



	40°C/Normal Voltage	-0.00229	-0.00064
	50°C/Normal Voltage	-0.00021	-0.00010
	60°C/Normal Voltage	-0.00154	-0.00259
	70°C/Normal Voltage	-0.00208	-0.00229
	80°C/Normal Voltage	-0.00301	-0.00195
	85°C/Normal Voltage	-0.00432	-0.00187
	20°C/Min Voltage	-0.00530	-0.00226
	20°C/Max Voltage	-0.00360	-0.00285
15MHz	-40°C/Normal Voltage	-0.00485	-0.00018
	-30°C/Normal Voltage	-0.00390	0.00080
	-20°C/Normal Voltage	-0.00460	-0.00331
	-10°C/Normal Voltage	-0.00395	-0.00046
	0°C/Normal Voltage	-0.00290	-0.00040
	10°C/Normal Voltage	-0.00181	0.00346
	20°C/Normal Voltage	-0.00136	0.00049
	30°C/Normal Voltage	-0.00043	-0.00009
	40°C/Normal Voltage	-0.00198	0.00215
	50°C/Normal Voltage	-0.00343	0.00212
	60°C/Normal Voltage	-0.00082	0.00301
	70°C/Normal Voltage	-0.00200	0.00572
	80°C/Normal Voltage	-0.00182	0.00515
	85°C/Normal Voltage	-0.00277	-0.00396
	20°C/Min Voltage	-0.00148	-0.00195
	20°C/Max Voltage	-0.00359	-0.00301
20MHz	-40°C/Normal Voltage	0.00114	0.00435
	-30°C/Normal Voltage	-0.00106	0.00396
	-20°C/Normal Voltage	-0.00316	0.00235
	-10°C/Normal Voltage	0.00012	0.00256
	0°C/Normal Voltage	0.00135	0.00223
	10°C/Normal Voltage	0.00097	0.00421
	20°C/Normal Voltage	0.00222	0.00327
	30°C/Normal Voltage	-0.00184	0.00301
	40°C/Normal Voltage	-0.00004	0.00408
	50°C/Normal Voltage	-0.00102	0.00639
	60°C/Normal Voltage	-0.00186	0.00576
	70°C/Normal Voltage	0.00230	0.00338
	80°C/Normal Voltage	-0.00037	0.00271
	85°C/Normal Voltage	-0.00040	0.00432
	20°C/Min Voltage	-0.00101	0.00422
	20°C/Max Voltage	-0.00295	0.00636

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	1851.1788	1914.8258	7.71	0.00410
Extreme (85°C)		1851.1791	1914.8255	2.64	0.00140
Extreme (80°C)		1851.1794	1914.8252	17.23	0.00916
Extreme (70°C)		1851.1789	1914.8257	-7.62	-0.00405
Extreme (60°C)		1851.1783	1914.8253	1.43	0.00076
Extreme (50°C)		1851.1868	1914.8338	5.81	0.00309
Extreme (40°C)		1851.1822	1914.8292	-12.33	-0.00656
Extreme (30°C)		1851.1829	1914.8299	6.42	0.00341
Extreme (20°C)		1851.1832	1914.8302	2.39	0.00127
Extreme (10C)		1851.1797	1914.8267	17.45	0.00928
Extreme (0°C)		1851.1856	1914.8326	8.46	0.00450
Extreme (-10°C)		1851.1793	1914.8263	-13.02	-0.00693
Extreme (-20°C)		1851.1834	1914.8304	12.35	0.00657
Extreme (-30°C)		1851.1781	1914.8252	9.76	0.00519
Extreme (-40°C)		1851.1788	1914.8258	5.25	0.00279
25°C	LV	1851.1832	1914.8302	-2.64	-0.00140
	HV	1851.1781	1914.8251	9.16	0.00487
(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	1851.1742	1914.8212	-5.48	-0.00291
Extreme (85°C)		1851.1745	1914.8209	3.14	0.00167
Extreme (80°C)		1851.1748	1914.8206	7.68	0.00409
Extreme (70°C)		1851.1743	1914.8211	9.24	0.00491
Extreme (60°C)		1851.1747	1914.8217	-15.33	-0.00815
Extreme (50°C)		1851.1662	1914.8132	4.25	0.00226
Extreme (40°C)		1851.1708	1914.8178	8.13	0.00432
Extreme (30°C)		1851.1701	1914.8171	-2.54	-0.00135
Extreme (20°C)		1851.1698	1914.8168	14.10	0.00750
Extreme (10C)		1851.1733	1914.8203	6.10	0.00324
Extreme (0°C)		1851.1674	1914.8144	2.84	0.00151
Extreme (-10°C)		1851.1737	1914.8207	13.64	0.00726
Extreme (-20°C)		1851.1696	1914.8166	-6.49	-0.00345
Extreme (-30°C)		1851.1753	1914.8222	2.01	0.00107



Extreme (-40°C)		1851.1742	1914.8212	7.38	0.00393
25°C	LV	1851.1698	1914.8168	4.32	0.00230
	HV	1851.1749	1914.8219	3.96	0.00211

5.7. Spurious Emissions at Antenna Terminals

Ambient condition

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

Method of Measurement

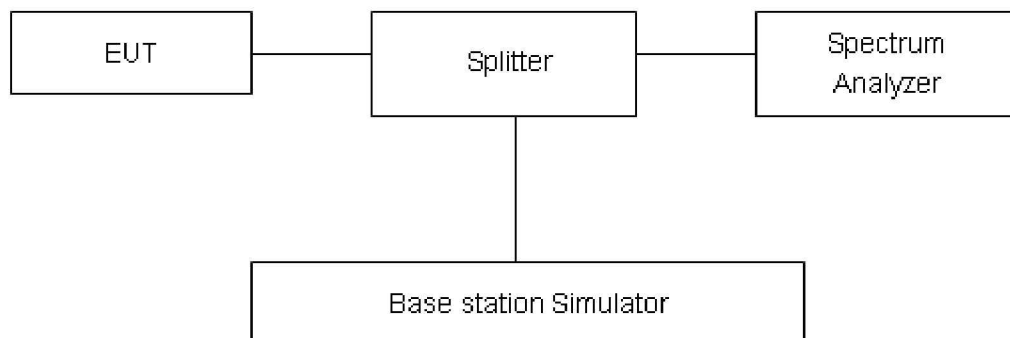
The EUT was connected to Spectrum Analyzer and Base Station Simulator via power Splitter. The measurement is carried out using a spectrum analyzer. The spectrum analyzer scans from 9kHz to the 10th harmonic of the carrier. The peak detector is used.

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
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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 $k = 1.96$.

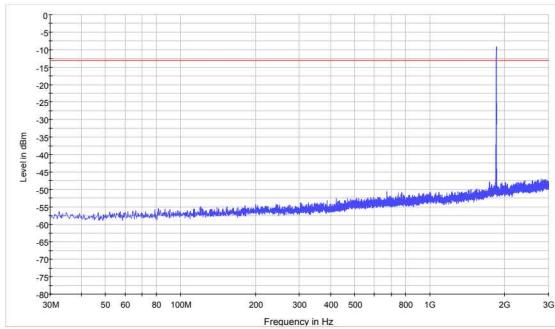
Frequency	Uncertainty
9kHz-1GHz	0.684 dB
1GHz-20GHz	1.407 dB

Test Result

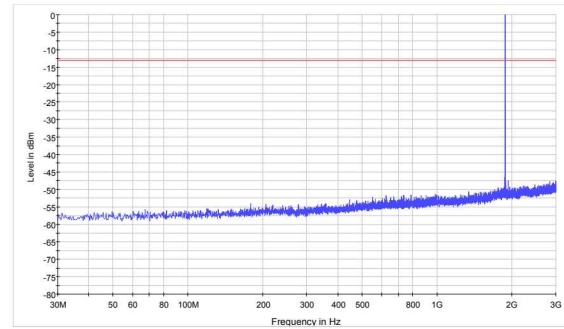
Sweep the whole frequency band through the range from 9kHz to the 10th harmonic of the carrier, the emissions more than 20 dB below the limit are not reported.

The signal beyond the limit is carrier.

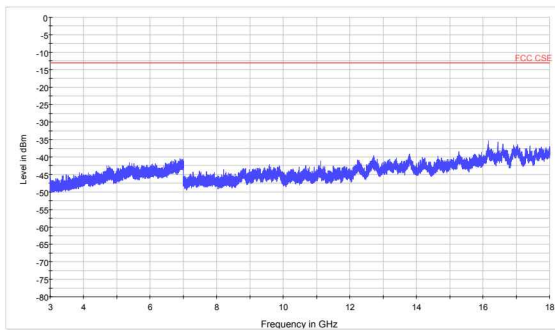
GSM 1900 CH-Low 30MHz~3GHz



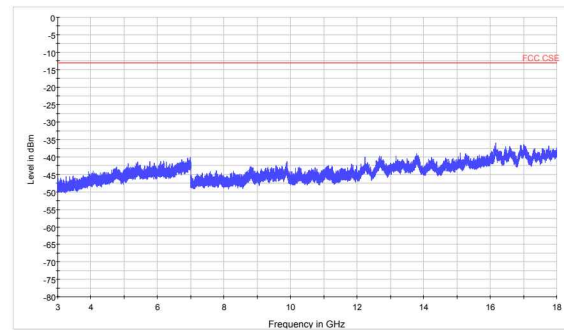
GSM 1900 CH-Middle 30MHz~3GHz



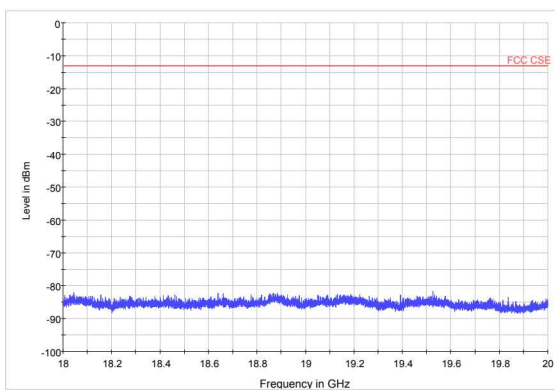
GSM 1900 CH-Low 3GHz~18GHz



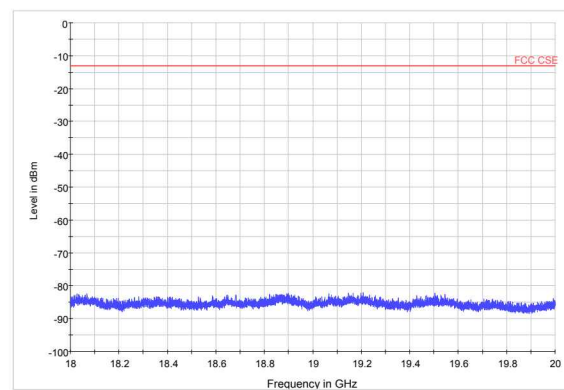
GSM 1900 CH-Middle 3GHz~18GHz



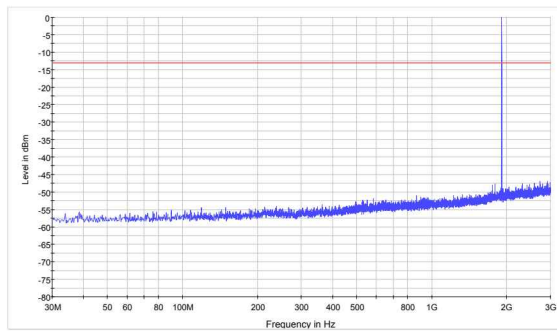
GSM 1900 CH-Low 18GHz~20GHz



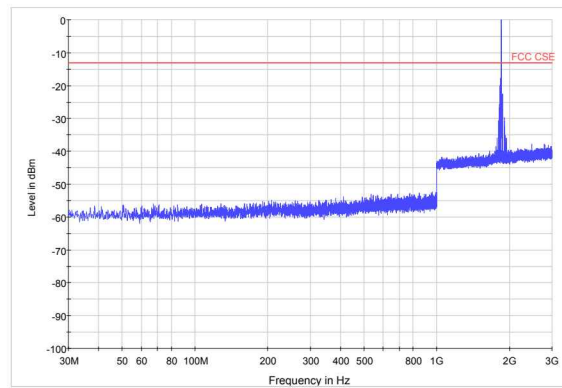
GSM 1900 CH-Middle 18GHz~20GHz



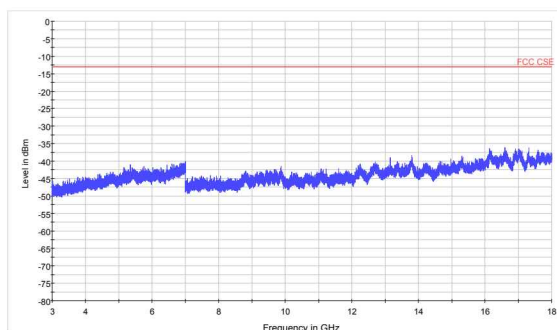
GSM 1900 CH-High 30MHz~3GHz



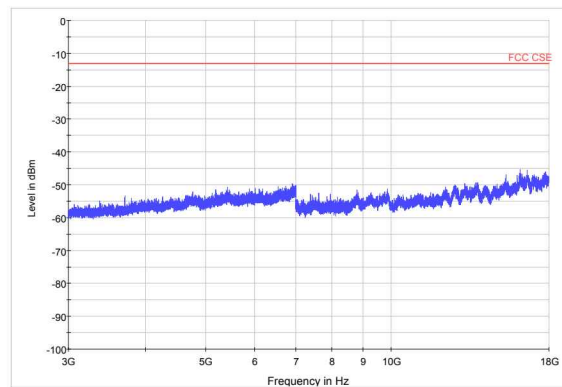
LTE Band 2 1.4MHz CH-Low 30MHz~3GHz



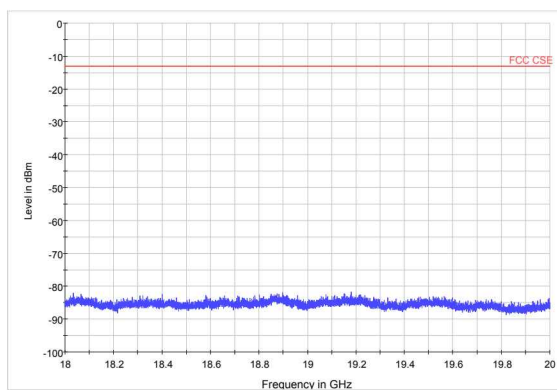
GSM 1900 CH-High 3GHz~18GHz



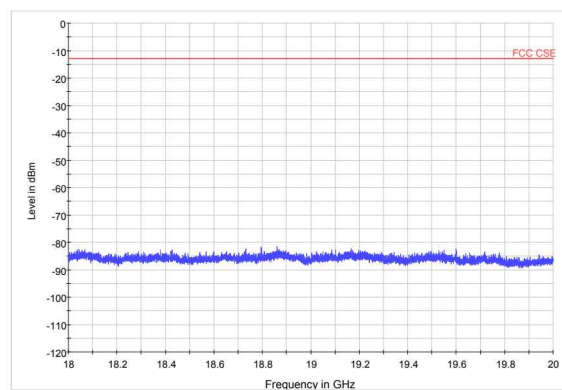
LTE Band 2 1.4MHz CH-Low 3GHz~18GHz



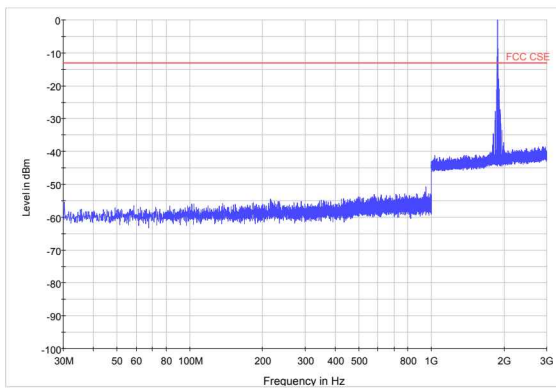
GSM 1900 CH-High 18GHz~20GHz



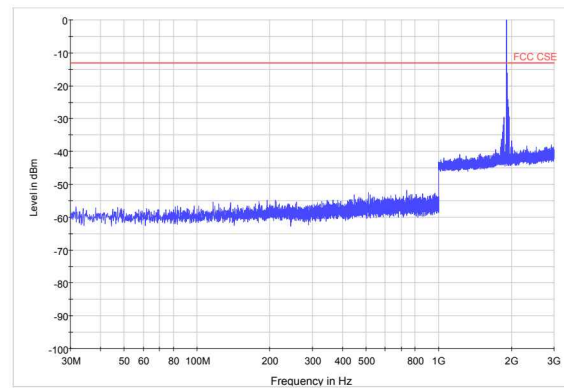
LTE Band 2 1.4MHz CH-Low 18GHz~20GHz



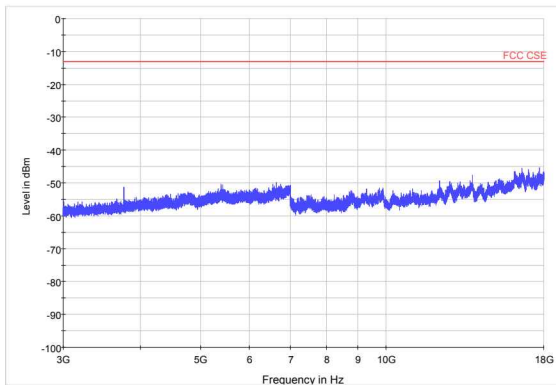
LTE Band 2 1.4MHz CH-Middle 30MHz~3GHz



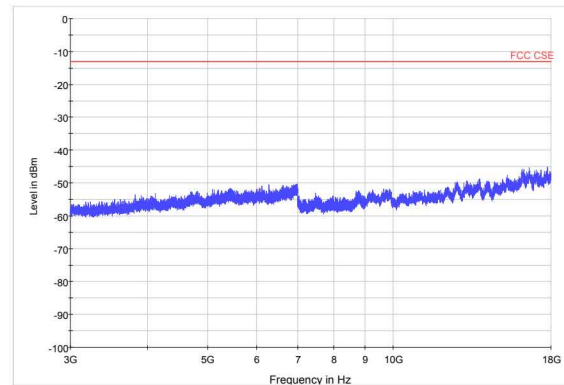
LTE Band 2 1.4MHz CH-High 30MHz~3GHz



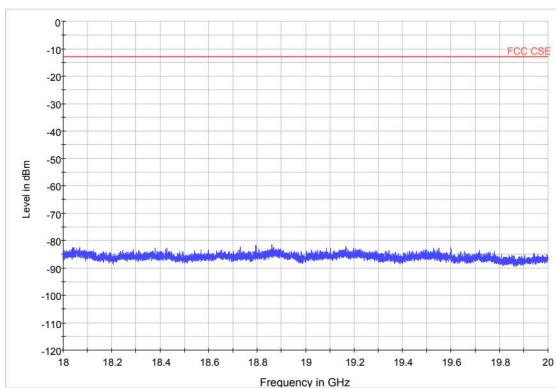
LTE Band 2 1.4MHz CH-Middle 3GHz~18GHz



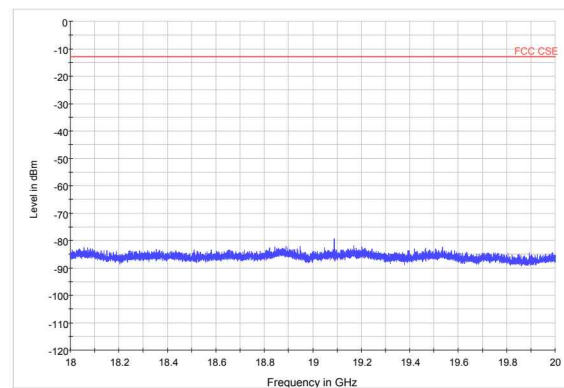
LTE Band 2 1.4MHz CH-High 3GHz~18GHz



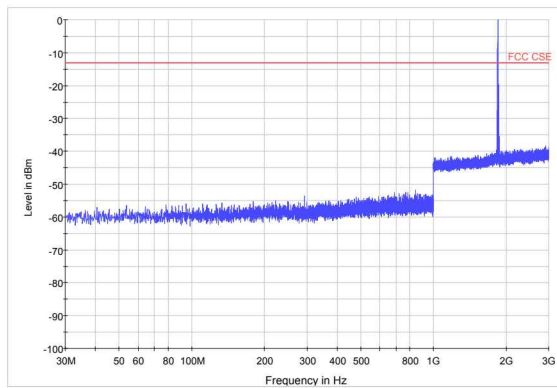
LTE Band 2 1.4MHz CH-Middle 18GHz~20GHz



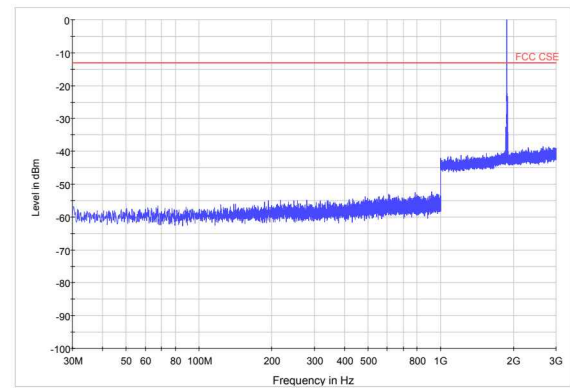
LTE Band 2 1.4MHz CH-High 18GHz~20GHz



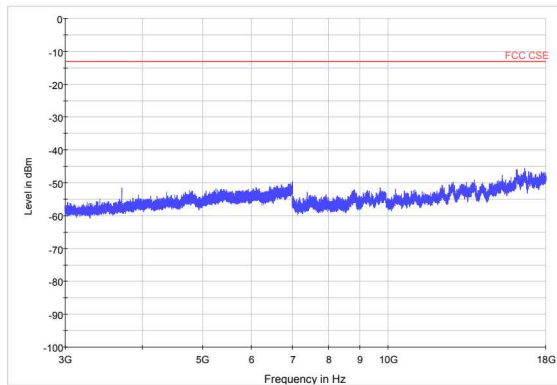
LTE Band 2 3MHz CH-Low 30MHz~3GHz



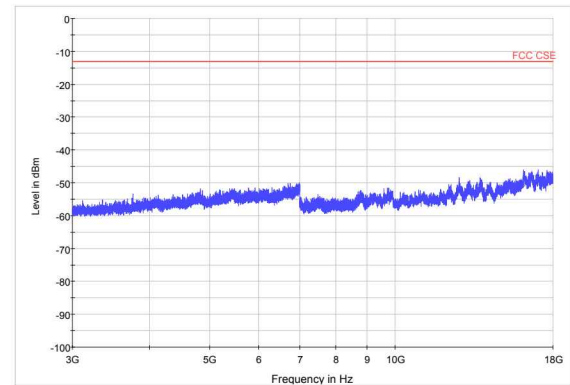
LTE Band 2 3MHz CH-Middle 30MHz~3GHz



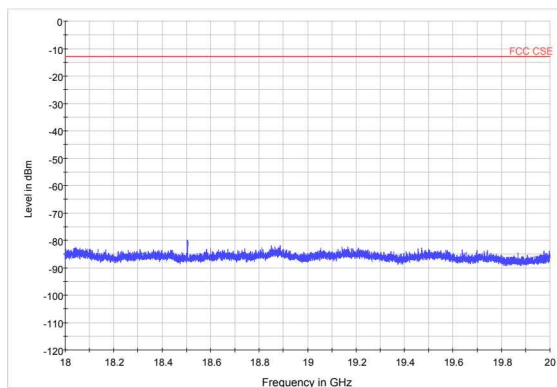
LTE Band 2 3MHz CH-Low 3GHz~18GHz



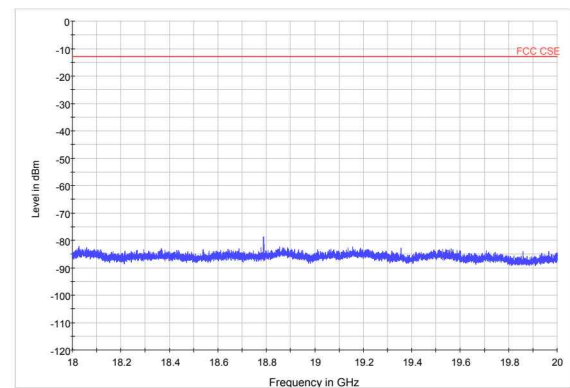
LTE Band 2 3MHz CH-Middle 3GHz~18GHz



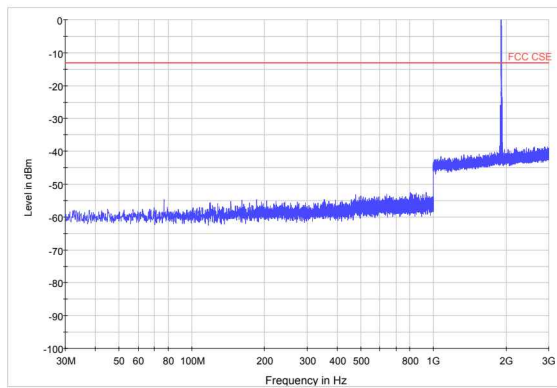
LTE Band 2 3MHz CH-Low 18GHz~20GHz



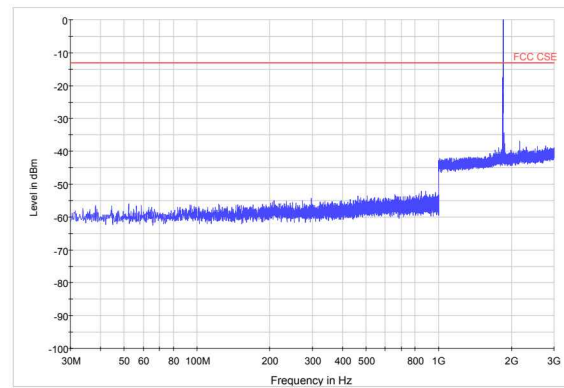
LTE Band 2 3MHz CH-Middle 18GHz~20GHz



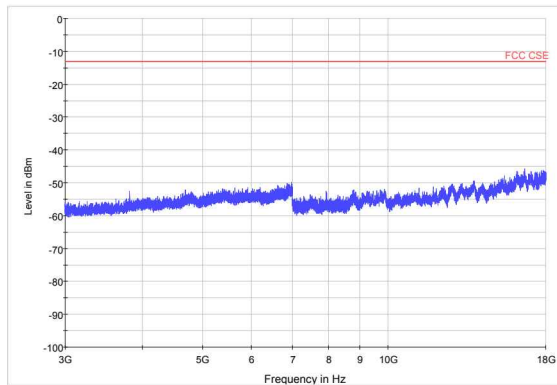
LTE Band 2 3MHz CH-High 30MHz~3GHz



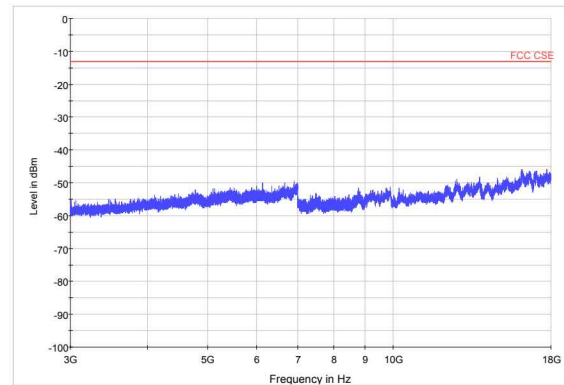
LTE Band 2 5MHz CH-Low 30MHz~3GHz



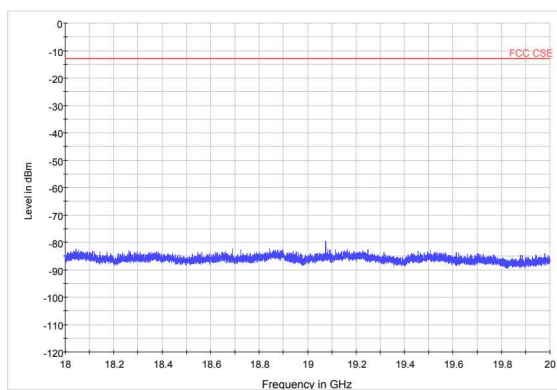
LTE Band 2 3MHz CH-High 3GHz~18GHz



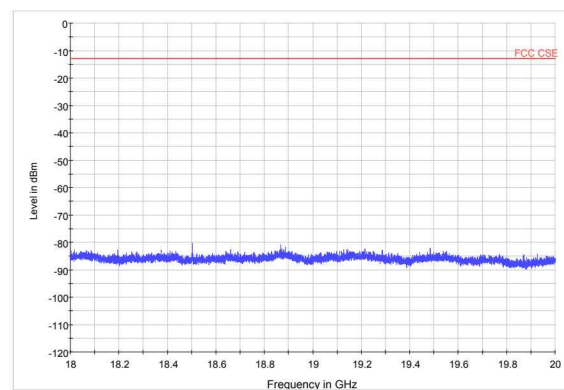
LTE Band 2 5MHz CH-Low 3GHz~18GHz



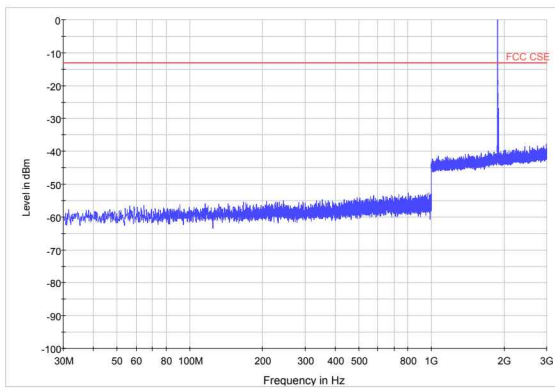
LTE Band 2 3MHz CH-High 18GHz~20GHz



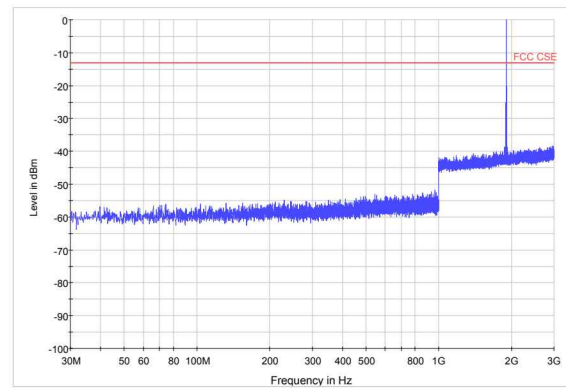
LTE Band 2 5MHz CH-Low 18GHz~20GHz



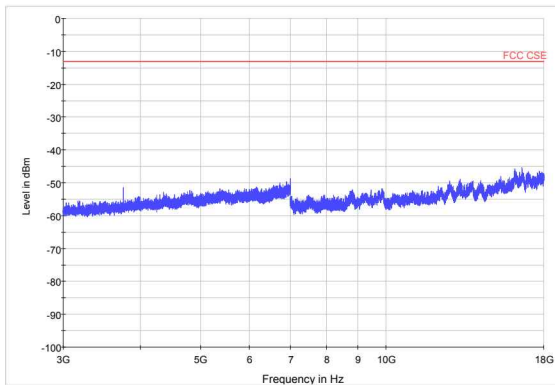
LTE Band 2 5MHz CH-Middle 30MHz~3GHz



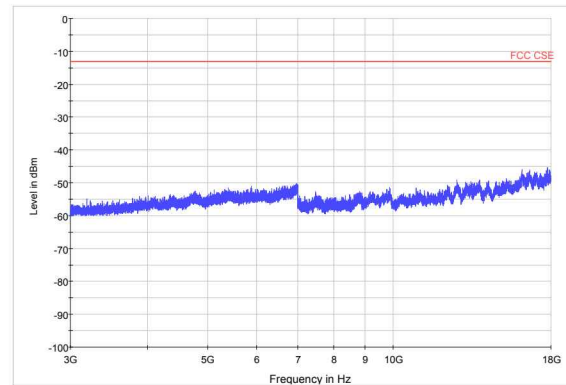
LTE Band 2 5MHz CH-High 30MHz~3GHz



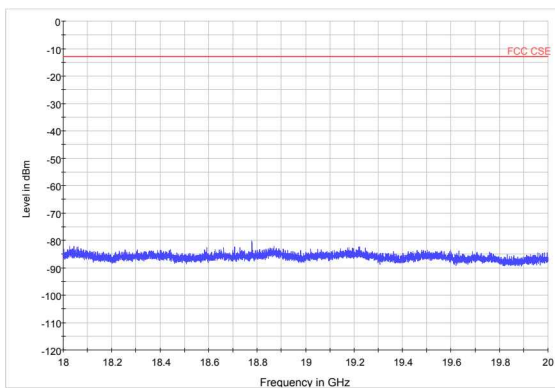
LTE Band 2 5MHz CH-Middle 3GHz~18GHz



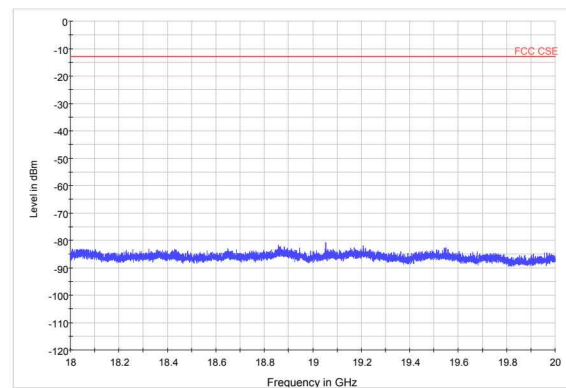
LTE Band 2 5MHz CH-High 3GHz~18GHz



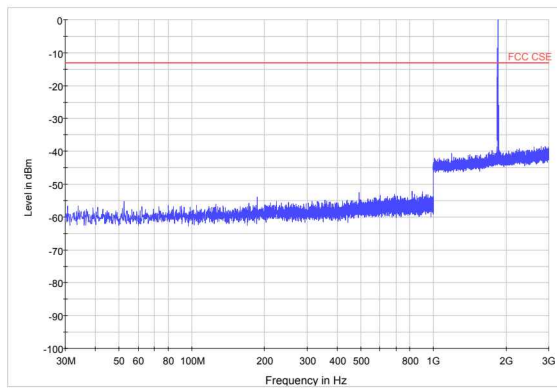
LTE Band 2 5MHz CH-Middle 18GHz~20GHz



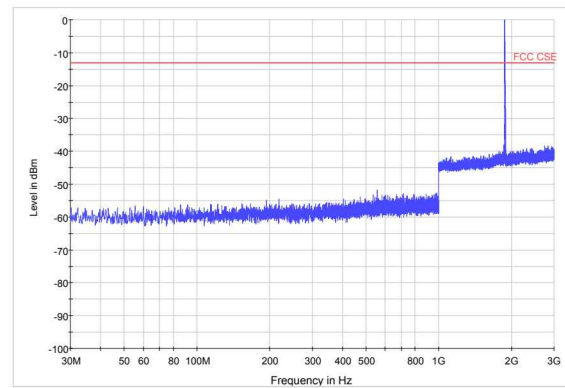
LTE Band 2 5MHz CH-High 18GHz~20GHz



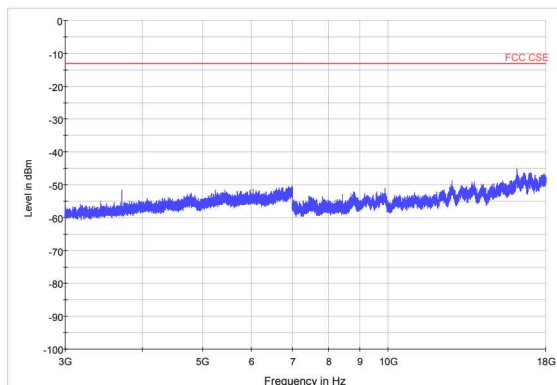
LTE Band 2 10MHz CH-Low 30MHz~3GHz



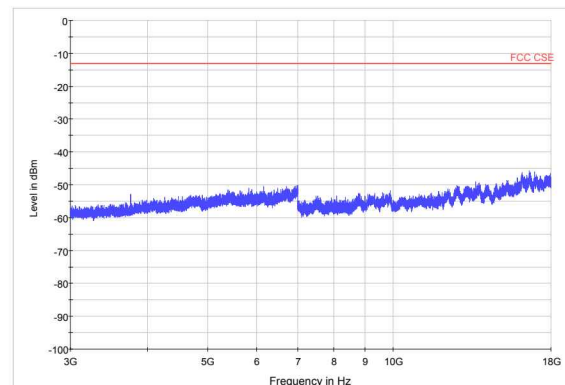
LTE Band 2 10MHz CH-Middle 30MHz~3GHz



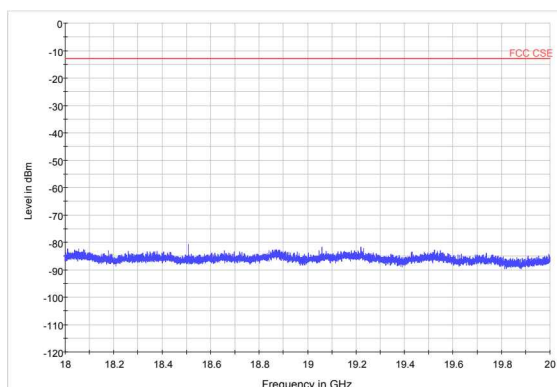
LTE Band 2 10MHz CH-Low 3GHz~18GHz



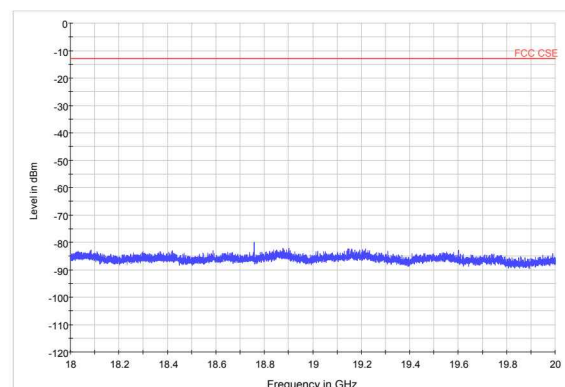
LTE Band 2 10MHz CH-Middle 3GHz~18GHz



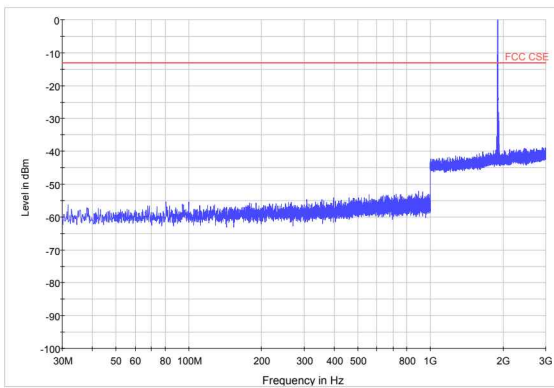
LTE Band 2 10MHz CH-Low 18GHz~20GHz



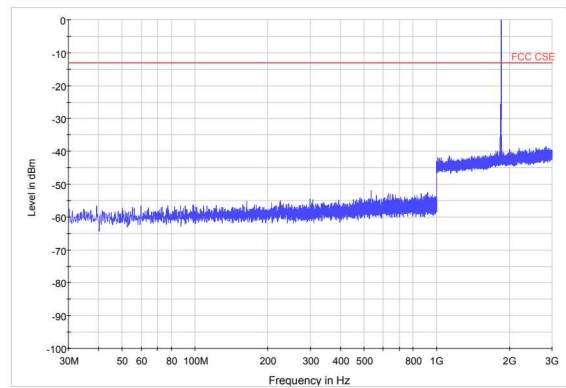
LTE Band 2 10MHz CH-Middle 18GHz~20GHz



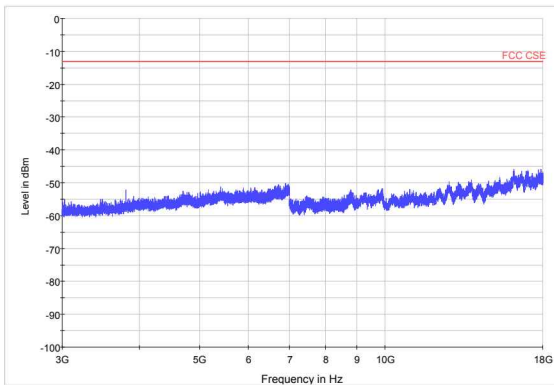
LTE Band 2 10MHz CH-High 30MHz~3GHz



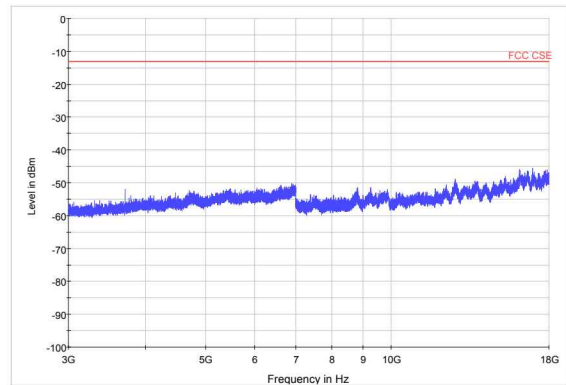
LTE Band 2 15MHz CH-Low 30MHz~3GHz



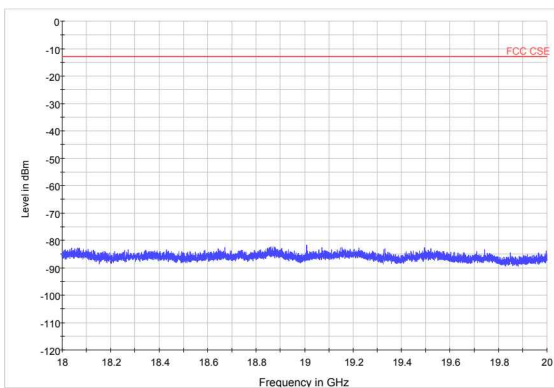
LTE Band 2 10MHz CH-High 3GHz~18GHz



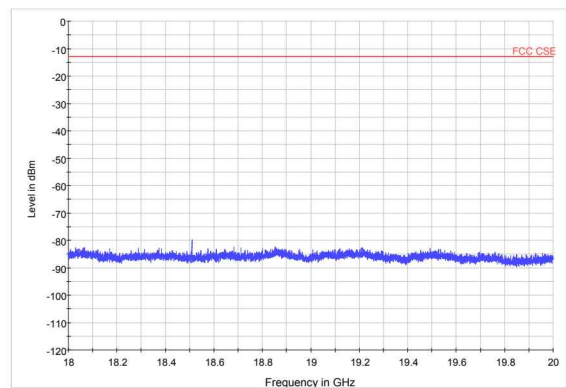
LTE Band 2 15MHz CH-Low 3GHz~18GHz



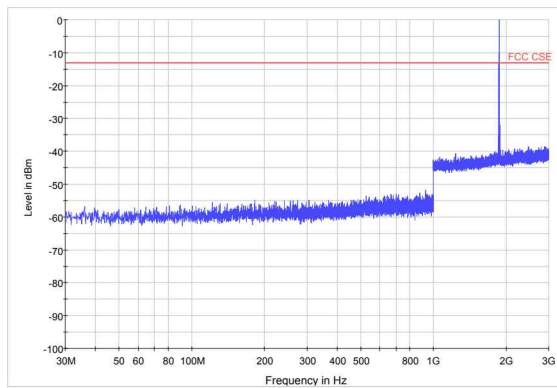
LTE Band 2 10MHz CH-High 18GHz~20GHz



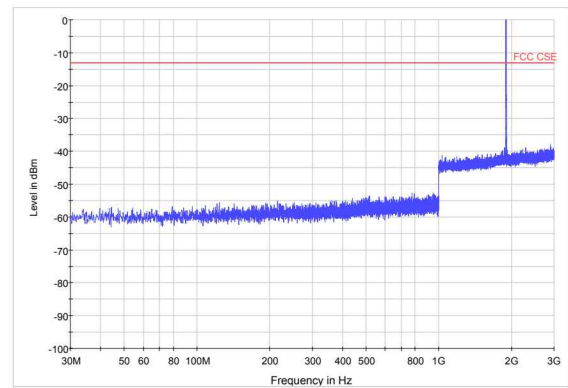
LTE Band 2 15MHz CH-Low 18GHz~20GHz



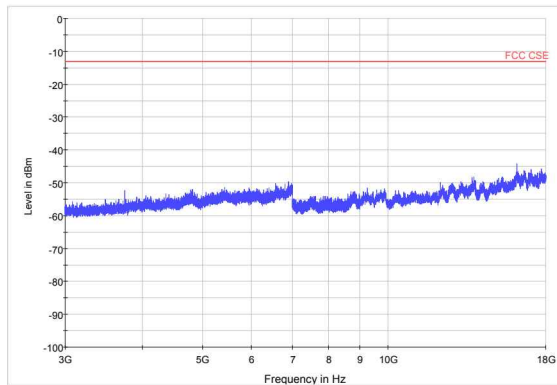
LTE Band 2 15MHz CH-Middle 30MHz~3GHz



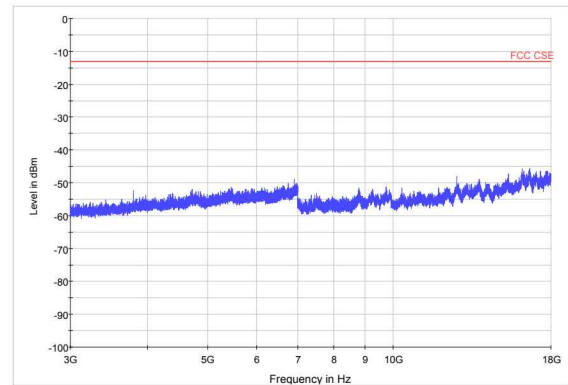
LTE Band 2 15MHz CH-High 30MHz~3GHz



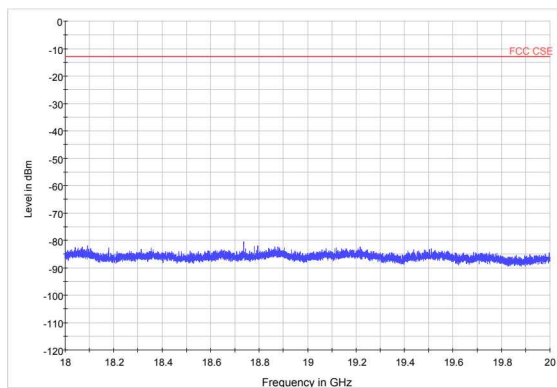
LTE Band 2 15MHz CH-Middle 3GHz~18GHz



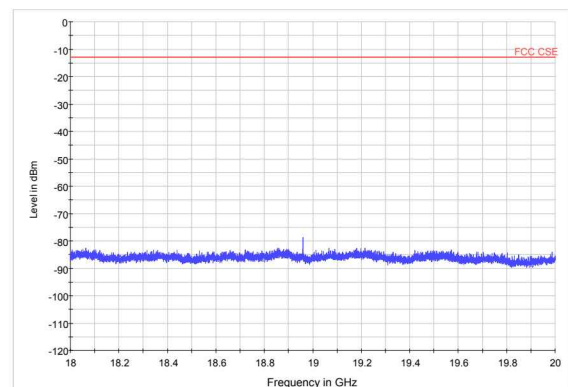
LTE Band 2 15MHz CH-High 3GHz~18GHz



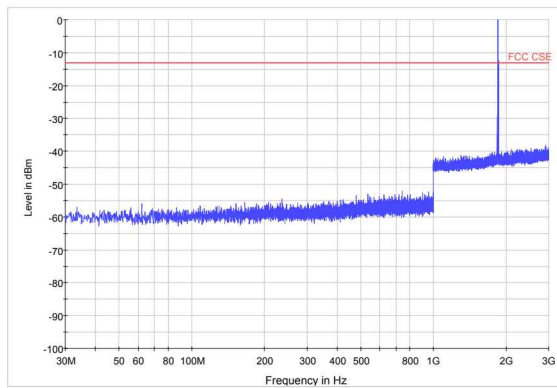
LTE Band 2 15MHz CH-Middle 18GHz~20GHz



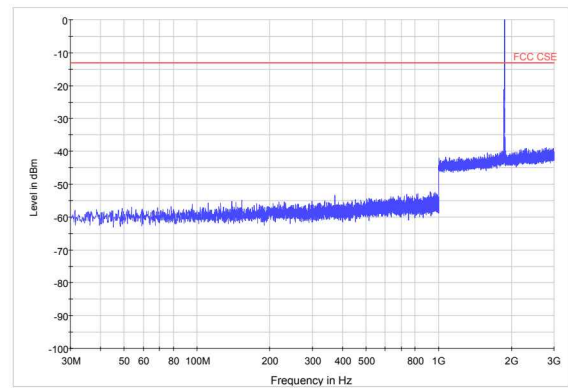
LTE Band 2 15MHz CH-High 18GHz~20GHz



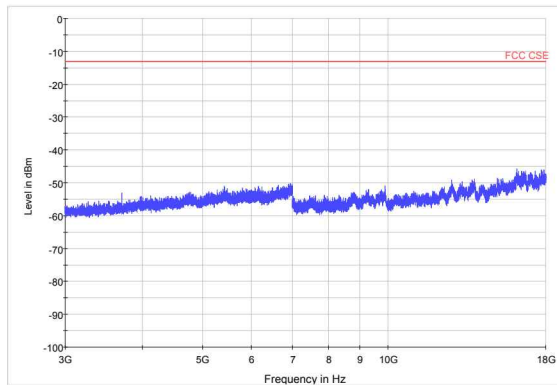
LTE Band 2 20MHz CH-Low 30MHz~3GHz



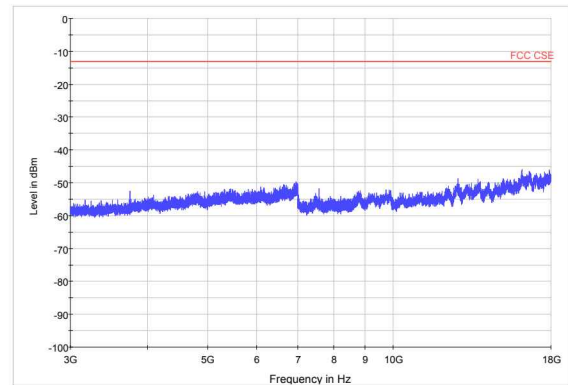
LTE Band 2 20MHz CH-Middle 30MHz~3GHz



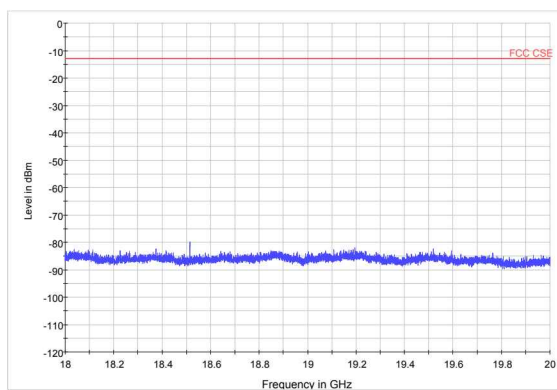
LTE Band 2 20MHz CH-Low 3GHz~18GHz



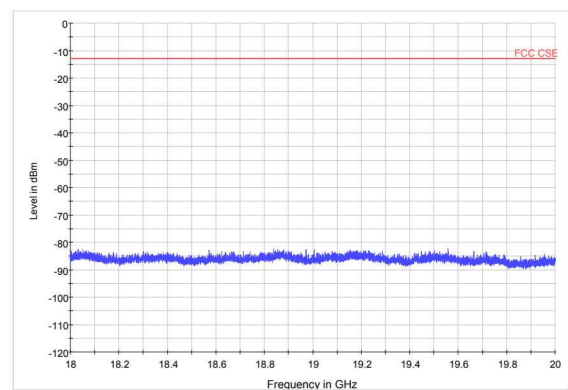
LTE Band 2 20MHz CH-Middle 3GHz~18GHz



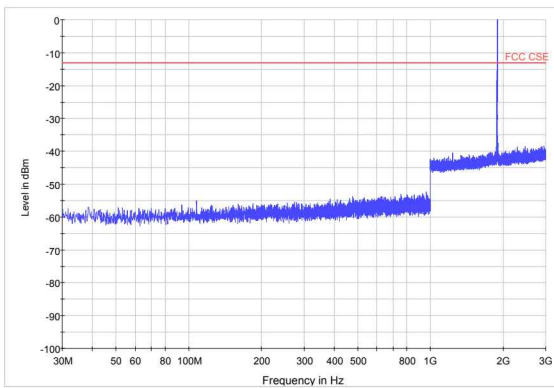
LTE Band 2 20MHz CH-Low 18GHz~20GHz



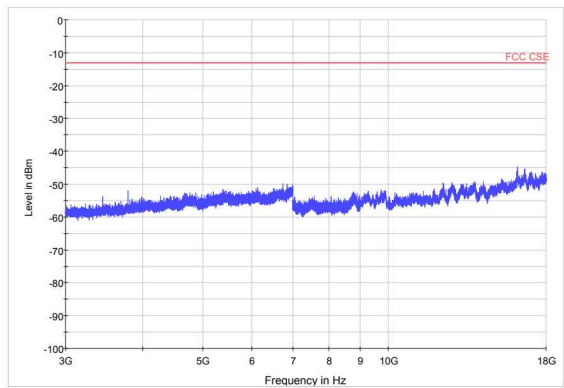
LTE Band 2 20MHz CH-Middle 18GHz~20GHz



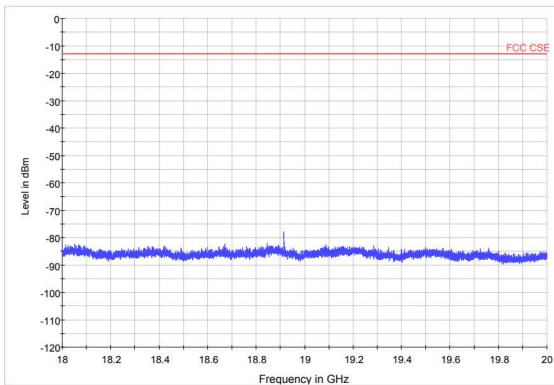
LTE Band 2 20MHz CH-High 30MHz~3GHz



LTE Band 2 20MHz CH-High 3GHz~18GHz

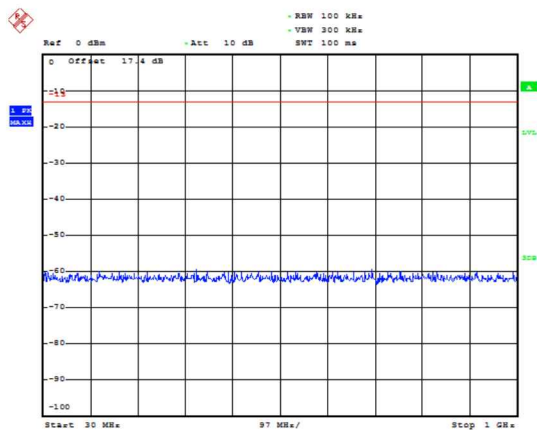


LTE Band 2 20MHz CH-High 18GHz~20GHz



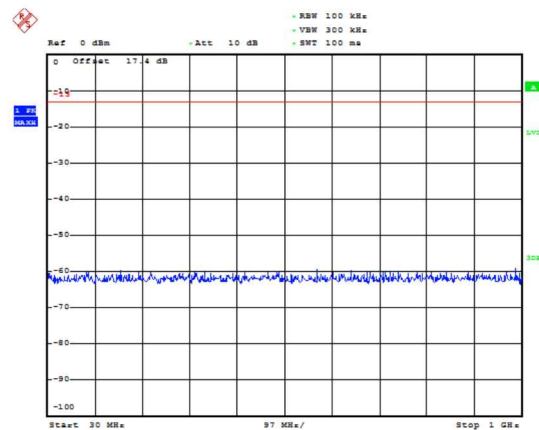


LTE Band 25 1.4MHz CH-Low 30MHz~1GHz



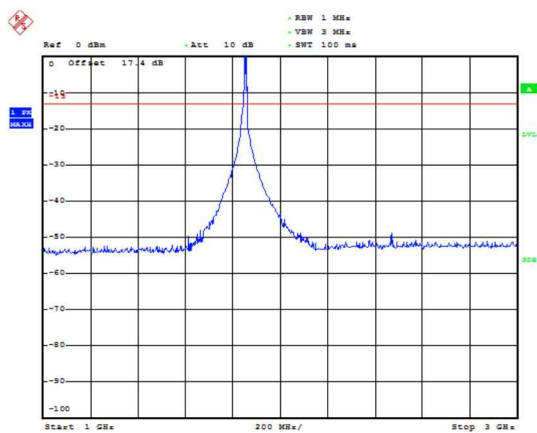
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LTE Band 25 1.4MHz CH-Middle 30MHz~1GHz



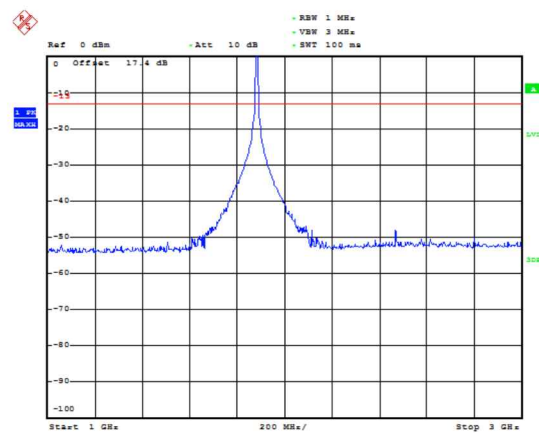
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LTE Band 25 1.4MHz CH-Low 1GHz~3GHz



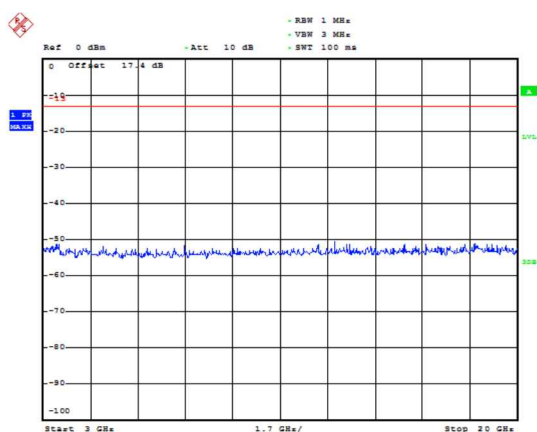
Date: 8.DEC.2018 10:22:21

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



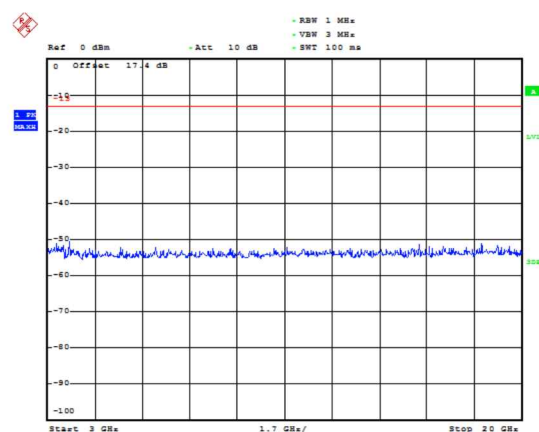
Date: 8.DEC.2018 10:29:35

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



Date: 8.DEC.2018 10:22:42

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



Date: 8.DEC.2018 10:48:26