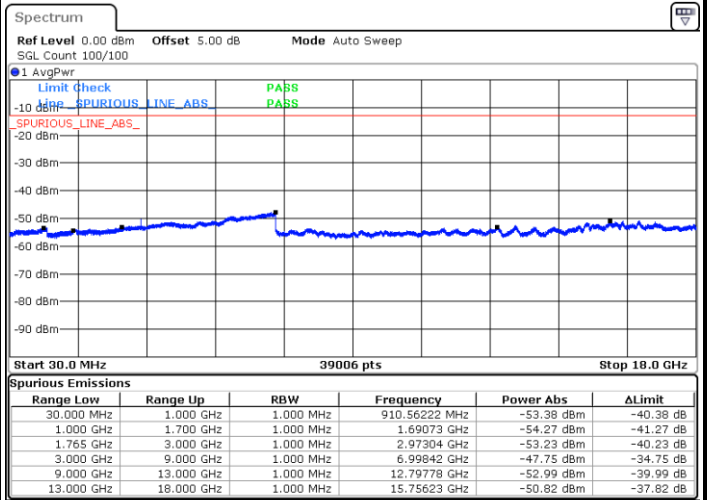
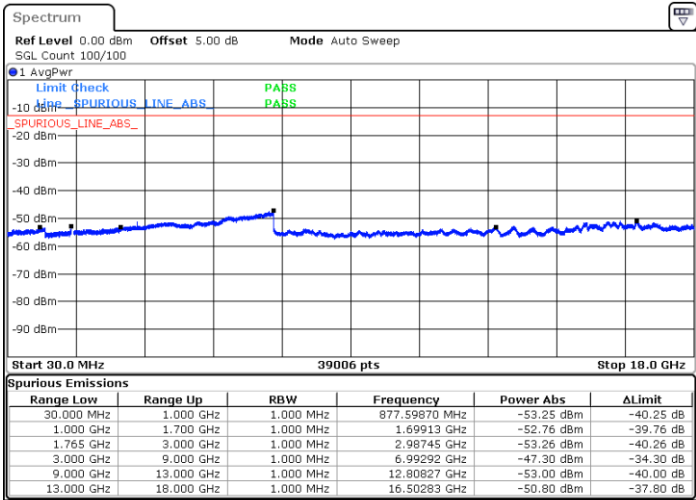




LTE Band 4 / 10MHz

Lowest Channel / QPSK

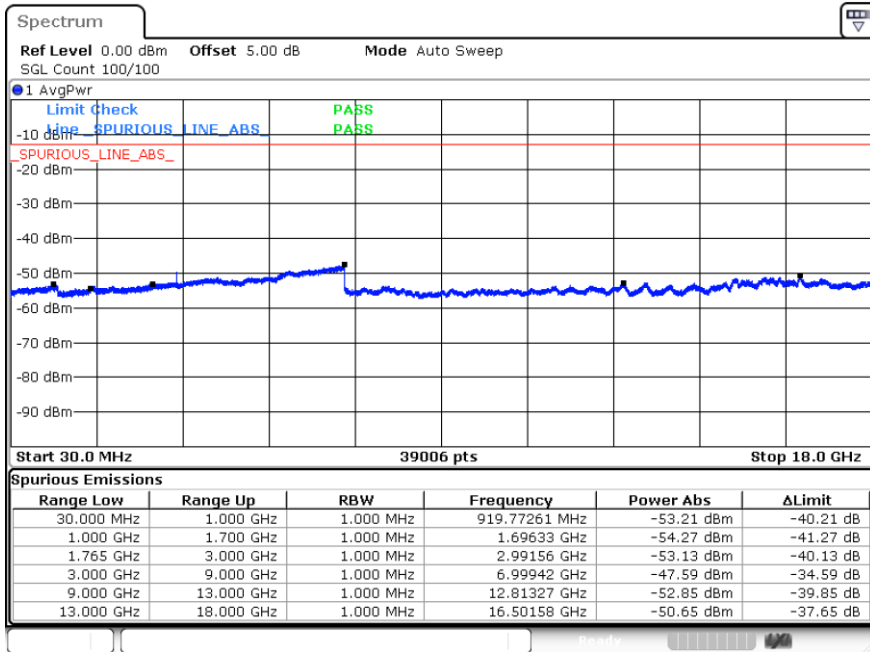
Middle Channel / QPSK



Date: 20.DEC.2021 01:56:00

Date: 20.DEC.2021 02:03:12

Highest Channel / QPSK



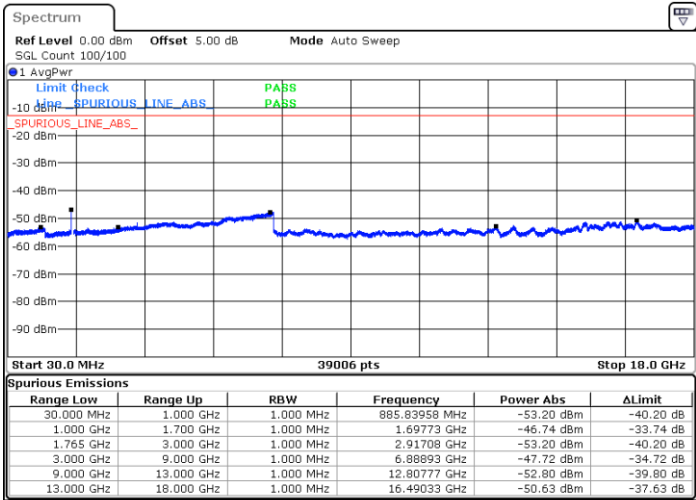
Date: 20.DEC.2021 02:05:05



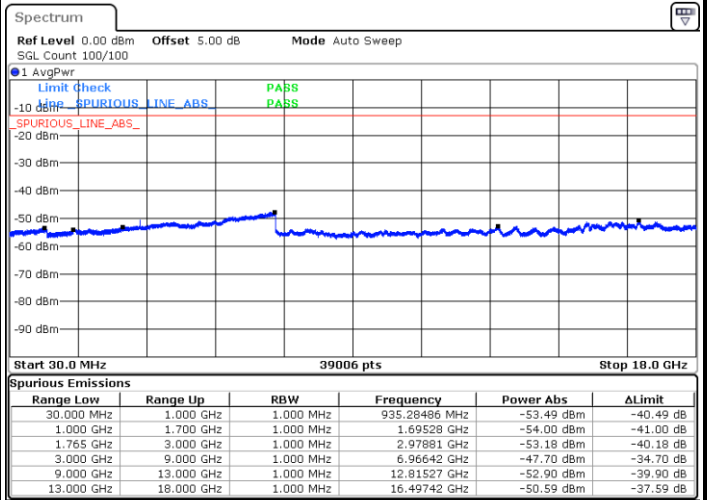
LTE Band 4 / 15MHz

Lowest Channel / QPSK

Middle Channel / QPSK

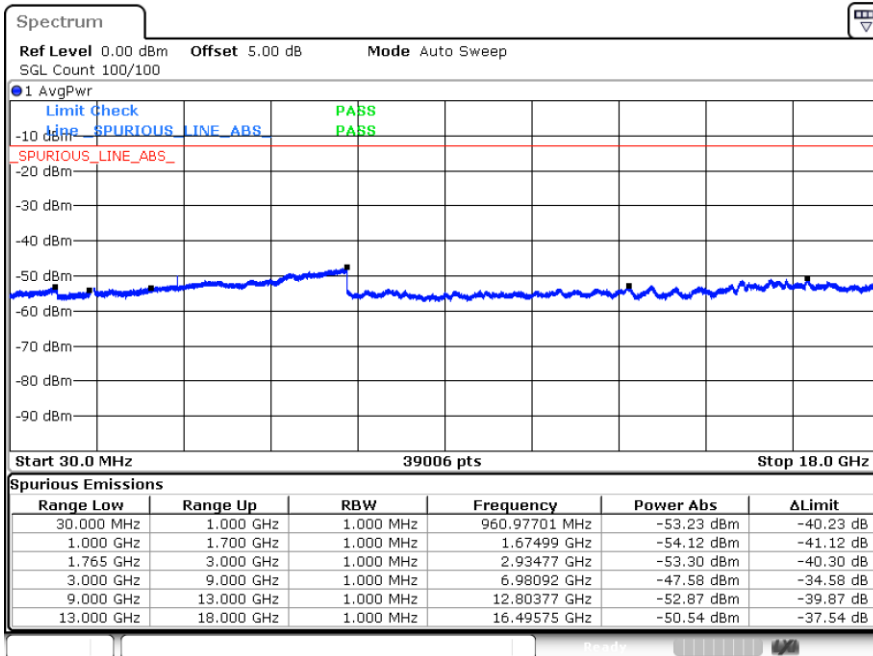


Date: 20.DEC.2021 02:12:27



Date: 20.DEC.2021 02:19:39

Highest Channel / QPSK



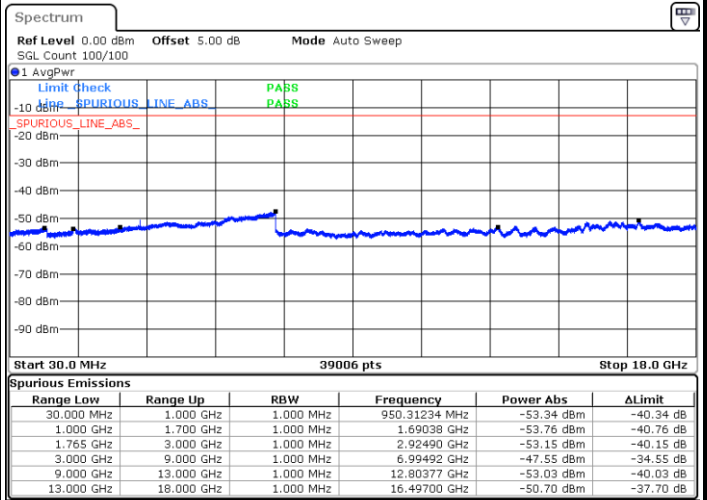
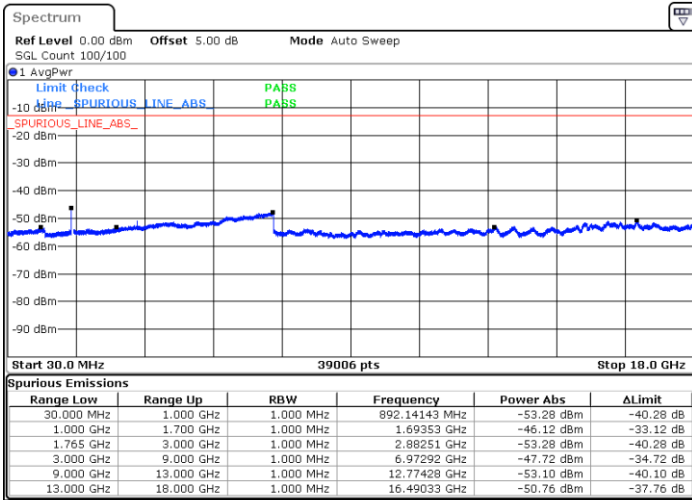
Date: 20.DEC.2021 02:21:32



LTE Band 4 / 20MHz

Lowest Channel / QPSK

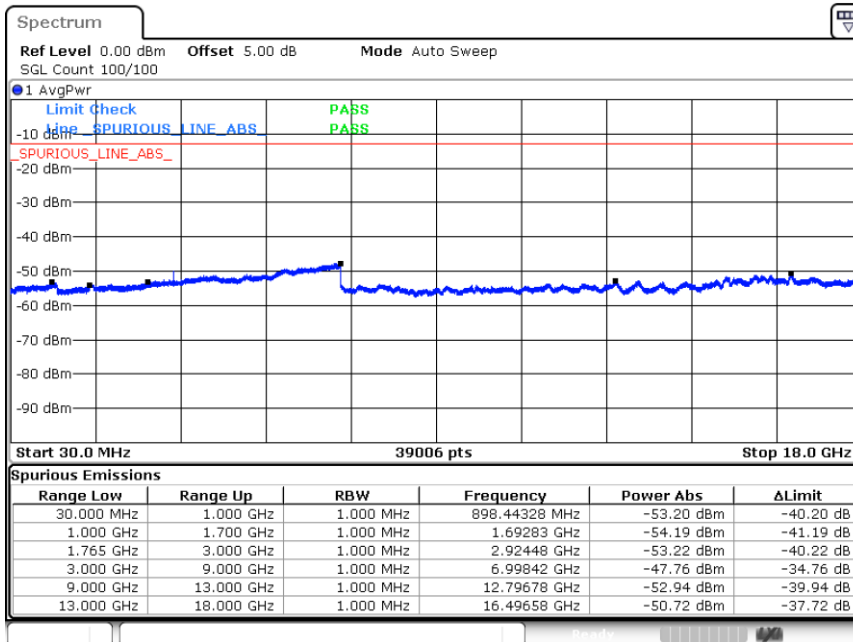
Middle Channel / QPSK



Date: 20.DEC.2021 02:29:15

Date: 20.DEC.2021 02:36:27

Highest Channel / QPSK



Date: 20.DEC.2021 02:38:20



Frequency Stability

Test Conditions		LTE Band 4 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0021	PASS
40	Normal Voltage	0.0006	
30	Normal Voltage	0.0004	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0002	
0	Normal Voltage	0.0015	
-10	Normal Voltage	0.0017	
-20	Normal Voltage	0.0013	
-30	Normal Voltage	0.0019	
20	Maximum Voltage	0.0016	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0008	

Note:

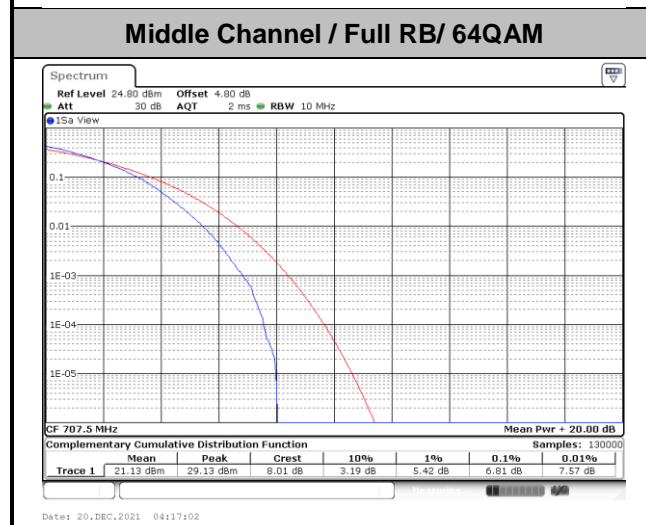
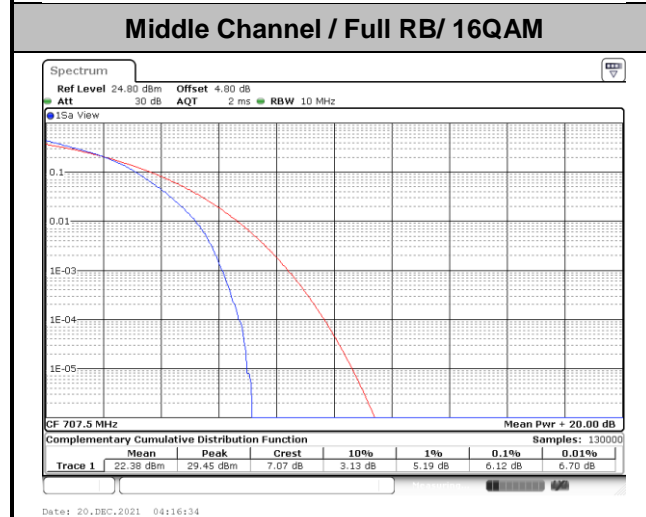
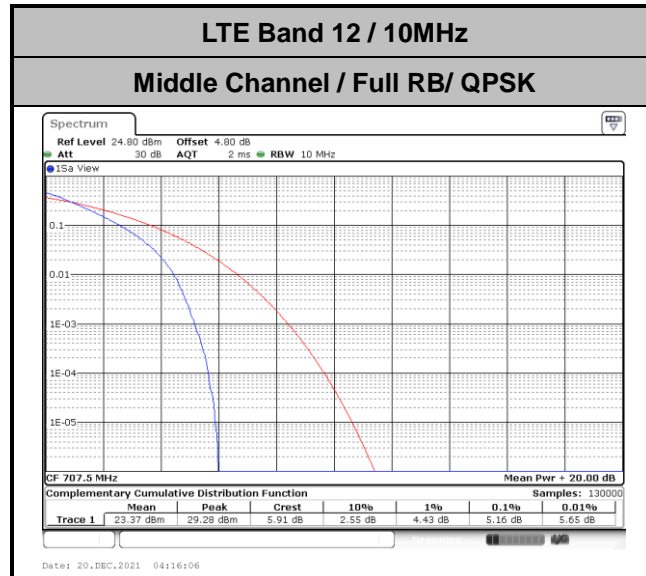
1. Normal Voltage =3.87 V. ; Battery End Point (BEP) =3.6 V. ; Maximum Voltage =4.4 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.



LTE Band 12

Peak-to-Average Ratio

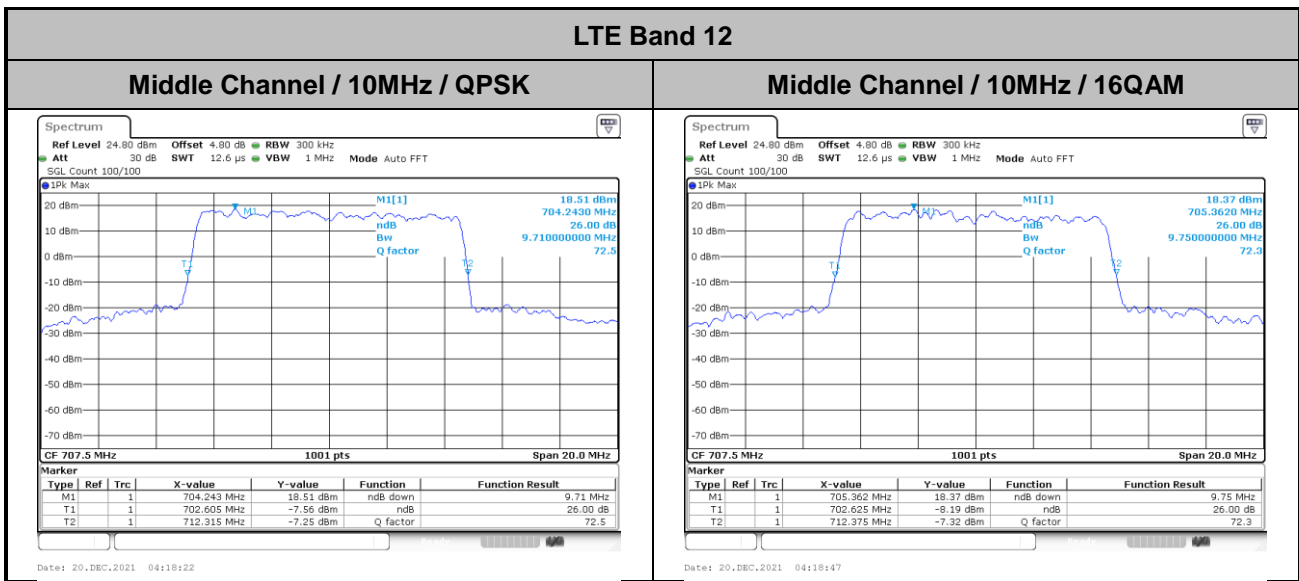
Mode	LTE Band 12 / 10MHz			
Mod.	QPSK	16QAM	64QAM	Limit: 13dB
RB Size	Full RB	Full RB	Full RB	Result
Middle CH	5.16	6.12	6.81	PASS





26dB Bandwidth

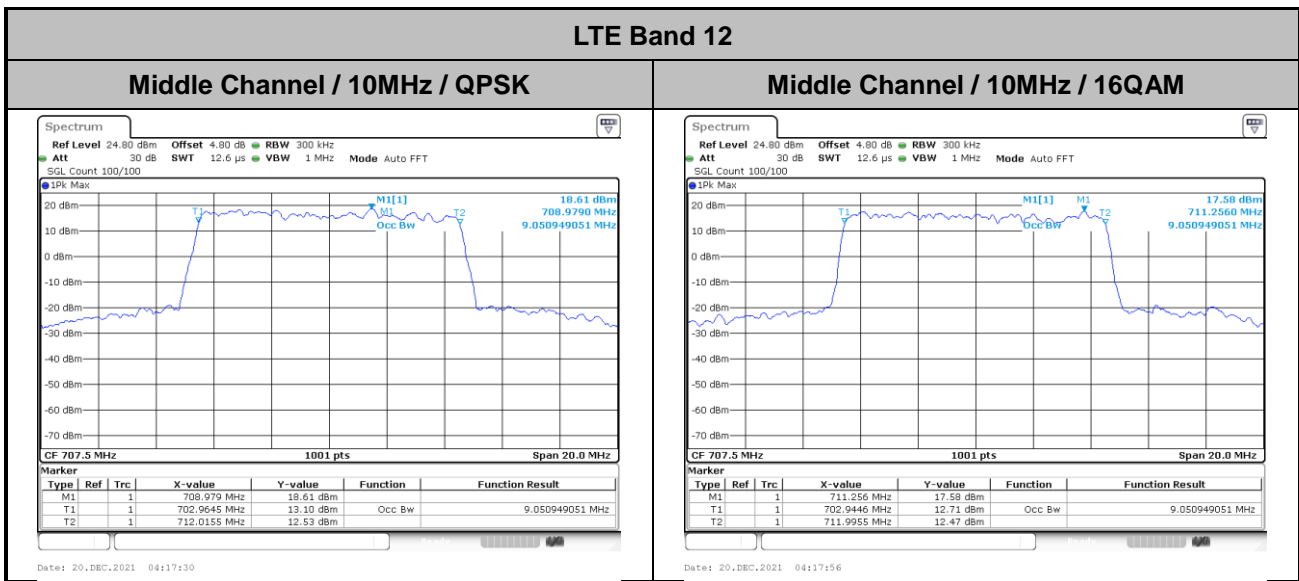
Mode	LTE Band 12 : 26dB BW(MHz)	
BW	10MHz	
Mod.	QPSK	16QAM
Middle CH	9.71	9.75





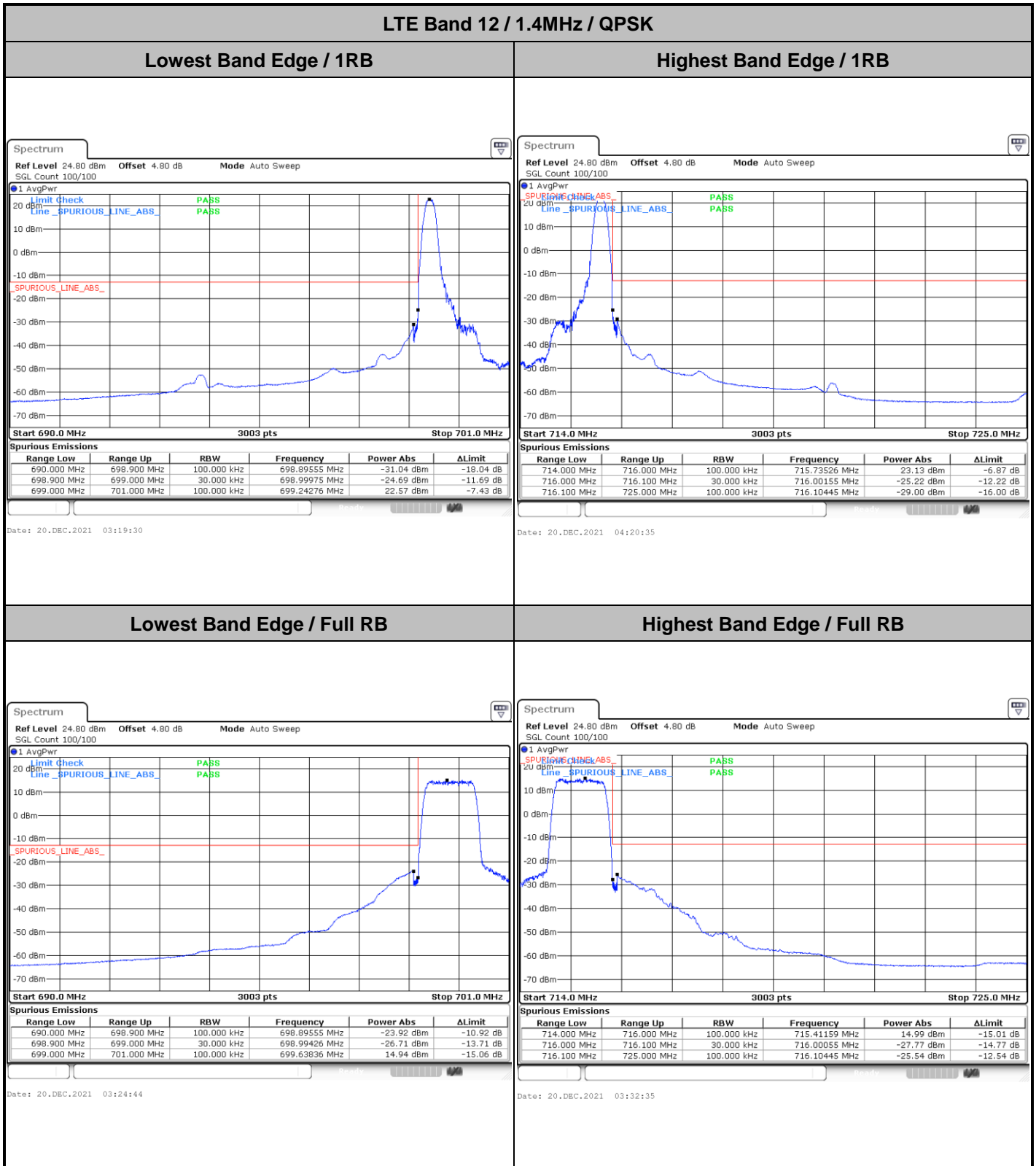
Occupied Bandwidth

Mode	LTE Band 12 : 99%OBW(MHz)	
BW	10MHz	
Mod.	QPSK	16QAM
Middle CH	9.05	9.05





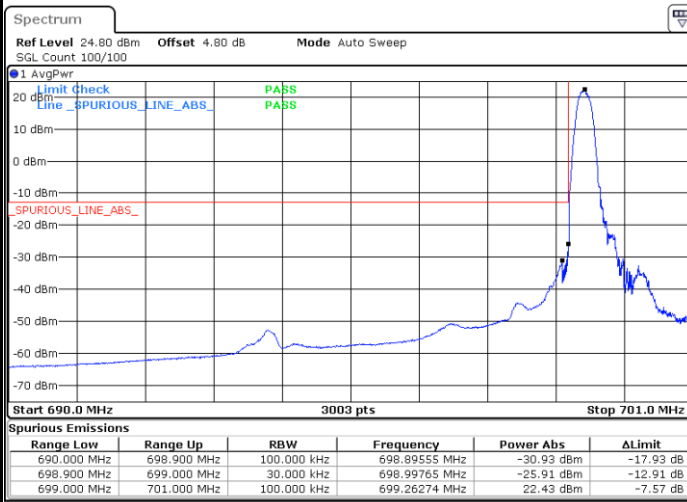
Conducted Band Edge





LTE Band 12 / 1.4MHz / 16QAM

Lowest Band Edge / 1 RB



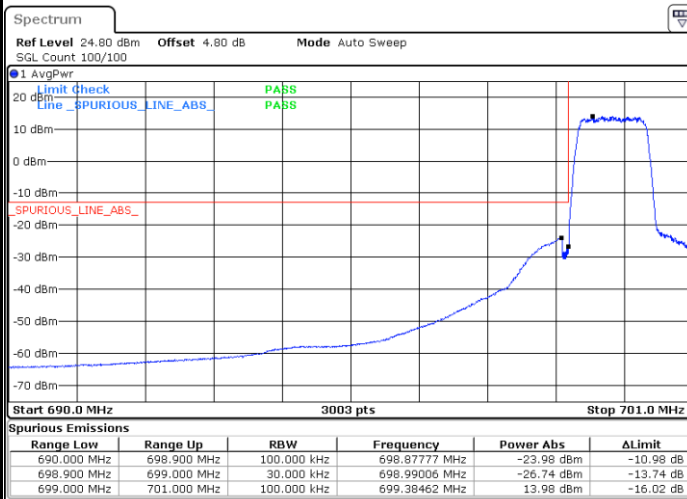
Date: 20.DEC.2021 03:21:02

Highest Band Edge / 1 RB



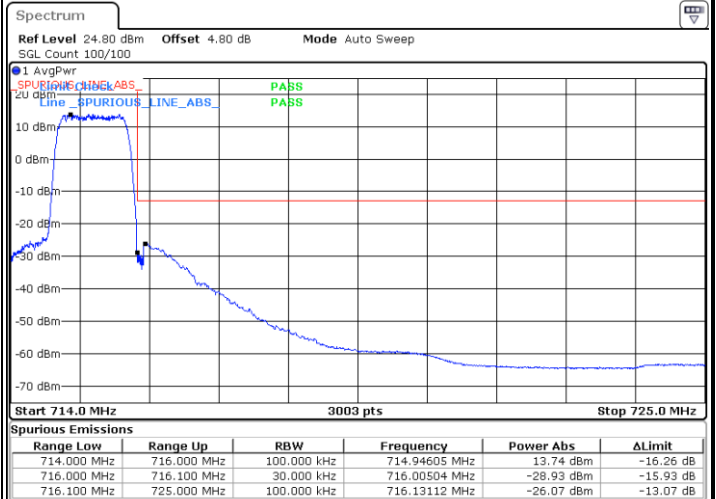
Date: 20.DEC.2021 03:28:57

Lowest Band Edge / Full RB



Date: 20.DEC.2021 03:23:49

Highest Band Edge / Full RB



Date: 20.DEC.2021 03:31:41



LTE Band 12 / 1.4MHz / 64QAM

Lowest Band Edge / 1 RB



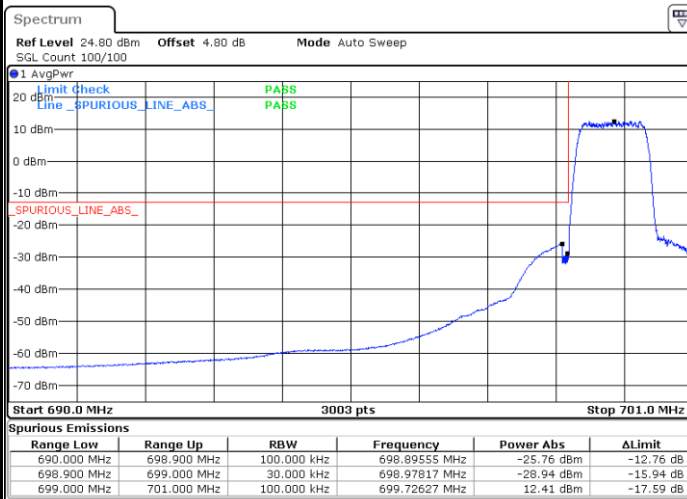
Date: 20.DEC.2021 03:21:57

Highest Band Edge / 1 RB



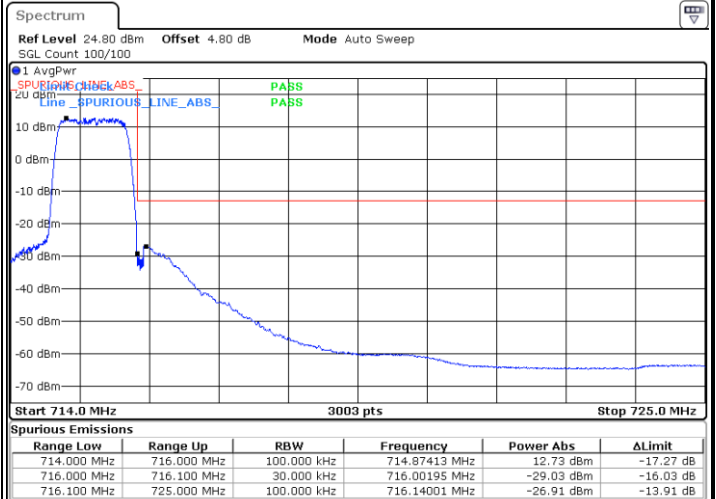
Date: 20.DEC.2021 03:29:51

Lowest Band Edge / Full RB



Date: 20.DEC.2021 03:22:54

Highest Band Edge / Full RB

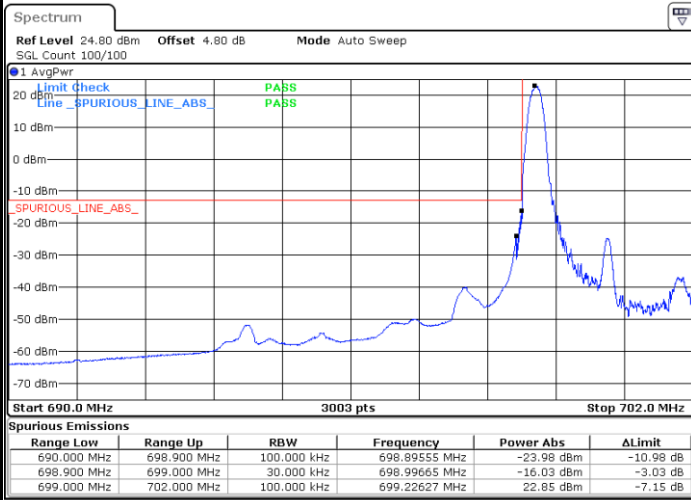


Date: 20.DEC.2021 03:30:46



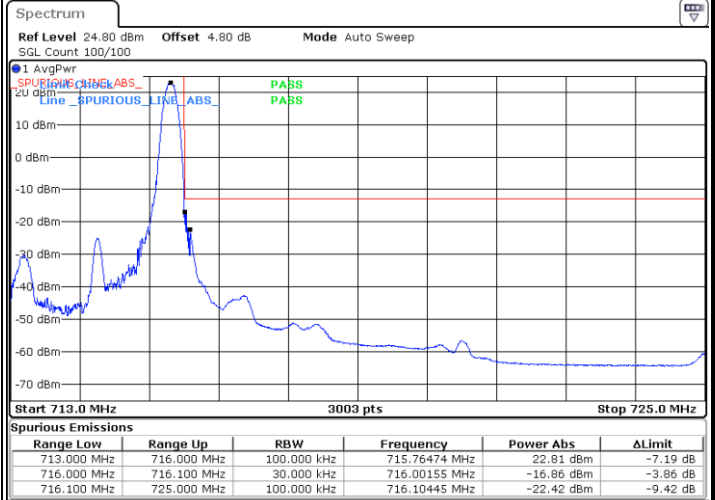
LTE Band 12 / 3MHz / QPSK

Lowest Band Edge / 1RB



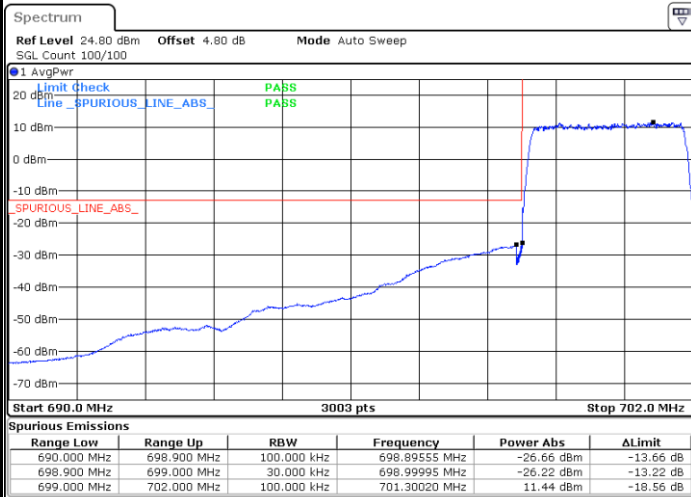
Date: 20.DEC.2021 03:34:31

Highest Band Edge / 1 RB



Date: 20.DEC.2021 03:42:25

Lowest Band Edge / Full RB



Date: 20.DEC.2021 03:39:06

Highest Band Edge / Full RB

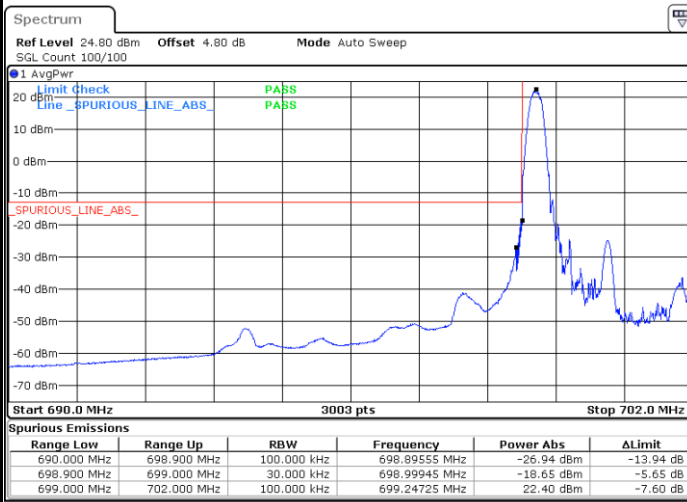


Date: 20.DEC.2021 03:46:57



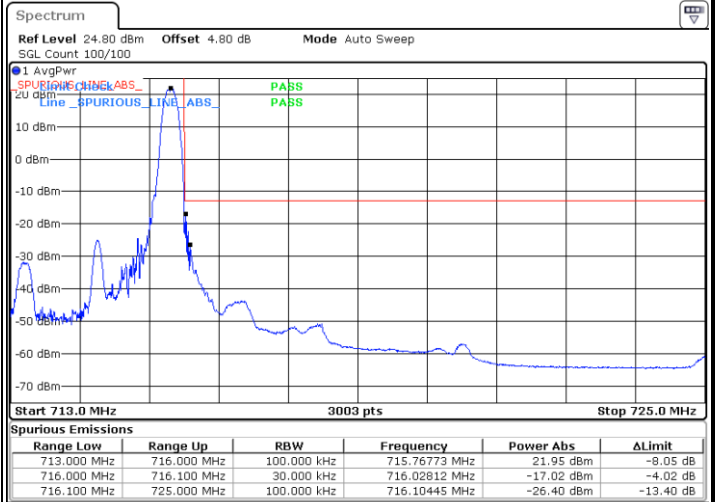
LTE Band 12 / 3MHz / 16QAM

Lowest Band Edge / 1 RB



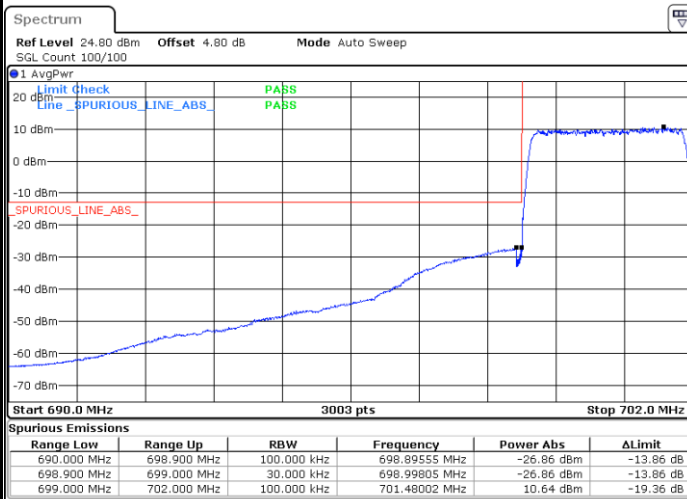
Date: 20.DEC.2021 03:35:26

Highest Band Edge / 1 RB



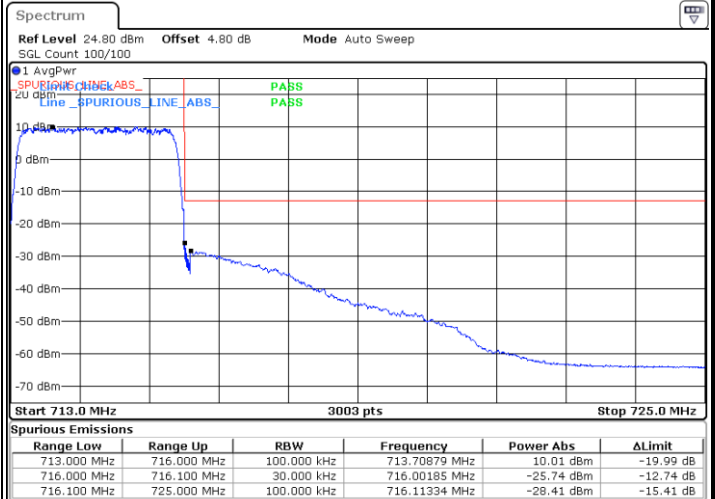
Date: 20.DEC.2021 03:43:19

Lowest Band Edge / Full RB



Date: 20.DEC.2021 03:38:10

Highest Band Edge / Full RB



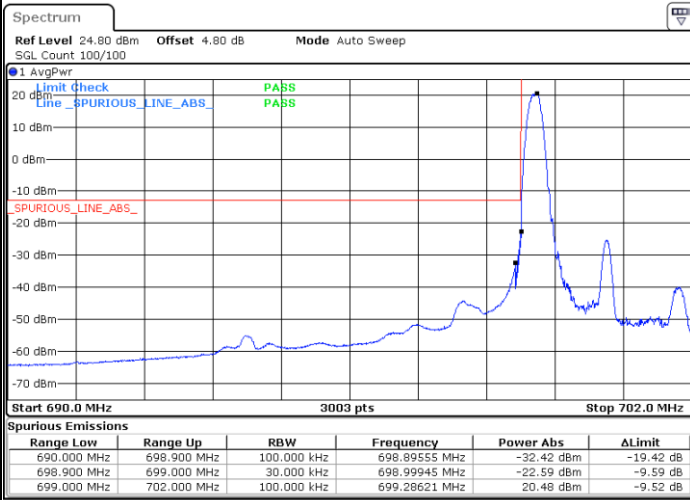
Date: 20.DEC.2021 03:46:03



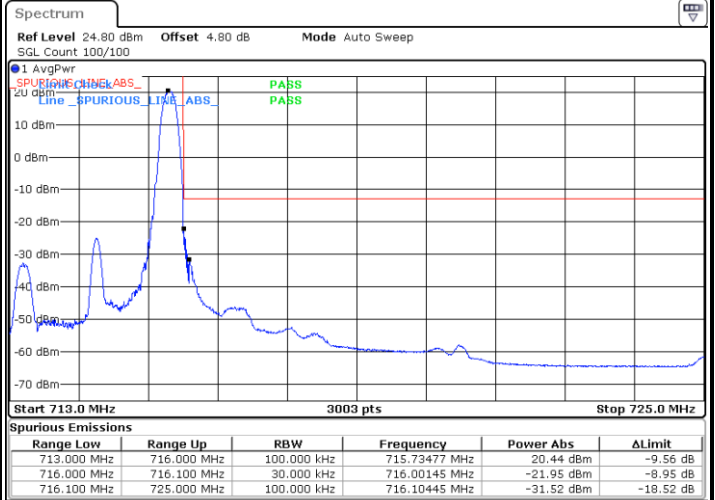
LTE Band 12 / 3MHz / 64QAM

Lowest Band Edge / 1 RB

Highest Band Edge / 1 RB



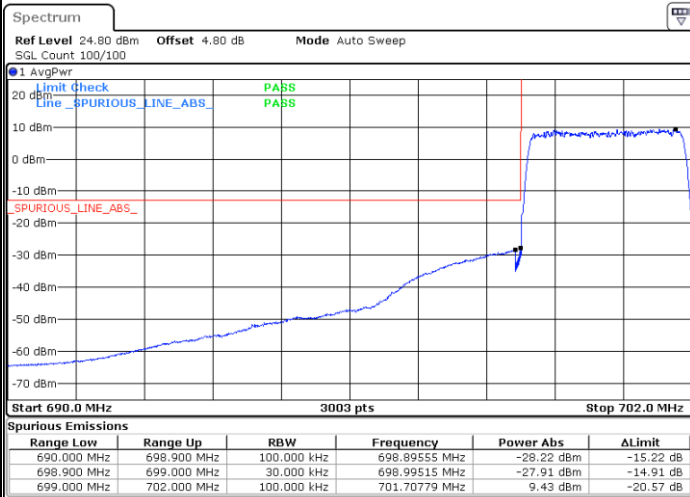
Date: 20.DEC.2021 03:36:20



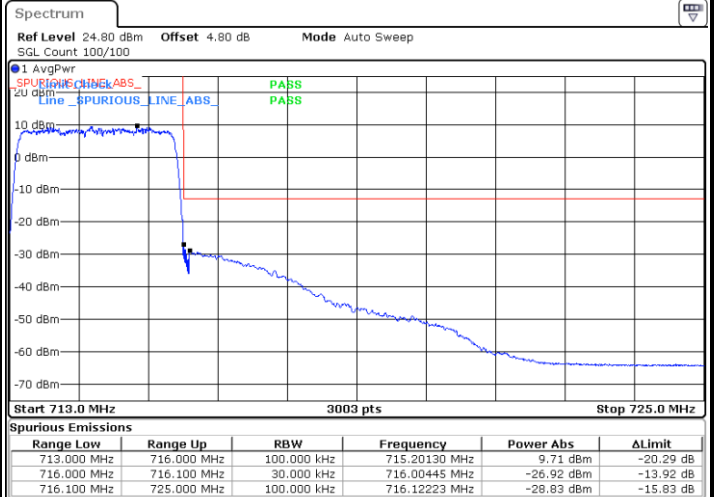
Date: 20.DEC.2021 03:44:13

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



Date: 20.DEC.2021 03:37:15

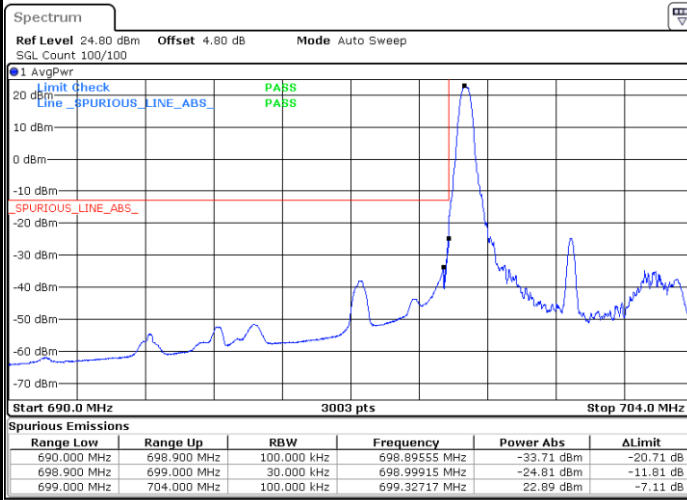


Date: 20.DEC.2021 03:45:09



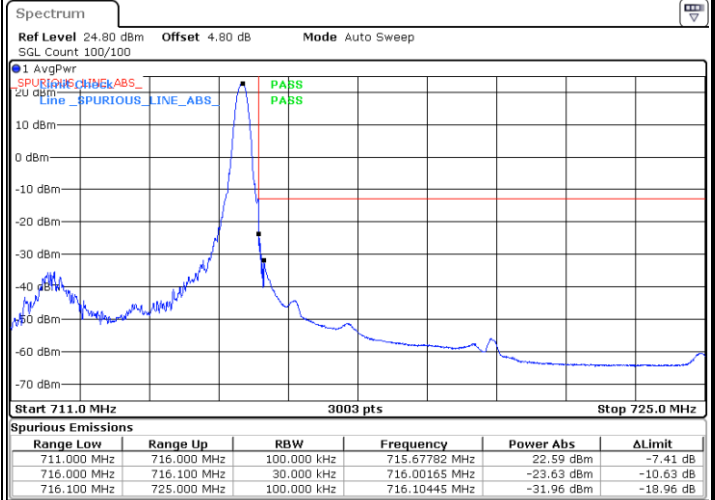
LTE Band 12 / 5MHz / QPSK

Lowest Band Edge / 1 RB



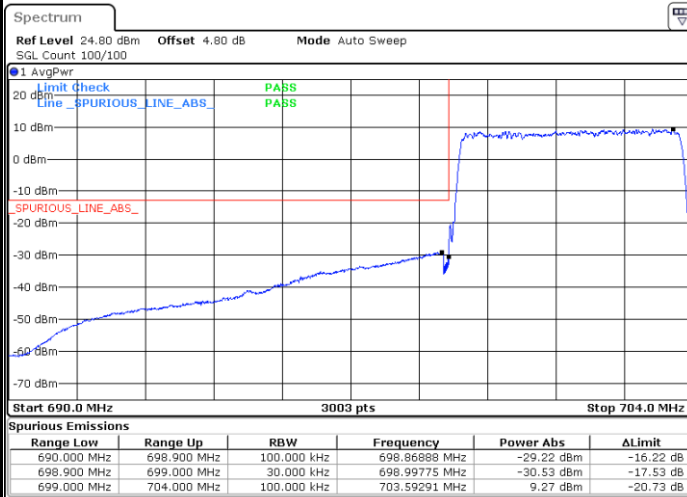
Date: 20.DEC.2021 03:48:56

Highest Band Edge / 1 RB



Date: 20.DEC.2021 03:56:44

Lowest Band Edge / Full RB



Date: 20.DEC.2021 03:53:27

Highest Band Edge / Full RB

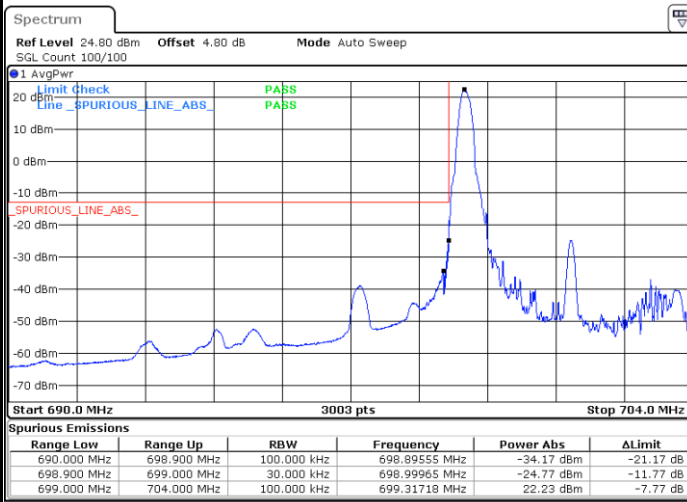


Date: 20.DEC.2021 04:01:15



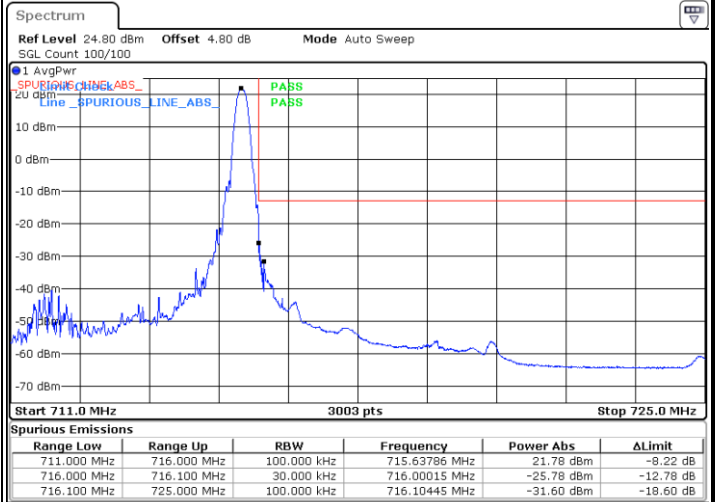
LTE Band 12 / 5MHz / 16QAM

Lowest Band Edge / 1RB



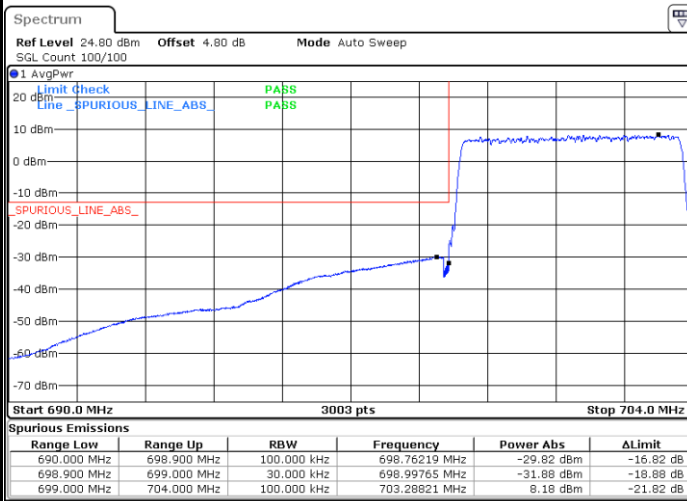
Date: 20.DEC.2021 03:49:50

Highest Band Edge / 1 RB



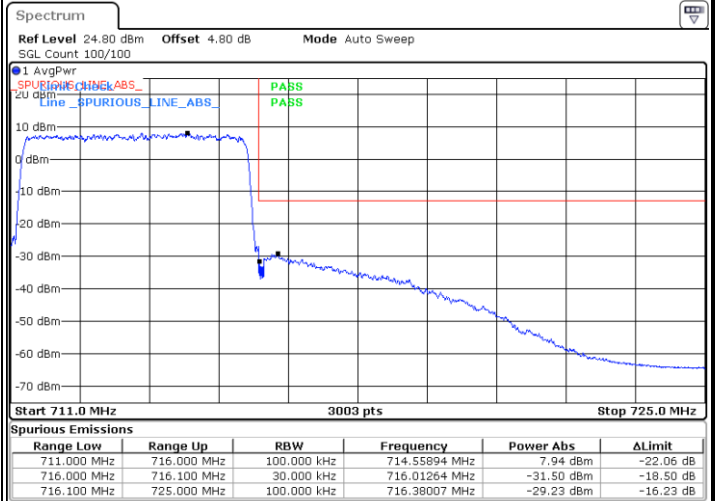
Date: 20.DEC.2021 03:57:38

Lowest Band Edge / Full RB



Date: 20.DEC.2021 03:52:33

Highest Band Edge / Full RB

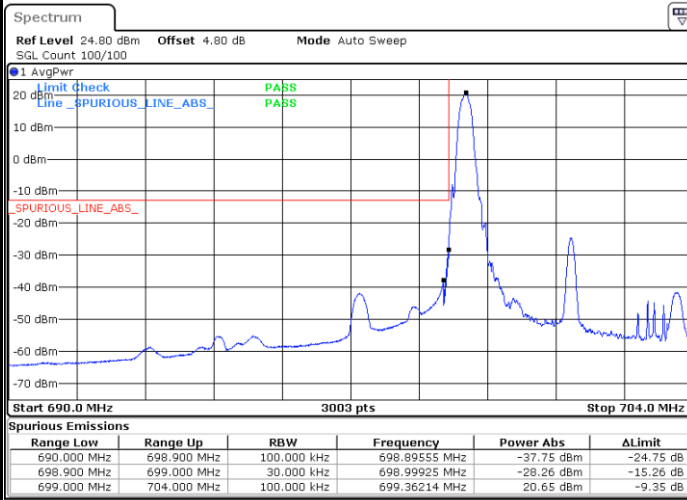


Date: 20.DEC.2021 04:00:21



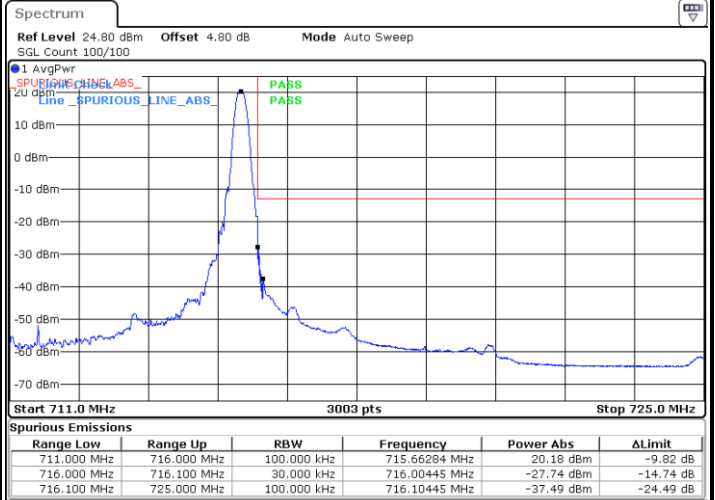
LTE Band 12 / 5MHz / 64QAM

Lowest Band Edge / 1RB



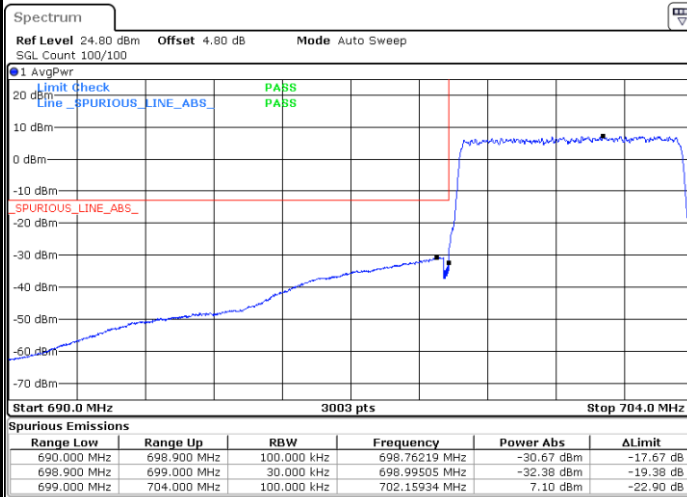
Date: 20.DEC.2021 03:50:44

Highest Band Edge / 1 RB



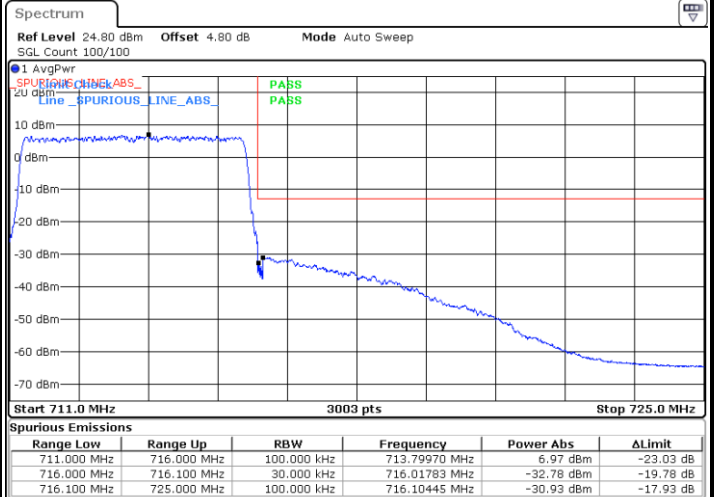
Date: 20.DEC.2021 03:58:33

Lowest Band Edge / Full RB



Date: 20.DEC.2021 03:51:38

Highest Band Edge / Full RB

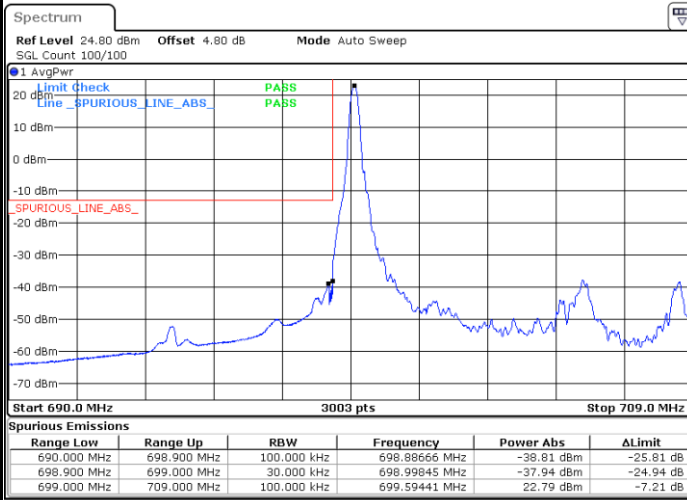


Date: 20.DEC.2021 03:59:27



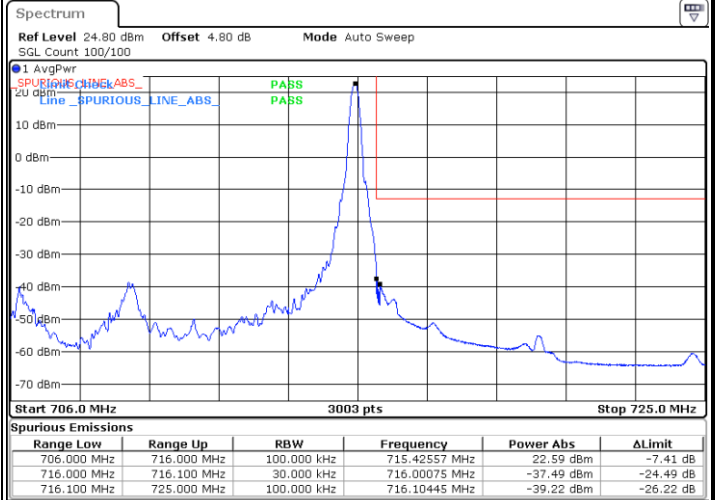
LTE Band 12 / 10MHz / QPSK

Lowest Band Edge / 1 RB



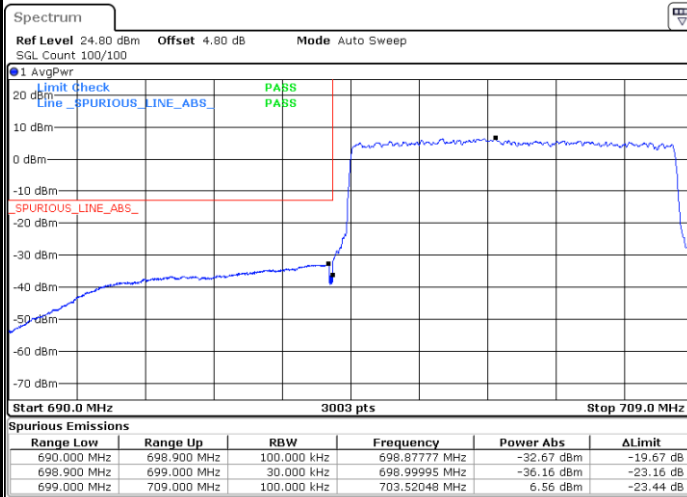
Date: 20.DEC.2021 04:03:11

Highest Band Edge / 1 RB



Date: 20.DEC.2021 04:11:00

Lowest Band Edge / Full RB



Date: 20.DEC.2021 04:07:42

Highest Band Edge / Full RB

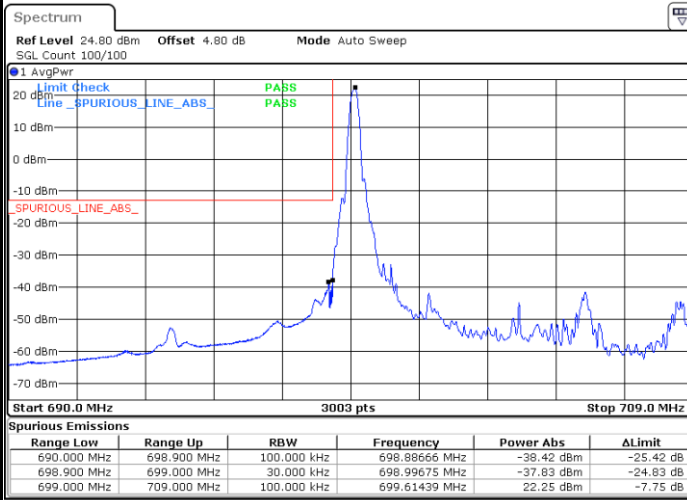


Date: 20.DEC.2021 04:15:39



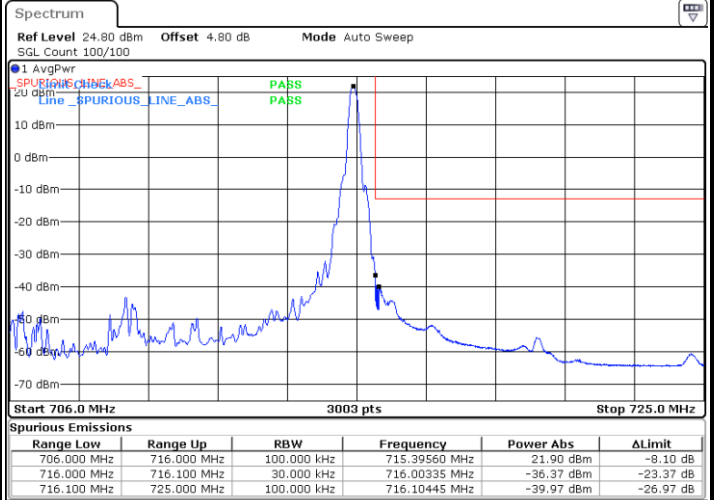
LTE Band 12 / 10MHz / 16QAM

Lowest Band Edge / 1 RB



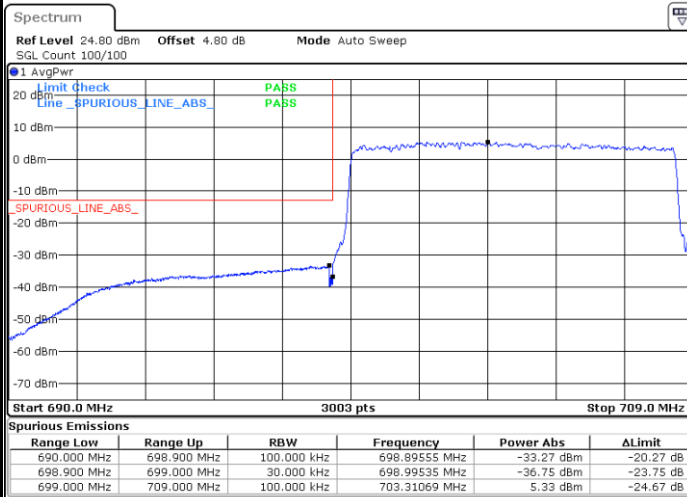
Date: 20.DEC.2021 04:04:06

Highest Band Edge / 1 RB



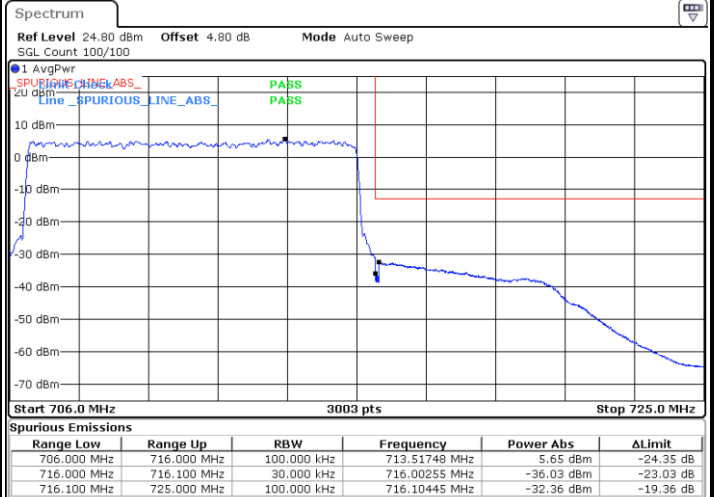
Date: 20.DEC.2021 04:12:03

Lowest Band Edge / Full RB



Date: 20.DEC.2021 04:06:48

Highest Band Edge / Full RB

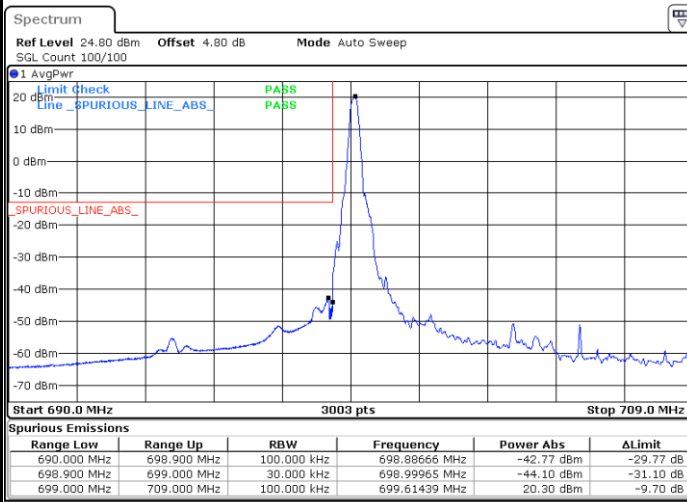


Date: 20.DEC.2021 04:14:45



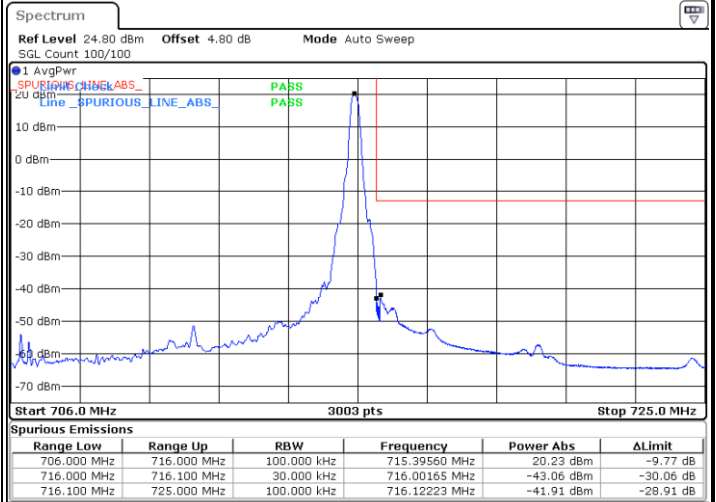
LTE Band 12 / 10MHz / 64QAM

Lowest Band Edge / 1 RB



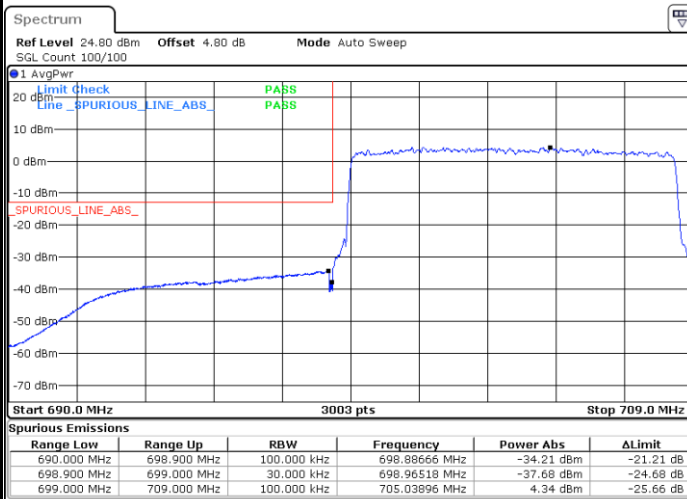
Date: 20.DEC.2021 04:05:00

Highest Band Edge / 1 RB



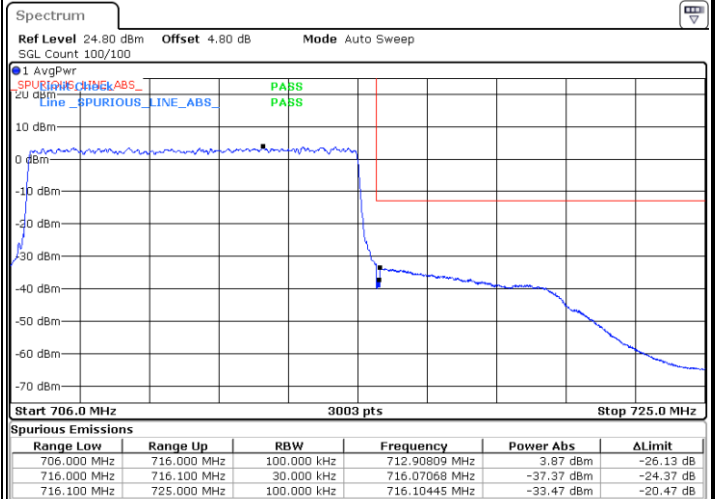
Date: 20.DEC.2021 04:12:57

Lowest Band Edge / Full RB



Date: 20.DEC.2021 04:05:54

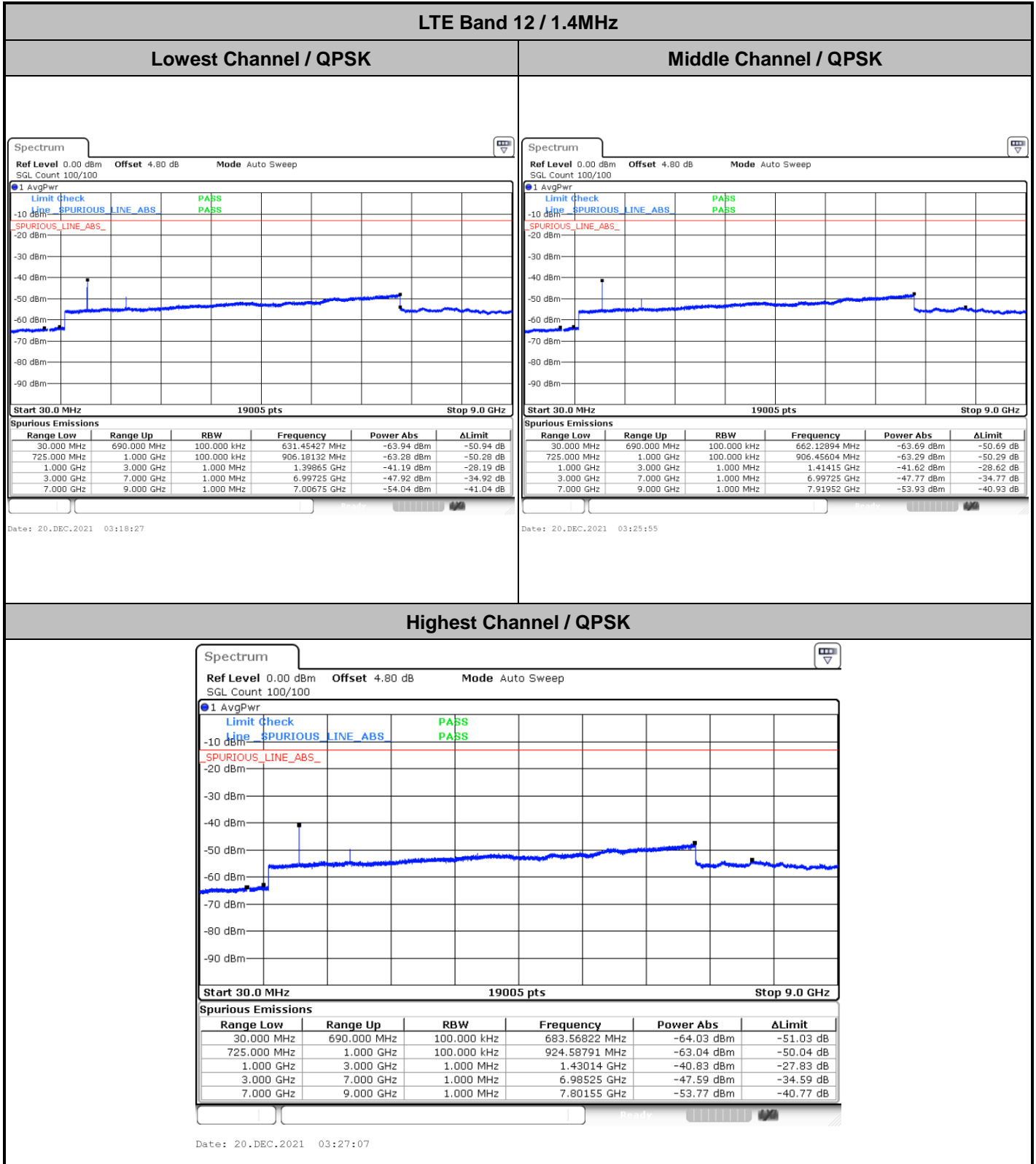
Highest Band Edge / Full RB



Date: 20.DEC.2021 04:13:52



Conducted Spurious Emission

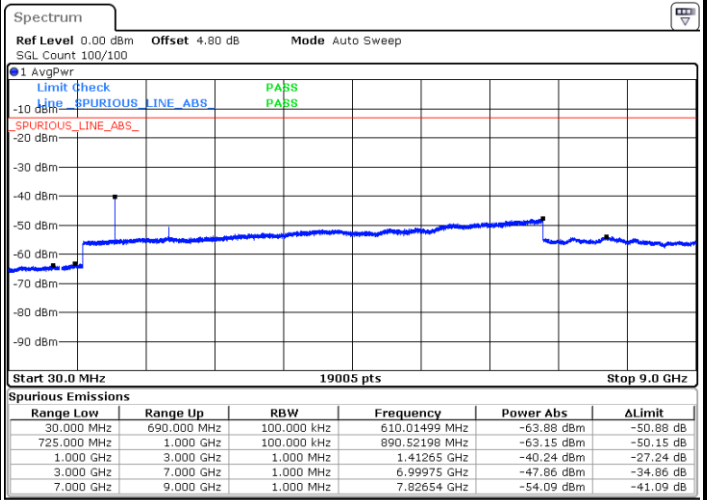
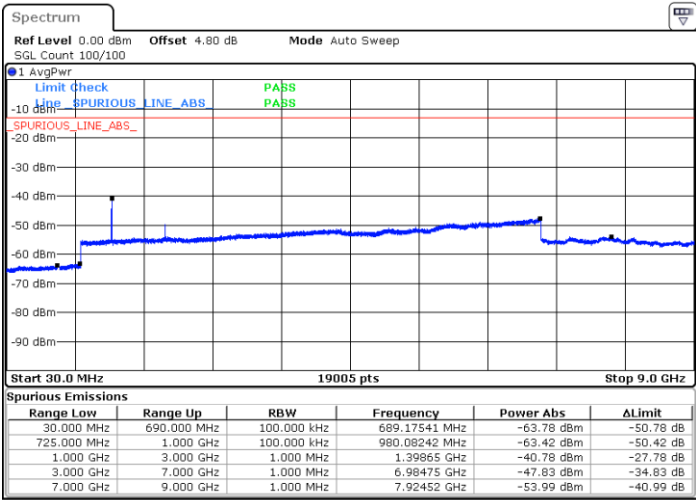




LTE Band 12 / 3MHz

Lowest Channel / QPSK

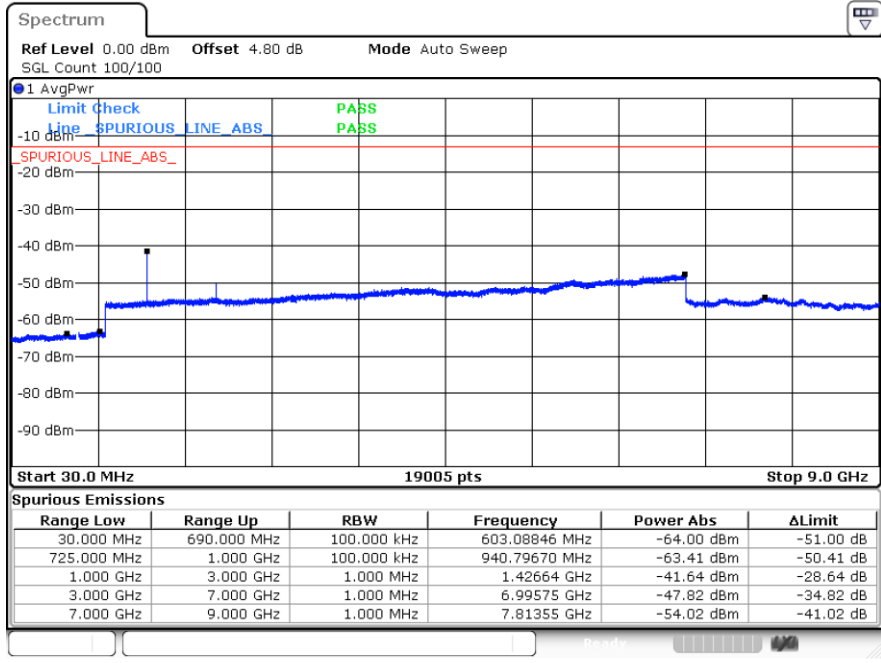
Middle Channel / QPSK



Date: 20.DEC.2021 03:33:47

Date: 20.DEC.2021 03:40:16

Highest Channel / QPSK



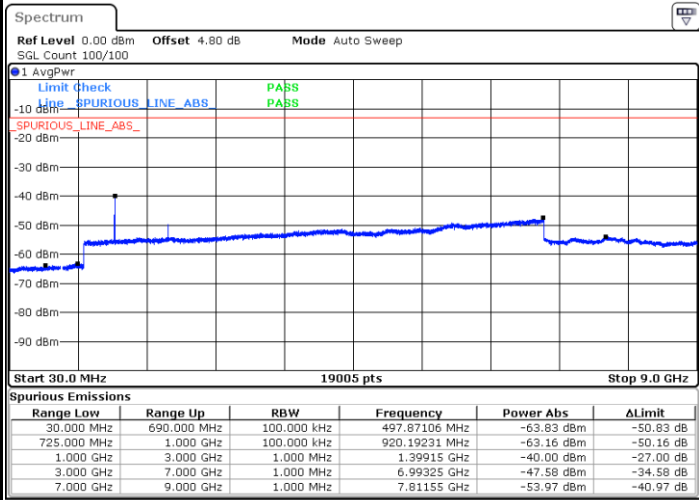
Date: 20.DEC.2021 03:41:30



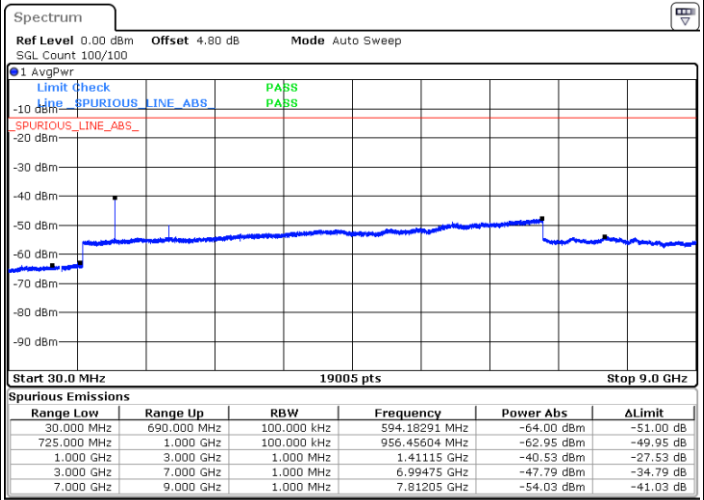
LTE Band 12 / 5MHz

Lowest Channel / QPSK

Middle Channel / QPSK

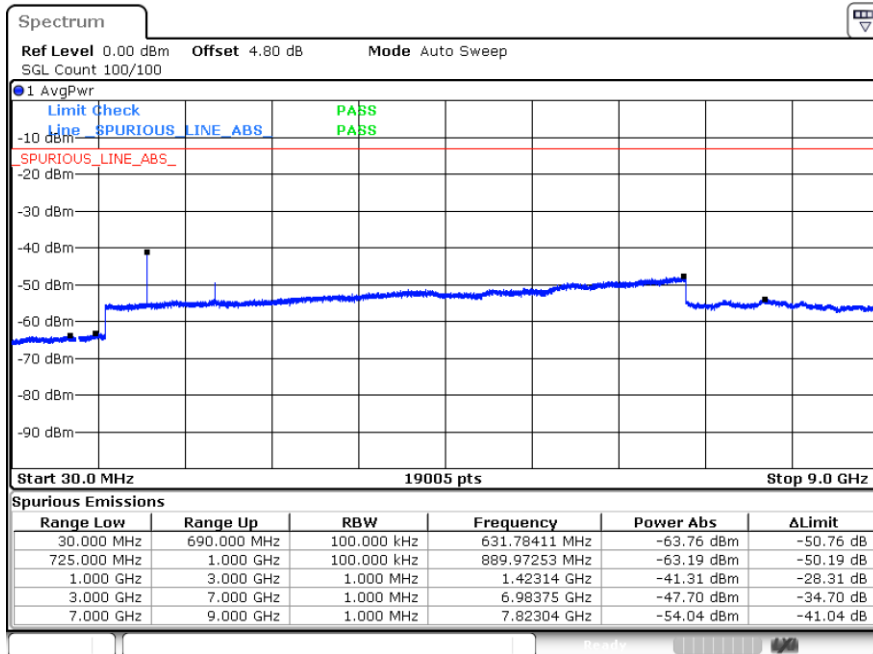


Date: 20.DEC.2021 03:48:10



Date: 20.DEC.2021 03:54:38

Highest Channel / QPSK



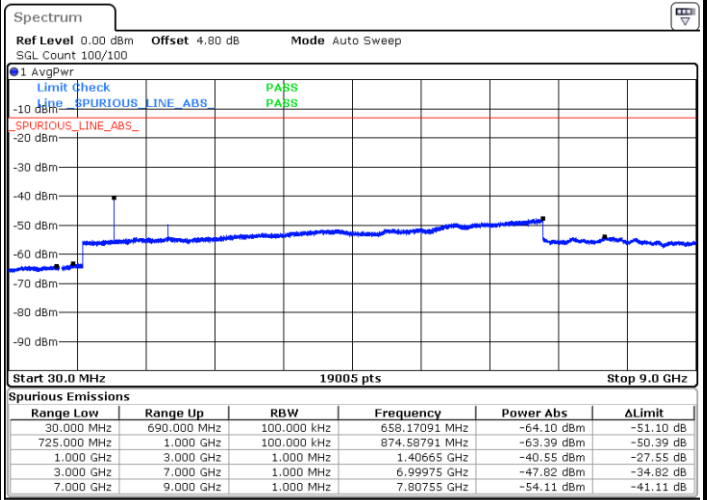
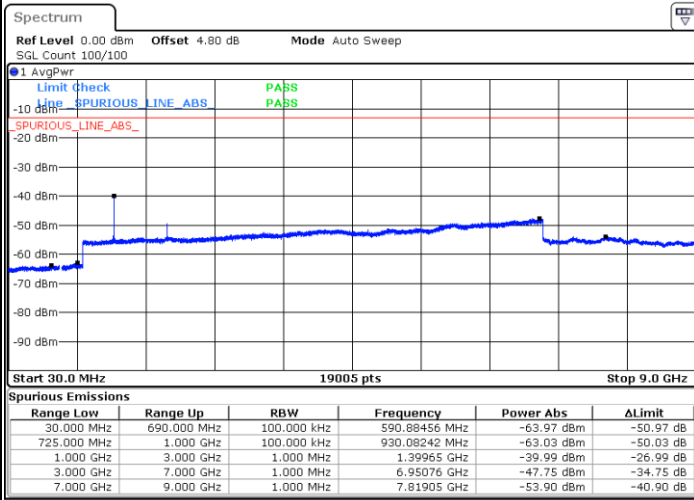
Date: 20.DEC.2021 03:55:49



LTE Band 12 / 10MHz

Lowest Channel / QPSK

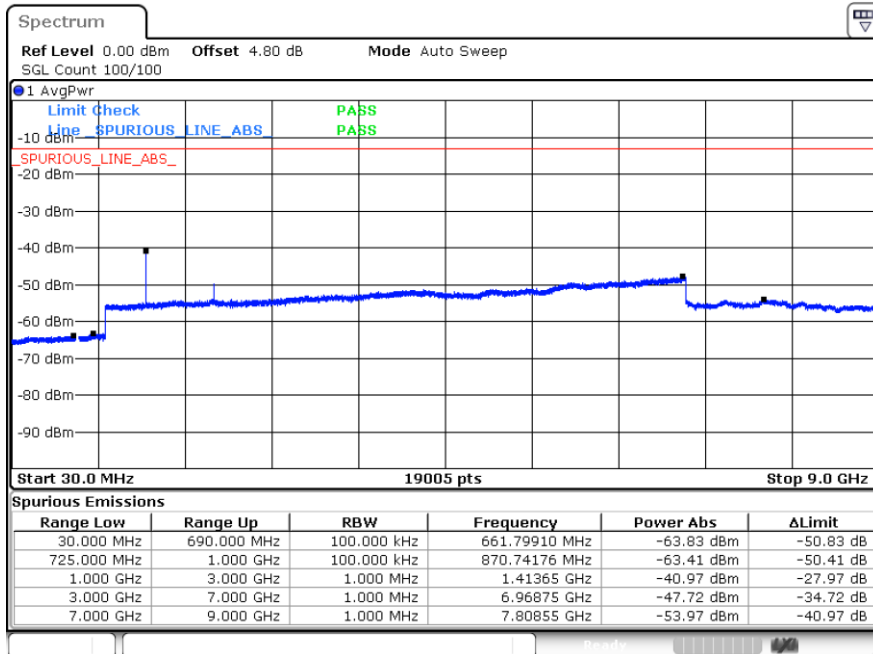
Middle Channel / QPSK



Date: 20.DEC.2021 04:02:27

Date: 20.DEC.2021 04:08:54

Highest Channel / QPSK



Date: 20.DEC.2021 04:10:05



Frequency Stability

Test Conditions		LTE Band 12 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0012	PASS
40	Normal Voltage	0.0015	
30	Normal Voltage	0.0021	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0007	
0	Normal Voltage	0.0011	
-10	Normal Voltage	0.0013	
-20	Normal Voltage	0.0019	
-30	Normal Voltage	0.0015	
20	Maximum Voltage	0.0005	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0006	

Note:

- 1. Normal Voltage =3.87 V. ; Battery End Point (BEP) =3.6 V. ; Maximum Voltage =4.4 V.
- 2. Note: The frequency fundamental emissions stay within the authorized frequency block.



Appendix B. Test Results of Radiated Test

Radiated Spurious Emission

Test Engineer :	Chris Chen	Temperature :	22~23°C
		Relative Humidity :	41~42%

Note: Pre-scanned harmonic for the different antenna, we choose the worst antenna mode to test.

LTE Band 4 / 20MHz / QPSK for Ant.0								
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	3447	-26.77	-13	-13.77	-37.51	2.604	13.34	H
	5172	-37.17	-13	-24.17	-47.68	3.011	13.52	H
	6888	-48.46	-13	-35.46	-58.66	3.271	13.47	H
	8616	-46.52	-13	-33.52	-53.49	5.527	12.5	H
	10344	-49.23	-13	-36.23	-56.09	6.038	12.9	H
	12060	-44.10	-13	-31.10	-51.30	6.726	13.93	H
	3447	-29.12	-13	-16.12	-39.86	2.604	13.34	V
	5172	-41.42	-13	-28.42	-51.93	3.011	13.52	V
	6888	-45.34	-13	-32.34	-55.54	3.271	13.47	V
	8616	-47.82	-13	-34.82	-54.79	5.527	12.50	V
	10344	-48.60	-13	-35.60	-55.46	6.038	12.90	V
	12060	-45.12	-13	-32.12	-52.32	6.726	13.93	V

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

LTE Band 12 / 10MHz / QPSK for Ant.0								
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	1408	-66.91	-13	-53.91	-73.88	1.58	10.70	H
	2112	-61.00	-13	-48.00	-69.25	2.102	12.50	H
	2812	-59.51	-13	-46.51	-68.40	2.856	13.90	H
	3512	-59.09	-13	-46.09	-67.55	2.689	13.30	H
	4216	-58.87	-13	-45.87	-66.63	3.093	13.00	H
	1408	-28.00	-13	-15.00	-34.97	1.58	10.70	V
	2112	-43.08	-13	-30.08	-51.33	2.10	12.50	V
	2808	-44.12	-13	-31.12	-53.01	2.86	13.90	V
	3512	-41.23	-13	-28.23	-49.69	2.69	13.30	V
	4216	-55.57	-13	-42.57	-63.33	3.09	13.00	V

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