.68	21.90
5	1	12		22.13	21.99	22.12
5	1	24		21.80	21.73	21.77
5	12	0		20.81	20.73	20.80
5	12	7		20.91	20.73	20.86

5	12	13		20.88	20.68	20.79
5	25	0		20.89	20.76	20.85
5	1	0	64-QAM	20.97	20.80	20.81
5	1	12		21.13	21.00	20.71
5	1	24		20.88	20.77	20.80
5	12	0		19.88	19.71	19.82
5	12	7		19.92	19.79	19.87
5	12	13		19.88	19.73	19.84
5	25	0		19.91	19.75	19.84

LTE Band 38 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
20	1	0	QPSK	23.89	23.58	23.57
20	1	49		23.84	23.87	23.83
20	1	99		23.61	23.62	23.65
20	50	0		22.60	22.59	22.65
20	50	24		22.73	22.69	22.70
20	50	50		22.80	22.70	22.67
20	100	0		22.80	22.77	22.71
20	1	0	16-QAM	22.61	22.63	22.63
20	1	49		22.90	22.90	22.92
20	1	99		22.66	22.67	22.66
20	50	0		21.68	21.73	21.77
20	50	24		21.77	21.75	21.79
20	50	50		21.81	21.79	21.81
20	100	0		21.83	21.80	21.80
20	1	0	64-QAM	21.44	21.39	21.39
20	1	49		21.70	21.69	21.49
20	1	99		21.46	21.44	21.52
20	50	0		20.62	20.65	20.69
20	50	24		20.69	20.73	20.75
20	50	50		20.77	20.75	20.78
20	100	0		20.85	20.85	20.84
15	1	0	QPSK	23.67	23.64	23.67
15	1	37		23.84	23.82	23.83
15	1	74		23.68	23.66	23.67
15	36	0		22.78	22.79	22.77
15	36	20		22.94	22.89	22.81
15	36	39		22.93	22.84	22.80
15	75	0		22.76	22.77	22.71
15	1	0	16-QAM	22.68	22.65	22.72
15	1	37		22.86	22.86	22.89
15	1	74		22.70	22.68	22.76
15	36	0		21.75	21.72	21.72
15	36	20		21.80	21.78	21.75

15	36	39		21.82	21.76	21.77
15	75	0		21.83	21.81	21.82
15	1	0		21.51	21.48	21.48
15	1	37		21.51	21.67	21.66
15	1	74		21.49	21.51	21.50
15	36	0	**64-QAM**	20.77	20.78	20.72
15	36	20		20.85	20.80	20.88
15	36	39		20.85	20.79	20.78
15	75	0		20.80	20.85	20.80

LTE Band 38 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK	23.80	23.71	23.74
10	1	25		23.74	23.71	23.68
10	1	49		23.73	23.71	23.75
10	25	0		22.83	22.82	22.84
10	25	12		22.86	22.84	22.86
10	25	25		22.86	22.85	22.85
10	50	0		22.69	22.70	22.74
10	1	0	16-QAM	22.75	22.84	22.79
10	1	25		22.71	22.69	22.73
10	1	49		22.76	22.77	22.81
10	25	0		21.83	21.83	21.99
10	25	12		21.88	21.87	21.86
10	25	25		21.90	21.86	21.84
10	50	0		21.79	21.77	21.82
10	1	0	64-QAM	21.54	21.52	21.57
10	1	25		21.49	21.47	21.50
10	1	49		21.58	21.55	21.58
10	25	0		20.85	20.78	20.82
10	25	12		20.78	20.80	20.79
10	25	25		20.92	20.88	20.78
10	50	0		20.71	20.88	20.77
5	1	0	QPSK	23.66	23.61	23.66
5	1	12		23.84	23.82	23.88
5	1	24		23.66	23.62	23.69
5	12	0		22.97	22.88	22.91
5	12	7		23.01	22.98	22.97
5	12	13		22.95	22.93	22.89
5	25	0		22.93	22.86	22.86
5	1	0	16-QAM	22.74	22.72	22.77
5	1	12		22.87	22.90	22.94
5	1	24		22.69	22.71	22.77
5	12	0		21.86	21.77	21.74
5	12	7		21.95	21.98	21.89

5	12	13		21.89	21.75	21.76
5	25	0		21.95	21.90	21.89
5	1	0		21.52	21.52	21.54
5	1	12		21.68	21.68	21.71
5	1	24		21.48	21.52	21.58
5	12	0	**64-QAM**	20.79	20.86	20.92
5	12	7		20.94	20.75	20.78
5	12	13		20.87	20.81	20.82
5	25	0		20.91	20.85	20.82

LTE Band 41 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
20	1	0	QPSK	23.99	23.78	23.96
20	1	49		23.65	23.64	23.66
20	1	99		23.72	23.67	23.66
20	50	0		22.93	22.67	22.86
20	50	24		22.89	22.62	22.83
20	50	50		22.92	22.85	22.70
20	100	0		22.93	22.87	22.84
20	1	0	16-QAM	22.62	22.65	22.70
20	1	49		22.98	22.95	23.07
20	1	99		22.71	22.67	22.73
20	50	0		21.70	21.70	21.88
20	50	24		21.85	21.67	21.86
20	50	50		21.92	21.78	21.76
20	100	0		21.89	21.81	21.86
20	1	0	64-QAM	21.47	21.46	21.44
20	1	49		21.78	21.75	21.82
20	1	99		21.71	21.49	21.48
20	50	0		20.64	20.61	20.81
20	50	24		20.77	20.68	20.78
20	50	50		20.79	20.75	20.75
20	100	0		20.96	20.90	20.95
15	1	0	QPSK	23.73	23.58	23.74
15	1	37		23.95	23.77	23.97
15	1	74		23.75	23.63	23.73
15	36	0		22.92	22.76	22.96
15	36	20		23.05	22.75	22.92
15	36	39		23.05	22.73	22.92
15	75	0		22.93	22.59	22.82
15	1	0	16-QAM	22.72	22.58	22.84
15	1	37		22.95	22.80	23.00
15	1	74		22.76	22.65	22.80
15	36	0		21.86	21.65	21.88
15	36	20		21.92	21.68	21.90

15	36	39		21.93	21.66	21.83
15	75	0		21.92	21.69	21.87
15	1	0	64-QAM	21.57	21.38	21.56
15	1	37		21.78	21.60	21.77
15	1	74		21.61	21.42	21.58
15	36	0		20.87	20.67	20.92
15	36	20		20.95	20.70	20.74
15	36	39		20.97	20.84	20.98
15	75	0		20.90	20.82	20.82

LTE Band 41 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK	23.82	23.67	23.82
10	1	25		23.89	23.63	23.85
10	1	49		23.84	23.72	23.82
10	25	0		22.94	22.74	22.98
10	25	12		22.97	22.80	22.99
10	25	25		23.00	22.78	22.92
10	50	0		22.84	22.52	22.89
10	1	0	16-QAM	22.81	22.69	22.90
10	1	25		22.91	22.66	22.89
10	1	49		22.87	22.72	22.87
10	25	0		21.93	21.80	22.01
10	25	12		21.98	21.82	22.02
10	25	25		22.00	21.84	21.93
10	50	0		21.90	21.71	21.91
10	1	0	64-QAM	21.65	21.48	21.68
10	1	25		21.73	21.41	21.64
10	1	49		21.70	21.49	21.66
10	25	0		20.88	20.69	20.72
10	25	12		20.76	20.81	20.88
10	25	25		20.97	20.79	20.86
10	50	0		20.86	20.61	20.84
5	1	0	QPSK	23.69	23.56	23.74
5	1	12		23.84	23.72	23.98
5	1	24		23.70	23.58	23.71
5	12	0		22.91	22.81	22.99
5	12	7		22.99	22.92	23.01
5	12	13		22.97	22.86	22.94
5	25	0		22.90	22.74	22.94
5	1	0	16-QAM	22.69	22.58	22.83
5	1	12		22.86	22.75	23.05
5	1	24		22.73	22.62	22.79
5	12	0		21.84	21.73	21.92
5	12	7		21.89	21.81	21.96

5	12	13		21.91	21.80	21.85
5	25	0		21.95	21.80	21.95
5	1	0	64-QAM	21.59	21.40	21.62
5	1	12		21.70	21.70	21.86
5	1	24		21.59	21.62	21.86
5	12	0		20.80	20.72	20.93
5	12	7		20.91	20.82	20.98
5	12	13		20.88	20.78	20.87
5	25	0		20.83	20.75	20.92

CA Power

CA_7C								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Measured Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
20850	21048	QPSK	1	0	0	0	1	22.74
		16QAM	1	0	0	0	1	22.01
		64QAM	1	0	0	0	1	21.09
21001	21199	QPSK	1	0	0	0	1	22.76
		16QAM	1	0	0	0	1	22.03
		64QAM	1	0	0	0	1	20.92
21152	21350	QPSK	1	0	0	0	1	22.75
		16QAM	1	0	0	0	1	21.98
		64QAM	1	0	0	0	1	20.98

CA_38C								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Measured Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
37850	38048	QPSK	1	0	0	0	1	23.28
		16QAM	1	0	0	0	1	22.45
		64QAM	1	0	0	0	1	21.23
37901	38099	QPSK	1	0	0	0	1	23.36
		16QAM	1	0	0	0	1	22.39
		64QAM	1	0	0	0	1	21.00
37952	38150	QPSK	1	0	0	0	1	23.35
		16QAM	1	0	0	0	1	22.46
		64QAM	1	0	0	0	1	21.03

ERP/EIRP

LTE Band 2 (GT - LC = 0.30 dB) QPSK									
Bandwidth	1.4M			3M			5M		
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)	22.61	22.70	22.64	22.48	22.62	22.51	22.66	22.69	22.70
Conducted Power (Watts)	0.1824	0.1862	0.1837	0.1770	0.1828	0.1782	0.1845	0.1858	0.1862
EIRP(dBm)	22.91	23.00	22.94	22.78	22.92	22.81	22.96	22.99	23.00
EIRP(Watts)	0.1954	0.1995	0.1968	0.1897	0.1959	0.1910	0.1977	0.1991	0.1995

LTE Band 2 (GT - LC = 0.30 dB) QPSK									
Bandwidth	10M			15M			20M		
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)	22.59	22.68	22.63	22.76	22.86	22.80	22.53	22.84	22.61
Conducted Power (Watts)	0.1816	0.1854	0.1832	0.1888	0.1932	0.1905	0.1791	0.1923	0.1824
EIRP(dBm)	22.89	22.98	22.93	23.06	23.16	23.10	22.83	23.14	22.91
EIRP(Watts)	0.1945	0.1986	0.1963	0.2023	0.2070	0.2042	0.1919	0.2061	0.1954

LTE Band 2 (GT - LC = 0.30 dB) 16QAM									
Bandwidth	1.4M			3M			5M		
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)	21.81	21.99	21.85	21.84	21.93	21.69	21.87	21.90	21.97
Conducted Power (Watts)	0.1517	0.1581	0.1531	0.1528	0.1560	0.1476	0.1538	0.1549	0.1574
EIRP(dBm)	22.11	22.29	22.15	22.14	22.23	21.99	22.17	22.20	22.27
EIRP(Watts)	0.1626	0.1694	0.1641	0.1637	0.1671	0.1581	0.1648	0.1660	0.1687

LTE Band 2 (GT - LC = 0.30 dB) 16QAM									
Bandwidth	10M			15M			20M		
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)	21.86	21.92	21.93	21.96	22.08	21.98	22.04	22.18	22.18
Conducted Power (Watts)	0.1535	0.1556	0.1560	0.1570	0.1614	0.1578	0.1600	0.1652	0.1652
EIRP(dBm)	22.16	22.22	22.23	22.26	22.38	22.28	22.34	22.48	22.48
EIRP(Watts)	0.1644	0.1667	0.1671	0.1683	0.1730	0.1690	0.1714	0.1770	0.1770

LTE Band 2 (GT - LC = 0.30 dB) 64QAM									
Bandwidth	1.4M			3M			5M		
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)	20.91	20.90	20.76	20.76	20.89	20.73	20.88	21.06	20.97
Conducted Power (Watts)	0.1233	0.1230	0.1191	0.1191	0.1227	0.1183	0.1225	0.1276	0.1250
EIRP(dBm)	21.21	21.20	21.06	21.06	21.19	21.03	21.18	21.36	21.27
EIRP(Watts)	0.1321	0.1318	0.1276	0.1276	0.1315	0.1268	0.1312	0.1368	0.1340

LTE Band 2 (GT - LC = 0.30 dB) 64QAM									
Bandwidth	10M			15M			20M		
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)	20.90	20.88	20.92	21.07	21.15	21.03	21.03	21.19	21.16
Conducted Power (Watts)	0.1230	0.1225	0.1236	0.1279	0.1303	0.1268	0.1268	0.1315	0.1306
EIRP(dBm)	21.20	21.18	21.22	21.37	21.45	21.33	21.33	21.49	21.46
EIRP(Watts)	0.1318	0.1312	0.1324	0.1371	0.1396	0.1358	0.1358	0.1409	0.1400

LTE Band 4 (GT - LC = -1.10 dB) QPSK									
Bandwidth	1.4M			3M			5M		
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)	22.63	22.61	22.65	22.45	22.45	22.47	22.76	22.76	22.76
Conducted Power (Watts)	0.1832	0.1824	0.1841	0.1758	0.1758	0.1766	0.1888	0.1888	0.1888
EIRP(dBm)	21.53	21.51	21.55	21.35	21.35	21.37	21.66	21.66	21.66
EIRP(Watts)	0.1422	0.1416	0.1429	0.1365	0.1365	0.1371	0.1466	0.1466	0.1466

LTE Band 4 (GT - LC = -1.10 dB) QPSK									
Bandwidth	10M			15M			20M		
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)	22.57	22.59	22.63	22.63	22.64	22.69	22.51	22.73	22.49
Conducted Power (Watts)	0.1807	0.1816	0.1832	0.1832	0.1837	0.1858	0.1782	0.1875	0.1774
EIRP(dBm)	21.47	21.49	21.53	21.53	21.54	21.59	21.41	21.63	21.39
EIRP(Watts)	0.1403	0.1409	0.1422	0.1422	0.1426	0.1442	0.1384	0.1455	0.1377

LTE Band 4 (GT - LC = -1.10 dB) 16QAM									
Bandwidth	1.4M			3M			5M		
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)	21.82	21.79	21.95	21.68	21.76	21.80	22.02	21.99	21.95
Conducted Power (Watts)	0.1521	0.1510	0.1567	0.1472	0.1500	0.1514	0.1592	0.1581	0.1567
EIRP(dBm)	20.72	20.69	20.85	20.58	20.66	20.70	20.92	20.89	20.85
EIRP(Watts)	0.1180	0.1172	0.1216	0.1143	0.1164	0.1175	0.1236	0.1227	0.1216

LTE Band 4 (GT - LC = -1.10 dB) 16QAM									
Bandwidth	10M			15M			20M		
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)	21.89	21.81	21.94	21.93	21.99	21.88	22.03	21.93	22.01
Conducted Power (Watts)	0.1545	0.1517	0.1563	0.1560	0.1581	0.1542	0.1596	0.1560	0.1589
EIRP(dBm)	20.79	20.71	20.84	20.83	20.89	20.78	20.93	20.83	20.91
EIRP(Watts)	0.1199	0.1178	0.1213	0.1211	0.1227	0.1197	0.1239	0.1211	0.1233

LTE Band 4 (GT - LC = -1.10 dB) 64QAM									
Bandwidth	1.4M			3M			5M		
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)	20.88	20.80	20.86	20.66	20.74	20.71	20.95	21.01	21.02
Conducted Power (Watts)	0.1225	0.1202	0.1219	0.1164	0.1186	0.1178	0.1245	0.1262	0.1265
EIRP(dBm)	19.78	19.70	19.76	19.56	19.64	19.61	19.85	19.91	19.92
EIRP(Watts)	0.0951	0.0933	0.0946	0.0904	0.0920	0.0914	0.0966	0.0979	0.0982

LTE Band 4 (GT - LC = -1.10 dB) 64QAM									
Bandwidth	10M			15M			20M		
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)	20.73	20.89	20.86	20.82	20.90	20.86	20.85	20.96	21.00
Conducted Power (Watts)	0.1183	0.1227	0.1219	0.1208	0.1230	0.1219	0.1216	0.1247	0.1259
EIRP(dBm)	19.63	19.79	19.76	19.72	19.80	19.76	19.75	19.86	19.90
EIRP(Watts)	0.0918	0.0953	0.0946	0.0938	0.0955	0.0946	0.0944	0.0968	0.0977

LTE Band 5 (GT - LC = -5.60 dB) QPSK									
Bandwidth	1.4M			3M			5M		
Channel	20407	20525	20643	20415	20525	20635	20425	20525	20625
	(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)	24.27	24.30	24.27	24.18	24.20	24.18	24.27	24.32	24.33
Conducted Power (Watts)	0.2673	0.2692	0.2673	0.2618	0.2630	0.2618	0.2673	0.2704	0.2710
ERP(dBm)	16.52	16.55	16.52	16.43	16.45	16.43	16.52	16.57	16.58
ERP(Watts)	0.0449	0.0452	0.0449	0.0440	0.0442	0.0440	0.0449	0.0454	0.0455

LTE Band 5 (GT - LC = -5.60 dB) QPSK			
Bandwidth	10M		
Channel	20450	20525	20600
	(Low)	(Mid)	(High)
Frequency (MHz)	829	836.5	844
Conducted Power (dBm)	24.19	24.35	24.22
Conducted Power (Watts)	0.2624	0.2723	0.2642
ERP(dBm)	16.44	16.60	16.47
ERP(Watts)	0.0441	0.0457	0.0444

LTE Band 5 (GT - LC = -5.60 dB) 16QAM									
Bandwidth	1.4M			3M			5M		
Channel	20407	20525	20643	20415	20525	20635	20425	20525	20625
	(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)	23.36	23.36	23.36	23.34	23.32	23.33	23.38	23.47	23.52
Conducted Power (Watts)	0.2168	0.2168	0.2168	0.2158	0.2148	0.2153	0.2178	0.2223	0.2249
ERP(dBm)	15.61	15.61	15.61	15.59	15.57	15.58	15.63	15.72	15.77
ERP(Watts)	0.0364	0.0364	0.0364	0.0362	0.0361	0.0361	0.0366	0.0373	0.0378

LTE Band 5 (GT - LC = -5.60 dB) 16QAM			
Bandwidth	10M		
Channel	20450	20525	20600
	(Low)	(Mid)	(High)
Frequency (MHz)	829	836.5	844
Conducted Power (dBm)	23.47	23.39	23.39
Conducted Power (Watts)	0.2223	0.2183	0.2183
ERP(dBm)	15.72	15.64	15.64
ERP(Watts)	0.0373	0.0366	0.0366

LTE Band 5 (GT - LC = -5.60 dB) 64QAM									
Bandwidth	1.4M			3M			5M		
Channel	20407	20525	20643	20415	20525	20635	20425	20525	20625
	(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)	22.26	22.35	22.39	22.31	22.17	22.33	22.36	22.38	22.41
Conducted Power (Watts)	0.1683	0.1718	0.1734	0.1702	0.1648	0.1710	0.1722	0.1730	0.1742
ERP(dBm)	14.51	14.60	14.64	14.56	14.42	14.58	14.61	14.63	14.66
ERP(Watts)	0.0282	0.0288	0.0291	0.0286	0.0277	0.0287	0.0289	0.0290	0.0292

LTE Band 5 (GT - LC = -5.60 dB) 64QAM			
Bandwidth	10M		
Channel	20450	20525	20600
	(Low)	(Mid)	(High)
Frequency (MHz)	829	836.5	844
Conducted Power (dBm)	22.43	22.42	22.26
Conducted Power (Watts)	0.1750	0.1746	0.1683
ERP(dBm)	14.68	14.67	14.51
ERP(Watts)	0.0294	0.0293	0.0282

LTE Band 7 (GT - LC = -0.30 dB) QPSK			
Bandwidth	5M		
Channel	20775	21100	21425
	(Low)	(Mid)	(High)
Frequency (MHz)	2502.5	2535	2567.5
Conducted Power (dBm)	22.93	22.81	22.99
Conducted Power (Watts)	0.1963	0.1910	0.1991
EIRP(dBm)	22.63	22.51	22.69
EIRP(Watts)	0.1832	0.1782	0.1858

LTE Band 7 (GT - LC = -0.30 dB) QPSK									
Bandwidth	10M			15M			20M		
Channel	20800	21100	21400	20825	21100	21375	20850	21100	21350
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency (MHz)	2505	2535	2565	2507.5	2535	2562.5	2510	2535	2560
Conducted Power (dBm)	22.79	22.70	22.72	22.89	22.80	22.79	22.78	22.76	22.74
Conducted Power (Watts)	0.1901	0.1862	0.1871	0.1945	0.1905	0.1901	0.1897	0.1888	0.1879
EIRP(dBm)	22.49	22.40	22.42	22.59	22.50	22.49	22.48	22.46	22.44
EIRP(Watts)	0.1774	0.1738	0.1746	0.1816	0.1778	0.1774	0.1770	0.1762	0.1754

LTE Band 7 (GT - LC = -0.30 dB) 16QAM			
Bandwidth	5M		
Channel	20775	21100	21425
	(Low)	(Mid)	(High)
Frequency (MHz)	2502.5	2535	2567.5
Conducted Power (dBm)	22.13	21.99	22.12
Conducted Power (Watts)	0.1633	0.1581	0.1629
EIRP(dBm)	21.83	21.69	21.82
EIRP(Watts)	0.1524	0.1476	0.1521

LTE Band 7 (GT - LC = -0.30 dB) 16QAM									
Bandwidth	10M			15M			20M		
Channel	20800	21100	21400	20825	21100	21375	20850	21100	21350
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency (MHz)	2505	2535	2565	2507.5	2535	2562.5	2510	2535	2560
Conducted Power (dBm)	22.01	21.97	21.90	22.09	22.03	22.06	22.07	21.88	22.03
Conducted Power (Watts)	0.1589	0.1574	0.1549	0.1618	0.1596	0.1607	0.1611	0.1542	0.1596
EIRP(dBm)	21.71	21.67	21.60	21.79	21.73	21.76	21.77	21.58	21.73
EIRP(Watts)	0.1483	0.1469	0.1445	0.1510	0.1489	0.1500	0.1503	0.1439	0.1489

LTE Band 7 (GT - LC = -0.30 dB) 64QAM			
Bandwidth	5M		
Channel	20775	21100	21425
	(Low)	(Mid)	(High)
Frequency (MHz)	2502.5	2535	2567.5
Conducted Power (dBm)	21.13	21.00	20.71
Conducted Power (Watts)	0.1297	0.1259	0.1178
EIRP(dBm)	20.83	20.70	20.41
EIRP(Watts)	0.1211	0.1175	0.1099

LTE Band 7 (GT - LC = -0.30 dB) 64QAM									
Bandwidth	10M			15M			20M		
Channel	20800	21100	21400	20825	21100	21375	20850	21100	21350
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency (MHz)	2505	2535	2565	2507.5	2535	2562.5	2510	2535	2560
Conducted Power (dBm)	21.09	21.01	20.86	21.03	21.01	21.01	21.00	20.96	20.96
Conducted Power (Watts)	0.1285	0.1262	0.1219	0.1268	0.1262	0.1262	0.1259	0.1247	0.1247
EIRP(dBm)	20.79	20.71	20.56	20.73	20.71	20.71	20.70	20.66	20.66
EIRP(Watts)	0.1199	0.1178	0.1138	0.1183	0.1178	0.1178	0.1175	0.1164	0.1164

LTE Band 41 (G_T - L_C = -0.30 dB) QPSK									
Bandwidth	5M			10M			15M		
Channel	40065	40640	41215	40090	40640	41190	40115	40640	41165
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency (MHz)	2537.5	2595	2652.5	2540	2595	2650	2542.5	2595	2647.5
Conducted Power (dBm)	23.84	23.72	23.98	23.89	23.63	23.85	23.95	23.77	23.97
Conducted Power (Watts)	0.2421	0.2355	0.2500	0.2449	0.2307	0.2427	0.2483	0.2382	0.2495
EIRP(dBm)	23.54	23.42	23.68	23.59	23.33	23.55	23.65	23.47	23.67
EIRP(Watts)	0.2259	0.2198	0.2333	0.2286	0.2153	0.2265	0.2317	0.2223	0.2328

LTE Band 41 (G_T - L_C = -0.30 dB) QPSK			
Bandwidth	20M		
Channel	40140	40640	41140
	(Low)	(Mid)	(High)
Frequency (MHz)	2545	2595	2645
Conducted Power (dBm)	23.99	23.78	23.96
Conducted Power (Watts)	0.2506	0.2388	0.2489
EIRP(dBm)	23.69	23.48	23.66
EIRP(Watts)	0.2339	0.2228	0.2323

LTE Band 41 (G_T - L_C = -0.30 dB) 16QAM									
Bandwidth	5M			10M			15M		
Channel	40065	40640	41215	40090	40640	41190	40115	40640	41165
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency (MHz)	2537.5	2595	2652.5	2540	2595	2650	2542.5	2595	2647.5
Conducted Power (dBm)	22.86	22.75	23.05	22.91	22.66	22.89	22.95	22.80	23.00
Conducted Power (Watts)	0.1932	0.1884	0.2018	0.1954	0.1845	0.1945	0.1972	0.1905	0.1995
EIRP(dBm)	22.56	22.45	22.75	22.61	22.36	22.59	22.65	22.50	22.70
EIRP(Watts)	0.1803	0.1758	0.1884	0.1824	0.1722	0.1816	0.1841	0.1778	0.1862

LTE Band 41 (G_T - L_C = -0.30 dB) 16QAM			
Bandwidth	20M		
Channel	40140	40640	41140
	(Low)	(Mid)	(High)
Frequency (MHz)	2545	2595	2645
Conducted Power (dBm)	22.98	22.95	23.07
Conducted Power (Watts)	0.1986	0.1972	0.2028
EIRP(dBm)	22.68	22.65	22.77
EIRP(Watts)	0.1854	0.1841	0.1892

LTE Band 41 (G_T - L_C = -0.30 dB) 64QAM									
Bandwidth	5M			10M			15M		
Channel	40065	40640	41215	40090	40640	41190	40115	40640	41165
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency (MHz)	2537.5	2595	2652.5	2540	2595	2650	2542.5	2595	2647.5
Conducted Power (dBm)	21.70	21.70	21.86	21.73	21.41	21.64	21.78	21.60	21.77
Conducted Power (Watts)	0.1479	0.1479	0.1535	0.1489	0.1384	0.1459	0.1507	0.1445	0.1503
EIRP(dBm)	21.40	21.40	21.56	21.43	21.11	21.34	21.48	21.30	21.47
EIRP(Watts)	0.1380	0.1380	0.1432	0.1390	0.1291	0.1361	0.1406	0.1349	0.1403

LTE Band 41 (G_T - L_C = -0.30 dB) 64QAM			
Bandwidth	20M		
Channel	40140	40640	41140
	(Low)	(Mid)	(High)
Frequency (MHz)	2545	2595	2645
Conducted Power (dBm)	21.78	21.75	21.82
Conducted Power (Watts)	0.1507	0.1496	0.1521
EIRP(dBm)	21.48	21.45	21.52
EIRP(Watts)	0.1406	0.1396	0.1419

CA EIRP

LTE Band 7 CA (GT - LC = -0.30 dB) QPSK			
Bandwidth	20M+20M		
Channel PCC	20850	21001	21152
	(Low)	(Mid)	(High)
Channel SCC	21048	21199	21350
	(Low)	(Mid)	(High)
Conducted Power (dBm)	22.74	22.76	22.75
Conducted Power (Watts)	0.1879	0.1888	0.1884
EIRP(dBm)	22.44	22.46	22.45
EIRP(Watts)	0.1754	0.1762	0.1758

LTE Band 7 CA (GT - LC = -0.30 dB) 16QAM			
Bandwidth	20M+20M		
Channel PCC	20850	21001	21152
	(Low)	(Mid)	(High)
Channel SCC	21048	21199	21350
	(Low)	(Mid)	(High)
Conducted Power (dBm)	22.01	22.03	21.98
Conducted Power (Watts)	0.1589	0.1596	0.1578
EIRP(dBm)	21.71	21.73	21.68
EIRP(Watts)	0.1483	0.1489	0.1472

LTE Band 7 CA (GT - LC = -0.30 dB) 64QAM			
Bandwidth	20M+20M		
Channel PCC	20850	21001	21152
	(Low)	(Mid)	(High)
Channel SCC	21048	21199	21350
	(Low)	(Mid)	(High)
Conducted Power (dBm)	21.09	20.92	20.98
Conducted Power (Watts)	0.1285	0.1236	0.1253
EIRP(dBm)	20.79	20.62	20.68
EIRP(Watts)	0.1199	0.1153	0.1169

LTE Band 38 CA (GT - LC = -0.30 dB) QPSK			
Bandwidth	20M+20M		
Channel PCC	37850	37901	37952
	(Low)	(Mid)	(High)
Channel SCC	38048	38099	38150
	(Low)	(Mid)	(High)
Conducted Power (dBm)	23.28	23.36	23.35
Conducted Power (Watts)	0.2128	0.2168	0.2163
EIRP(dBm)	22.98	23.06	23.05
EIRP(Watts)	0.1986	0.2023	0.2018

LTE Band 38 CA (GT - LC = -0.30 dB) 16QAM			
Bandwidth	20M+20M		
Channel PCC	37850	37901	37952
	(Low)	(Mid)	(High)
Channel SCC	38048	38099	38150
	(Low)	(Mid)	(High)
Conducted Power (dBm)	22.45	22.39	22.46
Conducted Power (Watts)	0.1758	0.1734	0.1762
EIRP(dBm)	22.15	22.09	22.16
EIRP(Watts)	0.1641	0.1618	0.1644

LTE Band 38 CA (GT - LC = -0.30 dB) 64QAM			
Bandwidth	20M+20M		
Channel PCC	37850	37901	37952
	(Low)	(Mid)	(High)
Channel SCC	38048	38099	38150
	(Low)	(Mid)	(High)
Conducted Power (dBm)	21.23	21	21.03
Conducted Power (Watts)	0.1327	0.1259	0.1268
EIRP(dBm)	20.93	20.70	20.73
EIRP(Watts)	0.1239	0.1175	0.1183

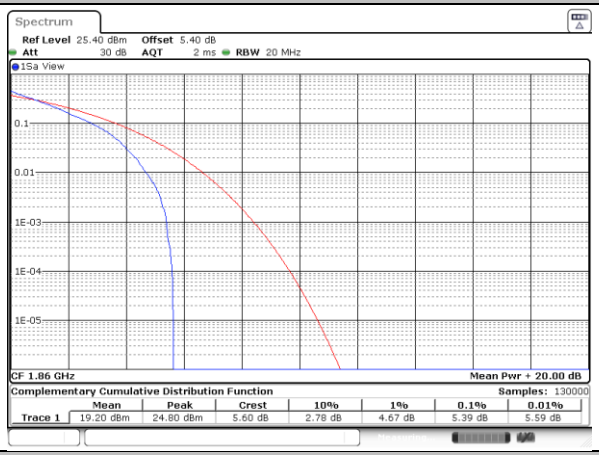
LTE Band 2

Peak-to-Average Ratio

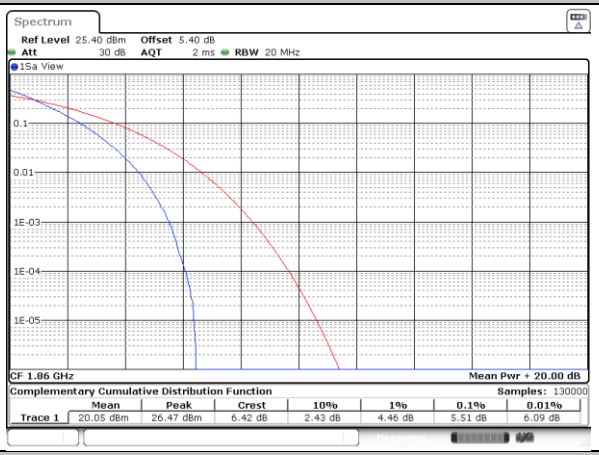
Mode	LTE Band 2 / 20MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	5.39	5.51	6.49	6.35	PASS
Middle CH	5.22	5.57	6.03	6.41	
Highest CH	5.36	5.33	6.52	6.23	
Mode	LTE Band 2 / 20MHz				
Mod.	64QAM				Limit: 13dB
RB Size	1RB	Full RB			Result
Lowest CH	6.67	6.61			PASS
Middle CH	6.72	6.67			
Highest CH	6.96	6.64			

LTE Band 2 / 20MHz / QPSK

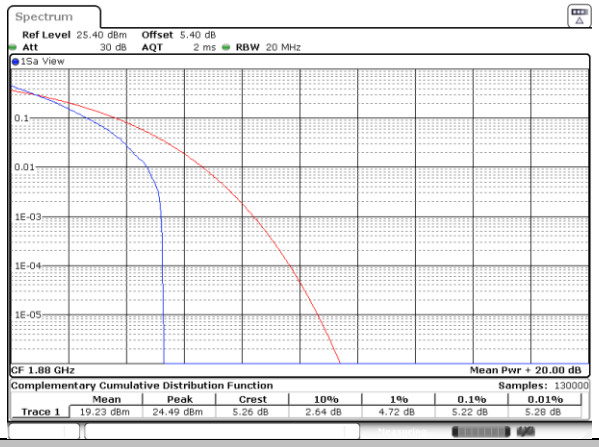
Lowest Channel / 1RB



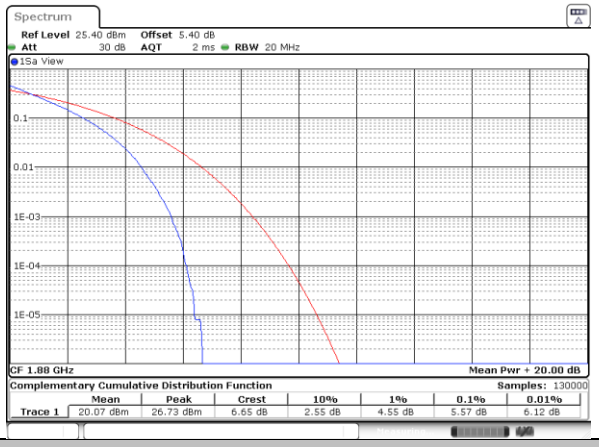
Lowest Channel / Full RB



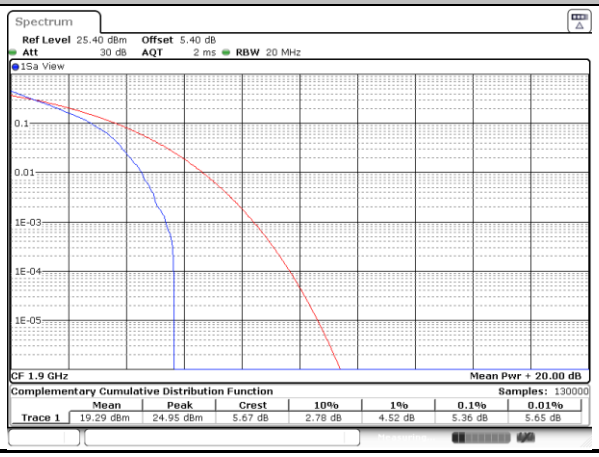
Middle Channel / 1RB



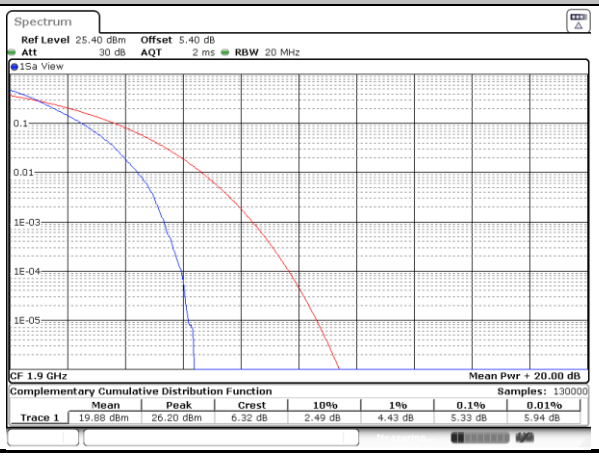
Middle Channel / Full RB



Highest Channel / 1RB

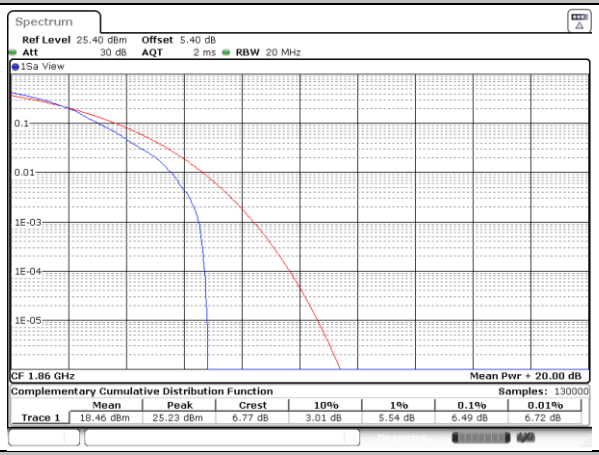


Highest Channel / Full RB

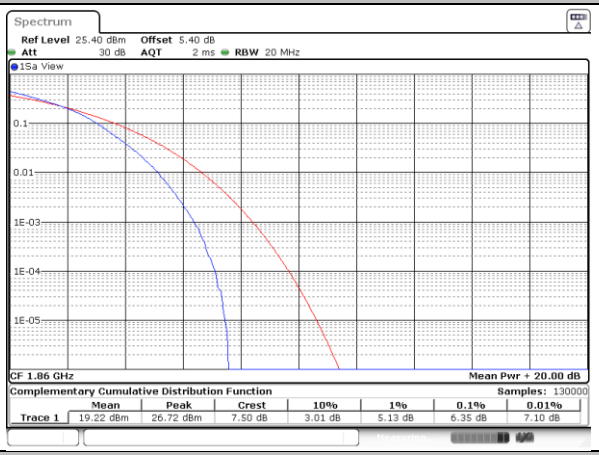


LTE Band 2 / 20MHz / 16QAM

Lowest Channel / 1RB

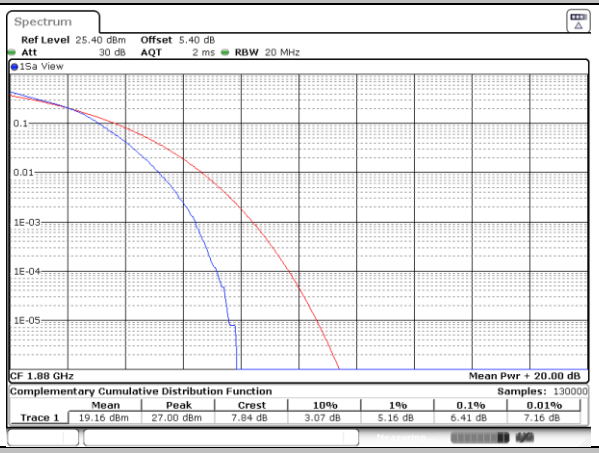


Lowest Channel / Full RB



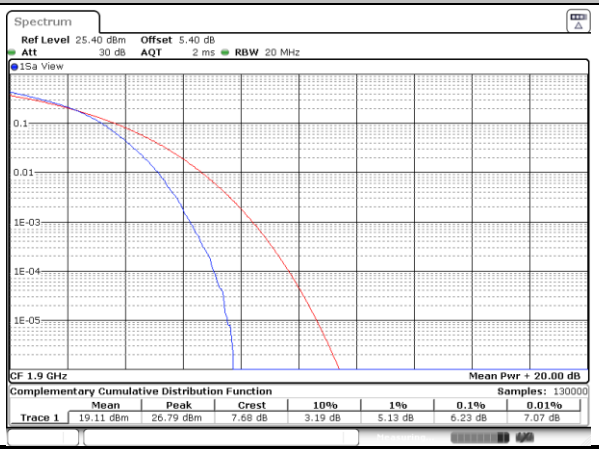
Middle Channel / 1RB

Middle Channel / Full RB



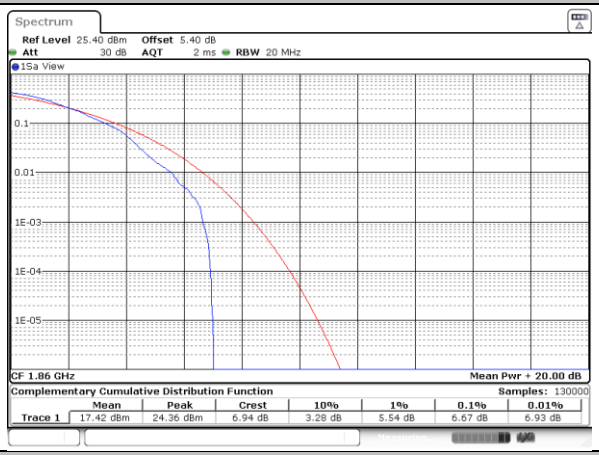
Highest Channel / 1RB

Highest Channel / Full RB

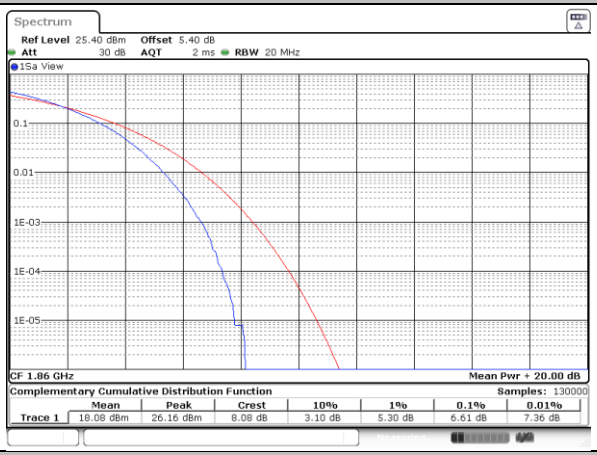


LTE Band 2 / 20MHz / 64QAM

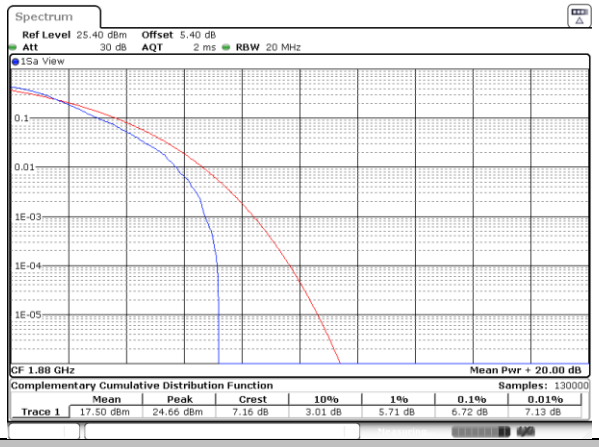
Lowest Channel / 1RB



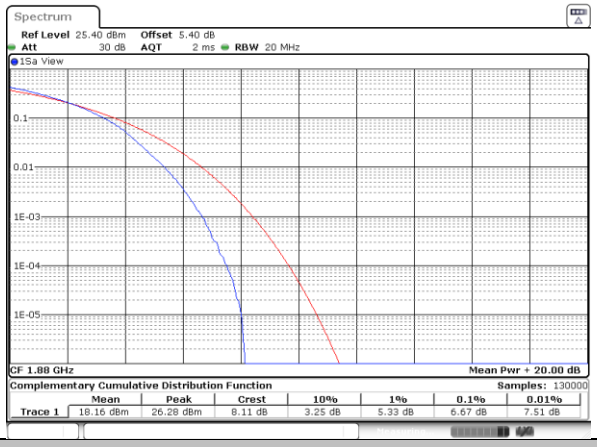
Lowest Channel / Full RB



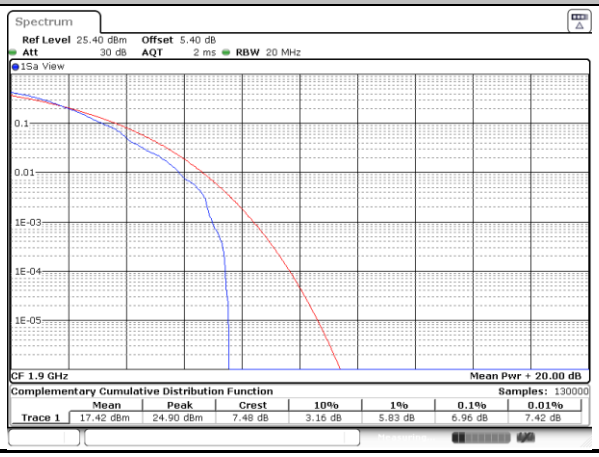
Middle Channel / 1RB



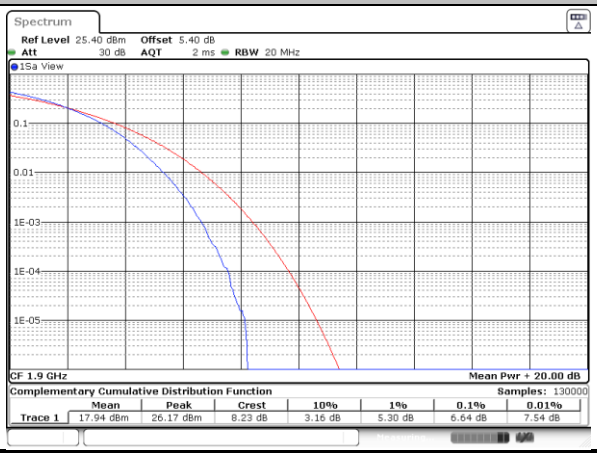
Middle Channel / Full RB



Highest Channel / 1RB



Highest Channel / Full RB

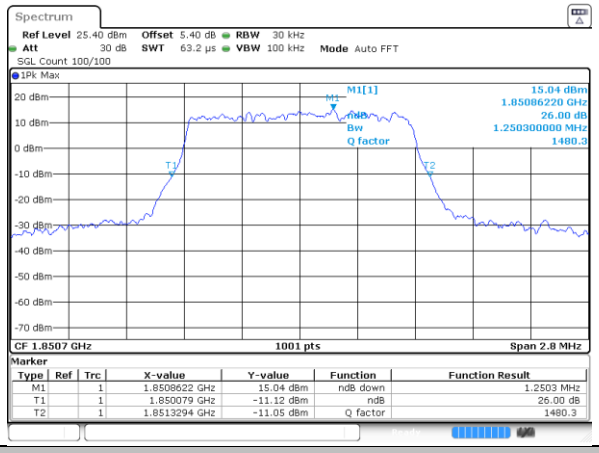


26dB Bandwidth

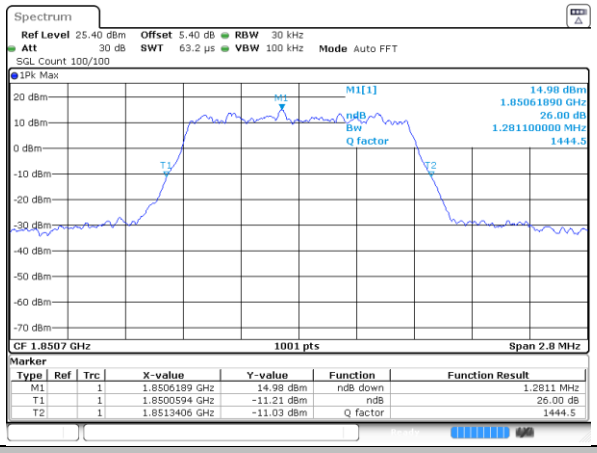
Mode	LTE Band 2 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	1.250	1.281	2.937	2.943	4.905	4.865	9.69	9.63	14.326	14.296	20.26	20.30
Middle CH	1.264	1.264	2.937	2.943	4.875	4.875	9.77	9.75	14.565	14.476	20.30	20.22
Highest CH	1.262	1.278	2.937	2.973	4.845	4.835	9.67	9.87	14.326	14.176	20.18	20.14
Mode	LTE Band 2 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	1.231		2.955		4.855		9.79		14.625		20.18	
Middle CH	1.245		2.937		4.875		9.79		14.416		20.18	
Highest CH	1.264		2.997		4.805		9.89		14.176		20.10	

LTE Band 2

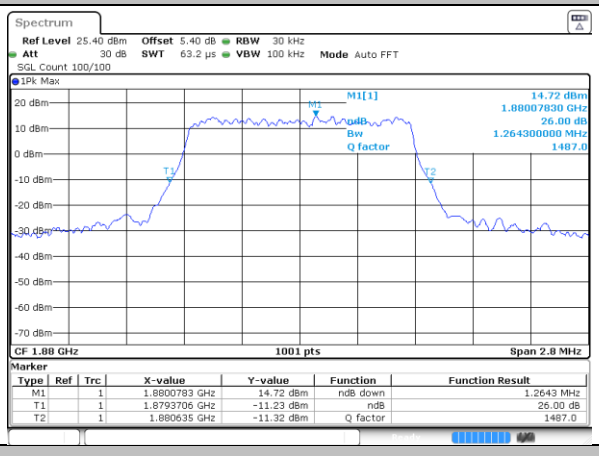
Lowest Channel / 1.4MHz / QPSK



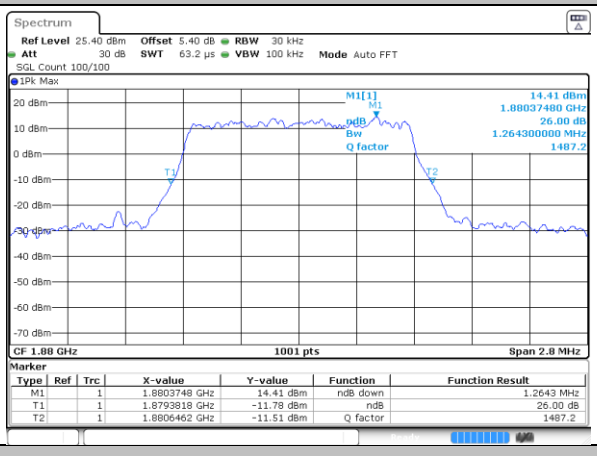
Lowest Channel / 1.4MHz / 16QAM



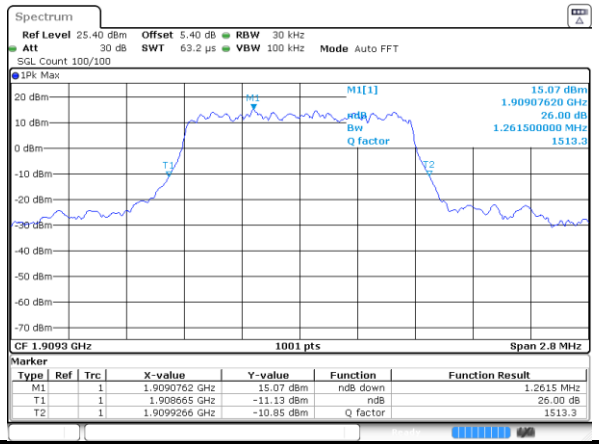
Middle Channel / 1.4MHz / QPSK



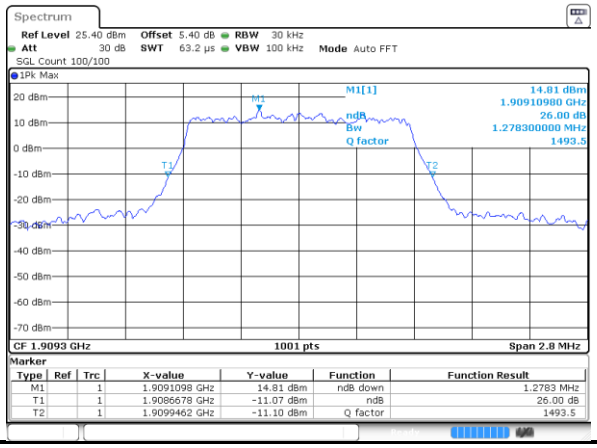
Middle Channel / 1.4MHz / 16QAM



Highest Channel / 1.4MHz / QPSK

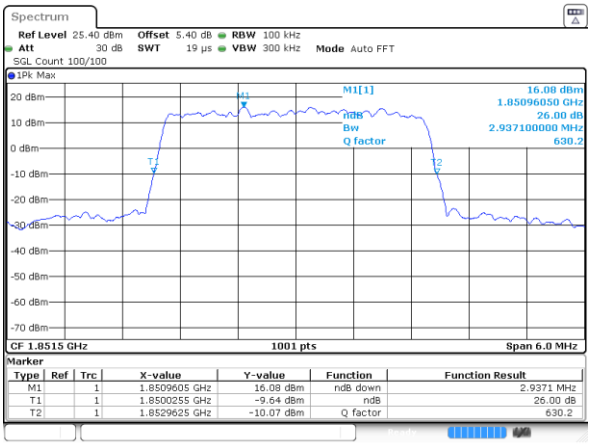


Highest Channel / 1.4MHz / 16QAM

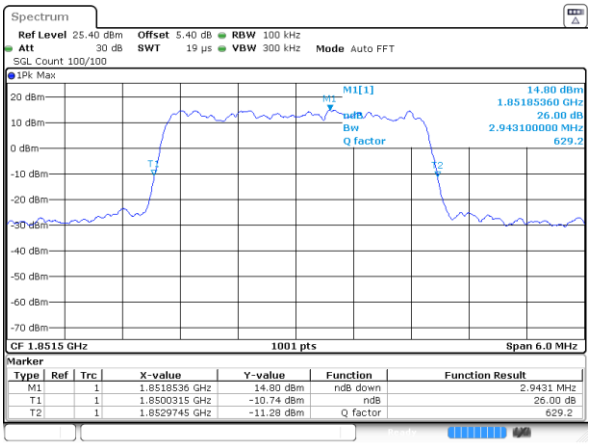


LTE Band 2

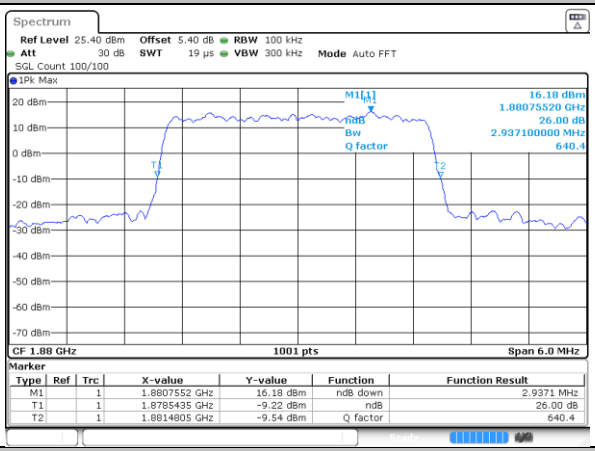
Lowest Channel / 3MHz / QPSK



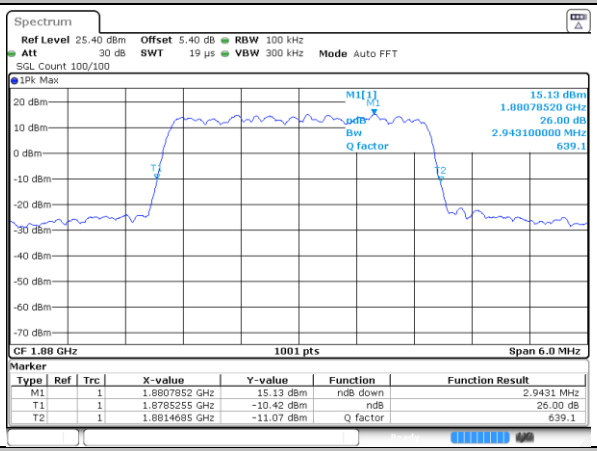
Lowest Channel / 3MHz / 16QAM



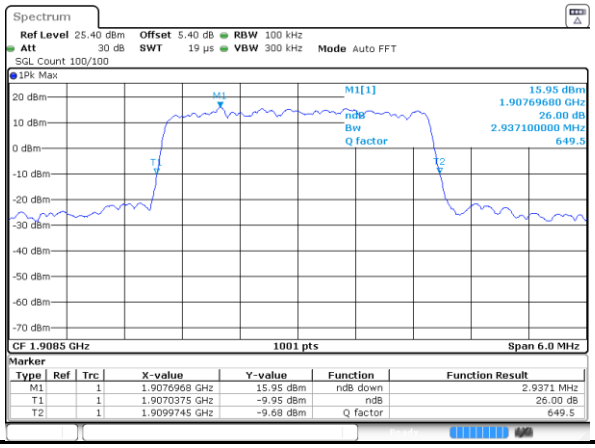
Middle Channel / 3MHz / QPSK



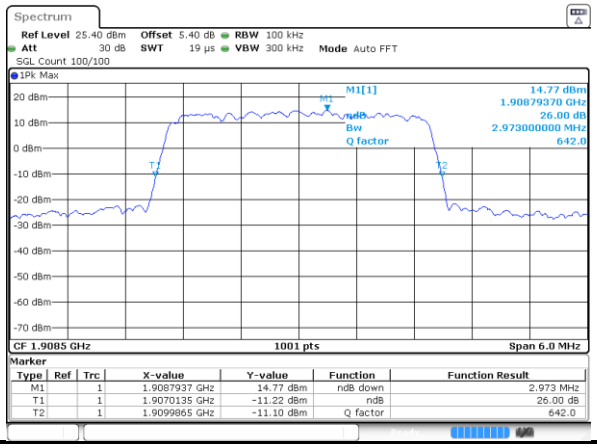
Middle Channel / 3MHz / 16QAM



Highest Channel / 3MHz / QPSK

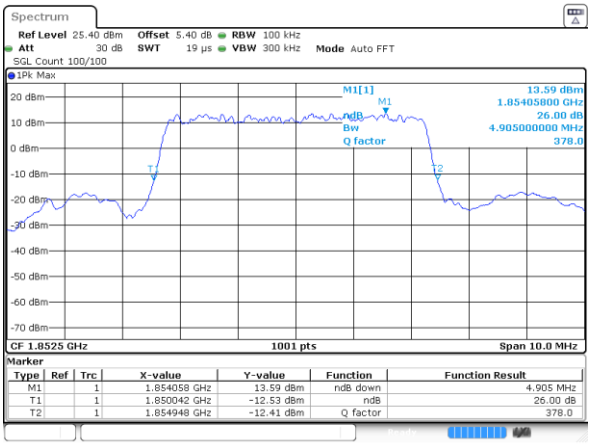


Highest Channel / 3MHz / 16QAM

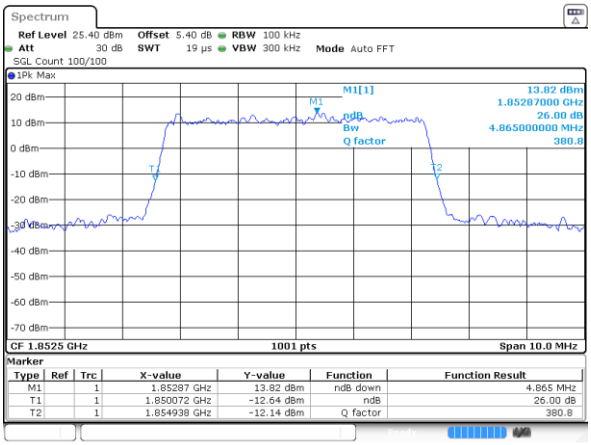


LTE Band 2

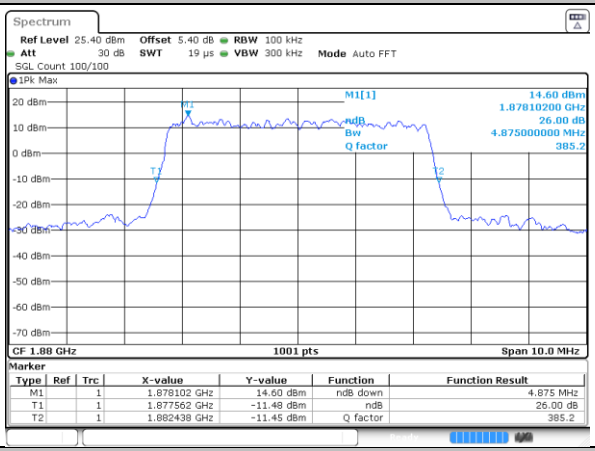
Lowest Channel / 5MHz / QPSK



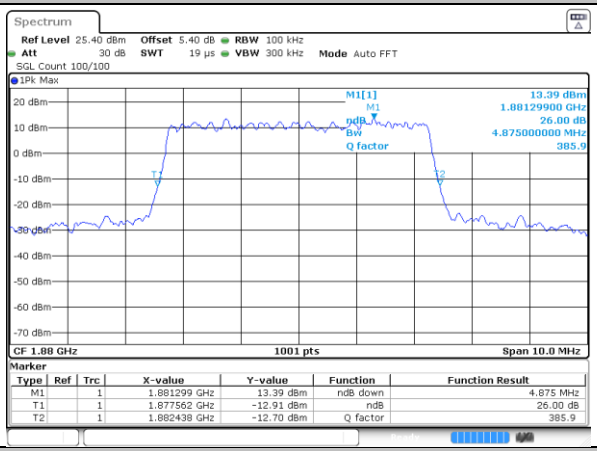
Lowest Channel / 5MHz / 16QAM



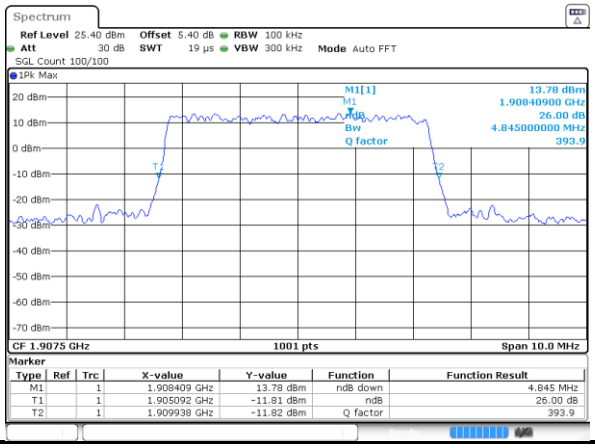
Middle Channel / 5MHz / QPSK



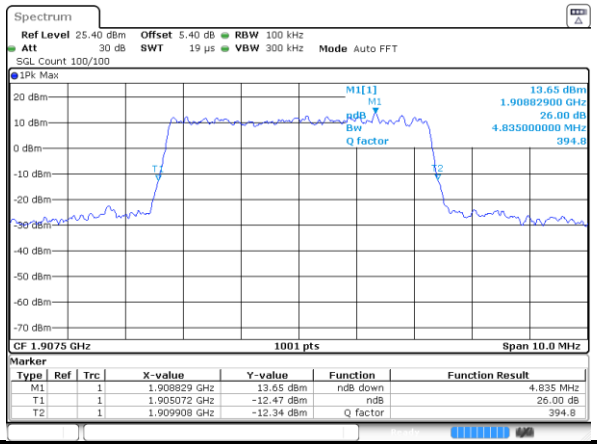
Middle Channel / 5MHz / 16QAM



Highest Channel / 5MHz / QPSK

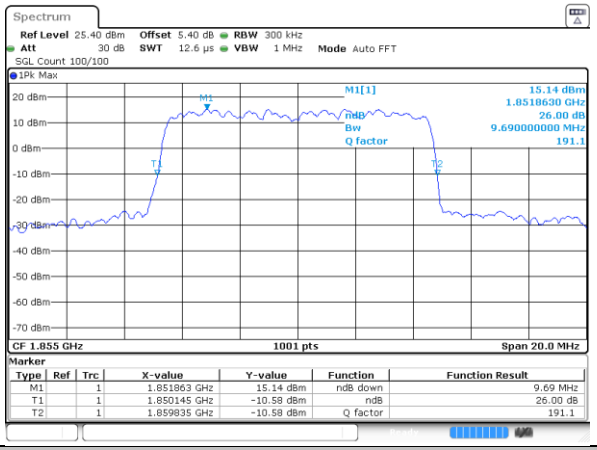


Highest Channel / 5MHz / 16QAM

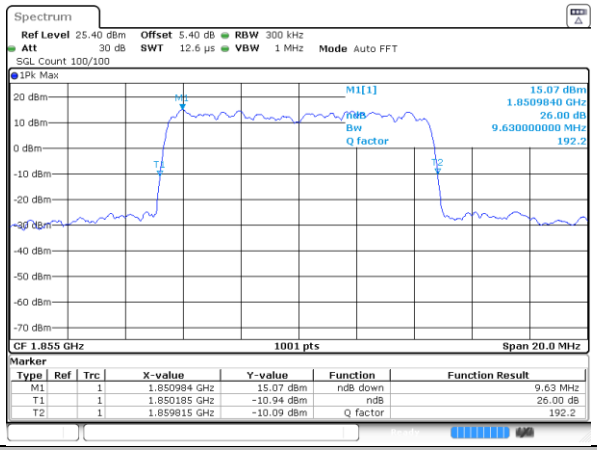


LTE Band 2

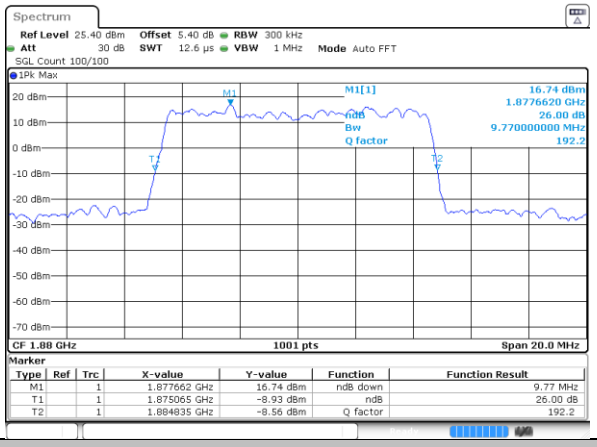
Lowest Channel / 10MHz / QPSK



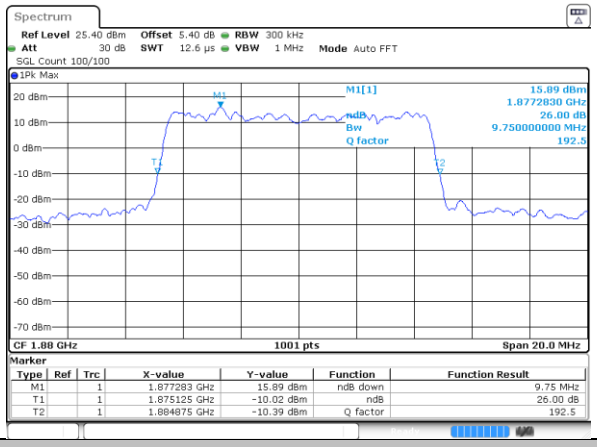
Lowest Channel / 10MHz / 16QAM



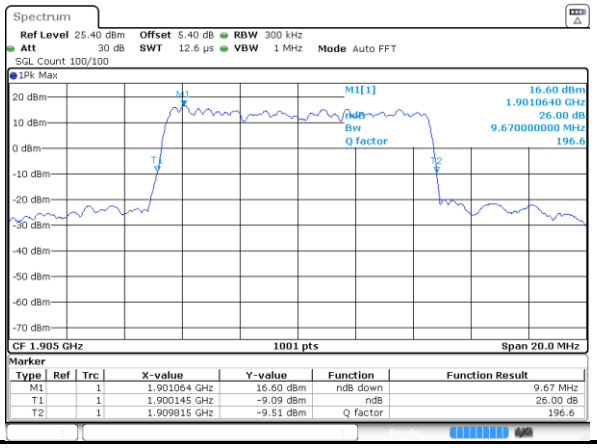
Middle Channel / 10MHz / QPSK



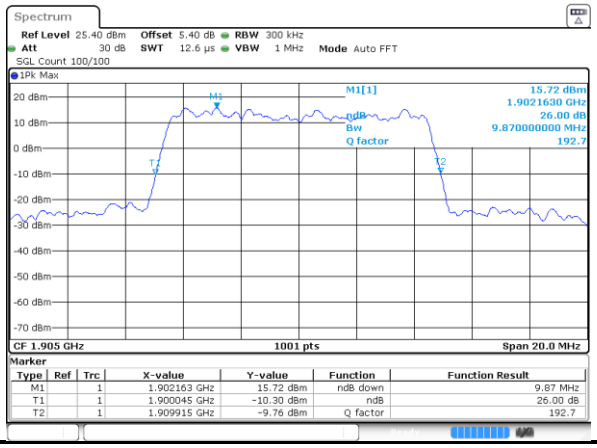
Middle Channel / 10MHz / 16QAM



Highest Channel / 10MHz / QPSK

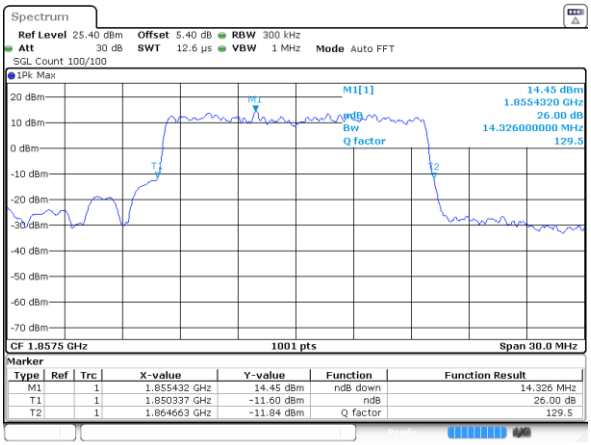


Highest Channel / 10MHz / 16QAM

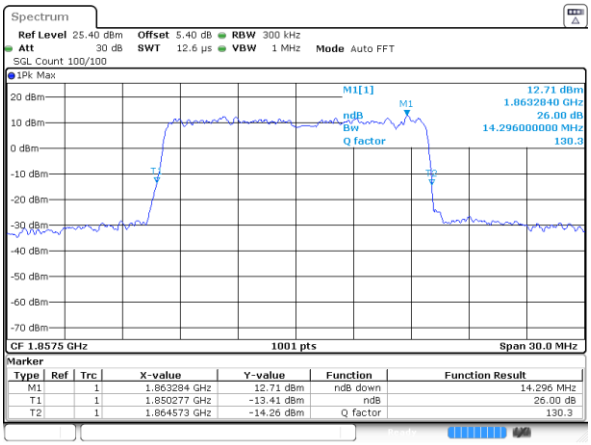


LTE Band 2

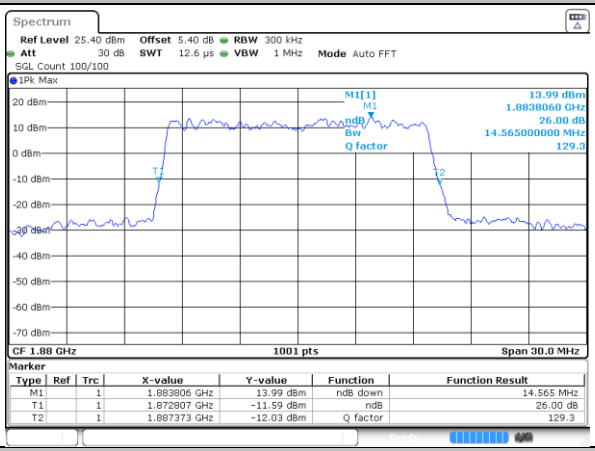
Lowest Channel / 15MHz / QPSK



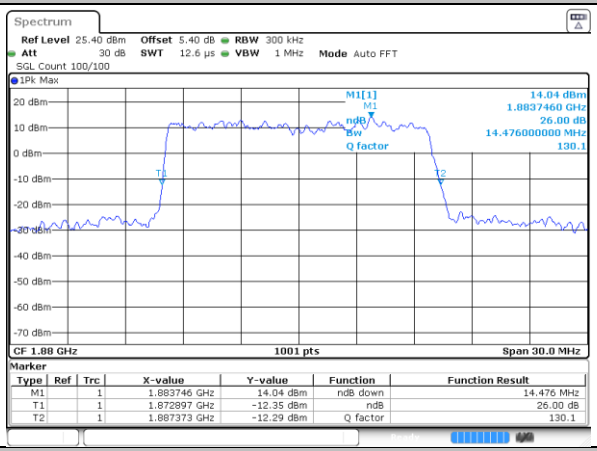
Lowest Channel / 15MHz / 16QAM



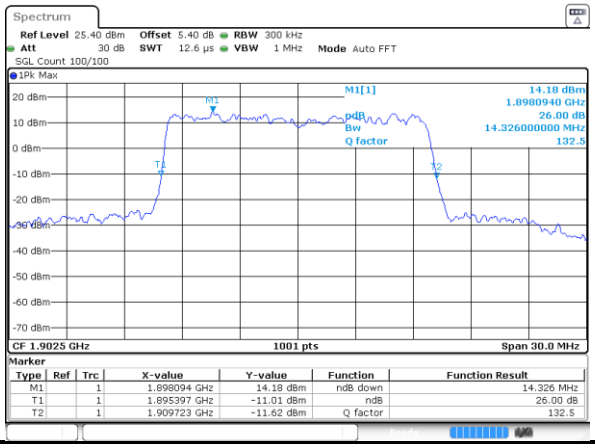
Middle Channel / 15MHz / QPSK



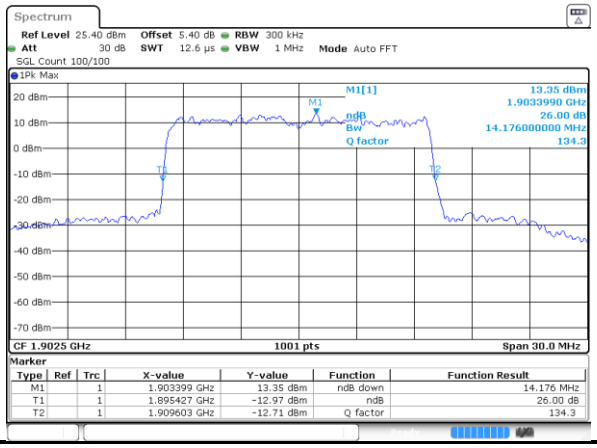
Middle Channel / 15MHz / 16QAM



Highest Channel / 15MHz / QPSK

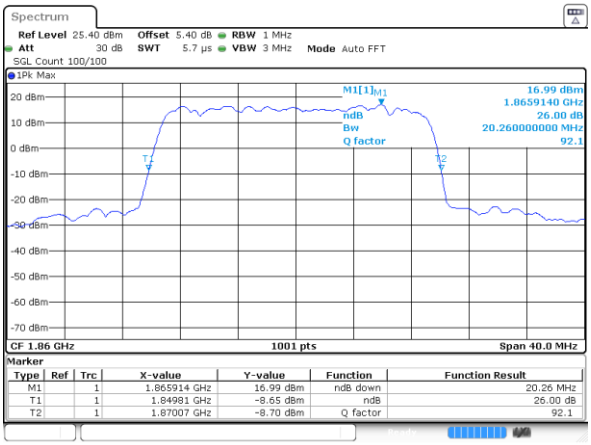


Highest Channel / 15MHz / 16QAM

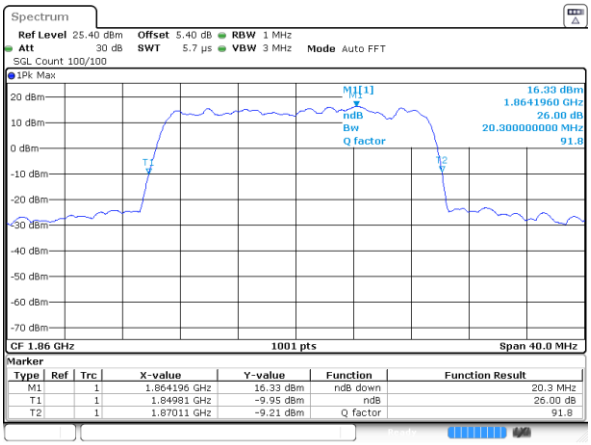


LTE Band 2

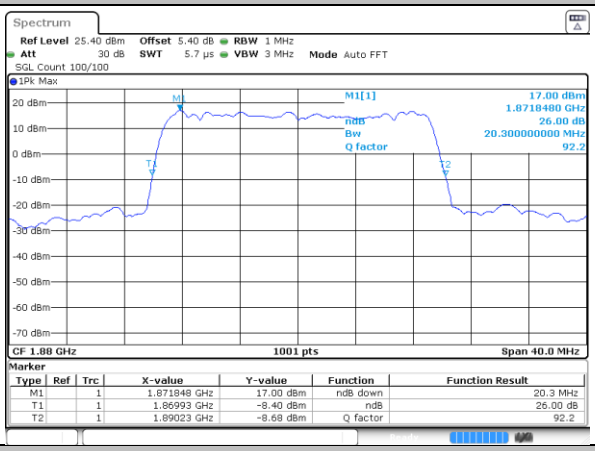
Lowest Channel / 20MHz / QPSK



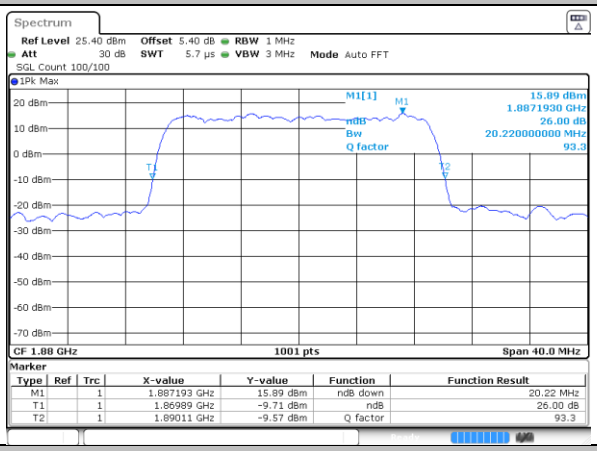
Lowest Channel / 20MHz / 16QAM



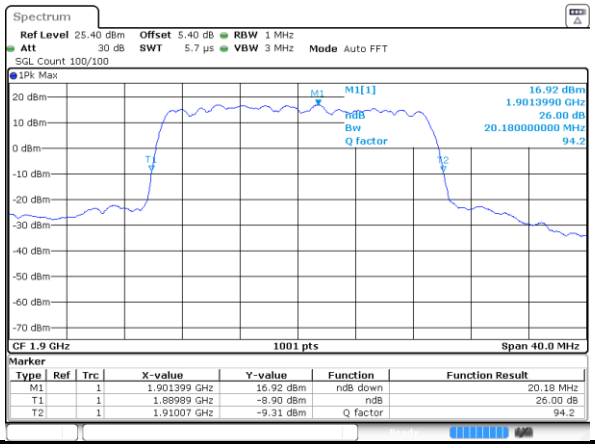
Middle Channel / 20MHz / QPSK



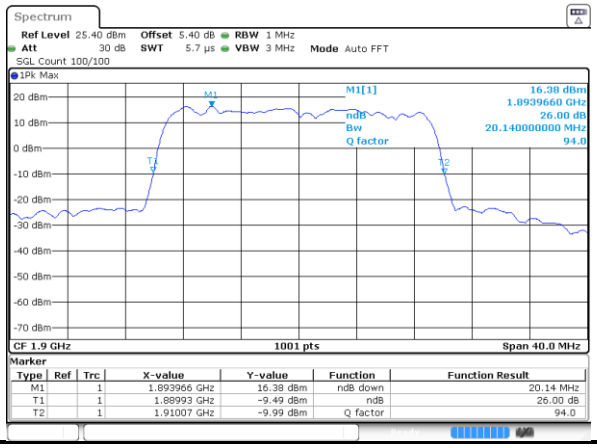
Middle Channel / 20MHz / 16QAM



Highest Channel / 20MHz / QPSK

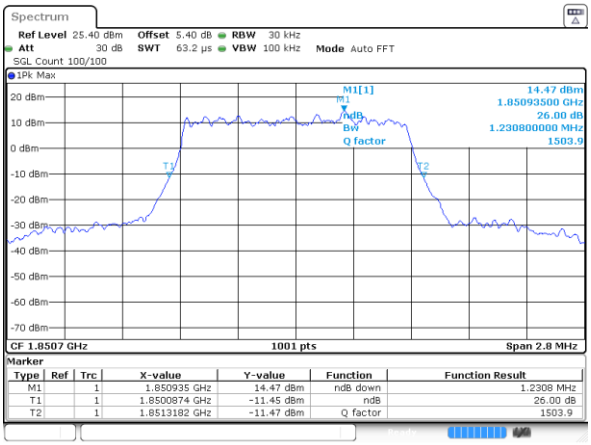


Highest Channel / 20MHz / 16QAM

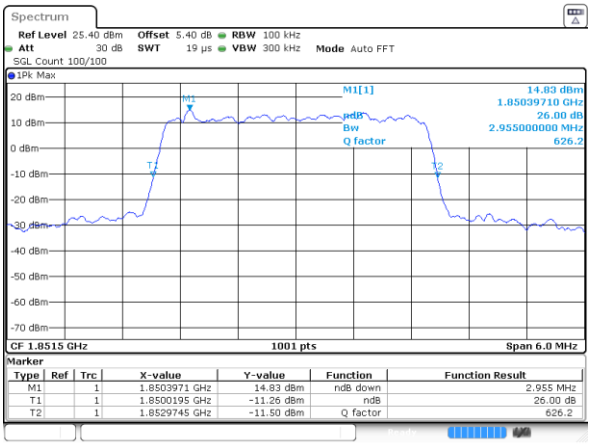


LTE Band 2

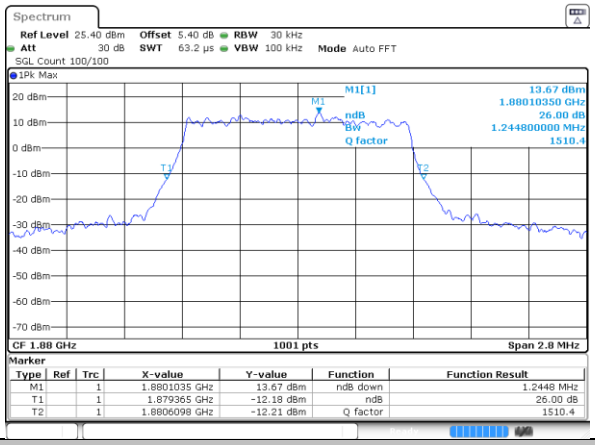
Lowest Channel / 1.4MHz / 64QAM



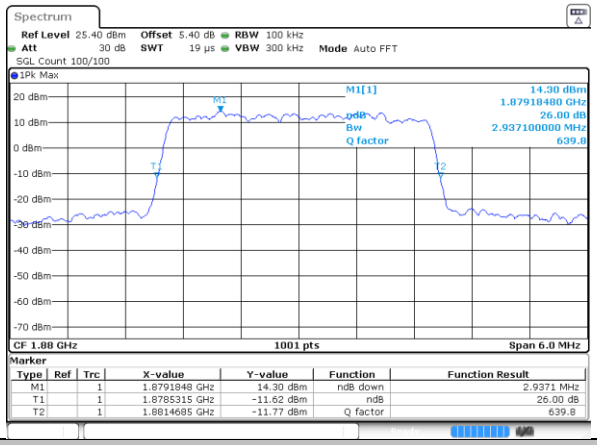
Lowest Channel / 3MHz / 64QAM



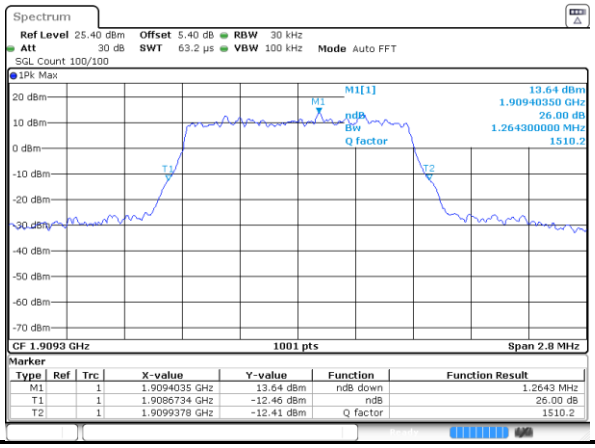
Middle Channel / 1.4MHz / 64QAM



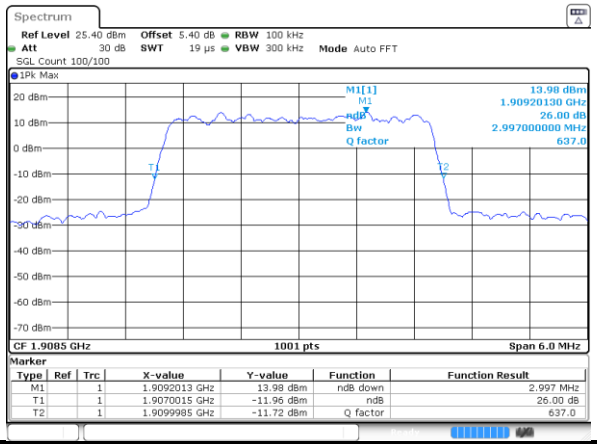
Middle Channel / 3MHz / 64QAM



Highest Channel / 1.4MHz / 64QAM

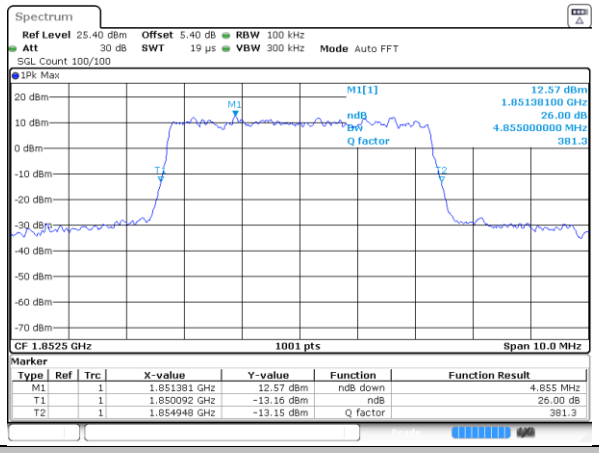


Highest Channel / 3MHz / 64QAM

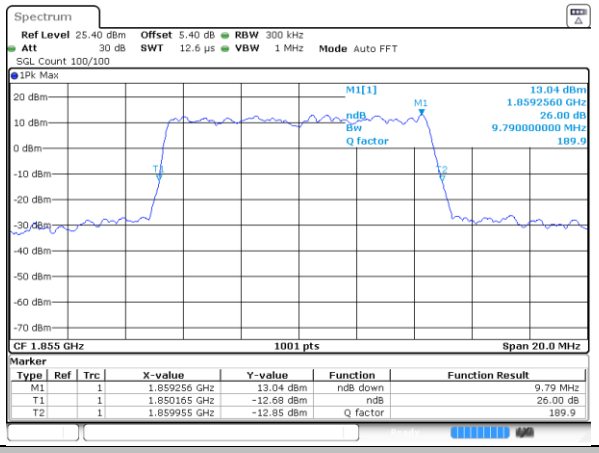


LTE Band 2

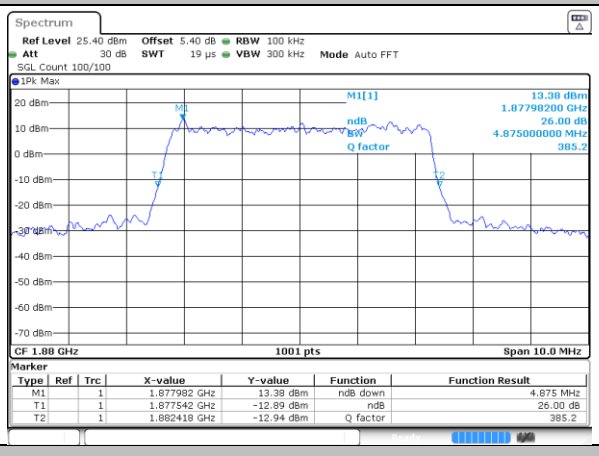
Lowest Channel / 5MHz / 64QAM



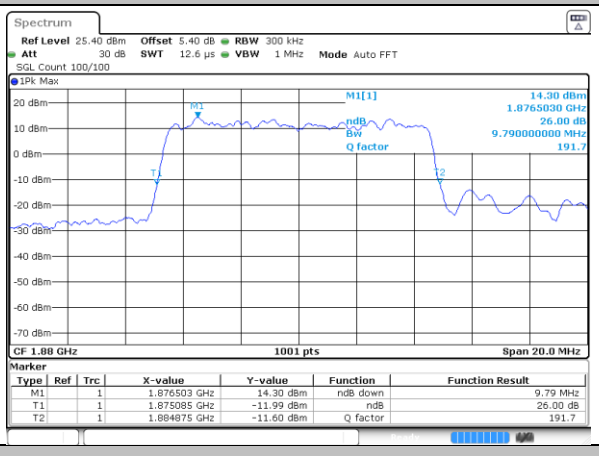
Lowest Channel / 10MHz / 64QAM



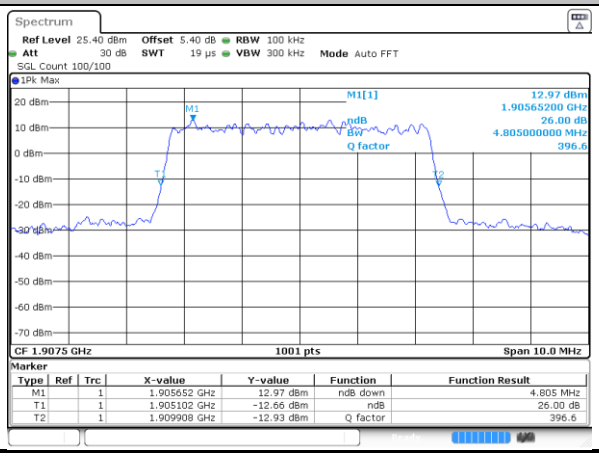
Middle Channel / 5MHz / 64QAM



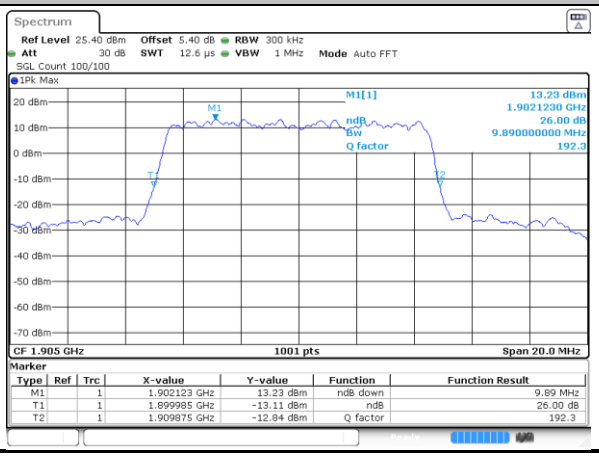
Middle Channel / 10MHz / 64QAM



Highest Channel / 5MHz / 64QAM

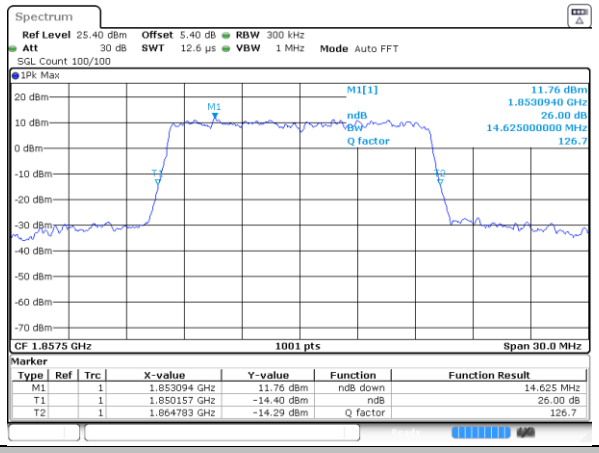


Highest Channel / 10MHz / 64QAM

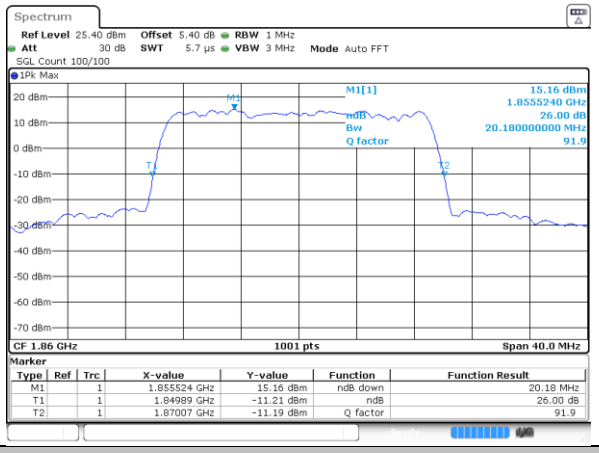


LTE Band 2

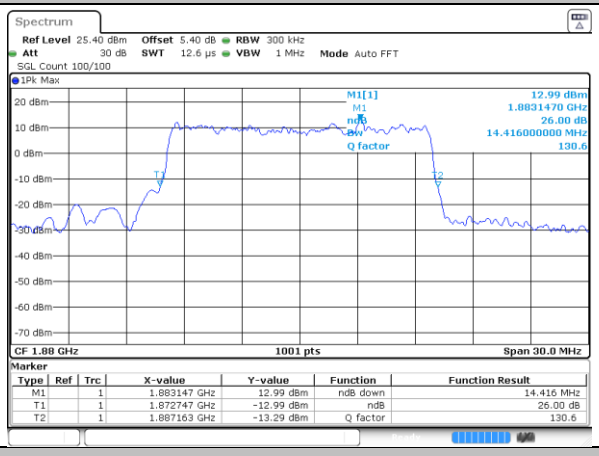
Lowest Channel / 15MHz / 64QAM



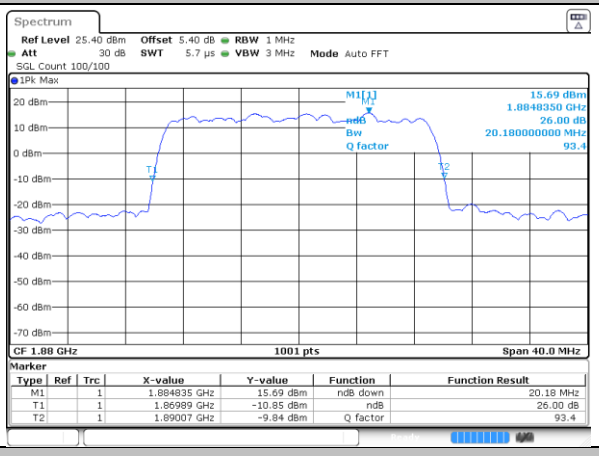
Lowest Channel / 20MHz / 64QAM



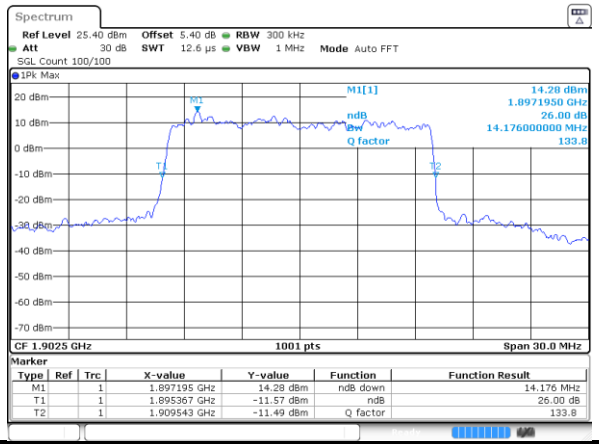
Middle Channel / 15MHz / 64QAM



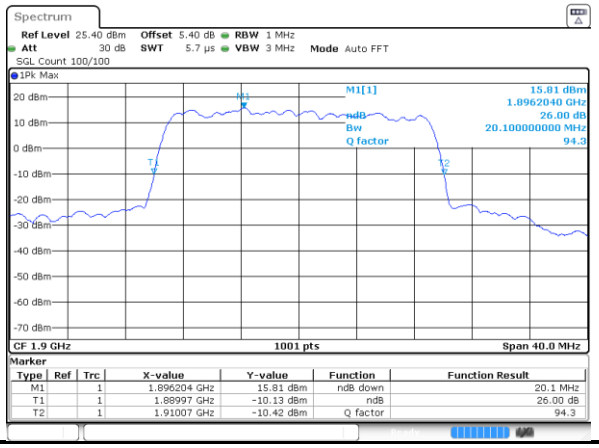
Middle Channel / 20MHz / 64QAM



Highest Channel / 15MHz / 64QAM



Highest Channel / 20MHz / 64QAM

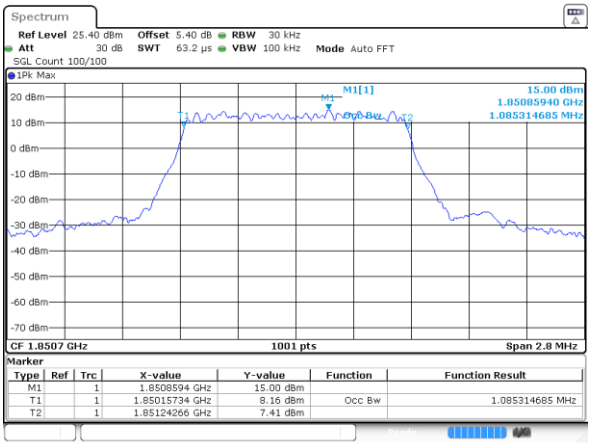


Occupied Bandwidth

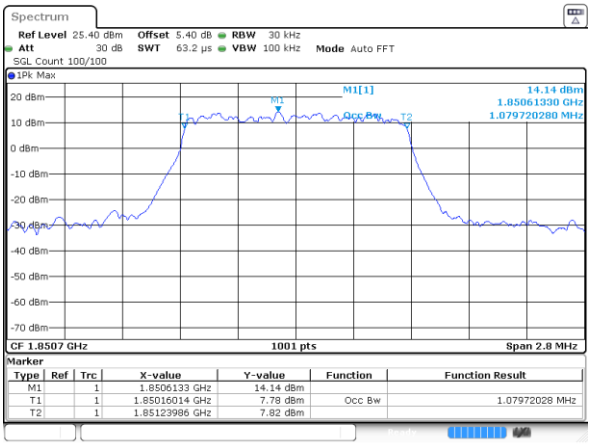
Mode	LTE Band 2 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	1.085	1.080	2.721	2.703	4.496	4.476	9.091	9.031	13.487	13.457	18.342	18.541
Middle CH	1.085	1.085	2.715	2.709	4.505	4.486	8.991	9.071	13.457	13.367	18.501	18.462
Highest CH	1.099	1.088	2.703	2.709	4.476	4.496	9.091	9.011	13.427	13.487	18.222	18.262
Mode	LTE Band 2 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	1.097		2.697		4.505		9.011		13.427		18.342	
Middle CH	1.085		2.709		4.486		9.051		13.487		18.462	
Highest CH	1.091		2.715		4.505		9.031		13.457		18.262	

LTE Band 2

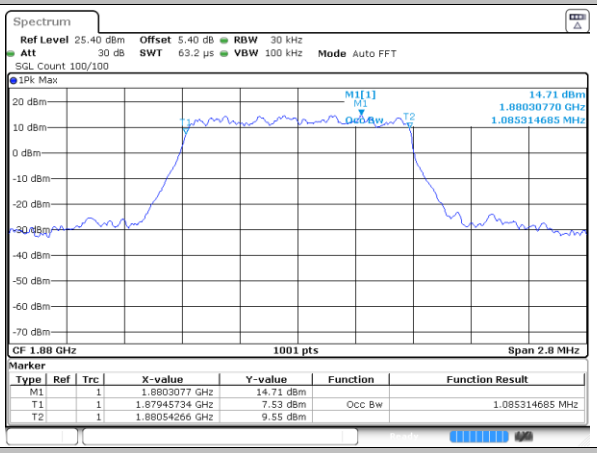
Lowest Channel / 1.4MHz / QPSK



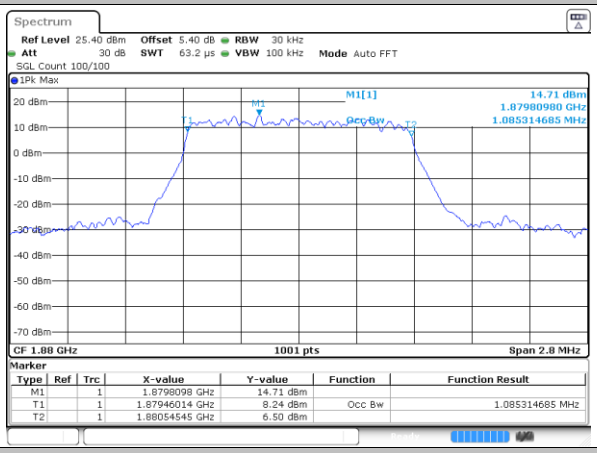
Lowest Channel / 1.4MHz / 16QAM



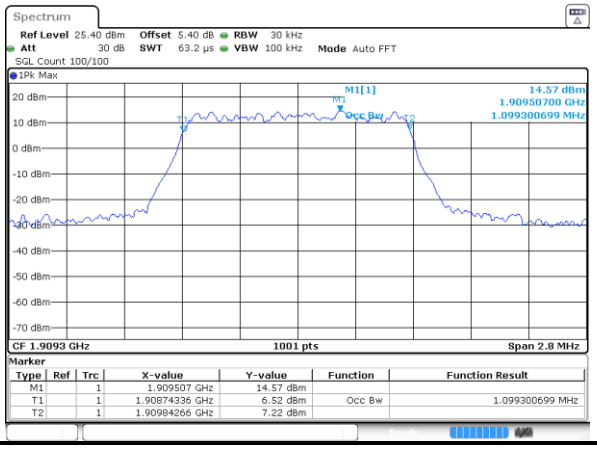
Middle Channel / 1.4MHz / QPSK



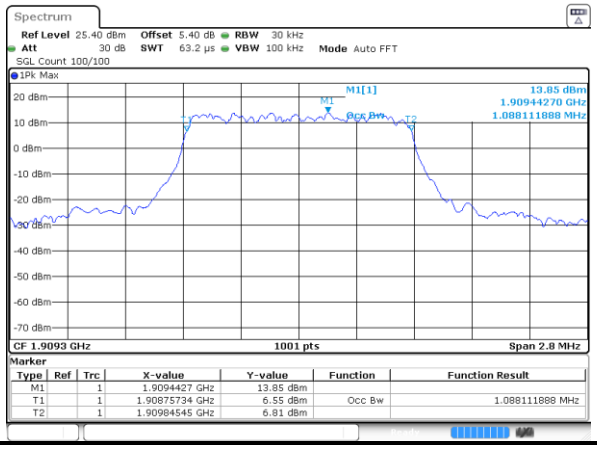
Middle Channel / 1.4MHz / 16QAM



Highest Channel / 1.4MHz / QPSK

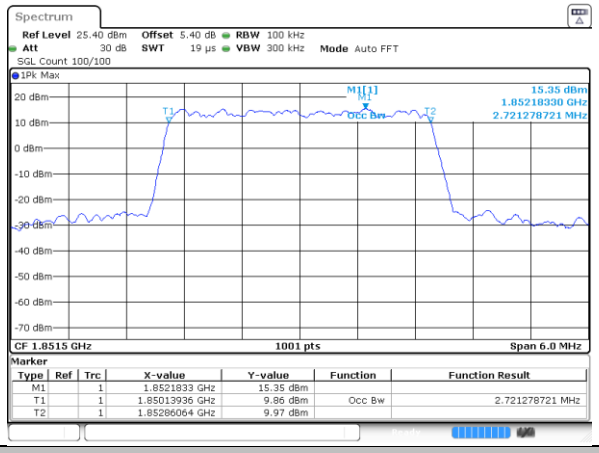


Highest Channel / 1.4MHz / 16QAM

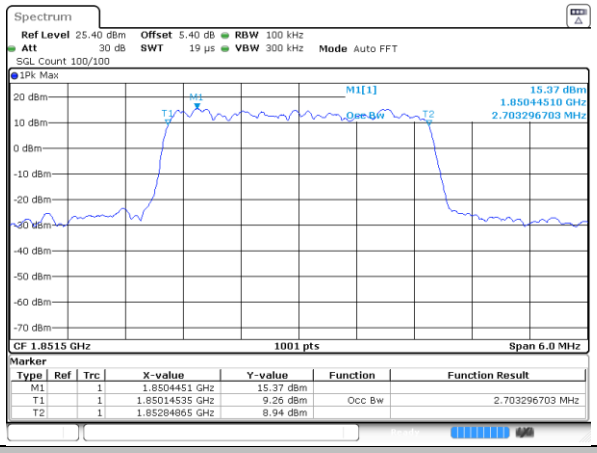


LTE Band 2

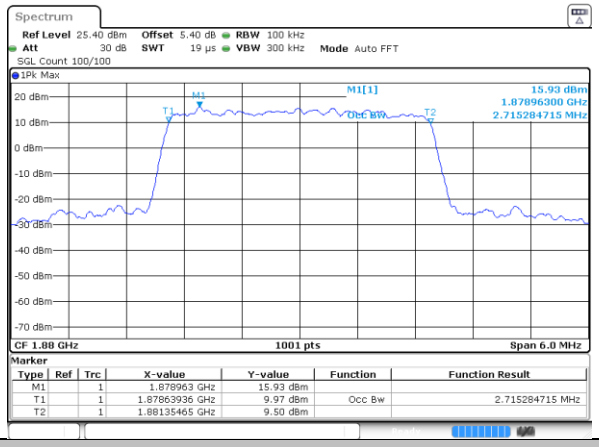
Lowest Channel / 3MHz / QPSK



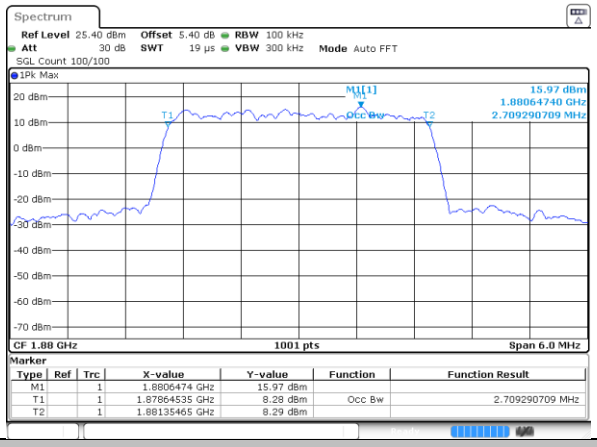
Lowest Channel / 3MHz / 16QAM



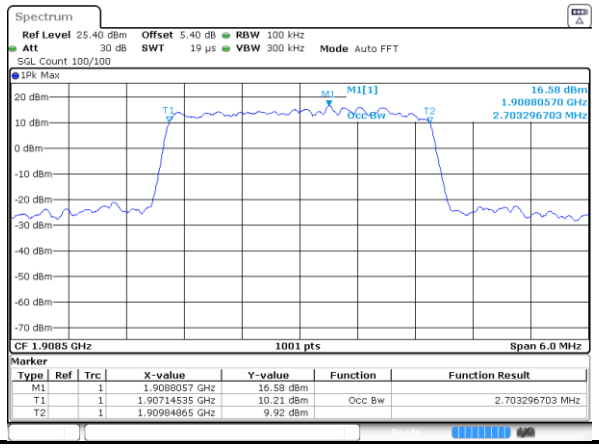
Middle Channel / 3MHz / QPSK



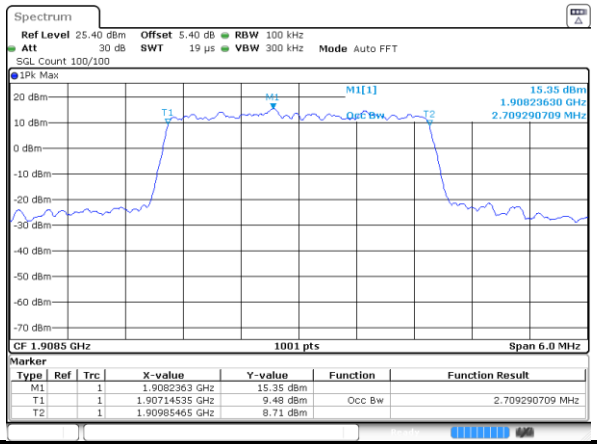
Middle Channel / 3MHz / 16QAM



Highest Channel / 3MHz / QPSK

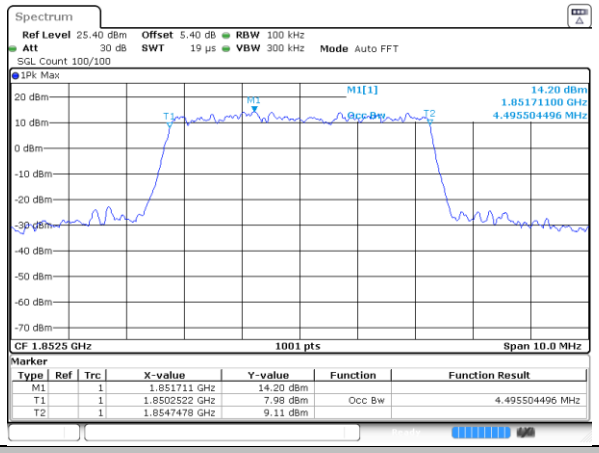


Highest Channel / 3MHz / 16QAM

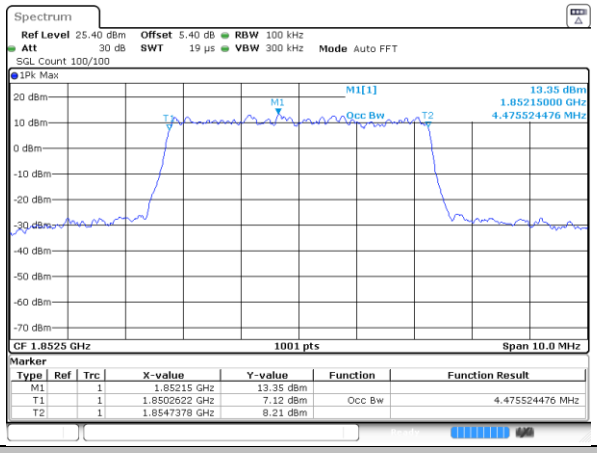


LTE Band 2

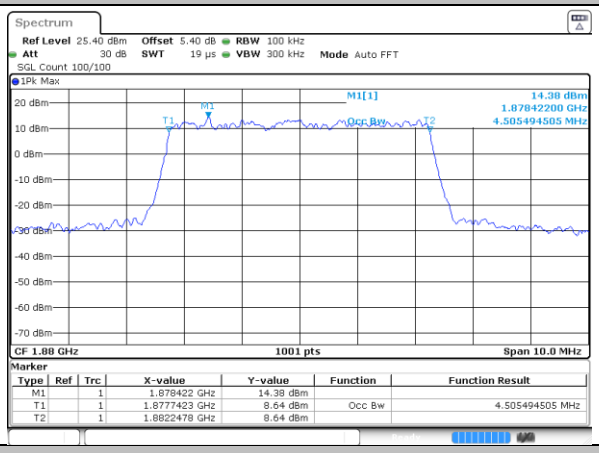
Lowest Channel / 5MHz / QPSK



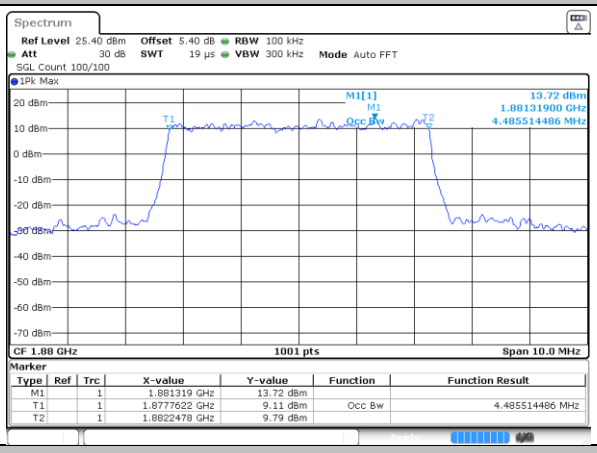
Lowest Channel / 5MHz / 16QAM



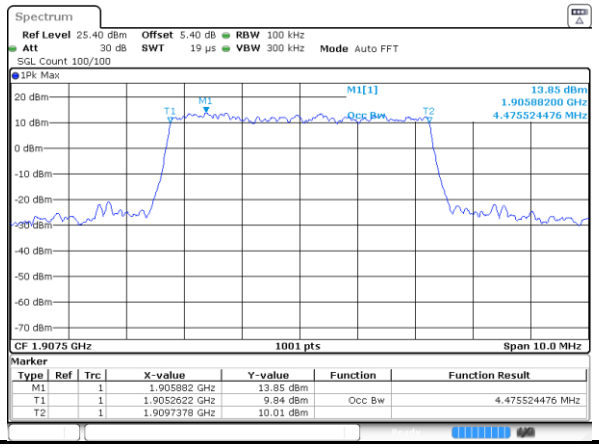
Middle Channel / 5MHz / QPSK



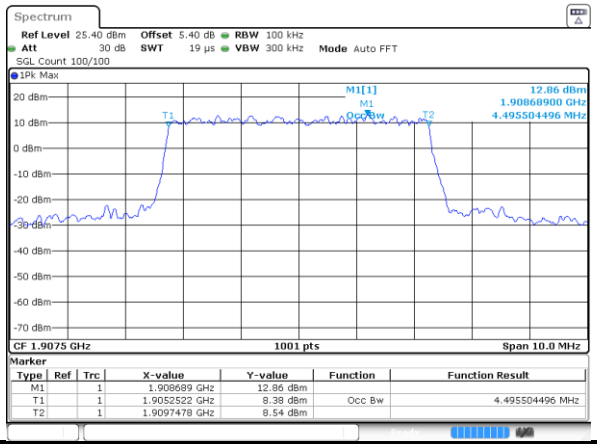
Middle Channel / 5MHz / 16QAM



Highest Channel / 5MHz / QPSK

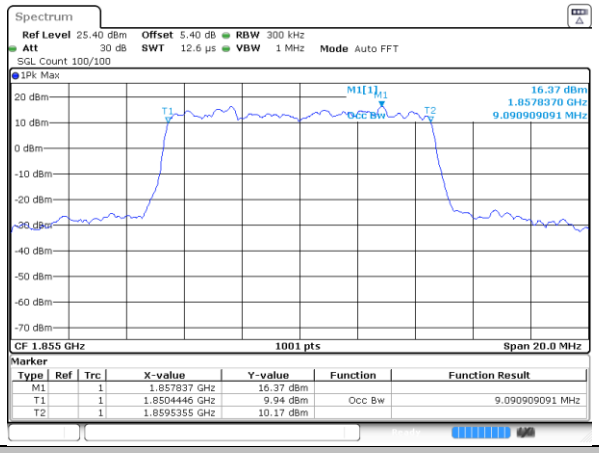


Highest Channel / 5MHz / 16QAM

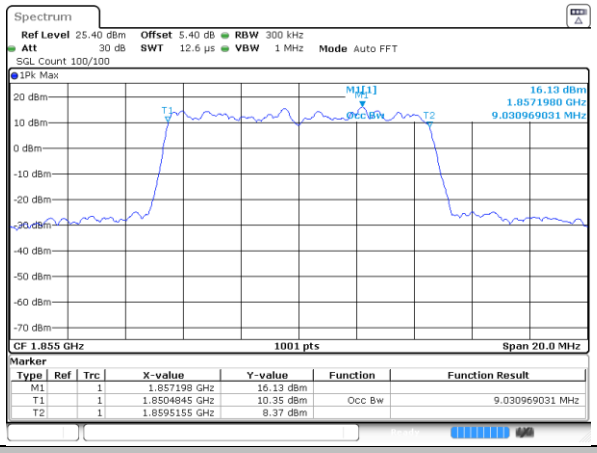


LTE Band 2

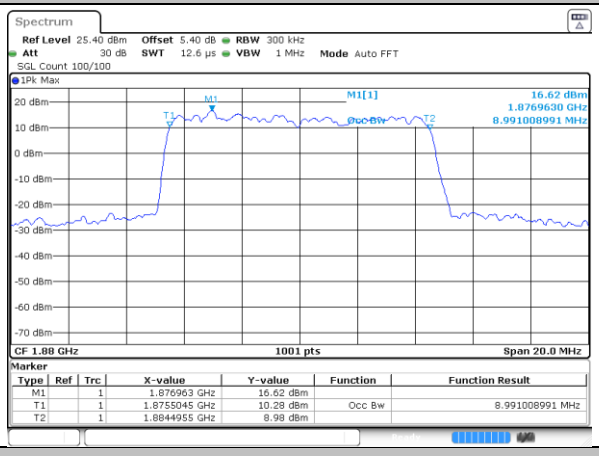
Lowest Channel / 10MHz / QPSK



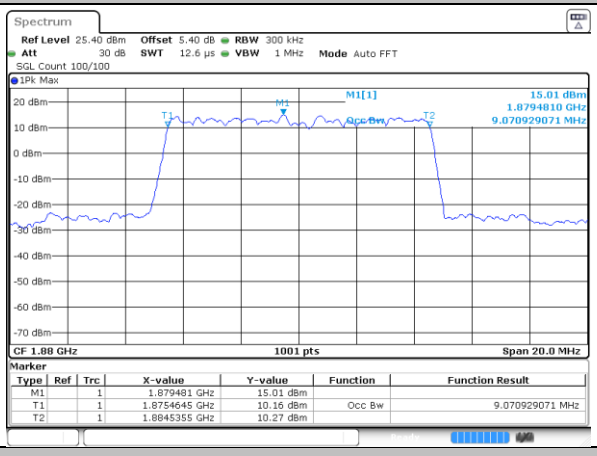
Lowest Channel / 10MHz / 16QAM



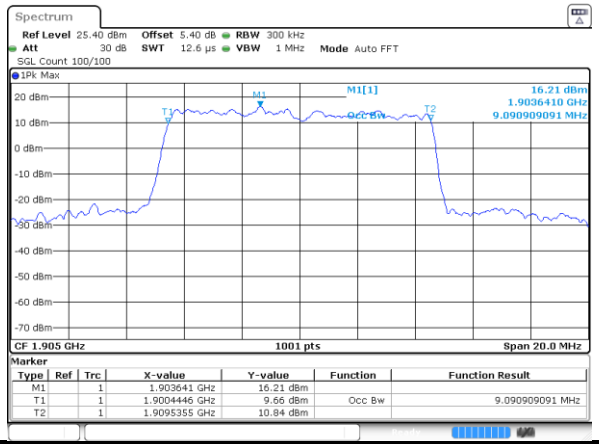
Middle Channel / 10MHz / QPSK



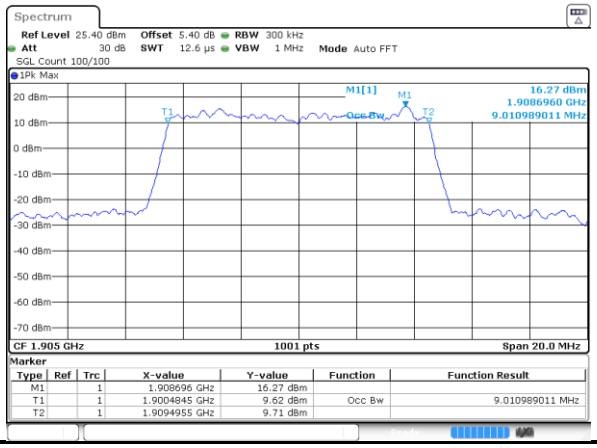
Middle Channel / 10MHz / 16QAM



Highest Channel / 10MHz / QPSK

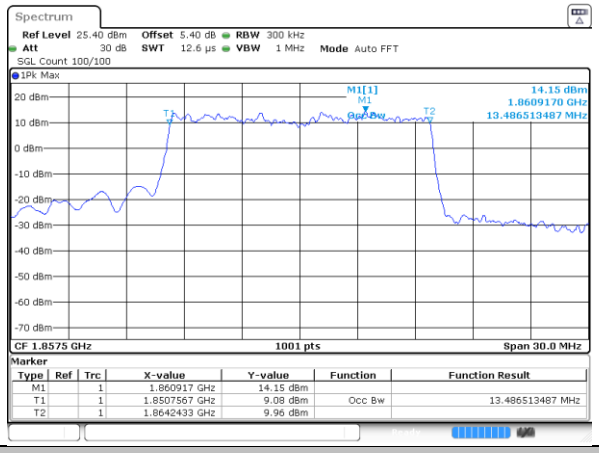


Highest Channel / 10MHz / 16QAM

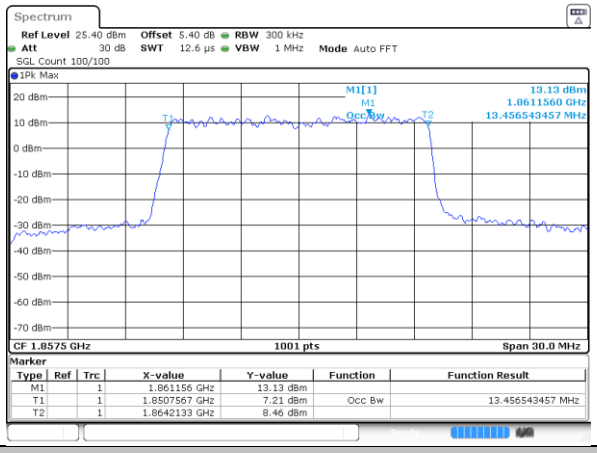


LTE Band 2

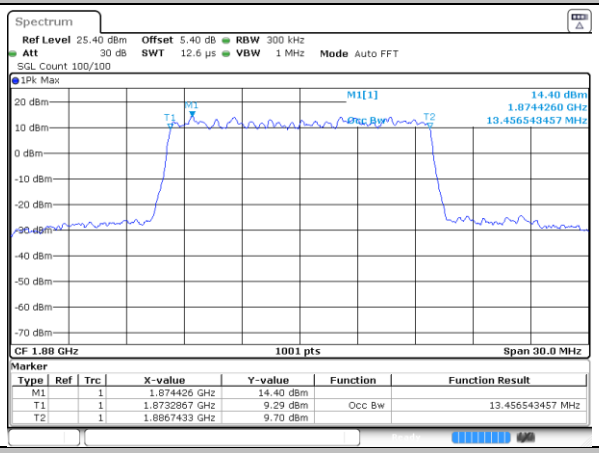
Lowest Channel / 15MHz / QPSK



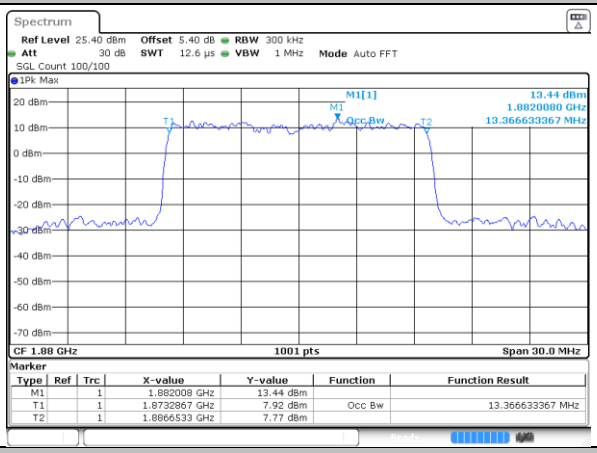
Lowest Channel / 15MHz / 16QAM



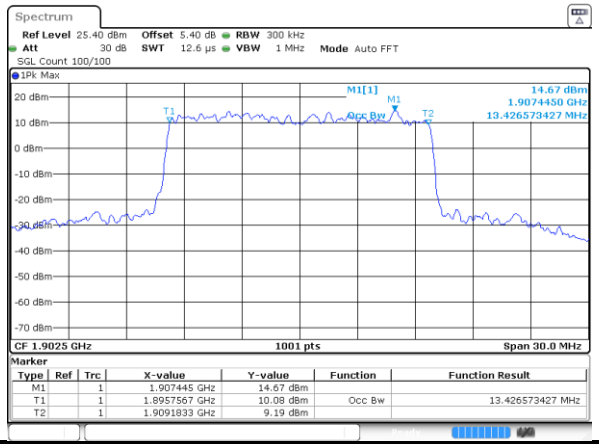
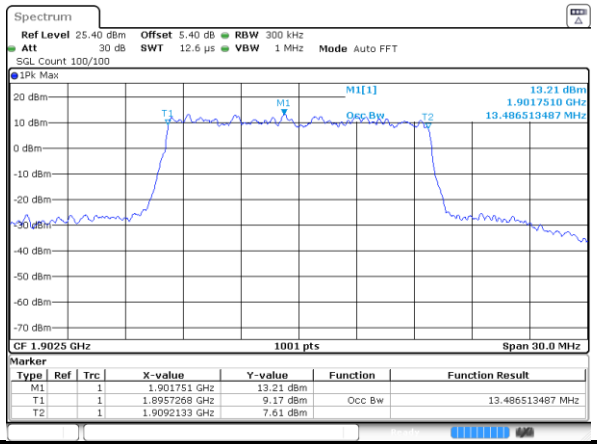
Middle Channel / 15MHz / QPSK



Middle Channel / 15MHz / 16QAM



Highest Channel / 15MHz / QPSK



Highest Channel / 15MHz / 16QAM