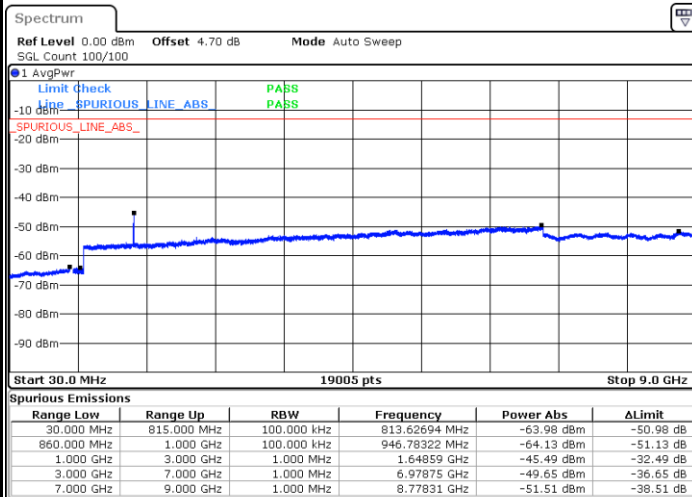




Conducted Spurious Emission

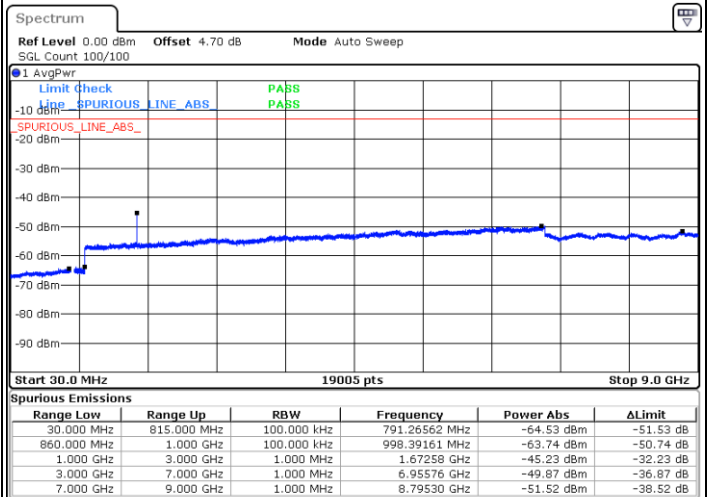
LTE Band 5 / 1.4MHz

Lowest Channel / QPSK



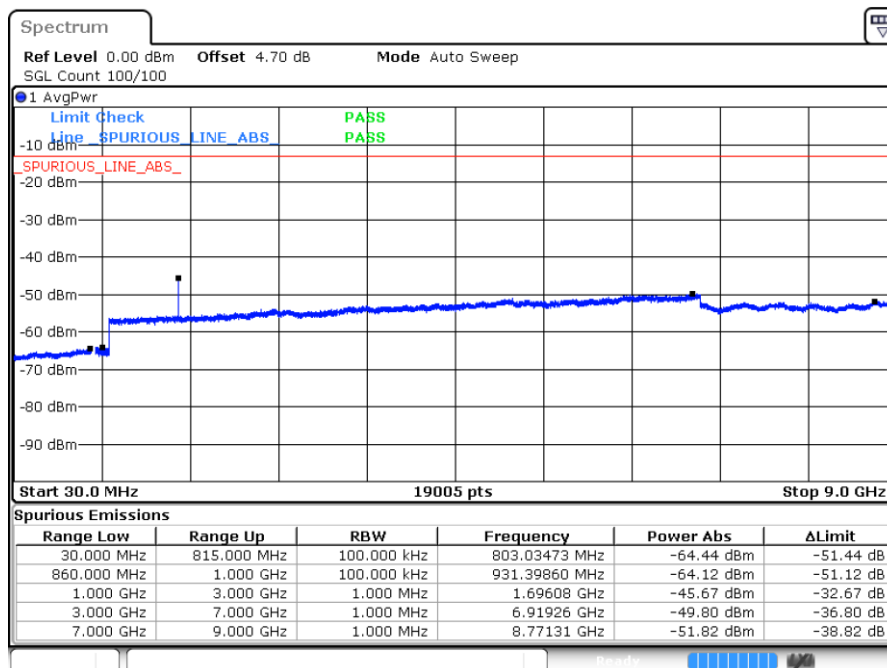
Date: 28 JUN 2021 18:03:15

Middle Channel / QPSK



Date: 28 JUN 2021 18:03:50

Highest Channel / QPSK

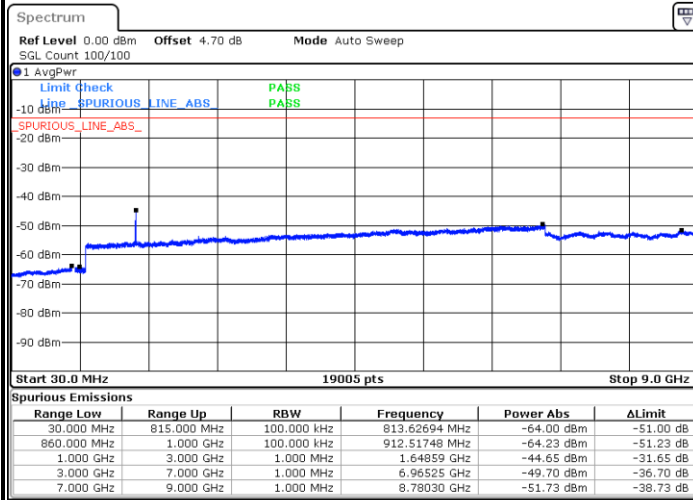


Date: 28 JUN 2021 18:04:21



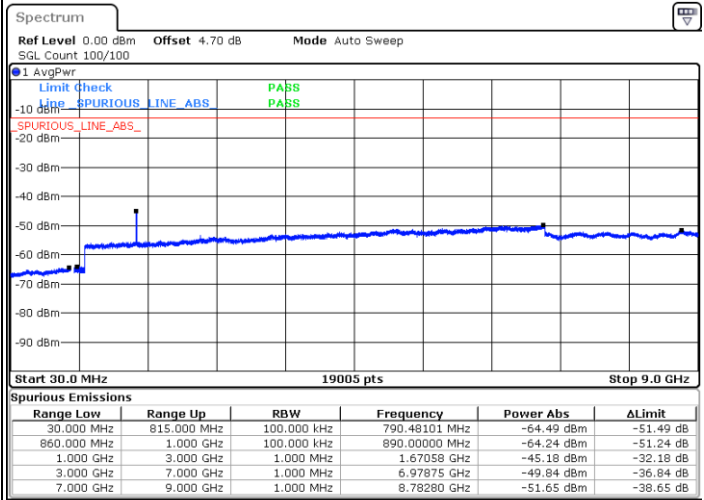
LTE Band 5 / 3MHz

Lowest Channel / QPSK



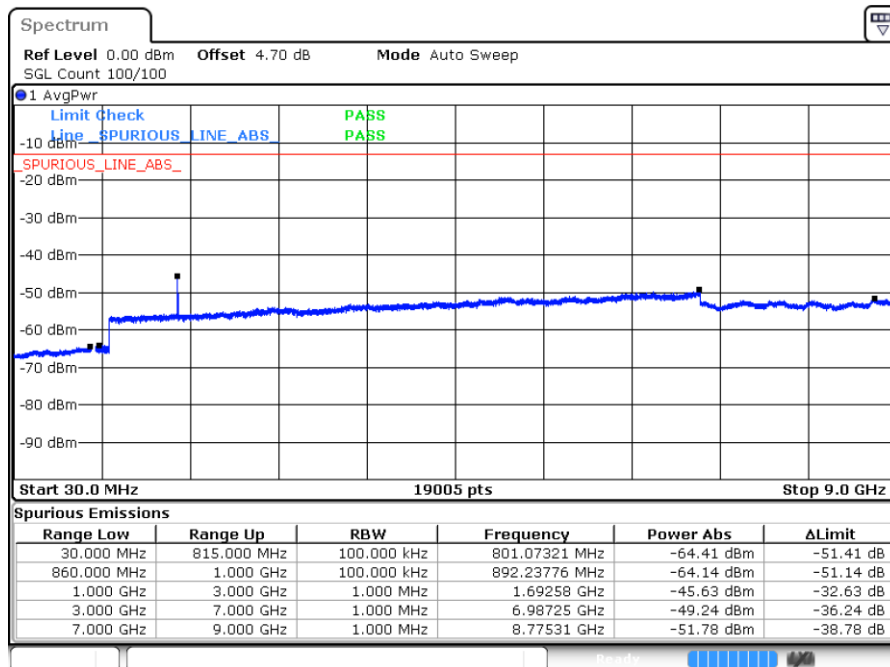
Date: 28 JUN 2021 18:28:28

Middle Channel / QPSK



Date: 28 JUN 2021 18:29:01

Highest Channel / QPSK

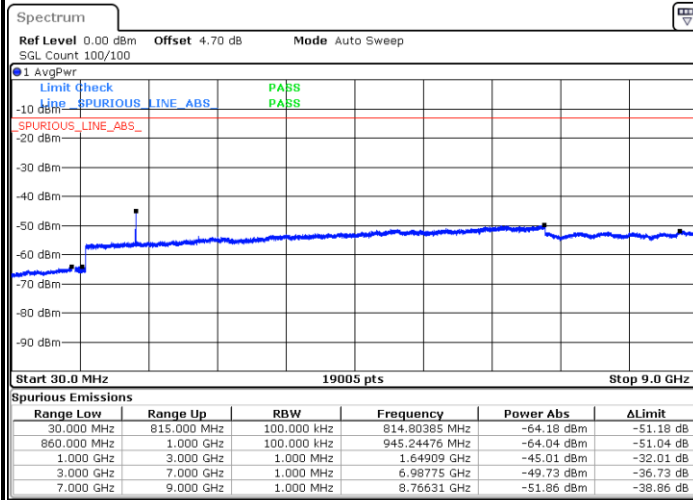


Date: 28 JUN 2021 18:29:31



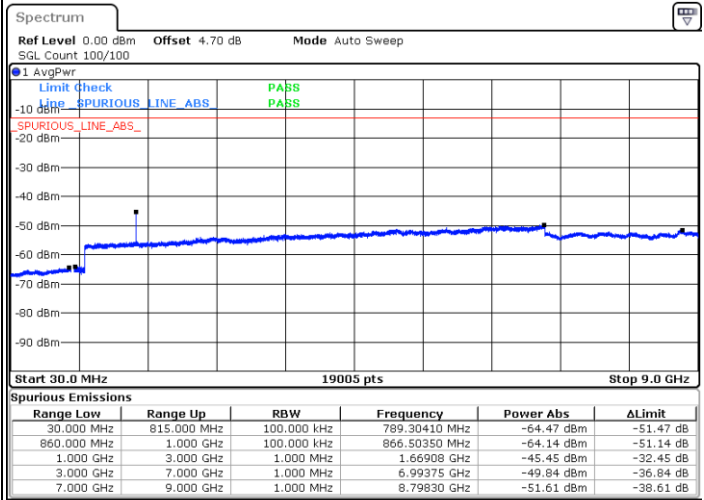
LTE Band 5 / 5MHz

Lowest Channel / QPSK



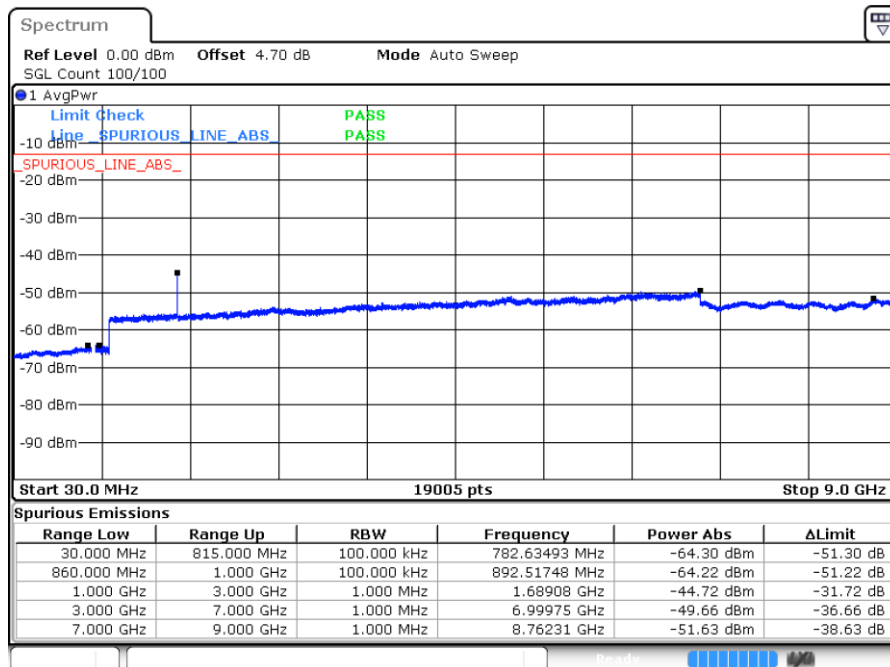
Date: 28 JUN 2021 18:46:37

Middle Channel / QPSK



Date: 28 JUN 2021 18:47:07

Highest Channel / QPSK

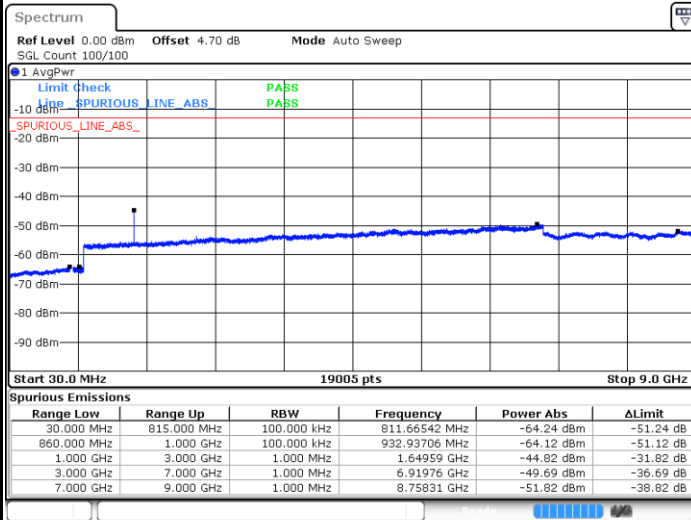


Date: 28 JUN 2021 18:47:38

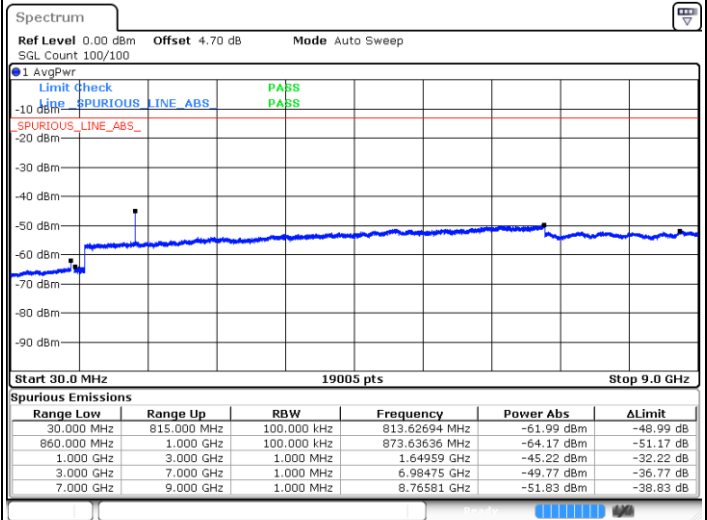


LTE Band 5 / 10MHz

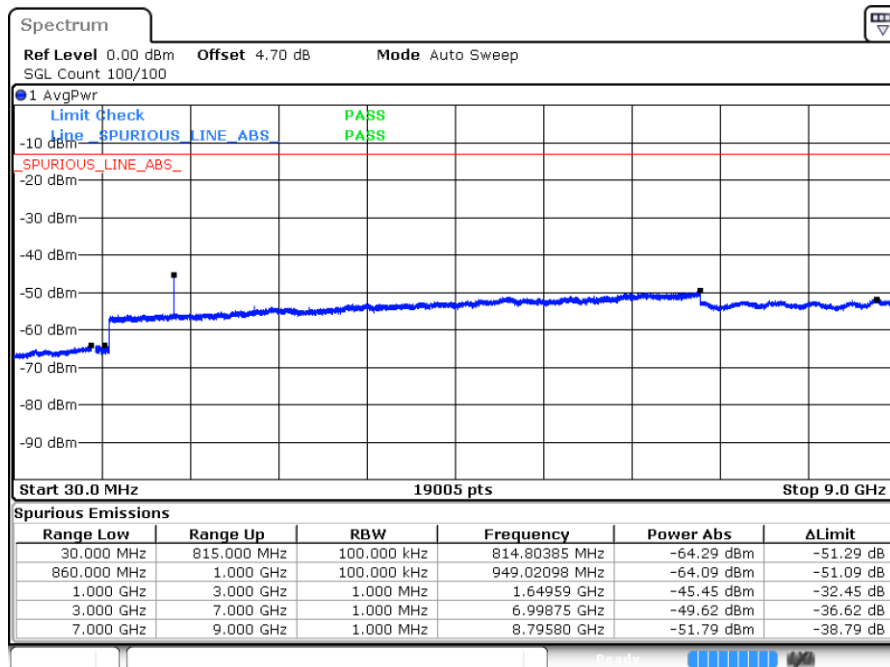
Lowest Channel / QPSK



Middle Channel / QPSK



Highest Channel / QPSK



**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	0.0016	PASS
40	Normal Voltage	0.0005	
30	Normal Voltage	0.0013	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0004	
0	Normal Voltage	0.0015	
-10	Normal Voltage	0.0021	
-20	Normal Voltage	0.0026	
-30	Normal Voltage	0.0017	
20	Maximum Voltage	0.0025	
20	Normal Voltage	0.0014	
20	Battery End Point	0.0011	

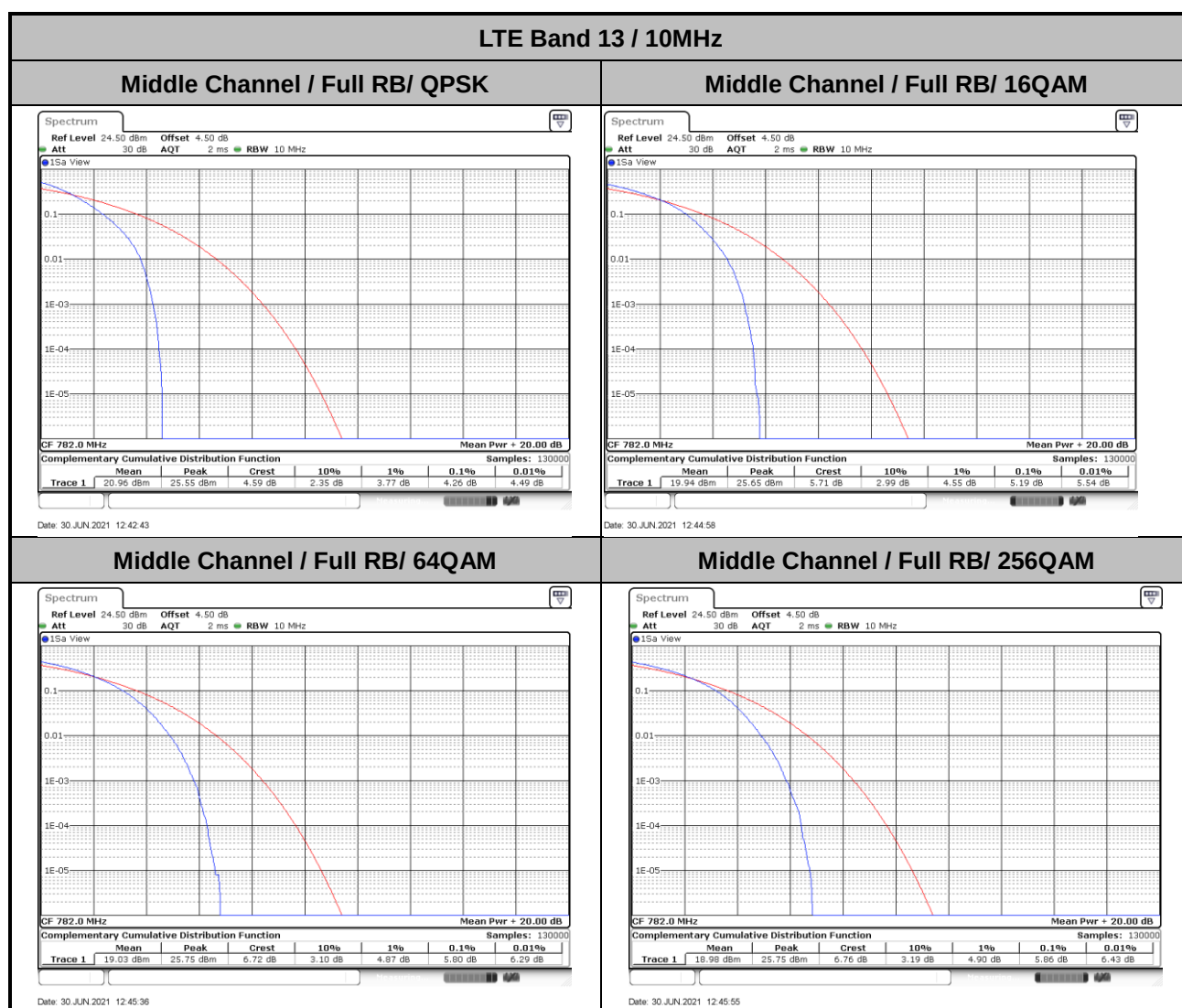
Note: Normal Voltage =3.85 V. ; Battery End Point (BEP) =3.6 V. ; Maximum Voltage =4.4 V.



LTE Band 13

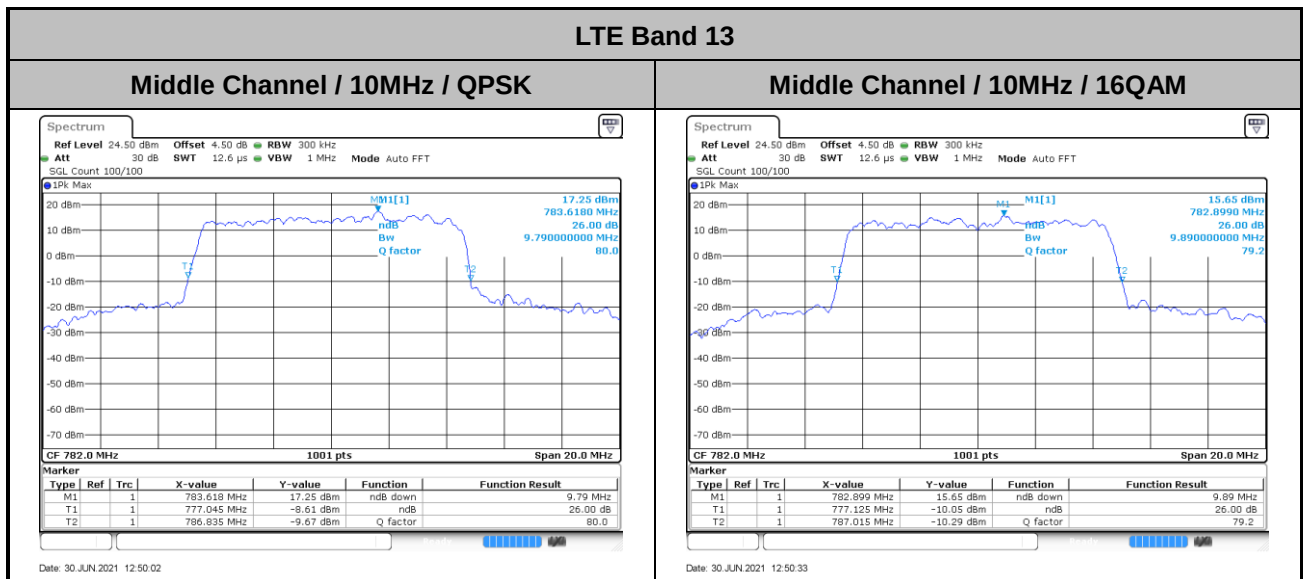
Peak-to-Average Ratio

Mode	LTE Band 13 / 10MHz				
Mod.	QPSK	16QAM	64QAM	256QAM	Limit: 13dB
RB Size	Full RB	Full RB	Full RB	Full RB	Result
Middle CH	4.26	5.19	5.80	5.86	PASS



**26dB Bandwidth**

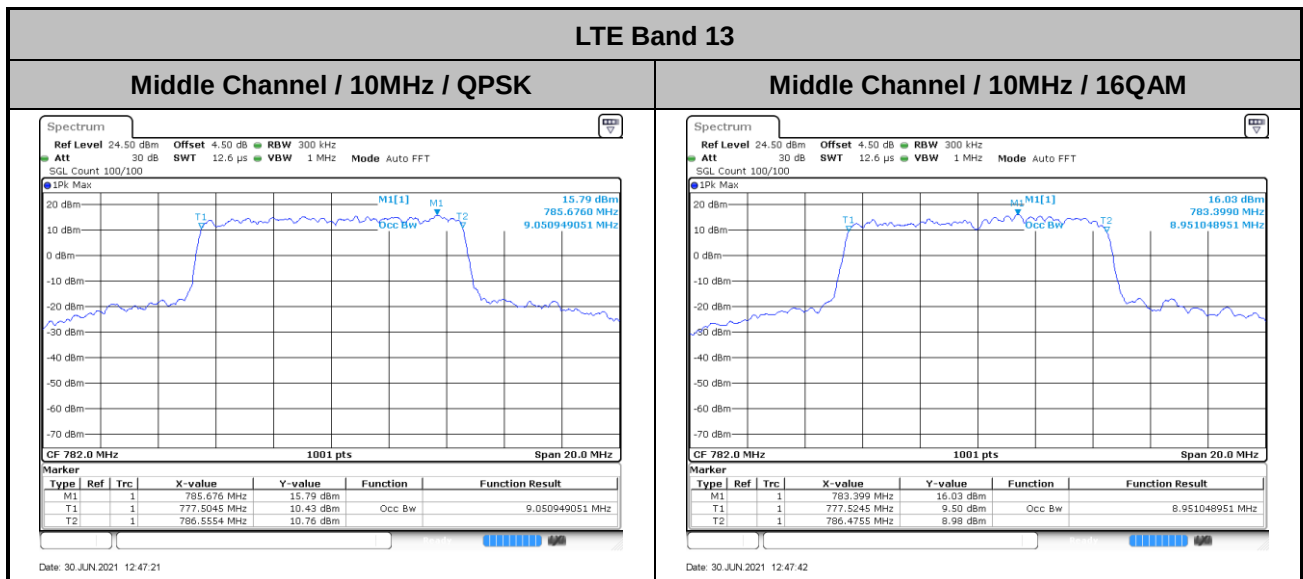
Mode	LTE Band 13 : 26dB BW(MHz)	
BW	10MHz	
Mod.	QPSK	16QAM
Middle CH	9.79	9.89

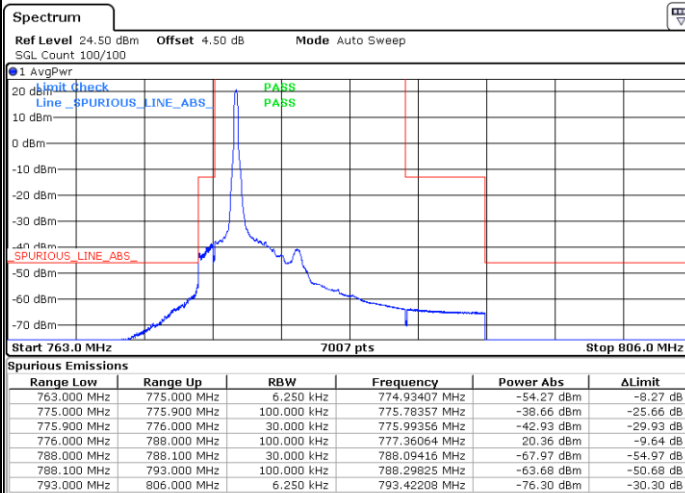




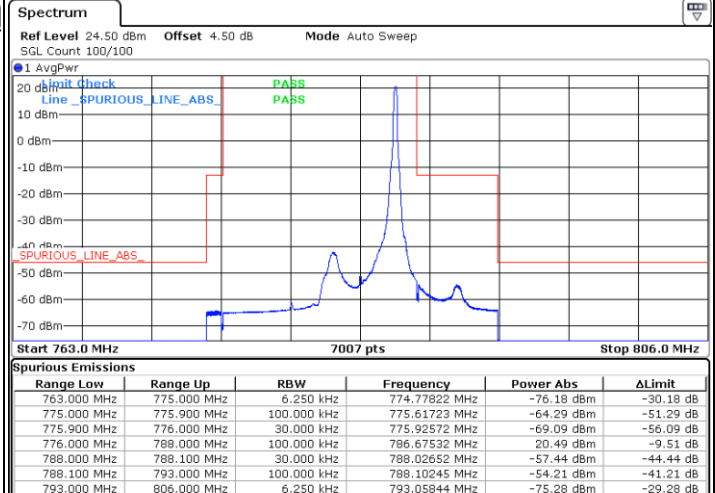
Occupied Bandwidth

Mode	LTE Band 13 : 99%OBW(MHz)	
BW	10MHz	
Mod.	QPSK	16QAM
Middle CH	9.05	8.95

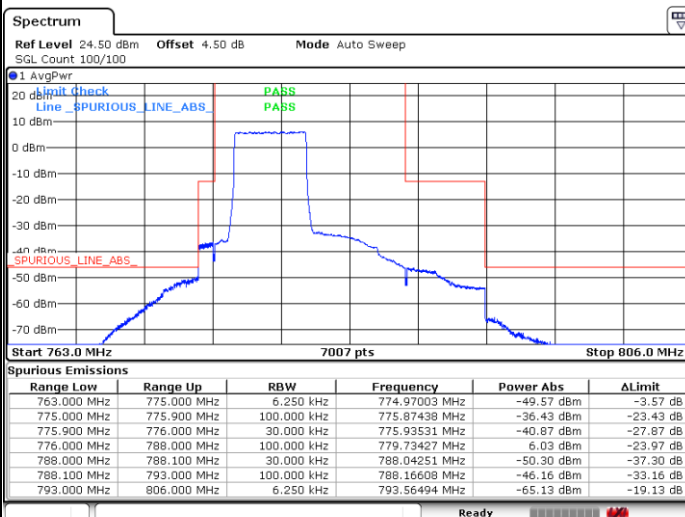


**Conducted Band Edge****LTE Band 13 / 5MHz / QPSK****Lowest Band Edge / 1 RB****Highest Band Edge / 1 RBmax**

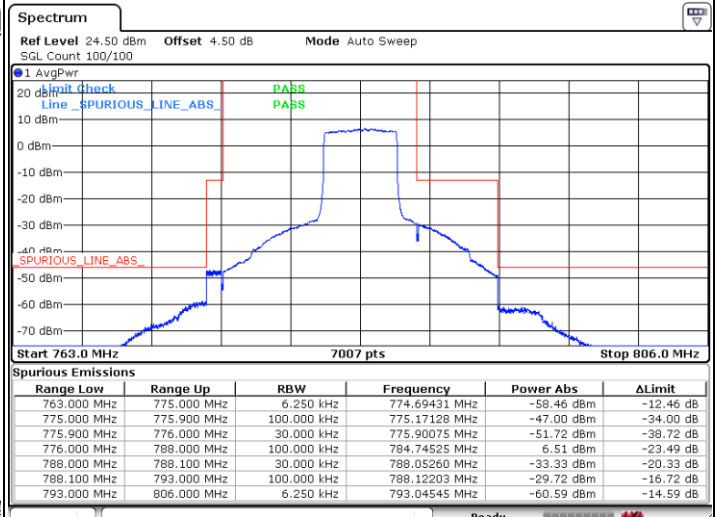
Date: 24 SEP 2021 13:29:23



Date: 24 SEP 2021 14:35:14

Lowest Band Edge / Full RB**Highest Band Edge / Full RB**

Date: 24 SEP 2021 13:20:21



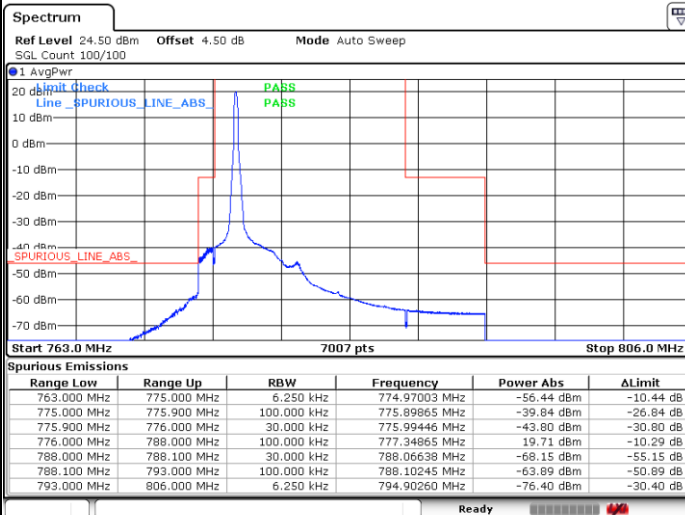
Date: 24 SEP 2021 13:30:47



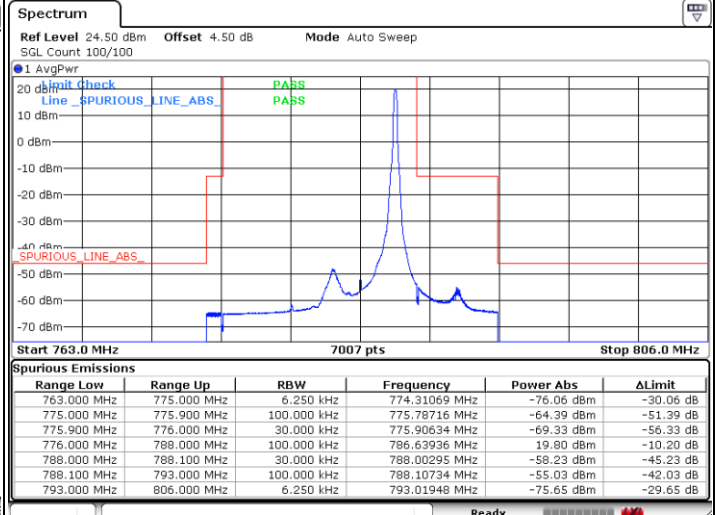
LTE Band 13 / 5MHz / 16QAM

Lowest Band Edge / 1RB

Highest Band Edge / 1 RBmax



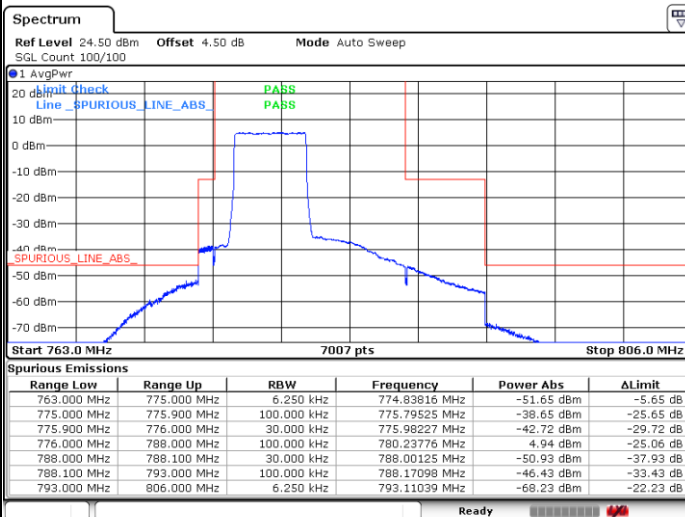
Date: 24 SEP 2021 13:28:10



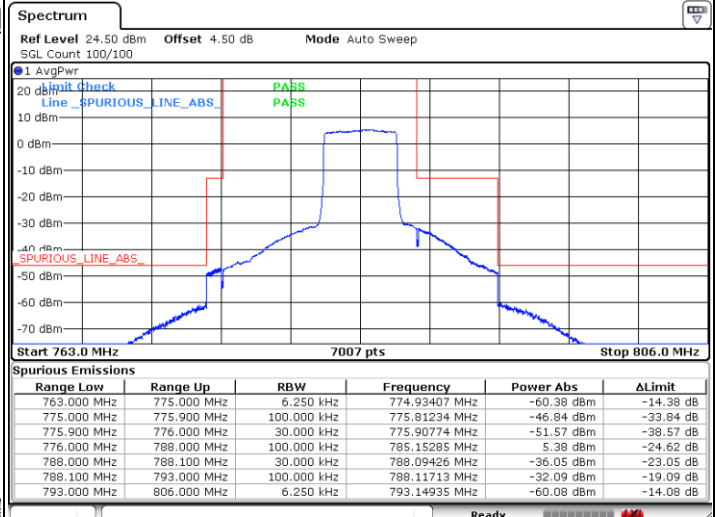
Date: 24 SEP 2021 14:34:00

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



Date: 24 SEP 2021 13:21:53



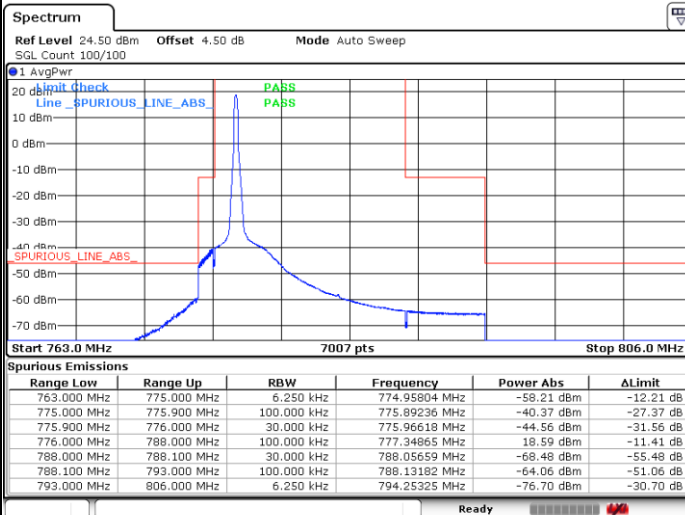
Date: 24 SEP 2021 13:33:45



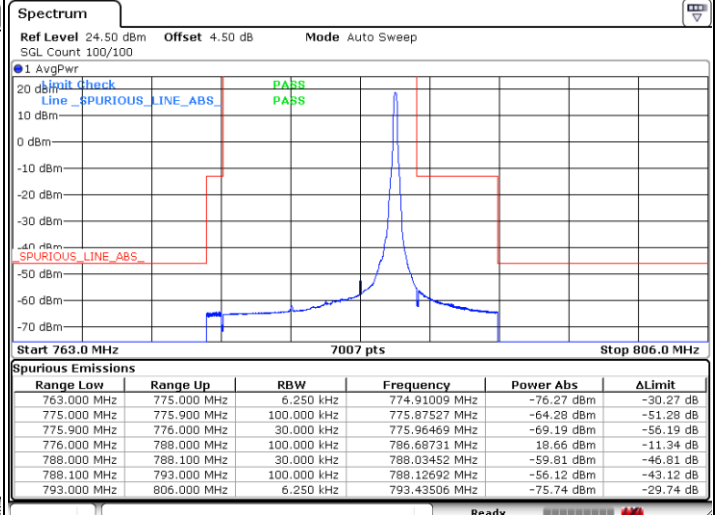
LTE Band 13 / 5MHz / 64QAM

Lowest Band Edge / 1RB

Highest Band Edge / 1 RBnx



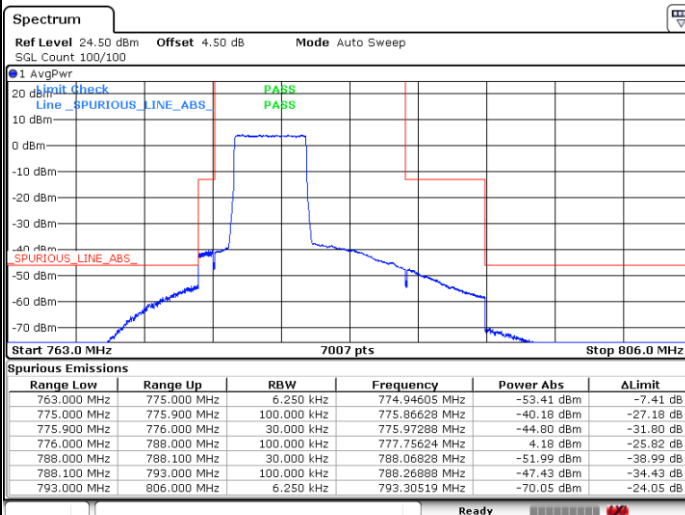
Date: 24 SEP 2021 13:26:57



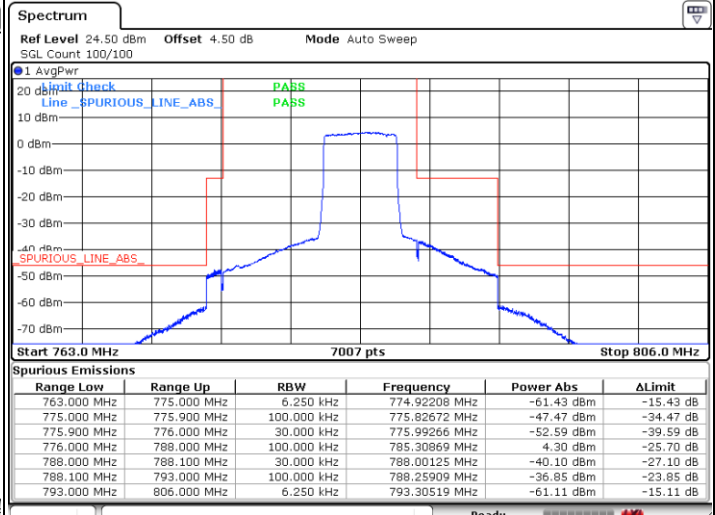
Date: 24 SEP 2021 14:32:40

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



Date: 24 SEP 2021 13:23:11



Date: 24 SEP 2021 14:28:14

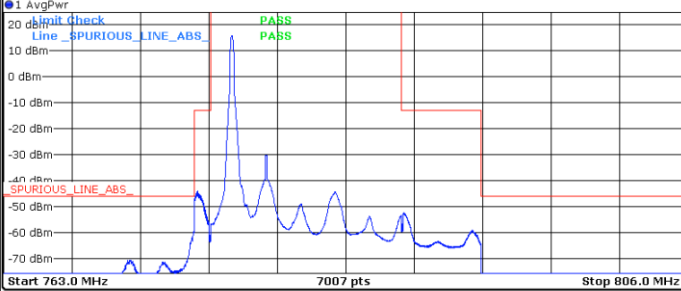


LTE Band 13 / 5MHz / 256QAM

Lowest Band Edge / 1RB

Highest Band Edge / 1 RBmax

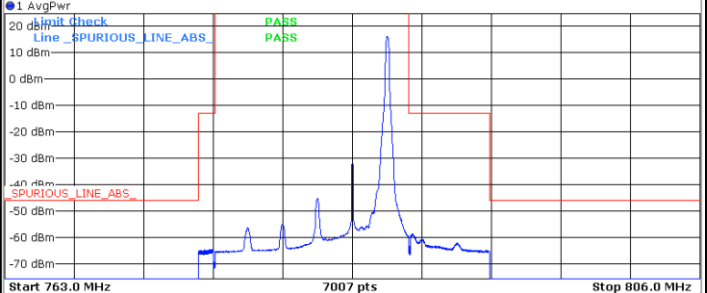
Spectrum

Ref Level 24.50 dBm Offset 4.50 dB Mode Auto Sweep
SGL Count 100/100

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
763.000 MHz	775.000 MHz	6.250 kHz	774.98202 MHz	-59.15 dBm	-13.15 dB
775.000 MHz	775.900 MHz	100.000 kHz	775.18207 MHz	-43.89 dBm	-30.89 dB
775.900 MHz	776.000 MHz	30.000 kHz	775.90654 MHz	-60.57 dBm	-47.57 dB
776.000 MHz	788.100 MHz	100.000 kHz	777.34665 MHz	15.61 dBm	-14.39 dB
788.100 MHz	788.100 MHz	30.000 kHz	788.06668 MHz	-56.66 dBm	-43.66 dB
788.100 MHz	793.000 MHz	100.000 kHz	788.12203 MHz	-52.37 dBm	-39.37 dB
793.000 MHz	806.000 MHz	6.250 kHz	796.65584 MHz	-76.20 dBm	-30.20 dB

Date: 24 SEP 2021 13:25:40

Spectrum

Ref Level 24.50 dBm Offset 4.50 dB Mode Auto Sweep
SGL Count 100/100

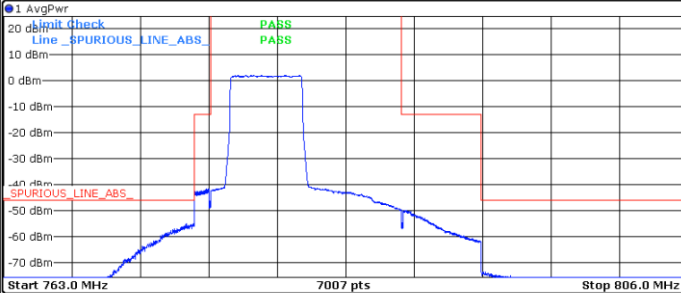
Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
763.000 MHz	775.000 MHz	6.250 kHz	773.89111 MHz	-76.45 dBm	-30.45 dB
775.000 MHz	775.900 MHz	100.000 kHz	775.68017 MHz	-64.48 dBm	-51.48 dB
775.900 MHz	776.000 MHz	30.000 kHz	775.94960 MHz	-69.07 dBm	-56.07 dB
776.000 MHz	788.100 MHz	100.000 kHz	786.62737 MHz	15.73 dBm	-14.27 dB
788.100 MHz	788.100 MHz	30.000 kHz	788.03402 MHz	-63.19 dBm	-50.19 dB
788.100 MHz	793.000 MHz	100.000 kHz	788.24930 MHz	-58.63 dBm	-45.63 dB
793.000 MHz	806.000 MHz	6.250 kHz	793.11039 MHz	-76.28 dBm	-30.28 dB

Date: 24 SEP 2021 14:31:15

Lowest Band Edge / Full RB

Highest Band Edge / Full RB

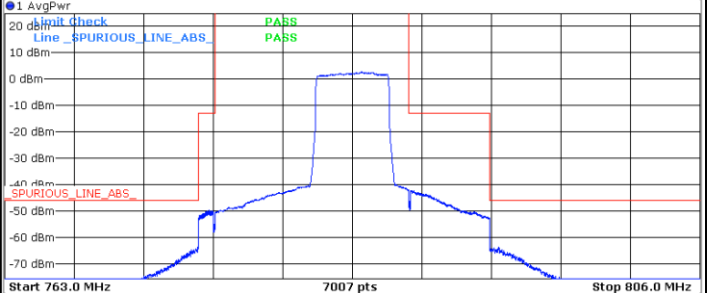
Spectrum

Ref Level 24.50 dBm Offset 4.50 dB Mode Auto Sweep
SGL Count 100/100

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
763.000 MHz	775.000 MHz	6.250 kHz	774.93407 MHz	-54.90 dBm	-8.90 dB
775.000 MHz	775.900 MHz	100.000 kHz	775.84201 MHz	-41.65 dBm	-28.65 dB
775.900 MHz	776.000 MHz	30.000 kHz	775.95260 MHz	-46.29 dBm	-33.29 dB
776.000 MHz	788.100 MHz	100.000 kHz	778.71528 MHz	1.97 dBm	-28.03 dB
788.100 MHz	788.100 MHz	30.000 kHz	788.01014 MHz	-54.28 dBm	-41.28 dB
788.100 MHz	793.000 MHz	100.000 kHz	788.26399 MHz	-49.95 dBm	-36.95 dB
793.000 MHz	806.000 MHz	6.250 kHz	793.00649 MHz	-73.09 dBm	-27.09 dB

Date: 24 SEP 2021 13:24:22

Spectrum

Ref Level 24.50 dBm Offset 4.50 dB Mode Auto Sweep
SGL Count 100/100

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
763.000 MHz	775.000 MHz	6.250 kHz	774.95804 MHz	-63.59 dBm	-17.59 dB
775.000 MHz	775.900 MHz	100.000 kHz	775.61723 MHz	-49.61 dBm	-36.61 dB
775.900 MHz	776.000 MHz	30.000 kHz	775.92872 MHz	-54.79 dBm	-41.79 dB
776.000 MHz	788.100 MHz	100.000 kHz	785.05694 MHz	2.50 dBm	-27.50 dB
788.100 MHz	788.100 MHz	30.000 kHz	788.00335 MHz	-46.29 dBm	-33.29 dB
788.100 MHz	793.000 MHz	100.000 kHz	788.13182 MHz	-42.16 dBm	-29.16 dB
793.000 MHz	806.000 MHz	6.250 kHz	793.52597 MHz	-63.38 dBm	-17.38 dB

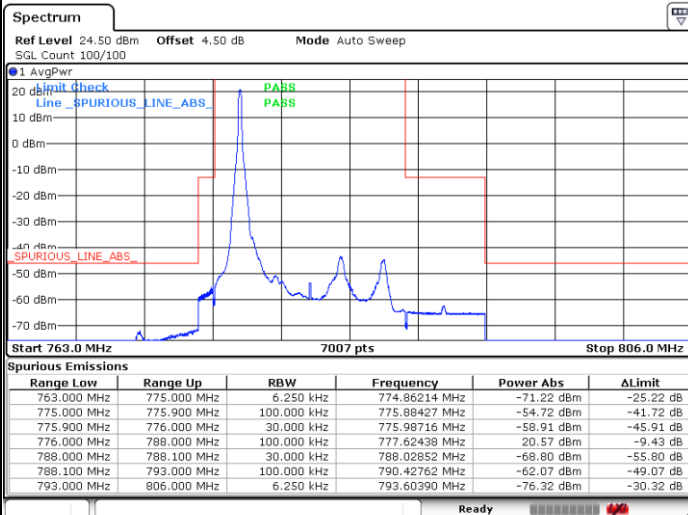
Date: 24 SEP 2021 14:29:38



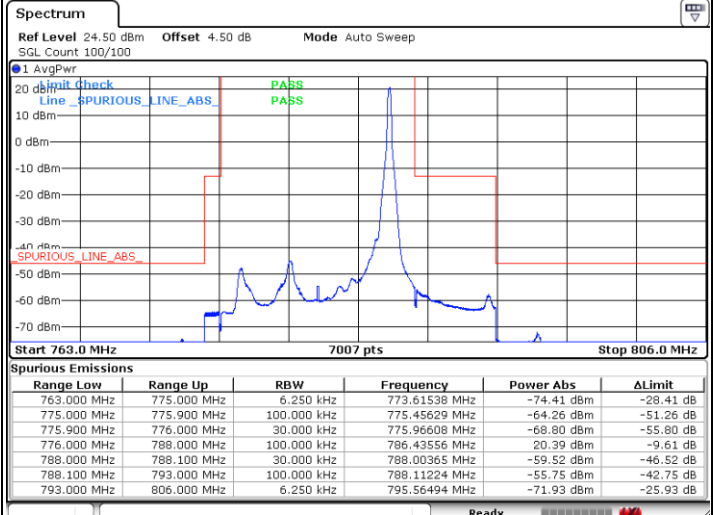
LTE Band 13 / 10MHz / QPSK

middle Band Edge / 1 RB

middle Band Edge / 1 RBmax



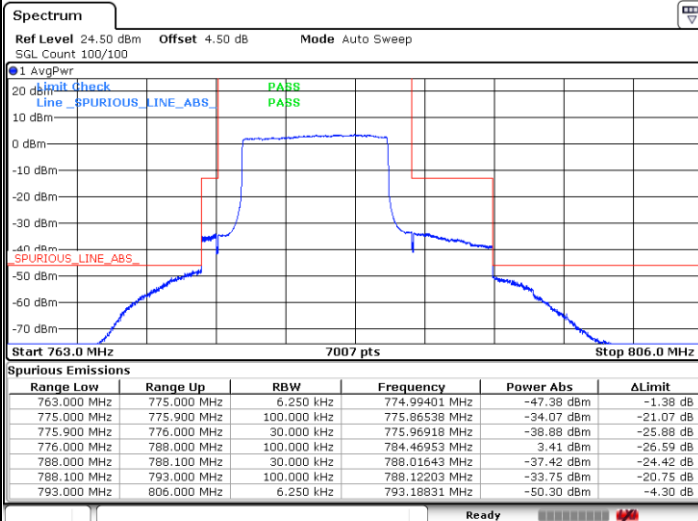
Date: 24.SEP.2021 13:10:59



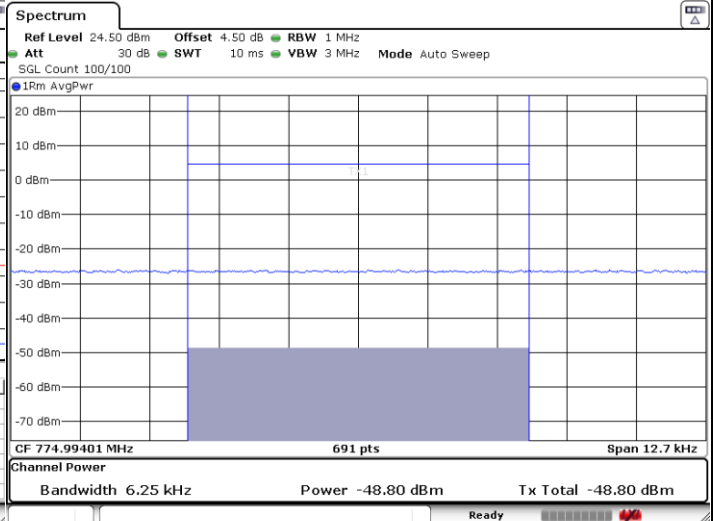
Date: 24.SEP.2021 13:12:23

Middle Band Edge / Full RB

Verify Middle Band Edge / Full RB



Date: 24.SEP.2021 13:00:07



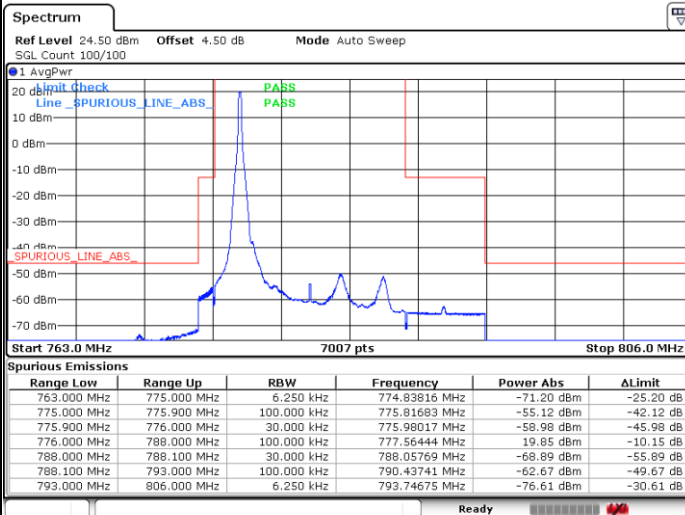
Date: 4.NOV.2021 06:30:34



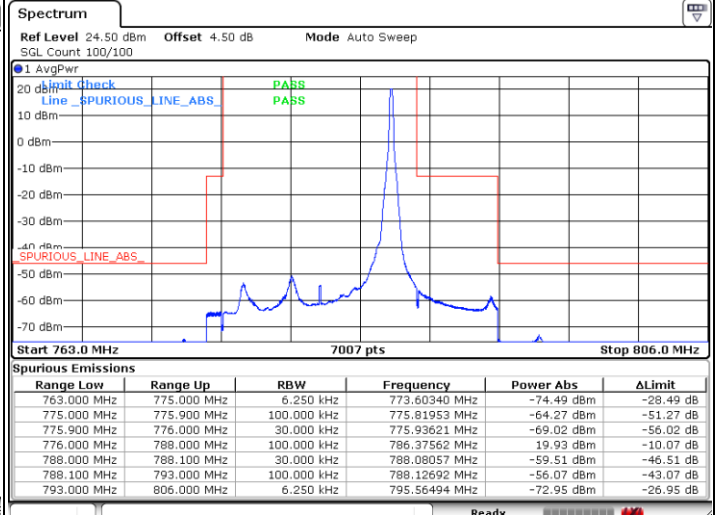
LTE Band 13 / 10MHz / 16QAM

middle Band Edge / 1 RB

middle Band Edge / 1 RBmax

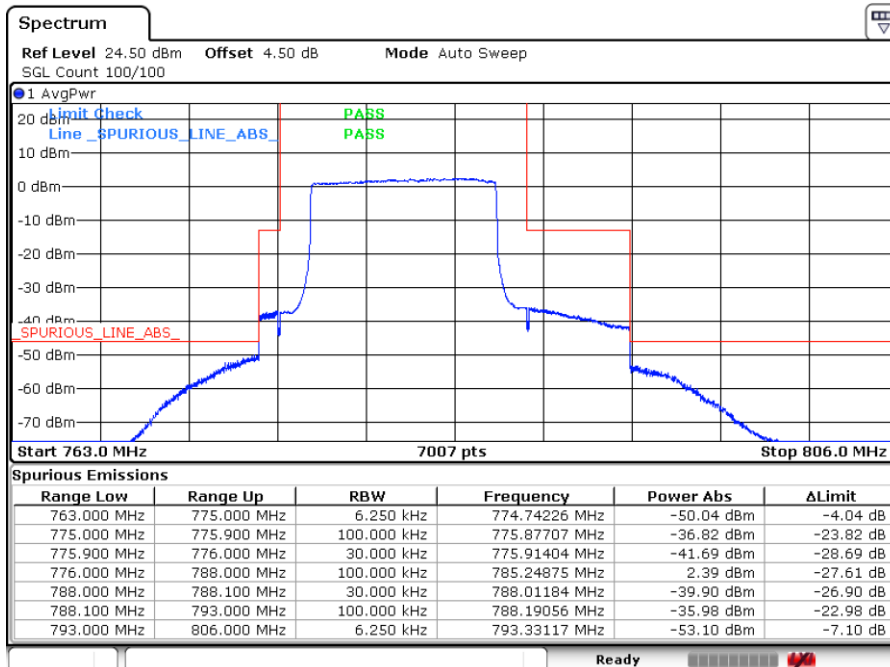


Date: 24 SEP 2021 13:09:48



Date: 24 SEP 2021 13:13:40

middle Band Edge / Full RB



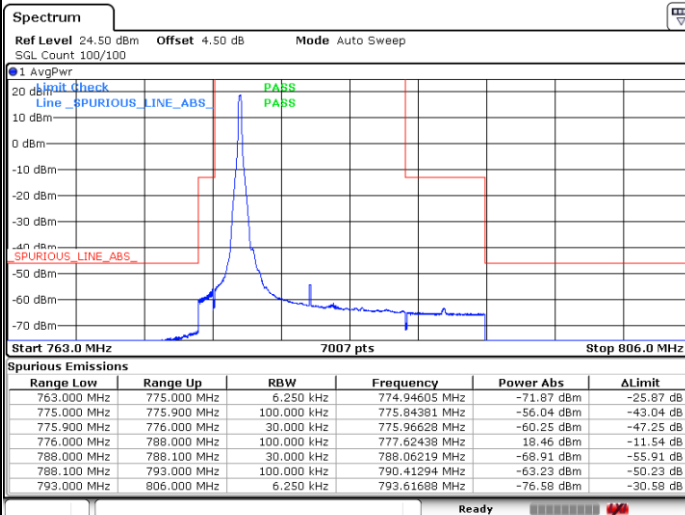
Date: 24 SEP 2021 13:02:57



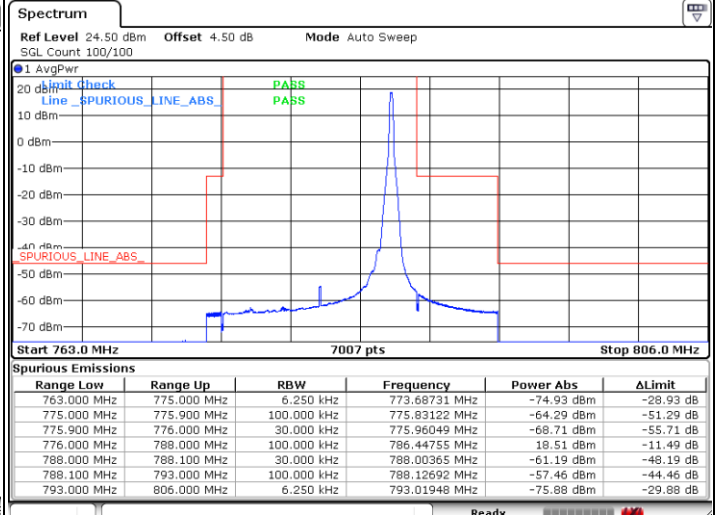
LTE Band 13 / 10MHz / 64QAM

middle Band Edge / 1 RB

middle Band Edge / 1 RBmax

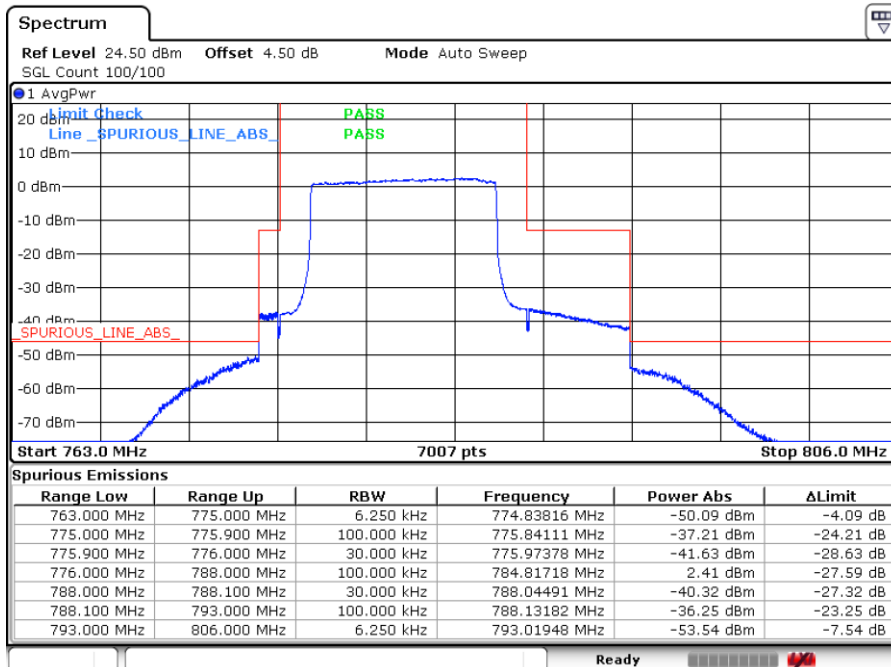


Date: 24 SEP 2021 13:08:32



Date: 24 SEP 2021 13:14:51

middle Band Edge / Full RB



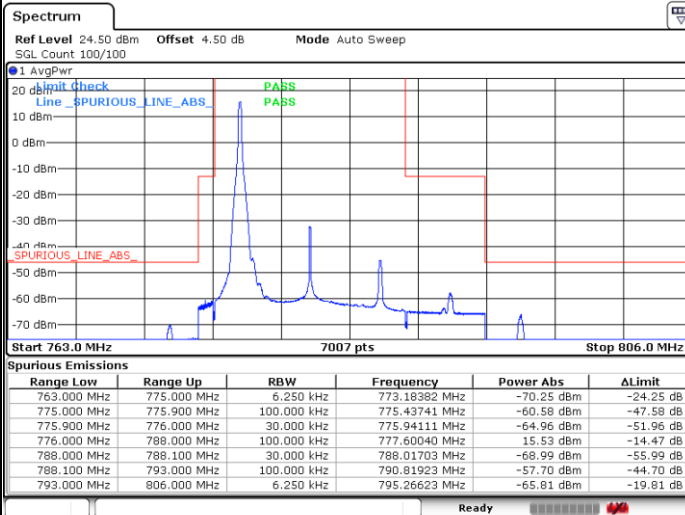
Date: 24 SEP 2021 13:04:20



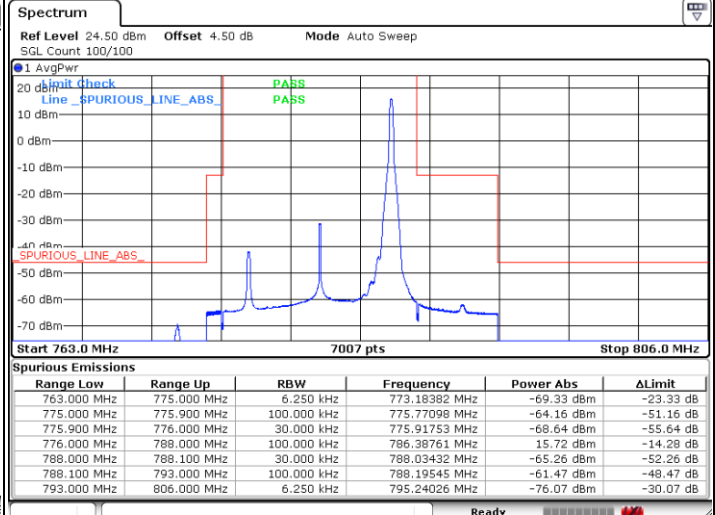
LTE Band 13 / 10MHz / 256QAM

middle Band Edge / 1 RB

middle Band Edge / 1 RBmax

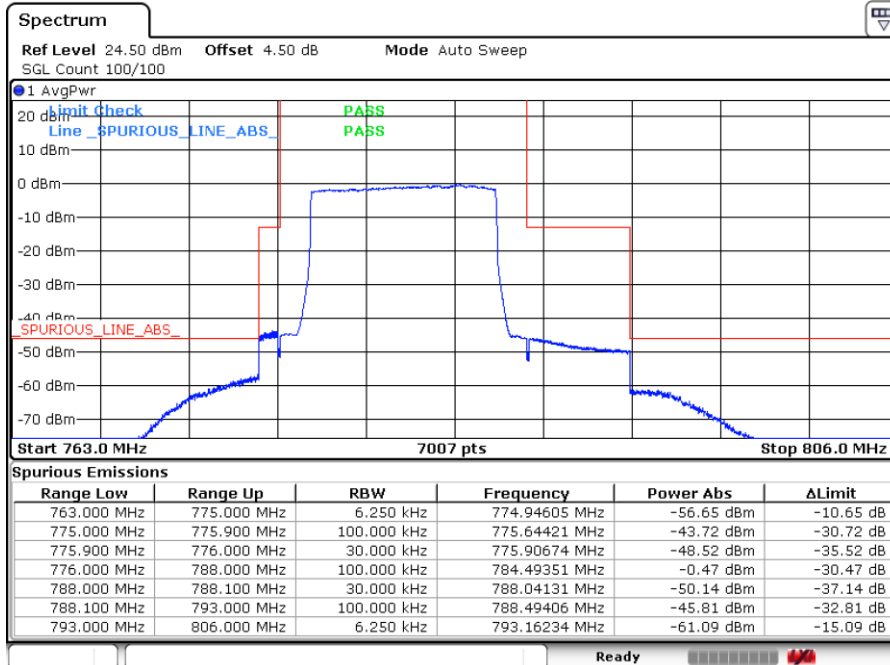


Date: 24.SEP.2021 13:07:15



Date: 24.SEP.2021 13:16:06

middle Band Edge / Full RB



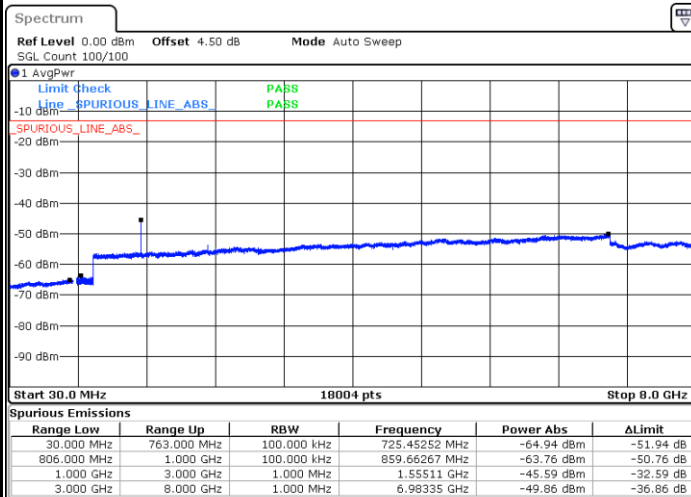
Date: 24.SEP.2021 13:05:46



Conducted Spurious Emission

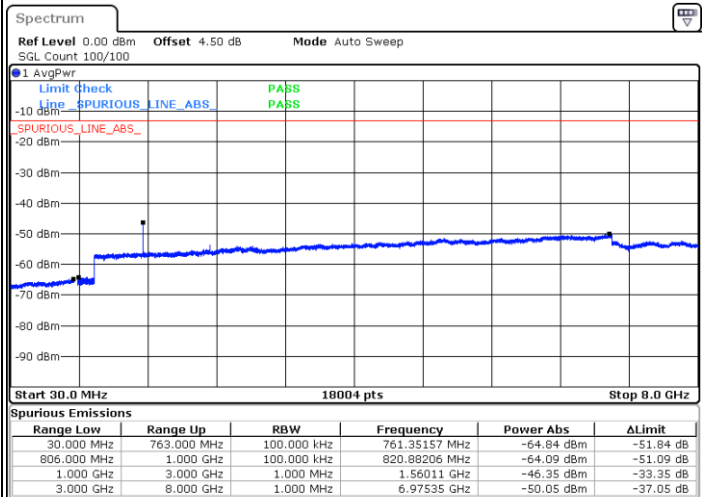
LTE Band 13 / 5MHz

Lowest Channel / QPSK



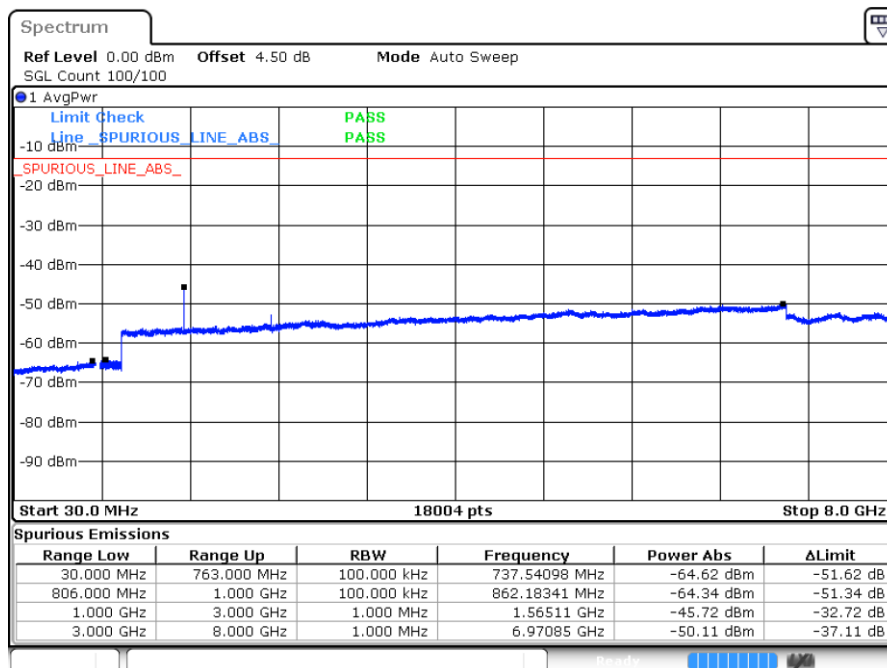
Date: 30 JUN 2021 12:19:06

Middle Channel / QPSK



Date: 30 JUN 2021 12:19:55

Highest Channel / QPSK

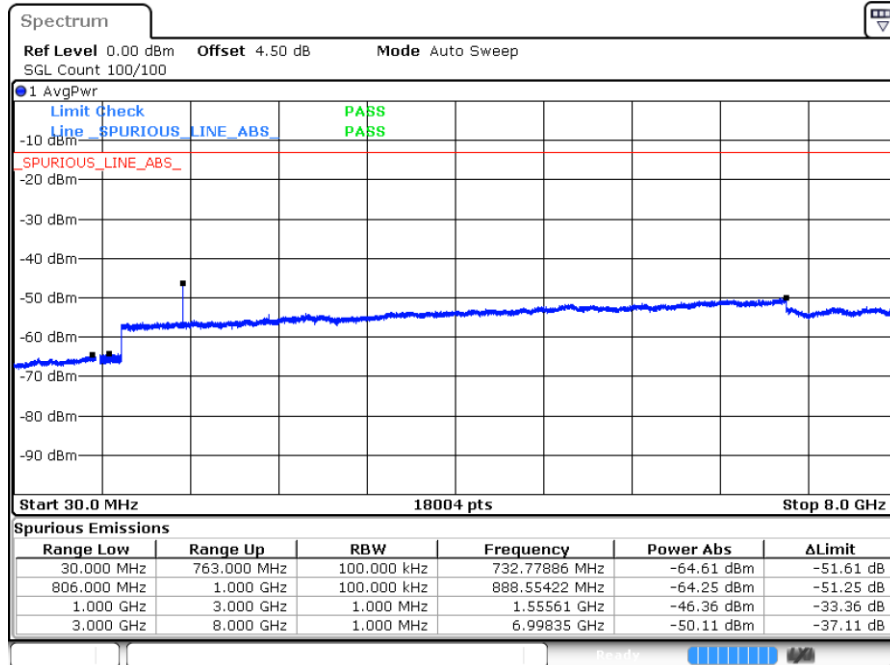


Date: 30 JUN 2021 12:20:34



LTE Band 13 / 10MHz

Middle Channel / QPSK



Date: 30 JUN 2021 12:52:06

**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	0.0013	PASS
40	Normal Voltage	0.0015	
30	Normal Voltage	0.0010	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0024	
0	Normal Voltage	0.0005	
-10	Normal Voltage	0.0023	
-20	Normal Voltage	0.0019	
-30	Normal Voltage	0.0009	
20	Maximum Voltage	0.0025	
20	Normal Voltage	0.0026	
20	Battery End Point	0.0021	

Note:

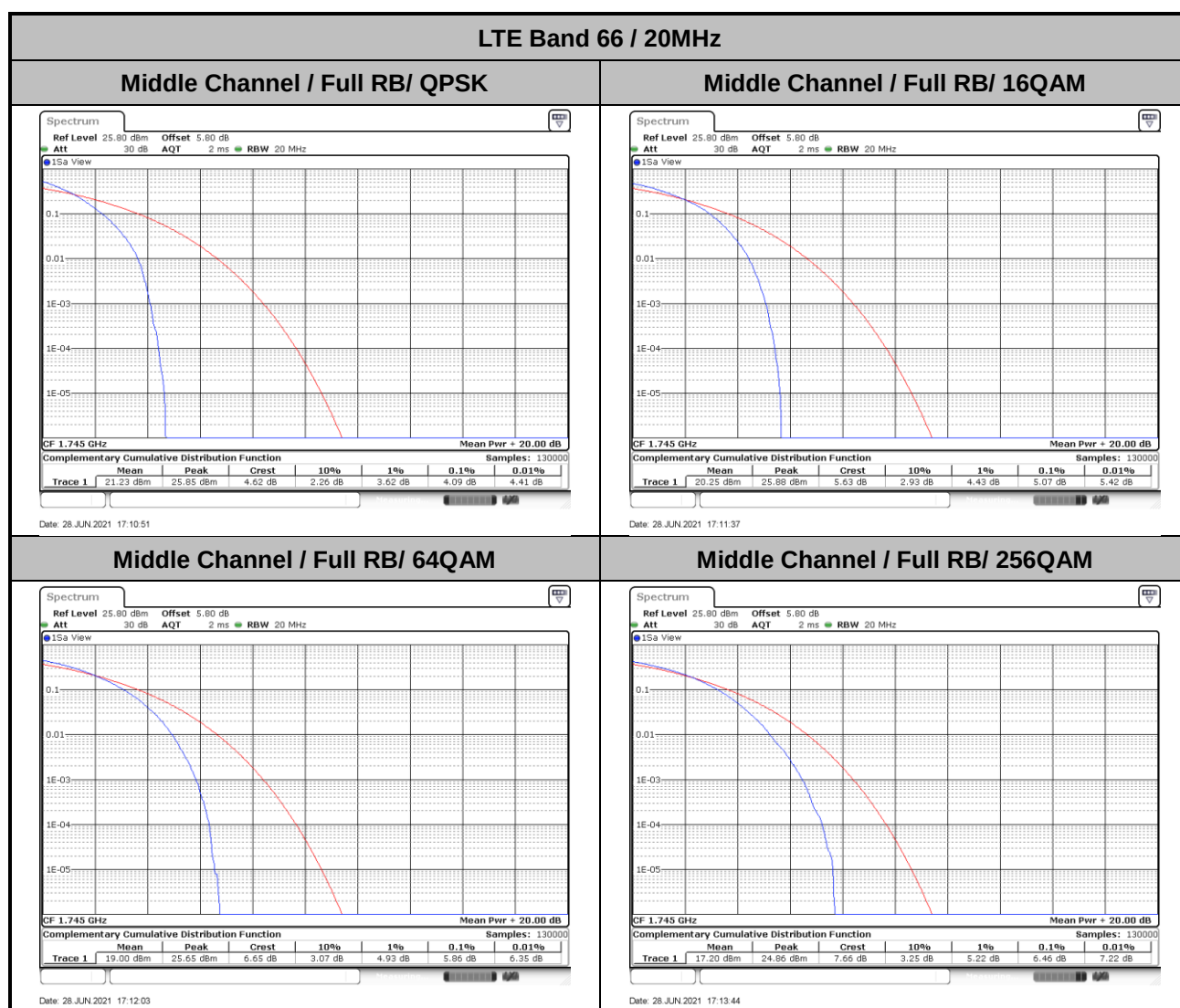
1. Normal Voltage =3.85 V. ; Battery End Point (BEP) =3.6 V. ; Maximum Voltage =4.4 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.



LTE Band 66

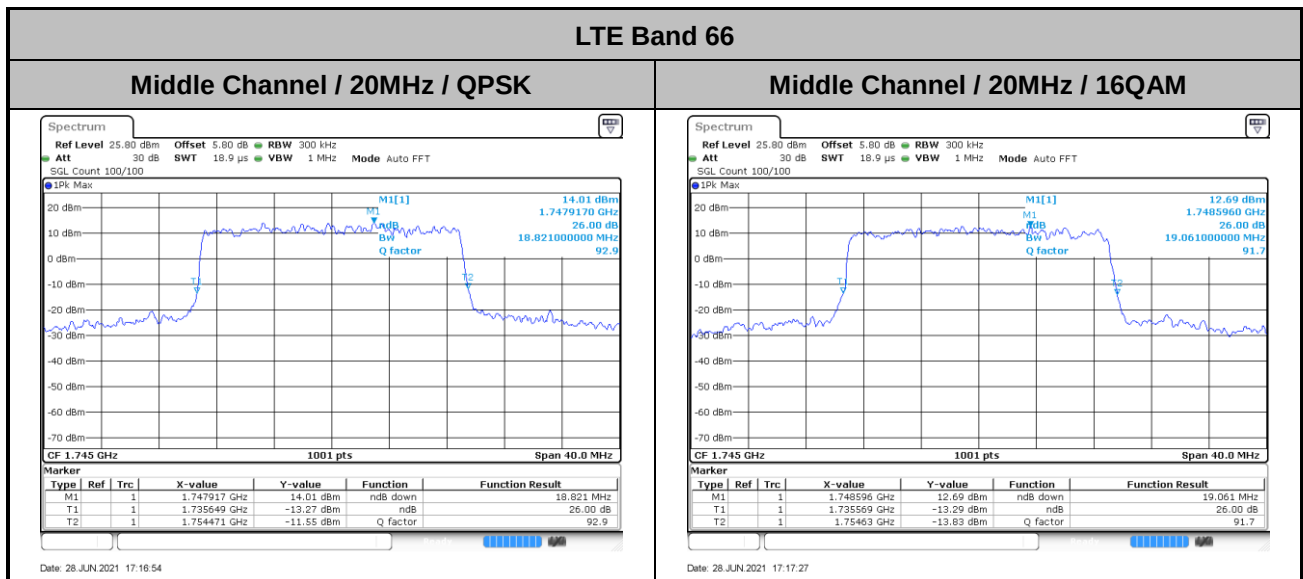
Peak-to-Average Ratio

Mode	LTE Band 66 / 20MHz				
Mod.	QPSK	16QAM	64QAM	256QAM	Limit: 13dB
RB Size	Full RB	Full RB	Full RB	Full RB	Result
Middle CH	4.09	5.07	5.86	6.46	PASS



**26dB Bandwidth**

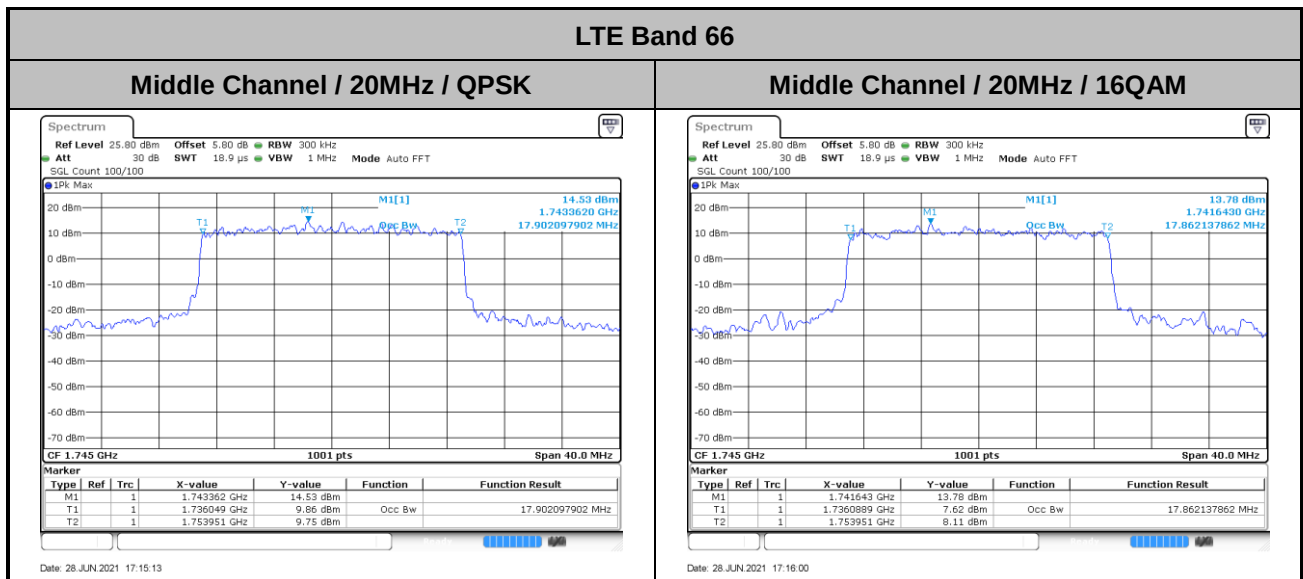
Mode	LTE Band 66 : 26dB BW(MHz)	
BW	20MHz	
Mod.	QPSK	16QAM
Middle CH	18.82	19.06





Occupied Bandwidth

Mode	LTE Band 66 : 99%OBW(MHz)	
BW	20MHz	
Mod.	QPSK	16QAM
Middle CH	17.90	17.86

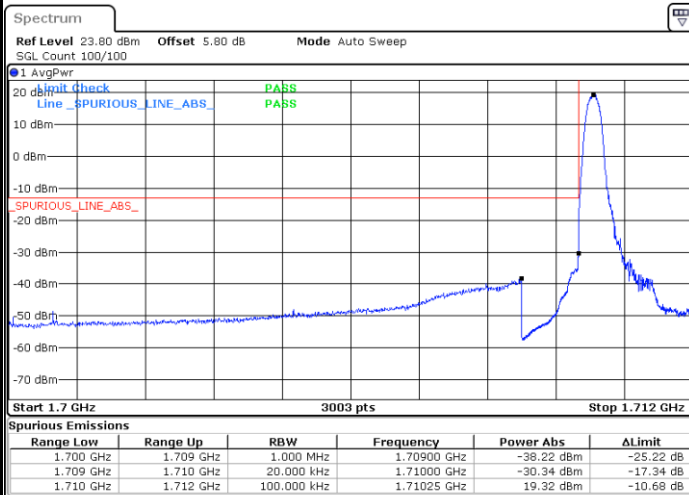




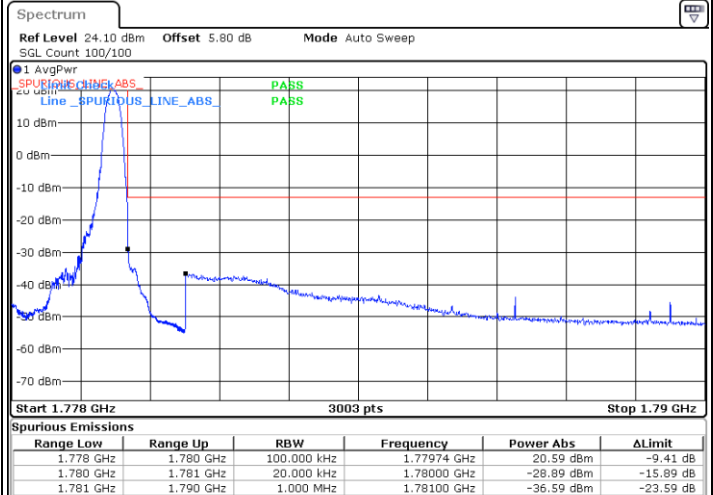
Conducted Band Edge

LTE Band 66 / 1.4MHz / QPSK

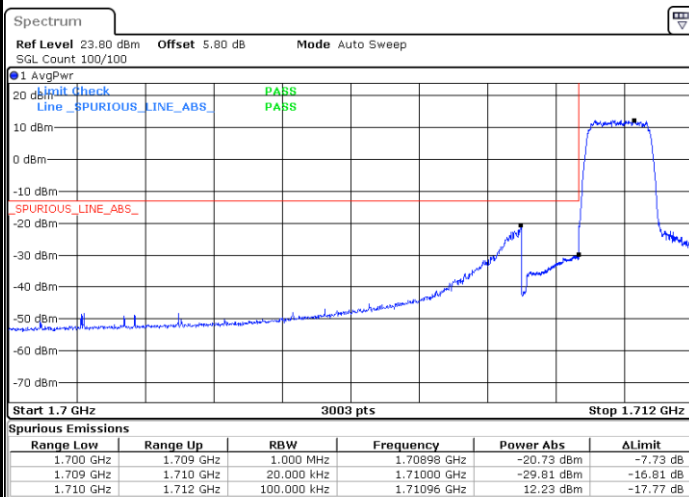
Lowest Band Edge / 1RB



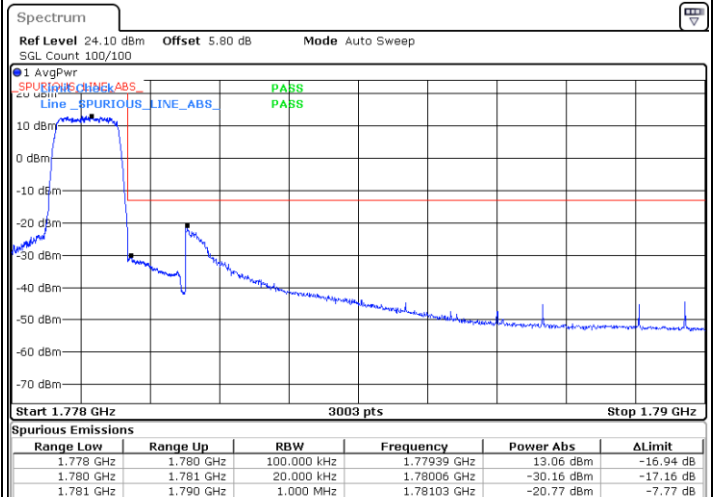
Highest Band Edge / 1RB



Lowest Band Edge / Full RB



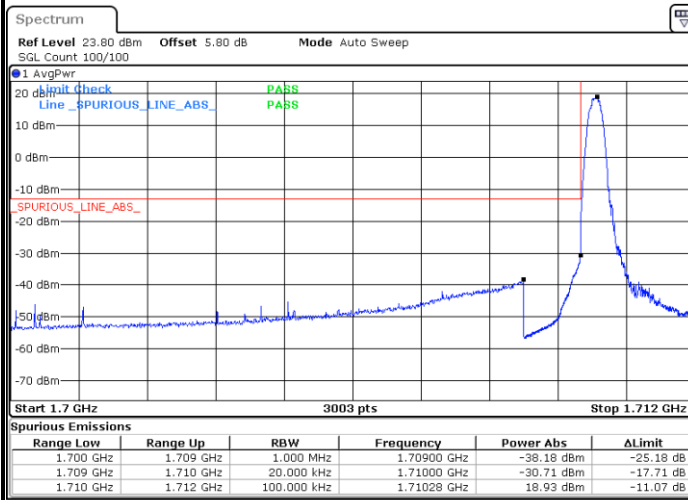
Highest Band Edge / Full RB



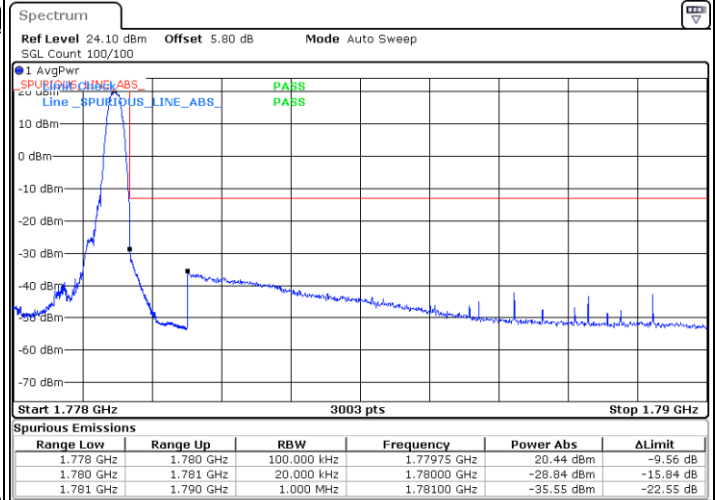


LTE Band 66 / 1.4MHz / 16QAM

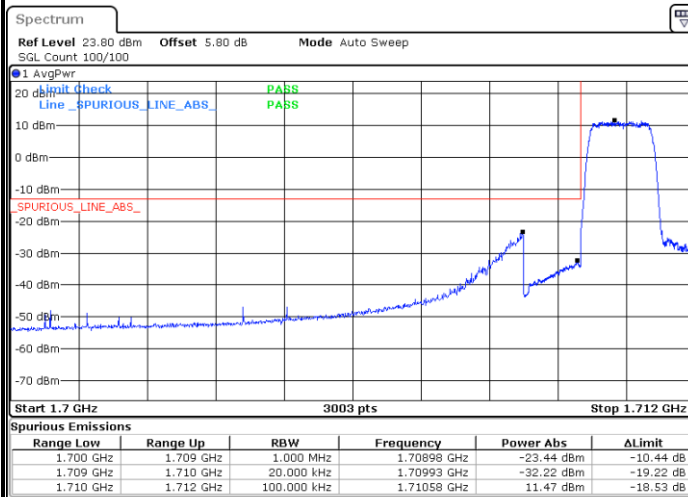
Lowest Band Edge / 1 RB



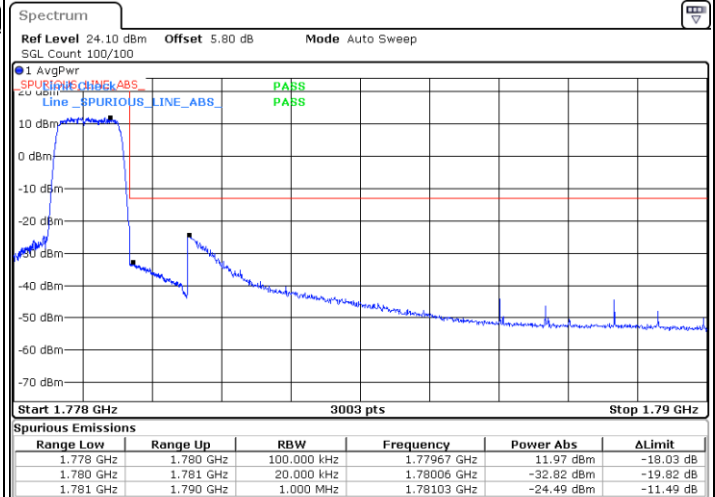
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



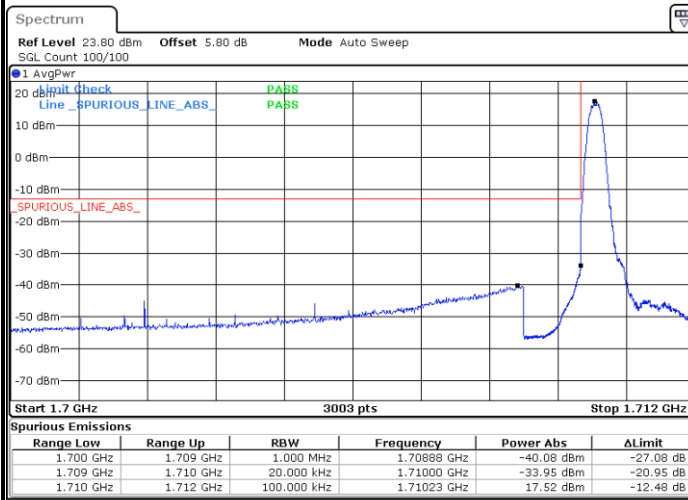
Highest Band Edge / Full RB



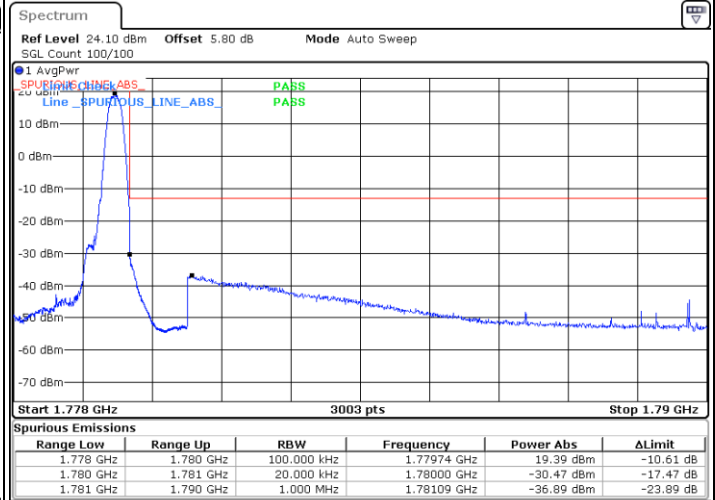


LTE Band 66 / 1.4MHz / 64QAM

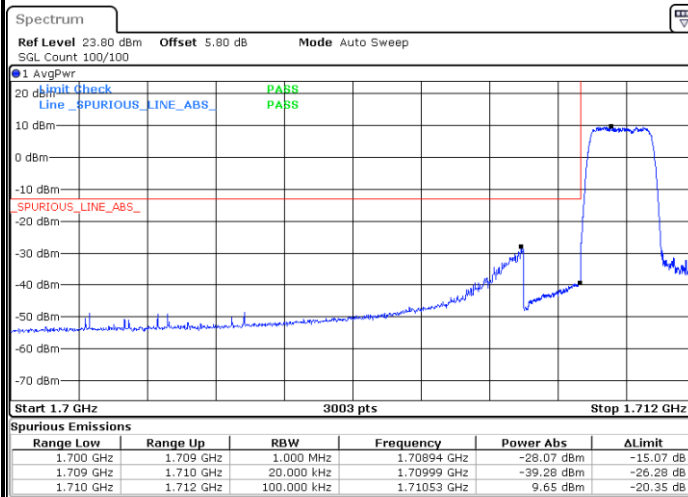
Lowest Band Edge / 1 RB



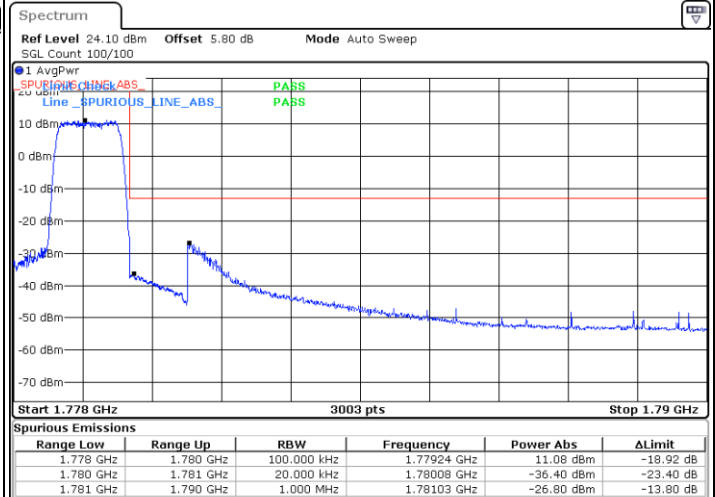
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



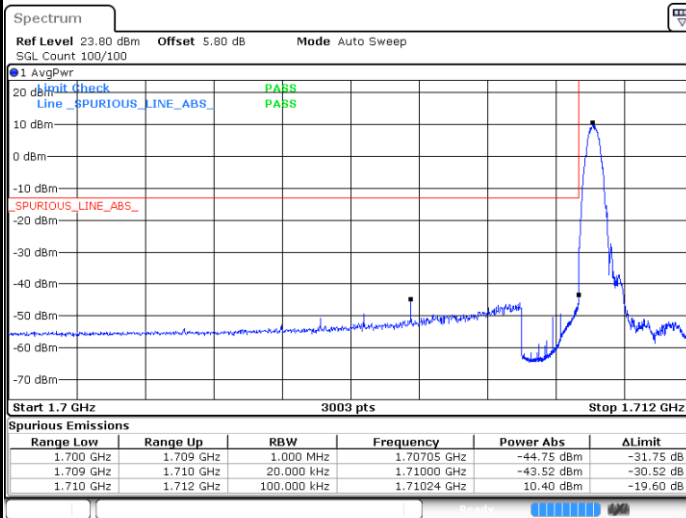
Highest Band Edge / Full RB



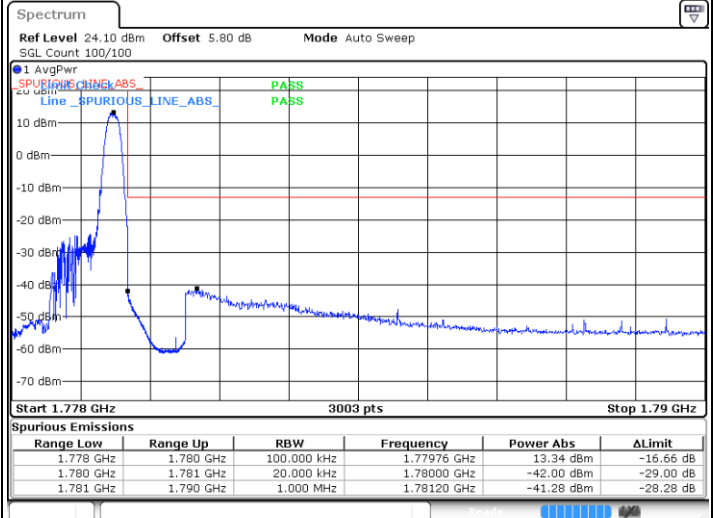


LTE Band 66 / 1.4MHz / 256QAM

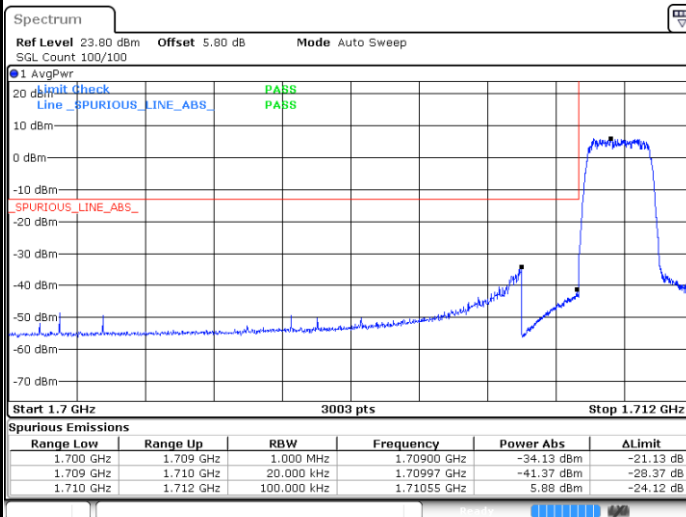
Lowest Band Edge / 1 RB



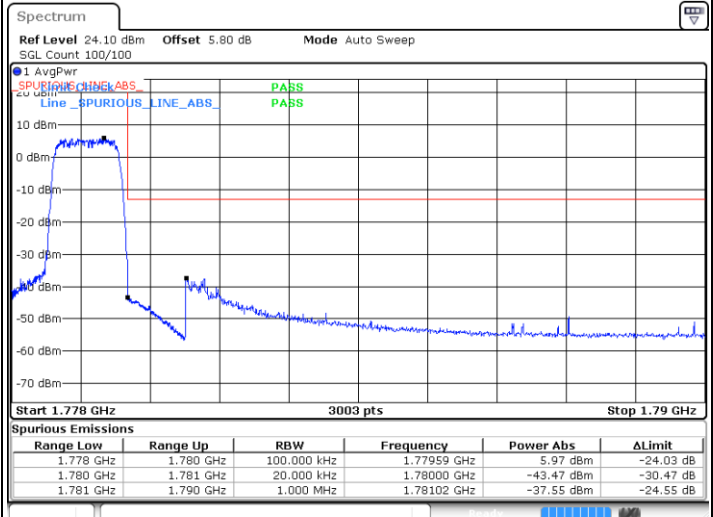
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



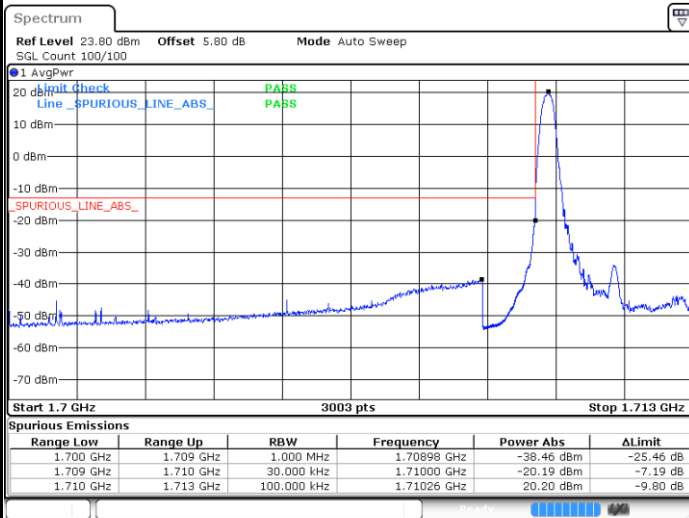
Highest Band Edge / Full RB



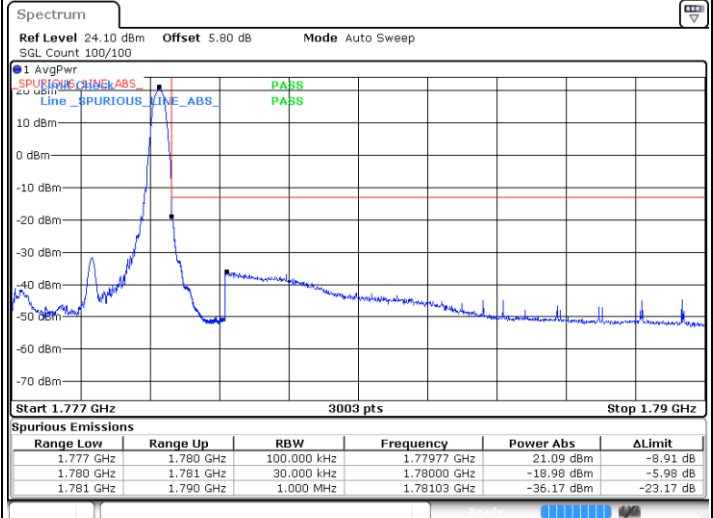


LTE Band 66 / 3MHz / QPSK

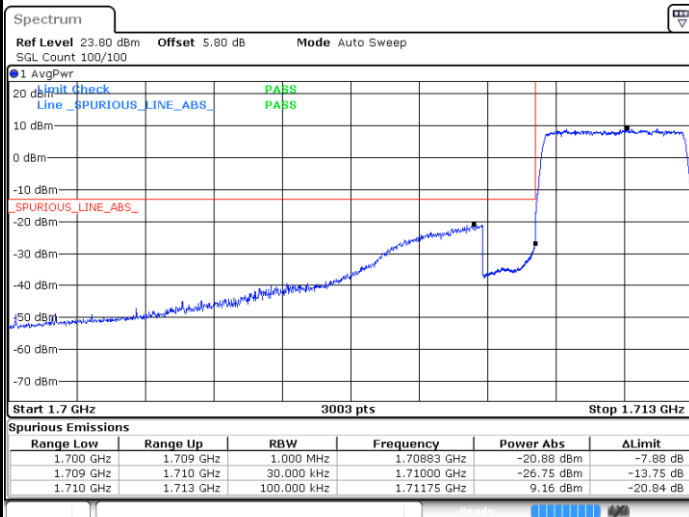
Lowest Band Edge / 1RB



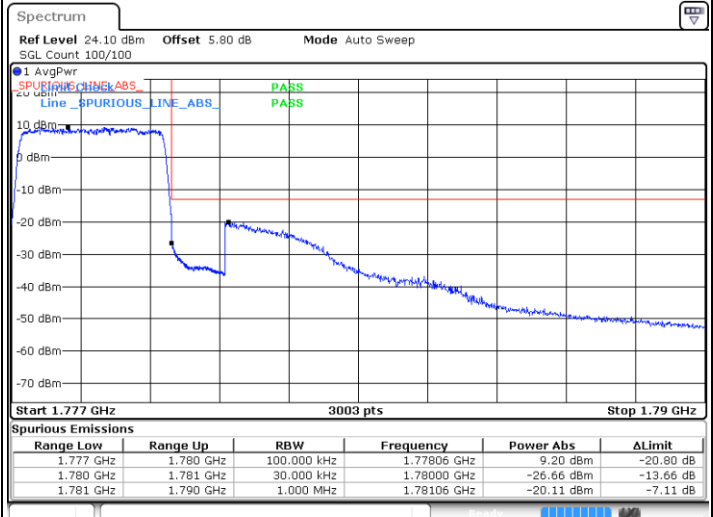
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



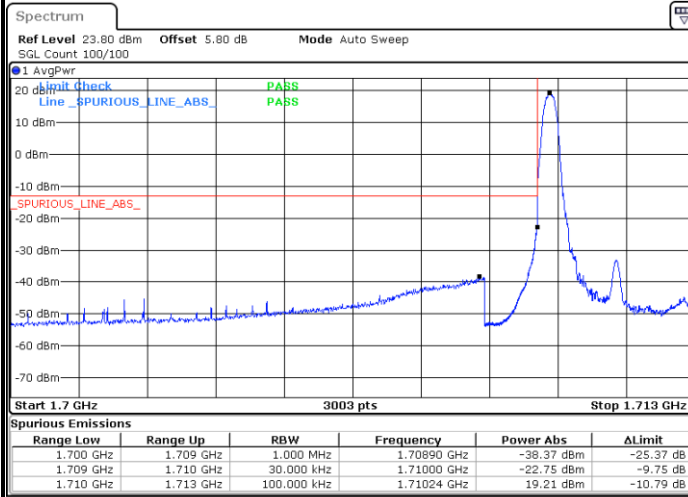
Highest Band Edge / Full RB



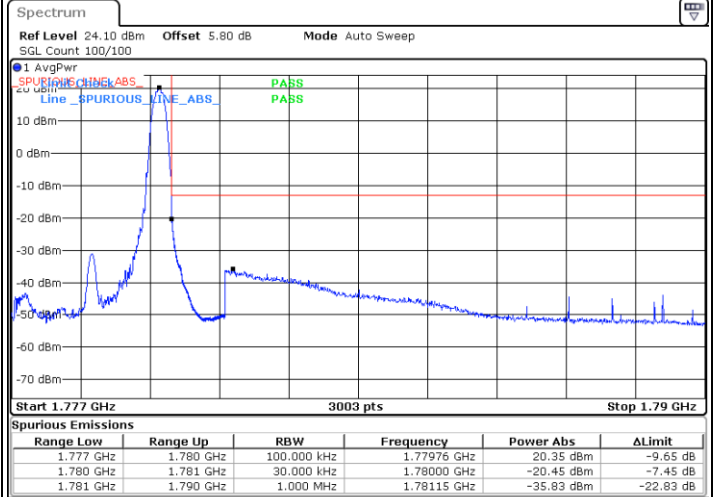


LTE Band 66 / 3MHz / 16QAM

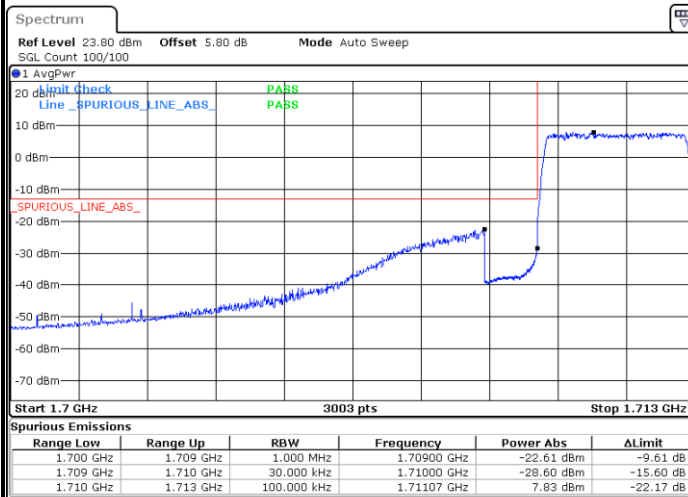
Lowest Band Edge / 1 RB



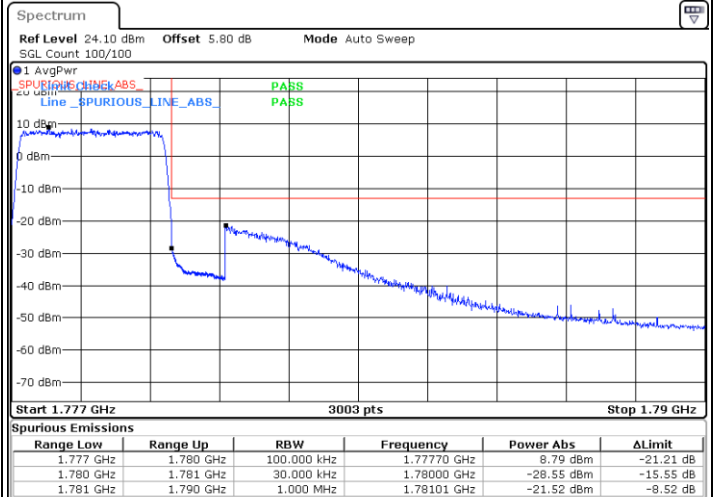
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



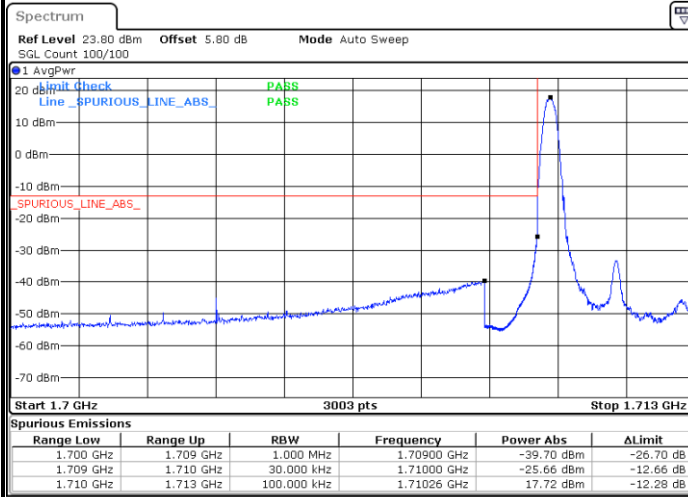
Highest Band Edge / Full RB



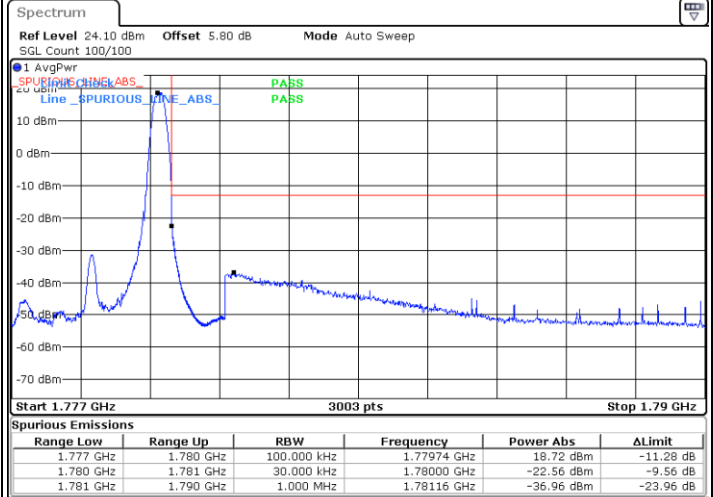


LTE Band 66 / 3MHz / 64QAM

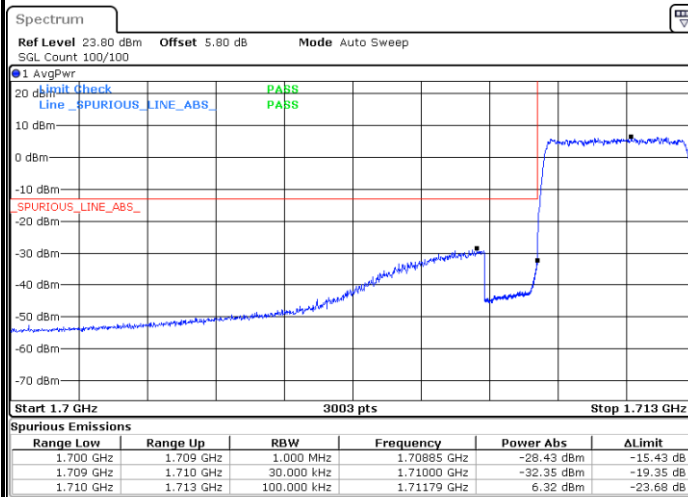
Lowest Band Edge / 1 RB



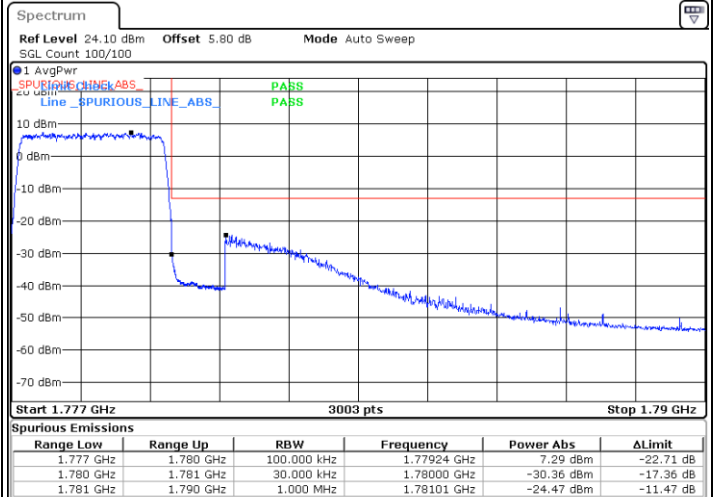
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



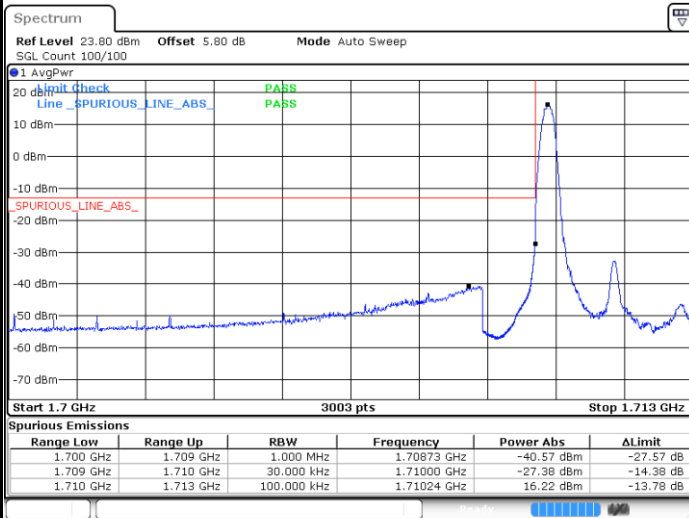
Highest Band Edge / Full RB





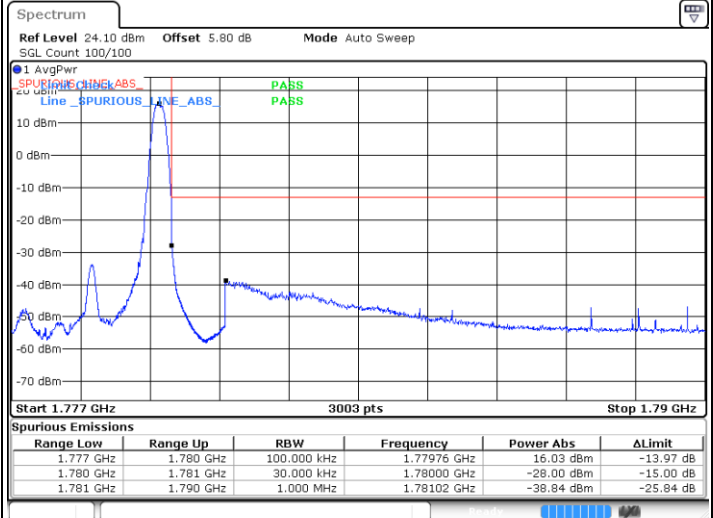
LTE Band 66 / 3MHz / 256QAM

Lowest Band Edge / 1 RB



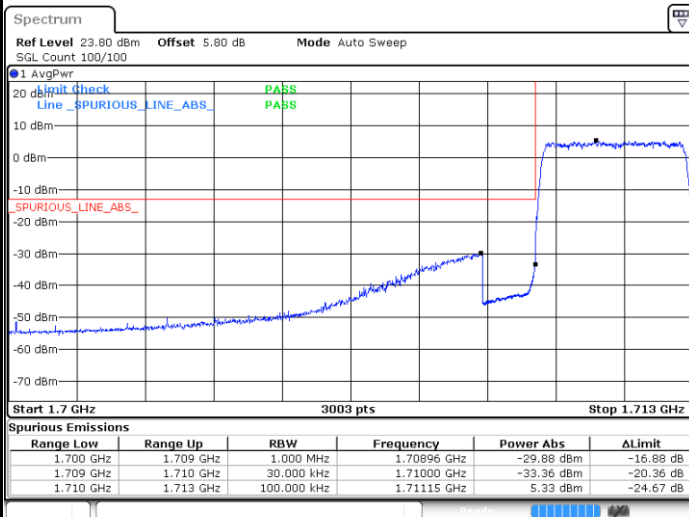
Date: 28 JUN 2021 16:10:24

Highest Band Edge / 1 RB



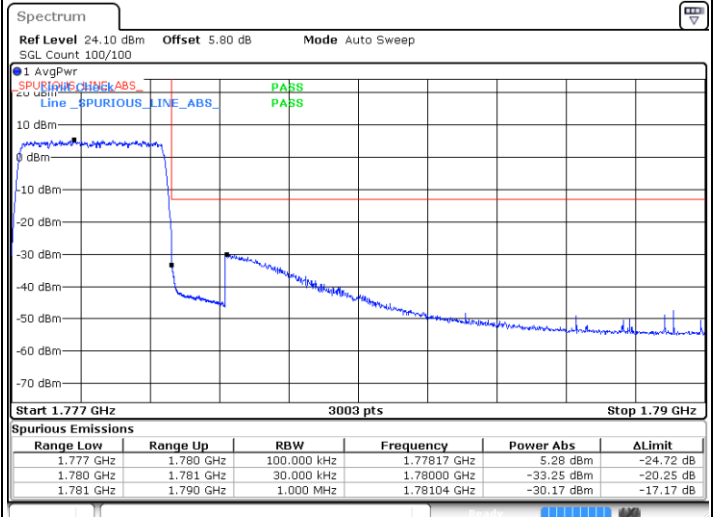
Date: 28 JUN 2021 16:17:40

Lowest Band Edge / Full RB



Date: 28 JUN 2021 16:14:05

Highest Band Edge / Full RB

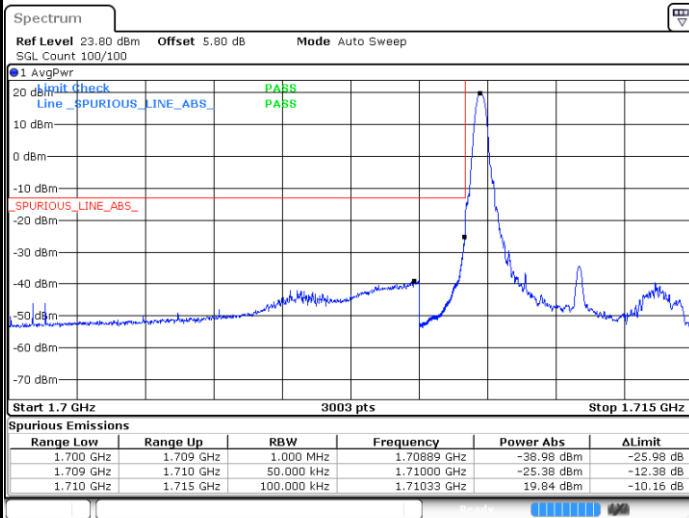


Date: 28 JUN 2021 16:21:15

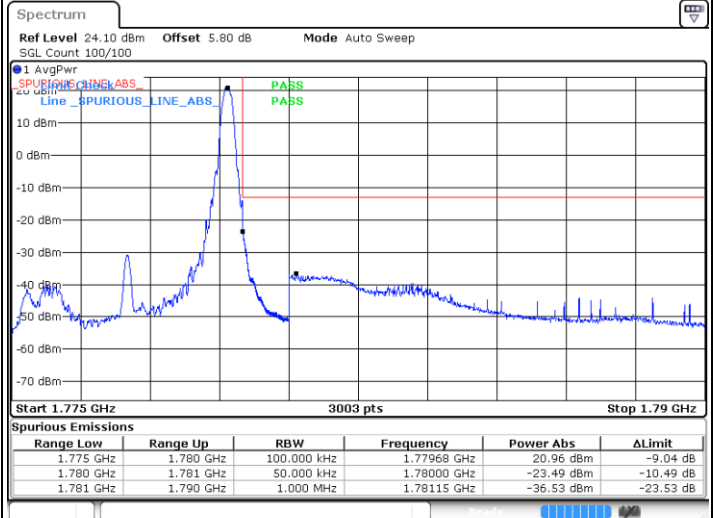


LTE Band 66 / 5MHz / QPSK

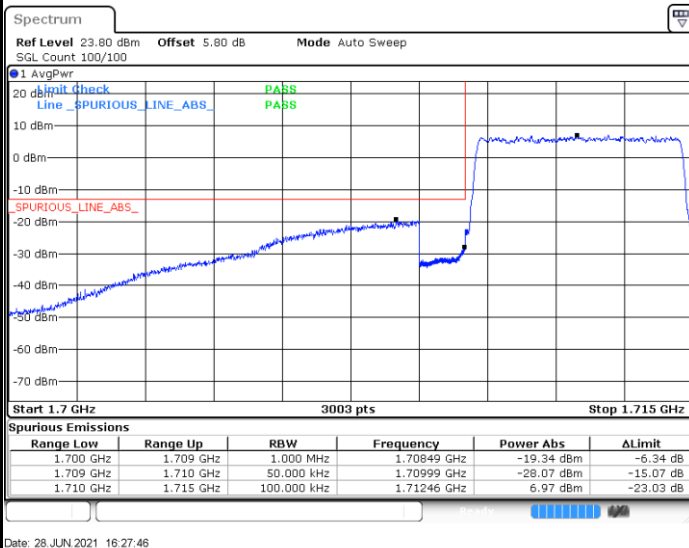
Lowest Band Edge / 1 RB



Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



Highest Band Edge / Full RB

