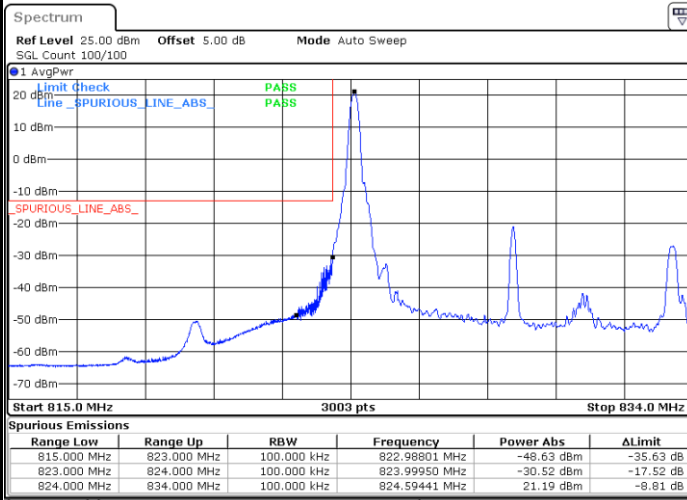




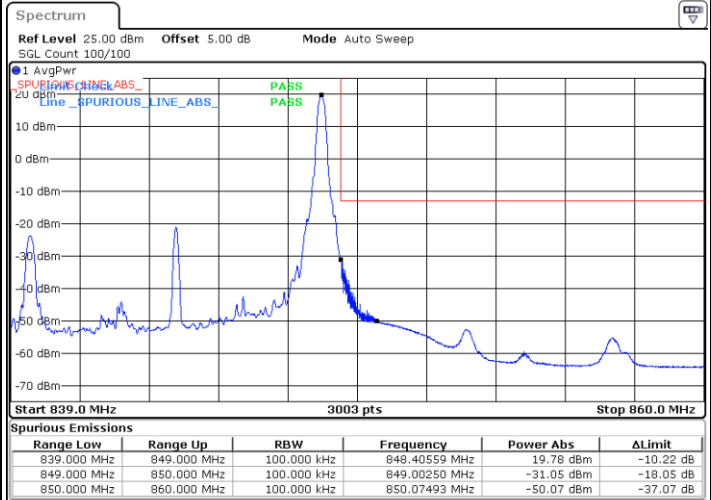
LTE Band 5 / 10MHz / 16QAM

Lowest Band Edge / 1 RB



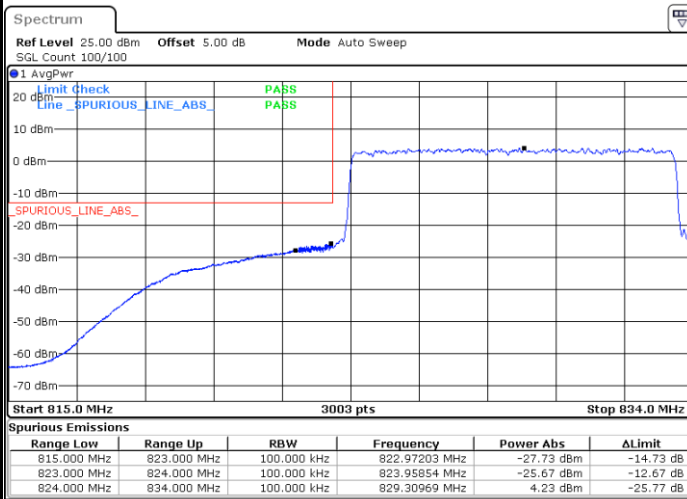
Date: 23.FEB.2024 00:08:25

Highest Band Edge / 1 RB



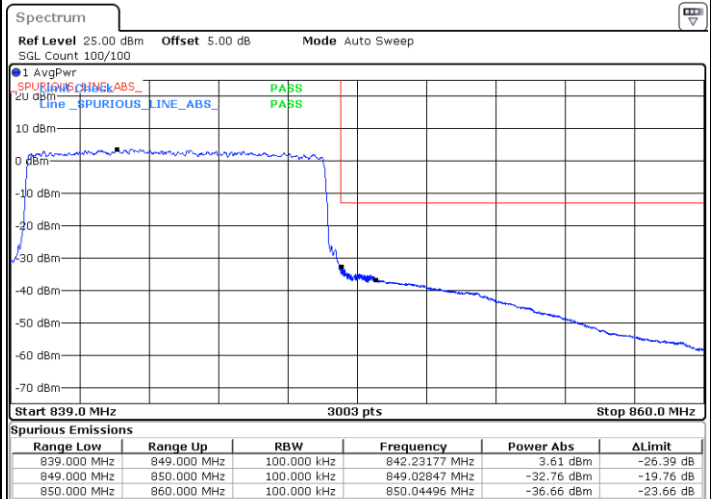
Date: 23.FEB.2024 00:14:26

Lowest Band Edge / Full RB



Date: 23.FEB.2024 00:09:57

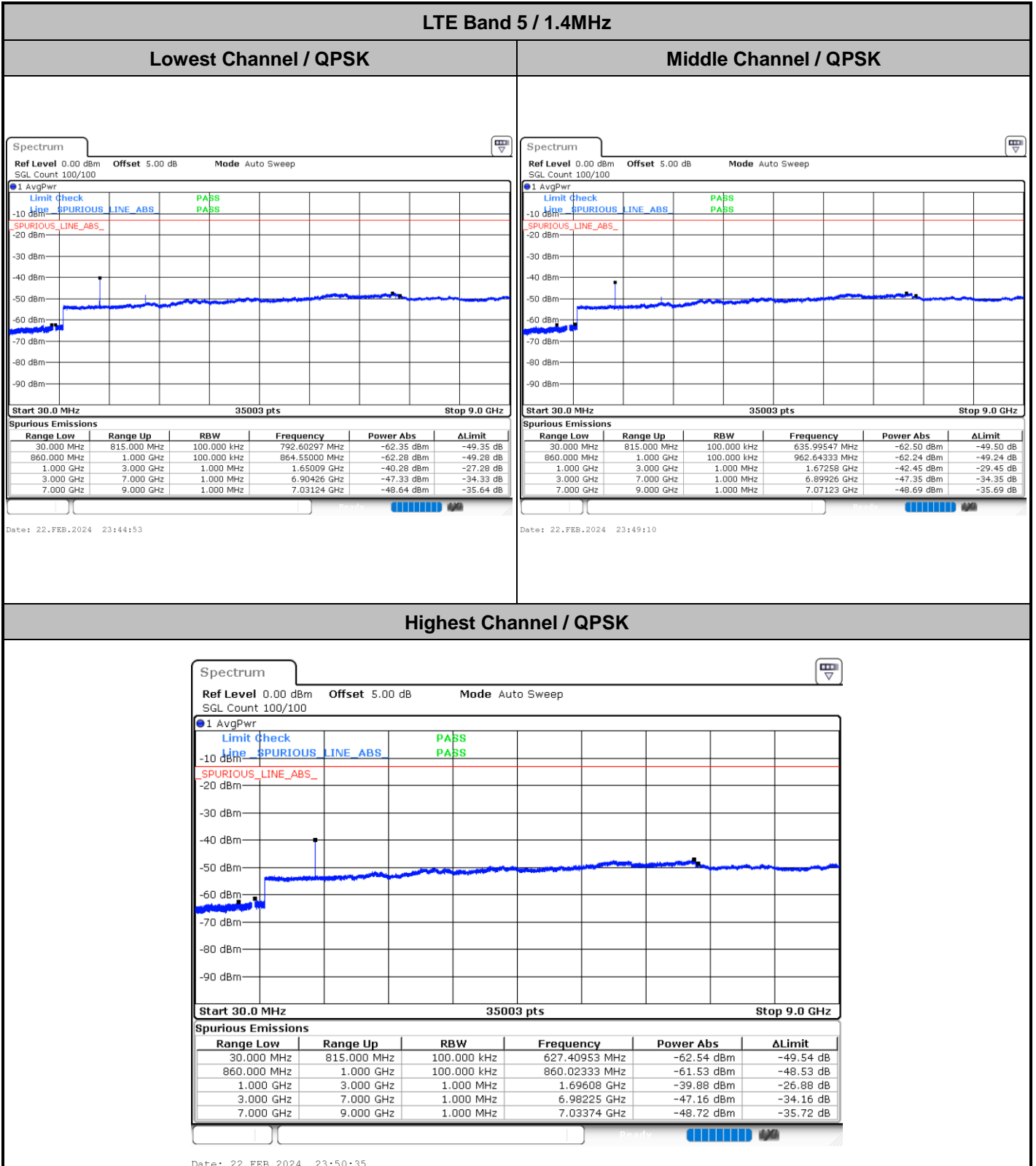
Highest Band Edge / Full RB



Date: 23.FEB.2024 00:16:03



Conducted Spurious Emission

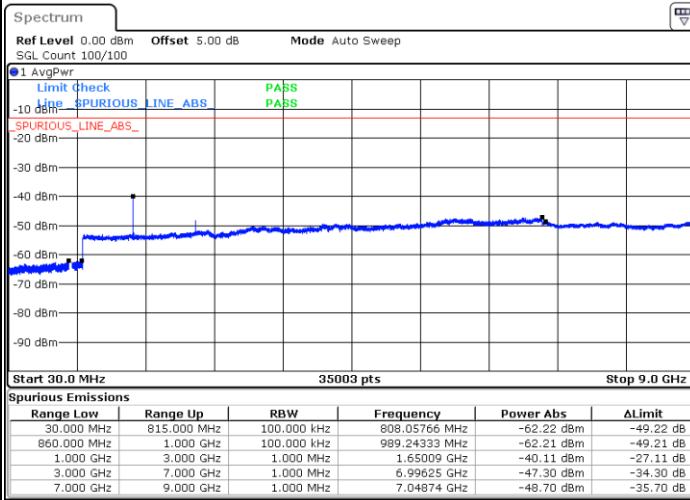




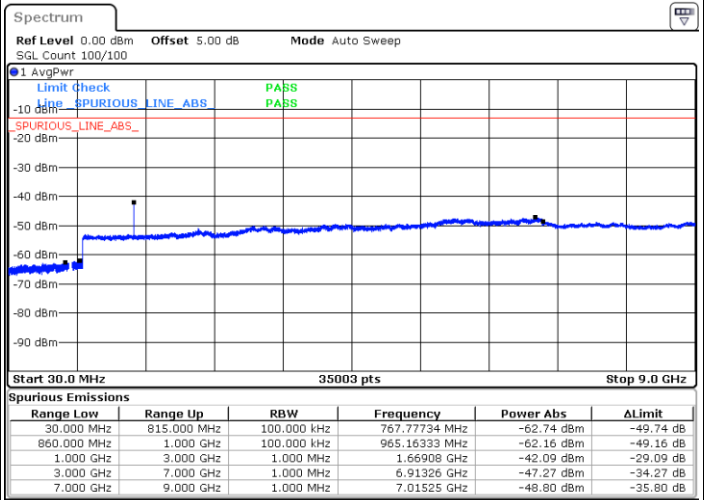
LTE Band 5 / 5MHz

Lowest Channel / QPSK

Middle Channel / QPSK

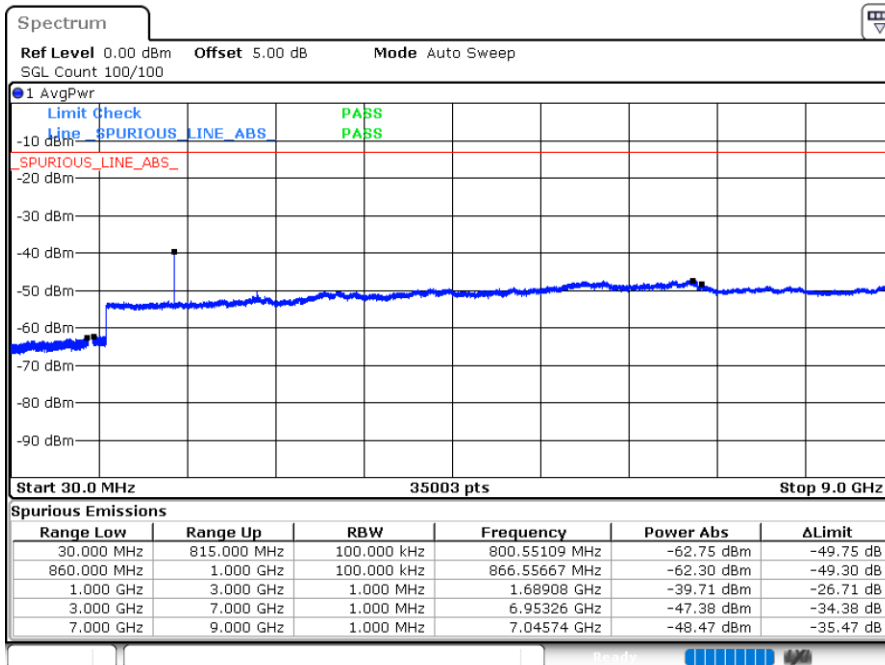


Date: 22.FEB.2024 23:55:58



Date: 23.FEB.2024 00:40:50

Highest Channel / QPSK



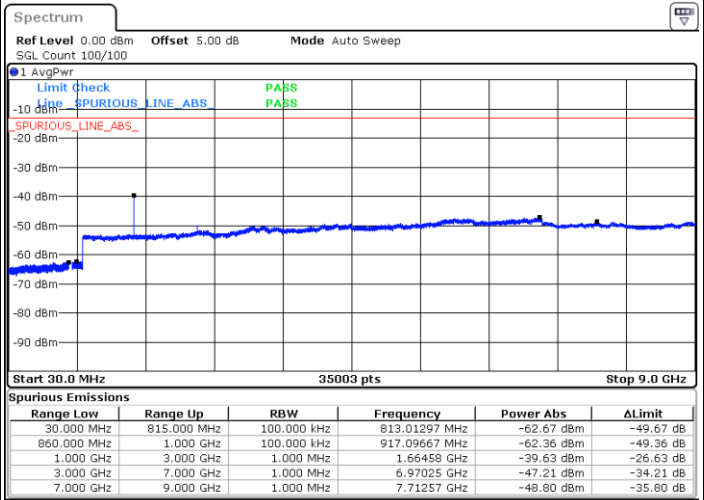
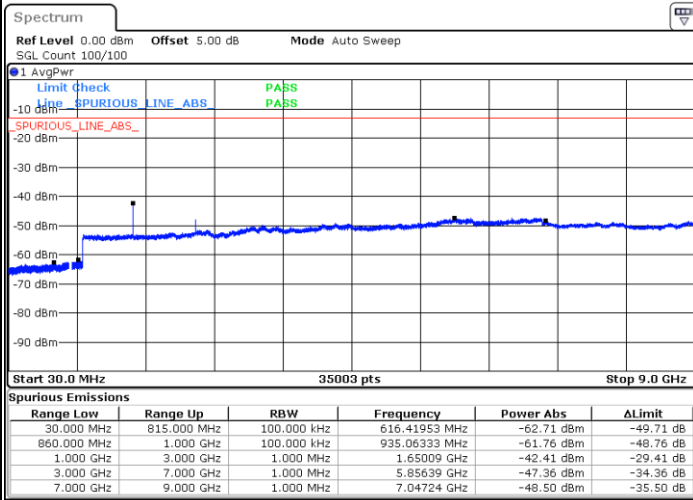
Date: 23.FEB.2024 00:01:42



LTE Band 5 / 10MHz

Lowest Channel / QPSK

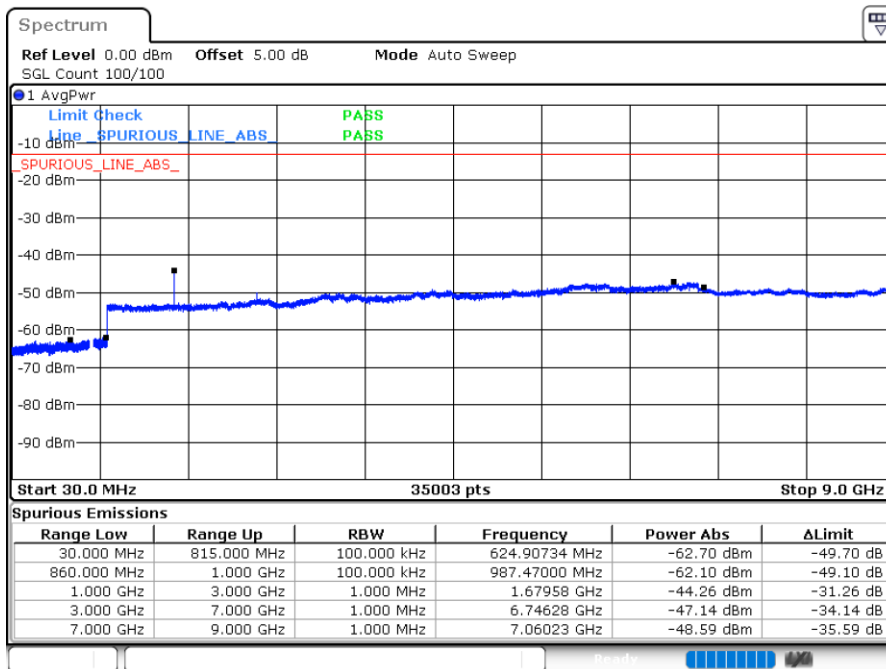
Middle Channel / QPSK



Date: 23.FEB.2024 00:07:05

Date: 23.FEB.2024 00:11:23

Highest Channel / QPSK



Date: 23.FEB.2024 00:12:49



Frequency Stability

Test Conditions		LTE Band 5 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	2.5ppm
		Deviation (ppm)	Result
50	Normal Voltage	0.0022	PASS
40	Normal Voltage	0.0016	
30	Normal Voltage	0.0028	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0042	
0	Normal Voltage	0.0027	
-10	Normal Voltage	0.0051	
-20	Normal Voltage	0.0043	
-30	Normal Voltage	0.0011	
20	Maximum Voltage	0.0040	
20	Normal Voltage	0.0030	
20	Minimum Voltage	0.0034	

Note:

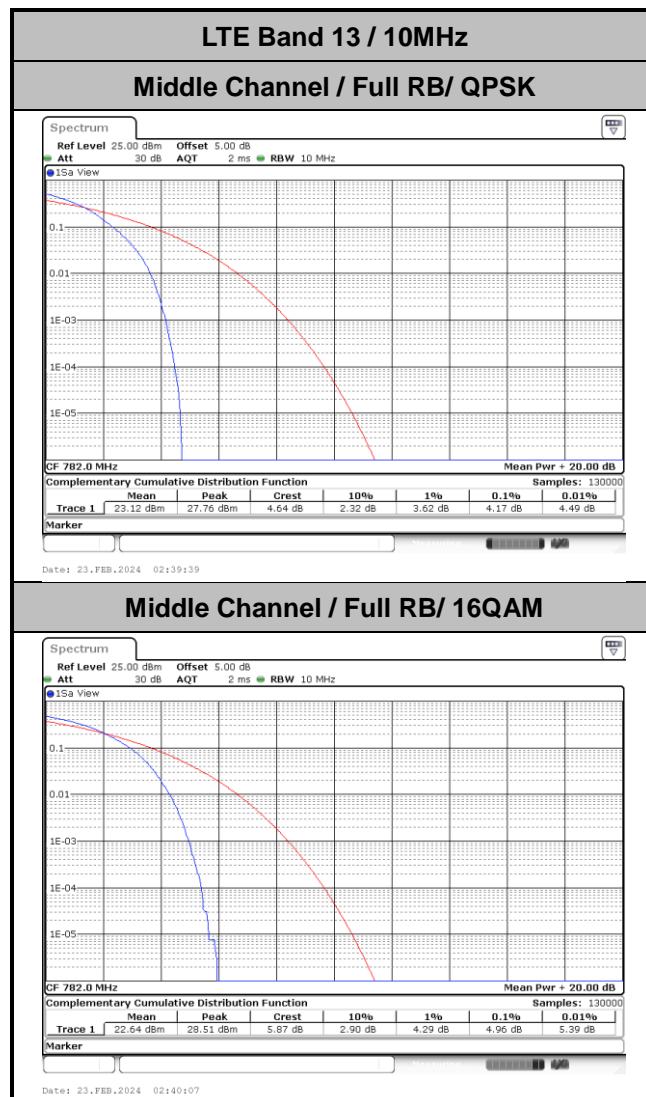
1. Normal Voltage =3.8 V. ; Minimum Voltage =3.4 V. ; Maximum Voltage =4.35 V.
2. The frequency fundamental emissions stay within the authorized frequency block.



LTE Band 13

Peak-to-Average Ratio

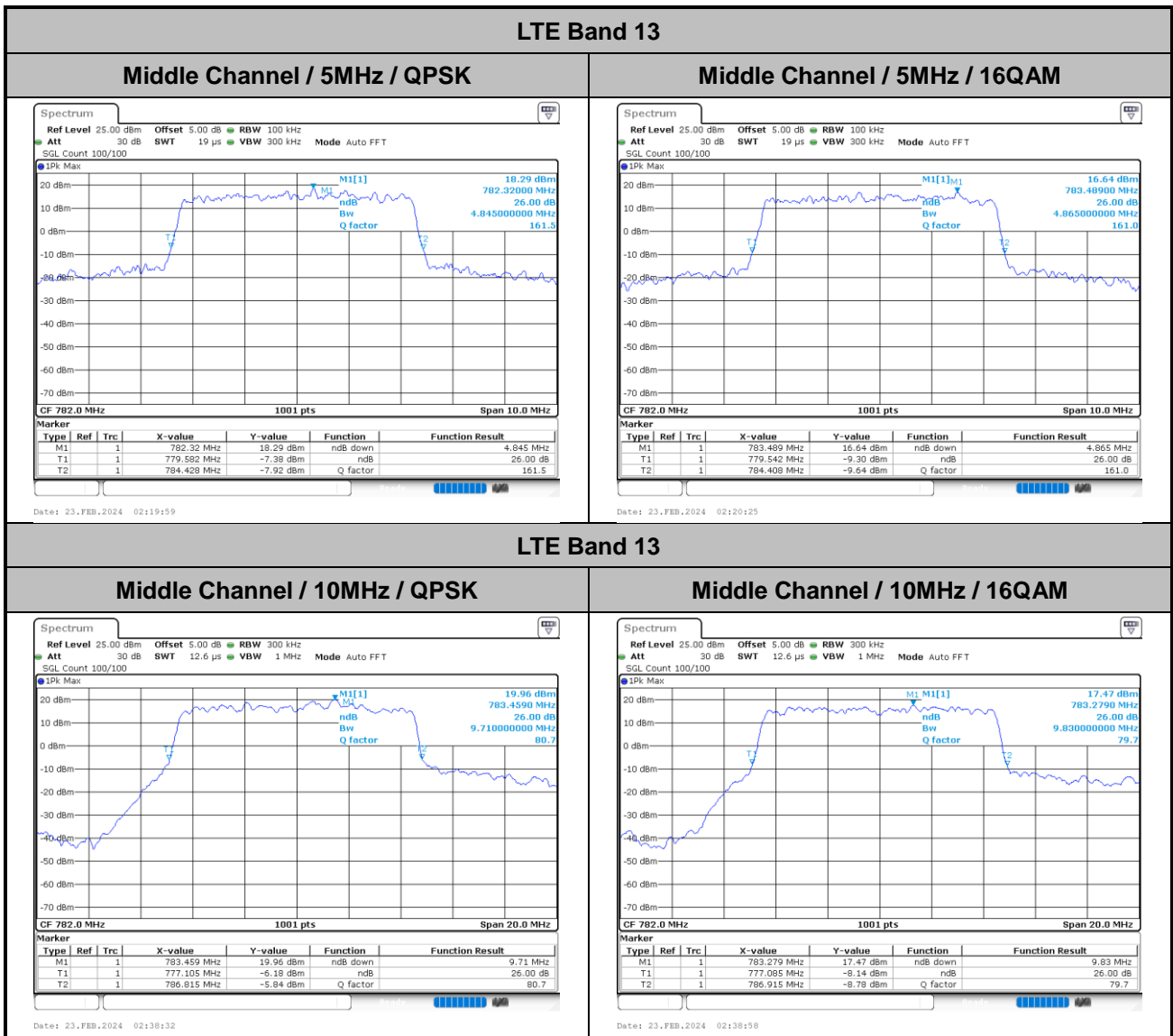
Mode	LTE Band 13 / 10MHz		
Mod.	QPSK	16QAM	Limit: 13dB
RB Size	Full RB	Full RB	Result
Middle CH	4.17	4.96	PASS





26dB Bandwidth

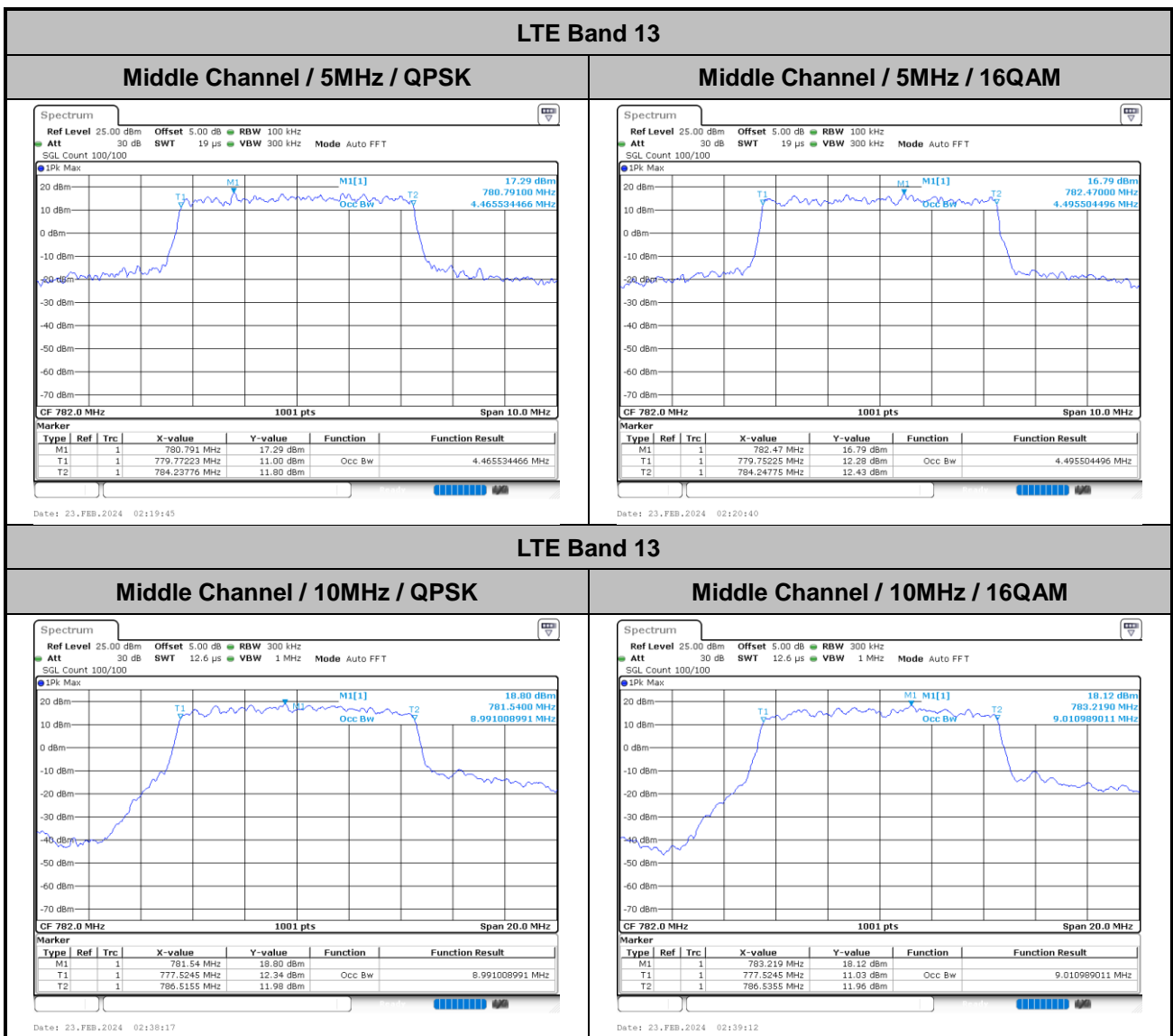
Mode	LTE Band 13 : 26dB BW(MHz)	
BW	5MHz	
Mod.	QPSK	16QAM
Middle CH	4.85	4.87
BW	10MHz	
Mod.	QPSK	16QAM
Middle CH	9.71	9.83





Occupied Bandwidth

Mode	LTE Band 13 : 99%OBW(MHz)	
BW	5MHz	
Mod.	QPSK	16QAM
Middle CH	4.47	4.50
BW	10MHz	
Mod.	QPSK	16QAM
Middle CH	8.99	9.01



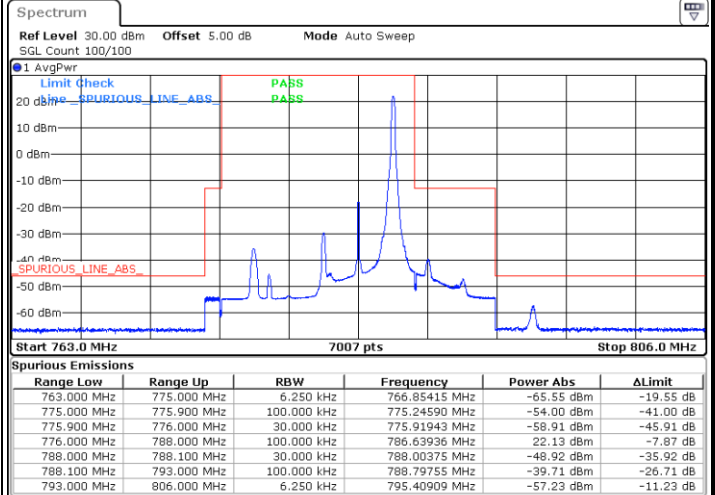
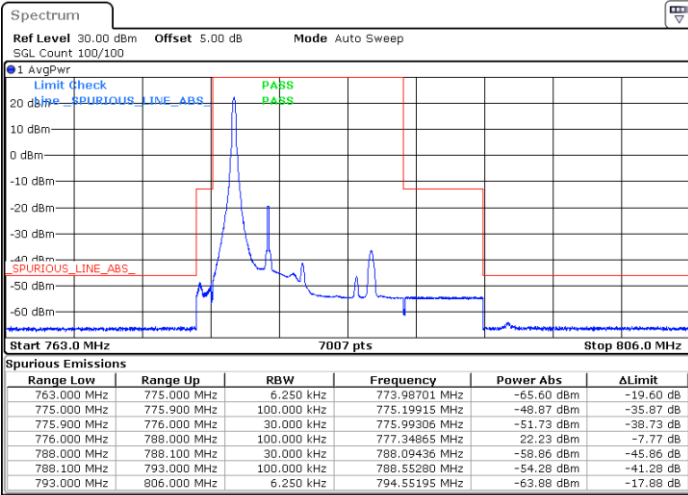


Conducted Band Edge

LTE Band 13 / 5MHz / QPSK

Lowest Band Edge / 1 RB

Highest Band Edge / 1 RB

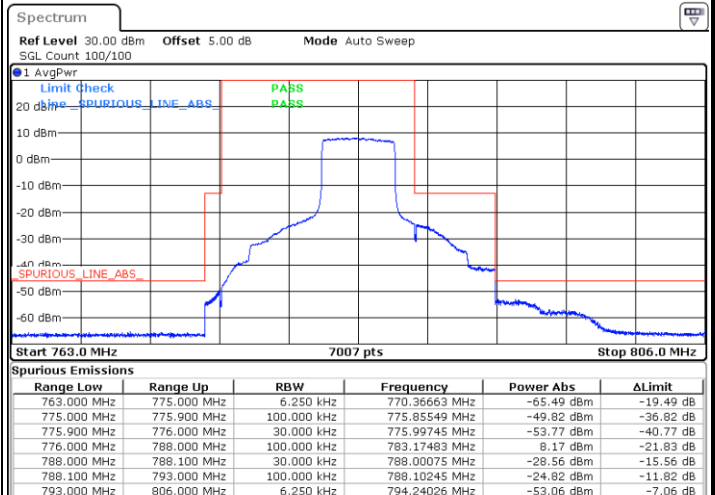
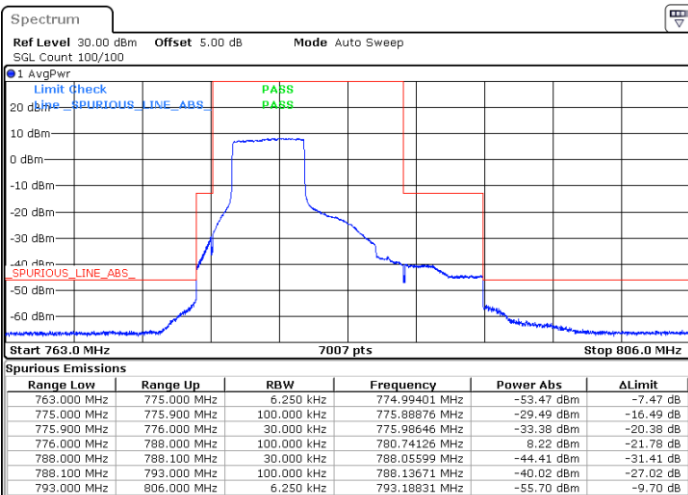


Date: 23.FEB.2024 02:13:54

Date: 23.FEB.2024 02:23:24

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



Date: 23.FEB.2024 02:17:53

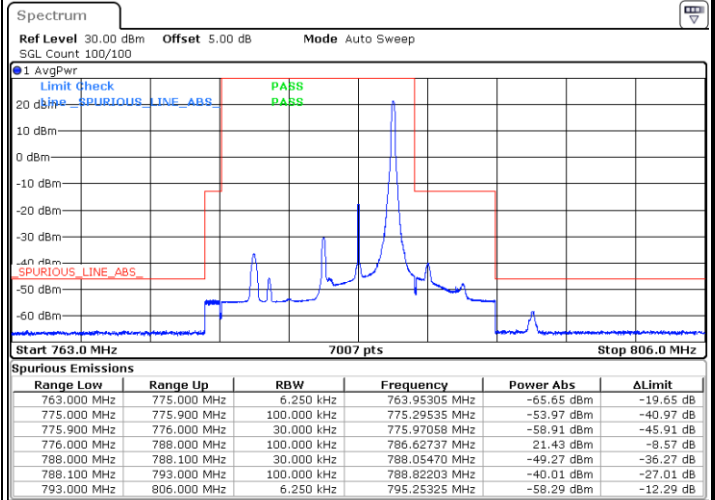
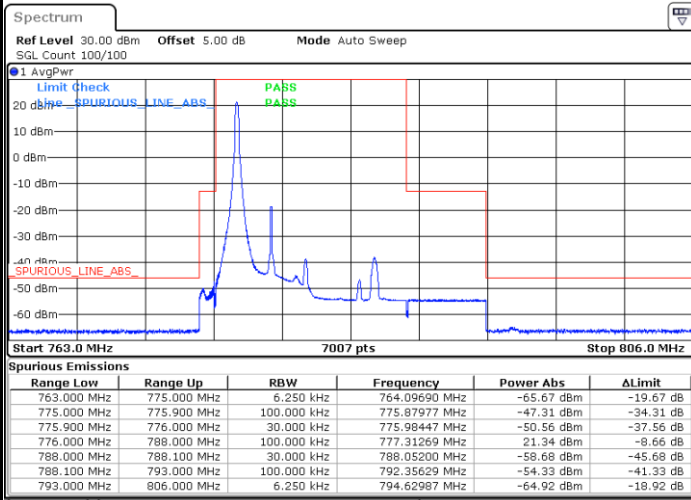
Date: 23.FEB.2024 02:27:24



LTE Band 13 / 5MHz / 16QAM

Lowest Band Edge / 1RB

Highest Band Edge / 1 RB

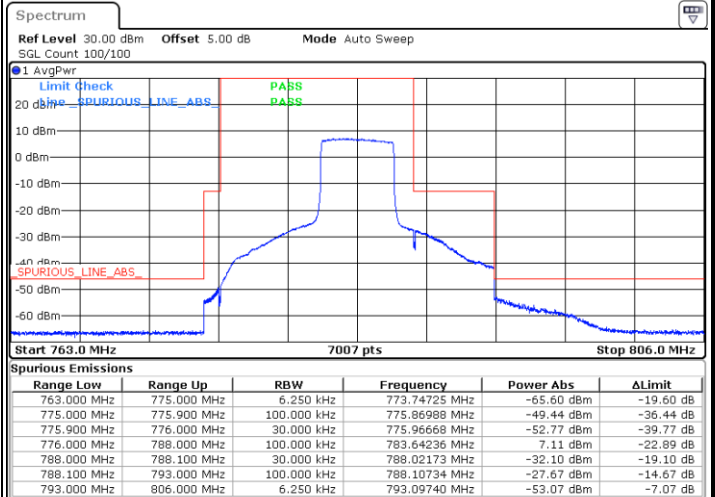
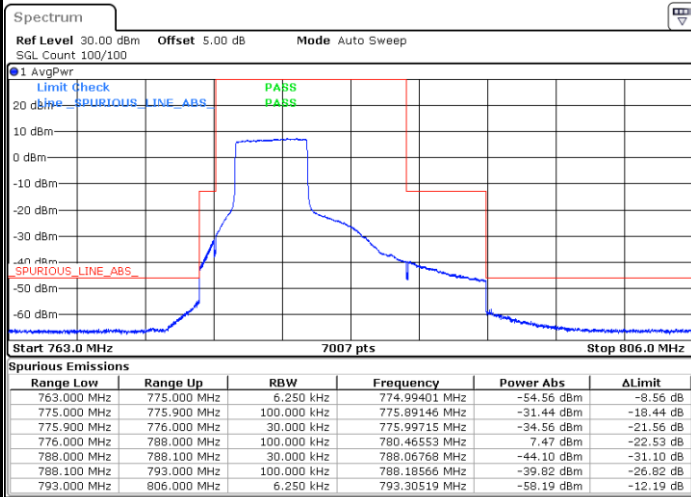


Date: 23.FEB.2024 02:15:13

Date: 23.FEB.2024 02:24:44

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



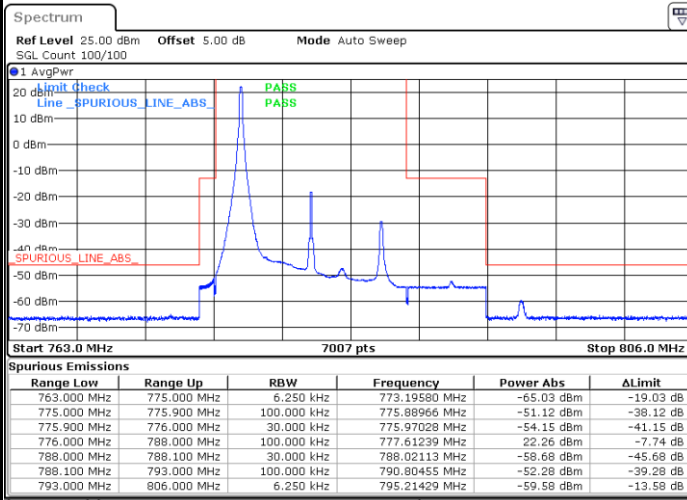
Date: 23.FEB.2024 02:16:33

Date: 23.FEB.2024 02:26:04



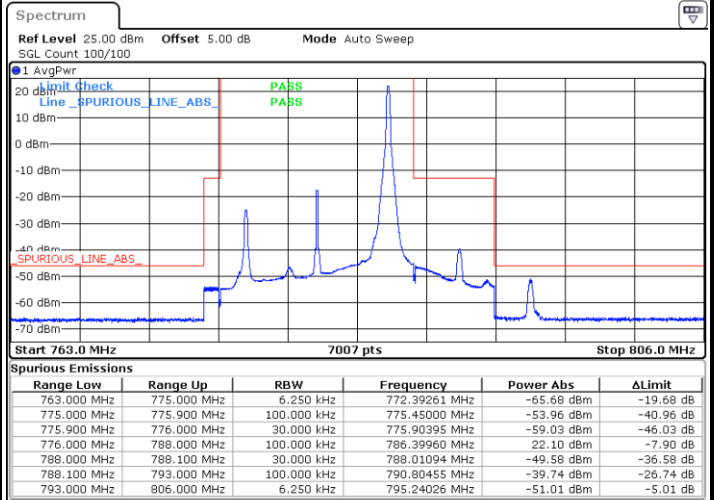
LTE Band 13 / 10MHz / QPSK

middle Band Edge / 1 RB



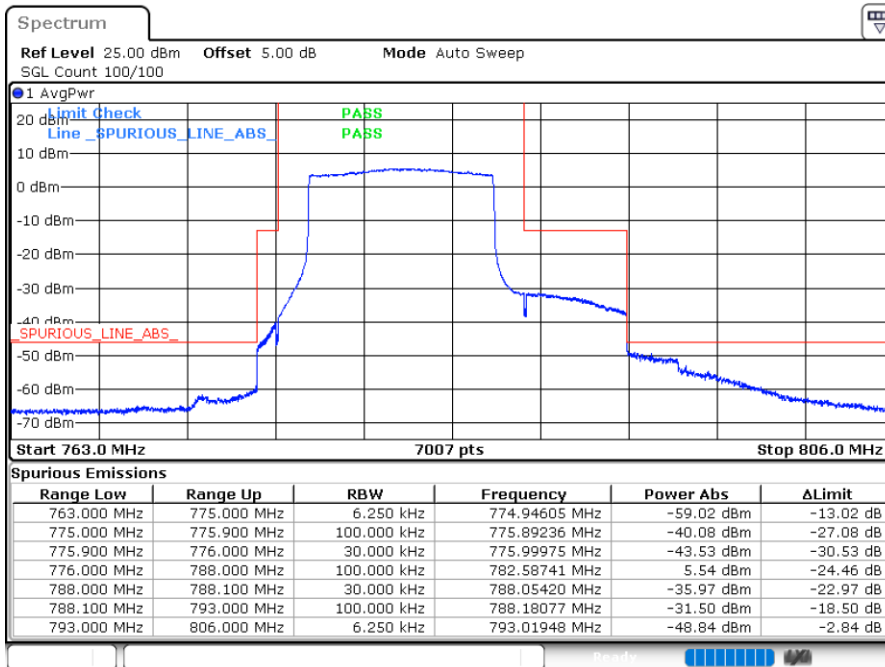
Date: 23.FEB.2024 02:31:13

middle Band Edge / 1 RB



Date: 23.FEB.2024 02:36:31

Middle Band Edge / Full RB

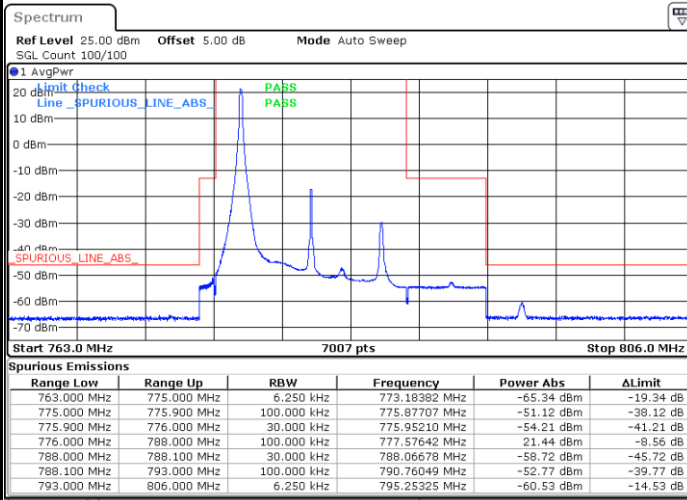


Date: 23.FEB.2024 03:08:19



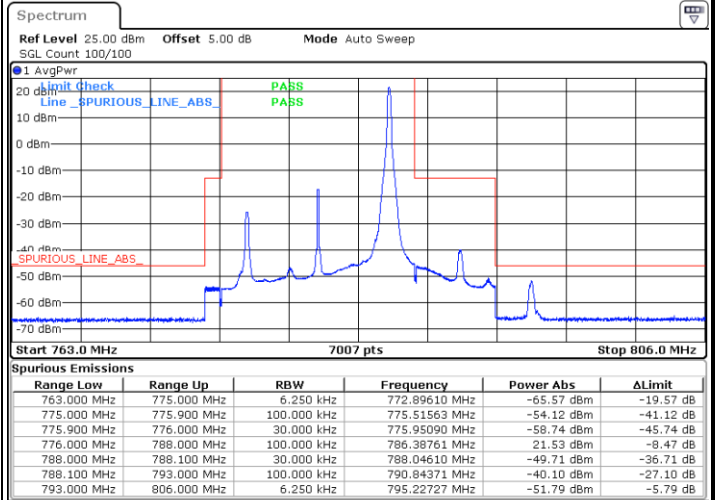
LTE Band 13 / 10MHz / 16QAM

middle Band Edge / 1 RB



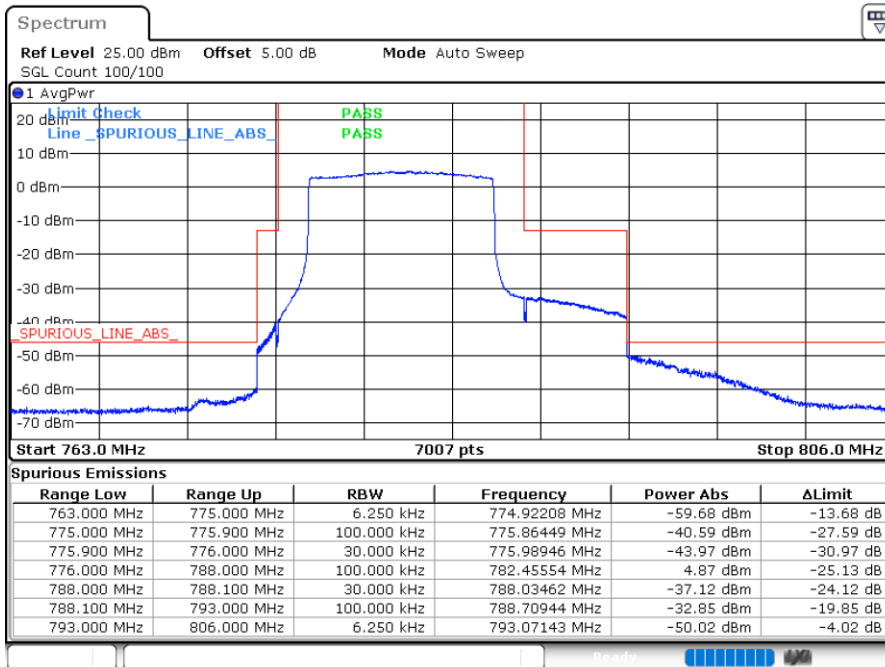
Date: 23.FEB.2024 02:32:33

middle Band Edge / 1 RB



Date: 23.FEB.2024 02:37:50

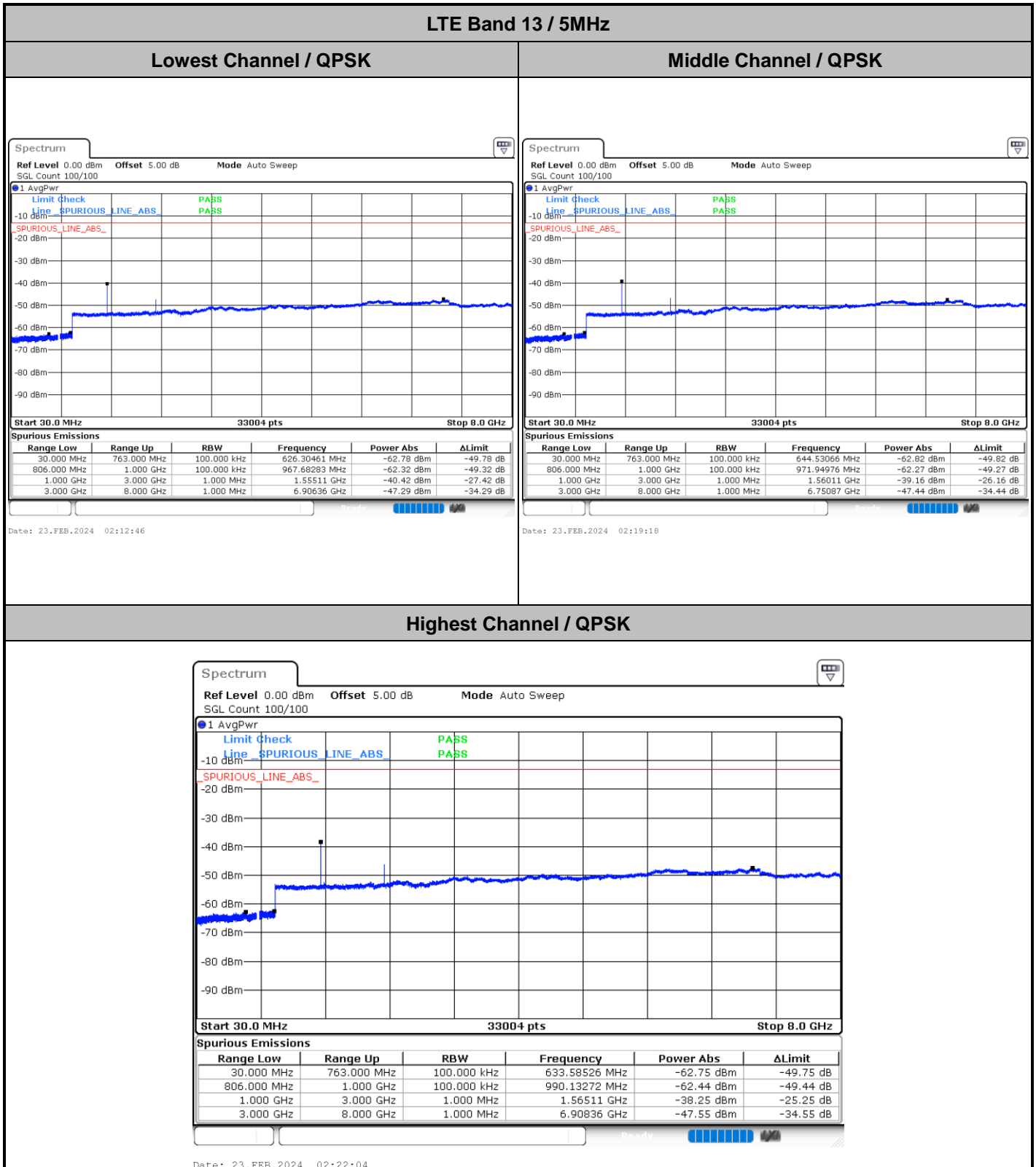
middle Band Edge / Full RB



Date: 23.FEB.2024 03:07:00



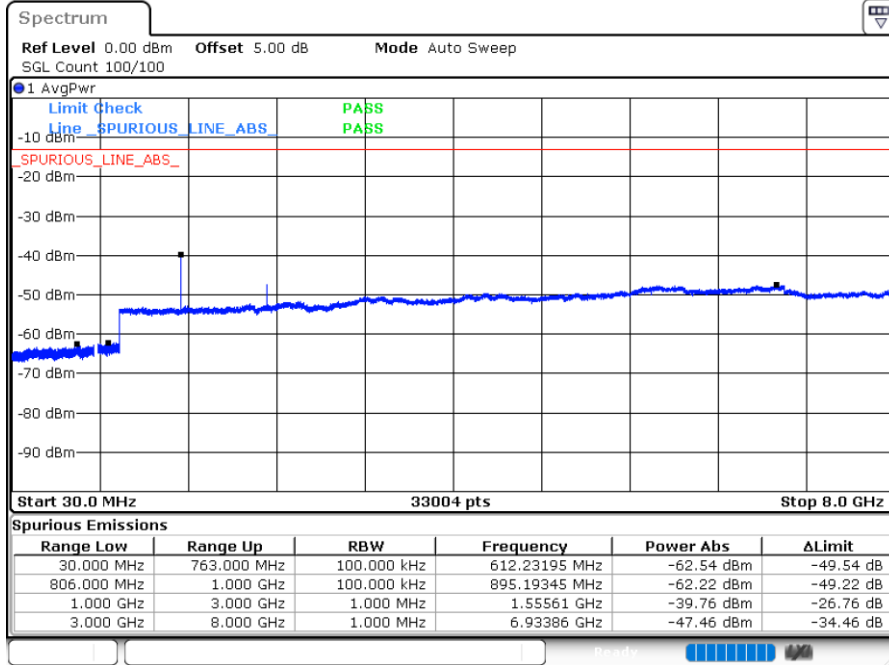
Conducted Spurious Emission





LTE Band 13 / 10MHz

Middle Channel / QPSK



Date: 23.FEB.2024 02:30:05

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	0.0045	PASS
40	Normal Voltage	0.0036	
30	Normal Voltage	0.0052	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0009	
0	Normal Voltage	0.0023	
-10	Normal Voltage	0.0016	
-20	Normal Voltage	0.0014	
-30	Normal Voltage	0.0056	
20	Maximum Voltage	0.0064	
20	Normal Voltage	0.0002	
20	Minimum Voltage	0.0026	

Note:

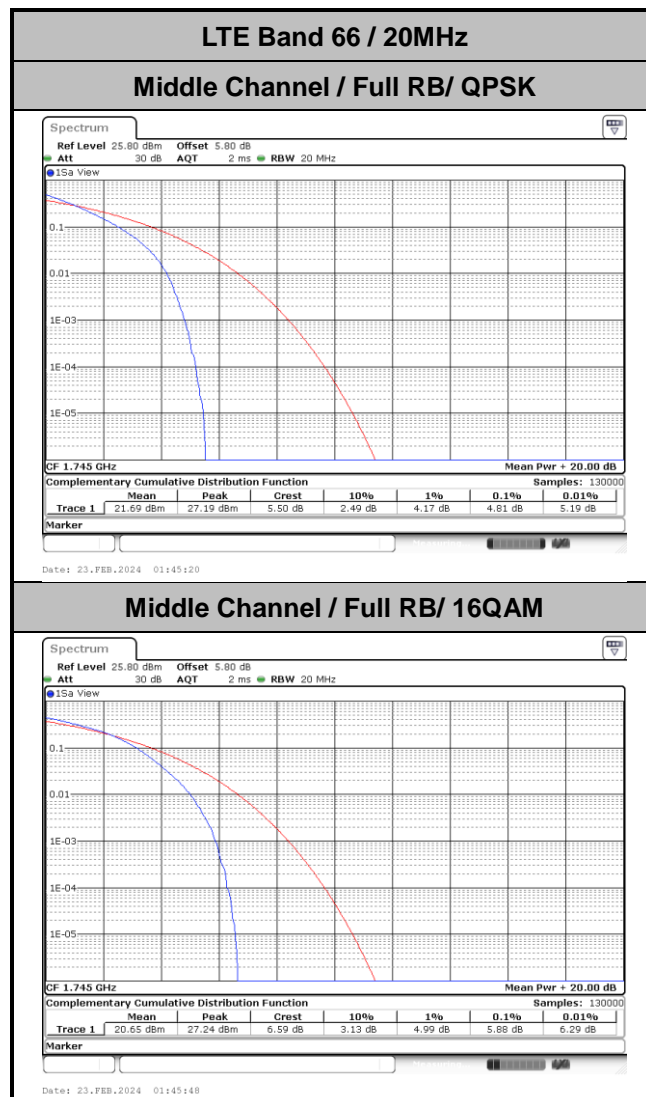
1. Normal Voltage =3.8 V. ; Minimum Voltage =3.4V. ; Maximum Voltage =4.35 V.
2. The frequency fundamental emissions stay within the authorized frequency block.



LTE Band 66

Peak-to-Average Ratio

Mode	LTE Band 66 / 20MHz		
Mod.	QPSK	16QAM	Limit: 13dB
RB Size	Full RB	Full RB	Result
Middle CH	4.81	5.88	PASS





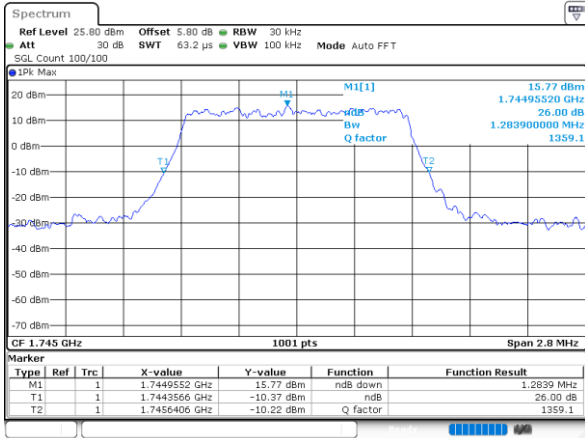
26dB Bandwidth

Mode	LTE Band 66 : 26dB BW(MHz)	
BW	1.4MHz	
Mod.	QPSK	16QAM
Middle CH	1.28	1.28
BW	3MHz	
Mod.	QPSK	16QAM
Middle CH	3.01	3.03
BW	5MHz	
Mod.	QPSK	16QAM
Middle CH	4.92	4.98
BW	10MHz	
Mod.	QPSK	16QAM
Middle CH	9.75	9.79
BW	15MHz	
Mod.	QPSK	16QAM
Middle CH	14.42	14.51
BW	20MHz	
Mod.	QPSK	16QAM
Middle CH	18.82	19.26



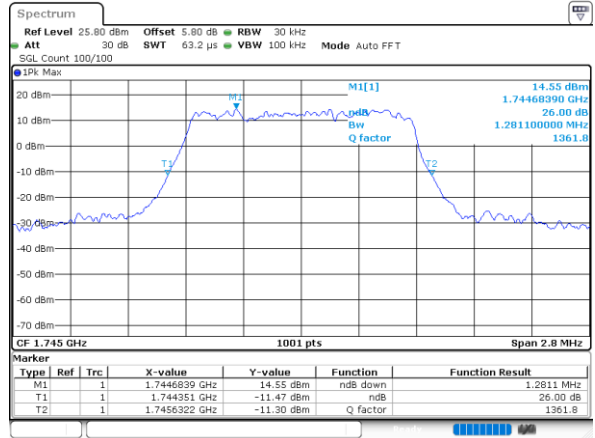
LTE Band 66

Middle Channel / 1.4MHz / QPSK



Date: 23.FEB.2024 01:03:45

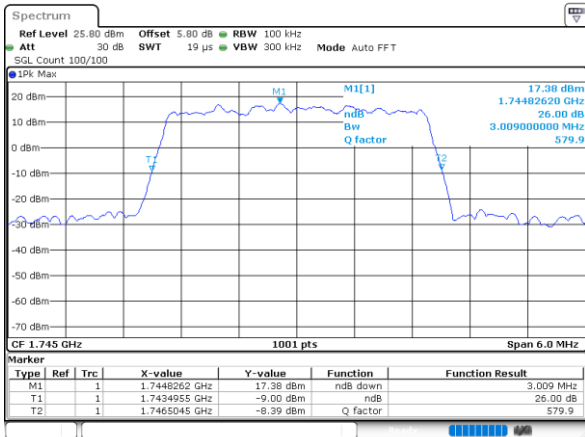
Middle Channel / 1.4MHz / 16QAM



Date: 23.FEB.2024 01:04:11

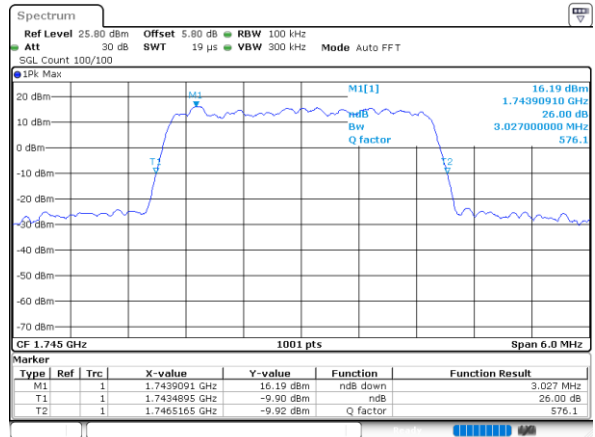
LTE Band 66

Middle Channel / 3MHz / QPSK



Date: 23.FEB.2024 01:10:20

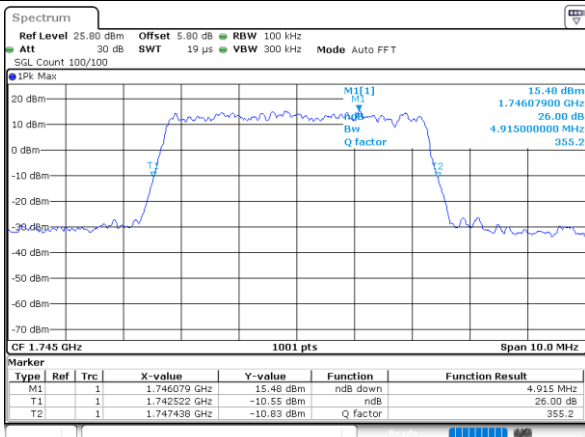
Middle Channel / 3MHz / 16QAM



Date: 23.FEB.2024 01:10:47

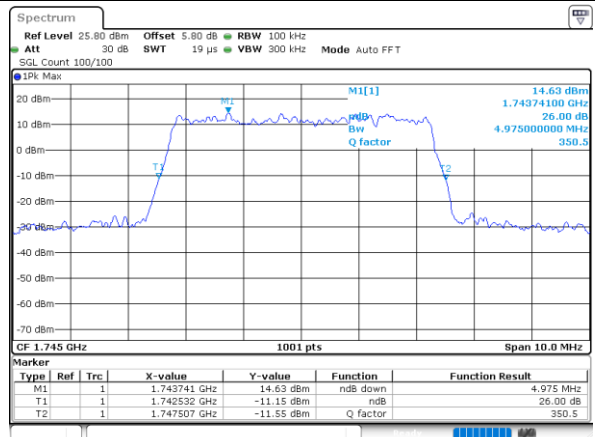
LTE Band 66

Middle Channel / 5MHz / QPSK



Date: 23.FEB.2024 01:17:04

Middle Channel / 5MHz / 16QAM

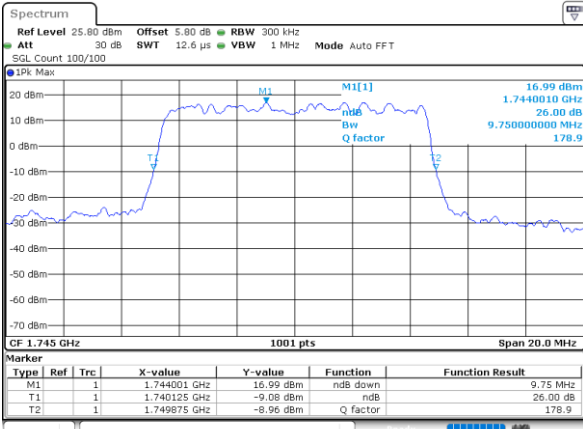


Date: 23.FEB.2024 01:17:31



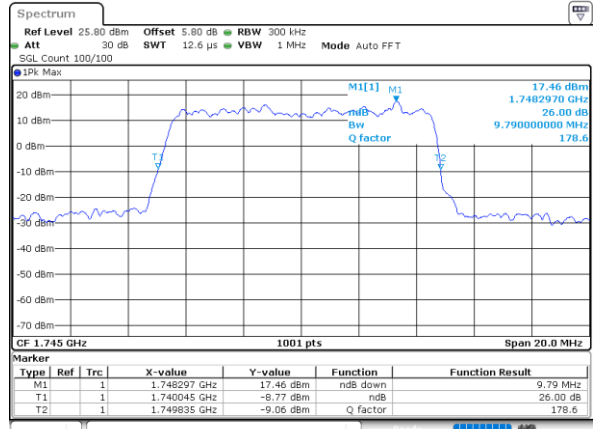
LTE Band 66

Middle Channel / 10MHz / QPSK



Date: 23.FEB.2024 01:24:53

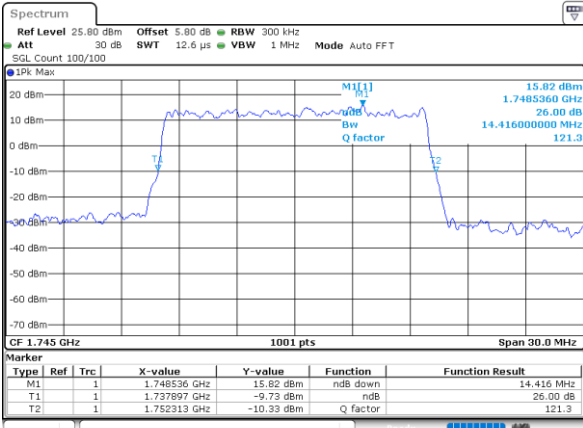
Middle Channel / 10MHz / 16QAM



Date: 23.FEB.2024 01:25:120

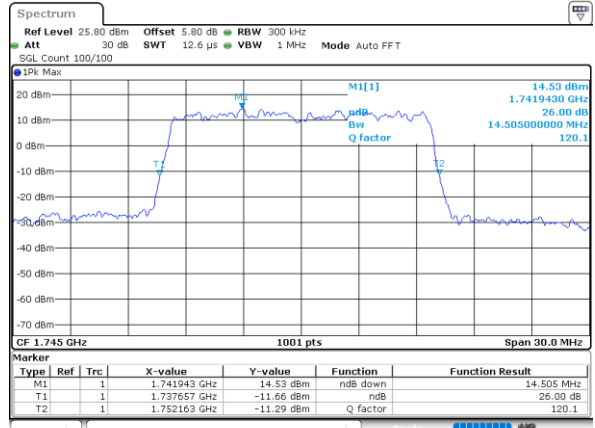
LTE Band 66

Middle Channel / 15MHz / QPSK



Date: 23.FEB.2024 01:31:28

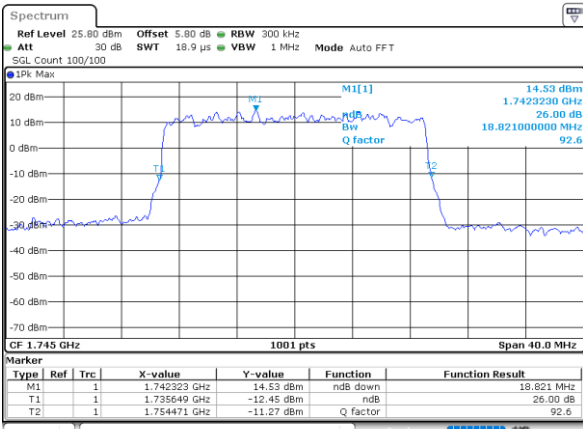
Middle Channel / 15MHz / 16QAM



Date: 23.FEB.2024 01:31:155

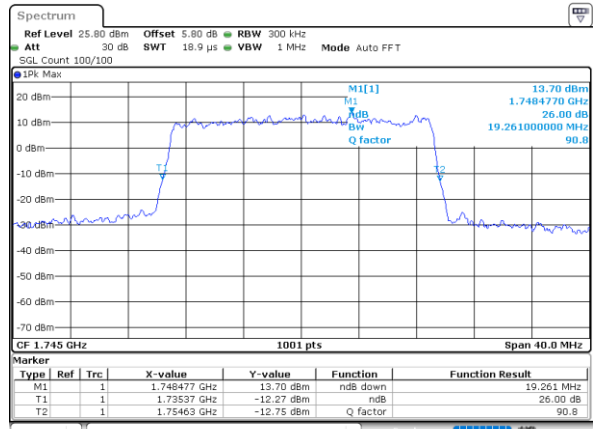
LTE Band 66

Middle Channel / 20MHz / QPSK



Date: 23.FEB.2024 01:44:25

Middle Channel / 20MHz / 16QAM



Date: 23.FEB.2024 01:44:152



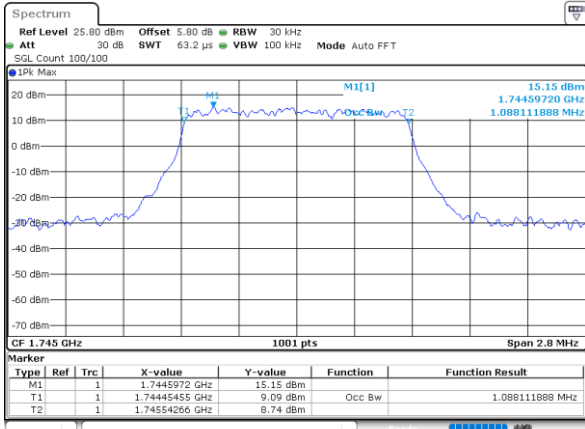
Occupied Bandwidth

Mode	LTE Band 66 : 99%OBW(MHz)	
BW	1.4MHz	
Mod.	QPSK	16QAM
Middle CH	1.09	1.09
BW	3MHz	
Mod.	QPSK	16QAM
Middle CH	2.71	2.72
BW	5MHz	
Mod.	QPSK	16QAM
Middle CH	4.49	4.49
BW	10MHz	
Mod.	QPSK	16QAM
Middle CH	8.99	9.01
BW	15MHz	
Mod.	QPSK	16QAM
Middle CH	13.37	13.34
BW	20MHz	
Mod.	QPSK	16QAM
Middle CH	17.82	17.82



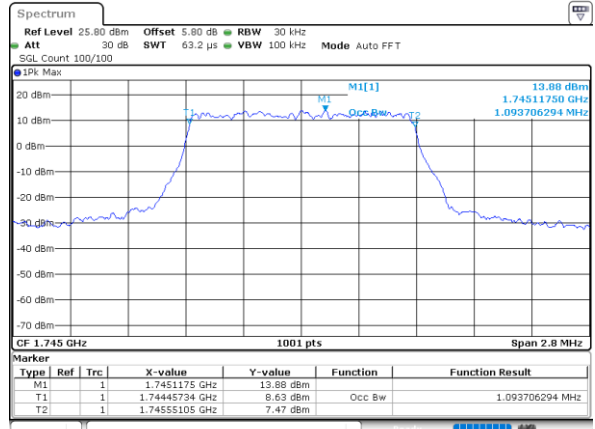
LTE Band 66

Middle Channel / 1.4MHz / QPSK



Date: 23.FEB.2024 01:03:30

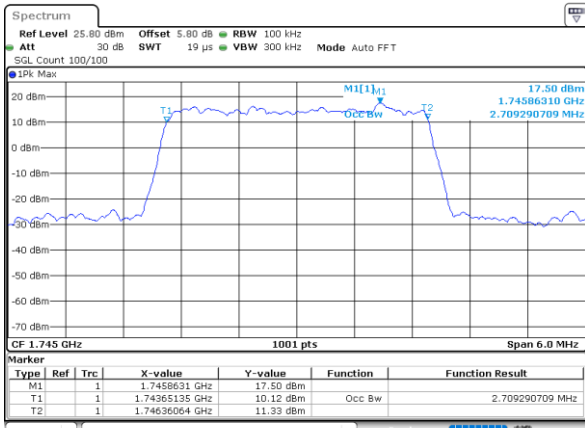
Middle Channel / 1.4MHz / 16QAM



Date: 23.FEB.2024 01:04:26

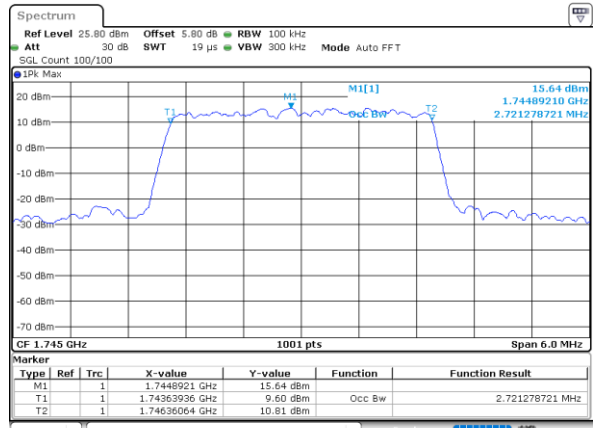
LTE Band 66

Middle Channel / 3MHz / QPSK



Date: 23.FEB.2024 01:10:06

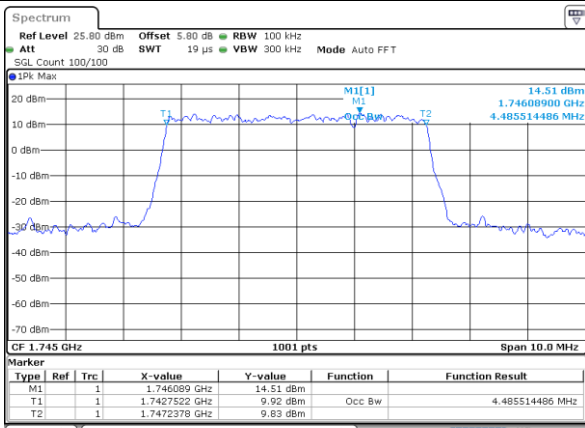
Middle Channel / 3MHz / 16QAM



Date: 23.FEB.2024 01:11:01

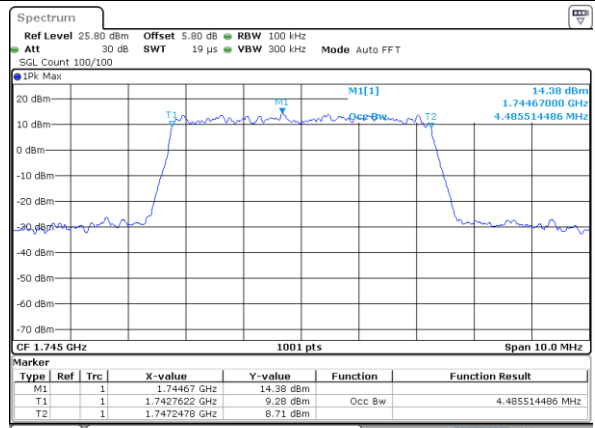
LTE Band 66

Middle Channel / 5MHz / QPSK



Date: 23.FEB.2024 01:16:50

Middle Channel / 5MHz / 16QAM

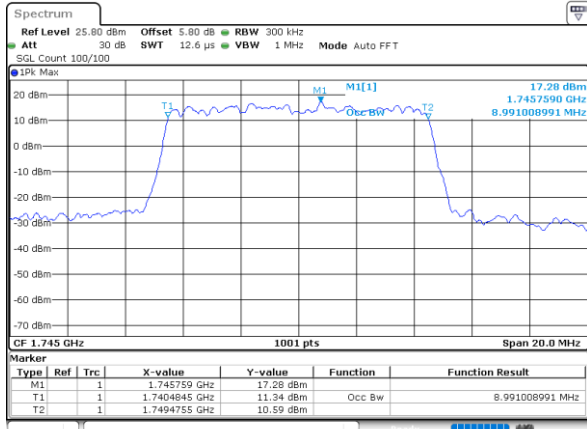


Date: 23.FEB.2024 01:17:45



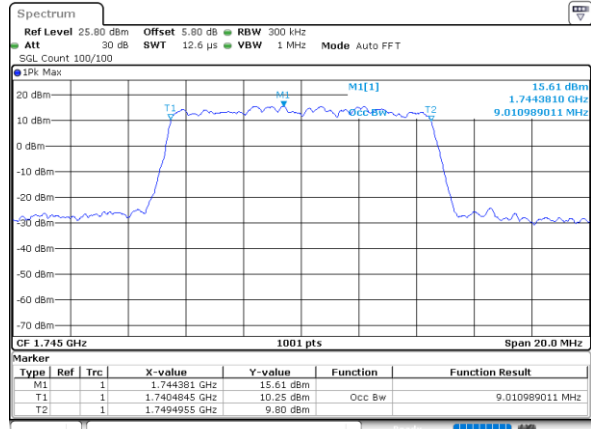
LTE Band 66

Middle Channel / 10MHz / QPSK



Date: 23.FEB.2024 01:24:39

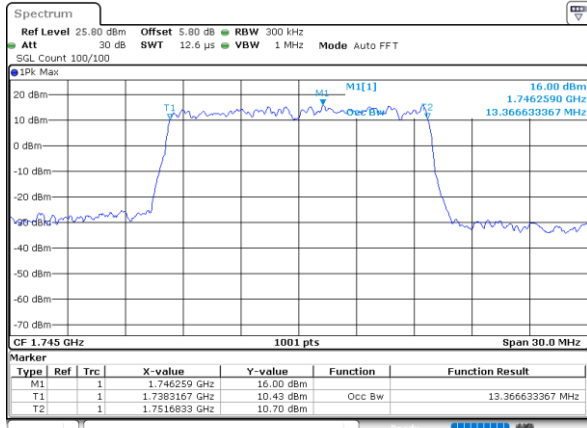
Middle Channel / 10MHz / 16QAM



Date: 23.FEB.2024 01:25:134

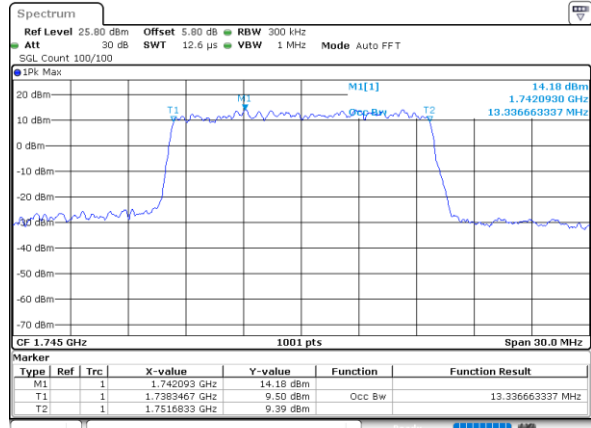
LTE Band 66

Middle Channel / 15MHz / QPSK



Date: 23.FEB.2024 01:31:14

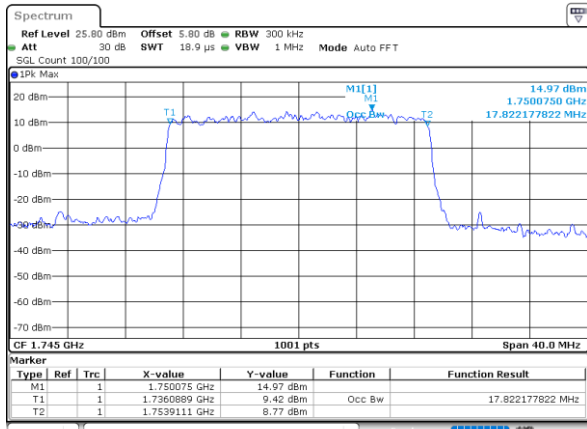
Middle Channel / 15MHz / 16QAM



Date: 23.FEB.2024 01:32:109

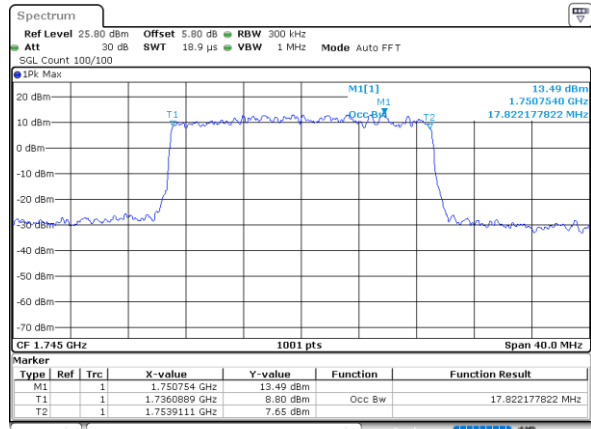
LTE Band 66

Middle Channel / 20MHz / QPSK



Date: 23.FEB.2024 01:43:32

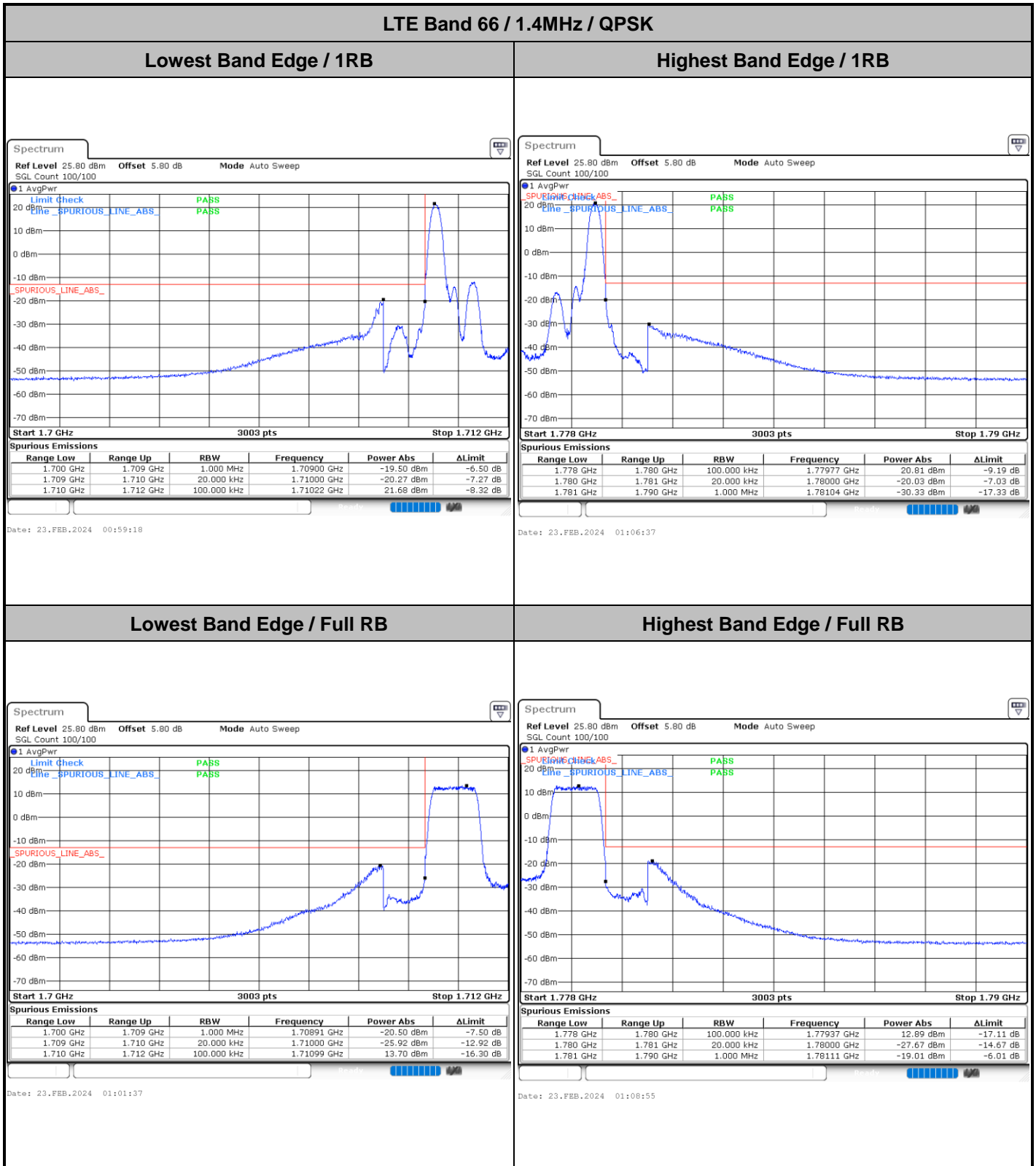
Middle Channel / 20MHz / 16QAM



Date: 23.FEB.2024 01:43:159



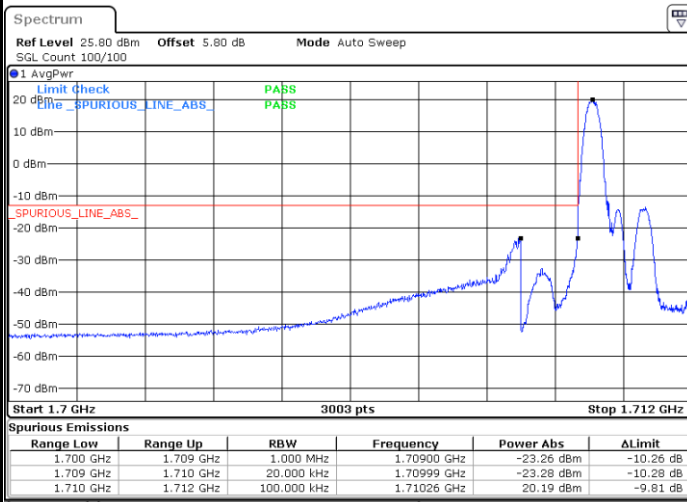
Conducted Band Edge





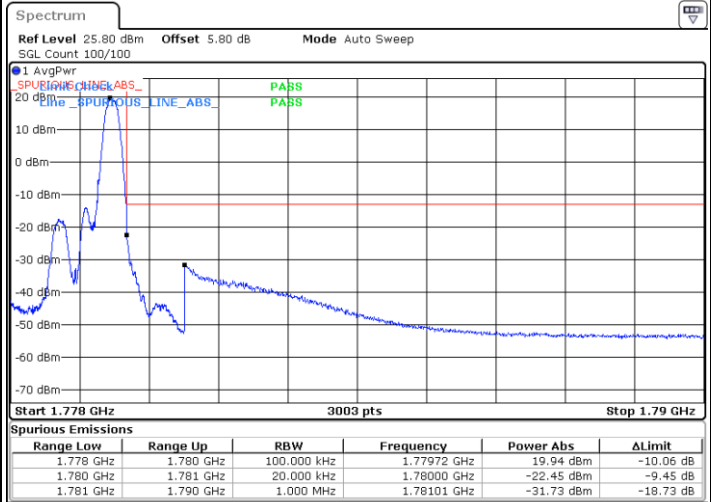
LTE Band 66 / 1.4MHz / 16QAM

Lowest Band Edge / 1 RB



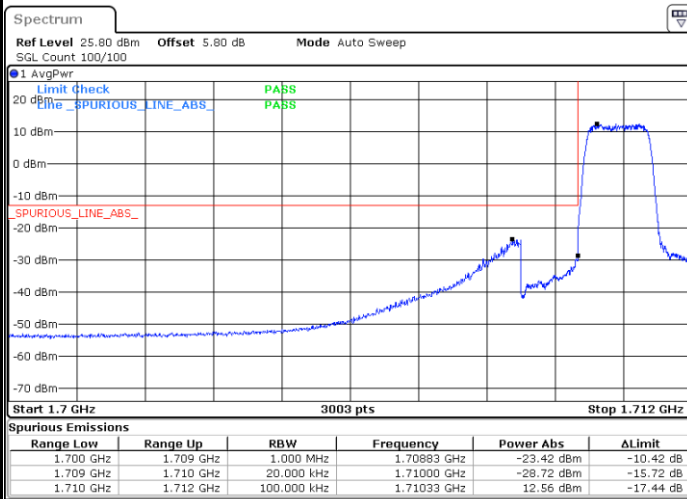
Date: 23.FEB.2024 01:00:04

Highest Band Edge / 1 RB



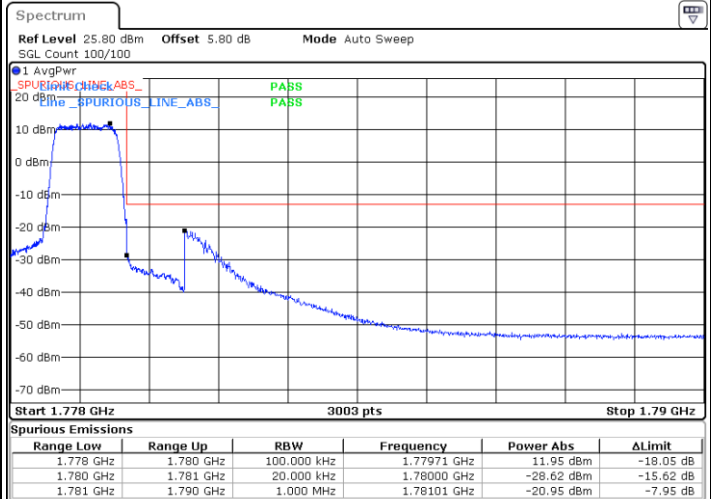
Date: 23.FEB.2024 01:07:23

Lowest Band Edge / Full RB



Date: 23.FEB.2024 01:00:50

Highest Band Edge / Full RB

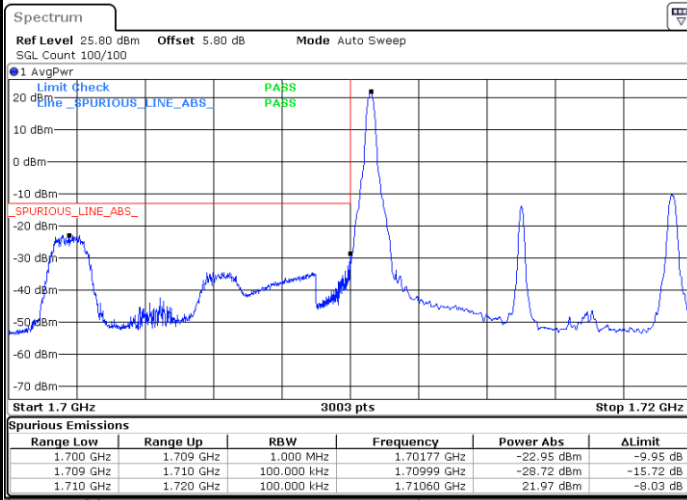


Date: 23.FEB.2024 01:08:09



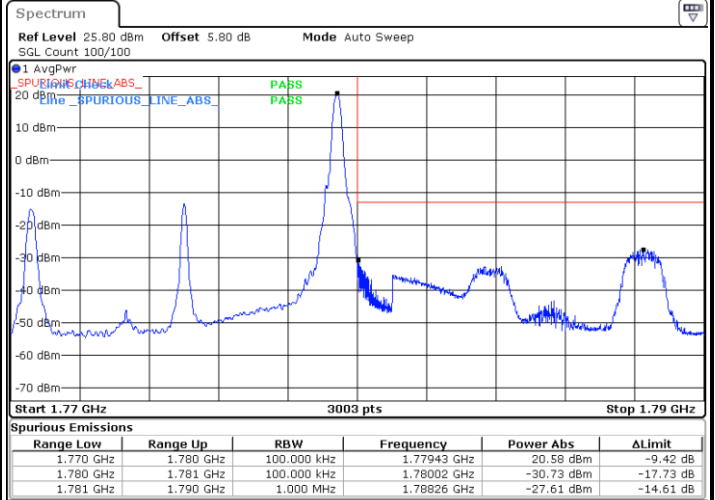
LTE Band 66 / 10MHz / QPSK

Lowest Band Edge / 1 RB



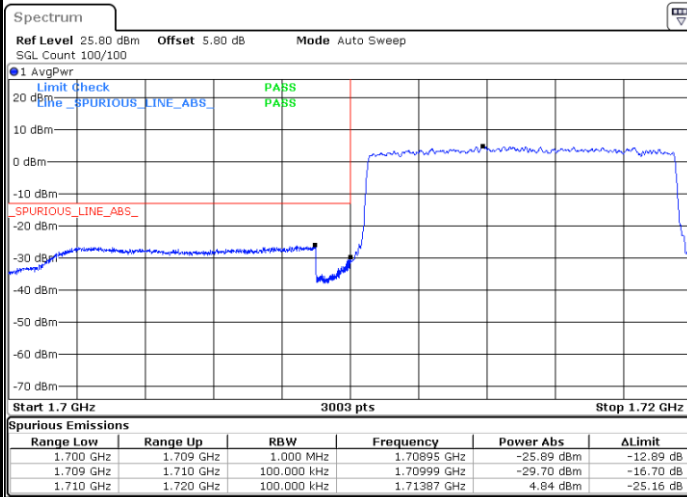
Date: 23.FEB.2024 01:20:27

Highest Band Edge / 1 RB



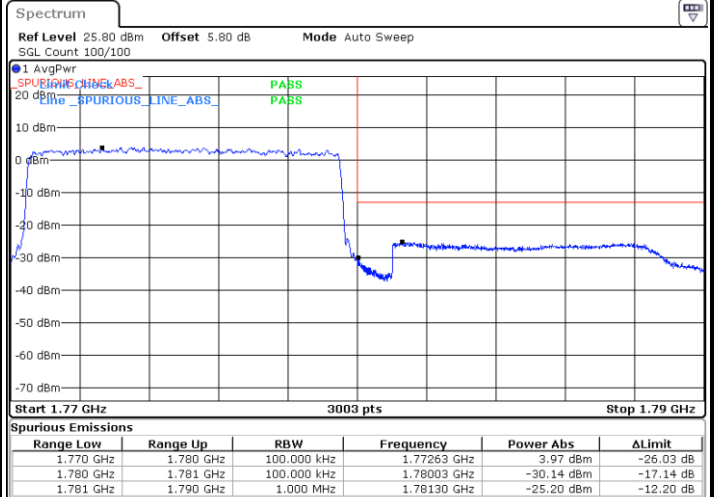
Date: 23.FEB.2024 01:27:45

Lowest Band Edge / Full RB



Date: 23.FEB.2024 01:22:46

Highest Band Edge / Full RB

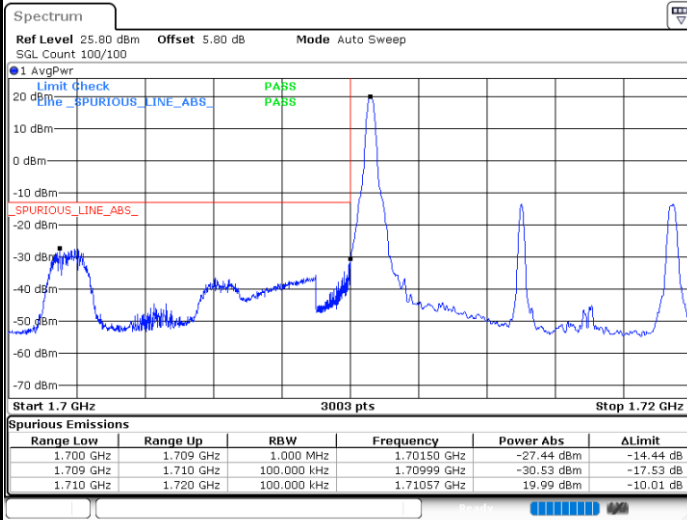


Date: 23.FEB.2024 01:30:03



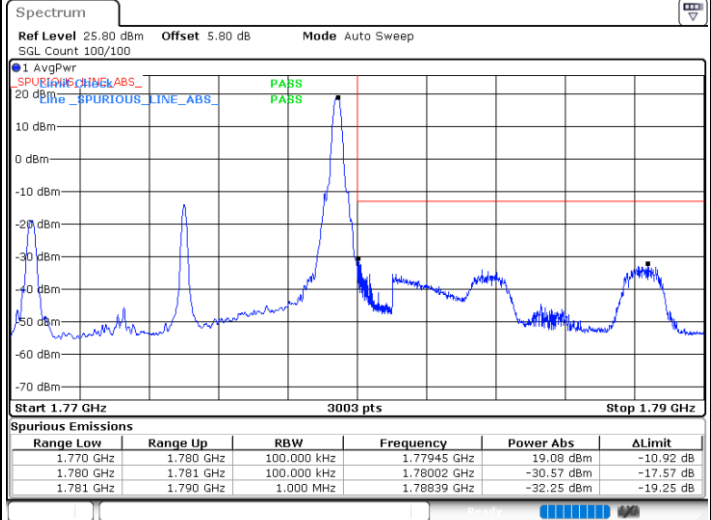
LTE Band 66 / 10MHz / 16QAM

Lowest Band Edge / 1 RB



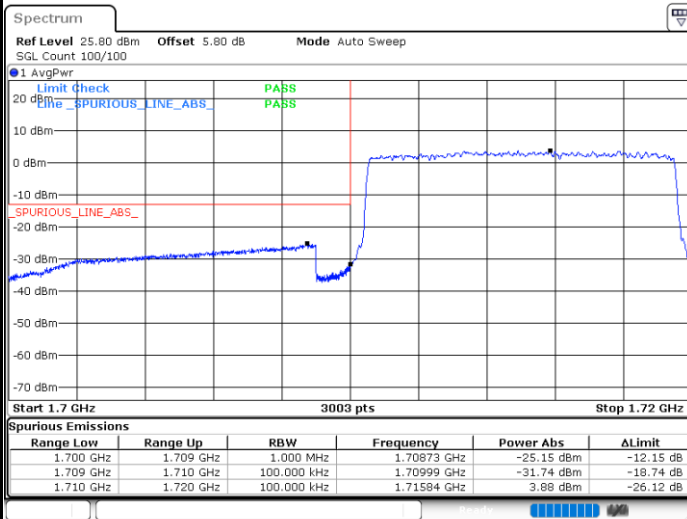
Date: 23.FEB.2024 01:21:13

Highest Band Edge / 1 RB



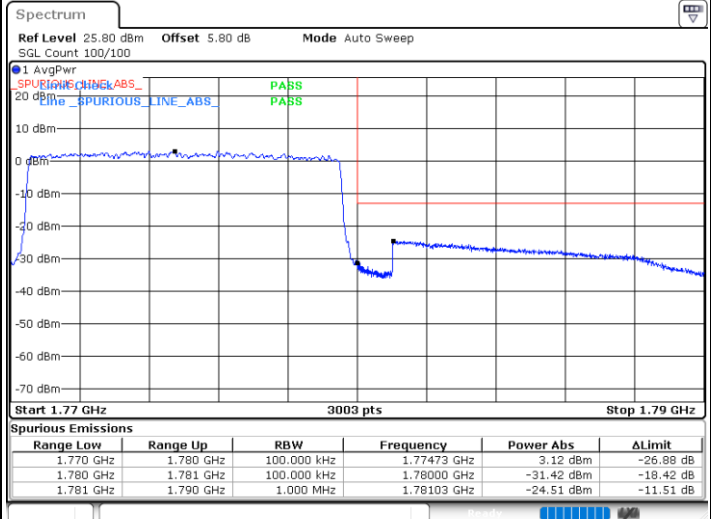
Date: 23.FEB.2024 01:28:31

Lowest Band Edge / Full RB



Date: 23.FEB.2024 01:22:00

Highest Band Edge / Full RB

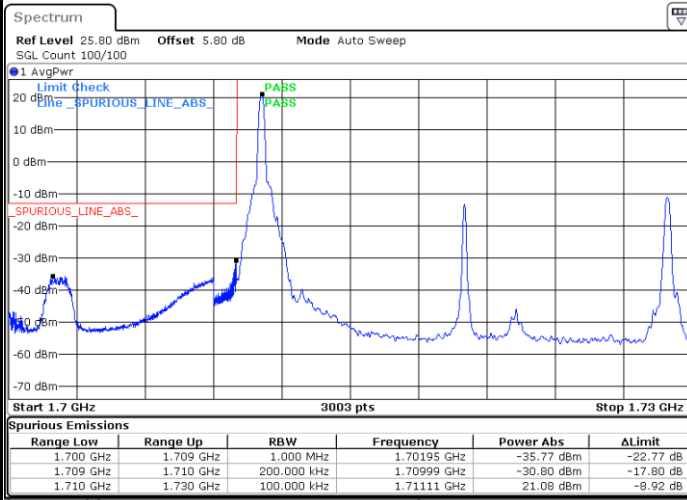


Date: 23.FEB.2024 01:29:17



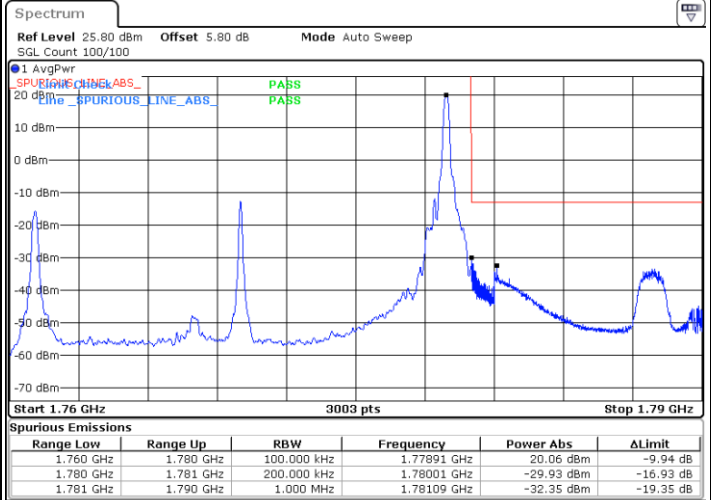
LTE Band 66 / 20MHz / QPSK

Lowest Band Edge / 1 RB



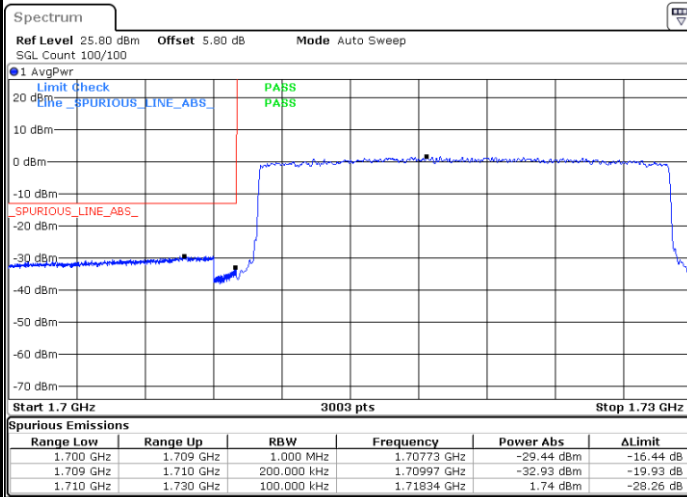
Date: 23.FEB.2024 01:34:51

Highest Band Edge / 1 RB



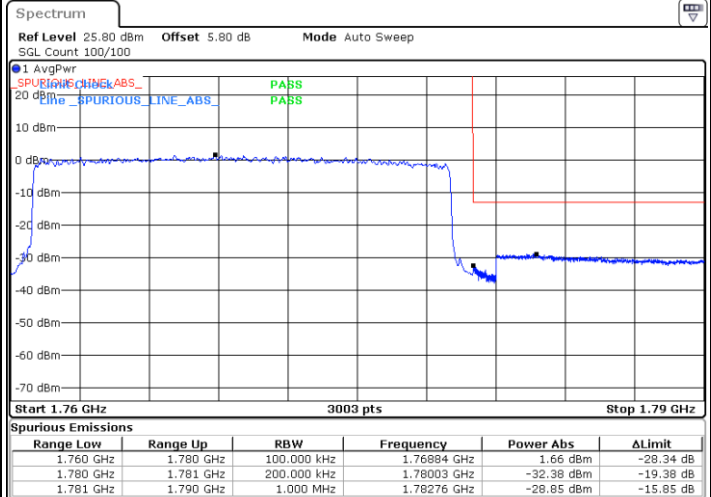
Date: 23.FEB.2024 01:40:46

Lowest Band Edge / Full RB



Date: 23.FEB.2024 01:37:09

Highest Band Edge / Full RB

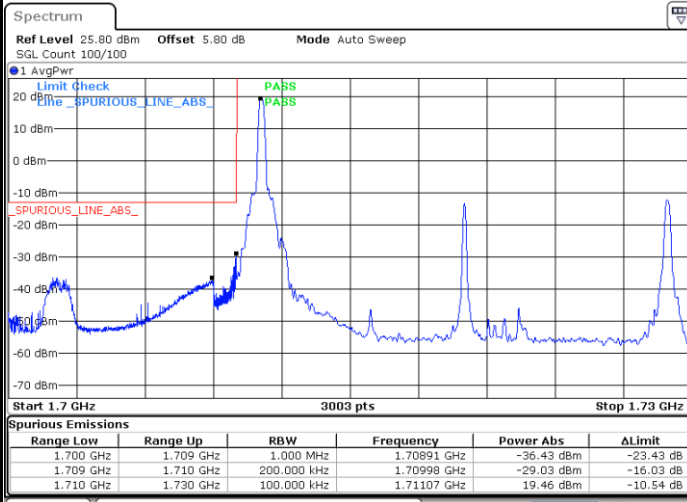


Date: 23.FEB.2024 01:43:05



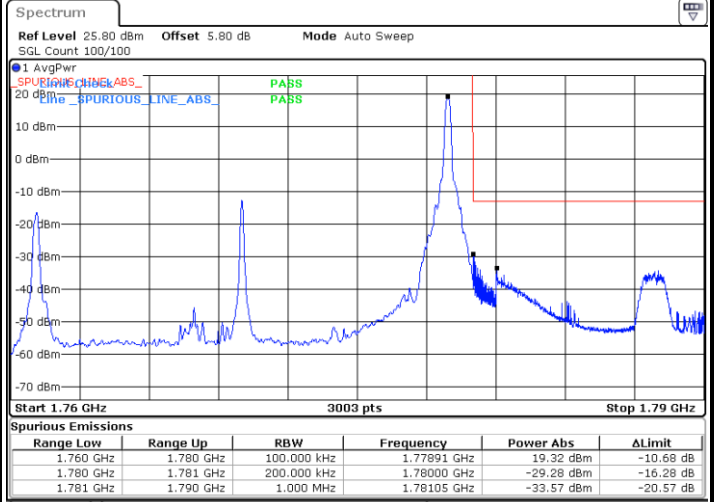
LTE Band 66 / 20MHz / 16QAM

Lowest Band Edge / 1 RB



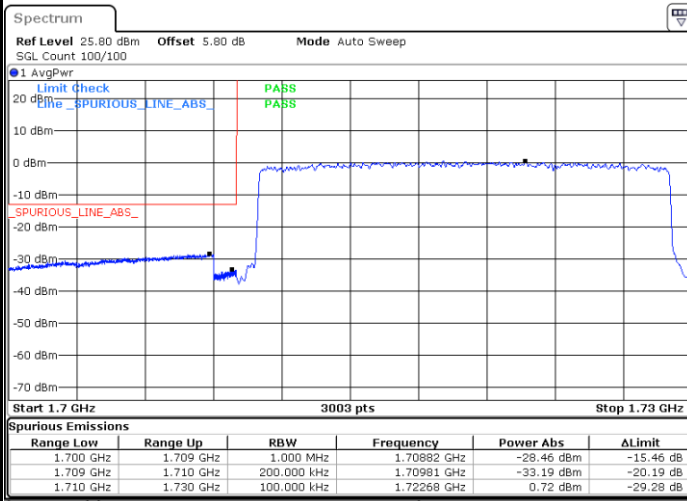
Date: 23.FEB.2024 01:35:37

Highest Band Edge / 1 RB



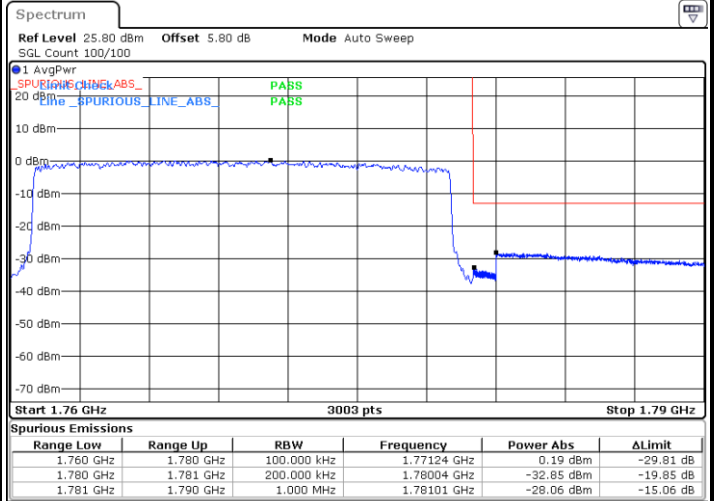
Date: 23.FEB.2024 01:41:32

Lowest Band Edge / Full RB



Date: 23.FEB.2024 01:36:23

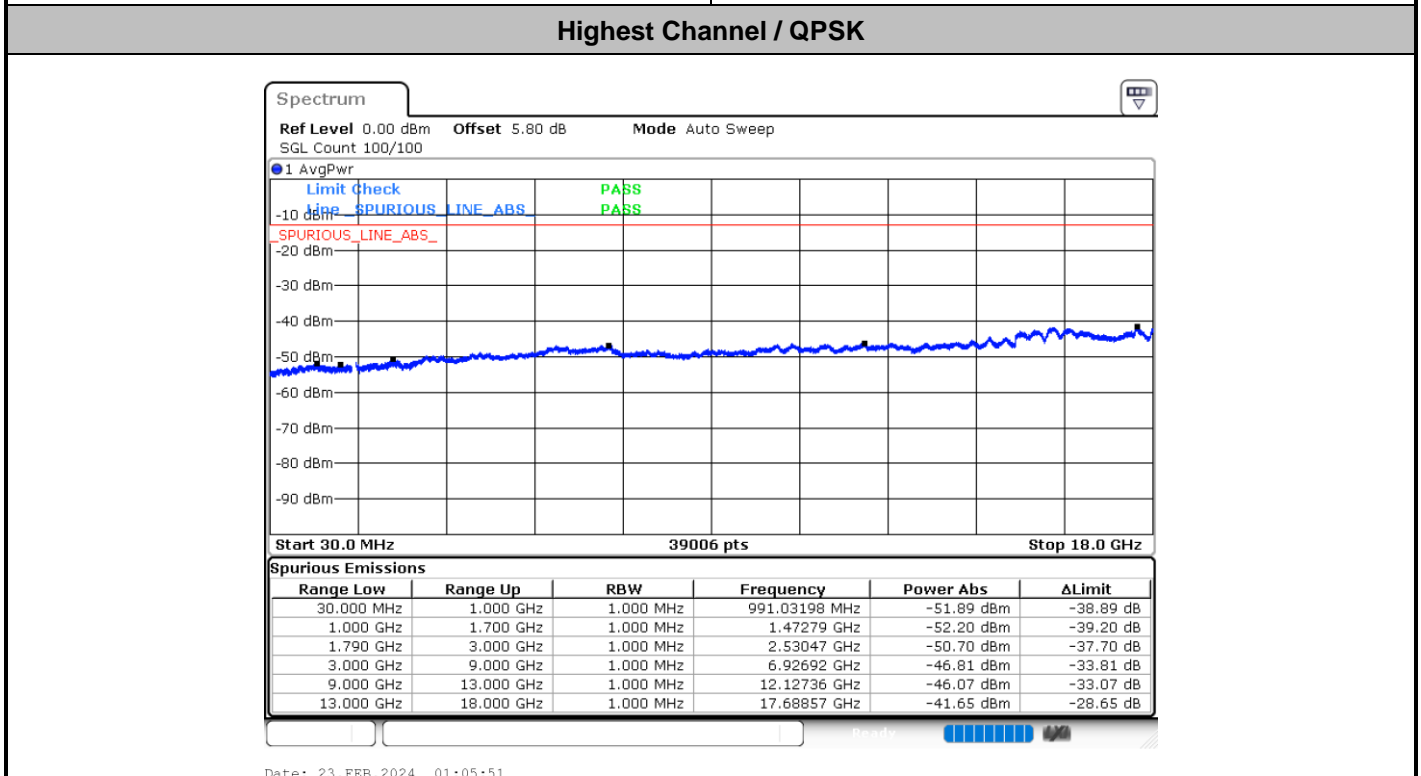
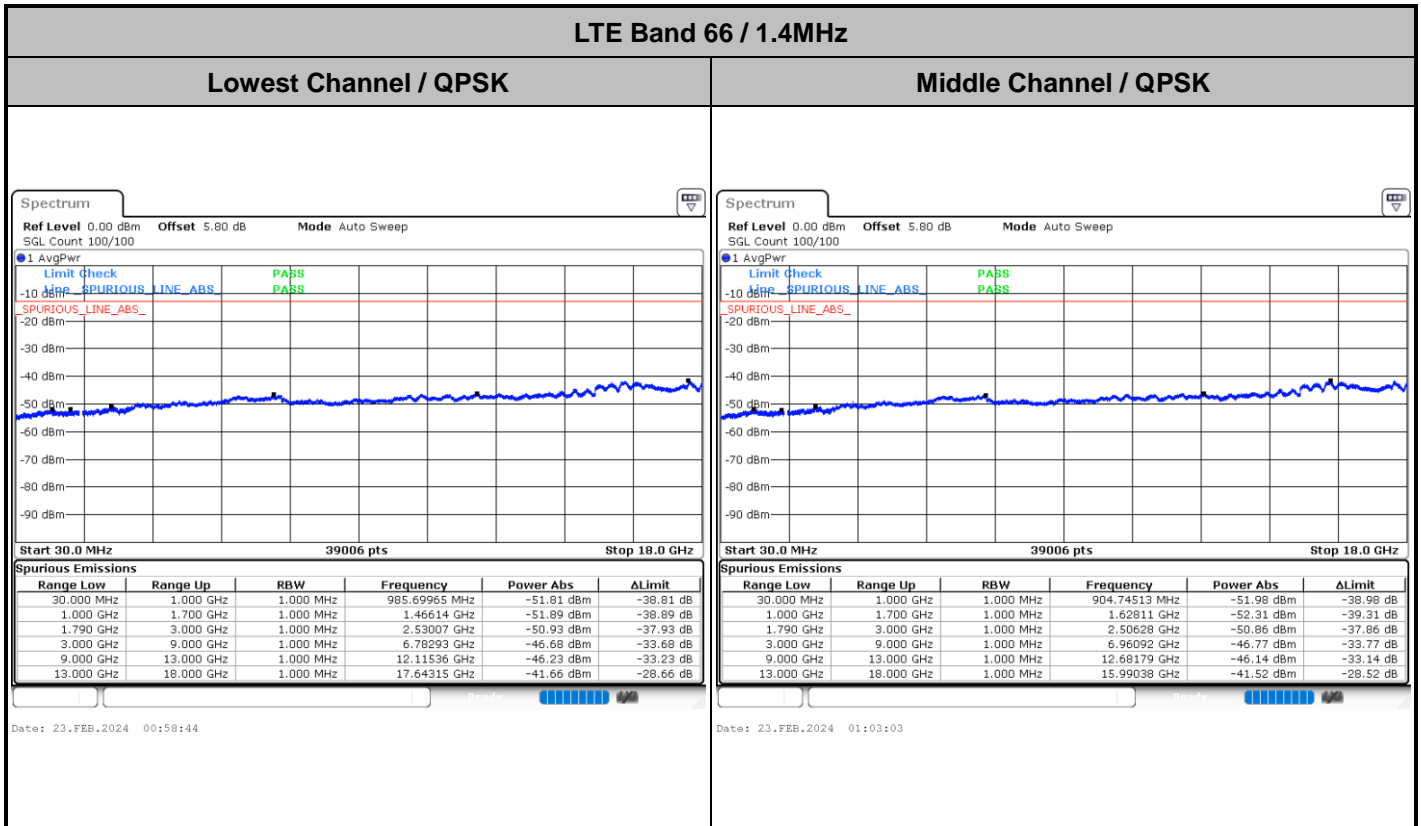
Highest Band Edge / Full RB



Date: 23.FEB.2024 01:42:19



Conducted Spurious Emission

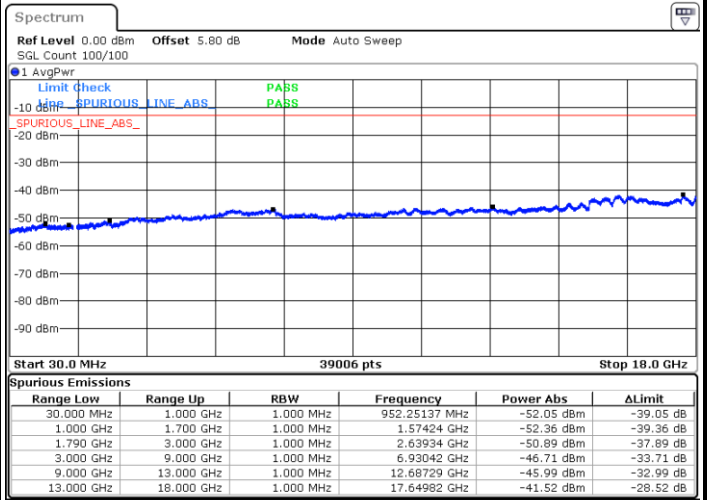
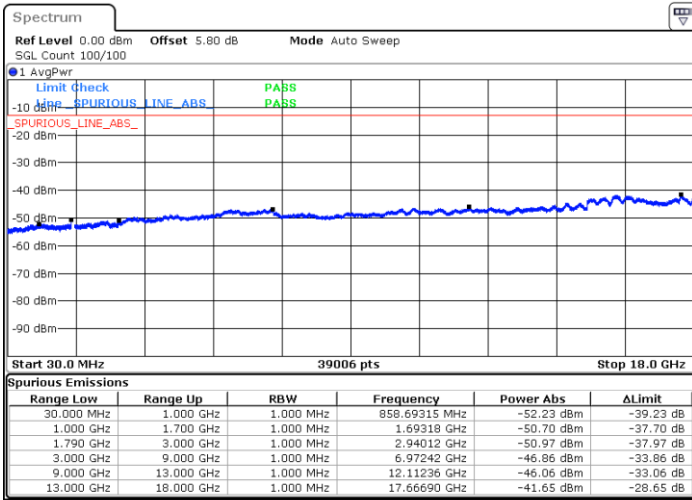




LTE Band 66 / 10MHz

Lowest Channel / QPSK

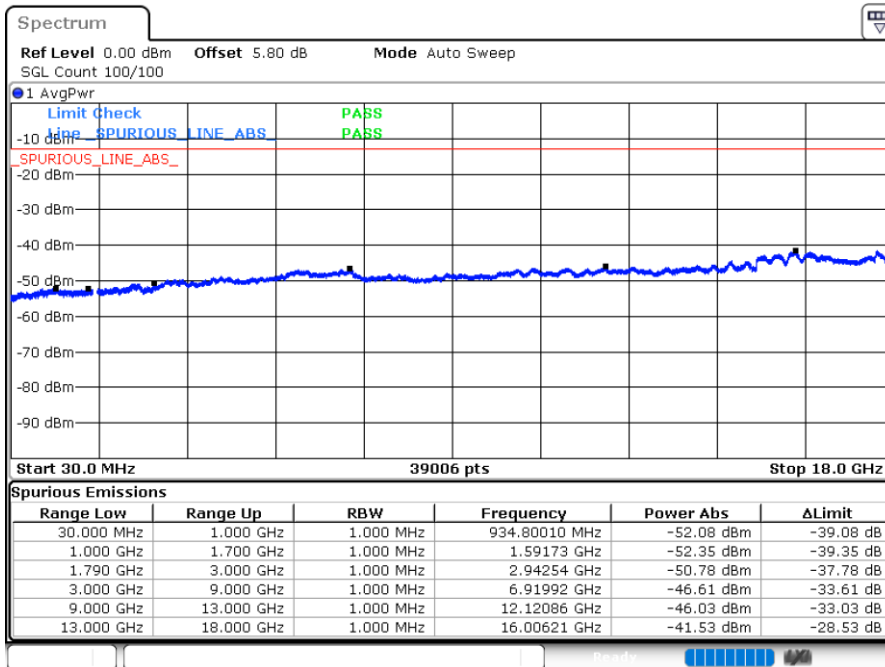
Middle Channel / QPSK



Date: 23.FEB.2024 01:19:53

Date: 23.FEB.2024 01:24:11

Highest Channel / QPSK



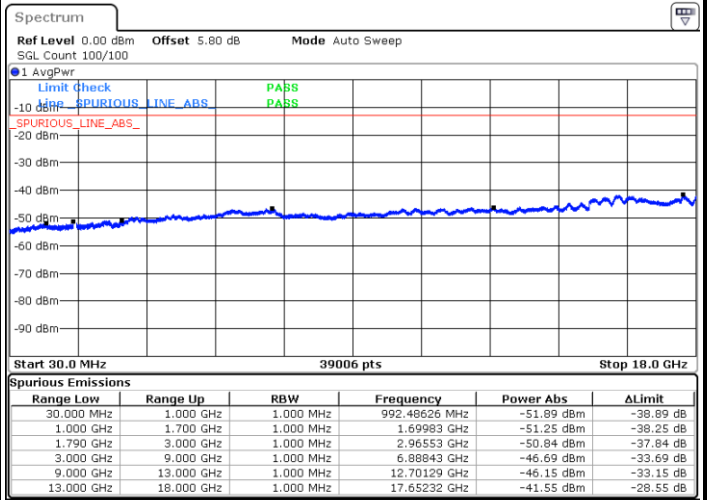
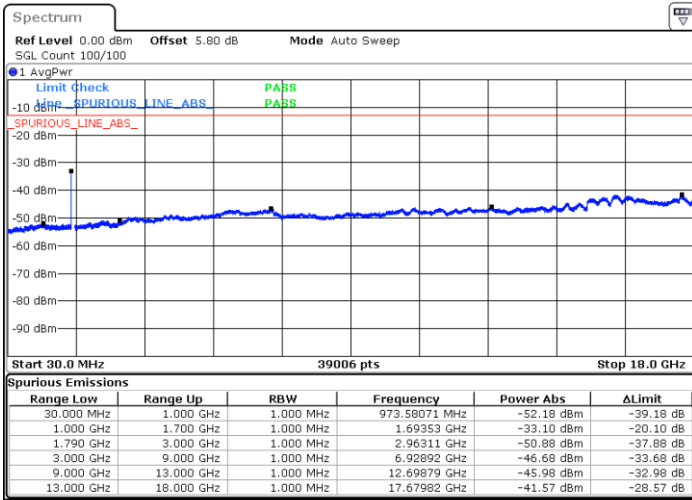
Date: 23.FEB.2024 01:26:59



LTE Band 66 / 20MHz

Lowest Channel / QPSK

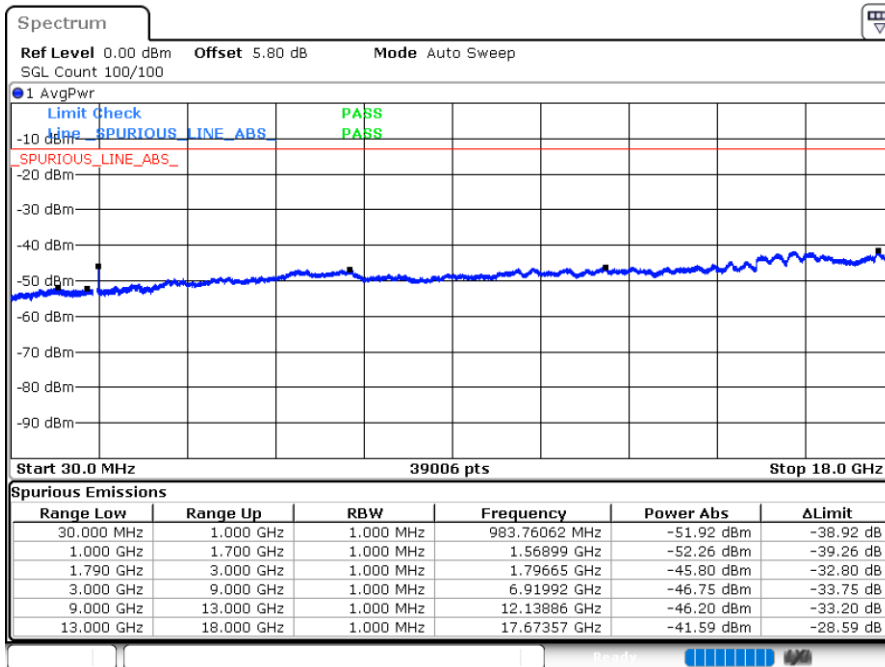
Middle Channel / QPSK



Date: 23.FEB.2024 01:34:17

Date: 23.FEB.2024 01:38:34

Highest Channel / QPSK



Date: 23.FEB.2024 01:40:00



Frequency Stability

Test Conditions		LTE Band 66 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0027	PASS
40	Normal Voltage	0.0020	
30	Normal Voltage	0.0008	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0047	
0	Normal Voltage	0.0009	
-10	Normal Voltage	0.0030	
-20	Normal Voltage	0.0053	
-30	Normal Voltage	0.0027	
20	Maximum Voltage	0.0032	
20	Normal Voltage	0.0020	
20	Minimum Voltage	0.0057	

Note:

1. Normal Voltage =3.8 V. ; Minimum Voltage =3.4 V. ; Maximum Voltage =4.35 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 :	22~23°C
		Relative Humidity :	40~42%

Note: All RSE test points are spurious by EUT, not noise floor.

LTE Band 2 / 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	3705	-47.52	-13	-34.52	-59.78	2.64	14.90	H
	5550	-57.88	-13	-44.88	-69.74	2.94	14.80	H
	7410	-55.23	-13	-42.23	-65.00	3.39	13.16	H
	3705	-53.78	-13	-40.78	-66.04	2.64	14.90	V
	5550	-57.94	-13	-44.94	-69.80	2.94	14.80	V
	7410	-55.10	-13	-42.10	-64.87	3.39	13.16	V
Middle	3735	-47.80	-13	-34.80	-60.06	2.64	14.90	H
	5610	-57.04	-13	-44.04	-68.90	2.94	14.80	H
	7485	-55.02	-13	-42.02	-64.79	3.39	13.16	H
	3735	-54.89	-13	-41.89	-67.15	2.64	14.90	V
	5610	-57.56	-13	-44.56	-69.42	2.94	14.80	V
	7485	-54.91	-13	-41.91	-64.68	3.39	13.16	V
Highest	3780	-48.13	-13	-35.13	-60.39	2.64	14.90	H
	5670	-57.59	-13	-44.59	-69.45	2.94	14.80	H
	7560	-55.06	-13	-42.06	-64.83	3.39	13.16	H
	3780	-52.84	-13	-39.84	-65.10	2.64	14.90	V
	5670	-58.40	-13	-45.40	-70.26	2.94	14.80	V
	7560	-54.98	-13	-41.98	-64.75	3.39	13.16	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)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	1648	-57.49	-13	-44.49	-64.46	1.58	10.70	H
	2472	-54.31	-13	-41.31	-62.56	2.102	12.50	H
	3296	-61.04	-13	-48.04	-69.93	2.856	13.90	H
	1648	-63.31	-13	-50.31	-70.28	1.58	10.70	V
	2472	-57.08	-13	-44.08	-65.33	2.10	12.50	V
	3296	-60.80	-13	-47.80	-69.69	2.86	13.90	V
Middle	1664	-53.39	-13	-40.39	-60.36	1.58	10.70	H
	2496	-45.41	-13	-32.41	-53.66	2.102	12.50	H
	3328	-60.46	-13	-47.46	-69.35	2.856	13.90	H
	1664	-58.60	-13	-45.60	-65.57	1.58	10.70	V
	2496	-47.05	-13	-34.05	-55.30	2.10	12.50	V
	3328	-60.55	-13	-47.55	-69.44	2.86	13.90	V
Highest	1680	-60.47	-13	-47.47	-67.44	1.58	10.70	H
	2520	-49.75	-13	-36.75	-58.00	2.102	12.50	H
	3360	-61.18	-13	-48.18	-70.07	2.856	13.90	H
	1680	-63.30	-13	-50.30	-70.27	1.58	10.70	V
	2520	-50.71	-13	-37.71	-58.96	2.10	12.50	V
	3360	-60.58	-13	-47.58	-69.47	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)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	1552	-66.26	-13	-53.26	-68.89	1.09	5.87	H
	2328	-58.70	-13	-45.70	-61.10	1.37	5.92	H
	3112	-59.78	-13	-46.78	-63.67	1.64	7.68	H
	1552	-65.93	-13	-52.93	-68.56	1.09	5.87	V
	2328	-59.09	-13	-46.09	-61.49	1.37	5.92	V
	3112	-60.55	-13	-47.55	-64.44	1.64	7.68	V
Middle	1560	-62.67	-42.15	-20.52	-65.30	1.09	5.87	H
	2336	-54.94	-13	-41.94	-57.34	1.37	5.92	H
	3120	-60.53	-13	-47.53	-64.42	1.64	7.68	H
	1560	-65.46	-42.15	-23.31	-68.09	1.09	5.87	V
	2336	-57.91	-13	-44.91	-60.31	1.37	5.92	V
	3120	-60.94	-13	-47.94	-64.83	1.64	7.68	V
Highest	1568	-64.65	-42.15	-22.50	-67.28	1.09	5.87	H
	2344	-56.06	-13	-43.06	-58.46	1.37	5.92	H
	3128	-60.28	-13	-47.28	-64.17	1.64	7.68	H
	1568	-65.59	-42.15	-23.44	-68.22	1.09	5.87	V
	2344	-58.13	-13	-45.13	-60.53	1.37	5.92	V
	3128	-60.53	-13	-47.53	-64.42	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)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	1552	-66.02	-13	-53.02	-68.65	1.09	5.87	H
	2336	-58.30	-13	-45.30	-60.70	1.37	5.92	H
	3112	-60.54	-13	-47.54	-64.43	1.64	7.68	H
	1552	-66.50	-13	-53.50	-69.13	1.09	5.87	V
	2336	-59.71	-13	-46.71	-62.11	1.37	5.92	V
	3112	-60.40	-13	-47.40	-64.29	1.64	7.68	V

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



LTE Band 66 / 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	3420	-51.05	-13	-38.05	-61.79	2.604	13.34	H
	5130	-56.63	-13	-43.63	-67.14	3.011	13.52	H
	6840	-56.21	-13	-43.21	-66.41	3.271	13.47	H
	3420	-54.39	-13	-41.39	-65.13	2.604	13.34	V
	5130	-57.06	-13	-44.06	-67.57	3.011	13.52	V
	6840	-56.74	-13	-43.74	-66.94	3.271	13.47	V
Middle	3465	-54.81	-13	-41.81	-65.55	2.604	13.34	H
	5205	-57.39	-13	-44.39	-67.90	3.011	13.52	H
	6945	-56.82	-13	-43.82	-67.02	3.271	13.47	H
	3465	-56.11	-13	-43.11	-66.85	2.604	13.34	V
	5205	-56.99	-13	-43.99	-67.50	3.011	13.52	V
	6945	-56.48	-13	-43.48	-66.68	3.271	13.47	V
Highest	3525	-52.92	-13	-39.92	-63.66	2.604	13.34	H
	5280	-57.07	-13	-44.07	-67.58	3.011	13.52	H
	7050	-56.48	-13	-43.48	-66.68	3.271	13.47	H
	3525	-56.73	-13	-43.73	-67.47	2.604	13.34	V
	5280	-56.60	-13	-43.60	-67.11	3.011	13.52	V
	7050	-56.60	-13	-43.60	-66.80	3.271	13.47	V

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