



FCC RF Test Report

APPLICANT : Nokia Shanghai Bell Co., Ltd.
EQUIPMENT : NOK 5G21 GATEWAY GRY KIT
BRAND NAME : T-Mobile
MODEL NAME : 5G21-12W-A
FCC ID : 2ADZR5G2112WA
STANDARD : 47 CFR Part 2, 22(H), 24(E), 27(L), 27(H), 27(M), 27(N)
CLASSIFICATION : PCS Licensed Transmitter (PCB)

The product was received on Mar. 11, 2020 and completely tested on Jul. 21, 2020. We, Sporton International (Kunshan) Inc., would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.26-2015 and shown compliance with the applicable technical standards.

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

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG9D2703A	Rev. 01	Initial issue of report	Jul. 29, 2020

SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.4	§2.1046 §27.50(h)(2)	Conducted Output Power (Band 41)	< 2Watt	PASS	-
	§22.913(a)(5)	Effective Radiated Power (Band 5) (Band 26)	ERP < 7 Watt	PASS	-
	§27.50(c)(10)	Effective Radiated Power (Band 12) (Band 71)	ERP < 3 Watt	PASS	-
	§24.232(c) §27.50(h)(2)	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(g) §27.53(h) §27.53(m)(2)	Conducted Band Edge Measurement (Band 2) (Band 4) (Band 5) (Band 12) (Band 25) (Band 26) (Band 66) (Band 71) (Band 41)	< 43+10log10(P[Watts])	PASS	-
3.8	§2.1051 §22.917(a) §24.238(a) §27.53(g) §27.53(h) §27.53(m)(2)	Conducted Spurious Emission (Band 2) (Band 4) (Band 5) (Band 12) (Band 25) (Band 26) (Band 66) (Band 71) (Band 41)	< 43+10log10(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		

Report Section	FCC Rule	Description	Limit	Result	Remark
4.4	§2.1053 §22.917(a) §24.238(a) §27.53(g) §27.53(h) §27.53(m)(2)	Radiated Spurious Emission (Band 2) (Band 4) (Band 5) (Band 12) (Band 25) (Band 26) (Band 66) (Band 71) (Band 41)	$< 43 + 10 \log_{10}(P[\text{Watts}])$	PASS	Under limit 22.14 dB at 3471.00 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

Nokia Shanghai Bell Co., Ltd.

388#, Ningqiao Road, China (Shanghai) Pilot Free Trade Zone, Shanghai 201206, China

1.2 Manufacturer

Nokia Solutions and Networks Oy

Karakaari 7, 02610 Espoo, Finland

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	NOK 5G21 GATEWAY GRY KIT
Brand Name	T-Mobile
Model Name	5G21-12W-A
FCC ID	2ADZR5G2112WA
EUT supports Radios application	LTE/5G NR/GNSS WLAN 2.4GHz 802.11b/g/n HT20/HT40 WLAN 2.4GHz 802.11ax HE20/HE40 WLAN 5GHz 802.11a/n HT20/HT40 WLAN 5GHz 802.11ac/ax VHT20/VHT40/VHT80/HE20/HE40/HE80 Bluetooth LE
HW Version	3TG00739A
SW Version	HB5GGW_D010000B42T0101E0379.tar
EUT Stage	Identical Prototype

Specification of Accessory				
AC Adapter 1	Brand Name	DELTA	Model Name	UPD-480WNAB B
	Power Rating	I/P: 100-240Vac, 1600mA, O/P:12Vdc, 4000mA		
AC Adapter 2	Brand Name	FSP	Model Name	FSP048-A12U01
	Power Rating	I/P: 100-240Vac, 1300mA, O/P:12Vdc, 4000mA		

Remark: Use adapter 1 for all tests.

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 12 : 699.7 MHz ~ 715.3 MHz LTE Band 25 : 1850.7MHz ~ 1914.3 MHz LTE Band 26 : 824.7MHz ~ 848.3 MHz LTE Band 41 : 2498.5 MHz ~ 2687.5 MHz LTE Band 66 : 1710.7 MHz ~ 1779.3 MHz LTE Band 71: 665.5 MHz ~ 695.5MHz
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 12 : 729.7 MHz ~ 745.3 MHz LTE Band 25 : 1930.7MHz ~ 1994.3 MHz LTE Band 26 : 869.7MHz ~ 893.3MHz LTE Band 41 : 2498.5 MHz ~ 2687.5 MHz LTE Band 46 : 5160 MHz ~ 5905 MHz (DL only) LTE Band 66 : 2110.7 MHz~ 2199.3 MHz LTE Band 71: 619.5 MHz ~ 649.5MHz
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 12 : 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 41 : 5MHz / 10MHz / 15MHz / 20MHz LTE Band 66 : 1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz / 20MHz LTE Band 71 : 5MHz / 10MHz / 15MHz / 20MHz
Uplink CA Bands	2A-4A, 2A-12A, 2A-66A, 12A-66A, 41C
Maximum Output Power to Antenna	LTE Band 2 : 24.92 dBm LTE Band 4 : 24.97 dBm LTE Band 5 : 23.77 dBm LTE Band 12 : 24.13 dBm LTE Band 25 : 24.98 dBm LTE Band 26 : 23.85 dBm LTE Band 41 : 25.61 dBm LTE Band 41C : 25.61 dBm LTE Band 66 : 25.02 dBm LTE Band 71 : 24.25 dBm
Antenna Gain	LTE Band 2 : 3.28 dBi LTE Band 4 : 3.28 dBi LTE Band 5 : 1.73 dBi LTE Band 12 : 0.97 dBi LTE Band 25 : 3.28 dBi LTE Band 26 : 1.73 dBi LTE Band 41 : 4.27 dBi LTE Band 66 : 3.28 dBi LTE Band 71 : 0.97 dBi
Type of Modulation	QPSK / 16QAM / 64QAM / 256QAM

Note:

1. The test items of inter band CA were cover by LTE single carrier due to the CA power is reduced according to 3GPP MPR, but except for RSE testing.
2. LTE band 41 supports HPUE

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	1M09G7D	-	0.6699	1M10W7D	-	0.5834
3	1851.5 ~ 1908.5	2M73G7D	-	0.6622	2M71W7D	-	0.5834
5	1852.5 ~ 1907.5	4M52G7D	-	0.6561	4M51W7D	-	0.5768
10	1855.0 ~ 1905.0	9M07G7D	0.0024	0.6622	9M05W7D	-	0.5572
15	1857.5 ~ 1902.5	13M4G7D	-	0.6653	13M5W7D	-	0.5768
20	1860.0 ~ 1900.0	18M5G7D	-	0.6412	18M5W7D	-	0.5623
LTE Band 2		64QAM			256QAM		
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	1M09W7D	-	0.4529	1M10W7D	-	0.2234
3	1851.5 ~ 1908.5	2M73W7D	-	0.4498	2M74W7D	-	0.2286
5	1852.5 ~ 1907.5	4M51W7D	-	0.4550	4M51W7D	-	0.2270
10	1855.0 ~ 1905.0	9M05W7D	-	0.4467	9M03W7D	-	0.2218
15	1857.5 ~ 1902.5	13M5W7D	-	0.4395	13M5W7D	-	0.2254
20	1860.0 ~ 1900.0	18M5W7D	-	0.4395	18M5W7D	-	0.2203



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	1M09G7D	-	0.6699	1M10W7D	-	0.5834
3	1851.5 ~ 1913.5	2M73G7D	-	0.6622	2M71W7D	-	0.5834
5	1852.5 ~ 1912.5	4M52G7D	-	0.6561	4M51W7D	-	0.5768
10	1855.0 ~ 1910.0	9M07G7D	0.0024	0.6622	9M05W7D	-	0.5572
15	1857.5 ~ 1907.5	13M4G7D	-	0.6653	13M5W7D	-	0.5768
20	1860.0 ~ 1905.0	18M5G7D	-	0.6412	18M5W7D	-	0.5623
LTE Band 25		64QAM			256QAM		
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	1M09W7D	-	0.4529	1M10W7D	-	0.2234
3	1851.5 ~ 1913.5	2M73W7D	-	0.4498	2M74W7D	-	0.2286
5	1852.5 ~ 1912.5	4M51W7D	-	0.4550	4M51W7D	-	0.2270
10	1855.0 ~ 1910.0	9M05W7D	-	0.4467	9M03W7D	-	0.2218
15	1857.5 ~ 1907.5	13M5W7D	-	0.4395	13M5W7D	-	0.2254
20	1860.0 ~ 1905.0	18M5W7D	-	0.4395	18M5W7D	-	0.2203
LTE Band 4		QPSK			16QAM		
BW (MHz)	Frequency Range (MHz)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)
1.4	1710.7 ~ 1754.3	1M09G7D	-	0.6561	1M09W7D	-	0.5408
3	1711.5 ~ 1753.5	2M72G7D	-	0.6531	2M72W7D	-	0.5358
5	1712.5 ~ 1752.5	4M51G7D	-	0.6745	4M50W7D	-	0.5702
10	1715.0 ~ 1750.0	8M99G7D	0.0032	0.6622	9M05W7D	-	0.5408
15	1717.5 ~ 1747.5	13M5G7D	-	0.6683	13M5W7D	-	0.5408
20	1720.0 ~ 1745.0	18M5G7D	-	0.6761	18M3W7D	-	0.5534
LTE Band 4		64QAM			256QAM		
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	1M10W7D	-	0.3733	1M09W7D	-	0.2328
3	1711.5 ~ 1753.5	2M75W7D	-	0.3741	2M73W7D	-	0.2344
5	1712.5 ~ 1752.5	4M49W7D	-	0.3733	4M51W7D	-	0.2382
10	1715.0 ~ 1750.0	9M05W7D	-	0.3698	9M01W7D	-	0.2328
15	1717.5 ~ 1747.5	13M5W7D	-	0.3597	13M4W7D	-	0.2415
20	1720.0 ~ 1745.0	18M5W7D	-	0.3614	18M4W7D	-	0.2307



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	-	0.2173	1M10W7D	-	0.1832
3	825.5 ~ 847.5	2M73G7D	-	0.2203	2M74W7D	-	0.1875
5	826.5 ~ 846.5	4M51G7D	-	0.2188	4M48W7D	-	0.1875
10	829.0 ~ 844.0	8M99G7D	0.0082	0.2168	9M05W7D	-	0.1901
LTE Band 5		64QAM			256QAM		
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	1M09W7D	-	0.1479	1M08W7D	-	0.0746
3	825.5 ~ 847.5	2M73W7D	-	0.1380	2M73W7D	-	0.0759
5	826.5 ~ 846.5	4M53W7D	-	0.1445	4M52W7D	-	0.0746
10	829.0 ~ 844.0	9M05W7D	-	0.1413	9M01W7D	-	0.0724
LTE Band 12		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	699.7 ~ 715.3	1M09G7D	-	0.1932	1M10W7D	-	0.1690
3	700.5 ~ 714.5	2M72G7D	-	0.1963	2M73W7D	-	0.1766
5	701.5 ~ 713.5	4M51G7D	-	0.1963	4M49W7D	-	0.1722
10	704.0 ~ 711.0	8M99G7D	0.0059	0.1972	9M07W7D	-	0.1791
LTE Band 12		64QAM			256QAM		
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	699.7 ~ 715.3	1M09W7D	-	0.1390	1M09W7D	-	0.0673
3	700.5 ~ 714.5	2M72W7D	-	0.1380	2M75W7D	-	0.0685
5	701.5 ~ 713.5	4M51W7D	-	0.1432	4M51W7D	-	0.0698
10	704.0 ~ 711.0	9M05W7D	-	0.1406	9M05W7D	-	0.0740



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	-	0.2173	1M10W7D	-	0.1832
3	825.5 ~ 847.5	2M73G7D	-	0.2203	2M74W7D	-	0.1875
5	826.5 ~ 846.5	4M51G7D	-	0.2188	4M48W7D	-	0.1875
10	829.0 ~ 844.0	8M99G7D	0.0082	0.2168	9M05W7D	-	0.1901
15	831.5 ~ 841.5	13M5G7D	-	0.2089	13M5W7D	-	0.1841
CH26765	821.5	13M5G7D	-	0.2061	13M3W7D	-	0.1766
LTE Band 26		64QAM			256QAM		
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	1M09W7D	-	0.1479	1M08W7D	-	0.0746
3	825.5 ~ 847.5	2M73W7D	-	0.1380	2M73W7D	-	0.0759
5	826.5 ~ 846.5	4M53W7D	-	0.1445	4M52W7D	-	0.0746
10	829.0 ~ 844.0	9M05W7D	-	0.1413	9M01W7D	-	0.0724
15	831.5 ~ 841.5	13M5W7D	-	0.1390	13M5W7D	-	0.0708
CH26765	821.5	13M4W7D	-	0.1390	13M4W7D	-	0.0708
LTE Band 41		QPSK			16QAM		
BW (MHz)	Frequency Range (MHz)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Conducted Power (W)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Conducted Power (W)
5	2498.5 ~ 2687.5	4M52G7D	-	0.3404	4M50W7D	-	0.2999
10	2501.0 ~ 2685.0	9M05G7D	0.0049	0.3639	9M09W7D	-	0.3020
15	2503.5 ~ 2682.5	13M5G7D	-	0.3443	13M5W7D	-	0.2979
20	2506.0 ~ 2680.0	17M9G7D	-	0.3381	17M9W7D	-	0.2924
LTE Band 41		64QAM			256QAM		
BW (MHz)	Frequency Range (MHz)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Conducted Power (W)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Conducted Power (W)
5	2498.5 ~ 2687.5	4M51W7D	-	0.2323	4M50W7D	-	0.1614
10	2501.0 ~ 2685.0	9M03W7D	-	0.2421	9M07W7D	-	0.1710
15	2503.5 ~ 2682.5	13M5W7D	-	0.2339	13M5W7D	-	0.1626
20	2506.0 ~ 2680.0	18M0W7D	-	0.2500	17M9W7D	-	0.1679



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	-	0.6561	1M09W7D	-	0.5408
3	1711.5 ~ 1778.5	2M72G7D	-	0.6531	2M72W7D	-	0.5358
5	1712.5 ~ 1777.5	4M51G7D	-	0.6745	4M50W7D	-	0.5702
10	1715.0 ~ 1775.0	8M99G7D	0.0032	0.6622	9M05W7D	-	0.5408
15	1717.5 ~ 1772.5	13M5G7D	-	0.6683	13M5W7D	-	0.5408
20	1720.0 ~ 1770.0	18M5G7D	-	0.6761	18M3W7D	-	0.5534
LTE Band 66		64QAM			256QAM		
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	1M10W7D	-	0.3733	1M09W7D	-	0.2328
3	1711.5 ~ 1778.5	2M75W7D	-	0.3741	2M73W7D	-	0.2344
5	1712.5 ~ 1777.5	4M49W7D	-	0.3733	4M51W7D	-	0.2382
10	1715.0 ~ 1775.0	9M05W7D	-	0.3698	9M01W7D	-	0.2328
15	1717.5 ~ 1772.5	13M5W7D	-	0.3597	13M4W7D	-	0.2415
20	1720.0 ~ 1770.0	18M5W7D	-	0.3614	18M4W7D	-	0.2307
LTE Band 71		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)
5	665.5 ~ 695.5	4M51G7D	-	0.1968	4M50W7D	-	0.1750
10	668.0 ~ 693.0	9M03G7D	0.0049	0.2004	9M03W7D	-	0.1862
15	670.5 ~ 690.5	13M5G7D	-	0.2028	13M5W7D	-	0.1754
20	673.0 ~ 688.0	17M9G7D	-	0.2014	17M9W7D	-	0.1828
LTE Band 71		64QAM			256QAM		
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)
5	665.5 ~ 695.5	4M50W7D	-	0.1406	4M50W7D	-	0.0687
10	668.0 ~ 693.0	9M01W7D	-	0.1390	9M03W7D	-	0.0705
15	670.5 ~ 690.5	13M5W7D	-	0.1455	13M5W7D	-	0.0728
20	673.0 ~ 688.0	17M9W7D	-	0.1426	17M9W7D	-	0.0741



LTE Band 41 CA	QPSK			16QAM		
BW (MHz)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Conducted Power (W)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Conducted Power (W)
5MHz+20MHz	22M9G7D	-	0.3556	23M2W7D	-	0.3199
10MHz+20MHz	27M8G7D	-	0.3573	27M8W7D	-	0.3334
10MHz+15MHz	23M5G7D	-	0.3532	23M4W7D	-	0.3221
15MHz+15MHz	28M4G7D	-	0.3556	28M3W7D	-	0.3243
15MHz+20MHz	32M9G7D	-	0.3565	32M5W7D	-	0.3319
15MHz+10MHz	23M3G7D	-	0.3491	23M3W7D	-	0.3296
20MHz+5MHz	23M1G7D	-	0.3622	23M5W7D	-	0.3296
20MHz+10MHz	28M0G7D	-	0.3622	27M8W7D	-	0.3311
20MHz+15MHz	32M7G7D	-	0.3614	32M6W7D	-	0.3296
20MHz+20MHz	37M4G7D	-	0.3639	37M4W7D	-	0.3319
LTE Band 41 CA	64QAM			256QAM		
BW (MHz)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Conducted Power (W)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Conducted Power (W)
5MHz+20MHz	23M1W7D	-	0.1782	23M1W7D	-	0.1791
10MHz+20MHz	27M8W7D	-	0.1791	28M1W7D	-	0.1803
10MHz+15MHz	23M1W7D	-	0.1811	23M3W7D	-	0.1799
15MHz+15MHz	28M5W7D	-	0.1758	28M4W7D	-	0.1791
15MHz+20MHz	32M5W7D	-	0.1754	32M7W7D	-	0.1734
15MHz+10MHz	23M4W7D	-	0.1791	23M3W7D	-	0.1782
20MHz+5MHz	23M2W7D	-	0.1774	23M4W7D	-	0.1811
20MHz+10MHz	27M9W7D	-	0.1722	28M2W7D	-	0.1714
20MHz+15MHz	32M7W7D	-	0.1774	32M7W7D	-	0.1774
20MHz+20MHz	37M5W7D	-	0.1774	37M3W7D	-	0.1782

Note:

1. LTE Band 26 overlaps the entire frequency range of LTE Band 5. Therefore, the test results provided in this report covers Band 5 and the portion of Band 26 subject to Part 22.
2. LTE Band 66 overlaps the entire frequency range of LTE Band 4. Therefore, the test results provided in this report covers Band 66 as well as Band 4.
3. LTE Band 25 overlaps the entire frequency range of LTE Band 2. Therefore, the test results provided in this report covers Band 25 as well as Band 2.



1.7 Testing Location

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

Test Firm	Sporton International (Kunshan) Inc.		
Test Site Location	No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300 People's Republic of China TEL : +86-512-57900158 FAX : +86-512-57900958		
Test Site No.	Sporton Site No.	FCC Designation No.	FCC Test Firm Registration No.
	03CH04-KS TH01-KS	CN1257	314309

1.8 Test Software

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

1.9 Applicable Standards

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

- ♦ 47 CFR Part 2, 22(H), 24(E), 27(L), 27(H), 27(M), 27(N)
- ♦ 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	256QAM	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	v
	4	v	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	v
	12	v	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	v
	26	v	v	v	v	v	-	v	v	v	v	v	v	v	v	v	v
	41	-	-	v	v	v	v	v	v	v	v	v	v	v	v	v	v
	66	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v
	71	-	-	v	v	v	v	v	v	v	v	v	v	v	v	v	v
Peak-to-Average Ratio	12				v	-	-	v	v	v	v	v		v	v	v	v
	25						v	v	v	v	v	v		v	v	v	v
	26				v		-	v	v	v	v	v		v	v	v	v
	41	-	-				v	v	v	v	v	v		v	v	v	v
	66						v	v	v	v	v	v		v	v	v	v
	71	-	-				v	v	v	v	v	v		v	v	v	v
26dB and 99% Bandwidth	12	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
	26	v	v	v	v	v	-	v	v	v	v			v	v	v	v
	41	-	-	v	v	v	v	v	v	v	v			v	v	v	v
	66	v	v	v	v	v	v	v	v	v	v			v	v	v	v
	71	-	-	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	256QAM	1	Half	Full	L	M	H
Conducted Band Edge	12	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
	26	v	v	v	v	v	-	v	v	v	v	v		v	v		v
	41	-	-	v	v	v	v	v	v	v	v	v		v	v		v
	66	v	v	v	v	v	v	v	v	v	v	v		v	v		v
	71	-	-	v	v	v	v	v	v	v	v	v		v	v		v
Conducted Spurious Emission	12	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
	26	v	v	v	v	v	-	v	v	v	v	v			v	v	v
	41	-	-	v	v	v	v	v	v	v	v	v			v	v	v
	66	v	v	v	v	v	v	v	v	v	v	v			v	v	v
	71	-	-	v	v	v	v	v	v	v	v	v			v	v	v
Frequency Stability	12				v	-	-	v						v		v	
	25				v			v						v		v	
	26				v		-	v						v		v	
	41	-	-		v			v						v		v	
	66				v			v						v		v	
	71	-	-		v			v						v		v	
E.R.P / E.I.R.P	12	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
	26	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
	71	-	-	v	v	v	v	v	v	v	v	v			v	v	v



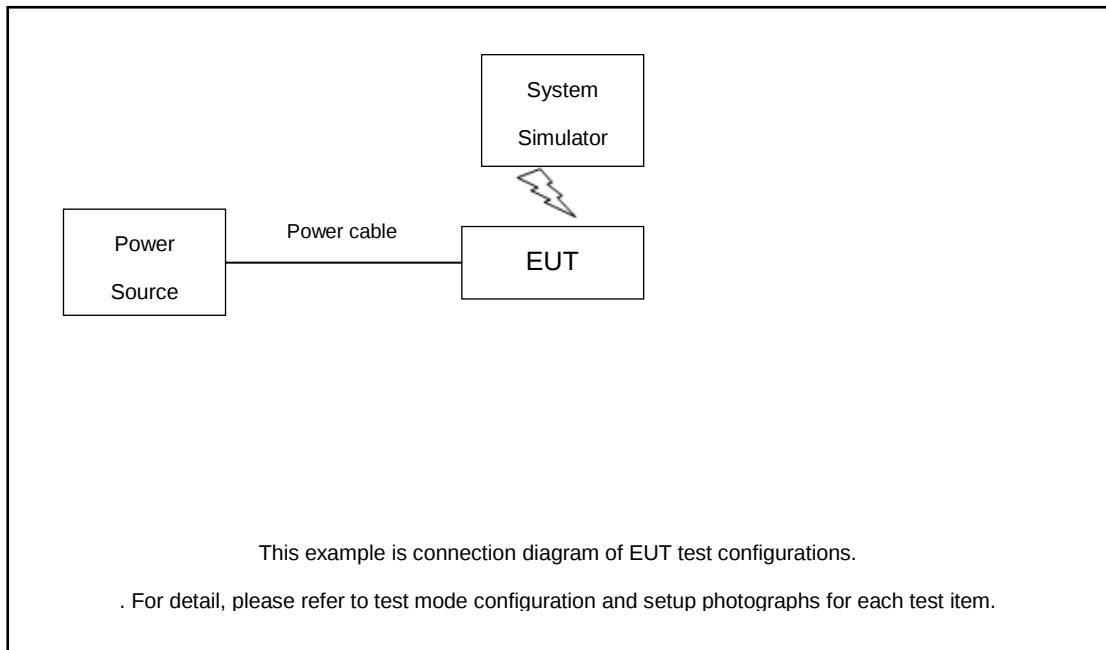
Test Items	Band	Bandwidth (MHz)						Modulation				RB #			Test Channel		
		1.4	3	5	10	15	20	QPSK	16QAM	64QAM	256QAM	1	Half	Full	L	M	H
Radiated Spurious Emission	12	Worst Case														v	
	25	Worst Case														v	
	26	Worst Case														v	
	41	Worst Case														v	
	66	Worst Case														v	
	71	Worst Case														v	
Note	1. The mark “v ” means that this configuration is chosen for testing 2. The mark “-“ means that this bandwidth is not supported. 3. The device is investigated from 30MHz to 10 times of fundamental signal for radiated spurious emission test under different RB size/offset and modulations in exploratory test. Subsequently, only the worst case emissions are reported. 4. LTE Band 26 overlaps the entire frequency range of LTE Band 5. Therefore, the test results provided in this report covers Band 5 and the portion of Band 26 subject to Part 22. 5. LTE Band 66 overlaps the entire frequency range of LTE Band 4. Therefore, the test results provided in this report covers Band 66 as well as Band 4. 6. LTE Band 25 overlaps the entire frequency range of LTE Band 2. Therefore, the test results provided in this report covers Band 25 as well as Band 2.																



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	256QAM	1	Half	Full	L	M	H
Max. Output Power	41C_CA	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v
26dB and 99% Bandwidth	41C_CA	v	v	v	v	v	v	v	v	v	v	v	v	v	v			v	v	v	v
Conducted Band Edge	41C_CA	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v		v	v		v
Conducted Spurious Emission	41C_CA	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v			v	v	v
Radiated Spurious Emission	41C_CA	Worst Case																		v	
Note	1. The mark “v ” means that this configuration is chosen for testing 2. The mark “-” means that this bandwidth is not supported. 3. The device is investigated from 30MHz to 10 times of fundamental signal for radiated spurious emission test under different RB size/offset and modulations in exploratory test. Subsequently, only the worst case emissions are reported. 4. The Maximum Conudcted Power / EIRP are reported of CA combination. 5. Frequency stability only shows the worst case of LTE band 41/41C																				

Test Items	Band	Bandwidth (MHz)						Modulation				RB #			Test Channel		
		1.4	3	5	10	15	20	QPSK	16QAM	64QAM	256QAM	1	Half	Full	L	M	H
Radiated Spurious Emission	2A-4A	Worst Case														v	
	2A-12A	Worst Case														v	
	2A-66A	Worst Case														v	
	12A-66A	Worst Case														v	
Note	1. The mark “v ” means that this configuration is chosen for testing 2. The mark “-“ means that this bandwidth is not supported. 3. The device is investigated from 30MHz to 10 times of fundamental signal for radiated spurious emission test under different RB size/offset and modulations in exploratory test. Subsequently, only the worst case emissions are reported.																

2.2 Connection Diagram of Test System



2.3 Support Unit used in test configuration and system

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

2.4 Measurement Results Explanation Example

For all conducted test items:

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

The spectrum analyzer offset is derived from RF cable loss.

Offset = RF cable loss.

Following shows an offset computation example with cable loss 5.4dB.

Example :

$$\begin{aligned}
 \text{Offset(dB)} &= \text{RF cable loss(dB)}. \\
 &= 5.4 \text{ (dB)}
 \end{aligned}$$



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 12 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
10	Channel	23060	23095	23130
	Frequency	704	707.5	711
5	Channel	23035	23095	23155
	Frequency	701.5	707.5	713.5
3	Channel	23025	23095	23165
	Frequency	700.5	707.5	714.5
1.4	Channel	23017	23095	23173
	Frequency	699.7	707.5	715.3

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 41 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
20	Channel	39750	40620	41490
	Frequency	2506	2593	2680
15	Channel	39725	40620	41515
	Frequency	2503.5	2593	2682.5
10	Channel	39700	40620	41540
	Frequency	2501	2593	2685
5	Channel	39675	40620	41565
	Frequency	2498.5	2593	2687.5

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 71 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
20	Channel	133222	133322	133372
	Frequency	673.0	680.5	688.0
15	Channel	133197	133297	133397
	Frequency	670.5	680.5	690.5
10	Channel	133172	133272	133422
	Frequency	668.0	678.0	693.0
5	Channel	133147	133247	133447
	Frequency	665.5	675.5	695.5

LTE Band 41C_CA Channel and Frequency List					
BW [MHz]	Channel/Frequency(MHz)		Lowest	Middle	Highest
20 + 20	PCC	Channel	39750	40521	41292
		Frequency	2506.0	2583.1	2660.2
	SCC	Channel	39948	40719	41490
		Frequency	2525.8	2602.9	2680.0
20 + 15	PCC	Channel	39750	40546	41341
		Frequency	2506.0	2585.6	2665.1
	SCC	Channel	39921	40717	41512
		Frequency	2523.1	2602.7	2682.2
15 + 20	PCC	Channel	39728	40523	41319
		Frequency	2503.8	2593.3	2662.9
	SCC	Channel	39899	40694	41490
		Frequency	2520.9	2600.4	2680.0
20 + 10	PCC	Channel	39750	40571	41391
		Frequency	2506.0	2588.1	2670.1
	SCC	Channel	39894	40715	41535
		Frequency	2520.4	2602.5	2684.5
10 + 20	PCC	Channel	39705	40526	41346
		Frequency	2501.5	2583.6	2665.6
	SCC	Channel	39849	40670	41490
		Frequency	2515.9	2598.0	2680.0



LTE Band 41C_CA Channel and Frequency List					
20 + 5	PCC	Channel	39750	40595	41440
		Frequency	2506.0	2590.5	2675.0
	SCC	Channel	39867	40712	41557
		Frequency	2517.7	2602.2	2686.7
5 + 20	PCC	Channel	39683	40528	41373
		Frequency	2499.3	2583.8	2668.3
	SCC	Channel	39800	40645	41490
		Frequency	2511.0	2595.5	2680.0
15 + 15	PCC	Channel	39725	40545	41365
		Frequency	2503.5	2585.5	2667.5
	SCC	Channel	39875	40695	41515
		Frequency	2518.5	2600.5	2682.5
10 + 15	PCC	Channel	39703	40549	41395
		Frequency	2501.3	2585.9	2670.5
	SCC	Channel	39823	40669	41515
		Frequency	2513.3	2597.9	2682.5
15 + 10	PCC	Channel	39725	40571	41417
		Frequency	2503.5	2588.1	2672.7
	SCC	Channel	39845	40691	41537
		Frequency	2515.5	2600.1	2684.7

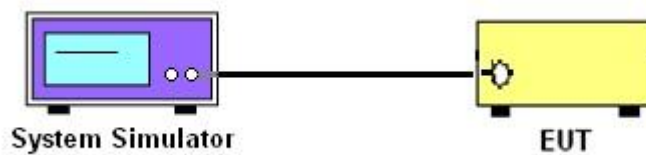
3 Conducted Test Items

3.1 Measuring Instruments

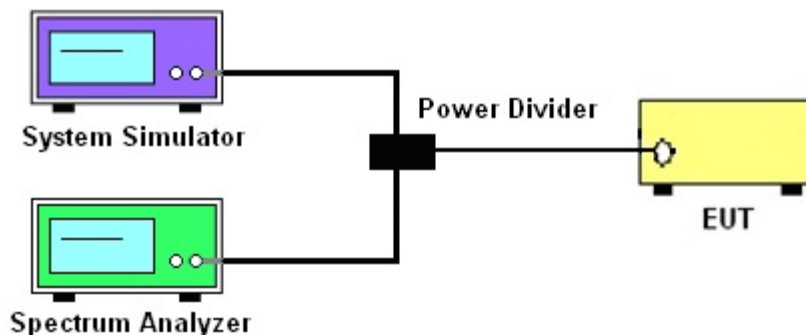
See list of measuring instruments of this test report.

3.2 Test Setup

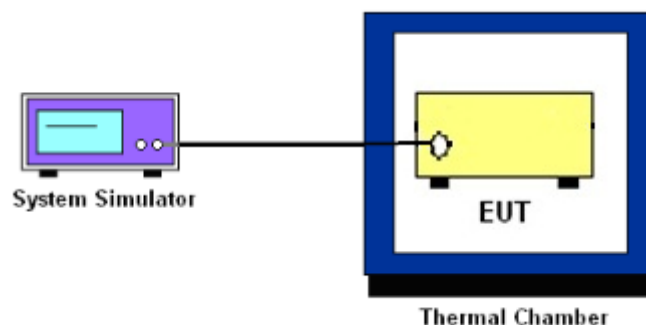
3.2.1 Conducted Output Power



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.

All user stations are limited to 2.0 watts transmitter output power for Band 41

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

The ERP of mobile transmitters must not exceed 3 Watts for LTE Band 12 and Band 71.

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 $P(\text{Watts})$ 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 $P(\text{Watts})$ 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 (g)

For operations in the 600MHz band and 698 -746 MHz band, the FCC limit is $43 + 10\log_{10}(P[\text{Watts}])$ dB below the transmitter power $P(\text{Watts})$ in a 100 kHz bandwidth. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

27.53 (h)

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

27.53(m)(2)(v)

For all fixed digital user stations, the attenuation factor shall be not less than $43 + 10 \log (P)$ dB at the channel edge.

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)

$$= P(W) - [43 + 10\log(P)] \text{ (dB)}$$

$$= [30 + 10\log(P)] \text{ (dBm)} - [43 + 10\log(P)] \text{ (dB)} = -13\text{dBm}.$$

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)
 $= -13\text{dBm}$.

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.

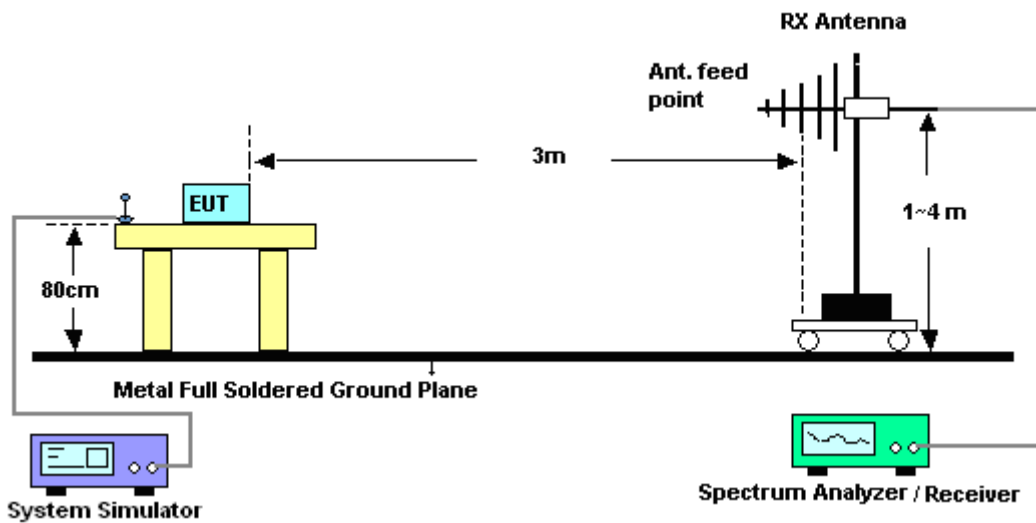
4 Radiated Test Items

4.1 Measuring Instruments

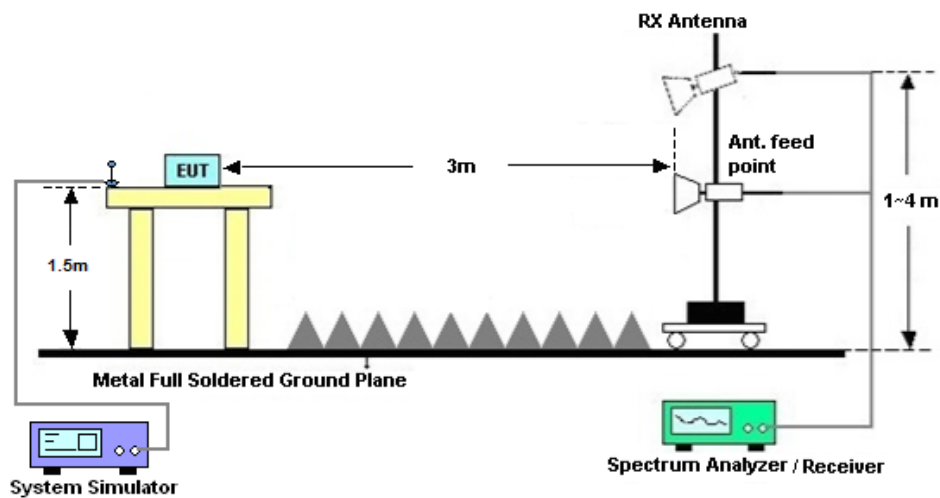
See list of measuring instruments of this test report.

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.

For Band 41

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

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)
 $= P(W) - [43 + 10\log(P)] \text{ (dB)}$
 $= [30 + 10\log(P)] \text{ (dBm)} - [43 + 10\log(P)] \text{ (dB)}$
 $= -13\text{dBm}.$

13. For Band 41:

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



5 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSV40	101040	10Hz~40GHz	Nov. 02, 2019	Apr. 02, 2020~Jul. 21, 2020	Nov. 01, 2020	Conducted (TH01-KS)
Thermal Chamber	Ten Billion	TTC-B3S	TBN-960502	-40~+150°C	Oct. 28, 2019	Apr. 02, 2020~Jul. 21, 2020	Oct. 27, 2020	Conducted (TH01-KS)
EXA Spectrum Analyzer	Keysight	N9010A	MY55150244	10Hz~44G,MAX 30dB	Apr. 15, 2020	May 21, 2020	Apr. 14, 2021	Radiation (03CH04-KS)
Bilog Antenna	TeseQ	CBL6111D	49922	30MHz~1GHz	May 30, 2019	May 21, 2020	May 29, 2020	Radiation (03CH04-KS)
Horn Antenna	Schwarzbeck	BBHA9120D	1356	1GHz~18GHz	Apr. 20, 2020	May 21, 2020	Apr. 19, 2021	Radiation (03CH04-KS)
SHF-EHF Horn	Com-power	AH-840	101115	18GHz~40GHz	Nov. 10, 2019	May 21, 2020	Nov. 09, 2020	Radiation (03CH04-KS)
Amplifier	SONOMA	310N	187289	9KHz~1GHz	Aug. 06, 2019	May 21, 2020	Aug. 05, 2020	Radiation (03CH04-KS)
Amplifier	MITEQ	EM18G40G GA	060728	18~40GHz	Jan. 08, 2020	May 21, 2020	Jan. 07, 2021	Radiation (03CH04-KS)
high gain Amplifier	MITEQ	AMF-7D-00 101800-30-1 0P	2025788	1Ghz~18Ghz	Aug. 16, 2019	May 21, 2020	Aug. 15, 2020	Radiation (03CH04-KS)
Amplifier	Keysight	83017A	MY57280106	500MHz~26.5GHz	Oct. 15, 2019	May 21, 2020	Oct. 14, 2020	Radiation (03CH04-KS)
AC Power Source	Chroma	61601	F104090004	N/A	NCR	May 21, 2020	NCR	Radiation (03CH04-KS)
Turn Table	ChamPro	EM 1000-T	060762-T	0~360 degree	NCR	May 21, 2020	NCR	Radiation (03CH04-KS)
Antenna Mast	ChamPro	EM 1000-A	060762-A	1 m~4 m	NCR	May 21, 2020	NCR	Radiation (03CH04-KS)

NCR: No Calibration Required

6 Uncertainty of Evaluation

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

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2U_c(y)$)	3.3dB
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Uncertainty of Radiated Emission Measurement (1 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2U_c(y)$)	2.8dB
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Appendix A. Test Results of Conducted Test

A1. Conducted Output Power(Average power)

LTE Band 2						
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				18700	18900	19100
Frequency (MHz)				1860	1880	1900
20	QPSK	1	0	24.44	24.72	24.33
20	QPSK	1	49	24.48	24.62	24.41
20	QPSK	1	99	24.62	24.61	24.50
20	QPSK	50	0	23.72	23.77	23.52
20	QPSK	50	24	23.68	23.80	23.51
20	QPSK	50	50	23.61	23.79	23.54
20	QPSK	100	0	23.66	23.78	23.49
20	16QAM	1	0	23.77	24.02	23.80
20	16QAM	1	49	23.89	24.11	23.78
20	16QAM	1	99	23.95	24.15	23.92
20	16QAM	50	0	22.68	22.75	22.52
20	16QAM	50	24	22.52	22.68	22.48
20	16QAM	50	50	22.53	22.73	22.39
20	16QAM	100	0	22.51	22.77	22.47
20	64QAM	1	0	22.99	23.12	22.82
20	64QAM	1	49	22.91	23.05	22.71
20	64QAM	1	99	22.80	23.01	22.69
20	64QAM	50	0	21.71	21.85	21.60
20	64QAM	50	24	21.73	21.90	21.62
20	64QAM	50	50	21.53	21.93	21.55
20	64QAM	100	0	21.62	21.72	21.50
20	256QAM	1	0	19.75	19.89	19.68
20	256QAM	1	49	19.77	20.02	19.69
20	256QAM	1	99	19.89	20.10	19.82
20	256QAM	50	0	19.50	19.72	19.44
20	256QAM	50	24	19.51	19.73	19.43
20	256QAM	50	50	19.52	19.68	19.48
20	256QAM	100	0	19.53	19.63	19.47



Channel				18675	18900	19125
Frequency (MHz)				1857.5	1880	1902.5
15	QPSK	1	0	24.57	24.77	24.52
15	QPSK	1	37	24.69	24.82	24.59
15	QPSK	1	74	24.82	24.83	24.63
15	QPSK	36	0	23.89	23.89	23.69
15	QPSK	36	20	23.71	23.99	23.66
15	QPSK	36	39	23.65	23.91	23.68
15	QPSK	75	0	23.66	23.82	23.55
15	16QAM	1	0	23.89	24.05	23.81
15	16QAM	1	37	23.92	24.10	23.86
15	16QAM	1	74	23.99	24.28	23.99
15	16QAM	36	0	22.62	22.81	22.58
15	16QAM	36	20	22.45	22.83	22.66
15	16QAM	36	39	22.53	22.95	22.68
15	16QAM	75	0	22.58	22.80	22.52
15	64QAM	1	0	22.92	23.04	22.99
15	64QAM	1	37	22.89	23.01	22.83
15	64QAM	1	74	22.77	22.97	22.79
15	64QAM	36	0	21.68	21.85	21.73
15	64QAM	36	20	21.74	21.93	21.77
15	64QAM	36	39	21.53	21.90	21.62
15	64QAM	75	0	21.68	21.95	21.82
15	256QAM	1	0	19.92	20.05	19.92
15	256QAM	1	37	19.93	20.20	19.89
15	256QAM	1	74	19.98	20.14	19.82
15	256QAM	36	0	19.68	19.89	19.66
15	256QAM	36	20	19.66	19.92	19.69
15	256QAM	36	39	19.58	19.82	19.60
15	256QAM	75	0	19.60	19.80	19.69



Channel				18650	18900	19150
Frequency (MHz)				1855	1880	1905
10	QPSK	1	0	24.63	24.89	24.52
10	QPSK	1	25	24.69	24.73	24.55
10	QPSK	1	49	24.85	24.77	24.53
10	QPSK	25	0	23.82	23.81	23.77
10	QPSK	25	12	23.88	23.89	23.72
10	QPSK	25	25	23.92	23.88	23.71
10	QPSK	50	0	23.81	23.87	23.62
10	16QAM	1	0	23.88	24.10	23.99
10	16QAM	1	25	23.98	24.15	23.91
10	16QAM	1	49	24.10	24.18	23.94
10	16QAM	25	0	22.70	22.79	22.78
10	16QAM	25	12	22.69	22.79	22.62
10	16QAM	25	25	22.77	22.81	22.61
10	16QAM	50	0	22.75	22.86	22.52
10	64QAM	1	0	23.10	23.15	23.01
10	64QAM	1	25	22.89	23.14	22.94
10	64QAM	1	49	22.83	23.02	22.88
10	64QAM	25	0	21.85	21.99	21.77
10	64QAM	25	12	21.92	21.93	21.80
10	64QAM	25	25	21.77	21.92	21.62
10	64QAM	50	0	21.73	21.83	21.69
10	256QAM	1	0	19.92	20.05	19.85
10	256QAM	1	25	19.94	20.08	19.89
10	256QAM	1	49	19.98	20.15	19.93
10	256QAM	25	0	19.68	19.88	19.66
10	256QAM	25	12	19.69	19.89	19.68
10	256QAM	25	25	19.66	19.77	19.60
10	256QAM	50	0	19.60	19.75	19.63



Channel				18625	18900	19175
Frequency (MHz)				1852.5	1880	1907.5
5	QPSK	1	0	24.55	24.81	24.47
5	QPSK	1	12	24.62	24.75	24.52
5	QPSK	1	24	24.74	24.72	24.62
5	QPSK	12	0	23.77	23.86	23.66
5	QPSK	12	7	23.78	23.91	23.62
5	QPSK	12	13	23.75	23.95	23.60
5	QPSK	25	0	23.76	23.92	23.59
5	16QAM	1	0	23.98	24.12	23.89
5	16QAM	1	12	24.01	24.22	23.95
5	16QAM	1	24	24.10	24.30	24.02
5	16QAM	12	0	22.75	22.89	22.68
5	16QAM	12	7	22.63	22.85	22.55
5	16QAM	12	13	22.68	22.91	22.59
5	16QAM	25	0	22.61	22.81	22.48
5	64QAM	1	0	23.01	23.22	22.95
5	64QAM	1	12	22.98	23.17	22.87
5	64QAM	1	24	22.85	23.09	22.76
5	64QAM	12	0	21.78	21.97	21.69
5	64QAM	12	7	21.83	22.01	21.70
5	64QAM	12	13	21.68	21.87	21.54
5	64QAM	25	0	21.72	21.89	21.65
5	256QAM	1	0	19.89	20.02	19.79
5	256QAM	1	12	19.99	20.13	19.85
5	256QAM	1	24	20.02	20.21	19.92
5	256QAM	12	0	19.60	19.82	19.56
5	256QAM	12	7	19.63	19.85	19.55
5	256QAM	12	13	19.59	19.78	19.50
5	256QAM	25	0	19.65	19.85	19.54



Channel				18615	18900	19185
Frequency (MHz)				1851.5	1880	1908.5
3	QPSK	1	0	24.62	24.86	24.52
3	QPSK	1	8	24.69	24.81	24.59
3	QPSK	1	14	24.78	24.82	24.69
3	QPSK	8	0	23.79	23.90	23.72
3	QPSK	8	4	23.82	23.96	23.85
3	QPSK	8	7	23.81	23.91	23.77
3	QPSK	15	0	23.80	23.85	23.62
3	16QAM	1	0	24.05	24.15	23.91
3	16QAM	1	8	24.09	24.26	24.02
3	16QAM	1	14	24.15	24.33	24.05
3	16QAM	8	0	22.88	22.92	22.78
3	16QAM	8	4	22.72	22.89	22.77
3	16QAM	8	7	22.75	22.95	22.65
3	16QAM	15	0	22.69	22.85	22.59
3	64QAM	1	0	23.05	22.99	22.97
3	64QAM	1	8	23.01	23.21	22.92
3	64QAM	1	14	22.95	23.02	22.81
3	64QAM	8	0	21.85	22.02	21.79
3	64QAM	8	4	21.89	22.05	21.80
3	64QAM	8	7	21.77	21.92	21.66
3	64QAM	15	0	21.80	21.96	21.69
3	256QAM	1	0	20.01	20.05	20.04
3	256QAM	1	8	20.05	20.19	20.01
3	256QAM	1	14	20.11	20.28	20.02
3	256QAM	8	0	19.82	19.93	19.66
3	256QAM	8	4	19.83	19.94	19.67
3	256QAM	8	7	19.77	19.86	19.60
3	256QAM	15	0	19.75	19.89	19.62



Channel				18607	18900	19193
Frequency (MHz)				1850.7	1880	1909.3
1.4	QPSK	1	0	24.69	24.92	24.52
1.4	QPSK	1	3	24.78	24.83	24.77
1.4	QPSK	1	5	24.82	24.82	24.75
1.4	QPSK	3	0	23.88	23.91	23.82
1.4	QPSK	3	1	23.89	23.98	23.86
1.4	QPSK	3	3	23.87	23.99	23.88
1.4	QPSK	6	0	23.82	23.91	23.61
1.4	16QAM	1	0	24.09	24.18	23.99
1.4	16QAM	1	3	24.02	24.30	23.82
1.4	16QAM	1	5	24.08	24.35	24.09
1.4	16QAM	3	0	22.97	23.05	22.88
1.4	16QAM	3	1	22.85	22.89	22.66
1.4	16QAM	3	3	22.96	22.94	22.69
1.4	16QAM	6	0	22.85	22.77	22.61
1.4	64QAM	1	0	23.15	23.18	23.02
1.4	64QAM	1	3	23.08	23.22	22.93
1.4	64QAM	1	5	23.14	23.18	22.82
1.4	64QAM	3	0	21.78	21.92	21.67
1.4	64QAM	3	1	21.87	22.08	21.84
1.4	64QAM	3	3	21.78	21.93	21.72
1.4	64QAM	6	0	21.77	21.99	21.90
1.4	256QAM	1	0	19.95	20.08	19.92
1.4	256QAM	1	3	19.93	20.20	19.98
1.4	256QAM	1	5	20.06	20.14	19.99
1.4	256QAM	3	0	19.78	19.93	19.68
1.4	256QAM	3	1	19.70	19.98	19.71
1.4	256QAM	3	3	19.63	19.86	19.68
1.4	256QAM	6	0	19.68	19.80	19.66



LTE Band 4						
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				20050	20175	20300
Frequency (MHz)				1720	1732.5	1745
20	QPSK	1	0	24.25	24.55	23.69
20	QPSK	1	49	24.33	24.97	23.88
20	QPSK	1	99	24.05	24.88	23.95
20	QPSK	50	0	23.45	23.96	23.38
20	QPSK	50	24	23.30	23.97	23.42
20	QPSK	50	50	23.38	23.99	23.51
20	QPSK	100	0	23.20	24.02	23.35
20	16QAM	1	0	23.22	24.00	23.41
20	16QAM	1	49	23.28	24.11	23.44
20	16QAM	1	99	23.30	24.03	23.45
20	16QAM	50	0	22.21	22.78	22.25
20	16QAM	50	24	22.30	22.79	22.21
20	16QAM	50	50	22.19	22.82	22.38
20	16QAM	100	0	22.25	22.93	22.59
20	64QAM	1	0	21.63	22.28	21.72
20	64QAM	1	49	21.66	22.25	21.59
20	64QAM	1	99	21.52	22.14	21.48
20	64QAM	50	0	20.42	21.30	20.44
20	64QAM	50	24	20.44	21.33	20.51
20	64QAM	50	50	20.50	21.28	20.56
20	64QAM	100	0	20.43	21.30	20.55
20	256QAM	1	0	20.31	20.31	20.23
20	256QAM	1	49	20.26	20.25	20.21
20	256QAM	1	99	20.21	20.08	20.15
20	256QAM	50	0	20.05	20.03	20.12
20	256QAM	50	24	20.15	20.05	20.05
20	256QAM	50	50	20.12	19.95	20.03
20	256QAM	100	0	20.31	20.09	20.21



Channel				20025	20175	20325
Frequency (MHz)				1717.5	1732.5	1747.5
15	QPSK	1	0	24.20	24.59	23.69
15	QPSK	1	37	24.30	24.83	23.95
15	QPSK	1	74	24.05	24.86	23.97
15	QPSK	36	0	23.42	23.85	23.35
15	QPSK	36	20	23.44	23.89	23.44
15	QPSK	36	39	23.35	23.92	23.52
15	QPSK	75	0	23.31	23.95	23.49
15	16QAM	1	0	23.28	23.99	23.31
15	16QAM	1	37	23.39	23.91	23.44
15	16QAM	1	74	23.34	23.89	23.43
15	16QAM	36	0	22.31	22.93	22.21
15	16QAM	36	20	22.28	22.91	22.15
15	16QAM	36	39	22.35	22.87	22.43
15	16QAM	75	0	22.29	22.84	22.51
15	64QAM	1	0	21.62	22.25	21.52
15	64QAM	1	37	21.64	22.21	21.53
15	64QAM	1	74	21.60	22.18	21.48
15	64QAM	36	0	20.33	21.33	20.30
15	64QAM	36	20	20.32	21.35	20.33
15	64QAM	36	39	20.30	21.27	20.38
15	64QAM	75	0	20.44	21.30	20.39
15	256QAM	1	0	20.43	20.31	20.05
15	256QAM	1	37	20.31	20.35	20.15
15	256QAM	1	74	20.02	20.12	20.18
15	256QAM	36	0	20.05	19.98	20.09
15	256QAM	36	20	20.08	19.95	20.00
15	256QAM	36	39	20.06	19.97	20.07
15	256QAM	75	0	20.25	20.02	20.22



Channel				20000	20175	20350
Frequency (MHz)				1715	1732.5	1750
10	QPSK	1	0	24.23	24.72	23.77
10	QPSK	1	25	24.30	24.89	23.89
10	QPSK	1	49	24.05	24.83	24.08
10	QPSK	25	0	23.42	24.02	23.38
10	QPSK	25	12	23.49	24.01	23.49
10	QPSK	25	25	23.55	23.99	23.52
10	QPSK	50	0	23.31	23.97	23.41
10	16QAM	1	0	23.25	23.95	23.34
10	16QAM	1	25	23.44	23.92	23.33
10	16QAM	1	49	23.38	23.99	23.38
10	16QAM	25	0	22.21	22.93	22.38
10	16QAM	25	12	22.30	22.91	22.25
10	16QAM	25	25	22.33	22.89	22.37
10	16QAM	50	0	22.28	22.87	22.48
10	64QAM	1	0	21.55	22.33	21.69
10	64QAM	1	25	21.59	22.25	21.57
10	64QAM	1	49	21.43	22.14	21.54
10	64QAM	25	0	20.25	21.35	20.48
10	64QAM	25	12	20.26	21.33	20.43
10	64QAM	25	25	20.35	21.30	20.44
10	64QAM	50	0	20.31	21.22	20.49
10	256QAM	1	0	20.28	20.31	20.22
10	256QAM	1	25	20.24	20.28	20.21
10	256QAM	1	49	20.14	20.09	20.18
10	256QAM	25	0	20.03	20.05	20.14
10	256QAM	25	12	20.08	20.01	20.21
10	256QAM	25	25	20.14	20.06	20.05
10	256QAM	50	0	20.24	20.08	20.09



Channel				19975	20175	20375
Frequency (MHz)				1712.5	1732.5	1752.5
5	QPSK	1	0	24.12	24.68	23.62
5	QPSK	1	12	24.17	24.94	23.91
5	QPSK	1	24	23.98	24.85	24.02
5	QPSK	12	0	23.38	23.94	23.42
5	QPSK	12	7	23.39	24.08	23.50
5	QPSK	12	13	23.28	24.01	23.57
5	QPSK	25	0	23.26	24.03	23.43
5	16QAM	1	0	23.30	24.01	23.36
5	16QAM	1	12	23.35	24.10	23.41
5	16QAM	1	24	23.38	24.15	23.48
5	16QAM	12	0	22.28	22.85	22.30
5	16QAM	12	7	22.21	22.85	22.15
5	16QAM	12	13	22.30	22.80	22.44
5	16QAM	25	0	22.31	22.97	22.54
5	64QAM	1	0	21.57	22.33	21.62
5	64QAM	1	12	21.55	22.17	21.64
5	64QAM	1	24	21.49	22.15	21.55
5	64QAM	12	0	20.36	21.28	20.41
5	64QAM	12	7	20.38	21.26	20.43
5	64QAM	12	13	20.33	21.30	20.45
5	64QAM	25	0	20.40	21.25	20.48
5	256QAM	1	0	20.35	20.26	20.12
5	256QAM	1	12	20.22	20.21	20.08
5	256QAM	1	24	20.19	20.03	20.21
5	256QAM	12	0	20.05	20.00	20.01
5	256QAM	12	7	20.01	19.98	20.13
5	256QAM	12	13	20.12	19.95	20.11
5	256QAM	25	0	20.31	20.09	20.17



Channel				19965	20175	20385
Frequency (MHz)				1711.5	1732.5	1753.5
3	QPSK	1	0	24.22	24.71	23.68
3	QPSK	1	8	24.25	24.83	23.89
3	QPSK	1	14	24.02	24.77	23.97
3	QPSK	8	0	23.45	23.99	23.44
3	QPSK	8	4	23.44	23.97	23.48
3	QPSK	8	7	23.33	23.91	23.52
3	QPSK	15	0	23.28	23.79	23.44
3	16QAM	1	0	23.15	23.89	23.31
3	16QAM	1	8	23.25	23.92	23.48
3	16QAM	1	14	23.41	23.97	23.41
3	16QAM	8	0	22.33	22.88	22.25
3	16QAM	8	4	22.15	22.85	22.21
3	16QAM	8	7	22.48	22.81	22.35
3	16QAM	15	0	22.38	22.83	22.47
3	64QAM	1	0	21.69	22.38	21.72
3	64QAM	1	8	21.65	22.21	21.69
3	64QAM	1	14	21.59	22.10	21.56
3	64QAM	8	0	20.33	21.23	20.44
3	64QAM	8	4	20.25	21.27	20.38
3	64QAM	8	7	20.29	21.35	20.34
3	64QAM	15	0	20.38	21.20	20.44
3	256QAM	1	0	20.25	20.28	20.15
3	256QAM	1	8	20.31	20.17	20.28
3	256QAM	1	14	20.18	20.09	20.27
3	256QAM	8	0	20.02	20.05	20.05
3	256QAM	8	4	20.06	19.89	20.19
3	256QAM	8	7	20.11	19.93	20.10
3	256QAM	15	0	20.27	20.11	20.14



Channel				19957	20175	20393
Frequency (MHz)				1710.7	1732.5	1754.3
1.4	QPSK	1	0	24.21	24.71	23.67
1.4	QPSK	1	3	24.25	24.86	23.89
1.4	QPSK	1	5	24.02	24.81	23.98
1.4	QPSK	3	0	23.25	23.88	23.33
1.4	QPSK	3	1	23.30	23.92	23.41
1.4	QPSK	3	3	23.29	23.98	23.62
1.4	QPSK	6	0	23.26	23.97	23.44
1.4	16QAM	1	0	23.15	23.95	23.36
1.4	16QAM	1	3	23.29	23.99	23.48
1.4	16QAM	1	5	23.33	23.89	23.41
1.4	16QAM	3	0	22.18	22.77	22.28
1.4	16QAM	3	1	22.21	22.75	22.19
1.4	16QAM	3	3	22.35	22.81	22.35
1.4	16QAM	6	0	22.33	22.85	22.58
1.4	64QAM	1	0	21.69	22.38	21.69
1.4	64QAM	1	3	21.63	22.21	21.68
1.4	64QAM	1	5	21.50	22.19	21.52
1.4	64QAM	3	0	20.33	21.33	20.44
1.4	64QAM	3	1	20.35	21.35	20.49
1.4	64QAM	3	3	20.41	21.28	20.33
1.4	64QAM	6	0	20.30	21.25	20.28
1.4	256QAM	1	0	20.21	20.30	20.15
1.4	256QAM	1	3	20.25	20.15	20.12
1.4	256QAM	1	5	20.14	20.08	20.25
1.4	256QAM	3	0	20.03	20.03	20.03
1.4	256QAM	3	1	20.05	20.01	20.15
1.4	256QAM	3	3	20.22	20.08	20.01
1.4	256QAM	6	0	20.18	20.02	20.05



LTE Band 5						
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				20450	20525	20600
Frequency (MHz)				829	836.5	844
10	QPSK	1	0	23.65	23.55	23.64
10	QPSK	1	25	23.68	23.59	23.48
10	QPSK	1	49	23.66	23.42	22.97
10	QPSK	25	0	22.69	22.68	22.67
10	QPSK	25	12	22.78	22.67	22.56
10	QPSK	25	25	22.67	22.64	22.43
10	QPSK	50	0	22.68	22.61	22.61
10	16QAM	1	0	22.72	23.02	23.12
10	16QAM	1	25	22.79	23.06	22.81
10	16QAM	1	49	23.12	22.97	21.97
10	16QAM	25	0	21.67	21.78	21.64
10	16QAM	25	12	21.79	21.69	21.52
10	16QAM	25	25	21.75	21.79	21.43
10	16QAM	50	0	21.79	21.71	21.62
10	64QAM	1	0	21.65	21.81	21.79
10	64QAM	1	25	21.55	21.94	21.04
10	64QAM	1	49	21.95	20.85	20.21
10	64QAM	25	0	20.13	20.73	20.00
10	64QAM	25	12	20.08	20.76	19.89
10	64QAM	25	25	20.37	20.71	19.71
10	64QAM	50	0	20.14	20.66	19.90
10	256QAM	1	0	18.75	18.88	18.82
10	256QAM	1	25	18.95	18.61	19.04
10	256QAM	1	49	18.72	18.86	18.82
10	256QAM	25	0	19.11	18.76	18.76
10	256QAM	25	12	18.73	18.71	18.75
10	256QAM	25	25	18.69	18.62	18.82
10	256QAM	50	0	18.74	18.66	18.73



Channel				20425	20525	20625
Frequency (MHz)				826.5	836.5	846.5
5	QPSK	1	0	23.75	23.74	23.62
5	QPSK	1	12	23.63	23.62	23.35
5	QPSK	1	24	23.51	23.59	22.62
5	QPSK	12	0	22.74	23.72	22.68
5	QPSK	12	7	22.66	22.80	22.43
5	QPSK	12	13	22.70	22.69	22.18
5	QPSK	25	0	22.67	22.75	22.38
5	16QAM	1	0	23.01	23.00	22.97
5	16QAM	1	12	23.12	22.73	22.61
5	16QAM	1	24	22.98	22.82	22.02
5	16QAM	12	0	21.83	21.83	21.71
5	16QAM	12	7	21.71	21.77	21.60
5	16QAM	12	13	21.65	21.62	21.19
5	16QAM	25	0	21.80	21.76	21.55
5	64QAM	1	0	21.66	22.14	21.11
5	64QAM	1	12	21.75	21.94	20.81
5	64QAM	1	24	21.23	21.10	19.87
5	64QAM	12	0	20.36	20.89	19.98
5	64QAM	12	7	20.21	20.79	19.60
5	64QAM	12	13	20.14	20.63	19.38
5	64QAM	25	0	20.08	20.74	19.69
5	256QAM	1	0	19.03	19.01	19.03
5	256QAM	1	12	18.98	19.05	18.74
5	256QAM	1	24	18.85	18.82	18.80
5	256QAM	12	0	18.72	18.84	18.73
5	256QAM	12	7	18.76	18.81	18.72
5	256QAM	12	13	18.79	18.69	18.60
5	256QAM	25	0	18.74	18.65	18.76



Channel				20415	20525	20635
Frequency (MHz)				825.5	836.5	847.5
3	QPSK	1	0	23.71	23.64	23.41
3	QPSK	1	8	23.77	23.74	23.07
3	QPSK	1	14	23.61	23.58	22.70
3	QPSK	8	0	22.70	22.67	22.37
3	QPSK	8	4	22.75	22.71	22.08
3	QPSK	8	7	22.63	22.69	22.03
3	QPSK	15	0	22.74	22.61	22.13
3	16QAM	1	0	23.08	23.03	22.87
3	16QAM	1	8	23.00	22.97	22.75
3	16QAM	1	14	22.75	23.01	22.67
3	16QAM	8	0	21.90	21.74	21.35
3	16QAM	8	4	21.77	21.84	21.24
3	16QAM	8	7	21.65	21.65	21.28
3	16QAM	15	0	21.86	21.63	21.23
3	64QAM	1	0	21.49	21.95	21.01
3	64QAM	1	8	21.45	21.76	20.98
3	64QAM	1	14	21.38	21.63	20.85
3	64QAM	8	0	20.22	20.86	19.57
3	64QAM	8	4	20.43	20.65	19.12
3	64QAM	8	7	20.17	20.45	19.65
3	64QAM	15	0	20.22	20.58	19.49
3	256QAM	1	0	19.13	19.01	19.02
3	256QAM	1	8	18.95	18.96	18.87
3	256QAM	1	14	18.90	18.74	18.63
3	256QAM	8	0	18.75	18.72	18.62
3	256QAM	8	4	18.76	18.59	18.53
3	256QAM	8	7	18.65	18.63	18.55
3	256QAM	15	0	18.72	18.71	18.52



Channel				20407	20525	20643
Frequency (MHz)				824.7	836.5	848.3
1.4	QPSK	1	0	23.61	23.68	23.01
1.4	QPSK	1	3	23.76	23.74	22.89
1.4	QPSK	1	5	23.52	23.51	22.78
1.4	QPSK	3	0	23.61	23.46	22.93
1.4	QPSK	3	1	23.64	23.56	22.81
1.4	QPSK	3	3	23.54	23.50	22.64
1.4	QPSK	6	0	22.64	22.58	21.87
1.4	16QAM	1	0	22.85	22.97	22.39
1.4	16QAM	1	3	23.12	22.87	22.18
1.4	16QAM	1	5	22.76	22.91	22.74
1.4	16QAM	3	0	22.86	22.84	22.03
1.4	16QAM	3	1	22.87	22.76	22.02
1.4	16QAM	3	3	22.62	22.81	22.11
1.4	16QAM	6	0	21.78	22.60	21.99
1.4	64QAM	1	0	21.57	22.01	20.36
1.4	64QAM	1	3	21.63	21.97	20.26
1.4	64QAM	1	5	21.49	21.87	20.17
1.4	64QAM	3	0	21.48	21.84	20.13
1.4	64QAM	3	1	21.47	21.92	20.06
1.4	64QAM	3	3	21.35	21.83	20.07
1.4	64QAM	6	0	20.35	20.65	19.20
1.4	256QAM	1	0	19.10	18.93	18.81
1.4	256QAM	1	3	18.98	18.63	18.86
1.4	256QAM	1	5	18.73	18.77	18.68
1.4	256QAM	3	0	18.87	18.78	18.76
1.4	256QAM	3	1	18.75	18.66	18.71
1.4	256QAM	3	3	18.68	18.61	18.72
1.4	256QAM	6	0	18.84	18.73	18.65



LTE Band 12						
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				23060	23095	23130
Frequency (MHz)				704	707.5	711
10	QPSK	1	0	23.97	24.13	24.05
10	QPSK	1	25	23.91	23.95	23.96
10	QPSK	1	49	23.91	23.86	23.87
10	QPSK	25	0	23.11	23.84	23.25
10	QPSK	25	12	23.12	23.54	23.10
10	QPSK	25	25	23.07	23.43	23.16
10	QPSK	50	0	23.14	23.12	23.20
10	16QAM	1	0	23.36	23.53	23.71
10	16QAM	1	25	23.32	23.42	23.65
10	16QAM	1	49	23.46	23.41	23.59
10	16QAM	25	0	22.22	22.51	23.52
10	16QAM	25	12	22.26	22.31	23.48
10	16QAM	25	25	22.16	22.23	23.32
10	16QAM	50	0	22.11	22.18	22.27
10	64QAM	1	0	22.56	22.47	22.66
10	64QAM	1	25	22.64	22.50	22.63
10	64QAM	1	49	22.51	22.36	22.52
10	64QAM	25	0	21.23	21.24	21.34
10	64QAM	25	12	21.13	21.19	21.38
10	64QAM	25	25	21.17	21.16	21.15
10	64QAM	50	0	21.24	21.19	21.17
10	256QAM	1	0	19.20	19.40	19.65
10	256QAM	1	25	19.87	19.54	19.68
10	256QAM	1	49	19.80	19.65	19.78
10	256QAM	25	0	19.20	19.53	19.39
10	256QAM	25	12	19.16	19.21	19.35
10	256QAM	25	25	19.06	19.23	19.23
10	256QAM	50	0	19.05	19.18	19.13



Channel				23035	23095	23155
Frequency (MHz)				701.5	707.5	713.5
5	QPSK	1	0	24.06	24.11	24.02
5	QPSK	1	12	23.97	23.96	23.98
5	QPSK	1	24	23.94	23.85	23.95
5	QPSK	12	0	23.03	23.76	23.86
5	QPSK	12	7	23.10	23.35	23.76
5	QPSK	12	13	23.04	23.31	23.53
5	QPSK	25	0	23.07	23.25	23.45
5	16QAM	1	0	23.54	23.18	23.24
5	16QAM	1	12	23.43	23.16	23.18
5	16QAM	1	24	23.36	23.12	23.14
5	16QAM	12	0	22.19	22.23	22.19
5	16QAM	12	7	22.21	22.19	22.27
5	16QAM	12	13	22.17	22.38	22.10
5	16QAM	25	0	22.12	22.16	22.04
5	64QAM	1	0	22.49	22.17	22.65
5	64QAM	1	12	22.74	22.45	22.53
5	64QAM	1	24	22.35	22.56	22.42
5	64QAM	12	0	21.18	21.24	21.18
5	64QAM	12	7	21.32	21.36	21.25
5	64QAM	12	13	21.17	21.25	21.09
5	64QAM	25	0	21.09	21.19	21.18
5	256QAM	1	0	19.55	19.36	19.48
5	256QAM	1	12	19.51	19.35	19.34
5	256QAM	1	24	19.62	19.28	19.38
5	256QAM	12	0	19.35	19.09	19.25
5	256QAM	12	7	19.27	19.22	19.18
5	256QAM	12	13	19.21	19.13	19.12
5	256QAM	25	0	19.28	19.16	19.06



Channel				23025	23095	23165
Frequency (MHz)				700.5	707.5	714.5
3	QPSK	1	0	24.05	24.03	24.11
3	QPSK	1	8	23.99	23.94	23.96
3	QPSK	1	14	23.96	23.96	23.95
3	QPSK	8	0	23.85	23.81	23.82
3	QPSK	8	4	23.07	23.73	23.76
3	QPSK	8	7	23.09	23.05	23.25
3	QPSK	15	0	22.95	23.08	23.04
3	16QAM	1	0	23.38	23.54	23.65
3	16QAM	1	8	23.57	23.49	23.52
3	16QAM	1	14	23.28	23.28	23.38
3	16QAM	8	0	22.15	22.17	22.20
3	16QAM	8	4	22.16	22.13	22.24
3	16QAM	8	7	22.00	22.12	22.19
3	16QAM	15	0	21.96	22.07	22.08
3	64QAM	1	0	22.36	22.49	22.58
3	64QAM	1	8	22.46	22.29	22.39
3	64QAM	1	14	22.04	22.16	22.12
3	64QAM	8	0	21.13	21.35	21.22
3	64QAM	8	4	21.15	21.29	21.20
3	64QAM	8	7	21.06	21.21	21.19
3	64QAM	15	0	21.00	21.16	21.17
3	256QAM	1	0	19.53	19.37	19.54
3	256QAM	1	8	19.36	19.38	19.41
3	256QAM	1	14	19.24	19.34	19.38
3	256QAM	8	0	19.23	19.28	19.25
3	256QAM	8	4	19.18	19.14	19.35
3	256QAM	8	7	19.05	19.06	19.08
3	256QAM	15	0	19.00	19.09	19.16



Channel				23017	23095	23173
Frequency (MHz)				699.7	707.5	715.3
1.4	QPSK	1	0	23.98	24.04	24.01
1.4	QPSK	1	3	23.96	23.98	23.94
1.4	QPSK	1	5	23.84	23.95	23.92
1.4	QPSK	3	0	23.80	23.92	23.85
1.4	QPSK	3	1	23.90	23.84	23.72
1.4	QPSK	3	3	23.88	23.81	23.64
1.4	QPSK	6	0	22.95	23.68	23.57
1.4	16QAM	1	0	23.28	23.46	23.43
1.4	16QAM	1	3	23.21	23.38	23.26
1.4	16QAM	1	5	23.22	23.32	23.15
1.4	16QAM	3	0	23.07	23.15	23.12
1.4	16QAM	3	1	23.06	23.07	23.04
1.4	16QAM	3	3	22.77	23.01	23.00
1.4	16QAM	6	0	22.64	22.19	22.08
1.4	64QAM	1	0	22.20	22.61	22.46
1.4	64QAM	1	3	22.39	22.59	22.52
1.4	64QAM	1	5	22.09	22.51	22.04
1.4	64QAM	3	0	22.23	22.48	22.22
1.4	64QAM	3	1	22.24	22.29	22.13
1.4	64QAM	3	3	22.02	22.18	22.12
1.4	64QAM	6	0	21.16	21.13	21.10
1.4	256QAM	1	0	19.46	19.42	19.36
1.4	256QAM	1	3	19.43	19.27	19.31
1.4	256QAM	1	5	19.23	19.23	19.26
1.4	256QAM	3	0	19.19	19.17	19.22
1.4	256QAM	3	1	19.15	19.16	19.14
1.4	256QAM	3	3	19.13	19.08	19.10
1.4	256QAM	6	0	19.08	19.03	19.06



LTE Band 25						
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				26140	26340	26590
Frequency (MHz)				1860	1880	1905
20	QPSK	1	0	24.62	24.79	24.39
20	QPSK	1	49	24.53	24.66	24.48
20	QPSK	1	99	24.51	24.65	24.57
20	QPSK	50	0	23.74	23.89	23.55
20	QPSK	50	24	23.69	23.98	23.61
20	QPSK	50	50	23.65	23.85	23.60
20	QPSK	100	0	23.69	23.81	23.55
20	16QAM	1	0	23.71	24.07	23.85
20	16QAM	1	49	23.85	24.22	23.86
20	16QAM	1	99	23.82	24.19	23.99
20	16QAM	50	0	22.42	22.81	22.53
20	16QAM	50	24	22.55	22.70	22.51
20	16QAM	50	50	22.54	22.77	22.60
20	16QAM	100	0	22.56	22.82	22.50
20	64QAM	1	0	23.02	23.15	22.89
20	64QAM	1	49	22.98	23.11	22.80
20	64QAM	1	99	22.85	23.05	22.75
20	64QAM	50	0	21.78	21.89	21.63
20	64QAM	50	24	21.77	21.98	21.68
20	64QAM	50	50	21.63	21.99	21.57
20	64QAM	100	0	21.66	21.82	21.53
20	256QAM	1	0	19.82	19.99	19.66
20	256QAM	1	49	19.78	20.10	19.77
20	256QAM	1	99	19.93	20.15	19.86
20	256QAM	50	0	19.66	19.82	19.53
20	256QAM	50	24	19.60	19.80	19.51
20	256QAM	50	50	19.55	19.72	19.61
20	256QAM	100	0	19.61	19.70	19.65



Channel				26115	26340	26615
Frequency (MHz)				1857.5	1880	1907.5
15	QPSK	1	0	24.62	24.83	24.55
15	QPSK	1	37	24.77	24.90	24.63
15	QPSK	1	74	24.89	24.95	24.67
15	QPSK	36	0	23.75	23.91	23.80
15	QPSK	36	20	23.77	24.02	23.69
15	QPSK	36	39	23.72	23.99	23.70
15	QPSK	75	0	23.69	23.92	23.61
15	16QAM	1	0	23.92	24.12	23.88
15	16QAM	1	37	23.94	24.18	23.94
15	16QAM	1	74	24.05	24.33	24.03
15	16QAM	36	0	22.72	22.89	22.66
15	16QAM	36	20	22.53	22.85	22.69
15	16QAM	36	39	22.61	22.99	22.72
15	16QAM	75	0	22.64	22.83	22.60
15	64QAM	1	0	22.99	23.15	22.89
15	64QAM	1	37	22.92	23.04	22.85
15	64QAM	1	74	22.83	23.02	22.86
15	64QAM	36	0	21.70	21.93	21.80
15	64QAM	36	20	21.77	21.85	21.83
15	64QAM	36	39	21.60	21.95	21.70
15	64QAM	75	0	21.77	21.99	21.89
15	256QAM	1	0	20.03	20.12	20.03
15	256QAM	1	37	20.01	20.25	20.04
15	256QAM	1	74	19.87	20.03	19.88
15	256QAM	36	0	19.75	19.97	19.72
15	256QAM	36	20	19.71	19.98	19.75
15	256QAM	36	39	19.66	19.89	19.70
15	256QAM	75	0	19.69	19.87	19.72



Channel				26090	26340	26640
Frequency (MHz)				1855	1880	1910
10	QPSK	1	0	24.68	24.93	24.57
10	QPSK	1	25	24.72	24.82	24.60
10	QPSK	1	49	24.88	24.79	24.63
10	QPSK	25	0	23.87	23.94	23.82
10	QPSK	25	12	23.82	23.99	23.75
10	QPSK	25	25	23.90	23.92	23.79
10	QPSK	50	0	23.89	23.93	23.70
10	16QAM	1	0	23.82	24.15	23.89
10	16QAM	1	25	24.05	24.18	23.94
10	16QAM	1	49	24.03	24.10	23.90
10	16QAM	25	0	22.80	22.88	22.81
10	16QAM	25	12	22.76	22.83	22.66
10	16QAM	25	25	22.77	22.84	22.65
10	16QAM	50	0	22.82	22.89	22.58
10	64QAM	1	0	23.05	23.22	23.07
10	64QAM	1	25	22.93	23.15	22.99
10	64QAM	1	49	22.91	23.07	22.93
10	64QAM	25	0	21.89	22.06	21.82
10	64QAM	25	12	21.94	21.99	21.86
10	64QAM	25	25	21.83	21.97	21.69
10	64QAM	50	0	21.82	21.90	21.75
10	256QAM	1	0	19.99	20.12	19.90
10	256QAM	1	25	19.89	20.03	19.94
10	256QAM	1	49	20.02	20.18	19.97
10	256QAM	25	0	19.72	19.94	19.76
10	256QAM	25	12	19.76	19.90	19.77
10	256QAM	25	25	19.68	19.82	19.62
10	256QAM	50	0	19.72	19.84	19.65



Channel				26065	26340	26665
Frequency (MHz)				1852.5	1880	1912.5
5	QPSK	1	0	24.62	24.89	24.53
5	QPSK	1	12	24.70	24.82	24.55
5	QPSK	1	24	24.71	24.80	24.59
5	QPSK	12	0	23.82	23.92	23.69
5	QPSK	12	7	23.88	24.01	23.70
5	QPSK	12	13	23.82	23.99	23.65
5	QPSK	25	0	23.81	23.97	23.65
5	16QAM	1	0	24.02	24.17	23.92
5	16QAM	1	12	24.05	24.29	24.03
5	16QAM	1	24	24.15	24.33	24.01
5	16QAM	12	0	22.82	22.99	22.75
5	16QAM	12	7	22.67	22.89	22.61
5	16QAM	12	13	22.69	22.98	22.66
5	16QAM	25	0	22.70	22.89	22.53
5	64QAM	1	0	23.05	23.30	22.94
5	64QAM	1	12	23.02	23.25	22.89
5	64QAM	1	24	22.92	23.15	22.83
5	64QAM	12	0	21.83	22.05	21.73
5	64QAM	12	7	21.88	22.08	21.74
5	64QAM	12	13	21.76	21.89	21.62
5	64QAM	25	0	21.79	21.92	21.68
5	256QAM	1	0	19.87	20.05	19.83
5	256QAM	1	12	19.89	20.10	19.92
5	256QAM	1	24	20.05	20.28	19.99
5	256QAM	12	0	19.68	19.89	19.66
5	256QAM	12	7	19.58	19.88	19.50
5	256QAM	12	13	19.66	19.83	19.62
5	256QAM	25	0	19.70	19.92	19.63



Channel				26055	26340	26675
Frequency (MHz)				1851.5	1880	1913.5
3	QPSK	1	0	24.69	24.93	24.60
3	QPSK	1	8	24.75	24.88	24.62
3	QPSK	1	14	24.89	24.85	24.72
3	QPSK	8	0	23.86	23.97	23.81
3	QPSK	8	4	23.85	23.86	23.80
3	QPSK	8	7	23.85	23.99	23.81
3	QPSK	15	0	23.70	23.77	23.52
3	16QAM	1	0	24.09	24.22	23.98
3	16QAM	1	8	24.12	24.28	24.13
3	16QAM	1	14	24.22	24.38	24.15
3	16QAM	8	0	23.01	23.05	22.83
3	16QAM	8	4	22.77	22.92	22.81
3	16QAM	8	7	22.79	22.99	22.71
3	16QAM	15	0	22.69	22.90	22.63
3	64QAM	1	0	23.01	23.05	23.04
3	64QAM	1	8	23.04	23.25	22.99
3	64QAM	1	14	22.83	22.89	22.78
3	64QAM	8	0	21.99	22.08	21.83
3	64QAM	8	4	21.84	22.01	21.78
3	64QAM	8	7	21.83	21.94	21.69
3	64QAM	15	0	21.88	22.05	21.76
3	256QAM	1	0	20.00	20.12	20.08
3	256QAM	1	8	20.04	20.20	20.03
3	256QAM	1	14	20.03	20.31	20.05
3	256QAM	8	0	19.88	19.99	19.67
3	256QAM	8	4	19.88	19.89	19.80
3	256QAM	8	7	19.72	19.91	19.67
3	256QAM	15	0	19.82	19.93	19.66



Channel				26047	26340	26683
Frequency (MHz)				1850.7	1880	1914.3
1.4	QPSK	1	0	23.72	24.98	24.55
1.4	QPSK	1	3	24.73	24.89	24.88
1.4	QPSK	1	5	24.78	24.87	24.68
1.4	QPSK	3	0	23.81	23.98	23.77
1.4	QPSK	3	1	23.79	23.94	23.85
1.4	QPSK	3	3	23.82	23.92	23.81
1.4	QPSK	6	0	23.77	23.84	23.67
1.4	16QAM	1	0	24.02	24.22	23.94
1.4	16QAM	1	3	24.01	24.35	23.85
1.4	16QAM	1	5	24.01	24.38	24.12
1.4	16QAM	3	0	22.85	22.95	22.77
1.4	16QAM	3	1	22.75	22.93	22.68
1.4	16QAM	3	3	22.99	22.97	22.73
1.4	16QAM	6	0	22.89	22.81	22.65
1.4	64QAM	1	0	23.22	23.21	23.05
1.4	64QAM	1	3	23.12	23.28	22.99
1.4	64QAM	1	5	23.21	23.12	22.85
1.4	64QAM	3	0	21.85	21.99	21.72
1.4	64QAM	3	1	21.92	22.01	21.89
1.4	64QAM	3	3	21.83	21.99	21.66
1.4	64QAM	6	0	21.80	22.02	21.94
1.4	256QAM	1	0	20.03	20.01	19.98
1.4	256QAM	1	3	19.89	20.21	19.93
1.4	256QAM	1	5	20.00	20.05	19.82
1.4	256QAM	3	0	19.83	19.94	19.70
1.4	256QAM	3	1	19.72	19.85	19.75
1.4	256QAM	3	3	19.70	19.81	19.72
1.4	256QAM	6	0	19.75	19.85	19.68



LTE Band 26						
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				26865	26915	26965
Frequency (MHz)				831.5	836.5	841.5
15	QPSK	1	0	23.55	23.62	23.51
15	QPSK	1	37	23.48	23.50	23.35
15	QPSK	1	74	23.56	23.38	23.01
15	QPSK	36	0	22.60	22.55	22.56
15	QPSK	36	20	22.62	22.53	22.51
15	QPSK	36	39	22.72	22.52	22.31
15	QPSK	75	0	22.60	22.51	22.48
15	16QAM	1	0	22.80	23.07	23.05
15	16QAM	1	37	22.74	23.00	22.72
15	16QAM	1	74	22.89	22.88	21.83
15	16QAM	36	0	21.72	21.68	21.54
15	16QAM	36	20	21.68	21.59	21.55
15	16QAM	36	39	21.64	21.52	21.47
15	16QAM	75	0	21.66	21.56	21.53
15	64QAM	1	0	21.69	21.76	21.82
15	64QAM	1	37	21.60	21.83	21.09
15	64QAM	1	74	21.85	20.72	20.28
15	64QAM	36	0	20.12	20.68	19.99
15	64QAM	36	20	20.15	20.62	19.92
15	64QAM	36	39	20.21	20.69	19.83
15	64QAM	75	0	20.13	20.67	19.78
15	256QAM	1	0	18.69	18.80	18.77
15	256QAM	1	37	18.83	18.77	18.85
15	256QAM	1	74	18.79	18.90	18.83
15	256QAM	36	0	18.92	18.86	18.80
15	256QAM	36	20	18.65	18.69	18.68
15	256QAM	36	39	18.60	18.65	18.70
15	256QAM	75	0	18.74	18.66	18.73



Channel				26840	26915	26990
Frequency (MHz)				829	836.5	844
10	QPSK	1	0	23.69	23.66	23.72
10	QPSK	1	25	23.78	23.62	23.52
10	QPSK	1	49	23.77	23.50	23.05
10	QPSK	25	0	22.73	22.82	22.76
10	QPSK	25	12	22.86	22.75	22.61
10	QPSK	25	25	22.76	22.71	22.53
10	QPSK	50	0	22.82	22.77	22.69
10	16QAM	1	0	22.86	23.08	23.21
10	16QAM	1	25	22.84	23.01	22.89
10	16QAM	1	49	23.15	23.01	22.02
10	16QAM	25	0	21.73	21.85	21.82
10	16QAM	25	12	21.86	21.73	21.63
10	16QAM	25	25	21.82	21.69	21.53
10	16QAM	50	0	21.86	21.83	21.66
10	64QAM	1	0	21.69	21.87	21.88
10	64QAM	1	25	21.60	21.83	21.23
10	64QAM	1	49	21.80	21.92	20.33
10	64QAM	25	0	20.08	20.75	20.05
10	64QAM	25	12	20.13	20.85	20.01
10	64QAM	25	25	20.30	20.68	19.86
10	64QAM	50	0	20.10	20.55	19.92
10	256QAM	1	0	18.82	18.96	18.89
10	256QAM	1	25	19.02	18.69	18.85
10	256QAM	1	49	18.62	18.77	18.78
10	256QAM	25	0	18.99	18.97	18.82
10	256QAM	25	12	18.79	18.82	18.86
10	256QAM	25	25	18.77	18.69	18.99
10	256QAM	50	0	18.70	18.80	18.82



Channel				26815	26915	27015
Frequency (MHz)				826.5	836.5	846.5
5	QPSK	1	0	23.69	23.82	23.70
5	QPSK	1	12	23.61	23.69	23.42
5	QPSK	1	24	23.55	23.64	22.69
5	QPSK	12	0	22.82	23.28	22.73
5	QPSK	12	7	22.71	22.88	22.44
5	QPSK	12	13	22.68	22.79	22.31
5	QPSK	25	0	22.59	22.83	22.48
5	16QAM	1	0	23.08	23.05	22.83
5	16QAM	1	12	23.15	22.88	22.76
5	16QAM	1	24	23.02	22.93	22.11
5	16QAM	12	0	21.85	21.89	21.84
5	16QAM	12	7	21.67	21.72	21.68
5	16QAM	12	13	21.65	21.69	21.27
5	16QAM	25	0	21.77	21.82	21.62
5	64QAM	1	0	21.72	21.93	21.25
5	64QAM	1	12	21.93	21.99	20.88
5	64QAM	1	24	20.55	22.02	19.99
5	64QAM	12	0	20.32	20.78	20.05
5	64QAM	12	7	20.15	20.83	19.95
5	64QAM	12	13	20.01	20.56	19.53
5	64QAM	25	0	20.23	20.68	19.72
5	256QAM	1	0	19.08	19.15	19.12
5	256QAM	1	12	19.02	19.01	19.03
5	256QAM	1	24	18.78	18.97	18.89
5	256QAM	12	0	18.75	18.94	18.86
5	256QAM	12	7	18.70	18.90	18.77
5	256QAM	12	13	18.82	18.89	18.73
5	256QAM	25	0	18.79	18.94	18.82



Channel				26805	26915	27025
Frequency (MHz)				825.5	836.5	847.5
3	QPSK	1	0	23.82	23.75	23.52
3	QPSK	1	8	23.85	23.83	23.15
3	QPSK	1	14	23.69	23.61	22.89
3	QPSK	8	0	22.76	22.80	22.44
3	QPSK	8	4	22.70	22.78	22.30
3	QPSK	8	7	22.69	22.77	22.12
3	QPSK	15	0	22.74	22.75	22.21
3	16QAM	1	0	23.15	22.95	22.79
3	16QAM	1	8	23.05	22.94	22.82
3	16QAM	1	14	22.82	23.05	22.77
3	16QAM	8	0	21.95	21.83	21.46
3	16QAM	8	4	21.83	21.92	21.35
3	16QAM	8	7	21.72	21.76	21.45
3	16QAM	15	0	21.79	21.69	21.35
3	64QAM	1	0	21.55	21.82	21.25
3	64QAM	1	8	21.40	21.70	21.08
3	64QAM	1	14	21.33	21.69	20.95
3	64QAM	8	0	20.30	20.77	19.65
3	64QAM	8	4	20.31	20.63	19.30
3	64QAM	8	7	20.22	20.55	19.45
3	64QAM	15	0	20.18	20.38	19.40
3	256QAM	1	0	19.05	19.22	19.07
3	256QAM	1	8	19.03	19.02	18.93
3	256QAM	1	14	18.99	18.85	18.70
3	256QAM	8	0	18.69	18.83	18.69
3	256QAM	8	4	18.64	18.68	18.72
3	256QAM	8	7	18.77	18.69	18.62
3	256QAM	15	0	18.68	18.77	18.60



Channel				26797	26915	27033
Frequency (MHz)				824.7	836.5	848.3
1.4	QPSK	1	0	23.66	23.62	23.21
1.4	QPSK	1	3	23.65	23.79	22.93
1.4	QPSK	1	5	23.52	23.55	22.85
1.4	QPSK	3	0	23.50	23.40	23.05
1.4	QPSK	3	1	23.51	23.48	23.01
1.4	QPSK	3	3	23.45	23.40	22.70
1.4	QPSK	6	0	23.60	22.44	21.83
1.4	16QAM	1	0	22.89	23.02	22.45
1.4	16QAM	1	3	23.05	22.93	22.35
1.4	16QAM	1	5	22.70	22.86	22.81
1.4	16QAM	3	0	22.75	22.89	22.00
1.4	16QAM	3	1	22.73	22.84	22.10
1.4	16QAM	3	3	22.66	22.78	22.04
1.4	16QAM	6	0	21.85	22.65	22.01
1.4	64QAM	1	0	21.65	22.12	20.45
1.4	64QAM	1	3	21.52	22.02	20.62
1.4	64QAM	1	5	21.44	21.80	20.33
1.4	64QAM	3	0	21.40	21.77	20.35
1.4	64QAM	3	1	21.38	21.82	20.33
1.4	64QAM	3	3	21.42	21.77	20.30
1.4	64QAM	6	0	20.48	20.73	19.40
1.4	256QAM	1	0	19.02	18.99	18.92
1.4	256QAM	1	3	18.89	19.15	18.84
1.4	256QAM	1	5	18.79	18.90	18.80
1.4	256QAM	3	0	18.92	18.84	18.85
1.4	256QAM	3	1	18.82	18.72	18.80
1.4	256QAM	3	3	18.77	18.72	18.79
1.4	256QAM	6	0	18.85	18.79	18.74



LTE Band 66						
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				132072	132322	132572
Frequency (MHz)				1720	1745	1770
20	QPSK	1	0	24.37	24.62	23.81
20	QPSK	1	49	24.41	25.02	23.93
20	QPSK	1	99	24.09	24.93	24.01
20	QPSK	50	0	23.52	23.99	23.42
20	QPSK	50	24	23.33	23.98	23.50
20	QPSK	50	50	23.42	24.05	23.55
20	QPSK	100	0	23.22	24.12	23.40
20	16QAM	1	0	23.33	24.05	23.45
20	16QAM	1	49	23.30	24.15	23.55
20	16QAM	1	99	23.33	24.06	23.58
20	16QAM	50	0	22.28	22.87	22.30
20	16QAM	50	24	22.41	22.88	22.28
20	16QAM	50	50	22.31	22.90	22.48
20	16QAM	100	0	22.40	23.01	23.05
20	64QAM	1	0	21.66	22.30	21.80
20	64QAM	1	49	21.78	22.30	21.66
20	64QAM	1	99	21.59	22.18	21.57
20	64QAM	50	0	20.55	21.38	20.49
20	64QAM	50	24	20.50	21.45	20.60
20	64QAM	50	50	20.59	21.35	20.65
20	64QAM	100	0	20.44	21.35	20.60
20	256QAM	1	0	20.15	20.35	20.29
20	256QAM	1	49	20.33	20.34	20.18
20	256QAM	1	99	20.25	20.15	20.21
20	256QAM	50	0	20.12	20.15	20.05
20	256QAM	50	24	20.14	20.08	20.11
20	256QAM	50	50	20.19	20.01	20.12
20	256QAM	100	0	20.28	20.21	20.22



Channel				132047	132322	132597
Frequency (MHz)				1717.5	1745	1772.5
15	QPSK	1	0	24.33	24.67	23.80
15	QPSK	1	37	24.38	24.89	24.01
15	QPSK	1	74	24.15	24.97	24.03
15	QPSK	36	0	23.59	23.88	23.39
15	QPSK	36	20	23.48	23.97	23.50
15	QPSK	36	39	23.44	23.95	23.55
15	QPSK	75	0	23.38	23.97	23.66
15	16QAM	1	0	23.40	24.05	23.41
15	16QAM	1	37	22.55	24.01	23.50
15	16QAM	1	74	23.44	23.91	23.48
15	16QAM	36	0	22.38	22.99	22.28
15	16QAM	36	20	22.33	22.94	22.17
15	16QAM	36	39	22.38	22.91	22.55
15	16QAM	75	0	22.34	22.92	22.59
15	64QAM	1	0	21.63	22.28	21.59
15	64QAM	1	37	21.50	22.14	21.62
15	64QAM	1	74	21.55	22.28	21.63
15	64QAM	36	0	20.38	21.39	20.35
15	64QAM	36	20	20.33	21.45	20.31
15	64QAM	36	39	20.42	21.40	20.28
15	64QAM	75	0	20.48	21.37	20.44
15	256QAM	1	0	20.38	20.55	20.08
15	256QAM	1	37	20.39	20.44	20.22
15	256QAM	1	74	20.08	20.15	20.21
15	256QAM	36	0	20.11	20.05	20.15
15	256QAM	36	20	20.15	20.04	20.03
15	256QAM	36	39	20.12	20.03	20.14
15	256QAM	75	0	20.30	20.08	20.26



Channel				132022	132322	132622
Frequency (MHz)				1715	1745	1775
10	QPSK	1	0	24.33	24.87	23.81
10	QPSK	1	25	24.38	24.93	23.92
10	QPSK	1	49	24.11	24.72	24.12
10	QPSK	25	0	23.55	24.08	23.42
10	QPSK	25	12	23.51	24.06	23.52
10	QPSK	25	25	23.59	24.03	23.55
10	QPSK	50	0	23.38	24.03	23.48
10	16QAM	1	0	23.31	23.99	23.37
10	16QAM	1	25	23.48	23.97	23.41
10	16QAM	1	49	23.42	24.05	23.44
10	16QAM	25	0	22.31	22.99	22.41
10	16QAM	25	12	22.44	22.99	22.40
10	16QAM	25	25	22.39	22.77	22.31
10	16QAM	50	0	22.25	22.89	22.33
10	64QAM	1	0	21.65	22.40	21.70
10	64QAM	1	25	21.66	22.35	21.60
10	64QAM	1	49	21.52	22.21	21.58
10	64QAM	25	0	20.28	21.39	20.52
10	64QAM	25	12	20.33	21.37	20.44
10	64QAM	25	25	20.39	21.42	20.50
10	64QAM	50	0	20.33	21.29	20.51
10	256QAM	1	0	20.37	20.39	20.15
10	256QAM	1	25	20.15	20.23	20.11
10	256QAM	1	49	20.11	20.22	20.25
10	256QAM	25	0	20.06	20.11	20.18
10	256QAM	25	12	20.15	20.05	20.28
10	256QAM	25	25	20.18	20.11	20.01
10	256QAM	50	0	20.33	20.12	20.14



Channel				131997	132322	132647
Frequency (MHz)				1712.5	1745	1777.5
5	QPSK	1	0	24.15	24.77	23.69
5	QPSK	1	12	24.22	25.01	23.94
5	QPSK	1	24	23.97	24.90	24.12
5	QPSK	12	0	23.42	23.98	23.50
5	QPSK	12	7	23.44	24.12	23.58
5	QPSK	12	13	23.33	24.05	23.59
5	QPSK	25	0	23.37	24.09	23.52
5	16QAM	1	0	23.39	24.05	23.44
5	16QAM	1	12	23.41	24.15	23.50
5	16QAM	1	24	23.42	24.28	23.55
5	16QAM	12	0	22.33	22.91	22.44
5	16QAM	12	7	22.28	22.90	22.21
5	16QAM	12	13	22.34	22.91	22.49
5	16QAM	25	0	22.44	22.99	22.57
5	64QAM	1	0	21.60	22.44	21.67
5	64QAM	1	12	21.40	22.33	21.65
5	64QAM	1	24	21.53	22.21	21.60
5	64QAM	12	0	20.15	21.33	20.44
5	64QAM	12	7	20.42	21.33	20.51
5	64QAM	12	13	20.39	21.35	20.49
5	64QAM	25	0	20.44	21.28	20.50
5	256QAM	1	0	20.49	20.29	20.12
5	256QAM	1	12	20.15	20.18	20.03
5	256QAM	1	24	20.26	20.05	20.15
5	256QAM	12	0	20.11	20.08	20.02
5	256QAM	12	7	20.04	20.03	20.22
5	256QAM	12	13	20.15	20.08	20.21
5	256QAM	25	0	20.33	20.12	20.07



Channel				131987	132322	132657
Frequency (MHz)				1711.5	1745	1778.5
3	QPSK	1	0	24.26	24.82	23.71
3	QPSK	1	8	24.33	24.87	23.93
3	QPSK	1	14	24.05	24.82	24.03
3	QPSK	8	0	23.55	24.02	23.48
3	QPSK	8	4	23.48	24.05	23.51
3	QPSK	8	7	23.38	23.99	23.55
3	QPSK	15	0	23.34	23.83	23.50
3	16QAM	1	0	23.22	23.91	23.34
3	16QAM	1	8	23.34	23.94	23.47
3	16QAM	1	14	23.48	24.01	23.49
3	16QAM	8	0	23.35	22.90	22.31
3	16QAM	8	4	22.22	22.94	22.28
3	16QAM	8	7	22.48	22.81	22.35
3	16QAM	15	0	22.44	22.89	22.51
3	64QAM	1	0	21.72	22.45	21.80
3	64QAM	1	8	21.77	22.32	21.73
3	64QAM	1	14	21.63	22.15	21.62
3	64QAM	8	0	20.38	21.32	20.48
3	64QAM	8	4	20.27	21.39	20.44
3	64QAM	8	7	20.33	21.42	20.40
3	64QAM	15	0	20.44	21.25	20.45
3	256QAM	1	0	20.30	20.33	20.21
3	256QAM	1	8	20.42	20.21	20.33
3	256QAM	1	14	20.19	20.11	20.33
3	256QAM	8	0	20.11	20.13	20.08
3	256QAM	8	4	20.08	20.05	20.22
3	256QAM	8	7	20.13	20.01	20.15
3	256QAM	15	0	20.35	20.22	20.21



Channel				131979	132322	132665
Frequency (MHz)				1710.7	1745	1779.3
1.4	QPSK	1	0	24.33	24.82	23.75
1.4	QPSK	1	3	24.33	24.89	23.94
1.4	QPSK	1	5	24.05	24.87	24.02
1.4	QPSK	3	0	23.33	23.90	23.35
1.4	QPSK	3	1	23.38	23.99	23.50
1.4	QPSK	3	3	23.42	24.02	23.66
1.4	QPSK	6	0	23.38	24.01	23.48
1.4	16QAM	1	0	23.25	24.02	23.44
1.4	16QAM	1	3	23.38	24.05	23.53
1.4	16QAM	1	5	23.42	23.94	23.48
1.4	16QAM	3	0	22.25	22.83	22.34
1.4	16QAM	3	1	22.28	22.89	22.30
1.4	16QAM	3	3	22.42	22.90	22.44
1.4	16QAM	6	0	22.40	22.92	22.68
1.4	64QAM	1	0	21.73	22.44	21.72
1.4	64QAM	1	3	21.70	22.30	21.74
1.4	64QAM	1	5	21.60	22.33	21.60
1.4	64QAM	3	0	20.35	21.39	20.48
1.4	64QAM	3	1	20.44	21.45	20.55
1.4	64QAM	3	3	20.49	21.33	20.38
1.4	64QAM	6	0	20.35	21.33	20.38
1.4	256QAM	1	0	20.31	20.39	20.22
1.4	256QAM	1	3	20.28	20.14	20.05
1.4	256QAM	1	5	20.18	20.11	20.15
1.4	256QAM	3	0	20.06	20.08	20.01
1.4	256QAM	3	1	20.10	20.05	20.11
1.4	256QAM	3	3	20.23	20.12	20.08
1.4	256QAM	6	0	20.21	20.06	20.01



LTE Band 71						
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				133222	133322	133372
Frequency (MHz)				673	683	688
20	QPSK	1	0	24.02	24.22	24.07
20	QPSK	1	49	23.94	23.99	24.02
20	QPSK	1	99	23.89	23.87	23.92
20	QPSK	50	0	23.22	23.90	23.40
20	QPSK	50	24	23.18	23.59	23.21
20	QPSK	50	50	23.21	23.49	23.22
20	QPSK	100	0	23.18	23.22	23.08
20	16QAM	1	0	23.41	23.60	23.80
20	16QAM	1	49	23.35	23.44	23.77
20	16QAM	1	99	23.51	23.48	23.62
20	16QAM	50	0	22.27	22.69	22.58
20	16QAM	50	24	22.33	22.41	23.56
20	16QAM	50	50	22.08	22.40	23.44
20	16QAM	100	0	22.19	22.27	22.33
20	64QAM	1	0	22.66	22.53	22.72
20	64QAM	1	49	22.69	22.55	22.64
20	64QAM	1	99	22.59	22.41	22.53
20	64QAM	50	0	21.32	21.28	21.39
20	64QAM	50	24	21.23	21.28	21.42
20	64QAM	50	50	21.25	21.33	21.10
20	64QAM	100	0	21.08	21.26	21.07
20	256QAM	1	0	19.33	19.48	19.77
20	256QAM	1	49	19.77	19.55	19.72
20	256QAM	1	99	19.73	19.70	19.88
20	256QAM	50	0	19.33	19.55	19.42
20	256QAM	50	24	19.22	19.21	19.40
20	256QAM	50	50	19.15	19.27	19.28
20	256QAM	100	0	19.14	19.24	19.18



Channel				133197	133297	133397
Frequency (MHz)				670.5	680.5	690.5
15	QPSK	1	0	24.12	24.25	24.07
15	QPSK	1	37	24.08	24.01	24.02
15	QPSK	1	74	23.85	23.77	23.97
15	QPSK	36	0	23.01	23.82	23.89
15	QPSK	36	20	23.15	23.44	23.83
15	QPSK	36	39	23.12	23.35	23.66
15	QPSK	75	0	23.20	23.33	23.50
15	16QAM	1	0	23.62	23.22	23.31
15	16QAM	1	37	23.51	23.22	23.27
15	16QAM	1	74	23.44	23.18	23.24
15	16QAM	36	0	22.21	22.31	22.28
15	16QAM	36	20	22.30	22.27	22.35
15	16QAM	36	39	22.28	22.44	22.18
15	16QAM	75	0	22.14	22.33	22.10
15	64QAM	1	0	22.54	22.33	22.77
15	64QAM	1	37	22.81	22.53	22.59
15	64QAM	1	74	22.42	22.62	22.51
15	64QAM	36	0	21.19	21.33	21.24
15	64QAM	36	20	21.38	21.46	21.33
15	64QAM	36	39	21.10	21.15	21.22
15	64QAM	75	0	21.18	21.30	21.19
15	256QAM	1	0	19.80	19.48	19.53
15	256QAM	1	37	19.55	19.39	19.48
15	256QAM	1	74	19.68	19.21	19.42
15	256QAM	36	0	19.44	19.21	19.33
15	256QAM	36	20	19.33	19.28	19.23
15	256QAM	36	39	19.28	19.17	19.18
15	256QAM	75	0	19.33	19.24	19.17



Channel				133172	133272	133422
Frequency (MHz)				668	678	693
10	QPSK	1	0	24.12	24.20	24.15
10	QPSK	1	25	24.08	24.01	24.02
10	QPSK	1	49	23.92	23.91	23.87
10	QPSK	25	0	23.88	23.93	23.88
10	QPSK	25	12	23.77	23.78	23.82
10	QPSK	25	25	23.30	23.21	23.24
10	QPSK	50	0	22.99	23.12	23.01
10	16QAM	1	0	23.44	23.68	23.88
10	16QAM	1	25	23.62	23.52	23.61
10	16QAM	1	49	23.37	23.44	23.42
10	16QAM	25	0	22.11	22.21	22.28
10	16QAM	25	12	22.21	22.18	22.27
10	16QAM	25	25	22.08	22.16	22.28
10	16QAM	50	0	22.02	22.14	22.15
10	64QAM	1	0	22.42	22.53	22.61
10	64QAM	1	25	22.55	22.31	22.44
10	64QAM	1	49	22.14	22.23	22.21
10	64QAM	25	0	21.23	21.38	21.28
10	64QAM	25	12	21.18	21.14	21.23
10	64QAM	25	25	21.15	21.23	21.17
10	64QAM	50	0	21.08	21.30	21.21
10	256QAM	1	0	19.57	19.45	19.66
10	256QAM	1	25	19.42	19.45	19.51
10	256QAM	1	49	19.33	19.44	19.40
10	256QAM	25	0	19.28	19.35	19.42
10	256QAM	25	12	19.22	19.19	19.44
10	256QAM	25	25	19.15	19.18	19.20
10	256QAM	50	0	19.08	19.23	19.21



Channel				133147	133247	133447
Frequency (MHz)				665.5	675.5	695.5
5	QPSK	1	0	23.89	24.12	24.03
5	QPSK	1	12	23.99	24.03	23.87
5	QPSK	1	24	23.93	24.01	23.99
5	QPSK	12	0	23.88	23.93	23.80
5	QPSK	12	7	23.79	23.88	23.81
5	QPSK	12	13	23.92	23.88	23.64
5	QPSK	25	0	23.22	23.71	23.60
5	16QAM	1	0	23.35	23.61	23.44
5	16QAM	1	12	23.27	23.44	23.39
5	16QAM	1	24	23.10	23.28	23.21
5	16QAM	12	0	23.15	23.20	23.07
5	16QAM	12	7	23.12	23.11	23.01
5	16QAM	12	13	22.82	23.05	23.04
5	16QAM	25	0	22.69	22.21	22.15
5	64QAM	1	0	22.15	22.57	22.50
5	64QAM	1	12	22.42	22.66	22.55
5	64QAM	1	24	22.15	22.63	22.14
5	64QAM	12	0	22.33	22.56	22.34
5	64QAM	12	7	22.40	22.44	22.31
5	64QAM	12	13	22.23	22.28	22.21
5	64QAM	25	0	21.18	21.25	21.04
5	256QAM	1	0	19.53	19.55	19.43
5	256QAM	1	12	19.40	19.22	19.24
5	256QAM	1	24	19.33	19.28	19.33
5	256QAM	12	0	19.25	19.28	19.30
5	256QAM	12	7	19.10	19.22	19.24
5	256QAM	12	13	19.08	19.22	19.14
5	256QAM	25	0	19.10	19.13	19.12



LTE Band 41						
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				39750	40620	41490
Frequency (MHz)				2506	2593	2680
20	QPSK	1	0	24.62	25.29	25.28
20	QPSK	1	49	24.89	25.02	24.92
20	QPSK	1	99	24.97	25.22	25.18
20	QPSK	50	0	23.95	24.24	24.33
20	QPSK	50	24	24.16	24.15	24.30
20	QPSK	50	50	24.17	24.12	24.14
20	QPSK	100	0	24.18	24.10	24.27
20	16QAM	1	0	23.89	24.41	24.40
20	16QAM	1	49	24.35	24.44	24.66
20	16QAM	1	99	24.25	24.47	24.29
20	16QAM	50	0	23.04	23.26	23.36
20	16QAM	50	24	23.11	23.19	23.35
20	16QAM	50	50	23.12	23.26	23.08
20	16QAM	100	0	23.26	23.25	23.30
20	64QAM	1	0	22.33	23.14	23.01
20	64QAM	1	49	22.62	23.56	22.83
20	64QAM	1	99	22.81	23.98	22.87
20	64QAM	50	0	21.19	22.34	22.08
20	64QAM	50	24	21.44	22.26	21.92
20	64QAM	50	50	21.78	22.29	21.65
20	64QAM	100	0	21.34	22.19	21.78
20	256QAM	1	0	20.89	21.75	21.54
20	256QAM	1	49	21.21	22.22	21.31
20	256QAM	1	99	21.44	22.25	21.35
20	256QAM	50	0	19.85	20.53	20.38
20	256QAM	50	24	19.93	20.51	20.24
20	256QAM	50	50	20.24	20.52	20.18
20	256QAM	100	0	19.83	20.42	20.05



Channel				39725	40620	41515
Frequency (MHz)				2503.5	2593	2682.5
15	QPSK	1	0	24.61	25.11	25.21
15	QPSK	1	37	24.86	25.16	25.10
15	QPSK	1	74	24.92	25.37	25.13
15	QPSK	36	0	23.90	24.27	24.30
15	QPSK	36	20	24.05	24.11	24.28
15	QPSK	36	39	24.00	24.15	24.10
15	QPSK	75	0	24.13	24.11	24.26
15	16QAM	1	0	23.96	24.38	24.65
15	16QAM	1	37	24.31	24.42	24.74
15	16QAM	1	74	24.39	24.34	24.35
15	16QAM	36	0	22.96	23.31	23.35
15	16QAM	36	20	23.14	23.26	23.27
15	16QAM	36	39	23.05	23.41	23.11
15	16QAM	75	0	23.04	23.13	23.22
15	64QAM	1	0	21.37	23.69	23.25
15	64QAM	1	37	22.69	22.76	22.89
15	64QAM	1	74	22.72	23.65	22.96
15	64QAM	36	0	20.93	22.23	21.84
15	64QAM	36	20	21.17	22.23	21.73
15	64QAM	36	39	21.43	22.29	21.63
15	64QAM	75	0	21.14	22.19	21.75
15	256QAM	1	0	19.85	22.11	21.83
15	256QAM	1	37	21.22	21.28	21.32
15	256QAM	1	74	21.31	22.03	21.44
15	256QAM	36	0	19.44	20.42	20.31
15	256QAM	36	20	19.33	20.51	20.34
15	256QAM	36	39	19.95	20.89	20.05
15	256QAM	75	0	19.82	20.77	20.25



Channel				39700	40620	41540
Frequency (MHz)				2501	2593	2685
10	QPSK	1	0	24.71	25.03	25.42
10	QPSK	1	25	25.00	25.61	25.16
10	QPSK	1	49	24.94	25.10	25.07
10	QPSK	25	0	23.73	24.30	24.33
10	QPSK	25	12	23.93	24.21	24.34
10	QPSK	25	25	24.06	24.31	24.24
10	QPSK	50	0	23.85	24.28	24.35
10	16QAM	1	0	24.07	24.39	24.79
10	16QAM	1	25	24.27	24.80	24.35
10	16QAM	1	49	24.73	24.24	24.60
10	16QAM	25	0	22.77	23.43	23.31
10	16QAM	25	12	22.86	23.39	23.38
10	16QAM	25	25	23.04	23.31	23.29
10	16QAM	50	0	22.71	23.31	23.25
10	64QAM	1	0	21.42	23.84	22.93
10	64QAM	1	25	22.12	23.45	22.69
10	64QAM	1	49	22.35	22.72	22.74
10	64QAM	25	0	20.85	22.31	21.69
10	64QAM	25	12	21.05	22.24	21.73
10	64QAM	25	25	21.15	22.14	21.60
10	64QAM	50	0	20.90	22.24	21.59
10	256QAM	1	0	19.89	22.33	21.43
10	256QAM	1	25	19.56	21.85	21.12
10	256QAM	1	49	20.86	21.24	21.35
10	256QAM	25	0	19.33	20.75	21.02
10	256QAM	25	12	19.52	20.75	20.21
10	256QAM	25	25	19.58	20.62	20.05
10	256QAM	50	0	19.32	20.74	20.01



Channel				39675	40620	41565
Frequency (MHz)				2498.5	2593	2687.5
5	QPSK	1	0	24.66	25.27	25.11
5	QPSK	1	12	24.62	25.32	25.17
5	QPSK	1	24	24.88	25.18	25.21
5	QPSK	12	0	23.61	24.26	24.30
5	QPSK	12	7	23.74	24.30	24.29
5	QPSK	12	13	23.79	24.27	24.24
5	QPSK	25	0	23.67	24.21	24.23
5	16QAM	1	0	24.00	24.70	24.47
5	16QAM	1	12	23.81	24.77	24.47
5	16QAM	1	24	24.05	24.39	24.71
5	16QAM	12	0	22.67	23.38	23.34
5	16QAM	12	7	22.72	23.41	23.41
5	16QAM	12	13	22.85	23.37	23.40
5	16QAM	25	0	22.56	23.33	23.23
5	64QAM	1	0	21.61	23.35	22.92
5	64QAM	1	12	22.25	23.66	23.03
5	64QAM	1	24	22.01	23.58	22.64
5	64QAM	12	0	20.82	22.36	21.74
5	64QAM	12	7	20.88	22.27	21.68
5	64QAM	12	13	20.53	22.30	21.60
5	64QAM	25	0	20.33	22.21	21.64
5	256QAM	1	0	20.05	21.85	21.44
5	256QAM	1	12	21.75	22.08	21.53
5	256QAM	1	24	20.53	22.01	21.03
5	256QAM	12	0	19.35	20.88	20.13
5	256QAM	12	7	19.42	20.75	20.12
5	256QAM	12	13	19.02	20.83	20.05
5	256QAM	25	0	19.03	20.39	20.34



CA Power

CA_41C							
Combination 20MHz+15MHz (100RB+75RB)							
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)
			RB Size	RB offset	RB Size	RB offset	
39750	39921	QPSK	100	0	75	0	22.78
		QPSK	1	0	1	74	16.89
		QPSK	1	99	1	0	25.33
		16QAM	100	0	75	0	21.62
		16QAM	1	0	1	74	17.32
		16QAM	1	99	1	0	24.45
		64QAM	100	0	75	0	20.22
		64QAM	1	0	1	74	17.33
		64QAM	1	99	1	0	22.43
		256QAM	100	0	75	0	20.49
		256QAM	1	0	1	74	17.26
		256QAM	1	99	1	0	22.49
40546	40717	QPSK	100	0	75	0	23.22
		QPSK	1	0	1	74	16.88
		QPSK	1	99	1	0	25.58
		16QAM	100	0	75	0	22.33
		16QAM	1	0	1	74	17.19
		16QAM	1	99	1	0	25.18
		64QAM	100	0	75	0	21.56
		64QAM	1	0	1	74	17.93
		64QAM	1	99	1	0	22.49
		256QAM	100	0	75	0	21.37
		256QAM	1	0	1	74	17.56
		256QAM	1	99	1	0	22.43
41341	41512	QPSK	100	0	75	0	22.37
		QPSK	1	0	1	74	16.92
		QPSK	1	99	1	0	25.11
		16QAM	100	0	75	0	21.33
		16QAM	1	0	1	74	17.38



		16QAM	1	99	1	0	24.43
		64QAM	100	0	75	0	20.43
		64QAM	1	0	1	74	17.31
		64QAM	1	99	1	0	21.46
		256QAM	100	0	75	0	20.46
		256QAM	1	0	1	74	17.49
		256QAM	1	99	1	0	21.66
Combination 15MHz+20MHz (75RB+100RB)							
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)
			RB Size	RB offset	RB Size	RB offset	
39728	39899	QPSK	75	0	100	0	22.49
		QPSK	1	0	1	99	16.78
		QPSK	1	74	1	0	25.37
		16QAM	75	0	100	0	21.59
		16QAM	1	0	1	99	17.45
		16QAM	1	74	1	0	24.55
		64QAM	75	0	100	0	20.43
		64QAM	1	0	1	99	17.22
		64QAM	1	74	1	0	22.38
		256QAM	75	0	100	0	20.41
		256QAM	1	0	1	99	17.12
		256QAM	1	74	1	0	22.39
40523	40694	QPSK	75	0	100	0	23.19
		QPSK	1	0	1	99	16.92
		QPSK	1	74	1	0	25.52
		16QAM	75	0	100	0	22.28
		16QAM	1	0	1	99	17.11
		16QAM	1	74	1	0	25.21
		64QAM	75	0	100	0	21.49
		64QAM	1	0	1	99	17.86
		64QAM	1	74	1	0	22.44
		256QAM	75	0	100	0	21.28
		256QAM	1	0	1	99	17.43
		256QAM	1	74	1	0	22.33
41319	41490	QPSK	75	0	100	0	22.28
		QPSK	1	0	1	99	16.79



		QPSK	1	74	1	0	25.02
		16QAM	75	0	100	0	21.28
		16QAM	1	0	1	99	17.28
		16QAM	1	74	1	0	24.37
		64QAM	75	0	100	0	20.29
		64QAM	1	0	1	99	17.13
		64QAM	1	74	1	0	21.33
		256QAM	75	0	100	0	20.33
		256QAM	1	0	1	99	17.29
		256QAM	1	74	1	0	21.33
Combination 20MHz+10MHz (100RB+50RB)							
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)
			RB Size	RB offset	RB Size	RB offset	
39750	39894	QPSK	100	0	50	0	22.41
		QPSK	1	0	1	49	16.44
		QPSK	1	99	1	0	25.27
		16QAM	100	0	50	0	21.51
		16QAM	1	0	1	49	17.35
		16QAM	1	99	1	0	24.68
		64QAM	100	0	50	0	20.42
		64QAM	1	0	1	49	17.12
		64QAM	1	99	1	0	22.36
		256QAM	100	0	50	0	20.46
		256QAM	1	0	1	49	16.94
		256QAM	1	99	1	0	22.34
40571	40715	QPSK	100	0	50	0	23.15
		QPSK	1	0	1	49	16.85
		QPSK	1	99	1	0	25.59
		16QAM	100	0	50	0	22.19
		16QAM	1	0	1	49	16.88
		16QAM	1	99	1	0	25.2
		64QAM	100	0	50	0	21.4
		64QAM	1	0	1	49	17.62
		64QAM	1	99	1	0	22.32
		256QAM	100	0	50	0	21.43
		256QAM	1	0	1	49	17.57



		256QAM	1	99	1	0	22.17
41391	41535	QPSK	100	0	50	0	22.22
		QPSK	1	0	1	49	16.55
		QPSK	1	99	1	0	24.98
		16QAM	100	0	50	0	21.21
		16QAM	1	0	1	49	17.3
		16QAM	1	99	1	0	24.33
		64QAM	100	0	50	0	20.2
		64QAM	1	0	1	49	17.04
		64QAM	1	99	1	0	21.27
		256QAM	100	0	50	0	20.18
		256QAM	1	0	1	49	17.21
		256QAM	1	99	1	0	21.16
Combination 10MHz+20MHz (50RB+100RB)							
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)
			RB Size	RB offset	RB Size	RB offset	
39705	39849	QPSK	50	0	100	0	22.68
		QPSK	1	0	1	99	16.92
		QPSK	1	49	1	0	25.45
		16QAM	50	0	100	0	21.78
		16QAM	1	0	1	99	17.45
		16QAM	1	49	1	0	24.49
		64QAM	50	0	100	0	20.34
		64QAM	1	0	1	99	17.42
		64QAM	1	49	1	0	22.49
		256QAM	50	0	100	0	20.53
		256QAM	1	0	1	99	17.35
		256QAM	1	49	1	0	22.56
40526	40670	QPSK	50	0	100	0	23.34
		QPSK	1	0	1	99	16.92
		QPSK	1	49	1	0	25.53
		16QAM	50	0	100	0	22.41
		16QAM	1	0	1	99	17.28
		16QAM	1	49	1	0	25.23
		64QAM	50	0	100	0	21.65
		64QAM	1	0	1	99	17.85



		64QAM	1	49	1	0	22.53
		256QAM	50	0	100	0	21.43
		256QAM	1	0	1	99	17.62
		256QAM	1	49	1	0	22.33
41346	41490	QPSK	50	0	100	0	22.48
		QPSK	1	0	1	99	16.75
		QPSK	1	49	1	0	25.03
		16QAM	50	0	100	0	21.28
		16QAM	1	0	1	99	17.22
		16QAM	1	49	1	0	24.34
		64QAM	50	0	100	0	20.28
		64QAM	1	0	1	99	17.18
		64QAM	1	49	1	0	21.29
		256QAM	50	0	100	0	20.43
		256QAM	1	0	1	99	17.25
		256QAM	1	49	1	0	21.33
Combination 20MHz+5MHz (100RB+25RB)							
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)
			RB Size	RB offset	RB Size	RB offset	
39750	39867	QPSK	100	0	25	0	22.85
		QPSK	1	0	1	24	16.78
		QPSK	1	99	1	0	25.44
		16QAM	100	0	25	0	22.01
		16QAM	1	0	1	24	17.38
		16QAM	1	99	1	0	24.41
		64QAM	100	0	25	0	20.78
		64QAM	1	0	1	24	17.42
		64QAM	1	99	1	0	22.49
		256QAM	100	0	25	0	20.68
		256QAM	1	0	1	24	17.43
		256QAM	1	99	1	0	22.58
40595	40712	QPSK	100	0	25	0	23.33
		QPSK	1	0	1	24	16.92
		QPSK	1	99	1	0	25.59
		16QAM	100	0	25	0	22.57
		16QAM	1	0	1	24	17.38



		16QAM	1	99	1	0	25.18
		64QAM	100	0	25	0	21.65
		64QAM	1	0	1	24	17.79
		64QAM	1	99	1	0	22.43
		256QAM	100	0	25	0	21.41
		256QAM	1	0	1	24	17.43
		256QAM	1	99	1	0	22.41
41440	41557	QPSK	100	0	25	0	22.74
		QPSK	1	0	1	24	16.74
		QPSK	1	99	1	0	25.11
		16QAM	100	0	25	0	21.44
		16QAM	1	0	1	24	17.37
		16QAM	1	99	1	0	24.49
		64QAM	100	0	25	0	20.43
		64QAM	1	0	1	24	17.38
		64QAM	1	99	1	0	21.45
		256QAM	100	0	25	0	20.52
		256QAM	1	0	1	24	17.43
		256QAM	1	99	1	0	21.45
Combination 5MHz+20MHz (25RB+100RB)							
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)
			RB Size	RB offset	RB Size	RB offset	
39683	39800	QPSK	25	0	100	0	22.76
		QPSK	1	0	1	99	16.78
		QPSK	1	24	1	0	25.41
		16QAM	25	0	100	0	21.55
		16QAM	1	0	1	99	17.31
		16QAM	1	24	1	0	24.42
		64QAM	25	0	100	0	20.18
		64QAM	1	0	1	99	17.22
		64QAM	1	24	1	0	22.46
		256QAM	25	0	100	0	20.51
		256QAM	1	0	1	99	17.38
		256QAM	1	24	1	0	22.53
40528	40645	QPSK	25	0	100	0	23.18
		QPSK	1	0	1	99	16.95



		QPSK	1	24	1	0	25.51
		16QAM	25	0	100	0	22.34
		16QAM	1	0	1	99	17.22
		16QAM	1	24	1	0	25.05
		64QAM	25	0	100	0	21.67
		64QAM	1	0	1	99	17.89
		64QAM	1	24	1	0	22.51
		256QAM	25	0	100	0	21.41
		256QAM	1	0	1	99	17.52
		256QAM	1	24	1	0	22.45
41373	41490	QPSK	25	0	100	0	22.39
		QPSK	1	0	1	99	16.92
		QPSK	1	24	1	0	25.08
		16QAM	25	0	100	0	21.41
		16QAM	1	0	1	99	17.33
		16QAM	1	24	1	0	24.41
		64QAM	25	0	100	0	20.48
		64QAM	1	0	1	99	17.43
		64QAM	1	24	1	0	21.43
		256QAM	25	0	100	0	20.52
		256QAM	1	0	1	99	17.42
		256QAM	1	24	1	0	21.61
Combination 15MHz+10MHz (75RB+50RB)							
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)
			RB Size	RB offset	RB Size	RB offset	
39725	39845	QPSK	75	0	50	0	22.78
		QPSK	1	0	1	49	17.02
		QPSK	1	74	1	0	25.43
		16QAM	75	0	50	0	21.88
		16QAM	1	0	1	49	17.52
		16QAM	1	74	1	0	24.59
		64QAM	75	0	50	0	20.44
		64QAM	1	0	1	49	17.43
		64QAM	1	74	1	0	22.53
		256QAM	75	0	50	0	20.56
		256QAM	1	0	1	49	17.39



		256QAM	1	74	1	0	22.51
40571	40691	QPSK	75	0	50	0	23.21
		QPSK	1	0	1	49	16.88
		QPSK	1	74	1	0	25.33
		16QAM	75	0	50	0	22.34
		16QAM	1	0	1	49	17.35
		16QAM	1	74	1	0	25.18
		64QAM	75	0	50	0	21.61
		64QAM	1	0	1	49	17.82
		64QAM	1	74	1	0	22.44
		256QAM	75	0	50	0	21.4
		256QAM	1	0	1	49	17.56
		256QAM	1	74	1	0	22.24
41417	41537	QPSK	75	0	50	0	22.45
		QPSK	1	0	1	49	16.74
		QPSK	1	74	1	0	25.08
		16QAM	75	0	50	0	21.26
		16QAM	1	0	1	49	17.34
		16QAM	1	74	1	0	24.37
		64QAM	75	0	50	0	20.39
		64QAM	1	0	1	49	17.22
		64QAM	1	74	1	0	21.31
		256QAM	75	0	50	0	20.48
		256QAM	1	0	1	49	17.33
		256QAM	1	74	1	0	21.42
Combination 10MHz+15MHz (50RB+75RB)							
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)
			RB Size	RB offset	RB Size	RB offset	
39703	39823	QPSK	50	0	75	0	22.57
		QPSK	1	49	1	0	16.88
		QPSK	1	0	1	74	25.47
		16QAM	50	0	75	0	21.53
		16QAM	1	49	1	0	17.37
		16QAM	1	0	1	74	24.48
		64QAM	50	0	75	0	20.22
		64QAM	1	49	1	0	17.31



		64QAM	1	0	1	74	22.49
		256QAM	50	0	75	0	20.47
		256QAM	1	49	1	0	17.33
		256QAM	1	0	1	74	22.55
40549	40669	QPSK	50	0	75	0	23.17
		QPSK	1	49	1	0	17.07
		QPSK	1	0	1	74	25.48
		16QAM	50	0	75	0	22.38
		16QAM	1	49	1	0	17.33
		16QAM	1	0	1	74	25.08
		64QAM	50	0	75	0	21.64
		64QAM	1	49	1	0	17.81
		64QAM	1	0	1	74	22.58
		256QAM	50	0	75	0	21.48
		256QAM	1	49	1	0	17.53
		256QAM	1	0	1	74	22.51
41395	41515	QPSK	50	0	75	0	22.45
		QPSK	1	49	1	0	17.02
		QPSK	1	0	1	74	25.18
		16QAM	50	0	75	0	21.49
		16QAM	1	49	1	0	17.37
		16QAM	1	0	1	74	24.49
		64QAM	50	0	75	0	20.45
		64QAM	1	49	1	0	17.37
		64QAM	1	0	1	74	21.39
		256QAM	50	0	75	0	20.45
		256QAM	1	49	1	0	17.38
		256QAM	1	0	1	74	21.55
Combination 15MHz+15MHz (75RB+75RB)							
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)
			RB Size	RB offset	RB Size	RB offset	
39725	39875	QPSK	75	0	75	0	22.71
		QPSK	1	0	1	74	16.91
		QPSK	1	74	1	0	25.33
		16QAM	75	0	75	0	21.85
		16QAM	1	0	1	74	17.33



		16QAM	1	74	1	0	24.38
		64QAM	75	0	75	0	20.45
		64QAM	1	0	1	74	17.35
		64QAM	1	74	1	0	22.39
		256QAM	75	0	75	0	20.48
		256QAM	1	0	1	74	17.33
		256QAM	1	74	1	0	22.53
40545	40695	QPSK	75	0	75	0	23.28
		QPSK	1	0	1	74	16.85
		QPSK	1	74	1	0	25.51
		16QAM	75	0	75	0	22.47
		16QAM	1	0	1	74	17.34
		16QAM	1	74	1	0	25.11
		64QAM	75	0	75	0	21.58
		64QAM	1	0	1	74	17.75
		64QAM	1	74	1	0	22.45
		256QAM	75	0	75	0	21.37
		256QAM	1	0	1	74	17.53
		256QAM	1	74	1	0	22.36
41365	41515	QPSK	75	0	75	0	22.68
		QPSK	1	0	1	74	16.79
		QPSK	1	74	1	0	25.08
		16QAM	75	0	75	0	21.33
		16QAM	1	0	1	74	17.42
		16QAM	1	74	1	0	24.48
		64QAM	75	0	75	0	20.33
		64QAM	1	0	1	74	17.26
		64QAM	1	74	1	0	21.39
		256QAM	75	0	75	0	20.48
		256QAM	1	0	1	74	17.34
		256QAM	1	74	1	0	21.42
Combination 20MHz+20MHz (100RB+100RB)							
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)
			RB Size	RB offset	RB Size	RB offset	
39750	39948	QPSK	100	0	100	0	22.68
		QPSK	1	0	1	99	16.88



		QPSK	1	99	1	0	25.25
		16QAM	100	0	100	0	21.86
		16QAM	1	0	1	99	17.34
		16QAM	1	99	1	0	24.35
		64QAM	100	0	100	0	20.37
		64QAM	1	0	1	99	17.31
		64QAM	1	99	1	0	22.43
		256QAM	100	0	100	0	20.55
		256QAM	1	0	1	99	17.45
		256QAM	1	99	1	0	22.51
40521	40719	QPSK	100	0	100	0	23.38
		QPSK	1	0	1	99	16.98
		QPSK	1	99	1	0	25.61
		16QAM	100	0	100	0	22.57
		16QAM	1	0	1	99	17.41
		16QAM	1	99	1	0	25.21
		64QAM	100	0	100	0	21.61
		64QAM	1	0	1	99	17.82
		64QAM	1	99	1	0	22.49
		256QAM	100	0	100	0	21.43
		256QAM	1	0	1	99	17.61
		256QAM	1	99	1	0	22.44
41292	41490	QPSK	100	0	100	0	22.65
		QPSK	1	0	1	99	16.77
		QPSK	1	99	1	0	25.04
		16QAM	100	0	100	0	22.42
		16QAM	1	0	1	99	17.21
		16QAM	1	99	1	0	24.88
		64QAM	100	0	100	0	21.64
		64QAM	1	0	1	99	17.53
		64QAM	1	99	1	0	22.28
		256QAM	100	0	100	0	21.21
		256QAM	1	0	1	99	17.34
		256QAM	1	99	1	0	22.36

**A2. ERP/EIRP**

LTE Band 12 / 1.4MHz (Average) (GT - LC = 0.97 dB)							
Channel	Mode	RB		Conducted		ERP	
		Size	Offset	Power (dBm)	Power (Watts)	ERP(dBm)	ERP(W)
Lowest	QPSK	1	0	23.98	0.2500	22.80	0.1905
Middle		1	0	24.04	0.2535	22.86	0.1932
Highest		1	0	24.01	0.2518	22.83	0.1919
Lowest	16QAM	1	0	23.28	0.2128	22.10	0.1622
Middle		1	0	23.46	0.2218	22.28	0.1690
Highest		1	0	23.43	0.2203	22.25	0.1679
Lowest	64QAM	1	0	22.20	0.1660	21.02	0.1265
Middle		1	0	22.61	0.1824	21.43	0.1390
Highest		1	0	22.46	0.1762	21.28	0.1343
Lowest	256QAM	1	0	19.46	0.0883	18.28	0.0673
Middle		1	0	19.42	0.0875	18.24	0.0667
Highest		1	0	19.36	0.0863	18.18	0.0658
Limit	ERP < 3W			Result		PASS	

LTE Band 12 / 3MHz (Average) (GT - LC = 0.97 dB)							
Channel	Mode	RB		Conducted		ERP	
		Size	Offset	Power (dBm)	Power (Watts)	ERP(dBm)	ERP(W)
Lowest	QPSK	1	0	24.05	0.2541	22.87	0.1936
Middle		1	0	24.03	0.2529	22.85	0.1928
Highest		1	0	24.11	0.2576	22.93	0.1963
Lowest	16QAM	1	0	23.38	0.2178	22.20	0.1660
Middle		1	0	23.54	0.2259	22.36	0.1722
Highest		1	0	23.65	0.2317	22.47	0.1766
Lowest	64QAM	1	0	22.36	0.1722	21.18	0.1312
Middle		1	0	22.49	0.1774	21.31	0.1352
Highest		1	0	22.58	0.1811	21.40	0.1380
Lowest	256QAM	1	0	19.53	0.0897	18.35	0.0684
Middle		1	0	19.37	0.0865	18.19	0.0659
Highest		1	0	19.54	0.0899	18.36	0.0685
Limit	ERP < 3W			Result		PASS	



LTE Band 12 / 5MHz (Average) (GT - LC = 0.97 dB)							
Channel	Mode	RB		Conducted		ERP	
		Size	Offset	Power (dBm)	Power (Watts)	ERP(dBm)	ERP(W)
Lowest	QPSK	1	0	24.06	0.2547	22.88	0.1941
Middle		1	0	24.11	0.2576	22.93	0.1963
Highest		1	0	24.02	0.2523	22.84	0.1923
Lowest	16QAM	1	0	23.54	0.2259	22.36	0.1722
Middle		1	0	23.18	0.2080	22.00	0.1585
Highest		1	0	23.24	0.2109	22.06	0.1607
Lowest	64QAM	1	12	22.74	0.1879	21.56	0.1432
Middle		1	12	22.45	0.1758	21.27	0.1340
Highest		1	12	22.53	0.1791	21.35	0.1365
Lowest	256QAM	1	24	19.62	0.0916	18.44	0.0698
Middle		1	24	19.28	0.0847	18.10	0.0646
Highest		1	24	19.38	0.0867	18.20	0.0661
Limit	ERP < 3W			Result		PASS	

LTE Band 12 / 10MHz (Average) (GT - LC = 0.97 dB)							
Channel	Mode	RB		Conducted		ERP	
		Size	Offset	Power (dBm)	Power (Watts)	ERP(dBm)	ERP(W)
Lowest	QPSK	1	0	23.97	0.2495	22.79	0.1901
Middle		1	0	24.13	0.2588	22.95	0.1972
Highest		1	0	24.05	0.2541	22.87	0.1936
Lowest	16QAM	1	0	23.36	0.2168	22.18	0.1652
Middle		1	0	23.53	0.2254	22.35	0.1718
Highest		1	0	23.71	0.2350	22.53	0.1791
Lowest	64QAM	1	0	22.56	0.1803	21.38	0.1374
Middle		1	0	22.47	0.1766	21.29	0.1346
Highest		1	0	22.66	0.1845	21.48	0.1406
Lowest	256QAM	1	25	19.87	0.0971	18.69	0.0740
Middle		1	25	19.54	0.0899	18.36	0.0685
Highest		1	25	19.68	0.0929	18.50	0.0708
Limit	ERP < 3W			Result		PASS	



LTE Band 25 / 1.4MHz (Average) (GT - LC = 3.28 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	0	23.72	0.2355	27.00	0.5012
Middle		1	0	24.98	0.3148	28.26	0.6699
Highest		1	0	24.55	0.2851	27.83	0.6067
Lowest	16QAM	1	5	24.01	0.2518	27.29	0.5358
Middle		1	5	24.38	0.2742	27.66	0.5834
Highest		1	5	24.12	0.2582	27.40	0.5495
Lowest	64QAM	1	3	23.12	0.2051	26.40	0.4365
Middle		1	3	23.28	0.2128	26.56	0.4529
Highest		1	3	22.99	0.1991	26.27	0.4236
Lowest	256QAM	1	3	19.89	0.0975	23.17	0.2075
Middle		1	3	20.21	0.1050	23.49	0.2234
Highest		1	3	19.93	0.0984	23.21	0.2094
Limit	EIRP < 2W			Result		PASS	

LTE Band 25 / 3MHz (Average) (GT - LC = 3.28 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	0	24.69	0.2944	27.97	0.6266
Middle		1	0	24.93	0.3112	28.21	0.6622
Highest		1	0	24.60	0.2884	27.88	0.6138
Lowest	16QAM	1	14	24.22	0.2642	27.50	0.5623
Middle		1	14	24.38	0.2742	27.66	0.5834
Highest		1	14	24.15	0.2600	27.43	0.5534
Lowest	64QAM	1	8	23.04	0.2014	26.32	0.4285
Middle		1	8	23.25	0.2113	26.53	0.4498
Highest		1	8	22.99	0.1991	26.27	0.4236
Lowest	256QAM	1	14	20.03	0.1007	23.31	0.2143
Middle		1	14	20.31	0.1074	23.59	0.2286
Highest		1	14	20.05	0.1012	23.33	0.2153
Limit	EIRP < 2W			Result		PASS	



LTE Band 25 / 5MHz (Average) (GT - LC = 3.28 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	0	24.62	0.2897	27.90	0.6166
Middle		1	0	24.89	0.3083	28.17	0.6561
Highest		1	0	24.53	0.2838	27.81	0.6039
Lowest	16QAM	1	24	24.15	0.2600	27.43	0.5534
Middle		1	24	24.33	0.2710	27.61	0.5768
Highest		1	24	24.01	0.2518	27.29	0.5358
Lowest	64QAM	1	0	23.05	0.2018	26.33	0.4295
Middle		1	0	23.30	0.2138	26.58	0.4550
Highest		1	0	22.94	0.1968	26.22	0.4188
Lowest	256QAM	1	24	20.05	0.1012	23.33	0.2153
Middle		1	24	20.28	0.1067	23.56	0.2270
Highest		1	24	19.99	0.0998	23.27	0.2123
Limit	EIRP < 2W			Result		PASS	

LTE Band 25 / 10MHz (Average) (GT - LC = 3.28 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	0	24.68	0.2938	27.96	0.6252
Middle		1	0	24.93	0.3112	28.21	0.6622
Highest		1	0	24.57	0.2864	27.85	0.6095
Lowest	16QAM	1	25	24.05	0.2541	27.33	0.5408
Middle		1	25	24.18	0.2618	27.46	0.5572
Highest		1	25	23.94	0.2477	27.22	0.5272
Lowest	64QAM	1	0	23.05	0.2018	26.33	0.4295
Middle		1	0	23.22	0.2099	26.50	0.4467
Highest		1	0	23.07	0.2028	26.35	0.4315
Lowest	256QAM	1	49	20.02	0.1005	23.30	0.2138
Middle		1	49	20.18	0.1042	23.46	0.2218
Highest		1	49	19.97	0.0993	23.25	0.2113
Limit	EIRP < 2W			Result		PASS	



LTE Band 25 / 15MHz (Average) (GT - LC = 3.28 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	74	24.89	0.3083	28.17	0.6561
Middle		1	74	24.95	0.3126	28.23	0.6653
Highest		1	74	24.67	0.2931	27.95	0.6237
Lowest	16QAM	1	74	24.05	0.2541	27.33	0.5408
Middle		1	74	24.33	0.2710	27.61	0.5768
Highest		1	74	24.03	0.2529	27.31	0.5383
Lowest	64QAM	1	0	22.99	0.1991	26.27	0.4236
Middle		1	0	23.15	0.2065	26.43	0.4395
Highest		1	0	22.89	0.1945	26.17	0.4140
Lowest	256QAM	1	37	20.01	0.1002	23.29	0.2133
Middle		1	37	20.25	0.1059	23.53	0.2254
Highest		1	37	20.04	0.1009	23.32	0.2148
Limit	EIRP < 2W			Result		PASS	

LTE Band 25 / 20MHz (Average) (GT - LC = 3.28 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	0	24.62	0.2897	27.90	0.6166
Middle		1	0	24.79	0.3013	28.07	0.6412
Highest		1	0	24.39	0.2748	27.67	0.5848
Lowest	16QAM	1	49	23.85	0.2427	27.13	0.5164
Middle		1	49	24.22	0.2642	27.50	0.5623
Highest		1	49	23.86	0.2432	27.14	0.5176
Lowest	64QAM	1	0	23.02	0.2004	26.30	0.4266
Middle		1	0	23.15	0.2065	26.43	0.4395
Highest		1	0	22.89	0.1945	26.17	0.4140
Lowest	256QAM	1	99	19.93	0.0984	23.21	0.2094
Middle		1	99	20.15	0.1035	23.43	0.2203
Highest		1	99	19.86	0.0968	23.14	0.2061
Limit	EIRP < 2W			Result		PASS	



LTE Band 26 / 1.4MHz (Average) (GT - LC = 1.73 dB)							
Channel	Mode	RB		Conducted		ERP	
		Size	Offset	Power (dBm)	Power (Watts)	ERP(dBm)	ERP(W)
Lowest	QPSK	1	3	23.65	0.2317	23.23	0.2104
Middle		1	3	23.79	0.2393	23.37	0.2173
Highest		1	3	22.93	0.1963	22.51	0.1782
Lowest	16QAM	1	3	23.05	0.2018	22.63	0.1832
Middle		1	3	22.93	0.1963	22.51	0.1782
Highest		1	3	22.35	0.1718	21.93	0.1560
Lowest	64QAM	1	0	21.65	0.1462	21.23	0.1327
Middle		1	0	22.12	0.1629	21.70	0.1479
Highest		1	0	20.45	0.1109	20.03	0.1007
Lowest	256QAM	1	3	18.89	0.0774	18.47	0.0703
Middle		1	3	19.15	0.0822	18.73	0.0746
Highest		1	3	18.84	0.0766	18.42	0.0695
Limit	ERP < 7W			Result		PASS	

LTE Band 26 / 3MHz (Average) (GT - LC = 1.73 dB)							
Channel	Mode	RB		Conducted		ERP	
		Size	Offset	Power (dBm)	Power (Watts)	ERP(dBm)	ERP(W)
Lowest	QPSK	1	8	23.85	0.2427	23.43	0.2203
Middle		1	8	23.83	0.2415	23.41	0.2193
Highest		1	8	23.15	0.2065	22.73	0.1875
Lowest	16QAM	1	0	23.15	0.2065	22.73	0.1875
Middle		1	0	22.95	0.1972	22.53	0.1791
Highest		1	0	22.79	0.1901	22.37	0.1726
Lowest	64QAM	1	0	21.55	0.1429	21.13	0.1297
Middle		1	0	21.82	0.1521	21.40	0.1380
Highest		1	0	21.25	0.1334	20.83	0.1211
Lowest	256QAM	1	0	19.05	0.0804	18.63	0.0729
Middle		1	0	19.22	0.0836	18.80	0.0759
Highest		1	0	19.07	0.0807	18.65	0.0733
Limit	ERP < 7W			Result		PASS	



LTE Band 26 / 5MHz (Average) (GT - LC = 1.73 dB)							
Channel	Mode	RB		Conducted		ERP	
		Size	Offset	Power (dBm)	Power (Watts)	ERP(dBm)	ERP(W)
Lowest	QPSK	1	0	23.69	0.2339	23.27	0.2123
Middle		1	0	23.82	0.2410	23.40	0.2188
Highest		1	0	23.70	0.2344	23.28	0.2128
Lowest	16QAM	1	12	23.15	0.2065	22.73	0.1875
Middle		1	12	22.88	0.1941	22.46	0.1762
Highest		1	12	22.76	0.1888	22.34	0.1714
Lowest	64QAM	1	24	20.55	0.1135	20.13	0.1030
Middle		1	24	22.02	0.1592	21.60	0.1445
Highest		1	24	19.99	0.0998	19.57	0.0906
Lowest	256QAM	1	0	19.08	0.0809	18.66	0.0735
Middle		1	0	19.15	0.0822	18.73	0.0746
Highest		1	0	19.12	0.0817	18.70	0.0741
Limit	ERP < 7W			Result		PASS	

LTE Band 26 / 10MHz (Average) (GT - LC = 1.73 dB)							
Channel	Mode	RB		Conducted		ERP	
		Size	Offset	Power (dBm)	Power (Watts)	ERP(dBm)	ERP(W)
Lowest	QPSK	1	25	23.78	0.2388	23.36	0.2168
Middle		1	25	23.62	0.2301	23.20	0.2089
Highest		1	25	23.52	0.2249	23.10	0.2042
Lowest	16QAM	1	0	22.86	0.1932	22.44	0.1754
Middle		1	0	23.08	0.2032	22.66	0.1845
Highest		1	0	23.21	0.2094	22.79	0.1901
Lowest	64QAM	1	49	21.80	0.1514	21.38	0.1374
Middle		1	49	21.92	0.1556	21.50	0.1413
Highest		1	49	20.33	0.1079	19.91	0.0979
Lowest	256QAM	1	25	19.02	0.0798	18.60	0.0724
Middle		1	25	18.69	0.0740	18.27	0.0671
Highest		1	25	18.85	0.0767	18.43	0.0697
Limit	ERP < 7W			Result		PASS	



LTE Band 26 / 15MHz (Average) (GT - LC = 1.73 dB)							
Channel	Mode	RB		Conducted		ERP	
		Size	Offset	Power (dBm)	Power (Watts)	ERP(dBm)	ERP(W)
Lowest	QPSK	1	0	23.55	0.2265	23.13	0.2056
Middle		1	0	23.62	0.2301	23.20	0.2089
Highest		1	0	23.51	0.2244	23.09	0.2037
Lowest	16QAM	1	0	22.80	0.1905	22.38	0.1730
Middle		1	0	23.07	0.2028	22.65	0.1841
Highest		1	0	23.05	0.2018	22.63	0.1832
Lowest	64QAM	1	74	21.85	0.1531	21.43	0.1390
Middle		1	74	20.72	0.1180	20.30	0.1072
Highest		1	74	20.28	0.1067	19.86	0.0968
Lowest	256QAM	36	0	18.92	0.0780	18.50	0.0708
Middle		36	0	18.86	0.0769	18.44	0.0698
Highest		36	0	18.80	0.0759	18.38	0.0689
Limit	ERP < 7W			Result		PASS	

LTE Band 26 / 15MHz (Channel 26765) (GT - LC = 1.73 dB)							
Channel	Mode	RB		Conducted		ERP	
		Size	Offset	Power (dBm)	Power (Watts)	ERP(dBm)	ERP(W)
Lowest	QPSK	1	74	23.56	0.2270	23.14	0.2061
Middle		-	-	-	-	-	-
Highest		-	-	-	-	-	-
Lowest	16QAM	1	74	22.89	0.1945	22.47	0.1766
Middle		-	-	-	-	-	-
Highest		-	-	-	-	-	-
Lowest	64QAM	1	74	21.85	0.1531	21.43	0.1390
Middle		-	-	-	-	-	-
Highest		-	-	-	-	-	-
Lowest	256QAM	36	0	18.92	0.0780	18.50	0.0708
Middle		-	-	-	-	-	-
Highest		-	-	-	-	-	-
Limit	ERP < 7W			Result		PASS	



LTE Band 66 / 1.4MHz (Average) (GT - LC = 3.28 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	3	24.33	0.2710	27.61	0.5768
Middle		1	3	24.89	0.3083	28.17	0.6561
Highest		1	3	23.94	0.2477	27.22	0.5272
Lowest	16QAM	1	3	23.38	0.2178	26.66	0.4634
Middle		1	3	24.05	0.2541	27.33	0.5408
Highest		1	3	23.53	0.2254	26.81	0.4797
Lowest	64QAM	1	0	21.73	0.1489	25.01	0.3170
Middle		1	0	22.44	0.1754	25.72	0.3733
Highest		1	0	21.72	0.1486	25.00	0.3162
Lowest	256QAM	1	0	20.31	0.1074	23.59	0.2286
Middle		1	0	20.39	0.1094	23.67	0.2328
Highest		1	0	20.22	0.1052	23.50	0.2239
Limit	EIRP < 1W			Result		PASS	

LTE Band 66 / 3MHz (Average) (GT - LC = 3.28 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	8	24.33	0.2710	27.61	0.5768
Middle		1	8	24.87	0.3069	28.15	0.6531
Highest		1	8	23.93	0.2472	27.21	0.5260
Lowest	16QAM	1	14	23.48	0.2228	26.76	0.4742
Middle		1	14	24.01	0.2518	27.29	0.5358
Highest		1	14	23.49	0.2234	26.77	0.4753
Lowest	64QAM	1	0	21.72	0.1486	25.00	0.3162
Middle		1	0	22.45	0.1758	25.73	0.3741
Highest		1	0	21.80	0.1514	25.08	0.3221
Lowest	256QAM	1	8	20.42	0.1102	23.70	0.2344
Middle		1	8	20.21	0.1050	23.49	0.2234
Highest		1	8	20.33	0.1079	23.61	0.2296
Limit	EIRP < 1W			Result		PASS	



LTE Band 66 / 5MHz (Average) (GT - LC = 3.28 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	12	24.22	0.2642	27.50	0.5623
Middle		1	12	25.01	0.3170	28.29	0.6745
Highest		1	12	23.94	0.2477	27.22	0.5272
Lowest	16QAM	1	24	23.42	0.2198	26.70	0.4677
Middle		1	24	24.28	0.2679	27.56	0.5702
Highest		1	24	23.55	0.2265	26.83	0.4819
Lowest	64QAM	1	0	21.60	0.1445	24.88	0.3076
Middle		1	0	22.44	0.1754	25.72	0.3733
Highest		1	0	21.67	0.1469	24.95	0.3126
Lowest	256QAM	1	0	20.49	0.1119	23.77	0.2382
Middle		1	0	20.29	0.1069	23.57	0.2275
Highest		1	0	20.12	0.1028	23.40	0.2188
Limit	EIRP < 1W			Result		PASS	

LTE Band 66 / 10MHz (Average) (GT - LC = 3.28 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	25	24.38	0.2742	27.66	0.5834
Middle		1	25	24.93	0.3112	28.21	0.6622
Highest		1	25	23.92	0.2466	27.20	0.5248
Lowest	16QAM	1	49	23.42	0.2198	26.70	0.4677
Middle		1	49	24.05	0.2541	27.33	0.5408
Highest		1	49	23.44	0.2208	26.72	0.4699
Lowest	64QAM	1	0	21.65	0.1462	24.93	0.3112
Middle		1	0	22.40	0.1738	25.68	0.3698
Highest		1	0	21.70	0.1479	24.98	0.3148
Lowest	256QAM	1	0	20.37	0.1089	23.65	0.2317
Middle		1	0	20.39	0.1094	23.67	0.2328
Highest		1	0	20.15	0.1035	23.43	0.2203
Limit	EIRP < 1W			Result		PASS	



LTE Band 66 / 15MHz (Average) (GT - LC = 3.28 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	74	24.15	0.2600	27.43	0.5534
Middle		1	74	24.97	0.3141	28.25	0.6683
Highest		1	74	24.03	0.2529	27.31	0.5383
Lowest	16QAM	1	0	23.40	0.2188	26.68	0.4656
Middle		1	0	24.05	0.2541	27.33	0.5408
Highest		1	0	23.41	0.2193	26.69	0.4667
Lowest	64QAM	1	0	21.63	0.1455	24.91	0.3097
Middle		1	0	22.28	0.1690	25.56	0.3597
Highest		1	0	21.59	0.1442	24.87	0.3069
Lowest	256QAM	1	0	20.38	0.1091	23.66	0.2323
Middle		1	0	20.55	0.1135	23.83	0.2415
Highest		1	0	20.08	0.1019	23.36	0.2168
Limit	EIRP < 1W			Result		PASS	

LTE Band 66 / 20MHz (Average) (GT - LC = 3.28 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	49	24.41	0.2761	27.69	0.5875
Middle		1	49	25.02	0.3177	28.30	0.6761
Highest		1	49	23.93	0.2472	27.21	0.5260
Lowest	16QAM	1	49	23.30	0.2138	26.58	0.4550
Middle		1	49	24.15	0.2600	27.43	0.5534
Highest		1	49	23.55	0.2265	26.83	0.4819
Lowest	64QAM	1	0	21.66	0.1466	24.94	0.3119
Middle		1	0	22.30	0.1698	25.58	0.3614
Highest		1	0	21.80	0.1514	25.08	0.3221
Lowest	256QAM	1	0	20.15	0.1035	23.43	0.2203
Middle		1	0	20.35	0.1084	23.63	0.2307
Highest		1	0	20.29	0.1069	23.57	0.2275
Limit	EIRP < 1W			Result		PASS	



LTE Band 71 / 5MHz (Average) (GT - LC = 0.97 dB)							
Channel	Mode	RB		Conducted		ERP	
		Size	Offset	Power (dBm)	Power (Watts)	ERP(dBm)	ERP(W)
Lowest	QPSK	1	0	23.89	0.2449	22.71	0.1866
Middle		1	0	24.12	0.2582	22.94	0.1968
Highest		1	0	24.03	0.2529	22.85	0.1928
Lowest	16QAM	1	0	23.35	0.2163	22.17	0.1648
Middle		1	0	23.61	0.2296	22.43	0.1750
Highest		1	0	23.44	0.2208	22.26	0.1683
Lowest	64QAM	1	12	22.42	0.1746	21.24	0.1330
Middle		1	12	22.66	0.1845	21.48	0.1406
Highest		1	12	22.55	0.1799	21.37	0.1371
Lowest	256QAM	1	0	19.53	0.0897	18.35	0.0684
Middle		1	0	19.55	0.0902	18.37	0.0687
Highest		1	0	19.43	0.0877	18.25	0.0668
Limit	ERP < 3W			Result		PASS	

LTE Band 71 / 10MHz (Average) (GT - LC = 0.97 dB)							
Channel	Mode	RB		Conducted		ERP	
		Size	Offset	Power (dBm)	Power (Watts)	ERP(dBm)	ERP(W)
Lowest	QPSK	1	0	24.12	0.2582	22.94	0.1968
Middle		1	0	24.20	0.2630	23.02	0.2004
Highest		1	0	24.15	0.2600	22.97	0.1982
Lowest	16QAM	1	0	23.44	0.2208	22.26	0.1683
Middle		1	0	23.68	0.2333	22.50	0.1778
Highest		1	0	23.88	0.2443	22.70	0.1862
Lowest	64QAM	1	0	22.42	0.1746	21.24	0.1330
Middle		1	0	22.53	0.1791	21.35	0.1365
Highest		1	0	22.61	0.1824	21.43	0.1390
Lowest	256QAM	1	0	19.57	0.0906	18.39	0.0690
Middle		1	0	19.45	0.0881	18.27	0.0671
Highest		1	0	19.66	0.0925	18.48	0.0705
Limit	ERP < 3W			Result		PASS	



LTE Band 71 / 15MHz (Average) (GT - LC = 0.97 dB)							
Channel	Mode	RB		Conducted		ERP	
		Size	Offset	Power (dBm)	Power (Watts)	ERP(dBm)	ERP(W)
Lowest	QPSK	1	0	24.12	0.2582	22.94	0.1968
Middle		1	0	24.25	0.2661	23.07	0.2028
Highest		1	0	24.07	0.2553	22.89	0.1945
Lowest	16QAM	1	0	23.62	0.2301	22.44	0.1754
Middle		1	0	23.22	0.2099	22.04	0.1600
Highest		1	0	23.31	0.2143	22.13	0.1633
Lowest	64QAM	1	37	22.81	0.1910	21.63	0.1455
Middle		1	37	22.53	0.1791	21.35	0.1365
Highest		1	37	22.59	0.1816	21.41	0.1384
Lowest	256QAM	1	0	19.80	0.0955	18.62	0.0728
Middle		1	0	19.48	0.0887	18.30	0.0676
Highest		1	0	19.53	0.0897	18.35	0.0684
Limit	ERP < 3W			Result		PASS	

LTE Band 71 / 20MHz (Average) (GT - LC = 0.97 dB)							
Channel	Mode	RB		Conducted		ERP	
		Size	Offset	EIRP(dBm)	EIRP(W)	ERP(dBm)	ERP(W)
Lowest	QPSK	1	0	24.02	0.2523	22.84	0.1923
Middle		1	0	24.22	0.2642	23.04	0.2014
Highest		1	0	24.07	0.2553	22.89	0.1945
Lowest	16QAM	1	0	23.41	0.2193	22.23	0.1671
Middle		1	0	23.60	0.2291	22.42	0.1746
Highest		1	0	23.80	0.2399	22.62	0.1828
Lowest	64QAM	1	0	22.66	0.1845	21.48	0.1406
Middle		1	0	22.53	0.1791	21.35	0.1365
Highest		1	0	22.72	0.1871	21.54	0.1426
Lowest	256QAM	1	99	19.73	0.0940	18.55	0.0716
Middle		1	99	19.70	0.0933	18.52	0.0711
Highest		1	99	19.88	0.0973	18.70	0.0741
Limit	ERP < 3W			Result		PASS	



A3. LTE Band 12

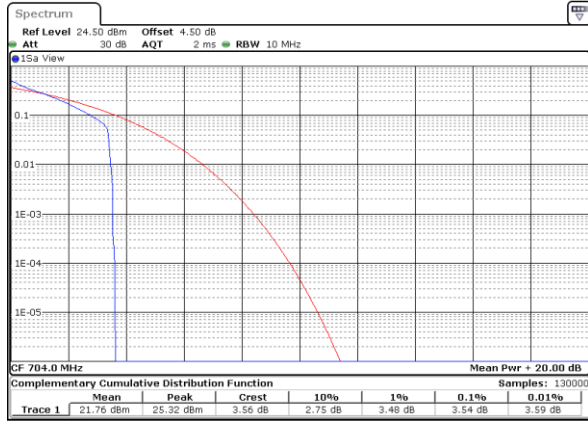
A3.1. Peak-to-Average Ratio

Mode	LTE Band 12 / 10MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	3.54	4.93	5.07	5.83	PASS
Middle CH	3.62	4.84	5.33	5.83	
Highest CH	3.51	5.01	4.87	5.80	
Mode	LTE Band 12 / 10MHz				
Mod.	64QAM		256QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	6.09	6.35	6.96	6.46	PASS
Middle CH	6.75	6.26	6.23	6.35	
Highest CH	6.17	6.29	6.00	6.46	

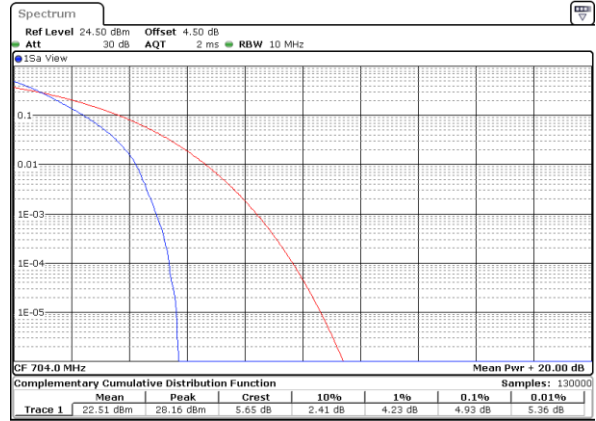


LTE Band 12 / 10MHz / QPSK

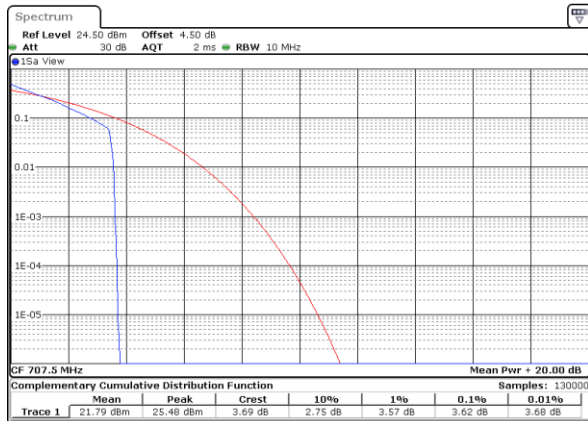
Lowest Channel / 1RB



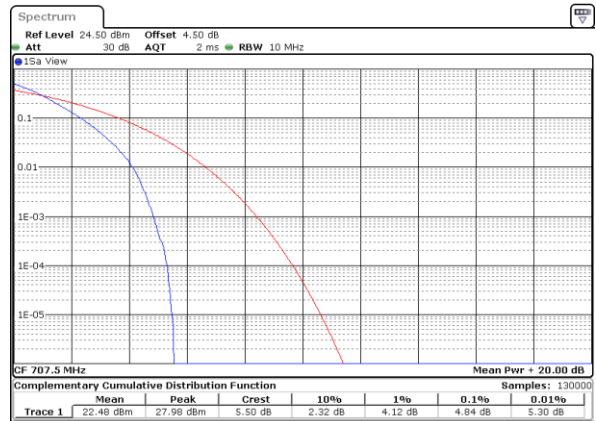
Lowest Channel / Full RB



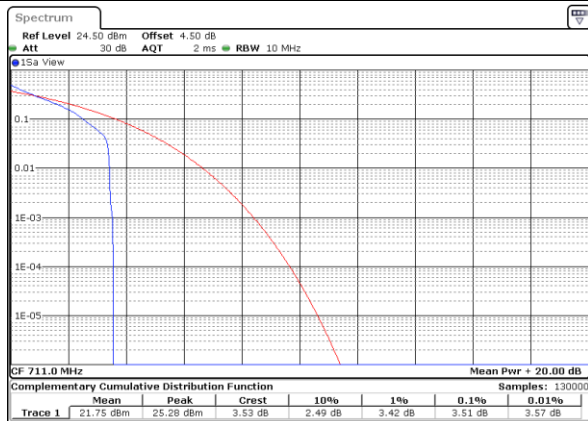
Middle Channel / 1RB



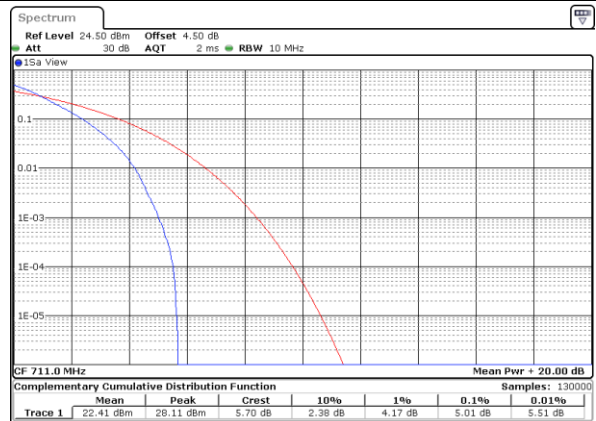
Middle Channel / Full RB



Highest Channel / 1RB



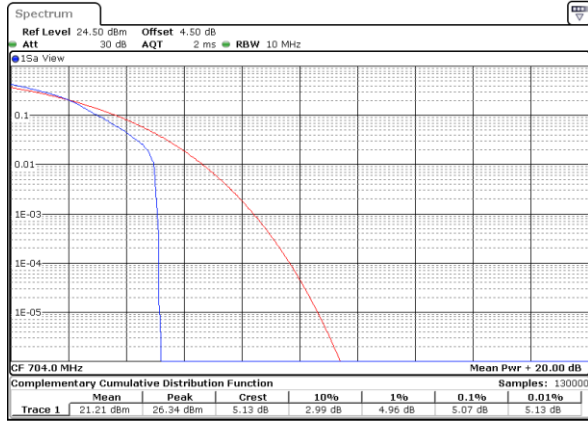
Highest Channel / Full RB



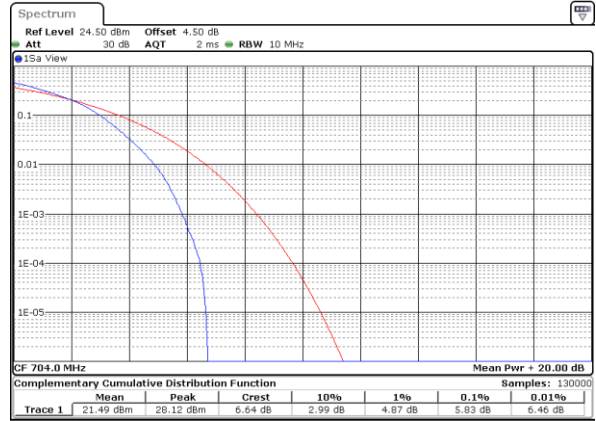


LTE Band 12 / 10MHz / 16QAM

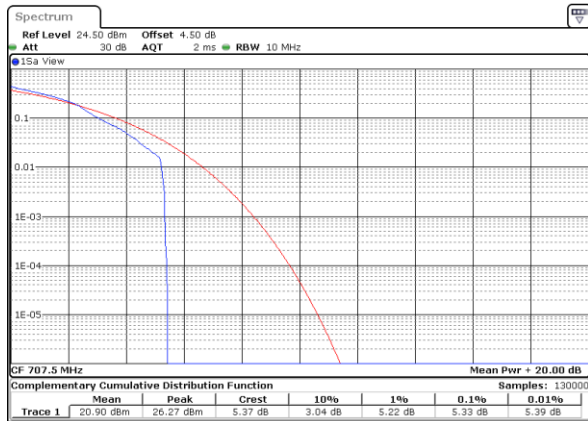
Lowest Channel / 1RB



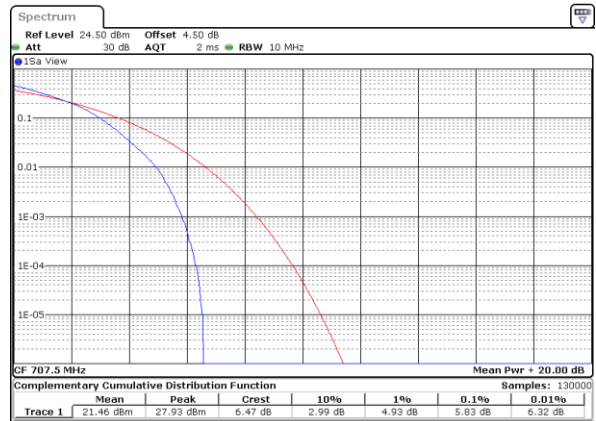
Lowest Channel / Full RB



Middle Channel / 1RB



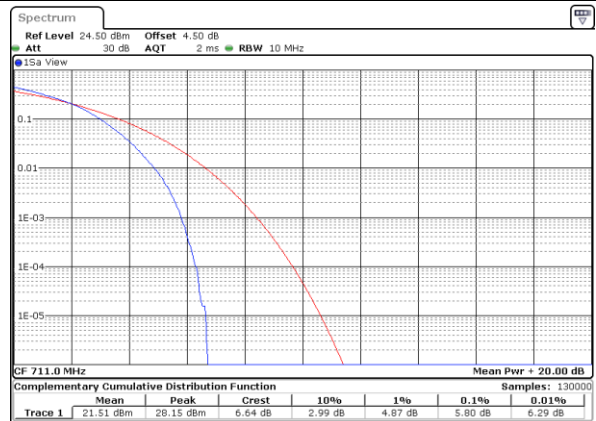
Middle Channel / Full RB



Highest Channel / 1RB



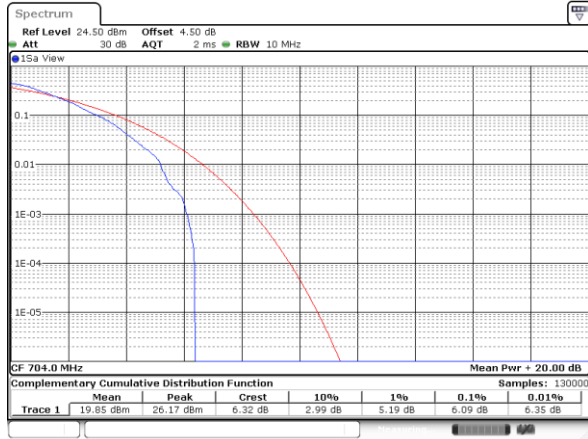
Highest Channel / Full RB



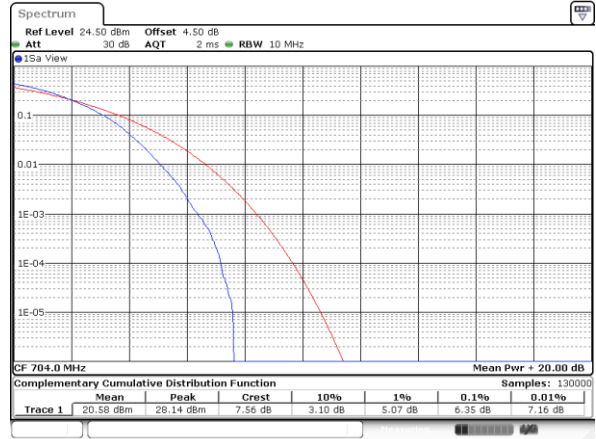


LTE Band 12 / 10MHz / 64QAM

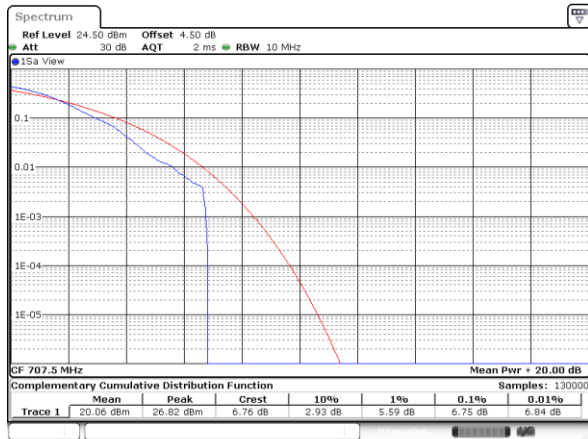
Lowest Channel / 1RB



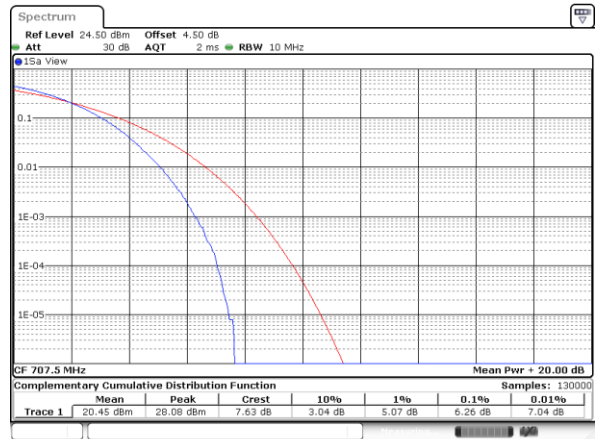
Lowest Channel / Full RB



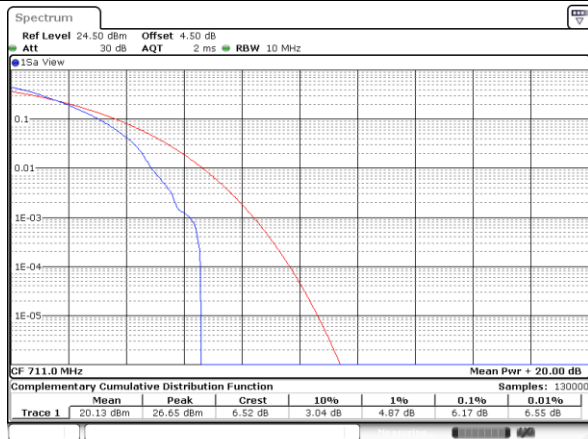
Middle Channel / 1RB



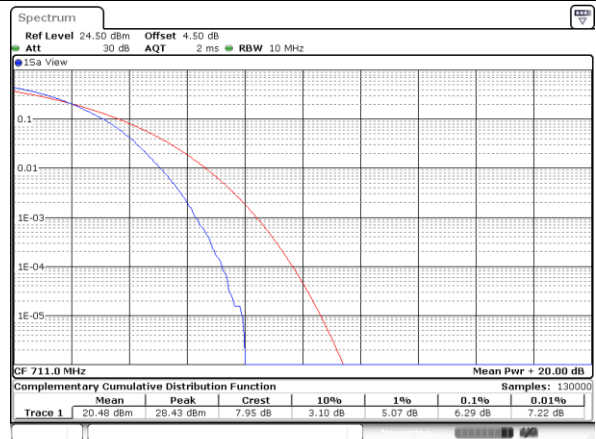
Middle Channel / Full RB



Highest Channel / 1RB



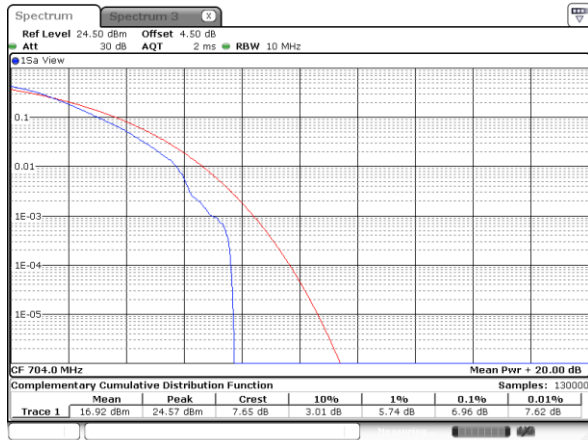
Highest Channel / Full RB





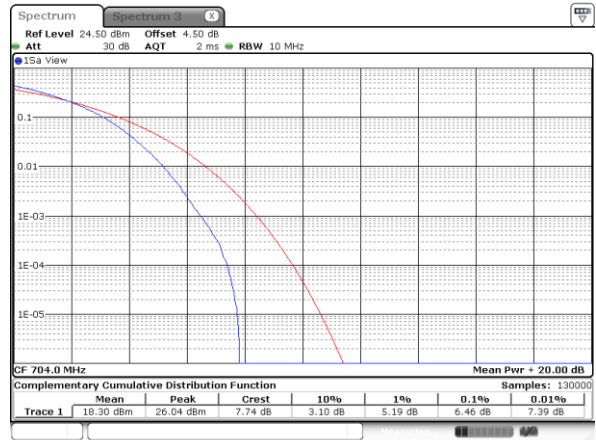
LTE Band 12 /10MHz / 256QAM

Lowest Channel / 1RB



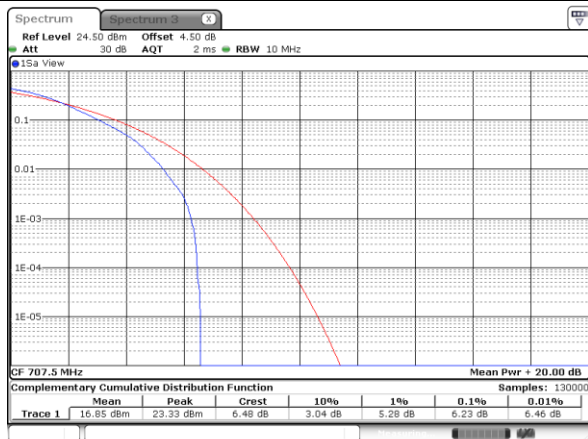
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Lowest Channel / Full RB



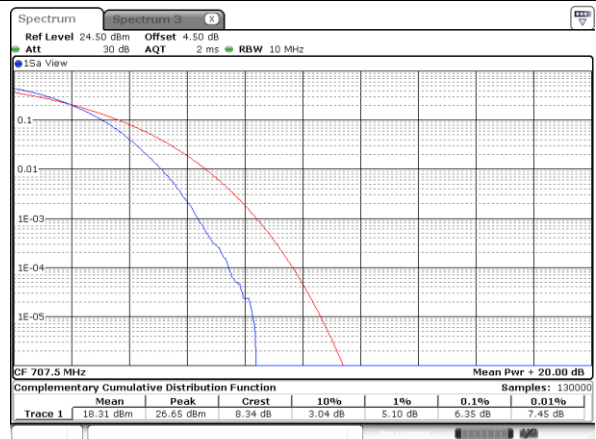
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Middle Channel / 1RB



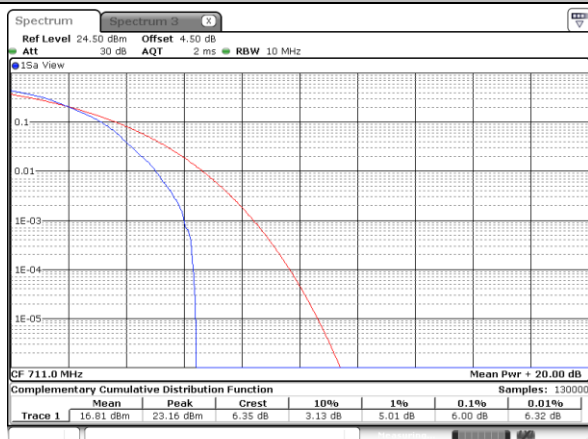
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Middle Channel / Full RB



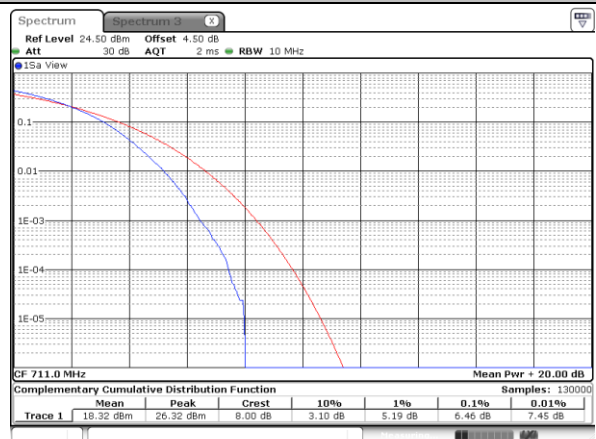
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Highest Channel / 1RB



Date: 10 APR 2020 10:53:19

Highest Channel / Full RB



Date: 10 APR 2020 10:53:07



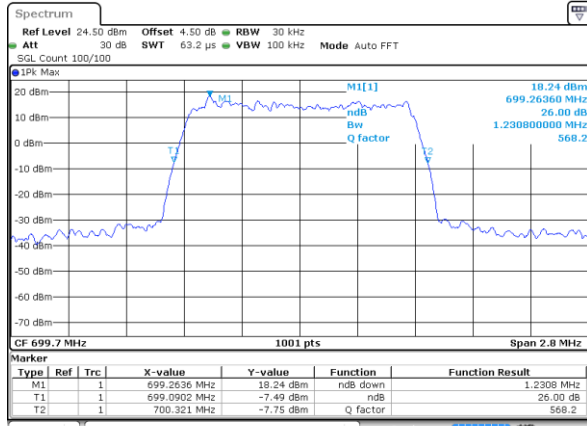
A3.2. 26dB Bandwidth

Mode	LTE Band 12 : 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	3.03	3.01	4.88	4.82	9.81	9.75	-	-	-	-
Middle CH	1.23	1.22	3.02	3.00	4.90	4.83	9.65	9.79	-	-	-	-
Highest CH	1.23	1.23	3.03	3.06	4.95	4.87	9.69	9.75	-	-	-	-
Mode	LTE Band 12 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM		64QAM	
Lowest CH	1.25	1.24	3.01	2.99	4.85	4.86	9.75	9.67	-	-	-	-
Middle CH	1.23	1.22	3.02	3.07	4.87	4.82	9.81	9.77	-	-	-	-
Highest CH	1.23	1.22	3.06	3.02	4.87	4.85	9.71	9.71	-	-	-	-



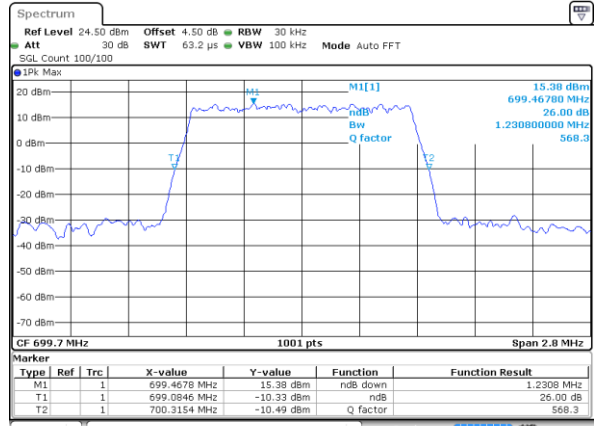
LTE Band 12

Lowest Channel / 1.4MHz / QPSK



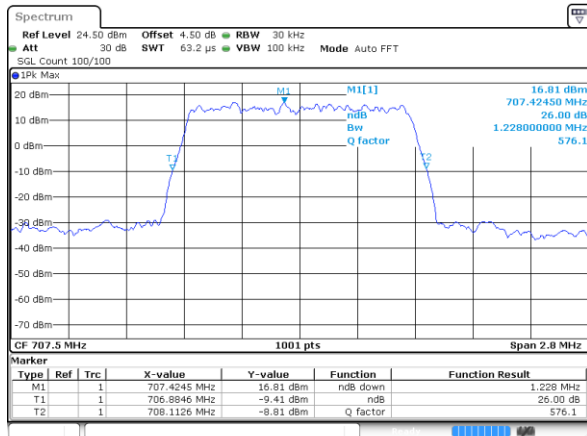
Date: 2 APR 2020 16:40:37

Lowest Channel / 1.4MHz / 16QAM



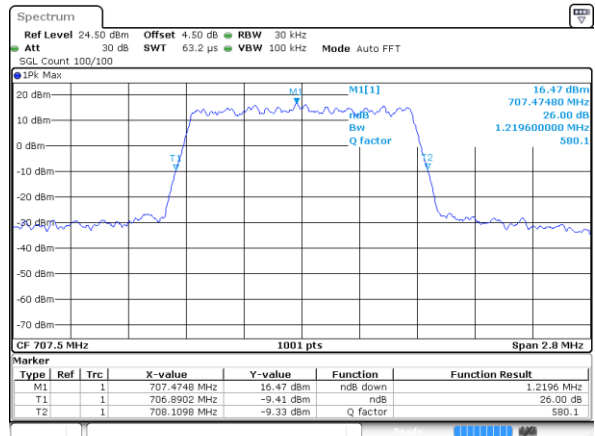
Date: 2 APR 2020 16:41:36

Middle Channel / 1.4MHz / QPSK



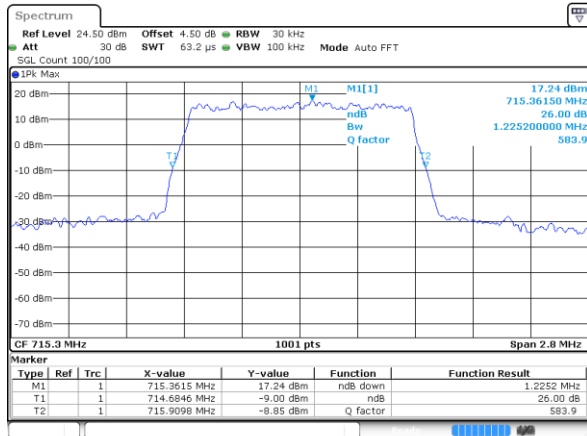
Date: 2 APR 2020 16:49:32

Middle Channel / 1.4MHz / 16QAM



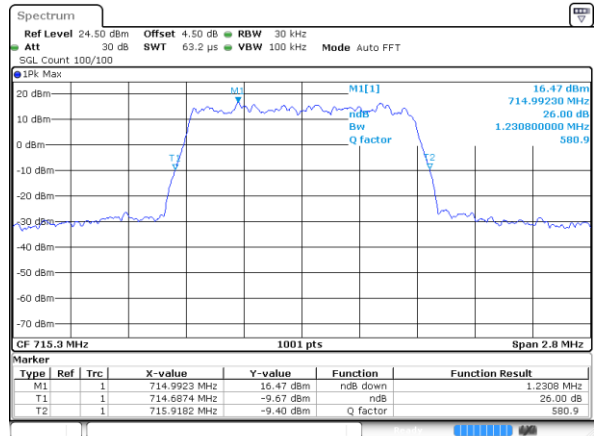
Date: 2 APR 2020 16:49:53

Highest Channel / 1.4MHz / QPSK



Date: 2 APR 2020 16:50:59

Highest Channel / 1.4MHz / 16QAM

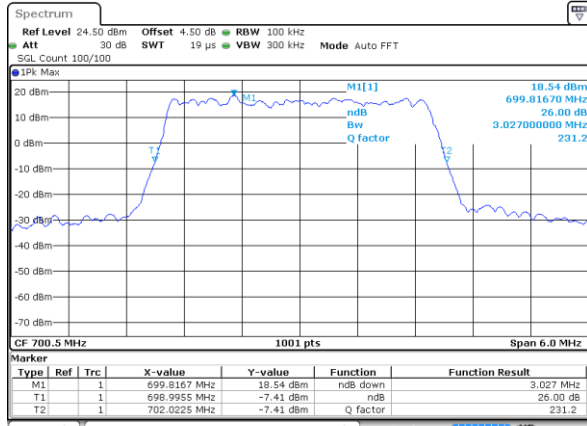


Date: 2 APR 2020 16:51:54

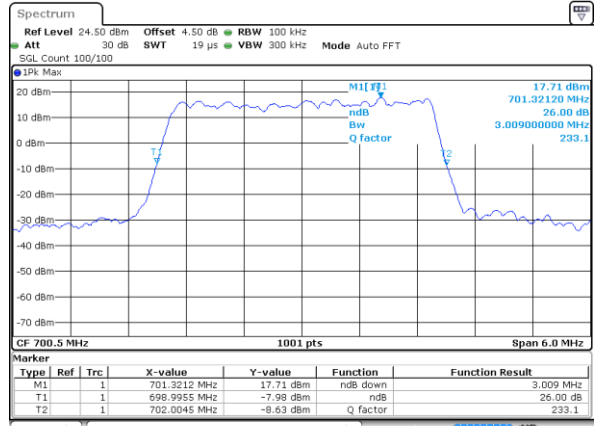


LTE Band 12

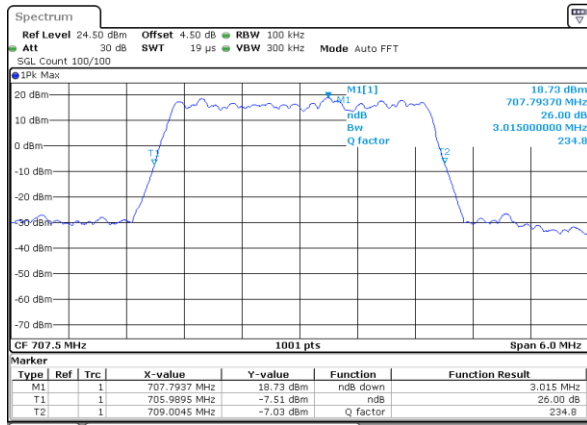
Lowest Channel / 3MHz / QPSK



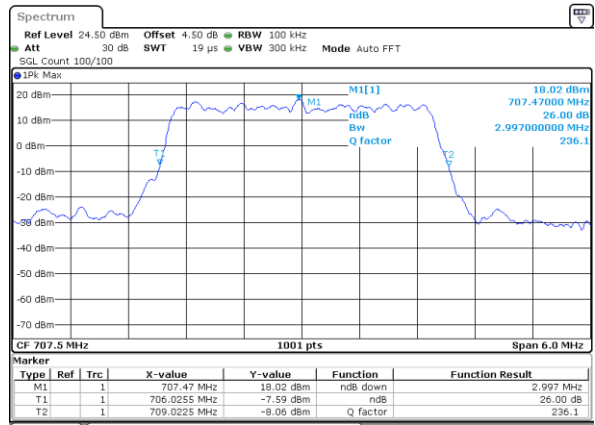
Lowest Channel / 3MHz / 16QAM



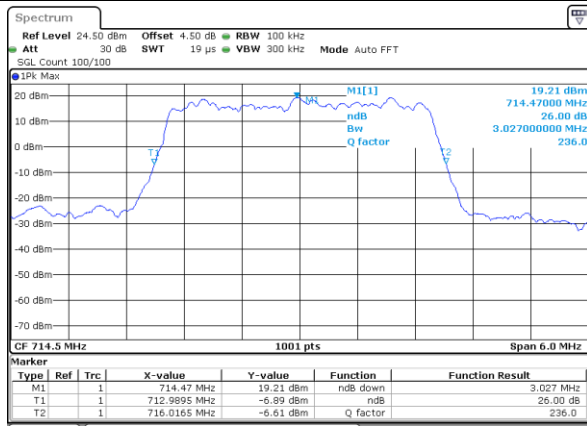
Middle Channel / 3MHz / QPSK



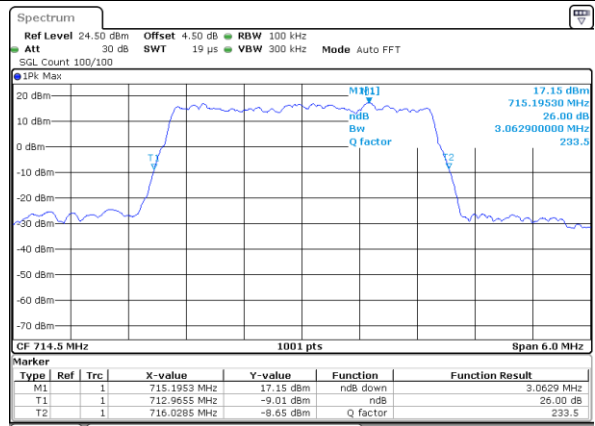
Middle Channel / 3MHz / 16QAM



Highest Channel / 3MHz / QPSK



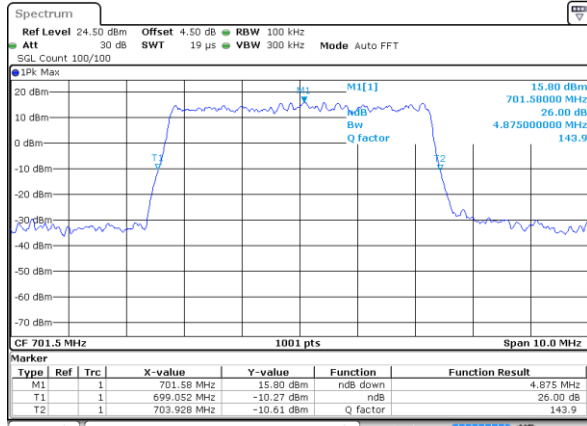
Highest Channel / 3MHz / 16QAM





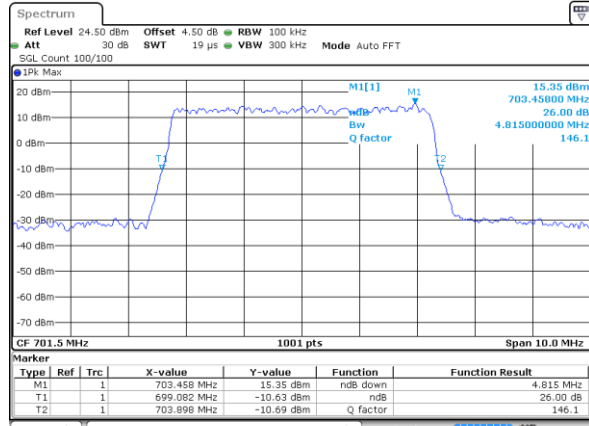
LTE Band 12

Lowest Channel / 5MHz / QPSK



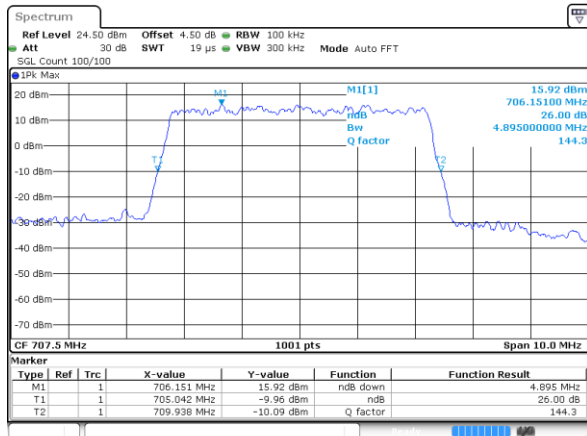
Date: 2 APR 2020 17:16:27

Lowest Channel / 5MHz / 16QAM



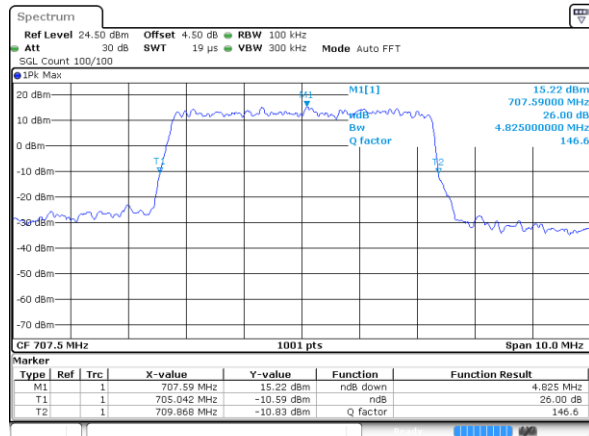
Date: 2 APR 2020 17:17:23

Middle Channel / 5MHz / QPSK



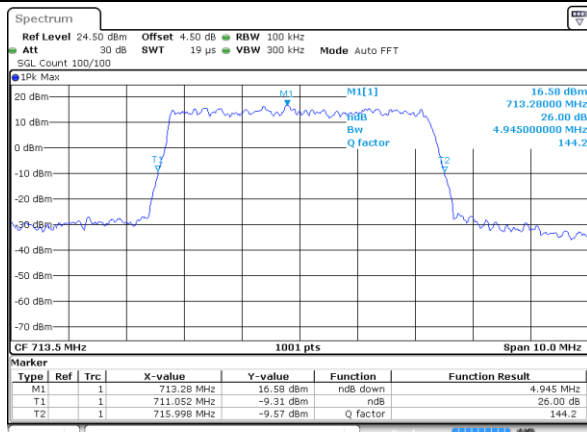
Date: 2 APR 2020 17:24:02

Middle Channel / 5MHz / 16QAM



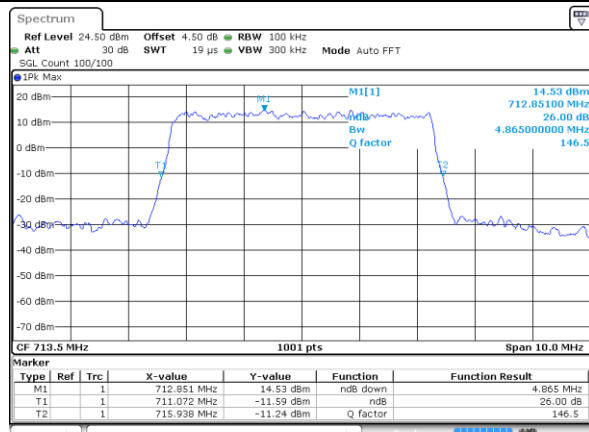
Date: 2 APR 2020 17:24:23

Highest Channel / 5MHz / QPSK



Date: 2 APR 2020 17:25:04

Highest Channel / 5MHz / 16QAM

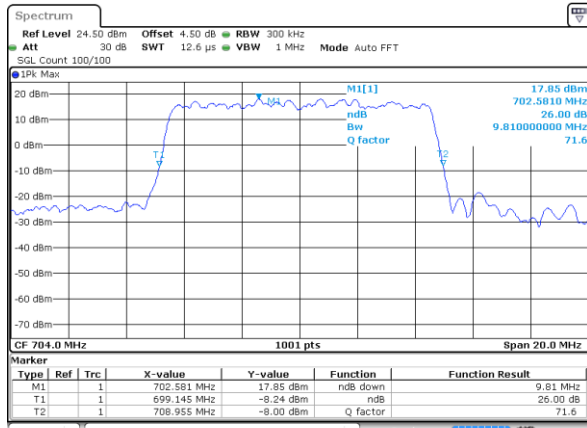


Date: 2 APR 2020 17:25:55



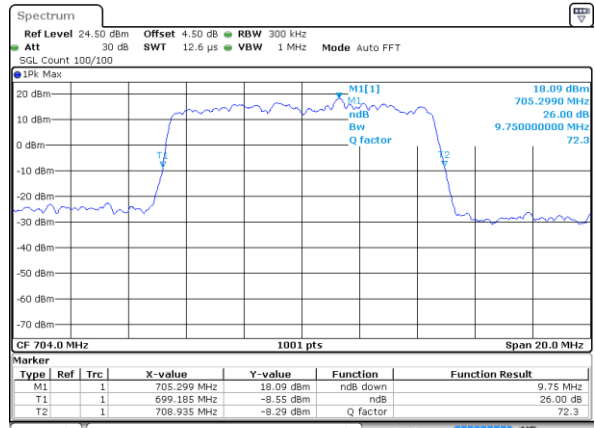
LTE Band 12

Lowest Channel / 10MHz / QPSK



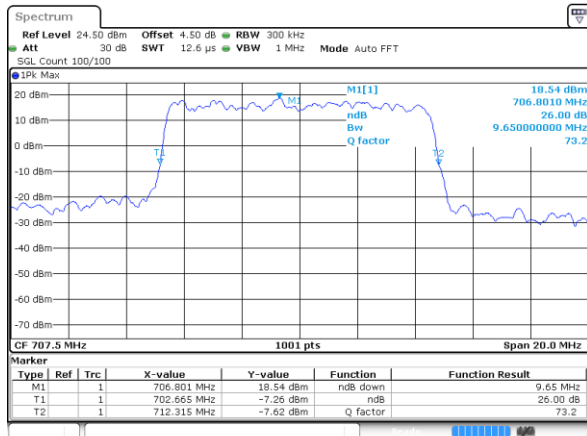
Date: 2 APR 2020 17:40:24

Lowest Channel / 10MHz / 16QAM



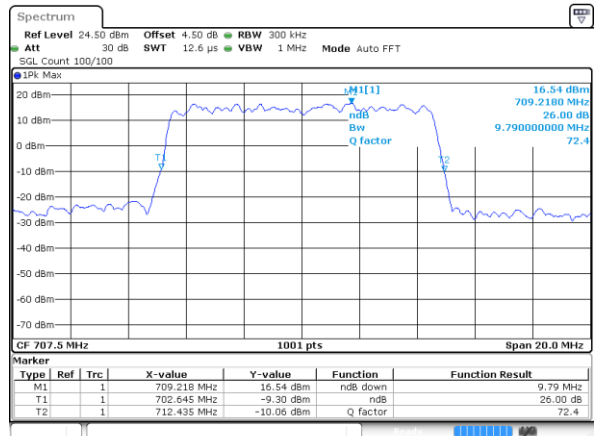
Date: 2 APR 2020 17:40:34

Middle Channel / 10MHz / QPSK



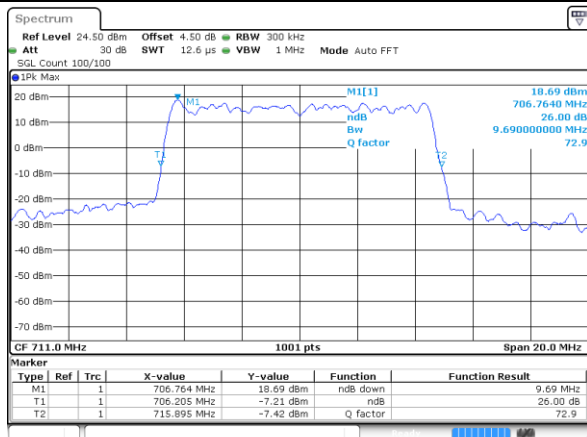
Date: 2 APR 2020 17:41:14

Middle Channel / 10MHz / 16QAM



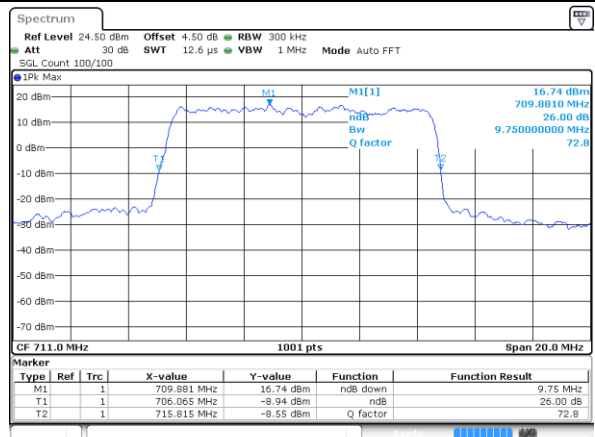
Date: 2 APR 2020 17:41:04

Highest Channel / 10MHz / QPSK



Date: 2 APR 2020 17:41:24

Highest Channel / 10MHz / 16QAM

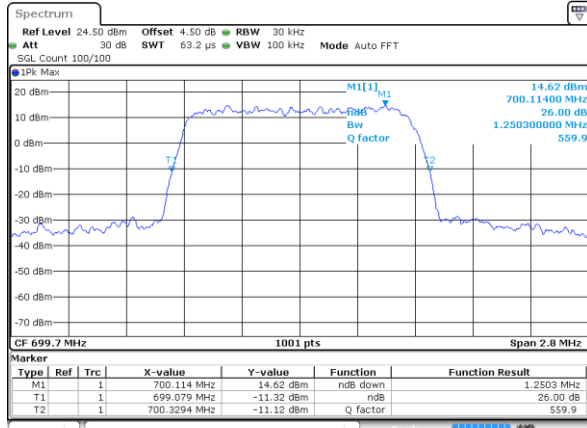


Date: 2 APR 2020 17:41:34

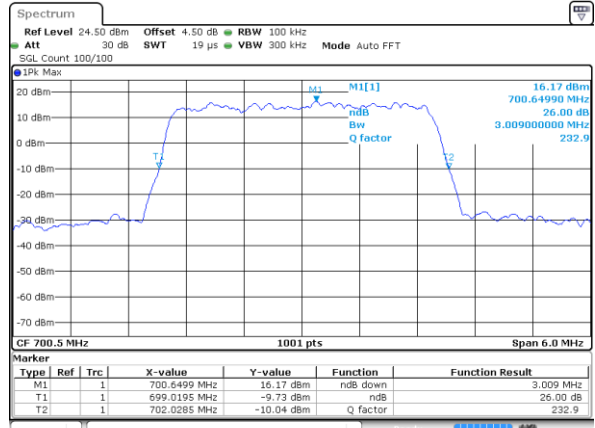


LTE Band 12

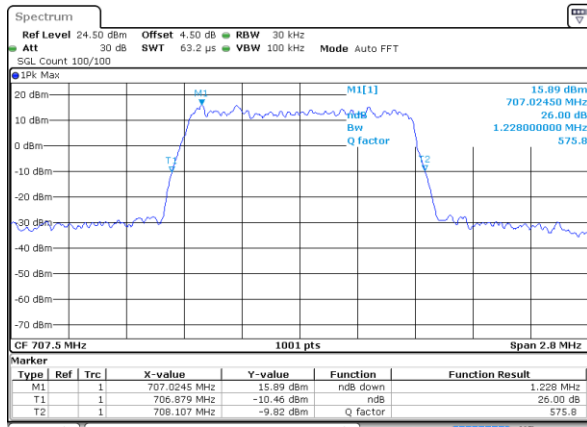
Lowest Channel / 1.4MHz / 64QAM



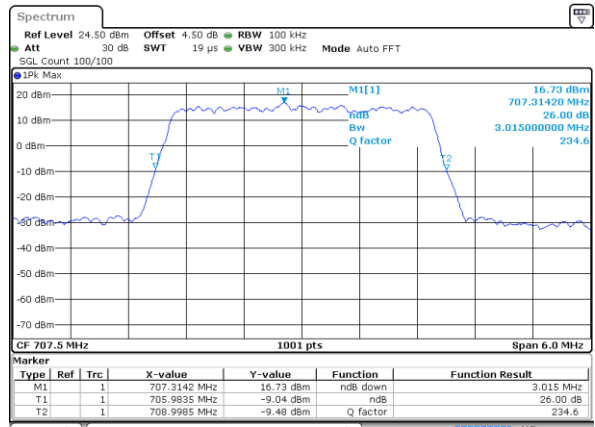
Lowest Channel / 3MHz / 64QAM



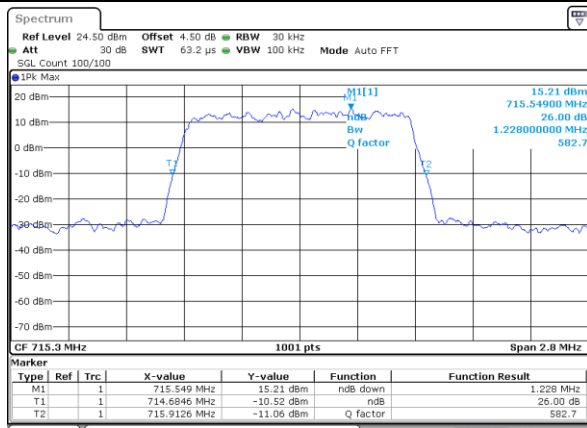
Middle Channel / 1.4MHz / 64QAM



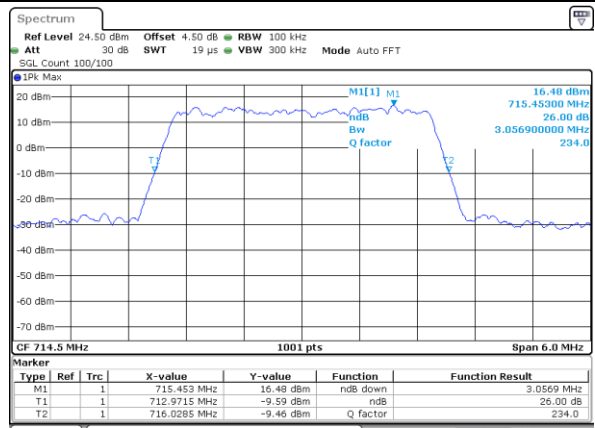
Middle Channel / 3MHz / 64QAM



Highest Channel / 1.4MHz / 64QAM



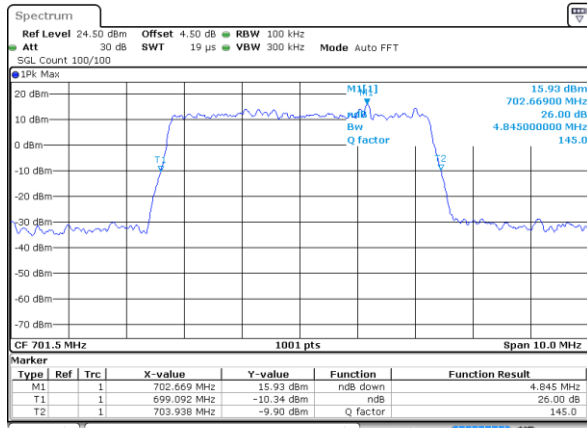
Highest Channel / 3MHz / 64QAM



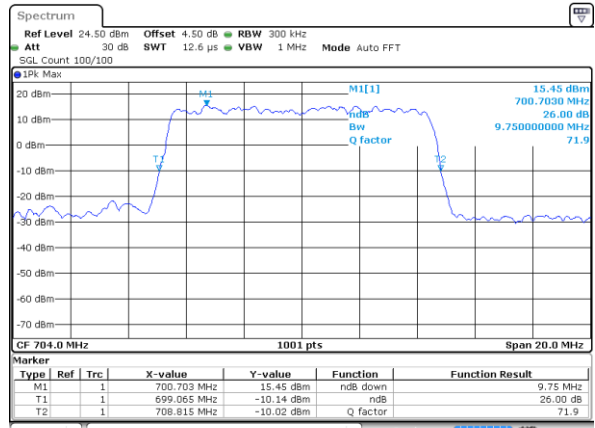


LTE Band 12

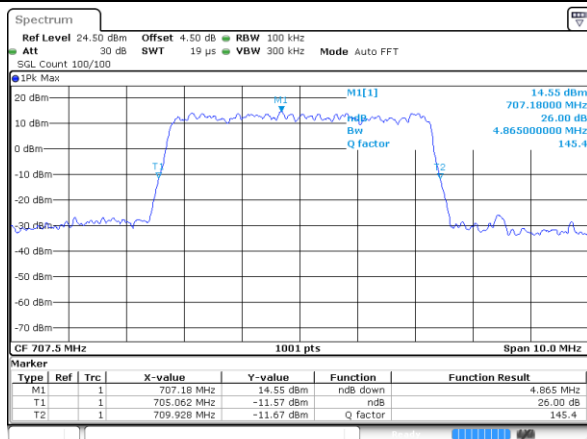
Lowest Channel / 5MHz / 64QAM



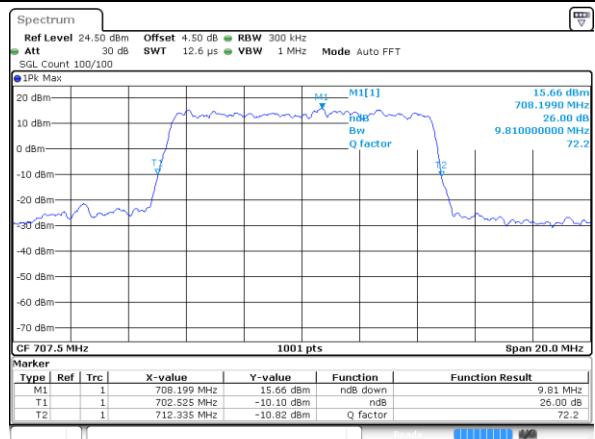
Lowest Channel / 10MHz / 64QAM



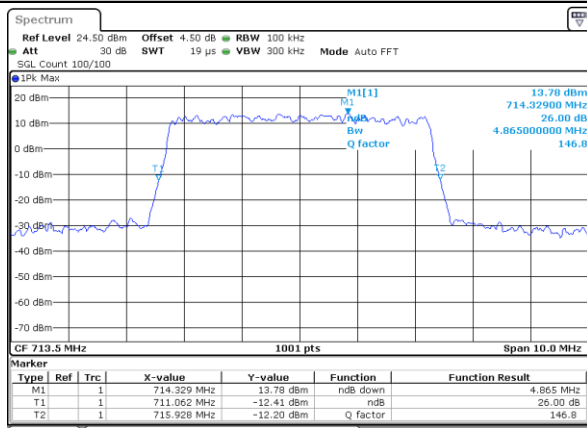
Middle Channel / 5MHz / 64QAM



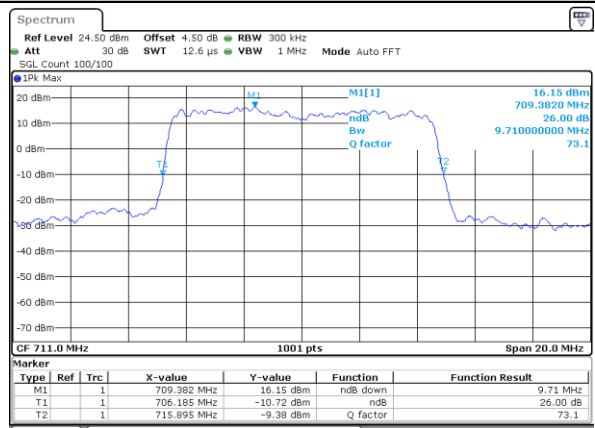
Middle Channel / 10MHz / 64QAM



Highest Channel / 5MHz / 64QAM



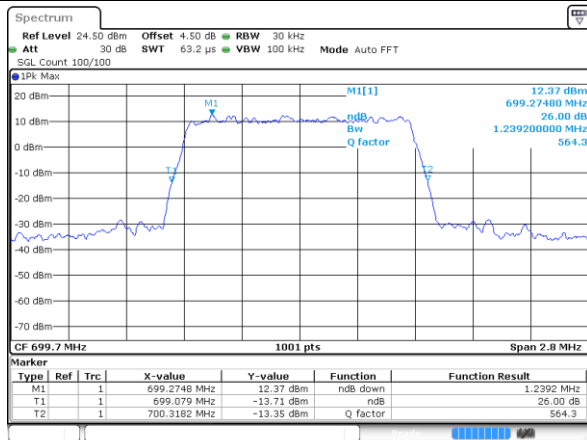
Highest Channel / 10MHz / 64QAM





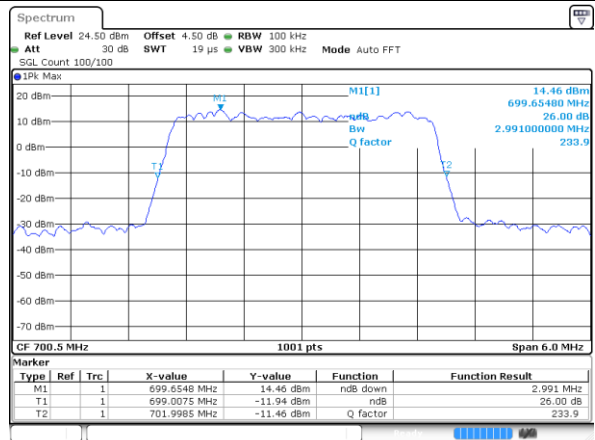
LTE Band 12

Lowest Channel / 1.4MHz / 256QAM



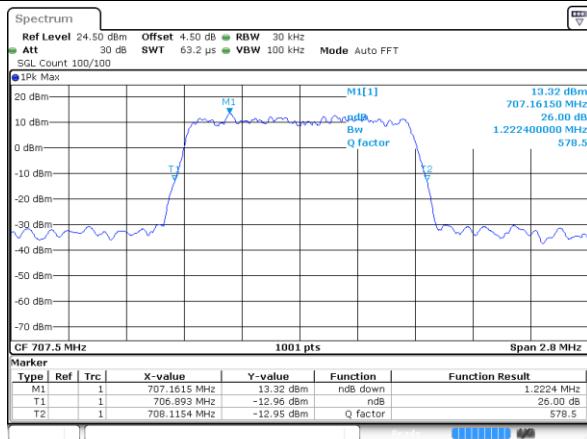
Date: 9 APR 2020 16:45:46

Lowest Channel / 3MHz / 256QAM



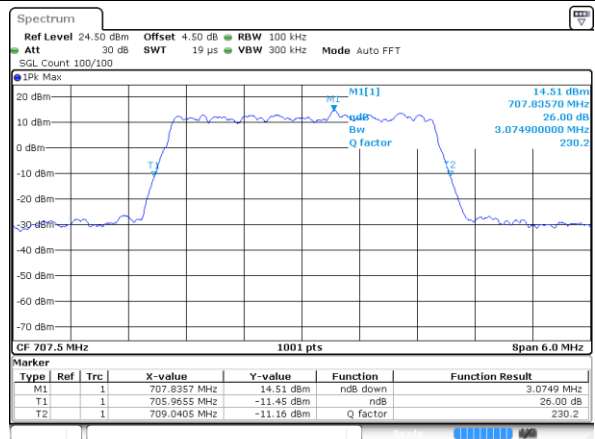
Date: 9 APR 2020 16:55:07

Middle Channel / 1.4MHz / 256QAM



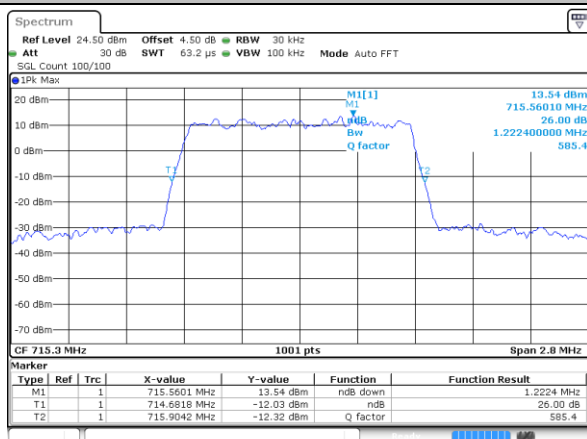
Date: 9 APR 2020 16:49:31

Middle Channel / 3MHz / 256QAM



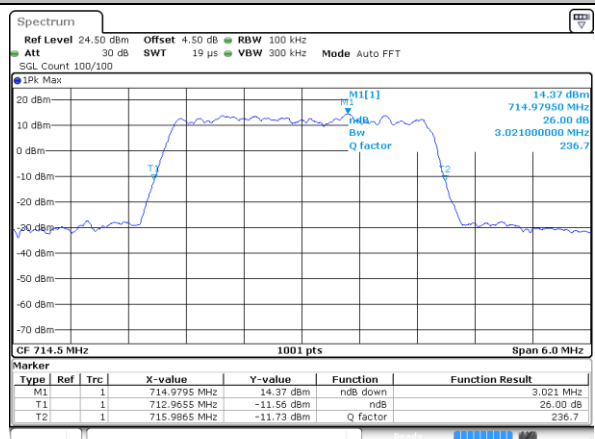
Date: 9 APR 2020 16:58:09

Highest Channel / 1.4MHz / 256QAM



Date: 9 APR 2020 16:51:40

Highest Channel / 3MHz / 256QAM

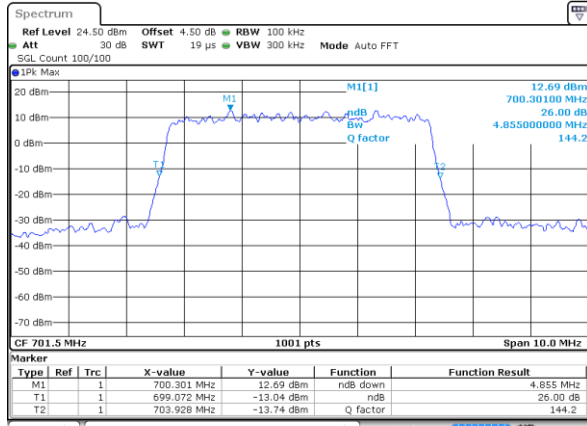


Date: 9 APR 2020 17:00:06

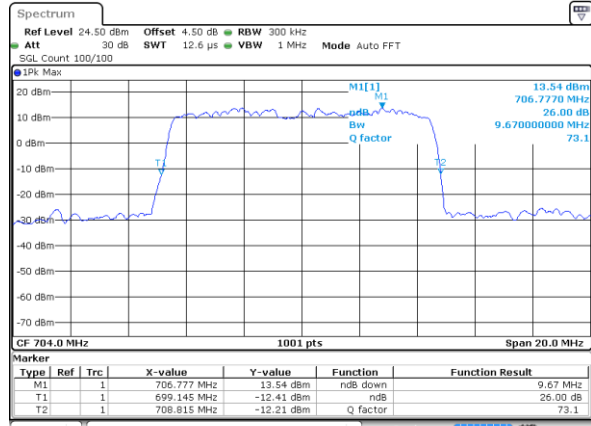


LTE Band 12

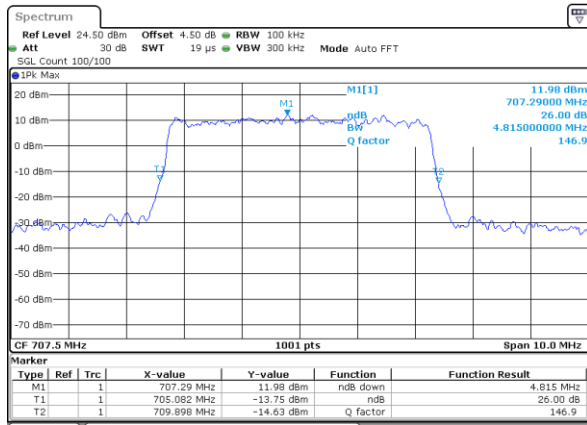
Lowest Channel / 5MHz / 256QAM



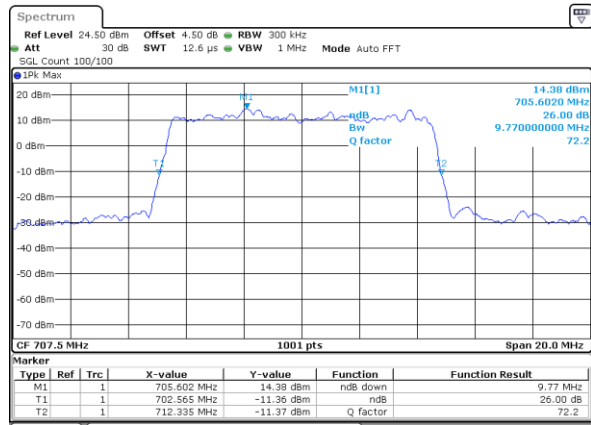
Lowest Channel / 10MHz / 256QAM



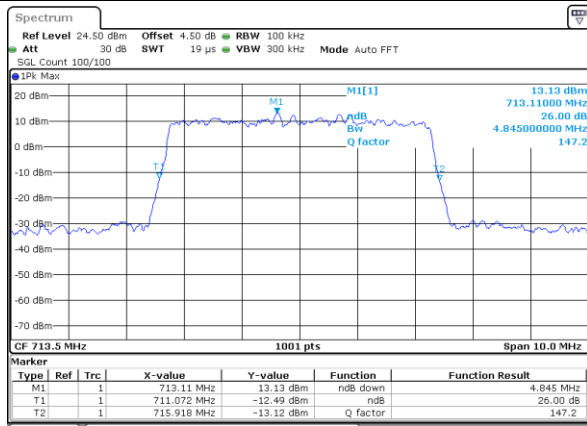
Middle Channel / 5MHz / 256QAM



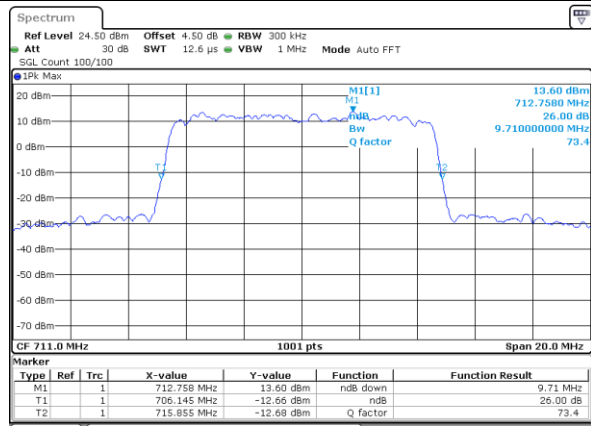
Middle Channel / 10MHz / 256QAM



Highest Channel / 5MHz / 256QAM



Highest Channel / 10MHz / 256QAM





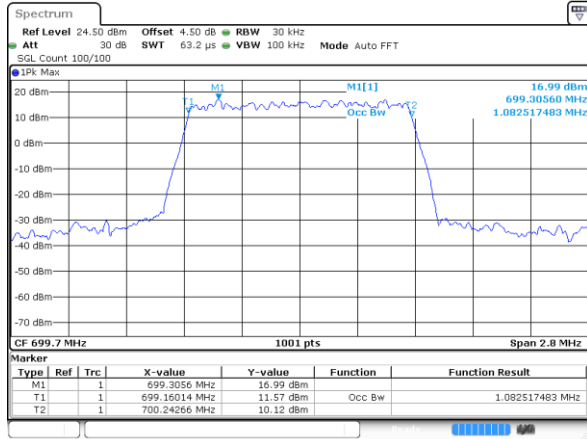
A3.3. Occupied Bandwidth

Mode	LTE Band 12 : 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	1.08	1.09	2.72	2.72	4.48	4.47	8.99	9.07	-	-	-	-
Middle CH	1.08	1.09	2.72	2.73	4.51	4.49	8.97	9.03	-	-	-	-
Highest CH	1.09	1.10	2.72	2.73	4.48	4.49	8.99	8.97	-	-	-	-
Mode	LTE Band 12 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM		64QAM	
Lowest CH	1.09	1.08	2.71	2.75	4.49	4.48	8.95	9.01	-	-	-	-
Middle CH	1.09	1.09	2.72	2.72	4.49	4.51	9.05	9.05	-	-	-	-
Highest CH	1.08	1.09	2.72	2.73	4.51	4.50	9.03	9.03	-	-	-	-

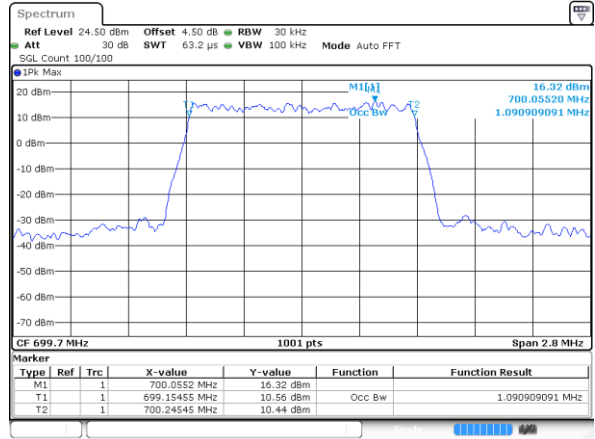


LTE Band 12

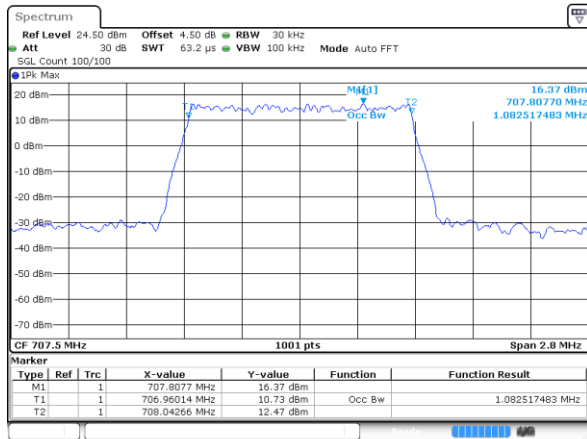
Lowest Channel / 1.4MHz / QPSK



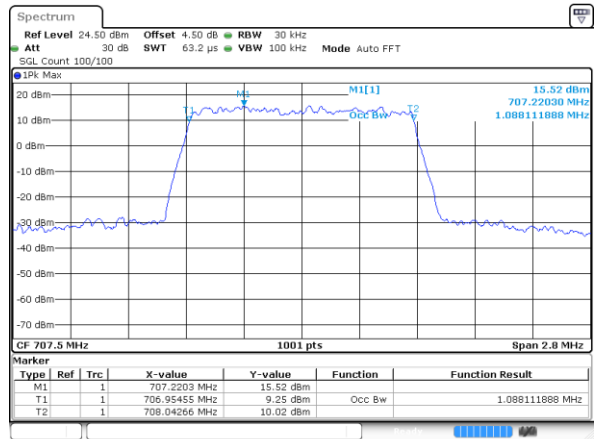
Lowest Channel / 1.4MHz / 16QAM



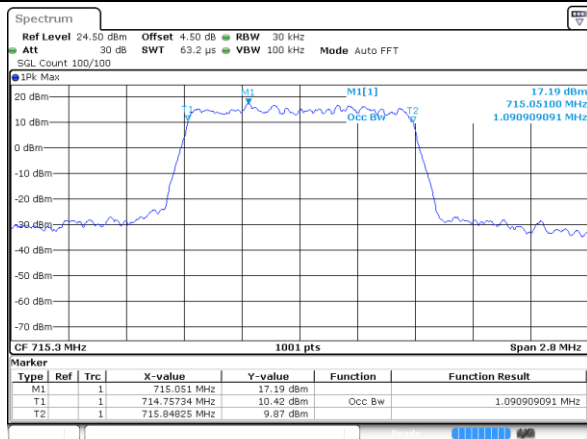
Middle Channel / 1.4MHz / QPSK



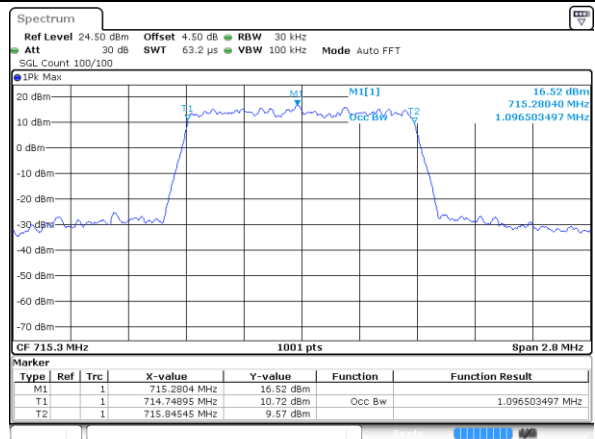
Middle Channel / 1.4MHz / 16QAM



Highest Channel / 1.4MHz / QPSK



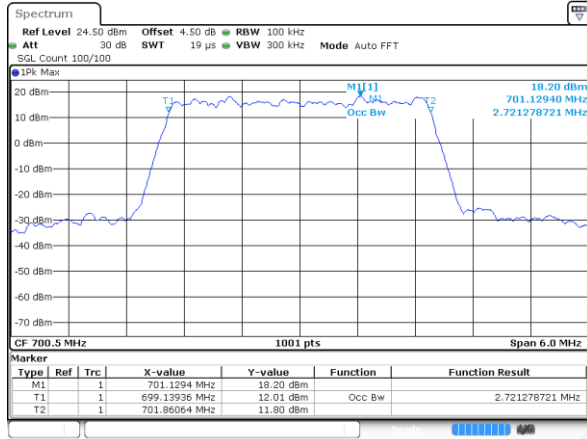
Highest Channel / 1.4MHz / 16QAM



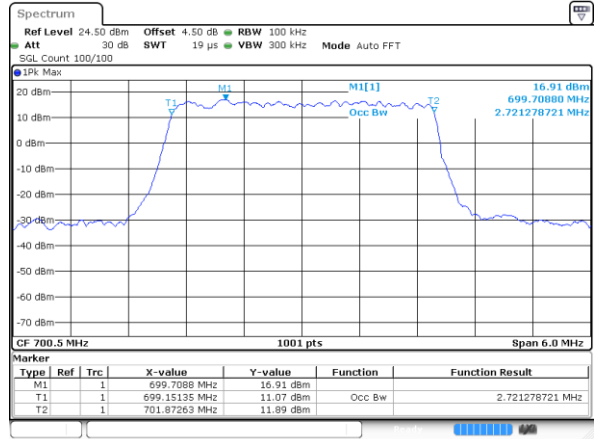


LTE Band 12

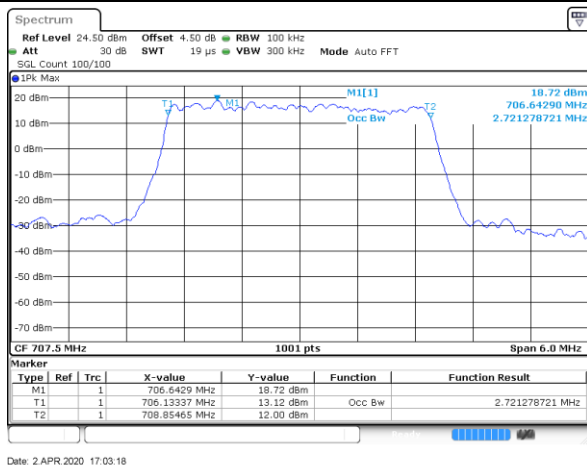
Lowest Channel / 3MHz / QPSK



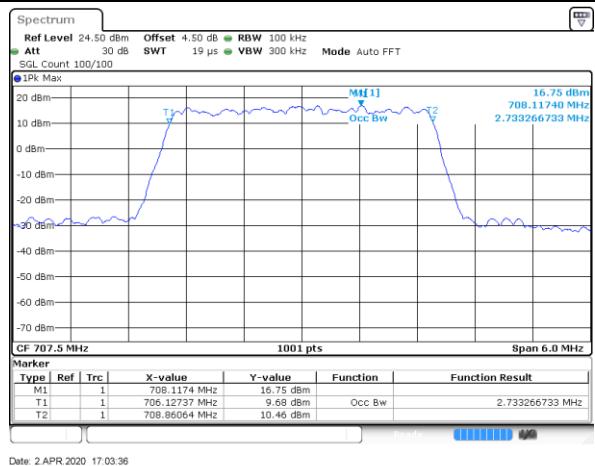
Lowest Channel / 3MHz / 16QAM



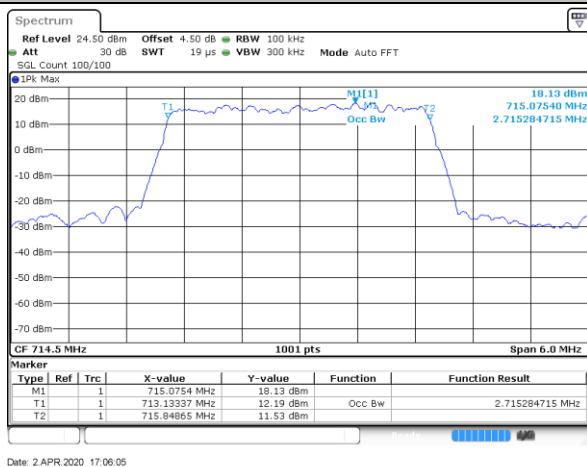
Middle Channel / 3MHz / QPSK



Middle Channel / 3MHz / 16QAM



Highest Channel / 3MHz / QPSK



Highest Channel / 3MHz / 16QAM

