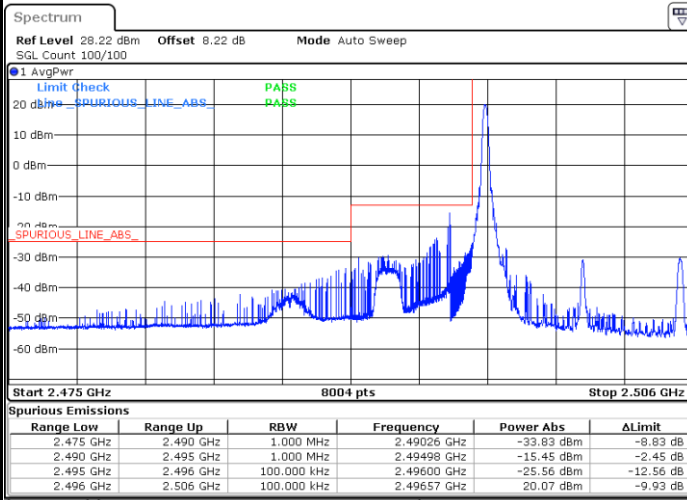




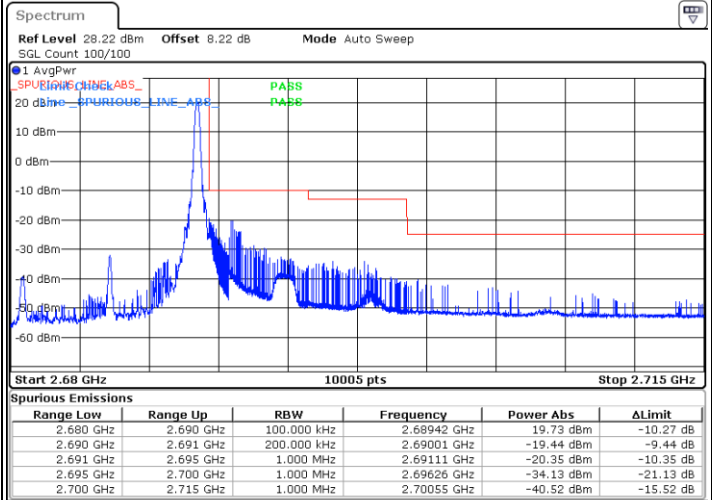
LTE Band 41 / 10MHz / 16QAM

Lowest Band Edge / 1 RB



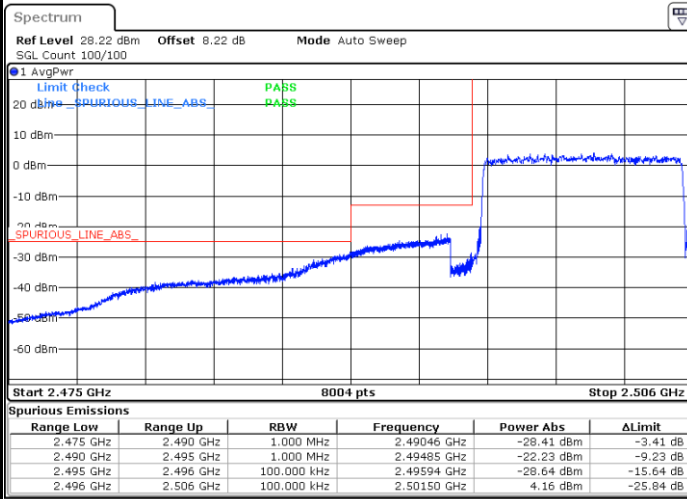
Date: 13 JAN 2023 21:48:40

Highest Band Edge / 1 RB



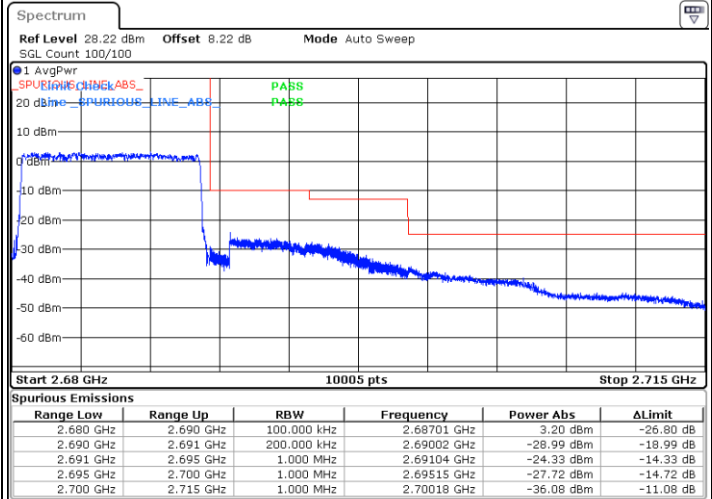
Date: 13 JAN 2023 22:02:46

Lowest Band Edge / Full RB



Date: 13 JAN 2023 21:54:03

Highest Band Edge / Full RB

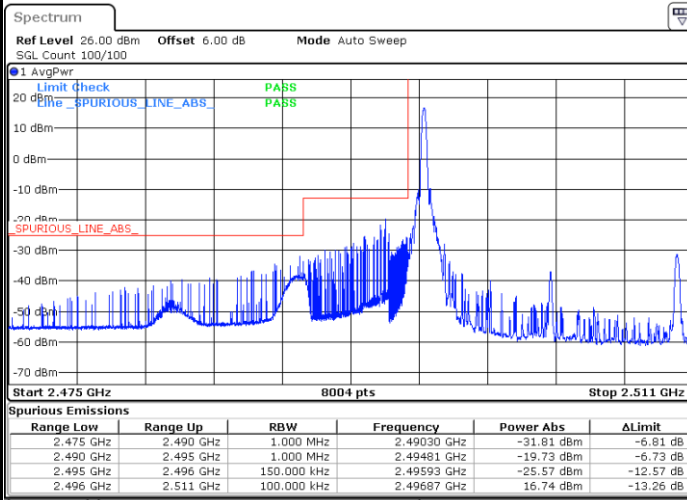


Date: 13 JAN 2023 22:07:57



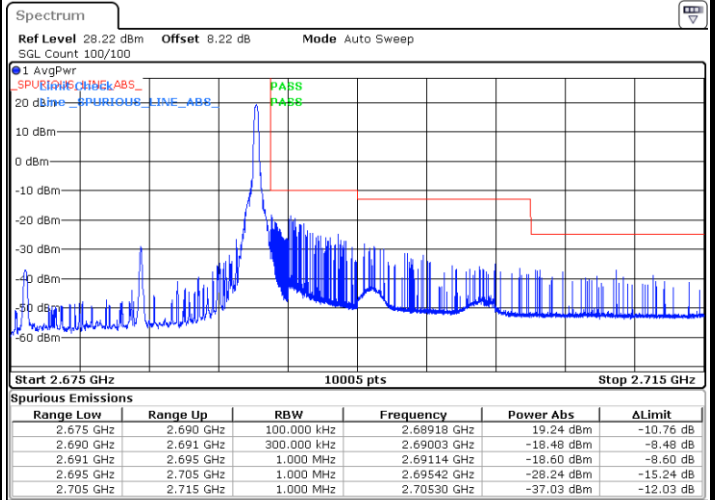
LTE Band 41 / 15MHz / QPSK

Lowest Band Edge / 1 RB



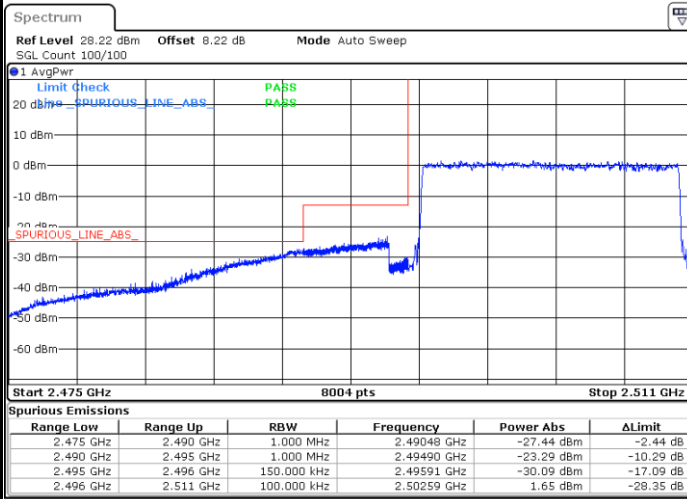
Date: 13 JAN 2023 23:53:33

Highest Band Edge / 1 RB



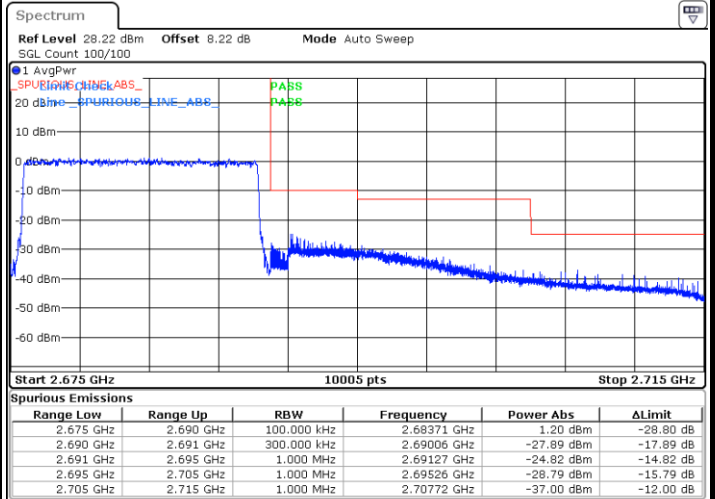
Date: 13 JAN 2023 22:26:33

Lowest Band Edge / Full RB



Date: 13 JAN 2023 22:17:59

Highest Band Edge / Full RB

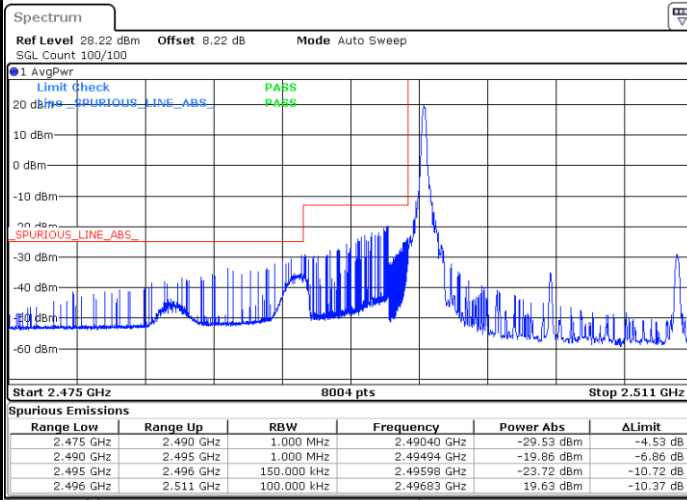


Date: 13 JAN 2023 22:31:13



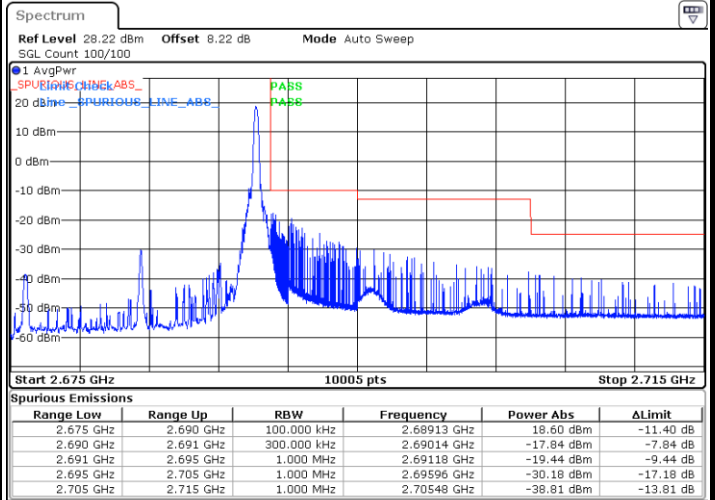
LTE Band 41 / 15MHz / 16QAM

Lowest Band Edge / 1 RB



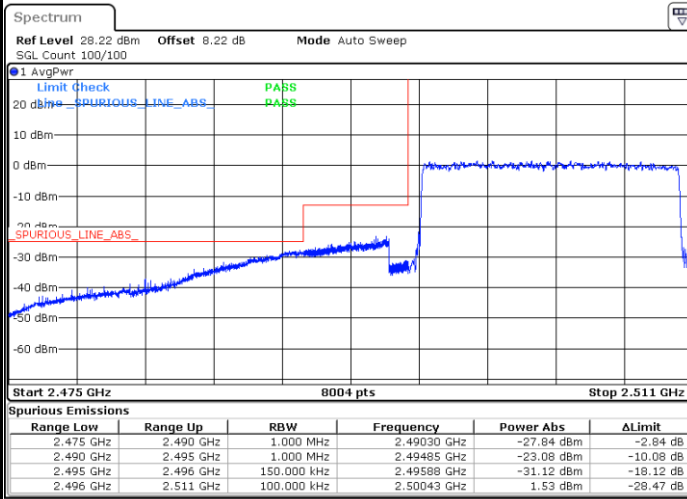
Date: 13 JAN 2023 22:14:26

Highest Band Edge / 1 RB



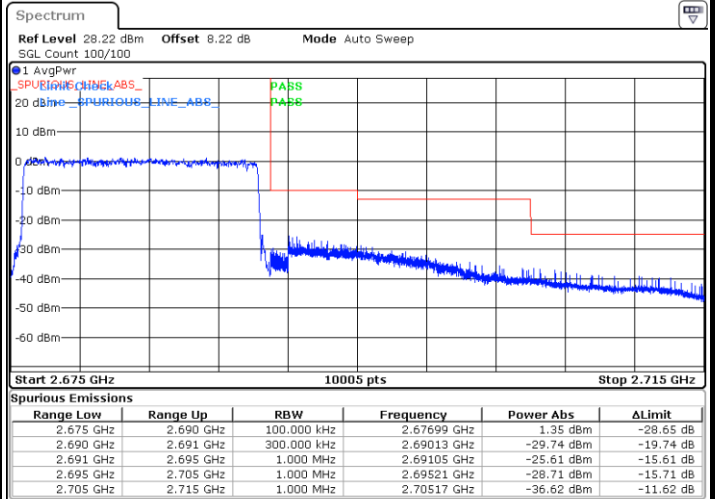
Date: 13 JAN 2023 22:27:41

Lowest Band Edge / Full RB



Date: 13 JAN 2023 22:19:08

Highest Band Edge / Full RB

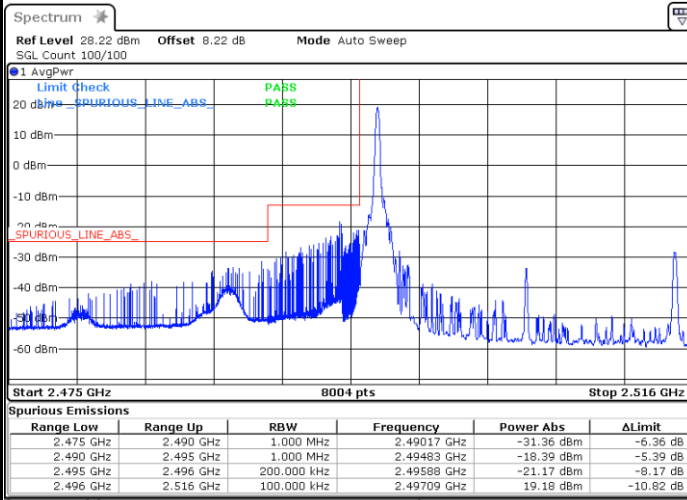


Date: 13 JAN 2023 22:32:19



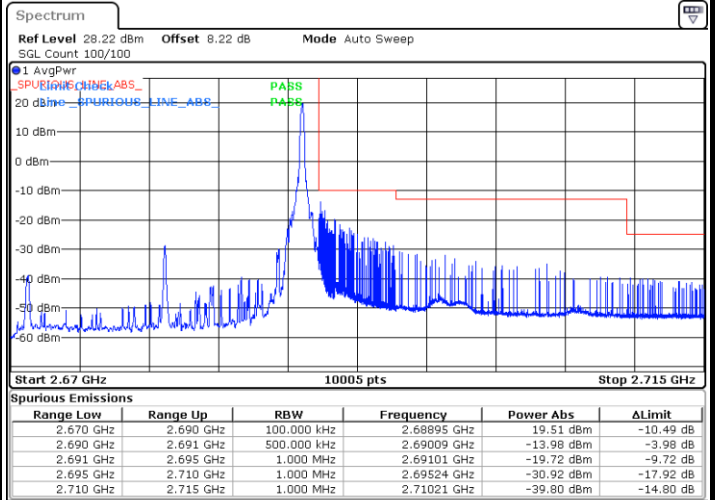
LTE Band 41 / 20MHz / QPSK

Lowest Band Edge / 1 RB



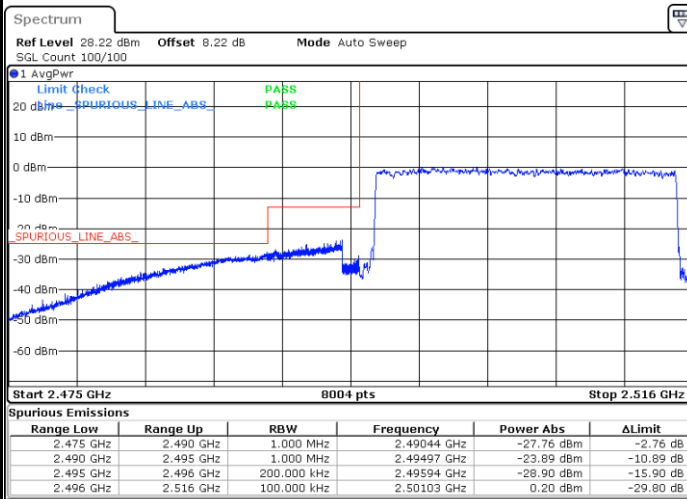
Date: 13 JAN 2023 22:37:56

Highest Band Edge / 1 RB



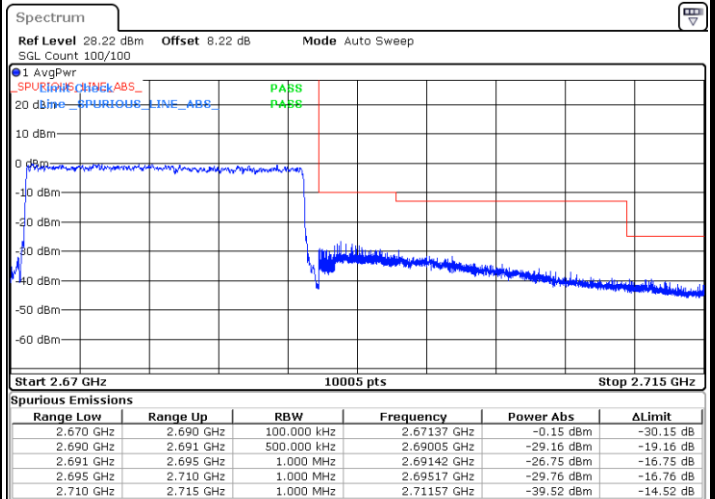
Date: 13 JAN 2023 23:39:28

Lowest Band Edge / Full RB



Date: 13 JAN 2023 23:18:37

Highest Band Edge / Full RB

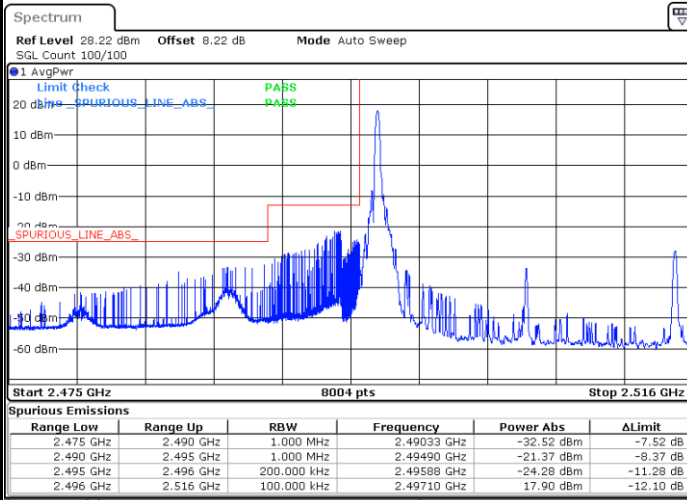


Date: 13 JAN 2023 23:31:44



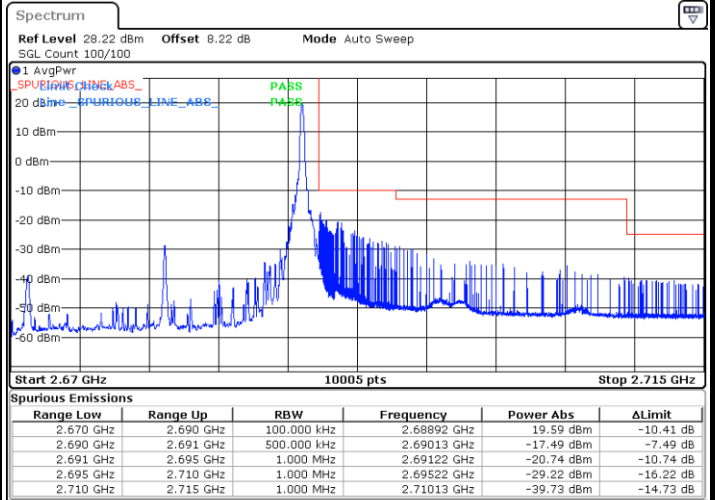
LTE Band 41 / 20MHz / 16QAM

Lowest Band Edge / 1 RB



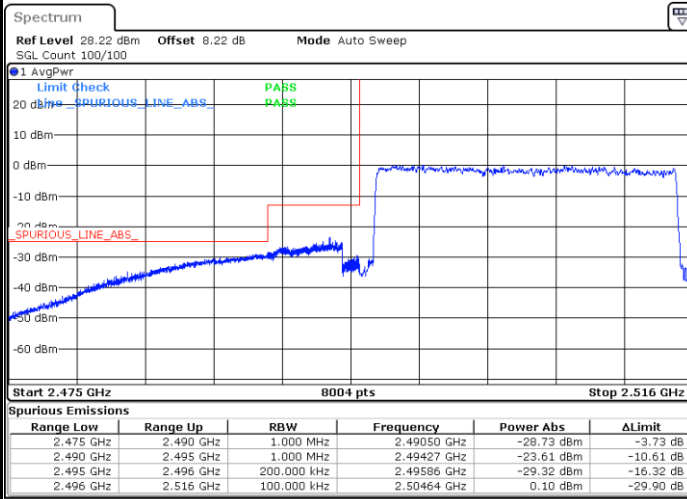
Date: 13 JAN 2023 22:39:14

Highest Band Edge / 1 RB



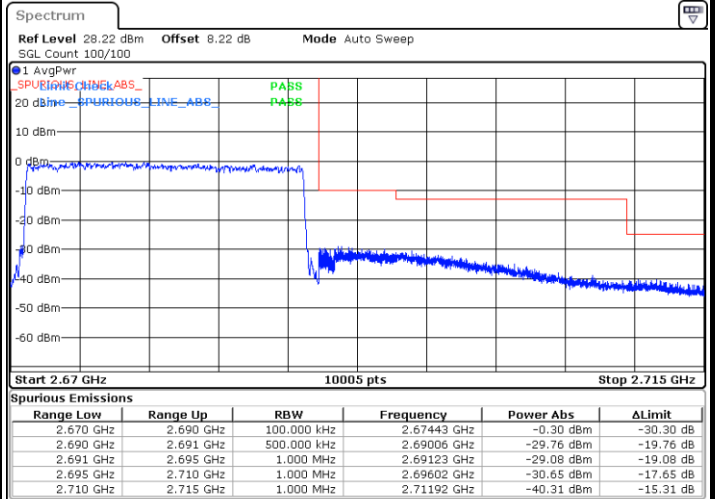
Date: 13 JAN 2023 23:28:13

Lowest Band Edge / Full RB



Date: 13 JAN 2023 23:19:43

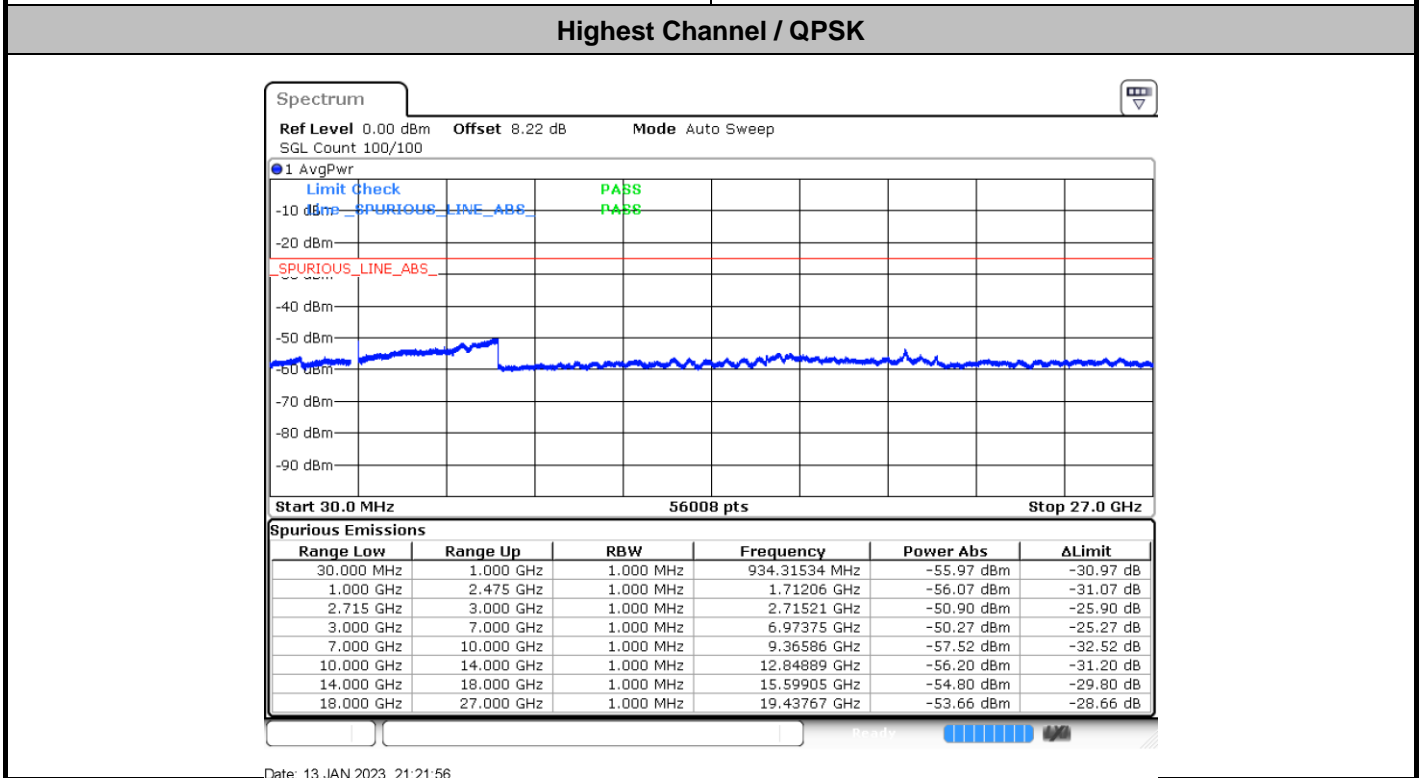
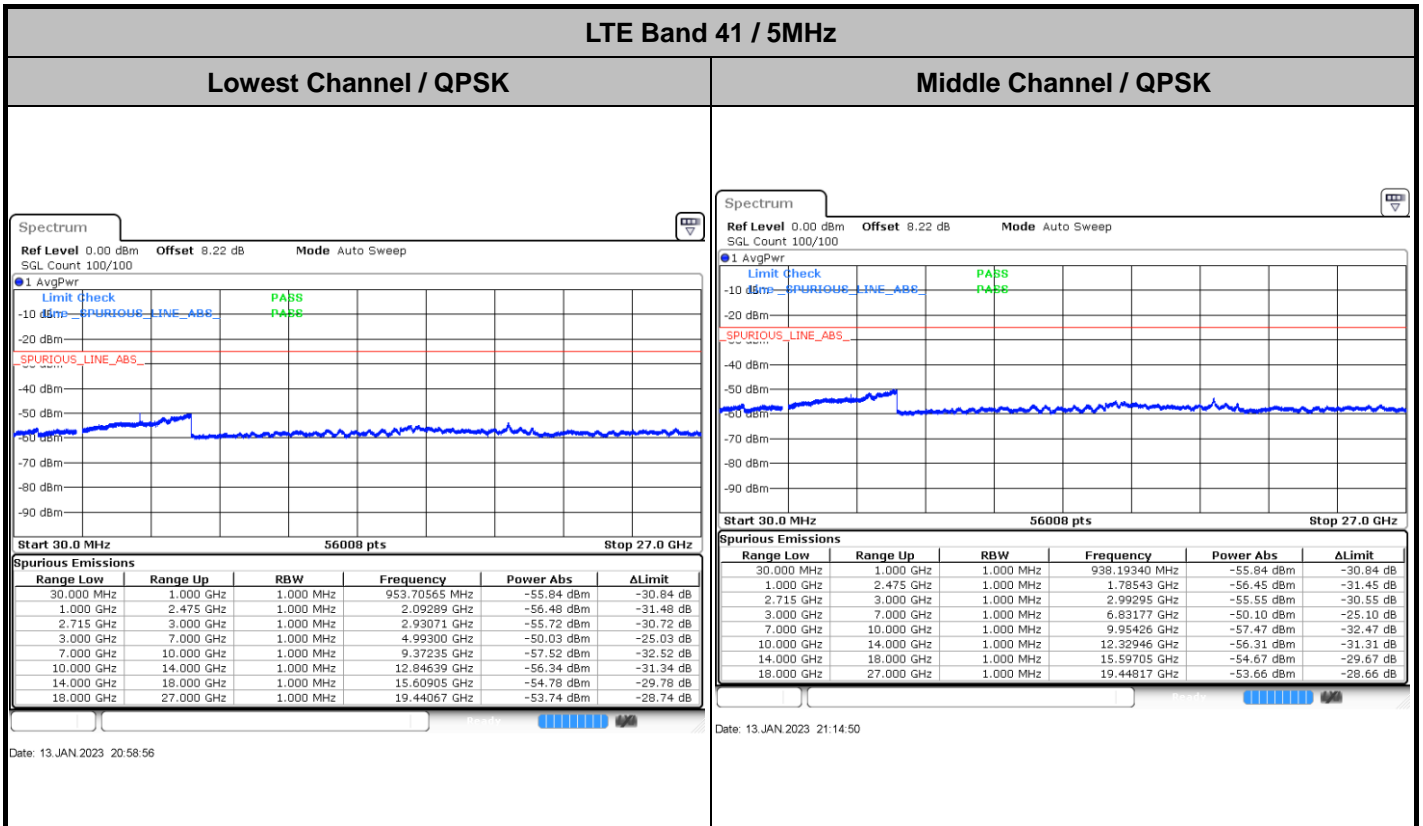
Highest Band Edge / Full RB



Date: 13 JAN 2023 23:33:00



Conducted Spurious Emission

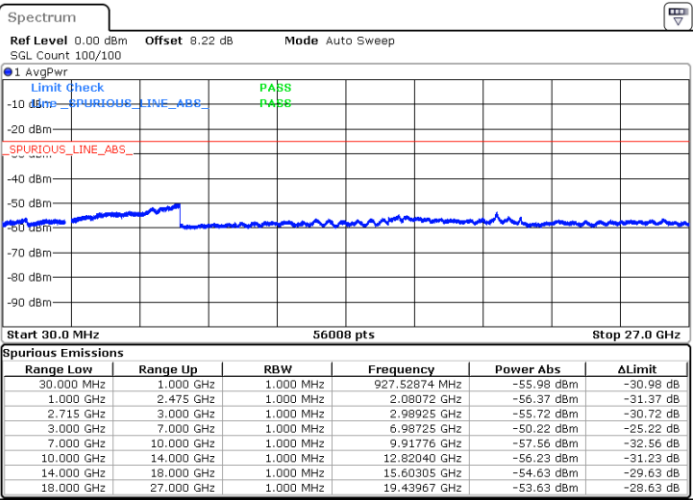
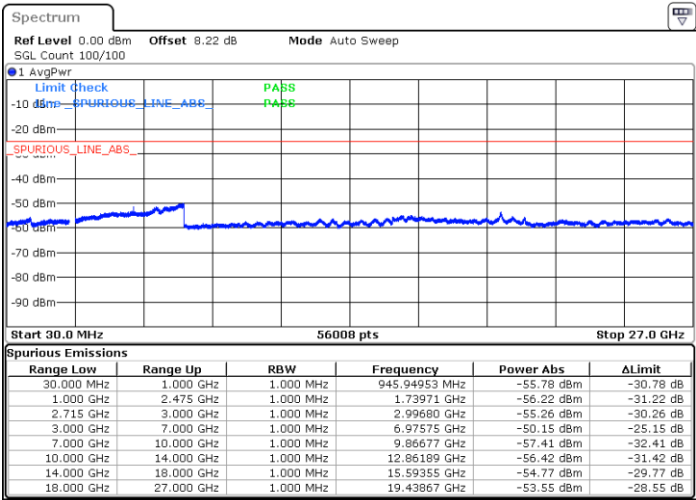




LTE Band 41 / 10MHz

Lowest Channel / QPSK

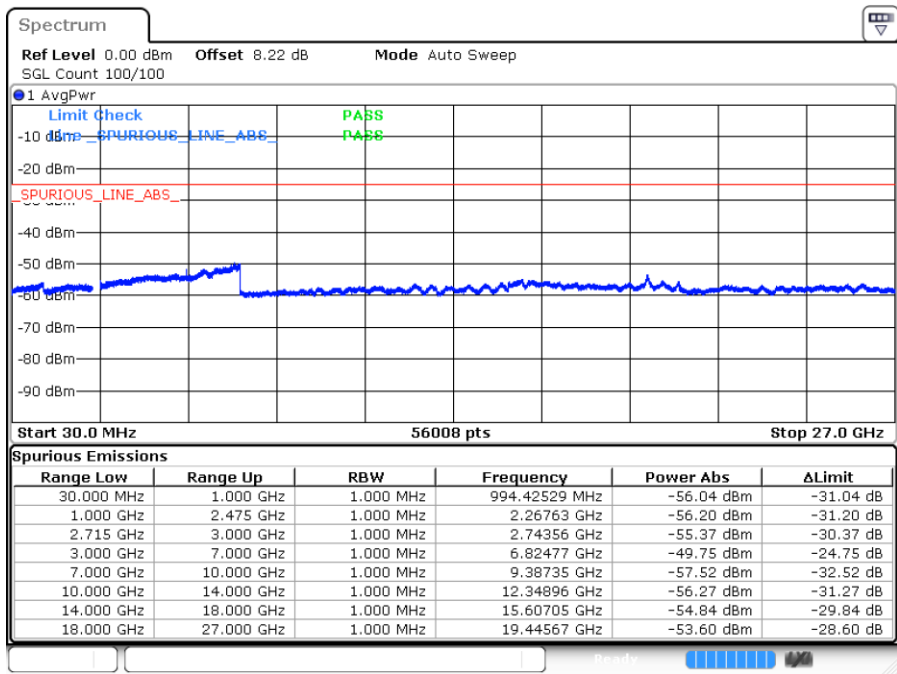
Middle Channel / QPSK



Date: 13 JAN 2023 21:35:58

Date: 13 JAN 2023 21:58:12

Highest Channel / QPSK



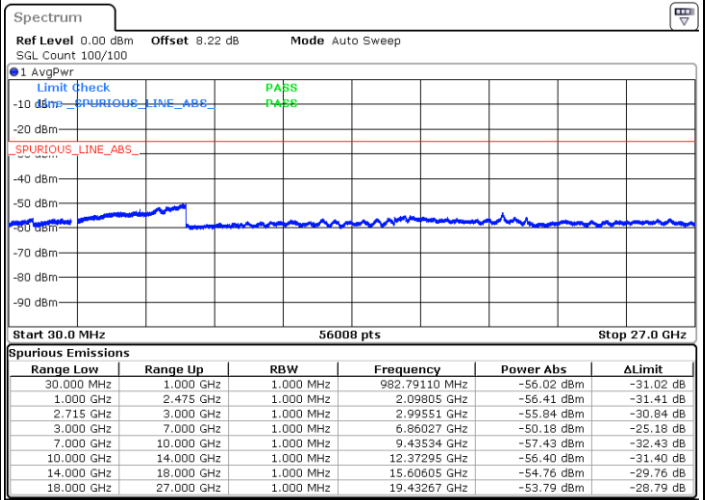
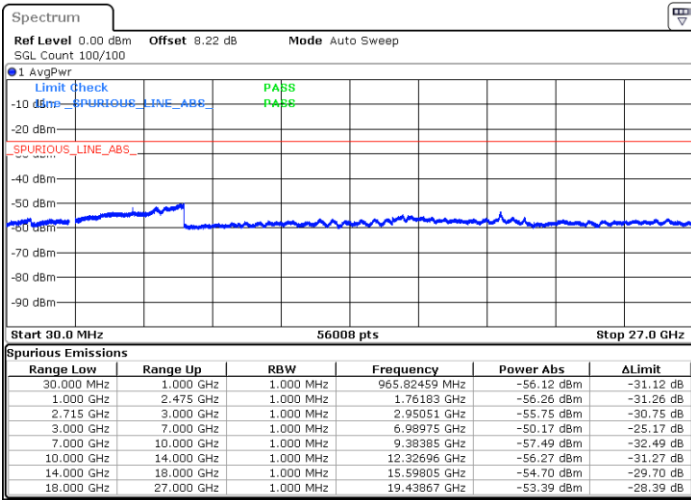
Date: 13 JAN 2023 22:00:01



LTE Band 41 / 15MHz

Lowest Channel / QPSK

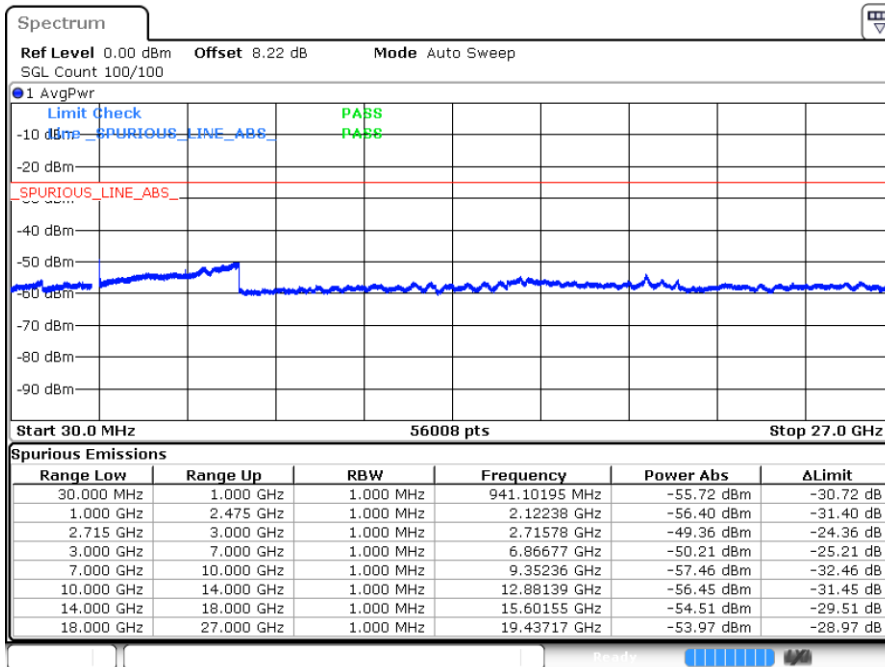
Middle Channel / QPSK



Date: 13 JAN 2023 22:12:15

Date: 13 JAN 2023 22:23:43

Highest Channel / QPSK

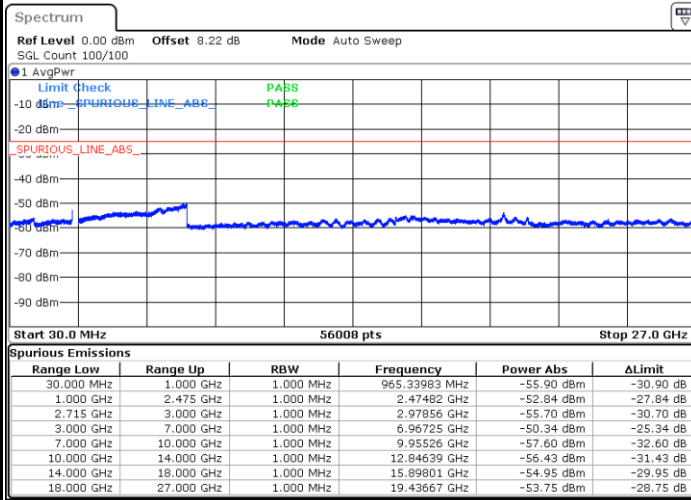


Date: 13 JAN 2023 22:25:11



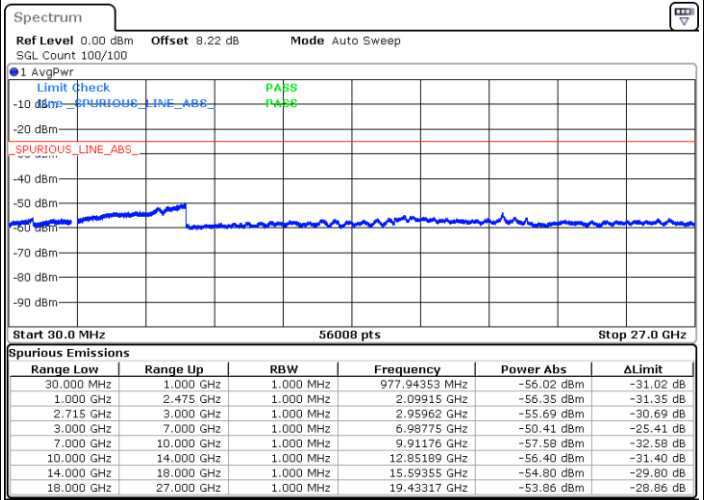
LTE Band 41 / 20MHz

Lowest Channel / QPSK



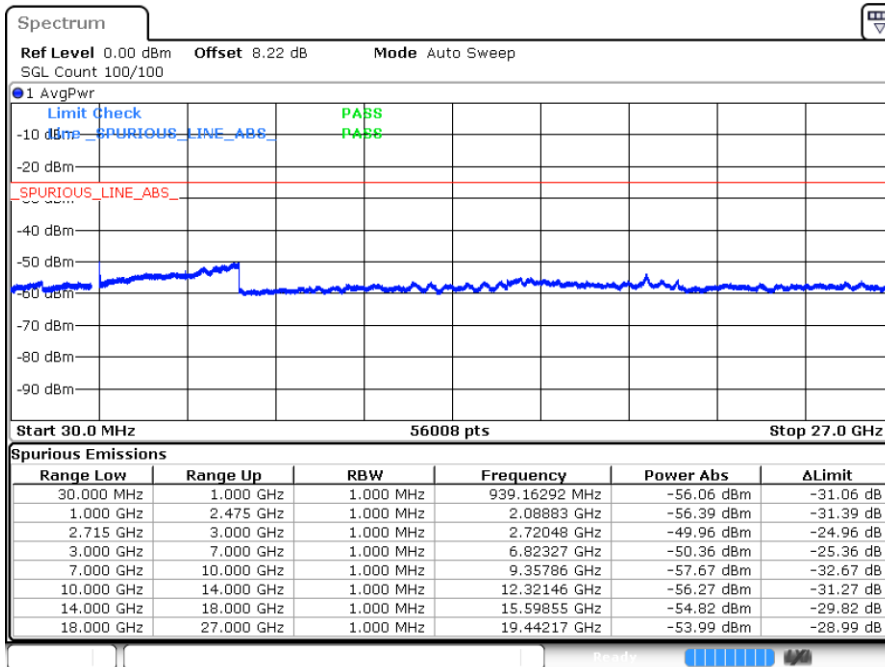
Date: 13 JAN 2023 22:36:47

Middle Channel / QPSK



Date: 13 JAN 2023 23:23:32

Highest Channel / QPSK



Date: 13 JAN 2023 23:25:27



Frequency Stability

Test Conditions		LTE Band 41 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0024	PASS
40	Normal Voltage	0.0006	
30	Normal Voltage	0.0009	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0021	
0	Normal Voltage	0.0042	
-10	Normal Voltage	0.0031	
-20	Normal Voltage	0.0014	
-30	Normal Voltage	0.0022	
20	Maximum Voltage	0.0013	
20	Normal Voltage	0.0000	
20	End Point	0.0016	

Note:

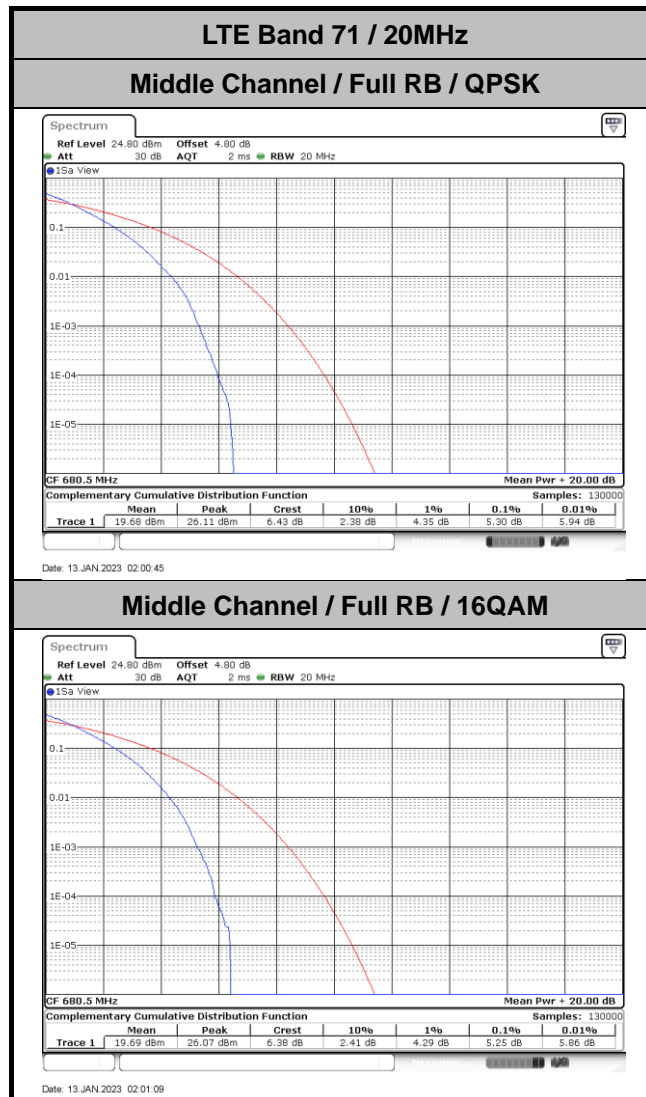
1. Normal Voltage =3.8 V. ; End Point (BEP) =3.55 V. ; Maximum Voltage =4.4V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.



LTE Band 71

Peak-to-Average Ratio

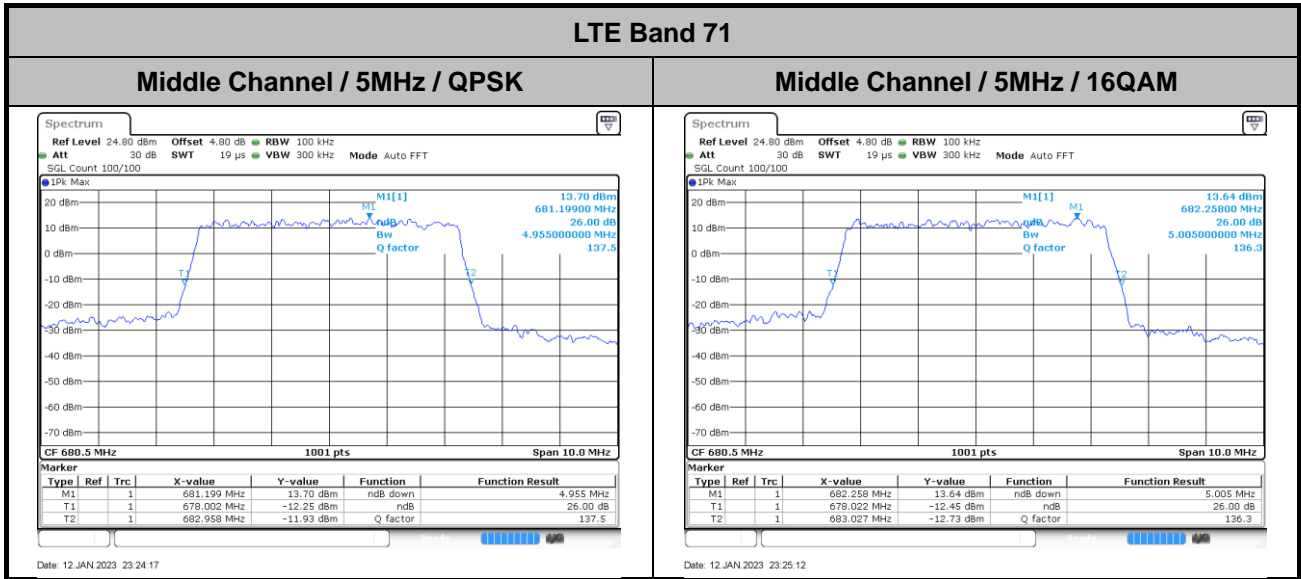
Mode	LTE Band 71 / 20MHz		
Mod.	QPSK	16QAM	Limit: 13dB
RB Size	Full RB	Full RB	Result
Middle CH	5.30	5.25	PASS





26dB Bandwidth

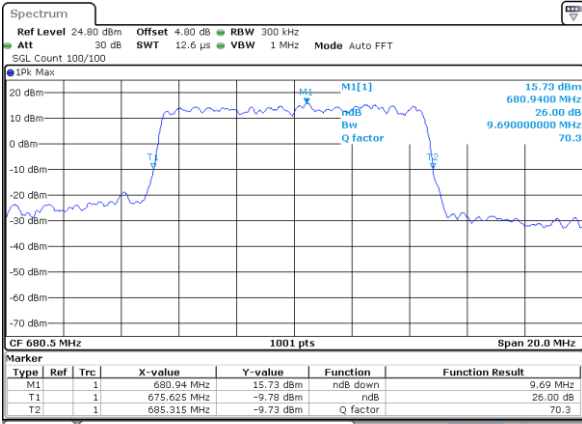
Mode	LTE Band 71 : 26dB BW(MHz)	
BW	5MHz	
Mod.	QPSK	16QAM
Middle CH	4.96	5.01
BW	10MHz	
Mod.	QPSK	16QAM
Middle CH	9.69	9.79
BW	15MHz	
Mod.	QPSK	16QAM
Middle CH	14.30	14.45
BW	20MHz	
Mod.	QPSK	16QAM
Middle CH	18.82	19.18





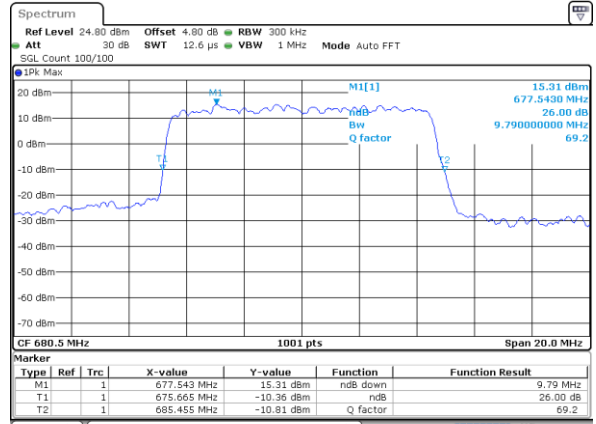
LTE Band 71

Middle Channel / 10MHz / QPSK



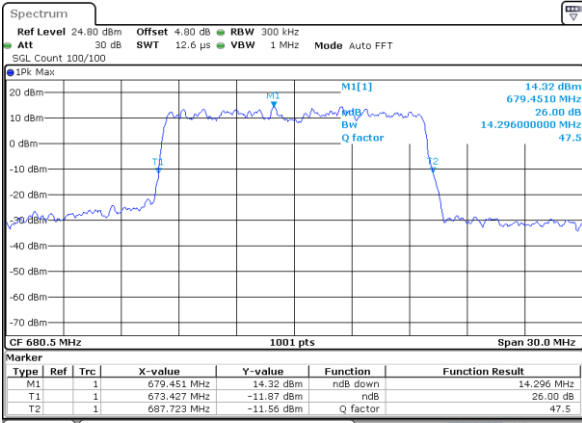
Date: 12 JAN 2023 23:51:43

Middle Channel / 10MHz / 16QAM



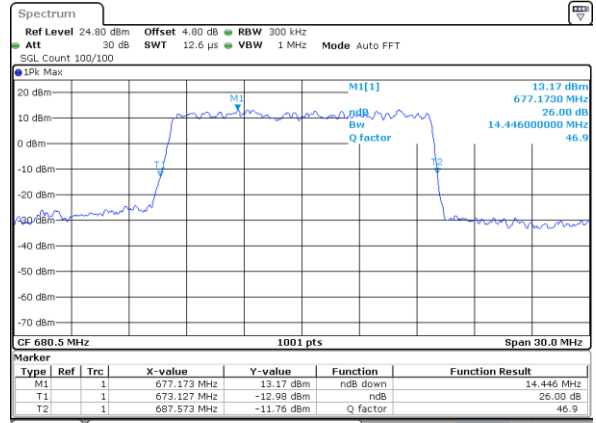
Date: 12 JAN 2023 23:52:32

Middle Channel / 15MHz / QPSK



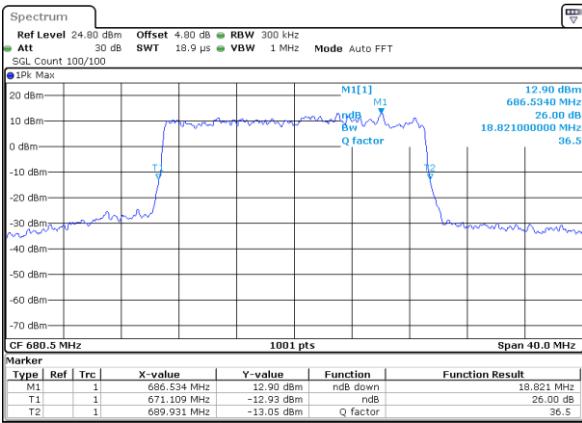
Date: 13 JAN 2023 00:53:52

Middle Channel / 15MHz / 16QAM



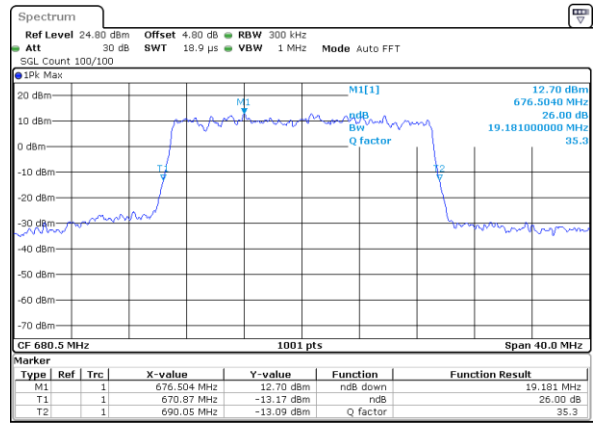
Date: 13 JAN 2023 00:54:49

Middle Channel / 20MHz / QPSK



Date: 13 JAN 2023 01:57:28

Middle Channel / 20MHz / 16QAM

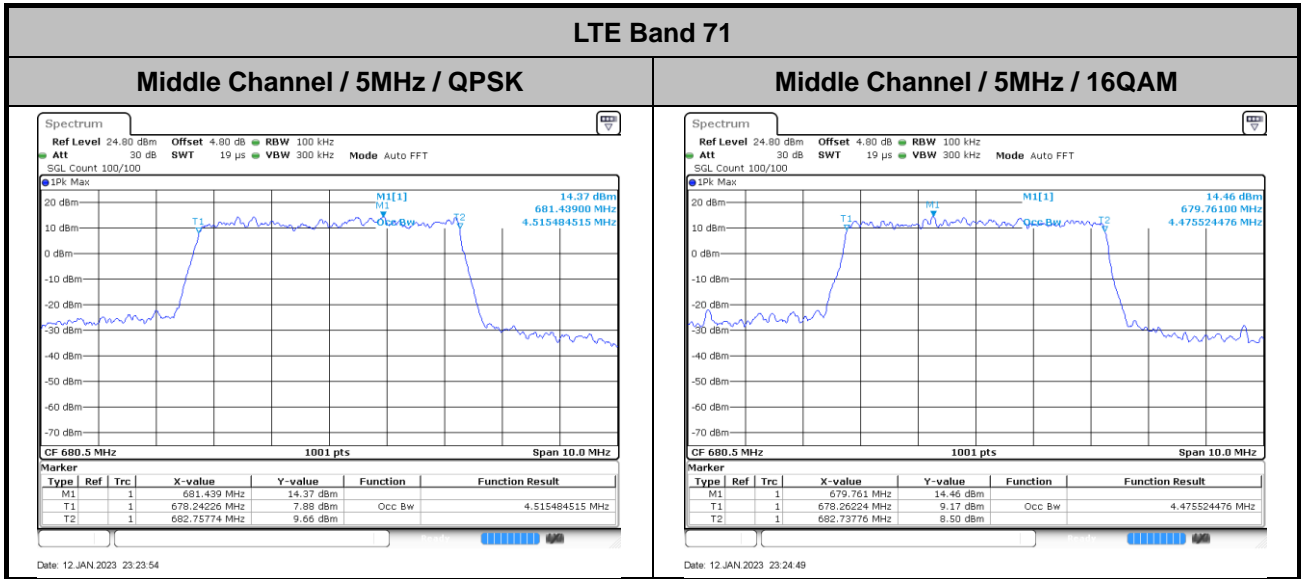


Date: 13 JAN 2023 02:00:07



Occupied Bandwidth

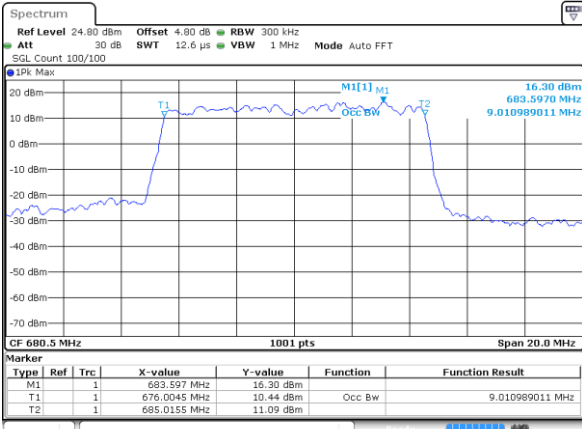
Mode	LTE Band 71 : 99%OBW(MHz)	
BW	5MHz	
Mod.	QPSK	16QAM
Middle CH	4.52	4.48
BW	10MHz	
Mod.	QPSK	16QAM
Middle CH	9.01	8.95
BW	15MHz	
Mod.	QPSK	16QAM
Middle CH	13.46	13.40
BW	20MHz	
Mod.	QPSK	16QAM
Middle CH	17.90	17.94





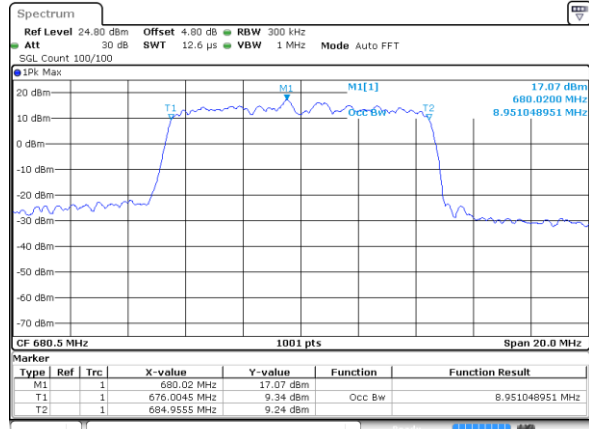
LTE Band 71

Middle Channel / 10MHz / QPSK



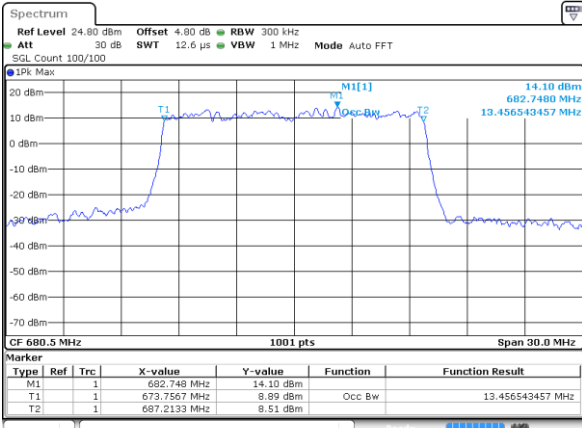
Date: 12 JAN 2023 23:51:20

Middle Channel / 10MHz / 16QAM



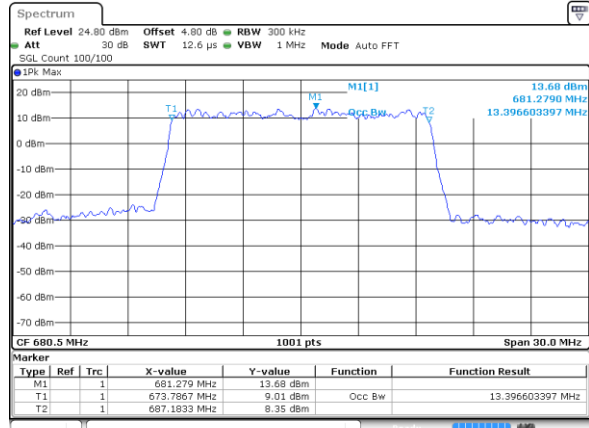
Date: 12 JAN 2023 23:52:07

Middle Channel / 15MHz / QPSK



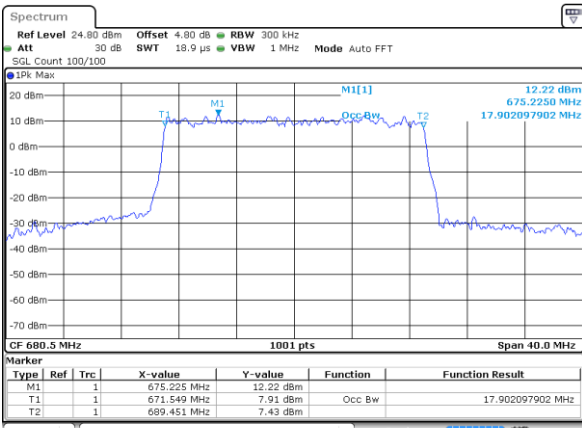
Date: 13 JAN 2023 00:53:31

Middle Channel / 15MHz / 16QAM



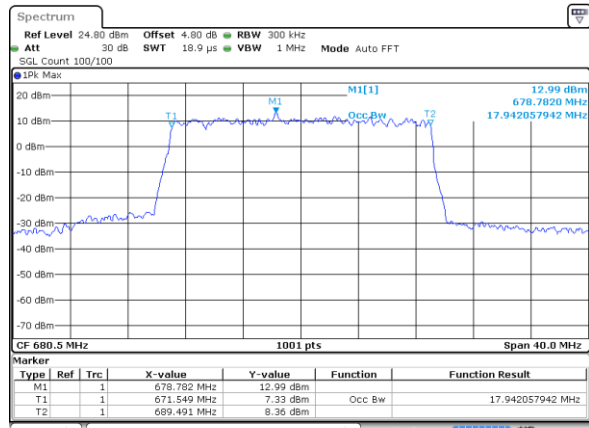
Date: 13 JAN 2023 00:54:15

Middle Channel / 20MHz / QPSK



Date: 13 JAN 2023 01:46:01

Middle Channel / 20MHz / 16QAM



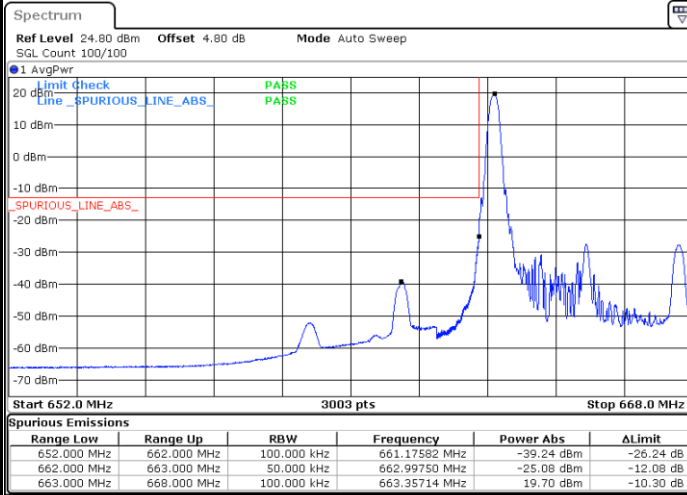
Date: 13 JAN 2023 01:58:02



Conducted Band Edge

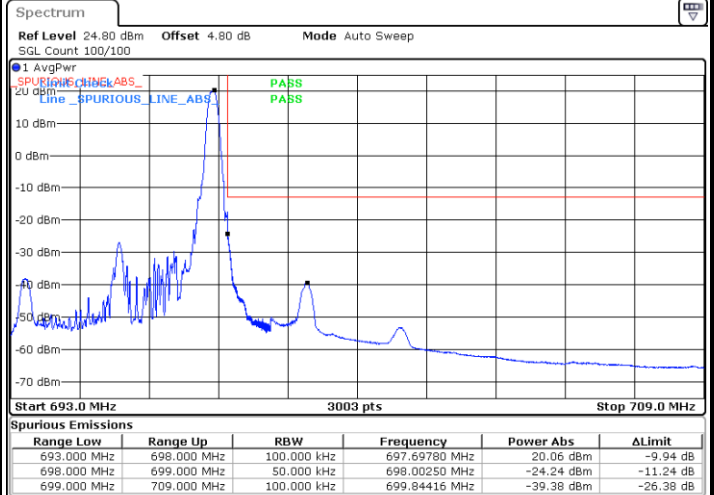
LTE Band 71 / 5MHz / QPSK

Lowest Band Edge / 1 RB



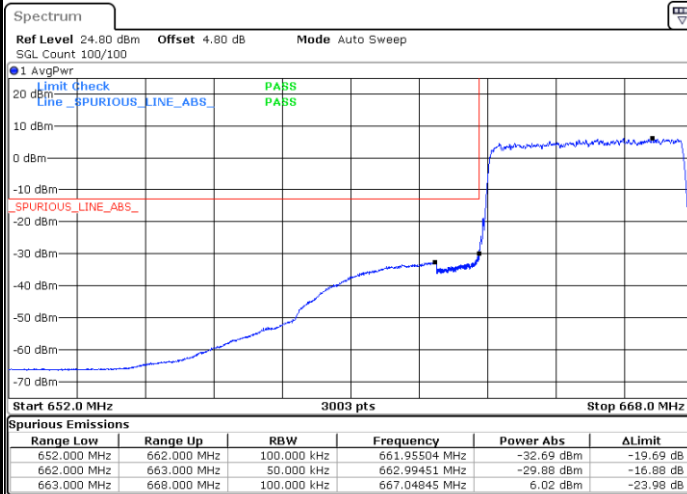
Date: 12 JAN 2023 23:20:16

Highest Band Edge / 1 RB



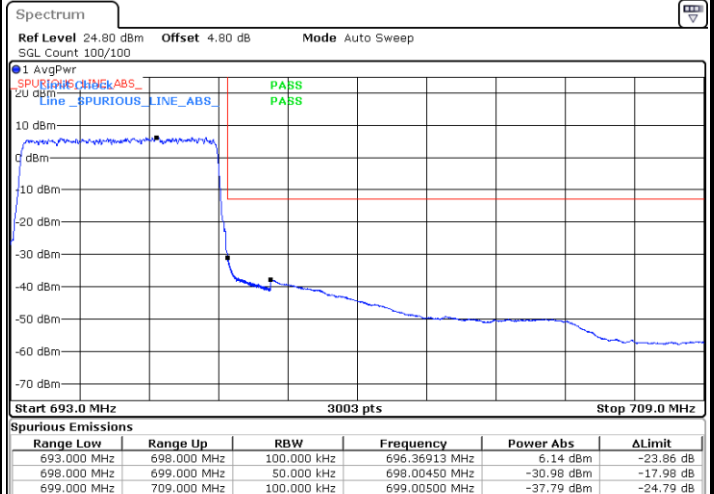
Date: 12 JAN 2023 23:37:16

Lowest Band Edge / Full RB



Date: 12 JAN 2023 21:57:51

Highest Band Edge / Full RB

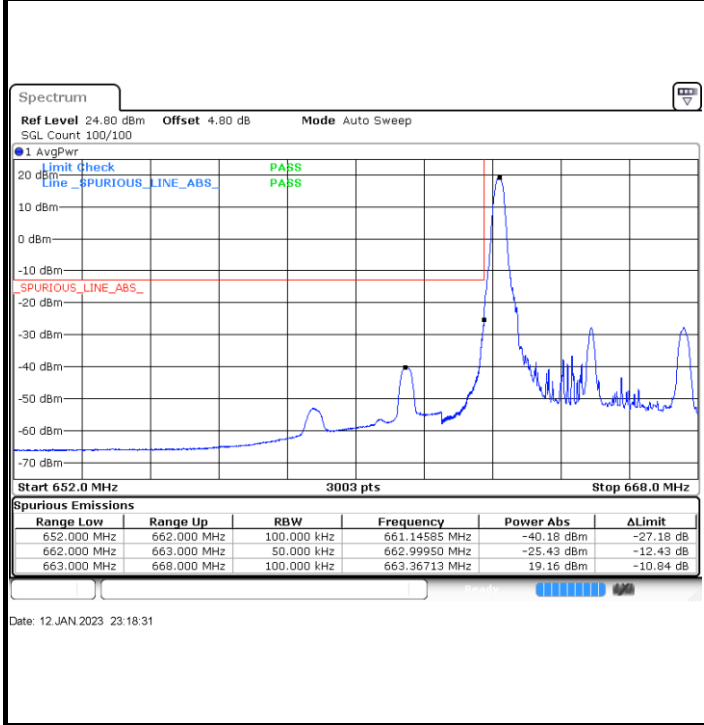


Date: 12 JAN 2023 23:28:10

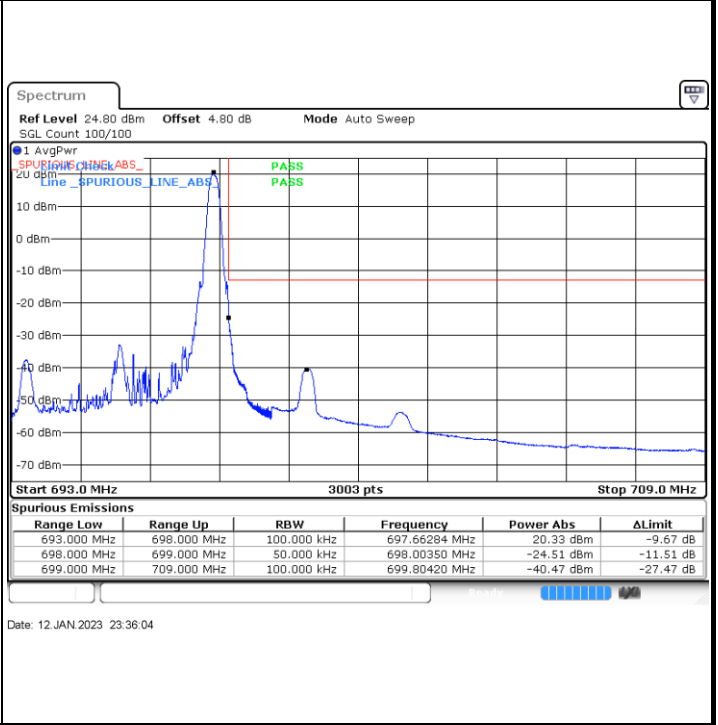


LTE Band 71 / 5MHz / 16QAM

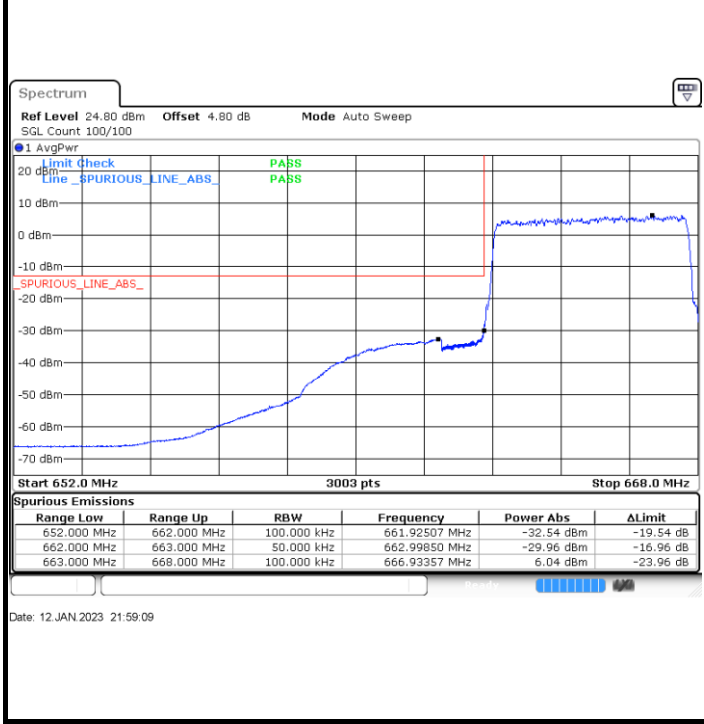
Lowest Band Edge / 1 RB



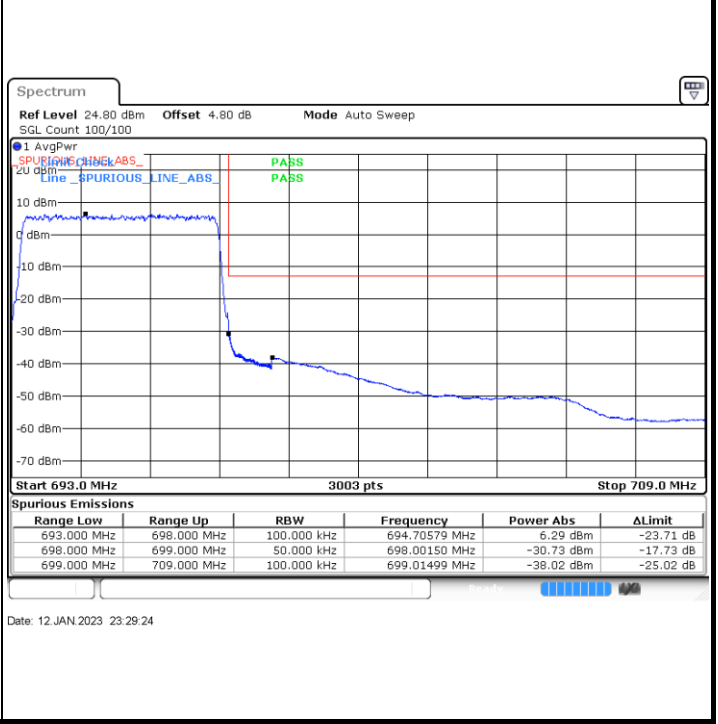
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



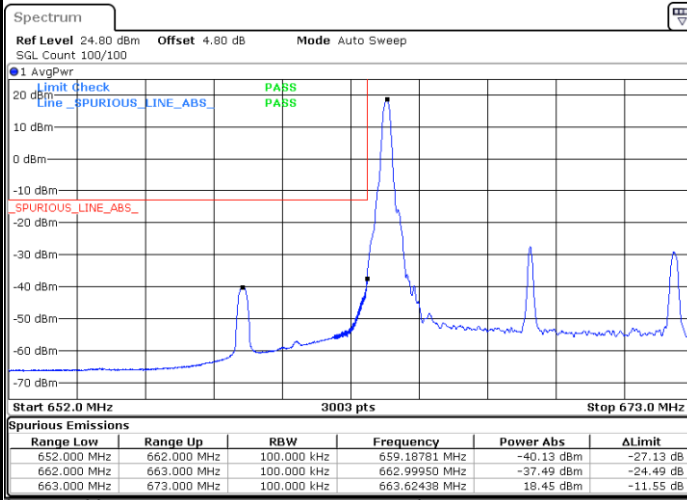
Highest Band Edge / Full RB





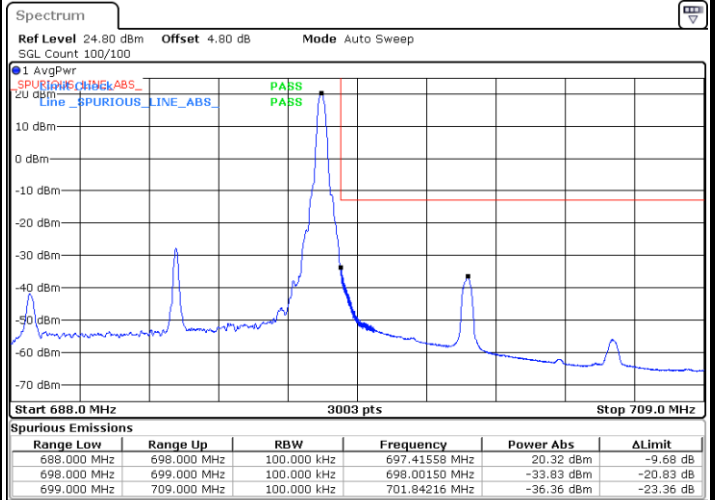
LTE Band 71 / 10MHz / QPSK

Lowest Band Edge / 1 RB



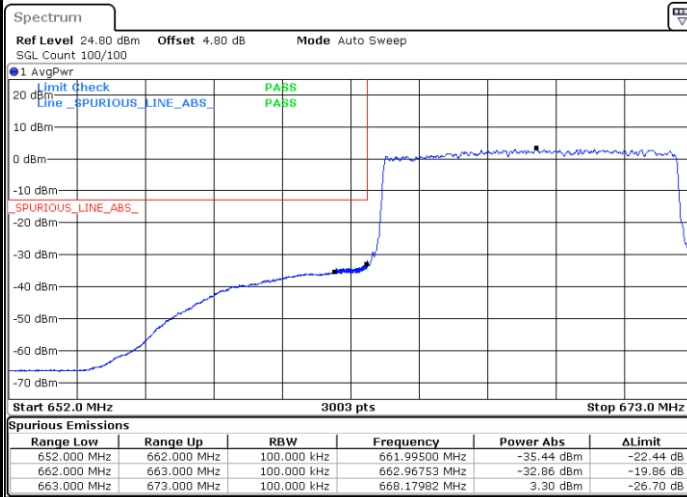
Date: 12 JAN 2023 23:46:24

Highest Band Edge / 1 RB



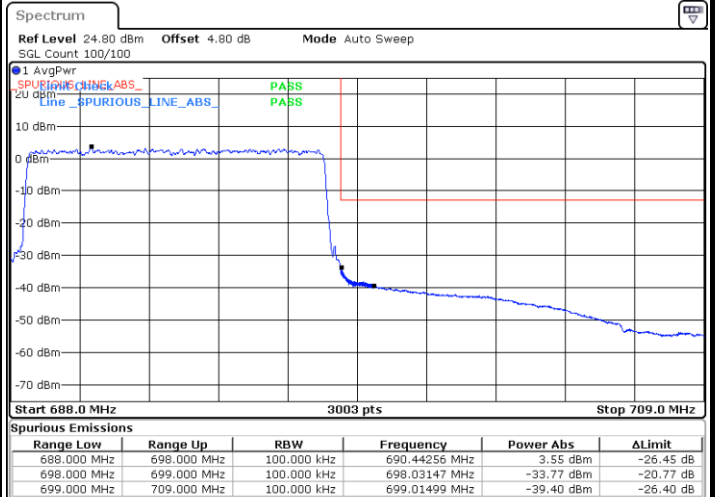
Date: 12 JAN 2023 23:55:19

Lowest Band Edge / Full RB



Date: 12 JAN 2023 23:39:11

Highest Band Edge / Full RB

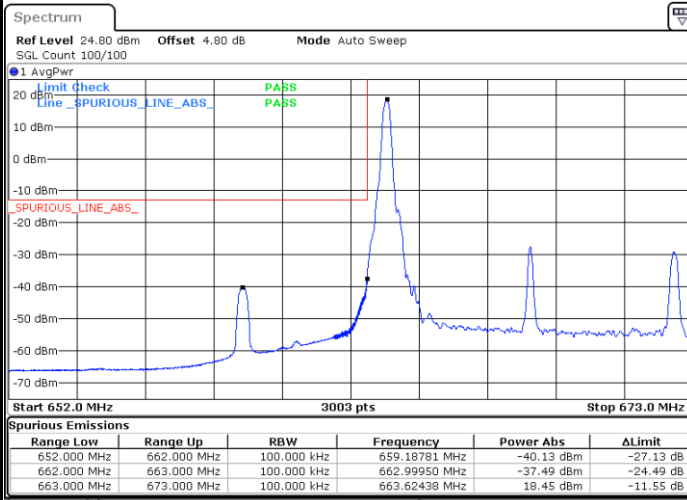


Date: 13 JAN 2023 00:03:43



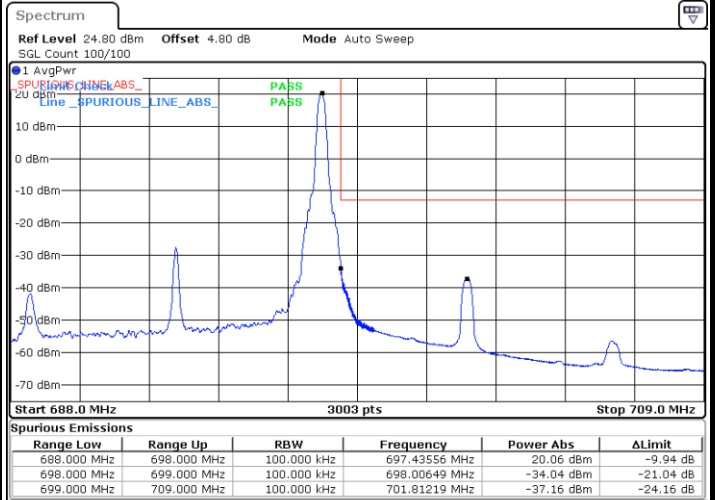
LTE Band 71 / 10MHz / 16QAM

Lowest Band Edge / 1 RB



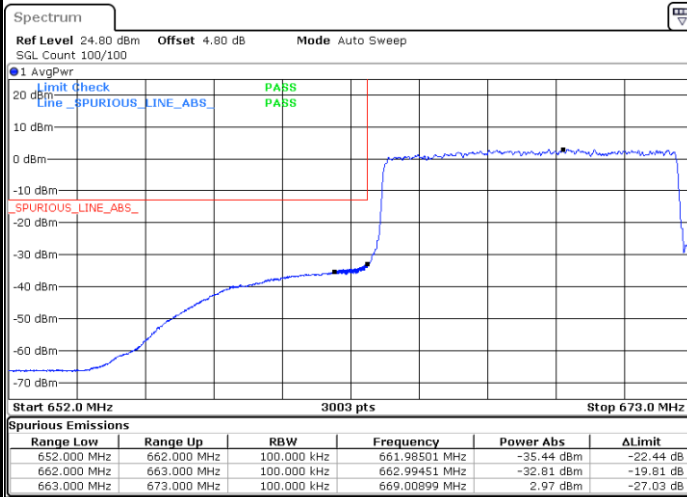
Date: 12 JAN 2023 23:46:24

Highest Band Edge / 1 RB



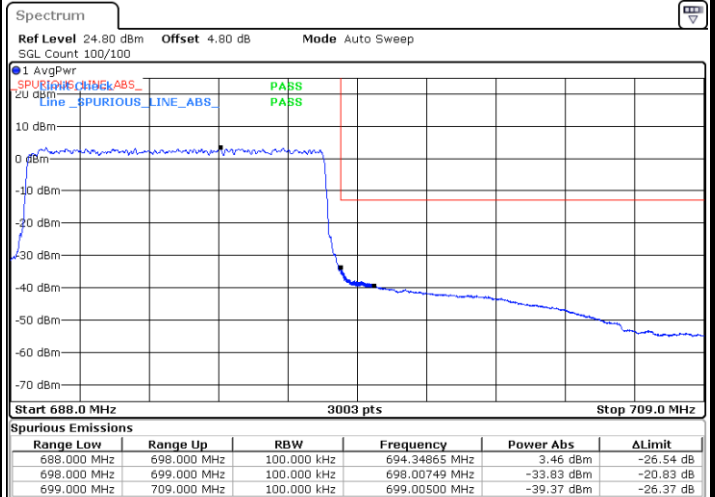
Date: 12 JAN 2023 23:56:30

Lowest Band Edge / Full RB



Date: 12 JAN 2023 23:40:19

Highest Band Edge / Full RB

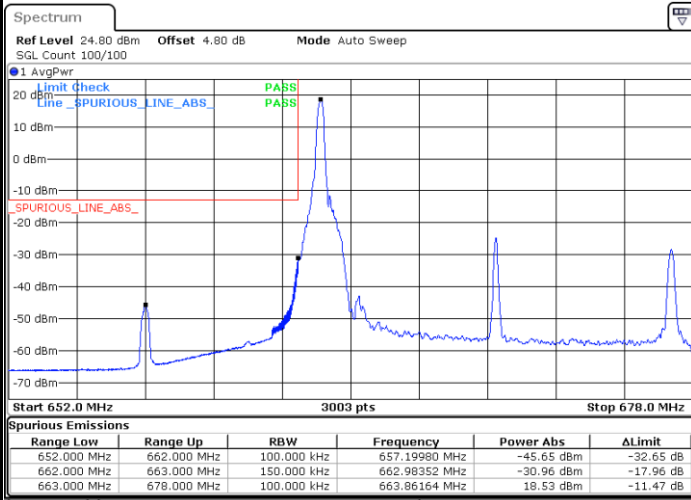


Date: 13 JAN 2023 00:02:35



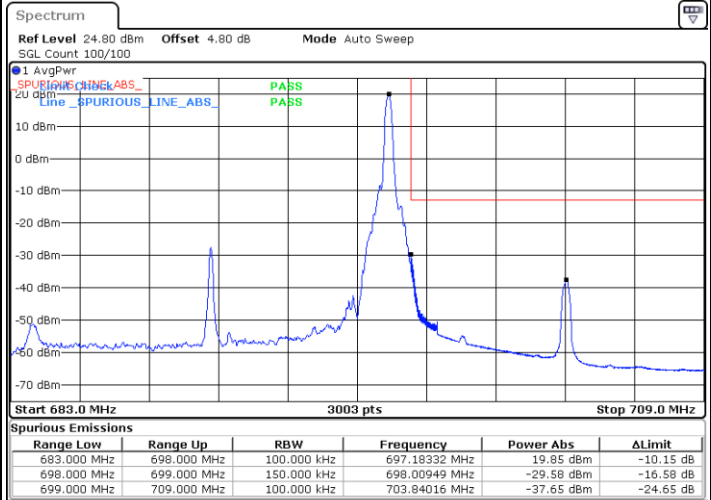
LTE Band 71 / 15MHz / QPSK

Lowest Band Edge / 1 RB



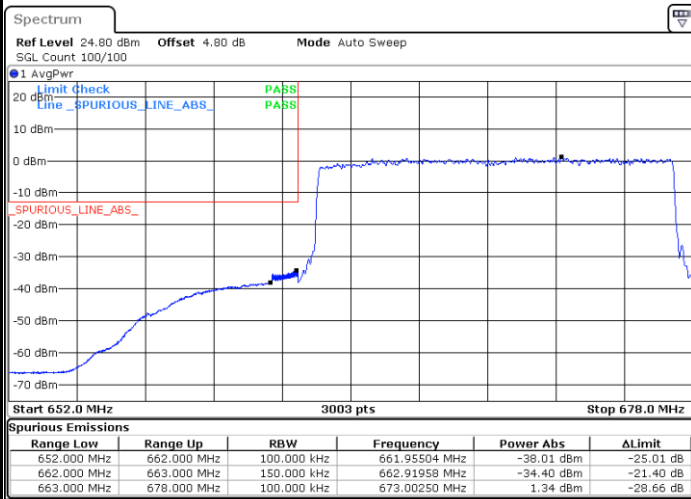
Date: 13 JAN 2023 00:49:06

Highest Band Edge / 1 RB



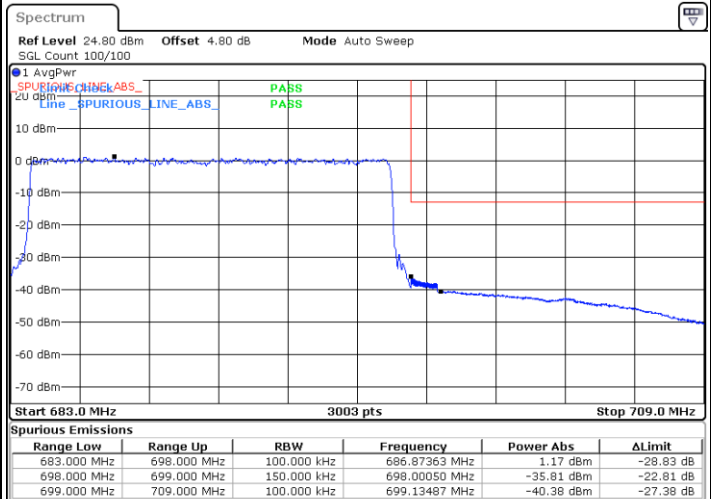
Date: 13 JAN 2023 01:00:28

Lowest Band Edge / Full RB



Date: 13 JAN 2023 00:38:10

Highest Band Edge / Full RB

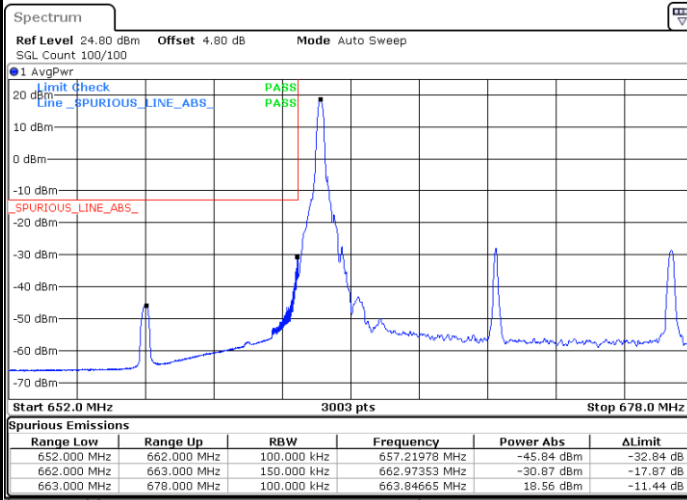


Date: 13 JAN 2023 01:10:59



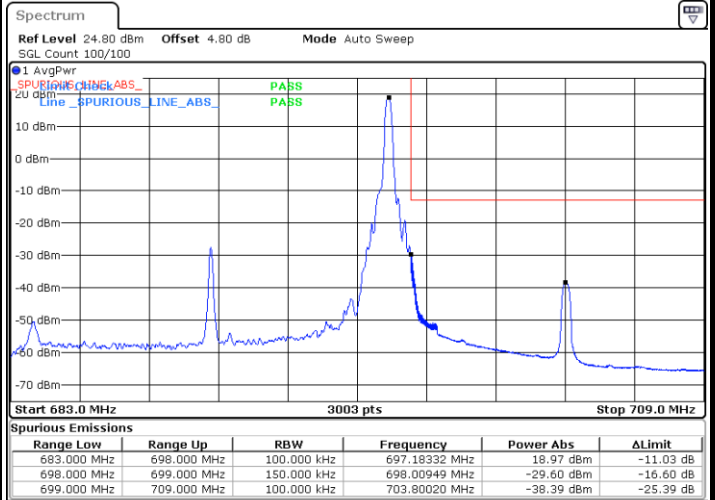
LTE Band 71 / 15MHz / 16QAM

Lowest Band Edge / 1 RB



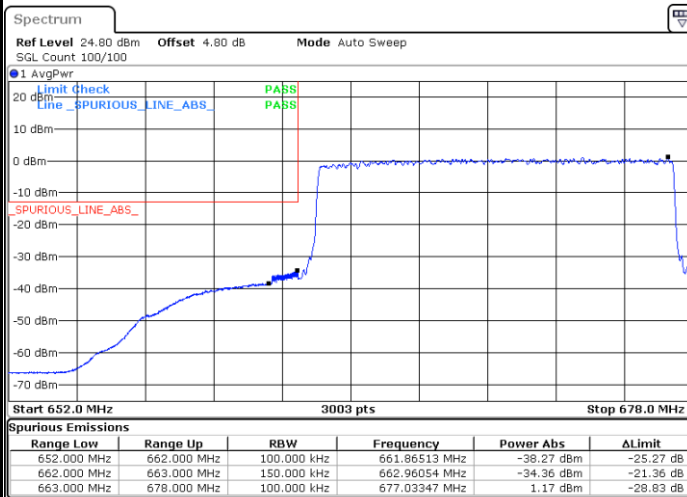
Date: 13 JAN 2023 00:47:19

Highest Band Edge / 1 RB



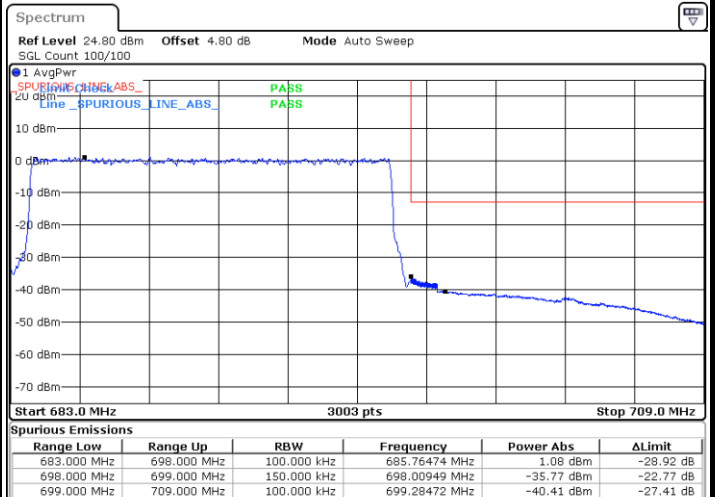
Date: 13 JAN 2023 01:01:48

Lowest Band Edge / Full RB



Date: 13 JAN 2023 00:40:07

Highest Band Edge / Full RB

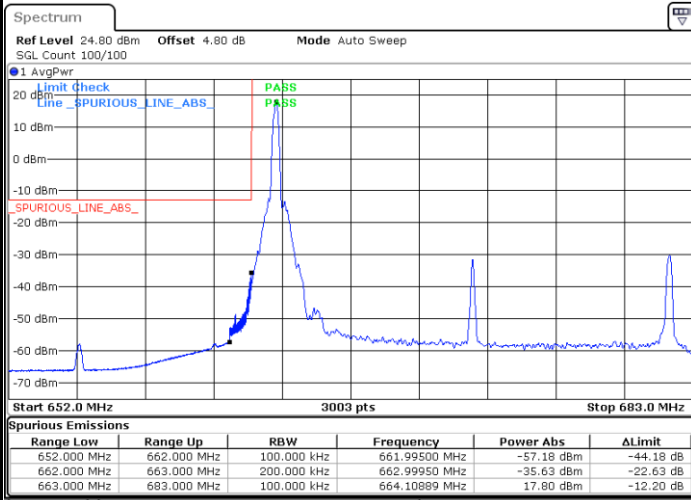


Date: 13 JAN 2023 01:09:26



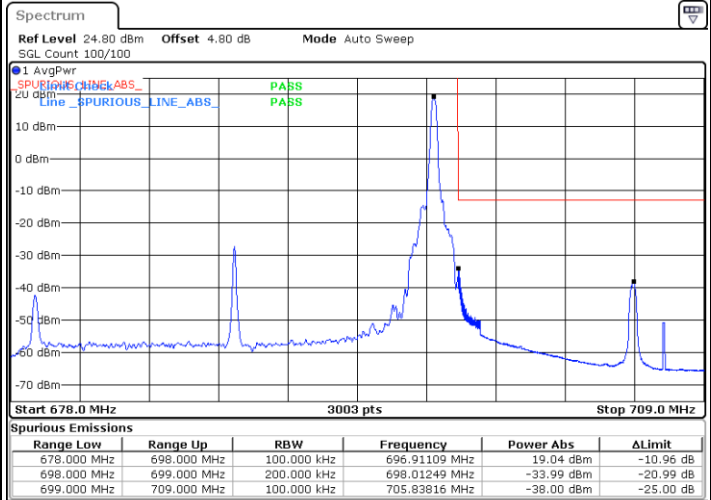
LTE Band 71 / 20MHz / QPSK

Lowest Band Edge / 1 RB



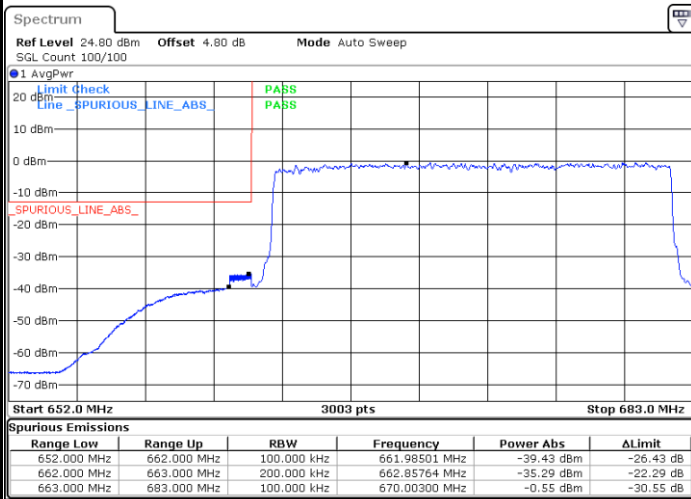
Date: 13.JAN.2023 01:22:05

Highest Band Edge / 1 RB



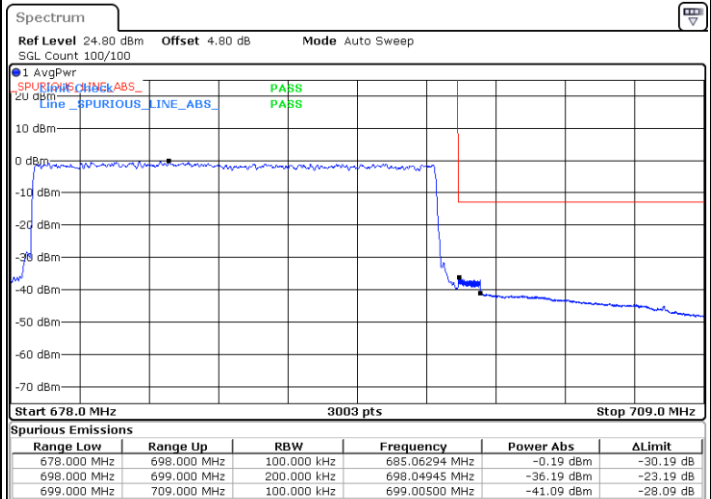
Date: 13.JAN.2023 01:32:00

Lowest Band Edge / Full RB



Date: 13.JAN.2023 01:12:27

Highest Band Edge / Full RB

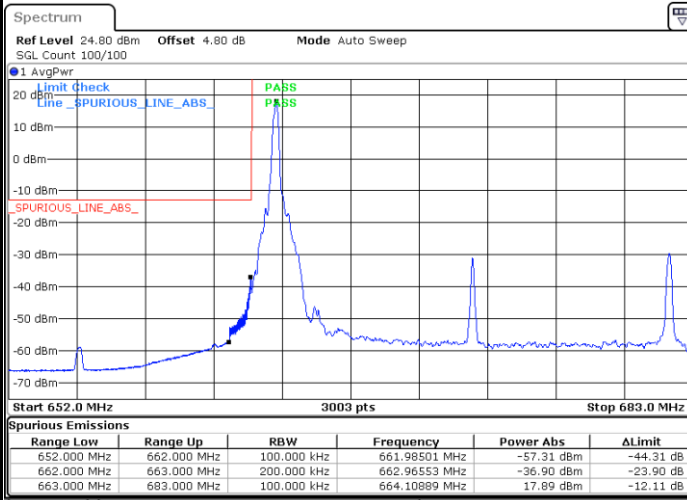


Date: 13.JAN.2023 01:42:17



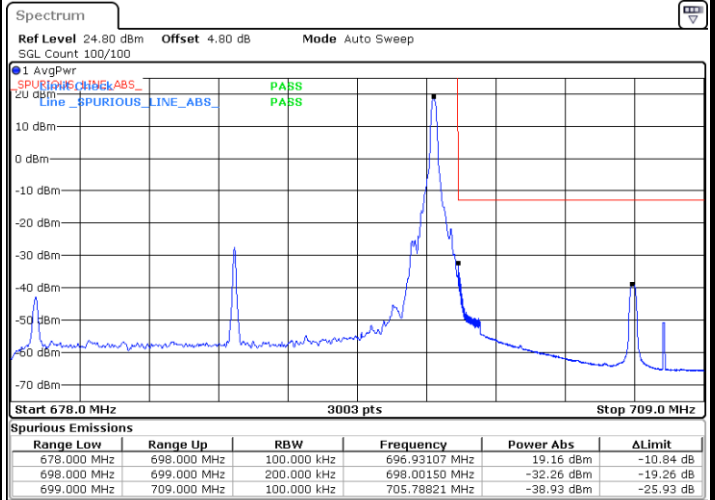
LTE Band 71 / 20MHz / 16QAM

Lowest Band Edge / 1 RB



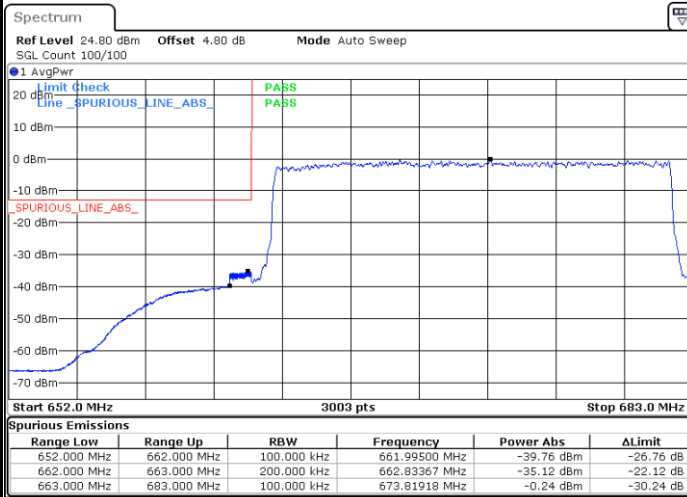
Date: 13 JAN 2023 01:20:42

Highest Band Edge / 1RB



Date: 13 JAN 2023 01:33:41

Lowest Band Edge / Full RB



Date: 13 JAN 2023 01:13:45

Highest Band Edge / Full RB



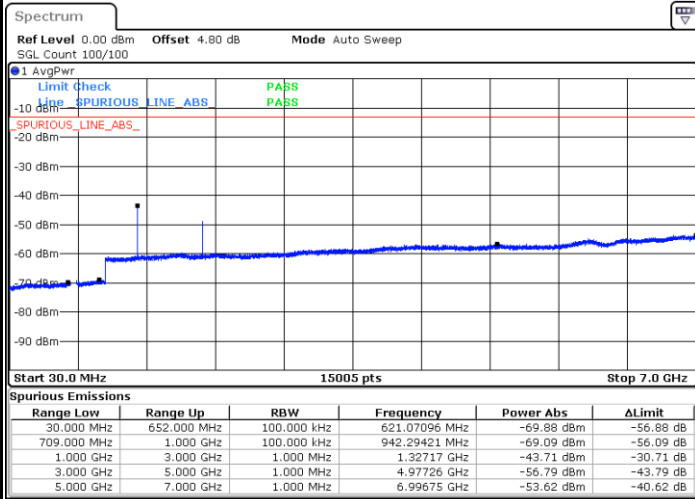
Date: 13 JAN 2023 01:40:58



Conducted Spurious Emission

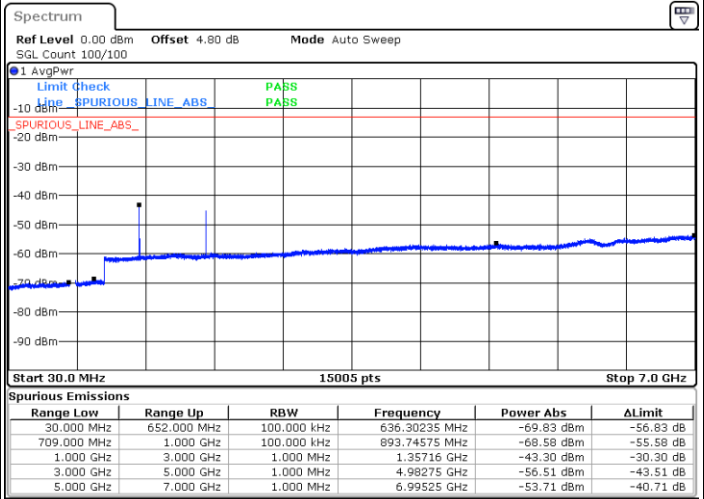
LTE Band 71 / 5MHz

Lowest Channel / QPSK



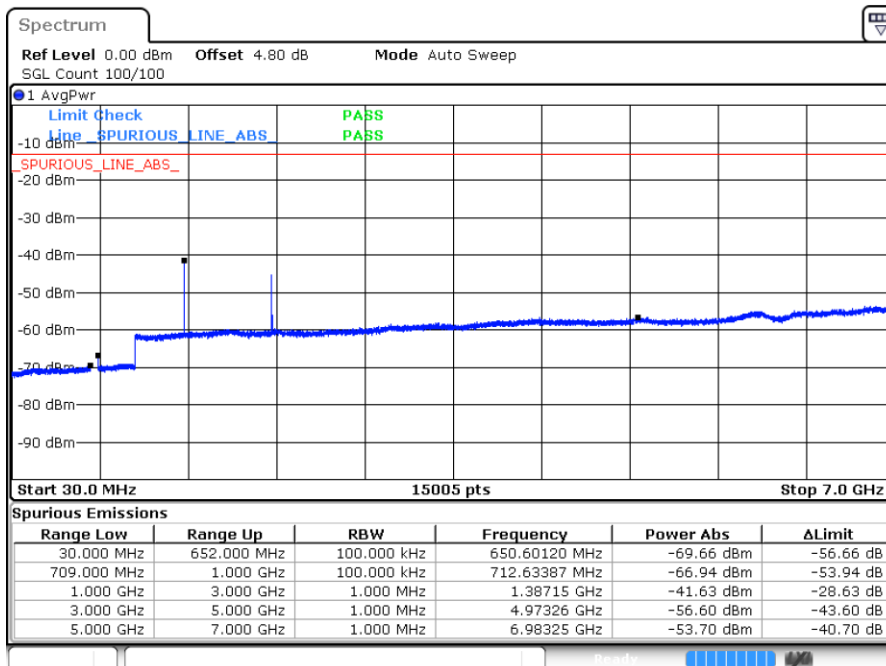
Date: 12 JAN 2023 23:21:56

Middle Channel / QPSK



Date: 12 JAN 2023 23:23:31

Highest Channel / QPSK



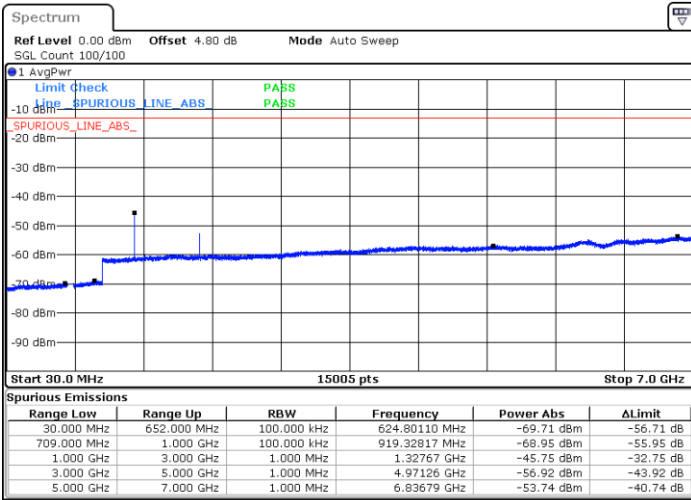
Date: 12 JAN 2023 23:26:51



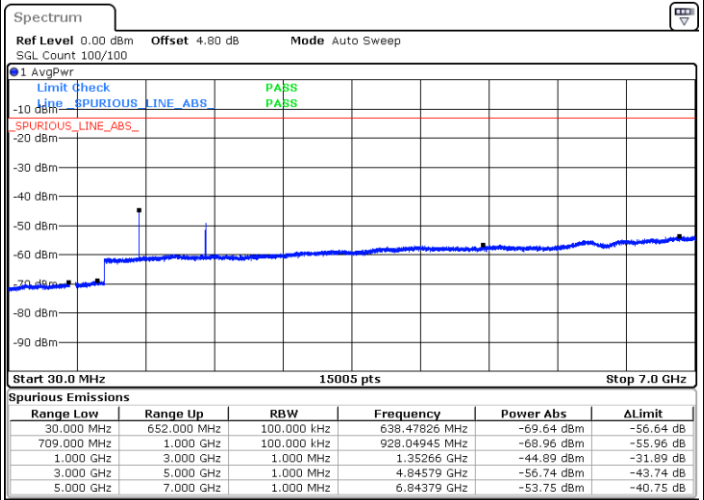
LTE Band 71 / 10MHz

Lowest Channel / QPSK

Middle Channel / QPSK

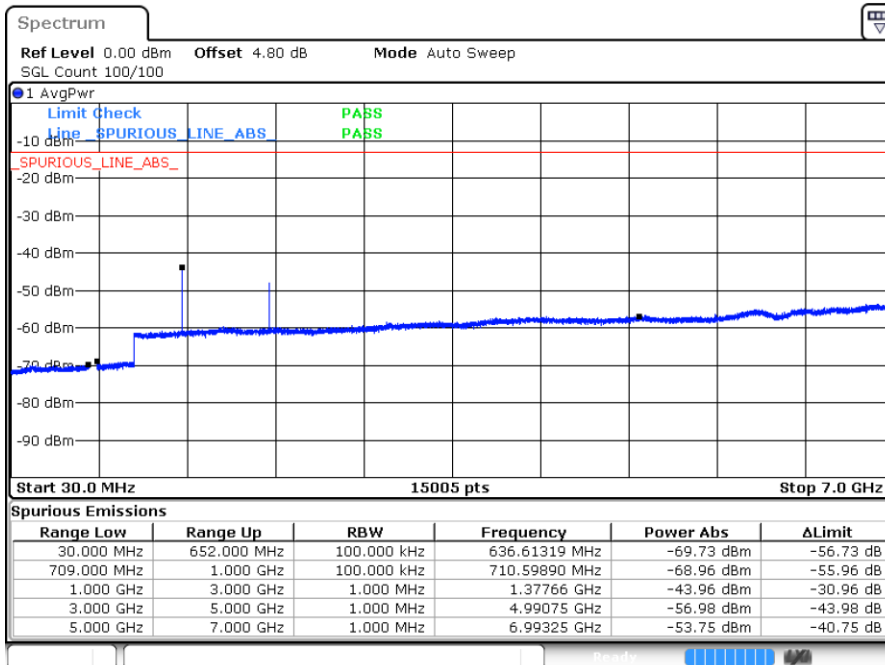


Date: 12 JAN 2023 23:48:15



Date: 12 JAN 2023 23:50:45

Highest Channel / QPSK



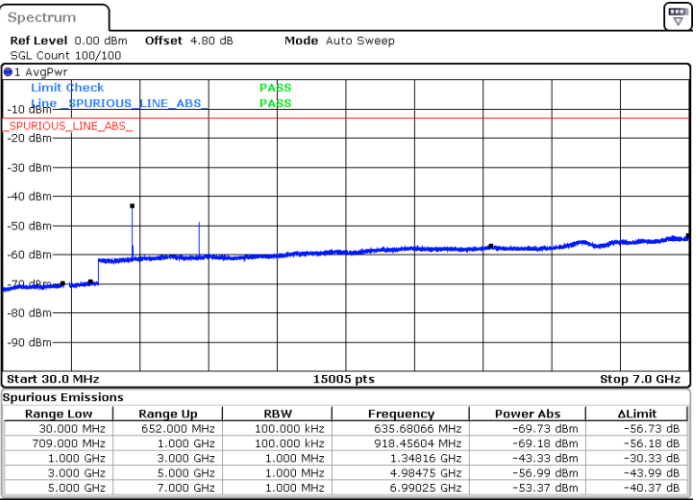
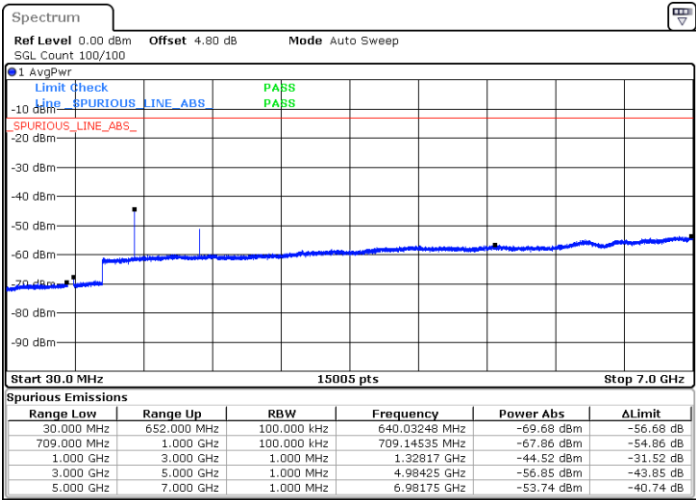
Date: 12 JAN 2023 23:54:09



LTE Band 71 / 15MHz

Lowest Channel / QPSK

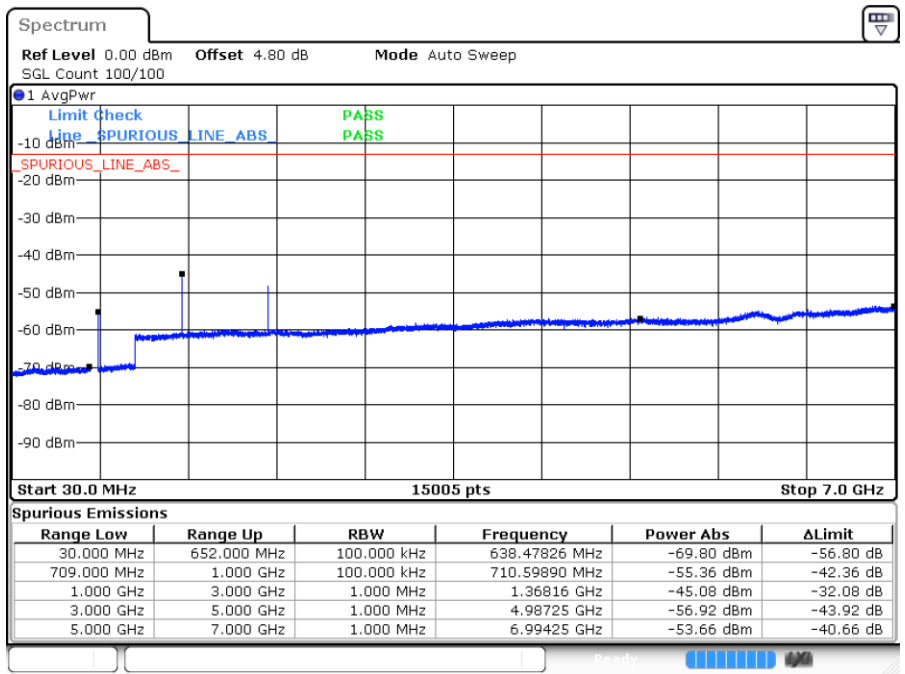
Middle Channel / QPSK



Date: 13.JAN.2023 00:51:32

Date: 13.JAN.2023 00:53:05

Highest Channel / QPSK



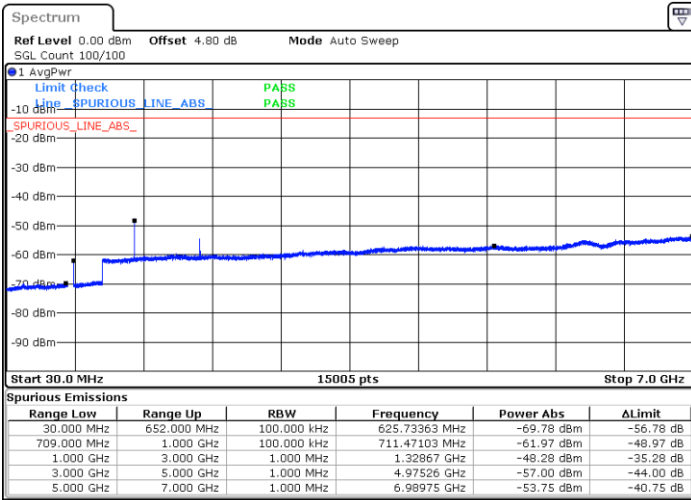
Date: 13.JAN.2023 00:58:53



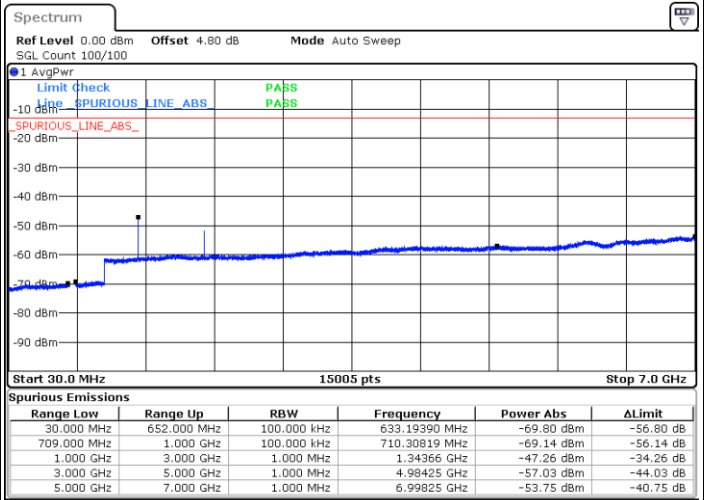
LTE Band 71 / 20MHz

Lowest Channel / QPSK

Middle Channel / QPSK

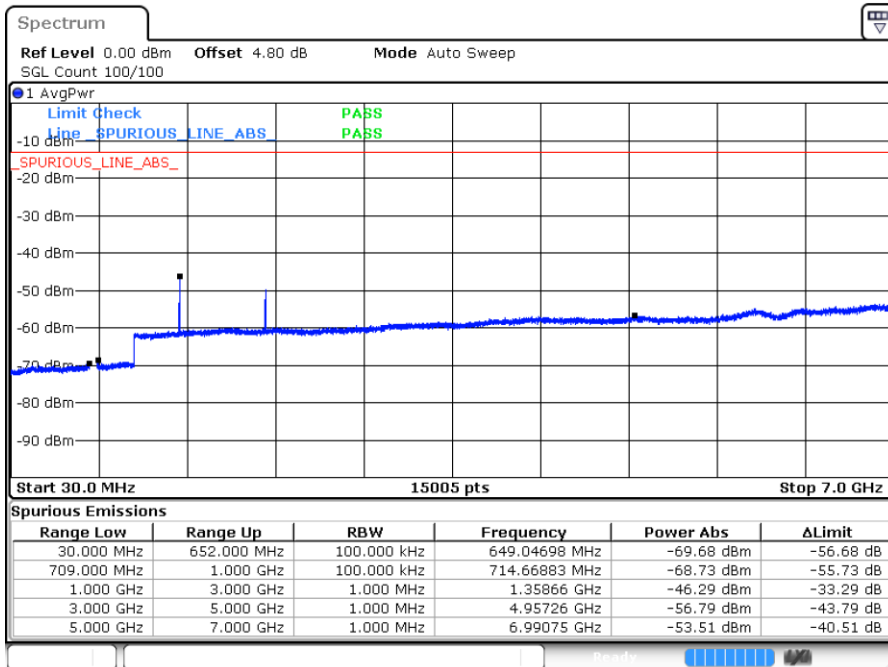


Date: 13 JAN 2023 01:24:09



Date: 13 JAN 2023 01:25:43

Highest Channel / QPSK



Date: 13 JAN 2023 01:27:21



Frequency Stability

Test Conditions		LTE Band 71 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0025	PASS
40	Normal Voltage	0.0012	
30	Normal Voltage	0.0023	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0007	
0	Normal Voltage	0.0030	
-10	Normal Voltage	0.0039	
-20	Normal Voltage	0.0013	
-30	Normal Voltage	0.0005	
20	Maximum Voltage	0.0015	
20	Normal Voltage	0.0000	
20	End Point	0.0008	

Note:

1. Normal Voltage =3.8V. ; End Point (BEP) =3.55 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

Test Engineer :	Carl Ni	Temperature :	23~25°C
		Relative Humidity :	41~42%

LTE Band 7 / 20MHz / QPSK								
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	5000	-61.78	-25	-36.78	-71.99	3.03	13.24	H
	7504	-62.33	-25	-37.33	-71.78	3.56	13.01	H
	10000	-60.71	-25	-35.71	-70.23	3.92	13.44	H
	5000	-61.85	-25	-36.85	-72.06	3.03	13.24	V
	7504	-59.83	-25	-34.83	-69.28	3.56	13.01	V
	10000	-58.73	-25	-33.73	-68.25	3.92	13.44	V
Middle	5052	-61.55	-25	-36.55	-71.76	3.03	13.24	H
	7580	-63.03	-25	-38.03	-72.48	3.56	13.01	H
	10100	-61.04	-25	-36.04	-70.56	3.92	13.44	H
	5052	-60.96	-25	-35.96	-71.17	3.03	13.24	V
	7580	-60.64	-25	-35.64	-70.09	3.56	13.01	V
	10100	-56.76	-25	-31.76	-66.28	3.92	13.44	V
Highest	5104	-63.41	-25	-38.41	-73.62	3.03	13.24	H
	7652	-62.50	-25	-37.50	-71.95	3.56	13.01	H
	10200	-61.94	-25	-36.94	-71.46	3.92	13.44	H
	5104	-62.62	-25	-37.62	-72.83	3.03	13.24	V
	7652	-60.22	-25	-35.22	-69.67	3.56	13.01	V
	10200	-58.50	-25	-33.50	-68.02	3.92	13.44	V

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



LTE Band 12 / 20MHz / QPSK								
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	1400	-68.62	-13	-55.62	-75.59	1.58	10.70	H
	2098	-63.75	-13	-50.75	-72.00	2.102	12.50	H
	2798	-58.94	-13	-45.94	-67.83	2.856	13.90	H
	1400	-67.19	-13	-54.19	-74.16	1.58	10.70	V
	2096	-58.20	-13	-45.20	-66.45	2.10	12.50	V
	2800	-57.30	-13	-44.30	-66.19	2.86	13.90	V
Middle	1406	-67.67	-13	-54.67	-74.64	1.58	10.70	H
	2110	-63.62	-13	-50.62	-71.87	2.102	12.50	H
	2812	-60.89	-13	-47.89	-69.78	2.856	13.90	H
	1406	-66.38	-13	-53.38	-73.35	1.58	10.70	V
	2110	-59.43	-13	-46.43	-67.68	2.10	12.50	V
	2812	-60.40	-13	-47.40	-69.29	2.86	13.90	V
Highest	1414	-66.87	-13	-53.87	-73.84	1.58	10.70	H
	2120	-62.03	-13	-49.03	-70.28	2.102	12.50	H
	2826	-58.62	-13	-45.62	-67.51	2.856	13.90	H
	1414	-64.82	-13	-51.82	-71.79	1.58	10.70	V
	2120	-57.89	-13	-44.89	-66.14	2.10	12.50	V
	2826	-55.46	-13	-42.46	-64.35	2.86	13.90	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)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	1552	-67.64	-13	-54.64	-70.27	1.09	5.87	H
	2336	-55.04	-13	-42.04	-57.44	1.37	5.92	H
	3112	-61.84	-13	-48.84	-65.73	1.64	7.68	H
	1552	-66.79	-13	-53.79	-69.42	1.09	5.87	V
	2336	-51.49	-13	-38.49	-53.89	1.37	5.92	V
	3112	-61.47	-13	-48.47	-65.36	1.64	7.68	V
Middle	1560	-67.02	-42.15	-24.87	-69.65	1.09	5.87	H
	2344	-54.68	-13	-41.68	-57.08	1.37	5.92	H
	3120	-62.32	-13	-49.32	-66.21	1.64	7.68	H
	1560	-65.96	-42.15	-23.81	-68.59	1.09	5.87	V
	2344	-52.48	-13	-39.48	-54.88	1.37	5.92	V
	3120	-62.00	-13	-49.00	-65.89	1.64	7.68	V
Highest	1568	-66.83	-42.15	-24.68	-69.46	1.09	5.87	H
	2352	-53.51	-13	-40.51	-55.91	1.37	5.92	H
	3128	-61.64	-13	-48.64	-65.53	1.64	7.68	H
	1568	-66.27	-42.15	-24.12	-68.90	1.09	5.87	V
	2352	-53.01	-13	-40.01	-55.41	1.37	5.92	V
	3128	-61.95	-13	-48.95	-65.84	1.64	7.68	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)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	1552	-63.38	-13	-50.38	-66.01	1.09	5.87	H
	2336	-45.58	-13	-32.58	-47.98	1.37	5.92	H
	3112	-61.75	-13	-48.75	-65.64	1.64	7.68	H
	1552	-63.21	-13	-50.21	-65.84	1.09	5.87	V
	2336	-43.43	-13	-30.43	-45.83	1.37	5.92	V
	3112	-61.39	-13	-48.39	-65.28	1.64	7.68	V

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

LTE Band 41 / 20MHz / QPSK								
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	4994.18	-61.94	-25	-36.94	-72.15	3.03	13.24	H
	7491.27	-63.23	-25	-38.23	-72.68	3.56	13.01	H
	9988.36	-60.63	-25	-35.63	-70.15	3.92	13.44	H
	4994.18	-61.88	-25	-36.88	-72.09	3.03	13.24	V
	7491.27	-61.17	-25	-36.17	-70.62	3.56	13.01	V
	9988.36	-59.21	-25	-34.21	-68.73	3.92	13.44	V
Middle	5168	-63.39	-25	-38.39	-73.60	3.03	13.24	H
	7752	-62.23	-25	-37.23	-71.68	3.56	13.01	H
	10336	-60.89	-25	-35.89	-70.41	3.92	13.44	H
	5168	-62.57	-25	-37.57	-72.78	3.03	13.24	V
	7752	-61.69	-25	-36.69	-71.14	3.56	13.01	V
	10336	-57.83	-25	-32.83	-67.35	3.92	13.44	V
Highest	5342.18	-61.89	-25	-36.89	-72.10	3.03	13.24	H
	8013.27	-62.38	-25	-37.38	-71.83	3.56	13.01	H
	10684.36	-61.07	-25	-36.07	-70.59	3.92	13.44	H
	5342.18	-58.60	-25	-33.60	-68.81	3.03	13.24	V
	8013.27	-61.12	-25	-36.12	-70.57	3.56	13.01	V
	10684.36	-57.38	-25	-32.38	-66.90	3.92	13.44	V

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



LTE Band 71 / 20MHz / QPSK								
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	1328	-69.04	-13	-56.04	-70.79	1.02	4.92	H
	1992	-63.07	-13	-50.07	-65.04	1.27	5.39	H
	2656	-61.09	-13	-48.09	-64.02	1.49	6.57	H
	1328	-68.06	-13	-55.06	-69.81	1.02	4.92	V
	1992	-62.36	-13	-49.36	-64.33	1.27	5.39	V
	2656	-60.41	-13	-47.41	-63.34	1.49	6.57	V
Middle	1352	-69.30	-13	-56.30	-71.05	1.02	4.92	H
	2024	-64.05	-13	-51.05	-66.02	1.27	5.39	H
	2696	-61.89	-13	-48.89	-64.82	1.49	6.57	H
	1352	-68.02	-13	-55.02	-69.77	1.02	4.92	V
	2024	-63.26	-13	-50.26	-65.23	1.27	5.39	V
	2696	-61.12	-13	-48.12	-64.05	1.49	6.57	V
Highest	1360	-67.93	-13	-54.93	-69.68	1.02	4.92	H
	2040	-63.42	-13	-50.42	-65.39	1.27	5.39	H
	2712	-60.87	-13	-47.87	-63.80	1.49	6.57	H
	1360	-67.53	-13	-54.53	-69.28	1.02	4.92	V
	2040	-62.60	-13	-49.60	-64.57	1.27	5.39	V
	2712	-60.60	-13	-47.60	-63.53	1.49	6.57	V

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