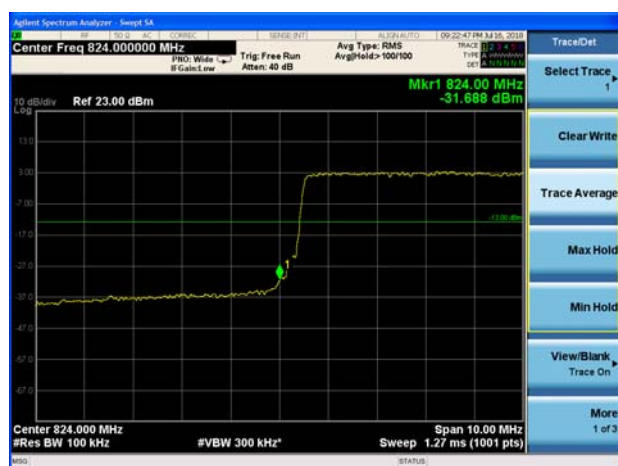
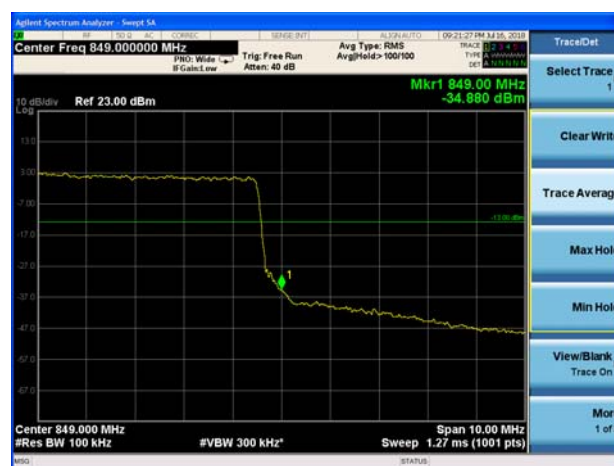


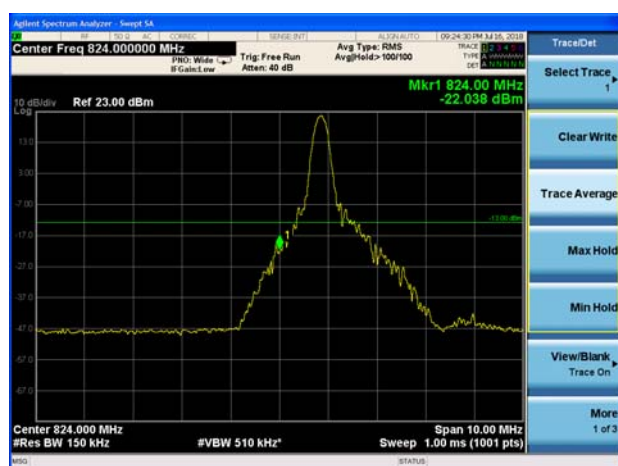
LTE Band 26 16QAM 10MHz CH-Low 100%RB



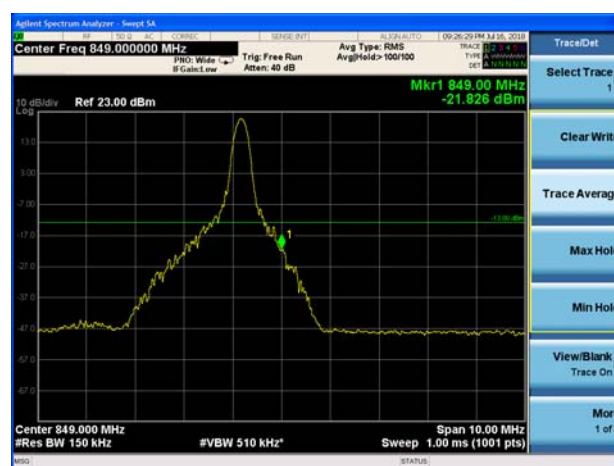
LTE Band 26 16QAM 10MHz CH-High 100%RB



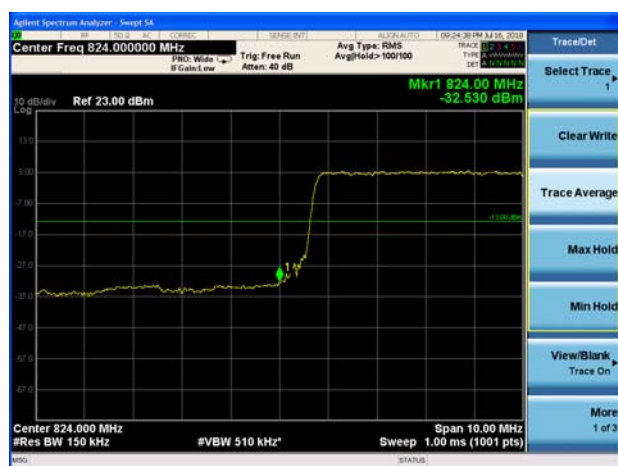
LTE Band 26 16QAM 15MHz CH-Low 1RB



LTE Band 26 16QAM 15MHz CH-High 1RB



LTE Band 26 16QAM 15MHz CH-Low 100%RB



LTE Band 26 16QAM 15MHz CH-High 100%RB



5.5. Peak-to-Average Power Ratio (PAPR)

Ambient condition

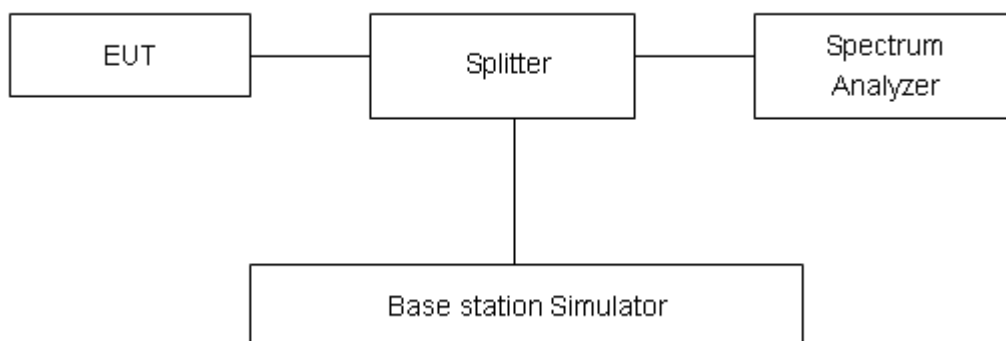
Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

Methods of Measurement

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

$$PAPR (dB) = P_{Pk} (dBm) - P_{Avg} (dBm).$$

Test Setup



Limits

According to the Sec. 22.913(d), The peak-to-average ratio (PAR) of the transmission must 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

Mode	Channel	Frequency (MHz)	Peak (dBm)	Avg (dBm)	PAPR (dB)	Limit (dB)	Conclusion
GPRS 850 (GMSK)	128	824.2	30.48	29.50	0.98	≤13	PASS
	190	836.6	30.64	29.61	1.03	≤13	PASS
	251	848.8	30.67	29.62	1.05	≤13	PASS
EGPRS 850 (8-PSK)	128	824.2	24.81	23.77	1.04	≤13	PASS
	190	836.6	24.84	23.78	1.06	≤13	PASS
	251	848.8	24.80	23.81	0.99	≤13	PASS
WCDMA Band V (RMC)	4132	826.4	25.27	22.58	2.69	≤13	PASS
	4183	836.6	25.21	22.53	2.68	≤13	PASS
	4233	846.6	25.28	22.64	2.64	≤13	PASS

LTE Band 5								
Modulation	Bandwidth (MHz)	Channel	Frequency (MHz)	Peak (dBm)	Avg (dBm)	PAPR (dB)	Limit (dB)	Conclusion
QPSK	1.4	20407	824.7	27.69	22.52	5.17	≤13	PASS
		20525	836.5	27.74	22.59	5.15	≤13	PASS
		20643	848.3	27.50	22.62	4.88	≤13	PASS
	3	20415	825.5	27.77	22.55	5.22	≤13	PASS
		20525	836.5	27.92	22.63	5.29	≤13	PASS
		20635	847.5	27.80	22.65	5.15	≤13	PASS
	5	20425	826.5	27.80	22.53	5.27	≤13	PASS
		20525	836.5	27.94	22.62	5.32	≤13	PASS
		20625	846.5	27.85	22.63	5.22	≤13	PASS
	10	20450	829	27.76	22.56	5.20	≤13	PASS
		20525	836.5	27.78	22.55	5.23	≤13	PASS
		20600	844	27.81	22.58	5.23	≤13	PASS
16QAM	1.4	20407	824.7	27.55	21.63	5.92	≤13	PASS
		20525	836.5	27.53	21.58	5.95	≤13	PASS
		20643	848.3	27.23	21.63	5.60	≤13	PASS
	3	20415	825.5	27.67	21.66	6.01	≤13	PASS
		20525	836.5	27.67	21.62	6.05	≤13	PASS
		20635	847.5	27.58	21.66	5.92	≤13	PASS
	5	20425	826.5	27.58	21.64	5.94	≤13	PASS
		20525	836.5	27.56	21.58	5.98	≤13	PASS
		20625	846.5	27.56	21.61	5.95	≤13	PASS
	10	20450	829	27.57	21.62	5.95	≤13	PASS
		20525	836.5	27.50	21.54	5.96	≤13	PASS
		20600	844	27.58	21.58	6.00	≤13	PASS

LTE Band 26								
Modulation	Bandwidth (MHz)	Channel	Frequency (MHz)	Peak (dBm)	Avg (dBm)	PAPR (dB)	Limit (dB)	Conclusion
QPSK	1.4	26797	824.7	27.68	22.56	5.12	≤13	PASS
		26915	836.5	27.91	22.73	5.18	≤13	PASS
		27033	848.3	27.63	22.71	4.92	≤13	PASS
	3	26805	825.5	27.81	22.59	5.22	≤13	PASS
		26915	836.5	28.05	22.77	5.28	≤13	PASS
		27025	847.5	27.92	22.74	5.18	≤13	PASS
	5	26815	826.5	27.92	22.65	5.27	≤13	PASS
		26915	836.5	28.08	22.78	5.30	≤13	PASS
		27015	846.5	28.01	22.76	5.25	≤13	PASS
	10	26840	829	27.78	22.63	5.15	≤13	PASS
		26915	836.5	27.92	22.74	5.18	≤13	PASS
		26990	844	27.92	22.71	5.21	≤13	PASS
	15	26865	831.5	27.81	22.60	5.21	≤13	PASS
		26915	836.5	27.88	22.69	5.19	≤13	PASS
		26965	841.5	27.93	22.67	5.26	≤13	PASS
16QAM	1.4	26797	824.7	27.53	21.60	5.93	≤13	PASS
		26915	836.5	27.58	21.71	5.87	≤13	PASS
		27033	848.3	27.31	21.66	5.65	≤13	PASS
	3	26805	825.5	27.62	21.63	5.99	≤13	PASS
		26915	836.5	27.78	21.75	6.03	≤13	PASS
		27025	847.5	27.63	21.69	5.94	≤13	PASS
	5	26815	826.5	27.57	21.64	5.93	≤13	PASS
		26915	836.5	27.73	21.76	5.97	≤13	PASS
		27015	846.5	27.62	21.68	5.94	≤13	PASS
	10	26840	829	27.54	21.61	5.93	≤13	PASS
		26915	836.5	27.64	21.71	5.93	≤13	PASS
		26990	844	27.61	21.64	5.97	≤13	PASS
	15	26865	831.5	27.46	21.59	5.87	≤13	PASS
		26915	836.5	27.51	21.67	5.84	≤13	PASS
		26965	841.5	27.50	21.61	5.89	≤13	PASS

5.6. Frequency Stability

Ambient condition

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

Method of Measurement

Frequency Stability (Temperature Variation)

The temperature inside the climate chamber is varied from -30°C to +70°C in 10°C step size,

(1) With all power removed, the temperature was decreased to 0°C and permitted to stabilize for three hours.

(2) Measure the carrier frequency with the test equipment in a “call mode”. These measurements should be made within 1 minute of powering up the mobile station, to prevent significant self warming.

(3) Repeat the above measurements at 10°C increments from -30°C to +70°C. Allow at least 1.5 hours at each temperature, un-powered, before making measurements. Frequency Stability

(Voltage Variation)

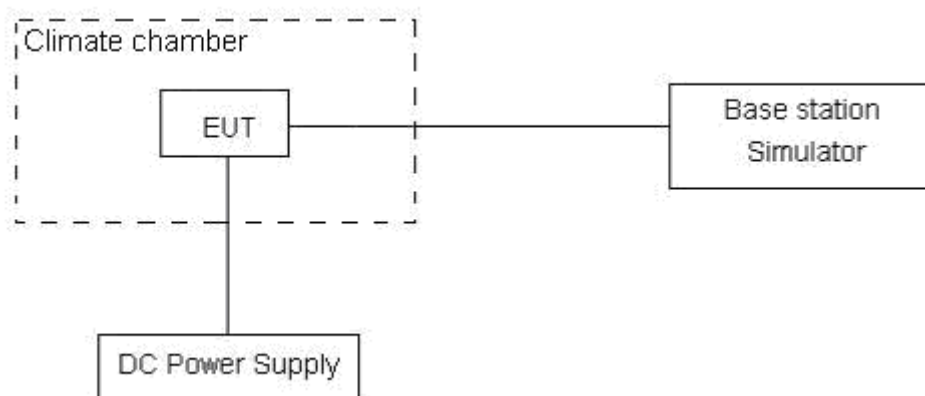
The frequency stability shall be measured with variation of primary supply voltage as follows:

(1) Vary primary supply voltage from 85 to 115 percent of the nominal value for other than hand carried battery equipment.

(2) For hand carried, battery powered equipment, reduce primary supply voltage to the battery-operating end point which shall be specified by the manufacturer.

This transceiver is specified to operate with an input voltage of between 3.2 V and 4.2 V, with a nominal voltage of 3.7V.

Test setup



Limits

According to the Sec. 22.355, the frequency stability of the carrier shall be accurate to within 2.5 ppm of the received frequency for mobile stations.

Limits	$\leq 2.5 \text{ ppm}$
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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

GPRS 850					
Condition		824	849	Delta (Hz)	Frequency Stability (ppm)
Temperature	Voltage	F low@-13dBm(MHz)	F high@-13dBm(MHz)		
Normal (25°C)	Normal	824.0654	848.9658	0.59	0.00071
Extreme (70°C)		824.0653	848.9657	-2.62	-0.00313
Extreme (60°C)		824.0642	848.9646	1.34	0.00160
Extreme (50°C)		824.0641	848.9645	-0.65	-0.00078
Extreme (40°C)		824.0651	848.9655	2.41	0.00288
Extreme (30°C)		824.0642	848.9646	3.82	0.00457
Extreme (20°C)		824.0650	848.9654	1.64	0.00196
Extreme (10°C)		824.0643	848.9647	4.80	0.00574
Extreme (0°C)		824.0649	848.9653	3.94	0.00471
Extreme (-10°C)		824.0644	848.9648	-0.45	-0.00054
Extreme (-20°C)		824.0648	848.9652	3.85	0.00460
Extreme (-30°C)		824.0645	848.9649	1.31	0.00157
25C	LV	824.0646	848.9650	-5.45	-0.00651
	HV	824.0655	848.9659	-2.68	-0.00320
EGPRS 850					
Condition		824	849	Delta (Hz)	Frequency Stability (ppm)
Temperature	Voltage	F low@-13dBm(MHz)	F high@-13dBm(MHz)		
Normal (25°C)	Normal	824.0782	848.9396	-0.60	-0.00072
Extreme (70°C)		824.0781	848.9395	-3.56	-0.00426
Extreme (60°C)		824.0770	848.9384	-5.22	-0.00624
Extreme (50°C)		824.0769	848.9383	-3.92	-0.00469
Extreme (40°C)		824.0779	848.9393	-2.16	-0.00258
Extreme (30°C)		824.0770	848.9384	-2.64	-0.00316

Extreme (20°C)		824.0778	848.9392	0.55	0.00066
Extreme (10C)		824.0771	848.9385	0.33	0.00039
Extreme (0°C)		824.0777	848.9391	-2.00	-0.00239
Extreme (-10°C)		824.0772	848.9386	0.06	0.00007
Extreme (-20°C)		824.0776	848.9390	4.07	0.00486
Extreme (-30°C)		824.0773	848.9387	-0.53	-0.00063
25C	LV	824.0774	848.9388	0.78	0.00093
	HV	824.0783	848.9397	-0.98	-0.00117

WCDMA Band 5					
Condition		824	849	Delta (Hz)	Frequency Stability (ppm)
Temperature	Voltage	F low@-13dBm(MHz)	F high@-13dBm(MHz)		
Normal (25°C)	Normal	824.0321	848.9679	-3.35	-0.00400
Extreme (70°C)		824.0309	848.9672	-5.64	-0.00674
Extreme (60°C)		824.0323	848.9656	-0.38	-0.00045
Extreme (50°C)		824.0317	848.9662	-1.02	-0.00122
Extreme (40°C)		824.0304	848.9675	-1.09	-0.00130
Extreme (30°C)		824.0297	848.9682	3.16	0.00378
Extreme (20°C)		824.0318	848.9661	1.15	0.00137
Extreme (10C)		824.0306	848.9673	-3.64	-0.00435
Extreme (0°C)		824.0319	848.9662	-4.34	-0.00519
Extreme (-10°C)		824.0324	848.9655	-0.35	-0.00042
Extreme (-20°C)		824.0313	848.9666	2.28	0.00273
Extreme (-30°C)		824.0283	848.9699	-3.92	-0.00469
25C	LV	824.0316	848.9663	0.20	0.00024
	HV	824.0313	848.9669	-5.57	-0.00666

LTE Band 5					
(QPSK, 10MHz BANDWIDTH)					
Condition		824	849	Delta (Hz)	Frequency Stability(ppm)
Temperature	Voltage	F low@-13dBm(MHz)	F high@-13dBm(MHz)		
Normal (25°C)	Normal	824.2278	848.7882	3.58	0.00428
Extreme (70°C)		824.2287	848.7889	0.90	0.00108
Extreme (60°C)		824.2301	848.7903	-0.11	-0.00013
Extreme (50°C)		824.2295	848.7897	-3.53	-0.00422
Extreme (40°C)		824.2282	848.7884	-1.55	-0.00185
Extreme (30°C)		824.2275	848.7877	2.95	0.00353
Extreme (20°C)		824.2296	848.7898	2.20	0.00263
Extreme (10C)		824.2284	848.7886	-5.42	-0.00648
Extreme (0°C)		824.2297	848.7899	1.84	0.00220
Extreme (-10°C)		824.2302	848.7904	3.15	0.00377
Extreme (-20°C)		824.2291	848.7893	-1.47	-0.00176
Extreme (-30°C)		824.2258	848.7863	0.23	0.00027
25°C	LV	824.2294	848.7896	-3.47	-0.00415
	HV	824.2288	848.7896	0.81	0.00097
(16QAM,10MHz BANDWIDTH)					
Condition		824	849	Delta (Hz)	Frequency Stability(ppm)
Temperature	Voltage	F low@-13dBm(MHz)	F high@-13dBm(MHz)		
Normal (25°C)	Normal	824.3662	848.7284	-2.42	-0.00289
Extreme (70°C)		824.3653	848.7275	4.35	0.00520
Extreme (60°C)		824.3639	848.7261	1.92	0.00230
Extreme (50°C)		824.3645	848.7267	-3.47	-0.00415
Extreme (40°C)		824.3658	848.7283	0.81	0.00097
Extreme (30°C)		824.3665	848.7287	-2.42	-0.00289
Extreme (20°C)		824.3644	848.7266	-0.67	-0.00080
Extreme (10C)		824.3656	848.7278	4.87	0.00582
Extreme (0°C)		824.3643	848.7265	4.35	0.00520
Extreme (-10°C)		824.3638	848.7262	1.92	0.00230
Extreme (-20°C)		824.3649	848.7271	2.86	0.00342
Extreme (-30°C)		824.3682	848.7304	4.87	0.00582
25°C	LV	824.3646	848.7268	2.38	0.00285
	HV	824.3652	848.7274	-3.69	-0.00441

LTE Band 26					
(QPSK, 15MHz BANDWIDTH)					
Condition		824	849	Delta (Hz)	Frequency Stability(ppm)
Temperature	Voltage	F low@-13dBm(MHz)	F high@-13dBm(MHz)		
Normal (25°C)	Normal	824.5171	848.6958	-1.23	-0.00147
Extreme (70°C)		824.5183	848.6946	0.04	0.00005
Extreme (60°C)		824.5160	848.6965	0.30	0.00036
Extreme (50°C)		824.5161	848.6968	0.90	0.00108
Extreme (40°C)		824.5176	848.6956	-0.40	-0.00048
Extreme (30°C)		824.5167	848.6964	-1.22	-0.00146
Extreme (20°C)		824.5162	848.6967	-0.01	-0.00001
Extreme (10C)		824.5178	848.6951	-0.93	-0.00111
Extreme (0°C)		824.5169	848.6966	0.27	0.00032
Extreme (-10°C)		824.5164	848.6965	0.19	0.00023
Extreme (-20°C)		824.5175	848.6959	0.99	0.00118
Extreme (-30°C)		824.5174	848.6967	-1.43	-0.00171
25°C	LV	824.5169	848.6974	-3.65	-0.00436
	HV	824.5165	848.6972	1.67	0.00200
(16QAM, 15MHz BANDWIDTH)					
Condition		824	849	Delta (Hz)	Frequency Stability(ppm)
Temperature	Voltage	F low@-13dBm(MHz)	F high@-13dBm(MHz)		
Normal (25°C)	Normal	824.5716	848.6151	1.04	0.00124
Extreme (70°C)		824.5698	848.6165	0.82	0.00098
Extreme (60°C)		824.5717	848.6144	-0.80	-0.00096
Extreme (50°C)		824.5725	848.6141	0.97	0.00116
Extreme (40°C)		824.5707	848.6156	0.56	0.00067
Extreme (30°C)		824.5716	848.6145	0.33	0.00039
Extreme (20°C)		824.5719	848.6142	-0.93	-0.00111
Extreme (10C)		824.5703	848.6158	0.46	0.00055
Extreme (0°C)		824.5712	848.6149	0.47	0.00056
Extreme (-10°C)		824.5717	848.6144	-0.63	-0.00075
Extreme (-20°C)		824.5711	848.6151	1.34	0.00160
Extreme (-30°C)		824.5713	848.6162	3.54	0.00423
25°C	LV	824.5728	848.6151	-2.14	-0.00256
	HV	824.5707	848.6162	3.21	0.00384

5.7. Spurious Emissions at Antenna Terminals

Ambient condition

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

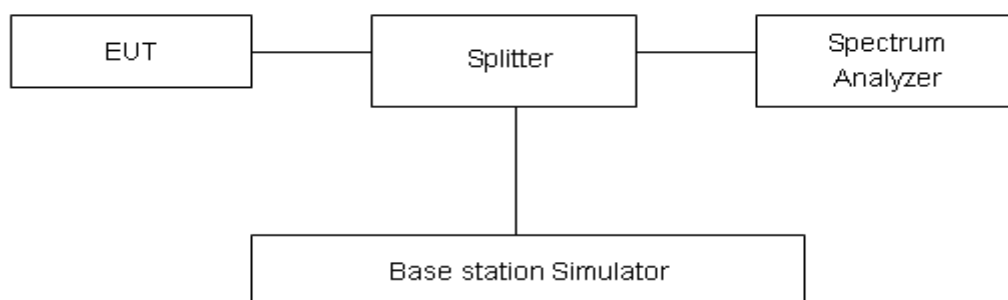
Method of Measurement

The EUT was connected to Spectrum Analyzer and Base Station Simulator via power Splitter. The measurement is carried out using a spectrum analyzer. The spectrum analyzer scans from 9kHz to the 10th harmonic of the carrier.

The peak detector is used. RBW are set to 100 kHz and VBW are set to 300 kHz for below 1G, RBW are set to 1MHz and VBW are set to 3MHz for above 1G, Sweep is set to ATUO.

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

Test setup



Limits

Rule Part 22.917(a) specifies that “The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log (P)$ dB.”

Limit	-13 dBm
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Measurement Uncertainty

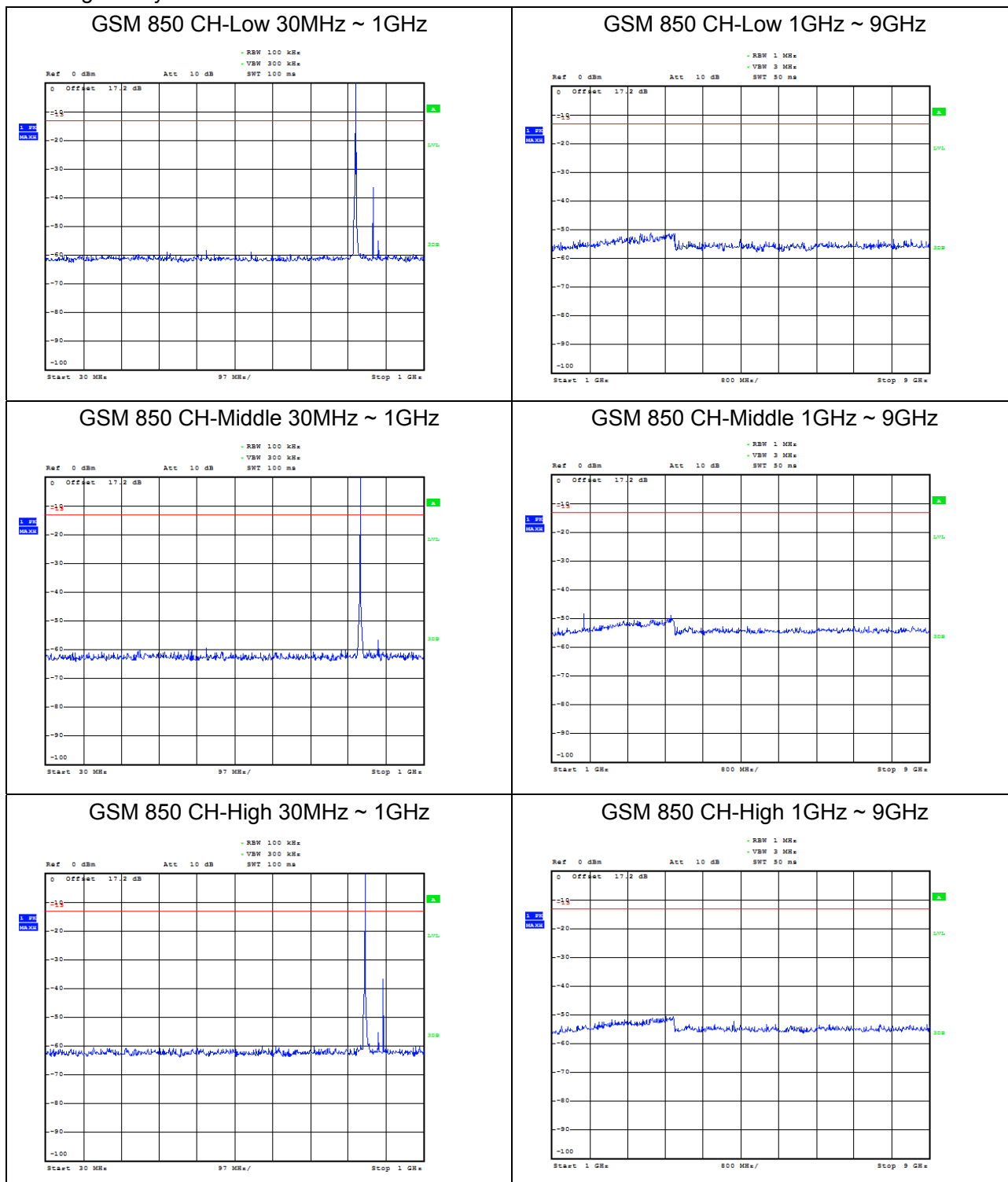
The assessed measurement uncertainty to ensure 99.75% confidence level for the normal distribution is with the coverage factor $k = 1.96$.

Frequency	Uncertainty
9kHz-1GHz	0.684 dB
1GHz-18GHz	1.407 dB

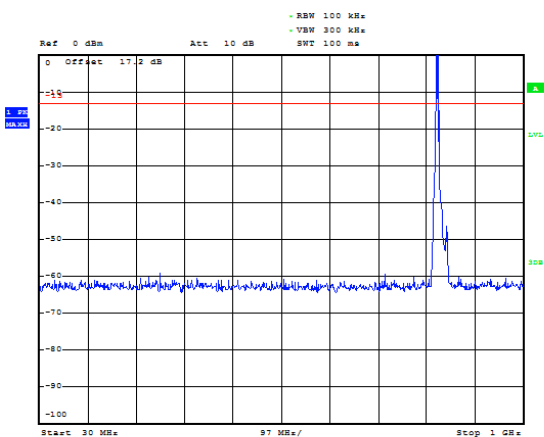
Test Result

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

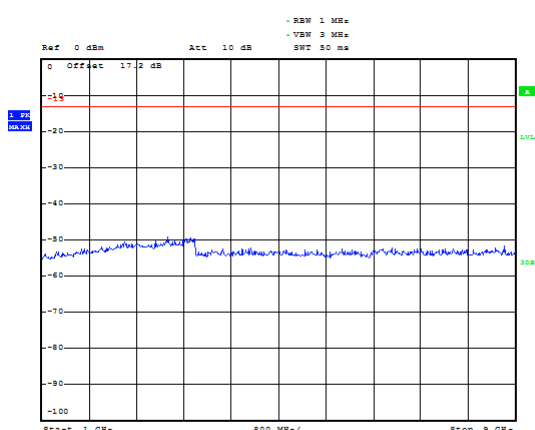
The signal beyond the limit is carrier.



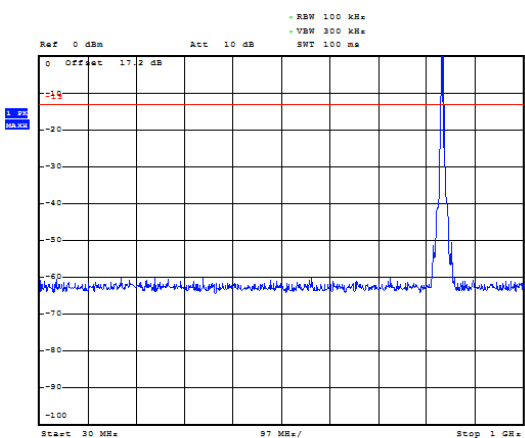
WCDMA Band V CH-Low 30MHz ~ 1GHz



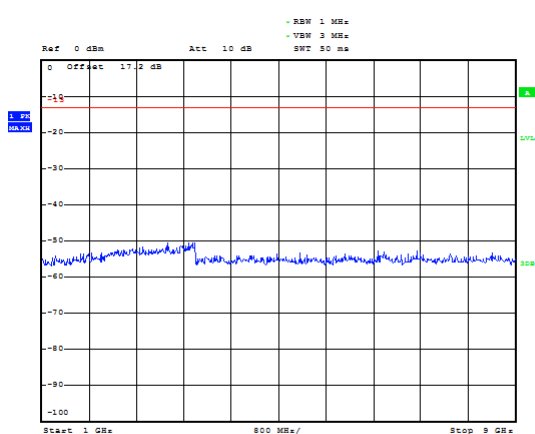
WCDMA Band V CH-Low 1GHz ~ 9GHz



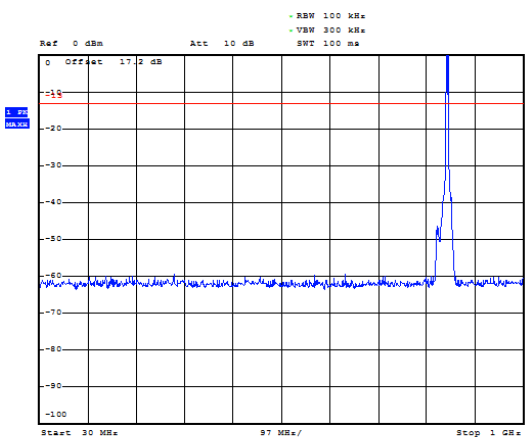
WCDMA Band V CH-Middle 30MHz ~ 1GHz



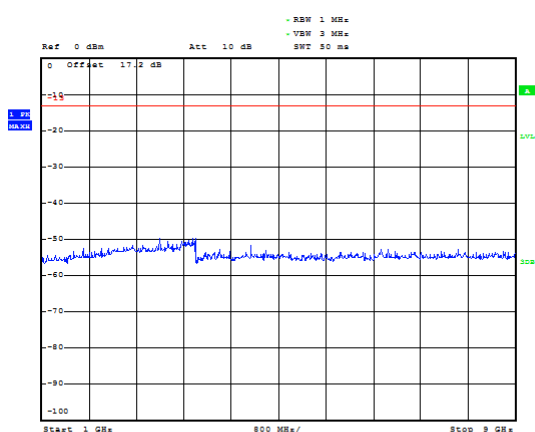
WCDMA Band V CH-Middle 1GHz ~ 9GHz



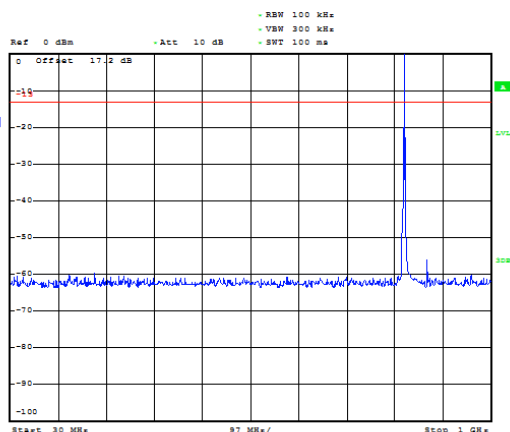
WCDMA Band V CH-High 30MHz ~ 1GHz



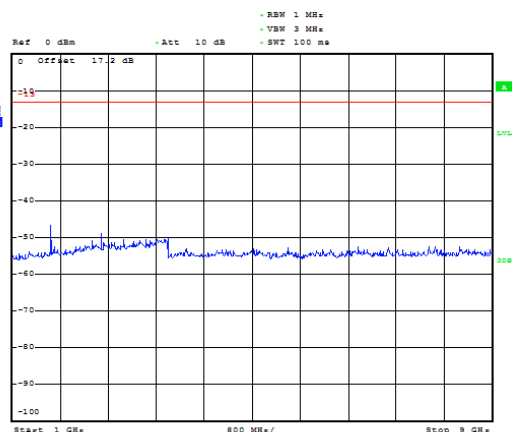
WCDMA Band V CH-High 1GHz ~ 9GHz



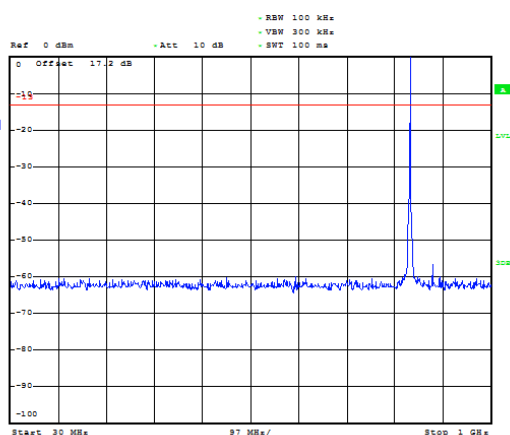
LTE Band 5 1.4MHz CH-Low 30MHz~1GHz



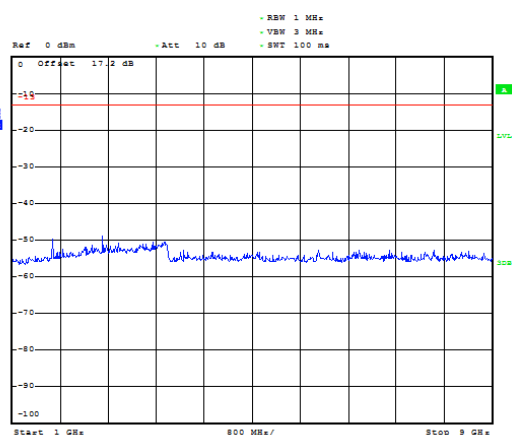
LTE Band 5 1.4MHz CH-Low 1GHz~9GHz



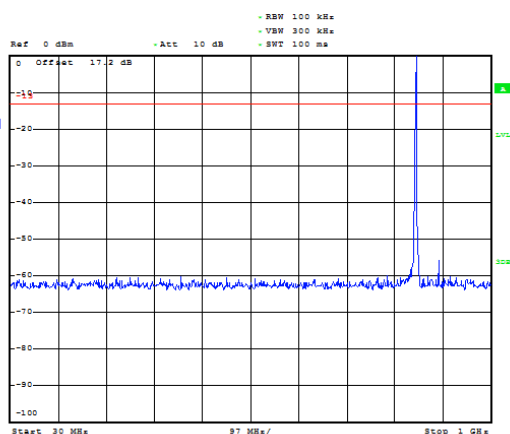
LTE Band 5 1.4MHz CH-Middle 30MHz~1GHz



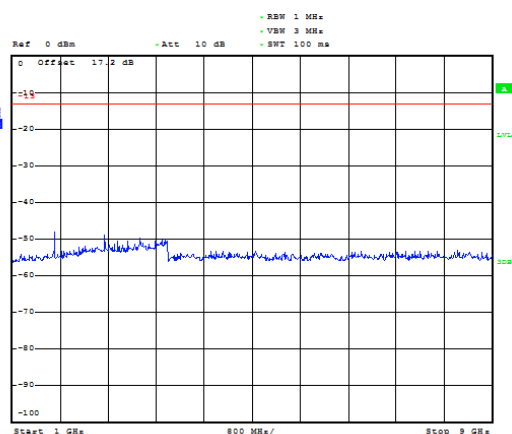
LTE Band 5 1.4MHz CH-Middle 1GHz~9GHz



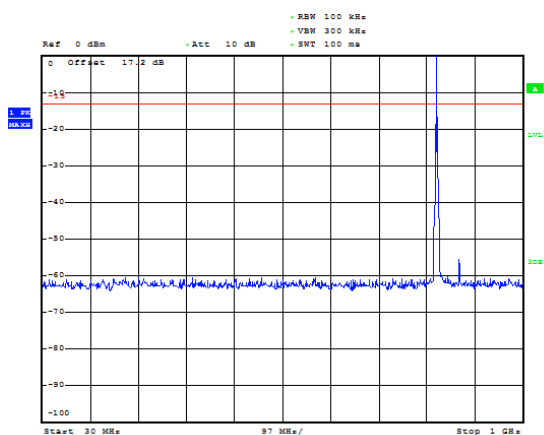
LTE Band 5 1.4MHz CH-High 30MHz~1GHz



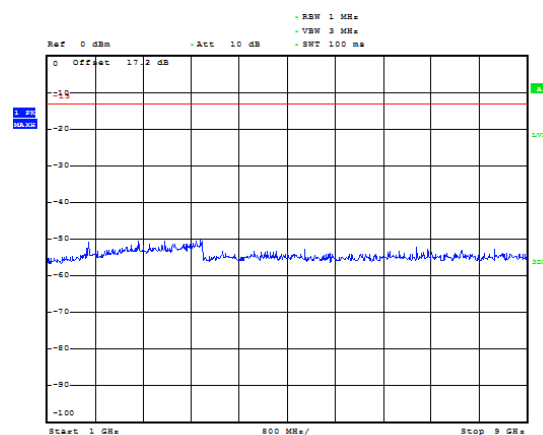
LTE Band 5 1.4MHz CH-High 1GHz~9GHz



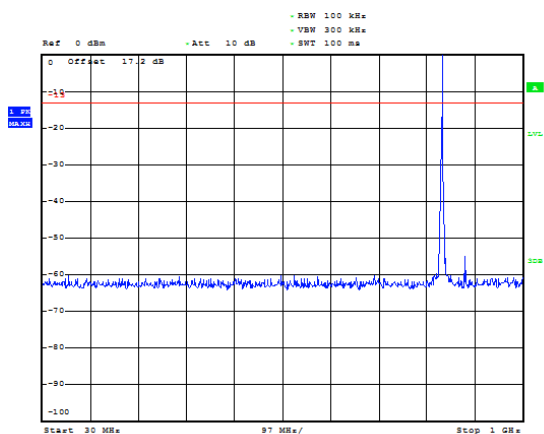
LTE Band 5 3MHz CH-Low 30MHz~1GHz



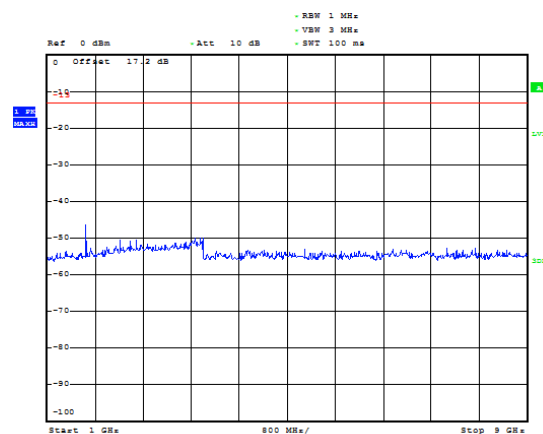
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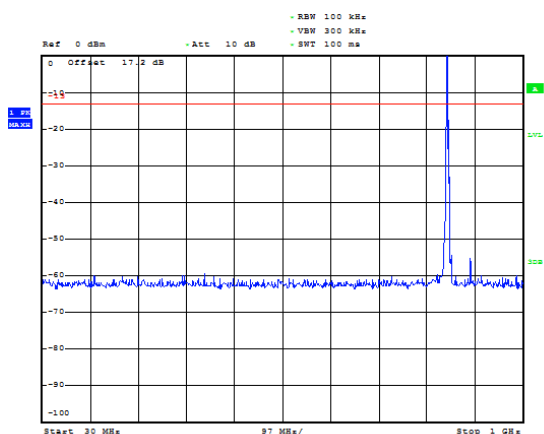
LTE Band 5 3MHz CH-Middle 30MHz~1GHz



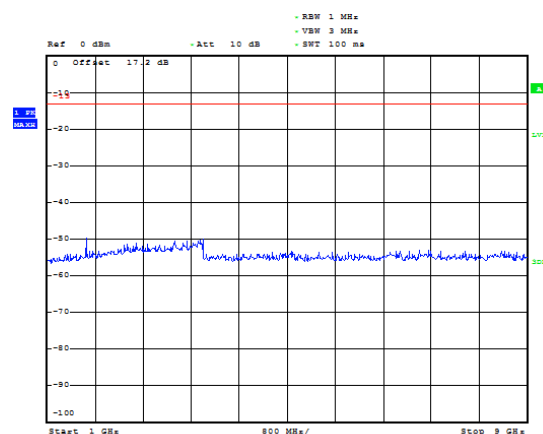
LTE Band 5 3MHz CH-Middle 1GHz~9GHz



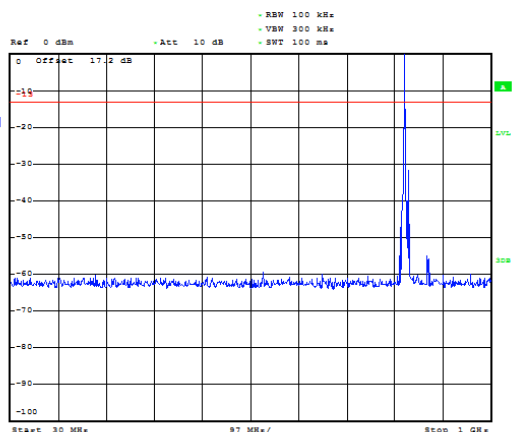
LTE Band 5 3MHz CH-High 30MHz~1GHz



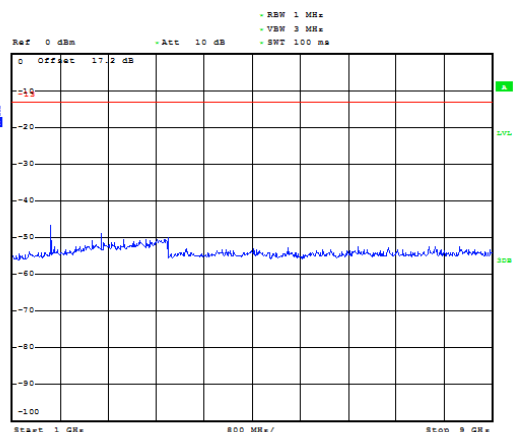
LTE Band 5 3MHz CH-High 1GHz~9GHz



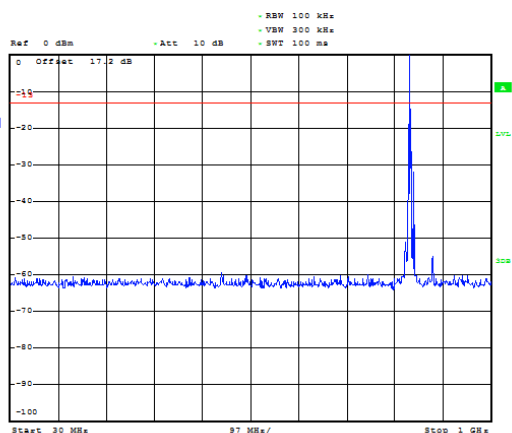
LTE Band 5 5MHz CH-Low 30MHz~1GHz



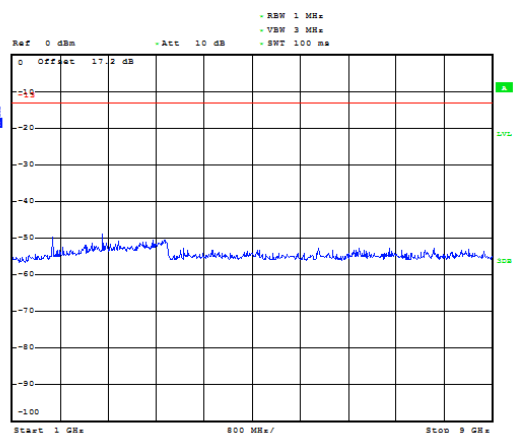
LTE Band 5 5MHz CH-Low 1GHz~9GHz



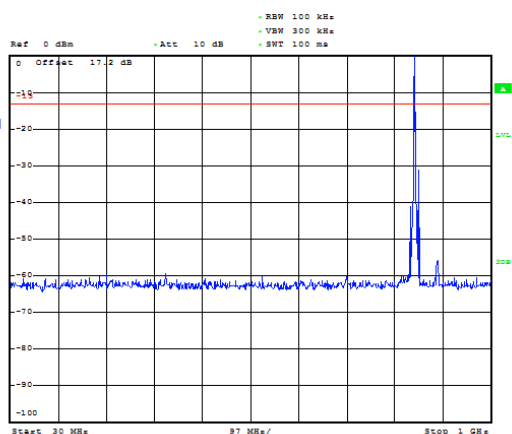
LTE Band 5 5MHz CH-Middle 30MHz~1GHz



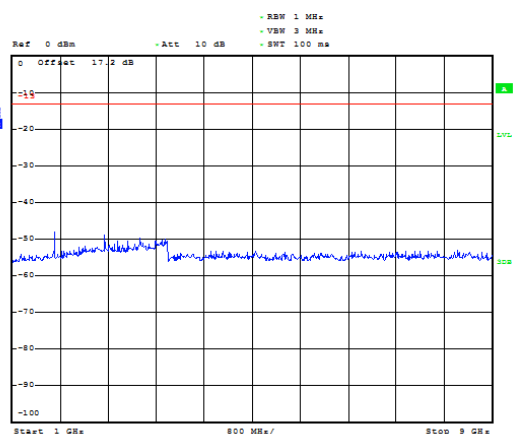
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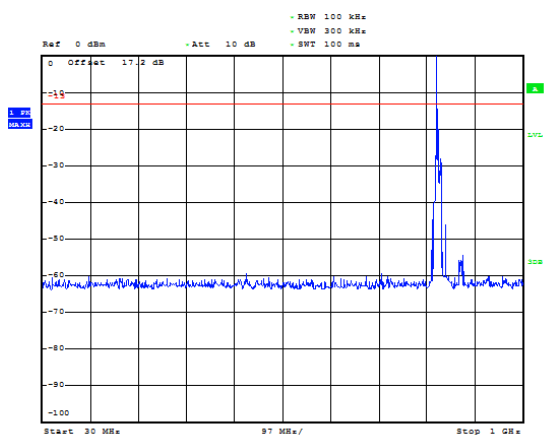
LTE Band 5 5MHz CH-High 30MHz~1GHz



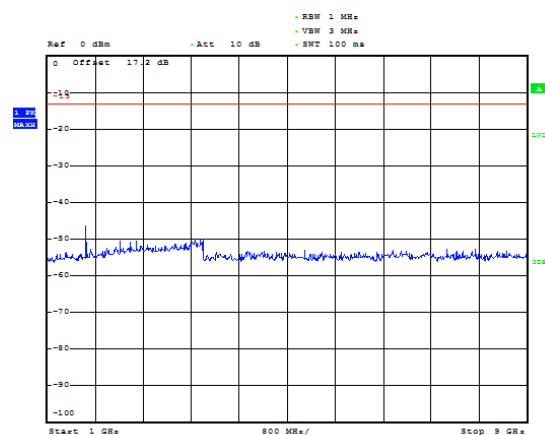
LTE Band 5 5MHz CH-High 1GHz~9GHz



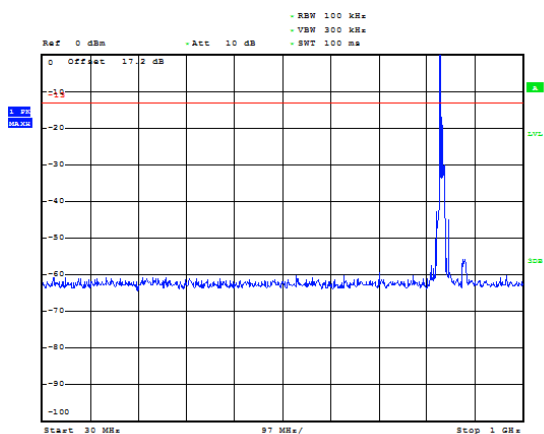
LTE Band 5 10MHz CH-Low 30MHz~1GHz



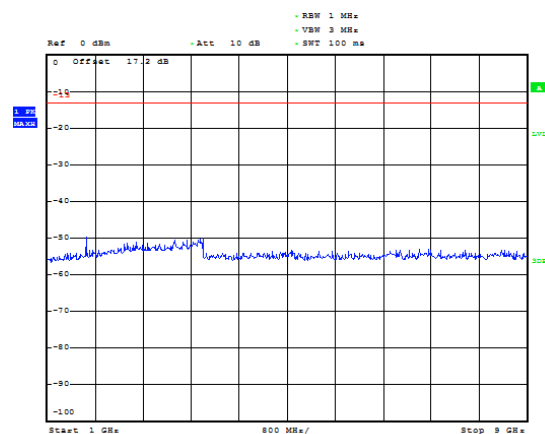
LTE Band 5 10MHz CH-Low 1GHz~9GHz



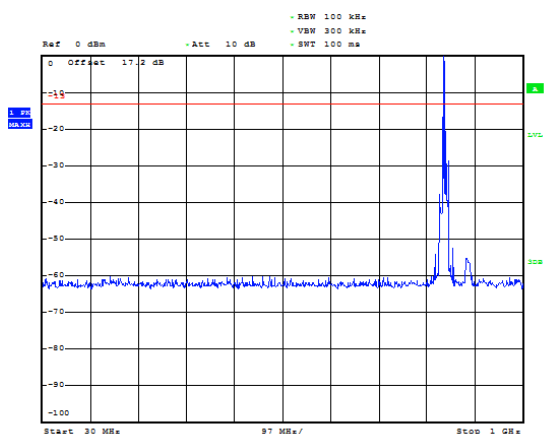
LTE Band 5 10MHz CH-Middle 30MHz~1GHz



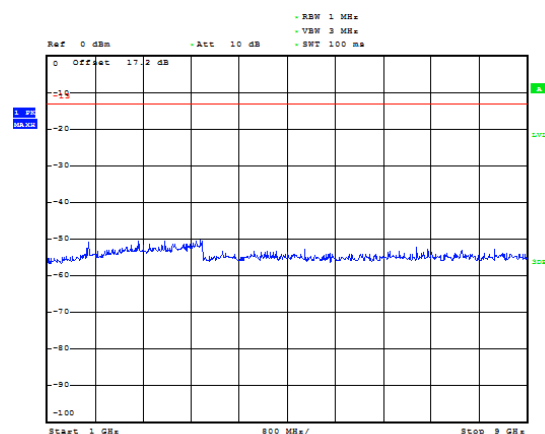
LTE Band 5 10MHz CH-Middle 1GHz~9GHz



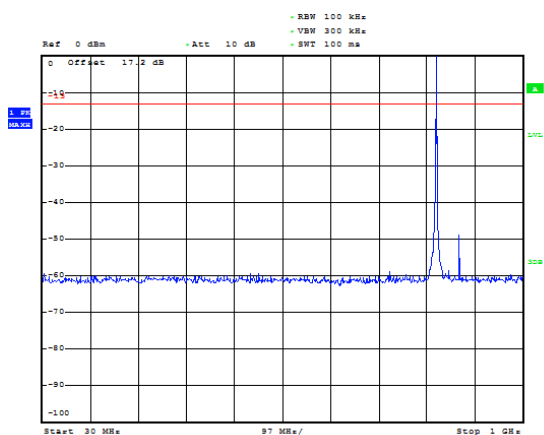
LTE Band 5 10MHz CH-High 30MHz~1GHz



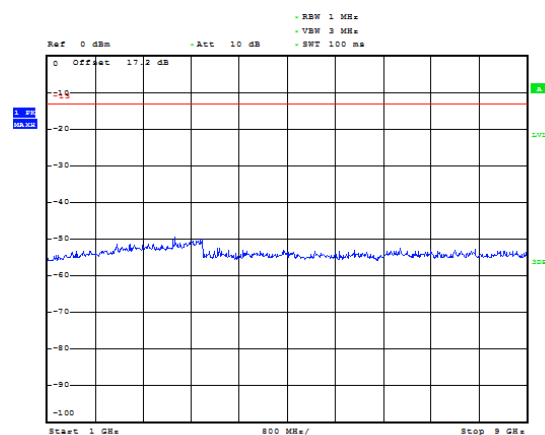
LTE Band 5 10MHz CH-High 1GHz~9GHz



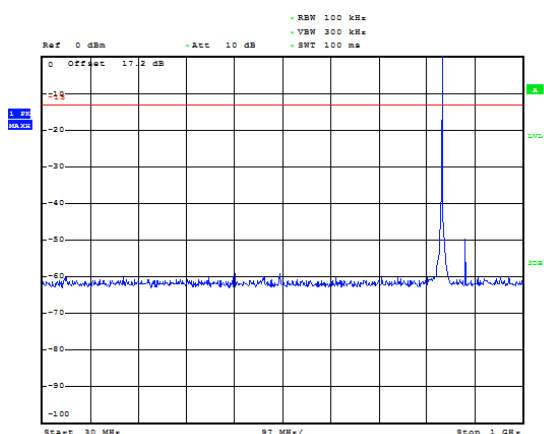
LTE Band 26 1.4MHz CH-Low 30MHz~1GHz



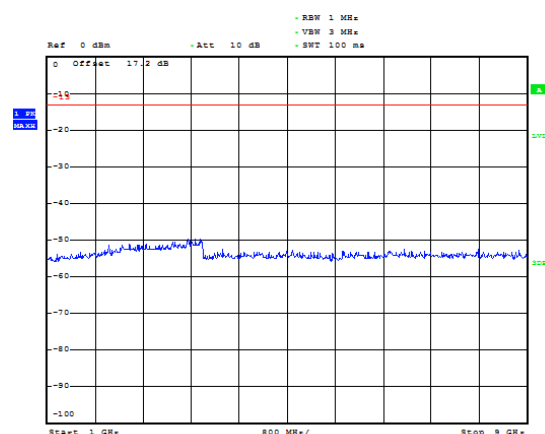
LTE Band 26 1.4MHz CH-Low 1GHz~9GHz



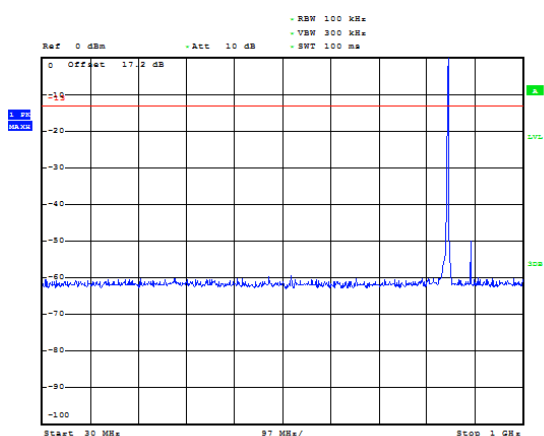
LTE Band 26 1.4MHz CH-Middle 30MHz~1GHz



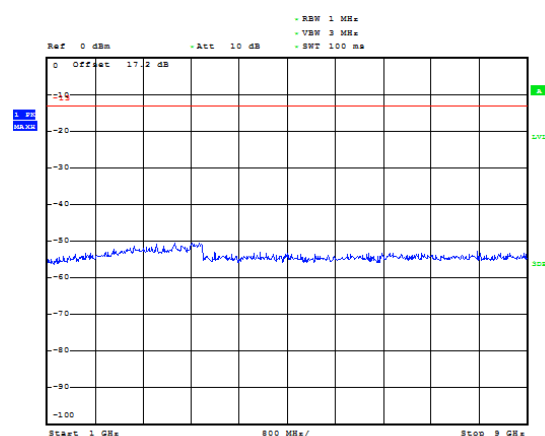
LTE Band 26 1.4MHz CH-Middle 1GHz~9GHz



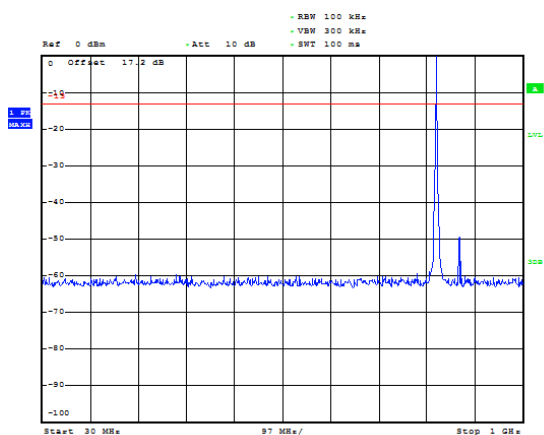
LTE Band 26 1.4MHz CH-High 30MHz~1GHz



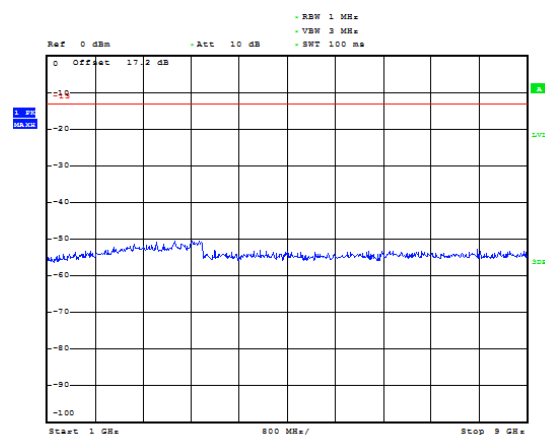
LTE Band 26 1.4MHz CH-High 1GHz~9GHz



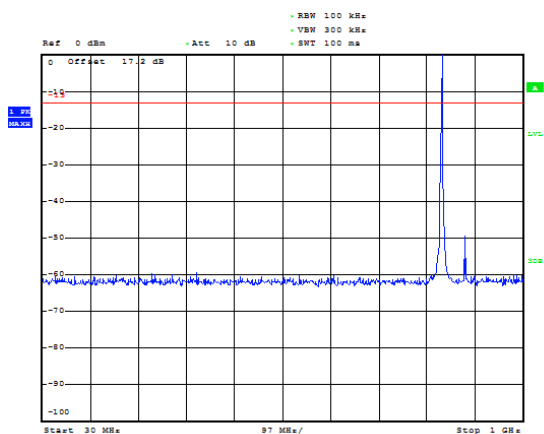
LTE Band 26 3MHz CH-Low 30MHz~1GHz



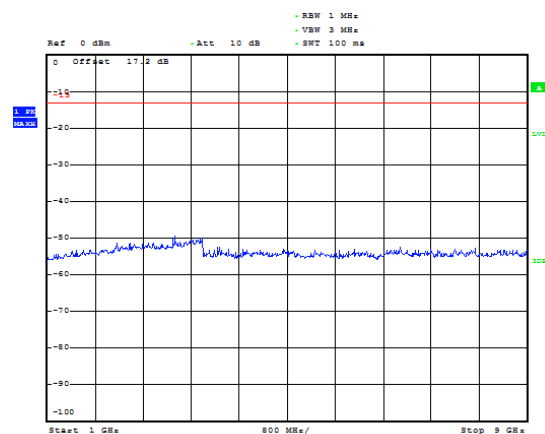
LTE Band 26 3MHz CH-Low 1GHz~9GHz



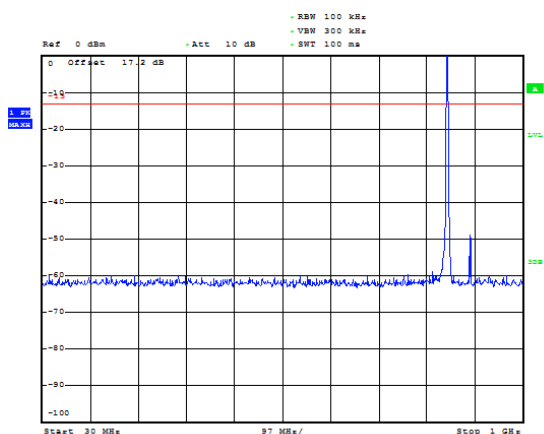
LTE Band 26 3MHz CH-Middle 30MHz~1GHz



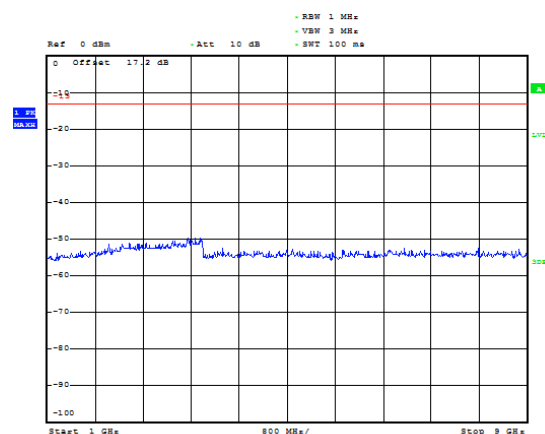
LTE Band 26 3MHz CH-Middle 1GHz~9GHz



LTE Band 26 3MHz CH-High 30MHz~1GHz

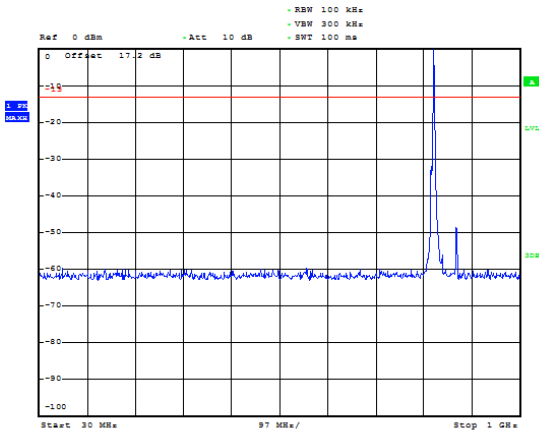


LTE Band 26 3MHz CH-High 1GHz~9GHz

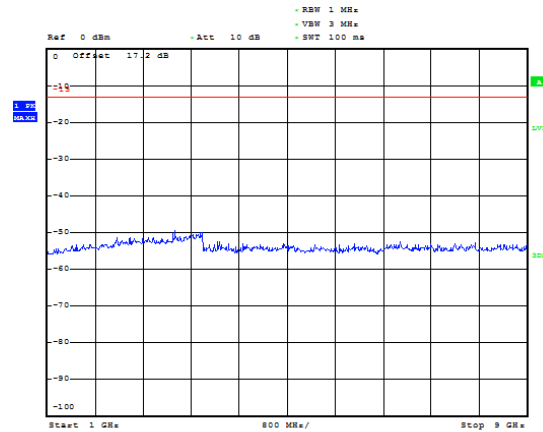




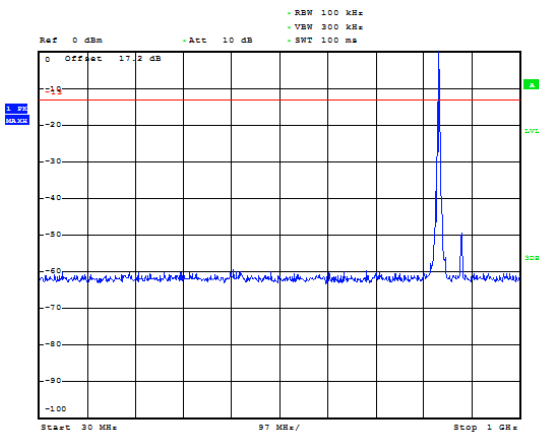
LTE Band 26 5MHz CH-Low 30MHz~1GHz



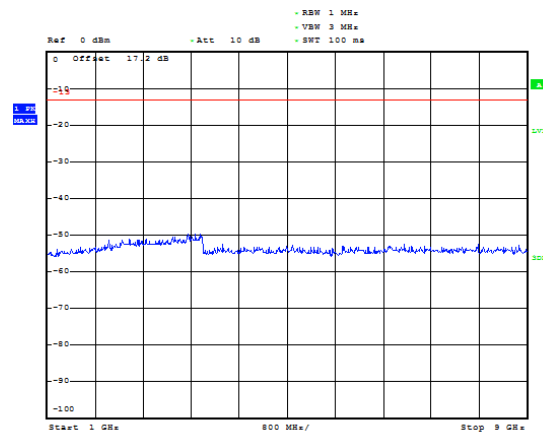
LTE Band 26 5MHz CH-Low 1GHz~9GHz



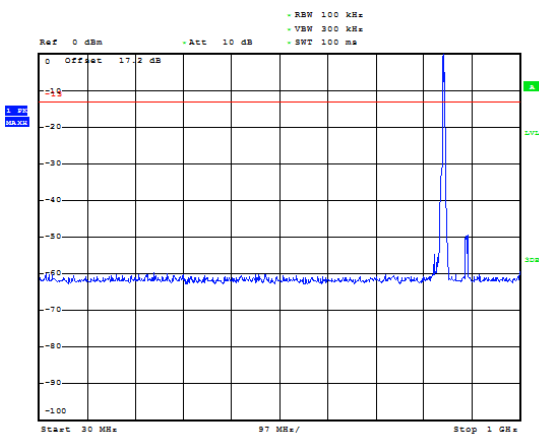
LTE Band 26 5MHz CH-Middle 30MHz~1GHz



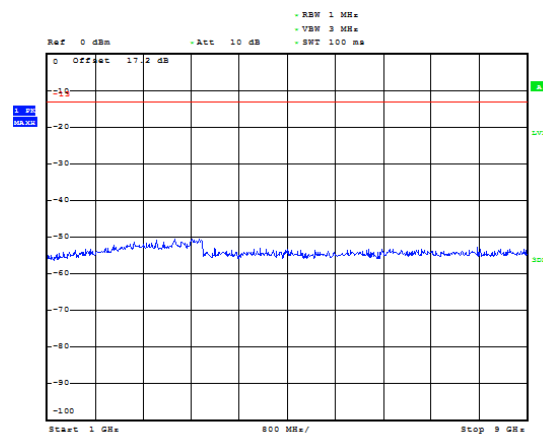
LTE Band 26 5MHz CH-Middle 1GHz~9GHz



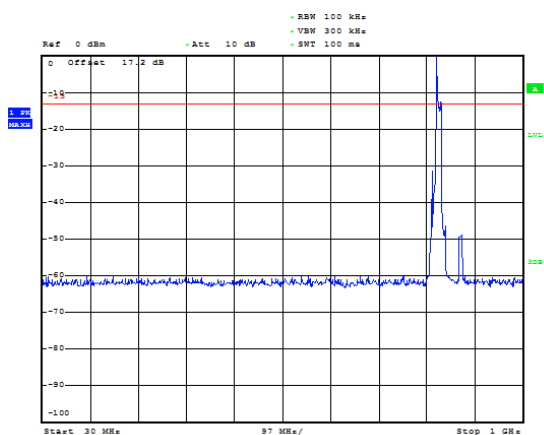
LTE Band 26 5MHz CH-High 30MHz~1GHz



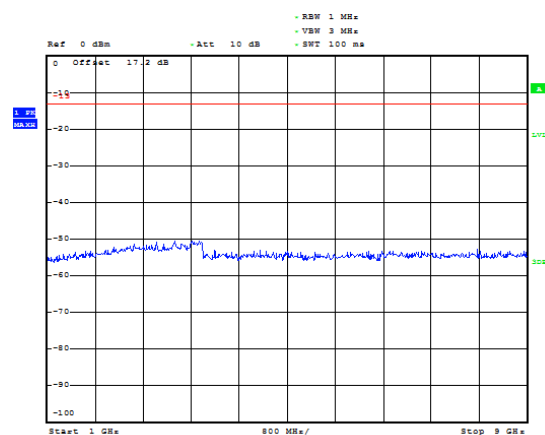
LTE Band 26 5MHz CH-High 1GHz~9GHz



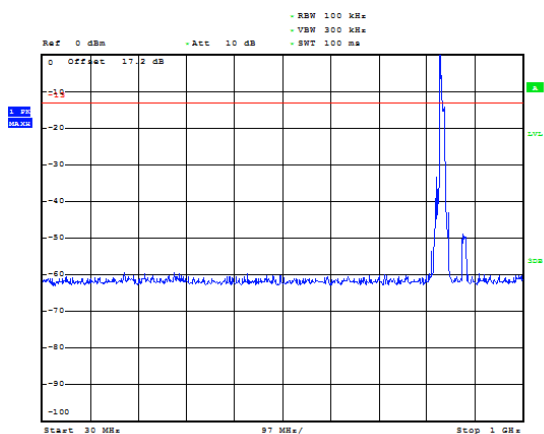
LTE Band 26 10MHz CH-Low 30MHz~1GHz



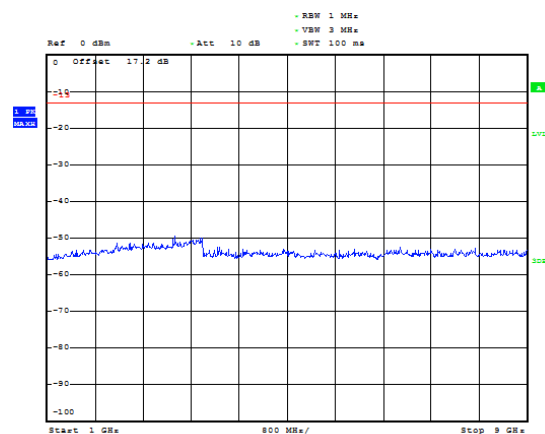
LTE Band 26 10MHz CH-Low 1GHz~9GHz



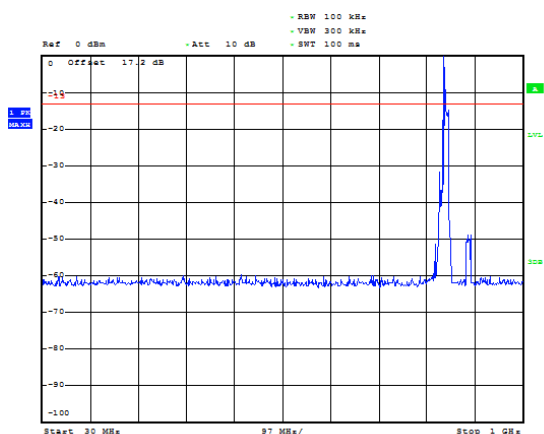
LTE Band 26 10MHz CH-Middle 30MHz~1GHz



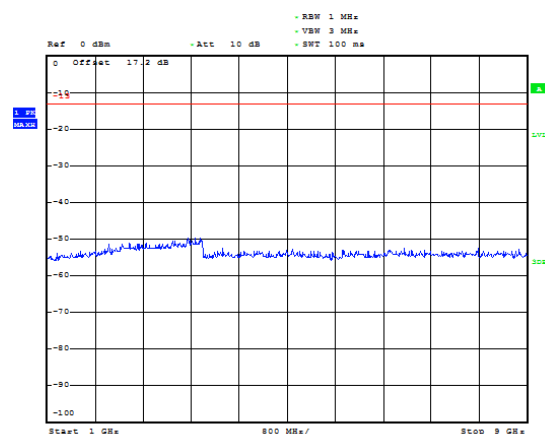
LTE Band 26 10MHz CH-Middle 1GHz~9GHz



LTE Band 26 10MHz CH-High 30MHz~1GHz

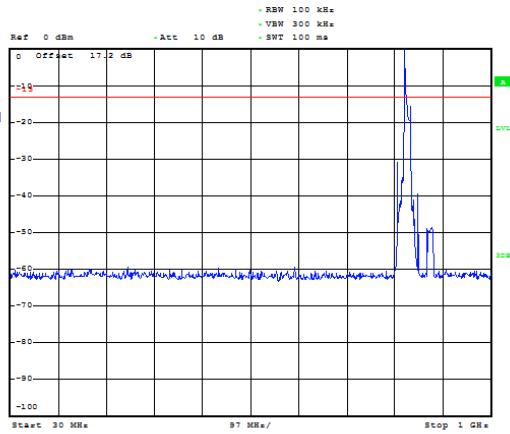


LTE Band 26 10MHz CH-High 1GHz~9GHz

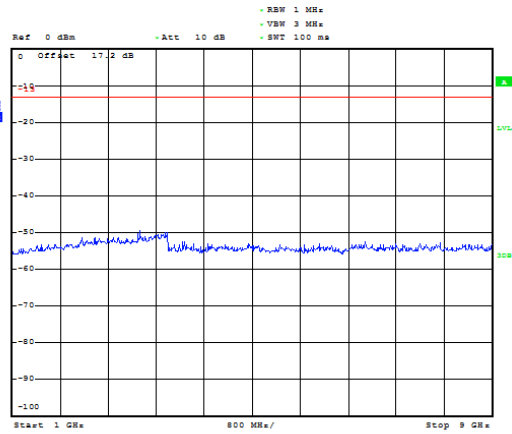




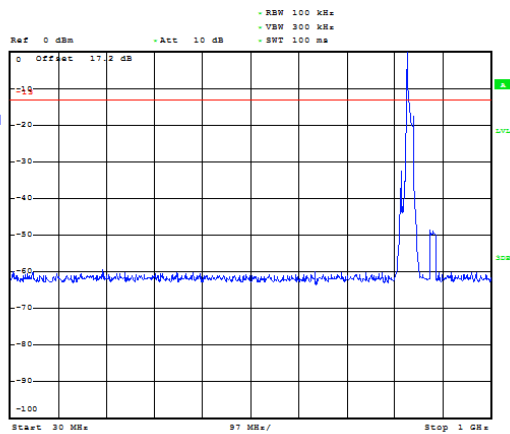
LTE Band 26 15MHz CH-Low 30MHz~1GHz



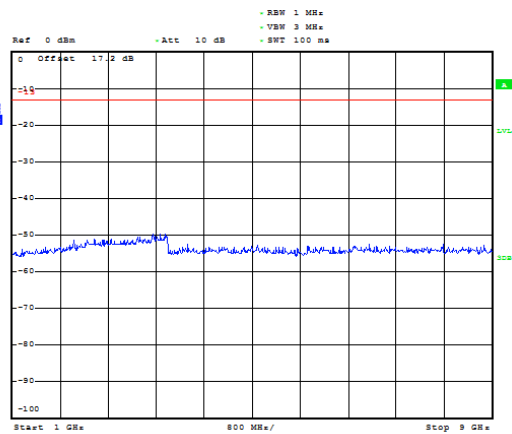
LTE Band 26 15MHz CH-Low 1GHz~9GHz



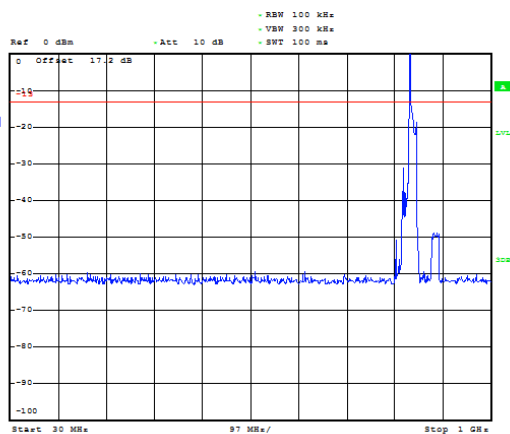
LTE Band 26 15MHz CH-Middle 30MHz~1GHz



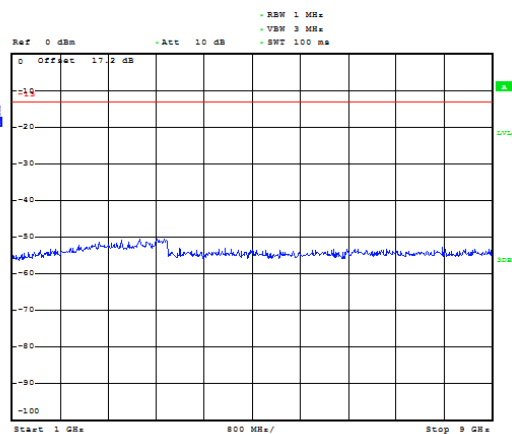
LTE Band 26 15MHz CH-Middle 1GHz~9GHz



LTE Band 26 15MHz CH-High 30MHz~1GHz



LTE Band 26 15MHz CH-High 1GHz~9GHz



5.8. Radiates Spurious Emission

Ambient condition

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

Method of Measurement

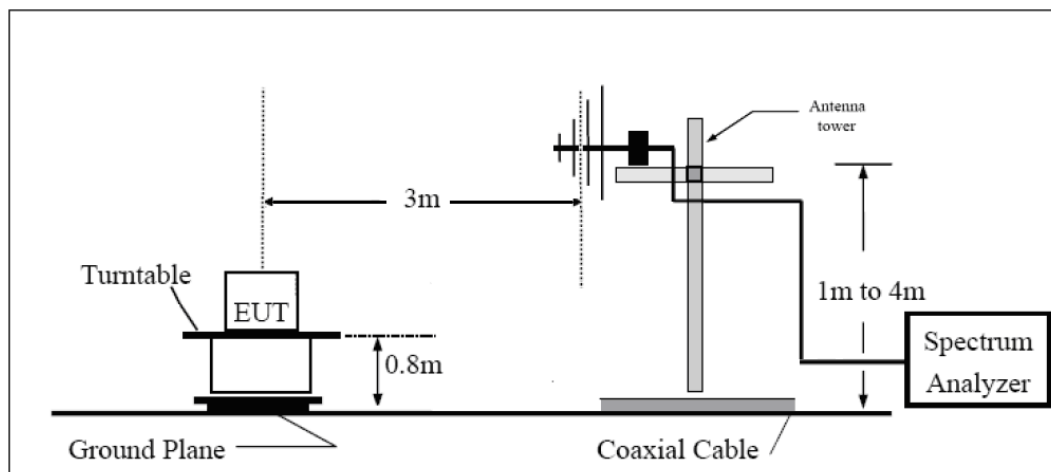
1. The testing follows FCC KDB 971168 v03r01 Section 5.8 and ANSI/TIA-603-E (2016).
 2. The EUT is placed on a turntable 0.8 meters above the ground in the chamber, 3 meter away from the antenna. The maximal emission value is acquired by adjusting the antenna height, polarisation and turntable azimuth. Normally, the height range of antenna is 1 m to 4 m, the azimuth range of turntable is 0° to 360°, and the receive antenna has two polarizations Vertical (V) and Horizontal (H).
 3. A log-periodic antenna or double-ridged waveguide horn antenna shall be substituted in place of the EUT. The log-periodic antenna will be driven by a signal generator and the level will be adjusted till the same power value on the spectrum analyzer or receiver. The level of the spurious emissions can be calculated through the level of the signal generator, cable loss, the gain of the substitution antenna and the reading of the spectrum analyzer or receiver.
 4. The EUT is then put into continuously transmitting mode at its maximum power level during the test. Set Test Receiver or Spectrum RBW=1MHz, VBW=3MHz for above 1GHz and RBW=100kHz, VBW=300kHz for 30MHz to 1GHz,, And the maximum value of the receiver should be recorded as (Pr).
 5. The EUT shall be replaced by a substitution antenna. In the chamber, an substitution antenna for the frequency band of interest is placed at the reference point of the chamber. An RF Signal source for the frequency band of interest is connected to the substitution antenna with a cable that has been constructed to not interfere with the radiation pattern of the antenna. A power (PMea) is applied to the input of the substitution antenna, and adjust the level of the signal generator output until the value of the receiver reach the previously recorded (Pr). The power of signal source (PMea) is recorded. The test should be performed by rotating the test item and adjusting the receiving antenna polarization.
 6. A amplifier should be connected to the Signal Source output port. And the cable should be connect between the Amplifier and the Substitution Antenna. The cable loss (Pcl) ,the Substitution Antenna Gain (Ga) and the Amplifier Gain (PAG) should be recorded after test.
 7. The measurement results are obtained as described below:

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

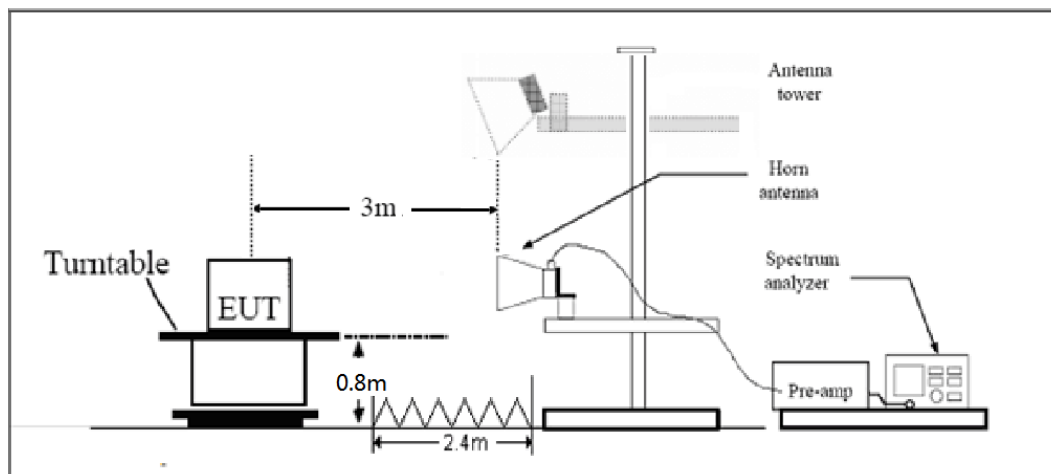
$$\text{Power(EIRP)} = \text{PMea} - \text{Pcl} + \text{Ga}$$
 8. This value is EIRP since the measurement is calibrated using an antenna of known gain (2.15 dBi) and known input power. ERP can be calculated from EIRP by subtracting the gain of the dipole, $\text{ERP} = \text{EIRP} - 2.15\text{dBi}$.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

Test setup

30MHz~~~ 1GHz



Above 1GHz



Note: Area side:2.4mX3.6m

Limits

Rule Part 22.917(a) specifies that "The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log (P)$ dB."

Limit	-13 dBm
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Measurement Uncertainty

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

Test Result

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

GSM 850 CH-Low

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1648.4	-50.79	2	10.15	Horizontal	-44.79	-13.00	31.79	45
3	2472.6	-42.19	2.51	11.35	Horizontal	-35.50	-13.00	22.50	90
4	3296.8	-48.54	4.2	10.85	Horizontal	-44.04	-13.00	31.04	270
5	4121.0	-44.32	5.2	11.35	Horizontal	-40.32	-13.00	27.32	180
6	4945.2	-47.29	5.5	11.95	Horizontal	-42.99	-13.00	29.99	270
7	5769.4	-43.54	5.7	13.55	Horizontal	-37.84	-13.00	24.84	135
8	6593.6	-51.30	6.3	13.75	Horizontal	-46.00	-13.00	33.00	45
9	7417.8	-47.16	6.8	13.85	Horizontal	-42.26	-13.00	29.26	180
10	8242.0	-51.32	6.9	14.25	Horizontal	-46.12	-13.00	33.12	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.									

GSM 850 CH-Middle

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1673.2	-53.76	2	10.75	Horizontal	-47.16	-13.00	34.16	180
3	2509.8	-33.94	2.51	11.05	Horizontal	-27.55	-13.00	14.55	270
4	3346.4	-48.97	4.2	11.15	Horizontal	-44.17	-13.00	31.17	135
5	4183.0	-46.51	5.2	11.15	Horizontal	-42.71	-13.00	29.71	45
6	5019.6	-45.38	5.5	11.95	Horizontal	-41.08	-13.00	28.08	270
7	5856.2	-41.47	5.7	13.55	Horizontal	-35.77	-13.00	22.77	180
8	6692.8	-39.91	6.3	13.75	Horizontal	-34.61	-13.00	21.61	270
9	7529.4	-47.17	6.8	13.85	Horizontal	-42.27	-13.00	29.27	135
10	8366.0	-52.48	6.9	14.25	Horizontal	-47.28	-13.00	34.28	45
Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor. 2.The worst emission was found in the antenna is Horizontal position.									

GSM 850 CH-High

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1697.6	-52.63	2	10.15	Horizontal	-46.63	-13.00	33.63	225
3	2546.4	-28.73	2.51	11.05	Horizontal	-22.34	-13.00	9.34	135
4	3395.2	-49.86	4.2	11.15	Horizontal	-45.06	-13.00	32.06	180
5	4244.0	-41.60	5.2	11.15	Horizontal	-37.80	-13.00	24.80	270
6	5092.8	-47.26	5.5	11.95	Horizontal	-42.96	-13.00	29.96	135
7	5941.6	-39.91	5.7	13.55	Horizontal	-34.21	-13.00	21.21	45
8	6790.4	-42.55	6.3	13.75	Horizontal	-37.25	-13.00	24.25	270
9	7639.2	-49.40	6.8	13.85	Horizontal	-44.50	-13.00	31.50	180
10	8488.0	-52.89	6.9	14.25	Horizontal	-47.69	-13.00	34.69	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.

WCDMA Band V CH-Low

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1652.8	-60.44	2	10.15	Horizontal	-54.44	-13.00	41.44	90
3	2479.2	-62.12	2.51	11.35	Horizontal	-55.43	-13.00	42.43	0
4	3305.6	-61.93	4.2	10.85	Horizontal	-57.43	-13.00	44.43	225
5	4132.0	-59.36	5.2	11.35	Horizontal	-55.36	-13.00	42.36	180
6	4958.4	-51.48	5.5	11.95	Horizontal	-47.18	-13.00	34.18	90
7	5784.8	-58.08	5.7	13.55	Horizontal	-52.38	-13.00	39.38	0
8	6611.2	-54.18	6.3	13.75	Horizontal	-48.88	-13.00	35.88	180
9	7437.6	-52.46	6.8	13.85	Horizontal	-47.56	-13.00	34.56	45
10	8264.0	-52.65	6.9	14.25	Horizontal	-47.45	-13.00	34.45	45

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

WCDMA Band V CH-Middle

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1673.2	-61.31	2	10.75	Horizontal	-54.71	-13.00	41.71	180
3	2509.8	-60.94	2.51	11.05	Horizontal	-54.55	-13.00	41.55	45
4	3346.4	-61.99	4.2	11.15	Horizontal	-57.19	-13.00	44.19	225
5	4183.0	-59.73	5.2	11.15	Horizontal	-55.93	-13.00	42.93	180
6	5019.6	-51.39	5.5	11.95	Horizontal	-47.09	-13.00	34.09	90
7	5856.2	-58.75	5.7	13.55	Horizontal	-53.05	-13.00	40.05	0
8	6692.8	-54.90	6.3	13.75	Horizontal	-49.60	-13.00	36.60	180
9	7529.4	-51.49	6.8	13.85	Horizontal	-46.59	-13.00	33.59	225
10	8366.0	-54.31	6.9	14.25	Horizontal	-49.11	-13.00	36.11	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.

WCDMA Band V CH-High

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1693.2	-61.96	2	10.15	Horizontal	-55.96	-13.00	42.96	45
3	2539.8	-61.81	2.51	11.05	Horizontal	-55.42	-13.00	42.42	225
4	3386.4	-61.21	4.2	11.15	Horizontal	-56.41	-13.00	43.41	0
5	4233.0	-57.80	5.2	11.15	Horizontal	-54.00	-13.00	41.00	180
6	5079.6	-51.87	5.5	11.95	Horizontal	-47.57	-13.00	34.57	225
7	5926.2	-56.43	5.7	13.55	Horizontal	-50.73	-13.00	37.73	180
8	6772.8	-53.49	6.3	13.75	Horizontal	-48.19	-13.00	35.19	90
9	7619.4	-50.25	6.8	13.85	Horizontal	-45.35	-13.00	32.35	0
10	8466.0	-51.62	6.9	14.25	Horizontal	-46.42	-13.00	33.42	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 5 1.4MHz CH-Low

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1649.4	-57.35	2.00	10.75	Horizontal	-50.75	-13.00	37.75	315
3	2474.1	-57.51	2.51	11.05	Horizontal	-51.12	-13.00	38.12	45
4	3298.8	-73.30	4.20	11.15	Horizontal	-68.50	-13.00	55.50	45
5	4123.5	-58.88	5.20	11.15	Horizontal	-55.08	-13.00	42.08	225
6	4948.2	-66.08	5.50	11.95	Horizontal	-61.78	-13.00	48.78	45
7	5772.9	-54.25	5.70	13.55	Horizontal	-48.55	-13.00	35.55	225
8	6597.6	-62.32	6.30	13.75	Horizontal	-57.02	-13.00	44.02	135
9	7422.3	-59.99	6.80	13.85	Horizontal	-55.09	-13.00	42.09	225
10	8247.0	-65.94	6.90	14.25	Horizontal	-60.74	-13.00	47.74	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 5 1.4MHz CH-Middle

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1673.0	-54.34	2.00	10.75	Horizontal	-47.74	-13.00	34.74	225
3	2509.5	-56.56	2.51	11.05	Horizontal	-50.17	-13.00	37.17	45
4	3346.0	-72.15	4.20	11.15	Horizontal	-67.35	-13.00	54.35	90
5	4182.5	-55.77	5.20	11.15	Horizontal	-51.97	-13.00	38.97	45
6	5019.0	-66.90	5.50	11.95	Horizontal	-62.60	-13.00	49.60	225
7	5855.5	-56.17	5.70	13.55	Horizontal	-50.47	-13.00	37.47	135
8	6692.0	-61.27	6.30	13.75	Horizontal	-55.97	-13.00	42.97	315
9	7528.5	-55.46	6.80	13.85	Horizontal	-50.56	-13.00	37.56	45
10	8365.0	-63.86	6.90	14.25	Horizontal	-58.66	-13.00	45.66	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 5 1.4MHz CH-High

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1696.6	-57.51	2.00	10.75	Horizontal	-50.91	-13.00	37.91	225
3	2544.9	-56.55	2.51	11.05	Horizontal	-50.16	-13.00	37.16	135
4	3393.2	-73.14	4.20	11.15	Horizontal	-68.34	-13.00	55.34	45
5	4241.5	-59.55	5.20	11.15	Horizontal	-55.75	-13.00	42.75	225
6	5089.8	-66.36	5.50	11.95	Horizontal	-62.06	-13.00	49.06	0
7	5938.1	-56.79	5.70	13.55	Horizontal	-51.09	-13.00	38.09	225
8	6786.4	-62.86	6.30	13.75	Horizontal	-57.56	-13.00	44.56	45
9	7634.7	-57.10	6.80	13.85	Horizontal	-52.20	-13.00	39.20	225
10	8483.0	-65.30	6.90	14.25	Horizontal	-60.10	-13.00	47.10	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 5 5MHz CH-Low

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1653.0	-57.93	2.00	10.75	Horizontal	-51.33	-13.00	38.33	225
3	2479.5	-53.19	2.51	11.05	Horizontal	-46.80	-13.00	33.80	45
4	3356.3	-72.60	4.20	11.15	Horizontal	-67.80	-13.00	54.80	225
5	4007.6	-67.19	5.20	11.15	Horizontal	-63.39	-13.00	50.39	135
6	4994.3	-67.35	5.50	11.95	Horizontal	-63.05	-13.00	50.05	315
7	5961.8	-67.93	5.70	13.55	Horizontal	-62.23	-13.00	49.23	45
8	6796.8	-62.80	6.30	13.75	Horizontal	-57.50	-13.00	44.50	225
9	7631.8	-64.50	6.80	13.85	Horizontal	-59.60	-13.00	46.60	135
10	8466.8	-62.60	6.90	14.25	Horizontal	-57.40	-13.00	44.40	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 5 5MHz CH-Middle

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1673.0	-56.61	2.00	10.75	Horizontal	-50.01	-13.00	37.01	225
3	2509.5	-56.48	2.51	11.05	Horizontal	-50.09	-13.00	37.09	45
4	3466.2	-72.72	4.20	11.15	Horizontal	-67.92	-13.00	54.92	45
5	4182.5	-68.19	5.20	11.15	Horizontal	-64.39	-13.00	51.39	90
6	5019.0	-66.35	5.50	11.95	Horizontal	-62.05	-13.00	49.05	45
7	5855.5	-66.93	5.70	13.55	Horizontal	-61.23	-13.00	48.23	225
8	6765.0	-63.29	6.30	13.75	Horizontal	-57.99	-13.00	44.99	0
9	7614.7	-64.47	6.80	13.85	Horizontal	-59.57	-13.00	46.57	225
10	8464.4	-62.82	6.90	14.25	Horizontal	-57.62	-13.00	44.62	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 5 5MHz CH-High

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1693.0	-56.07	2.00	10.75	Horizontal	-49.47	-13.00	36.47	225
3	2539.5	-56.79	2.51	11.05	Horizontal	-50.40	-13.00	37.40	135
4	3386.0	-71.99	4.20	11.15	Horizontal	-67.19	-13.00	54.19	225
5	4232.5	-67.41	5.20	11.15	Horizontal	-63.61	-13.00	50.61	45
6	5079.0	-66.53	5.50	11.95	Horizontal	-62.23	-13.00	49.23	225
7	5925.5	-65.88	5.70	13.55	Horizontal	-60.18	-13.00	47.18	135
8	6772.0	-63.30	6.30	13.75	Horizontal	-58.00	-13.00	45.00	315
9	7618.5	-63.94	6.80	13.85	Horizontal	-59.04	-13.00	46.04	45
10	8465.0	-64.26	6.90	14.25	Horizontal	-59.06	-13.00	46.06	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 5 10MHz CH-Low

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1658.0	-57.36	2.00	10.75	Horizontal	-50.76	-13.00	37.76	315
3	2487.0	-58.11	2.51	11.05	Horizontal	-51.72	-13.00	38.72	45
4	3316.0	-73.19	4.20	11.15	Horizontal	-68.39	-13.00	55.39	135
5	4145.0	-69.23	5.20	11.15	Horizontal	-65.43	-13.00	52.43	225
6	4974.0	-66.74	5.50	11.95	Horizontal	-62.44	-13.00	49.44	90
7	5803.0	-66.98	5.70	13.55	Horizontal	-61.28	-13.00	48.28	90
8	6632.0	-62.97	6.30	13.75	Horizontal	-57.67	-13.00	44.67	225
9	7461.0	-63.65	6.80	13.85	Horizontal	-58.75	-13.00	45.75	45
10	8290.0	-65.06	6.90	14.25	Horizontal	-59.86	-13.00	46.86	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 5 10MHz CH-Middle

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1673.0	-59.22	2.00	10.75	Horizontal	-52.62	-13.00	39.62	225
3	2509.5	-59.44	2.51	11.05	Horizontal	-53.05	-13.00	40.05	45
4	3346.0	-72.81	4.20	11.15	Horizontal	-68.01	-13.00	55.01	180
5	4182.5	-66.87	5.20	11.15	Horizontal	-63.07	-13.00	50.07	0
6	5019.0	-66.09	5.50	11.95	Horizontal	-61.79	-13.00	48.79	45
7	5855.5	-63.95	5.70	13.55	Horizontal	-58.25	-13.00	45.25	90
8	6692.0	-62.67	6.30	13.75	Horizontal	-57.37	-13.00	44.37	45
9	7528.5	-65.03	6.80	13.85	Horizontal	-60.13	-13.00	47.13	225
10	8365.0	-64.30	6.90	14.25	Horizontal	-59.10	-13.00	46.10	135

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

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

LTE Band 5 10MHz CH-High

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1688.0	-58.54	2.00	10.75	Horizontal	-51.94	-13.00	38.94	225
3	2532.0	-59.17	2.51	11.05	Horizontal	-52.78	-13.00	39.78	45
4	3376.0	-73.89	4.20	11.15	Horizontal	-69.09	-13.00	56.09	315
5	4220.0	-69.27	5.20	11.15	Horizontal	-65.47	-13.00	52.47	45
6	5064.0	-67.14	5.50	11.95	Horizontal	-62.84	-13.00	49.84	90
7	5908.0	-66.11	5.70	13.55	Horizontal	-60.41	-13.00	47.41	45
8	6752.0	-63.08	6.30	13.75	Horizontal	-57.78	-13.00	44.78	225
9	7596.0	-63.79	6.80	13.85	Horizontal	-58.89	-13.00	45.89	0
10	8440.0	-64.51	6.90	14.25	Horizontal	-59.31	-13.00	46.31	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 26 1.4MHz CH-Low

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1629.4	-56.54	2.00	10.75	Horizontal	-49.94	-13.00	36.94	45
3	2444.1	-55.03	2.51	11.05	Horizontal	-48.64	-13.00	35.64	0
4	3258.8	-61.90	4.20	11.15	Horizontal	-57.10	-13.00	44.10	135
5	4073.5	-59.12	5.20	11.15	Horizontal	-55.32	-13.00	42.32	270
6	4888.2	-52.69	5.50	11.95	Horizontal	-48.39	-13.00	35.39	180
7	5702.9	-57.25	5.70	13.55	Horizontal	-51.55	-13.00	38.55	90
8	6517.6	-56.01	6.30	13.75	Horizontal	-50.71	-13.00	37.71	45
9	7332.3	-49.17	6.80	13.85	Horizontal	-44.27	-13.00	31.27	45
10	8147.0	-49.71	6.90	14.25	Horizontal	-44.51	-13.00	31.51	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 26 1.4MHz CH-Middle

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1673.0	-51.75	2.00	10.75	Horizontal	-45.15	-13.00	32.15	315
3	2509.5	-58.17	2.51	11.05	Horizontal	-51.78	-13.00	38.78	225
4	3346.0	-62.63	4.20	11.15	Horizontal	-57.83	-13.00	44.83	315
5	4182.5	-58.49	5.20	11.15	Horizontal	-54.69	-13.00	41.69	135
6	5019.0	-53.22	5.50	11.95	Horizontal	-48.92	-13.00	35.92	270
7	5855.5	-58.21	5.70	13.55	Horizontal	-52.51	-13.00	39.51	315
8	6692.0	-53.07	6.30	13.75	Horizontal	-47.77	-13.00	34.77	135
9	7528.5	-48.74	6.80	13.85	Horizontal	-43.84	-13.00	30.84	270
10	8365.0	-52.44	6.90	14.25	Horizontal	-47.24	-13.00	34.24	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 26 1.4MHz CH-High

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1693.0	-57.96	2.00	10.75	Horizontal	-51.36	-13.00	38.36	135
3	2544.9	-53.60	2.51	11.05	Horizontal	-47.21	-13.00	34.21	270
4	3393.2	-62.64	4.20	11.15	Horizontal	-57.84	-13.00	44.84	90
5	4241.5	-56.70	5.20	11.15	Horizontal	-52.90	-13.00	39.90	45
6	5089.8	-50.09	5.50	11.95	Horizontal	-45.79	-13.00	32.79	45
7	5938.1	-57.57	5.70	13.55	Horizontal	-51.87	-13.00	38.87	0
8	6786.4	-53.93	6.30	13.75	Horizontal	-48.63	-13.00	35.63	315
9	7634.7	-45.54	6.80	13.85	Horizontal	-40.64	-13.00	27.64	135
10	8483.0	-53.30	6.90	14.25	Horizontal	-48.10	-13.00	35.10	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 26 5MHz CH-Low

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1633.0	-57.45	2.00	10.75	Horizontal	-50.85	-13.00	37.85	180
3	2449.5	-55.58	2.51	11.05	Horizontal	-49.19	-13.00	36.19	90
4	3266.0	-61.65	4.20	11.15	Horizontal	-56.85	-13.00	43.85	45
5	4082.5	-58.50	5.20	11.15	Horizontal	-54.70	-13.00	41.70	0
6	4899.0	-51.63	5.50	11.95	Horizontal	-47.33	-13.00	34.33	315
7	5715.5	-57.53	5.70	13.55	Horizontal	-51.83	-13.00	38.83	225
8	6532.0	-56.20	6.30	13.75	Horizontal	-50.90	-13.00	37.90	135
9	7348.5	-47.20	6.80	13.85	Horizontal	-42.30	-13.00	29.30	180
10	8165.0	-49.39	6.90	14.25	Horizontal	-44.19	-13.00	31.19	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 26 5MHz CH-Middle

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1673.0	-54.48	2.00	10.75	Horizontal	-47.88	-13.00	34.88	45
3	2509.5	-60.10	2.51	11.05	Horizontal	-53.71	-13.00	40.71	45
4	3346.0	-61.75	4.20	11.15	Horizontal	-56.95	-13.00	43.95	45
5	4182.5	-57.01	5.20	11.15	Horizontal	-53.21	-13.00	40.21	45
6	5019.0	-54.63	5.50	11.95	Horizontal	-50.33	-13.00	37.33	0
7	5855.5	-57.23	5.70	13.55	Horizontal	-51.53	-13.00	38.53	315
8	6692.0	-54.90	6.30	13.75	Horizontal	-49.60	-13.00	36.60	135
9	7528.5	-47.83	6.80	13.85	Horizontal	-42.93	-13.00	29.93	270
10	8365.0	-53.85	6.90	14.25	Horizontal	-48.65	-13.00	35.65	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 26 5MHz CH-High

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1693.0	-56.43	2.00	10.75	Horizontal	-49.83	-13.00	36.83	0
3	2539.5	-55.16	2.51	11.05	Horizontal	-48.77	-13.00	35.77	315
4	3386.0	-62.36	4.20	11.15	Horizontal	-57.56	-13.00	44.56	0
5	4232.5	-57.80	5.20	11.15	Horizontal	-54.00	-13.00	41.00	315
6	5079.0	-54.01	5.50	11.95	Horizontal	-49.71	-13.00	36.71	225
7	5925.0	-57.03	5.70	13.55	Horizontal	-51.33	-13.00	38.33	135
8	6772.0	-55.57	6.30	13.75	Horizontal	-50.27	-13.00	37.27	270
9	7618.5	-46.22	6.80	13.85	Horizontal	-41.32	-13.00	28.32	180
10	8465.0	-53.34	6.90	14.25	Horizontal	-48.14	-13.00	35.14	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 26 15MHz CH-Low

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1663.0	-56.05	2.00	10.75	Horizontal	-49.45	-13.00	36.45	135
3	2494.5	-55.79	2.51	11.05	Horizontal	-49.40	-13.00	36.40	270
4	3286.0	-61.61	4.20	11.15	Horizontal	-56.81	-13.00	43.81	45
5	4107.5	-58.62	5.20	11.15	Horizontal	-54.82	-13.00	41.82	45
6	4929.0	-50.40	5.50	11.95	Horizontal	-46.10	-13.00	33.10	0
7	5750.5	-58.33	5.70	13.55	Horizontal	-52.63	-13.00	39.63	315
8	6572.0	-53.97	6.30	13.75	Horizontal	-48.67	-13.00	35.67	225
9	7393.5	-48.19	6.80	13.85	Horizontal	-43.29	-13.00	30.29	135
10	8215.0	-48.74	6.90	14.25	Horizontal	-43.54	-13.00	30.54	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 26 15MHz CH-Middle

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1673.0	-57.34	2.00	10.75	Horizontal	-50.74	-13.00	37.74	45
3	2509.5	-55.22	2.51	11.05	Horizontal	-48.83	-13.00	35.83	0
4	3346.0	-62.53	4.20	11.15	Horizontal	-57.73	-13.00	44.73	90
5	4182.5	-58.12	5.20	11.15	Horizontal	-54.32	-13.00	41.32	45
6	5019.0	-55.52	5.50	11.95	Horizontal	-51.22	-13.00	38.22	45
7	5855.5	-57.36	5.70	13.55	Horizontal	-51.66	-13.00	38.66	0
8	6692.0	-54.91	6.30	13.75	Horizontal	-49.61	-13.00	36.61	45
9	7528.5	-48.79	6.80	13.85	Horizontal	-43.89	-13.00	30.89	0
10	8365.0	-53.32	6.90	14.25	Horizontal	-48.12	-13.00	35.12	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 26 15MHz CH-High

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1683.0	-58.21	2.00	10.75	Horizontal	-51.61	-13.00	38.61	315
3	2524.5	-61.07	2.51	11.05	Horizontal	-54.68	-13.00	41.68	225
4	3366.0	-62.64	4.20	11.15	Horizontal	-57.84	-13.00	44.84	270
5	4207.5	-58.66	5.20	11.15	Horizontal	-54.86	-13.00	41.86	45
6	5049.0	-54.25	5.50	11.95	Horizontal	-49.95	-13.00	36.95	0
7	5890.5	-56.86	5.70	13.55	Horizontal	-51.16	-13.00	38.16	315
8	6732.0	-54.58	6.30	13.75	Horizontal	-49.28	-13.00	36.28	225
9	7573.5	-48.36	6.80	13.85	Horizontal	-43.46	-13.00	30.46	135
10	8415.0	-51.96	6.90	14.25	Horizontal	-46.76	-13.00	33.76	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.

6. Main Test Instruments

Name	Manufacturer	Type	Serial Number	Calibration Date	Expiration Date
Base Station Simulator	R&S	CMW500	113824	2018-05-20	2019-05-19
Power Splitter	Hua Xiang	SHX-GF2-2-13	10120101	/	/
Spectrum Analyzer	Agilent	N9010A	MY47191109	2018-05-20	2019-05-19
Universal Radio Communication Tester	Agilent	E5515C	MY48367192	2018-05-20	2019-05-19
Signal Analyzer	R&S	FSV30	100815	2017-12-17	2018-12-16
EMI Test Receiver	R&S	ESCI	100948	2018-05-20	2019-05-19
Signal generator	R&S	SMB 100A	102594	2018-05-13	2019-05-12
Loop Antenna	SCHWARZBECK	FMZB1519	1519-047	2014-12-06	2019-12-05
Trilog Antenna	SCHWARZBECK	VUBL 9163	9163-201	2017-11-18	2020-11-17
Horn Antenna	R&S	HF907	100126	2014-12-06	2019-12-05
Horn Antenna	ETS-Lindgren	3160-09	00102644	2015-01-30	2020-01-29
Climatic Chamber	ESPEC	SU-242	93000506	2017-12-17	2020-12-16
RF Cable	Agilent	SMA 15cm	0001	/	/
Preamplifier	R&S	SCU18	102327	2018-05-20	2019-05-19
Software	R&S	EMC32	V9.26.0	/	/
MOB COMMS DC SUPPLY	Keysight	66319D	MY43004105	2018-05-07	2019-05-06

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

ANNEX A: EUT Appearance and Test Setup

A.1 EUT Appearance

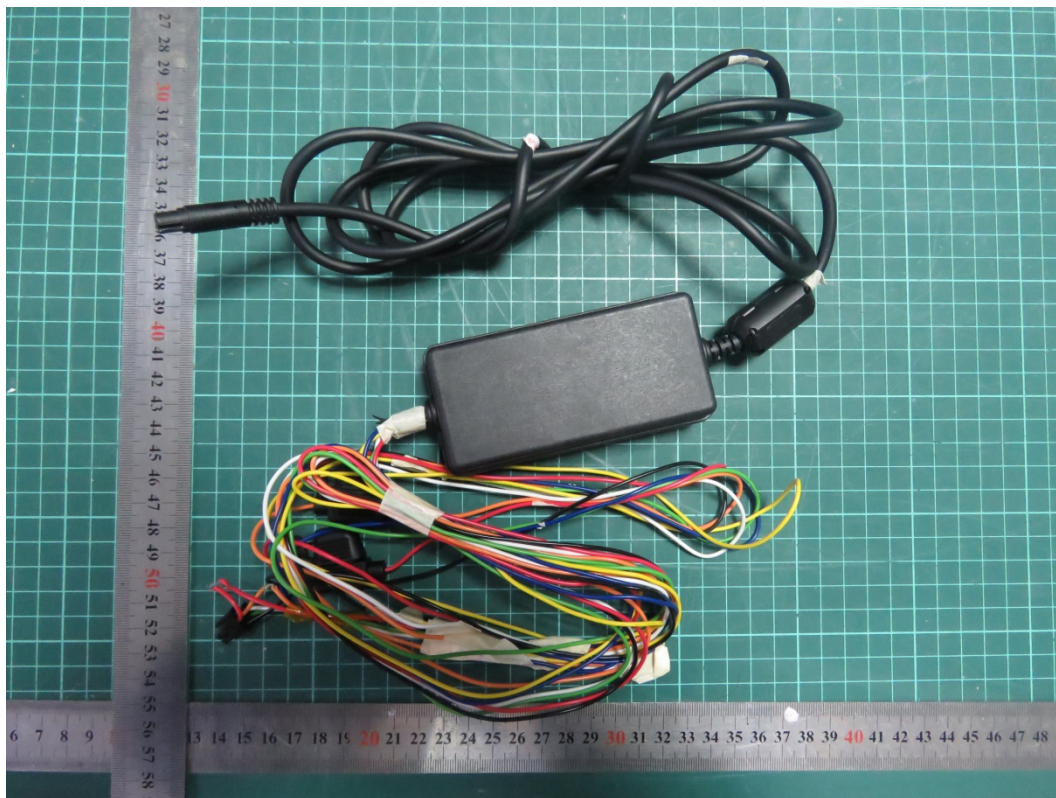


Front Side



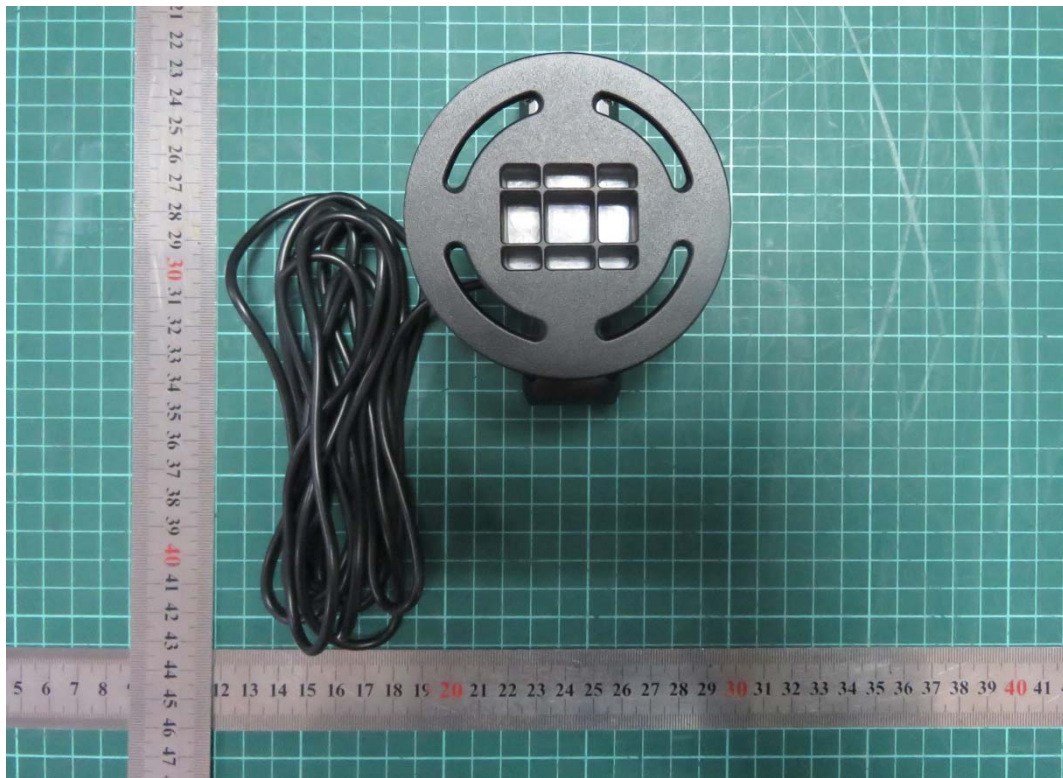
Back Side

a: EUT



b: AutoRing A2 Power Cable

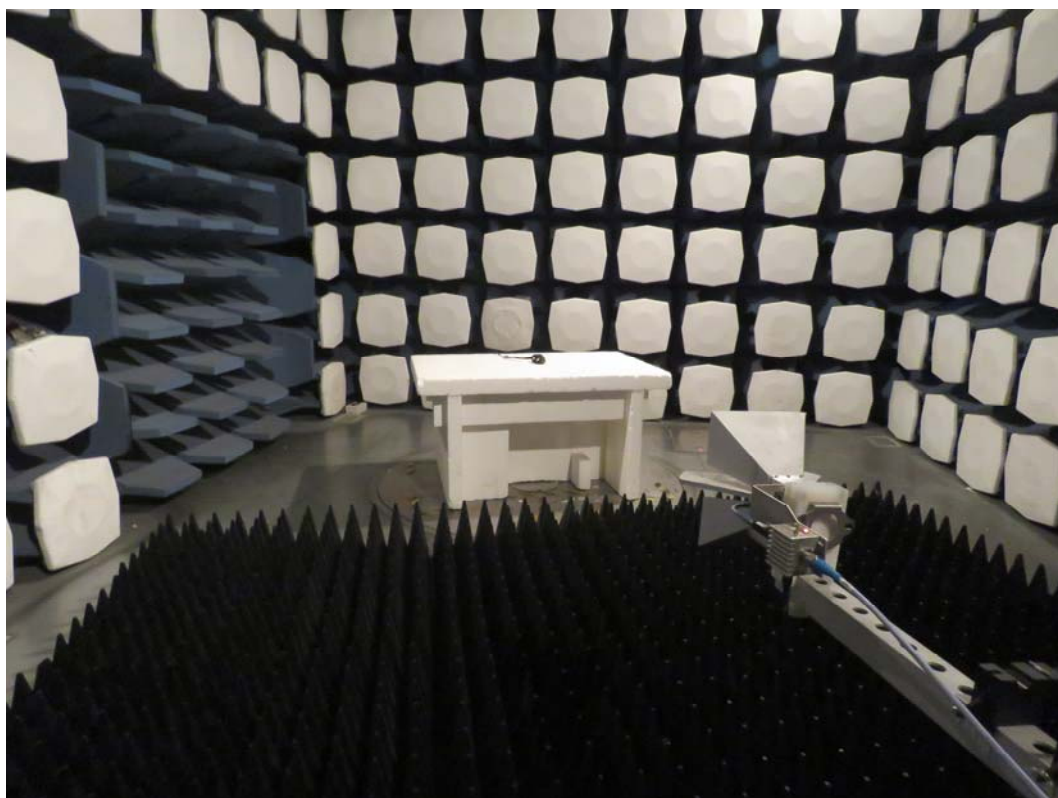




c:Camera

Picture 1 EUT and Accessory

A.2 Test Setup



Picture 2: Radiated Spurious Emissions Test setup