

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 2

Report No.: RFBEIQ-WTW-P25060179

FCC ID: APYHRO00339

Product: Smart phone

Brand: SHARP

Received Date: 2025/6/25

Test Date: 2025/7/6 ~ 2025/7/23

Issued Date: 2025/9/2

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2025/9/2

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Prepared by : Vera Huang / Specialist

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Release Control Record

Issue No.	Description	Date Issued
RFBEIQ-WTW-P25060179	Original Release	2025/9/2

1 Certificate

Product: Smart phone

Brand: SHARP

Sample Status: DVT

Applicant: SHARP Corporation Mobile Communication BU

Manufacturer: Sharp Corporation

Test Date: 2025/7/6 ~ 2025/7/23

Standard: 47 CFR FCC Part 22
47 CFR FCC Part 24
47 CFR FCC Part 27
47 CFR FCC Part 2

Measurement ANSI/TIA/EIA-603-E 2016

procedure: 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(h) Part 27.50(c)	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)	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(m) Part 27.53(g)	Conducted Spurious Emissions	Pass	Meet the requirement of limit.
Part 2.1053 Part 22.917 Part 24.238 Part 27.53(m) Part 27.53(g)	Radiated Spurious Emissions below 1GHz	Pass	Minimum passing margin is -21.8 dB at 946.65 MHz
Part 2.1053 Part 22.917 Part 24.238 Part 27.53(m) Part 27.53(g)	Radiated Spurious Emissions above 1GHz	Pass	Minimum passing margin is -20.04 dB at 5135.00 MHz and 5186.00 MHz
Part 2.1055 Part 22.355 Part 24.235 Part 27.54	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 (±)
Effective Radiated Power and Equivalent Isotropically Radiated Power	-	1.371 dB
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 dB
	30 MHz ~ 1 GHz	2.93 dB
Radiated Spurious Emissions above 1GHz	1 GHz ~ 18 GHz	1.76 dB
	18 GHz ~ 40 GHz	1.77 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	Smart phone
Brand	SHARP
Status of EUT	DVT
Power Supply Rating	3.89Vdc (from Battery) 5Vdc (from AC Charger)
EUT Category	Portable station
Modulation Type	GSM, GPRS: GMSK WCDMA: Release 99/HSDPA/HSUPA/HSPA+ LTE: QPSK, 16QAM, 64QAM
Support Band	GSM, GPRS: 850, 1900 WCDMA: B2, B5 LTE: B2, B5, B7, B12, B17, B38, B41

Note:

1. The EUT contains following accessories.

Battery	Power Rating	3.89V, Rated 4950mAh (19.3Wh), Typ. 5000mAh(19.5Wh)
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2. The EUT uses following support unit.

AC Charger	Brand	DSA
	Model	10PF06-05 FUS
	AC Input	100-240V, 50/60Hz, 0.3A
	DC Output	5.0V===2 A, 10.0W
Data Cable (Type C Cable)	Brand	Kingpower
	Model	K201-05130-00
	Signal Line	1M
Headset	Brand	Apple
	Model	EarPods(USB-C)
	Signal Line	1.14M

3. EUT Overview

GSM 850

TX Frequency Range (MHz)	Modulation	Max. ERP (W)	Max. ERP (dBm)	Emission Designator
824.2 ~ 848.8	GSM	0.407	26.10	247KGXW
	GPRS	0.406	26.08	247KGXW

GSM 1900

TX Frequency Range (MHz)	Modulation	Max. EIRP (W)	Max. EIRP (dBm)	Emission Designator
1850.2 ~ 1909.8	GSM	0.484	26.85	245KGXW
	GPRS	0.481	26.82	247KGXW

WCDMA Band II

TX Frequency Range (MHz)	Modulation	Max. EIRP (W)	Max. EIRP (dBm)	Emission Designator
1852.4 ~ 1907.6	RMC 12.2K	0.047	16.68	4M16F9W
	HSDPA	0.038	15.75	4M17F9W
	HSUPA	0.039	15.87	4M17F9W
	HSPA+	0.021	13.21	-

WCDMA Band V

TX Frequency Range (MHz)	Modulation	Max. ERP (W)	Max. ERP (dBm)	Emission Designator
826.4 ~ 846.6	RMC 12.2K	0.047	16.68	4M15F9W
	HSDPA	0.036	15.58	4M15F9W
	HSUPA	0.031	14.96	4M16F9W
	HSPA+	0.019	12.82	-

LTE Band 2

Bandwidth	TX Frequency Range (MHz)	Modulation	Max. EIRP (W)	Max. EIRP (dBm)	Emission Designator
1.4 MHz	1850.7 ~ 1909.3	QPSK	0.041	16.15	1M09G7D
		16QAM	0.041	16.16	1M09D7W
		64QAM	0.041	16.13	1M09D7W
3 MHz	1851.5 ~ 1908.5	QPSK	0.042	16.20	2M70G7D
		16QAM	0.041	16.11	2M71D7W
		64QAM	0.04	16.07	2M70D7W
5 MHz	1852.5 ~ 1907.5	QPSK	0.041	16.15	4M50G7D
		16QAM	0.042	16.19	4M50D7W
		64QAM	0.041	16.09	4M50D7W
10 MHz	1855 ~ 1905	QPSK	0.042	16.20	8M99G7D
		16QAM	0.041	16.16	8M99D7W
		64QAM	0.041	16.16	8M99D7W
15 MHz	1857.5 ~ 1902.5	QPSK	0.042	16.22	13M5G7D
		16QAM	0.042	16.20	13M5D7W
		64QAM	0.041	16.16	13M5D7W
20 MHz	1860 ~ 1900	QPSK	0.043	16.33	18M0G7D
		16QAM	0.043	16.31	18M0D7W
		64QAM	0.043	16.29	18M0D7W

LTE Band 5

Bandwidth	TX Frequency Range (MHz)	Modulation	Max. ERP (W)	Max. ERP (dBm)	Emission Designator
1.4 MHz	824.7 ~ 848.3	QPSK	0.044	16.42	1M09G7D
		16QAM	0.043	16.35	1M09D7W
		64QAM	0.042	16.25	1M09D7W
3 MHz	825.5 ~ 847.5	QPSK	0.044	16.41	2M70G7D
		16QAM	0.044	16.40	2M70D7W
		64QAM	0.042	16.24	2M71D7W
5 MHz	826.5 ~ 846.5	QPSK	0.044	16.46	4M50G7D
		16QAM	0.044	16.46	4M50D7W
		64QAM	0.043	16.32	4M50D7W
10 MHz	829 ~ 844	QPSK	0.045	16.53	8M98G7D
		16QAM	0.045	16.52	8M98D7W
		64QAM	0.044	16.43	8M98D7W

LTE Band 7

Bandwidth	TX Frequency Range (MHz)	Modulation	Max. EIRP (W)	Max. EIRP (dBm)	Emission Designator
5 MHz	2502.5 ~ 2567.5	QPSK	0.086	19.33	4M50G7D
		16QAM	0.087	19.39	4M50D7W
		64QAM	0.083	19.20	4M50D7W
10 MHz	2505 ~ 2565	QPSK	0.087	19.41	8M99G7D
		16QAM	0.086	19.35	8M99D7W
		64QAM	0.083	19.21	8M99D7W
15 MHz	2507.5 ~ 2562.5	QPSK	0.088	19.43	13M5G7D
		16QAM	0.087	19.40	13M5D7W
		64QAM	0.085	19.31	13M5D7W
20 MHz	2510 ~ 2560	QPSK	0.09	19.55	18M0G7D
		16QAM	0.09	19.53	18M0D7W
		64QAM	0.087	19.38	18M0D7W

LTE Band 12

Bandwidth	TX Frequency Range (MHz)	Modulation	Max. ERP (W)	Max. ERP (dBm)	Emission Designator
1.4 MHz	699.7 ~ 715.3	QPSK	0.039	15.86	1M09G7D
		16QAM	0.033	15.17	1M09D7W
		64QAM	0.026	14.10	1M09D7W
3 MHz	700.5 ~ 714.5	QPSK	0.039	15.91	2M70G7D
		16QAM	0.033	15.12	2M70D7W
		64QAM	0.026	14.14	2M71D7W
5 MHz	701.5 ~ 713.5	QPSK	0.04	16.00	4M50G7D
		16QAM	0.033	15.21	4M50D7W
		64QAM	0.026	14.16	4M50D7W
10 MHz	704 ~ 711	QPSK	0.04	16.06	8M97G7D
		16QAM	0.033	15.24	8M97D7W
		64QAM	0.026	14.23	8M97D7W

LTE Band 17

Bandwidth	TX Frequency Range (MHz)	Modulation	Max. ERP (W)	Max. ERP (dBm)	Emission Designator
5 MHz	706.5 ~ 713.5	QPSK	0.039	15.93	4M50G7D
		16QAM	0.033	15.17	4M50D7W
		64QAM	0.026	14.16	4M50D7W
10 MHz	709 ~ 711	QPSK	0.041	16.1	8M96G7D
		16QAM	0.033	15.23	8M96D7W
		64QAM	0.027	14.24	8M97D7W

LTE Band 38

Bandwidth	TX Frequency Range (MHz)	Modulation	Max. EIRP (W)	Max. EIRP (dBm)	Emission Designator
5 MHz	2572.5 ~ 2617.5	QPSK	0.1	19.99	4M50G7D
		16QAM	0.094	19.73	4M49D7W
		64QAM	0.078	18.94	4M50D7W
10 MHz	2575 ~ 2615	QPSK	0.1	19.98	8M99G7D
		16QAM	0.094	19.74	8M98D7W
		64QAM	0.078	18.91	8M99D7W
15 MHz	2577.5 ~ 2612.5	QPSK	0.102	20.07	13M5G7D
		16QAM	0.097	19.85	13M5D7W
		64QAM	0.078	18.94	13M5D7W
20 MHz	2580 ~ 2610	QPSK	0.102	20.08	18M0G7D
		16QAM	0.098	19.91	18M0D7W
		64QAM	0.08	19.01	18M0D7W

LTE Band 41

Bandwidth	TX Frequency Range (MHz)	Modulation	Max. EIRP (W)	Max. EIRP (dBm)	Emission Designator
5 MHz	2498.5 ~ 2687.5	QPSK	0.116	20.65	4M50G7D
		16QAM	0.116	20.65	4M50D7W
		64QAM	0.115	20.62	4M50D7W
10 MHz	2501 ~ 2685	QPSK	0.116	20.65	8M99G7D
		16QAM	0.116	20.64	8M99D7W
		64QAM	0.115	20.62	8M98D7W
15 MHz	2503.5 ~ 2682.5	QPSK	0.116	20.66	13M5G7D
		16QAM	0.117	20.70	13M5D7W
		64QAM	0.118	20.73	13M5D7W
20 MHz	2506 ~ 2680	QPSK	0.119	20.76	18M0G7D
		16QAM	0.119	20.77	18M0D7W
		64QAM	0.12	20.8	18M0D7W

- For detailed information about each WWAN bands frequency range, bandwidth mode of the product, please refer to section 3.3 of the report.
- 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

Antenna Type	Antenna Connector	Band	Peak Gain (dBi)	
			Ant 1	Ant 2
PIFA	Murata	GSM 850	-	-3.0
		GSM 1900	-2.9	-
		WCDMA B2	-2.9	-
		WCDMA B5	-	-3.4
		LTE B2	-2.9	-
		LTE B5	-	-3.4
		LTE B7	-1.6	-
		LTE B12	-	-5.6
		LTE B17	-	-5.6
		LTE B38	-1.7	-
LTE B41	-1.6	-		

*The above Antenna information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications, the laboratory shall not be held responsible.

3.3 Test Mode Applicability and Tested Channel Detail

Pre-Scan:	<p>1. 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.</p> <p>2. EUT can be used in the following ways: AC Charge / Headset. Pre-scan these ways and find the worst case as a representative test condition.</p> <p>3. For GSM bands, this device was tested under all bandwidths, RB configurations and modulations. The worst case was found in GSM mode. Therefore, only EIRP/ERP, modulation characteristics, bandwidth, peak to average ratio and conducted spurious emission items had been tested under GSM and GPRS mode, the other items were performed under GSM mode. For radiated spurious emissions, choose the maximum EIRP/ERP power worst case for final test.</p> <p>4. For WCDMA bands, this device was tested under all bandwidths, RB configurations and modulations. The worst case was found in WCDMA mode. Therefore, only EIRP/ERP, modulation characteristics, bandwidth, peak to average ratio and conducted spurious emission items had been tested under WCDMA, HSDPA and HSUPA mode, the other items were performed under WCDMA mode only. For radiated spurious emissions, choose the maximum EIRP/ERP power worst case for final test.</p> <p>5. For LTE bands, this device was tested under all bandwidths, RB configurations and modulations. The worst case was found in QPSK modulation. Therefore, only EIRP/ERP, modulation characteristics, bandwidth and peak to average ratio items had been tested under QPSK, 16QAM and 64QAM mode, the other items were performed under QPSK mode only. For radiated spurious emissions, choose the maximum EIRP/ERP power and 1RB offset worst case for final test.</p> <p>6. For radiated spurious emissions below 1 GHz, the worst case radiated emissions mode above 1 GHz is selected for final testing.</p>
Worst Case:	<p>1. X-axis / Y-axis / Z-axis Worst Condition: Z-axis</p> <p>2. AC Charge / Headset Worst Condition: AC Charge</p>

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

3.3.1 GSM 850

Test Item	Tested Channel	Mode
Effective Radiated Power	128 (824.20 MHz) 189 (836.40 MHz) 251 (848.80 MHz)	GSM, GPRS
Modulation Characteristics	189 (836.40 MHz)	GSM, GPRS
Peak to Average Ratio	128 (824.20 MHz) 189 (836.40 MHz) 251 (848.80 MHz)	GSM, GPRS
Bandwidth	128 (824.20 MHz) 189 (836.40 MHz) 251 (848.80 MHz)	GSM, GPRS
Conducted Spurious Emission	128 (824.20 MHz) 189 (836.40 MHz) 251 (848.80 MHz)	GSM, GPRS
Radiated Spurious Emissions below 1GHz	251 (848.80 MHz)	GSM
Radiated Spurious Emissions above 1GHz	128 (824.20 MHz) 189 (836.40 MHz) 251 (848.80 MHz)	GSM
Frequency Stability	128 (824.20 MHz) 251 (848.80 MHz)	GSM, GPRS

3.3.2 GSM 1900

Test Item	Tested Channel	Mode
Equivalent Isotropically Radiated Power	512 (1850.20 MHz) 661 (1880.00 MHz) 810 (1909.80 MHz)	GSM, GPRS
Modulation Characteristics	661 (1880.00 MHz)	GSM, GPRS
Peak to Average Ratio	512 (1850.20 MHz) 661 (1880.00 MHz) 810 (1909.80 MHz)	GSM, GPRS
Bandwidth	512 (1850.20 MHz) 661 (1880.00 MHz) 810 (1909.80 MHz)	GSM, GPRS
Conducted Spurious Emission	512 (1850.20 MHz) 661 (1880.00 MHz) 810 (1909.80 MHz)	GSM, GPRS
Radiated Spurious Emissions below 1GHz	810 (1909.80 MHz)	GSM
Radiated Spurious Emissions above 1GHz	512 (1850.20 MHz) 661 (1880.00 MHz) 810 (1909.80 MHz)	GSM
Frequency Stability	512 (1850.20 MHz) 810 (1909.80 MHz)	GSM, GPRS

3.3.3 WCDMA Band II

Test Item	Tested Channel	Mode
Equivalent Isotropically Radiated Power	9262 (1852.40 MHz) 9400 (1880.00 MHz) 9538 (1907.60 MHz)	WCDMA HSDPA HSUPA HSPA+
Modulation Characteristics	9400 (1880.00 MHz)	WCDMA HSDPA HSUPA
Peak to Average Ratio	9262 (1852.40 MHz) 9400 (1880.00 MHz) 9538 (1907.60 MHz)	WCDMA HSDPA HSUPA
Bandwidth	9262 (1852.40 MHz) 9400 (1880.00 MHz) 9538 (1907.60 MHz)	WCDMA HSDPA HSUPA
Conducted Spurious Emissions	9262 (1852.40 MHz) 9400 (1880.00 MHz) 9538 (1907.60 MHz)	WCDMA HSDPA HSUPA
Radiated Spurious Emissions below 1GHz	9538 (1907.60 MHz)	WCDMA
Radiated Spurious Emissions above 1GHz	9262 (1852.40 MHz) 9400 (1880.00 MHz) 9538 (1907.60 MHz)	WCDMA
Frequency Stability	9262 (1852.40 MHz) 9538 (1907.60 MHz)	WCDMA

3.3.4 WCDMA Band V

Test Item	Tested Channel	Mode
Effective Radiated Power	4132 (826.40 MHz) 4182 (836.40 MHz) 4233 (846.60 MHz)	WCDMA HSDPA HSUPA HSPA+
Modulation Characteristics	4182 (836.40 MHz)	WCDMA HSDPA HSUPA
Peak to Average Ratio	4132 (826.40 MHz) 4182 (836.40 MHz) 4233 (846.60 MHz)	WCDMA HSDPA HSUPA
Bandwidth	4132 (826.40 MHz) 4182 (836.40 MHz) 4233 (846.60 MHz)	WCDMA HSDPA HSUPA
Conducted Spurious Emissions	4132 (826.40 MHz) 4182 (836.40 MHz) 4233 (846.60 MHz)	WCDMA HSDPA HSUPA
Radiated Spurious Emissions below 1GHz	4233 (846.60 MHz)	WCDMA
Radiated Spurious Emissions above 1GHz	4132 (826.40 MHz) 4182 (836.40 MHz) 4233 (846.60 MHz)	WCDMA
Frequency Stability	4132 (826.40 MHz) 4233 (846.60 MHz)	WCDMA

3.3.5 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	1 RB Half RB Full RB
	18615(1851.50 MHz) 18900(1880.00 MHz) 19185(1908.50 MHz)	3 MHz	QPSK / 16QAM / 64QAM	1 RB Half RB Full RB
	18625(1852.50 MHz) 18900(1880.00 MHz) 19175(1907.50 MHz)	5 MHz	QPSK / 16QAM / 64QAM	1 RB Half RB Full RB
	18650(1855.00 MHz) 18900(1880.00 MHz) 19150(1905.00 MHz)	10 MHz	QPSK / 16QAM / 64QAM	1 RB Half RB Full RB
	18675(1857.50 MHz) 18900(1880.00 MHz) 19125(1902.50 MHz)	15 MHz	QPSK / 16QAM / 64QAM	1 RB Half RB Full RB
	18700(1860.00 MHz) 18900(1880.00 MHz) 19100(1900.00 MHz)	20 MHz	QPSK / 16QAM / 64QAM	1 RB Half RB Full RB
Modulation Characteristics	18900(1880.00 MHz)	20 MHz	QPSK / 16QAM / 64QAM	Full RB
Peak to Average Ratio	18607(1850.70 MHz) 18900(1880.00 MHz) 19193(1909.30 MHz)	1.4 MHz	QPSK / 16QAM / 64QAM	1 RB
	18615(1851.50 MHz) 18900(1880.00 MHz) 19185(1908.50 MHz)	3 MHz	QPSK / 16QAM / 64QAM	1 RB
	18625(1852.50 MHz) 18900(1880.00 MHz) 19175(1907.50 MHz)	5 MHz	QPSK / 16QAM / 64QAM	1 RB
	18650(1855.00 MHz) 18900(1880.00 MHz) 19150(1905.00 MHz)	10 MHz	QPSK / 16QAM / 64QAM	1 RB
	18675(1857.50 MHz) 18900(1880.00 MHz) 19125(1902.50 MHz)	15 MHz	QPSK / 16QAM / 64QAM	1 RB
	18700(1860.00 MHz) 18900(1880.00 MHz) 19100(1900.00 MHz)	20 MHz	QPSK / 16QAM / 64QAM	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	Full RB
	18615(1851.50 MHz) 18900(1880.00 MHz) 19185(1908.50 MHz)	3 MHz	QPSK / 16QAM / 64QAM	Full RB
	18625(1852.50 MHz) 18900(1880.00 MHz) 19175(1907.50 MHz)	5 MHz	QPSK / 16QAM / 64QAM	Full RB
	18650(1855.00 MHz) 18900(1880.00 MHz) 19150(1905.00 MHz)	10 MHz	QPSK / 16QAM / 64QAM	Full RB
	18675(1857.50 MHz) 18900(1880.00 MHz) 19125(1902.50 MHz)	15 MHz	QPSK / 16QAM / 64QAM	Full RB
	18700(1860.00 MHz) 18900(1880.00 MHz) 19100(1900.00 MHz)	20 MHz	QPSK / 16QAM / 64QAM	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	19175(1907.50 MHz)	5 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
Frequency Stability	18700(1860.00 MHz) 19100(1900.00 MHz)	20 MHz	QPSK	Full RB

3.3.6 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	1 RB Half RB Full RB
	20415(825.50 MHz) 20525(836.50 MHz) 20635(847.50 MHz)	3 MHz	QPSK / 16QAM / 64QAM	1 RB Half RB Full RB
	20425(826.50 MHz) 20525(836.50 MHz) 20625(846.50 MHz)	5 MHz	QPSK / 16QAM / 64QAM	1 RB Half RB Full RB
	20450(829.00 MHz) 20525(836.50 MHz) 20600(844.00 MHz)	10 MHz	QPSK / 16QAM / 64QAM	1 RB Half RB Full RB
Modulation Characteristics	20525(836.50 MHz)	10 MHz	QPSK / 16QAM / 64QAM	Full RB
Peak to Average Ratio	20407(824.70 MHz) 20525(836.50 MHz) 20643(848.30 MHz)	1.4 MHz	QPSK / 16QAM / 64QAM	1 RB
	20415(825.50 MHz) 20525(836.50 MHz) 20635(847.50 MHz)	3 MHz	QPSK / 16QAM / 64QAM	1 RB
	20425(826.50 MHz) 20525(836.50 MHz) 20625(846.50 MHz)	5 MHz	QPSK / 16QAM / 64QAM	1 RB
	20450(829.00 MHz) 20525(836.50 MHz) 20600(844.00 MHz)	10 MHz	QPSK / 16QAM / 64QAM	1 RB
Bandwidth	20407(824.70 MHz) 20525(836.50 MHz) 20643(848.30 MHz)	1.4 MHz	QPSK / 16QAM / 64QAM	Full RB
	20415(825.50 MHz) 20525(836.50 MHz) 20635(847.50 MHz)	3 MHz	QPSK / 16QAM / 64QAM	Full RB
	20425(826.50 MHz) 20525(836.50 MHz) 20625(846.50 MHz)	5 MHz	QPSK / 16QAM / 64QAM	Full RB
	20450(829.00 MHz) 20525(836.50 MHz) 20600(844.00 MHz)	10 MHz	QPSK / 16QAM / 64QAM	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	20525(836.50 MHz)	10 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	20450(829.00 MHz) 20600(844.00 MHz)	10 MHz	QPSK	Full RB

3.3.7 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	1 RB Half RB Full RB
	20800(2505.00 MHz) 21100(2535.00 MHz) 21400(2565.00 MHz)	10 MHz	QPSK / 16QAM / 64QAM	1 RB Half RB Full RB
	20825(2507.50 MHz) 21100(2535.00 MHz) 21375(2562.50 MHz)	15 MHz	QPSK / 16QAM / 64QAM	1 RB Half RB Full RB
	20850(2510.00 MHz) 21100(2535.00 MHz) 21350(2560.00 MHz)	20 MHz	QPSK / 16QAM / 64QAM	1 RB Half RB Full RB
Modulation Characteristics	21100(2535.00 MHz)	20 MHz	QPSK / 16QAM / 64QAM	Full RB
Peak to Average Ratio	20775(2502.50 MHz) 21100(2535.00 MHz) 21425(2567.50 MHz)	5 MHz	QPSK / 16QAM / 64QAM	1 RB
	20800(2505.00 MHz) 21100(2535.00 MHz) 21400(2565.00 MHz)	10 MHz	QPSK / 16QAM / 64QAM	1 RB
	20825(2507.50 MHz) 21100(2535.00 MHz) 21375(2562.50 MHz)	15 MHz	QPSK / 16QAM / 64QAM	1 RB
	20850(2510.00 MHz) 21100(2535.00 MHz) 21350(2560.00 MHz)	20 MHz	QPSK / 16QAM / 64QAM	1 RB
Bandwidth	20775(2502.50 MHz) 21100(2535.00 MHz) 21425(2567.50 MHz)	5 MHz	QPSK / 16QAM / 64QAM	Full RB
	20800(2505.00 MHz) 21100(2535.00 MHz) 21400(2565.00 MHz)	10 MHz	QPSK / 16QAM / 64QAM	Full RB
	20825(2507.50 MHz) 21100(2535.00 MHz) 21375(2562.50 MHz)	15 MHz	QPSK / 16QAM / 64QAM	Full RB
	20850(2510.00 MHz) 21100(2535.00 MHz) 21350(2560.00 MHz)	20 MHz	QPSK / 16QAM / 64QAM	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	21425(2567.50 MHz)	5 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	20850(2510.00 MHz) 21350(2560.00 MHz)	20 MHz	QPSK	Full RB

3.3.8 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	1 RB Half RB Full RB
	23025(700.50 MHz) 23095(707.50 MHz) 23165(714.50 MHz)	3 MHz	QPSK / 16QAM / 64QAM	1 RB Half RB Full RB
	23035(701.50 MHz) 23095(707.50 MHz) 23155(713.50 MHz)	5 MHz	QPSK / 16QAM / 64QAM	1 RB Half RB Full RB
	23060(704.00 MHz) 23095(707.50 MHz) 23130(711.00 MHz)	10 MHz	QPSK / 16QAM / 64QAM	1 RB Half RB Full RB
Modulation Characteristics	23095(707.50 MHz)	10 MHz	QPSK / 16QAM / 64QAM	Full RB
Peak to Average Ratio	23017(699.70 MHz) 23095(707.50 MHz) 23173(715.30 MHz)	1.4 MHz	QPSK / 16QAM / 64QAM	1 RB
	23025(700.50 MHz) 23095(707.50 MHz) 23165(714.50 MHz)	3 MHz	QPSK / 16QAM / 64QAM	1 RB
	23035(701.50 MHz) 23095(707.50 MHz) 23155(713.50 MHz)	5 MHz	QPSK / 16QAM / 64QAM	1 RB
	23060(704.00 MHz) 23095(707.50 MHz) 23130(711.00 MHz)	10 MHz	QPSK / 16QAM / 64QAM	1 RB
Bandwidth	23017(699.70 MHz) 23095(707.50 MHz) 23173(715.30 MHz)	1.4 MHz	QPSK / 16QAM / 64QAM	Full RB
	23025(700.50 MHz) 23095(707.50 MHz) 23165(714.50 MHz)	3 MHz	QPSK / 16QAM / 64QAM	Full RB
	23035(701.50 MHz) 23095(707.50 MHz) 23155(713.50 MHz)	5 MHz	QPSK / 16QAM / 64QAM	Full RB
	23060(704.00 MHz) 23095(707.50 MHz) 23130(711.00 MHz)	10 MHz	QPSK / 16QAM / 64QAM	Full RB

Test Item	Tested Channel	Channel Bandwidth	Modulation	Mode
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
Radiated Spurious Emissions below 1GHz	23173(715.30 MHz)	1.4 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	23060(704.00 MHz) 23130(711.00 MHz)	10 MHz	QPSK	Full RB

3.3.9 LTE Band 17

Test Item	Tested Channel	Channel Bandwidth	Modulation	Mode
Effective Radiated Power	23755(706.50 MHz) 23790(710.00 MHz) 23825(713.50 MHz)	5 MHz	QPSK / 16QAM / 64QAM	1 RB Half RB Full RB
	23780(709.00 MHz) 23790(710.00 MHz) 23800(711.00 MHz)	10 MHz	QPSK / 16QAM / 64QAM	1 RB Half RB Full RB
Modulation Characteristics	23790(710.00 MHz)	10 MHz	QPSK / 16QAM / 64QAM	Full RB
Peak to Average Ratio	23755(706.50 MHz) 23790(710.00 MHz) 23825(713.50 MHz)	5 MHz	QPSK / 16QAM / 64QAM	1 RB
	23780(709.00 MHz) 23790(710.00 MHz) 23800(711.00 MHz)	10 MHz	QPSK / 16QAM / 64QAM	1 RB
Bandwidth	23755(706.50 MHz) 23790(710.00 MHz) 23825(713.50 MHz)	5 MHz	QPSK / 16QAM / 64QAM	Full RB
	23780(709.00 MHz) 23790(710.00 MHz) 23800(711.00 MHz)	10 MHz	QPSK / 16QAM / 64QAM	Full RB
Conducted Spurious Emissions	23755(706.50 MHz) 23790(710.00 MHz) 23825(713.50 MHz)	5 MHz	QPSK	1 RB Full RB
	23780(709.00 MHz) 23790(710.00 MHz) 23800(711.00 MHz)	10 MHz	QPSK	1 RB Full RB
Radiated Spurious Emissions below 1GHz	23825(713.50 MHz)	5 MHz	QPSK	1 RB
Radiated Spurious Emissions above 1GHz	23755(706.50 MHz) 23790(710.00 MHz) 23825(713.50 MHz)	5 MHz	QPSK	1 RB
	23780(709.00 MHz) 23790(710.00 MHz) 23800(711.00 MHz)	10 MHz	QPSK	1 RB
Frequency Stability	23780(709.00 MHz) 23800(711.00 MHz)	10 MHz	QPSK	Full RB

3.3.10 LTE Band 38

Test Item	Tested Channel	Channel Bandwidth	Modulation	Mode
Equivalent Isotropically Radiated Power	37775(2572.50 MHz) 38000(2595.00 MHz) 38225(2617.50 MHz)	5 MHz	QPSK / 16QAM / 64QAM	1 RB Half RB Full RB
	37800(2575.00 MHz) 38000(2595.00 MHz) 38200(2615.00 MHz)	10 MHz	QPSK / 16QAM / 64QAM	1 RB Half RB Full RB
	37825(2577.50 MHz) 38000(2595.00 MHz) 38175(2612.50 MHz)	15 MHz	QPSK / 16QAM / 64QAM	1 RB Half RB Full RB
	37850(2580.00 MHz) 38000(2595.00 MHz) 38150(2610.00 MHz)	20 MHz	QPSK / 16QAM / 64QAM	1 RB Half RB Full RB
Modulation Characteristics	38000(2595.00 MHz)	20 MHz	QPSK / 16QAM / 64QAM	Full RB
Peak to Average Ratio	37775(2572.50 MHz) 38000(2595.00 MHz) 38225(2617.50 MHz)	5 MHz	QPSK / 16QAM / 64QAM	1 RB
	37800(2575.00 MHz) 38000(2595.00 MHz) 38200(2615.00 MHz)	10 MHz	QPSK / 16QAM / 64QAM	1 RB
	37825(2577.50 MHz) 38000(2595.00 MHz) 38175(2612.50 MHz)	15 MHz	QPSK / 16QAM / 64QAM	1 RB
	37850(2580.00 MHz) 38000(2595.00 MHz) 38150(2610.00 MHz)	20 MHz	QPSK / 16QAM / 64QAM	1 RB
Bandwidth	37775(2572.50 MHz) 38000(2595.00 MHz) 38225(2617.50 MHz)	5 MHz	QPSK / 16QAM / 64QAM	Full RB
	37800(2575.00 MHz) 38000(2595.00 MHz) 38200(2615.00 MHz)	10 MHz	QPSK / 16QAM / 64QAM	Full RB
	37825(2577.50 MHz) 38000(2595.00 MHz) 38175(2612.50 MHz)	15 MHz	QPSK / 16QAM / 64QAM	Full RB
	37850(2580.00 MHz) 38000(2595.00 MHz) 38150(2610.00 MHz)	20 MHz	QPSK / 16QAM / 64QAM	Full RB



Test Item	Tested Channel	Channel Bandwidth	Modulation	Mode
Conducted Spurious Emissions	37775(2572.50 MHz) 38000(2595.00 MHz) 38225(2617.50 MHz)	5 MHz	QPSK	1 RB Full RB
	37800(2575.00 MHz) 38000(2595.00 MHz) 38200(2615.00 MHz)	10 MHz	QPSK	1 RB Full RB
	37825(2577.50 MHz) 38000(2595.00 MHz) 38175(2612.50 MHz)	15 MHz	QPSK	1 RB Full RB
	37850(2580.00 MHz) 38000(2595.00 MHz) 38150(2610.00 MHz)	20 MHz	QPSK	1 RB Full RB
Radiated Spurious Emissions below 1GHz	38000(2595.00 MHz)	20 MHz	QPSK	1 RB
Radiated Spurious Emissions above 1GHz	37775(2572.50 MHz) 38000(2595.00 MHz) 38225(2617.50 MHz)	5 MHz	QPSK	1 RB
	37850(2580.00 MHz) 38000(2595.00 MHz) 38150(2610.00 MHz)	20 MHz	QPSK	1 RB
Frequency Stability	37850(2580.00 MHz) 38150(2610.00 MHz)	20 MHz	QPSK	Full RB

3.3.11 LTE Band 41

Test Item	Tested Channel	Channel Bandwidth	Modulation	Mode
Equivalent Isotropically Radiated Power	39675(2498.50 MHz) 40620(2593.00 MHz) 41565(2687.50 MHz)	5 MHz	QPSK / 16QAM / 64QAM	1 RB Half RB Full RB
	39700(2501.00 MHz) 40620(2593.00 MHz) 41540(2685.00 MHz)	10 MHz	QPSK / 16QAM / 64QAM	1 RB Half RB Full RB
	39725(2503.50 MHz) 40620(2593.00 MHz) 41515(2682.50 MHz)	15 MHz	QPSK / 16QAM / 64QAM	1 RB Half RB Full RB
	39750(2506.00 MHz) 40620(2593.00 MHz) 41490(2680.00 MHz)	20 MHz	QPSK / 16QAM / 64QAM	1 RB Half RB Full RB
Modulation Characteristics	40620(2593.00 MHz)	20 MHz	QPSK / 16QAM / 64QAM	Full RB
Peak to Average Ratio	39675(2498.50 MHz) 40620(2593.00 MHz) 41565(2687.50 MHz)	5 MHz	QPSK / 16QAM / 64QAM	1 RB
	39700(2501.00 MHz) 40620(2593.00 MHz) 41540(2685.00 MHz)	10 MHz	QPSK / 16QAM / 64QAM	1 RB
	39725(2503.50 MHz) 40620(2593.00 MHz) 41515(2682.50 MHz)	15 MHz	QPSK / 16QAM / 64QAM	1 RB
	39750(2506.00 MHz) 40620(2593.00 MHz) 41490(2680.00 MHz)	20 MHz	QPSK / 16QAM / 64QAM	1 RB
Bandwidth	39675(2498.50 MHz) 40620(2593.00 MHz) 41565(2687.50 MHz)	5 MHz	QPSK / 16QAM / 64QAM	Full RB
	39700(2501.00 MHz) 40620(2593.00 MHz) 41540(2685.00 MHz)	10 MHz	QPSK / 16QAM / 64QAM	Full RB
	39725(2503.50 MHz) 40620(2593.00 MHz) 41515(2682.50 MHz)	15 MHz	QPSK / 16QAM / 64QAM	Full RB
	39750(2506.00 MHz) 40620(2593.00 MHz) 41490(2680.00 MHz)	20 MHz	QPSK / 16QAM / 64QAM	Full RB

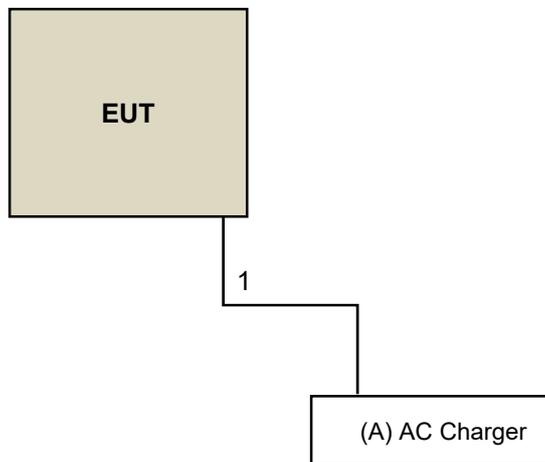


Test Item	Tested Channel	Channel Bandwidth	Modulation	Mode
Conducted Spurious Emissions	39675(2498.50 MHz) 40620(2593.00 MHz) 41565(2687.50 MHz)	5 MHz	QPSK	1 RB Full RB
	39700(2501.00 MHz) 40620(2593.00 MHz) 41540(2685.00 MHz)	10 MHz	QPSK	1 RB Full RB
	39725(2503.50 MHz) 40620(2593.00 MHz) 41515(2682.50 MHz)	15 MHz	QPSK	1 RB Full RB
	39750(2506.00 MHz) 40620(2593.00 MHz) 41490(2680.00 MHz)	20 MHz	QPSK	1 RB Full RB
Radiated Spurious Emissions below 1GHz	40620(2593.00 MHz)	20 MHz	QPSK	1 RB
Radiated Spurious Emissions above 1GHz	39675(2498.50 MHz) 40620(2593.00 MHz) 41565(2687.50 MHz)	5 MHz	QPSK	1 RB
	39750(2506.00 MHz) 40620(2593.00 MHz) 41490(2680.00 MHz)	20 MHz	QPSK	1 RB
Frequency Stability	39750(2506.00 MHz) 41490(2680.00 MHz)	20 MHz	QPSK	Full RB

3.4 Test Program Used and Operation Descriptions

EUT link Simulator has been activated to set the EUT under transmission condition continuously at specific channel frequency.

3.5 Connection Diagram of EUT and Peripheral Devices



Under Table

Remote Site

3.6 Configuration of Peripheral Devices and Cable Connections

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A	AC Charger	DSA	10PF06-05 FUS	N/A	N/A	Supplied by applicant

ID	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1	Data Cable (Type C Cable)	1	1	Yes	0	Supplied by applicant

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
Fixed Attenuator Woken	00800A1K01A-10	00800A1K01A-10-01	2025/5/23	2026/5/22
PXA Signal Analyzer Keysight	N9030B	MY57140938	2025/3/24	2026/3/23
Radio Communication Analyzer Anritsu	MT8821C	6261806803	2025/2/19	2026/2/18
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: 2025/7/6 ~ 2025/7/11

4.2 Modulation Characteristics

Refer to section 4.1 to get the tested date and information of the instruments.

4.3 Peak to Average Ratio

Refer to section 4.1 to get the tested date and information of the instruments.

4.4 Bandwidth

Refer to section 4.1 to get the tested date and information of the instruments.

4.5 Conducted Spurious Emissions

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Fixed Attenuator Woken	00800A1K01A-10	00800A1K01A-10-01	2025/5/23	2026/5/22
PXA Signal Analyzer Keysight	N9030B	MY57140938	2025/3/24	2026/3/23
Radio Communication Analyzer Anritsu	MT8821C	6261806803	2025/2/19	2026/2/18
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: 2025/7/6 ~ 2025/7/9

4.6 Radiated Spurious Emissions below 1GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna Tower Max-Full	MFT-151SS-0.5T	N/A	N/A	N/A
Bi_Log Antenna Schwarzbeck	VULB 9168	9168-1213	2024/10/14	2025/10/13
EXA Signal Analyzer Agilent	N9010A	MY52220207	2024/12/30	2025/12/29
Loop Antenna TESEQ	HLA 6121	45745	2024/8/21	2025/8/20
MXE EMI Receiver Keysight	N9038B	MY60180019	2025/1/15	2026/1/14
Preamplifier EMCI	EMC330N	980782	2025/1/14	2026/1/13
RF Coaxial Cable EMCI	EMCCFD400-NM-NM- 500	201233	2025/1/14	2026/1/13
	EMCCFD400-NM-NM- 3000	201235	2025/1/14	2026/1/13
	EMCCFD400-NM-NM- 9000	201236(with PAD)	2025/1/14	2026/1/13
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	N/A	N/A	N/A
Turn Table Max-Full	MF-7802BS	N/A	N/A	N/A
Turn Table Controller Max-Full	MF-7802BS	MF780208674	N/A	N/A

Notes:

1. The test was performed in WM - 966 chamber 8.
2. Tested Date: 2025/7/22 ~ 2025/7/23

4.7 Radiated Spurious Emissions above 1GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna Tower Max-Full	MFT-151SS-0.5T	N/A	N/A	N/A
EXA Signal Analyzer Agilent	N9010A	MY52220207	2024/12/30	2025/12/29
Horn Antenna RFSPIN	DRH18-E	210103A18E	2024/11/10	2025/11/9
Horn Antenna Schwarzbeck	BBHA 9170	9170-1049	2024/11/10	2025/11/9
MXE EMI Receiver Keysight	N9038B	MY60180019	2025/1/15	2026/1/14
Preamplifier EMCI	EMC118A45SE	980808	2024/12/26	2025/12/25
	EMC184045SE	980788	2025/1/14	2026/1/13
RF Coaxial Cable EMCI	EMC101G-KM-KM-2000	201254	2025/1/14	2026/1/13
	EMC101G-KM-KM-3000	201258	2025/1/14	2026/1/13
	EMC101G-KM-KM-5000	201261	2025/1/14	2026/1/13
	EMC104-SM-SM-1000	210102	2025/1/14	2026/1/13
	EMC104-SM-SM-3000	201231	2025/1/14	2026/1/13
	EMC104-SM-SM-9000	201243	2025/1/14	2026/1/13
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	N/A	N/A	N/A
Turn Table Max-Full	MF-7802BS	N/A	N/A	N/A
Turn Table Controller Max-Full	MF-7802BS	MF780208674	N/A	N/A

Notes:

1. The test was performed in WM - 966 chamber 8.
2. Tested Date: 2025/7/17 ~ 2025/7/18

4.8 Frequency Stability

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
3-channel DC power supply OWON	ODP3033	ODP30332128138	N/A	N/A
Digital Multimeter Fluke	8050A	4660081	2025/6/6	2026/6/5
Fixed Attenuator Woken	00800A1K01A-10	00800A1K01A-10-01	2025/5/23	2026/5/22
PXA Signal Analyzer Keysight	N9030B	MY57140938	2025/3/24	2026/3/23
Radio Communication Analyzer Anritsu	MT8821C	6261806803	2025/2/19	2026/2/18
Software BV	ADT_RF Test Software V7.6.5.4	N/A	N/A	N/A
Temperature & Humidity Chamber Terchy	MHU-225AU	920842	2025/6/25	2026/6/24

Notes:

1. The test was performed in Oven room.
2. Tested Date: 2025/7/11

5 Limits of Test Items

5.1 Effective Radiated Power and Equivalent Isotropically Radiated Power

For GSM850, WCDMA Band V, LTE Band 5:

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

For GSM1900, WCDMA Band II, LTE Band 2:

Mobile and portable stations are limited to 2 watts EIRP.

For LTE Band 12, LTE Band 17:

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 7, LTE Band 38, LTE Band 41:

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 GSM850, GSM1900, WCDMA Band II, WCDMA Band V, 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 12, LTE Band 17:

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 7, LTE Band 38, LTE Band 41:

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 GSM850, GSM1900, WCDMA Band II, WCDMA Band V, 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 12, LTE Band 17:

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 7, LTE Band 38, LTE Band 41:

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 GSM850, GSM1900, WCDMA Band II, WCDMA Band V, 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 12, LTE Band 17:

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 7, LTE Band 38, LTE Band 41:

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 GSM850, WCDMA Band V, LTE Band 5:

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

For GSM1900, WCDMA Band II, LTE Band 2, LTE Band 7, LTE Band 12, LTE Band 17, LTE Band 38, LTE Band 41:

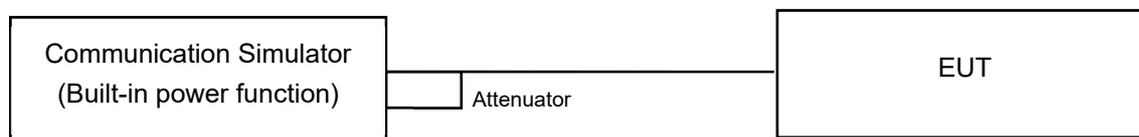
The frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation (authorized frequency block).

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.

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:

$$\text{EIRP} = P_{\text{Meas}} + G_T$$

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

where

ERP or EIRP effective radiated power or equivalent isotropically radiated power, respectively

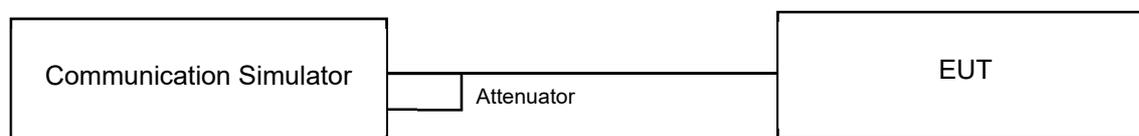
(expressed in the same units as P_{Meas} , e.g., dBm or dBW)

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

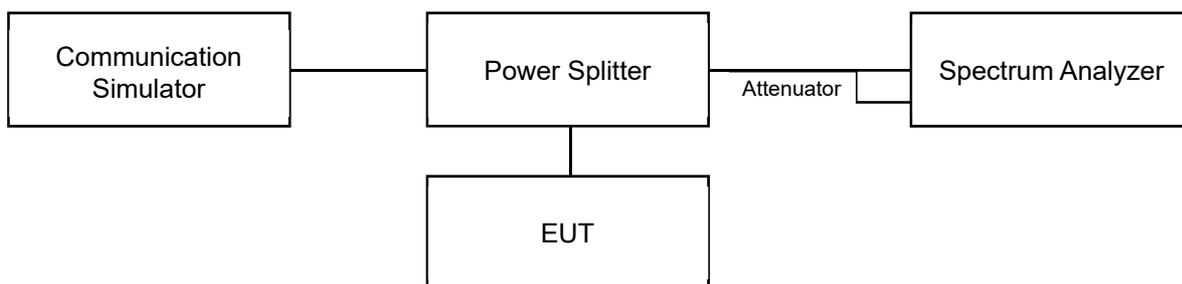


6.2.2 Test Procedure

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

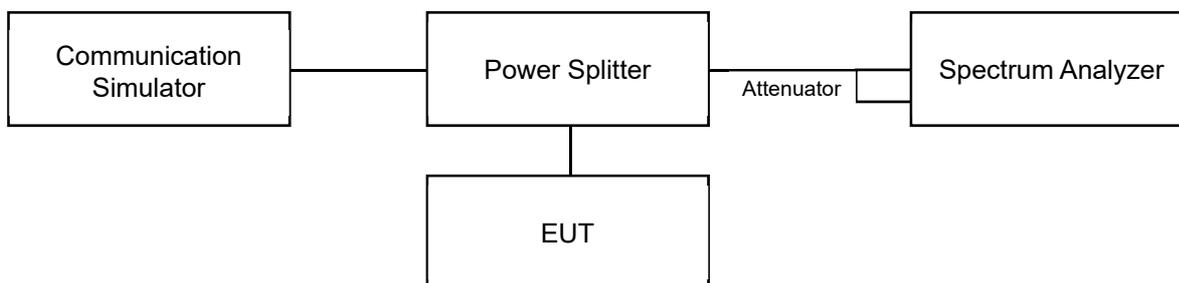


6.3.2 Test Procedure

- a. Set resolution/measurement bandwidth \geq 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.

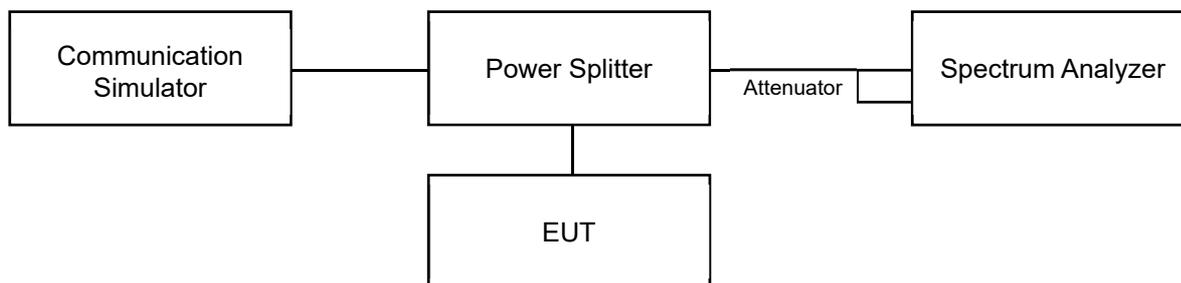
- a. The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The span range for the spectrum analyzer shall be wide enough to see sufficient roll off of the signal to make the measurement.
- b. The nominal RBW shall be in the range of 1% to 5% of the anticipated OBW, and the VBW shall be set $\geq 3 \times$ 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 $\geq 3 \times$ 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



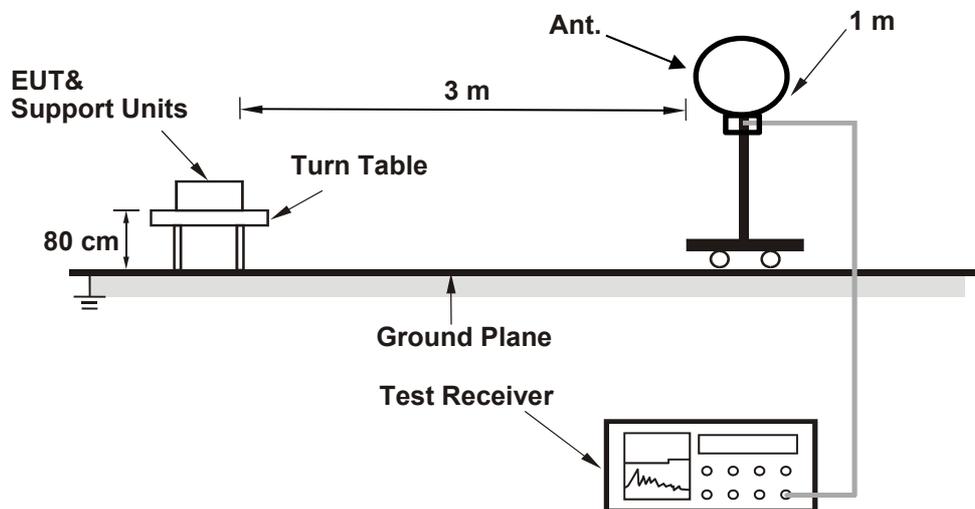
6.5.2 Test Procedure

- 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 highest 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 \geq 100 kHz, VBW \geq 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.
 For example: 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] + $10 \cdot \log(1000/100)$. To compensate for this integration before comparison to the value, the adjusted reference level offset was increase by 10 dB accordingly.
- h. Record the maximum power value test plot.

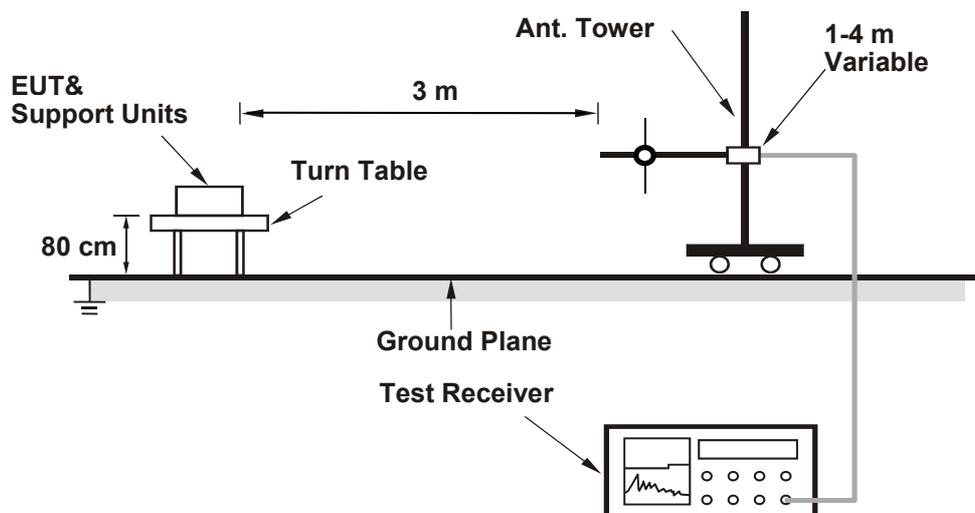
6.6 Radiated Spurious Emissions below 1GHz

6.6.1 Test Setup

For Radiated emission below 30 MHz



For Radiated emission above 30 MHz



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

6.6.2 Test Procedure

The EUT is configured 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. $EIRP (dBm) = E (dB\mu V/m) + 20\log(D) - 104.8$; where D is the measurement distance (in the far field region) in m.
- f. $ERP (dBm) = E (dB\mu V/m) + 20\log(D) - 104.8 - 2.15$; where D is the measurement distance (in the far field region) in m.

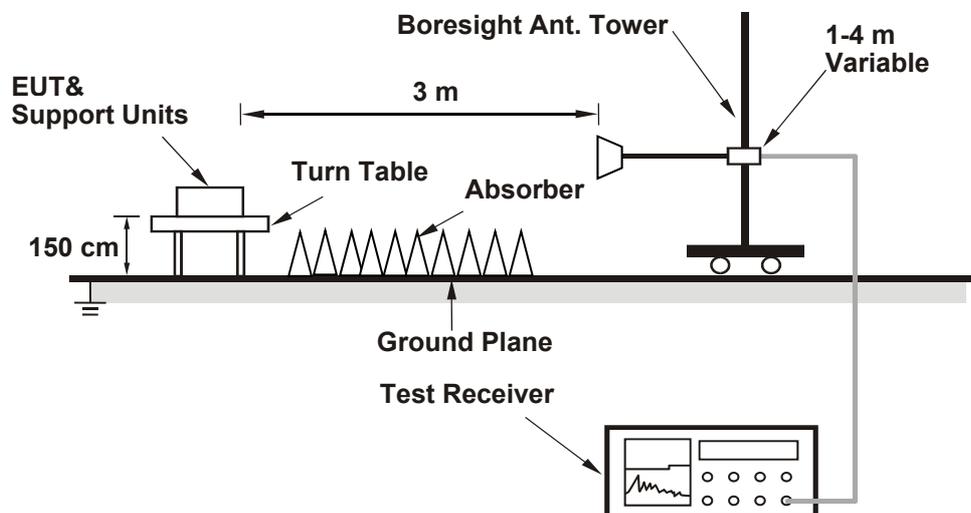
Note:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1 MHz/3 MHz. Set detector = average.
2. The amplitude of spurious emissions in the range 9 kHz to 30 MHz which are attenuated more than 20 dB below the permissible value need not be reported.

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

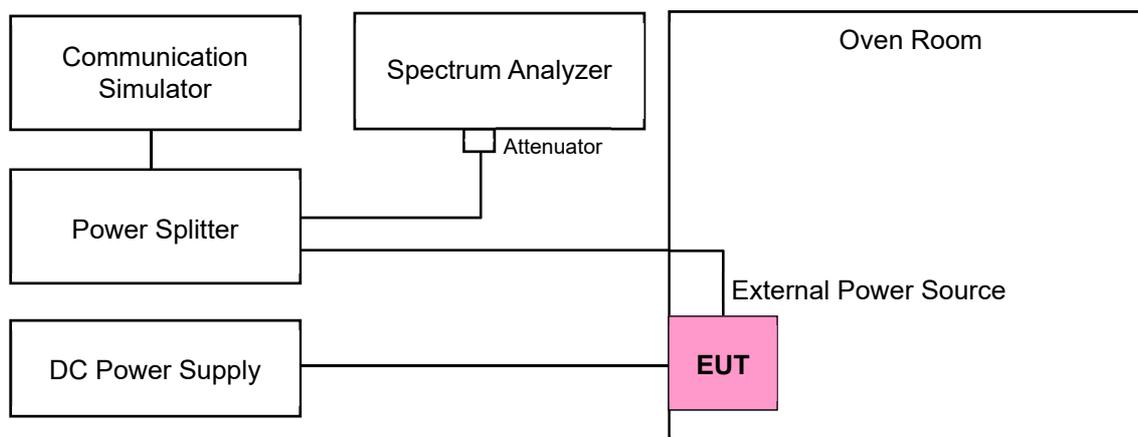
The EUT is configured to set data modulation and maximum power using WWAN technology.

- 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.
- 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.
- 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.
- Following ANSI C63.26 section 5.5 and 5.2.7
- $EIRP (dBm) = E (dB\mu V/m) + 20\log(D) - 104.8$; where D is the measurement distance (in the far field region) in m.
- $ERP (dBm) = E (dB\mu V/m) + 20\log(D) - 104.8 - 2.15$; where D is the measurement distance (in the far field region) in m.

Note: 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.

- 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.
- 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.
- The temperature range step is 10 degrees in this test items. All temperature levels shall be hold the $\pm 0.5^{\circ}\text{C}$ 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:	3.89 Vdc	Environmental Conditions:	23°C, 62% RH	Tested By:	Charles Hsiao
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7.1.1 GSM 850

Band	GSM850		
Channel	128	189	251
Frequency (MHz)	824.2	836.4	848.8
GSM	31.11	31.22	31.25
GPRS 1Tx Slot	31.09	31.19	31.23
GPRS 2Tx Slot	28.63	28.71	28.74
GPRS 3Tx Slot	26.09	26.22	26.23
GPRS 4Tx Slot	25.19	25.26	25.29

Output Power					
Modulation	Minimum Cond. Power (dBm)	Maximum Cond. Power (dBm)	Minimum ERP (dBm)	Maximum ERP (dBm)	ERP Limit (dBm)
GSM	31.11	31.25	25.96	26.10	38.45
GPRS	25.19	31.23	20.04	26.08	38.45

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

7.1.2 GSM 1900

Band	GSM1900		
Channel	512	661	810
Frequency (MHz)	1850.2	1880	1909.8
GSM	29.75	29.32	29.41
GPRS 1Tx Slot	29.72	29.29	29.38
GPRS 2Tx Slot	27.39	26.96	27.13
GPRS 3Tx Slot	25.65	25.42	25.54
GPRS 4Tx Slot	24.47	24.14	24.23

Output Power					
Modulation	Minimum Cond. Power (dBm)	Maximum Cond. Power (dBm)	Minimum EIRP (dBm)	Maximum EIRP (dBm)	EIRP Limit (dBm)
GSM	29.32	29.75	26.42	26.85	33.01
GPRS	24.14	29.72	21.24	26.82	33.01

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

7.1.3 WCDMA Band II

Measurement Conducted Power (dBm)			
Band	WCDMA II		
TX Channel	9262	9400	9538
Rx Channel	9662	9800	9938
Frequency	1852.4	1880	1907.6
RMC 12.2K	19.58	19.51	19.49
HSDPA Subtest-1	18.65	18.59	18.61
HSDPA Subtest-2	18.63	18.57	18.59
HSDPA Subtest-3	18.11	18.09	18.07
HSDPA Subtest-4	18.33	18.03	18.11
HSUPA Subtest-1	18.77	18.63	18.63
HSUPA Subtest-2	16.88	16.71	16.67
HSUPA Subtest-3	17.78	17.67	17.62
HSUPA Subtest-4	16.71	16.69	16.63
HSUPA Subtest-5	18.72	18.68	18.71
HSPA+ Subtest-1	16.11	16.05	15.94

Output Power					
Modulation	Minimum Cond. Power (dBm)	Maximum Cond. Power (dBm)	Minimum EIRP (dBm)	Maximum EIRP (dBm)	EIRP Limit (dBm)
RMC 12.2K	19.49	19.58	16.59	16.68	33.01
HSDPA	18.03	18.65	15.13	15.75	33.01
HSUPA	16.63	18.77	13.73	15.87	33.01
HSPA+	15.94	16.11	13.04	13.21	33.01

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

7.1.4 WCDMA Band V

Measurement Conducted Power (dBm)			
Band	WCDMA V		
TX Channel	4132	4182	4233
Rx Channel	4357	4407	4458
Frequency	826.4	836.4	846.6
RMC 12.2K	22.21	22.23	22.18
HSDPA Subtest-1	21.11	21.13	21.06
HSDPA Subtest-2	21.09	21.11	21.03
HSDPA Subtest-3	20.62	20.65	20.45
HSDPA Subtest-4	20.59	20.63	20.42
HSUPA Subtest-1	20.45	20.49	20.43
HSUPA Subtest-2	18.32	18.37	18.23
HSUPA Subtest-3	19.46	19.58	19.37
HSUPA Subtest-4	18.25	18.33	18.18
HSUPA Subtest-5	20.47	20.51	20.41
HSPA+ Subtest-1	18.24	18.37	18.29

Output Power					
Modulation	Minimum Cond. Power (dBm)	Maximum Cond. Power (dBm)	Minimum ERP (dBm)	Maximum ERP (dBm)	ERP Limit (dBm)
RMC 12.2K	22.18	22.23	16.63	16.68	38.45
HSDPA	20.42	21.13	14.87	15.58	38.45
HSUPA	18.18	20.51	12.63	14.96	38.45
HSPA+	18.24	18.37	12.69	12.82	38.45

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

7.1.5 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	18.97	19.05	19.03
	1	2	19.02	18.91	18.83
	1	5	19.01	18.75	18.86
	3	0	18.99	18.93	18.93
	3	1	18.94	18.84	18.95
	3	3	18.98	18.85	18.75
	6	0	18.91	18.95	18.87
16QAM	1	0	19.06	18.92	18.84
	1	2	19.03	18.94	18.9
	1	5	18.93	18.9	18.82
	3	0	18.9	18.87	18.76
	3	1	18.8	18.75	18.74
	3	3	18.76	18.7	18.67
	6	0	18.82	18.69	18.58
64QAM	1	0	18.94	18.89	18.9
	1	2	19.03	18.87	18.93
	1	5	18.96	18.76	18.79
	3	0	18.88	18.85	18.92
	3	1	18.82	18.83	18.7
	3	3	18.88	18.62	18.68
	6	0	18.9	18.76	18.83

Output Power					
Modulation	Minimum Cond. Power (dBm)	Maximum Cond. Power (dBm)	Minimum EIRP (dBm)	Maximum EIRP (dBm)	EIRP Limit (dBm)
QPSK	18.75	19.05	15.85	16.15	33.01
16QAM	18.58	19.06	15.68	16.16	33.01
64QAM	18.62	19.03	15.72	16.13	33.01

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	18.95	18.91	18.96
	1	7	19.1	18.93	18.89
	1	14	18.97	18.85	18.93
	8	0	19	18.97	18.95
	8	3	19.01	18.77	18.85
	8	7	19	18.95	18.78
	15	0	19.01	19.08	18.87
16QAM	1	0	19.01	18.88	18.78
	1	7	19	18.97	18.9
	1	14	18.99	19	18.81
	8	0	18.99	18.96	18.85
	8	3	18.82	18.75	18.71
	8	7	18.74	18.78	18.66
	15	0	18.8	18.67	18.69
64QAM	1	0	18.97	18.91	18.91
	1	7	18.93	18.84	18.91
	1	14	18.96	18.74	18.92
	8	0	18.93	18.81	18.83
	8	3	18.82	18.74	18.77
	8	7	18.82	18.64	18.69
	15	0	18.77	18.76	18.81

Output Power					
Modulation	Minimum Cond. Power (dBm)	Maximum Cond. Power (dBm)	Minimum EIRP (dBm)	Maximum EIRP (dBm)	EIRP Limit (dBm)
QPSK	18.77	19.10	15.87	16.20	33.01
16QAM	18.66	19.01	15.76	16.11	33.01
64QAM	18.64	18.97	15.74	16.07	33.01

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	18.98	18.9	18.89
	1	12	19.05	18.95	18.74
	1	24	19.02	18.79	18.74
	12	0	18.99	19.01	18.8
	12	6	19.02	18.76	18.92
	12	13	18.91	18.82	18.73
	25	0	18.91	19.05	18.84
16QAM	1	0	18.94	18.87	18.89
	1	12	19.09	18.87	18.87
	1	24	18.94	18.94	18.89
	12	0	18.94	18.82	18.86
	12	6	18.87	18.71	18.84
	12	13	18.8	18.78	18.69
	25	0	18.77	18.65	18.6
64QAM	1	0	18.97	18.99	18.97
	1	12	18.97	18.94	18.95
	1	24	18.93	18.78	18.83
	12	0	18.85	18.89	18.78
	12	6	18.79	18.76	18.66
	12	13	18.8	18.74	18.76
	25	0	18.85	18.72	18.77

Output Power					
Modulation	Minimum Cond. Power (dBm)	Maximum Cond. Power (dBm)	Minimum EIRP (dBm)	Maximum EIRP (dBm)	EIRP Limit (dBm)
QPSK	18.73	19.05	15.83	16.15	33.01
16QAM	18.60	19.09	15.70	16.19	33.01
64QAM	18.66	18.99	15.76	16.09	33.01

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	18.94	18.93	18.97
	1	24	18.99	19.02	18.85
	1	49	18.91	18.77	18.88
	25	0	19.1	18.98	18.94
	25	12	18.93	18.79	18.97
	25	25	18.97	18.85	18.83
	50	0	18.99	19.04	18.91
16QAM	1	0	19.05	18.9	18.91
	1	24	19.06	18.89	18.83
	1	49	18.95	18.94	18.86
	25	0	18.94	18.82	18.81
	25	12	18.82	18.8	18.78
	25	25	18.88	18.64	18.6
	50	0	18.81	18.63	18.68
64QAM	1	0	18.94	18.89	18.91
	1	24	19.06	18.87	18.82
	1	49	19	18.87	18.78
	25	0	18.85	18.85	18.79
	25	12	18.88	18.84	18.71
	25	25	18.94	18.65	18.77
	50	0	18.86	18.82	18.74

Output Power					
Modulation	Minimum Cond. Power (dBm)	Maximum Cond. Power (dBm)	Minimum EIRP (dBm)	Maximum EIRP (dBm)	EIRP Limit (dBm)
QPSK	18.77	19.10	15.87	16.20	33.01
16QAM	18.60	19.06	15.70	16.16	33.01
64QAM	18.65	19.06	15.75	16.16	33.01

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	19.09	19.05	19.04
	1	37	19.12	19.04	18.97
	1	74	19.05	18.88	18.96
	36	0	19.11	19.02	18.97
	36	19	19.03	18.9	18.97
	36	39	19.05	18.97	18.88
	75	0	19.05	19.08	18.96
16QAM	1	0	19.08	19.02	18.92
	1	37	19.1	18.98	18.93
	1	74	19.03	19	18.93
	36	0	19.04	18.97	18.88
	36	19	18.93	18.83	18.84
	36	39	18.88	18.78	18.73
	75	0	18.83	18.7	18.71
64QAM	1	0	19.06	19.04	19.03
	1	37	19.06	18.94	18.95
	1	74	19	18.88	18.93
	36	0	18.97	18.91	18.92
	36	19	18.89	18.86	18.8
	36	39	18.94	18.76	18.79
	75	0	18.91	18.85	18.86

Output Power					
Modulation	Minimum Cond. Power (dBm)	Maximum Cond. Power (dBm)	Minimum EIRP (dBm)	Maximum EIRP (dBm)	EIRP Limit (dBm)
QPSK	18.88	19.12	15.98	16.22	33.01
16QAM	18.70	19.10	15.80	16.20	33.01
64QAM	18.76	19.06	15.86	16.16	33.01

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	19.23	19.16	19.11
	1	50	19.17	19.11	19.09
	1	99	19.16	19.03	19.02
	50	0	19.21	19.15	19.08
	50	25	19.16	19.05	19.03
	50	50	19.13	19.06	19.02
	100	0	19.19	19.16	19.09
16QAM	1	0	19.21	19.08	19.05
	1	50	19.17	19.07	19.02
	1	99	19.14	19.05	19.01
	50	0	19.11	19.05	18.99
	50	25	19.07	18.97	18.97
	50	50	18.95	18.86	18.83
	100	0	18.96	18.83	18.81
64QAM	1	0	19.19	19.13	19.11
	1	50	19.13	19.05	19.02
	1	99	19.07	19.03	19.01
	50	0	19.06	18.99	18.98
	50	25	19.03	18.93	18.91
	50	50	18.99	18.88	18.85
	100	0	19.01	18.97	18.93

Output Power					
Modulation	Minimum Cond. Power (dBm)	Maximum Cond. Power (dBm)	Minimum EIRP (dBm)	Maximum EIRP (dBm)	EIRP Limit (dBm)
QPSK	19.02	19.23	16.12	16.33	33.01
16QAM	18.81	19.21	15.91	16.31	33.01
64QAM	18.85	19.19	15.95	16.29	33.01

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

7.1.6 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	21.97	21.86	21.75
	1	2	21.83	21.75	21.84
	1	5	21.76	21.55	21.84
	3	0	21.79	21.76	21.76
	3	1	21.85	21.51	21.59
	3	3	21.78	21.61	21.68
	6	0	21.86	21.57	21.7
16QAM	1	0	21.9	21.72	21.88
	1	2	21.89	21.65	21.88
	1	5	21.87	21.67	21.68
	3	0	21.54	21.29	21.46
	3	1	21.45	21.43	21.38
	3	3	21.65	21.47	21.46
	6	0	21.56	21.26	21.4
64QAM	1	0	21.8	21.63	21.72
	1	2	21.75	21.71	21.76
	1	5	21.72	21.48	21.52
	3	0	20.62	20.41	20.41
	3	1	20.67	20.47	20.55
	3	3	20.61	20.38	20.51
	6	0	20.66	20.64	20.63

Output Power					
Modulation	Minimum Cond. Power (dBm)	Maximum Cond. Power (dBm)	Minimum ERP (dBm)	Maximum ERP (dBm)	ERP Limit (dBm)
QPSK	21.51	21.97	15.96	16.42	38.45
16QAM	21.26	21.90	15.71	16.35	38.45
64QAM	20.38	21.80	14.83	16.25	38.45

Note: ERP (dBm) = Cond. Power (dBm) + Antenna Gain (dBi) + Array Gain (if applicable)-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	21.96	21.86	21.84
	1	7	21.8	21.8	21.85
	1	14	21.71	21.6	21.84
	8	0	21.9	21.81	21.9
	8	3	21.79	21.65	21.62
	8	7	21.78	21.68	21.71
	15	0	21.91	21.67	21.7
16QAM	1	0	21.87	21.81	21.76
	1	7	21.95	21.65	21.74
	1	14	21.74	21.6	21.72
	8	0	21.63	21.41	21.48
	8	3	21.52	21.46	21.41
	8	7	21.71	21.38	21.48
	15	0	21.49	21.24	21.48
64QAM	1	0	21.79	21.51	21.7
	1	7	21.72	21.64	21.76
	1	14	21.64	21.49	21.55
	8	0	20.52	20.36	20.52
	8	3	20.63	20.51	20.46
	8	7	20.6	20.34	20.56
	15	0	20.7	20.73	20.68

Output Power					
Modulation	Minimum Cond. Power (dBm)	Maximum Cond. Power (dBm)	Minimum ERP (dBm)	Maximum ERP (dBm)	ERP Limit (dBm)
QPSK	21.60	21.96	16.05	16.41	38.45
16QAM	21.24	21.95	15.69	16.40	38.45
64QAM	20.34	21.79	14.79	16.24	38.45

Note: ERP (dBm) = Cond. Power (dBm) + Antenna Gain (dBi) + Array Gain (if applicable)-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	22.01	21.95	21.92
	1	12	21.94	21.8	21.9
	1	24	21.86	21.7	21.86
	12	0	21.91	21.91	21.95
	12	6	21.88	21.66	21.74
	12	13	21.93	21.69	21.74
	25	0	21.97	21.67	21.85
16QAM	1	0	22.01	21.81	21.91
	1	12	21.98	21.73	21.88
	1	24	21.89	21.73	21.83
	12	0	21.65	21.44	21.61
	12	6	21.6	21.52	21.5
	12	13	21.72	21.48	21.51
	25	0	21.62	21.39	21.48
64QAM	1	0	21.87	21.66	21.78
	1	12	21.83	21.76	21.86
	1	24	21.76	21.56	21.65
	12	0	20.66	20.45	20.53
	12	6	20.69	20.53	20.6
	12	13	20.71	20.46	20.61
	25	0	20.79	20.73	20.73

Output Power					
Modulation	Minimum Cond. Power (dBm)	Maximum Cond. Power (dBm)	Minimum ERP (dBm)	Maximum ERP (dBm)	ERP Limit (dBm)
QPSK	21.66	22.01	16.11	16.46	38.45
16QAM	21.39	22.01	15.84	16.46	38.45
64QAM	20.45	21.87	14.90	16.32	38.45

Note: ERP (dBm) = Cond. Power (dBm) + Antenna Gain (dBi) + Array Gain (if applicable)-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	22.08	22.02	22.06
	1	24	22.03	21.85	21.95
	1	49	22.01	21.79	21.93
	25	0	22.05	21.96	22.01
	25	12	22.03	21.78	21.89
	25	25	21.99	21.81	21.88
	50	0	22.02	21.82	21.91
16QAM	1	0	22.07	21.89	22.02
	1	24	22.06	21.88	22.01
	1	49	22.03	21.85	21.91
	25	0	21.78	21.53	21.66
	25	12	21.75	21.57	21.62
	25	25	21.77	21.58	21.65
	50	0	21.73	21.49	21.59
64QAM	1	0	21.98	21.81	21.92
	1	24	21.95	21.82	21.92
	1	49	21.83	21.61	21.73
	25	0	20.76	20.53	20.67
	25	12	20.83	20.63	20.71
	25	25	20.81	20.55	20.67
	50	0	20.89	20.79	20.85

Output Power					
Modulation	Minimum Cond. Power (dBm)	Maximum Cond. Power (dBm)	Minimum ERP (dBm)	Maximum ERP (dBm)	ERP Limit (dBm)
QPSK	21.78	22.08	16.23	16.53	38.45
16QAM	21.49	22.07	15.94	16.52	38.45
64QAM	20.53	21.98	14.98	16.43	38.45

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

7.1.7 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	20.91	20.93	20.81
	1	12	20.85	20.81	20.68
	1	24	20.72	20.79	20.53
	12	0	20.91	20.76	20.43
	12	6	20.76	20.63	20.61
	12	13	20.92	20.82	20.45
	25	0	20.8	20.79	20.63
16QAM	1	0	20.99	20.94	20.86
	1	12	20.82	20.82	20.81
	1	24	20.86	20.91	20.79
	12	0	20.54	20.42	20.34
	12	6	20.42	20.31	20.39
	12	13	20.34	20.35	20.35
	25	0	20.52	20.42	20.33
64QAM	1	0	20.8	20.78	20.57
	1	12	20.7	20.76	20.58
	1	24	20.75	20.47	20.48
	12	0	20.33	20.37	20.32
	12	6	20.4	20.31	20.35
	12	13	20.35	20.32	20.31
	25	0	20.31	20.35	20.33

Output Power					
Modulation	Minimum Cond. Power (dBm)	Maximum Cond. Power (dBm)	Minimum EIRP (dBm)	Maximum EIRP (dBm)	EIRP Limit (dBm)
QPSK	20.43	20.93	18.83	19.33	33.01
16QAM	20.31	20.99	18.71	19.39	33.01
64QAM	20.31	20.80	18.71	19.20	33.01

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	21.01	20.95	20.96
	1	24	20.79	20.78	20.69
	1	49	20.82	20.79	20.57
	25	0	20.82	20.65	20.52
	25	12	20.84	20.75	20.68
	25	25	20.88	20.81	20.58
	50	0	20.91	20.79	20.64
16QAM	1	0	20.85	20.95	20.92
	1	24	20.81	20.86	20.79
	1	49	20.92	20.92	20.79
	25	0	20.56	20.32	20.31
	25	12	20.41	20.35	20.32
	25	25	20.39	20.33	20.35
	50	0	20.48	20.41	20.34
64QAM	1	0	20.79	20.72	20.63
	1	24	20.81	20.76	20.54
	1	49	20.67	20.49	20.44
	25	0	20.41	20.35	20.35
	25	12	20.36	20.33	20.38
	25	25	20.41	20.35	20.32
	50	0	20.31	20.32	20.33

Output Power					
Modulation	Minimum Cond. Power (dBm)	Maximum Cond. Power (dBm)	Minimum EIRP (dBm)	Maximum EIRP (dBm)	EIRP Limit (dBm)
QPSK	20.52	21.01	18.92	19.41	33.01
16QAM	20.31	20.95	18.71	19.35	33.01
64QAM	20.31	20.81	18.71	19.21	33.01

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	21.01	21.03	20.96
	1	37	20.93	20.81	20.73
	1	74	20.87	20.81	20.65
	36	0	20.93	20.79	20.67
	36	19	20.85	20.78	20.69
	36	39	20.93	20.84	20.68
	75	0	20.91	20.9	20.74
16QAM	1	0	21	20.97	20.92
	1	37	20.95	20.9	20.81
	1	74	20.98	20.94	20.9
	36	0	20.57	20.44	20.36
	36	19	20.56	20.37	20.32
	36	39	20.47	20.38	20.35
	75	0	20.58	20.55	20.38
64QAM	1	0	20.91	20.8	20.7
	1	37	20.81	20.77	20.63
	1	74	20.75	20.62	20.52
	36	0	20.45	20.39	20.33
	36	19	20.4	20.39	20.36
	36	39	20.43	20.33	20.39
	75	0	20.38	20.34	20.37

Output Power					
Modulation	Minimum Cond. Power (dBm)	Maximum Cond. Power (dBm)	Minimum EIRP (dBm)	Maximum EIRP (dBm)	EIRP Limit (dBm)
QPSK	20.65	21.03	19.05	19.43	33.01
16QAM	20.32	21.00	18.72	19.40	33.01
64QAM	20.33	20.91	18.73	19.31	33.01

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	21.15	21.08	21.05
	1	50	21.03	20.95	20.88
	1	99	20.98	20.89	20.79
	50	0	20.99	20.93	20.78
	50	25	20.95	20.89	20.81
	50	50	20.98	20.91	20.77
	100	0	21.03	20.95	20.82
16QAM	1	0	21.13	21.05	20.97
	1	50	21.09	20.96	20.86
	1	99	21.11	21.06	20.95
	50	0	20.65	20.53	20.43
	50	25	20.63	20.51	20.39
	50	50	20.62	20.52	20.42
	100	0	20.71	20.65	20.51
64QAM	1	0	20.98	20.91	20.79
	1	50	20.95	20.82	20.75
	1	99	20.81	20.67	20.61
	50	0	20.51	20.46	20.35
	50	25	20.55	20.51	20.41
	50	50	20.52	20.42	20.33
	100	0	20.53	20.43	20.36

Output Power					
Modulation	Minimum Cond. Power (dBm)	Maximum Cond. Power (dBm)	Minimum EIRP (dBm)	Maximum EIRP (dBm)	EIRP Limit (dBm)
QPSK	20.77	21.15	19.17	19.55	33.01
16QAM	20.39	21.13	18.79	19.53	33.01
64QAM	20.33	20.98	18.73	19.38	33.01

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

7.1.8 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	23.57	23.59	23.61
	1	2	23.6	23.6	23.12
	1	5	23.38	23.55	23.46
	3	0	22.42	22.54	22.27
	3	1	22.4	22.49	22.29
	3	3	22.34	22.46	22.24
	6	0	22.49	22.53	22.39
16QAM	1	0	22.7	22.87	22.74
	1	2	22.7	22.92	22.72
	1	5	22.69	22.79	22.71
	3	0	21.41	21.54	21.27
	3	1	21.53	21.58	21.58
	3	3	21.48	21.65	21.4
	6	0	21.44	21.64	21.47
64QAM	1	0	21.84	21.76	21.73
	1	2	21.79	21.85	21.68
	1	5	21.66	21.66	21.57
	3	0	20.48	20.55	20.54
	3	1	20.62	20.64	20.62
	3	3	20.38	20.59	20.4
	6	0	20.44	20.55	20.47

Output Power					
Modulation	Minimum Cond. Power (dBm)	Maximum Cond. Power (dBm)	Minimum ERP (dBm)	Maximum ERP (dBm)	ERP Limit (dBm)
QPSK	22.24	23.61	14.49	15.86	34.77
16QAM	21.27	22.92	13.52	15.17	34.77
64QAM	20.38	21.85	12.63	14.10	34.77

Note: ERP (dBm) = Cond. Power (dBm) + Antenna Gain (dBi) + Array Gain (if applicable)-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	23.63	23.6	23.61
	1	7	23.57	23.66	23.17
	1	14	23.46	23.43	23.39
	8	0	22.41	22.5	22.4
	8	3	22.36	22.53	22.31
	8	7	22.39	22.51	22.36
	15	0	22.53	22.53	22.29
16QAM	1	0	22.75	22.81	22.69
	1	7	22.72	22.84	22.75
	1	14	22.67	22.87	22.7
	8	0	21.43	21.48	21.39
	8	3	21.54	21.54	21.52
	8	7	21.56	21.65	21.54
	15	0	21.54	21.66	21.43
64QAM	1	0	21.89	21.85	21.79
	1	7	21.73	21.81	21.69
	1	14	21.68	21.77	21.59
	8	0	20.59	20.65	20.44
	8	3	20.62	20.7	20.47
	8	7	20.43	20.52	20.5
	15	0	20.45	20.51	20.51

Output Power					
Modulation	Minimum Cond. Power (dBm)	Maximum Cond. Power (dBm)	Minimum ERP (dBm)	Maximum ERP (dBm)	ERP Limit (dBm)
QPSK	22.29	23.66	14.54	15.91	34.77
16QAM	21.39	22.87	13.64	15.12	34.77
64QAM	20.43	21.89	12.68	14.14	34.77

Note: ERP (dBm) = Cond. Power (dBm) + Antenna Gain (dBi) + Array Gain (if applicable)-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	23.65	23.71	23.66
	1	12	23.64	23.75	23.24
	1	24	23.49	23.56	23.5
	12	0	22.52	22.6	22.4
	12	6	22.48	22.58	22.41
	12	13	22.39	22.58	22.38
	25	0	22.55	22.64	22.44
16QAM	1	0	22.85	22.96	22.8
	1	12	22.78	22.92	22.75
	1	24	22.82	22.9	22.76
	12	0	21.43	21.61	21.42
	12	6	21.65	21.66	21.61
	12	13	21.59	21.69	21.54
	25	0	21.59	21.68	21.5
64QAM	1	0	21.91	21.88	21.8
	1	12	21.82	21.89	21.8
	1	24	21.74	21.8	21.65
	12	0	20.61	20.69	20.55
	12	6	20.66	20.71	20.62
	12	13	20.51	20.63	20.51
	25	0	20.58	20.59	20.56

Output Power					
Modulation	Minimum Cond. Power (dBm)	Maximum Cond. Power (dBm)	Minimum ERP (dBm)	Maximum ERP (dBm)	ERP Limit (dBm)
QPSK	22.38	23.75	14.63	16.00	34.77
16QAM	21.42	22.96	13.67	15.21	34.77
64QAM	20.51	21.91	12.76	14.16	34.77

Note: ERP (dBm) = Cond. Power (dBm) + Antenna Gain (dBi) + Array Gain (if applicable)-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	23.75	23.81	23.69
	1	24	23.68	23.76	23.3
	1	49	23.55	23.65	23.52
	25	0	22.53	22.65	22.47
	25	12	22.52	22.61	22.43
	25	25	22.48	22.63	22.38
	50	0	22.55	22.73	22.48
16QAM	1	0	22.91	22.99	22.83
	1	24	22.88	22.98	22.78
	1	49	22.89	22.92	22.81
	25	0	21.53	21.63	21.46
	25	12	21.68	21.73	21.62
	25	25	21.61	21.71	21.58
	50	0	21.62	21.69	21.55
64QAM	1	0	21.93	21.98	21.86
	1	24	21.92	21.96	21.83
	1	49	21.78	21.87	21.68
	25	0	20.71	20.73	20.61
	25	12	20.72	20.76	20.72
	25	25	20.56	20.63	20.53
	50	0	20.63	20.69	20.61

Output Power					
Modulation	Minimum Cond. Power (dBm)	Maximum Cond. Power (dBm)	Minimum ERP (dBm)	Maximum ERP (dBm)	ERP Limit (dBm)
QPSK	22.38	23.81	14.63	16.06	34.77
16QAM	21.46	22.99	13.71	15.24	34.77
64QAM	20.53	21.98	12.78	14.23	34.77

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

7.1.9 LTE Band 17

LTE Band 17, Channel Bandwidth: 5 MHz

Modulation	RB Size	RB Offset	Measurement Conducted Power (dBm)		
			CH 23755	CH 23790	CH 23825
			706.5 MHz	710 MHz	713.5 MHz
QPSK	1	0	23.61	23.67	23.68
	1	12	23.61	23.65	23.66
	1	24	23.52	23.37	23.55
	12	0	22.58	22.54	22.68
	12	6	22.64	22.58	22.51
	12	13	22.6	22.49	22.68
	25	0	22.63	22.58	22.64
16QAM	1	0	22.85	22.82	22.85
	1	12	22.76	22.72	22.78
	1	24	22.76	22.77	22.92
	12	0	21.55	21.63	21.61
	12	6	21.67	21.53	21.77
	12	13	21.57	21.46	21.71
	25	0	21.57	21.5	21.67
64QAM	1	0	21.83	21.65	21.87
	1	12	21.71	21.77	21.91
	1	24	21.82	21.71	21.83
	12	0	20.64	20.57	20.61
	12	6	20.55	20.59	20.56
	12	13	20.64	20.61	20.69
	25	0	20.49	20.43	20.62

Output Power					
Modulation	Minimum Cond. Power (dBm)	Maximum Cond. Power (dBm)	Minimum ERP (dBm)	Maximum ERP (dBm)	ERP Limit (dBm)
QPSK	22.49	23.68	14.74	15.93	34.77
16QAM	21.46	22.92	13.71	15.17	34.77
64QAM	20.43	21.91	12.68	14.16	34.77

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

LTE Band 17, Channel Bandwidth: 10 MHz

Modulation	RB Size	RB Offset	Measurement Conducted Power (dBm)		
			CH 23780	CH 23790	CH 23800
			709 MHz	710 MHz	711 MHz
QPSK	1	0	23.81	23.79	23.85
	1	24	23.76	23.73	23.83
	1	49	23.63	23.56	23.69
	25	0	22.73	22.67	22.76
	25	12	22.75	22.71	22.75
	25	25	22.66	22.59	22.71
	50	0	22.69	22.69	22.77
16QAM	1	0	22.98	22.92	22.98
	1	24	22.95	22.85	22.96
	1	49	22.92	22.83	22.95
	25	0	21.77	21.77	21.83
	25	12	21.73	21.63	21.79
	25	25	21.71	21.61	21.81
	50	0	21.72	21.71	21.72
64QAM	1	0	21.93	21.86	21.96
	1	24	21.92	21.85	21.99
	1	49	21.87	21.77	21.97
	25	0	20.72	20.62	20.78
	25	12	20.71	20.71	20.79
	25	25	20.81	20.76	20.83
	50	0	20.69	20.62	20.77

Output Power					
Modulation	Minimum Cond. Power (dBm)	Maximum Cond. Power (dBm)	Minimum ERP (dBm)	Maximum ERP (dBm)	ERP Limit (dBm)
QPSK	22.59	23.85	14.84	16.1	34.77
16QAM	21.61	22.98	13.86	15.23	34.77
64QAM	20.62	21.99	12.87	14.24	34.77

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

7.1.10 LTE Band 38

LTE Band 38, Channel Bandwidth: 5 MHz

Modulation	RB Size	RB Offset	Measurement Conducted Power (dBm)		
			CH 37775	CH 38000	CH 38225
			2572.5 MHz	2595 MHz	2617.5 MHz
QPSK	1	0	21.69	21.3	21.19
	1	12	21.58	21.25	21.16
	1	24	21.21	21.33	21.01
	12	0	21.52	21.38	21.1
	12	6	21.37	21.34	21.05
	12	13	21.32	21.31	21.19
	25	0	21.44	21.34	21.14
16QAM	1	0	21.43	21.27	21.37
	1	12	21.38	21.31	21.24
	1	24	21.06	21	21.01
	12	0	20.6	20.5	20.41
	12	6	20.41	20.42	20.39
	12	13	20.39	20.35	20.22
	25	0	20.54	20.36	20.28
64QAM	1	0	20.49	20.32	20.25
	1	12	20.64	20.51	20.51
	1	24	20.29	20.07	19.94
	12	0	19.51	19.45	19.22
	12	6	19.39	19.27	19.28
	12	13	19.28	19.35	19.25
	25	0	19.41	19.3	19.28

Output Power					
Modulation	Minimum Cond. Power (dBm)	Maximum Cond. Power (dBm)	Minimum EIRP (dBm)	Maximum EIRP (dBm)	EIRP Limit (dBm)
QPSK	21.01	21.69	19.31	19.99	33.01
16QAM	20.22	21.43	18.52	19.73	33.01
64QAM	19.22	20.64	17.52	18.94	33.01

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

LTE Band 38, Channel Bandwidth: 10 MHz

Modulation	RB Size	RB Offset	Measurement Conducted Power (dBm)		
			CH 37800	CH 38000	CH 38200
			2575 MHz	2595 MHz	2615 MHz
QPSK	1	0	21.68	21.38	21.33
	1	24	21.49	21.34	21.23
	1	49	21.16	21.26	21.14
	25	0	21.5	21.4	21.23
	25	12	21.43	21.2	21.08
	25	25	21.42	21.18	21.3
	50	0	21.48	21.32	21.28
16QAM	1	0	21.4	21.29	21.24
	1	24	21.44	21.29	21.23
	1	49	21.21	21	20.93
	25	0	20.54	20.47	20.44
	25	12	20.38	20.34	20.44
	25	25	20.39	20.31	20.28
	50	0	20.54	20.42	20.23
64QAM	1	0	20.55	20.27	20.35
	1	24	20.51	20.61	20.53
	1	49	20.25	20.04	19.94
	25	0	19.47	19.39	19.31
	25	12	19.47	19.28	19.19
	25	25	19.26	19.27	19.36
	50	0	19.42	19.27	19.23

Output Power					
Modulation	Minimum Cond. Power (dBm)	Maximum Cond. Power (dBm)	Minimum EIRP (dBm)	Maximum EIRP (dBm)	EIRP Limit (dBm)
QPSK	21.08	21.68	19.38	19.98	33.01
16QAM	20.23	21.44	18.53	19.74	33.01
64QAM	19.19	20.61	17.49	18.91	33.01

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

LTE Band 38, Channel Bandwidth: 15 MHz

Modulation	RB Size	RB Offset	Measurement Conducted Power (dBm)		
			CH 37825	CH 38000	CH 38175
			2577.5 MHz	2595 MHz	2612.5 MHz
QPSK	1	0	21.77	21.41	21.37
	1	37	21.63	21.36	21.32
	1	74	21.26	21.33	21.22
	36	0	21.53	21.43	21.33
	36	19	21.52	21.35	21.21
	36	39	21.44	21.31	21.32
	75	0	21.49	21.41	21.33
16QAM	1	0	21.55	21.38	21.37
	1	37	21.51	21.31	21.29
	1	74	21.21	21.08	21.07
	36	0	20.65	20.51	20.49
	36	19	20.45	20.45	20.45
	36	39	20.43	20.36	20.34
	75	0	20.57	20.42	20.36
64QAM	1	0	20.58	20.4	20.36
	1	37	20.64	20.63	20.61
	1	74	20.38	20.19	20.09
	36	0	19.51	19.48	19.37
	36	19	19.47	19.37	19.28
	36	39	19.38	19.37	19.37
	75	0	19.49	19.39	19.31

Output Power					
Modulation	Minimum Cond. Power (dBm)	Maximum Cond. Power (dBm)	Minimum EIRP (dBm)	Maximum EIRP (dBm)	EIRP Limit (dBm)
QPSK	21.21	21.77	19.51	20.07	33.01
16QAM	20.34	21.55	18.64	19.85	33.01
64QAM	19.28	20.64	17.58	18.94	33.01

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

LTE Band 38, Channel Bandwidth: 20 MHz

Modulation	RB Size	RB Offset	Measurement Conducted Power (dBm)		
			CH 37850	CH 38000	CH 38150
			2580 MHz	2595 MHz	2610 MHz
QPSK	1	0	21.78	21.46	21.43
	1	50	21.63	21.45	21.37
	1	99	21.35	21.33	21.25
	50	0	21.62	21.47	21.41
	50	25	21.53	21.41	21.31
	50	50	21.46	21.39	21.36
	100	0	21.55	21.43	21.43
16QAM	1	0	21.61	21.43	21.39
	1	50	21.58	21.41	21.38
	1	99	21.23	21.18	21.15
	50	0	20.68	20.53	20.51
	50	25	20.53	20.5	20.49
	50	50	20.48	20.37	20.34
	100	0	20.57	20.45	20.36
64QAM	1	0	20.63	20.48	20.43
	1	50	20.71	20.67	20.63
	1	99	20.38	20.21	20.13
	50	0	19.58	19.55	19.46
	50	25	19.52	19.41	19.31
	50	50	19.48	19.43	19.41
	100	0	19.56	19.46	19.36

Output Power					
Modulation	Minimum Cond. Power (dBm)	Maximum Cond. Power (dBm)	Minimum EIRP (dBm)	Maximum EIRP (dBm)	EIRP Limit (dBm)
QPSK	21.25	21.78	19.55	20.08	33.01
16QAM	20.34	21.61	18.64	19.91	33.01
64QAM	19.31	20.71	17.61	19.01	33.01

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

7.1.11 LTE Band 41

LTE Band 41, Channel Bandwidth: 5 MHz

Modulation	RB Size	RB Offset	Measurement Conducted Power (dBm)		
			CH 39675	CH 40620	CH 41565
			2498.5 MHz	2593 MHz	2687.5 MHz
QPSK	1	0	21.4	22.13	22.16
	1	12	21.28	22.22	22.1
	1	24	21.12	21.86	21.78
	12	0	21.34	22.25	21.98
	12	6	21.43	22.16	21.98
	12	13	21.18	21.97	21.92
	25	0	21.31	22.21	22.18
16QAM	1	0	21.31	22.11	22.14
	1	12	21.24	22.2	22.09
	1	24	21.06	21.83	21.78
	12	0	21.34	22.18	22.04
	12	6	21.37	22.12	22
	12	13	21.18	21.87	21.85
	25	0	21.35	22.14	22.25
64QAM	1	0	21.34	22.11	22.16
	1	12	21.22	22.22	22.02
	1	24	21.07	21.89	21.73
	12	0	21.43	22.22	21.96
	12	6	21.36	22.16	21.95
	12	13	21.15	21.96	21.87
	25	0	21.35	22.15	22.19

Output Power					
Modulation	Minimum Cond. Power (dBm)	Maximum Cond. Power (dBm)	Minimum EIRP (dBm)	Maximum EIRP (dBm)	EIRP Limit (dBm)
QPSK	21.12	22.25	19.52	20.65	33.01
16QAM	21.06	22.25	19.46	20.65	33.01
64QAM	21.07	22.22	19.47	20.62	33.01

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

LTE Band 41, Channel Bandwidth: 10 MHz

Modulation	RB Size	RB Offset	Measurement Conducted Power (dBm)		
			CH 39700	CH 40620	CH 41540
			2501 MHz	2593 MHz	2685 MHz
QPSK	1	0	21.32	22.1	22.08
	1	24	21.23	22.25	22.07
	1	49	21.11	21.8	21.77
	25	0	21.43	22.23	21.98
	25	12	21.34	22.11	21.99
	25	25	21.18	21.91	21.83
	50	0	21.37	22.2	22.16
16QAM	1	0	21.39	22.15	22.1
	1	24	21.32	22.15	22.08
	1	49	21.13	21.84	21.82
	25	0	21.43	22.2	22.05
	25	12	21.43	22.16	21.94
	25	25	21.15	21.88	21.83
	50	0	21.34	22.2	22.24
64QAM	1	0	21.37	22.13	22.08
	1	24	21.24	22.19	22.12
	1	49	21.07	21.87	21.76
	25	0	21.42	22.15	22.03
	25	12	21.43	22.1	22.01
	25	25	21.16	21.91	21.84
	50	0	21.36	22.22	22.18

Output Power					
Modulation	Minimum Cond. Power (dBm)	Maximum Cond. Power (dBm)	Minimum EIRP (dBm)	Maximum EIRP (dBm)	EIRP Limit (dBm)
QPSK	21.11	22.25	19.51	20.65	33.01
16QAM	21.13	22.24	19.53	20.64	33.01
64QAM	21.07	22.22	19.47	20.62	33.01

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

LTE Band 41, Channel Bandwidth: 15 MHz

Modulation	RB Size	RB Offset	Measurement Conducted Power (dBm)		
			CH 39725	CH 40620	CH 41515
			2503.5 MHz	2593 MHz	2682.5 MHz
QPSK	1	0	21.4	22.16	22.17
	1	37	21.32	22.25	22.12
	1	74	21.15	21.9	21.83
	36	0	21.43	22.25	22.06
	36	19	21.43	22.2	22.04
	36	39	21.24	21.97	21.93
	75	0	21.38	22.24	22.26
16QAM	1	0	21.37	22.08	22.18
	1	37	21.35	22.21	22.12
	1	74	21.14	21.82	21.76
	36	0	21.25	22.14	22.11
	36	19	21.41	22.18	22.05
	36	39	21.14	22.03	21.95
	75	0	21.15	22.3	22.18
64QAM	1	0	21.32	22.12	22.21
	1	37	21.34	22.2	22.18
	1	74	21.01	21.83	21.76
	36	0	21.27	22.27	22.14
	36	19	21.28	22.15	22.09
	36	39	21.24	22.09	21.94
	75	0	21.21	22.33	22.27

Output Power					
Modulation	Minimum Cond. Power (dBm)	Maximum Cond. Power (dBm)	Minimum EIRP (dBm)	Maximum EIRP (dBm)	EIRP Limit (dBm)
QPSK	21.15	22.26	19.55	20.66	33.01
16QAM	21.14	22.30	19.54	20.70	33.01
64QAM	21.01	22.33	19.41	20.73	33.01

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

LTE Band 41, Channel Bandwidth: 20 MHz

Modulation	RB Size	RB Offset	Measurement Conducted Power (dBm)		
			CH 39750	CH 40620	CH 41490
			2506 MHz	2593 MHz	2680 MHz
QPSK	1	0	21.48	22.28	22.23
	1	50	21.37	22.27	22.22
	1	99	21.22	21.95	21.85
	50	0	21.46	22.28	22.17
	50	25	21.45	22.26	22.16
	50	50	21.31	22.08	22.03
	100	0	21.47	22.36	22.29
16QAM	1	0	21.45	22.17	22.06
	1	50	21.41	22.23	22.19
	1	99	21.17	21.88	21.86
	50	0	21.36	22.23	22.15
	50	25	21.43	22.21	22.13
	50	50	21.19	22.14	22.02
	100	0	21.21	22.37	22.31
64QAM	1	0	21.42	22.14	22.1
	1	50	21.41	22.26	22.22
	1	99	21.13	21.87	21.77
	50	0	21.37	22.29	22.25
	50	25	21.32	22.25	22.14
	50	50	21.29	22.15	22.12
	100	0	21.25	22.4	22.29

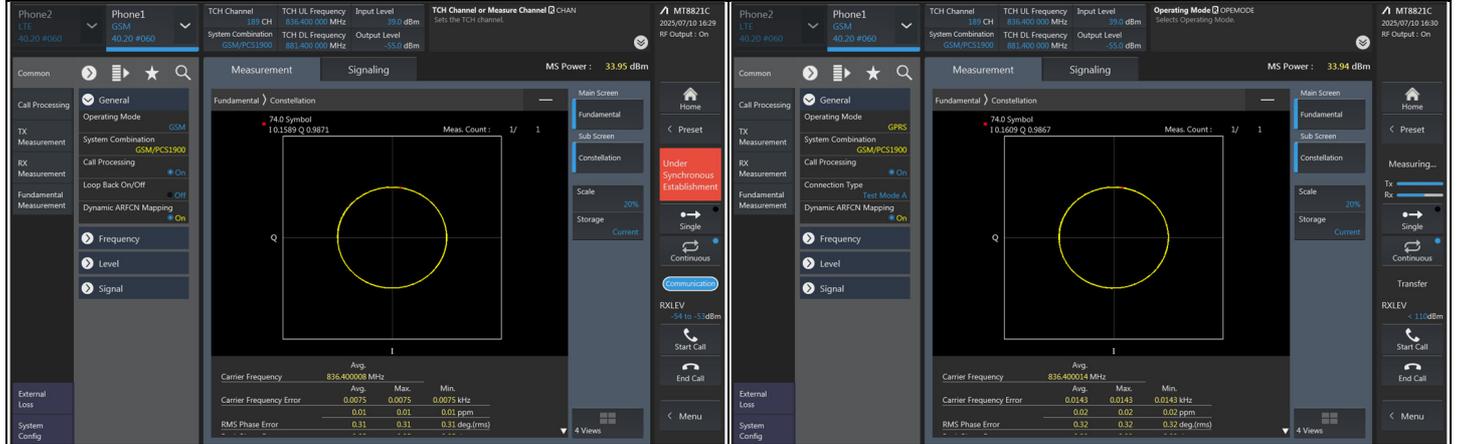
Output Power					
Modulation	Minimum Cond. Power (dBm)	Maximum Cond. Power (dBm)	Minimum EIRP (dBm)	Maximum EIRP (dBm)	EIRP Limit (dBm)
QPSK	21.22	22.36	19.62	20.76	33.01
16QAM	21.17	22.37	19.57	20.77	33.01
64QAM	21.13	22.4	19.53	20.8	33.01

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

7.2 Modulation Characteristics

Input Power:	3.89 Vdc	Environmental Conditions:	25°C, 65% RH	Tested By:	Noah Chang
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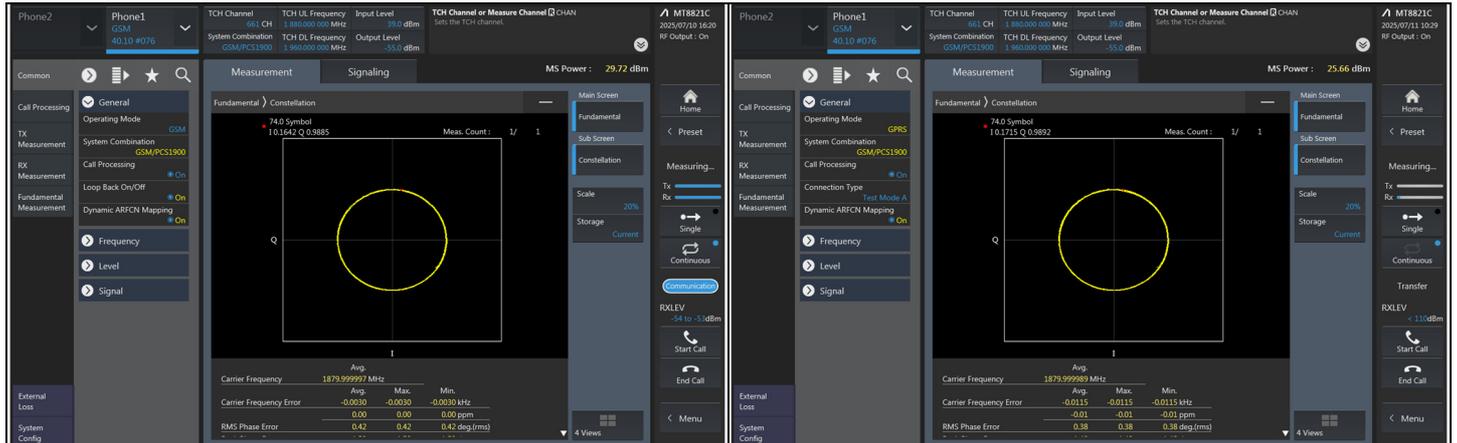
7.2.1 GSM 850



GSM CH 189 (836.4 MHz)

GPRS CH 189 (836.4 MHz)

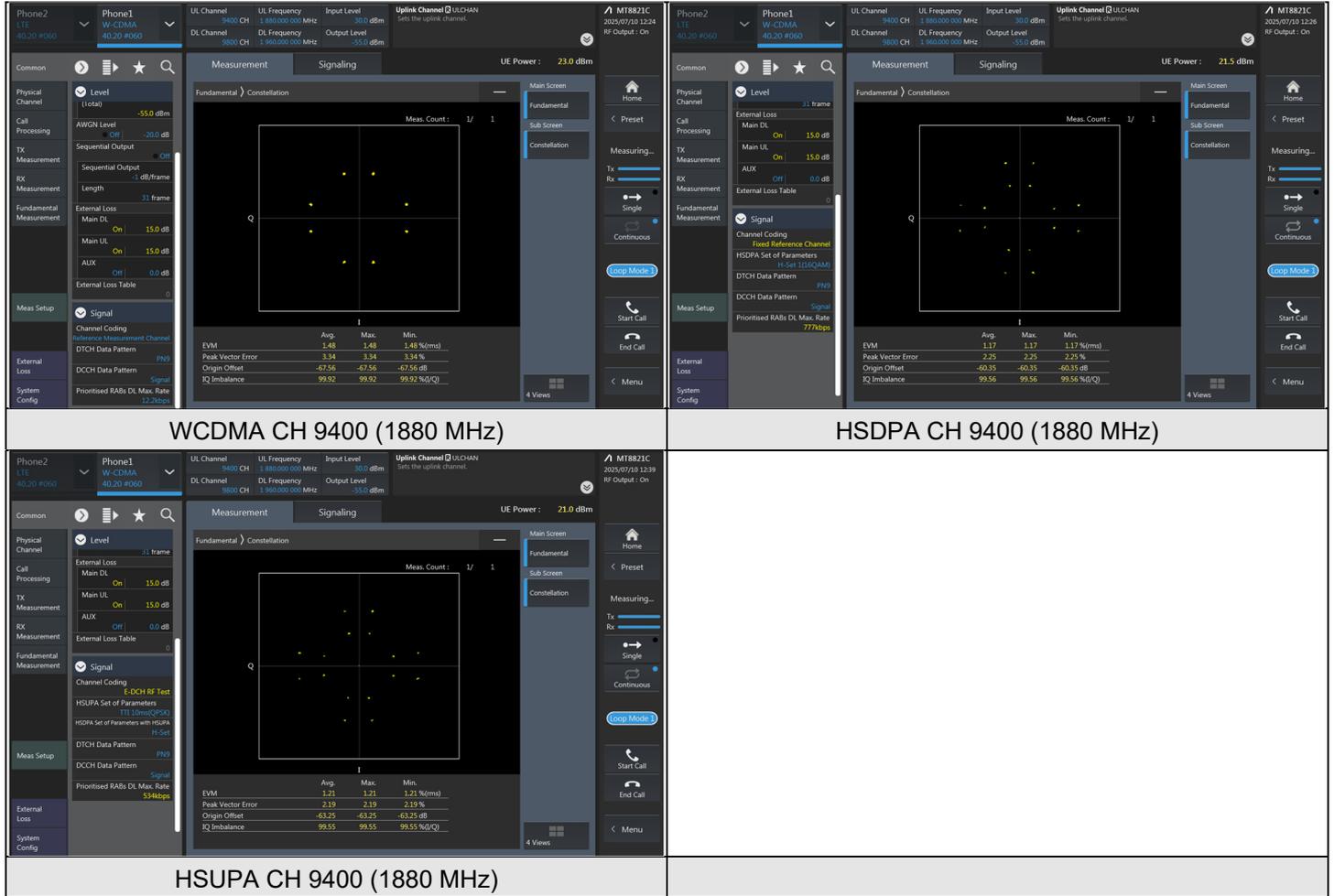
7.2.2 GSM 1900



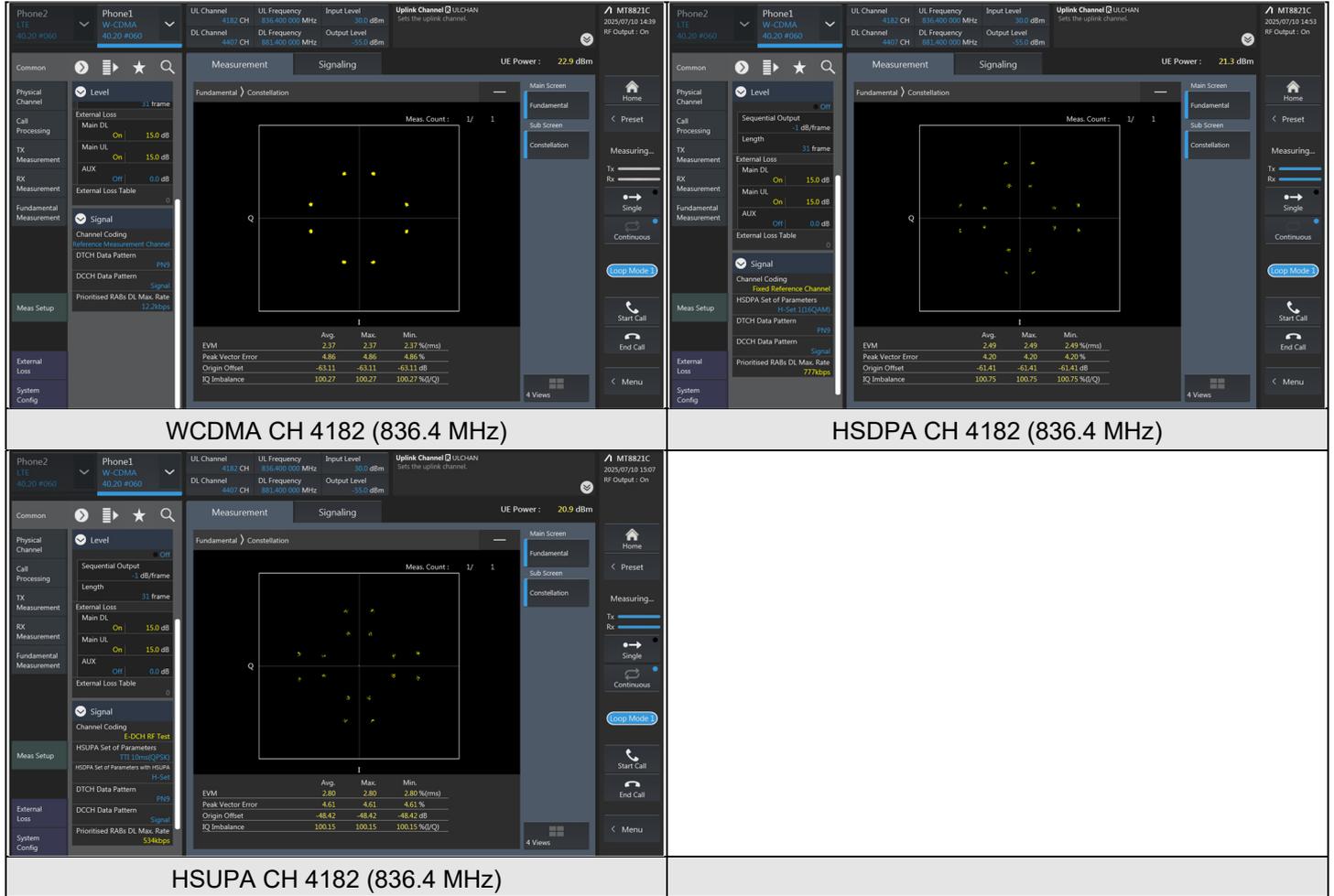
GSM CH 661 (1880 MHz)

GPRS CH 661 (1880 MHz)

7.2.3 WCDMA Band II

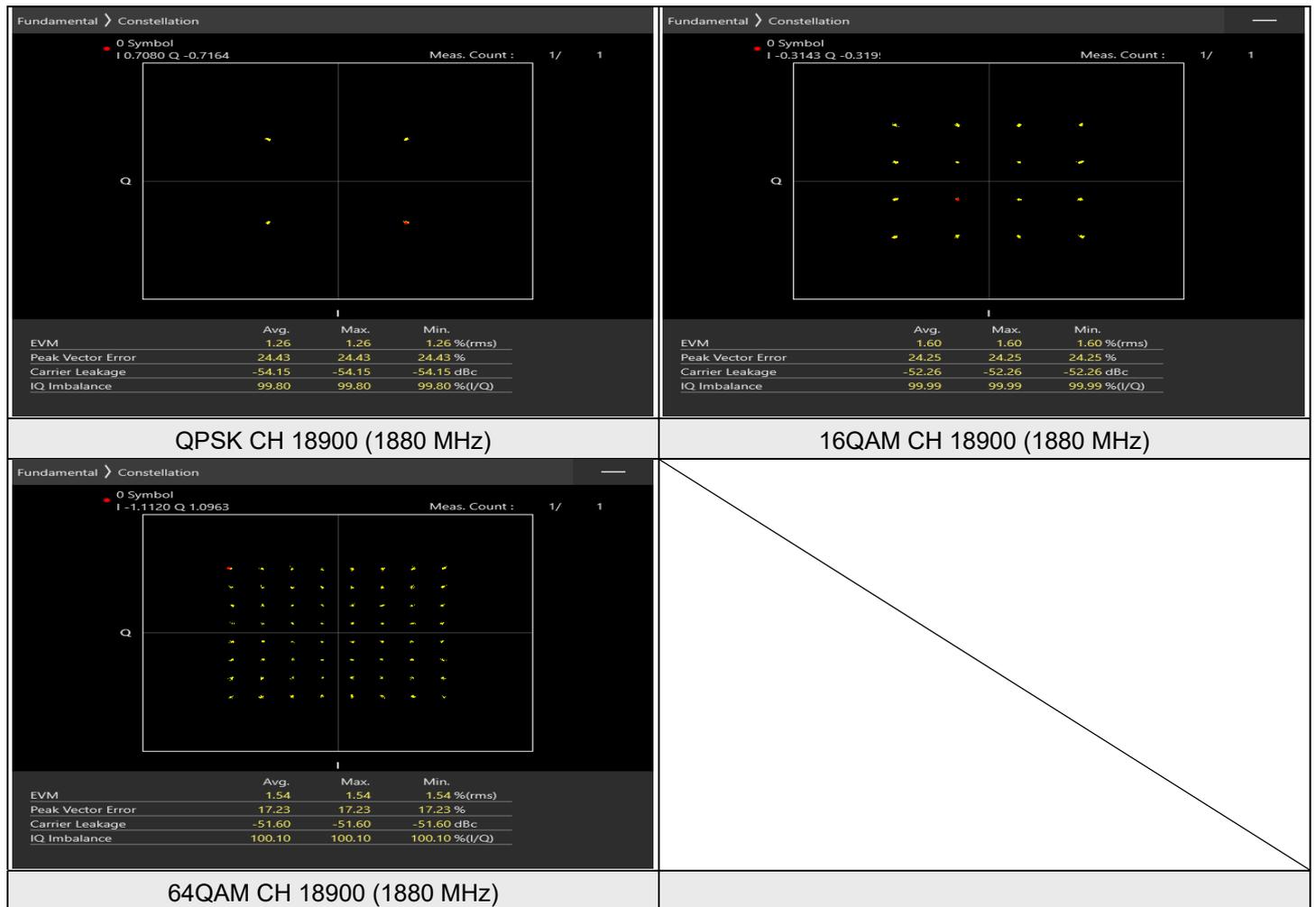


7.2.4 WCDMA Band V



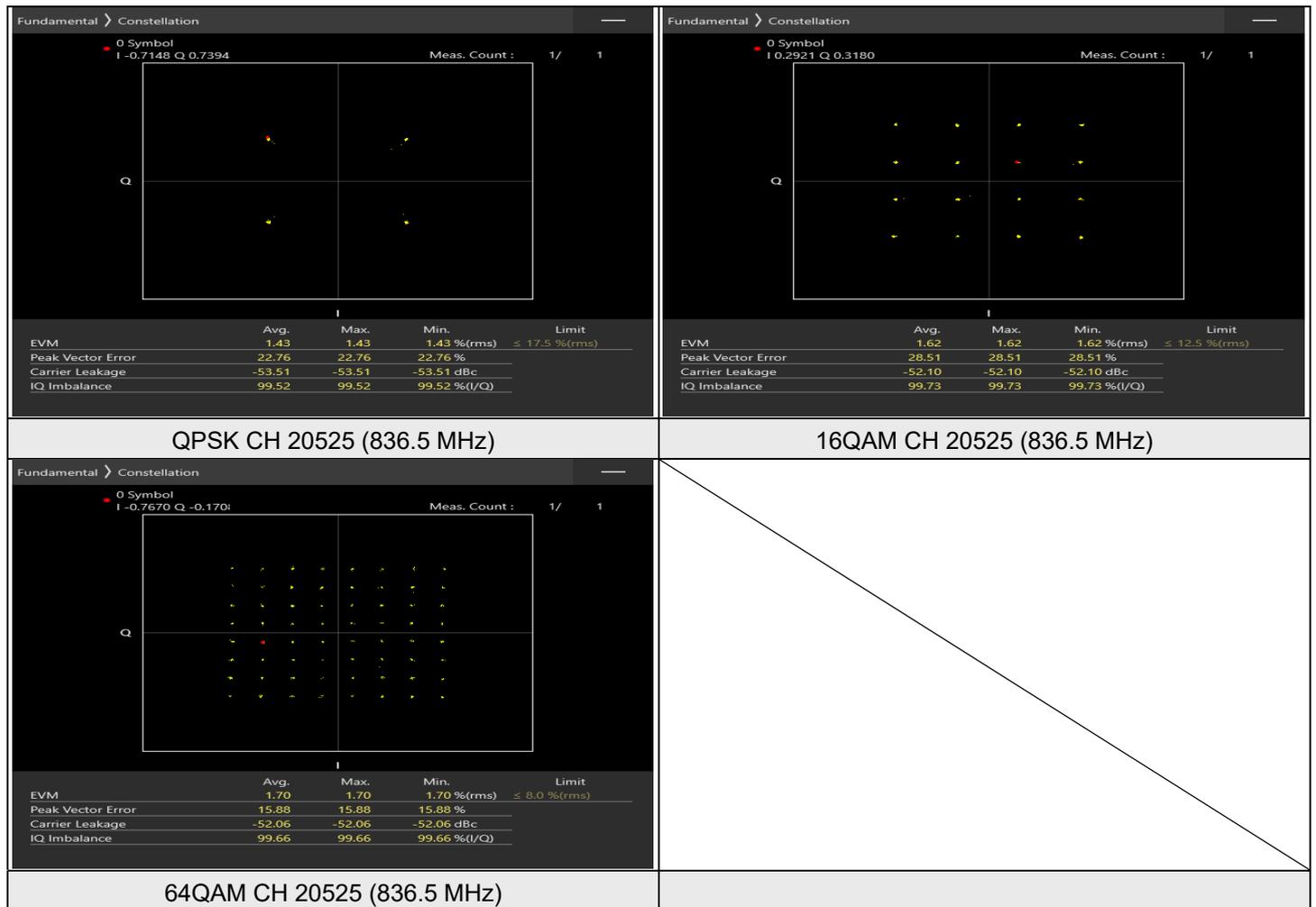
7.2.5 LTE Band 2

LTE Band 2, Channel Bandwidth: 20 MHz



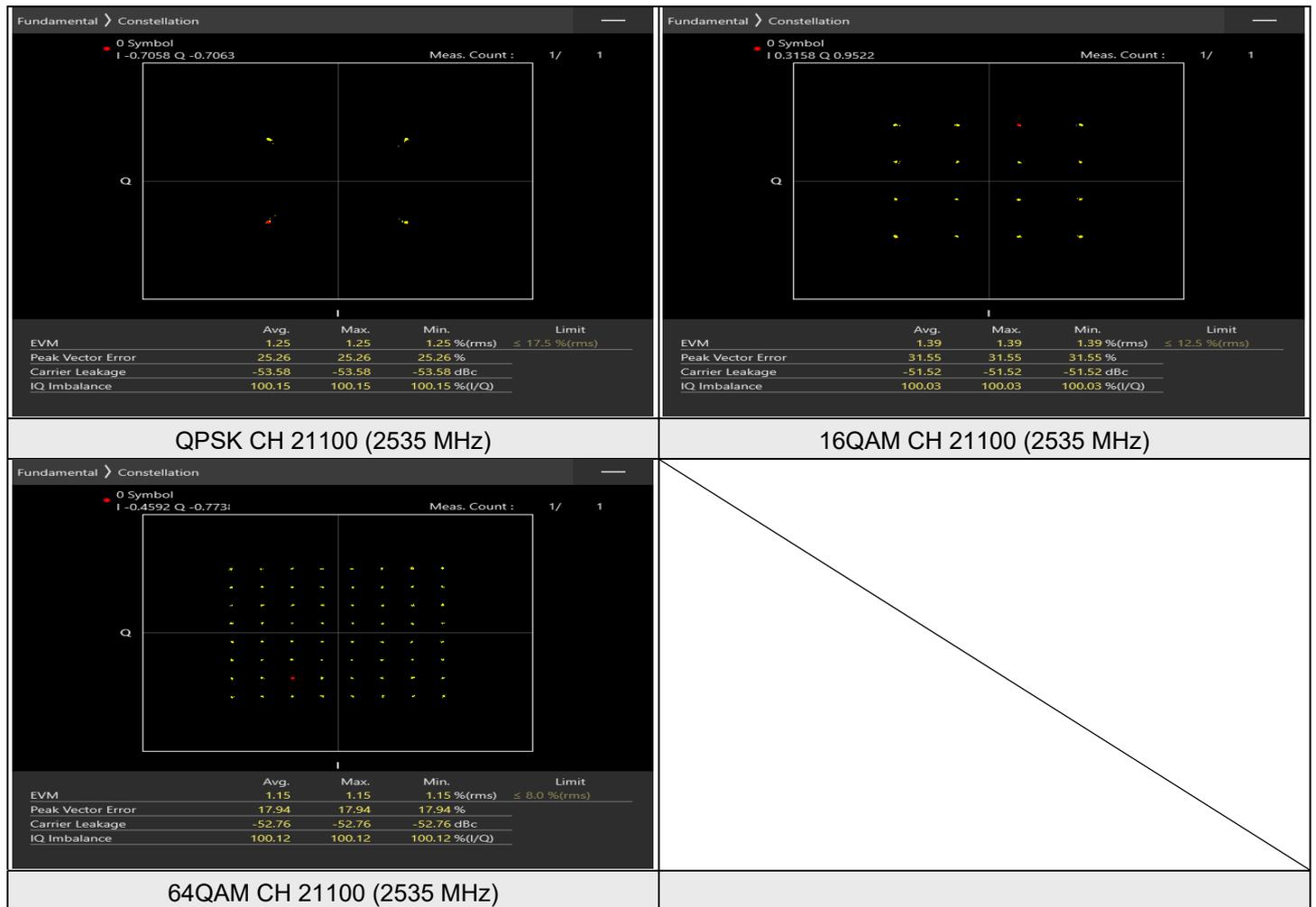
7.2.6 LTE Band 5

LTE Band 5, Channel Bandwidth: 10 MHz



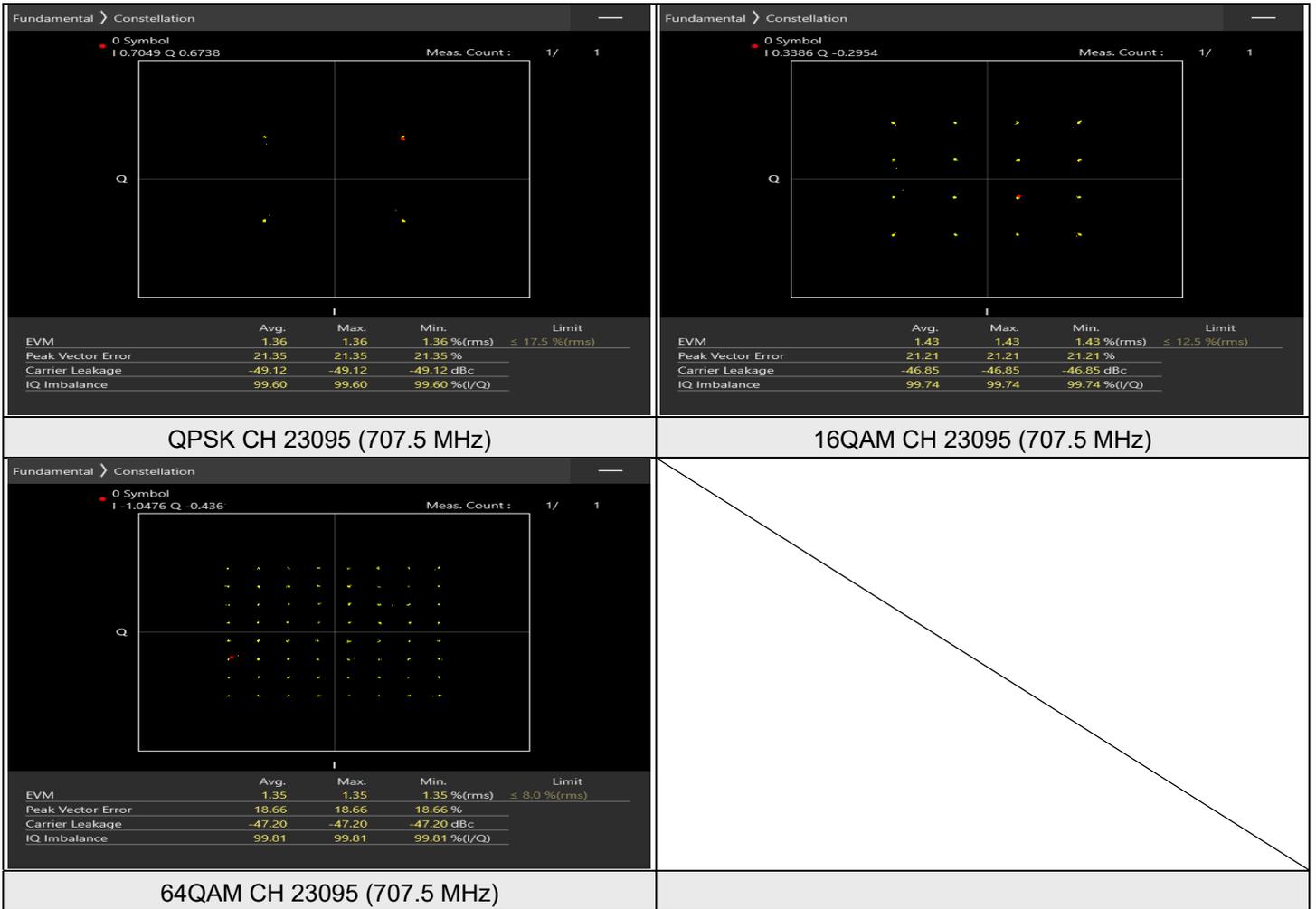
7.2.7 LTE Band 7

LTE Band 7, Channel Bandwidth: 20 MHz



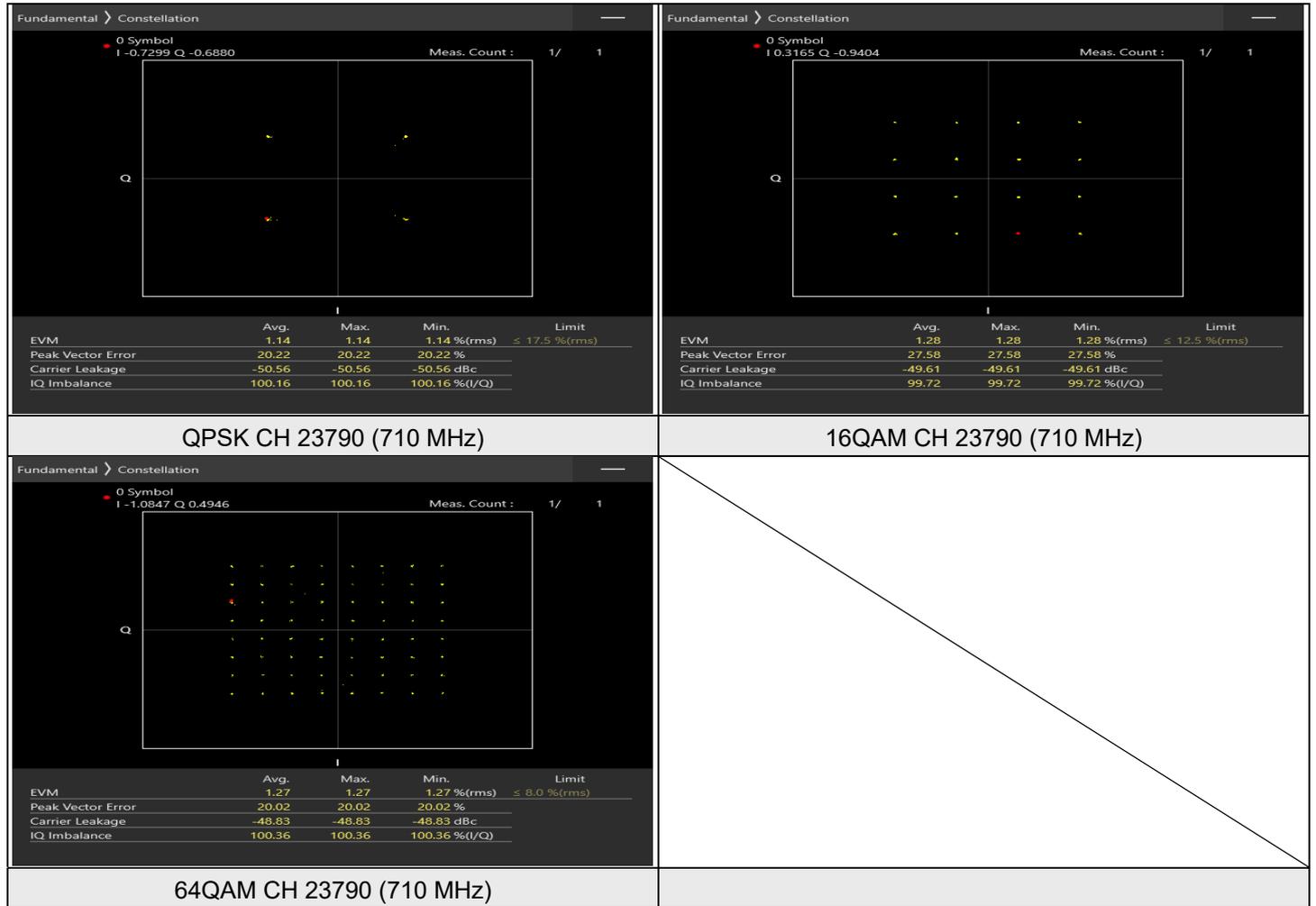
7.2.8 LTE Band 12

LTE Band 12, Channel Bandwidth: 10 MHz



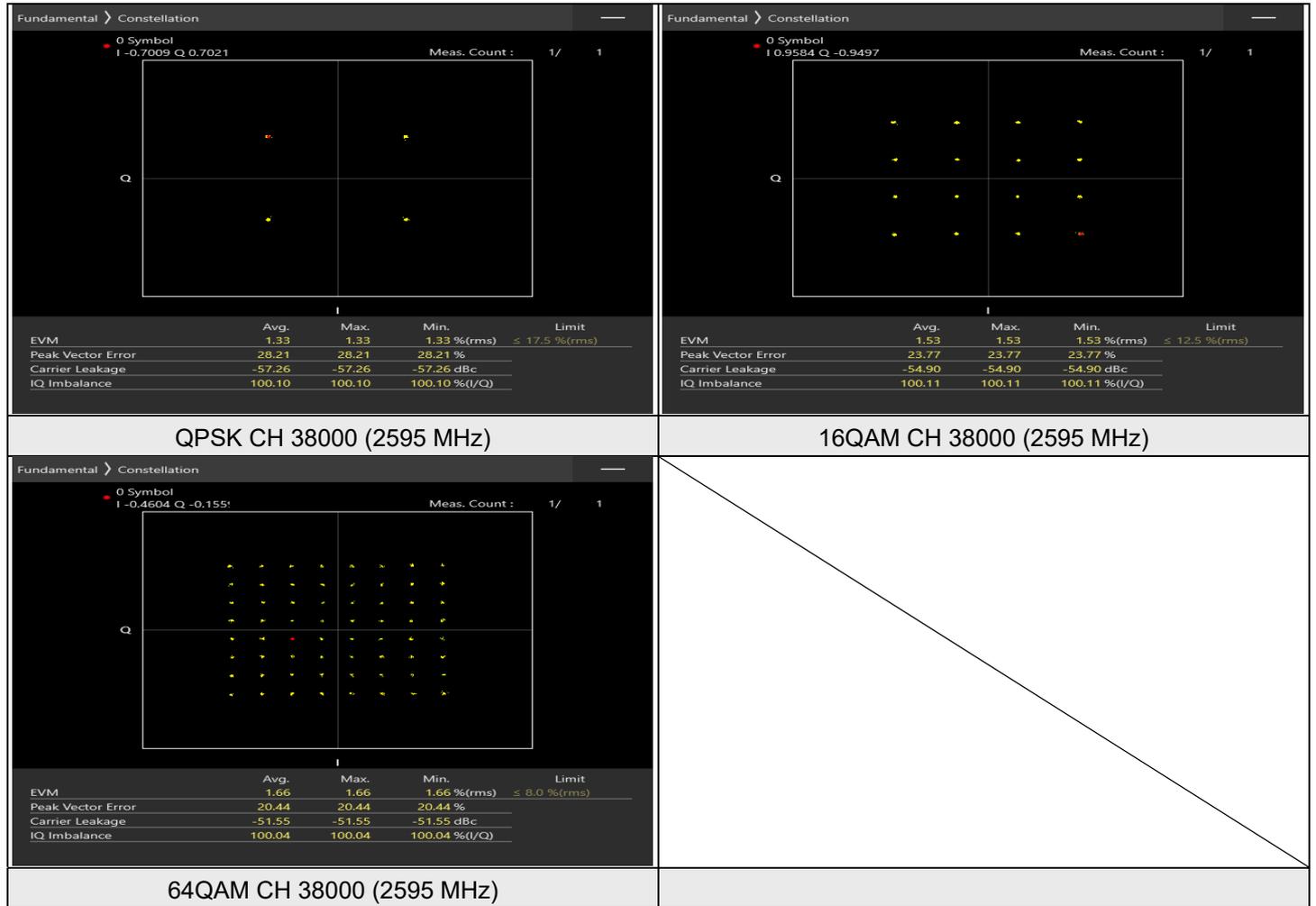
7.2.9 LTE Band 17

LTE Band 17, Channel Bandwidth: 10 MHz



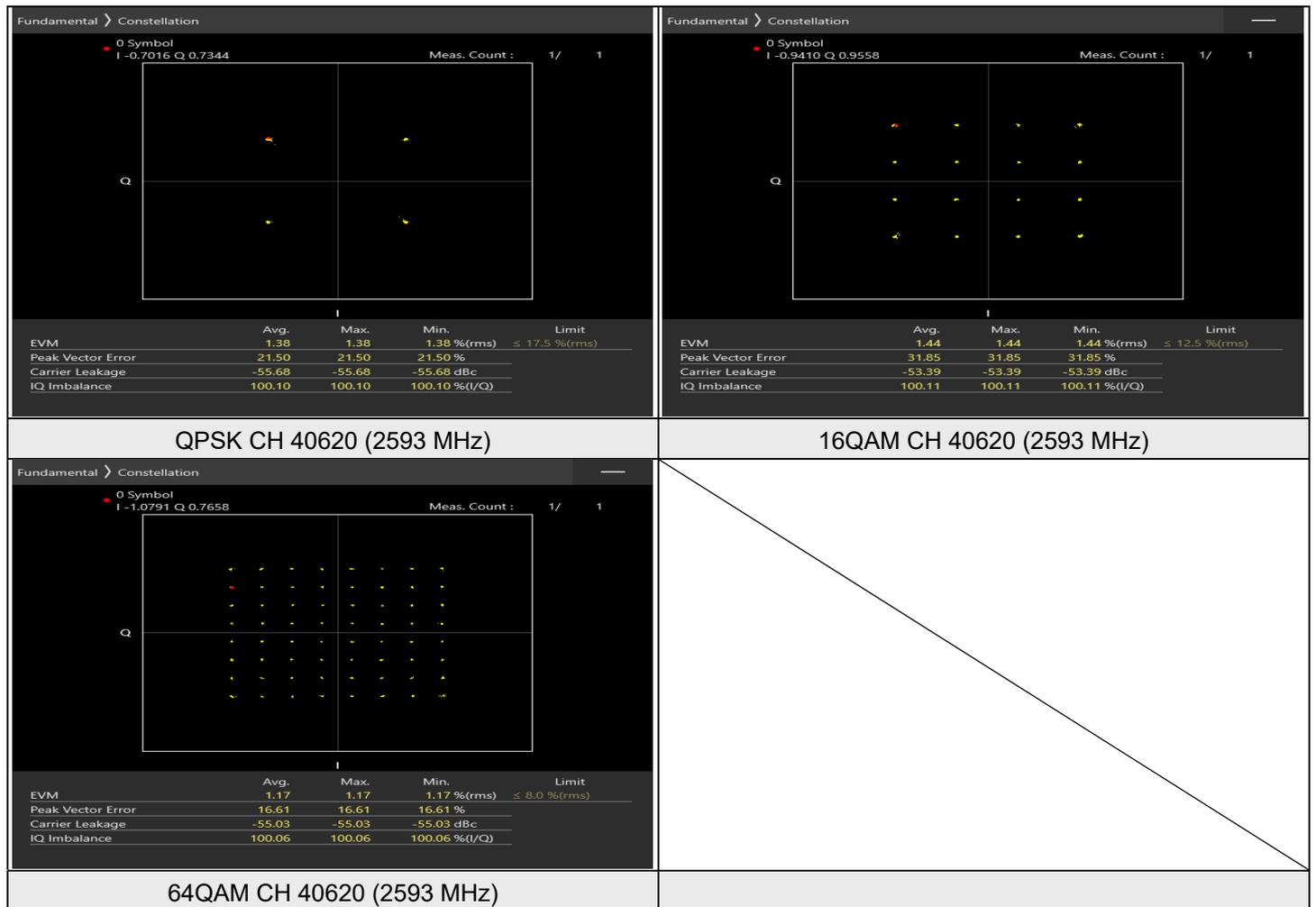
7.2.10 LTE Band 38

LTE Band 38, Channel Bandwidth: 20 MHz



7.2.11 LTE Band 41

LTE Band 41, Channel Bandwidth: 20 MHz



7.3 Peak to Average Ratio

Input Power:	3.89 Vdc	Environmental Conditions:	25°C, 65% RH	Tested By:	Noah Chang
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7.3.1 GSM 850

Modulation	Channel	Frequency (MHz)	Measurement Value(dB)	Limit (dB)	Result
GSM	128	824.2	2.67	13	Pass
GSM	189	836.4	2.66	13	Pass
GSM	251	848.8	2.78	13	Pass
GPRS	128	824.2	2.72	13	Pass
GPRS	189	836.4	2.71	13	Pass
GPRS	251	848.8	2.68	13	Pass

Spectrum Plot of Worst Value

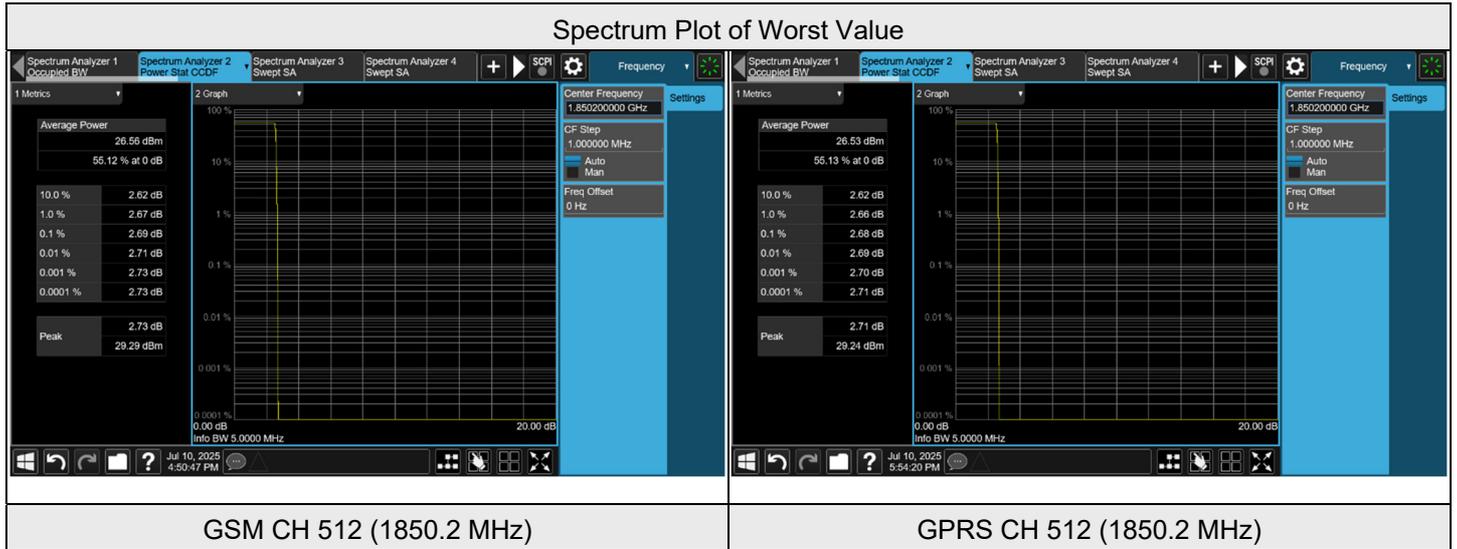


GSM CH 251 (848.8 MHz)

GPRS CH 128 (824.2 MHz)

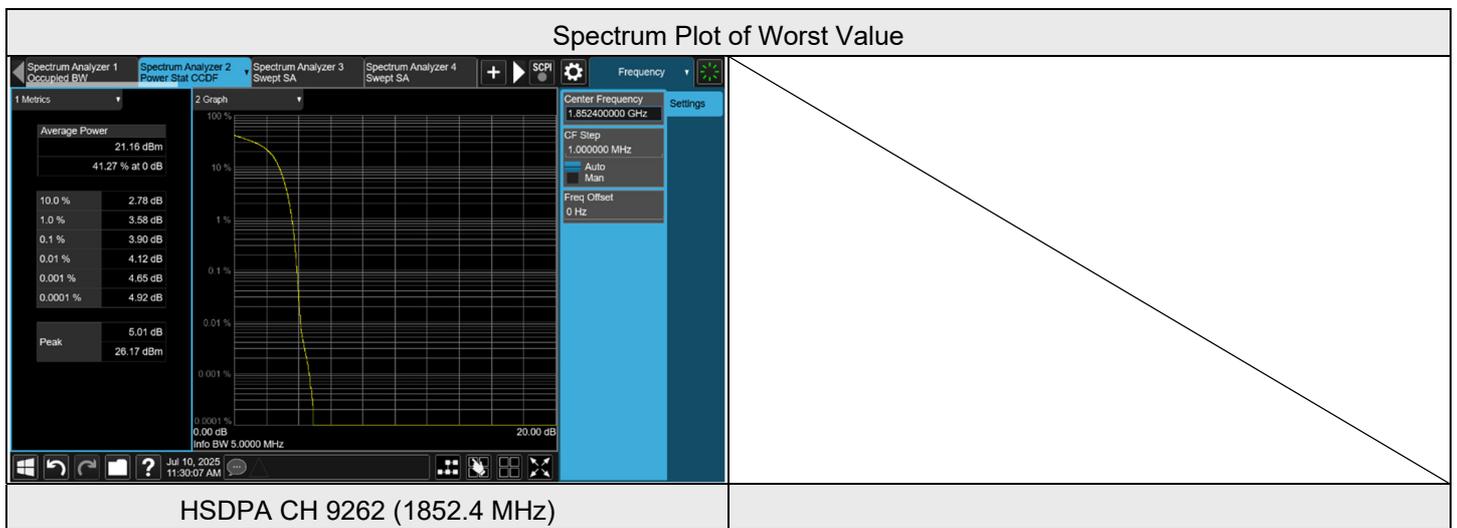
7.3.2 GSM 1900

Modulation	Channel	Frequency (MHz)	Measurement Value(dB)	Limit (dB)	Result
GSM	512	1850.2	2.69	13	Pass
GSM	661	1880.0	2.67	13	Pass
GSM	810	1909.8	2.66	13	Pass
GPRS	512	1850.2	2.68	13	Pass
GPRS	661	1880.0	2.67	13	Pass
GPRS	810	1909.8	2.65	13	Pass



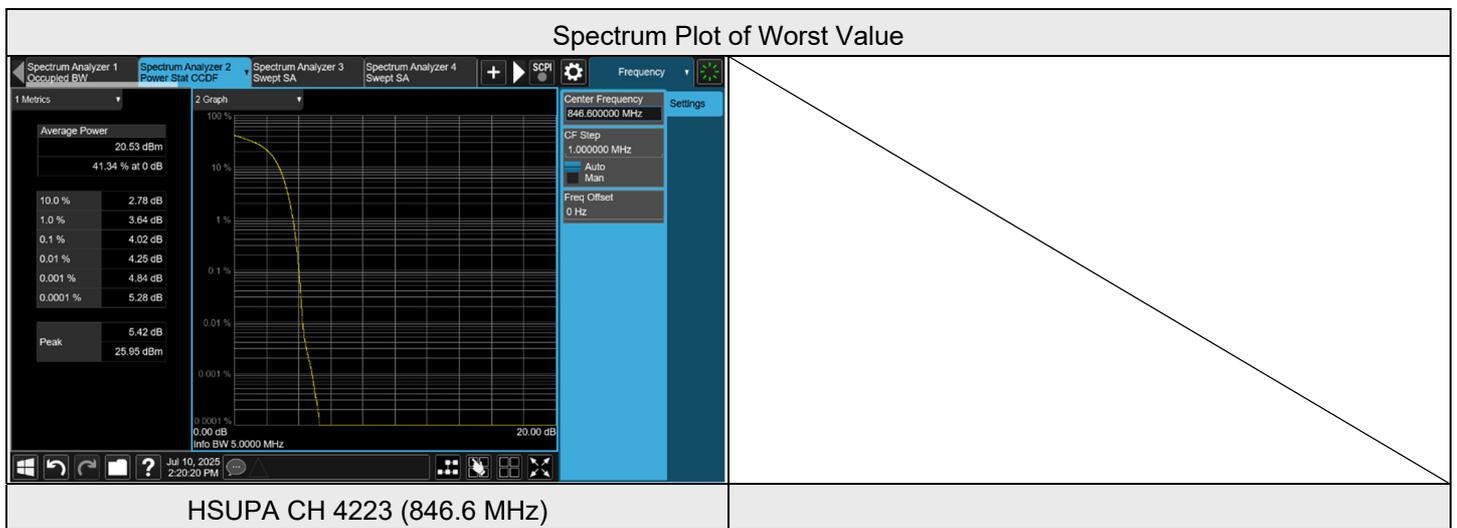
7.3.3 WCDMA Band II

Modulation	Channel	Frequency (MHz)	Measurement Value(dB)	Limit (dB)	Result
WCDMA	9262	1852.4	3.10	13	Pass
WCDMA	9400	1880	3.09	13	Pass
WCDMA	9538	1907.6	3.05	13	Pass
HSDPA	9262	1852.4	3.90	13	Pass
HSDPA	9400	1880	3.87	13	Pass
HSDPA	9538	1907.6	3.83	13	Pass
HSUPA	9262	1852.4	3.89	13	Pass
HSUPA	9400	1880	3.89	13	Pass
HSUPA	9538	1907.6	3.88	13	Pass



7.3.4 WCDMA Band V

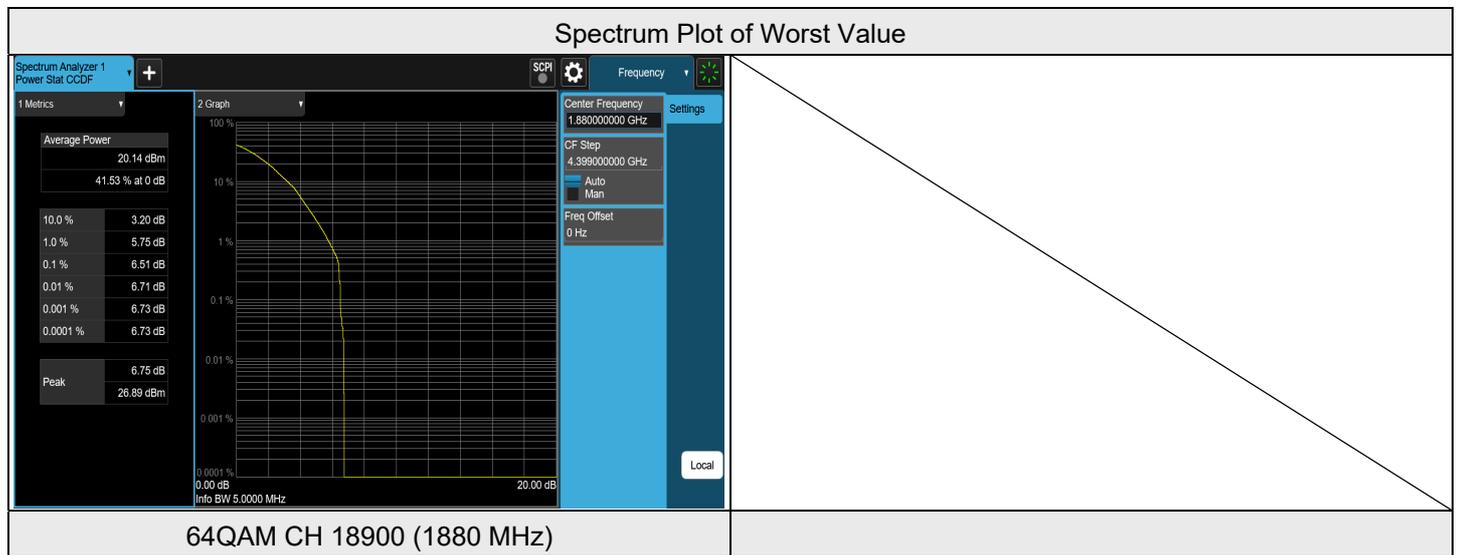
Modulation	Channel	Frequency (MHz)	Measurement Value(dB)	Limit (dB)	Result
WCDMA	4132	826.4	3.18	13	Pass
WCDMA	4182	836.4	3.08	13	Pass
WCDMA	4223	846.6	3.25	13	Pass
HSDPA	4132	826.4	3.87	13	Pass
HSDPA	4182	836.4	3.77	13	Pass
HSDPA	4223	846.6	3.98	13	Pass
HSUPA	4132	826.4	3.86	13	Pass
HSUPA	4182	836.4	3.80	13	Pass
HSUPA	4223	846.6	4.02	13	Pass



7.3.5 LTE Band 2

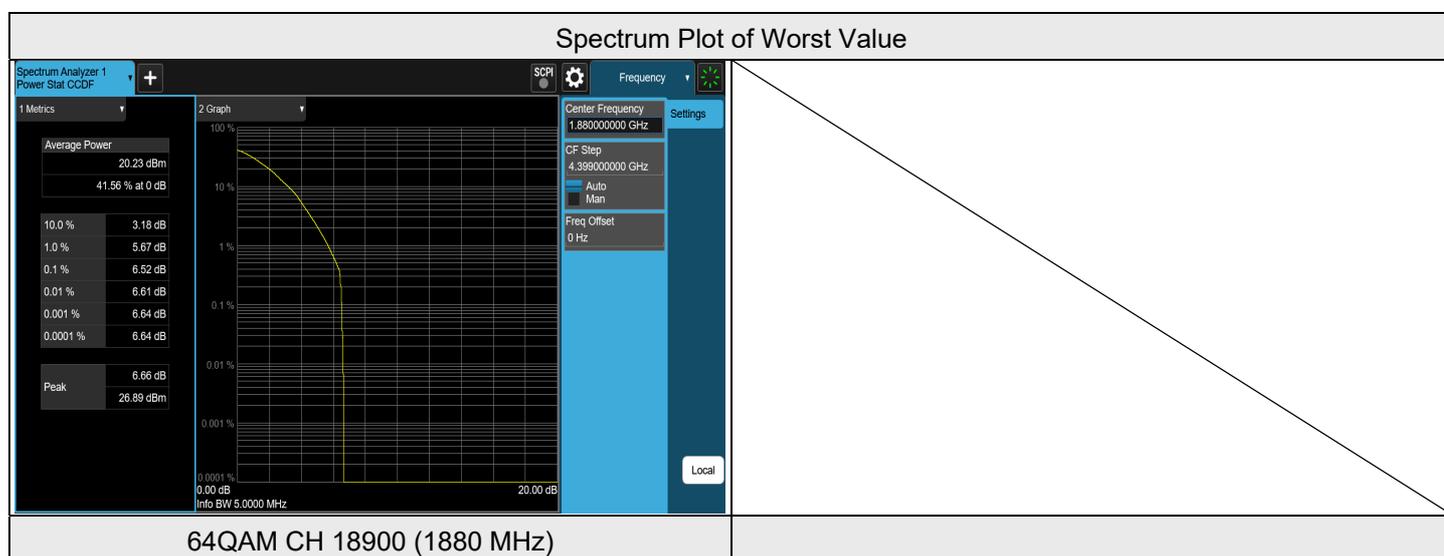
LTE Band 2, Channel Bandwidth: 1.4 MHz

Modulation	Channel	Frequency (MHz)	Measurement Value(dB)	Limit (dB)	Result
QPSK	18607	1850.7	4.47	13	PASS
QPSK	18900	1880	4.60	13	PASS
QPSK	19193	1909.3	4.40	13	PASS
16QAM	18607	1850.7	5.25	13	PASS
16QAM	18900	1880	5.45	13	PASS
16QAM	19193	1909.3	5.17	13	PASS
64QAM	18607	1850.7	6.42	13	PASS
64QAM	18900	1880	6.51	13	PASS
64QAM	19193	1909.3	6.24	13	PASS



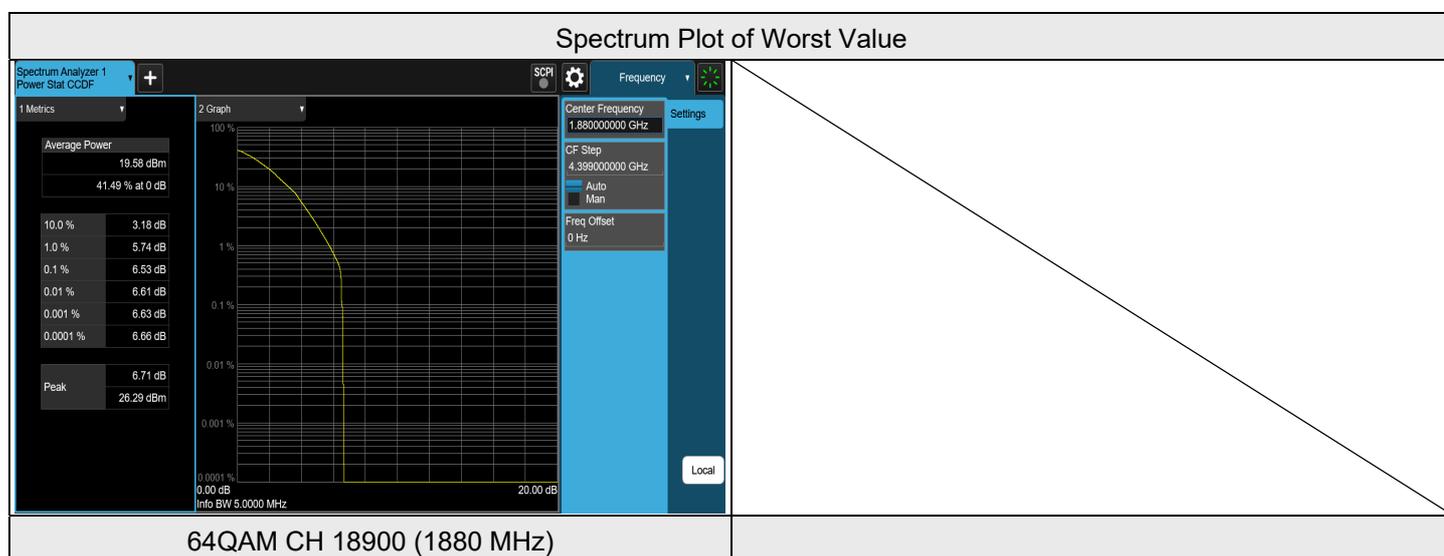
LTE Band 2, Channel Bandwidth: 3 MHz

Modulation	Channel	Frequency (MHz)	Measurement Value(dB)	Limit (dB)	Result
QPSK	18615	1851.5	4.44	13	PASS
QPSK	18900	1880	4.59	13	PASS
QPSK	19185	1908.5	4.47	13	PASS
16QAM	18615	1851.5	5.29	13	PASS
16QAM	18900	1880	5.41	13	PASS
16QAM	19185	1908.5	5.30	13	PASS
64QAM	18615	1851.5	6.35	13	PASS
64QAM	18900	1880	6.52	13	PASS
64QAM	19185	1908.5	6.43	13	PASS



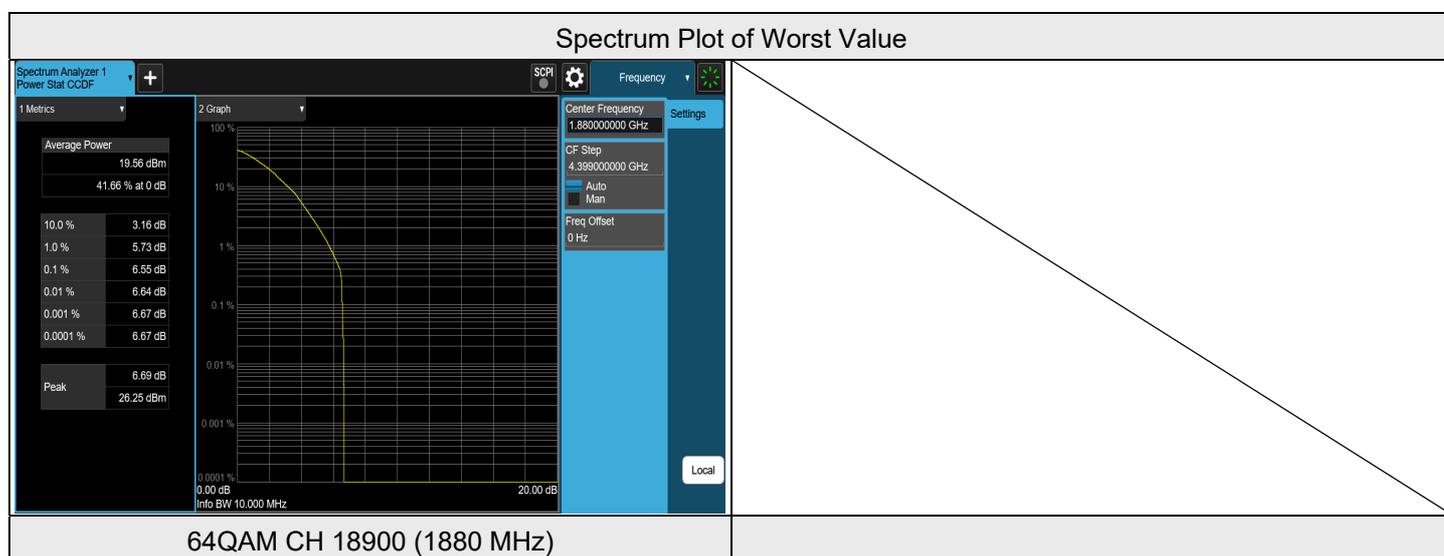
LTE Band 2, Channel Bandwidth: 5 MHz

Modulation	Channel	Frequency (MHz)	Measurement Value(dB)	Limit (dB)	Result
QPSK	18625	1852.5	4.46	13	PASS
QPSK	18900	1880	4.67	13	PASS
QPSK	19175	1907.5	4.54	13	PASS
16QAM	18625	1852.5	5.33	13	PASS
16QAM	18900	1880	5.40	13	PASS
16QAM	19175	1907.5	5.30	13	PASS
64QAM	18625	1852.5	6.37	13	PASS
64QAM	18900	1880	6.53	13	PASS
64QAM	19175	1907.5	6.43	13	PASS



LTE Band 2, Channel Bandwidth: 10 MHz

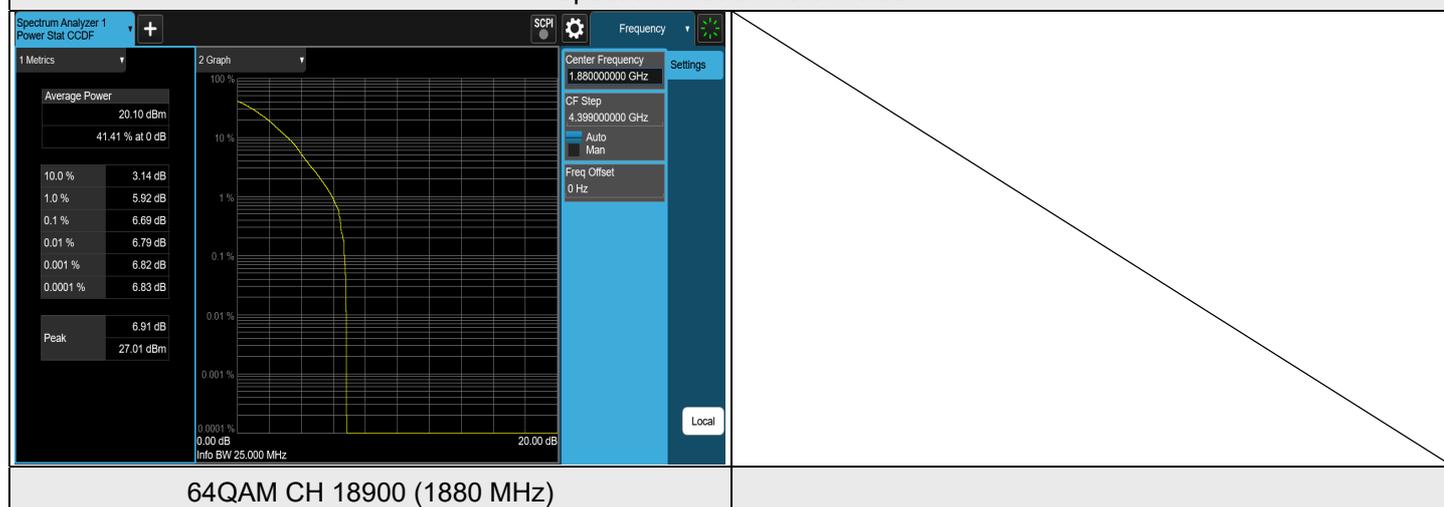
Modulation	Channel	Frequency (MHz)	Measurement Value(dB)	Limit (dB)	Result
QPSK	18650	1855	4.49	13	PASS
QPSK	18900	1880	4.60	13	PASS
QPSK	19150	1905	4.62	13	PASS
16QAM	18650	1855	5.26	13	PASS
16QAM	18900	1880	5.43	13	PASS
16QAM	19150	1905	5.44	13	PASS
64QAM	18650	1855	6.36	13	PASS
64QAM	18900	1880	6.55	13	PASS
64QAM	19150	1905	6.50	13	PASS



LTE Band 2, Channel Bandwidth: 15 MHz

Modulation	Channel	Frequency (MHz)	Measurement Value(dB)	Limit (dB)	Result
QPSK	18675	1857.5	4.60	13	PASS
QPSK	18900	1880	4.75	13	PASS
QPSK	19125	1902.5	4.66	13	PASS
16QAM	18675	1857.5	5.28	13	PASS
16QAM	18900	1880	5.39	13	PASS
16QAM	19125	1902.5	5.20	13	PASS
64QAM	18675	1857.5	6.45	13	PASS
64QAM	18900	1880	6.69	13	PASS
64QAM	19125	1902.5	6.28	13	PASS

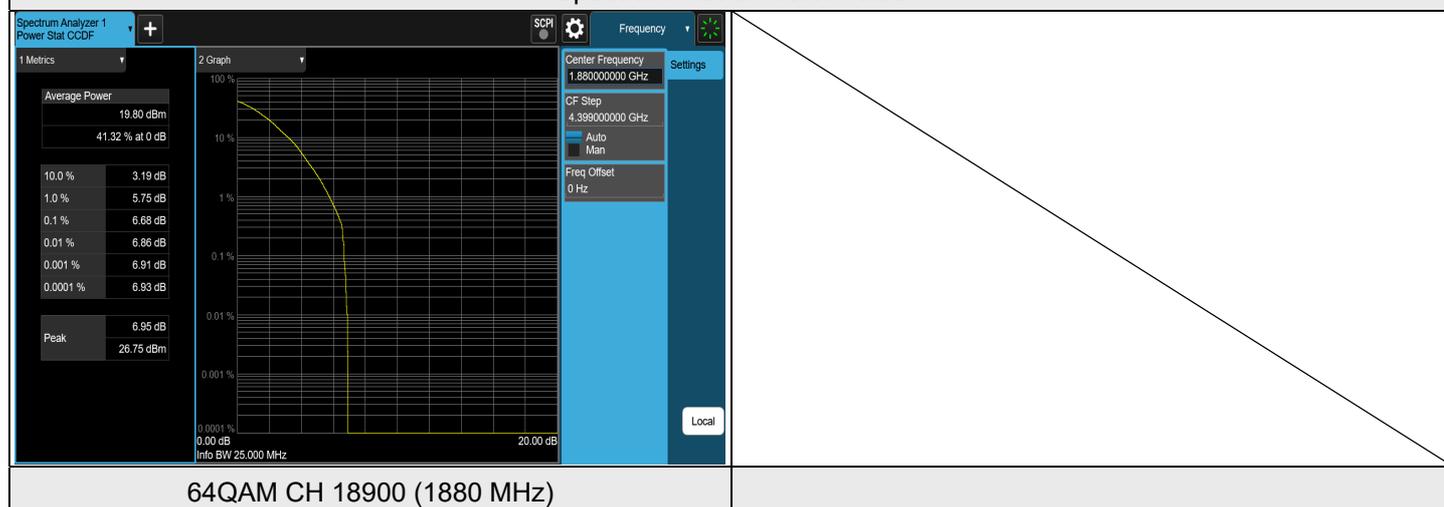
Spectrum Plot of Worst Value



LTE Band 2, Channel Bandwidth: 20 MHz

Modulation	Channel	Frequency (MHz)	Measurement Value(dB)	Limit (dB)	Result
QPSK	18700	1860	4.64	13	PASS
QPSK	18900	1880	4.82	13	PASS
QPSK	19100	1900	4.68	13	PASS
16QAM	18700	1860	5.26	13	PASS
16QAM	18900	1880	5.52	13	PASS
16QAM	19100	1900	5.37	13	PASS
64QAM	18700	1860	6.46	13	PASS
64QAM	18900	1880	6.68	13	PASS
64QAM	19100	1900	6.38	13	PASS

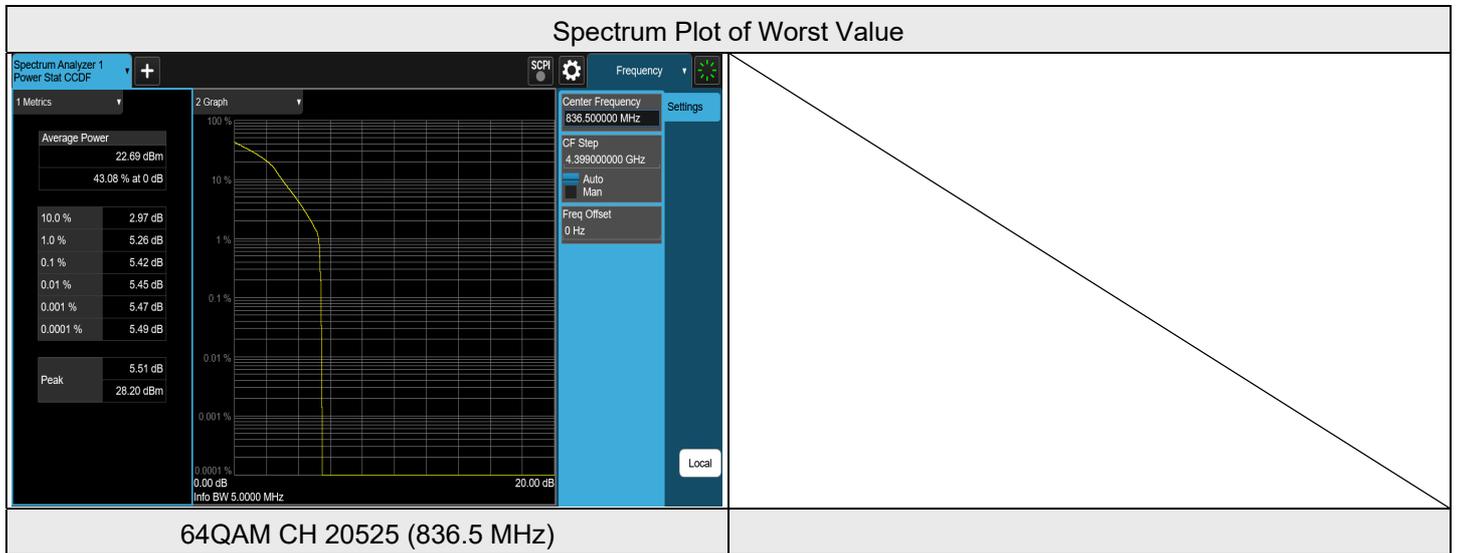
Spectrum Plot of Worst Value



7.3.6 LTE Band 5

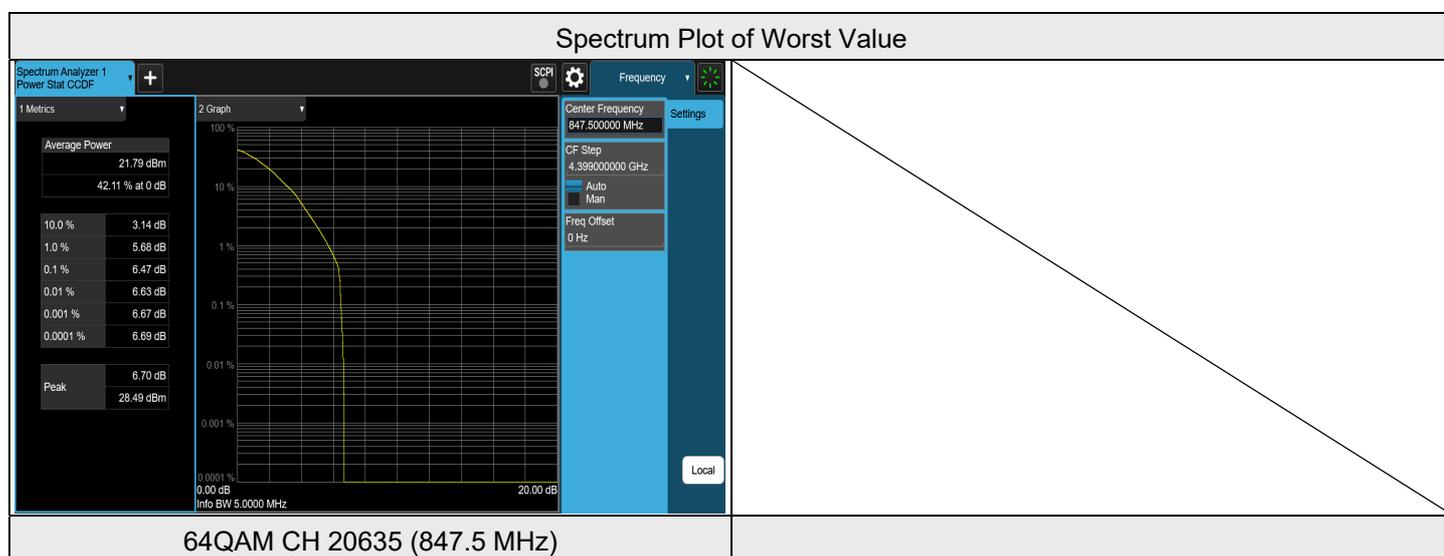
LTE Band 5, Channel Bandwidth: 1.4 MHz

Modulation	Channel	Frequency (MHz)	Measurement Value(dB)	Limit (dB)	Result
QPSK	20407	824.7	4.45	13	PASS
QPSK	20525	836.5	4.49	13	PASS
QPSK	20643	848.3	4.53	13	PASS
16QAM	20407	824.7	5.34	13	PASS
16QAM	20525	836.5	5.31	13	PASS
16QAM	20643	848.3	5.29	13	PASS
64QAM	20407	824.7	5.41	13	PASS
64QAM	20525	836.5	5.42	13	PASS
64QAM	20643	848.3	5.42	13	PASS



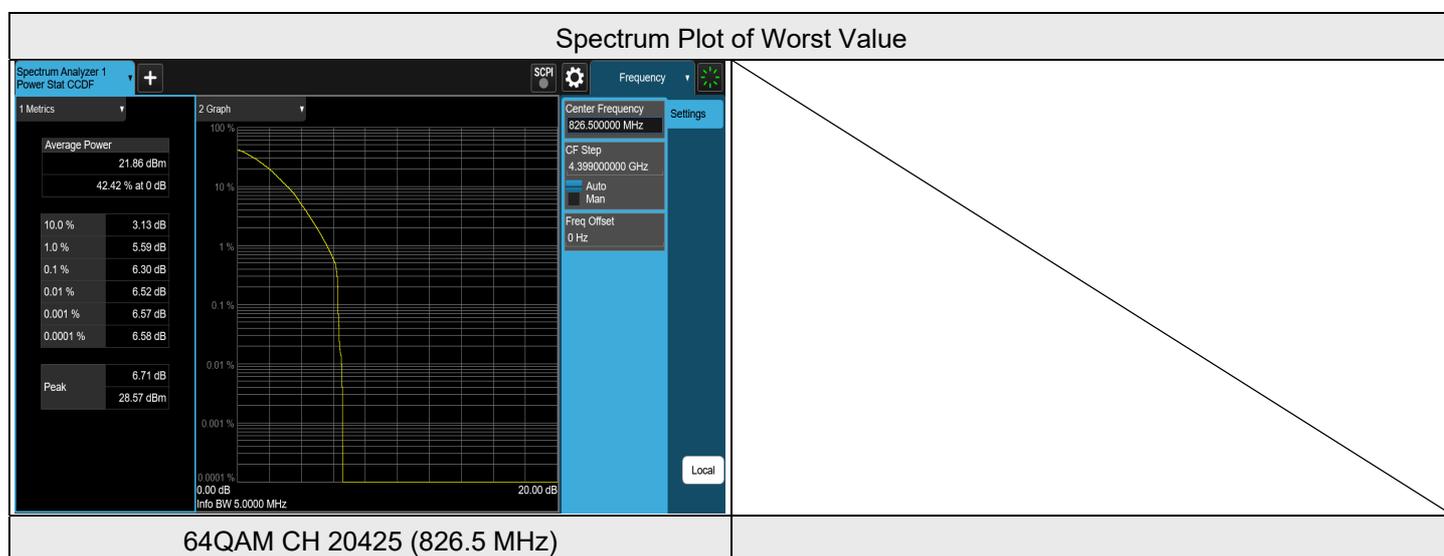
LTE Band 5, Channel Bandwidth: 3 MHz

Modulation	Channel	Frequency (MHz)	Measurement Value(dB)	Limit (dB)	Result
QPSK	20415	825.5	4.46	13	PASS
QPSK	20525	836.5	4.47	13	PASS
QPSK	20635	847.5	4.56	13	PASS
16QAM	20415	825.5	5.31	13	PASS
16QAM	20525	836.5	5.29	13	PASS
16QAM	20635	847.5	5.36	13	PASS
64QAM	20415	825.5	6.37	13	PASS
64QAM	20525	836.5	6.32	13	PASS
64QAM	20635	847.5	6.47	13	PASS



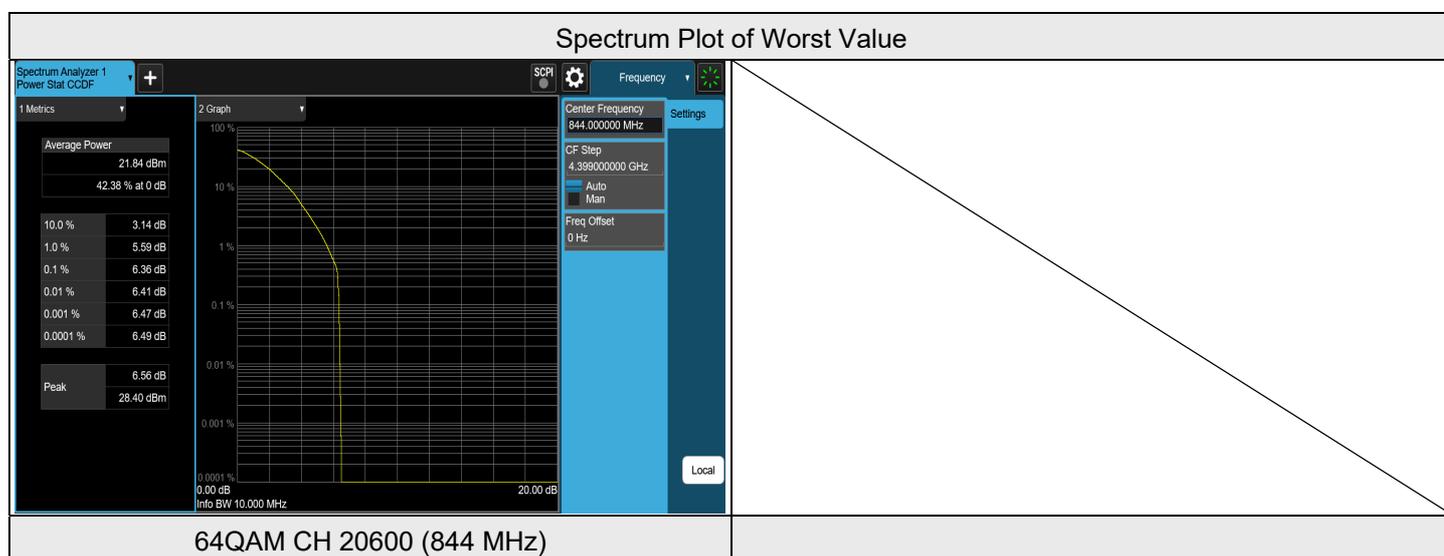
LTE Band 5, Channel Bandwidth: 5 MHz

Modulation	Channel	Frequency (MHz)	Measurement Value(dB)	Limit (dB)	Result
QPSK	20425	826.5	4.54	13	PASS
QPSK	20525	836.5	4.48	13	PASS
QPSK	20625	846.5	4.39	13	PASS
16QAM	20425	826.5	5.30	13	PASS
16QAM	20525	836.5	5.27	13	PASS
16QAM	20625	846.5	5.14	13	PASS
64QAM	20425	826.5	6.30	13	PASS
64QAM	20525	836.5	6.27	13	PASS
64QAM	20625	846.5	6.19	13	PASS



LTE Band 5, Channel Bandwidth: 10 MHz

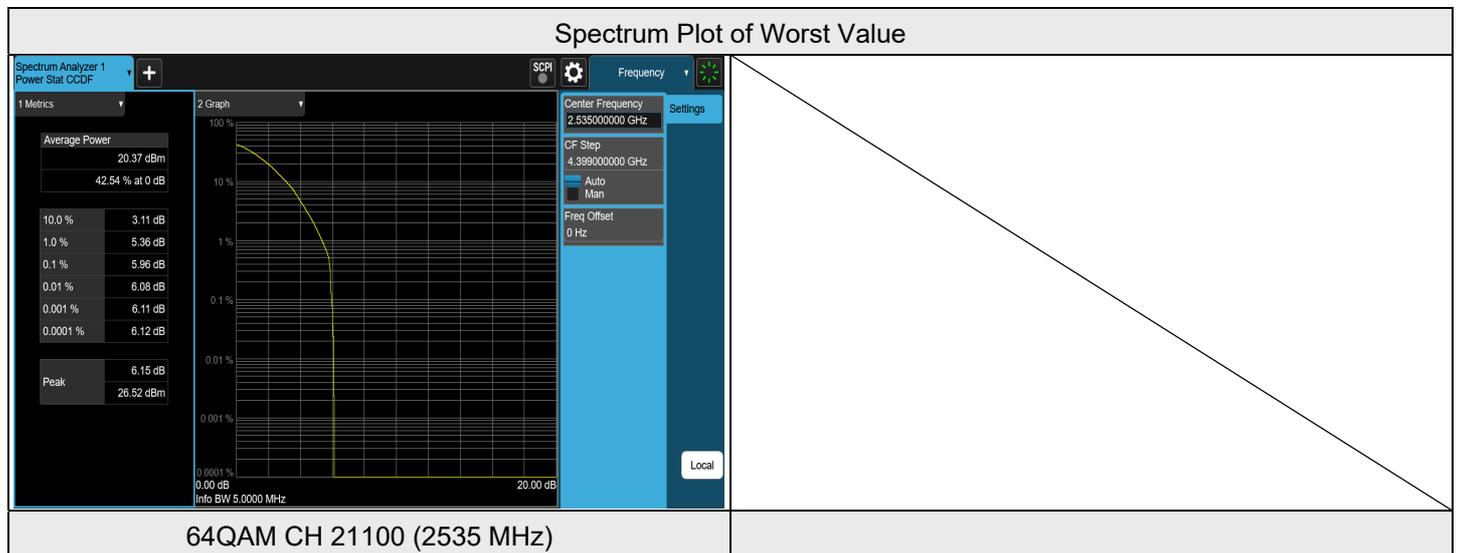
Modulation	Channel	Frequency (MHz)	Measurement Value(dB)	Limit (dB)	Result
QPSK	20450	829	4.51	13	PASS
QPSK	20525	836.5	4.39	13	PASS
QPSK	20600	844	4.51	13	PASS
16QAM	20450	829	5.30	13	PASS
16QAM	20525	836.5	5.24	13	PASS
16QAM	20600	844	5.36	13	PASS
64QAM	20450	829	6.33	13	PASS
64QAM	20525	836.5	6.24	13	PASS
64QAM	20600	844	6.36	13	PASS



7.3.7 LTE Band 7

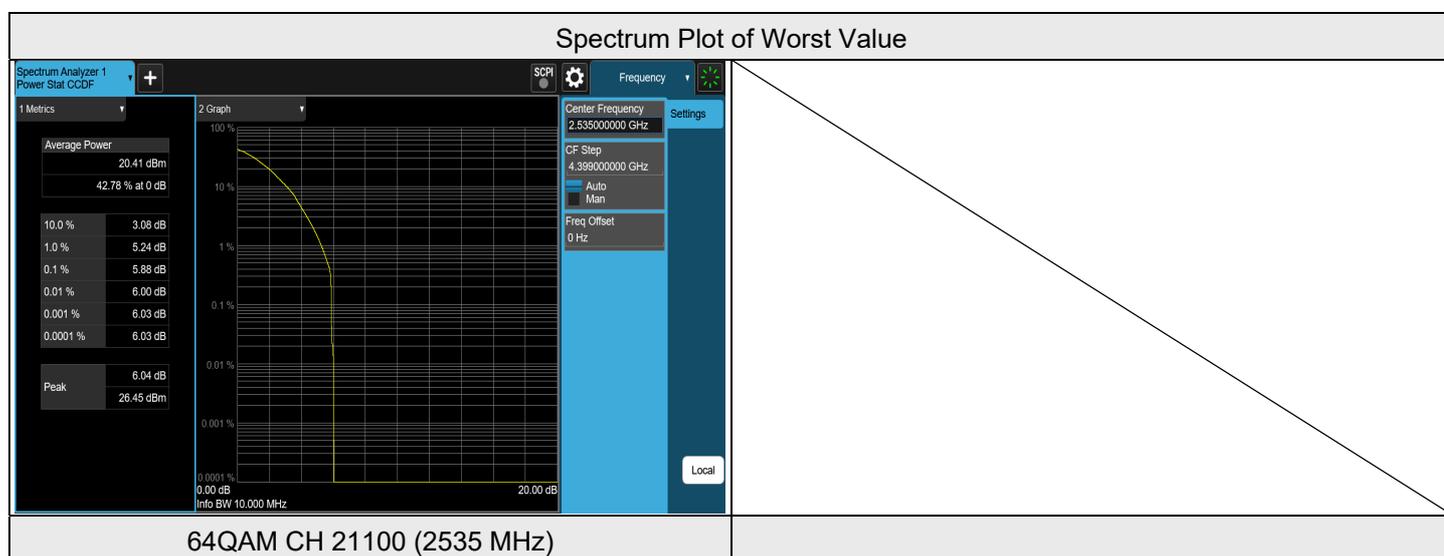
LTE Band 7, Channel Bandwidth: 5 MHz

Modulation	Channel	Frequency (MHz)	Measurement Value(dB)	Limit (dB)	Result
QPSK	20775	2502.5	3.92	13	PASS
QPSK	21100	2535	4.10	13	PASS
QPSK	21425	2567.5	3.73	13	PASS
16QAM	20775	2502.5	4.66	13	PASS
16QAM	21100	2535	4.83	13	PASS
16QAM	21425	2567.5	4.47	13	PASS
64QAM	20775	2502.5	5.61	13	PASS
64QAM	21100	2535	5.96	13	PASS
64QAM	21425	2567.5	5.58	13	PASS



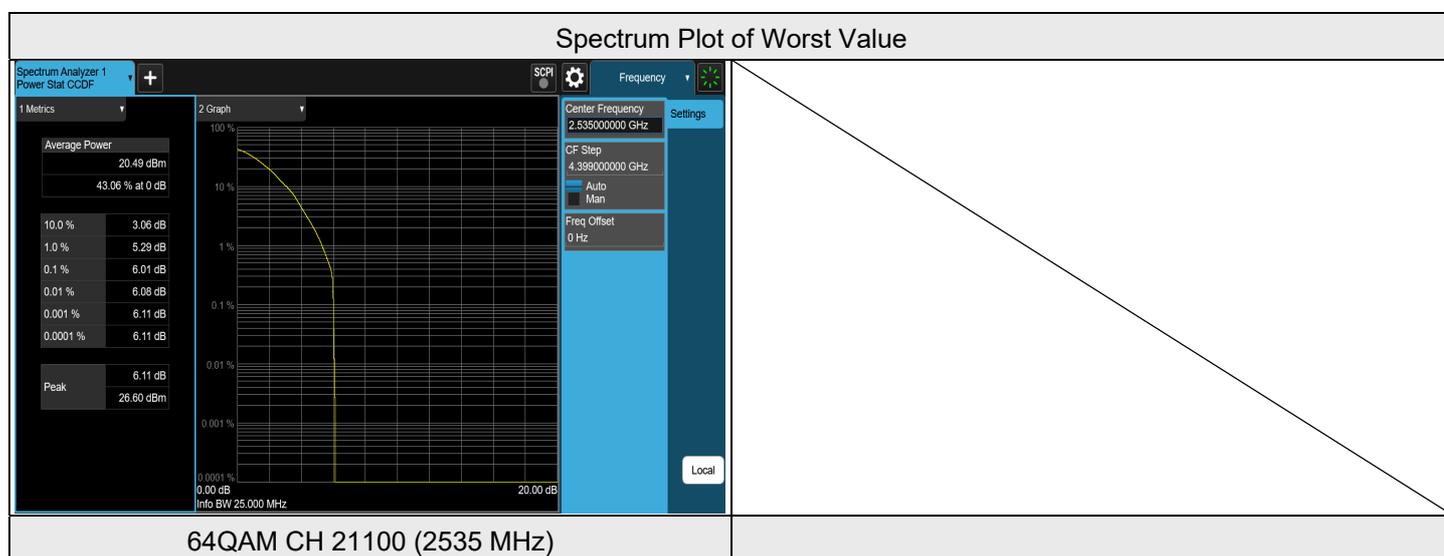
LTE Band 7, Channel Bandwidth: 10 MHz

Modulation	Channel	Frequency (MHz)	Measurement Value(dB)	Limit (dB)	Result
QPSK	20800	2505	3.87	13	PASS
QPSK	21100	2535	4.10	13	PASS
QPSK	21400	2565	3.94	13	PASS
16QAM	20800	2505	4.73	13	PASS
16QAM	21100	2535	4.87	13	PASS
16QAM	21400	2565	4.74	13	PASS
64QAM	20800	2505	5.70	13	PASS
64QAM	21100	2535	5.88	13	PASS
64QAM	21400	2565	5.79	13	PASS



LTE Band 7, Channel Bandwidth: 15 MHz

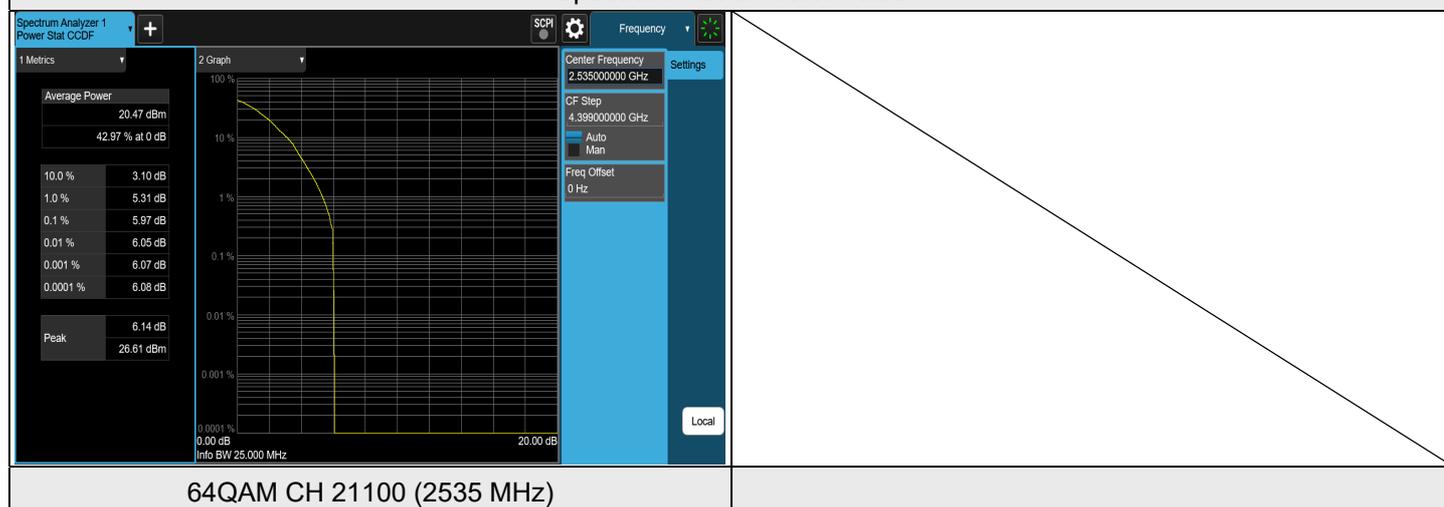
Modulation	Channel	Frequency (MHz)	Measurement Value(dB)	Limit (dB)	Result
QPSK	20825	2507.5	4.15	13	PASS
QPSK	21100	2535	4.24	13	PASS
QPSK	21375	2562.5	4.36	13	PASS
16QAM	20825	2507.5	4.84	13	PASS
16QAM	21100	2535	4.89	13	PASS
16QAM	21375	2562.5	5.18	13	PASS
64QAM	20825	2507.5	5.70	13	PASS
64QAM	21100	2535	6.01	13	PASS
64QAM	21375	2562.5	5.94	13	PASS



LTE Band 7, Channel Bandwidth: 20 MHz

Modulation	Channel	Frequency (MHz)	Measurement Value(dB)	Limit (dB)	Result
QPSK	20850	2510	4.13	13	PASS
QPSK	21100	2535	4.29	13	PASS
QPSK	21350	2560	4.38	13	PASS
16QAM	20850	2510	4.82	13	PASS
16QAM	21100	2535	4.98	13	PASS
16QAM	21350	2560	4.95	13	PASS
64QAM	20850	2510	5.72	13	PASS
64QAM	21100	2535	5.97	13	PASS
64QAM	21350	2560	5.96	13	PASS

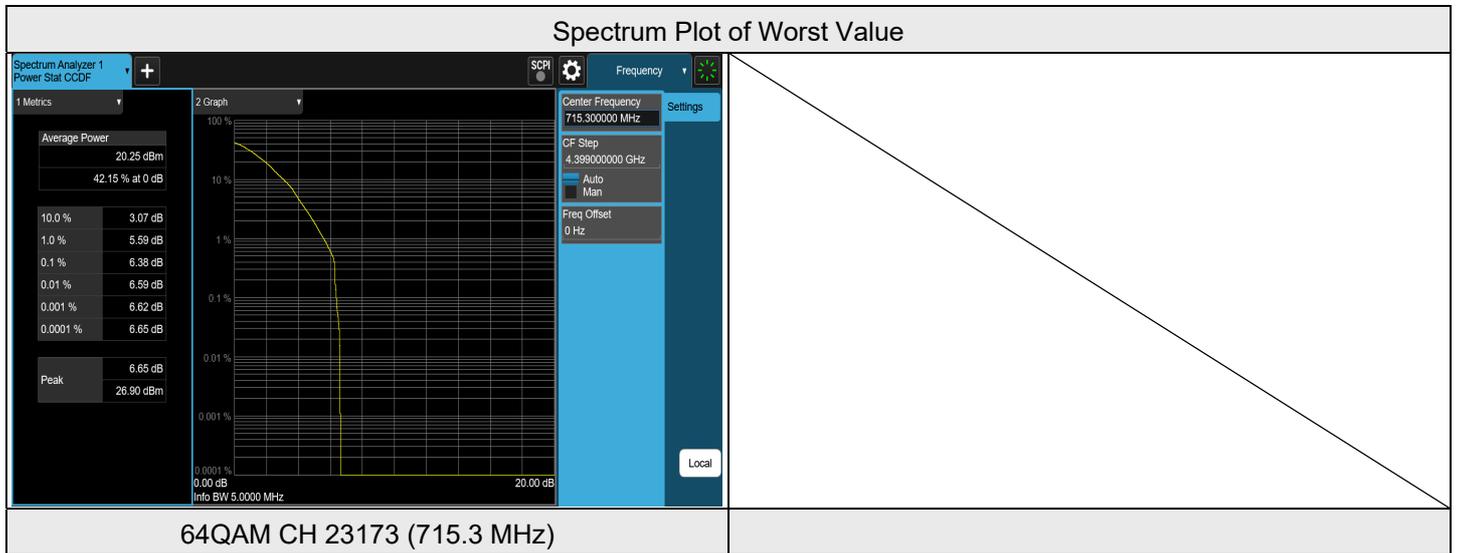
Spectrum Plot of Worst Value



7.3.8 LTE Band 12

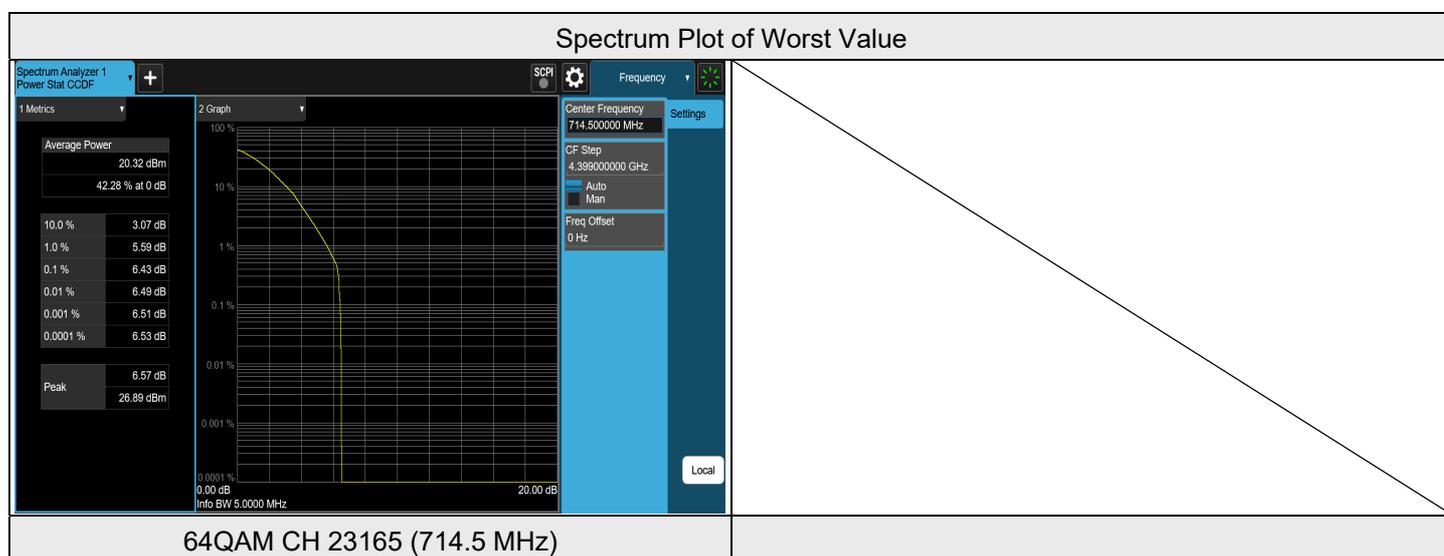
LTE Band 12, Channel Bandwidth: 1.4 MHz

Modulation	Channel	Frequency (MHz)	Measurement Value(dB)	Limit (dB)	Result
QPSK	23017	699.7	4.54	13	PASS
QPSK	23095	707.5	4.40	13	PASS
QPSK	23173	715.3	4.50	13	PASS
16QAM	23017	699.7	5.37	13	PASS
16QAM	23095	707.5	5.19	13	PASS
16QAM	23173	715.3	5.31	13	PASS
64QAM	23017	699.7	6.35	13	PASS
64QAM	23095	707.5	6.22	13	PASS
64QAM	23173	715.3	6.38	13	PASS



LTE Band 12, Channel Bandwidth: 3 MHz

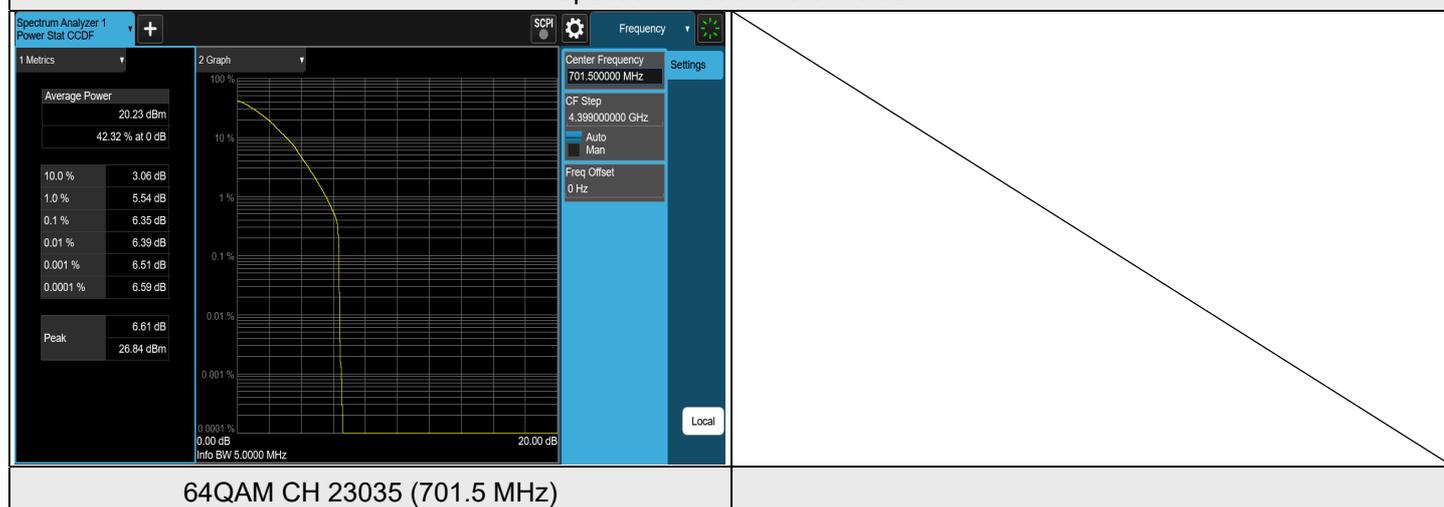
Modulation	Channel	Frequency (MHz)	Measurement Value(dB)	Limit (dB)	Result
QPSK	23025	700.5	4.51	13	PASS
QPSK	23095	707.5	4.51	13	PASS
QPSK	23165	714.5	4.57	13	PASS
16QAM	23025	700.5	5.29	13	PASS
16QAM	23095	707.5	5.33	13	PASS
16QAM	23165	714.5	5.50	13	PASS
64QAM	23025	700.5	6.37	13	PASS
64QAM	23095	707.5	6.32	13	PASS
64QAM	23165	714.5	6.43	13	PASS



LTE Band 12, Channel Bandwidth: 5 MHz

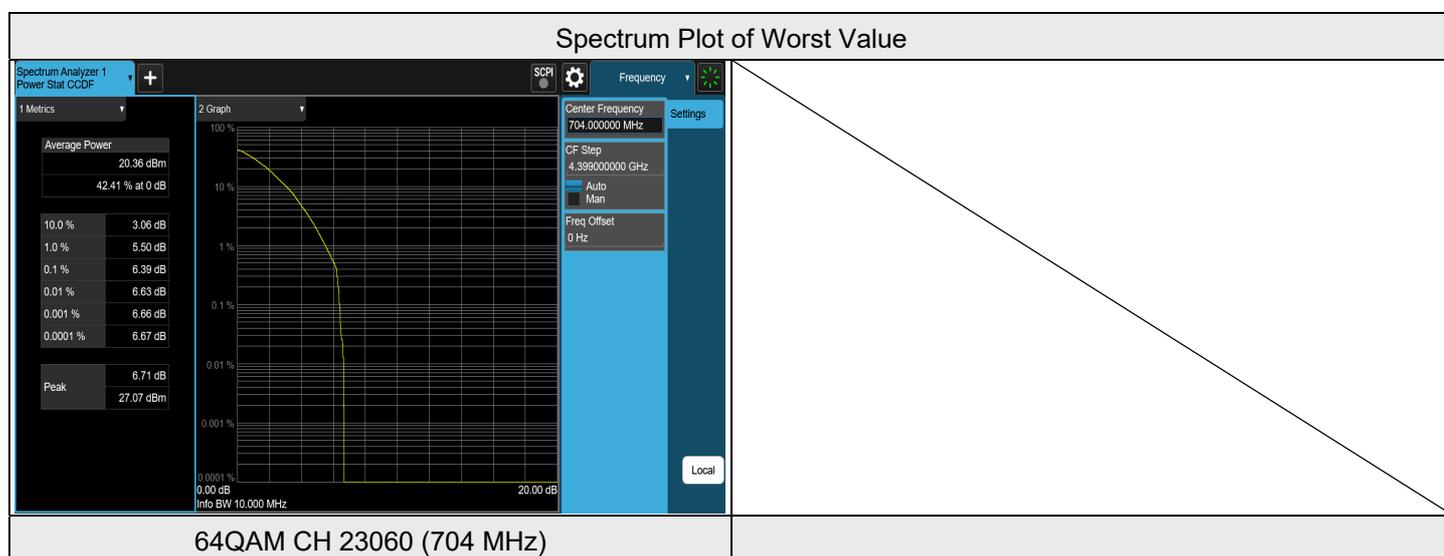
Modulation	Channel	Frequency (MHz)	Measurement Value(dB)	Limit (dB)	Result
QPSK	23035	701.5	4.58	13	PASS
QPSK	23095	707.5	4.52	13	PASS
QPSK	23155	713.5	4.55	13	PASS
16QAM	23035	701.5	5.30	13	PASS
16QAM	23095	707.5	5.29	13	PASS
16QAM	23155	713.5	5.32	13	PASS
64QAM	23035	701.5	6.35	13	PASS
64QAM	23095	707.5	6.29	13	PASS
64QAM	23155	713.5	6.32	13	PASS

Spectrum Plot of Worst Value



LTE Band 12, Channel Bandwidth: 10 MHz

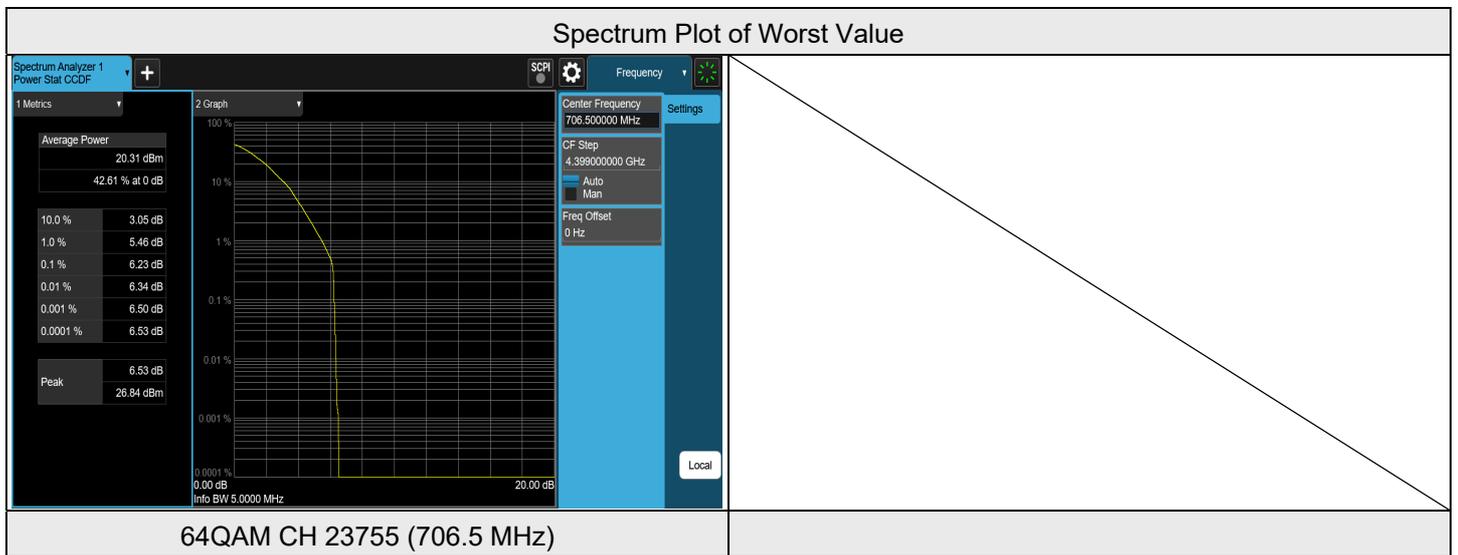
Modulation	Channel	Frequency (MHz)	Measurement Value(dB)	Limit (dB)	Result
QPSK	23060	704	4.59	13	PASS
QPSK	23095	707.5	4.51	13	PASS
QPSK	23130	711	4.47	13	PASS
16QAM	23060	704	5.32	13	PASS
16QAM	23095	707.5	5.34	13	PASS
16QAM	23130	711	5.23	13	PASS
64QAM	23060	704	6.39	13	PASS
64QAM	23095	707.5	6.38	13	PASS
64QAM	23130	711	6.30	13	PASS



7.3.9 LTE Band 17

LTE Band 17, Channel Bandwidth: 5 MHz

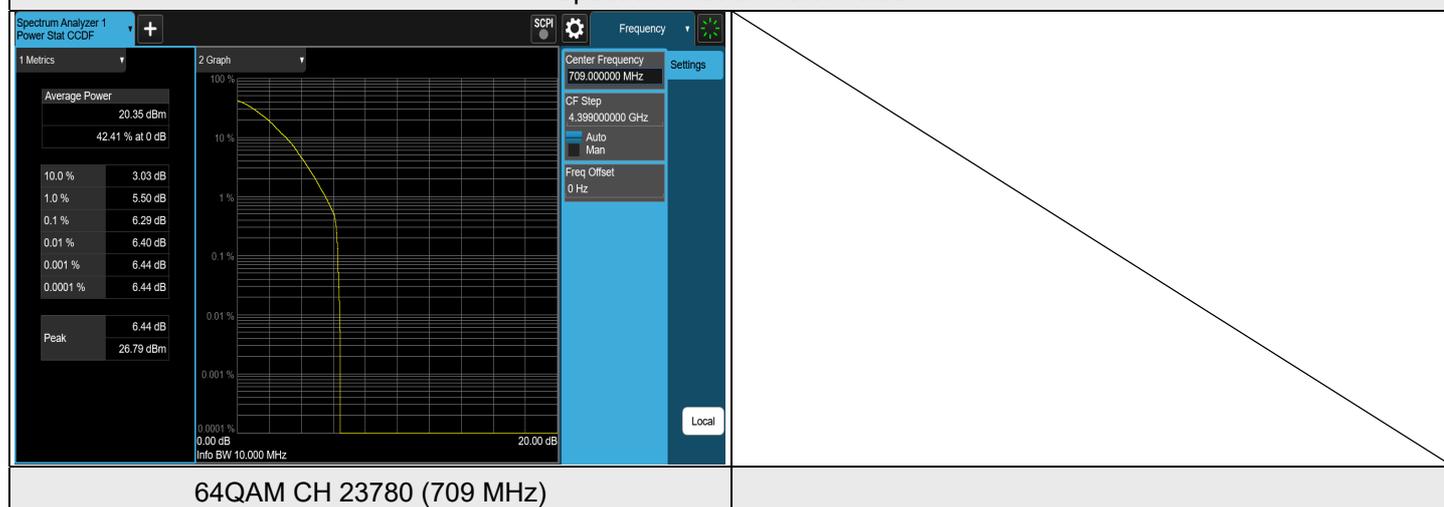
Modulation	Channel	Frequency (MHz)	Measurement Value(dB)	Limit (dB)	Result
QPSK	23755	706.5	4.40	13	PASS
QPSK	23790	710	4.36	13	PASS
QPSK	23825	713.5	4.48	13	PASS
16QAM	23755	706.5	5.20	13	PASS
16QAM	23790	710	5.17	13	PASS
16QAM	23825	713.5	5.26	13	PASS
64QAM	23755	706.5	6.23	13	PASS
64QAM	23790	710	6.10	13	PASS
64QAM	23825	713.5	6.23	13	PASS



LTE Band 17, Channel Bandwidth: 10 MHz

Modulation	Channel	Frequency (MHz)	Measurement Value(dB)	Limit (dB)	Result
QPSK	23780	709	4.45	13	PASS
QPSK	23790	710	4.48	13	PASS
QPSK	23800	711	4.42	13	PASS
16QAM	23780	709	5.18	13	PASS
16QAM	23790	710	5.24	13	PASS
16QAM	23800	711	5.19	13	PASS
64QAM	23780	709	6.29	13	PASS
64QAM	23790	710	6.29	13	PASS
64QAM	23800	711	6.21	13	PASS

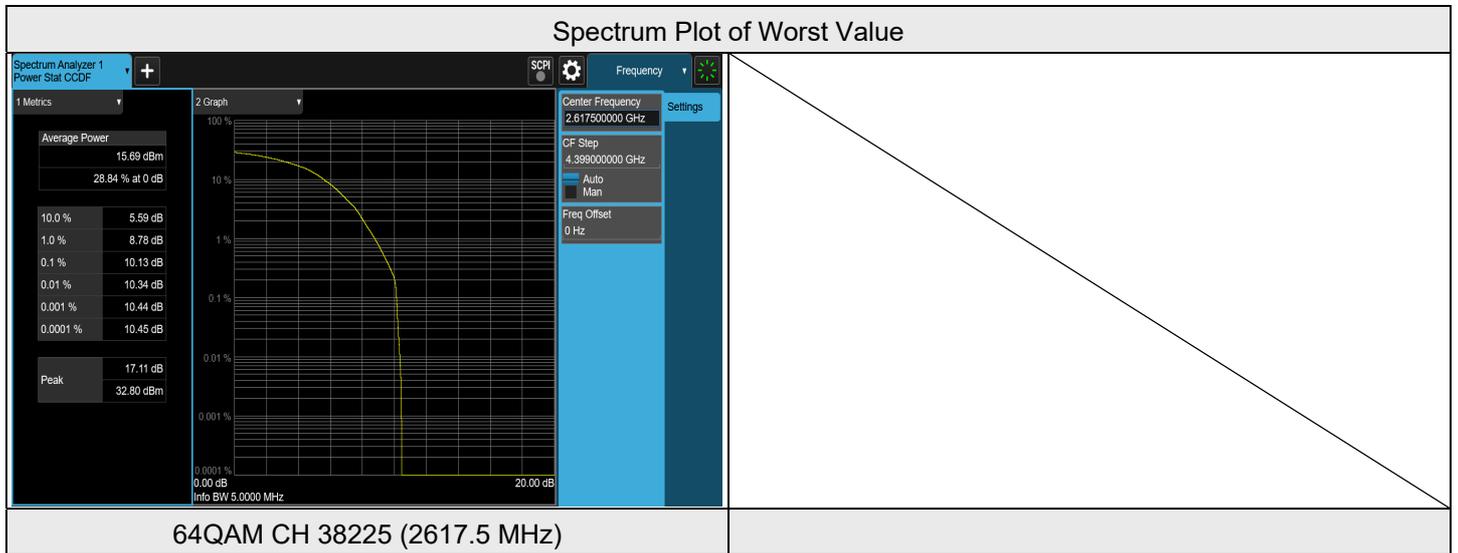
Spectrum Plot of Worst Value



7.3.10 LTE Band 38

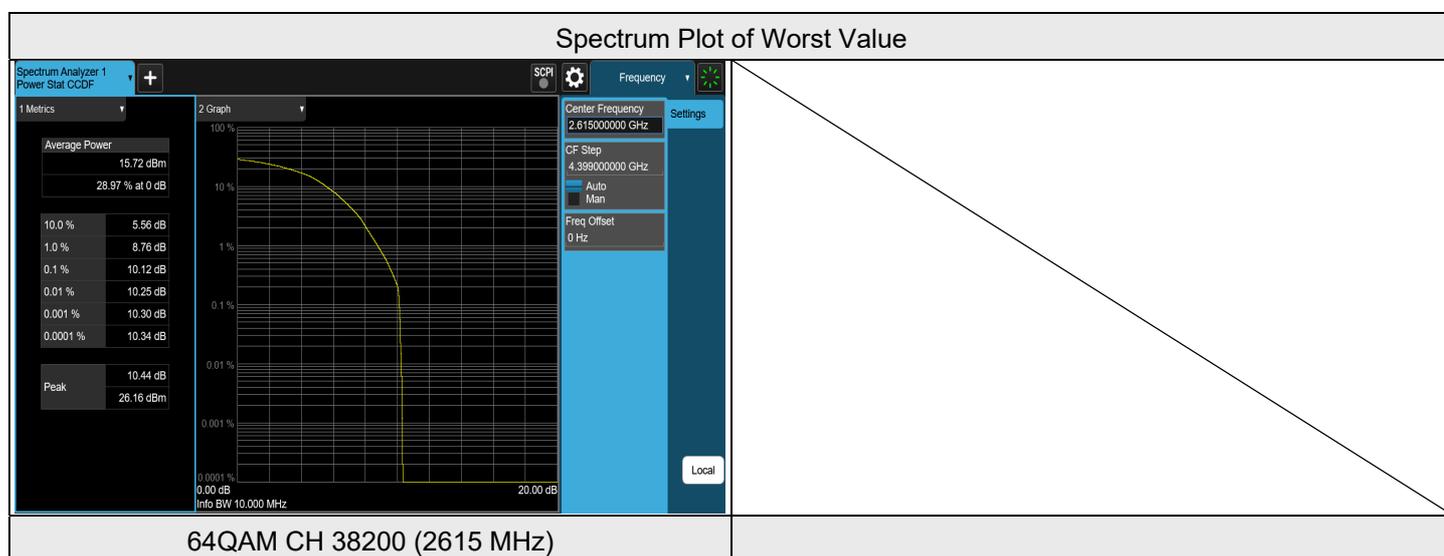
LTE Band 38, Channel Bandwidth: 5 MHz

Modulation	Channel	Frequency (MHz)	Measurement Value(dB)	Limit (dB)	Result
QPSK	37775	2572.5	8.14	13	PASS
QPSK	38000	2595	8.18	13	PASS
QPSK	38225	2617.5	8.32	13	PASS
16QAM	37775	2572.5	8.68	13	PASS
16QAM	38000	2595	9.04	13	PASS
16QAM	38225	2617.5	9.12	13	PASS
64QAM	37775	2572.5	9.13	13	PASS
64QAM	38000	2595	9.86	13	PASS
64QAM	38225	2617.5	10.13	13	PASS



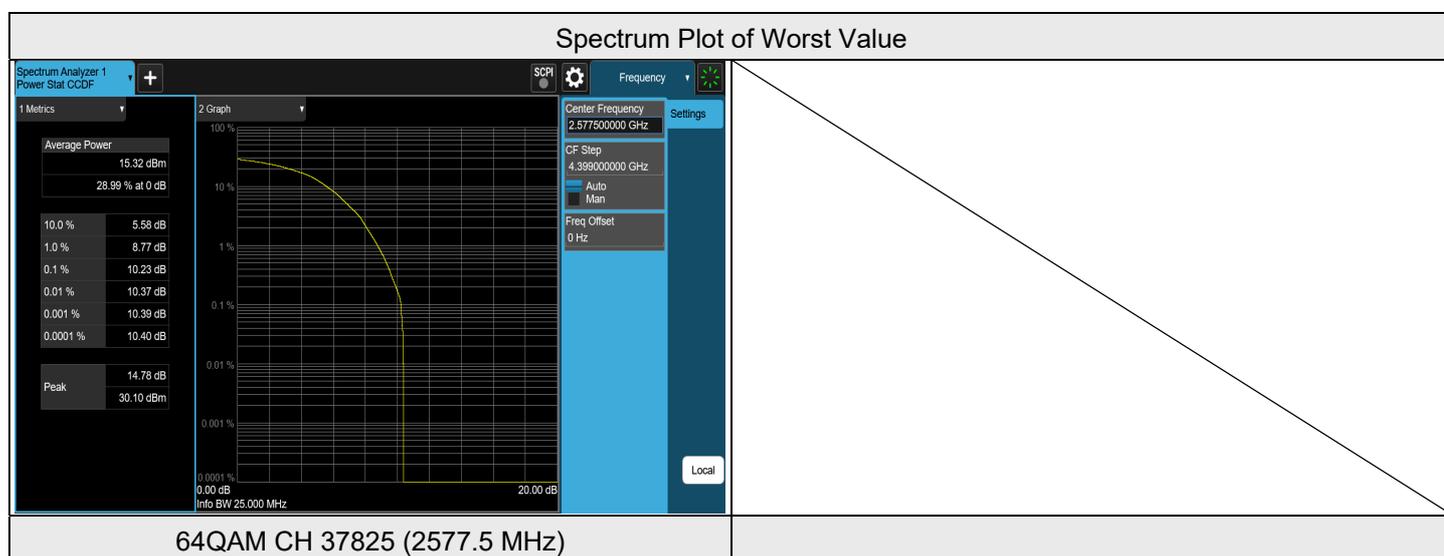
LTE Band 38, Channel Bandwidth: 10 MHz

Modulation	Channel	Frequency (MHz)	Measurement Value(dB)	Limit (dB)	Result
QPSK	37800	2575	8.19	13	PASS
QPSK	38000	2595	8.19	13	PASS
QPSK	38200	2615	8.35	13	PASS
16QAM	37800	2575	8.76	13	PASS
16QAM	38000	2595	9.33	13	PASS
16QAM	38200	2615	8.79	13	PASS
64QAM	37800	2575	9.60	13	PASS
64QAM	38000	2595	9.97	13	PASS
64QAM	38200	2615	10.12	13	PASS



LTE Band 38, Channel Bandwidth: 15 MHz

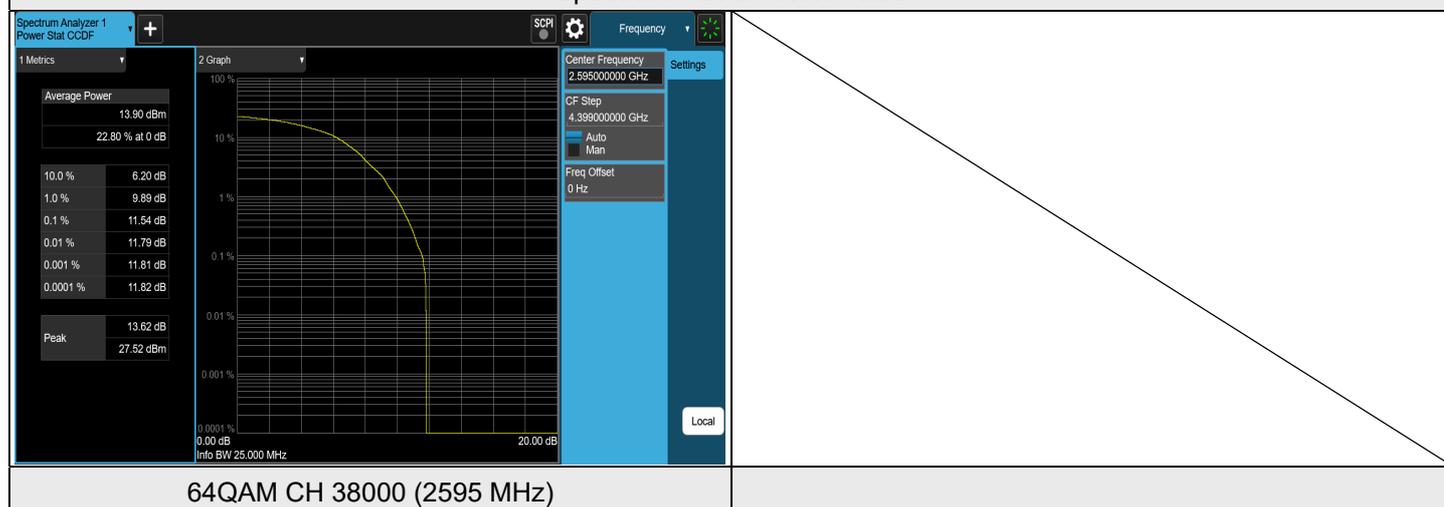
Modulation	Channel	Frequency (MHz)	Measurement Value(dB)	Limit (dB)	Result
QPSK	37825	2577.5	7.25	13	PASS
QPSK	38000	2595	8.90	13	PASS
QPSK	38175	2612.5	8.61	13	PASS
16QAM	37825	2577.5	9.06	13	PASS
16QAM	38000	2595	9.29	13	PASS
16QAM	38175	2612.5	9.78	13	PASS
64QAM	37825	2577.5	10.23	13	PASS
64QAM	38000	2595	8.89	13	PASS
64QAM	38175	2612.5	9.26	13	PASS



LTE Band 38, Channel Bandwidth: 20 MHz

Modulation	Channel	Frequency (MHz)	Measurement Value(dB)	Limit (dB)	Result
QPSK	37850	2580	8.56	13	PASS
QPSK	38000	2595	8.12	13	PASS
QPSK	38150	2610	7.93	13	PASS
16QAM	37850	2580	9.39	13	PASS
16QAM	38000	2595	9.66	13	PASS
16QAM	38150	2610	9.86	13	PASS
64QAM	37850	2580	10.83	13	PASS
64QAM	38000	2595	11.54	13	PASS
64QAM	38150	2610	10.31	13	PASS

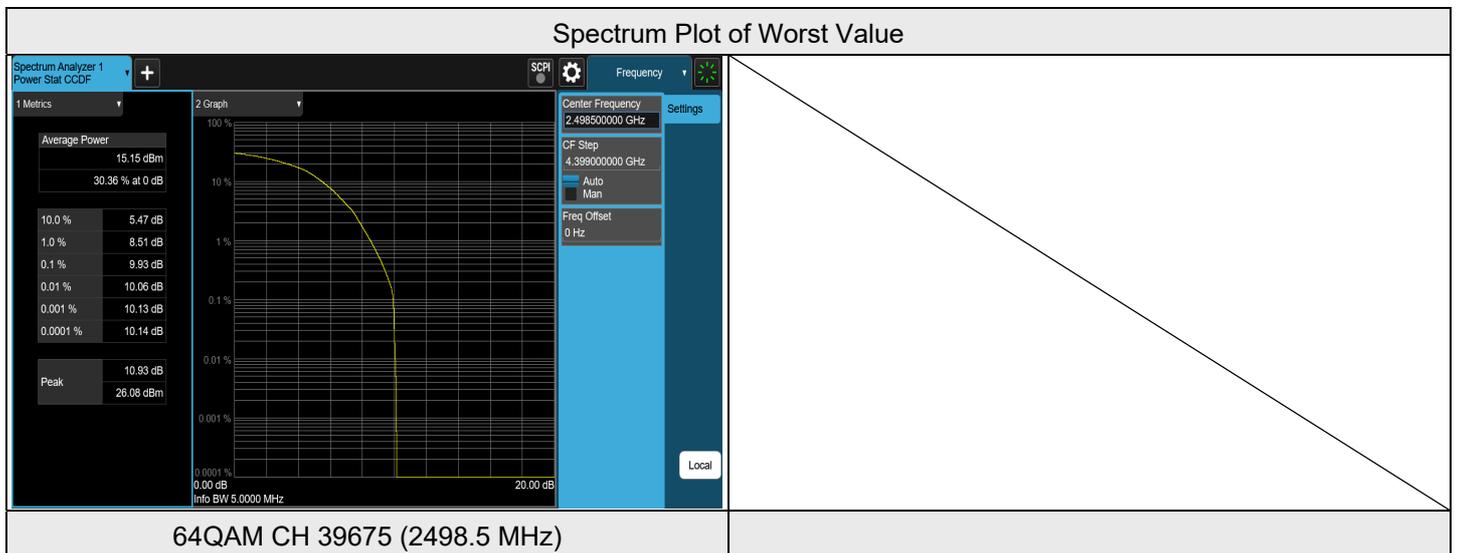
Spectrum Plot of Worst Value



7.3.11 LTE Band 41

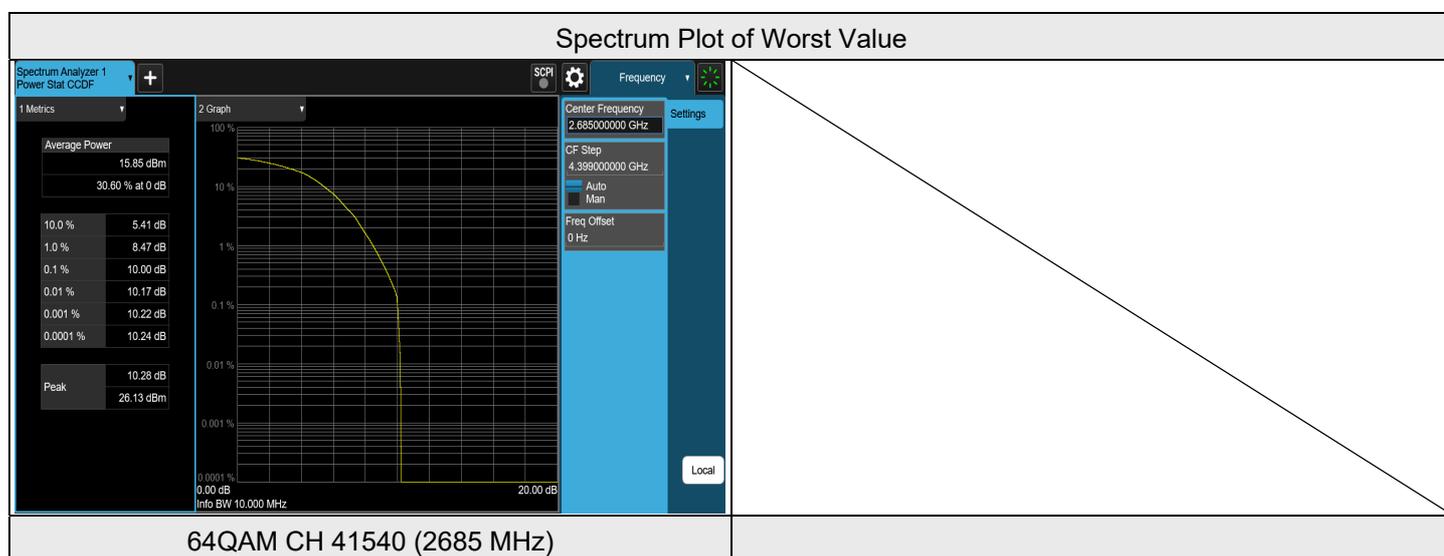
LTE Band 41, Channel Bandwidth: 5 MHz

Modulation	Channel	Frequency (MHz)	Measurement Value(dB)	Limit (dB)	Result
QPSK	39675	2498.5	8.02	13	PASS
QPSK	40620	2593	7.92	13	PASS
QPSK	41565	2687.5	8.34	13	PASS
16QAM	39675	2498.5	8.92	13	PASS
16QAM	40620	2593	8.74	13	PASS
16QAM	41565	2687.5	8.95	13	PASS
64QAM	39675	2498.5	9.93	13	PASS
64QAM	40620	2593	9.79	13	PASS
64QAM	41565	2687.5	9.87	13	PASS



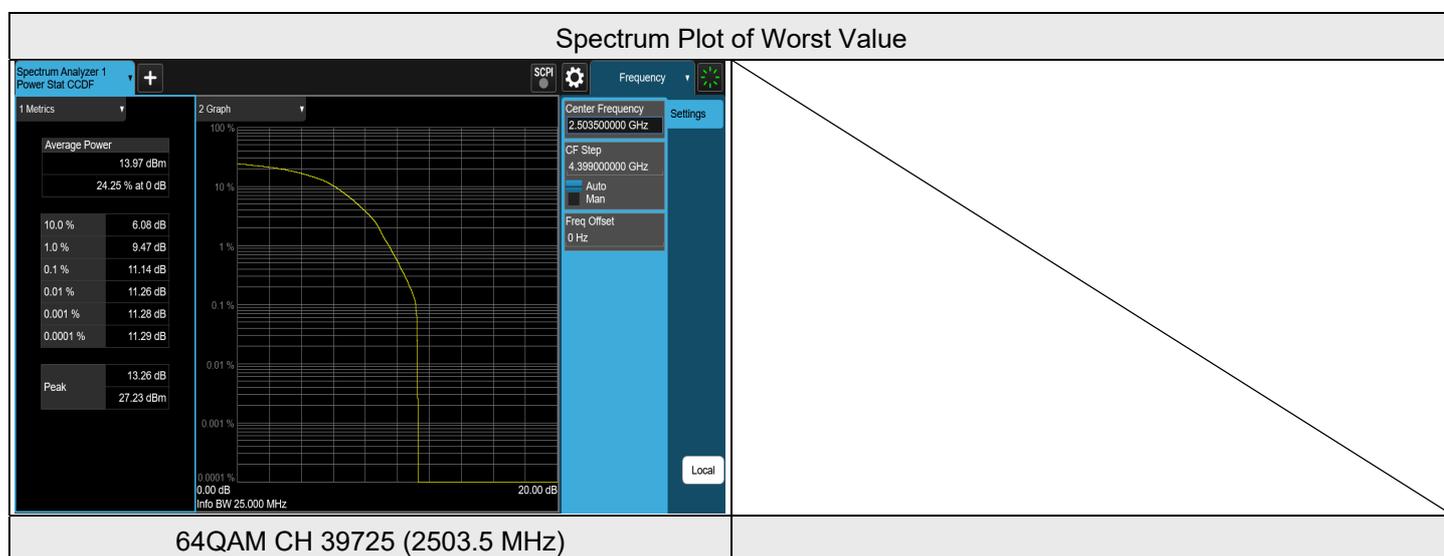
LTE Band 41, Channel Bandwidth: 10 MHz

Modulation	Channel	Frequency (MHz)	Measurement Value(dB)	Limit (dB)	Result
QPSK	39700	2501	8.00	13	PASS
QPSK	40620	2593	7.73	13	PASS
QPSK	41540	2685	8.55	13	PASS
16QAM	39700	2501	8.71	13	PASS
16QAM	40620	2593	8.79	13	PASS
16QAM	41540	2685	8.92	13	PASS
64QAM	39700	2501	9.73	13	PASS
64QAM	40620	2593	9.92	13	PASS
64QAM	41540	2685	10.00	13	PASS



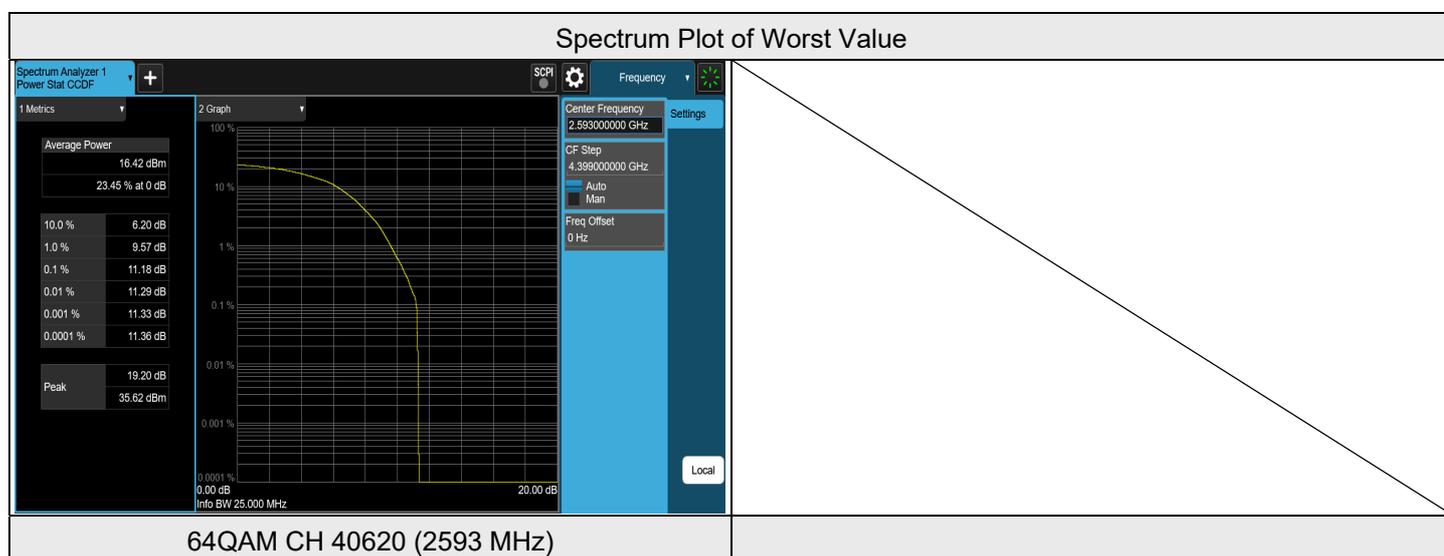
LTE Band 41, Channel Bandwidth: 15 MHz

Modulation	Channel	Frequency (MHz)	Measurement Value(dB)	Limit (dB)	Result
QPSK	39725	2503.5	7.77	13	PASS
QPSK	40620	2593	8.81	13	PASS
QPSK	41515	2682.5	9.66	13	PASS
16QAM	39725	2503.5	7.55	13	PASS
16QAM	40620	2593	9.62	13	PASS
16QAM	41515	2682.5	9.39	13	PASS
64QAM	39725	2503.5	11.14	13	PASS
64QAM	40620	2593	9.43	13	PASS
64QAM	41515	2682.5	10.73	13	PASS



LTE Band 41, Channel Bandwidth: 20 MHz

Modulation	Channel	Frequency (MHz)	Measurement Value(dB)	Limit (dB)	Result
QPSK	39750	2506	8.82	13	PASS
QPSK	40620	2593	7.78	13	PASS
QPSK	41490	2680	8.33	13	PASS
16QAM	39750	2506	10.43	13	PASS
16QAM	40620	2593	9.51	13	PASS
16QAM	41490	2680	10.24	13	PASS
64QAM	39750	2506	8.48	13	PASS
64QAM	40620	2593	11.18	13	PASS
64QAM	41490	2680	9.65	13	PASS



7.4 Bandwidth

Input Power:	3.89 Vdc	Environmental Conditions:	25°C, 65% RH	Tested By:	Noah Chang
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7.4.1 GSM 850

Modulation	Channel	Frequency (MHz)	Occupied Bandwidth (kHz)	26 dB Bandwidth (kHz)
GSM	128	824.2	246.98	313.4
GSM	189	836.4	245.57	316.5
GSM	251	848.8	245.01	317.5
GPRS	128	824.2	246.51	318.9
GPRS	189	836.4	245.88	317.0
GPRS	251	848.8	246.67	318.5

Spectrum Plot of Worst Value

