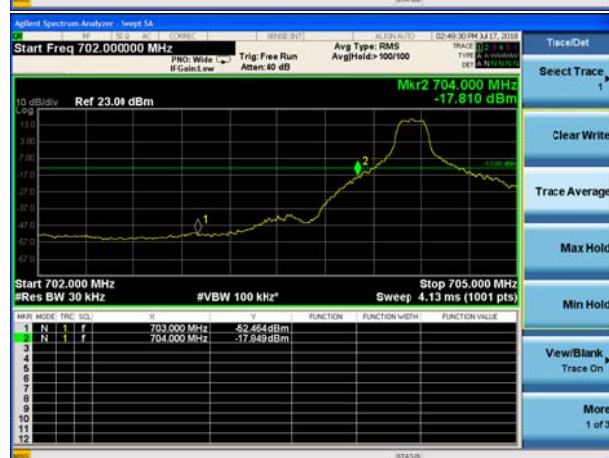
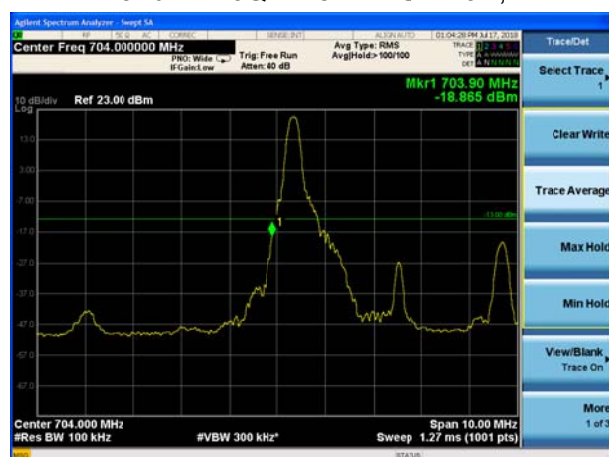
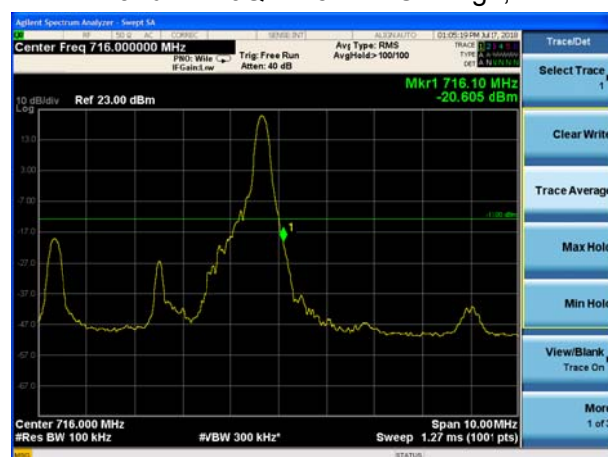


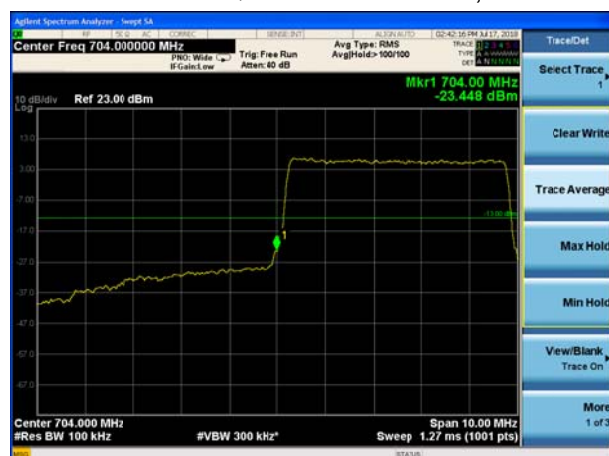
LTE Band 17 16QAM 5MHz CH-Low, 1 RB



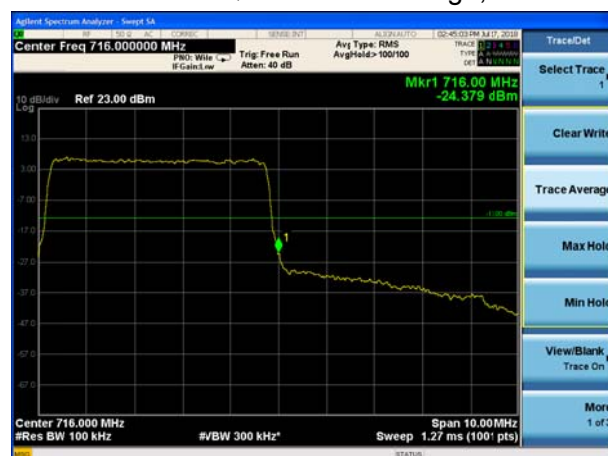
LTE Band 17 16QAM 5MHz CH-High, 1 RB



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

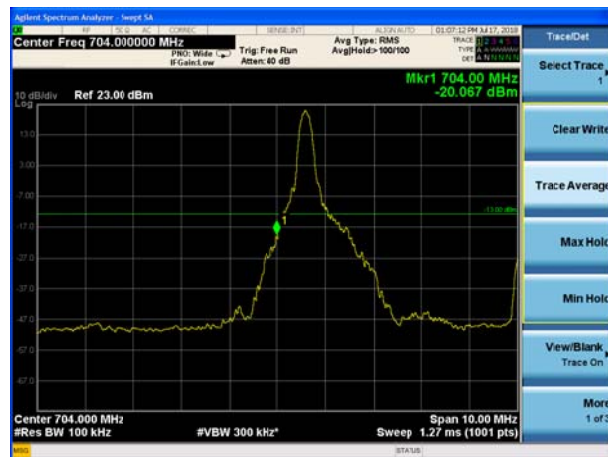


LTE Band 17 16QAM 5MHz CH-High, 100%RB

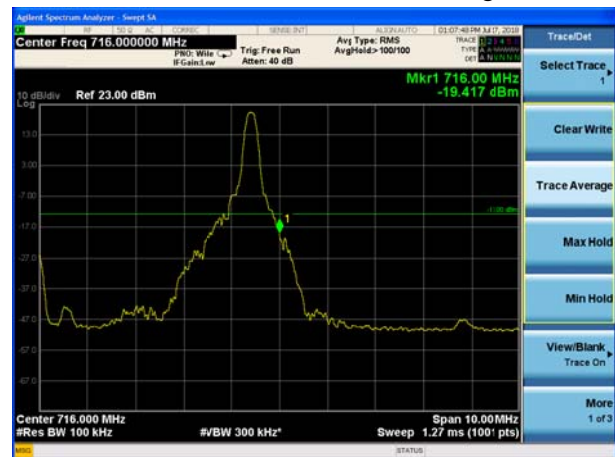




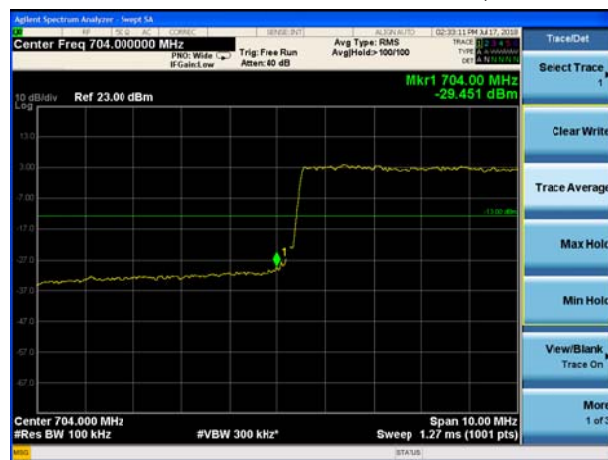
LTE Band 17 16QAM 10MHz CH-Low, 1 RB



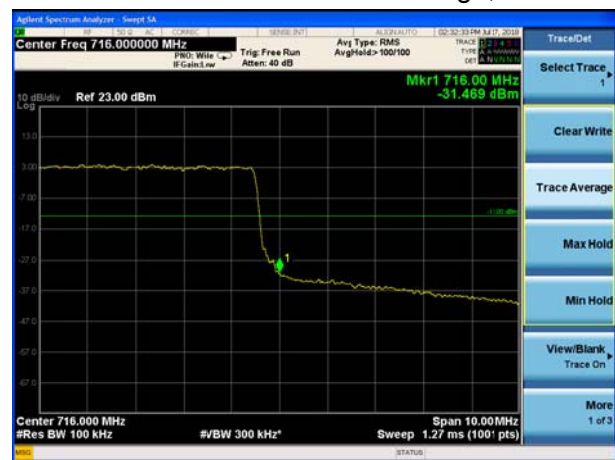
LTE Band 17 16QAM 10MHz CH-High, 1 RB



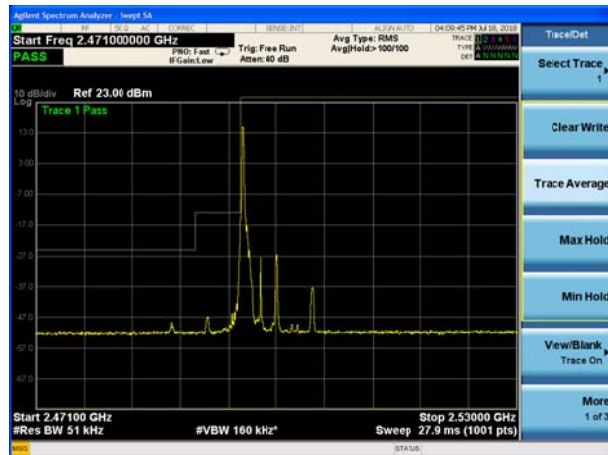
LTE Band 17 16QAM 10MHz CH-Low, 100%RB



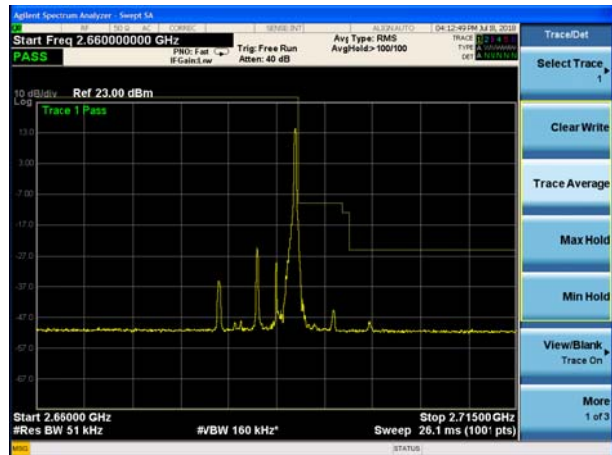
LTE Band 17 16QAM 10MHz CH-High, 100%RB



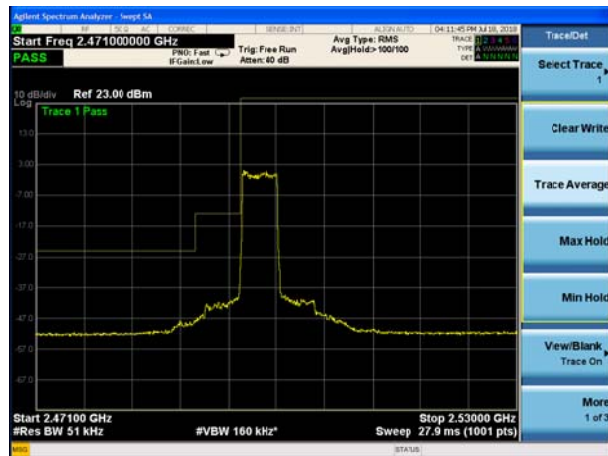
LTE Band 41 QPSK 5MHz CH-Low, 1 RB



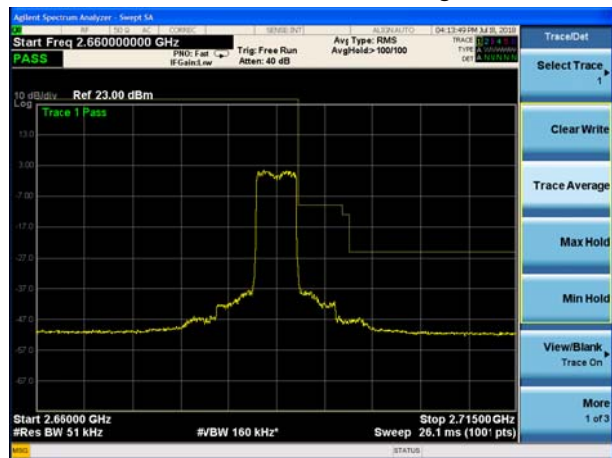
LTE Band 41 QPSK 5MHz CH-High, 1 RB



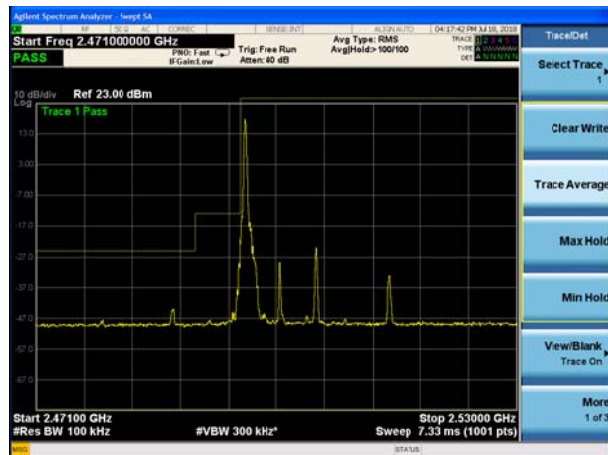
LTE Band 41 QPSK 5MHz CH-Low, 100%RB



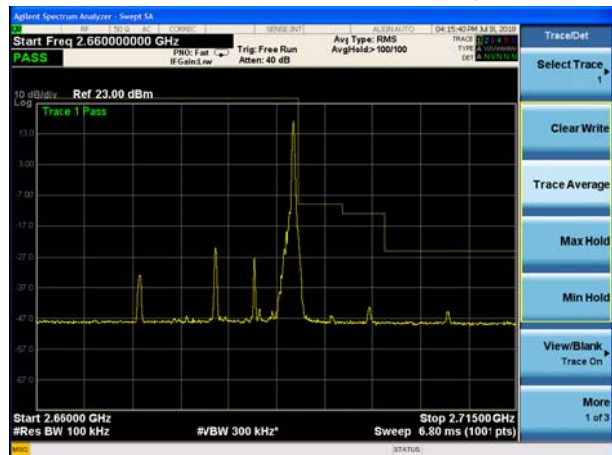
LTE Band 41 QPSK 5MHz CH-High, 100%RB



LTE Band 41 QPSK 10MHz CH-Low, 1 RB



LTE Band 41 QPSK 10MHz CH-High, 1 RB





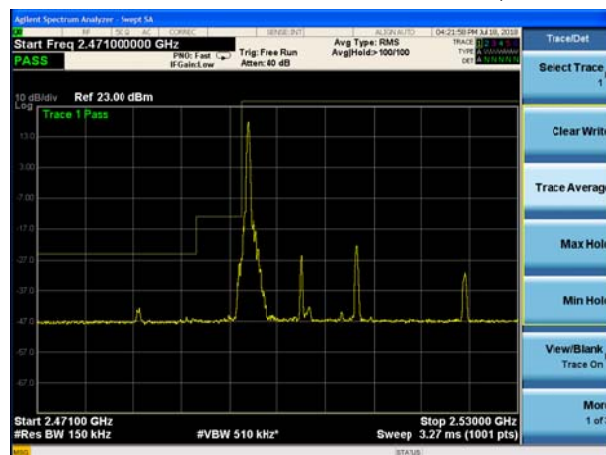
LTE Band 41 QPSK 10MHz CH-Low, 100%RB



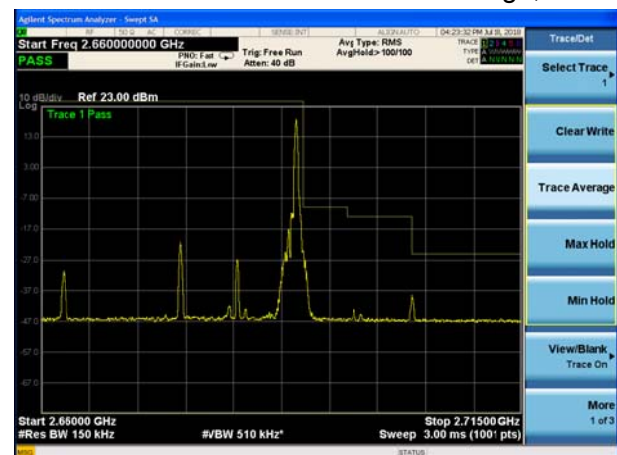
LTE Band 41 QPSK 10MHz CH-High, 100%RB



LTE Band 41 QPSK 15MHz CH-Low, 1 RB



LTE Band 41 QPSK 15MHz CH-High, 1 RB



LTE Band 41 QPSK 15MHz CH-Low, 100%RB

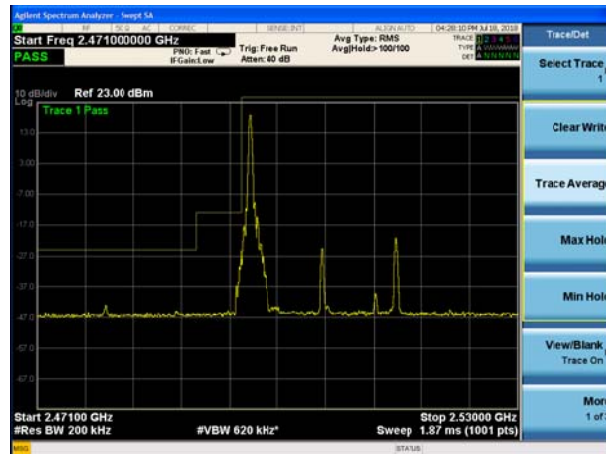


LTE Band 41 QPSK 15MHz CH-High, 100%RB

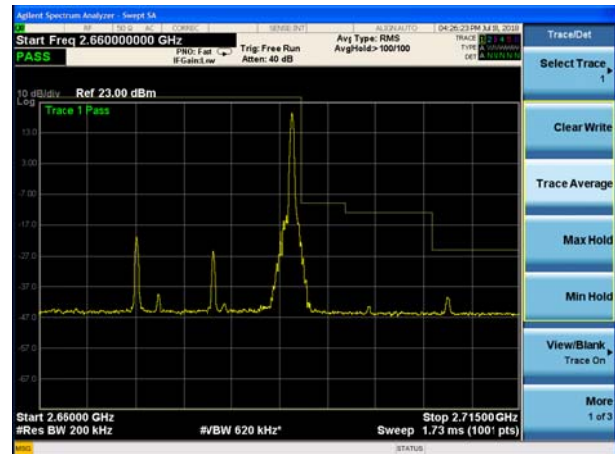




LTE Band 41 QPSK 20MHz CH-Low, 1 RB



LTE Band 41 QPSK 20MHz CH-High, 1 RB



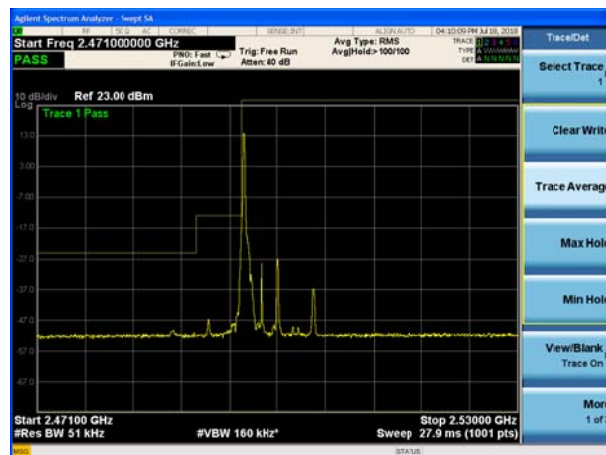
LTE Band 41 QPSK 20MHz CH-Low, 100%RB



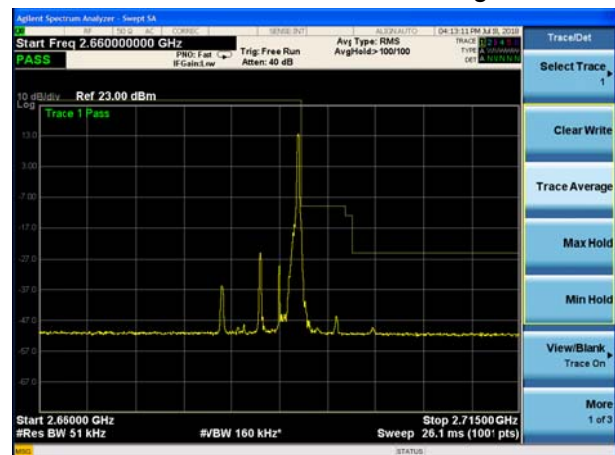
LTE Band 41 QPSK 20MHz CH-High, 100%RB



LTE Band 41 16QAM 5MHz CH-Low, 1 RB

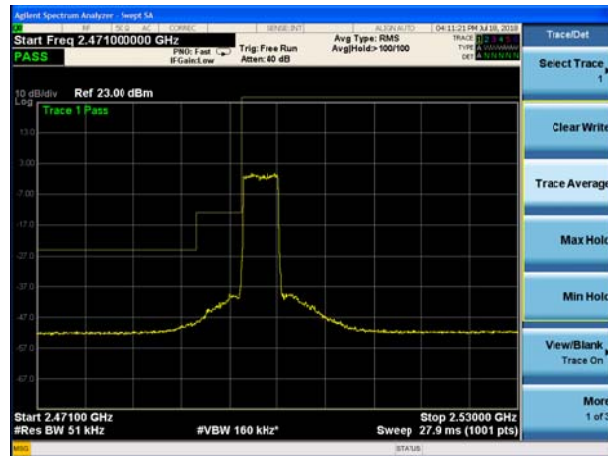


LTE Band 41 16QAM 5MHz CH-High, 1 RB

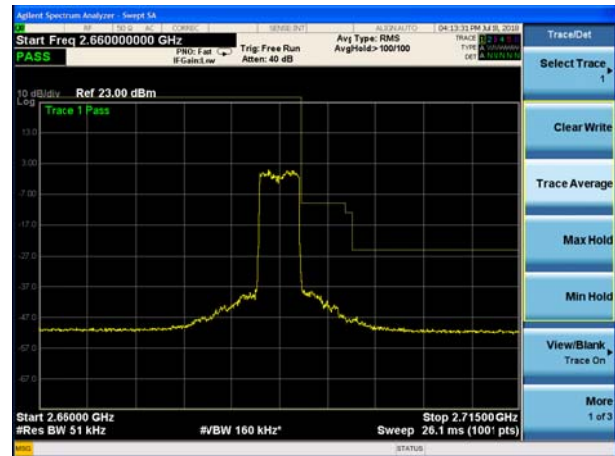




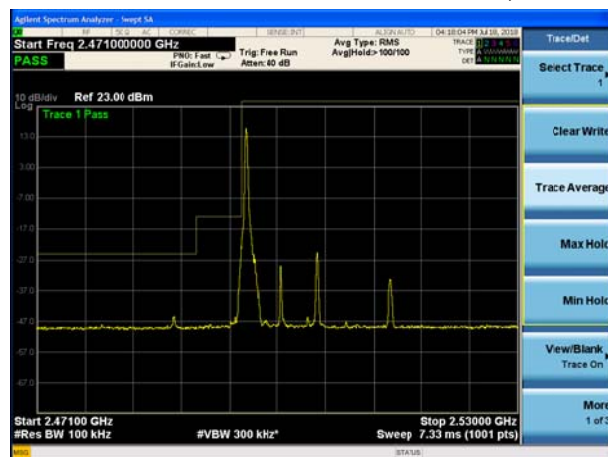
LTE Band 41 16QAM 5MHz CH-Low, 100%RB



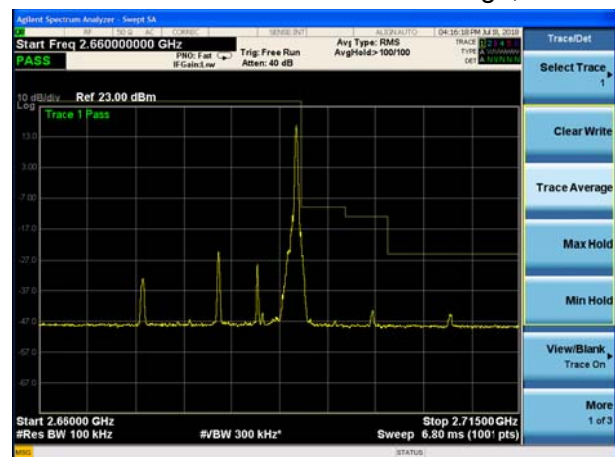
LTE Band 41 16QAM 5MHz CH-High, 100%RB



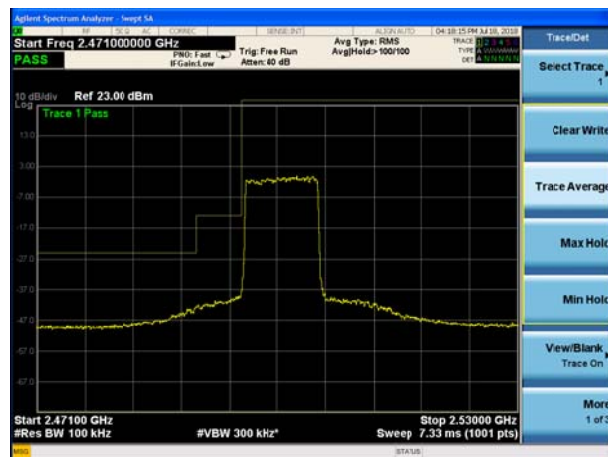
LTE Band 41 16QAM 10MHz CH-Low, 1 RB



LTE Band 41 16QAM 10MHz CH-High, 1 RB



LTE Band 41 16QAM 10MHz CH-Low, 100%RB

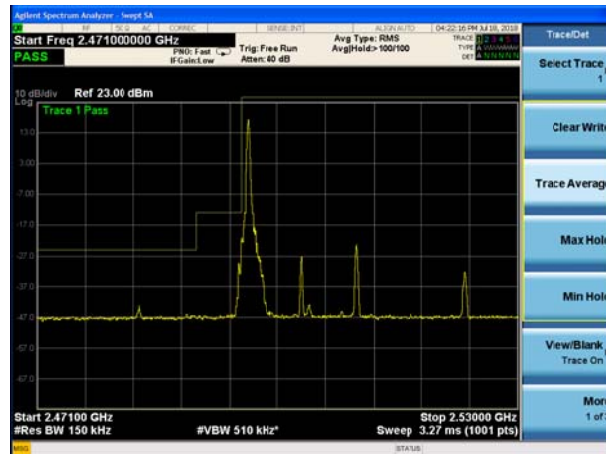


LTE Band 41 16QAM 10MHz CH-High, 100%RB

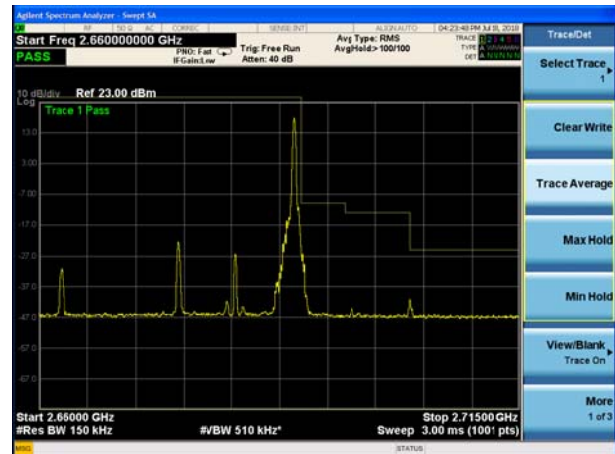




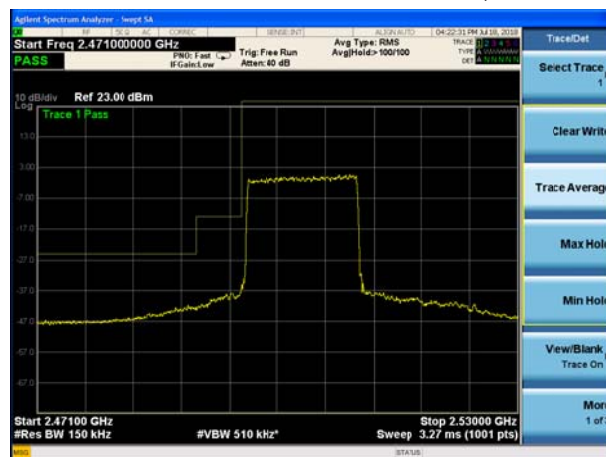
LTE Band 41 16QAM 15MHz CH-Low, 1 RB



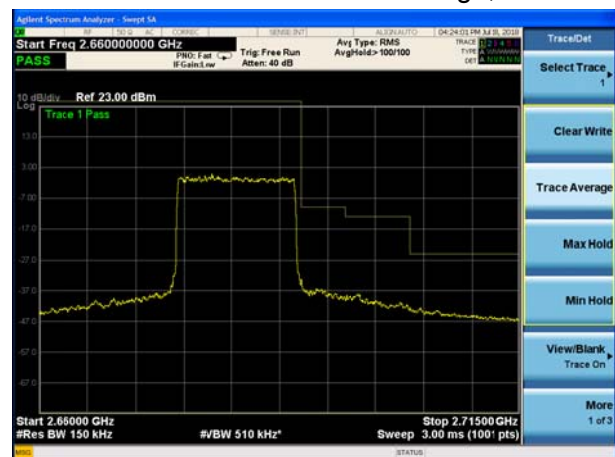
LTE Band 41 16QAM 15MHz CH-High, 1 RB



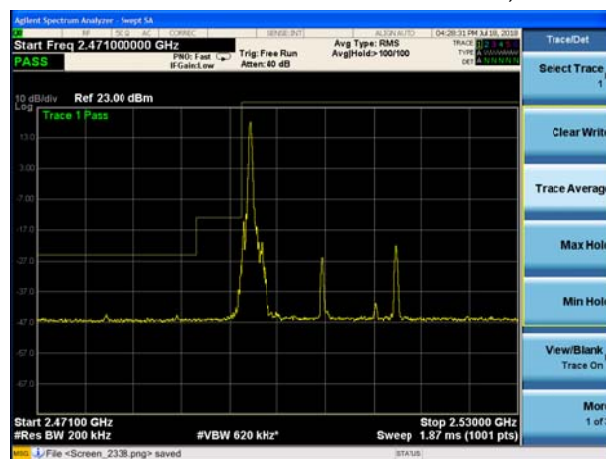
LTE Band 41 16QAM 15MHz CH-Low, 100%RB



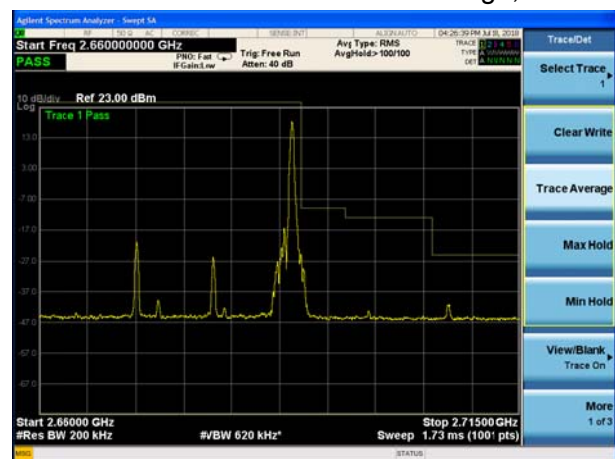
LTE Band 41 16QAM 15MHz CH-High, 100%RB



LTE Band 41 16QAM 20MHz CH-Low, RB 1

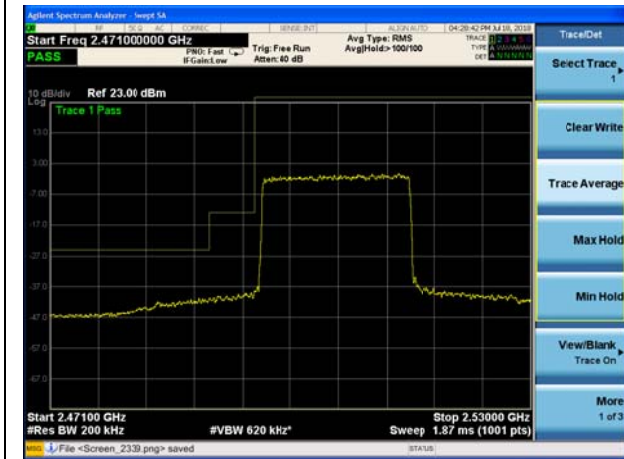


LTE Band 41 16QAM 20MHz CH-High, RB 1





LTE Band 41 16QAM 20MHz CH-Low, 100%RB



LTE Band 41 16QAM 20MHz CH-High, 100%RB



5.5 Peak-to-Average Power Ratio (PAPR)

Ambient condition

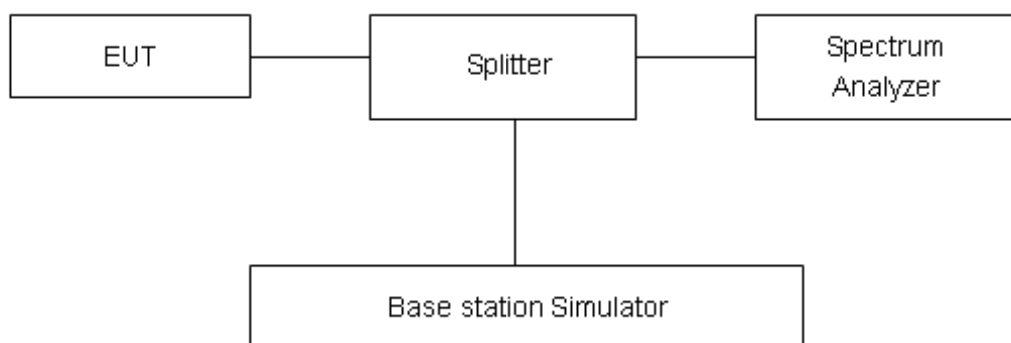
Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

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:

$$\text{PAPR (dB)} = \text{PPk (dBm)} - \text{PAvg (dBm)}.$$

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 the normal 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	26.01	23.18	2.83	≤13	PASS
	1413	1732.6	25.92	23.12	2.80	≤13	PASS
	1513	1752.6	26.01	23.19	2.82	≤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	28.30	22.57	5.73	≤13	PASS
		20175	1732.5	28.41	22.77	5.64	≤13	PASS
		20393	1754.3	28.11	22.40	5.71	≤13	PASS
	3	19965	1711.5	28.31	22.60	5.71	≤13	PASS
		20175	1732.5	28.50	22.81	5.69	≤13	PASS
		20385	1753.5	28.14	22.43	5.71	≤13	PASS
	5	19975	1712.5	28.46	22.58	5.88	≤13	PASS
		20175	1732.5	28.60	22.80	5.80	≤13	PASS
		20375	1752.5	28.27	22.41	5.86	≤13	PASS
	10	20000	1715	28.44	22.66	5.78	≤13	PASS
		20175	1732.5	28.53	22.82	5.71	≤13	PASS
		20350	1750	28.18	22.45	5.73	≤13	PASS
	15	20025	1717.5	28.71	22.64	6.07	≤13	PASS
		20175	1732.5	28.73	22.78	5.95	≤13	PASS
		20325	1747.5	28.43	22.40	6.03	≤13	PASS
	20	20050	1720	28.38	22.61	5.77	≤13	PASS
		20175	1732.5	28.40	22.73	5.67	≤13	PASS
		20300	1745	28.11	22.36	5.75	≤13	PASS
16QAM	1.4	19957	1710.7	28.10	21.64	6.46	≤13	PASS
		20175	1732.5	28.31	21.85	6.46	≤13	PASS
		20393	1754.3	27.89	21.48	6.41	≤13	PASS
	3	19965	1711.5	28.16	21.67	6.49	≤13	PASS
		20175	1732.5	28.36	21.89	6.47	≤13	PASS
		20385	1753.5	28.01	21.51	6.50	≤13	PASS
	5	19975	1712.5	28.19	21.65	6.54	≤13	PASS
		20175	1732.5	28.30	21.85	6.45	≤13	PASS
		20375	1752.5	28.00	21.46	6.54	≤13	PASS
	10	20000	1715	28.23	21.68	6.55	≤13	PASS
		20175	1732.5	28.33	21.90	6.43	≤13	PASS
		20350	1750	27.99	21.50	6.49	≤13	PASS



	15	20025	1717.5	28.25	21.65	6.60	≤13	PASS
		20175	1732.5	28.33	21.85	6.48	≤13	PASS
		20325	1747.5	27.99	21.46	6.53	≤13	PASS
	20	20050	1720	28.16	21.63	6.53	≤13	PASS
		20175	1732.5	28.25	21.81	6.44	≤13	PASS
		20300	1745	27.89	21.43	6.46	≤13	PASS

LTE Band 7								
Modulation	Bandwidth (MHz)	Channel	Frequency (MHz)	Peak (dBm)	Avg (dBm)	PAPR (dB)	Limit (dB)	Conclusion
QPSK	5	20775	2502.5	27.35	21.88	5.47	≤13	PASS
		21100	2535	27.82	22.17	5.65	≤13	PASS
		21425	2567.5	27.50	22.22	5.28	≤13	PASS
	10	20800	2505	27.39	21.96	5.43	≤13	PASS
		21100	2535	27.76	22.19	5.57	≤13	PASS
		21400	2565	27.55	22.26	5.29	≤13	PASS
	15	20825	2507.5	27.53	21.94	5.59	≤13	PASS
		21100	2535	27.95	22.15	5.80	≤13	PASS
		21375	2562.5	27.67	22.21	5.46	≤13	PASS
	20	20850	2510	27.36	21.91	5.45	≤13	PASS
		21100	2535	27.65	22.10	5.55	≤13	PASS
		21350	2560	27.58	22.17	5.41	≤13	PASS
16QAM	5	20775	2502.5	27.11	20.96	6.15	≤13	PASS
		21100	2535	27.39	21.12	6.27	≤13	PASS
		21425	2567.5	26.85	20.86	5.99	≤13	PASS
	10	20800	2505	27.19	20.99	6.20	≤13	PASS
		21100	2535	27.47	21.17	6.30	≤13	PASS
		21400	2565	26.95	20.90	6.05	≤13	PASS
	15	20825	2507.5	27.16	20.96	6.20	≤13	PASS
		21100	2535	27.47	21.12	6.35	≤13	PASS
		21375	2562.5	26.93	20.86	6.07	≤13	PASS
	20	20850	2510	27.14	20.94	6.20	≤13	PASS
		21100	2535	27.40	21.08	6.32	≤13	PASS
		21350	2560	26.97	20.83	6.14	≤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	27.26	22.48	4.78	≤13	PASS
		23095	707.5	28.11	22.70	5.41	≤13	PASS
		23173	715.3	26.55	21.74	4.81	≤13	PASS
	3	23025	700.5	27.58	22.57	5.01	≤13	PASS
		23095	707.5	28.23	22.75	5.48	≤13	PASS
		23165	714.5	26.88	21.79	5.09	≤13	PASS
	5	23035	701.5	27.72	22.55	5.17	≤13	PASS
		23095	707.5	28.41	22.71	5.70	≤13	PASS
		23155	713.5	26.92	21.74	5.18	≤13	PASS
	10	23060	704	27.84	22.52	5.32	≤13	PASS
		23095	707.5	28.18	22.66	5.52	≤13	PASS
		23130	711	27.00	21.70	5.30	≤13	PASS
16QAM	1.4	23017	699.7	27.21	21.55	5.66	≤13	PASS
		23095	707.5	27.95	21.75	6.20	≤13	PASS
		23173	715.3	27.43	21.77	5.66	≤13	PASS
	3	23025	700.5	27.46	21.59	5.87	≤13	PASS
		23095	707.5	28.11	21.80	6.31	≤13	PASS
		23165	714.5	27.71	21.79	5.92	≤13	PASS
	5	23035	701.5	27.50	21.56	5.94	≤13	PASS
		23095	707.5	28.17	21.75	6.42	≤13	PASS
		23155	713.5	27.72	21.75	5.97	≤13	PASS
	10	23060	704	27.68	21.54	6.14	≤13	PASS
		23095	707.5	28.00	21.71	6.29	≤13	PASS
		23130	711	27.85	21.72	6.13	≤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	26.07	20.55	5.52	≤13	PASS
		23230	782	26.08	20.69	5.39	≤13	PASS
		23255	784.5	26.01	20.56	5.45	≤13	PASS
	10	23230	782	26.06	20.62	5.44	≤13	PASS
16QAM	5	23205	779.5	26.28	20.57	5.71	≤13	PASS
		23230	782	26.33	20.59	5.74	≤13	PASS
		23255	784.5	26.52	20.63	5.89	≤13	PASS
	10	23230	782	26.43	20.59	5.84	≤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	27.78	22.57	5.21	≤13	PASS
		23790	710	28.23	22.67	5.56	≤13	PASS
		23825	713.5	28.15	22.68	5.47	≤13	PASS
	10	23780	709	27.99	22.54	5.45	≤13	PASS
		23790	710	28.04	22.62	5.42	≤13	PASS
		23800	711	27.95	22.64	5.31	≤13	PASS
16QAM	5	23755	706.5	27.85	21.56	6.29	≤13	PASS
		23790	710	27.88	21.69	6.19	≤13	PASS
		23825	713.5	27.70	21.70	6.00	≤13	PASS
	10	23780	709	27.81	21.54	6.27	≤13	PASS
		23790	710	27.86	21.65	6.21	≤13	PASS
		23800	711	27.80	21.67	6.13	≤13	PASS

LTE Band 41								
Modulation	Bandwidth ((MHz))	Channel	Frequency (MHz)	Peak (dBm)	Avg (dBm)	PAPR (dB)	Limit (dB)	Conclusion
QPSK	5	39675	2498.5	31.42	22.44	8.98	≤13	PASS
		40620	2593	31.30	22.56	8.74	≤13	PASS
		41565	2687.5	31.60	22.90	8.70	≤13	PASS
	10	39700	2501	31.84	22.52	9.32	≤13	PASS
		40620	2593	31.01	22.58	8.43	≤13	PASS
		41540	2685	31.09	22.94	8.15	≤13	PASS
	15	39725	2503.5	31.98	22.50	9.48	≤13	PASS
		40620	2593	31.36	22.54	8.82	≤13	PASS
		41515	2682.5	31.51	22.89	8.62	≤13	PASS
	20	39750	2506	31.85	22.47	9.38	≤13	PASS
		40620	2593	31.94	22.49	9.45	≤13	PASS
		41490	2680	32.25	22.85	9.40	≤13	PASS
16QAM	5	39675	2498.5	31.22	21.60	9.62	≤13	PASS
		40620	2593	31.39	21.46	9.93	≤13	PASS
		41565	2687.5	31.40	21.81	9.59	≤13	PASS
	10	39700	2501	31.75	21.63	10.12	≤13	PASS
		40620	2593	31.27	21.51	9.76	≤13	PASS



		41540	2685	31.48	21.85	9.63	≤13	PASS
	15	39725	2503.5	32.08	21.60	10.48	≤13	PASS
		40620	2593	31.41	21.46	9.95	≤13	PASS
		41515	2682.5	32.04	21.81	10.23	≤13	PASS
	20	39750	2506	30.86	21.58	9.28	≤13	PASS
		40620	2593	31.00	21.42	9.58	≤13	PASS
		41490	2680	31.27	21.78	9.49	≤13	PASS

5.6 Frequency Stability

Ambient condition

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

Method of Measurement

Frequency Stability (Temperature Variation)

The temperature inside the climate chamber is varied from -30°C to +70°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 -30°C to +70°C. Allow at least 1.5 hours at each temperature, un-powered, before making measurements.

Frequency Stability (Voltage Variation)

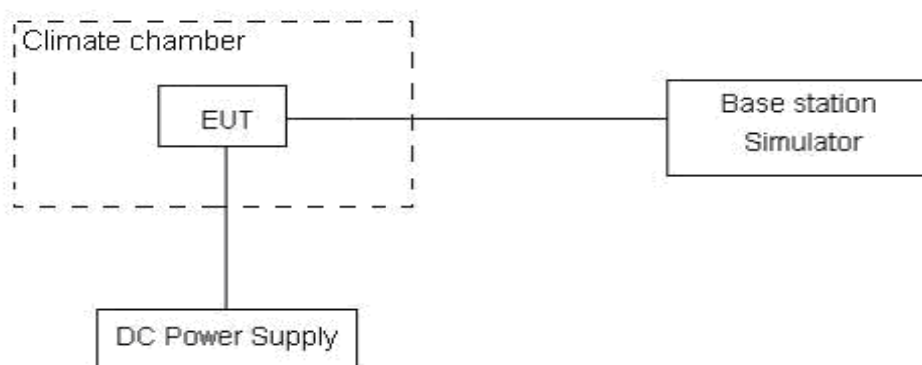
The frequency stability shall be measured with variation of primary supply voltage as follows:

(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 3.2 V and 4.2 V, with a nominal voltage of 3.7V.

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 $k = 3, U = 0.01\text{ppm}$.

Test Result
WCDMA Band IV

WCDMA Band IV					
Condition		1710	1755	Delta(Hz)	Frequency Stability(ppm)
Temperature	Voltage	F low@-13dBm(MHz)	F high@-13dBm(MHz)		
Normal (25°C)	Normal	1710.0279	1754.9113	1.79	0.00103
Extreme (70°C)		1710.0291	1754.9101	-0.48	-0.00028
Extreme (60°C)		1710.0272	1754.9122	0.44	0.00025
Extreme (50°C)		1710.0269	1754.9123	-3.11	-0.00179
Extreme (40°C)		1710.0284	1754.9108	-3.65	-0.00211
Extreme (30°C)		1710.0273	1754.9119	-2.58	-0.00149
Extreme (20°C)		1710.0271	1754.9122	1.41	0.00081
Extreme (10C)		1710.0286	1754.9106	-1.16	-0.00067
Extreme (0°C)		1710.0277	1754.9115	-2.05	-0.00118
Extreme (-10°C)		1710.0291	1754.9122	-1.76	-0.00102
Extreme (-20°C)		1710.0323	1754.9153	-3.87	-0.00223
Extreme (-30°C)		1710.0339	1754.9175	-3.65	-0.00211
25C	LV	1710.0316	1754.9147	-2.79	-0.00161
	HV	1710.0303	1754.9156	-0.91	-0.00053

LTE Band 4					
(QPSK, 20MHz BANDWIDTH)					
Condition		1710	1755	Delta(Hz)	Frequency Stability(ppm)
Temperature	Voltage	F low@-13dBm(MHz)	F high@-13dBm(MHz)		
Normal (25°C)	Normal	1710.6538	1754.4302	-3.21	-0.00185
Extreme (70°C)		1710.6529	1754.4294	-10.21	-0.00589
Extreme (60°C)		1710.6515	1754.4285	-5.63	-0.00325
Extreme (50°C)		1710.6521	1754.4286	-5.15	-0.00297
Extreme (40°C)		1710.6534	1754.4299	-6.21	-0.00358
Extreme (30°C)		1710.6541	1754.4306	-2.59	-0.00149
Extreme (20°C)		1710.6523	1754.4285	0.78	0.00045
Extreme (10C)		1710.6532	1754.4297	-0.59	-0.00034
Extreme (0°C)		1710.6519	1754.4284	-3.90	-0.00225
Extreme (-10°C)		1710.6514	1754.4279	-6.38	-0.00368
Extreme (-20°C)		1710.6525	1754.4291	-6.86	-0.00396
Extreme (-30°C)		1710.6558	1754.4323	-7.34	-0.00424
25°C	LV	1710.6522	1754.4287	0.17	0.00010
	HV	1710.6528	1754.4293	-7.34	-0.00424



(16QAM, 20MHz BANDWIDTH)					
Condition		1710	1755	Delta(Hz)	Frequency Stability(ppm)
Temperature	Voltage	F low@-13dBm(MHz)	F high@-13dBm(MHz)		
Normal (25°C)	Normal	1710.6387	1754.5105	-2.76	-0.00159
Extreme (70°C)		1710.6389	1754.5114	0.28	0.00016
Extreme (60°C)		1710.6403	1754.5128	3.65	0.00211
Extreme (50°C)		1710.6397	1754.5122	2.28	0.00132
Extreme (40°C)		1710.6384	1754.5109	-1.03	-0.00059
Extreme (30°C)		1710.6377	1754.5102	-3.51	-0.00203
Extreme (20°C)		1710.6398	1754.5123	-3.99	-0.00230
Extreme (10C)		1710.6386	1754.5111	-4.47	-0.00258
Extreme (0°C)		1710.6399	1754.5124	-6.77	-0.00391
Extreme (-10°C)		1710.6404	1754.5129	3.04	0.00175
Extreme (-20°C)		1710.6393	1754.5118	0.71	0.00041
Extreme (-30°C)		1710.6363	1754.5085	-0.70	-0.00040
25°C	LV	1710.6396	1754.5121	-1.97	-0.00114
	HV	1710.6391	1754.5115	-2.98	-0.00172

LTE Band 7					
(QPSK, 20MHz BANDWIDTH)					
Condition		2500	2570	Delta (Hz)	Frequency Stability(ppm)
Temperature	Voltage	F low@-13dBm(MHz)	F high@-13dBm(MHz)		
Normal (25°C)	Normal	2500.4380	2569.6782	9.27	0.00366
Extreme (70°C)		2500.4386	2569.6776	-8.92	-0.00352
Extreme (60°C)		2500.4387	2569.6775	11.24	0.00443
Extreme (50°C)		2500.4392	2569.6770	13.21	0.00521
Extreme (40°C)		2500.4381	2569.6781	6.25	0.00247
Extreme (30°C)		2500.4396	2569.6766	-7.63	-0.00301
Extreme (20°C)		2500.4388	2569.6774	3.61	0.00142
Extreme (10C)		2500.4389	2569.6773	1.66	0.00065
Extreme (0°C)		2500.4382	2569.6780	10.12	0.00399
Extreme (-10°C)		2500.4390	2569.6772	0.17	0.00007
Extreme (-20°C)		2500.4393	2569.6769	-0.56	-0.00022
Extreme (-30°C)		2500.4383	2569.6779	-7.09	-0.00280
25°C	LV	2500.4391	2569.6771	-1.18	-0.00047
	HV	2500.4384	2569.6778	-4.31	-0.00170
(16QAM,20MHz BANDWIDTH)					
Condition		2500	2570	Delta (Hz)	Frequency Stability(ppm)
Temperature	Voltage	F low@-13dBm(MHz)	F high@-13dBm(MHz)		



Normal (25°C)	Normal	2500.3995	2569.6123	-4.97	-0.00196
Extreme (70°C)		2500.4001	2569.6117	-4.92	-0.00194
Extreme (60°C)		2500.4002	2569.6116	-6.47	-0.00255
Extreme (50°C)		2500.4007	2569.6111	0.48	0.00019
Extreme (40°C)		2500.3996	2569.6122	-0.68	-0.00027
Extreme (30°C)		2500.4011	2569.6107	-1.78	-0.00070
Extreme (20°C)		2500.4003	2569.6115	-0.60	-0.00024
Extreme (10C)		2500.4004	2569.6114	-5.19	-0.00205
Extreme (0°C)		2500.3997	2569.6121	-8.51	-0.00336
Extreme (-10°C)		2500.4005	2569.6113	-1.29	-0.00051
Extreme (-20°C)		2500.4008	2569.6110	-3.75	-0.00148
Extreme (-30°C)		2500.3998	2569.6120	-1.77	-0.00070
25°C	LV	2500.4006	2569.6112	2.39	0.00094
	HV	2500.3999	2569.6119	-2.87	-0.00113

LTE Band 12					
(QPSK, 10MHz BANDWIDTH)					
Condition		699	716	Delta(Hz)	Frequency Stability(ppm)
Temperature	Voltage	F low@-13dBm(MHz)	F high@-13dBm(MHz)		
Normal (25°C)	Normal	699.2572	715.7323	-3.51	-0.00496
Extreme (70°C)		699.2563	715.7291	-5.04	-0.00712
Extreme (60°C)		699.2549	715.7277	-2.40	-0.00339
Extreme (50°C)		699.2555	715.7283	5.33	0.00753
Extreme (40°C)		699.2568	715.7296	-1.61	-0.00228
Extreme (30°C)		699.2575	715.7303	1.57	0.00222
Extreme (20°C)		699.2554	715.7282	-0.65	-0.00092
Extreme (10C)		699.2566	715.7294	-4.83	-0.00683
Extreme (0°C)		699.2553	715.7281	-2.28	-0.00322
Extreme (-10°C)		699.2548	715.7276	9.47	0.01339
Extreme (-20°C)		699.2559	715.7287	8.28	0.01170
Extreme (-30°C)		699.2592	715.7324	8.05	0.01138
25°C	LV	699.2556	715.7284	7.42	0.01049
	HV	699.2562	715.7295	2.36	0.00334
(16QAM, 10MHz BANDWIDTH)					
Condition		699	716	Delta(Hz)	Frequency Stability(ppm)
Temperature	Voltage	F low@-13dBm(MHz)	F high@-13dBm(MHz)		
Normal (25°C)	Normal	699.3118	715.6805	-1.81	-0.00256
Extreme (70°C)		699.3127	715.6814	-2.12	-0.00300
Extreme (60°C)		699.3141	715.6828	9.72	0.01374



Extreme (50°C)		699.3135	715.6822	-2.02	-0.00286
Extreme (40°C)		699.3122	715.6809	-4.21	-0.00595
Extreme (30°C)		699.3115	715.6802	-10.90	-0.01541
Extreme (20°C)		699.3136	715.6823	-0.85	-0.00120
Extreme (10°C)		699.3124	715.6811	-4.97	-0.00702
Extreme (0°C)		699.3137	715.6824	-9.23	-0.01305
Extreme (-10°C)		699.3142	715.6829	2.07	0.00293
Extreme (-20°C)		699.3131	715.6818	-5.24	-0.00741
Extreme (-30°C)		699.3098	715.6785	1.69	0.00239
25°C	LV	699.3134	715.6821	2.09	0.00295
	HV	699.3128	715.6815	-0.57	-0.00081

LTE Band 13					
(QPSK, 10MHz BANDWIDTH)					
Condition		777	787	Delta(Hz)	Frequency Stability(ppm)
Temperature	Voltage	F low@-13dBm(MHz)	F high@-13dBm(MHz)		
Normal (25°C)	Normal	777.4363	786.5756	9.32	0.01192
Extreme (70°C)		777.4375	786.5744	-3.11	-0.00398
Extreme (60°C)		777.4356	786.5763	-3.43	-0.00439
Extreme (50°C)		777.4353	786.5766	-1.24	-0.00159
Extreme (40°C)		777.4368	786.5751	-0.71	-0.00091
Extreme (30°C)		777.4357	786.5762	-8.73	-0.01116
Extreme (20°C)		777.4354	786.5765	-6.01	-0.00769
Extreme (10°C)		777.4370	786.5749	1.30	0.00166
Extreme (0°C)		777.4361	786.5758	-7.96	-0.01018
Extreme (-10°C)		777.4356	786.5751	-7.00	-0.00895
Extreme (-20°C)		777.4362	786.5765	-1.92	-0.00246
Extreme (-30°C)		777.4356	786.5763	-7.90	-0.01010
25°C	LV	777.4356	786.5755	-7.39	-0.00945
	HV	777.4362	786.5744	-1.47	-0.00188
(16QAM, 10MHz BANDWIDTH)					
Condition		777	787	Delta(Hz)	Frequency Stability(ppm)
Temperature	Voltage	F low@-13dBm(MHz)	F high@-13dBm(MHz)		
Normal (25°C)	Normal	777.5179	786.5012	-3.12	-0.00399
Extreme (70°C)		777.5191	786.5131	-1.94	-0.00248
Extreme (60°C)		777.5172	786.5019	-1.81	-0.00231
Extreme (50°C)		777.5169	786.5022	-1.21	-0.00155
Extreme (40°C)		777.5184	786.5007	-8.75	-0.01119
Extreme (30°C)		777.5173	786.5018	-3.07	-0.00393



Extreme (20°C)		777.5170	786.5021	4.40	0.00563
Extreme (10C)		777.5186	786.5005	-8.60	-0.01100
Extreme (0°C)		777.5177	786.5014	-1.14	-0.00146
Extreme (-10°C)		777.5176	786.5011	-0.66	-0.00084
Extreme (-20°C)		777.5169	786.5131	-5.83	-0.00746
Extreme (-30°C)		777.5173	786.5018	-14.90	-0.01905
25°C	LV	777.5172	786.5019	3.09	0.00395
	HV	777.5178	786.5013	-13.79	-0.01763

LTE Band 17					
(QPSK, 10MHz BANDWIDTH)					
Condition		704	716	Delta(Hz)	Frequency Stability(ppm)
Temperature	Voltage	F low@-13dBm(MHz)	F high@-13dBm(MHz)		
Normal (25°C)	Normal	704.3566	715.7036	3.04	0.00383
Extreme (70°C)		704.3567	715.7035	4.43	0.00559
Extreme (60°C)		704.3563	715.7039	-8.09	-0.01020
Extreme (50°C)		704.3556	715.7046	-2.96	-0.00373
Extreme (40°C)		704.3565	715.7037	-1.53	-0.00193
Extreme (30°C)		704.3562	715.7040	5.83	0.00735
Extreme (20°C)		704.3555	715.7047	-10.40	-0.01311
Extreme (10C)		704.3559	715.7043	5.12	0.00646
Extreme (0°C)		704.3554	715.7048	3.04	0.00383
Extreme (-10°C)		704.3561	715.7041	-9.49	-0.01197
Extreme (-20°C)		704.3564	715.7038	-8.60	-0.01084
Extreme (-30°C)		704.3552	715.7050	-8.99	-0.01134
25°C	LV	704.3565	715.7037	-8.92	-0.01125
	HV	704.3552	715.7050	-6.71	-0.00846
(16QAM, 10MHz BANDWIDTH)					
Condition		704	716	Delta(Hz)	Frequency Stability(ppm)
Temperature	Voltage	F low@-13dBm(MHz)	F high@-13dBm(MHz)		
Normal (25°C)	Normal	704.4601	715.6232	2.84	0.00358
Extreme (70°C)		704.4602	715.6231	4.03	0.00508
Extreme (60°C)		704.4598	715.6235	-8.11	-0.01023
Extreme (50°C)		704.4591	715.6242	-15.25	-0.01923
Extreme (40°C)		704.4600	715.6233	-11.21	-0.01414
Extreme (30°C)		704.4597	715.6236	-12.85	-0.01620
Extreme (20°C)		704.4590	715.6243	-12.74	-0.01607
Extreme (10C)		704.4594	715.6239	-16.43	-0.02072
Extreme (0°C)		704.4589	715.6244	-8.70	-0.01097



Extreme (-10°C)		704.4596	715.6237	-3.20	-0.00404
Extreme (-20°C)		704.4599	715.6234	-4.86	-0.00613
Extreme (-30°C)		704.4587	715.6246	0.49	0.00062
25°C	LV	704.4600	715.6233	-0.13	-0.00016
	HV	704.4587	715.6246	7.96	0.01004

LTE Band 41					
(QPSK, 20MHz BANDWIDTH)					
Condition		2496	2690	Delta(Hz)	Frequency Stability(ppm)
Temperature	Voltage	F low@-13dBm(MHz)	F high@-13dBm(MHz)		
Normal (25°C)	Normal	2496.4246	2689.6772	1.91	0.00074
Extreme (70°C)		2496.4241	2689.6778	1.24	0.00048
Extreme (60°C)		2496.4238	2689.6782	4.49	0.00173
Extreme (50°C)		2496.4245	2689.6773	3.67	0.00142
Extreme (40°C)		2496.4241	2689.6777	1.32	0.00051
Extreme (30°C)		2496.4244	2689.6774	0.60	0.00023
Extreme (20°C)		2496.4247	2689.6771	11.60	0.00447
Extreme (10C)		2496.4252	2689.6768	-6.07	-0.00234
Extreme (0°C)		2496.4243	2689.6775	9.98	0.00385
Extreme (-10°C)		2496.4243	2689.6775	1.87	0.00072
Extreme (-20°C)		2496.4245	2689.6773	4.96	0.00191
Extreme (-30°C)		2496.4249	2689.6785	1.39	0.00054
25°C	LV	2496.4255	2689.6779	11.67	0.00450
	HV	2496.4260	2689.6776	-6.00	-0.00231
(16QAM, 20MHz BANDWIDTH)					
Condition		2496	2690	Delta(Hz)	Frequency Stability(ppm)
Temperature	Voltage	F low@-13dBm(MHz)	F high@-13dBm(MHz)		
Normal (25°C)	Normal	2496.4392	2689.6642	-2.66	-0.00103
Extreme (70°C)		2496.4386	2689.6646	-2.65	-0.00102
Extreme (60°C)		2496.4384	2689.6648	-4.57	-0.00176
Extreme (50°C)		2496.4391	2689.6641	-2.11	-0.00081
Extreme (40°C)		2496.4387	2689.6645	-2.78	-0.00107
Extreme (30°C)		2496.4394	2689.6642	-1.34	-0.00052
Extreme (20°C)		2496.4393	2689.6639	3.70	0.00143
Extreme (10C)		2496.4396	2689.6636	-0.62	-0.00024
Extreme (0°C)		2496.4389	2689.6643	-1.18	-0.00046
Extreme (-10°C)		2496.4389	2689.6643	-2.14	-0.00083
Extreme (-20°C)		2496.4391	2689.6641	-1.25	-0.00048
Extreme (-30°C)		2496.4399	2689.6645	3.76	0.00145



25°C	LV	2496.4395	2689.6649	-1.12	-0.00043
	HV	2496.4395	2689.6649	-2.08	-0.00080

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 9kHz to the 10th harmonic of the carrier. The peak detector is used.

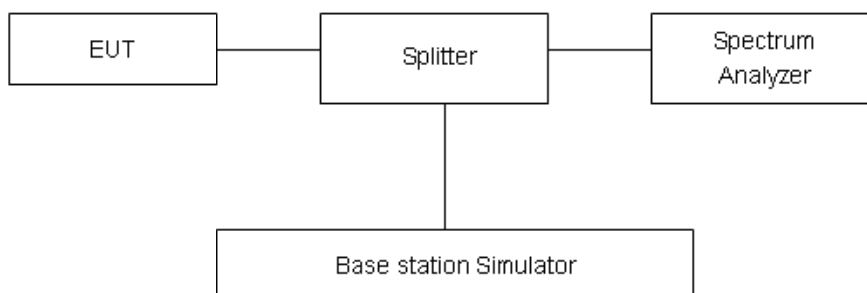
RBW is set to 100kHz, VBW is set to 300kHz for 30MHz~1GHz

RBW is set to 1MHz, VBW is set to 3MHz for above 1GHz, Sweep is set to ATUO.

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

The modulation mode and RB allocation refer to section 5.1, using the maximum output power configuration.

Test setup



Limits

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 $43 + 10 \log_{10} (P)$ dB..”

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.

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.

Rule Part 27.53(m) $55 + 10 \log (P)$ dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(4) of this section.

Part 27.53 (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;

Part 27.53(a)/(h)/(g) Limit		-13 dBm
Part 27.53(f) Limit	Limit out of the band 1559-1610 MHz	-13 dBm
	Limit in the band 1559-1610 MHz	-40 dBm
Part 27.53(m) Limit		-25 dBm

Measurement Uncertainty

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

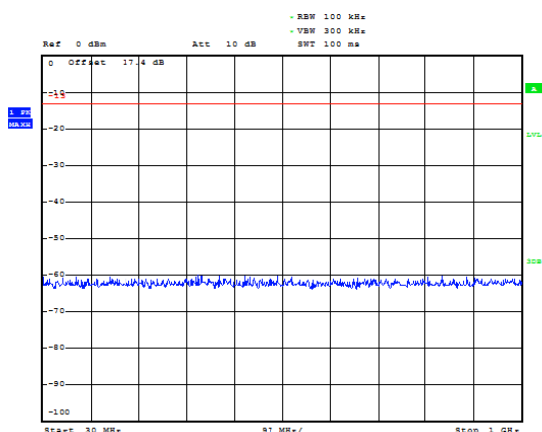
Frequency	Uncertainty
9kHz-1GHz	0.684 dB
1GHz-27GHz	1.407 dB

Test Result

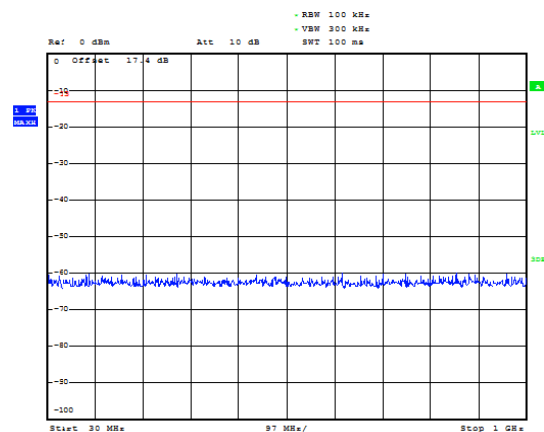
Sweep the whole frequency band through the range from 9kHz to the 10th harmonic of the carrier, the emissions more than 20 dB below the limit are not reported.

The signal beyond the limit is carrier.

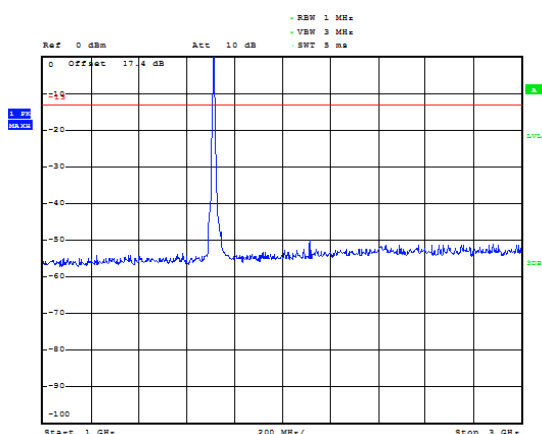
WCDMA Band IV CH-Low 30MHz~1GHz



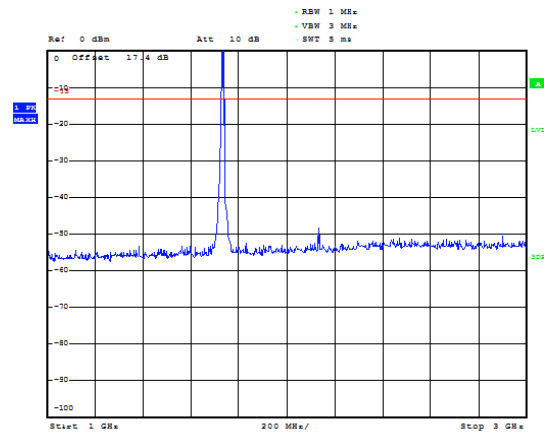
WCDMA Band IV CH- Middle 30MHz~1GHz



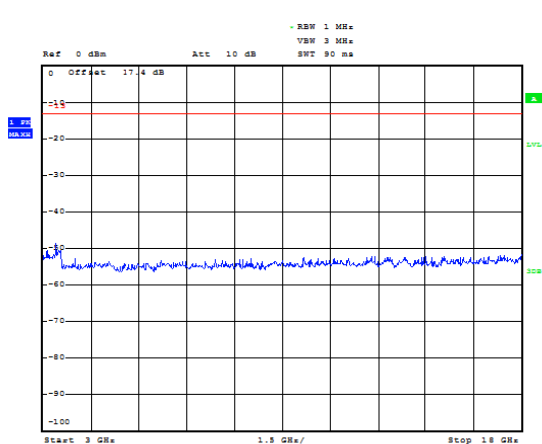
WCDMA Band IV CH- Low 1GHz~3GHz



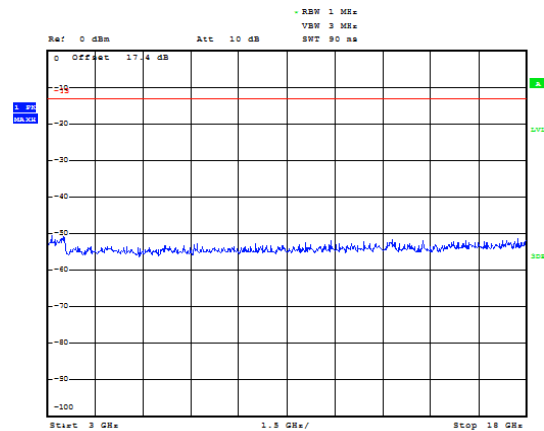
WCDMA Band IV CH- Middle 1GHz~3GHz



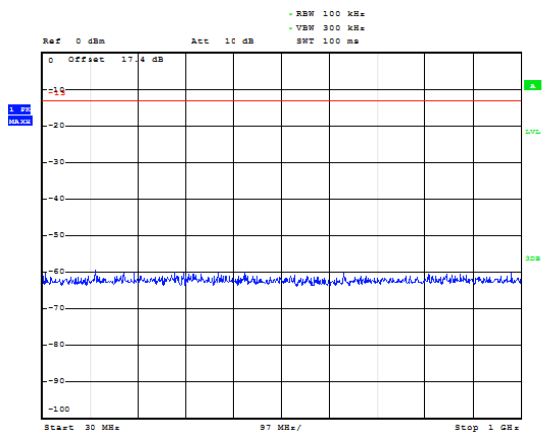
WCDMA Band IV CH- Low 3GHz~18GHz



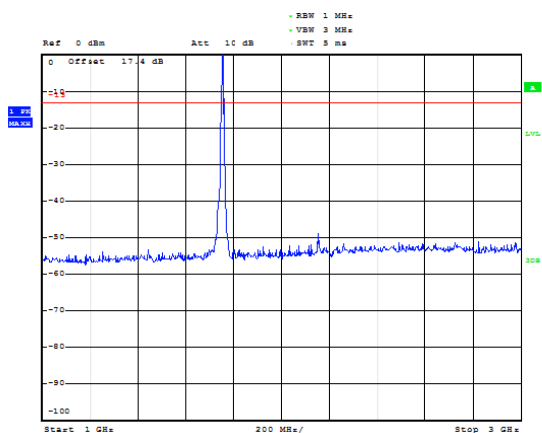
WCDMA Band IV CH- Middle 3GHz~18GHz



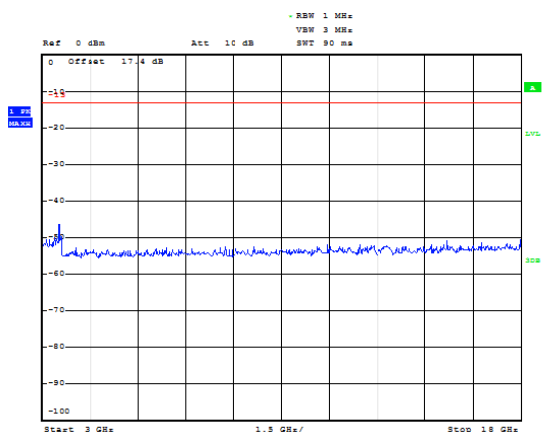
WCDMA Band IV CH- High 30MHz~1GHz



WCDMA Band IV CH- High 1GHz~3GHz

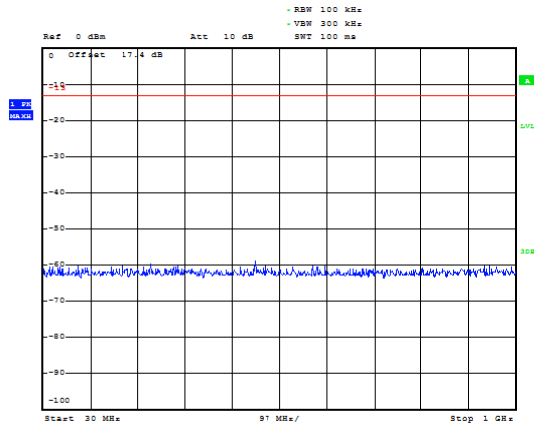


WCDMA Band IV CH- High 3GHz~18GHz

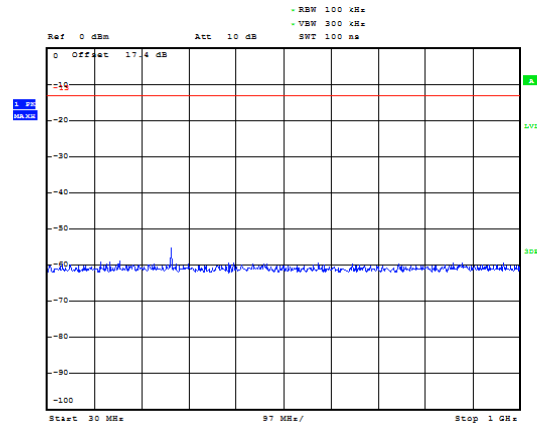




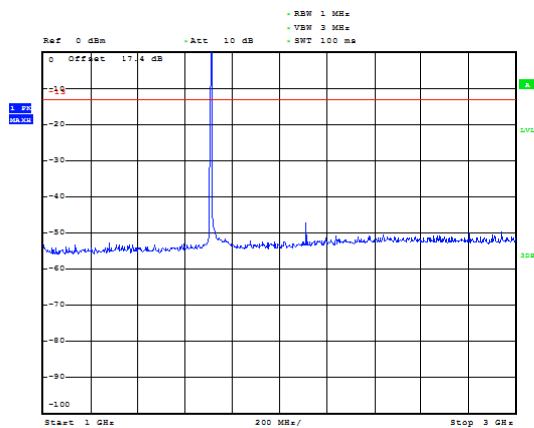
LTE Band 4 1.4MHz CH-Low 30MHz~1GHz



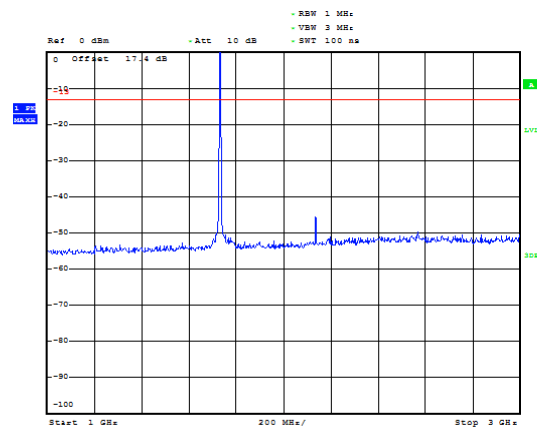
LTE Band 4 1.4MHz CH-Middle 30MHz~1GHz



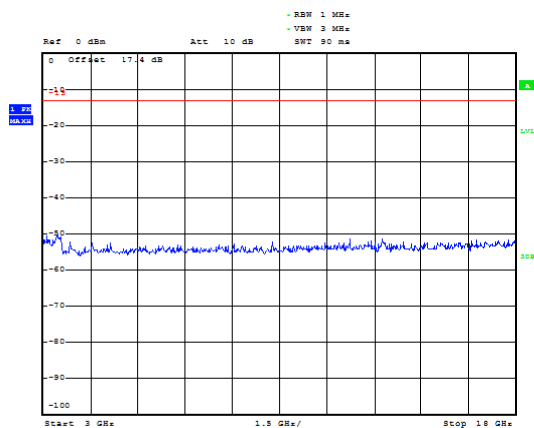
LTE Band 4 1.4MHz CH-Low 1GHz~3GHz



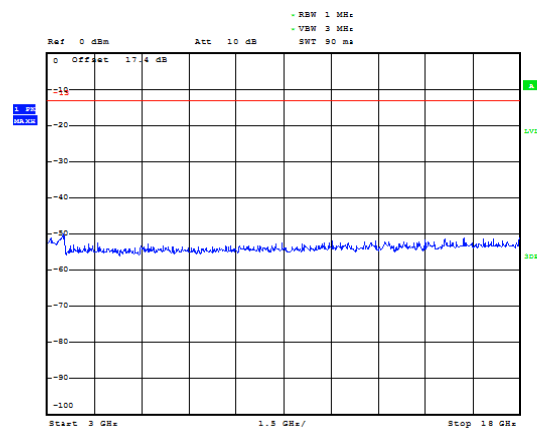
LTE Band 4 1.4MHz CH-Middle 1GHz~3GHz



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

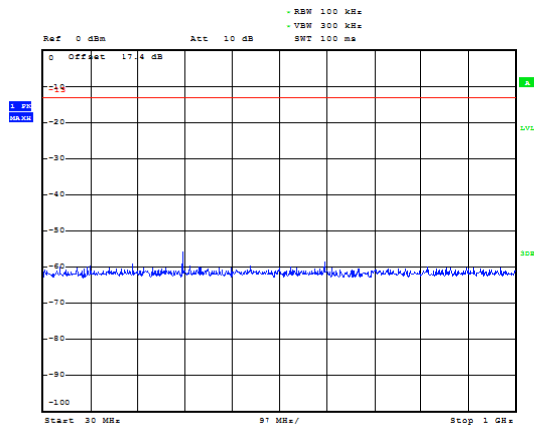


LTE Band 4 1.4MHz CH-Middle 3GHz~18GHz

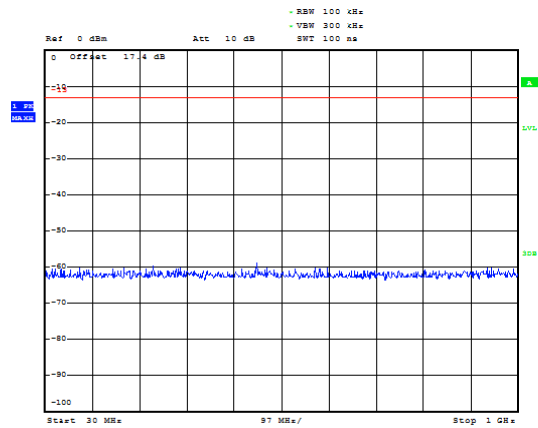




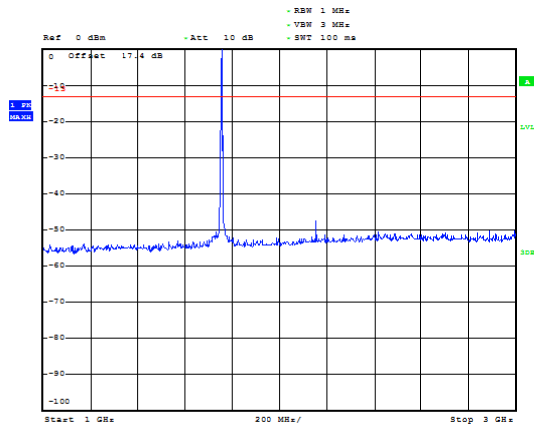
LTE Band 4 1.4MHz CH-High 30MHz~1GHz



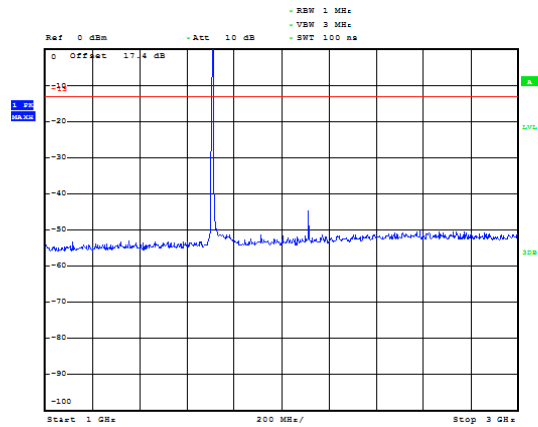
LTE Band 4 3MHz CH-Low 30MHz~1GHz



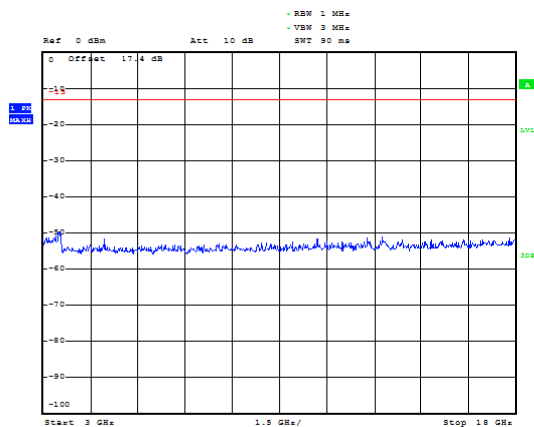
LTE Band 4 1.4MHz CH-High 1GHz~3GHz



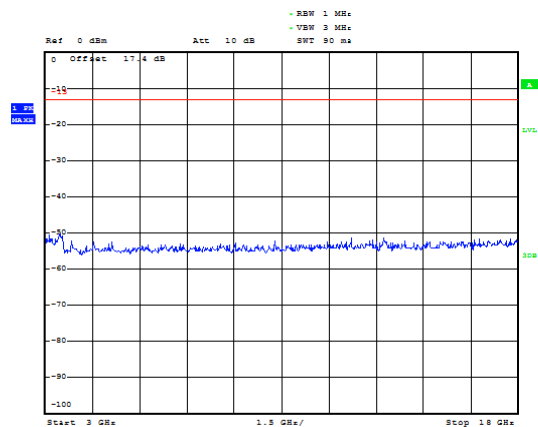
LTE Band 4 3MHz CH-Low 1GHz~3GHz



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

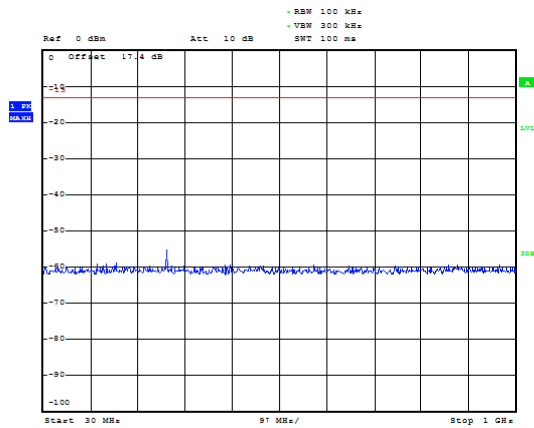


LTE Band 4 3MHz CH-Low 3GHz~18GHz

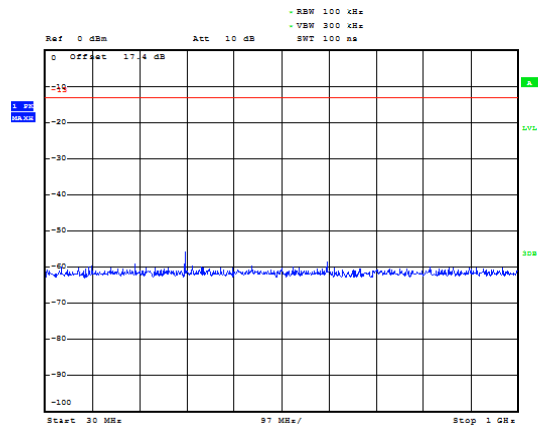




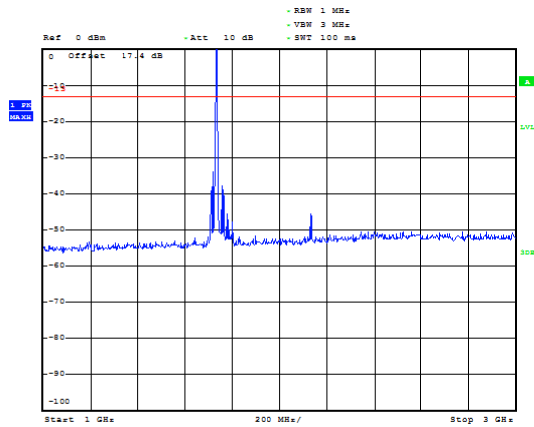
LTE Band 4 3MHz CH-Middle 30MHz~1GHz



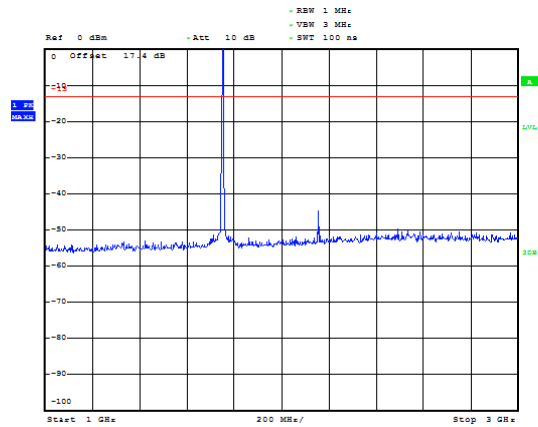
LTE Band 4 3MHz CH-High 30MHz~1GHz



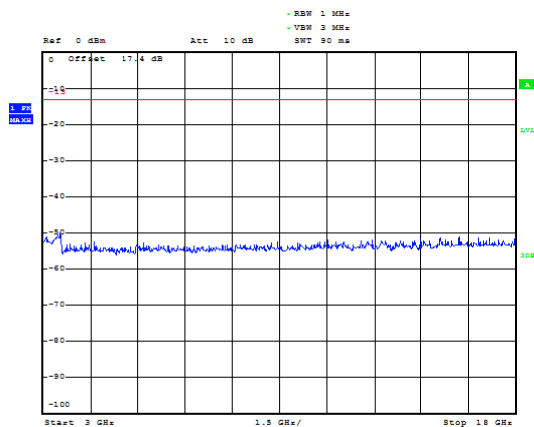
LTE Band 4 3MHz CH-Middle 1GHz~3GHz



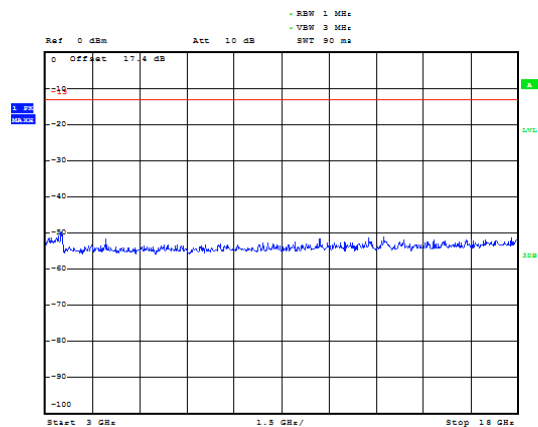
LTE Band 4 3MHz CH-High 1GHz~3GHz



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

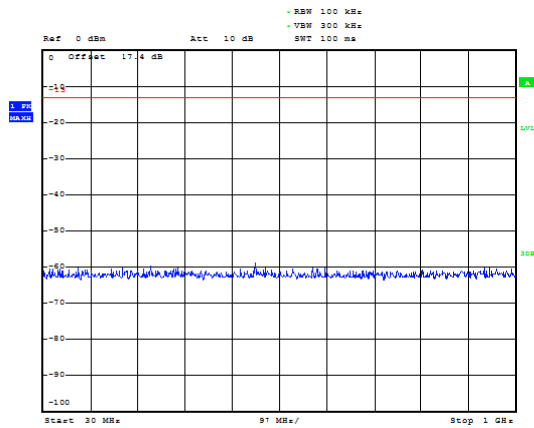


LTE Band 4 3MHz CH-High 3GHz~18GHz

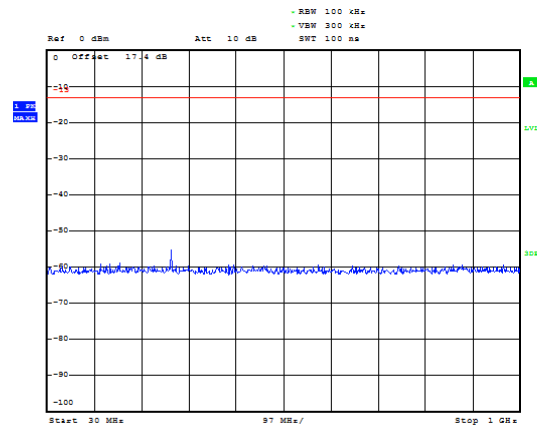




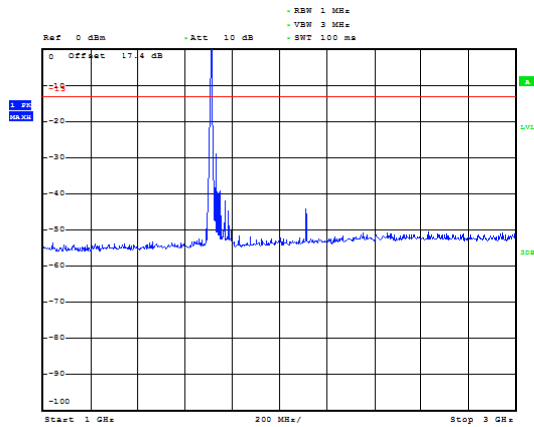
LTE Band 4 5MHz CH-Low 30MHz~1GHz



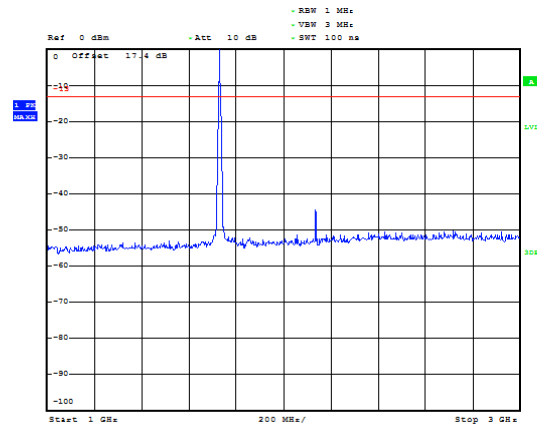
LTE Band 4 5MHz CH-Middle 30MHz~1GHz



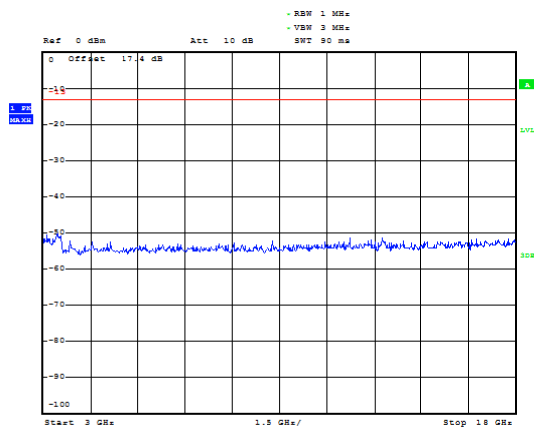
LTE Band 4 5MHz CH-Low 1GHz~3GHz



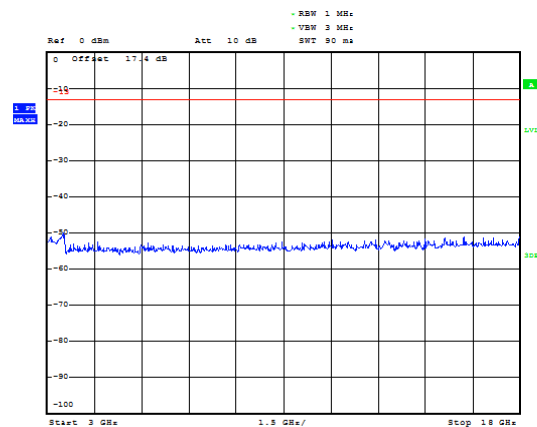
LTE Band 4 5MHz CH-Middle 1GHz~3GHz



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

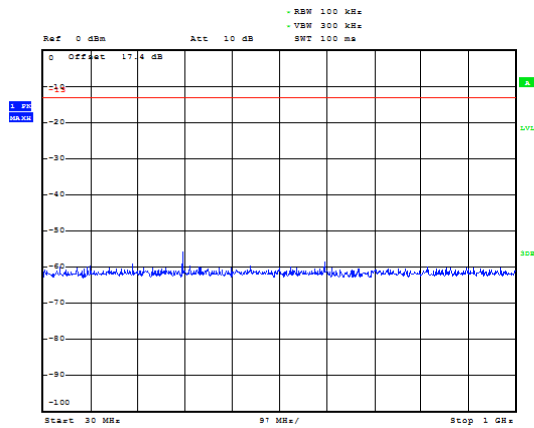


LTE Band 4 5MHz CH-Middle 3GHz~18GHz

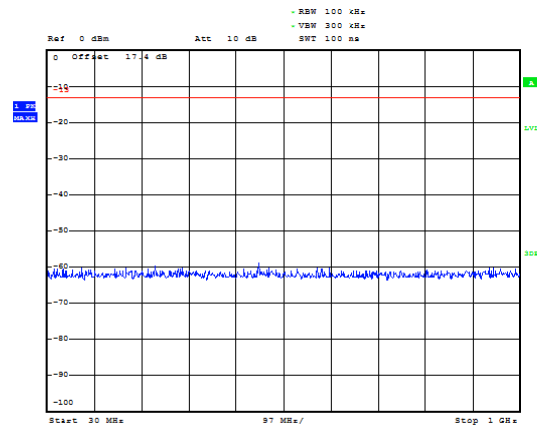




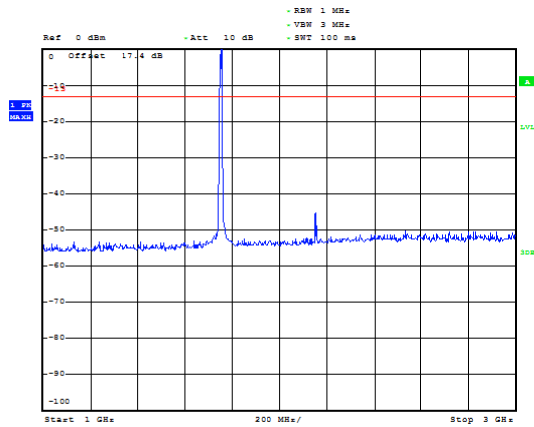
LTE Band 4 5MHz CH-High 30MHz~1GHz



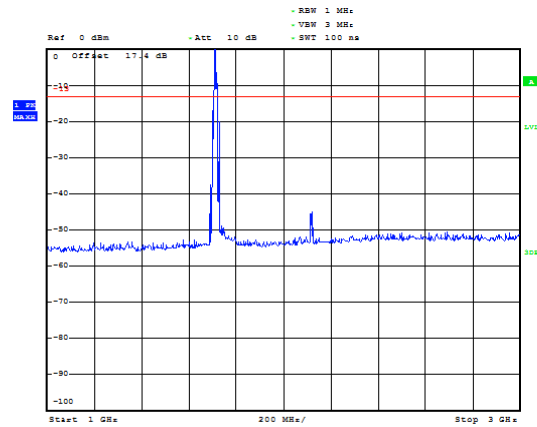
LTE Band 4 10MHz CH-Low 30MHz~1GHz



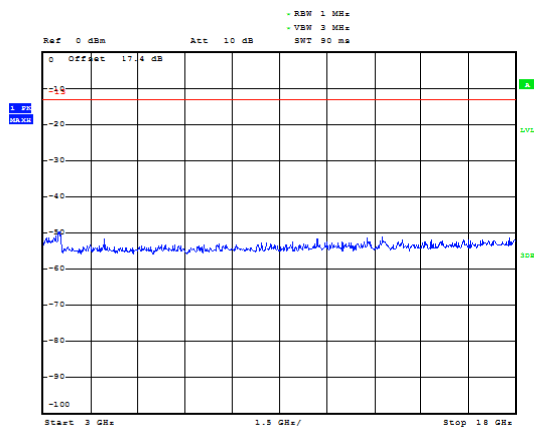
LTE Band 4 5MHz CH-High 1GHz~3GHz



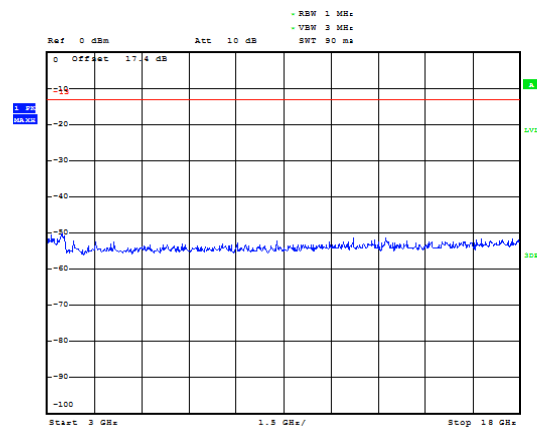
LTE Band 4 10MHz CH-Low 1GHz~3GHz



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

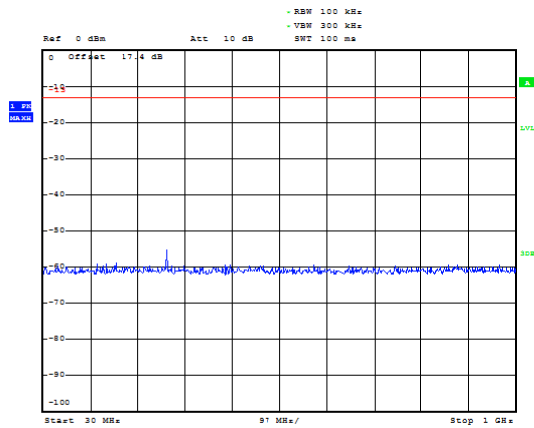


LTE Band 4 10MHz CH-Low 3GHz~18GHz

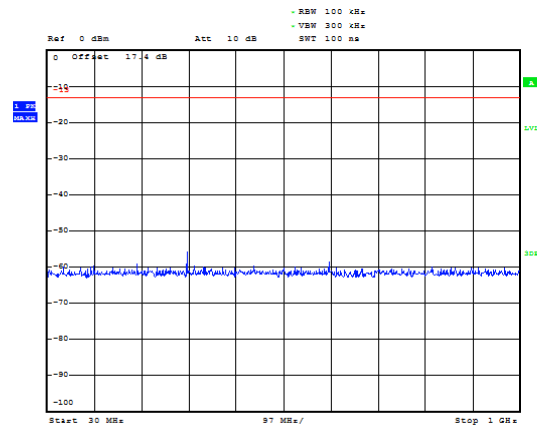




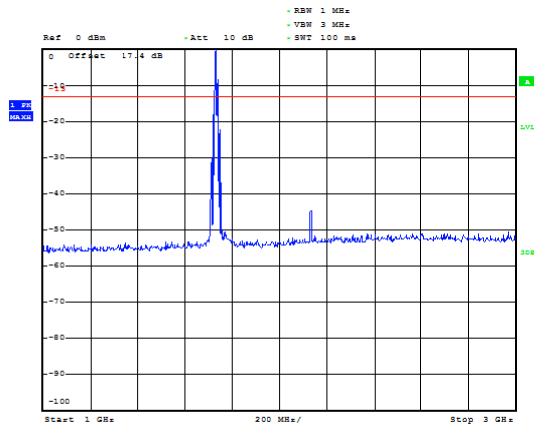
LTE Band 4 10MHz CH-Middle 30MHz~1GHz



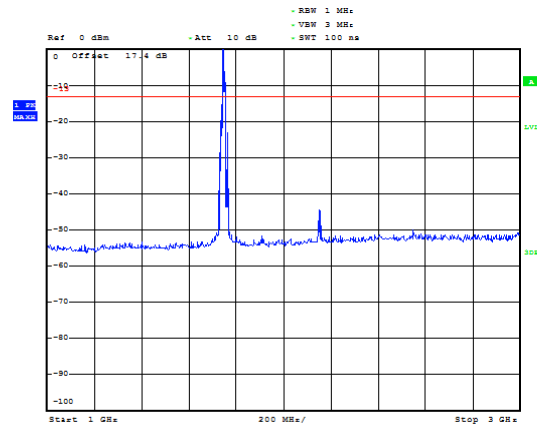
LTE Band 4 10MHz CH-High 30MHz~1GHz



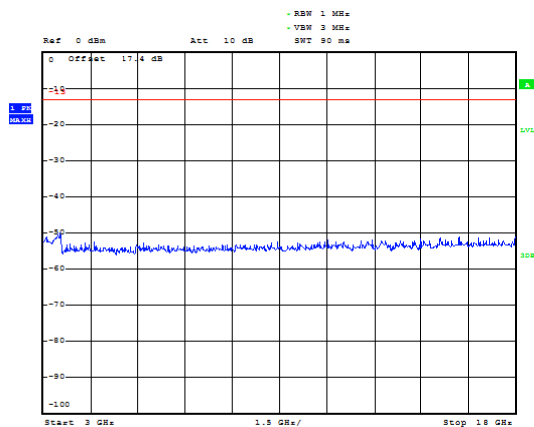
LTE Band 4 10MHz CH-Middle 1GHz~3GHz



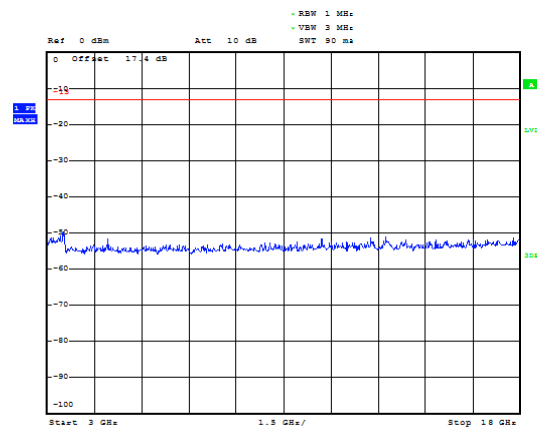
LTE Band 4 10MHz CH-High 1GHz~3GHz



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

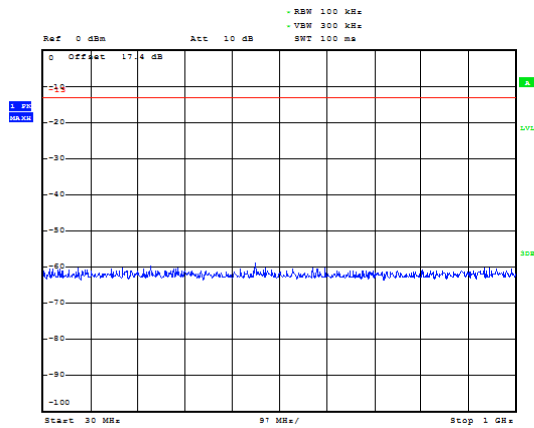


LTE Band 4 10MHz CH-High 3GHz~18GHz

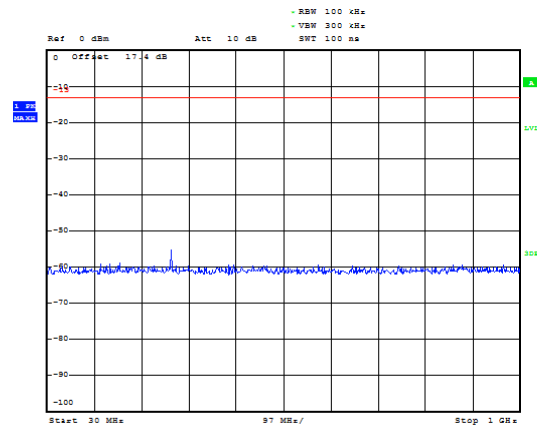




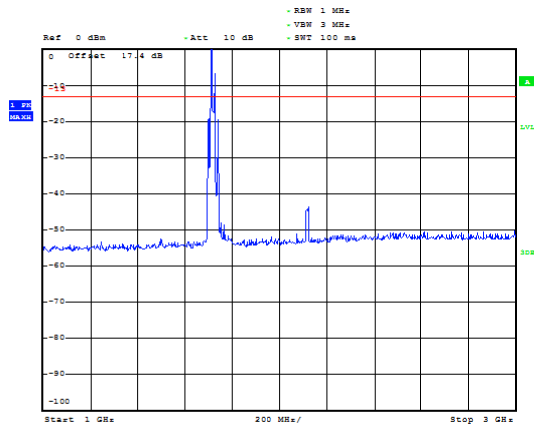
LTE Band 4 15MHz CH-Low 30MHz~1GHz



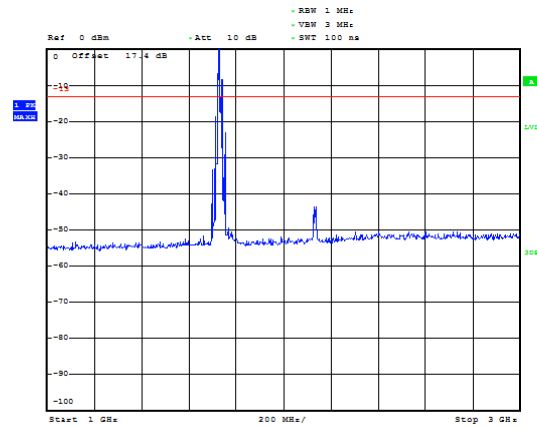
LTE Band 4 15MHz CH-Middle 30MHz~1GHz



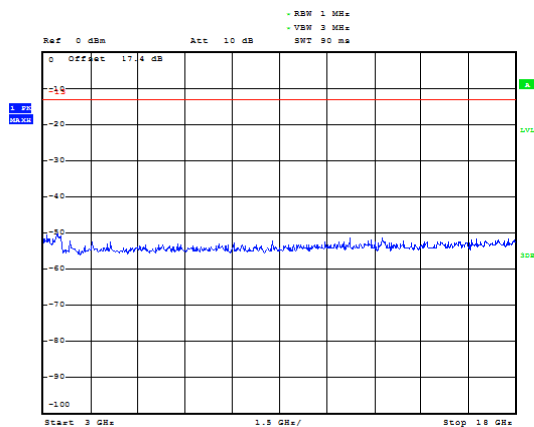
LTE Band 4 15MHz CH-Low 1GHz~3GHz



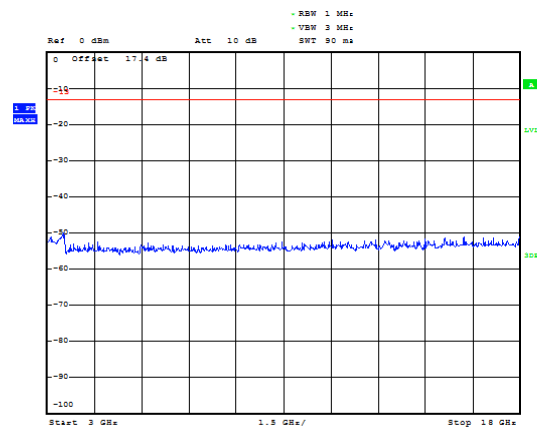
LTE Band 4 15MHz CH-Middle 1GHz~3GHz



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

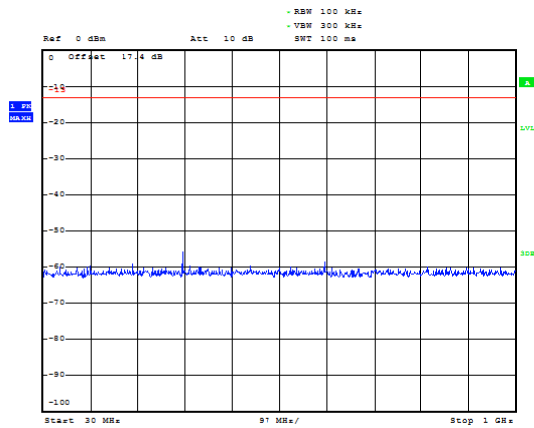


LTE Band 4 15MHz CH-Middle 3GHz~18GHz

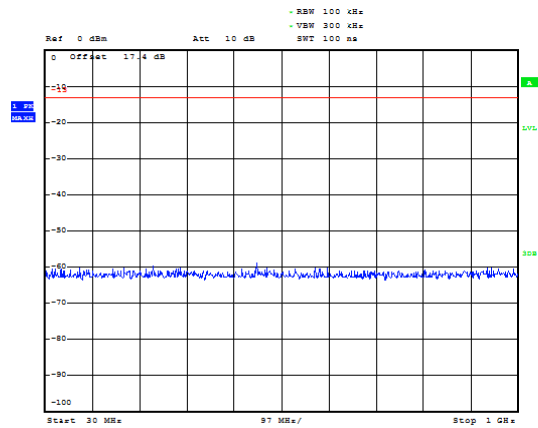




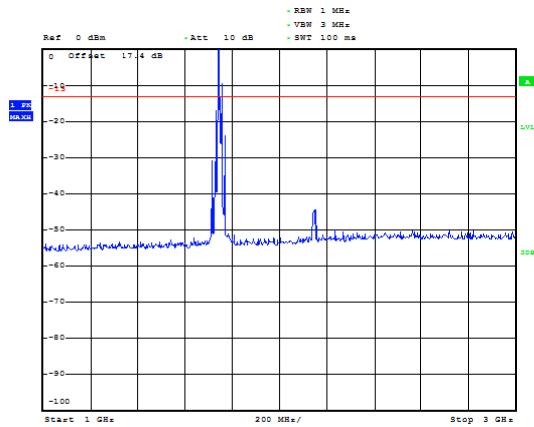
LTE Band 4 15MHz CH-High 30MHz~1GHz



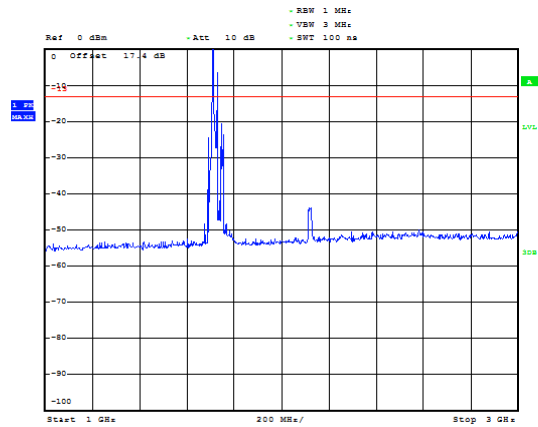
LTE Band 4 20MHz CH-Low 30MHz~1GHz



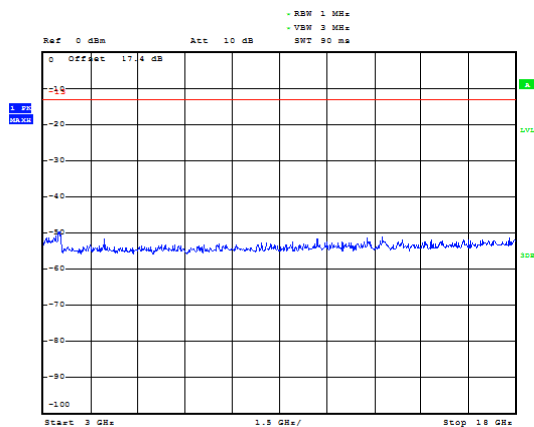
LTE Band 4 15MHz CH-High 1GHz~3GHz



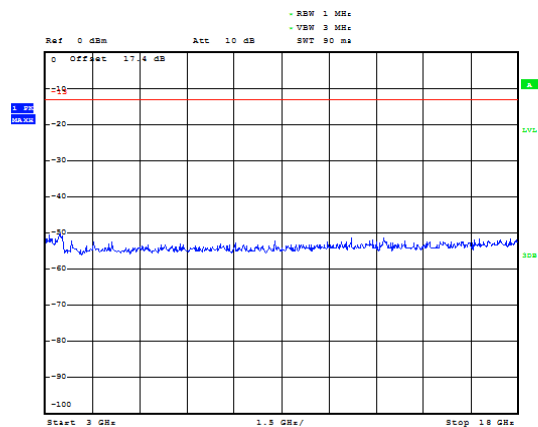
LTE Band 4 20MHz CH-Low 1GHz~3GHz



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

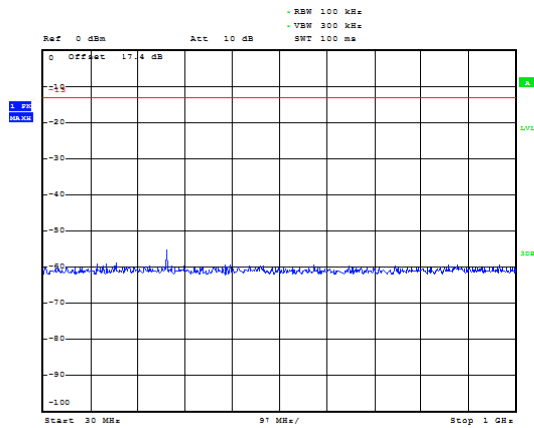


LTE Band 4 20MHz CH-Low 3GHz~18GHz

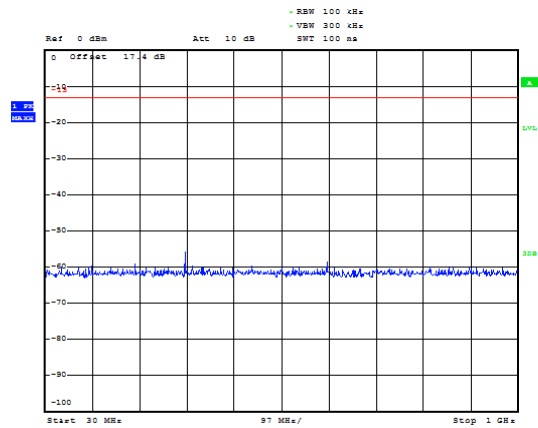




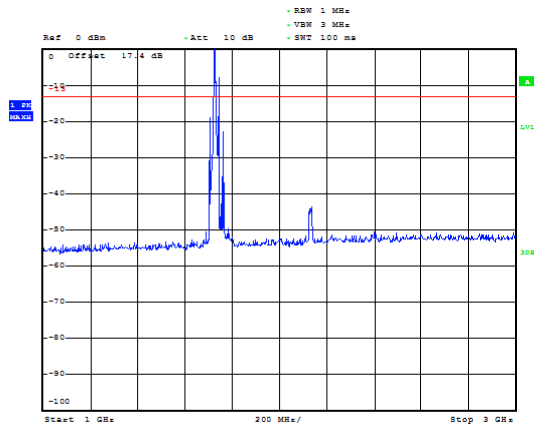
LTE Band 4 20MHz CH-Middle 30MHz~1GHz



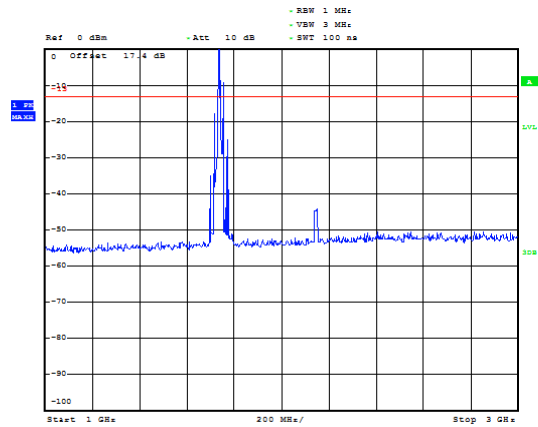
LTE Band 4 20MHz CH-High 30MHz~1GHz



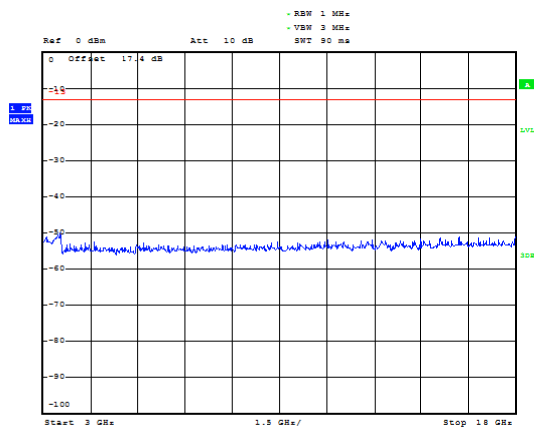
LTE Band 4 20MHz CH-Middle 1GHz~3GHz



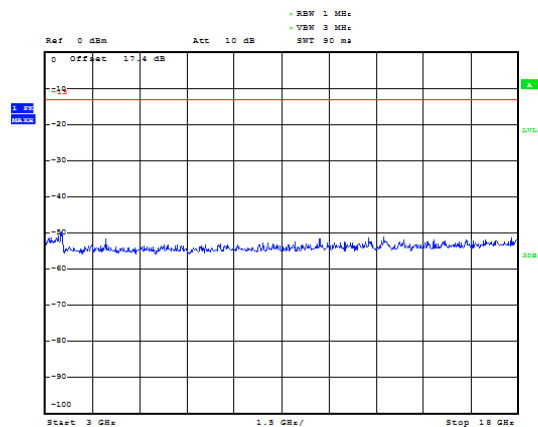
LTE Band 4 20MHz CH-High 1GHz~3GHz



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

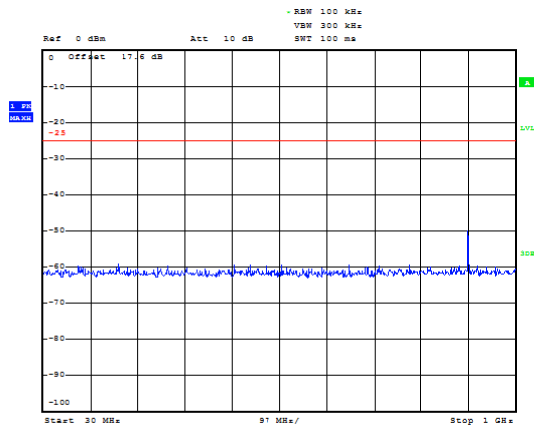


LTE Band 4 20MHz CH-High 3GHz~18GHz

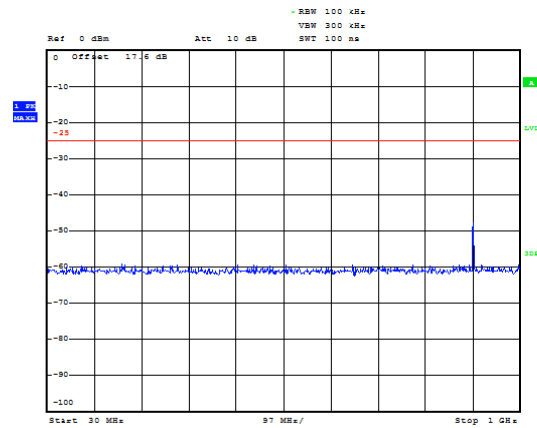




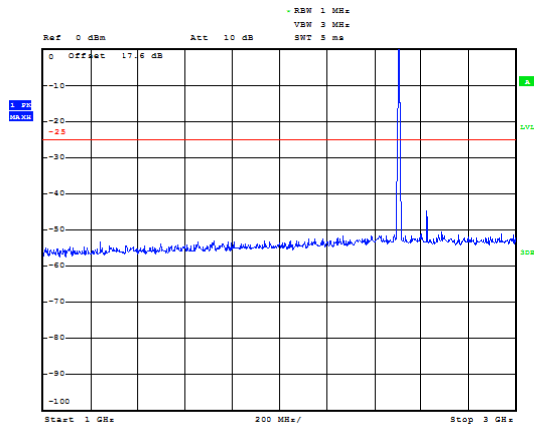
LTE Band 7 5MHz CH-Low 30MHz~1GHz



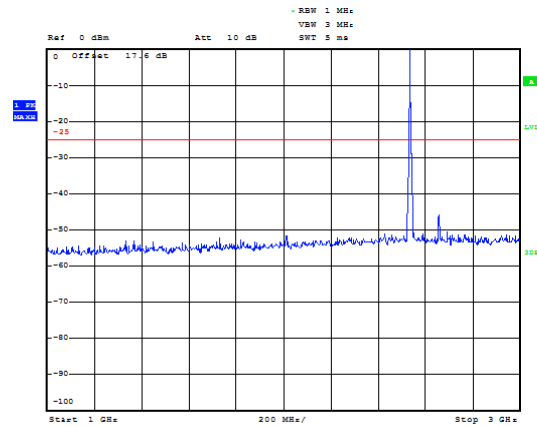
LTE Band 7 5MHz CH-Middle 30MHz~1GHz



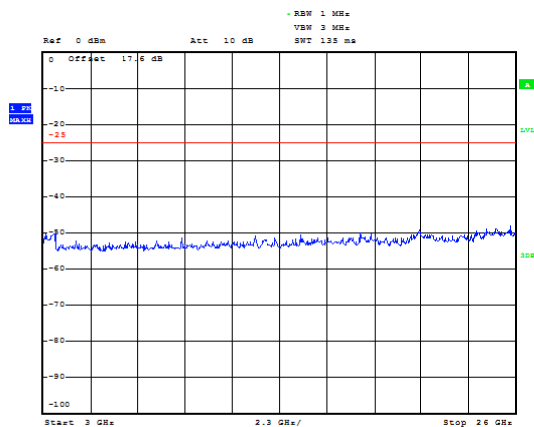
LTE Band 7 5MHz CH-Low 1GHz~3GHz



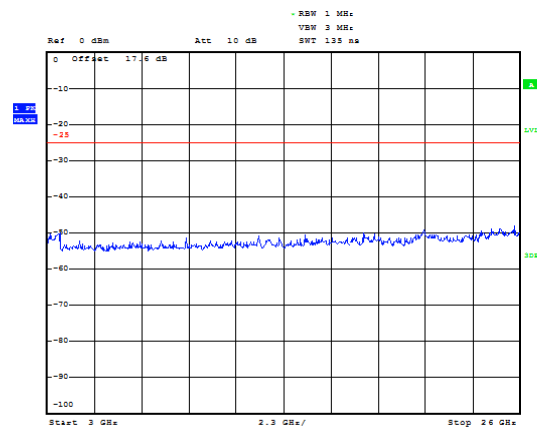
LTE Band 7 5MHz CH-Middle 1GHz~3GHz



LTE Band 7 5MHz CH-Low 3GHz~26GHz

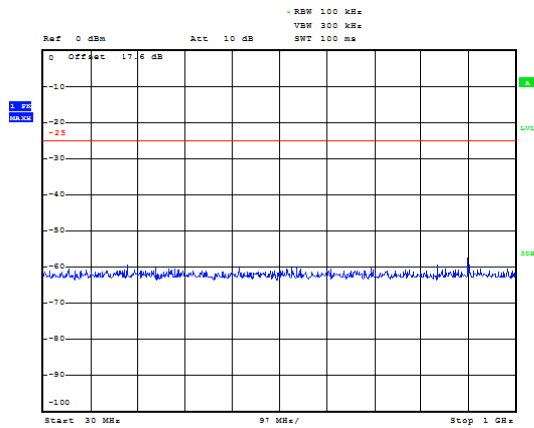


LTE Band 7 5MHz CH-Middle 3GHz~26GHz

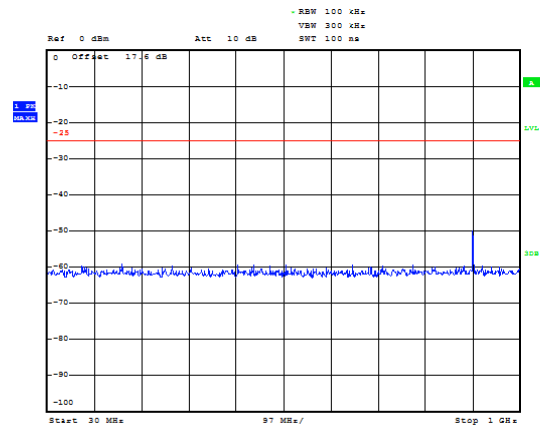




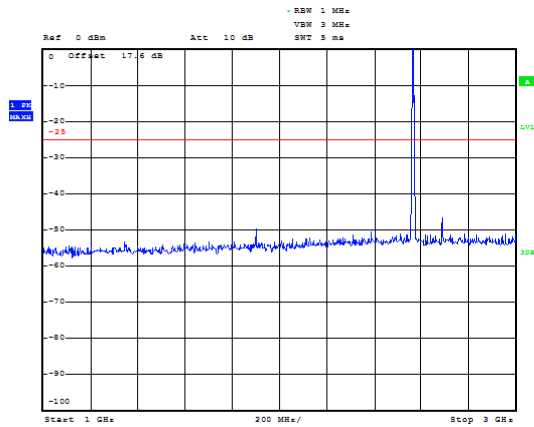
LTE Band 7 5MHz CH-High 30MHz~1GHz



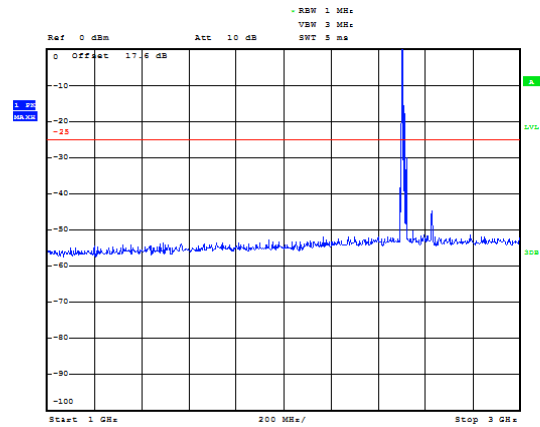
LTE Band 7 10MHz CH-Low 30MHz~1GHz



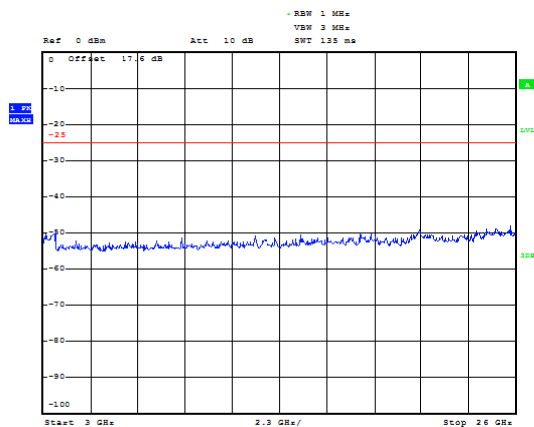
LTE Band 7 5MHz CH-High 1GHz~3GHz



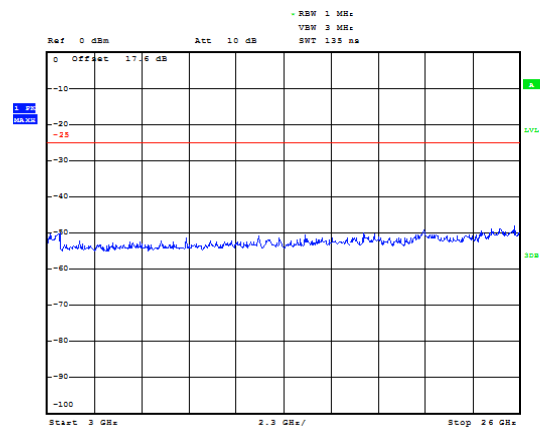
LTE Band 7 10MHz CH-Low 1GHz~3GHz



LTE Band 7 5MHz CH-High 3GHz~26GHz

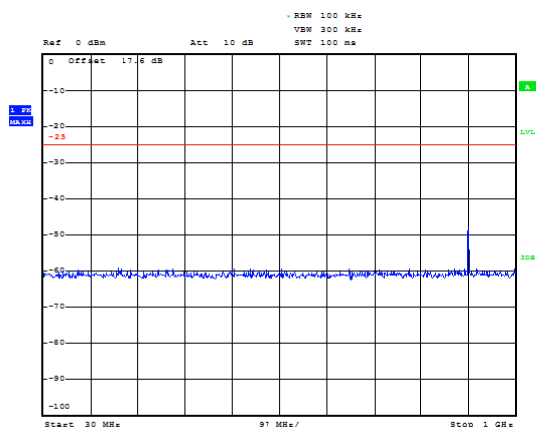


LTE Band 7 10MHz CH-Low 3GHz~26GHz

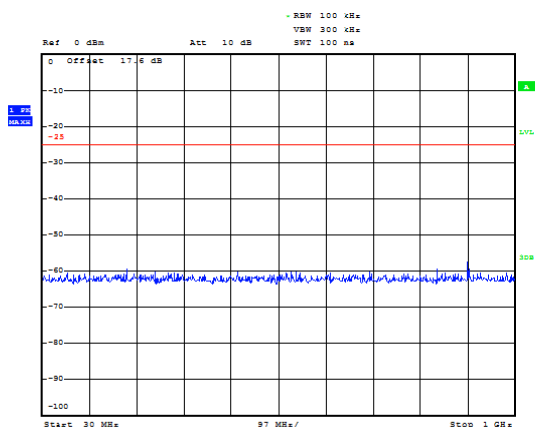




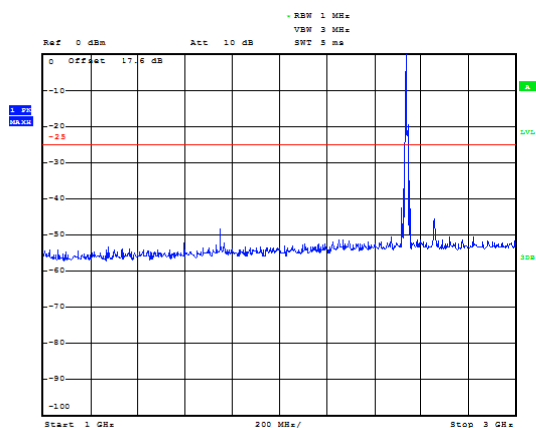
LTE Band 7 10MHz CH-Middle 30MHz~1GHz



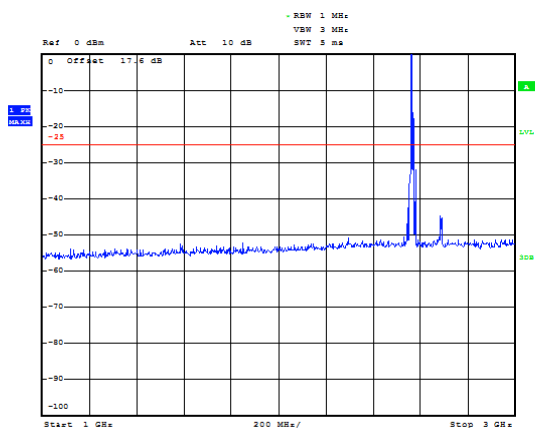
LTE Band 7 10MHz CH-High 30MHz~1GHz



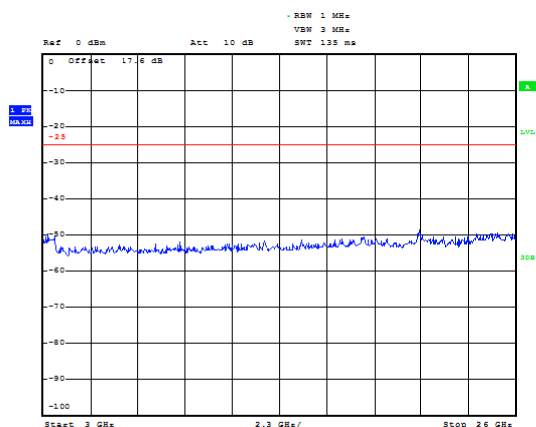
LTE Band 7 10MHz CH-Middle 1GHz~3GHz



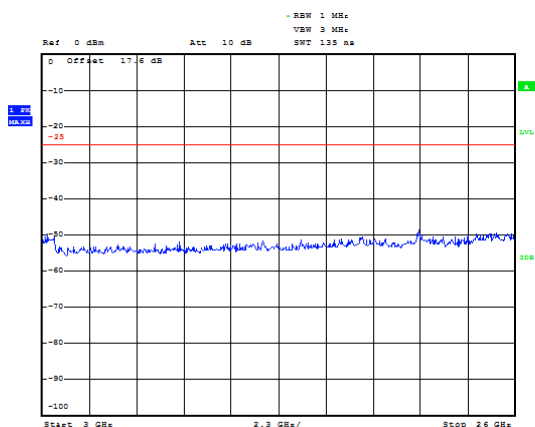
LTE Band 7 10MHz CH-High 1GHz~3GHz



LTE Band 7 10MHz CH-Middle 3GHz~26GHz

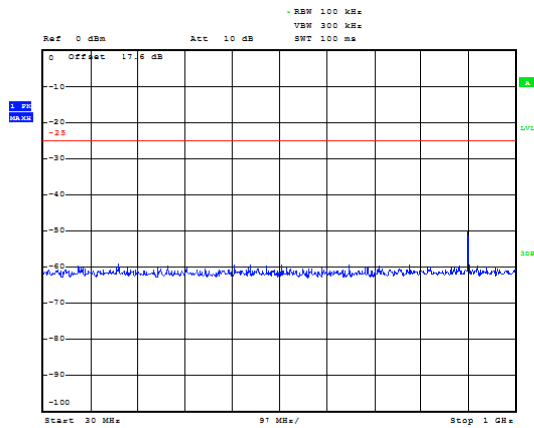


LTE Band 7 10MHz CH-High 3GHz~26GHz

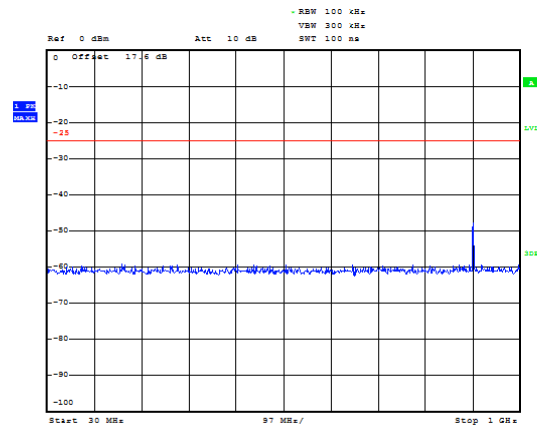




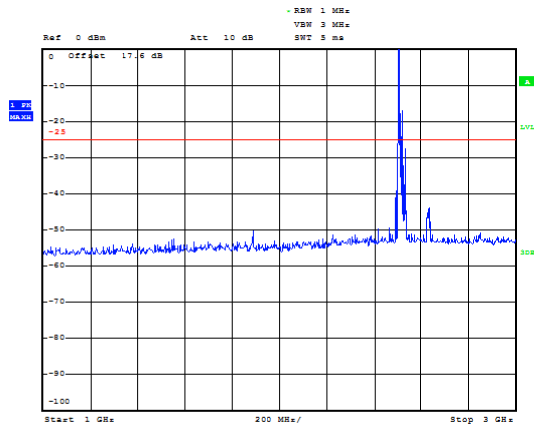
LTE Band 7 15MHz CH-Low 30MHz~1GHz



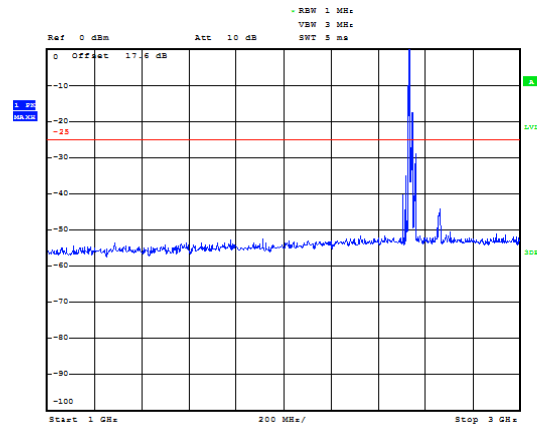
LTE Band 7 15MHz CH-Middle 30MHz~1GHz



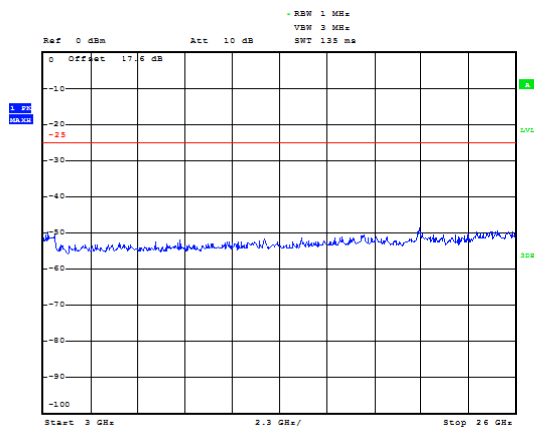
LTE Band 7 15MHz CH-Low 1GHz~3GHz



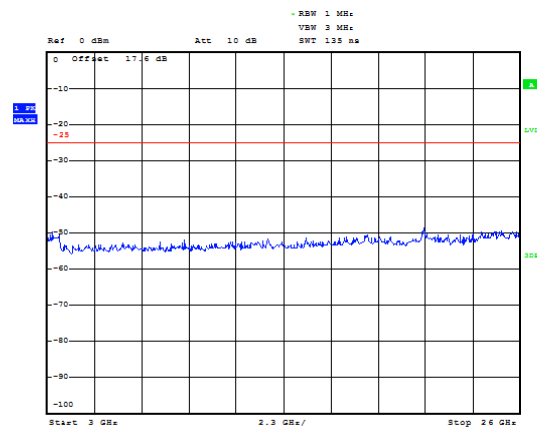
LTE Band 7 15MHz CH-Middle 1GHz~3GHz



LTE Band 7 15MHz CH-Low 3GHz~26GHz

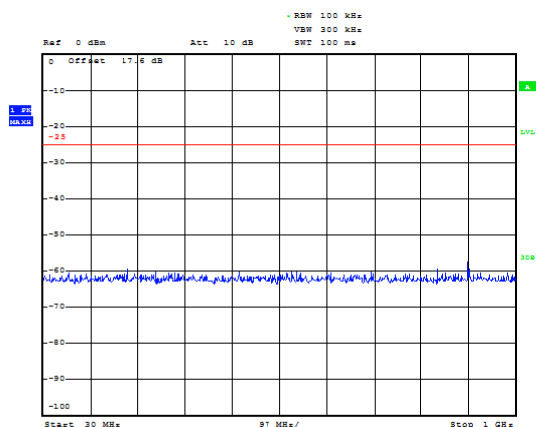


LTE Band 7 15MHz CH-Middle 3GHz~26GHz

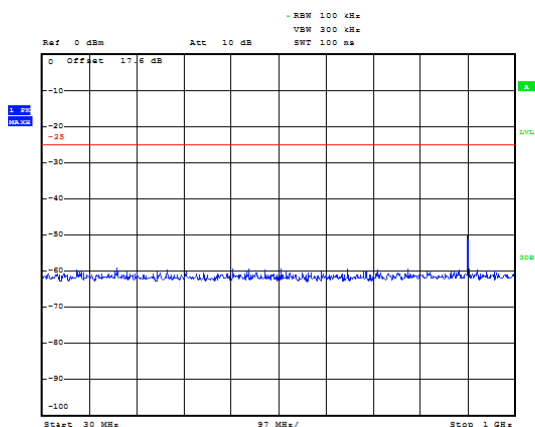




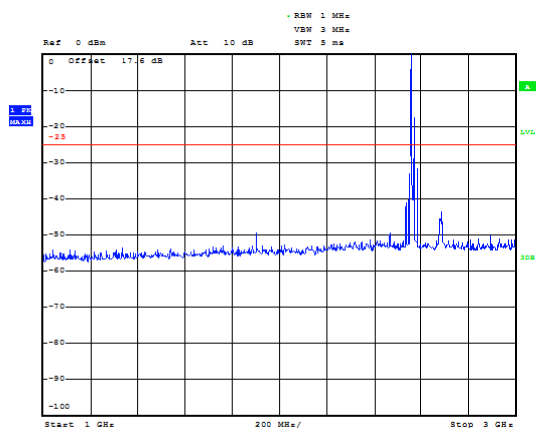
LTE Band 7 15MHz CH-High 30MHz~1GHz



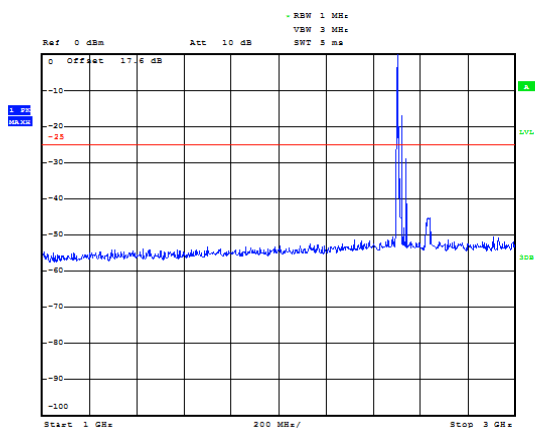
LTE Band 7 20MHz CH-Low 30MHz~1GHz



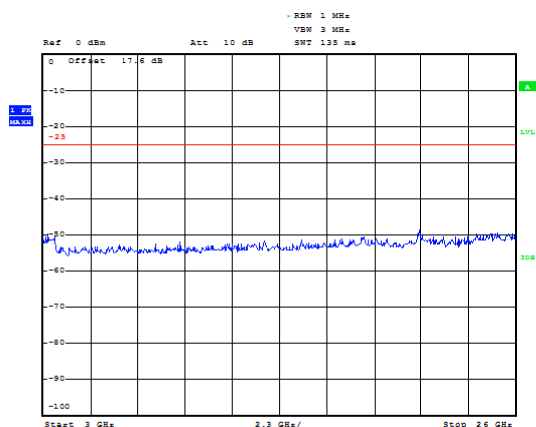
LTE Band 7 15MHz CH-High 1GHz~3GHz



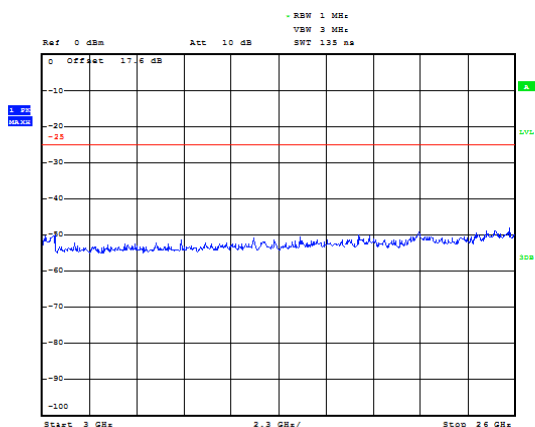
LTE Band 7 20MHz CH-Low 1GHz~3GHz



LTE Band 7 15MHz CH-High 3GHz~26GHz

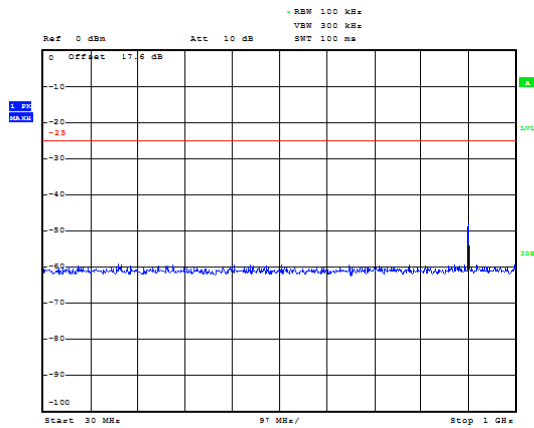


LTE Band 7 20MHz CH-Low 3GHz~26GHz

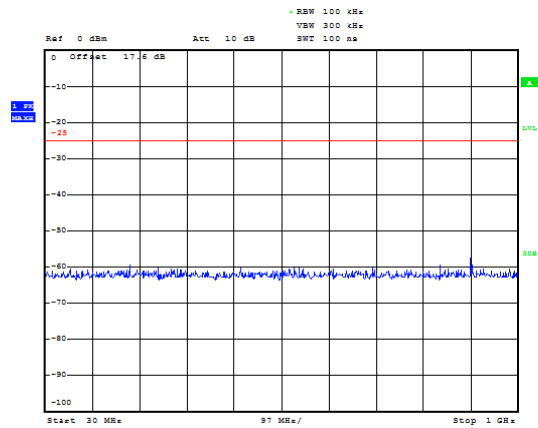




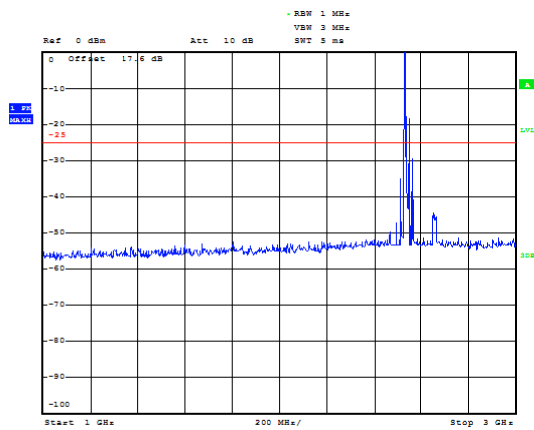
LTE Band 7 20MHz CH-Middle 30MHz~1GHz



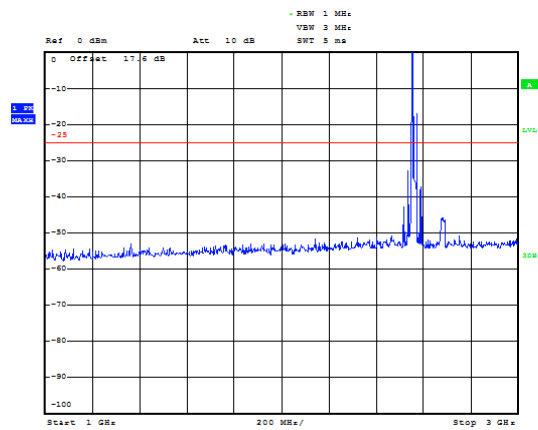
LTE Band 7 20MHz CH-High 30MHz~1GHz



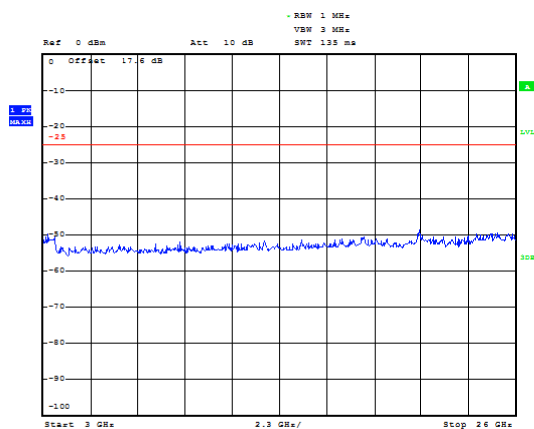
LTE Band 7 20MHz CH-Middle 1GHz~3GHz



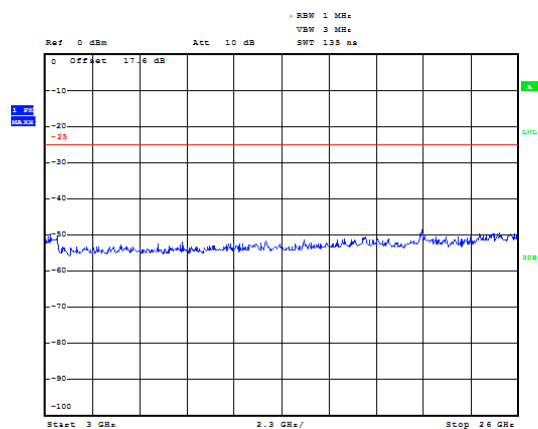
LTE Band 7 20MHz CH-High 1GHz~3GHz



LTE Band 7 20MHz CH-Middle 3GHz~26GHz

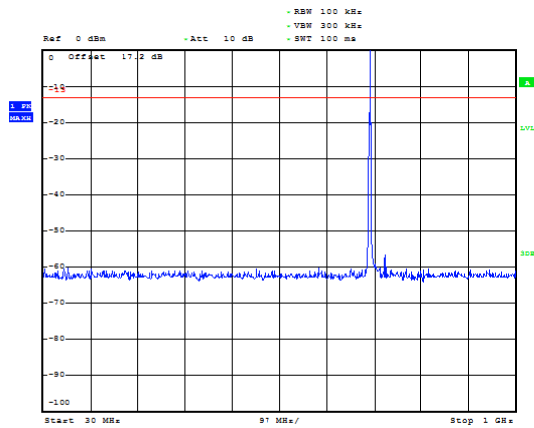


LTE Band 7 20MHz CH-High 3GHz~26GHz

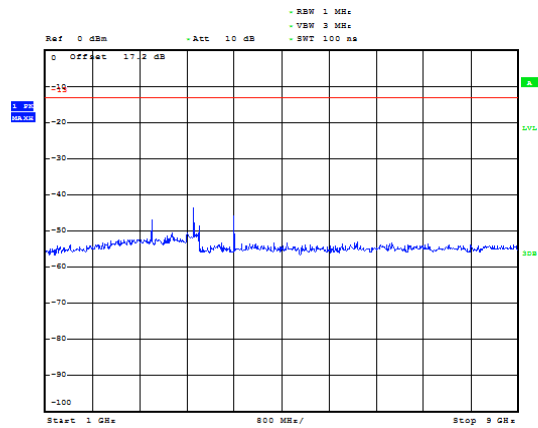




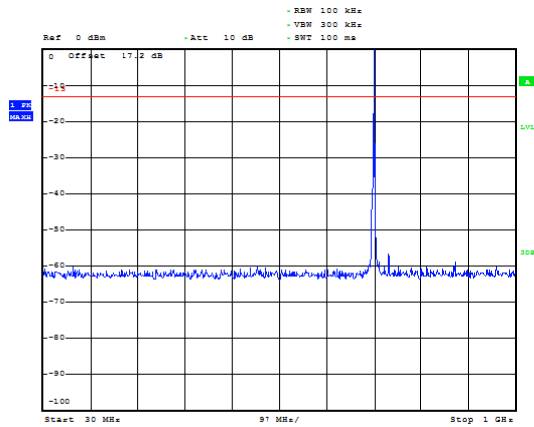
LTE Band 12 1.4MHz CH-Low 30MHz~1GHz



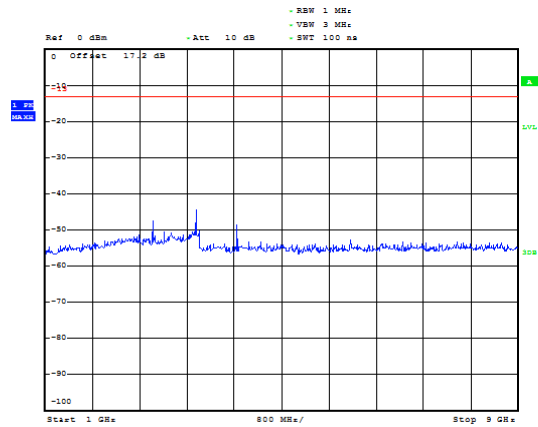
LTE Band 12 1.4MHz CH-Low 1GHz~9GHz



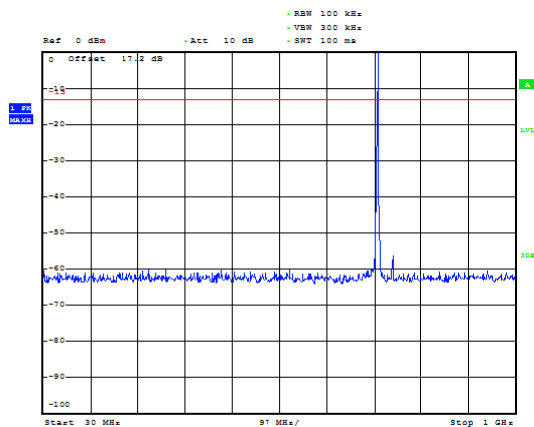
LTE Band 12 1.4MHz CH- Middle 30MHz~1GHz



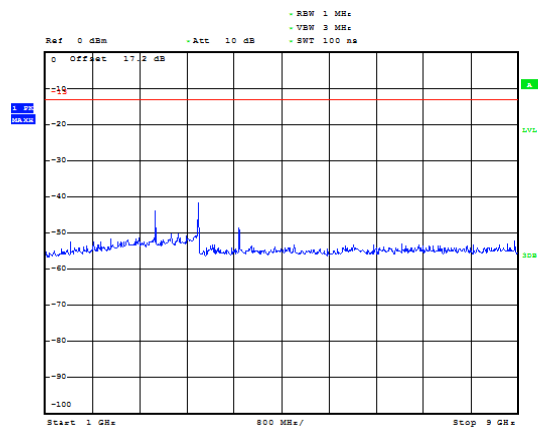
LTE Band 12 1.4MHz CH- Middle 1GHz~9GHz



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

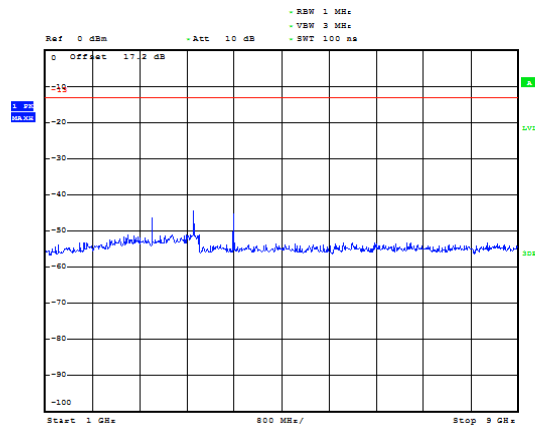
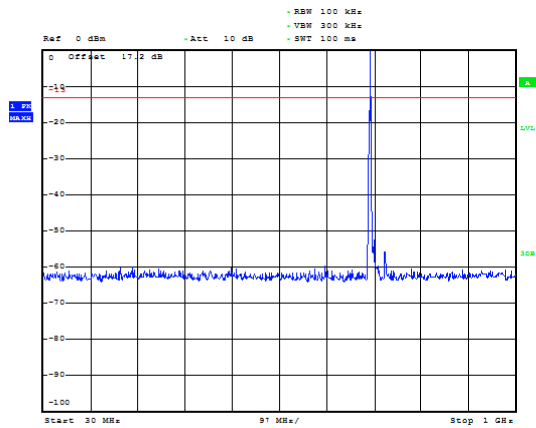


LTE Band 12 1.4MHz CH-High 1GHz~9GHz

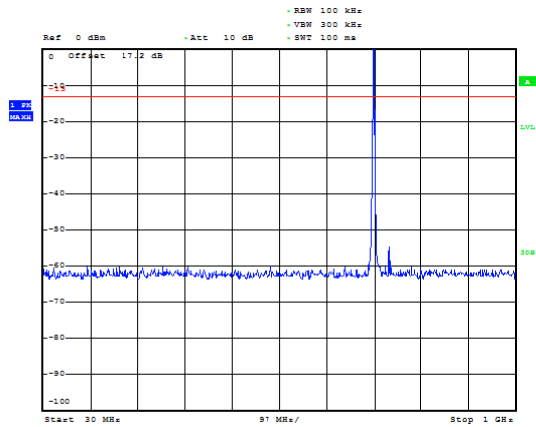


LTE Band 12 3MHz CH-Low 30MHz~1GHz

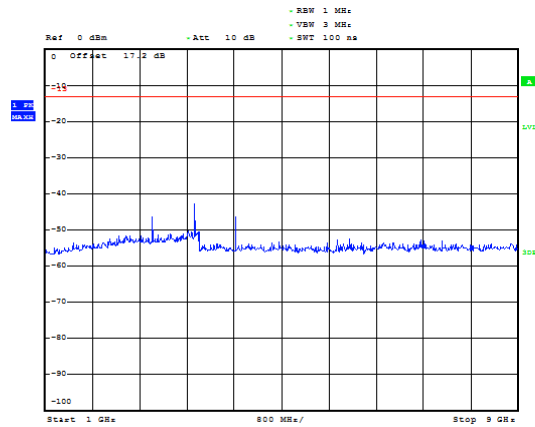
LTE Band 12 3MHz CH-Low 1GHz~9GHz



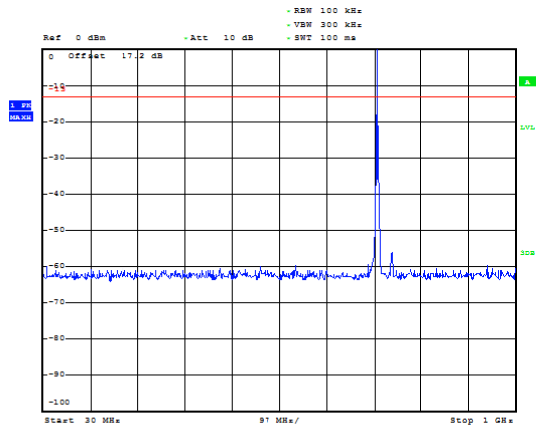
LTE Band 12 3MHz CH- Middle 30MHz~1GHz



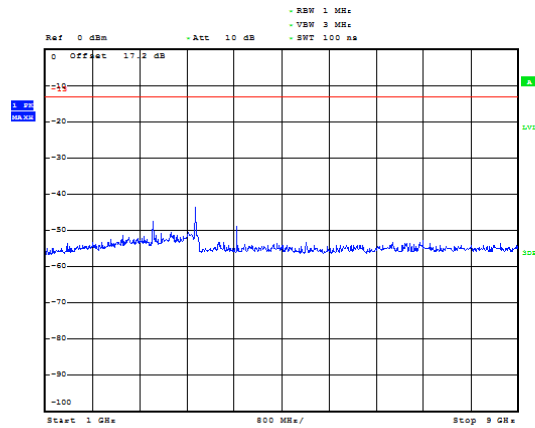
LTE Band 12 3MHz CH- Middle 1GHz~9GHz



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

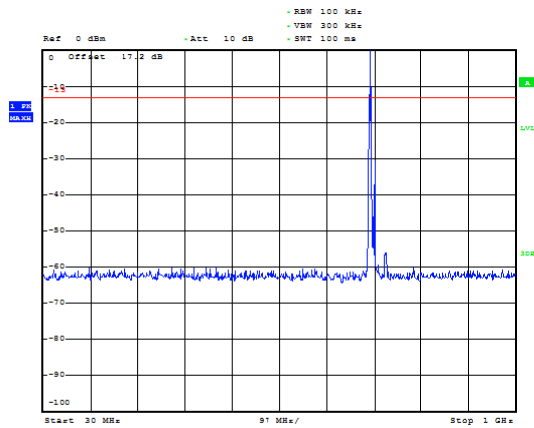


LTE Band 12 3MHz CH-High 1GHz~9GHz

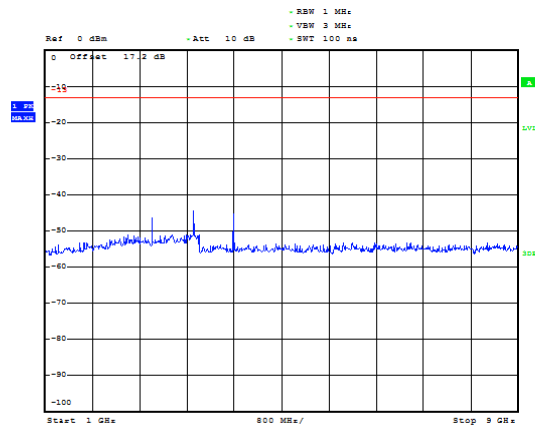




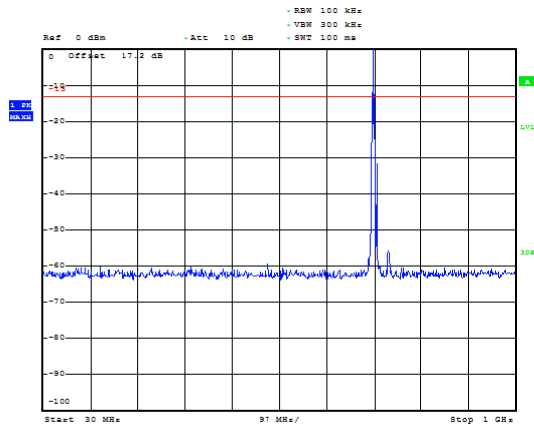
LTE Band 12 5MHz CH-Low 30MHz~1GHz



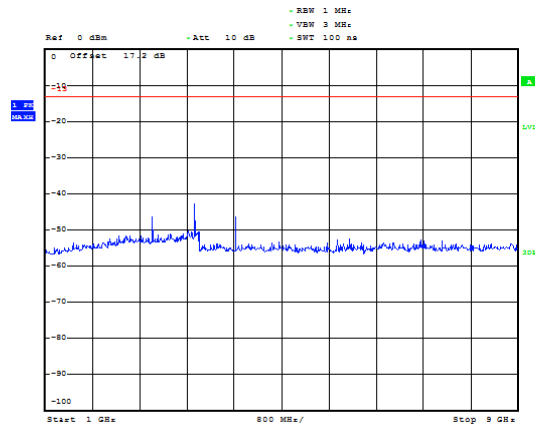
LTE Band 12 5MHz CH-Low 1GHz~9GHz



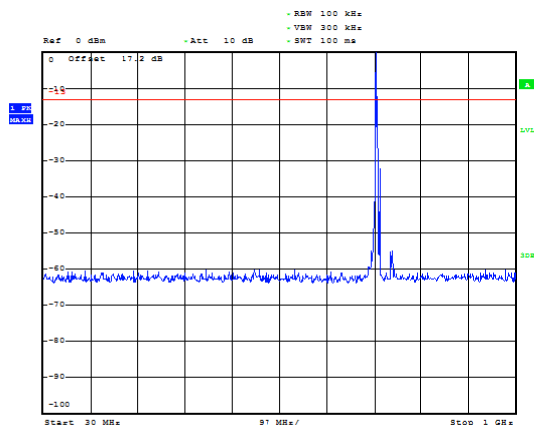
LTE Band 12 5MHz CH- Middle 30MHz~1GHz



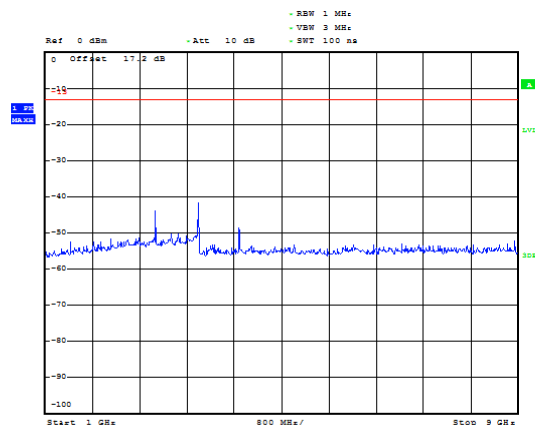
LTE Band 12 5MHz CH- Middle 1GHz~9GHz



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

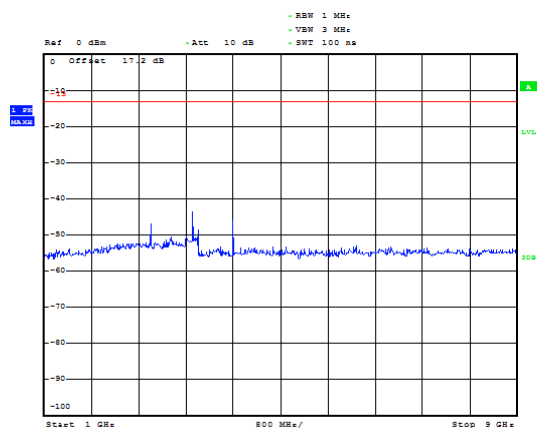
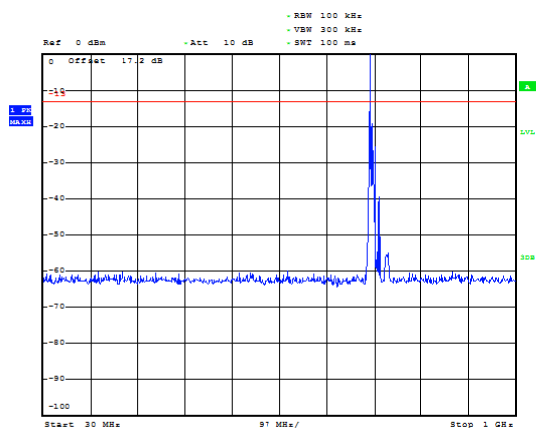


LTE Band 12 5MHz CH-High 1GHz~9GHz

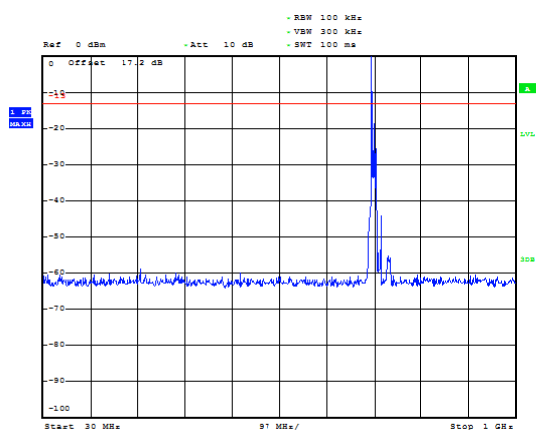


LTE Band 12 10MHz CH-Low 30MHz~1GHz

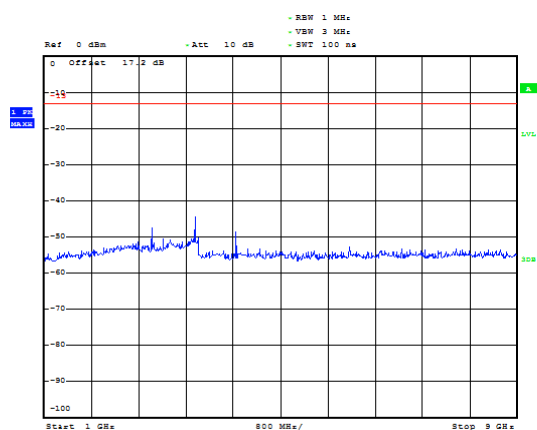
LTE Band 12 10MHz CH-Low 1GHz~9GHz



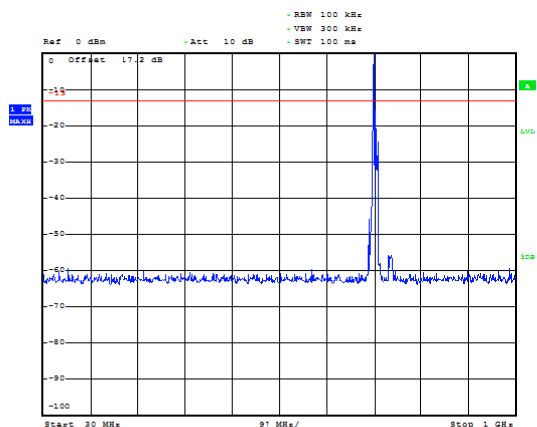
LTE Band 12 10MHz CH- Middle 30MHz~1GHz



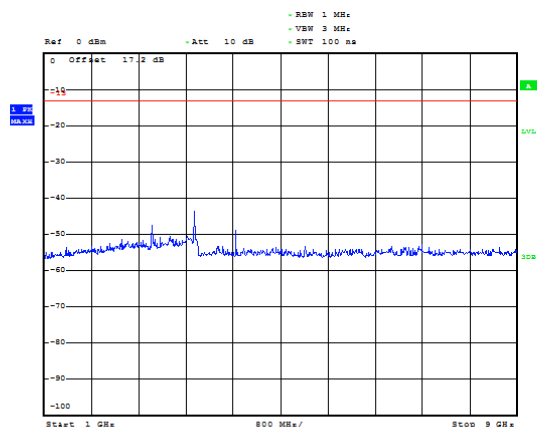
LTE Band 12 10MHz CH- Middle 1GHz~9GHz



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

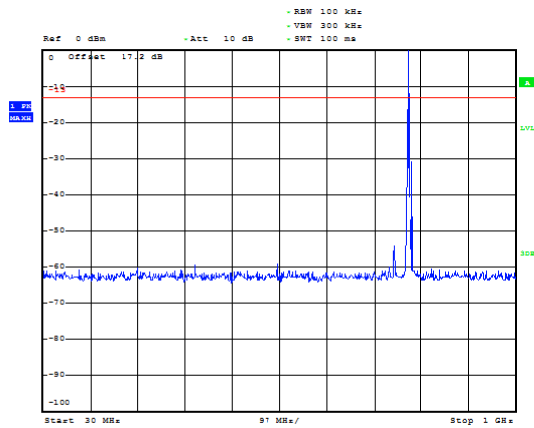


LTE Band 12 10MHz CH-High 1GHz~9GHz

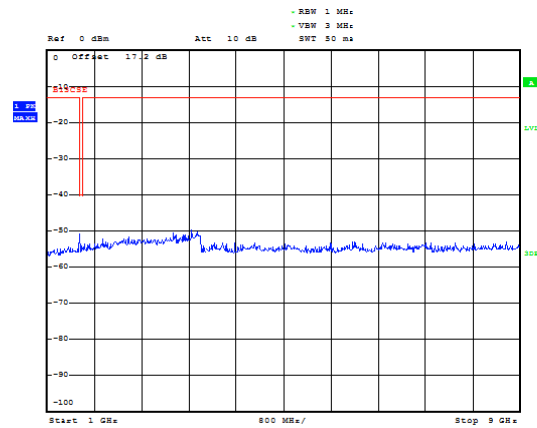




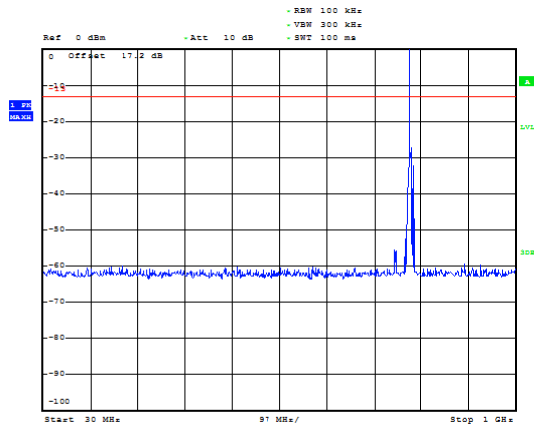
LTE Band 13 5MHz CH-Low 30MHz~1GHz



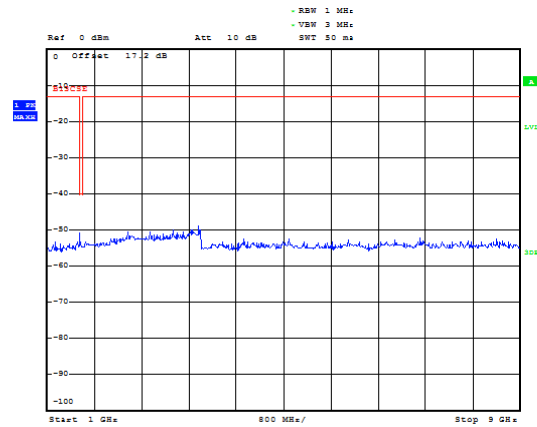
LTE Band 13 5MHz CH-Low 1GHz~9GHz



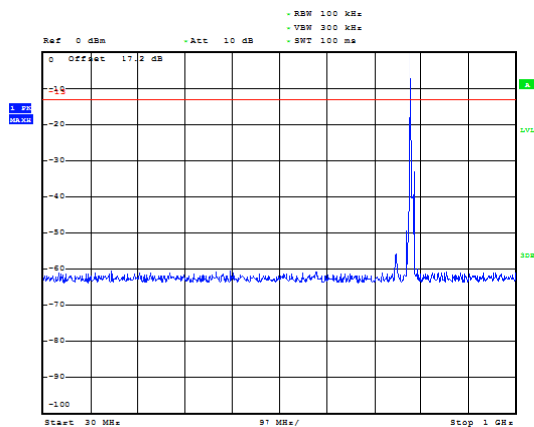
LTE Band 13 5MHz CH-Middle 30MHz~1GHz



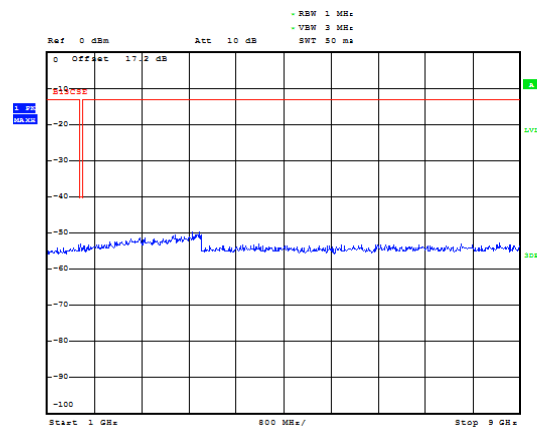
LTE Band 13 5MHz CH-Middle 1GHz~9GHz



LTE Band 13 5MHz CH-High 30MHz~1GHz

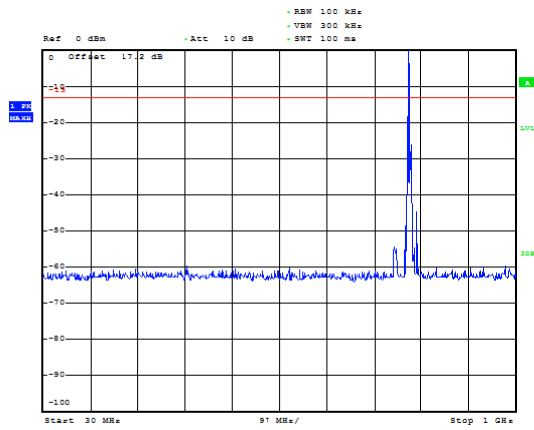


LTE Band 13 5MHz CH-High 1GHz~9GHz

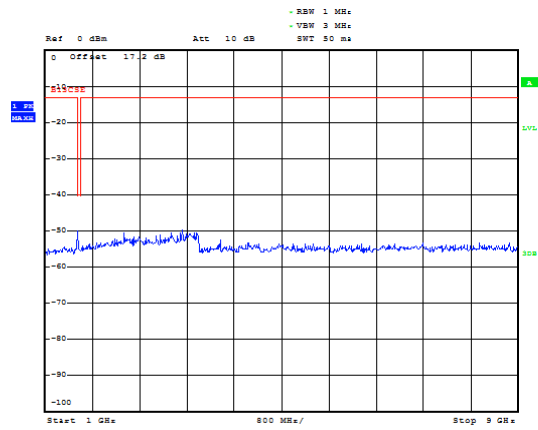




LTE Band 13 10MHz CH-Middle 30MHz~1GHz

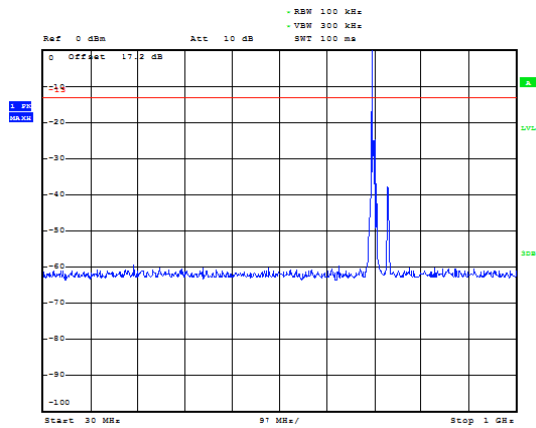


LTE Band 13 10MHz CH-Middle 1GHz~9GHz

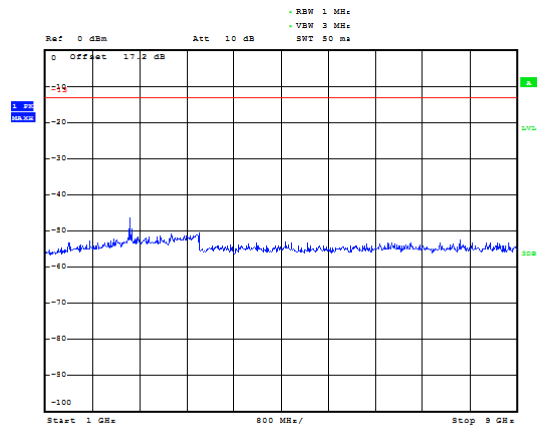




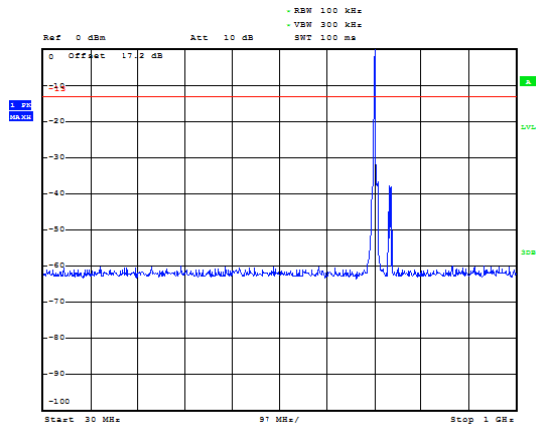
LTE Band 17 5MHz CH-Low 30MHz~1GHz



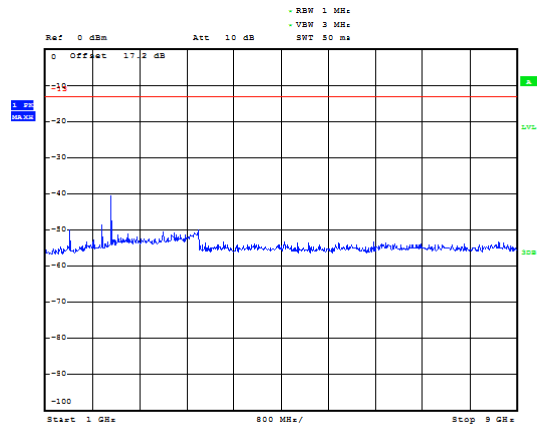
LTE Band 17 5MHz CH-Low 1GHz~9GHz



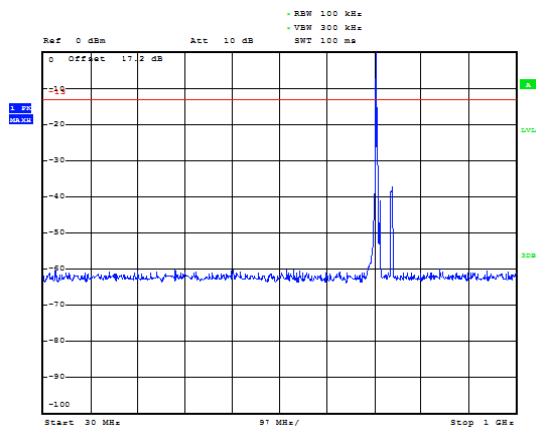
LTE Band 17 5MHz CH-Middle 30MHz~1GHz



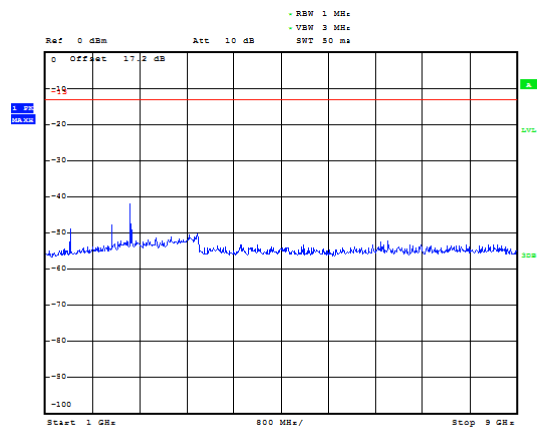
LTE Band 17 5MHz CH-Middle 1GHz~9GHz



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

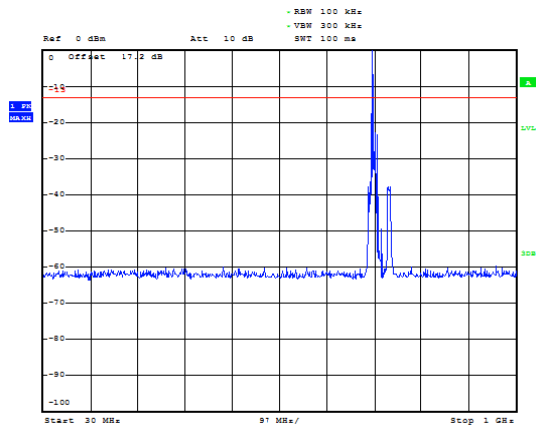


LTE Band 17 5MHz CH-High 1GHz~9GHz

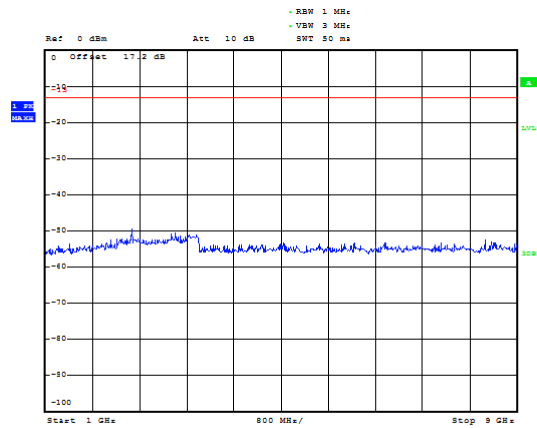




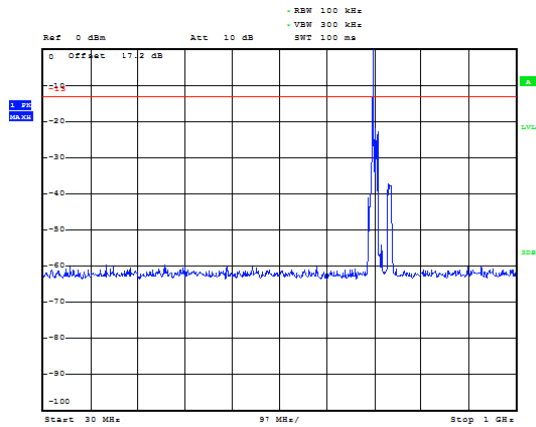
LTE Band 17 10MHz CH-Low 30MHz~1GHz



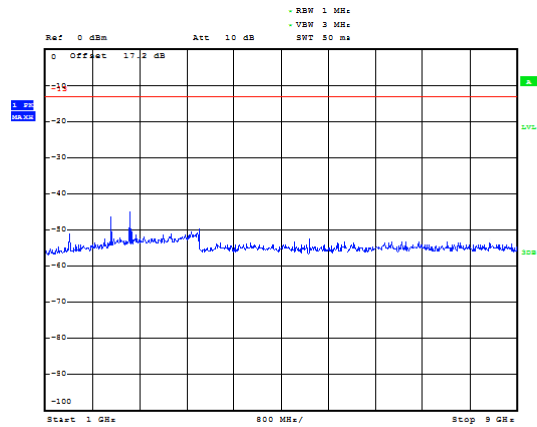
LTE Band 17 10MHz CH-Low 1GHz~9GHz



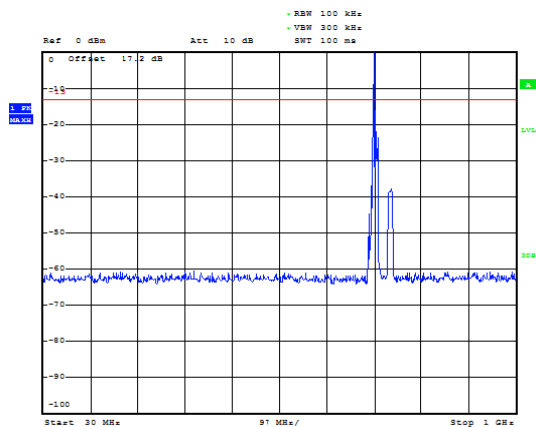
LTE Band 17 10MHz CH-Middle 30MHz~1GHz



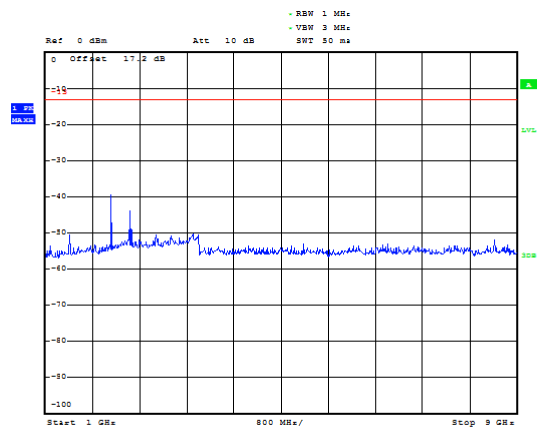
LTE Band 17 10MHz CH-Middle 1GHz~9GHz



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

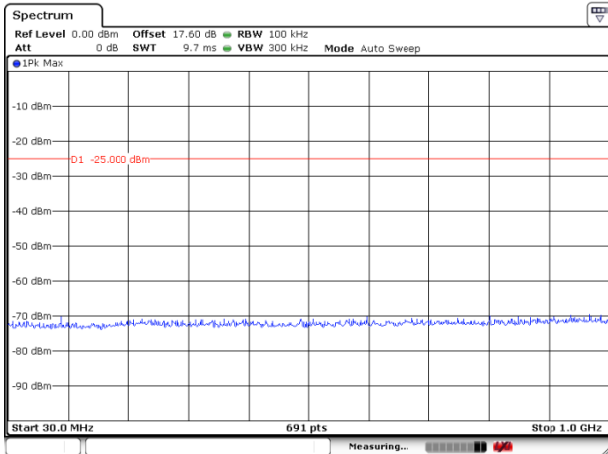


LTE Band 17 10MHz CH-High 1GHz~9GHz

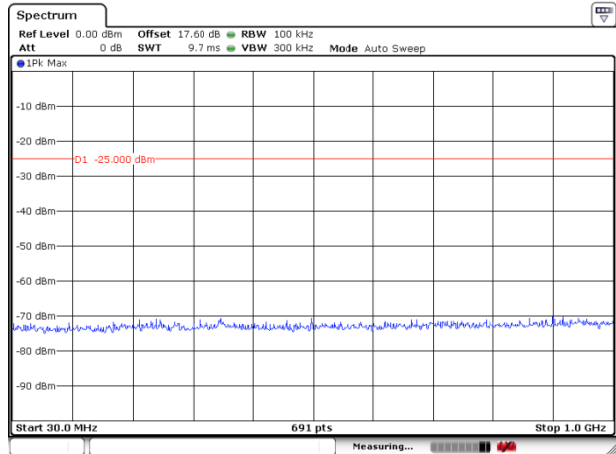




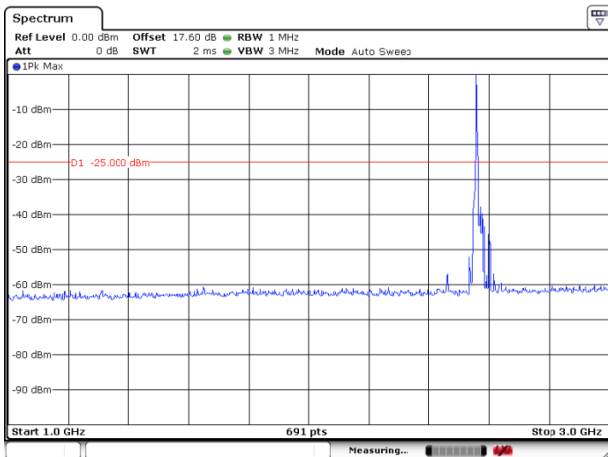
LTE Band 41 5MHz CH-Low 30MHz~1GHz



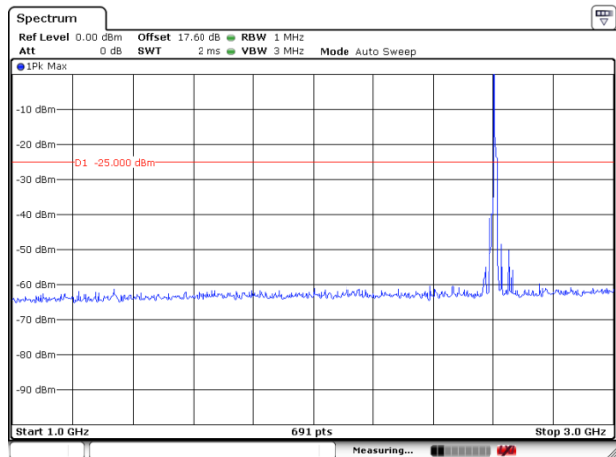
LTE Band 41 5MHz CH-Middle 30MHz~1GHz



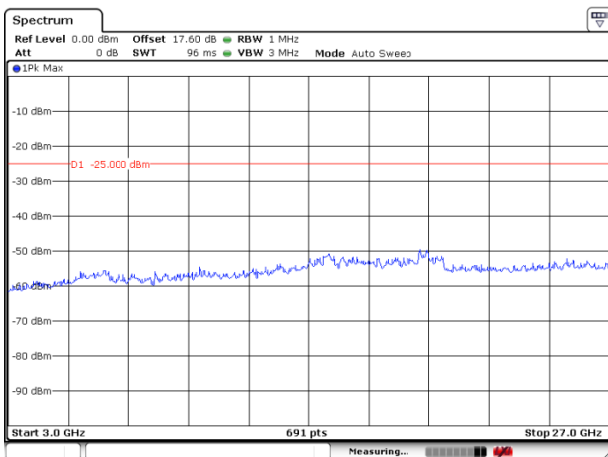
LTE Band 41 5MHz CH427235 1GHz~3GHz



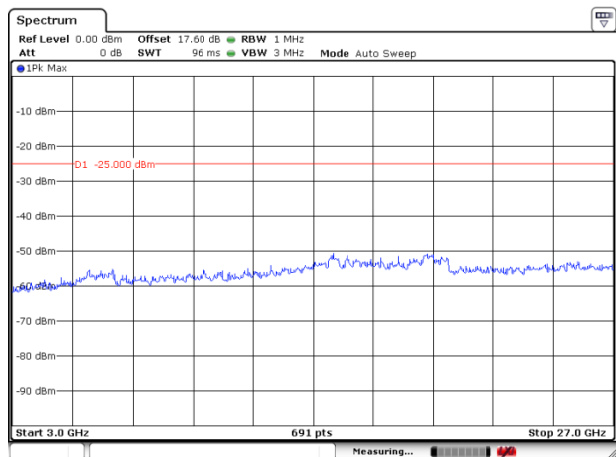
LTE Band 41 5MHz CH-Middle 1GHz~3GHz



LTE Band 41 5MHz CH-Low 3GHz~27GHz

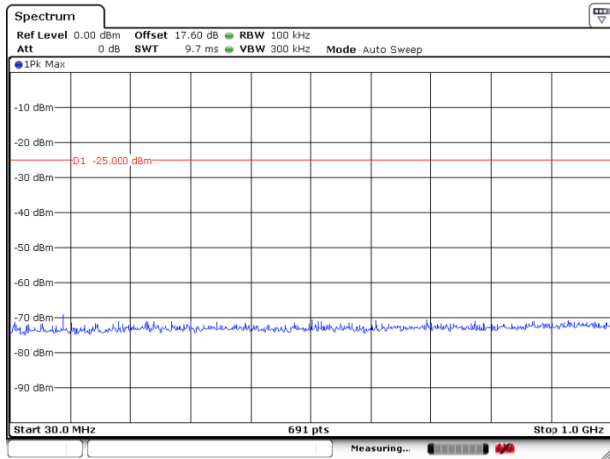


LTE Band 41 5MHz CH-Middle 3GHz~27GHz

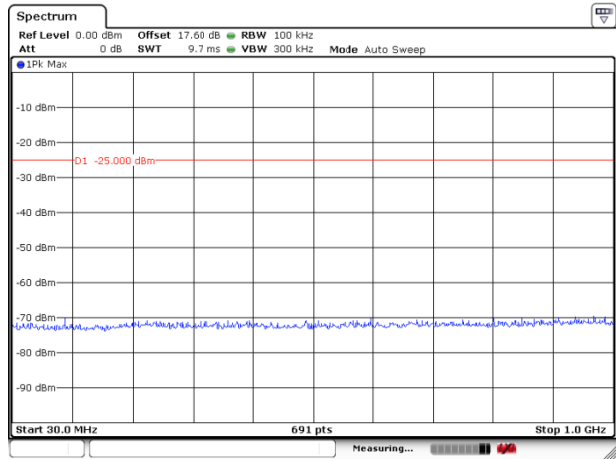




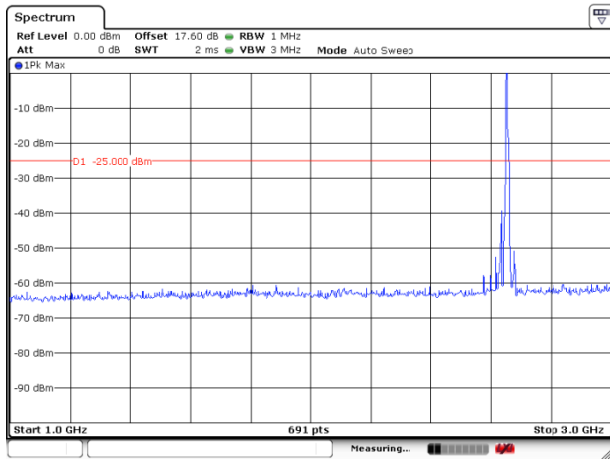
LTE Band 41 5MHz CH-High 30MHz~1GHz



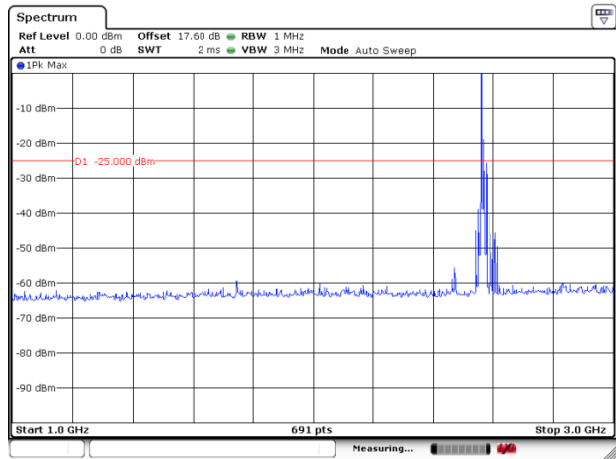
LTE Band 41 10MHz CH-Low 30MHz~1GHz



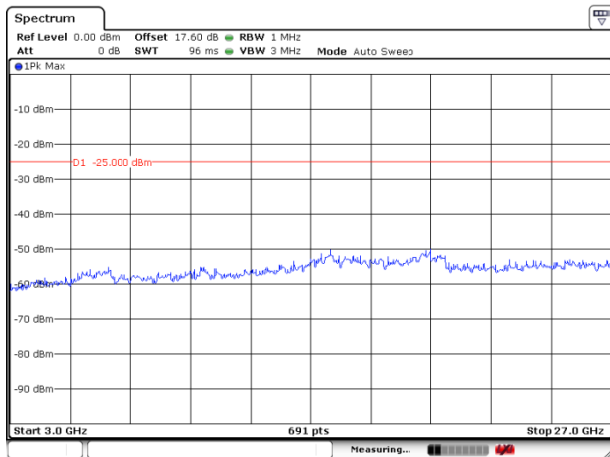
LTE Band 41 5MHz CH-High 1GHz~3GHz



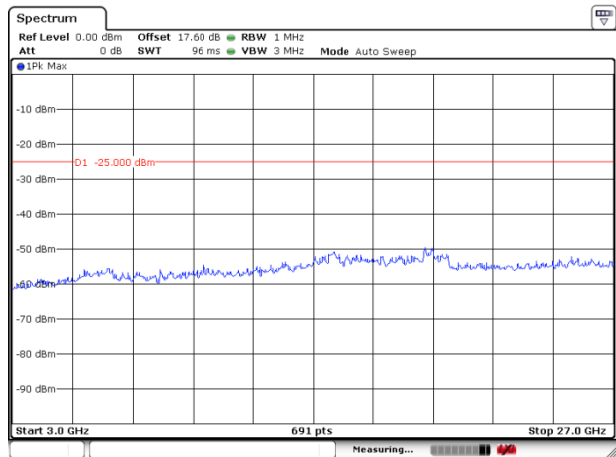
LTE Band 41 10MHz CH-Low 1GHz~3GHz



LTE Band 41 5MHz CH-High 3GHz~27GHz

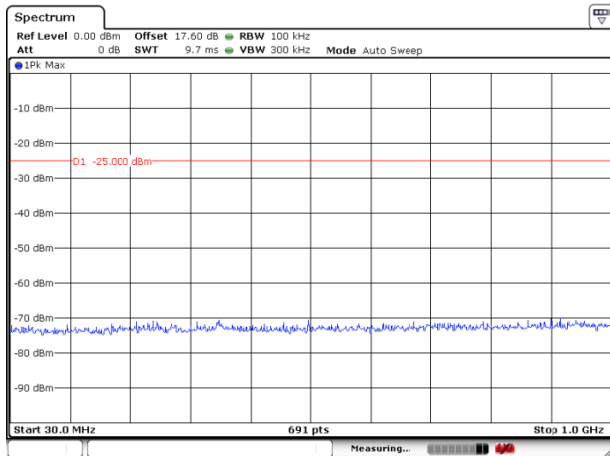


LTE Band 41 10MHz CH-Low 3GHz~27GHz

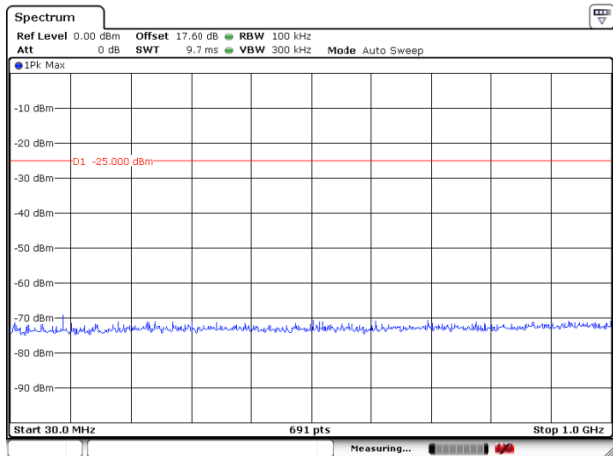




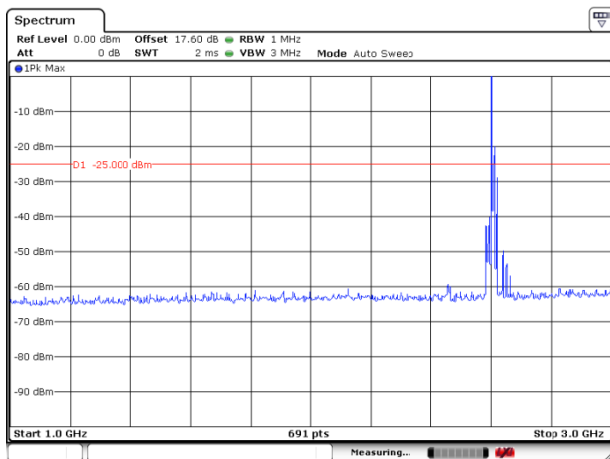
LTE Band 41 10MHz CH-Middle 30MHz~1GHz



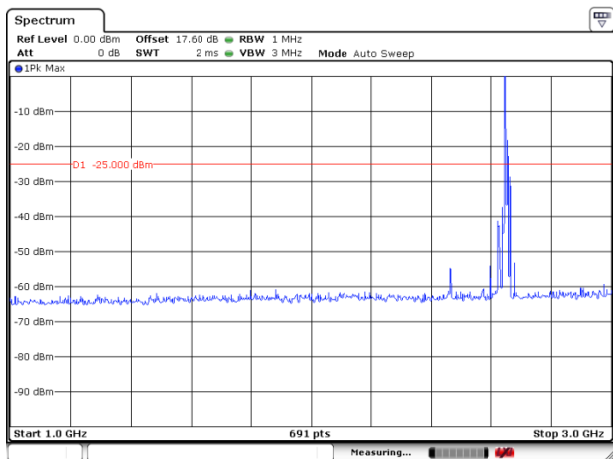
LTE Band 41 10MHz CH-High 30MHz~1GHz



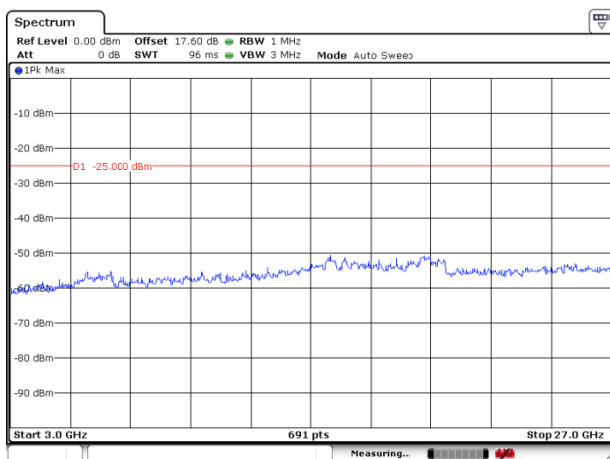
LTE Band 41 10MHz CH-Middle 1GHz~3GHz



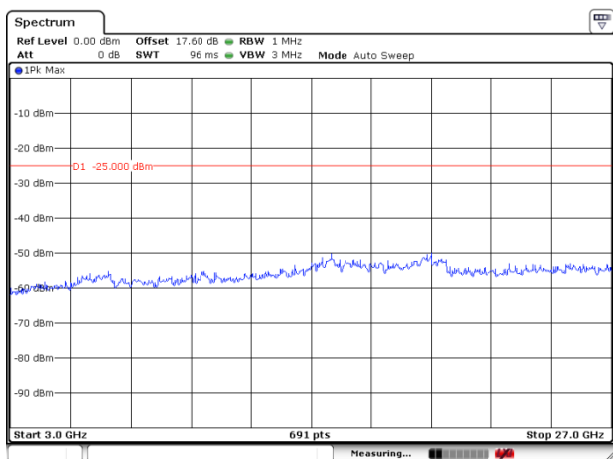
LTE Band 41 10MHz CH-High 1GHz~3GHz



LTE Band 41 10MHz CH-Middle 3GHz~27GHz

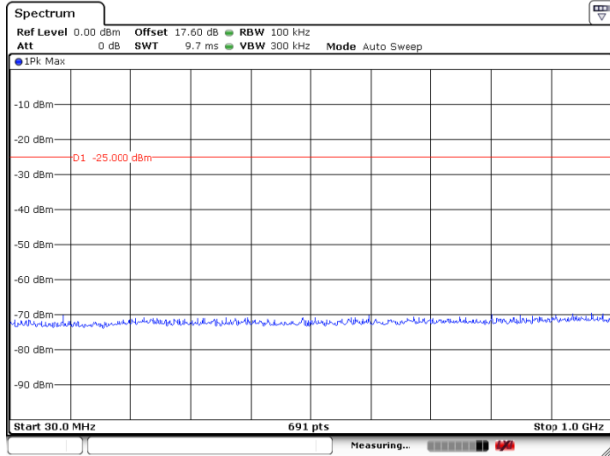


LTE Band 41 10MHz CH-High 3GHz~27GHz

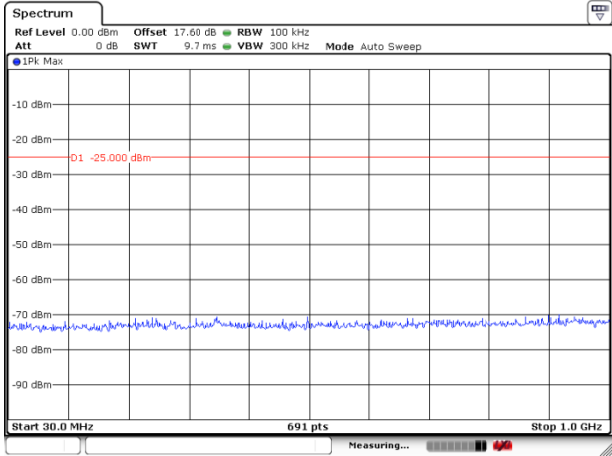




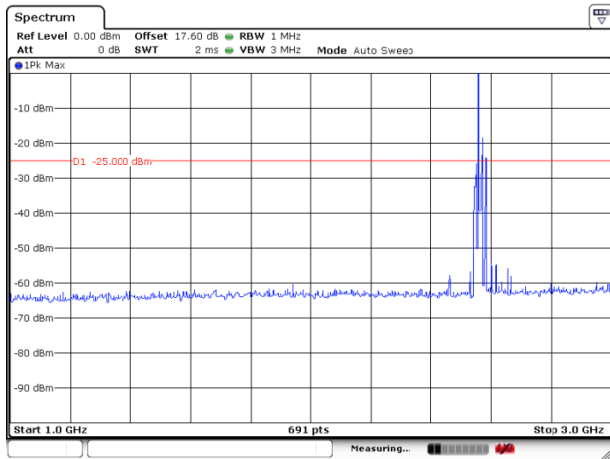
LTE Band 41 15MHz CH-Low 30MHz~1GHz



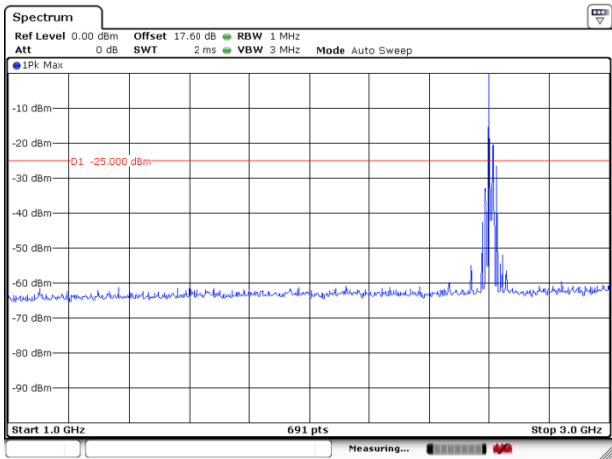
LTE Band 41 15MHz CH-Middle 30MHz~1GHz



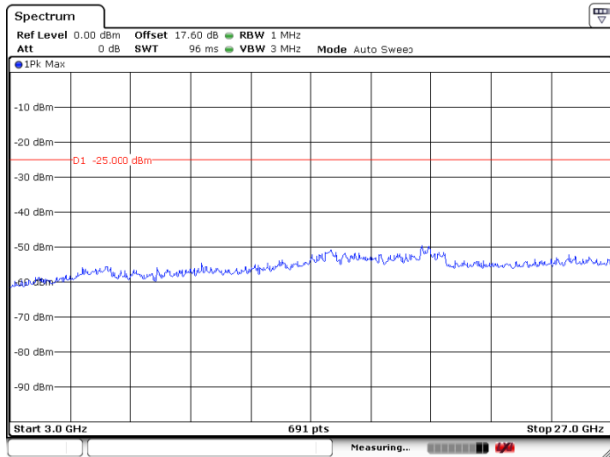
LTE Band 41 15MHz CH-Low 1GHz~3GHz



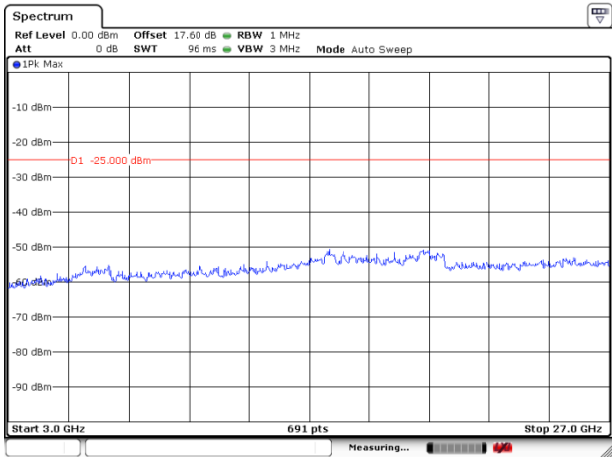
LTE Band 41 15MHz CH-Middle 1GHz~3GHz



LTE Band 41 15MHz CH-Low 3GHz~27GHz

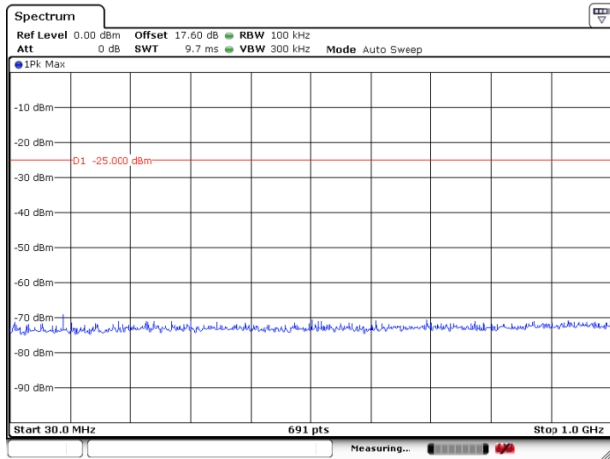


LTE Band 41 15MHz CH-Middle 3GHz~27GHz

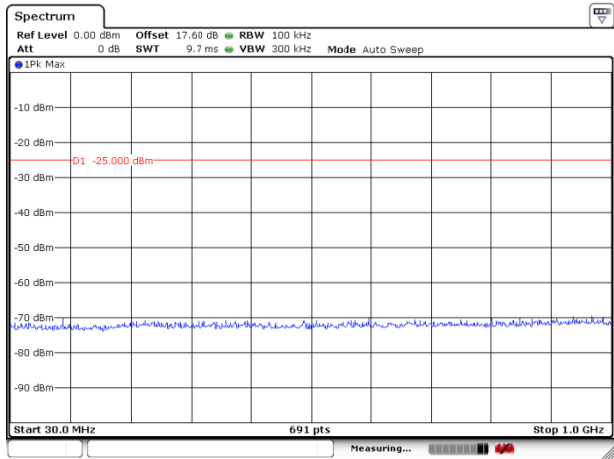




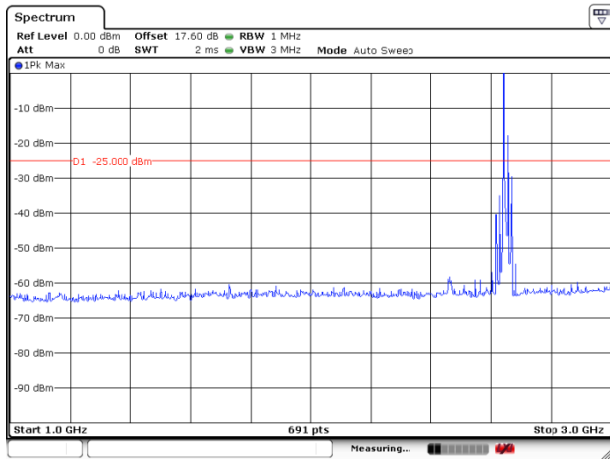
LTE Band 41 15MHz CH-High 30MHz~1GHz



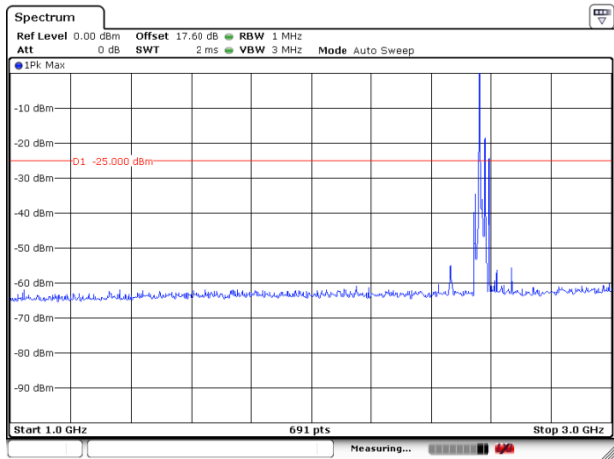
LTE Band 41 20MHz CH-Low 30MHz~1GHz



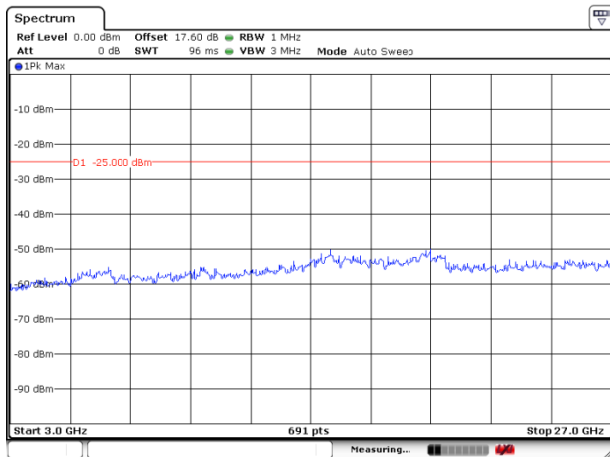
LTE Band 41 15MHz CH-High 1GHz~3GHz



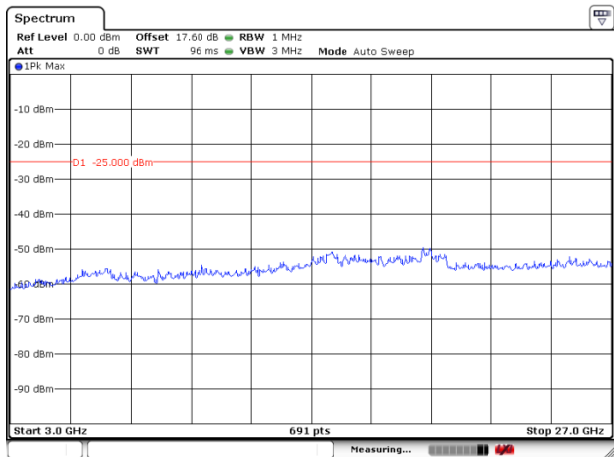
LTE Band 41 20MHz CH-Low 1GHz~3GHz



LTE Band 41 15MHz CH-High 3GHz~27GHz

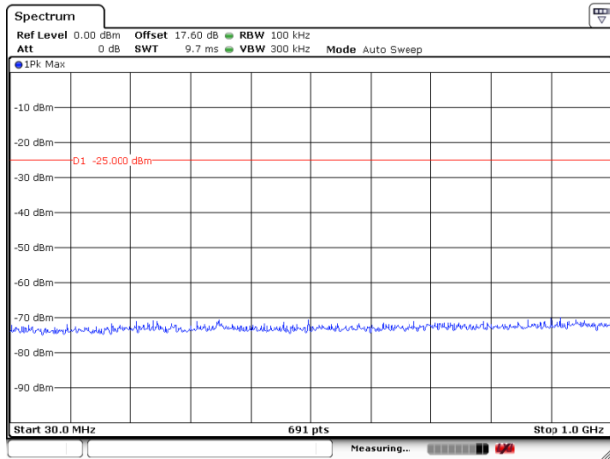


LTE Band 41 20MHz CH-Low 3GHz~27GHz

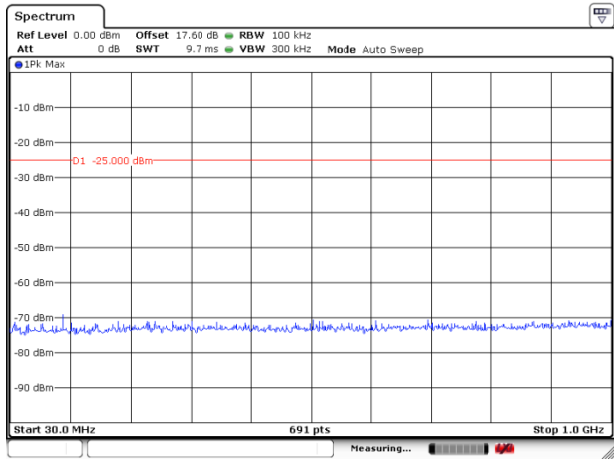




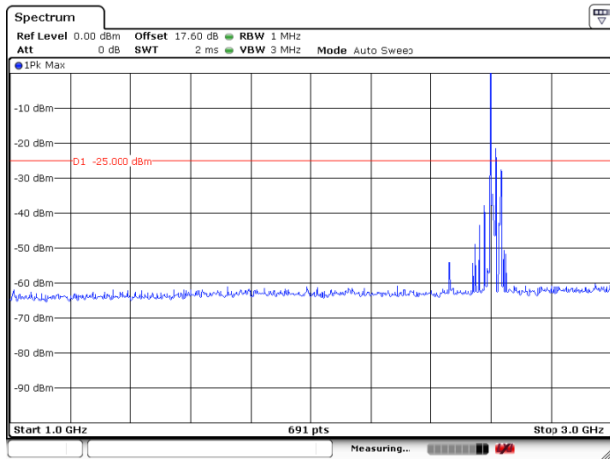
LTE Band 41 20MHz CH-Middle 30MHz~1GHz



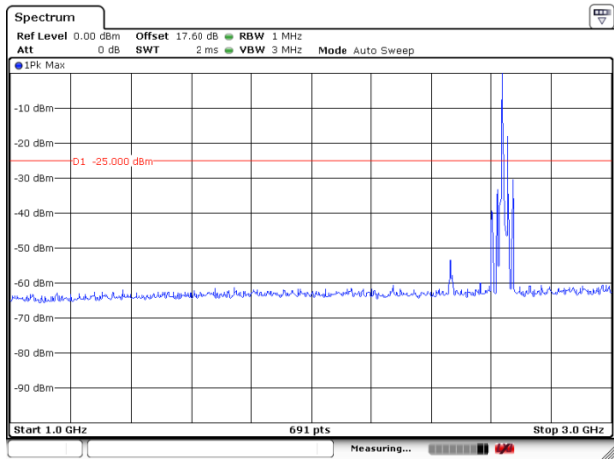
LTE Band 41 20MHz CH-High 30MHz~1GHz



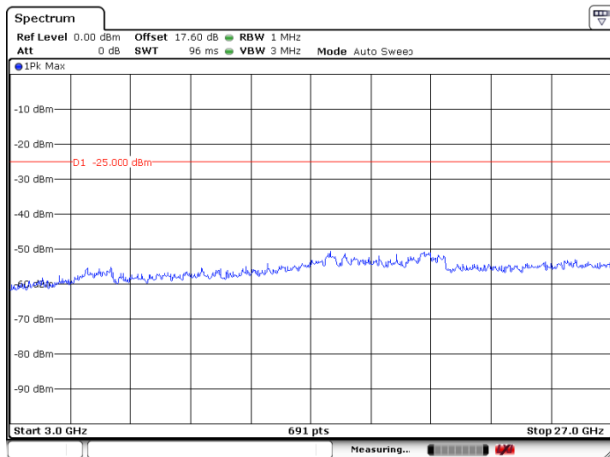
LTE Band 41 20MHz CH-Middle 1GHz~3GHz



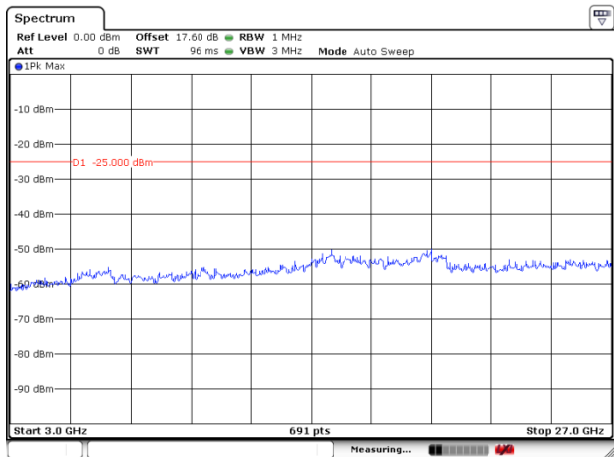
LTE Band 41 20MHz CH-High 1GHz~3GHz



LTE Band 41 20MHz CH-Middle 3GHz~27GHz



LTE Band 41 20MHz CH-High 3GHz~27GHz



5.8 Radiates Spurious Emission

Ambient condition

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

Method of Measurement

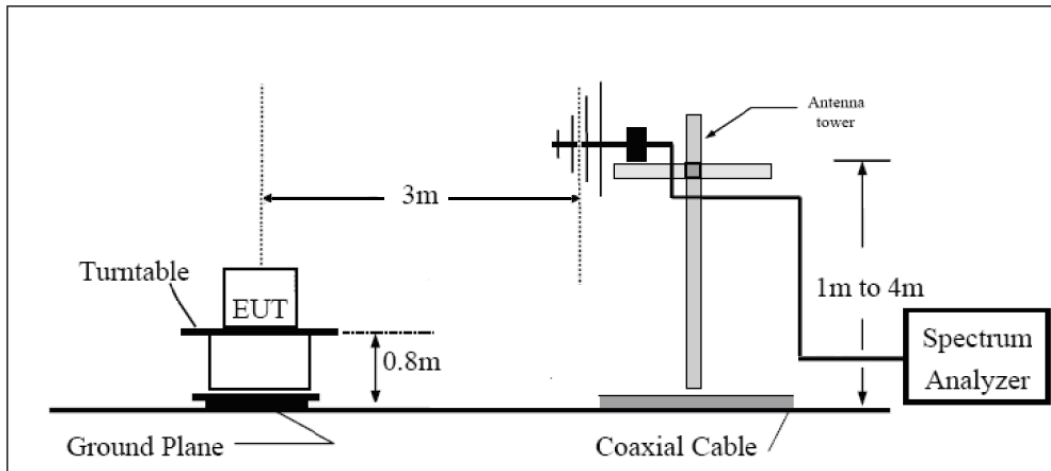
1. The testing follows FCC KDB 971168 D01 v03r01 Section 5.8 and ANSI/TIA-603-E (2016).
 2. The EUT is placed on a turntable 0.8 meters above the ground in the chamber, 3 meter away from the antenna. The maximal emission value is acquired by adjusting the antenna height, polarisation and turntable azimuth. 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).
 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:

$$\text{Power(EIRP)} = \text{PMea} - \text{PAg} - \text{Pcl} + \text{Ga}$$
 The measurement results are amend as described below:

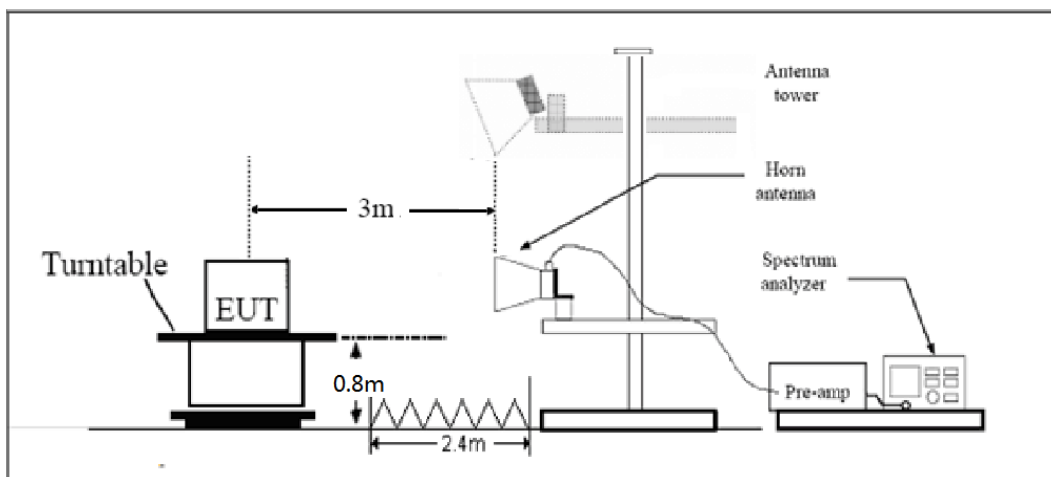
$$\text{Power(EIRP)} = \text{PMea} - \text{Pcl} + \text{Ga}$$
 8. This value is EIRP since the measurement is calibrated using an antenna of known gain (2.15 dBi) and known input power. ERP can be calculated from EIRP by subtracting the gain of the dipole, $\text{ERP} = \text{EIRP} - 2.15\text{dBi}$.
- The modulation mode and RB allocation refer to section 5.1, using the maximum output power configuration.

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 lie-down position (X axis) and the worst case was recorded.

Limits

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 $43 + 10 \log_{10} (P)$ dB..”

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.

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.

Rule Part 27.53(m) $55 + 10 \log (P)$ dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(4) of this section.

Part 27.53 (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;

Part 27.53(a)/(h)/(g) Limit		-13 dBm
Part 27.53(f) Limit	Limit out of the band 1559-1610 MHz	-13 dBm
	Limit in the band 1559-1610 MHz	-40 dBm
Part 27.53(m) Limit		-25 dBm

Measurement Uncertainty

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

Test Result

Sweep the whole frequency band through the range from 30MHz to the 10th harmonic of the carrier, the emissions below the noise floor will not be recorded in the report.

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	-50.36	2.6	10.15	Horizontal	-42.81	-13.00	29.81	90
3	5137.2	-45.12	2.4	11.35	Horizontal	-36.17	-13.00	23.17	225
4	6849.6	-41.09	4.5	10.85	Horizontal	-34.74	-13.00	21.74	0
5	8562.0	-48.28	5.1	11.35	Horizontal	-42.03	-13.00	29.03	180
6	10274.4	-49.89	5.3	11.95	Horizontal	-43.24	-13.00	30.24	45
7	11986.8	-51.73	5.5	13.55	Horizontal	-43.68	-13.00	30.68	45
8	13699.2	-48.14	6.3	13.75	Horizontal	-40.69	-13.00	27.69	225
9	15411.6	-50.34	6.7	13.85	Horizontal	-43.19	-13.00	30.19	180
10	17124.0	-47.28	6.8	14.25	Horizontal	-39.83	-13.00	26.83	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.

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	-55.23	2.6	10.75	Horizontal	-47.08	-13.00	34.08	0
3	5197.8	-52.30	2.4	11.05	Horizontal	-43.65	-13.00	30.65	180
4	6930.4	-47.52	4.5	11.15	Horizontal	-40.87	-13.00	27.87	45
5	8663.0	-49.79	5.1	11.35	Horizontal	-43.54	-13.00	30.54	45
6	10395.6	-50.46	5.3	11.95	Horizontal	-43.81	-13.00	30.81	180
7	12128.2	-51.11	5.5	13.55	Horizontal	-43.06	-13.00	30.06	315
8	13860.8	-46.65	6.3	13.75	Horizontal	-39.20	-13.00	26.20	180
9	15593.4	-49.89	6.7	13.85	Horizontal	-42.74	-13.00	29.74	90
10	17326.0	-45.53	6.8	14.25	Horizontal	-38.08	-13.00	25.08	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.

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	-47.93	2.6	10.15	Horizontal	-40.38	-13.00	27.38	180
3	5254.1	-49.65	2.4	11.05	Horizontal	-41.00	-13.00	28.00	0
4	7010.4	-41.56	4.5	11.15	Horizontal	-34.91	-13.00	21.91	180
5	8763.0	-47.37	5.1	11.35	Horizontal	-41.12	-13.00	28.12	45
6	10515.6	-49.99	5.3	11.95	Horizontal	-43.34	-13.00	30.34	45
7	12268.2	-51.23	5.5	13.55	Horizontal	-43.18	-13.00	30.18	135
8	14020.8	-46.19	6.3	13.75	Horizontal	-38.74	-13.00	25.74	135
9	15773.4	-49.97	6.7	13.85	Horizontal	-42.82	-13.00	29.82	315
10	17526.0	-47.77	6.8	14.25	Horizontal	-40.32	-13.00	27.32	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 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	-72.84	2.6	10.15	Horizontal	-65.29	-13.00	52.29	270
3	5131.1	-70.24	2.4	11.35	Horizontal	-61.29	-13.00	48.29	180
4	6842.8	-62.24	4.5	10.85	Horizontal	-55.89	-13.00	42.89	135
5	8553.5	-65.58	5.1	11.35	Horizontal	-59.33	-13.00	46.33	270
6	10264.2	-61.89	5.3	11.95	Horizontal	-55.24	-13.00	42.24	180
7	11974.9	-61.87	5.5	13.55	Horizontal	-53.82	-13.00	40.82	225
8	13685.6	-57.15	6.3	13.75	Horizontal	-49.70	-13.00	36.70	45
9	15396.3	-56.37	6.7	13.85	Horizontal	-49.22	-13.00	36.22	270
10	17107.0	-56.07	6.8	14.25	Horizontal	-48.62	-13.00	35.62	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 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	3464.3	-73.83	2.6	10.75	Horizontal	-65.68	-13.00	52.68	135
3	5197.5	-69.45	2.4	11.05	Horizontal	-60.80	-13.00	47.80	270
4	6930.0	-63.36	4.5	11.15	Horizontal	-56.71	-13.00	43.71	180
5	8662.5	-66.22	5.1	11.35	Horizontal	-59.97	-13.00	46.97	225
6	10395.0	-64.22	5.3	11.95	Horizontal	-57.57	-13.00	44.57	270
7	12127.5	-63.73	5.5	13.55	Horizontal	-55.68	-13.00	42.68	180
8	13860.0	-61.58	6.3	13.75	Horizontal	-54.13	-13.00	41.13	135
9	15592.5	-58.10	6.7	13.85	Horizontal	-50.95	-13.00	37.95	270
10	17325.0	-56.62	6.8	14.25	Horizontal	-49.17	-13.00	36.17	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 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	3507.8	-73.39	2.6	10.15	Horizontal	-65.84	-13.00	52.84	225
3	5261.6	-69.23	2.4	11.05	Horizontal	-60.58	-13.00	47.58	45
4	7017.2	-66.36	4.5	11.15	Horizontal	-59.71	-13.00	46.71	270
5	8771.5	-62.67	5.1	11.35	Horizontal	-56.42	-13.00	43.42	180
6	10525.8	-65.79	5.3	11.95	Horizontal	-59.14	-13.00	46.14	135
7	12280.1	-62.19	5.5	13.55	Horizontal	-54.14	-13.00	41.14	270
8	14034.4	-58.33	6.3	13.75	Horizontal	-50.88	-13.00	37.88	180
9	15788.7	-57.07	6.7	13.85	Horizontal	-49.92	-13.00	36.92	225
10	17543.0	-56.47	6.8	14.25	Horizontal	-49.02	-13.00	36.02	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.									



Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	3425.0	-73.52	2.6	10.15	Horizontal	-65.97	-13.00	52.97	225
3	5131.1	-69.98	2.4	11.35	Horizontal	-61.03	-13.00	48.03	45
4	6850.0	-62.14	4.5	10.85	Horizontal	-55.79	-13.00	42.79	90
5	8562.5	-65.54	5.1	11.35	Horizontal	-59.29	-13.00	46.29	180
6	10275.0	-64.72	5.3	11.95	Horizontal	-58.07	-13.00	45.07	270
7	11987.5	-61.92	5.5	13.55	Horizontal	-53.87	-13.00	40.87	180
8	13700.0	-59.11	6.3	13.75	Horizontal	-51.66	-13.00	38.66	225
9	15412.5	-57.90	6.7	13.85	Horizontal	-50.75	-13.00	37.75	45
10	17125.0	-56.76	6.8	14.25	Horizontal	-49.31	-13.00	36.31	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-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	3460.5	-76.85	2.6	10.75	Horizontal	-68.70	-13.00	55.70	180
3	5191.5	-69.29	2.4	11.05	Horizontal	-60.64	-13.00	47.64	135
4	6930.0	-59.96	4.5	11.15	Horizontal	-53.31	-13.00	40.31	270
5	8662.5	-64.97	5.1	11.35	Horizontal	-58.72	-13.00	45.72	180
6	10395.0	-63.42	5.3	11.95	Horizontal	-56.77	-13.00	43.77	225
7	12127.5	-64.86	5.5	13.55	Horizontal	-56.81	-13.00	43.81	45
8	13860.0	-59.75	6.3	13.75	Horizontal	-52.30	-13.00	39.30	90
9	15592.5	-57.37	6.7	13.85	Horizontal	-50.22	-13.00	37.22	270
10	17325.0	-56.03	6.8	14.25	Horizontal	-48.58	-13.00	35.58	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-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	-72.53	2.6	10.15	Horizontal	-64.98	-13.00	51.98	90
3	5251.1	-69.40	2.4	11.05	Horizontal	-60.75	-13.00	47.75	45
4	7010.0	-67.28	4.5	11.15	Horizontal	-60.63	-13.00	47.63	135
5	8762.5	-63.62	5.1	11.35	Horizontal	-57.37	-13.00	44.37	180
6	10515.0	-65.06	5.3	11.95	Horizontal	-58.41	-13.00	45.41	225
7	12267.5	-62.82	5.5	13.55	Horizontal	-54.77	-13.00	41.77	45
8	14020.0	-59.82	6.3	13.75	Horizontal	-52.37	-13.00	39.37	90
9	15772.5	-57.69	6.7	13.85	Horizontal	-50.54	-13.00	37.54	270
10	17525.0	-56.71	6.8	14.25	Horizontal	-49.26	-13.00	36.26	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 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	3440.0	-73.43	2.6	10.15	Horizontal	-65.88	-13.00	52.88	135
3	5133.4	-70.53	2.4	11.35	Horizontal	-61.58	-13.00	48.58	90
4	6880.0	-63.64	4.5	10.85	Horizontal	-57.29	-13.00	44.29	45
5	8600.0	-62.29	5.1	11.35	Horizontal	-56.04	-13.00	43.04	90
6	10320.0	-62.68	5.3	11.95	Horizontal	-56.03	-13.00	43.03	90
7	12040.0	-60.34	5.5	13.55	Horizontal	-52.29	-13.00	39.29	135
8	13760.0	-58.56	6.3	13.75	Horizontal	-51.11	-13.00	38.11	225
9	15480.0	-54.15	6.7	13.85	Horizontal	-47.00	-13.00	34.00	135
10	17200.0	-55.89	6.8	14.25	Horizontal	-48.44	-13.00	35.44	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 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	3465.0	-73.75	2.6	10.75	Horizontal	-65.60	-13.00	52.60	90
3	5170.9	-69.72	2.4	11.05	Horizontal	-61.07	-13.00	48.07	45
4	6930.0	-62.00	4.5	11.15	Horizontal	-55.35	-13.00	42.35	45
5	8662.5	-62.81	5.1	11.35	Horizontal	-56.56	-13.00	43.56	180
6	10395.0	-64.08	5.3	11.95	Horizontal	-57.43	-13.00	44.43	270
7	12127.5	-62.12	5.5	13.55	Horizontal	-54.07	-13.00	41.07	225
8	13860.0	-59.92	6.3	13.75	Horizontal	-52.47	-13.00	39.47	135
9	15592.5	-55.82	6.7	13.85	Horizontal	-48.67	-13.00	35.67	180
10	17325.0	-55.45	6.8	14.25	Horizontal	-48.00	-13.00	35.00	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 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	3490.0	-75.15	2.6	10.15	Horizontal	-67.60	-13.00	54.60	45
3	5208.4	-70.01	2.4	11.05	Horizontal	-61.36	-13.00	48.36	225
4	6980.0	-58.45	4.5	11.15	Horizontal	-51.80	-13.00	38.80	135
5	8725.0	-65.39	5.1	11.35	Horizontal	-59.14	-13.00	46.14	90
6	10470.0	-63.00	5.3	11.95	Horizontal	-56.35	-13.00	43.35	45
7	12215.0	-61.05	5.5	13.55	Horizontal	-53.00	-13.00	40.00	90
8	13960.0	-57.53	6.3	13.75	Horizontal	-50.08	-13.00	37.08	45
9	15705.0	-55.49	6.7	13.85	Horizontal	-48.34	-13.00	35.34	135
10	17450.0	-55.43	6.8	14.25	Horizontal	-47.98	-13.00	34.98	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 7 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	5000.6	-70.50	2.00	9.15	Horizontal	-63.35	-25.00	38.35	180
3	7501.1	-68.16	2.50	11.35	Horizontal	-59.31	-25.00	34.31	225
4	10001.3	-67.32	4.20	12.05	Horizontal	-59.47	-25.00	34.47	45
5	12512.5	-63.45	5.20	12.85	Horizontal	-55.80	-25.00	30.80	180
6	15015.0	-61.09	5.50	14.23	Horizontal	-52.36	-25.00	27.36	270
7	17517.5	-56.55	5.70	14.15	Horizontal	-48.10	-25.00	23.10	135
8	20020.0	-	-	-	-	-	-	-	-
9	22522.5	-	-	-	-	-	-	-	-
10	25025.0	-	-	-	-	-	-	-	-
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 7 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	5065.8	-68.82	2.00	9.15	Horizontal	-61.67	-25.00	36.67	135
3	7598.6	-63.46	2.50	11.35	Horizontal	-54.61	-25.00	29.61	180
4	10130.6	-66.26	4.20	12.05	Horizontal	-58.41	-25.00	33.41	90
5	12675.0	-62.82	5.20	12.85	Horizontal	-55.17	-25.00	30.17	45
6	15210.0	-59.31	5.50	14.23	Horizontal	-50.58	-25.00	25.58	180
7	17745.0	-57.09	5.70	14.15	Horizontal	-48.64	-25.00	23.64	270
8	20280.0	--	--	--	--	--	--	--	--
9	22815.0	--	--	--	--	--	--	--	--
10	25350.0	--	--	--	--	--	--	--	--
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 7 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	5130.8	-69.30	2.00	9.15	Horizontal	-62.15	-25.00	37.15	225
3	7696.1	-61.52	2.50	11.35	Horizontal	-52.67	-25.00	27.67	45
4	10261.1	-66.44	4.20	12.05	Horizontal	-58.59	-25.00	33.59	90
5	12837.5	-61.59	5.20	12.85	Horizontal	-53.94	-25.00	28.94	180
6	15405.0	-60.24	5.50	14.23	Horizontal	-51.51	-25.00	26.51	180
7	17972.5	-56.86	5.70	14.15	Horizontal	-48.41	-25.00	23.41	270
8	20540.0	--	--	--	--	--	--	--	--
9	23107.5	--	--	--	--	--	--	--	--
10	25675.0	--	--	--	--	--	--	--	--
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 7 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	5002.1	-44.88	2.00	10.15	Horizontal	-36.73	-25.00	11.73	270
3	7530.0	-43.80	2.50	11.35	Horizontal	-34.95	-25.00	9.95	180
4	10040.0	-49.19	4.20	12.05	Horizontal	-41.34	-25.00	16.34	270
5	12550.0	-51.55	5.20	14.85	Horizontal	-41.90	-25.00	16.90	135
6	15060.0	-47.23	5.50	13.23	Horizontal	-39.50	-25.00	14.50	180
7	17570.0	-46.25	5.70	12.15	Horizontal	-39.80	-25.00	14.80	270
8	20080.0	--	--	--	--	--	--	--	--
9	22590.0	--	--	--	--	--	--	--	--
10	25100.0	--	--	--	--	--	--	--	--
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 7 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	5052.4	-47.03	2.00	10.15	Horizontal	-38.88	-25.00	13.88	270
3	7605.0	-40.61	2.50	11.35	Horizontal	-31.76	-25.00	6.76	135
4	10140.0	-49.86	4.20	12.05	Horizontal	-42.01	-25.00	17.01	45
5	12675.0	-51.51	5.20	14.85	Horizontal	-41.86	-25.00	16.86	270
6	15210.0	-47.45	5.50	13.23	Horizontal	-39.72	-25.00	14.72	180
7	17745.0	-46.31	5.70	12.15	Horizontal	-39.86	-25.00	14.86	270
8	20280.0	--	--	--	--	--	--	--	--
9	22815.0	--	--	--	--	--	--	--	--
10	25350.0	--	--	--	--	--	--	--	--
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 7 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	5102.3	-42.17	2.00	10.15	Horizontal	-34.02	-25.00	9.02	45
3	7680.0	-38.11	2.50	11.35	Horizontal	-29.26	-25.00	4.26	180
4	10240.0	-46.99	4.20	12.05	Horizontal	-39.14	-25.00	14.14	270
5	12800.0	-50.65	5.20	14.85	Horizontal	-41.00	-25.00	16.00	135
6	15360.0	-49.63	5.50	13.23	Horizontal	-41.90	-25.00	16.90	45
7	17920.0	-46.15	5.70	12.15	Horizontal	-39.70	-25.00	14.70	270
8	20480.0	--	--	--	--	--	--	--	--
9	23040.0	--	--	--	--	--	--	--	--
10	25600.0	--	--	--	--	--	--	--	--

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-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	1399.4	-56.85	2.00	10.15	Horizontal	-50.85	-13.00	37.85	45
3	2099.1	-58.73	2.50	11.35	Horizontal	-52.03	-13.00	39.03	225
4	2798.8	-54.31	4.20	10.85	Horizontal	-49.81	-13.00	36.81	180
5	3498.5	-61.90	5.20	11.35	Horizontal	-57.90	-13.00	44.90	135
6	4198.2	-61.80	5.50	11.95	Horizontal	-57.50	-13.00	44.50	90
7	4897.9	-61.50	5.70	13.55	Horizontal	-55.80	-13.00	42.80	135
8	5597.6	-58.50	6.30	13.75	Horizontal	-53.20	-13.00	40.20	225
9	6297.3	-56.80	6.80	13.85	Horizontal	-51.90	-13.00	38.90	180
10	6997.0	-55.10	6.90	14.25	Horizontal	-49.90	-13.00	36.90	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 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	1415.0	-51.84	2.00	10.75	Horizontal	-45.24	-13.00	32.24	90
3	2122.5	-60.40	2.51	11.05	Horizontal	-54.01	-13.00	41.01	135
4	2830.0	-58.11	4.20	11.15	Horizontal	-53.31	-13.00	40.31	90
5	3537.5	-62.55	5.20	11.15	Horizontal	-58.75	-13.00	45.75	135
6	4245.0	-61.87	5.50	11.95	Horizontal	-57.57	-13.00	44.57	45
7	4952.5	-61.45	5.70	13.55	Horizontal	-55.75	-13.00	42.75	0
8	5660.0	-58.38	6.30	13.75	Horizontal	-53.08	-13.00	40.08	180
9	6367.5	-56.69	6.80	13.85	Horizontal	-51.79	-13.00	38.79	45
10	7075.0	-54.29	6.90	14.25	Horizontal	-49.09	-13.00	36.09	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 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	1430.6	-57.47	2.00	10.15	Horizontal	-51.47	-13.00	38.47	135
3	2145.9	-56.29	2.51	11.05	Horizontal	-49.90	-13.00	36.90	225
4	2861.2	-56.30	4.20	11.15	Horizontal	-51.50	-13.00	38.50	225
5	3576.5	-62.00	5.20	11.15	Horizontal	-58.20	-13.00	45.20	90
6	4291.8	-58.80	5.50	11.95	Horizontal	-54.50	-13.00	41.50	135
7	5007.1	-61.30	5.70	13.55	Horizontal	-55.60	-13.00	42.60	225
8	5722.4	-58.40	6.30	13.75	Horizontal	-53.10	-13.00	40.10	180
9	6437.7	-56.60	6.80	13.85	Horizontal	-51.70	-13.00	38.70	135
10	7153.0	-48.00	6.90	14.25	Horizontal	-42.80	-13.00	29.80	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 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	1403.0	-57.57	2.00	10.15	Horizontal	-51.57	-13.00	38.57	135
3	2104.5	-57.46	2.50	11.35	Horizontal	-50.76	-13.00	37.76	0
4	2806.0	-54.68	4.20	10.85	Horizontal	-50.18	-13.00	37.18	180
5	3507.5	-62.20	5.20	11.35	Horizontal	-58.20	-13.00	45.20	180
6	4209.0	-58.50	5.50	11.95	Horizontal	-54.20	-13.00	41.20	45
7	4910.5	-61.30	5.70	13.55	Horizontal	-55.60	-13.00	42.60	45
8	5612.0	-59.50	6.30	13.75	Horizontal	-54.20	-13.00	41.20	225
9	6313.5	-56.80	6.80	13.85	Horizontal	-51.90	-13.00	38.90	180
10	7015.0	-47.70	6.90	14.25	Horizontal	-42.50	-13.00	29.50	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 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	1415.0	-58.33	2.00	10.75	Horizontal	-51.73	-13.00	38.73	45
3	2122.5	-57.02	2.51	11.05	Horizontal	-50.63	-13.00	37.63	45
4	2830.0	-55.44	4.20	11.15	Horizontal	-50.64	-13.00	37.64	135
5	3537.5	-59.20	5.20	11.15	Horizontal	-55.40	-13.00	42.40	135
6	4245.0	-58.50	5.50	11.95	Horizontal	-54.20	-13.00	41.20	90
7	4952.5	-60.60	5.70	13.55	Horizontal	-54.90	-13.00	41.90	0
8	5660.0	-58.50	6.30	13.75	Horizontal	-53.20	-13.00	40.20	45
9	6367.5	-58.50	6.80	13.85	Horizontal	-53.60	-13.00	40.60	180
10	7075.0	-54.70	6.90	14.25	Horizontal	-49.50	-13.00	36.50	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 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	1427.0	-58.25	2.00	10.15	Horizontal	-52.25	-13.00	39.25	225
3	2140.5	-59.46	2.51	11.05	Horizontal	-53.07	-13.00	40.07	180
4	2854.0	-56.90	4.20	11.15	Horizontal	-52.10	-13.00	39.10	90
5	3567.5	-56.18	5.20	11.15	Horizontal	-52.38	-13.00	39.38	180
6	4281.0	-58.33	5.50	11.95	Horizontal	-54.03	-13.00	41.03	45
7	4994.5	-58.53	5.70	13.55	Horizontal	-52.83	-13.00	39.83	45
8	5708.0	-56.60	6.30	13.75	Horizontal	-51.30	-13.00	38.30	180
9	6421.5	-54.81	6.80	13.85	Horizontal	-49.91	-13.00	36.91	90
10	7135.0	-48.55	6.90	14.25	Horizontal	-43.35	-13.00	30.35	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 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	1408.0	-59.04	2.00	10.15	Horizontal	-53.04	-13.00	40.04	135
3	2112.0	-59.35	2.51	11.35	Horizontal	-52.66	-13.00	39.66	0
4	2816.0	-54.82	4.20	10.85	Horizontal	-50.32	-13.00	37.32	225
5	3520.0	-61.62	5.20	11.35	Horizontal	-57.62	-13.00	44.62	225
6	4224.0	-58.30	5.50	11.95	Horizontal	-54.00	-13.00	41.00	180
7	4928.0	-58.50	5.70	13.55	Horizontal	-52.80	-13.00	39.80	90
8	5632.0	-56.90	6.30	13.75	Horizontal	-51.60	-13.00	38.60	135
9	6336.0	-53.80	6.80	13.85	Horizontal	-48.90	-13.00	35.90	0
10	7040.0	-48.40	6.90	14.25	Horizontal	-43.20	-13.00	30.20	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-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	1415.0	-58.72	2.00	10.75	Horizontal	-52.12	-13.00	39.12	90
3	2122.5	-57.96	2.51	11.05	Horizontal	-51.57	-13.00	38.57	0
4	2830.0	-58.13	4.20	11.15	Horizontal	-53.33	-13.00	40.33	180
5	3537.5	-58.22	5.20	11.15	Horizontal	-54.42	-13.00	41.42	45
6	4245.0	-58.30	5.50	11.95	Horizontal	-54.00	-13.00	41.00	45
7	4952.5	-58.50	5.70	13.55	Horizontal	-52.80	-13.00	39.80	45
8	5660.0	-56.60	6.30	13.75	Horizontal	-51.30	-13.00	38.30	45
9	6367.5	-54.80	6.80	13.85	Horizontal	-49.90	-13.00	36.90	225
10	7075.0	-48.50	6.90	14.25	Horizontal	-43.30	-13.00	30.30	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	1422.0	-64.19	2.00	10.15	Horizontal	-58.19	-13.00	45.19	45
3	2133.0	-58.08	2.51	11.05	Horizontal	-51.69	-13.00	38.69	45
4	2844.0	-54.73	4.20	11.15	Horizontal	-49.93	-13.00	36.93	90
5	3555.0	-61.00	5.20	11.15	Horizontal	-57.20	-13.00	44.20	90
6	4266.0	-60.80	5.50	11.95	Horizontal	-56.50	-13.00	43.50	135
7	4977.0	-58.20	5.70	13.55	Horizontal	-52.50	-13.00	39.50	0
8	5688.0	-56.60	6.30	13.75	Horizontal	-51.30	-13.00	38.30	180
9	6399.0	-54.80	6.80	13.85	Horizontal	-49.90	-13.00	36.90	45
10	7110.0	-49.10	6.90	14.25	Horizontal	-43.90	-13.00	30.90	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-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	1554.5	-54.12	2.00	10.15	Horizontal	-48.12	-13.00	35.12	180
3	2338.5	-62.14	2.50	11.35	Horizontal	-55.44	-13.00	42.44	135
4	3118.0	-62.60	4.20	10.85	Horizontal	-58.10	-13.00	45.10	135
5	3897.5	-61.20	5.20	11.35	Horizontal	-57.20	-13.00	44.20	315
6	4677.0	-57.20	5.50	11.95	Horizontal	-52.90	-13.00	39.90	45
7	5456.5	-58.50	5.70	13.55	Horizontal	-52.80	-13.00	39.80	90
8	6236.0	-56.50	6.30	13.75	Horizontal	-51.20	-13.00	38.20	135
9	7015.5	-51.80	6.80	13.85	Horizontal	-46.90	-13.00	33.90	315
10	7795.0	-53.10	6.90	14.25	Horizontal	-47.90	-13.00	34.90	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	1559.5	-52.73	2.00	10.75	Horizontal	-46.13	-40.00	6.13	180
3	2346.0	-60.78	2.51	11.05	Horizontal	-54.39	-13.00	41.39	45
4	3128.0	-63.04	4.20	11.15	Horizontal	-58.24	-13.00	45.24	0
5	3910.0	-60.95	5.20	11.15	Horizontal	-57.15	-13.00	44.15	45
6	4692.0	-57.82	5.50	11.95	Horizontal	-53.52	-13.00	40.52	45
7	5474.0	-58.64	5.70	13.55	Horizontal	-52.94	-13.00	39.94	90
8	6256.0	-56.55	6.30	13.75	Horizontal	-51.25	-13.00	38.25	135
9	7038.0	-52.09	6.80	13.85	Horizontal	-47.19	-13.00	34.19	315
10	7820.0	-52.72	6.90	14.25	Horizontal	-47.52	-13.00	34.52	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-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	1564.5	-53.38	2.00	10.15	Horizontal	-47.38	-40.00	7.38	180
3	2353.5	-61.22	2.51	11.05	Horizontal	-54.83	-13.00	41.83	315
4	3138.0	-63.10	4.20	11.15	Horizontal	-58.30	-13.00	45.30	90
5	3922.5	-61.70	5.20	11.15	Horizontal	-57.90	-13.00	44.90	135
6	4707.0	-56.90	5.50	11.95	Horizontal	-52.60	-13.00	39.60	315
7	5491.5	-58.50	5.70	13.55	Horizontal	-52.80	-13.00	39.80	45
8	6276.0	-56.50	6.30	13.75	Horizontal	-51.20	-13.00	38.20	0
9	7060.5	-51.90	6.80	13.85	Horizontal	-47.00	-13.00	34.00	45
10	7845.0	-52.70	6.90	14.25	Horizontal	-47.50	-13.00	34.50	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	1556.5	-50.30	2.00	10.15	Horizontal	-44.30	-13.00	31.30	135
3	2346.0	-58.71	2.51	11.35	Horizontal	-52.02	-13.00	39.02	315
4	3128.0	-63.00	4.20	10.85	Horizontal	-58.50	-13.00	45.50	90
5	3910.0	-60.00	5.20	11.35	Horizontal	-56.00	-13.00	43.00	135
6	4692.0	-59.90	5.50	11.95	Horizontal	-55.60	-13.00	42.60	315
7	5474.0	-58.30	5.70	13.55	Horizontal	-52.60	-13.00	39.60	90
8	6256.0	-56.50	6.30	13.75	Horizontal	-51.20	-13.00	38.20	135
9	7038.0	-52.70	6.80	13.85	Horizontal	-47.80	-13.00	34.80	315
10	7820.0	-52.70	6.90	14.25	Horizontal	-47.50	-13.00	34.50	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-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	1555.5	-50.30	2.00	10.75	Horizontal	-43.70	-13.00	30.70	90
3	2346.0	-56.12	2.51	11.05	Horizontal	-49.73	-13.00	36.73	90
4	3128.0	-63.30	4.20	11.15	Horizontal	-58.50	-13.00	45.50	90
5	3910.0	-61.40	5.20	11.15	Horizontal	-57.60	-13.00	44.60	135
6	4692.0	-59.50	5.50	11.95	Horizontal	-55.20	-13.00	42.20	315
7	5474.0	-58.60	5.70	13.55	Horizontal	-52.90	-13.00	39.90	45
8	6256.0	-57.20	6.30	13.75	Horizontal	-51.90	-13.00	38.90	0
9	7038.0	-54.40	6.80	13.85	Horizontal	-49.50	-13.00	36.50	45
10	7820.0	-52.70	6.90	14.25	Horizontal	-47.50	-13.00	34.50	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 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	1555.5	-49.43	2.00	10.15	Horizontal	-43.43	-13.00	30.43	135
3	2346.0	-59.17	2.51	11.05	Horizontal	-52.78	-13.00	39.78	315
4	3128.0	-62.90	4.20	11.15	Horizontal	-58.10	-13.00	45.10	45
5	3910.0	-61.00	5.20	11.15	Horizontal	-57.20	-13.00	44.20	45
6	4692.0	-59.90	5.50	11.95	Horizontal	-55.60	-13.00	42.60	0
7	5474.0	-57.30	5.70	13.55	Horizontal	-51.60	-13.00	38.60	45
8	6256.0	-55.20	6.30	13.75	Horizontal	-49.90	-13.00	36.90	90
9	7038.0	-53.10	6.80	13.85	Horizontal	-48.20	-13.00	35.20	135
10	7820.0	-52.70	6.90	14.25	Horizontal	-47.50	-13.00	34.50	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 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	1413.0	-62.56	2.00	10.15	Horizontal	-56.56	-13.00	43.56	90
3	2119.5	-59.34	2.50	11.35	Horizontal	-52.64	-13.00	39.64	135
4	2826.0	-59.49	4.20	10.85	Horizontal	-54.99	-13.00	41.99	225
5	3532.5	-62.00	5.20	11.35	Horizontal	-58.00	-13.00	45.00	45
6	4239.0	-58.50	5.50	11.95	Horizontal	-54.20	-13.00	41.20	90
7	4945.5	-58.80	5.70	13.55	Horizontal	-53.10	-13.00	40.10	45
8	5652.0	-57.60	6.30	13.75	Horizontal	-52.30	-13.00	39.30	135
9	6358.5	-54.90	6.80	13.85	Horizontal	-50.00	-13.00	37.00	90
10	7065.0	-49.40	6.90	14.25	Horizontal	-44.20	-13.00	31.20	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-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	1420.0	-60.72	2.00	10.75	Horizontal	-54.12	-13.00	41.12	135
3	2130.0	-59.12	2.51	11.05	Horizontal	-52.73	-13.00	39.73	90
4	2840.0	-54.77	4.20	11.15	Horizontal	-49.97	-13.00	36.97	90
5	3550.0	-62.17	5.20	11.15	Horizontal	-58.37	-13.00	45.37	135
6	4260.0	-58.65	5.50	11.95	Horizontal	-54.35	-13.00	41.35	45
7	4970.0	-58.77	5.70	13.55	Horizontal	-53.07	-13.00	40.07	90
8	5680.0	-57.57	6.30	13.75	Horizontal	-52.27	-13.00	39.27	90
9	6390.0	-55.40	6.80	13.85	Horizontal	-50.50	-13.00	37.50	45
10	7100.0	-50.86	6.90	14.25	Horizontal	-45.66	-13.00	32.66	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 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	1427.0	-58.69	2.00	10.15	Horizontal	-52.69	-13.00	39.69	45
3	2140.5	-58.18	2.51	11.05	Horizontal	-51.79	-13.00	38.79	45
4	2854.0	-58.11	4.20	11.15	Horizontal	-53.31	-13.00	40.31	180
5	3567.5	-61.70	5.20	11.15	Horizontal	-57.90	-13.00	44.90	225
6	4281.0	-58.20	5.50	11.95	Horizontal	-53.90	-13.00	40.90	45
7	4994.5	-57.60	5.70	13.55	Horizontal	-51.90	-13.00	38.90	90
8	5708.0	-56.20	6.30	13.75	Horizontal	-50.90	-13.00	37.90	135
9	6421.5	-55.00	6.80	13.85	Horizontal	-50.10	-13.00	37.10	135
10	7135.0	-50.10	6.90	14.25	Horizontal	-44.90	-13.00	31.90	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-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	1418.0	-64.20	2.00	10.15	Horizontal	-58.20	-13.00	45.20	270
3	2127.0	-58.11	2.51	11.35	Horizontal	-51.42	-13.00	38.42	225
4	2836.0	-56.40	4.20	10.85	Horizontal	-51.90	-13.00	38.90	135
5	3545.0	-62.10	5.20	11.35	Horizontal	-58.10	-13.00	45.10	90
6	4254.0	-57.80	5.50	11.95	Horizontal	-53.50	-13.00	40.50	180
7	4963.0	-57.20	5.70	13.55	Horizontal	-51.50	-13.00	38.50	270
8	5672.0	-55.50	6.30	13.75	Horizontal	-50.20	-13.00	37.20	225
9	6381.0	-55.80	6.80	13.85	Horizontal	-50.90	-13.00	37.90	135
10	7090.0	-50.10	6.90	14.25	Horizontal	-44.90	-13.00	31.90	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	1420.0	-63.83	2.00	10.75	Horizontal	-57.23	-13.00	44.23	180
3	2130.0	-58.79	2.51	11.05	Horizontal	-52.40	-13.00	39.40	225
4	2840.0	-57.91	4.20	11.15	Horizontal	-53.11	-13.00	40.11	45
5	3550.0	-62.00	5.20	11.15	Horizontal	-58.20	-13.00	45.20	45
6	4260.0	-57.90	5.50	11.95	Horizontal	-53.60	-13.00	40.60	90
7	4970.0	-57.60	5.70	13.55	Horizontal	-51.90	-13.00	38.90	135
8	5680.0	-55.80	6.30	13.75	Horizontal	-50.50	-13.00	37.50	225
9	6390.0	-55.10	6.80	13.85	Horizontal	-50.20	-13.00	37.20	45
10	7100.0	-49.40	6.90	14.25	Horizontal	-44.20	-13.00	31.20	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 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	1422.0	-60.97	2.00	10.15	Horizontal	-54.97	-13.00	41.97	225
3	2133.0	-58.99	2.51	11.05	Horizontal	-52.60	-13.00	39.60	135
4	2844.0	-56.98	4.20	11.15	Horizontal	-52.18	-13.00	39.18	90
5	3555.0	-61.00	5.20	11.15	Horizontal	-57.20	-13.00	44.20	135
6	4266.0	-57.50	5.50	11.95	Horizontal	-53.20	-13.00	40.20	135
7	4977.0	-57.20	5.70	13.55	Horizontal	-51.50	-13.00	38.50	90
8	5688.0	-55.50	6.30	13.75	Horizontal	-50.20	-13.00	37.20	225
9	6399.0	-54.40	6.80	13.85	Horizontal	-49.50	-13.00	36.50	135
10	7110.0	-49.40	6.90	14.25	Horizontal	-44.20	-13.00	31.20	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 41 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	4997.0	-50.23	2.00	9.15	Horizontal	-43.08	-25.00	18.08	270
3	7495.5	-41.53	2.50	11.35	Horizontal	-32.68	-25.00	7.68	180
4	9994.0	-43.06	4.20	12.05	Horizontal	-35.21	-25.00	10.21	90
5	12492.5	-48.91	5.20	12.85	Horizontal	-41.26	-25.00	16.26	45
6	14991.0	-45.97	5.50	14.23	Horizontal	-37.24	-25.00	12.24	45
7	17489.5	-47.03	5.70	14.15	Horizontal	-38.58	-25.00	13.58	0
8	19988.0	--	--	--	--	--	--	--	--
9	22486.5	--	--	--	--	--	--	--	--
10	24985.0	--	--	--	--	--	--	--	--
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 41 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	5186.0	--	--	--	--	--	--	--	--
3	7779.0	-44.47	2.50	11.35	Horizontal	-35.62	-25.00	10.62	0
4	10372.0	-35.19	4.20	12.05	Horizontal	-27.34	-25.00	2.34	315
5	12965.0	-43.69	5.20	12.85	Horizontal	-36.04	-25.00	11.04	135
6	15558.0	-45.02	5.50	14.23	Horizontal	-36.29	-25.00	11.29	270
8	20744.0	--	--	--	--	--	--	--	--
9	23337.0	--	--	--	--	--	--	--	--
10	25930.0	--	--	--	--	--	--	--	--
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 41 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	5375.0	-38.50	2.00	9.15	Horizontal	-31.35	-25.00	6.35	135
3	8062.5	-47.94	2.50	11.35	Horizontal	-39.09	-25.00	14.09	270
4	10750.0	-36.68	4.20	12.05	Horizontal	-28.83	-25.00	3.83	180
5	13437.5	-41.23	5.20	12.85	Horizontal	-33.58	-25.00	8.58	225
6	16125.0	-44.64	5.50	14.23	Horizontal	-35.91	-25.00	10.91	45
7	18812.5	--	--	--	--	--	--	--	--
8	21500.0	--	--	--	--	--	--	--	--
9	24187.5	--	--	--	--	--	--	--	--
10	26875.0	--	--	--	--	--	--	--	--
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 41 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	4993.1	-46.43	2.00	9.15	Horizontal	-39.28	-25.00	14.28	90
3	7489.5	-42.46	2.50	11.35	Horizontal	-33.61	-25.00	8.61	180
4	9986.6	-42.79	4.20	12.05	Horizontal	-34.94	-25.00	9.94	270
5	12505.0	-48.71	5.20	12.85	Horizontal	-41.06	-25.00	16.06	225
6	15006.0	-48.50	5.50	14.23	Horizontal	-39.77	-25.00	14.77	135
7	17507.0	-48.85	5.70	14.15	Horizontal	-40.40	-25.00	15.40	225
8	20008.0	--	--	--	--	--	--	--	--
9	22509.0	--	--	--	--	--	--	--	--
10	25010.0	--	--	--	--	--	--	--	--
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 41 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	5186.0	-36.59	2.00	9.15	Horizontal	-29.44	-25.00	4.44	225
3	7779.0	-43.03	2.50	11.35	Horizontal	-34.18	-25.00	9.18	45
4	10372.0	-38.46	4.20	12.05	Horizontal	-30.61	-25.00	5.61	90
5	12965.0	-44.49	5.20	12.85	Horizontal	-36.84	-25.00	11.84	135
6	15558.0	-44.03	5.50	14.23	Horizontal	-35.30	-25.00	10.30	135
7	18151.0	-37.89	5.70	14.15	Horizontal	-29.44	-25.00	4.44	225
8	20744.0	--	--	--	--	--	--	--	--
9	23337.0	--	--	--	--	--	--	--	--
10	25930.0	--	--	--	--	--	--	--	--
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 41 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	5361.4	-39.14	2.00	10.15	Horizontal	-30.99	-25.00	5.99	135
3	8042.3	-43.90	2.50	11.35	Horizontal	-35.05	-25.00	10.05	135
4	10722.4	-39.55	4.20	12.05	Horizontal	-31.70	-25.00	6.70	45
5	13425.0	-43.86	5.20	14.85	Horizontal	-34.21	-25.00	9.21	90
6	16110.0	-43.63	5.50	13.23	Horizontal	-35.90	-25.00	10.90	180
7	18795.0	--	--	--	--	--	--	--	--
8	21480.0	--	--	--	--	--	--	--	--
9	24165.0	--	--	--	--	--	--	--	--
10	26850.0	--	--	--	--	--	--	--	--
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 41 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	5012.0	-48.89	2.00	10.15	Horizontal	-40.74	-25.00	15.74	45
3	7518.0	-42.31	2.50	11.35	Horizontal	-33.46	-25.00	8.46	90
4	10024.0	-43.93	4.20	12.05	Horizontal	-36.08	-25.00	11.08	135
5	12530.0	-49.21	5.20	14.85	Horizontal	-39.56	-25.00	14.56	225
6	15036.0	-46.08	5.50	13.23	Horizontal	-38.35	-25.00	13.35	45
7	17542.0	-45.60	5.70	12.15	Horizontal	-39.15	-25.00	14.15	90
8	20048.0	--	--	--	--	--	--	--	--
9	22554.0	--	--	--	--	--	--	--	--
10	25060.0	--	--	--	--	--	--	--	--
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 41 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	5186.0	-37.64	2.00	10.15	Horizontal	-29.49	-25.00	4.49	0
3	7779.0	-43.72	2.50	11.35	Horizontal	-34.87	-25.00	9.87	315
4	10372.0	-40.63	4.20	12.05	Horizontal	-32.78	-25.00	7.78	225
5	12965.0	-47.82	5.20	14.85	Horizontal	-38.17	-25.00	13.17	135
6	15558.0	-42.97	5.50	13.23	Horizontal	-35.24	-25.00	10.24	270
7	18151.0	--	--	--	--	--	--	--	--
8	20744.0	--	--	--	--	--	--	--	--
9	23337.0	--	--	--	--	--	--	--	--
10	25930.0	--	--	--	--	--	--	--	--
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 41 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	5341.9	-39.23	2.00	10.15	Horizontal	-31.08	-25.00	6.08	135
3	8013.4	-49.35	2.50	11.35	Horizontal	-40.50	-25.00	15.50	135
4	10684.5	-37.69	4.20	12.05	Horizontal	-29.84	-25.00	4.84	45
5	13400.0	-47.85	5.20	14.85	Horizontal	-38.20	-25.00	13.20	90
6	16080.0	-43.44	5.50	13.23	Horizontal	-35.71	-25.00	10.71	180
7	18760.0	--	--	--	--	--	--	--	--
8	21440.0	--	--	--	--	--	--	--	--
9	24120.0	--	--	--	--	--	--	--	--
10	26800.0	--	--	--	--	--	--	--	--

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.

6 Main Test Instruments

Name	Manufacturer	Type	Serial Number	Calibration Date	Expiration Date
Base Station Simulator	R&S	CMW500	113645	2018-05-20	2019-05-19
Power Splitter	Hua Xiang	SHX-GF2-2-13	10120101	/	/
Spectrum Analyzer	Key sight	N9010A	MY50210259	2018-05-20	2019-05-19
Signal Analyzer	R&S	FSV30	100815	2017-12-17	2018-12-16
Signal generator	R&S	SMB 100A	102594	2018-05-20	2019-05-19
EMI Test Receiver	R&S	ESCI	100948	2018-05-20	2019-05-19
Loop Antenna	SCHWARZBECK	FMZB1519	1519-047	2014-12-06	2019-12-05
Trilog Antenna	SCHWARZBECK	VUBL 9163	9163-201	2017-11-18	2020-11-17
Horn Antenna	R&S	HF907	100126	2014-12-06	2019-12-05
Horn Antenna	ETS-Lindgren	3160-09	00102643	2015-01-30	2020-01-29
Horn Antenna	STEATITE	QSH-SL-26-40-K-15	16779	2017-07-20	2019-07-19
Climatic Chamber	ESPEC	SU-242	93000506	2017-12-17	2020-12-16
RF Cable	Agilent	SMA 15cm	0001	/	/
Preamplifier	R&S	SCU18	102327	2018-05-20	2019-05-19
MOB COMMS DC SUPPLY	Keysight	66319D	MY43004105	2018-05-20	2019-05-19
Software	R&S	EMC32	V9.26.0	/	/

*****END OF REPORT *****

ANNEX A: EUT Appearance and Test Setup

A.1 EUT Appearance

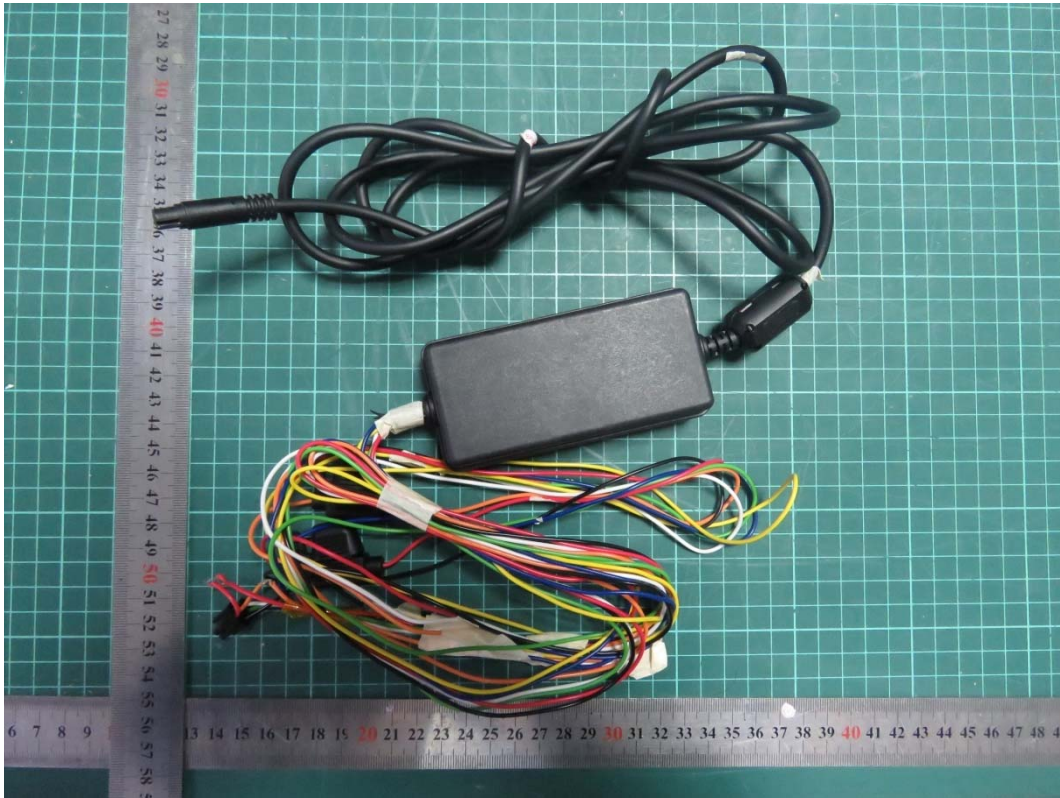


Front Side



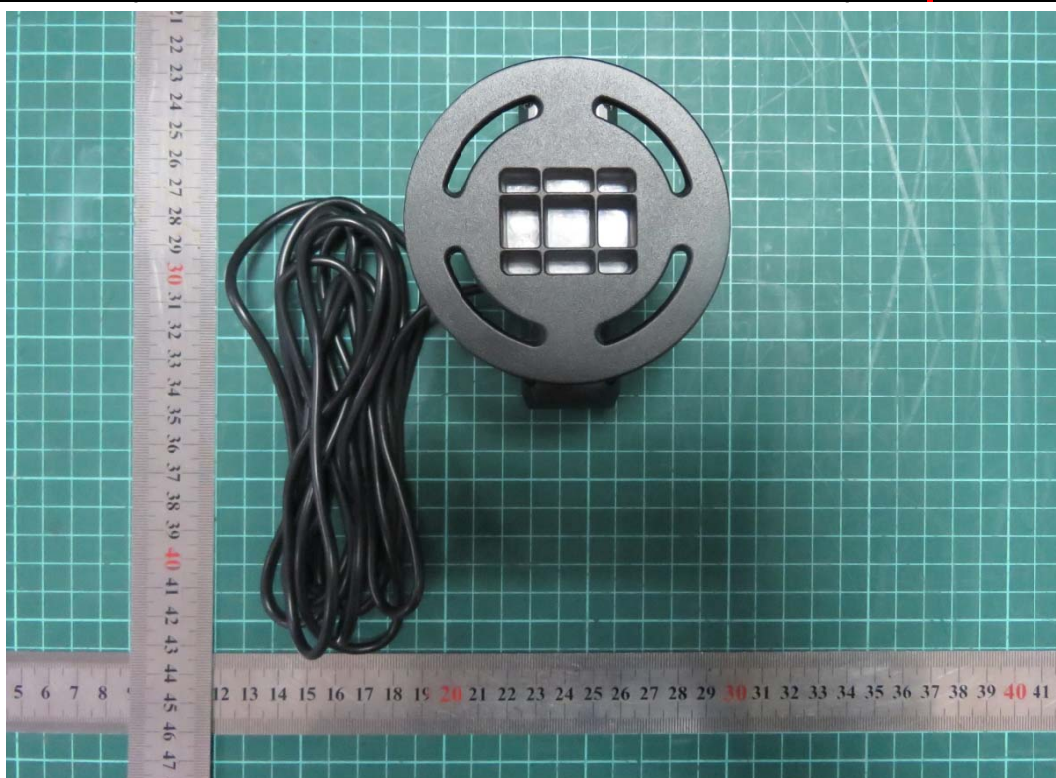
Back Side

a: EUT



b: AutoRing A2 Power Cable

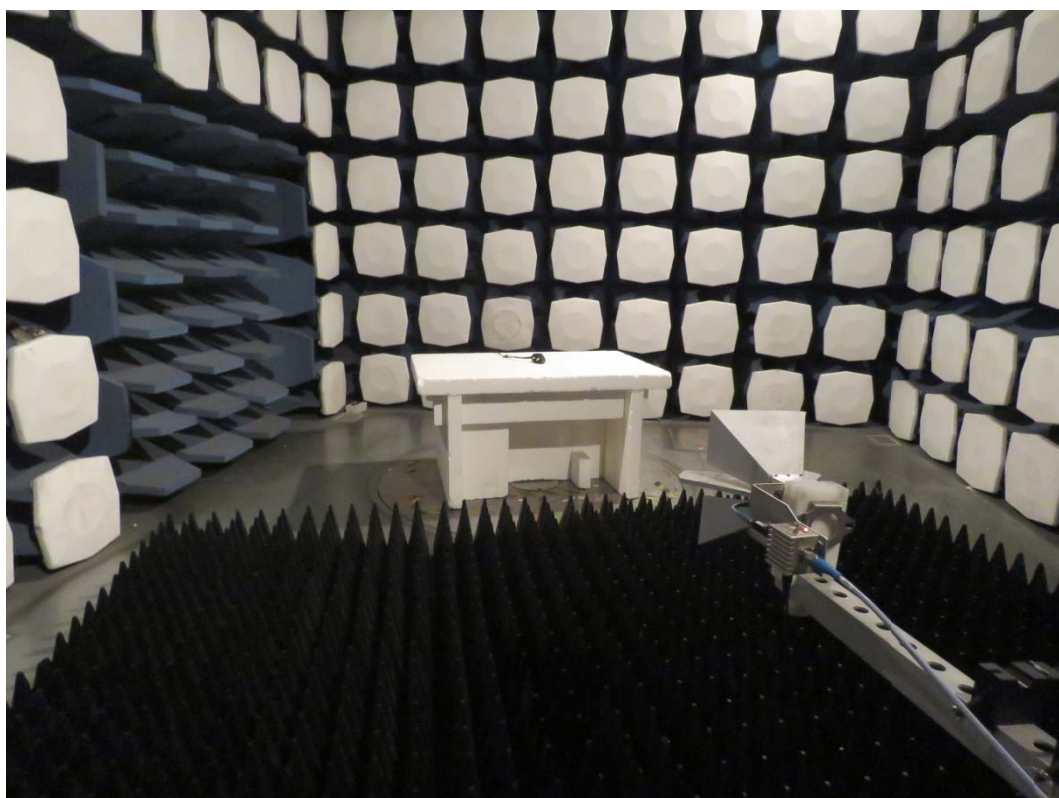




c:Camera

Picture 1 EUT and Accessory

A.2 Test Setup



Picture 2: Radiated Spurious Emissions Test setup