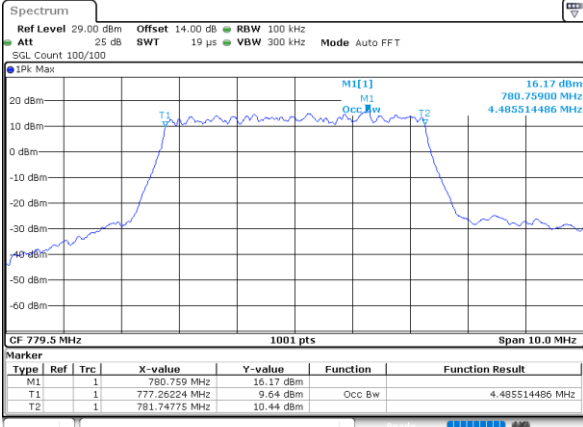




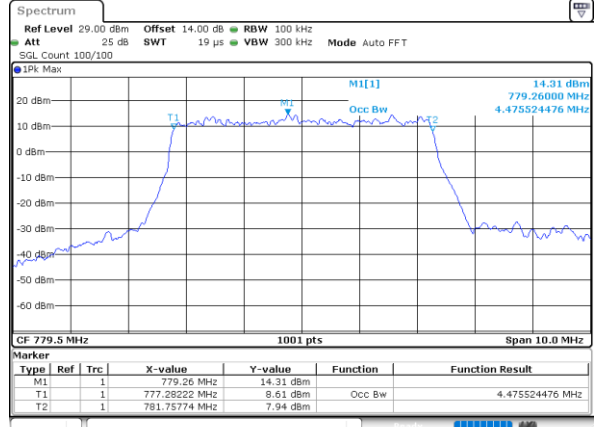
LTE Band 13

Lowest Channel / 5MHz / QPSK



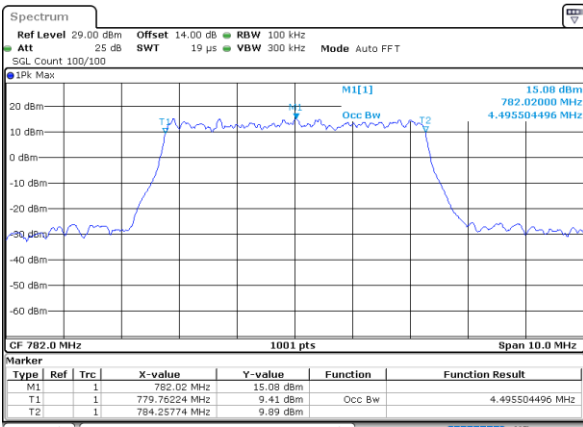
Date: 12_JUL_2021 14:37:11

Lowest Channel / 5MHz / 16QAM



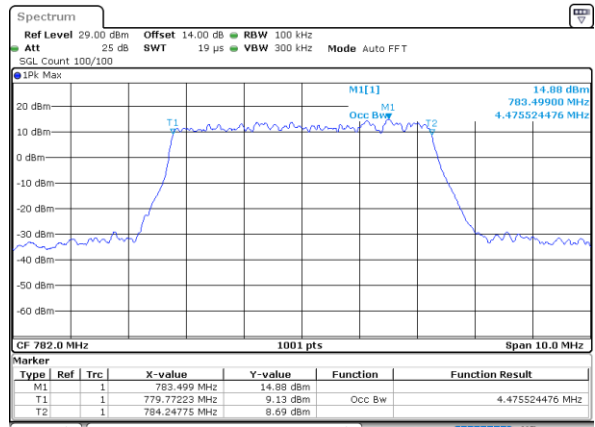
Date: 12_JUL_2021 14:37:22

Middle Channel / 5MHz / QPSK



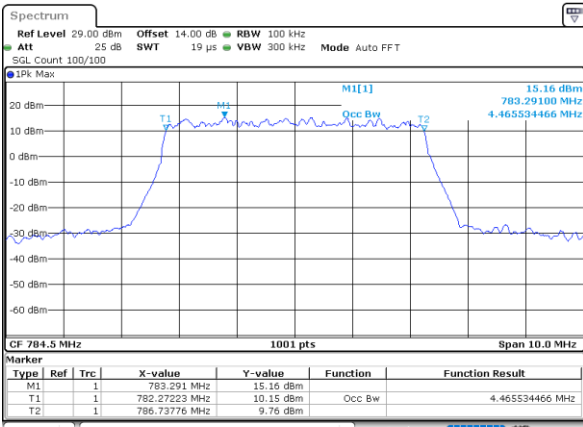
Date: 12_JUL_2021 14:49:01

Middle Channel / 5MHz / 16QAM



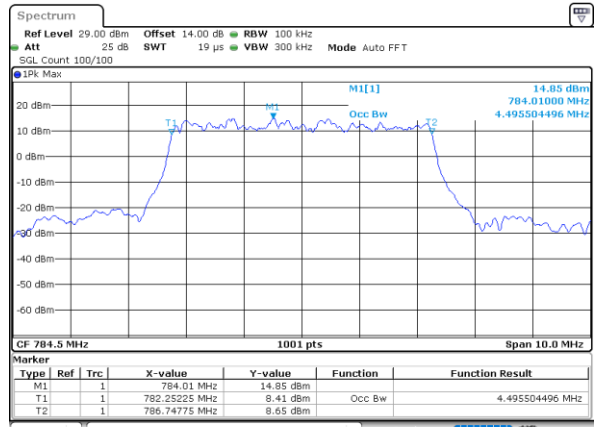
Date: 12_JUL_2021 14:48:50

Highest Channel / 5MHz / QPSK



Date: 12_JUL_2021 14:49:12

Highest Channel / 5MHz / 16QAM

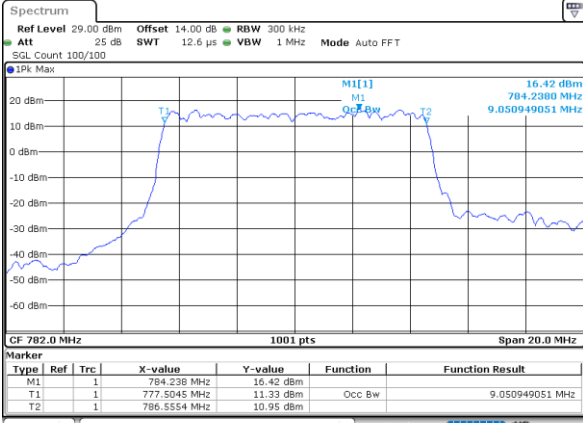


Date: 12_JUL_2021 14:49:23

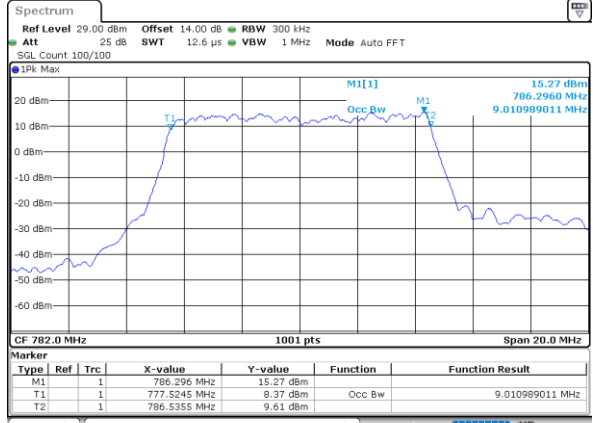


LTE Band 13

Middle Channel / 10MHz / QPSK



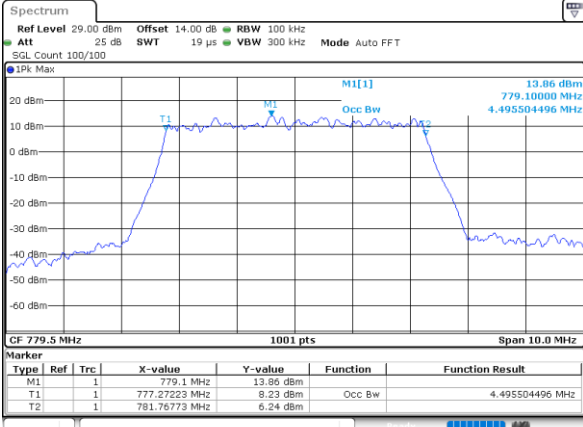
Middle Channel / 10MHz / 16QAM





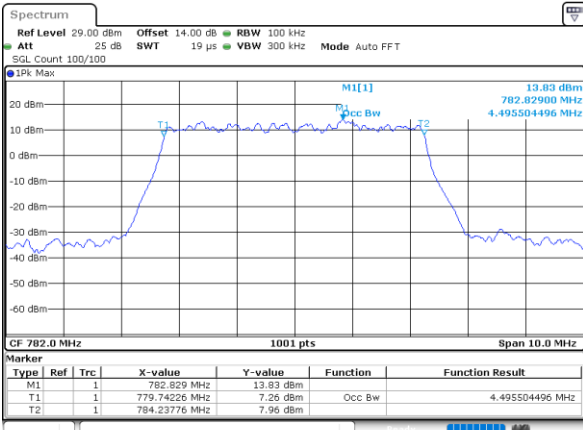
LTE Band 13

Lowest Channel / 5MHz / 64QAM



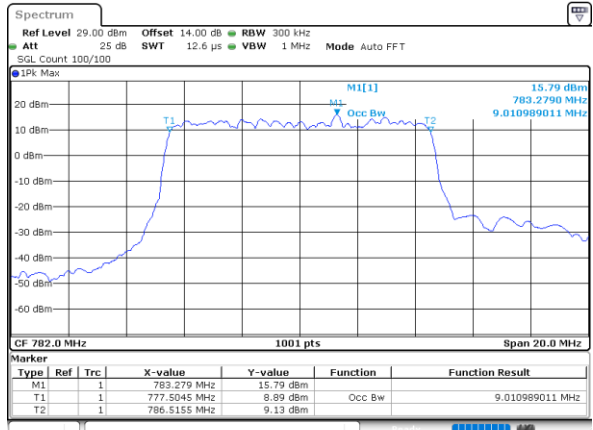
Date: 12_JUL_2021 14:58:31

Middle Channel / 5MHz / 64QAM



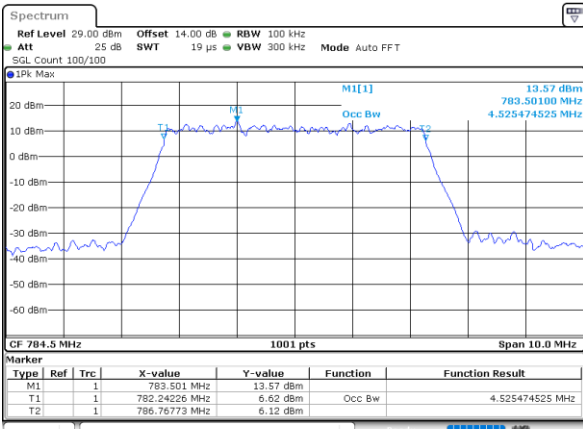
Date: 12_JUL_2021 15:04:22

Middle Channel / 10MHz / 64QAM



Date: 12_JUL_2021 15:21:56

Highest Channel / 5MHz / 64QAM



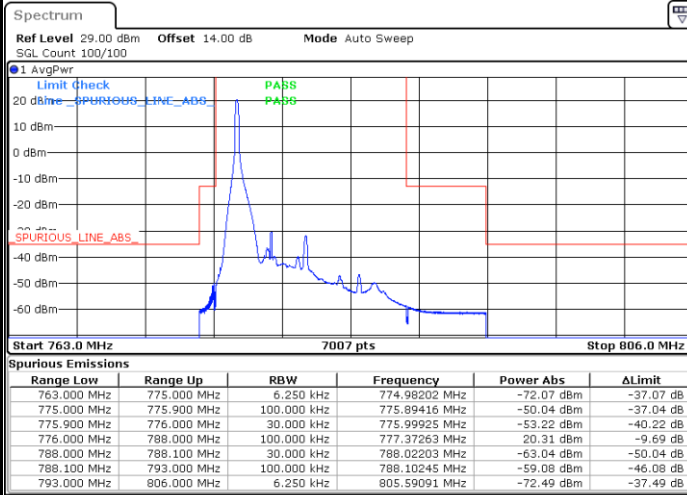
Date: 12_JUL_2021 15:04:33



Conducted Band Edge

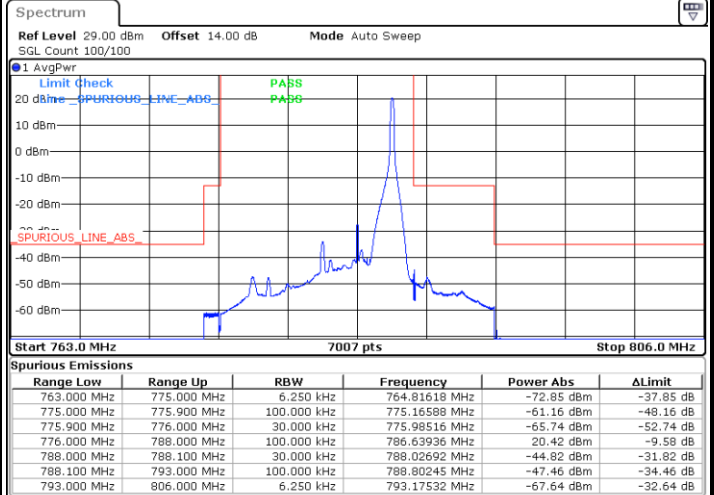
LTE Band 13 / 5MHz / QPSK

Lowest Band Edge / 1 RB



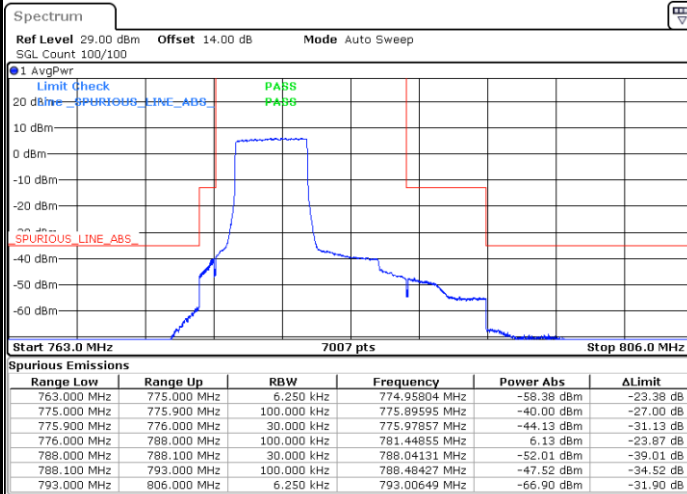
Date: 12.JUL.2021 14:44:21

Highest Band Edge / 1 RB



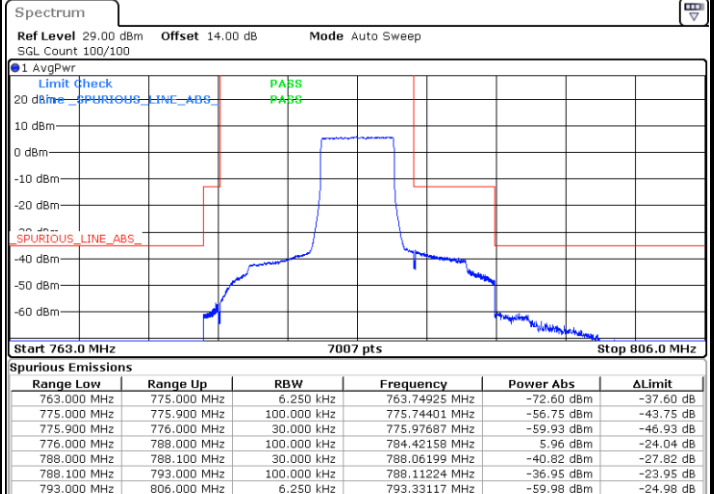
Date: 12.JUL.2021 14:56:22

Lowest Band Edge / Full RB



Date: 12.JUL.2021 14:39:23

Highest Band Edge / Full RB



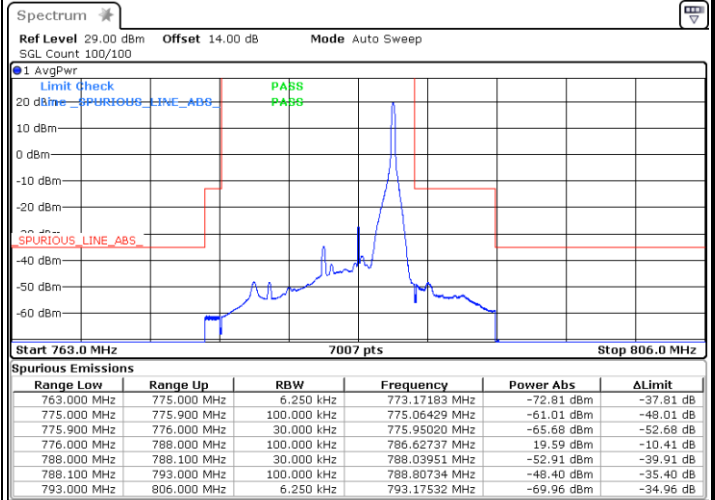
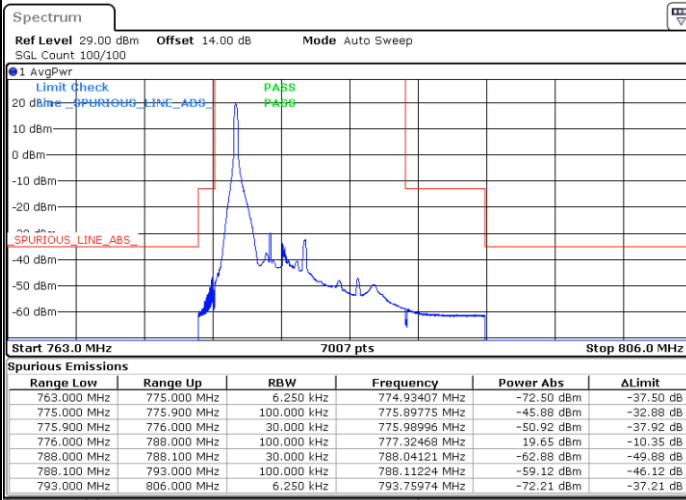
Date: 12.JUL.2021 14:51:24



LTE Band 13 / 5MHz / 16QAM

Lowest Band Edge / 1 RB

Highest Band Edge / 1 RB

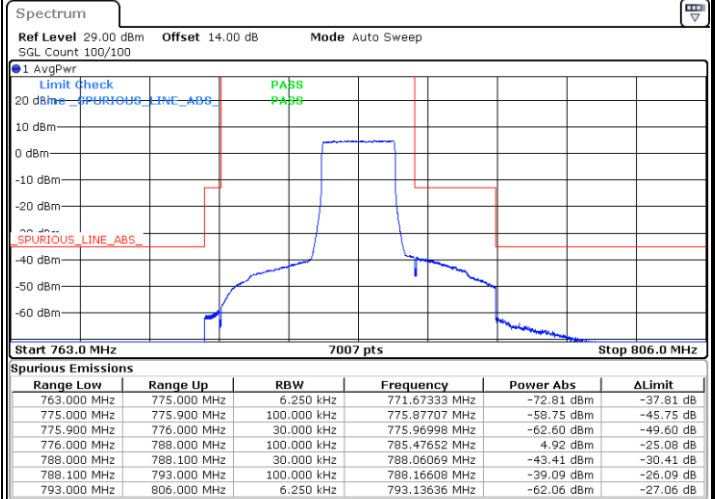
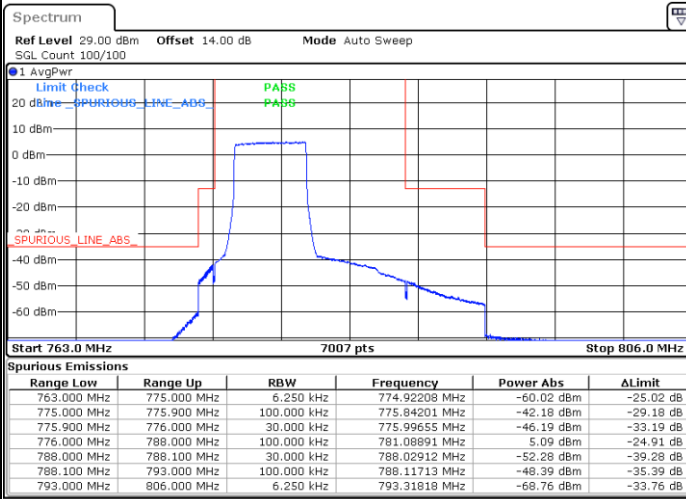


Date: 12.JUL.2021 15:37:47

Date: 12.JUL.2021 15:52:42

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



Date: 12.JUL.2021 14:41:02

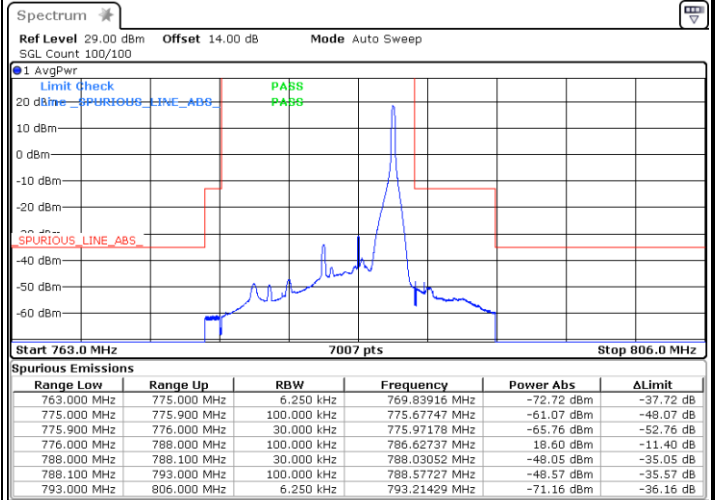
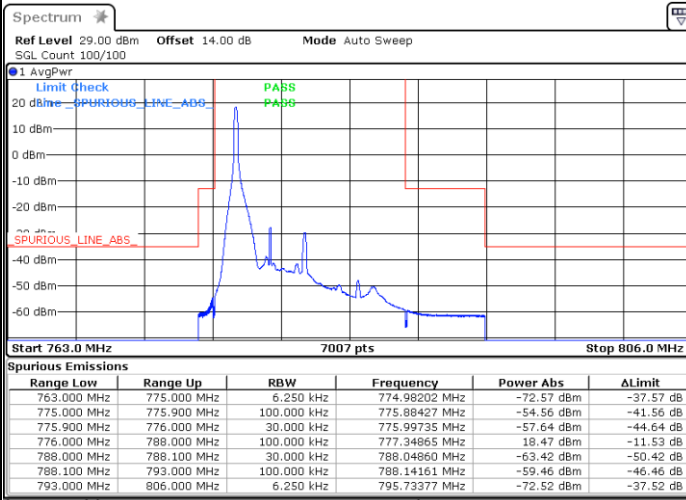
Date: 12.JUL.2021 14:53:03



LTE Band 13 / 5MHz / 64QAM

Lowest Band Edge / 1 RB

Highest Band Edge / 1 RB

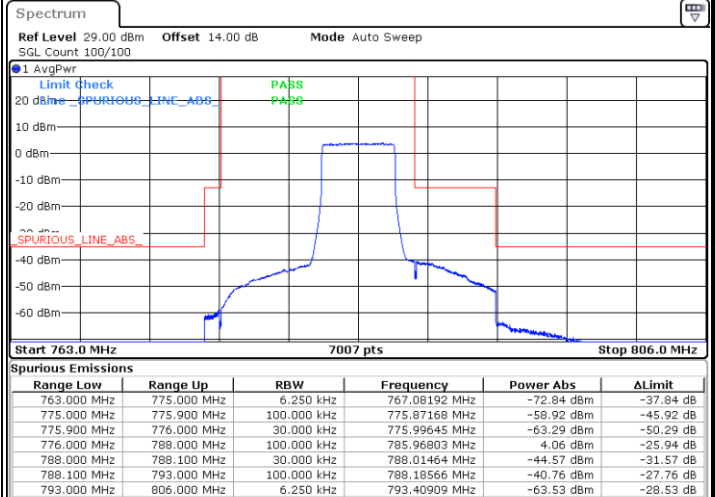
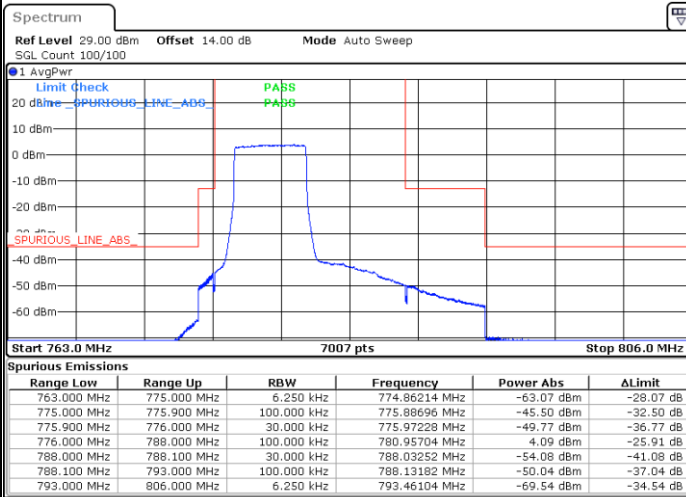


Date: 12.JUL.2021 15:49:09

Date: 12.JUL.2021 16:04:57

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



Date: 12.JUL.2021 15:00:22

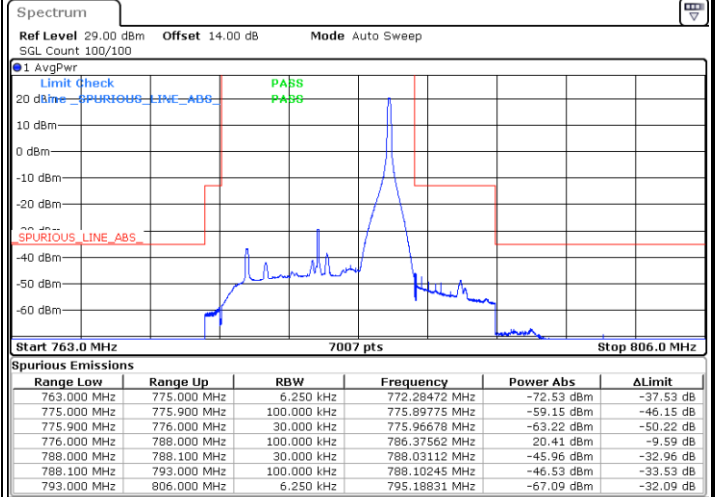
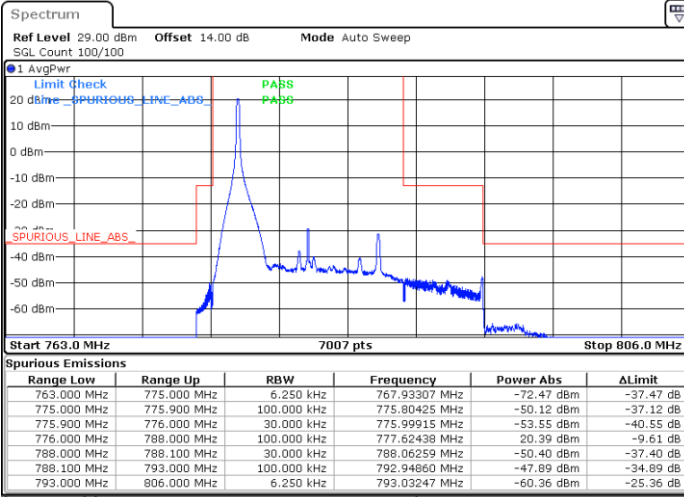
Date: 12.JUL.2021 15:06:28



LTE Band 13 / 10MHz / QPSK

Lowest Band Edge / 1 RB

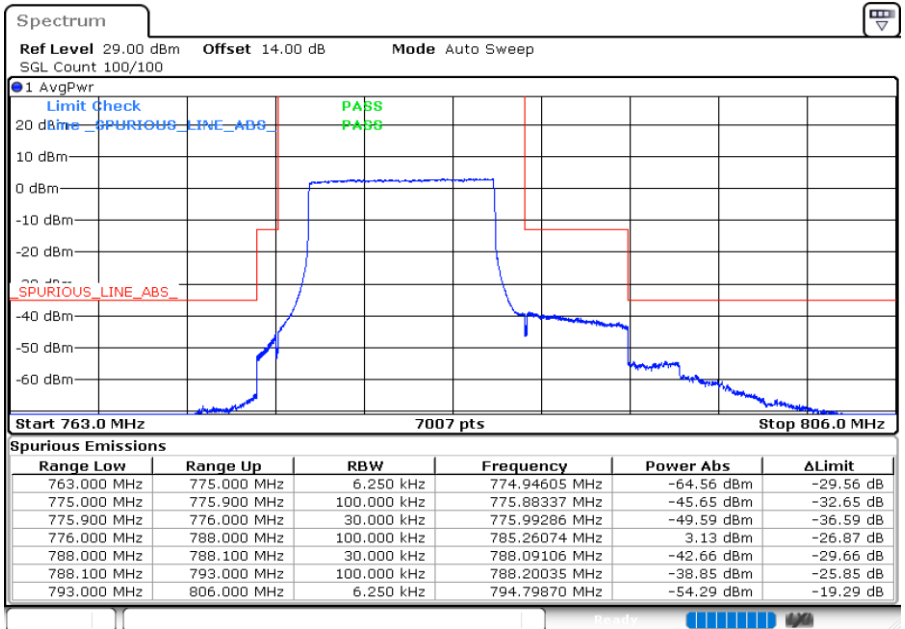
Highest Band Edge / 1 RB



Date: 12.JUL.2021 15:16:28

Date: 12.JUL.2021 15:18:07

Band Edge / Full RB

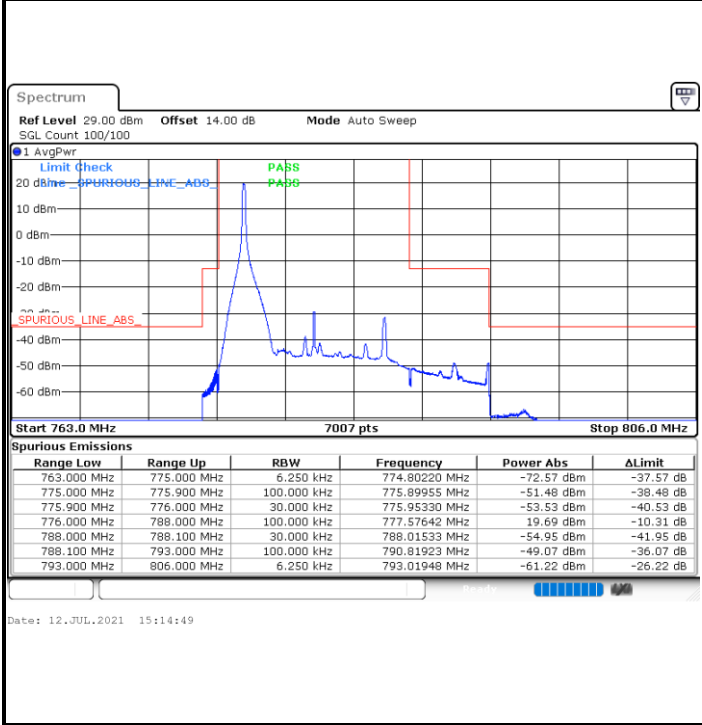


Date: 12.JUL.2021 15:11:31

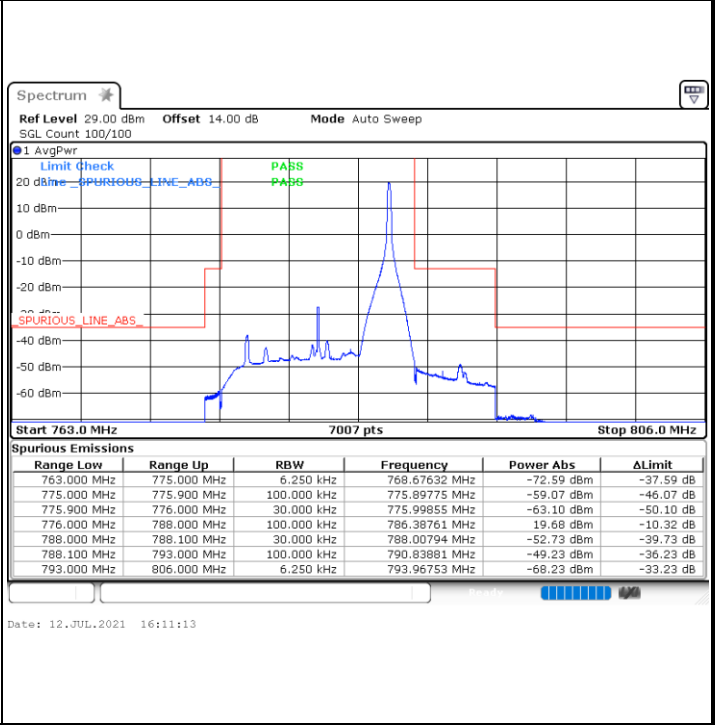


LTE Band 13 / 10MHz / 16QAM

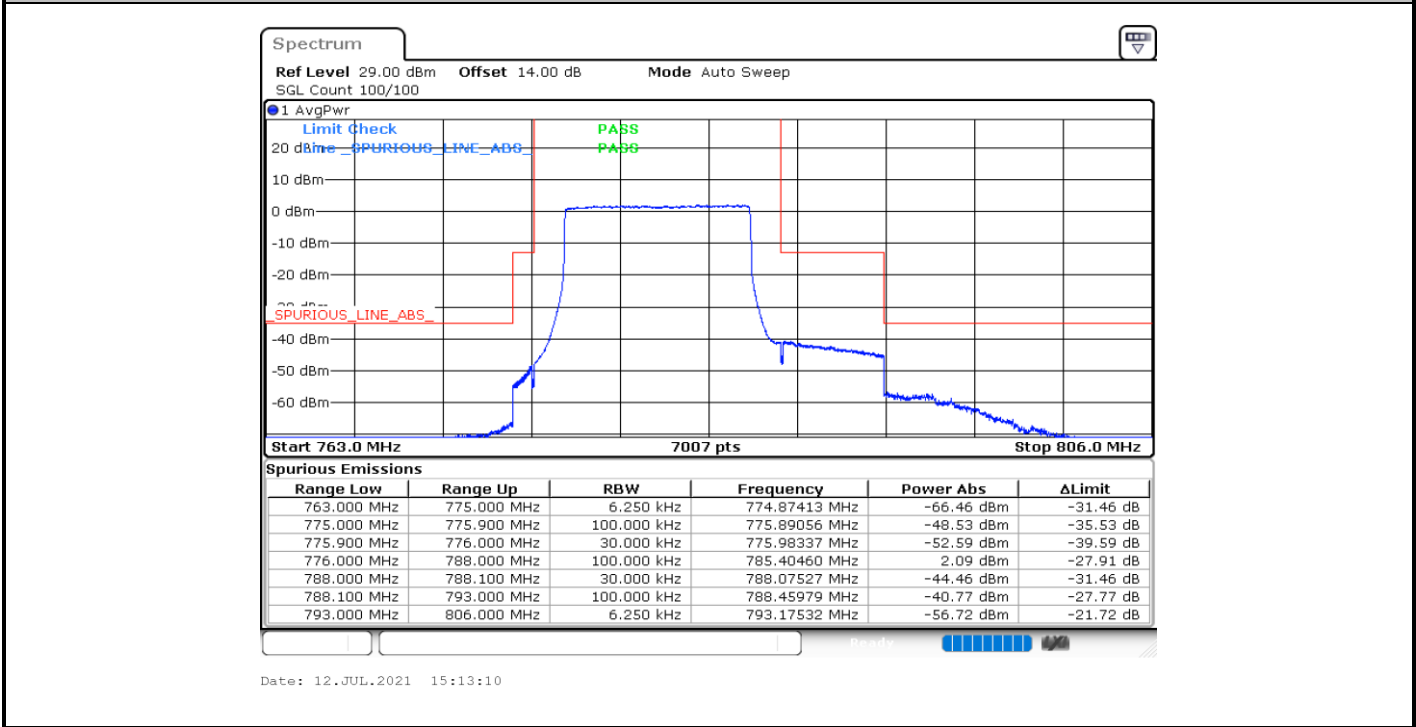
Lowest Band Edge / 1 RB



Highest Band Edge / 1 RB



Band Edge / Full RB

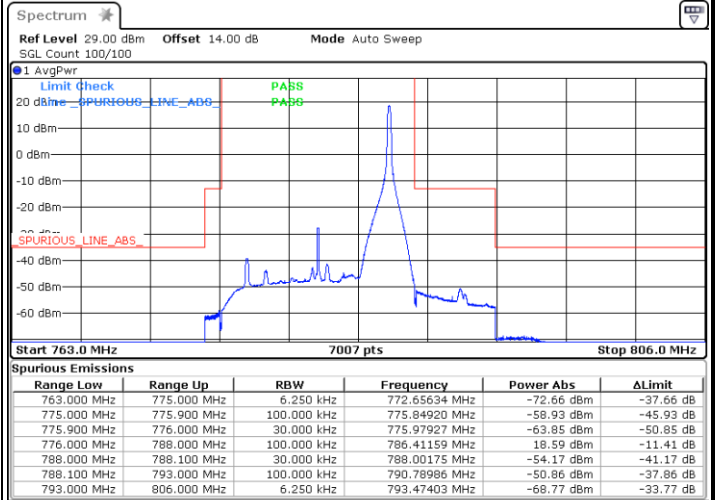
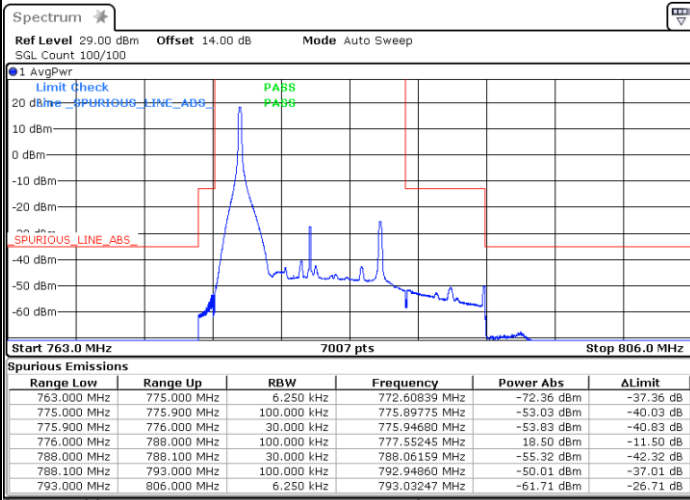




LTE Band 13 / 10MHz / 64QAM

Lowest Band Edge / 1 RB

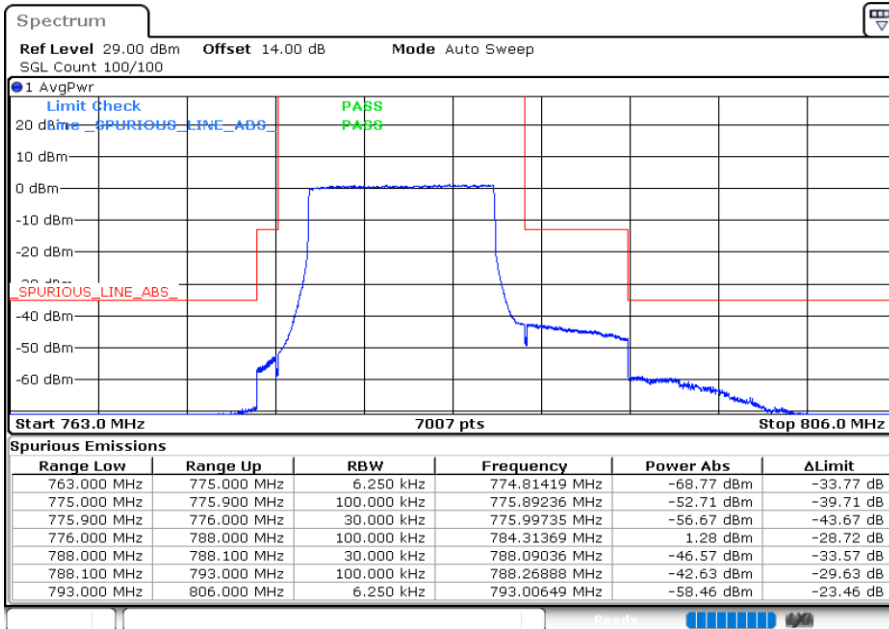
Highest Band Edge / 1 RB



Date: 12.JUL.2021 16:07:49

Date: 12.JUL.2021 16:12:37

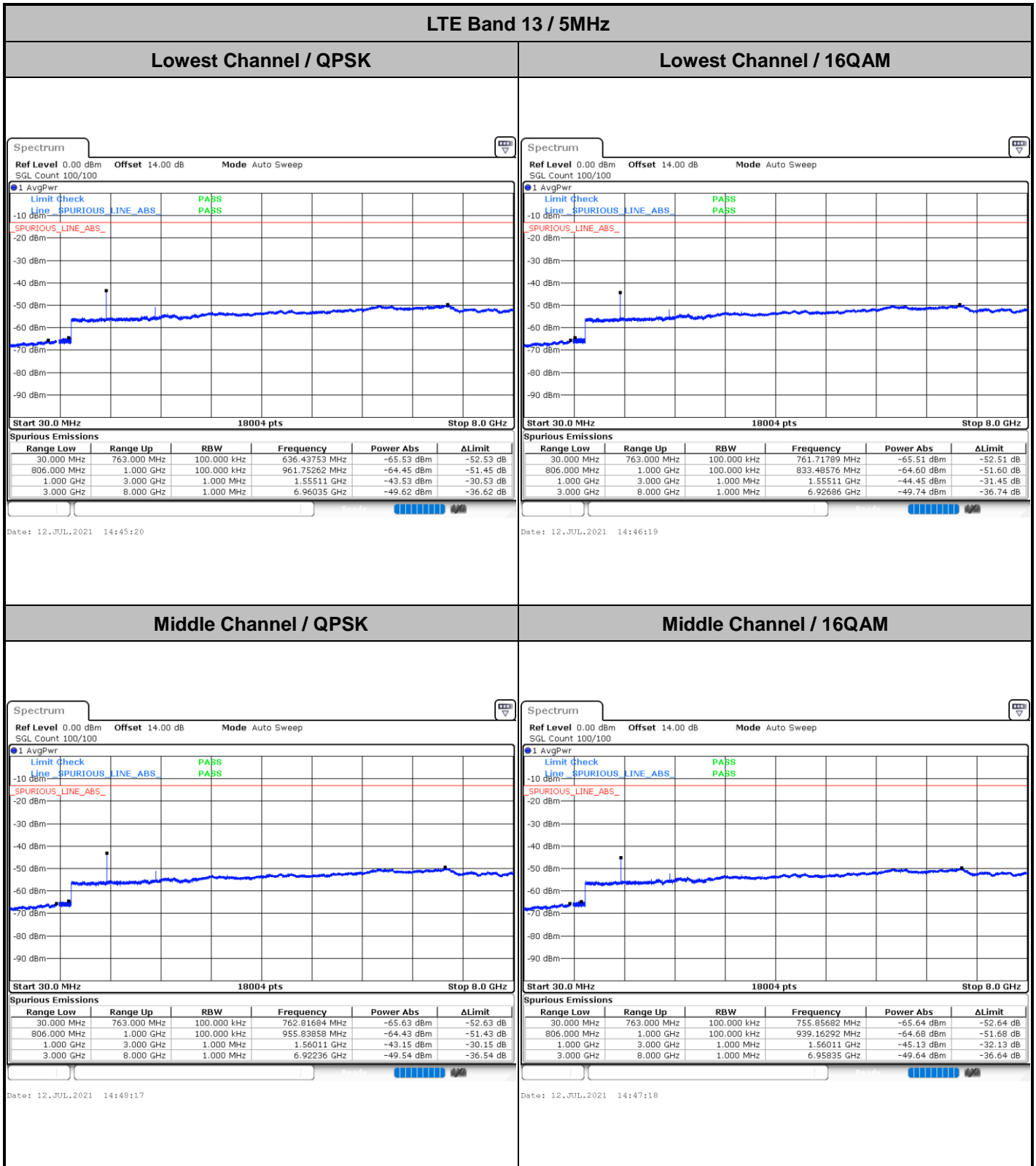
Band Edge / Full RB



Date: 12.JUL.2021 15:23:46



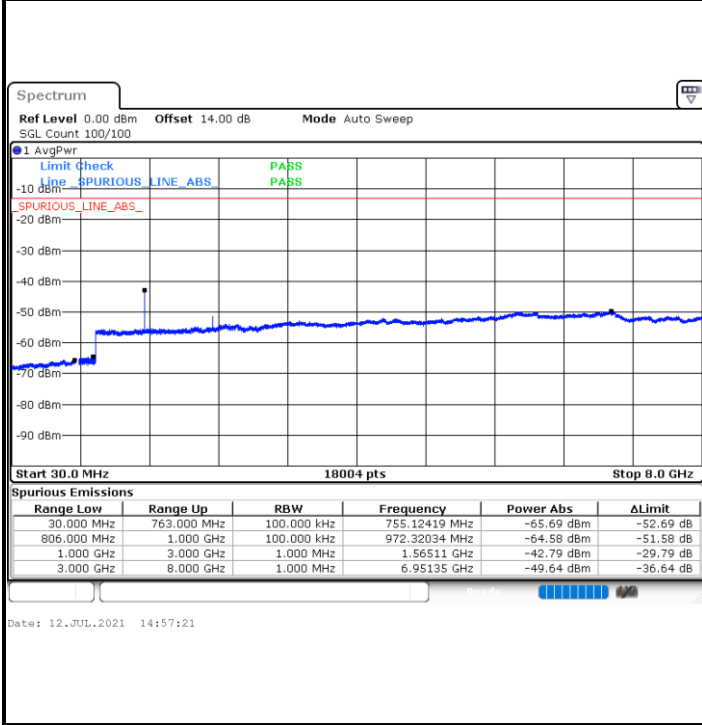
Conducted Spurious Emission



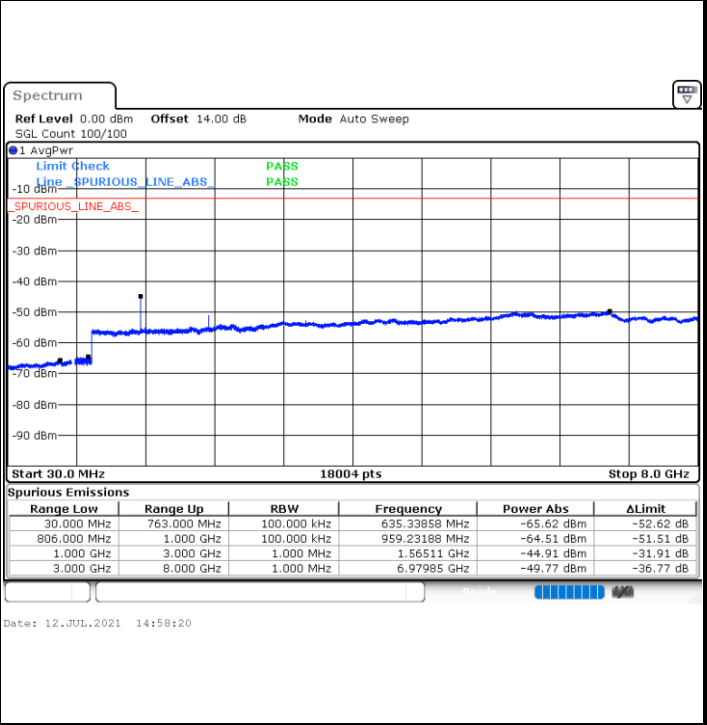


LTE Band 13 / 5MHz

Highest Channel / QPSK

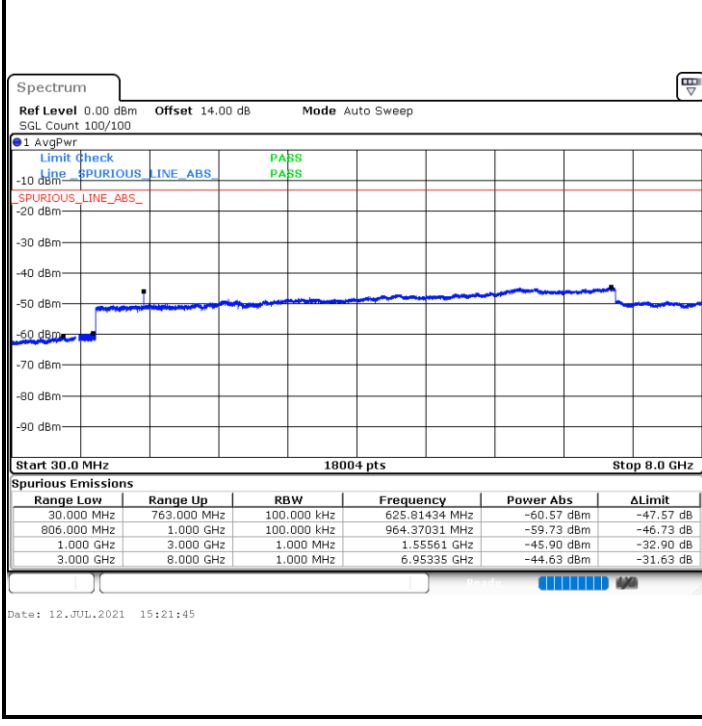


Highest Channel / 16QAM

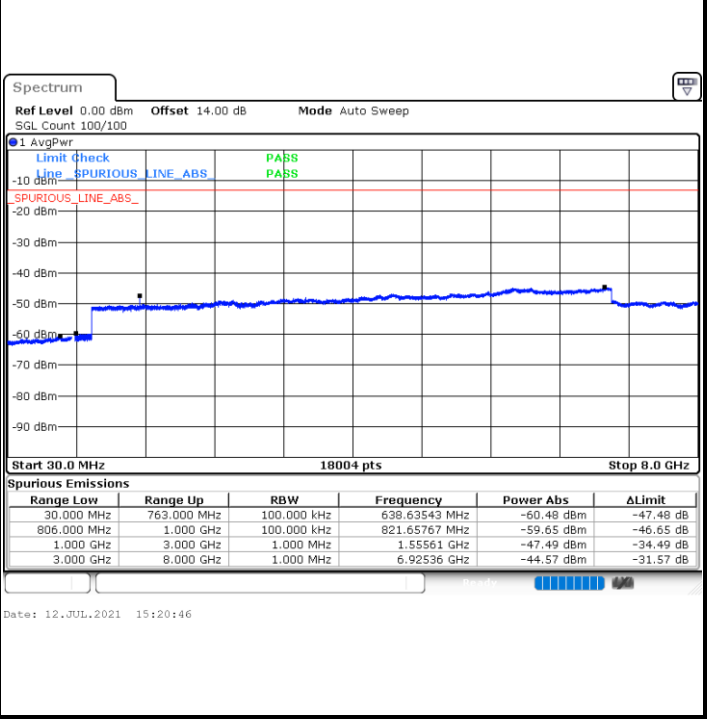


LTE Band 13 / 10MHz

Middle Channel / QPSK



Middle Channel / 16QAM

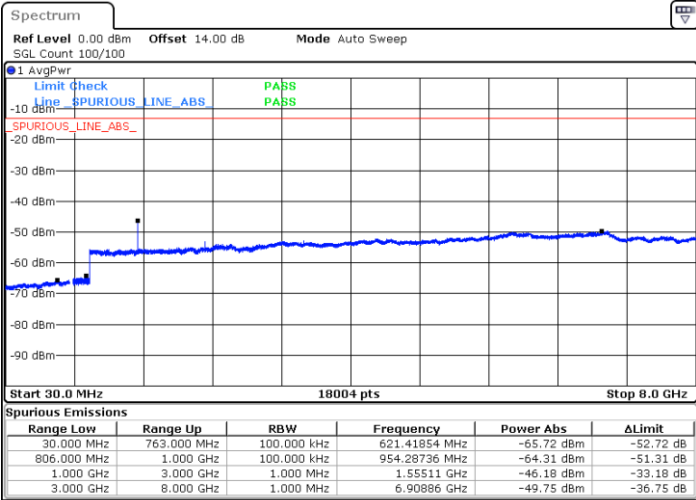




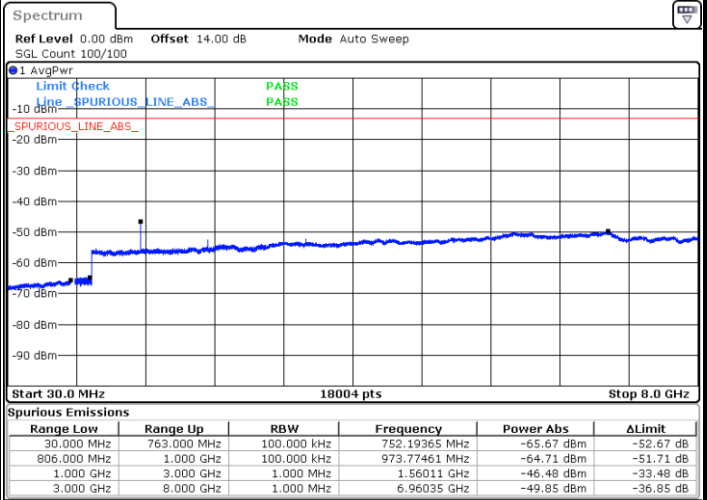
LTE Band 13 / 5MHz

Lowest Channel / 64QAM

Middle Channel / 64QAM

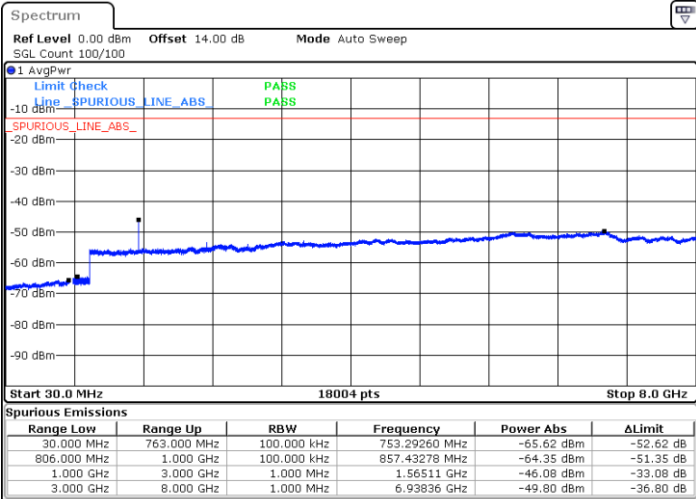


Date: 12.JUL.2021 15:03:00



Date: 12.JUL.2021 15:04:00

Highest Channel / 64QAM

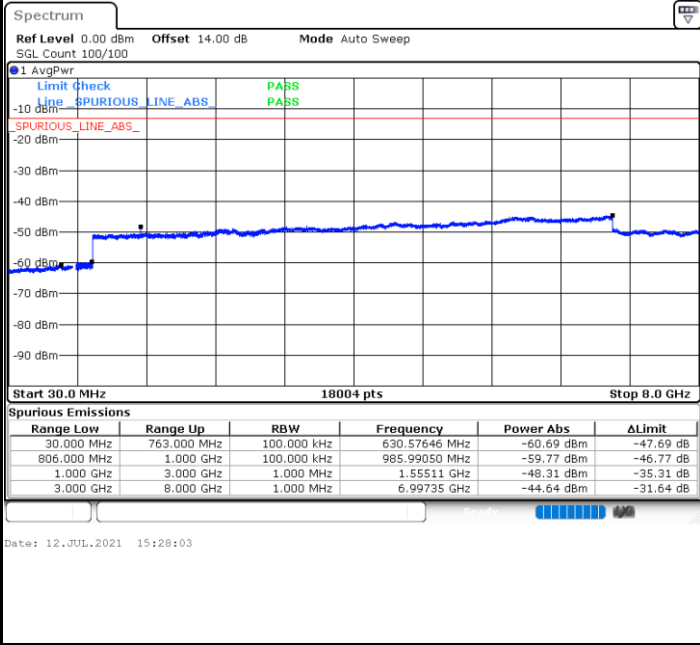


Date: 12.JUL.2021 15:09:07



LTE Band 13 / 10MHz

Middle Channel / 64QAM





Frequency Stability

Test Conditions		LTE Band 13 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0003	PASS
40	Normal Voltage	0.0006	
30	Normal Voltage	0.0006	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0014	
0	Normal Voltage	0.0017	
-10	Normal Voltage	0.0005	
-20	Normal Voltage	0.0004	
-30	Normal Voltage	0.0001	
20	Maximum Voltage	0.0008	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0020	

Note:

1. Normal Voltage =3.8 V. ; Battery End Point (BEP) =3.6 V. ; Maximum Voltage =4.4 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.



Appendix B. Test Results of Radiated Test

Radiated Spurious Emission

Top Antenna:

LTE Band 2 / 20MHz / 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)
Middle	3742.18	-59.89	-13	-46.89	-74.32	-66.64	5.85	12.60	H
	5613.27	-61.72	-13	-48.72	-78.56	-67.52	7.30	13.10	H
	7484.36	-56.14	-13	-43.14	-78.52	-59.29	8.35	11.50	H
	3742.18	-57.09	-13	-44.09	-71.73	-63.84	5.85	12.60	V
	5613.27	-61.72	-13	-48.72	-78.47	-67.52	7.30	13.10	V
	7484.36	-55.81	-13	-42.81	-78.12	-58.96	8.35	11.50	V

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

LTE Band 5 / 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)
Middle	1664.18	-66.01	-13	-53.01	-72.12	-69.26	4.00	9.40	H
	2496.27	-63.78	-13	-50.78	-73.97	-67.35	4.88	10.60	H
	3328.36	-63.93	-13	-50.93	-75.90	-68.86	5.52	12.60	H
	1664.18	-66.77	-13	-53.77	-72.65	-70.02	4.00	9.40	V
	2496.27	-63.75	-13	-50.75	-74.28	-67.32	4.88	10.60	V
	3328.36	-63.71	-13	-50.71	-76.09	-68.64	5.52	12.60	V

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



Bottom Antenna:

LTE Band 2 / 20MHz / 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)
Middle	3742.18	-59.91	-13	-46.91	-74.34	-66.66	5.85	12.60	H
	5613.27	-61.96	-13	-48.96	-78.80	-67.76	7.30	13.10	H
	7484.36	-56.30	-13	-43.30	-78.68	-59.45	8.35	11.50	H
	3742.18	-57.33	-13	-44.33	-71.97	-64.08	5.85	12.60	V
	5613.27	-61.79	-13	-48.79	-78.54	-67.59	7.30	13.10	V
	7484.36	-56.47	-13	-43.47	-78.78	-59.62	8.35	11.50	V

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

LTE Band 5 / 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)
Middle	1664.18	-65.69	-13	-52.69	-71.80	-68.94	4.00	9.40	H
	2496.27	-63.92	-13	-50.92	-74.11	-67.49	4.88	10.60	H
	3328.36	-64.22	-13	-51.22	-76.19	-69.15	5.52	12.60	H
	1664.18	-66.56	-13	-53.56	-72.44	-69.81	4.00	9.40	V
	2496.27	-63.71	-13	-50.71	-74.24	-67.28	4.88	10.60	V
	3328.36	-63.54	-13	-50.54	-75.92	-68.47	5.52	12.60	V

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



LTE Band 13 / 5MHz / 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)
Middle	1559.5	-61.59	-42.15	-19.44	-61.59	-64.84	4.00	9.40	H
	2339.25	-64.30	-13	-51.30	-64.30	-67.87	4.88	10.60	H
	3119	-63.03	-13	-50.03	-63.03	-67.96	5.52	12.60	H
	1559.5	-62.70	-42.15	-20.55	-62.70	-65.95	4.00	9.40	V
	2339.25	-63.89	-13	-50.89	-63.89	-67.46	4.88	10.60	V
	3119	-62.57	-13	-49.57	-62.57	-67.50	5.52	12.60	V

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

LTE Band 13 / 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)
Middle	1555	-60.82	-42.15	-18.67	-60.82	-64.07	4.00	9.40	H
	2332.5	-64.55	-13	-51.55	-64.55	-68.12	4.88	10.60	H
	3110	-63.10	-13	-50.10	-63.10	-68.03	5.52	12.60	H
	1555	-61.10	-42.15	-18.95	-61.10	-64.35	4.00	9.40	V
	2332.5	-64.21	-13	-51.21	-64.21	-67.78	4.88	10.60	V
	3110	-62.51	-13	-49.51	-62.51	-67.44	5.52	12.60	V

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



Appendix D. Reference Report

Please refer to Sporton report number FG151921B which is issued separately.