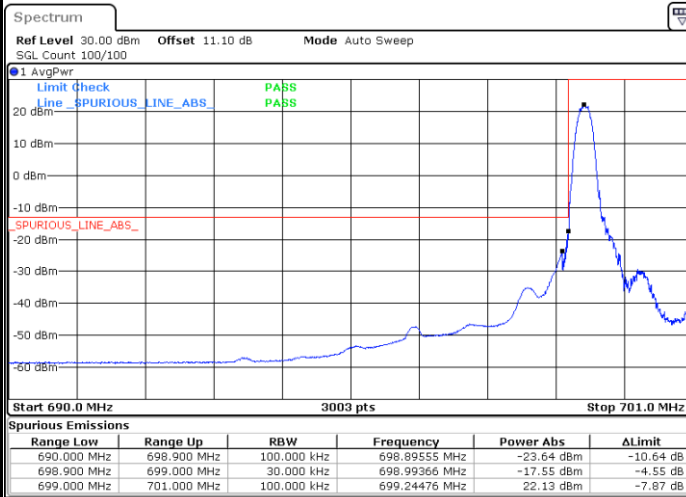




Conducted Band Edge

LTE Cat 1 Band 12 / 1.4MHz / QPSK

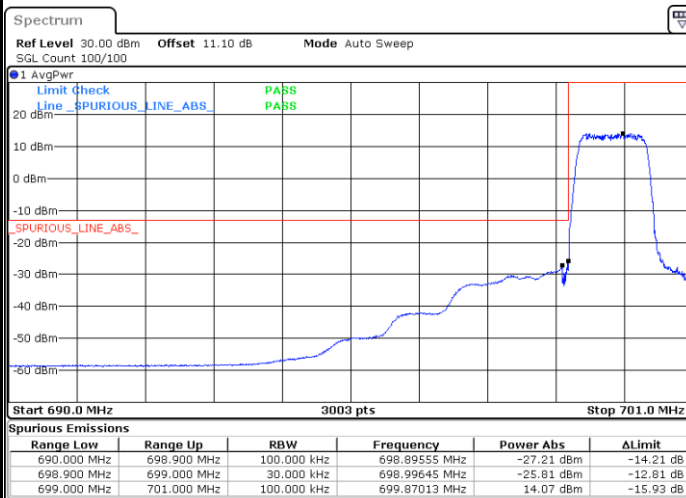
Lowest Band Edge / 1RB



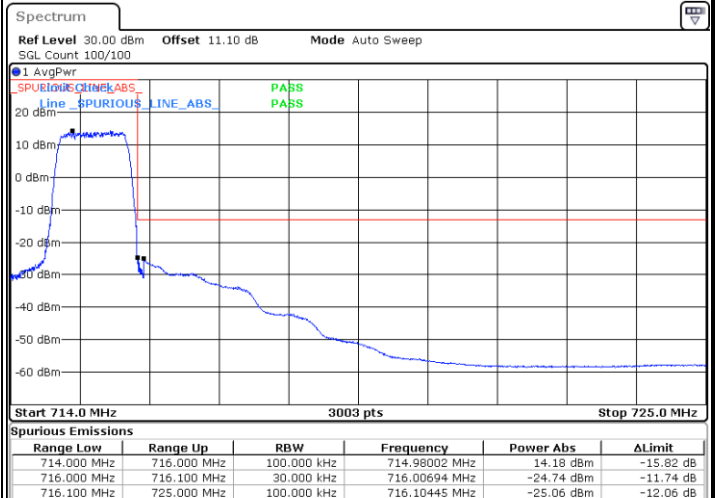
Highest Band Edge / 1RB



Lowest Band Edge / Full RB



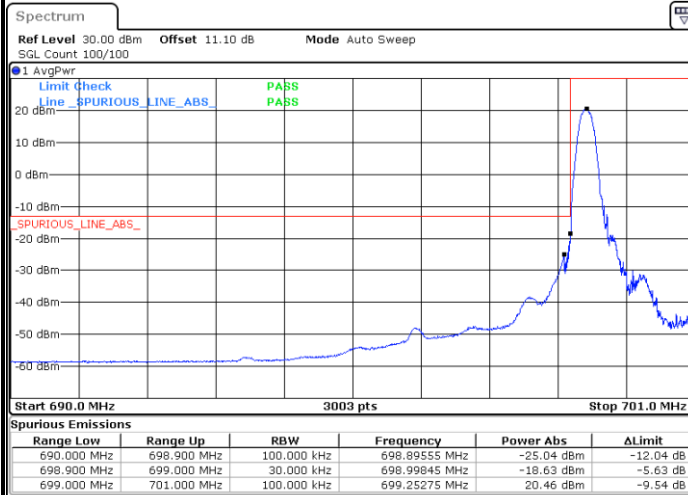
Highest Band Edge / Full RB





LTE Cat 1 Band 12 / 1.4MHz / 16QAM

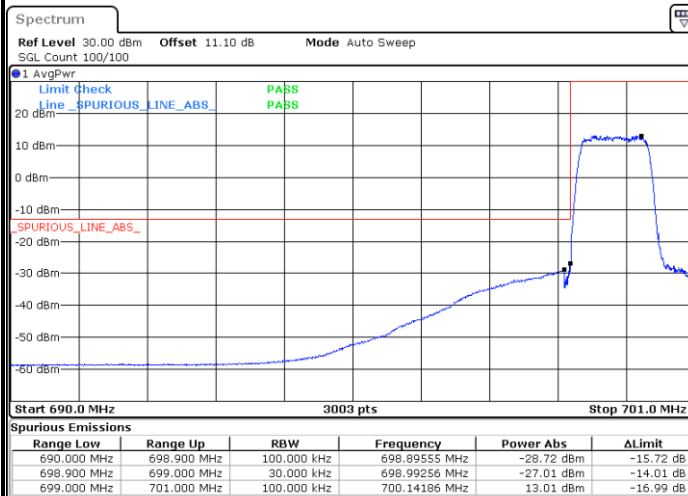
Lowest Band Edge / 1 RB



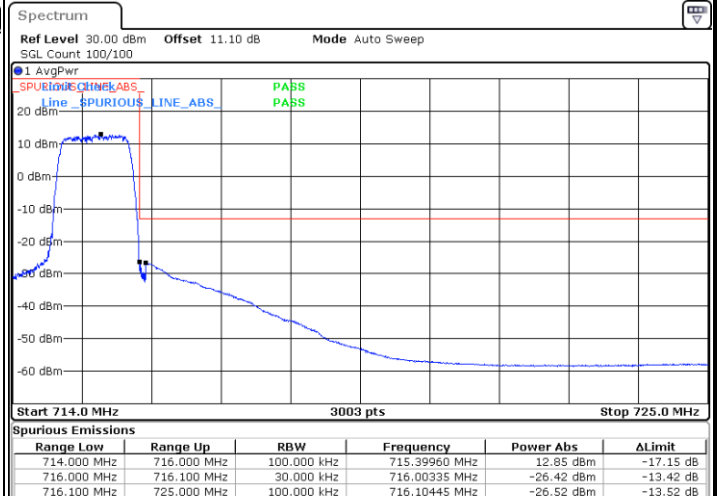
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



Highest Band Edge / Full RB



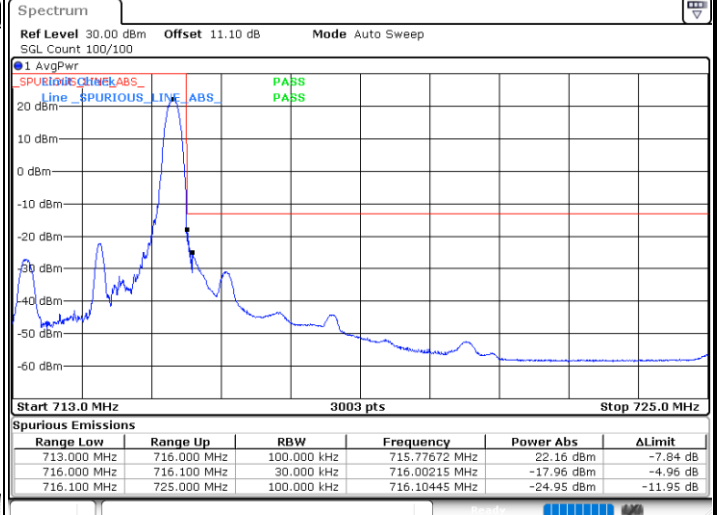


LTE Cat 1 Band 12 / 3MHz / QPSK

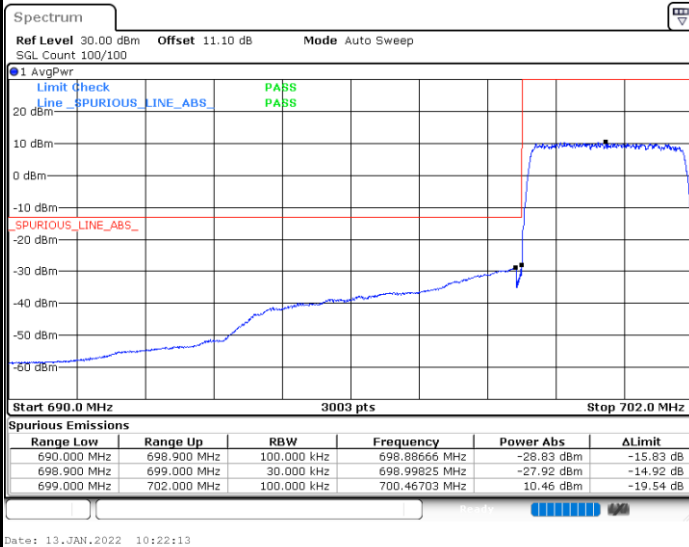
Lowest Band Edge / 1RB



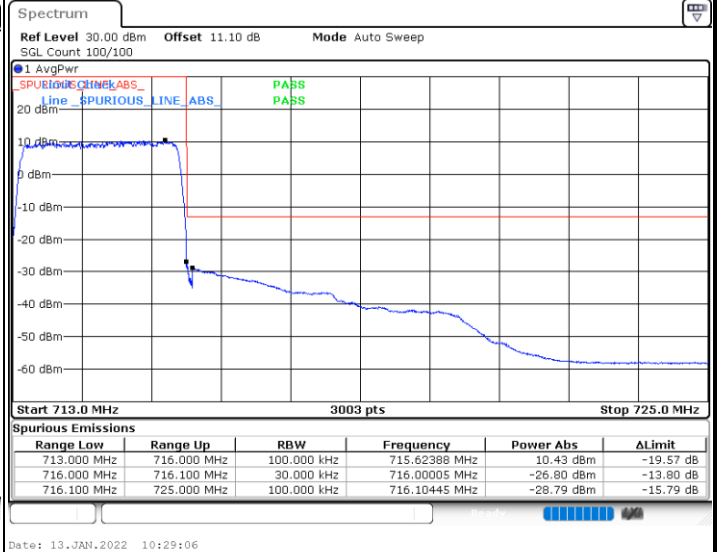
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



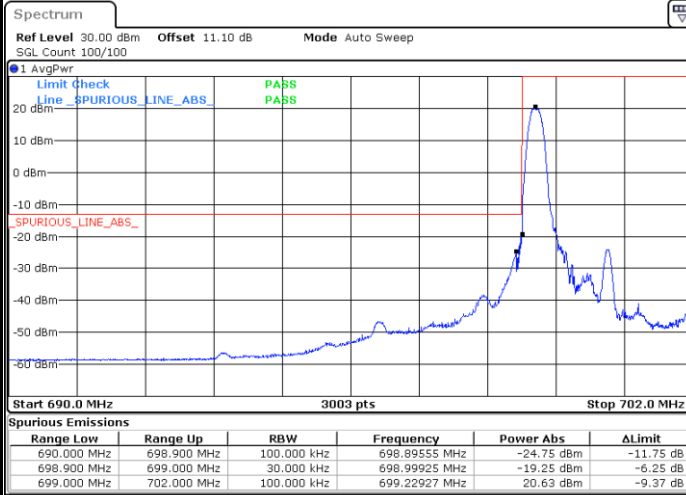
Highest Band Edge / Full RB



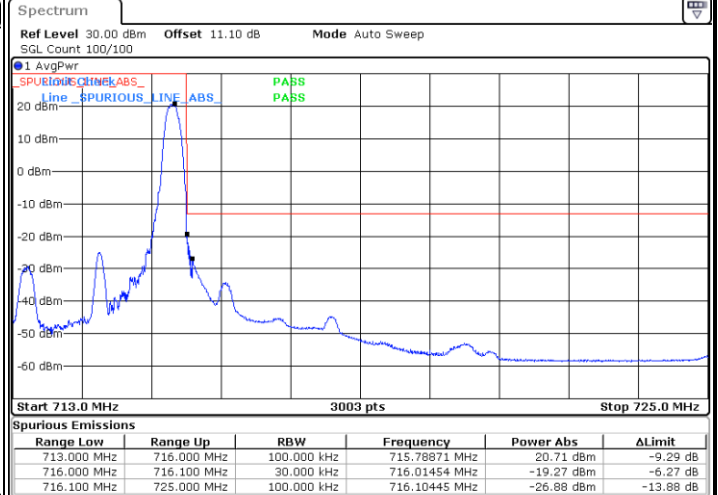


LTE Cat 1 Band 12 / 3MHz / 16QAM

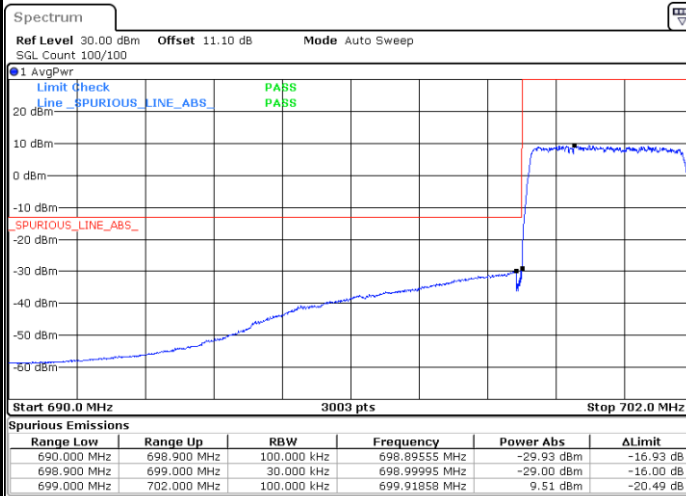
Lowest Band Edge / 1 RB



Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



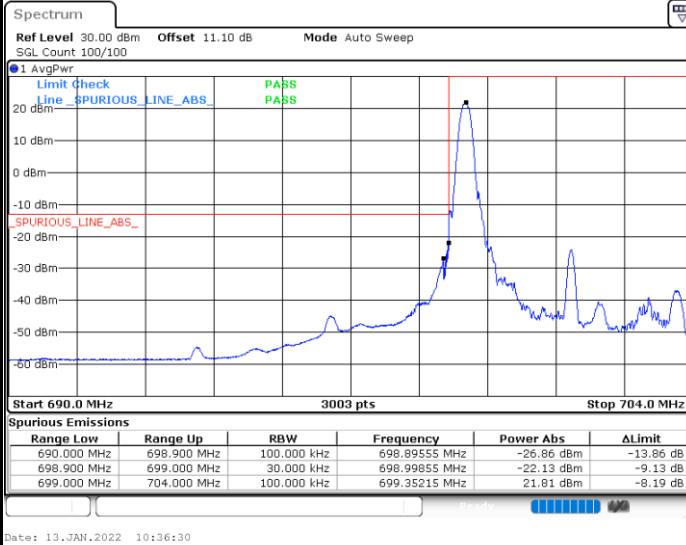
Highest Band Edge / Full RB



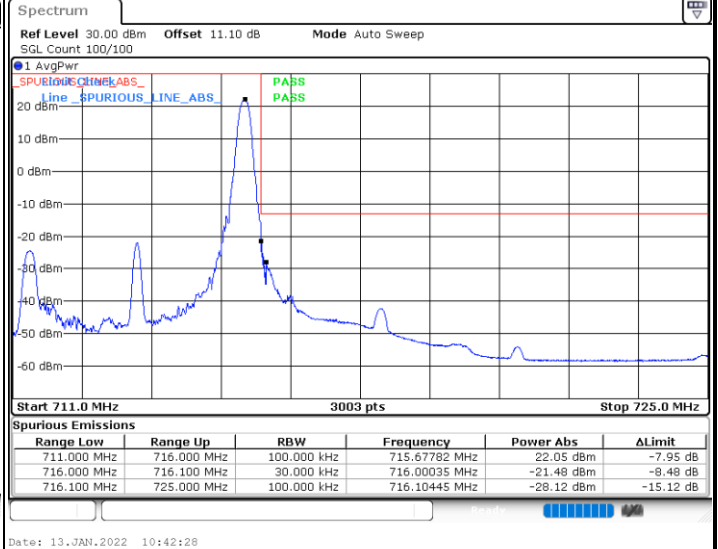


LTE Cat 1 Band 12 / 5MHz / QPSK

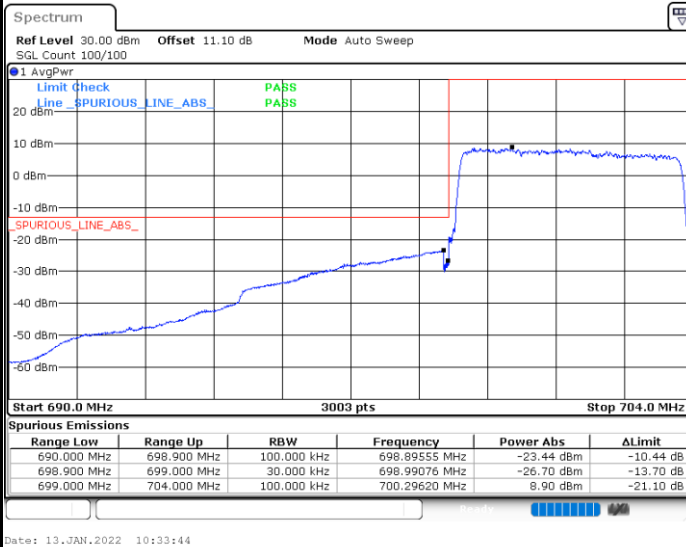
Lowest Band Edge / 1 RB



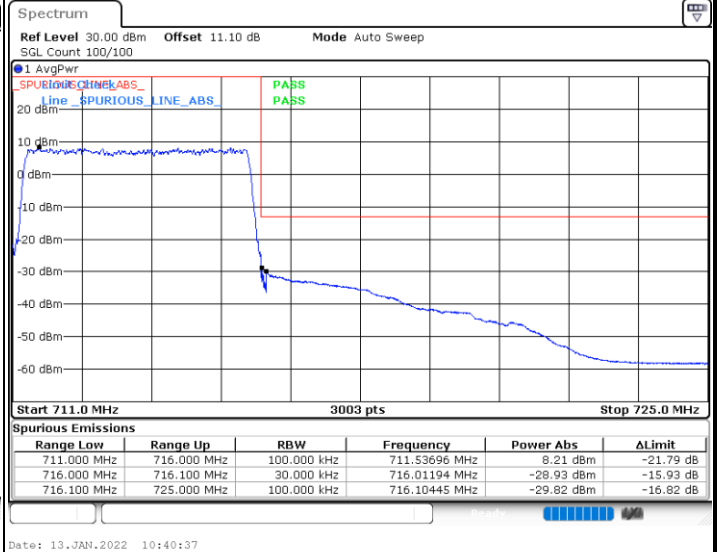
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



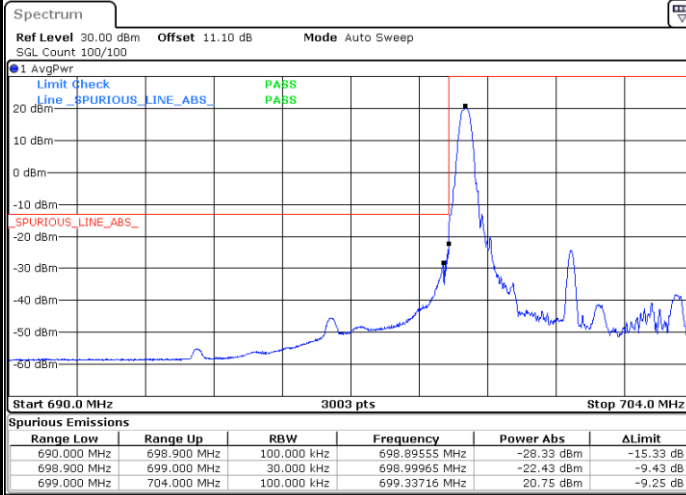
Highest Band Edge / Full RB



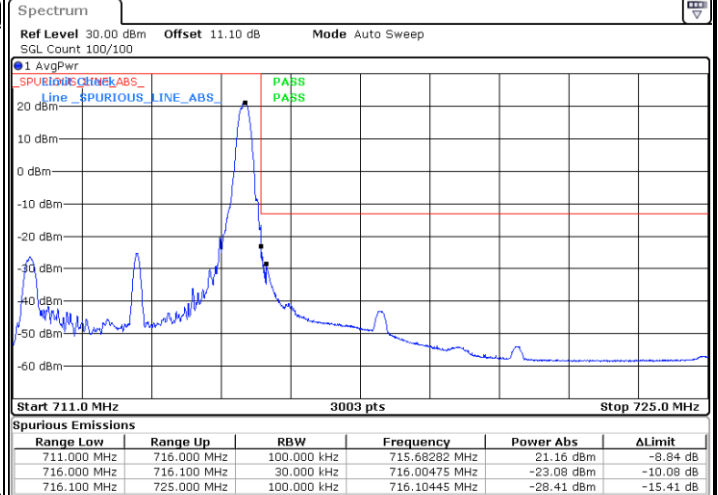


LTE Cat 1 Band 12 / 5MHz / 16QAM

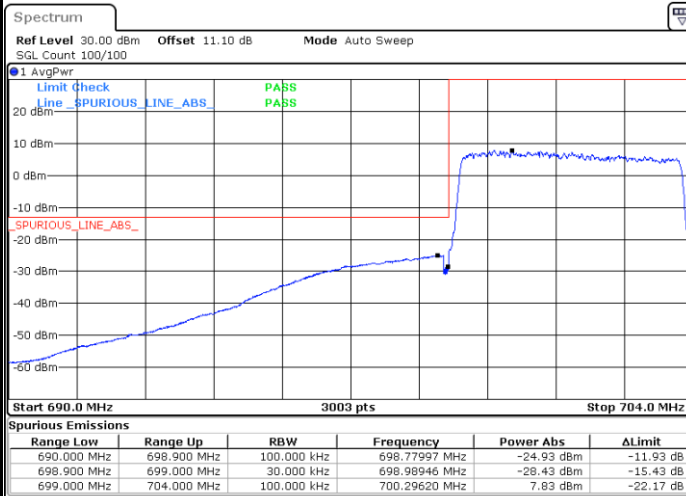
Lowest Band Edge / 1RB



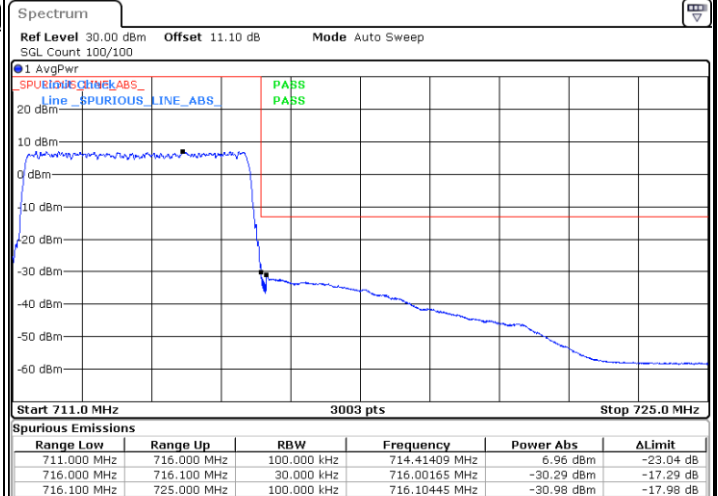
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



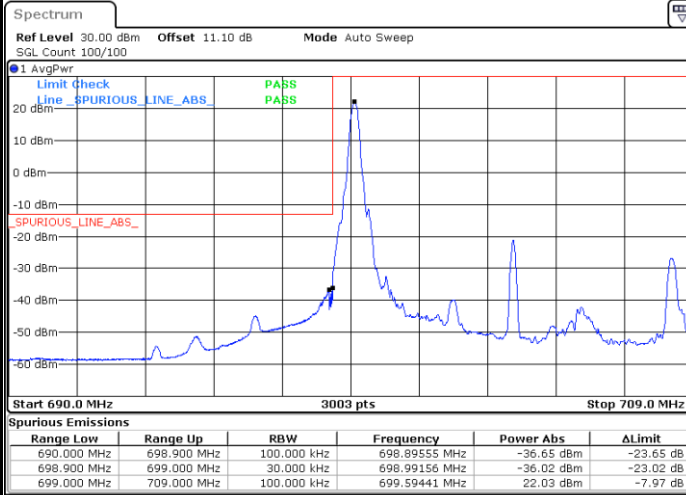
Highest Band Edge / Full RB



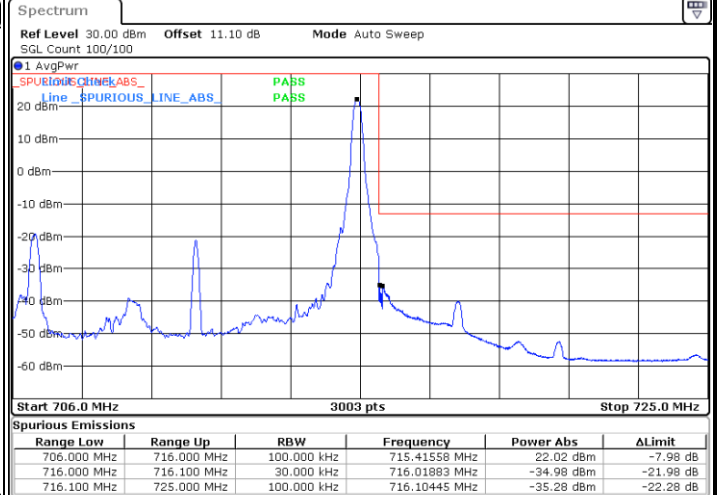


LTE Cat 1 Band 12 / 10MHz / QPSK

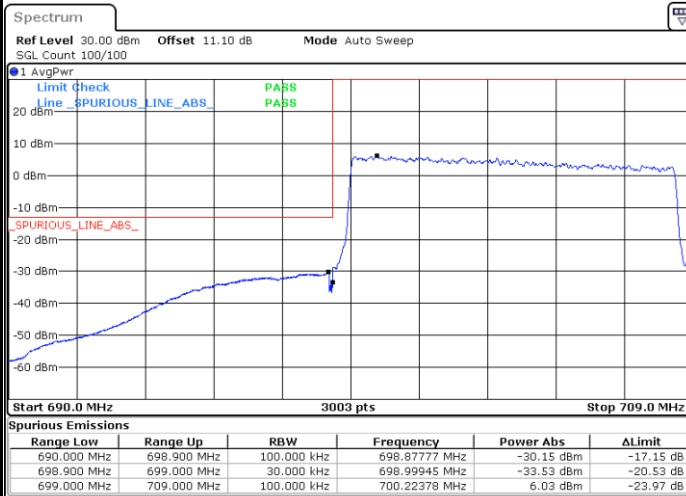
Lowest Band Edge / 1 RB



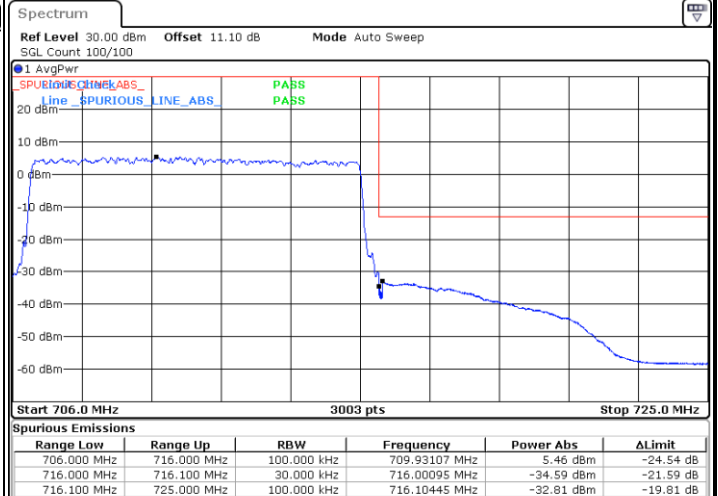
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



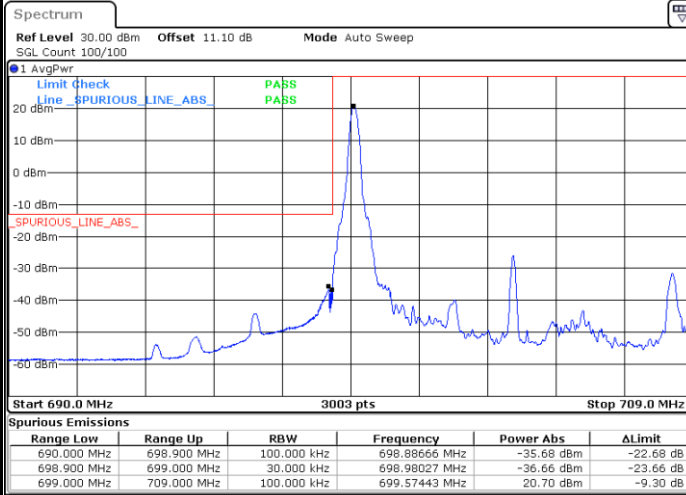
Highest Band Edge / Full RB



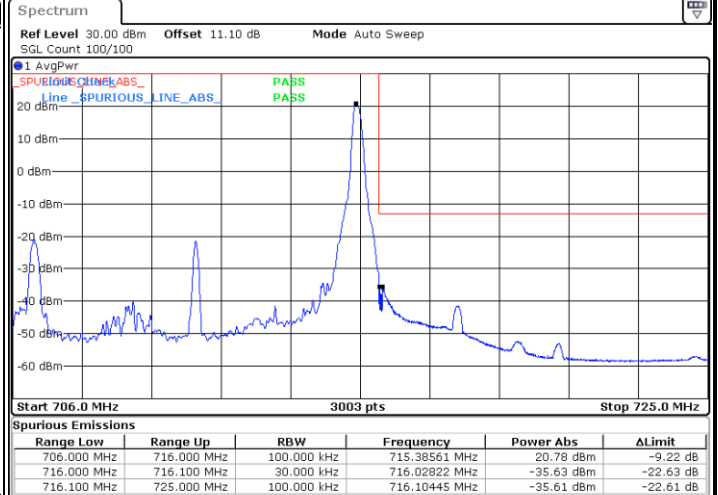


LTE Cat 1 Band 12 / 10MHz / 16QAM

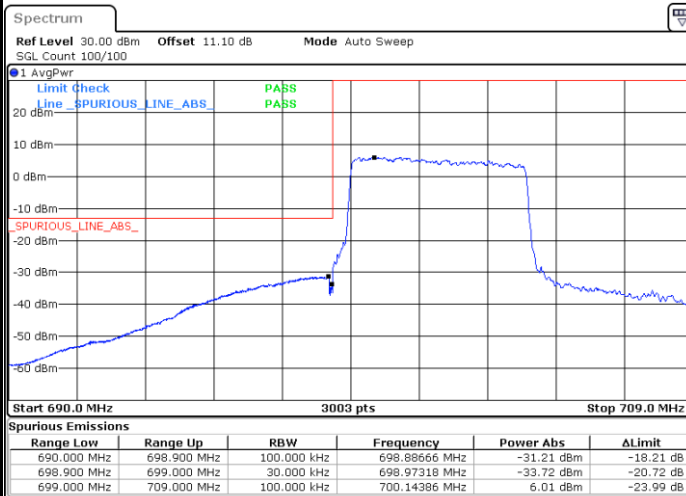
Lowest Band Edge / 1 RB



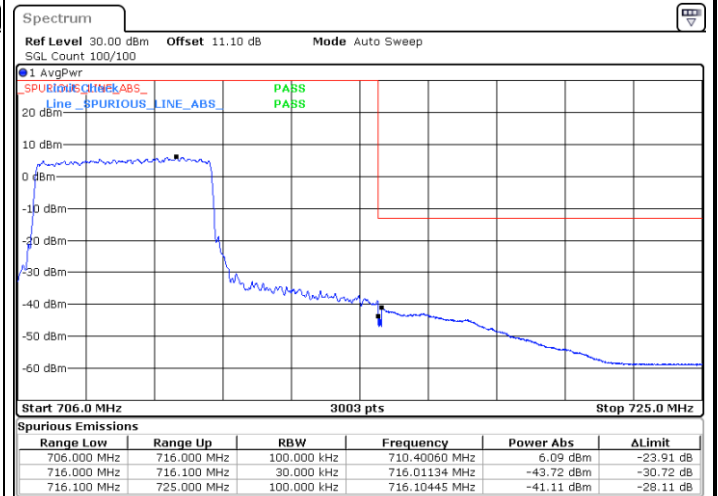
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



Highest Band Edge / Full RB

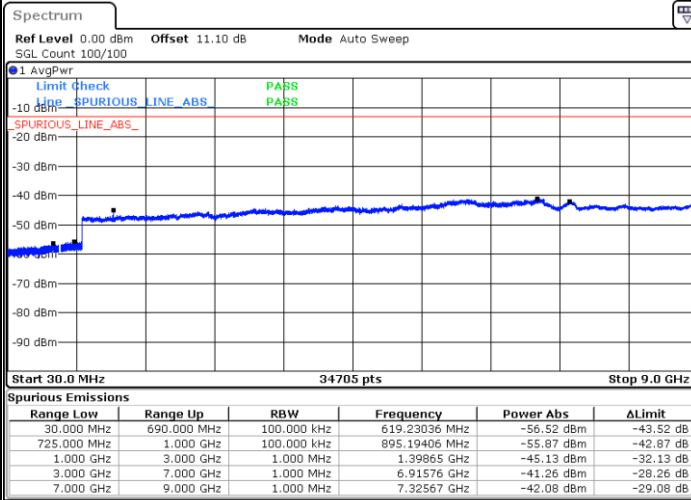




Conducted Spurious Emission

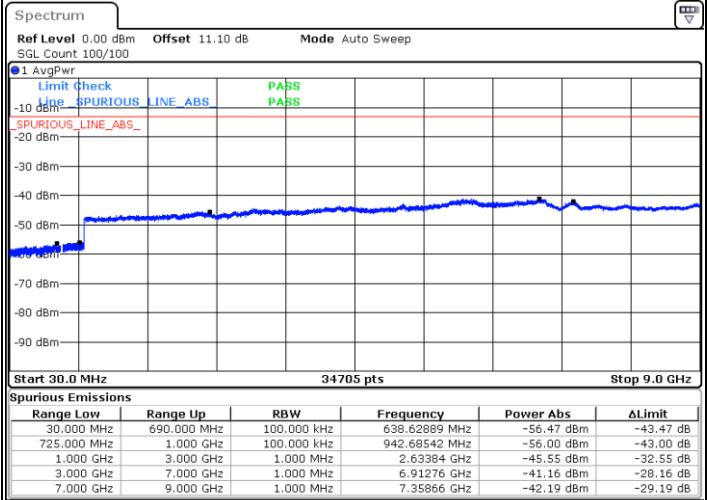
LTE Cat 1 Band 12 / 1.4MHz

Lowest Channel / QPSK



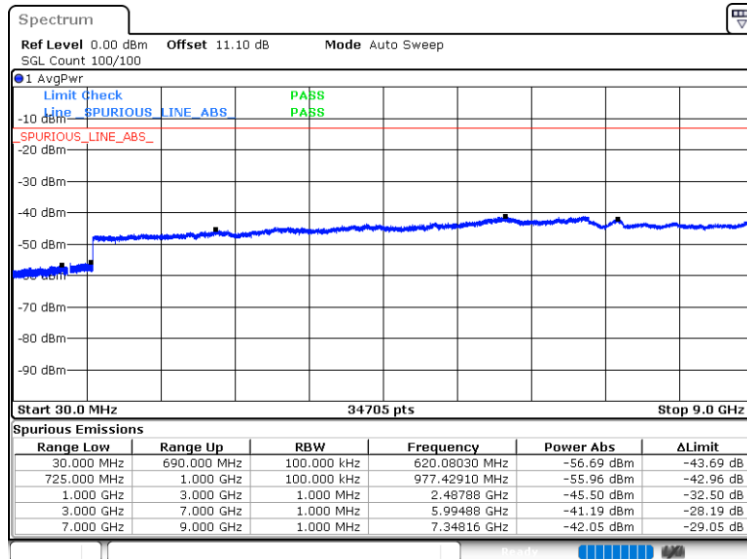
Date: 13.JAN.2022 10:09:24

Middle Channel / QPSK



Date: 13.JAN.2022 10:11:40

Highest Channel / QPSK

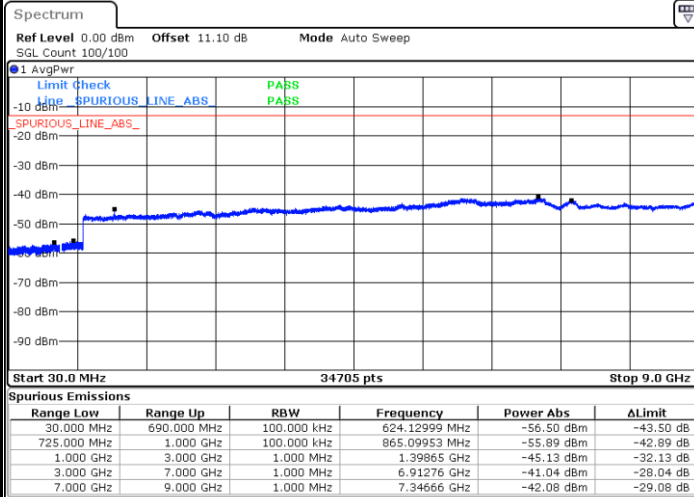


Date: 13.JAN.2022 10:16:17



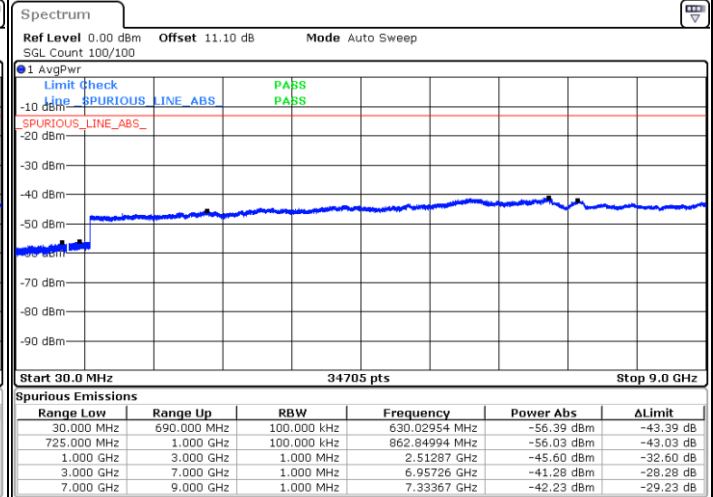
LTE Cat 1 Band 12 / 3MHz

Lowest Channel / QPSK



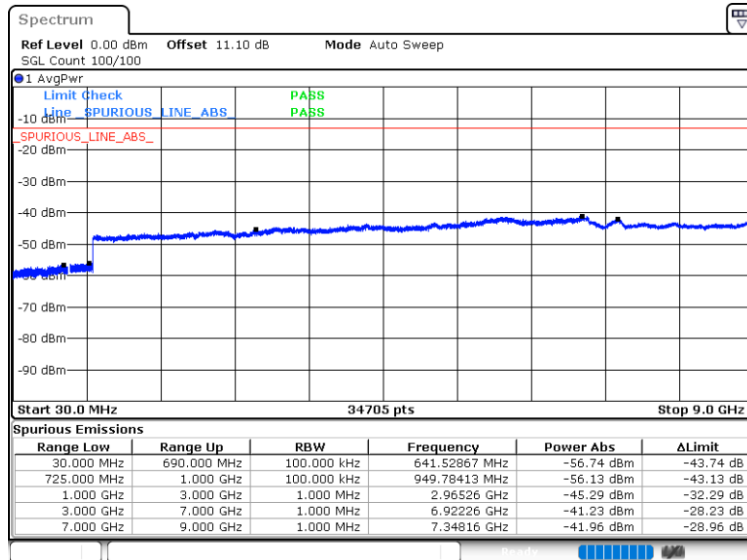
Date: 13.JAN.2022 10:25:54

Middle Channel / QPSK



Date: 13.JAN.2022 10:28:11

Highest Channel / QPSK

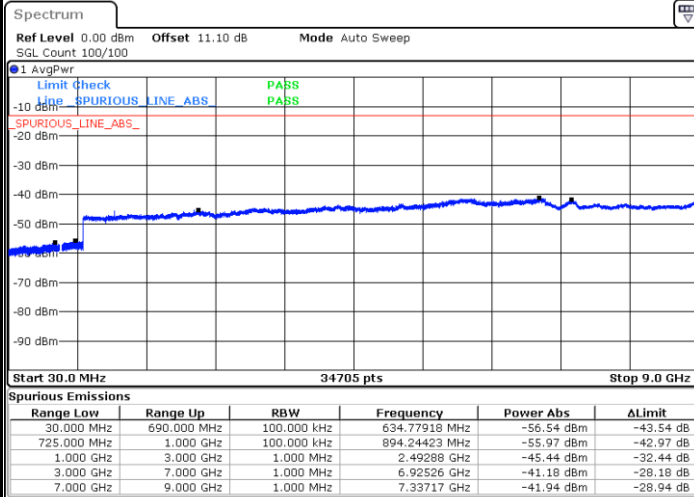


Date: 13.JAN.2022 10:32:47



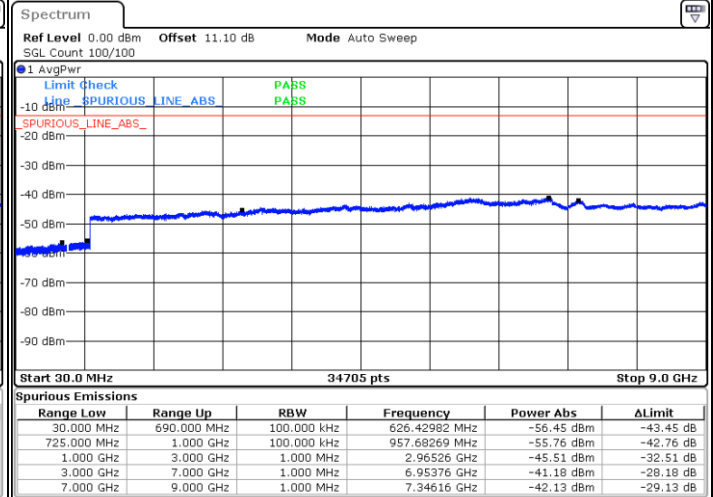
LTE Cat 1 Band 12 / 5MHz

Lowest Channel / QPSK



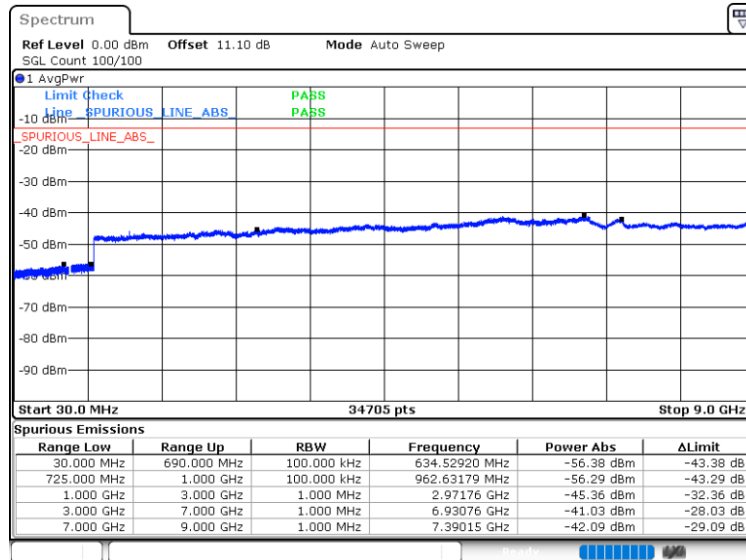
Date: 13.JAN.2022 10:37:25

Middle Channel / QPSK



Date: 13.JAN.2022 10:39:41

Highest Channel / QPSK

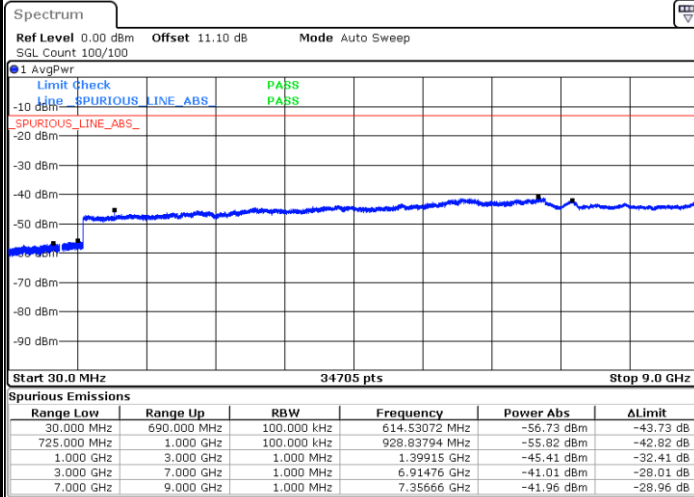


Date: 13.JAN.2022 10:44:18



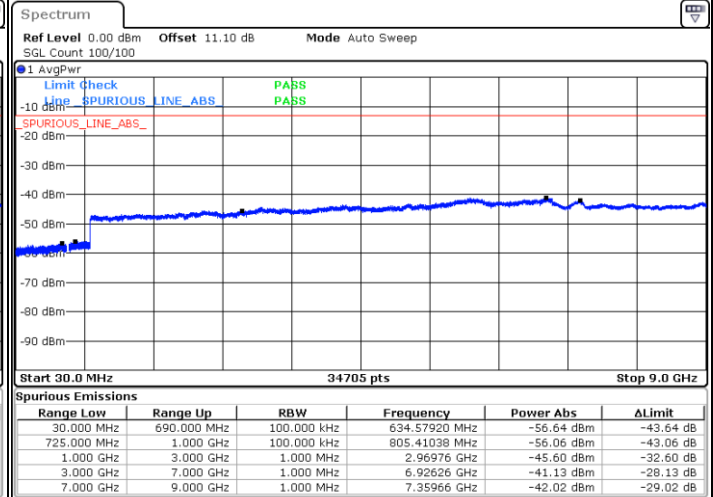
LTE Cat 1 Band 12 / 10MHz

Lowest Channel / QPSK



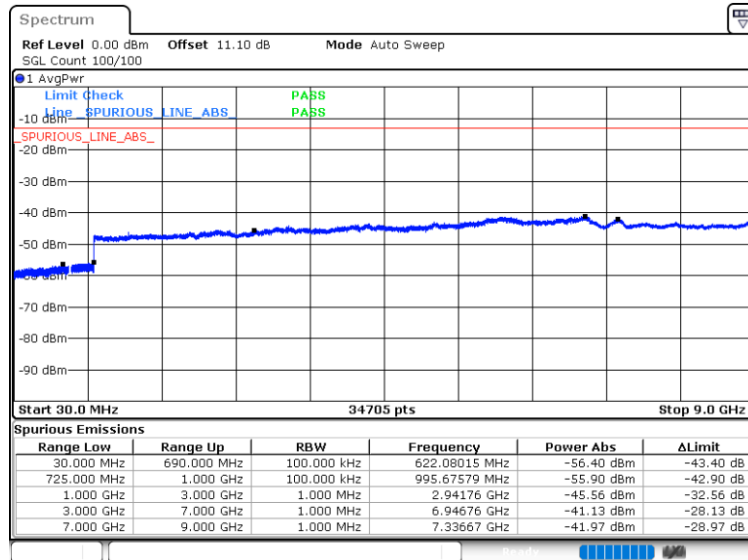
Date: 13.JAN.2022 10:48:01

Middle Channel / QPSK



Date: 13.JAN.2022 10:49:37

Highest Channel / QPSK



Date: 13.JAN.2022 10:53:18

Frequency Stability

Test Conditions		LTE Cat 1 Band 12 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0174	PASS
40	Normal Voltage	0.0182	
30	Normal Voltage	0.0230	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0174	
0	Normal Voltage	0.0168	
-10	Normal Voltage	0.0054	
-20	Normal Voltage	0.0196	
-30	Normal Voltage	0.0223	
20	Maximum Voltage	0.0259	
20	Normal Voltage	0.0174	
20	Battery End Point	0.0045	

Note:

1. Normal Voltage =3.88 V. ; Battery End Point (BEP) =3.6 V. ; Maximum Voltage =4.45 V.
2. The frequency fundamental emissions stay within the authorized frequency block.



Appendix B. Test Results of Radiated Test

LTE Cat 1 Band 2

LTE Cat 1 Band 2 / 20MHz / QPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	3702	-54.53	-13	-41.53	-75.5	-61.1	1.67	8.24	H
	5556	-43.03	-13	-30.03	-68.7	-50.1	2.66	9.72	H
	7398	-52.87	-13	-39.87	-80.21	-62	2.46	11.60	H
									H
									H
									H
	3702	-41.43	-13	-28.43	-62.43	-48	1.67	8.24	V
	5556	-44.63	-13	-31.63	-70.53	-51.7	2.66	9.72	V
	7398	-53.17	-13	-40.17	-80.37	-62.3	2.46	11.60	V
									V
									V
									V
Middle	3744	-39.99	-13	-26.99	-61	-46.6	1.68	8.29	H
	5616	-46.85	-13	-33.85	-72.85	-53.9	2.69	9.75	H
	7482	-50.87	-13	-37.87	-78.35	-60.2	2.44	11.76	H
									H
									H
									H
	3744	-45.59	-13	-32.59	-66.17	-52.2	1.68	8.29	V
	5616	-45.35	-13	-32.35	-71.2	-52.4	2.69	9.75	V
	7482	-51.87	-13	-38.87	-79.67	-61.2	2.44	11.76	V
									V
									V
									V



LTE Cat 1 Band 2 / 20MHz / QPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Highest	3780	-39.26	-13	-26.26	-59.82	-45.9	1.69	8.34	H
	5676	-48.16	-13	-35.16	-74.06	-55.2	2.73	9.77	H
	7560	-52.47	-13	-39.47	-80.27	-61.9	2.41	11.84	H
									H
									H
									H
	3780	-50.86	-13	-37.86	-71.76	-57.5	1.69	8.34	V
	5676	-47.56	-13	-34.56	-73.41	-54.6	2.73	9.77	V
	7560	-52.57	-13	-39.57	-80.32	-62	2.41	11.84	V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

**LTE Cat 1 Band 4**

LTE Cat 1 Band 4 / 20MHz / QPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	3420	-42.62	-13	-29.62	-63.51	-48.69	1.58	7.65	H
	5136	-34.79	-13	-21.79	-59.28	-42.07	2.42	9.70	H
	6840	-53.11	-13	-40.11	-80.67	-61.08	2.64	10.61	H
									H
									H
									H
	3420	-44.44	-13	-31.44	-65.38	-50.51	1.58	7.65	V
	5136	-33.70	-13	-20.70	-58.03	-40.98	2.42	9.70	V
	6840	-53.10	-13	-40.10	-80.61	-61.07	2.64	10.61	V
									V
									V
									V
Middle	3450	-52.11	-13	-39.11	-72.47	-58.3	1.59	7.78	H
	5172	-39.04	-13	-26.04	-63.2	-46.3	2.44	9.70	H
	8616	-49.15	-13	-36.15	-78.79	-59.3	2.40	12.55	H
									H
									H
									H
	3450	-51.01	-13	-38.01	-71.88	-57.2	1.59	7.78	V
	5172	-39.64	-13	-26.64	-63.75	-46.9	2.44	9.70	V
	8616	-50.95	-13	-37.95	-80.38	-61.1	2.40	12.55	V
									V
									V
									V



LTE Cat 1 Band 4 / 20MHz / QPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Highest	3474	-44.96	-13	-31.96	-66.18	-51.25	1.60	7.89	H
	5208	-36.17	-13	-23.17	-60.76	-43.41	2.46	9.70	H
	6940	-53.19	-13	-40.19	-80.57	-61.31	2.61	10.73	H
									H
									H
									H
	3474	-46.02	-13	-33.02	-67.13	-52.31	1.60	7.89	V
	5208	-42.37	-13	-29.37	-66.83	-49.61	2.46	9.70	V
	6940	-52.94	-13	-39.94	-80.32	-61.06	2.61	10.73	V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

**LTE Cat 1 Band 12**

LTE Cat 1 Band 12 / 10MHz / QPSK									
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	1400	-49.11	-13	-36.11	-59.63	-50.77	0.87	4.68	H
	2096	-53.01	-13	-40.01	-68.66	-53.88	1.16	4.19	H
	2800	-56.66	-13	-43.66	-74.66	-58.77	1.38	5.64	H
	3496	-53.82	-13	-40.82	-74.60	-58.05	1.60	7.98	H
									H
									H
									H
	1400	-50.25	-13	-37.25	-61.24	-51.91	0.87	4.68	V
	2096	-47.38	-13	-34.38	-63.36	-48.25	1.16	4.19	V
	2800	-56.15	-13	-43.15	-74.93	-58.26	1.38	5.64	V
	3496	-55.56	-13	-42.56	-76.19	-59.79	1.60	7.98	V
									V
									V
									V
Middle	1408	-54.33	-13	-41.33	-64.84	-56.04	0.87	4.73	H
	2112	-58.96	-13	-45.96	-74.68	-59.88	1.17	4.24	H
	2816	-55.85	-13	-42.85	-73.89	-57.96	1.39	5.65	H
	3515	-55.57	-13	-42.57	-76.37	-59.83	1.61	8.02	H
									H
									H
									H
	1408	-56.60	-13	-43.60	-67.58	-58.31	0.87	4.73	V
	2112	-56.39	-13	-43.39	-72.45	-57.31	1.17	4.24	V
	2816	-56.17	-13	-43.17	-75.01	-58.28	1.39	5.65	V
	3515	-54.30	-13	-41.30	-74.96	-58.56	1.61	8.02	V
									V
									V
									V



LTE Cat 1 Band 12 / 10MHz / QPSK									
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Highest	1416	-54.20	-13	-41.20	-64.71	-55.95	0.87	4.78	H
	2120	-58.97	-13	-45.97	-74.77	-59.91	1.17	4.26	H
	2824	-56.53	-13	-43.53	-74.57	-58.65	1.39	5.66	H
									H
									H
									H
	1416	-54.63	-13	-41.63	-65.61	-56.38	0.87	4.78	V
	2120	-57.49	-13	-44.49	-73.64	-58.43	1.17	4.26	V
	2824	-56.45	-13	-43.45	-75.29	-58.57	1.39	5.66	V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.