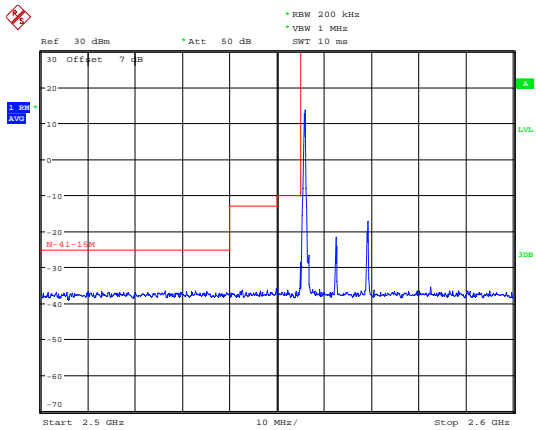


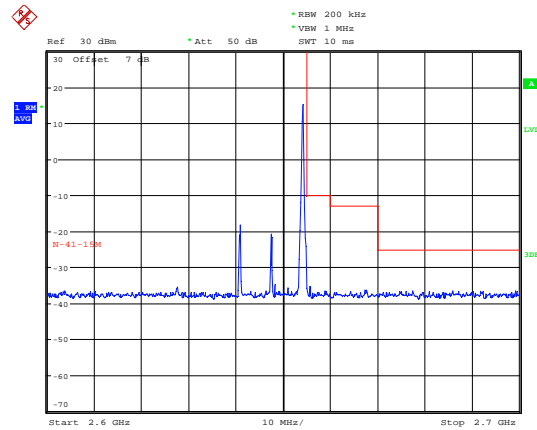


LTE Band 41 16QAM 15MHz CH-Low, 1 RB



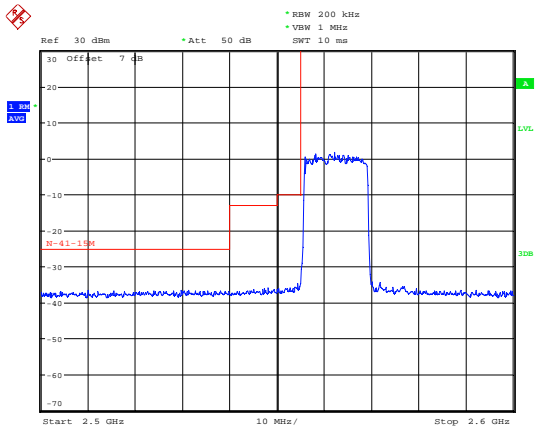
Date: 19.SEP.2019 12:49:34

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



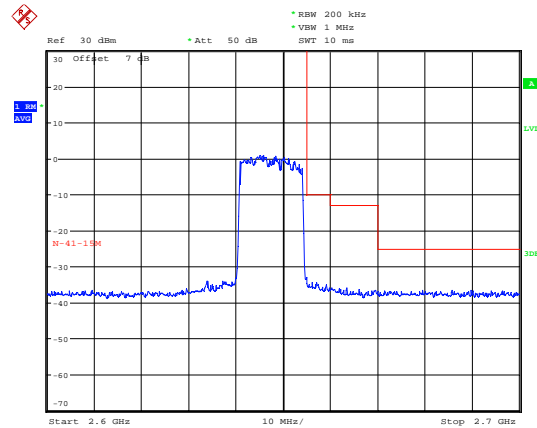
Date: 19.SEP.2019 12:50:52

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



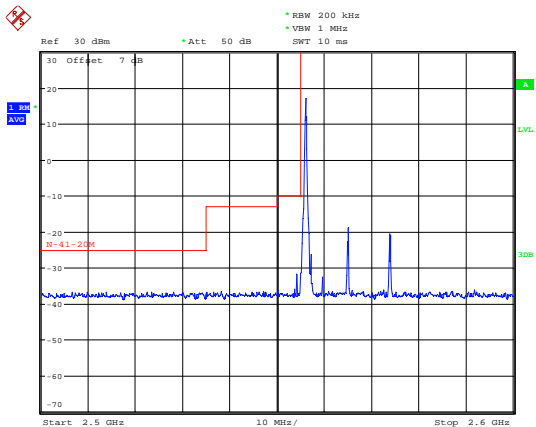
Date: 19.SEP.2019 12:49:44

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



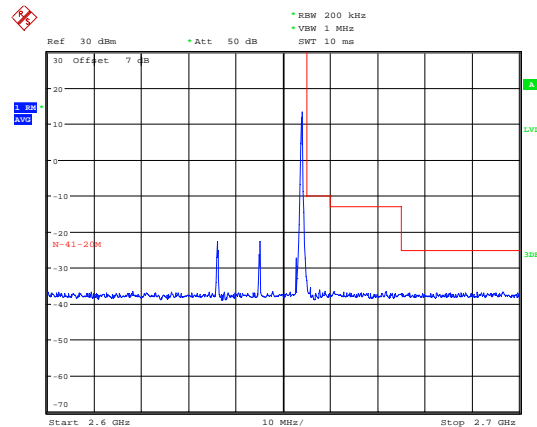
Date: 19.SEP.2019 12:51:04

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



Date: 19.SEP.2019 12:52:21

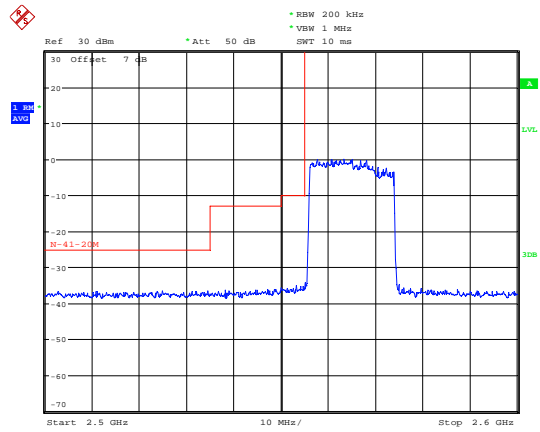
LTE Band 41 16QAM 20MHz CH-High, RB 1



Date: 19.SEP.2019 12:53:20

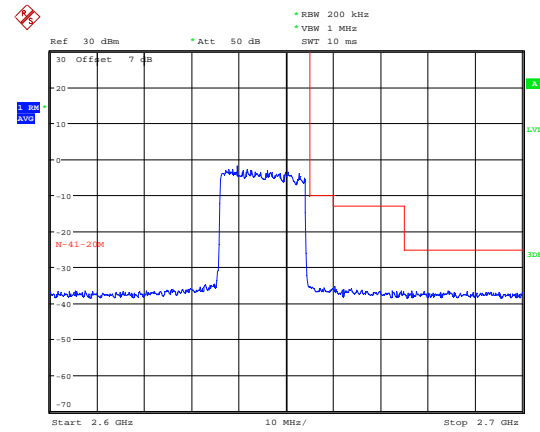


LTE Band 41 16QAM 20MHz CH-Low, 100%RB



Date: 19.SEP.2019 12:52:30

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



Date: 19.SEP.2019 12:53:29



6.4 Peak-to-Average Power Ratio (PAPR)

WCDMA Band IV	Channel	Frequency (MHz)	Peak (dBm)	Avg (dBm)	PAPR (dB)	Limit (dB)	Conclusion
RMC	1312	1712.4	25.40	22.21	3.19	≤13	PASS
	1413	1732.6	25.21	22.19	3.02	≤13	PASS
	1513	1752.6	25.32	22.35	2.97	≤13	PASS

LTE Band 4								
Modulation	Bandwidth (MHz)	Channel	Frequency (MHz)	Peak (dBm)	Avg (dBm)	PAPR (dB)	Limit (dB)	Conclusion
QPSK	1.4	19957	1710.7	26.66	21.90	4.76	≤13	PASS
		20175	1732.5	25.98	21.71	4.27	≤13	PASS
		20393	1754.3	26.06	21.77	4.29	≤13	PASS
	3	19965	1711.5	26.78	22.01	4.77	≤13	PASS
		20175	1732.5	26.24	22.08	4.16	≤13	PASS
		20385	1753.5	25.88	21.74	4.14	≤13	PASS
	5	19975	1712.5	26.75	21.97	4.78	≤13	PASS
		20175	1732.5	26.04	21.80	4.24	≤13	PASS
		20375	1752.5	26.13	21.98	4.15	≤13	PASS
	10	20000	1715	26.87	22.15	4.72	≤13	PASS
		20175	1732.5	25.97	21.78	4.19	≤13	PASS
		20350	1750	26.25	21.92	4.33	≤13	PASS
	15	20025	1717.5	26.85	22.24	4.61	≤13	PASS
		20175	1732.5	25.90	21.64	4.26	≤13	PASS
		20325	1747.5	26.17	21.71	4.46	≤13	PASS
20	20050	1720	26.62	21.98	4.64	≤13	PASS	
	20175	1732.5	26.52	22.34	4.18	≤13	PASS	
	20300	1745	26.47	22.18	4.29	≤13	PASS	
16QAM	1.4	19957	1710.7	27.02	21.46	5.56	≤13	PASS
		20175	1732.5	25.78	20.50	5.28	≤13	PASS
		20393	1754.3	25.86	20.54	5.32	≤13	PASS
	3	19965	1711.5	26.46	20.77	5.69	≤13	PASS
		20175	1732.5	26.37	21.35	5.02	≤13	PASS
		20385	1753.5	25.79	20.71	5.08	≤13	PASS
	5	19975	1712.5	26.33	20.56	5.77	≤13	PASS
		20175	1732.5	25.92	20.86	5.06	≤13	PASS
		20375	1752.5	25.91	20.84	5.07	≤13	PASS
	10	20000	1715	26.27	20.66	5.61	≤13	PASS



		20175	1732.5	26.20	21.17	5.03	≤13	PASS
		20350	1750	25.98	20.62	5.36	≤13	PASS
	15	20025	1717.5	26.53	20.93	5.60	≤13	PASS
		20175	1732.5	26.16	21.09	5.07	≤13	PASS
		20325	1747.5	25.89	20.49	5.40	≤13	PASS
	20	20050	1720	26.50	21.02	5.48	≤13	PASS
		20175	1732.5	26.72	21.85	4.87	≤13	PASS
		20300	1745	26.62	21.48	5.14	≤13	PASS

LTE Band 12								
Modulation	Bandwidth (MHz)	Channel	Frequency (MHz)	Peak (dBm)	Avg (dBm)	PAPR (dB)	Limit (dB)	Conclusion
QPSK	1.4	23017	699.7	27.50	23.35	4.15	≤13	PASS
		23095	707.5	27.78	23.31	4.47	≤13	PASS
		23173	715.3	27.14	23.40	3.74	≤13	PASS
	3	23025	700.5	27.56	23.48	4.08	≤13	PASS
		23095	707.5	27.98	23.42	4.56	≤13	PASS
		23165	714.5	27.09	23.32	3.77	≤13	PASS
	5	23035	701.5	27.47	23.29	4.18	≤13	PASS
		23095	707.5	27.55	23.12	4.43	≤13	PASS
		23155	713.5	27.46	23.66	3.80	≤13	PASS
	10	23060	704	27.66	23.58	4.08	≤13	PASS
		23095	707.5	27.68	23.52	4.16	≤13	PASS
		23130	711	27.67	23.20	4.47	≤13	PASS
16QAM	1.4	23017	699.7	27.65	22.76	4.89	≤13	PASS
		23095	707.5	27.80	22.50	5.30	≤13	PASS
		23173	715.3	27.09	22.38	4.71	≤13	PASS
	3	23025	700.5	27.44	22.38	5.06	≤13	PASS
		23095	707.5	28.05	22.89	5.16	≤13	PASS
		23165	714.5	27.07	22.43	4.64	≤13	PASS
	5	23035	701.5	27.32	22.11	5.21	≤13	PASS
		23095	707.5	27.60	22.39	5.21	≤13	PASS
		23155	713.5	27.40	22.61	4.79	≤13	PASS
	10	23060	704	27.52	22.54	4.98	≤13	PASS
		23095	707.5	27.81	22.81	5.00	≤13	PASS
		23130	711	27.39	21.92	5.47	≤13	PASS



LTE Band 13								
Modulation	Bandwidth (MHz)	Channel	Frequency (MHz)	Peak (dBm)	Avg (dBm)	PAPR (dB)	Limit (dB)	Conclusion
QPSK	5	23205	779.5	27.22	22.80	4.42	≤13	PASS
		23230	782	27.21	22.78	4.43	≤13	PASS
		23255	784.5	27.28	22.89	4.39	≤13	PASS
	10	23230	782	27.63	23.01	4.62	≤13	PASS
16QAM	5	23205	779.5	27.08	21.85	5.23	≤13	PASS
		23230	782	26.81	21.37	5.44	≤13	PASS
		23255	784.5	27.50	22.41	5.09	≤13	PASS
	10	23230	782	27.70	22.67	5.03	≤13	PASS

LTE Band 41								
Modulation	Bandwidth ((MHz))	Channel	Frequency (MHz)	Peak (dBm)	Avg (dBm)	PAPR (dB)	Limit (dB)	Conclusion
QPSK	5	39675	2498.5	25.69	17.48	8.21	≤13	PASS
		40620	2593	25.57	17.48	8.09	≤13	PASS
		41565	2687.5	24.99	17.30	7.69	≤13	PASS
	10	39700	2501	25.91	18.18	7.73	≤13	PASS
		40620	2593	25.65	17.81	7.84	≤13	PASS
		41540	2685	25.16	18.39	6.77	≤13	PASS
	15	39725	2503.5	25.96	18.40	7.56	≤13	PASS
		40620	2593	25.72	17.81	7.91	≤13	PASS
		41515	2682.5	25.01	17.33	7.68	≤13	PASS
	20	39750	2506	25.70	17.49	8.21	≤13	PASS
		40620	2593	25.73	17.19	8.54	≤13	PASS
		41490	2680	25.09	17.34	7.75	≤13	PASS
16QAM	5	39675	2498.5	25.89	17.30	8.59	≤13	PASS
		40620	2593	25.72	16.92	8.80	≤13	PASS
		41565	2687.5	24.85	16.20	8.65	≤13	PASS
	10	39700	2501	25.79	17.10	8.69	≤13	PASS
		40620	2593	26.03	17.94	8.09	≤13	PASS
		41540	2685	25.24	17.25	7.99	≤13	PASS
	15	39725	2503.5	25.72	16.66	9.06	≤13	PASS
40620		2593	26.09	16.80	9.29	≤13	PASS	



		41515	2682.5	25.04	16.30	8.74	≤13	PASS
	20	39750	2506	25.91	17.07	8.84	≤13	PASS
		40620	2593	25.46	16.26	9.20	≤13	PASS
		41490	2680	25.12	16.61	8.51	≤13	PASS

6.5 Frequency Stability

WCDMA Band IV						
Condition		Freq.Error (Hz)	Freq.Error (Hz)	Frequency Stability (ppm)	Frequency Stability (ppm)	Verdict
Temperature	Voltage	QPSK	BPSK	QPSK	BPSK	
Normal (25°C)	Normal	16.79	15.75	0.00893	0.00838	PASS
Extreme (90°C)		7.05	15.34	0.00375	0.00816	PASS
Extreme (80°C)		16.82	1.36	0.00895	0.00073	PASS
Extreme (70°C)		7.52	4.83	0.00400	0.00257	PASS
Extreme (60°C)		17.21	13.42	0.00915	0.00714	PASS
Extreme (50°C)		11.26	8.72	0.00599	0.00464	PASS
Extreme (40°C)		2.12	3.16	0.00113	0.00168	PASS
Extreme (30°C)		4.62	13.59	0.00246	0.00723	PASS
Extreme (20°C)		6.67	13.46	0.00355	0.00716	PASS
Extreme (10°C)		2.84	17.86	0.00151	0.00950	PASS
Extreme (0°C)		6.09	16.95	0.00324	0.00901	PASS
Extreme (-10°C)		15.91	7.34	0.00847	0.00391	PASS
Extreme (-20°C)		11.02	6.02	0.00586	0.00320	PASS
Extreme (-30°C)		15.57	2.57	0.00828	0.00137	PASS
Extreme (-40°C)		15.74	12.22	0.00837	0.00650	PASS
25°C	LV	1.83	12.95	0.00097	0.00689	PASS
	HV	3.96	14.48	0.00211	0.00770	PASS

LTE Band 4						
Condition		Freq.Error (Hz)	Freq.Error (Hz)	Frequency Stability (ppm)	Frequency Stability (ppm)	Verdict
BANDWIDTH	20MHz	16QAM	QPSK	16QAM	QPSK	
Normal (25°C)	Normal	17.42	2.16	0.00927	0.00115	PASS
Extreme (90°C)		17.81	3.82	0.00948	0.00203	PASS
Extreme (80°C)		13.50	4.81	0.00718	0.00256	PASS
Extreme (70°C)		2.79	15.77	0.00148	0.00839	PASS
Extreme (60°C)		14.48	13.09	0.00770	0.00696	PASS
Extreme (50°C)		17.11	14.84	0.00910	0.00789	PASS
Extreme (40°C)		12.30	11.67	0.00654	0.00621	PASS
Extreme (30°C)		16.28	1.96	0.00866	0.00104	PASS



Extreme (20°C)		3.76	4.82	0.00200	0.00257	PASS
Extreme (10°C)		7.85	16.25	0.00418	0.00865	PASS
Extreme (0°C)		3.13	3.48	0.00167	0.00185	PASS
Extreme (-10°C)		9.70	7.84	0.00516	0.00417	PASS
Extreme (-20°C)		4.42	3.18	0.00235	0.00169	PASS
Extreme (-30°C)		13.96	2.64	0.00743	0.00141	PASS
Extreme (-40°C)		1.71	10.14	0.00091	0.00539	PASS
25°C	LV	14.41	1.64	0.00767	0.00087	PASS
	HV	16.72	14.34	0.00889	0.00763	PASS

LTE Band 12						
Condition		Freq.Error (Hz)	Freq.Error (Hz)	Frequency Stability (ppm)	Frequency Stability (ppm)	Verdict
BANDWIDTH	20MHz	16QAM	QPSK	16QAM	QPSK	
Temperature	Voltage					
Normal (25°C)	Normal	11.46	15.83	0.00610	0.00842	PASS
Extreme (90°C)		17.41	10.00	0.00926	0.00532	PASS
Extreme (80°C)		11.11	8.60	0.00591	0.00457	PASS
Extreme (70°C)		7.18	4.22	0.00382	0.00224	PASS
Extreme (60°C)		11.56	9.51	0.00615	0.00506	PASS
Extreme (50°C)		13.33	15.14	0.00709	0.00805	PASS
Extreme (40°C)		16.07	15.62	0.00855	0.00831	PASS
Extreme (30°C)		13.78	16.73	0.00733	0.00890	PASS
Extreme (20°C)		2.56	13.36	0.00136	0.00710	PASS
Extreme (10°C)		12.11	1.81	0.00644	0.00096	PASS
Extreme (0°C)		17.49	4.80	0.00930	0.00255	PASS
Extreme (-10°C)		8.57	15.61	0.00456	0.00830	PASS
Extreme (-20°C)		2.44	8.25	0.00130	0.00439	PASS
Extreme (-30°C)		3.18	12.91	0.00169	0.00687	PASS
Extreme (-40°C)		12.64	11.54	0.00672	0.00614	PASS
25°C		LV	5.98	2.22	0.00318	0.00118
	HV	3.07	10.24	0.00163	0.00545	PASS

LTE Band 13						
Condition		Freq.Error (Hz)	Freq.Error (Hz)	Frequency Stability (ppm)	Frequency Stability (ppm)	Verdict
BANDWIDTH	20MHz	16QAM	QPSK	16QAM	QPSK	
Temperature	Voltage					
Normal (25°C)	Normal	12.28	7.35	0.00653	0.00391	PASS
Extreme (90°C)		15.05	16.32	0.00801	0.00868	PASS
Extreme (80°C)		14.91	7.70	0.00793	0.00410	PASS



Extreme (70°C)		15.42	3.35	0.00820	0.00178	PASS
Extreme (60°C)		7.56	16.23	0.00402	0.00863	PASS
Extreme (50°C)		4.72	3.53	0.00251	0.00188	PASS
Extreme (40°C)		11.90	14.62	0.00633	0.00778	PASS
Extreme (30°C)		4.67	14.01	0.00248	0.00745	PASS
Extreme (20°C)		14.61	9.21	0.00777	0.00490	PASS
Extreme (10°C)		1.34	8.41	0.00071	0.00447	PASS
Extreme (0°C)		6.10	9.93	0.00325	0.00528	PASS
Extreme (-10°C)		9.19	4.05	0.00489	0.00215	PASS
Extreme (-20°C)		1.58	6.78	0.00084	0.00361	PASS
Extreme (-30°C)		8.27	12.61	0.00440	0.00671	PASS
Extreme (-40°C)		17.92	3.63	0.00953	0.00193	PASS
25°C	LV	3.96	14.87	0.00211	0.00791	PASS
	HV	5.12	16.15	0.00272	0.00859	PASS

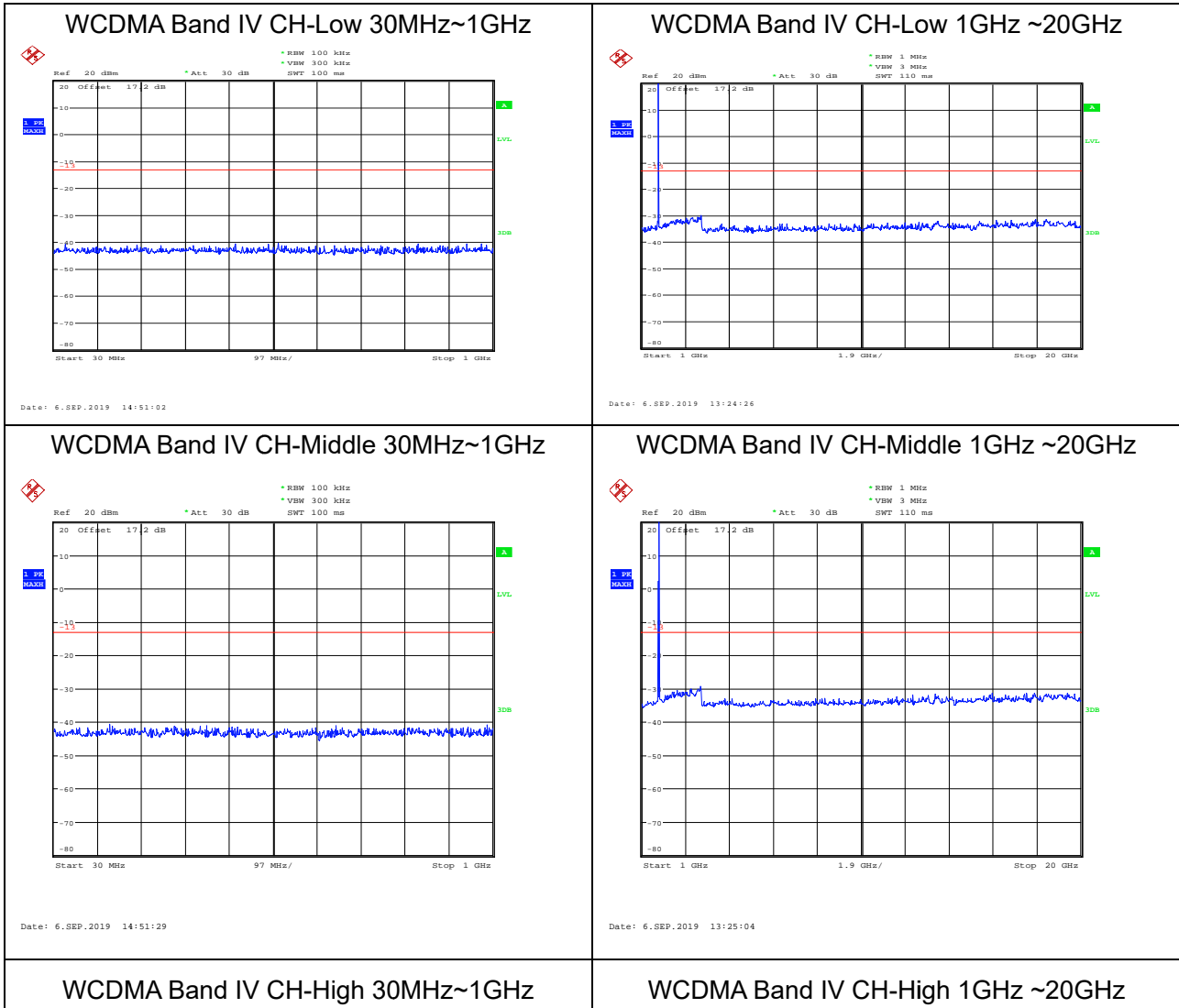
LTE Band 17						
Condition		Freq.Error (Hz)	Freq.Error (Hz)	Frequency Stability (ppm)	Frequency Stability (ppm)	Verdict
BANDWIDTH	20MHz					
Temperature	Voltage	16QAM	QPSK	16QAM	QPSK	
Normal (25°C)	Normal	12.54	13.37	0.00667	0.00711	PASS
Extreme (90°C)		10.16	5.39	0.00540	0.00287	PASS
Extreme (80°C)		5.58	7.29	0.00297	0.00388	PASS
Extreme (70°C)		17.24	1.43	0.00917	0.00076	PASS
Extreme (60°C)		7.14	4.64	0.00380	0.00247	PASS
Extreme (50°C)		13.51	6.29	0.00719	0.00335	PASS
Extreme (40°C)		13.21	4.22	0.00702	0.00224	PASS
Extreme (30°C)		1.57	12.62	0.00084	0.00671	PASS
Extreme (20°C)		17.14	9.95	0.00912	0.00529	PASS
Extreme (10°C)		15.28	17.44	0.00813	0.00927	PASS
Extreme (0°C)		8.16	12.30	0.00434	0.00654	PASS
Extreme (-10°C)		4.01	11.65	0.00213	0.00620	PASS
Extreme (-20°C)		16.18	6.32	0.00861	0.00336	PASS
Extreme (-30°C)		15.25	2.82	0.00811	0.00150	PASS
Extreme (-40°C)		10.86	17.79	0.00578	0.00946	PASS
25°C		LV	10.99	11.96	0.00585	0.00636
	HV	14.75	2.41	0.00785	0.00128	PASS

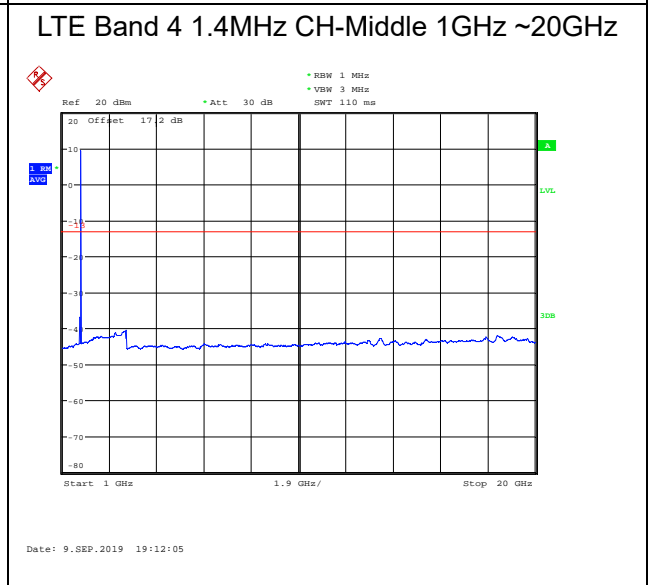
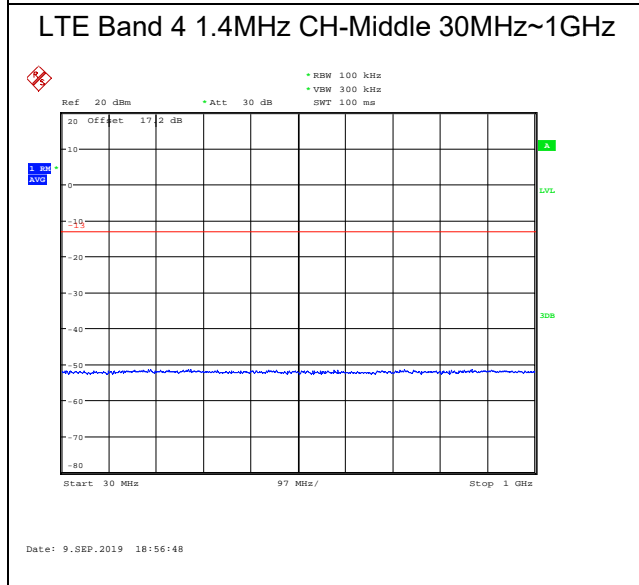
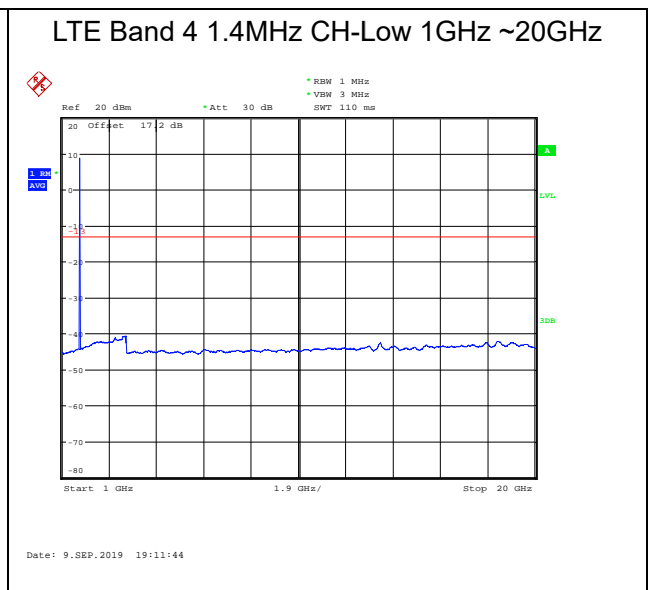
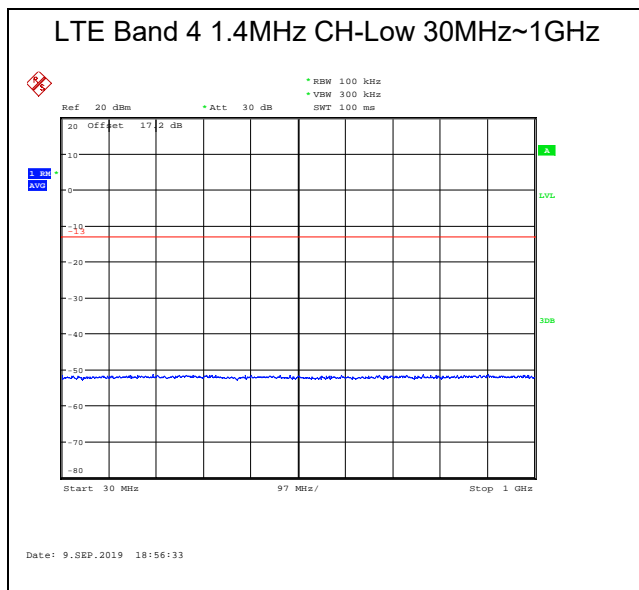
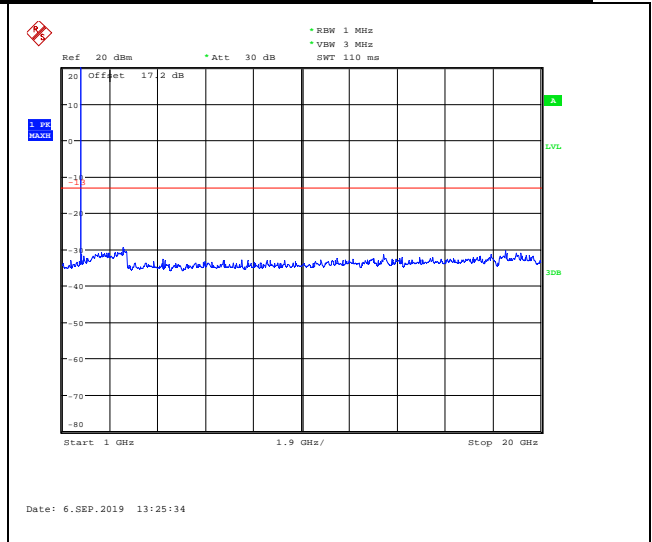
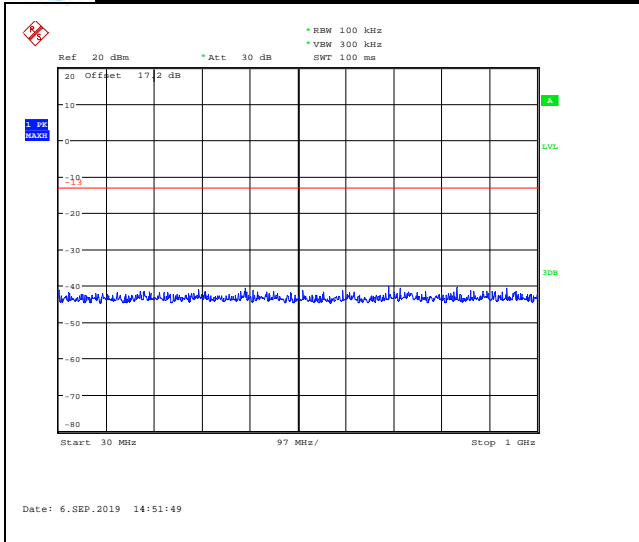


LTE Band 41						
Condition		Freq.Error (Hz)	Freq.Error (Hz)	Frequency Stability (ppm)	Frequency Stability (ppm)	Verdict
BANDWIDTH	20MHz					
Temperature	Voltage	16QAM	QPSK	16QAM	QPSK	
Normal (25°C)	Normal	15.31	6.82	0.00814	0.00363	PASS
Extreme (90°C)		15.34	5.74	0.00816	0.00305	PASS
Extreme (80°C)		4.90	4.33	0.00261	0.00230	PASS
Extreme (70°C)		15.33	1.73	0.00815	0.00092	PASS
Extreme (60°C)		12.55	10.59	0.00667	0.00563	PASS
Extreme (50°C)		13.63	7.94	0.00725	0.00422	PASS
Extreme (40°C)		13.17	10.21	0.00701	0.00543	PASS
Extreme (30°C)		14.20	11.33	0.00756	0.00603	PASS
Extreme (20°C)		8.45	9.63	0.00449	0.00512	PASS
Extreme (10°C)		10.06	4.04	0.00535	0.00215	PASS
Extreme (0°C)		4.66	9.06	0.00248	0.00482	PASS
Extreme (-10°C)		16.73	8.35	0.00890	0.00444	PASS
Extreme (-20°C)		10.81	14.82	0.00575	0.00788	PASS
Extreme (-30°C)		14.67	16.00	0.00780	0.00851	PASS
Extreme (-40°C)		2.13	7.99	0.00113	0.00425	PASS
25°C	LV	3.66	5.00	0.00195	0.00266	PASS
	HV	8.20	7.45	0.00436	0.00396	PASS

6.6 Spurious Emissions at Antenna Terminals

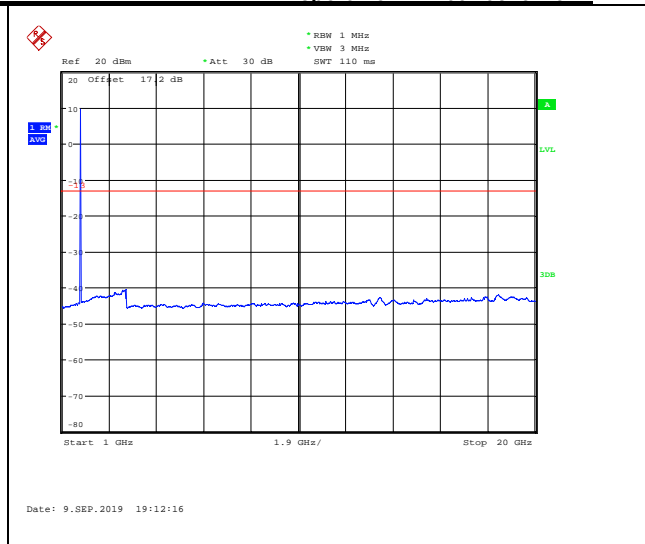
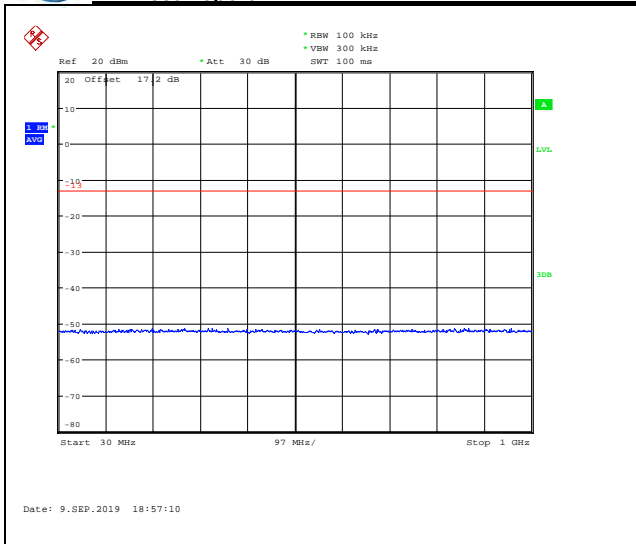
Sweep the whole frequency band through the range from 9kHz to the 10th harmonic of the carrier, the emissions more than 20 dB below the limit are not reported. The signal beyond the limit is carrier.





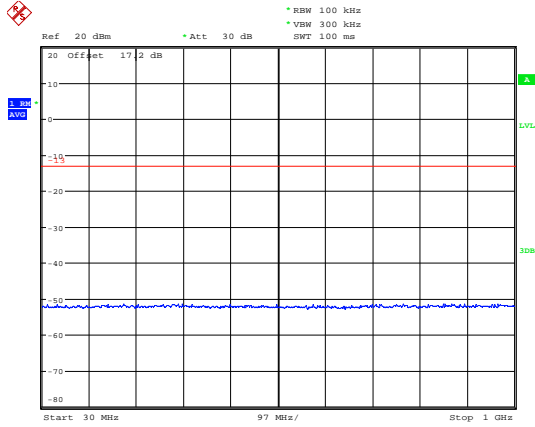
LTE Band 4 1.4MHz CH-High 30MHz~1GHz

LTE Band 4 1.4MHz CH-High 1GHz~20GHz



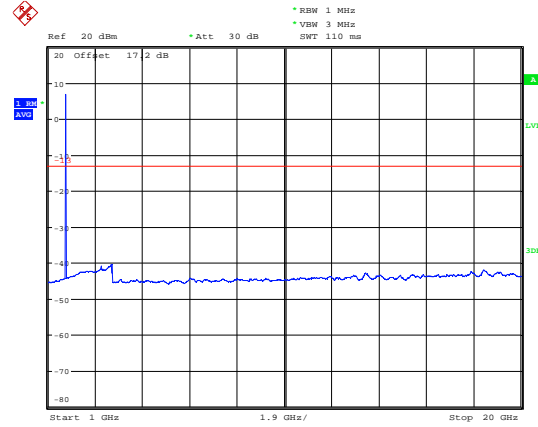


LTE Band 4 3MHz CH-Low 30MHz~1GHz



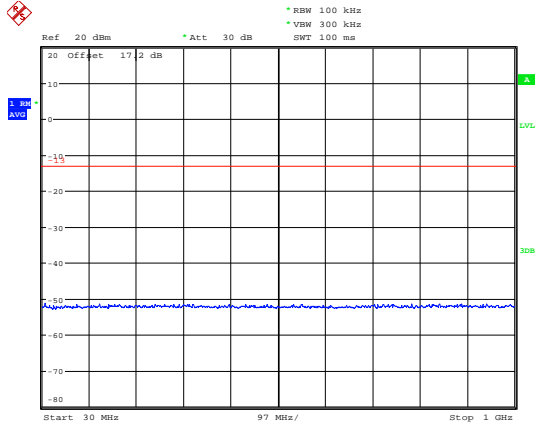
Date: 9.SEP.2019 18:57:27

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



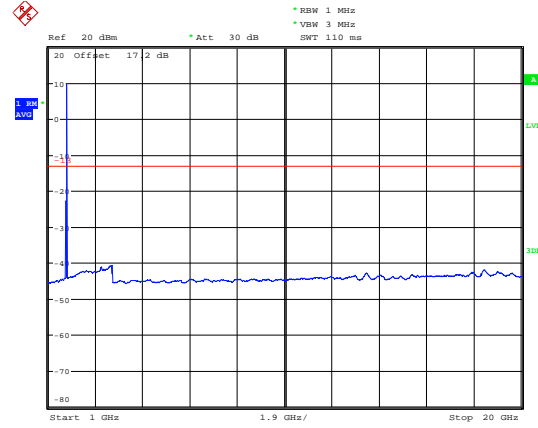
Date: 9.SEP.2019 19:12:33

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



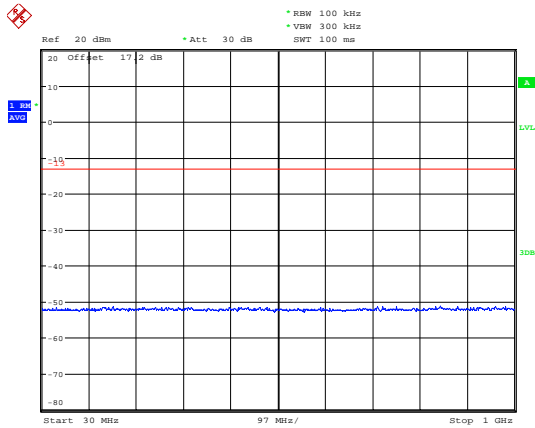
Date: 9.SEP.2019 18:57:38

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



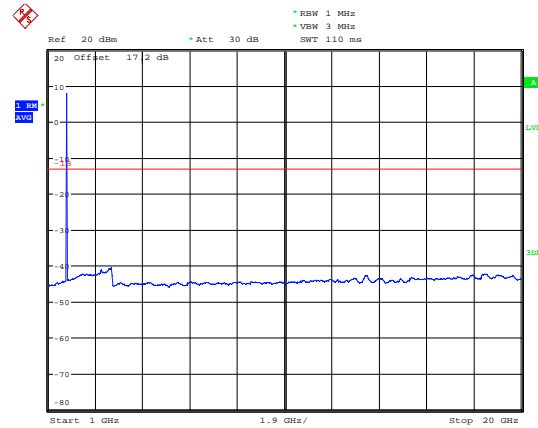
Date: 9.SEP.2019 19:12:54

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



Date: 9.SEP.2019 18:57:47

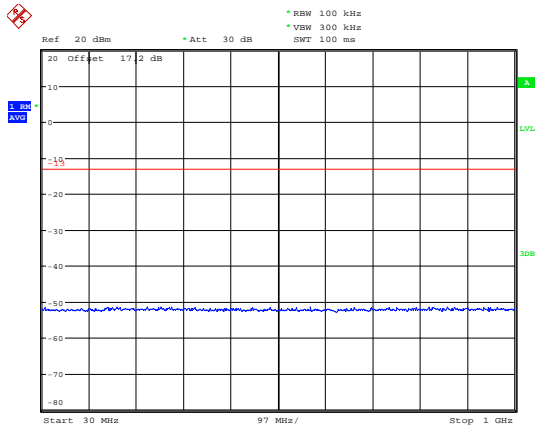
LTE Band 4 3MHz CH-High 1GHz ~20GHz



Date: 9.SEP.2019 19:13:17

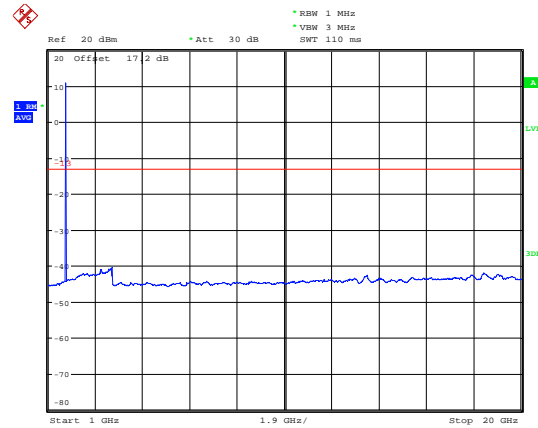


LTE Band 4 5MHz CH-Low 30MHz~1GHz



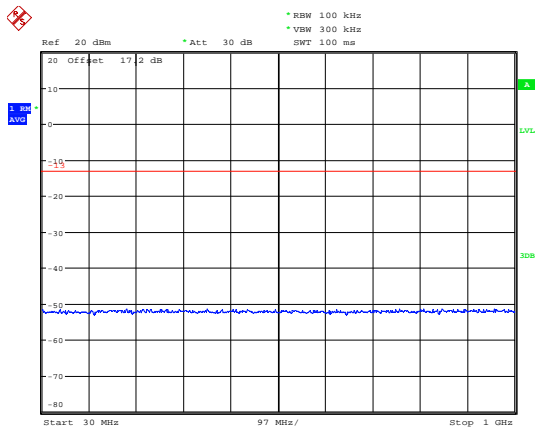
Date: 9.SEP.2019 18:58:13

LTE Band 4 5MHz CH-Low 1GHz ~20GHz



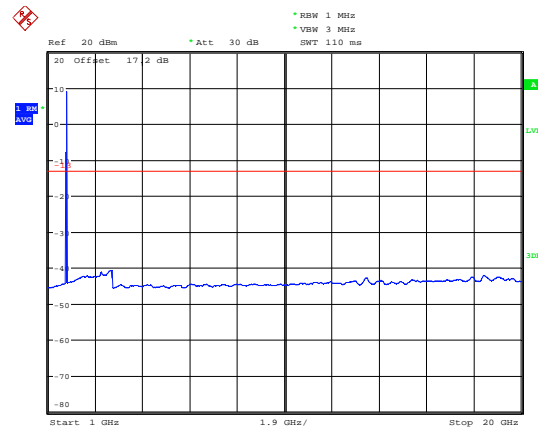
Date: 9.SEP.2019 19:15:24

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



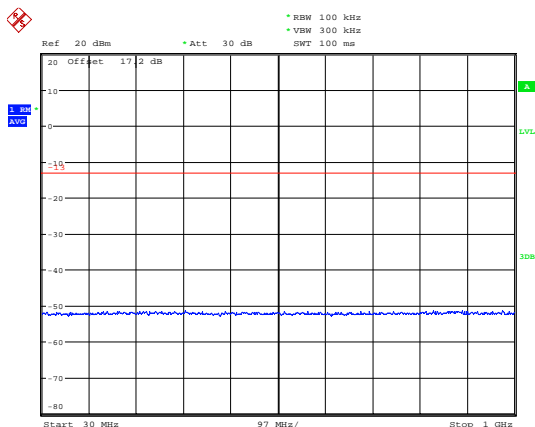
Date: 9.SEP.2019 18:58:36

LTE Band 4 5MHz CH-Middle 1GHz ~20GHz



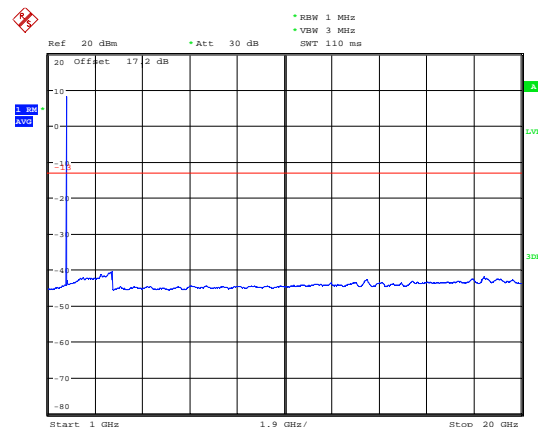
Date: 9.SEP.2019 19:15:07

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



Date: 9.SEP.2019 18:58:52

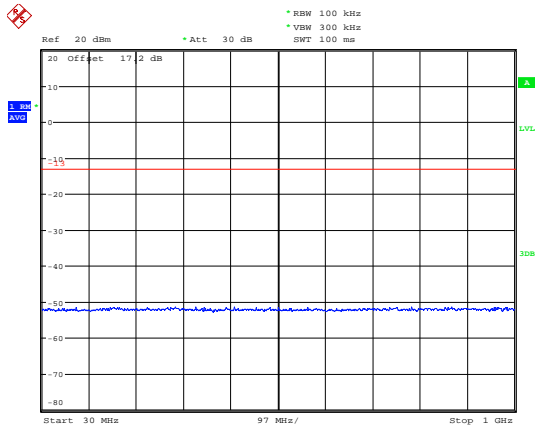
LTE Band 4 5MHz CH-High 1GHz ~20GHz



Date: 9.SEP.2019 19:14:23

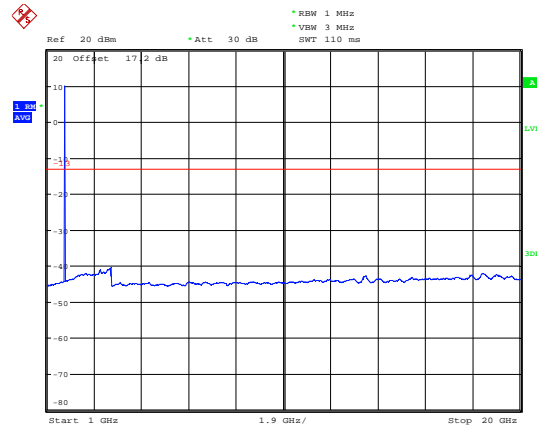


LTE Band 4 10MHz CH-Low 30MHz~1GHz



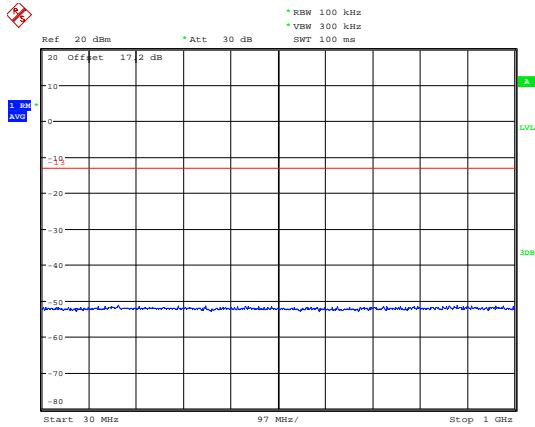
Date: 9.SEP.2019 18:59:57

LTE Band 4 10MHz CH-Low 1GHz ~20GHz



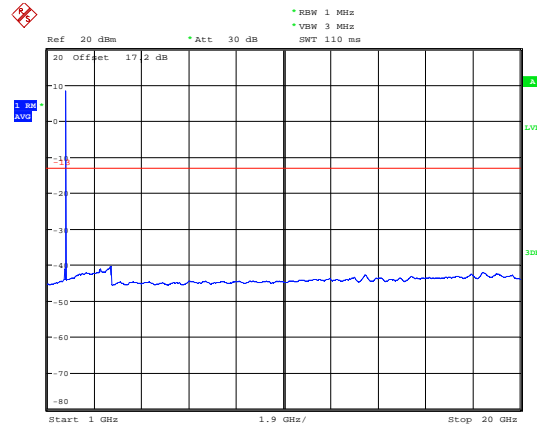
Date: 9.SEP.2019 19:15:41

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



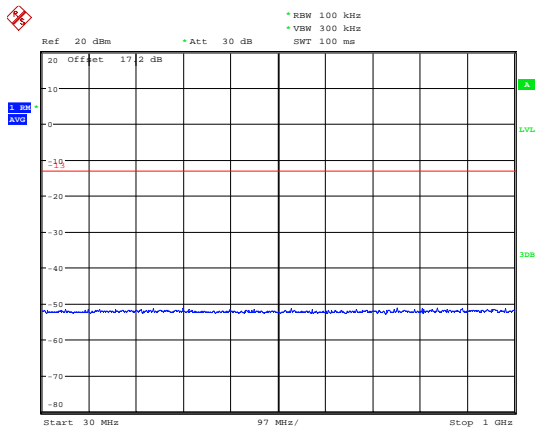
Date: 9.SEP.2019 19:00:18

LTE Band 4 10MHz CH-Middle 1GHz ~20GHz



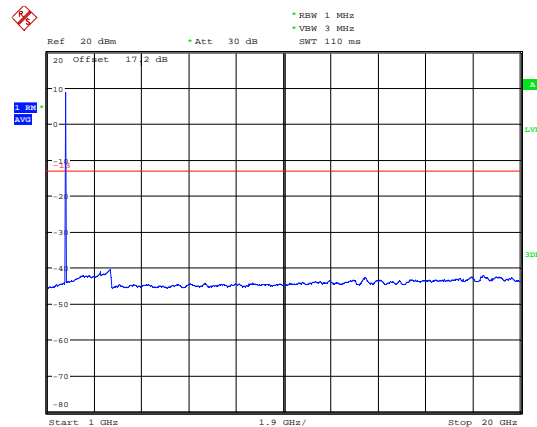
Date: 9.SEP.2019 19:16:03

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



Date: 9.SEP.2019 19:00:29

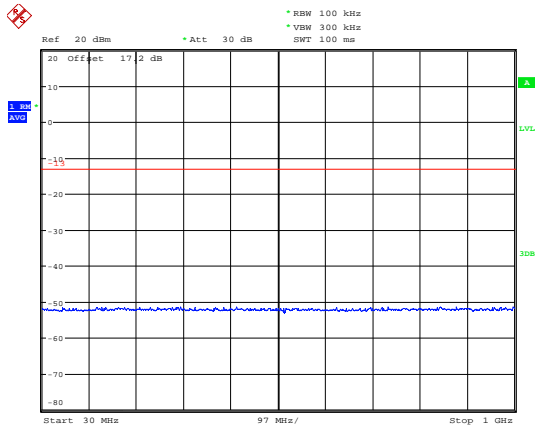
LTE Band 4 10MHz CH-High 1GHz ~20GHz



Date: 9.SEP.2019 19:16:17

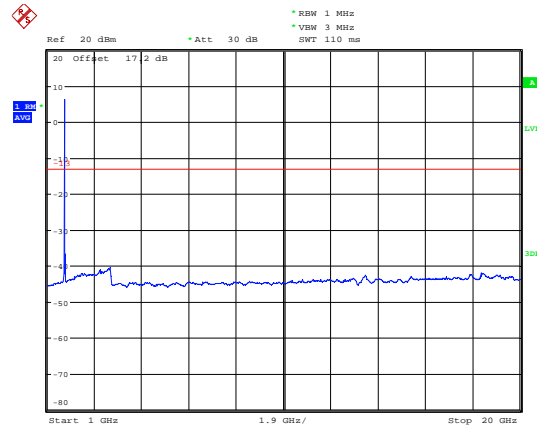


LTE Band 4 15MHz CH-Low 30MHz~1GHz



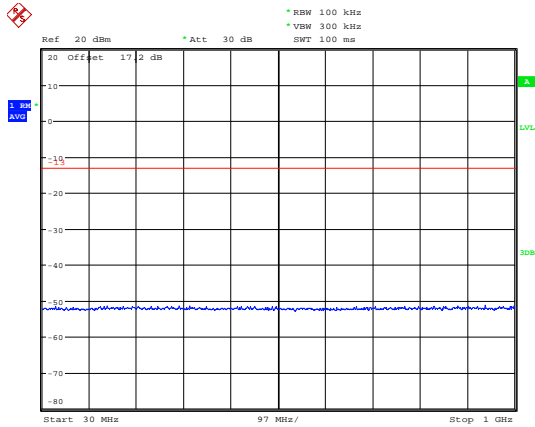
Date: 9.SEP.2019 19:01:23

LTE Band 4 15MHz CH-Low 1GHz ~20GHz



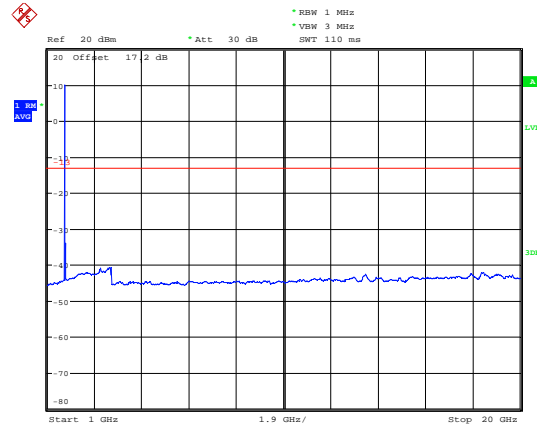
Date: 9.SEP.2019 19:18:43

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



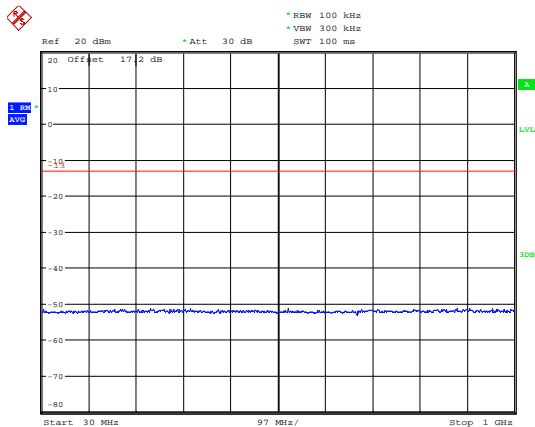
Date: 9.SEP.2019 19:02:14

LTE Band 4 15MHz CH-Middle 1GHz ~20GHz



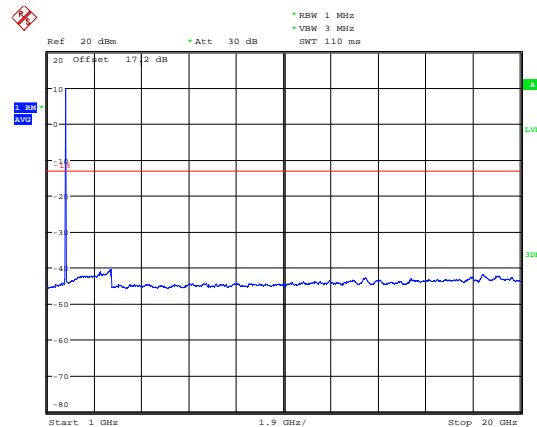
Date: 9.SEP.2019 19:19:09

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



Date: 9.SEP.2019 19:02:22

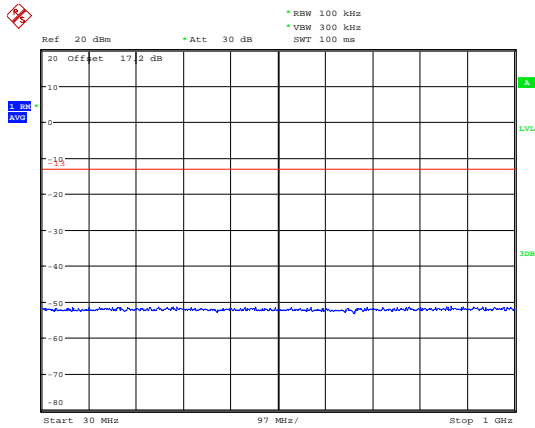
LTE Band 4 15MHz CH-High 1GHz ~20GHz



Date: 9.SEP.2019 19:19:26

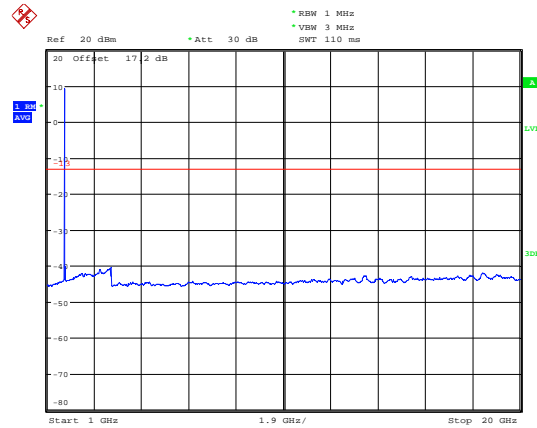


LTE Band 4 20MHz CH-Low 30MHz~1GHz



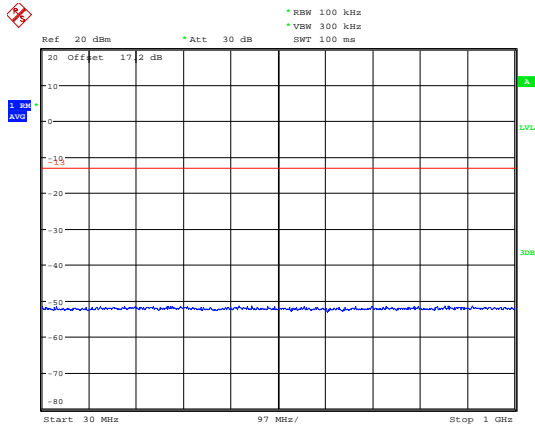
Date: 9.SEP.2019 19:02:37

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



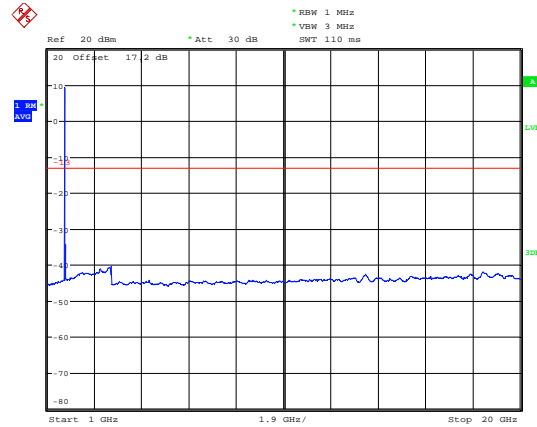
Date: 9.SEP.2019 19:19:47

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



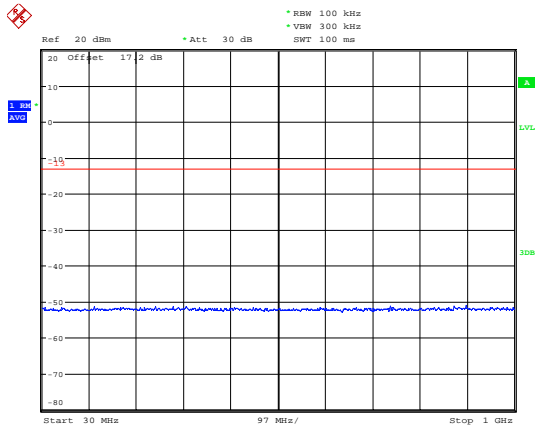
Date: 9.SEP.2019 19:02:52

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



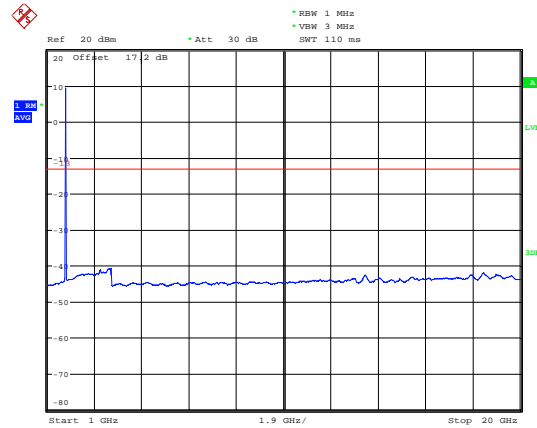
Date: 9.SEP.2019 19:19:59

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



Date: 9.SEP.2019 19:03:02

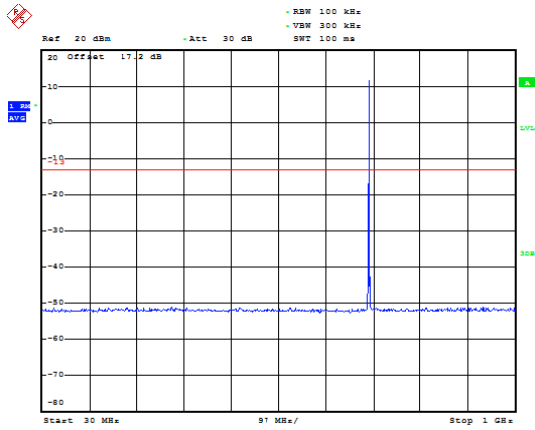
LTE Band 4 20MHz CH-High 1GHz ~20GHz



Date: 9.SEP.2019 19:20:15

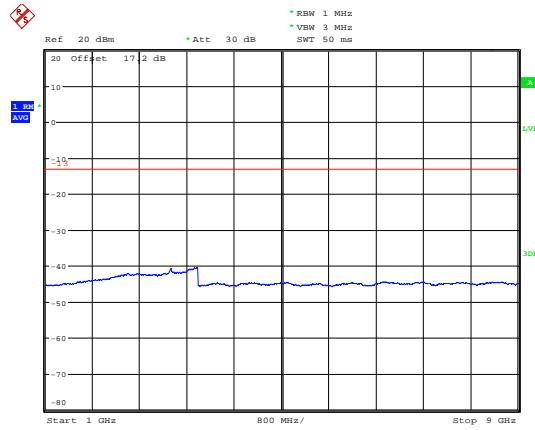


LTE Band 12 1.4MHz CH-Low 30MHz~1GHz



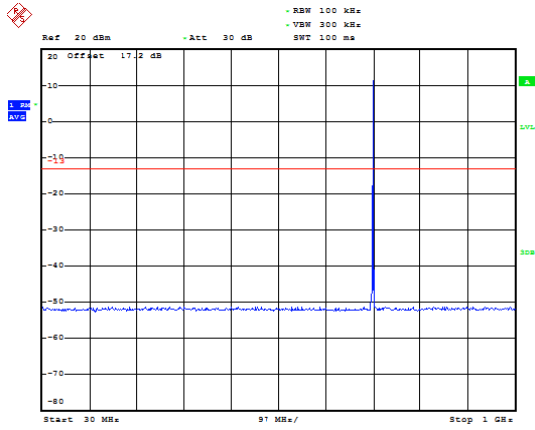
Date: 9.SEP.2019 19:22:56

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



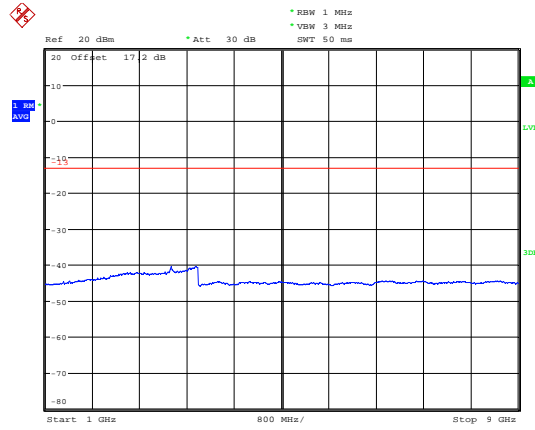
Date: 9.SEP.2019 19:29:04

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



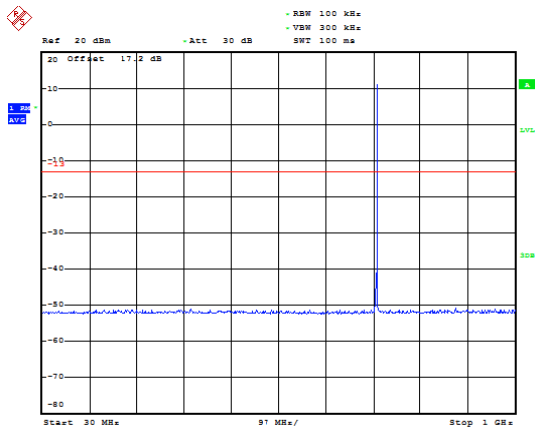
Date: 9.SEP.2019 19:22:55

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



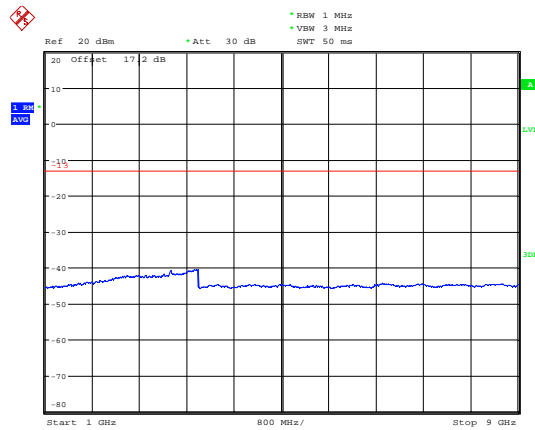
Date: 9.SEP.2019 19:29:18

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



Date: 9.SEP.2019 19:23:10

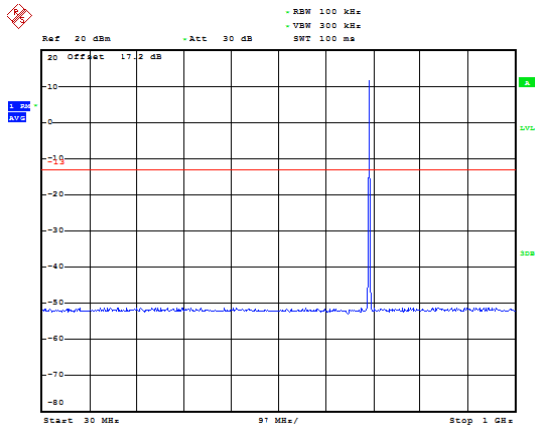
LTE Band 12 1.4MHz CH-High 1GHz ~9GHz



Date: 9.SEP.2019 19:29:33

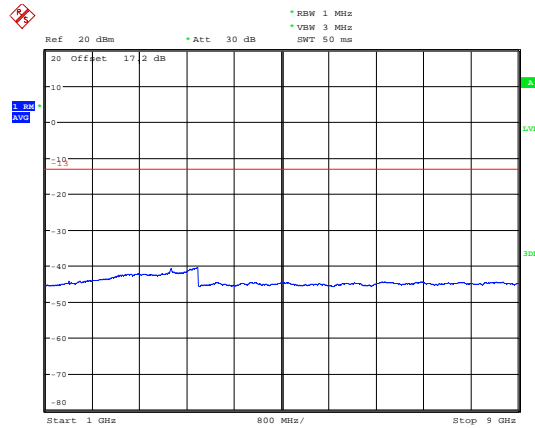


LTE Band 12 3MHz CH-Low 30MHz~1GHz



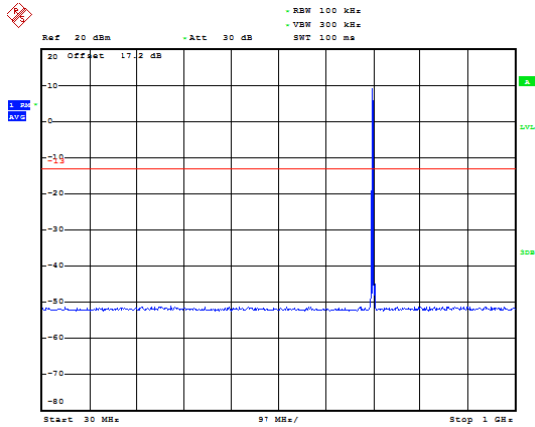
Date: 9.SEP.2019 19:23:28

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



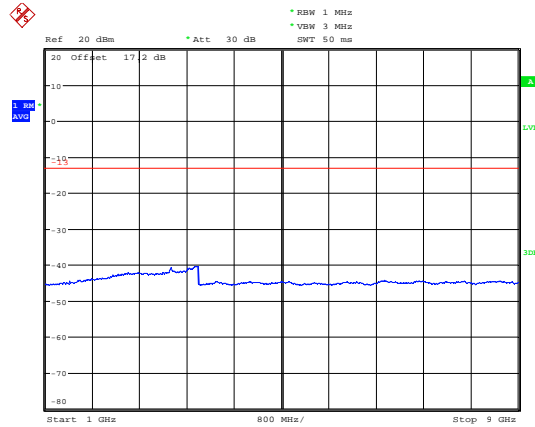
Date: 9.SEP.2019 19:29:52

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



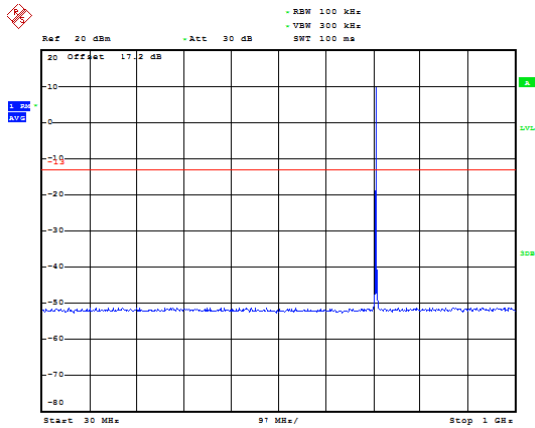
Date: 9.SEP.2019 19:23:45

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



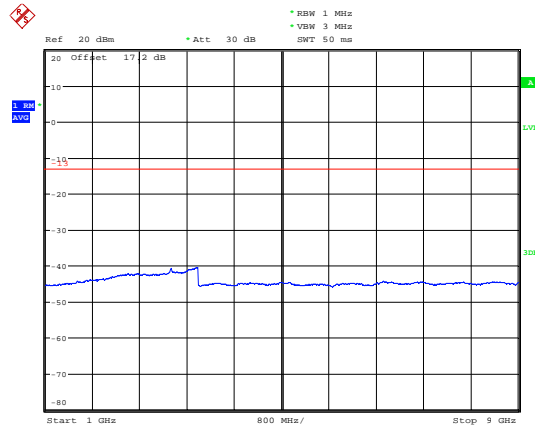
Date: 9.SEP.2019 19:30:07

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



Date: 9.SEP.2019 19:24:08

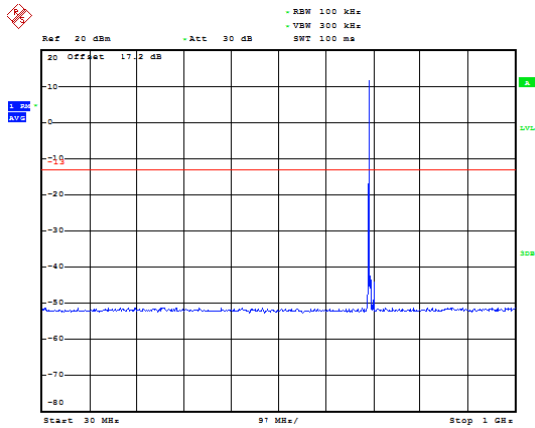
LTE Band 12 3MHz CH-High 1GHz ~9GHz



Date: 9.SEP.2019 19:30:22

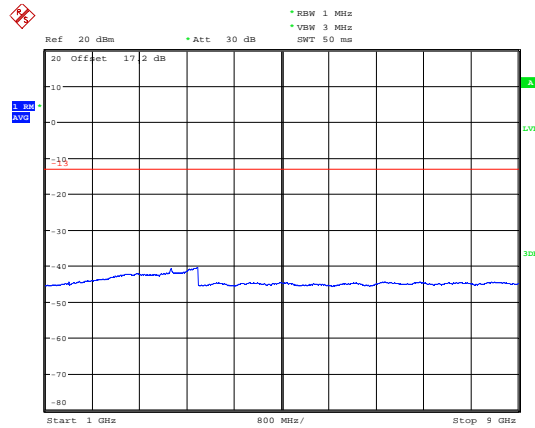


LTE Band 12 5MHz CH-Low 30MHz~1GHz



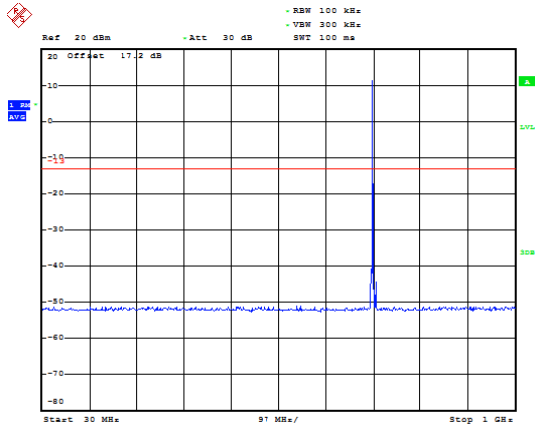
Date: 9.SEP.2019 19:24:20

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



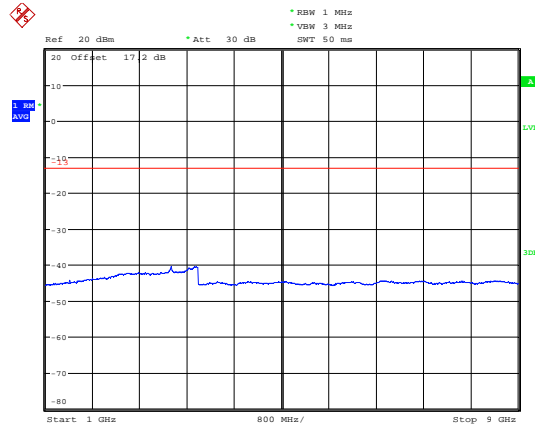
Date: 9.SEP.2019 19:30:43

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



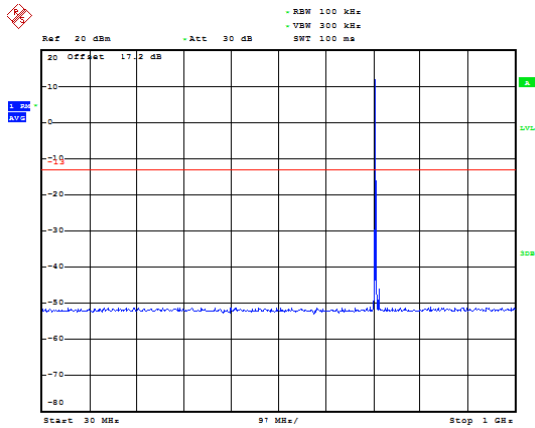
Date: 9.SEP.2019 19:25:01

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



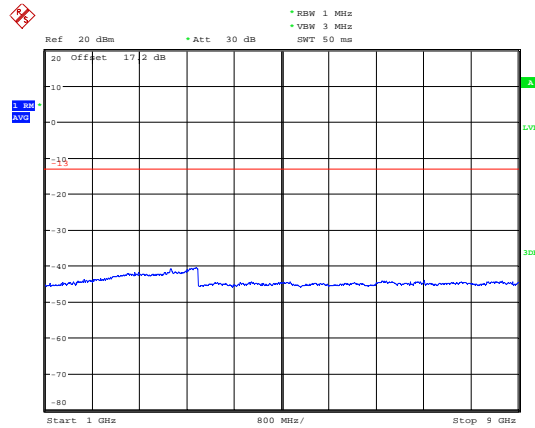
Date: 9.SEP.2019 19:31:02

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

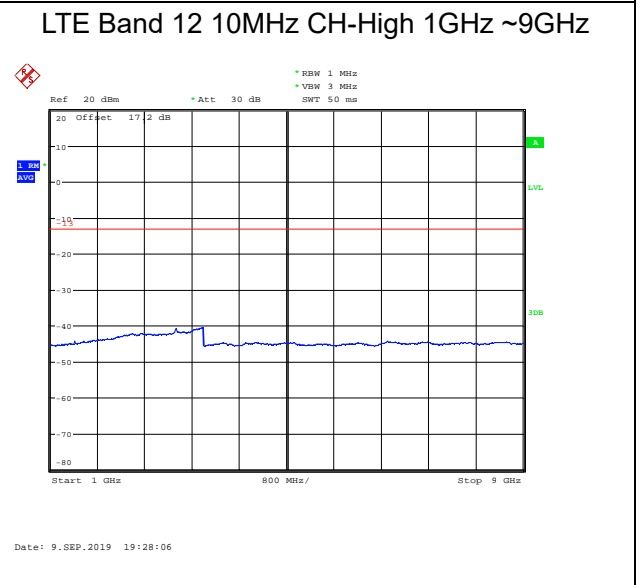
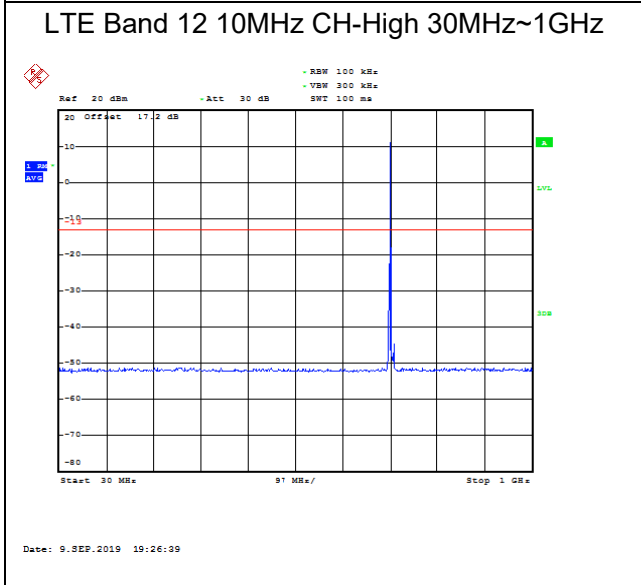
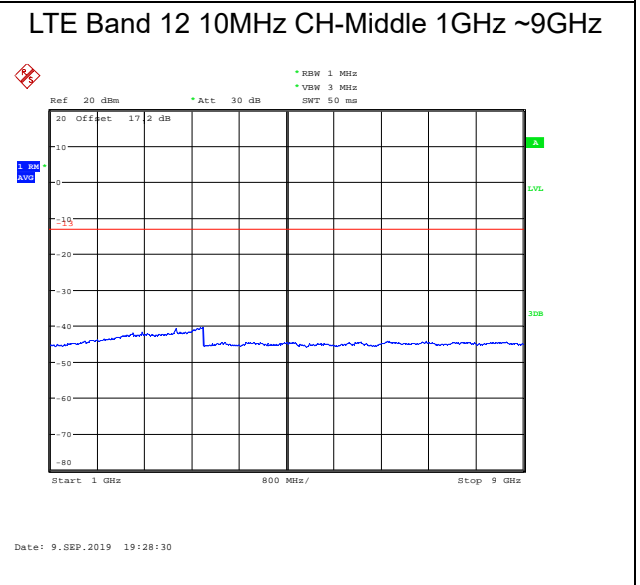
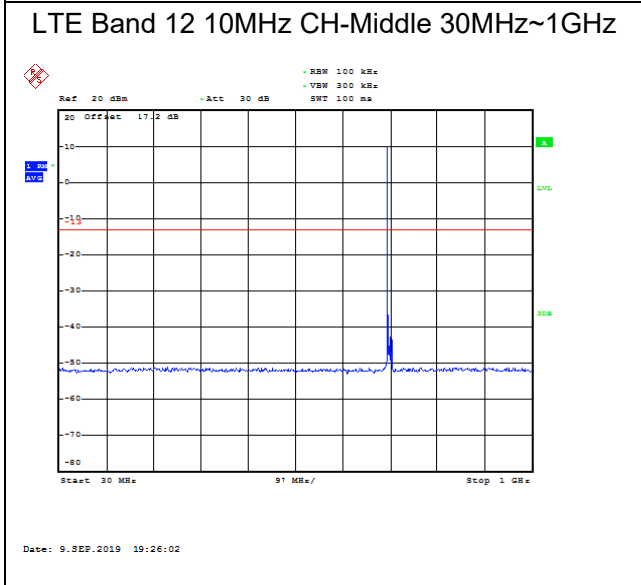
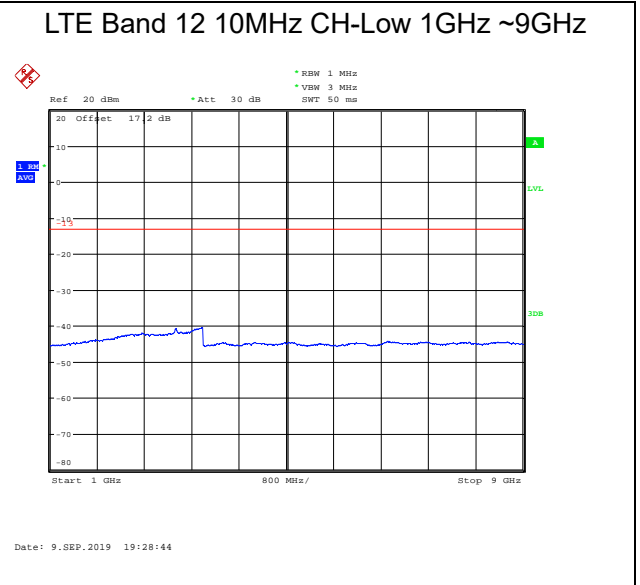
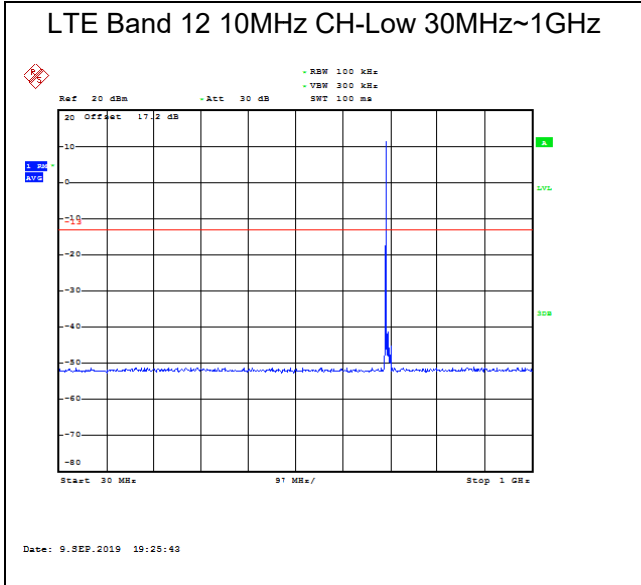


Date: 9.SEP.2019 19:25:19

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

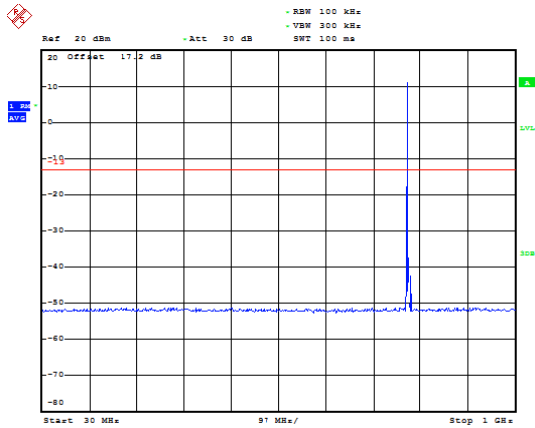


Date: 9.SEP.2019 19:31:14



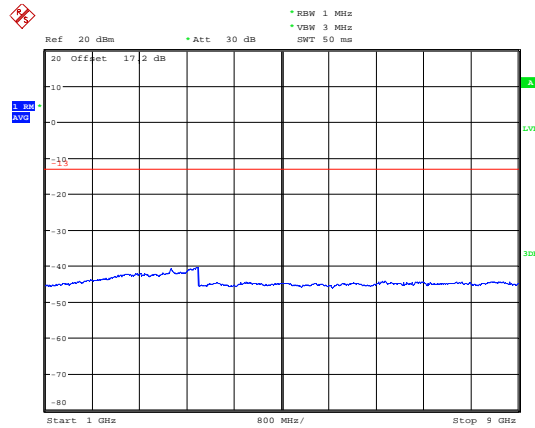


LTE Band 13 5MHz CH-Low 30MHz~1GHz



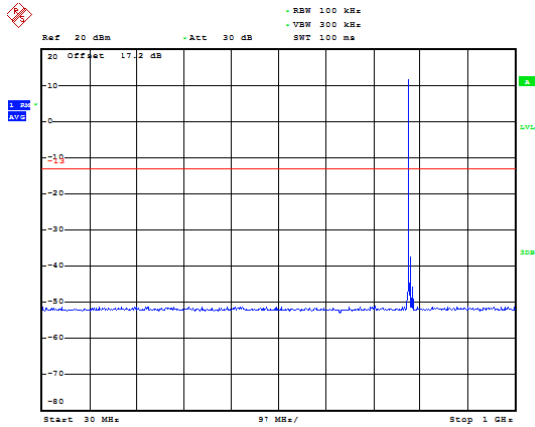
Date: 9.SEP.2019 20:10:58

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



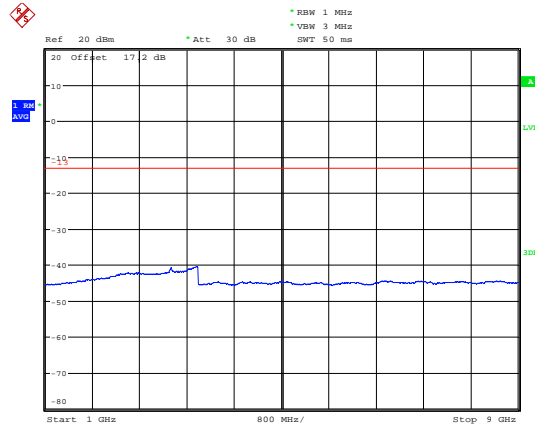
Date: 9.SEP.2019 20:14:15

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



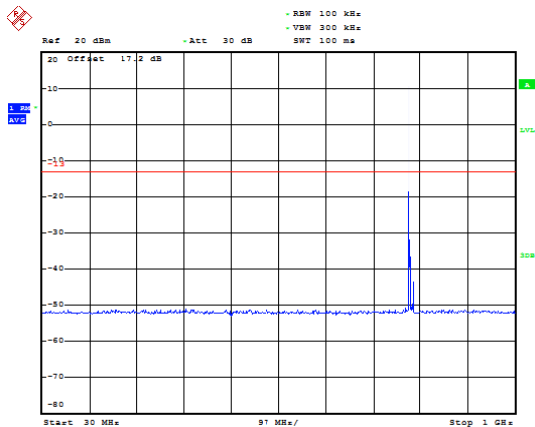
Date: 9.SEP.2019 20:11:30

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



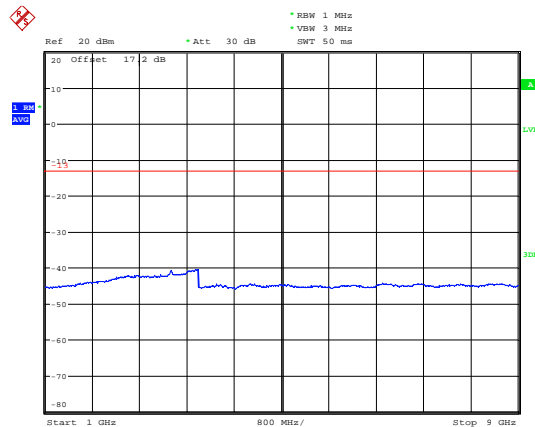
Date: 9.SEP.2019 20:14:43

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



Date: 9.SEP.2019 20:12:35

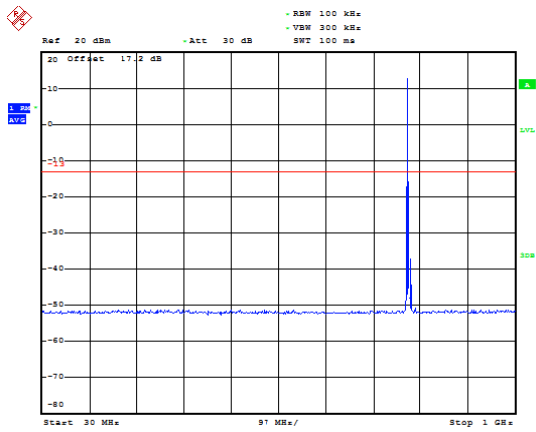
LTE Band 13 5MHz CH-High 1GHz ~9GHz



Date: 9.SEP.2019 20:14:55

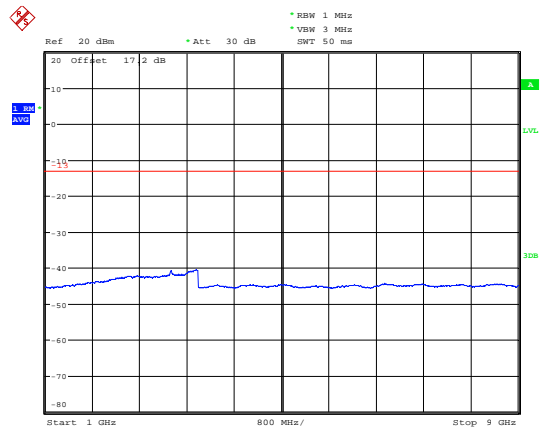


LTE Band 13 10MHz CH-Middle 30MHz~1GHz



Date: 9.SEP.2019 20:12:52

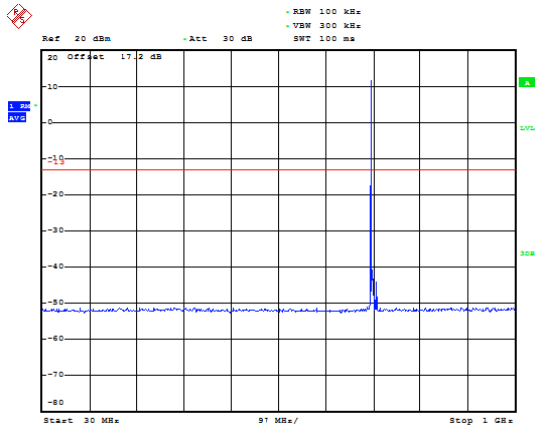
LTE Band 13 10MHz CH-Middle 1GHz ~9GHz



Date: 9.SEP.2019 20:13:58

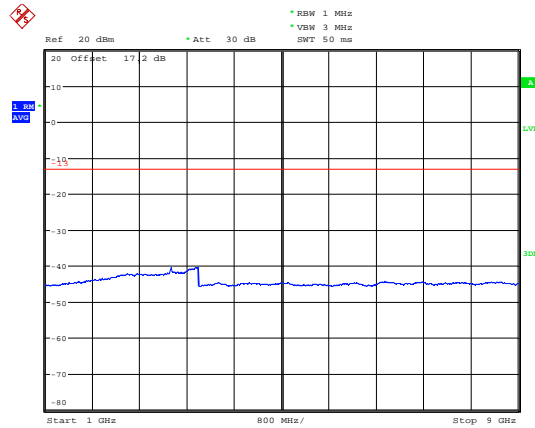


LTE Band 17 5MHz CH-Low 30MHz~1GHz



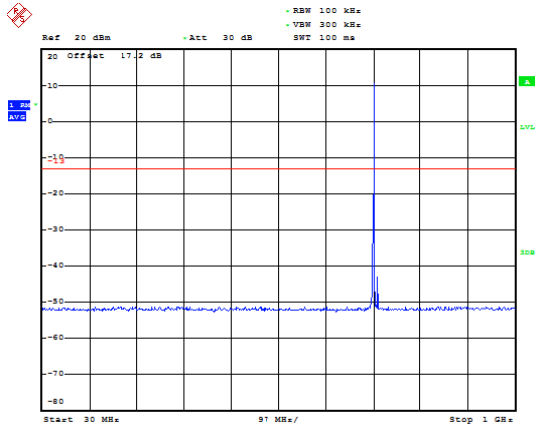
Date: 9.SEP.2019 20:17:36

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



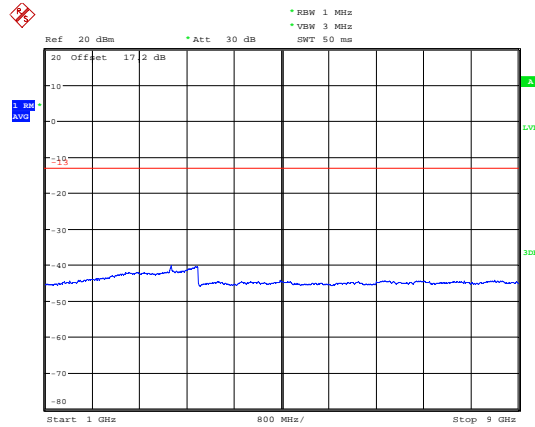
Date: 9.SEP.2019 20:15:24

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



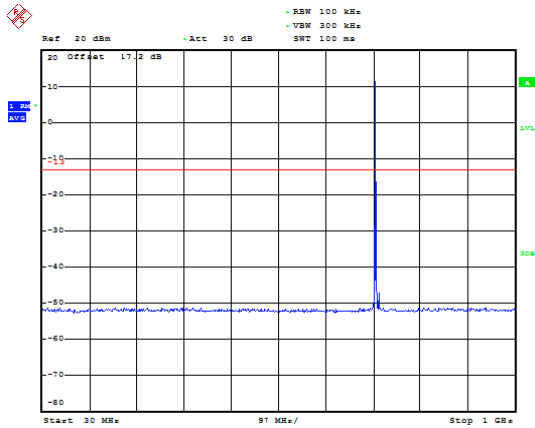
Date: 9.SEP.2019 20:18:15

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



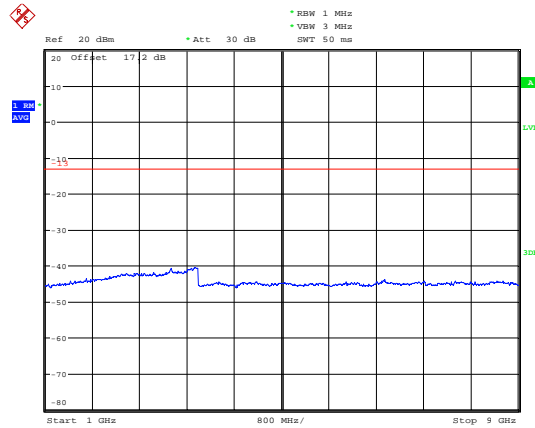
Date: 9.SEP.2019 20:15:38

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

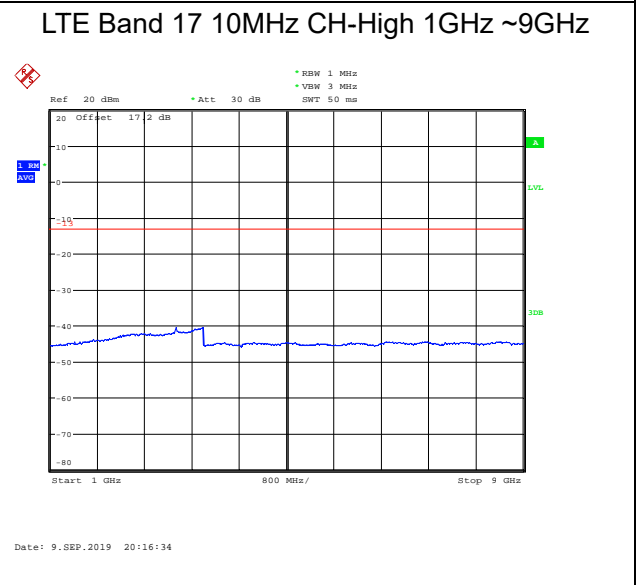
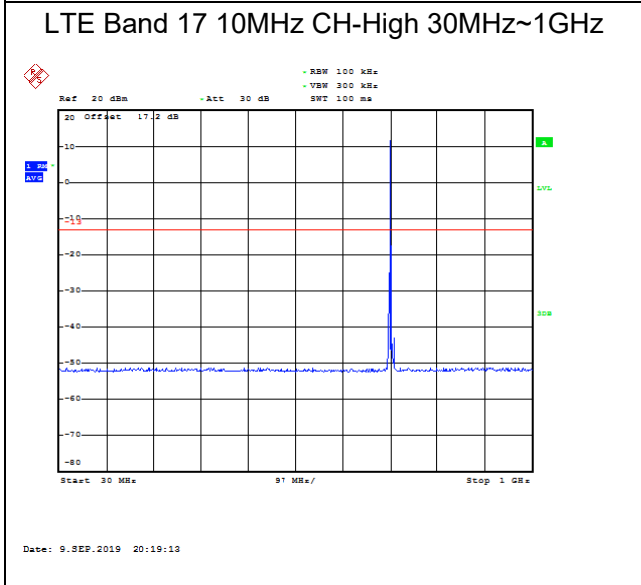
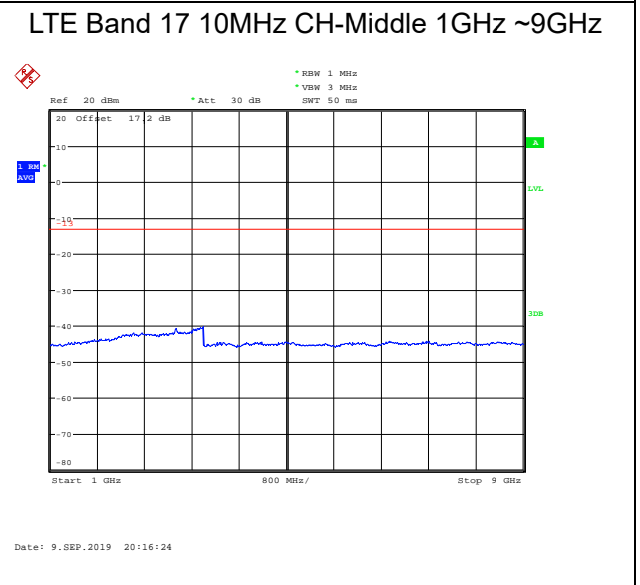
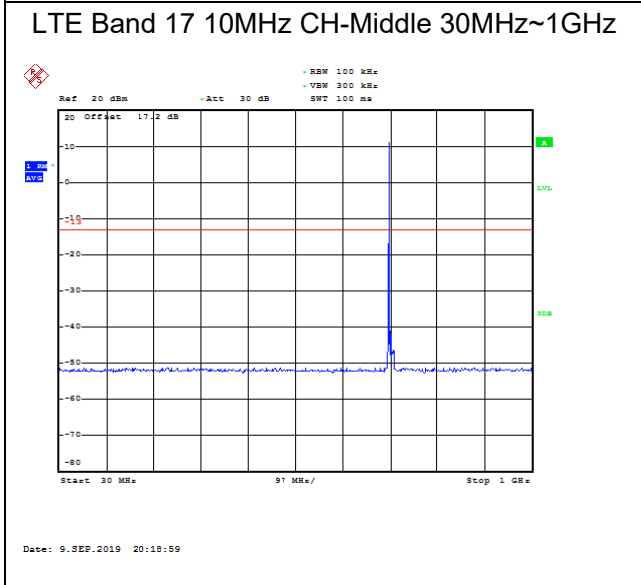
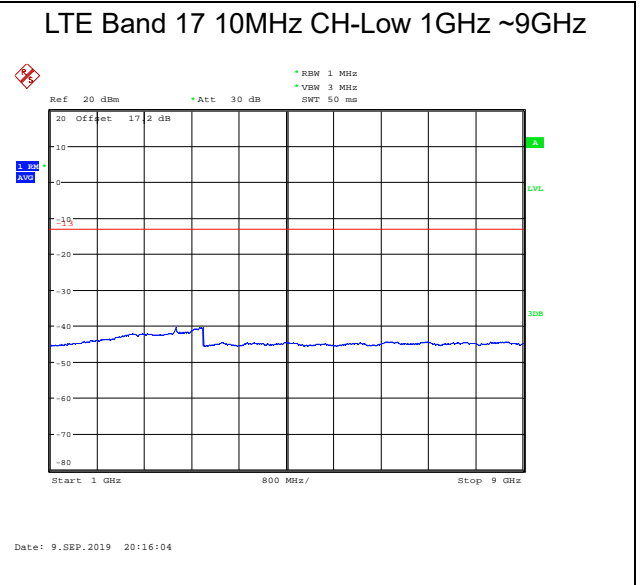
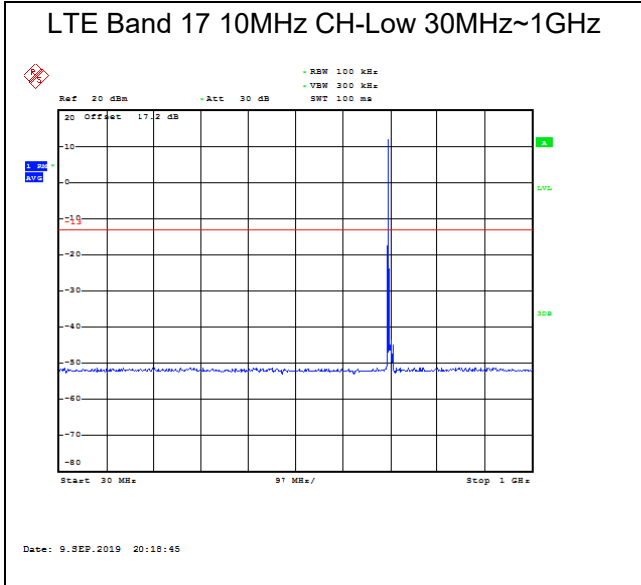


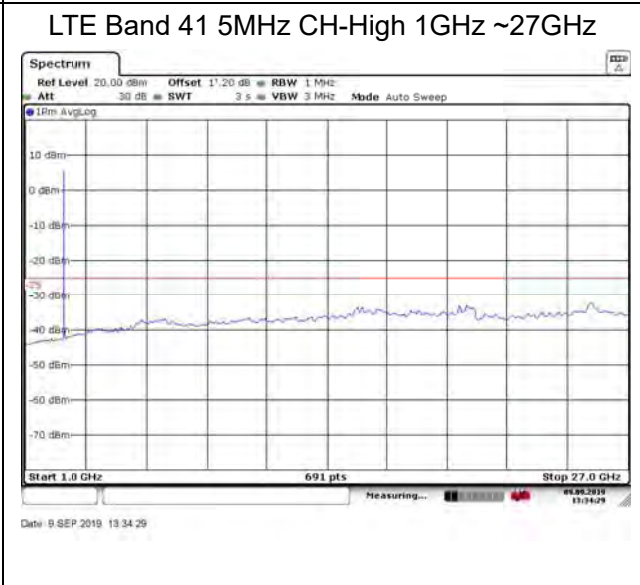
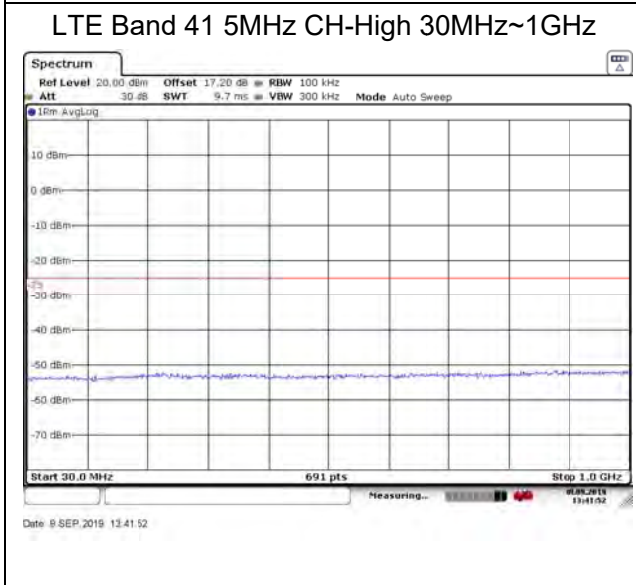
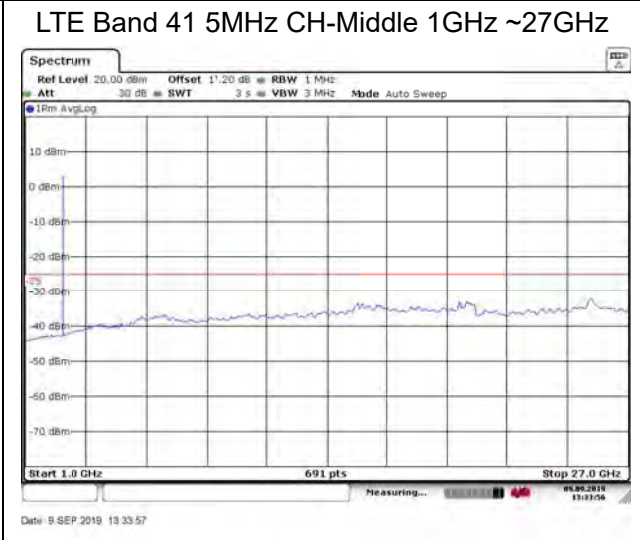
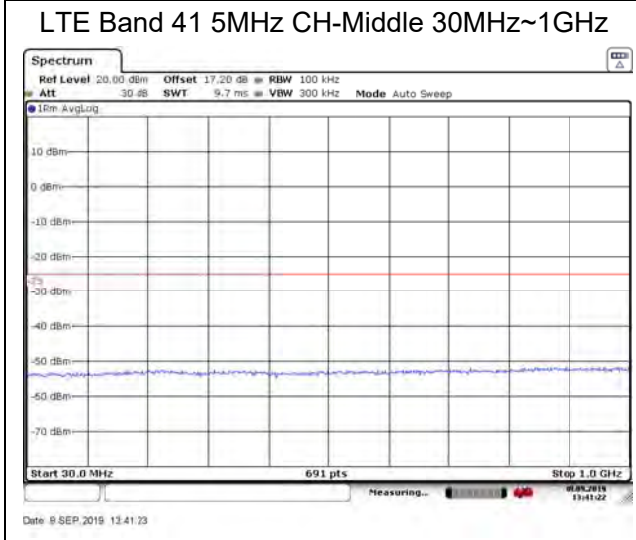
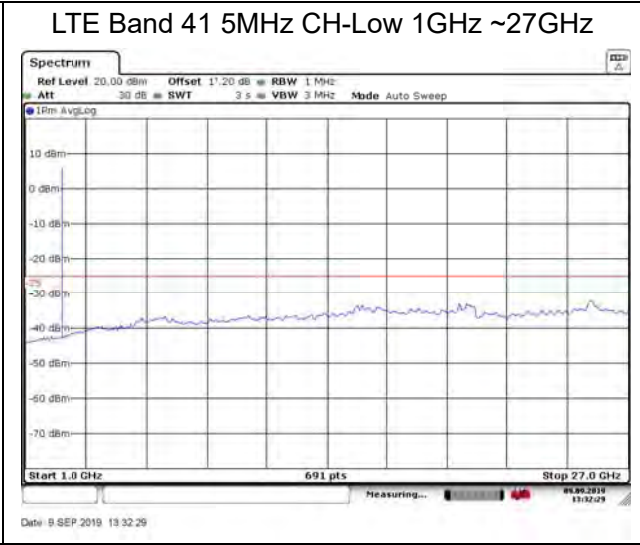
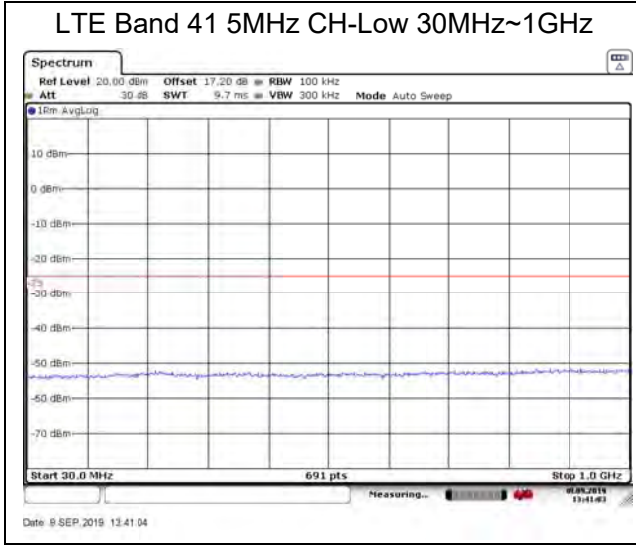
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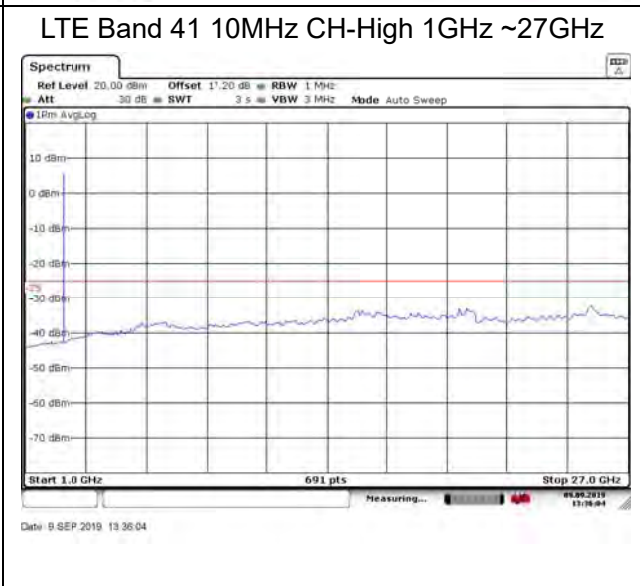
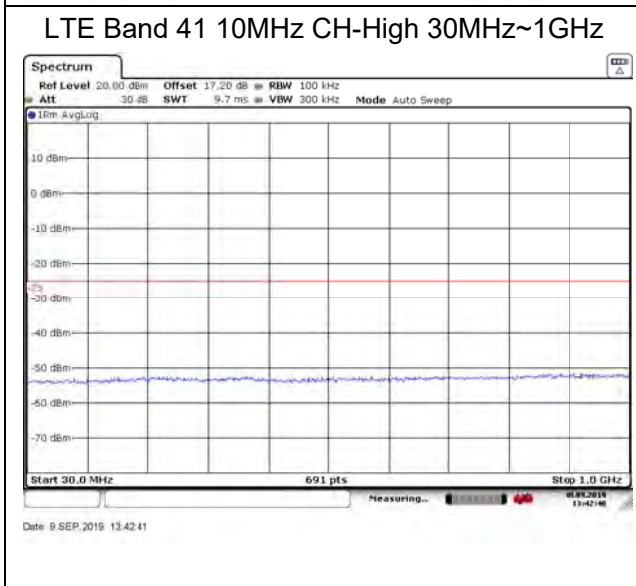
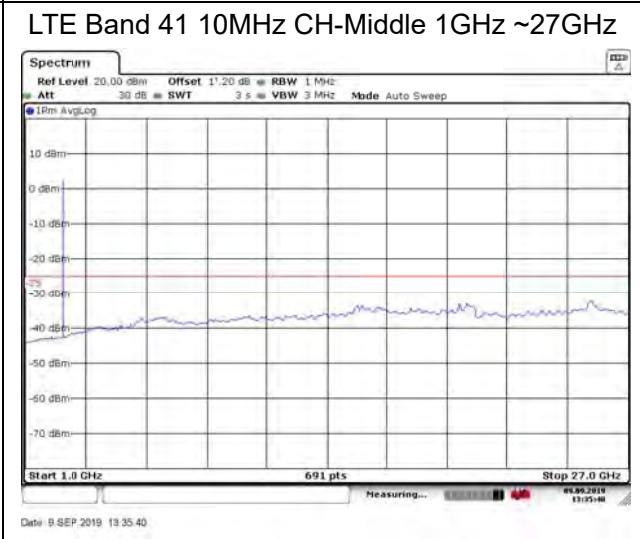
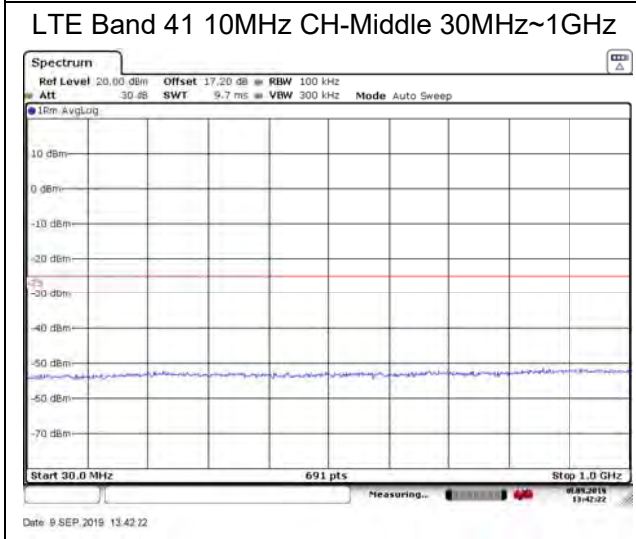
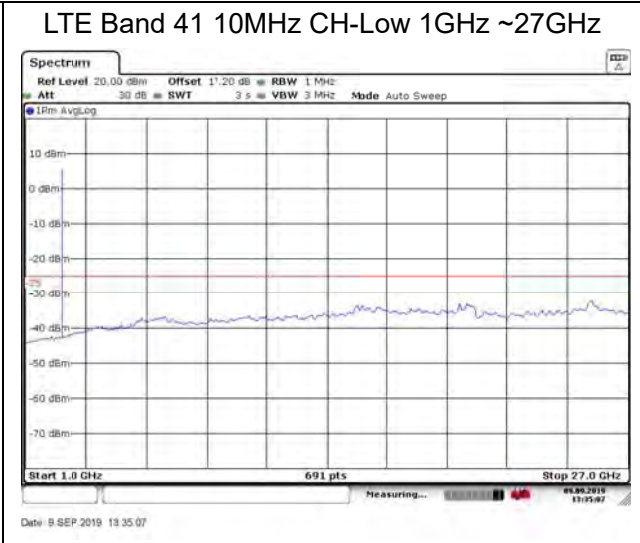
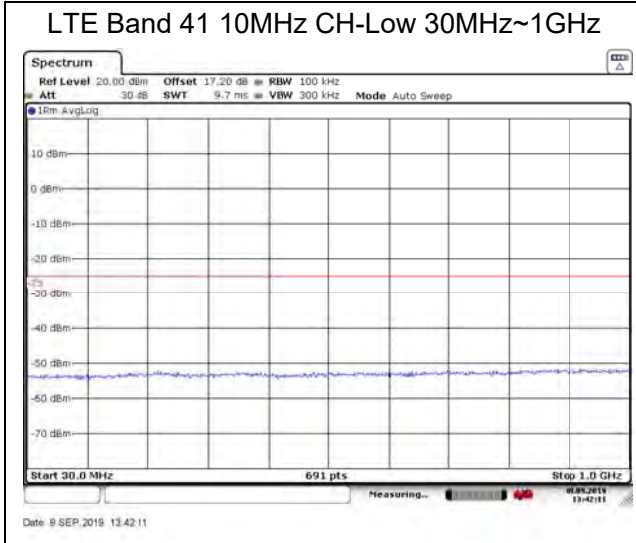
LTE Band 17 5MHz CH-High 1GHz ~9GHz

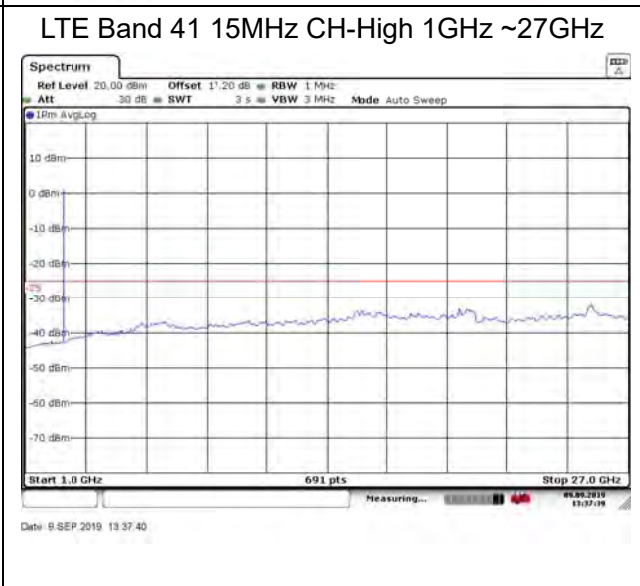
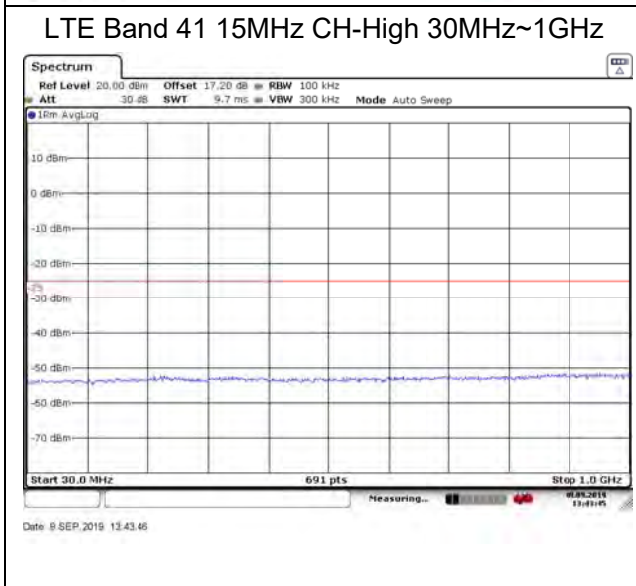
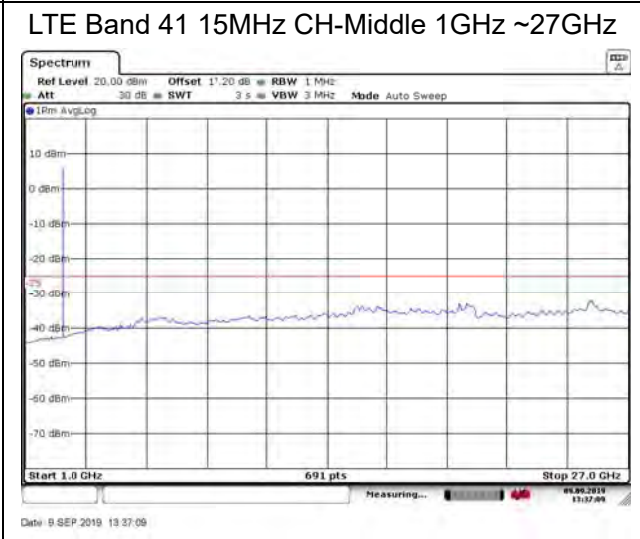
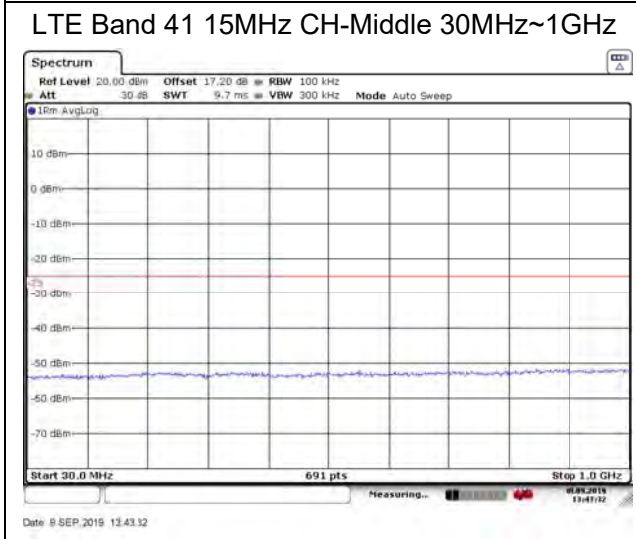
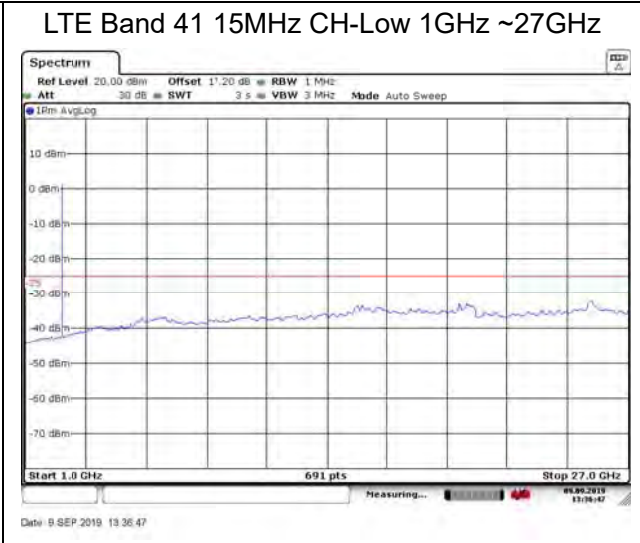
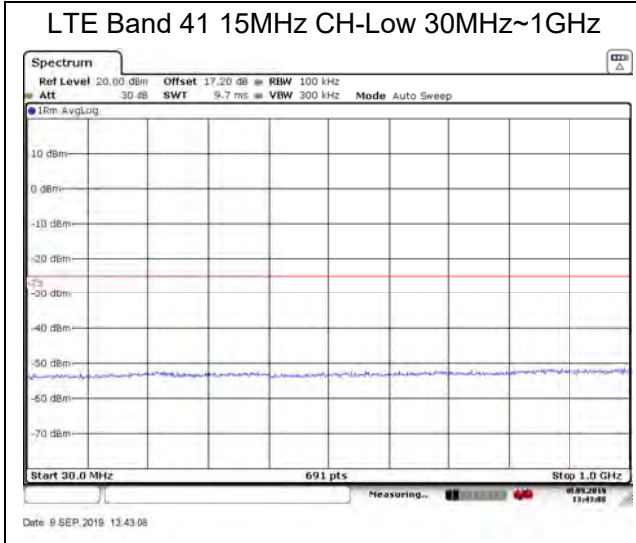


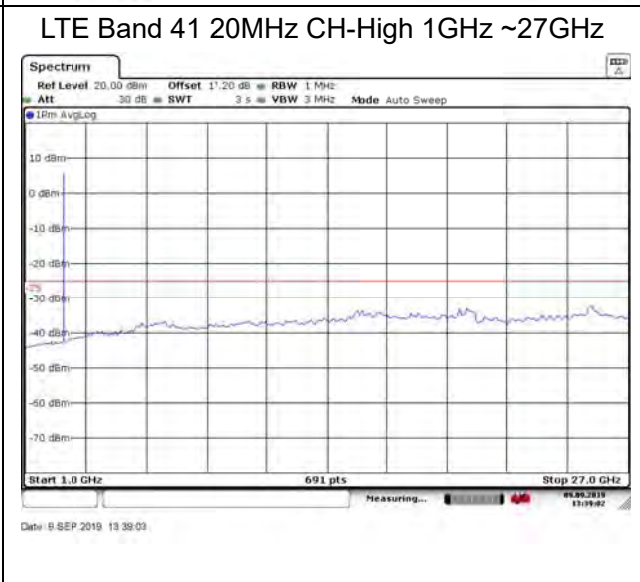
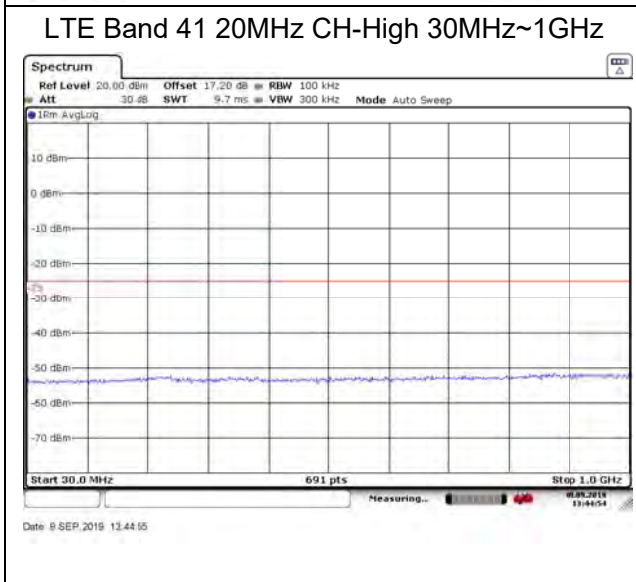
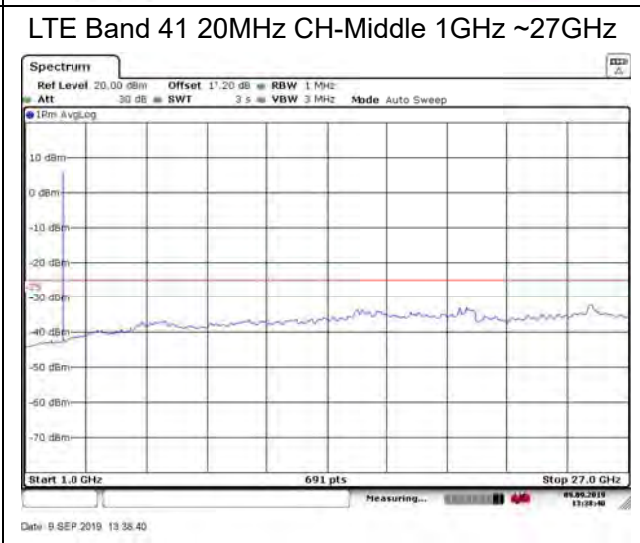
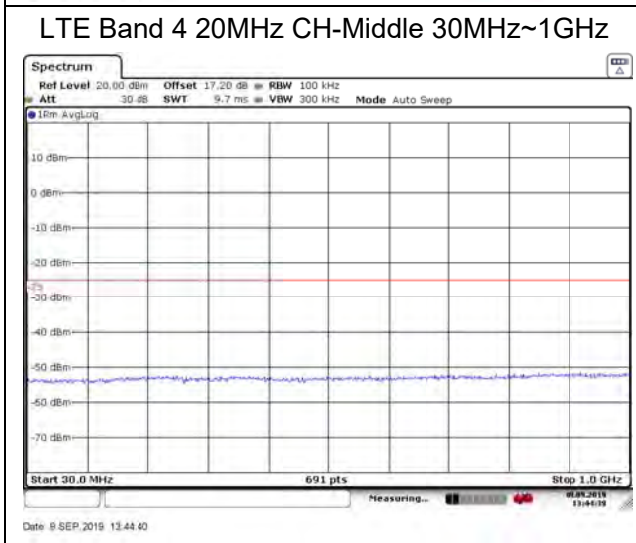
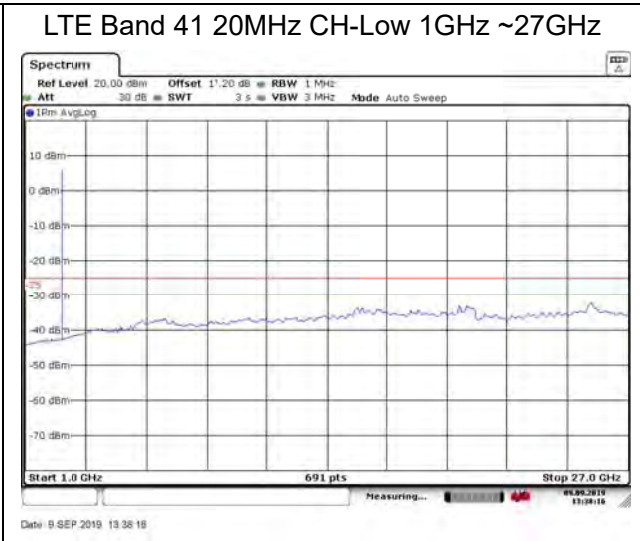
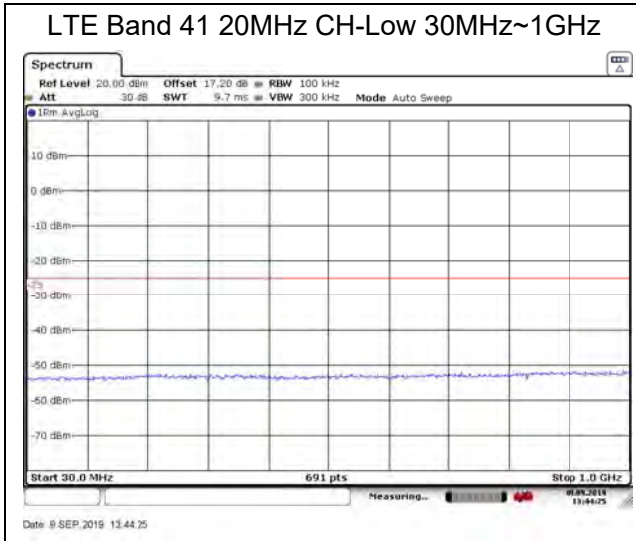
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6.7 Radiates Spurious Emission

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 IV CH-Middle

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	3462.8	-60.24	2.6	10.75	Horizontal	-52.09	-13.00	39.09	90
3	5201.3	-62.74	2.4	11.05	Horizontal	-54.09	-13.00	41.09	180
4	6925.1	-56.91	4.5	11.15	Horizontal	-50.26	-13.00	37.26	45
5	8663.0	-54.99	5.1	11.35	Horizontal	-48.74	-13.00	35.74	0
6	10395.6	-54.25	5.3	11.95	Horizontal	-47.60	-13.00	34.60	315
7	12128.2	-53.66	5.5	13.55	Horizontal	-45.61	-13.00	32.61	225
8	13860.8	-51.68	6.3	13.75	Horizontal	-44.23	-13.00	31.23	270
9	15593.4	-54.65	6.7	13.85	Horizontal	-47.50	-13.00	34.50	45
10	17326.0	-51.00	6.8	14.25	Horizontal	-43.55	-13.00	30.55	90

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

LTE Band 4 QPSK 1.4MHz CH-Middle, RB 1

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	3464.3	-66.52	2.6	10.75	Horizontal	-58.37	-13.00	45.37	225
3	5197.5	-58.42	2.4	11.05	Horizontal	-49.77	-13.00	36.77	315
4	6930.0	-57.23	4.5	11.15	Horizontal	-50.58	-13.00	37.58	45
5	8662.5	-55.77	5.1	11.35	Horizontal	-49.52	-13.00	36.52	90
6	10395.0	-55.57	5.3	11.95	Horizontal	-48.92	-13.00	35.92	315
7	12127.5	-55.42	5.5	13.55	Horizontal	-47.37	-13.00	34.37	90
8	13860.0	-52.25	6.3	13.75	Horizontal	-44.80	-13.00	31.80	45
9	15592.5	-54.75	6.7	13.85	Horizontal	-47.60	-13.00	34.60	0
10	17325.0	-51.96	6.8	14.25	Horizontal	-44.51	-13.00	31.51	135

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



LTE Band 4 QPSK 5MHz CH-Middle, RB 1

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	3460.5	-67.38	2.6	10.75	Horizontal	-59.23	-13.00	46.23	225
3	5191.5	-58.38	2.4	11.05	Horizontal	-49.73	-13.00	36.73	135
4	6930.0	-57.86	4.5	11.15	Horizontal	-51.21	-13.00	38.21	45
5	8662.5	-57.10	5.1	11.35	Horizontal	-50.85	-13.00	37.85	90
6	10395.0	-55.38	5.3	11.95	Horizontal	-48.73	-13.00	35.73	225
7	12127.5	-54.73	5.5	13.55	Horizontal	-46.68	-13.00	33.68	315
8	13860.0	-51.93	6.3	13.75	Horizontal	-44.48	-13.00	31.48	45
9	15592.5	-54.84	6.7	13.85	Horizontal	-47.69	-13.00	34.69	0
10	17325.0	-52.42	6.8	14.25	Horizontal	-44.97	-13.00	31.97	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.

TE Band 4 QPSK 20MHz CH-Middle, RB 1

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	3447.0	-62.95	2.6	10.75	Horizontal	-54.80	-13.00	41.80	315
3	5170.5	-56.24	2.4	11.05	Horizontal	-47.59	-13.00	34.59	135
4	6930.0	-59.43	4.5	11.15	Horizontal	-52.78	-13.00	39.78	90
5	8662.5	-57.01	5.1	11.35	Horizontal	-50.76	-13.00	37.76	225
6	10395.0	-57.11	5.3	11.95	Horizontal	-50.46	-13.00	37.46	315
7	12127.5	-55.62	5.5	13.55	Horizontal	-47.57	-13.00	34.57	270
8	13860.0	-52.90	6.3	13.75	Horizontal	-45.45	-13.00	32.45	0
9	15592.5	-54.82	6.7	13.85	Horizontal	-47.67	-13.00	34.67	180
10	17325.0	-52.81	6.8	14.25	Horizontal	-45.36	-13.00	32.36	45

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



LTE Band 12 QPSK 1.4MHz CH-Middle, RB 1

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1415.00	-62.10	2.00	10.75	Horizontal	-53.35	-13.00	40.35	315
3	2122.50	-55.64	2.51	11.05	Horizontal	-47.10	-13.00	34.10	270
4	2830.00	-65.65	4.20	11.15	Horizontal	-58.70	-13.00	45.70	90
5	3537.50	-61.63	5.20	11.15	Horizontal	-55.68	-13.00	42.68	45
6	4245.00	-64.07	5.50	11.95	Horizontal	-57.62	-13.00	44.62	90
7	4952.50	-62.68	5.70	13.55	Horizontal	-54.83	-13.00	41.83	225
8	5660.00	-64.59	6.30	13.75	Horizontal	-57.14	-13.00	44.14	315
9	6367.50	-61.83	6.80	13.85	Horizontal	-54.78	-13.00	41.78	90
10	7075.00	-58.62	6.90	14.25	Horizontal	-51.27	-13.00	38.27	225

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

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

LTE Band 12 QPSK 5MHz CH-Middle, RB 1

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1415.00	-60.45	2.00	10.75	Horizontal	-51.70	-13.00	38.70	225
3	2122.50	-54.34	2.51	11.05	Horizontal	-45.80	-13.00	32.80	135
4	2830.00	-66.05	4.20	11.15	Horizontal	-59.10	-13.00	46.10	180
5	3537.50	-64.19	5.20	11.15	Horizontal	-58.24	-13.00	45.24	135
6	4245.00	-64.57	5.50	11.95	Horizontal	-58.12	-13.00	45.12	45
7	4952.50	-65.10	5.70	13.55	Horizontal	-57.25	-13.00	44.25	0
8	5660.00	-64.63	6.30	13.75	Horizontal	-57.18	-13.00	44.18	225
9	6367.50	-62.64	6.80	13.85	Horizontal	-55.59	-13.00	42.59	135
10	7075.00	-58.56	6.90	14.25	Horizontal	-51.21	-13.00	38.21	90

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

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



LTE Band 12 QPSK 10MHz CH-Middle, RB 1

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1415.00	-63.31	2.00	10.75	Horizontal	-54.56	-13.00	41.56	135
3	2122.50	-58.24	2.51	11.05	Horizontal	-49.70	-13.00	36.70	45
4	2830.00	-64.85	4.20	11.15	Horizontal	-57.90	-13.00	44.90	90
5	3537.50	-65.18	5.20	11.15	Horizontal	-59.23	-13.00	46.23	225
6	4245.00	-64.62	5.50	11.95	Horizontal	-58.17	-13.00	45.17	90
7	4952.50	-65.63	5.70	13.55	Horizontal	-57.78	-13.00	44.78	315
8	5660.00	-64.43	6.30	13.75	Horizontal	-56.98	-13.00	43.98	270
9	6367.50	-62.42	6.80	13.85	Horizontal	-55.37	-13.00	42.37	45
10	7075.00	-59.33	6.90	14.25	Horizontal	-51.98	-13.00	38.98	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 13 QPSK 5MHz CH-Middle, RB 1

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1564.0	-67.63	2.00	10.75	Horizontal	-58.88	-40.00	18.88	135
Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
3	2346.0	-64.96	2.51	11.05	Horizontal	-56.42	-13.00	43.42	180
4	3128.0	-64.82	4.20	11.15	Horizontal	-57.87	-13.00	44.87	225
5	3910.0	-63.97	5.20	11.15	Horizontal	-58.02	-13.00	45.02	90
6	4692.0	-62.83	5.50	11.95	Horizontal	-56.38	-13.00	43.38	135
7	5474.0	-65.65	5.70	13.55	Horizontal	-57.80	-13.00	44.80	225
8	6256.0	-62.79	6.30	13.75	Horizontal	-55.34	-13.00	42.34	90
9	7038.0	-59.68	6.80	13.85	Horizontal	-52.63	-13.00	39.63	45
10	7820.0	-58.45	6.90	14.25	Horizontal	-51.10	-13.00	38.10	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 13 QPSK 10MHz CH-Middle, RB 1

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1555.3	-67.60	2.00	10.75	Horizontal	-58.85	-13.00	45.85	90
3	2346.0	-68.24	2.51	11.05	Horizontal	-59.70	-13.00	46.70	45
4	3128.0	-65.26	4.20	11.15	Horizontal	-58.31	-13.00	45.31	45
5	3910.0	-63.70	5.20	11.15	Horizontal	-57.75	-13.00	44.75	225
6	4692.0	-64.32	5.50	11.95	Horizontal	-57.87	-13.00	44.87	45
7	5474.0	-64.77	5.70	13.55	Horizontal	-56.92	-13.00	43.92	135
8	6256.0	-62.87	6.30	13.75	Horizontal	-55.42	-13.00	42.42	315
9	7038.0	-58.33	6.80	13.85	Horizontal	-51.28	-13.00	38.28	45
10	7820.0	-58.18	6.90	14.25	Horizontal	-50.83	-13.00	37.83	90

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

LTE Band 17 QPSK 5MHz CH-Middle, RB 1

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1415.5	-61.55	2.00	10.75	Horizontal	-52.80	-13.00	39.80	90
3	2220.0	-56.94	2.51	11.05	Horizontal	-48.40	-13.00	35.40	0
4	2960.0	-66.68	4.20	11.15	Horizontal	-59.73	-13.00	46.73	45
5	3700.0	-65.02	5.20	11.15	Horizontal	-59.07	-13.00	46.07	45
6	4440.0	-64.35	5.50	11.95	Horizontal	-57.90	-13.00	44.90	225
7	5180.0	-64.59	5.70	13.55	Horizontal	-56.74	-13.00	43.74	90
8	5920.0	-64.28	6.30	13.75	Horizontal	-56.83	-13.00	43.83	45
9	6660.0	-62.53	6.80	13.85	Horizontal	-55.48	-13.00	42.48	135
10	7400.0	-58.59	6.90	14.25	Horizontal	-51.24	-13.00	38.24	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 17 QPSK 10MHz CH-Middle, RB 1

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1411.0	-60.40	2.00	10.75	Horizontal	-51.65	-13.00	38.65	135
3	2220.0	-57.19	2.51	11.05	Horizontal	-48.65	-13.00	35.65	90
4	2960.0	-66.35	4.20	11.15	Horizontal	-59.40	-13.00	46.40	315
5	3700.0	-64.85	5.20	11.15	Horizontal	-58.90	-13.00	45.90	270
6	4440.0	-63.48	5.50	11.95	Horizontal	-57.03	-13.00	44.03	135
7	5180.0	-64.78	5.70	13.55	Horizontal	-56.93	-13.00	43.93	45
8	5920.0	-63.42	6.30	13.75	Horizontal	-55.97	-13.00	42.97	90
9	6660.0	-62.79	6.80	13.85	Horizontal	-55.74	-13.00	42.74	0
10	7400.0	-58.31	6.90	14.25	Horizontal	-50.96	-13.00	37.96	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 41 QPSK 5MHz CH-Middle, RB 1

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	5186.00	-54.86	2.00	9.15	Horizontal	-47.71	-25.00	22.71	45
3	7779.00	-54.02	2.50	11.35	Horizontal	-45.17	-25.00	20.17	135
4	10372.00	-55.44	4.20	12.05	Horizontal	-47.59	-25.00	22.59	180
5	12965.00	-53.63	5.20	12.85	Horizontal	-45.98	-25.00	20.98	225
6	15558.00	-54.22	5.50	14.23	Horizontal	-45.49	-25.00	20.49	90
7	18151.00	-51.50	5.70	14.15	Horizontal	-43.05	-25.00	18.05	0
8	20744.00	--	--	--	--	--	--	--	--
9	23337.00	--	--	--	--	--	--	--	--
10	25930.00	--	--	--	--	--	--	--	--

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

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



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

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	5186.00	-55.81	2.00	10.15	Horizontal	-47.66	-25.00	22.66	225
3	7779.00	-57.15	2.50	11.35	Horizontal	-48.30	-25.00	23.30	135
4	10372.00	-56.15	4.20	12.05	Horizontal	-48.30	-25.00	23.30	45
5	12965.00	-54.45	5.20	14.85	Horizontal	-44.80	-25.00	19.80	90
6	15558.00	-55.13	5.50	13.23	Horizontal	-47.40	-25.00	22.40	315
7	18151.00	--	--	--	--	--	--	--	--
8	20744.00	--	--	--	--	--	--	--	--
9	23337.00	--	--	--	--	--	--	--	--
10	25930.00	--	--	--	--	--	--	--	--

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.



7 Main Test Instruments

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

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



ANNEX A: The EUT Appearance and Change declaration letter

The EUT Appearance and Change declaration letter are submitted separately.



ANNEX B: Test Setup Photos

The Test Setup Photos are submitted separately.