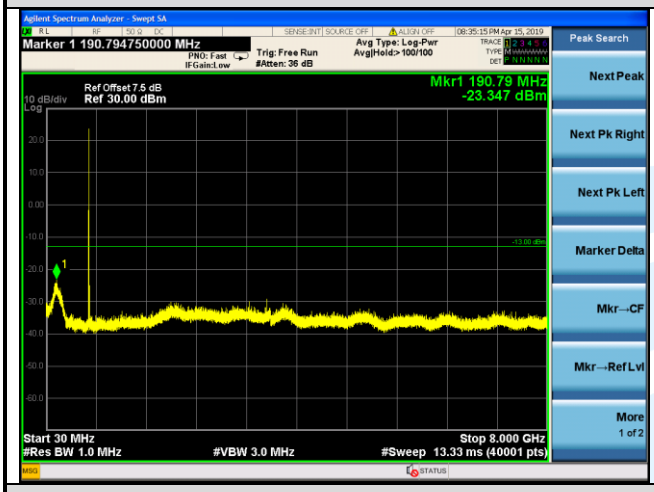
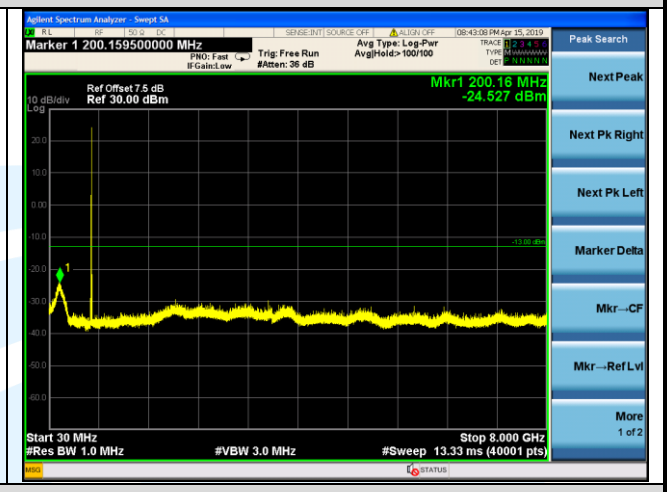
LTE Band 12_ Channel Bandwidth: 1.4 MHz	
QPSK	16QAM
Lowest Channel	
	
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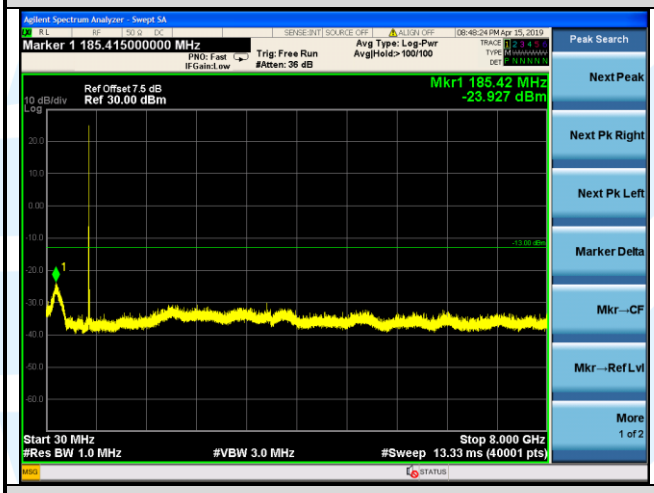
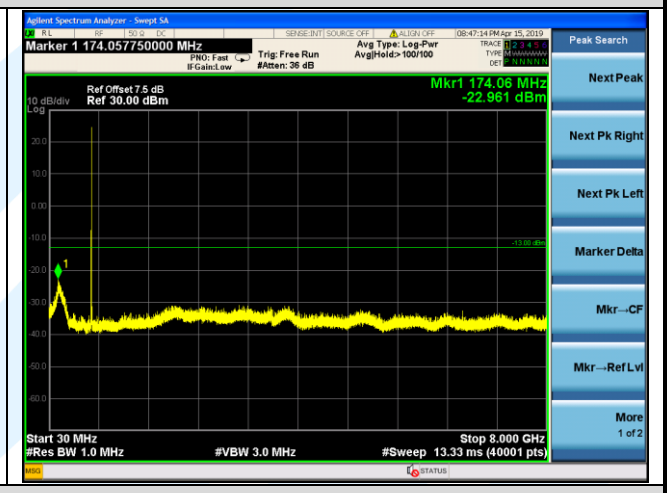
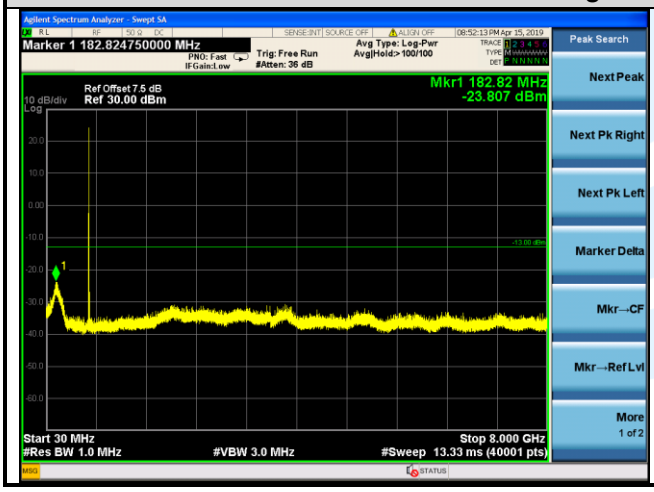
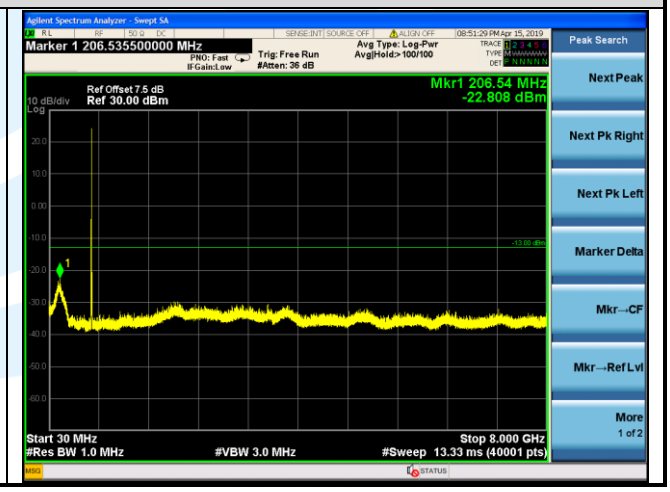
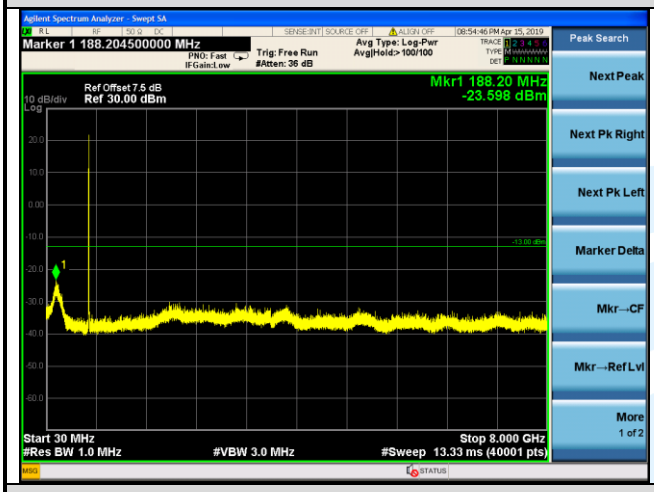
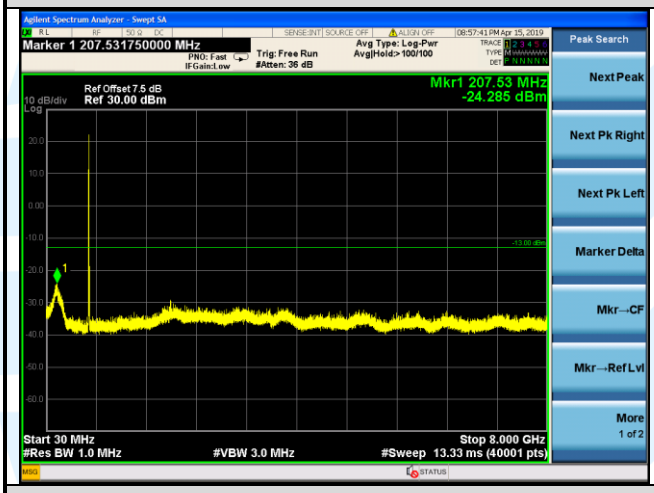
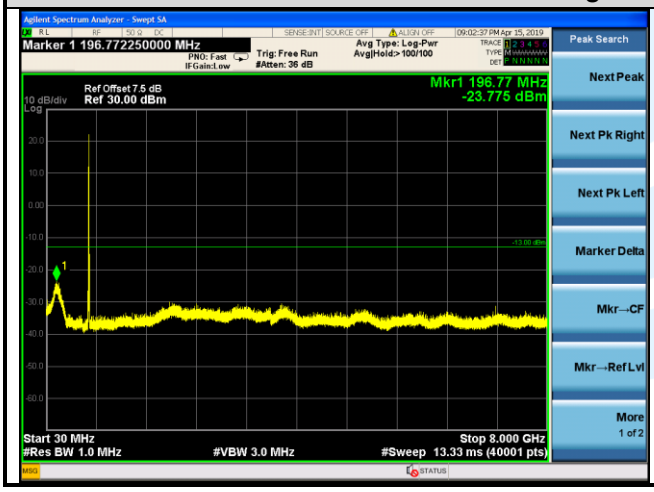
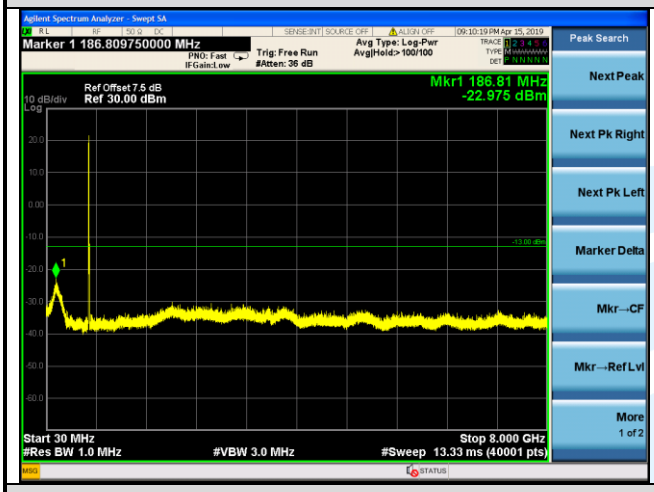
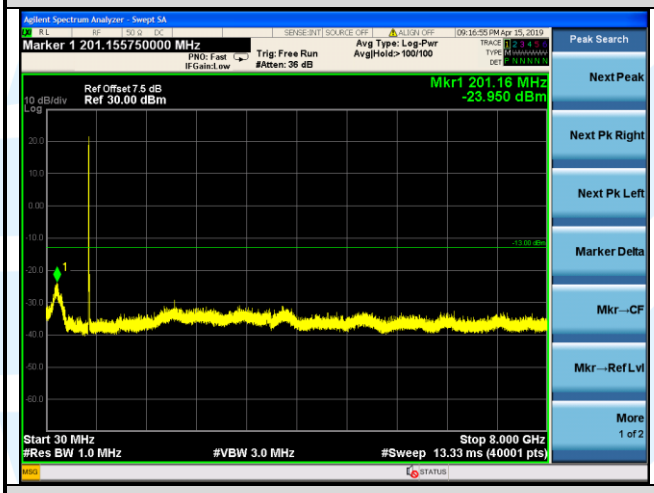
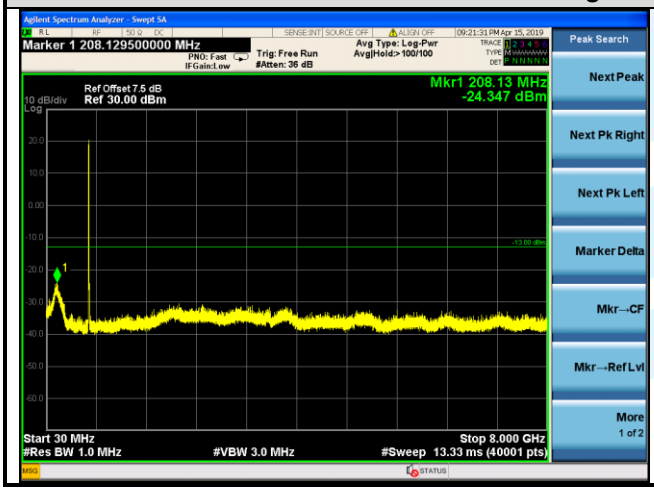
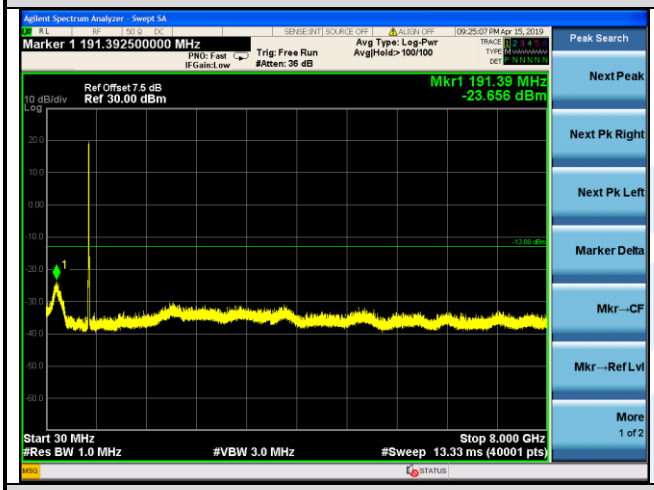
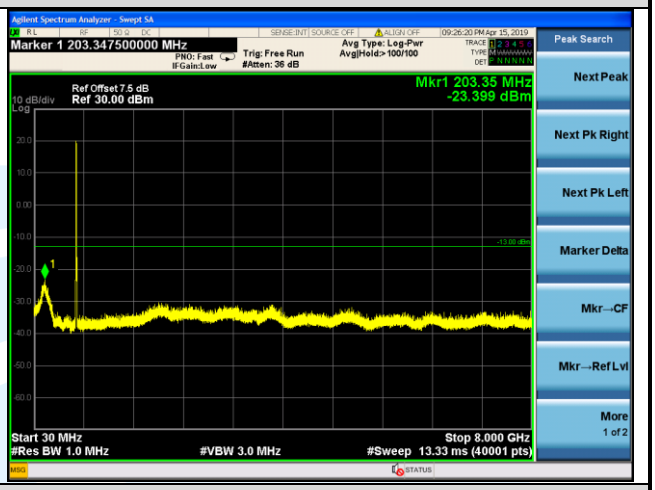
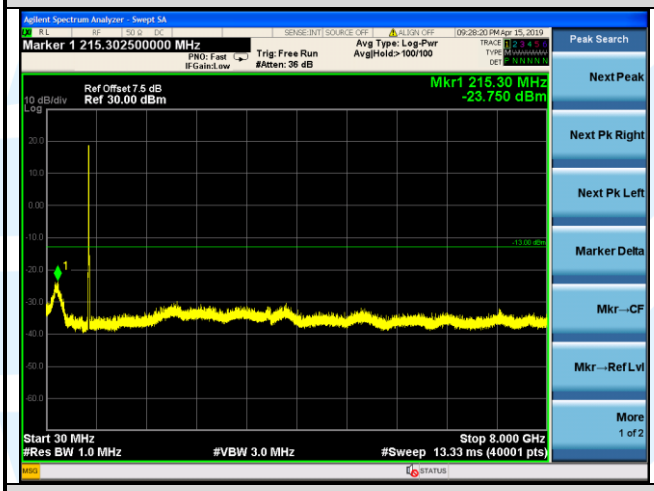
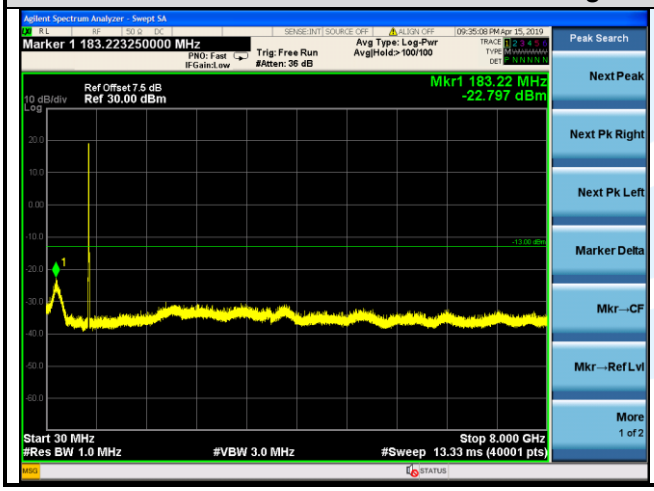
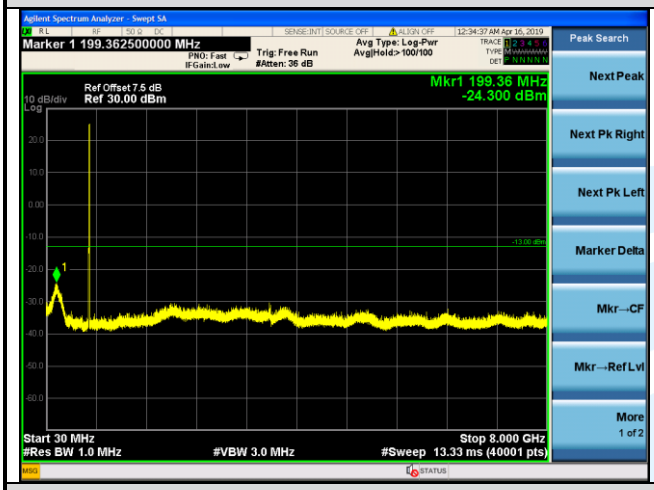
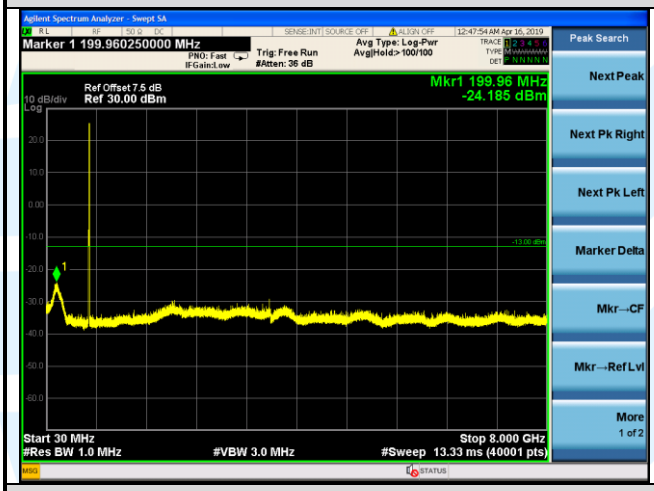
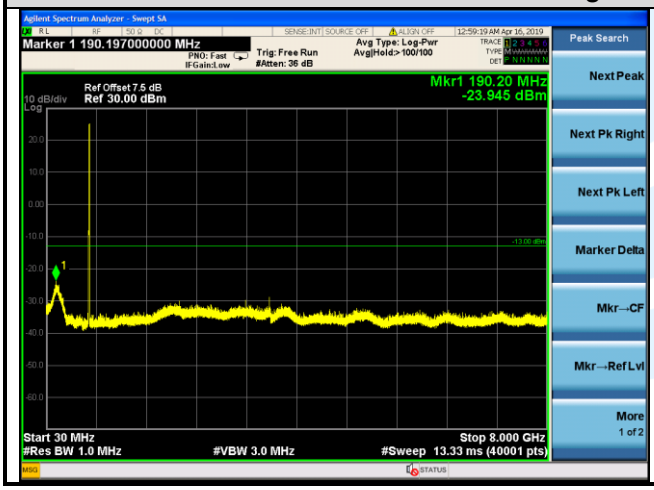
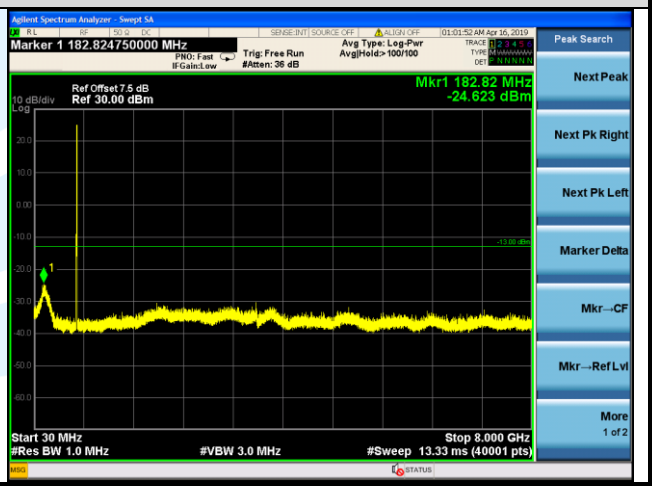
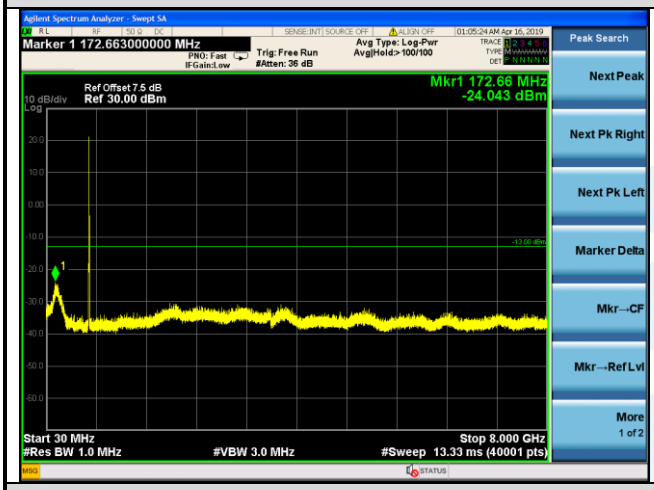
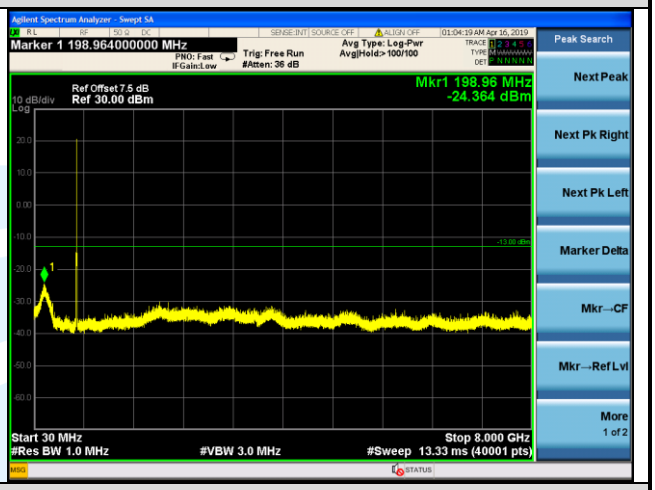
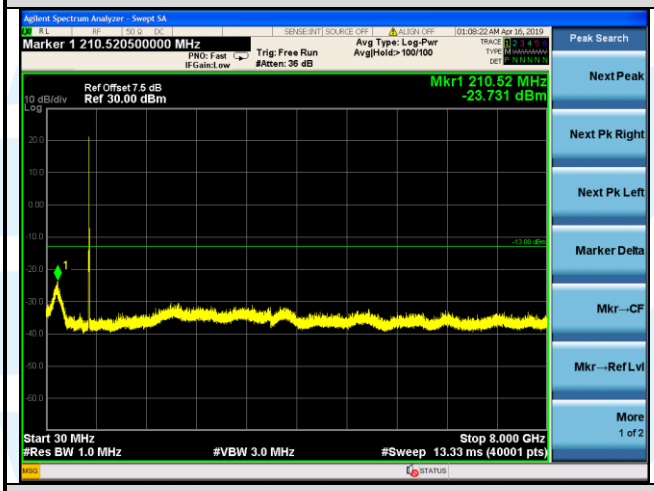
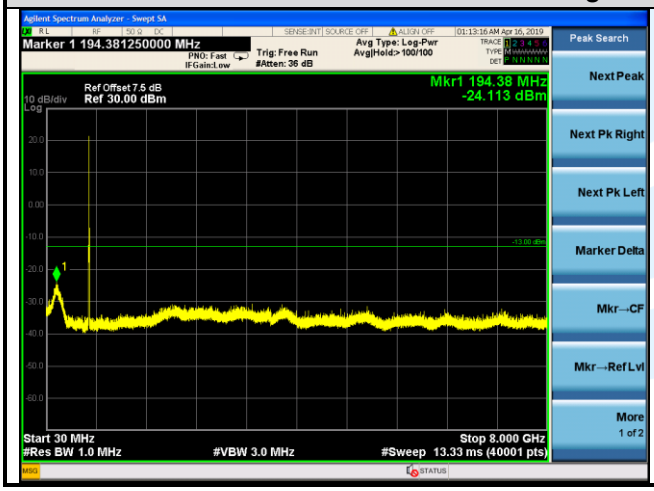
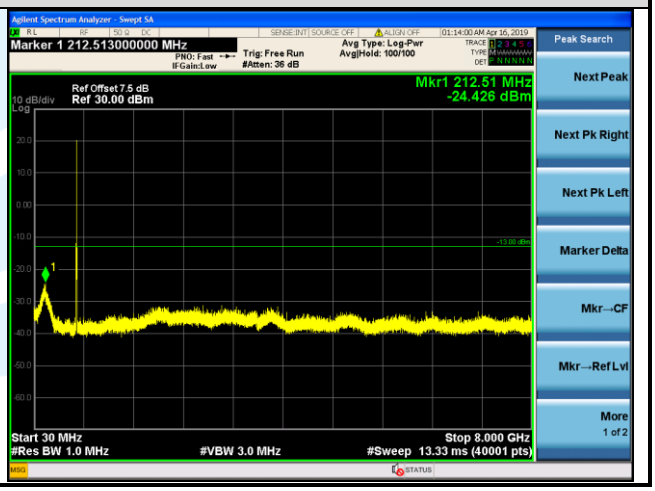
	
Highest Channel	
	

LTE Band 12_ Channel Bandwidth: 3 MHz	
QPSK	16QAM
Lowest Channel	
	
Middle Channel	
	
Highest Channel	
	

LTE Band 12_ Channel Bandwidth: 5 MHz	
QPSK	16QAM
Lowest Channel	
	
Middle Channel	
	
Highest Channel	
	

LTE Band 12_ Channel Bandwidth: 10 MHz	
QPSK	16QAM
Lowest Channel	
	
Middle Channel	
	
Highest Channel	
	

LTE Band 17_ Channel Bandwidth: 5 MHz	
QPSK	16QAM
Lowest Channel	
	
Middle Channel	
	
Highest Channel	
	

LTE Band 17_ Channel Bandwidth: 10 MHz	
QPSK	16QAM
Lowest Channel	
	
Middle Channel	
	
Highest Channel	
	

5.8 FIELD STRENGTH OF SPURIOUS RADIATION

Test Requirement: FCC 47 CFR Part 2.1051,
GSM 850 & WCDMA Band V & LTE Band 5: FCC 47 CFR Part 22.917(a)(b),
GSM 1900 & WCDMA Band II & LTE Band 2: FCC 47 CFR Part 24.238(a)(b),
WCDMA Band IV & LTE Band 4: FCC 47 CFR Part 27.53(h)(1),
LTE Band 12 & Band 17: FCC 47 CFR Part 27.53(g)
LTE Band 7: FCC 47 CFR Part 27.53(m)(4)

Test Method: ANSI/TIA-603-E-2016 & KDB 971168 D01v03r01

Receiver Setup:

Frequency	Detector	RBW	VBW	Remark
0.009 MHz-30 MHz	Peak	10 kHz	30 KHz	Peak
30 MHz-1 GHz	Quasi-peak	120 kHz	300 KHz	Peak
Above 1 GHz	Peak	1 MHz	3 MHz	Peak

Limits:

FCC 47 CFR Part 22 & FCC 47 CFR Part 24: 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.

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.

FCC 47 CFR Part 27.53(h)(1): Except as otherwise specified below, for operations in the 1695-1710 MHz, 1710-1755 MHz, 1755-1780 MHz, 1915-1920 MHz, 1995-2000 MHz, 2000-2020 MHz, 2110-2155 MHz, 2155-2180 MHz, and 2180-2200 bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least 43 + 10 log10 (P) dB. The emission limit equal to –13 dBm.

FCC 47 CFR Part 27.53(m)(4): For mobile digital stations, the attenuation factor shall be not less than 40 + 10 log (P) dB on all frequencies between the channel edge and 5 megahertz from the channel edge, 43 + 10 log (P) dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and 55 + 10 log (P) dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less that 43 + 10 log (P) dB on all frequencies between 2490.5 MHz and 2496 MHz and 55 + 10 log (P) dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.

Test Setup: Refer to section 4.2.1 for details.

Test Procedures:

1. Scan up to 10th harmonic, find the maximum radiation frequency to measure.
2. The technique used to find the Spurious Emissions of the transmitter was the antenna substitution method. Substitution method was performed to determine the actual ERP/EIRP emission levels of the EUT.

Test procedure as below:

1) The EUT was powered ON and placed on a 0.8/1.5m high table at a 3 meter semi/fully Anechoic Chamber. The antenna of the transmitter was extended to its maximum length. Modulation mode and the measuring receiver shall be tuned to the frequency of the transmitter under test.
2) The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
3) The disturbance of the transmitter was maximized on the test receiver display by raising and lowering from 1m to 4m the receive antenna and by rotating through 360° the turntable. After the fundamental emission was maximized, a field strength measurement was made.
4) Steps 1) to 3) were performed with the EUT and the receive antenna in both vertical and horizontal polarization.
5) The transmitter was then removed and replaced with another antenna. The center of the antenna was

approximately at the same location as the center of the transmitter.

6) A signal at the disturbance was fed to the substitution antenna by means of a non-radiating cable. With both the substitution and the receive antennas horizontally polarized, the receive antenna was raised and lowered to obtain a maximum reading at the test receiver. The level of the signal generator was adjusted until the measured field strength level in step 3) is obtained for this set of conditions.
7) The output power into the substitution antenna was then measured.
8) Steps 6) and 7) were repeated with both antennas polarized.
9) Calculate power in dBm by the following formula:

ERP(dBm) = Pg(dBm) – cable loss (dB) + antenna gain (dBd)
EIRP(dBm) = Pg(dBm) – cable loss (dB) + antenna gain (dBi)
EIRP=ERP+2.15dB

where:
Pg is the generator output power into the substitution antenna.

10) Test the EUT in the lowest channel, the middle channel the Highest channel
11) The radiation measurements are performed in X, Y, Z axis positioning for EUT operation mode, and found the Y axis positioning which it is worse case.
12) Repeat above procedures until all frequencies measured was complete.

Equipment Used: Refer to section 3 for details.

Test Result: Pass

The measurement data as follows:

5.8.1 Radiated Emission Test Data (30 MHz to 1 GHz)

GSM 850 1Tx-slot_Lowest Channel

Horizontal

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	41.448	-90.54	27.73	-62.81	-13.00	-49.81	Peak
2	238.463	-90.57	29.14	-61.43	-13.00	-48.43	Peak
3	586.217	-88.93	36.97	-51.96	-13.00	-38.96	Peak

Vertical

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	31.735	-91.77	33.29	-58.48	-13.00	-45.48	Peak
2	148.917	-88.85	26.96	-61.89	-13.00	-48.89	Peak
3	602.929	-88.30	37.69	-50.61	-13.00	-37.61	Peak

GSM 850 1Tx-slot_Middle Channel

Horizontal

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	34.045	-91.23	31.29	-59.94	-13.00	-46.94	Peak
2	240.144	-88.00	29.30	-58.70	-13.00	-45.70	Peak
3	698.804	-87.68	39.12	-48.56	-13.00	-35.56	Peak

Vertical

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	32.640	-91.59	32.53	-59.06	-13.00	-46.06	Peak
2	170.189	-88.93	27.51	-61.42	-13.00	-48.42	Peak
3	804.252	-86.99	40.30	-46.69	-13.00	-33.69	Peak

GSM 850 1Tx-slot_Highest Channel

Horizontal

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	31.292	-91.11	33.59	-57.52	-13.00	-44.52	Peak
2	112.427	-89.51	26.77	-62.74	-13.00	-49.74	Peak
3	633.328	-88.44	38.07	-50.37	-13.00	-37.37	Peak

Vertical

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	30.639	-90.03	34.04	-55.99	-13.00	-42.99	Peak
2	95.649	-89.05	26.37	-62.68	-13.00	-49.68	Peak
3	598.707	-89.04	37.55	-51.49	-13.00	-38.49	Peak

GSM 1900 1Tx-slot_Lowest Channel

Horizontal

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	38.636	-75.57	-0.08	-75.65	-13.00	-62.65	Peak
2	93.653	-74.86	-2.56	-77.42	-13.00	-64.42	Peak
3	693.910	-81.85	9.73	-72.12	-13.00	-59.12	Peak

Vertical

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	38.365	-64.17	0.05	-64.12	-13.00	-51.12	Peak
2	84.284	-69.45	-3.57	-73.02	-13.00	-60.02	Peak
3	881.184	-75.83	12.30	-63.53	-13.00	-50.53	Peak

GSM 1900 1Tx-slot_Middle Channel

Horizontal

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	31.959	-77.51	4.28	-73.23	-13.00	-60.23	Peak
2	92.997	-74.01	-2.65	-76.66	-13.00	-63.66	Peak
3	881.184	-79.99	12.30	-67.69	-13.00	-54.69	Peak

Vertical

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	39.182	-68.92	-0.35	-69.27	-13.00	-56.27	Peak
2	92.997	-69.19	-2.65	-71.84	-13.00	-58.84	Peak
3	881.184	-76.95	12.30	-64.65	-13.00	-51.65	Peak

GSM 1900 1Tx-slot_Highest Channel

Horizontal

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	31.959	-78.97	4.28	-74.69	-13.00	-61.69	Peak
2	39.182	-74.75	-0.35	-75.10	-13.00	-62.10	Peak
3	51.900	-72.66	-3.71	-76.37	-13.00	-63.37	Peak

Vertical

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	31.959	-78.97	4.28	-74.69	-13.00	-61.69	Peak
2	39.182	-74.75	-0.35	-75.10	-13.00	-62.10	Peak
3	51.900	-72.66	-3.71	-76.37	-13.00	-63.37	Peak

WCDMA Band II RMC 12.2Kbps_Lowest Channel

Horizontal

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	31.513	-78.54	4.59	-73.95	-13.00	-60.95	Peak
2	183.866	-79.11	-0.30	-79.41	-13.00	-66.41	Peak
3	856.760	-80.32	11.83	-68.49	-13.00	-55.49	Peak

Vertical

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	51.900	-74.67	-3.71	-78.38	-13.00	-65.38	Peak
2	74.793	-75.22	-3.71	-78.93	-13.00	-65.93	Peak
3	862.802	-80.59	11.95	-68.64	-13.00	-55.64	Peak

WCDMA Band II RMC 12.2Kbps_Middle Channel

Horizontal

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	54.135	-71.81	-4.18	-75.99	-13.00	-62.99	Peak
2	302.819	-79.22	2.39	-76.83	-13.00	-63.83	Peak
3	689.051	-81.02	9.59	-71.43	-13.00	-58.43	Peak

Vertical

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	52.634	-77.25	-3.85	-81.10	-13.00	-68.10	Peak
2	75.852	-77.42	-3.71	-81.13	-13.00	-68.13	Peak
3	713.692	-80.63	9.74	-70.89	-13.00	-57.89	Peak

WCDMA Band II RMC 12.2Kbps_Highest Channel

Horizontal

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	53.379	-71.87	-4.01	-75.88	-13.00	-62.88	Peak
2	236.793	-80.09	0.75	-79.34	-13.00	-66.34	Peak
3	815.635	-80.72	11.05	-69.67	-13.00	-56.67	Peak

Vertical

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	31.959	-80.30	4.28	-76.02	-13.00	-63.02	Peak
2	86.080	-78.08	-3.42	-81.50	-13.00	-68.50	Peak
3	938.714	-80.84	13.75	-67.09	-13.00	-54.09	Peak

WCDMA Band IV RMC 12.2Kbps_Lowest Channel

Horizontal

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	47.703	-71.29	-3.46	-74.75	-13.00	-61.75	Peak
2	296.502	-78.38	2.53	-75.85	-13.00	-62.85	Peak
3	912.695	-80.06	13.22	-66.84	-13.00	-53.84	Peak

Vertical

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	35.762	-79.16	1.35	-77.81	-13.00	-64.81	Peak
2	243.543	-79.52	1.10	-78.42	-13.00	-65.42	Peak
3	912.695	-80.06	13.22	-66.84	-13.00	-53.84	Peak

WCDMA Band IV RMC 12.2Kbps_Middle Channel

Horizontal

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	47.703	-72.07	-3.46	-75.53	-13.00	-62.53	Peak
2	101.893	-77.32	-2.15	-79.47	-13.00	-66.47	Peak
3	875.013	-81.59	12.18	-69.41	-13.00	-56.41	Peak

Vertical

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	54.135	-70.33	-4.18	-74.51	-13.00	-61.51	Peak
2	101.893	-77.32	-2.15	-79.47	-13.00	-66.47	Peak
3	887.398	-79.99	12.33	-67.66	-13.00	-54.66	Peak

WCDMA Band IV RMC 12.2Kbps_Highest Channel

Horizontal

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	52.634	-70.91	-3.85	-74.76	-13.00	-61.76	Peak
2	163.162	-78.65	-0.87	-79.52	-13.00	-66.52	Peak
3	754.963	-80.11	10.57	-69.54	-13.00	-56.54	Peak

Vertical

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	47.703	-72.07	-3.46	-75.53	-13.00	-62.53	Peak
2	200.043	-77.71	-0.63	-78.34	-13.00	-65.34	Peak
3	624.490	-79.88	8.76	-71.12	-13.00	-58.12	Peak

WCDMA Band V RMC 12.2Kbps_Lowest Channel

Horizontal

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	31.292	-90.68	33.59	-57.09	-13.00	-44.09	Peak
2	128.486	-88.95	26.59	-62.36	-13.00	-49.36	Peak
3	723.793	-88.38	39.08	-49.30	-13.00	-36.30	Peak

Vertical

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	31.292	-92.02	33.59	-58.43	-13.00	-45.43	Peak
2	177.518	-89.10	27.88	-61.22	-13.00	-48.22	Peak
3	689.051	-87.49	38.83	-48.66	-13.00	-35.66	Peak

WCDMA Band V RMC 12.2Kbps_Middle Channel

Horizontal

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	51.536	-89.08	25.09	-63.99	-13.00	-50.99	Peak
2	148.917	-88.57	26.96	-61.61	-13.00	-48.61	Peak
3	439.473	-89.34	34.14	-55.20	-13.00	-42.20	Peak

Vertical

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	46.708	-90.65	25.56	-65.09	-13.00	-52.09	Peak
2	108.546	-88.75	26.60	-62.15	-13.00	-49.15	Peak
3	403.934	-87.88	33.34	-54.54	-13.00	-41.54	Peak

WCDMA Band V RMC 12.2Kbps_Highest Channel

Horizontal

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	32.411	-90.02	32.74	-57.28	-13.00	-44.28	Peak
2	288.284	-89.16	30.45	-58.71	-13.00	-45.71	Peak
3	723.793	-86.74	39.08	-47.66	-13.00	-34.66	Peak

Vertical

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	31.073	-91.67	33.74	-57.93	-13.00	-44.93	Peak
2	151.025	-88.10	27.01	-61.09	-13.00	-48.09	Peak
3	698.804	-87.84	39.12	-48.72	-13.00	-35.72	Peak

LTE Band 2/ 1.4 MHz _Lowest Channel

Horizontal

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	53.756	-73.41	-4.11	-77.52	-13.00	-64.52	Peak
2	140.777	-75.84	-1.48	-77.32	-13.00	-64.32	Peak
3	620.117	-80.15	8.71	-71.44	-13.00	-58.44	Peak

Vertical

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	89.158	-70.38	-3.09	-73.47	-13.00	-60.47	Peak
2	113.220	-73.72	-1.88	-75.60	-13.00	-62.60	Peak
3	140.777	-72.55	-1.48	-74.03	-13.00	-61.03	Peak

LTE Band 2/ 1.4 MHz _Middle Channel

Horizontal

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	47.703	-74.20	-3.46	-77.66	-13.00	-64.66	Peak
2	140.777	-77.26	-1.48	-78.74	-13.00	-65.74	Peak
3	765.648	-80.65	10.79	-69.86	-13.00	-56.86	Peak

Vertical

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	88.534	-71.39	-3.17	-74.56	-13.00	-61.56	Peak
2	113.220	-72.50	-1.88	-74.38	-13.00	-61.38	Peak
3	140.777	-73.67	-1.48	-75.15	-13.00	-62.15	Peak

LTE Band 2/ 1.4 MHz _Highest Channel

Horizontal

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	47.369	-73.62	-3.39	-77.01	-13.00	-64.01	Peak
2	114.822	-75.68	-1.87	-77.55	-13.00	-64.55	Peak
3	140.777	-74.03	-1.48	-75.51	-13.00	-62.51	Peak

Vertical

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	89.787	-68.51	-3.03	-71.54	-13.00	-58.54	Peak
2	113.220	-74.46	-1.88	-76.34	-13.00	-63.34	Peak
3	137.840	-74.89	-1.76	-76.65	-13.00	-63.65	Peak

LTE Band 2/ 3 MHz _Lowest Channel

Horizontal

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	39.459	-73.19	-0.47	-73.66	-13.00	-60.66	Peak
2	47.703	-73.05	-3.46	-76.51	-13.00	-63.51	Peak
3	137.840	-74.86	-1.76	-76.62	-13.00	-63.62	Peak

Vertical

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	89.158	-68.06	-3.09	-71.15	-13.00	-58.15	Peak
2	112.427	-73.19	-1.89	-75.08	-13.00	-62.08	Peak
3	138.812	-73.74	-1.62	-75.36	-13.00	-62.36	Peak

LTE Band 2/ 3 MHz _Middle Channel

Horizontal

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	113.220	-76.76	-1.88	-78.64	-13.00	-65.64	Peak
2	140.777	-74.15	-1.48	-75.63	-13.00	-62.63	Peak
3	693.910	-80.70	9.73	-70.97	-13.00	-57.97	Peak

Vertical

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	89.158	-73.56	-3.09	-76.65	-13.00	-63.65	Peak
2	114.018	-75.08	-1.87	-76.95	-13.00	-63.95	Peak
3	140.777	-75.31	-1.48	-76.79	-13.00	-63.79	Peak

LTE Band 2/ 3 MHz _Highest Channel

Horizontal

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	51.900	-72.78	-3.71	-76.49	-13.00	-63.49	Peak
2	113.220	-75.76	-1.88	-77.64	-13.00	-64.64	Peak
3	139.791	-73.51	-1.51	-75.02	-13.00	-62.02	Peak

Vertical

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	88.534	-70.60	-3.17	-73.77	-13.00	-60.77	Peak
2	114.018	-72.39	-1.87	-74.26	-13.00	-61.26	Peak
3	138.812	-74.58	-1.62	-76.20	-13.00	-63.20	Peak

LTE Band 2/ 5 MHz _Lowest Channel

Horizontal

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	113.220	-75.00	-1.88	-76.88	-13.00	-63.88	Peak
2	140.777	-72.71	-1.48	-74.19	-13.00	-61.19	Peak
3	821.387	-80.12	11.13	-68.99	-13.00	-55.99	Peak

Vertical

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	89.787	-69.98	-3.03	-73.01	-13.00	-60.01	Peak
2	113.220	-72.91	-1.88	-74.79	-13.00	-61.79	Peak
3	140.777	-74.15	-1.48	-75.63	-13.00	-62.63	Peak

LTE Band 2/ 5 MHz _Middle Channel

Horizontal

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	47.703	-73.01	-3.46	-76.47	-13.00	-63.47	Peak
2	140.777	-72.74	-1.48	-74.22	-13.00	-61.22	Peak
3	912.695	-81.68	13.22	-68.46	-13.00	-55.46	Peak

Vertical

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	89.158	-69.08	-3.09	-72.17	-13.00	-59.17	Peak
2	115.632	-74.85	-1.91	-76.76	-13.00	-63.76	Peak
3	140.777	-74.12	-1.48	-75.60	-13.00	-62.60	Peak

LTE Band 2/ 5 MHz _Highest Channel

Horizontal

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	138.812	-72.24	-1.62	-73.86	-13.00	-60.86	Peak
2	527.571	-79.57	6.54	-73.03	-13.00	-60.03	Peak
3	919.132	-81.49	13.49	-68.00	-13.00	-55.00	Peak

Vertical

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	88.534	-69.65	-3.17	-72.82	-13.00	-59.82	Peak
2	114.018	-73.30	-1.87	-75.17	-13.00	-62.17	Peak
3	602.929	-80.14	8.42	-71.72	-13.00	-58.72	Peak

LTE Band 2/ 10 MHz _Lowest Channel

Horizontal

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	50.461	-73.08	-3.79	-76.87	-13.00	-63.87	Peak
2	138.812	-73.60	-1.62	-75.22	-13.00	-62.22	Peak
3	787.475	-80.83	10.98	-69.85	-13.00	-56.85	Peak

Vertical

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	89.158	-69.05	-3.09	-72.14	-13.00	-59.14	Peak
2	113.220	-72.95	-1.88	-74.83	-13.00	-61.83	Peak
3	138.812	-72.91	-1.62	-74.53	-13.00	-61.53	Peak

LTE Band 2/ 10 MHz _Middle Channel

Horizontal

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	47.703	-72.92	-3.46	-76.38	-13.00	-63.38	Peak
2	138.812	-73.25	-1.62	-74.87	-13.00	-61.87	Peak
3	938.714	-80.71	13.75	-66.96	-13.00	-53.96	Peak

Vertical

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	89.787	-68.50	-3.03	-71.53	-13.00	-58.53	Peak
2	114.018	-72.55	-1.87	-74.42	-13.00	-61.42	Peak
3	138.812	-74.98	-1.62	-76.60	-13.00	-63.60	Peak

LTE Band 2/ 10 MHz _Highest Channel

Horizontal

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	113.220	-75.92	-1.88	-77.80	-13.00	-64.80	Peak
2	137.840	-72.14	-1.76	-73.90	-13.00	-60.90	Peak
3	899.958	-81.08	12.79	-68.29	-13.00	-55.29	Peak

Vertical

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	80.238	-71.95	-3.76	-75.71	-13.00	-62.71	Peak
2	89.158	-68.46	-3.09	-71.55	-13.00	-58.55	Peak
3	113.220	-72.49	-1.88	-74.37	-13.00	-61.37	Peak

LTE Band 2/ 15 MHz _Lowest Channel

Horizontal

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	47.703	-72.82	-3.46	-76.28	-13.00	-63.28	Peak
2	113.220	-75.54	-1.88	-77.42	-13.00	-64.42	Peak
3	138.812	-73.06	-1.62	-74.68	-13.00	-61.68	Peak

Vertical

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	91.057	-72.83	-2.88	-75.71	-13.00	-62.71	Peak
2	114.822	-74.76	-1.87	-76.63	-13.00	-63.63	Peak
3	138.812	-73.78	-1.62	-75.40	-13.00	-62.40	Peak

LTE Band 2/ 15 MHz _Middle Channel

Horizontal

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	113.220	-74.75	-1.88	-76.63	-13.00	-63.63	Peak
2	138.812	-71.40	-1.62	-73.02	-13.00	-60.02	Peak
3	925.613	-81.50	13.54	-67.96	-13.00	-54.96	Peak

Vertical

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	89.787	-68.33	-3.03	-71.36	-13.00	-58.36	Peak
2	113.220	-73.85	-1.88	-75.73	-13.00	-62.73	Peak
3	138.812	-75.06	-1.62	-76.68	-13.00	-63.68	Peak

LTE Band 2/ 15 MHz _Highest Channel

Horizontal

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	47.703	-72.94	-3.46	-76.40	-13.00	-63.40	Peak
2	137.840	-72.68	-1.76	-74.44	-13.00	-61.44	Peak
3	868.886	-80.54	12.03	-68.51	-13.00	-55.51	Peak

Vertical

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	79.676	-73.03	-3.77	-76.80	-13.00	-63.80	Peak
2	115.632	-73.20	-1.91	-75.11	-13.00	-62.11	Peak
3	925.613	-81.49	13.54	-67.95	-13.00	-54.95	Peak

LTE Band 2/ 20 MHz _Lowest Channel

Horizontal

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	114.822	-75.80	-1.87	-77.67	-13.00	-64.67	Peak
2	138.812	-73.21	-1.62	-74.83	-13.00	-61.83	Peak
3	793.028	-80.93	11.07	-69.86	-13.00	-56.86	Peak

Vertical

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	89.787	-68.04	-3.03	-71.07	-13.00	-58.07	Peak
2	114.822	-73.49	-1.87	-75.36	-13.00	-62.36	Peak
3	138.812	-73.49	-1.62	-75.11	-13.00	-62.11	Peak

LTE Band 2/ 20 MHz _Middle Channel

Horizontal

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	50.461	-72.07	-3.79	-75.86	-13.00	-62.86	Peak
2	140.777	-72.69	-1.48	-74.17	-13.00	-61.17	Peak
3	965.474	-81.60	14.12	-67.48	-13.00	-54.48	Peak

Vertical

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	89.787	-69.07	-3.03	-72.10	-13.00	-59.10	Peak
2	113.220	-72.89	-1.88	-74.77	-13.00	-61.77	Peak
3	138.812	-74.24	-1.62	-75.86	-13.00	-62.86	Peak

LTE Band 2/ 20 MHz _Highest Channel

Horizontal

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	47.703	-74.03	-3.46	-77.49	-13.00	-64.49	Peak
2	138.812	-74.86	-1.62	-76.48	-13.00	-63.48	Peak
3	744.427	-80.39	10.20	-70.19	-13.00	-57.19	Peak

Vertical

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	89.158	-69.74	-3.09	-72.83	-13.00	-59.83	Peak
2	114.822	-73.35	-1.87	-75.22	-13.00	-62.22	Peak
3	945.334	-80.70	13.67	-67.03	-13.00	-54.03	Peak

LTE Band 4/ 1.4 MHz _Lowest Channel

Horizontal

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	114.822	-75.17	-1.87	-77.04	-13.00	-64.04	Peak
2	137.840	-73.74	-1.76	-75.50	-13.00	-62.50	Peak
3	734.037	-80.26	10.06	-70.20	-13.00	-57.20	Peak

Vertical

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	89.158	-69.26	-3.09	-72.35	-13.00	-59.35	Peak
2	114.018	-73.89	-1.87	-75.76	-13.00	-62.76	Peak
3	137.840	-75.72	-1.76	-77.48	-13.00	-64.48	Peak

LTE Band 4/ 1.4 MHz _Middle Channel

Horizontal

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	50.108	-73.81	-3.80	-77.61	-13.00	-64.61	Peak
2	69.230	-73.08	-4.11	-77.19	-13.00	-64.19	Peak
3	140.777	-75.08	-1.48	-76.56	-13.00	-63.56	Peak

Vertical

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	90.420	-68.34	-2.96	-71.30	-13.00	-58.30	Peak
2	114.822	-74.20	-1.87	-76.07	-13.00	-63.07	Peak
3	628.894	-79.02	8.82	-70.20	-13.00	-57.20	Peak

LTE Band 4/ 1.4 MHz _Highest Channel

Horizontal

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	62.304	-69.42	-4.69	-74.11	-13.00	-61.11	Peak
2	139.791	-71.40	-1.51	-72.91	-13.00	-59.91	Peak
3	474.791	-80.27	5.53	-74.74	-13.00	-61.74	Peak

Vertical

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	56.466	-74.61	-4.46	-79.07	-13.00	-66.07	Peak
2	89.158	-69.67	-3.09	-72.76	-13.00	-59.76	Peak
3	115.632	-74.03	-1.91	-75.94	-13.00	-62.94	Peak

LTE Band 4/ 3 MHz _Lowest Channel

Horizontal

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	50.108	-73.81	-3.80	-77.61	-13.00	-64.61	Peak
2	140.777	-75.08	-1.48	-76.56	-13.00	-63.56	Peak
3	703.731	-80.22	9.86	-70.36	-13.00	-57.36	Peak

Vertical

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	89.158	-68.62	-3.09	-71.71	-13.00	-54.39	Peak
2	114.822	-73.20	-1.87	-75.07	-13.00	-49.90	Peak
3	899.958	-80.38	12.79	-67.59	-13.00	-48.17	Peak

LTE Band 4/ 3 MHz _Middle Channel

Horizontal

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	117.269	-72.11	-1.99	-74.10	-13.00	-61.10	Peak
2	137.840	-71.74	-1.76	-73.50	-13.00	-60.50	Peak
3	679.435	-77.47	9.55	-67.92	-13.00	-54.92	Peak

Vertical

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	89.158	-64.26	-3.09	-67.35	-13.00	-54.35	Peak
2	114.018	-70.89	-1.87	-72.76	-13.00	-59.76	Peak
3	468.165	-79.36	5.43	-73.93	-13.00	-60.93	Peak

LTE Band 4/ 3 MHz _Highest Channel

Horizontal

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	50.461	-71.67	-3.79	-75.46	-13.00	-62.46	Peak
2	62.304	-70.89	-4.69	-75.58	-13.00	-62.58	Peak
3	115.632	-72.90	-1.91	-74.81	-13.00	-61.81	Peak

Vertical

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	54.135	-72.96	-4.18	-77.14	-13.00	-64.14	Peak
2	88.534	-71.89	-3.17	-75.06	-13.00	-62.06	Peak
3	114.018	-72.60	-1.87	-74.47	-13.00	-61.47	Peak

LTE Band 4/ 5 MHz _Lowest Channel

Horizontal

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	114.822	-74.81	-1.87	-76.68	-13.00	-63.68	Peak
2	139.791	-73.40	-1.51	-74.91	-13.00	-61.91	Peak
3	787.475	-81.31	10.98	-70.33	-13.00	-57.33	Peak

Vertical

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	88.534	-69.30	-3.17	-72.47	-13.00	-59.47	Peak
2	115.632	-75.03	-1.91	-76.94	-13.00	-63.94	Peak
3	765.648	-80.65	10.79	-69.86	-13.00	-56.86	Peak

LTE Band 4/ 5 MHz _Middle Channel

Horizontal

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	116.448	-75.72	-1.94	-77.66	-13.00	-64.66	Peak
2	140.777	-74.06	-1.48	-75.54	-13.00	-62.54	Peak
3	798.620	-80.74	11.19	-69.55	-13.00	-56.55	Peak

Vertical

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	89.787	-70.14	-3.03	-73.17	-13.00	-60.17	Peak
2	111.640	-73.46	-1.89	-75.35	-13.00	-62.35	Peak
3	135.916	-75.35	-2.00	-77.35	-13.00	-64.35	Peak

LTE Band 4/ 5 MHz _Highest Channel

Horizontal

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	47.703	-71.71	-3.46	-75.17	-13.00	-62.17	Peak
2	69.230	-70.20	-4.11	-74.31	-13.00	-61.31	Peak
3	139.791	-72.27	-1.51	-73.78	-13.00	-60.78	Peak

Vertical

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	89.158	-72.19	-3.09	-75.28	-13.00	-62.28	Peak
2	139.791	-73.86	-1.51	-75.37	-13.00	-62.37	Peak
3	550.290	-81.05	6.70	-74.35	-13.00	-61.35	Peak

LTE Band 4/ 10 MHz _Lowest Channel

Horizontal

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	50.461	-71.67	-3.79	-75.46	-13.00	-62.46	Peak
2	138.812	-72.51	-1.62	-74.13	-13.00	-61.13	Peak
3	615.774	-80.06	8.66	-71.40	-13.00	-58.40	Peak

Vertical

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	89.158	-72.13	-3.09	-75.22	-13.00	-62.22	Peak
2	114.018	-72.60	-1.87	-74.47	-13.00	-61.47	Peak
3	138.812	-75.15	-1.62	-76.77	-13.00	-63.77	Peak

LTE Band 4/ 10 MHz _Middle Channel

Horizontal

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	47.703	-73.04	-3.46	-76.50	-13.00	-63.50	Peak
2	138.812	-73.67	-1.62	-75.29	-13.00	-62.29	Peak
3	958.714	-81.56	14.05	-67.51	-13.00	-54.51	Peak

Vertical

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	89.158	-69.17	-3.09	-72.26	-13.00	-59.26	Peak
2	114.018	-73.91	-1.87	-75.78	-13.00	-62.78	Peak
3	925.613	-81.44	13.54	-67.90	-13.00	-54.90	Peak

LTE Band 4/ 10 MHz _Highest Channel

Horizontal

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	106.281	-74.78	-2.31	-77.09	-13.00	-64.09	Peak
2	138.812	-74.43	-1.62	-76.05	-13.00	-63.05	Peak
3	611.462	-79.87	8.60	-71.27	-13.00	-58.27	Peak

Vertical

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	90.420	-71.15	-2.96	-74.11	-13.00	-61.11	Peak
2	113.220	-74.81	-1.88	-76.69	-13.00	-63.69	Peak
3	137.840	-74.55	-1.76	-76.31	-13.00	-63.31	Peak

LTE Band 4/ 15 MHz _Lowest Channel

Horizontal

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	47.703	-72.71	-3.46	-76.17	-13.00	-63.17	Peak
2	139.791	-72.27	-1.51	-73.78	-13.00	-60.78	Peak
3	562.014	-78.97	6.90	-72.07	-13.00	-59.07	Peak

Vertical

No.	Frequency (MHz)	Reading (dBm)	Correction factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	89.158	-69.19	-3.09	-72.28	-13.00	-59.28	Peak
2	112.427	-73.86	-1.89	-75.75	-13.00	-62.75	Peak
3	912.695	-80.43	13.22	-67.21	-13.00	-54.21	Peak