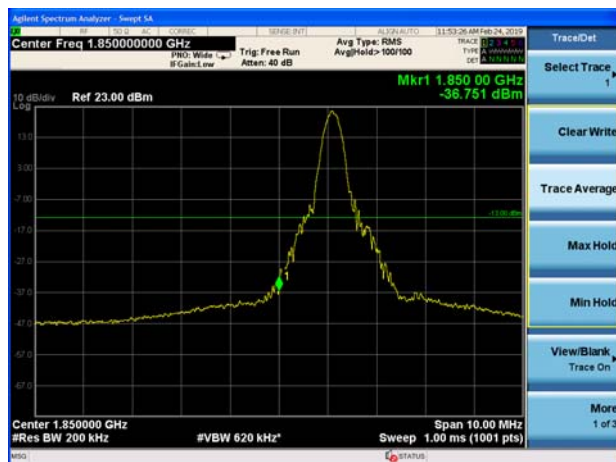
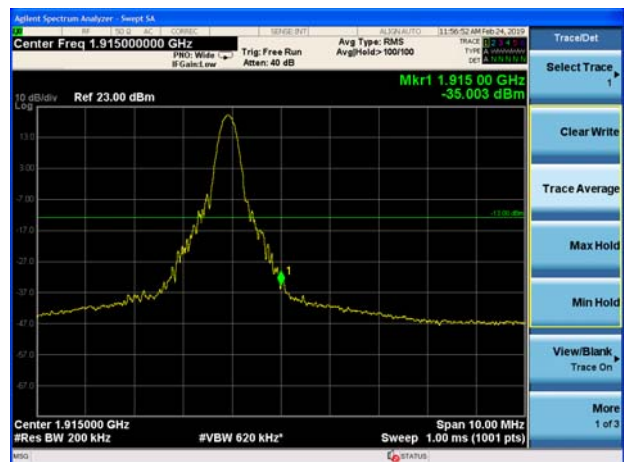




LTE Band 25 20MHz 16QAM 1RB CH-Low



LTE Band 25 20MHz 16QAM 1RB CH-High



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

Ambient condition

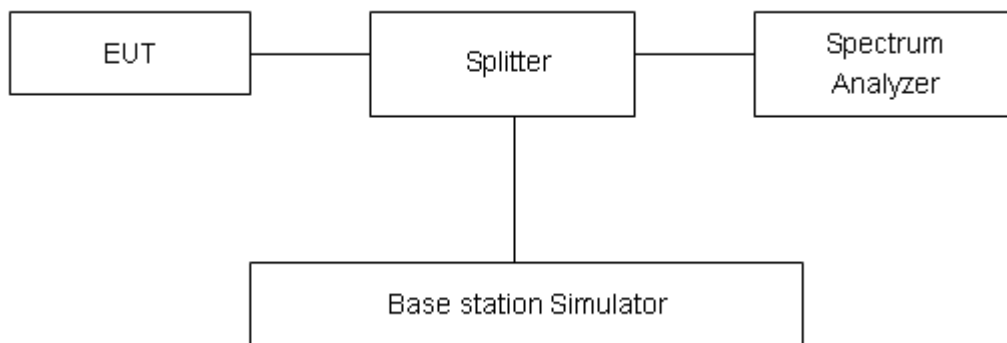
Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

Methods of Measurement

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

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

Test Setup



Limits

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 in 24.232(d).

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
WCDMA Band II (RMC)	9262	1852.4	26.27	23.38	2.89	≤13	PASS
	9400	1880	26.22	23.33	2.89	≤13	PASS
	9538	1907.6	26.04	23.18	2.86	≤13	PASS

LTE Band 2									
RB	Modulation	Bandwidth (MHz)	Channel	Frequency (MHz)	Peak (dBm)	Avg (dBm)	PAPR (dB)	Limit (dB)	Conclusion
100%	QPSK	1.4	18607	1850.7	28.27	22.98	5.29	≤13	PASS
			18900	1880.0	28.26	22.88	5.38	≤13	PASS
			19193	1909.3	28.83	22.84	5.99	≤13	PASS
		3	18615	1851.5	27.82	22.82	5.00	≤13	PASS
			18900	1880	29.32	22.89	6.43	≤13	PASS
			19185	1908.5	28.12	22.98	5.14	≤13	PASS
		5	18625	1852.5	27.57	22.80	4.77	≤13	PASS
			18900	1880	28.43	22.88	5.55	≤13	PASS
			19175	1907.5	28.15	22.96	5.19	≤13	PASS
		10	18650	1855	28.60	22.88	5.72	≤13	PASS
			18900	1880	29.23	22.90	6.33	≤13	PASS
			19150	1905	29.05	23.00	6.05	≤13	PASS
		15	18675	1857.5	27.96	22.86	5.10	≤13	PASS
			18900	1880	29.03	22.86	6.17	≤13	PASS
			19125	1902.5	29.05	22.95	6.10	≤13	PASS
		20	18700	1860	28.30	22.83	5.47	≤13	PASS
			18900	1880	27.74	22.81	4.93	≤13	PASS
			19100	1900	28.85	22.91	5.94	≤13	PASS
1	16QAM	1.4	18607	1850.7	29.27	22.89	6.38	≤13	PASS
			18900	1880.0	27.53	22.67	4.86	≤13	PASS
			19193	1909.3	29.13	23.09	6.04	≤13	PASS
		3	18615	1851.5	28.43	23.17	5.26	≤13	PASS
			18900	1880	28.97	22.99	5.98	≤13	PASS
			19185	1908.5	28.72	23.43	5.29	≤13	PASS
		5	18625	1852.5	29.01	23.14	5.87	≤13	PASS
			18900	1880	28.61	22.95	5.66	≤13	PASS
			19175	1907.5	28.30	23.40	4.90	≤13	PASS
		10	18650	1855	29.39	23.16	6.23	≤13	PASS
			18900	1880	29.54	22.98	6.56	≤13	PASS
			19150	1905	28.37	23.42	4.95	≤13	PASS
		15	18675	1857.5	29.81	23.11	6.70	≤13	PASS
			18900	1880	28.76	22.96	5.80	≤13	PASS
			19125	1902.5	29.69	23.40	6.29	≤13	PASS



		20	18700	1860	28.02	23.09	4.93	≤13	PASS
			18900	1880	28.87	22.92	5.95	≤13	PASS
			19100	1900	28.61	23.35	5.26	≤13	PASS

LTE Band 25									
RB	Modulation	Bandwidth (MHz)	Channel	Frequency (MHz)	Peak (dBm)	Avg (dBm)	PAPR (dB)	Limit (dB)	Conclusion
100%	QPSK	1.4	26047	1850.7	27.13	22.57	4.56	≤13	PASS
			26365	1882.5	27.51	23.07	4.44	≤13	PASS
			26683	1914.3	27.03	23.31	3.72	≤13	PASS
		3	26055	1851.5	27.44	22.89	4.55	≤13	PASS
			26365	1882.5	27.38	22.97	4.41	≤13	PASS
			26675	1913.5	26.95	23.28	3.67	≤13	PASS
		5	26065	1852.5	27.37	22.77	4.60	≤13	PASS
			26365	1882.5	27.62	23.12	4.50	≤13	PASS
			26665	1912.5	26.30	22.93	3.37	≤13	PASS
		10	26090	1855	26.96	22.55	4.41	≤13	PASS
			26365	1882.5	27.57	23.09	4.48	≤13	PASS
			26640	1910	27.13	23.11	4.02	≤13	PASS
		15	26115	1857.5	27.71	23.24	4.47	≤13	PASS
			26365	1882.5	28.20	23.60	4.60	≤13	PASS
			26615	1907.5	28.33	23.46	4.87	≤13	PASS
1	16QAM	1.4	26047	1850.7	27.41	22.00	5.41	≤13	PASS
			26365	1882.5	27.63	22.43	5.20	≤13	PASS
			26683	1914.3	26.75	21.88	4.87	≤13	PASS
		3	26055	1851.5	27.35	21.89	5.46	≤13	PASS
			26365	1882.5	27.74	22.61	5.13	≤13	PASS
			26675	1913.5	26.82	22.22	4.60	≤13	PASS
		5	26065	1852.5	27.43	21.89	5.54	≤13	PASS
			26365	1882.5	27.59	22.44	5.15	≤13	PASS
			26665	1912.5	26.16	21.94	4.22	≤13	PASS
		10	26090	1855	26.81	21.51	5.30	≤13	PASS
			26365	1882.5	27.89	22.80	5.09	≤13	PASS
			26640	1910	27.12	22.48	4.64	≤13	PASS
		15	26115	1857.5	27.73	22.40	5.33	≤13	PASS
			26365	1882.5	28.28	23.02	5.26	≤13	PASS
			26615	1907.5	28.25	22.45	5.80	≤13	PASS
		20	26140	1860	27.74	22.61	5.13	≤13	PASS
			26365	1882.5	27.76	21.96	5.80	≤13	PASS
			26590	1905	28.12	22.37	5.75	≤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 -40°C to +85°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 -40°C to +85°C. Allow at least 1.5 hours at each temperature, un-powered, before making measurements.

Frequency Stability (Voltage Variation)

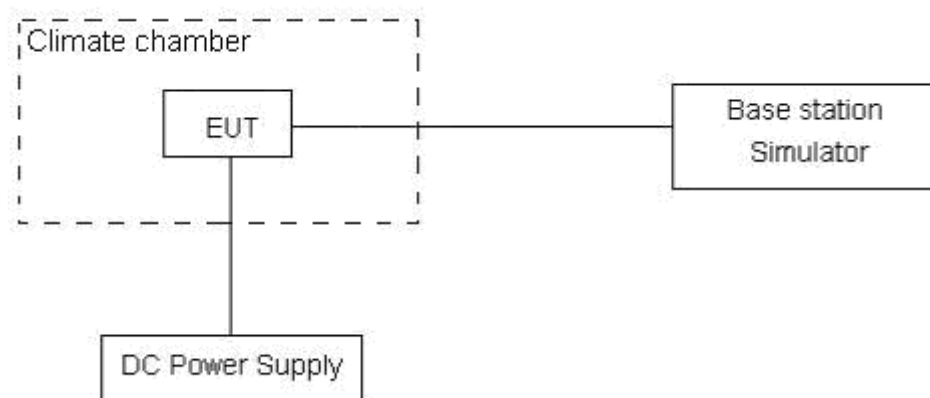
The frequency stability shall be measured with variation of primary supply voltage as follows:

(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 3.3 V and 4.3 V, with a nominal voltage of 3.8V.

Test setup



Limits

The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block

Measurement Uncertainty

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



Test Result

WCDMA Band II					
Condition		1850	1910	Delta(Hz)	Frequency Stability(ppm)
Temperature	Voltage	F low@-13dBm(MHz)	F high@-13dBm(MHz)		
Normal (25°C)	Normal	1850.0298	1909.9503	-2.77	-0.00147
Extreme (85°C)		1850.0308	1909.9489	2.84	0.00151
Extreme (80°C)		1850.0269	1909.9526	-2.15	-0.00114
Extreme (70°C)		1850.0288	1909.9550	5.85	0.00311
Extreme (60°C)		1850.0274	1909.9521	-4.36	-0.00232
Extreme (50°C)		1850.0282	1909.9515	3.11	0.00165
Extreme (40°C)		1850.0293	1909.9502	-2.48	-0.00132
Extreme (30°C)		1850.0301	1909.9495	-2.54	-0.00135
Extreme (20°C)		1850.0279	1909.9516	3.07	0.00163
Extreme (10°C)		1850.0291	1909.9504	-1.92	-0.00102
Extreme (0°C)		1850.0278	1909.9521	6.08	0.00323
Extreme (-10°C)		1850.0273	1909.9522	-4.13	-0.00220
Extreme (-20°C)		1850.0284	1909.9511	3.34	0.00178
Extreme (-30°C)		1850.0319	1909.9478	-2.25	-0.00120
Extreme (-40°C)		1850.0329	1909.9466	-0.68	-0.00036
25°C	LV	1850.0281	1909.9514	3.18	0.00169
	HV	1850.0291	1909.9508	4.95	0.00263

LTE Band 2					
(QPSK, 20MHz BANDWIDTH)					
Condition		1850	1910	Delta(Hz)	Frequency Stability(ppm)
Temperature	Voltage	F low@-13dBm(MHz)	F high@-13dBm(MHz)		
Normal (25°C)	Normal	1850.6449	1909.4818	1.24	0.00066
Extreme (85°C)		1850.6458	1909.4814	0.60	0.00032
Extreme (80°C)		1850.6419	1909.4846	2.53	0.00135
Extreme (70°C)		1850.6438	1909.4832	1.71	0.00091
Extreme (60°C)		1850.6424	1909.4841	-0.22	-0.00012
Extreme (50°C)		1850.6430	1909.4835	-0.59	-0.00031
Extreme (40°C)		1850.6443	1909.4822	1.36	0.00072
Extreme (30°C)		1850.6450	1909.4815	3.96	0.00211
Extreme (20°C)		1850.6429	1909.4836	-0.59	-0.00031
Extreme (10°C)		1850.6441	1909.4824	2.10	0.00112
Extreme (0°C)		1850.6428	1909.4844	0.41	0.00022
Extreme (-10°C)		1850.6423	1909.4842	-0.22	-0.00012



Extreme (-20°C)		1850.6434	1909.4831	-0.59	-0.00031
Extreme (-30°C)		1850.6470	1909.4798	1.36	0.00072
Extreme (-40°C)		1850.6479	1909.4786	3.96	0.00211
25°C	LV	1850.6431	1909.4834	-0.68	-0.00036
	HV	1850.6442	1909.4828	-0.33	-0.00018
(16QAM, 20MHz BANDWIDTH)					
Condition		1850	1910	Delta(Hz)	Frequency Stability(ppm)
Temperature	Voltage	F low@-13dBm(MHz)	F high@-13dBm(MHz)		
Normal (25°C)	Normal	1850.5812	1909.4459	3.45	0.00184
Extreme (85°C)		1850.5823	1909.4448	0.46	0.00024
Extreme (80°C)		1850.5784	1909.4510	3.39	0.00180
Extreme (70°C)		1850.5803	1909.4468	2.18	0.00116
Extreme (60°C)		1850.5789	1909.4482	2.83	0.00151
Extreme (50°C)		1850.5795	1909.4476	2.39	0.00127
Extreme (40°C)		1850.5808	1909.4463	4.85	0.00258
Extreme (30°C)		1850.5815	1909.4456	2.91	0.00155
Extreme (20°C)		1850.5794	1909.4478	-0.76	-0.00040
Extreme (10°C)		1850.5806	1909.4465	-0.94	-0.00050
Extreme (0°C)		1850.5793	1909.4478	-0.27	-0.00015
Extreme (-10°C)		1850.5788	1909.4483	2.83	0.00151
Extreme (-20°C)		1850.5799	1909.4472	2.39	0.00127
Extreme (-30°C)		1850.5832	1909.4439	4.85	0.00258
Extreme (-40°C)		1850.5844	1909.4436	2.91	0.00155
25°C	LV	1850.5796	1909.4475	1.22	0.00065
	HV	1850.5802	1909.4469	-0.48	-0.00026

LTE Band 25					
(QPSK, 20MHz BANDWIDTH)					
Condition		1850	1915	Delta(Hz)	Frequency Stability(ppm)
Temperature	Voltage	F low@-13dBm(MHz)	F high@-13dBm(MHz)		
Normal (25°C)	Normal	1850.5171	1914.6958	-1.23	-0.00169
Extreme (85°C)		1850.5172	1914.6957	-0.57	-0.00078
Extreme (80°C)		1850.5168	1914.6961	-1.43	-0.00196
Extreme (70°C)		1850.5183	1914.6946	0.04	0.00005
Extreme (60°C)		1850.5160	1914.6965	0.30	0.00041
Extreme (50°C)		1850.5161	1914.6968	0.90	0.00124
Extreme (40°C)		1850.5176	1914.6956	-0.40	-0.00055
Extreme (30°C)		1850.5167	1914.6964	-1.22	-0.00168
Extreme (20°C)		1850.5162	1914.6967	-0.01	-0.00001



Extreme (10°C)		1850.5178	1914.6951	-0.93	-0.00128
Extreme (0°C)		1850.5169	1914.6966	0.27	0.00037
Extreme (-10°C)		1850.5164	1914.6965	0.19	0.00026
Extreme (-20°C)		1850.5175	1914.6959	0.99	0.00136
Extreme (-30°C)		1850.5174	1914.6967	-1.43	-0.00196
Extreme (-40°C)		1850.5185	1914.6948	2.39	0.00328
25°C	LV	1850.5169	1914.6974	-3.65	-0.00501
	HV	1850.5165	1914.6972	1.67	0.00229
(16QAM, 20MHz BANDWIDTH)					
Condition		1850	1915	Delta(Hz)	Frequency Stability(ppm)
Temperature	Voltage	F low@-13dBm(MHz)	F high@-13dBm(MHz)		
Normal (25°C)	Normal	1850.5716	1914.6151	1.04	0.00143
Extreme (85°C)		1850.5709	1914.6152	0.06	0.00008
Extreme (80°C)		1850.5713	1914.6148	-0.30	-0.00041
Extreme (70°C)		1850.5698	1914.6165	0.82	0.00113
Extreme (60°C)		1850.5717	1914.6144	-0.80	-0.00110
Extreme (50°C)		1850.5725	1914.6141	0.97	0.00133
Extreme (40°C)		1850.5707	1914.6156	0.56	0.00077
Extreme (30°C)		1850.5716	1914.6145	0.33	0.00045
Extreme (20°C)		1850.5719	1914.6142	-0.93	-0.00128
Extreme (10°C)		1850.5703	1914.6158	0.46	0.00063
Extreme (0°C)		1850.5712	1914.6149	0.47	0.00065
Extreme (-10°C)		1850.5717	1914.6144	-0.63	-0.00087
Extreme (-20°C)		1850.5711	1914.6151	1.34	0.00184
Extreme (-30°C)		1850.5713	1914.6162	3.54	0.00486
Extreme (-40°C)		1850.5718	1914.6147	2.69	0.00370
25°C	LV	1850.5728	1914.6151	-2.14	-0.00294
	HV	1850.5707	1914.6162	3.21	0.00441

5.7. Spurious Emissions at Antenna Terminals

Ambient condition

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

Method of Measurement

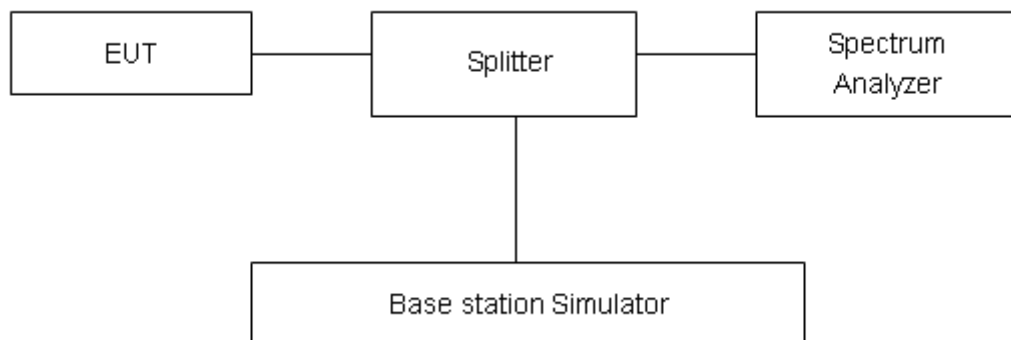
The EUT was connected to Spectrum Analyzer and Base Station Simulator via power Splitter. The measurement is carried out using a spectrum analyzer. The spectrum analyzer scans from 9kHz to the 10th harmonic of the carrier. The peak detector is used.

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

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

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

Test setup



Limits

Rule Part 24.238(a) specifies that “on any frequency outside a licensee’s frequency block, the power of any emission shall be attenuated below the transmitter power (P) by at least $43 + 10 \log_{10} (P)$ dB.”

Limit	-13 dBm
-------	---------

Measurement Uncertainty

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

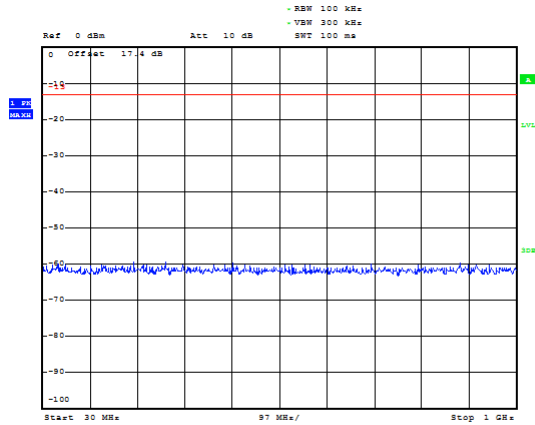
Frequency	Uncertainty
9kHz-1GHz	0.684 dB
1GHz-20GHz	1.407 dB

Test Result

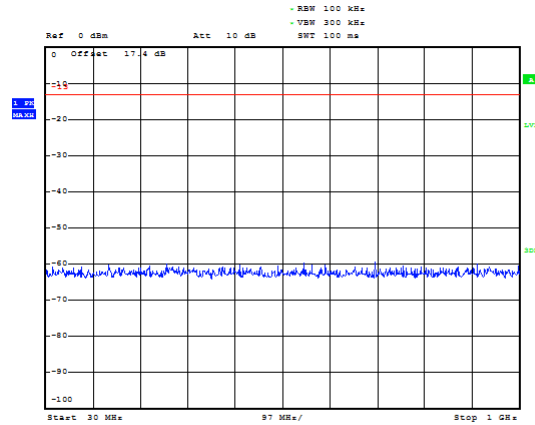
Sweep the whole frequency band through the range from 9kHz to the 10th harmonic of the carrier, the emissions more than 20 dB below the limit are not reported.

The signal beyond the limit is carrier.

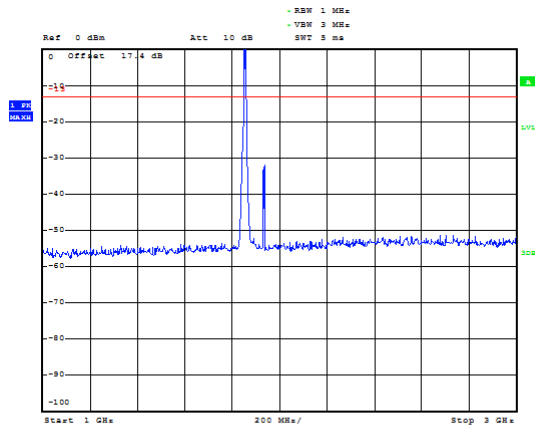
WCDMA Band II CH-Low 30MHz~1GHz



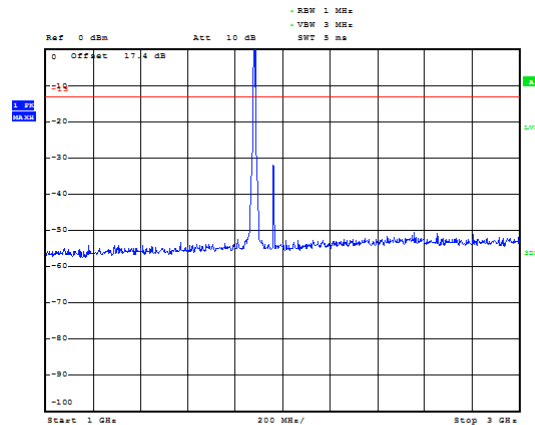
WCDMA Band II CH- Middle 30MHz~1GHz



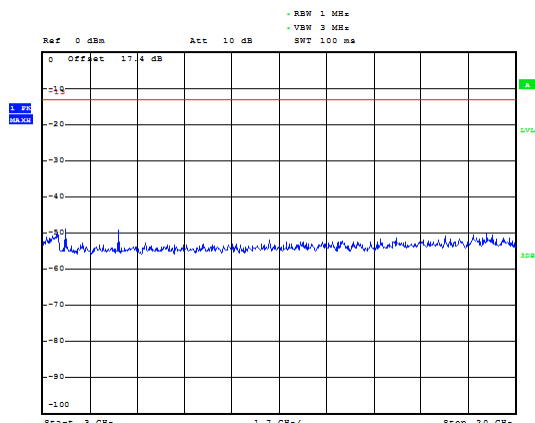
WCDMA BAND II CH-Low 1GHz~3GHz



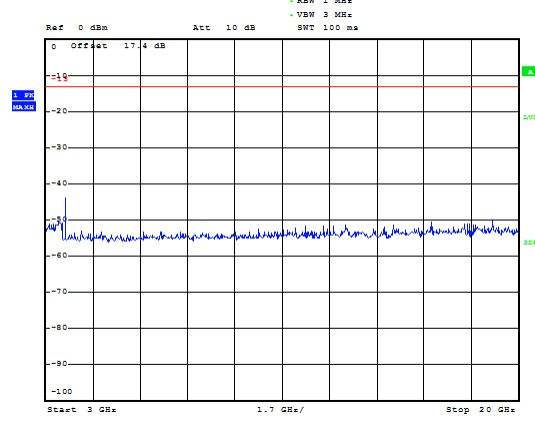
WCDMA BAND II CH-Middle 1GHz~3GHz



WCDMA BAND II CH-Low 3GHz~20GHz

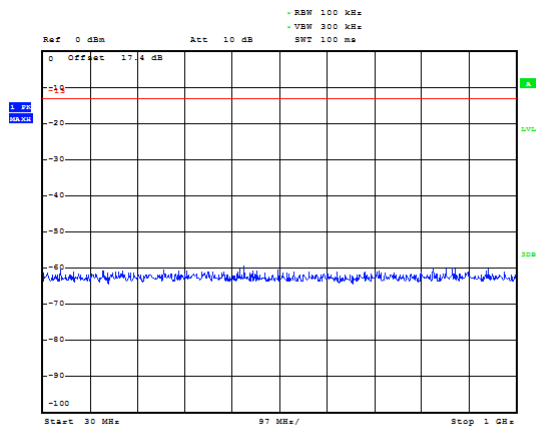


WCDMA BAND II CH-Middle 3GHz~20GHz

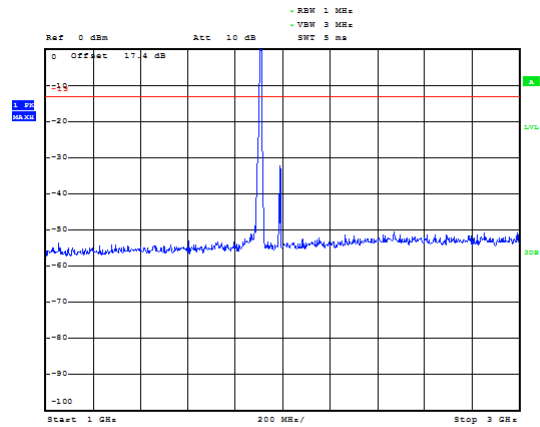




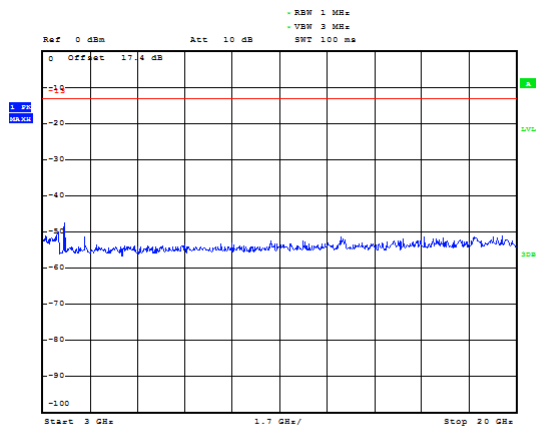
WCDMA Band II CH- High 30MHz~1GHz



WCDMA BAND II CH-High 1GHz~3GHz

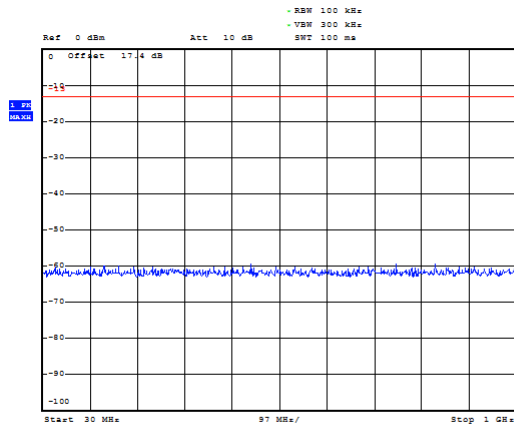


WCDMA BAND II CH-High 3GHz~20GHz

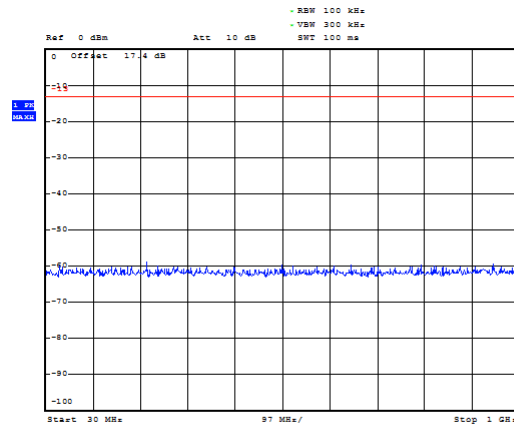




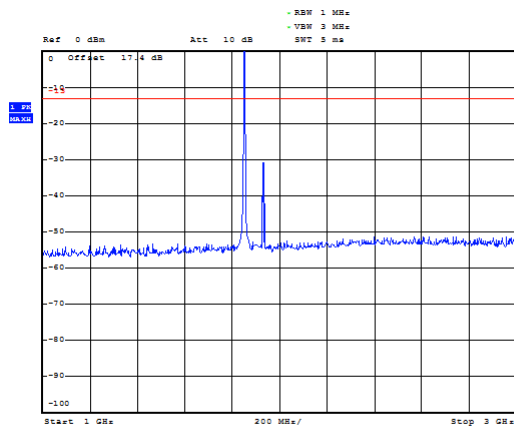
LTE Band 2 1.4MHz CH-Low 30MHz~1GHz



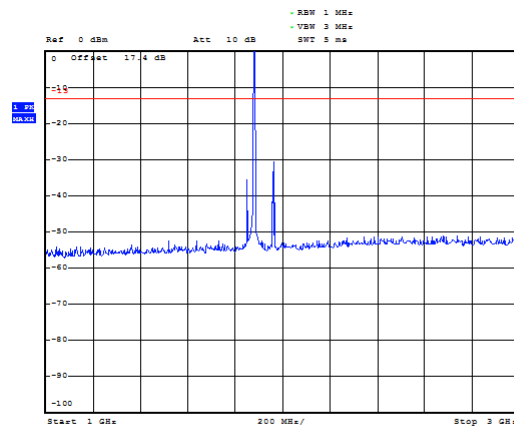
LTE Band 2 1.4MHz CH-Middle 30MHz~1GHz



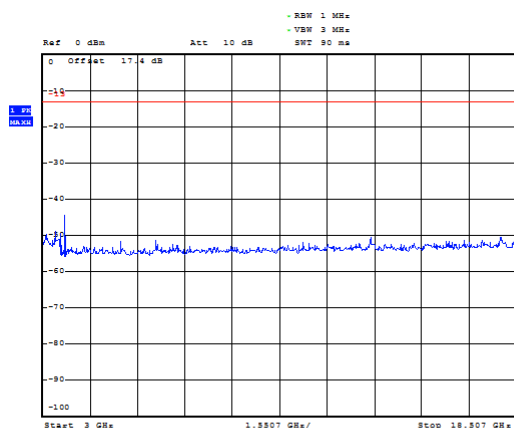
LTE Band 2 1.4MHz CH-Low 1GHz~3GHz



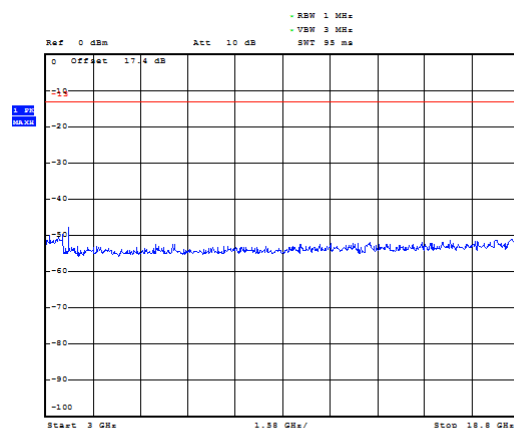
LTE Band 2 1.4MHz CH-Middle 1GHz~3GHz



LTE Band 2 1.4MHz CH-Low 3GHz~20GHz

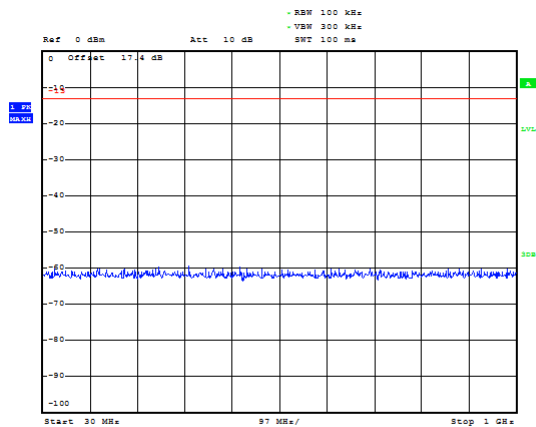


LTE Band 2 1.4MHz CH-Middle 3GHz~20GHz

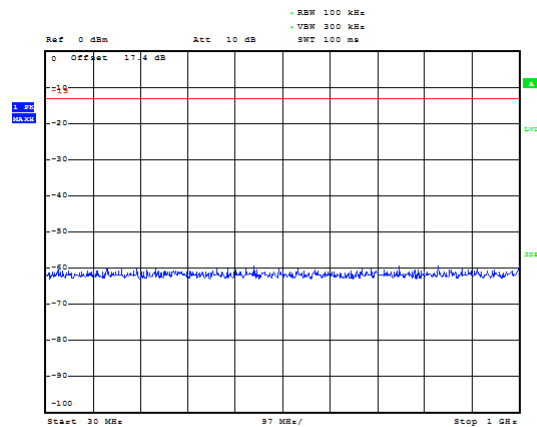




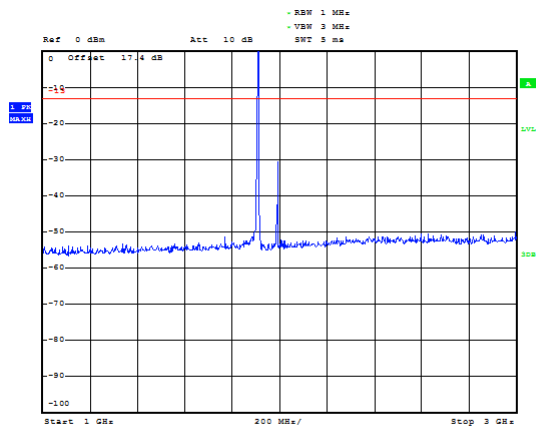
LTE Band 2 1.4MHz CH-High 30MHz~1GHz



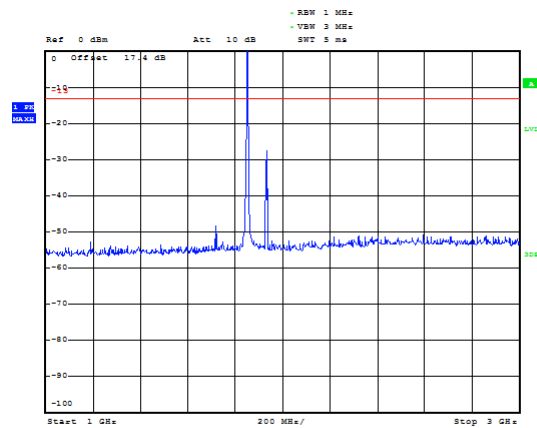
LTE Band 2 3MHz CH-Low 30MHz~1GHz



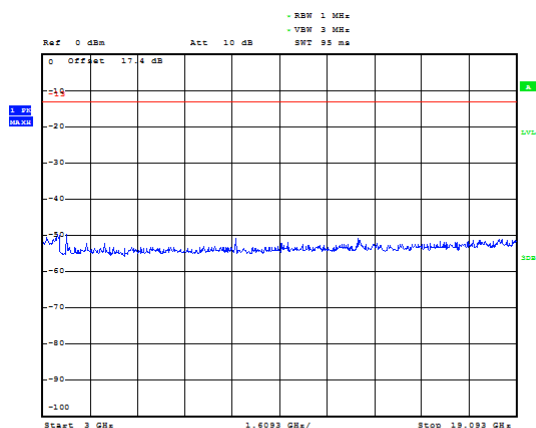
LTE Band 2 1.4MHz CH-High 1GHz~3GHz



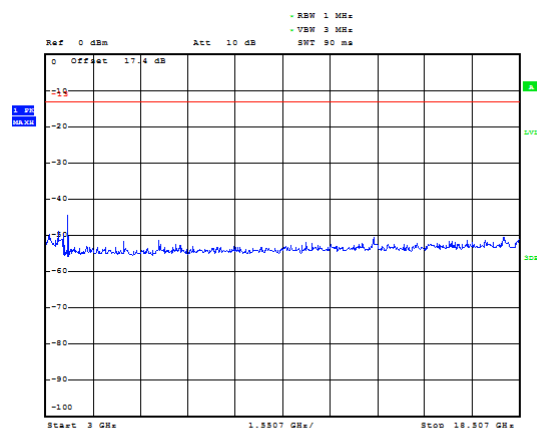
LTE Band 2 3MHz CH-Low 1GHz~3GHz



LTE Band 2 1.4MHz CH-High 3GHz~20GHz

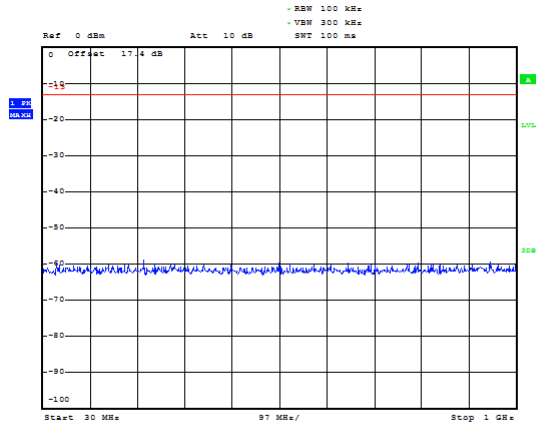


LTE Band 2 3MHz CH-Low 3GHz~20GHz

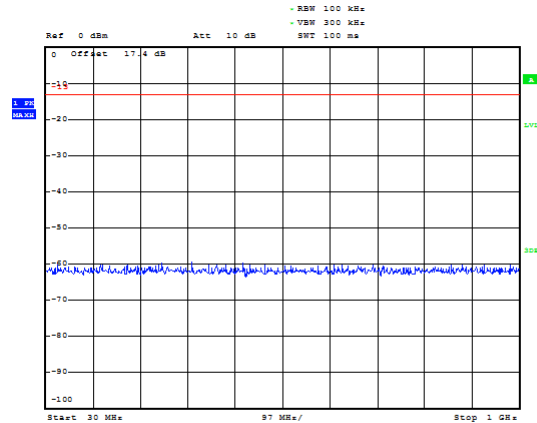




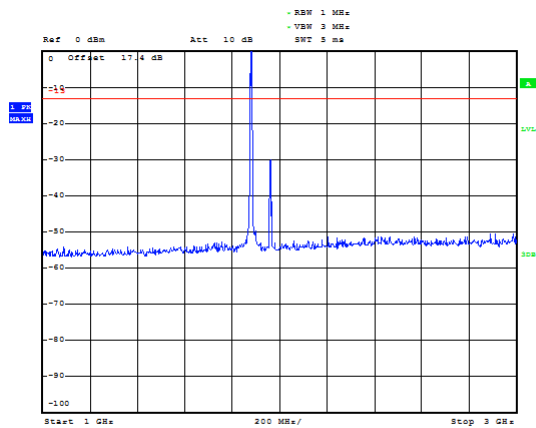
LTE Band 2 3MHz CH-Middle 30MHz~1GHz



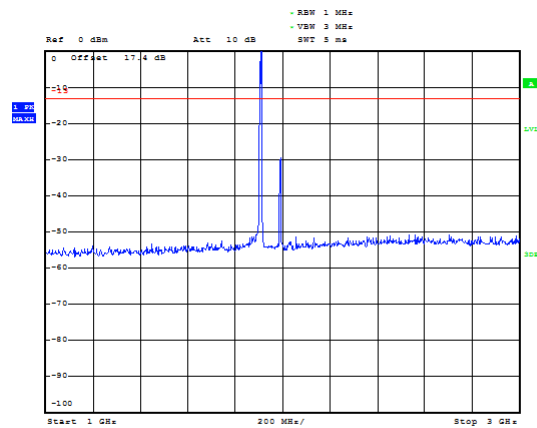
LTE Band 2 3MHz CH-High 30MHz~1GHz



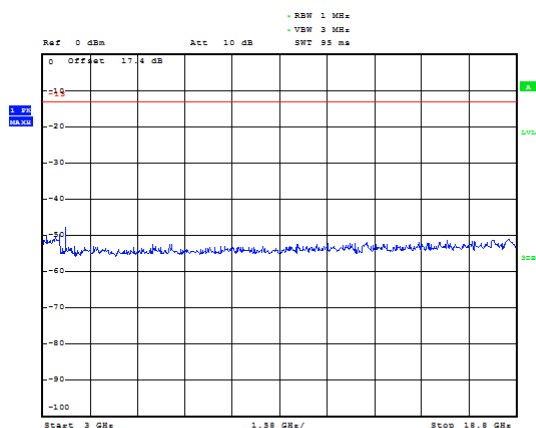
LTE Band 2 3MHz CH-Middle 1GHz~3GHz



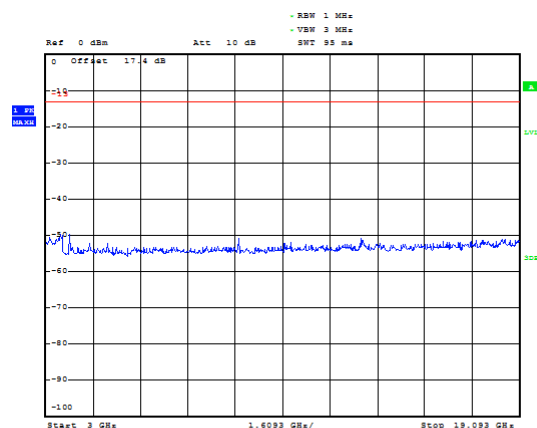
LTE Band 2 3MHz CH-High 1GHz~3GHz



LTE Band 2 3MHz CH-Middle 3GHz~20GHz

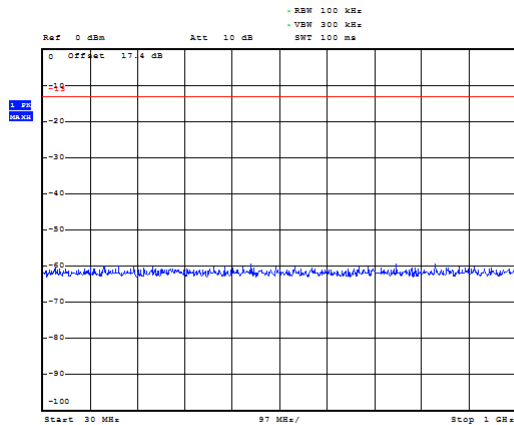


LTE Band 2 3MHz CH-High 3GHz~20GHz

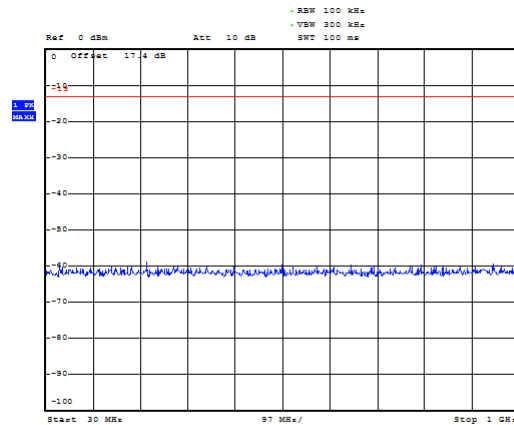




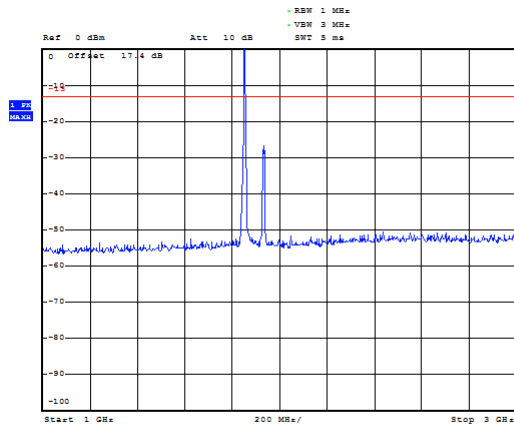
LTE Band 2 5MHz CH-Low 30MHz~1GHz



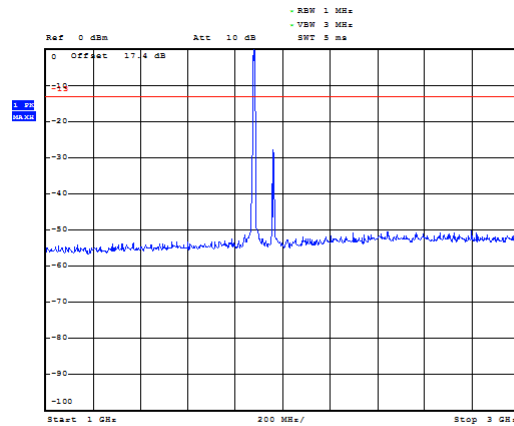
LTE Band 2 5MHz CH-Middle 30MHz~1GHz



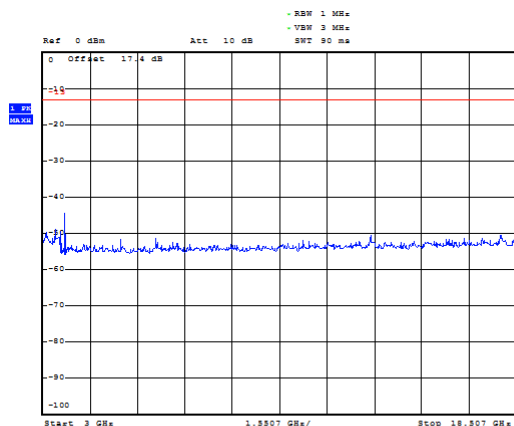
LTE Band 2 5MHz CH-Low 1GHz~3GHz



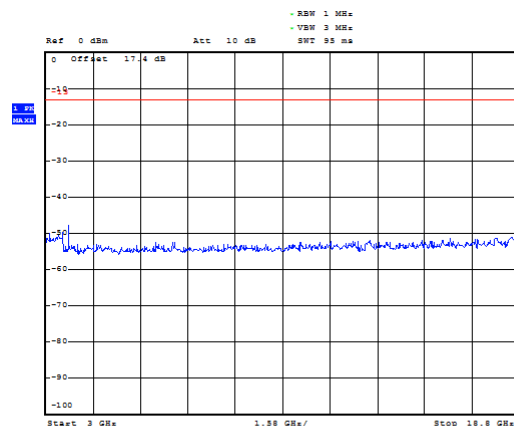
LTE Band 2 5MHz CH-Middle 1GHz~3GHz



LTE Band 2 5MHz CH-Low 3GHz~20GHz

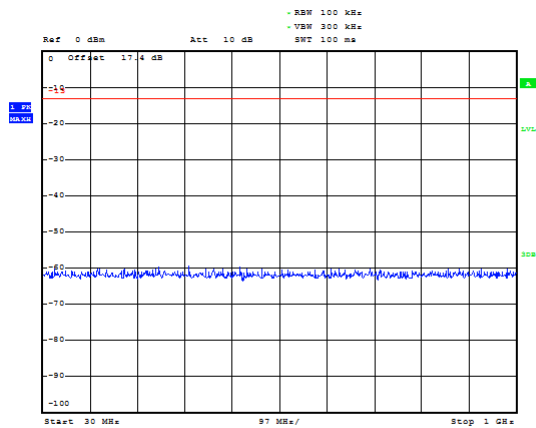


LTE Band 2 5MHz CH-Middle 3GHz~20GHz

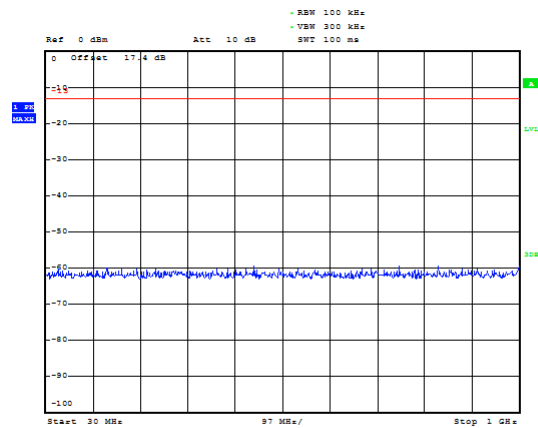




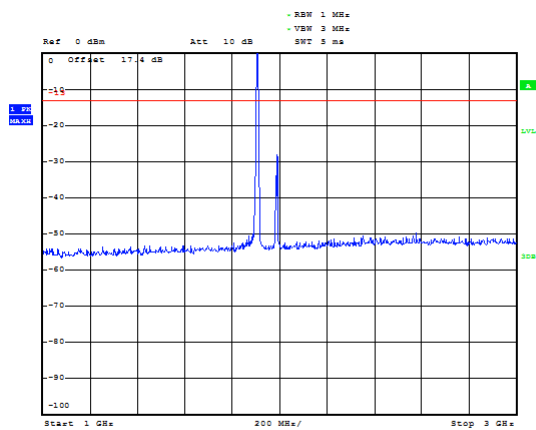
LTE Band 2 5MHz CH-High 30MHz~1GHz



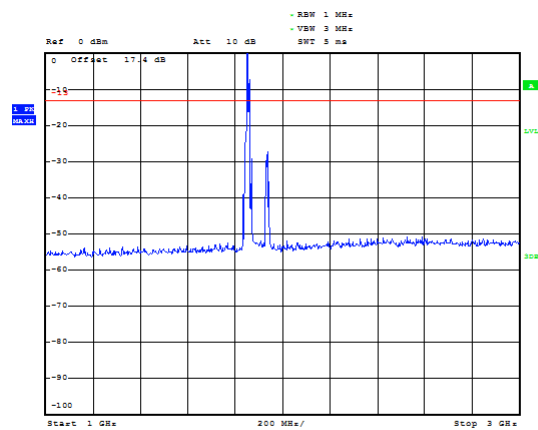
LTE Band 2 10MHz CH-Low 30MHz~1GHz



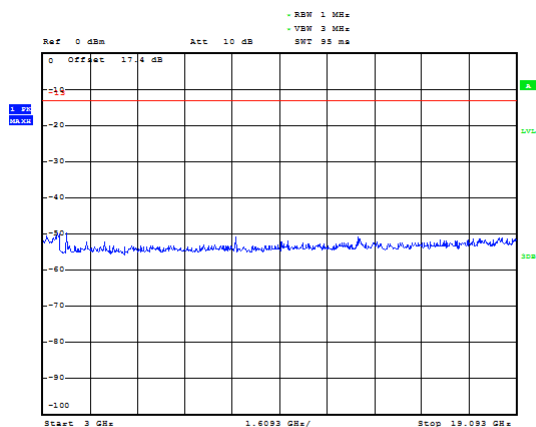
LTE Band 2 5MHz CH-High 1GHz~3GHz



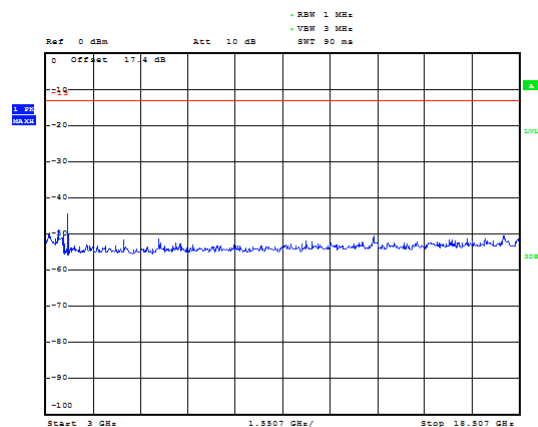
LTE Band 2 10MHz CH-Low 1GHz~3GHz



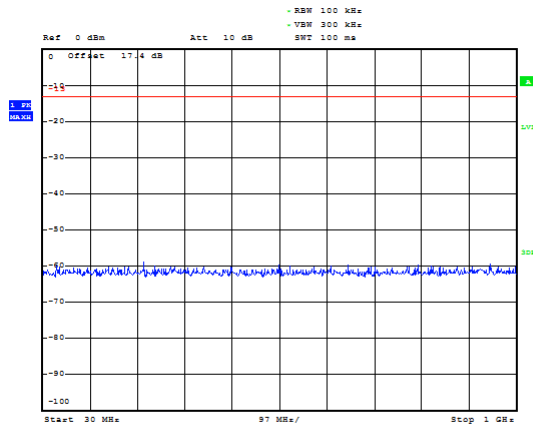
LTE Band 2 5MHz CH-High 3GHz~20GHz



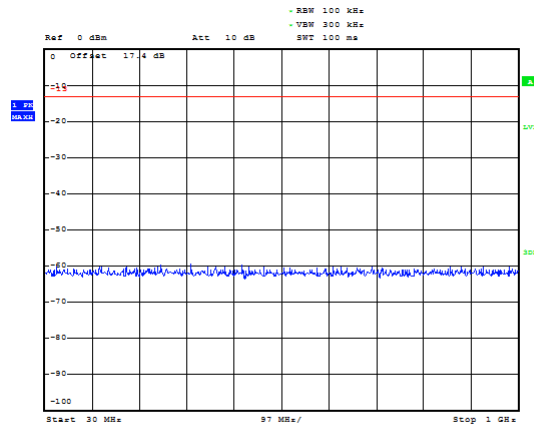
LTE Band 2 10MHz CH-Low 3GHz~20GHz



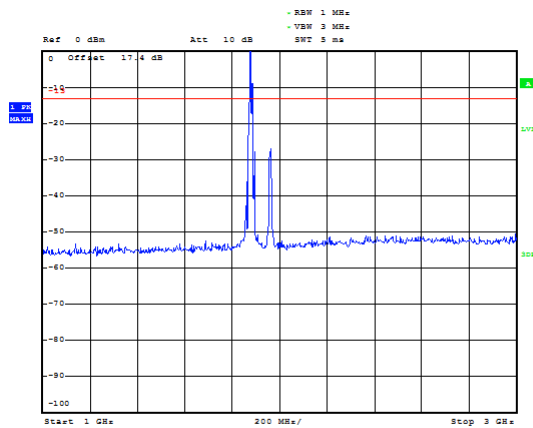
LTE Band 2 10MHz CH-Middle 30MHz~1GHz



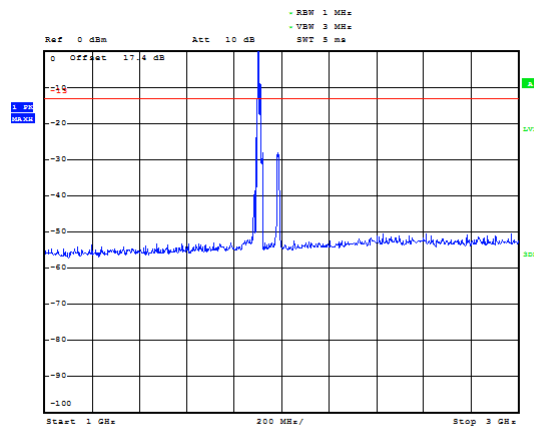
LTE Band 2 10MHz CH-High 30MHz~1GHz



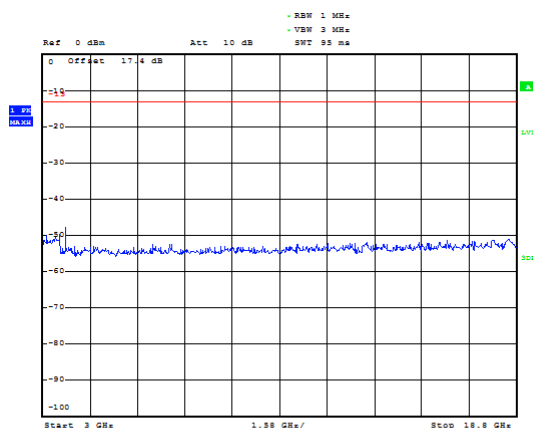
LTE Band 2 10MHz CH-Middle 1GHz~3GHz



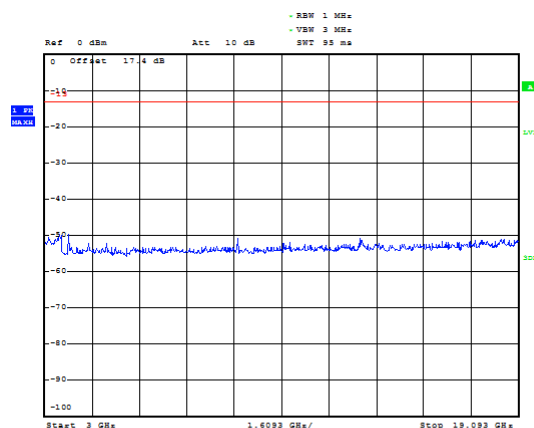
LTE Band 2 10MHz CH-High 1GHz~3GHz



LTE Band 2 10MHz CH-Middle 3GHz~20GHz

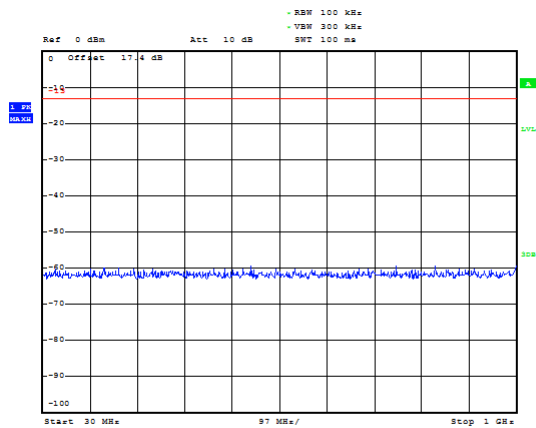


LTE Band 2 10MHz CH-High 3GHz~20GHz

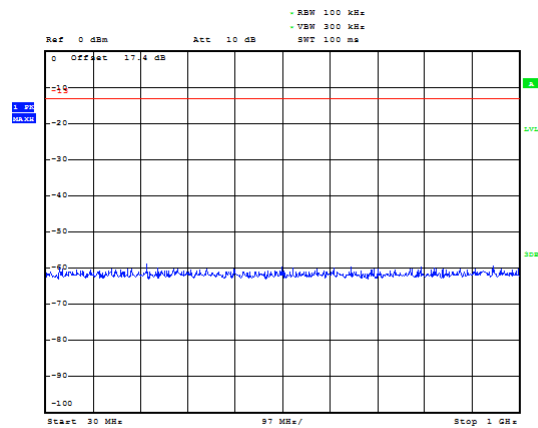




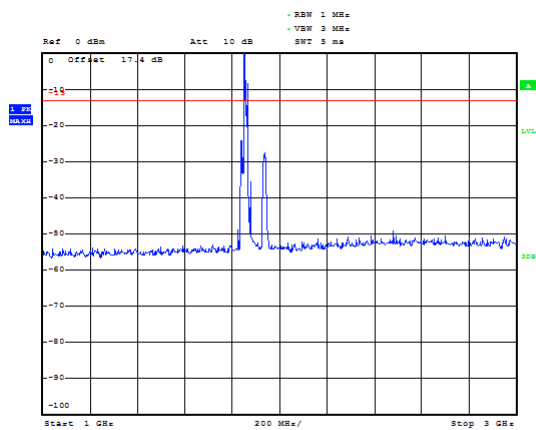
LTE Band 2 15MHz CH-Low 30MHz~1GHz



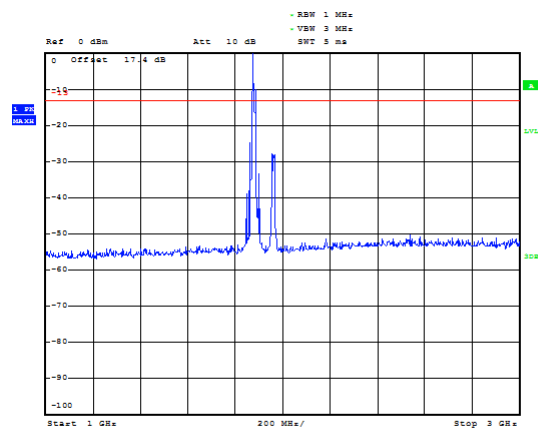
LTE Band 2 15MHz CH-Middle 30MHz~1GHz



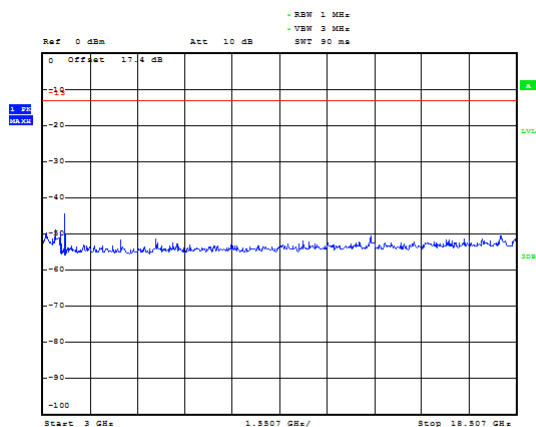
LTE Band 2 15MHz CH-Low 1GHz~3GHz



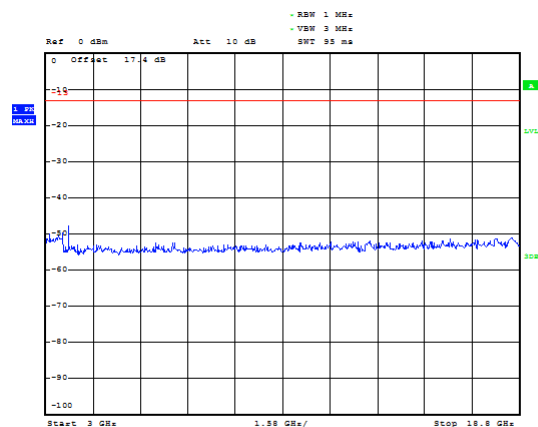
LTE Band 2 15MHz CH-Middle 1GHz~3GHz



LTE Band 2 15MHz CH-Low 3GHz~20GHz

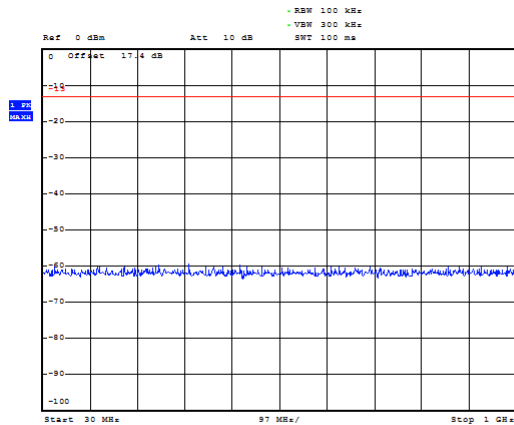


LTE Band 2 15MHz CH-Middle 3GHz~20GHz

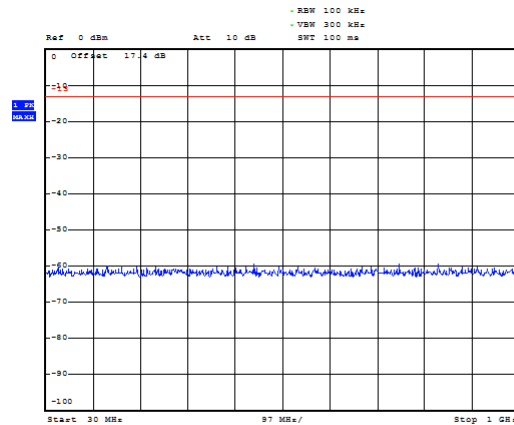




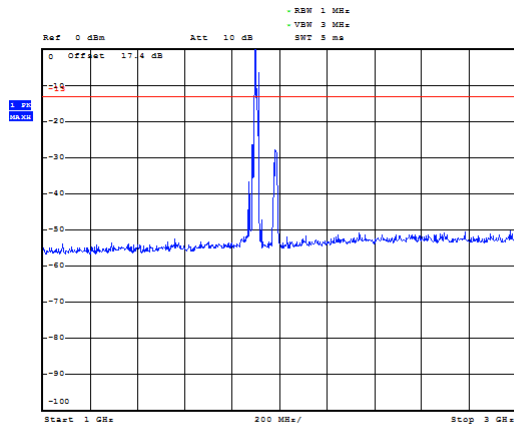
LTE Band 2 15MHz CH-High 30MHz~1GHz



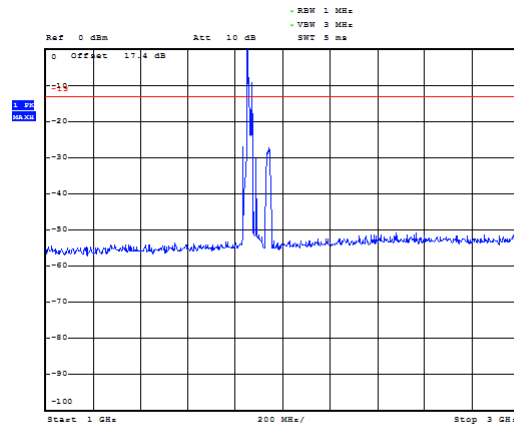
LTE Band 2 20MHz CH-Low 30MHz~1GHz



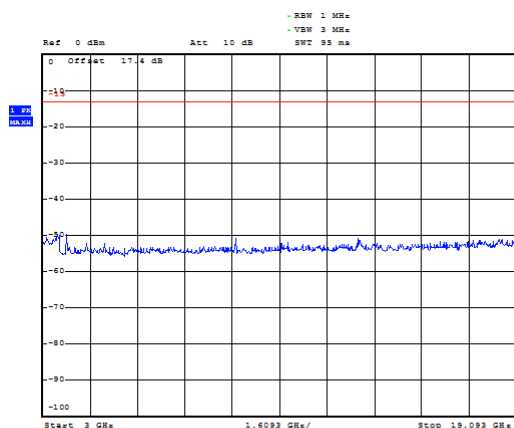
LTE Band 2 15MHz CH-High 1GHz~3GHz



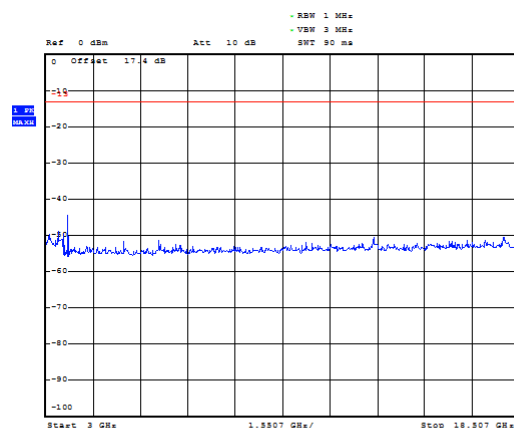
LTE Band 2 20MHz CH-Low 1GHz~3GHz



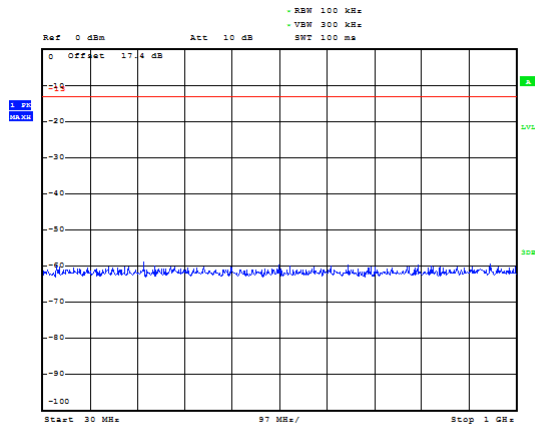
LTE Band 2 15MHz CH-High 3GHz~20GHz



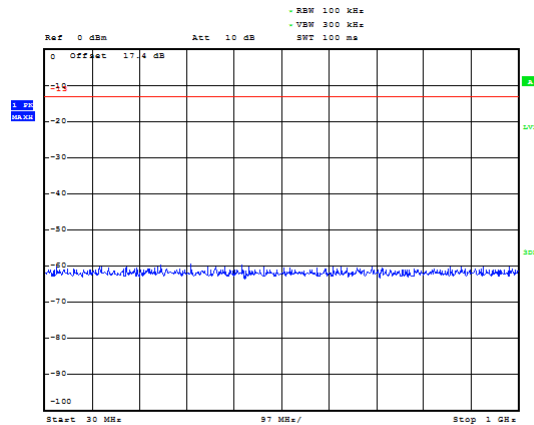
LTE Band 2 20MHz CH-Low 3GHz~20GHz



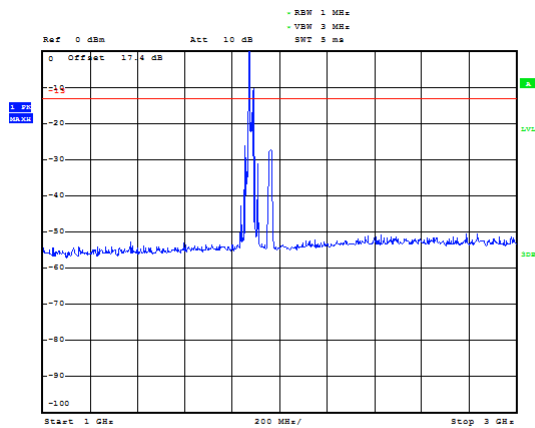
LTE Band 2 20MHz CH-Middle 30MHz~1GHz



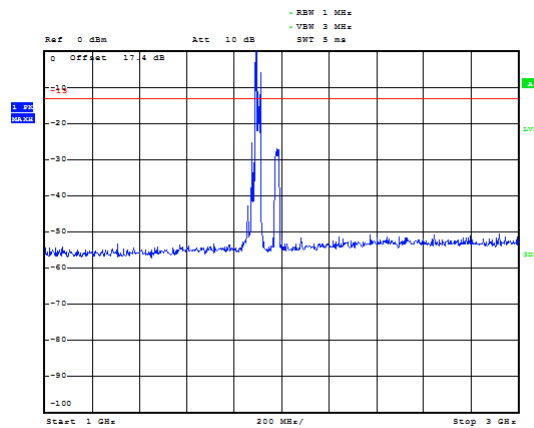
LTE Band 2 20MHz CH-High 30MHz~1GHz



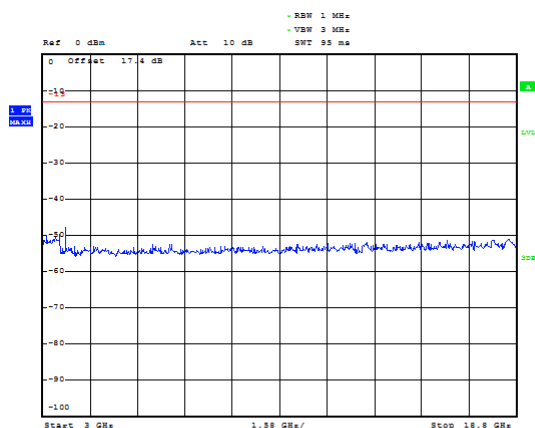
LTE Band 2 20MHz CH-Middle 1GHz~3GHz



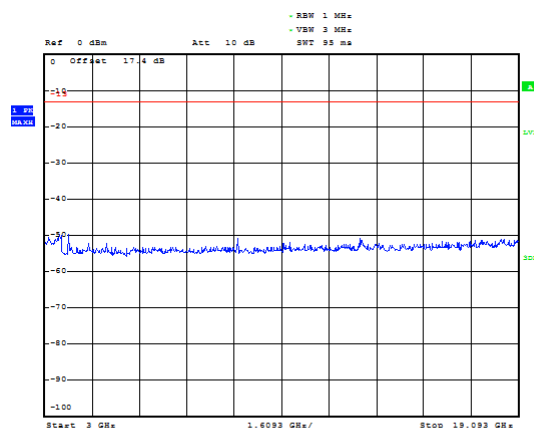
LTE Band 2 20MHz CH-High 1GHz~3GHz



LTE Band 2 20MHz CH-Middle 3GHz~20GHz

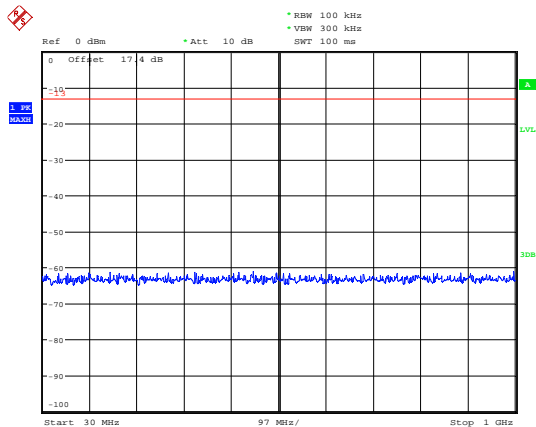


LTE Band 2 20MHz CH-High 3GHz~20GHz



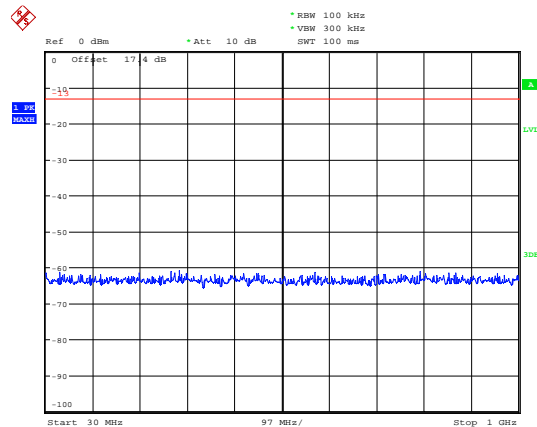


LTE Band 25 1.4MHz CH-Low 30MHz~1GHz



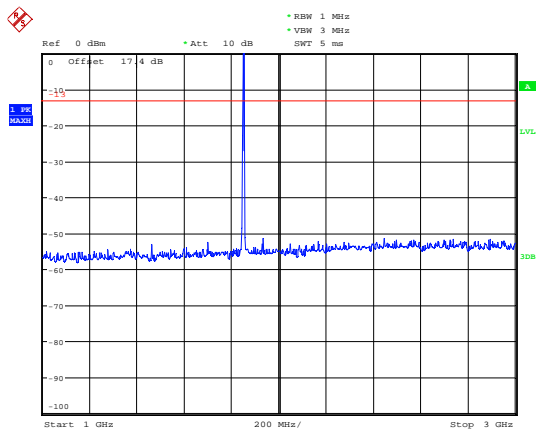
Date: 25.FEB.2019 11:23:09

LTE Band 25 1.4MHz CH-Middle 30MHz~1GHz



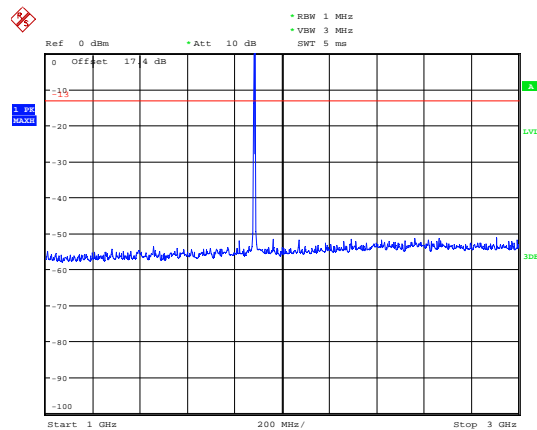
Date: 25.FEB.2019 11:23:51

LTE Band 25 1.4MHz CH-Low 1GHz~3GHz



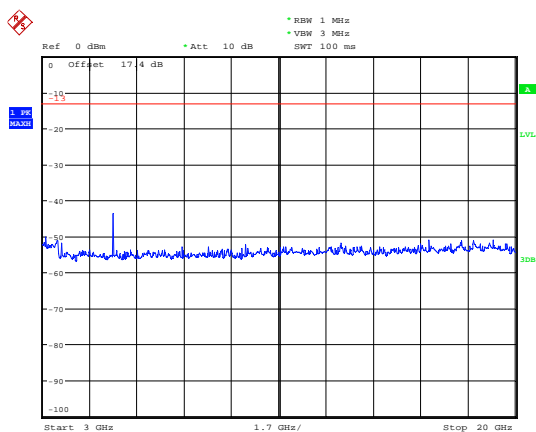
Date: 25.FEB.2019 11:25:24

LTE Band 25 1.4MHz CH-Middle 1GHz~3GHz



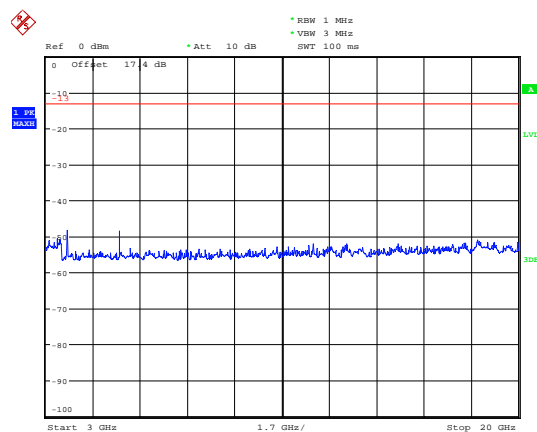
Date: 25.FEB.2019 11:25:07

LTE Band 25 1.4MHz CH-Low 3GHz~20GHz



Date: 25.FEB.2019 11:25:38

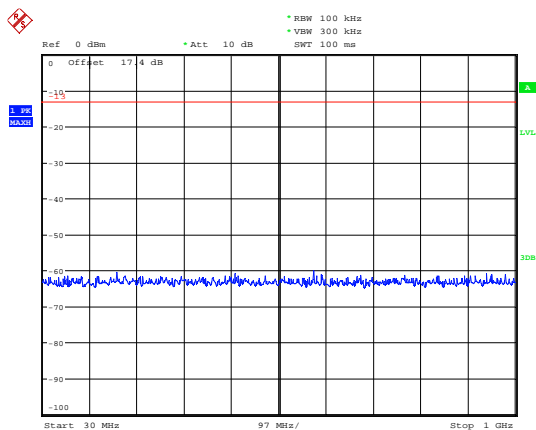
LTE Band 25 1.4MHz CH-Middle 3GHz~20GHz



Date: 25.FEB.2019 11:25:54

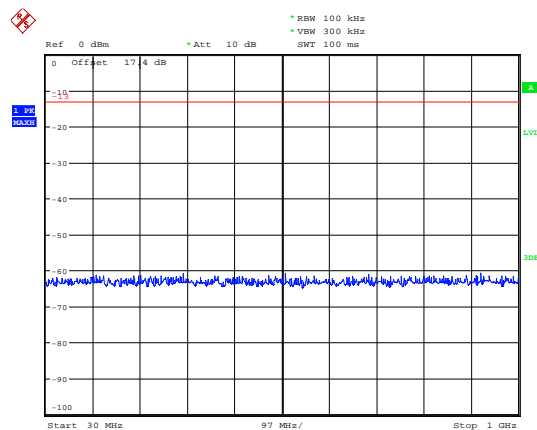


LTE Band 25 1.4MHz CH-High 30MHz~1GHz



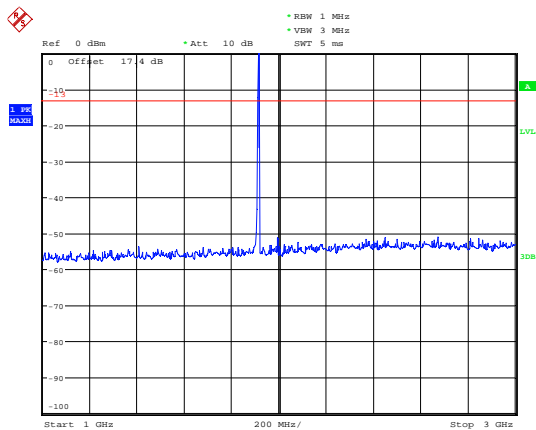
Date: 25.FEB.2019 11:24:13

LTE Band 25 3MHz CH-Low 30MHz~1GHz



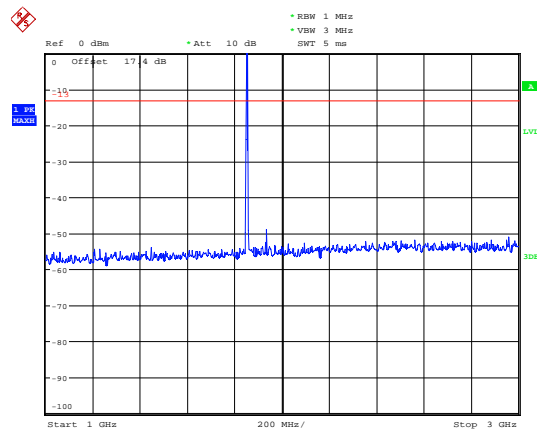
Date: 25.FEB.2019 11:29:13

LTE Band 25 1.4MHz CH-High 1GHz~3GHz



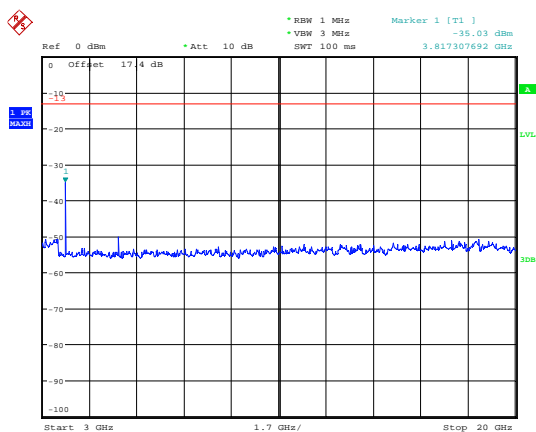
Date: 25.FEB.2019 11:24:54

LTE Band 25 3MHz CH-Low 1GHz~3GHz



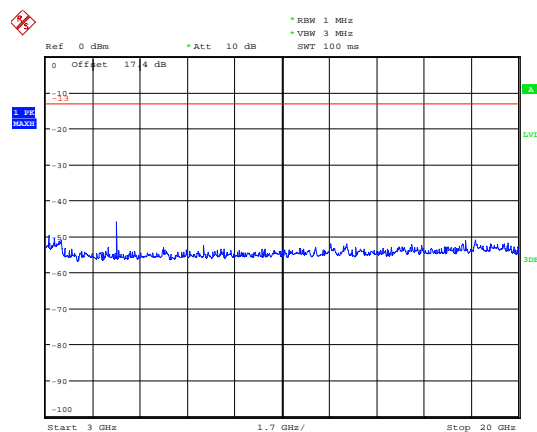
Date: 25.FEB.2019 11:28:14

LTE Band 25 1.4MHz CH-High 3GHz~20GHz



Date: 25.FEB.2019 11:26:11

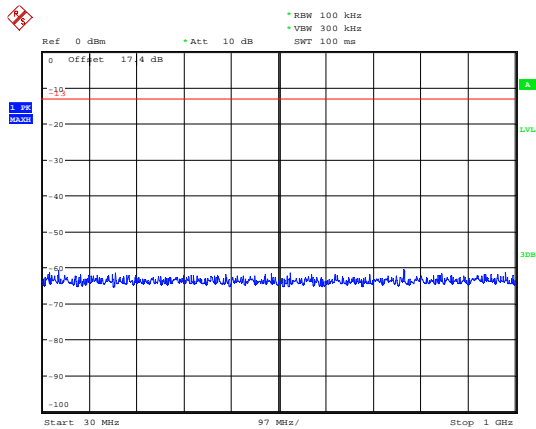
LTE Band 25 3MHz CH-Low 3GHz~20GHz



Date: 25.FEB.2019 11:26:58

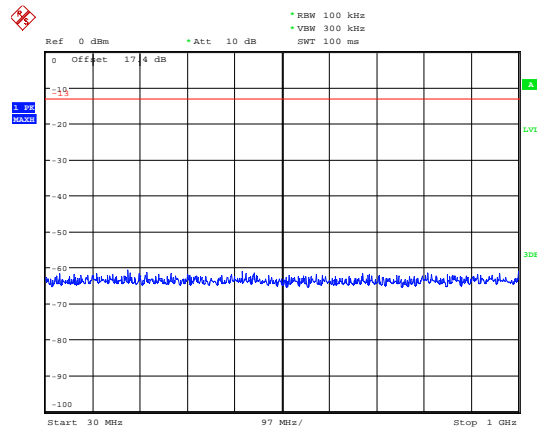


LTE Band 25 3MHz CH-Middle 30MHz~1GHz



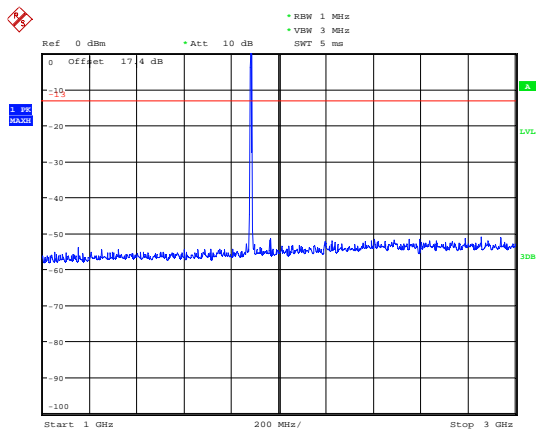
Date: 25.FEB.2019 11:29:33

LTE Band 25 3MHz CH-High 30MHz~1GHz



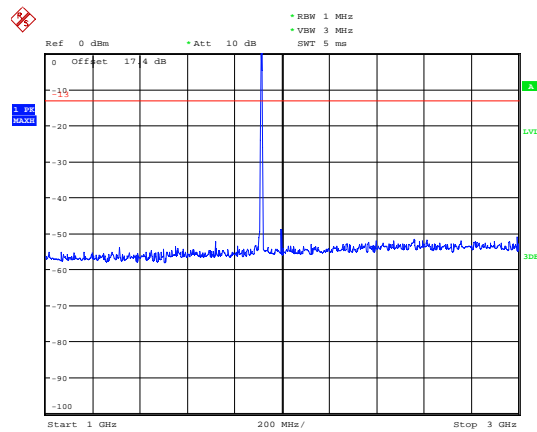
Date: 25.FEB.2019 11:29:45

LTE Band 25 3MHz CH-Middle 1GHz~3GHz



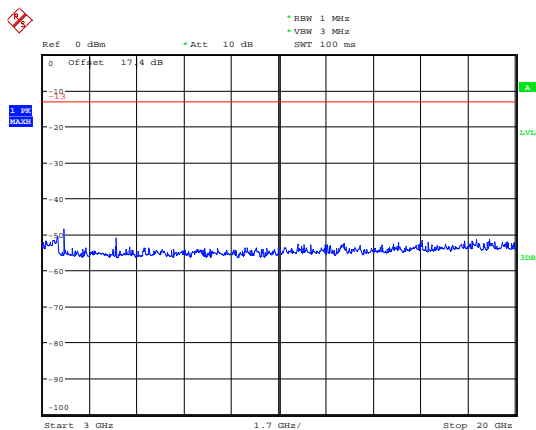
Date: 25.FEB.2019 11:28:01

LTE Band 25 3MHz CH-High 1GHz~3GHz



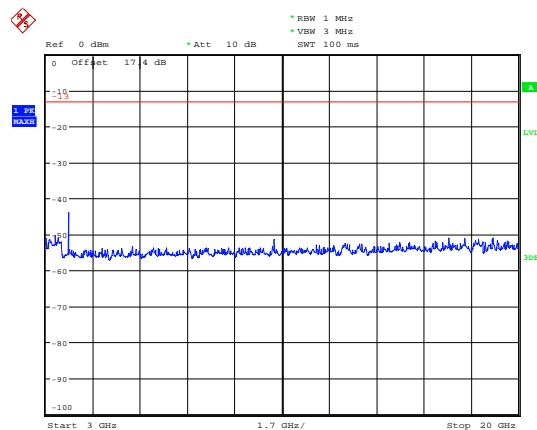
Date: 25.FEB.2019 11:27:50

LTE Band 25 3MHz CH-Middle 3GHz~20GHz



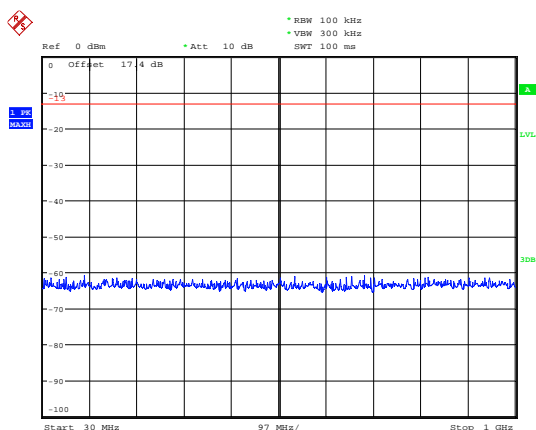
Date: 25.FEB.2019 11:27:17

LTE Band 25 3MHz CH-High 3GHz~20GHz



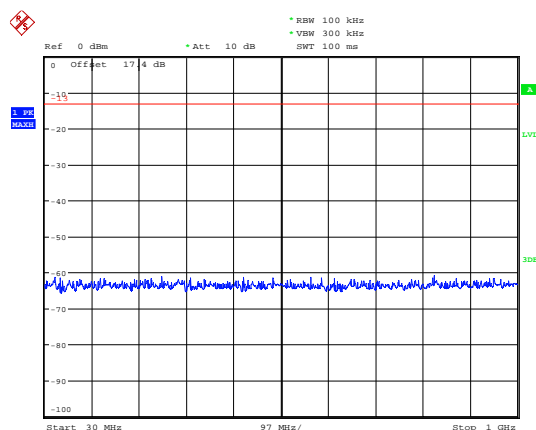
Date: 25.FEB.2019 11:27:33

LTE Band 25 5MHz CH-Low 30MHz~1GHz



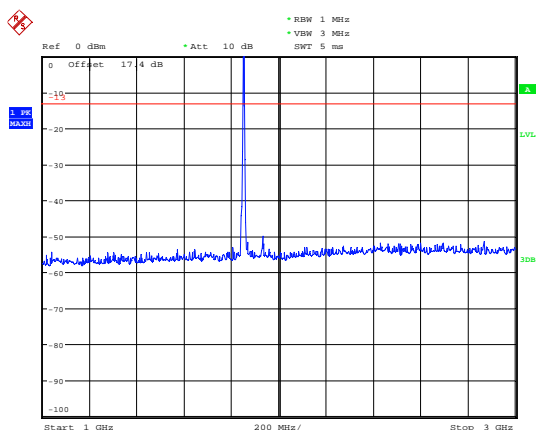
Date: 25.FEB.2019 11:30:34

LTE Band 25 5MHz CH-Middle 30MHz~1GHz



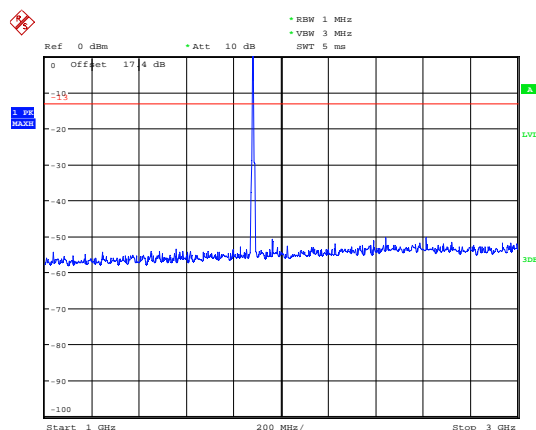
Date: 25.FEB.2019 11:30:47

LTE Band 25 5MHz CH-Low 1GHz~3GHz



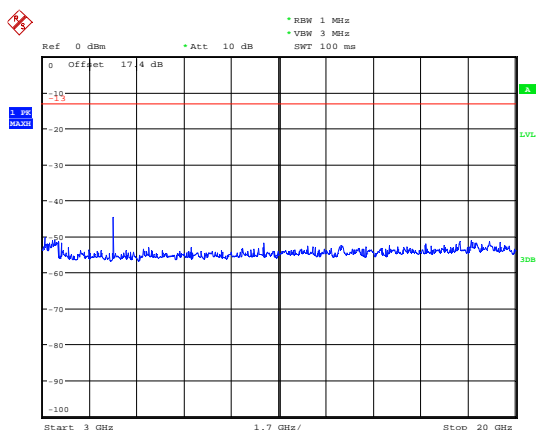
Date: 25.FEB.2019 11:31:51

LTE Band 25 5MHz CH-Middle 1GHz~3GHz



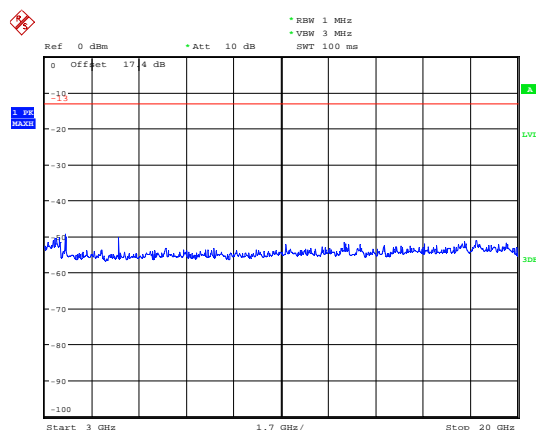
Date: 25.FEB.2019 11:31:36

LTE Band 25 5MHz CH-Low 3GHz~20GHz



Date: 25.FEB.2019 11:32:07

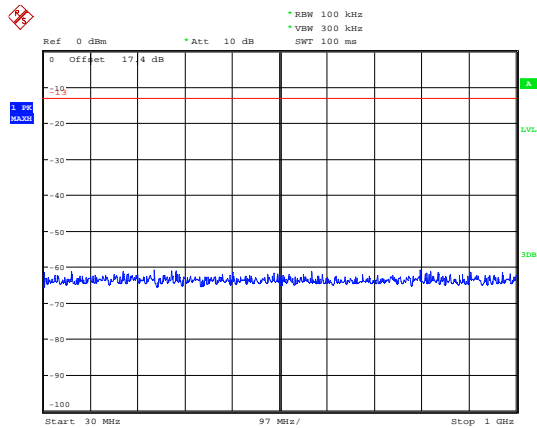
LTE Band 25 5MHz CH-Middle 3GHz~20GHz



Date: 25.FEB.2019 11:32:18

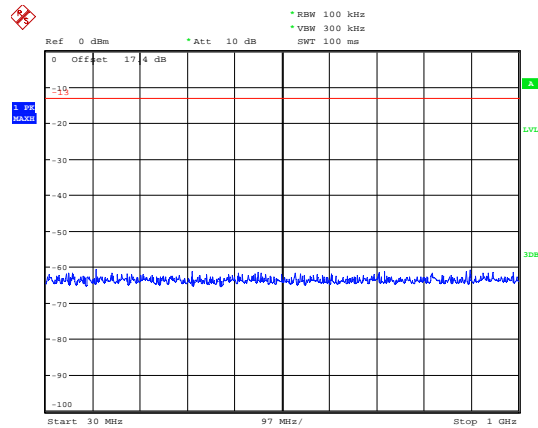


LTE Band 25 5MHz CH-High 30MHz~1GHz



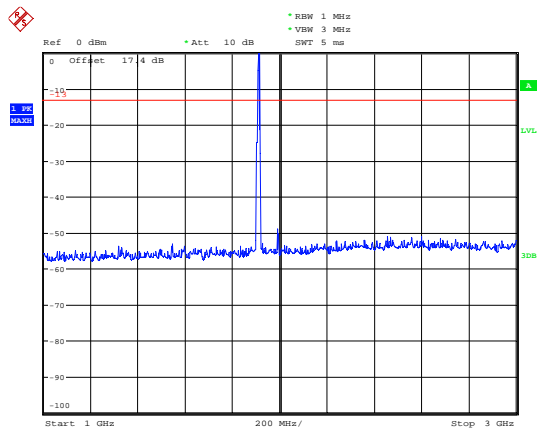
Date: 25.FEB.2019 11:31:02

LTE Band 25 10MHz CH-Low 30MHz~1GHz



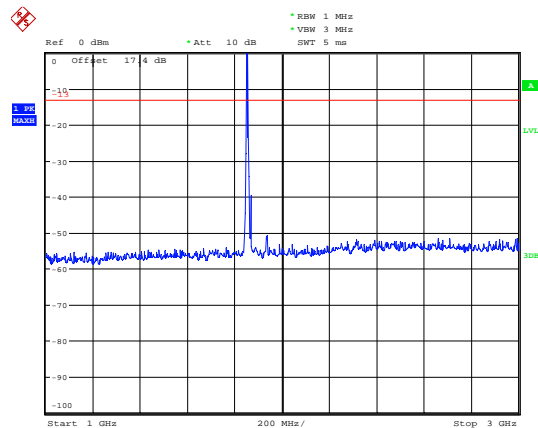
Date: 25.FEB.2019 12:00:31

LTE Band 25 5MHz CH-High 1GHz~3GHz



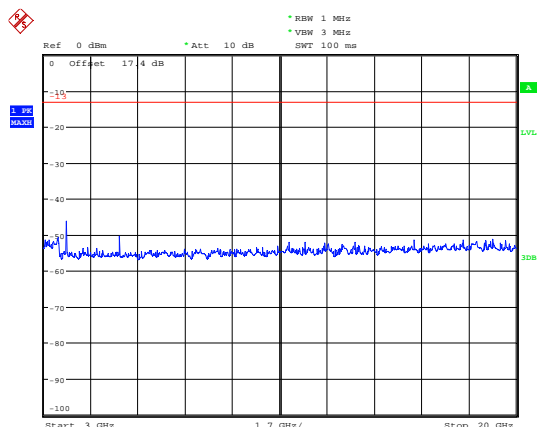
Date: 25.FEB.2019 11:31:22

LTE Band 25 10MHz CH-Low 1GHz~3GHz



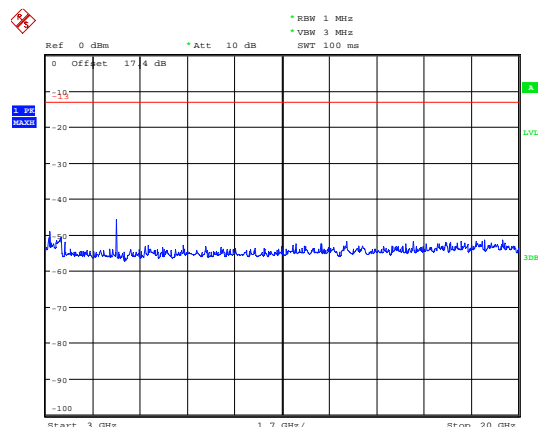
Date: 25.FEB.2019 11:56:59

LTE Band 25 5MHz CH-High 3GHz~20GHz



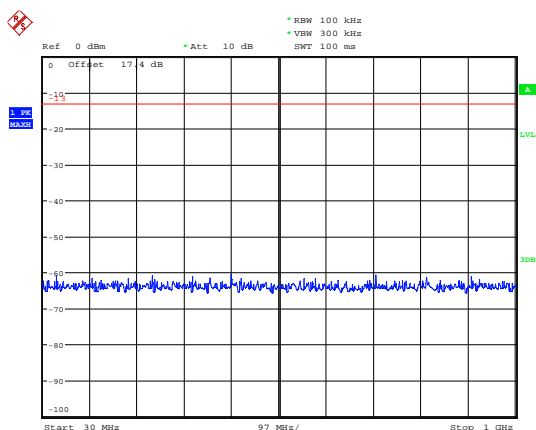
Date: 25.FEB.2019 11:32:31

LTE Band 25 10MHz CH-Low 3GHz~20GHz



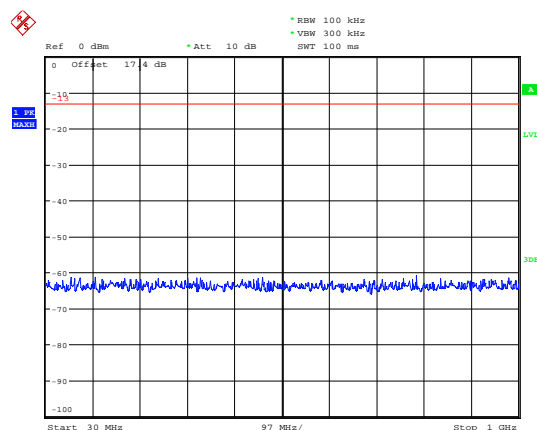
Date: 25.FEB.2019 11:37:56

LTE Band 25 10MHz CH-Middle 30MHz~1GHz



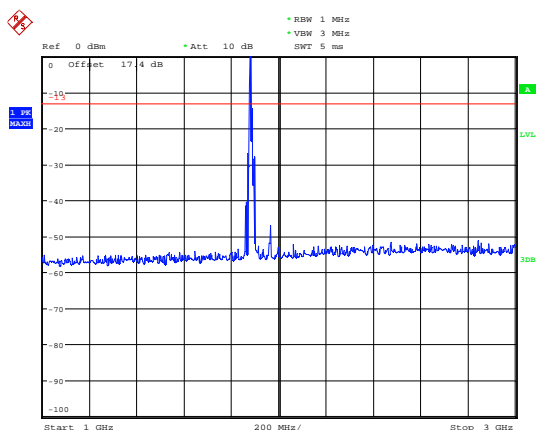
Date: 25.FEB.2019 12:00:48

LTE Band 25 10MHz CH-High 30MHz~1GHz



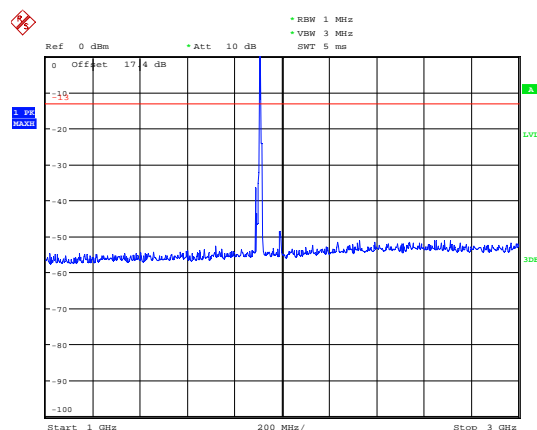
Date: 25.FEB.2019 12:01:02

LTE Band 25 10MHz CH-Middle 1GHz~3GHz



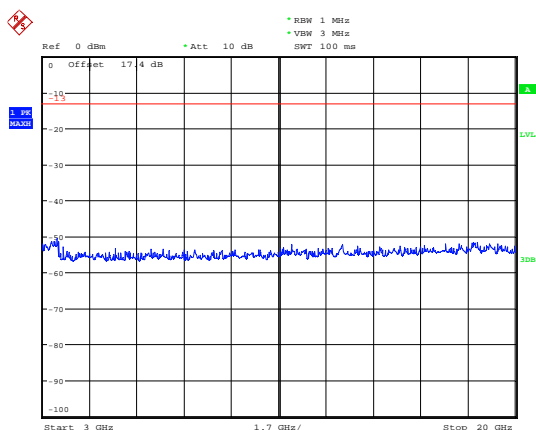
Date: 25.FEB.2019 11:56:47

LTE Band 25 10MHz CH-High 1GHz~3GHz



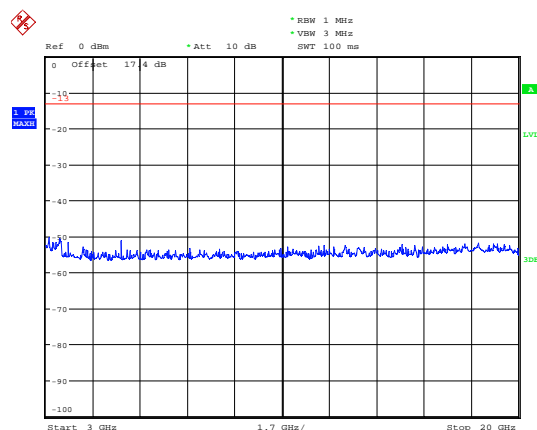
Date: 25.FEB.2019 11:56:33

LTE Band 25 10MHz CH-Middle 3GHz~20GHz



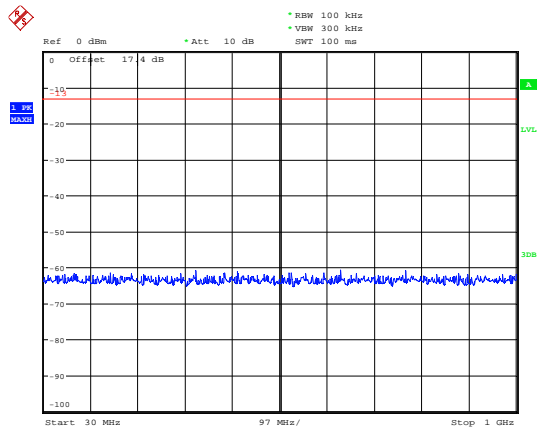
Date: 25.FEB.2019 11:38:40

LTE Band 25 10MHz CH-High 3GHz~20GHz



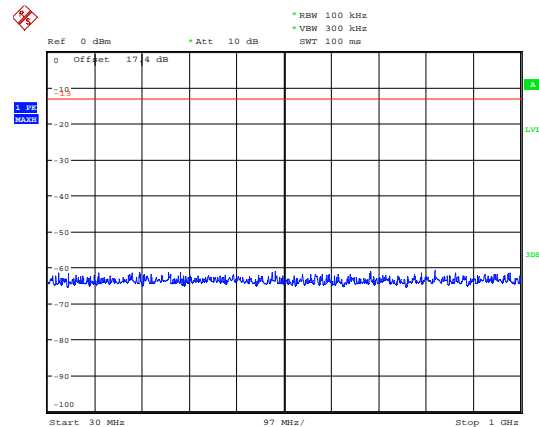
Date: 25.FEB.2019 11:39:03

LTE Band 25 15MHz CH-Low 30MHz~1GHz



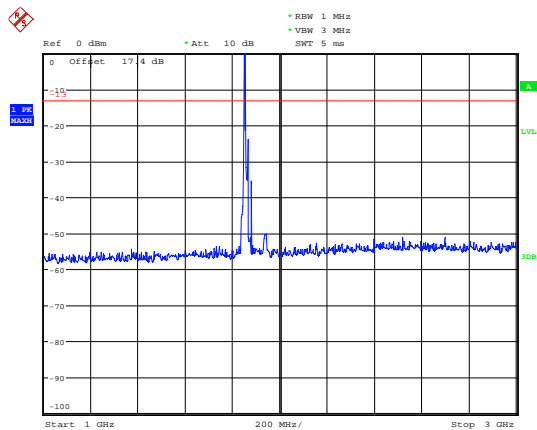
Date: 25.FEB.2019 12:09:49

LTE Band 25 15MHz CH-Middle 30MHz~1GHz



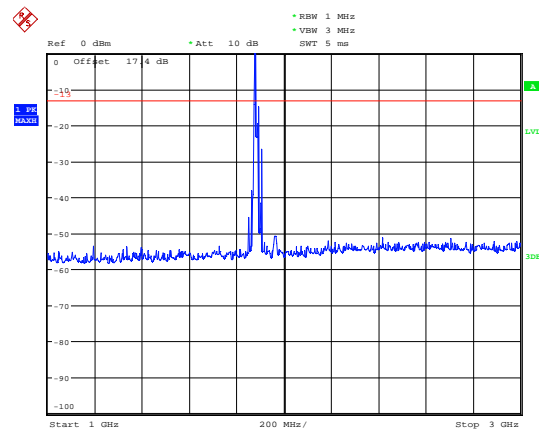
Date: 25.FEB.2019 12:10:06

LTE Band 25 15MHz CH-Low 1GHz~3GHz



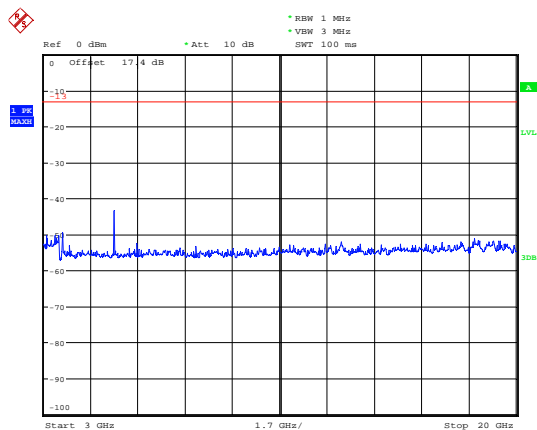
Date: 25.FEB.2019 12:12:01

LTE Band 25 15MHz CH-Middle 1GHz~3GHz



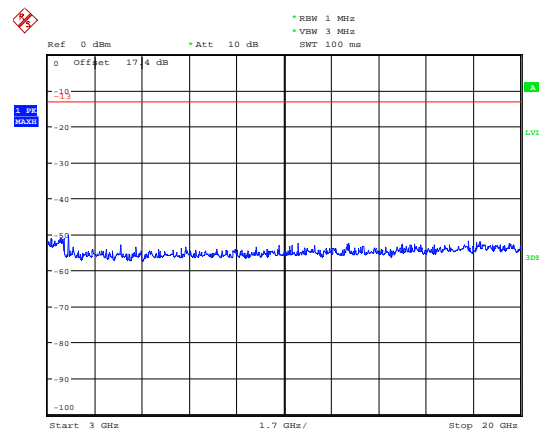
Date: 25.FEB.2019 12:11:49

LTE Band 25 15MHz CH-Low 3GHz~20GHz



Date: 25.FEB.2019 12:14:32

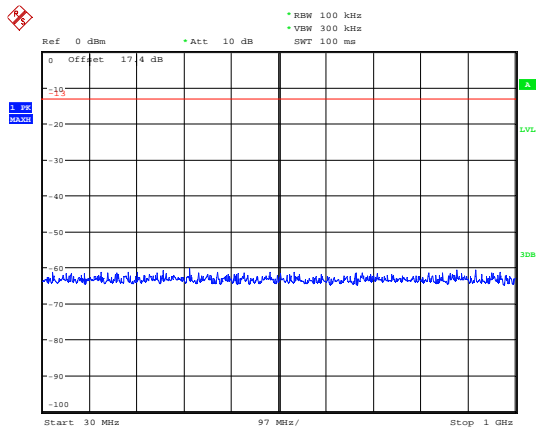
LTE Band 25 15MHz CH-Middle 3GHz~20GHz



Date: 25.FEB.2019 12:14:46

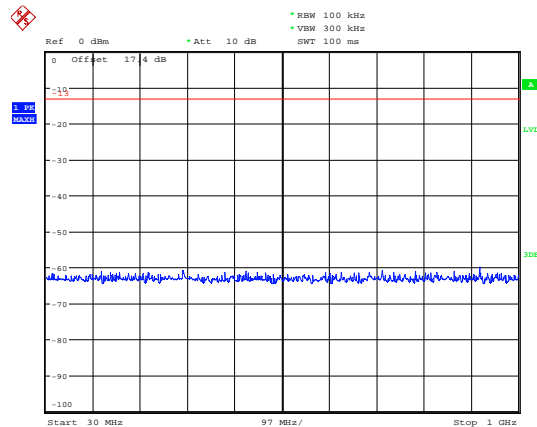


LTE Band 25 15MHz CH-High 30MHz~1GHz



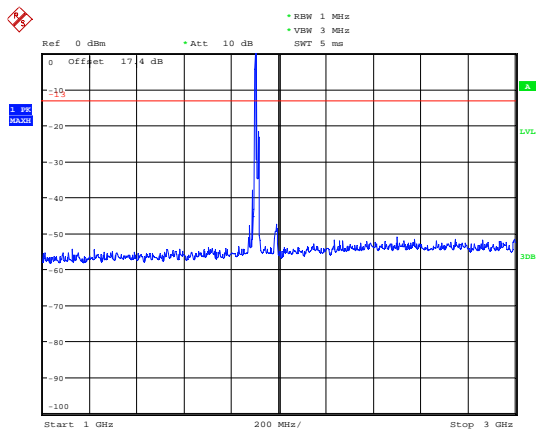
Date: 25.FEB.2019 12:10:21

LTE Band 25 20MHz CH-Low 30MHz~1GHz



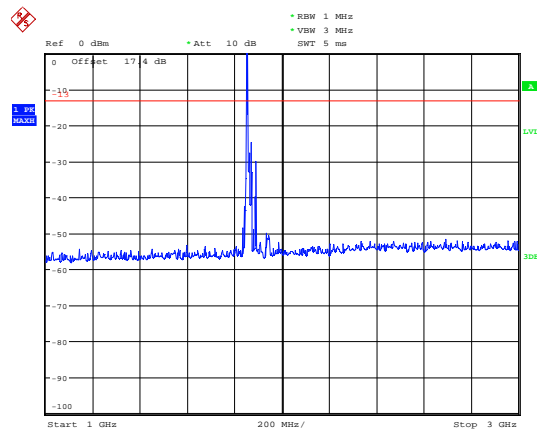
Date: 25.FEB.2019 13:54:13

LTE Band 25 15MHz CH-High 1GHz~3GHz



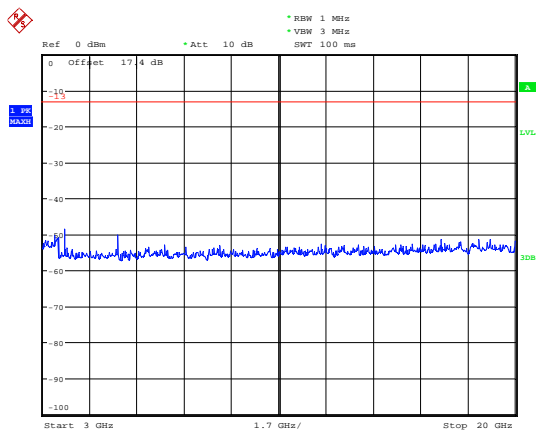
Date: 25.FEB.2019 12:11:37

LTE Band 25 20MHz CH-Low 1GHz~3GHz



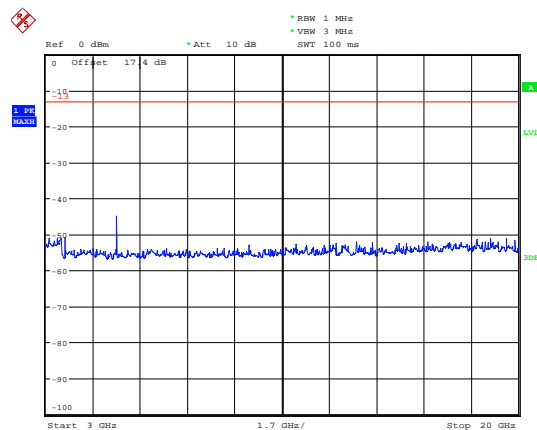
Date: 25.FEB.2019 13:53:54

LTE Band 25 15MHz CH-High 3GHz~20GHz



Date: 25.FEB.2019 12:15:03

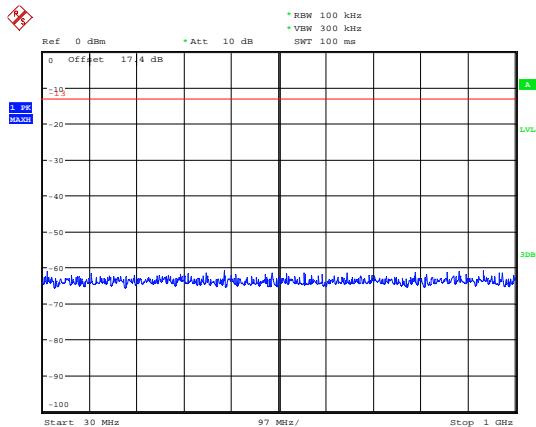
LTE Band 25 20MHz CH-Low 3GHz~20GHz



Date: 25.FEB.2019 13:49:13

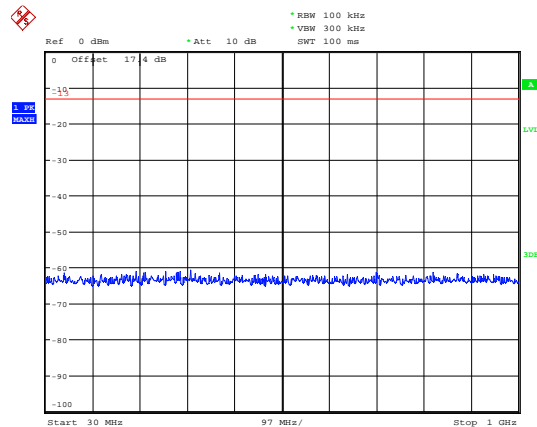


LTE Band 25 20MHz CH-Middle 30MHz~1GHz



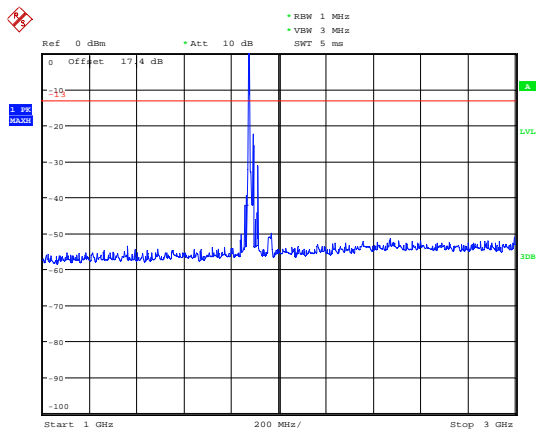
Date: 25.FEB.2019 13:54:25

LTE Band 25 20MHz CH-High 30MHz~1GHz



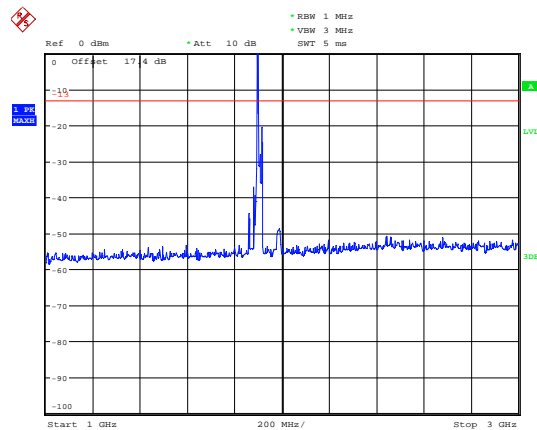
Date: 25.FEB.2019 13:54:37

LTE Band 25 20MHz CH-Middle 1GHz~3GHz



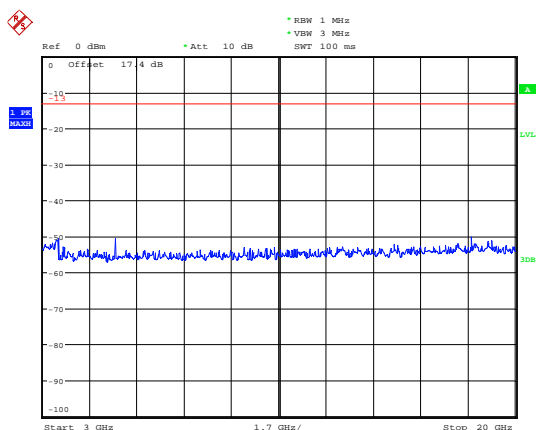
Date: 25.FEB.2019 13:53:42

LTE Band 25 20MHz CH-High 1GHz~3GHz



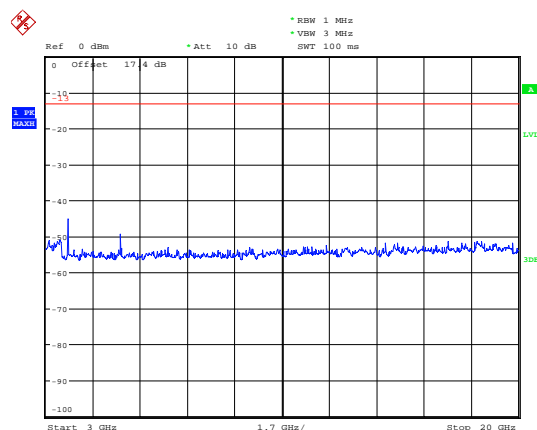
Date: 25.FEB.2019 13:53:29

LTE Band 25 20MHz CH-Middle 3GHz~20GHz



Date: 25.FEB.2019 13:49:30

LTE Band 25 20MHz CH-High 3GHz~20GHz



Date: 25.FEB.2019 13:53:10

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 C63.26 (2015).
2. 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).
3. 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.
4. 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).
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:

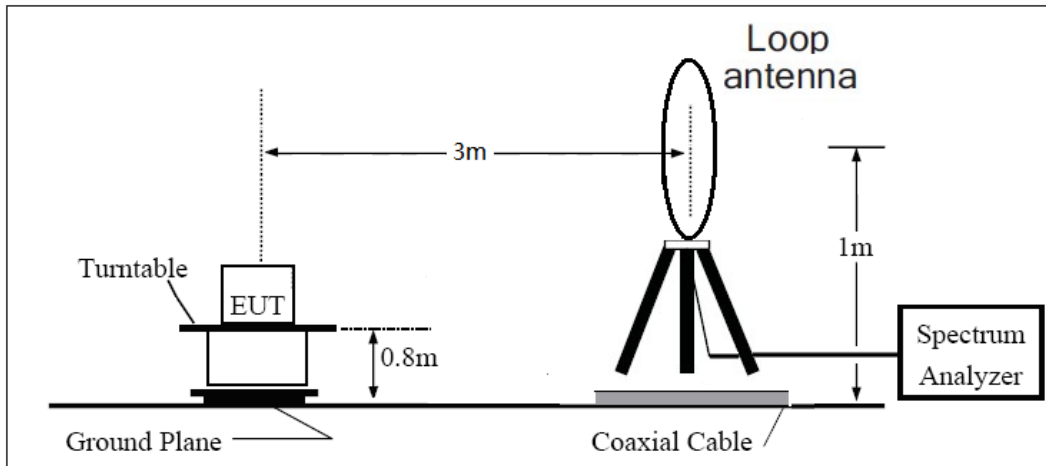
$$\text{Power(EIRP)} = \text{PMea} - \text{Pcl} + \text{Ga}$$
8. This value is EIRP since the measurement is calibrated using an antenna of known gain (2.15 dBi)

and known input power. ERP can be calculated from EIRP by subtracting the gain of the dipole, $ERP = EIRP - 2.15\text{dBi}$.

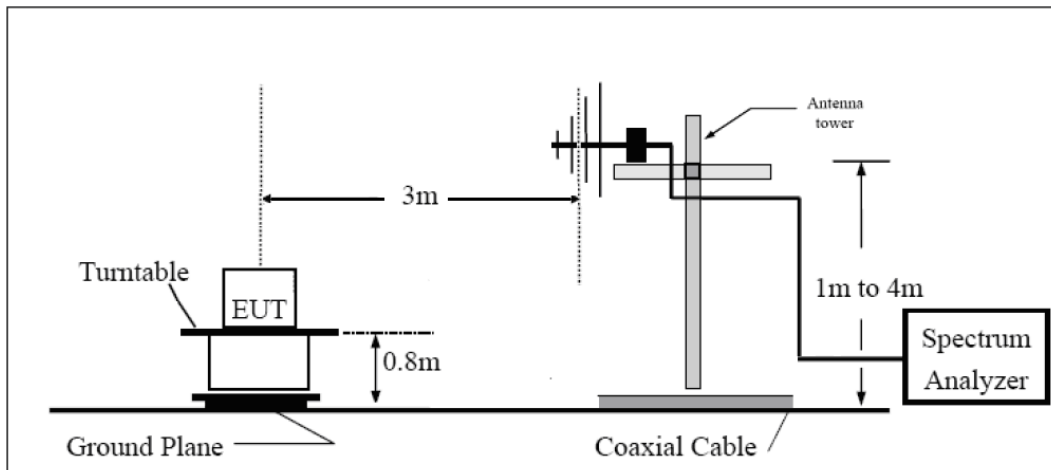
The modulation mode and RB allocation refer to section 5.1, using the maximum output power configuration.

Test setup

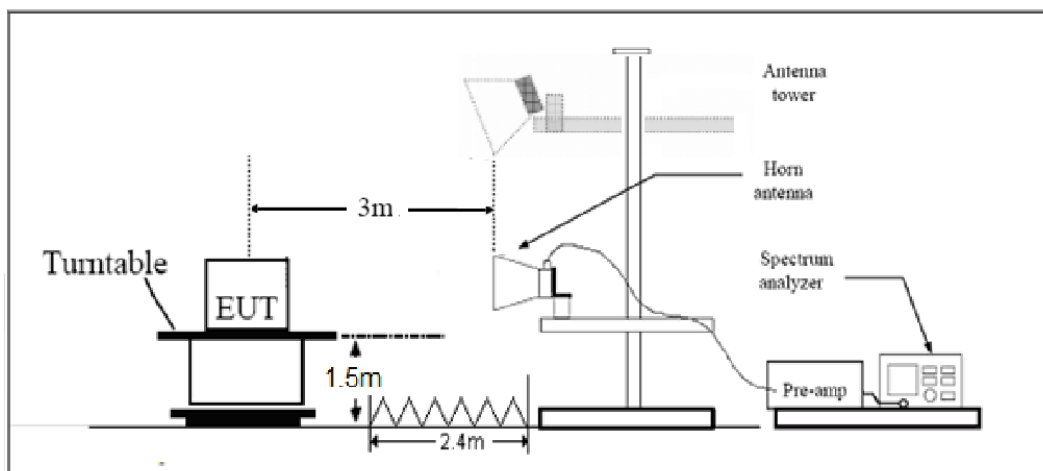
9KHz ~ 30MHz



30MHz ~ 1GHz



Above 1GHz





Note: Area side: 2.4mX3.6m

Limits

Rule Part 24.238(a) specifies that “on any frequency outside a licensee's frequency block, the power of any emission shall be attenuated below the transmitter power (P) by at least $43 + 10 \log_{10} (P)$ dB.”

Limit	-13 dBm
-------	---------

Measurement Uncertainty

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

Test Result

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.

WCDMA Band II CH-Low

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	3704.8	-52.41	5.10	11.05	Horizontal	-46.46	-13.00	33.46	45
3	5557.2	-51.12	5.42	12.65	Horizontal	-43.89	-13.00	30.89	0
4	7409.6	-54.22	6.70	13.85	Horizontal	-47.07	-13.00	34.07	225
5	9262.0	-54.59	7.01	14.75	Horizontal	-46.85	-13.00	33.85	90
6	11114.4	-52.82	7.48	15.95	Horizontal	-44.35	-13.00	31.35	0
7	12966.8	-53.08	7.51	16.55	Horizontal	-44.04	-13.00	31.04	225
8	14819.2	-50.91	8.24	15.35	Horizontal	-43.80	-13.00	30.80	135
9	16671.6	-51.66	8.41	14.95	Horizontal	-45.12	-13.00	32.12	315
10	18524.0	-	-	-	-	-	-	-	-
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 Vertical position.									

WCDMA Band II CH-Middle

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	3762.4	-54.28	5.10	11.05	Horizontal	-48.33	-13.00	35.33	270
3	5643.8	-51.64	5.42	12.65	Horizontal	-44.41	-13.00	31.41	315
4	7520.0	-54.32	6.70	13.85	Horizontal	-47.17	-13.00	34.17	180
5	9400.0	-54.33	7.01	14.75	Horizontal	-46.59	-13.00	33.59	45
6	11280.0	-52.28	7.48	15.95	Horizontal	-43.81	-13.00	30.81	90
7	13160.0	-53.31	7.51	16.55	Horizontal	-44.27	-13.00	31.27	180
8	15040.0	-52.91	8.24	15.35	Horizontal	-45.80	-13.00	32.80	315
9	16920.0	-50.18	8.41	14.95	Horizontal	-43.64	-13.00	30.64	45
10	18800.0	-	-	-	-	-	-	-	-
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 Vertical position.									

WCDMA Band II CH-High

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	3813.8	-53.26	5.10	11.05	Horizontal	-47.31	-13.00	34.31	45
3	5722.8	-51.79	5.42	12.65	Horizontal	-44.56	-13.00	31.56	0
4	7630.4	-56.35	6.70	13.85	Horizontal	-49.20	-13.00	36.20	225
5	9538.0	-55.35	7.01	14.75	Horizontal	-47.61	-13.00	34.61	90
6	11445.6	-53.18	7.48	15.95	Horizontal	-44.71	-13.00	31.71	0
7	13353.2	-52.69	7.51	16.55	Horizontal	-43.65	-13.00	30.65	225
8	15260.8	-52.16	8.24	15.35	Horizontal	-45.05	-13.00	32.05	90
9	17168.4	-51.31	8.41	14.95	Horizontal	-44.77	-13.00	31.77	180
10	19076.0	-	-	-	-	-	-	-	-

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 Vertical position.

LTE Band 2 20MHz CH-Low

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	3702.0	-45.68	5.10	11.05	Horizontal	-39.73	-13.00	26.73	180
3	5553.4	-43.43	5.42	12.65	Horizontal	-36.20	-13.00	23.20	270
4	7440.0	-56.06	6.70	13.85	Horizontal	-48.91	-13.00	35.91	45
5	9300.0	-54.96	7.01	14.75	Horizontal	-47.22	-13.00	34.22	225
6	11160.0	-54.01	7.48	15.95	Horizontal	-45.54	-13.00	32.54	315
7	13020.0	-50.82	7.51	16.55	Horizontal	-41.78	-13.00	28.78	135
8	14880.0	-50.76	8.24	15.35	Horizontal	-43.65	-13.00	30.65	90
9	16740.0	-51.10	8.41	14.95	Horizontal	-44.56	-13.00	31.56	45
10	18600.0	-	-	-	-	-	-	-	-

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 Vertical position.

LTE Band 2 20MHz CH-Middle

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	3742.1	-49.80	5.10	11.05	Horizontal	-43.85	-13.00	30.85	135
3	5613.4	-46.99	5.42	12.65	Horizontal	-39.76	-13.00	26.76	45
4	7484.6	-54.23	6.70	13.85	Horizontal	-47.08	-13.00	34.08	225
5	9400.0	-54.44	7.01	14.75	Horizontal	-46.70	-13.00	33.70	270
6	11280.0	-53.64	7.48	15.95	Horizontal	-45.17	-13.00	32.17	90
7	13160.0	-53.07	7.51	16.55	Horizontal	-44.03	-13.00	31.03	315
8	15040.0	-51.95	8.24	15.35	Horizontal	-44.84	-13.00	31.84	45
9	16920.0	-50.20	8.41	14.95	Horizontal	-43.66	-13.00	30.66	135
10	18800.0	-	-	-	-	-	-	-	-

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 Vertical position.

LTE Band 2 20MHz CH-High

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	3781.9	-45.74	5.10	11.05	Horizontal	-39.79	-13.00	26.79	90
3	5673.8	-48.93	5.42	12.65	Horizontal	-41.70	-13.00	28.70	135
4	7564.1	-55.68	6.70	13.85	Horizontal	-48.53	-13.00	35.53	315
5	9500.0	-56.05	7.01	14.75	Horizontal	-48.31	-13.00	35.31	225
6	11400.0	-52.19	7.48	15.95	Horizontal	-43.72	-13.00	30.72	135
7	13300.0	-52.78	7.51	16.55	Horizontal	-43.74	-13.00	30.74	270
8	15200.0	-52.98	8.24	15.35	Horizontal	-45.87	-13.00	32.87	135
9	17100.0	-50.09	8.41	14.95	Horizontal	-43.55	-13.00	30.55	45
10	19000.0	-	-	-	-	-	-	-	-

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 Vertical position.

LTE Band 25 20MHz CH-Low

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	3720.0	-45.10	5.10	11.05	Horizontal	-39.15	-13.00	26.15	225
3	5580.0	-44.48	5.42	12.65	Horizontal	-37.25	-13.00	24.25	315
4	7440.0	-54.48	6.70	13.85	Horizontal	-47.33	-13.00	34.33	135
5	9300.0	-55.26	7.01	14.75	Horizontal	-47.52	-13.00	34.52	90
6	11160.0	-54.28	7.48	15.95	Horizontal	-45.81	-13.00	32.81	45
7	13020.0	-54.98	7.51	16.55	Horizontal	-45.94	-13.00	32.94	0
8	14880.0	-51.96	8.24	15.35	Horizontal	-44.85	-13.00	31.85	45
9	16740.0	-50.27	8.41	14.95	Horizontal	-43.73	-13.00	30.73	90
10	18600.0	-	-	-	-	-	-	-	-
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 Vertical position.									

LTE Band 25 20MHz CH-Middle

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	3765.0	-46.75	5.10	11.05	Horizontal	-40.80	-13.00	27.80	0
3	5647.5	-47.07	5.42	12.65	Horizontal	-39.84	-13.00	26.84	45
4	7530.0	-56.88	6.70	13.85	Horizontal	-49.73	-13.00	36.73	45
5	9412.5	-55.77	7.01	14.75	Horizontal	-48.03	-13.00	35.03	45
6	11295.0	-54.36	7.48	15.95	Horizontal	-45.89	-13.00	32.89	0
7	13177.5	-55.12	7.51	16.55	Horizontal	-46.08	-13.00	33.08	45
8	15060.0	-53.17	8.24	15.35	Horizontal	-46.06	-13.00	33.06	45
9	16942.5	-51.06	8.41	14.95	Horizontal	-44.52	-13.00	31.52	225
10	18825.0	-	-	-	-	-	-	-	-
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 Vertical position.									



LTE Band 25 20MHz CH-High

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	3810.0	-46.62	5.10	11.05	Horizontal	-40.67	-13.00	27.67	225
3	5715.0	-47.37	5.42	12.65	Horizontal	-40.14	-13.00	27.14	315
4	7620.0	-56.41	6.70	13.85	Horizontal	-49.26	-13.00	36.26	135
5	9525.0	-56.11	7.01	14.75	Horizontal	-48.37	-13.00	35.37	90
6	11430.0	-50.67	7.48	15.95	Horizontal	-42.20	-13.00	29.20	45
7	13335.0	-53.67	7.51	16.55	Horizontal	-44.63	-13.00	31.63	0
8	15240.0	-53.39	8.24	15.35	Horizontal	-46.28	-13.00	33.28	45
9	17145.0	-51.04	8.41	14.95	Horizontal	-44.50	-13.00	31.50	90
10	19050.0	-	-	-	-	-	-	-	-

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 Vertical position.

6. Main Test Instruments

May 25, 2018 ~ June 27, 2018

Name	Manufacturer	Type	Serial Number	Calibration Date	Expiration Date
Base Station Simulator	R&S	CMU200	118133	2018-05-13	2019-05-12
Base Station Simulator	R&S	CMW500	113645	2018-05-13	2019-05-12
Power Splitter	Hua Xiang	SHX-GF2-2-13	10120101	NA	NA
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
Climatic Chamber	Re Ce	PT-30B	20101891	2015-07-18	2018-07-17
Horn Antenna	ETS-Lindgren	3160-09	00102644	2015-01-30	2020-01-29
RF Cable	Agilent	SMA 15cm	0001	2018-02-03	2018-08-02
Preamplifier	R&S	SCU18	102327	2018-05-20	2019-05-19
Software	R&S	EMC32	V 8.52.0	NA	NA
MOB COMMS DC SUPPLY	Keysight	66319D	MY43004105	2018-05-07	2019-05-06



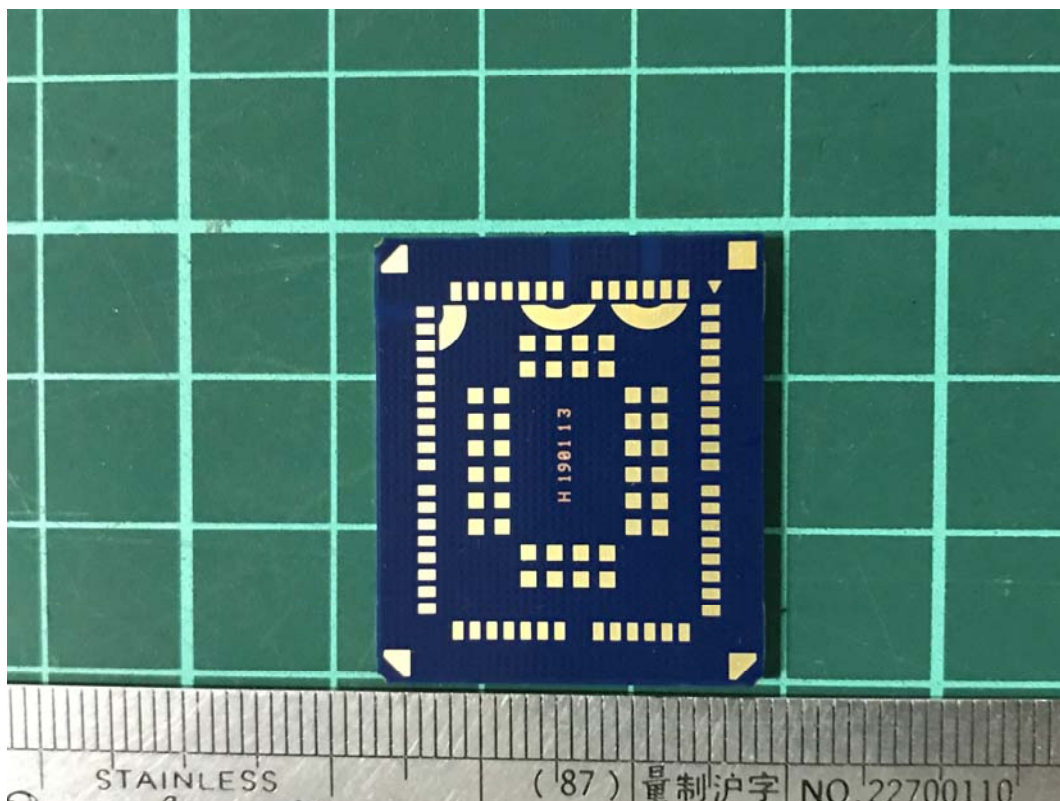
February 17, 2019 ~ March 10, 2019

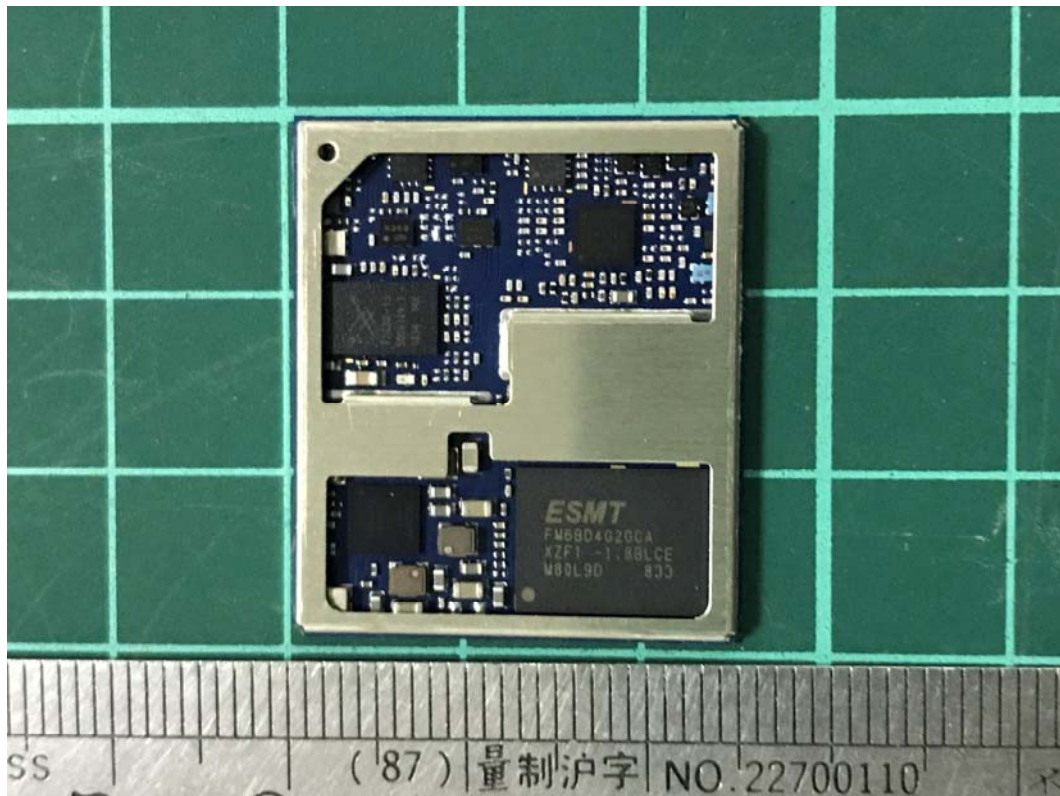
Name	Manufacturer	Type	Serial Number	Calibration Date	Expiration Date
Base Station Simulator	R&S	CMU200	118133	2018-05-13	2019-05-12
Base Station Simulator	R&S	CMW500	113824	2018-05-20	2019-05-19
Power Splitter	Hua Xiang	SHX-GF2-2-13	10120101	/	/
Spectrum Analyzer	Key sight	N9010A	MY50210259	2018-05-20	2019-05-19
Universal Radio Communication Tester	Key sight	E5515C	MY48367192	2018-05-20	2019-05-19
Signal Analyzer	R&S	FSV30	100815	2018-12-16	2019-12-15
Loop Antenna	SCHWARZBECK	FMZB1519	1519-047	2017-09-26	2019-09-25
Trilog Antenna	SCHWARZBECK	VUBL 9163	9163-201	2017-11-18	2019-11-17
Horn Antenna	R&S	HF907	100126	2018-07-07	2020-07-06
Horn Antenna	ETS-Lindgren	3160-09	00102643	2018-06-20	2020-06-19
Signal generator	R&S	SMB 100A	102594	2018-05-20	2019-05-19
Climatic Chamber	ESPEC	SU-242	93000506	2017-12-17	2020-12-16
Preamplifier	R&S	SCU18	102327	2018-05-20	2019-05-19
MOB COMMS DC SUPPLY	Keysight	66319D	MY43004105	2018-05-07	2019-05-06
RF Cable	Agilent	SMA 15cm	0001	/	/
Software	R&S	EMC32	9.26.0	/	/

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

ANNEX A: EUT Appearance and Test Setup

A.1 EUT Appearance

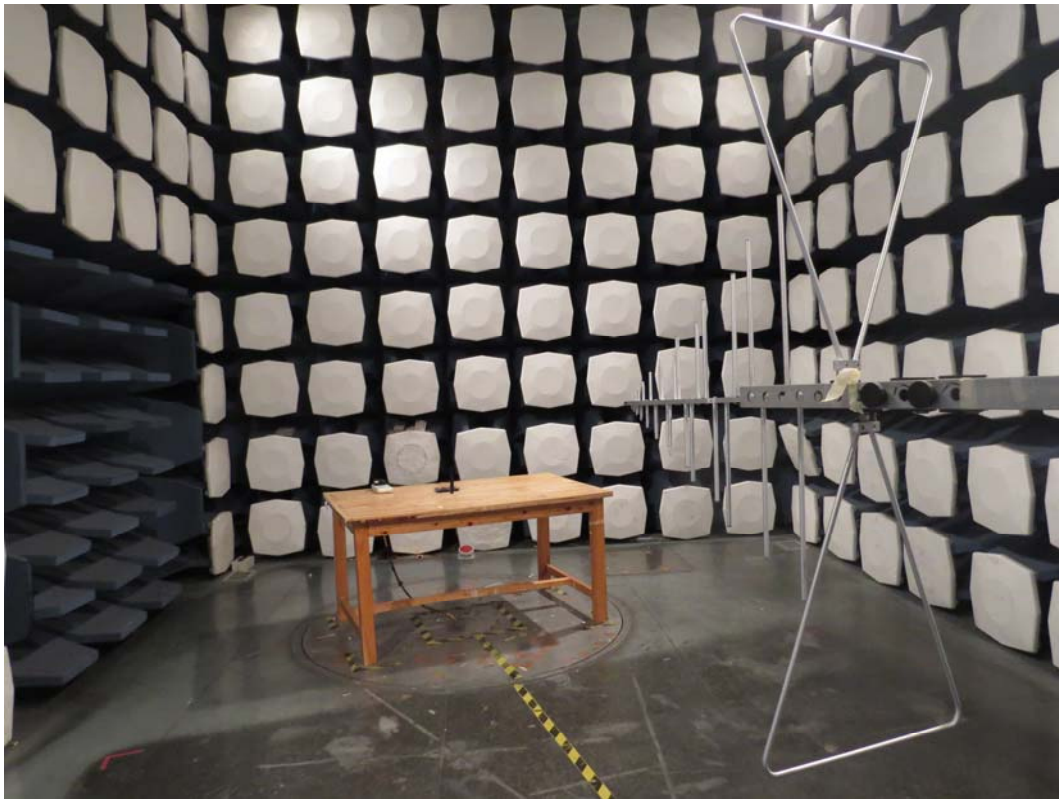




a: EUT

Picture 1 EUT and Accessory

A.2 Test Setup



Picture 2 Radiated Spurious Emissions Test setup