TEST REPORT

CERTIFICATE OF CONFORMITY

Standard:	**47 CFR FCC Part 22** **47 CFR FCC Part 24** **47 CFR FCC Part 27** **47 CFR FCC Part 90** **47 CFR FCC Part 2**
Report No.:	RFBBQZ-WTW-P24030292-3
FCC ID:	PY324100618
Product:	Nighthawk 5G Mobile Router
Brand:	NETGEAR
Model No.:	MR7400
Received Date:	2024/3/18
Test Date:	2024/3/23 ~ 2024/6/14
Issued Date:	2024/7/1
Applicant and Manufacturer:	NETGEAR, INC.
Address:	350 East Plumeria Drive San Jose CA 95134
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch Lin Kou Laboratories
Lab Address:	No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan
Test Location:	No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kewi Shan Dist., Taoyuan City 33383, Taiwan
FCC Registration / Designation Number:	788550 / TW0003

Approved by: Jeremy Lin , **Date:** **2024/7/1**

Jeremy Lin / Project Engineer

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Prepared by : Pettie Chen / Senior Specialist

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Release Control Record

Issue No.	Description	Date Issued
RFBBQZ-WTW-P24030292-3	Original release.	2024/7/1

1 Certificate

Product:	Nighthawk 5G Mobile Router
Brand:	NETGEAR
Test Model:	MR7400
Sample Status:	Engineering sample
Applicant and Manufacturer:	NETGEAR, INC.
Test Date:	2024/3/23 ~ 2024/6/14
Standard:	47 CFR FCC Part 22 47 CFR FCC Part 24 47 CFR FCC Part 27 47 CFR FCC Part 90 47 CFR FCC Part 2
Measurement procedure:	ANSI/TIA/EIA-603-E 2016 ANSI C63.26-2015 KDB 971168 D01 Power Meas License Digital Systems v03r01 KDB 971168 D02 Misc Rev Approv License Devices v02r02

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's RF characteristics under the conditions specified in this report.

2 Summary of Test Results

Standard / Clause	Test Item	Result	Remark
Part 2.1046 Part 22.913 (a) Part 24.232 (c) Part 27.50(d) Part 27.50(h) Part 27.50(c) Part 27.50(a) Part 90.542(a)(7)	Effective Radiated Power and Equivalent Isotropically Radiated Power	Pass	Meet the requirement of limit.
Part 2.1047	Modulation Characteristics	Pass	Meet the requirement of limit.
Part 22.913 (d) Part 24.232 (d) Part 27.50(d)	Peak to Average Ratio	Pass	Meet the requirement of limit.
Part 2.1049	Bandwidth	Pass	Meet the requirement of limit.
Part 2.1051 Part 22.917 Part 24.238 Part 27.53(h) Part 27.53(m) Part 27.53(g) Part 27.53(a) Part 90.543(e)(f)	Conducted Spurious Emissions	Pass	Meet the requirement of limit.
Part 2.1053 Part 22.917 Part 24.238 Part 27.53(h) Part 27.53(m) Part 27.53(g) Part 27.53(a) Part 90.543(e)(f)	Radiated Spurious Emissions below 1GHz	Pass	Minimum passing margin is -3.22 dB at 50.97 MHz
Part 2.1053 Part 22.917 Part 24.238 Part 27.53(h) Part 27.53(m) Part 27.53(g) Part 27.53(a) Part 90.543(e)(f)	Radiated Spurious Emissions above 1GHz	Pass	Minimum passing margin is -3.75 dB at 4710.00 MHz
Part 2.1055 Part 22.355 Part 24.235 Part 27.54 Part 90.539(e)	Frequency Stability	Pass	Meet the requirement of limit.

Note: Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

2.1 Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

Parameter	Specification	Uncertainty (±)
Peak to Average Ratio	-	0.920 dB
Bandwidth	-	960 Hz
Conducted Spurious Emissions	-	2.12 dB
Radiated Spurious Emissions below 1GHz	9 kHz ~ 30 MHz	3.59 dB
	30 MHz ~ 1 GHz	3.64 dB
Radiated Spurious Emissions above 1GHz	1 GHz ~ 18 GHz	2.29 dB
	18 GHz ~ 40 GHz	2.29 dB
Frequency Stability	-	0.176 ppm

The other instruments specified are routine verified to remain within the calibrated levels, no measurement uncertainty is required to be calculated.

2.2 Supplementary Information

There is not any deviation from the test standards for the test method, and no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	Nighthawk 5G Mobile Router
Brand	NETGEAR
Test Model	MR7400
Status of EUT	Engineering sample
Power Supply Rating	3.85Vdc from battery 5Vdc or 9Vdc or 12Vdc from adapter
EUT Category	Mobile station

Note:

1. EUT Overview

Mode	Bandwidth	TX Frequency Range (MHz)	Modulation	Max. ERP (W)	Max. ERP (dBm)	Emission Designator
LTE Band 5	1.4 MHz	824.7 ~ 848.3	QPSK	0.126	21.02	1M09G7D
			16QAM	0.097	19.87	1M09D7W
			64QAM	0.083	19.17	1M09D7W
			256QAM	0.039	15.87	1M09D7W
	3 MHz	825.5 ~ 847.5	QPSK	0.128	21.06	2M70G7D
			16QAM	0.097	19.89	2M70D7W
			64QAM	0.078	18.90	2M70D7W
			256QAM	0.039	15.92	2M70D7W
	5 MHz	826.5 ~ 846.5	QPSK	0.128	21.06	4M50G7D
			16QAM	0.097	19.89	4M50D7W
			64QAM	0.078	18.90	4M50D7W
			256QAM	0.039	15.91	4M50D7W
	10 MHz	829 ~ 844	QPSK	0.13	21.13	8M99G7D
			16QAM	0.098	19.91	8M99D7W
			64QAM	0.078	18.92	8M99D7W
			256QAM	0.039	15.92	8M99D7W
LTE Band 12	1.4 MHz	699.7 ~ 715.3	QPSK	0.129	21.11	1M09G7D
			16QAM	0.119	20.75	1M09D7W
			64QAM	0.098	19.92	1M09D7W
			256QAM	0.048	16.84	1M09D7W
	3 MHz	700.5 ~ 714.5	QPSK	0.13	21.13	2M70G7D
			16QAM	0.115	20.62	2M70D7W
			64QAM	0.092	19.63	2M70D7W
			256QAM	0.049	16.93	2M70D7W
	5 MHz	701.5 ~ 713.5	QPSK	0.131	21.17	4M49G7D
			16QAM	0.116	20.64	4M50D7W
			64QAM	0.091	19.60	4M50D7W
			256QAM	0.05	16.95	4M50D7W
	10 MHz	704 ~ 711	QPSK	0.132	21.20	8M99G7D
			16QAM	0.116	20.64	9M00D7W
			64QAM	0.092	19.63	8M99D7W
			256QAM	0.05	16.96	8M99D7W

Mode	Bandwidth	TX Frequency Range (MHz)	Modulation	Max. ERP (W)	Max. ERP (dBm)	Emission Designator
LTE Band 14	5 MHz	790.5 ~ 795.5	QPSK	0.141	21.48	4M50G7D
			16QAM	0.121	20.83	4M49D7W
			64QAM	0.097	19.87	4M50D7W
			256QAM	0.052	17.15	4M50D7W
	10 MHz	793	QPSK	0.143	21.54	8M99G7D
			16QAM	0.122	20.88	9M00D7W
			64QAM	0.099	19.94	8M98D7W
			256QAM	0.052	17.15	8M98D7W

Mode	Bandwidth	TX Frequency Range (MHz)	Modulation	Max. EIRP (W)	Max. EIRP (dBm)	Emission Designator
LTE Band 2	1.4 MHz	1850.7 ~ 1909.3	QPSK	0.467	26.69	1M09G7D
			16QAM	0.38	25.8	1M09D7W
			64QAM	0.308	24.88	1M09D7W
			256QAM	0.154	21.87	1M09D7W
	3 MHz	1851.5 ~ 1908.5	QPSK	0.465	26.67	2M70G7D
			16QAM	0.385	25.86	2M70D7W
			64QAM	0.31	24.92	2M70D7W
			256QAM	0.153	21.86	2M71D7W
	5 MHz	1852.5 ~ 1907.5	QPSK	0.468	26.7	4M50G7D
			16QAM	0.386	25.87	4M49D7W
			64QAM	0.308	24.88	4M50D7W
			256QAM	0.154	21.88	4M49D7W
	10 MHz	1855 ~ 1905	QPSK	0.466	26.68	8M98G7D
			16QAM	0.384	25.84	8M98D7W
			64QAM	0.305	24.84	8M99D7W
			256QAM	0.152	21.81	9M00D7W
	15 MHz	1857.5 ~ 1902.5	QPSK	0.463	26.66	13M5G7D
			16QAM	0.384	25.84	13M5D7W
			64QAM	0.309	24.9	13M5D7W
			256QAM	0.153	21.85	13M5D7W
	20 MHz	1860 ~ 1900	QPSK	0.473	26.75	18M0G7D
			16QAM	0.388	25.89	18M0D7W
			64QAM	0.312	24.94	18M0D7W
			256QAM	0.156	21.92	18M0D7W

Mode	Bandwidth	TX Frequency Range (MHz)	Modulation	Max. EIRP (W)	Max. EIRP (dBm)	Emission Designator
LTE Band 4	1.4 MHz	1710.7 ~ 1754.3	QPSK	0.448	26.51	1M09G7D
			16QAM	0.361	25.58	1M09D7W
			64QAM	0.281	24.48	1M09D7W
			256QAM	0.143	21.55	1M09D7W
	3 MHz	1711.5 ~ 1753.5	QPSK	0.448	26.51	2M70G7D
			16QAM	0.359	25.55	2M70D7W
			64QAM	0.28	24.47	2M70D7W
			256QAM	0.142	21.52	2M70D7W
	5 MHz	1712.5 ~ 1752.5	QPSK	0.439	26.42	4M49G7D
			16QAM	0.358	25.54	4M49D7W
			64QAM	0.279	24.45	4M50D7W
			256QAM	0.143	21.54	4M49D7W
	10 MHz	1715 ~ 1750	QPSK	0.442	26.45	8M99G7D
			16QAM	0.365	25.62	8M99D7W
			64QAM	0.279	24.45	8M98D7W
			256QAM	0.143	21.56	8M99D7W
	15 MHz	1717.5 ~ 1747.5	QPSK	0.446	26.49	13M5G7D
			16QAM	0.359	25.55	13M5D7W
			64QAM	0.281	24.48	13M5D7W
			256QAM	0.143	21.55	13M5D7W
	20 MHz	1720 ~ 1745	QPSK	0.451	26.54	18M0G7D
			16QAM	0.368	25.66	18M0D7W
			64QAM	0.282	24.50	18M0D7W
			256QAM	0.145	21.60	18M0D7W
LTE Band 7	5 MHz	2502.5 ~ 2567.5	QPSK	0.558	27.47	4M50G7D
			16QAM	0.407	26.10	4M50D7W
			64QAM	0.327	25.15	4M49D7W
			256QAM	0.175	22.44	4M50D7W
	10 MHz	2505 ~ 2565	QPSK	0.556	27.45	8M98G7D
			16QAM	0.405	26.07	8M98D7W
			64QAM	0.331	25.20	8M98D7W
			256QAM	0.173	22.39	8M99D7W
	15 MHz	2507.5 ~ 2562.5	QPSK	0.56	27.48	13M5G7D
			16QAM	0.407	26.10	13M5D7W
			64QAM	0.33	25.18	13M5D7W
			256QAM	0.176	22.45	13M5D7W
	20 MHz	2510 ~ 2560	QPSK	0.564	27.51	18M0G7D
			16QAM	0.409	26.12	18M0D7W
			64QAM	0.332	25.21	18M0D7W
			256QAM	0.176	22.46	18M0D7W

Mode	Bandwidth	TX Frequency Range (MHz)	Modulation	Max. EIRP (W)	Max. EIRP (dBm)	Emission Designator
LTE Band 30	5 MHz	2307.5 ~ 2312.5	QPSK	0.213	23.28	4M50G7D
			16QAM	0.148	21.71	4M49D7W
			64QAM	0.117	20.67	4M49D7W
			256QAM	0.062	17.95	4M50D7W
	10 MHz	2310	QPSK	0.215	23.33	8M98G7D
			16QAM	0.152	21.83	8M98D7W
			64QAM	0.119	20.76	8M98D7W
			256QAM	0.065	18.12	8M98D7W
LTE Band 40 (2.305 GHz ~ 2.315 GHz)	5 MHz	2307.5 ~ 2312.5	QPSK	0.197	22.94	4M49G7D
			16QAM	0.147	21.66	4M50D7W
			64QAM	0.118	20.73	4M50D7W
			256QAM	0.061	17.88	4M50D7W
	10 MHz	2310	QPSK	0.201	23.03	8M97G7D
			16QAM	0.148	21.71	8M97D7W
			64QAM	0.121	20.82	8M97D7W
			256QAM	0.062	17.89	8M98D7W
LTE Band 40 (2.35 GHz ~ 2.36 GHz)	5 MHz	2352.5 ~ 2357.5	QPSK	0.21	23.22	4M50G7D
			16QAM	0.157	21.96	4M50D7W
			64QAM	0.124	20.94	4M50D7W
			256QAM	0.064	18.03	4M50D7W
	10 MHz	2355	QPSK	0.21	23.23	8M99G7D
			16QAM	0.157	21.97	8M97D7W
			64QAM	0.124	20.95	8M97D7W
			256QAM	0.064	18.04	8M97D7W
LTE Band 66	1.4 MHz	1710.7 ~ 1779.3	QPSK	0.467	26.69	1M09G7D
			16QAM	0.349	25.43	1M09D7W
			64QAM	0.28	24.47	1M09D7W
			256QAM	0.149	21.73	1M09D7W
	3 MHz	1711.5 ~ 1778.5	QPSK	0.465	26.67	2M70G7D
			16QAM	0.348	25.41	2M70D7W
			64QAM	0.276	24.41	2M70D7W
			256QAM	0.146	21.65	2M70D7W
	5 MHz	1712.5 ~ 1777.5	QPSK	0.466	26.68	4M49G7D
			16QAM	0.348	25.42	4M50D7W
			64QAM	0.279	24.45	4M50D7W
			256QAM	0.148	21.70	4M50D7W
	10 MHz	1715 ~ 1775	QPSK	0.466	26.68	8M99G7D
			16QAM	0.347	25.40	8M99D7W
			64QAM	0.279	24.46	8M98D7W
			256QAM	0.146	21.65	8M99D7W

Mode	Bandwidth	TX Frequency Range (MHz)	Modulation	Max. EIRP (W)	Max. EIRP (dBm)	Emission Designator
LTE Band 66	15 MHz	1717.5 ~ 1772.5	QPSK	0.469	26.71	13M5G7D
			16QAM	0.347	25.40	13M5D7W
			64QAM	0.278	24.44	13M5D7W
			256QAM	0.149	21.73	13M5D7W
	20 MHz	1720 ~ 1770	QPSK	0.474	26.76	18M0G7D
			16QAM	0.352	25.46	18M0D7W
			64QAM	0.282	24.50	18M0D7W
			256QAM	0.15	21.76	18M0D7W

2. The EUT uses following accessories.

AC Adapter 1			
Brand	Model	Part Number	Specification
NETGEAR	2AFH0183AA	332-11642-01	AC Input : 100-240Vac, 50/60Hz, 0.5A DC Output : 5.0V, 3.0A, 15.0W 9.0V, 2.0A, 18.0W 12.0V, 1.5A, 18.0W DC Output Cable : N/A Plug : US Manufacturer : CWT

AC Adapter 2			
Brand	Model	Part Number	Specification
NETGEAR	AD2122F20	332-11106-03	AC Input : 100-240V, 50/60Hz, 0.5A DC Output : 5V, 2.0A 9V, 1.8A DC Output Cable : N/A Plug : US Manufacturer : PIE

Battery			
Brand	Model	Part Number	Specification
NETGEAR	W-20b	308-10100-01	Power Rating : 3.85Vdc, 19.96Wh

USB Cable 1		
Brand	Model	Specification
HORTON	D0017100R37HR	Signal Line : 1m

USB Cable 2		
Brand	Model	Specification
LUXSHARE PRECISION INDUSTRY	LZZUC052-CS-H	Signal Line : 1m

3. The above EUT information is declared by manufacturer and for more detailed features description, please refers to the manufacturer's specifications or user's manual.

3.2 Antenna Description of EUT

1. The antenna information is listed as below.

Antenna Type		Monopole	
LTE Band			
Band	Freq. Range (MHz)	Gain (dBi)	
		Ant. 1	Ant. 2
LTE B2	1850 ~ 1910	3.25	2.99
LTE B4	1710 ~ 1755	2.08	3.09
LTE B5	824 ~ 849	-1.31	-0.58
LTE B7	2500 ~ 2570	3.8	3.18
LTE B12	698 ~ 716	0.47	0.38
LTE B14	788 ~ 798	0.88	0.66
LTE B30	2305 ~ 2315	3.01	2.67
LTE B40	2305 ~ 2315	3.01	2.67
LTE B40	2350 ~ 2360	3.01	2.88
LTE B66	1710 ~ 1780	2.19	3.09

* Detail antenna specification please refer to antenna datasheet and/or antenna measurement report.

Antenna Type		External	
External Connector		TS9	
LTE Band			
Band	Freq. Range (MHz)	Gain (dBi)	
		Ant. 1	Ant. 2
LTE B2	1850 ~ 1910	0.67	0.45
LTE B4	1710 ~ 1755	0.67	0.54
LTE B5	824 ~ 849	-1.32	-1.6
LTE B7	2500 ~ 2570	0.39	-0.53
LTE B12	698 ~ 716	-0.83	-1.6
LTE B14	788 ~ 798	-0.83	-1.6
LTE B30	2305 ~ 2315	1.03	1.05
LTE B40	2305 ~ 2315	1.03	1.05
LTE B40	2350 ~ 2360	1.03	1.05
LTE B66	1710 ~ 1780	0.67	0.54

Note:

1. TS9 connector is for the external antennas, while the external antennas are connected, RF outputs are switch from internal 1/2 to the external one.
2. The maximum antenna gain allowed for the external antenna is limited by the internal antenna gain, also illustrated in the user manual.

3.3 Test Mode Applicability and Tested Channel Detail

Pre-Scan:	1. For Unwanted Emission (below 1GHz) items: Battery/AC Adapter/USB Cable. Pre-scan these modes and find the worst case as a representative test condition. 2. EUT can be used in the following ways: X-axis/ Y-axis/ Z-axis. Pre-scan these ways and find the worst case as a representative test condition.
Worst Case:	1. AC Adapter 1 + USB Cable 1 2. Z-Axis

Following channel(s) was (were) selected for the final test as listed below:

3.3.1 LTE Band 2

Test Item	Tested Channel	Channel Bandwidth	Modulation	Mode
Equivalent Isotropically Radiated Power	18607(1850.70 MHz) 18900(1880.00 MHz) 19193(1909.30 MHz)	1.4 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB Half RB Full RB
	18615(1851.50 MHz) 18900(1880.00 MHz) 19185(1908.50 MHz)	3 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB Half RB Full RB
	18625(1852.50 MHz) 18900(1880.00 MHz) 19175(1907.50 MHz)	5 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB Half RB Full RB
	18650(1855.00 MHz) 18900(1880.00 MHz) 19150(1905.00 MHz)	10 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB Half RB Full RB
	18675(1857.50 MHz) 18900(1880.00 MHz) 19125(1902.50 MHz)	15 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB Half RB Full RB
	18700(1860.00 MHz) 18900(1880.00 MHz) 19100(1900.00 MHz)	20 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB Half RB Full RB
Modulation Characteristics	18900(1880.00 MHz)	20 MHz	QPSK / 16QAM / 64QAM / 256QAM	Full RB
Peak to Average Ratio	18607(1850.70 MHz) 18900(1880.00 MHz) 19193(1909.30 MHz)	1.4 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB
	18615(1851.50 MHz) 18900(1880.00 MHz) 19185(1908.50 MHz)	3 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB
	18625(1852.50 MHz) 18900(1880.00 MHz) 19175(1907.50 MHz)	5 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB
	18650(1855.00 MHz) 18900(1880.00 MHz) 19150(1905.00 MHz)	10 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB
	18675(1857.50 MHz) 18900(1880.00 MHz) 19125(1902.50 MHz)	15 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB
	18700(1860.00 MHz) 18900(1880.00 MHz) 19100(1900.00 MHz)	20 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB

Test Item	Tested Channel	Channel Bandwidth	Modulation	Mode
Bandwidth	18607(1850.70 MHz) 18900(1880.00 MHz) 19193(1909.30 MHz)	1.4 MHz	QPSK / 16QAM / 64QAM / 256QAM	Full RB
	18615(1851.50 MHz) 18900(1880.00 MHz) 19185(1908.50 MHz)	3 MHz	QPSK / 16QAM / 64QAM / 256QAM	Full RB
	18625(1852.50 MHz) 18900(1880.00 MHz) 19175(1907.50 MHz)	5 MHz	QPSK / 16QAM / 64QAM / 256QAM	Full RB
	18650(1855.00 MHz) 18900(1880.00 MHz) 19150(1905.00 MHz)	10 MHz	QPSK / 16QAM / 64QAM / 256QAM	Full RB
	18675(1857.50 MHz) 18900(1880.00 MHz) 19125(1902.50 MHz)	15 MHz	QPSK / 16QAM / 64QAM / 256QAM	Full RB
	18700(1860.00 MHz) 18900(1880.00 MHz) 19100(1900.00 MHz)	20 MHz	QPSK / 16QAM / 64QAM / 256QAM	Full RB
Conducted Spurious Emissions	18607(1850.70 MHz) 18900(1880.00 MHz) 19193(1909.30 MHz)	1.4 MHz	QPSK	1 RB Full RB
	18615(1851.50 MHz) 18900(1880.00 MHz) 19185(1908.50 MHz)	3 MHz	QPSK	1 RB Full RB
	18625(1852.50 MHz) 18900(1880.00 MHz) 19175(1907.50 MHz)	5 MHz	QPSK	1 RB Full RB
	18650(1855.00 MHz) 18900(1880.00 MHz) 19150(1905.00 MHz)	10 MHz	QPSK	1 RB Full RB
	18675(1857.50 MHz) 18900(1880.00 MHz) 19125(1902.50 MHz)	15 MHz	QPSK	1 RB Full RB
	18700(1860.00 MHz) 18900(1880.00 MHz) 19100(1900.00 MHz)	20 MHz	QPSK	1 RB Full RB
Radiated Spurious Emissions below 1GHz	18700(1860.00 MHz)	20 MHz	QPSK	1 RB
Radiated Spurious Emissions above 1GHz	18607(1850.70 MHz) 18900(1880.00 MHz) 19193(1909.30 MHz)	1.4 MHz	QPSK	1 RB
	18625(1852.50 MHz) 18900(1880.00 MHz) 19175(1907.50 MHz)	5 MHz	QPSK	1 RB
	18700(1860.00 MHz) 18900(1880.00 MHz) 19100(1900.00 MHz)	20 MHz	QPSK	1 RB

Test Item	Tested Channel	Channel Bandwidth	Modulation	Mode
Frequency Stability	18607(1850.70 MHz) 19193(1909.30 MHz)	1.4 MHz	QPSK	Full RB
	18615(1851.50 MHz) 19185(1908.50 MHz)	3 MHz	QPSK	Full RB
	18625(1852.50 MHz) 19175(1907.50 MHz)	5 MHz	QPSK	Full RB
	18650(1855.00 MHz) 19150(1905.00 MHz)	10 MHz	QPSK	Full RB
	18675(1857.50 MHz) 19125(1902.50 MHz)	15 MHz	QPSK	Full RB
	18700(1860.00 MHz) 19100(1900.00 MHz)	20 MHz	QPSK	Full RB

3.3.2 LTE Band 4

Test Item	Tested Channel	Channel Bandwidth	Modulation	Mode
Equivalent Isotropically Radiated Power	19957(1710.70 MHz) 20175(1732.50 MHz) 20393(1754.30 MHz)	1.4 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB Half RB Full RB
	19965(1711.50 MHz) 20175(1732.50 MHz) 20385(1753.50 MHz)	3 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB Half RB Full RB
	19975(1712.50 MHz) 20175(1732.50 MHz) 20375(1752.50 MHz)	5 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB Half RB Full RB
	20000(1715.00 MHz) 20175(1732.50 MHz) 20350(1750.00 MHz)	10 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB Half RB Full RB
	20025(1717.50 MHz) 20175(1732.50 MHz) 20325(1747.50 MHz)	15 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB Half RB Full RB
	20050(1720.00 MHz) 20175(1732.50 MHz) 20300(1745.00 MHz)	20 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB Half RB Full RB
Modulation Characteristics	20175(1732.50 MHz)	20 MHz	QPSK / 16QAM / 64QAM / 256QAM	Full RB
Peak to Average Ratio	19957(1710.70 MHz) 20175(1732.50 MHz) 20393(1754.30 MHz)	1.4 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB
	19965(1711.50 MHz) 20175(1732.50 MHz) 20385(1753.50 MHz)	3 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB
	19975(1712.50 MHz) 20175(1732.50 MHz) 20375(1752.50 MHz)	5 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB
	20000(1715.00 MHz) 20175(1732.50 MHz) 20350(1750.00 MHz)	10 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB
	20025(1717.50 MHz) 20175(1732.50 MHz) 20325(1747.50 MHz)	15 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB
	20050(1720.00 MHz) 20175(1732.50 MHz) 20300(1745.00 MHz)	20 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB

Test Item	Tested Channel	Channel Bandwidth	Modulation	Mode
Bandwidth	19957(1710.70 MHz) 20175(1732.50 MHz) 20393(1754.30 MHz)	1.4 MHz	QPSK / 16QAM / 64QAM / 256QAM	Full RB
	19965(1711.50 MHz) 20175(1732.50 MHz) 20385(1753.50 MHz)	3 MHz	QPSK / 16QAM / 64QAM / 256QAM	Full RB
	19975(1712.50 MHz) 20175(1732.50 MHz) 20375(1752.50 MHz)	5 MHz	QPSK / 16QAM / 64QAM / 256QAM	Full RB
	20000(1715.00 MHz) 20175(1732.50 MHz) 20350(1750.00 MHz)	10 MHz	QPSK / 16QAM / 64QAM / 256QAM	Full RB
	20025(1717.50 MHz) 20175(1732.50 MHz) 20325(1747.50 MHz)	15 MHz	QPSK / 16QAM / 64QAM / 256QAM	Full RB
	20050(1720.00 MHz) 20175(1732.50 MHz) 20300(1745.00 MHz)	20 MHz	QPSK / 16QAM / 64QAM / 256QAM	Full RB
Conducted Spurious Emissions	19957(1710.70 MHz) 20175(1732.50 MHz) 20393(1754.30 MHz)	1.4 MHz	QPSK	1 RB Full RB
	19965(1711.50 MHz) 20175(1732.50 MHz) 20385(1753.50 MHz)	3 MHz	QPSK	1 RB Full RB
	19975(1712.50 MHz) 20175(1732.50 MHz) 20375(1752.50 MHz)	5 MHz	QPSK	1 RB Full RB
	20000(1715.00 MHz) 20175(1732.50 MHz) 20350(1750.00 MHz)	10 MHz	QPSK	1 RB Full RB
	20025(1717.50 MHz) 20175(1732.50 MHz) 20325(1747.50 MHz)	15 MHz	QPSK	1 RB Full RB
	20050(1720.00 MHz) 20175(1732.50 MHz) 20300(1745.00 MHz)	20 MHz	QPSK	1 RB Full RB
Radiated Spurious Emissions below 1GHz	20300(1745.00 MHz)	20 MHz	QPSK	1 RB
Radiated Spurious Emissions above 1GHz	19957(1710.70 MHz) 20175(1732.50 MHz) 20393(1754.30 MHz)	1.4 MHz	QPSK	1 RB
	19975(1712.50 MHz) 20175(1732.50 MHz) 20375(1752.50 MHz)	5 MHz	QPSK	1 RB
	20050(1720.00 MHz) 20175(1732.50 MHz) 20300(1745.00 MHz)	20 MHz	QPSK	1 RB

Test Item	Tested Channel	Channel Bandwidth	Modulation	Mode
Frequency Stability	19957(1710.70 MHz) 20393(1754.30 MHz)	1.4 MHz	QPSK	Full RB
	19965(1711.50 MHz) 20385(1753.50 MHz)	3 MHz	QPSK	Full RB
	19975(1712.50 MHz) 20375(1752.50 MHz)	5 MHz	QPSK	Full RB
	20000(1715.00 MHz) 20350(1750.00 MHz)	10 MHz	QPSK	Full RB
	20025(1717.50 MHz) 20325(1747.50 MHz)	15 MHz	QPSK	Full RB
	20050(1720.00 MHz) 20300(1745.00 MHz)	20 MHz	QPSK	Full RB

3.3.3 LTE Band 5

Test Item	Tested Channel	Channel Bandwidth	Modulation	Mode
Effective Radiated Power	20407(824.70 MHz) 20525(836.50 MHz) 20643(848.30 MHz)	1.4 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB Half RB Full RB
	20415(825.50 MHz) 20525(836.50 MHz) 20635(847.50 MHz)	3 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB Half RB Full RB
	20425(826.50 MHz) 20525(836.50 MHz) 20625(846.50 MHz)	5 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB Half RB Full RB
	20450(829.00 MHz) 20525(836.50 MHz) 20600(844.00 MHz)	10 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB Half RB Full RB
Modulation Characteristics	20525(836.50 MHz)	10 MHz	QPSK / 16QAM / 64QAM / 256QAM	Full RB
Peak to Average Ratio	20407(824.70 MHz) 20525(836.50 MHz) 20643(848.30 MHz)	1.4 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB
	20415(825.50 MHz) 20525(836.50 MHz) 20635(847.50 MHz)	3 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB
	20425(826.50 MHz) 20525(836.50 MHz) 20625(846.50 MHz)	5 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB
	20450(829.00 MHz) 20525(836.50 MHz) 20600(844.00 MHz)	10 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB
Bandwidth	20407(824.70 MHz) 20525(836.50 MHz) 20643(848.30 MHz)	1.4 MHz	QPSK / 16QAM / 64QAM / 256QAM	Full RB
	20415(825.50 MHz) 20525(836.50 MHz) 20635(847.50 MHz)	3 MHz	QPSK / 16QAM / 64QAM / 256QAM	Full RB
	20425(826.50 MHz) 20525(836.50 MHz) 20625(846.50 MHz)	5 MHz	QPSK / 16QAM / 64QAM / 256QAM	Full RB
	20450(829.00 MHz) 20525(836.50 MHz) 20600(844.00 MHz)	10 MHz	QPSK / 16QAM / 64QAM / 256QAM	Full RB

Test Item	Tested Channel	Channel Bandwidth	Modulation	Mode
Conducted Spurious Emissions	20407(824.70 MHz) 20525(836.50 MHz) 20643(848.30 MHz)	1.4 MHz	QPSK	1 RB Full RB
	20415(825.50 MHz) 20525(836.50 MHz) 20635(847.50 MHz)	3 MHz	QPSK	1 RB Full RB
	20425(826.50 MHz) 20525(836.50 MHz) 20625(846.50 MHz)	5 MHz	QPSK	1 RB Full RB
	20450(829.00 MHz) 20525(836.50 MHz) 20600(844.00 MHz)	10 MHz	QPSK	1 RB Full RB
Radiated Spurious Emissions below 1GHz	20407(824.70 MHz)	1.4 MHz	QPSK	1 RB
Radiated Spurious Emissions above 1GHz	20407(824.70 MHz) 20525(836.50 MHz) 20643(848.30 MHz)	1.4 MHz	QPSK	1 RB
	20425(826.50 MHz) 20525(836.50 MHz) 20625(846.50 MHz)	5 MHz	QPSK	1 RB
	20450(829.00 MHz) 20525(836.50 MHz) 20600(844.00 MHz)	10 MHz	QPSK	1 RB
Frequency Stability	20407(824.70 MHz) 20643(848.30 MHz)	1.4 MHz	QPSK	Full RB
	20415(825.50 MHz) 20635(847.50 MHz)	3 MHz	QPSK	Full RB
	20425(826.50 MHz) 20625(846.50 MHz)	5 MHz	QPSK	Full RB
	20450(829.00 MHz) 20600(844.00 MHz)	10 MHz	QPSK	Full RB

3.3.4 LTE Band 7

Test Item	Tested Channel	Channel Bandwidth	Modulation	Mode
Equivalent Isotropically Radiated Power	20775(2502.50 MHz) 21100(2535.00 MHz) 21425(2567.50 MHz)	5 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB Half RB Full RB
	20800(2505.00 MHz) 21100(2535.00 MHz) 21400(2565.00 MHz)	10 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB Half RB Full RB
	20825(2507.50 MHz) 21100(2535.00 MHz) 21375(2562.50 MHz)	15 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB Half RB Full RB
	20850(2510.00 MHz) 21100(2535.00 MHz) 21350(2560.00 MHz)	20 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB Half RB Full RB
Modulation Characteristics	21100(2535.00 MHz)	20 MHz	QPSK / 16QAM / 64QAM / 256QAM	Full RB
Peak to Average Ratio	20775(2502.50 MHz) 21100(2535.00 MHz) 21425(2567.50 MHz)	5 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB
	20800(2505.00 MHz) 21100(2535.00 MHz) 21400(2565.00 MHz)	10 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB
	20825(2507.50 MHz) 21100(2535.00 MHz) 21375(2562.50 MHz)	15 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB
	20850(2510.00 MHz) 21100(2535.00 MHz) 21350(2560.00 MHz)	20 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB
Bandwidth	20775(2502.50 MHz) 21100(2535.00 MHz) 21425(2567.50 MHz)	5 MHz	QPSK / 16QAM / 64QAM / 256QAM	Full RB
	20800(2505.00 MHz) 21100(2535.00 MHz) 21400(2565.00 MHz)	10 MHz	QPSK / 16QAM / 64QAM / 256QAM	Full RB
	20825(2507.50 MHz) 21100(2535.00 MHz) 21375(2562.50 MHz)	15 MHz	QPSK / 16QAM / 64QAM / 256QAM	Full RB
	20850(2510.00 MHz) 21100(2535.00 MHz) 21350(2560.00 MHz)	20 MHz	QPSK / 16QAM / 64QAM / 256QAM	Full RB

Test Item	Tested Channel	Channel Bandwidth	Modulation	Mode
Conducted Spurious Emissions	20775(2502.50 MHz) 21100(2535.00 MHz) 21425(2567.50 MHz)	5 MHz	QPSK	1 RB Full RB
	20800(2505.00 MHz) 21100(2535.00 MHz) 21400(2565.00 MHz)	10 MHz	QPSK	1 RB Full RB
	20825(2507.50 MHz) 21100(2535.00 MHz) 21375(2562.50 MHz)	15 MHz	QPSK	1 RB Full RB
	20850(2510.00 MHz) 21100(2535.00 MHz) 21350(2560.00 MHz)	20 MHz	QPSK	1 RB Full RB
Radiated Spurious Emissions below 1GHz	21100(2535.00 MHz)	20 MHz	QPSK	1 RB
Radiated Spurious Emissions above 1GHz	20775(2502.50 MHz) 21100(2535.00 MHz) 21425(2567.50 MHz)	5 MHz	QPSK	1 RB
	20850(2510.00 MHz) 21100(2535.00 MHz) 21350(2560.00 MHz)	20 MHz	QPSK	1 RB
Frequency Stability	20775(2502.50 MHz) 21425(2567.50 MHz)	5 MHz	QPSK	Full RB
	20800(2505.00 MHz) 21400(2565.00 MHz)	10 MHz	QPSK	Full RB
	20825(2507.50 MHz) 21375(2562.50 MHz)	15 MHz	QPSK	Full RB
	20850(2510.00 MHz) 21350(2560.00 MHz)	20 MHz	QPSK	Full RB

3.3.5 LTE Band 12

Test Item	Tested Channel	Channel Bandwidth	Modulation	Mode
Effective Radiated Power	23017(699.70 MHz) 23095(707.50 MHz) 23173(715.30 MHz)	1.4 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB Half RB Full RB
	23025(700.50 MHz) 23095(707.50 MHz) 23165(714.50 MHz)	3 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB Half RB Full RB
	23035(701.50 MHz) 23095(707.50 MHz) 23155(713.50 MHz)	5 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB Half RB Full RB
	23060(704.00 MHz) 23095(707.50 MHz) 23130(711.00 MHz)	10 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB Half RB Full RB
Modulation Characteristics	23095(707.50 MHz)	10 MHz	QPSK / 16QAM / 64QAM / 256QAM	Full RB
Peak to Average Ratio	23017(699.70 MHz) 23095(707.50 MHz) 23173(715.30 MHz)	1.4 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB
	23025(700.50 MHz) 23095(707.50 MHz) 23165(714.50 MHz)	3 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB
	23035(701.50 MHz) 23095(707.50 MHz) 23155(713.50 MHz)	5 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB
	23060(704.00 MHz) 23095(707.50 MHz) 23130(711.00 MHz)	10 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB
Bandwidth	23017(699.70 MHz) 23095(707.50 MHz) 23173(715.30 MHz)	1.4 MHz	QPSK / 16QAM / 64QAM / 256QAM	Full RB
	23025(700.50 MHz) 23095(707.50 MHz) 23165(714.50 MHz)	3 MHz	QPSK / 16QAM / 64QAM / 256QAM	Full RB
	23035(701.50 MHz) 23095(707.50 MHz) 23155(713.50 MHz)	5 MHz	QPSK / 16QAM / 64QAM / 256QAM	Full RB
	23060(704.00 MHz) 23095(707.50 MHz) 23130(711.00 MHz)	10 MHz	QPSK / 16QAM / 64QAM / 256QAM	Full RB
Conducted Spurious Emissions	23017(699.70 MHz) 23095(707.50 MHz) 23173(715.30 MHz)	1.4 MHz	QPSK	1 RB Full RB
	23025(700.50 MHz) 23095(707.50 MHz) 23165(714.50 MHz)	3 MHz	QPSK	1 RB Full RB
	23035(701.50 MHz) 23095(707.50 MHz) 23155(713.50 MHz)	5 MHz	QPSK	1 RB Full RB
	23060(704.00 MHz) 23095(707.50 MHz) 23130(711.00 MHz)	10 MHz	QPSK	1 RB Full RB

Test Item	Tested Channel	Channel Bandwidth	Modulation	Mode
Radiated Spurious Emissions below 1GHz	23095(707.50 MHz)	10 MHz	QPSK	1 RB
Radiated Spurious Emissions above 1GHz	23017(699.70 MHz) 23095(707.50 MHz) 23173(715.30 MHz)	1.4 MHz	QPSK	1 RB
	23035(701.50 MHz) 23095(707.50 MHz) 23155(713.50 MHz)	5 MHz	QPSK	1 RB
	23060(704.00 MHz) 23095(707.50 MHz) 23130(711.00 MHz)	10 MHz	QPSK	1 RB
Frequency Stability	23017(699.70 MHz) 23173(715.30 MHz)	1.4 MHz	QPSK	Full RB
	23025(700.50 MHz) 23165(714.50 MHz)	3 MHz	QPSK	Full RB
	23035(701.50 MHz) 23155(713.50 MHz)	5 MHz	QPSK	Full RB
	23060(704.00 MHz) 23130(711.00 MHz)	10 MHz	QPSK	Full RB

3.3.6 LTE Band 14

Test Item	Tested Channel	Channel Bandwidth	Modulation	Mode
Effective Radiated Power	23305(790.50 MHz) 23330(793.00 MHz) 23355(795.50 MHz)	5 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB Half RB Full RB
	23330(793.00 MHz)	10 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB Half RB Full RB
Modulation Characteristics	23330(793.00 MHz)	10 MHz	QPSK / 16QAM / 64QAM / 256QAM	Full RB
Bandwidth	23305(790.50 MHz) 23330(793.00 MHz) 23355(795.50 MHz)	5 MHz	QPSK / 16QAM / 64QAM / 256QAM	Full RB
	23330(793.00 MHz)	10 MHz	QPSK / 16QAM / 64QAM / 256QAM	Full RB
Conducted Spurious Emissions	23305(790.50 MHz) 23330(793.00 MHz) 23355(795.50 MHz)	5 MHz	QPSK	1 RB Full RB
	23330(793.00 MHz)	10 MHz	QPSK	1 RB Full RB
Radiated Spurious Emissions below 1GHz	23330(793.00 MHz)	10 MHz	QPSK	1 RB
Radiated Spurious Emissions above 1GHz	23305(790.50 MHz) 23330(793.00 MHz) 23355(795.50 MHz)	5 MHz	QPSK	1 RB
	23330(793.00 MHz)	10 MHz	QPSK	1 RB
Frequency Stability	23305(790.50 MHz) 23355(795.50 MHz)	5 MHz	QPSK	Full RB
	23330(793.00 MHz)	10 MHz	QPSK	Full RB

3.3.7 LTE Band 30

Test Item	Tested Channel	Channel Bandwidth	Modulation	Mode
Effective Radiated Power	27685(2307.50 MHz) 27710(2310.00 MHz) 27735(2312.50 MHz)	5 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB Half RB Full RB
	27710(2310.00 MHz)	10 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB Half RB Full RB
Modulation Characteristics	27710(2310.00 MHz)	10 MHz	QPSK / 16QAM / 64QAM / 256QAM	Full RB
Peak to Average Ratio	27685(2307.50 MHz) 27710(2310.00 MHz) 27735(2312.50 MHz)	5 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB
	27710(2310.00 MHz)	10 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB
Bandwidth	27685(2307.50 MHz) 27710(2310.00 MHz) 27735(2312.50 MHz)	5 MHz	QPSK / 16QAM / 64QAM / 256QAM	Full RB
	27710(2310.00 MHz)	10 MHz	QPSK / 16QAM / 64QAM / 256QAM	Full RB
Conducted Spurious Emissions	27685(2307.50 MHz) 27710(2310.00 MHz) 27735(2312.50 MHz)	5 MHz	QPSK	1 RB Full RB
	27710(2310.00 MHz)	10 MHz	QPSK	1 RB Full RB
Radiated Spurious Emissions below 1GHz	27710(2310.00 MHz)	5 MHz	QPSK	1 RB
Radiated Spurious Emissions above 1GHz	27685(2307.50 MHz) 27710(2310.00 MHz) 27735(2312.50 MHz)	5 MHz	QPSK	1 RB
	27710(2310.00 MHz)	10 MHz	QPSK	1 RB
Frequency Stability	27685(2307.50 MHz) 27735(2312.50 MHz)	5 MHz	QPSK	Full RB
	27710(2310.00 MHz)	10 MHz	QPSK	Full RB

3.3.8 LTE Band 40 (2.305 GHz ~ 2.315 GHz)

Test Item	Tested Channel	Channel Bandwidth	Modulation	Mode
Equivalent Isotropically Radiated Power	38725(2307.50 MHz) 38750(2310.00 MHz) 38775(2312.50 MHz)	5 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB Half RB Full RB
	38750(2310.00 MHz)	10 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB Half RB Full RB
Modulation Characteristics	38750(2310.00 MHz)	10 MHz	QPSK / 16QAM / 64QAM / 256QAM	Full RB
Peak to Average Ratio	38725(2307.50 MHz) 38750(2310.00 MHz) 38775(2312.50 MHz)	5 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB
	38750(2310.00 MHz)	10 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB
Bandwidth	38725(2307.50 MHz) 38750(2310.00 MHz) 38775(2312.50 MHz)	5 MHz	QPSK / 16QAM / 64QAM / 256QAM	Full RB
	38750(2310.00 MHz)	10 MHz	QPSK / 16QAM / 64QAM / 256QAM	Full RB
Conducted Spurious Emissions	38725(2307.50 MHz) 38750(2310.00 MHz) 38775(2312.50 MHz)	5 MHz	QPSK	1 RB Full RB
	38750(2310.00 MHz)	10 MHz	QPSK	1 RB Full RB
Radiated Spurious Emissions below 1GHz	38750(2310.00 MHz)	5 MHz	QPSK	1 RB
Radiated Spurious Emissions above 1GHz	38725(2307.50 MHz) 38750(2310.00 MHz) 38775(2312.50 MHz)	5 MHz	QPSK	1 RB
	38750(2310.00 MHz)	10 MHz	QPSK	1 RB
Frequency Stability	38725(2307.50 MHz) 38775(2312.50 MHz)	5 MHz	QPSK	Full RB
	38750(2310.00 MHz)	10 MHz	QPSK	Full RB

3.3.9 LTE Band 40 (2.35 GHz ~ 2.36 GHz)

Test Item	Tested Channel	Channel Bandwidth	Modulation	Mode
Equivalent Isotropically Radiated Power	39175(2352.50 MHz) 39200(2355.00 MHz) 39225(2357.50 MHz)	5 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB Half RB Full RB
	39200(2355.00 MHz)	10 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB Half RB Full RB
Modulation Characteristics	39200(2355.00 MHz)	10 MHz	QPSK / 16QAM / 64QAM / 256QAM	Full RB
Peak to Average Ratio	39175(2352.50 MHz) 39200(2355.00 MHz) 39225(2357.50 MHz)	5 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB
	39200(2355.00 MHz)	10 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB
Bandwidth	39175(2352.50 MHz) 39200(2355.00 MHz) 39225(2357.50 MHz)	5 MHz	QPSK / 16QAM / 64QAM / 256QAM	Full RB
	39200(2355.00 MHz)	10 MHz	QPSK / 16QAM / 64QAM / 256QAM	Full RB
Conducted Spurious Emissions	39175(2352.50 MHz) 39200(2355.00 MHz) 39225(2357.50 MHz)	5 MHz	QPSK	1 RB Full RB
	39200(2355.00 MHz)	10 MHz	QPSK	1 RB Full RB
Radiated Spurious Emissions below 1GHz	39200(2355.00 MHz)	10 MHz	QPSK	1 RB
Radiated Spurious Emissions above 1GHz	39175(2352.50 MHz) 39200(2355.00 MHz) 39225(2357.50 MHz)	5 MHz	QPSK	1 RB
	39200(2355.00 MHz)	10 MHz	QPSK	1 RB
Frequency Stability	39175(2352.50 MHz) 39225(2357.50 MHz)	5 MHz	QPSK	Full RB
	39200(2355.00 MHz)	10 MHz	QPSK	Full RB

3.3.10 LTE Band 66

Test Item	Tested Channel	Channel Bandwidth	Modulation	Mode
Equivalent Isotropically Radiated Power	131979(1710.70 MHz) 132322(1745.00 MHz) 132665(1779.30 MHz)	1.4 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB Half RB Full RB
	131987(1711.50 MHz) 132322(1745.00 MHz) 132657(1778.50 MHz)	3 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB Half RB Full RB
	131997(1712.50 MHz) 132322(1745.00 MHz) 132647(1777.50 MHz)	5 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB Half RB Full RB
	132022(1715.00 MHz) 132322(1745.00 MHz) 132622(1775.00 MHz)	10 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB Half RB Full RB
	132047(1717.50 MHz) 132322(1745.00 MHz) 132597(1772.50 MHz)	15 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB Half RB Full RB
	132072(1720.00 MHz) 132322(1745.00 MHz) 132572(1770.00 MHz)	20 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB Half RB Full RB
Modulation Characteristics	132322(1745.00 MHz)	20 MHz	QPSK / 16QAM / 64QAM / 256QAM	Full RB
Peak to Average Ratio	131979(1710.70 MHz) 132322(1745.00 MHz) 132665(1779.30 MHz)	1.4 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB
	131987(1711.50 MHz) 132322(1745.00 MHz) 132657(1778.50 MHz)	3 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB
	131997(1712.50 MHz) 132322(1745.00 MHz) 132647(1777.50 MHz)	5 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB
	132022(1715.00 MHz) 132322(1745.00 MHz) 132622(1775.00 MHz)	10 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB
	132047(1717.50 MHz) 132322(1745.00 MHz) 132597(1772.50 MHz)	15 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB
	132072(1720.00 MHz) 132322(1745.00 MHz) 132572(1770.00 MHz)	20 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB

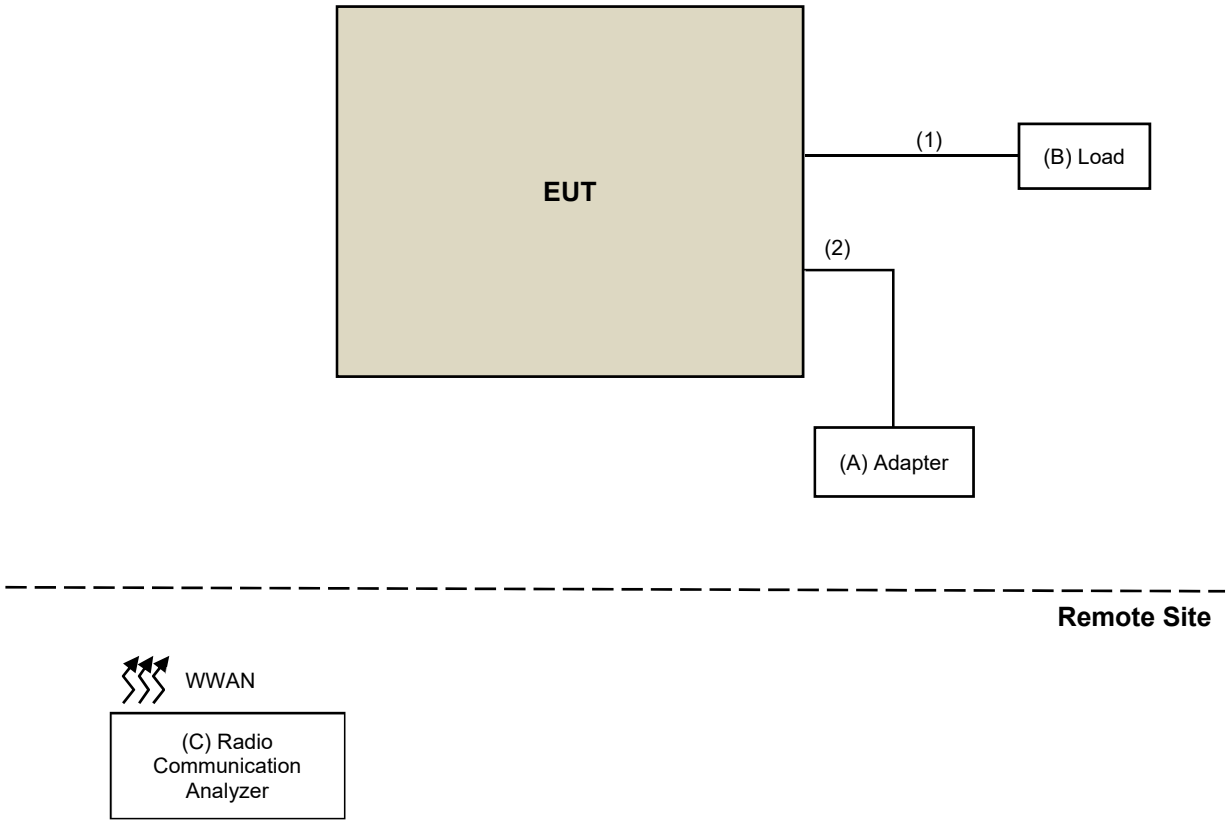
Test Item	Tested Channel	Channel Bandwidth	Modulation	Mode
Bandwidth	131979(1710.70 MHz) 132322(1745.00 MHz) 132665(1779.30 MHz)	1.4 MHz	QPSK / 16QAM / 64QAM / 256QAM	Full RB
	131987(1711.50 MHz) 132322(1745.00 MHz) 132657(1778.50 MHz)	3 MHz	QPSK / 16QAM / 64QAM / 256QAM	Full RB
	131997(1712.50 MHz) 132322(1745.00 MHz) 132647(1777.50 MHz)	5 MHz	QPSK / 16QAM / 64QAM / 256QAM	Full RB
	132022(1715.00 MHz) 132322(1745.00 MHz) 132622(1775.00 MHz)	10 MHz	QPSK / 16QAM / 64QAM / 256QAM	Full RB
	132047(1717.50 MHz) 132322(1745.00 MHz) 132597(1772.50 MHz)	15 MHz	QPSK / 16QAM / 64QAM / 256QAM	Full RB
	132072(1720.00 MHz) 132322(1745.00 MHz) 132572(1770.00 MHz)	20 MHz	QPSK / 16QAM / 64QAM / 256QAM	Full RB
Conducted Spurious Emissions	131979(1710.70 MHz) 132322(1745.00 MHz) 132665(1779.30 MHz)	1.4 MHz	QPSK	1 RB Full RB
	131987(1711.50 MHz) 132322(1745.00 MHz) 132657(1778.50 MHz)	3 MHz	QPSK	1 RB Full RB
	131997(1712.50 MHz) 132322(1745.00 MHz) 132647(1777.50 MHz)	5 MHz	QPSK	1 RB Full RB
	132022(1715.00 MHz) 132322(1745.00 MHz) 132622(1775.00 MHz)	10 MHz	QPSK	1 RB Full RB
	132047(1717.50 MHz) 132322(1745.00 MHz) 132597(1772.50 MHz)	15 MHz	QPSK	1 RB Full RB
	132072(1720.00 MHz) 132322(1745.00 MHz) 132572(1770.00 MHz)	20 MHz	QPSK	1 RB Full RB
Radiated Spurious Emissions below 1GHz	132572(1770.00 MHz)	20 MHz	QPSK	1 RB
Radiated Spurious Emissions above 1GHz	131979(1710.70 MHz) 132322(1745.00 MHz) 132665(1779.30 MHz)	1.4 MHz	QPSK	1 RB
	131997(1712.50 MHz) 132322(1745.00 MHz) 132647(1777.50 MHz)	5 MHz	QPSK	1 RB
	132072(1720.00 MHz) 132322(1745.00 MHz) 132572(1770.00 MHz)	20 MHz	QPSK	1 RB

Test Item	Tested Channel	Channel Bandwidth	Modulation	Mode
Frequency Stability	131979(1710.70 MHz) 132665(1779.30 MHz)	1.4 MHz	QPSK	Full RB
	131987(1711.50 MHz) 132657(1778.50 MHz)	3 MHz	QPSK	Full RB
	131997(1712.50 MHz) 132647(1777.50 MHz)	5 MHz	QPSK	Full RB
	132022(1715.00 MHz) 132622(1775.00 MHz)	10 MHz	QPSK	Full RB
	132047(1717.50 MHz) 132597(1772.50 MHz)	15 MHz	QPSK	Full RB
	132072(1720.00 MHz) 132572(1770.00 MHz)	20 MHz	QPSK	Full RB
EUT Configure Mode:	Adapter 1+USB Cable 1			

3.4 Test Program Used and Operation Descriptions

There is no need to controlling software during the test, and the EUT can be paired with the Radio Communication Analyzer to test the connection when it is powered on.

3.5 Connection Diagram of EUT and Peripheral Devices



3.6 Configuration of Peripheral Devices and Cable Connections

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	Adapter	NETGEAR	2AFH0183AA	NA	NA	Accessory of EUT
B.	Load	NA	NA	NA	NA	Provided by Lab
C.	Radio Communication Analyzer	Anritsu	MT8821C	6201462755	N/A	Provided by Lab

No.	Cable Descriptions	Qty.	Length (m)	Shielded (Yes/ No)	Cores (Qty.)	Remark
1.	RJ45 Cable	1	1.5	No	0	Provided by Lab
2.	USB Cable	1	1	Yes	0	Accessory of EUT

4 Test Instruments

The calibration interval of the all test instruments are 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

4.1 Effective Radiated Power and Equivalent Isotropically Radiated Power

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
PXA Signal Analyzer Keysight	N9030B	MY57140938	2024/3/20	2025/3/19
Radio Communication Analyzer Anritsu	MT8821C	6261806803	2024/2/15	2025/2/14
Software BV	ADT_RF Test Software V7.6.5.4	N/A	N/A	N/A

Notes:

1. The test was performed in Oven room.
2. Tested Date: 2024/3/23 ~ 2024/5/31

4.2 Modulation Characteristics

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
PXA Signal Analyzer Keysight	N9030B	MY57140938	2024/3/20	2025/3/19
Radio Communication Analyzer Anritsu	MT8821C	6201462755	2024/3/13	2025/3/12
		6261806803	2024/2/15	2025/2/14
Software BV	ADT_RF Test Software V7.6.5.4	N/A	N/A	N/A

Notes:

1. The test was performed in Oven room.
2. Tested Date: 2024/4/9 ~ 2024/5/22

4.3 Peak to Average Ratio

Refer to section 4.2 to get information of the instruments.

4.4 Bandwidth

Refer to section 4.2 to get information of the instruments.

4.5 Conducted Spurious Emissions

Refer to section 4.2 to get information of the instruments.

4.6 Radiated Spurious Emissions below 1GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna Tower inn-co GmbH	MA 4000	010303	N/A	N/A
Bi_Log Antenna Schwarzbeck	VULB 9168	9168-155	2023/10/13	2024/10/12
EMI Test Receiver R&S	ESR3	102782	2023/12/7	2024/12/6
Loop Antenna Electro-Metrics	EM-6879	269	2023/9/23	2024/9/22
Loop Antenna TESEQ	HLA 6121	45745	2023/8/8	2024/8/7
Preamplifier Agilent	8447D	2944A10631	2023/5/7 2024/5/1	2024/5/6 2025/4/30
Preamplifier EMCI	EMC001340	980201	2023/9/27	2024/9/26
RF Coaxial Cable Woken	8D-FB	Cable-CH4-01	2023/7/8	2024/7/7
Signal & Spectrum Analyzer R&S	FSW43	101582	2023/4/13 2024/4/12	2024/4/12 2025/4/11
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	N/A	N/A	N/A
Turn Table BV ADT	TT100	TT93021705	N/A	N/A
Turn Table Controller BV ADT	SC100	SC93021705	N/A	N/A

Notes:

1. The test was performed in HY - 966 chamber 3.
2. Tested Date: 2024/3/27 ~ 2024/5/27

4.7 Radiated Spurious Emissions above 1GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna Tower inn-co GmbH	MA 4000	010303	N/A	N/A
Boresight antenna tower fixture BV	BAF-02	5	N/A	N/A
EMI Test Receiver R&S	ESR3	102782	2023/12/7	2024/12/6
Horn Antenna Schwarzbeck	BBHA 9120D	9120D-408	2023/11/12	2024/11/11
	BBHA 9170	9170-480	2023/11/12	2024/11/11
		BBHA9170241	2023/10/16	2024/10/15
		BBHA9170243	2023/11/12	2024/11/11
Preamplifier EMCI	EMC 184045	980116	2023/9/27	2024/9/26
Preamplifier Keysight	83017A	MY53270295	2023/5/7 2024/5/1	2024/5/6 2025/4/30
RF Coaxial Cable EMCI	EMC102-KM-KM-600	150928	2023/7/8	2024/7/7
	EMC102-KM-KM-3000	150929	2023/7/8	2024/7/7
RF Coaxial Cable HUBER+SUHNER	SUCOFLEX 104	Cable-CH4-03(250724)	2023/5/7 2024/5/1	2024/5/6 2025/4/30
	Sucoflex 104	MY 13380+295012/04	2023/5/7 2024/5/1	2024/5/6 2025/4/30
Signal & Spectrum Analyzer R&S	FSW43	101582	2023/4/13 2024/4/12	2024/4/12 2025/4/11
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	N/A	N/A	N/A
Turn Table BV ADT	TT100	TT93021705	N/A	N/A
Turn Table Controller BV ADT	SC100	SC93021705	N/A	N/A

Notes:

1. The test was performed in HY - 966 chamber 3.
2. Tested Date: 2024/3/25 ~ 2024/5/23

4.8 Frequency Stability

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
3-channel DC power supply JIN YIH Technology	ODP3033	ODP30332128138	N/A	N/A
Digital Multimeter Fluke	87III	70360742	2023/7/6	2024/7/5
PXA Signal Analyzer Keysight	N9030B	MY57140938	2024/3/20	2025/3/19
Software BV	ADT_RF Test Software V7.6.5.4	N/A	N/A	N/A
Temperature & Humidity Chamber Terchy	HRM-120RF	931022	2023/12/19	2024/12/18

Notes:

1. The test was performed in Oven room.
2. Tested Date: 2024/6/4

5 Limits of Test Items

5.1 Effective Radiated Power and Equivalent Isotropically Radiated Power

For LTE Band 5:

The ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 watts.

For LTE Band 2:

Mobile and portable stations are limited to 2 watts EIRP.

For LTE Band 14:

Portable stations (hand-held devices) transmitting in the 758-768 MHz band and the 788-798 MHz band are limited to 3 watts ERP.

For LTE Band 12:

Portable stations (hand-held devices) in the 600 MHz uplink band and the 698-746 MHz band, and fixed and mobile stations in the 600 MHz uplink band are limited to 3 watts ERP.

For LTE Band 4, LTE Band 66:

Fixed, mobile, and portable (hand-held) stations operating in the 1710-1755 MHz band and mobile and portable stations operating in the 1695-1710 MHz and 1755-1780 MHz bands are limited to 1 watt EIRP.

For LTE Band 30, LTE Band 40 (2.305 GHz ~ 2.315 GHz), LTE Band 40 (2.35 GHz ~ 2.36 GHz):

For mobile and portable stations transmitting in the 2305-2315 MHz band or the 2350-2360 MHz band, the average EIRP must not exceed 50 milliwatts within any 1 megahertz of authorized bandwidth, except that for mobile and portable stations compliant with 3GPP LTE standards or another advanced mobile broadband protocol that avoids concentrating energy at the edge of the operating band the average EIRP must not exceed 250 milliwatts within any 5 megahertz of authorized bandwidth but may exceed 50 milliwatts within any 1 megahertz of authorized bandwidth.

For LTE Band 7:

Mobile stations are limited to 2.0 watts EIRP. All user stations are limited to 2.0 watts transmitter output power.

5.2 Modulation Characteristics

A curve or equivalent data which shows that the equipment will meet the modulation requirements of the rules under which the equipment is to be licensed.

5.3 Peak to Average Ratio

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.

5.4 Bandwidth

According to FCC 47 CFR part 2.1049, the occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5% of the total mean power radiated by a given emission.

5.5 Conducted Spurious Emissions

For LTE Band 2, LTE Band 5:

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB. The emission limit equal to –13 dBm.

For LTE Band 14:

According to FCC 47 CFR part 90.543 (e), for operations in the 758-768 MHz and the 788-798 MHz bands, the power of any emission outside the licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, in accordance with the following:

(1) On all frequencies between 769-775 MHz and 799-805 MHz, by a factor not less than 65 + 10 log (P) dB in a 6.25 kHz band segment, for mobile and portable stations.

(2) On any frequency between 775-788 MHz, above 805 MHz, and below 758 MHz, by at least 43 + 10 log (P) dB.

According to FCC 47 CFR part 90.543 (f), for operations in the 758-775 MHz and 788-805 MHz bands, all emissions including harmonics in the band 1559-1610 MHz shall be limited to −70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals, and −80 dBW EIRP for discrete emissions of less than 700 Hz bandwidth.

For LTE Band 12:

According to FCC 47 CFR part 27.53(g), for operations in the 600 MHz band and the 698-746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least 43 + 10 log (P) dB. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kilohertz or greater. 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.

For LTE Band 4, LTE Band 66:

According to FCC 47 CFR part 27.53(h), for operations in the 1695-1710 MHz, 1710-1755 MHz, 1755-1780 MHz, 1915-1920 MHz, 1995-2000 MHz, 2000-2020 MHz, 2110-2155 MHz, 2155-2180 MHz, and 2180-2200 MHz bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least 43 + 10 log (P) dB. However, in the 1 megahertz 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.

For LTE Band 30, LTE Band 40 (2.305 GHz ~ 2.315 GHz), LTE Band 40 (2.35 GHz ~ 2.36 GHz):

According to FCC 47 CFR part 27.53(a)(4), for mobile and portable stations operating in the 2305-2315 MHz and 2350-2360 MHz bands:

(i) By a factor of not less than: 43 + 10 log (P) dB on all frequencies between 2305 MHz and 2320 MHz and on all frequencies between 2345 MHz and 2360 MHz that are outside the licensed band(s) of operation, not less than 55 + 10 log (P) dB on all frequencies between 2320 MHz and 2324 MHz and on all frequencies between 2341 MHz and 2345 MHz, not less than 61 + 10 log (P) dB on all frequencies between 2324 MHz and 2328 MHz and on all frequencies between 2337 MHz and 2341 MHz, and not less than 67 + 10 log (P) dB on all frequencies between 2328 MHz and 2337 MHz;

(ii) By a factor of not less than 43 + 10 log (P) dB on all frequencies between 2300 MHz and 2305 MHz, 55 + 10 log (P) dB on all frequencies between 2296 MHz and 2300 MHz, 61 + 10 log (P) dB on all frequencies between 2292 MHz and 2296 MHz, 67 + 10 log (P) dB on all frequencies between 2288 MHz and 2292 MHz, and 70 + 10 log (P) dB below 2288 MHz;

(iii) By a factor of not less than 43 + 10 log (P) dB on all frequencies between 2360 MHz and 2365 MHz, and not less than 70 + 10 log (P) dB above 2365 MHz.

(iv) Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 1 MHz or greater. However, in the 1 MHz bands immediately outside and adjacent to the channel blocks at 2305 MHz, 2310 MHz, 2315 MHz, 2320 MHz, 2345 MHz, 2350 MHz, 2355 MHz, and 2360 MHz, a resolution bandwidth of at least 1 percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

For LTE Band 7:

According to FCC 47 CFR part 27.53(m)(4) regulations, any transmit power outside of the channel edge must be attenuated below the transmitting power (P) by a factor shall be not less than 40 + 10 log (P) dB on all frequencies between the channel edge and 5 megahertz from the channel edge, 43 + 10 log (P) dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and 55 + 10 log (P) dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth. In addition, the attenuation factor shall not be less that 43 + 10 log (P) dB on all frequencies between 2490.5 MHz and 2496 MHz and 55 + 10 log (P) dB at or below 2490.5 MHz. In the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least two percent may be employed, except when the 1 megahertz band is 2495-2496 MHz, in which case a resolution bandwidth of at least one percent may be employed.

5.6 Radiated Spurious Emissions below 1GHz

For LTE Band 2, LTE Band 5:

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB. The emission limit equal to –13 dBm.

For LTE Band 14:

According to FCC 47 CFR part 90.543 (e), for operations in the 758-768 MHz and the 788-798 MHz bands, the power of any emission outside the licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) in watts by at least 43 + 10 Log (P) dB.

According to FCC 47 CFR part 90.543 (f), for operations in the 758-775 MHz and 788-805 MHz bands, all emissions including harmonics in the band 1559-1610 MHz shall be limited to −70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals, and −80 dBW EIRP for discrete emissions of less than 700 Hz bandwidth.

For LTE Band 12:

According to FCC 47 CFR part 27.53(g), for operations in the 600 MHz band and the 698-746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least 43 + 10 log (P) dB. The limit of emissions is equal to -13 dBm.

For LTE Band 4, LTE Band 66:

According to FCC 47 CFR part 27.53(h), for operations in the 1695-1710 MHz, 1710-1755 MHz, 1755-1780 MHz bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least 43 + 10 log (P) dB. The limit of emission is equal to -13 dBm.

For LTE Band 30, LTE Band 40 (2.305 GHz ~ 2.315 GHz), LTE Band 40 (2.35 GHz ~ 2.36 GHz):

According to FCC 47 CFR part 27.53(a)(4)(ii)(iii), the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least 70 +10 log (P) dB. The limit of emission is equal to -40 dBm.

For LTE Band 7:

According to FCC 47 CFR part 27.53(m)(4), on any frequency outside a licensee’s frequency block, The power of any emission shall be attenuated below the transmitter power (P) by at least 55 + 10 log (P) dB. The emission limit equal to –25 dBm.

5.7 Radiated Spurious Emissions above 1GHz

For LTE Band 2, LTE Band 5:

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB. The emission limit equal to –13 dBm.

For LTE Band 14:

According to FCC 47 CFR part 90.543 (e), for operations in the 758-768 MHz and the 788-798 MHz bands, the power of any emission outside the licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) in watts by at least 43 + 10 Log (P) dB.

According to FCC 47 CFR part 90.543 (f), for operations in the 758-775 MHz and 788-805 MHz bands, all emissions including harmonics in the band 1559-1610 MHz shall be limited to −70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals, and −80 dBW EIRP for discrete emissions of less than 700 Hz bandwidth.

For LTE Band 12:

According to FCC 47 CFR part 27.53(g), for operations in the 600 MHz band and the 698-746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least 43 + 10 log (P) dB. The limit of emissions is equal to -13 dBm.

For LTE Band 4, LTE Band 66:

According to FCC 47 CFR part 27.53(h), for operations in the 1695-1710 MHz, 1710-1755 MHz, 1755-1780 MHz bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least 43 + 10 log (P) dB. The limit of emission is equal to -13 dBm.

For LTE Band 30, LTE Band 40 (2.305 GHz ~ 2.315 GHz), LTE Band 40 (2.35 GHz ~ 2.36 GHz):

According to FCC 47 CFR part 27.53(a)(4)(ii)(iii), the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least 70 +10 log (P) dB. The limit of emission is equal to -40 dBm.

For LTE Band 7:

According to FCC 47 CFR part 27.53(m)(4), on any frequency outside a licensee’s frequency block, The power of any emission shall be attenuated below the transmitter power (P) by at least 55 + 10 log (P) dB. The emission limit equal to –25 dBm.

5.8 Frequency Stability

For LTE Band 5:

1.5 ppm is for base and fixed station. 2.5 ppm is for mobile station.

For LTE Band 2, LTE Band 4, LTE Band 7, LTE Band 12, LTE Band 30, LTE Band 40 (2.305 GHz ~ 2.315 GHz), LTE Band 40 (2.35 GHz ~ 2.36 GHz), LTE Band 66:

The frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation (authorized frequency block).

For LTE Band 14:

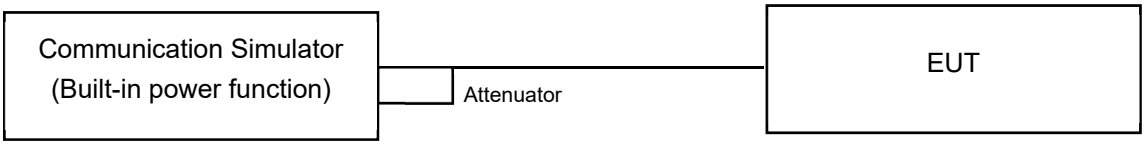
The frequency stability of mobile, portable and control transmitters operating in the wideband segment must be 1.25 parts per million or better when AFC is locked to a base station, and 5 parts per million or better when AFC is not locked.

6 Test Arrangements

6.1 Effective Radiated Power and Equivalent Isotropically Radiated Power

6.1.1 Test Setup

Conducted Power Measurement:



6.1.2 Test Procedure

Conducted Power Measurement:

The EUT is configured by emulator to set data modulation and maximum power using WWAN technology. The average (rms) power measurement was performed on emulator and power value was measured from power function on emulator. Set the EUT to transmit under low, middle and high channel and record the power level shown on simulator.
The EUT is configured by emulator to set data modulation and maximum power using WWAN technology and link to spectrum analyzer measurements. Set the EUT to transmit under low, middle and high channel and record the power level shown on spectrum analyzer. Power measurements use detector average (rms).

Maximum EIRP / ERP

The relevant equation for determining the maximum ERP or EIRP from the measured RF output power is given in Equation as follows:

$EIRP = P_{Meas} + G_T$

$ERP = P_{Meas} + G_T - 2.15$

where

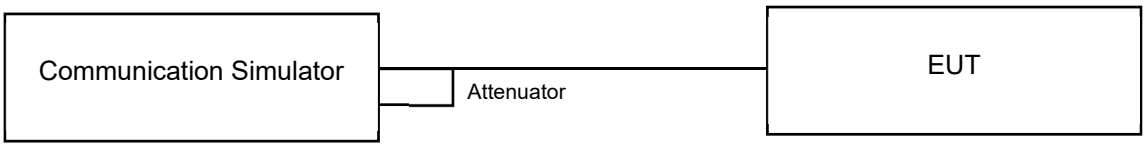
ERP or EIRP effective radiated power or equivalent isotropically radiated power, respectively (expressed in the same units as P_{Meas}, e.g., dBm or dBW)

P_{Meas} measured transmitter output power or PSD, in dBm or dBW

G_T gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP)

6.2 Modulation Characteristics

6.2.1 Test Setup

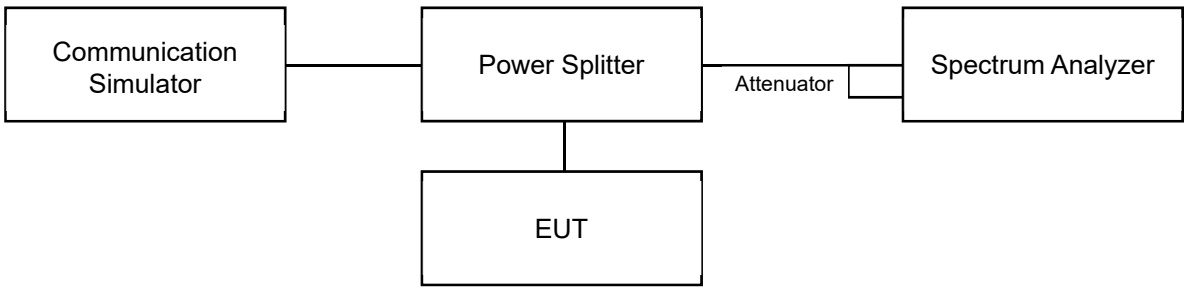


6.2.2 Test Procedure

Connect the EUT to Communication Simulator via the antenna connector, the frequency band is set as EUT supported Modulation and Channels, the EUT output is matched with 50 ohm load, the waveform quality and constellation of the EUT was tested.

6.3 Peak to Average Ratio

6.3.1 Test Setup

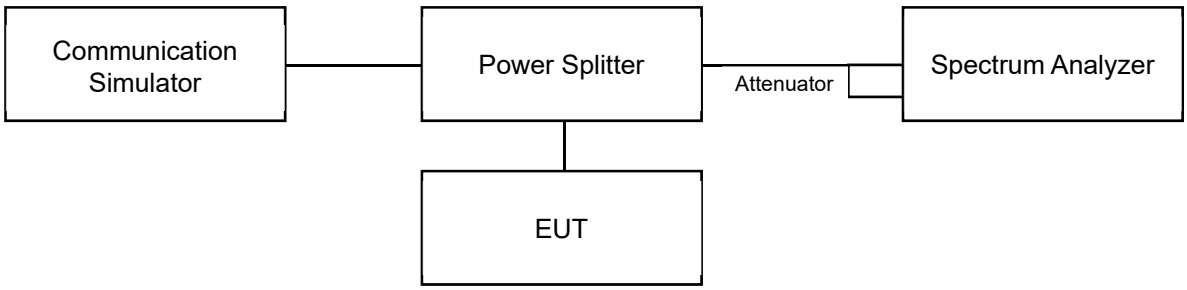


6.3.2 Test Procedure

a. Set resolution/measurement bandwidth ≥ signal's occupied bandwidth;
b. Set the number of counts to a value that stabilizes the measured CCDF curve;
c. Record the maximum PAPR level associated with a probability of 0.1%.

6.4 Bandwidth

6.4.1 Test Setup



6.4.2 Test Procedure

For the 26 dBc bandwidth measurement method, please refer to section 5.4.3 of ANSI C63.26.

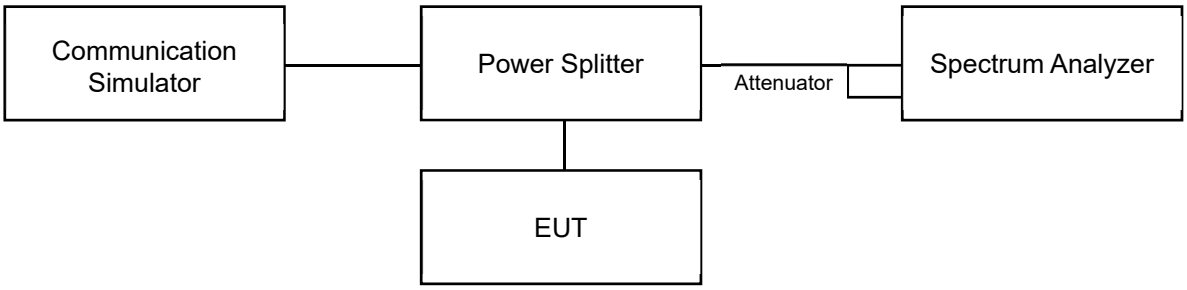
a. The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The span range for the spectrum analyzer shall be wide enough to see sufficient roll off of the signal to make the measurement.
b. The nominal RBW shall be in the range of 1% to 5% of the anticipated OBW, and the VBW shall be set ≥ 3 × RBW.
c. Set the reference level of the instrument as required to prevent the signal amplitude from exceeding the maximum spectrum analyzer input mixer level for linear operation. See guidance provided in 4.2.3.
d. The dynamic range of the spectrum analyzer at the selected RBW shall be more than 10 dB below the target "−X dB" requirement, i.e., if the requirement calls for measuring the −26 dB OBW, the spectrum analyzer noise floor at the selected RBW shall be at least 36 dB below the reference level.
e. Set spectrum analyzer detection mode to peak, and the trace mode to max hold.
f. Determine the following reference values: 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).
g. Determine the "−X dB amplitude" as equal to (Reference Value − X). Alternatively, this calculation can be performed on the spectrum analyzer using the delta-marker measurement function.
h. 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 amplitude" determined in step f). If a marker is below this "−X dB amplitude" value it should be as close as possible to this value. The OBW is the positive frequency difference between the two markers.
i. The OBW shall be reported by providing plot(s) of the measuring instrument display, to include markers depicting the relevant frequency and amplitude information (e.g., marker table). The frequency and amplitude axis and scale shall be clearly labeled. Tabular data may be reported in addition to the plot(s).

For the occupied bandwidth measurement method, please refer to section 5.4.4 of ANSI C63.26.

a. The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The span range for the spectrum analyzer shall be wide enough to see sufficient roll off of the signal to make the measurement.
b. The nominal RBW shall be in the range of 1% to 5% of the anticipated OBW, and the VBW shall be set ≥ 3 × RBW.
c. Set the reference level of the instrument as required to prevent the signal amplitude from exceeding the maximum spectrum analyzer input mixer level for linear operation. See guidance provided in 4.2.3.
d. The dynamic range of the spectrum analyzer at the selected RBW shall be more than 10 dB below the target "−X dB" requirement, i.e., if the requirement calls for measuring the −26 dB OBW, the spectrum analyzer noise floor at the selected RBW shall be at least 36 dB below the reference level.
e. Set spectrum analyzer detection mode to peak, and the trace mode to max hold.
f. Determine the reference value by either of the following:
g. 1) 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).
h. 2) Set the EUT to transmit an unmodulated carrier. Set the spectrum analyzer marker to the level of the carrier.
i. Determine the "−X dB amplitude" as equal to (Reference Value − X). Alternatively, this calculation can be performed on the spectrum analyzer using the delta-marker measurement function.
j. If the reference value was determined using an unmodulated carrier, turn the EUT modulation on, then either clear the existing trace or start a new trace on the spectrum analyzer and allow the new trace to stabilize. Otherwise the trace from step f) shall be used for step i).
k. 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 amplitude" determined in step f). If a marker is below this "−X dB amplitude" value it should be as close as possible to this value. The OBW is the positive frequency difference between the two markers. The spectral envelope can cross the "−X dB amplitude" at multiple points. The lowest or highest frequency shall be selected as the frequencies that are the farthest away from the center frequency at which the spectral envelope crosses the "−X dB amplitude."
l. The OBW shall be reported by providing plot(s) of the measuring instrument display, to include markers depicting the relevant frequency and amplitude information (e.g., marker table). The frequency and amplitude axis and scale shall be clearly labeled. Tabular data may be reported in addition to the plot(s).

6.5 Conducted Spurious Emissions

6.5.1 Test Setup



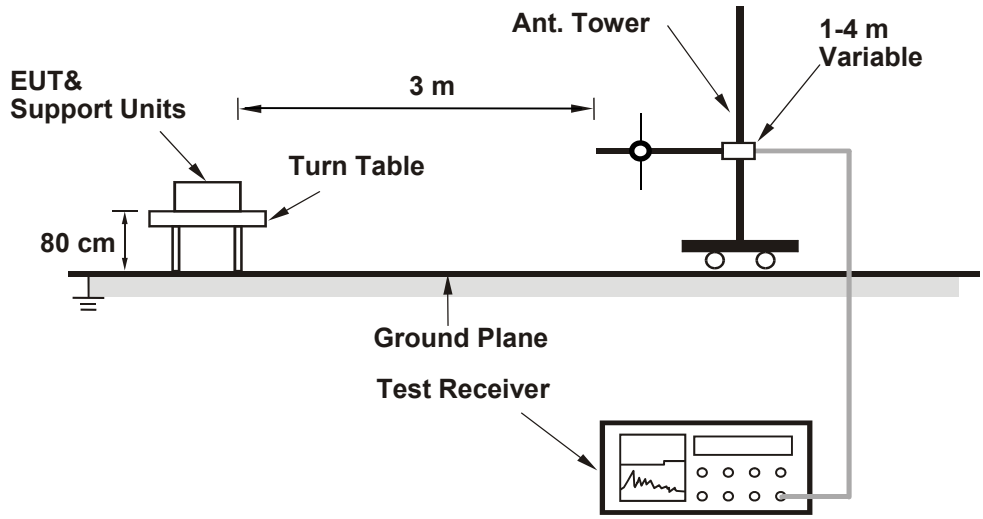
6.5.2 Test Procedure

a. Measurement refer to ANSI C63.26 section 5.7.
b. All measurements were done at 3 channels: low, middle and high operational frequency range.
c. Measuring frequency range is from 9 kHz up to the tenth harmonic of the hightest fundamental frequency or to 40 GHz, whichever is lower. 20 dB attenuation pad is connected with spectrum.
d. The fundamental frequency above 1 GHz, the spectrum set RBW = 1 MHz, VBW = 3 MHz, Detector = Average.
e. The fundamental frequency below 1 GHz, the spectrum set RBW ≥ 100 kHz, VBW ≥ 3 x RBW, Detector = Average.
f. Measuring frequency band edge, narrow RBW (no less than 1% of the OBW) is used for conducted emission measurement.
g. For the emissions measurement method, certain channel BW modes demonstrate compliance by integrating with the smaller RBW allowed by the rule.
h. e.g. Where Reference RBW = 1 MHz and a smaller RBW = 100 kHz is used, worst-case integrated BW power = [Max Measured Value (dBm) with RBW = 100 kHz] + 10* log(1000/100). To compensate for this integration before comparison to the limit, the limit line was reduced by 10 dB accordingly.
i. Record the maximum power value test plot.

6.6 Radiated Spurious Emissions below 1GHz

6.6.1 Test Setup

For radiated emission 30 MHz to 1 GHz



For the actual test configuration, please refer to the attached file (Test Setup Photo).

6.6.2 Test Procedure

The EUT is configured by emulator to set data modulation and maximum power using WWAN technology.

a. In the semi-anechoic chamber, EUT placed on the 0.8 m (below or equal 1 GHz) height of turn table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1 m to 4 m to find the maximum polar radiated power. The “Read Value” is the spectrum reading the maximum power value.

b. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

c. Perform a field strength measurement and record the worse read value, is the field strength value via a spectrum reading obtained corrected for antenna factor, cable loss and pre-amplifier factor and then mathematically convert the measured field strength level to EIRP/ERP level.

d. Following ANSI C63.26 section 5.5 and 5.2.7

e. EIRP (dBm) = E (dBμV/m) + 20log(D) - 104.8; where D is the measurement distance (in the far field region) in m.

f. ERP (dBm) = E (dBμV/m) + 20log(D) - 104.8 - 2.15; where D is the measurement distance (in the far field region) in m.

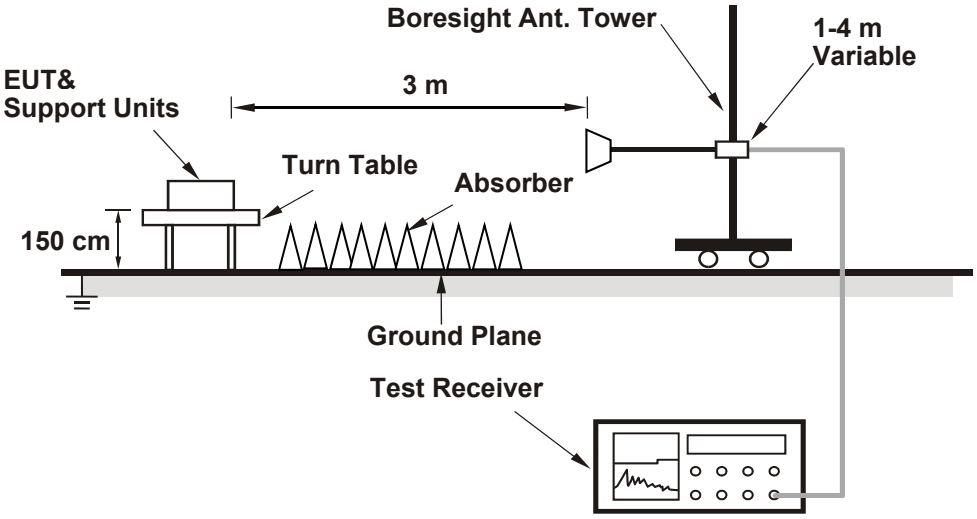
Note:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1 MHz/3 MHz. Set detector = average.

6.7 Radiated Spurious Emissions above 1GHz

6.7.1 Test Setup

For radiated emission above 1 GHz



For the actual test configuration, please refer to the attached file (Test Setup Photo).

6.7.2 Test Procedure

The EUT is configured by emulator to set data modulation and maximum power using WWAN technology.

a. In the semi-anechoic chamber, EUT placed on the 1.5 m height of turn table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1 m to 4 m to find the maximum polar radiated power. The “Read Value” is the spectrum reading the maximum power value.

b. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

c. Perform a field strength measurement and record the worse read value, is the field strength value via a spectrum reading obtained corrected for antenna factor, cable loss and pre-amplifier factor and then mathematically convert the measured field strength level to EIRP/ERP level.

d. Following ANSI C63.26 section 5.5 and 5.2.7

e. EIRP (dBm) = E (dBμV/m) + 20log(D) - 104.8; where D is the measurement distance (in the far field region) in m.

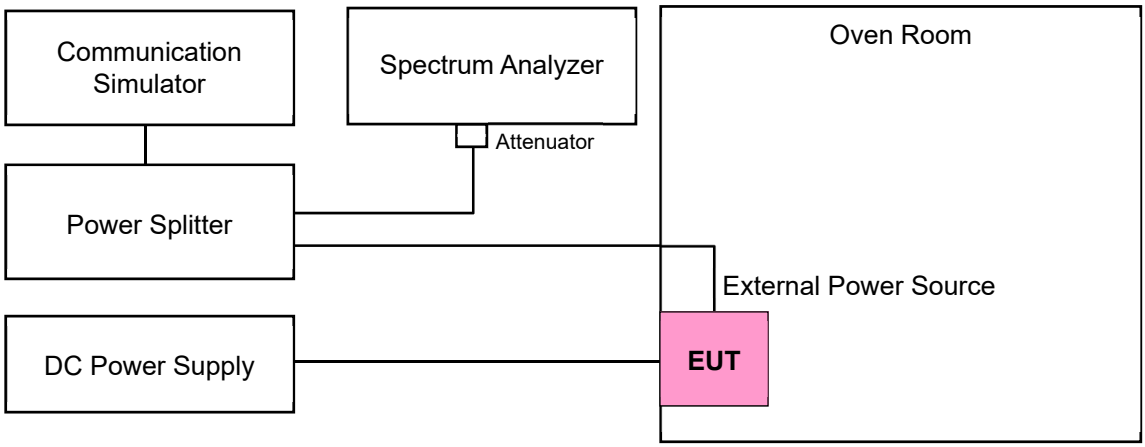
f. ERP (dBm) = E (dBμV/m) + 20log(D) - 104.8 - 2.15; where D is the measurement distance (in the far field region) in m.

Note:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1 MHz/3 MHz. Set detector = average.

6.8 Frequency Stability

6.8.1 Test Setup



6.8.2 Test Procedure

The EUT is configured by emulator to set data modulation and maximum power using WWAN technology.

a. Device is placed at the oven room. The oven room could control the temperatures and humidity. Power warm up is at least 15 min and power applied should perform before recording frequency error.

b. EUT is connected the external power supply to control the DC input power. The test voltage range is from minimum to maximum working voltage. Each step shall be record the frequency error rate.

c. The temperature range step is 10 degrees in this test items. All temperature levels shall be hold the ±0.5℃ during the measurement testing. The each temperature step shall be at least 0.5 hours, consider the EUT could be test under the stability condition.

Note: The frequency error was recorded frequency error from the communication simulator.

7 Test Results of Test Item

7.1 Effective Radiated Power and Equivalent Isotropically Radiated Power

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	22°C, 68% RH	Tested By:	Willy Cheng

7.1.1 LTE Band 2

LTE Band 2, Channel Bandwidth: 1.4 MHz

Modulation	RB Size	RB Offset	Measurement Conducted Power (dBm)		
			CH 18607	CH 18900	CH 19193
			1850.7 MHz	1880 MHz	1909.3 MHz
QPSK	1	0	23.44	23.3	23.16
	1	2	23.28	23.1	23
	1	5	23.44	23.28	23.15
	3	0	23.4	23.22	23.13
	3	1	23.37	23.21	23.09
	3	3	23.35	23.14	23.08
	6	0	22.4	22.19	22.22
16QAM	1	0	22.55	22.43	22.28
	1	2	22.49	22.33	22.35
	1	5	22.54	22.39	22.27
	3	0	21.52	21.34	21.17
	3	1	21.49	21.37	21.28
	3	3	21.26	21.05	21.04
	6	0	21.44	21.21	21.17
64QAM	1	0	21.63	21.36	21.33
	1	2	21.54	21.41	21.13
	1	5	21.41	21.18	21.2
	3	0	20.94	20.74	20.63
	3	1	20.91	20.81	20.56
	3	3	20.84	20.63	20.53
	6	0	20.89	20.71	20.63
256QAM	1	0	18.61	18.44	18.28
	1	2	18.62	18.47	18.34
	1	5	18.52	18.39	18.33
	3	0	18.54	18.35	18.29
	3	1	18.44	18.28	18.15
	3	3	18.55	18.4	18.29
	6	0	18.18	18.11	17.94

Maximum Output Power			
Modulation	Cond. Power (dBm)	EIRP (dBm)	EIRP Limit (dBm)
QPSK	23.44	26.69	33
16QAM	22.55	25.8	33
64QAM	21.63	24.88	33
256QAM	18.62	21.87	33

Note: EIRP (dBm) = Cond. Power (dBm) + Antenna Gain (dBi) + Array Gain (if applicable)

LTE Band 2, Channel Bandwidth: 3 MHz

Modulation	RB Size	RB Offset	Measurement Conducted Power (dBm)		
			CH 18615	CH 18900	CH 19185
			1851.5 MHz	1880 MHz	1908.5 MHz
QPSK	1	0	23.4	23.34	23.26
	1	7	23.28	23.07	22.96
	1	14	23.42	23.28	23.12
	8	0	22.47	22.28	22.29
	8	3	22.45	22.19	22.18
	8	7	22.35	22.14	21.99
	15	0	22.41	22.21	22.21
16QAM	1	0	22.61	22.4	22.27
	1	7	22.52	22.35	22.31
	1	14	22.51	22.42	22.29
	8	0	21.46	21.3	21.21
	8	3	21.46	21.37	21.27
	8	7	21.28	21.07	21.1
	15	0	21.46	21.21	21.09
64QAM	1	0	21.67	21.4	21.33
	1	7	21.53	21.39	21.17
	1	14	21.46	21.22	21.13
	8	0	20.93	20.72	20.64
	8	3	20.92	20.74	20.63
	8	7	20.79	20.59	20.52
	15	0	20.88	20.67	20.69
256QAM	1	0	18.56	18.44	18.28
	1	7	18.61	18.48	18.4
	1	14	18.54	18.39	18.31
	8	0	18.46	18.32	18.26
	8	3	18.46	18.3	18.14
	8	7	18.55	18.45	18.28
	15	0	18.18	18.07	17.89

Maximum Output Power			
Modulation	Cond. Power (dBm)	EIRP (dBm)	EIRP Limit (dBm)
QPSK	23.42	26.67	33
16QAM	22.61	25.86	33
64QAM	21.67	24.92	33
256QAM	18.61	21.86	33

Note: EIRP (dBm) = Cond. Power (dBm) + Antenna Gain (dBi) + Array Gain (if applicable)

LTE Band 2, Channel Bandwidth: 5 MHz

Modulation	RB Size	RB Offset	Measurement Conducted Power (dBm)		
			CH 18625	CH 18900	CH 19175
			1852.5 MHz	1880 MHz	1907.5 MHz
QPSK	1	0	23.45	23.3	23.19
	1	12	23.34	23.06	23
	1	24	23.39	23.21	23.11
	12	0	22.49	22.23	22.24
	12	6	22.41	22.26	22.17
	12	13	22.28	22.13	22.05
	25	0	22.46	22.22	22.24
16QAM	1	0	22.62	22.46	22.34
	1	12	22.59	22.29	22.37
	1	24	22.52	22.41	22.26
	12	0	21.49	21.25	21.16
	12	6	21.52	21.39	21.25
	12	13	21.32	21.11	21.02
	25	0	21.4	21.26	21.13
64QAM	1	0	21.63	21.43	21.37
	1	12	21.49	21.32	21.17
	1	24	21.45	21.23	21.22
	12	0	20.92	20.74	20.63
	12	6	20.95	20.73	20.53
	12	13	20.87	20.68	20.58
	25	0	20.89	20.75	20.69
256QAM	1	0	18.54	18.46	18.26
	1	12	18.63	18.47	18.33
	1	24	18.52	18.34	18.34
	12	0	18.51	18.32	18.22
	12	6	18.41	18.31	18.15
	12	13	18.53	18.45	18.26
	25	0	18.16	18.08	17.89

Maximum Output Power			
Modulation	Cond. Power (dBm)	EIRP (dBm)	EIRP Limit (dBm)
QPSK	23.45	26.7	33
16QAM	22.62	25.87	33
64QAM	21.63	24.88	33
256QAM	18.63	21.88	33

Note: EIRP (dBm) = Cond. Power (dBm) + Antenna Gain (dBi) + Array Gain (if applicable)

LTE Band 2, Channel Bandwidth: 10 MHz

Modulation	RB Size	RB Offset	Measurement Conducted Power (dBm)		
			CH 18650	CH 18900	CH 19150
			1855 MHz	1880 MHz	1905 MHz
QPSK	1	0	23.41	23.29	23.25
	1	24	23.26	23.1	23.04
	1	49	23.43	23.29	23.12
	25	0	22.51	22.28	22.23
	25	12	22.46	22.17	22.18
	25	25	22.36	22.07	21.99
	50	0	22.43	22.16	22.2
16QAM	1	0	22.55	22.42	22.25
	1	24	22.59	22.31	22.37
	1	49	22.56	22.36	22.24
	25	0	21.51	21.34	21.16
	25	12	21.47	21.37	21.27
	25	25	21.25	21.12	21.03
	50	0	21.42	21.27	21.15
64QAM	1	0	21.59	21.45	21.35
	1	24	21.53	21.4	21.13
	1	49	21.42	21.18	21.17
	25	0	20.93	20.81	20.67
	25	12	20.93	20.72	20.54
	25	25	20.77	20.59	20.59
	50	0	20.92	20.72	20.64
256QAM	1	0	18.56	18.37	18.28
	1	24	18.56	18.39	18.38
	1	49	18.48	18.34	18.35
	25	0	18.52	18.32	18.29
	25	12	18.38	18.3	18.17
	25	25	18.54	18.4	18.3
	50	0	18.19	18.1	17.9

Maximum Output Power			
Modulation	Cond. Power (dBm)	EIRP (dBm)	EIRP Limit (dBm)
QPSK	23.43	26.68	33
16QAM	22.59	25.84	33
64QAM	21.59	24.84	33
256QAM	18.56	21.81	33

Note: EIRP (dBm) = Cond. Power (dBm) + Antenna Gain (dBi) + Array Gain (if applicable)

LTE Band 2, Channel Bandwidth: 15 MHz

Modulation	RB Size	RB Offset	Measurement Conducted Power (dBm)		
			CH 18675	CH 18900	CH 19125
			1857.5 MHz	1880 MHz	1902.5 MHz
QPSK	1	0	23.41	23.29	23.25
	1	37	23.27	23.04	23.04
	1	74	23.39	23.23	23.15
	36	0	22.54	22.3	22.25
	36	19	22.47	22.24	22.19
	36	39	22.31	22.13	22.06
	75	0	22.43	22.24	22.2
16QAM	1	0	22.58	22.36	22.25
	1	37	22.59	22.3	22.31
	1	74	22.56	22.41	22.34
	36	0	21.47	21.27	21.24
	36	19	21.49	21.35	21.21
	36	39	21.26	21.15	21.05
	75	0	21.42	21.28	21.12
64QAM	1	0	21.65	21.39	21.31
	1	37	21.55	21.35	21.2
	1	74	21.45	21.19	21.14
	36	0	20.87	20.8	20.63
	36	19	20.93	20.79	20.53
	36	39	20.79	20.65	20.55
	75	0	20.93	20.76	20.61
256QAM	1	0	18.54	18.46	18.29
	1	37	18.6	18.46	18.36
	1	74	18.52	18.36	18.3
	36	0	18.55	18.3	18.28
	36	19	18.42	18.34	18.17
	36	39	18.56	18.4	18.3
	75	0	18.17	18.05	17.98

Maximum Output Power			
Modulation	Cond. Power (dBm)	EIRP (dBm)	EIRP Limit (dBm)
QPSK	23.41	26.66	33
16QAM	22.59	25.84	33
64QAM	21.65	24.9	33
256QAM	18.6	21.85	33

Note: EIRP (dBm) = Cond. Power (dBm) + Antenna Gain (dBi) + Array Gain (if applicable)

LTE Band 2, Channel Bandwidth: 20 MHz

Modulation	RB Size	RB Offset	Measurement Conducted Power (dBm)		
			CH 18700	CH 18900	CH 19100
			1860 MHz	1880 MHz	1900 MHz
QPSK	1	0	23.5	23.37	23.28
	1	50	23.37	23.14	23.06
	1	99	23.49	23.31	23.19
	50	0	22.57	22.35	22.31
	50	25	22.51	22.28	22.22
	50	50	22.39	22.17	22.1
	100	0	22.49	22.28	22.26
16QAM	1	0	22.64	22.48	22.36
	1	50	22.61	22.38	22.39
	1	99	22.59	22.44	22.36
	50	0	21.55	21.37	21.27
	50	25	21.57	21.44	21.33
	50	50	21.37	21.17	21.14
	100	0	21.48	21.3	21.2
64QAM	1	0	21.69	21.48	21.43
	1	50	21.57	21.43	21.25
	1	99	21.5	21.27	21.24
	50	0	20.99	20.83	20.71
	50	25	20.97	20.83	20.65
	50	50	20.89	20.7	20.63
	100	0	20.95	20.78	20.71
256QAM	1	0	18.65	18.49	18.35
	1	50	18.67	18.51	18.45
	1	99	18.6	18.46	18.37
	50	0	18.58	18.38	18.34
	50	25	18.5	18.36	18.23
	50	50	18.64	18.47	18.37
	100	0	18.27	18.14	18.01

Maximum Output Power			
Modulation	Cond. Power (dBm)	EIRP (dBm)	EIRP Limit (dBm)
QPSK	23.5	26.75	33
16QAM	22.64	25.89	33
64QAM	21.69	24.94	33
256QAM	18.67	21.92	33

Note: EIRP (dBm) = Cond. Power (dBm) + Antenna Gain (dBi) + Array Gain (if applicable)

7.1.2 LTE Band 4

LTE Band 4, Channel Bandwidth: 1.4 MHz

Modulation	RB Size	RB Offset	Measurement Conducted Power (dBm)		
			CH 19957	CH 20175	CH 20393
			1710.7 MHz	1732.5 MHz	1754.3 MHz
QPSK	1	0	23.19	23.42	23.33
	1	2	23.15	23.26	23.19
	1	5	23.12	23.28	23.19
	3	0	23.18	23.39	23.32
	3	1	23.09	23.31	23.21
	3	3	23.13	23.27	23.19
	6	0	22.25	22.45	22.29
16QAM	1	0	22.23	22.46	22.28
	1	2	22.29	22.49	22.33
	1	5	22.07	22.41	22.31
	3	0	21.22	21.36	21.25
	3	1	21.06	21.23	21.02
	3	3	21.14	21.44	21.25
	6	0	21.15	21.31	21.15
64QAM	1	0	21.08	21.3	21.18
	1	2	21.08	21.27	21.15
	1	5	21.1	21.39	21.17
	3	0	20.58	20.8	20.68
	3	1	20.41	20.68	20.54
	3	3	20.34	20.59	20.53
	6	0	20.45	20.71	20.62
256QAM	1	0	18.21	18.45	18.19
	1	2	18.31	18.46	18.27
	1	5	18.09	18.33	18.19
	3	0	18.02	18.16	18.07
	3	1	18.02	18.3	18.07
	3	3	18.04	18.2	18.03
	6	0	18.1	18.32	18.19

Maximum Output Power			
Modulation	Cond. Power (dBm)	EIRP (dBm)	EIRP Limit (dBm)
QPSK	23.42	26.51	30
16QAM	22.49	25.58	30
64QAM	21.39	24.48	30
256QAM	18.46	21.55	30

Note: EIRP (dBm) = Cond. Power (dBm) + Antenna Gain (dBi) + Array Gain (if applicable)

LTE Band 4, Channel Bandwidth: 3 MHz

Modulation	RB Size	RB Offset	Measurement Conducted Power (dBm)		
			CH 19965	CH 20175	CH 20385
			1711.5 MHz	1732.5 MHz	1753.5 MHz
QPSK	1	0	23.23	23.42	23.27
	1	7	23.11	23.27	23.16
	1	14	23.14	23.22	23.19
	8	0	22.32	22.5	22.37
	8	3	22.16	22.44	22.29
	8	7	22.28	22.48	22.38
	15	0	22.31	22.48	22.29
16QAM	1	0	22.2	22.39	22.35
	1	7	22.21	22.46	22.39
	1	14	22.12	22.33	22.31
	8	0	21.17	21.33	21.28
	8	3	21.04	21.19	21.01
	8	7	21.17	21.37	21.28
	15	0	21.09	21.33	21.19
64QAM	1	0	21.06	21.29	21.2
	1	7	21.12	21.28	21.12
	1	14	21.16	21.38	21.13
	8	0	20.58	20.85	20.76
	8	3	20.44	20.65	20.52
	8	7	20.32	20.66	20.49
	15	0	20.45	20.67	20.56
256QAM	1	0	18.18	18.39	18.22
	1	7	18.3	18.43	18.3
	1	14	18.09	18.31	18.22
	8	0	17.96	18.15	18.09
	8	3	17.99	18.31	18.05
	8	7	18.02	18.17	18
	15	0	18.05	18.27	18.16

Maximum Output Power			
Modulation	Cond. Power (dBm)	EIRP (dBm)	EIRP Limit (dBm)
QPSK	23.42	26.51	30
16QAM	22.46	25.55	30
64QAM	21.38	24.47	30
256QAM	18.43	21.52	30

Note: EIRP (dBm) = Cond. Power (dBm) + Antenna Gain (dBi) + Array Gain (if applicable)

LTE Band 4, Channel Bandwidth: 5 MHz

Modulation	RB Size	RB Offset	Measurement Conducted Power (dBm)		
			CH 19975	CH 20175	CH 20375
			1712.5 MHz	1732.5 MHz	1752.5 MHz
QPSK	1	0	23.22	23.33	23.32
	1	12	23.12	23.28	23.21
	1	24	23.04	23.23	23.2
	12	0	22.31	22.58	22.39
	12	6	22.19	22.42	22.26
	12	13	22.26	22.55	22.32
	25	0	22.26	22.47	22.24
16QAM	1	0	22.22	22.43	22.3
	1	12	22.22	22.45	22.35
	1	24	22.07	22.41	22.27
	12	0	21.24	21.4	21.23
	12	6	21.04	21.17	20.98
	12	13	21.17	21.45	21.21
	25	0	21.1	21.29	21.17
64QAM	1	0	21.08	21.34	21.23
	1	12	21.08	21.28	21.15
	1	24	21.2	21.36	21.14
	12	0	20.59	20.84	20.75
	12	6	20.39	20.65	20.58
	12	13	20.35	20.65	20.56
	25	0	20.49	20.72	20.6
256QAM	1	0	18.22	18.45	18.21
	1	12	18.29	18.44	18.28
	1	24	18.15	18.31	18.21
	12	0	18	18.16	18.13
	12	6	18.04	18.29	18.1
	12	13	18.01	18.15	18.01
	25	0	18.13	18.31	18.16

Maximum Output Power			
Modulation	Cond. Power (dBm)	EIRP (dBm)	EIRP Limit (dBm)
QPSK	23.33	26.42	30
16QAM	22.45	25.54	30
64QAM	21.36	24.45	30
256QAM	18.45	21.54	30

Note: EIRP (dBm) = Cond. Power (dBm) + Antenna Gain (dBi) + Array Gain (if applicable)

LTE Band 4, Channel Bandwidth: 10 MHz

Modulation	RB Size	RB Offset	Measurement Conducted Power (dBm)		
			CH 20000	CH 20175	CH 20350
			1715 MHz	1732.5 MHz	1750 MHz
QPSK	1	0	23.25	23.36	23.28
	1	24	23.19	23.31	23.21
	1	49	23.06	23.25	23.14
	25	0	22.26	22.56	22.42
	25	12	22.2	22.37	22.35
	25	25	22.3	22.55	22.38
	50	0	22.34	22.46	22.32
16QAM	1	0	22.16	22.47	22.33
	1	24	22.25	22.53	22.33
	1	49	22.1	22.32	22.26
	25	0	21.24	21.37	21.21
	25	12	20.99	21.16	20.97
	25	25	21.18	21.41	21.22
	50	0	21.12	21.37	21.12
64QAM	1	0	21.06	21.34	21.16
	1	24	21.16	21.36	21.12
	1	49	21.15	21.36	21.18
	25	0	20.6	20.77	20.74
	25	12	20.47	20.65	20.61
	25	25	20.39	20.61	20.48
	50	0	20.43	20.63	20.6
256QAM	1	0	18.18	18.47	18.29
	1	24	18.29	18.46	18.2
	1	49	18.14	18.41	18.18
	25	0	18.04	18.2	18.09
	25	12	18.07	18.29	18.14
	25	25	17.98	18.17	17.99
	50	0	18.08	18.31	18.17

Maximum Output Power			
Modulation	Cond. Power (dBm)	EIRP (dBm)	EIRP Limit (dBm)
QPSK	23.36	26.45	30
16QAM	22.53	25.62	30
64QAM	21.36	24.45	30
256QAM	18.47	21.56	30

Note: EIRP (dBm) = Cond. Power (dBm) + Antenna Gain (dBi) + Array Gain (if applicable)

LTE Band 4, Channel Bandwidth: 15 MHz

Modulation	RB Size	RB Offset	Measurement Conducted Power (dBm)		
			CH 20025	CH 20175	CH 20325
			1717.5 MHz	1732.5 MHz	1747.5 MHz
QPSK	1	0	23.21	23.4	23.26
	1	37	23.19	23.35	23.21
	1	74	23.05	23.25	23.18
	36	0	22.29	22.5	22.4
	36	19	22.24	22.44	22.26
	36	39	22.31	22.55	22.35
	75	0	22.28	22.42	22.32
16QAM	1	0	22.19	22.45	22.31
	1	37	22.21	22.46	22.38
	1	74	22.1	22.39	22.26
	36	0	21.23	21.33	21.23
	36	19	21.06	21.21	21.05
	36	39	21.21	21.42	21.27
	75	0	21.12	21.32	21.18
64QAM	1	0	21.13	21.27	21.17
	1	37	21.15	21.34	21.14
	1	74	21.13	21.39	21.11
	36	0	20.61	20.85	20.69
	36	19	20.4	20.66	20.57
	36	39	20.33	20.69	20.51
	75	0	20.45	20.66	20.6
256QAM	1	0	18.24	18.39	18.26
	1	37	18.3	18.46	18.22
	1	74	18.13	18.31	18.19
	36	0	18.02	18.17	18.09
	36	19	17.99	18.28	18.14
	36	39	18	18.16	17.98
	75	0	18.04	18.24	18.17

Maximum Output Power			
Modulation	Cond. Power (dBm)	EIRP (dBm)	EIRP Limit (dBm)
QPSK	23.4	26.49	30
16QAM	22.46	25.55	30
64QAM	21.39	24.48	30
256QAM	18.46	21.55	30

Note: EIRP (dBm) = Cond. Power (dBm) + Antenna Gain (dBi) + Array Gain (if applicable)

LTE Band 4, Channel Bandwidth: 20 MHz

Modulation	RB Size	RB Offset	Measurement Conducted Power (dBm)		
			CH 20050	CH 20175	CH 20300
			1720 MHz	1732.5 MHz	1745 MHz
QPSK	1	0	23.28	23.45	23.36
	1	50	23.21	23.38	23.24
	1	99	23.16	23.33	23.22
	50	0	22.38	22.6	22.47
	50	25	22.26	22.47	22.38
	50	50	22.36	22.58	22.44
	100	0	22.36	22.53	22.34
16QAM	1	0	22.26	22.49	22.39
	1	50	22.31	22.57	22.45
	1	99	22.18	22.44	22.35
	50	0	21.26	21.43	21.31
	50	25	21.08	21.26	21.08
	50	50	21.23	21.48	21.32
	100	0	21.18	21.4	21.24
64QAM	1	0	21.15	21.38	21.25
	1	50	21.18	21.38	21.24
	1	99	21.22	21.41	21.23
	50	0	20.67	20.87	20.78
	50	25	20.51	20.74	20.64
	50	50	20.44	20.71	20.6
	100	0	20.51	20.75	20.66
256QAM	1	0	18.29	18.49	18.31
	1	50	18.34	18.51	18.32
	1	99	18.18	18.43	18.24
	50	0	18.06	18.25	18.16
	50	25	18.09	18.36	18.17
	50	50	18.09	18.27	18.09
	100	0	18.16	18.35	18.23

Maximum Output Power			
Modulation	Cond. Power (dBm)	EIRP (dBm)	EIRP Limit (dBm)
QPSK	23.45	26.54	30
16QAM	22.57	25.66	30
64QAM	21.41	24.50	30
256QAM	18.51	21.60	30

Note: EIRP (dBm) = Cond. Power (dBm) + Antenna Gain (dBi) + Array Gain (if applicable)

7.1.3 LTE Band 5

LTE Band 5, Channel Bandwidth: 1.4 MHz

Modulation	RB Size	RB Offset	Measurement Conducted Power (dBm)		
			CH 20407	CH 20525	CH 20643
			824.7 MHz	836.5 MHz	848.3 MHz
QPSK	1	0	23.75	23.63	23.4
	1	2	23.75	23.69	23.45
	1	5	23.75	23.48	23.47
	3	0	23.42	23.44	23.37
	3	1	23.53	23.38	23.38
	3	3	23.35	23.31	23.34
	6	0	22.38	22.3	22.31
16QAM	1	0	22.6	22.17	22.15
	1	2	22.42	22.31	22.16
	1	5	22.37	22.12	22.22
	3	0	22.32	22.17	22.04
	3	1	22.34	22.27	22.12
	3	3	22.24	21.92	22.03
	6	0	21.25	21.11	20.99
64QAM	1	0	21.47	21.39	21.39
	1	2	21.34	21.36	21.09
	1	5	21.42	20.95	21.11
	3	0	21.83	21.59	21.52
	3	1	21.9	21.66	21.51
	3	3	21.78	21.57	21.35
	6	0	20.84	20.62	20.54
256QAM	1	0	18.46	18.37	18.13
	1	2	18.5	18.3	18.34
	1	5	18.45	18.21	18.21
	3	0	18.41	18.24	18.13
	3	1	18.33	18.23	18.07
	3	3	18.6	18.24	18.23
	6	0	18.01	18.07	17.78

Maximum Output Power			
Modulation	Cond. Power (dBm)	ERP (dBm)	ERP Limit (dBm)
QPSK	23.75	21.02	38.5
16QAM	22.60	19.87	38.5
64QAM	21.90	19.17	38.5
256QAM	18.60	15.87	38.5

Note: EIRP (dBm) = Cond. Power (dBm) + Antenna Gain (dBi) + Array Gain (if applicable)
ERP (dBm) = EIRP (dBm) - 2.15

LTE Band 5, Channel Bandwidth: 3 MHz

Modulation	RB Size	RB Offset	Measurement Conducted Power (dBm)		
			CH 20415	CH 20525	CH 20635
			825.5 MHz	836.5 MHz	847.5 MHz
QPSK	1	0	23.77	23.79	23.55
	1	7	23.74	23.73	23.49
	1	14	23.71	23.66	23.45
	8	0	22.62	22.48	22.41
	8	3	22.53	22.44	22.4
	8	7	22.56	22.47	22.36
	15	0	22.53	22.45	22.3
16QAM	1	0	22.62	22.35	22.25
	1	7	22.5	22.24	22.23
	1	14	22.45	22.31	22.3
	8	0	21.43	21.23	21.13
	8	3	21.46	21.33	21.28
	8	7	21.24	21.07	21.08
	15	0	21.31	21.15	21.09
64QAM	1	0	21.63	21.46	21.39
	1	7	21.51	21.33	21.09
	1	14	21.45	21.1	21.13
	8	0	20.88	20.67	20.66
	8	3	20.88	20.72	20.52
	8	7	20.77	20.66	20.5
	15	0	20.88	20.64	20.57
256QAM	1	0	18.56	18.37	18.29
	1	7	18.65	18.39	18.31
	1	14	18.46	18.39	18.24
	8	0	18.45	18.35	18.16
	8	3	18.44	18.31	18.12
	8	7	18.59	18.4	18.29
	15	0	18.17	18.02	17.87

Maximum Output Power			
Modulation	Cond. Power (dBm)	ERP (dBm)	ERP Limit (dBm)
QPSK	23.79	21.06	38.5
16QAM	22.62	19.89	38.5
64QAM	21.63	18.90	38.5
256QAM	18.65	15.92	38.5

Note: EIRP (dBm) = Cond. Power (dBm) + Antenna Gain (dBi) + Array Gain (if applicable)
ERP (dBm) = EIRP (dBm) - 2.15

LTE Band 5, Channel Bandwidth: 5 MHz

Modulation	RB Size	RB Offset	Measurement Conducted Power (dBm)		
			CH 20425	CH 20525	CH 20625
			826.5 MHz	836.5 MHz	846.5 MHz
QPSK	1	0	23.79	23.76	23.53
	1	12	23.78	23.66	23.56
	1	24	23.78	23.68	23.45
	12	0	22.58	22.47	22.42
	12	6	22.51	22.48	22.42
	12	13	22.52	22.48	22.37
	25	0	22.52	22.41	22.39
16QAM	1	0	22.62	22.3	22.29
	1	12	22.42	22.25	22.21
	1	24	22.5	22.29	22.25
	12	0	21.44	21.2	21.09
	12	6	21.53	21.34	21.26
	12	13	21.28	21.13	21.05
	25	0	21.31	21.18	21.1
64QAM	1	0	21.63	21.46	21.37
	1	12	21.46	21.4	21.06
	1	24	21.48	21.18	21.19
	12	0	20.84	20.67	20.61
	12	6	20.88	20.72	20.51
	12	13	20.75	20.66	20.5
	25	0	20.91	20.65	20.52
256QAM	1	0	18.64	18.43	18.25
	1	12	18.61	18.46	18.3
	1	24	18.51	18.34	18.33
	12	0	18.43	18.34	18.23
	12	6	18.47	18.31	18.22
	12	13	18.53	18.37	18.31
	25	0	18.2	18.03	17.85

Maximum Output Power			
Modulation	Cond. Power (dBm)	ERP (dBm)	ERP Limit (dBm)
QPSK	23.79	21.06	38.5
16QAM	22.62	19.89	38.5
64QAM	21.63	18.90	38.5
256QAM	18.64	15.91	38.5

Note: EIRP (dBm) = Cond. Power (dBm) + Antenna Gain (dBi) + Array Gain (if applicable)
ERP (dBm) = EIRP (dBm) - 2.15

LTE Band 5, Channel Bandwidth: 10 MHz

Modulation	RB Size	RB Offset	Measurement Conducted Power (dBm)		
			CH 20450	CH 20525	CH 20600
			829 MHz	836.5 MHz	844 MHz
QPSK	1	0	23.86	23.79	23.62
	1	24	23.83	23.74	23.58
	1	49	23.81	23.71	23.51
	25	0	22.63	22.55	22.46
	25	12	22.61	22.51	22.44
	25	25	22.59	22.49	22.41
	50	0	22.58	22.45	22.39
16QAM	1	0	22.64	22.39	22.32
	1	24	22.52	22.34	22.3
	1	49	22.53	22.35	22.35
	25	0	21.53	21.3	21.17
	25	12	21.54	21.41	21.28
	25	25	21.31	21.17	21.1
	50	0	21.41	21.22	21.19
64QAM	1	0	21.65	21.47	21.39
	1	24	21.54	21.4	21.15
	1	49	21.5	21.18	21.22
	25	0	20.92	20.77	20.67
	25	12	20.96	20.79	20.61
	25	25	20.85	20.66	20.59
	50	0	20.92	20.7	20.62
256QAM	1	0	18.65	18.46	18.3
	1	24	18.65	18.49	18.4
	1	49	18.55	18.42	18.33
	25	0	18.49	18.38	18.24
	25	12	18.47	18.32	18.22
	25	25	18.63	18.41	18.37
	50	0	18.21	18.12	17.91

Maximum Output Power			
Modulation	Cond. Power (dBm)	ERP (dBm)	ERP Limit (dBm)
QPSK	23.86	21.13	38.5
16QAM	22.64	19.91	38.5
64QAM	21.65	18.92	38.5
256QAM	18.65	15.92	38.5

Note: EIRP (dBm) = Cond. Power (dBm) + Antenna Gain (dBi) + Array Gain (if applicable)
ERP (dBm) = EIRP (dBm) - 2.15

7.1.4 LTE Band 7

LTE Band 7, Channel Bandwidth: 5 MHz

Modulation	RB Size	RB Offset	Measurement Conducted Power (dBm)		
			CH 20775	CH 21100	CH 21425
			2502.5 MHz	2535 MHz	2567.5 MHz
QPSK	1	0	23.4	23.58	23.67
	1	12	23.23	23.6	23.67
	1	24	23.24	23.52	23.59
	12	0	22.09	22.44	22.45
	12	6	22.01	22.24	22.38
	12	13	22.07	22.38	22.4
	25	0	22.14	22.42	22.43
16QAM	1	0	21.96	22.13	22.3
	1	12	21.91	22.13	22.25
	1	24	21.76	22.18	22.14
	12	0	21.06	21.36	21.4
	12	6	21.13	21.41	21.42
	12	13	21.11	21.42	21.5
	25	0	20.93	21.16	21.17
64QAM	1	0	20.94	21.28	21.35
	1	12	21.01	21.23	21.34
	1	24	20.98	21.2	21.24
	12	0	20.41	20.61	20.71
	12	6	20.47	20.67	20.7
	12	13	20.22	20.52	20.55
	25	0	20.1	20.47	20.57
256QAM	1	0	18.3	18.58	18.64
	1	12	18.08	18.38	18.36
	1	24	18.14	18.46	18.42
	12	0	17.8	18.18	18.23
	12	6	17.91	18.21	18.25
	12	13	17.96	18.19	18.25
	25	0	17.8	18.22	18.22

Maximum Output Power			
Modulation	Cond. Power (dBm)	EIRP (dBm)	EIRP Limit (dBm)
QPSK	23.67	27.47	33
16QAM	22.3	26.10	33
64QAM	21.35	25.15	33
256QAM	18.64	22.44	33

Note: EIRP (dBm) = Cond. Power (dBm) + Antenna Gain (dBi) + Array Gain (if applicable)

LTE Band 7, Channel Bandwidth: 10 MHz

Modulation	RB Size	RB Offset	Measurement Conducted Power (dBm)		
			CH 20800	CH 21100	CH 21400
			2505 MHz	2535 MHz	2565 MHz
QPSK	1	0	23.41	23.61	23.61
	1	24	23.19	23.57	23.65
	1	49	23.25	23.55	23.61
	25	0	22.11	22.4	22.52
	25	12	21.93	22.3	22.32
	25	25	22.12	22.28	22.44
	50	0	22.1	22.38	22.42
16QAM	1	0	21.94	22.17	22.27
	1	24	21.87	22.12	22.2
	1	49	21.82	22.1	22.21
	25	0	21.06	21.39	21.44
	25	12	21.08	21.35	21.48
	25	25	21.1	21.34	21.5
	50	0	20.88	21.17	21.21
64QAM	1	0	20.96	21.31	21.31
	1	24	21.06	21.29	21.4
	1	49	20.97	21.18	21.21
	25	0	20.36	20.67	20.74
	25	12	20.45	20.62	20.78
	25	25	20.2	20.49	20.59
	50	0	20.13	20.51	20.5
256QAM	1	0	18.32	18.55	18.59
	1	24	18.07	18.37	18.38
	1	49	18.13	18.46	18.52
	25	0	17.86	18.14	18.24
	25	12	17.92	18.23	18.31
	25	25	17.92	18.22	18.29
	50	0	17.9	18.16	18.2

Maximum Output Power			
Modulation	Cond. Power (dBm)	EIRP (dBm)	EIRP Limit (dBm)
QPSK	23.65	27.45	33
16QAM	22.27	26.07	33
64QAM	21.4	25.20	33
256QAM	18.59	22.39	33

Note: EIRP (dBm) = Cond. Power (dBm) + Antenna Gain (dBi) + Array Gain (if applicable)

LTE Band 7, Channel Bandwidth: 15 MHz

Modulation	RB Size	RB Offset	Measurement Conducted Power (dBm)		
			CH 20825	CH 21100	CH 21375
			2507.5 MHz	2535 MHz	2562.5 MHz
QPSK	1	0	23.39	23.52	23.61
	1	37	23.25	23.56	23.65
	1	74	23.33	23.6	23.68
	36	0	22.14	22.44	22.53
	36	19	22.02	22.31	22.29
	36	39	22.04	22.37	22.4
	75	0	22.17	22.45	22.45
16QAM	1	0	21.88	22.2	22.3
	1	37	21.85	22.15	22.21
	1	74	21.78	22.15	22.19
	36	0	21.06	21.41	21.43
	36	19	21.16	21.39	21.48
	36	39	21.16	21.4	21.51
	75	0	20.93	21.17	21.24
64QAM	1	0	20.92	21.31	21.3
	1	37	20.99	21.24	21.38
	1	74	20.9	21.16	21.27
	36	0	20.33	20.62	20.7
	36	19	20.48	20.64	20.68
	36	39	20.28	20.49	20.5
	75	0	20.17	20.47	20.56
256QAM	1	0	18.28	18.59	18.65
	1	37	18.14	18.39	18.43
	1	74	18.1	18.48	18.46
	36	0	17.85	18.2	18.25
	36	19	17.96	18.21	18.29
	36	39	17.92	18.22	18.2
	75	0	17.87	18.19	18.26

Maximum Output Power			
Modulation	Cond. Power (dBm)	EIRP (dBm)	EIRP Limit (dBm)
QPSK	23.68	27.48	33
16QAM	22.3	26.10	33
64QAM	21.38	25.18	33
256QAM	18.65	22.45	33

Note: EIRP (dBm) = Cond. Power (dBm) + Antenna Gain (dBi) + Array Gain (if applicable)

LTE Band 7, Channel Bandwidth: 20 MHz

Modulation	RB Size	RB Offset	Measurement Conducted Power (dBm)		
			CH 20850	CH 21100	CH 21350
			2510 MHz	2535 MHz	2560 MHz
QPSK	1	0	23.42	23.66	23.71
	1	50	23.29	23.65	23.68
	1	99	23.34	23.63	23.69
	50	0	22.19	22.48	22.56
	50	25	22.03	22.35	22.39
	50	50	22.15	22.39	22.45
	100	0	22.19	22.49	22.51
16QAM	1	0	21.97	22.22	22.32
	1	50	21.92	22.17	22.27
	1	99	21.85	22.21	22.22
	50	0	21.13	21.42	21.46
	50	25	21.19	21.46	21.5
	50	50	21.17	21.45	21.52
	100	0	20.94	21.2	21.28
64QAM	1	0	21	21.36	21.36
	1	50	21.07	21.33	21.41
	1	99	21.01	21.24	21.3
	50	0	20.43	20.72	20.77
	50	25	20.49	20.72	20.79
	50	50	20.31	20.54	20.61
	100	0	20.21	20.52	20.58
256QAM	1	0	18.36	18.61	18.66
	1	50	18.17	18.4	18.47
	1	99	18.2	18.52	18.53
	50	0	17.89	18.24	18.26
	50	25	17.99	18.24	18.33
	50	50	18.01	18.29	18.3
	100	0	17.91	18.27	18.29

Maximum Output Power			
Modulation	Cond. Power (dBm)	EIRP (dBm)	EIRP Limit (dBm)
QPSK	23.71	27.51	33
16QAM	22.32	26.12	33
64QAM	21.41	25.21	33
256QAM	18.66	22.46	33

Note: EIRP (dBm) = Cond. Power (dBm) + Antenna Gain (dBi) + Array Gain (if applicable)

7.1.5 LTE Band 12

LTE Band 12, Channel Bandwidth: 1.4 MHz

Modulation	RB Size	RB Offset	Measurement Conducted Power (dBm)		
			CH 23017	CH 23095	CH 23173
			699.7 MHz	707.5 MHz	715.3 MHz
QPSK	1	0	22.59	22.75	22.69
	1	2	22.57	22.79	22.59
	1	5	22.53	22.69	22.56
	3	0	22.41	22.46	22.29
	3	1	22.5	22.42	22.45
	3	3	22.3	22.44	22.34
	6	0	21.4	21.46	21.4
16QAM	1	0	22.1	22.21	22.1
	1	2	22.15	22.04	21.96
	1	5	21.98	21.99	21.84
	3	0	22.33	22.43	22.22
	3	1	22.42	22.32	22.21
	3	3	22.23	22.29	22.3
	6	0	20.98	21.1	20.94
64QAM	1	0	21.08	21.18	21.19
	1	2	21.12	21.19	21.06
	1	5	21.1	20.99	20.91
	3	0	21.5	21.54	21.44
	3	1	21.49	21.6	21.54
	3	3	21.29	21.34	21.37
	6	0	20.3	20.47	20.43
256QAM	1	0	18.45	18.52	18.38
	1	2	18.29	18.3	18.16
	1	5	18.32	18.3	18.27
	3	0	17.84	18.08	17.84
	3	1	17.99	18.1	18
	3	3	17.99	18.18	17.89
	6	0	18	18.16	18.03

Maximum Output Power			
Modulation	Cond. Power (dBm)	ERP (dBm)	ERP Limit (dBm)
QPSK	22.79	21.11	34.77
16QAM	22.43	20.75	34.77
64QAM	21.60	19.92	34.77
256QAM	18.52	16.84	34.77

Note: EIRP (dBm) = Cond. Power (dBm) + Antenna Gain (dBi) + Array Gain (if applicable)
ERP (dBm) = EIRP (dBm) - 2.15

LTE Band 12, Channel Bandwidth: 3 MHz

Modulation	RB Size	RB Offset	Measurement Conducted Power (dBm)		
			CH 23025	CH 23095	CH 23165
			700.5 MHz	707.5 MHz	714.5 MHz
QPSK	1	0	22.71	22.81	22.71
	1	7	22.71	22.78	22.65
	1	14	22.68	22.76	22.61
	8	0	21.49	21.55	21.46
	8	3	21.48	21.49	21.44
	8	7	21.45	21.46	21.38
	15	0	21.49	21.5	21.46
16QAM	1	0	22.21	22.3	22.1
	1	7	22.15	22.11	22.13
	1	14	22.12	22.08	21.97
	8	0	21.43	21.41	21.36
	8	3	21.41	21.48	21.35
	8	7	21.27	21.34	21.24
	15	0	21.13	21.22	21.15
64QAM	1	0	21.2	21.26	21.21
	1	7	21.2	21.31	21.18
	1	14	21.11	21.14	21.05
	8	0	20.56	20.66	20.58
	8	3	20.65	20.73	20.56
	8	7	20.51	20.51	20.4
	15	0	20.51	20.55	20.46
256QAM	1	0	18.51	18.61	18.46
	1	7	18.39	18.36	18.22
	1	14	18.39	18.46	18.33
	8	0	18.08	18.1	17.94
	8	3	18.08	18.21	18.06
	8	7	18.1	18.17	18.08
	15	0	18.19	18.21	18.06

Maximum Output Power			
Modulation	Cond. Power (dBm)	ERP (dBm)	ERP Limit (dBm)
QPSK	22.81	21.13	34.77
16QAM	22.30	20.62	34.77
64QAM	21.31	19.63	34.77
256QAM	18.61	16.93	34.77

Note: EIRP (dBm) = Cond. Power (dBm) + Antenna Gain (dBi) + Array Gain (if applicable)
ERP (dBm) = EIRP (dBm) - 2.15

LTE Band 12, Channel Bandwidth: 5 MHz

Modulation	RB Size	RB Offset	Measurement Conducted Power (dBm)		
			CH 23035	CH 23095	CH 23155
			701.5 MHz	707.5 MHz	713.5 MHz
QPSK	1	0	22.75	22.85	22.72
	1	12	22.66	22.78	22.66
	1	24	22.68	22.72	22.56
	12	0	21.56	21.52	21.49
	12	6	21.52	21.56	21.45
	12	13	21.5	21.55	21.38
	25	0	21.47	21.47	21.47
16QAM	1	0	22.14	22.32	22.15
	1	12	22.1	22.1	22.13
	1	24	22.05	22.16	22.01
	12	0	21.37	21.36	21.36
	12	6	21.36	21.4	21.41
	12	13	21.25	21.41	21.33
	25	0	21.16	21.22	21.07
64QAM	1	0	21.26	21.23	21.18
	1	12	21.21	21.28	21.19
	1	24	21.13	21.19	21
	12	0	20.63	20.59	20.54
	12	6	20.66	20.65	20.61
	12	13	20.51	20.53	20.42
	25	0	20.48	20.56	20.47
256QAM	1	0	18.57	18.63	18.43
	1	12	18.37	18.38	18.31
	1	24	18.34	18.48	18.29
	12	0	18.07	18.12	17.93
	12	6	18.12	18.17	18.07
	12	13	18.08	18.13	18.09
	25	0	18.18	18.17	18.04

Maximum Output Power			
Modulation	Cond. Power (dBm)	ERP (dBm)	ERP Limit (dBm)
QPSK	22.85	21.17	34.77
16QAM	22.32	20.64	34.77
64QAM	21.28	19.60	34.77
256QAM	18.63	16.95	34.77

Note: EIRP (dBm) = Cond. Power (dBm) + Antenna Gain (dBi) + Array Gain (if applicable)
ERP (dBm) = EIRP (dBm) - 2.15

LTE Band 12, Channel Bandwidth: 10 MHz

Modulation	RB Size	RB Offset	Measurement Conducted Power (dBm)		
			CH 23060	CH 23095	CH 23130
			704 MHz	707.5 MHz	711 MHz
QPSK	1	0	22.79	22.88	22.77
	1	24	22.75	22.85	22.7
	1	49	22.71	22.81	22.62
	25	0	21.58	21.62	21.53
	25	12	21.56	21.58	21.49
	25	25	21.54	21.55	21.45
	50	0	21.5	21.52	21.47
16QAM	1	0	22.22	22.32	22.17
	1	24	22.19	22.19	22.19
	1	49	22.14	22.18	22.06
	25	0	21.45	21.46	21.44
	25	12	21.44	21.5	21.41
	25	25	21.35	21.43	21.34
	50	0	21.18	21.24	21.16
64QAM	1	0	21.27	21.3	21.26
	1	24	21.22	21.31	21.21
	1	49	21.13	21.21	21.06
	25	0	20.64	20.67	20.59
	25	12	20.66	20.74	20.63
	25	25	20.51	20.53	20.49
	50	0	20.53	20.58	20.51
256QAM	1	0	18.59	18.64	18.5
	1	24	18.39	18.43	18.32
	1	49	18.44	18.5	18.36
	25	0	18.09	18.19	18
	25	12	18.16	18.23	18.11
	25	25	18.14	18.22	18.11
	50	0	18.21	18.27	18.14

Maximum Output Power			
Modulation	Cond. Power (dBm)	ERP (dBm)	ERP Limit (dBm)
QPSK	22.88	21.20	34.77
16QAM	22.32	20.64	34.77
64QAM	21.31	19.63	34.77
256QAM	18.64	16.96	34.77

Note: EIRP (dBm) = Cond. Power (dBm) + Antenna Gain (dBi) + Array Gain (if applicable)
ERP (dBm) = EIRP (dBm) - 2.15

7.1.6 LTE Band 14

LTE Band 14, Channel Bandwidth: 5 MHz

Modulation	RB Size	RB Offset	Measurement Conducted Power (dBm)		
			CH 23305	CH 23330	CH 23355
			790.5 MHz	793 MHz	795.5 MHz
QPSK	1	0	22.66	22.75	22.63
	1	12	22.63	22.71	22.61
	1	24	22.61	22.65	22.63
	12	0	21.62	21.64	21.57
	12	6	21.57	21.6	21.5
	12	13	21.48	21.54	21.52
	25	0	21.5	21.52	21.47
16QAM	1	0	22.08	22.09	22.02
	1	12	22.08	22.1	22.01
	1	24	21.83	21.88	21.81
	12	0	21.24	21.28	21.22
	12	6	21.19	21.22	21.13
	12	13	21.21	21.25	21.23
	25	0	21.04	21.04	20.95
64QAM	1	0	21.08	21.14	21.05
	1	12	21.03	21.06	21.02
	1	24	20.98	21.03	20.97
	12	0	20.36	20.44	20.43
	12	6	20.51	20.54	20.54
	12	13	20.3	20.34	20.24
	25	0	20.3	20.35	20.3
256QAM	1	0	18.36	18.42	18.42
	1	12	18.13	18.19	18.1
	1	24	18.17	18.24	18.22
	12	0	17.82	17.86	17.81
	12	6	18.05	18.05	18.02
	12	13	17.95	17.99	17.98
	25	0	17.98	18.02	17.96

Maximum Output Power			
Modulation	Cond. Power (dBm)	ERP (dBm)	ERP Limit (dBm)
QPSK	22.75	21.48	34.77
16QAM	22.1	20.83	34.77
64QAM	21.14	19.87	34.77
256QAM	18.42	17.15	34.77

Note: EIRP (dBm) = Cond. Power (dBm) + Antenna Gain (dBi) + Array Gain (if applicable)
ERP (dBm) = EIRP (dBm) - 2.15

LTE Band 14, Channel Bandwidth: 10 MHz

Modulation	RB Size	RB Offset	Measurement Conducted Power (dBm)
			CH 23330
			793 MHz
QPSK	1	0	22.81
	1	24	22.79
	1	49	22.75
	25	0	21.65
	25	12	21.63
	25	25	21.61
	50	0	21.6
16QAM	1	0	22.11
	1	24	22.15
	1	49	21.96
	25	0	21.35
	25	12	21.32
	25	25	21.29
	50	0	21.08
64QAM	1	0	21.21
	1	24	21.13
	1	49	21.03
	25	0	20.49
	25	12	20.56
	25	25	20.4
	50	0	20.43
256QAM	1	0	18.42
	1	24	18.28
	1	49	18.26
	25	0	17.95
	25	12	18.06
	25	25	18.07
	50	0	18.1

Maximum Output Power			
Modulation	Cond. Power (dBm)	ERP (dBm)	ERP Limit (dBm)
QPSK	22.81	21.54	34.77
16QAM	22.15	20.88	34.77
64QAM	21.21	19.94	34.77
256QAM	18.42	17.15	34.77

Note: EIRP (dBm) = Cond. Power (dBm) + Antenna Gain (dBi) + Array Gain (if applicable)
ERP (dBm) = EIRP (dBm) - 2.15

7.1.7 LTE Band 30

LTE Band 30, Channel Bandwidth: 5 MHz

Modulation	RB Size	RB Offset	Measurement Conducted Power (dBm)		
			CH 27685	CH 27710	CH 27735
			2307.5 MHz	2310 MHz	2312.5 MHz
QPSK	1	0	20.04	20.27	19.94
	1	12	19.94	20.15	20
	1	24	19.8	20.1	19.78
	12	0	18.6	18.8	18.52
	12	6	18.55	18.65	18.48
	12	13	18.46	18.7	18.59
	25	0	18.51	18.64	18.39
16QAM	1	0	18.48	18.7	18.37
	1	12	18.43	18.67	18.42
	1	24	18.58	18.63	18.55
	12	0	17.73	17.86	17.68
	12	6	17.65	17.82	17.6
	12	13	17.63	17.97	17.61
	25	0	17.49	17.72	17.57
64QAM	1	0	17.58	17.66	17.48
	1	12	17.4	17.53	17.31
	1	24	17.43	17.66	17.39
	12	0	16.61	16.7	16.45
	12	6	16.6	16.73	16.45
	12	13	16.7	16.79	16.52
	25	0	16.57	16.72	16.45
256QAM	1	0	14.77	14.94	14.67
	1	12	14.68	14.92	14.77
	1	24	14.79	14.86	14.62
	12	0	14.68	14.8	14.63
	12	6	14.85	14.94	14.81
	12	13	14.66	14.88	14.64
	25	0	14.77	14.79	14.58

Maximum Output Power			
Modulation	Cond. Power (dBm)	EIRP (dBm)	EIRP Limit (dBm)
QPSK	20.27	23.28	24
16QAM	18.7	21.71	24
64QAM	17.66	20.67	24
256QAM	14.94	17.95	24

Note: EIRP (dBm) = Cond. Power (dBm) + Antenna Gain (dBi) + Array Gain (if applicable)

LTE Band 30, Channel Bandwidth: 10 MHz

Modulation	RB Size	RB Offset	Measurement Conducted Power (dBm)
			CH 27710
			2310 MHz
QPSK	1	0	20.32
	1	24	20.16
	1	49	20.13
	25	0	18.87
	25	12	18.76
	25	25	18.78
	50	0	18.68
16QAM	1	0	18.72
	1	24	18.82
	1	49	18.77
	25	0	17.92
	25	12	17.92
	25	25	17.92
	50	0	17.87
64QAM	1	0	17.74
	1	24	17.59
	1	49	17.75
	25	0	16.78
	25	12	16.88
	25	25	16.95
	50	0	16.84
256QAM	1	0	15.11
	1	24	14.95
	1	49	14.9
	25	0	14.95
	25	12	15.1
	25	25	14.95
	50	0	14.97

Maximum Output Power			
Modulation	Cond. Power (dBm)	EIRP (dBm)	EIRP Limit (dBm)
QPSK	20.32	23.33	24
16QAM	18.82	21.83	24
64QAM	17.75	20.76	24
256QAM	15.11	18.12	24

Note: EIRP (dBm) = Cond. Power (dBm) + Antenna Gain (dBi) + Array Gain (if applicable)

7.1.8 LTE Band 40 (2.305 GHz ~ 2.315 GHz)

LTE Band 40 (2.305 GHz ~ 2.315 GHz), Channel Bandwidth: 5 MHz

Modulation	RB Size	RB Offset	Measurement Conducted Power (dBm)		
			CH 38725	CH 38750	CH 38775
			2307.5 MHz	2310 MHz	2312.5 MHz
QPSK	1	0	19.93	19.93	19.85
	1	12	19.74	19.78	19.67
	1	24	19.67	19.84	19.74
	12	0	18.67	18.86	18.76
	12	6	18.67	18.73	18.64
	12	13	18.55	18.6	18.49
	25	0	18.64	18.68	18.62
16QAM	1	0	18.59	18.65	18.52
	1	12	18.59	18.57	18.49
	1	24	18.41	18.61	18.46
	12	0	17.74	17.83	17.74
	12	6	17.58	17.71	17.62
	12	13	17.43	17.55	17.45
	25	0	17.74	17.81	17.74
64QAM	1	0	17.72	17.69	17.66
	1	12	17.72	17.66	17.58
	1	24	17.53	17.61	17.5
	12	0	16.67	16.74	16.65
	12	6	16.57	16.65	16.55
	12	13	16.78	16.66	16.62
	25	0	16.57	16.75	16.62
256QAM	1	0	14.7	14.7	14.57
	1	12	14.62	14.69	14.68
	1	24	14.62	14.67	14.59
	12	0	14.43	14.56	14.51
	12	6	14.65	14.72	14.69
	12	13	14.72	14.87	14.86
	25	0	14.74	14.81	14.79

Maximum Output Power			
Modulation	Cond. Power (dBm)	EIRP (dBm)	EIRP Limit (dBm)
QPSK	19.93	22.94	24
16QAM	18.65	21.66	24
64QAM	17.72	20.73	24
256QAM	14.87	17.88	24

Note: EIRP (dBm) = Cond. Power (dBm) + Antenna Gain (dBi) + Array Gain (if applicable)

LTE Band 40 (2.305 GHz ~ 2.315 GHz), Channel Bandwidth: 10 MHz

Modulation	RB Size	RB Offset	Measurement Conducted Power (dBm)
			CH 38750
			2310 MHz
QPSK	1	0	20.02
	1	24	19.84
	1	49	19.84
	25	0	18.87
	25	12	18.76
	25	25	18.61
	50	0	18.74
16QAM	1	0	18.7
	1	24	18.69
	1	49	18.64
	25	0	17.88
	25	12	17.76
	25	25	17.61
	50	0	17.89
64QAM	1	0	17.81
	1	24	17.7
	1	49	17.74
	25	0	16.83
	25	12	16.75
	25	25	16.79
	50	0	16.78
256QAM	1	0	14.83
	1	24	14.7
	1	49	14.75
	25	0	14.6
	25	12	14.74
	25	25	14.88
	50	0	14.83

Maximum Output Power			
Modulation	Cond. Power (dBm)	EIRP (dBm)	EIRP Limit (dBm)
QPSK	20.02	23.03	24
16QAM	18.7	21.71	24
64QAM	17.81	20.82	24
256QAM	14.88	17.89	24

Note: EIRP (dBm) = Cond. Power (dBm) + Antenna Gain (dBi) + Array Gain (if applicable)

7.1.9 LTE Band 40 (2.35 GHz ~ 2.36 GHz)

LTE Band 40 (2.35 GHz ~ 2.36 GHz), Channel Bandwidth: 5 MHz

Modulation	RB Size	RB Offset	Measurement Conducted Power (dBm)		
			CH 39175	CH 39200	CH 39225
			2352.5 MHz	2355 MHz	2357.5 MHz
QPSK	1	0	20.04	20.21	20.11
	1	12	19.9	19.89	19.94
	1	24	19.77	19.74	19.75
	12	0	18.91	18.94	18.99
	12	6	18.66	18.82	18.71
	12	13	18.69	18.73	18.82
	25	0	18.69	18.74	18.78
16QAM	1	0	18.77	18.94	18.95
	1	12	18.68	18.63	18.56
	1	24	18.63	18.59	18.68
	12	0	17.91	17.84	17.91
	12	6	17.72	17.73	17.77
	12	13	17.8	17.8	17.8
	25	0	17.69	17.79	17.74
64QAM	1	0	17.87	17.93	17.86
	1	12	17.54	17.7	17.68
	1	24	17.79	17.8	17.77
	12	0	16.85	16.86	16.84
	12	6	16.82	16.92	16.99
	12	13	16.69	16.59	16.59
	25	0	16.81	16.77	16.69
256QAM	1	0	14.87	14.9	14.88
	1	12	14.95	15.02	14.94
	1	24	14.76	14.75	14.66
	12	0	14.75	14.94	14.87
	12	6	14.72	14.71	14.73
	12	13	14.96	14.83	14.91
	25	0	14.84	14.92	14.88

Maximum Output Power			
Modulation	Cond. Power (dBm)	EIRP (dBm)	EIRP Limit (dBm)
QPSK	20.21	23.22	24
16QAM	18.95	21.96	24
64QAM	17.93	20.94	24
256QAM	15.02	18.03	24

Note: EIRP (dBm) = Cond. Power (dBm) + Antenna Gain (dBi) + Array Gain (if applicable)

LTE Band 40 (2.35 GHz ~ 2.36 GHz), Channel Bandwidth: 10 MHz

Modulation	RB Size	RB Offset	Measurement Conducted Power (dBm)
			CH 39200
			2355 MHz
QPSK	1	0	20.22
	1	24	20.03
	1	49	19.87
	25	0	19.06
	25	12	18.84
	25	25	18.83
	50	0	18.79
16QAM	1	0	18.96
	1	24	18.67
	1	49	18.69
	25	0	17.94
	25	12	17.86
	25	25	17.91
	50	0	17.8
64QAM	1	0	17.94
	1	24	17.7
	1	49	17.86
	25	0	16.9
	25	12	17.02
	25	25	16.69
	50	0	16.8
256QAM	1	0	14.99
	1	24	15.03
	1	49	14.79
	25	0	14.97
	25	12	14.83
	25	25	14.98
	50	0	14.98

Maximum Output Power			
Modulation	Cond. Power (dBm)	EIRP (dBm)	EIRP Limit (dBm)
QPSK	20.22	23.23	24
16QAM	18.96	21.97	24
64QAM	17.94	20.95	24
256QAM	15.03	18.04	24

Note: EIRP (dBm) = Cond. Power (dBm) + Antenna Gain (dBi) + Array Gain (if applicable)

7.1.10 LTE Band 66

LTE Band 66, Channel Bandwidth: 1.4 MHz

Modulation	RB Size	RB Offset	Measurement Conducted Power (dBm)		
			CH 131979	CH 132322	CH 132665
			1710.7 MHz	1745 MHz	1779.3 MHz
QPSK	1	0	23.34	23.42	23.6
	1	2	23.3	23.34	23.57
	1	5	23.31	23.33	23.55
	3	0	23.29	23.2	23.38
	3	1	23.25	23.18	23.37
	3	3	23.24	23.28	23.27
	6	0	22.19	22.32	22.33
16QAM	1	0	22.17	22.17	22.28
	1	2	22.06	22.12	22.34
	1	5	22.12	22.29	22.25
	3	0	21.19	21.22	21.39
	3	1	21.15	21.28	21.28
	3	3	21.21	21.27	21.41
	6	0	21.27	21.33	21.41
64QAM	1	0	21.24	21.28	21.38
	1	2	21.15	21.34	21.36
	1	5	21.21	21.27	21.24
	3	0	20.31	20.37	20.62
	3	1	20.44	20.28	20.62
	3	3	20.26	20.15	20.43
	6	0	20.22	20.18	20.51
256QAM	1	0	18.31	18.31	18.64
	1	2	18.07	18.18	18.31
	1	5	18.13	18.13	18.44
	3	0	17.8	17.85	18.21
	3	1	17.84	18.03	18.21
	3	3	17.93	17.98	18.21
	6	0	17.9	17.79	18.23

Maximum Output Power			
Modulation	Cond. Power (dBm)	EIRP (dBm)	EIRP Limit (dBm)
QPSK	23.6	26.69	30
16QAM	22.34	25.43	30
64QAM	21.38	24.47	30
256QAM	18.64	21.73	30

Note: EIRP (dBm) = Cond. Power (dBm) + Antenna Gain (dBi) + Array Gain (if applicable)

LTE Band 66, Channel Bandwidth: 3 MHz

Modulation	RB Size	RB Offset	Measurement Conducted Power (dBm)		
			CH 131987	CH 132322	CH 132657
			1711.5 MHz	1745 MHz	1778.5 MHz
QPSK	1	0	23.33	23.36	23.58
	1	7	23.34	23.4	23.56
	1	14	23.31	23.36	23.51
	8	0	22.27	22.2	22.38
	8	3	22.16	22.21	22.35
	8	7	22.24	22.28	22.29
	15	0	22.2	22.25	22.36
16QAM	1	0	22.15	22.12	22.2
	1	7	22.14	22.15	22.32
	1	14	22.09	22.25	22.23
	8	0	21.23	21.24	21.45
	8	3	21.16	21.32	21.3
	8	7	21.19	21.29	21.4
	15	0	21.24	21.33	21.45
64QAM	1	0	21.24	21.28	21.32
	1	7	21.14	21.32	21.3
	1	14	21.14	21.3	21.32
	8	0	20.32	20.45	20.59
	8	3	20.38	20.28	20.63
	8	7	20.29	20.21	20.47
	15	0	20.21	20.19	20.47
256QAM	1	0	18.37	18.28	18.56
	1	7	18.09	18.15	18.39
	1	14	18.23	18.07	18.37
	8	0	17.77	17.81	18.17
	8	3	17.87	17.96	18.28
	8	7	17.97	17.9	18.3
	15	0	17.93	17.79	18.18

Maximum Output Power			
Modulation	Cond. Power (dBm)	EIRP (dBm)	EIRP Limit (dBm)
QPSK	23.58	26.67	30
16QAM	22.32	25.41	30
64QAM	21.32	24.41	30
256QAM	18.56	21.65	30

Note: EIRP (dBm) = Cond. Power (dBm) + Antenna Gain (dBi) + Array Gain (if applicable)

LTE Band 66, Channel Bandwidth: 5 MHz

Modulation	RB Size	RB Offset	Measurement Conducted Power (dBm)		
			CH 131997	CH 132322	CH 132647
			1712.5 MHz	1745 MHz	1777.5 MHz
QPSK	1	0	23.29	23.35	23.59
	1	12	23.34	23.31	23.53
	1	24	23.29	23.34	23.55
	12	0	22.23	22.26	22.37
	12	6	22.19	22.25	22.32
	12	13	22.25	22.26	22.3
	25	0	22.18	22.34	22.36
16QAM	1	0	22.2	22.18	22.23
	1	12	22.14	22.11	22.26
	1	24	22.12	22.24	22.33
	12	0	21.21	21.28	21.37
	12	6	21.19	21.33	21.27
	12	13	21.19	21.33	21.43
	25	0	21.24	21.27	21.46
64QAM	1	0	21.17	21.29	21.28
	1	12	21.22	21.28	21.36
	1	24	21.22	21.24	21.31
	12	0	20.35	20.41	20.64
	12	6	20.45	20.33	20.6
	12	13	20.26	20.22	20.4
	25	0	20.21	20.22	20.44
256QAM	1	0	18.35	18.3	18.61
	1	12	18.13	18.23	18.3
	1	24	18.14	18.08	18.45
	12	0	17.84	17.86	18.12
	12	6	17.86	17.97	18.21
	12	13	17.9	17.98	18.27
	25	0	17.93	17.86	18.14

Maximum Output Power			
Modulation	Cond. Power (dBm)	EIRP (dBm)	EIRP Limit (dBm)
QPSK	23.59	26.68	30
16QAM	22.33	25.42	30
64QAM	21.36	24.45	30
256QAM	18.61	21.70	30

Note: EIRP (dBm) = Cond. Power (dBm) + Antenna Gain (dBi) + Array Gain (if applicable)

LTE Band 66, Channel Bandwidth: 10 MHz

Modulation	RB Size	RB Offset	Measurement Conducted Power (dBm)		
			CH 132022	CH 132322	CH 132622
			1715 MHz	1745 MHz	1775 MHz
QPSK	1	0	23.29	23.35	23.57
	1	24	23.3	23.34	23.59
	1	49	23.34	23.36	23.49
	25	0	22.22	22.28	22.38
	25	12	22.22	22.18	22.38
	25	25	22.23	22.27	22.31
	50	0	22.24	22.25	22.33
16QAM	1	0	22.16	22.19	22.2
	1	24	22.06	22.15	22.31
	1	49	22.12	22.21	22.3
	25	0	21.21	21.3	21.42
	25	12	21.16	21.28	21.33
	25	25	21.23	21.29	21.37
	50	0	21.34	21.25	21.39
64QAM	1	0	21.23	21.24	21.37
	1	24	21.2	21.28	21.35
	1	49	21.14	21.3	21.23
	25	0	20.31	20.4	20.66
	25	12	20.35	20.33	20.61
	25	25	20.27	20.17	20.39
	50	0	20.2	20.13	20.43
256QAM	1	0	18.28	18.31	18.56
	1	24	18.09	18.21	18.31
	1	49	18.18	18.16	18.35
	25	0	17.84	17.79	18.21
	25	12	17.91	17.93	18.21
	25	25	17.95	17.92	18.21
	50	0	17.92	17.81	18.18

Maximum Output Power			
Modulation	Cond. Power (dBm)	EIRP (dBm)	EIRP Limit (dBm)
QPSK	23.59	26.68	30
16QAM	22.31	25.40	30
64QAM	21.37	24.46	30
256QAM	18.56	21.65	30

Note: EIRP (dBm) = Cond. Power (dBm) + Antenna Gain (dBi) + Array Gain (if applicable)

LTE Band 66, Channel Bandwidth: 15 MHz

Modulation	RB Size	RB Offset	Measurement Conducted Power (dBm)		
			CH 132047	CH 132322	CH 132597
			1717.5 MHz	1745 MHz	1772.5 MHz
QPSK	1	0	23.29	23.36	23.62
	1	37	23.34	23.36	23.6
	1	74	23.32	23.34	23.52
	36	0	22.31	22.26	22.34
	36	19	22.24	22.16	22.29
	36	39	22.27	22.19	22.3
	75	0	22.2	22.31	22.31
16QAM	1	0	22.16	22.17	22.27
	1	37	22.15	22.14	22.31
	1	74	22.13	22.23	22.28
	36	0	21.26	21.25	21.43
	36	19	21.22	21.32	21.27
	36	39	21.17	21.25	21.36
	75	0	21.27	21.24	21.39
64QAM	1	0	21.25	21.22	21.35
	1	37	21.16	21.3	21.27
	1	74	21.14	21.25	21.29
	36	0	20.37	20.4	20.61
	36	19	20.41	20.34	20.68
	36	39	20.23	20.14	20.46
	75	0	20.21	20.16	20.46
256QAM	1	0	18.37	18.27	18.64
	1	37	18.12	18.16	18.31
	1	74	18.22	18.14	18.39
	36	0	17.76	17.83	18.15
	36	19	17.87	17.93	18.26
	36	39	17.88	17.98	18.27
	75	0	17.9	17.79	18.21

Maximum Output Power			
Modulation	Cond. Power (dBm)	EIRP (dBm)	EIRP Limit (dBm)
QPSK	23.62	26.71	30
16QAM	22.31	25.40	30
64QAM	21.35	24.44	30
256QAM	18.64	21.73	30

Note: EIRP (dBm) = Cond. Power (dBm) + Antenna Gain (dBi) + Array Gain (if applicable)

LTE Band 66, Channel Bandwidth: 20 MHz

Modulation	RB Size	RB Offset	Measurement Conducted Power (dBm)		
			CH 132072	CH 132322	CH 132572
			1720 MHz	1745 MHz	1770 MHz
QPSK	1	0	23.41	23.47	23.67
	1	50	23.38	23.44	23.65
	1	99	23.4	23.45	23.58
	50	0	22.34	22.33	22.63
	50	25	22.28	22.29	22.41
	50	50	22.31	22.31	22.38
	100	0	22.3	22.37	22.39
16QAM	1	0	22.24	22.25	22.31
	1	50	22.18	22.22	22.37
	1	99	22.17	22.33	22.36
	50	0	21.29	21.34	21.49
	50	25	21.27	21.41	21.39
	50	50	21.29	21.37	21.47
	100	0	21.37	21.37	21.5
64QAM	1	0	21.28	21.34	21.41
	1	50	21.25	21.41	21.4
	1	99	21.27	21.34	21.35
	50	0	20.43	20.49	20.7
	50	25	20.48	20.41	20.72
	50	50	20.34	20.27	20.5
	100	0	20.25	20.25	20.56
256QAM	1	0	18.4	18.38	18.67
	1	50	18.18	18.26	18.43
	1	99	18.26	18.2	18.48
	50	0	17.88	17.89	18.24
	50	25	17.97	18.06	18.32
	50	50	18	18.01	18.33
	100	0	17.97	17.92	18.27

Maximum Output Power			
Modulation	Cond. Power (dBm)	EIRP (dBm)	EIRP Limit (dBm)
QPSK	23.67	26.76	30
16QAM	22.37	25.46	30
64QAM	21.41	24.50	30
256QAM	18.67	21.76	30

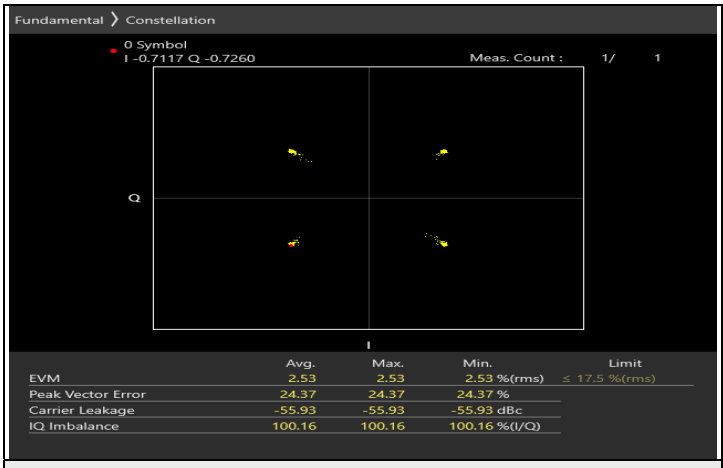
Note: EIRP (dBm) = Cond. Power (dBm) + Antenna Gain (dBi) + Array Gain (if applicable)

7.2 Modulation Characteristics

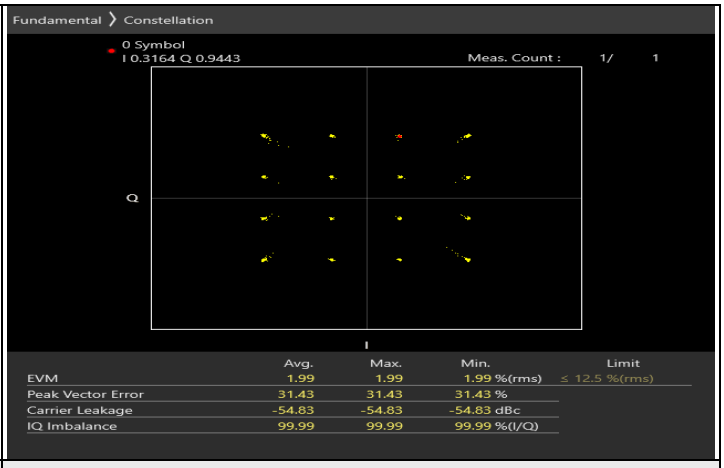
Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 69% RH	Tested By:	Noah Chang

7.2.1 LTE Band 2

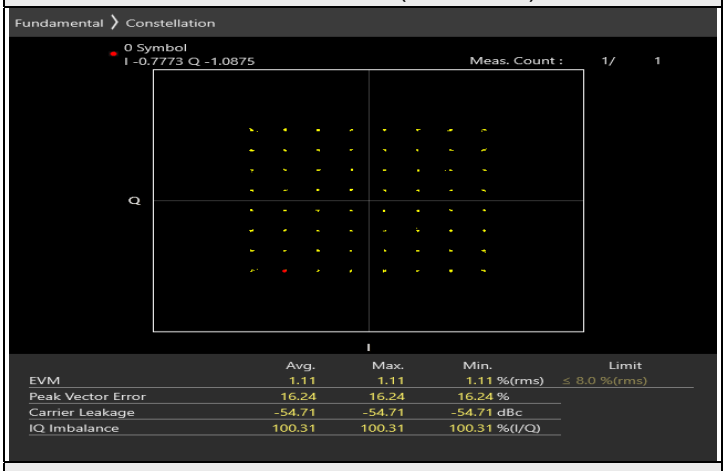
LTE Band 2, Channel Bandwidth: 20 MHz



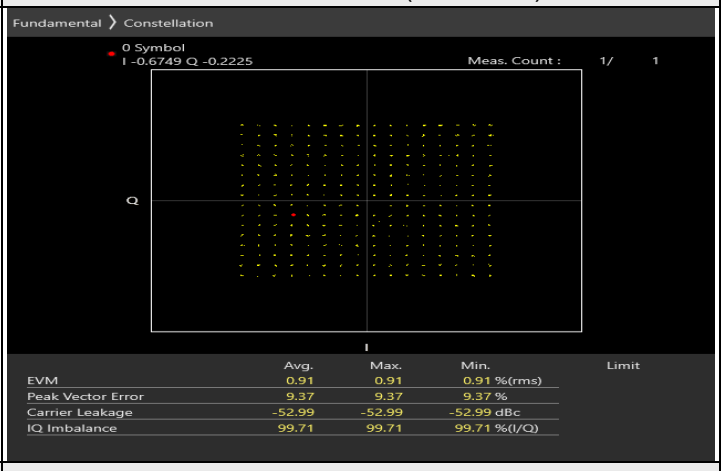
QPSK CH 18900 (1880 MHz)



16QAM CH 18900 (1880 MHz)



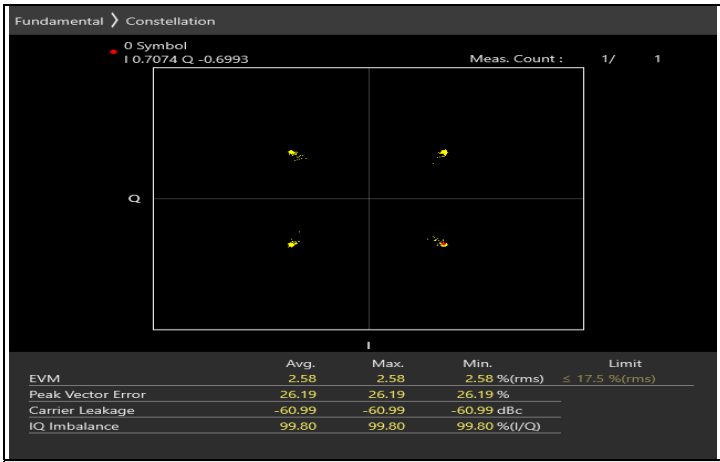
64QAM CH 18900 (1880 MHz)



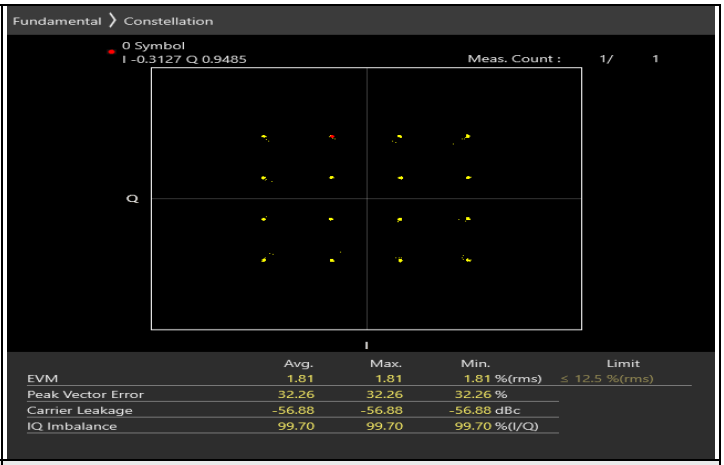
256QAM CH 18900 (1880 MHz)

7.2.2 LTE Band 4

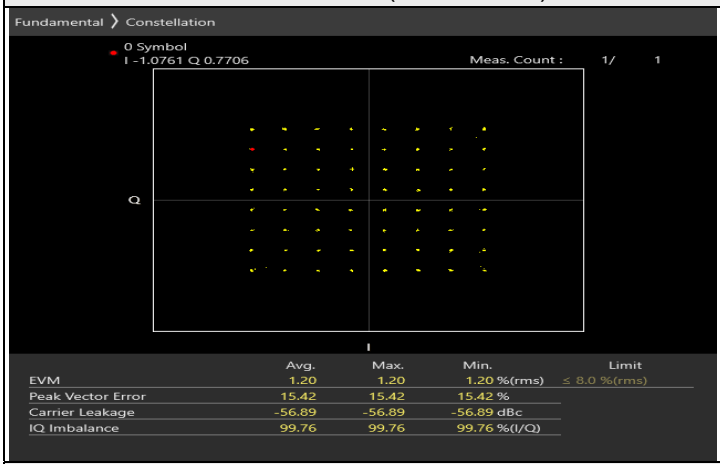
LTE Band 4, Channel Bandwidth: 20 MHz



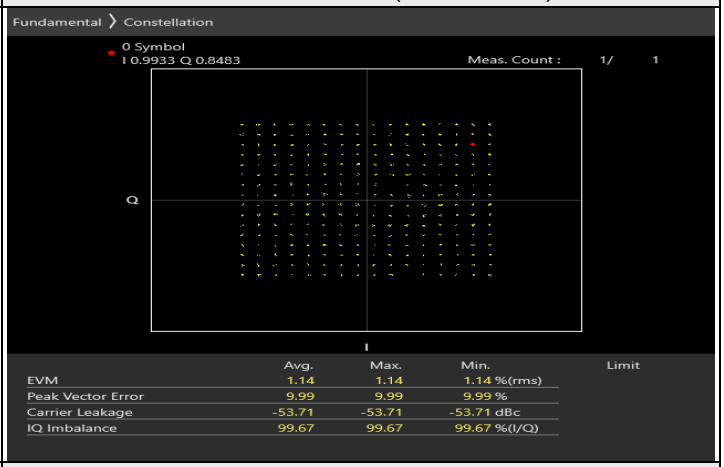
QPSK CH 20175 (1732.5 MHz)



16QAM CH 20175 (1732.5 MHz)



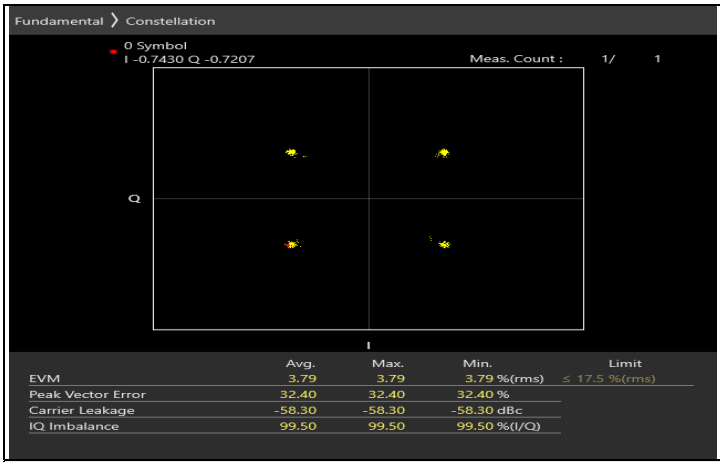
64QAM CH 20175 (1732.5 MHz)



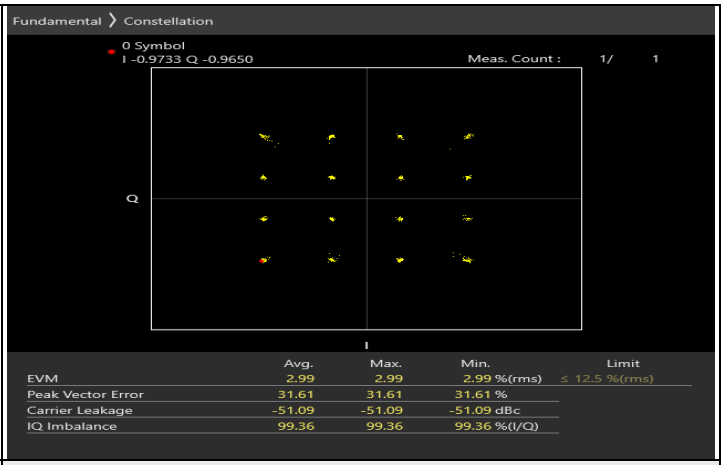
256QAM CH 20175 (1732.5 MHz)

7.2.3 LTE Band 5

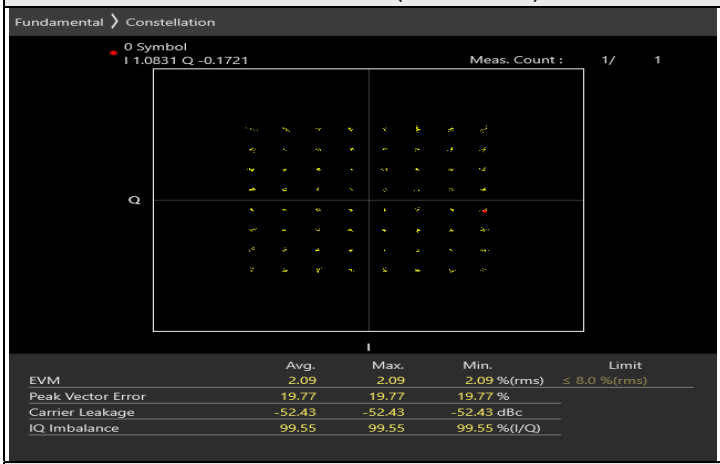
LTE Band 5, Channel Bandwidth: 10 MHz



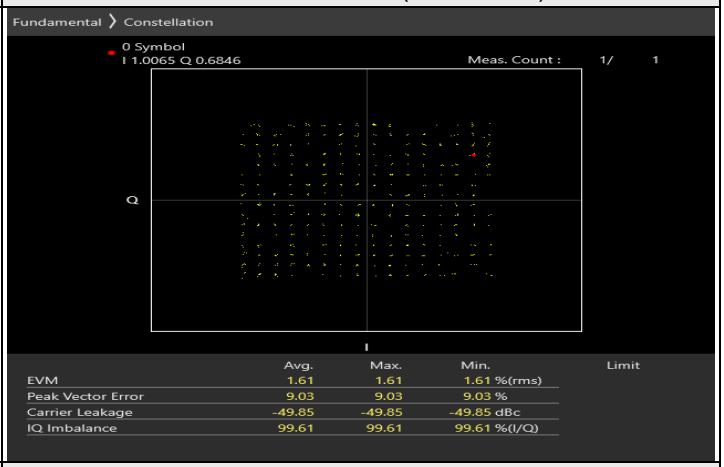
QPSK CH 20525 (836.5 MHz)



16QAM CH 20525 (836.5 MHz)



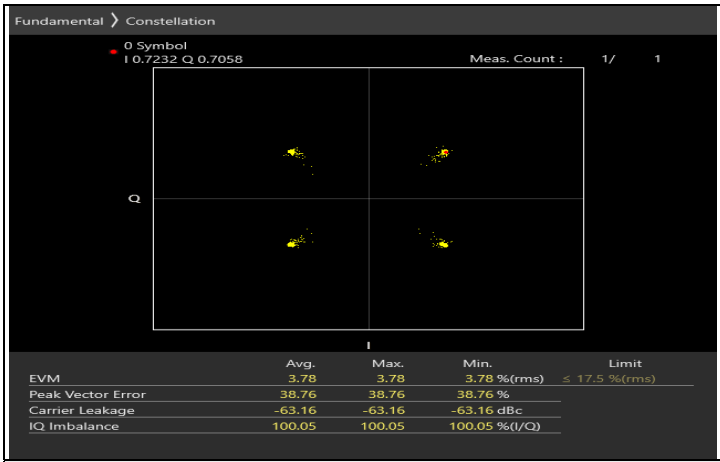
64QAM CH 20525 (836.5 MHz)



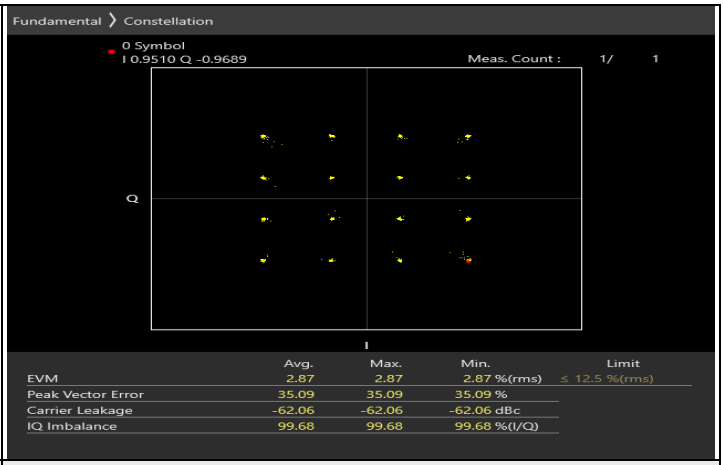
256QAM CH 20525 (836.5 MHz)

7.2.4 LTE Band 7

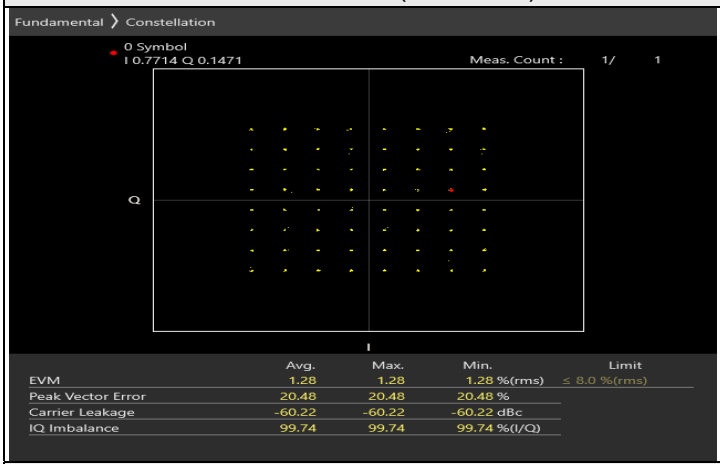
LTE Band 7, Channel Bandwidth: 20 MHz



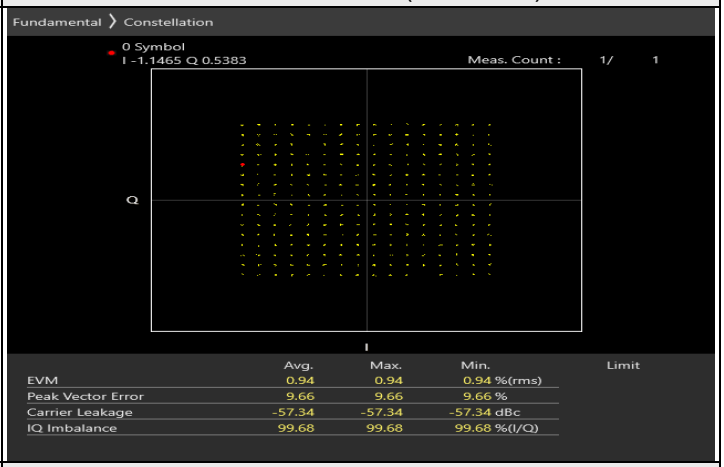
QPSK CH 21100 (2535 MHz)



16QAM CH 21100 (2535 MHz)



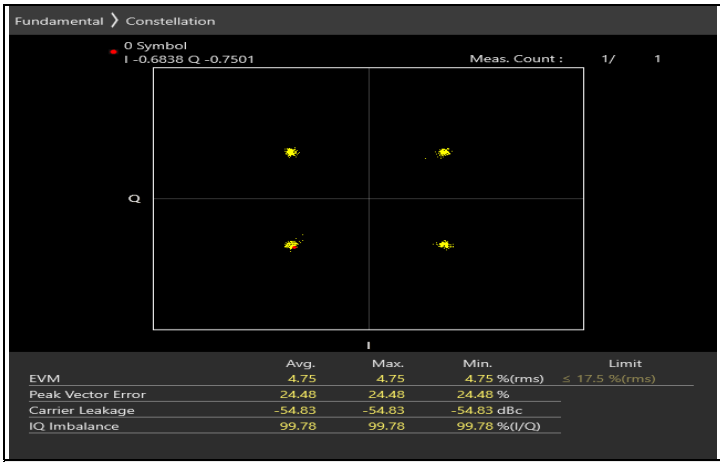
64QAM CH 21100 (2535 MHz)



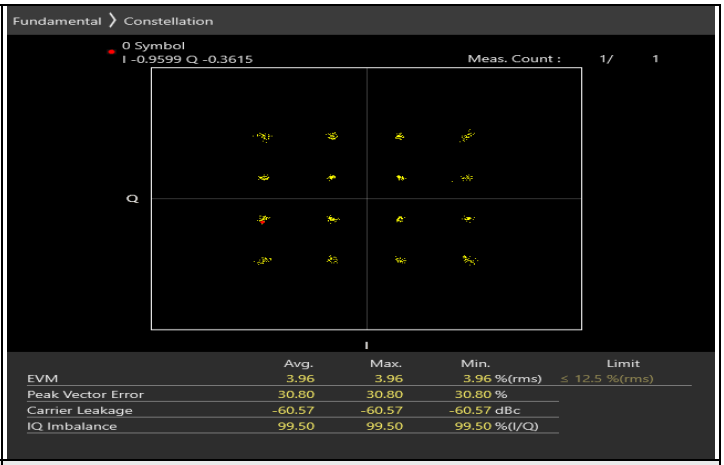
256QAM CH 21100 (2535 MHz)

7.2.5 LTE Band 12

LTE Band 12, Channel Bandwidth: 10 MHz

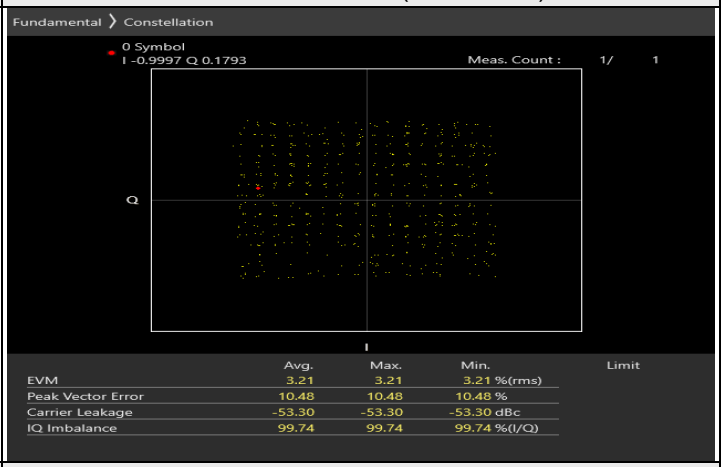


QPSK CH 23095 (707.5 MHz)



16QAM CH 23095 (707.5 MHz)

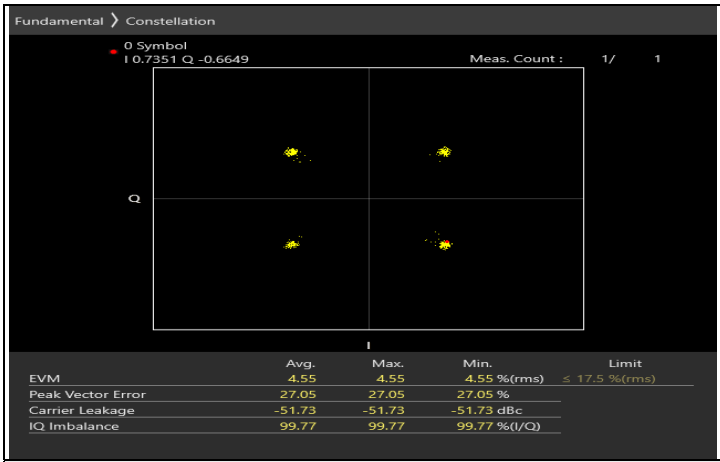
64QAM CH 23095 (707.5 MHz)



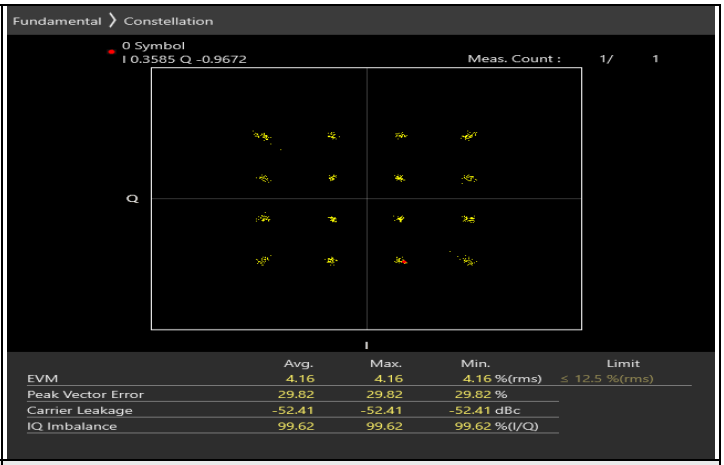
256QAM CH 23095 (707.5 MHz)

7.2.6 LTE Band 14

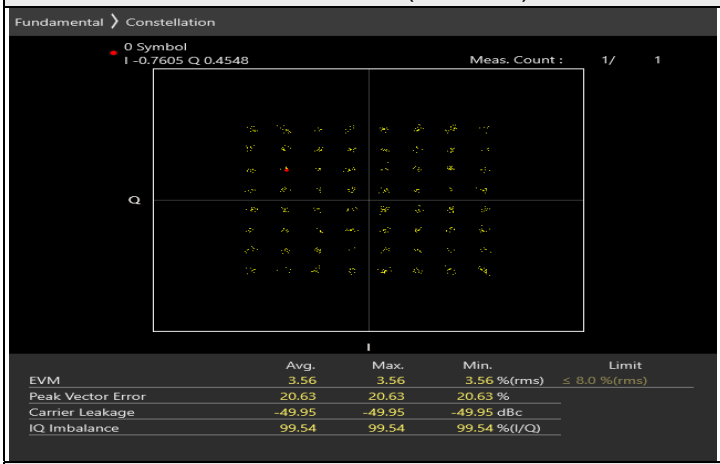
LTE Band 14, Channel Bandwidth: 10 MHz



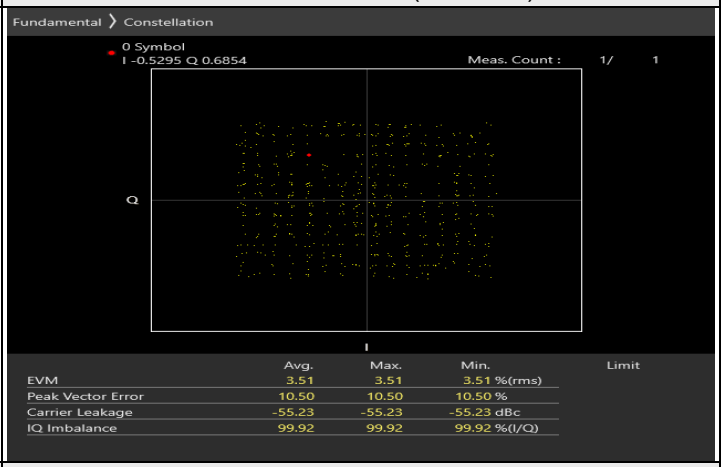
QPSK CH 23330 (793 MHz)



16QAM CH 23330 (793 MHz)



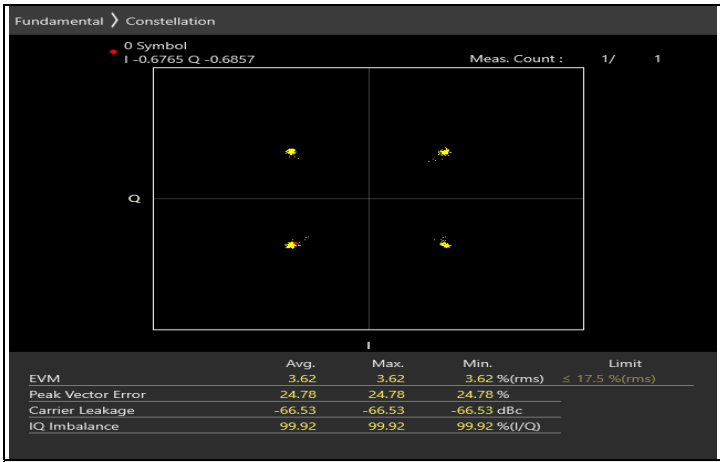
64QAM CH 23330 (793 MHz)



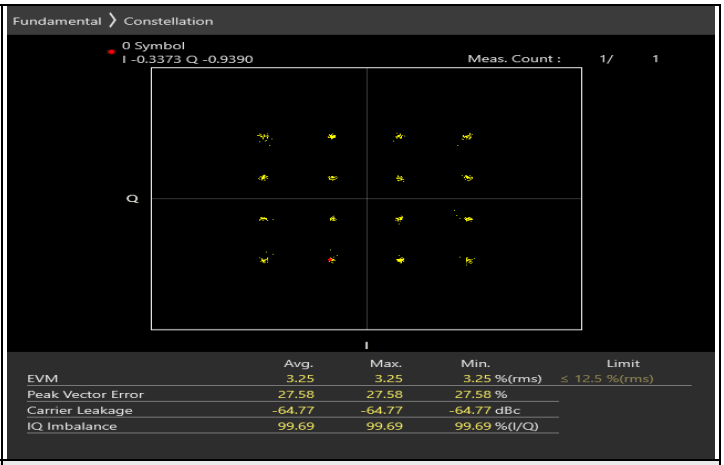
256QAM CH 23330 (793 MHz)

7.2.7 LTE Band 30

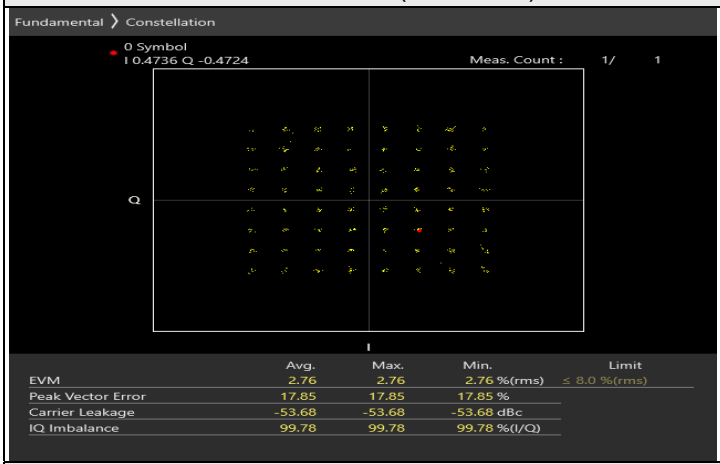
LTE Band 30, Channel Bandwidth: 10 MHz



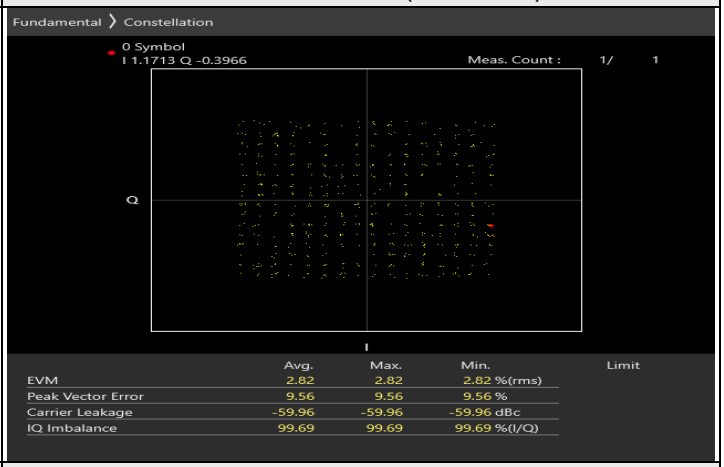
QPSK CH 27710 (2310 MHz)



16QAM CH 27710 (2310 MHz)



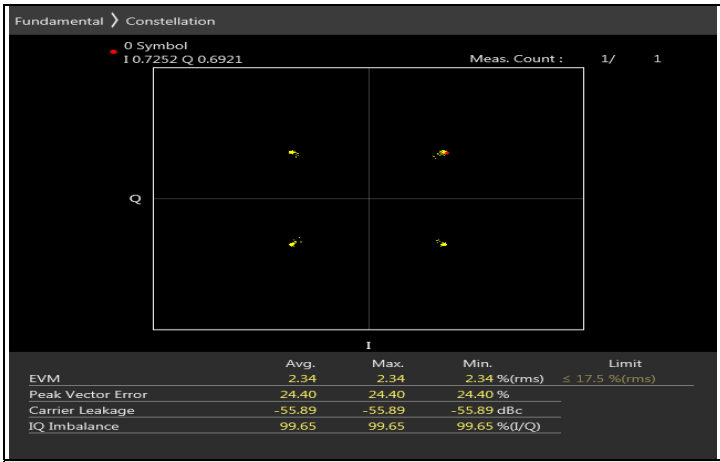
64QAM CH 27710 (2310 MHz)



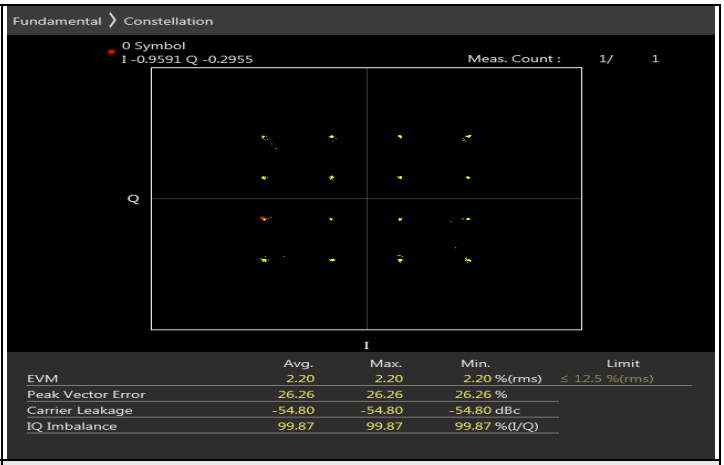
256QAM CH 27710 (2310 MHz)

7.2.8 LTE Band 40 (2.305 GHz ~ 2.315 GHz)

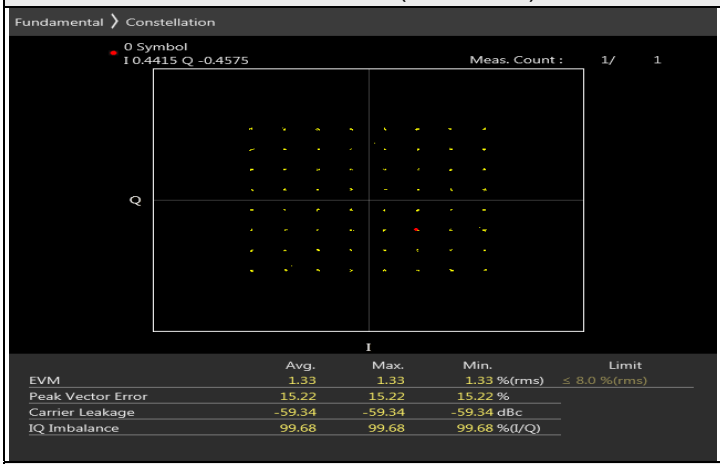
LTE Band 40 (2.305 GHz ~ 2.315 GHz), Channel Bandwidth: 10 MHz



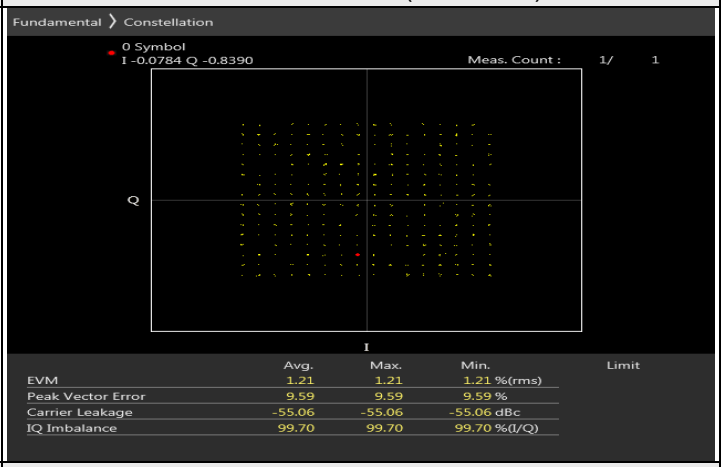
QPSK CH 38750 (2310 MHz)



16QAM CH 38750 (2310 MHz)



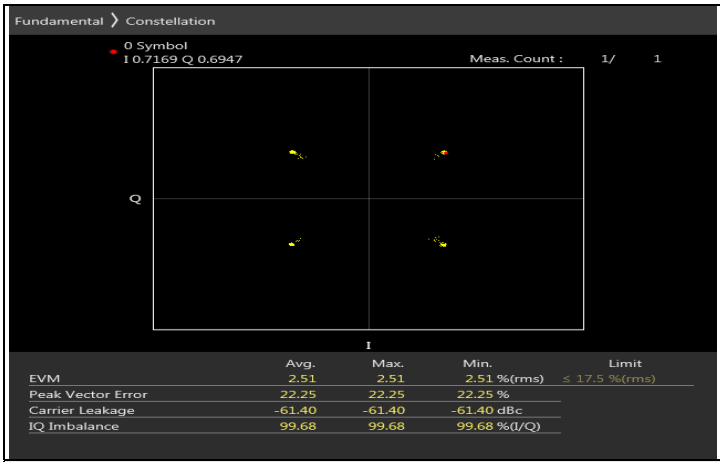
64QAM CH 38750 (2310 MHz)



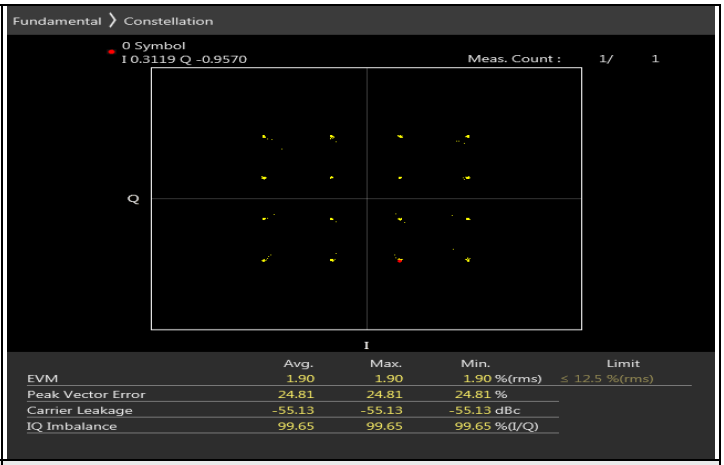
256QAM CH 38750 (2310 MHz)

7.2.9 LTE Band 40 (2.35 GHz ~ 2.36 GHz)

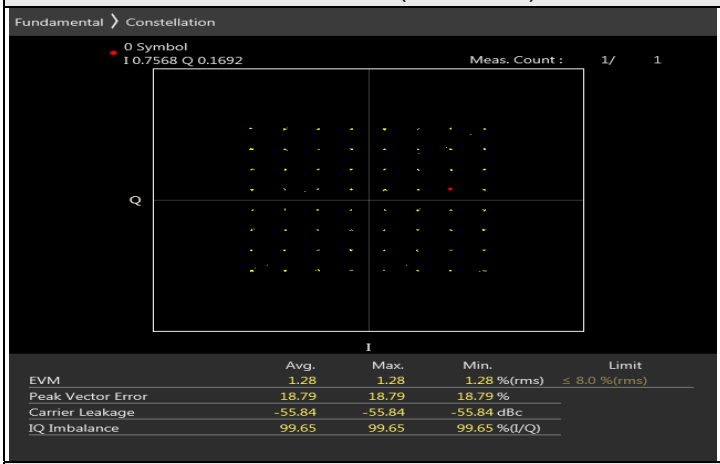
LTE Band 40 (2.35 GHz ~ 2.36 GHz), Channel Bandwidth: 10 MHz



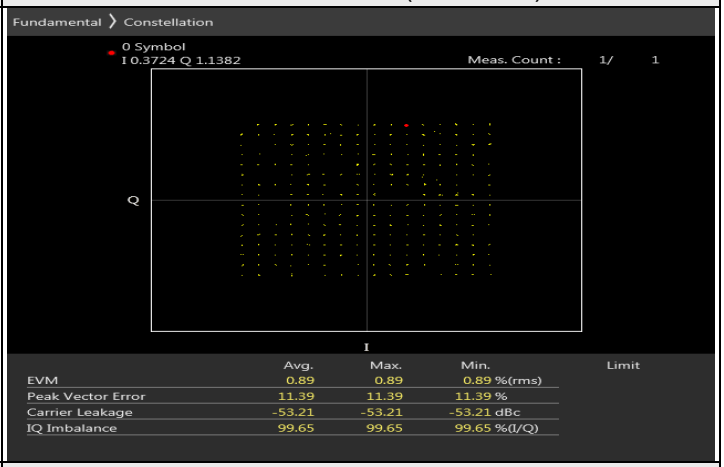
QPSK CH 39200 (2355 MHz)



16QAM CH 39200 (2355 MHz)



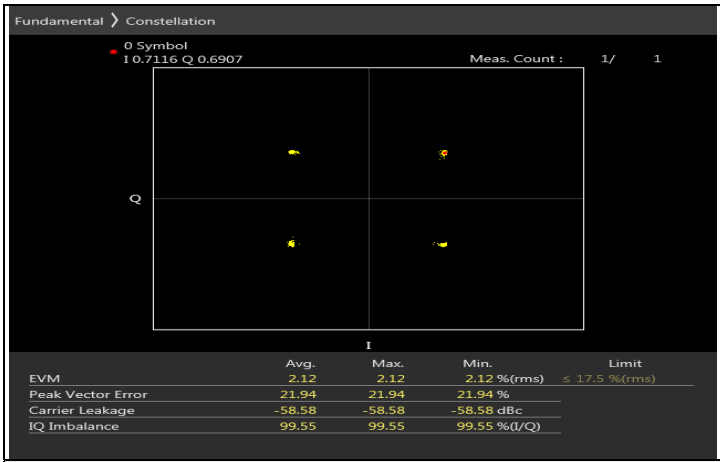
64QAM CH 39200 (2355 MHz)



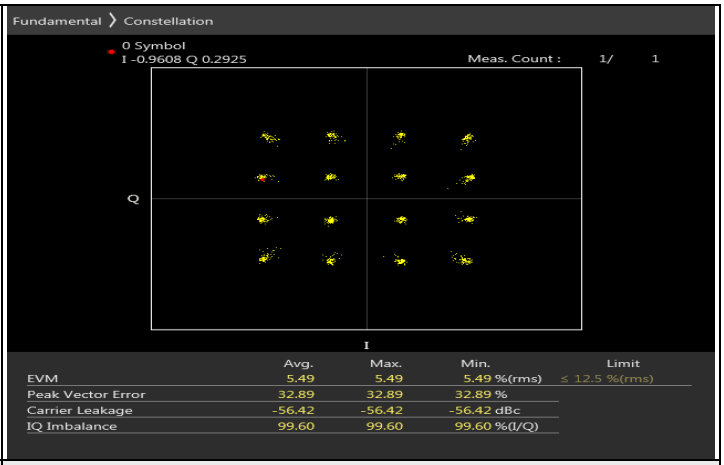
256QAM CH 39200 (2355 MHz)

7.2.10 LTE Band 66

LTE Band 66, Channel Bandwidth: 20 MHz

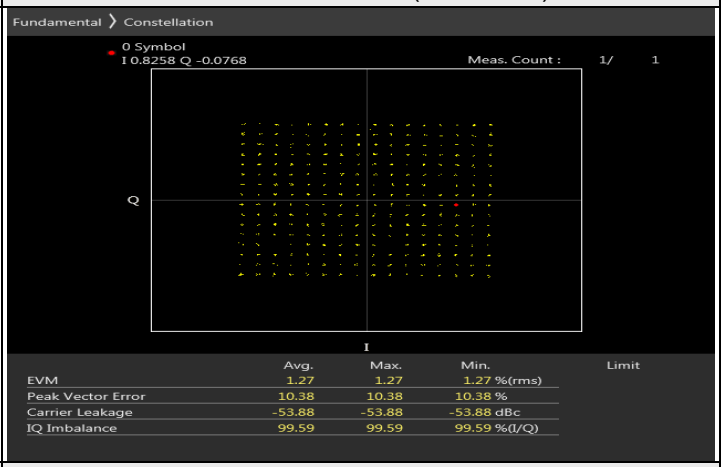


QPSK CH 132322 (1745 MHz)



16QAM CH 132322 (1745 MHz)

64QAM CH 132322 (1745 MHz)



256QAM CH 132322 (1745 MHz)

7.3 Peak to Average Ratio

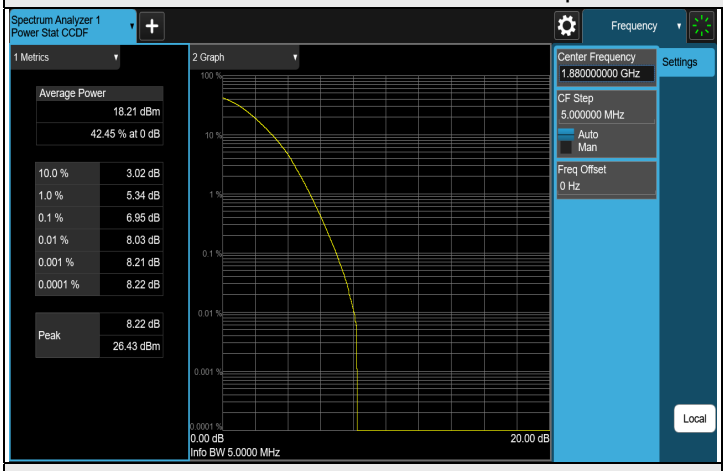
Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 69% RH	Tested By:	Noah Chang

7.3.1 LTE Band 2

LTE Band 2, Channel Bandwidth: 1.4 MHz

Modulation	Channel	Frequency (MHz)	Measurement Value(dB)	Limit (dB)	Result
QPSK	18607	1850.7	3.49	13	PASS
QPSK	18900	1880	3.62	13	PASS
QPSK	19193	1909.3	3.58	13	PASS
16QAM	18607	1850.7	4.32	13	PASS
16QAM	18900	1880	4.25	13	PASS
16QAM	19193	1909.3	4.23	13	PASS
64QAM	18607	1850.7	5.29	13	PASS
64QAM	18900	1880	5.27	13	PASS
64QAM	19193	1909.3	5.31	13	PASS
256QAM	18607	1850.7	6.73	13	PASS
256QAM	18900	1880	6.95	13	PASS
256QAM	19193	1909.3	6.76	13	PASS

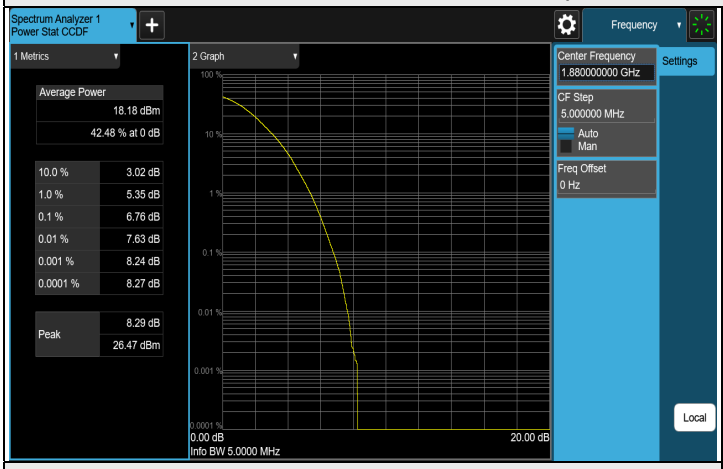
Spectrum Plot of Worst Value



256QAM CH 18900 (1880 MHz)

LTE Band 2, Channel Bandwidth: 3 MHz

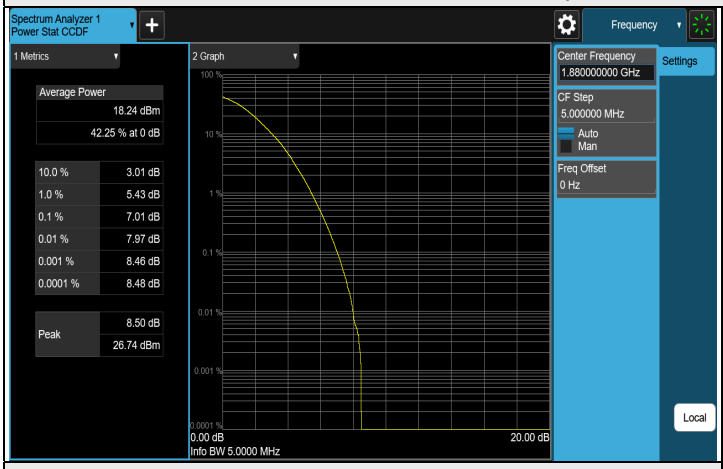
Modulation	Channel	Frequency (MHz)	Measurement Value(dB)	Limit (dB)	Result
QPSK	18615	1851.5	3.52	13	PASS
QPSK	18900	1880	3.51	13	PASS
QPSK	19185	1908.5	3.50	13	PASS
16QAM	18615	1851.5	4.40	13	PASS
16QAM	18900	1880	4.41	13	PASS
16QAM	19185	1908.5	4.47	13	PASS
64QAM	18615	1851.5	5.36	13	PASS
64QAM	18900	1880	5.39	13	PASS
64QAM	19185	1908.5	5.26	13	PASS
256QAM	18615	1851.5	6.55	13	PASS
256QAM	18900	1880	6.76	13	PASS
256QAM	19185	1908.5	6.71	13	PASS

Spectrum Plot of Worst Value	
	
256QAM CH 18900 (1880 MHz)	

LTE Band 2, Channel Bandwidth: 5 MHz

Modulation	Channel	Frequency (MHz)	Measurement Value(dB)	Limit (dB)	Result
QPSK	18625	1852.5	3.49	13	PASS
QPSK	18900	1880	3.54	13	PASS
QPSK	19175	1907.5	3.51	13	PASS
16QAM	18625	1852.5	4.41	13	PASS
16QAM	18900	1880	4.30	13	PASS
16QAM	19175	1907.5	4.32	13	PASS
64QAM	18625	1852.5	5.32	13	PASS
64QAM	18900	1880	5.41	13	PASS
64QAM	19175	1907.5	5.36	13	PASS
256QAM	18625	1852.5	6.68	13	PASS
256QAM	18900	1880	7.01	13	PASS
256QAM	19175	1907.5	6.60	13	PASS

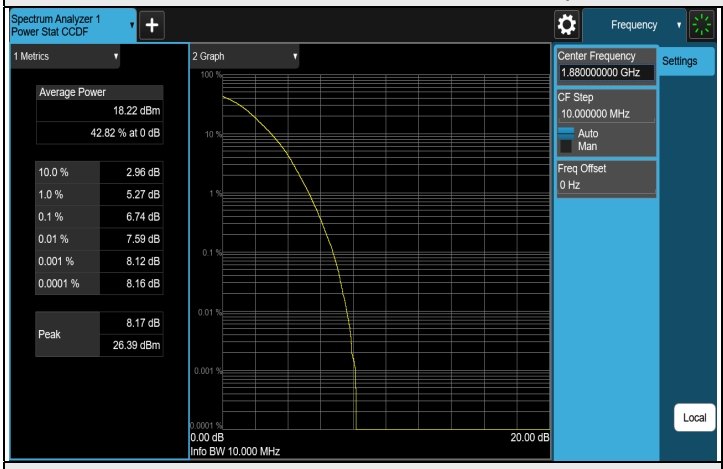
Spectrum Plot of Worst Value



256QAM CH 18900 (1880 MHz)

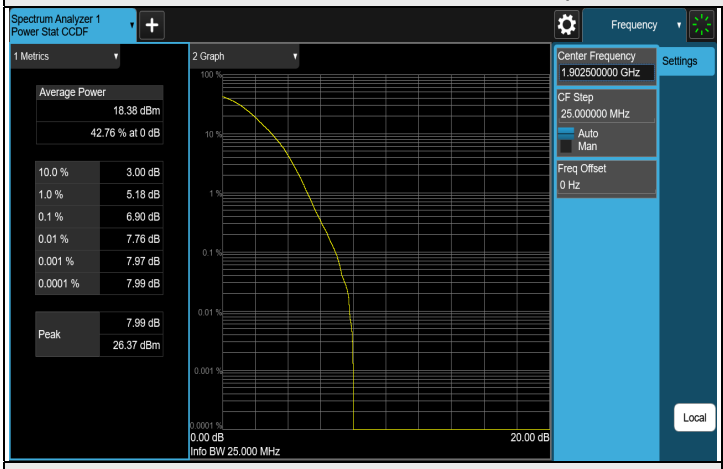
LTE Band 2, Channel Bandwidth: 10 MHz

Modulation	Channel	Frequency (MHz)	Measurement Value(dB)	Limit (dB)	Result
QPSK	18650	1855	3.49	13	PASS
QPSK	18900	1880	3.73	13	PASS
QPSK	19150	1905	3.72	13	PASS
16QAM	18650	1855	4.48	13	PASS
16QAM	18900	1880	4.35	13	PASS
16QAM	19150	1905	4.42	13	PASS
64QAM	18650	1855	5.21	13	PASS
64QAM	18900	1880	5.31	13	PASS
64QAM	19150	1905	5.27	13	PASS
256QAM	18650	1855	6.66	13	PASS
256QAM	18900	1880	6.74	13	PASS
256QAM	19150	1905	6.72	13	PASS

Spectrum Plot of Worst Value	
	
256QAM CH 18900 (1880 MHz)	

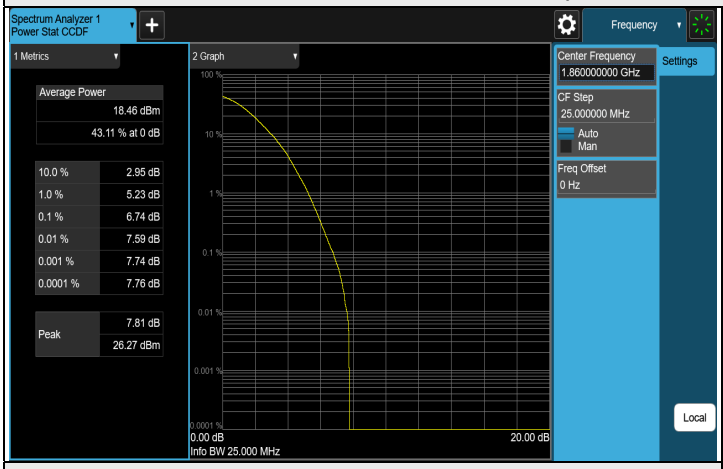
LTE Band 2, Channel Bandwidth: 15 MHz

Modulation	Channel	Frequency (MHz)	Measurement Value(dB)	Limit (dB)	Result
QPSK	18675	1857.5	3.66	13	PASS
QPSK	18900	1880	3.74	13	PASS
QPSK	19125	1902.5	3.76	13	PASS
16QAM	18675	1857.5	4.31	13	PASS
16QAM	18900	1880	4.43	13	PASS
16QAM	19125	1902.5	4.44	13	PASS
64QAM	18675	1857.5	5.17	13	PASS
64QAM	18900	1880	5.14	13	PASS
64QAM	19125	1902.5	5.23	13	PASS
256QAM	18675	1857.5	6.57	13	PASS
256QAM	18900	1880	6.50	13	PASS
256QAM	19125	1902.5	6.90	13	PASS

Spectrum Plot of Worst Value	
	
256QAM CH 19125 (1902.5 MHz)	

LTE Band 2, Channel Bandwidth: 20 MHz

Modulation	Channel	Frequency (MHz)	Measurement Value(dB)	Limit (dB)	Result
QPSK	18700	1860	3.74	13	PASS
QPSK	18900	1880	3.83	13	PASS
QPSK	19100	1900	3.83	13	PASS
16QAM	18700	1860	4.17	13	PASS
16QAM	18900	1880	4.60	13	PASS
16QAM	19100	1900	4.28	13	PASS
64QAM	18700	1860	5.10	13	PASS
64QAM	18900	1880	5.60	13	PASS
64QAM	19100	1900	5.55	13	PASS
256QAM	18700	1860	6.74	13	PASS
256QAM	18900	1880	6.72	13	PASS
256QAM	19100	1900	6.74	13	PASS

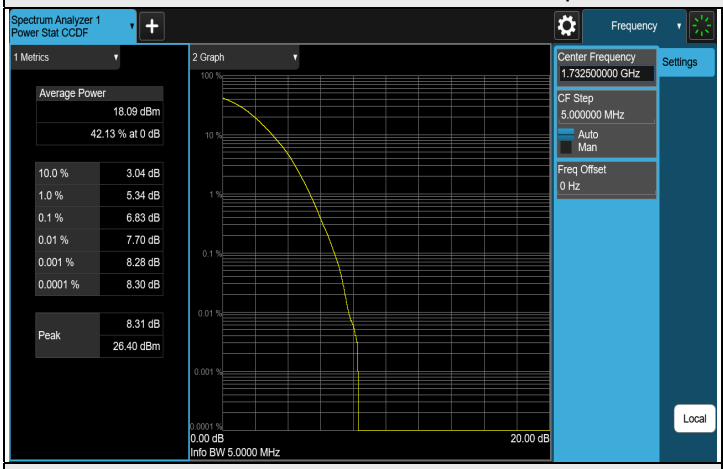
Spectrum Plot of Worst Value	
	
256QAM CH 18700 (1860 MHz)	

7.3.2 LTE Band 4

LTE Band 4, Channel Bandwidth: 1.4 MHz

Modulation	Channel	Frequency (MHz)	Measurement Value(dB)	Limit (dB)	Result
QPSK	19957	1710.7	3.45	13	PASS
QPSK	20175	1732.5	3.64	13	PASS
QPSK	20393	1754.3	3.54	13	PASS
16QAM	19957	1710.7	4.21	13	PASS
16QAM	20175	1732.5	4.34	13	PASS
16QAM	20393	1754.3	4.29	13	PASS
64QAM	19957	1710.7	4.30	13	PASS
64QAM	20175	1732.5	4.36	13	PASS
64QAM	20393	1754.3	4.30	13	PASS
256QAM	19957	1710.7	6.77	13	PASS
256QAM	20175	1732.5	6.83	13	PASS
256QAM	20393	1754.3	6.78	13	PASS

Spectrum Plot of Worst Value

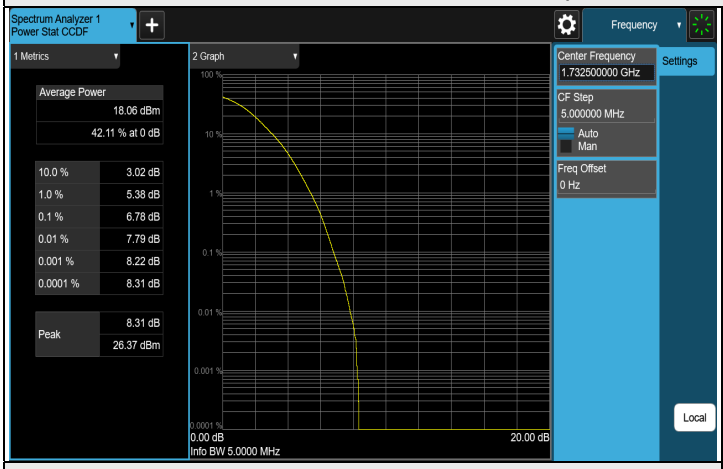


256QAM CH 20175 (1732.5 MHz)

LTE Band 4, Channel Bandwidth: 3 MHz

Modulation	Channel	Frequency (MHz)	Measurement Value(dB)	Limit (dB)	Result
QPSK	19965	1711.5	3.57	13	PASS
QPSK	20175	1732.5	3.64	13	PASS
QPSK	20385	1753.5	3.59	13	PASS
16QAM	19965	1711.5	4.49	13	PASS
16QAM	20175	1732.5	4.39	13	PASS
16QAM	20385	1753.5	4.46	13	PASS
64QAM	19965	1711.5	5.33	13	PASS
64QAM	20175	1732.5	5.32	13	PASS
64QAM	20385	1753.5	5.35	13	PASS
256QAM	19965	1711.5	6.59	13	PASS
256QAM	20175	1732.5	6.78	13	PASS
256QAM	20385	1753.5	6.75	13	PASS

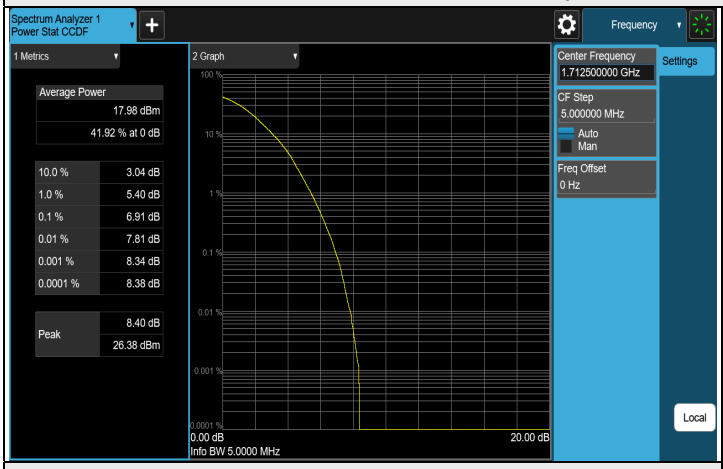
Spectrum Plot of Worst Value



256QAM CH 20175 (1732.5 MHz)

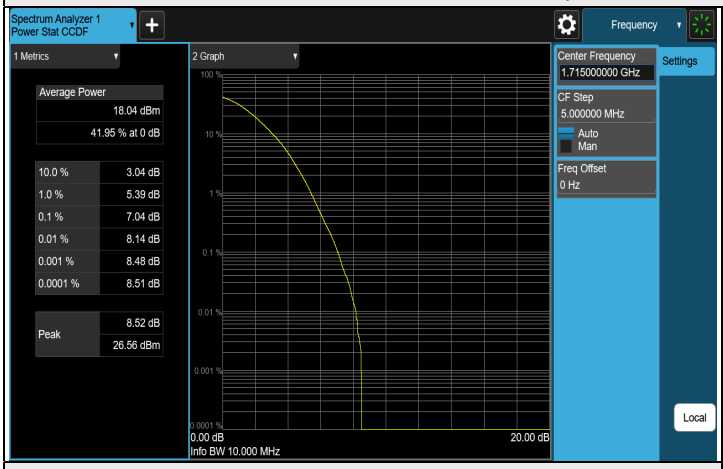
LTE Band 4, Channel Bandwidth: 5 MHz

Modulation	Channel	Frequency (MHz)	Measurement Value(dB)	Limit (dB)	Result
QPSK	19975	1712.5	3.56	13	PASS
QPSK	20175	1732.5	3.68	13	PASS
QPSK	20375	1752.5	3.52	13	PASS
16QAM	19975	1712.5	4.44	13	PASS
16QAM	20175	1732.5	4.45	13	PASS
16QAM	20375	1752.5	4.34	13	PASS
64QAM	19975	1712.5	5.42	13	PASS
64QAM	20175	1732.5	5.48	13	PASS
64QAM	20375	1752.5	5.36	13	PASS
256QAM	19975	1712.5	6.91	13	PASS
256QAM	20175	1732.5	6.79	13	PASS
256QAM	20375	1752.5	6.81	13	PASS

Spectrum Plot of Worst Value	
	
256QAM CH 19975 (1712.5 MHz)	

LTE Band 4, Channel Bandwidth: 10 MHz

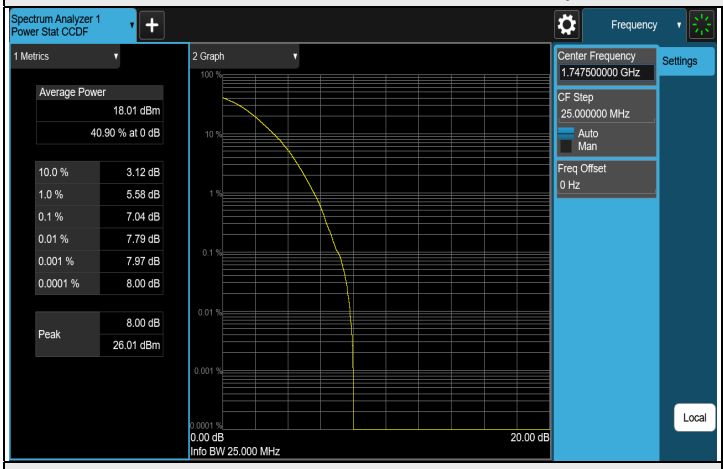
Modulation	Channel	Frequency (MHz)	Measurement Value(dB)	Limit (dB)	Result
QPSK	20000	1715	3.73	13	PASS
QPSK	20175	1732.5	3.79	13	PASS
QPSK	20350	1750	3.73	13	PASS
16QAM	20000	1715	4.42	13	PASS
16QAM	20175	1732.5	4.46	13	PASS
16QAM	20350	1750	4.69	13	PASS
64QAM	20000	1715	5.39	13	PASS
64QAM	20175	1732.5	5.31	13	PASS
64QAM	20350	1750	5.31	13	PASS
256QAM	20000	1715	7.04	13	PASS
256QAM	20175	1732.5	6.65	13	PASS
256QAM	20350	1750	6.81	13	PASS

Spectrum Plot of Worst Value	
	
256QAM CH 20000 (1715 MHz)	

LTE Band 4, Channel Bandwidth: 15 MHz

Modulation	Channel	Frequency (MHz)	Measurement Value(dB)	Limit (dB)	Result
QPSK	20025	1717.5	3.88	13	PASS
QPSK	20175	1732.5	3.80	13	PASS
QPSK	20325	1747.5	3.97	13	PASS
16QAM	20025	1717.5	4.52	13	PASS
16QAM	20175	1732.5	4.37	13	PASS
16QAM	20325	1747.5	4.50	13	PASS
64QAM	20025	1717.5	5.59	13	PASS
64QAM	20175	1732.5	5.33	13	PASS
64QAM	20325	1747.5	5.41	13	PASS
256QAM	20025	1717.5	6.99	13	PASS
256QAM	20175	1732.5	6.51	13	PASS
256QAM	20325	1747.5	7.04	13	PASS

Spectrum Plot of Worst Value

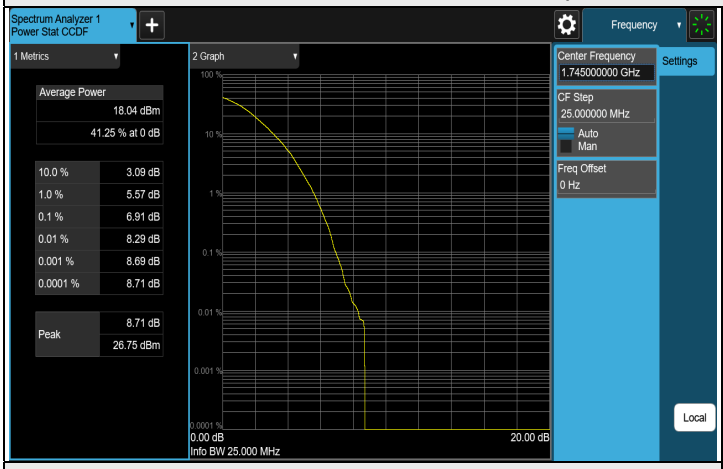


256QAM CH 20325 (1747.5 MHz)

LTE Band 4, Channel Bandwidth: 20 MHz

Modulation	Channel	Frequency (MHz)	Measurement Value(dB)	Limit (dB)	Result
QPSK	20050	1720	3.73	13	PASS
QPSK	20175	1732.5	3.68	13	PASS
QPSK	20300	1745	3.93	13	PASS
16QAM	20050	1720	4.51	13	PASS
16QAM	20175	1732.5	4.43	13	PASS
16QAM	20300	1745	4.44	13	PASS
64QAM	20050	1720	5.22	13	PASS
64QAM	20175	1732.5	5.31	13	PASS
64QAM	20300	1745	5.53	13	PASS
256QAM	20050	1720	6.78	13	PASS
256QAM	20175	1732.5	6.56	13	PASS
256QAM	20300	1745	6.91	13	PASS

Spectrum Plot of Worst Value



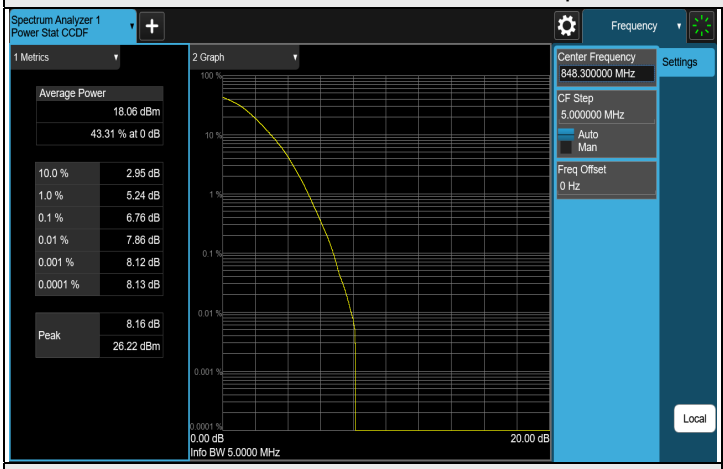
256QAM CH 20300 (1745 MHz)

7.3.3 LTE Band 5

LTE Band 5, Channel Bandwidth: 1.4 MHz

Modulation	Channel	Frequency (MHz)	Measurement Value(dB)	Limit (dB)	Result
QPSK	20407	824.7	3.56	13	PASS
QPSK	20525	836.5	3.65	13	PASS
QPSK	20643	848.3	3.58	13	PASS
16QAM	20407	824.7	4.36	13	PASS
16QAM	20525	836.5	4.41	13	PASS
16QAM	20643	848.3	4.27	13	PASS
64QAM	20407	824.7	4.43	13	PASS
64QAM	20525	836.5	4.45	13	PASS
64QAM	20643	848.3	4.32	13	PASS
256QAM	20407	824.7	6.60	13	PASS
256QAM	20525	836.5	6.57	13	PASS
256QAM	20643	848.3	6.76	13	PASS

Spectrum Plot of Worst Value

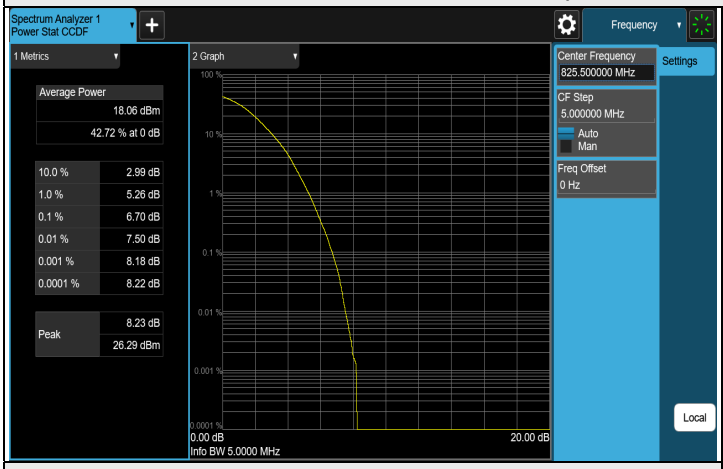


256QAM CH 20643 (848.3 MHz)

LTE Band 5, Channel Bandwidth: 3 MHz

Modulation	Channel	Frequency (MHz)	Measurement Value(dB)	Limit (dB)	Result
QPSK	20415	825.5	3.70	13	PASS
QPSK	20525	836.5	3.55	13	PASS
QPSK	20635	847.5	3.39	13	PASS
16QAM	20415	825.5	4.57	13	PASS
16QAM	20525	836.5	4.44	13	PASS
16QAM	20635	847.5	4.32	13	PASS
64QAM	20415	825.5	5.35	13	PASS
64QAM	20525	836.5	5.40	13	PASS
64QAM	20635	847.5	5.14	13	PASS
256QAM	20415	825.5	6.70	13	PASS
256QAM	20525	836.5	6.47	13	PASS
256QAM	20635	847.5	6.25	13	PASS

Spectrum Plot of Worst Value

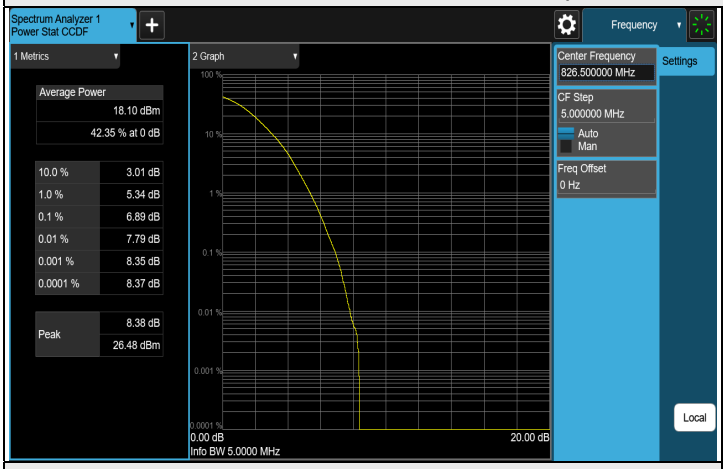


256QAM CH 20415 (825.5 MHz)

LTE Band 5, Channel Bandwidth: 5 MHz

Modulation	Channel	Frequency (MHz)	Measurement Value(dB)	Limit (dB)	Result
QPSK	20425	826.5	3.78	13	PASS
QPSK	20525	836.5	3.46	13	PASS
QPSK	20625	846.5	3.27	13	PASS
16QAM	20425	826.5	4.48	13	PASS
16QAM	20525	836.5	4.47	13	PASS
16QAM	20625	846.5	4.18	13	PASS
64QAM	20425	826.5	5.51	13	PASS
64QAM	20525	836.5	5.46	13	PASS
64QAM	20625	846.5	5.23	13	PASS
256QAM	20425	826.5	6.89	13	PASS
256QAM	20525	836.5	6.51	13	PASS
256QAM	20625	846.5	6.38	13	PASS

Spectrum Plot of Worst Value

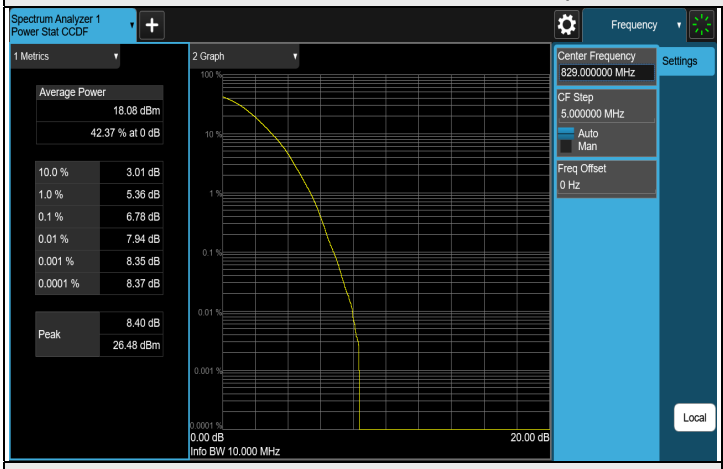


256QAM CH 20425 (826.5 MHz)

LTE Band 5, Channel Bandwidth: 10 MHz

Modulation	Channel	Frequency (MHz)	Measurement Value(dB)	Limit (dB)	Result
QPSK	20450	829	3.83	13	PASS
QPSK	20525	836.5	3.44	13	PASS
QPSK	20600	844	3.90	13	PASS
16QAM	20450	829	4.50	13	PASS
16QAM	20525	836.5	4.19	13	PASS
16QAM	20600	844	4.85	13	PASS
64QAM	20450	829	5.50	13	PASS
64QAM	20525	836.5	5.10	13	PASS
64QAM	20600	844	5.42	13	PASS
256QAM	20450	829	6.78	13	PASS
256QAM	20525	836.5	6.25	13	PASS
256QAM	20600	844	6.74	13	PASS

Spectrum Plot of Worst Value

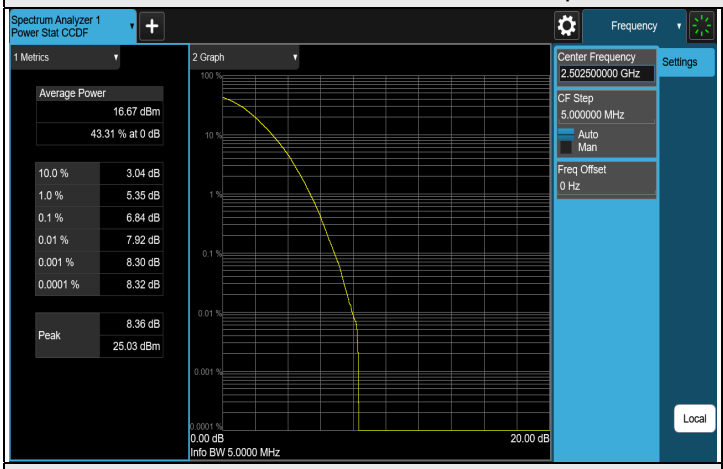
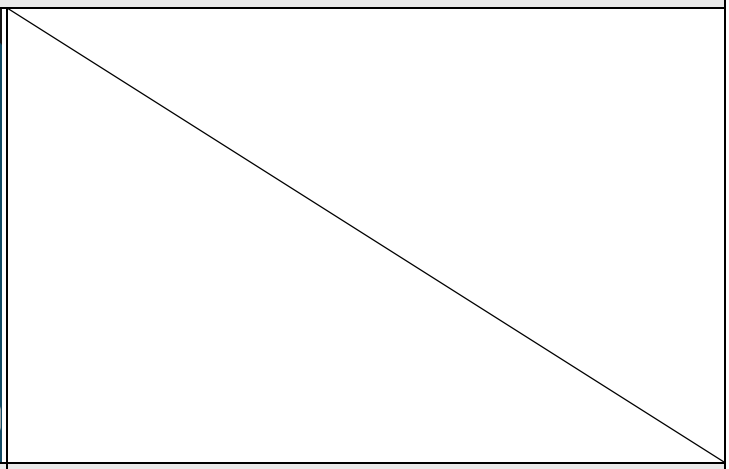


256QAM CH 20450 (829 MHz)

7.3.4 LTE Band 7

LTE Band 7, Channel Bandwidth: 5 MHz

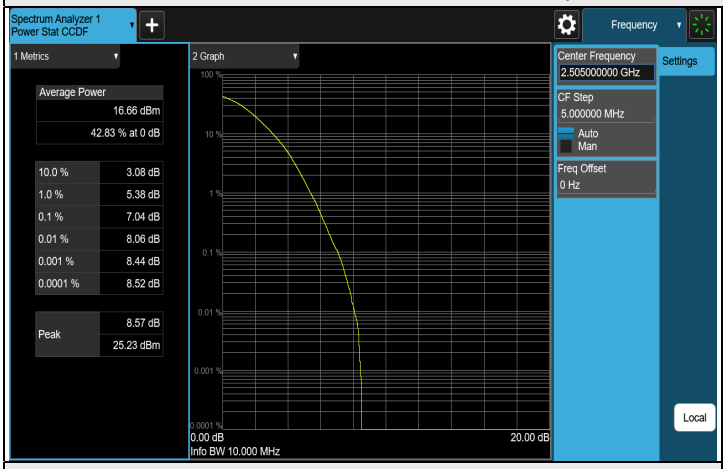
Modulation	Channel	Frequency (MHz)	Measurement Value(dB)	Limit (dB)	Result
QPSK	20775	2502.5	3.63	13	PASS
QPSK	21100	2535	3.67	13	PASS
QPSK	21425	2567.5	3.55	13	PASS
16QAM	20775	2502.5	4.39	13	PASS
16QAM	21100	2535	4.47	13	PASS
16QAM	21425	2567.5	4.28	13	PASS
64QAM	20775	2502.5	4.57	13	PASS
64QAM	21100	2535	4.65	13	PASS
64QAM	21425	2567.5	4.43	13	PASS
256QAM	20775	2502.5	6.84	13	PASS
256QAM	21100	2535	6.76	13	PASS
256QAM	21425	2567.5	6.61	13	PASS

Spectrum Plot of Worst Value	
	
256QAM CH 20775 (2502.5 MHz)	

LTE Band 7, Channel Bandwidth: 10 MHz

Modulation	Channel	Frequency (MHz)	Measurement Value(dB)	Limit (dB)	Result
QPSK	20800	2505	3.84	13	PASS
QPSK	21100	2535	3.82	13	PASS
QPSK	21400	2565	3.75	13	PASS
16QAM	20800	2505	4.74	13	PASS
16QAM	21100	2535	4.39	13	PASS
16QAM	21400	2565	4.38	13	PASS
64QAM	20800	2505	5.43	13	PASS
64QAM	21100	2535	5.34	13	PASS
64QAM	21400	2565	5.33	13	PASS
256QAM	20800	2505	7.04	13	PASS
256QAM	21100	2535	6.61	13	PASS
256QAM	21400	2565	6.76	13	PASS

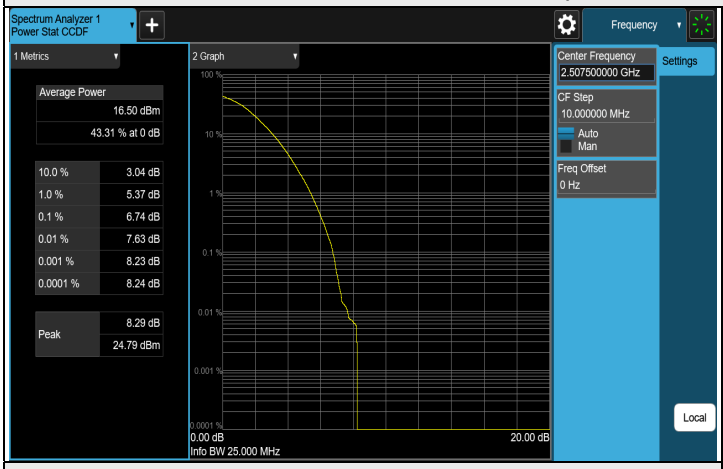
Spectrum Plot of Worst Value



256QAM CH 20800 (2505 MHz)

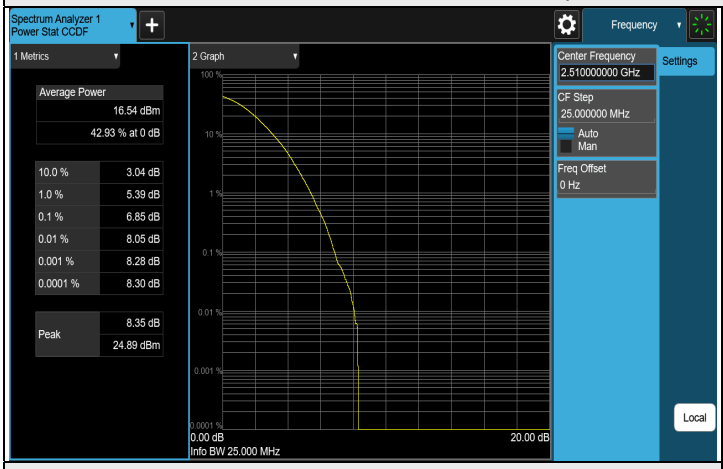
LTE Band 7, Channel Bandwidth: 15 MHz

Modulation	Channel	Frequency (MHz)	Measurement Value(dB)	Limit (dB)	Result
QPSK	20825	2507.5	3.85	13	PASS
QPSK	21100	2535	3.87	13	PASS
QPSK	21375	2562.5	3.86	13	PASS
16QAM	20825	2507.5	4.34	13	PASS
16QAM	21100	2535	4.56	13	PASS
16QAM	21375	2562.5	4.43	13	PASS
64QAM	20825	2507.5	5.21	13	PASS
64QAM	21100	2535	5.27	13	PASS
64QAM	21375	2562.5	5.24	13	PASS
256QAM	20825	2507.5	6.74	13	PASS
256QAM	21100	2535	6.46	13	PASS
256QAM	21375	2562.5	6.42	13	PASS

Spectrum Plot of Worst Value	
	
256QAM CH 20825 (2507.5 MHz)	

LTE Band 7, Channel Bandwidth: 20 MHz

Modulation	Channel	Frequency (MHz)	Measurement Value(dB)	Limit (dB)	Result
QPSK	20850	2510	3.83	13	PASS
QPSK	21100	2535	3.82	13	PASS
QPSK	21350	2560	3.84	13	PASS
16QAM	20850	2510	4.71	13	PASS
16QAM	21100	2535	4.46	13	PASS
16QAM	21350	2560	4.57	13	PASS
64QAM	20850	2510	5.40	13	PASS
64QAM	21100	2535	5.27	13	PASS
64QAM	21350	2560	5.25	13	PASS
256QAM	20850	2510	6.85	13	PASS
256QAM	21100	2535	6.68	13	PASS
256QAM	21350	2560	6.78	13	PASS

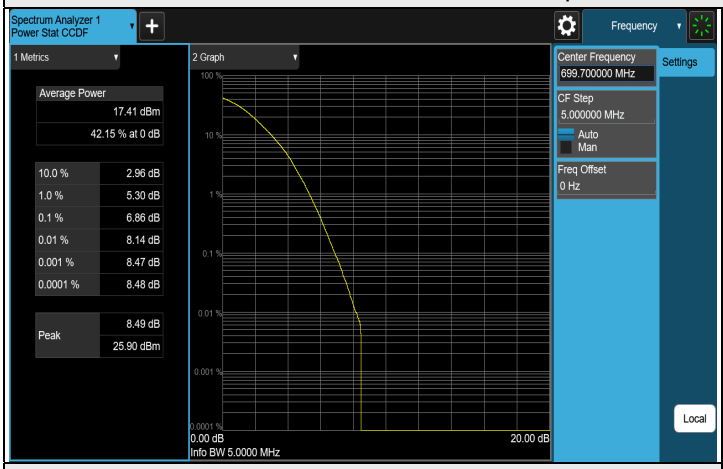
Spectrum Plot of Worst Value	
	
256QAM CH 20850 (2510 MHz)	

7.3.5 LTE Band 12

LTE Band 12, Channel Bandwidth: 1.4 MHz

Modulation	Channel	Frequency (MHz)	Measurement Value(dB)	Limit (dB)	Result
QPSK	23017	699.7	3.54	13	PASS
QPSK	23095	707.5	3.62	13	PASS
QPSK	23173	715.3	3.67	13	PASS
16QAM	23017	699.7	4.40	13	PASS
16QAM	23095	707.5	4.44	13	PASS
16QAM	23173	715.3	4.43	13	PASS
64QAM	23017	699.7	5.47	13	PASS
64QAM	23095	707.5	5.29	13	PASS
64QAM	23173	715.3	5.34	13	PASS
256QAM	23017	699.7	6.86	13	PASS
256QAM	23095	707.5	6.75	13	PASS
256QAM	23173	715.3	6.80	13	PASS

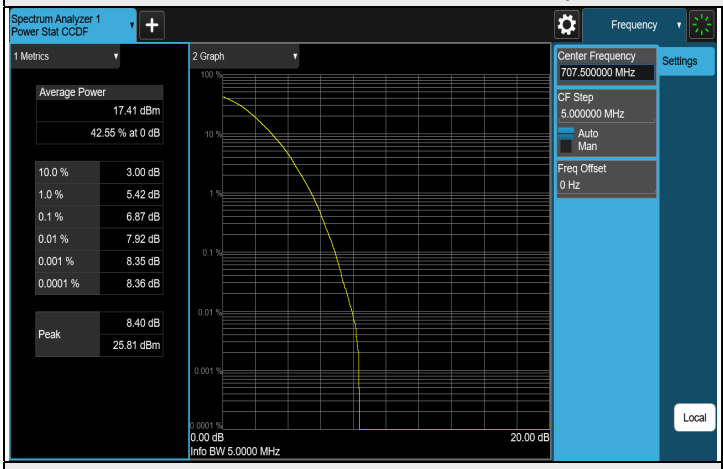
Spectrum Plot of Worst Value



256QAM CH 23017 (699.7 MHz)

LTE Band 12, Channel Bandwidth: 3 MHz

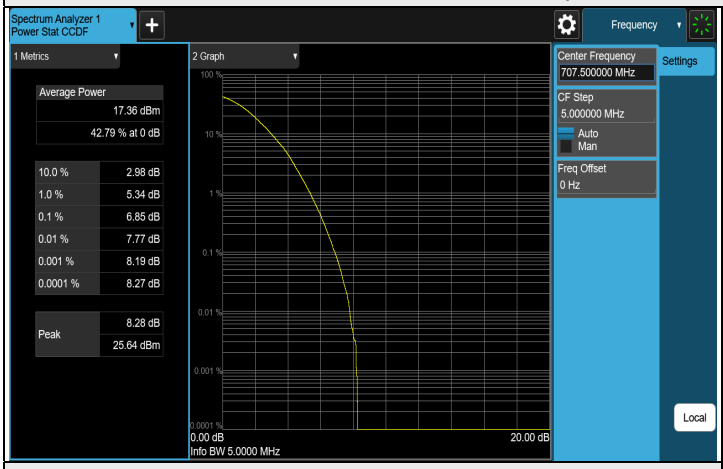
Modulation	Channel	Frequency (MHz)	Measurement Value(dB)	Limit (dB)	Result
QPSK	23025	700.5	3.57	13	PASS
QPSK	23095	707.5	3.54	13	PASS
QPSK	23165	714.5	3.58	13	PASS
16QAM	23025	700.5	4.50	13	PASS
16QAM	23095	707.5	4.72	13	PASS
16QAM	23165	714.5	4.50	13	PASS
64QAM	23025	700.5	5.34	13	PASS
64QAM	23095	707.5	5.43	13	PASS
64QAM	23165	714.5	5.31	13	PASS
256QAM	23025	700.5	6.71	13	PASS
256QAM	23095	707.5	6.87	13	PASS
256QAM	23165	714.5	6.59	13	PASS

Spectrum Plot of Worst Value	
	
256QAM CH 23095 (707.5 MHz)	

LTE Band 12, Channel Bandwidth: 5 MHz

Modulation	Channel	Frequency (MHz)	Measurement Value(dB)	Limit (dB)	Result
QPSK	23035	701.5	3.83	13	PASS
QPSK	23095	707.5	3.68	13	PASS
QPSK	23155	713.5	3.54	13	PASS
16QAM	23035	701.5	4.57	13	PASS
16QAM	23095	707.5	4.71	13	PASS
16QAM	23155	713.5	4.51	13	PASS
64QAM	23035	701.5	5.44	13	PASS
64QAM	23095	707.5	5.52	13	PASS
64QAM	23155	713.5	5.47	13	PASS
256QAM	23035	701.5	6.65	13	PASS
256QAM	23095	707.5	6.85	13	PASS
256QAM	23155	713.5	6.60	13	PASS

Spectrum Plot of Worst Value

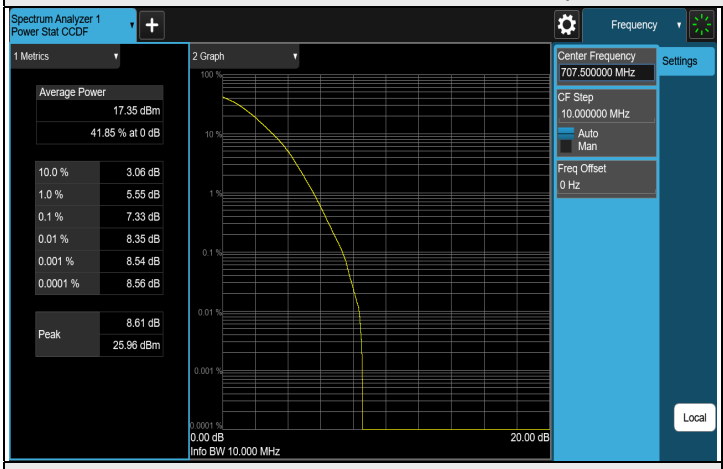


256QAM CH 23095 (707.5 MHz)

LTE Band 12, Channel Bandwidth: 10 MHz

Modulation	Channel	Frequency (MHz)	Measurement Value(dB)	Limit (dB)	Result
QPSK	23060	704	3.72	13	PASS
QPSK	23095	707.5	3.93	13	PASS
QPSK	23130	711	3.70	13	PASS
16QAM	23060	704	4.68	13	PASS
16QAM	23095	707.5	4.64	13	PASS
16QAM	23130	711	4.52	13	PASS
64QAM	23060	704	5.39	13	PASS
64QAM	23095	707.5	5.57	13	PASS
64QAM	23130	711	5.36	13	PASS
256QAM	23060	704	6.63	13	PASS
256QAM	23095	707.5	7.33	13	PASS
256QAM	23130	711	6.53	13	PASS

Spectrum Plot of Worst Value



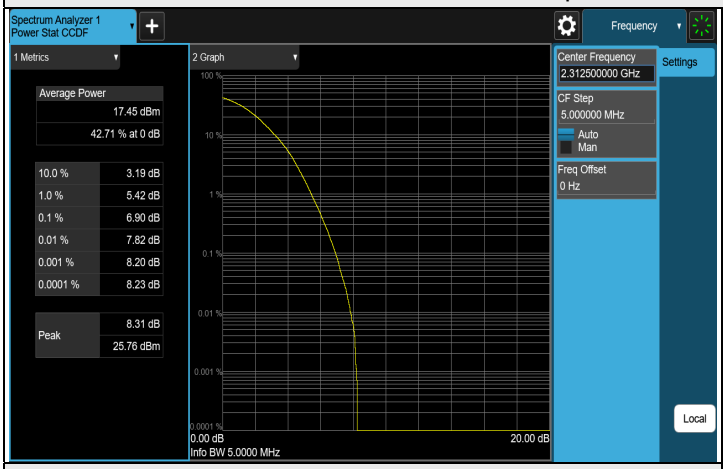
256QAM CH 23095 (707.5 MHz)

7.3.6 LTE Band 30

LTE Band 30, Channel Bandwidth: 5 MHz

Modulation	Channel	Frequency (MHz)	Measurement Value(dB)	Limit (dB)	Result
QPSK	27685	2307.5	3.58	13	PASS
QPSK	27710	2310	3.61	13	PASS
QPSK	27735	2312.5	3.66	13	PASS
16QAM	27685	2307.5	4.31	13	PASS
16QAM	27710	2310	4.43	13	PASS
16QAM	27735	2312.5	4.74	13	PASS
64QAM	27685	2307.5	5.14	13	PASS
64QAM	27710	2310	5.31	13	PASS
64QAM	27735	2312.5	5.57	13	PASS
256QAM	27685	2307.5	6.37	13	PASS
256QAM	27710	2310	6.74	13	PASS
256QAM	27735	2312.5	6.90	13	PASS

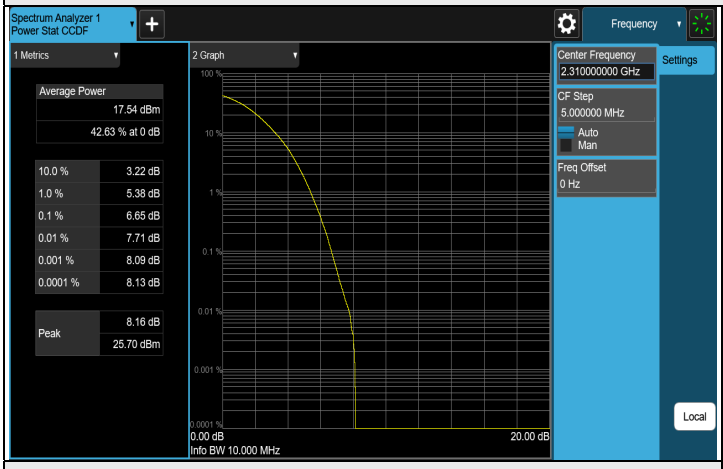
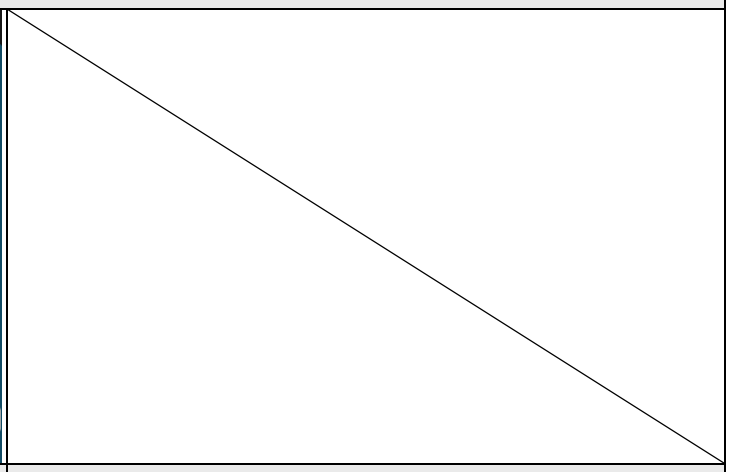
Spectrum Plot of Worst Value



256QAM CH 27735 (2312.5 MHz)

LTE Band 30, Channel Bandwidth: 10 MHz

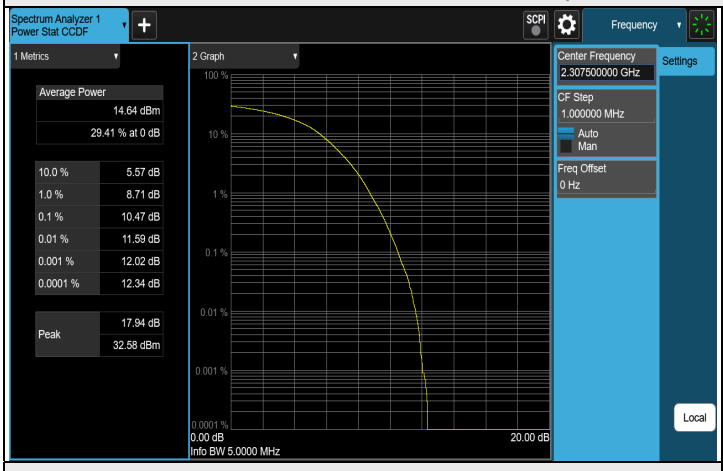
Modulation	Channel	Frequency (MHz)	Measurement Value(dB)	Limit (dB)	Result
QPSK	27710	2310	3.82	13	PASS
16QAM	27710	2310	4.62	13	PASS
64QAM	27710	2310	5.33	13	PASS
256QAM	27710	2310	6.65	13	PASS

Spectrum Plot of Worst Value	
	
256QAM CH 27710 (2310 MHz)	

7.3.7 LTE Band 40 (2.305 GHz ~ 2.315 GHz)

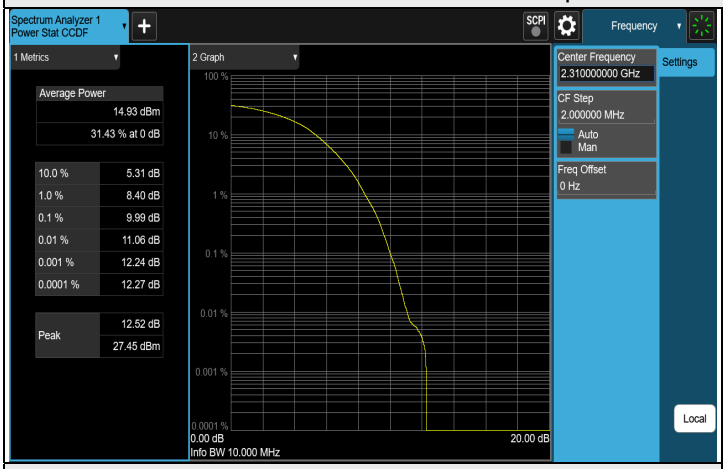
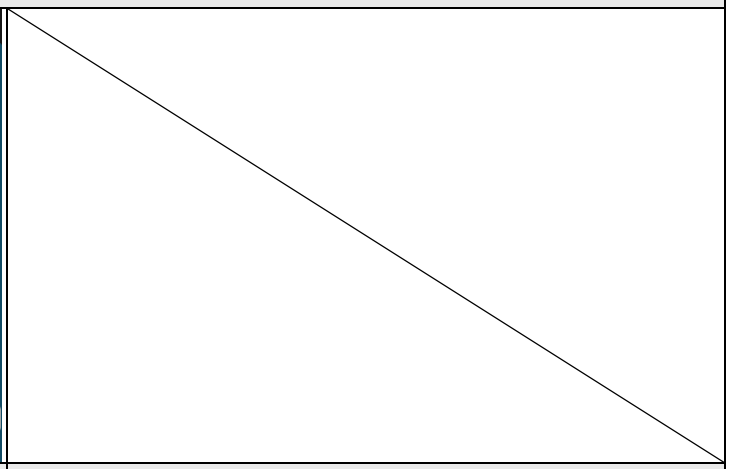
LTE Band 40 (2.305 GHz ~ 2.315 GHz), Channel Bandwidth: 5 MHz

LTE Band 40 5M					
Modulation	Channel	Frequency (MHz)	Measurement Value(dB)	Limit (dB)	Result
QPSK	38725	2307.5	7.47	13	PASS
QPSK	38750	2310	7.55	13	PASS
QPSK	38775	2312.5	7.53	13	PASS
16QAM	38725	2307.5	8.44	13	PASS
16QAM	38750	2310	8.49	13	PASS
16QAM	38775	2312.5	8.57	13	PASS
64QAM	38725	2307.5	9.36	13	PASS
64QAM	38750	2310	9.47	13	PASS
64QAM	38775	2312.5	9.07	13	PASS
256QAM	38725	2307.5	10.47	13	PASS
256QAM	38750	2310	10.11	13	PASS
256QAM	38775	2312.5	10.03	13	PASS

Spectrum Plot of Worst Value	
	
256QAM CH 38725 (2307.5 MHz)	

LTE Band 40 (2.305 GHz ~ 2.315 GHz), Channel Bandwidth: 10 MHz

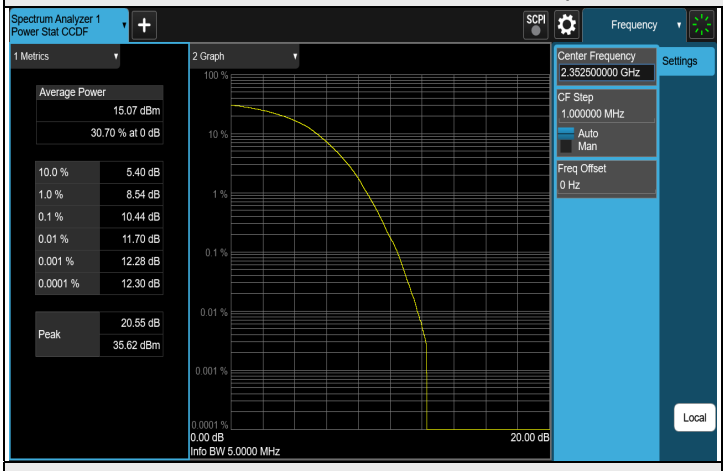
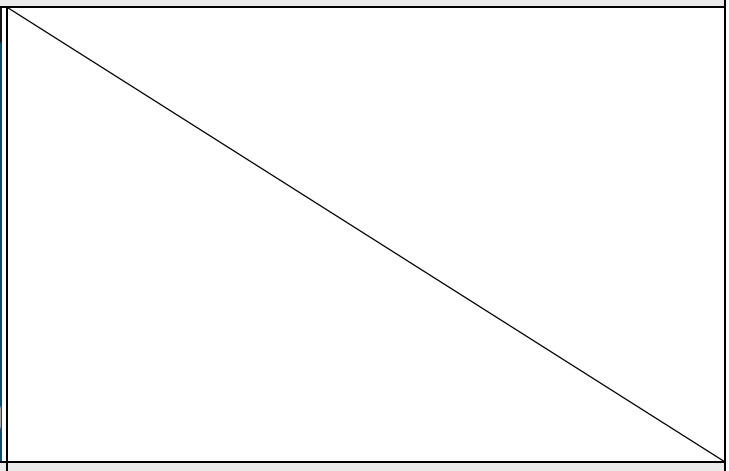
LTE Band 40 10M					
Modulation	Channel	Frequency (MHz)	Measurement Value(dB)	Limit (dB)	Result
QPSK	38750	2310	7.96	13	PASS
16QAM	38750	2310	8.47	13	PASS
64QAM	38750	2310	9.30	13	PASS
256QAM	38750	2310	9.99	13	PASS

Spectrum Plot of Worst Value	
	
256QAM CH 38750 (2310 MHz)	

7.3.8 LTE Band 40 (2.35 GHz ~ 2.36 GHz)

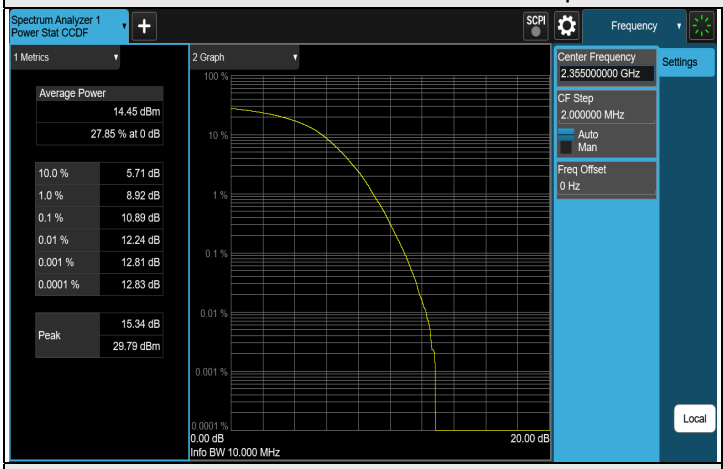
LTE Band 40 (2.35 GHz ~ 2.36 GHz), Channel Bandwidth: 5 MHz

LTE Band 40 5M					
Modulation	Channel	Frequency (MHz)	Measurement Value(dB)	Limit (dB)	Result
QPSK	39175	2352.5	7.56	13	PASS
QPSK	39200	2355	7.57	13	PASS
QPSK	39225	2357.5	7.67	13	PASS
16QAM	39175	2352.5	8.87	13	PASS
16QAM	39200	2355	8.48	13	PASS
16QAM	39225	2357.5	8.34	13	PASS
64QAM	39175	2352.5	9.39	13	PASS
64QAM	39200	2355	9.19	13	PASS
64QAM	39225	2357.5	9.40	13	PASS
256QAM	39175	2352.5	10.44	13	PASS
256QAM	39200	2355	10.20	13	PASS
256QAM	39225	2357.5	10.24	13	PASS

Spectrum Plot of Worst Value	
	
256QAM CH 39175 (2352.5 MHz)	

LTE Band 40 (2.35 GHz ~ 2.36 GHz), Channel Bandwidth: 10 MHz

LTE Band 40 10M					
Modulation	Channel	Frequency (MHz)	Measurement Value(dB)	Limit (dB)	Result
QPSK	39200	2355	7.65	13	PASS
16QAM	39200	2355	8.23	13	PASS
64QAM	39200	2355	9.89	13	PASS
256QAM	39200	2355	10.89	13	PASS

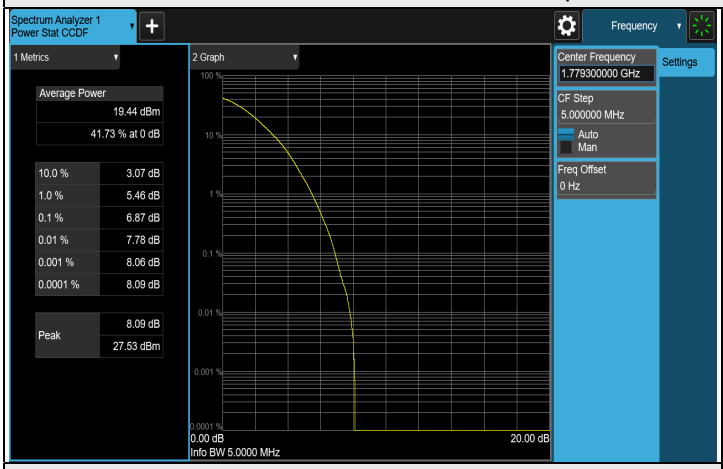
Spectrum Plot of Worst Value	
	
256QAM CH 39200 (2355 MHz)	

7.3.9 LTE Band 66

LTE Band 66, Channel Bandwidth: 1.4 MHz

Modulation	Channel	Frequency (MHz)	Measurement Value(dB)	Limit (dB)	Result
QPSK	131979	1710.7	3.50	13	PASS
QPSK	132322	1745	3.76	13	PASS
QPSK	132665	1779.3	3.62	13	PASS
16QAM	131979	1710.7	4.41	13	PASS
16QAM	132322	1745	4.31	13	PASS
16QAM	132665	1779.3	4.24	13	PASS
64QAM	131979	1710.7	5.41	13	PASS
64QAM	132322	1745	5.36	13	PASS
64QAM	132665	1779.3	5.29	13	PASS
256QAM	131979	1710.7	6.85	13	PASS
256QAM	132322	1745	6.72	13	PASS
256QAM	132665	1779.3	6.87	13	PASS

Spectrum Plot of Worst Value

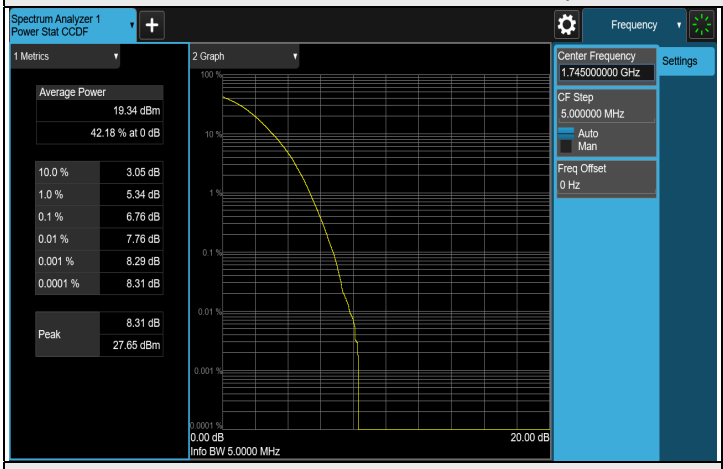


256QAM CH 132665 (1779.3 MHz)

LTE Band 66, Channel Bandwidth: 3 MHz

Modulation	Channel	Frequency (MHz)	Measurement Value(dB)	Limit (dB)	Result
QPSK	131987	1711.5	3.90	13	PASS
QPSK	132322	1745	3.62	13	PASS
QPSK	132657	1778.5	3.53	13	PASS
16QAM	131987	1711.5	4.61	13	PASS
16QAM	132322	1745	4.42	13	PASS
16QAM	132657	1778.5	4.34	13	PASS
64QAM	131987	1711.5	5.40	13	PASS
64QAM	132322	1745	5.51	13	PASS
64QAM	132657	1778.5	5.37	13	PASS
256QAM	131987	1711.5	6.65	13	PASS
256QAM	132322	1745	6.76	13	PASS
256QAM	132657	1778.5	6.67	13	PASS

Spectrum Plot of Worst Value

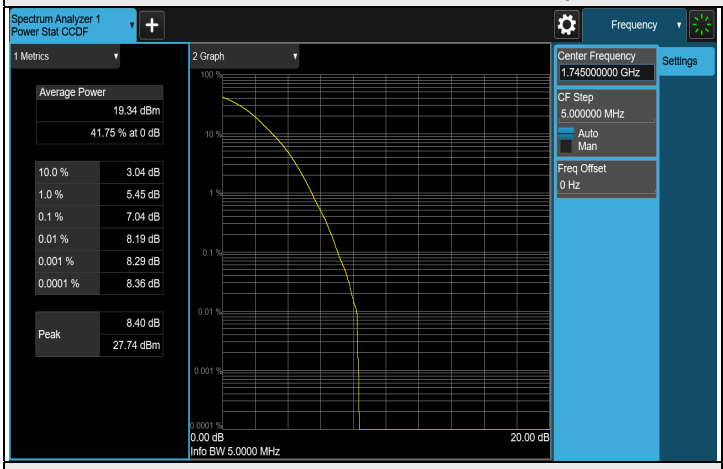


256QAM CH 132322 (1745 MHz)

LTE Band 66, Channel Bandwidth: 5 MHz

Modulation	Channel	Frequency (MHz)	Measurement Value(dB)	Limit (dB)	Result
QPSK	131997	1712.5	3.60	13	PASS
QPSK	132322	1745	3.70	13	PASS
QPSK	132647	1777.5	3.55	13	PASS
16QAM	131997	1712.5	4.46	13	PASS
16QAM	132322	1745	4.56	13	PASS
16QAM	132647	1777.5	4.38	13	PASS
64QAM	131997	1712.5	5.86	13	PASS
64QAM	132322	1745	5.78	13	PASS
64QAM	132647	1777.5	5.44	13	PASS
256QAM	131997	1712.5	6.92	13	PASS
256QAM	132322	1745	7.04	13	PASS
256QAM	132647	1777.5	6.95	13	PASS

Spectrum Plot of Worst Value

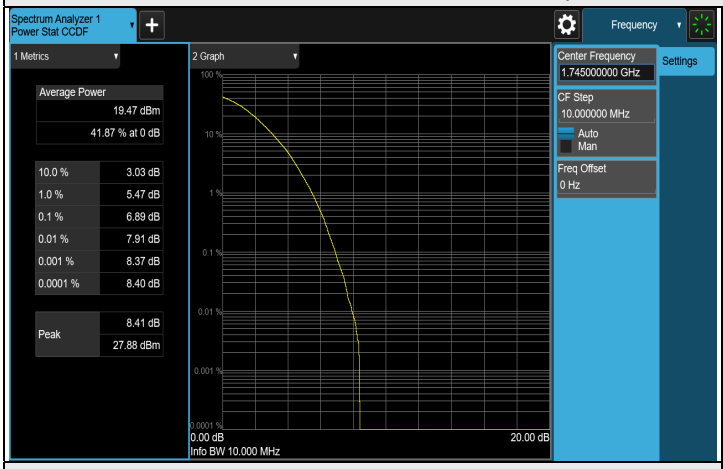


256QAM CH 132322 (1745 MHz)

LTE Band 66, Channel Bandwidth: 10 MHz

Modulation	Channel	Frequency (MHz)	Measurement Value(dB)	Limit (dB)	Result
QPSK	132022	1715	3.81	13	PASS
QPSK	132322	1745	4.00	13	PASS
QPSK	132622	1775	3.85	13	PASS
16QAM	132022	1715	4.62	13	PASS
16QAM	132322	1745	4.49	13	PASS
16QAM	132622	1775	4.44	13	PASS
64QAM	132022	1715	5.53	13	PASS
64QAM	132322	1745	5.55	13	PASS
64QAM	132622	1775	5.47	13	PASS
256QAM	132022	1715	6.77	13	PASS
256QAM	132322	1745	6.89	13	PASS
256QAM	132622	1775	6.88	13	PASS

Spectrum Plot of Worst Value

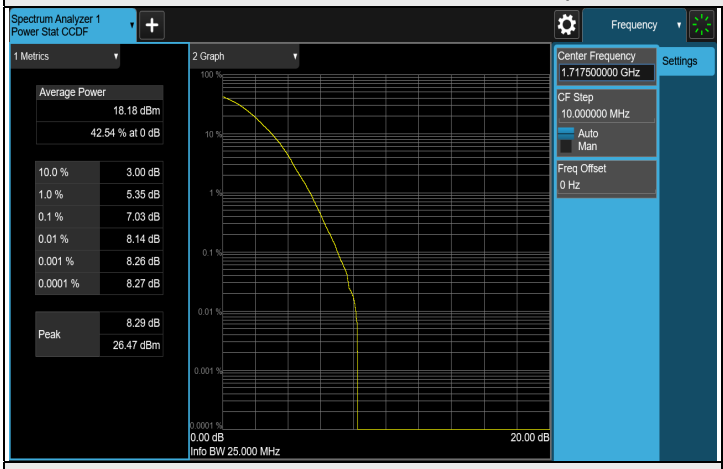


256QAM CH 132322 (1745 MHz)

LTE Band 66, Channel Bandwidth: 15 MHz

Modulation	Channel	Frequency (MHz)	Measurement Value(dB)	Limit (dB)	Result
QPSK	132047	1717.5	3.99	13	PASS
QPSK	132322	1745	3.97	13	PASS
QPSK	132597	1772.5	3.90	13	PASS
16QAM	132047	1717.5	4.80	13	PASS
16QAM	132322	1745	4.42	13	PASS
16QAM	132597	1772.5	4.77	13	PASS
64QAM	132047	1717.5	5.41	13	PASS
64QAM	132322	1745	5.70	13	PASS
64QAM	132597	1772.5	5.74	13	PASS
256QAM	132047	1717.5	7.03	13	PASS
256QAM	132322	1745	7.03	13	PASS
256QAM	132597	1772.5	6.61	13	PASS

Spectrum Plot of Worst Value

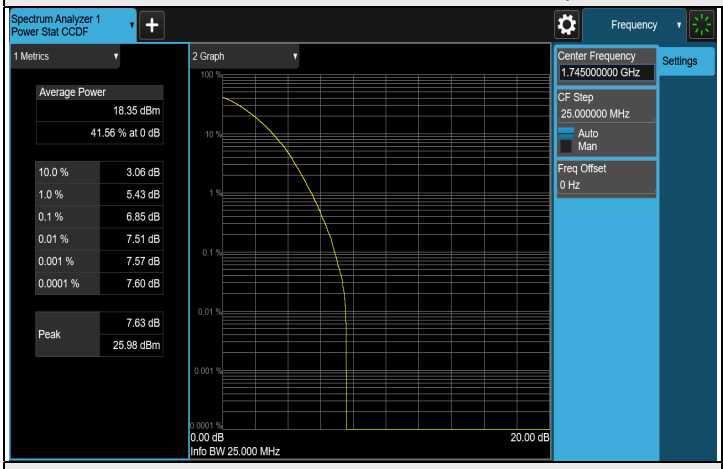


256QAM CH 132047 (1717.5 MHz)

LTE Band 66, Channel Bandwidth: 20 MHz

Modulation	Channel	Frequency (MHz)	Measurement Value(dB)	Limit (dB)	Result
QPSK	132072	1720	3.84	13	PASS
QPSK	132322	1745	3.95	13	PASS
QPSK	132572	1770	3.86	13	PASS
16QAM	132072	1720	4.46	13	PASS
16QAM	132322	1745	4.55	13	PASS
16QAM	132572	1770	4.64	13	PASS
64QAM	132072	1720	5.29	13	PASS
64QAM	132322	1745	5.72	13	PASS
64QAM	132572	1770	5.20	13	PASS
256QAM	132072	1720	6.80	13	PASS
256QAM	132322	1745	6.85	13	PASS
256QAM	132572	1770	6.74	13	PASS

Spectrum Plot of Worst Value



256QAM CH 132322 (1745 MHz)

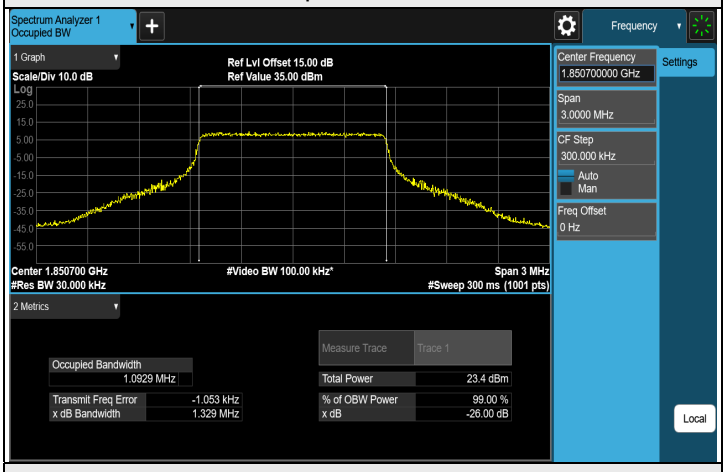
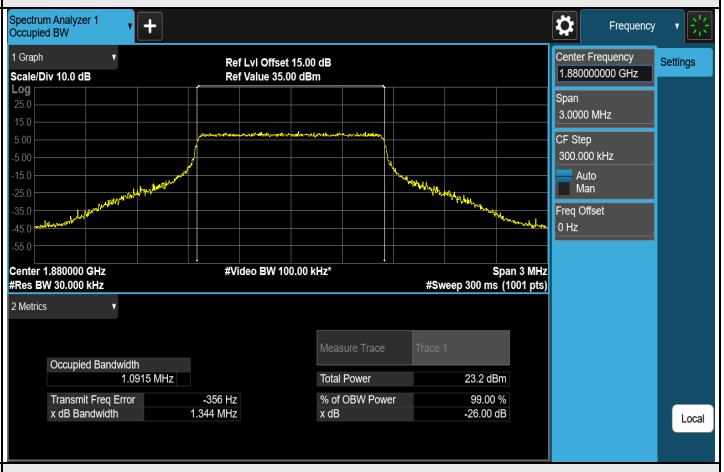
7.4 Bandwidth

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 69% RH	Tested By:	Noah Chang

7.4.1 LTE Band 2

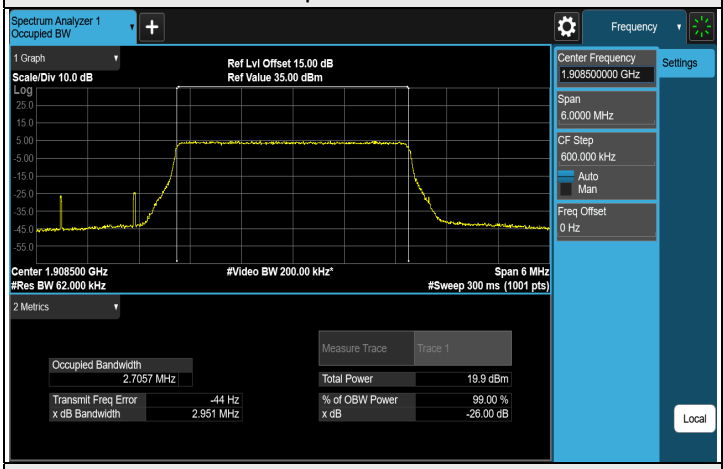
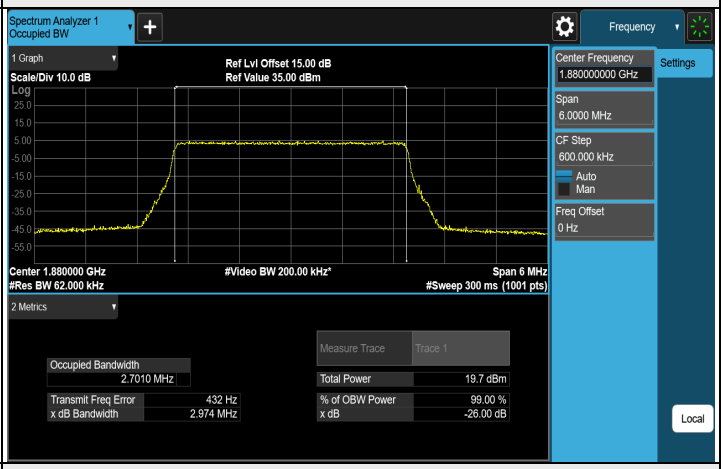
LTE Band 2, Channel Bandwidth: 1.4 MHz

Modulation	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	26 dB Bandwidth (MHz)
QPSK	18607	1850.7	1.0903	1.316
QPSK	18900	1880	1.0895	1.331
QPSK	19193	1909.3	1.0913	1.284
16QAM	18607	1850.7	1.0929	1.329
16QAM	18900	1880	1.0915	1.344
16QAM	19193	1909.3	1.0928	1.344
64QAM	18607	1850.7	1.0919	1.281
64QAM	18900	1880	1.0906	1.305
64QAM	19193	1909.3	1.0916	1.295
256QAM	18607	1850.7	1.0918	1.299
256QAM	18900	1880	1.0910	1.295
256QAM	19193	1909.3	1.0908	1.303

Spectrum Plot of Worst Value	
Occupied bandwidth	26 dB Bandwidth
	
16QAM CH 18607 (1850.7 MHz)	16QAM CH 18900 (1880 MHz)

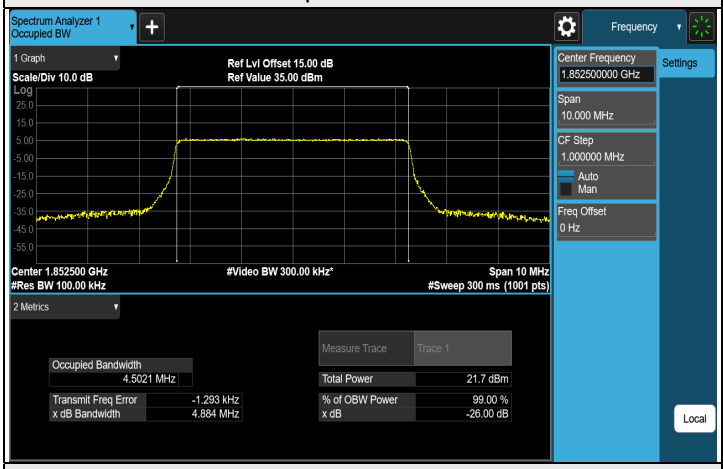
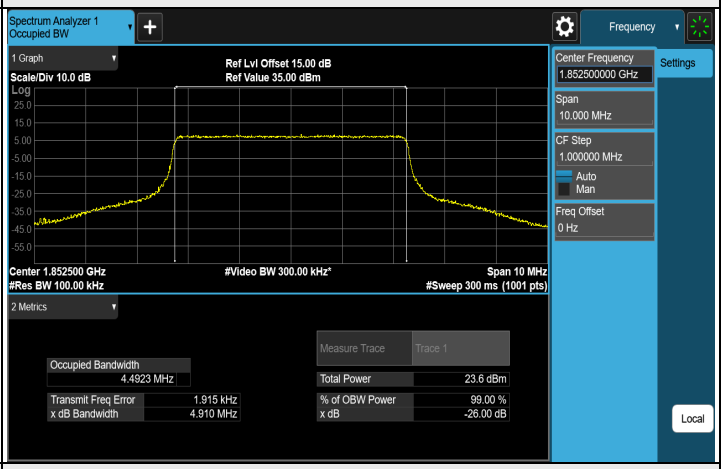
LTE Band 2, Channel Bandwidth: 3 MHz

Modulation	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	26 dB Bandwidth (MHz)
QPSK	18615	1851.5	2.7010	2.950
QPSK	18900	1880	2.6996	2.960
QPSK	19185	1908.5	2.7005	2.957
16QAM	18615	1851.5	2.7016	2.962
16QAM	18900	1880	2.6974	2.957
16QAM	19185	1908.5	2.7032	2.953
64QAM	18615	1851.5	2.7014	2.961
64QAM	18900	1880	2.7038	2.959
64QAM	19185	1908.5	2.7022	2.955
256QAM	18615	1851.5	2.7001	2.942
256QAM	18900	1880	2.7010	2.974
256QAM	19185	1908.5	2.7057	2.951

Spectrum Plot of Worst Value	
Occupied bandwidth	26 dB Bandwidth
	
256QAM CH 19185 (1908.5 MHz)	256QAM CH 18900 (1880 MHz)

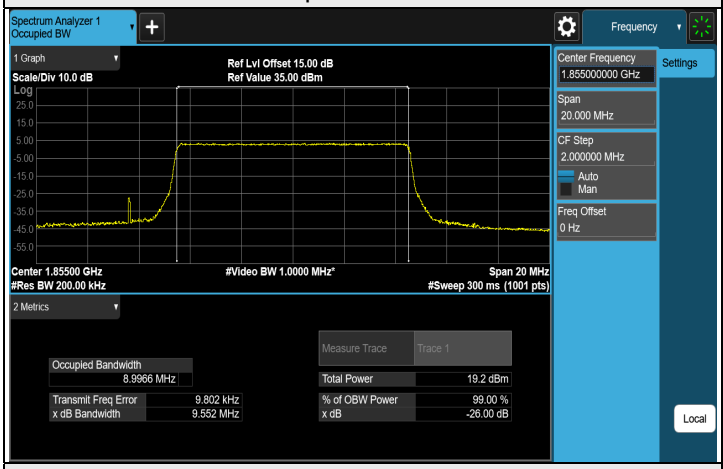
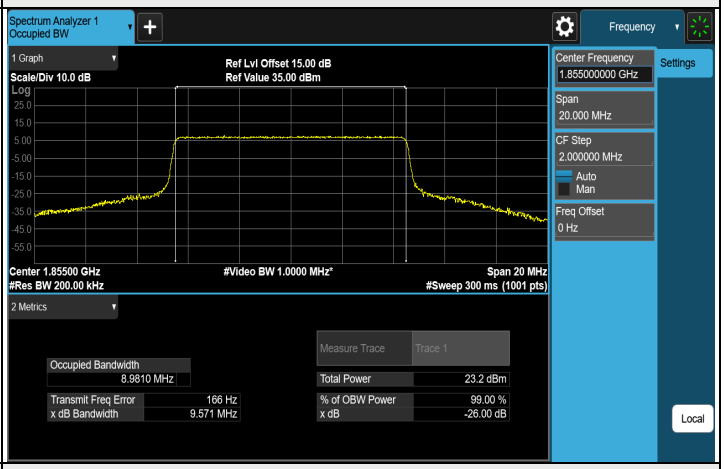
LTE Band 2, Channel Bandwidth: 5 MHz

Modulation	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	26 dB Bandwidth (MHz)
QPSK	18625	1852.5	4.4923	4.910
QPSK	18900	1880	4.4906	4.875
QPSK	19175	1907.5	4.5004	4.872
16QAM	18625	1852.5	4.4932	4.909
16QAM	18900	1880	4.4920	4.886
16QAM	19175	1907.5	4.4919	4.883
64QAM	18625	1852.5	4.5021	4.884
64QAM	18900	1880	4.4912	4.894
64QAM	19175	1907.5	4.4969	4.904
256QAM	18625	1852.5	4.4934	4.858
256QAM	18900	1880	4.4940	4.878
256QAM	19175	1907.5	4.4948	4.853

Spectrum Plot of Worst Value	
Occupied bandwidth	26 dB Bandwidth
	
64QAM CH 18625 (1852.5 MHz)	QPSK CH 18625 (1852.5 MHz)

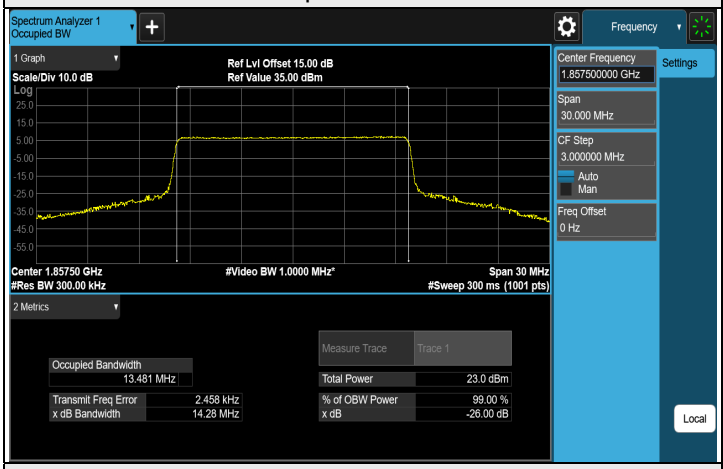
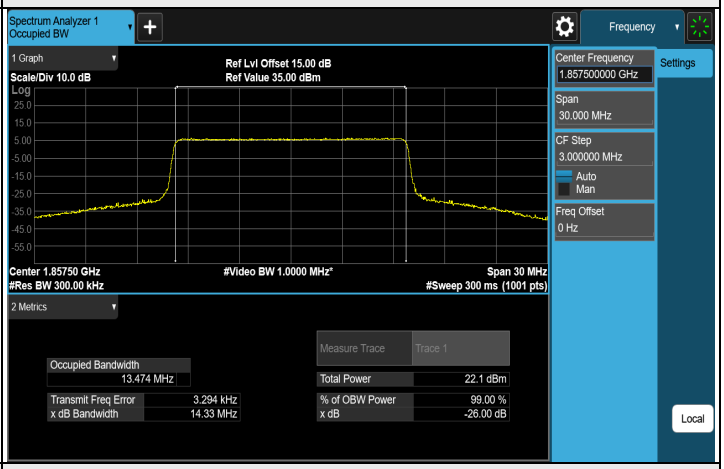
LTE Band 2, Channel Bandwidth: 10 MHz

Modulation	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	26 dB Bandwidth (MHz)
QPSK	18650	1855	8.9810	9.571
QPSK	18900	1880	8.9836	9.558
QPSK	19150	1905	8.9786	9.565
16QAM	18650	1855	8.9832	9.558
16QAM	18900	1880	8.9822	9.564
16QAM	19150	1905	8.9818	9.550
64QAM	18650	1855	8.9852	9.557
64QAM	18900	1880	8.9824	9.543
64QAM	19150	1905	8.9815	9.537
256QAM	18650	1855	8.9966	9.552
256QAM	18900	1880	8.9868	9.542
256QAM	19150	1905	8.9759	9.523

Spectrum Plot of Worst Value	
Occupied bandwidth	26 dB Bandwidth
	
256QAM CH 18650 (1855 MHz)	QPSK CH 18650 (1855 MHz)

LTE Band 2, Channel Bandwidth: 15 MHz

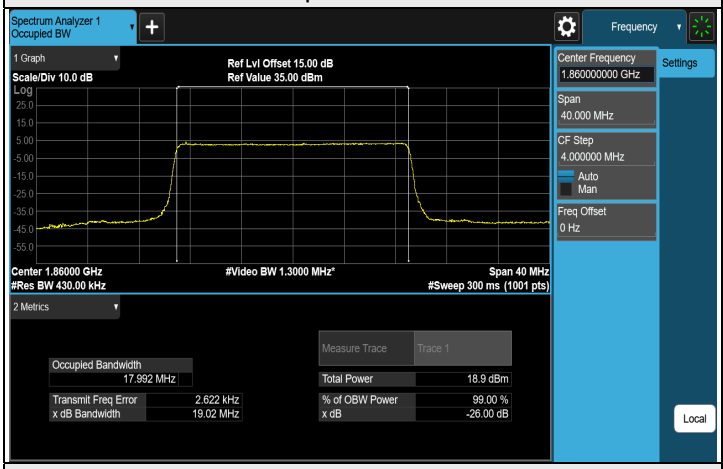
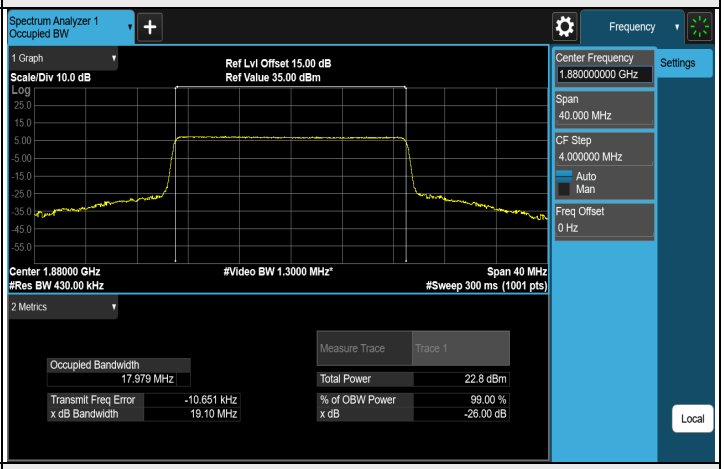
Modulation	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	26 dB Bandwidth (MHz)
QPSK	18675	1857.5	13.4809	14.281
QPSK	18900	1880	13.4669	14.308
QPSK	19125	1902.5	13.4639	14.288
16QAM	18675	1857.5	13.4738	14.331
16QAM	18900	1880	13.4635	14.275
16QAM	19125	1902.5	13.4556	14.268
64QAM	18675	1857.5	13.4673	14.282
64QAM	18900	1880	13.4600	14.256
64QAM	19125	1902.5	13.4589	14.216
256QAM	18675	1857.5	13.4619	14.226
256QAM	18900	1880	13.4680	14.225
256QAM	19125	1902.5	13.4561	14.249

Spectrum Plot of Worst Value	
Occupied bandwidth	26 dB Bandwidth
	
QPSK CH 18675 (1857.5 MHz)	16QAM CH 18675 (1857.5 MHz)

LTE Band 2, Channel Bandwidth: 20 MHz

Modulation	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	26 dB Bandwidth (MHz)
QPSK	18700	1860	17.9662	19.071
QPSK	18900	1880	17.9789	19.099
QPSK	19100	1900	17.9531	19.055
16QAM	18700	1860	17.9763	19.077
16QAM	18900	1880	17.9802	19.059
16QAM	19100	1900	17.9497	19.060
64QAM	18700	1860	17.9711	19.069
64QAM	18900	1880	17.9675	19.027
64QAM	19100	1900	17.9379	19.038
256QAM	18700	1860	17.9916	19.025
256QAM	18900	1880	17.9719	19.012
256QAM	19100	1900	17.9356	19.020

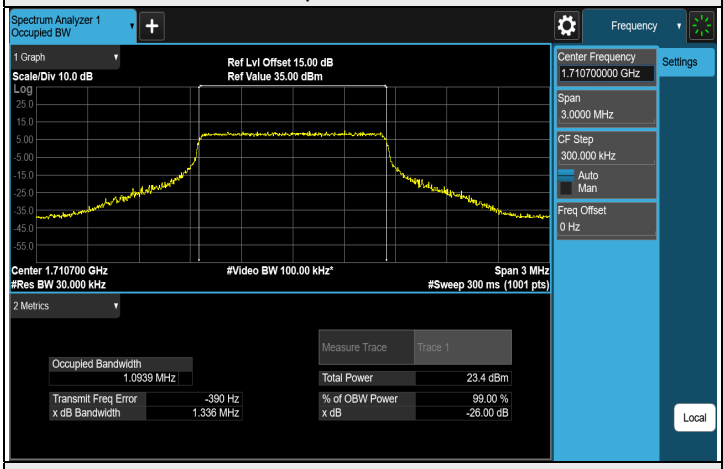
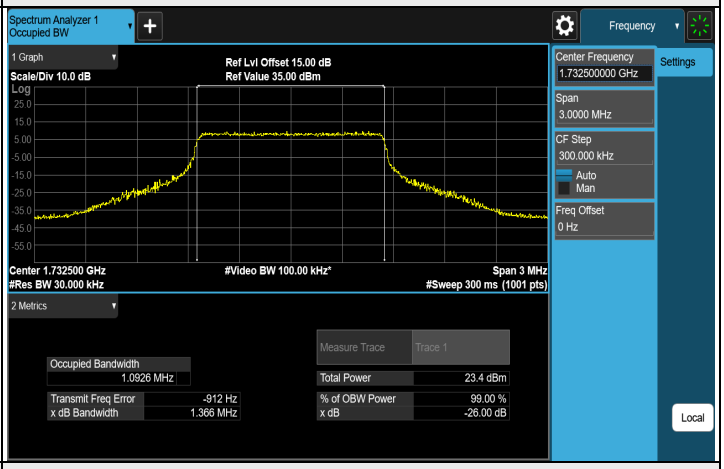
Spectrum Plot of Worst Value

Occupied bandwidth	26 dB Bandwidth
	
256QAM CH 18700 (1860 MHz)	QPSK CH 18900 (1880 MHz)

7.4.2 LTE Band 4

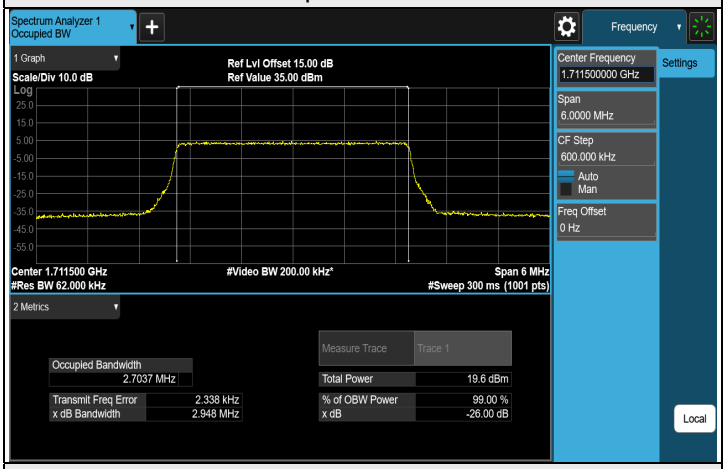
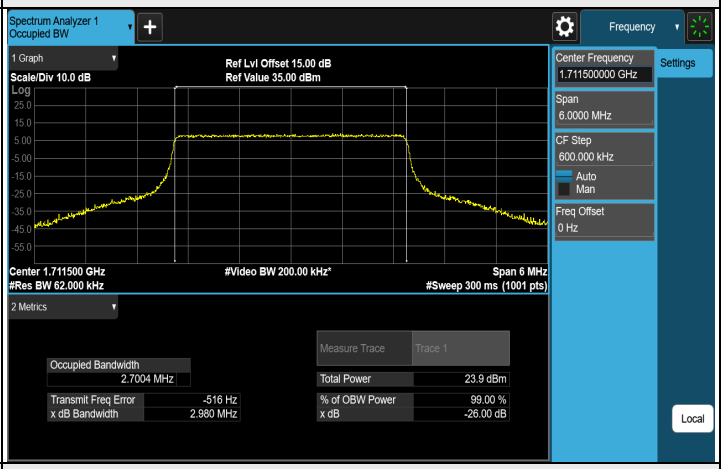
LTE Band 4, Channel Bandwidth: 1.4 MHz

Modulation	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	26 dB Bandwidth (MHz)
QPSK	19957	1710.7	1.0904	1.307
QPSK	20175	1732.5	1.0912	1.347
QPSK	20393	1754.3	1.0907	1.327
16QAM	19957	1710.7	1.0939	1.336
16QAM	20175	1732.5	1.0926	1.366
16QAM	20393	1754.3	1.0917	1.334
64QAM	19957	1710.7	1.0906	1.302
64QAM	20175	1732.5	1.0888	1.310
64QAM	20393	1754.3	1.0900	1.313
256QAM	19957	1710.7	1.0908	1.294
256QAM	20175	1732.5	1.0927	1.293
256QAM	20393	1754.3	1.0911	1.293

Spectrum Plot of Worst Value	
Occupied bandwidth	26 dB Bandwidth
	
16QAM CH 19957 (1710.7 MHz)	16QAM CH 20175 (1732.5 MHz)

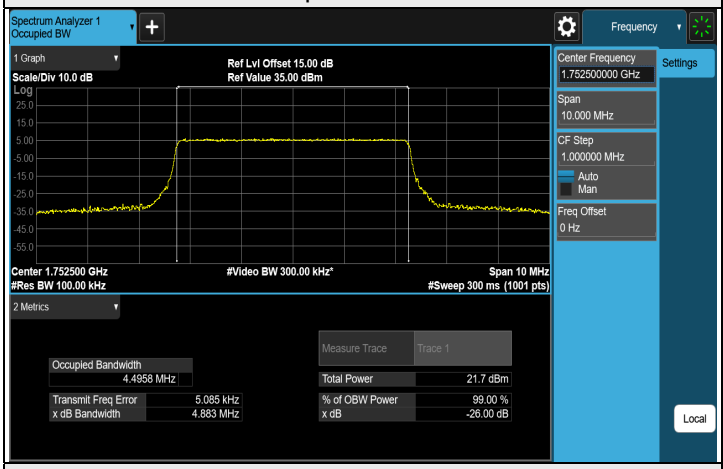
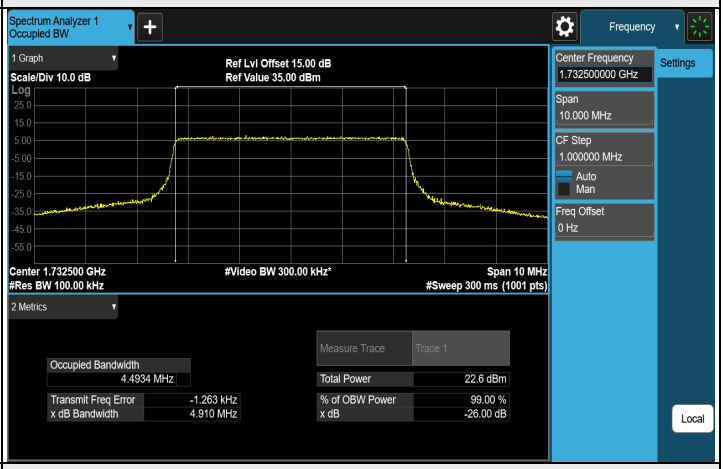
LTE Band 4, Channel Bandwidth: 3 MHz

Modulation	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	26 dB Bandwidth (MHz)
QPSK	19965	1711.5	2.7004	2.980
QPSK	20175	1732.5	2.7011	2.944
QPSK	20385	1753.5	2.7006	2.970
16QAM	19965	1711.5	2.7019	2.968
16QAM	20175	1732.5	2.7011	2.959
16QAM	20385	1753.5	2.6989	2.955
64QAM	19965	1711.5	2.7033	2.972
64QAM	20175	1732.5	2.6975	2.967
64QAM	20385	1753.5	2.7001	2.972
256QAM	19965	1711.5	2.7037	2.948
256QAM	20175	1732.5	2.6996	2.955
256QAM	20385	1753.5	2.7016	2.951

Spectrum Plot of Worst Value	
Occupied bandwidth	26 dB Bandwidth
	
256QAM CH 19965 (1711.5 MHz)	QPSK CH 19965 (1711.5 MHz)

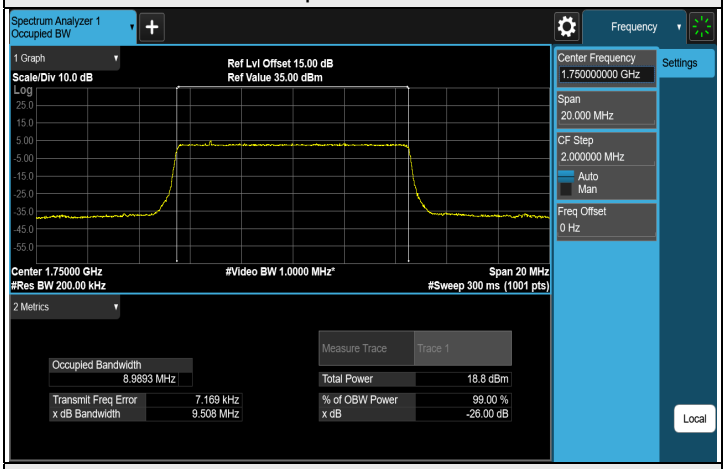
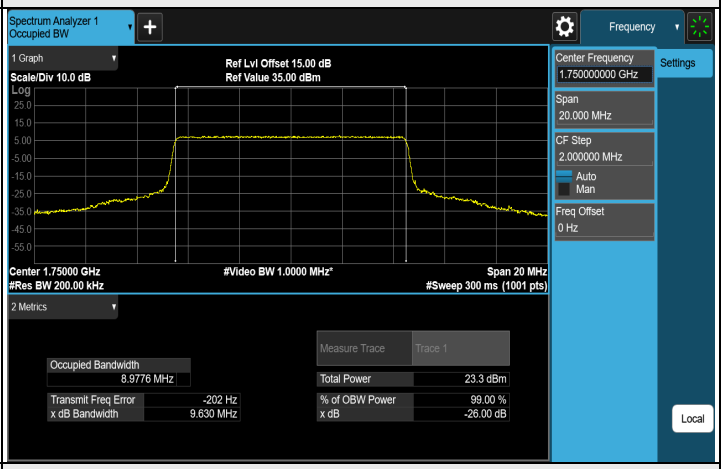
LTE Band 4, Channel Bandwidth: 5 MHz

Modulation	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	26 dB Bandwidth (MHz)
QPSK	19975	1712.5	4.4921	4.897
QPSK	20175	1732.5	4.4908	4.876
QPSK	20375	1752.5	4.4913	4.880
16QAM	19975	1712.5	4.4938	4.894
16QAM	20175	1732.5	4.4934	4.910
16QAM	20375	1752.5	4.4938	4.859
64QAM	19975	1712.5	4.4935	4.868
64QAM	20175	1732.5	4.4910	4.862
64QAM	20375	1752.5	4.4958	4.883
256QAM	19975	1712.5	4.4887	4.827
256QAM	20175	1732.5	4.4930	4.884
256QAM	20375	1752.5	4.4886	4.851

Spectrum Plot of Worst Value	
Occupied bandwidth	26 dB Bandwidth
	
64QAM CH 20375 (1752.5 MHz)	16QAM CH 20175 (1732.5 MHz)

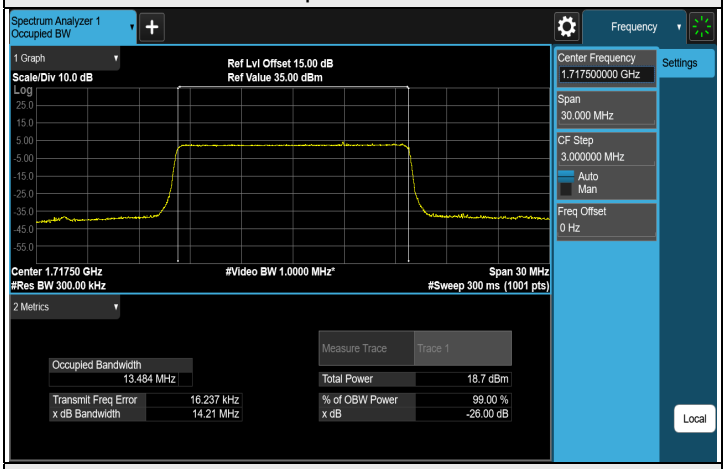
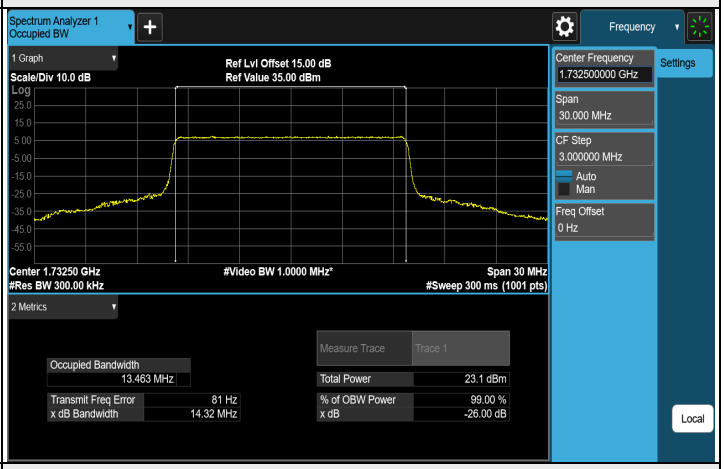
LTE Band 4, Channel Bandwidth: 10 MHz

Modulation	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	26 dB Bandwidth (MHz)
QPSK	20000	1715	8.9853	9.547
QPSK	20175	1732.5	8.9814	9.587
QPSK	20350	1750	8.9776	9.630
16QAM	20000	1715	8.9863	9.570
16QAM	20175	1732.5	8.9741	9.562
16QAM	20350	1750	8.9791	9.544
64QAM	20000	1715	8.9725	9.565
64QAM	20175	1732.5	8.9744	9.571
64QAM	20350	1750	8.9818	9.581
256QAM	20000	1715	8.9830	9.548
256QAM	20175	1732.5	8.9847	9.518
256QAM	20350	1750	8.9893	9.508

Spectrum Plot of Worst Value	
Occupied bandwidth	26 dB Bandwidth
	
256QAM CH 20350 (1750 MHz)	QPSK CH 20350 (1750 MHz)

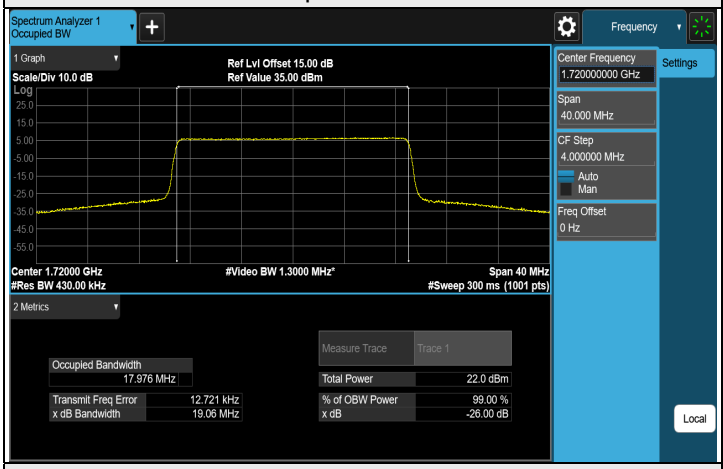
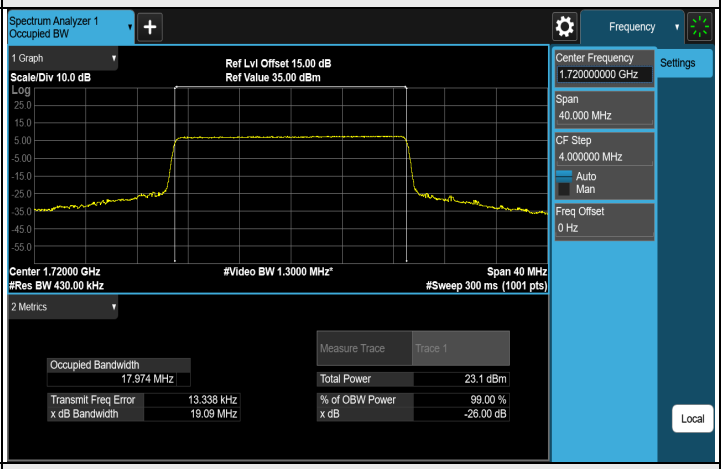
LTE Band 4, Channel Bandwidth: 15 MHz

Modulation	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	26 dB Bandwidth (MHz)
QPSK	20025	1717.5	13.4638	14.269
QPSK	20175	1732.5	13.4629	14.316
QPSK	20325	1747.5	13.4722	14.301
16QAM	20025	1717.5	13.4693	14.259
16QAM	20175	1732.5	13.4586	14.273
16QAM	20325	1747.5	13.4666	14.286
64QAM	20025	1717.5	13.4719	14.268
64QAM	20175	1732.5	13.4665	14.262
64QAM	20325	1747.5	13.4603	14.256
256QAM	20025	1717.5	13.4835	14.214
256QAM	20175	1732.5	13.4743	14.260
256QAM	20325	1747.5	13.4737	14.269

Spectrum Plot of Worst Value	
Occupied bandwidth	26 dB Bandwidth
	
256QAM CH 20025 (1717.5 MHz)	QPSK CH 20175 (1732.5 MHz)

LTE Band 4, Channel Bandwidth: 20 MHz

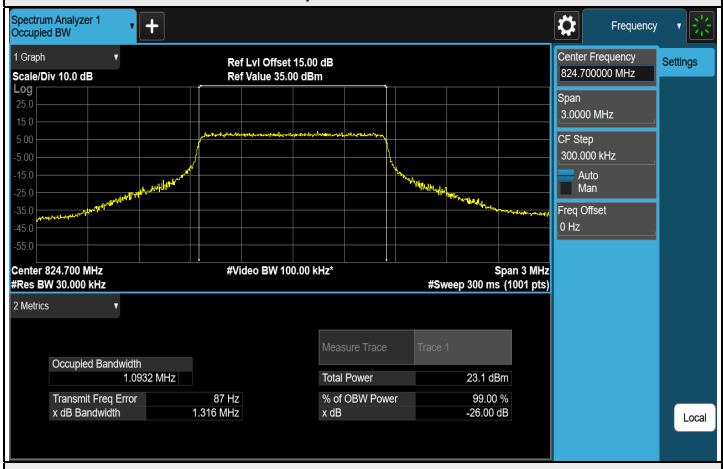
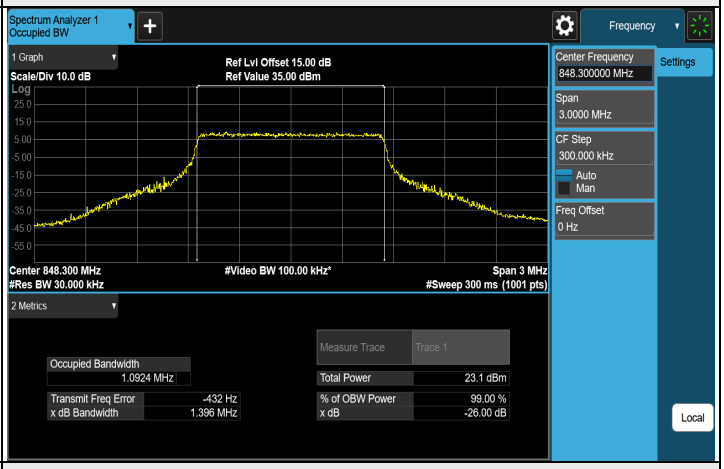
Modulation	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	26 dB Bandwidth (MHz)
QPSK	20050	1720	17.9739	19.094
QPSK	20175	1732.5	17.9597	19.078
QPSK	20300	1745	17.9755	19.082
16QAM	20050	1720	17.9758	19.059
16QAM	20175	1732.5	17.9573	19.070
16QAM	20300	1745	17.9713	19.057
64QAM	20050	1720	17.9634	19.054
64QAM	20175	1732.5	17.9461	19.071
64QAM	20300	1745	17.9700	19.064
256QAM	20050	1720	17.9737	19.055
256QAM	20175	1732.5	17.9726	18.988
256QAM	20300	1745	17.9684	19.051

Spectrum Plot of Worst Value	
Occupied bandwidth	26 dB Bandwidth
	
16QAM CH 20050 (1720 MHz)	QPSK CH 20050 (1720 MHz)

7.4.3 LTE Band 5

LTE Band 5, Channel Bandwidth: 1.4 MHz

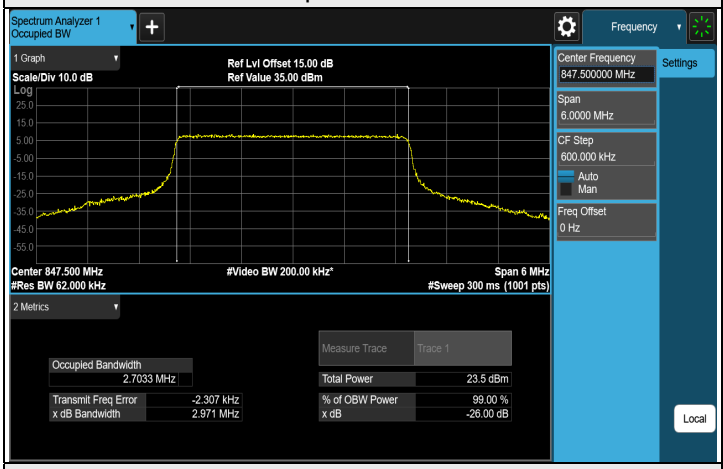
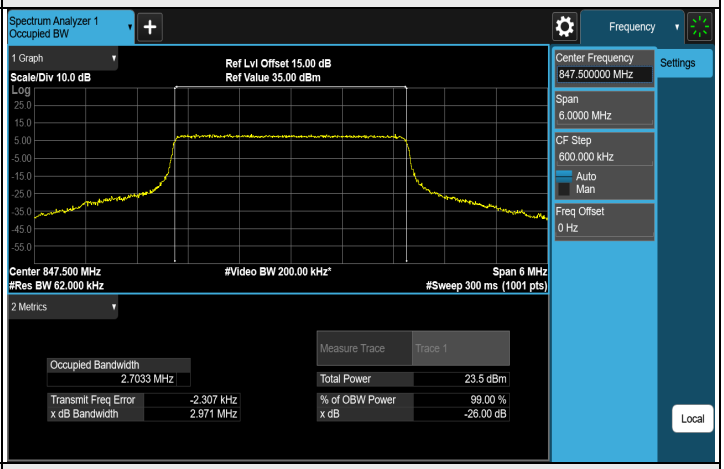
Modulation	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	26 dB Bandwidth (MHz)
QPSK	20407	824.7	1.0903	1.301
QPSK	20525	836.5	1.0905	1.319
QPSK	20643	848.3	1.0903	1.317
16QAM	20407	824.7	1.0932	1.316
16QAM	20525	836.5	1.0919	1.340
16QAM	20643	848.3	1.0924	1.396
64QAM	20407	824.7	1.0904	1.318
64QAM	20525	836.5	1.0887	1.303
64QAM	20643	848.3	1.0896	1.314
256QAM	20407	824.7	1.0921	1.310
256QAM	20525	836.5	1.0881	1.307
256QAM	20643	848.3	1.0913	1.312

Spectrum Plot of Worst Value	
Occupied bandwidth	26 dB Bandwidth
	
16QAM CH 20407 (824.7 MHz)	16QAM CH 20643 (848.3 MHz)

LTE Band 5, Channel Bandwidth: 3 MHz

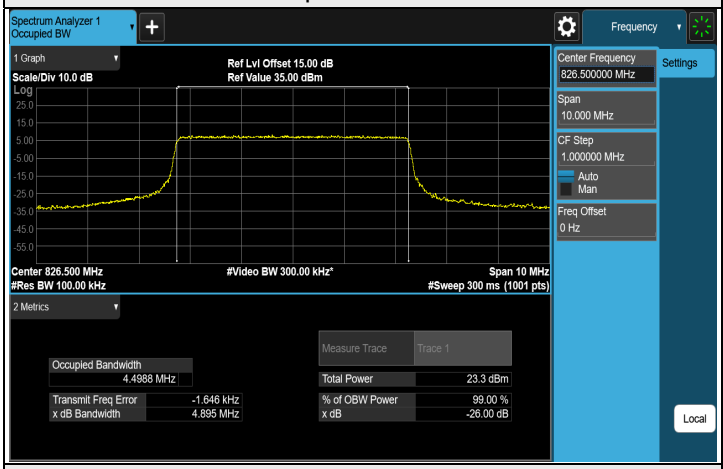
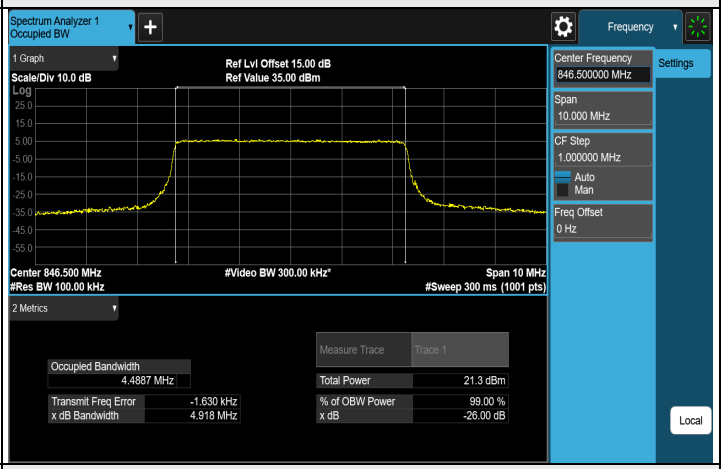
Modulation	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	26 dB Bandwidth (MHz)
QPSK	20415	825.5	2.6984	2.958
QPSK	20525	836.5	2.7029	2.957
QPSK	20635	847.5	2.7033	2.971
16QAM	20415	825.5	2.6998	2.970
16QAM	20525	836.5	2.7022	2.945
16QAM	20635	847.5	2.7004	2.954
64QAM	20415	825.5	2.7025	2.956
64QAM	20525	836.5	2.6999	2.960
64QAM	20635	847.5	2.7005	2.954
256QAM	20415	825.5	2.7018	2.958
256QAM	20525	836.5	2.7020	2.957
256QAM	20635	847.5	2.6979	2.966

Spectrum Plot of Worst Value

Occupied bandwidth	26 dB Bandwidth
	
QPSK CH 20635 (847.5 MHz)	QPSK CH 20635 (847.5 MHz)

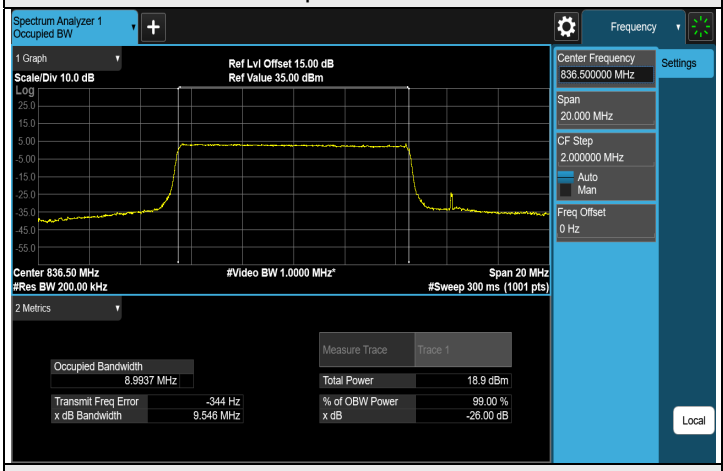
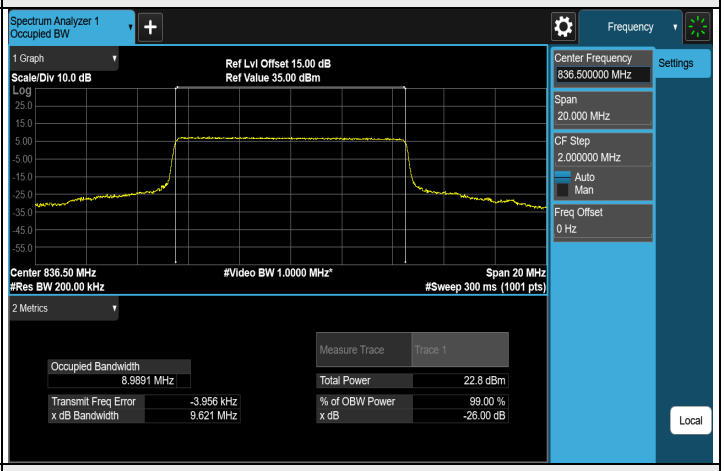
LTE Band 5, Channel Bandwidth: 5 MHz

Modulation	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	26 dB Bandwidth (MHz)
QPSK	20425	826.5	4.4988	4.895
QPSK	20525	836.5	4.4974	4.853
QPSK	20625	846.5	4.4978	4.900
16QAM	20425	826.5	4.4965	4.886
16QAM	20525	836.5	4.4969	4.869
16QAM	20625	846.5	4.4904	4.903
64QAM	20425	826.5	4.4878	4.877
64QAM	20525	836.5	4.4967	4.875
64QAM	20625	846.5	4.4887	4.918
256QAM	20425	826.5	4.4963	4.839
256QAM	20525	836.5	4.4935	4.843
256QAM	20625	846.5	4.4940	4.865

Spectrum Plot of Worst Value	
Occupied bandwidth	26 dB Bandwidth
	
QPSK CH 20425 (826.5 MHz)	64QAM CH 20625 (846.5 MHz)

LTE Band 5, Channel Bandwidth: 10 MHz

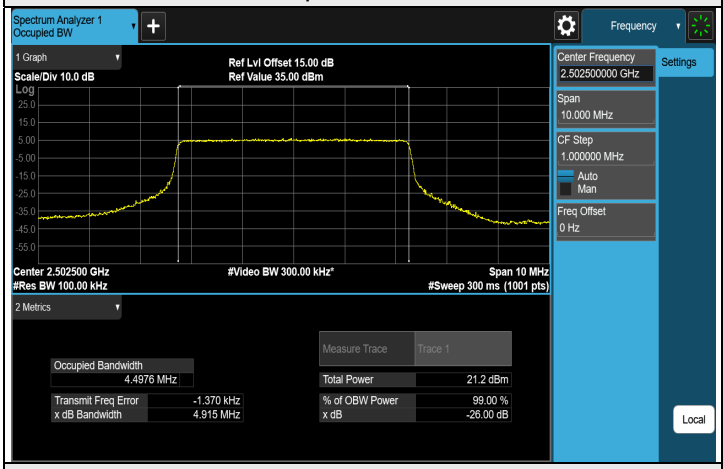
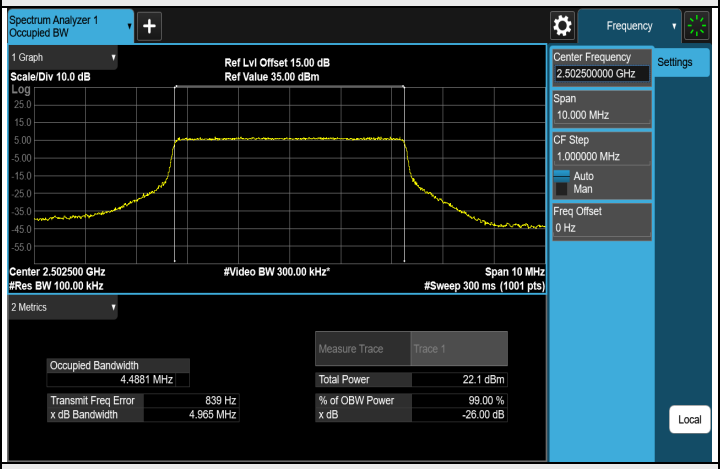
Modulation	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	26 dB Bandwidth (MHz)
QPSK	20450	829	8.9832	9.571
QPSK	20525	836.5	8.9891	9.621
QPSK	20600	844	8.9878	9.616
16QAM	20450	829	8.9826	9.582
16QAM	20525	836.5	8.9857	9.556
16QAM	20600	844	8.9834	9.579
64QAM	20450	829	8.9810	9.565
64QAM	20525	836.5	8.9779	9.581
64QAM	20600	844	8.9872	9.618
256QAM	20450	829	8.9856	9.528
256QAM	20525	836.5	8.9937	9.546
256QAM	20600	844	8.9915	9.558

Spectrum Plot of Worst Value	
Occupied bandwidth	26 dB Bandwidth
	
256QAM CH 20525 (836.5 MHz)	QPSK CH 20525 (836.5 MHz)

7.4.4 LTE Band 7

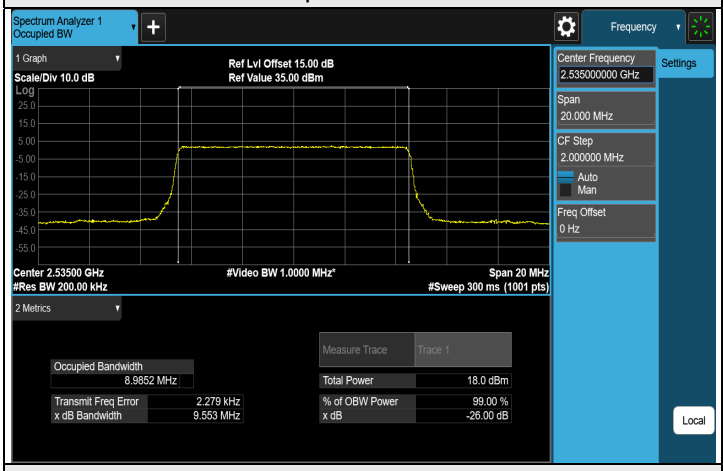
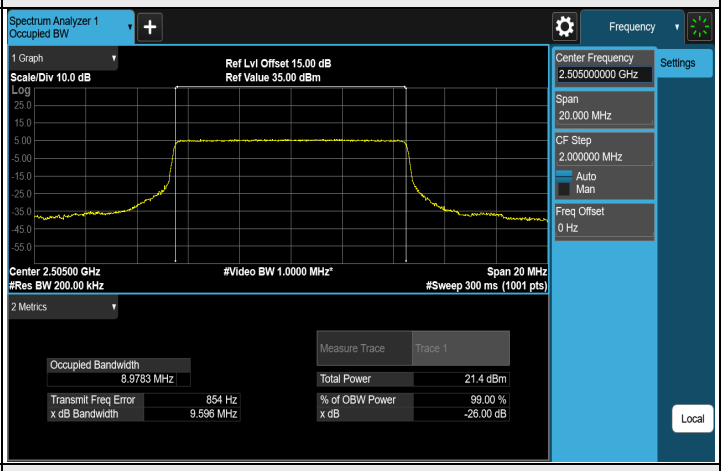
LTE Band 7, Channel Bandwidth: 5 MHz

Modulation	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	26 dB Bandwidth (MHz)
QPSK	20775	2502.5	4.4881	4.965
QPSK	21100	2535	4.4923	4.940
QPSK	21425	2567.5	4.4972	4.915
16QAM	20775	2502.5	4.4976	4.915
16QAM	21100	2535	4.4910	4.911
16QAM	21425	2567.5	4.4962	4.888
64QAM	20775	2502.5	4.4918	4.890
64QAM	21100	2535	4.4902	4.918
64QAM	21425	2567.5	4.4934	4.875
256QAM	20775	2502.5	4.4876	4.925
256QAM	21100	2535	4.4952	4.891
256QAM	21425	2567.5	4.4949	4.885

Spectrum Plot of Worst Value	
Occupied bandwidth	26 dB Bandwidth
	
16QAM CH 20775 (2502.5 MHz)	QPSK CH 20775 (2502.5 MHz)

LTE Band 7, Channel Bandwidth: 10 MHz

Modulation	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	26 dB Bandwidth (MHz)
QPSK	20800	2505	8.9783	9.596
QPSK	21100	2535	8.9739	9.588
QPSK	21400	2565	8.9729	9.589
16QAM	20800	2505	8.9796	9.559
16QAM	21100	2535	8.9778	9.549
16QAM	21400	2565	8.9800	9.571
64QAM	20800	2505	8.9768	9.552
64QAM	21100	2535	8.9803	9.561
64QAM	21400	2565	8.9800	9.557
256QAM	20800	2505	8.9776	9.560
256QAM	21100	2535	8.9852	9.553
256QAM	21400	2565	8.9807	9.516

<table>
<tr><th colspan="2">Spectrum Plot of Worst Value</th></tr>
<tr><th>Occupied bandwidth</th><th>26 dB Bandwidth</th></tr>
<tr><td> 
</td><td> 
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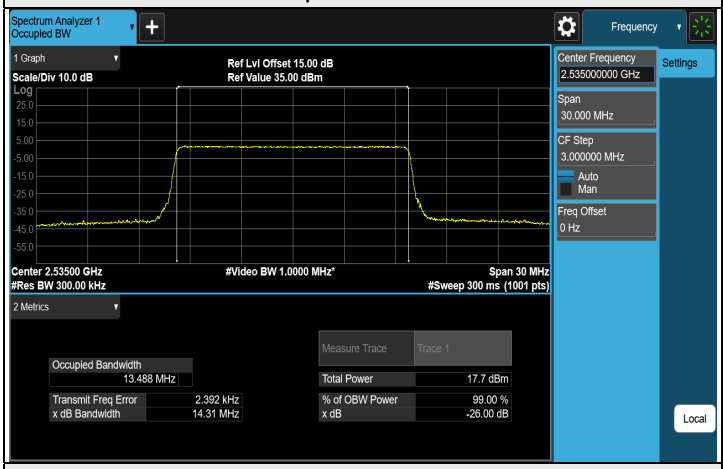
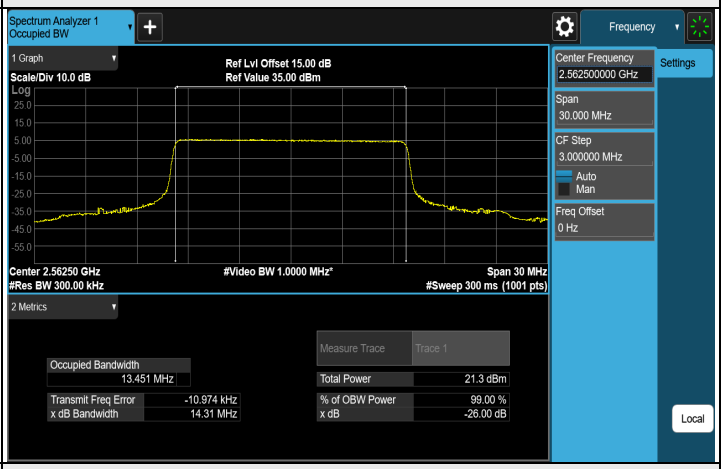
<tr><td>256QAM CH 21100 (2535 MHz)</td><td>QPSK CH 20800 (2505 MHz)</td></tr>
</table>

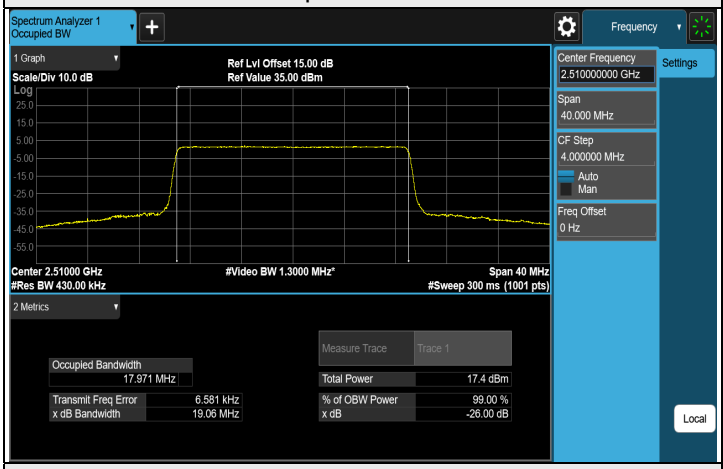
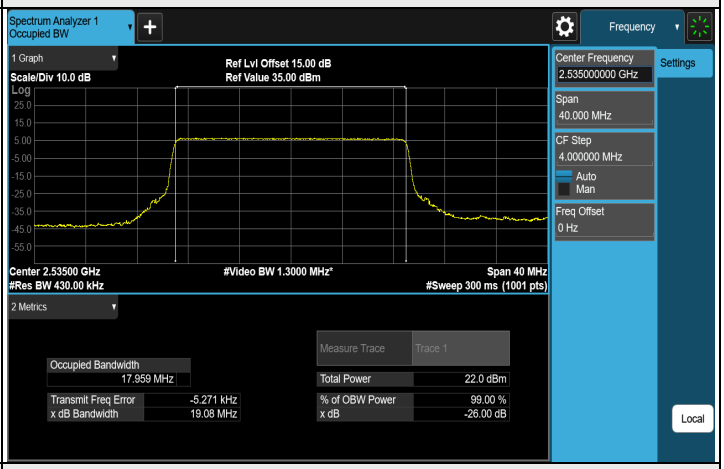
LTE Band 7, Channel Bandwidth: 15 MHz

Modulation	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	26 dB Bandwidth (MHz)
QPSK	20825	2507.5	13.4668	14.265
QPSK	21100	2535	13.4711	14.281
QPSK	21375	2562.5	13.4582	14.284
16QAM	20825	2507.5	13.4652	14.271
16QAM	21100	2535	13.4567	14.276
16QAM	21375	2562.5	13.4514	14.306
64QAM	20825	2507.5	13.4617	14.268
64QAM	21100	2535	13.4611	14.277
64QAM	21375	2562.5	13.4612	14.243
256QAM	20825	2507.5	13.4727	14.274
256QAM	21100	2535	13.4879	14.306
256QAM	21375	2562.5	13.4681	14.260

Spectrum Plot of Worst Value	
Occupied bandwidth	26 dB Bandwidth
	
256QAM CH 21100 (2535 MHz)	16QAM CH 21375 (2562.5 MHz)

LTE Band 7, Channel Bandwidth: 20 MHz

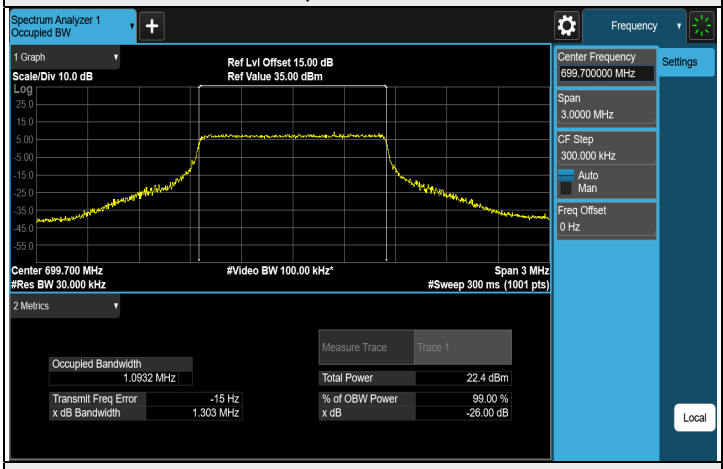
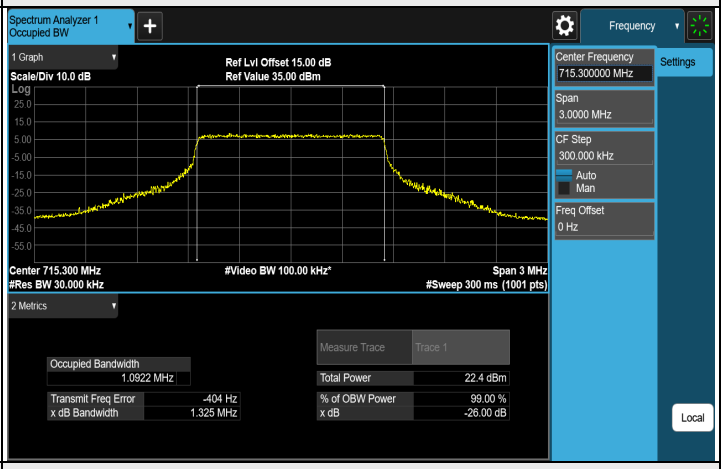
Modulation	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	26 dB Bandwidth (MHz)
QPSK	20850	2510	17.9681	19.073
QPSK	21100	2535	17.9585	19.082
QPSK	21350	2560	17.9563	19.074
16QAM	20850	2510	17.9601	19.054
16QAM	21100	2535	17.9595	19.062
16QAM	21350	2560	17.9541	19.040
64QAM	20850	2510	17.9545	19.054
64QAM	21100	2535	17.9538	19.073
64QAM	21350	2560	17.9548	19.040
256QAM	20850	2510	17.9707	19.060
256QAM	21100	2535	17.9648	19.034
256QAM	21350	2560	17.9497	19.037

Spectrum Plot of Worst Value	
Occupied bandwidth	26 dB Bandwidth
	
256QAM CH 20850 (2510 MHz)	QPSK CH 21100 (2535 MHz)

7.4.5 LTE Band 12

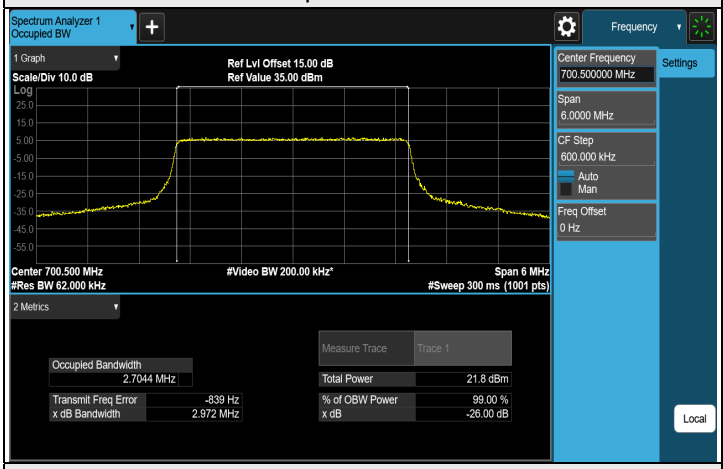
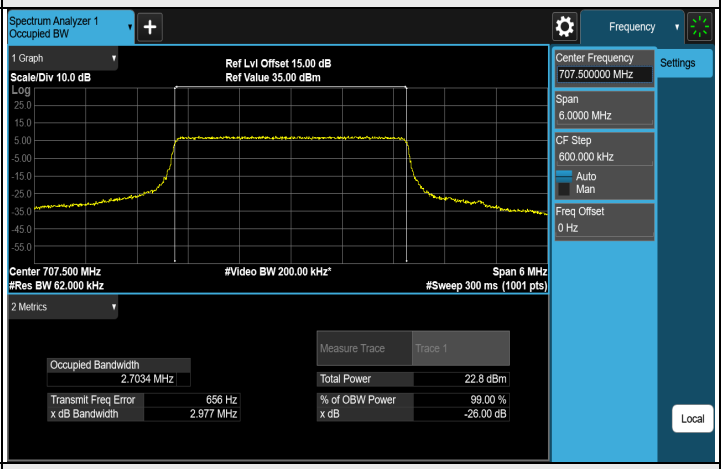
LTE Band 12, Channel Bandwidth: 1.4 MHz

Modulation	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	26 dB Bandwidth (MHz)
QPSK	23017	699.7	1.0904	1.298
QPSK	23095	707.5	1.0898	1.308
QPSK	23173	715.3	1.0924	1.312
16QAM	23017	699.7	1.0932	1.303
16QAM	23095	707.5	1.0917	1.322
16QAM	23173	715.3	1.0922	1.325
64QAM	23017	699.7	1.0892	1.307
64QAM	23095	707.5	1.0915	1.293
64QAM	23173	715.3	1.0913	1.317
256QAM	23017	699.7	1.0908	1.303
256QAM	23095	707.5	1.0901	1.289
256QAM	23173	715.3	1.0908	1.322

Spectrum Plot of Worst Value	
Occupied bandwidth	26 dB Bandwidth
	
16QAM CH 23017 (699.7 MHz)	16QAM CH 23173 (715.3 MHz)

LTE Band 12, Channel Bandwidth: 3 MHz

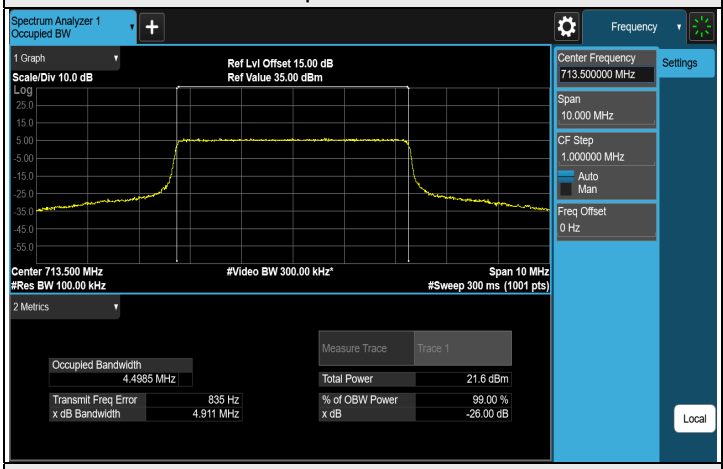
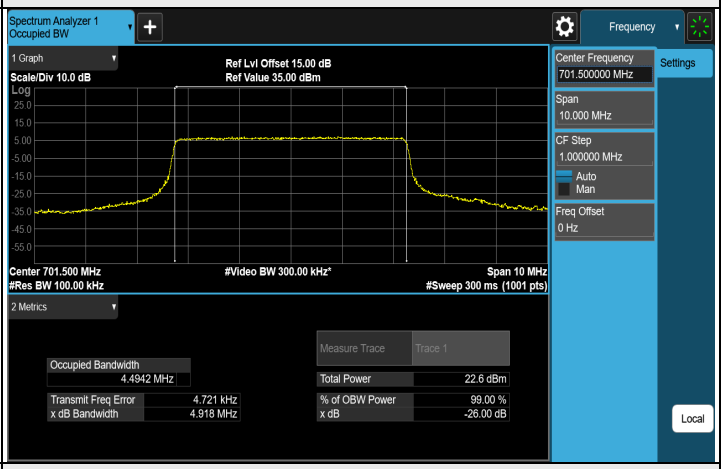
Modulation	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	26 dB Bandwidth (MHz)
QPSK	23025	700.5	2.7020	2.961
QPSK	23095	707.5	2.7034	2.977
QPSK	23165	714.5	2.7029	2.967
16QAM	23025	700.5	2.7044	2.972
16QAM	23095	707.5	2.7031	2.950
16QAM	23165	714.5	2.7012	2.956
64QAM	23025	700.5	2.7014	2.930
64QAM	23095	707.5	2.7006	2.952
64QAM	23165	714.5	2.7012	2.969
256QAM	23025	700.5	2.6992	2.946
256QAM	23095	707.5	2.7031	2.958
256QAM	23165	714.5	2.7022	2.946

Spectrum Plot of Worst Value	
Occupied bandwidth	26 dB Bandwidth
	
16QAM CH 23025 (700.5 MHz)	QPSK CH 23095 (707.5 MHz)

LTE Band 12, Channel Bandwidth: 5 MHz

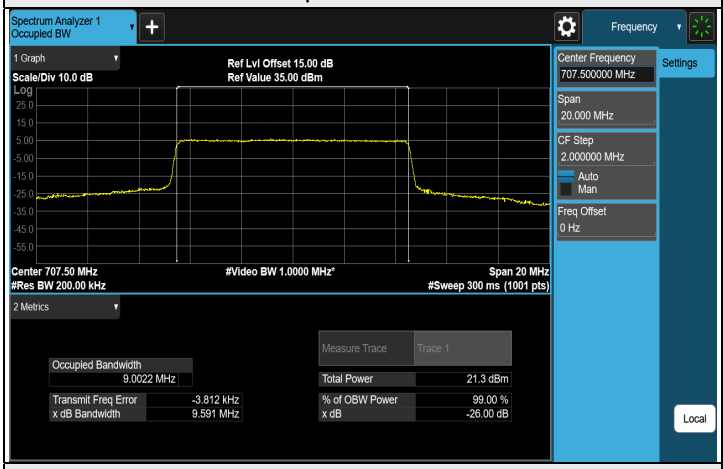
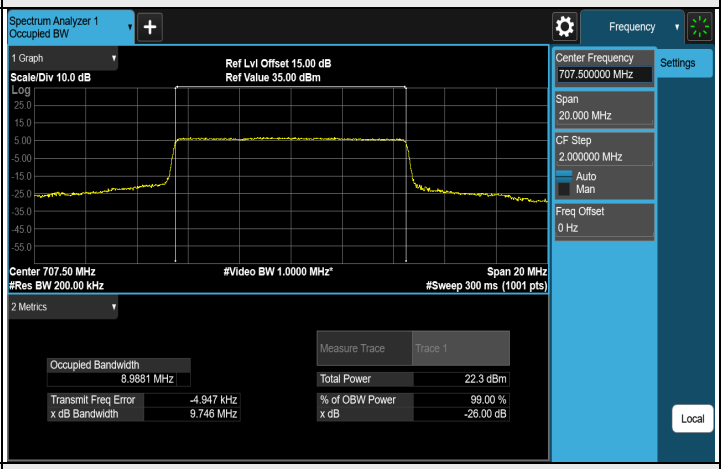
Modulation	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	26 dB Bandwidth (MHz)
QPSK	23035	701.5	4.4942	4.918
QPSK	23095	707.5	4.4917	4.885
QPSK	23155	713.5	4.4948	4.913
16QAM	23035	701.5	4.4971	4.892
16QAM	23095	707.5	4.4926	4.883
16QAM	23155	713.5	4.4985	4.911
64QAM	23035	701.5	4.4895	4.859
64QAM	23095	707.5	4.4916	4.868
64QAM	23155	713.5	4.4968	4.916
256QAM	23035	701.5	4.4934	4.876
256QAM	23095	707.5	4.4972	4.865
256QAM	23155	713.5	4.4926	4.882

Spectrum Plot of Worst Value

Occupied bandwidth	26 dB Bandwidth
	
16QAM CH 23155 (713.5 MHz)	QPSK CH 23035 (701.5 MHz)

LTE Band 12, Channel Bandwidth: 10 MHz

Modulation	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	26 dB Bandwidth (MHz)
QPSK	23060	704	8.9791	9.584
QPSK	23095	707.5	8.9881	9.746
QPSK	23130	711	8.9843	9.633
16QAM	23060	704	8.9839	9.576
16QAM	23095	707.5	9.0022	9.591
16QAM	23130	711	8.9876	9.601
64QAM	23060	704	8.9763	9.563
64QAM	23095	707.5	8.9865	9.587
64QAM	23130	711	8.9815	9.572
256QAM	23060	704	8.9828	9.561
256QAM	23095	707.5	8.9938	9.574
256QAM	23130	711	8.9931	9.563

Spectrum Plot of Worst Value	
Occupied bandwidth	26 dB Bandwidth
	
16QAM CH 23095 (707.5 MHz)	QPSK CH 23095 (707.5 MHz)