		132665	1779.3	28.94	22.84	6.10	≤13	PASS
	3	131987	1711.5	28.44	22.88	5.56	≤13	PASS
		132322	1745	28.72	22.67	6.05	≤13	PASS
		132657	1778.5	28.96	22.90	6.06	≤13	PASS
	5	131997	1712.5	28.80	22.90	5.90	≤13	PASS
		132322	1745	28.81	22.73	6.08	≤13	PASS
		132647	1777.5	28.98	22.95	6.03	≤13	PASS
	10	132022	1715	28.73	22.85	5.88	≤13	PASS
		132322	1745	28.80	22.75	6.05	≤13	PASS
		132622	1775	28.92	22.84	6.08	≤13	PASS
	15	132047	1717.5	28.96	22.86	6.10	≤13	PASS
		132322	1745	28.96	22.76	6.20	≤13	PASS
		132597	1772.5	28.91	22.79	6.12	≤13	PASS
	20	132072	1720	28.80	22.86	5.94	≤13	PASS
		132322	1745	28.82	22.76	6.06	≤13	PASS
		132572	1770	28.87	22.79	6.08	≤13	PASS

Bandwidth	PCC		SCC1		Modulation	Peak-to-Average Power Ratio (PAPR)		
	Channel	Frequency (MHz)	Channel	Frequency (MHz)		Peak (dBm)	Avg (dBm)	PAPR (dB)
CA_66B_5MHz+5MHz_QPSK	132398	1752.6	132446	1757.4	QPSK	27.85	21.79	6.06
CA_66B_5MHz+5MHz_16QAM	132398	1752.6	132446	1757.4	16QAM	27.40	20.82	6.58
CA_66B_5MHz+5MHz_64QAM	132398	1752.6	132446	1757.4	64QAM	27.41	20.81	6.60
CA_66B_5MHz+10MHz_QPSK	132375	1750.3	132447	1757.5	QPSK	27.77	21.74	6.03
CA_66B_5MHz+10MHz_16QAM	132375	1750.3	132447	1757.5	16QAM	27.33	20.74	6.59
CA_66B_5MHz+10MHz_64QAM	132375	1750.3	132447	1757.5	64QAM	26.79	20.71	6.08
CA_66B_10MHz+5MHz_QPSK	132397	1752.5	132469	1759.7	QPSK	26.79	21.22	5.57
CA_66B_10MHz+5MHz_16QAM	132397	1752.5	132469	1759.7	16QAM	26.56	20.28	6.28
CA_66B_10MHz+5MHz_64QAM	132397	1752.5	132469	1759.7	64QAM	25.83	20.27	5.56
CA_66B_5MHz+15MHz_QPSK	132353	1748.1	132446	1757.4	QPSK	27.67	21.68	5.99
CA_66B_5MHz+15MHz_16QAM	132353	1748.1	132446	1757.4	16QAM	27.30	20.69	6.61
CA_66B_5MHz+15MHz_64QAM	132353	1748.1	132446	1757.4	64QAM	26.78	20.68	6.10
CA_66B_15MHz+5MHz_QPSK	132398	1752.6	132491	1761.9	QPSK	25.62	20.45	5.17
CA_66B_15MHz+5MHz_16QAM	132398	1752.6	132491	1761.9	16QAM	25.63	19.49	6.14
CA_66B_15MHz+5MHz_64QAM	132398	1752.6	132491	1761.9	64QAM	25.63	19.47	6.16
CA_66B_10MHz+10MHz_QPSK	132373	1750.1	132472	1760	QPSK	27.19	21.43	5.76
CA_66B_10MHz+10MHz_16QAM	132373	1750.1	132472	1760	16QAM	26.82	20.38	6.44
CA_66B_10MHz+10MHz_64QAM	132373	1750.1	132472	1760	64QAM	26.24	20.43	5.81

Bandwidth	PCC	SCC1	Modulation	Peak-to-Average

						Power Ratio (PAPR)		
	Channel	Frequency (MHz)	Channel	Frequency (MHz)		Peak (dBm)	Avg (dBm)	PAPR (dB)
CA_66C_10MHz+15MHz_QPSK	132351	1747.9	132471	1759.9	QPSK	27.54	21.78	5.76
CA_66C_10MHz+15MHz_16QAM	132351	1747.9	132471	1759.9	16QAM	27.16	20.73	6.43
CA_66C_10MHz+15MHz_64QAM	132351	1747.9	132471	1759.9	64QAM	26.65	20.78	5.87
CA_66C_15MHz+10MHz_QPSK	132373	1750.1	132493	1762.1	QPSK	27.05	21.48	5.57
CA_66C_15MHz+10MHz_16QAM	132373	1750.1	132493	1762.1	16QAM	26.75	20.45	6.30
CA_66C_15MHz+10MHz_64QAM	132373	1750.1	132493	1762.1	64QAM	26.10	20.43	5.67
CA_66C_10MHz+20MHz_QPSK	132328	1745.6	132472	1760	QPSK	27.68	21.94	5.74
CA_66C_10MHz+20MHz_16QAM	132328	1745.6	132472	1760	16QAM	27.31	20.91	6.40
CA_66C_10MHz+20MHz_64QAM	132328	1745.6	132472	1760	64QAM	26.82	20.91	5.91
CA_66C_20MHz+10MHz_QPSK	132373	1750.1	132517	1764.5	QPSK	26.27	21.05	5.22
CA_66C_20MHz+10MHz_16QAM	132373	1750.1	132517	1764.5	16QAM	26.33	20.10	6.23
CA_66C_20MHz+10MHz_64QAM	132373	1750.1	132517	1764.5	64QAM	25.38	20.14	5.24
CA_66C_15MHz+15MHz_QPSK	132347	1747.5	132497	1762.5	QPSK	27.43	21.71	5.72
CA_66C_15MHz+15MHz_16QAM	132347	1747.5	132497	1762.5	16QAM	27.08	20.68	6.40
CA_66C_15MHz+15MHz_64QAM	132347	1747.5	132497	1762.5	64QAM	26.54	20.71	5.83
CA_66C_15MHz+20MHz_QPSK	132325	1745.3	132496	1762.4	QPSK	27.70	21.83	5.87
CA_66C_15MHz+20MHz_16QAM	132325	1745.3	132496	1762.4	16QAM	27.31	20.87	6.44
CA_66C_15MHz+20MHz_64QAM	132325	1745.3	132496	1762.4	64QAM	27.32	20.87	6.45
CA_66C_20MHz+15MHz_QPSK	132348	1747.6	132519	1764.7	QPSK	27.01	21.59	5.42
CA_66C_20MHz+15MHz_16QAM	132348	1747.6	132519	1764.7	16QAM	26.78	20.62	6.16
CA_66C_20MHz+15MHz_64QAM	132348	1747.6	132519	1764.7	64QAM	26.80	20.62	6.18
CA_66C_20MHz+5MHz_QPSK	132397	1752.5	132514	1764.2	QPSK	25.43	20.38	5.05
CA_66C_20MHz+5MHz_16QAM	132397	1752.5	132514	1764.2	16QAM	25.63	19.42	6.21
CA_66C_20MHz+5MHz_64QAM	132397	1752.5	132514	1764.2	64QAM	24.40	19.39	5.01
CA_66C_5MHz+20MHz_QPSK	132330	1745.8	132447	1757.5	QPSK	27.87	22.09	5.78
CA_66C_5MHz+20MHz_16QAM	132330	1745.8	132447	1757.5	16QAM	27.54	21.12	6.42
CA_66C_5MHz+20MHz_64QAM	132330	1745.8	132447	1757.5	64QAM	27.13	21.11	6.02
CA_66C_20MHz+20MHz_QPSK	132323	1745.1	132521	1764.9	QPSK	27.24	21.73	5.51
CA_66C_20MHz+20MHz_16QAM	132323	1745.1	132521	1764.9	16QAM	26.98	20.70	6.28
CA_66C_20MHz+20MHz_64QAM	132323	1745.1	132521	1764.9	64QAM	26.34	20.72	5.62

5.5 Frequency Stability

Ambient condition

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

Method of Measurement

Frequency Stability (Temperature Variation)

The temperature inside the climate chamber is varied from -30°C to +55°C in 10°C step size.

(1)With all power removed, the temperature was decreased to -10°C and permitted to stabilize for three hours.

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

(3) Repeat the above measurements at 10°C increments from -30°C to +55°C. Allow at least 1.5 hours at each temperature, un-powered, before making measurements.

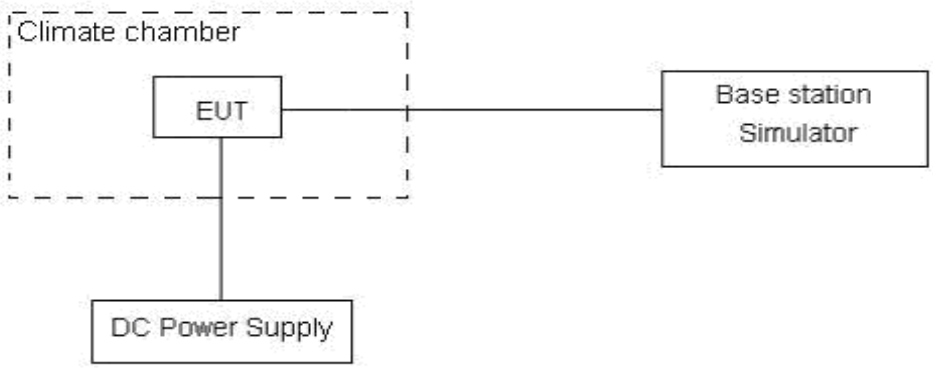
Frequency Stability (Voltage Variation)

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

Primary Supply Voltage: The primary supply voltage is varied from 85% to 115% of the nominal value for non hand-carried battery and AC powered equipment. For hand-carried, battery-powered equipment, primary supply voltage is reduced 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 3.5 V and 4.4V, with a nominal voltage of 4.0 V.

Test setup



Limits

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

Measurement Uncertainty

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

Test Result

LTE Band 4								
Condition		Freq.Error (Hz)	Freq.Error (Hz)	Freq.Error (Hz)	Frequency Stability （ppm）	Frequency Stability （ppm）	Frequency Stability （ppm）	Verdict
BANDWIDTH	1.4MHz							
Temperature	Voltage	64QAM	16QAM	QPSK	64QAM	16QAM	QPSK	
Normal（25℃）	Normal	7.71	3.86	3.06	0.00410	0.00205	0.00163	PASS
Extreme（50℃）		5.92	16.42	14.38	0.00315	0.00874	0.00765	PASS
Extreme（40℃）		2.52	8.74	2.55	0.00134	0.00465	0.00135	PASS
Extreme（30℃）		14.99	16.04	9.43	0.00797	0.00853	0.00502	PASS
Extreme（20℃）		1.80	4.47	15.72	0.00096	0.00238	0.00836	PASS
Extreme（10℃）		5.08	4.96	10.09	0.00270	0.00264	0.00536	PASS
Extreme（0℃）		8.83	3.84	5.18	0.00470	0.00204	0.00276	PASS
Extreme（-10℃）		2.21	8.82	3.06	0.00118	0.00469	0.00163	PASS
Extreme（-20℃）		12.68	3.06	12.02	0.00675	0.00163	0.00639	PASS
Extreme（-30℃）		1.49	3.61	4.83	0.00079	0.00192	0.00257	PASS
25℃	LV	14.77	8.67	15.87	0.00785	0.00461	0.00844	PASS
	HV	4.47	7.38	7.23	0.00238	0.00393	0.00385	PASS
Condition		Freq.Error (Hz)	Freq.Error (Hz)	Freq.Error (Hz)	Frequency Stability （ppm）	Frequency Stability （ppm）	Frequency Stability （ppm）	Verdict
BANDWIDTH	3MHz							
Temperature	Voltage	64QAM	16QAM	QPSK	64QAM	16QAM	QPSK	
Normal（25℃）	Normal	17.09	4.48	8.28	0.00909	0.00238	0.00440	PASS
Extreme（50℃）		9.85	11.31	1.70	0.00524	0.00602	0.00090	PASS
Extreme（40℃）		9.64	17.73	14.94	0.00513	0.00943	0.00795	PASS
Extreme（30℃）		12.67	12.76	1.61	0.00674	0.00679	0.00086	PASS
Extreme（20℃）		5.06	1.10	13.61	0.00269	0.00058	0.00724	PASS
Extreme（10℃）		8.51	1.97	17.56	0.00453	0.00105	0.00934	PASS
Extreme（0℃）		11.95	8.56	6.72	0.00636	0.00455	0.00357	PASS
Extreme（-10℃）		16.11	7.41	6.75	0.00857	0.00394	0.00359	PASS
Extreme（-20℃）		9.43	2.82	5.21	0.00502	0.00150	0.00277	PASS
Extreme（-30℃）		9.63	9.27	15.53	0.00512	0.00493	0.00826	PASS
25℃	LV	6.49	13.40	16.40	0.00345	0.00713	0.00872	PASS
	HV	7.60	13.52	7.97	0.00404	0.00719	0.00424	PASS
Condition		Freq.Error (Hz)	Freq.Error (Hz)	Freq.Error (Hz)	Frequency Stability （ppm）	Frequency Stability （ppm）	Frequency Stability （ppm）	Verdict
BANDWIDTH	5MHz							
Temperature	Voltage	64QAM	16QAM	QPSK	64QAM	16QAM	QPSK	
Normal（25℃）	Normal	6.55	7.78	12.38	0.00348	0.00414	0.00658	PASS
Extreme（50℃）		7.78	14.51	3.70	0.00414	0.00772	0.00197	PASS

Extreme（40℃）		5.88	8.65	7.16	0.00313	0.00460	0.00381	PASS
Extreme（30℃）		9.67	9.02	8.83	0.00514	0.00480	0.00470	PASS
Extreme（20℃）		13.52	11.16	7.74	0.00719	0.00594	0.00412	PASS
Extreme（10℃）		13.78	17.42	5.83	0.00733	0.00927	0.00310	PASS
Extreme（0℃）		16.30	8.38	15.92	0.00867	0.00446	0.00847	PASS
Extreme（-10℃）		2.98	8.12	3.65	0.00159	0.00432	0.00194	PASS
Extreme（-20℃）		12.86	12.29	11.31	0.00684	0.00654	0.00602	PASS
Extreme（-30℃）		17.31	10.99	15.21	0.00921	0.00584	0.00809	PASS
25℃	LV	6.07	15.69	9.46	0.00323	0.00835	0.00503	PASS
	HV	2.05	10.80	4.84	0.00109	0.00574	0.00257	PASS
Condition		Freq.Error (Hz)	Freq.Error (Hz)	Freq.Error (Hz)	Frequency Stability（ppm）	Frequency Stability（ppm）	Frequency Stability（ppm）	Verdict
BANDWIDTH	10MHz							
Temperature	Voltage	64QAM	16QAM	QPSK	64QAM	16QAM	QPSK	
Normal（25℃）	Normal	4.25	10.26	16.55	0.00226	0.00546	0.00880	PASS
Extreme（50℃）		2.61	11.39	8.86	0.00139	0.00606	0.00471	PASS
Extreme（40℃）		13.57	5.23	11.96	0.00722	0.00278	0.00636	PASS
Extreme（30℃）		17.04	7.69	13.83	0.00906	0.00409	0.00735	PASS
Extreme（20℃）		7.91	15.66	14.66	0.00421	0.00833	0.00780	PASS
Extreme（10℃）		9.49	3.93	5.98	0.00505	0.00209	0.00318	PASS
Extreme（0℃）		5.75	13.43	11.88	0.00306	0.00714	0.00632	PASS
Extreme（-10℃）		16.69	13.24	8.46	0.00888	0.00704	0.00450	PASS
Extreme（-20℃）		12.84	3.65	10.79	0.00683	0.00194	0.00574	PASS
Extreme（-30℃）		2.71	14.44	9.29	0.00144	0.00768	0.00494	PASS
25℃	LV	7.19	6.41	11.05	0.00383	0.00341	0.00588	PASS
	HV	10.17	7.07	12.26	0.00541	0.00376	0.00652	PASS
Condition		Freq.Error (Hz)	Freq.Error (Hz)	Freq.Error (Hz)	Frequency Stability（ppm）	Frequency Stability（ppm）	Frequency Stability（ppm）	Verdict
BANDWIDTH	15MHz							
Temperature	Voltage	64QAM	16QAM	QPSK	64QAM	16QAM	QPSK	
Normal（25℃）	Normal	3.16	10.11	10.47	0.00168	0.00538	0.00557	PASS
Extreme（50℃）		17.20	7.38	11.00	0.00915	0.00393	0.00585	PASS
Extreme（40℃）		5.44	10.85	5.05	0.00289	0.00577	0.00269	PASS
Extreme（30℃）		2.62	16.05	15.27	0.00139	0.00854	0.00812	PASS
Extreme（20℃）		15.85	13.23	7.28	0.00843	0.00704	0.00387	PASS
Extreme（10℃）		7.47	8.70	13.26	0.00397	0.00463	0.00705	PASS
Extreme（0℃）		17.57	8.54	14.57	0.00935	0.00455	0.00775	PASS
Extreme（-10℃）		1.81	1.27	10.71	0.00096	0.00067	0.00570	PASS
Extreme（-20℃）		11.52	3.27	12.69	0.00613	0.00174	0.00675	PASS
Extreme（-30℃）		3.07	3.32	3.00	0.00163	0.00176	0.00159	PASS
25℃	LV	14.22	16.53	15.83	0.00756	0.00879	0.00842	PASS

	HV	8.89	8.22	17.86	0.00473	0.00437	0.00950	PASS
Condition		Freq.Error (Hz)	Freq.Error (Hz)	Freq.Error (Hz)	Frequency Stability （ppm）	Frequency Stability （ppm）	Frequency Stability （ppm）	Verdict
BANDWIDTH	20MHz							
Temperature	Voltage	64QAM	16QAM	QPSK	64QAM	16QAM	QPSK	
Normal（25℃）	Normal	11.05	4.42	10.41	0.00588	0.00235	0.00554	PASS
Extreme（50℃）		9.62	2.53	15.63	0.00511	0.00135	0.00831	PASS
Extreme（40℃）		6.77	14.95	4.94	0.00360	0.00795	0.00263	PASS
Extreme（30℃）		8.45	11.95	17.56	0.00449	0.00636	0.00934	PASS
Extreme（20℃）		9.94	2.69	6.01	0.00529	0.00143	0.00320	PASS
Extreme（10℃）		4.31	8.88	1.30	0.00229	0.00473	0.00069	PASS
Extreme（0℃）		10.03	5.89	2.65	0.00534	0.00313	0.00141	PASS
Extreme（-10℃）		7.81	15.81	7.96	0.00416	0.00841	0.00424	PASS
Extreme（-20℃）		2.26	16.71	16.55	0.00120	0.00889	0.00880	PASS
Extreme（-30℃）		3.84	9.38	14.94	0.00204	0.00499	0.00795	PASS
25℃	LV	5.27	14.05	1.20	0.00281	0.00747	0.00064	PASS
	HV	3.93	10.76	11.71	0.00209	0.00573	0.00623	PASS

LTE Band 12								
Condition		Freq.Error (Hz)	Freq.Error (Hz)	Freq.Error (Hz)	Frequency Stability （ppm）	Frequency Stability （ppm）	Frequency Stability （ppm）	Verdict
BANDWIDTH	1.4MHz							
Temperature	Voltage	64QAM	16QAM	QPSK	64QAM	16QAM	QPSK	
Normal（25℃）	Normal	16.80	2.06	13.22	0.00893	0.00110	0.00703	PASS
Extreme（50℃）		16.17	9.60	13.98	0.00860	0.00511	0.00743	PASS
Extreme（40℃）		9.32	3.88	12.29	0.00496	0.00206	0.00654	PASS
Extreme（30℃）		7.14	1.81	9.24	0.00380	0.00096	0.00492	PASS
Extreme（20℃）		2.21	10.75	8.53	0.00117	0.00572	0.00454	PASS
Extreme（10℃）		17.67	8.78	9.53	0.00940	0.00467	0.00507	PASS
Extreme（0℃）		3.49	7.90	14.73	0.00186	0.00420	0.00783	PASS
Extreme（-10℃）		15.17	16.95	7.24	0.00807	0.00902	0.00385	PASS
Extreme（-20℃）		11.50	7.91	16.86	0.00612	0.00421	0.00897	PASS
Extreme（-30℃）		4.44	1.51	12.24	0.00236	0.00080	0.00651	PASS
25℃	LV	13.68	2.07	5.15	0.00728	0.00110	0.00274	PASS
	HV	14.57	8.85	1.42	0.00775	0.00470	0.00076	PASS
Condition		Freq.Error (Hz)	Freq.Error (Hz)	Freq.Error (Hz)	Frequency Stability （ppm）	Frequency Stability （ppm）	Frequency Stability （ppm）	Verdict
BANDWIDTH	3MHz							
Temperature	Voltage	64QAM	16QAM	QPSK	64QAM	16QAM	QPSK	

Normal（25℃）	Normal	9.54	14.30	13.36	0.00507	0.00761	0.00711	PASS
Extreme（50℃）		4.06	12.75	13.97	0.00216	0.00678	0.00743	PASS
Extreme（40℃）		12.53	4.55	5.83	0.00666	0.00242	0.00310	PASS
Extreme（30℃）		9.99	4.05	14.71	0.00531	0.00216	0.00782	PASS
Extreme（20℃）		13.95	15.65	15.07	0.00742	0.00832	0.00802	PASS
Extreme（10℃）		5.36	7.16	15.96	0.00285	0.00381	0.00849	PASS
Extreme（0℃）		5.52	1.96	17.20	0.00293	0.00104	0.00915	PASS
Extreme（-10℃）		9.59	1.02	11.27	0.00510	0.00054	0.00600	PASS
Extreme（-20℃）		14.53	8.05	5.07	0.00773	0.00428	0.00270	PASS
Extreme（-30℃）		4.77	8.00	12.35	0.00254	0.00425	0.00657	PASS
25℃	LV	15.00	9.84	8.75	0.00798	0.00524	0.00466	PASS
	HV	6.01	6.69	2.82	0.00320	0.00356	0.00150	PASS
Condition		Freq.Error (Hz)	Freq.Error (Hz)	Freq.Error (Hz)	Frequency Stability（ppm）	Frequency Stability（ppm）	Frequency Stability（ppm）	Verdict
BANDWIDTH	5MHz							
Temperature	Voltage	64QAM	16QAM	QPSK	64QAM	16QAM	QPSK	
Normal（25℃）	Normal	10.79	14.00	13.65	0.00574	0.00744	0.00726	PASS
Extreme（50℃）		14.73	4.24	3.58	0.00784	0.00225	0.00190	PASS
Extreme（40℃）		9.56	13.97	5.66	0.00509	0.00743	0.00301	PASS
Extreme（30℃）		7.39	13.11	8.46	0.00393	0.00698	0.00450	PASS
Extreme（20℃）		13.22	14.15	8.39	0.00703	0.00753	0.00446	PASS
Extreme（10℃）		3.19	1.22	8.45	0.00170	0.00065	0.00450	PASS
Extreme（0℃）		16.82	6.25	1.38	0.00895	0.00333	0.00073	PASS
Extreme（-10℃）		16.84	15.54	5.84	0.00896	0.00827	0.00311	PASS
Extreme（-20℃）		5.82	12.96	17.39	0.00310	0.00690	0.00925	PASS
Extreme（-30℃）		10.09	6.72	6.66	0.00537	0.00358	0.00354	PASS
25℃	LV	15.75	2.14	1.42	0.00838	0.00114	0.00076	PASS
	HV	17.28	15.82	10.83	0.00919	0.00842	0.00576	PASS
Condition		Freq.Error (Hz)	Freq.Error (Hz)	Freq.Error (Hz)	Frequency Stability（ppm）	Frequency Stability（ppm）	Frequency Stability（ppm）	Verdict
BANDWIDTH	10MHz							
Temperature	Voltage	64QAM	16QAM	QPSK	64QAM	16QAM	QPSK	
Normal（25℃）	Normal	1.29	17.05	12.80	0.00068	0.00907	0.00681	PASS
Extreme（50℃）		4.14	7.91	14.64	0.00220	0.00421	0.00779	PASS
Extreme（40℃）		13.01	5.65	5.07	0.00692	0.00300	0.00269	PASS
Extreme（30℃）		2.80	4.73	10.47	0.00149	0.00251	0.00557	PASS
Extreme（20℃）		16.93	5.77	7.44	0.00901	0.00307	0.00396	PASS
Extreme（10℃）		1.42	17.65	9.87	0.00075	0.00939	0.00525	PASS
Extreme（0℃）		6.46	15.85	5.48	0.00344	0.00843	0.00291	PASS
Extreme（-10℃）		4.09	6.75	6.52	0.00218	0.00359	0.00347	PASS
Extreme（-20℃）		14.51	10.05	14.22	0.00772	0.00534	0.00756	PASS

Extreme（-30℃）		4.60	4.39	6.18	0.00245	0.00234	0.00329	PASS
25℃	LV	3.08	17.49	15.76	0.00164	0.00930	0.00838	PASS
	HV	5.43	4.00	15.64	0.00289	0.00213	0.00832	PASS

LTE Band13								
Condition		Freq.Error (Hz)	Freq.Error (Hz)	Freq.Error (Hz)	Frequency Stability（ppm）	Frequency Stability（ppm）	Frequency Stability（ppm）	Verdict
BANDWIDTH	5MHz							
Temperature	Voltage	64QAM	16QAM	QPSK	64QAM	16QAM	QPSK	
Normal（25℃）	Normal	17.01	3.44	17.86	0.00905	0.00183	0.00950	PASS
Extreme（50℃）		11.22	7.15	9.56	0.00597	0.00380	0.00508	PASS
Extreme（40℃）		13.40	11.01	15.11	0.00713	0.00586	0.00804	PASS
Extreme（30℃）		10.08	12.31	8.57	0.00536	0.00655	0.00456	PASS
Extreme（20℃）		11.77	13.65	16.94	0.00626	0.00726	0.00901	PASS
Extreme（10℃）		14.53	10.26	2.08	0.00773	0.00546	0.00111	PASS
Extreme（0℃）		10.06	10.63	6.29	0.00535	0.00566	0.00335	PASS
Extreme（-10℃）		2.60	9.52	1.53	0.00138	0.00507	0.00081	PASS
Extreme（-20℃）		2.42	15.41	10.44	0.00129	0.00819	0.00555	PASS
Extreme（-30℃）		17.51	10.30	2.61	0.00931	0.00548	0.00139	PASS
25℃	LV	11.52	8.74	14.32	0.00613	0.00465	0.00762	PASS
	HV	13.49	3.67	9.38	0.00718	0.00195	0.00499	PASS
Condition		Freq.Error (Hz)	Freq.Error (Hz)	Freq.Error (Hz)	Frequency Stability（ppm）	Frequency Stability（ppm）	Frequency Stability（ppm）	Verdict
BANDWIDTH	10MHz							
Temperature	Voltage	64QAM	16QAM	QPSK	64QAM	16QAM	QPSK	
Normal（25℃）	Normal	2.44	4.46	3.17	0.00130	0.00237	0.00168	PASS
Extreme（50℃）		12.02	4.10	14.05	0.00640	0.00218	0.00747	PASS
Extreme（40℃）		1.09	10.15	12.69	0.00058	0.00540	0.00675	PASS
Extreme（30℃）		1.55	14.87	6.68	0.00083	0.00791	0.00355	PASS
Extreme（20℃）		13.51	4.03	12.55	0.00719	0.00215	0.00667	PASS
Extreme（10℃）		9.17	15.19	7.67	0.00488	0.00808	0.00408	PASS
Extreme（0℃）		13.75	17.14	16.15	0.00731	0.00912	0.00859	PASS
Extreme（-10℃）		4.85	15.79	9.38	0.00258	0.00840	0.00499	PASS
Extreme（-20℃）		13.15	15.30	10.98	0.00700	0.00814	0.00584	PASS
Extreme（-30℃）		16.25	4.04	11.70	0.00864	0.00215	0.00622	PASS
25℃	LV	5.64	8.16	10.27	0.00300	0.00434	0.00546	PASS
	HV	11.02	3.80	11.71	0.00586	0.00202	0.00623	PASS

CA_66B_QPSK	5MHz+5MHz (Bandwidth)		10MHz+10MHz (Bandwidth)		Verdict
Condition	Delta	Frequency	Delta	Frequency	

Temperature	Voltage	(Hz)	Stability (ppm)	(Hz)	Stability (ppm)	
Normal（25℃）	Normal	16.52	0.00879	6.88	0.00366	PASS
Extreme（50℃）		7.91	0.00421	4.53	0.00241	PASS
Extreme（40℃）		10.16	0.00541	3.40	0.00181	PASS
Extreme（30℃）		9.12	0.00485	4.03	0.00214	PASS
Extreme（20℃）		16.20	0.00862	10.50	0.00558	PASS
Extreme（10℃）		4.95	0.00263	11.36	0.00605	PASS
Extreme（0℃）		6.55	0.00348	3.04	0.00162	PASS
Extreme（-10℃）		16.44	0.00874	2.11	0.00112	PASS
Extreme（-20℃）		6.84	0.00364	16.09	0.00856	PASS
Extreme（-30℃）		12.37	0.00658	7.00	0.00372	PASS
25℃	LV	1.56	0.00083	9.08	0.00483	PASS
	HV	15.93	0.00847	16.41	0.00873	PASS
CA_66B_16QAM		5MHz+5MHz (Bandwidth)		10MHz+10MHz (Bandwidth)		Verdict
Condition		Delta (Hz)	Frequency Stability (ppm)	Delta (Hz)	Frequency Stability (ppm)	
Temperature	Voltage					
Normal（25℃）	Normal	17.12	0.00911	7.30	0.00388	PASS
Extreme（50℃）		2.07	0.00110	11.36	0.00604	PASS
Extreme（40℃）		16.61	0.00884	7.14	0.00380	PASS
Extreme（30℃）		3.55	0.00189	7.42	0.00395	PASS
Extreme（20℃）		14.67	0.00780	13.16	0.00700	PASS
Extreme（10℃）		3.85	0.00205	14.67	0.00780	PASS
Extreme（0℃）		3.15	0.00168	7.90	0.00420	PASS
Extreme（-10℃）		10.92	0.00581	8.74	0.00465	PASS
Extreme（-20℃）		3.47	0.00185	17.18	0.00914	PASS
Extreme（-30℃）		10.89	0.00579	14.58	0.00776	PASS
25℃	LV	17.87	0.00951	7.37	0.00392	PASS
	HV	14.67	0.00781	15.17	0.00807	PASS
CA_66B_64QAM		5MHz+5MHz (Bandwidth)		10MHz+10MHz (Bandwidth)		Verdict
Condition		Delta (Hz)	Frequency Stability (ppm)	Delta (Hz)	Frequency Stability (ppm)	
Temperature	Voltage					
Normal（25℃）	Normal	14.13	0.00752	8.94	0.00475	PASS
Extreme（50℃）		6.95	0.00369	11.50	0.00612	PASS
Extreme（40℃）		6.01	0.00320	1.04	0.00055	PASS
Extreme（30℃）		14.15	0.00753	1.67	0.00089	PASS
Extreme（20℃）		2.07	0.00110	17.01	0.00905	PASS
Extreme（10℃）		15.34	0.00816	16.04	0.00853	PASS
Extreme（0℃）		4.46	0.00237	4.28	0.00228	PASS

Extreme（-10℃）		3.41	0.00181	6.56	0.00349	PASS
Extreme（-20℃）		12.83	0.00683	8.20	0.00436	PASS
Extreme（-30℃）		8.49	0.00452	10.51	0.00559	PASS
25℃	LV	14.28	0.00760	2.40	0.00128	PASS
	HV	8.74	0.00465	12.64	0.00672	PASS

CA_66C_QPSK		20MHz+5MHz (Bandwidth)		20MHz+20MHz (Bandwidth)		Verdict
Condition		Delta (Hz)	Frequency Stability (ppm)	Delta (Hz)	Frequency Stability (ppm)	
Temperature	Voltage					
Normal（25℃）	Normal	16.83	0.00895	2.47	0.00132	PASS
Extreme（50℃）		3.07	0.00163	7.05	0.00375	PASS
Extreme（40℃）		3.70	0.00197	2.78	0.00148	PASS
Extreme（30℃）		11.24	0.00598	9.82	0.00523	PASS
Extreme（20℃）		8.82	0.00469	14.74	0.00784	PASS
Extreme（10℃）		14.36	0.00764	3.47	0.00185	PASS
Extreme（0℃）		9.03	0.00481	1.50	0.00080	PASS
Extreme（-10℃）		7.69	0.00409	15.92	0.00847	PASS
Extreme（-20℃）		11.52	0.00613	17.56	0.00934	PASS
Extreme（-30℃）		9.63	0.00512	15.52	0.00825	PASS
25℃	LV	13.88	0.00738	11.09	0.00590	PASS
	HV	16.90	0.00899	9.62	0.00512	PASS
CA_66C_16QAM		20MHz+5MHz (Bandwidth)		20MHz+20MHz (Bandwidth)		Verdict
Condition		Delta (Hz)	Frequency Stability (ppm)	Delta (Hz)	Frequency Stability (ppm)	
Temperature	Voltage					
Normal（25℃）	Normal	1.30	0.00069	4.54	0.00241	PASS
Extreme（50℃）		12.91	0.00687	4.25	0.00226	PASS
Extreme（40℃）		13.16	0.00700	4.81	0.00256	PASS
Extreme（30℃）		8.55	0.00455	1.78	0.00095	PASS
Extreme（20℃）		15.33	0.00816	11.15	0.00593	PASS
Extreme（10℃）		14.59	0.00776	1.92	0.00102	PASS
Extreme（0℃）		10.56	0.00562	1.12	0.00060	PASS
Extreme（-10℃）		8.78	0.00467	2.18	0.00116	PASS
Extreme（-20℃）		7.16	0.00381	6.42	0.00341	PASS
Extreme（-30℃）		14.12	0.00751	14.49	0.00771	PASS
25℃	LV	14.96	0.00796	7.29	0.00388	PASS
	HV	17.31	0.00921	6.87	0.00365	PASS
CA_66C_64QAM		20MHz+5MHz (Bandwidth)		20MHz+20MHz (Bandwidth)		Verdict

Condition		Delta (Hz)	Frequency Stability (ppm)	Delta (Hz)	Frequency Stability (ppm)	
Temperature	Voltage					
Normal（25℃）	Normal	7.83	0.00416	7.89	0.00420	PASS
Extreme（50℃）		9.05	0.00481	5.51	0.00293	PASS
Extreme（40℃）		1.16	0.00062	7.83	0.00416	PASS
Extreme（30℃）		11.39	0.00606	11.76	0.00625	PASS
Extreme（20℃）		11.16	0.00593	12.71	0.00676	PASS
Extreme（10℃）		8.67	0.00461	3.72	0.00198	PASS
Extreme（0℃）		12.82	0.00682	13.65	0.00726	PASS
Extreme（-10℃）		7.28	0.00387	3.94	0.00210	PASS
Extreme（-20℃）		17.70	0.00941	7.29	0.00388	PASS
Extreme（-30℃）		2.99	0.00159	8.26	0.00439	PASS
25℃	LV	3.10	0.00165	6.35	0.00338	PASS
	HV	14.98	0.00797	3.82	0.00203	PASS

5.6 Spurious Emissions at Antenna Terminals

Ambient condition

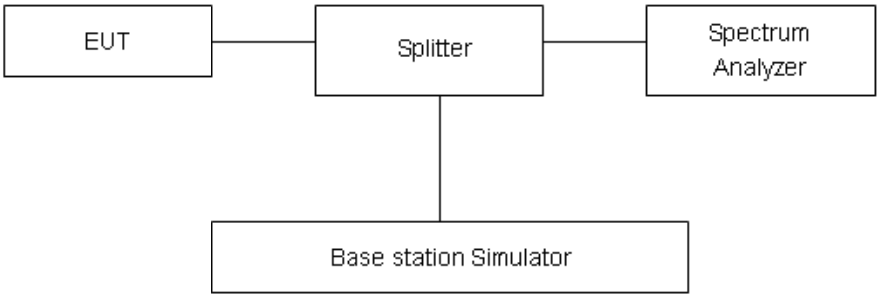
Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

Method of Measurement

The EUT was connected to Spectrum Analyzer and Base Station Simulator via power Splitter. The measurement is carried out using a spectrum analyzer. The spectrum analyzer scans from 9kHz to the 10th harmonic of the carrier. The peak detector is used.
RBW is set to 100kHz, VBW is set to 300kHz for 30MHz~1GHz
RBW is set to 1MHz, VBW is set to 3MHz for above 1GHz, Sweep is set to ATUO.
RBW is set to 1 kHz (0.009MHz~ 0.15 MHz),
RBW is set to 10 kHz (0.15 MHz~ 30 MHz)
RBW is set to 100 kHz (30MHz~1000 MHz)
RBW is set to 1000 kHz (above 1000MHz)

Of those disturbances below (limit – 20 dB), the mark is not required for the EUT.
The modulation mode and RB allocation refer to section 5.1, using the maximum output power configuration.

Test setup



Limits

Rule Part 27.53(h) specifies that “for operations in the 1695-1710 MHz, 1710-1755 MHz, 1755-1780 MHz, 1915-1920 MHz, 1995-2000 MHz, 2000-2020 MHz, 2110-2155 MHz, 2155-2180 MHz, and 2180-2200 bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least 43 + 10 log10 (P) dB..”

Rule Part 27.53 (g) For operations in the 600 MHz band and the 698-746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least 43 + 10 log (P) dB. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kilohertz or greater. However, in the 100 kilohertz bands

immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

Rule Part 27.53(f) For operations in the 746-758 MHz, 775-788 MHz, and 805-806 MHz bands, emissions in the band 1559-1610 MHz shall be limited to −70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals, and −80 dBW EIRP for discrete emissions of less than 700 Hz bandwidth. For the purpose of equipment authorization, a transmitter shall be tested with an antenna that is representative of the type that will be used with the equipment in normal operation.

Part 27.53 (c) For operations in the 746-758 MHz band and the 776-788 MHz band, the power of any emission outside the licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, in accordance with the following:
(1) On any frequency outside the 746-758 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least 43 + 10 log (P) dB;
(2) On any frequency outside the 776-788 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least 43 + 10 log (P) dB;
(3) On all frequencies between 763-775 MHz and 793-805 MHz, by a factor not less than 76 + 10 log (P) dB in a 6.25 kHz band segment, for base and fixed stations;
(4) On all frequencies between 763-775 MHz and 793-805 MHz, by a factor not less than 65 + 10 log (P) dB in a 6.25 kHz band segment, for mobile and portable stations;
(5) Compliance with the provisions of paragraphs (c)(1) and (c)(2) of this section is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater. However, in the 100 kHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of at least 30 kHz may be employed;

Part 27.53(h)/(g) Limit		-13 dBm
Part 27.53(f) Limit	Limit out of the band 1559-1610 MHz	-13 dBm
	Limit in the band 1559-1610 MHz	-40 dBm

Measurement Uncertainty

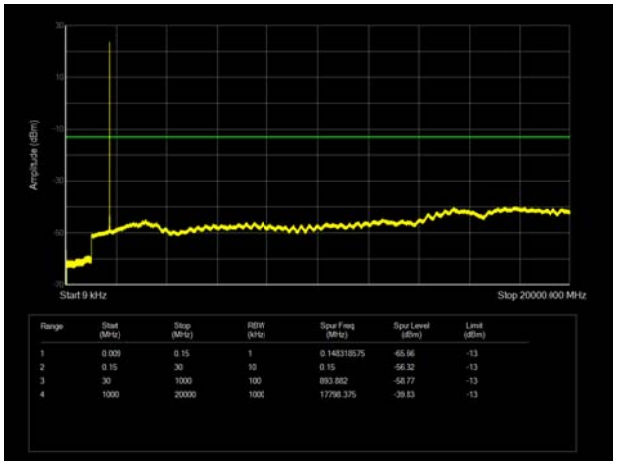
The assessed measurement uncertainty to ensure 99.75％ confidence level for the normal distribution is with the coverage factor *k* = 1.96.

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

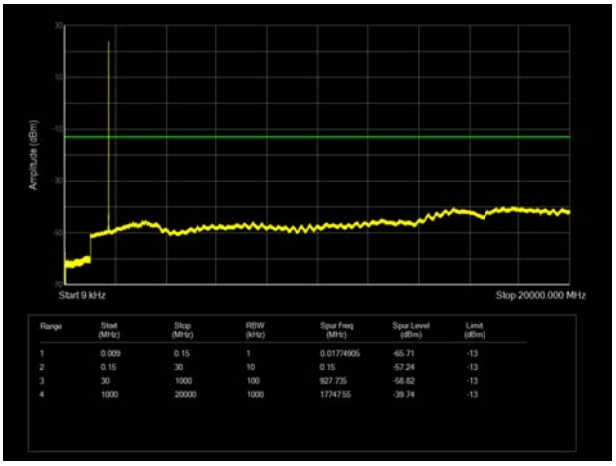
Test Result

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

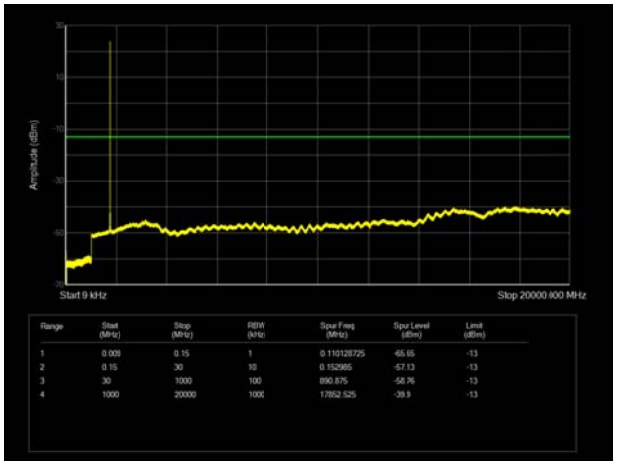
LTE Band 4 1.4MHz CH-Low 9kHz~20GHz



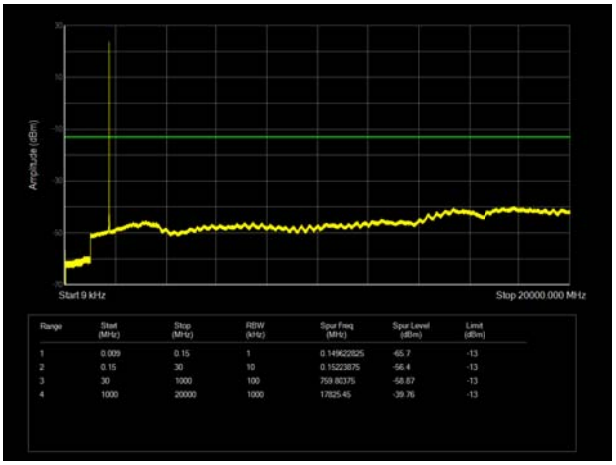
LTE Band 4 3MHz CH- Low 9kHz~20GHz



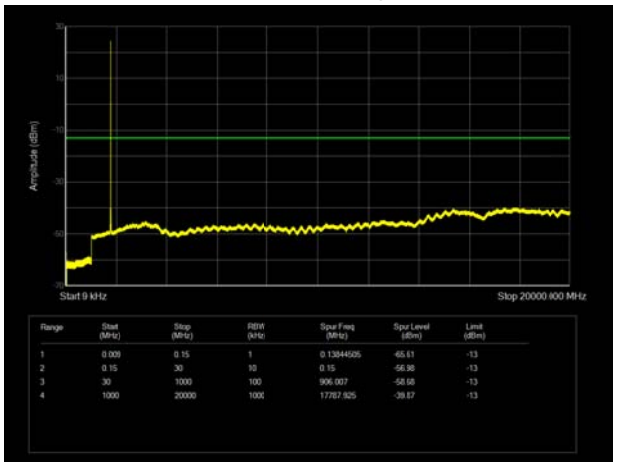
LTE Band 4 1.4MHz CH- Middle 9kHz~20GHz



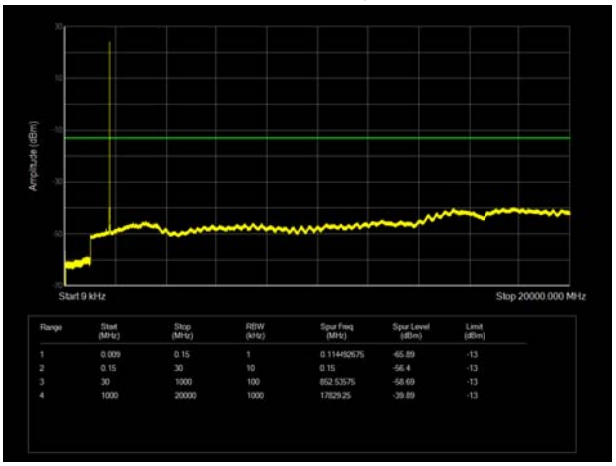
LTE Band 4 3MHz CH- Middle 9kHz~20GHz



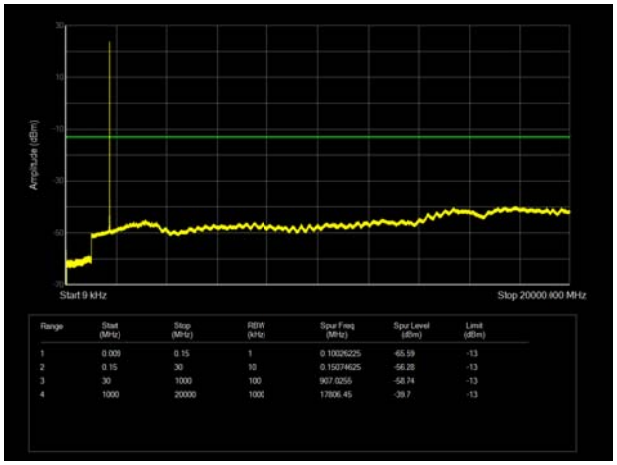
LTE Band 4 1.4MHz CH- High 9kHz~20GHz



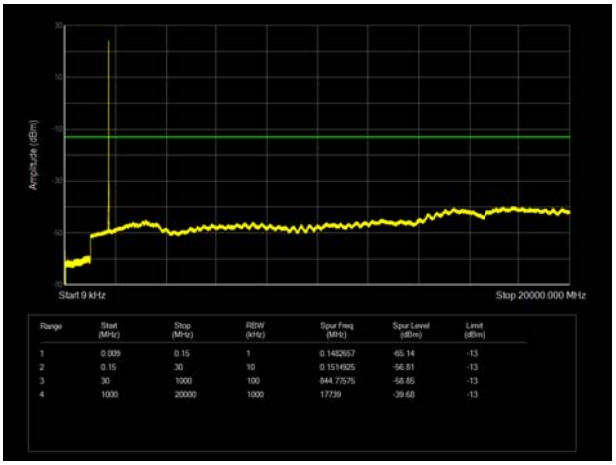
LTE Band 4 3MHz CH-High 9kHz~20GHz



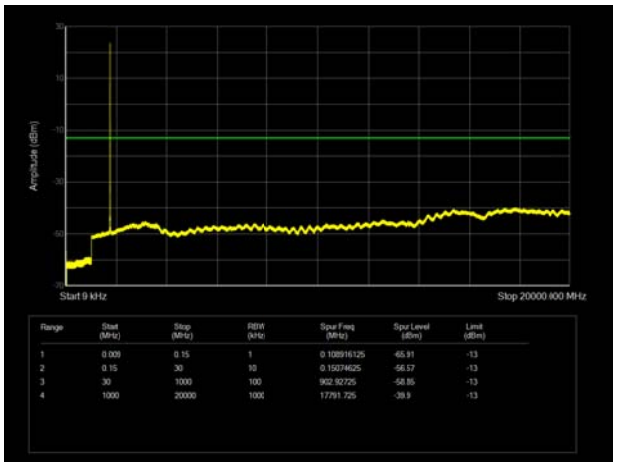
LTE Band 4 5MHz CH- Low 9kHz~20GHz



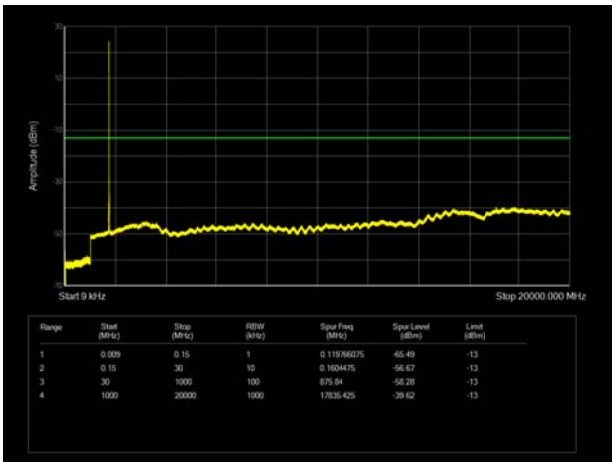
LTE Band 4 10MHz CH-Low 9kHz~20GHz



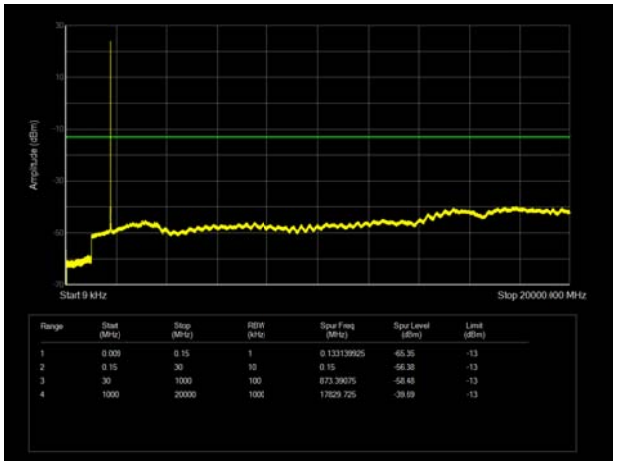
LTE Band 4 5MHz CH- Middle 9kHz~20GHz



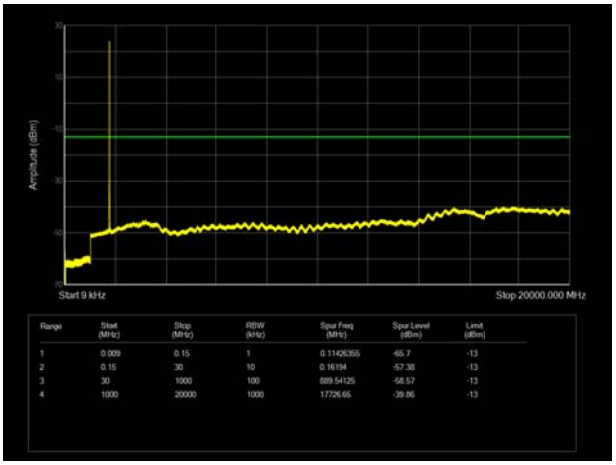
LTE Band 4 10MHz CH- Middle 9kHz~20GHz



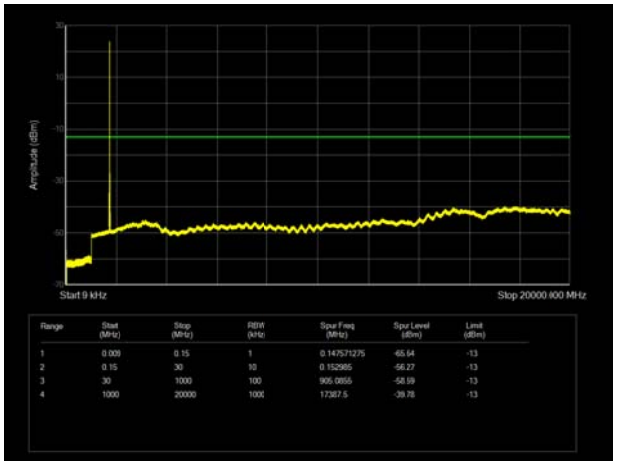
LTE Band 4 5MHz CH-High 9kHz~20GHz



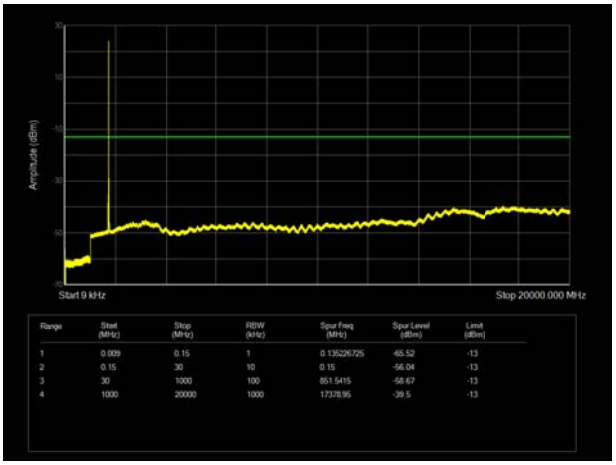
LTE Band 4 10MHz CH- High 9kHz~20GHz



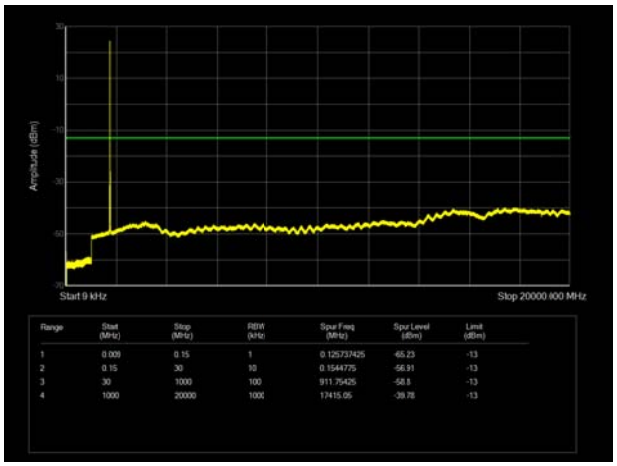
LTE Band 4 15MHz CH- Low 9kHz~20GHz



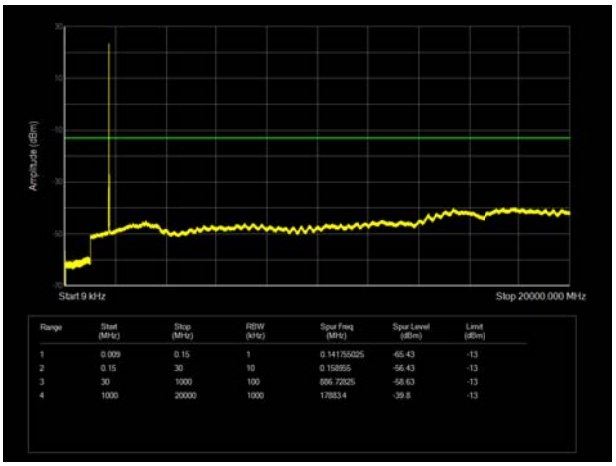
LTE Band 4 20MHz CH-Low 9kHz~20GHz



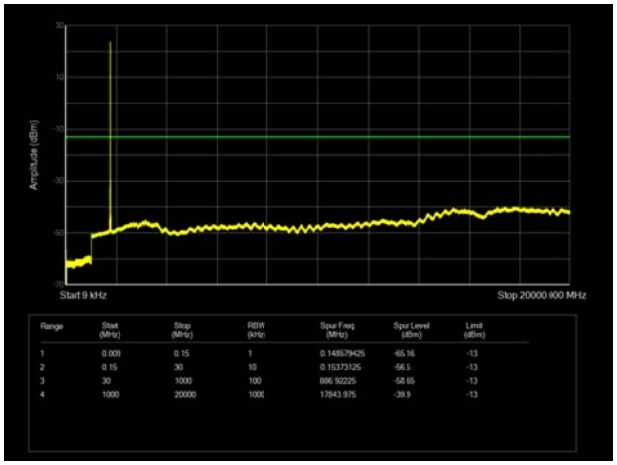
LTE Band 4 15MHz CH- Middle 9kHz~20GHz



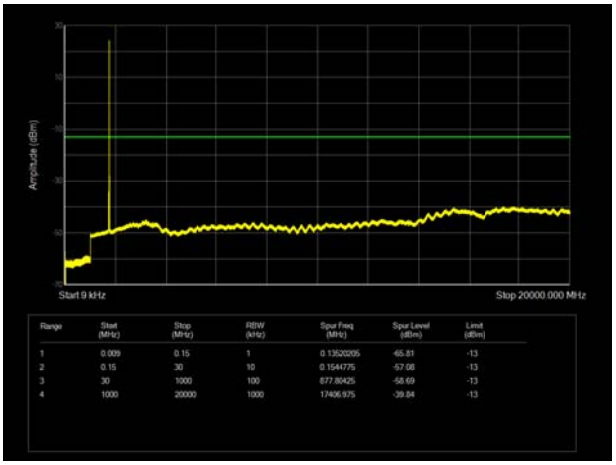
LTE Band 4 20MHz CH- Middle 9kHz~20GHz



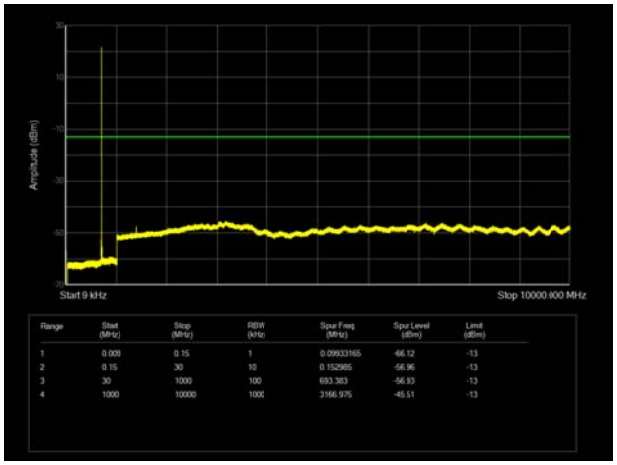
LTE Band 4 15MHz CH-High 9kHz~20GHz



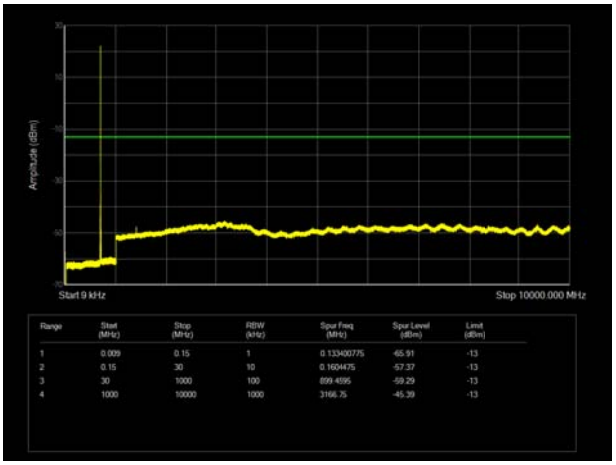
LTE Band 4 20MHz CH- High 9kHz~20GHz



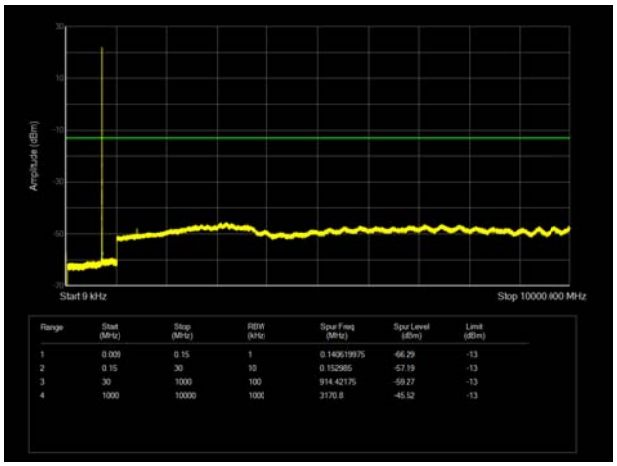
LTE Band 12 1.4MHz CH-Low 9kHz~10GHz



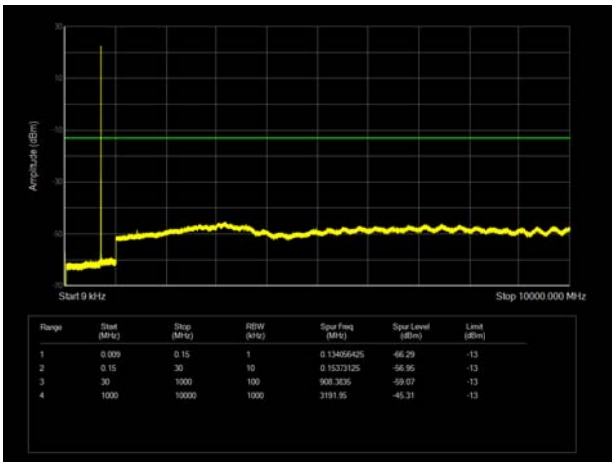
LTE Band 12 3MHz CH- Low 9kHz~10GHz



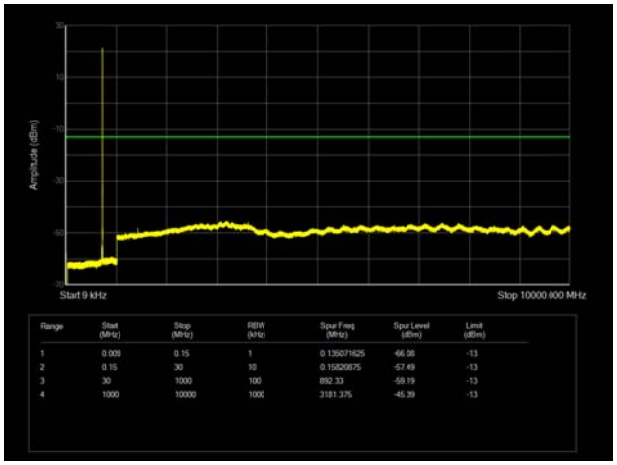
LTE Band 12 1.4MHz CH- Middle 9kHz~10GHz



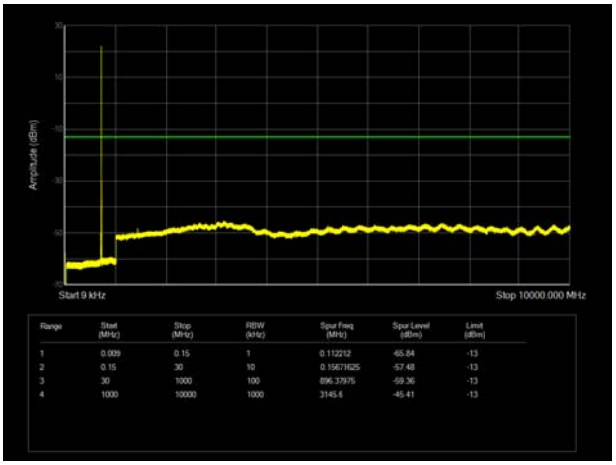
LTE Band 12 3MHz CH- Middle 9kHz~10GHz



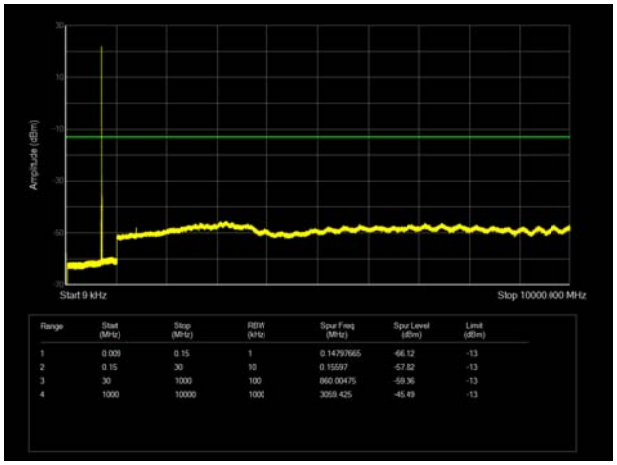
LTE Band 12 1.4MHz CH- High 9kHz~10GHz



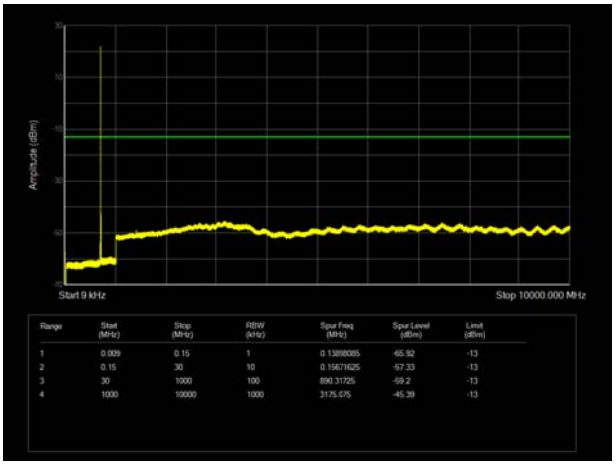
LTE Band 12 3MHz CH-High 9kHz~10GHz



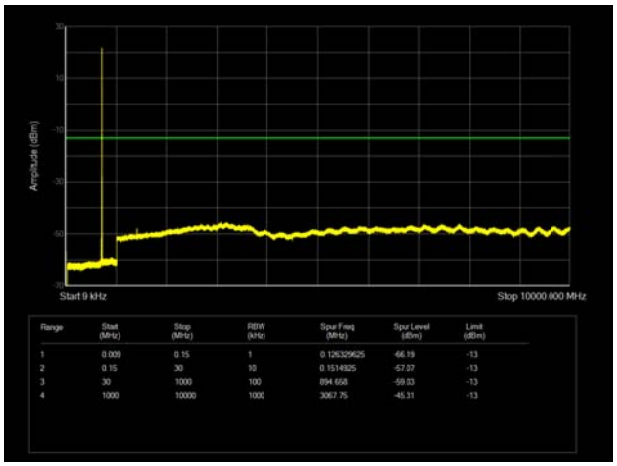
LTE Band 12 5MHz CH- Low 9kHz~10GHz



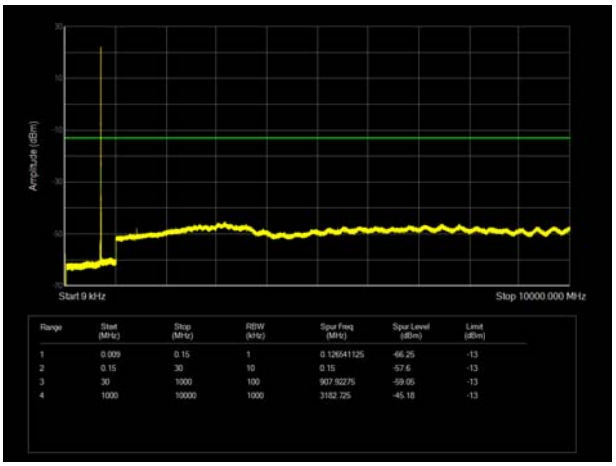
LTE Band 12 10MHz CH-Low 9kHz~10GHz



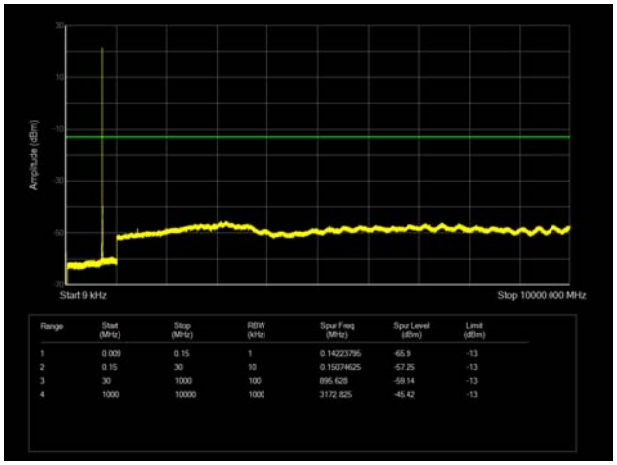
LTE Band 12 5MHz CH- Middle 9kHz~10GHz



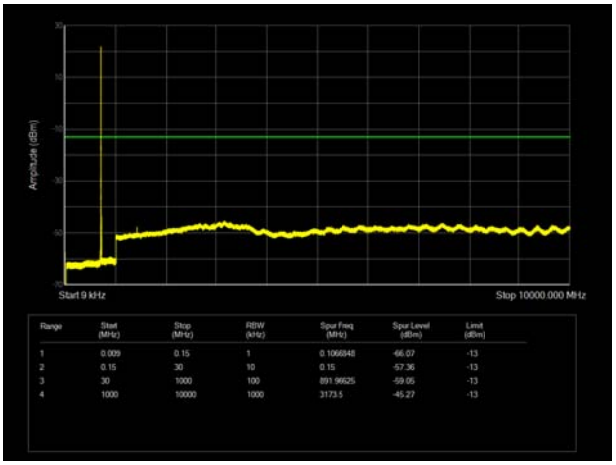
LTE Band 12 10MHz CH- Middle 9kHz~10GHz



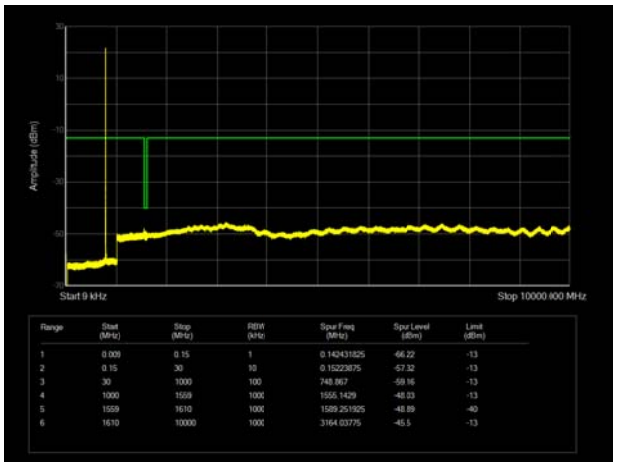
LTE Band 12 5MHz CH-High 9kHz~10GHz



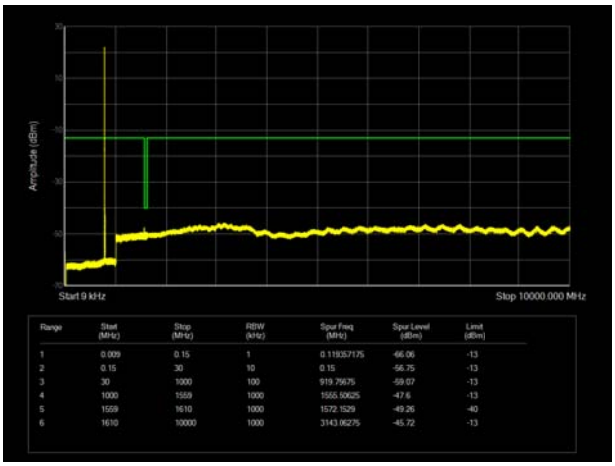
LTE Band 12 10MHz CH- High 9kHz~10GHz



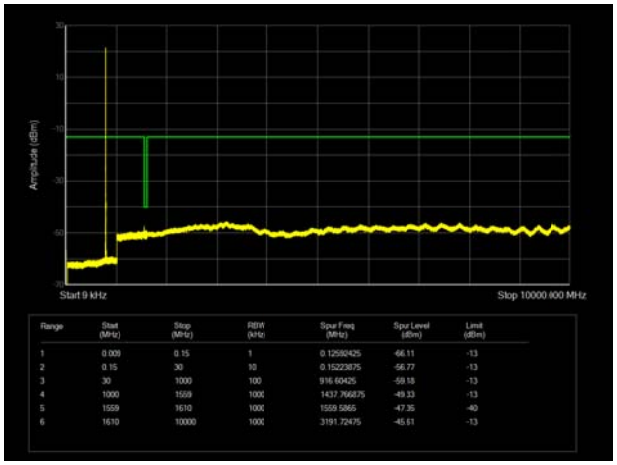
LTE Band 13 5MHz CH- Low 9kHz~10GHz



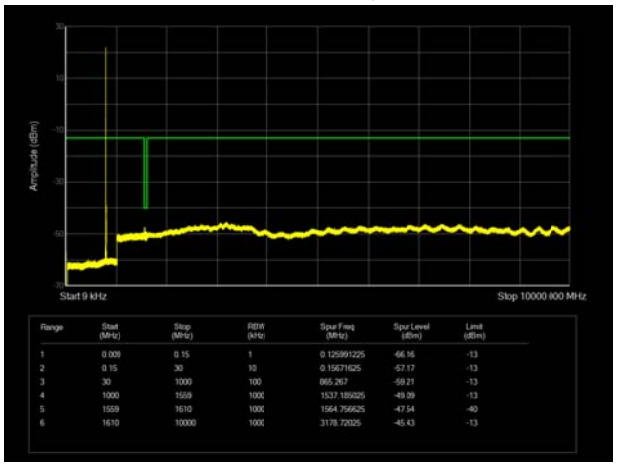
LTE Band 13 10MHz CH- Middle 9kHz~10GHz



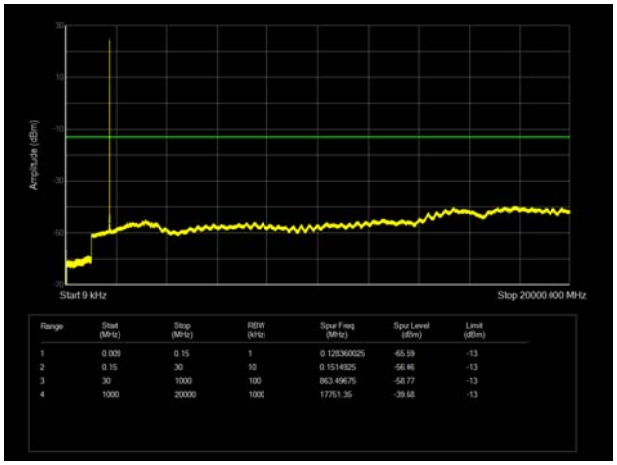
LTE Band 13 5MHz CH- Middle 9kHz~10GHz



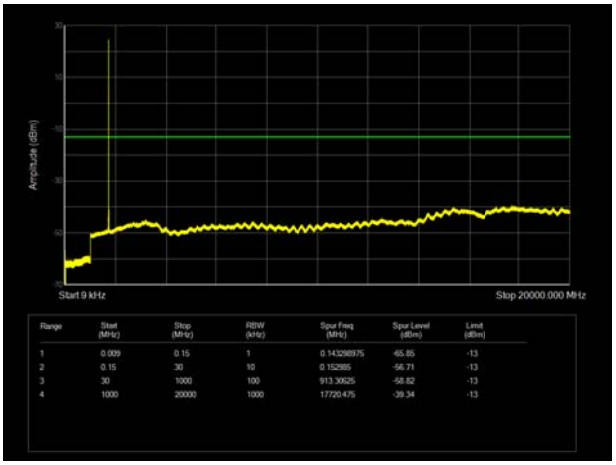
LTE Band 13 5MHz CH-High 9kHz~10GHz



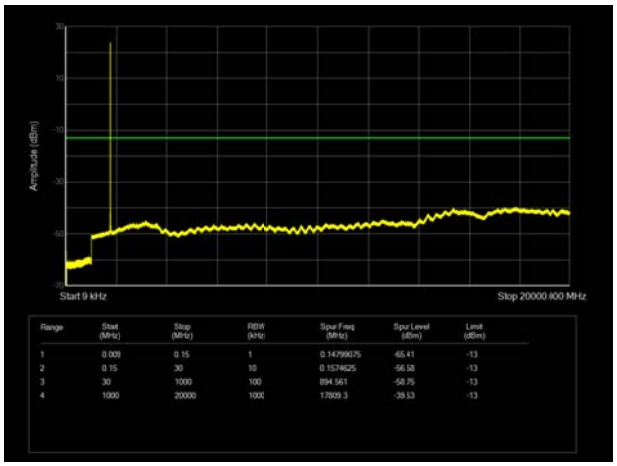
LTE Band 66 1.4MHz CH-Low 9kHz~20GHz



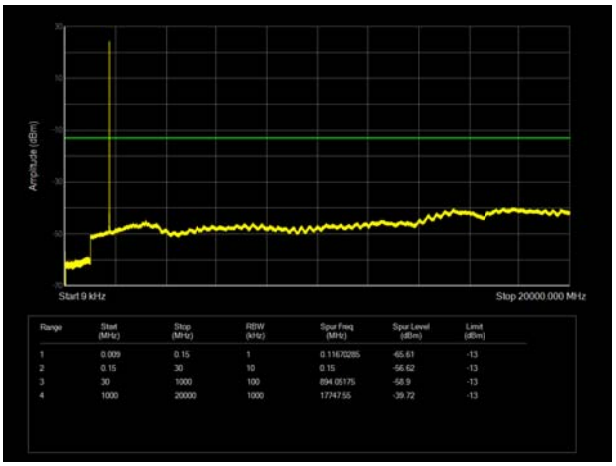
LTE Band 66 3MHz CH- Low 9kHz~20GHz



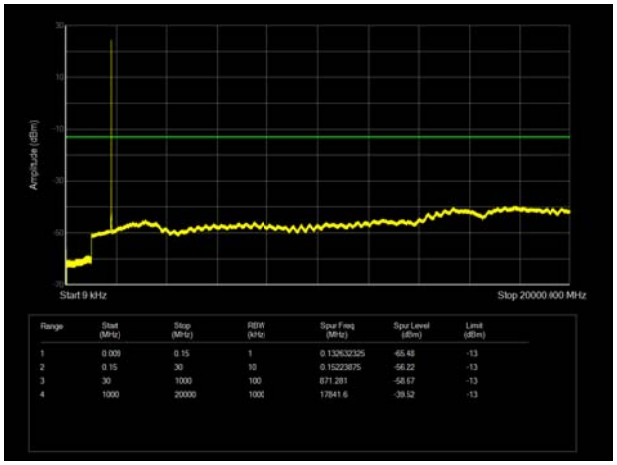
LTE Band 66 1.4MHz CH- Middle 9kHz~20GHz



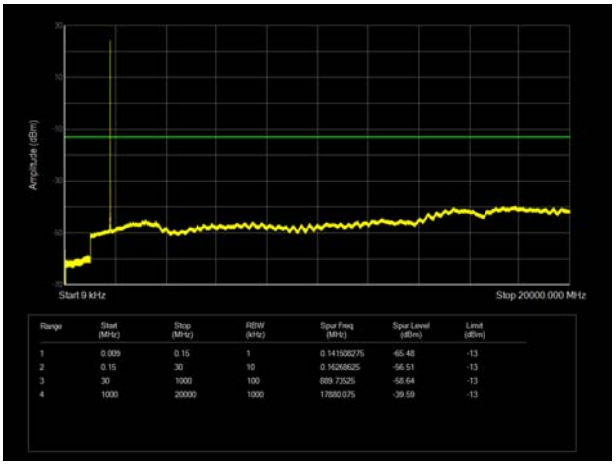
LTE Band 66 3MHz CH- Middle 9kHz~20GHz



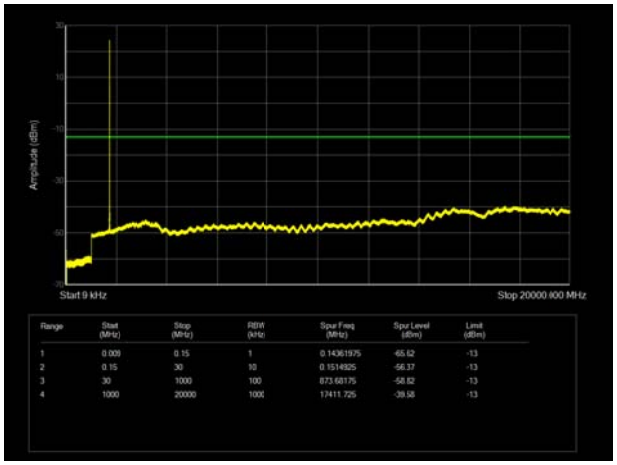
LTE Band 66 1.4MHz CH- High 9kHz~20GHz



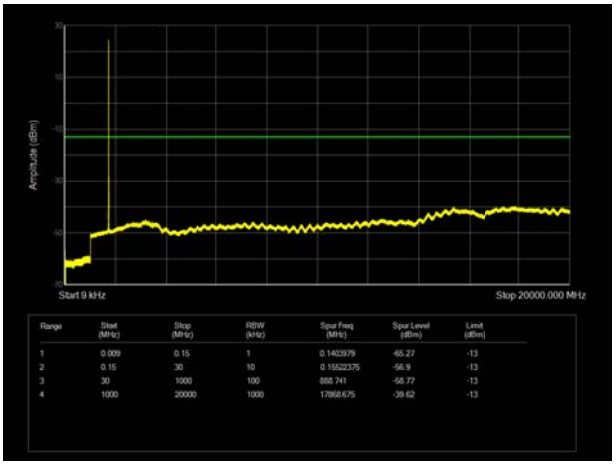
LTE Band 66 3MHz CH-High 9kHz~20GHz



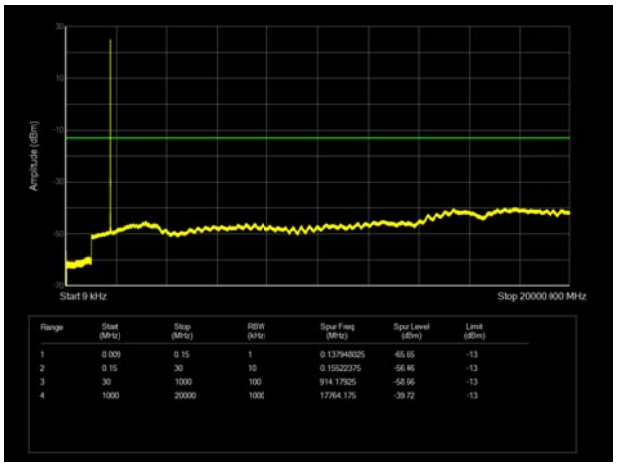
LTE Band 66 5MHz CH- Low 9kHz~20GHz



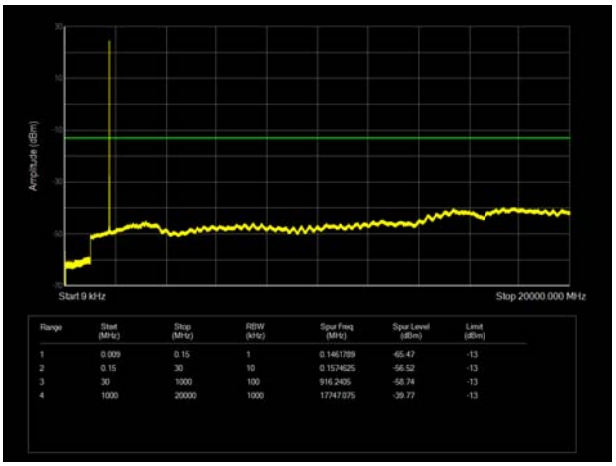
LTE Band 66 10MHz CH-Low 9kHz~20GHz



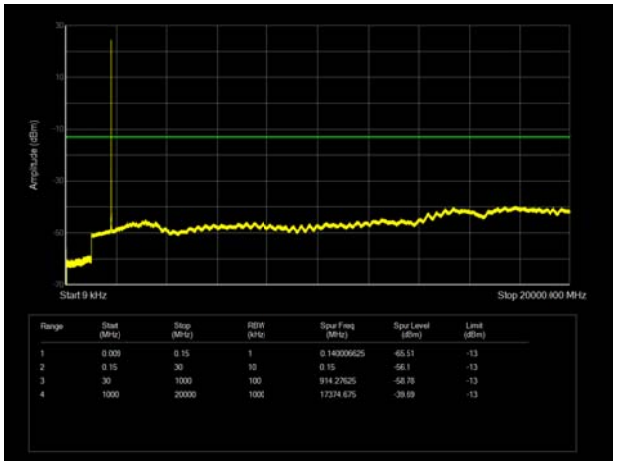
LTE Band 66 5MHz CH- Middle 9kHz~20GHz



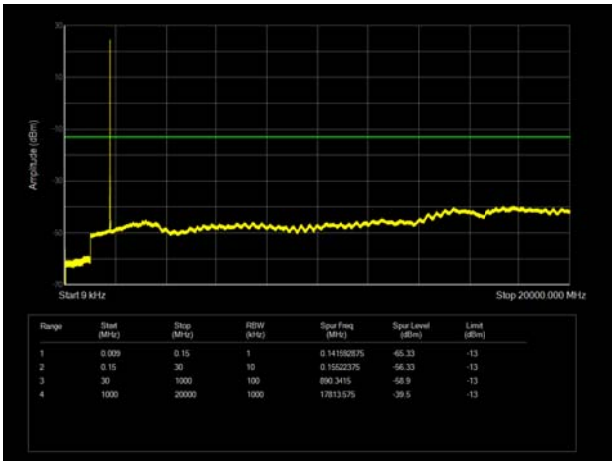
LTE Band 66 10MHz CH- Middle 9kHz~20GHz



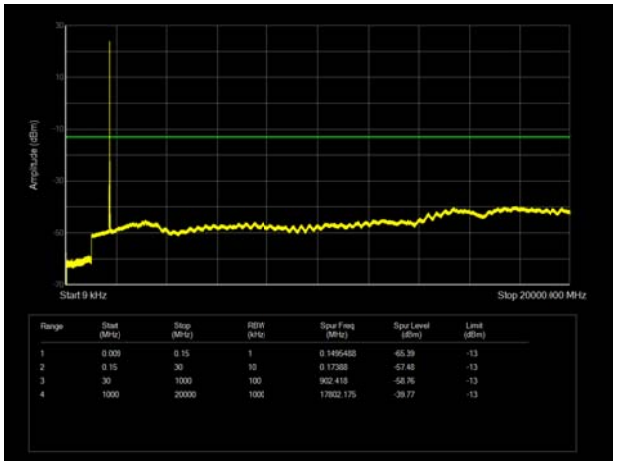
LTE Band 66 5MHz CH-High 9kHz~20GHz



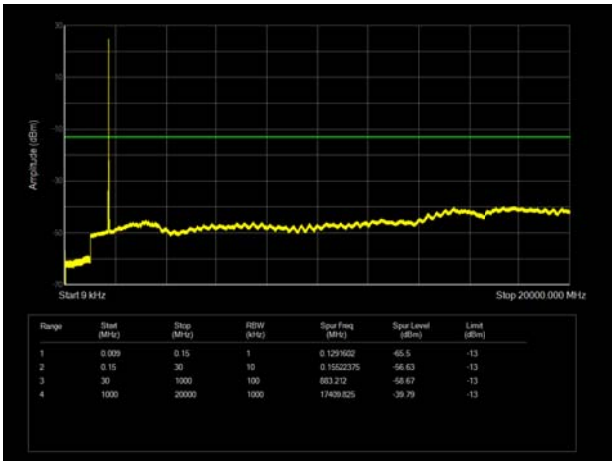
LTE Band 66 10MHz CH- High 9kHz~20GHz



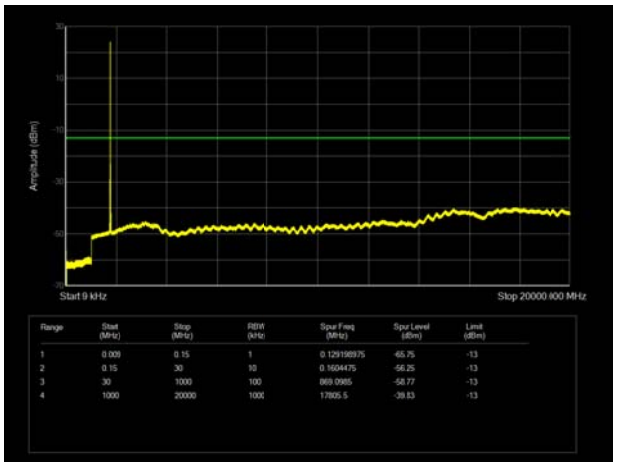
LTE Band 66 15MHz CH- Low 9kHz~20GHz



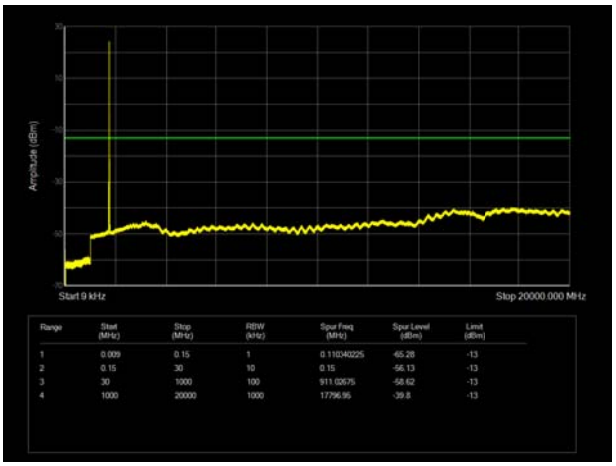
LTE Band 66 20MHz CH-Low 9kHz~20GHz



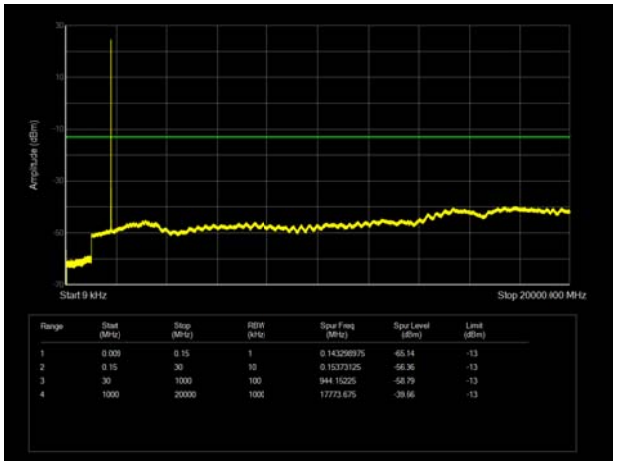
LTE Band 66 15MHz CH- Middle 9kHz~20GHz



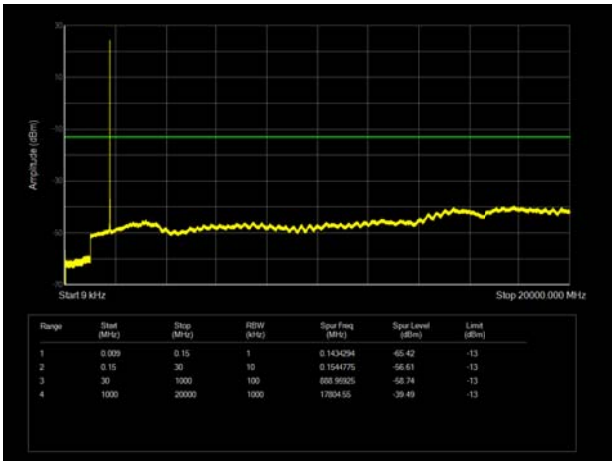
LTE Band 66 20MHz CH- Middle 9kHz~20GHz



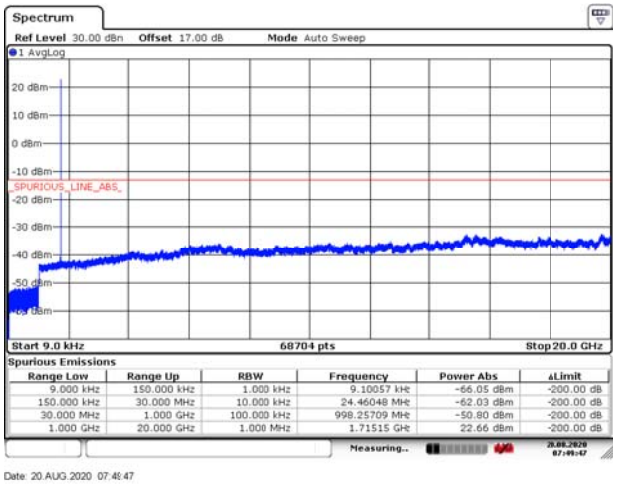
LTE Band 66 15MHz CH-High 9kHz~20GHz



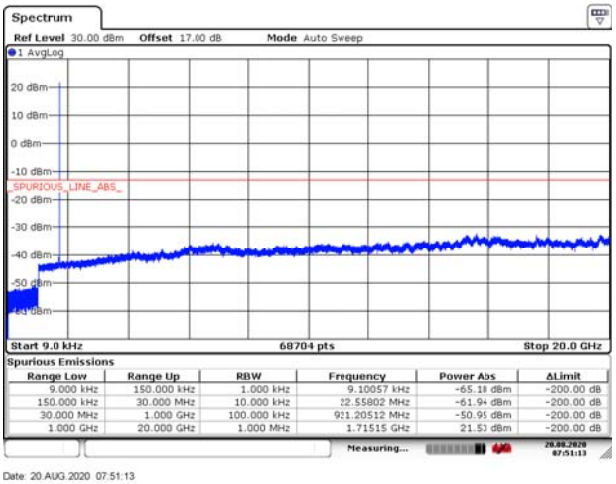
LTE Band 66 20MHz CH- High 9kHz~20GHz



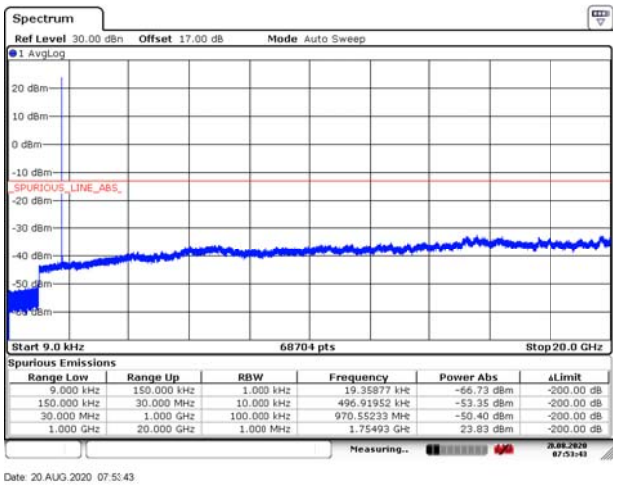
CA_66B_5MHz+5MHz_QPSK CH- Low
9kHz~20GHz



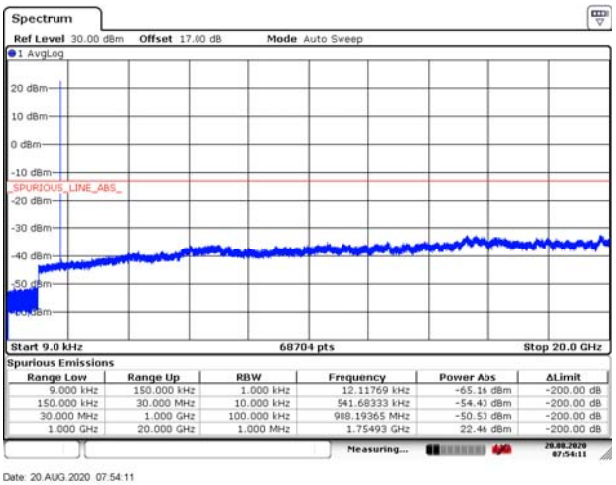
CA_66B_5MHz+5MHz_16QAM CH-Low
9kHz~20GHz



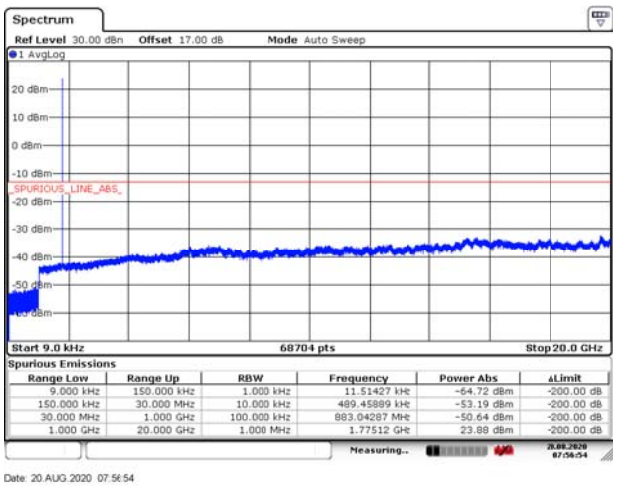
CA_66B_5MHz+5MHz_QPSK CH- Middle
9kHz~20GHz



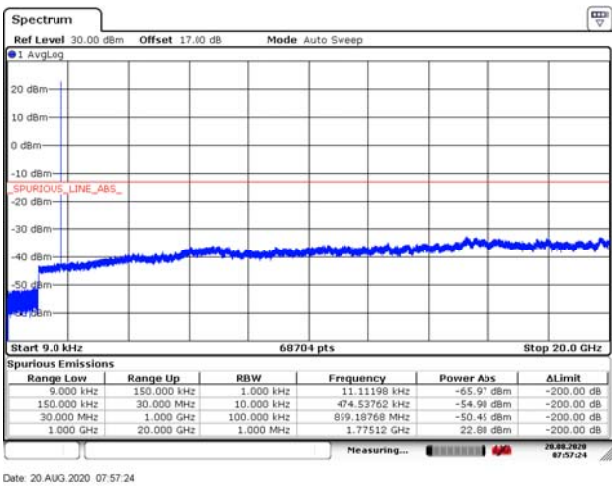
CA_66B_5MHz+5MHz_16QAM CH- Middle
9kHz~20GHz



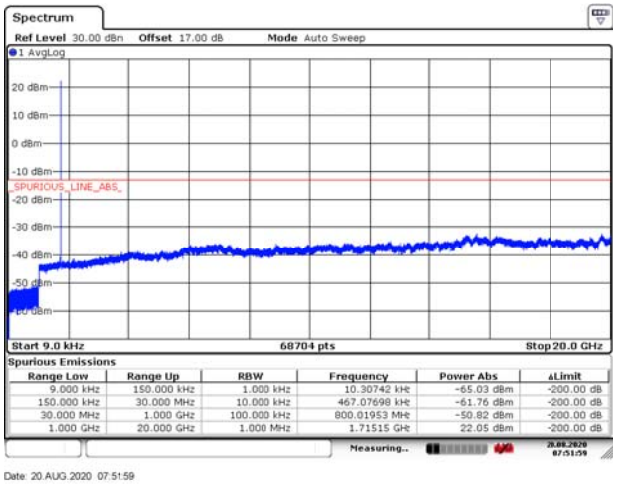
CA_66B_5MHz+5MHz_QPSK CH-High
9kHz~20GHz



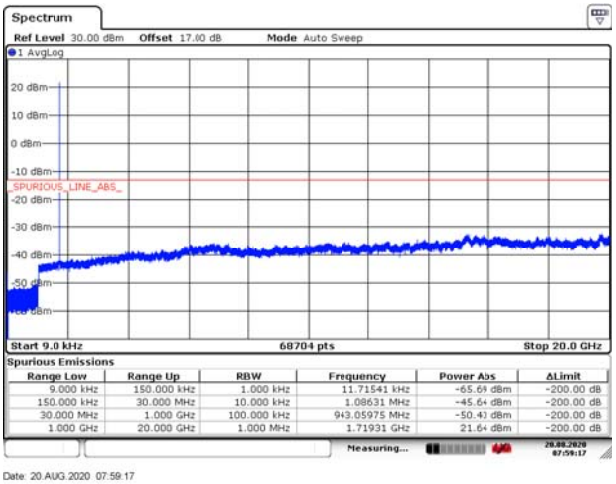
CA_66B_5MHz+5MHz_16QAM CH- High
9kHz~20GHz



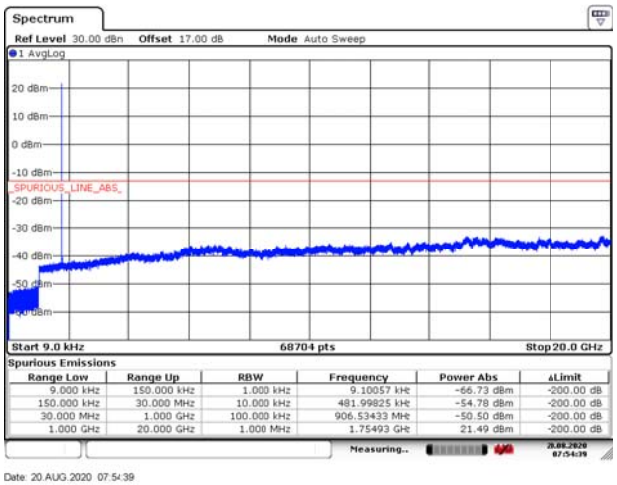
CA_66B_5MHz+5MHz_64QAM CH- Low
9kHz~20GHz



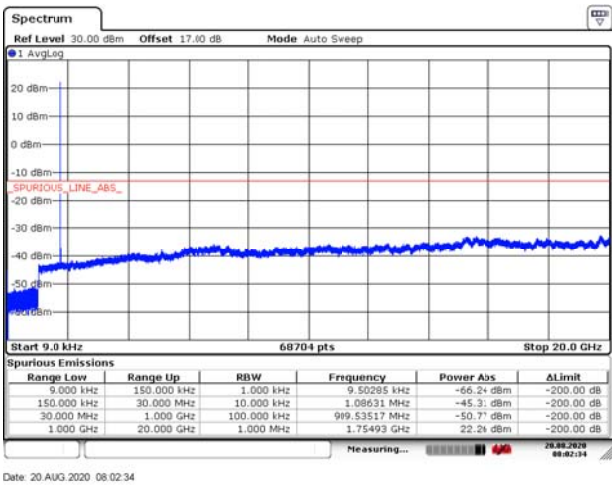
CA_66B_10MHz+10MHz_QPSK CH-Low
9kHz~20GHz



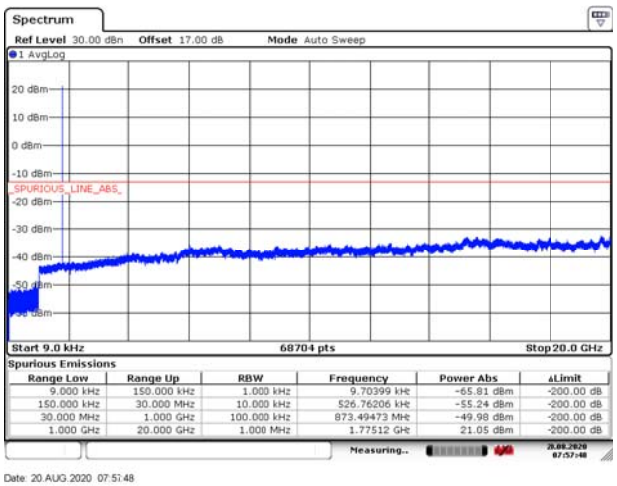
CA_66B_5MHz+5MHz_64QAM CH- Middle
9kHz~20GHz



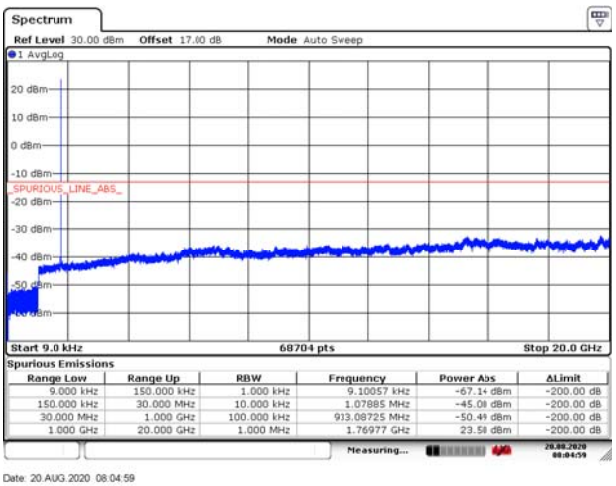
CA_66B_10MHz+10MHz_QPSK CH- Middle
9kHz~20GHz



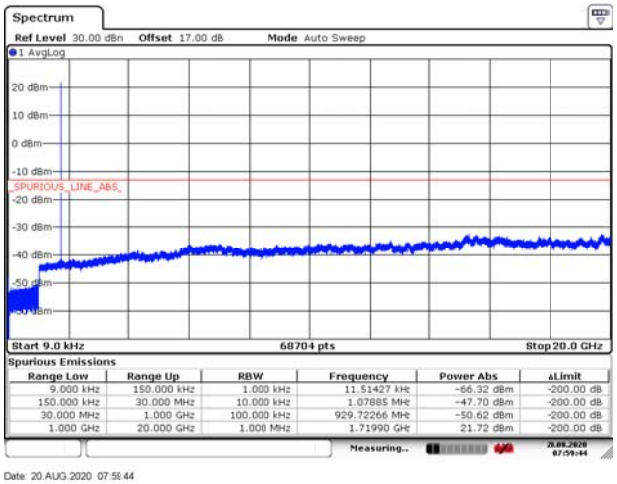
CA_66B_5MHz+5MHz_64QAM CH-High
9kHz~20GHz



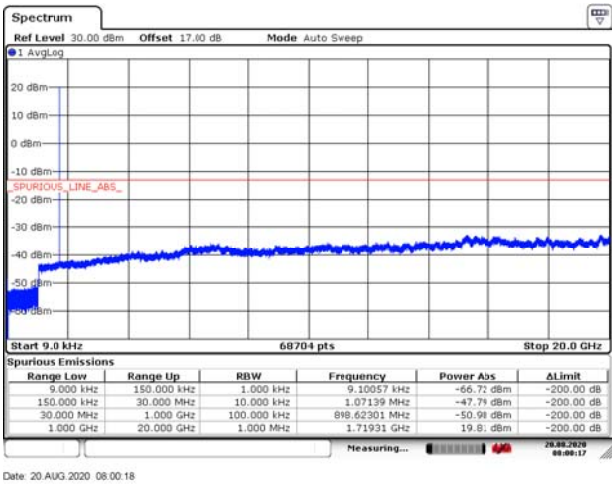
CA_66B_10MHz+10MHz_QPSK CH- High
9kHz~20GHz



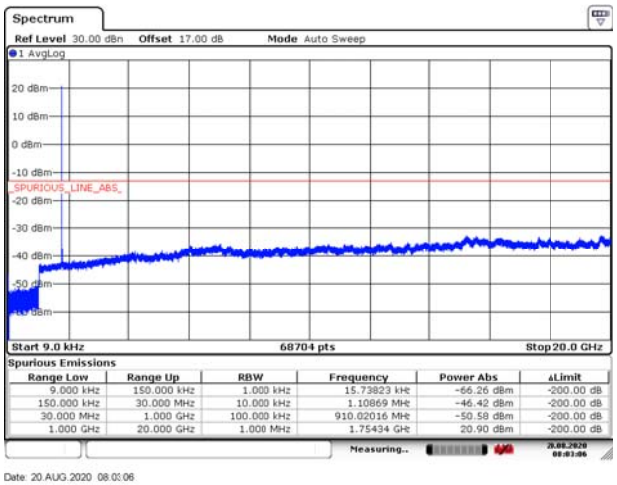
CA_66B_10MHz+10MHz_16QAM CH-Low
9kHz~20GHz



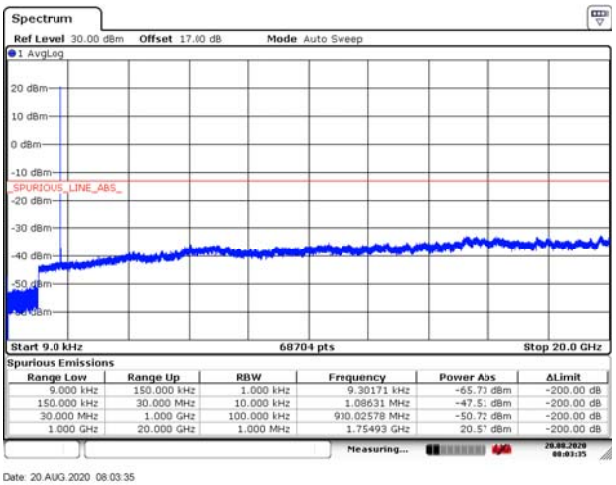
CA_66B_10MHz+10MHz_64QAM CH-Low
9kHz~20GHz



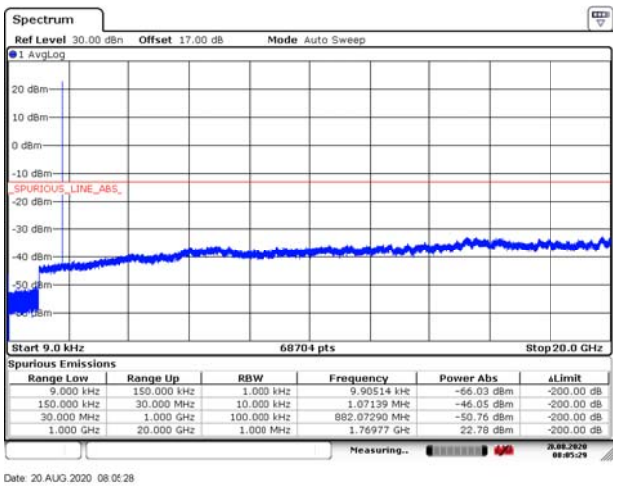
CA_66B_10MHz+10MHz_16QAM K CH- Middle
9kHz~20GHz



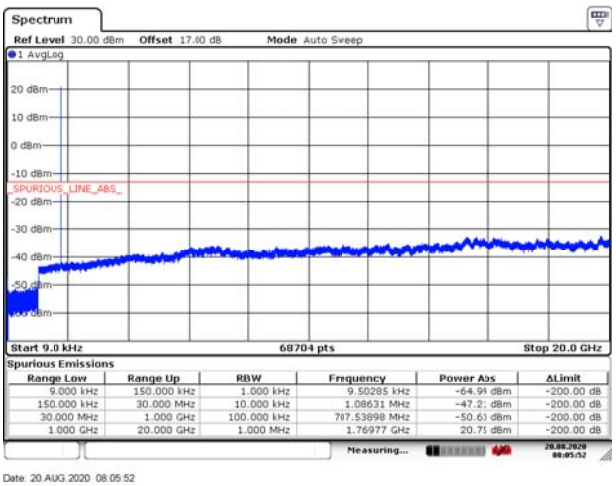
CA_66B_10MHz+10MHz_64QAM CH- Middle
9kHz~20GHz



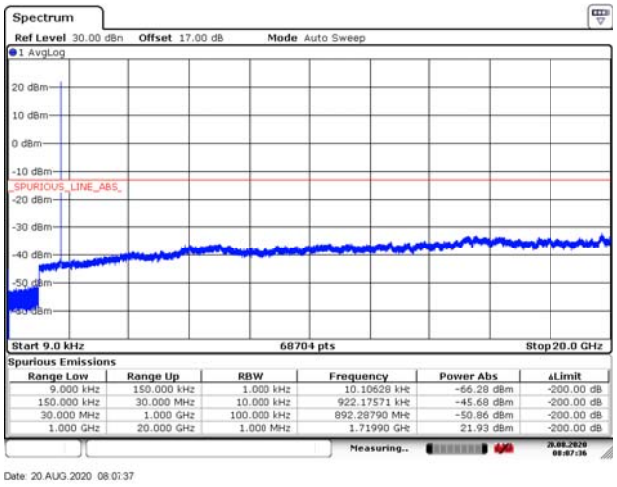
CA_66B_10MHz+10MHz_16QAM CH- High
9kHz~20GHz



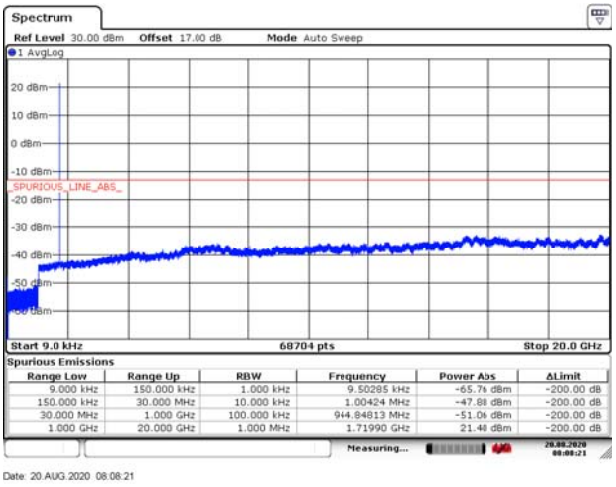
CA_66B_10MHz+10MHz_64QAM CH- High
9kHz~20GHz



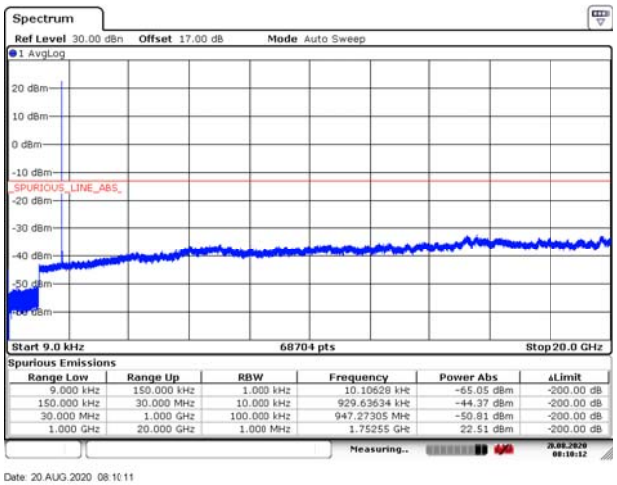
CA_66C_10MHz+15MHz_QPSK CH- Low
9kHz~20GHz



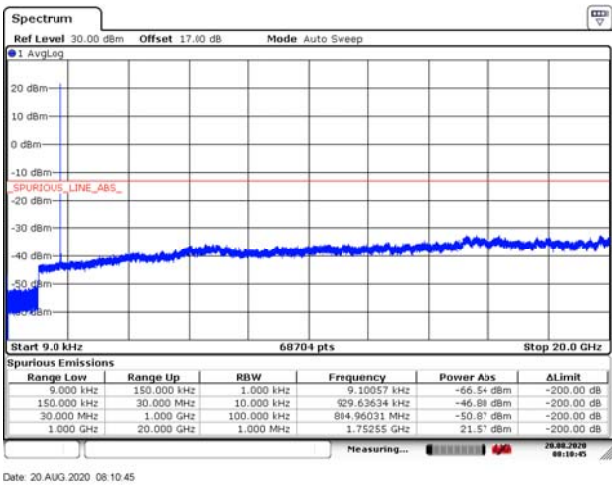
CA_66C_10MHz+15MHz_16QAM CH-Low
9kHz~20GHz



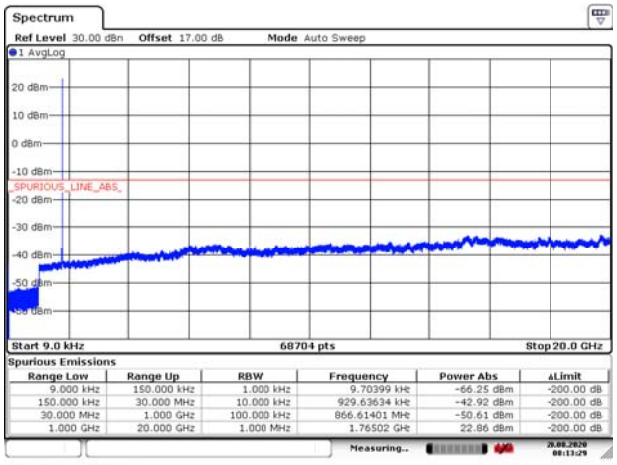
CA_66C_10MHz+15MHz_QPSK CH- Middle
9kHz~20GHz



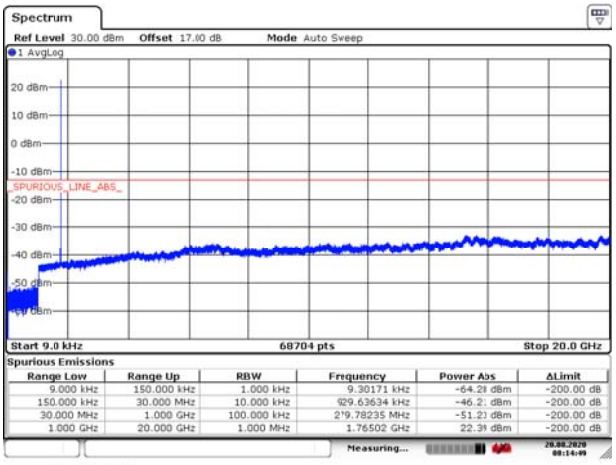
CA_66C_10MHz+15MHz_16QAM CH- Middle
9kHz~20GHz



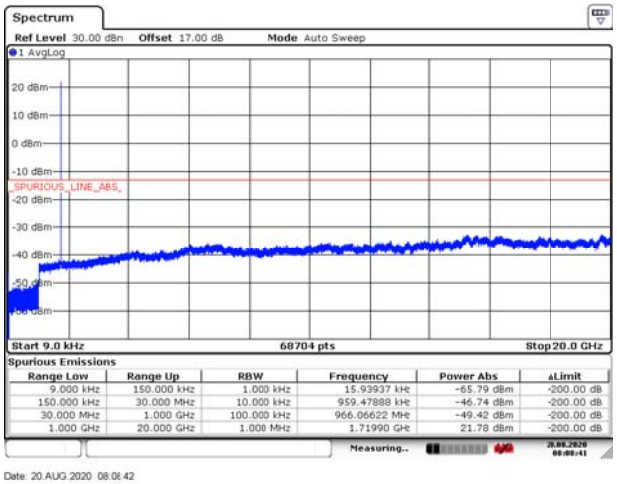
CA_66C_10MHz+15MHz_QPSK CH-High
9kHz~20GHz



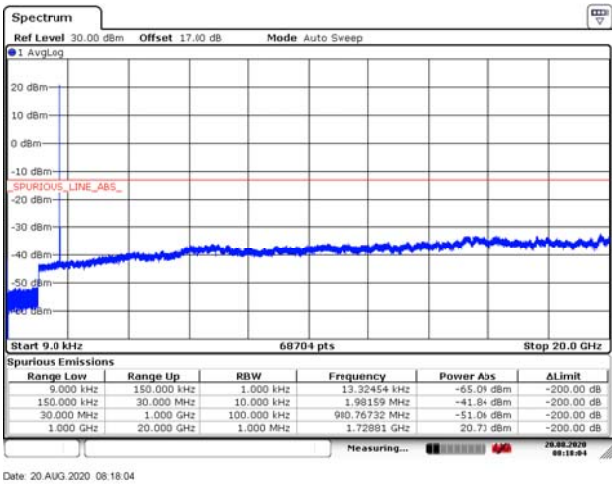
CA_66C_10MHz+15MHz_16QAM CH- High
9kHz~20GHz



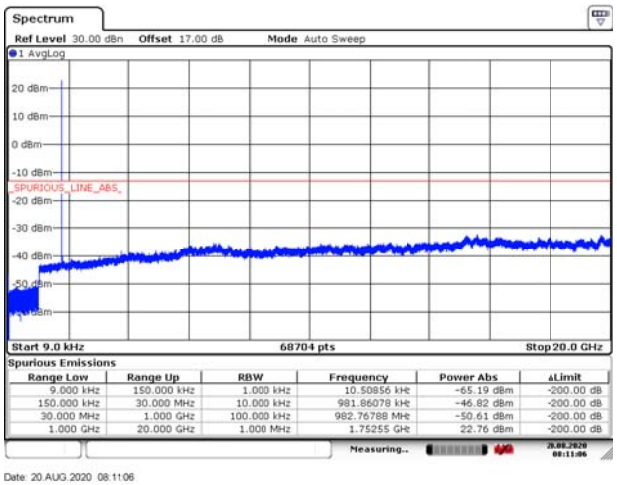
CA_66C_10MHz+15MHz_64QAM CH- Low
9kHz~20GHz



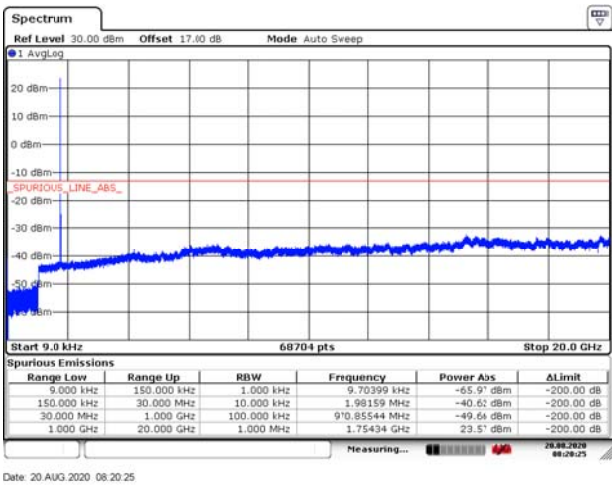
CA_66C_20MHz+20MHz_QPSK CH-Low
9kHz~20GHz



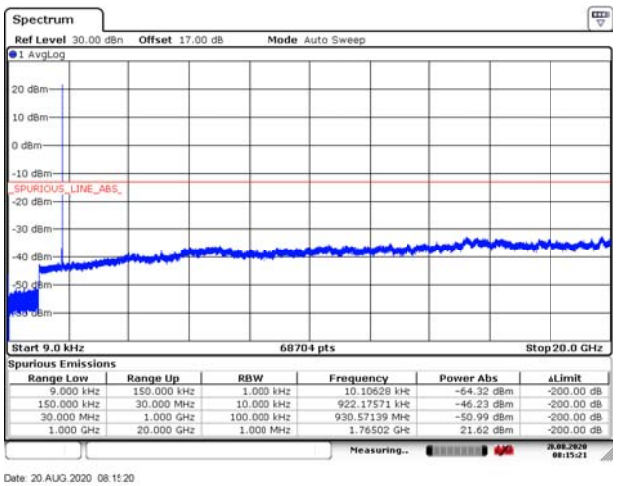
CA_66C_10MHz+15MHz_64QAM CH- Middle
9kHz~20GHz



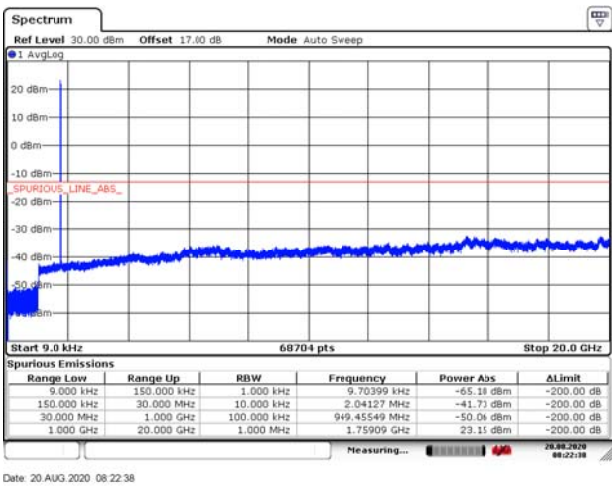
CA_66C_20MHz+20MHz_QPSK CH- Middle
9kHz~20GHz



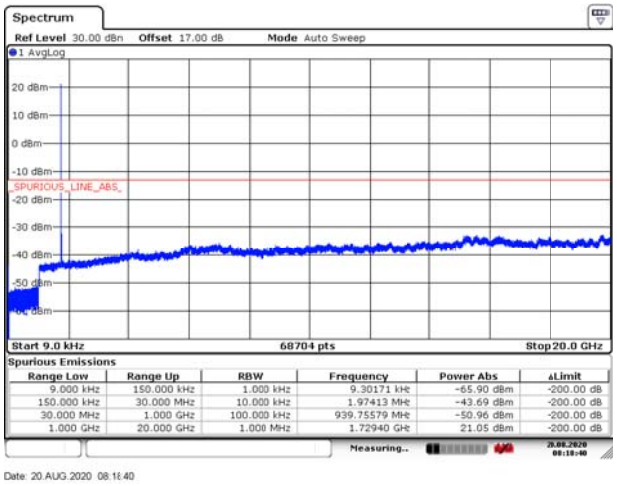
CA_66C_10MHz+15MHz_64QAM CH-High
9kHz~20GHz



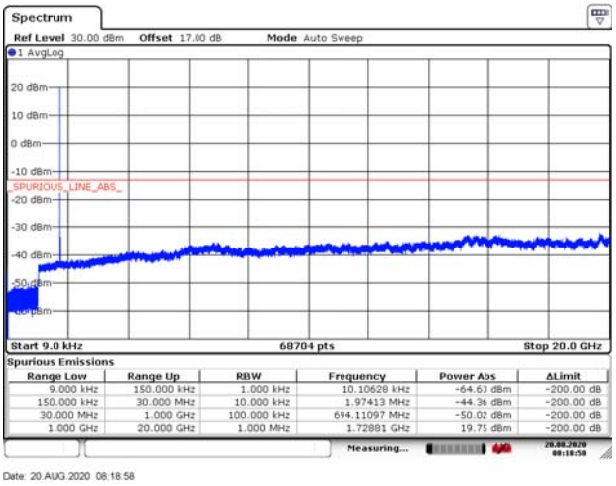
CA_66C_20MHz+20MHz_QPSK CH- High
9kHz~20GHz



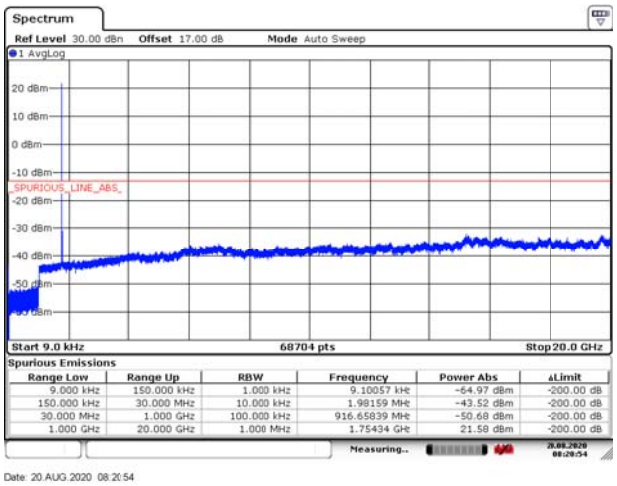
CA_66C_20MHz+20MHz_16QAM CH-Low
9kHz~20GHz



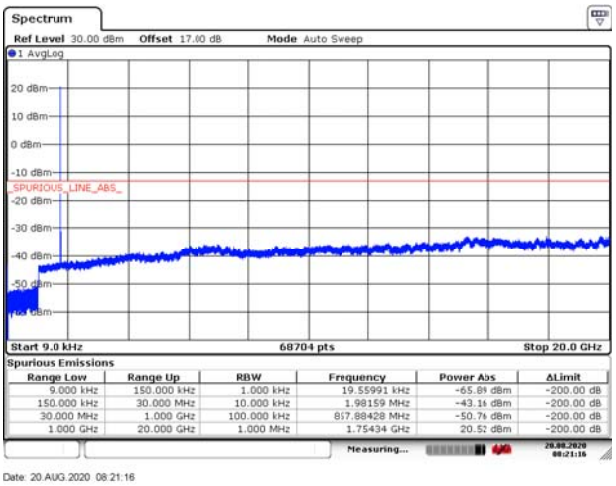
CA_66C_20MHz+20MHz_64QAM CH-Low
9kHz~20GHz



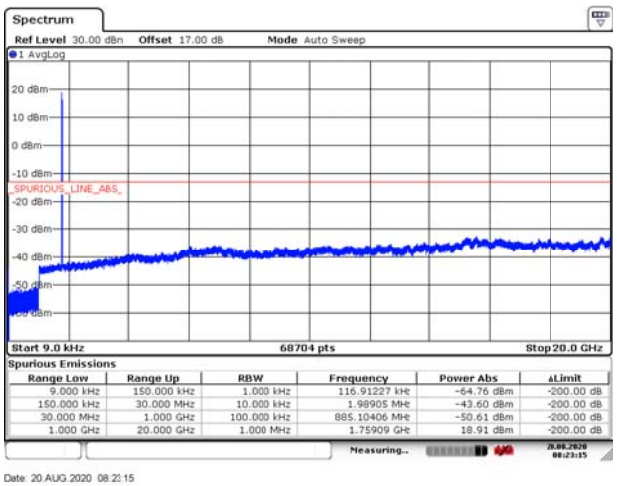
CA_66C_20MHz+20MHz_16QAM CH- Middle
9kHz~20GHz



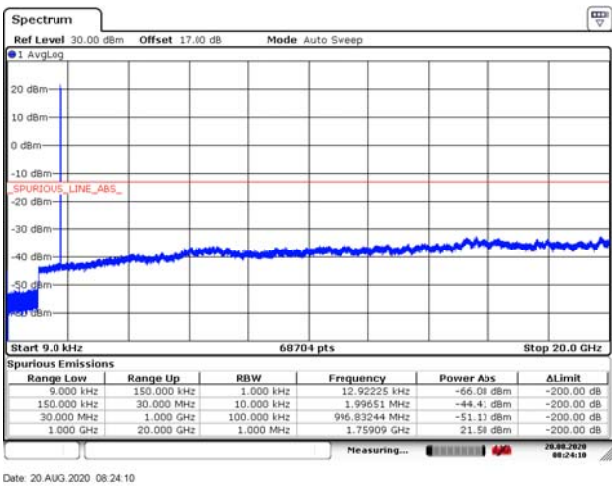
CA_66C_20MHz+20MHz_64QAM CH- Middle
9kHz~20GHz



CA_66C_20MHz+20MHz_16QAM CH- High
9kHz~20GHz



CA_66C_20MHz+20MHz_64QAM CH- High
9kHz~20GHz



5.7 Radiates Spurious Emission

Ambient condition

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

Method of Measurement

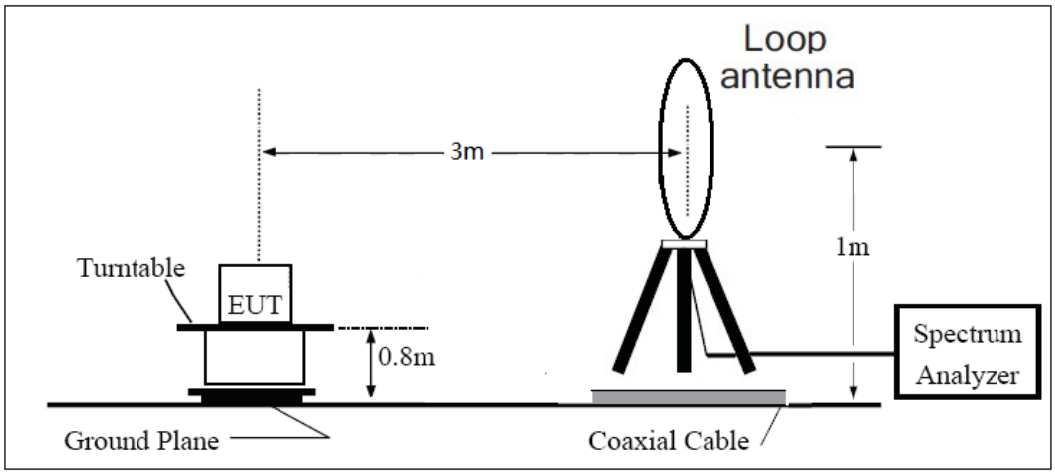
1. The testing follows FCC KDB 971168 D01 v03r01 Section 5.8 and ANSI C63.26 (2015).
2. Below 1GHz: The EUT is placed on a turntable 0.8 meters above the ground in the chamber, 3 meter away from the antenna. The maximal emission value is acquired by adjusting the antenna height, polarisation and turntable 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 9kHz-150kHz , 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:
Power(EIRP)=PMea- PAg - Pcl + Ga
The measurement results are amend as described below:
Power(EIRP)=PMea- Pcl + 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-2.15dBi.

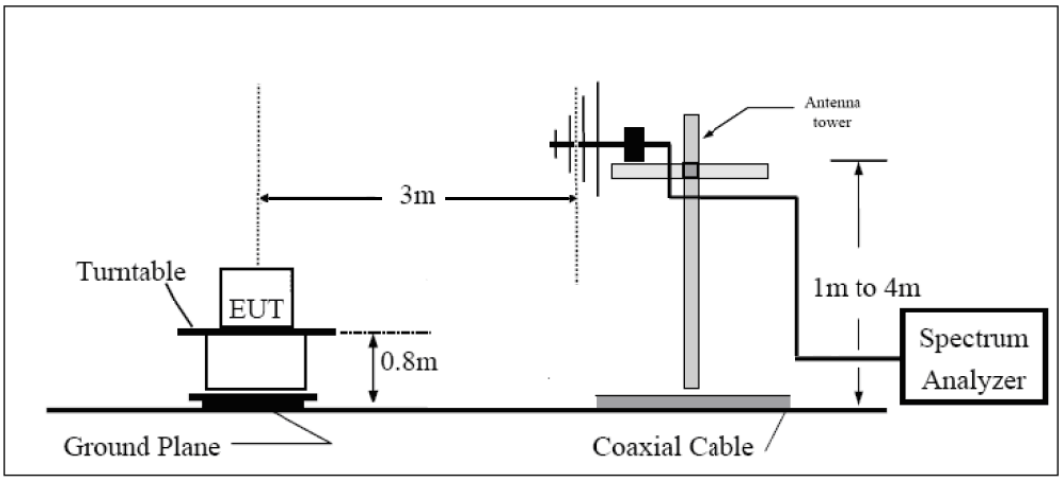
The modulation mode and RB allocation refer to section 5.1, using the maximum output power configuration.

Test setup

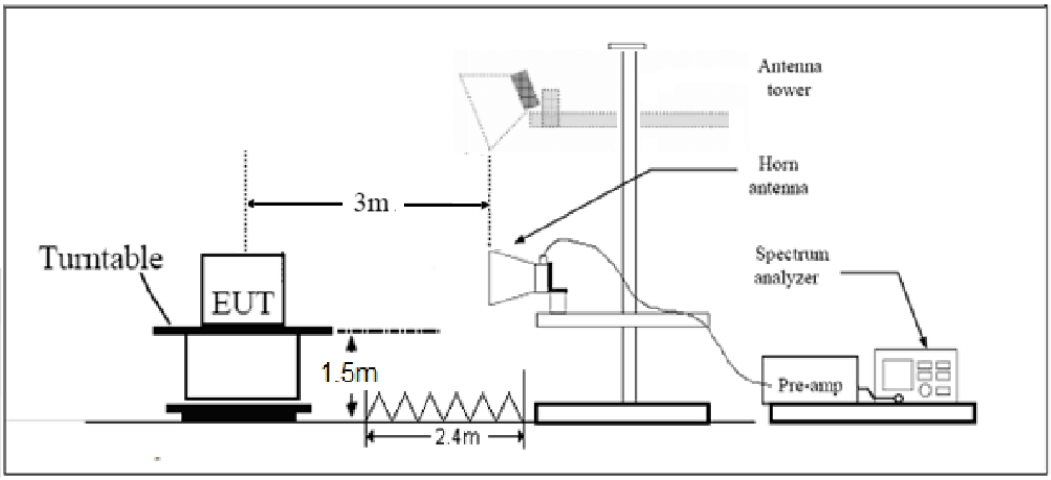
9KHz ~ 30MHz



30MHz ~ 1GHz



Above 1GHz



Note: Area side:2.4mX3.6m

Limits

Rule Part 27.53(h) specifies that “for operations in the 1695-1710 MHz, 1710-1755 MHz, 1755-1780 MHz, 1915-1920 MHz, 1995-2000 MHz, 2000-2020 MHz, 2110-2155 MHz, 2155-2180 MHz, and 2180-2200 bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least 43 + 10 log10 (P) dB.”

Rule Part 27.53 (g) For operations in the 600 MHz band and the 698-746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least 43 + 10 log (P) dB. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kilohertz or greater. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

Rule Part 27.53(f)For operations in the 746-758 MHz, 775-788 MHz, and 805-806 MHz bands, emissions in the band 1559-1610 MHz shall be limited to −70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals, and −80 dBW EIRP for discrete emissions of less than 700 Hz bandwidth. For the purpose of equipment authorization, a transmitter shall be tested with an antenna that is representative of the type that will be used with the equipment in normal operation.

Part 27.53 (c) For operations in the 746-758 MHz band and the 776-788 MHz band, the power of any emission outside the licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, in accordance with the following:
(1) On any frequency outside the 746-758 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least 43 + 10 log (P) dB;
(2) On any frequency outside the 776-788 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least 43 + 10 log (P) dB;
(3) On all frequencies between 763-775 MHz and 793-805 MHz, by a factor not less than 76 + 10 log (P) dB in a 6.25 kHz band segment, for base and fixed stations;
(4) On all frequencies between 763-775 MHz and 793-805 MHz, by a factor not less than 65 + 10 log (P) dB in a 6.25 kHz band segment, for mobile and portable stations;
(5) Compliance with the provisions of paragraphs (c)(1) and (c)(2) of this section is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater. However, in the 100 kHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of at least 30 kHz may be employed;

Part 27.53(a)/(h)/(g) Limit		-13 dBm
Part 27.53(f) Limit	Limit out of the band 1559-1610 MHz	-13 dBm
	Limit in the band 1559-1610 MHz	-40 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.

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	-60.82	2.6	10.75	Horizontal	-52.67	-13.00	39.67	45
3	5197.5	-59.87	2.4	11.05	Horizontal	-51.22	-13.00	38.22	90
4	6930.0	-60.14	4.5	11.15	Horizontal	-53.49	-13.00	40.49	45
5	8662.5	-54.29	5.1	11.35	Horizontal	-48.04	-13.00	35.04	315
6	10395.0	-50.66	5.3	11.95	Horizontal	-44.01	-13.00	31.01	90
7	12127.5	-50.66	5.5	13.55	Horizontal	-42.61	-13.00	29.61	45
8	13860.0	-49.42	6.3	13.75	Horizontal	-41.97	-13.00	28.97	270
9	15592.5	-48.45	6.7	13.85	Horizontal	-41.30	-13.00	28.30	315
10	17325.0	-45.92	6.8	14.25	Horizontal	-38.47	-13.00	25.47	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 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	-61.76	2.6	10.75	Horizontal	-53.61	-13.00	40.61	315
3	5191.5	-57.96	2.4	11.05	Horizontal	-49.31	-13.00	36.31	270
4	6930.0	-59.92	4.5	11.15	Horizontal	-53.27	-13.00	40.27	90
5	8662.5	-54.40	5.1	11.35	Horizontal	-48.15	-13.00	35.15	90
6	10395.0	-50.22	5.3	11.95	Horizontal	-43.57	-13.00	30.57	180
7	12127.5	-51.22	5.5	13.55	Horizontal	-43.17	-13.00	30.17	45
8	13860.0	-49.66	6.3	13.75	Horizontal	-42.21	-13.00	29.21	45
9	15592.5	-48.28	6.7	13.85	Horizontal	-41.13	-13.00	28.13	315
10	17325.0	-46.99	6.8	14.25	Horizontal	-39.54	-13.00	26.54	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 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	3465.0	-61.10	2.6	10.75	Horizontal	-52.95	-13.00	39.95	45
3	5170.9	-59.42	2.4	11.05	Horizontal	-50.77	-13.00	37.77	180
4	6930.0	-59.81	4.5	11.15	Horizontal	-53.16	-13.00	40.16	90
5	8662.5	-54.98	5.1	11.35	Horizontal	-48.73	-13.00	35.73	315
6	10395.0	-50.67	5.3	11.95	Horizontal	-44.02	-13.00	31.02	45
7	12127.5	-51.24	5.5	13.55	Horizontal	-43.19	-13.00	30.19	45
8	13860.0	-49.51	6.3	13.75	Horizontal	-42.06	-13.00	29.06	90
9	15592.5	-48.69	6.7	13.85	Horizontal	-41.54	-13.00	28.54	315
10	17325.0	-46.90	6.8	14.25	Horizontal	-39.45	-13.00	26.45	45
Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor. 2. The worst emission was found in the antenna is Horizontal position.									

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	-68.41	2.00	10.75	Horizontal	-61.81	-13.00	48.81	315
3	2122.50	-66.02	2.51	11.05	Horizontal	-59.63	-13.00	46.63	45
4	2830.00	-61.23	4.20	11.15	Horizontal	-56.43	-13.00	43.43	45
5	3537.50	-57.23	5.20	11.15	Horizontal	-53.43	-13.00	40.43	45
6	4245.00	-55.30	5.50	11.95	Horizontal	-51.00	-13.00	38.00	315
7	4952.50	-56.97	5.70	13.55	Horizontal	-51.27	-13.00	38.27	180
8	5660.00	-56.19	6.30	13.75	Horizontal	-50.89	-13.00	37.89	45
9	6367.50	-55.79	6.80	13.85	Horizontal	-50.89	-13.00	37.89	270
10	7075.00	-56.29	6.90	14.25	Horizontal	-51.09	-13.00	38.09	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 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	1410.60	-68.02	2.00	10.75	Horizontal	-61.42	-13.00	48.42	90
3	2115.90	-65.60	2.51	11.05	Horizontal	-59.21	-13.00	46.21	45
4	2821.20	-61.51	4.20	11.15	Horizontal	-56.71	-13.00	43.71	315
5	3537.50	-57.50	5.20	11.15	Horizontal	-53.70	-13.00	40.70	180
6	4245.00	-55.95	5.50	11.95	Horizontal	-51.65	-13.00	38.65	45
7	4952.50	-56.10	5.70	13.55	Horizontal	-50.40	-13.00	37.40	225
8	5660.00	-56.49	6.30	13.75	Horizontal	-51.19	-13.00	38.19	315
9	6367.50	-56.95	6.80	13.85	Horizontal	-52.05	-13.00	39.05	90
10	7075.00	-56.58	6.90	14.25	Horizontal	-51.38	-13.00	38.38	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 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	1406.40	-68.87	2.00	10.75	Horizontal	-62.27	-13.00	49.27	270
3	2109.60	-65.35	2.51	11.05	Horizontal	-58.96	-13.00	45.96	315
4	2812.80	-61.58	4.20	11.15	Horizontal	-56.78	-13.00	43.78	45
5	3537.50	-57.51	5.20	11.15	Horizontal	-53.71	-13.00	40.71	180
6	4245.00	-56.19	5.50	11.95	Horizontal	-51.89	-13.00	38.89	45
7	4952.50	-56.66	5.70	13.55	Horizontal	-50.96	-13.00	37.96	270
8	5660.00	-56.29	6.30	13.75	Horizontal	-50.99	-13.00	37.99	45
9	6367.50	-57.12	6.80	13.85	Horizontal	-52.22	-13.00	39.22	315
10	7075.00	-56.36	6.90	14.25	Horizontal	-51.16	-13.00	38.16	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 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	1564.88	-69.16	2.00	10.75	Horizontal	-62.56	-40.00	22.56	90
Harmonic	**Frequency (MHz)**	**SG (dBm)**	**Cable Loss (dB)**	**Gain (dBi)**	**Antenna Polarization**	**ERP Level (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Azimuth (deg)**
3	2366.81	-64.58	2.51	11.05	Horizontal	-58.19	-13.00	45.19	45
4	3128.00	-58.27	4.20	11.15	Horizontal	-53.47	-13.00	40.47	90
5	3910.00	-54.47	5.20	11.15	Horizontal	-50.67	-13.00	37.67	270
6	4692.00	-54.83	5.50	11.95	Horizontal	-50.53	-13.00	37.53	315
7	5474.00	-55.53	5.70	13.55	Horizontal	-49.83	-13.00	36.83	45
8	6256.00	-55.29	6.30	13.75	Horizontal	-49.99	-13.00	36.99	90
9	7038.00	-56.33	6.80	13.85	Horizontal	-51.43	-13.00	38.43	315
10	7820.00	-54.41	6.90	14.25	Horizontal	-49.21	-13.00	36.21	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 13 QPSK 10MHz CH-Middle, RB 1

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1564.00	-68.99	2.00	10.75	Horizontal	-62.39	-40.00	22.39	315
Harmonic	**Frequency (MHz)**	**SG (dBm)**	**Cable Loss (dB)**	**Gain (dBi)**	**Antenna Polarization**	**ERP Level (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Azimuth (deg)**
3	2346.00	-64.11	2.51	11.05	Horizontal	-57.72	-13.00	44.72	45
4	3128.00	-58.12	4.20	11.15	Horizontal	-53.32	-13.00	40.32	90
5	3910.00	-55.61	5.20	11.15	Horizontal	-51.81	-13.00	38.81	315
6	4692.00	-54.81	5.50	11.95	Horizontal	-50.51	-13.00	37.51	45
7	5474.00	-55.97	5.70	13.55	Horizontal	-50.27	-13.00	37.27	45
8	6256.00	-56.56	6.30	13.75	Horizontal	-51.26	-13.00	38.26	90
9	7038.00	-56.01	6.80	13.85	Horizontal	-51.11	-13.00	38.11	315
10	7820.00	-54.84	6.90	14.25	Horizontal	-49.64	-13.00	36.64	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 66 QPSK 1.4MHz CH-Middle, RB 1

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	3464.30	-61.36	2.6	10.75	Horizontal	-53.21	-13.00	40.21	45
3	5197.50	-58.99	2.4	11.05	Horizontal	-50.34	-13.00	37.34	225
4	6930.00	-59.61	4.5	11.15	Horizontal	-52.96	-13.00	39.96	315
5	8662.50	-54.34	5.1	11.35	Horizontal	-48.09	-13.00	35.09	45
6	10395.00	-50.10	5.3	11.95	Horizontal	-43.45	-13.00	30.45	270
7	12127.50	-51.12	5.5	13.55	Horizontal	-43.07	-13.00	30.07	90
8	13860.00	-48.40	6.3	13.75	Horizontal	-40.95	-13.00	27.95	315
9	15592.50	-47.74	6.7	13.85	Horizontal	-40.59	-13.00	27.59	135
10	17325.00	-46.48	6.8	14.25	Horizontal	-39.03	-13.00	26.03	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 66 QPSK 5MHz CH-Middle, RB 1

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	3460.50	-61.32	2.6	10.75	Horizontal	-53.17	-13.00	40.17	315
3	5191.50	-58.71	2.4	11.05	Horizontal	-50.06	-13.00	37.06	45
4	6930.00	-58.71	4.5	11.15	Horizontal	-52.06	-13.00	39.06	225
5	8662.50	-54.48	5.1	11.35	Horizontal	-48.23	-13.00	35.23	315
6	10395.00	-49.88	5.3	11.95	Horizontal	-43.23	-13.00	30.23	90
7	12127.50	-51.34	5.5	13.55	Horizontal	-43.29	-13.00	30.29	45
8	13860.00	-49.61	6.3	13.75	Horizontal	-42.16	-13.00	29.16	315
9	15592.50	-48.18	6.7	13.85	Horizontal	-41.03	-13.00	28.03	270
10	17325.00	-47.08	6.8	14.25	Horizontal	-39.63	-13.00	26.63	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 66 QPSK 20MHz CH-Middle, RB 1

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	3447.00	-61.14	2.6	10.75	Horizontal	-52.99	-13.00	39.99	315
3	5170.50	-58.71	2.4	11.05	Horizontal	-50.06	-13.00	37.06	45
4	6930.00	-59.41	4.5	11.15	Horizontal	-52.76	-13.00	39.76	90
5	8662.50	-54.09	5.1	11.35	Horizontal	-47.84	-13.00	34.84	225
6	10395.00	-50.90	5.3	11.95	Horizontal	-44.25	-13.00	31.25	135
7	12127.50	-51.48	5.5	13.55	Horizontal	-43.43	-13.00	30.43	270
8	13860.00	-49.08	6.3	13.75	Horizontal	-41.63	-13.00	28.63	45
9	15592.50	-48.44	6.7	13.85	Horizontal	-41.29	-13.00	28.29	315
10	17325.00	-47.77	6.8	14.25	Horizontal	-40.32	-13.00	27.32	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.									

CA_66B_10MHz+10MHz QPSK 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	3500.2	-64.19	2.6	10.75	Horizontal	-56.04	-13.00	43.04	135
3	5250.3	-62.55	2.4	11.05	Horizontal	-53.90	-13.00	40.90	225
4	7000.4	-54.35	4.5	11.15	Horizontal	-47.70	-13.00	34.70	45
5	8750.5	-55.36	5.1	11.35	Horizontal	-49.11	-13.00	36.11	0
6	10500.6	-52.47	5.3	11.95	Horizontal	-45.82	-13.00	32.82	315
7	12250.7	-53.29	5.5	13.55	Horizontal	-45.24	-13.00	32.24	225
8	14000.8	-48.86	6.3	13.75	Horizontal	-41.41	-13.00	28.41	180
9	15750.9	-53.83	6.7	13.85	Horizontal	-46.68	-13.00	33.68	0
10	17501.0	-48.97	6.8	14.25	Horizontal	-41.52	-13.00	28.52	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.									

CA_66B_5MHz+10MHz QPSK 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	3500.6	-63.75	2.6	10.75	Horizontal	-55.60	-13.00	42.60	0
3	5250.9	-62.79	2.4	11.05	Horizontal	-54.14	-13.00	41.14	225
4	7001.2	-54.42	4.5	11.15	Horizontal	-47.77	-13.00	34.77	315
5	8751.5	-54.35	5.1	11.35	Horizontal	-48.10	-13.00	35.10	180
6	10501.8	-52.20	5.3	11.95	Horizontal	-45.55	-13.00	32.55	45
7	12252.1	-52.11	5.5	13.55	Horizontal	-44.06	-13.00	31.06	90
8	14002.4	-49.43	6.3	13.75	Horizontal	-41.98	-13.00	28.98	225
9	15752.7	-53.06	6.7	13.85	Horizontal	-45.91	-13.00	32.91	0
10	17503.0	-49.11	6.8	14.25	Horizontal	-41.66	-13.00	28.66	180
Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor. 2. The worst emission was found in the antenna is Horizontal position.									

CA_66B_10MHz+5MHz QPSK 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	3505.0	-64.40	2.6	10.75	Horizontal	-56.25	-13.00	43.25	45
3	5257.5	-62.96	2.4	11.05	Horizontal	-54.31	-13.00	41.31	225
4	7010.0	-54.47	4.5	11.15	Horizontal	-47.82	-13.00	34.82	180
5	8762.5	-55.55	5.1	11.35	Horizontal	-49.30	-13.00	36.30	90
6	10515.0	-51.53	5.3	11.95	Horizontal	-44.88	-13.00	31.88	225
7	12267.5	-52.76	5.5	13.55	Horizontal	-44.71	-13.00	31.71	315
8	14020.0	-48.85	6.3	13.75	Horizontal	-41.40	-13.00	28.40	270
9	15772.5	-53.36	6.7	13.85	Horizontal	-46.21	-13.00	33.21	45
10	17525.0	-49.24	6.8	14.25	Horizontal	-41.79	-13.00	28.79	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.									

CA_66B_5MHz+5MHz QPSK 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	3505.2	-64.21	2.6	10.75	Horizontal	-56.06	-13.00	43.06	90
3	5257.8	-63.64	2.4	11.05	Horizontal	-54.99	-13.00	41.99	0
4	7010.4	-55.31	4.5	11.15	Horizontal	-48.66	-13.00	35.66	45
5	8763.0	-55.09	5.1	11.35	Horizontal	-48.84	-13.00	35.84	315
6	10515.6	-51.93	5.3	11.95	Horizontal	-45.28	-13.00	32.28	270
7	12268.2	-52.87	5.5	13.55	Horizontal	-44.82	-13.00	31.82	45
8	14020.8	-49.68	6.3	13.75	Horizontal	-42.23	-13.00	29.23	315
9	15773.4	-52.36	6.7	13.85	Horizontal	-45.21	-13.00	32.21	45
10	17526.0	-50.45	6.8	14.25	Horizontal	-43.00	-13.00	30.00	225
Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor. 2. The worst emission was found in the antenna is Horizontal position.									

CA_66B_3MHz+5MHz QPSK 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	1668.2	-67.17	2.6	10.75	Horizontal	-59.02	-13.00	46.02	45
3	2502.3	-67.40	2.4	11.05	Horizontal	-58.75	-13.00	45.75	315
4	3336.4	-62.38	4.5	11.15	Horizontal	-55.73	-13.00	42.73	270
5	4170.5	-62.21	5.1	11.35	Horizontal	-55.96	-13.00	42.96	315
6	5004.6	-60.70	5.3	11.95	Horizontal	-54.05	-13.00	41.05	0
7	5838.7	-61.70	5.5	13.55	Horizontal	-53.65	-13.00	40.65	315
8	6672.8	-58.78	6.3	13.75	Horizontal	-51.33	-13.00	38.33	90
9	7506.9	-56.83	6.7	13.85	Horizontal	-49.68	-13.00	36.68	45
10	8341.0	-57.00	6.8	14.25	Horizontal	-49.55	-13.00	36.55	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.									

CA_66B_5MHz+3MHz QPSK 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	1670.0	-68.71	2.6	10.75	Horizontal	-60.56	-13.00	47.56	225
3	2505.0	-65.95	2.4	11.05	Horizontal	-57.30	-13.00	44.30	0
4	3340.0	-63.63	4.5	11.15	Horizontal	-56.98	-13.00	43.98	315
5	4175.0	-62.09	5.1	11.35	Horizontal	-55.84	-13.00	42.84	45
6	5010.0	-59.71	5.3	11.95	Horizontal	-53.06	-13.00	40.06	0
7	5845.0	-61.77	5.5	13.55	Horizontal	-53.72	-13.00	40.72	90
8	6680.0	-59.30	6.3	13.75	Horizontal	-51.85	-13.00	38.85	45
9	7515.0	-56.57	6.7	13.85	Horizontal	-49.42	-13.00	36.42	225
10	8350.0	-56.88	6.8	14.25	Horizontal	-49.43	-13.00	36.43	180
Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor. 2. The worst emission was found in the antenna is Horizontal position.									

CA_66C_20MHz+20MHz QPSK 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	3490.1	-64.84	2.6	10.75	Horizontal	-56.69	-13.00	43.69	315
3	5235.3	-62.70	2.4	11.05	Horizontal	-54.05	-13.00	41.05	0
4	6980.4	-58.17	4.5	11.15	Horizontal	-51.52	-13.00	38.52	45
5	8725.5	-55.00	5.1	11.35	Horizontal	-48.75	-13.00	35.75	135
6	10470.6	-52.63	5.3	11.95	Horizontal	-45.98	-13.00	32.98	90
7	12215.7	-53.52	5.5	13.55	Horizontal	-45.47	-13.00	32.47	45
8	13960.8	-50.51	6.3	13.75	Horizontal	-43.06	-13.00	30.06	0
9	15705.9	-52.89	6.7	13.85	Horizontal	-45.74	-13.00	32.74	270
10	17451.0	-49.19	6.8	14.25	Horizontal	-41.74	-13.00	28.74	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.									

CA_66C_15MHz+15MHz QPSK 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	3495.0	-64.30	2.6	10.75	Horizontal	-56.15	-13.00	43.15	45
3	5242.5	-62.70	2.4	11.05	Horizontal	-54.05	-13.00	41.05	135
4	6990.0	-57.40	4.5	11.15	Horizontal	-50.75	-13.00	37.75	225
5	8737.5	-53.20	5.1	11.35	Horizontal	-46.95	-13.00	33.95	90
6	10485.0	-52.16	5.3	11.95	Horizontal	-45.51	-13.00	32.51	180
7	12232.5	-53.12	5.5	13.55	Horizontal	-45.07	-13.00	32.07	0
8	13980.0	-49.77	6.3	13.75	Horizontal	-42.32	-13.00	29.32	45
9	15727.5	-52.25	6.7	13.85	Horizontal	-45.10	-13.00	32.10	225
10	17475.0	-50.00	6.8	14.25	Horizontal	-42.55	-13.00	29.55	180
Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor. 2. The worst emission was found in the antenna is Horizontal position.									

CA_66C_10MHz+15MHz QPSK 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	3495.8	-64.81	2.6	10.75	Horizontal	-56.66	-13.00	43.66	0
3	5243.7	-63.87	2.4	11.05	Horizontal	-55.22	-13.00	42.22	180
4	6991.6	-56.86	4.5	11.15	Horizontal	-50.21	-13.00	37.21	90
5	8739.5	-54.71	5.1	11.35	Horizontal	-48.46	-13.00	35.46	225
6	10487.4	-50.69	5.3	11.95	Horizontal	-44.04	-13.00	31.04	315
7	12235.3	-53.26	5.5	13.55	Horizontal	-45.21	-13.00	32.21	0
8	13983.2	-50.56	6.3	13.75	Horizontal	-43.11	-13.00	30.11	45
9	15731.1	-52.30	6.7	13.85	Horizontal	-45.15	-13.00	32.15	225
10	17479.0	-49.28	6.8	14.25	Horizontal	-41.83	-13.00	28.83	180
Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor. 2. The worst emission was found in the antenna is Horizontal position.									

CA_66C_15MHz+10MHz QPSK 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	3500.2	-64.31	2.6	10.75	Horizontal	-56.16	-13.00	43.16	45
3	5250.3	-61.87	2.4	11.05	Horizontal	-53.22	-13.00	40.22	135
4	7000.4	-54.02	4.5	11.15	Horizontal	-47.37	-13.00	34.37	225
5	8750.5	-54.61	5.1	11.35	Horizontal	-48.36	-13.00	35.36	135
6	10500.6	-51.79	5.3	11.95	Horizontal	-45.14	-13.00	32.14	270
7	12250.7	-51.40	5.5	13.55	Horizontal	-43.35	-13.00	30.35	0
8	14000.8	-48.81	6.3	13.75	Horizontal	-41.36	-13.00	28.36	135
9	15750.9	-51.57	6.7	13.85	Horizontal	-44.42	-13.00	31.42	90
10	17501.0	-49.58	6.8	14.25	Horizontal	-42.13	-13.00	29.13	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.									

6 Main Test Instruments

Name	Manufacturer	Type	Serial Number	Calibration Date	Expiration Date
Base Station Simulator	R&S	CMW500	113824	2020-05-18	2021-05-17
Power Splitter	Hua Xiang	SHX-GF2-2-13	10120101	/	/
Spectrum Analyzer	Key sight	N9010A	MY50210259	2020-05-18	2021-05-17
Signal Analyzer	R&S	FSV30	100815	2019-12-15	2020-12-14
Loop Antenna	SCHWARZBECK	FMZB1519	1519-047	2020-04-02	2023-04-01
Trilog Antenna	SCHWARZBECK	VUBL 9163	9163-201	2017-11-18	2020-11-17
Horn Antenna	R&S	HF907	102723	2018-08-11	2021-08-10
Horn Antenna	ETS-Lindgren	3160-09	00102643	2018-06-20	2021-06-19
Horn Antenna	STEATITE	QSH-SL-26-40-K-15	16779	2017-07-20	2021-07-19
Signal generator	R&S	SMB 100A	102594	2020-05-18	2021-05-17
Climatic Chamber	ESPEC	SU-242	93000506	2017-12-17	2020-12-16
Preampflier	R&S	SCU18	102327	2020-05-18	2021-05-17
MOB COMMS DC SUPPLY	Keysight	66319D	MY43004105	2020-05-18	2021-05-17
RF Cable	Agilent	SMA 15cm	0001	2020-06-12	2020-12-11
Software	R&S	EMC32	9.26.0	/	/

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

ANNEX A: The EUT Appearance

The EUT Appearance are submitted separately.

ANNEX B: Test Setup Photos

The Test Setup Photos are submitted separately.