



FCC RF Test Report

APPLICANT : OnePlus Technology (Shenzhen) Co., Ltd
EQUIPMENT : Smart Phone
BRAND NAME : ONEPLUS
MODEL NAME : IN2025
FCC ID : 2ABZ2-EE007
STANDARD : 47 CFR Part 2, 22(H), 24(E), 27(L)
CLASSIFICATION : PCS Licensed Transmitter Held to Ear (PCE)

The product was received on Nov. 20, 2019 and completely tested on Feb. 27, 2020. We, Sporton International (ShenZhen) 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 (ShenZhen) Inc., the test report shall not be reproduced except in full.

Reviewed by: Derreck Chen / Supervisor

Approved by: Eric Shih / Manager



Sporton International (ShenZhen) Inc.

1/F, 2/F, Bldg 5, Shiling Industrial Zone, Xinwei Village, Xili, Nanshan, Shenzhen, 518055

People's Republic of China



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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG9N2009-01B	Rev. 01	Initial issue of report	Mar. 19, 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) (Band 26)	ERP < 7 Watt	PASS	-
	§24.232(c)	Equivalent Isotropic Radiated Power (Band 2) (Band 25)	EIRP < 2Watt	PASS	-
	§27.50(d)(4)	Equivalent Isotropic Radiated Power (Band 4) (Band 66)	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) (Band 25) (Band 26) (Band 66)	< 43+10log ₁₀ (P[Watts])	PASS	-
3.8	§2.1051 §22.917(a) §24.238(a) §27.53(h)	Conducted Spurious Emission (Band 2) (Band 4) (Band 5) (Band 25) (Band 26) (Band 66)	< 43+10log ₁₀ (P[Watts])	PASS	-
3.9	§2.1055 §22.355	Frequency Stability Temperature & Voltage	< 2.5 ppm for Part 22	PASS	-
	§2.1055 §24.235 §27.54		Within Authorized Band		
4.4	§2.1053 §22.917(a) §24.238(a) §27.53(h)	Radiated Spurious Emission (Band 2) (Band 4) (Band 5) (Band 25) (Band 26) (Band 66)	< 43+10log ₁₀ (P[Watts])	PASS	Under limit 37.52 dB at 2496.270 MHz

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

OnePlus Technology (Shenzhen) Co., Ltd

18C02, 18C03, 18C04 and 18C05, Shum Yip Terra Building, Binhe Avenue North, Futian District, Shenzhen

1.2 Manufacturer

OnePlus Technology (Shenzhen) Co., Ltd

18C02, 18C03, 18C04 and 18C05, Shum Yip Terra Building, Binhe Avenue North, Futian District, Shenzhen

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	Smart Phone
Brand Name	ONEPLUS
Model Name	IN2025
FCC ID	2ABZ2-EE007
EUT supports Radios application	CDMA/GSM/WCDMA/LTE/5G NR WLAN 2.4GHz 802.11b/g/n HT20 WLAN 2.4GHz 802.11ax HE20/HE40 WLAN 5GHz 802.11a/n HT20/HT40 WLAN 5GHz 802.11ac VHT20/VHT40/VHT80 WLAN 5GHz 802.11ax VHT20/VHT40/VHT80 Bluetooth BR/EDR/LE GNSS/NFC/WPC
IMEI Code	Conducted: 865422040000457/865422040002982 for LTE Band 2/4/25 865422040000341/865422040002875 for LTE Band 5/26/66 99001579001124/865422040022493 for LTE Band 66C_CA Radiation: 865422040066037/865422040066029 for LTE Band 2/4/5/25/26 865422040025090/865422040025082 for LTE Band 66/66C_CA
HW Version	15
SW Version	Oxygen OS 10.5.IN11AA
EUT Stage	Production Unit



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 25 : 1850.7MHz ~ 1914.3 MHz LTE Band 26 : 824.7MHz ~ 848.3 MHz LTE Band 66 : 1710.7 MHz ~ 1779.3 MHz
Rx Frequency	LTE Band 2 : 1930.7 MHz ~ 1989.3 MHz LTE Band 4 : 2110.7 MHz ~ 2154.3 MHz LTE Band 5 : 869.7 MHz ~ 893.3 MHz LTE Band 25 : 1930.7MHz ~ 1994.3 MHz LTE Band 26 : 869.7MHz ~ 893.3MHz LTE Band 66 : 2110.7 MHz~ 2199.3 MHz
Bandwidth	LTE Band 2 : 1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz / 20MHz LTE Band 4 : 1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz / 20MHz LTE Band 5 : 1.4MHz / 3MHz / 5MHz / 10MHz LTE Band 25 : 1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz / 20MHz LTE Band 26 : 1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz LTE Band 66 : 1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz / 20MHz
Maximum Output Power to Antenna	Bottom Antenna : LTE Band 2 : 22.80 dBm LTE Band 4 : 23.04 dBm LTE Band 5 : 23.01 dBm LTE Band 25 : 23.19 dBm LTE Band 26 : 23.12 dBm LTE Band 66 : 23.18 dBm; Band 66C_CA: 21.49 dBm
Antenna Gain	Top Antenna : LTE Band 2 : -2.00 dBi LTE Band 4 : -2.00 dBi LTE Band 5 : -3.00 dBi LTE Band 25 : -2.00 dBi LTE Band 26 : -3.00 dBi LTE Band 66 : -2.00 dBi Bottom Antenna : LTE Band 2 : -2.00 dBi LTE Band 4 : -2.00 dBi LTE Band 5 : -2.00 dBi LTE Band 25 : -2.00 dBi LTE Band 26 : -2.00 dBi LTE Band 66 : -2.00 dBi
Type of Modulation	QPSK / 16QAM / 64QAM / 256QAM

Note: 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	-	0.1159	1M09W7D	-	0.0995
3	1851.5 ~ 1908.5	2M73G7D	-	0.1183	2M73W7D	-	0.1019
5	1852.5 ~ 1907.5	4M50G7D	-	0.1169	4M48W7D	-	0.0995
10	1855.0 ~ 1905.0	9M03G7D	0.0871	0.1164	9M01W7D	-	0.1005
15	1857.5 ~ 1902.5	13M4G7D	-	0.1186	13M5W7D	-	0.1012
20	1860.0 ~ 1900.0	17M9G7D	-	0.1202	17M9W7D	-	0.1016
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	1M09W7D		-	0.0738		
3	1851.5 ~ 1908.5	2M74W7D		-	0.0741		
5	1852.5 ~ 1907.5	4M51W7D		-	0.0718		
10	1855.0 ~ 1905.0	9M01W7D		-	0.0733		
15	1857.5 ~ 1902.5	13M5W7D		-	0.0757		
20	1860.0 ~ 1900.0	17M8W7D		-	0.0753		
LTE Band 25		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 ~ 1914.3	1M10G7D	-	0.1230	1M09W7D	-	0.1045
3	1851.5 ~ 1913.5	2M73G7D	-	0.1256	2M75W7D	-	0.1094
5	1852.5 ~ 1912.5	4M51G7D	-	0.1256	4M51W7D	-	0.1064
10	1855.0 ~ 1910.0	9M05G7D	0.0110	0.1239	9M01W7D	-	0.1067
15	1857.5 ~ 1907.5	13M4G7D	-	0.1297	13M5W7D	-	0.1127
20	1860.0 ~ 1905.0	17M9G7D	-	0.1315	17M9W7D	-	0.1122



LTE Band 25		64QAM					
BW (MHz)	Frequency Range (MHz)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)		Maximum EIRP(W)		
1.4	1850.7 ~ 1914.3	1M09W7D	-		0.0778		
3	1851.5 ~ 1913.5	2M73W7D	-		0.0780		
5	1852.5 ~ 1912.5	4M50W7D	-		0.0794		
10	1855.0 ~ 1910.0	9M03W7D	-		0.0780		
15	1857.5 ~ 1907.5	13M5W7D	-		0.0824		
20	1860.0 ~ 1905.0	17M9W7D	-		0.0824		
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	1M10G7D	-	0.1230	1M10W7D	-	0.1050
3	1711.5 ~ 1753.5	2M73G7D	-	0.1265	2M75W7D	-	0.1086
5	1712.5 ~ 1752.5	4M49G7D	-	0.1245	4M51W7D	-	0.1062
10	1715.0 ~ 1750.0	9M03G7D	0.0313	0.1230	9M01W7D	-	0.1047
15	1717.5 ~ 1747.5	13M5G7D	-	0.1262	13M5W7D	-	0.1089
20	1720.0 ~ 1745.0	17M9G7D	-	0.1271	17M9W7D	-	0.1096
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	-		0.0811		
3	1711.5 ~ 1753.5	2M74W7D	-		0.0815		
5	1712.5 ~ 1752.5	4M50W7D	-		0.0815		
10	1715.0 ~ 1750.0	8M99W7D	-		0.0802		
15	1717.5 ~ 1747.5	13M5W7D	-		0.0841		
20	1720.0 ~ 1745.0	17M9W7D	-		0.0820		
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	1M09G7D	-	0.0759	1M09W7D	-	0.0681
3	825.5 ~ 847.5	2M73G7D	-	0.0766	2M74W7D	-	0.0668
5	826.5 ~ 846.5	4M50G7D	-	0.0767	4M50W7D	-	0.0679
10	829.0 ~ 844.0	9M05G7D	0.0016	0.0769	9M05W7D	-	0.0628



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		-		0.0511	
3	825.5 ~ 847.5	2M74W7D		-		0.0537	
5	826.5 ~ 846.5	4M50W7D		-		0.0536	
10	829.0 ~ 844.0	9M05W7D		-		0.0526	
LTE Band 26		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	1M09G7D	-	0.0783	1M09W7D	-	0.0652
3	825.5 ~ 847.5	2M73G7D	-	0.0780	2M73W7D	-	0.0692
5	826.5 ~ 846.5	4M50G7D	-	0.0785	4M51W7D	-	0.0612
10	829.0 ~ 844.0	9M05G7D	0.0047	0.0757	9M03W7D	-	0.0719
15	831.5 ~ 841.5	13M4G7D	-	0.0789	13M5W7D	-	0.0729
CH26765	821.5	13M5G7D	-	0.0785	13M5W7D	-	0.0721
LTE Band 26		64QAM					
BW (MHz)	Frequency Range (MHz)	Emission Designator (99%OBW)		Frequency Tolerance (ppm)		Maximum ERP(W)	
1.4	824.7 ~ 848.3	1M09W7D		-		0.0512	
3	825.5 ~ 847.5	2M73W7D		-		0.0525	
5	826.5 ~ 846.5	4M51W7D		-		0.0520	
10	829.0 ~ 844.0	9M05W7D		-		0.0527	
15	831.5 ~ 841.5	13M5W7D		-		0.0530	
CH26765	821.5	13M4W7D		-		0.0513	



LTE Band 66		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 ~ 1779.3	1M09G7D	-	0.1256	1M09W7D	-	0.1079
3	1711.5 ~ 1778.5	2M72G7D	-	0.1271	2M74W7D	-	0.1076
5	1712.5 ~ 1777.5	4M51G7D	-	0.1265	4M50W7D	-	0.1069
10	1715.0 ~ 1775.0	9M05G7D	0.0165	0.1236	9M01W7D	-	0.1074
15	1717.5 ~ 1772.5	13M5G7D	-	0.1306	13M5W7D	-	0.1138
20	1720.0 ~ 1770.0	17M9G7D	-	0.1312	17M9W7D	-	0.1143
LTE Band 66		64QAM					
BW (MHz)	Frequency Range (MHz)	Emission Designator (99%OBW)		Frequency Tolerance (ppm)	Maximum EIRP(W)		
1.4	1710.7 ~ 1779.3	1M10W7D		-	0.0834		
3	1711.5 ~ 1778.5	2M72W7D		-	0.0836		
5	1712.5 ~ 1777.5	4M50W7D		-	0.0818		
10	1715.0 ~ 1775.0	9M01W7D		-	0.0822		
15	1717.5 ~ 1772.5	13M5W7D		-	0.0849		
20	1720.0 ~ 1770.0	17M9W7D		-	0.0849		

LTE Band 66 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	-	0.0889	37M6W7D	-	0.0746
LTE Band 66 CA		64QAM				
BW (MHz)	Emission Designator (99%OBW)		Frequency Tolerance (ppm)	Maximum EIRP(W)		
20MHz+20MHz	37M6W7D		-	0.0608		



1.7 Testing Location

Sporton International (Shenzhen) Inc. is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.01.

Test Firm	Sporton International (Shenzhen) Inc.		
Test Site Location	1/F, 2/F, Bldg 5, Shiling Industrial Zone, Xinwei Village, Xili, Nanshan, Shenzhen, 518055 People's Republic of China TEL: +86-755-86379589 FAX: +86-755-86379595		
Test Site No.	Sporton Site No.	FCC Designation No.	FCC Test Firm Registration No.
	TH01-SZ	CN1256	421272

Test Firm	Sporton International (Shenzhen) Inc.		
Test Site Location	No. 3 Bldg the third floor of south, Shahe River west, Fengzeyuan Warehouse, Nanshan Shenzhen, 518055 People's Republic of China TEL: +86-755-33202398		
Test Site No.	Sporton Site No.	FCC Designation No.	FCC Test Firm Registration No.
	03CH02-SZ 03CH03-SZ 03CH04-SZ	CN1256	421272

1.8 Test Software

Item	Site	Manufacture	Name	Version
1.	03CH02-SZ	AUDIX	E3	6.2009-8-24a
2.	03CH03-SZ	AUDIX	E3	6.2009-8-24
3.	03CH04-SZ	AUDIX	E3	6.2009-8-24



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)
- ♦ 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
	25	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v
	26	v	v	v	v	v	-	v	v	v	v	v	v	v	v	v
	66	v	v	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
	25						v	v	v	v	v		v	v	v	v
	26				v		-	v	v	v	v		v	v	v	v
	66						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
	25	v	v	v	v	v	v	v	v	v			v	v	v	v
	26	v	v	v	v	v	-	v	v	v			v	v	v	v
	66	v	v	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
	25	v	v	v	v	v	v	v	v	v	v		v	v		v
	26	v	v	v	v	v	-	v	v	v	v		v	v		v
	66	v	v	v	v	v	v	v	v	v	v		v	v		v

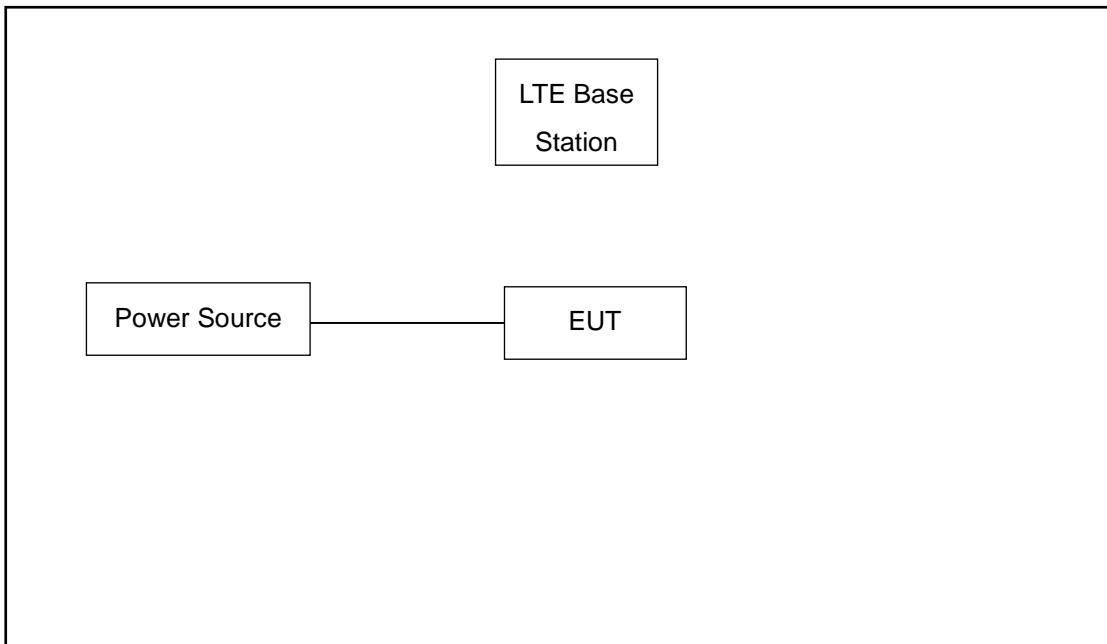


Test Items	Band	Bandwidth (MHz)						Modulation			RB #			Test Channel		
		1.4	3	5	10	15	20	QPSK	16QAM	64QAM	1	Half	Full	L	M	H
Conducted Spurious Emission	2	v	v	v	v	v	v	v	v	v	v			v	v	v
	4	v	v	v	v	v	v	v	v	v	v			v	v	v
	5	v	v	v	v	-	-	v	v	v	v			v	v	v
	25	v	v	v	v	v	v	v	v	v	v			v	v	v
	26	v	v	v	v	v	-	v	v	v	v			v	v	v
	66	v	v	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	
	25				v			v					v		v	
	26				v		-	v					v		v	
	66				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
	25	v	v	v	v	v	v	v	v	v	v			v	v	v
	26	v	v	v	v	v	-	v	v	v	v			v	v	v
	66	v	v	v	v	v	v	v	v	v	v			v	v	v
Radiated Spurious Emission	2	v	v	v	v	v	v	v			v			v	v	v
	4	v	v	v	v	v	v	v			v			v	v	v
	5	v	v	v	v	-	-	v			v			v	v	v
	25	v	v	v	v	v	v	v			v			v	v	v
	26	v	v	v	v	v	-	v			v			v	v	v
	66	v	v	v	v	v	v	v			v			v	v	v
Note	<ol style="list-style-type: none"> The mark "v" means that this configuration is chosen for testing The mark "-" means that this bandwidth is not supported. 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. 															



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	66C_CA	v										v	v	v	v	v	v	v	v	v
26dB and 99% Bandwidth	66C_CA	v	v	v	v	v	v	v	v	v	v	v	v	v			v	v	v	v
Conducted Band Edge	66C_CA	v	v	v	v	v	v	v	v	v	v	v	v	v		v	v			v
Conducted Spurious Emission	66C_CA	v	v	v	v	v	v	v	v	v	v	v	v	v				v	v	v
E.I.R.P.	66C_CA	v										v	v	v	v			v	v	v
Radiated Spurious Emission	66C_CA	v										v			v			v	v	v
Note	<ol style="list-style-type: none"> The mark "v " means that this configuration is chosen for testing The mark "-" means that this bandwidth is not supported. The device is investigated from 30MHz to 10 times of fundamental signal for radiated spurious emission test under different RB size/offset and modulations in exploratory test. Subsequently, only the worst case emissions are reported. 																			

2.2 Connection Diagram of Test System



2.3 Support Unit used in test configuration and system

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

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 and attenuator factor between EUT conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly the EUT RF output level.

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

Offset = RF cable loss + attenuator factor.

Following shows an offset computation example with cable loss 4.5 dB and 10dB attenuator.

Example :

$$\begin{aligned} \text{Offset(dB)} &= \text{RF cable loss(dB)} + \text{attenuator factor(dB)} \\ &= 4.5 + 10 = 14.5 \text{ (dB)} \end{aligned}$$



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 25 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
20	Channel	26140	26340	26590
	Frequency	1860	1880	1905
15	Channel	26115	26340	26615
	Frequency	1857.5	1880	1907.5
10	Channel	26090	26340	26640
	Frequency	1855	1880	1910
5	Channel	26065	26340	26665
	Frequency	1852.5	1880	1912.5
3	Channel	26055	26340	26675
	Frequency	1851.5	1880	1913.5
1.4	Channel	26047	26340	26683
	Frequency	1850.7	1880	1914.3



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

LTE Band 66 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
20	Channel	132072	132322	132572
	Frequency	1720	1745	1770
15	Channel	132047	132322	132597
	Frequency	1717.5	1745	1772.5
10	Channel	132022	132322	132622
	Frequency	1715	1745	1775
5	Channel	131997	132322	132647
	Frequency	1712.5	1745	1777.5
3	Channel	131987	132322	132657
	Frequency	1711.5	1745	1778.5
1.4	Channel	131979	132322	132665
	Frequency	1710.7	1745	1779.3



LTE Band 66C_CA Channel and Frequency List					
BW [MHz]	Channel/Frequency(MHz)		Lowest	Middle	Highest
20 + 20	PCC	Channel	132072	132323	132374
		Frequency	1720	1745.1	1750.2
	SCC	Channel	132270	132521	132572
		Frequency	1739.8	1764.9	1770
20 + 15	PCC	Channel	132072	132348	132423
		Frequency	1720	1747.6	1755.1
	SCC	Channel	132243	132519	132594
		Frequency	1737.1	1764.7	1772.2
15 + 20	PCC	Channel	132050	132325	132401
		Frequency	1717.8	1745.3	1752.9
	SCC	Channel	132221	132496	132572
		Frequency	1734.9	1762.4	1770
20 + 10	PCC	Channel	132072	132373	132473
		Frequency	1720	1750.1	1760.1
	SCC	Channel	132216	132517	132617
		Frequency	1734.4	1764.5	1774.5
10 + 20	PCC	Channel	132027	132328	132428
		Frequency	1715.5	1745.6	1755.6
	SCC	Channel	132171	132472	132572
		Frequency	1729.9	1760	1770



LTE Band 66C_CA Channel and Frequency List					
20 + 5	PCC	Channel	132072	132397	132522
		Frequency	1720	1752.5	1765
	SCC	Channel	132189	132514	132639
		Frequency	1731.7	1764.2	1776.7
5 + 20	PCC	Channel	132005	132330	132455
		Frequency	1713.3	1745.8	1758.3
	SCC	Channel	132122	132447	132572
		Frequency	1725	1757.5	1770
15 + 15	PCC	Channel	132047	132347	132447
		Frequency	1717.5	1747.5	1757.5
	SCC	Channel	132197	132497	132597
		Frequency	1732.5	1762.5	1772.5
10 + 15	PCC	Channel	132025	132351	132477
		Frequency	1715.3	1747.9	1760.5
	SCC	Channel	132145	132471	132597
		Frequency	1727.3	1759.9	1772.5
15 + 10	PCC	Channel	132047	132373	132499
		Frequency	1717.5	1750.1	1762.7
	SCC	Channel	132167	132493	132619
		Frequency	1729.5	1762.1	1774.7

3 Conducted Test Items

3.1 Measuring Instruments

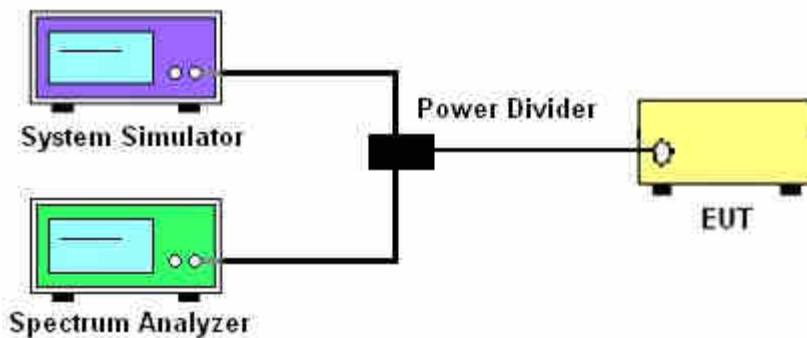
See list of measuring instruments of this test report.

3.2 Test Setup

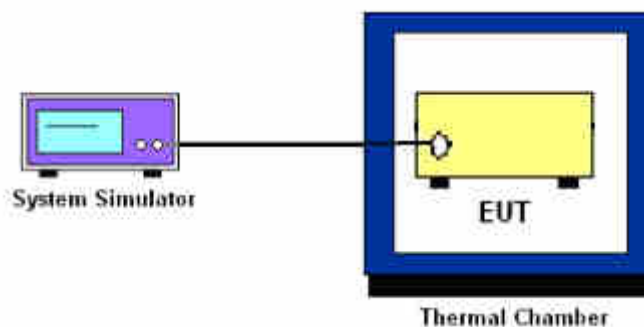
3.2.1 Conducted Output Power



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



3.2.3 Frequency Stability



3.3 Test Result of Conducted Test

Please refer to Appendix A.



3.4 Conducted Output Power and ERP/EIRP

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

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

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

The EIRP of mobile transmitters must not exceed 2 Watts for LTE Band 2 and Band 25.

The EIRP of mobile transmitters must not exceed 1 Watts for LTE Band 4 and Band 66.

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 $43 + 10\log_{10}(P[\text{Watts}])$ 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 $43 + 10\log_{10}(P[\text{Watts}])$ 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 $43 + 10\log_{10}(P[\text{Watts}])$ 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.

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 \geq 1% EBW in the 1MHz band immediately outside and adjacent to the band edge.
5. Beyond the 1 MHz band from the band edge, RBW=1MHz was used.
6. Set spectrum analyzer with RMS detector.
7. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
8. Checked that all the results comply with the emission limit line.

Example:

The limit line is derived from $43 + 10\log(P)$ dB below the transmitter power P(Watts)
 $= P(W) - [43 + 10\log(P)]$ (dB)
 $= [30 + 10\log(P)]$ (dBm) - $[43 + 10\log(P)]$ (dB) = -13dBm.



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.

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. Taking the record of maximum spurious emission.
9. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
10. The limit line is derived from $43 + 10\log(P)$ dB below the transmitter power P(Watts)
= $P(W) - [43 + 10\log(P)]$ (dB)
= $[30 + 10\log(P)]$ (dBm) - $[43 + 10\log(P)]$ (dB)
= -13dBm.



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 $\pm 0.00025\%$ ($\pm 2.5\text{ppm}$) 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 $20\pm 5^{\circ}\text{C}$ 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.

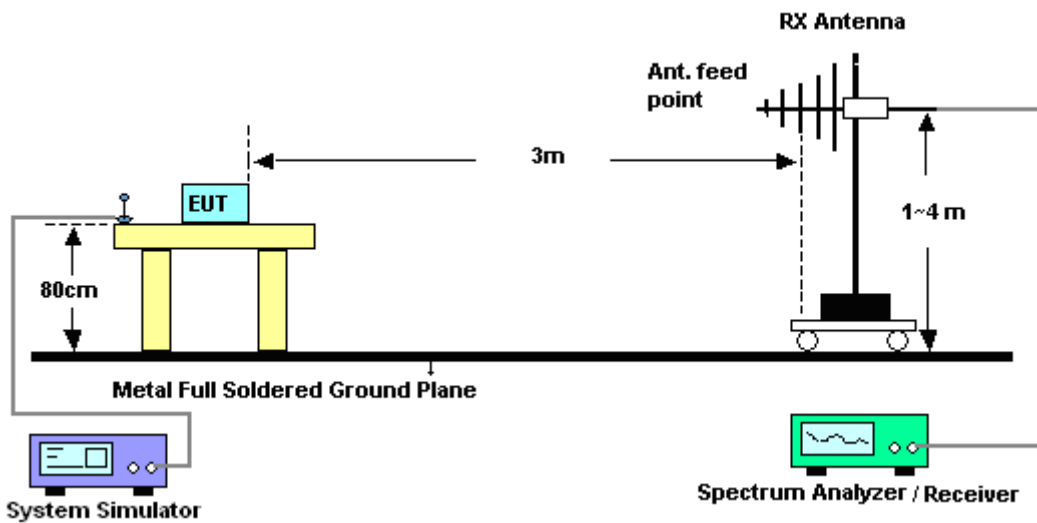
4 Radiated Test Items

4.1 Measuring Instruments

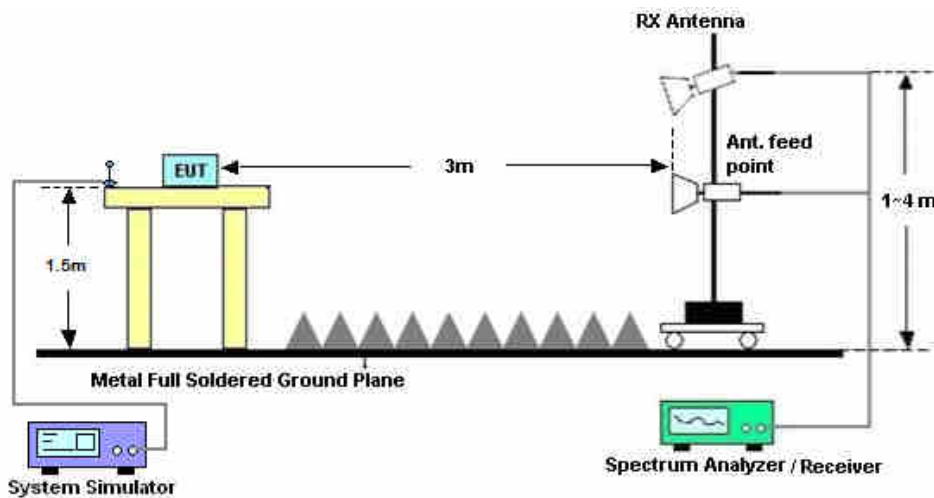
See list of measuring instruments of this test report.

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.

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

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. $EIRP \text{ (dBm)} = S.G. \text{ Power} - Tx \text{ Cable Loss} + Tx \text{ Antenna Gain}$
11. $ERP \text{ (dBm)} = EIRP - 2.15$
12. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

The limit line is derived from $43 + 10\log(P)$ dB below the transmitter power P(Watts)
= $P(W) - [43 + 10\log(P)] \text{ (dB)}$
= $[30 + 10\log(P)] \text{ (dBm)} - [43 + 10\log(P)] \text{ (dB)}$
= -13dBm.



5 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSV40	101078	10Hz~40GHz	Apr. 18, 2019	Dec. 14, 2019~ Feb. 16, 2020	Apr. 17, 2020	Conducted (TH01-SZ)
Thermal Chamber	Ten Billion Hongzhangroup	LP-150U	H2014081803	-40~+150°C	Dec. 24, 2018	Dec. 14, 2019~ Feb. 16, 2020	Dec. 23, 2019	Conducted (TH01-SZ)
Thermal Chamber	Ten Billion Hongzhangroup	LP-150U	H2014081803	-40~+150°C	Dec. 26, 2019		Dec. 25, 2020	Conducted (TH01-SZ)
EXA Spectrum Analyzer	KEYSIGHT	N9010A	MY55150213	10Hz~44GHz	Apr. 19, 2019	Jan. 15, 2020~ Feb. 27, 2020	Apr. 18, 2020	Radiation (03CH02-SZ)
Bilog Antenna	TeseQ	CBL6112D	35407	30MHz-2GHz	Jul. 19, 2019	Jan. 15, 2020~ Feb. 27, 2020	Jul. 18, 2020	Radiation (03CH02-SZ)
Double Ridge Horn Antenna	SCHWARZBECK	BBHA 9120D	9120D-1285	1GHz~18GHz	Jan. 06, 2020	Jan. 15, 2020~ Feb. 27, 2020	Jan. 05, 2021	Radiation (03CH02-SZ)
HF Amplifier	MITEQ	TTA1840-35 -HG	1871923	18GHz~40GHz	Jul. 22, 2019	Jan. 15, 2020~ Feb. 27, 2020	Jul. 21, 2020	Radiation (03CH02-SZ)
SHF-EHF Horn	com-power	AH-840	101071	18Ghz-40GHz	Apr. 18, 2019	Jan. 15, 2020~ Feb. 27, 2020	Apr. 17, 2020	Radiation (03CH02-SZ)
LF Amplifier	Burgeon	BPA-530	102211	0.01~3000Mhz	Oct. 18, 2019	Jan. 15, 2020~ Feb. 27, 2020	Oct. 17, 2020	Radiation (03CH02-SZ)
HF Amplifier	KEYSIGHT	83017A	MY53270105	0.5GHz~26.5Ghz	Oct. 18, 2019	Jan. 15, 2020~ Feb. 27, 2020	Oct. 17, 2020	Radiation (03CH02-SZ)
AC Power Source	Chroma	61601	616010002470	N/A	NCR	Jan. 15, 2020~ Feb. 27, 2020	NCR	Radiation (03CH02-SZ)
Turn Table	Chaintek	T-200	N/A	0~360 degree	NCR	Jan. 15, 2020~ Feb. 27, 2020	NCR	Radiation (03CH02-SZ)
Antenna Mast	Chaintek	MBS-400	N/A	1 m~4 m	NCR	Jan. 15, 2020~ Feb. 27, 2020	NCR	Radiation (03CH02-SZ)
EMI Test Receiver&SA	KEYSIGHT	N9038A	MY54450083	20Hz~8.4GHz	Apr. 18, 2019	Jan. 14, 2020	Apr. 17, 2020	Radiation (03CH03-SZ)
EXA Spectrum Anaiyzer	KEYSIGHT	N9010A	MY55150246	10Hz~44GHz;	Apr. 18, 2019	Jan. 14, 2020	Apr. 17, 2020	Radiation (03CH03-SZ)
Bilog Antenna	TeseQ	CBL6112D	35408	30MHz-2GHz	Apr. 19, 2019	Jan. 14, 2020	Apr. 18, 2020	Radiation (03CH03-SZ)
Double Ridge Horn Antenna	SCHWARZBECK	BBHA9120D	9120D-1355	1GHz~18GHz	Apr. 01, 2019	Jan. 14, 2020	Mar. 31, 2020	Radiation (03CH03-SZ)
Amplifier	Burgeon	BPA-530	102210	0.01Hz ~3000MHZ	Oct. 18, 2019	Jan. 14, 2020	Oct. 17, 2020	Radiation (03CH03-SZ)
HF Amplifier	MITEQ	TTA1840-35 -HG	1871923	18GHz~40GHz	Jul. 22, 2019	Jan. 14, 2020	Jul. 21, 2020	Radiation (03CH03-SZ)
SHF-EHF Horn	com-power	AH-840	101071	18Ghz-40GHz	Apr. 18, 2019	Jan. 14, 2020	Apr. 17, 2020	Radiation (03CH03-SZ)
Amplifier	Agilent Technologies	83017A	MY39501302	500MHz~26.5GHz	Dec. 20, 2019	Jan. 14, 2020	Dec. 19, 2020	Radiation (03CH03-SZ)
AC Power Source	Chroma	61601	616010001985	N/A	NCR	Jan. 14, 2020	NCR	Radiation (03CH03-SZ)
Turn Table	EM	EM1000	N/A	0~360 degree	NCR	Jan. 14, 2020	NCR	Radiation (03CH03-SZ)
Antenna Mast	EM	EM1000	N/A	1 m~4 m	NCR	Jan. 14, 2020	NCR	Radiation (03CH03-SZ)
EMI Test Receiver	R&S	ESR7	101404	9kHz~7GHz	Apr. 18, 2019	Feb. 26, 2020	Apr. 17, 2020	Radiation (03CH04-SZ)
EXA Spectrum Analyzer	KEYSIGHT	N9010A	MY55150213	10Hz~44GHz	Apr. 18, 2019	Feb. 26, 2020	Apr. 17, 2020	Radiation (03CH04-SZ)
Bilog Antenna	TeseQ	CBL6111D	41909	30MHz~1GHz	Aug. 27, 2019	Feb. 26, 2020	Aug. 26, 2020	Radiation (03CH04-SZ)



Double Ridge Horn Antenna	SCHWARZBECK	BBHA9120D	9120D-1474	1GHz~18GHz	Apr. 01, 2019	Feb. 26, 2020	Mar. 31, 2020	Radiation (03CH04-SZ)
Horn Antenna	SCHWARZBECK	BBHA9170	9170#679	15GHz~40GHz	Apr. 19, 2019	Feb. 26, 2020	Apr. 18, 2020	Radiation (03CH04-SZ)
Amplifier	Burgeon	BPA-530	102211	0.01Hz ~3000MHz	Oct. 18, 2019	Feb. 26, 2020	Oct. 17, 2020	Radiation (03CH04-SZ)
HF Amplifier	MITEQ	AMF-7D-00 101800-30-1 0P-R	1943528	1GHz~18GHz	Oct. 18, 2019	Feb. 26, 2020	Oct. 17, 2020	Radiation (03CH04-SZ)
HF Amplifier	MITEQ	TTA1840-35 -HG	1871923	18GHz~40GHz	Jul. 22, 2019	Feb. 26, 2020	Jul. 21, 2020	Radiation (03CH04-SZ)
Amplifier	Agilent Technologies	83017A	MY53270156	500MHz~26.5GHz	Aug. 26, 2019	Feb. 26, 2020	Aug. 25, 2020	Radiation (03CH04-SZ)
AC Power Source	Chroma	61601	N/A	N/A	NCR	Feb. 26, 2020	NCR	Radiation (03CH04-SZ)
Turn Table	EM	EM1000	N/A	0~360 degree	NCR	Feb. 26, 2020	NCR	Radiation (03CH04-SZ)
Antenna Mast	EM	EM1000	N/A	1 m~4 m	NCR	Feb. 26, 2020	NCR	Radiation (03CH04-SZ)

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.

03CH02-SZ

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	2.5dB
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Uncertainty of Radiated Emission Measurement (1 GHz ~ 18 GHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	3.3dB
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Uncertainty of Radiated Emission Measurement (18 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	3.7dB
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03CH03-SZ

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	3.0dB
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Uncertainty of Radiated Emission Measurement (1 GHz ~ 18 GHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	3.6dB
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Uncertainty of Radiated Emission Measurement (18 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	3.8dB
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03CH04-SZ

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	2.8dB
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Uncertainty of Radiated Emission Measurement (1 GHz ~ 18 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	3.1dB
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Uncertainty of Radiated Emission Measurement (18 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	3.9dB
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Appendix A. Test Results of Conducted Test

Conducted Output Power(Average power)

Bottom Antenna:

LTE Band 2 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
20	1	0	QPSK	22.68	22.73	22.80
20	1	49		22.63	22.69	22.73
20	1	99		22.61	22.66	22.68
20	50	0		21.65	21.67	21.71
20	50	24		21.74	21.77	21.79
20	50	50		21.76	21.79	21.81
20	100	0		21.74	21.75	21.78
20	1	0	16-QAM	22.04	22.06	22.07
20	1	49		21.99	22.02	22.07
20	1	99		21.99	21.99	22.05
20	50	0		20.68	20.71	20.72
20	50	24		20.84	20.77	20.82
20	50	50		20.78	20.80	20.87
20	100	0		20.75	20.70	20.72
20	1	0	64-QAM	20.68	20.73	20.77
20	1	49		20.61	20.60	20.66
20	1	99		20.63	20.65	20.64
20	50	0		19.44	19.54	19.49
20	50	24		19.57	19.59	19.56
20	50	50		19.52	19.59	19.58
20	100	0		19.50	19.49	19.48
15	1	0	QPSK	22.55	22.74	22.72
15	1	37		22.67	22.71	22.73
15	1	74		22.55	22.72	22.74
15	36	0		21.66	21.71	21.71
15	36	20		21.79	21.77	21.80
15	36	39		21.77	21.84	21.83
15	75	0		21.77	21.75	21.72



15	1	0	16-QAM	21.87	22.05	22.01
15	1	37		22.00	22.01	22.01
15	1	74		21.91	22.03	22.02
15	36	0		20.66	20.76	20.74
15	36	20		20.81	20.76	20.78
15	36	39		20.77	20.83	20.82
15	75	0		20.79	20.74	20.78
15	1	0	64-QAM	20.49	20.74	20.72
15	1	37		20.66	20.79	20.74
15	1	74		20.54	20.75	20.68
15	36	0		19.46	19.57	19.50
15	36	20		19.59	19.61	19.54
15	36	39		19.54	19.63	19.64
15	75	0		19.50	19.55	19.50



LTE Band 2 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK	22.19	22.34	22.63
10	1	25		22.56	22.66	22.59
10	1	49		22.29	22.32	22.59
10	25	0		21.52	21.58	21.58
10	25	12		21.71	21.66	21.73
10	25	25		21.55	21.60	21.64
10	50	0		21.56	21.56	21.66
10	1	0	16-QAM	21.62	21.59	22.02
10	1	25		21.94	22.00	22.00
10	1	49		21.62	21.71	21.97
10	25	0		20.49	20.63	20.56
10	25	12		20.68	20.66	20.77
10	25	25		20.56	20.59	20.63
10	50	0		20.61	20.60	20.67
10	1	0	64-QAM	20.16	20.24	20.65
10	1	25		20.53	20.62	20.63
10	1	49		20.28	20.38	20.56
10	25	0		19.28	19.38	19.32
10	25	12		19.50	19.47	19.51
10	25	25		19.32	19.44	19.38
10	50	0		19.36	19.39	19.40
5	1	0	QPSK	22.54	22.52	22.52
5	1	12		22.57	22.68	22.66
5	1	24		22.50	22.52	22.54
5	12	0		21.71	21.70	21.73
5	12	7		21.71	21.75	21.70
5	12	13		21.61	21.70	21.67
5	25	0		21.62	21.66	21.64
5	1	0	16-QAM	21.84	21.84	21.83
5	1	12		21.87	21.96	21.98
5	1	24		21.77	21.84	21.84
5	12	0		20.72	20.73	20.72
5	12	7		20.74	20.81	20.71



5	12	13		20.62	20.70	20.71
5	25	0		20.67	20.63	20.66
5	1	0	64-QAM	20.56	20.56	20.56
5	1	12		20.56	20.56	20.56
5	1	24		20.47	20.47	20.47
5	12	0		19.53	19.53	19.53
5	12	7		19.48	19.48	19.48
5	12	13		19.43	19.43	19.43
5	25	0		19.41	19.41	19.41



LTE Band 2 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
3	1	0	QPSK	22.64	22.64	22.69
3	1	8		22.64	22.71	22.73
3	1	14		22.52	22.59	22.56
3	8	0		21.66	21.71	21.78
3	8	4		21.66	21.75	21.79
3	8	7		21.64	21.71	21.63
3	15	0		21.62	21.66	21.70
3	1	0	16-QAM	21.95	21.98	21.97
3	1	8		21.95	22.08	22.01
3	1	14		21.78	21.94	21.96
3	8	0		20.74	20.75	20.82
3	8	4		20.73	20.85	20.81
3	8	7		20.65	20.77	20.76
3	15	0		20.70	20.66	20.74
3	1	0	64-QAM	20.61	20.64	20.59
3	1	8		20.64	20.69	20.70
3	1	14		20.52	20.60	20.56
3	8	0		19.53	19.54	19.50
3	8	4		19.51	19.58	19.49
3	8	7		19.42	19.55	19.45
3	15	0		19.44	19.50	19.44
1.4	1	0	QPSK	22.54	22.60	22.54
1.4	1	3		22.58	22.63	22.61
1.4	1	5		22.49	22.57	22.54
1.4	3	0		22.54	22.58	22.59
1.4	3	1		22.58	22.64	22.64
1.4	3	3		22.52	22.57	22.57
1.4	6	0		21.62	21.70	21.64
1.4	1	0	16-QAM	21.82	21.86	21.86
1.4	1	3		21.92	21.98	21.91
1.4	1	5		21.82	21.86	21.83
1.4	3	0		21.63	21.67	21.67
1.4	3	1		21.68	21.72	21.70



1.4	3	3	64-QAM	21.60	21.65	21.65
1.4	6	0		20.69	20.75	20.70
1.4	1	0		20.60	20.68	20.54
1.4	1	3		20.57	20.61	20.53
1.4	1	5		20.53	20.55	20.48
1.4	3	0		20.47	20.61	20.50
1.4	3	1		20.51	20.60	20.52
1.4	3	3		20.44	20.54	20.40
1.4	6	0		19.43	19.47	19.32



LTE Band 25 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
20	1	0	QPSK	23.09	23.19	23.12
20	1	49		23.07	23.09	23.08
20	1	99		22.94	23.04	23.02
20	50	0		22.03	22.16	22.07
20	50	24		22.17	22.25	22.23
20	50	50		22.10	22.17	22.12
20	100	0		22.08	22.19	22.15
20	1	0	16-QAM	22.46	22.46	22.50
20	1	49		22.45	22.48	22.48
20	1	99		22.27	22.40	22.39
20	50	0		21.11	21.21	21.18
20	50	24		21.20	21.26	21.25
20	50	50		21.13	21.18	21.18
20	100	0		21.09	21.17	21.17
20	1	0	64-QAM	21.05	21.16	21.06
20	1	49		21.04	21.16	21.06
20	1	99		20.98	21.09	20.90
20	50	0		19.90	19.98	19.89
20	50	24		19.93	20.05	19.95
20	50	50		19.89	19.99	19.92
20	100	0		19.82	19.94	19.87
15	1	0	QPSK	22.86	23.12	23.13
15	1	37		23.06	23.11	23.10
15	1	74		22.86	23.11	23.11
15	36	0		22.01	22.07	22.09
15	36	20		22.14	22.25	22.19
15	36	39		22.11	22.22	22.22
15	75	0		22.09	22.18	22.12
15	1	0	16-QAM	22.19	22.47	22.52
15	1	37		22.42	22.45	22.47
15	1	74		22.22	22.41	22.39
15	36	0		21.03	21.08	21.09
15	36	20		21.15	21.25	21.19



15	36	39	64-QAM	21.11	21.16	21.21
15	75	0		21.13	21.18	21.14
15	1	0		20.75	21.12	21.03
15	1	37		21.04	21.16	21.11
15	1	74		20.86	21.09	20.99
15	36	0		19.81	19.94	19.81
15	36	20		19.94	20.10	19.88
15	36	39		19.88	19.98	19.93
15	75	0		19.86	19.96	19.81



LTE Band 25 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK	22.60	22.64	22.93
10	1	25		22.75	22.92	22.91
10	1	49		22.51	22.63	22.86
10	25	0		21.78	21.87	21.89
10	25	12		21.96	22.04	22.04
10	25	25		21.88	21.98	22.00
10	50	0		21.89	21.95	21.94
10	1	0	16-QAM	21.84	22.00	22.28
10	1	25		22.10	22.26	22.27
10	1	49		21.83	22.02	22.26
10	25	0		20.79	20.89	20.89
10	25	12		20.95	21.08	21.09
10	25	25		20.84	20.98	20.96
10	50	0		20.87	20.99	20.99
10	1	0	64-QAM	20.51	20.63	20.77
10	1	25		20.79	20.90	20.92
10	1	49		20.57	20.68	20.79
10	25	0		19.56	19.69	19.54
10	25	12		19.70	19.82	19.74
10	25	25		19.66	19.74	19.66
10	50	0		19.67	19.79	19.64
5	1	0	QPSK	22.81	22.84	22.89
5	1	12		22.89	22.95	22.91
5	1	24		22.83	22.99	22.92
5	12	0		21.89	21.91	21.96
5	12	7		21.93	22.05	21.97
5	12	13		21.95	22.05	22.03
5	25	0		21.88	22.01	21.97
5	1	0	16-QAM	22.15	22.16	22.18
5	1	12		22.16	22.27	22.23
5	1	24		22.18	22.24	22.24
5	12	0		20.90	20.95	20.99
5	12	7		20.93	21.06	20.97



5	12	13	64-QAM	20.92	21.04	21.06
5	25	0		20.89	20.99	20.96
5	1	0		20.86	20.90	20.82
5	1	12		20.84	20.92	20.80
5	1	24		20.89	21.00	20.81
5	12	0		19.73	19.78	19.65
5	12	7		19.75	19.88	19.65
5	12	13		19.74	19.87	19.75
5	25	0		19.67	19.81	19.64



LTE Band 25 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
3	1	0	QPSK	22.79	22.83	22.89
3	1	8		22.85	22.99	22.97
3	1	14		22.80	22.92	22.96
3	8	0		21.90	21.91	21.98
3	8	4		21.95	22.04	21.98
3	8	7		21.89	22.00	22.03
3	15	0		21.92	21.98	21.99
3	1	0	16-QAM	22.12	22.25	22.29
3	1	8		22.17	22.35	22.39
3	1	14		22.20	22.30	22.32
3	8	0		20.95	20.99	21.07
3	8	4		20.96	21.04	21.09
3	8	7		20.95	21.08	21.06
3	15	0		20.93	21.01	21.03
3	1	0	64-QAM	20.83	20.87	20.75
3	1	8		20.89	20.90	20.81
3	1	14		20.88	20.92	20.71
3	8	0		19.72	19.72	19.69
3	8	4		19.69	19.87	19.71
3	8	7		19.74	19.84	19.73
3	15	0		19.70	19.78	19.66
1.4	1	0	QPSK	22.71	22.73	22.79
1.4	1	3		22.82	22.90	22.89
1.4	1	5		22.76	22.85	22.83
1.4	3	0		22.74	22.86	22.86
1.4	3	1		22.80	22.89	22.87
1.4	3	3		22.80	22.87	22.84
1.4	6	0		21.82	21.93	21.93
1.4	1	0	16-QAM	22.02	22.04	22.16
1.4	1	3		22.12	22.19	22.17
1.4	1	5		22.04	22.10	22.17
1.4	3	0		21.89	21.96	21.93
1.4	3	1		21.88	22.03	21.98



1.4	3	3	64-QAM	21.84	21.99	21.95
1.4	6	0		20.87	20.94	20.97
1.4	1	0		20.81	20.81	20.75
1.4	1	3		20.90	20.89	20.74
1.4	1	5		20.81	20.91	20.69
1.4	3	0		20.74	20.85	20.67
1.4	3	1		20.77	20.88	20.78
1.4	3	3		20.78	20.84	20.74
1.4	6	0		19.66	19.70	19.56



LTE Band 4 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
20	1	0	QPSK	22.74	22.81	22.82
20	1	49		22.93	23.04	23.01
20	1	99		22.72	22.66	22.65
20	50	0		22.15	22.16	22.08
20	50	24		21.97	22.04	22.02
20	50	50		22.03	22.08	22.03
20	100	0		21.92	21.99	21.97
20	1	0	16-QAM	22.05	22.13	22.16
20	1	49		22.28	22.38	22.40
20	1	99		22.06	22.03	22.03
20	50	0		20.98	21.06	21.01
20	50	24		21.18	21.14	21.07
20	50	50		21.02	21.07	21.04
20	100	0		21.04	21.01	20.98
20	1	0	64-QAM	20.73	20.93	20.96
20	1	49		21.01	21.11	21.14
20	1	99		20.78	20.89	20.83
20	50	0		19.86	20.03	20.00
20	50	24		20.00	20.05	20.05
20	50	50		19.93	20.05	20.04
20	100	0		19.92	19.98	20.01
15	1	0	QPSK	22.79	22.91	22.86
15	1	37		22.93	23.01	23.00
15	1	74		22.83	22.86	22.85
15	36	0		21.98	22.07	22.04
15	36	20		22.11	22.09	22.16
15	36	39		22.05	22.10	22.07
15	75	0		22.04	22.03	22.11
15	1	0	16-QAM	22.16	22.24	22.21
15	1	37		22.32	22.37	22.34
15	1	74		22.19	22.20	22.19
15	36	0		20.99	21.05	21.06
15	36	20		21.12	21.08	21.17



15	36	39	64-QAM	21.08	21.10	21.07
15	75	0		21.09	21.08	21.10
15	1	0		20.82	20.97	21.08
15	1	37		21.05	21.25	21.18
15	1	74		20.89	21.02	20.98
15	36	0		19.88	20.05	20.05
15	36	20		20.00	20.08	20.10
15	36	39		19.95	20.07	20.05
15	75	0		19.92	20.00	20.05



LTE Band 4 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK	22.58	22.59	22.57
10	1	25		22.77	22.90	22.84
10	1	49		22.49	22.51	22.53
10	25	0		21.76	21.88	21.85
10	25	12		21.95	21.92	21.93
10	25	25		21.79	21.87	21.84
10	50	0		21.86	21.84	21.80
10	1	0	16-QAM	21.86	21.94	21.95
10	1	25		22.15	22.20	22.18
10	1	49		21.82	21.92	21.86
10	25	0		20.79	20.88	20.91
10	25	12		20.98	20.97	20.93
10	25	25		20.82	20.90	20.82
10	50	0		20.85	20.86	20.84
10	1	0	64-QAM	20.58	20.81	20.74
10	1	25		20.98	21.04	21.02
10	1	49		20.63	20.81	20.82
10	25	0		19.66	19.83	19.82
10	25	12		19.83	19.89	19.87
10	25	25		19.71	19.82	19.79
10	50	0		19.72	19.81	19.75
5	1	0	QPSK	22.77	22.83	22.81
5	1	12		22.83	22.95	22.90
5	1	24		22.66	22.78	22.76
5	12	0		21.91	21.99	21.93
5	12	7		21.98	21.98	21.95
5	12	13		21.87	21.94	21.90
5	25	0		21.87	21.93	21.91
5	1	0	16-QAM	22.18	22.16	22.20
5	1	12		22.16	22.26	22.22
5	1	24		22.06	22.14	22.14
5	12	0		20.93	21.01	20.96
5	12	7		21.00	20.99	20.96



5	12	13	64-QAM	20.91	20.99	20.94
5	25	0		20.91	20.95	20.91
5	1	0		20.86	21.01	21.03
5	1	12		20.90	21.11	21.03
5	1	24		20.75	20.96	20.88
5	12	0		19.87	19.98	19.91
5	12	7		19.85	19.95	19.90
5	12	13		19.82	19.94	19.90
5	25	0		19.78	19.91	19.81



LTE Band 4 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
3	1	0	QPSK	22.88	22.89	22.89
3	1	8		22.88	23.02	22.97
3	1	14		22.77	22.90	22.84
3	8	0		21.95	21.96	22.02
3	8	4		21.97	22.02	22.02
3	8	7		21.92	22.01	21.93
3	15	0		21.92	21.98	21.95
3	1	0	16-QAM	22.23	22.23	22.24
3	1	8		22.25	22.36	22.35
3	1	14		22.12	22.23	22.19
3	8	0		21.00	21.01	21.06
3	8	4		21.04	21.09	21.05
3	8	7		20.95	21.10	21.01
3	15	0		20.99	21.00	21.02
3	1	0	64-QAM	20.91	21.02	21.03
3	1	8		20.95	21.11	21.04
3	1	14		20.88	21.04	20.95
3	8	0		19.86	19.96	19.92
3	8	4		19.88	20.03	19.93
3	8	7		19.80	19.99	19.91
3	15	0		19.80	19.89	19.92
1.4	1	0	QPSK	22.74	22.85	22.65
1.4	1	3		22.77	22.90	22.66
1.4	1	5		22.72	22.82	22.59
1.4	3	0		22.73	22.88	22.58
1.4	3	1		22.78	22.87	22.52
1.4	3	3		22.76	22.85	22.57
1.4	6	0		21.82	21.94	21.81
1.4	1	0	16-QAM	22.07	22.15	22.11
1.4	1	3		22.05	22.21	22.16
1.4	1	5		22.03	22.04	22.07
1.4	3	0		21.85	22.02	21.95
1.4	3	1		21.88	21.99	21.97



1.4	3	3	64-QAM	21.81	21.97	21.89
1.4	6	0		20.90	21.01	20.89
1.4	1	0		20.60	21.03	20.96
1.4	1	3		20.97	21.09	20.92
1.4	1	5		20.76	21.06	20.87
1.4	3	0		20.84	21.02	20.89
1.4	3	1		20.86	21.03	20.94
1.4	3	3		20.82	20.96	20.92
1.4	6	0		19.73	19.86	19.81



LTE Band 5 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK	23.01	22.83	22.91
10	1	25		22.95	22.88	22.66
10	1	49		22.92	22.80	22.90
10	25	0		21.95	21.94	21.91
10	25	12		22.12	21.86	22.03
10	25	25		22.06	22.05	21.97
10	50	0		21.90	21.88	21.86
10	1	0	16-QAM	22.12	22.13	22.04
10	1	25		22.07	22.09	22.03
10	1	49		22.07	22.02	22.13
10	25	0		20.89	20.82	20.95
10	25	12		20.99	20.84	21.08
10	25	25		20.98	20.96	20.86
10	50	0		20.91	20.85	20.89
10	1	0	64-QAM	20.92	21.24	21.23
10	1	25		21.17	21.36	21.22
10	1	49		21.29	21.28	21.32
10	25	0		20.03	19.92	19.84
10	25	12		20.03	19.96	19.95
10	25	25		20.00	19.91	20.04
10	50	0		19.87	19.89	19.91
5	1	0	QPSK	22.88	22.87	22.81
5	1	12		22.96	22.92	23.00
5	1	24		23.00	22.92	22.81
5	12	0		22.00	21.97	21.98
5	12	7		22.05	22.00	21.96
5	12	13		21.96	22.01	21.99
5	25	0		21.91	21.93	21.92
5	1	0	16-QAM	22.00	22.37	22.29
5	1	12		22.04	22.47	22.46
5	1	24		22.02	22.45	22.40
5	12	0		21.01	20.97	20.98
5	12	7		21.07	21.08	20.99



5	12	13	64-QAM	21.04	21.04	20.89
5	25	0		21.07	20.85	20.84
5	1	0		20.95	21.29	21.22
5	1	12		21.06	21.29	21.22
5	1	24		21.44	20.97	21.04
5	12	0		20.09	20.05	20.07
5	12	7		20.15	20.03	20.07
5	12	13		20.05	20.15	20.14
5	25	0		20.07	19.79	19.90



LTE Band 5 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
3	1	0	QPSK	22.91	22.73	22.77
3	1	8		22.95	22.90	22.78
3	1	14		22.99	22.80	22.80
3	8	0		21.98	22.05	21.99
3	8	4		22.05	21.97	21.99
3	8	7		22.41	21.95	21.99
3	15	0		21.95	21.87	22.06
3	1	0	16-QAM	22.26	22.06	22.21
3	1	8		22.40	22.22	22.20
3	1	14		22.27	22.25	22.26
3	8	0		21.02	20.98	21.08
3	8	4		20.96	20.99	20.99
3	8	7		21.02	20.99	20.90
3	15	0		21.06	20.93	20.96
3	1	0	64-QAM	21.24	21.16	21.18
3	1	8		21.45	21.30	21.41
3	1	14		21.28	20.98	21.34
3	8	0		20.21	20.10	20.20
3	8	4		20.15	20.09	20.24
3	8	7		20.28	20.13	20.08
3	15	0		19.93	19.91	19.91
1.4	1	0	QPSK	22.91	22.75	22.76
1.4	1	3		22.83	22.88	22.89
1.4	1	5		22.85	22.82	22.78
1.4	3	0		22.86	22.75	22.82
1.4	3	1		22.93	22.82	22.95
1.4	3	3		22.82	22.94	22.89
1.4	6	0		21.91	21.88	21.86
1.4	1	0	16-QAM	22.37	22.38	22.40
1.4	1	3		22.48	22.45	22.47
1.4	1	5		22.46	22.39	22.29
1.4	3	0		21.93	21.92	21.96
1.4	3	1		21.94	21.97	21.99



1.4	3	3	64-QAM	21.92	22.00	21.98
1.4	6	0		20.93	20.82	21.02
1.4	1	0		21.05	21.19	20.99
1.4	1	3		21.23	21.11	21.16
1.4	1	5		21.08	21.23	21.22
1.4	3	0		21.20	21.10	21.13
1.4	3	1		21.20	21.09	21.11
1.4	3	3		21.02	21.22	21.14
1.4	6	0		19.89	19.86	19.87



LTE Band 26 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
15	1	0	QPSK	22.98	23.12	23.08
15	1	37		22.98	22.96	23.01
15	1	74		23.10	23.11	23.09
15	36	0		22.04	22.00	22.09
15	36	20		22.24	22.25	22.20
15	36	39		22.18	22.02	22.04
15	75	0		22.10	22.11	22.02
15	1	0	16-QAM	22.61	22.52	22.78
15	1	37		22.73	22.70	22.61
15	1	74		22.51	22.64	22.35
15	36	0		21.10	21.03	21.10
15	36	20		21.19	21.12	21.17
15	36	39		21.03	21.17	21.10
15	75	0		21.15	21.11	21.14
15	1	0	64-QAM	21.18	21.21	21.09
15	1	37		21.25	21.30	21.23
15	1	74		21.20	21.39	21.14
15	36	0		20.00	20.14	20.21
15	36	20		20.30	20.17	20.20
15	36	39		20.23	20.19	20.23
15	75	0		20.20	20.08	20.11
10	1	0	QPSK	22.94	22.93	22.94
10	1	25		22.84	22.89	22.94
10	1	49		22.92	22.80	22.86
10	25	0		21.92	21.81	21.87
10	25	12		22.05	22.01	21.99
10	25	25		21.99	21.96	22.01
10	50	0		21.98	21.88	21.85
10	1	0	16-QAM	22.29	22.60	22.72
10	1	25		22.56	22.51	22.63
10	1	49		22.32	22.37	22.35
10	25	0		20.86	20.89	20.86
10	25	12		21.13	21.06	21.09



10	25	25	64-QAM	20.99	21.09	21.02
10	50	0		20.99	20.86	20.84
10	1	0		21.12	21.23	21.25
10	1	25		21.37	21.21	21.33
10	1	49		21.37	21.30	21.14
10	25	0		19.99	20.00	19.99
10	25	12		20.19	20.05	19.91
10	25	25		20.10	19.97	19.97
10	50	0		20.04	20.00	20.00



LTE Band 26 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	22.85	22.84	23.00
5	1	12		22.99	22.95	23.10
5	1	24		23.08	23.10	22.99
5	12	0		22.02	22.01	22.00
5	12	7		22.02	22.05	22.04
5	12	13		22.09	22.03	22.06
5	25	0		22.11	22.00	21.96
5	1	0	16-QAM	22.01	21.90	21.91
5	1	12		21.96	21.82	21.83
5	1	24		22.01	22.02	21.96
5	12	0		21.06	21.01	21.03
5	12	7		21.22	21.06	21.10
5	12	13		21.02	20.95	21.04
5	25	0		21.01	21.00	21.02
5	1	0	64-QAM	21.31	21.31	21.19
5	1	12		21.16	21.24	21.26
5	1	24		21.13	21.20	21.06
5	12	0		20.18	20.09	20.04
5	12	7		20.23	20.25	20.15
5	12	13		20.13	20.16	20.02
5	25	0		20.10	20.09	20.05
3	1	0	QPSK	22.71	22.92	23.01
3	1	8		22.99	23.00	23.07
3	1	14		22.90	22.98	22.96
3	8	0		22.12	22.03	22.01
3	8	4		22.14	22.11	22.05
3	8	7		22.10	22.05	22.02
3	15	0		22.09	22.04	22.08
3	1	0	16-QAM	21.97	22.31	22.33
3	1	8		22.45	22.33	22.31
3	1	14		22.55	22.36	22.35
3	8	0		21.09	20.99	21.11
3	8	4		21.13	21.06	21.06



3	8	7	64-QAM	21.17	21.05	20.95
3	15	0		21.10	20.97	21.04
3	1	0		21.35	21.00	21.08
3	1	8		21.03	21.11	20.96
3	1	14		21.02	21.01	21.00
3	8	0		20.02	20.08	19.98
3	8	4		20.16	20.12	20.01
3	8	7		20.16	20.07	20.14
3	15	0		19.99	19.91	20.15



LTE Band 26 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
1.4	1	0	QPSK	22.85	22.72	22.85
1.4	1	3		23.09	23.02	22.95
1.4	1	5		22.84	22.93	22.82
1.4	3	0		22.93	22.82	22.91
1.4	3	1		22.93	22.84	22.85
1.4	3	3		22.98	22.91	22.84
1.4	6	0		22.00	21.96	21.95
1.4	1	0	16-QAM	22.29	21.96	22.04
1.4	1	3		22.29	22.11	22.27
1.4	1	5		22.28	21.93	22.09
1.4	3	0		22.02	21.96	21.99
1.4	3	1		22.06	22.00	21.95
1.4	3	3		22.01	22.11	22.03
1.4	6	0		21.19	21.11	21.04
1.4	1	0	64-QAM	21.24	21.08	20.86
1.4	1	3		21.08	21.10	20.93
1.4	1	5		20.99	20.80	20.91
1.4	3	0		21.01	20.94	21.18
1.4	3	1		21.04	20.97	21.21
1.4	3	3		21.13	21.10	20.96
1.4	6	0		20.11	19.94	19.86



LTE Band 66 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
20	1	0	QPSK	22.79	23.18	22.88
20	1	49		23.05	23.13	23.07
20	1	99		22.77	22.72	22.84
20	50	0		22.08	22.17	22.15
20	50	24		22.18	22.29	22.25
20	50	50		22.02	22.14	22.12
20	100	0		22.10	22.22	22.16
20	1	0	16-QAM	22.02	22.58	22.17
20	1	49		22.29	22.42	22.36
20	1	99		22.04	22.24	22.06
20	50	0		21.09	21.20	21.16
20	50	24		21.19	21.27	21.19
20	50	50		21.04	21.13	21.11
20	100	0		21.12	21.18	21.10
20	1	0	64-QAM	20.92	21.27	21.06
20	1	49		21.18	21.16	21.29
20	1	99		20.91	21.07	20.97
20	50	0		20.00	19.97	20.18
20	50	24		20.13	20.04	20.22
20	50	50		19.99	20.04	20.16
20	100	0		20.03	20.09	20.13
15	1	0	QPSK	22.92	23.04	23.16
15	1	37		22.99	23.12	23.10
15	1	74		22.84	22.93	23.07
15	36	0		22.10	22.17	22.22
15	36	20		22.17	22.17	22.17
15	36	39		22.07	22.16	22.16
15	75	0		22.14	22.10	22.15
15	1	0	16-QAM	22.26	22.36	22.56
15	1	37		22.39	22.41	22.47
15	1	74		22.14	22.22	22.36
15	36	0		21.09	21.18	21.23
15	36	20		21.18	21.16	21.19



15	36	39	64-QAM	21.09	21.15	21.17
15	75	0		21.09	21.12	21.17
15	1	0		21.04	21.23	21.15
15	1	37		21.20	21.29	21.20
15	1	74		20.96	21.11	21.11
15	36	0		20.04	20.24	20.03
15	36	20		20.11	20.21	20.08
15	36	39		20.03	20.19	20.06
15	75	0		20.03	20.14	20.04



LTE Band 66 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK	22.55	22.64	22.69
10	1	25		22.79	22.92	22.88
10	1	49		22.55	22.64	22.63
10	25	0		21.85	21.92	21.95
10	25	12		21.96	21.99	21.99
10	25	25		21.86	21.95	21.96
10	50	0		21.91	21.89	21.94
10	1	0	16-QAM	21.93	22.02	22.10
10	1	25		22.21	22.31	22.31
10	1	49		21.90	22.07	22.12
10	25	0		20.84	20.95	20.95
10	25	12		20.96	20.97	21.03
10	25	25		20.84	20.90	20.93
10	50	0		20.90	20.88	20.91
10	1	0	64-QAM	20.65	20.83	20.75
10	1	25		20.96	21.15	21.11
10	1	49		20.71	20.83	20.83
10	25	0		19.78	19.95	19.84
10	25	12		19.94	20.04	19.88
10	25	25		19.81	19.95	19.80
10	50	0		19.84	19.95	19.79
5	1	0	QPSK	22.80	22.92	22.94
5	1	12		22.84	22.98	23.02
5	1	24		22.74	22.85	22.88
5	12	0		21.99	22.02	22.04
5	12	7		21.98	22.09	22.10
5	12	13		21.92	22.00	22.01
5	25	0		21.95	21.93	21.99
5	1	0	16-QAM	22.10	22.20	22.24
5	1	12		22.18	22.25	22.29
5	1	24		22.08	22.25	22.17
5	12	0		21.00	21.06	21.06
5	12	7		21.01	21.07	21.12



5	12	13	64-QAM	20.94	21.00	20.99
5	25	0		20.95	20.98	21.00
5	1	0		20.95	21.13	21.08
5	1	12		20.99	21.12	21.01
5	1	24		20.90	21.08	20.99
5	12	0		19.95	20.10	19.92
5	12	7		19.95	20.14	19.98
5	12	13		19.88	20.07	19.90
5	25	0		19.89	19.97	19.83



LTE Band 66 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
3	1	0	QPSK	22.86	22.99	22.96
3	1	8		22.88	23.01	23.04
3	1	14		22.80	22.92	22.93
3	8	0		21.98	22.02	22.00
3	8	4		21.98	22.06	21.98
3	8	7		21.92	22.02	22.00
3	15	0		21.92	21.99	21.97
3	1	0	16-QAM	22.10	22.21	22.18
3	1	8		22.18	22.32	22.32
3	1	14		22.02	22.22	22.18
3	8	0		21.03	21.13	21.11
3	8	4		21.04	21.17	21.10
3	8	7		20.99	21.06	21.07
3	15	0		20.99	21.00	20.99
3	1	0	64-QAM	20.96	21.18	21.04
3	1	8		21.03	21.22	21.12
3	1	14		20.88	21.09	21.01
3	8	0		19.95	20.08	19.89
3	8	4		19.94	20.12	19.87
3	8	7		19.91	20.05	19.89
3	15	0		19.87	20.01	19.83
1.4	1	0	QPSK	22.67	22.93	22.91
1.4	1	3		22.80	22.97	22.96
1.4	1	5		22.71	22.85	22.85
1.4	3	0		22.77	22.95	22.93
1.4	3	1		22.78	22.99	22.96
1.4	3	3		22.73	22.91	22.89
1.4	6	0		21.88	21.98	21.95
1.4	1	0	16-QAM	22.05	22.25	22.25
1.4	1	3		22.11	22.33	22.33
1.4	1	5		22.07	22.24	22.25
1.4	3	0		21.86	22.01	22.00
1.4	3	1		21.92	22.03	22.03



1.4	3	3	64-QAM	21.87	21.98	21.99
1.4	6	0		20.95	21.10	21.08
1.4	1	0		20.82	21.17	21.03
1.4	1	3		20.94	21.21	21.01
1.4	1	5		20.83	21.08	20.94
1.4	3	0		20.89	21.10	20.96
1.4	3	1		20.98	21.21	20.97
1.4	3	3		20.87	21.08	20.94
1.4	6	0		19.78	19.98	19.79

Note: For Top/Bottom Antenna, the higher Conducted power is showed in this report.



CA Power

Bottom Antenna:

CA_66C								
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		
132072	132270	QPSK	1	0	0	0	1	21.16
132323	132521	QPSK	1	0	1	99	2	21.49
132374	132572	QPSK	1	0	1	99	2	21.29
132072	132270	16QAM	1	0	0	0	1	20.38
132323	132521	16QAM	1	0	1	99	2	20.73
132374	132572	16QAM	1	0	1	99	2	20.65
132072	132270	64QAM	1	0	0	0	1	19.44
132323	132521	64QAM	1	0	1	99	2	19.84
132374	132572	64QAM	1	0	1	99	2	19.77



ERP/EIRP

LTE Band 2 (GT - LC = -2.00 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	1850.7	1880	1909.3	1851.5	1880	1908.5	1852.5	1880	1907.5
(MHz)									
Conducted Power (dBm)	22.58	22.64	22.64	22.64	22.71	22.73	22.57	22.68	22.66
Conducted Power (Watts)	0.1811	0.1837	0.1837	0.1837	0.1866	0.1875	0.1807	0.1854	0.1845
EIRP(dBm)	20.58	20.64	20.64	20.64	20.71	20.73	20.57	20.68	20.66
EIRP(Watts)	0.1143	0.1159	0.1159	0.1159	0.1178	0.1183	0.1140	0.1169	0.1164

LTE Band 2 (GT - LC = -2.00 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	1855	1880	1905	1857.5	1880	1902.5	1860	1880	1900
(MHz)									
Conducted Power (dBm)	22.56	22.66	22.59	22.55	22.72	22.74	22.68	22.73	22.80
Conducted Power (Watts)	0.1803	0.1845	0.1816	0.1799	0.1871	0.1879	0.1854	0.1875	0.1905
EIRP(dBm)	20.56	20.66	20.59	20.55	20.72	20.74	20.68	20.73	20.80
EIRP(Watts)	0.1138	0.1164	0.1146	0.1135	0.1180	0.1186	0.1169	0.1183	0.1202



LTE Band 2 (GT - LC = -2.00 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)	21.92	21.98	21.91	21.95	22.08	22.01	21.87	21.96	21.98
Conducted Power (Watts)	0.1556	0.1578	0.1552	0.1567	0.1614	0.1589	0.1538	0.1570	0.1578
EIRP(dBm)	19.92	19.98	19.91	19.95	20.08	20.01	19.87	19.96	19.98
EIRP(Watts)	0.0982	0.0995	0.0979	0.0989	0.1019	0.1002	0.0971	0.0991	0.0995

LTE Band 2 (GT - LC = -2.00 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)	21.62	21.59	22.02	21.87	22.05	22.01	22.04	22.06	22.07
Conducted Power (Watts)	0.1452	0.1442	0.1592	0.1538	0.1603	0.1589	0.1600	0.1607	0.1611
EIRP(dBm)	19.62	19.59	20.02	19.87	20.05	20.01	20.04	20.06	20.07
EIRP(Watts)	0.0916	0.0910	0.1005	0.0971	0.1012	0.1002	0.1009	0.1014	0.1016



LTE Band 2 (GT - LC = -2.00 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)	20.60	20.68	20.54	20.64	20.69	20.70	20.56	20.56	20.56
Conducted Power (Watts)	0.1148	0.1169	0.1132	0.1159	0.1172	0.1175	0.1138	0.1138	0.1138
EIRP(dBm)	18.60	18.68	18.54	18.64	18.69	18.70	18.56	18.56	18.56
EIRP(Watts)	0.0724	0.0738	0.0714	0.0731	0.0740	0.0741	0.0718	0.0718	0.0718

LTE Band 2 (GT - LC = -2.00 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)	20.16	20.24	20.65	20.66	20.79	20.74	20.68	20.73	20.77
Conducted Power (Watts)	0.1038	0.1057	0.1161	0.1164	0.1199	0.1186	0.1169	0.1183	0.1194
EIRP(dBm)	18.16	18.24	18.65	18.66	18.79	18.74	18.68	18.73	18.77
EIRP(Watts)	0.0655	0.0667	0.0733	0.0735	0.0757	0.0748	0.0738	0.0746	0.0753



LTE Band 4 (GT - LC = -2.00 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)	22.77	22.90	22.66	22.88	23.02	22.97	22.83	22.95	22.90
Conducted Power (Watts)	0.1892	0.1950	0.1845	0.1941	0.2004	0.1982	0.1919	0.1972	0.1950
EIRP(dBm)	20.77	20.90	20.66	20.88	21.02	20.97	20.83	20.95	20.90
EIRP(Watts)	0.1194	0.1230	0.1164	0.1225	0.1265	0.1250	0.1211	0.1245	0.1230

LTE Band 4 (GT - LC = -2.00 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)	22.77	22.90	22.84	22.93	23.01	23.00	22.93	23.04	23.01
Conducted Power (Watts)	0.1892	0.1950	0.1923	0.1963	0.2000	0.1995	0.1963	0.2014	0.2000
EIRP(dBm)	20.77	20.90	20.84	20.93	21.01	21.00	20.93	21.04	21.01
EIRP(Watts)	0.1194	0.1230	0.1213	0.1239	0.1262	0.1259	0.1239	0.1271	0.1262



LTE Band 4 (GT - LC = -2.00 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)	22.05	22.21	22.16	22.25	22.36	22.35	22.16	22.26	22.22
Conducted Power (Watts)	0.1603	0.1663	0.1644	0.1679	0.1722	0.1718	0.1644	0.1683	0.1667
EIRP(dBm)	20.05	20.21	20.16	20.25	20.36	20.35	20.16	20.26	20.22
EIRP(Watts)	0.1012	0.1050	0.1038	0.1059	0.1086	0.1084	0.1038	0.1062	0.1052

LTE Band 4 (GT - LC = -2.00 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)	22.15	22.20	22.18	22.32	22.37	22.34	22.28	22.38	22.40
Conducted Power (Watts)	0.1641	0.1660	0.1652	0.1706	0.1726	0.1714	0.1690	0.1730	0.1738
EIRP(dBm)	20.15	20.20	20.18	20.32	20.37	20.34	20.28	20.38	20.40
EIRP(Watts)	0.1035	0.1047	0.1042	0.1076	0.1089	0.1081	0.1067	0.1091	0.1096



LTE Band 4 (GT - LC = -2.00 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)	20.97	21.09	20.92	20.95	21.11	21.04	20.90	21.11	21.03
Conducted Power (Watts)	0.1250	0.1285	0.1236	0.1245	0.1291	0.1271	0.1230	0.1291	0.1268
EIRP(dBm)	18.97	19.09	18.92	18.95	19.11	19.04	18.90	19.11	19.03
EIRP(Watts)	0.0789	0.0811	0.0780	0.0785	0.0815	0.0802	0.0776	0.0815	0.0800

LTE Band 4 (GT - LC = -2.00 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)	20.98	21.04	21.02	21.05	21.25	21.18	21.01	21.11	21.14
Conducted Power (Watts)	0.1253	0.1271	0.1265	0.1274	0.1334	0.1312	0.1262	0.1291	0.1300
EIRP(dBm)	18.98	19.04	19.02	19.05	19.25	19.18	19.01	19.11	19.14
EIRP(Watts)	0.0791	0.0802	0.0798	0.0804	0.0841	0.0828	0.0796	0.0815	0.0820



LTE Band 5 (GT - LC = -2.00 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)	22.93	22.82	22.95	22.99	22.80	22.80	22.96	22.92	23.00
Conducted Power (Watts)	0.1963	0.1914	0.1972	0.1991	0.1905	0.1905	0.1977	0.1959	0.1995
ERP(dBm)	18.78	18.67	18.80	18.84	18.65	18.65	18.81	18.77	18.85
ERP(Watts)	0.0755	0.0736	0.0759	0.0766	0.0733	0.0733	0.0760	0.0753	0.0767

LTE Band 5 (GT - LC = -2.00 dB) QPSK			
Bandwidth	10M		
Channel	20450	20525	20600
	(Low)	(Mid)	(High)
Frequency (MHz)	829	836.5	844
Conducted Power (dBm)	23.01	22.83	22.91
Conducted Power (Watts)	0.2000	0.1919	0.1954
ERP(dBm)	18.86	18.68	18.76
ERP(Watts)	0.0769	0.0738	0.0752



LTE Band 5 (GT - LC = -2.00 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)	22.48	22.45	22.47	22.40	22.22	22.20	22.04	22.47	22.46
Conducted Power (Watts)	0.1770	0.1758	0.1766	0.1738	0.1667	0.1660	0.1600	0.1766	0.1762
ERP(dBm)	18.33	18.30	18.32	18.25	18.07	18.05	17.89	18.32	18.31
ERP(Watts)	0.0681	0.0676	0.0679	0.0668	0.0641	0.0638	0.0615	0.0679	0.0678

LTE Band 5 (GT - LC = -2.00 dB) 16QAM			
Bandwidth	10M		
Channel	20450	20525	20600
	(Low)	(Mid)	(High)
Frequency (MHz)	829	836.5	844
Conducted Power (dBm)	22.12	22.13	22.04
Conducted Power (Watts)	0.1629	0.1633	0.1600
ERP(dBm)	17.97	17.98	17.89
ERP(Watts)	0.0627	0.0628	0.0615



LTE Band 5 (GT - LC = -2.00 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)	21.23	21.11	21.16	21.45	21.30	21.41	21.44	20.97	21.04
Conducted Power (Watts)	0.1327	0.1291	0.1306	0.1396	0.1349	0.1384	0.1393	0.1250	0.1271
ERP(dBm)	17.08	16.96	17.01	17.30	17.15	17.26	17.29	16.82	16.89
ERP(Watts)	0.0511	0.0497	0.0502	0.0537	0.0519	0.0532	0.0536	0.0481	0.0489

LTE Band 5 (GT - LC = -2.00 dB) 64QAM			
Bandwidth	10M		
Channel	20450	20525	20600
	(Low)	(Mid)	(High)
Frequency (MHz)	829	836.5	844
Conducted Power (dBm)	21.17	21.36	21.22
Conducted Power (Watts)	0.1309	0.1368	0.1324
ERP(dBm)	17.02	17.21	17.07
ERP(Watts)	0.0504	0.0526	0.0509



LTE Band 25 (GT - LC = -2.00 dB) QPSK									
Bandwidth	1.4M			3M			5M		
Channel	26407	26340	26683	26055	26340	26675	26065	26340	26665
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency (MHz)	1850.7	1880	1914.3	1851.5	1880	1913.5	1852.5	1880	1912.5
Conducted Power (dBm)	22.82	22.90	22.89	22.85	22.99	22.97	22.83	22.99	22.92
Conducted Power (Watts)	0.1914	0.1950	0.1945	0.1928	0.1991	0.1982	0.1919	0.1991	0.1959
EIRP(dBm)	20.82	20.90	20.89	20.85	20.99	20.97	20.83	20.99	20.92
EIRP(Watts)	0.1208	0.1230	0.1227	0.1216	0.1256	0.1250	0.1211	0.1256	0.1236

LTE Band 25 (GT - LC = -2.00 dB) QPSK									
Bandwidth	10M			15M			20M		
Channel	26090	26340	26640	26115	26340	26615	26140	26340	26590
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency (MHz)	1855	1880	1910	1857.5	1880	1907.5	1860	1880	1905
Conducted Power (dBm)	22.60	22.64	22.93	22.86	23.12	23.13	23.09	23.19	23.12
Conducted Power (Watts)	0.1820	0.1837	0.1963	0.1932	0.2051	0.2056	0.2037	0.2084	0.2051
EIRP(dBm)	20.60	20.64	20.93	20.86	21.12	21.13	21.09	21.19	21.12
EIRP(Watts)	0.1148	0.1159	0.1239	0.1219	0.1294	0.1297	0.1285	0.1315	0.1294



LTE Band 25 (GT - LC = -2.00 dB) 16QAM									
Bandwidth	1.4M			3M			5M		
Channel	26407	26340	26683	26055	26340	26675	26065	26340	26665
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency (MHz)	1850.7	1880	1914.3	1851.5	1880	1913.5	1852.5	1880	1912.5
Conducted Power (dBm)	22.12	22.19	22.17	22.17	22.35	22.39	22.16	22.27	22.23
Conducted Power (Watts)	0.1629	0.1656	0.1648	0.1648	0.1718	0.1734	0.1644	0.1687	0.1671
EIRP(dBm)	20.12	20.19	20.17	20.17	20.35	20.39	20.16	20.27	20.23
EIRP(Watts)	0.1028	0.1045	0.1040	0.1040	0.1084	0.1094	0.1038	0.1064	0.1054

LTE Band 25 (GT - LC = -2.00 dB) 16QAM									
Bandwidth	10M			15M			20M		
Channel	26090	26340	26640	26115	26340	26615	26140	26340	26590
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency (MHz)	1855	1880	1910	1857.5	1880	1907.5	1860	1880	1905
Conducted Power (dBm)	21.84	22.00	22.28	22.19	22.47	22.52	22.46	22.46	22.50
Conducted Power (Watts)	0.1528	0.1585	0.1690	0.1656	0.1766	0.1786	0.1762	0.1762	0.1778
EIRP(dBm)	19.84	20.00	20.28	20.19	20.47	20.52	20.46	20.46	20.50
EIRP(Watts)	0.0964	0.1000	0.1067	0.1045	0.1114	0.1127	0.1112	0.1112	0.1122



LTE Band 25 (GT - LC = -2.00 dB) 64QAM									
Bandwidth	1.4M			3M			5M		
Channel	26407	26340	26683	26055	26340	26675	26065	26340	26665
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency (MHz)	1850.7	1880	1914.3	1851.5	1880	1913.5	1852.5	1880	1912.5
Conducted Power (dBm)	20.81	20.91	20.69	20.88	20.92	20.71	20.89	21.00	20.81
Conducted Power (Watts)	0.1205	0.1233	0.1172	0.1225	0.1236	0.1178	0.1227	0.1259	0.1205
EIRP(dBm)	18.81	18.91	18.69	18.88	18.92	18.71	18.89	19.00	18.81
EIRP(Watts)	0.0760	0.0778	0.0740	0.0773	0.0780	0.0743	0.0774	0.0794	0.0760

LTE Band 25 (GT - LC = -2.00 dB) 64QAM									
Bandwidth	10M			15M			20M		
Channel	26090	26340	26640	26115	26340	26615	26140	26340	26590
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency (MHz)	1855	1880	1910	1857.5	1880	1907.5	1860	1880	1905
Conducted Power (dBm)	20.79	20.90	20.92	21.04	21.16	21.11	21.05	21.16	21.06
Conducted Power (Watts)	0.1199	0.1230	0.1236	0.1271	0.1306	0.1291	0.1274	0.1306	0.1276
EIRP(dBm)	18.79	18.90	18.92	19.04	19.16	19.11	19.05	19.16	19.06
EIRP(Watts)	0.0757	0.0776	0.0780	0.0802	0.0824	0.0815	0.0804	0.0824	0.0805



LTE Band 26 (GT - LC = -2.00 dB) QPSK									
Bandwidth	1.4M			3M			5M		
Channel	26797	26915	27033	26805	26915	27025	26815	26915	27015
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency	824.7	836.5	848.3	825.5	836.5	847.5	826.5	836.5	846.5
(MHz)									
Conducted Power (dBm)	23.09	23.02	22.95	22.99	23.00	23.07	23.08	23.10	22.99
Conducted Power (Watts)	0.2037	0.2004	0.1972	0.1991	0.1995	0.2028	0.2032	0.2042	0.1991
ERP(dBm)	18.94	18.87	18.80	18.84	18.85	18.92	18.93	18.95	18.84
ERP(Watts)	0.0783	0.0771	0.0759	0.0766	0.0767	0.0780	0.0782	0.0785	0.0766

LTE Band 26 (GT - LC = -2.00 dB) QPSK							
Bandwidth	10M			15M			15M
Channel	26840	26915	26990	26865	26915	26965	26765
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)
Frequency	829	836.5	844	831.5	836.5	841.5	821.5
(MHz)							
Conducted Power (dBm)	22.94	22.93	22.94	22.98	23.12	23.08	23.10
Conducted Power (Watts)	0.1968	0.1963	0.1968	0.1986	0.2051	0.2032	0.2042
ERP(dBm)	18.79	18.78	18.79	18.83	18.97	18.93	18.95
ERP(Watts)	0.0757	0.0755	0.0757	0.0764	0.0789	0.0782	0.0785



LTE Band 26 (GT - LC = -2.00 dB) 16QAM									
Bandwidth	1.4M			3M			5M		
Channel	26797	26915	27033	26805	26915	27025	26815	26915	27015
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency	824.7	836.5	848.3	825.5	836.5	847.5	826.5	836.5	846.5
(MHz)									
Conducted Power (dBm)	22.29	22.11	22.27	22.55	22.36	22.35	22.01	22.02	21.96
Conducted Power (Watts)	0.1694	0.1626	0.1687	0.1799	0.1722	0.1718	0.1589	0.1592	0.1570
ERP(dBm)	18.14	17.96	18.12	18.40	18.21	18.20	17.86	17.87	17.81
ERP(Watts)	0.0652	0.0625	0.0649	0.0692	0.0662	0.0661	0.0611	0.0612	0.0604

LTE Band 26 (GT - LC = -2.00 dB) 16QAM							
Bandwidth	10M			15M			15M
Channel	26840	26915	26990	26865	26915	26965	26765
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)
Frequency	829	836.5	844	831.5	836.5	841.5	821.5
(MHz)							
Conducted Power (dBm)	22.29	22.60	22.72	22.61	22.52	22.78	22.73
Conducted Power (Watts)	0.1694	0.1820	0.1871	0.1824	0.1786	0.1897	0.1875
ERP(dBm)	18.14	18.45	18.57	18.46	18.37	18.63	18.58
ERP(Watts)	0.0652	0.0700	0.0719	0.0701	0.0687	0.0729	0.0721



LTE Band 26 (GT - LC = -2.00 dB) 64QAM									
Bandwidth	1.4M			3M			5M		
Channel	26797	26915	27033	26805	26915	27025	26815	26915	27015
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency	824.7	836.5	848.3	825.5	836.5	847.5	826.5	836.5	846.5
(MHz)									
Conducted Power (dBm)	21.24	21.08	20.86	21.35	21.00	21.08	21.31	21.31	21.19
Conducted Power (Watts)	0.1330	0.1282	0.1219	0.1365	0.1259	0.1282	0.1352	0.1352	0.1315
ERP(dBm)	17.09	16.93	16.71	17.20	16.85	16.93	17.16	17.16	17.04
ERP(Watts)	0.0512	0.0493	0.0469	0.0525	0.0484	0.0493	0.0520	0.0520	0.0506

LTE Band 26 (GT - LC = -2.00 dB) 64QAM							
Bandwidth	10M			15M			15M
Channel	26840	26915	26990	26865	26915	26965	26765
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)
Frequency	829	836.5	844	831.5	836.5	841.5	821.5
(MHz)							
Conducted Power (dBm)	21.37	21.30	21.14	21.20	21.39	21.14	21.25
Conducted Power (Watts)	0.1371	0.1349	0.1300	0.1318	0.1377	0.1300	0.1334
ERP(dBm)	17.22	17.15	16.99	17.05	17.24	16.99	17.10
ERP(Watts)	0.0527	0.0519	0.0500	0.0507	0.0530	0.0500	0.0513



LTE Band 66 (GT - LC = -2.00 dB) QPSK									
Bandwidth	1.4M			3M			5M		
Channel	131979	132322	132665	131987	132322	132657	131997	132322	132647
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency (MHz)	1710.7	1745	1779.3	1711.5	1745	1778.5	1712.5	1745	1777.5
Conducted Power (dBm)	22.78	22.99	22.96	22.88	23.01	23.04	22.84	22.98	23.02
Conducted Power (Watts)	0.1897	0.1991	0.1977	0.1941	0.2000	0.2014	0.1923	0.1986	0.2004
EIRP(dBm)	20.78	20.99	20.96	20.88	21.01	21.04	20.84	20.98	21.02
EIRP(Watts)	0.1197	0.1256	0.1247	0.1225	0.1262	0.1271	0.1213	0.1253	0.1265

LTE Band 66 (GT - LC = -2.00 dB) QPSK									
Bandwidth	10M			15M			20M		
Channel	132022	132322	132622	132047	132322	132597	132072	132322	132572
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(Mid)
Frequency (MHz)	1715	1745	1775	1717.5	1745	1772.5	1720	1745	1770
Conducted Power (dBm)	22.79	22.92	22.88	22.92	23.04	23.16	22.79	23.18	22.88
Conducted Power (Watts)	0.1901	0.1959	0.1941	0.1959	0.2014	0.2070	0.1901	0.2080	0.1941
EIRP(dBm)	20.79	20.92	20.88	20.92	21.04	21.16	20.79	21.18	20.88
EIRP(Watts)	0.1199	0.1236	0.1225	0.1236	0.1271	0.1306	0.1199	0.1312	0.1225



LTE Band 66 (GT - LC = -2.00 dB) 16QAM									
Bandwidth	1.4M			3M			5M		
Channel	131979	132322	132665	131987	132322	132657	131997	132322	132647
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency (MHz)	1710.7	1745	1779.3	1711.5	1745	1778.5	1712.5	1745	1777.5
Conducted Power (dBm)	22.11	22.33	22.33	22.18	22.32	22.32	22.18	22.25	22.29
Conducted Power (Watts)	0.1626	0.1710	0.1710	0.1652	0.1706	0.1706	0.1652	0.1679	0.1694
EIRP(dBm)	20.11	20.33	20.33	20.18	20.32	20.32	20.18	20.25	20.29
EIRP(Watts)	0.1026	0.1079	0.1079	0.1042	0.1076	0.1076	0.1042	0.1059	0.1069

LTE Band 66 (GT - LC = -2.00 dB) 16QAM									
Bandwidth	10M			15M			20M		
Channel	132022	132322	132622	132047	132322	132597	132072	132322	132572
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(Mid)
Frequency (MHz)	1715	1745	1775	1717.5	1745	1772.5	1720	1745	1770
Conducted Power (dBm)	22.21	22.31	22.31	22.26	22.36	22.56	22.02	22.58	22.17
Conducted Power (Watts)	0.1663	0.1702	0.1702	0.1683	0.1722	0.1803	0.1592	0.1811	0.1648
EIRP(dBm)	20.21	20.31	20.31	20.26	20.36	20.56	20.02	20.58	20.17
EIRP(Watts)	0.1050	0.1074	0.1074	0.1062	0.1086	0.1138	0.1005	0.1143	0.1040



LTE Band 66 (GT - LC = -2.00 dB) 64QAM									
Bandwidth	1.4M			3M			5M		
Channel	131979	132322	132665	131987	132322	132657	131997	132322	132647
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency (MHz)	1710.7	1745	1779.3	1711.5	1745	1778.5	1712.5	1745	1777.5
Conducted Power (dBm)	20.94	21.21	21.01	21.03	21.22	21.12	20.95	21.13	21.08
Conducted Power (Watts)	0.1242	0.1321	0.1262	0.1268	0.1324	0.1294	0.1245	0.1297	0.1282
EIRP(dBm)	18.94	19.21	19.01	19.03	19.22	19.12	18.95	19.13	19.08
EIRP(Watts)	0.0783	0.0834	0.0796	0.0800	0.0836	0.0817	0.0785	0.0818	0.0809

LTE Band 66 (GT - LC = -2.00 dB) 64QAM									
Bandwidth	10M			15M			20M		
Channel	132022	132322	132622	132047	132322	132597	132072	132322	132572
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(Mid)
Frequency (MHz)	1715	1745	1775	1717.5	1745	1772.5	1720	1745	1770
Conducted Power (dBm)	20.96	21.15	21.11	21.20	21.29	21.20	21.18	21.16	21.29
Conducted Power (Watts)	0.1247	0.1303	0.1291	0.1318	0.1346	0.1318	0.1312	0.1306	0.1346
EIRP(dBm)	18.96	19.15	19.11	19.20	19.29	19.20	19.18	19.16	19.29
EIRP(Watts)	0.0787	0.0822	0.0815	0.0832	0.0849	0.0832	0.0828	0.0824	0.0849



CA EIRP

LTE Band 66 CA (GT - LC = -2.00 dB) QPSK			
Bandwidth	20M+20M		
Channel PCC	132072	132323	132374
	(Low)	(Mid)	(High)
Channel SCC	132270	132521	132572
	(Low)	(Mid)	(High)
Conducted Power (dBm)	21.16	21.49	21.29
Conducted Power (Watts)	0.13	0.14	0.13
EIRP(dBm)	19.16	19.49	19.29
EIRP(Watts)	0.0824	0.0889	0.0849

LTE Band 66 CA (GT - LC = -2.00 dB) 16QAM			
Bandwidth	20M+20M		
Channel PCC	132072	132323	132374
	(Low)	(Mid)	(High)
Channel SCC	132270	132521	132572
	(Low)	(Mid)	(High)
Conducted Power (dBm)	20.38	20.73	20.65
Conducted Power (Watts)	0.11	0.12	0.12
EIRP(dBm)	18.38	18.73	18.65
EIRP(Watts)	0.0689	0.0746	0.0733

LTE Band 66 CA (GT - LC = -2.00 dB) 64QAM			
Bandwidth	20M+20M		
Channel PCC	132072	132323	132374
	(Low)	(Mid)	(High)
Channel SCC	132270	132521	132572
	(Low)	(Mid)	(High)
Conducted Power (dBm)	19.44	19.84	19.77
Conducted Power (Watts)	0.09	0.10	0.09
EIRP(dBm)	17.44	17.84	17.77
EIRP(Watts)	0.0555	0.0608	0.0598



LTE Band 2

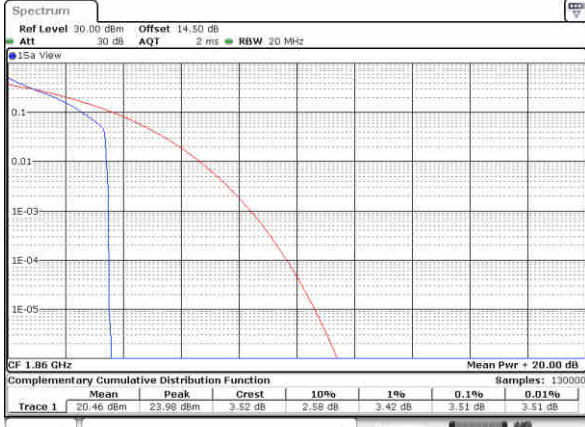
Peak-to-Average Ratio

Mode	LTE Band 2 / 20MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	3.51	4.93	5.16	5.83	PASS
Middle CH	3.48	4.84	5.25	5.77	
Highest CH	3.57	4.93	5.39	5.94	
Mode	LTE Band 2 / 20MHz				
Mod.	64QAM				Limit: 13dB
RB Size	1RB	Full RB			Result
Lowest CH	5.13	5.86	-	-	PASS
Middle CH	5.13	5.80	-	-	
Highest CH	5.42	5.94	-	-	



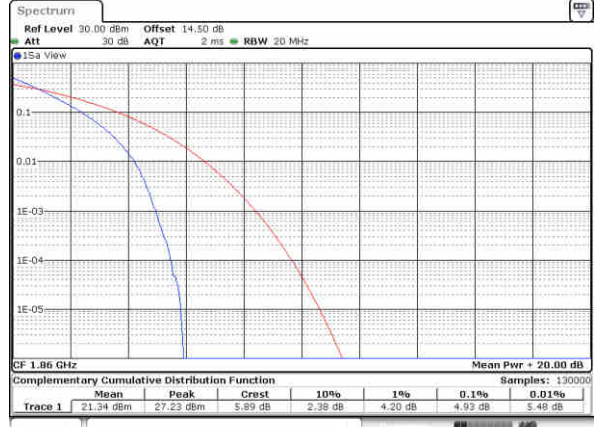
LTE Band 2 / 20MHz / QPSK

Lowest Channel / 1RB



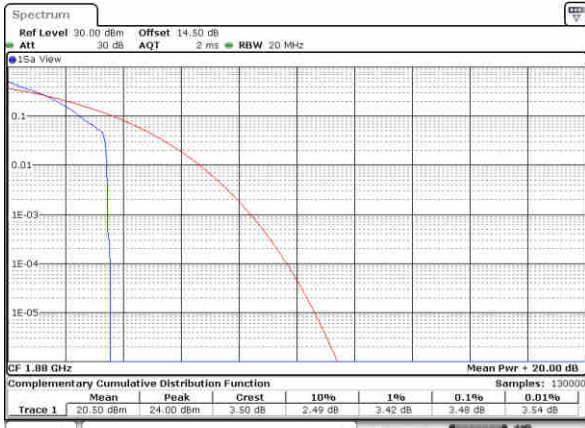
Date: 14, DEC, 2019 21:19:48

Lowest Channel / Full RB



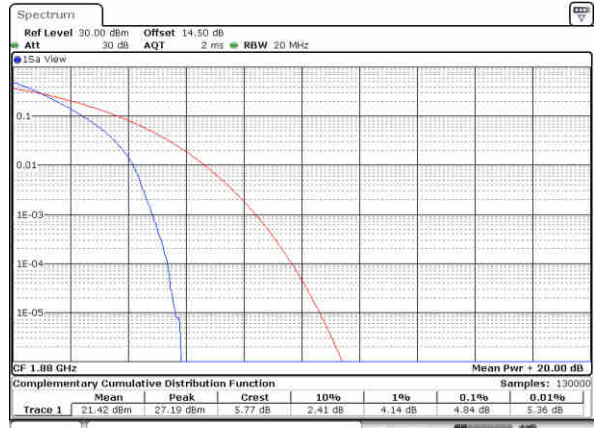
Date: 14, DEC, 2019 21:20:00

Middle Channel / 1RB



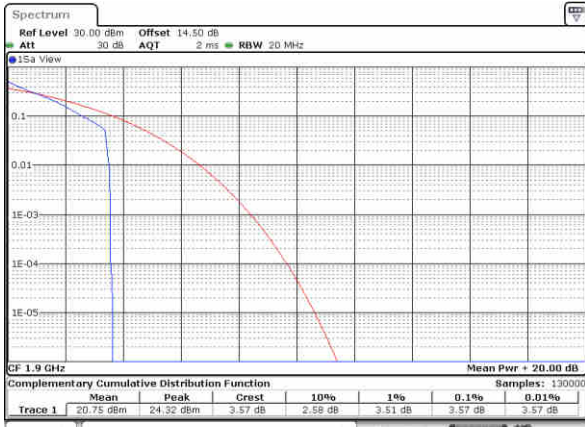
Date: 14, DEC, 2019 21:20:11

Middle Channel / Full RB



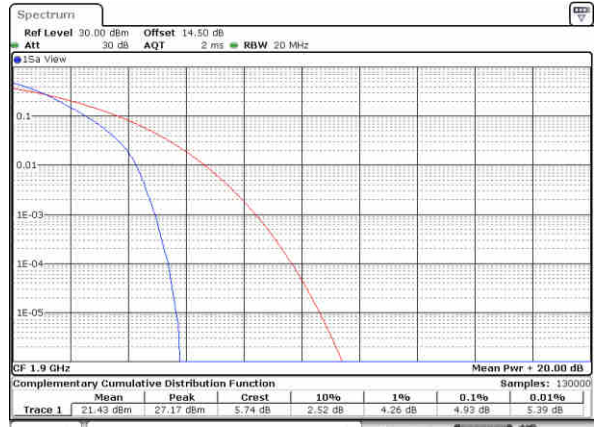
Date: 14, DEC, 2019 21:20:22

Highest Channel / 1RB



Date: 14, DEC, 2019 21:20:33

Highest Channel / Full RB

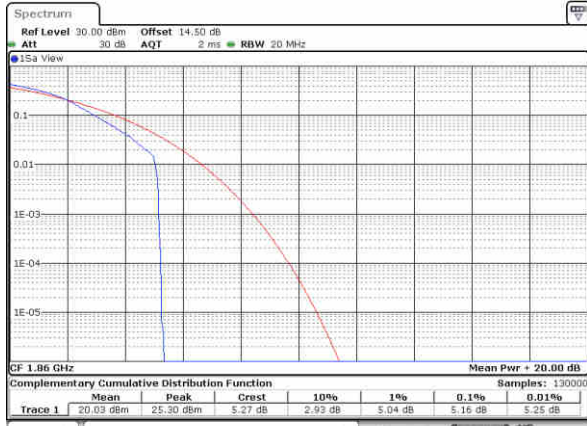


Date: 14, DEC, 2019 21:20:44



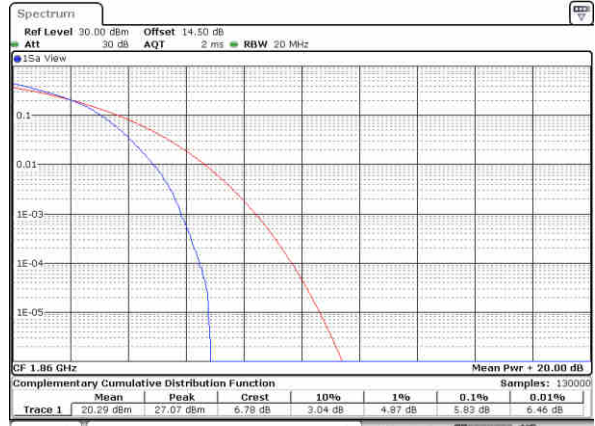
LTE Band 2 / 20MHz / 16QAM

Lowest Channel / 1RB



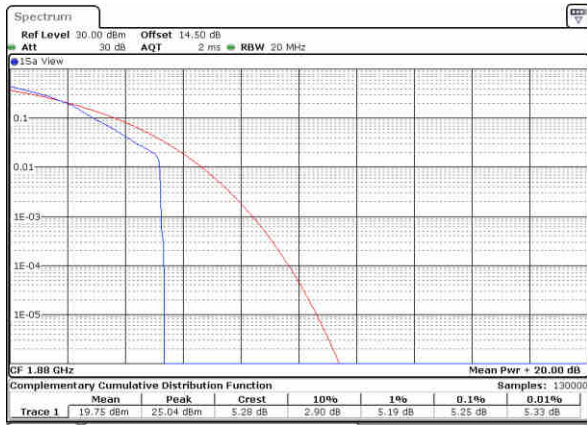
Date: 14, DEC, 2019 21:18:28

Lowest Channel / Full RB



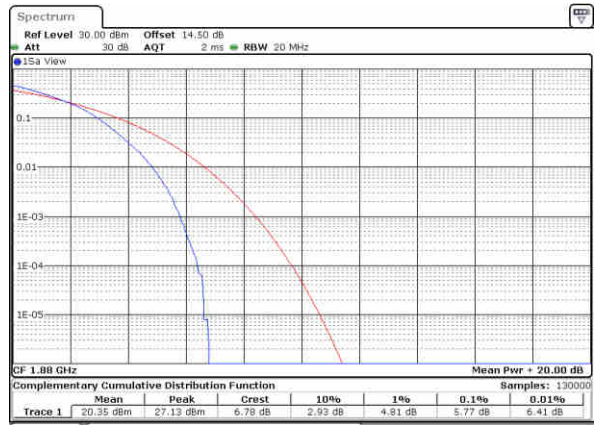
Date: 14, DEC, 2019 21:18:39

Middle Channel / 1RB



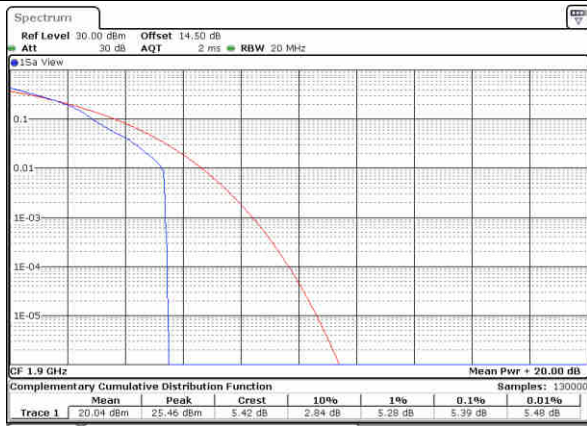
Date: 14, DEC, 2019 21:18:57

Middle Channel / Full RB



Date: 14, DEC, 2019 21:19:13

Highest Channel / 1RB



Date: 14, DEC, 2019 21:19:26

Highest Channel / Full RB



Date: 14, DEC, 2019 21:19:37



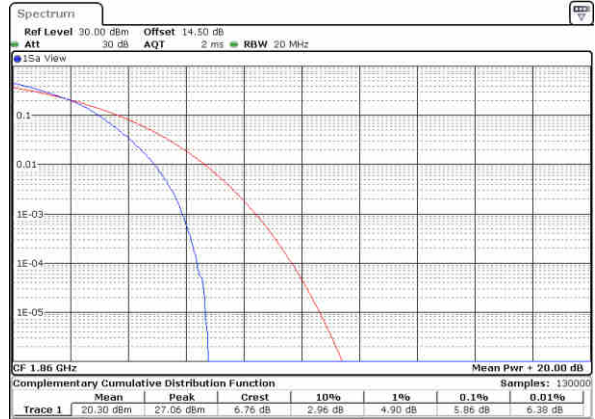
LTE Band 2 / 20MHz / 64QAM

Lowest Channel / 1RB



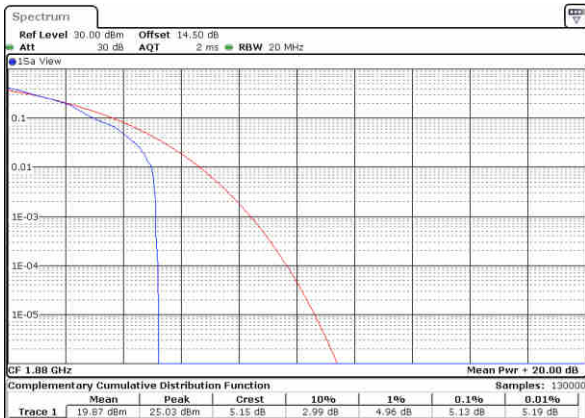
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Lowest Channel / Full RB



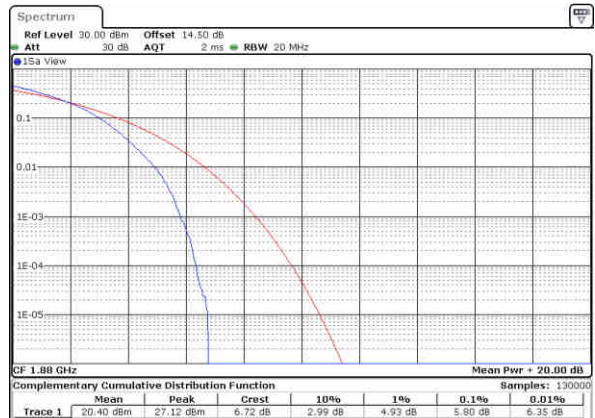
Date: 14, DEC, 2019 21:21:07

Middle Channel / 1RB



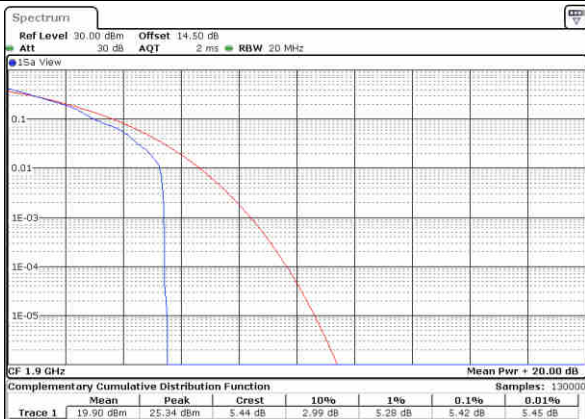
Date: 14, DEC, 2019 21:21:18

Middle Channel / Full RB



Date: 14, DEC, 2019 21:21:29

Highest Channel / 1RB



Date: 14, DEC, 2019 21:21:42

Highest Channel / Full RB



Date: 14, DEC, 2019 21:21:53



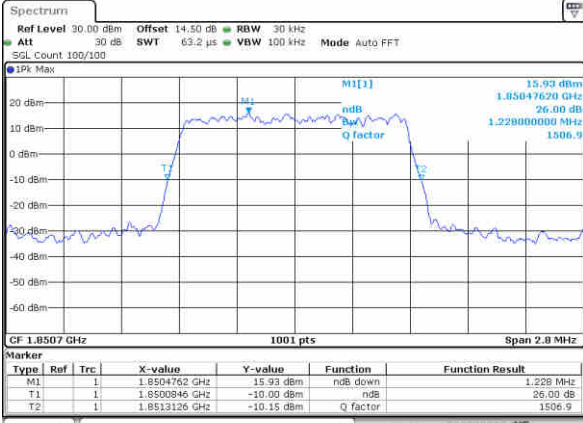
26dB Bandwidth

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	1.23	1.23	3.01	3.03	4.91	4.90	9.59	9.63	14.12	14.27	18.82	18.90
Middle CH	1.22	1.23	3.04	3.06	4.86	4.82	9.77	9.87	14.24	14.36	18.86	18.78
Highest CH	1.24	1.22	3.01	3.05	4.94	4.87	9.71	9.75	14.45	14.24	19.02	18.98
Mode	LTE Band 2 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	1.24	-	3.02	-	4.86	-	9.79	-	14.21	-	19.14	-
Middle CH	1.24	-	3.07	-	4.90	-	9.73	-	14.51	-	19.10	-
Highest CH	1.23	-	3.03	-	4.83	-	9.75	-	14.30	-	19.02	-



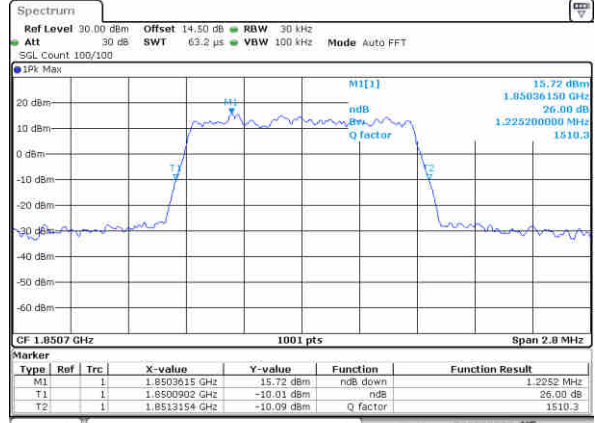
LTE Band 2

Lowest Channel / 1.4MHz / QPSK



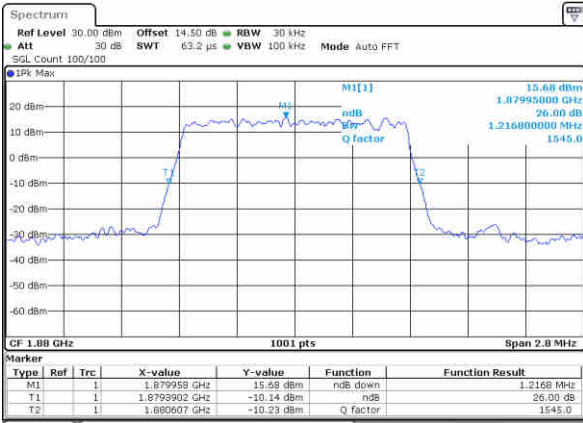
Date: 14, DEC, 2019 20:23:07

Lowest Channel / 1.4MHz / 16QAM



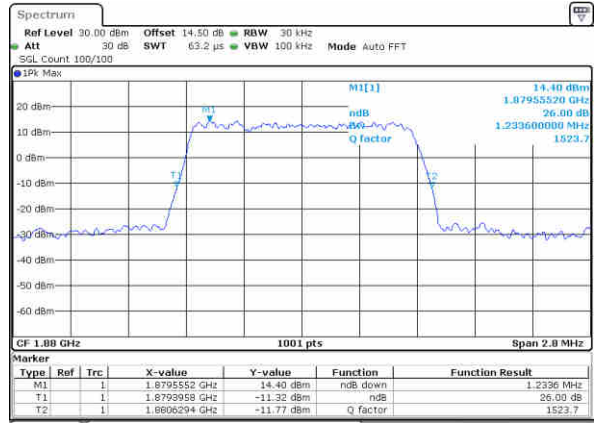
Date: 14, DEC, 2019 20:23:19

Middle Channel / 1.4MHz / QPSK



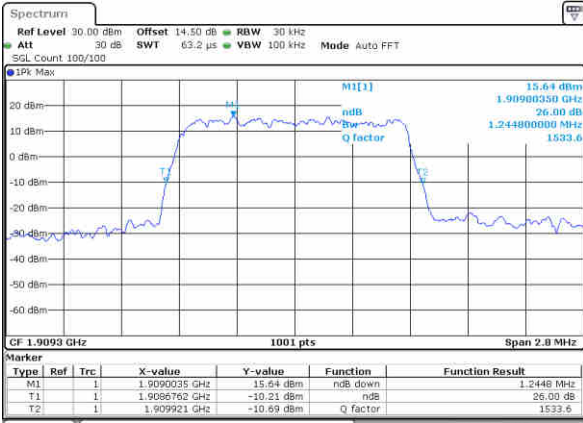
Date: 14, DEC, 2019 20:25:15

Middle Channel / 1.4MHz / 16QAM



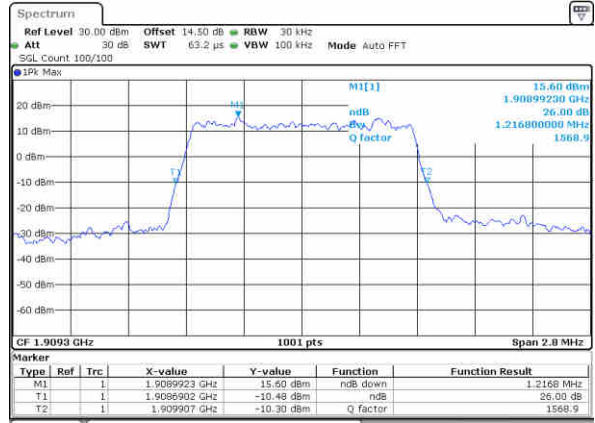
Date: 14, DEC, 2019 20:25:17

Highest Channel / 1.4MHz / QPSK



Date: 14, DEC, 2019 20:27:25

Highest Channel / 1.4MHz / 16QAM

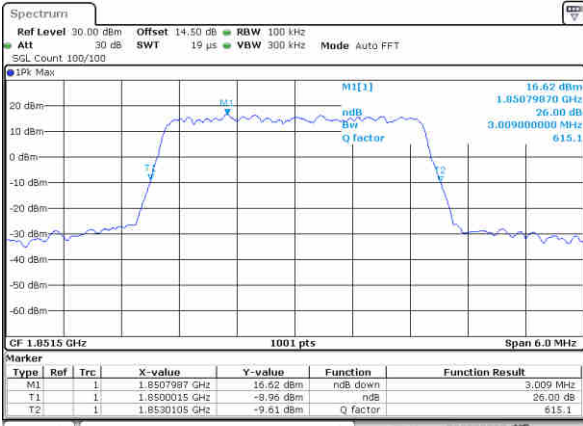


Date: 14, DEC, 2019 20:27:36



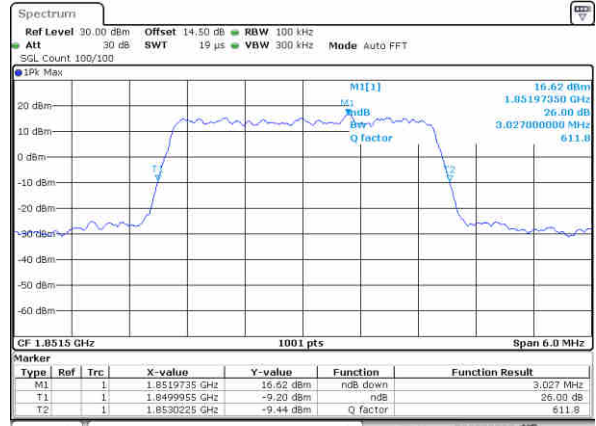
LTE Band 2

Lowest Channel / 3MHz / QPSK



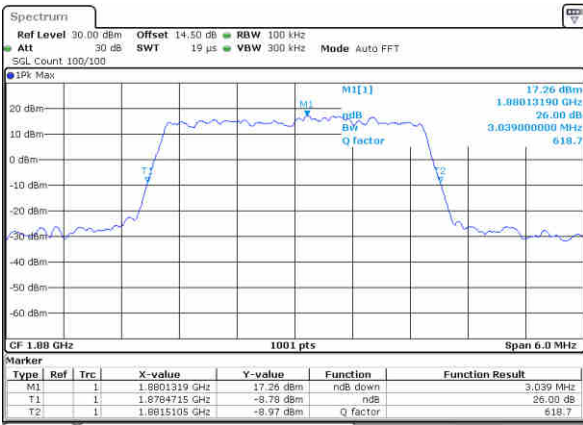
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Lowest Channel / 3MHz / 16QAM



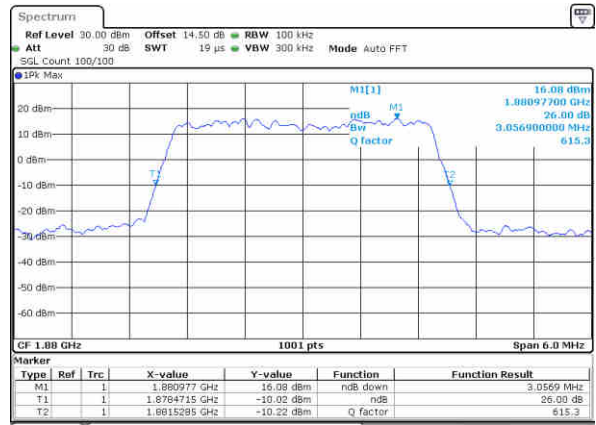
Date: 14, DEC, 2019 20:29:45

Middle Channel / 3MHz / QPSK



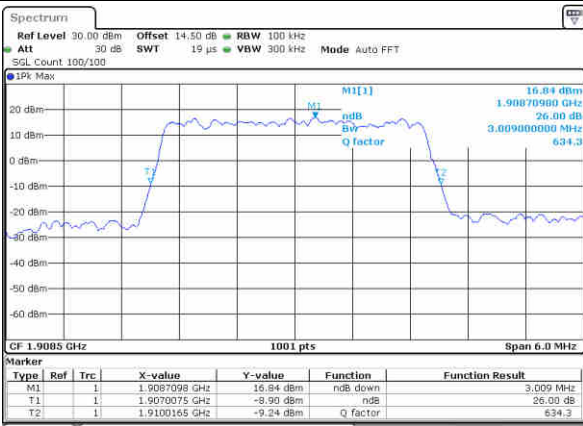
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Middle Channel / 3MHz / 16QAM



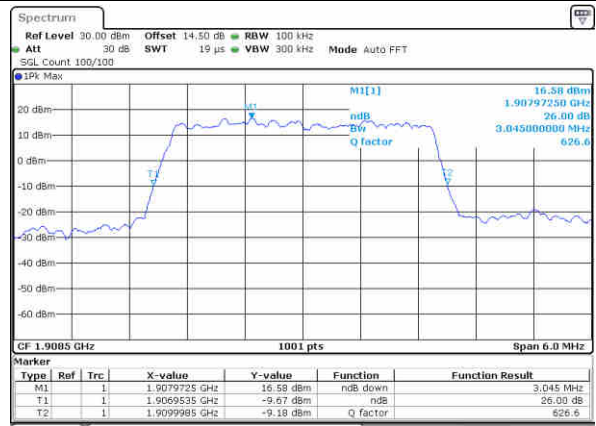
Date: 14, DEC, 2019 20:31:54

Highest Channel / 3MHz / QPSK



Date: 14, DEC, 2019 20:33:52

Highest Channel / 3MHz / 16QAM

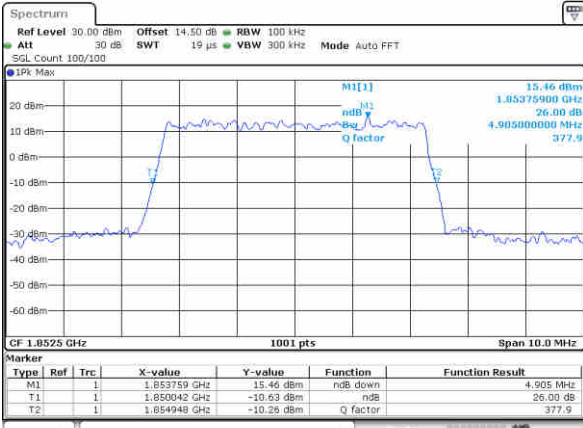


Date: 14, DEC, 2019 20:34:03



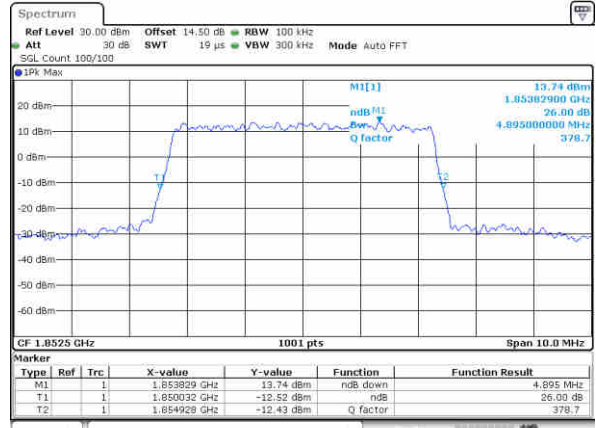
LTE Band 2

Lowest Channel / 5MHz / QPSK



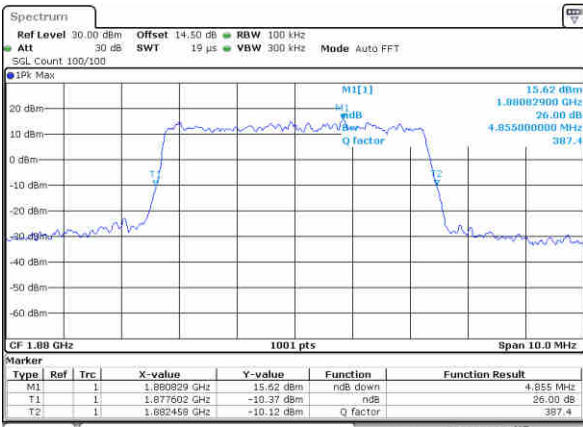
Date: 14, DEC, 2019 20:36:01

Lowest Channel / 5MHz / 16QAM



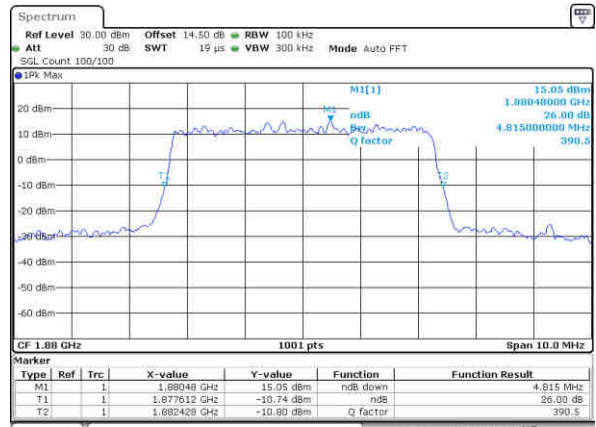
Date: 14, DEC, 2019 20:36:12

Middle Channel / 5MHz / QPSK



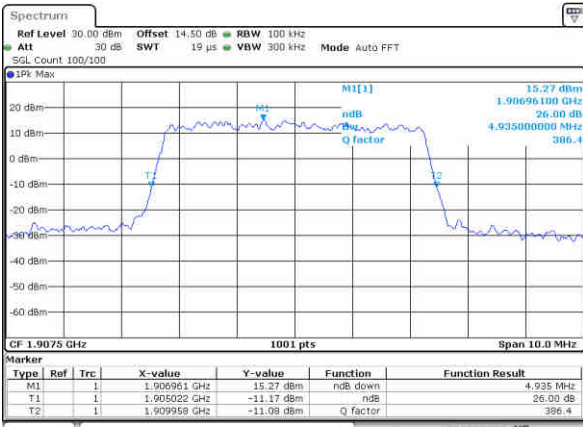
Date: 14, DEC, 2019 20:38:10

Middle Channel / 5MHz / 16QAM



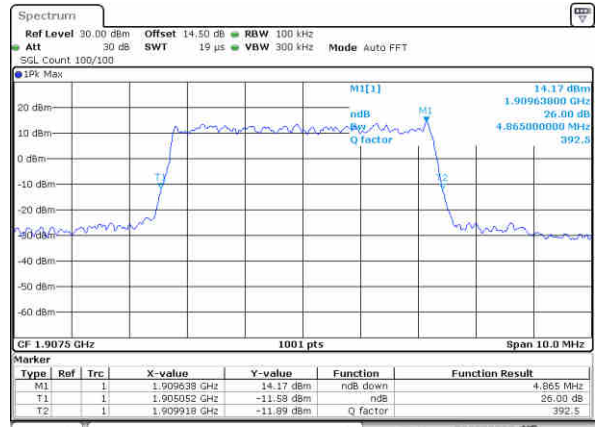
Date: 14, DEC, 2019 20:38:11

Highest Channel / 5MHz / QPSK



Date: 14, DEC, 2019 20:40:19

Highest Channel / 5MHz / 16QAM

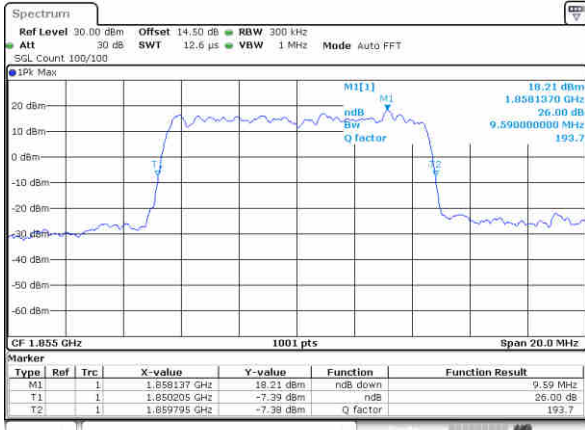


Date: 14, DEC, 2019 20:40:30



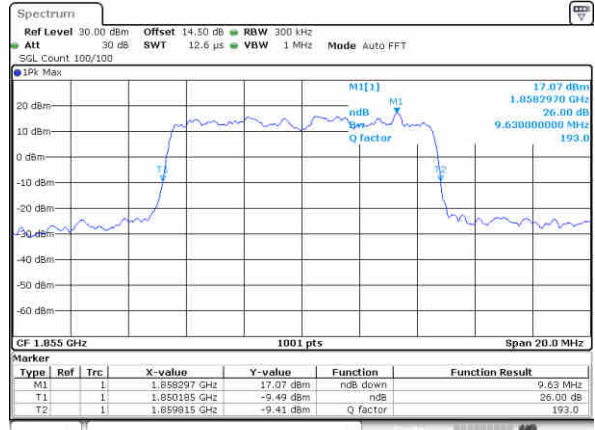
LTE Band 2

Lowest Channel / 10MHz / QPSK



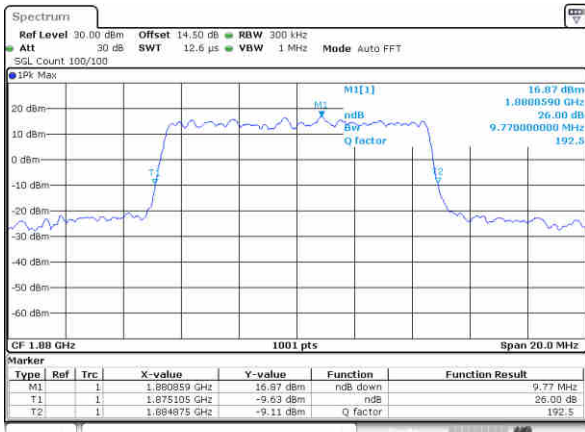
Date: 14, Dec, 2019 20:42:28

Lowest Channel / 10MHz / 16QAM



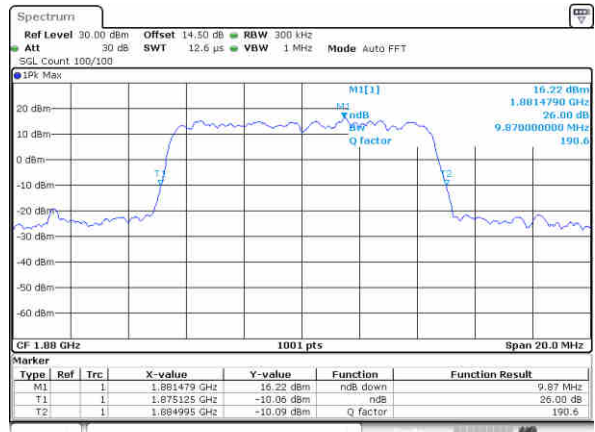
Date: 14, Dec, 2019 20:42:39

Middle Channel / 10MHz / QPSK



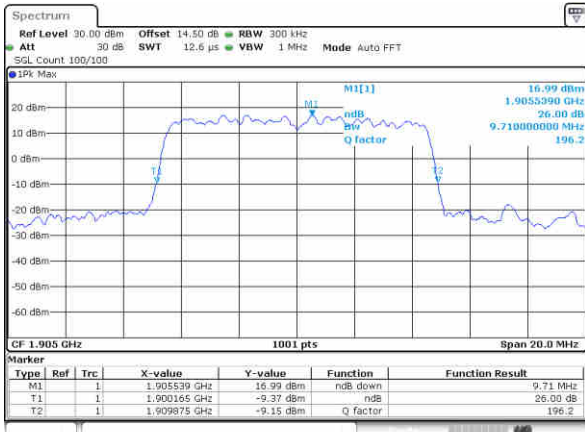
Date: 14, Dec, 2019 20:44:38

Middle Channel / 10MHz / 16QAM



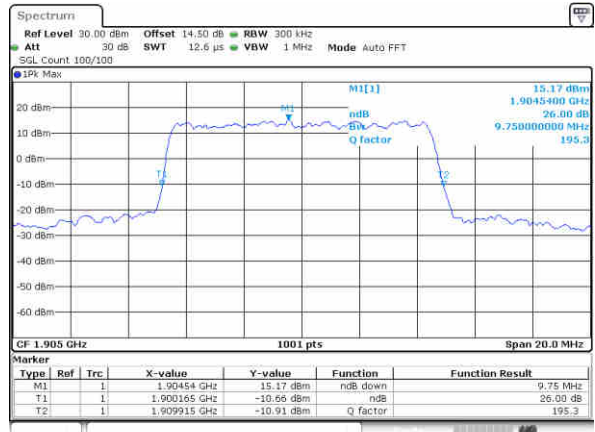
Date: 14, Dec, 2019 20:44:49

Highest Channel / 10MHz / QPSK



Date: 14, Dec, 2019 20:46:47

Highest Channel / 10MHz / 16QAM

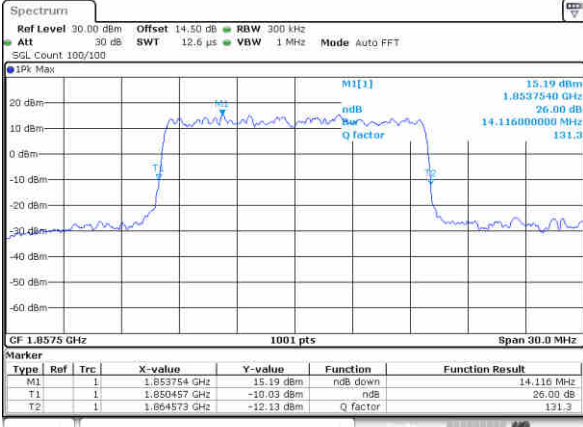


Date: 14, Dec, 2019 20:46:58



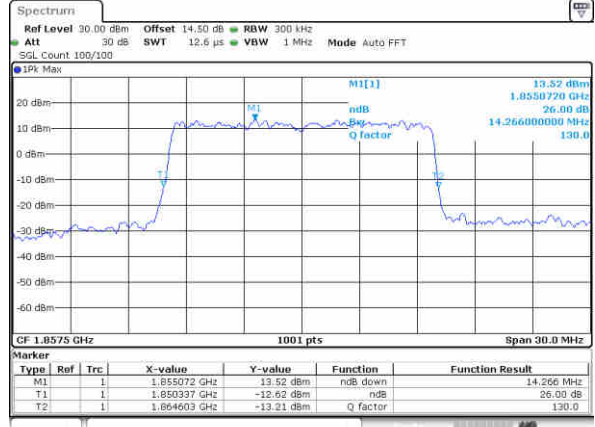
LTE Band 2

Lowest Channel / 15MHz / QPSK



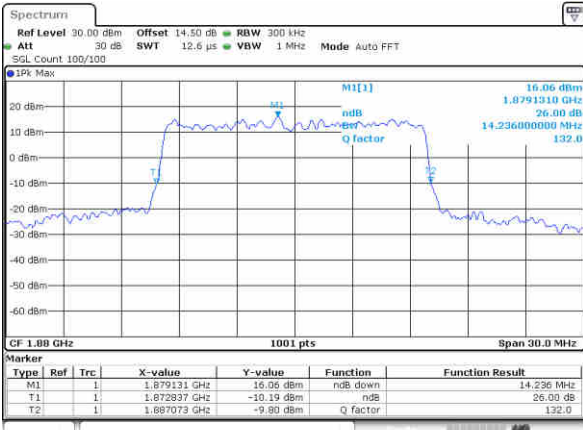
Date: 14, DEC, 2019 20:48:56

Lowest Channel / 15MHz / 16QAM



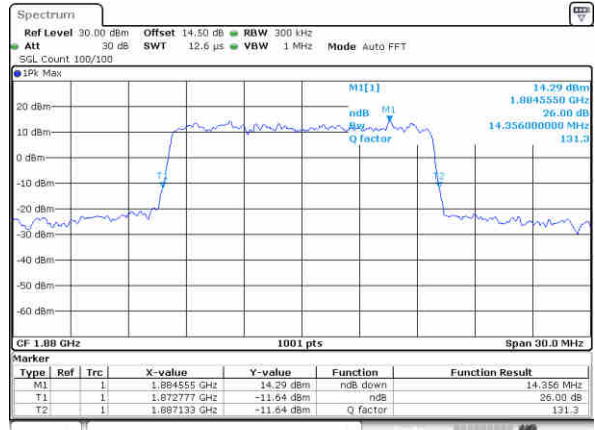
Date: 14, DEC, 2019 20:49:07

Middle Channel / 15MHz / QPSK



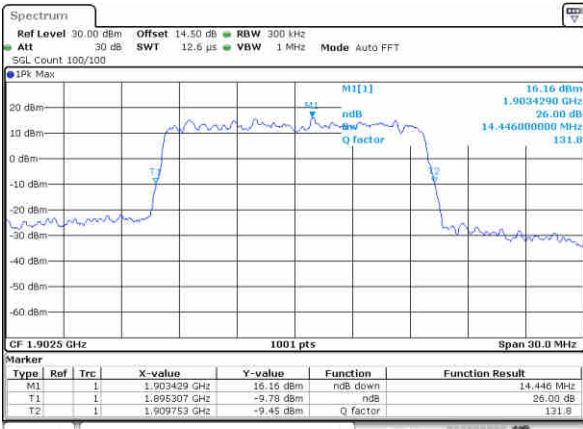
Date: 14, DEC, 2019 20:51:06

Middle Channel / 15MHz / 16QAM



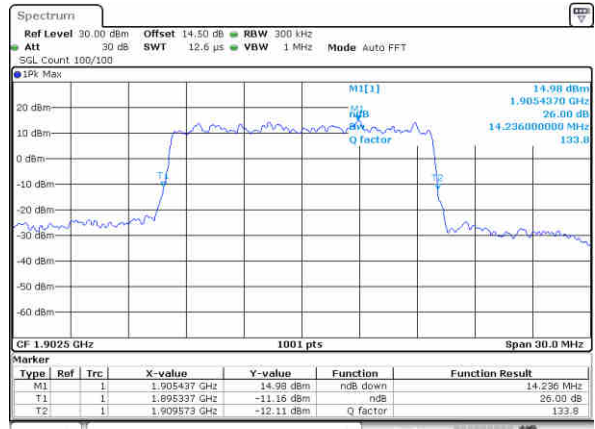
Date: 14, DEC, 2019 20:51:17

Highest Channel / 15MHz / QPSK



Date: 14, DEC, 2019 20:53:15

Highest Channel / 15MHz / 16QAM

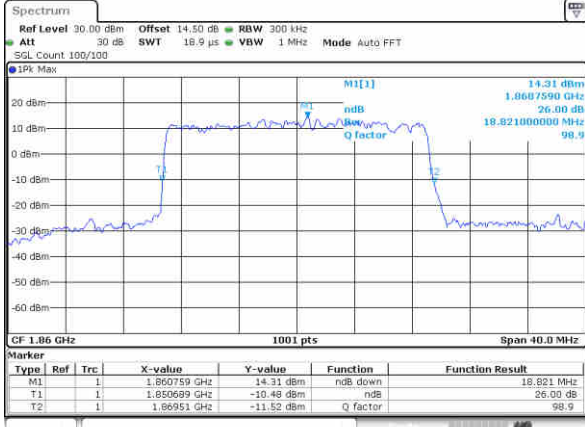


Date: 14, DEC, 2019 20:53:26



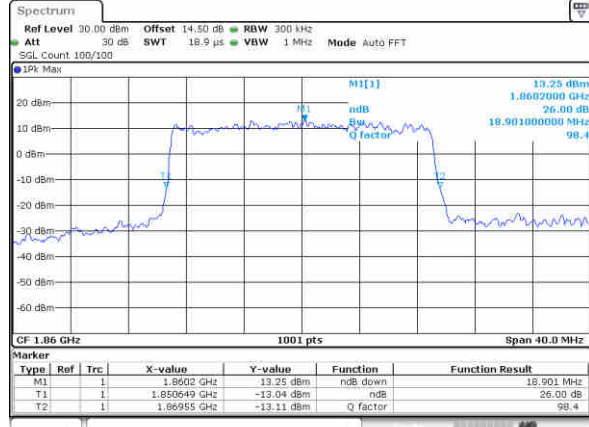
LTE Band 2

Lowest Channel / 20MHz / QPSK



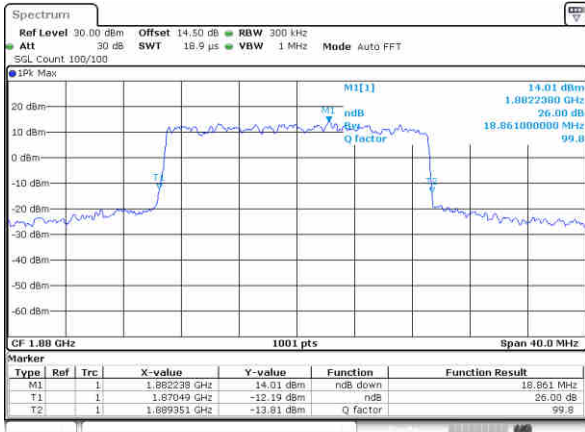
Date: 14, Dec, 2019 20:55:24

Lowest Channel / 20MHz / 16QAM



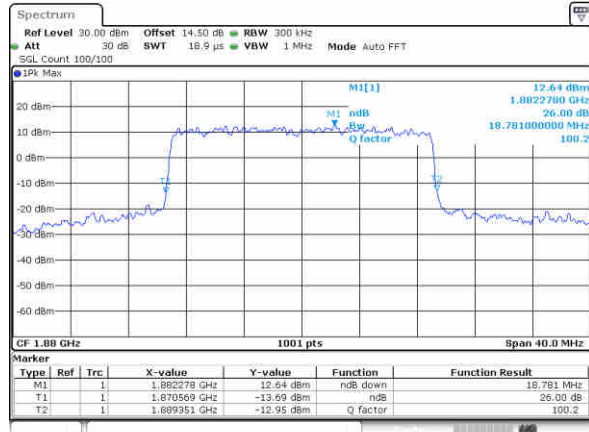
Date: 14, Dec, 2019 20:55:35

Middle Channel / 20MHz / QPSK



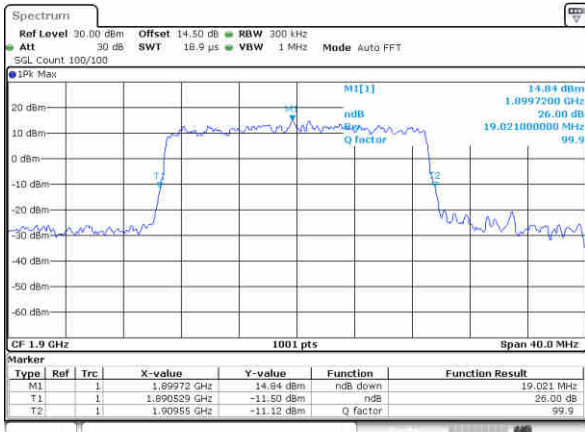
Date: 14, Dec, 2019 20:57:32

Middle Channel / 20MHz / 16QAM



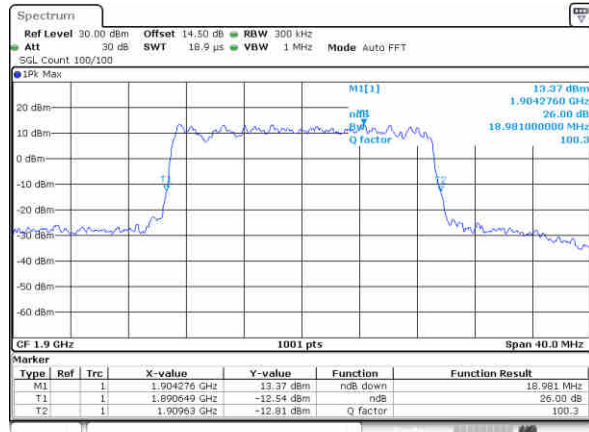
Date: 14, Dec, 2019 20:57:44

Highest Channel / 20MHz / QPSK



Date: 14, Dec, 2019 20:59:43

Highest Channel / 20MHz / 16QAM

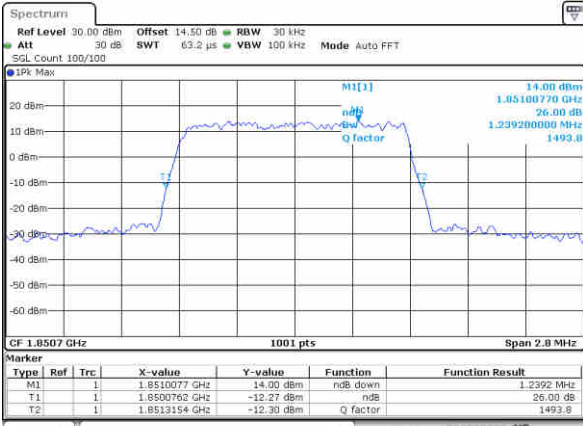


Date: 14, Dec, 2019 20:59:54



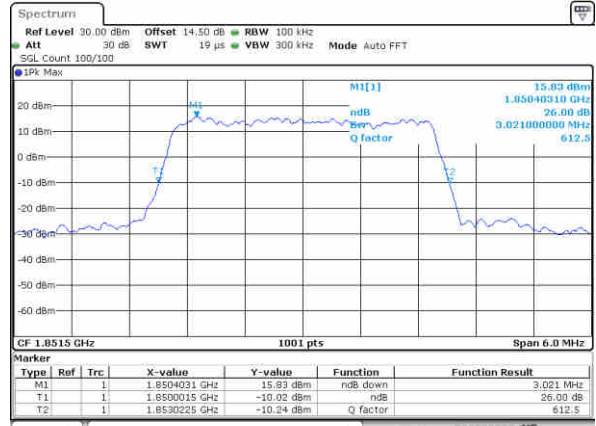
LTE Band 2

Lowest Channel / 1.4MHz / 64QAM



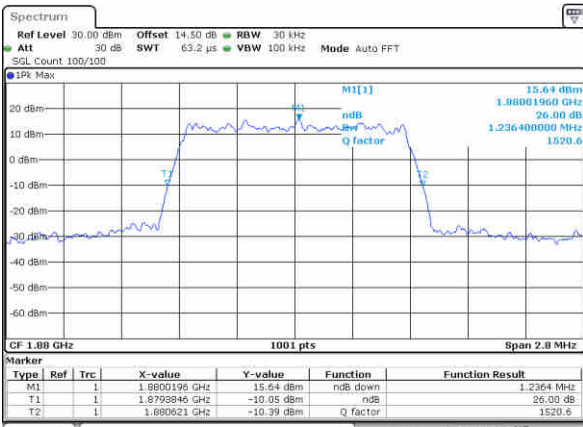
Date: 14, DEC, 2019 20:19:44

Lowest Channel / 3MHz / 64QAM



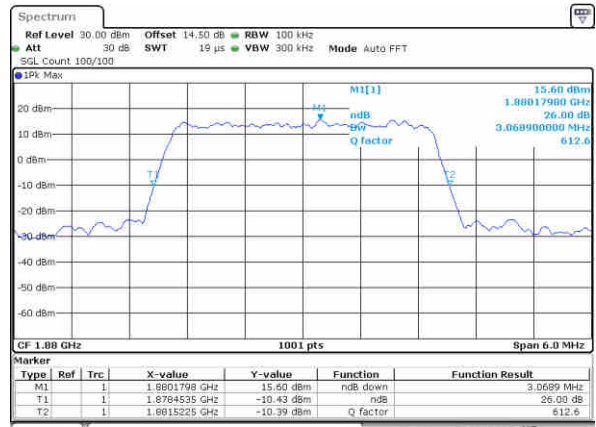
Date: 14, DEC, 2019 21:02:12

Middle Channel / 1.4MHz / 64QAM



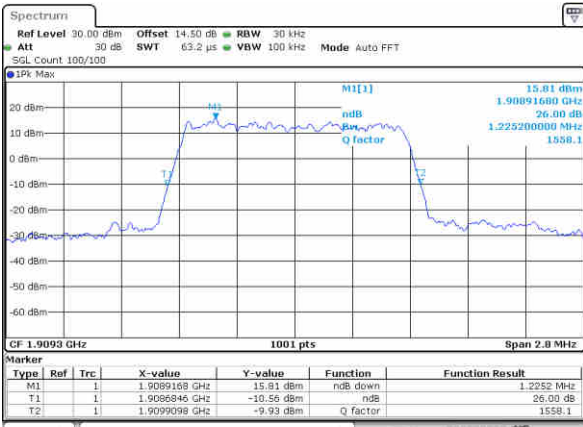
Date: 14, DEC, 2019 20:29:48

Middle Channel / 3MHz / 64QAM



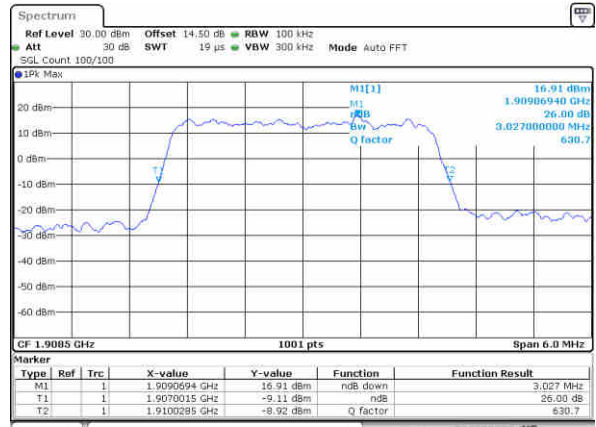
Date: 14, DEC, 2019 21:04:17

Highest Channel / 1.4MHz / 64QAM



Date: 14, DEC, 2019 20:21:52

Highest Channel / 3MHz / 64QAM

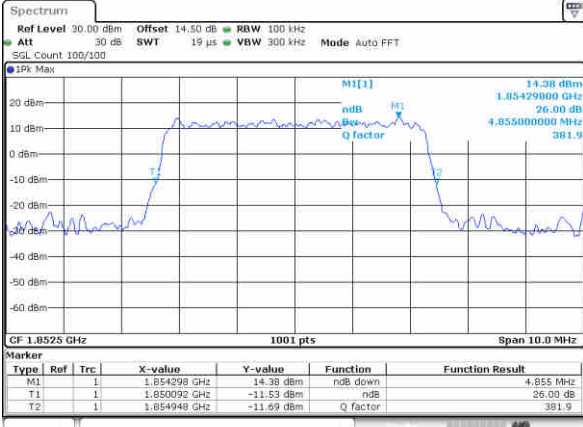


Date: 14, DEC, 2019 21:04:21



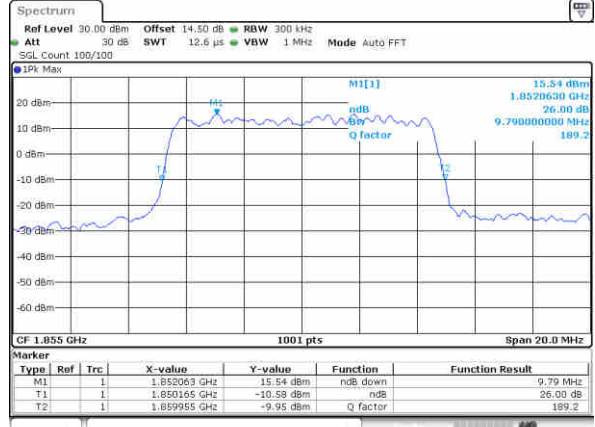
LTE Band 2

Lowest Channel / 5MHz / 64QAM



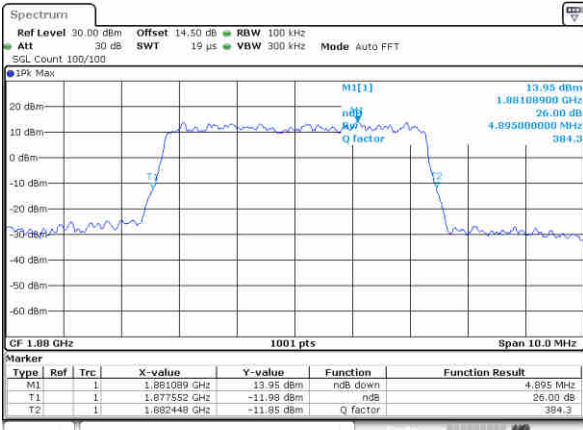
Date: 14, DEC, 2019 21:05:25

Lowest Channel / 10MHz / 64QAM



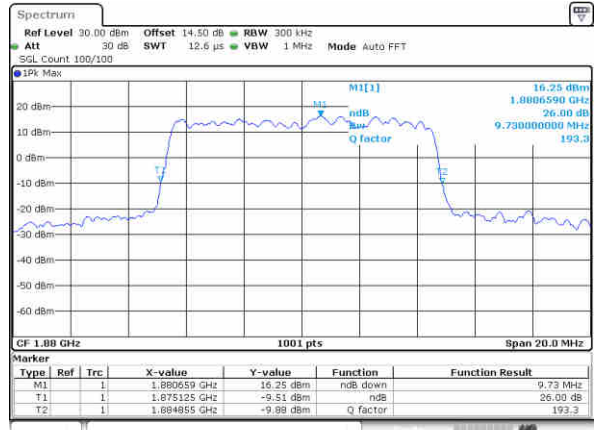
Date: 14, DEC, 2019 21:08:39

Middle Channel / 5MHz / 64QAM



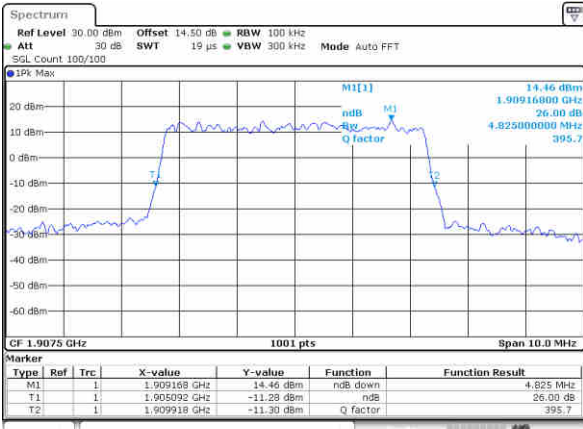
Date: 14, DEC, 2019 21:06:29

Middle Channel / 10MHz / 64QAM



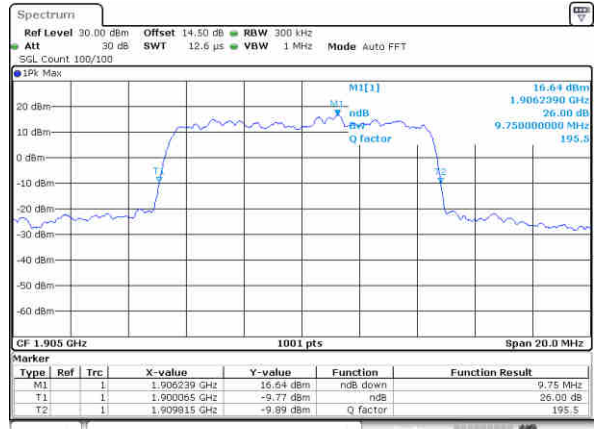
Date: 14, DEC, 2019 21:09:43

Highest Channel / 5MHz / 64QAM



Date: 14, DEC, 2019 21:07:34

Highest Channel / 10MHz / 64QAM

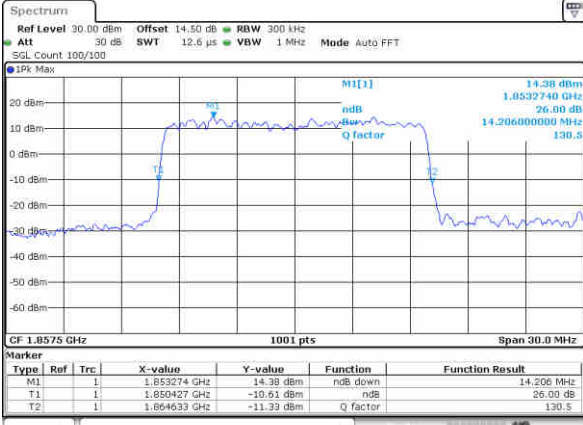


Date: 14, DEC, 2019 21:10:48



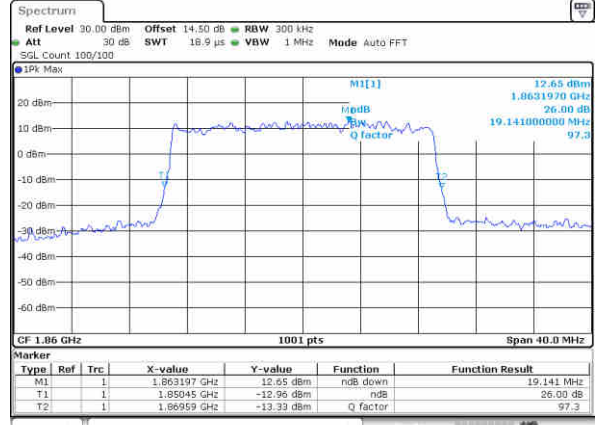
LTE Band 2

Lowest Channel / 15MHz / 64QAM



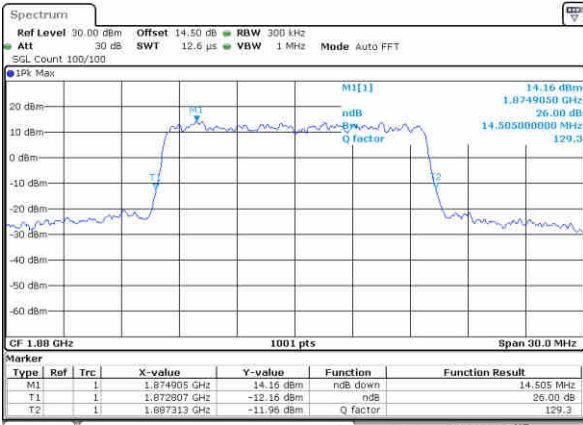
Date: 14, Dec, 2019 21:11:52

Lowest Channel / 20MHz / 64QAM



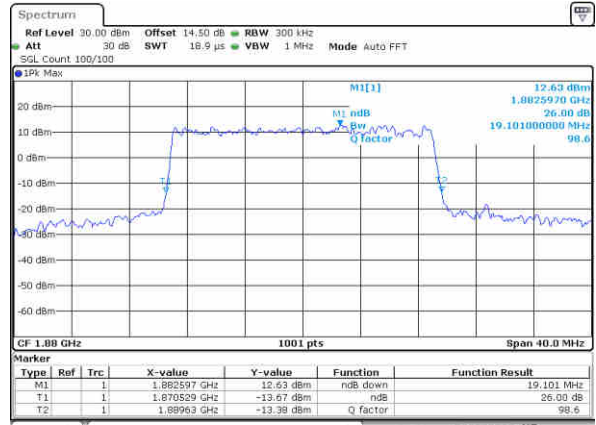
Date: 14, Dec, 2019 21:11:50

Middle Channel / 15MHz / 64QAM



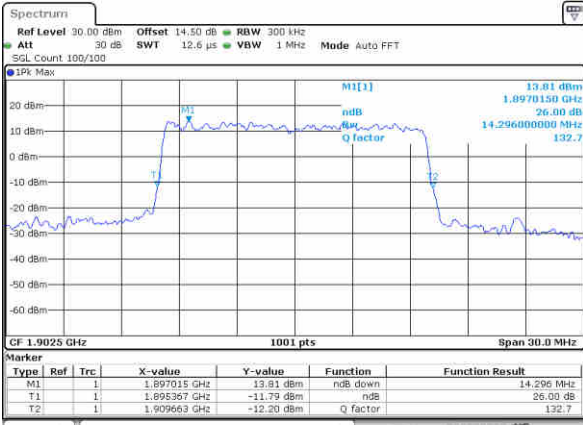
Date: 14, Dec, 2019 21:12:06

Middle Channel / 20MHz / 64QAM



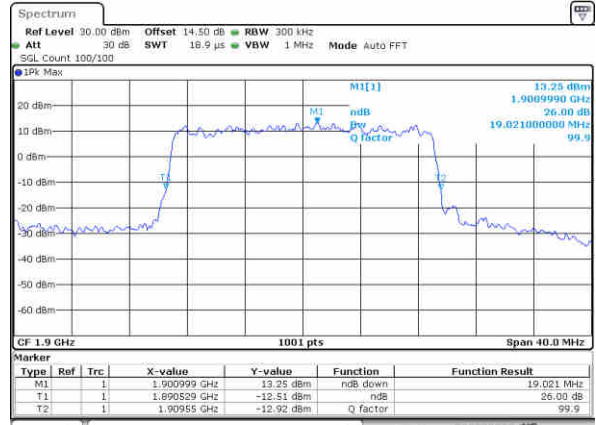
Date: 14, Dec, 2019 21:16:09

Highest Channel / 15MHz / 64QAM



Date: 14, Dec, 2019 21:14:00

Highest Channel / 20MHz / 64QAM



Date: 14, Dec, 2019 21:17:13



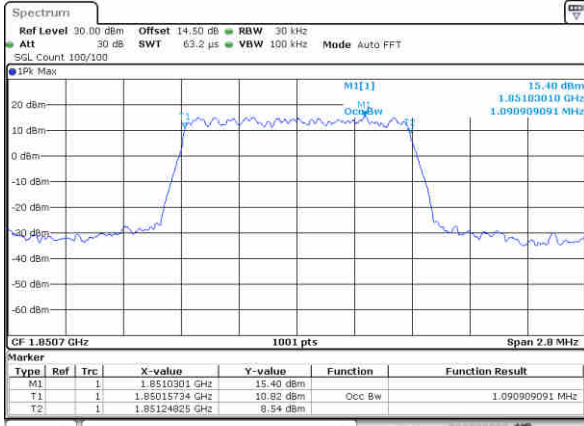
Occupied Bandwidth

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	1.09	1.09	2.72	2.71	4.49	4.48	9.01	8.95	13.43	13.46	17.86	17.86
Middle CH	1.10	1.09	2.73	2.73	4.50	4.48	9.03	9.01	13.43	13.46	17.86	17.82
Highest CH	1.10	1.09	2.71	2.72	4.50	4.46	9.01	8.95	13.43	13.46	17.94	17.86
Mode	LTE Band 2 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	1.09	-	2.73	-	4.50	-	9.01	-	13.43	-	17.82	-
Middle CH	1.09	-	2.72	-	4.51	-	8.99	-	13.49	-	17.78	-
Highest CH	1.09	-	2.74	-	4.50	-	9.01	-	13.52	-	17.82	-



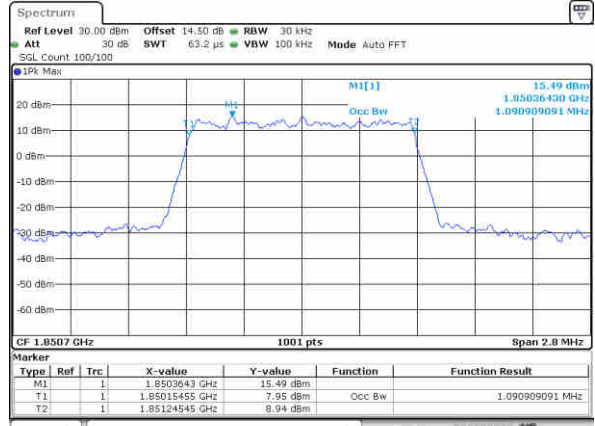
LTE Band 2

Lowest Channel / 1.4MHz / QPSK



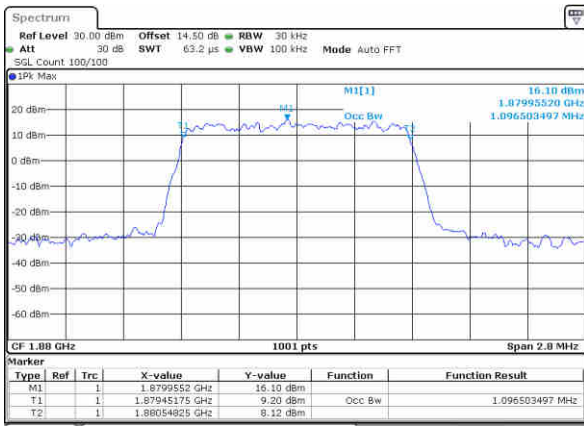
Date: 14_DEC.2019 20:22:45

Lowest Channel / 1.4MHz / 16QAM



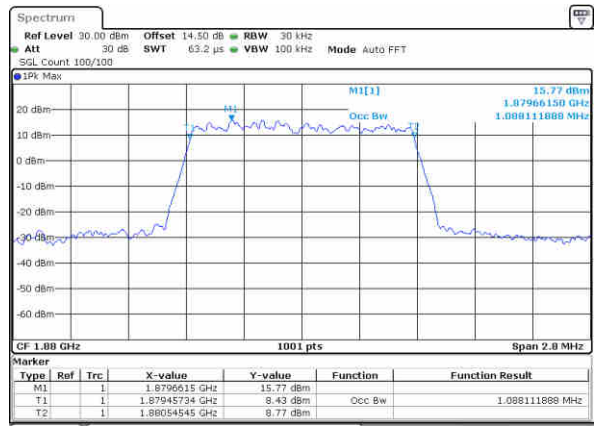
Date: 14_DEC.2019 20:22:56

Middle Channel / 1.4MHz / QPSK



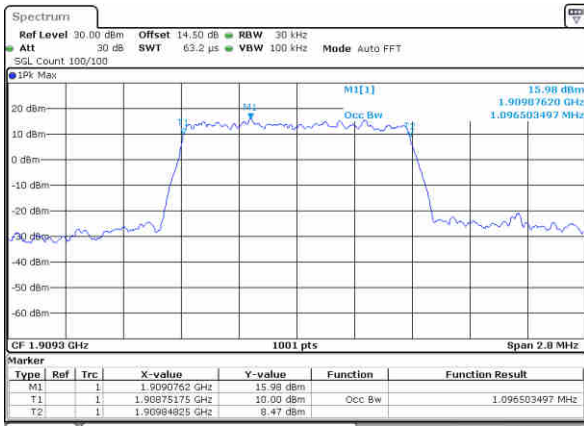
Date: 14_DEC.2019 20:24:53

Middle Channel / 1.4MHz / 16QAM



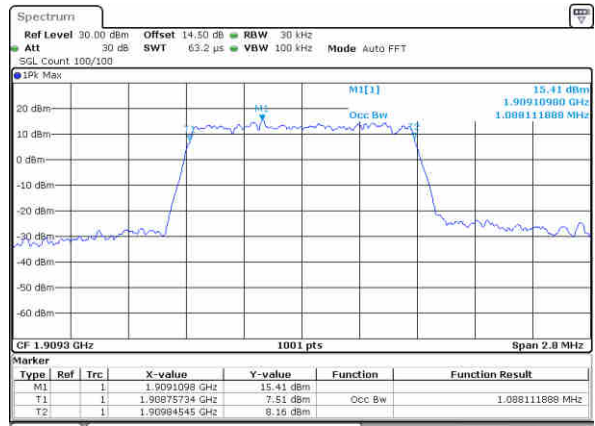
Date: 14_DEC.2019 20:25:04

Highest Channel / 1.4MHz / QPSK



Date: 14_DEC.2019 20:27:02

Highest Channel / 1.4MHz / 16QAM

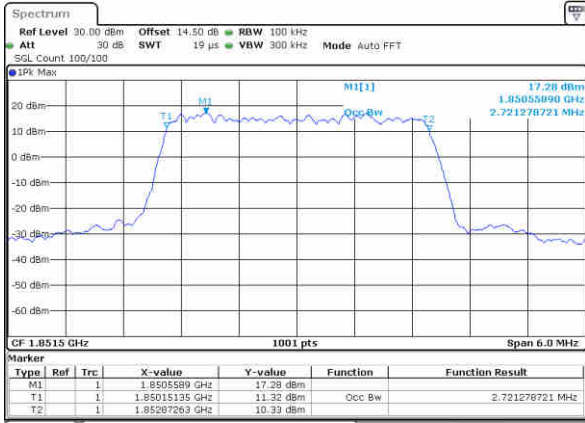


Date: 14_DEC.2019 20:27:13



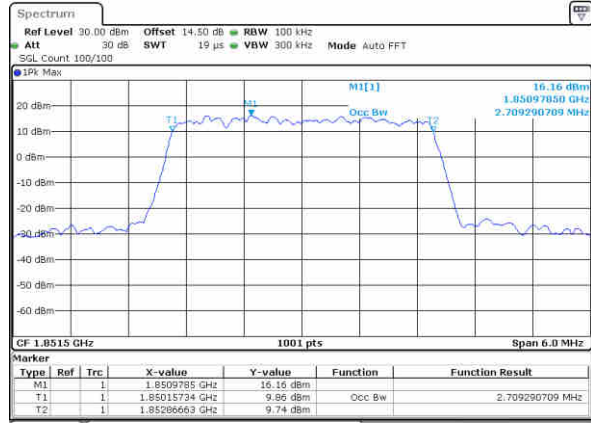
LTE Band 2

Lowest Channel / 3MHz / QPSK



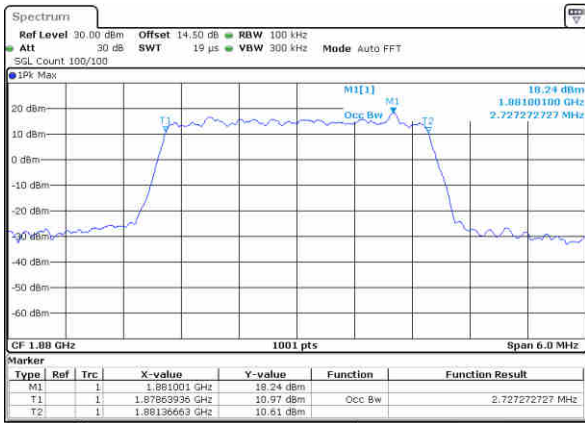
Date: 14, DEC, 2019 20:29:11

Lowest Channel / 3MHz / 16QAM



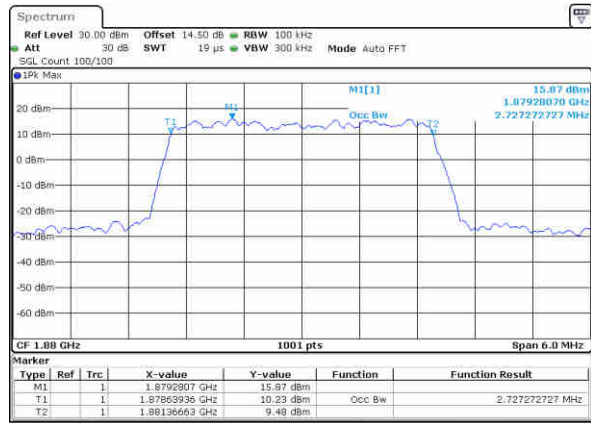
Date: 14, DEC, 2019 20:29:23

Middle Channel / 3MHz / QPSK



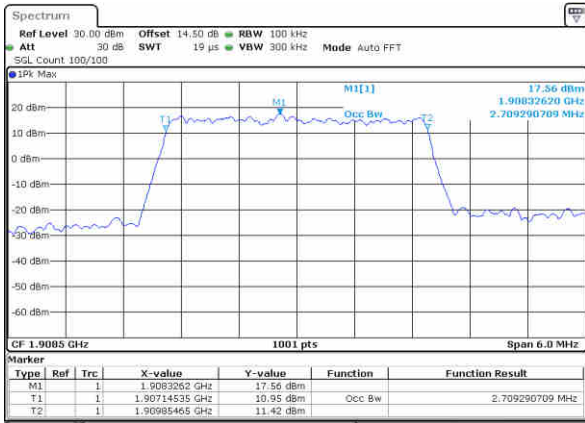
Date: 14, DEC, 2019 20:31:20

Middle Channel / 3MHz / 16QAM



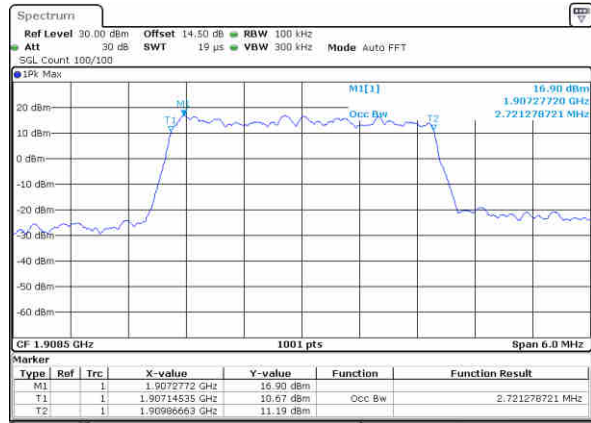
Date: 14, DEC, 2019 20:31:31

Highest Channel / 3MHz / QPSK



Date: 14, DEC, 2019 20:33:30

Highest Channel / 3MHz / 16QAM

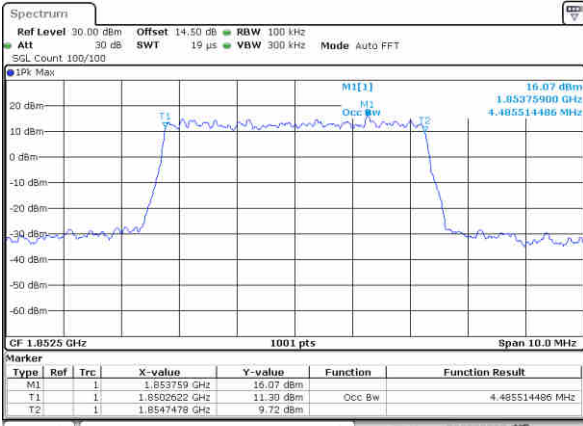


Date: 14, DEC, 2019 20:33:41



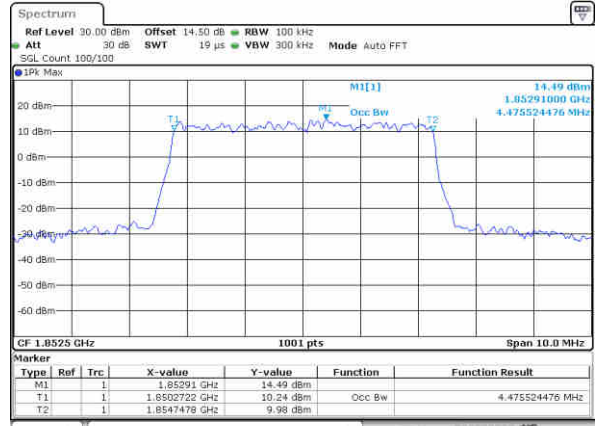
LTE Band 2

Lowest Channel / 5MHz / QPSK



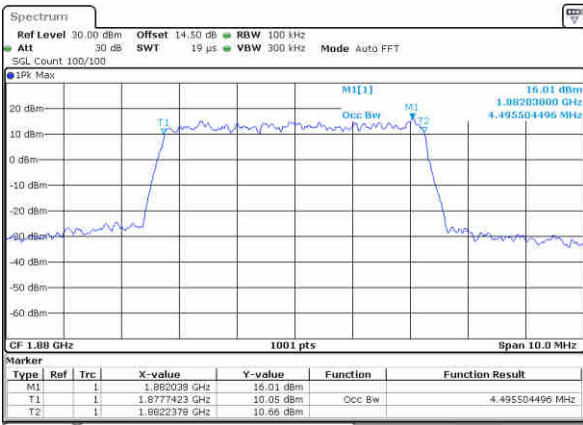
Date: 14, DEC, 2019 20:35:39

Lowest Channel / 5MHz / 16QAM



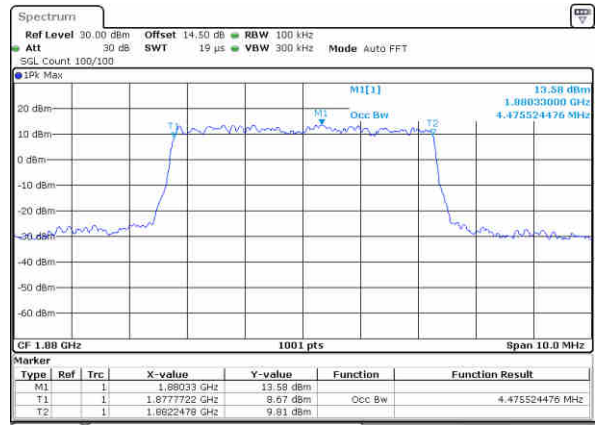
Date: 14, DEC, 2019 20:35:50

Middle Channel / 5MHz / QPSK



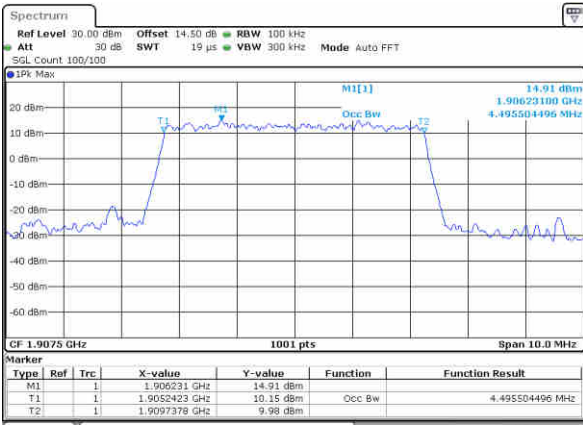
Date: 14, DEC, 2019 20:37:48

Middle Channel / 5MHz / 16QAM



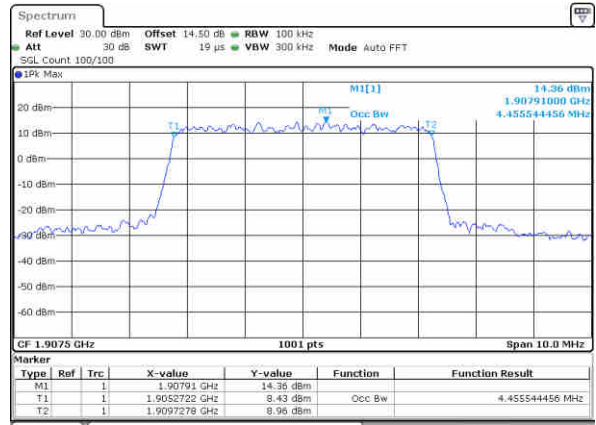
Date: 14, DEC, 2019 20:37:59

Highest Channel / 5MHz / QPSK



Date: 14, DEC, 2019 20:39:57

Highest Channel / 5MHz / 16QAM

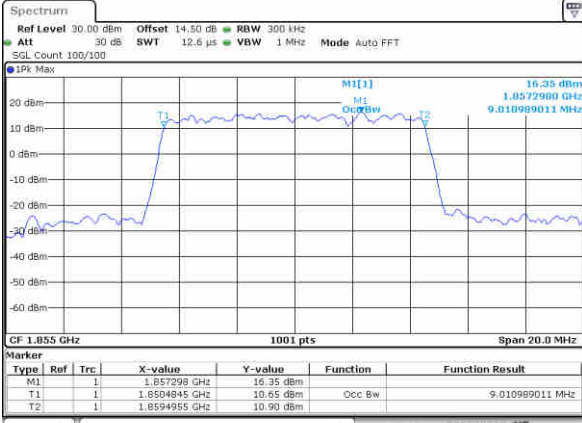


Date: 14, DEC, 2019 20:40:08



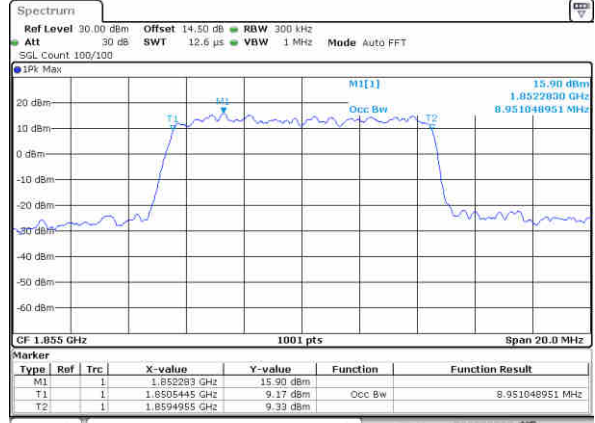
LTE Band 2

Lowest Channel / 10MHz / QPSK



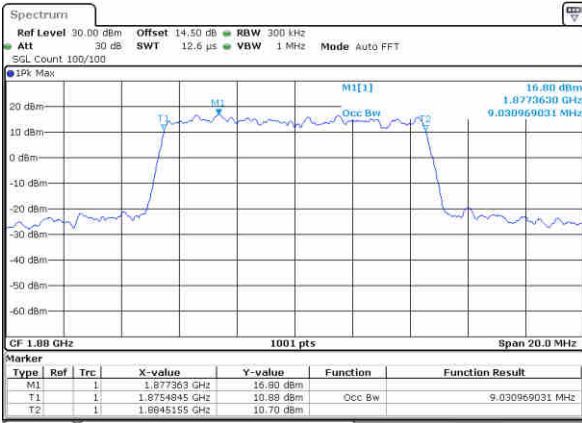
Date: 14, DEC, 2019 20:42:06

Lowest Channel / 10MHz / 16QAM



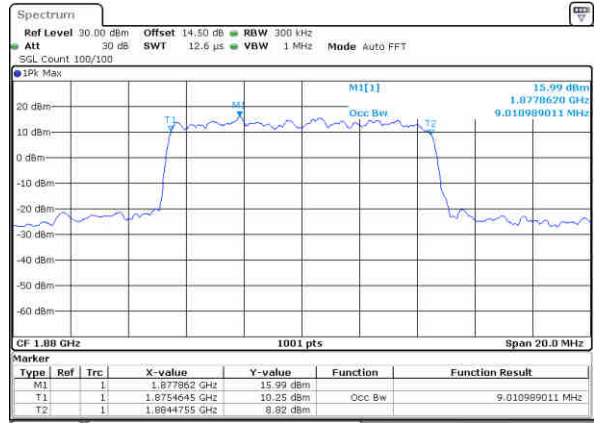
Date: 14, DEC, 2019 20:42:17

Middle Channel / 10MHz / QPSK



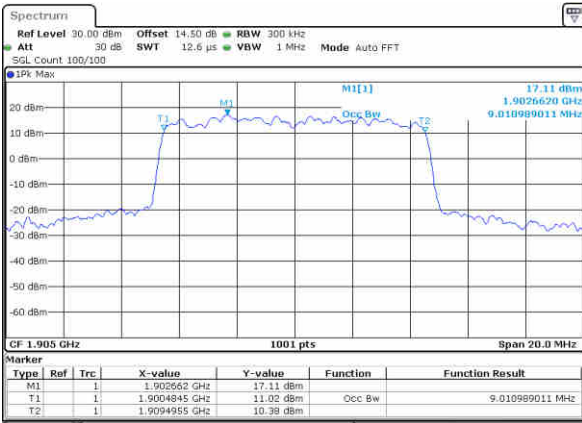
Date: 14, DEC, 2019 20:44:15

Middle Channel / 10MHz / 16QAM



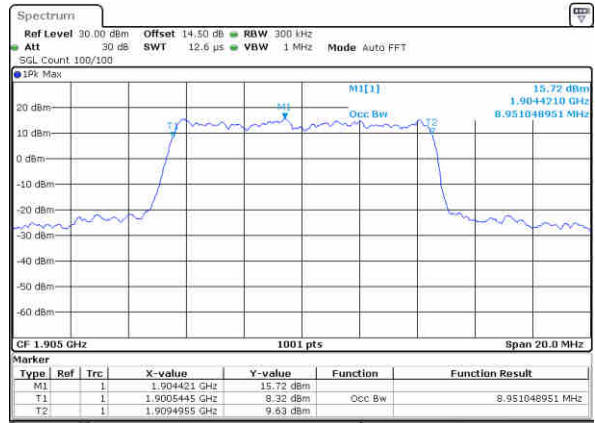
Date: 14, DEC, 2019 20:44:26

Highest Channel / 10MHz / QPSK



Date: 14, DEC, 2019 20:46:24

Highest Channel / 10MHz / 16QAM

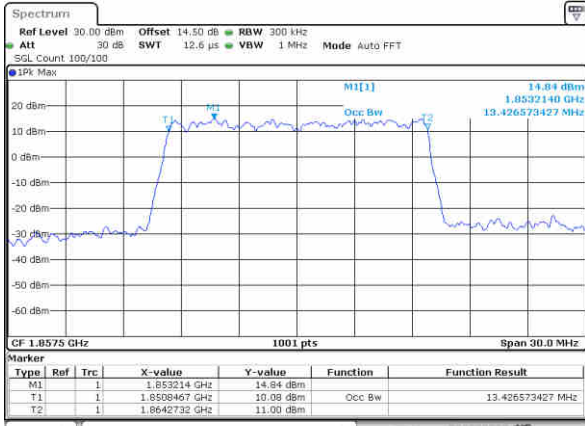


Date: 14, DEC, 2019 20:46:35



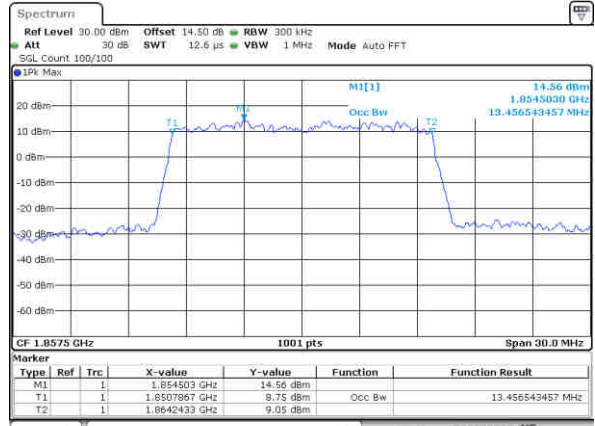
LTE Band 2

Lowest Channel / 15MHz / QPSK



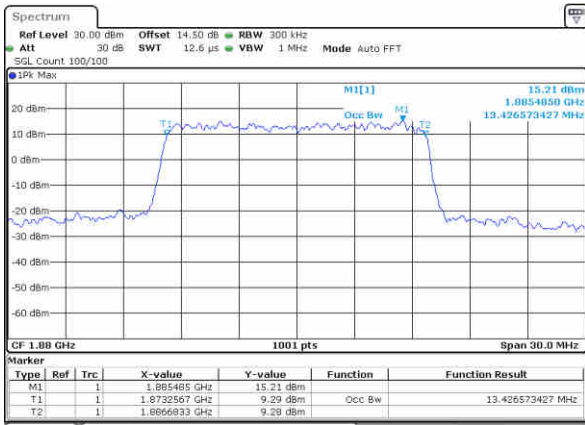
Date: 14, DEC, 2019 20:48:34

Lowest Channel / 15MHz / 16QAM



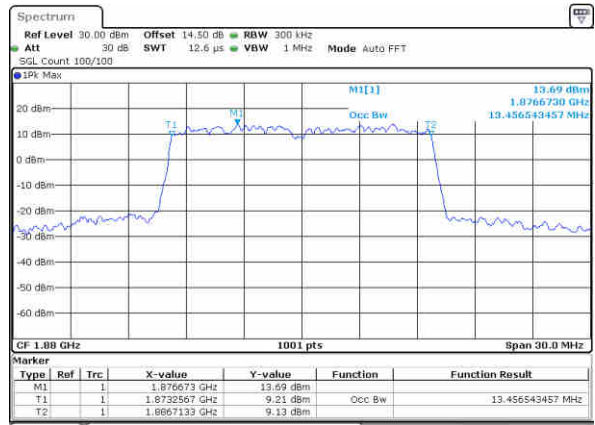
Date: 14, DEC, 2019 20:48:45

Middle Channel / 15MHz / QPSK



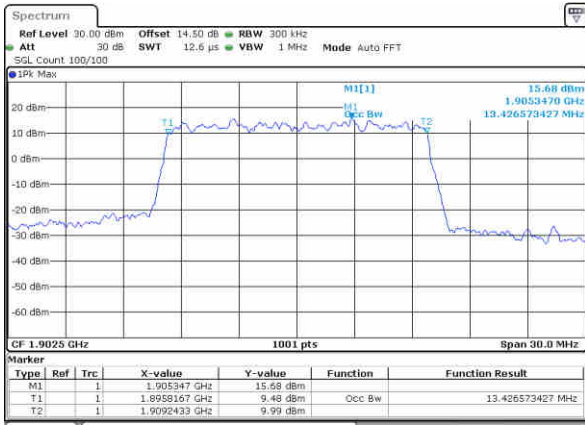
Date: 14, DEC, 2019 20:50:43

Middle Channel / 15MHz / 16QAM



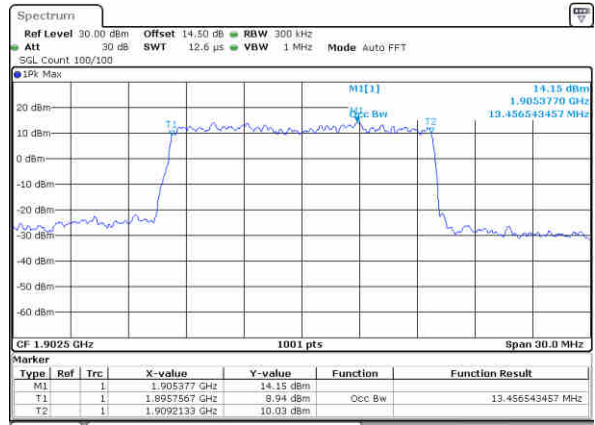
Date: 14, DEC, 2019 20:50:54

Highest Channel / 15MHz / QPSK



Date: 14, DEC, 2019 20:52:53

Highest Channel / 15MHz / 16QAM

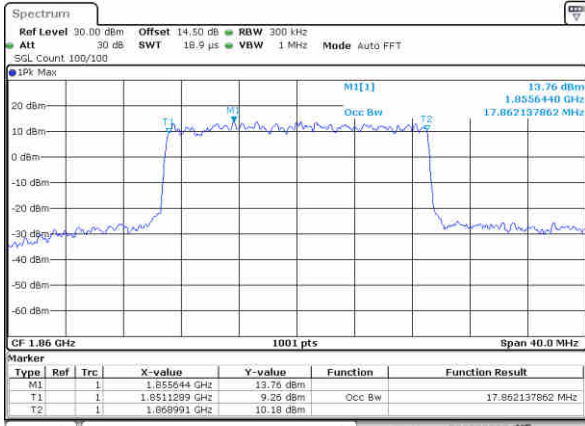


Date: 14, DEC, 2019 20:53:04



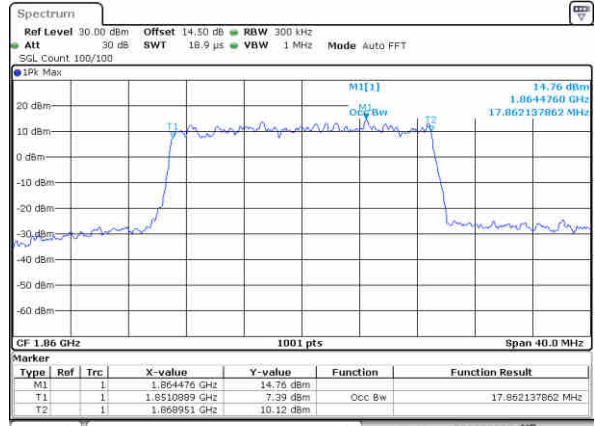
LTE Band 2

Lowest Channel / 20MHz / QPSK



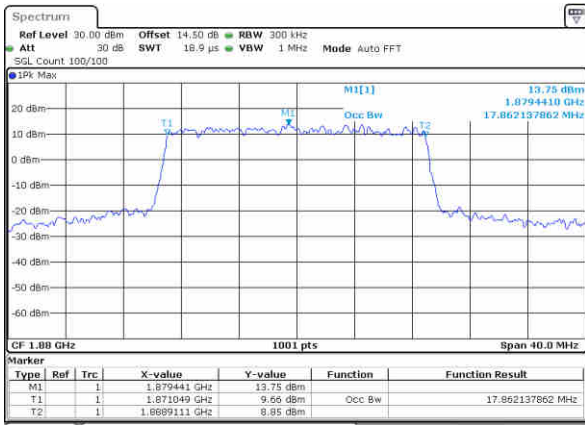
Date: 14, DEC, 2019 20:55:02

Lowest Channel / 20MHz / 16QAM



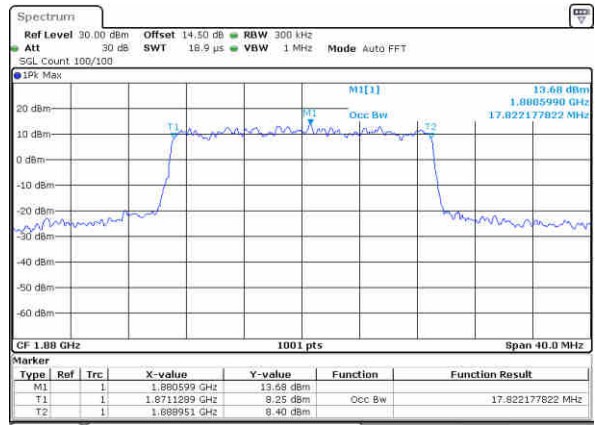
Date: 14, DEC, 2019 20:55:13

Middle Channel / 20MHz / QPSK



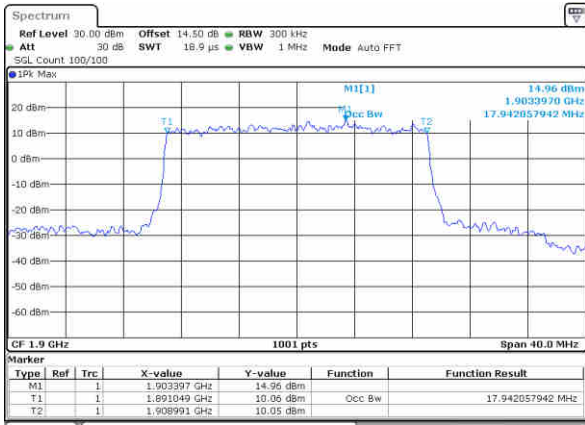
Date: 14, DEC, 2019 20:57:11

Middle Channel / 20MHz / 16QAM



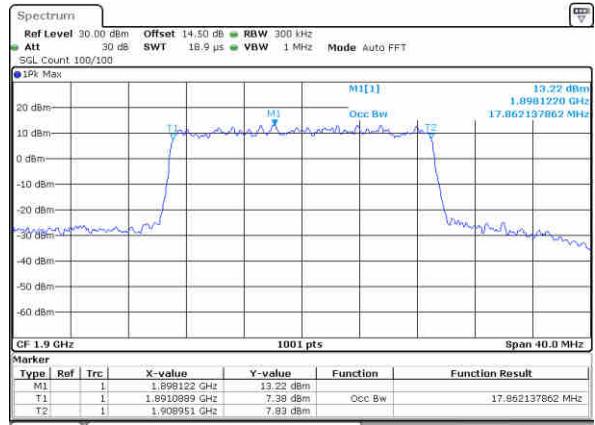
Date: 14, DEC, 2019 20:57:22

Highest Channel / 20MHz / QPSK



Date: 14, DEC, 2019 20:59:21

Highest Channel / 20MHz / 16QAM

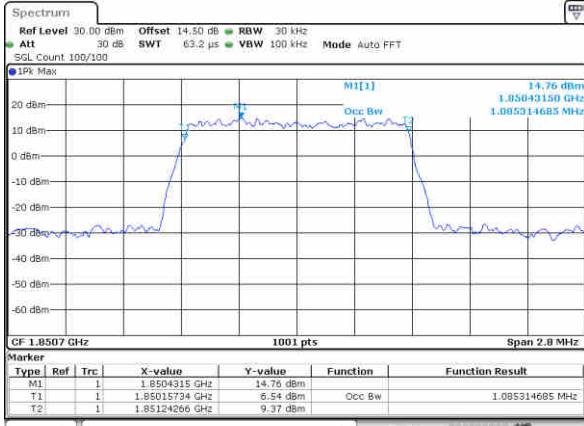


Date: 14, DEC, 2019 20:59:32



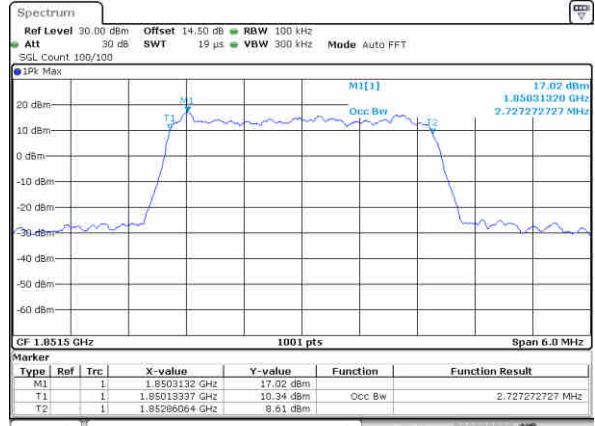
LTE Band 2

Lowest Channel / 1.4MHz / 64QAM



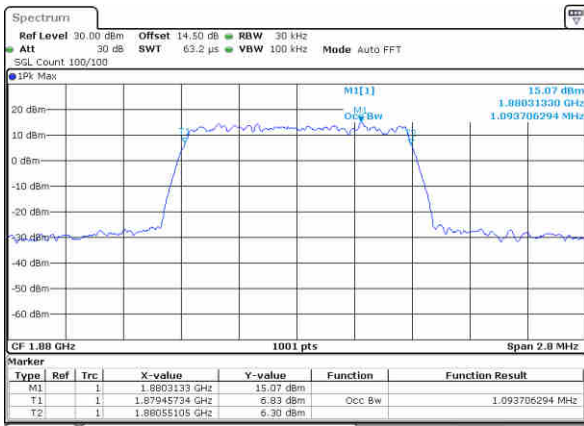
Date: 14_DEC.2019 20:19:33

Lowest Channel / 3MHz / 64QAM



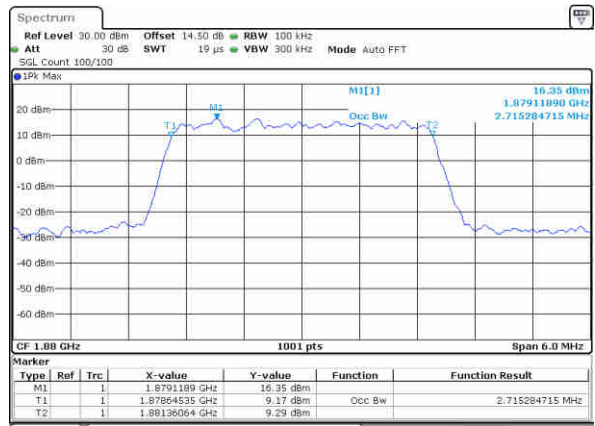
Date: 14_DEC.2019 21:02:01

Middle Channel / 1.4MHz / 64QAM



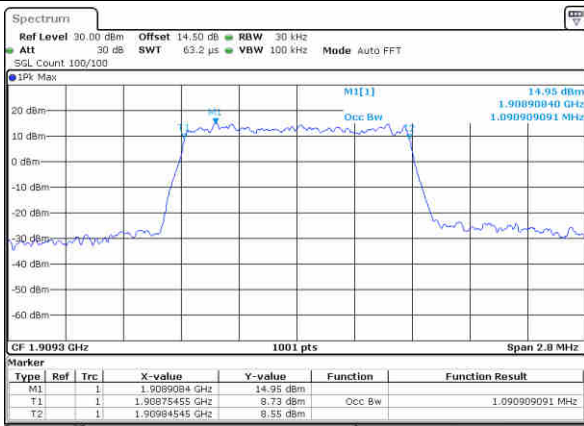
Date: 14_DEC.2019 20:20:37

Middle Channel / 3MHz / 64QAM



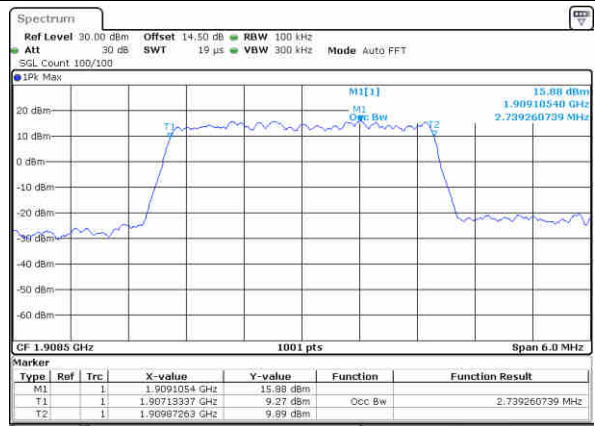
Date: 14_DEC.2019 21:03:06

Highest Channel / 1.4MHz / 64QAM



Date: 14_DEC.2019 20:21:40

Highest Channel / 3MHz / 64QAM

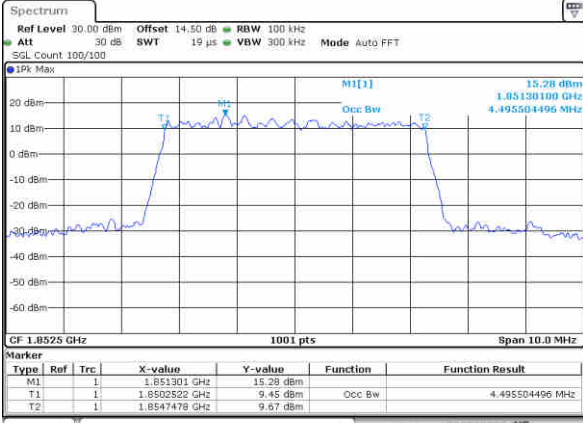


Date: 14_DEC.2019 21:04:10



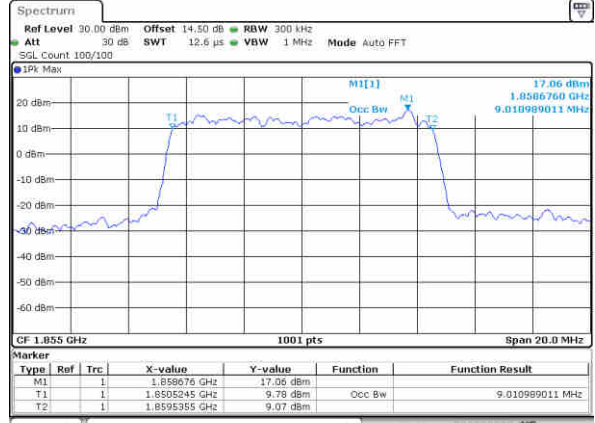
LTE Band 2

Lowest Channel / 5MHz / 64QAM



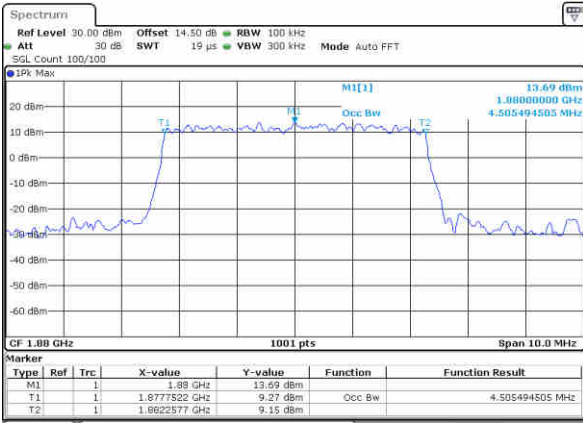
Date: 14, DEC, 2019 21:05:14

Lowest Channel / 10MHz / 64QAM



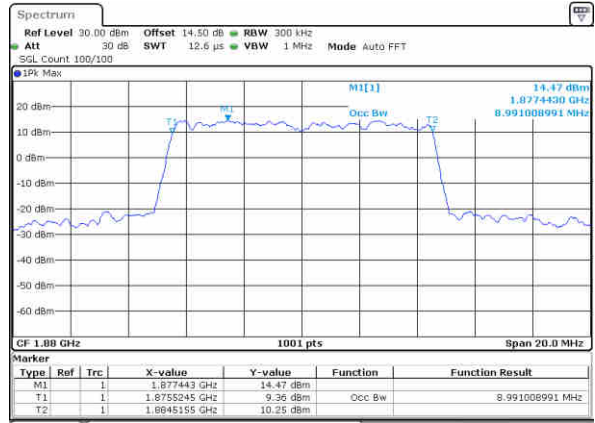
Date: 14, DEC, 2019 21:08:27

Middle Channel / 5MHz / 64QAM



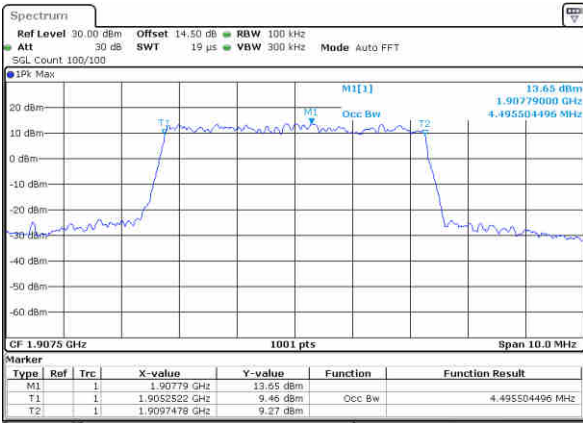
Date: 14, DEC, 2019 21:06:18

Middle Channel / 10MHz / 64QAM



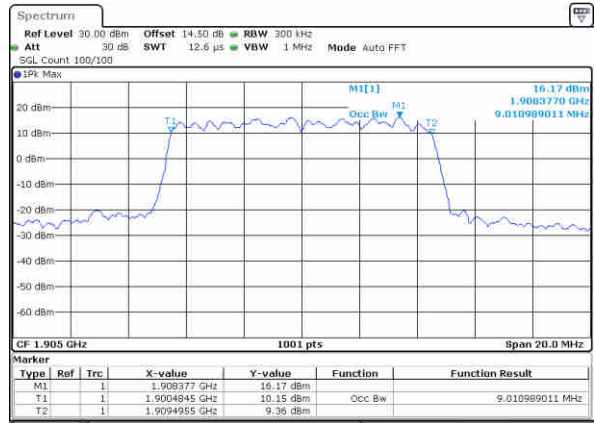
Date: 14, DEC, 2019 21:09:32

Highest Channel / 5MHz / 64QAM



Date: 14, DEC, 2019 21:07:23

Highest Channel / 10MHz / 64QAM

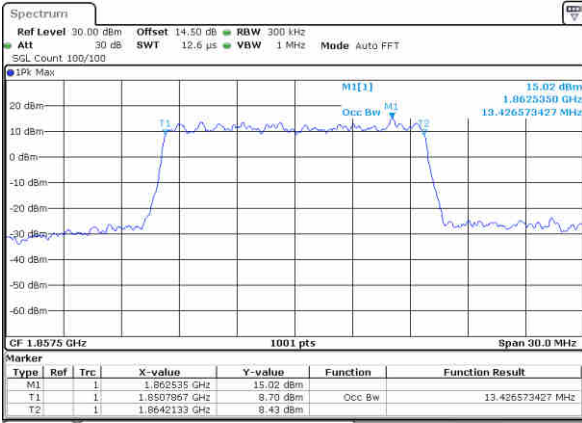


Date: 14, DEC, 2019 21:10:37



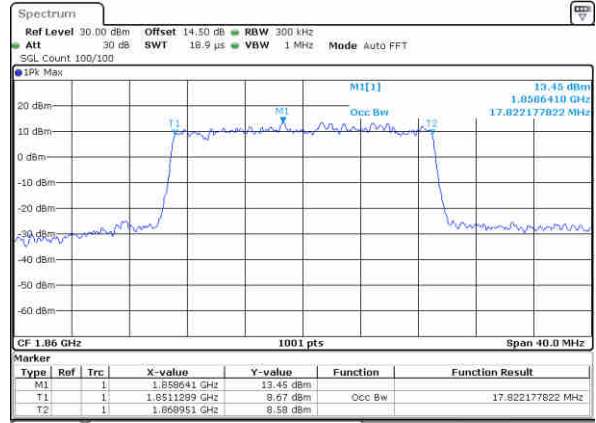
LTE Band 2

Lowest Channel / 15MHz / 64QAM



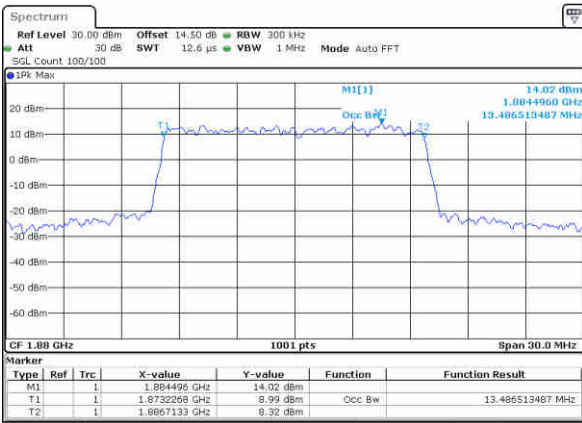
Date: 14, DEC, 2019 21:11:41

Lowest Channel / 20MHz / 64QAM



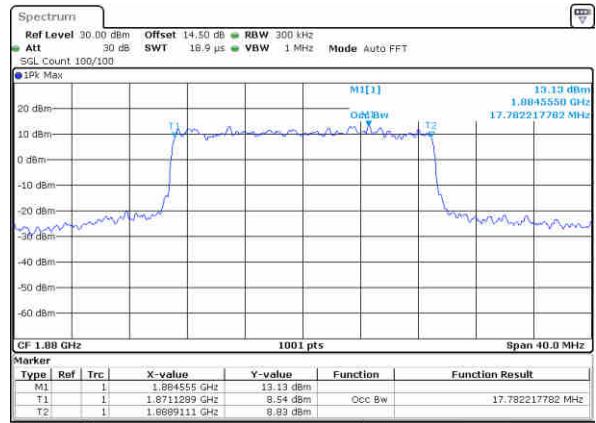
Date: 14, DEC, 2019 21:11:53

Middle Channel / 15MHz / 64QAM



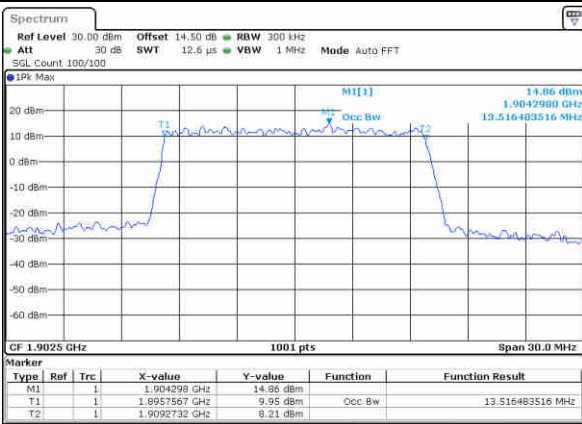
Date: 14, DEC, 2019 21:12:45

Middle Channel / 20MHz / 64QAM



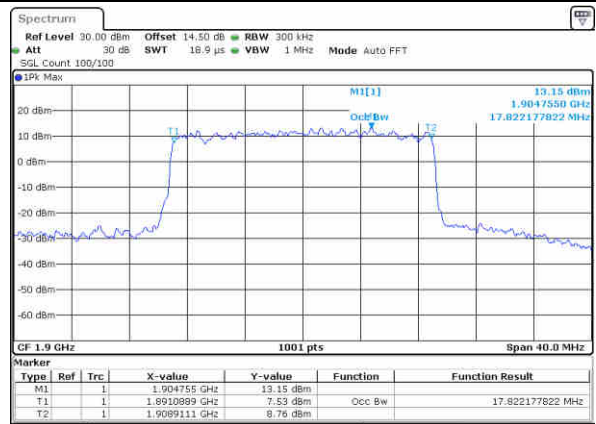
Date: 14, DEC, 2019 21:15:58

Highest Channel / 15MHz / 64QAM



Date: 14, DEC, 2019 21:13:49

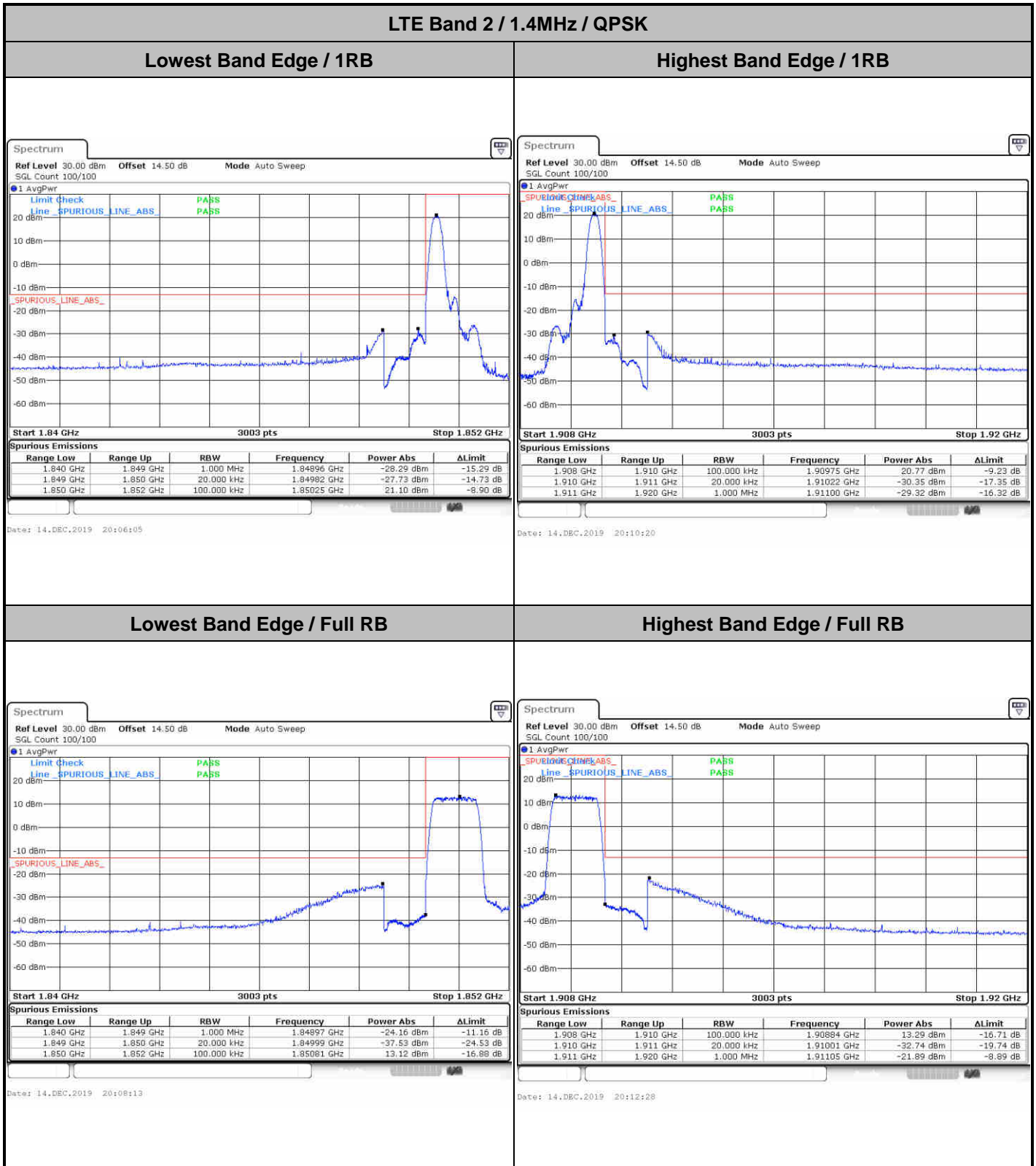
Highest Channel / 20MHz / 64QAM



Date: 14, DEC, 2019 21:17:02



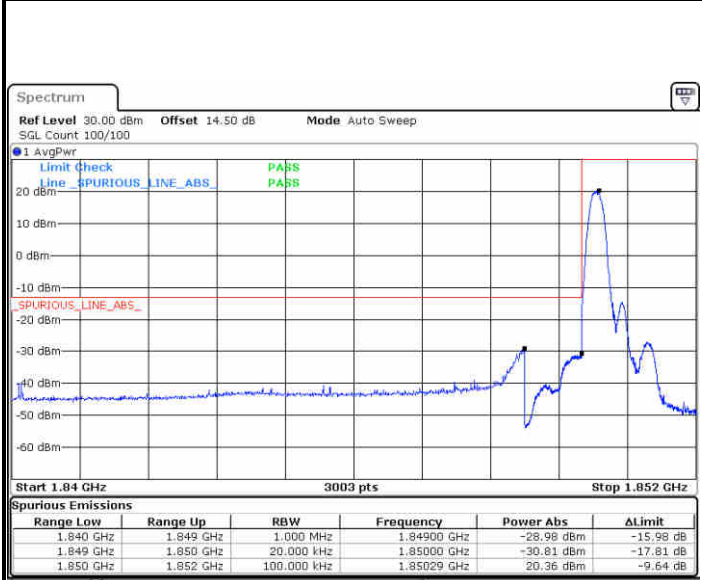
Conducted Band Edge





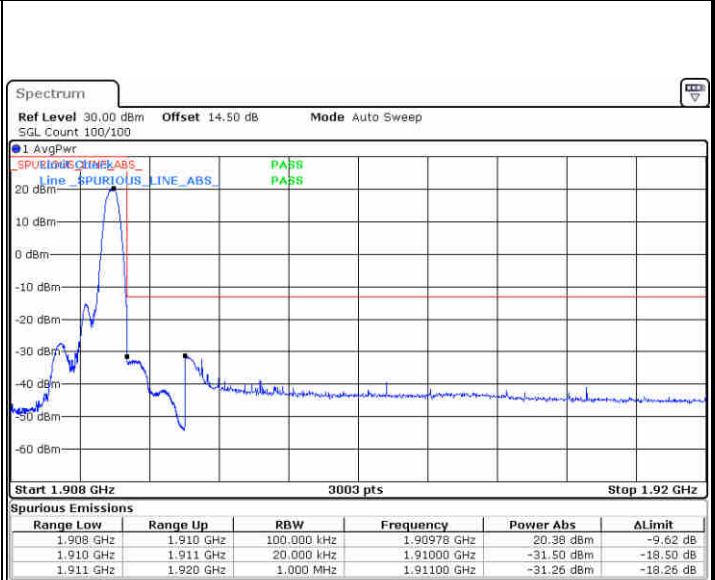
LTE Band 2 / 1.4MHz / 16QAM

Lowest Band Edge / 1 RB



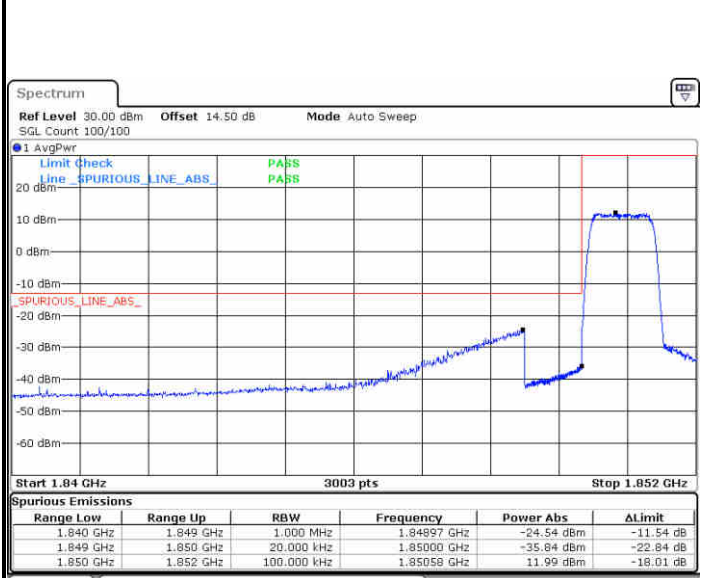
Date: 14.DEC.2019 20:07:09

Highest Band Edge / 1 RB



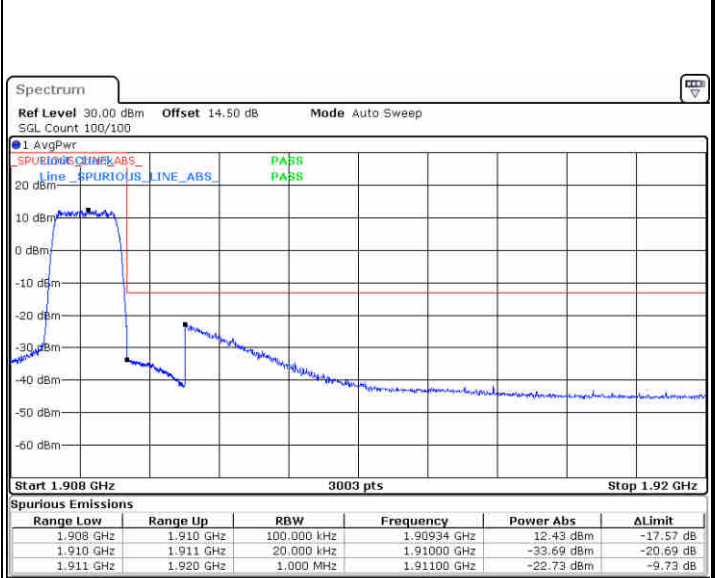
Date: 14.DEC.2019 20:11:24

Lowest Band Edge / Full RB



Date: 14.DEC.2019 20:09:16

Highest Band Edge / Full RB



Date: 14.DEC.2019 20:13:32