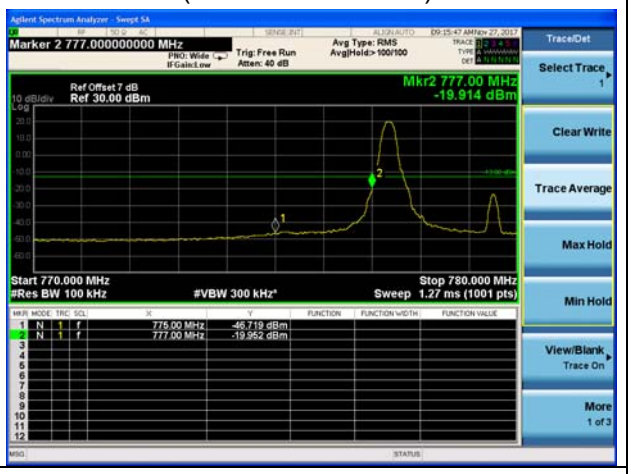
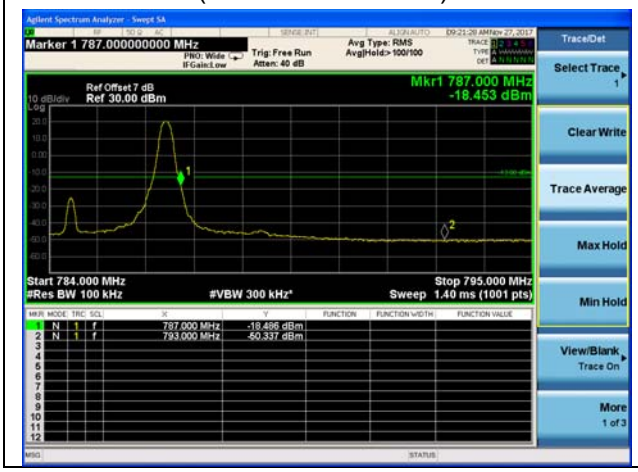
LTE Band 13 QPSK 5MHz CH-Low, 1 RB (763MHz ~775MHz)

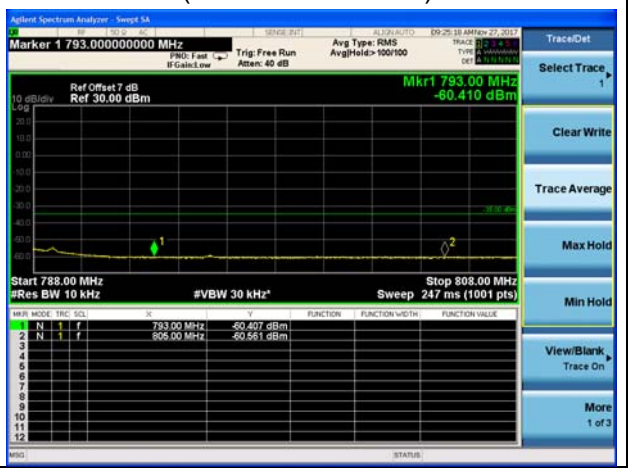
LTE Band 13 QPSK 5MHz CH-Low, 1 RB (775MHz ~777MHz)



LTE Band 13 QPSK 5MHz CH-High, 1 RB (787MHz ~793MHz)

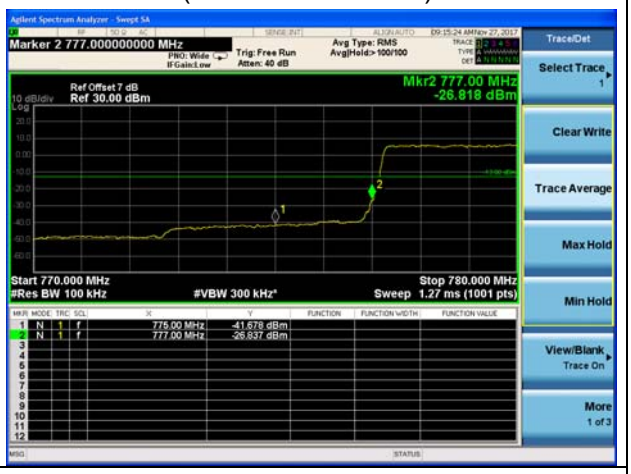


LTE Band 13 QPSK 5MHz CH-High, 1 RB (793MHz ~805MHz)



LTE Band 13 QPSK 5MHz CH-Low, 100%RB (763MHz ~775MHz)

LTE Band 13 QPSK 5MHz CH-Low, 100%RB (775MHz ~777MHz)

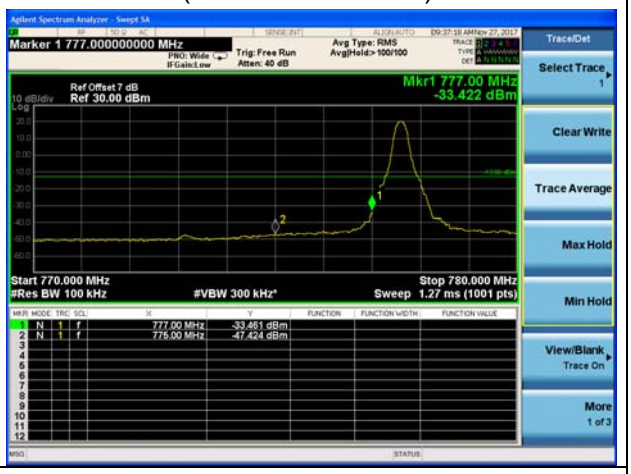


LTE Band 13 QPSK 5MHz CH-High, 100%RB (787MHz ~793MHz)

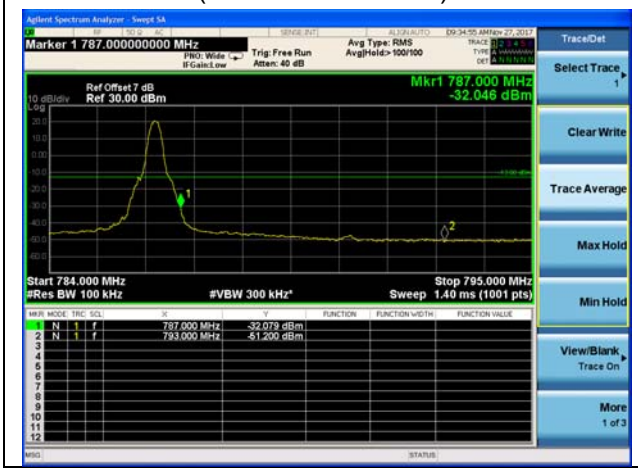
LTE Band 13 QPSK 5MHz CH-High, 100%RB (793MHz ~805MHz)

LTE Band 13 QPSK 10MHz CH-Low, 1 RB (763MHz ~775MHz)

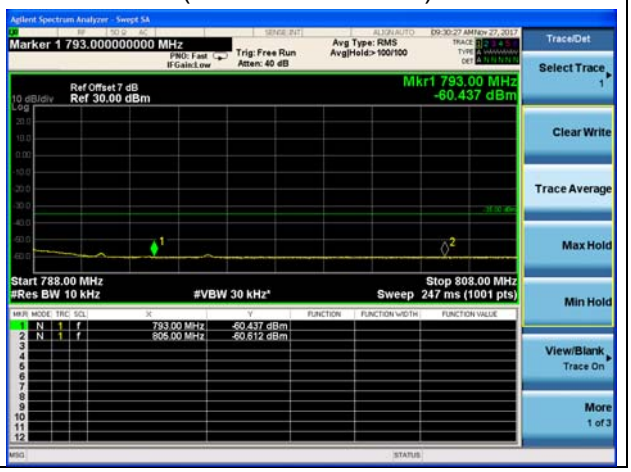
LTE Band 13 QPSK 10MHz CH-Low, 1 RB (775MHz ~777MHz)



LTE Band 13 QPSK 10MHz CH-High, 1 RB (787MHz ~793MHz)

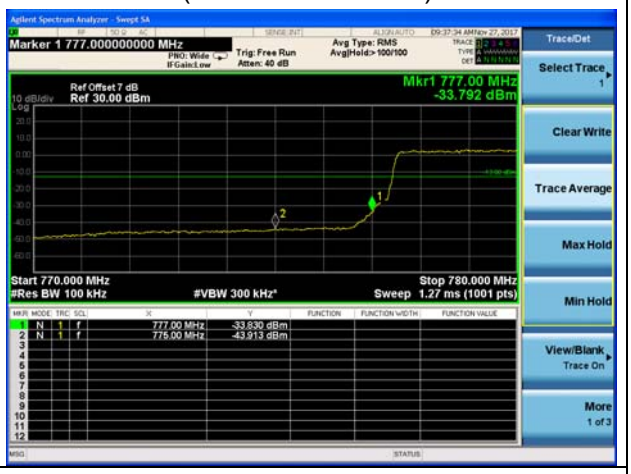


LTE Band 13 QPSK 10MHz CH-High, 1 RB (793MHz ~805MHz)



LTE Band 13 QPSK 10MHz CH-Low, 100%RB (763MHz ~775MHz)

LTE Band 13 QPSK 10MHz CH-Low, 100%RB (775MHz ~777MHz)

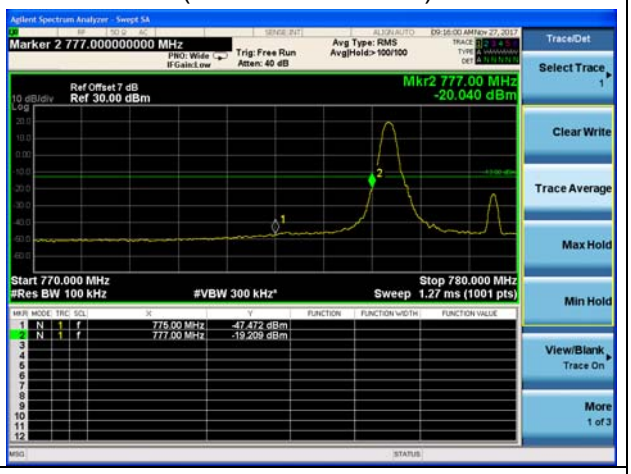


LTE Band 13 QPSK 10MHz CH-High, 100%RB (787MHz ~793MHz)

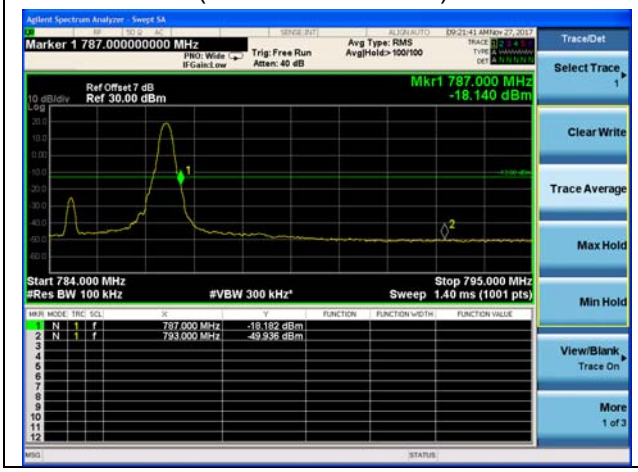
LTE Band 13 QPSK 10MHz CH-High, 100%RB (793MHz ~805MHz)

LTE Band 13 16QAM 5MHz CH-Low, 1 RB (763MHz ~775MHz)

LTE Band 13 16QAM 5MHz CH-Low, 1 RB (775MHz ~777MHz)



LTE Band 13 16QAM 5MHz CH-High, 1 RB (787MHz ~793MHz)



LTE Band 13 16QAM 5MHz CH-High, 1 RB (793MHz ~805MHz)

LTE Band 13 16QAM 5MHz CH-Low, 100%RB (763MHz ~775MHz)

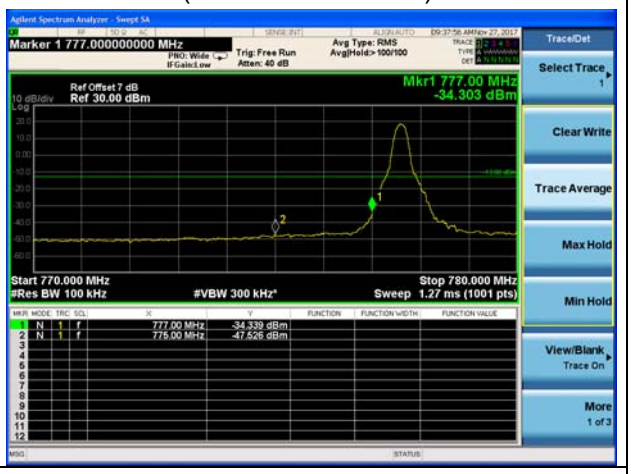
LTE Band 13 16QAM 5MHz CH-Low, 100%RB (775MHz ~777MHz)

LTE Band 13 16QAM 5MHz CH-High, 100%RB (787MHz ~793MHz)

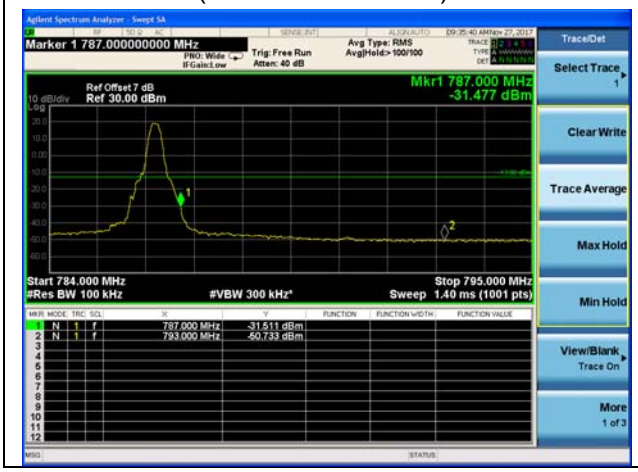
LTE Band 13 16QAM 5MHz CH-High, 100%RB (793MHz ~805MHz)

LTE Band 13 16QAM 10MHz CH-Low, 1 RB (763MHz ~775MHz)

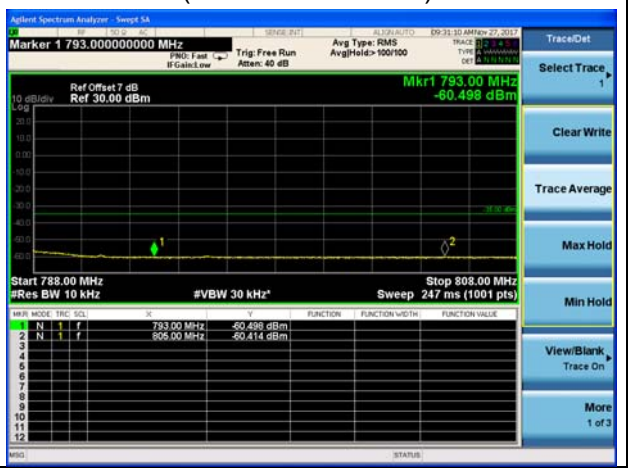
LTE Band 13 16QAM 10MHz CH-Low, 1 RB (775MHz ~777MHz)



LTE Band 13 16QAM 10MHz CH-High, 1 RB (787MHz ~793MHz)

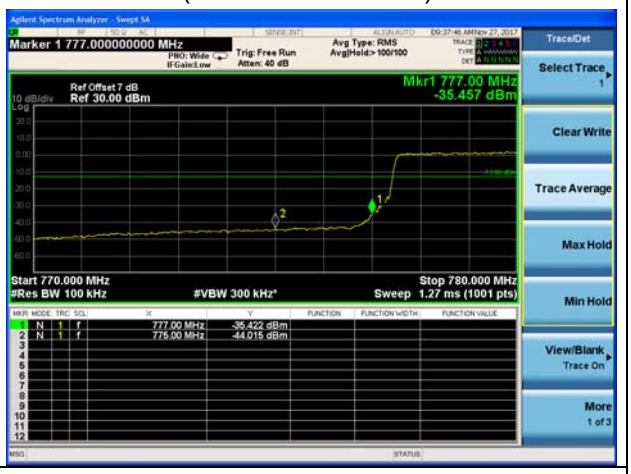


LTE Band 13 16QAM 10MHz CH-High, 1 RB (793MHz ~805MHz)



LTE Band 13 16QAM 10MHz CH-Low, 100%RB (763MHz ~775MHz)

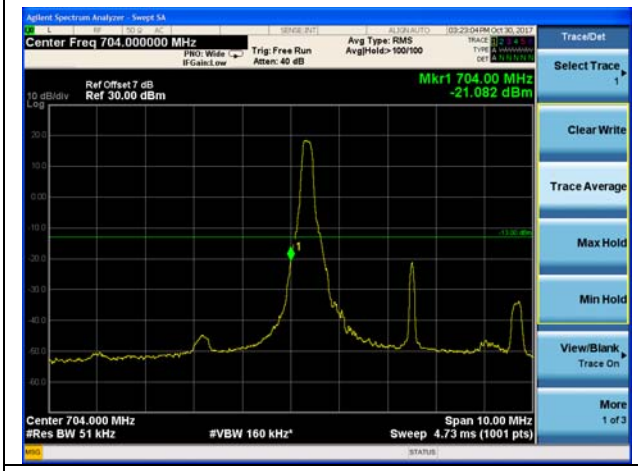
LTE Band 13 16QAM 10MHz CH-Low, 100%RB (775MHz ~777MHz)



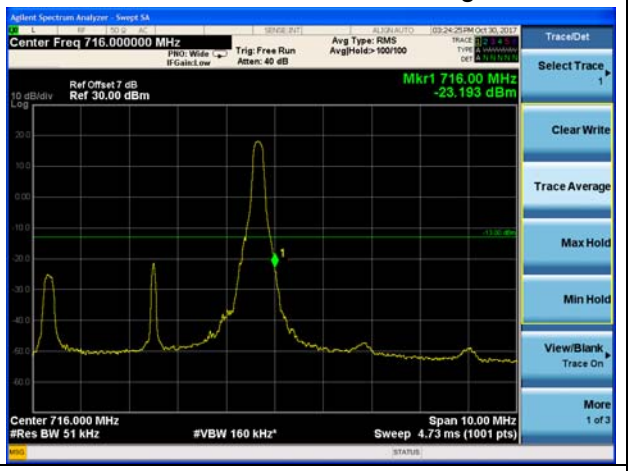
LTE Band 13 16QAM 10MHz CH-High, 100%RB (787MHz ~793MHz)

LTE Band 13 16QAM 10MHz CH-High, 100%RB (793MHz ~805MHz)

LTE Band 17 QPSK 5MHz CH-Low, 1 RB



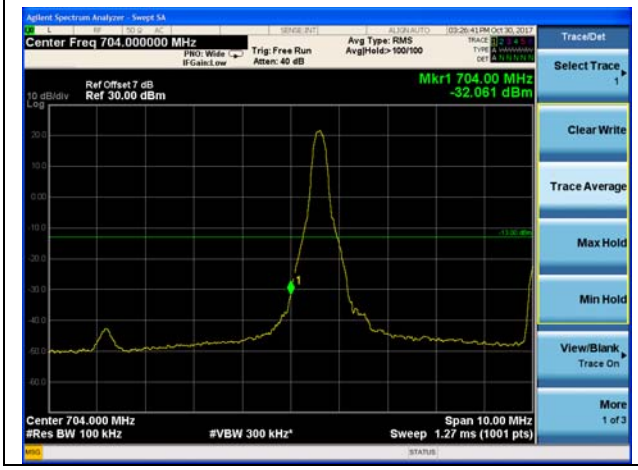
LTE Band 17 QPSK 5MHz CH-High, 1 RB



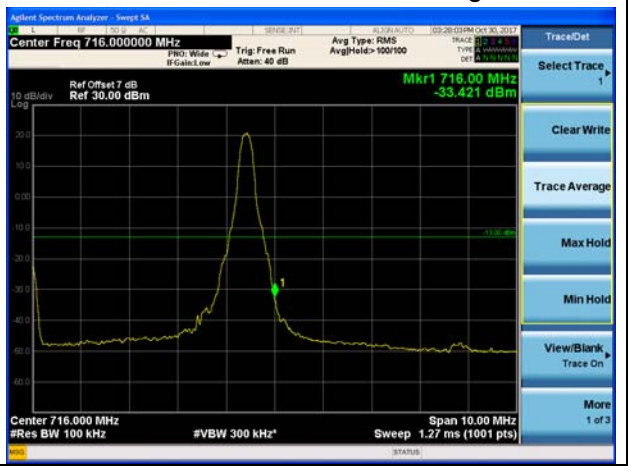
LTE Band 17QPSK 5MHz CH-Low, 100%RB

LTE Band 17 QPSK 5MHz CH-High, 100%RB

LTE Band 17QPSK 10MHz CH-Low, 1 RB



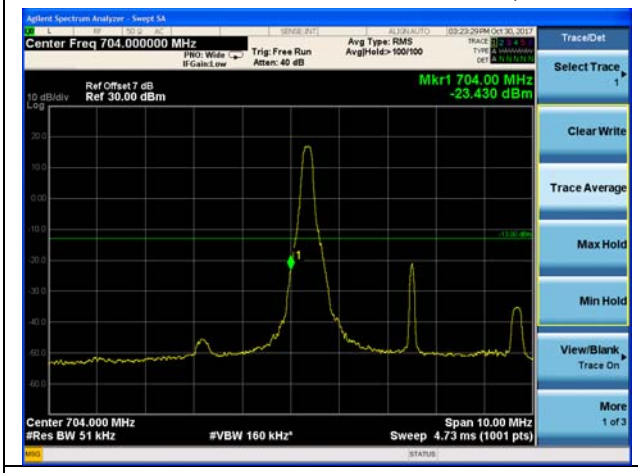
LTE Band 17 QPSK 10MHz CH-High, 1 RB



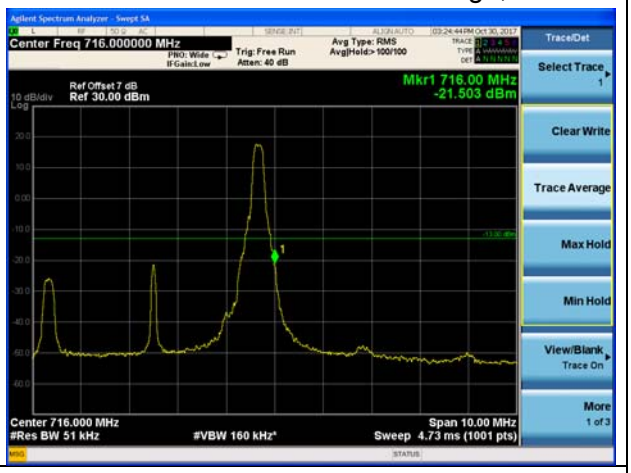
LTE Band 17QPSK 10MHz CH-Low, 100%RB

LTE Band 17 QPSK 10MHz CH-High, 100%RB

LTE Band 17 16QAM 5MHz CH-Low, 1 RB



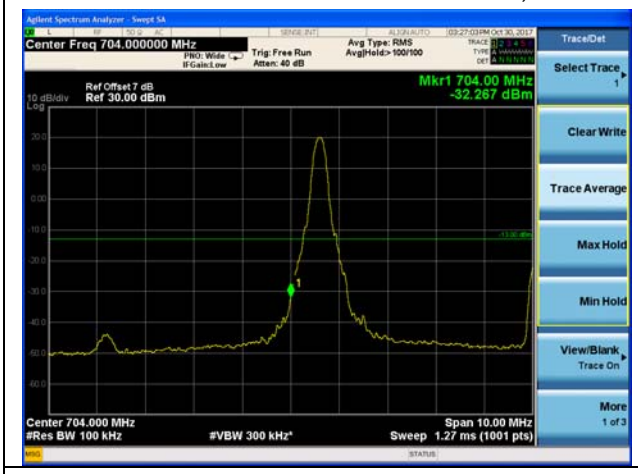
LTE Band 17 16QAM 5MHz CH-High, 1 RB



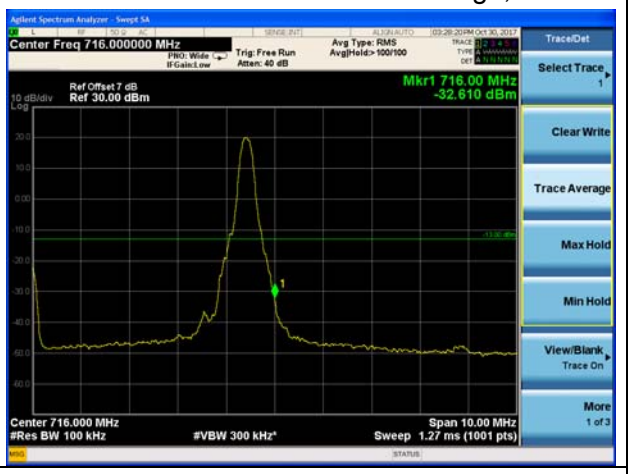
LTE Band 17 16QAM 5MHz CH-Low, 100%RB

LTE Band 17 13QAM 5MHz CH-High, 100%RB

LTE Band 17 16QAM 10MHz CH-Low, 1 RB



LTE Band 1716QAM 10MHz CH-High, 1 RB



LTE Band 17 16QAM 10MHz CH-Low, 100%RB

LTE Band 17 16QAM 10MHz CH-High, 100%RB

5.5 Peak-to-Average Power Ratio (PAPR)

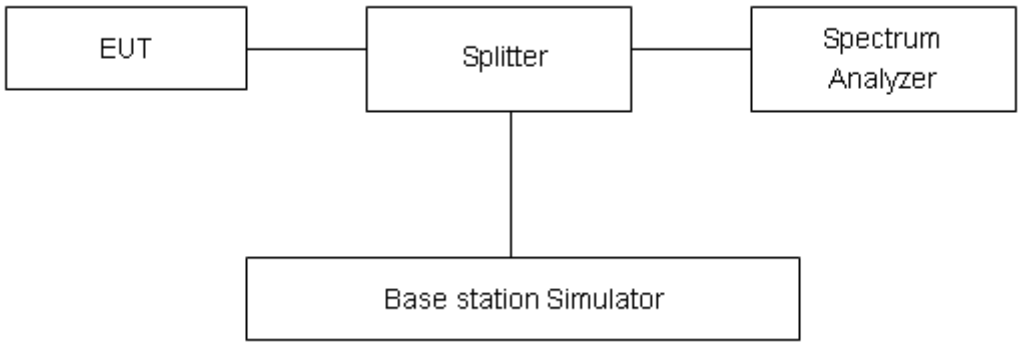
Ambient condition

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

Methods of Measurement

Measure the total peak power and record as PPk. And measure the total average power and record as PAvg. Both the peak and average power levels must be expressed in the same logarithmic units (*e.g.*, dBm). Determine the PAPR from:
PAPR (dB) = PPk (dBm) - PAvg (dBm).

Test Setup



Limits

Rule Part 27.50(d)(5) Equipment employed must be authorized in accordance with the provisions of 24.51. Power measurements for transmissions by stations authorized under this section may be made either in accordance with a Commission-approved average power technique or in compliance with paragraph (d)(6) of this section. 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.

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for thenormal distribution is with the coverage factor k = 2, U= 0.4 dB.

Test Results

WCDMA Band IV	Channel	Frequency (MHz)	Peak (dBm)	Avg (dBm)	PAPR (dB)	Limit (dB)	Conclusion
RMC	1312	1712.4	25.25	22.41	2.84	≤13	PASS
	1413	1732.6	25.75	22.43	3.32	≤13	PASS
	1513	1752.6	25.06	22.28	2.78	≤13	PASS

LTE Band 4								
Modulation	Bandwidth (MHz)	Channel	Frequency (MHz)	Peak (dBm)	Avg (dBm)	PAPR (dB)	Limit (dB)	Conclusion
QPSK	1.4	19957	1710.7	26.03	21.05	4.98	≤13	PASS
		20175	1732.5	26.58	21.11	5.47	≤13	PASS
		20393	1754.3	25.89	21.04	4.85	≤13	PASS
	3	19965	1711.5	26.03	20.99	5.04	≤13	PASS
		20175	1732.5	26.46	21.03	5.43	≤13	PASS
		20385	1753.5	25.20	20.23	4.97	≤13	PASS
	5	19975	1712.5	25.99	20.97	5.02	≤13	PASS
		20175	1732.5	26.41	21.02	5.39	≤13	PASS
		20375	1752.5	25.11	20.21	4.90	≤13	PASS
	10	20000	1715	25.97	21.05	4.92	≤13	PASS
		20175	1732.5	26.34	21.04	5.30	≤13	PASS
		20350	1750	25.13	20.25	4.88	≤13	PASS
	15	20025	1717.5	26.43	21.03	5.40	≤13	PASS
		20175	1732.5	26.58	21.00	5.58	≤13	PASS
		20325	1747.5	25.43	20.20	5.23	≤13	PASS
	20	20050	1720	26.02	21.00	5.02	≤13	PASS
		20175	1732.5	26.20	20.95	5.25	≤13	PASS
		20300	1745	25.10	20.16	4.94	≤13	PASS
16QAM	1.4	19957	1710.7	26.20	20.33	5.87	≤13	PASS
		20175	1732.5	26.37	20.05	6.32	≤13	PASS
		20393	1754.3	25.91	20.17	5.74	≤13	PASS
	3	19965	1711.5	26.03	20.14	5.89	≤13	PASS
		20175	1732.5	26.47	20.20	6.27	≤13	PASS
		20385	1753.5	26.00	20.24	5.76	≤13	PASS
	5	19975	1712.5	25.95	20.12	5.83	≤13	PASS
		20175	1732.5	26.35	20.16	6.19	≤13	PASS
		20375	1752.5	25.87	20.19	5.68	≤13	PASS
	10	20000	1715	25.90	20.15	5.75	≤13	PASS
		20175	1732.5	26.32	20.21	6.11	≤13	PASS
		20350	1750	25.91	20.23	5.68	≤13	PASS

	15	20025	1717.5	26.23	20.12	6.11	≤13	PASS
		20175	1732.5	26.47	20.16	6.31	≤13	PASS
		20325	1747.5	26.14	20.19	5.95	≤13	PASS
	20	20050	1720	25.93	20.10	5.83	≤13	PASS
		20175	1732.5	26.20	20.12	6.08	≤13	PASS
		20300	1745	25.98	20.16	5.82	≤13	PASS

LTE Band 12								
Modulation	**Bandwidth (MHz)**	**Channel**	**Frequency (MHz)**	**Peak (dBm)**	**Avg (dBm)**	**PAPR (dB)**	**Limit (dB)**	**Conclusion**
QPSK	1.4	23017	699.7	27.05	22.13	4.92	≤13	PASS
		23095	707.5	27.41	22.26	5.15	≤13	PASS
		23173	715.3	26.97	22.05	4.92	≤13	PASS
	3	23025	700.5	27.15	22.13	5.02	≤13	PASS
		23095	707.5	27.36	22.16	5.20	≤13	PASS
		23165	714.5	27.14	22.19	4.95	≤13	PASS
	5	23035	701.5	27.16	22.11	5.05	≤13	PASS
		23095	707.5	27.28	22.15	5.13	≤13	PASS
		23155	713.5	27.07	22.17	4.90	≤13	PASS
	10	23060	704	27.28	22.14	5.14	≤13	PASS
		23095	707.5	27.04	22.08	4.96	≤13	PASS
		23130	711	27.01	22.12	4.89	≤13	PASS
16QAM	1.4	23017	699.7	27.05	21.22	5.83	≤13	PASS
		23095	707.5	27.32	21.25	6.07	≤13	PASS
		23173	715.3	26.88	21.04	5.84	≤13	PASS
	3	23025	700.5	27.10	21.23	5.87	≤13	PASS
		23095	707.5	27.27	21.21	6.06	≤13	PASS
		23165	714.5	27.13	21.29	5.84	≤13	PASS
	5	23035	701.5	27.08	21.21	5.87	≤13	PASS
		23095	707.5	27.13	21.17	5.96	≤13	PASS
		23155	713.5	26.91	21.24	5.67	≤13	PASS
	10	23060	704	27.14	21.19	5.95	≤13	PASS
		23095	707.5	26.95	21.13	5.82	≤13	PASS
		23130	711	26.95	21.21	5.74	≤13	PASS

LTE Band 13								
Modulation	Bandwidth (MHz)	Channel	Frequency (MHz)	Peak (dBm)	Avg (dBm)	PAPR (dB)	Limit (dB)	Conclusion
QPSK	5	23205	779.5	27.00	21.71	5.29	≤13	PASS
		23230	782	27.10	21.81	5.29	≤13	PASS
		23255	784.5	27.14	21.93	5.21	≤13	PASS
	10	23230	782	27.08	21.89	5.19	≤13	PASS
16QAM	5	23205	779.5	26.93	20.85	6.08	≤13	PASS
		23230	782	27.07	20.99	6.08	≤13	PASS
		23255	784.5	27.01	20.97	6.04	≤13	PASS
	10	23230	782	26.87	20.85	6.02	≤13	PASS

LTE Band 17								
Modulation	Bandwidth (MHz)	Channel	Frequency (MHz)	Peak (dBm)	Avg (dBm)	PAPR (dB)	Limit (dB)	Conclusion
QPSK	5	23755	706.5	27.12	21.86	5.26	≤13	PASS
		23790	710	26.87	21.87	5.00	≤13	PASS
		23825	713.5	26.90	21.95	4.95	≤13	PASS
	10	23780	709	26.99	22.04	4.95	≤13	PASS
		23790	710	26.95	22.02	4.93	≤13	PASS
		23800	711	27.01	22.05	4.96	≤13	PASS
16QAM	5	23755	706.5	26.89	20.82	6.07	≤13	PASS
		23790	710	26.72	20.90	5.82	≤13	PASS
		23825	713.5	26.69	20.93	5.76	≤13	PASS
	10	23780	709	26.85	21.01	5.84	≤13	PASS
		23790	710	26.68	20.91	5.77	≤13	PASS
		23800	711	26.73	20.95	5.78	≤13	PASS

5.6 Frequency Stability

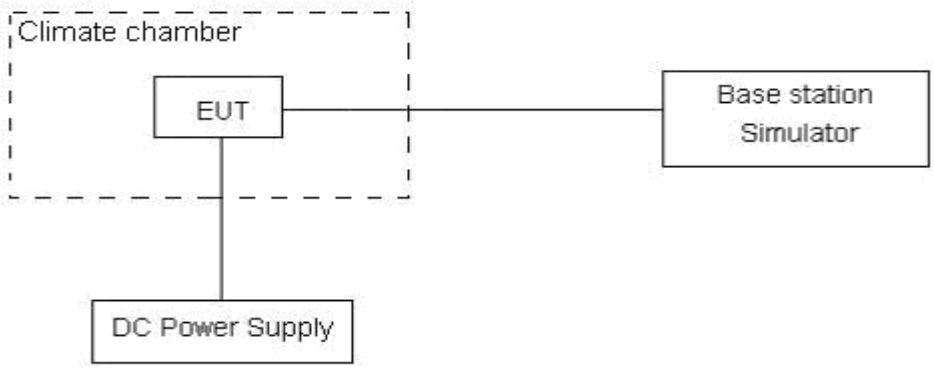
Ambient condition

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

Method of Measurement

1. Frequency Stability (Temperature Variation)
   The temperature inside the climate chamber is varied from -40°C to +85°C in 10°C step size.
   (1)With all power removed, the temperature was decreased to -10°C and permitted to stabilize for three hours.
   (2)Measure the carrier frequency with the test equipment in a “call mode”. These measurements should be made within 1 minute of powering up the mobile station, to prevent significant self warming.
   (3) Repeat the above measurements at 10°C increments from -40°C to +85°C. Allow at least 1.5 hours at each temperature, un-powered, before making measurements.
2. Frequency Stability (Voltage Variation)
   The frequency stability shall be measured with variation of primary supply voltage as follows:
   (1) Vary primary supply voltage from 85 to 115 percent of the nominal value for other than hand carried battery equipment.
   (2) For hand carried, battery powered equipment, reduce primary supply voltage to the battery-operating end point which shall be specified by the manufacturer.
   This transceiver is specified to operate with an input voltage of between 3.3 V and 4.2 V, with a nominal voltage of 3.8V.

Test setup



Limits

No specific frequency stability requirements in part 27.54

Measurement Uncertainty

The assessed measurement uncertainty to ensure 99.75% confidence level for the normal distribution is with the coverage factor k = 3,U=0.01ppm.

Test Result

WCDMA Band IV

Test status	WCDMA Band IV Channel 1413 RMC
	Test Results (ppm)
-40°C/Normal Voltage	-0.00044
-30°C/Normal Voltage	-0.00017
-20°C/Normal Voltage	0.00900
-10°C/Normal Voltage	0.00860
0°C/Normal Voltage	0.00630
10°C/Normal Voltage	0.01190
20°C/Normal Voltage	0.02232
30°C/Normal Voltage	0.01232
40°C/Normal Voltage	0.00260
50°C/Normal Voltage	-0.00053
60°C/Normal Voltage	0.00340
70°C/Normal Voltage	0.00026
80°C/Normal Voltage	0.00690
85°C/Normal Voltage	0.00016
20°C/Min Voltage	-0.00069
20°C/Max Voltage	0.00460

Bandwidth	Test status	LTE Band 4 Channel 20175 Test Results (ppm)	
		QPSK	16QAM
1.4MHz	-40°C/Normal Voltage	-0.00082	-0.00229
	-30°C/Normal Voltage	0.00143	0.00355
	-20°C/Normal Voltage	-0.00032	0.00679
	-10°C/Normal Voltage	-0.00016	0.00549
	0°C/Normal Voltage	-0.00144	0.00379
	10°C/Normal Voltage	-0.00340	0.00174
	20°C/Normal Voltage	0.00302	0.00592
	30°C/Normal Voltage	-0.00113	0.00731
	40°C/Normal Voltage	0.00210	0.00008
	50°C/Normal Voltage	-0.00119	-0.00210
	60°C/Normal Voltage	-0.00039	0.00380
	70°C/Normal Voltage	-0.00311	0.00452
	80°C/Normal Voltage	-0.00112	0.00594
	85°C/Normal Voltage	0.00207	0.00089
	20°C/Min Voltage	0.00149	0.00091

	20°C/Max Voltage	0.00013	0.00414
3MHz	-40°C/Normal Voltage	-0.00054	-0.00284
	-30°C/Normal Voltage	-0.00031	0.00139
	-20°C/Normal Voltage	0.00079	0.00012
	-10°C/Normal Voltage	0.00002	-0.00181
	0°C/Normal Voltage	-0.00027	-0.00516
	10°C/Normal Voltage	0.00178	-0.00462
	20°C/Normal Voltage	0.00042	-0.00290
	30°C/Normal Voltage	0.00068	0.00057
	40°C/Normal Voltage	0.00021	0.00109
	50°C/Normal Voltage	0.00063	0.00121
	60°C/Normal Voltage	0.00003	0.00020
	70°C/Normal Voltage	0.00073	-0.00344
	80°C/Normal Voltage	-0.00054	-0.00121
	85°C/Normal Voltage	-0.00044	-0.00366
	20°C/Min Voltage	0.00017	-0.00353
	20°C/Max Voltage	-0.00038	-0.00259
5MHz	-40°C/Normal Voltage	0.00071	-0.00054
	-30°C/Normal Voltage	0.00136	-0.00235
	-20°C/Normal Voltage	-0.00061	0.00657
	-10°C/Normal Voltage	0.00170	0.00056
	0°C/Normal Voltage	-0.00042	-0.00178
	10°C/Normal Voltage	0.00028	-0.00654
	20°C/Normal Voltage	0.00155	0.00540
	30°C/Normal Voltage	0.00253	0.00681
	40°C/Normal Voltage	0.00247	0.00731
	50°C/Normal Voltage	0.00061	-0.00036
	60°C/Normal Voltage	0.00152	-0.00616
	70°C/Normal Voltage	-0.00083	0.00051
	80°C/Normal Voltage	0.00154	-0.00586
	85°C/Normal Voltage	0.00250	-0.00154
	20°C/Min Voltage	0.00092	0.00411
	20°C/Max Voltage	-0.00003	0.00550
10MHz	-40°C/Normal Voltage	-0.00033	-0.00309
	-30°C/Normal Voltage	-0.00094	-0.00198
	-20°C/Normal Voltage	0.00027	-0.00245
	-10°C/Normal Voltage	0.00209	0.00002
	0°C/Normal Voltage	-0.00159	-0.00166
	10°C/Normal Voltage	-0.00190	-0.00199
	20°C/Normal Voltage	0.00006	-0.00235

	30°C/Normal Voltage	0.00184	-0.00416
	40°C/Normal Voltage	-0.00005	-0.00311
	50°C/Normal Voltage	-0.00047	-0.00201
	60°C/Normal Voltage	-0.00044	0.00268
	70°C/Normal Voltage	-0.00091	-0.00304
	80°C/Normal Voltage	-0.00137	-0.00159
	85°C/Normal Voltage	-0.00076	-0.00375
	20°C/Min Voltage	-0.00002	-0.00195
	20°C/Max Voltage	-0.00048	0.00142
15MHz	-40°C/Normal Voltage	-0.00145	0.00084
	-30°C/Normal Voltage	0.00031	0.00402
	-20°C/Normal Voltage	-0.00349	0.00500
	-10°C/Normal Voltage	0.00137	-0.00580
	0°C/Normal Voltage	0.00165	-0.00098
	10°C/Normal Voltage	-0.00002	0.00095
	20°C/Normal Voltage	-0.00012	0.00029
	30°C/Normal Voltage	0.00041	-0.00028
	40°C/Normal Voltage	-0.00073	-0.00046
	50°C/Normal Voltage	0.00039	0.00113
	60°C/Normal Voltage	-0.00136	-0.00223
	70°C/Normal Voltage	-0.00368	0.00357
	80°C/Normal Voltage	-0.00210	0.00311
	85°C/Normal Voltage	-0.00034	-0.00252
	20°C/Min Voltage	-0.00123	-0.00121
	20°C/Max Voltage	-0.00052	-0.00226
20MHz	-40°C/Normal Voltage	0.00200	-0.00099
	-30°C/Normal Voltage	-0.00188	-0.00356
	-20°C/Normal Voltage	0.00071	-0.00504
	-10°C/Normal Voltage	0.00055	-0.00328
	0°C/Normal Voltage	-0.00069	-0.00322
	10°C/Normal Voltage	-0.00024	-0.00205
	20°C/Normal Voltage	0.00055	-0.00404
	30°C/Normal Voltage	-0.00302	-0.00328
	40°C/Normal Voltage	0.00017	-0.00164
	50°C/Normal Voltage	0.00034	-0.00309
	60°C/Normal Voltage	0.00055	-0.00115
	70°C/Normal Voltage	-0.00186	-0.00366
	80°C/Normal Voltage	0.00086	-0.00320
	85°C/Normal Voltage	-0.00113	-0.00253
	20°C/Min Voltage	-0.00053	-0.00003

	20°C/Max Voltage	0.00185	-0.00309

Bandwidth	Test status	LTE Band 12 Channel 23095 Test Results (ppm)	
		QPSK	16QAM
1.4M	-40°C/Normal Voltage	-0.00226	0.00916
	-30°C/Normal Voltage	-0.00082	-0.00948
	-20°C/Normal Voltage	-0.00093	-0.00273
	-10°C/Normal Voltage	-0.00399	0.01553
	0°C/Normal Voltage	0.00147	0.01104
	10°C/Normal Voltage	-0.00038	-0.00314
	20°C/Normal Voltage	-0.00034	0.01053
	30°C/Normal Voltage	-0.00233	0.00946
	40°C/Normal Voltage	-0.00158	-0.00343
	50°C/Normal Voltage	-0.00174	-0.00507
	60°C/Normal Voltage	-0.00120	-0.00762
	70°C/Normal Voltage	-0.00037	-0.00661
	80°C/Normal Voltage	-0.00417	-0.00417
	85°C/Normal Voltage	-0.00108	-0.00506
	20°C/Min Voltage	-0.00076	0.00914
	20°C/Max Voltage	-0.00290	-0.00236
3M	-40°C/Normal Voltage	0.00180	-0.01152
	-30°C/Normal Voltage	-0.00093	0.00051
	-20°C/Normal Voltage	-0.00459	-0.00360
	-10°C/Normal Voltage	0.00027	-0.01118
	0°C/Normal Voltage	-0.00295	-0.00027
	10°C/Normal Voltage	0.00034	-0.00006
	20°C/Normal Voltage	-0.00287	-0.00013
	30°C/Normal Voltage	-0.00168	-0.00099
	40°C/Normal Voltage	-0.00711	-0.00847
	50°C/Normal Voltage	-0.00288	-0.00083
	60°C/Normal Voltage	-0.00150	-0.00232
	70°C/Normal Voltage	-0.00136	-0.00291
	80°C/Normal Voltage	-0.00284	-0.00239
	85°C/Normal Voltage	-0.00239	-0.00184
	20°C/Min Voltage	-0.00222	-0.01067
	20°C/Max Voltage	-0.00164	-0.01207
5MHz	-40°C/Normal Voltage	0.00079	0.01399
	-30°C/Normal Voltage	-0.00182	-0.00418
	-20°C/Normal Voltage	0.00027	-0.00198

	-10°C/Normal Voltage	-0.00215	0.00896
	0°C/Normal Voltage	-0.00024	-0.00349
	10°C/Normal Voltage	0.00001	-0.00560
	20°C/Normal Voltage	-0.00061	-0.00208
	30°C/Normal Voltage	-0.00034	0.01037
	40°C/Normal Voltage	0.00090	-0.00495
	50°C/Normal Voltage	0.00037	0.01026
	60°C/Normal Voltage	-0.00154	-0.00602
	70°C/Normal Voltage	0.00095	0.00892
	80°C/Normal Voltage	0.00008	-0.00500
	85°C/Normal Voltage	-0.00069	-0.00322
	20°C/Min Voltage	-0.00212	0.01432
	20°C/Max Voltage	-0.00024	0.01231
10MHz	-40°C/Normal Voltage	-0.00236	-0.00694
	-30°C/Normal Voltage	-0.00058	-0.00290
	-20°C/Normal Voltage	-0.00254	-0.00742
	-10°C/Normal Voltage	-0.00130	-0.00741
	0°C/Normal Voltage	-0.00249	-0.00926
	10°C/Normal Voltage	-0.00261	-0.00390
	20°C/Normal Voltage	-0.00042	-0.00534
	30°C/Normal Voltage	-0.00102	-0.00286
	40°C/Normal Voltage	-0.00329	-0.00807
	50°C/Normal Voltage	-0.00083	0.00366
	60°C/Normal Voltage	-0.00146	-0.00797
	70°C/Normal Voltage	-0.00211	-0.00849
	80°C/Normal Voltage	-0.00085	-0.00083
	85°C/Normal Voltage	-0.00107	-0.00534
	20°C/Min Voltage	0.00014	-0.00765
	20°C/Max Voltage	-0.00399	-0.00957

Bandwidth	Test status	LTE Band 13 Channel 23230 Test Results (ppm)	
		QPSK	16QAM
5MHz	-40°C/Normal Voltage	-0.00207	0.00216
	-30°C/Normal Voltage	-0.00327	0.00761
	-20°C/Normal Voltage	0.00056	0.00940
	-10°C/Normal Voltage	0.00050	0.00587
	0°C/Normal Voltage	0.00075	0.00967
	10°C/Normal Voltage	-0.00056	0.01136
	20°C/Normal Voltage	0.00024	0.01023
	30°C/Normal Voltage	-0.00055	0.00926

	40°C/Normal Voltage	-0.00102	0.01063
	50°C/Normal Voltage	-0.00159	0.00459
	60°C/Normal Voltage	-0.00302	0.00721
	70°C/Normal Voltage	0.00109	0.00809
	80°C/Normal Voltage	-0.00130	0.00538
	85°C/Normal Voltage	0.00121	0.00483
	20°C/Min Voltage	-0.00294	0.01164
	20°C/Max Voltage	0.00005	0.00271
10MHz	-40°C/Normal Voltage	-0.00192	-0.00348
	-30°C/Normal Voltage	-0.00239	-0.00309
	-20°C/Normal Voltage	-0.00348	-0.00552
	-10°C/Normal Voltage	-0.00192	-0.00679
	0°C/Normal Voltage	-0.00473	-0.00668
	10°C/Normal Voltage	-0.00202	-0.00303
	20°C/Normal Voltage	-0.00047	-0.00751
	30°C/Normal Voltage	-0.00331	-0.00641
	40°C/Normal Voltage	-0.00322	-0.00717
	50°C/Normal Voltage	-0.00199	-0.00467
	60°C/Normal Voltage	-0.00170	-0.00214
	70°C/Normal Voltage	-0.00458	-0.00523
	80°C/Normal Voltage	-0.00352	-0.00597
	85°C/Normal Voltage	-0.00110	-0.00740
	20°C/Min Voltage	-0.00207	-0.00166
	20°C/Max Voltage	-0.00018	-0.00561

Bandwidth	Test status	LTE Band 17 Channel 23790 Test Results (ppm)	
		QPSK	16QAM
5MHz	-40°C/Normal Voltage	-0.00158	0.00444
	-30°C/Normal Voltage	-0.00087	0.00238
	-20°C/Normal Voltage	-0.00101	0.01015
	-10°C/Normal Voltage	0.00089	0.00087
	0°C/Normal Voltage	0.00018	0.00451
	10°C/Normal Voltage	0.00089	0.00697
	20°C/Normal Voltage	-0.00001	0.01070
	30°C/Normal Voltage	-0.00115	0.00692
	40°C/Normal Voltage	-0.00013	0.00376
	50°C/Normal Voltage	-0.00111	0.00365
	60°C/Normal Voltage	-0.00132	0.00503
	70°C/Normal Voltage	-0.00177	0.00228
	80°C/Normal Voltage	-0.00006	0.00513

	85°C/Normal Voltage	-0.00035	0.00449
	20°C/Min Voltage	-0.00127	0.00323
	20°C/Max Voltage	0.00052	0.00117
10MHz	-40°C/Normal Voltage	-0.00020	-0.00296
	-30°C/Normal Voltage	-0.00042	-0.00617
	-20°C/Normal Voltage	-0.00076	-0.00759
	-10°C/Normal Voltage	0.00214	-0.00158
	0°C/Normal Voltage	0.00179	-0.00383
	10°C/Normal Voltage	-0.00235	-0.00618
	20°C/Normal Voltage	0.00024	-0.00448
	30°C/Normal Voltage	-0.00310	-0.00927
	40°C/Normal Voltage	-0.00217	-0.00804
	50°C/Normal Voltage	-0.00090	0.00290
	60°C/Normal Voltage	0.00125	0.00927
	70°C/Normal Voltage	-0.00037	0.00773
	80°C/Normal Voltage	-0.00065	0.00297
	85°C/Normal Voltage	-0.00052	0.00270
	20°C/Min Voltage	-0.00004	-0.00007
	20°C/Max Voltage	-0.00037	-0.00556

5.7 Spurious Emissions at Antenna Terminals

Ambient condition

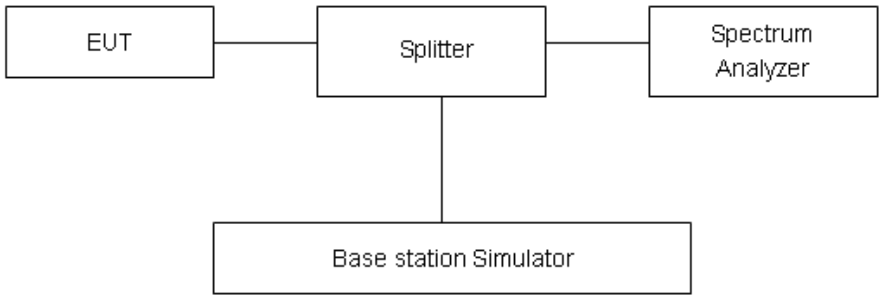
Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

Method of Measurement

The EUT was connected to Spectrum Analyzer and Base Station Simulator via power Splitter. The measurement is carried out using a spectrum analyzer. The spectrum analyzer scans from 30MHz to the 10th harmonic of the carrier. The peak detector is used. Set RBW 1MHz and VBW3MHz， Sweep is set to ATUO.

Of those disturbances below (limit – 20 dB), the mark is not required for the EUT.

Test setup



Limits

LTE -4 Rule Part 27.53(h) specifies that “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..”

LTE -12 Rule 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.

LTE -13/17 Rule Part 27.53(f)For operations in the 746-758 MHz, 775-788 MHz, and 805-806 MHz bands, emissions in the band 1559-1610 MHz shall be limited to −70 dBW/MHz equivalent(-40 dBm) isotropically radiated power (EIRP) for wideband signals, and −80 dBW EIRP for discrete emissions of less than 700 Hz bandwidth. For the purpose of equipment authorization, a transmitter shall be

tested with an antenna that is representative of the type that will be used with the equipment in normal operation.
(c) For operations in the 746-758 MHz band and the 776-788 MHz band, the power of any emission outside the licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, in accordance with the following:
(1) On any frequency outside the 746-758 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least 43 + 10 log (P) dB;
(2) On any frequency outside the 776-788 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least 43 + 10 log (P) dB;
(3) On all frequencies between 763-775 MHz and 793-805 MHz, by a factor not less than 76 + 10 log (P) dB in a 6.25 kHz band segment, for base and fixed stations;
(4) On all frequencies between 763-775 MHz and 793-805 MHz, by a factor not less than 65 + 10 log (P) dB in a 6.25 kHz band segment, for mobile and portable stations;
(5) Compliance with the provisions of paragraphs (c)(1) and (c)(2) of this section is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater. However, in the 100 kHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of at least 30 kHz may be employed;

LTE B4/12 Limit		-13 dBm
LTE B13/17 Limit	Limit out of the band 1559-1610 MHz	-13 dBm
	Limit in the band 1559-1610 MHz	-40 dBm

Measurement Uncertainty

The assessed measurement uncertainty to ensure 99.75% confidence level for the normal distribution is with the coverage factor *k* = 1.96.

Frequency	Uncertainty
100kHz-2GHz	0.684 dB
2GHz-18GHz	1.407 dB

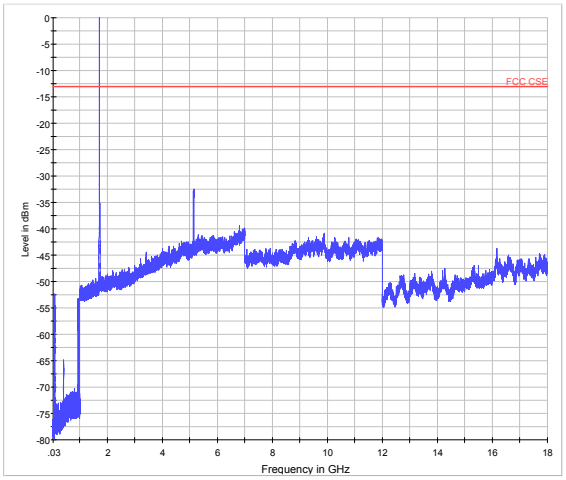
Test Result

Sweep from 9 kHz to 30MHz, and the emissions more than 20 dB below the permissible value are not reported.

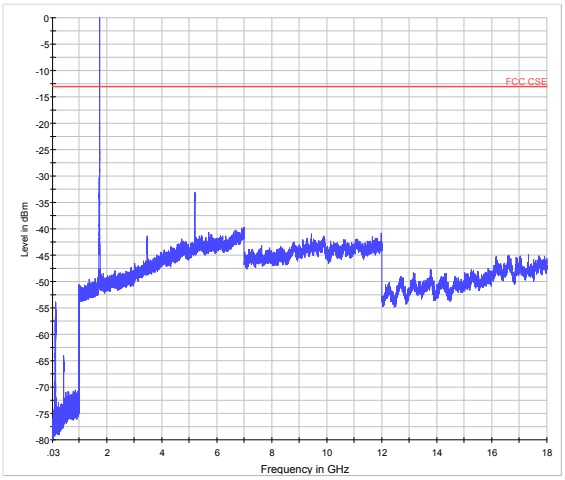
If disturbances were found more than 20dB below limit line, the mark is not required for the EUT.

The signal beyond the limit is carrier in the following plots.

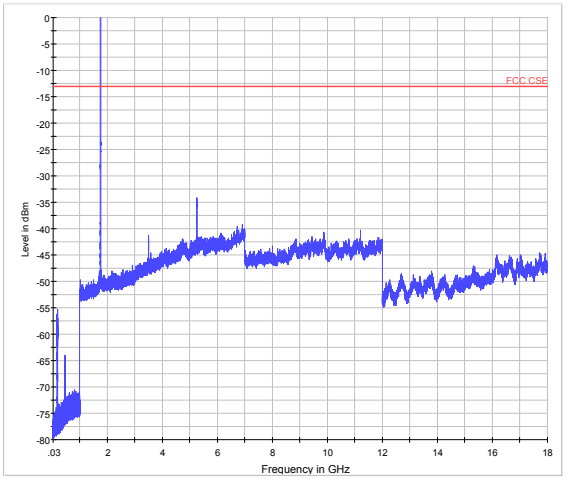
WCDMA Band IV CH-Low 30MHz~18GHz

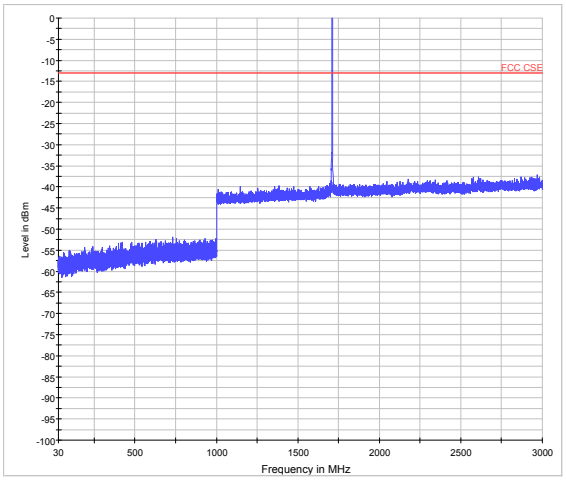
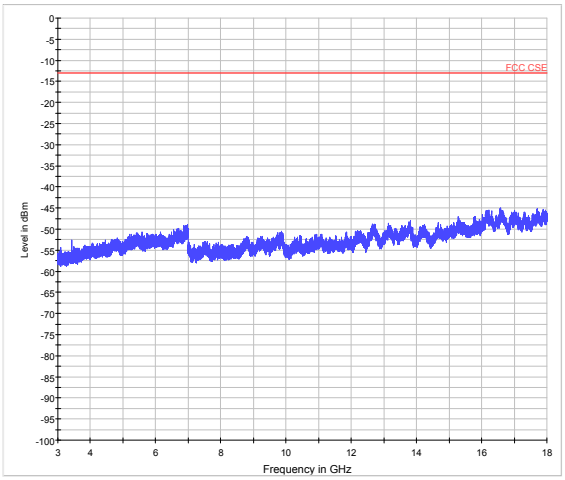
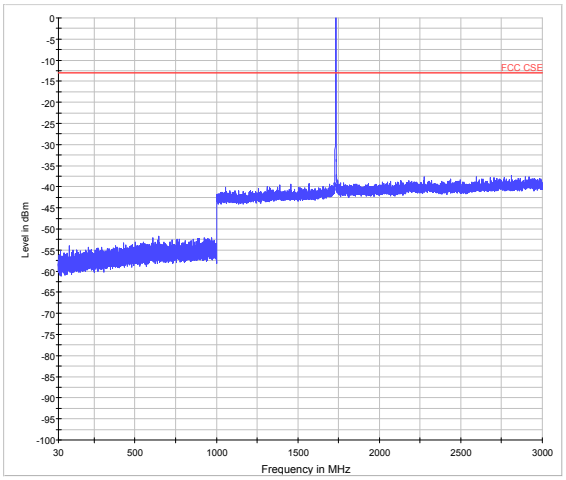
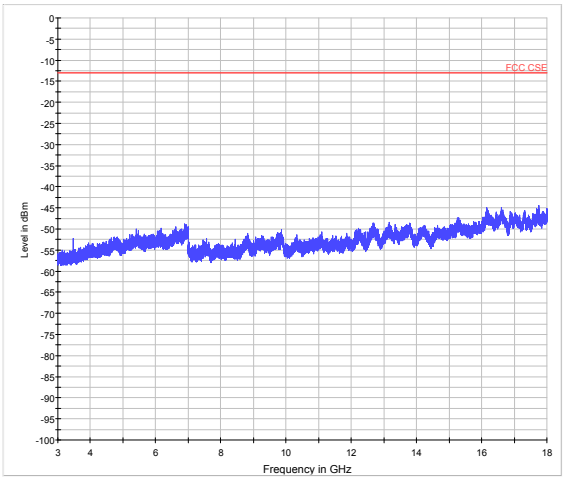
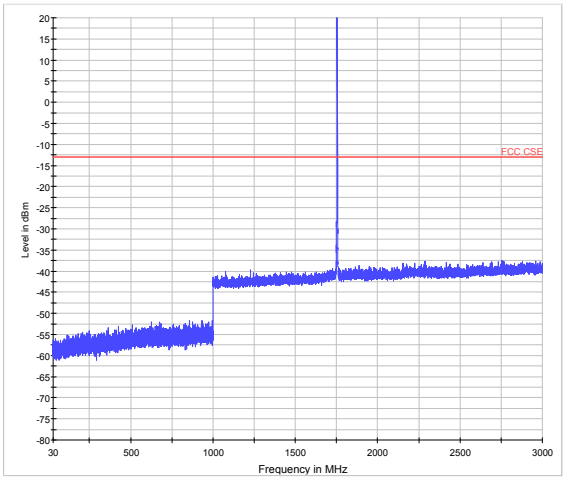
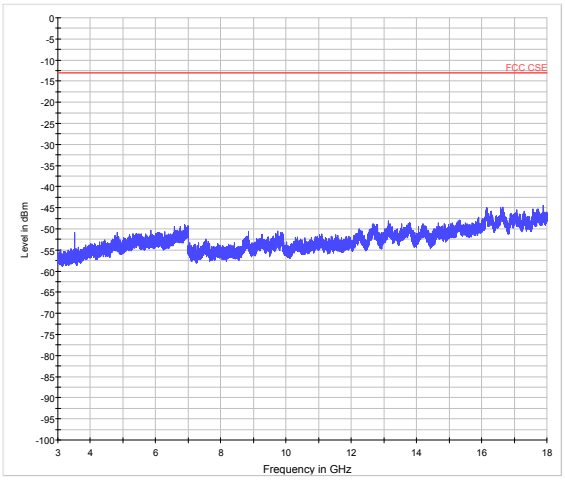


WCDMA Band IV CH-Middle 30MHz~18GHz

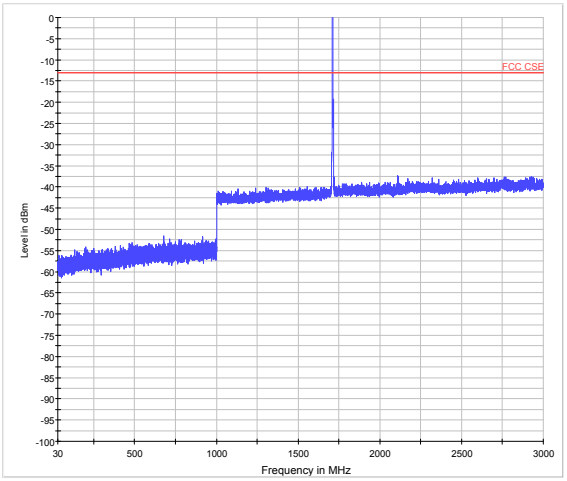


WCDMA Band IV CH-High 30MHz~18GHz

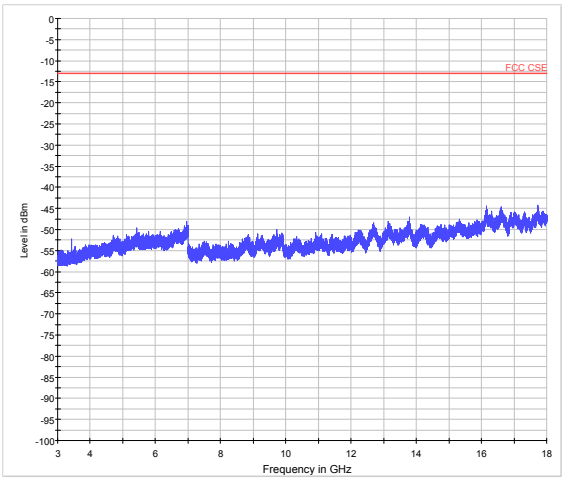


LTE Band 4 1.4MHz CH-Low 30MHz~3GHz	LTE Band 4 1.4MHz CH-Low 3GHz~18GHz
	
LTE Band 4 1.4MHz CH-Middle 30MHz~3GHz	LTE Band 4 1.4MHz CH-Middle 3GHz~18GHz
	
LTE Band 4 1.4MHz CH-High 30MHz~3GHz	LTE Band 4 1.4MHz CH-High 3GHz~18GHz
	

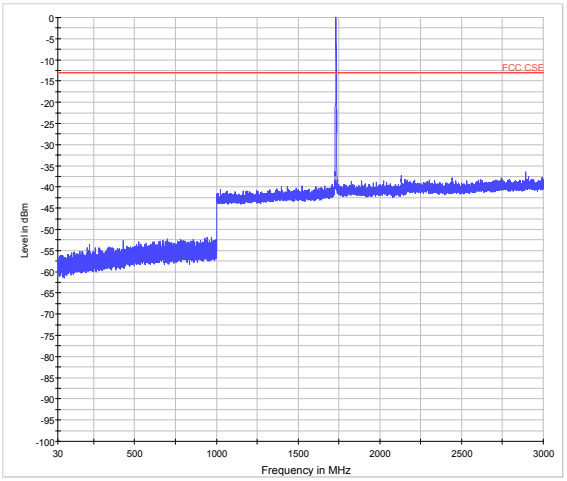
LTE Band 4 3MHz CH-Low 30MHz~3GHz



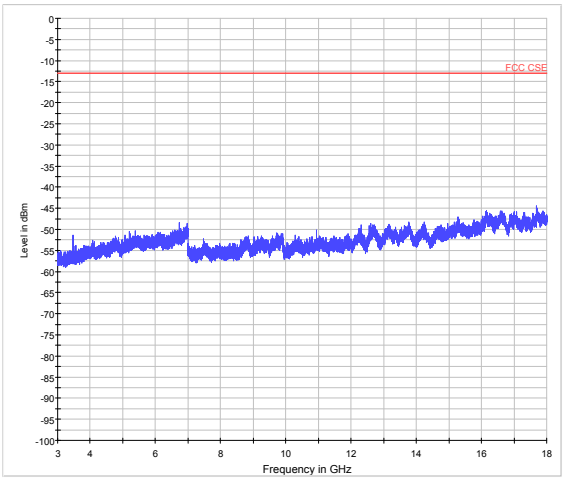
LTE Band 4 3MHz CH-Low 3GHz~18GHz



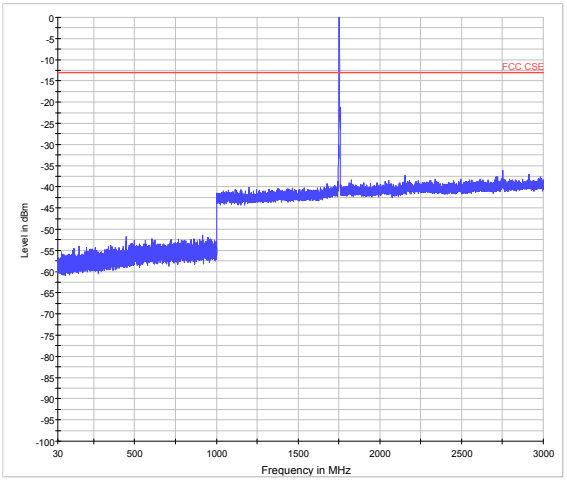
LTE Band 4 3MHz CH-Middle 30MHz~3GHz



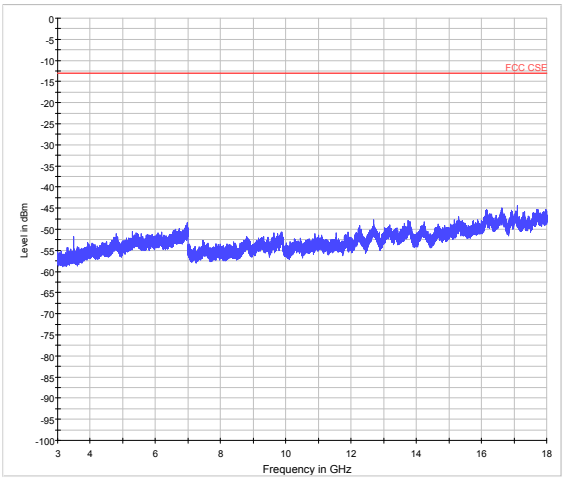
LTE Band 4 3MHz CH-Middle 3GHz~18GHz



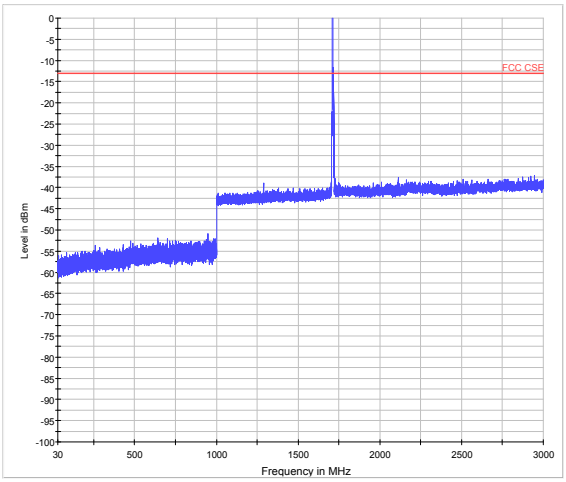
LTE Band 4 3MHz CH-High 30MHz~3GHz



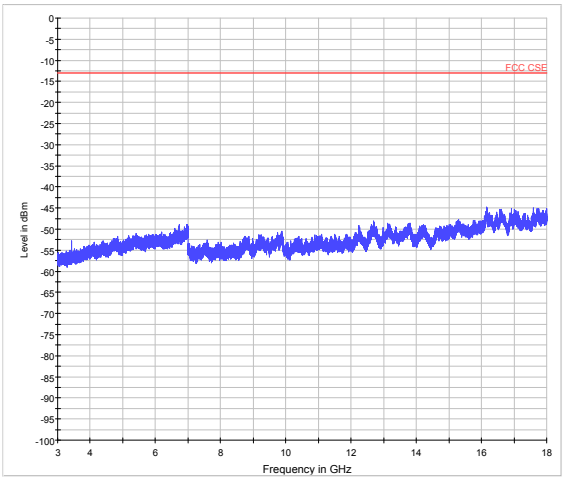
LTE Band 4 3MHz CH-High 3GHz~18GHz



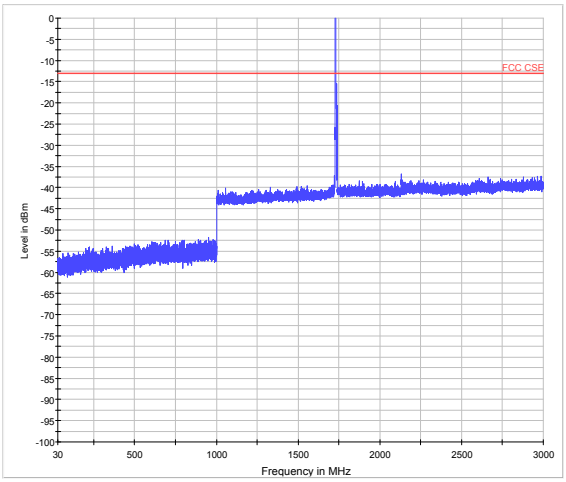
LTE Band 4 5MHz CH-Low 30MHz~3GHz



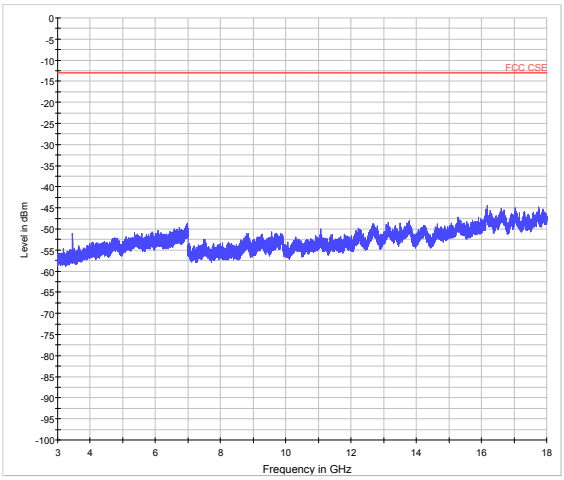
LTE Band 4 5MHz CH-Low 3GHz~18GHz



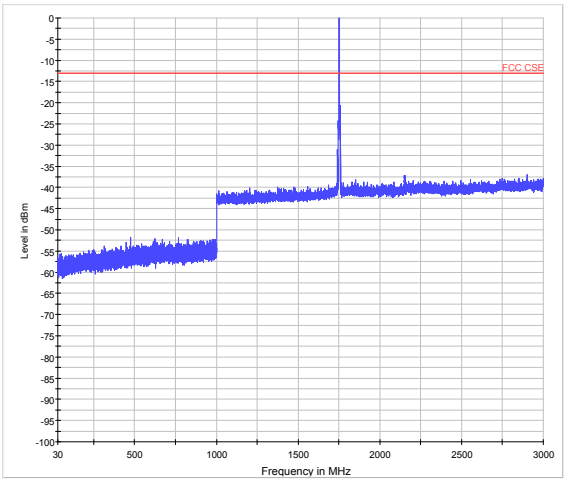
LTE Band 4 5MHz CH-Middle 30MHz~3GHz



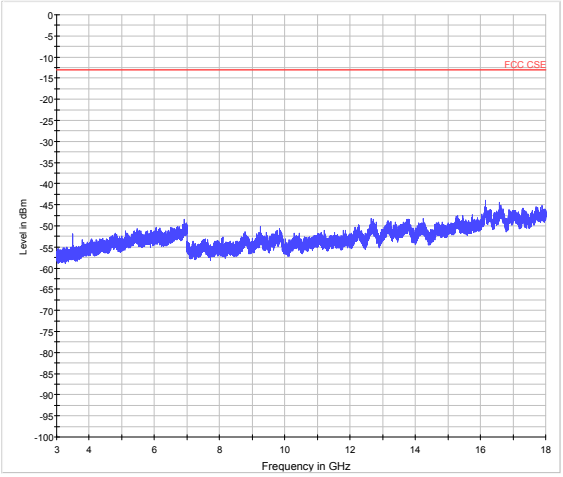
LTE Band 4 5MHz CH-Middle 3GHz~18GHz



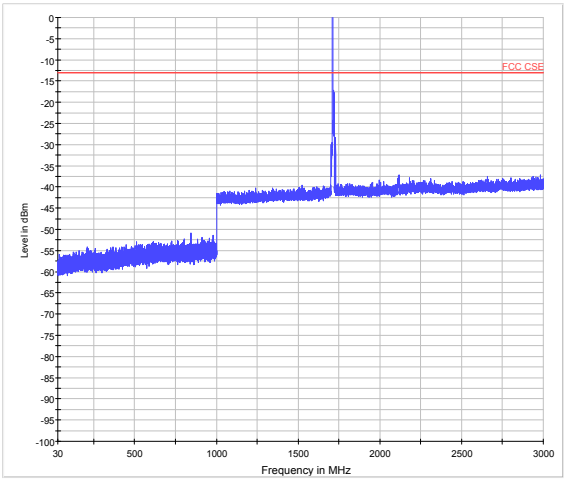
LTE Band 4 5MHz CH-High 30MHz~3GHz



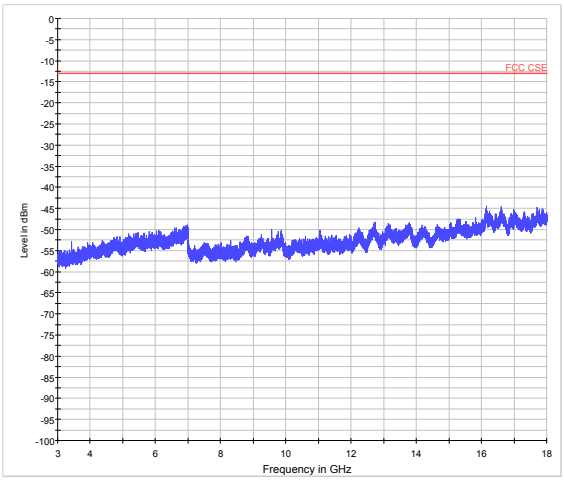
LTE Band 4 5MHz CH-High 3GHz~18GHz



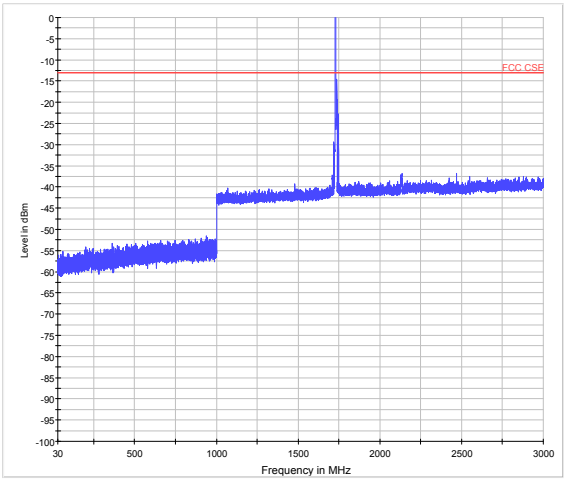
LTE Band 4 10MHz CH-Low 30MHz~3GHz



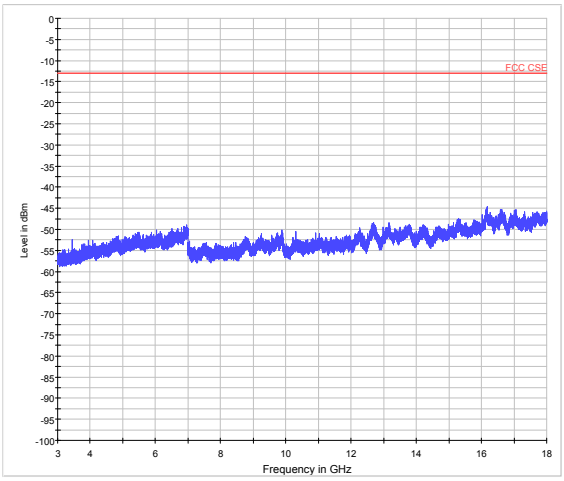
LTE Band 4 10MHz CH-Low 3GHz~18GHz



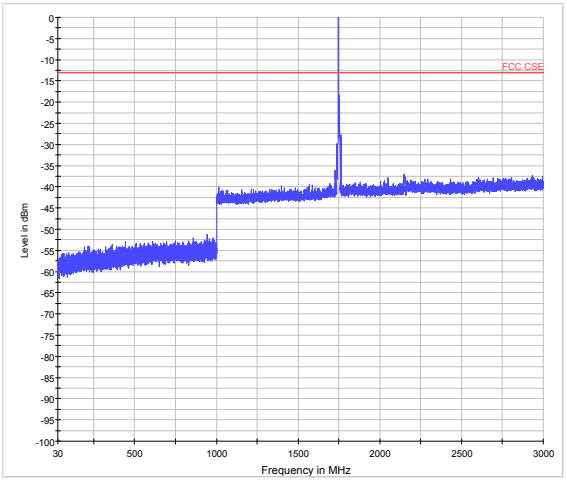
LTE Band 4 10MHz CH-Middle 30MHz~3GHz



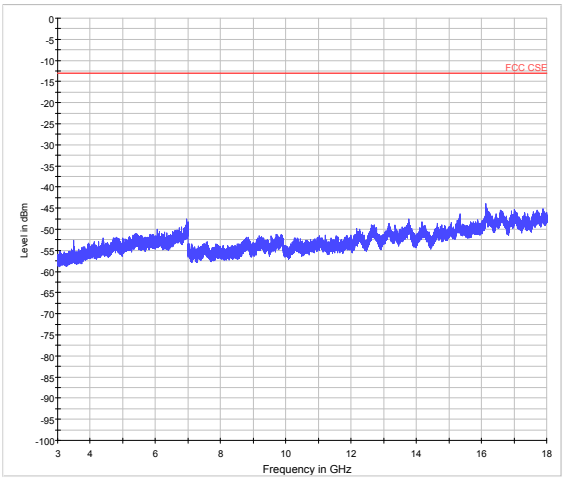
LTE Band 4 10MHz CH-Middle 3GHz~18GHz



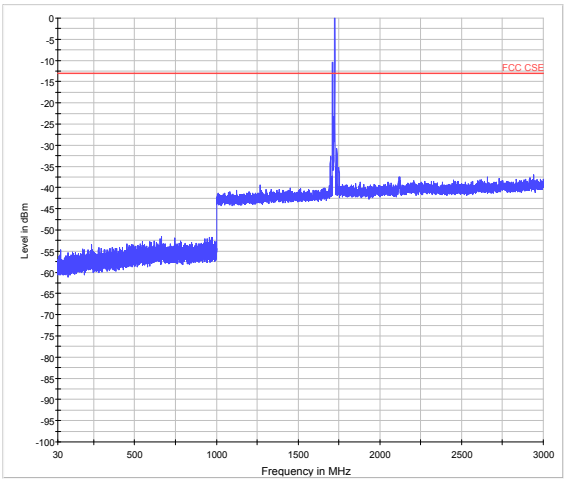
LTE Band 4 10MHz CH-High 30MHz~3GHz



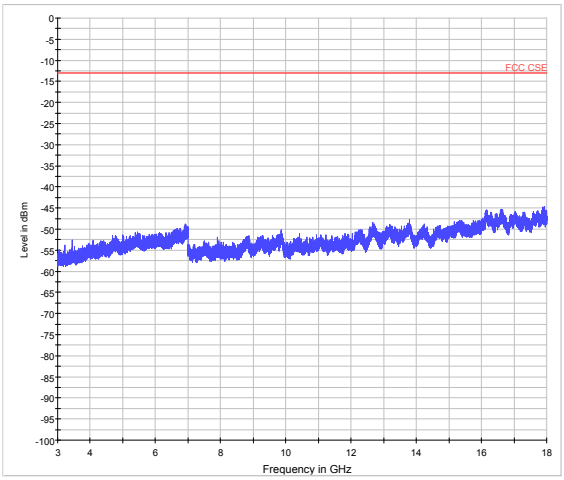
LTE Band 4 10MHz CH-High 3GHz~18GHz



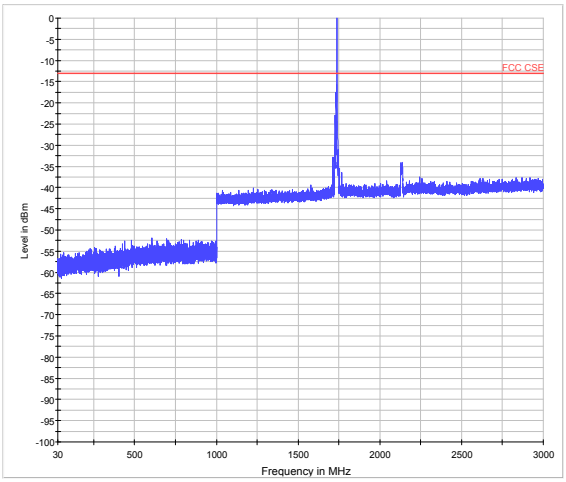
LTE Band 4 15MHz CH-Low 30MHz~3GHz



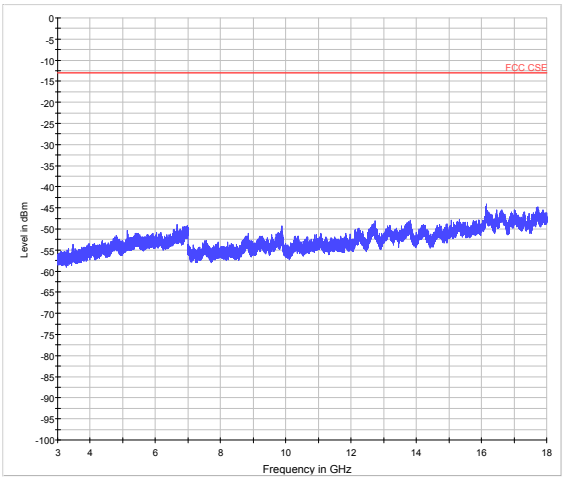
LTE Band 4 15MHz CH-Low 3GHz~18GHz



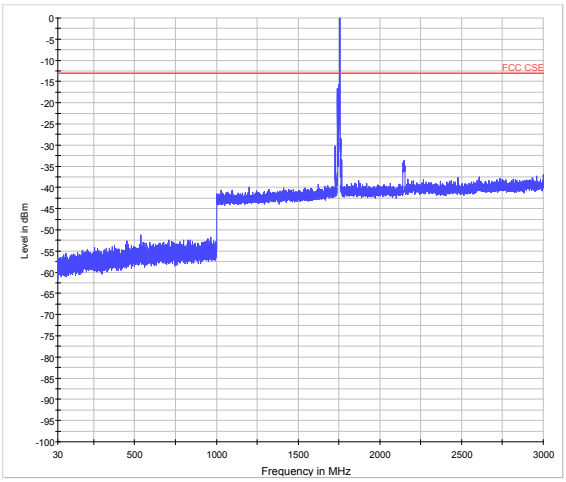
LTE Band 4 15MHz CH-Middle 30MHz~3GHz



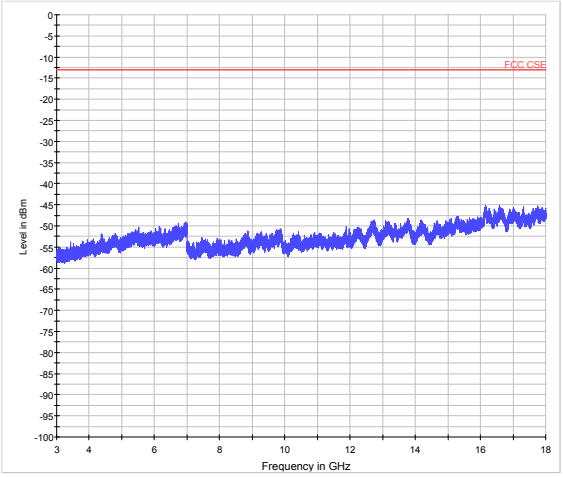
LTE Band 4 15MHz CH-Middle 3GHz~18GHz



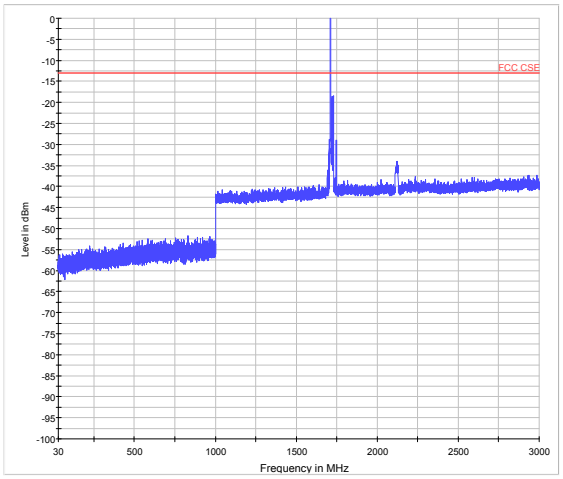
LTE Band 4 15MHz CH-High 30MHz~3GHz



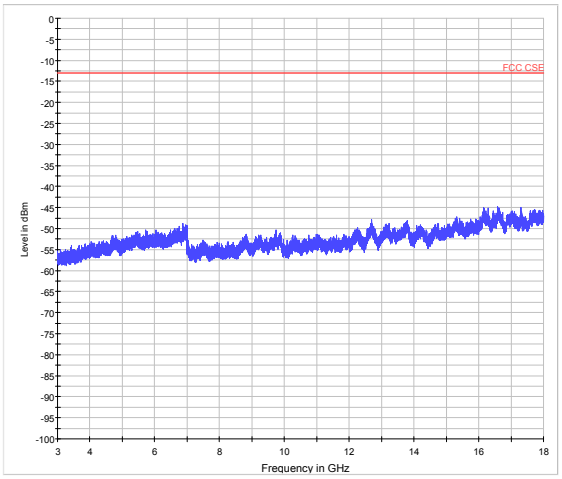
LTE Band 4 15MHz CH-High 3GHz~18GHz



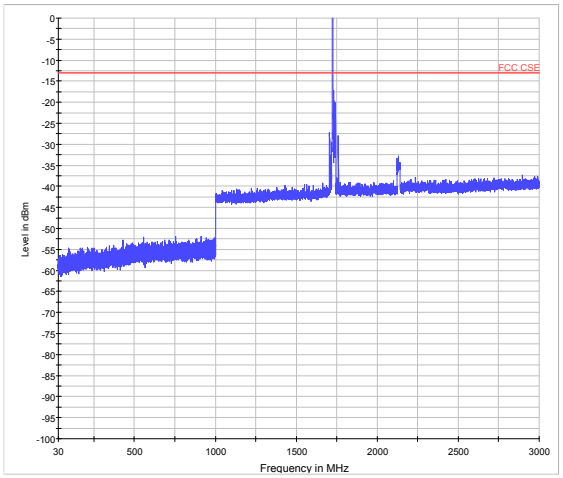
LTE Band 4 20MHz CH-Low 30MHz~3GHz



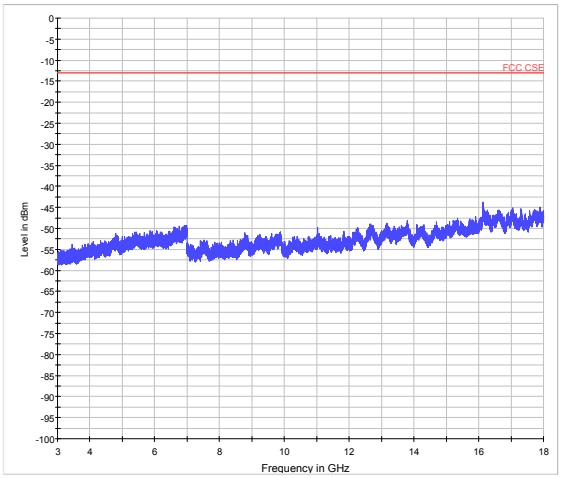
LTE Band 4 20MHz CH-Low 3GHz~18GHz



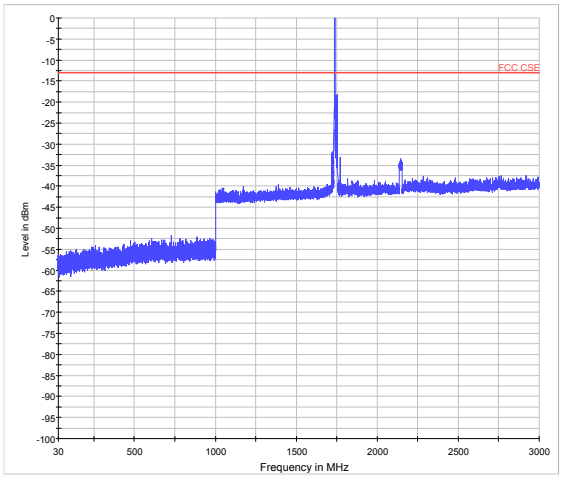
LTE Band 4 20MHz CH-Middle 30MHz~3GHz



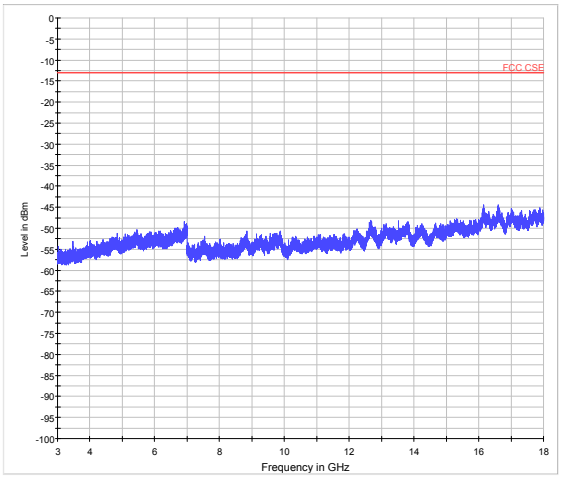
LTE Band 4 20MHz CH-Middle 3GHz~18GHz



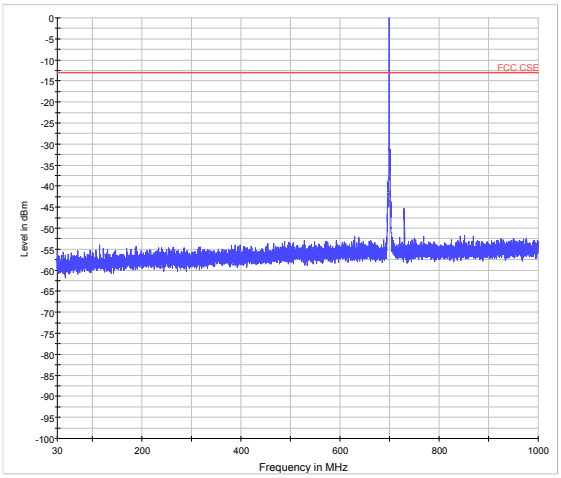
LTE Band 4 20MHz CH-High 30MHz~3GHz



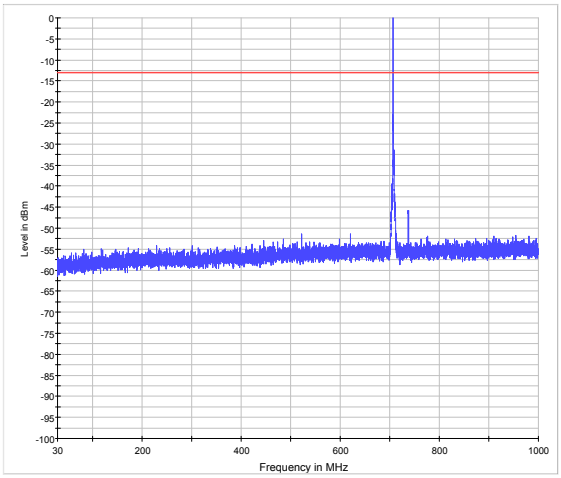
LTE Band 4 20MHz CH-High 3GHz~18GHz



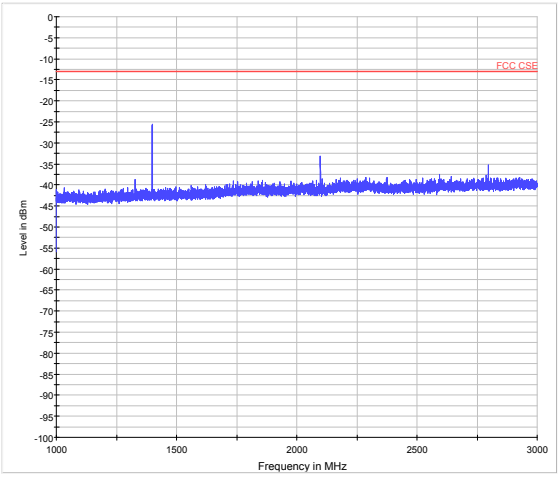
LTE Band 12 1.4MHz CH-Low 30MHz~1GHz



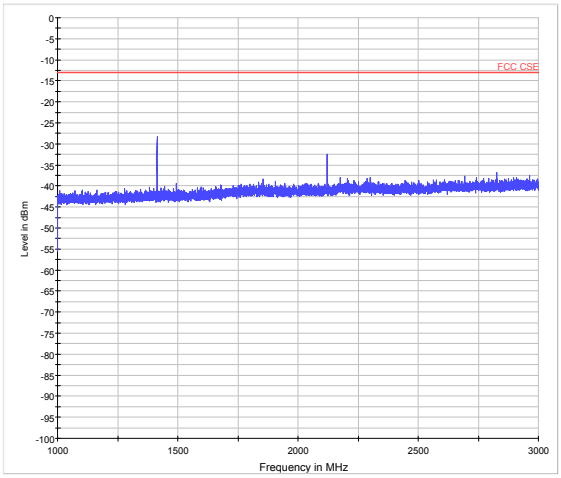
LTE Band 12 1.4MHz CH-Middle 30MHz~1GHz



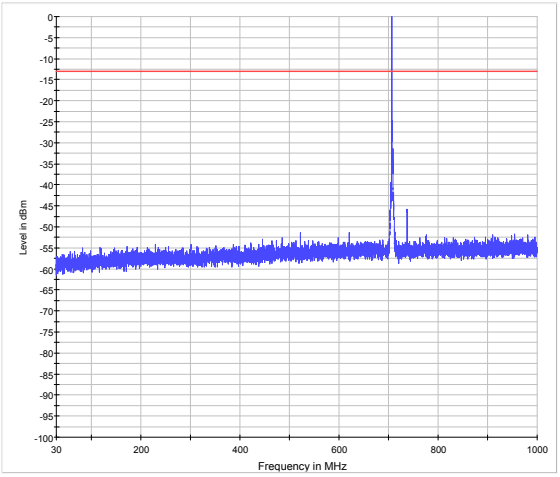
LTE Band 12 1.4MHz CH-Low 1GHz~3GHz



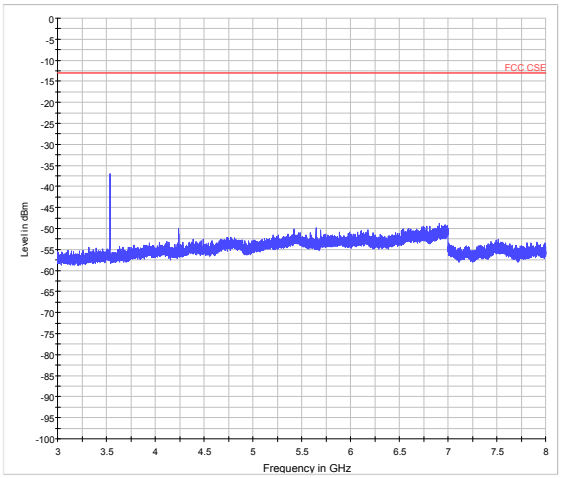
LTE Band 12 1.4MHz CH-Middle 1GHz~3GHz



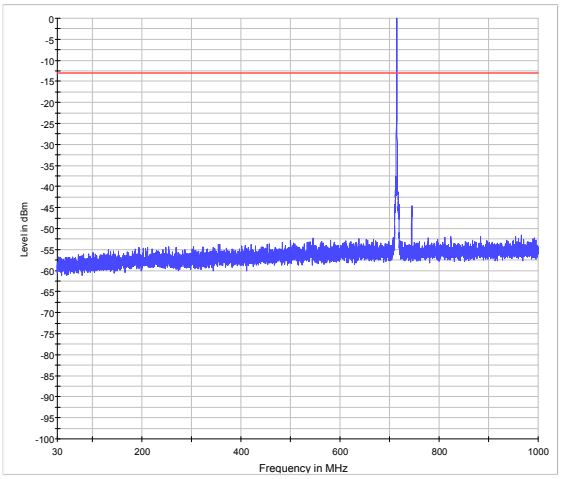
LTE Band 12 1.4MHz CH-Low 3GHz~8 GHz



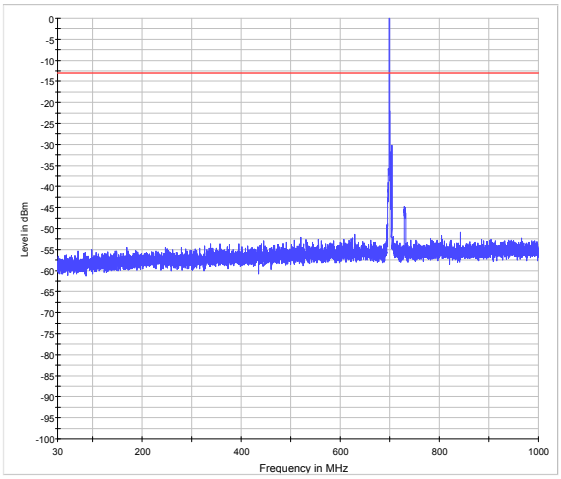
LTE Band 12 1.4MHz CH-Middle 3GHz~8GHz



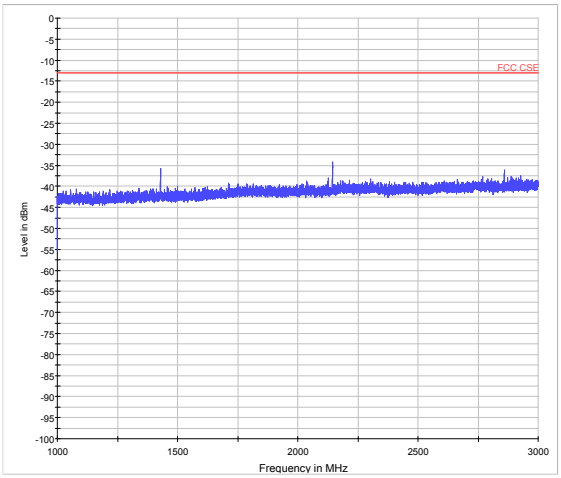
LTE Band 12 1.4MHz CH-High 30MHz~1GHz



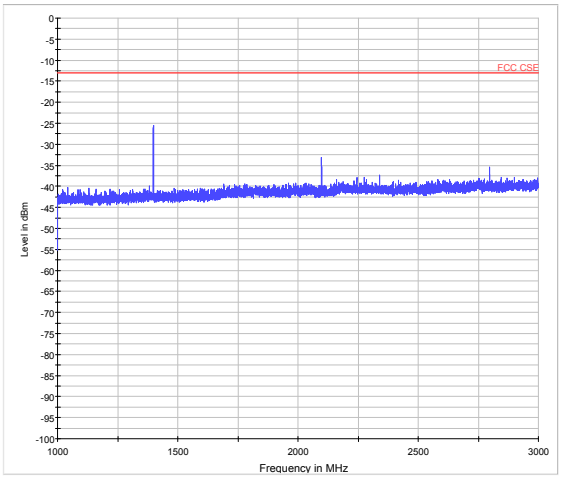
LTE Band 12 3MHz CH-Low 30MHz~1GHz



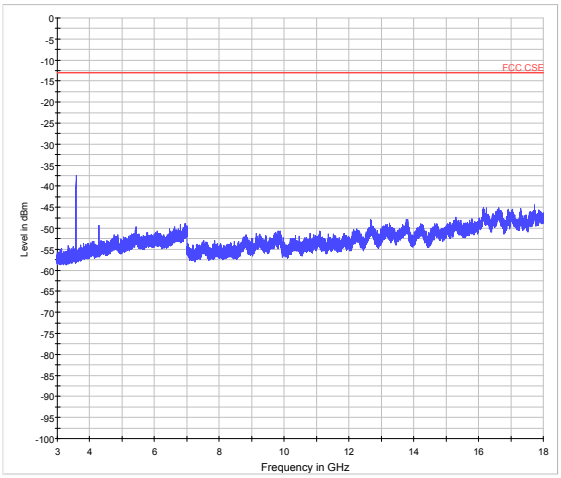
LTE Band 12 1.4MHz CH-High 1GHz~3GHz



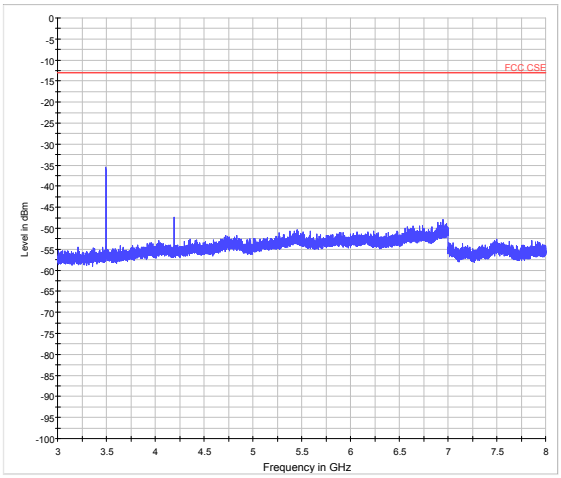
LTE Band 12 3MHz CH-Low 1GHz~3GHz



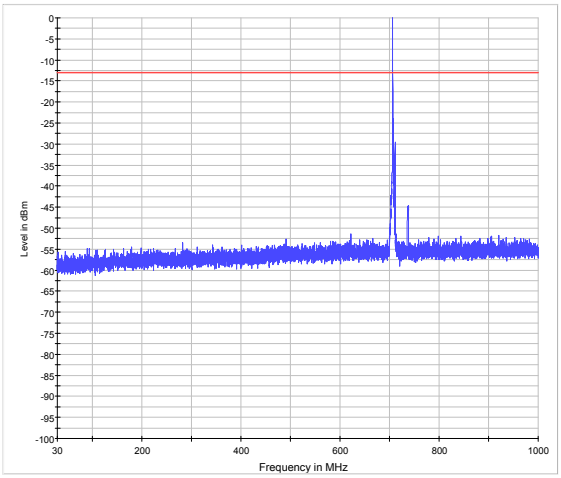
LTE Band 12 1.4MHz CH-High 3GHz~8GHz



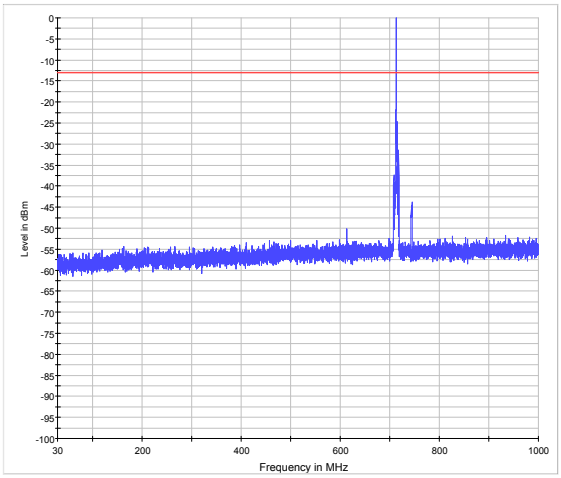
LTE Band 12 3MHz CH-Low 3GHz~8GHz



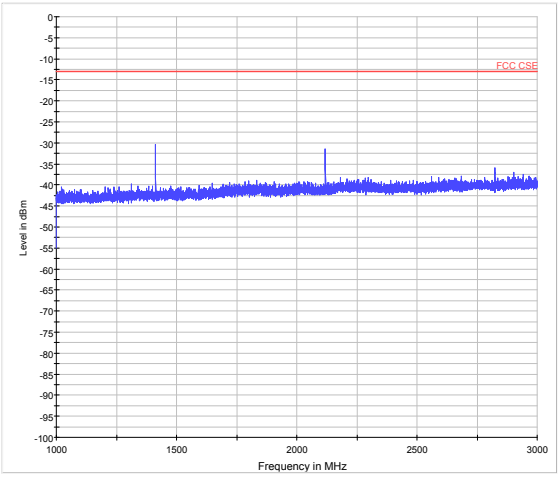
LTE Band 12 3MHz CH-Middle 30MHz~1GHz



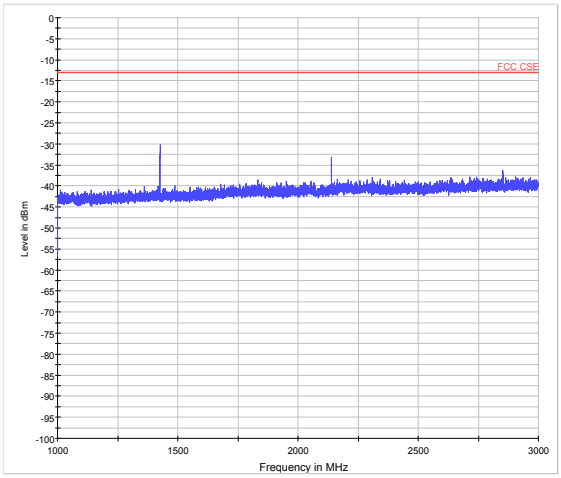
LTE Band 12 3MHz CH-High 30MHz~1GHz



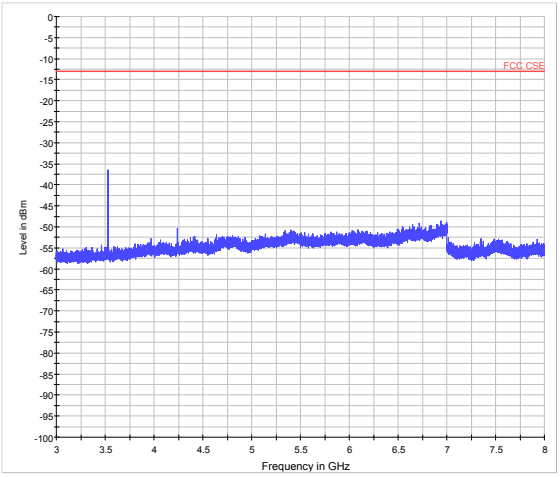
LTE Band 12 3MHz CH-Middle 1GHz~3GHz



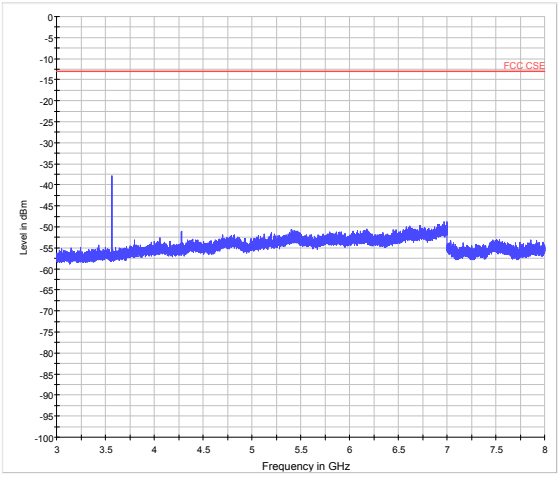
LTE Band 12 3MHz CH-High 1GHz~3GHz



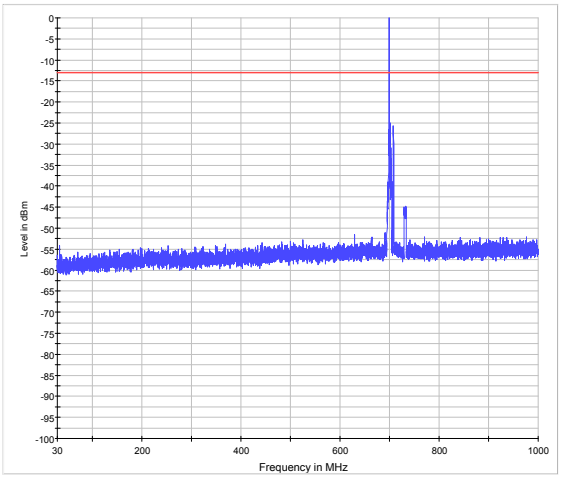
LTE Band 12 3MHz CH-Middle 3GHz~8GHz



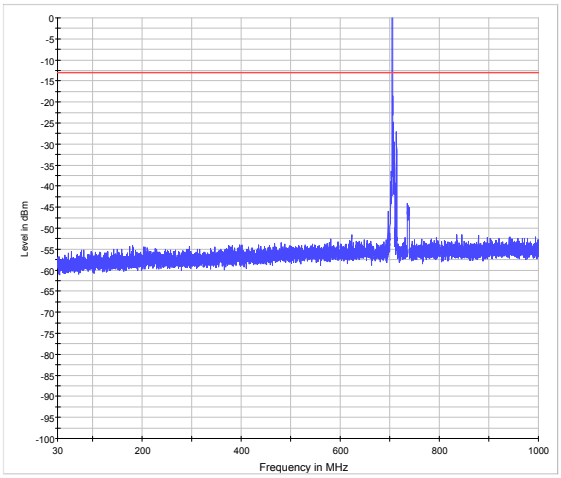
LTE Band 12 3MHz CH-High 3GHz~8GHz



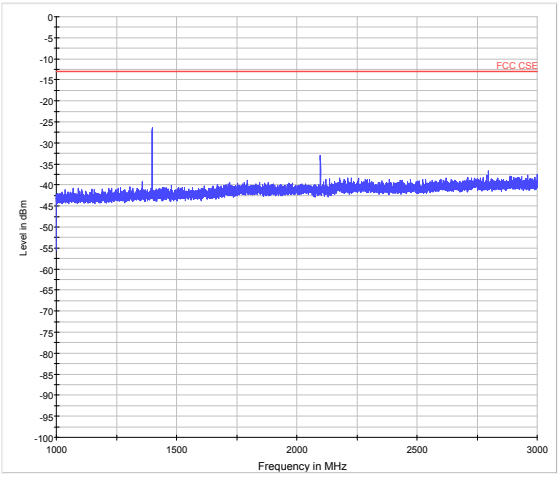
LTE Band 12 5MHz CH-Low 30MHz~1GHz



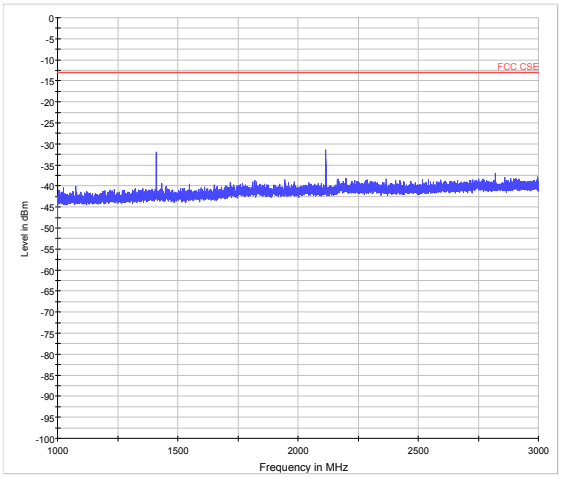
LTE Band 12 5MHz CH-Middle 30MHz~1GHz



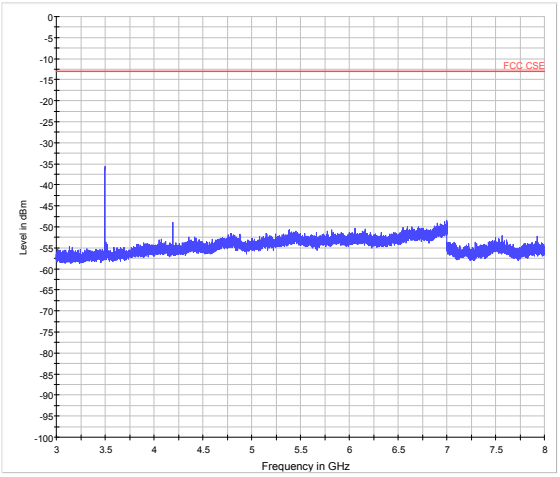
LTE Band 12 5MHz CH-Low 1GHz~3GHz



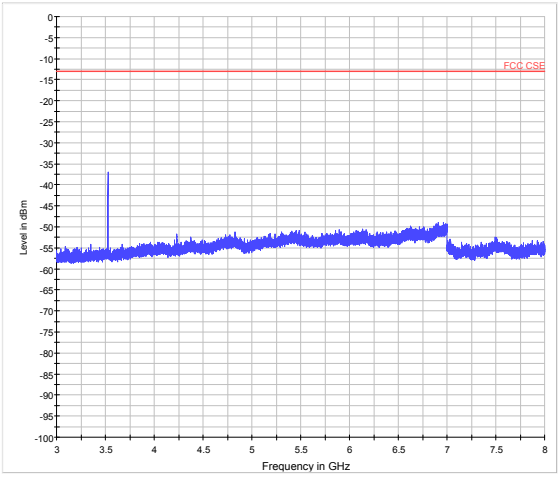
LTE Band 12 5MHz CH-Middle 1GHz~3GHz



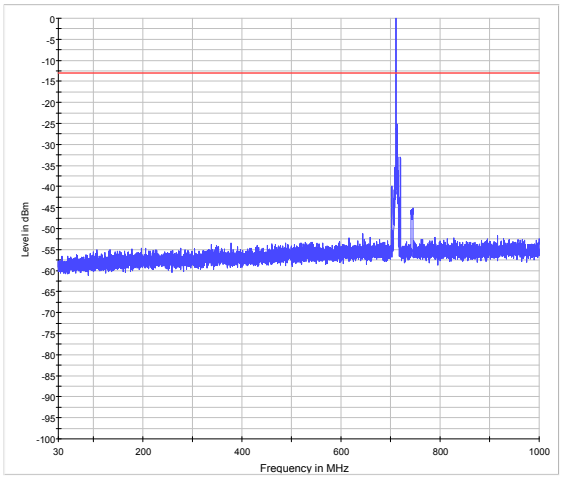
LTE Band 12 5MHz CH-Low 3GHz~8GHz



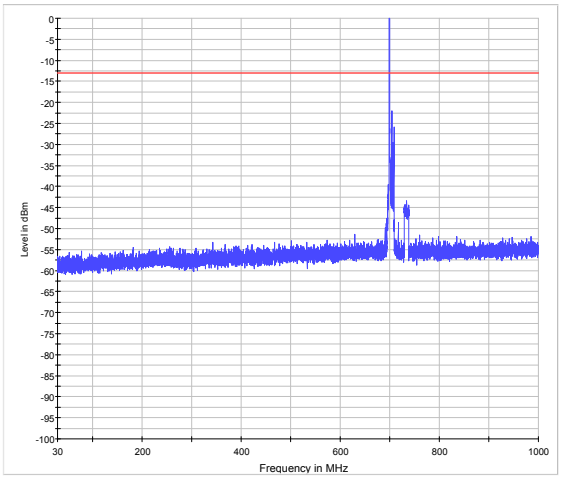
LTE Band 12 5MHz CH-Middle 3GHz~8GHz



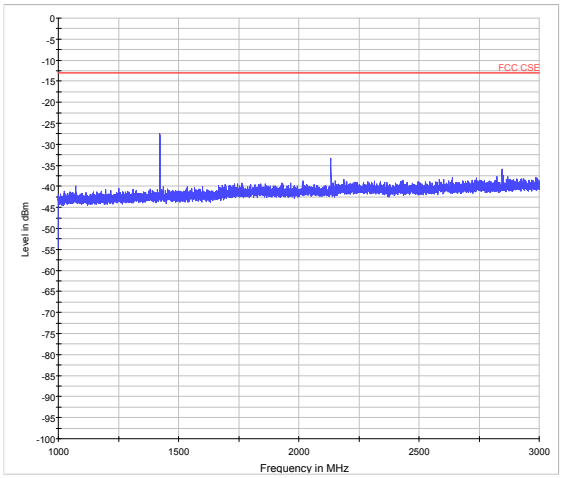
LTE Band 12 5MHz CH-High 30MHz~1GHz



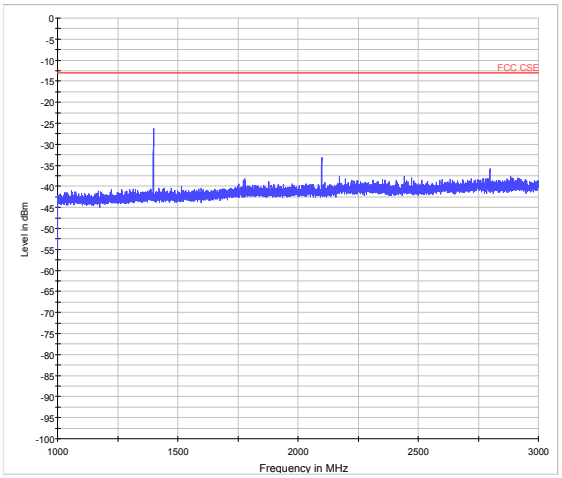
LTE Band 12 10MHz CH-Low 30MHz~1GHz



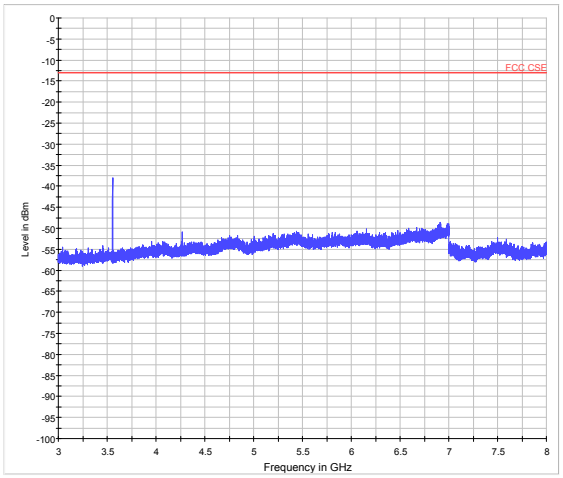
LTE Band 12 5MHz CH-High 1GHz~3GHz



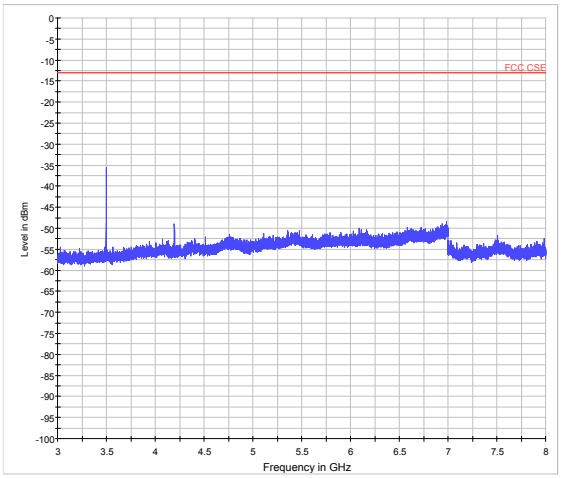
LTE Band 12 10MHz CH-Low 1GHz~3GHz



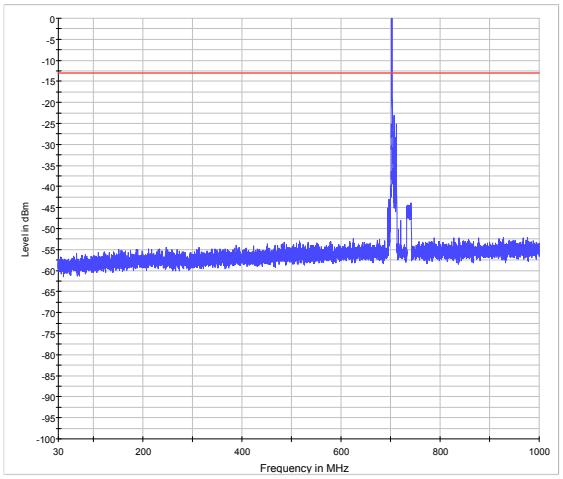
LTE Band 12 5MHz CH-High 3GHz~8GHz



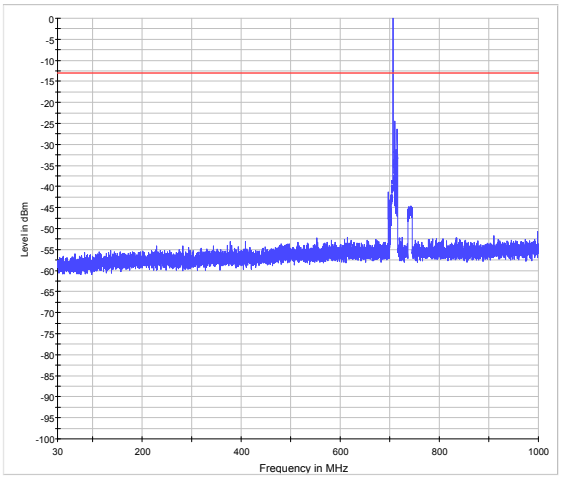
LTE Band 12 10MHz CH-Low 3GHz~8GHz



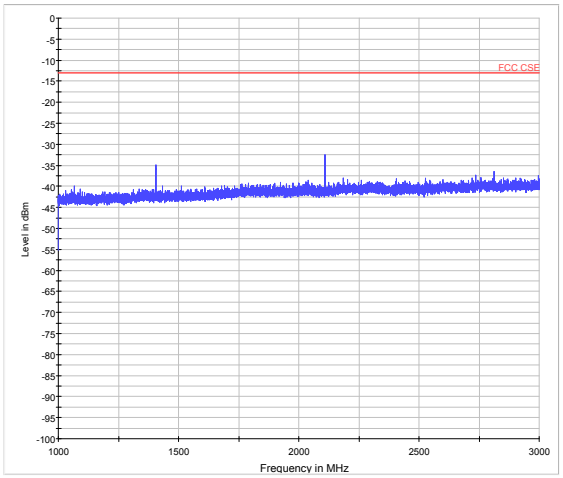
LTE Band 12 10MHz CH-Middle 30MHz~1GHz



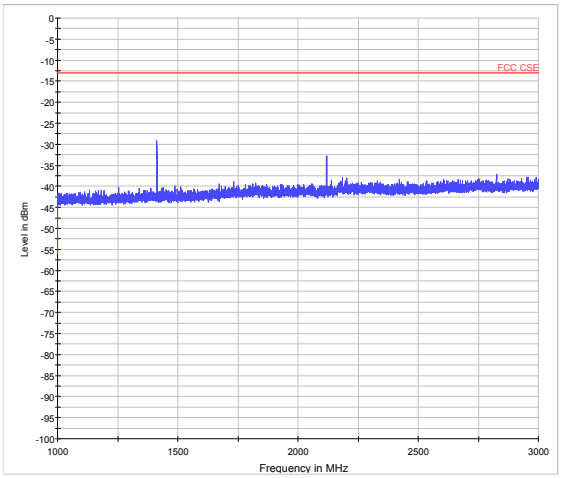
LTE Band 12 10MHz CH-High 30MHz~1GHz



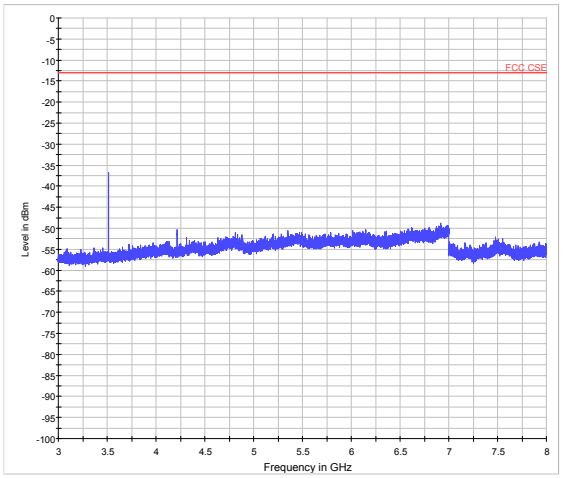
LTE Band 12 10MHz CH-Middle 1GHz~3GHz



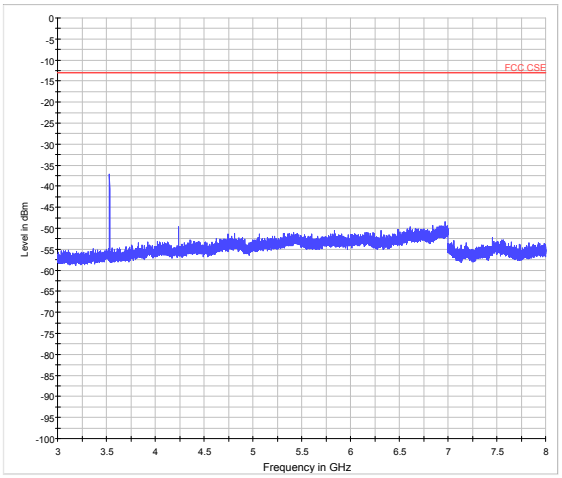
LTE Band 12 10MHz CH-High 1GHz~3GHz



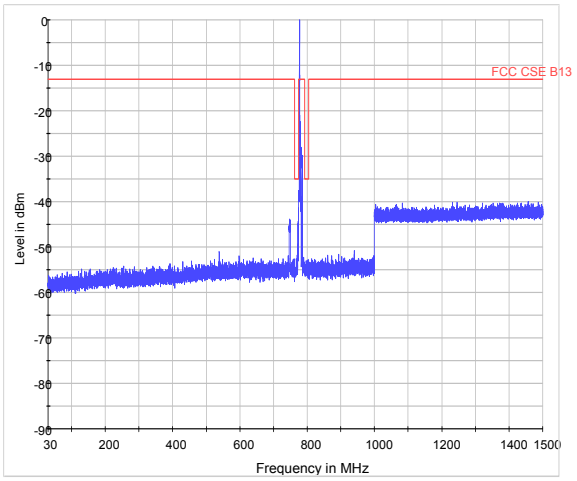
LTE Band 12 10MHz CH-Middle 3GHz~8GHz



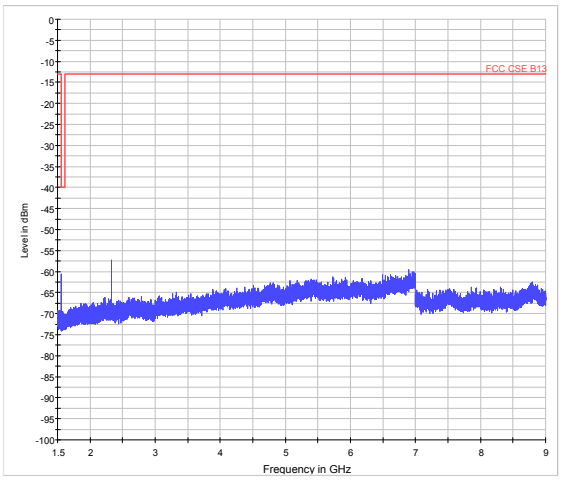
LTE Band 12 10MHz CH-High 3GHz~8GHz



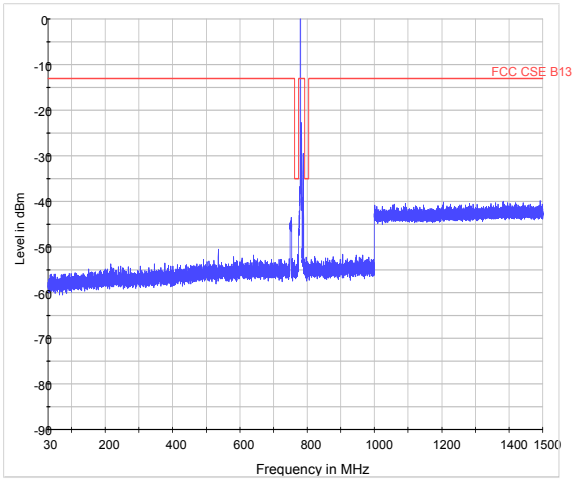
LTE Band 13 5MHz CH-Low 30MHz~1.5GHz



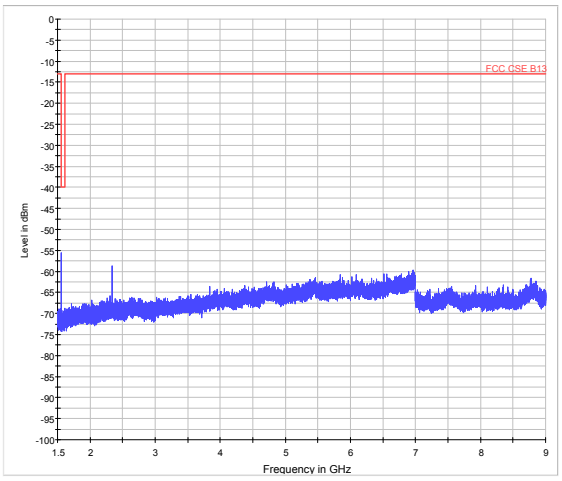
LTE Band 13 5MHz CH-Low 1.5GHz~9GHz



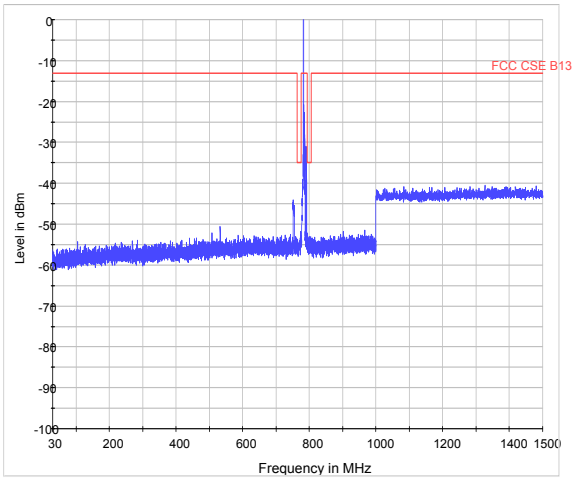
LTE Band 13 5MHz CH-Middle 30MHz~1.5GHz



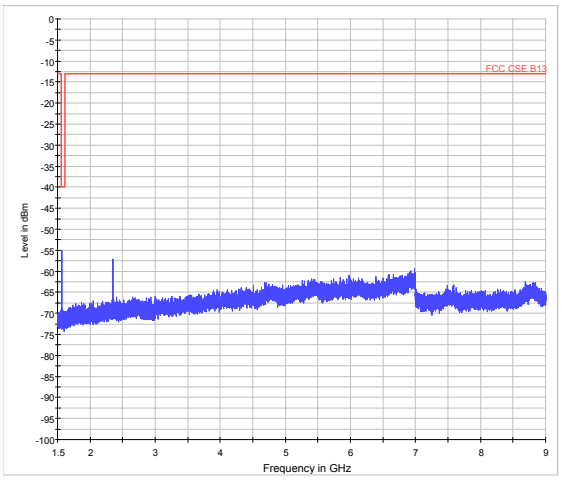
LTE Band 13 5MHz CH-Middle1.5GHz~9GHz



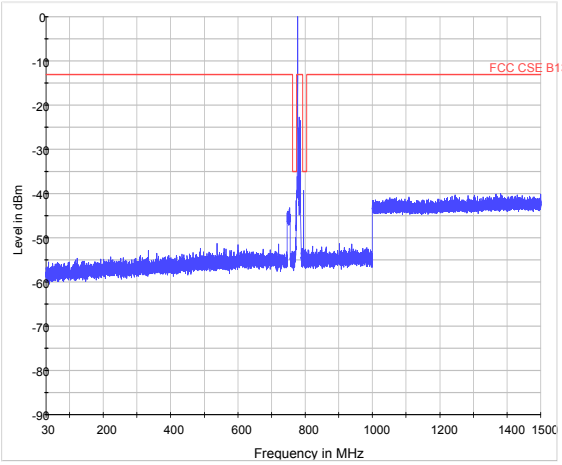
LTE Band 13 5MHz CH-High 30MHz~1.5GHz



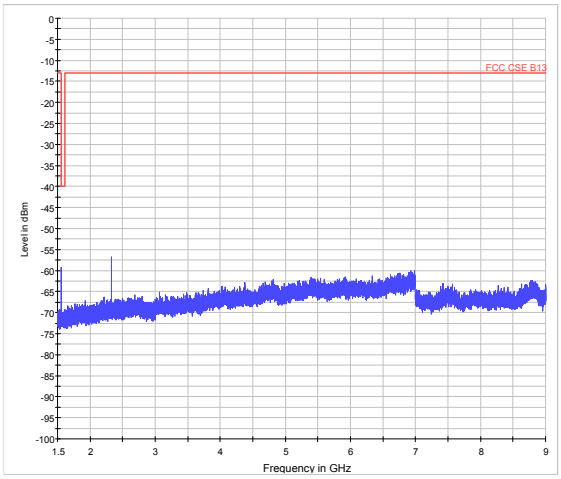
LTE Band 13 5MHz CH-High 1.5GHz~9GHz



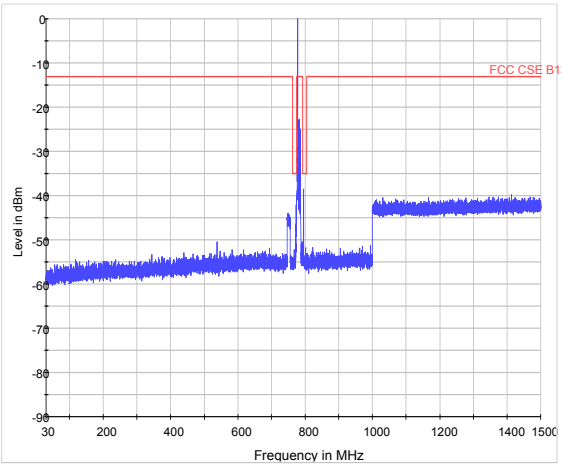
LTE Band 13 10MHz CH-Low 30MHz~1.5GHz



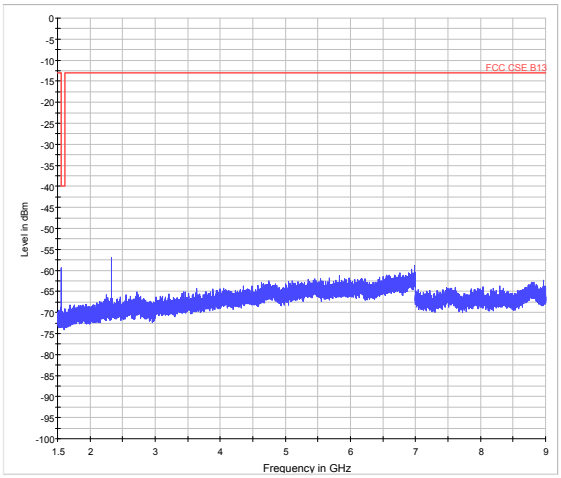
LTE Band 13 10MHz CH-Low 1.5GHz~9GHz



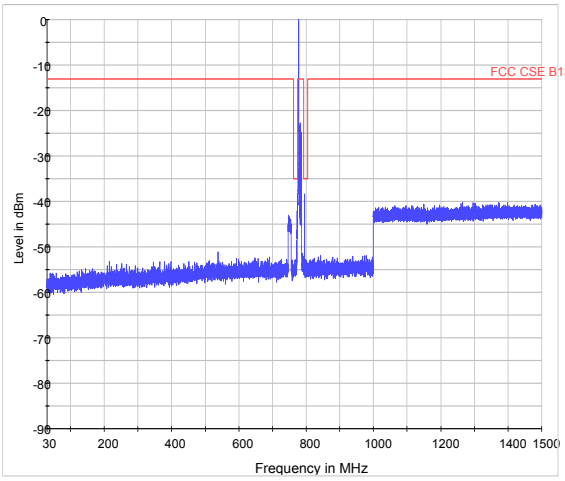
LTE Band 13 10MHz CH-Middle 30MHz~1.5GHz



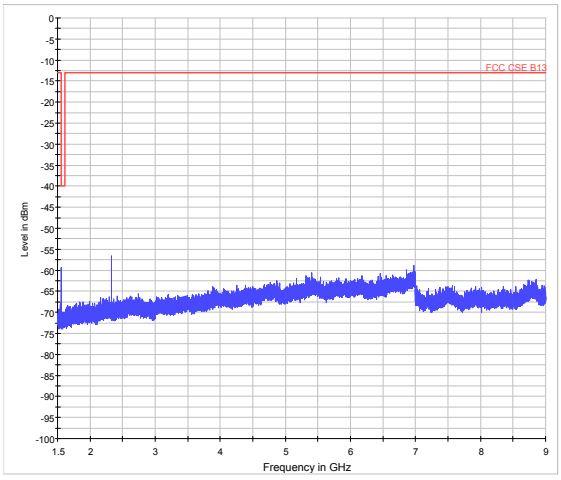
LTE Band 13 10MHz CH-Middle1.5GHz~9GHz



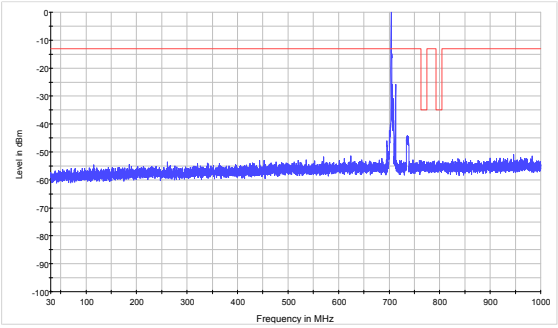
LTE Band 13 10MHz CH-High 30MHz~1.5GHz



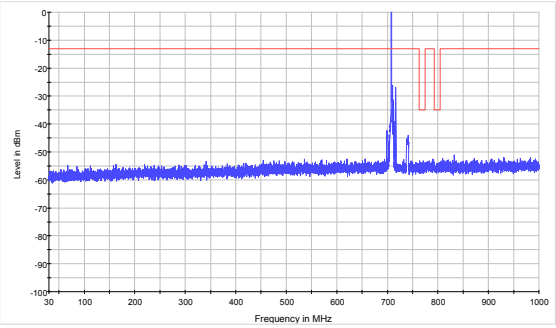
LTE Band 13 10MHz CH-High 1.5GHz~9GHz



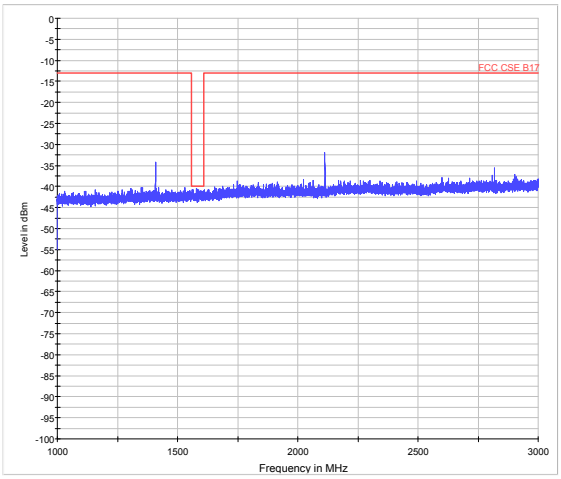
LTE Band 17 5MHz CH-Low 30MHz~1GHz



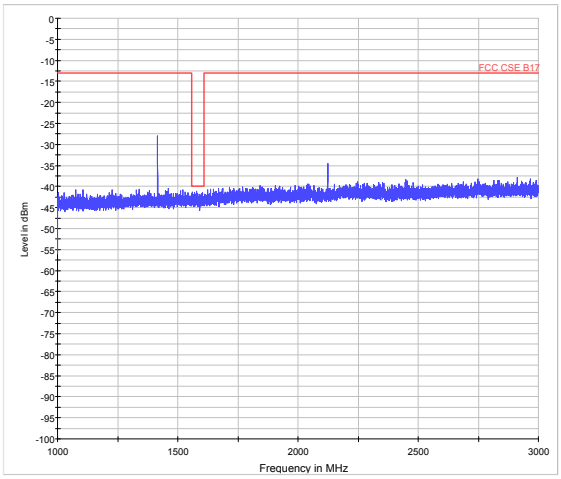
LTE Band 17 5MHz CH-Middle 30MHz~1GHz



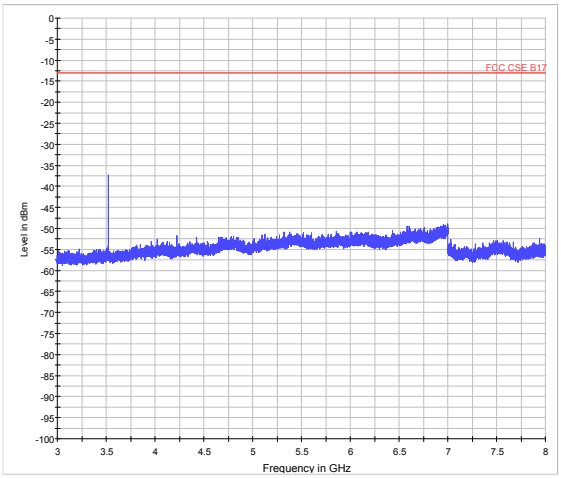
LTE Band 17 5MHz CH-Low 1GHz~3GHz



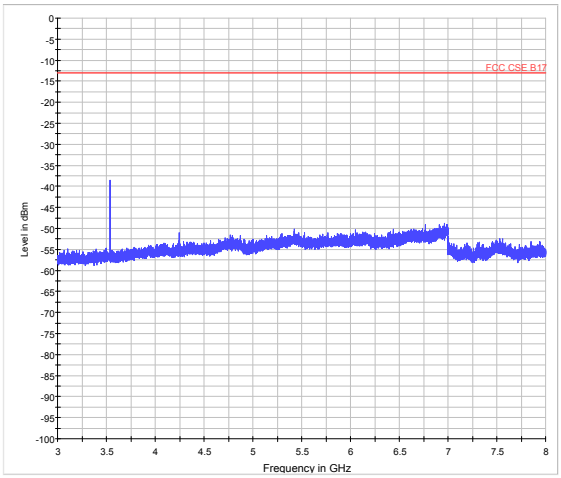
LTE Band 17 5MHz CH-Middle 1GHz~3GHz



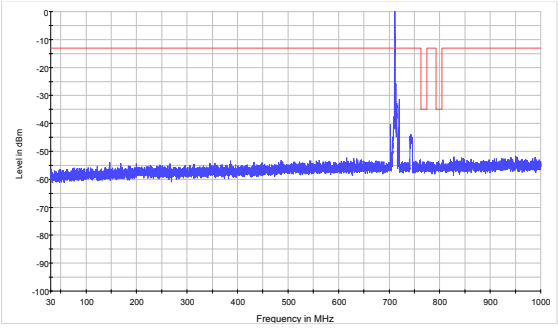
LTE Band 17 5MHz CH-Low 3GHz~8GHz



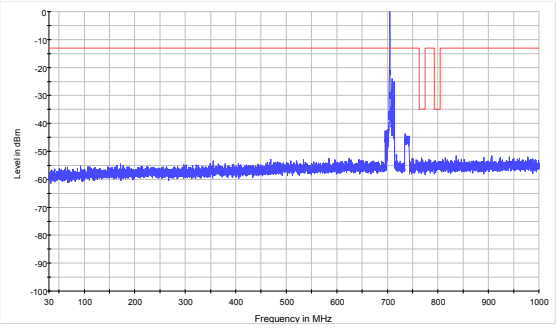
LTE Band 17 5MHz CH-Middle 3GHz~8GHz



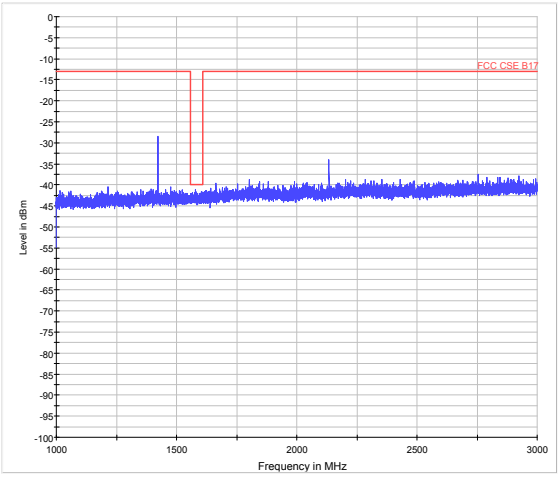
LTE Band 17 5MHz CH-High 30MHz~1GHz



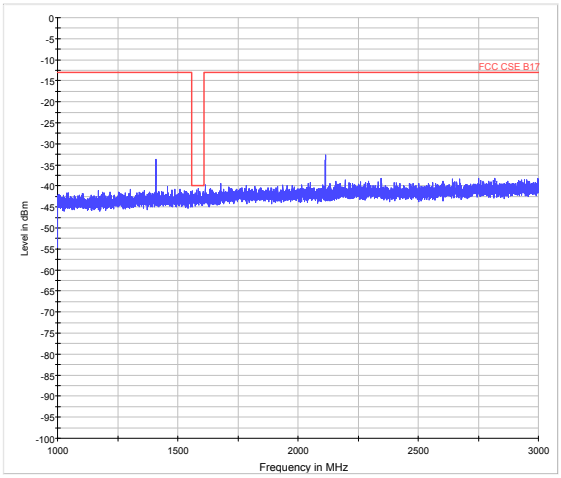
LTE Band 17 10MHz CH-Low 30MHz~1GHz



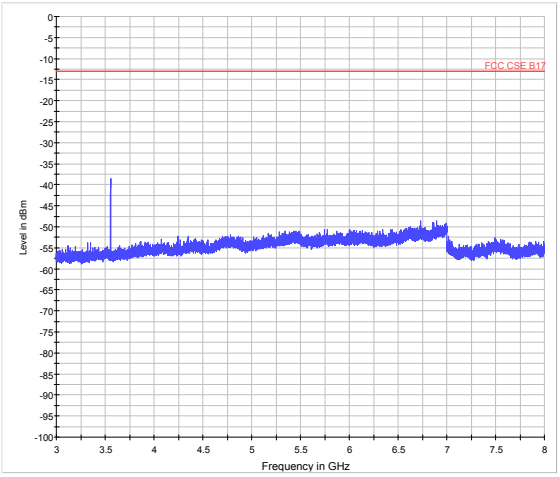
LTE Band 17 5MHz CH-High 1GHz~3GHz



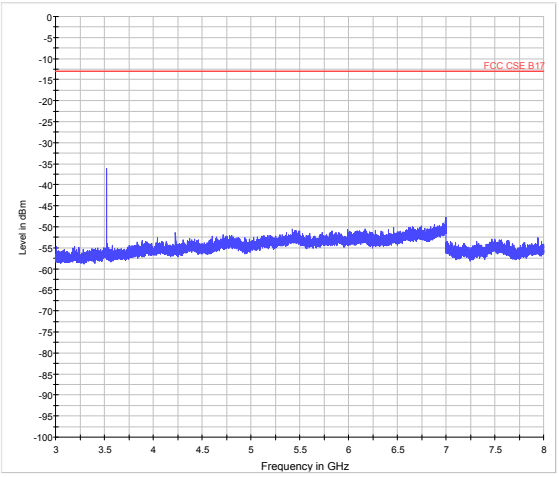
LTE Band 17 10MHz CH-Low 1GHz~3GHz



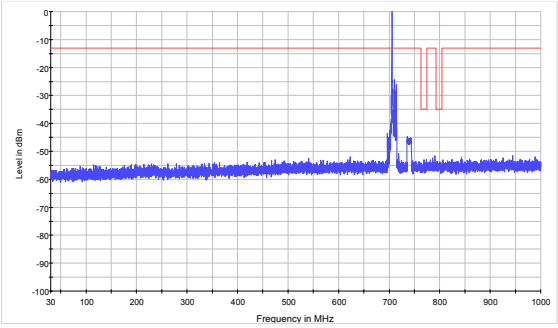
LTE Band 17 5MHz CH-High 3GHz~8GHz



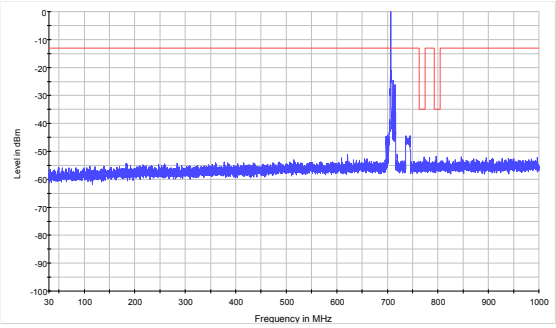
LTE Band 17 10MHz CH-Low 3GHz~8GHz



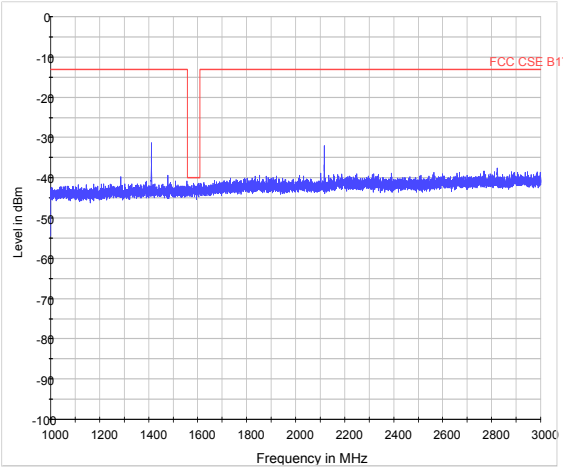
LTE Band 17 10MHz CH-Middle 30MHz~1GHz



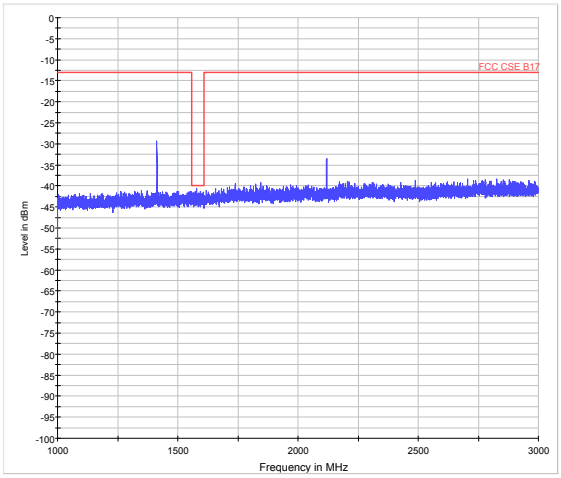
LTE Band 17 10MHz CH-High 30MHz~1GHz



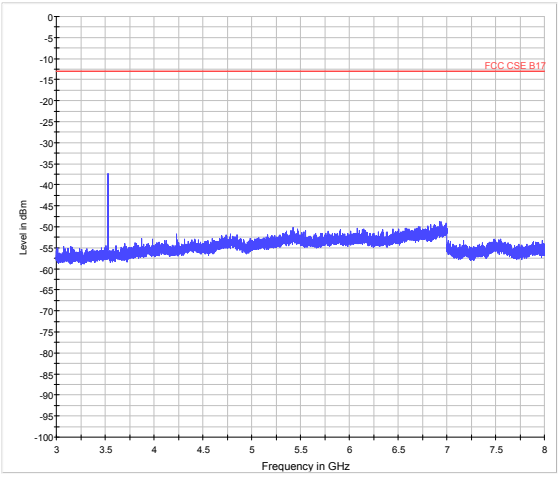
LTE Band 17 10MHz CH-Middle 1GHz~3GHz



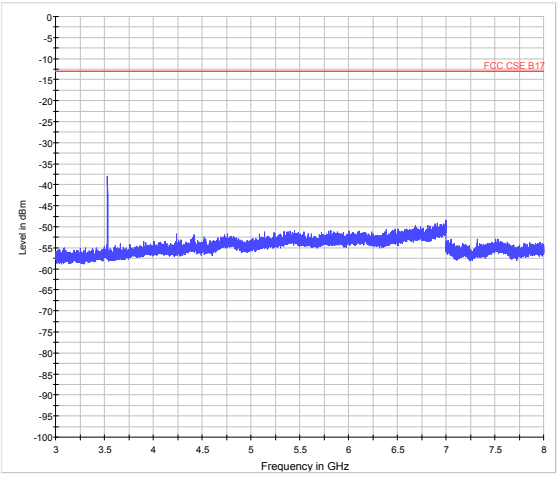
LTE Band 17 10MHz CH-High 1GHz~3GHz



LTE Band 17 10MHz CH-Middle 3GHz~8GHz



LTE Band 17 10MHz CH-High 3GHz~8GHz



If disturbances were found more than 20dB below limit line, the mark is not required for the EUT.

Test Data File Name	Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)
CSE_LTE B12_CHLOW_1.4M_RB1_1-3GHz	1398.5	-25.58	-13.00	12.58
CSE_LTE B12_CHMID_1.4M_RB1_1-3GHz	1414.0	-28.38	-13.00	15.38
CSE_LTE B12_CHLOW_3M_RB1_1-3GHz	1398.5	-25.58	-13.00	12.58
CSE_LTE B12_CHMID_3M_RB1_1-3GHz	1412.3	-30.49	-13.00	17.49
CSE_LTE B12_CHHIGH_3M_RB1_1-3GHz	1426.5	-30.28	-13.00	17.28
CSE_LTE B12_CHLOW_5M_RB1_1-3GHz	1398.5	-26.35	-13.00	13.35
CSE_LTE B12_CHMID_5M_RB1_1-3GHz	2116.3	-31.35	-13.00	18.35
CSE_LTE B12_CHHIGH_5M_RB1_1-3GHz	1425.0	-27.40	-13.00	14.40
CSE_LTE B12_CHLOW_10M_RB1_1-3GHz	1399.0	-26.30	-13.00	13.30
CSE_LTE B12_CHMID_10M_RB1_1-3GHz	2109.3	-32.40	-13.00	19.40
CSE_LTE B12_CHHIGH_10M_RB1_1-3GHz	1413.0	-29.16	-13.00	16.16
CSE_ LTE B13_CHMID_5M_RB1_1.5-9GHz	1559.6	-55.49	-40.00	15.49
CSE_ LTE B13_CHHIGH_5M_RB1_1.5-9GHz	1564.7	-54.97	-40.00	14.97
CSE_ LTE B13_CHLOW_10M_RB1_1.5-9GHz	1555.1	-59.28	-40.00	19.28
CSE_LTE B17_CHLOW_5M_RB1_1-3GHz	2113.0	-31.87	-13.00	18.87
CSE_LTE B17_CHMID_5M_RB1_1-3GHz	1415.5	-28.01	-13.00	15.01
CSE_LTE B17_CHHIGH_5M_RB1_1-3GHz	1422.5	-28.55	-13.00	15.55
CSE_LTE B17_CHLOW_10M_RB1_1-3GHz	2114.0	-32.70	-13.00	19.70
CSE_LTE B17_CHMID_10M_RB1_1-3GHz	2117.0	-32.04	-13.00	19.04
CSE_LTE B17_CHHIGH_10M_RB1_1-3GHz	1413.3	-29.42	-13.00	16.42
CSE_WCDMA IV_CHLOW_0.03-18GHz_1027	5141.3	-32.51	-13.00	19.51

5.8 Radiates Spurious Emission

Ambient condition

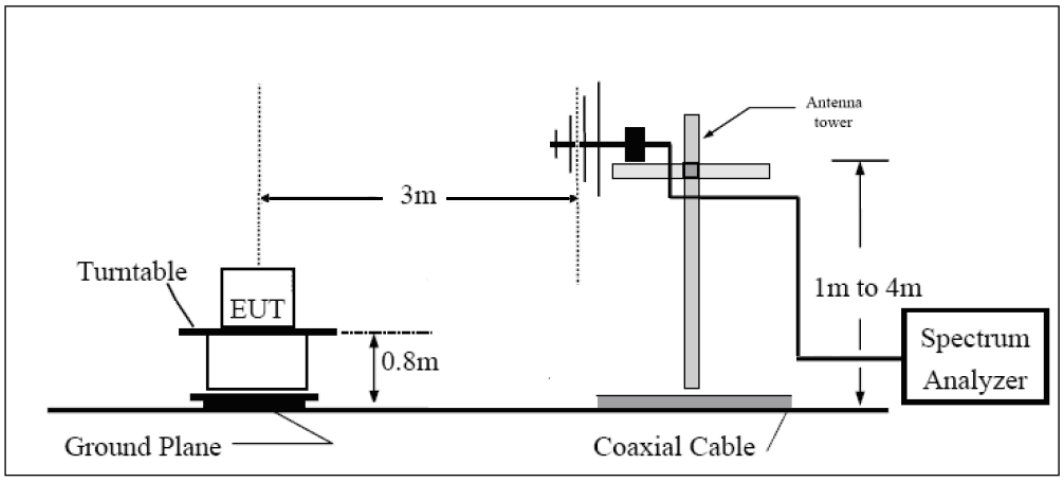
Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

Method of Measurement

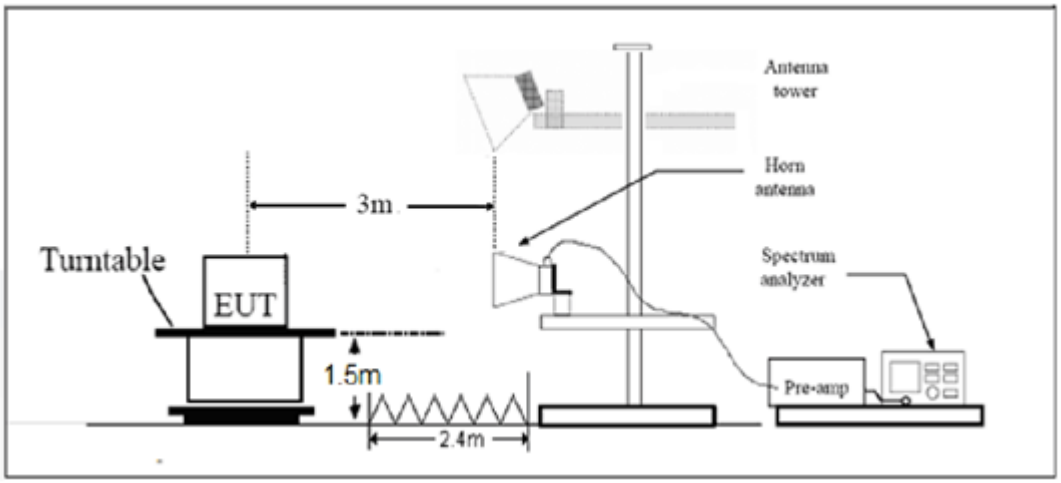
1. The testing follows FCC KDB 971168 v02r02 Section 5.8 and ANSI/TIA-603-D-2010.
2. Above 30MHz： The EUT is placed on a turntable 0.8 meters above the ground in the chamber, 3 meter away from the antenna. The maximal emission value is acquired by adjusting the antenna height, polarisation and turntable azimuth. Normally, the height range of antenna is 1 m to 4 m, the azimuth range of turntable is 0° to 360°, and the receive antenna has two polarizations Vertical (V) and Horizontal (H). Above 1GHz: (Note: the FCC's permission to use 1.5m as an alternative per TCBC Conf call of Dec. 2, 2014.) The EUT is placed on a turntable 1.5 meters above the ground in the chamber, 3 meter away from the antenna. The maximal emission value is acquired by adjusting the antenna height, polarisation and turntable azimuth. Normally, the height range of antenna is 1 m to 4 m, the azimuth range of turntable is 0° to 360°, and the receive antenna has two polarizations Vertical (V) and Horizontal (H).
3. A log-periodic antenna or double-ridged waveguide horn antenna shall be substituted in place of the EUT. The log-periodic antenna will be driven by a signal generator and the level will be adjusted till the same power value on the spectrum analyzer or receiver. The level of the spurious emissions can be calculated through the level of the signal generator, cable loss, the gain of the substitution antenna and the reading of the spectrum analyzer or receiver.
4. The EUT is then put into continuously transmitting mode at its maximum power level during the test.Set Test Receiver or Spectrum RBW=1MHz,VBW=3MHz, And the maximum value of the receiver should be recorded as (Pr).
5. The EUT shall be replaced by a substitution antenna. In the chamber, an substitution antenna for the frequency band of interest is placed at the reference point of the chamber. An RF Signal source for the frequency band of interest is connected to the substitution antenna with a cable that has been constructed to not interfere with the radiation pattern of the antenna. A power (PMea) is applied to the input of the substitution antenna, and adjust the level of the signal generator output until the value of the receiver reach the previously recorded (Pr). The power of signal source (PMea) is recorded. The test should be performed by rotating the test item and adjusting the receiving antenna polarization.
6. A amplifier should be connected to the Signal Source output port. And the cable should be connect between the Amplifier and the Substitution Antenna. The cable loss (Pcl) ,the Substitution Antenna Gain (Ga) and the Amplifier Gain (PAg) should be recorded after test.
7. The measurement results are obtained as described below:
Power(EIRP)=PMea- PAg - Pcl + Ga
The measurement results are amend as described below:
Power(EIRP)=PMea- Pcl + Ga
8. This value is EIRP since the measurement is calibrated using an antenna of known gain (2.15 dBi) and known input power. ERP can be calculated from EIRP by subtracting the gain of the dipole, ERP = EIRP-2.15dBi.

Test setup

30MHz~~~ 1GHz



Above 1GHz



Note: Area side:2.4mX3.6m

The radiated emission was measured in the following position: EUT stand-up position (Z axis), lie-down position (X, Y axis). The worst emission was found in stand-up position (Z axis) and the worst case was recorded.

Limits

LTE -4 Rule Part 27.53(h) specifies that “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..”

LTE -12 Rule 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.

LTE -13/17 Rule Part 27.53(f)For operations in the 746-758 MHz, 775-788 MHz, and 805-806 MHz bands, emissions in the band 1559-1610 MHz shall be limited to −70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals, and −80 dBW EIRP for discrete emissions of less than 700 Hz bandwidth. For the purpose of equipment authorization, a transmitter shall be tested with an antenna that is representative of the type that will be used with the equipment in normal operation.

LTE B4/12 Limit		-13 dBm
LTE B13 Limit	Limit out of the band 1559-1610 MHz	-13 dBm
	Limit in the band 1559-1610 MHz	-40 dBm

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95％ confidence level for the normal distribution is with the coverage factor k = ±1.96, U= ±3.55 dB.

Test Result

WCDMA Band IV CH-Low

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	3424.8	-61.35	2.6	10.15	Horizontal	-53.85	-13.00	40.85	270
3	5137.2	-60.25	2.4	11.35	Horizontal	-51.27	-13.00	38.27	315
4	6849.6	-54.45	4.5	10.85	Horizontal	-48.12	-13.00	35.12	135
5	8562.0	-52.85	5.1	11.35	Horizontal	-46.61	-13.00	33.61	270
6	10274.4	-52.85	5.3	11.95	Horizontal	-46.24	-13.00	33.24	225
7	11986.8	-51.25	5.5	13.55	Horizontal	-43.21	-13.00	30.21	0
8	13699.2	-50.65	6.3	13.75	Horizontal	-43.15	-13.00	30.15	315
9	15411.6	-48.25	6.7	13.85	Horizontal	-41.10	-13.00	28.10	45
10	17124.0	-48.15	6.8	14.25	Horizontal	-40.69	-13.00	27.69	225

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.
2. The worst emission was found in the antenna is Horizontal position.

WCDMA Band IV CH-Middle

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	3465.2	-62.45	2.6	10.75	Horizontal	-54.27	-13.00	41.27	315
3	5197.8	-59.65	2.4	11.05	Horizontal	-51.01	-13.00	38.01	315
4	6930.4	-55.45	4.5	11.15	Horizontal	-48.82	-13.00	35.82	45
5	8663.0	-52.05	5.1	11.35	Horizontal	-45.82	-13.00	32.82	270
6	10395.6	-52.65	5.3	11.95	Horizontal	-46.03	-13.00	33.03	315
7	12128.2	-50.85	5.5	13.55	Horizontal	-42.82	-13.00	29.82	135
8	13860.8	-49.95	6.3	13.75	Horizontal	-42.52	-13.00	29.52	135
9	15593.4	-48.25	6.7	13.85	Horizontal	-41.06	-13.00	28.06	180
10	17326.0	-47.75	6.8	14.25	Horizontal	-40.25	-13.00	27.25	45

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.
2. The worst emission was found in the antenna is Horizontal position.

WCDMA Band IV CH-High

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	3505.2	-61.45	2.6	10.15	Horizontal	-53.92	-13.00	40.92	225
3	5260.1	-56.85	2.4	11.05	Horizontal	-48.17	-13.00	35.17	225
4	7010.4	-55.55	4.5	11.15	Horizontal	-48.87	-13.00	35.87	315
5	8763.0	-52.45	5.1	11.35	Horizontal	-46.17	-13.00	33.17	270
6	10515.6	-53.15	5.3	11.95	Horizontal	-46.49	-13.00	33.49	45
7	12268.2	-51.65	5.5	13.55	Horizontal	-43.60	-13.00	30.60	90
8	14020.8	-50.25	6.3	13.75	Horizontal	-42.76	-13.00	29.76	225
9	15773.4	-48.95	6.7	13.85	Horizontal	-41.84	-13.00	28.84	0
10	17526.0	-47.45	6.8	14.25	Horizontal	-40.03	-13.00	27.03	45

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.
2. The worst emission was found in the antenna is Horizontal position.

LTE Band 4 QPSK 1.4MHz CH-Low, RB 1

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	3421.4	-62.25	2.6	10.15	Horizontal	-54.71	-13.00	41.71	135
3	5131.1	-60.25	2.4	11.35	Horizontal	-51.29	-13.00	38.29	180
4	6842.8	-53.25	4.5	10.85	Horizontal	-46.95	-13.00	33.95	180
5	8553.5	-50.45	5.1	11.35	Horizontal	-44.25	-13.00	31.25	315
6	10264.2	-53.55	5.3	11.95	Horizontal	-46.93	-13.00	33.93	45
7	11974.9	-54.45	5.5	13.55	Horizontal	-46.36	-13.00	33.36	135
8	13685.6	-51.75	6.3	13.75	Horizontal	-44.27	-13.00	31.27	0
9	15396.3	-51.85	6.7	13.85	Horizontal	-44.71	-13.00	31.71	0
10	17107.0	-48.85	6.8	14.25	Horizontal	-41.36	-13.00	28.36	0

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.
2. The worst emission was found in the antenna is Horizontal position.

LTE Band 4 QPSK 1.4MHz CH-Middle, RB 1

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	3463.9	-60.05	2.6	10.75	Horizontal	-51.87	-13.00	38.87	90
3	5196.4	-58.15	2.4	11.05	Horizontal	-49.46	-13.00	36.46	225
4	6930.0	-55.55	4.5	11.15	Horizontal	-48.91	-13.00	35.91	135
5	8662.5	-54.45	5.1	11.35	Horizontal	-48.24	-13.00	35.24	225
6	10395.0	-55.95	5.3	11.95	Horizontal	-49.29	-13.00	36.29	0
7	12127.5	-57.25	5.5	13.55	Horizontal	-49.16	-13.00	36.16	90
8	13860.0	-52.35	6.3	13.75	Horizontal	-44.90	-13.00	31.90	90
9	15592.5	-51.35	6.7	13.85	Horizontal	-44.18	-13.00	31.18	135
10	17325.0	-51.15	6.8	14.25	Horizontal	-43.67	-13.00	30.67	270

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

2. The worst emission was found in the antenna is Horizontal position.

LTE Band 4 QPSK 1.4MHz CH-High, RB 1

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	3507.4	-59.25	2.6	10.15	Horizontal	-51.69	-13.00	38.69	270
3	5262.0	-56.45	2.4	11.05	Horizontal	-47.80	-13.00	34.80	315
4	7017.2	-55.25	4.5	11.15	Horizontal	-48.59	-13.00	35.59	180
5	8769.4	-50.55	5.1	11.35	Horizontal	-44.25	-13.00	31.25	225
6	10525.8	-54.15	5.3	11.95	Horizontal	-47.51	-13.00	34.51	135
7	12280.1	-57.75	5.5	13.55	Horizontal	-49.69	-13.00	36.69	180
8	14034.4	-52.45	6.3	13.75	Horizontal	-45.00	-13.00	32.00	0
9	15788.7	-48.65	6.7	13.85	Horizontal	-41.51	-13.00	28.51	225
10	17543.0	-48.35	6.8	14.25	Horizontal	-40.87	-13.00	27.87	45

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

2. The worst emission was found in the antenna is Horizontal position.

LTE Band 4 QPSK 3MHz CH-Low, RB 1

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	3423.0	-61.25	2.6	10.15	Horizontal	-53.74	-13.00	40.74	135
3	5130.8	-60.25	2.4	11.35	Horizontal	-51.28	-13.00	38.28	0
4	6840.8	-53.95	4.5	10.85	Horizontal	-47.57	-13.00	34.57	225
5	8557.5	-54.85	5.1	11.35	Horizontal	-48.62	-13.00	35.62	45
6	10269.0	-51.35	5.3	11.95	Horizontal	-44.72	-13.00	31.72	225
7	11980.5	-55.35	5.5	13.55	Horizontal	-47.34	-13.00	34.34	270
8	13692.0	-49.35	6.3	13.75	Horizontal	-41.95	-13.00	28.95	135
9	15403.5	-49.15	6.7	13.85	Horizontal	-42.01	-13.00	29.01	45
10	17115.0	-50.25	6.8	14.25	Horizontal	-42.80	-13.00	29.80	315

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

2. The worst emission was found in the antenna is Horizontal position.

LTE Band 4 QPSK 3MHz CH-Middle, RB 1

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	3462.0	-59.85	2.6	10.75	Horizontal	-51.74	-13.00	38.74	225
3	5193.7	-56.75	2.4	11.05	Horizontal	-48.08	-13.00	35.08	45
4	6925.1	-54.15	4.5	11.15	Horizontal	-47.46	-13.00	34.46	135
5	8662.5	-54.15	5.1	11.35	Horizontal	-47.90	-13.00	34.90	270
6	10395.0	-55.85	5.3	11.95	Horizontal	-49.24	-13.00	36.24	90
7	12127.5	-56.55	5.5	13.55	Horizontal	-48.51	-13.00	35.51	0
8	13860.0	-51.85	6.3	13.75	Horizontal	-44.37	-13.00	31.37	225
9	15592.5	-50.65	6.7	13.85	Horizontal	-43.51	-13.00	30.51	180
10	17325.0	-49.55	6.8	14.25	Horizontal	-42.08	-13.00	29.08	270

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

2. The worst emission was found in the antenna is Horizontal position.

LTE Band 4 QPSK 3MHz CH-High, RB 1

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	3504.0	-59.35	2.6	10.15	Horizontal	-51.82	-13.00	38.82	90
3	5256.4	-57.35	2.4	11.05	Horizontal	-48.72	-13.00	35.72	180
4	7014.0	-54.55	4.5	11.15	Horizontal	-47.91	-13.00	34.91	180
5	8761.5	-50.85	5.1	11.35	Horizontal	-44.62	-13.00	31.62	135
6	10521.0	-55.85	5.3	11.95	Horizontal	-49.16	-13.00	36.16	225
7	12274.5	-52.75	5.5	13.55	Horizontal	-44.72	-13.00	31.72	0
8	14028.0	-51.35	6.3	13.75	Horizontal	-43.87	-13.00	30.87	0
9	15781.5	-50.65	6.7	13.85	Horizontal	-43.47	-13.00	30.47	315
10	17535.0	-48.95	6.8	14.25	Horizontal	-41.52	-13.00	28.52	0

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

2. The worst emission was found in the antenna is Horizontal position.

LTE Band 4 QPSK 5MHz CH-Low, RB 1

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	3425.0	-62.35	2.6	10.15	Horizontal	-54.84	-13.00	41.84	0
3	5130.8	-59.85	2.4	11.35	Horizontal	-50.90	-13.00	37.90	0
4	6850.0	-55.85	4.5	10.85	Horizontal	-49.51	-13.00	36.51	180
5	8562.5	-55.85	5.1	11.35	Horizontal	-49.60	-13.00	36.60	135
6	10275.0	-55.85	5.3	11.95	Horizontal	-49.21	-13.00	36.21	270
7	11987.5	-56.25	5.5	13.55	Horizontal	-48.19	-13.00	35.19	225
8	13700.0	-54.65	6.3	13.75	Horizontal	-47.20	-13.00	34.20	90
9	15412.5	-48.75	6.7	13.85	Horizontal	-41.58	-13.00	28.58	90
10	17125.0	-48.85	6.8	14.25	Horizontal	-41.36	-13.00	28.36	180

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

2. The worst emission was found in the antenna is Horizontal position.

LTE Band 4 QPSK 5MHz CH-Middle, RB 1

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	3460.9	-61.25	2.6	10.75	Horizontal	-53.06	-13.00	40.06	270
3	5191.3	-56.85	2.4	11.05	Horizontal	-48.20	-13.00	35.20	180
4	6921.0	-54.35	4.5	11.15	Horizontal	-47.74	-13.00	34.74	90
5	8662.5	-54.45	5.1	11.35	Horizontal	-48.16	-13.00	35.16	180
6	10395.0	-55.65	5.3	11.95	Horizontal	-48.96	-13.00	35.96	45
7	12127.5	-55.55	5.5	13.55	Horizontal	-47.51	-13.00	34.51	315
8	13860.0	-52.75	6.3	13.75	Horizontal	-45.30	-13.00	32.30	45
9	15592.5	-50.35	6.7	13.85	Horizontal	-43.23	-13.00	30.23	135
10	17325.0	-49.65	6.8	14.25	Horizontal	-42.18	-13.00	29.18	90

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

2. The worst emission was found in the antenna is Horizontal position.

LTE Band 4 QPSK 5MHz CH-High, RB 1

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	3500.6	-59.55	2.6	10.15	Horizontal	-52.01	-13.00	39.01	270
3	5251.1	-57.15	2.4	11.05	Horizontal	-48.52	-13.00	35.52	90
4	7010.0	-56.55	4.5	11.15	Horizontal	-49.88	-13.00	36.88	45
5	8751.8	-52.05	5.1	11.35	Horizontal	-45.77	-13.00	32.77	0
6	10515.0	-55.45	5.3	11.95	Horizontal	-48.78	-13.00	35.78	90
7	12267.5	-56.85	5.5	13.55	Horizontal	-48.81	-13.00	35.81	45
8	14020.0	-52.45	6.3	13.75	Horizontal	-44.99	-13.00	31.99	0
9	15772.5	-49.55	6.7	13.85	Horizontal	-42.38	-13.00	29.38	225
10	17525.0	-47.55	6.8	14.25	Horizontal	-40.08	-13.00	27.08	90

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

2. The worst emission was found in the antenna is Horizontal position.

LTE Band 4 QPSK 10MHz CH-Low, RB 1

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	3420.8	-62.35	2.6	10.15	Horizontal	-54.76	-13.00	41.76	270
3	5131.9	-58.95	2.4	11.35	Horizontal	-50.04	-13.00	37.04	315
4	6860.0	-55.55	4.5	10.85	Horizontal	-49.21	-13.00	36.21	90
5	8575.0	-54.95	5.1	11.35	Horizontal	-48.65	-13.00	35.65	180
6	10290.0	-54.15	5.3	11.95	Horizontal	-47.46	-13.00	34.46	180
7	12005.0	-54.25	5.5	13.55	Horizontal	-46.22	-13.00	33.22	90
8	13720.0	-53.05	6.3	13.75	Horizontal	-45.59	-13.00	32.59	135
9	15435.0	-49.95	6.7	13.85	Horizontal	-42.84	-13.00	29.84	180
10	17150.0	-48.45	6.8	14.25	Horizontal	-41.01	-13.00	28.01	135

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

2. The worst emission was found in the antenna is Horizontal position.

LTE Band 4 QPSK 10MHz CH-Middle, RB 1

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	3456.4	-61.05	2.6	10.75	Horizontal	-52.90	-13.00	39.90	90
3	5184.4	-57.85	2.4	11.05	Horizontal	-49.25	-13.00	36.25	315
4	6930.0	-54.45	4.5	11.15	Horizontal	-47.78	-13.00	34.78	45
5	8662.5	-55.85	5.1	11.35	Horizontal	-49.63	-13.00	36.63	315
6	10395.0	-55.75	5.3	11.95	Horizontal	-49.06	-13.00	36.06	135
7	12127.5	-55.25	5.5	13.55	Horizontal	-47.16	-13.00	34.16	225
8	13860.0	-52.15	6.3	13.75	Horizontal	-44.73	-13.00	31.73	225
9	15592.5	-49.95	6.7	13.85	Horizontal	-42.76	-13.00	29.76	45
10	17325.0	-50.55	6.8	14.25	Horizontal	-43.07	-13.00	30.07	270

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

2. The worst emission was found in the antenna is Horizontal position.

LTE Band 4 QPSK 10MHz CH-High, RB 1

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	3491.3	-60.85	2.6	10.15	Horizontal	-53.28	-13.00	40.28	180
3	5236.5	-58.45	2.4	11.05	Horizontal	-49.85	-13.00	36.85	225
4	7000.0	-56.15	4.5	11.15	Horizontal	-49.54	-13.00	36.54	0
5	8727.8	-51.85	5.1	11.35	Horizontal	-45.56	-13.00	32.56	135
6	10500.0	-55.75	5.3	11.95	Horizontal	-49.07	-13.00	36.07	225
7	12250.0	-54.25	5.5	13.55	Horizontal	-46.21	-13.00	33.21	90
8	14000.0	-52.05	6.3	13.75	Horizontal	-44.63	-13.00	31.63	90
9	15750.0	-50.25	6.7	13.85	Horizontal	-43.14	-13.00	30.14	45
10	17500.0	-49.85	6.8	14.25	Horizontal	-42.38	-13.00	29.38	315

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

2. The worst emission was found in the antenna is Horizontal position.

LTE Band 4 QPSK 15MHz CH Low, RB 1

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	3448.1	-61.15	2.6	10.15	Horizontal	-53.63	-13.00	40.63	270
3	5132.6	-60.35	2.4	11.35	Horizontal	-51.37	-13.00	38.37	315
4	6870.0	-54.35	4.5	10.85	Horizontal	-47.99	-13.00	34.99	180
5	8587.5	-55.45	5.1	11.35	Horizontal	-49.16	-13.00	36.16	315
6	10305.0	-56.75	5.3	11.95	Horizontal	-50.11	-13.00	37.11	315
7	12022.5	-55.45	5.5	13.55	Horizontal	-47.38	-13.00	34.38	90
8	13740.0	-52.05	6.3	13.75	Horizontal	-44.60	-13.00	31.60	90
9	15457.5	-49.45	6.7	13.85	Horizontal	-42.32	-13.00	29.32	315
10	17175.0	-49.95	6.8	14.25	Horizontal	-42.53	-13.00	29.53	45

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

2. The worst emission was found in the antenna is Horizontal position.

LTE Band 4 QPSK 15MHz CH-Middle, RB 1

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	3451.5	-59.05	2.6	10.75	Horizontal	-50.92	-13.00	37.92	90
3	5178.0	-56.85	2.4	11.05	Horizontal	-48.24	-13.00	35.24	90
4	6930.0	-54.95	4.5	11.15	Horizontal	-48.32	-13.00	35.32	90
5	8662.5	-52.85	5.1	11.35	Horizontal	-46.60	-13.00	33.60	225
6	10395.0	-54.45	5.3	11.95	Horizontal	-47.84	-13.00	34.84	90
7	12127.5	-54.05	5.5	13.55	Horizontal	-46.05	-13.00	33.05	135
8	13860.0	-52.25	6.3	13.75	Horizontal	-44.84	-13.00	31.84	315
9	15592.5	-49.05	6.7	13.85	Horizontal	-41.85	-13.00	28.85	90
10	17325.0	-48.65	6.8	14.25	Horizontal	-41.20	-13.00	28.20	315

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

2. The worst emission was found in the antenna is Horizontal position.

LTE Band 4 QPSK 15MHz CH-High, RB 1

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	3481.5	-60.85	2.6	10.15	Horizontal	-53.27	-13.00	40.27	90
3	5222.6	-59.25	2.4	11.05	Horizontal	-50.61	-13.00	37.61	135
4	6990.0	-54.45	4.5	11.15	Horizontal	-47.82	-13.00	34.82	180
5	8704.5	-52.85	5.1	11.35	Horizontal	-46.64	-13.00	33.64	225
6	10468.1	-53.75	5.3	11.95	Horizontal	-47.07	-13.00	34.07	0
7	12232.5	-54.85	5.5	13.55	Horizontal	-46.79	-13.00	33.79	0
8	13980.0	-53.65	6.3	13.75	Horizontal	-46.21	-13.00	33.21	225
9	15727.5	-50.65	6.7	13.85	Horizontal	-43.51	-13.00	30.51	270
10	17475.0	-49.85	6.8	14.25	Horizontal	-42.39	-13.00	29.39	45

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

2. The worst emission was found in the antenna is Horizontal position.

LTE Band 4 QPSK 20MHz CH-Low, RB 1

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	3421.9	-61.05	2.6	10.15	Horizontal	-53.49	-13.00	40.49	90
3	5133.0	-58.55	2.4	11.35	Horizontal	-49.63	-13.00	36.63	45
4	6880.0	-54.75	4.5	10.85	Horizontal	-48.37	-13.00	35.37	270
5	8600.0	-55.75	5.1	11.35	Horizontal	-49.50	-13.00	36.50	225
6	10320.0	-55.95	5.3	11.95	Horizontal	-49.34	-13.00	36.34	180
7	12040.0	-56.45	5.5	13.55	Horizontal	-48.41	-13.00	35.41	270
8	13760.0	-52.35	6.3	13.75	Horizontal	-44.85	-13.00	31.85	270
9	15480.0	-51.25	6.7	13.85	Horizontal	-44.11	-13.00	31.11	45
10	17200.0	-49.65	6.8	14.25	Horizontal	-42.16	-13.00	29.16	270

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

2. The worst emission was found in the antenna is Horizontal position.

LTE Band 4 QPSK 20MHz CH-Middle, RB 1

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	3447.0	-59.85	2.6	10.75	Horizontal	-51.71	-13.00	38.71	180
3	5170.9	-57.05	2.4	11.05	Horizontal	-48.38	-13.00	35.38	270
4	6930.0	-54.45	4.5	11.15	Horizontal	-47.83	-13.00	34.83	270
5	8662.5	-54.35	5.1	11.35	Horizontal	-48.08	-13.00	35.08	315
6	10395.0	-54.85	5.3	11.95	Horizontal	-48.19	-13.00	35.19	225
7	12127.5	-54.65	5.5	13.55	Horizontal	-46.64	-13.00	33.64	225
8	13860.0	-51.65	6.3	13.75	Horizontal	-44.19	-13.00	31.19	270
9	15592.5	-48.65	6.7	13.85	Horizontal	-41.51	-13.00	28.51	0
10	17325.0	-48.65	6.8	14.25	Horizontal	-41.16	-13.00	28.16	315

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

2. The worst emission was found in the antenna is Horizontal position.

LTE Band 4 QPSK 20MHz CH-High, RB 1

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	3472.1	-61.15	2.6	10.15	Horizontal	-53.56	-13.00	40.56	45
3	5208.4	-58.15	2.4	11.05	Horizontal	-49.51	-13.00	36.51	180
4	6980.0	-55.55	4.5	11.15	Horizontal	-48.89	-13.00	35.89	225
5	8725.0	-56.15	5.1	11.35	Horizontal	-49.88	-13.00	36.88	90
6	10470.0	-55.25	5.3	11.95	Horizontal	-48.59	-13.00	35.59	225
7	12215.0	-55.85	5.5	13.55	Horizontal	-47.84	-13.00	34.84	315
8	13960.0	-54.35	6.3	13.75	Horizontal	-46.87	-13.00	33.87	135
9	15705.0	-51.65	6.7	13.85	Horizontal	-44.47	-13.00	31.47	180
10	17450.0	-50.45	6.8	14.25	Horizontal	-42.98	-13.00	29.98	180

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.
2. The worst emission was found in the antenna is Horizontal position.

LTE Band 12 QPSK 1.4MHz CH-Low, RB 1

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1398.5	-56.95	2.00	10.15	Horizontal	-48.80	-13.00	35.80	45
3	2099.1	-68.15	2.50	11.35	Horizontal	-59.31	-13.00	46.31	180
4	2797.3	-51.15	4.20	10.85	Horizontal	-44.55	-13.00	31.55	180
5	3496.1	-47.55	5.20	11.35	Horizontal	-41.38	-13.00	28.38	0
6	4198.2	-59.75	5.50	11.95	Horizontal	-53.29	-13.00	40.29	135
7	4897.9	-61.55	5.70	13.55	Horizontal	-53.71	-13.00	40.71	225
8	5562.0	-57.45	6.30	13.75	Horizontal	-50.00	-13.00	37.00	45
9	6297.3	-58.35	6.80	13.85	Horizontal	-51.32	-13.00	38.32	135
10	6997.0	-57.55	6.90	14.25	Horizontal	-50.24	-13.00	37.24	0

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.
2. The worst emission was found in the antenna is Horizontal position.

LTE Band 12 QPSK 1.4MHz CH-Middle, RB 1

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1414.0	-60.75	2.00	10.75	Horizontal	-52.04	-13.00	39.04	90
3	2122.5	-66.84	2.51	11.05	Horizontal	-58.28	-13.00	45.28	315
4	2828.5	-51.75	4.20	11.15	Horizontal	-44.78	-13.00	31.78	135
5	3535.1	-49.75	5.20	11.15	Horizontal	-43.79	-13.00	30.79	0
6	4245.0	-59.35	5.50	11.95	Horizontal	-52.88	-13.00	39.88	45
7	4952.5	-60.75	5.70	13.55	Horizontal	-52.87	-13.00	39.87	315
8	5660.0	-59.45	6.30	13.75	Horizontal	-52.04	-13.00	39.04	315
9	6367.5	-57.85	6.80	13.85	Horizontal	-50.79	-13.00	37.79	180
10	7075.0	-56.95	6.90	14.25	Horizontal	-49.62	-13.00	36.62	270

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.
2. The worst emission was found in the antenna is Horizontal position.

LTE Band 12 QPSK 1.4MHz CH-High, RB 1

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1429.5	-54.55	2.00	10.15	Horizontal	-46.38	-13.00	33.38	315
3	2145.9	-65.74	2.51	11.05	Horizontal	-57.21	-13.00	44.21	180
4	2859.8	-54.85	4.20	11.15	Horizontal	-47.91	-13.00	34.91	315
5	3574.1	-49.95	5.20	11.15	Horizontal	-43.97	-13.00	30.97	315
6	4291.8	-59.75	5.50	11.95	Horizontal	-53.31	-13.00	40.31	0
7	5007.1	-61.65	5.70	13.55	Horizontal	-53.80	-13.00	40.80	90
8	5722.4	-59.75	6.30	13.75	Horizontal	-52.34	-13.00	39.34	315
9	6437.7	-57.95	6.80	13.85	Horizontal	-50.93	-13.00	37.93	90
10	7153.0	-57.15	6.90	14.25	Horizontal	-49.82	-13.00	36.82	90

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.
2. The worst emission was found in the antenna is Horizontal position.

LTE Band 12 QPSK 3MHz CH-Low, RB 1

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1398.5	-56.85	2.00	10.15	Horizontal	-48.67	-13.00	35.67	270
3	2101.5	-67.64	2.51	11.35	Horizontal	-58.76	-13.00	45.76	0
4	2797.3	-50.55	4.20	10.85	Horizontal	-43.88	-13.00	30.88	270
5	3496.1	-47.35	5.20	11.35	Horizontal	-41.22	-13.00	28.22	270
6	4195.5	-58.65	5.50	11.95	Horizontal	-52.22	-13.00	39.22	225
7	4903.5	-61.15	5.70	13.55	Horizontal	-53.28	-13.00	40.28	0
8	5604.0	-60.55	6.30	13.75	Horizontal	-53.07	-13.00	40.07	180
9	6304.5	-59.25	6.80	13.85	Horizontal	-52.24	-13.00	39.24	90
10	7005.0	-58.45	6.90	14.25	Horizontal	-51.10	-13.00	38.10	135

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

2. The worst emission was found in the antenna is Horizontal position.

LTE Band 12 QPSK 3MHz CH-Middle, RB 1

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1412.3	-60.05	2.00	10.75	Horizontal	-51.25	-13.00	38.25	135
3	2122.5	-67.04	2.51	11.05	Horizontal	-58.45	-13.00	45.45	225
4	2825.3	-52.25	4.20	11.15	Horizontal	-45.28	-13.00	32.28	225
5	3531.0	-49.45	5.20	11.15	Horizontal	-43.52	-13.00	30.52	270
6	4245.0	-59.85	5.50	11.95	Horizontal	-53.44	-13.00	40.44	0
7	4952.5	-60.75	5.70	13.55	Horizontal	-52.88	-13.00	39.88	135
8	5660.0	-58.25	6.30	13.75	Horizontal	-50.76	-13.00	37.76	0
9	6367.5	-56.75	6.80	13.85	Horizontal	-49.67	-13.00	36.67	45
10	7075.0	-56.65	6.90	14.25	Horizontal	-49.34	-13.00	36.34	90

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

2. The worst emission was found in the antenna is Horizontal position.

LTE Band 12 QPSK 3MHz CH-High, RB 1

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1426.5	-55.55	2.00	10.15	Horizontal	-47.42	-13.00	34.42	315
3	2143.5	-65.64	2.51	11.05	Horizontal	-57.05	-13.00	44.05	180
4	2852.8	-57.05	4.20	11.15	Horizontal	-50.07	-13.00	37.07	270
5	3566.3	-49.45	5.20	11.15	Horizontal	-43.53	-13.00	30.53	0
6	4287.0	-58.35	5.50	11.95	Horizontal	-51.90	-13.00	38.90	270
7	5001.5	-60.65	5.70	13.55	Horizontal	-52.78	-13.00	39.78	180
8	5716.0	-57.85	6.30	13.75	Horizontal	-50.38	-13.00	37.38	315
9	6430.5	-56.35	6.80	13.85	Horizontal	-49.32	-13.00	36.32	0
10	7145.0	-58.35	6.90	14.25	Horizontal	-51.01	-13.00	38.01	180

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

2. The worst emission was found in the antenna is Horizontal position.

LTE Band 12 QPSK 5MHz CH-Low, RB 1

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1398.8	-56.35	2.00	10.15	Horizontal	-48.22	-13.00	35.22	180
3	2104.5	-67.05	2.50	11.35	Horizontal	-58.25	-13.00	45.25	0
4	2797.5	-51.45	4.20	10.85	Horizontal	-44.76	-13.00	31.76	225
5	3506.9	-48.85	5.20	11.35	Horizontal	-42.72	-13.00	29.72	180
6	4209.0	-59.75	5.50	11.95	Horizontal	-53.29	-13.00	40.29	180
7	4910.5	-60.85	5.70	13.55	Horizontal	-53.00	-13.00	40.00	90
8	5612.0	-58.45	6.30	13.75	Horizontal	-51.03	-13.00	38.03	0
9	6313.5	-57.35	6.80	13.85	Horizontal	-50.27	-13.00	37.27	135
10	7015.0	-57.65	6.90	14.25	Horizontal	-50.30	-13.00	37.30	225

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

2. The worst emission was found in the antenna is Horizontal position.

LTE Band 12 QPSK 5MHz CH-Middle, RB 1

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1410.5	-58.75	2.00	10.75	Horizontal	-50.02	-13.00	37.02	225
3	2122.5	-68.24	2.51	11.05	Horizontal	-59.71	-13.00	46.71	270
4	2821.3	-54.25	4.20	11.15	Horizontal	-47.30	-13.00	34.30	270
5	3526.5	-49.65	5.20	11.15	Horizontal	-43.68	-13.00	30.68	90
6	4245.0	-58.15	5.50	11.95	Horizontal	-51.74	-13.00	38.74	0
7	4952.5	-61.15	5.70	13.55	Horizontal	-53.30	-13.00	40.30	135
8	5660.0	-58.35	6.30	13.75	Horizontal	-50.95	-13.00	37.95	180
9	6367.5	-56.95	6.80	13.85	Horizontal	-49.91	-13.00	36.91	90
10	7075.0	-58.85	6.90	14.25	Horizontal	-51.51	-13.00	38.51	135

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

2. The worst emission was found in the antenna is Horizontal position.

LTE Band 12 QPSK 5MHz CH-High, RB 1

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1422.5	-58.45	2.00	10.15	Horizontal	-50.25	-13.00	37.25	135
3	2140.5	-66.04	2.51	11.05	Horizontal	-57.46	-13.00	44.46	90
4	2845.8	-55.75	4.20	11.15	Horizontal	-48.76	-13.00	35.76	180
5	3556.5	-49.85	5.20	11.15	Horizontal	-43.92	-13.00	30.92	90
6	4281.0	-58.45	5.50	11.95	Horizontal	-51.96	-13.00	38.96	180
7	4994.5	-60.55	5.70	13.55	Horizontal	-52.72	-13.00	39.72	225
8	5708.0	-57.55	6.30	13.75	Horizontal	-50.10	-13.00	37.10	45
9	6421.5	-55.95	6.80	13.85	Horizontal	-48.86	-13.00	35.86	0
10	7135.0	-58.45	6.90	14.25	Horizontal	-51.05	-13.00	38.05	180

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

2. The worst emission was found in the antenna is Horizontal position.

LTE Band 12 QPSK 10MHz CH-Low, RB 1

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1399.0	-55.75	2.00	10.15	Horizontal	-47.57	-13.00	34.57	90
3	2112.0	-65.94	2.51	11.35	Horizontal	-57.12	-13.00	44.12	135
4	2798.5	-51.55	4.20	10.85	Horizontal	-44.86	-13.00	31.86	270
5	3497.6	-47.65	5.20	11.35	Horizontal	-41.51	-13.00	28.51	135
6	4224.0	-58.25	5.50	11.95	Horizontal	-51.82	-13.00	38.82	315
7	4928.0	-60.85	5.70	13.55	Horizontal	-52.98	-13.00	39.98	315
8	5632.0	-57.75	6.30	13.75	Horizontal	-50.31	-13.00	37.31	0
9	6336.0	-56.35	6.80	13.85	Horizontal	-49.28	-13.00	36.28	90
10	7040.0	-58.65	6.90	14.25	Horizontal	-51.28	-13.00	38.28	45

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

2. The worst emission was found in the antenna is Horizontal position.

LTE Band 12 QPSK 10MHz CH-Middle, RB 1

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1406.0	-55.95	2.00	10.75	Horizontal	-47.23	-13.00	34.23	315
3	2122.5	-65.44	2.51	11.05	Horizontal	-56.90	-13.00	43.90	45
4	2812.5	-54.05	4.20	11.15	Horizontal	-47.09	-13.00	34.09	225
5	3515.3	-49.15	5.20	11.15	Horizontal	-43.22	-13.00	30.22	45
6	4245.0	-58.35	5.50	11.95	Horizontal	-51.87	-13.00	38.87	0
7	4952.5	-60.45	5.70	13.55	Horizontal	-52.61	-13.00	39.61	270
8	5660.0	-57.35	6.30	13.75	Horizontal	-49.92	-13.00	36.92	0
9	6367.5	-56.55	6.80	13.85	Horizontal	-49.52	-13.00	36.52	180
10	7075.0	-58.25	6.90	14.25	Horizontal	-50.91	-13.00	37.91	180

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

2. The worst emission was found in the antenna is Horizontal position.

LTE Band 12 QPSK 10MHz CH-High, RB 1

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1413.3	-60.15	2.00	10.15	Horizontal	-52.05	-13.00	39.05	270
3	2133.0	-67.74	2.51	11.05	Horizontal	-59.18	-13.00	46.18	135
4	2826.3	-52.35	4.20	11.15	Horizontal	-45.38	-13.00	32.38	315
5	3532.9	-49.55	5.20	11.15	Horizontal	-43.65	-13.00	30.65	225
6	4266.0	-60.35	5.50	11.95	Horizontal	-53.86	-13.00	40.86	225
7	4977.0	-60.75	5.70	13.55	Horizontal	-52.95	-13.00	39.95	135
8	5688.0	-58.55	6.30	13.75	Horizontal	-51.10	-13.00	38.10	225
9	6399.0	-56.45	6.80	13.85	Horizontal	-49.43	-13.00	36.43	180
10	7110.0	-56.45	6.90	14.25	Horizontal	-49.10	-13.00	36.10	315

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

2. The worst emission was found in the antenna is Horizontal position.

LTE Band 13 QPSK 5MHz CH-Low, RB 1

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1559.0	-61.25	2.00	10.15	Horizontal	-53.15	-40.00	13.15	90
3	2338.5	-60.55	2.50	11.35	Horizontal	-51.74	-13.00	38.74	270
4	3118.0	-61.25	4.20	10.85	Horizontal	-54.59	-13.00	41.59	135
5	3897.5	-60.65	5.20	11.35	Horizontal	-54.53	-13.00	41.53	315
6	4677.0	-59.85	5.50	11.95	Horizontal	-53.43	-13.00	40.43	270
7	5456.5	-58.85	5.70	13.55	Horizontal	-51.00	-13.00	38.00	315
8	6236.0	-57.65	6.30	13.75	Horizontal	-50.22	-13.00	37.22	270
9	7015.5	-57.15	6.80	13.85	Horizontal	-50.10	-13.00	37.10	90
10	7795.0	-57.45	6.90	14.25	Horizontal	-50.06	-13.00	37.06	45

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

2. The worst emission was found in the antenna is Horizontal position.

LTE Band 13 QPSK 5MHz CH-Middle, RB 1

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1564.0	-61.65	2.00	10.75	Horizontal	-52.86	-40.00	12.86	180
3	2346.0	-59.54	2.51	11.05	Horizontal	-50.98	-13.00	37.98	270
4	3128.0	-61.35	4.20	11.15	Horizontal	-54.41	-13.00	41.41	135
5	3910.0	-60.55	5.20	11.15	Horizontal	-54.61	-13.00	41.61	90
6	4692.0	-60.05	5.50	11.95	Horizontal	-53.60	-13.00	40.60	225
7	5474.0	-58.75	5.70	13.55	Horizontal	-50.91	-13.00	37.91	225
8	6256.0	-58.15	6.30	13.75	Horizontal	-50.71	-13.00	37.71	180
9	7038.0	-57.65	6.80	13.85	Horizontal	-50.60	-13.00	37.60	0
10	7820.0	-57.75	6.90	14.25	Horizontal	-50.37	-13.00	37.37	90

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

2. The worst emission was found in the antenna is Horizontal position.

LTE Band 13 QPSK 5MHz CH-High, RB 1

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1564.3	-60.25	2.00	10.15	Horizontal	-52.12	-40.00	12.12	135
3	2353.5	-57.84	2.51	11.05	Horizontal	-49.34	-13.00	36.34	270
4	3138.0	-62.45	4.20	11.15	Horizontal	-55.48	-13.00	42.48	135
5	3924.8	-59.15	5.20	11.15	Horizontal	-53.24	-13.00	40.24	90
6	4707.0	-58.75	5.50	11.95	Horizontal	-52.27	-13.00	39.27	315
7	5491.5	-59.15	5.70	13.55	Horizontal	-51.27	-13.00	38.27	0
8	6276.0	-57.55	6.30	13.75	Horizontal	-50.09	-13.00	37.09	270
9	7060.5	-56.85	6.80	13.85	Horizontal	-49.84	-13.00	36.84	270
10	7845.0	-57.45	6.90	14.25	Horizontal	-50.09	-13.00	37.09	45

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

2. The worst emission was found in the antenna is Horizontal position.

LTE Band 13 QPSK 10MHz CH-Low, RB 1

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1564.0	-60.55	2.00	10.15	Horizontal	-52.45	-40.00	12.45	135
3	2346.0	-58.14	2.51	11.35	Horizontal	-49.34	-13.00	36.34	90
4	3128.0	-63.15	4.20	10.85	Horizontal	-56.49	-13.00	43.49	180
5	3910.0	-60.15	5.20	11.35	Horizontal	-53.96	-13.00	40.96	0
6	4692.0	-56.35	5.50	11.95	Horizontal	-49.90	-13.00	36.90	135
7	5474.0	-59.75	5.70	13.55	Horizontal	-51.94	-13.00	38.94	45
8	6256.0	-57.55	6.30	13.75	Horizontal	-50.09	-13.00	37.09	45
9	7038.0	-56.95	6.80	13.85	Horizontal	-49.91	-13.00	36.91	315
10	7820.0	-57.35	6.90	14.25	Horizontal	-50.00	-13.00	37.00	180

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

2. The worst emission was found in the antenna is Horizontal position.

LTE Band 13 QPSK 10MHz CH-Middle, RB 1

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1564.0	-61.45	2.00	10.75	Horizontal	-52.74	-40.00	12.74	180
3	2346.0	-57.74	2.51	11.05	Horizontal	-49.18	-13.00	36.18	0
4	3128.0	-63.55	4.20	11.15	Horizontal	-56.65	-13.00	43.65	45
5	3910.0	-60.35	5.20	11.15	Horizontal	-54.40	-13.00	41.40	90
6	4692.0	-56.55	5.50	11.95	Horizontal	-50.08	-13.00	37.08	315
7	5474.0	-59.55	5.70	13.55	Horizontal	-51.69	-13.00	38.69	180
8	6256.0	-57.95	6.30	13.75	Horizontal	-50.52	-13.00	37.52	180
9	7038.0	-56.65	6.80	13.85	Horizontal	-49.63	-13.00	36.63	180
10	7820.0	-57.75	6.90	14.25	Horizontal	-50.36	-13.00	37.36	270

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

2. The worst emission was found in the antenna is Horizontal position.

LTE Band 13 QPSK 10MHz CH-High, RB 1

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1564.0	-60.85	2.00	10.15	Horizontal	-52.68	-40.00	12.68	45
3	2346.0	-57.44	2.51	11.05	Horizontal	-48.93	-13.00	35.93	45
4	3128.0	-63.95	4.20	11.15	Horizontal	-57.00	-13.00	44.00	0
5	3910.0	-60.05	5.20	11.15	Horizontal	-54.13	-13.00	41.13	90
6	4692.0	-56.45	5.50	11.95	Horizontal	-49.95	-13.00	36.95	45
7	5474.0	-59.55	5.70	13.55	Horizontal	-51.66	-13.00	38.66	180
8	6256.0	-57.75	6.30	13.75	Horizontal	-50.30	-13.00	37.30	0
9	7038.0	-56.85	6.80	13.85	Horizontal	-49.76	-13.00	36.76	270
10	7820.0	-57.75	6.90	14.25	Horizontal	-50.43	-13.00	37.43	45

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

2. The worst emission was found in the antenna is Horizontal position.

LTE Band 17 QPSK 5MHz CH-Low, RB 1

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1408.8	-56.55	2.00	10.15	Horizontal	-48.39	-13.00	35.39	45
3	2119.5	-66.15	2.50	11.35	Horizontal	-57.35	-13.00	44.35	225
4	2817.5	-56.55	4.20	10.85	Horizontal	-49.86	-13.00	36.86	225
5	3521.6	-50.95	5.20	11.35	Horizontal	-44.81	-13.00	31.81	90
6	4239.0	-59.75	5.50	11.95	Horizontal	-53.28	-13.00	40.28	45
7	4945.5	-60.75	5.70	13.55	Horizontal	-52.86	-13.00	39.86	45
8	5652.0	-58.35	6.30	13.75	Horizontal	-50.91	-13.00	37.91	180
9	6358.5	-58.25	6.80	13.85	Horizontal	-51.21	-13.00	38.21	270
10	7065.0	-57.35	6.90	14.25	Horizontal	-49.97	-13.00	36.97	225

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

2. The worst emission was found in the antenna is Horizontal position.

LTE Band 17 QPSK 5MHz CH-Middle, RB 1

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1415.8	-61.55	2.00	10.75	Horizontal	-52.81	-13.00	39.81	180
3	2130.0	-66.54	2.51	11.05	Horizontal	-58.02	-13.00	45.02	315
4	2831.5	-53.35	4.20	11.15	Horizontal	-46.41	-13.00	33.41	180
5	3538.9	-51.75	5.20	11.15	Horizontal	-45.75	-13.00	32.75	45
6	4260.0	-60.15	5.50	11.95	Horizontal	-53.71	-13.00	40.71	270
7	4970.0	-60.85	5.70	13.55	Horizontal	-52.99	-13.00	39.99	45
8	5680.0	-58.15	6.30	13.75	Horizontal	-50.66	-13.00	37.66	90
9	6390.0	-58.65	6.80	13.85	Horizontal	-51.56	-13.00	38.56	225
10	7100.0	-57.45	6.90	14.25	Horizontal	-50.13	-13.00	37.13	270

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

2. The worst emission was found in the antenna is Horizontal position.

LTE Band 17 QPSK 5MHz CH-High, RB 1

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1422.5	-59.15	2.00	10.15	Horizontal	-51.04	-13.00	38.04	270
3	2140.5	-65.64	2.51	11.05	Horizontal	-57.07	-13.00	44.07	225
4	2845.5	-55.75	4.20	11.15	Horizontal	-48.84	-13.00	35.84	270
5	3556.9	-50.65	5.20	11.15	Horizontal	-44.70	-13.00	31.70	180
6	4281.0	-60.05	5.50	11.95	Horizontal	-53.58	-13.00	40.58	315
7	4994.5	-60.55	5.70	13.55	Horizontal	-52.69	-13.00	39.69	315
8	5708.0	-58.95	6.30	13.75	Horizontal	-51.50	-13.00	38.50	180
9	6421.5	-57.75	6.80	13.85	Horizontal	-50.66	-13.00	37.66	270
10	7135.0	-56.85	6.90	14.25	Horizontal	-49.51	-13.00	36.51	225

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

2. The worst emission was found in the antenna is Horizontal position.

LTE Band 17 QPSK 10MHz CH-Low, RB 1

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1409.0	-56.65	2.00	10.15	Horizontal	-48.51	-13.00	35.51	0
3	2127.0	-66.14	2.51	11.35	Horizontal	-57.28	-13.00	44.28	0
4	2818.8	-55.15	4.20	10.85	Horizontal	-48.46	-13.00	35.46	135
5	3522.8	-49.35	5.20	11.35	Horizontal	-43.24	-13.00	30.24	225
6	4254.0	-59.35	5.50	11.95	Horizontal	-52.86	-13.00	39.86	315
7	4963.0	-60.35	5.70	13.55	Horizontal	-52.53	-13.00	39.53	180
8	5672.0	-58.95	6.30	13.75	Horizontal	-51.51	-13.00	38.51	270
9	6381.0	-58.75	6.80	13.85	Horizontal	-51.65	-13.00	38.65	315
10	7090.0	-56.85	6.90	14.25	Horizontal	-49.51	-13.00	36.51	225

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

2. The worst emission was found in the antenna is Horizontal position.

LTE Band 17 QPSK 10MHz CH-Middle, RB 1

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1411.0	-59.55	2.00	10.75	Horizontal	-50.84	-13.00	37.84	315
3	2130.0	-66.74	2.51	11.05	Horizontal	-58.23	-13.00	45.23	180
4	2822.8	-54.45	4.20	11.15	Horizontal	-47.52	-13.00	34.52	315
5	3527.6	-50.35	5.20	11.15	Horizontal	-44.43	-13.00	31.43	45
6	4260.0	-59.75	5.50	11.95	Horizontal	-53.35	-13.00	40.35	270
7	4970.0	-60.75	5.70	13.55	Horizontal	-52.86	-13.00	39.86	90
8	5680.0	-59.05	6.30	13.75	Horizontal	-51.65	-13.00	38.65	270
9	6390.0	-58.35	6.80	13.85	Horizontal	-51.26	-13.00	38.26	0
10	7100.0	-57.05	6.90	14.25	Horizontal	-49.75	-13.00	36.75	45

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

2. The worst emission was found in the antenna is Horizontal position.

LTE Band 17 QPSK 10MHz CH-High, RB 1

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1413.0	-60.45	2.00	10.15	Horizontal	-52.25	-13.00	39.25	0
3	2133.0	-67.04	2.51	11.05	Horizontal	-58.46	-13.00	45.46	315
4	2826.8	-54.65	4.20	11.15	Horizontal	-47.71	-13.00	34.71	270
5	3532.9	-50.75	5.20	11.15	Horizontal	-44.76	-13.00	31.76	90
6	4266.0	-59.55	5.50	11.95	Horizontal	-53.15	-13.00	40.15	315
7	4977.0	-60.75	5.70	13.55	Horizontal	-52.91	-13.00	39.91	315
8	5688.0	-59.05	6.30	13.75	Horizontal	-51.59	-13.00	38.59	0
9	6399.0	-58.45	6.80	13.85	Horizontal	-51.36	-13.00	38.36	45
10	7110.0	-57.55	6.90	14.25	Horizontal	-50.21	-13.00	37.21	315

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

2. The worst emission was found in the antenna is Horizontal position.

6 Main Test Instruments

Name	Manufacturer	Type	Serial Number	Calibration Date	Expiration Time
Base Station Simulator	R&S	CMW500	113645	2017-05-14	2018-05-13
Power Splitter	Hua Xiang	SHX-GF2-2-13	10120101	2017-05-14	2018-05-13
Universal Radio Communication Tester	Agilent	E5515C	MY48367192	2017-05-14	2018-05-13
Spectrum Analyzer	Agilent	N9010A	MY47191109	2017-05-14	2018-05-13
Signal Analyzer	R&S	FSV30	100815	2016-12-16	2017-12-15
Signal generator	R&S	SMB 100A	102594	2017-05-14	2018-05-13
EMI Test Receiver	R&S	ESCI	100948	2017-05-20	2018-05-19
Trilog Antenna	SCHWARZBECK	VUBL 9163	9163-201	2014-12-06	2017-12-05
Horn Antenna	R&S	HF907	100126	2014-12-06	2017-12-05
Horn Antenna	ETS-Lindgren	3160-09	00102643	2015-01-30	2018-01-29
Climatic Chamber	Re Ce	PT-30B	20101891	2015-07-18	2018-07-17
RF Cable	Agilent	SMA 15cm	0001	2017-08-04	2018-02-03
Preampflier	R&S	SCU18	102327	2017-06-18	2018-06-17