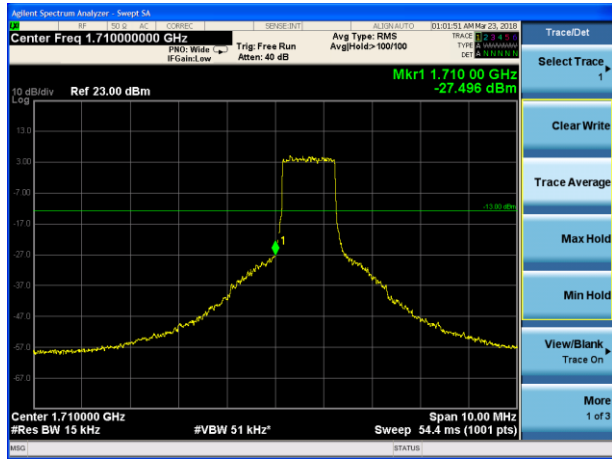
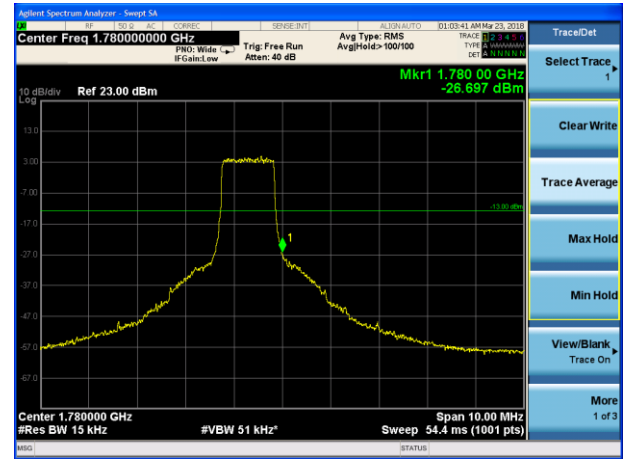




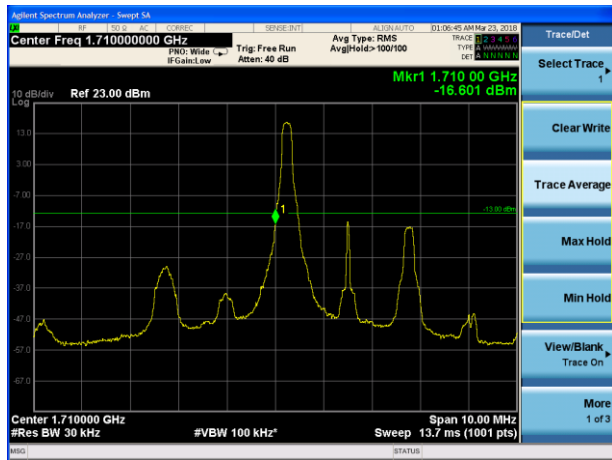
LTE Band 66 16QAM 1.4MHz CH-Low, 100%RB



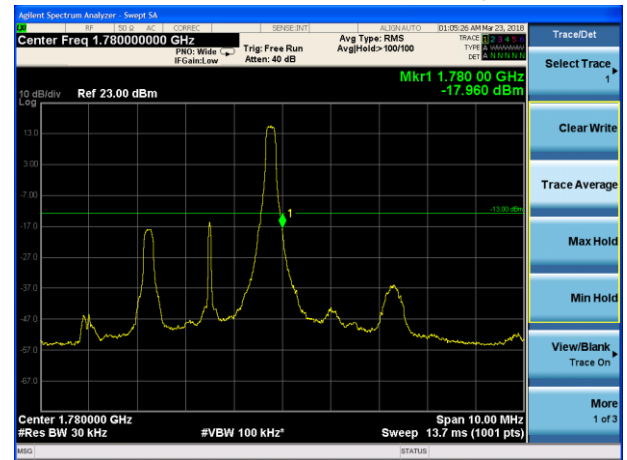
LTE Band 66 16QAM 1.4MHz CH-High, 100%RB



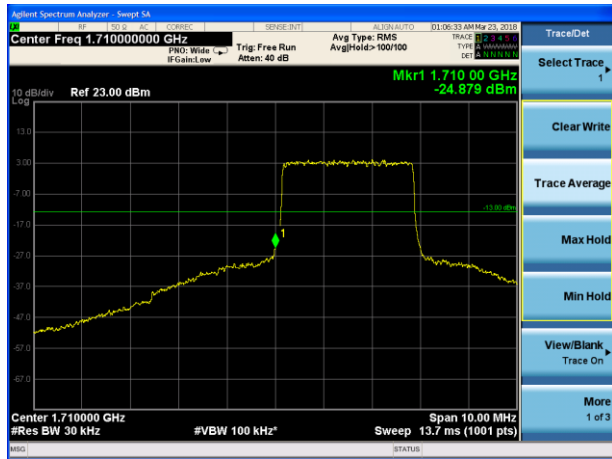
LTE Band 66 16QAM 3MHz CH-Low, 1 RB



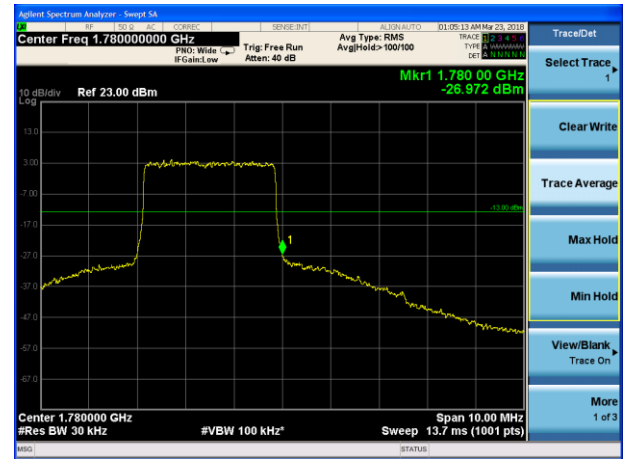
LTE Band 66 16QAM 3MHz CH-High, 1 RB



LTE Band 66 16QAM 3MHz CH-Low, 100%RB

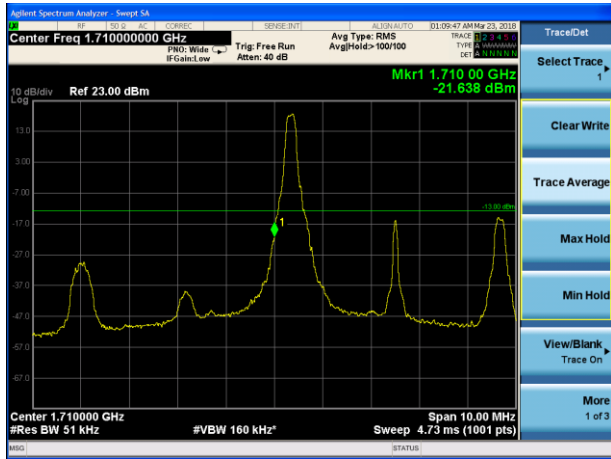


LTE Band 66 16QAM 3MHz CH-High, 100%RB

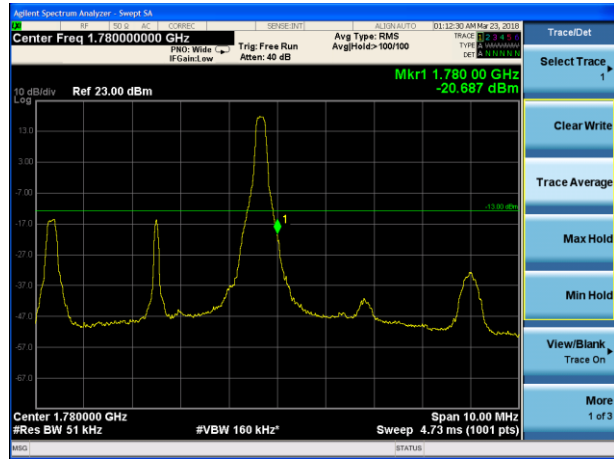




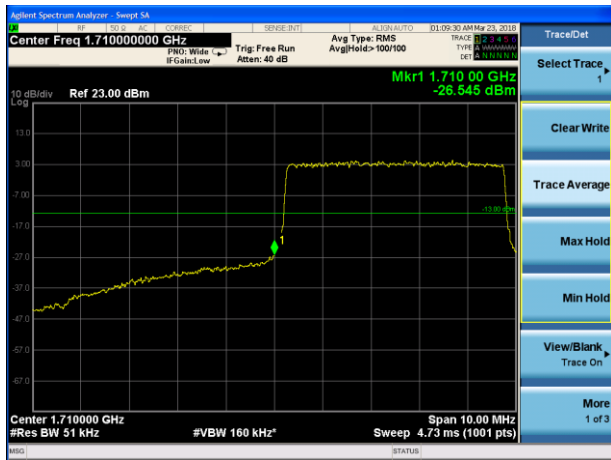
LTE Band 66 16QAM 5MHz CH-Low, 1 RB



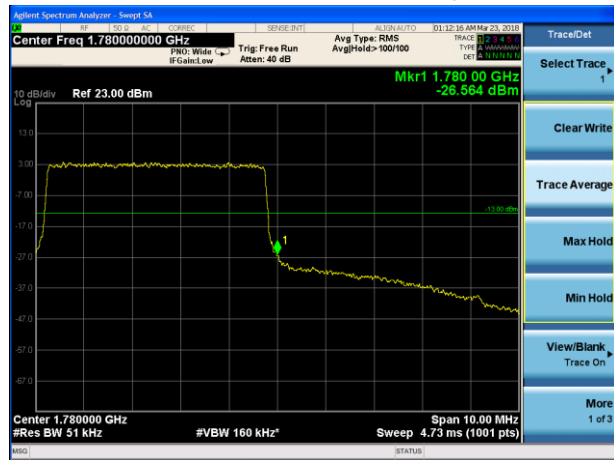
LTE Band 66 16QAM 5MHz CH-High, 1 RB



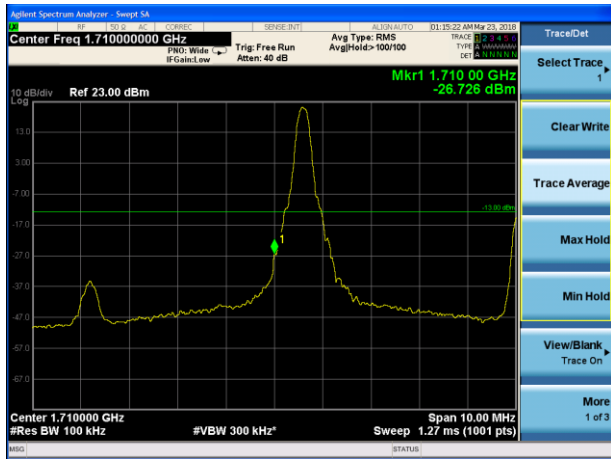
LTE Band 66 16QAM 5MHz CH-Low, 100%RB



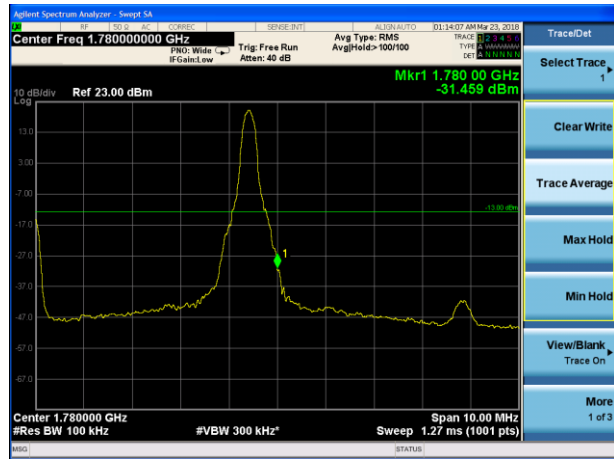
LTE Band 66 16QAM 5MHz CH-High, 100%RB



LTE Band 66 16QAM 10MHz CH-Low, 1 RB

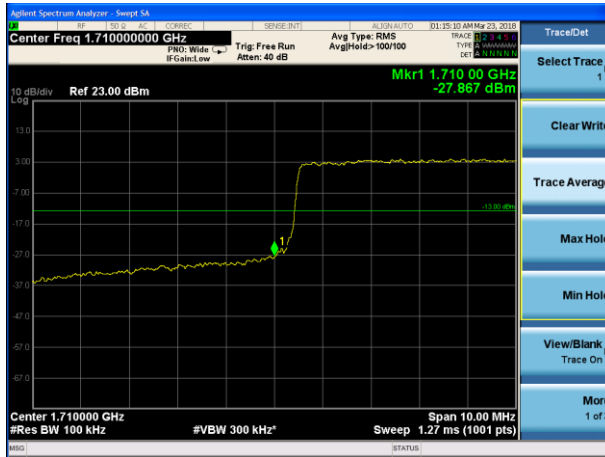


LTE Band 66 16QAM 10MHz CH-High, 1 RB

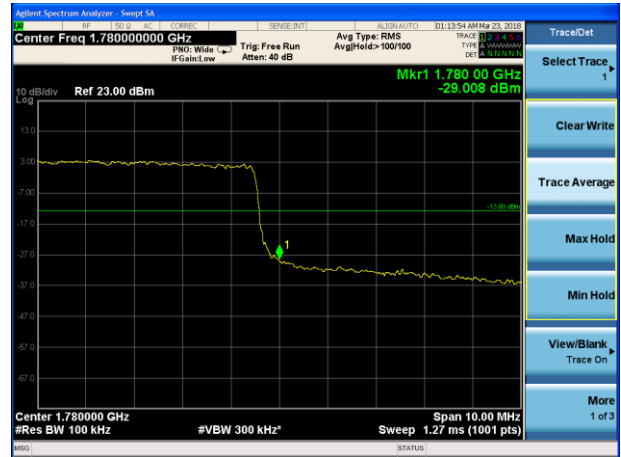




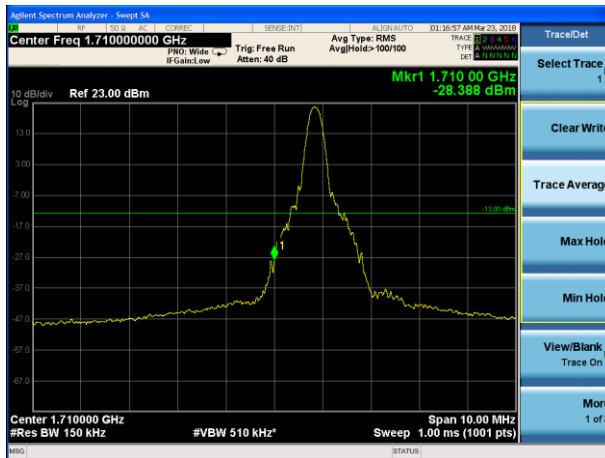
LTE Band 66 16QAM 10MHz CH-Low, 100%RB



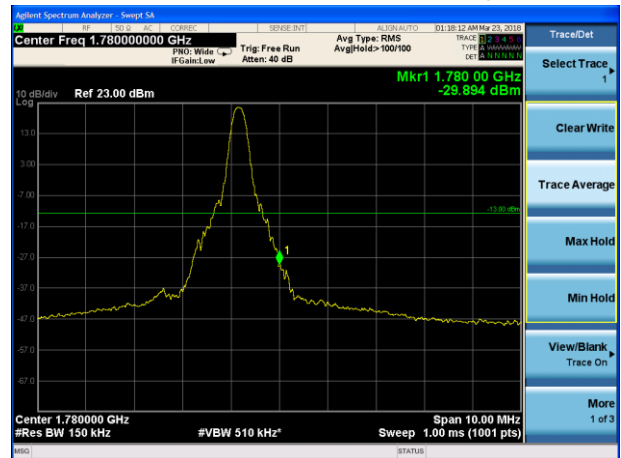
LTE Band 66 16QAM 10MHz CH-High, 100%RB



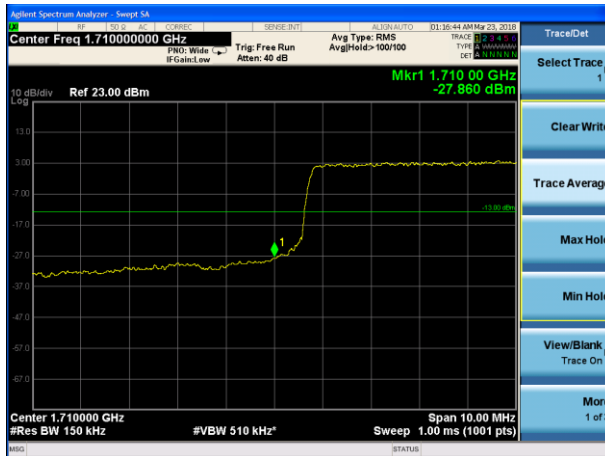
LTE Band 66 16QAM 15MHz CH-Low, 1 RB



LTE Band 66 16QAM 15MHz CH-High, 1 RB



LTE Band 66 16QAM 15MHz CH-Low, 100%RB

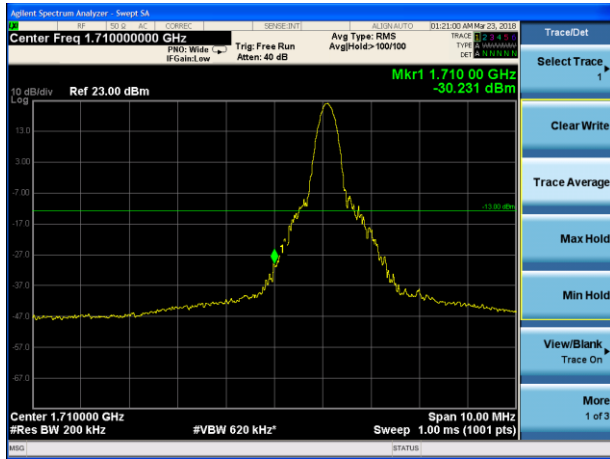


LTE Band 66 16QAM 15MHz CH-High, 100%RB

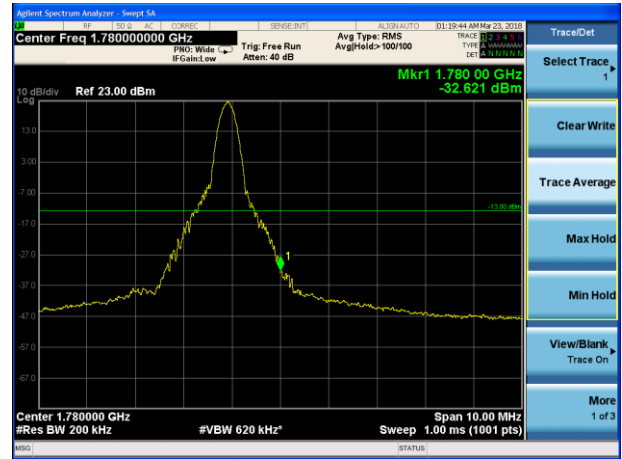




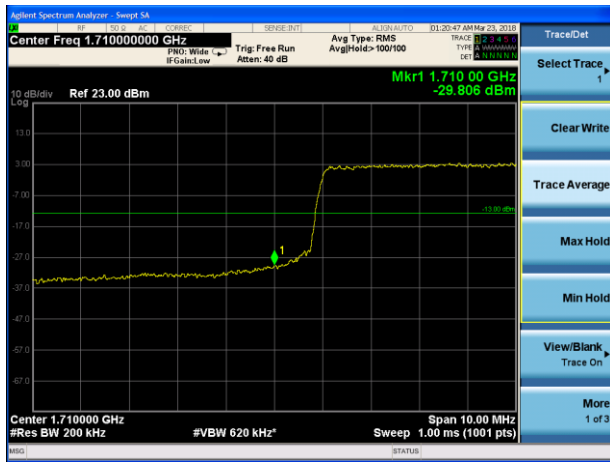
### LTE Band 66 16QAM 20MHz CH-Low, 1 RB



### LTE Band 66 16QAM 20MHz CH-High, 1 RB



### LTE Band 66 16QAM 20MHz CH-Low, 100%RB

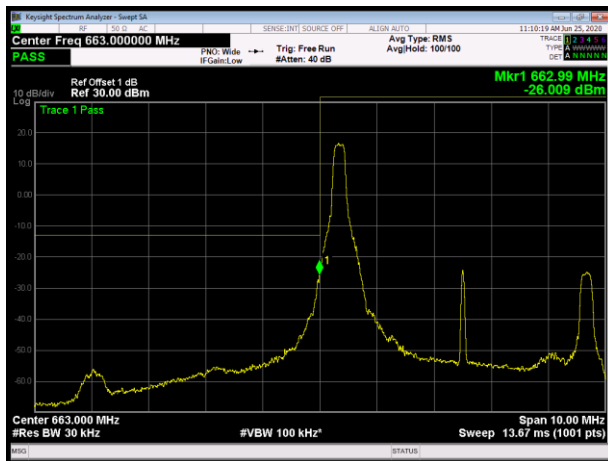


### LTE Band 66 16QAM 20MHz CH-High, 100%RB

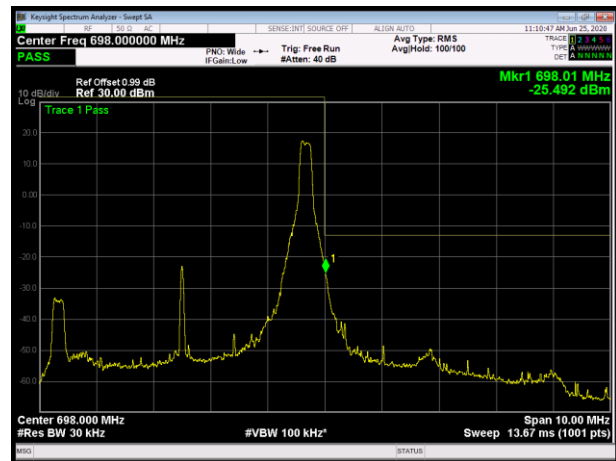




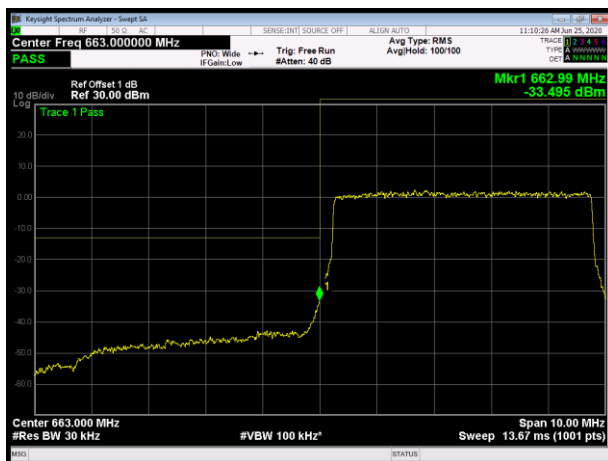
### LTE Band 71 QPSK 5MHz CH-Low, 1 RB



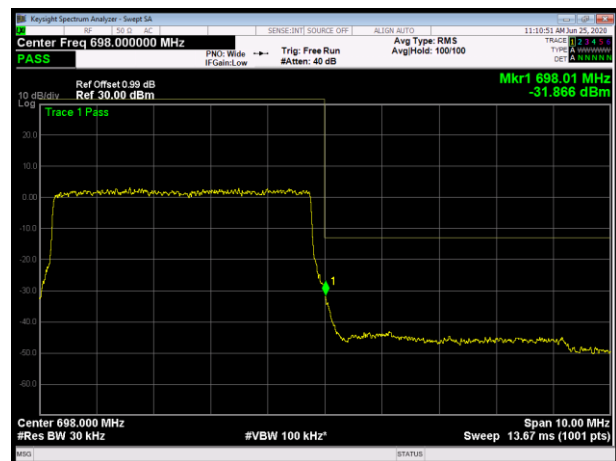
### LTE Band 71 QPSK 5MHz CH-High, 1 RB



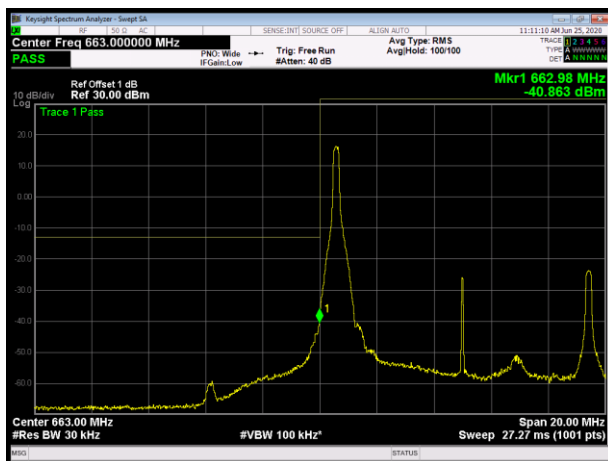
### LTE Band 71 QPSK 5MHz CH-Low, 100%RB



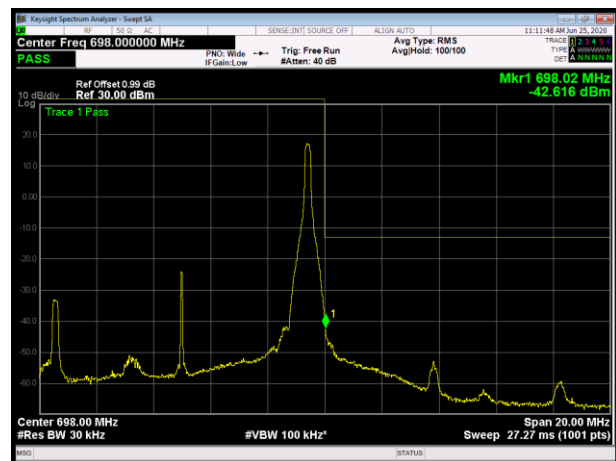
### LTE Band 71 QPSK 5MHz CH-High, 100%RB



### LTE Band 71 QPSK 10MHz CH-Low, 1 RB

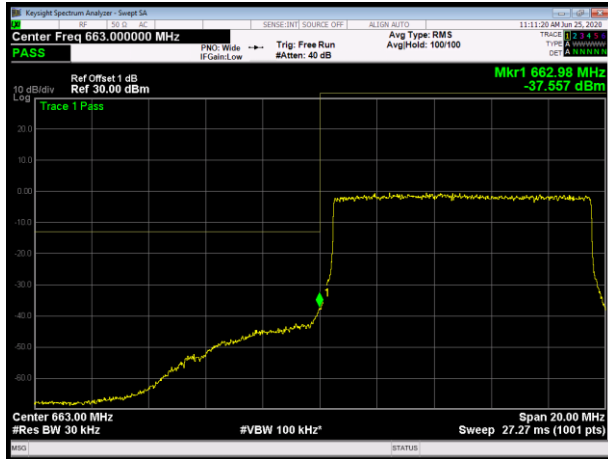


### LTE Band 71 QPSK 10MHz CH-High, 1 RB

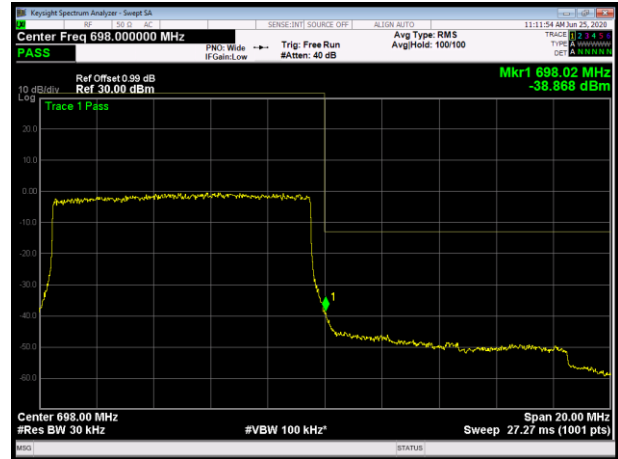




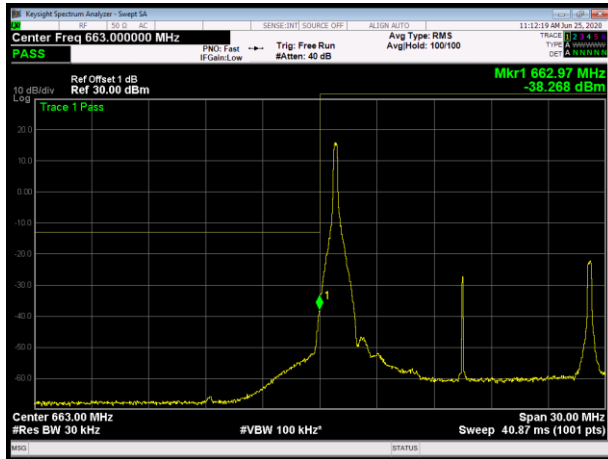
LTE Band 71 QPSK 10MHz CH-Low, 100%RB



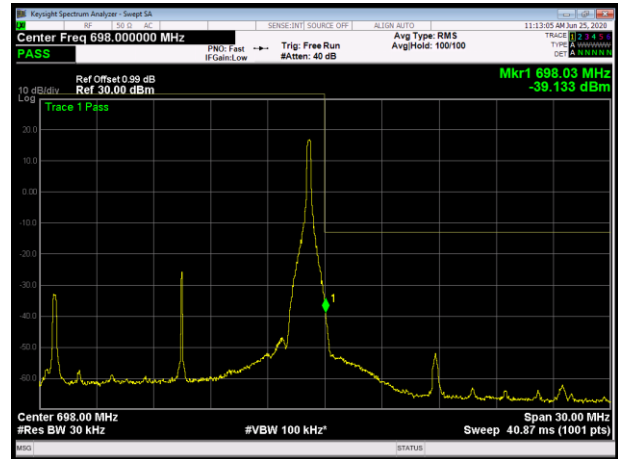
LTE Band 71 QPSK 10MHz CH-High, 100%RB



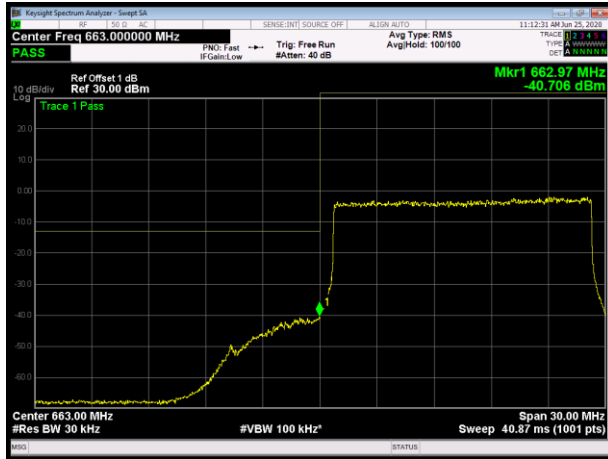
LTE Band 71 QPSK 15MHz CH-Low, 1 RB



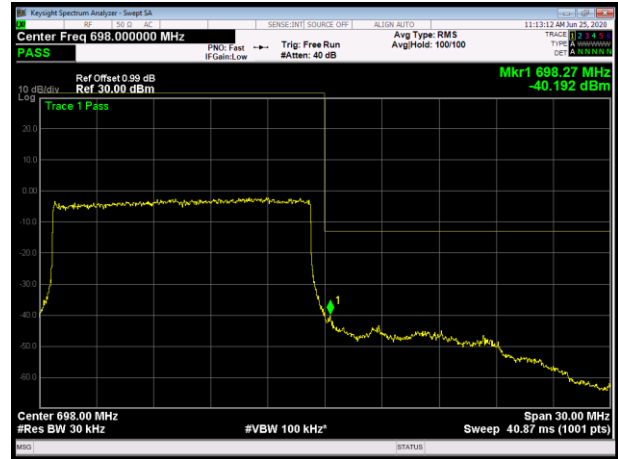
LTE Band 71 QPSK 15MHz CH-High, 1 RB



LTE Band 71 QPSK 15MHz CH-Low, 100%RB

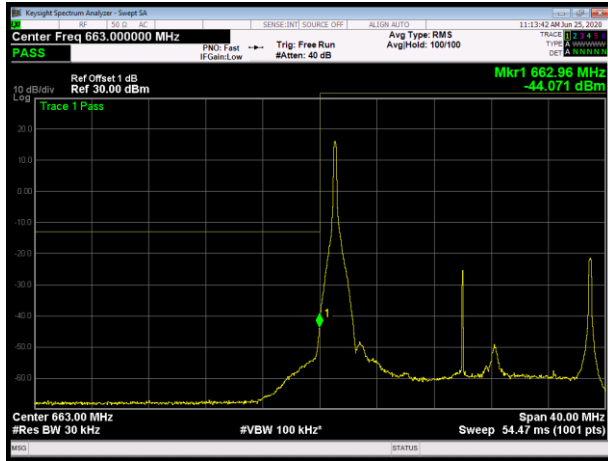


LTE Band 71 QPSK 15MHz CH-High, 100%RB

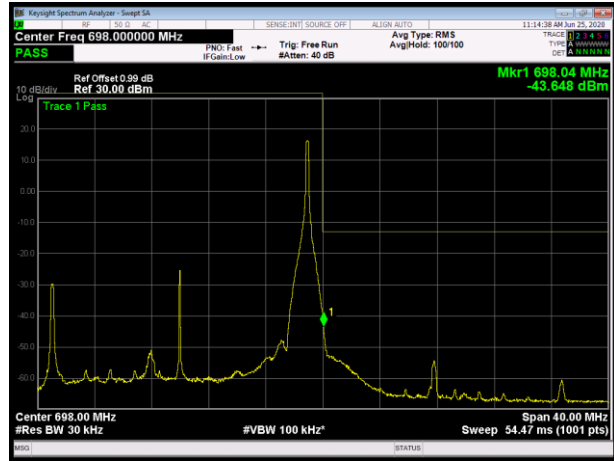




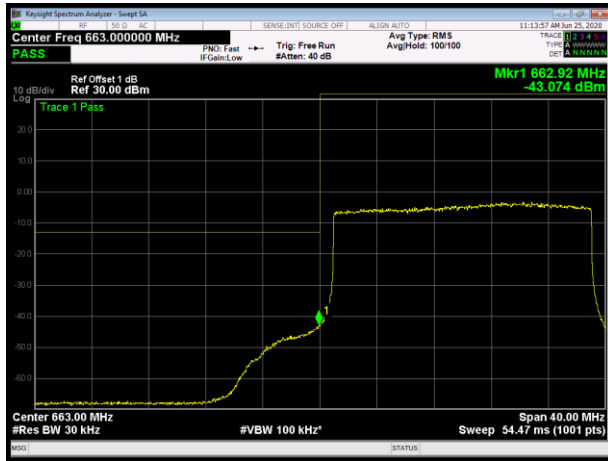
LTE Band 71 QPSK 20MHz CH-Low, 1 RB



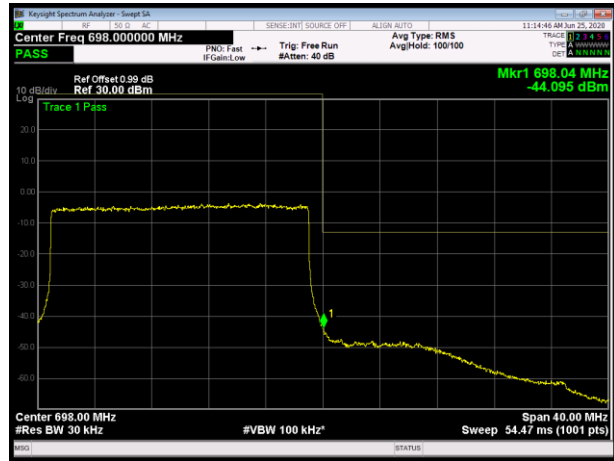
LTE Band 71 QPSK 20MHz CH-High, 1 RB



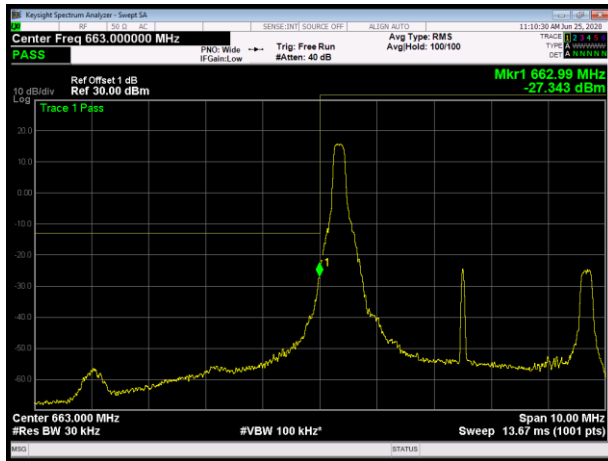
LTE Band 71 QPSK 20MHz CH-Low, 100%RB



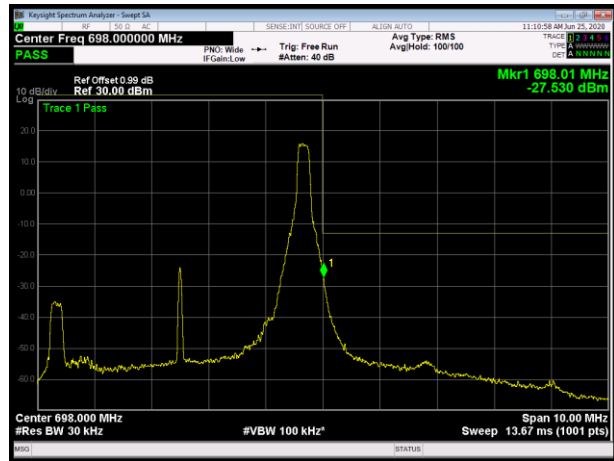
LTE Band 71 QPSK 20MHz CH-High, 100%RB



LTE Band 71 16QAM 5MHz CH-Low, 1 RB

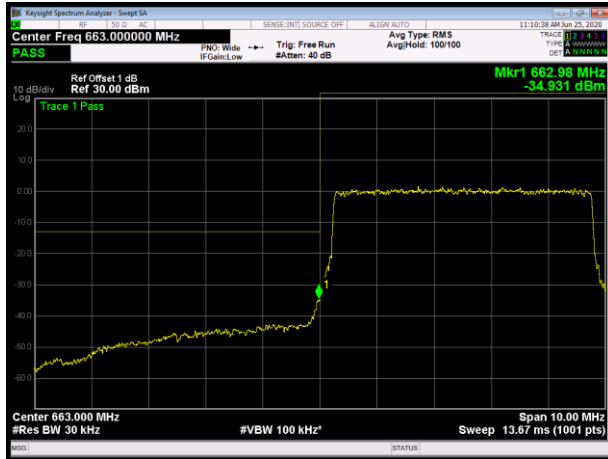


LTE Band 71 16QAM 5MHz CH-High, 1 RB

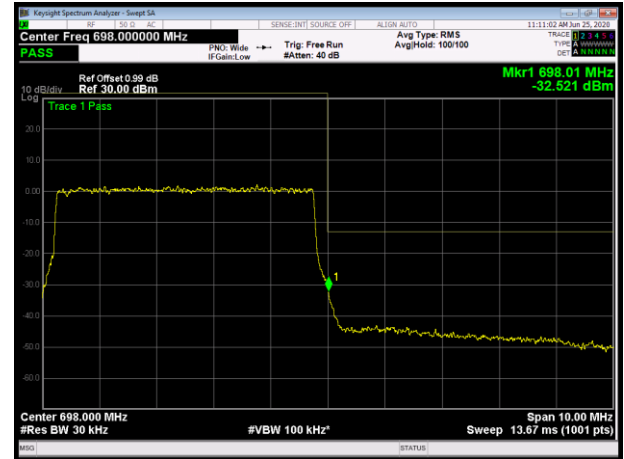




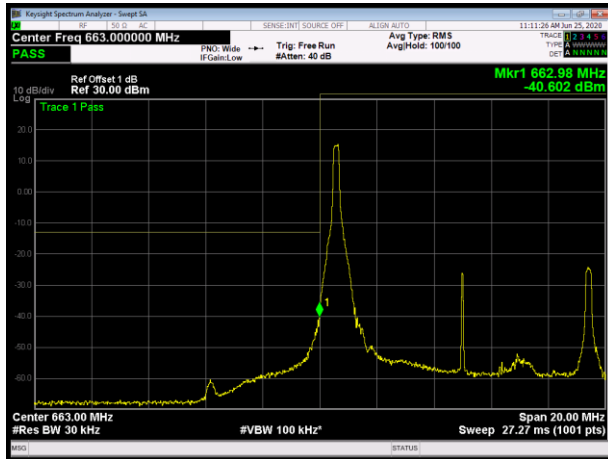
LTE Band 71 16QAM 5MHz CH-Low, 100%RB



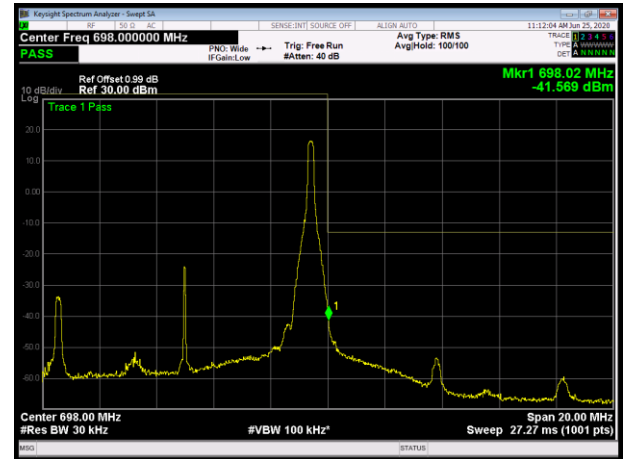
LTE Band 71 16QAM 5MHz CH-High, 100%RB



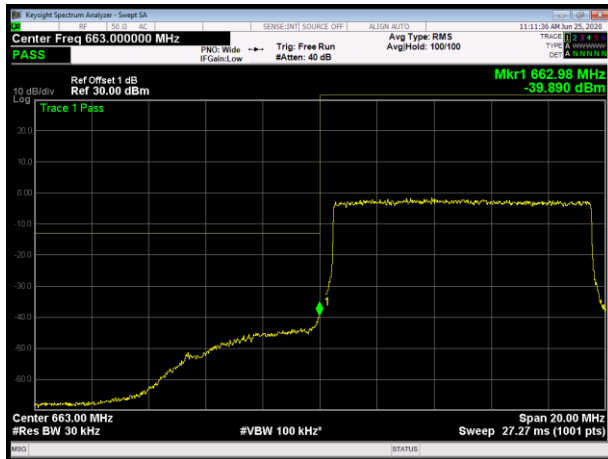
LTE Band 71 16QAM 10MHz CH-Low, 1 RB



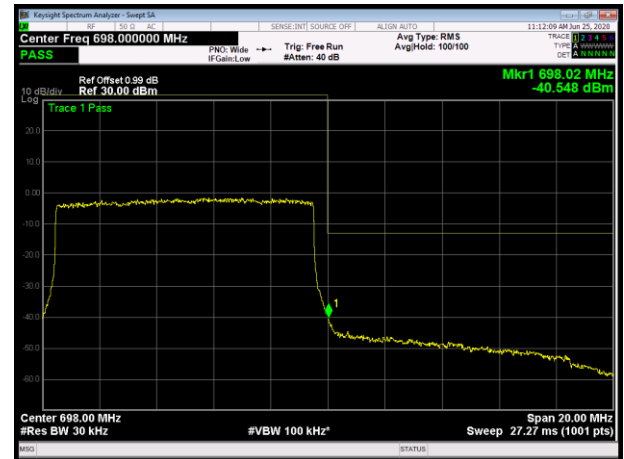
LTE Band 71 16QAM 10MHz CH-High, 1 RB



LTE Band 71 16QAM 10MHz CH-Low, 100%RB



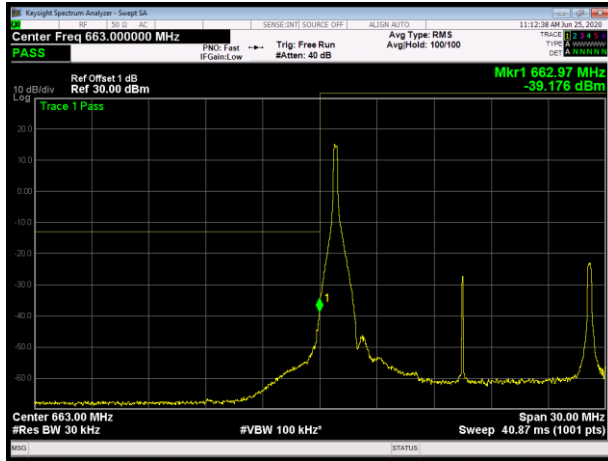
LTE Band 71 16QAM 10MHz CH-High, 100%RB



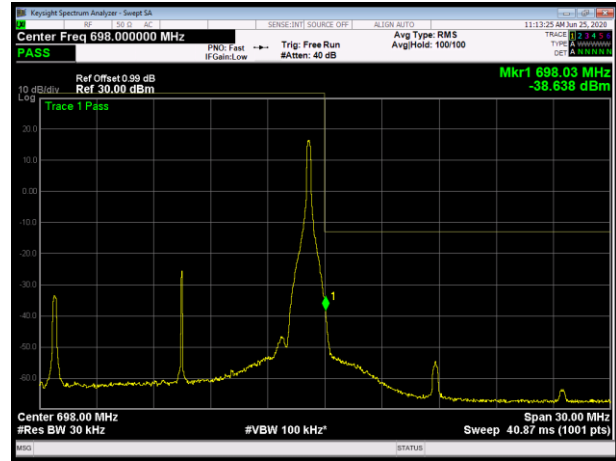




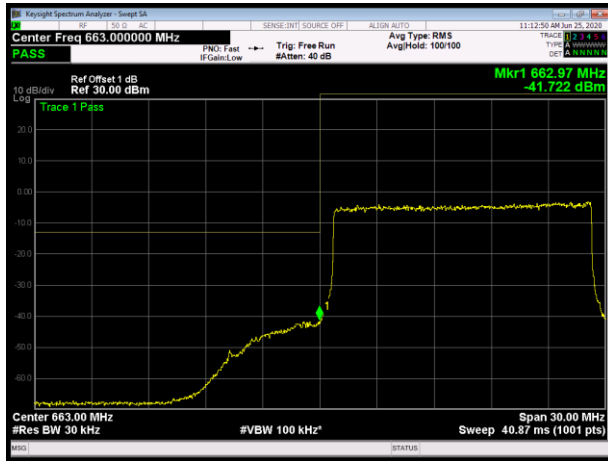
LTE Band 71 16QAM 15MHz CH-Low, 1 RB



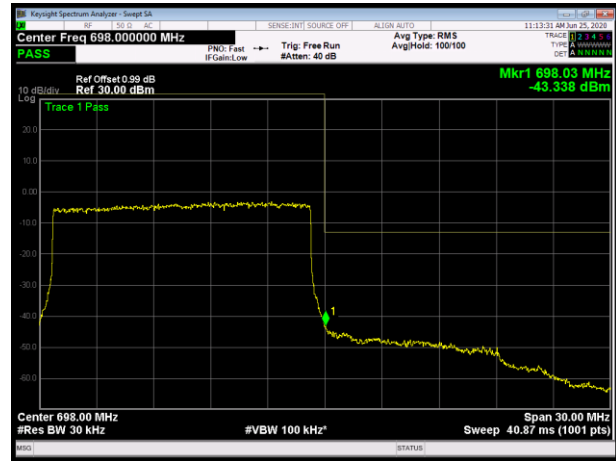
LTE Band 71 16QAM 15MHz CH-High, 1 RB



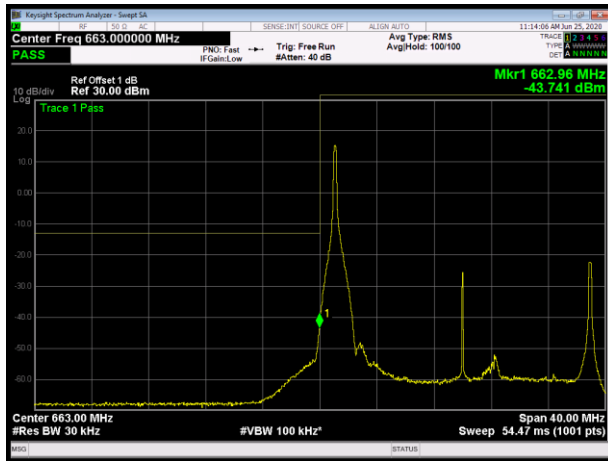
LTE Band 71 16QAM 15MHz CH-Low, 100%RB



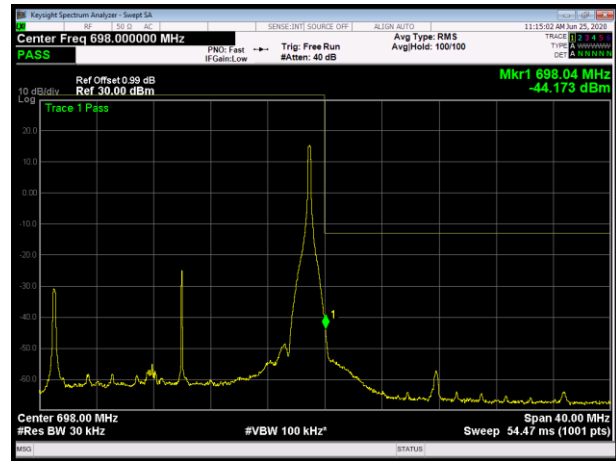
LTE Band 71 16QAM 15MHz CH-High, 100%RB



LTE Band 71 16QAM 20MHz CH-Low, 1 RB



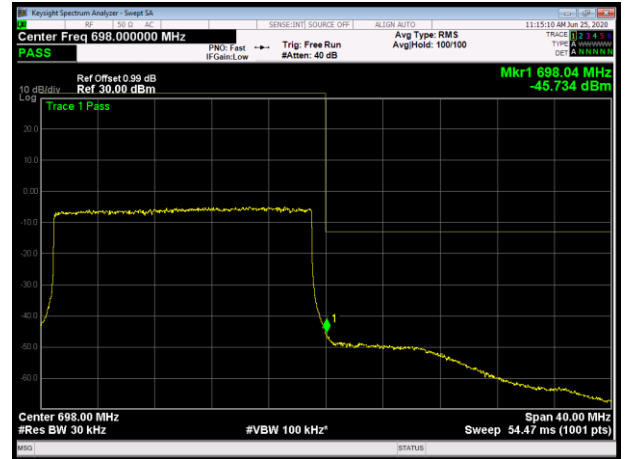
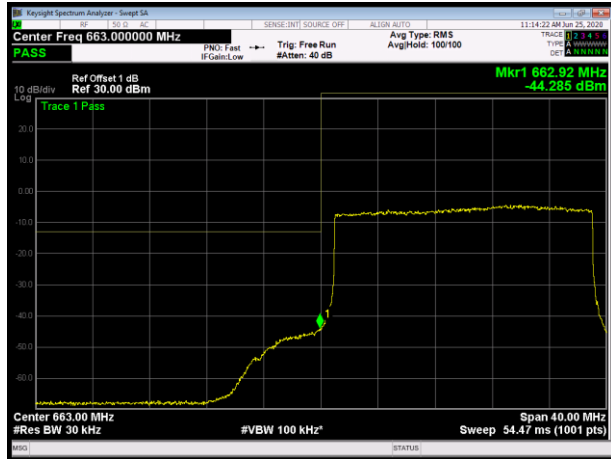
LTE Band 71 16QAM 20MHz CH-High, 1 RB





LTE Band 71 16QAM 20MHz CH-Low, 100%RB

LTE Band 71 16QAM 20MHz CH-High, 100%RB



### 5.4 Peak-to-Average Power Ratio (PAPR)

#### Ambient condition

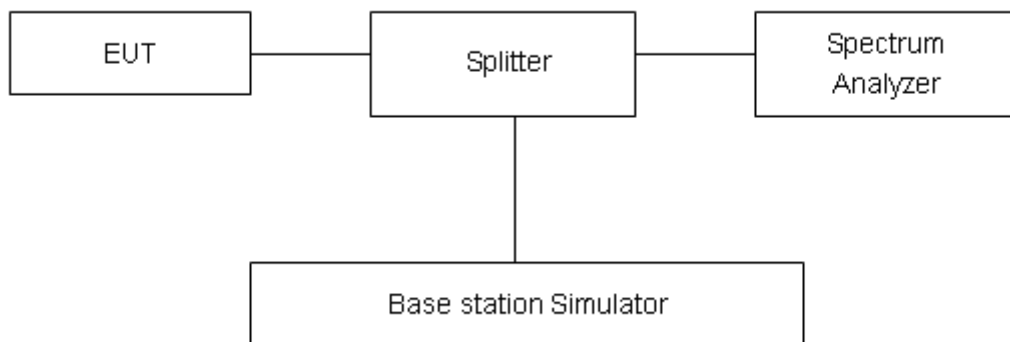
Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

#### Methods of Measurement

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

$$PAPR (dB) = PPk (dBm) - PAvg (dBm).$$

#### Test Setup



#### Limits

Rule Part 27.50(d)(5) Equipment employed must be authorized in accordance with the provisions of 24.51. Power measurements for transmissions by stations authorized under this section may be made either in accordance with a Commission-approved average power technique or in compliance with paragraph (d)(6) of this section. In measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

#### Measurement Uncertainty

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



## Test Results

LTE Band 4								
Modulation	Bandwidth (MHz)	Channel	Frequency (MHz)	Peak (dBm)	Avg (dBm)	PAPR (dB)	Limit (dB)	Conclusion
QPSK	1.4	19957	1710.7	26.87	22.75	4.12	≤13	PASS
		20175	1732.5	27.44	22.81	4.63	≤13	PASS
		20393	1754.3	27.05	22.62	4.43	≤13	PASS
	3	19965	1711.5	27.26	22.86	4.40	≤13	PASS
		20175	1732.5	27.61	22.90	4.71	≤13	PASS
		20385	1753.5	27.63	23.03	4.60	≤13	PASS
	5	19975	1712.5	27.11	22.84	4.27	≤13	PASS
		20175	1732.5	27.59	22.89	4.70	≤13	PASS
		20375	1752.5	27.42	23.01	4.41	≤13	PASS
	10	20000	1715	27.09	22.92	4.17	≤13	PASS
		20175	1732.5	27.21	22.91	4.30	≤13	PASS
		20350	1750	27.21	23.05	4.16	≤13	PASS
	15	20025	1717.5	27.25	22.90	4.35	≤13	PASS
		20175	1732.5	27.48	22.87	4.61	≤13	PASS
		20325	1747.5	27.45	23.00	4.45	≤13	PASS
	20	20050	1720	27.26	22.87	4.39	≤13	PASS
		20175	1732.5	27.37	22.82	4.55	≤13	PASS
		20300	1745	27.40	22.96	4.44	≤13	PASS
16QAM	1.4	19957	1710.7	26.65	21.68	4.97	≤13	PASS
		20175	1732.5	26.90	21.53	5.37	≤13	PASS
		20393	1754.3	26.97	21.76	5.21	≤13	PASS
	3	19965	1711.5	26.99	21.81	5.18	≤13	PASS
		20175	1732.5	27.32	21.82	5.50	≤13	PASS
		20385	1753.5	27.43	22.01	5.42	≤13	PASS
	5	19975	1712.5	26.95	21.79	5.16	≤13	PASS
		20175	1732.5	27.27	21.78	5.49	≤13	PASS
		20375	1752.5	27.20	21.96	5.24	≤13	PASS
	10	20000	1715	26.81	21.82	4.99	≤13	PASS
		20175	1732.5	26.93	21.83	5.10	≤13	PASS
		20350	1750	26.98	22.00	4.98	≤13	PASS
	15	20025	1717.5	26.96	21.79	5.17	≤13	PASS
		20175	1732.5	27.20	21.78	5.42	≤13	PASS
		20325	1747.5	27.19	21.96	5.23	≤13	PASS
	20	20050	1720	27.00	21.77	5.23	≤13	PASS
		20175	1732.5	27.13	21.74	5.39	≤13	PASS
		20300	1745	27.22	21.93	5.29	≤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	27.87	22.95	4.92	≤13	PASS
		23095	707.5	28.09	23.07	5.02	≤13	PASS
		23173	715.3	27.64	23.10	4.54	≤13	PASS
	3	23025	700.5	27.92	22.89	5.03	≤13	PASS
		23095	707.5	28.19	23.10	5.09	≤13	PASS
		23165	714.5	27.91	23.13	4.78	≤13	PASS
	5	23035	701.5	27.90	22.87	5.03	≤13	PASS
		23095	707.5	28.17	23.09	5.08	≤13	PASS
		23155	713.5	27.86	23.11	4.75	≤13	PASS
	10	23060	704	27.96	22.90	5.06	≤13	PASS
		23095	707.5	28.00	23.02	4.98	≤13	PASS
		23130	711	27.86	23.06	4.80	≤13	PASS
16QAM	1.4	23017	699.7	27.78	22.07	5.71	≤13	PASS
		23095	707.5	27.97	22.11	5.86	≤13	PASS
		23173	715.3	27.49	22.17	5.32	≤13	PASS
	3	23025	700.5	27.93	22.10	5.83	≤13	PASS
		23095	707.5	28.08	22.15	5.93	≤13	PASS
		23165	714.5	27.80	22.20	5.60	≤13	PASS
	5	23035	701.5	27.91	22.08	5.83	≤13	PASS
		23095	707.5	28.01	22.11	5.90	≤13	PASS
		23155	713.5	27.68	22.15	5.53	≤13	PASS
	10	23060	704	27.93	22.06	5.87	≤13	PASS
		23095	707.5	27.89	22.07	5.82	≤13	PASS
		23130	711	27.78	22.12	5.66	≤13	PASS

LTE Band 66								
Modulation	Bandwidth (MHz)	Channel	Frequency (MHz)	Peak (dBm)	Avg (dBm)	PAPR (dB)	Limit (dB)	Conclusion
QPSK	1.4	131979	1710.7	26.94	23.01	3.93	≤13	PASS
		132322	1745	27.28	22.85	4.43	≤13	PASS
		132665	1779.3	27.19	22.95	4.24	≤13	PASS
	3	131987	1711.5	27.20	23.04	4.16	≤13	PASS
		132322	1745	27.54	22.89	4.65	≤13	PASS
		132657	1778.5	27.31	22.98	4.33	≤13	PASS
	5	131997	1712.5	27.12	23.02	4.10	≤13	PASS
		132322	1745	27.42	22.88	4.54	≤13	PASS
		132647	1777.5	27.22	22.96	4.26	≤13	PASS



	10	132022	1715	27.32	23.10	4.22	≤13	PASS
		132322	1745	27.42	22.90	4.52	≤13	PASS
		132622	1775	27.26	23.00	4.26	≤13	PASS
	15	132047	1717.5	27.25	23.08	4.17	≤13	PASS
		132322	1745	27.26	22.86	4.40	≤13	PASS
		132597	1772.5	27.02	22.95	4.07	≤13	PASS
	20	132072	1720	27.33	23.05	4.28	≤13	PASS
		132322	1745	27.28	22.81	4.47	≤13	PASS
		132572	1770	27.17	22.91	4.26	≤13	PASS
16QAM	1.4	131979	1710.7	26.66	22.06	4.60	≤13	PASS
		132322	1745	27.24	22.02	5.22	≤13	PASS
		132665	1779.3	27.11	22.02	5.09	≤13	PASS
	3	131987	1711.5	27.05	22.09	4.96	≤13	PASS
		132322	1745	27.55	22.06	5.49	≤13	PASS
		132657	1778.5	27.24	22.05	5.19	≤13	PASS
	5	131997	1712.5	26.79	22.07	4.72	≤13	PASS
		132322	1745	27.35	22.02	5.33	≤13	PASS
		132647	1777.5	26.98	22.00	4.98	≤13	PASS
	10	132022	1715	27.08	22.10	4.98	≤13	PASS
		132322	1745	27.40	22.07	5.33	≤13	PASS
		132622	1775	27.03	22.04	4.99	≤13	PASS
	15	132047	1717.5	26.99	22.07	4.92	≤13	PASS
		132322	1745	27.22	22.02	5.20	≤13	PASS
		132597	1772.5	26.90	22.00	4.90	≤13	PASS
	20	132072	1720	27.16	22.05	5.11	≤13	PASS
		132322	1745	27.27	21.98	5.29	≤13	PASS
		132572	1770	27.04	21.97	5.07	≤13	PASS

LTE Band 71								
Modulation	Bandwidth (MHz)	Channel	Frequency (MHz)	Peak (dBm)	Avg (dBm)	PAPR (dB)	Limit (dB)	Conclusion
QPSK	5	133147	665.5	26.96	22.31	4.65	≤13	PASS
		133297	680.5	27.32	22.32	5.00	≤13	PASS
		133447	695.5	27.59	22.44	5.15	≤13	PASS
	10	133172	668	27.35	22.39	4.96	≤13	PASS
		133297	680.5	27.36	22.34	5.02	≤13	PASS
		133422	693	27.61	22.48	5.13	≤13	PASS
	15	133197	670.5	27.51	22.37	5.14	≤13	PASS
		133297	680.5	27.46	22.30	5.16	≤13	PASS
		133397	690.5	27.63	22.43	5.20	≤13	PASS



	20	133222	673	27.24	22.34	4.90	≤13	PASS
		133322	683	27.40	22.25	5.15	≤13	PASS
		133372	688	27.46	22.39	5.07	≤13	PASS
16QAM	5	133147	665.5	26.64	21.26	5.38	≤13	PASS
		133297	680.5	27.00	21.21	5.79	≤13	PASS
		133447	695.5	27.29	21.39	5.90	≤13	PASS
	10	133172	668	27.05	21.29	5.76	≤13	PASS
		133297	680.5	27.10	21.26	5.84	≤13	PASS
		133422	693	27.40	21.43	5.97	≤13	PASS
	15	133197	670.5	27.16	21.26	5.90	≤13	PASS
		133297	680.5	27.10	21.21	5.89	≤13	PASS
		133397	690.5	27.38	21.39	5.99	≤13	PASS
	20	133222	673	27.03	21.24	5.79	≤13	PASS
		133322	683	27.11	21.17	5.94	≤13	PASS
		133372	688	27.28	21.36	5.92	≤13	PASS

## 5.5 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 +55°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 +55°C. Allow at least 1.5 hours at each temperature, un-powered, before making measurements.

#### Frequency Stability (Voltage Variation)

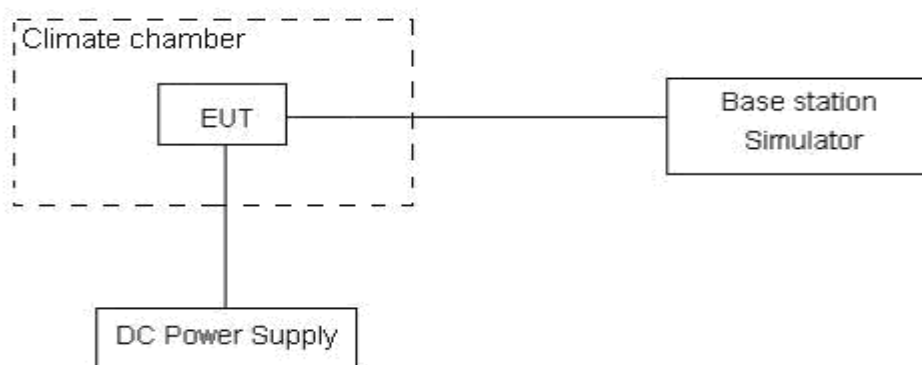
The frequency stability shall be measured with variation of primary supply voltage as follows:

(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 3.4 V and 4.35 V, with a nominal voltage of 3.8V.

### Test setup



### Limits

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

### 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

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	1710.6483	1754.4247	-6.32	-0.00365
Extreme (55°C)		1710.6483	1754.4248	-1.19	-0.00069
Extreme (50°C)		1710.6483	1754.4248	1.26	0.00073
Extreme (40°C)		1710.6483	1754.4248	-4.44	-0.00256
Extreme (30°C)		1710.6483	1754.4248	-7.30	-0.00421
Extreme (20°C)		1710.6483	1754.4248	-4.80	-0.00277
Extreme (10C)		1710.6483	1754.4248	7.61	0.00439
Extreme (0°C)		1710.6483	1754.4248	4.91	0.00283
Extreme (-10°C)		1710.6483	1754.4248	2.41	0.00139
Extreme (-20°C)		1710.6483	1754.4248	-0.97	-0.00056
Extreme (-30°C)		1710.6483	1754.4248	-2.95	-0.00170
25°C		LV	1710.6483	1754.4248	-1.41
	HV	1710.6483	1754.4248	-7.41	-0.00428
(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	1710.6407	1754.5132	-3.13	-0.00181
Extreme (55°C)		1710.6407	1754.5132	-3.83	-0.00221
Extreme (50°C)		1710.6407	1754.5132	0.16	0.00009
Extreme (40°C)		1710.6407	1754.5132	2.79	0.00161
Extreme (30°C)		1710.6407	1754.5132	-3.41	-0.00197
Extreme (20°C)		1710.6407	1754.5132	-5.07	-0.00293
Extreme (10C)		1710.6407	1754.5132	0.71	0.00041
Extreme (0°C)		1710.6407	1754.5132	-5.06	-0.00292
Extreme (-10°C)		1710.6407	1754.5132	6.38	0.00368
Extreme (-20°C)		1710.6407	1754.5132	1.58	0.00091
Extreme (-30°C)		1710.6407	1754.5132	2.39	0.00138
25°C		LV	1710.6407	1754.5132	3.67
	HV	1710.6407	1754.5132	1.66	0.00096



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	699.2514	715.7242	1.44	0.00204
Extreme (55°C)		699.2514	715.7242	1.18	0.00167
Extreme (50°C)		699.2514	715.7242	-2.66	-0.00376
Extreme (40°C)		699.2514	715.7242	1.04	0.00147
Extreme (30°C)		699.2514	715.7242	-2.09	-0.00295
Extreme (20°C)		699.2514	715.7242	4.14	0.00585
Extreme (10C)		699.2514	715.7242	-3.28	-0.00464
Extreme (0°C)		699.2514	715.7242	2.17	0.00307
Extreme (-10°C)		699.2514	715.7242	0.94	0.00133
Extreme (-20°C)		699.2514	715.7242	2.29	0.00324
Extreme (-30°C)		699.2514	715.7242	-6.81	-0.00963
25°C		LV	699.2514	715.7242	-2.77
	HV	699.2514	715.7242	-6.34	-0.00896
(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	699.3142	715.6829	-7.96	-0.01125
Extreme (55°C)		699.3142	715.6829	-7.00	-0.00989
Extreme (50°C)		699.3142	715.6829	-1.92	-0.00271
Extreme (40°C)		699.3142	715.6829	-7.90	-0.01117
Extreme (30°C)		699.3142	715.6829	-7.39	-0.01045
Extreme (20°C)		699.3142	715.6829	-1.47	-0.00208
Extreme (10C)		699.3142	715.6829	-8.30	-0.01173
Extreme (0°C)		699.3142	715.6829	-10.22	-0.01445
Extreme (-10°C)		699.3142	715.6829	-3.64	-0.00514
Extreme (-20°C)		699.3142	715.6829	-0.06	-0.00008
Extreme (-30°C)		699.3142	715.6829	0.08	0.00011
25°C		LV	699.3142	715.6829	-6.01
	HV	699.3142	715.6829	1.30	0.00184



LTE Band 66					
(QPSK, 20MHz BANDWIDTH)					
Condition		1710	1780	Delta(Hz)	Frequency Stability(ppm)
Temperature	Voltage	F low@-13dBm(MHz)	F high@-13dBm(MHz)		
Normal (25°C)	Normal	1710.3418	1779.6721	3.51	0.00201
Extreme (55°C)		1710.3418	1779.6721	4.90	0.00281
Extreme (50°C)		1710.3418	1779.6721	-7.62	-0.00437
Extreme (40°C)		1710.3418	1779.6721	-2.49	-0.00143
Extreme (30°C)		1710.3418	1779.6721	-1.06	-0.00061
Extreme (20°C)		1710.3418	1779.6721	6.30	0.00361
Extreme (10C)		1710.3418	1779.6721	-9.93	-0.00569
Extreme (0°C)		1710.3418	1779.6721	5.59	0.00320
Extreme (-10°C)		1710.3418	1779.6721	3.51	0.00201
Extreme (-20°C)		1710.3418	1779.6721	-9.02	-0.00517
Extreme (-30°C)		1710.3418	1779.6721	-8.13	-0.00466
25°C		LV	1710.3418	1779.6721	3.89
	HV	1710.3418	1779.6721	6.47	0.00371
(16QAM, 20MHz BANDWIDTH)					
Condition		1710	1780	Delta(Hz)	Frequency Stability(ppm)
Temperature	Voltage	F low@-13dBm(MHz)	F high@-13dBm(MHz)		
Normal (25°C)	Normal	1710.4037	1779.7144	-5.54	-0.00317
Extreme (55°C)		1710.4037	1779.7144	-3.31	-0.00190
Extreme (50°C)		1710.4037	1779.7144	-5.28	-0.00303
Extreme (40°C)		1710.4037	1779.7144	-5.17	-0.00296
Extreme (30°C)		1710.4037	1779.7144	-6.20	-0.00355
Extreme (20°C)		1710.4037	1779.7144	-3.35	-0.00192
Extreme (10C)		1710.4037	1779.7144	-7.94	-0.00455
Extreme (0°C)		1710.4037	1779.7144	-5.86	-0.00336
Extreme (-10°C)		1710.4037	1779.7144	-5.81	-0.00333
Extreme (-20°C)		1710.4037	1779.7144	-6.26	-0.00359
Extreme (-30°C)		1710.4037	1779.7144	-5.01	-0.00287
25°C		LV	1710.4037	1779.7144	-5.51
	HV	1710.4037	1779.7144	-6.07	-0.00348



LTE Band 71					
(QPSK, 20MHz BANDWIDTH)					
Condition		663	698	Delta(Hz)	Frequency Stability(ppm)
Temperature	Voltage	F low@-13dBm(MHz)	F high@-13dBm(MHz)		
Normal (25°C)	Normal	663.5332	697.4977	4.02	0.00230
Extreme (55°C)		663.6528	697.6175	6.14	0.00352
Extreme (50°C)		663.5361	697.5008	-6.09	-0.00349
Extreme (40°C)		663.5318	697.4965	-1.82	-0.00104
Extreme (30°C)		663.5432	697.5079	-0.55	-0.00032
Extreme (20°C)		663.5391	697.5038	7.17	0.00411
Extreme (10C)		663.5321	697.4968	-9.32	-0.00534
Extreme (0°C)		663.5375	697.5022	7.40	0.00424
Extreme (-10°C)		663.5387	697.5034	4.78	0.00274
Extreme (-20°C)		663.5345	697.4992	-8.13	-0.00466
Extreme (-30°C)		663.5311	697.4958	-7.05	-0.00404
25°C		LV	663.5326	697.4973	6.36
	HV	663.5361	697.5008	7.38	0.00423
(16QAM, 20MHz BANDWIDTH)					
Condition		663	698	Delta(Hz)	Frequency Stability(ppm)
Temperature	Voltage	F low@-13dBm(MHz)	F high@-13dBm(MHz)		
Normal (25°C)	Normal	663.5258	697.4905	0.97	0.00056
Extreme (55°C)		663.4064	697.3707	3.93	0.00225
Extreme (50°C)		663.5227	697.4874	2.25	0.00129
Extreme (40°C)		663.5273	697.4917	1.50	0.00086
Extreme (30°C)		663.5156	697.4803	0.31	0.00018
Extreme (20°C)		663.5197	697.4844	3.52	0.00202
Extreme (10C)		663.5267	697.4914	-1.33	-0.00076
Extreme (0°C)		663.5213	697.4867	1.95	0.00112
Extreme (-10°C)		663.5201	697.4848	1.46	0.00084
Extreme (-20°C)		663.5243	697.4891	0.63	0.00036
Extreme (-30°C)		663.5277	697.4924	2.07	0.00119
25°C		LV	663.5262	697.4909	2.96
	HV	663.5227	697.4874	0.84	0.00048

## 5.6 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.

RBW is set to 1 kHz (0.009MHz~ 0.15 MHz),

RBW is set to 10 kHz (0.15 MHz~ 30 MHz)

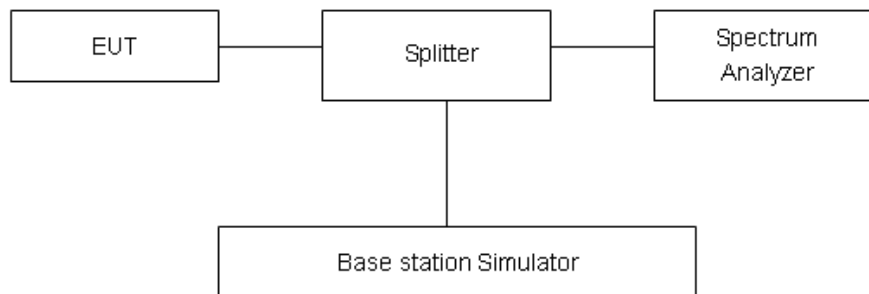
RBW is set to 100 kHz (30MHz~1000 MHz)

RBW is set to 1000 kHz (above 1000MHz)

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(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(a)/(h)/(g) Limit	-13 dBm
Part 27.53(m) Limit	-25 dBm

### Measurement Uncertainty

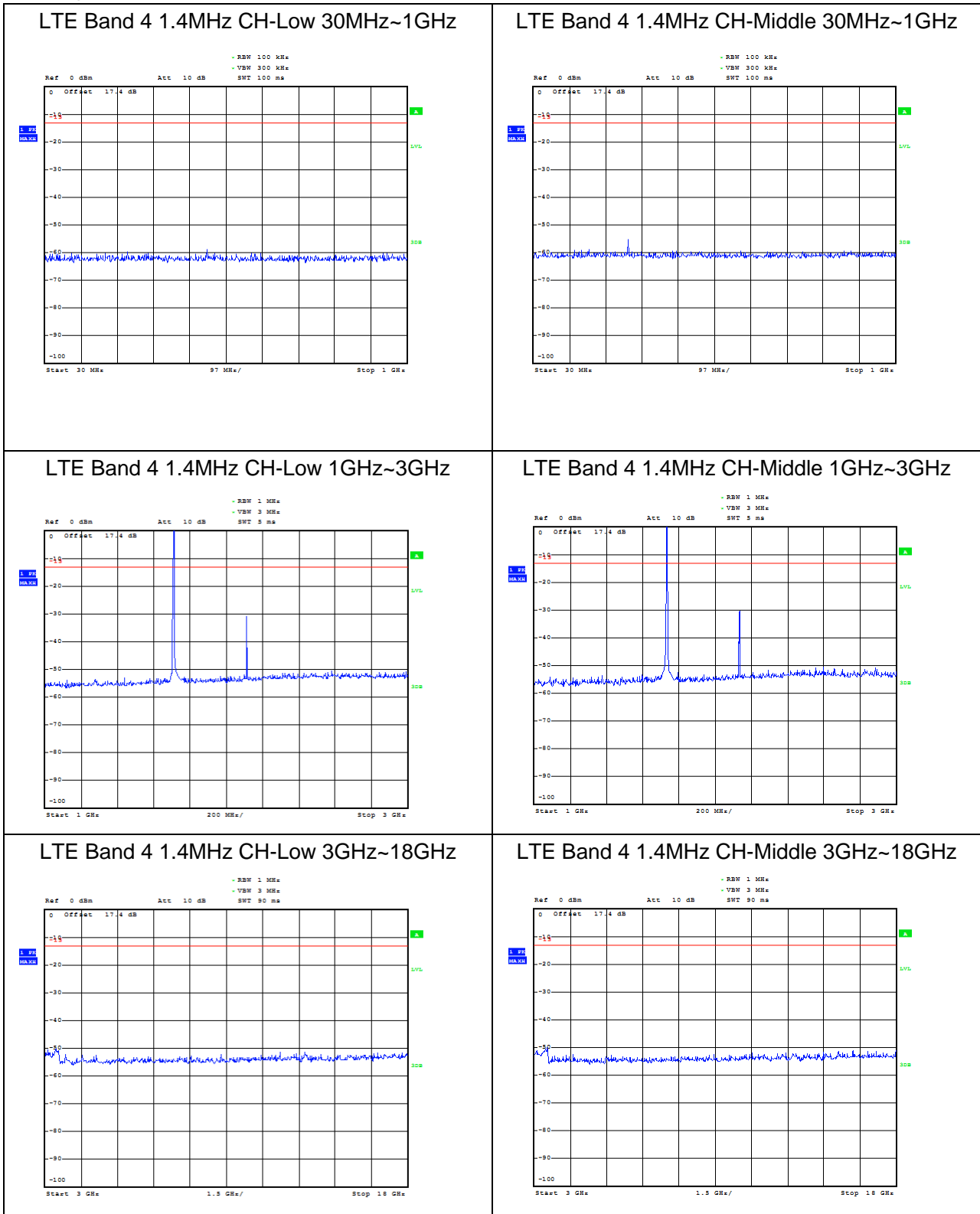
The assessed measurement uncertainty to ensure 99.75% confidence level for the normal distribution is with the coverage factor  $k = 1.96$ .

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

**Test Result**

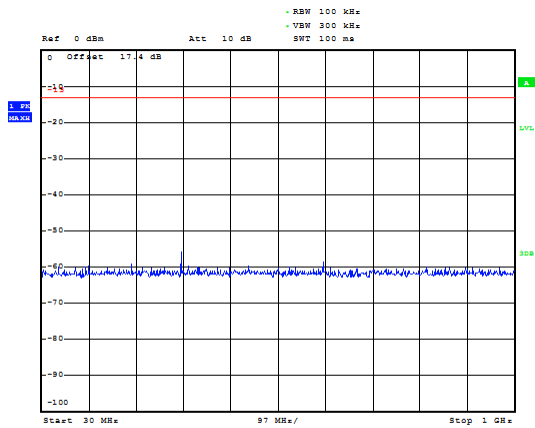
Sweep the whole frequency band through the range from 9kHz to the 10th harmonic of the carrier, the emissions more than 20 dB below the limit are not reported.

The signal beyond the limit is carrier.

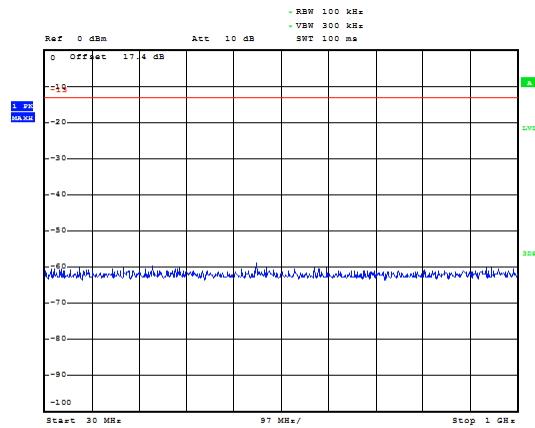




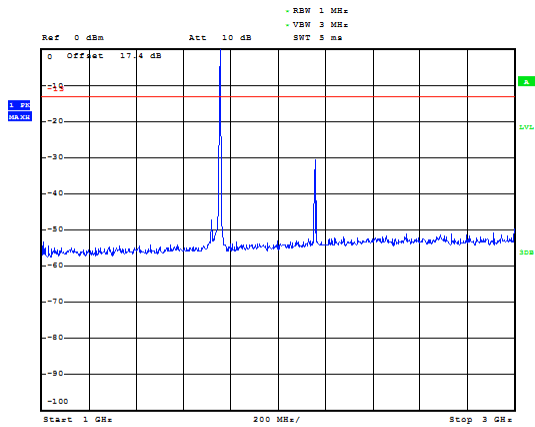
### LTE Band 4 1.4MHz CH-High 30MHz~1GHz



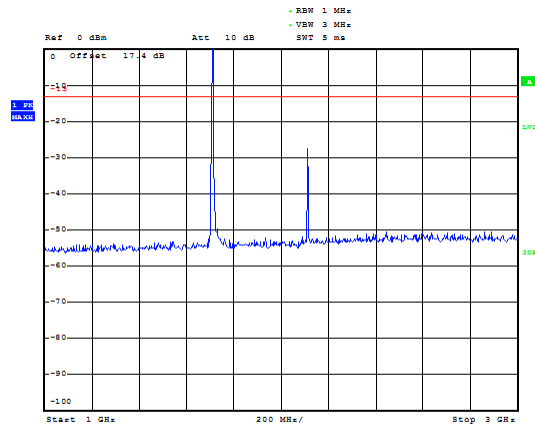
### LTE Band 4 3MHz CH-Low 30MHz~1GHz



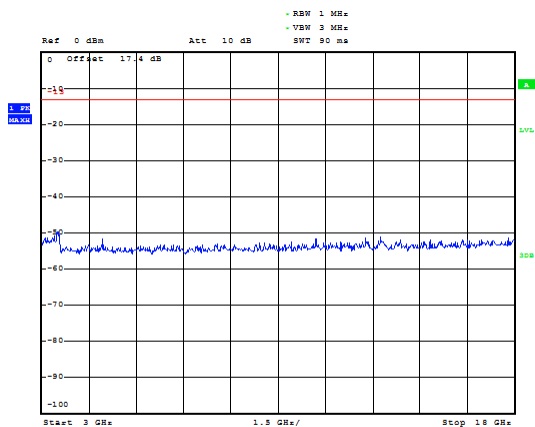
### LTE Band 4 1.4MHz CH-High 1GHz~3GHz



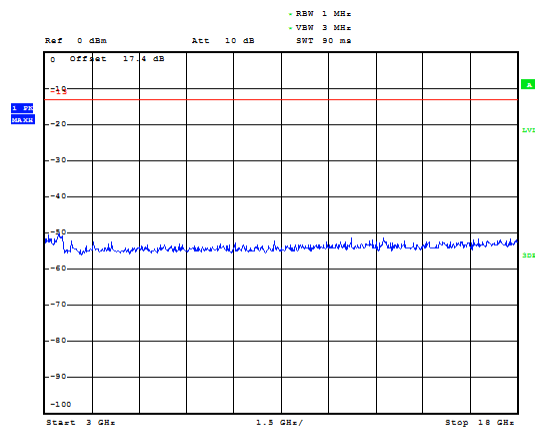
### LTE Band 4 3MHz CH-Low 1GHz~3GHz



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

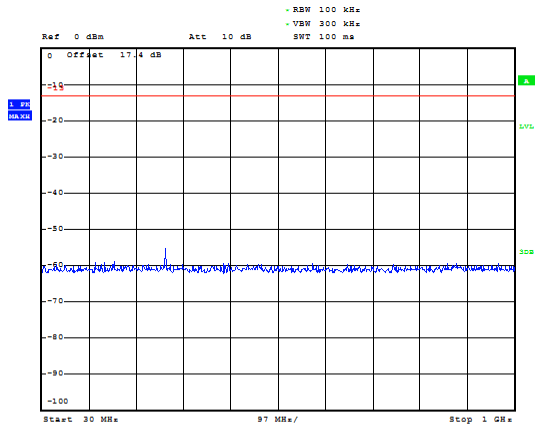


### LTE Band 4 3MHz CH-Low 3GHz~18GHz

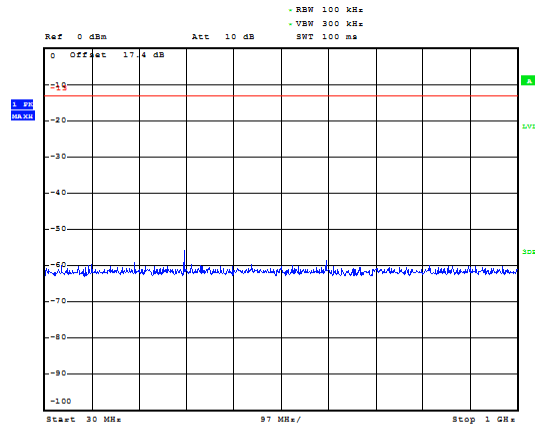




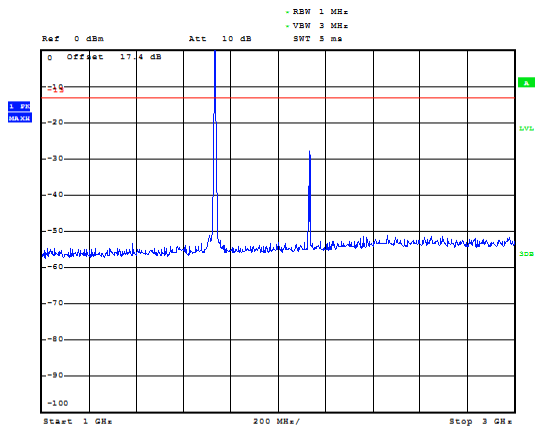
LTE Band 4 3MHz CH-Middle 30MHz~1GHz



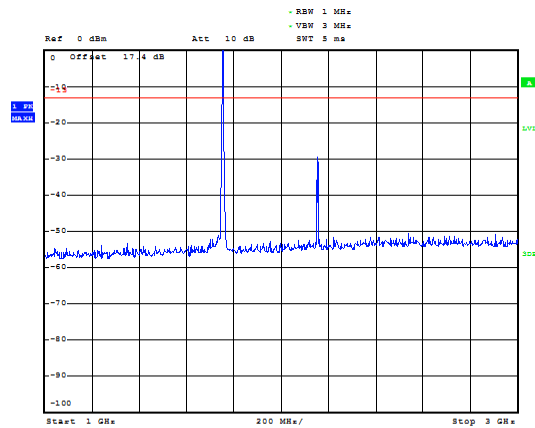
LTE Band 4 3MHz CH-High 30MHz~1GHz



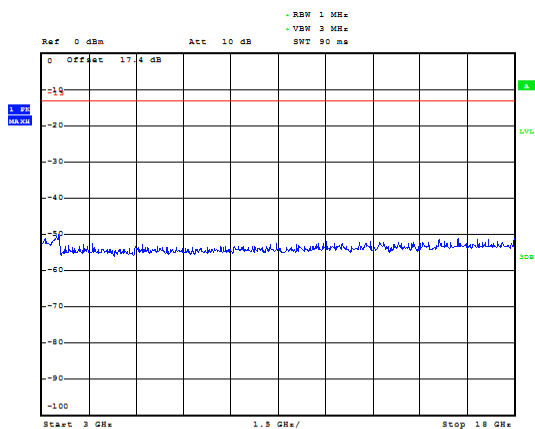
LTE Band 4 3MHz CH-Middle 1GHz~3GHz



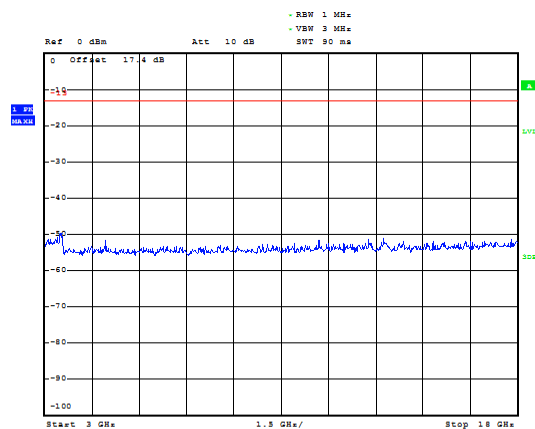
LTE Band 4 3MHz CH-High 1GHz~3GHz



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

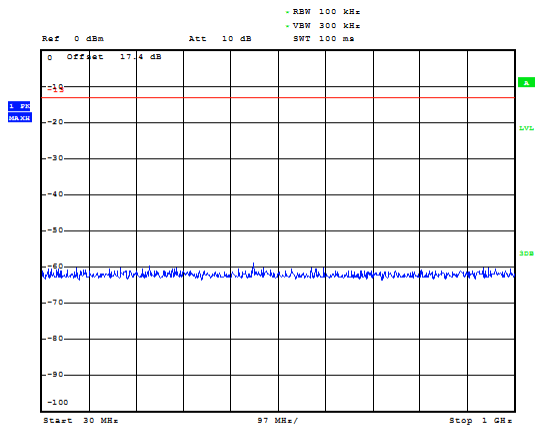


LTE Band 4 3MHz CH-High 3GHz~18GHz

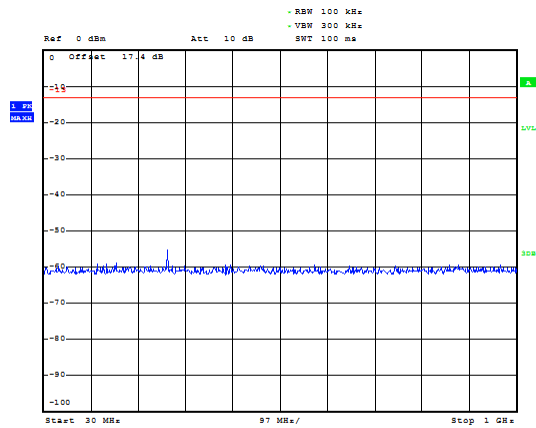




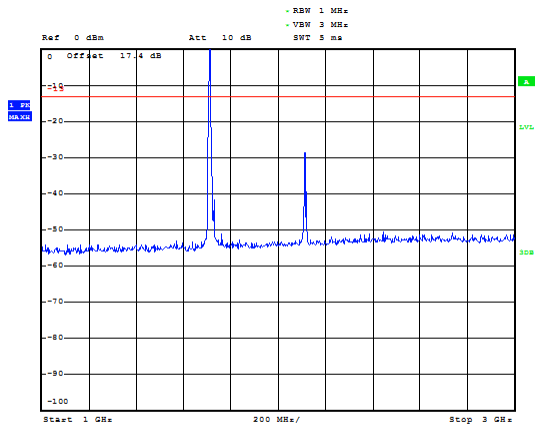
### LTE Band 4 5MHz CH-Low 30MHz~1GHz



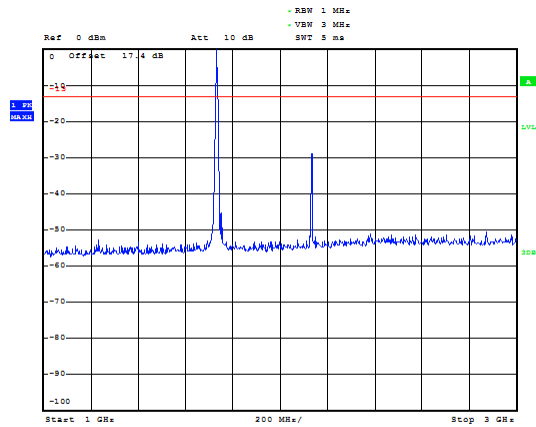
### LTE Band 4 5MHz CH-Middle 30MHz~1GHz



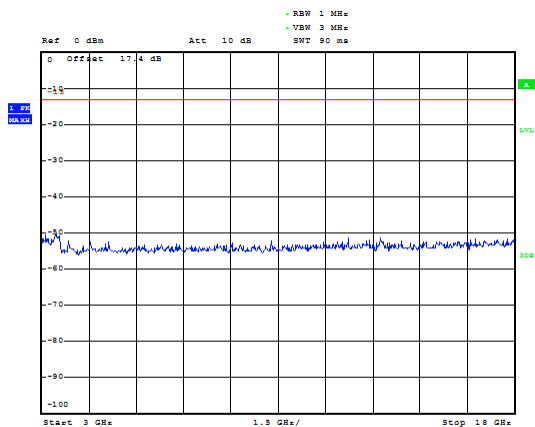
### LTE Band 4 5MHz CH-Low 1GHz~3GHz



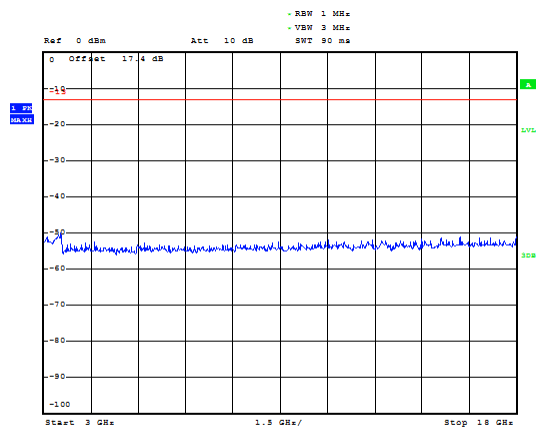
### LTE Band 4 5MHz CH-Middle 1GHz~3GHz



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

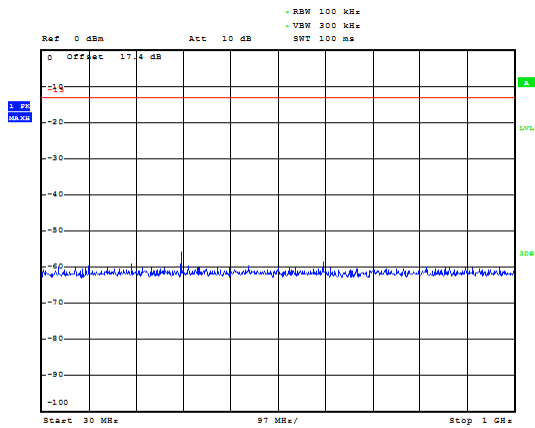


### LTE Band 4 5MHz CH-Middle 3GHz~18GHz

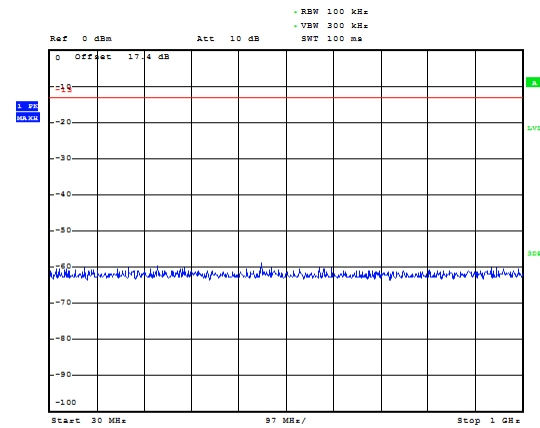




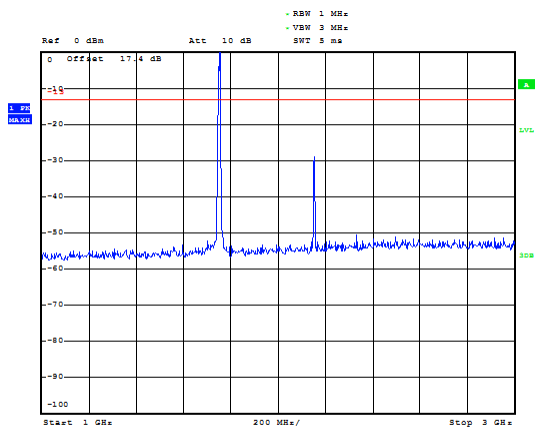
### LTE Band 4 5MHz CH-High 30MHz~1GHz



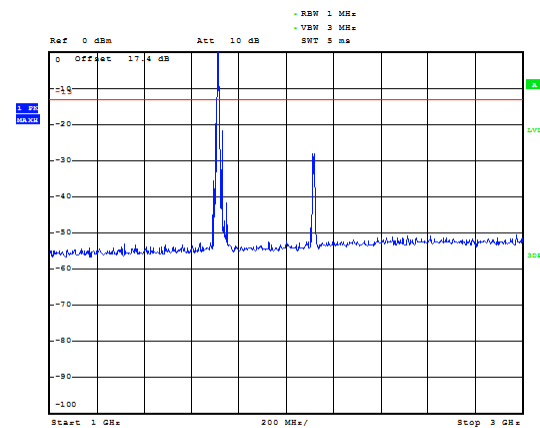
### LTE Band 4 10MHz CH-Low 30MHz~1GHz



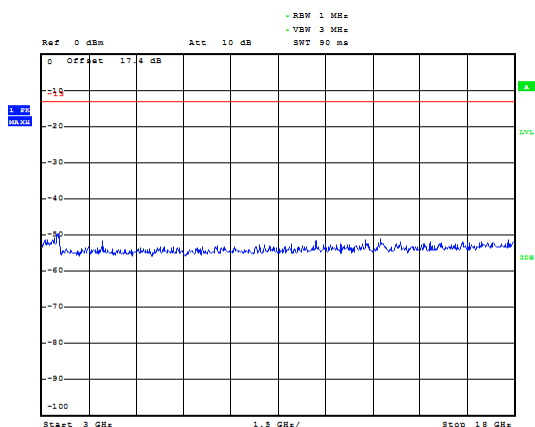
### LTE Band 4 5MHz CH-High 1GHz~3GHz



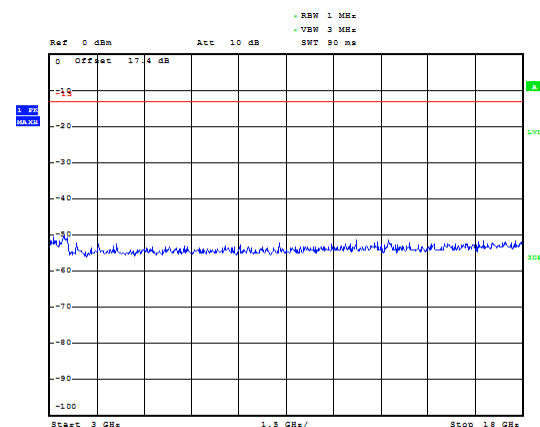
### LTE Band 4 10MHz CH-Low 1GHz~3GHz



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

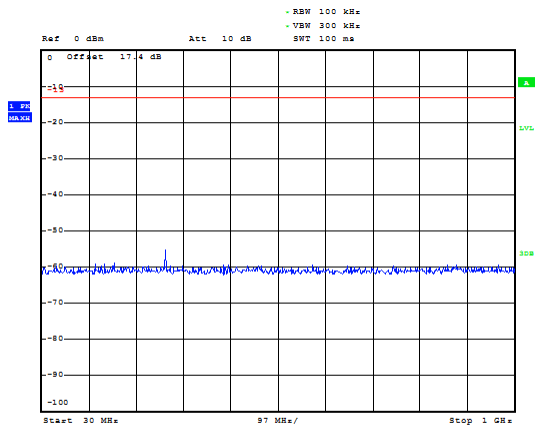


### LTE Band 4 10MHz CH-Low 3GHz~18GHz

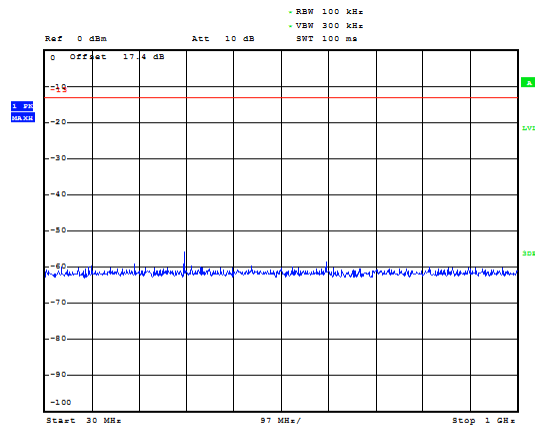




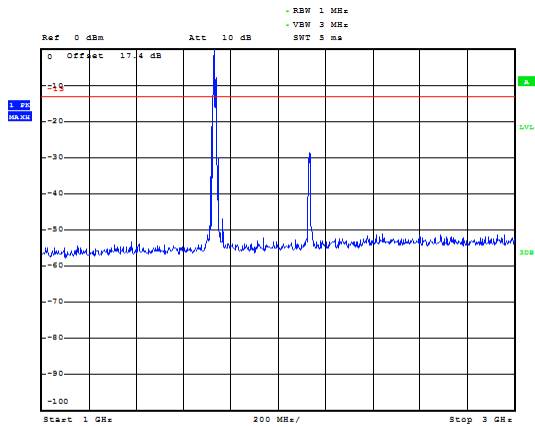
### LTE Band 4 10MHz CH-Middle 30MHz~1GHz



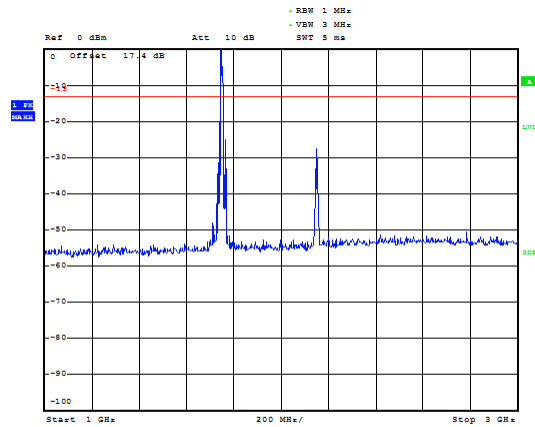
### LTE Band 4 10MHz CH-High 30MHz~1GHz



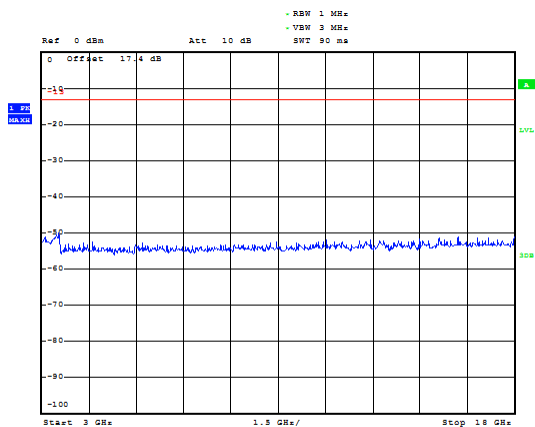
### LTE Band 4 10MHz CH-Middle 1GHz~3GHz



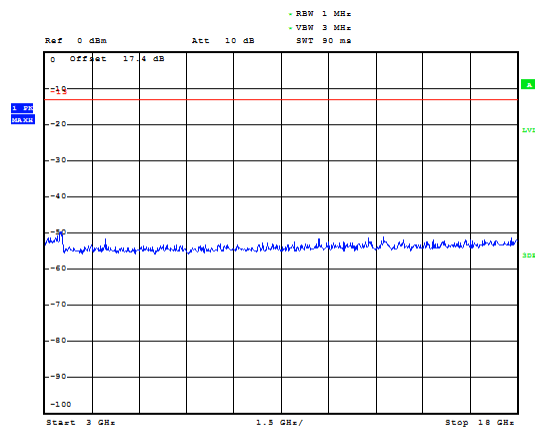
### LTE Band 4 10MHz CH-High 1GHz~3GHz



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

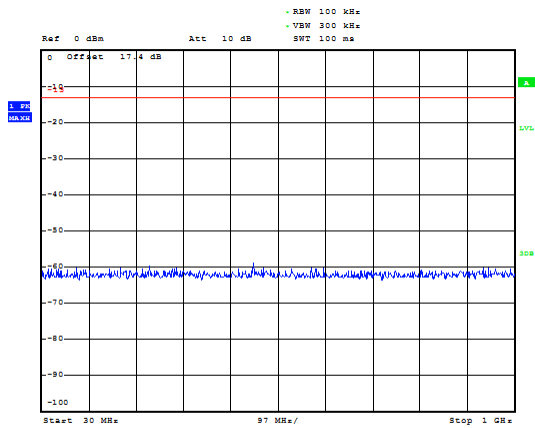


### LTE Band 4 10MHz CH-High 3GHz~18GHz

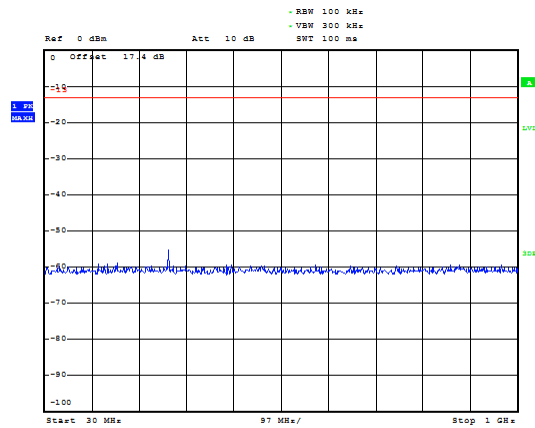




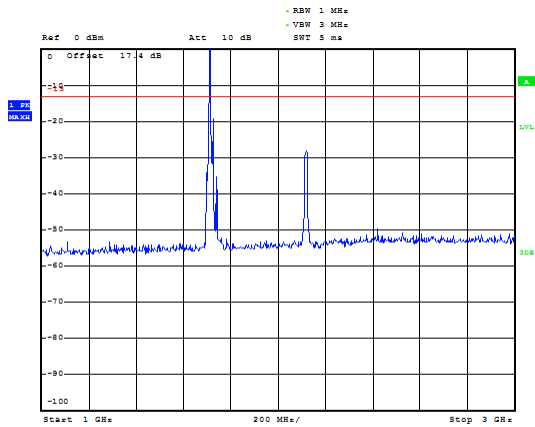
### LTE Band 4 15MHz CH-Low 30MHz~1GHz



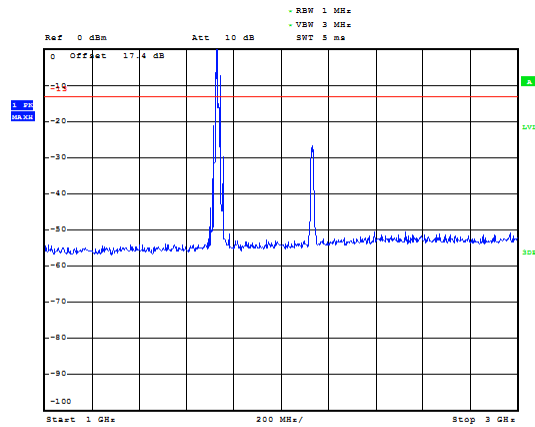
### LTE Band 4 15MHz CH-Middle 30MHz~1GHz



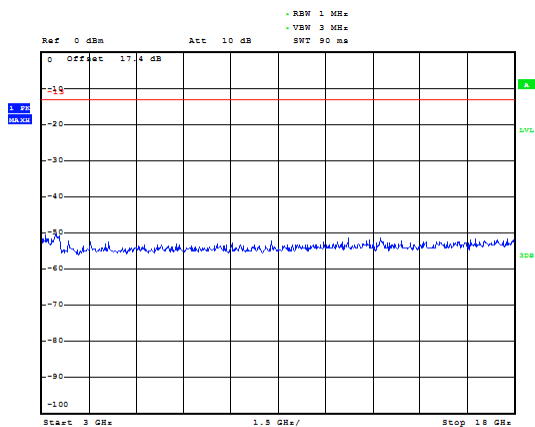
### LTE Band 4 15MHz CH-Low 1GHz~3GHz



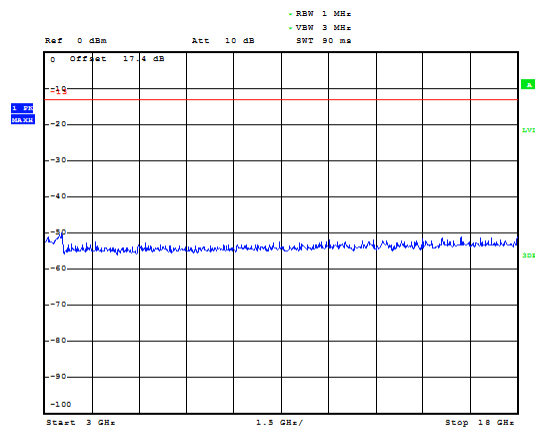
### LTE Band 4 15MHz CH-Middle 1GHz~3GHz



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

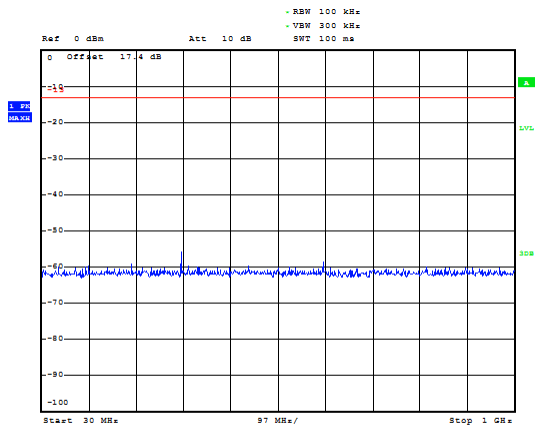


### LTE Band 4 15MHz CH-Middle 3GHz~18GHz

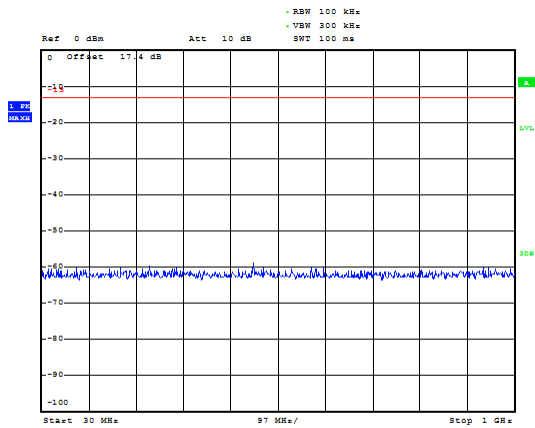




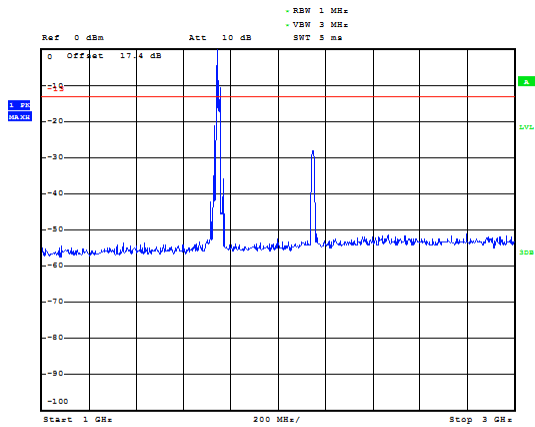
### LTE Band 4 15MHz CH-High 30MHz~1GHz



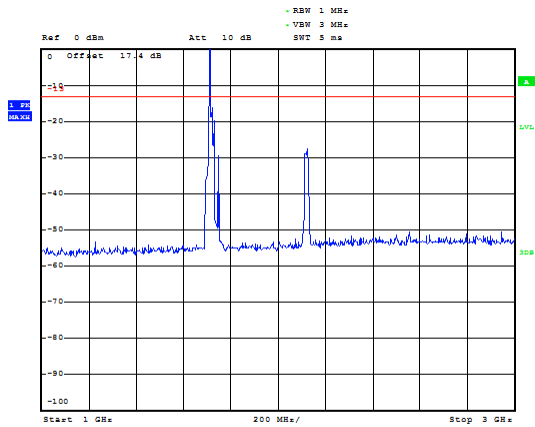
### LTE Band 4 20MHz CH-Low 30MHz~1GHz



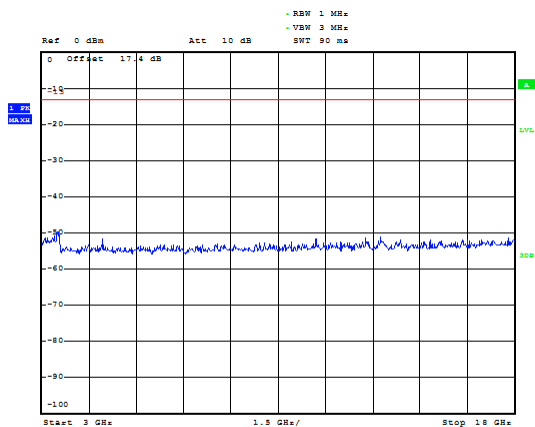
### LTE Band 4 15MHz CH-High 1GHz~3GHz



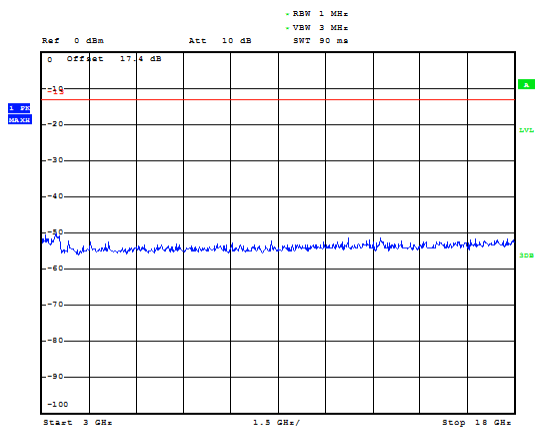
### LTE Band 4 20MHz CH-Low 1GHz~3GHz



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

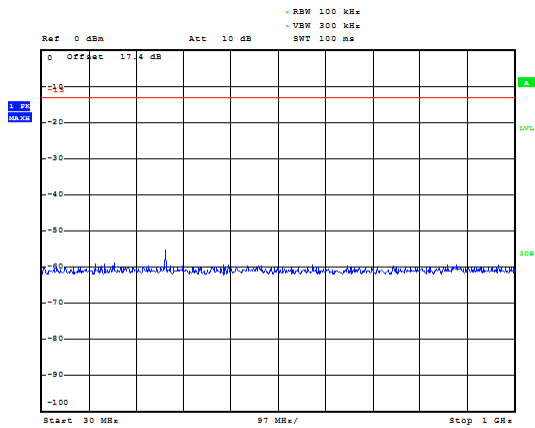


### LTE Band 4 20MHz CH-Low 3GHz~18GHz

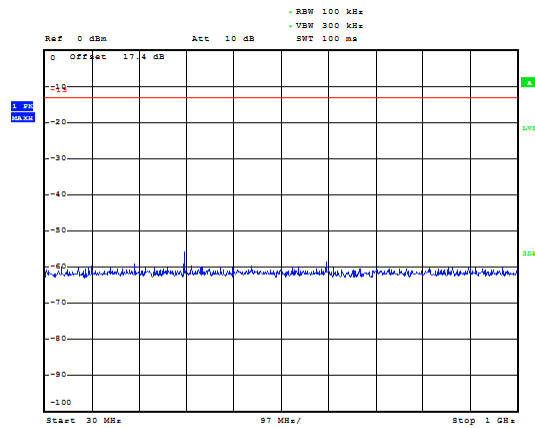




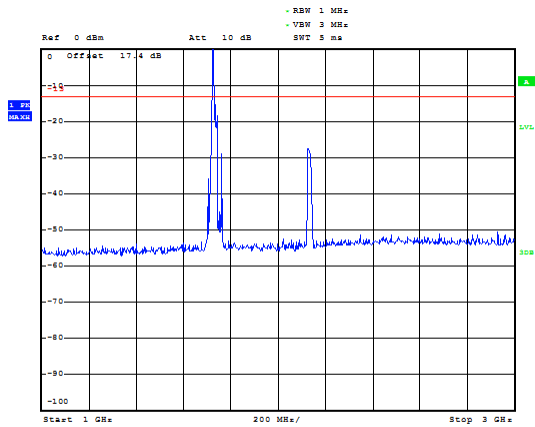
### LTE Band 4 20MHz CH-Middle 30MHz~1GHz



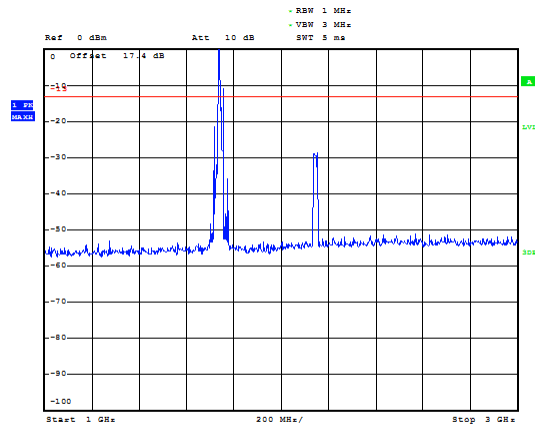
### LTE Band 4 20MHz CH-High 30MHz~1GHz



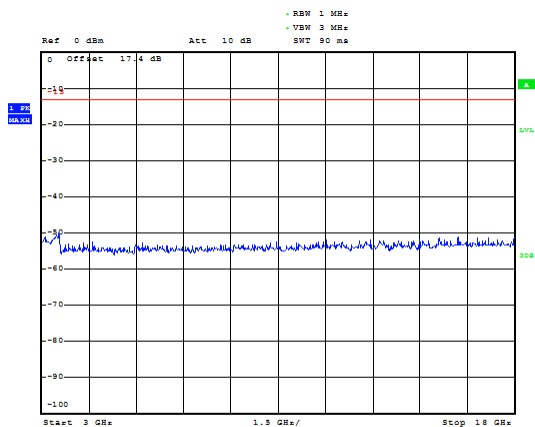
### LTE Band 4 20MHz CH-Middle 1GHz~3GHz



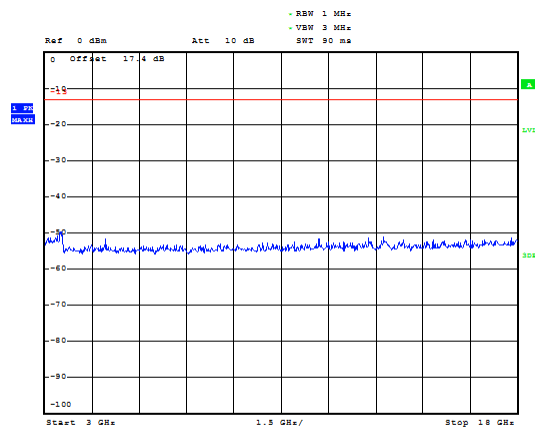
### LTE Band 4 20MHz CH-High 1GHz~3GHz



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

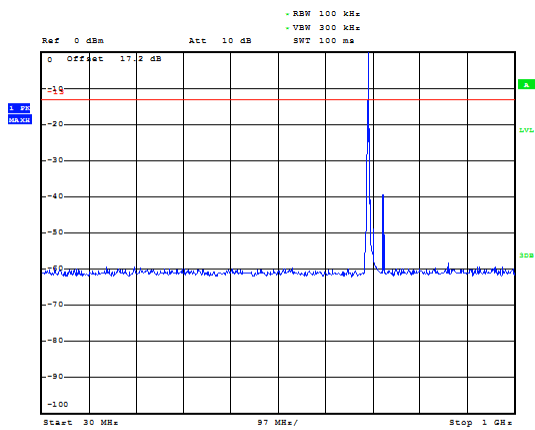


### LTE Band 4 20MHz CH-High 3GHz~18GHz

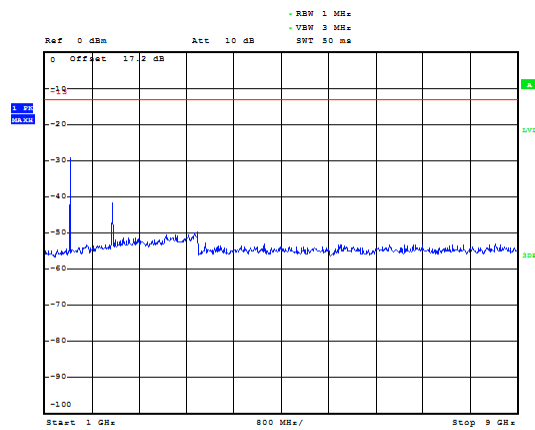




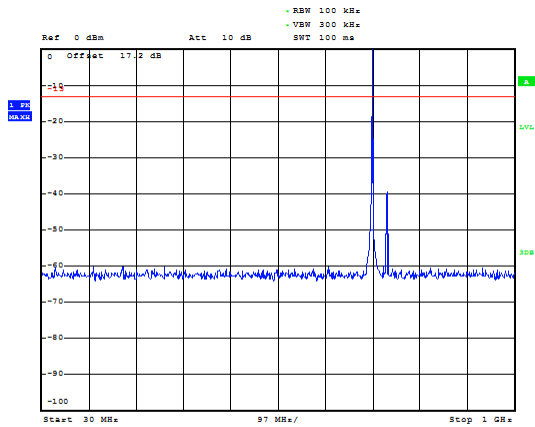
### LTE Band 12 1.4MHz CH-Low 30MHz~1GHz



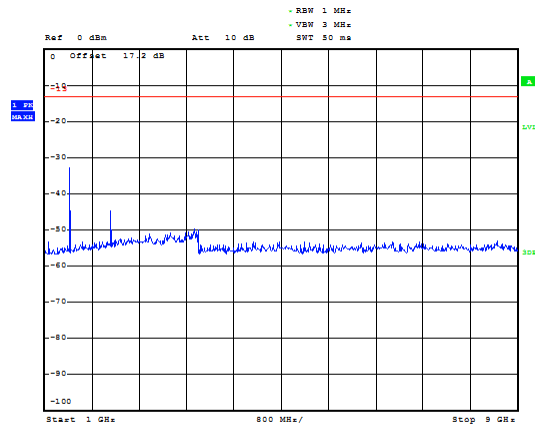
### LTE Band 12 1.4MHz CH-Low 1GHz~9GHz



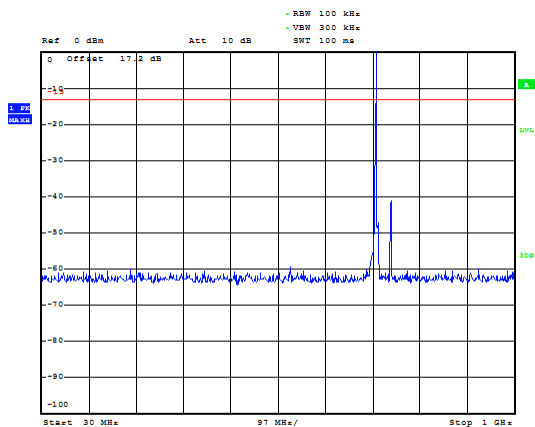
### LTE Band 12 1.4MHz CH- Middle 30MHz~1GHz



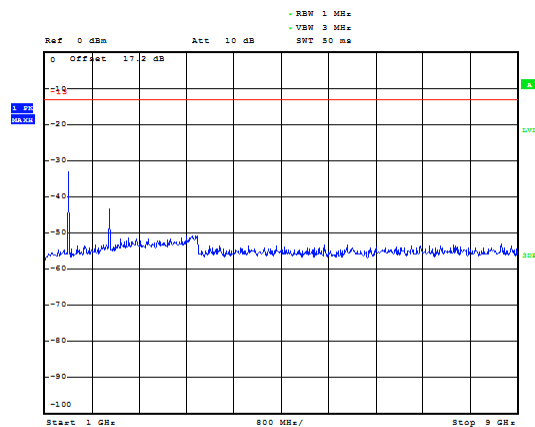
### LTE Band 12 1.4MHz CH- Middle 1GHz~9GHz



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



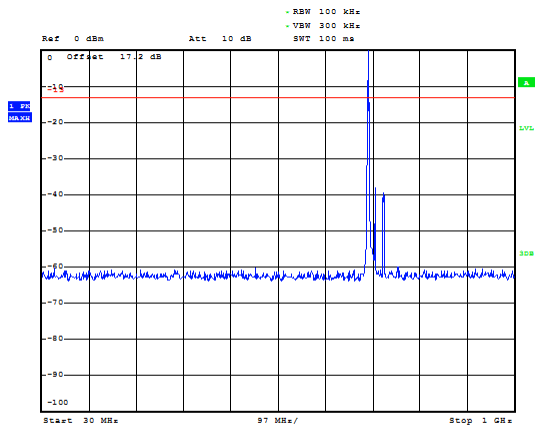
### LTE Band 12 1.4MHz CH-High 1GHz~9GHz



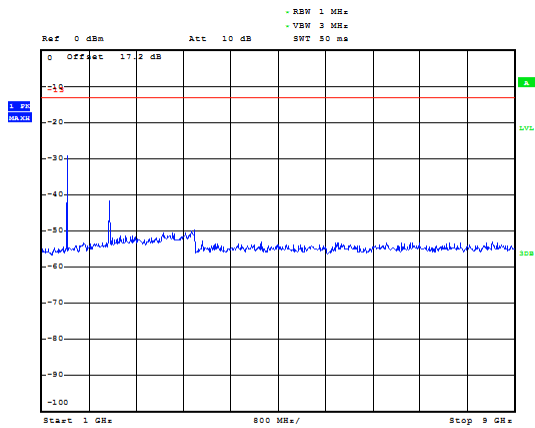




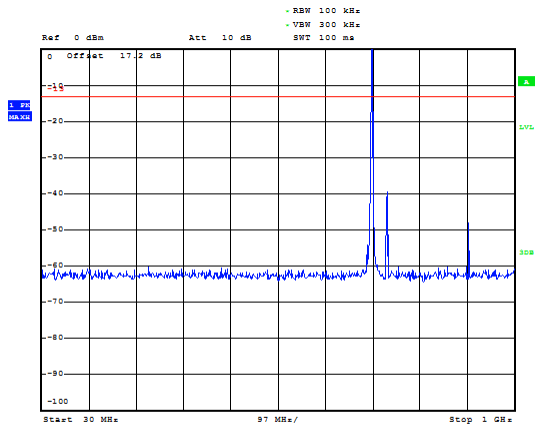
### LTE Band 12 3MHz CH-Low 30MHz~1GHz



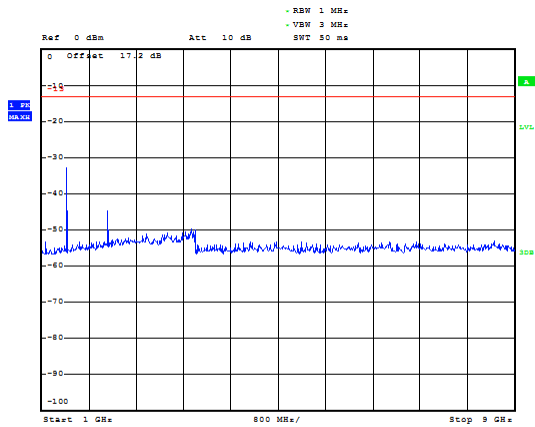
### LTE Band 12 3MHz CH-Low 1GHz~9GHz



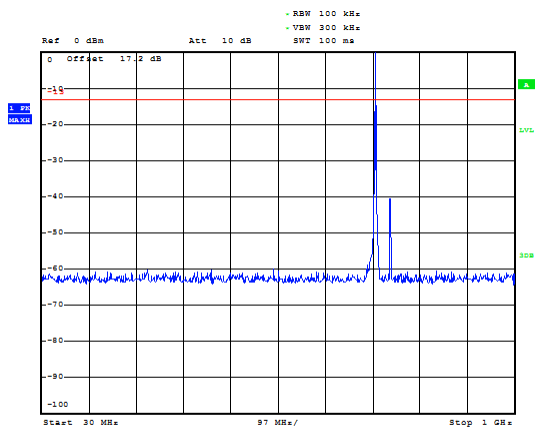
### LTE Band 12 3MHz CH- Middle 30MHz~1GHz



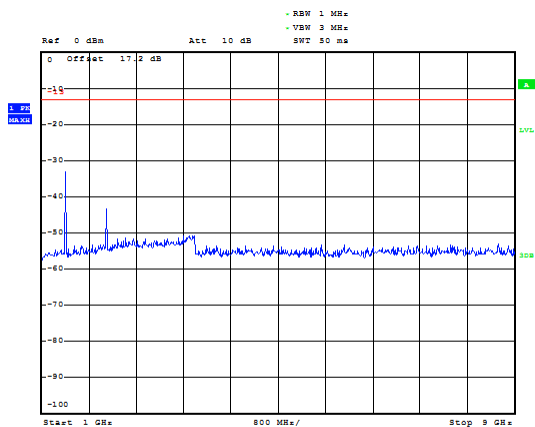
### LTE Band 12 3MHz CH- Middle 1GHz~9GHz



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

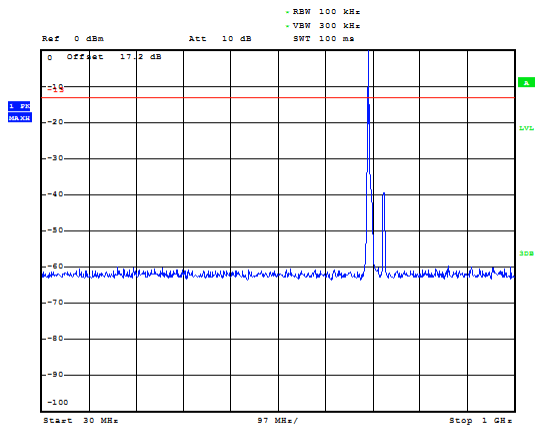


### LTE Band 12 3MHz CH-High 1GHz~9GHz

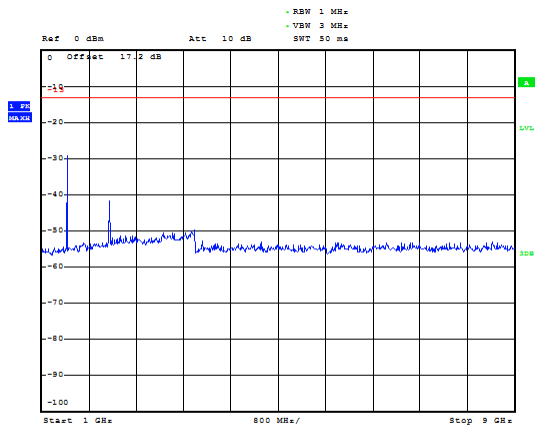




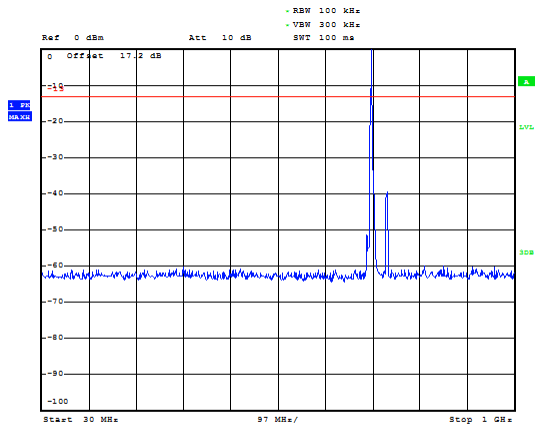
### LTE Band 12 5MHz CH-Low 30MHz~1GHz



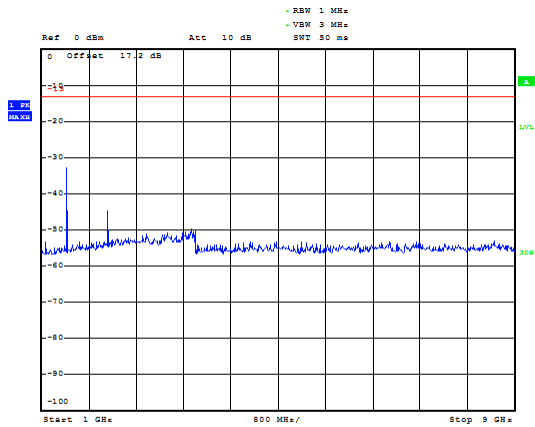
### LTE Band 12 5MHz CH-Low 1GHz~9GHz



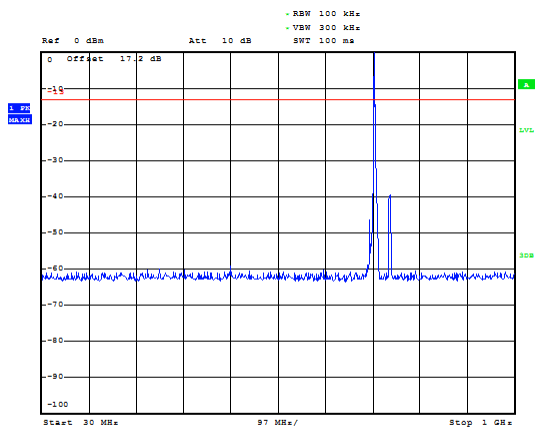
### LTE Band 12 5MHz CH- Middle 30MHz~1GHz



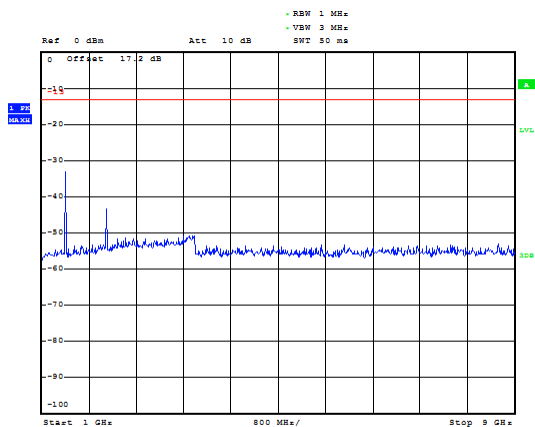
### LTE Band 12 5MHz CH- Middle 1GHz~9GHz



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

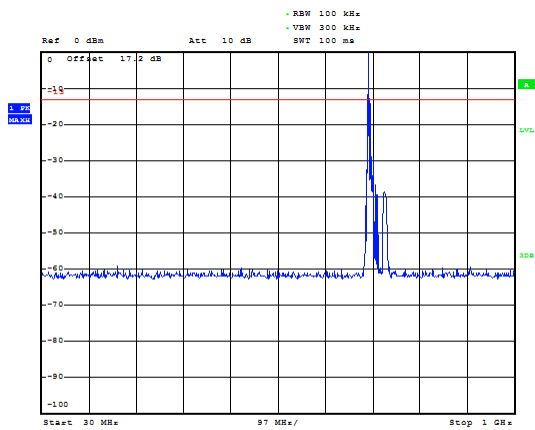


### LTE Band 12 5MHz CH-High 1GHz~9GHz

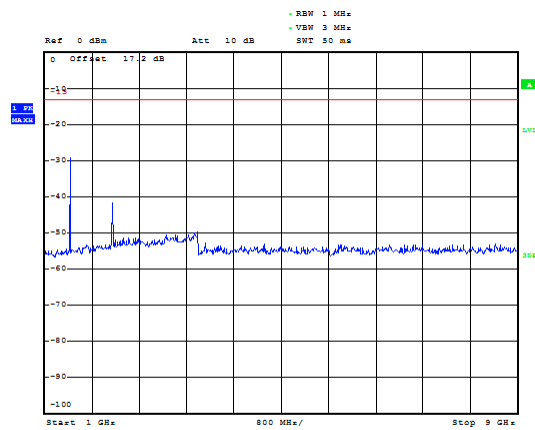




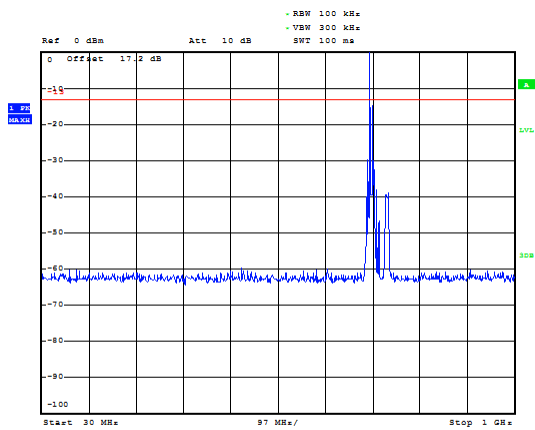
### LTE Band 12 10MHz CH-Low 30MHz~1GHz



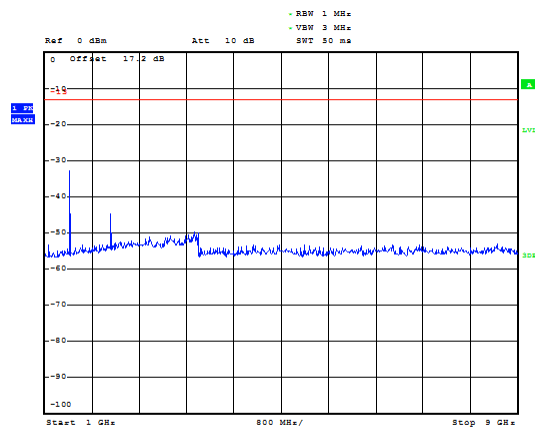
### LTE Band 12 10MHz CH-Low 1GHz~9GHz



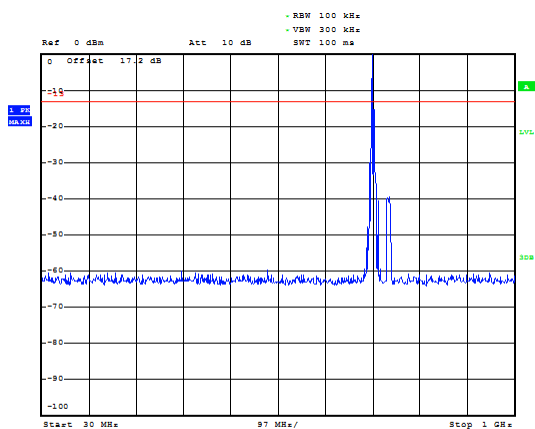
### LTE Band 12 10MHz CH- Middle 30MHz~1GHz



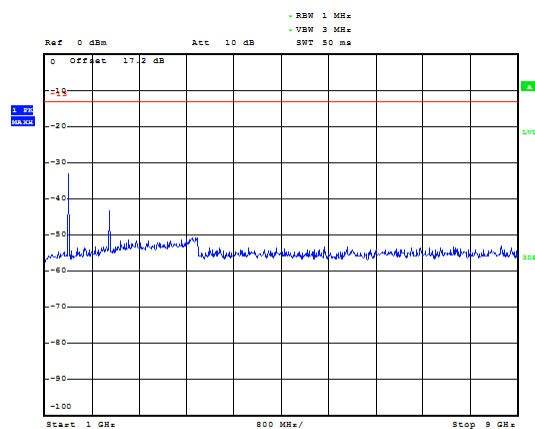
### LTE Band 12 10MHz CH- Middle 1GHz~9GHz



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

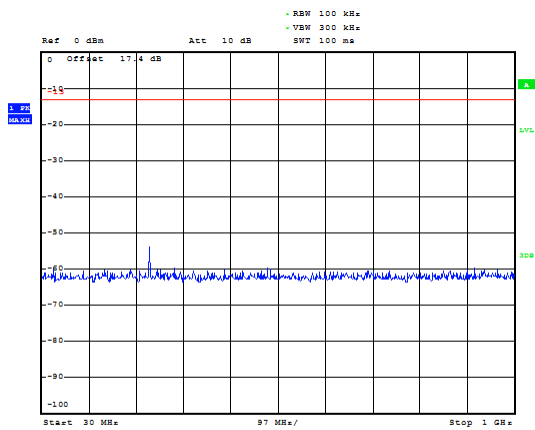


### LTE Band 12 10MHz CH-High 1GHz~9GHz

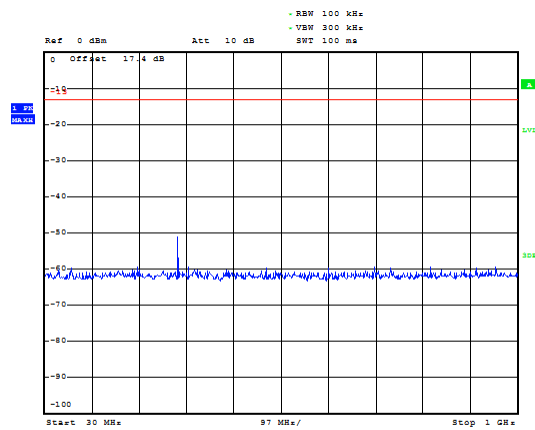




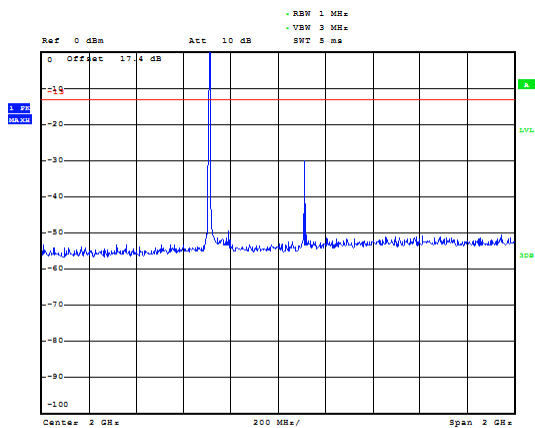
LTE Band 66 1.4MHz CH-Low 30MHz~1GHz



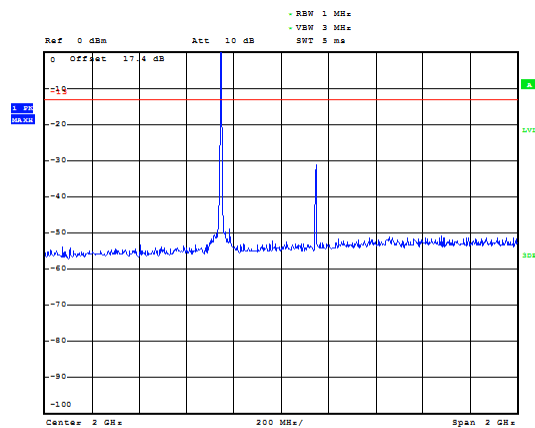
LTE Band 66 1.4MHz CH-Middle 30MHz~1GHz



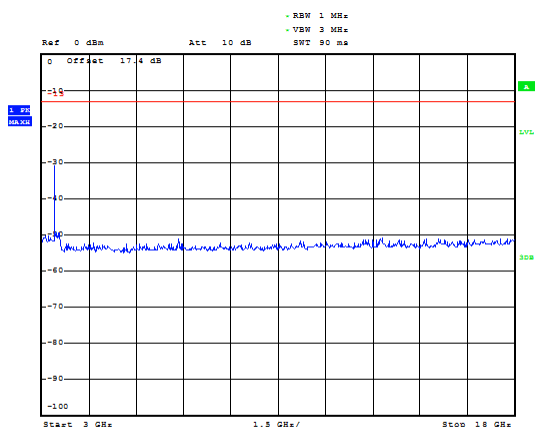
LTE Band 66 1.4MHz CH-Low 1GHz~3GHz



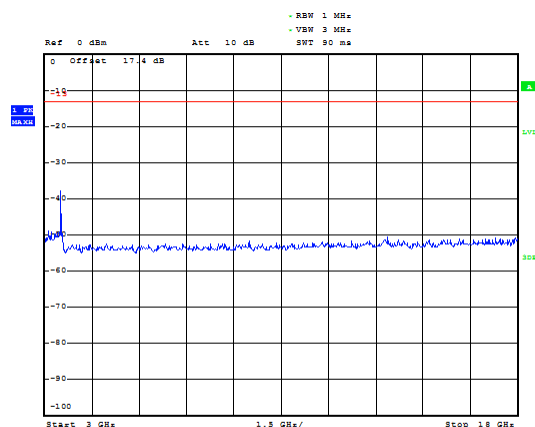
LTE Band 66 1.4MHz CH-Middle 1GHz~3GHz



LTE Band 66 1.4MHz CH-Low 3GHz~18GHz

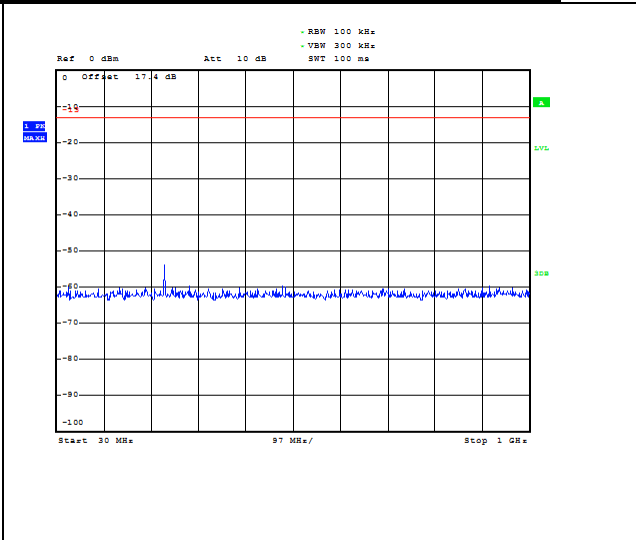
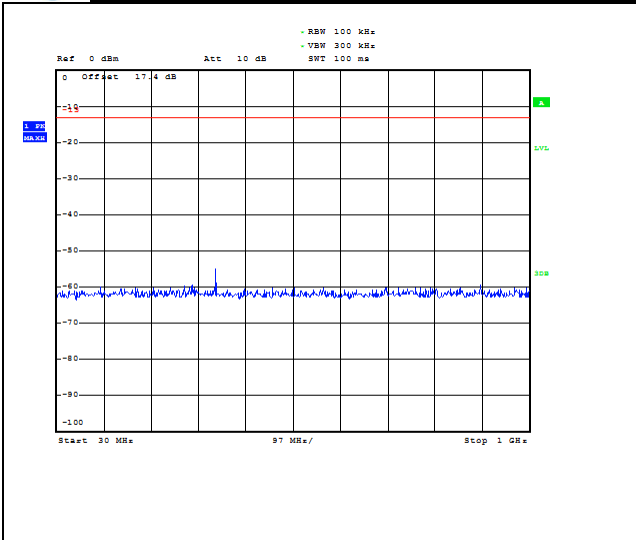


LTE Band 66 1.4MHz CH-Middle 3GHz~18GHz

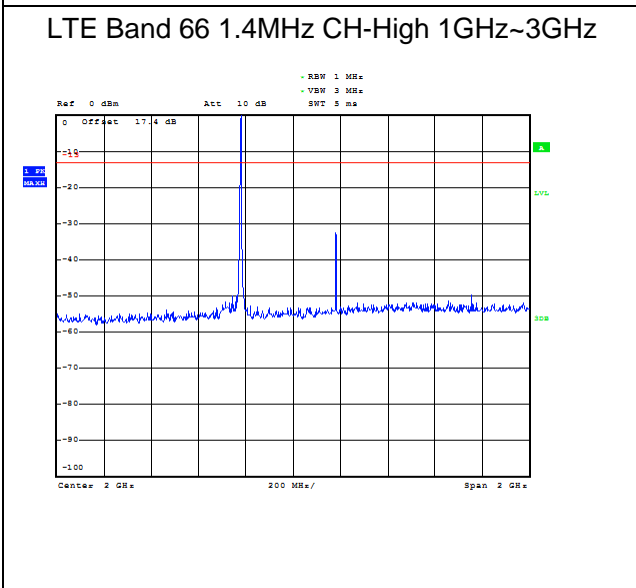


LTE Band 66 1.4MHz CH-High 30MHz~1GHz

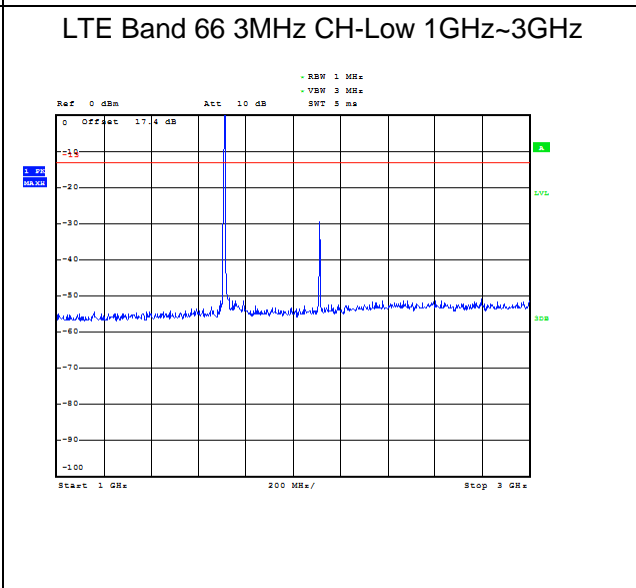
LTE Band 66 3MHz CH-Low 30MHz~1GHz



LTE Band 66 1.4MHz CH-High 1GHz~3GHz

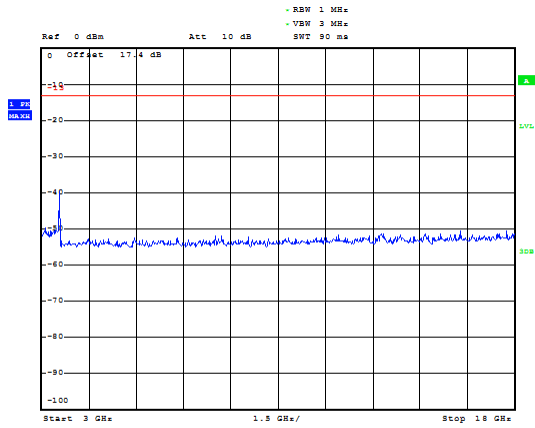


LTE Band 66 3MHz CH-Low 1GHz~3GHz

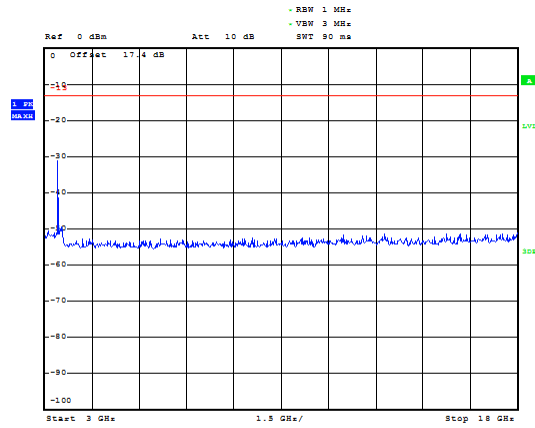




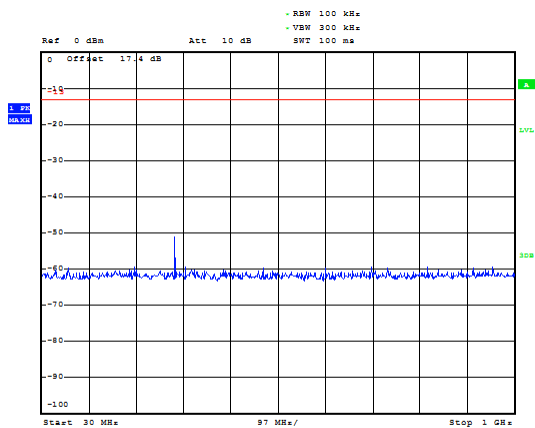
### LTE Band 66 1.4MHz CH-High 3GHz~18GHz



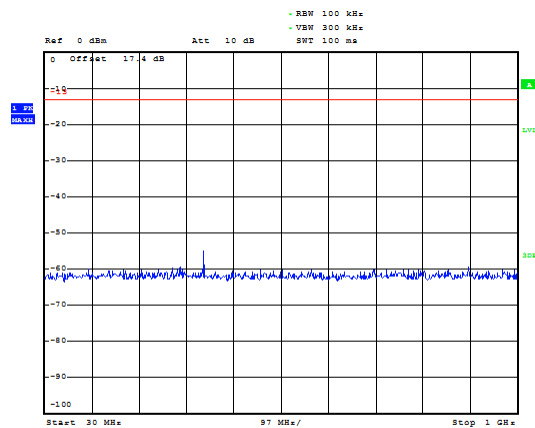
### LTE Band 66 3MHz CH-Low 3GHz~18GHz



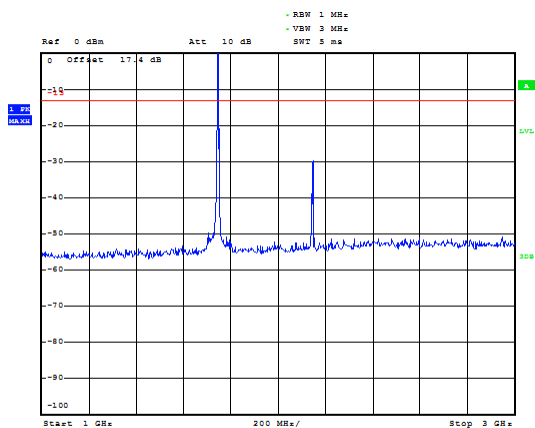
### LTE Band 66 3MHz CH-Middle 30MHz~1GHz



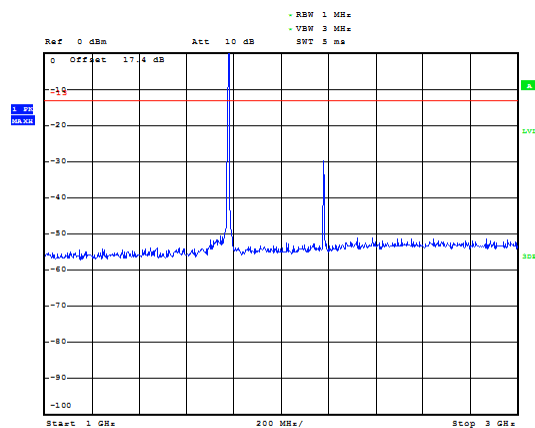
### LTE Band 66 3MHz CH-High 30MHz~1GHz



### LTE Band 66 3MHz CH-Middle 1GHz~3GHz

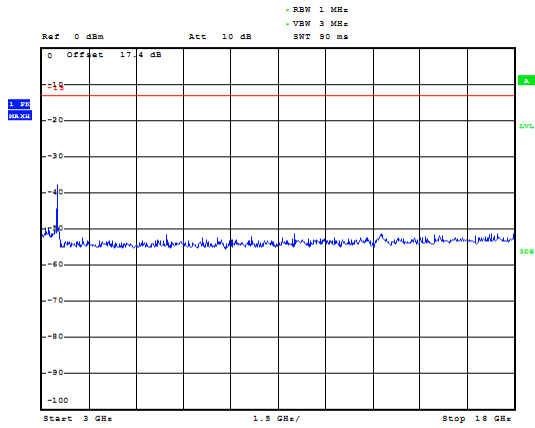


### LTE Band 66 3MHz CH-High 1GHz~3GHz

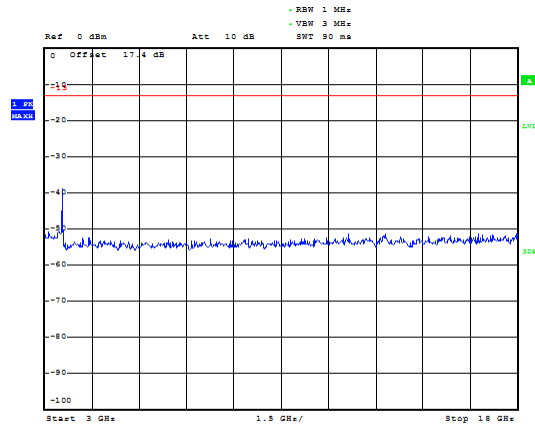




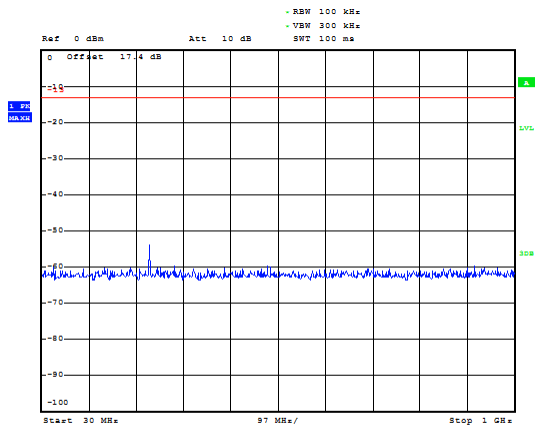
### LTE Band 66 3MHz CH-Middle 3GHz~18GHz



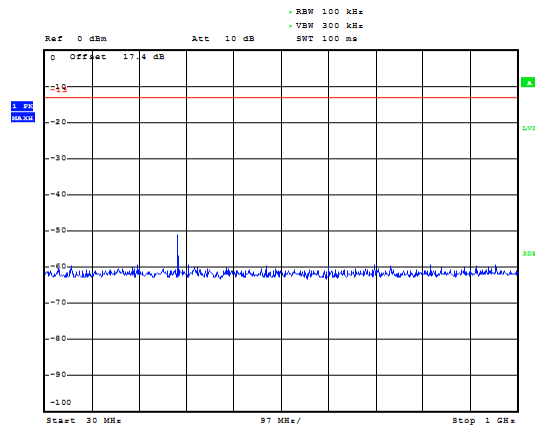
### LTE Band 66 3MHz CH-High 3GHz~18GHz



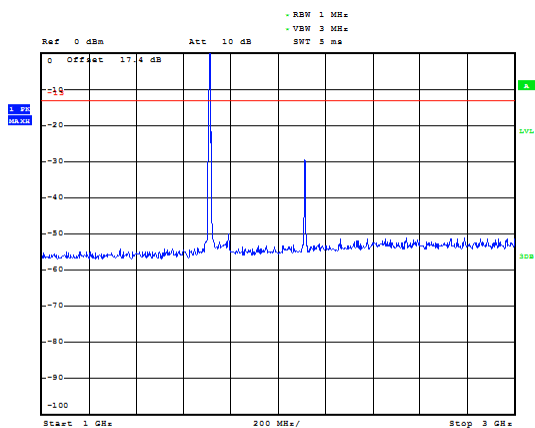
### LTE Band 66 5MHz CH-Low 30MHz~1GHz



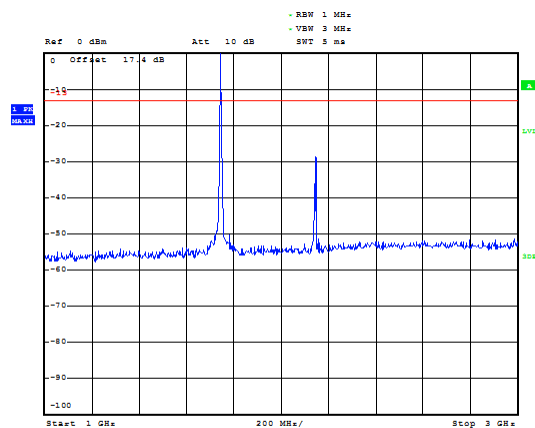
### LTE Band 66 5MHz CH-Middle 30MHz~1GHz



### LTE Band 66 5MHz CH-Low 1GHz~3GHz

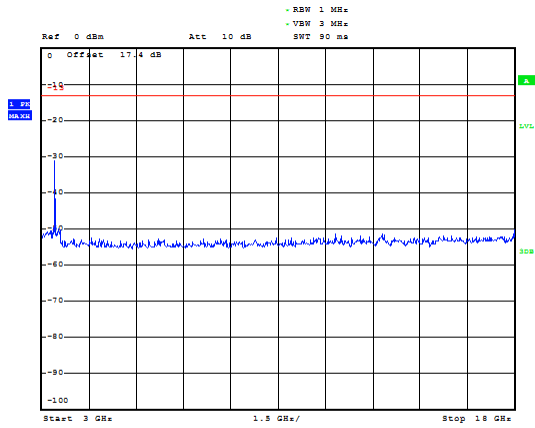


### LTE Band 66 5MHz CH-Middle 1GHz~3GHz

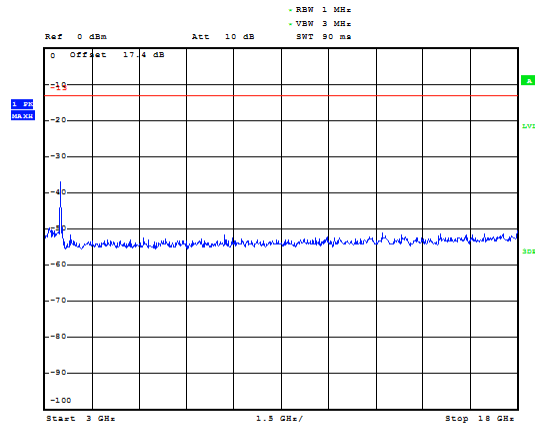




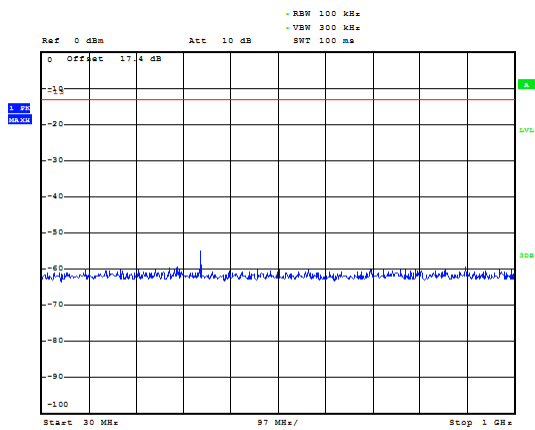
### LTE Band 66 5MHz CH-Low 3GHz~18GHz



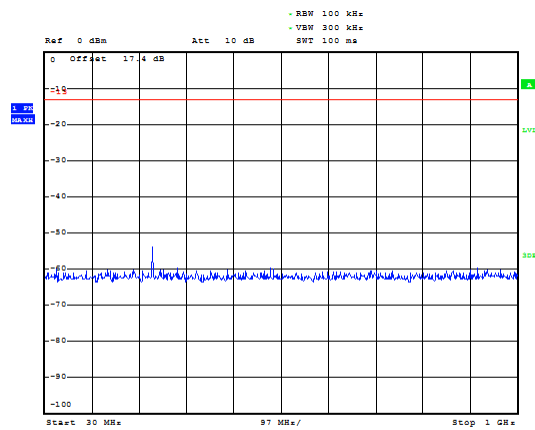
### LTE Band 66 5MHz CH-Middle 3GHz~18GHz



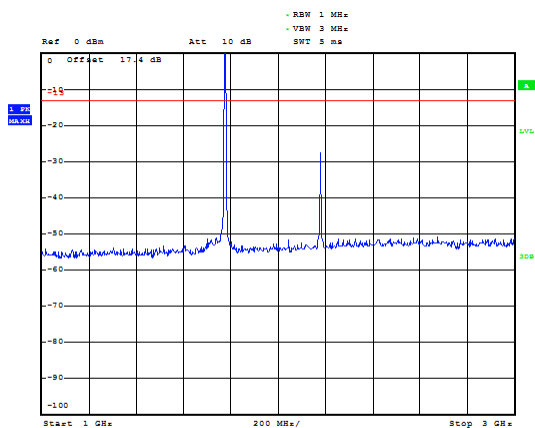
### LTE Band 66 5MHz CH-High 30MHz~1GHz



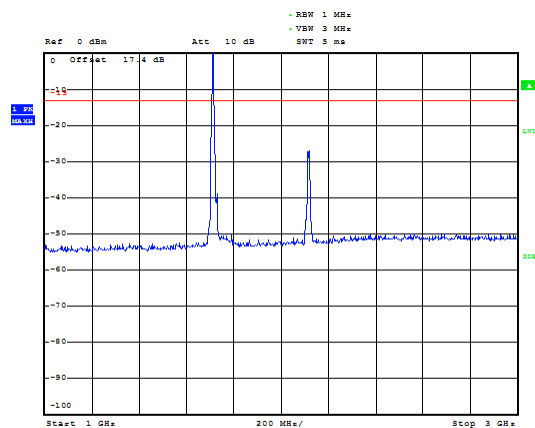
### LTE Band 66 10MHz CH-Low 30MHz~1GHz



### LTE Band 66 5MHz CH-High 1GHz~3GHz



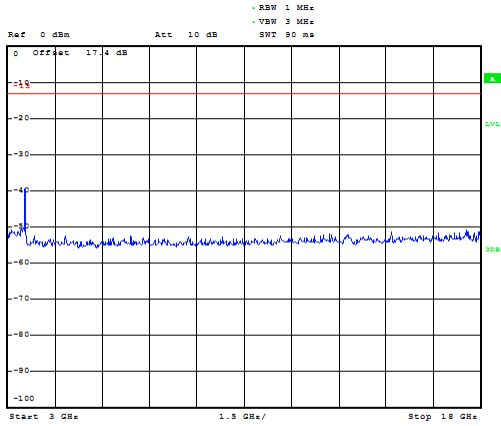
### LTE Band 66 10MHz CH-Low 1GHz~3GHz



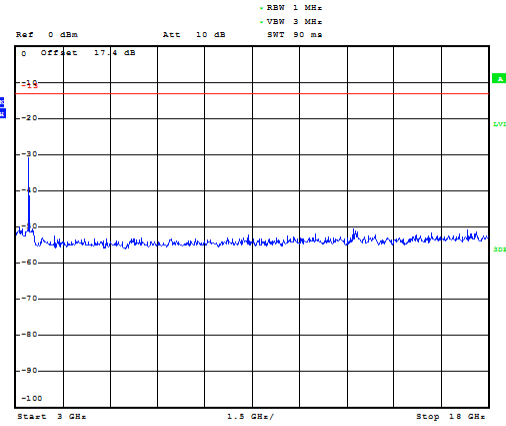




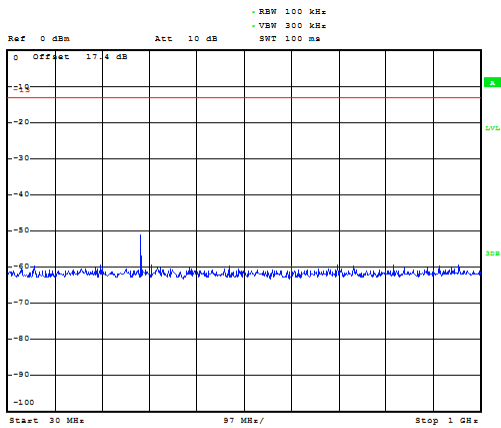
### LTE Band 66 5MHz CH-High 3GHz~18GHz



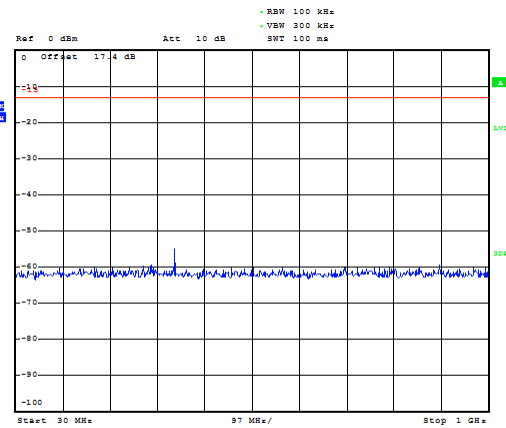
### LTE Band 66 10MHz CH-Low 3GHz~18GHz



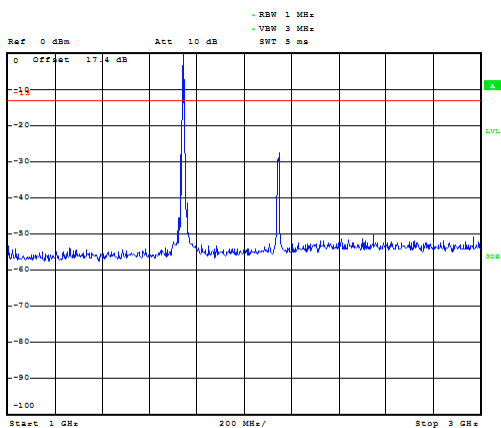
### LTE Band 66 10MHz CH-Middle 30MHz~1GHz



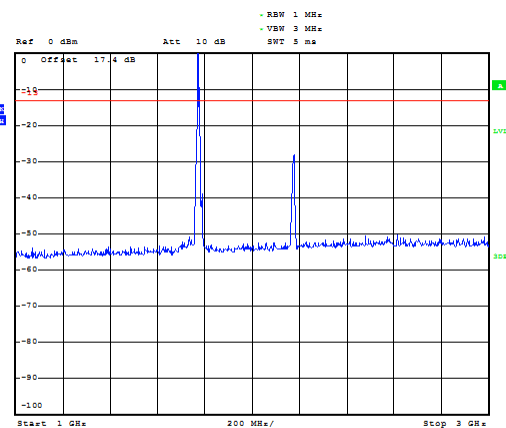
### LTE Band 66 10MHz CH-High 30MHz~1GHz



### LTE Band 66 10MHz CH-Middle 1GHz~3GHz

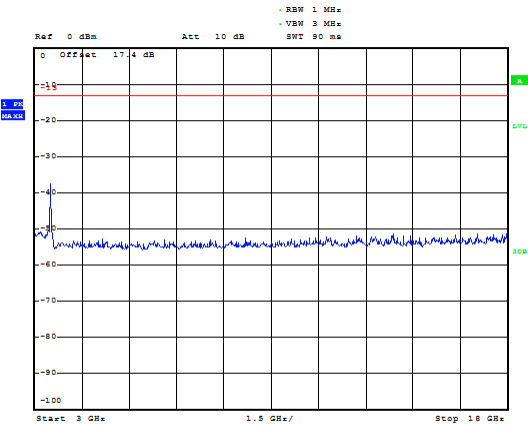


### LTE Band 66 10MHz CH-High 1GHz~3GHz

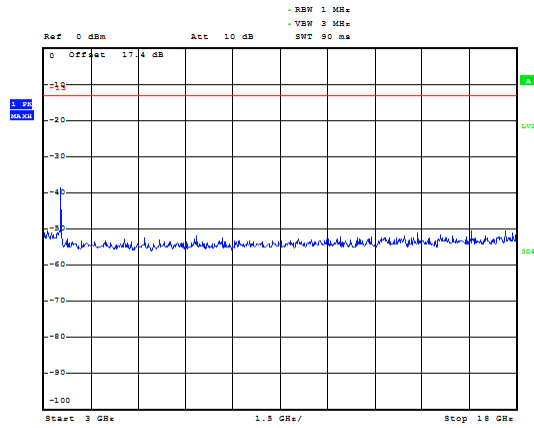




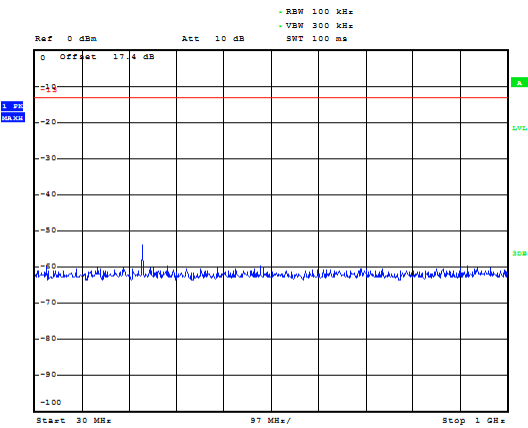
### LTE Band 66 10MHz CH-Middle 3GHz~18GHz



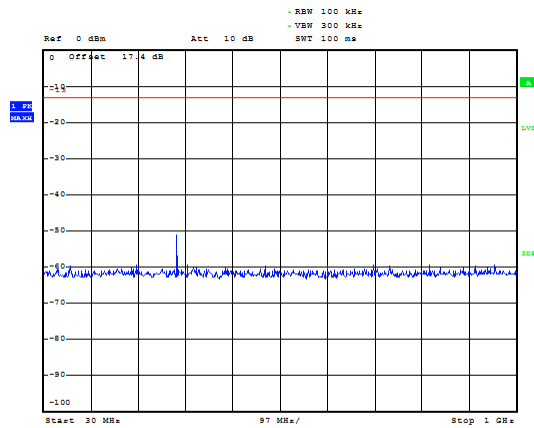
### LTE Band 66 10MHz CH-High 3GHz~18GHz



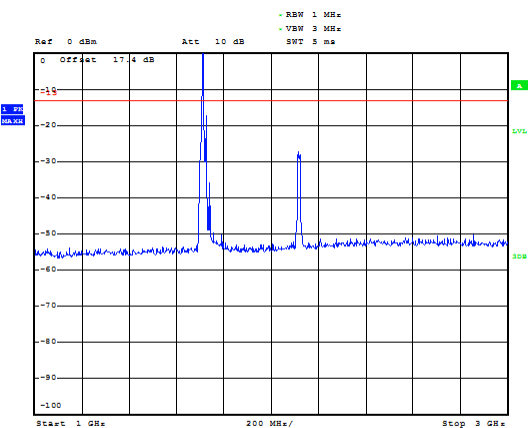
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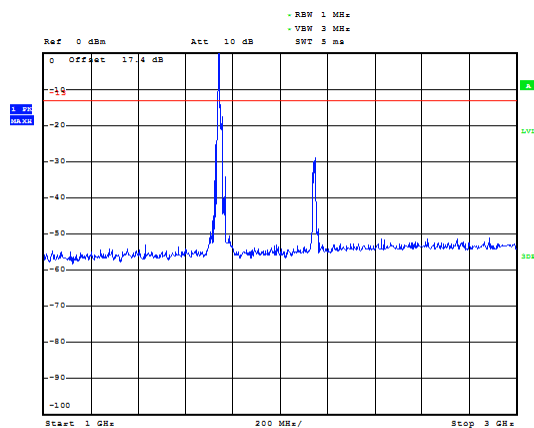
### LTE Band 66 15MHz CH-Middle 30MHz~1GHz



### LTE Band 66 15MHz CH-Low 1GHz~3GHz

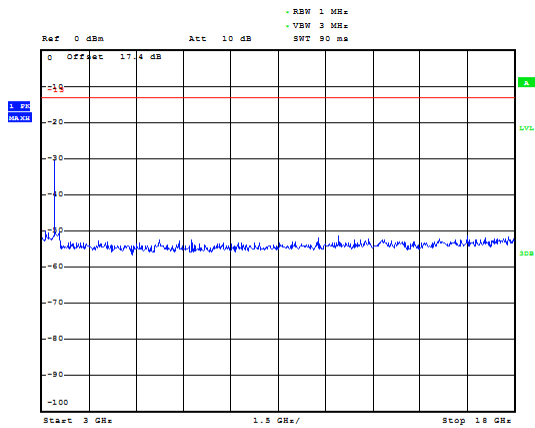


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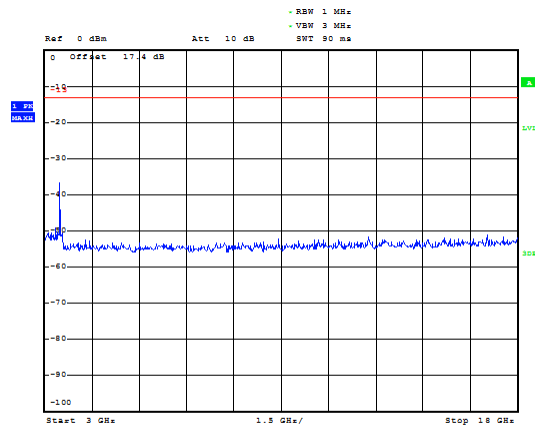




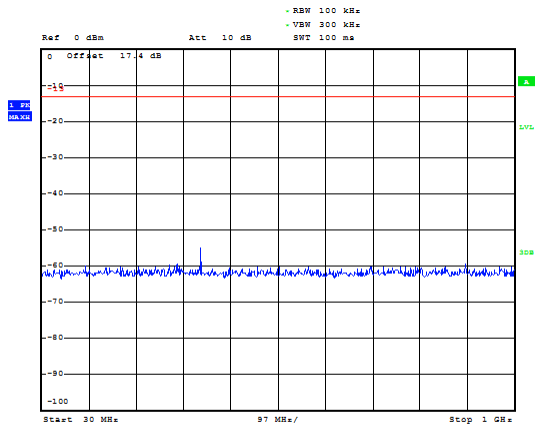
### LTE Band 66 15MHz CH-Low 3GHz~18GHz



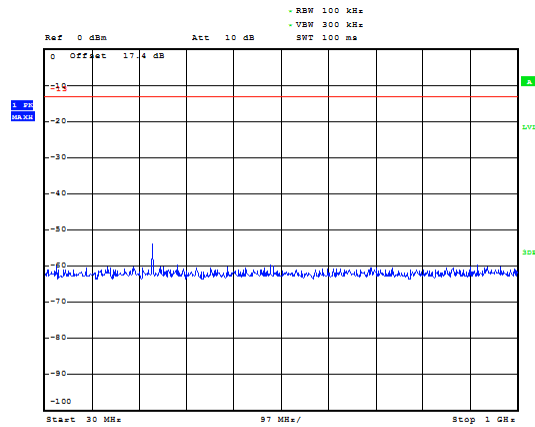
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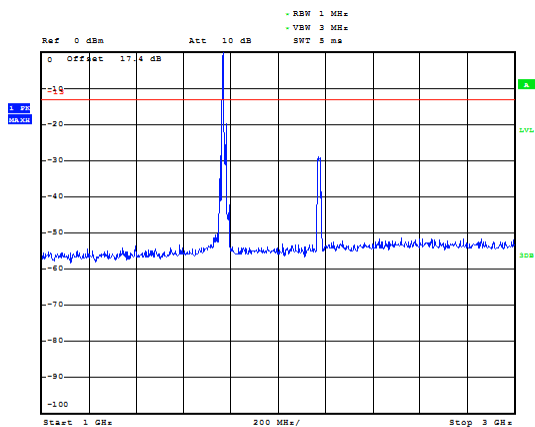
### LTE Band 66 15MHz CH-High 30MHz~1GHz



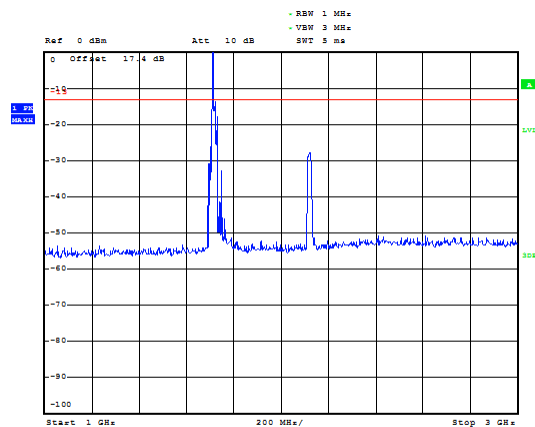
### LTE Band 66 20MHz CH-Low 30MHz~1GHz



### LTE Band 66 15MHz CH-High 1GHz~3GHz

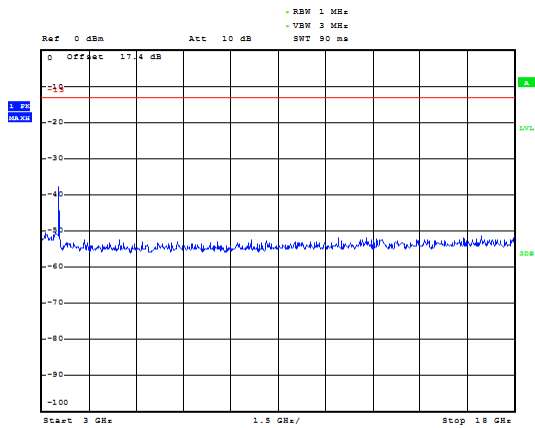


### LTE Band 66 20MHz CH-Low 1GHz~3GHz

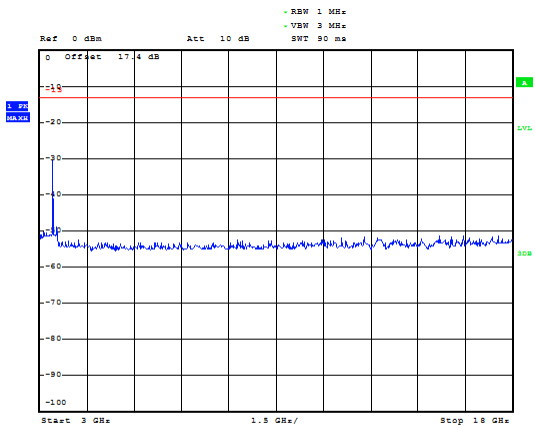




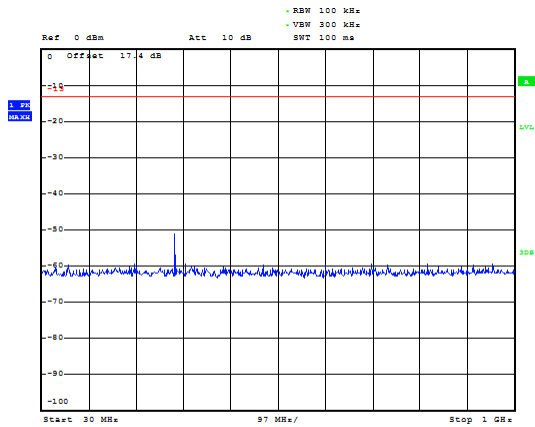
### LTE Band 66 15MHz CH-High 3GHz~18GHz



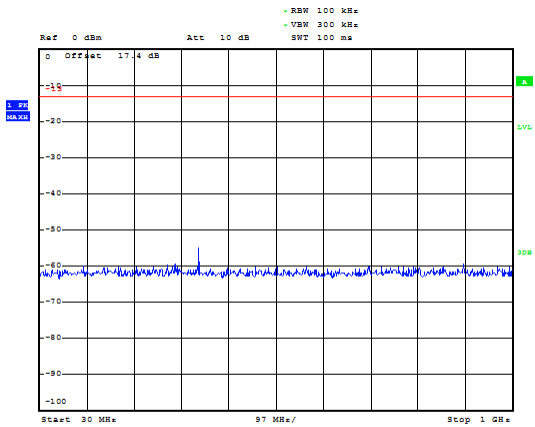
### LTE Band 66 20MHz CH-Low 3GHz~18GHz



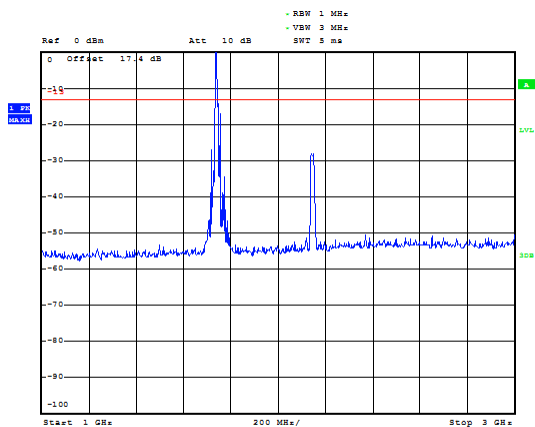
### LTE Band 66 20MHz CH-Middle 30MHz~1GHz



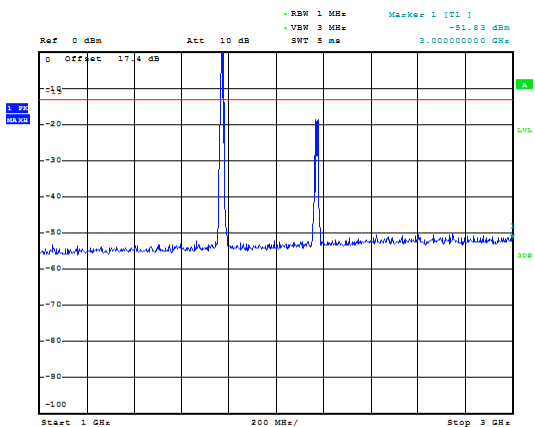
### LTE Band 66 20MHz CH-High 30MHz~1GHz



### LTE Band 66 20MHz CH-Middle 1GHz~3GHz

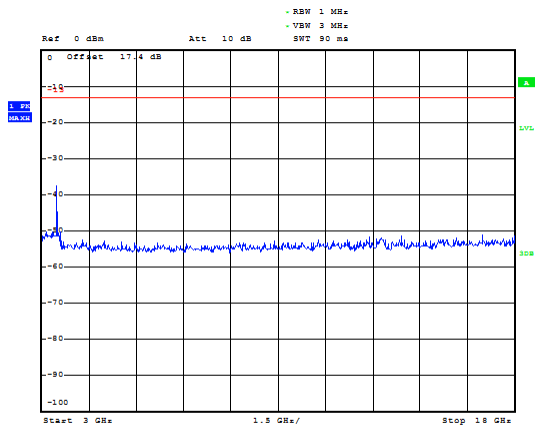


### LTE Band 66 20MHz CH-High 1GHz~3GHz

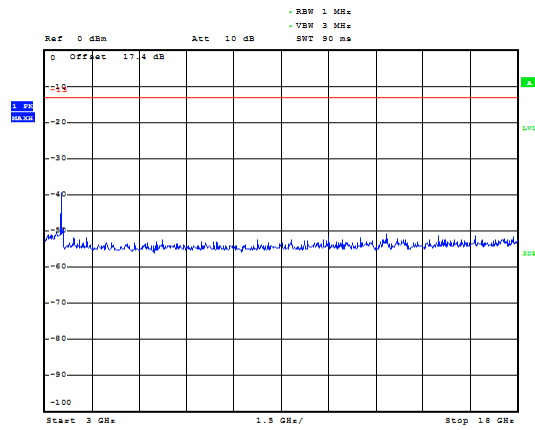




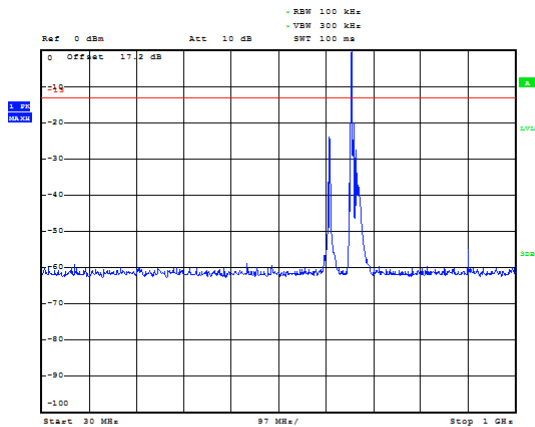
### LTE Band 66 20MHz CH-Middle 3GHz~18GHz



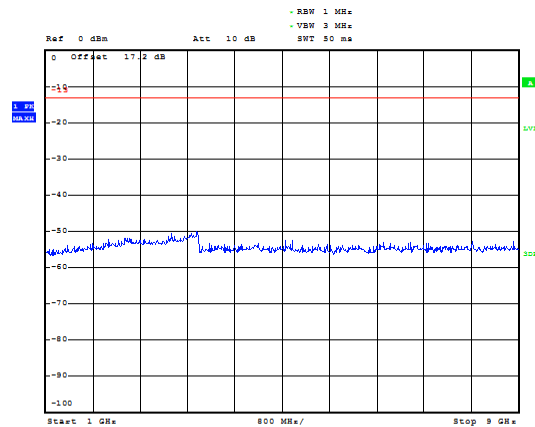
### LTE Band 66 20MHz CH-High 3GHz~18GHz



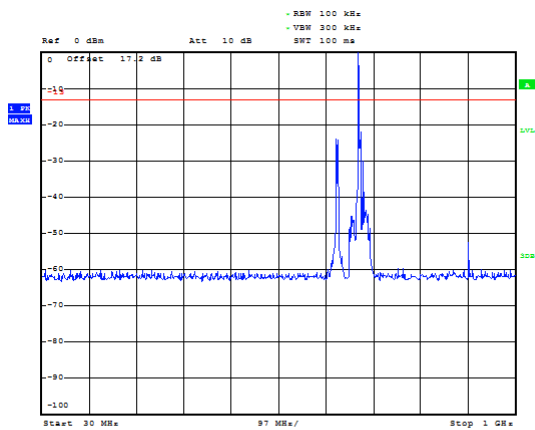
### LTE Band 71 5MHz CH-Low 30MHz~1GHz



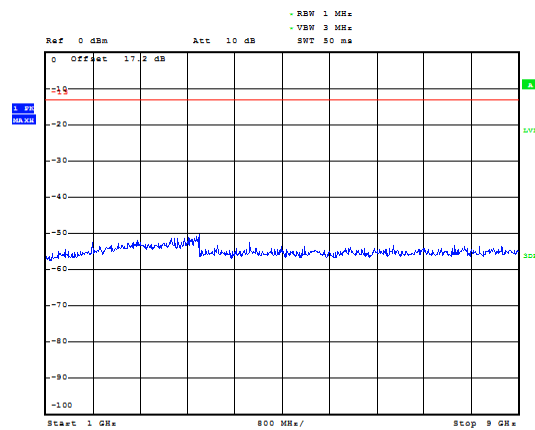
### LTE Band 71 5MHz CH-Low 1GHz~9GHz



### LTE Band 71 5MHz CH-Middle 30MHz~1GHz

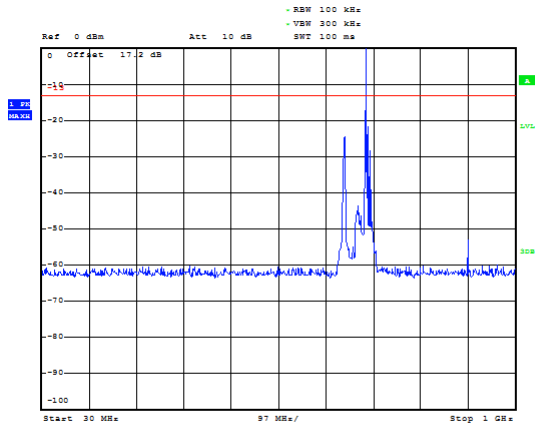


### LTE Band 71 5MHz CH-Middle 1GHz~9GHz

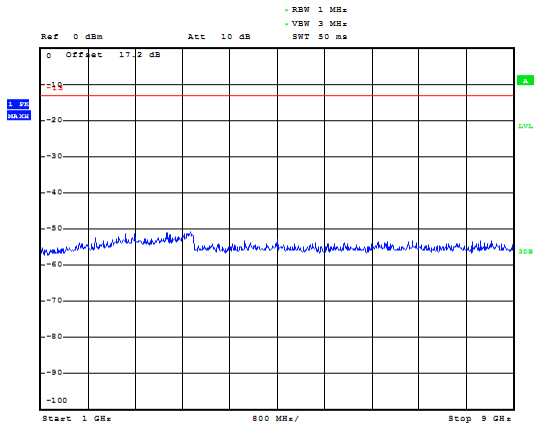




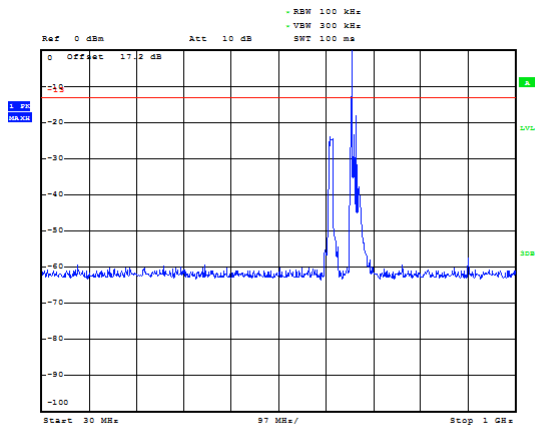
### LTE Band 71 5MHz CH-High 30MHz~1GHz



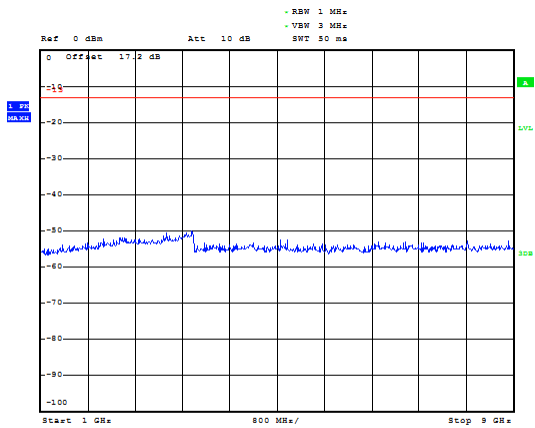
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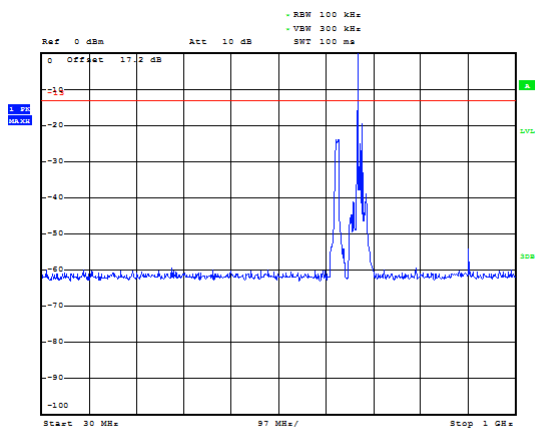
### LTE Band 71 10MHz CH-Low 30MHz~1GHz



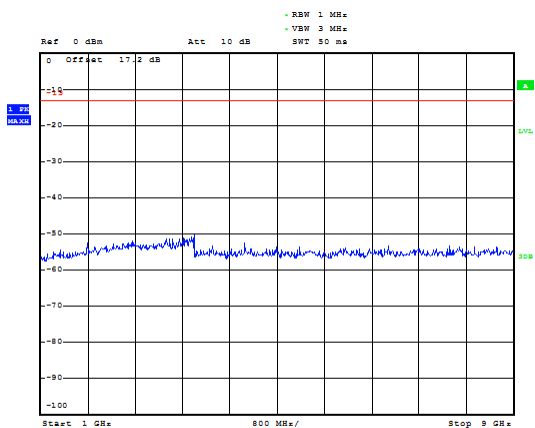
### LTE Band 71 10MHz CH-Low 1GHz~9GHz



### LTE Band 71 10MHz CH-Middle 30MHz~1GHz

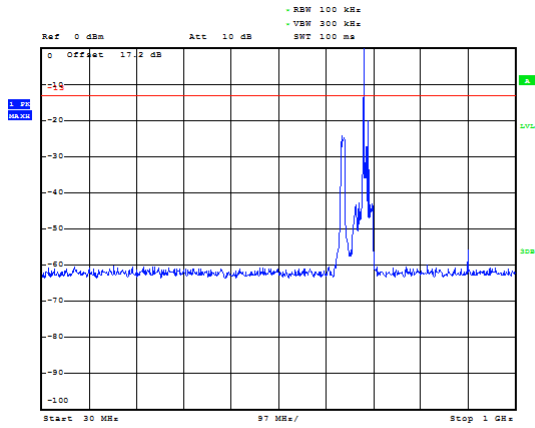


### LTE Band 71 10MHz CH-Middle 1GHz~9GHz

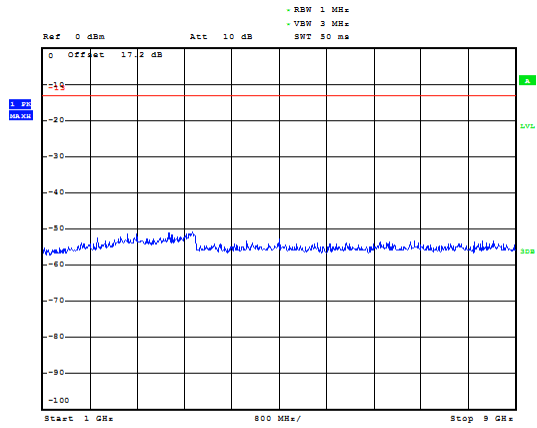




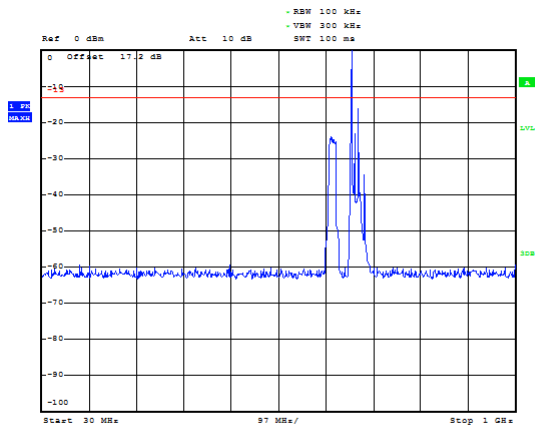
### LTE Band 71 10MHz CH-High 30MHz~1GHz



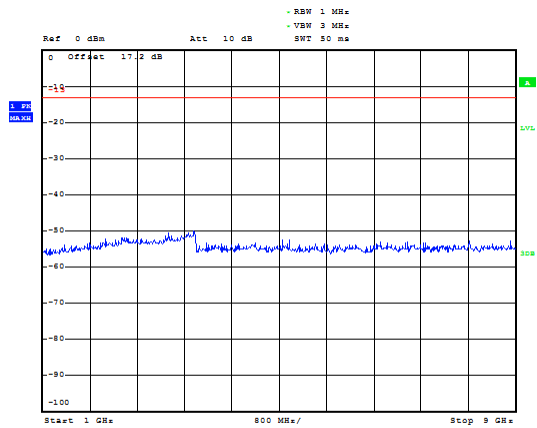
### LTE Band 71 10MHz CH-High 1GHz~9GHz



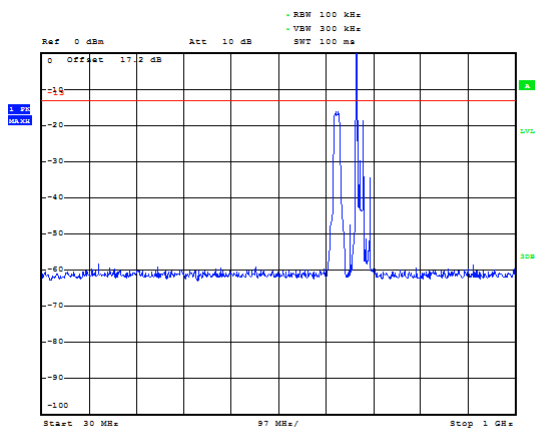
### LTE Band 71 15MHz CH-Low 30MHz~1GHz



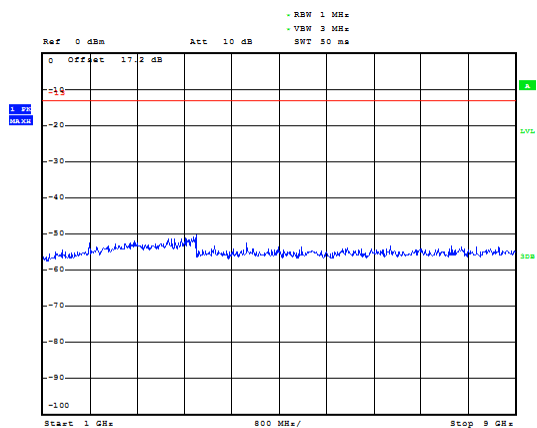
### LTE Band 71 15MHz CH-Low 1GHz~9GHz



### LTE Band 71 15MHz CH-Middle 30MHz~1GHz

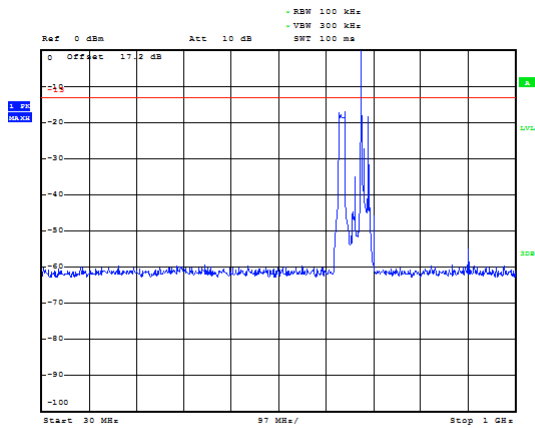


### LTE Band 71 15MHz CH-Middle 1GHz~9GHz

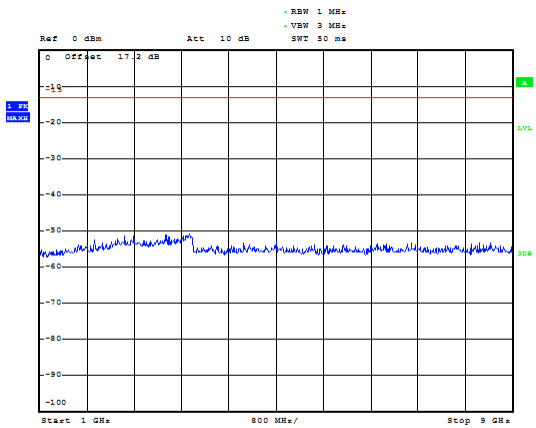




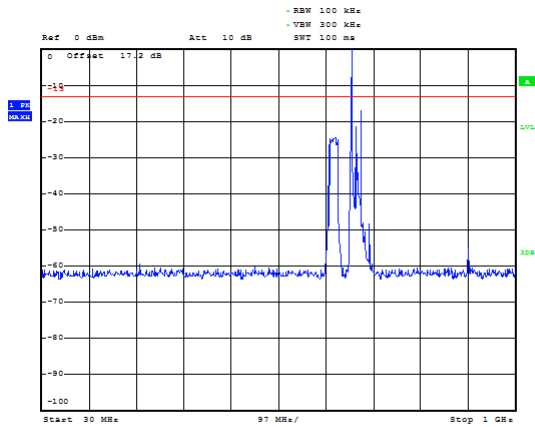
### LTE Band 71 15MHz CH-High 30MHz~1GHz



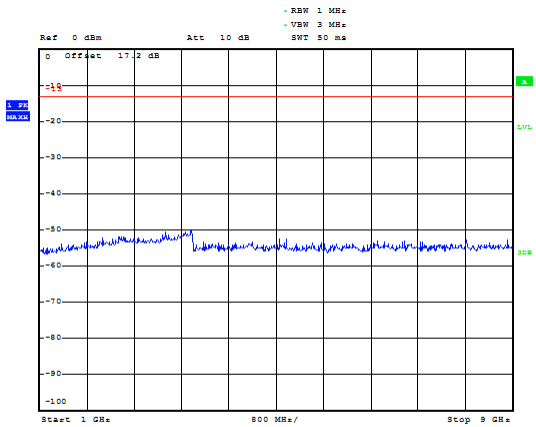
### LTE Band 71 15MHz CH-High 1GHz~9GHz



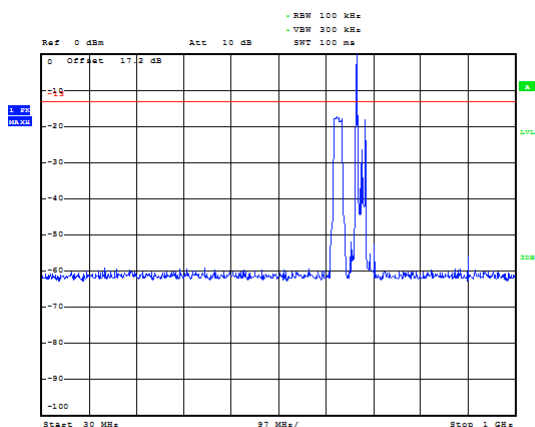
### LTE Band 71 20MHz CH-Low 30MHz~1GHz



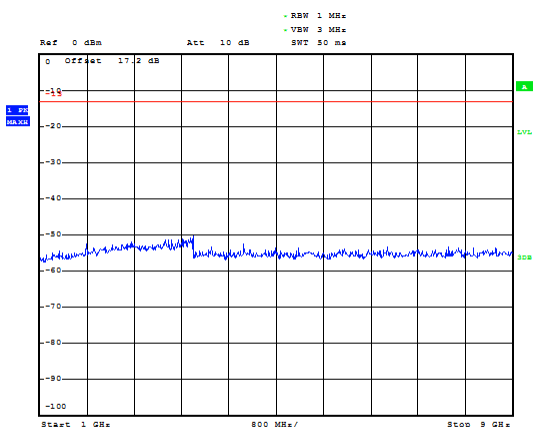
### LTE Band 71 20MHz CH-Low 1GHz~9GHz



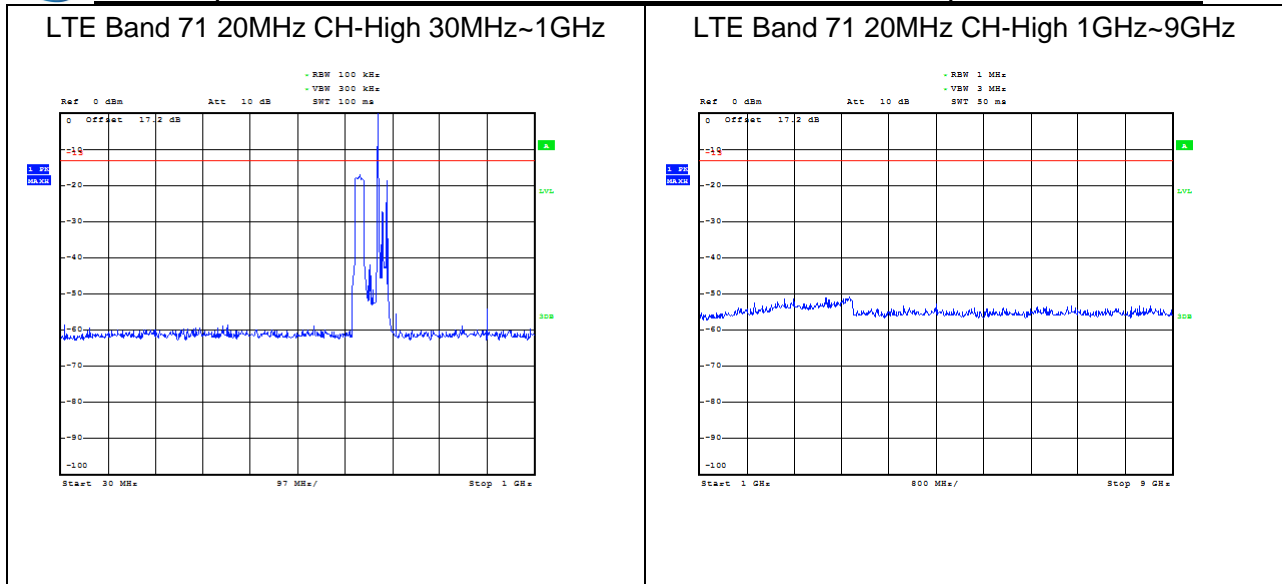
### LTE Band 71 20MHz CH-Middle 30MHz~1GHz



### LTE Band 71 20MHz CH-Middle 1GHz~9GHz







If disturbances were found more than 20dB below limit line, the mark is not required for the EUT. The signal beyond the limit is carrier in the following plots.

Test Data File Name	Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)
B12_CHLOW_1.4M_RB1_1-9GHz	1353.6	-29.342	-13	16.34
B12_CHMID_1.4M_RB1_1-9GHz	1363.3	-32.16	-13	19.16
B12_CHHIGH_1.4M_RB1_1-9GHz	1375.4	-33.044	-13	20.04
B12_CHLOW_3M_RB1_1-9GHz	1359.4	-29.342	-13	16.34
B12_CHMID_3M_RB1_1-9GHz	1365.3	-32.027	-13	19.03
B12_CHHIGH_3M_RB1_1-9GHz	1384.4	-32.757	-13	19.76
B12_CHLOW_5M_RB1_1-9GHz	1365.9	-29.084	-13	16.08
B12_CHMID_5M_RB1_1-9GHz	1375.6	-31.902	-13	18.90
B12_CHHIGH_5M_RB1_1-9GHz	1387.7	-32.786	-13	19.79
B12_CHLOW_10M_RB1_1-9GHz	1371.7	-29.077	-13	16.08
B12_CHMID_10M_RB1_1-9GHz	1377.6	-31.769	-13	18.77
B12_CHHIGH_10M_RB1_1-9GHz	1396.7	-32.487	-13	19.49
B66_CHLOW_1.4M_RB1_3-18GHz	3408.7	-30.513	-13	17.51
B66_CHLOW_3M_RB1_3-18GHz	3408.7	-30.927	-13	17.93
B66_CHLOW_5M_RB1_3-18GHz	3408.7	-30.935	-13	17.94
B66_CHLOW_10M_RB1_3-18GHz	3408.7	-30.941	-13	17.94
B66_CHLOW_15M_RB1_3-18GHz	3408.7	-30.257	-13	17.26
B66_CHLOW_20M_RB1_3-18GHz	3408.7	-30.198	-13	17.20

## 5.7 Radiates Spurious Emission

### Ambient condition

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

### Method of Measurement

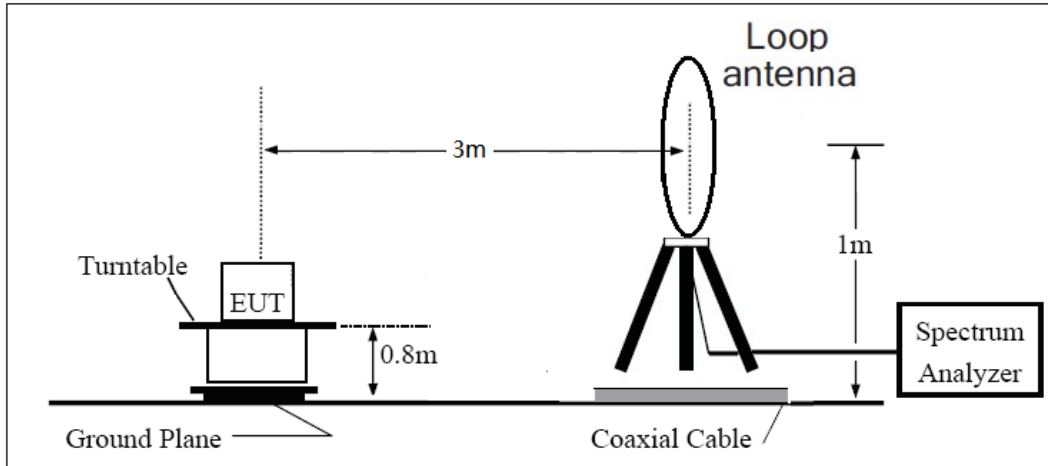
- The testing follows FCC KDB 971168 D01 v03r01 Section 5.8 and ANSI C63.26 (2015).
- Below 1GHz: The EUT is placed on a turntable 0.8 meters above the ground in the chamber, 3 meter away from the antenna. The maximal emission value is acquired by adjusting the antenna height, polarisation and turntable azimuth. Normally, the height range of antenna is 1 m to 4 m, the azimuth range of turntable is 0° to 360°, and the receive antenna has two polarizations Vertical (V) and Horizontal (H). Above 1GHz: (Note: the FCC's permission to use 1.5m as an alternative per TCBC Conf call of Dec. 2, 2014.) The EUT is placed on a turntable 1.5 meters above the ground in the chamber, 3 meter away from the antenna. The maximal emission value is acquired by adjusting the antenna height, polarisation and turntable azimuth. Normally, the height range of antenna is 1 m to 4 m, the azimuth range of turntable is 0° to 360°, and the receive antenna has two polarizations Vertical (V) and Horizontal (H).
- A loop antenna, A log-periodic antenna or 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.
- The EUT is then put into continuously transmitting mode at its maximum power level during the test. Set Test Receiver or Spectrum RBW=200Hz,VBW=600Hz for 9kHz150kHz , RBW=10kHz, VBW=30kHz 150kHz-30MHz ,RBW=100kHz,VBW=300kHz for 30MHz to 1GHz and RBW=1MHz, VBW=3MHz for above 1GHz And the maximum value of the receiver should be recorded as (Pr).
- 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.
- 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.
- The measurement results are obtained as described below:  
 $Power(EIRP)=PMea- PAg - Pcl + Ga$   
 The measurement results are amend as described below:  
 $Power(EIRP)=PMea- Pcl + Ga$
- This value is EIRP since the measurement is calibrated using an antenna of known gain (2.15 dBi) and known input power. ERP can be calculated from EIRP by subtracting the gain of the dipole, ERP

= EIRP-2.15dBi.

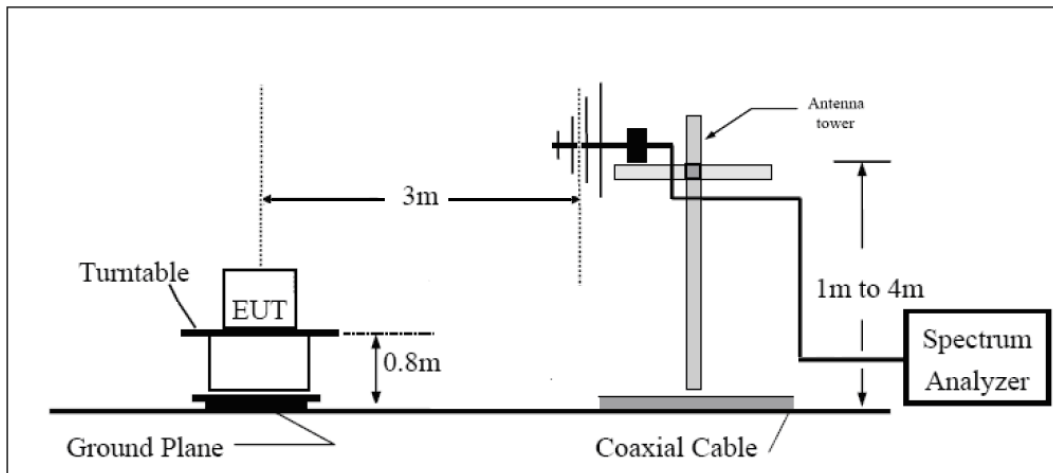
The modulation mode and RB allocation refer to section 5.1, using the maximum output power configuration.

**Test setup**

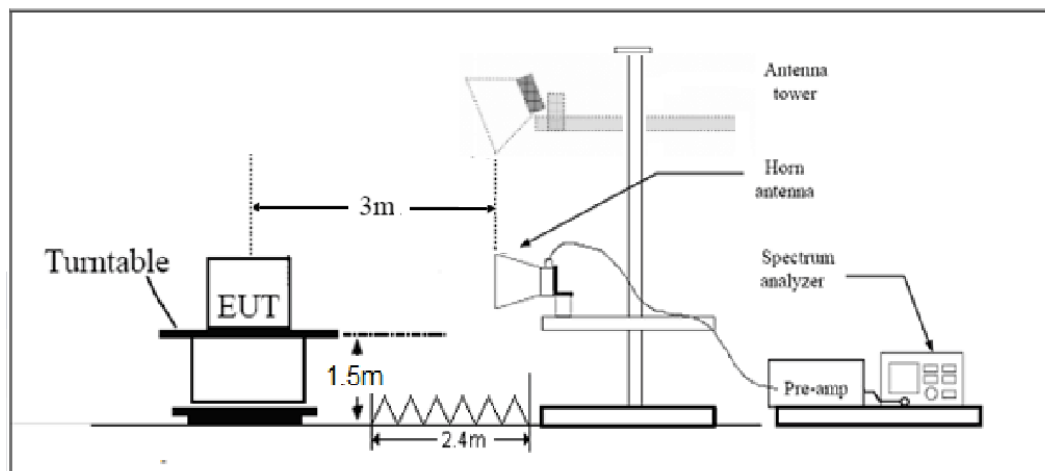
**9KHz ~ 30MHz**



**30MHz ~ 1GHz**



**Above 1GHz**



Note: Area side:2.4mX3.6m

## 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(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(a)/(h)/(g) Limit	-13 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 9kHz to the 10th harmonic of the carrier, the emissions below the noise floor will not be recorded in the report.

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	3421.5	-57.41	2.6	10.15	Horizontal	-49.86	-13.00	36.86	0
3	5130.8	-38.86	2.4	11.35	Horizontal	-29.91	-13.00	16.91	315
4	6841.9	-49.73	4.5	10.85	Horizontal	-43.38	-13.00	30.38	225
5	8554.5	-47.24	5.1	11.35	Horizontal	-40.99	-13.00	27.99	270
6	10267.9	-46.79	5.3	11.95	Horizontal	-40.14	-13.00	27.14	180
7	11990.3	-45.31	5.5	13.55	Horizontal	-37.26	-13.00	24.26	270
8	13684.5	-44.00	6.3	13.75	Horizontal	-36.55	-13.00	23.55	225
9	15394.5	-46.46	6.7	13.85	Horizontal	-39.31	-13.00	26.31	315
10	17114.6	-43.02	6.8	14.25	Horizontal	-35.57	-13.00	22.57	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 1.4MHz CH-Middle, RB 1

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	3463.5	-57.05	2.6	10.75	Horizontal	-48.90	-13.00	35.90	0
3	5196.4	-47.53	2.4	11.05	Horizontal	-38.88	-13.00	25.88	315
4	6929.6	-49.50	4.5	11.15	Horizontal	-42.85	-13.00	29.85	180
5	8661.8	-45.25	5.1	11.35	Horizontal	-39.00	-13.00	26.00	270
6	10395.0	-45.18	5.3	11.95	Horizontal	-38.53	-13.00	25.53	45
7	12180.4	-44.95	5.5	13.55	Horizontal	-36.90	-13.00	23.90	0
8	13873.5	-42.21	6.3	13.75	Horizontal	-34.76	-13.00	21.76	180
9	15599.3	-44.98	6.7	13.85	Horizontal	-37.83	-13.00	24.83	225
10	17335.1	-42.48	6.8	14.25	Horizontal	-35.03	-13.00	22.03	135

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

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

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	3507.4	-55.77	2.6	10.15	Horizontal	-48.22	-13.00	35.22	0
3	5261.3	-46.14	2.4	11.05	Horizontal	-37.49	-13.00	24.49	315
4	7018.1	-50.20	4.5	11.15	Horizontal	-43.55	-13.00	30.55	90
5	8776.1	-47.04	5.1	11.35	Horizontal	-40.79	-13.00	27.79	45
6	10522.1	-45.28	5.3	11.95	Horizontal	-38.63	-13.00	25.63	0
7	12288.4	-45.55	5.5	13.55	Horizontal	-37.50	-13.00	24.50	90
8	14032.1	-43.04	6.3	13.75	Horizontal	-35.59	-13.00	22.59	0
9	15784.9	-45.07	6.7	13.85	Horizontal	-37.92	-13.00	24.92	225
10	17587.1	-42.75	6.8	14.25	Horizontal	-35.30	-13.00	22.30	135

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



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

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	3420.4	-59.09	2.6	10.15	Horizontal	-51.54	-13.00	38.54	180
3	5130.8	-39.02	2.4	11.35	Horizontal	-30.07	-13.00	17.07	315
4	6841.1	-46.79	4.5	10.85	Horizontal	-40.44	-13.00	27.44	135
5	8557.5	-47.71	5.1	11.35	Horizontal	-41.46	-13.00	28.46	315
6	10261.1	-47.08	5.3	11.95	Horizontal	-40.43	-13.00	27.43	135
7	11983.5	-46.08	5.5	13.55	Horizontal	-38.03	-13.00	25.03	90
8	13629.4	-43.88	6.3	13.75	Horizontal	-36.43	-13.00	23.43	270
9	15428.3	-44.88	6.7	13.85	Horizontal	-37.73	-13.00	24.73	135
10	17122.5	-43.41	6.8	14.25	Horizontal	-35.96	-13.00	22.96	0

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

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

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	3462.4	-44.81	2.6	10.75	Horizontal	-36.66	-13.00	23.66	0
3	5194.1	-39.93	2.4	11.05	Horizontal	-31.28	-13.00	18.28	315
4	6934.1	-48.74	4.5	11.15	Horizontal	-42.09	-13.00	29.09	270
5	8656.1	-44.96	5.1	11.35	Horizontal	-38.71	-13.00	25.71	90
6	10391.6	-45.01	5.3	11.95	Horizontal	-38.36	-13.00	25.36	180
7	12123.0	-45.13	5.5	13.55	Horizontal	-37.08	-13.00	24.08	315
8	13862.3	-43.43	6.3	13.75	Horizontal	-35.98	-13.00	22.98	45
9	15590.3	-44.64	6.7	13.85	Horizontal	-37.49	-13.00	24.49	225
10	17323.9	-42.23	6.8	14.25	Horizontal	-34.78	-13.00	21.78	0

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



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

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	3504.4	-45.47	2.6	10.15	Horizontal	-37.92	-13.00	24.92	0
3	5256.8	-42.34	2.4	11.05	Horizontal	-33.69	-13.00	20.69	45
4	7037.6	-48.47	4.5	11.15	Horizontal	-41.82	-13.00	28.82	315
5	8781.4	-46.45	5.1	11.35	Horizontal	-40.20	-13.00	27.20	270
6	10524.4	-46.25	5.3	11.95	Horizontal	-39.60	-13.00	26.60	0
7	12255.8	-45.68	5.5	13.55	Horizontal	-37.63	-13.00	24.63	0
8	14027.6	-43.14	6.3	13.75	Horizontal	-35.69	-13.00	22.69	270
9	15762.4	-44.04	6.7	13.85	Horizontal	-36.89	-13.00	23.89	225
10	17538.8	-43.46	6.8	14.25	Horizontal	-36.01	-13.00	23.01	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 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	3424.9	-47.13	2.6	10.15	Horizontal	-39.58	-13.00	26.58	0
3	5138.3	-36.71	2.4	11.35	Horizontal	-27.76	-13.00	14.76	315
4	6850.9	-48.41	4.5	10.85	Horizontal	-42.06	-13.00	29.06	135
5	8564.3	-46.09	5.1	11.35	Horizontal	-39.84	-13.00	26.84	90
6	10272.4	-47.19	5.3	11.95	Horizontal	-40.54	-13.00	27.54	270
7	11956.5	-45.47	5.5	13.55	Horizontal	-37.42	-13.00	24.42	180
8	13702.5	-44.46	6.3	13.75	Horizontal	-37.01	-13.00	24.01	180
9	15406.9	-44.36	6.7	13.85	Horizontal	-37.21	-13.00	24.21	45
10	17131.5	-44.06	6.8	14.25	Horizontal	-36.61	-13.00	23.61	45

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





## LTE Band 4 QPSK 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	3465.4	-51.03	2.6	10.75	Horizontal	-42.88	-13.00	29.88	0
3	5197.9	-39.06	2.4	11.05	Horizontal	-30.41	-13.00	17.41	315
4	6930.8	-48.92	4.5	11.15	Horizontal	-42.27	-13.00	29.27	180
5	8664.0	-47.42	5.1	11.35	Horizontal	-41.17	-13.00	28.17	90
6	10384.9	-44.93	5.3	11.95	Horizontal	-38.28	-13.00	25.28	0
7	12136.5	-45.38	5.5	13.55	Horizontal	-37.33	-13.00	24.33	270
8	13858.9	-43.17	6.3	13.75	Horizontal	-35.72	-13.00	22.72	315
9	15591.4	-44.10	6.7	13.85	Horizontal	-36.95	-13.00	23.95	180
10	17319.4	-43.14	6.8	14.25	Horizontal	-35.69	-13.00	22.69	45

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

## LTE Band 4 QPSK 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	3505.1	-46.77	2.6	10.15	Horizontal	-39.22	-13.00	26.22	0
3	5257.9	-42.95	2.4	11.05	Horizontal	-34.30	-13.00	21.30	135
4	7011.0	-49.85	4.5	11.15	Horizontal	-43.20	-13.00	30.20	270
5	8763.8	-47.60	5.1	11.35	Horizontal	-41.35	-13.00	28.35	225
6	10513.1	-45.08	5.3	11.95	Horizontal	-38.43	-13.00	25.43	270
7	12264.8	-45.59	5.5	13.55	Horizontal	-37.54	-13.00	24.54	270
8	14032.1	-42.97	6.3	13.75	Horizontal	-35.52	-13.00	22.52	315
9	15775.9	-44.62	6.7	13.85	Horizontal	-37.47	-13.00	24.47	270
10	17569.1	-43.40	6.8	14.25	Horizontal	-35.95	-13.00	22.95	90

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



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

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	3430.1	-45.48	2.6	10.15	Horizontal	-37.93	-13.00	24.93	135
3	5145.0	-38.78	2.4	11.35	Horizontal	-29.83	-13.00	16.83	315
4	6859.1	-49.33	4.5	10.85	Horizontal	-42.98	-13.00	29.98	225
5	8575.5	-43.58	5.1	11.35	Horizontal	-37.33	-13.00	24.33	45
6	10284.8	-46.86	5.3	11.95	Horizontal	-40.21	-13.00	27.21	180
7	12009.4	-45.66	5.5	13.55	Horizontal	-37.61	-13.00	24.61	225
8	13736.3	-44.69	6.3	13.75	Horizontal	-37.24	-13.00	24.24	90
9	15451.9	-45.61	6.7	13.85	Horizontal	-38.46	-13.00	25.46	180
10	17146.1	-43.16	6.8	14.25	Horizontal	-35.71	-13.00	22.71	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 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	3465.0	-46.05	2.6	10.75	Horizontal	-37.90	-13.00	24.90	0
3	5198.3	-40.25	2.4	11.05	Horizontal	-31.60	-13.00	18.60	315
4	6923.6	-49.08	4.5	11.15	Horizontal	-42.43	-13.00	29.43	90
5	8663.3	-45.70	5.1	11.35	Horizontal	-39.45	-13.00	26.45	45
6	10398.4	-45.32	5.3	11.95	Horizontal	-38.67	-13.00	25.67	180
7	12163.5	-45.16	5.5	13.55	Horizontal	-37.11	-13.00	24.11	270
8	13821.8	-42.89	6.3	13.75	Horizontal	-35.44	-13.00	22.44	225
9	15590.3	-46.00	6.7	13.85	Horizontal	-38.85	-13.00	25.85	270
10	17313.8	-43.83	6.8	14.25	Horizontal	-36.38	-13.00	23.38	135

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



## LTE Band 4 QPSK 10MHz CH-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	3490.9	-59.39	2.6	10.15	Horizontal	-51.84	-13.00	38.84	135
3	5250.0	-41.97	2.4	11.05	Horizontal	-33.32	-13.00	20.32	135
4	6999.8	-49.75	4.5	11.15	Horizontal	-43.10	-13.00	30.10	90
5	8746.5	-47.71	5.1	11.35	Horizontal	-41.46	-13.00	28.46	45
6	10508.6	-45.36	5.3	11.95	Horizontal	-38.71	-13.00	25.71	90
7	12288.4	-45.29	5.5	13.55	Horizontal	-37.24	-13.00	24.24	270
8	14000.6	-43.89	6.3	13.75	Horizontal	-36.44	-13.00	23.44	315
9	15710.6	-43.44	6.7	13.85	Horizontal	-36.29	-13.00	23.29	45
10	17502.8	-44.46	6.8	14.25	Horizontal	-37.01	-13.00	24.01	135

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

## LTE Band 4 QPSK 15MHz CH Low, RB 1

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	3435.0	-45.51	2.6	10.15	Horizontal	-37.96	-13.00	24.96	135
3	5153.3	-38.47	2.4	11.35	Horizontal	-29.52	-13.00	16.52	315
4	6871.1	-48.93	4.5	10.85	Horizontal	-42.58	-13.00	29.58	180
5	8588.6	-43.98	5.1	11.35	Horizontal	-37.73	-13.00	24.73	45
6	10302.8	-46.69	5.3	11.95	Horizontal	-40.04	-13.00	27.04	135
7	12020.6	-47.26	5.5	13.55	Horizontal	-39.21	-13.00	26.21	135
8	13746.4	-42.99	6.3	13.75	Horizontal	-35.54	-13.00	22.54	180
9	15449.6	-45.42	6.7	13.85	Horizontal	-38.27	-13.00	25.27	225
10	17160.8	-44.10	6.8	14.25	Horizontal	-36.65	-13.00	23.65	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 15MHz CH-Middle, RB 1

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	3465.0	-45.82	2.6	10.75	Horizontal	-37.67	-13.00	24.67	0
3	5198.3	-41.34	2.4	11.05	Horizontal	-32.69	-13.00	19.69	315
4	6929.6	-48.49	4.5	11.15	Horizontal	-41.84	-13.00	28.84	270
5	8663.3	-47.25	5.1	11.35	Horizontal	-41.00	-13.00	28.00	0
6	13837.5	-42.73	5.3	11.95	Horizontal	-36.08	-13.00	23.08	0
7	12120.8	-46.44	5.5	13.55	Horizontal	-38.39	-13.00	25.39	45
8	13851.0	-43.25	6.3	13.75	Horizontal	-35.80	-13.00	22.80	270
9	15538.5	-45.58	6.7	13.85	Horizontal	-38.43	-13.00	25.43	0
10	17331.8	-42.17	6.8	14.25	Horizontal	-34.72	-13.00	21.72	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 15MHz CH-High, RB 1

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	3495.4	-47.00	2.6	10.15	Horizontal	-39.45	-13.00	26.45	0
3	5243.3	-42.12	2.4	11.05	Horizontal	-33.47	-13.00	20.47	90
4	6990.8	-50.29	4.5	11.15	Horizontal	-43.64	-13.00	30.64	180
5	8738.3	-46.80	5.1	11.35	Horizontal	-40.55	-13.00	27.55	225
6	10487.3	-45.89	5.3	11.95	Horizontal	-39.24	-13.00	26.24	90
7	12217.5	-46.20	5.5	13.55	Horizontal	-38.15	-13.00	25.15	270
8	13957.9	-43.45	6.3	13.75	Horizontal	-36.00	-13.00	23.00	225
9	15718.5	-45.21	6.7	13.85	Horizontal	-38.06	-13.00	25.06	315
10	17478.0	-43.45	6.8	14.25	Horizontal	-36.00	-13.00	23.00	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-Low, RB 1

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	3421.9	-47.03	2.6	10.15	Horizontal	-39.48	-13.00	26.48	135
3	5133.8	-36.36	2.4	11.35	Horizontal	-27.41	-13.00	14.41	315
4	6880.5	-51.11	4.5	10.85	Horizontal	-44.76	-13.00	31.76	135
5	8607.4	-48.06	5.1	11.35	Horizontal	-41.81	-13.00	28.81	90
6	10319.6	-46.04	5.3	11.95	Horizontal	-39.39	-13.00	26.39	0
7	12036.4	-45.93	5.5	13.55	Horizontal	-37.88	-13.00	24.88	135
8	13753.1	-44.07	6.3	13.75	Horizontal	-36.62	-13.00	23.62	0
9	15482.3	-45.70	6.7	13.85	Horizontal	-38.55	-13.00	25.55	315
10	17202.4	-44.34	6.8	14.25	Horizontal	-36.89	-13.00	23.89	270

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

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

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	3447.4	-45.78	2.6	10.75	Horizontal	-37.63	-13.00	24.63	135
3	5170.9	-39.28	2.4	11.05	Horizontal	-30.63	-13.00	17.63	315
4	6930.8	-51.73	4.5	11.15	Horizontal	-45.08	-13.00	32.08	45
5	8666.3	-46.34	5.1	11.35	Horizontal	-40.09	-13.00	27.09	135
6	10396.1	-46.23	5.3	11.95	Horizontal	-39.58	-13.00	26.58	0
7	12120.8	-46.69	5.5	13.55	Horizontal	-38.64	-13.00	25.64	225
8	13861.1	-44.16	6.3	13.75	Horizontal	-36.71	-13.00	23.71	90
9	15591.4	-45.74	6.7	13.85	Horizontal	-38.59	-13.00	25.59	270
10	17323.9	-44.18	6.8	14.25	Horizontal	-36.73	-13.00	23.73	315

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



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

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	3472.1	-46.12	2.6	10.15	Horizontal	-38.57	-13.00	25.57	0
3	5208.4	-39.85	2.4	11.05	Horizontal	-31.20	-13.00	18.20	315
4	6990.4	-50.07	4.5	11.15	Horizontal	-43.42	-13.00	30.42	45
5	8728.9	-48.10	5.1	11.35	Horizontal	-41.85	-13.00	28.85	225
6	10468.1	-45.44	5.3	11.95	Horizontal	-38.79	-13.00	25.79	45
7	12214.1	-46.02	5.5	13.55	Horizontal	-37.97	-13.00	24.97	180
8	13955.6	-43.19	6.3	13.75	Horizontal	-35.74	-13.00	22.74	180
9	15701.6	-45.48	6.7	13.85	Horizontal	-38.33	-13.00	25.33	180
10	17420.6	-43.30	6.8	14.25	Horizontal	-35.85	-13.00	22.85	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 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	-59.64	2.00	10.15	Horizontal	-53.64	-13.00	40.64	180
3	2099.1	-57.78	2.50	11.35	Horizontal	-51.08	-13.00	38.08	45
4	2798.8	-55.05	4.20	10.85	Horizontal	-50.55	-13.00	37.55	0
5	3492.8	-55.01	5.20	11.35	Horizontal	-51.01	-13.00	38.01	180
6	4196.6	-53.44	5.50	11.95	Horizontal	-49.14	-13.00	36.14	135
7	4897.5	-52.55	5.70	13.55	Horizontal	-46.85	-13.00	33.85	0
8	5592.4	-51.42	6.30	13.75	Horizontal	-46.12	-13.00	33.12	315
9	6295.5	-50.97	6.80	13.85	Horizontal	-46.07	-13.00	33.07	135
10	6999.3	-48.63	6.90	14.25	Horizontal	-43.43	-13.00	30.43	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 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	-61.02	2.00	10.75	Horizontal	-54.42	-13.00	41.42	45
3	2122.5	-45.63	2.51	11.05	Horizontal	-39.24	-13.00	26.24	315
4	2830.0	-54.43	4.20	11.15	Horizontal	-49.63	-13.00	36.63	315
5	3537.4	-55.05	5.20	11.15	Horizontal	-51.25	-13.00	38.25	270
6	4250.3	-53.00	5.50	11.95	Horizontal	-48.70	-13.00	35.70	270
7	4945.5	-53.01	5.70	13.55	Horizontal	-47.31	-13.00	34.31	0
8	5668.1	-52.35	6.30	13.75	Horizontal	-47.05	-13.00	34.05	315
9	6364.3	-49.55	6.80	13.85	Horizontal	-44.65	-13.00	31.65	90
10	7073.8	-48.43	6.90	14.25	Horizontal	-43.23	-13.00	30.23	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-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	-58.89	2.00	10.15	Horizontal	-52.89	-13.00	39.89	225
3	2145.9	-48.23	2.51	11.05	Horizontal	-41.84	-13.00	28.84	90
4	2861.2	-54.96	4.20	11.15	Horizontal	-50.16	-13.00	37.16	180
5	3570.0	-53.72	5.20	11.15	Horizontal	-49.92	-13.00	36.92	135
6	4290.0	-53.35	5.50	11.95	Horizontal	-49.05	-13.00	36.05	225
7	5008.5	-52.07	5.70	13.55	Horizontal	-46.37	-13.00	33.37	180
8	5721.0	-52.25	6.30	13.75	Horizontal	-46.95	-13.00	33.95	225
9	6432.0	-49.32	6.80	13.85	Horizontal	-44.42	-13.00	31.42	0
10	7153.5	-47.78	6.90	14.25	Horizontal	-42.58	-13.00	29.58	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 3MHz CH-Low, RB 1

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1401.0	-59.30	2.00	10.15	Horizontal	-53.30	-13.00	40.30	180
3	2101.5	-56.95	2.51	11.35	Horizontal	-50.26	-13.00	37.26	270
4	2802.0	-53.76	4.20	10.85	Horizontal	-49.26	-13.00	36.26	270
5	3507.0	-54.52	5.20	11.35	Horizontal	-50.52	-13.00	37.52	315
6	4201.9	-53.62	5.50	11.95	Horizontal	-49.32	-13.00	36.32	45
7	4903.1	-54.15	5.70	13.55	Horizontal	-48.45	-13.00	35.45	45
8	5603.6	-52.23	6.30	13.75	Horizontal	-46.93	-13.00	33.93	0
9	6304.8	-52.12	6.80	13.85	Horizontal	-47.22	-13.00	34.22	315
10	7016.8	-47.79	6.90	14.25	Horizontal	-42.59	-13.00	29.59	225

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

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

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1415.0	-60.61	2.00	10.75	Horizontal	-54.01	-13.00	41.01	225
3	2122.5	-46.43	2.51	11.05	Horizontal	-40.04	-13.00	27.04	225
4	2830.0	-55.10	4.20	11.15	Horizontal	-50.30	-13.00	37.30	315
5	3540.4	-54.76	5.20	11.15	Horizontal	-50.96	-13.00	37.96	90
6	4247.6	-52.76	5.50	11.95	Horizontal	-48.46	-13.00	35.46	180
7	4957.1	-52.90	5.70	13.55	Horizontal	-47.20	-13.00	34.20	90
8	5666.3	-52.56	6.30	13.75	Horizontal	-47.26	-13.00	34.26	45
9	6368.5	-51.64	6.80	13.85	Horizontal	-46.74	-13.00	33.74	0
10	7074.8	-47.82	6.90	14.25	Horizontal	-42.62	-13.00	29.62	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 3MHz CH-High, RB 1

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1429.0	-59.64	2.00	10.15	Horizontal	-53.64	-13.00	40.64	180
3	2143.5	-48.95	2.51	11.05	Horizontal	-42.56	-13.00	29.56	45
4	2858.0	-55.90	4.20	11.15	Horizontal	-51.10	-13.00	38.10	315
5	3574.9	-54.66	5.20	11.15	Horizontal	-50.86	-13.00	37.86	270
6	4286.6	-53.72	5.50	11.95	Horizontal	-49.42	-13.00	36.42	45
7	5002.9	-51.62	5.70	13.55	Horizontal	-45.92	-13.00	32.92	0
8	5714.6	-52.05	6.30	13.75	Horizontal	-46.75	-13.00	33.75	45
9	6429.8	-50.36	6.80	13.85	Horizontal	-45.46	-13.00	32.46	315
10	7136.0	-47.61	6.90	14.25	Horizontal	-42.41	-13.00	29.41	270

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

## LTE Band 12 QPSK 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	-59.50	2.00	10.15	Horizontal	-53.50	-13.00	40.50	270
3	2104.5	-58.02	2.50	11.35	Horizontal	-51.32	-13.00	38.32	135
4	2806.0	-55.74	4.20	10.85	Horizontal	-51.24	-13.00	38.24	225
5	3509.6	-55.30	5.20	11.35	Horizontal	-51.30	-13.00	38.30	315
6	4209.8	-53.05	5.50	11.95	Horizontal	-48.75	-13.00	35.75	0
7	4909.9	-52.61	5.70	13.55	Horizontal	-46.91	-13.00	33.91	270
8	5613.0	-51.67	6.30	13.75	Horizontal	-46.37	-13.00	33.37	225
9	6312.3	-50.66	6.80	13.85	Horizontal	-45.76	-13.00	32.76	270
10	7014.5	-47.79	6.90	14.25	Horizontal	-42.59	-13.00	29.59	270

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



## LTE Band 12 QPSK 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	-59.04	2.00	10.75	Horizontal	-52.44	-13.00	39.44	0
3	2122.5	-48.21	2.51	11.05	Horizontal	-41.82	-13.00	28.82	270
4	2830.0	-55.27	4.20	11.15	Horizontal	-50.47	-13.00	37.47	270
5	3531.0	-54.35	5.20	11.15	Horizontal	-50.55	-13.00	37.55	225
6	4241.3	-53.06	5.50	11.95	Horizontal	-48.76	-13.00	35.76	180
7	4957.9	-52.02	5.70	13.55	Horizontal	-46.32	-13.00	33.32	225
8	5667.4	-51.84	6.30	13.75	Horizontal	-46.54	-13.00	33.54	270
9	6363.8	-49.23	6.80	13.85	Horizontal	-44.33	-13.00	31.33	180
10	7071.5	-47.28	6.90	14.25	Horizontal	-42.08	-13.00	29.08	135

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

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

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1427.0	-60.86	2.00	10.15	Horizontal	-54.86	-13.00	41.86	135
3	2140.5	-49.20	2.51	11.05	Horizontal	-42.81	-13.00	29.81	90
4	2854.0	-55.11	4.20	11.15	Horizontal	-50.31	-13.00	37.31	180
5	3568.1	-53.65	5.20	11.15	Horizontal	-49.85	-13.00	36.85	135
6	4279.5	-52.46	5.50	11.95	Horizontal	-48.16	-13.00	35.16	45
7	4989.8	-51.92	5.70	13.55	Horizontal	-46.22	-13.00	33.22	45
8	5711.3	-51.62	6.30	13.75	Horizontal	-46.32	-13.00	33.32	0
9	6424.3	-50.46	6.80	13.85	Horizontal	-45.56	-13.00	32.56	180
10	7134.0	-46.25	6.90	14.25	Horizontal	-41.05	-13.00	28.05	225

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



## LTE Band 12 QPSK 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	-59.58	2.00	10.15	Horizontal	-53.58	-13.00	40.58	0
3	2112.0	-52.77	2.51	11.35	Horizontal	-46.08	-13.00	33.08	180
4	2816.0	-54.49	4.20	10.85	Horizontal	-49.99	-13.00	36.99	90
5	3523.5	-54.81	5.20	11.35	Horizontal	-50.81	-13.00	37.81	225
6	4225.1	-53.60	5.50	11.95	Horizontal	-49.30	-13.00	36.30	135
7	4924.1	-54.02	5.70	13.55	Horizontal	-48.32	-13.00	35.32	270
8	5631.0	-50.78	6.30	13.75	Horizontal	-45.48	-13.00	32.48	270
9	6331.8	-49.61	6.80	13.85	Horizontal	-44.71	-13.00	31.71	315
10	7046.3	-47.77	6.90	14.25	Horizontal	-42.57	-13.00	29.57	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-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	-59.39	2.00	10.75	Horizontal	-52.79	-13.00	39.79	225
3	2122.5	-46.84	2.51	11.05	Horizontal	-40.45	-13.00	27.45	315
4	2830.0	-54.38	4.20	11.15	Horizontal	-49.58	-13.00	36.58	45
5	3538.5	-54.62	5.20	11.15	Horizontal	-50.82	-13.00	37.82	315
6	4252.9	-51.31	5.50	11.95	Horizontal	-47.01	-13.00	34.01	270
7	4956.4	-52.69	5.70	13.55	Horizontal	-46.99	-13.00	33.99	225
8	5662.1	-51.34	6.30	13.75	Horizontal	-46.04	-13.00	33.04	0
9	6366.5	-49.54	6.80	13.85	Horizontal	-44.64	-13.00	31.64	45
10	7074.5	-47.57	6.90	14.25	Horizontal	-42.37	-13.00	29.37	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	-59.75	2.00	10.15	Horizontal	-53.75	-13.00	40.75	90
3	2133.0	-49.37	2.51	11.05	Horizontal	-42.98	-13.00	29.98	0
4	2844.0	-55.88	4.20	11.15	Horizontal	-51.08	-13.00	38.08	135
5	3555.4	-55.14	5.20	11.15	Horizontal	-51.34	-13.00	38.34	135
6	4268.6	-53.21	5.50	11.95	Horizontal	-48.91	-13.00	35.91	135
7	4980.4	-52.40	5.70	13.55	Horizontal	-46.70	-13.00	33.70	0
8	5682.8	-51.38	6.30	13.75	Horizontal	-46.08	-13.00	33.08	135
9	6393.0	-50.98	6.80	13.85	Horizontal	-46.08	-13.00	33.08	90
10	7117.3	-46.71	6.90	14.25	Horizontal	-41.51	-13.00	28.51	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 66 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	3420.4	-56.31	2.6	10.15	Horizontal	-48.76	-13.00	35.76	270
3	5130.6	-50.29	2.4	11.35	Horizontal	-41.34	-13.00	28.34	225
4	6840.8	-49.01	4.5	10.85	Horizontal	-42.66	-13.00	29.66	90
5	8551.0	-42.91	5.1	11.35	Horizontal	-36.66	-13.00	23.66	135
6	10261.2	-44.24	5.3	11.95	Horizontal	-37.59	-13.00	24.59	90
7	11971.4	-45.68	5.5	13.55	Horizontal	-37.63	-13.00	24.63	135
8	13681.6	-43.87	6.3	13.75	Horizontal	-36.42	-13.00	23.42	135
9	15391.8	-46.76	6.7	13.85	Horizontal	-39.61	-13.00	26.61	45
10	17102.0	-42.96	6.8	14.25	Horizontal	-35.51	-13.00	22.51	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 66 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	3510.0	-57.41	2.6	10.75	Horizontal	-49.26	-13.00	36.26	270
3	5265.0	-47.02	2.4	11.05	Horizontal	-38.37	-13.00	25.37	135
4	7020.0	-48.88	4.5	11.15	Horizontal	-42.23	-13.00	29.23	0
5	8775.0	-45.88	5.1	11.35	Horizontal	-39.63	-13.00	26.63	180
6	10530.0	-44.52	5.3	11.95	Horizontal	-37.87	-13.00	24.87	315
7	12285.0	-44.12	5.5	13.55	Horizontal	-36.07	-13.00	23.07	135
8	14040.0	-43.06	6.3	13.75	Horizontal	-35.61	-13.00	22.61	45
9	15795.0	-47.20	6.7	13.85	Horizontal	-40.05	-13.00	27.05	0
10	17550.0	-44.44	6.8	14.25	Horizontal	-36.99	-13.00	23.99	270

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

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

## LTE Band 66 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	3558.6	-57.20	2.6	10.15	Horizontal	-49.65	-13.00	36.65	270
3	5337.9	-49.02	2.4	11.05	Horizontal	-40.37	-13.00	27.37	0
4	7117.2	-48.67	4.5	11.15	Horizontal	-42.02	-13.00	29.02	90
5	8896.5	-44.54	5.1	11.35	Horizontal	-38.29	-13.00	25.29	0
6	10675.8	-45.35	5.3	11.95	Horizontal	-38.70	-13.00	25.70	315
7	12455.1	-44.56	5.5	13.55	Horizontal	-36.51	-13.00	23.51	90
8	14234.4	-44.20	6.3	13.75	Horizontal	-36.75	-13.00	23.75	0
9	16013.7	-46.99	6.7	13.85	Horizontal	-39.84	-13.00	26.84	270
10	17793.0	-43.72	6.8	14.25	Horizontal	-36.27	-13.00	23.27	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 66 QPSK 3MHz CH-Low, RB 1

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	3423.0	-57.38	2.6	10.15	Horizontal	-49.83	-13.00	36.83	180
3	5134.5	-43.31	2.4	11.35	Horizontal	-34.36	-13.00	21.36	0
4	6846.0	-49.76	4.5	10.85	Horizontal	-43.41	-13.00	30.41	90
5	8557.5	-41.67	5.1	11.35	Horizontal	-35.42	-13.00	22.42	45
6	10269.0	-44.96	5.3	11.95	Horizontal	-38.31	-13.00	25.31	90
7	11980.5	-44.64	5.5	13.55	Horizontal	-36.59	-13.00	23.59	270
8	13692.0	-42.68	6.3	13.75	Horizontal	-35.23	-13.00	22.23	45
9	15403.5	-46.33	6.7	13.85	Horizontal	-39.18	-13.00	26.18	0
10	17115.0	-42.98	6.8	14.25	Horizontal	-35.53	-13.00	22.53	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 66 QPSK 3MHz CH-Middle, RB 1

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	3510.0	-55.42	2.6	10.75	Horizontal	-47.27	-13.00	34.27	315
3	5265.0	-46.68	2.4	11.05	Horizontal	-38.03	-13.00	25.03	135
4	7020.0	-48.88	4.5	11.15	Horizontal	-42.23	-13.00	29.23	45
5	8775.0	-44.74	5.1	11.35	Horizontal	-38.49	-13.00	25.49	315
6	10530.0	-44.80	5.3	11.95	Horizontal	-38.15	-13.00	25.15	180
7	12285.0	-45.55	5.5	13.55	Horizontal	-37.50	-13.00	24.50	270
8	14040.0	-43.70	6.3	13.75	Horizontal	-36.25	-13.00	23.25	135
9	15795.0	-46.21	6.7	13.85	Horizontal	-39.06	-13.00	26.06	270
10	17550.0	-43.97	6.8	14.25	Horizontal	-36.52	-13.00	23.52	0

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



## LTE Band 66 QPSK 3MHz CH-High, RB 1

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	3557.0	-55.95	2.6	10.15	Horizontal	-49.22	-13.00	36.22	180
3	5335.5	-58.65	2.4	11.05	Horizontal	-36.58	-13.00	23.58	315
4	7114.0	-52.55	4.5	11.15	Horizontal	-41.68	-13.00	28.68	0
5	8892.5	-48.65	5.1	11.35	Horizontal	-38.40	-13.00	25.40	90
6	10671.0	-46.55	5.3	11.95	Horizontal	-38.39	-13.00	25.39	270
7	12449.5	-48.05	5.5	13.55	Horizontal	-36.33	-13.00	23.33	180
8	14228.0	-44.15	6.3	13.75	Horizontal	-36.71	-13.00	23.71	315
9	16006.5	-46.25	6.7	13.85	Horizontal	-39.60	-13.00	26.60	270
10	17785.0	-44.55	6.8	14.25	Horizontal	-37.17	-13.00	24.17	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 66 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	3430.0	-56.63	2.6	10.15	Horizontal	-49.08	-13.00	36.08	0
3	5131.3	-44.29	2.4	11.35	Horizontal	-35.34	-13.00	22.34	270
4	6860.0	-47.74	4.5	10.85	Horizontal	-41.39	-13.00	28.39	270
5	8575.0	-42.84	5.1	11.35	Horizontal	-36.59	-13.00	23.59	225
6	10290.0	-44.40	5.3	11.95	Horizontal	-37.75	-13.00	24.75	135
7	12005.0	-44.37	5.5	13.55	Horizontal	-36.32	-13.00	23.32	180
8	13720.0	-43.79	6.3	13.75	Horizontal	-36.34	-13.00	23.34	0
9	15435.0	-47.51	6.7	13.85	Horizontal	-40.36	-13.00	27.36	315
10	17150.0	-44.48	6.8	14.25	Horizontal	-37.03	-13.00	24.03	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 66 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	3510.0	-57.34	2.6	10.75	Horizontal	-49.19	-13.00	36.19	90
3	5265.0	-46.10	2.4	11.05	Horizontal	-37.45	-13.00	24.45	180
4	7020.0	-49.26	4.5	11.15	Horizontal	-42.61	-13.00	29.61	270
5	8775.0	-45.32	5.1	11.35	Horizontal	-39.07	-13.00	26.07	135
6	10530.0	-44.37	5.3	11.95	Horizontal	-37.72	-13.00	24.72	315
7	12285.0	-45.04	5.5	13.55	Horizontal	-36.99	-13.00	23.99	270
8	14040.0	-43.68	6.3	13.75	Horizontal	-36.23	-13.00	23.23	180
9	15795.0	-46.61	6.7	13.85	Horizontal	-39.46	-13.00	26.46	225
10	17550.0	-43.81	6.8	14.25	Horizontal	-36.36	-13.00	23.36	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 66 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	3555.0	-57.26	2.6	10.15	Horizontal	-49.71	-13.00	36.71	225
3	5332.5	-45.94	2.4	11.05	Horizontal	-37.29	-13.00	24.29	0
4	7110.0	-45.42	4.5	11.15	Horizontal	-38.77	-13.00	25.77	270
5	8887.5	-44.82	5.1	11.35	Horizontal	-38.57	-13.00	25.57	0
6	10665.0	-44.97	5.3	11.95	Horizontal	-38.32	-13.00	25.32	270
7	12442.5	-45.66	5.5	13.55	Horizontal	-37.61	-13.00	24.61	270
8	14220.0	-44.63	6.3	13.75	Horizontal	-37.18	-13.00	24.18	270
9	15997.5	-46.84	6.7	13.85	Horizontal	-39.69	-13.00	26.69	90
10	17775.0	-43.61	6.8	14.25	Horizontal	-36.16	-13.00	23.16	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 66 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	3435.0	-56.91	2.6	10.15	Horizontal	-49.36	-13.00	36.36	270
3	5152.5	-41.41	2.4	11.35	Horizontal	-32.46	-13.00	19.46	0
4	6870.0	-49.90	4.5	10.85	Horizontal	-43.55	-13.00	30.55	225
5	8587.5	-46.05	5.1	11.35	Horizontal	-39.80	-13.00	26.80	315
6	10305.0	-45.25	5.3	11.95	Horizontal	-38.60	-13.00	25.60	135
7	12022.5	-45.38	5.5	13.55	Horizontal	-37.33	-13.00	24.33	270
8	13740.0	-44.37	6.3	13.75	Horizontal	-36.92	-13.00	23.92	135
9	15457.5	-46.39	6.7	13.85	Horizontal	-39.24	-13.00	26.24	90
10	17175.0	-43.57	6.8	14.25	Horizontal	-36.12	-13.00	23.12	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 66 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	3510.0	-57.31	2.6	10.75	Horizontal	-49.16	-13.00	36.16	270
3	5265.0	-46.09	2.4	11.05	Horizontal	-37.44	-13.00	24.44	45
4	7020.0	-50.15	4.5	11.15	Horizontal	-43.50	-13.00	30.50	0
5	8775.0	-44.99	5.1	11.35	Horizontal	-38.74	-13.00	25.74	270
6	10530.0	-45.24	5.3	11.95	Horizontal	-38.59	-13.00	25.59	225
7	12285.0	-45.70	5.5	13.55	Horizontal	-37.65	-13.00	24.65	0
8	14040.0	-43.51	6.3	13.75	Horizontal	-36.06	-13.00	23.06	135
9	15795.0	-45.91	6.7	13.85	Horizontal	-38.76	-13.00	25.76	270
10	17550.0	-43.75	6.8	14.25	Horizontal	-36.30	-13.00	23.30	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 66 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	3550.0	-56.45	2.6	10.15	Horizontal	-48.90	-13.00	35.90	0
3	5325.0	-45.65	2.4	11.05	Horizontal	-37.00	-13.00	24.00	270
4	7100.0	-44.02	4.5	11.15	Horizontal	-37.37	-13.00	24.37	90
5	8875.0	-44.77	5.1	11.35	Horizontal	-38.52	-13.00	25.52	225
6	10650.0	-44.17	5.3	11.95	Horizontal	-37.52	-13.00	24.52	45
7	12425.0	-45.34	5.5	13.55	Horizontal	-37.29	-13.00	24.29	45
8	14200.0	-43.44	6.3	13.75	Horizontal	-35.99	-13.00	22.99	270
9	15975.0	-45.87	6.7	13.85	Horizontal	-38.72	-13.00	25.72	180
10	17750.0	-43.41	6.8	14.25	Horizontal	-35.96	-13.00	22.96	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 66 QPSK 15MHz CH Low, RB 1

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	3440.0	-56.87	2.6	10.15	Horizontal	-49.32	-13.00	36.32	270
3	5160.0	-45.93	2.4	11.35	Horizontal	-36.98	-13.00	23.98	0
4	6880.0	-49.01	4.5	10.85	Horizontal	-42.66	-13.00	29.66	45
5	8600.0	-42.52	5.1	11.35	Horizontal	-36.27	-13.00	23.27	45
6	10320.0	-43.93	5.3	11.95	Horizontal	-37.28	-13.00	24.28	45
7	12040.0	-44.91	5.5	13.55	Horizontal	-36.86	-13.00	23.86	180
8	13760.0	-42.71	6.3	13.75	Horizontal	-35.26	-13.00	22.26	180
9	15480.0	-46.43	6.7	13.85	Horizontal	-39.28	-13.00	26.28	90
10	17200.0	-42.95	6.8	14.25	Horizontal	-35.50	-13.00	22.50	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 66 QPSK 15MHz CH-Middle, RB 1

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	3510.0	-57.82	2.6	10.75	Horizontal	-49.67	-13.00	36.67	225
3	5265.0	-47.40	2.4	11.05	Horizontal	-38.75	-13.00	25.75	225
4	7020.0	-50.15	4.5	11.15	Horizontal	-43.50	-13.00	30.50	270
5	8775.0	-45.42	5.1	11.35	Horizontal	-39.17	-13.00	26.17	315
6	10530.0	-45.00	5.3	11.95	Horizontal	-38.35	-13.00	25.35	90
7	12285.0	-45.46	5.5	13.55	Horizontal	-37.41	-13.00	24.41	270
8	14040.0	-44.10	6.3	13.75	Horizontal	-36.65	-13.00	23.65	225
9	15795.0	-45.76	6.7	13.85	Horizontal	-38.61	-13.00	25.61	270
10	17550.0	-43.51	6.8	14.25	Horizontal	-36.06	-13.00	23.06	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 66 QPSK 15MHz CH-High, RB 1

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	3545.0	-57.08	2.6	10.15	Horizontal	-49.53	-13.00	36.53	90
3	5317.5	-45.08	2.4	11.05	Horizontal	-36.43	-13.00	23.43	0
4	7090.0	-44.03	4.5	11.15	Horizontal	-37.38	-13.00	24.38	45
5	8862.5	-44.86	5.1	11.35	Horizontal	-38.61	-13.00	25.61	45
6	10635.0	-44.76	5.3	11.95	Horizontal	-38.11	-13.00	25.11	315
7	12407.5	-44.27	5.5	13.55	Horizontal	-36.22	-13.00	23.22	180
8	14180.0	-44.57	6.3	13.75	Horizontal	-37.12	-13.00	24.12	270
9	15952.5	-47.02	6.7	13.85	Horizontal	-39.87	-13.00	26.87	180
10	17725.0	-43.63	6.8	14.25	Horizontal	-36.18	-13.00	23.18	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 66 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	-57.07	2.6	10.15	Horizontal	-49.52	-13.00	36.52	180
3	5160.0	-44.29	2.4	11.35	Horizontal	-35.34	-13.00	22.34	45
4	6880.0	-48.73	4.5	10.85	Horizontal	-42.38	-13.00	29.38	45
5	8600.0	-44.36	5.1	11.35	Horizontal	-38.11	-13.00	25.11	135
6	10320.0	-44.62	5.3	11.95	Horizontal	-37.97	-13.00	24.97	315
7	12040.0	-45.81	5.5	13.55	Horizontal	-37.76	-13.00	24.76	135
8	13760.0	-44.43	6.3	13.75	Horizontal	-36.98	-13.00	23.98	90
9	15480.0	-46.95	6.7	13.85	Horizontal	-39.80	-13.00	26.80	90
10	17200.0	-44.51	6.8	14.25	Horizontal	-37.06	-13.00	24.06	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 66 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	3510.0	-57.37	2.6	10.75	Horizontal	-49.22	-13.00	36.22	135
3	5265.0	-46.17	2.4	11.05	Horizontal	-37.52	-13.00	24.52	180
4	7020.0	-49.83	4.5	11.15	Horizontal	-43.18	-13.00	30.18	135
5	8775.0	-45.83	5.1	11.35	Horizontal	-39.58	-13.00	26.58	315
6	10530.0	-44.23	5.3	11.95	Horizontal	-37.58	-13.00	24.58	180
7	12285.0	-44.97	5.5	13.55	Horizontal	-36.92	-13.00	23.92	135
8	14040.0	-43.79	6.3	13.75	Horizontal	-36.34	-13.00	23.34	270
9	15795.0	-45.94	6.7	13.85	Horizontal	-38.79	-13.00	25.79	270
10	17550.0	-43.42	6.8	14.25	Horizontal	-35.97	-13.00	22.97	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 66 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	3540.0	-56.77	2.6	10.15	Horizontal	-49.22	-13.00	36.22	0
3	5310.0	-44.34	2.4	11.05	Horizontal	-35.69	-13.00	22.69	135
4	7080.0	-49.11	4.5	11.15	Horizontal	-42.46	-13.00	29.46	225
5	8850.0	-46.21	5.1	11.35	Horizontal	-39.96	-13.00	26.96	90
6	10620.0	-44.97	5.3	11.95	Horizontal	-38.32	-13.00	25.32	315
7	12390.0	-45.18	5.5	13.55	Horizontal	-37.13	-13.00	24.13	135
8	14160.0	-43.25	6.3	13.75	Horizontal	-35.80	-13.00	22.80	225
9	15930.0	-45.66	6.7	13.85	Horizontal	-38.51	-13.00	25.51	45
10	17700.0	-44.04	6.8	14.25	Horizontal	-36.59	-13.00	23.59	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 71 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	1332.0	-60.01	2.00	10.15	Horizontal	-54.01	-13.00	41.01	180
3	1995.8	-60.07	2.50	11.35	Horizontal	-53.37	-13.00	40.37	45
4	2662.0	-55.98	4.20	10.85	Horizontal	-51.48	-13.00	38.48	45
5	3323.6	-55.53	5.20	11.35	Horizontal	-51.53	-13.00	38.53	225
6	3999.0	-53.56	5.50	11.95	Horizontal	-49.26	-13.00	36.26	45
7	4659.4	-53.81	5.70	13.55	Horizontal	-48.11	-13.00	35.11	135
8	5322.4	-53.16	6.30	13.75	Horizontal	-47.86	-13.00	34.86	135
9	5985.8	-51.45	6.80	13.85	Horizontal	-46.55	-13.00	33.55	225
10	6656.3	-47.93	6.90	14.25	Horizontal	-42.73	-13.00	29.73	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 71 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	1362.5	-61.82	2.00	10.75	Horizontal	-55.22	-13.00	42.22	180
3	2041.0	-58.62	2.51	11.05	Horizontal	-52.23	-13.00	39.23	45
4	2721.0	-57.22	4.20	11.15	Horizontal	-52.42	-13.00	39.42	45
5	3406.5	-55.56	5.20	11.15	Horizontal	-51.76	-13.00	38.76	225
6	4082.3	-54.12	5.50	11.95	Horizontal	-49.82	-13.00	36.82	180
7	4765.1	-52.90	5.70	13.55	Horizontal	-47.20	-13.00	34.20	270
8	5441.3	-52.84	6.30	13.75	Horizontal	-47.54	-13.00	34.54	225
9	6119.6	-50.65	6.80	13.85	Horizontal	-45.75	-13.00	32.75	45
10	6805.4	-49.97	6.90	14.25	Horizontal	-44.77	-13.00	31.77	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 71 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	1393.8	-60.95	2.00	10.15	Horizontal	-54.95	-13.00	41.95	180
3	2087.5	-58.85	2.51	11.05	Horizontal	-52.46	-13.00	39.46	45
4	2780.8	-56.59	4.20	11.15	Horizontal	-51.79	-13.00	38.79	45
5	3479.6	-55.02	5.20	11.15	Horizontal	-51.22	-13.00	38.22	90
6	4173.8	-54.03	5.50	11.95	Horizontal	-49.73	-13.00	36.73	315
7	4862.3	-53.05	5.70	13.55	Horizontal	-47.35	-13.00	34.35	45
8	5567.3	-51.60	6.30	13.75	Horizontal	-46.30	-13.00	33.30	135
9	6257.8	-49.43	6.80	13.85	Horizontal	-44.53	-13.00	31.53	135
10	6954.1	-49.38	6.90	14.25	Horizontal	-44.18	-13.00	31.18	90

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



## LTE Band 71 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	1621.8	-50.38	2.00	10.15	Horizontal	-44.38	-13.00	31.38	180
3	2002.5	-59.93	2.51	11.35	Horizontal	-53.24	-13.00	40.24	45
4	2674.0	-55.97	4.20	10.85	Horizontal	-51.47	-13.00	38.47	45
5	3343.9	-55.63	5.20	11.35	Horizontal	-51.63	-13.00	38.63	135
6	4006.5	-54.06	5.50	11.95	Horizontal	-49.76	-13.00	36.76	225
7	4675.5	-52.92	5.70	13.55	Horizontal	-47.22	-13.00	34.22	180
8	5344.1	-54.47	6.30	13.75	Horizontal	-49.17	-13.00	36.17	45
9	6012.5	-50.96	6.80	13.85	Horizontal	-46.06	-13.00	33.06	225
10	6684.1	-48.78	6.90	14.25	Horizontal	-43.58	-13.00	30.58	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 71 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	1362.3	-61.50	2.00	10.75	Horizontal	-54.90	-13.00	41.90	180
3	2040.0	-60.24	2.51	11.05	Horizontal	-53.85	-13.00	40.85	45
4	2719.3	-56.33	4.20	11.15	Horizontal	-51.53	-13.00	38.53	45
5	3403.9	-53.47	5.20	11.15	Horizontal	-49.67	-13.00	36.67	180
6	4085.6	-53.84	5.50	11.95	Horizontal	-49.54	-13.00	36.54	225
7	4765.5	-52.83	5.70	13.55	Horizontal	-47.13	-13.00	34.13	225
8	5444.3	-51.51	6.30	13.75	Horizontal	-46.21	-13.00	33.21	180
9	6124.9	-50.91	6.80	13.85	Horizontal	-46.01	-13.00	33.01	90
10	6801.8	-49.44	6.90	14.25	Horizontal	-44.24	-13.00	31.24	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 71 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	1623.8	-51.23	2.00	10.15	Horizontal	-45.23	-13.00	32.23	180
3	2093.3	-59.24	2.51	11.05	Horizontal	-52.85	-13.00	39.85	45
4	2775.0	-56.46	4.20	11.15	Horizontal	-51.66	-13.00	38.66	45
5	3460.9	-55.15	5.20	11.15	Horizontal	-51.35	-13.00	38.35	45
6	4157.3	-53.95	5.50	11.95	Horizontal	-49.65	-13.00	36.65	135
7	4852.9	-52.26	5.70	13.55	Horizontal	-46.56	-13.00	33.56	270
8	5544.8	-52.67	6.30	13.75	Horizontal	-47.37	-13.00	34.37	315
9	6233.9	-50.10	6.80	13.85	Horizontal	-45.20	-13.00	32.20	180
10	6936.5	-49.88	6.90	14.25	Horizontal	-44.68	-13.00	31.68	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 71 QPSK 15MHz 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	1620.3	-49.26	2.00	10.15	Horizontal	-43.26	-13.00	30.26	180
3	2010.3	-59.72	2.50	11.35	Horizontal	-53.02	-13.00	40.02	45
4	2680.8	-55.97	4.20	10.85	Horizontal	-51.47	-13.00	38.47	45
5	3351.4	-56.02	5.20	11.35	Horizontal	-52.02	-13.00	39.02	45
6	4024.5	-54.26	5.50	11.95	Horizontal	-49.96	-13.00	36.96	135
7	4694.3	-54.34	5.70	13.55	Horizontal	-48.64	-13.00	35.64	135
8	5373.0	-53.01	6.30	13.75	Horizontal	-47.71	-13.00	34.71	270
9	6039.4	-51.81	6.80	13.85	Horizontal	-46.91	-13.00	33.91	135
10	6709.3	-48.68	6.90	14.25	Horizontal	-43.48	-13.00	30.48	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 71 QPSK 15MHz 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	1362.0	-60.65	2.00	10.75	Horizontal	-54.05	-13.00	41.05	180
3	2042.3	-59.53	2.51	11.05	Horizontal	-53.14	-13.00	40.14	45
4	2721.0	-56.34	4.20	11.15	Horizontal	-51.54	-13.00	38.54	45
5	3404.3	-55.16	5.20	11.15	Horizontal	-51.36	-13.00	38.36	0
6	4084.1	-53.65	5.50	11.95	Horizontal	-49.35	-13.00	36.35	225
7	4762.5	-53.34	5.70	13.55	Horizontal	-47.64	-13.00	34.64	270
8	5445.8	-52.82	6.30	13.75	Horizontal	-47.52	-13.00	34.52	135
9	6125.3	-49.92	6.80	13.85	Horizontal	-45.02	-13.00	32.02	315
10	6810.3	-49.32	6.90	14.25	Horizontal	-44.12	-13.00	31.12	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 71 QPSK 15MHz 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	1615.0	-52.50	2.00	10.15	Horizontal	-46.50	-13.00	33.50	180
3	2075.0	-58.44	2.51	11.05	Horizontal	-52.05	-13.00	39.05	45
4	2760.0	-55.68	4.20	11.15	Horizontal	-50.88	-13.00	37.88	45
5	3450.0	-55.20	5.20	11.15	Horizontal	-51.40	-13.00	38.40	225
6	4143.0	-63.31	5.50	11.95	Horizontal	-59.01	-13.00	46.01	135
7	4833.5	-55.59	5.70	13.55	Horizontal	-49.89	-13.00	36.89	270
8	5524.0	-51.54	6.30	13.75	Horizontal	-46.24	-13.00	33.24	270
9	6214.5	-50.01	6.80	13.85	Horizontal	-45.11	-13.00	32.11	315
10	6905.0	-48.49	6.90	14.25	Horizontal	-43.29	-13.00	30.29	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 71 QPSK 20MHz 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	1347.8	-59.81	2.00	10.15	Horizontal	-53.81	-13.00	40.81	180
3	2017.8	-60.31	2.51	11.35	Horizontal	-53.62	-13.00	40.62	45
4	2693.0	-56.15	4.20	10.85	Horizontal	-51.65	-13.00	38.65	45
5	3365.3	-56.19	5.20	11.35	Horizontal	-52.19	-13.00	39.19	225
6	4035.0	-53.97	5.50	11.95	Horizontal	-49.67	-13.00	36.67	135
7	4714.5	-51.95	5.70	13.55	Horizontal	-46.25	-13.00	33.25	270
8	5386.1	-51.44	6.30	13.75	Horizontal	-46.14	-13.00	33.14	270
9	6056.9	-50.72	6.80	13.85	Horizontal	-45.82	-13.00	32.82	315
10	6728.5	-48.80	6.90	14.25	Horizontal	-43.60	-13.00	30.60	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 71 QPSK 20MHz 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	1367.3	-61.72	2.00	10.75	Horizontal	-55.12	-13.00	42.12	180
3	2047.8	-59.32	2.51	11.05	Horizontal	-52.93	-13.00	39.93	45
4	2735.8	-56.68	4.20	11.15	Horizontal	-51.88	-13.00	38.88	45
5	3412.5	-55.81	5.20	11.15	Horizontal	-52.01	-13.00	39.01	225
6	4095.0	-54.08	5.50	11.95	Horizontal	-49.78	-13.00	36.78	135
7	4786.9	-53.70	5.70	13.55	Horizontal	-48.00	-13.00	35.00	270
8	5462.3	-52.82	6.30	13.75	Horizontal	-47.52	-13.00	34.52	270
9	6146.8	-51.10	6.80	13.85	Horizontal	-46.20	-13.00	33.20	315
10	6838.6	-49.32	6.90	14.25	Horizontal	-44.12	-13.00	31.12	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 71 QPSK 20MHz 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	1375.8	-60.64	2.00	10.15	Horizontal	-54.64	-13.00	41.64	180
3	2063.0	-59.04	2.51	11.05	Horizontal	-52.65	-13.00	39.65	45
4	2754.0	-56.04	4.20	11.15	Horizontal	-51.24	-13.00	38.24	45
5	3442.5	-55.30	5.20	11.15	Horizontal	-51.50	-13.00	38.50	225
6	4125.4	-54.09	5.50	11.95	Horizontal	-49.79	-13.00	36.79	135
7	4816.5	-53.72	5.70	13.55	Horizontal	-48.02	-13.00	35.02	270
8	5506.5	-51.63	6.30	13.75	Horizontal	-46.33	-13.00	33.33	270
9	6191.4	-50.25	6.80	13.85	Horizontal	-45.35	-13.00	32.35	315
10	6880.3	-48.87	6.90	14.25	Horizontal	-43.67	-13.00	30.67	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.



## 6 Main Test Instruments

Name	Manufacturer	Type	Serial Number	Calibration Date	Expiration Date
Base Station Simulator	R&S	CMW500	113824	2020-05-18	2021-05-17
Power Splitter	Hua Xiang	SHX-GF2-2-13	10120101	/	/
Spectrum Analyzer	Key sight	N9010A	MY50210259	2020-05-18	2021-05-17
Signal Analyzer	R&S	FSV30	100815	2019-12-15	2020-12-14
Loop Antenna	SCHWARZBECK	FMZB1519	1519-047	2017-09-26	2020-09-25
Trilog Antenna	SCHWARZBECK	VUBL 9163	9163-201	2017-11-18	2020-11-17
Horn Antenna	R&S	HF907	102723	2018-08-11	2021-08-10
Horn Antenna	ETS-Lindgren	3160-09	00102643	2018-06-20	2021-06-19
Horn Antenna	STEATITE	QSH-SL-26-40-K-15	16779	2017-07-20	2021-07-19
Signal generator	R&S	SMB 100A	102594	2020-05-18	2021-05-17
Climatic Chamber	ESPEC	SU-242	93000506	2017-12-17	2020-12-16
Preamplifier	R&S	SCU18	102327	2020-05-18	2021-05-17
MOB COMMS DC SUPPLY	Keysight	66319D	MY43004105	2020-05-18	2021-05-17
RF Cable	Agilent	SMA 15cm	0001	2020-06-12	2020-12-11
Software	R&S	EMC32	9.26.0	/	/

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