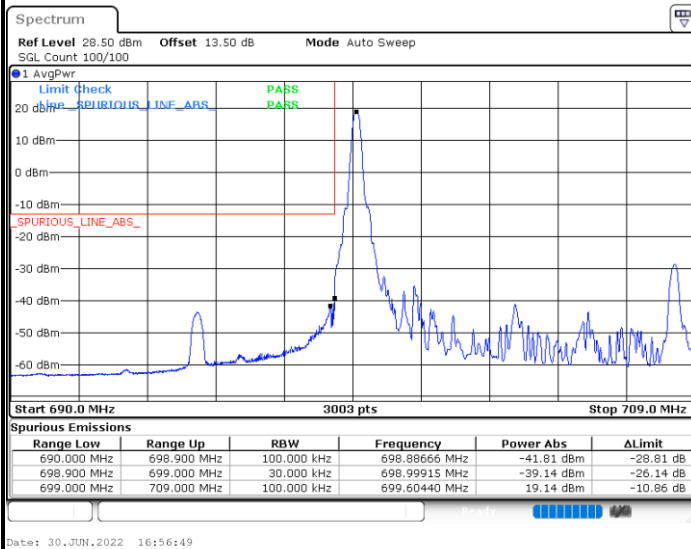


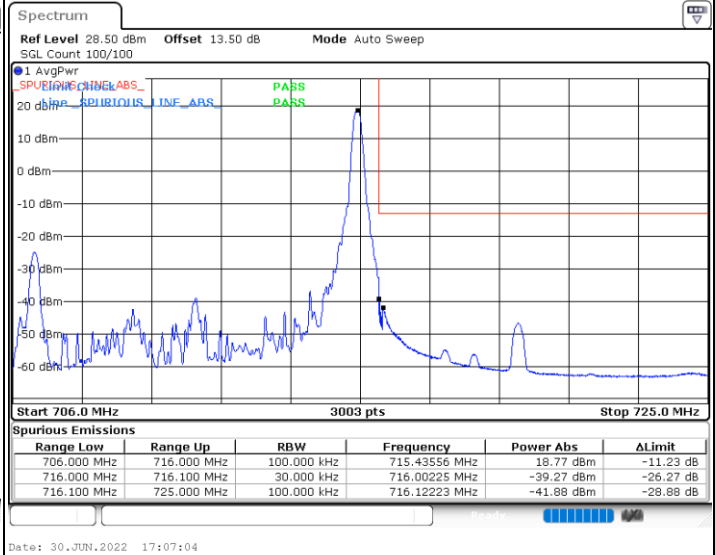


LTE Band 12 / 10MHz / 16QAM

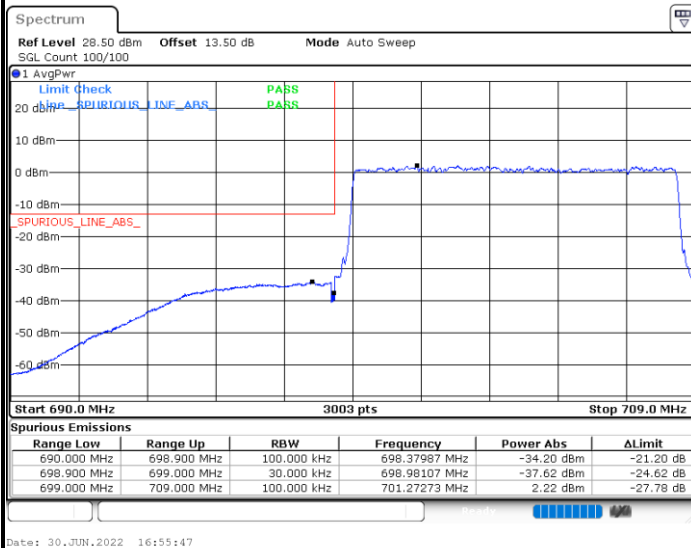
Lowest Band Edge / 1 RB



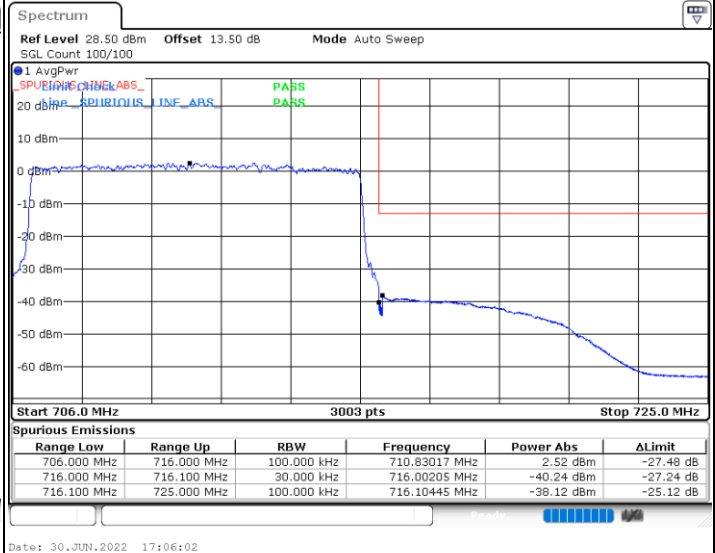
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB

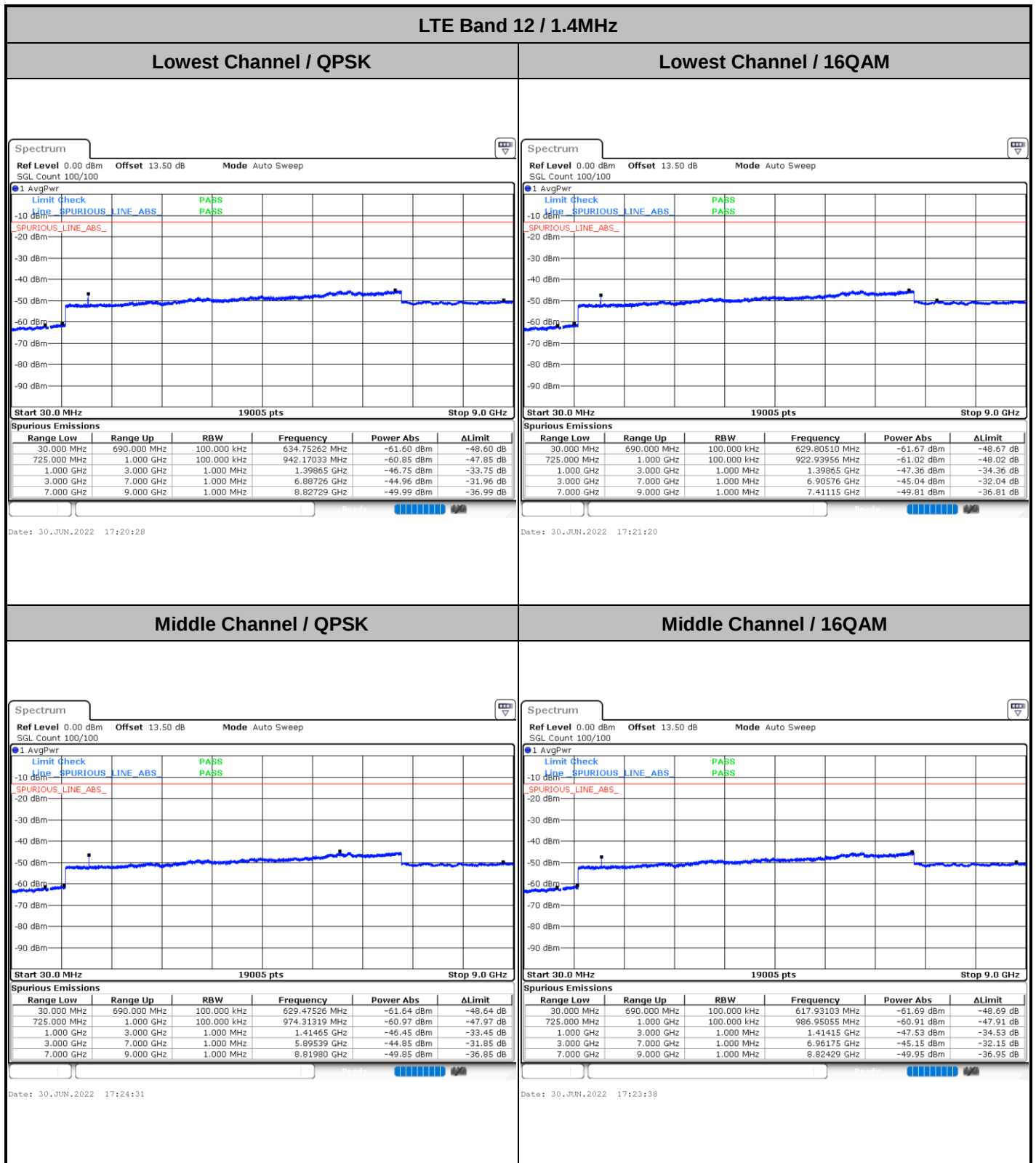


Highest Band Edge / Full RB





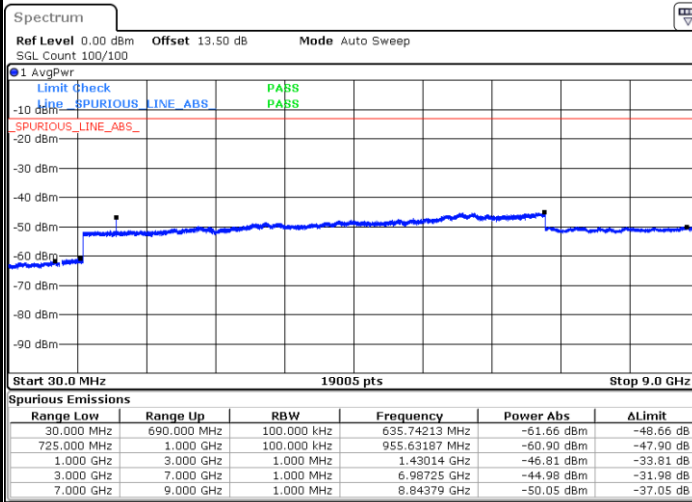
Conducted Spurious Emission





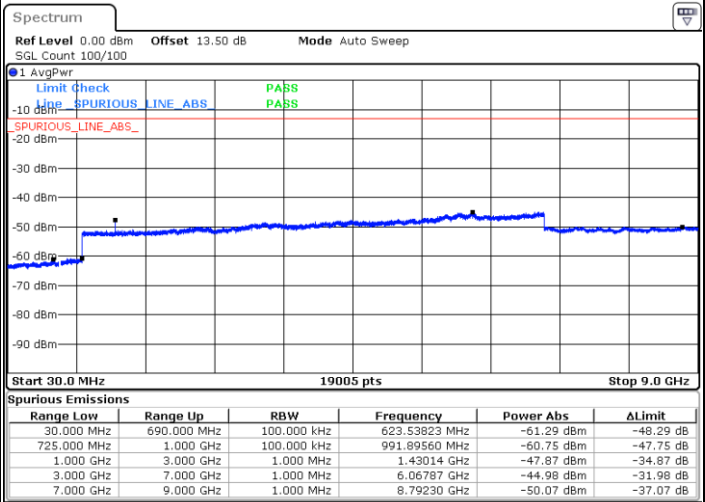
LTE Band 12 / 1.4MHz

Highest Channel / QPSK



Date: 30.JUN.2022 17:30:53

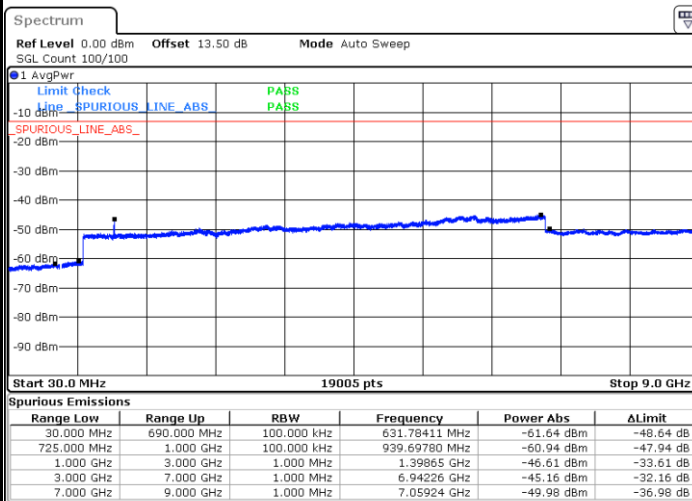
Highest Channel / 16QAM



Date: 30.JUN.2022 17:31:46

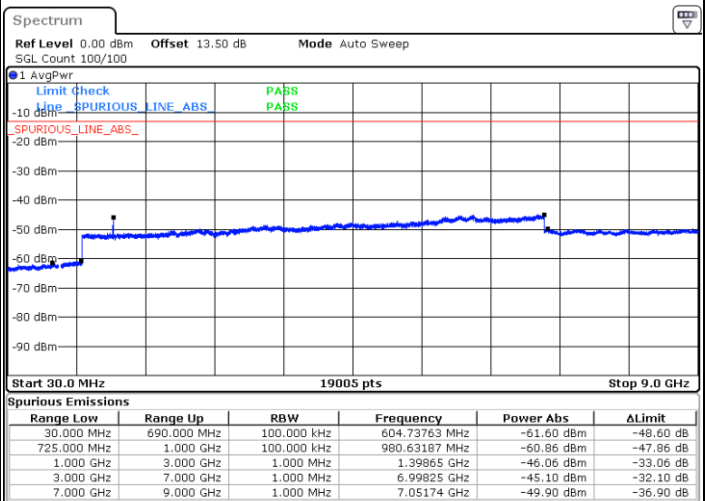
LTE Band 12 / 3MHz

Lowest Channel / QPSK



Date: 30.JUN.2022 16:23:36

Lowest Channel / 16QAM

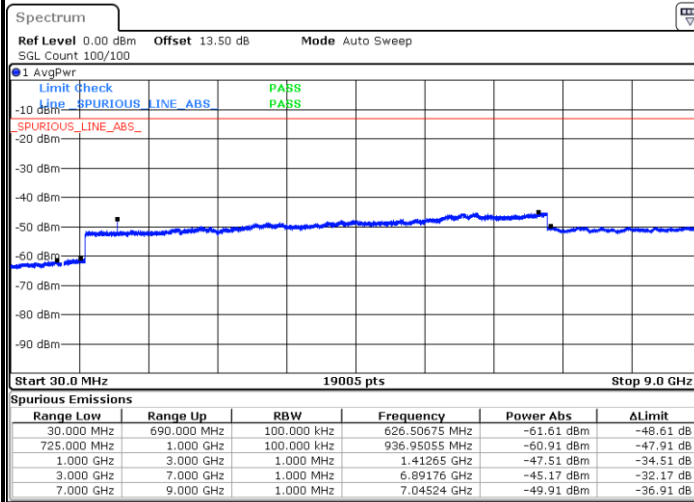


Date: 30.JUN.2022 16:24:29



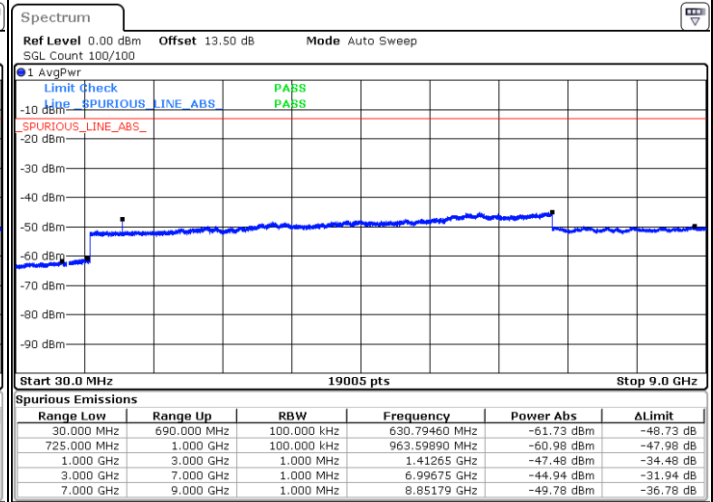
LTE Band 12 / 3MHz

Middle Channel / QPSK



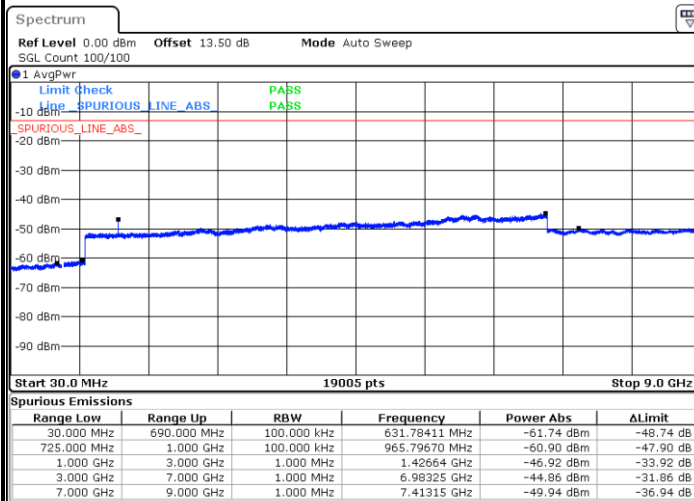
Date: 30.JUN.2022 16:27:38

Middle Channel / 16QAM



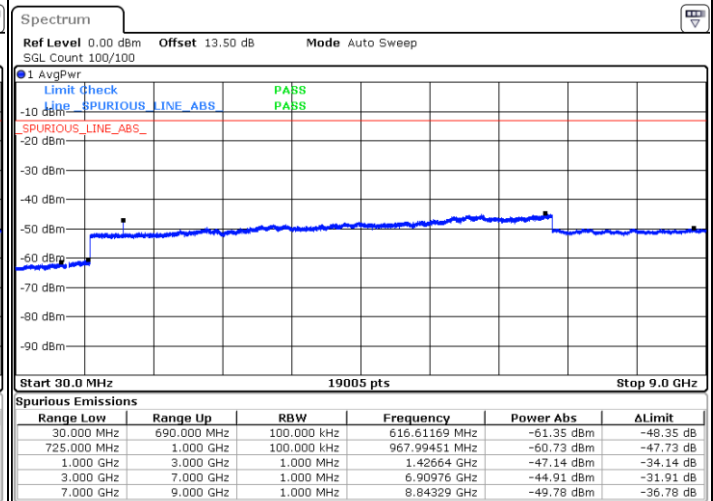
Date: 30.JUN.2022 16:26:46

Highest Channel / QPSK



Date: 30.JUN.2022 16:34:00

Highest Channel / 16QAM

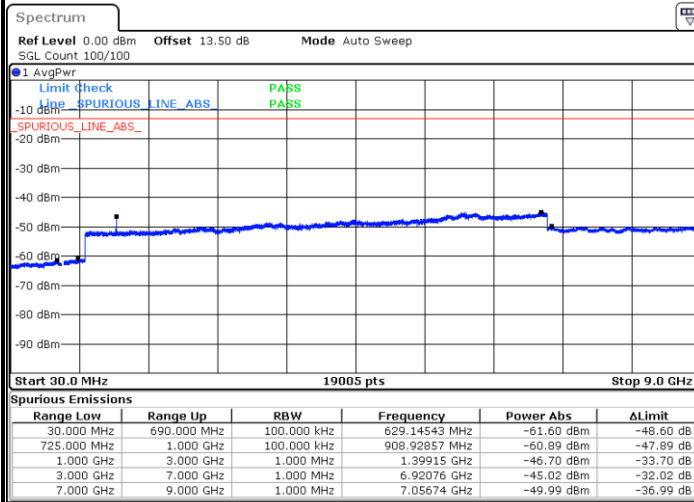


Date: 30.JUN.2022 16:34:53



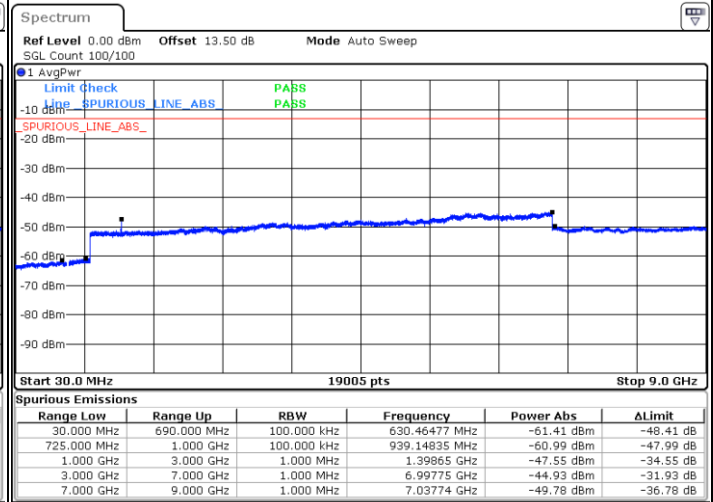
LTE Band 12 / 5MHz

Lowest Channel / QPSK



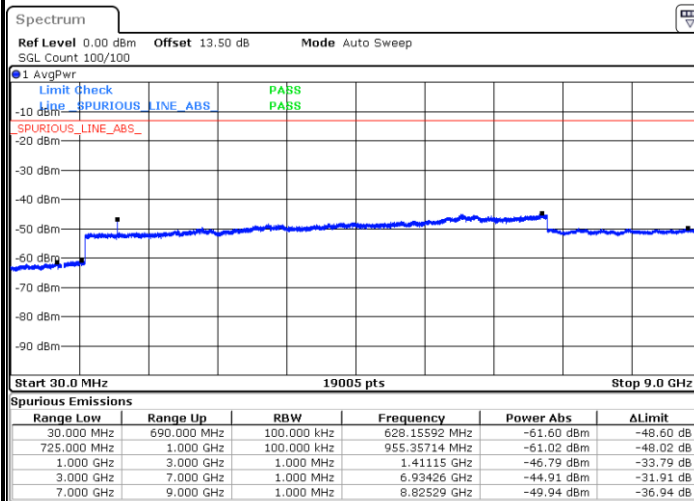
Date: 30.JUN.2022 16:41:06

Lowest Channel / 16QAM



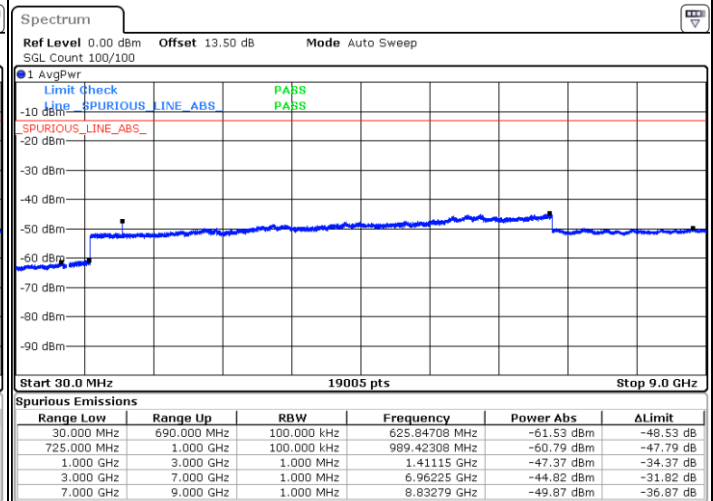
Date: 30.JUN.2022 16:41:59

Middle Channel / QPSK



Date: 30.JUN.2022 16:45:09

Middle Channel / 16QAM

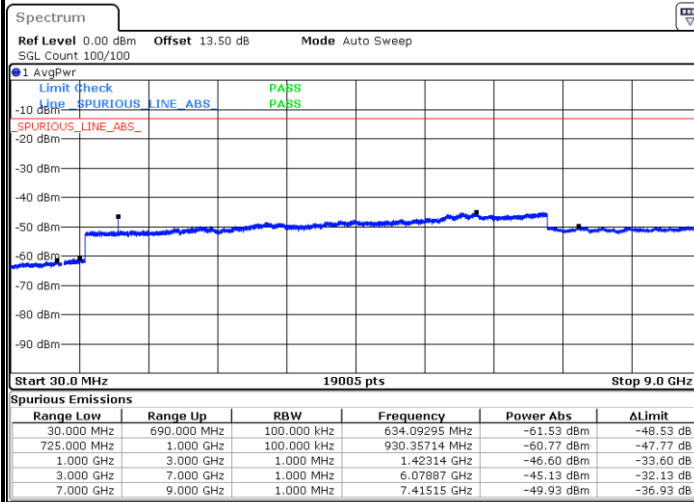


Date: 30.JUN.2022 16:44:17



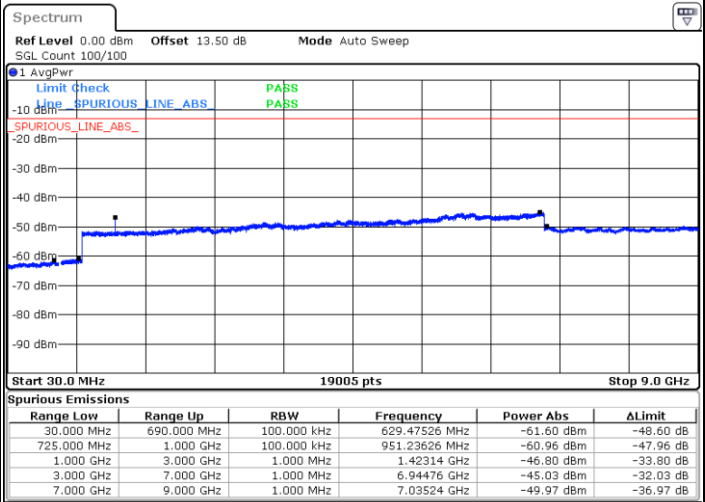
LTE Band 12 / 5MHz

Highest Channel / QPSK



Date: 30.JUN.2022 16:52:23

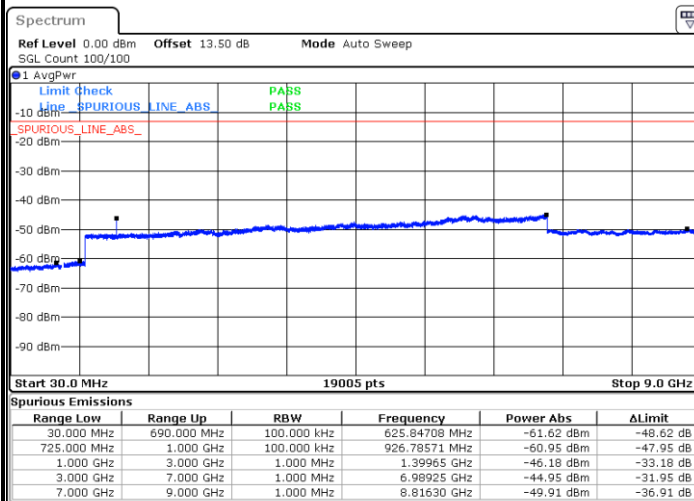
Highest Channel / 16QAM



Date: 30.JUN.2022 16:51:30

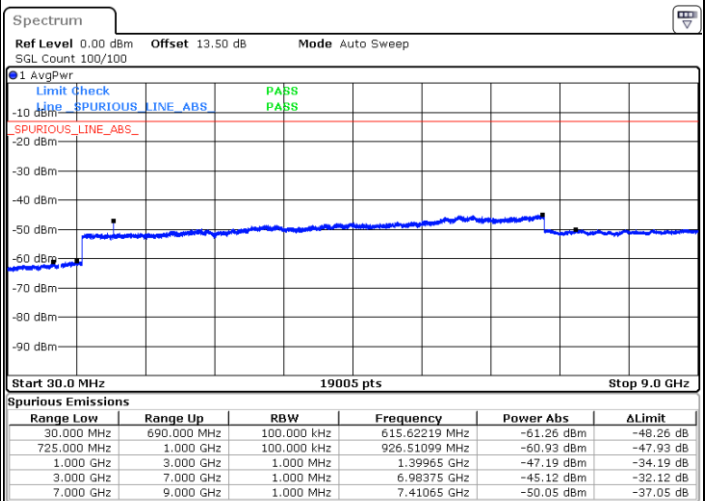
LTE Band 12 / 10MHz

Lowest Channel / QPSK



Date: 30.JUN.2022 16:58:36

Lowest Channel / 16QAM

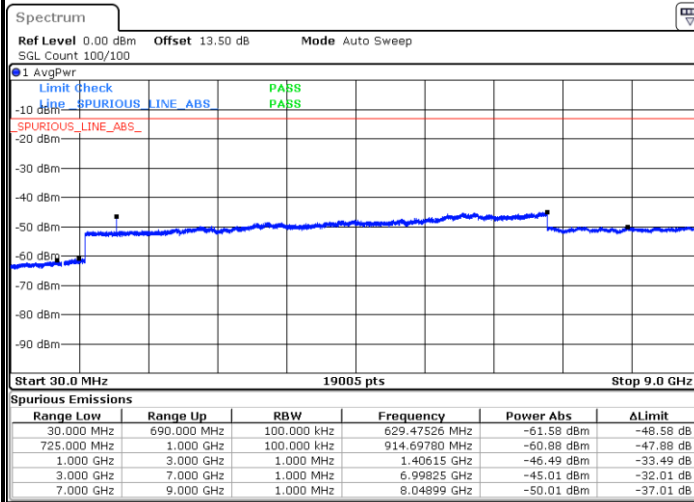


Date: 30.JUN.2022 16:59:29



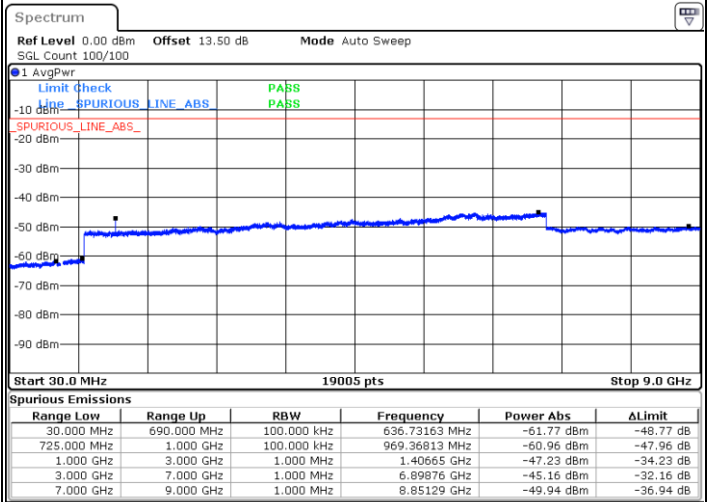
LTE Band 12 / 10MHz

Middle Channel / QPSK



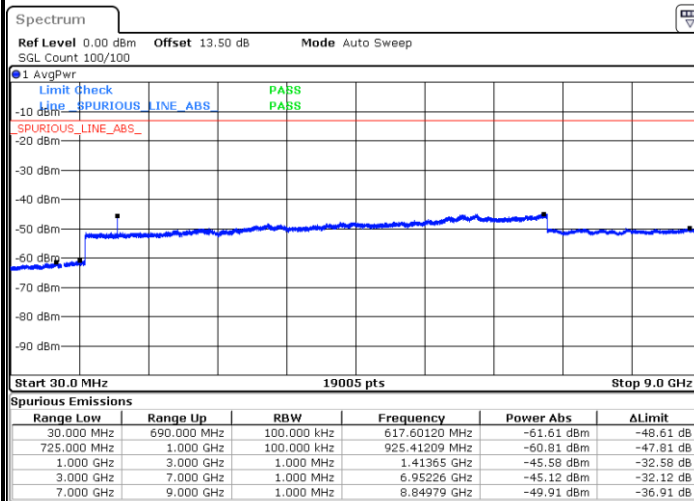
Date: 30.JUN.2022 17:02:39

Middle Channel / 16QAM



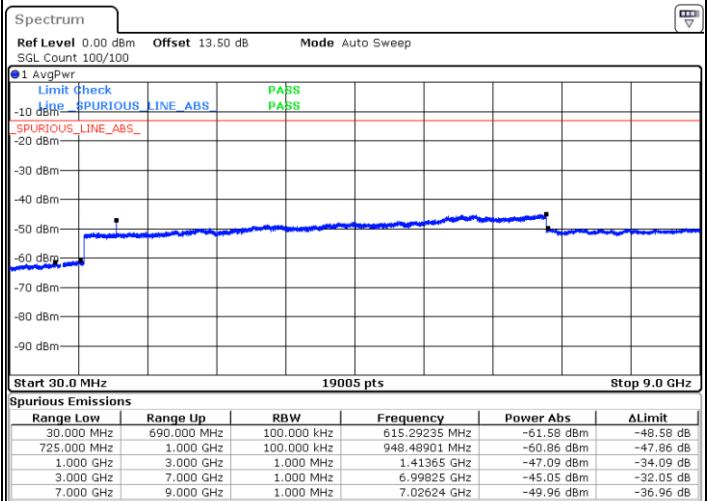
Date: 30.JUN.2022 17:01:47

Highest Channel / QPSK



Date: 30.JUN.2022 17:09:00

Highest Channel / 16QAM



Date: 30.JUN.2022 17:14:11

Frequency Stability

Test Conditions		LTE Band 12 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
70	Normal Voltage	0.0004	PASS
60	Normal Voltage	0.0015	
50	Normal Voltage	0.0027	
40	Normal Voltage	0.0017	
30	Normal Voltage	0.0015	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0004	
0	Normal Voltage	0.0004	
-10	Normal Voltage	0.0015	
-20	Normal Voltage	0.0023	
-30	Normal Voltage	0.0026	
20	Maximum Voltage	0.0004	
20	Normal Voltage	0.0000	
20	Minimum Voltage	0.0017	

Note:

1. Normal Voltage =3.7 V. ; Minimum Voltage =3.4 V. ; Maximum Voltage =4.2 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.



LTE Band 13

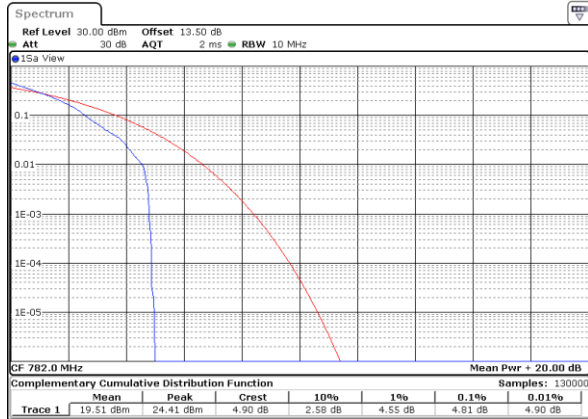
Peak-to-Average Ratio

Mode	LTE Band 13 / 10MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	-	-	-	-	PASS
Middle CH	4.81	5.22	5.77	6.09	
Highest CH	-	-	-	-	

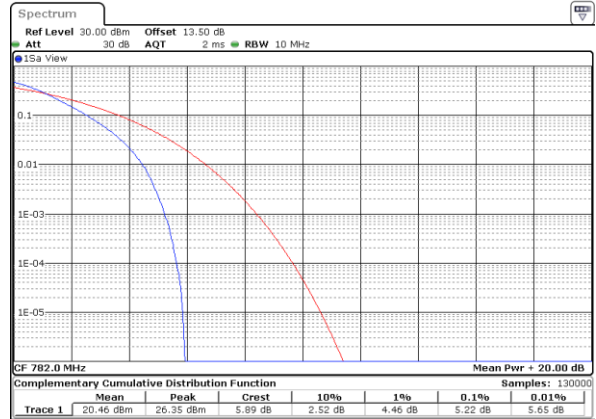


LTE Band 13 / 10MHz / QPSK

Middle Channel/ 1RB



Middle Channel / Full RB



LTE Band 13 / 10MHz / 16QAM

Middle Channel/ 1RB



Middle Channel / Full RB





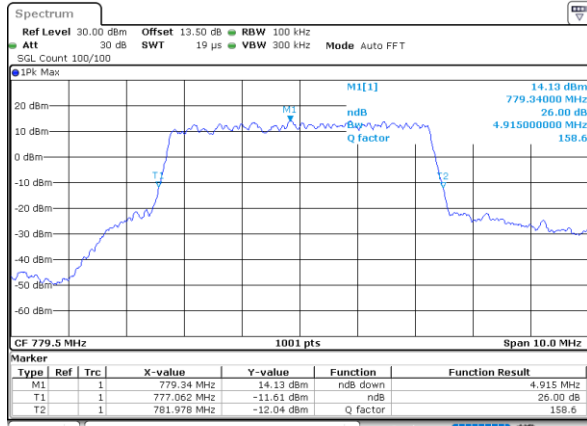
26dB Bandwidth

Mode	LTE Band 13 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	4.92	4.87	-	-	-	-	-	-
Middle CH	-	-	-	-	4.96	4.94	9.79	9.81	-	-	-	-
Highest CH	-	-	-	-	4.94	4.92	-	-	-	-	-	-

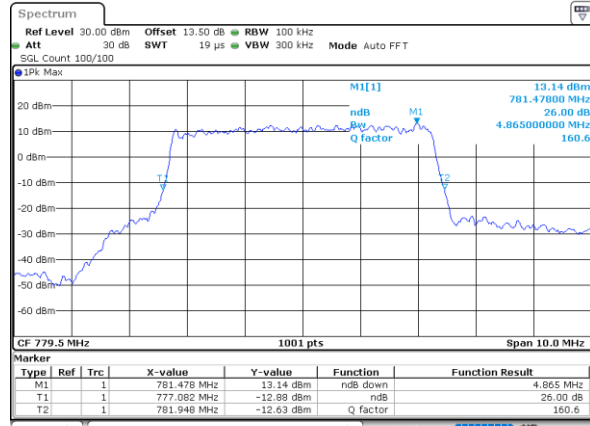


LTE Band 13

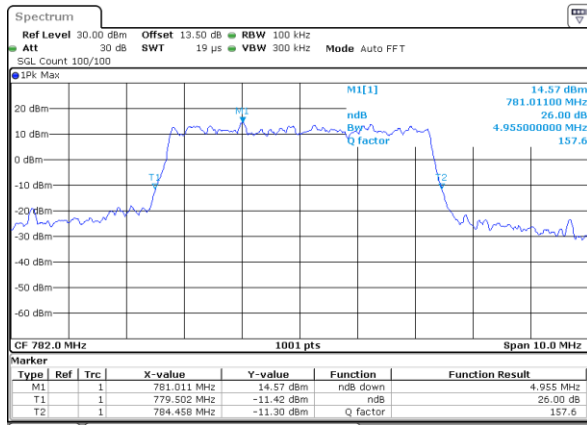
Lowest Channel / 5MHz / QPSK



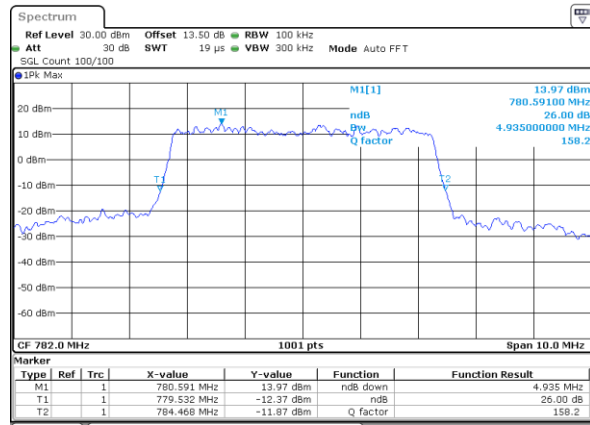
Lowest Channel / 5MHz / 16QAM



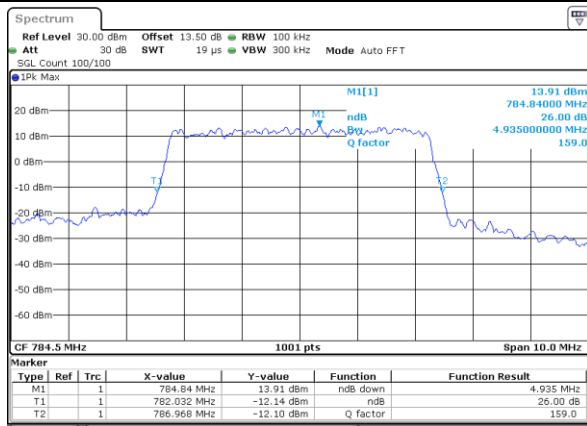
Middle Channel / 5MHz / QPSK



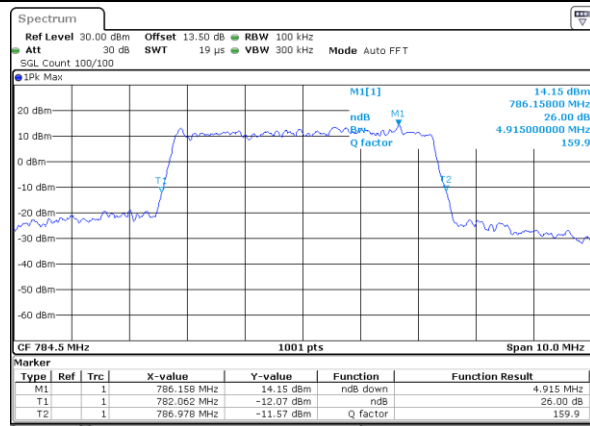
Middle Channel / 5MHz / 16QAM



Highest Channel / 5MHz / QPSK



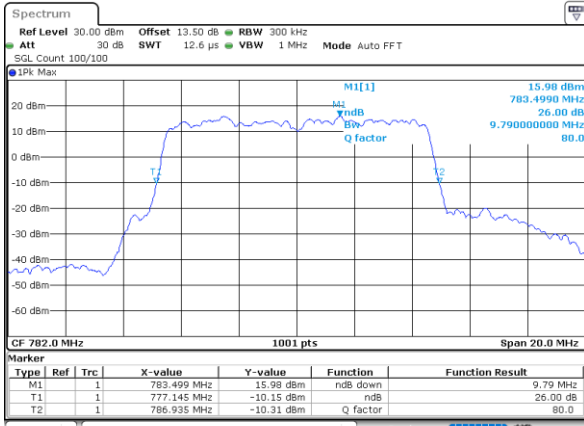
Highest Channel / 5MHz / 16QAM





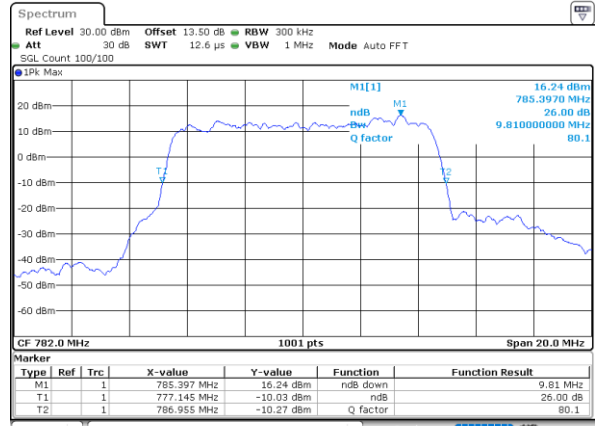
LTE Band 13

Middle Channel / 10MHz / QPSK



Date: 30 JUN 2022 18:11:00

Middle Channel / 10MHz / 16QAM



Date: 30 JUN 2022 18:10:36



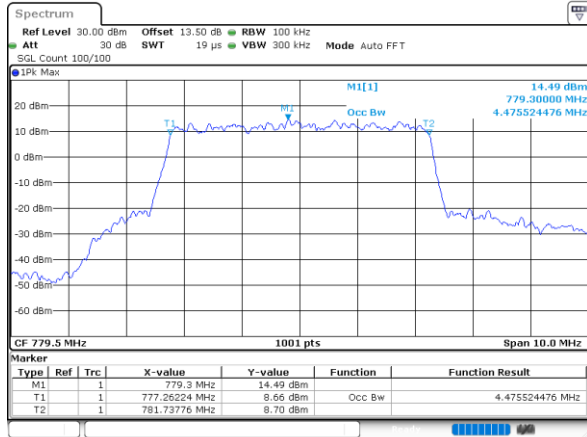
Occupied Bandwidth

Mode	LTE Band 13 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	4.48	4.49	-	-	-	-	-	-
Middle CH	-	-	-	-	4.50	4.48	9.01	9.03	-	-	-	-
Highest CH	-	-	-	-	4.49	4.51	-	-	-	-	-	-

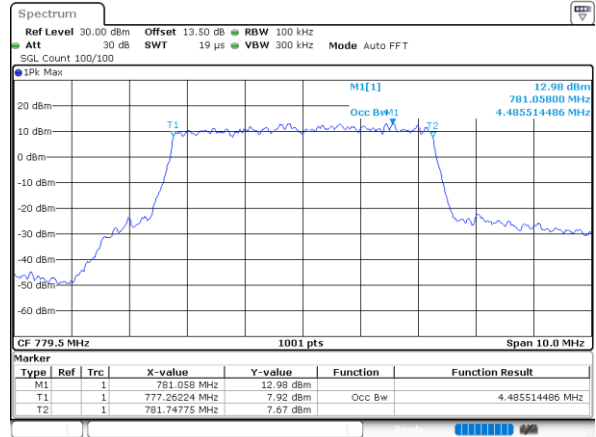


LTE Band 13

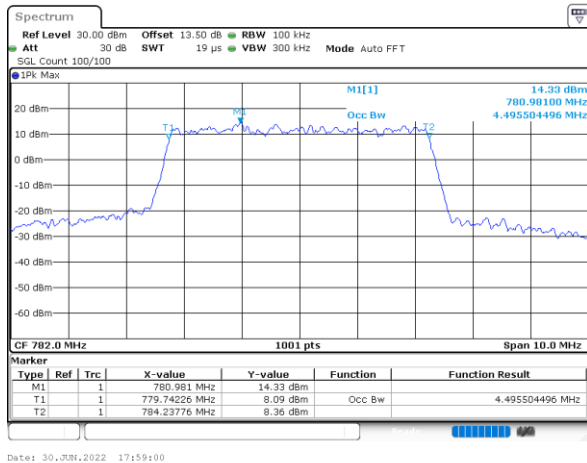
Lowest Channel / 5MHz / QPSK



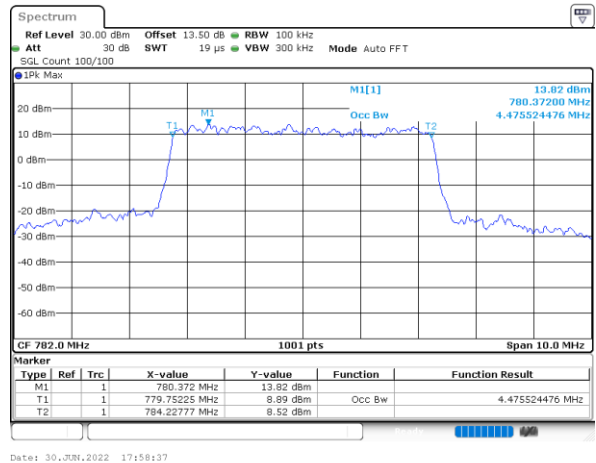
Lowest Channel / 5MHz / 16QAM



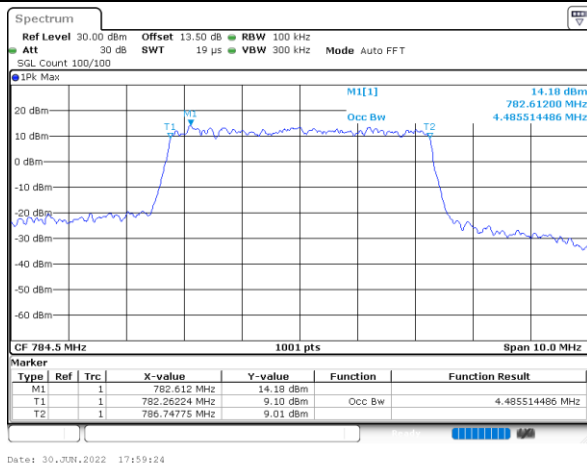
Middle Channel / 5MHz / QPSK



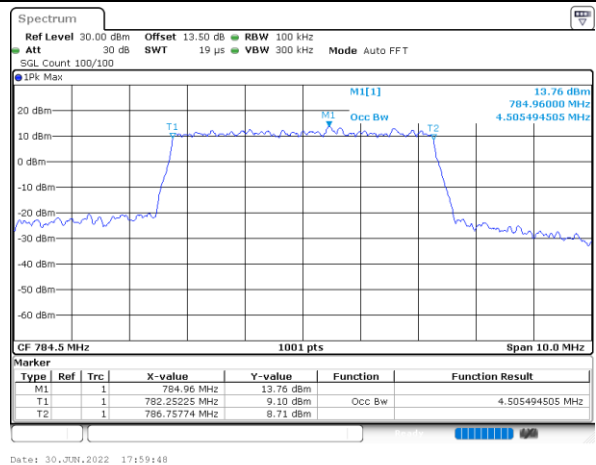
Middle Channel / 5MHz / 16QAM



Highest Channel / 5MHz / QPSK



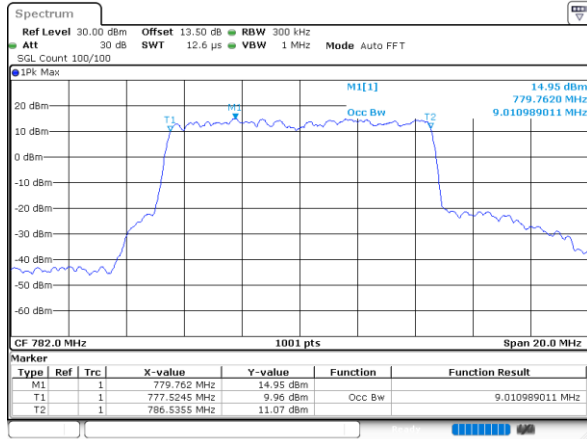
Highest Channel / 5MHz / 16QAM





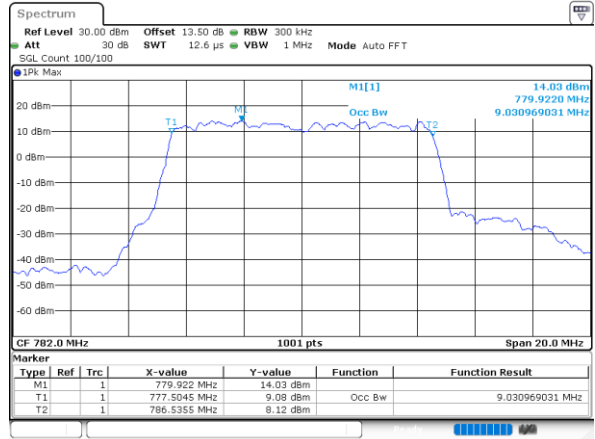
LTE Band 13

Middle Channel / 10MHz / QPSK



Date: 30 JUN 2022 18:09:50

Middle Channel / 10MHz / 16QAM



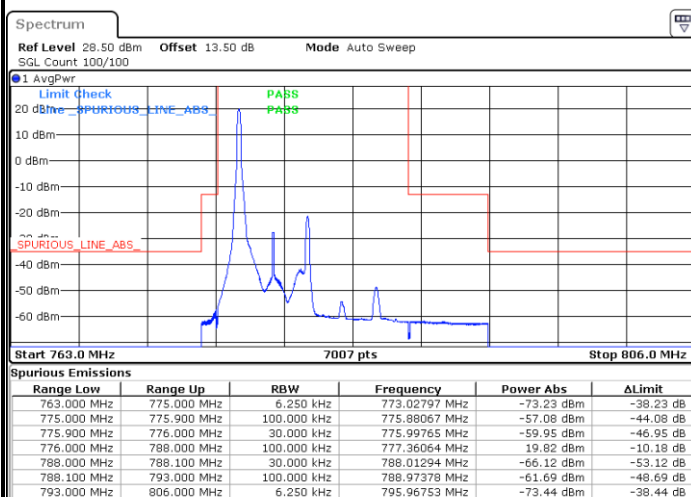
Date: 30 JUN 2022 18:10:21



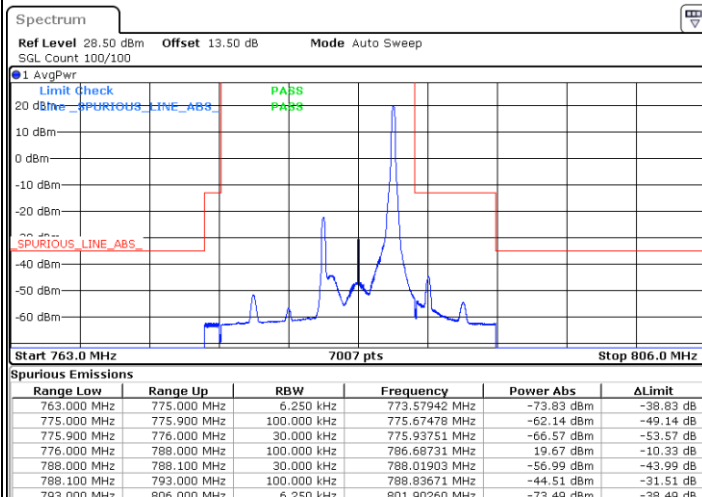
Conducted Band Edge

LTE Band 13 / 5MHz / QPSK

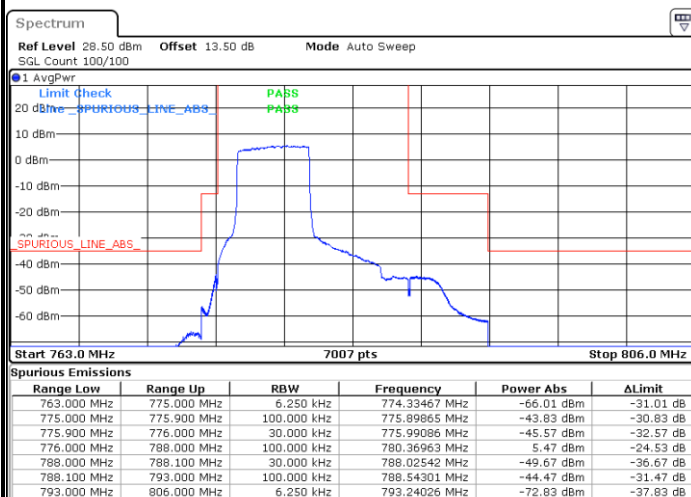
Lowest Band Edge / 1 RB



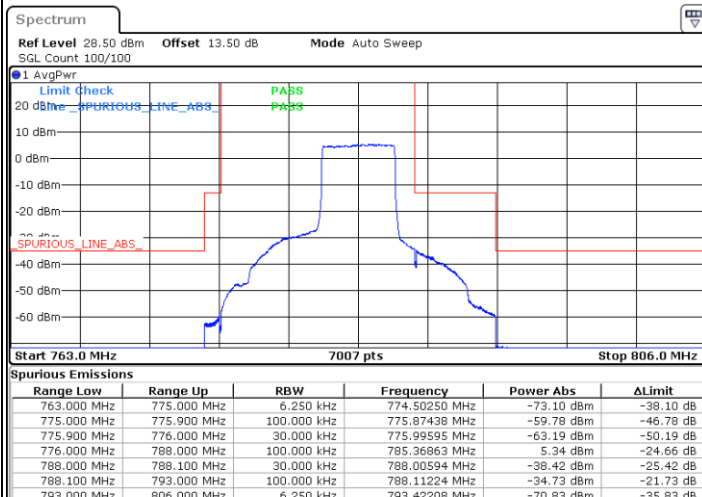
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



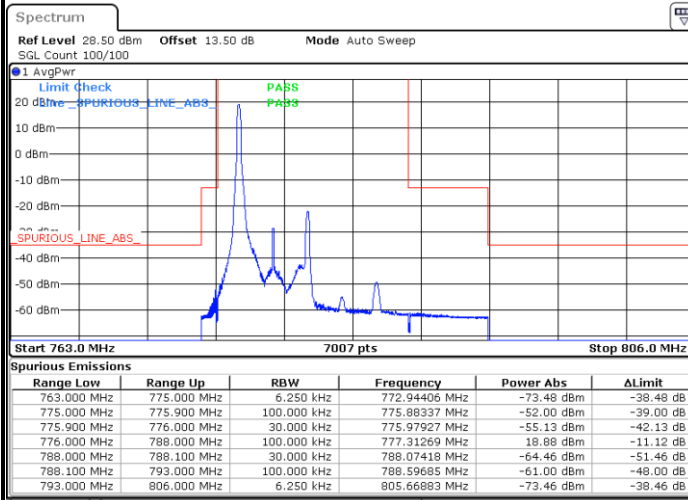
Highest Band Edge / Full RB





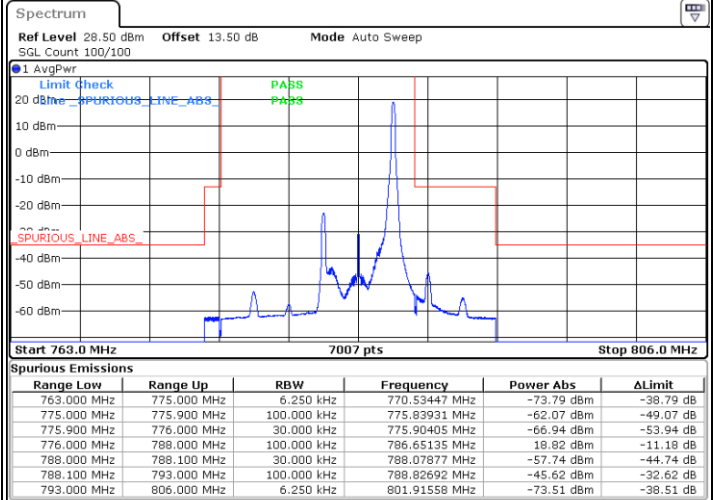
LTE Band 13 / 5MHz / 16QAM

Lowest Band Edge / 1 RB



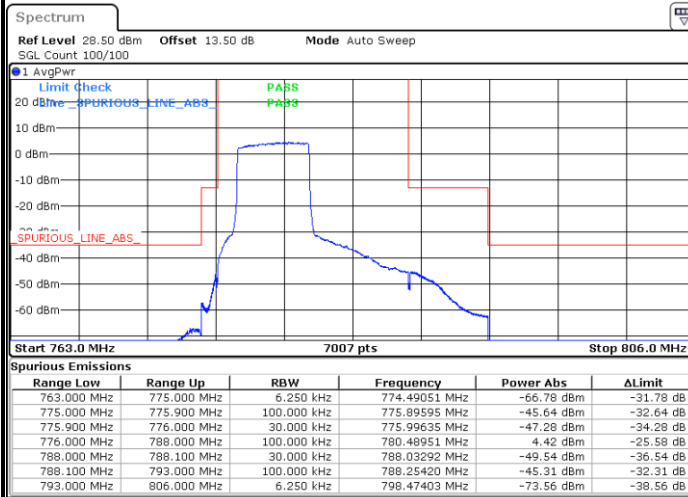
Date: 30 JUN 2022 17:52:21

Highest Band Edge / 1 RB



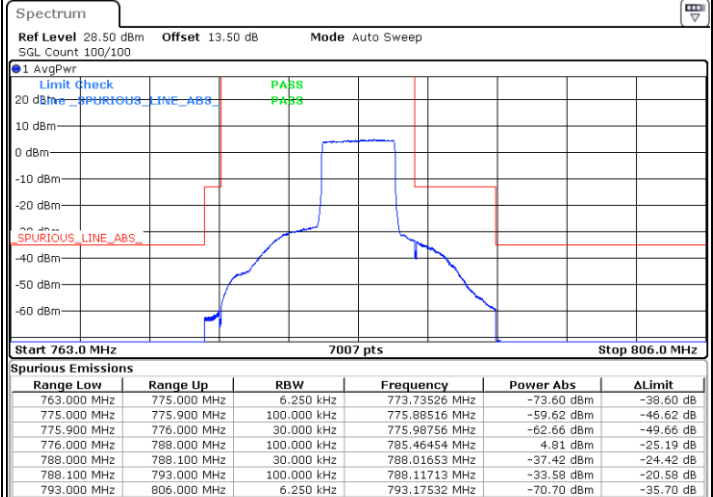
Date: 30 JUN 2022 18:05:55

Lowest Band Edge / Full RB



Date: 30 JUN 2022 17:50:29

Highest Band Edge / Full RB

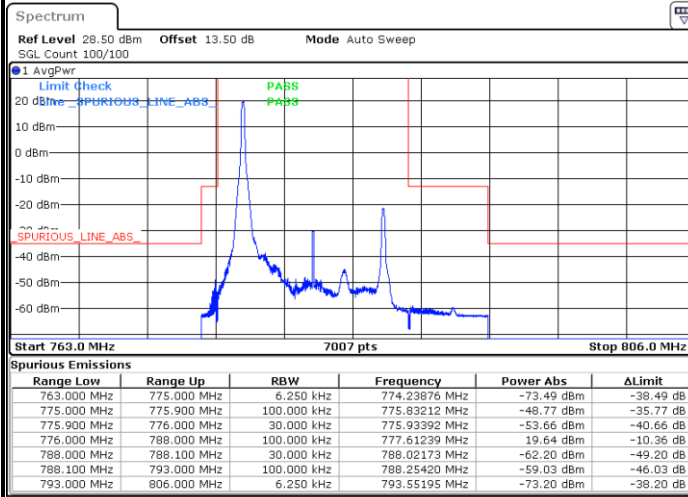


Date: 30 JUN 2022 18:04:02



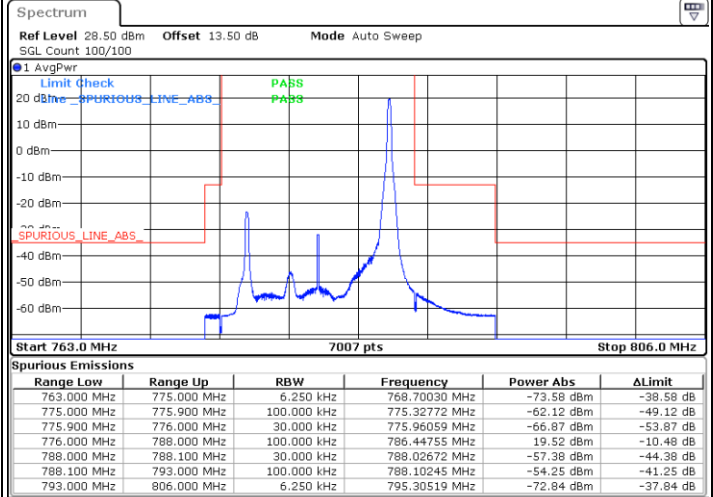
LTE Band 13 / 10MHz / QPSK

Lowest Band Edge / 1 RB



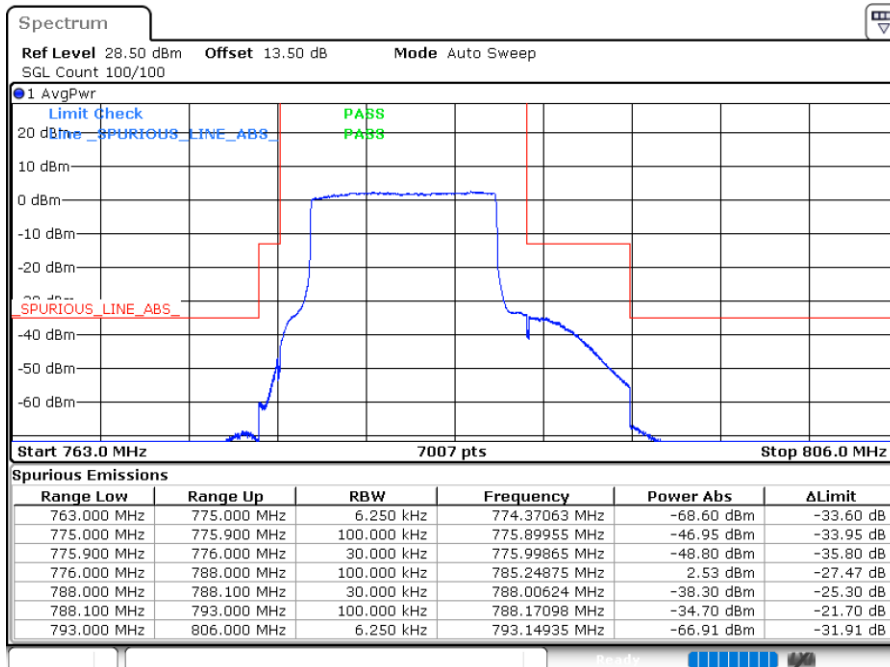
Date: 30.JUN.2022 18:18:19

Highest Band Edge / 1 RB



Date: 30.JUN.2022 18:20:12

Band Edge / Full RB

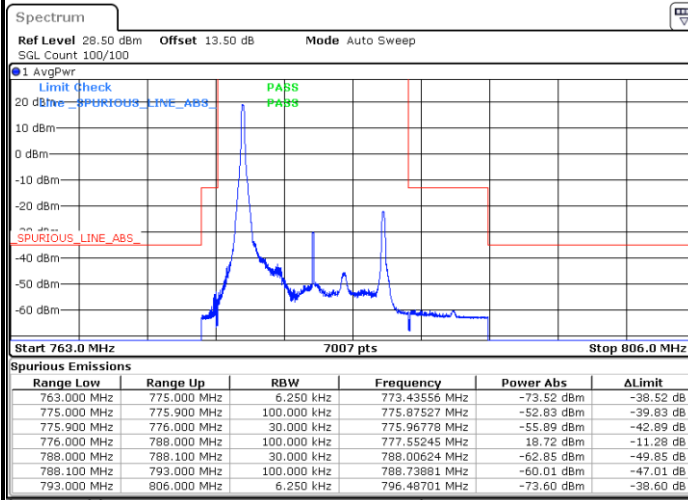


Date: 30.JUN.2022 18:12:43



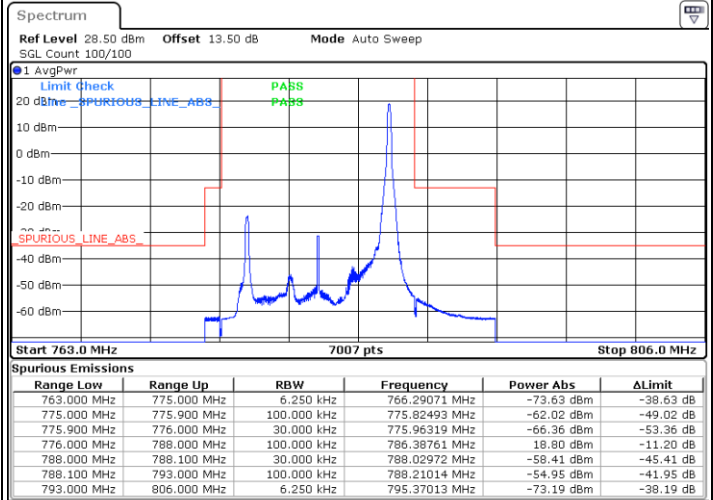
LTE Band 13 / 10MHz / 16QAM

Lowest Band Edge / 1 RB



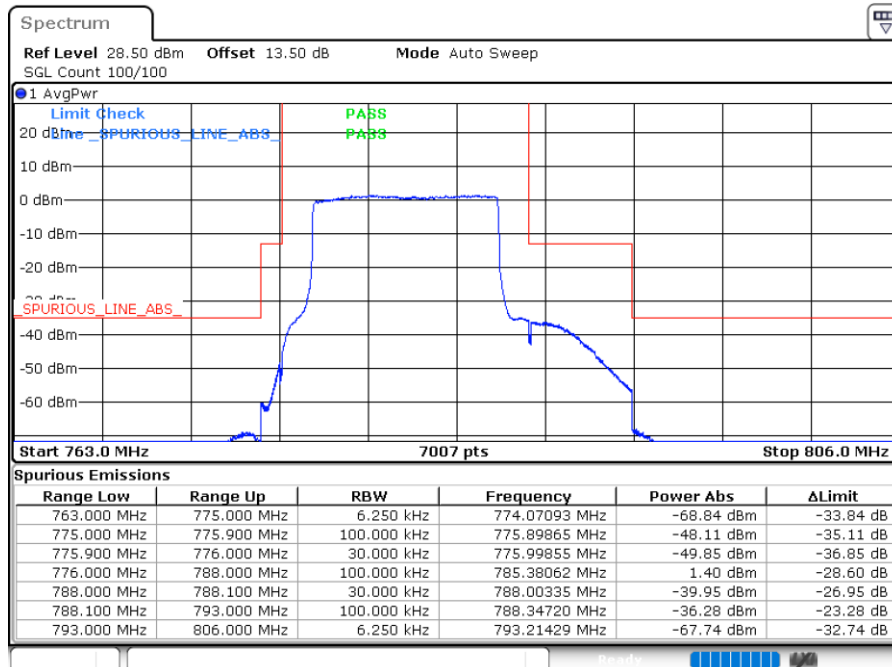
Date: 30 JUN.2022 18:16:27

Highest Band Edge / 1 RB



Date: 30 JUN.2022 18:22:04

Band Edge / Full RB



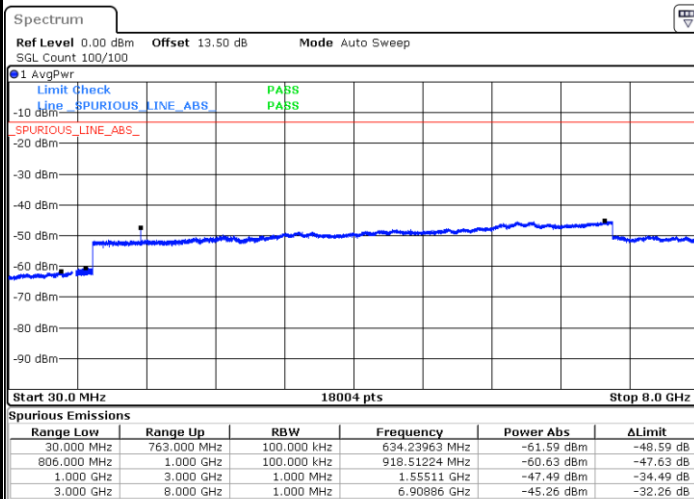
Date: 30 JUN.2022 18:14:35



Conducted Spurious Emission

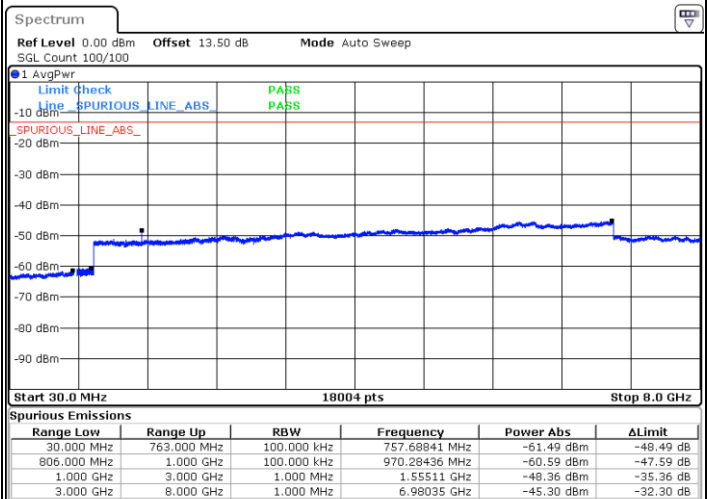
LTE Band 13 / 5MHz

Lowest Channel / QPSK



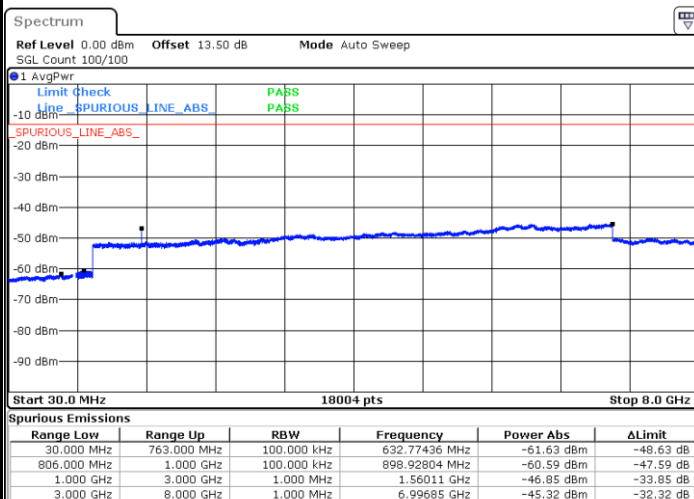
Date: 30.JUN.2022 17:54:57

Lowest Channel / 16QAM



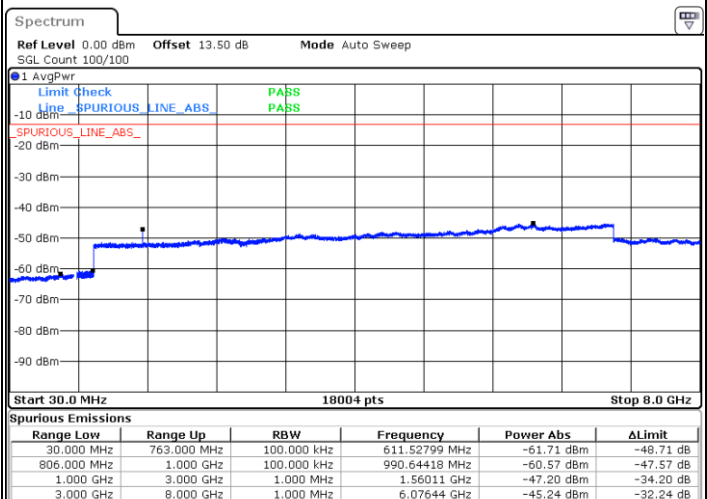
Date: 30.JUN.2022 17:55:51

Middle Channel / QPSK



Date: 30.JUN.2022 17:57:35

Middle Channel / 16QAM

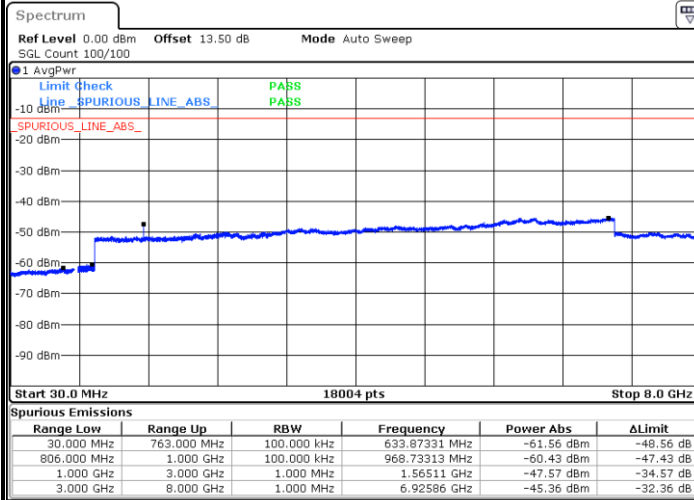


Date: 30.JUN.2022 17:56:43



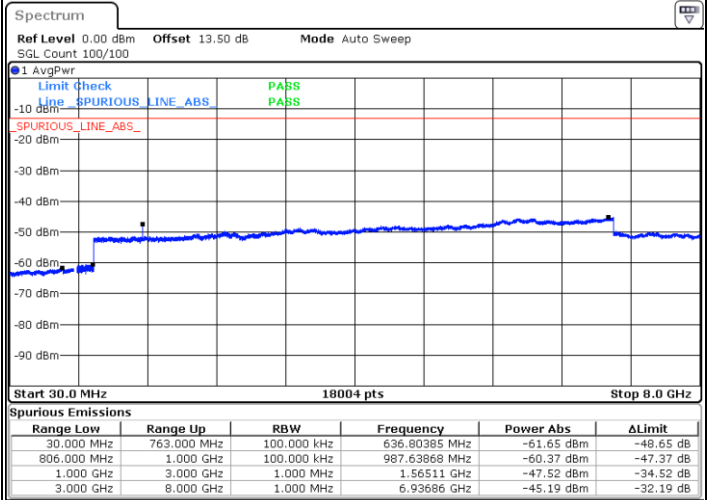
LTE Band 13 / 5MHz

Highest Channel / QPSK



Date: 30.JUN.2022 18:08:41

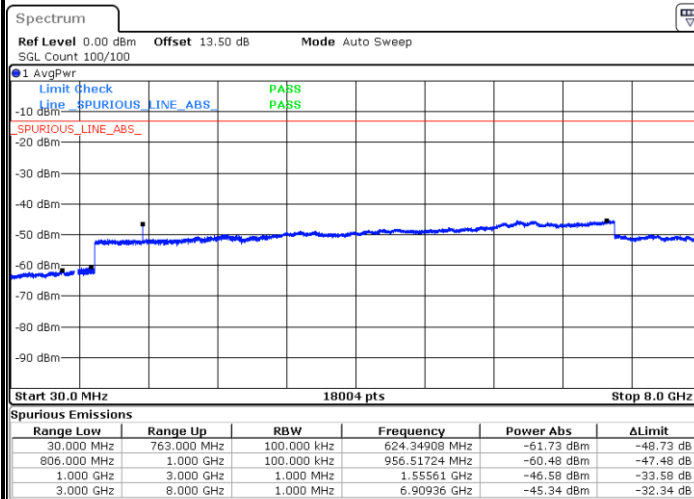
Highest Channel / 16QAM



Date: 30.JUN.2022 18:09:33

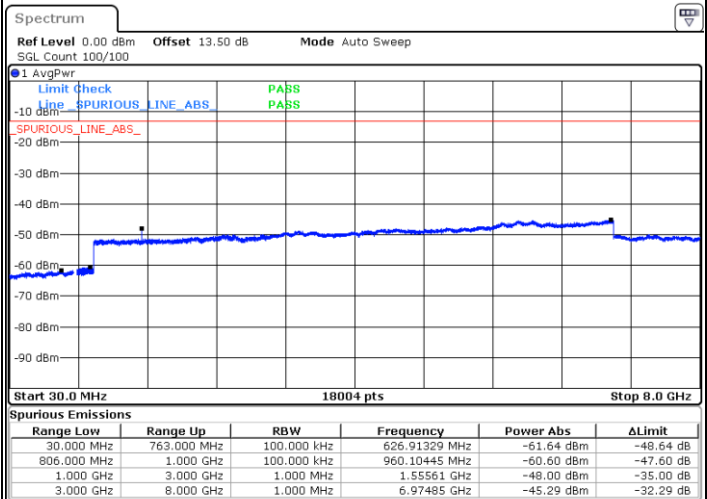
LTE Band 13 / 10MHz

Middle Channel / QPSK



Date: 30.JUN.2022 18:23:48

Middle Channel / 16QAM



Date: 30.JUN.2022 18:22:56

Frequency Stability

Test Conditions		LTE Band 13 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
70	Normal Voltage	0.0033	PASS
60	Normal Voltage	0.0017	
50	Normal Voltage	0.0006	
40	Normal Voltage	0.0023	
30	Normal Voltage	0.0008	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0006	
0	Normal Voltage	0.0004	
-10	Normal Voltage	0.0017	
-20	Normal Voltage	0.0020	
-30	Normal Voltage	0.0023	
20	Maximum Voltage	0.0008	
20	Normal Voltage	0.0011	
20	Minimum Voltage	0.0013	

Note:

1. Normal Voltage =3.7 V. ; Minimum Voltage =3.4 V. ; Maximum Voltage =4.2 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.



Appendix B. Test Results of Radiated Test

Radiated Spurious Emission

Test Engineer :	Shun ping You	Temperature :	22~25°C
		Relative Humidity :	48~52%

LTE 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	3702.18	-61.36	-13	-48.36	-79.48	-68.12	5.82	12.58	H
	5553.27	-58.89	-13	-45.89	-80.99	-64.61	7.28	13.00	H
	7404.36	-53.40	-13	-40.40	-80.08	-56.56	8.32	11.48	H
	3702.18	-61.80	-13	-48.80	-79.82	-68.56	5.82	12.58	V
	5553.27	-57.70	-13	-44.70	-79.98	-63.42	7.28	13.00	V
	7404.36	-53.34	-13	-40.34	-80.04	-56.50	8.32	11.48	V
Middle	3742.18	-61.18	-13	-48.18	-79.05	-67.93	5.85	12.60	H
	5613.27	-57.51	-13	-44.51	-79.77	-63.31	7.30	13.10	H
	7484.36	-53.21	-13	-40.21	-79.54	-56.36	8.35	11.50	H
	3742.18	-61.03	-13	-48.03	-78.82	-67.78	5.85	12.60	V
	5613.27	-57.25	-13	-44.25	-79.7	-63.05	7.30	13.10	V
	7484.36	-53.02	-13	-40.02	-79.34	-56.17	8.35	11.50	V
Highest	3782.18	-61.89	-13	-48.89	-79.69	-68.63	5.88	12.62	H
	5673.27	-57.00	-13	-44.00	-80.12	-62.81	7.32	13.13	H
	7564.36	-53.81	-13	-40.81	-79.92	-56.97	8.38	11.54	H
	3782.18	-62.00	-13	-49.00	-79.77	-68.74	5.88	12.62	V
	5673.27	-56.44	-13	-43.44	-79.04	-62.25	7.32	13.13	V
	7564.36	-53.84	-13	-40.84	-79.92	-57.00	8.38	11.54	V

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

LTE 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	3422.18	-62.85	-13	-49.85	-79.48	-69.73	5.60	12.48	H
	5133.27	-58.70	-13	-45.70	-80.47	-64.38	7.10	12.78	H
	6844.36	-55.41	-13	-42.41	-80.67	-58.80	8.38	11.77	H
	3422.18	-62.17	-13	-49.17	-78.89	-69.05	5.60	12.48	V
	5133.27	-58.87	-13	-45.87	-80.86	-64.55	7.10	12.78	V
	6844.36	-55.04	-13	-42.04	-80.8	-58.43	8.38	11.77	V
Middle	3447.18	-62.85	-13	-49.85	-79.71	-69.70	5.65	12.50	H
	5170.77	-59.06	-13	-46.06	-80.66	-64.73	7.13	12.80	H
	6894.36	-55.06	-13	-42.06	-80.69	-58.46	8.40	11.80	H
	3447.18	-62.70	-13	-49.70	-79.6	-69.55	5.65	12.50	V
	5170.77	-58.84	-13	-45.84	-80.71	-64.51	7.13	12.80	V
	6894.36	-54.35	-13	-41.35	-80.46	-57.75	8.40	11.80	V
Highest	3472.18	-62.75	-13	-49.75	-79.69	-69.59	5.68	12.52	H
	5208.27	-59.46	-13	-46.46	-80.89	-65.13	7.15	12.82	H



	6944.36	-54.35	-13	-41.35	-80.27	-57.78	8.42	11.85	H
	3472.18	-62.97	-13	-49.97	-79.93	-69.81	5.68	12.52	V
	5208.27	-58.93	-13	-45.93	-80.61	-64.60	7.15	12.82	V
	6944.36	-54.28	-13	-41.28	-80.67	-57.71	8.42	11.85	V

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

LTE Band 5 / 10MHz / 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	1649.18	-67.00	-13	-54.00	-76.39	-70.23	3.98	9.36	H
	2473.77	-63.88	-13	-50.88	-78.04	-67.43	4.85	10.55	H
	3298.36	-62.64	-13	-49.64	-79.14	-67.57	5.50	12.58	H
	1649.18	-67.00	-13	-54.00	-76.13	-70.23	3.98	9.36	V
	2473.77	-63.73	-13	-50.73	-77.86	-67.28	4.85	10.55	V
	3298.36	-63.01	-13	-50.01	-79.32	-67.94	5.50	12.58	V
Middle	1664.18	-66.62	-13	-53.62	-76.12	-69.87	4.00	9.40	H
	2496.27	-63.90	-13	-50.90	-78.10	-67.47	4.88	10.60	H
	3328.36	-63.05	-13	-50.05	-79.26	-67.98	5.52	12.60	H
	1664.18	-67.13	-13	-54.13	-76.23	-70.38	4.00	9.40	V
	2496.27	-63.88	-13	-50.88	-78.04	-67.45	4.88	10.60	V
	3328.36	-63.15	-13	-50.15	-79.12	-68.08	5.52	12.60	V
Highest	1679.18	-66.45	-13	-53.45	-76.07	-69.62	4.10	9.42	H
	2518.77	-63.84	-13	-50.84	-77.94	-67.42	4.90	10.63	H
	3358.36	-63.28	-13	-50.28	-79.49	-68.20	5.55	12.62	H
	1679.18	-67.02	-13	-54.02	-76.09	-70.19	4.10	9.42	V
	2518.77	-63.96	-13	-50.96	-78.02	-67.54	4.90	10.63	V
	3358.36	-63.21	-13	-50.21	-79.28	-68.13	5.55	12.62	V

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

LTE Band 12 / 10MHz / 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	1399	-65.64	-13	-52.64	-75.63	-68.87	3.98	9.36	H
	2098.5	-64.84	-13	-51.84	-77.50	-68.39	4.85	10.55	H
	2798	-62.77	-13	-49.77	-78.65	-67.70	5.50	12.58	H
	1399	-66.19	-13	-53.19	-75.88	-69.42	3.98	9.36	V
	2098.5	-64.45	-13	-51.45	-77.60	-68.00	4.85	10.55	V
	2798	-62.82	-13	-49.82	-78.40	-67.75	5.50	12.58	V
Middle	1406	-65.85	-13	-52.85	-75.97	-69.10	4.00	9.40	H
	2109	-64.43	-13	-51.43	-77.09	-68.00	4.88	10.60	H
	2812	-62.63	-13	-49.63	-78.54	-67.56	5.52	12.60	H
	1406	-66.52	-13	-53.52	-76.29	-69.77	4.00	9.40	V
	2109	-64.20	-13	-51.20	-77.35	-67.77	4.88	10.60	V
	2812	-62.99	-13	-49.99	-78.62	-67.92	5.52	12.60	V
Highest	1413	-66.03	-13	-53.03	-76.15	-69.20	4.10	9.42	H
	2119.5	-64.48	-13	-51.48	-77.49	-68.06	4.90	10.63	H
	2826	-62.33	-13	-49.33	-78.28	-67.25	5.55	12.62	H
	1413	-66.22	-13	-53.22	-75.99	-69.39	4.10	9.42	V
	2119.5	-63.69	-13	-50.69	-77.09	-67.27	4.90	10.63	V
	2826	-62.85	-13	-49.85	-78.52	-67.77	5.55	12.62	V



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

LTE Band 13 / 5MHz / 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	1554.5	-65.43	-13	-52.43	-74.90	-68.66	3.98	9.36	H
	2331.75	-55.92	-13	-42.92	-70.29	-59.47	4.85	10.55	H
	3109	-60.14	-13	-47.14	-77.61	-65.07	5.50	12.58	H
	1554.5	-63.60	-13	-50.60	-73.15	-66.83	3.98	9.36	V
	2331.75	-60.02	-13	-47.02	-74.39	-63.57	4.85	10.55	V
	3109	-59.83	-13	-46.83	-77.36	-64.76	5.50	12.58	V
Middle	1559.5	-65.21	-42.15	-23.06	-74.68	-68.46	4.00	9.40	H
	2339.25	-50.32	-13	-37.32	-64.64	-53.89	4.88	10.60	H
	3119	-60.16	-13	-47.16	-77.73	-65.09	5.52	12.60	H
	1559.5	-59.54	-42.15	-17.39	-69.09	-62.79	4.00	9.40	V
	2339.25	-60.76	-13	-47.76	-75.08	-64.33	4.88	10.60	V
	3119	-60.17	-13	-47.17	-77.78	-65.10	5.52	12.60	V
Highest	1564.5	-64.79	-42.15	-22.64	-74.26	-67.96	4.10	9.42	H
	2346.75	-58.82	-13	-45.82	-73.14	-62.40	4.90	10.63	H
	3129	-60.48	-13	-47.48	-78.05	-65.40	5.55	12.62	H
	1564.5	-65.81	-42.15	-23.66	-75.36	-68.98	4.10	9.42	V
	2346.75	-57.73	-13	-44.73	-72.05	-61.31	4.90	10.63	V
	3129	-60.20	-13	-47.20	-77.81	-65.12	5.55	12.62	V

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

LTE Band 13 / 10MHz / 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)
Middle	1559.5	-66.23	-42.15	-24.08	-75.70	-69.48	4.00	9.40	H
	2339.25	-58.18	-13	-45.18	-72.50	-61.75	4.88	10.60	H
	3119	-60.77	-13	-47.77	-78.34	-65.70	5.52	12.60	H
	1559.5	-66.19	-42.15	-24.04	-75.74	-69.44	4.00	9.40	V
	2339.25	-57.07	-13	-44.07	-71.39	-60.64	4.88	10.60	V
	3119	-60.60	-13	-47.60	-78.21	-65.53	5.52	12.60	V

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