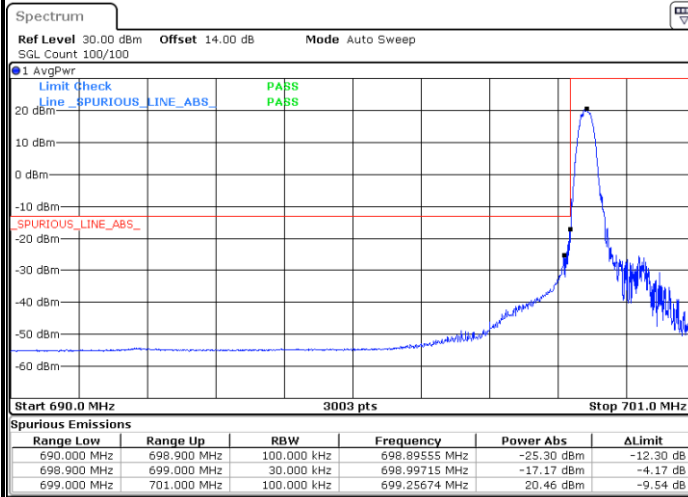




LTE Band 12 / 1.4MHz / 64QAM

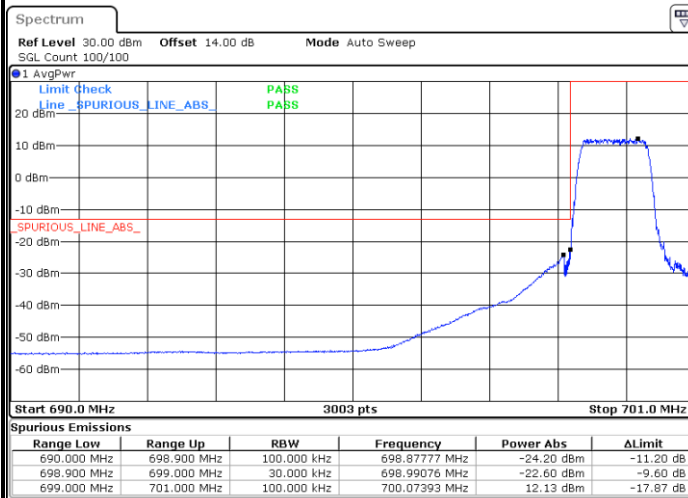
Lowest Band Edge / 1 RB



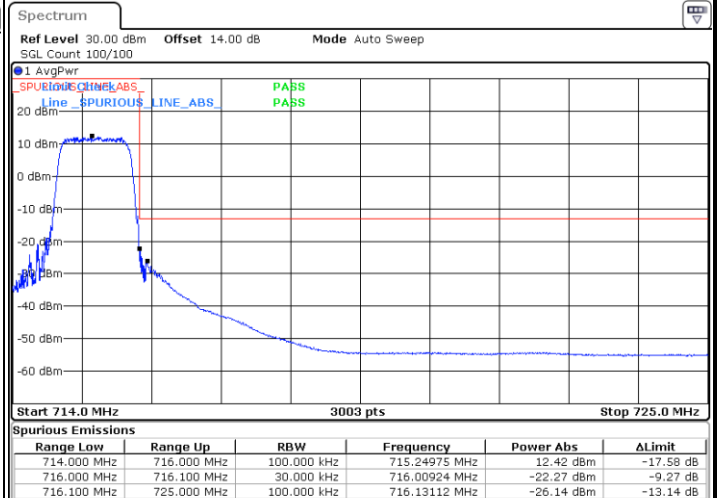
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



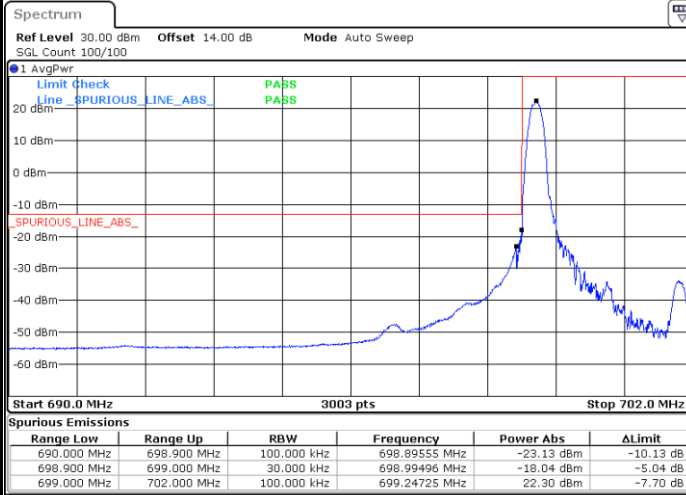
Highest Band Edge / Full RB



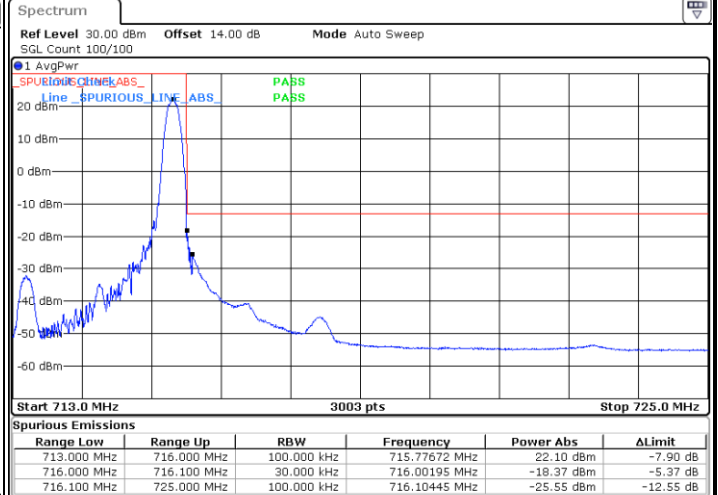


LTE Band 12 / 3MHz / QPSK

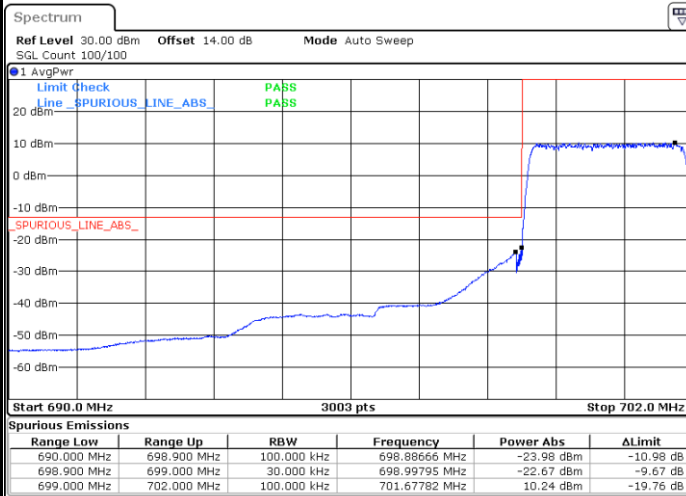
Lowest Band Edge / 1RB



Highest Band Edge / 1RB



Lowest Band Edge / Full RB



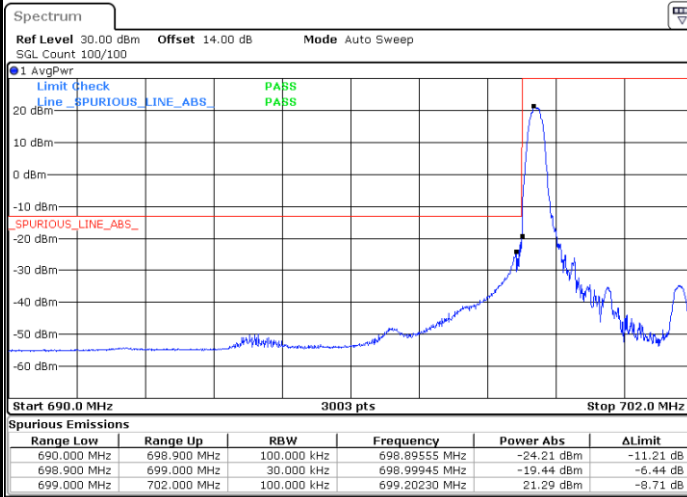
Highest Band Edge / Full RB





LTE Band 12 / 3MHz / 16QAM

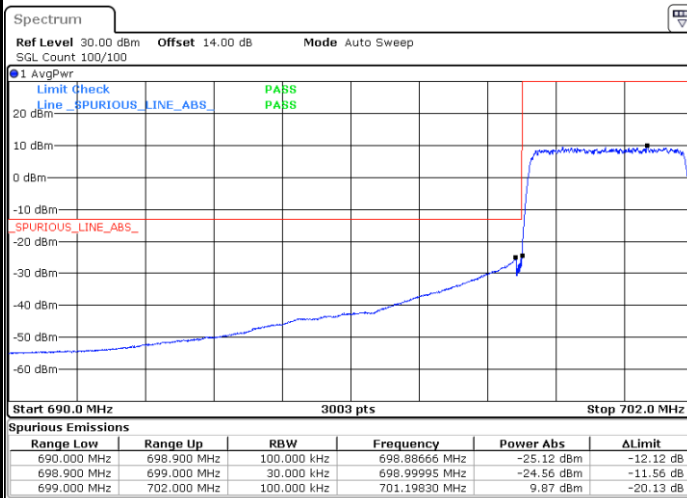
Lowest Band Edge / 1 RB



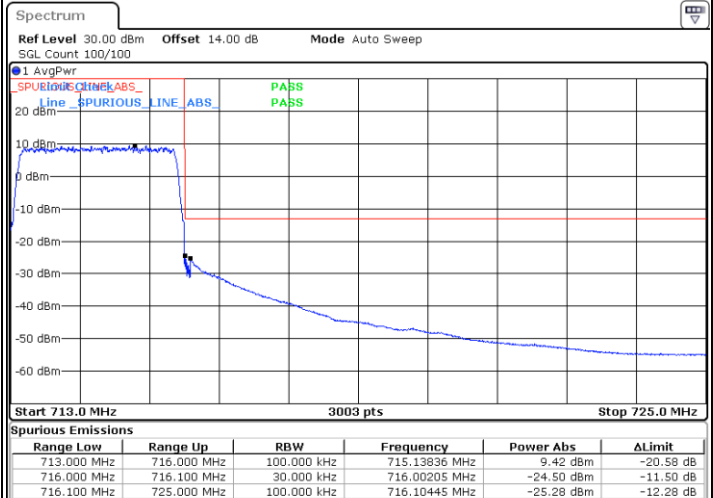
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



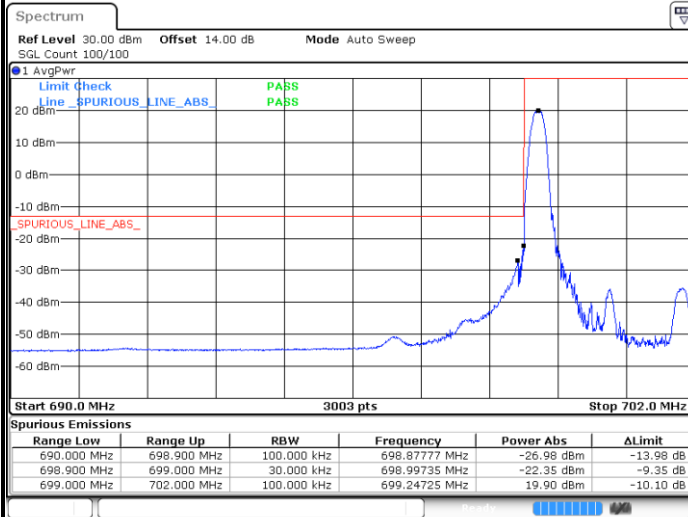
Highest Band Edge / Full RB





LTE Band 12 / 3MHz / 64QAM

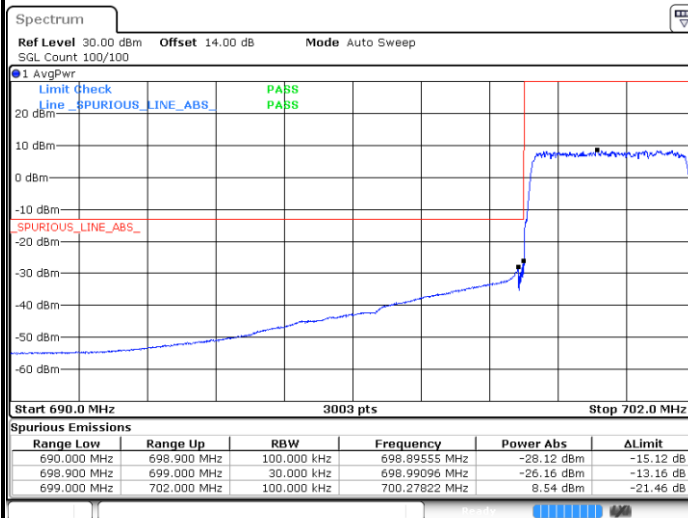
Lowest Band Edge / 1 RB



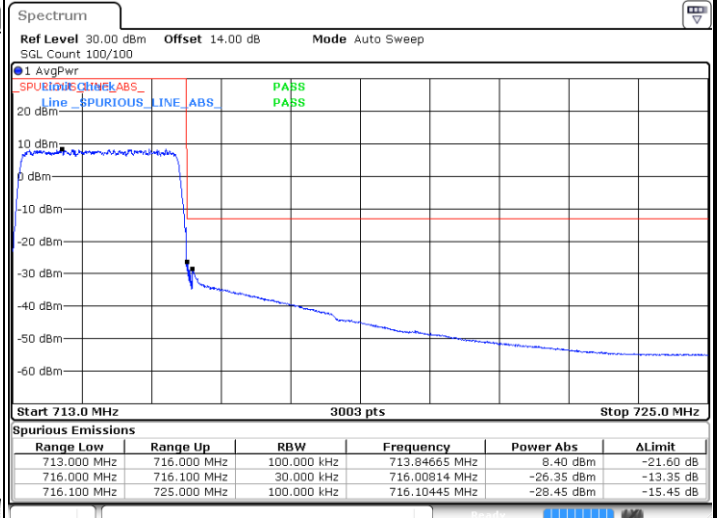
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



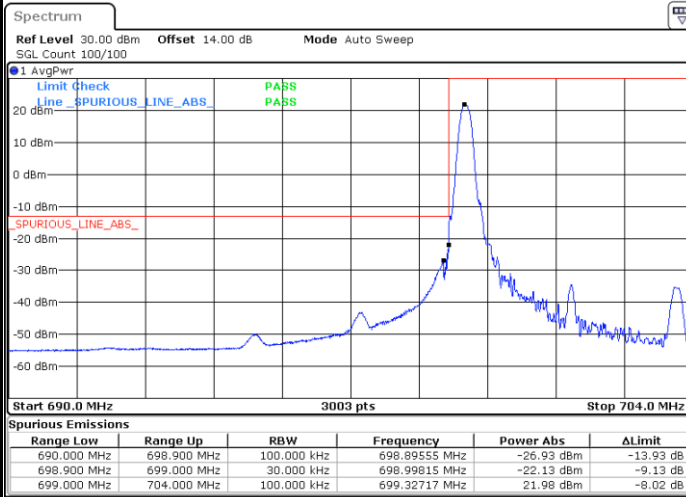
Highest Band Edge / Full RB



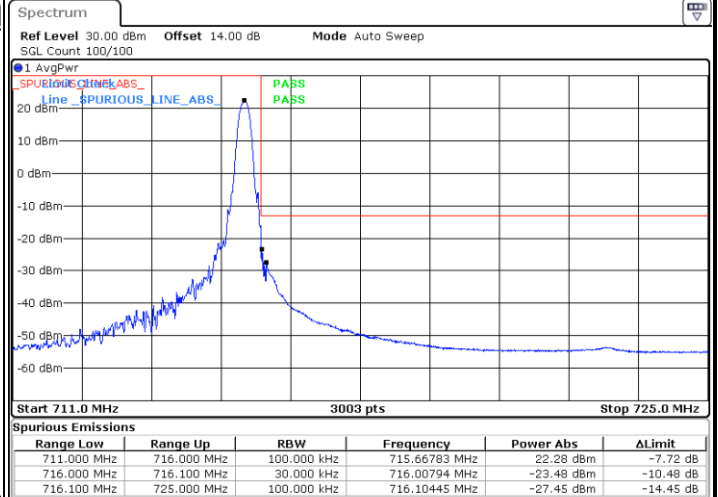


LTE Band 12 / 5MHz / QPSK

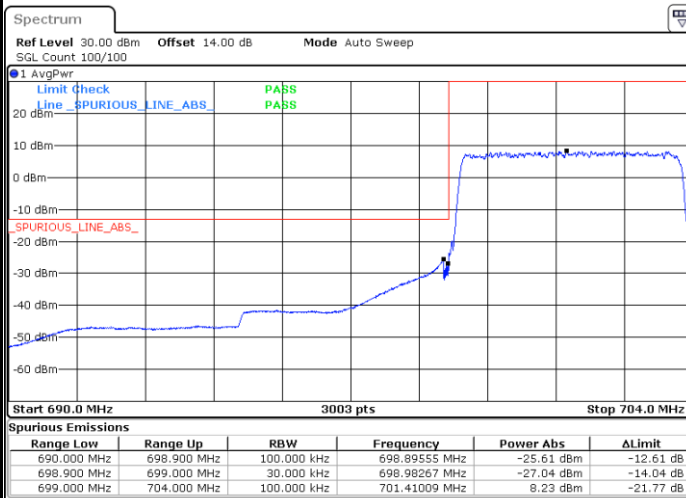
Lowest Band Edge / 1RB



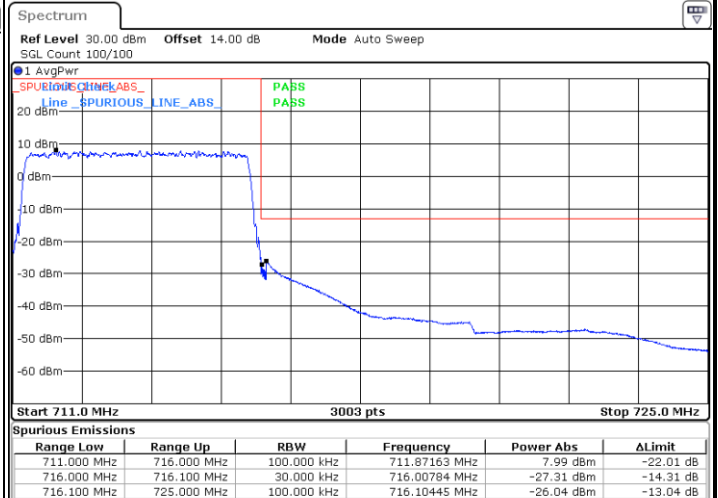
Highest Band Edge / 1RB



Lowest Band Edge / Full RB



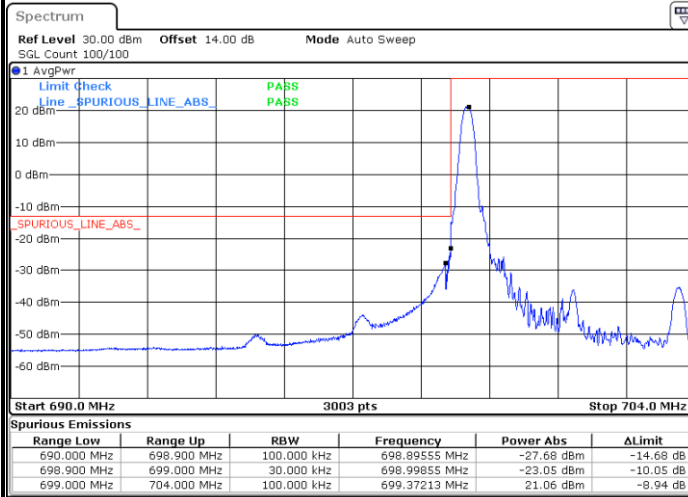
Highest Band Edge / Full RB



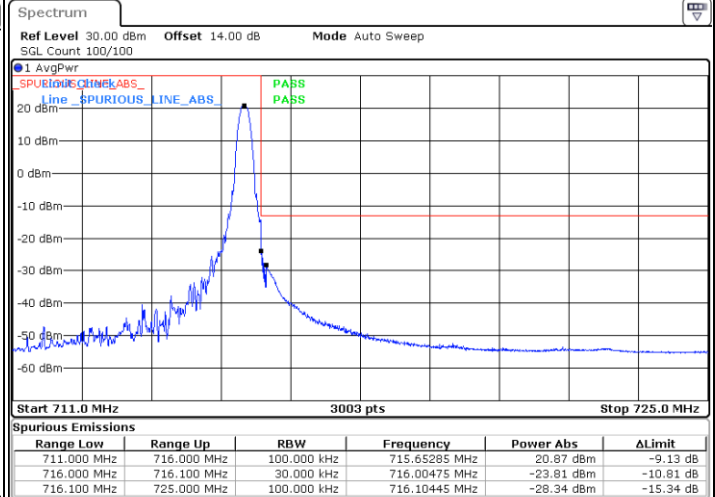


LTE Band 12 / 5MHz / 16QAM

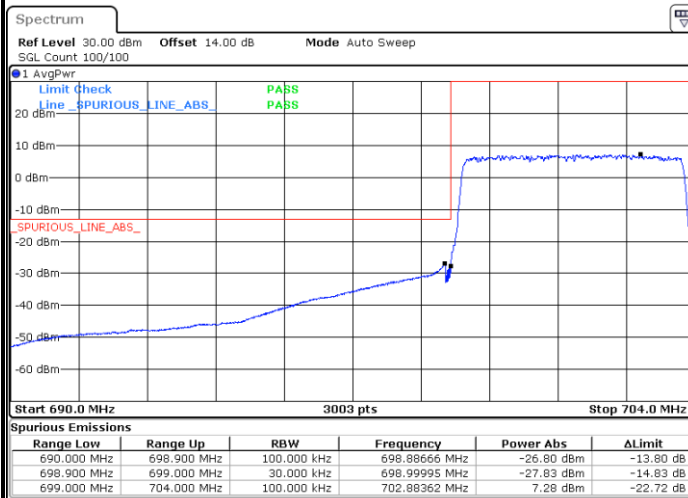
Lowest Band Edge / 1 RB



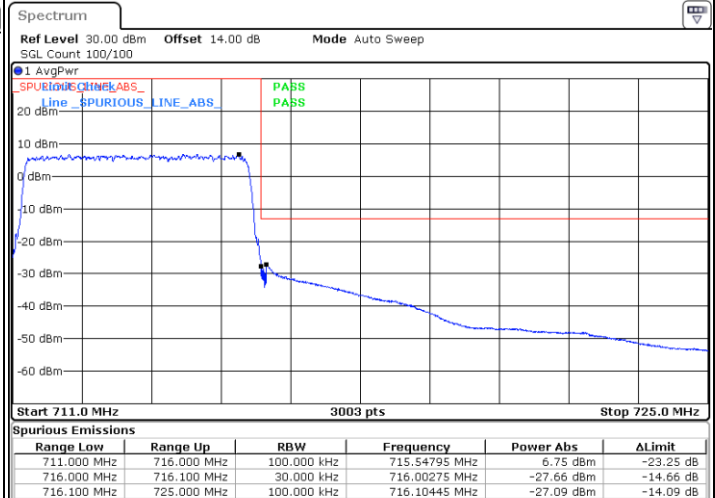
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



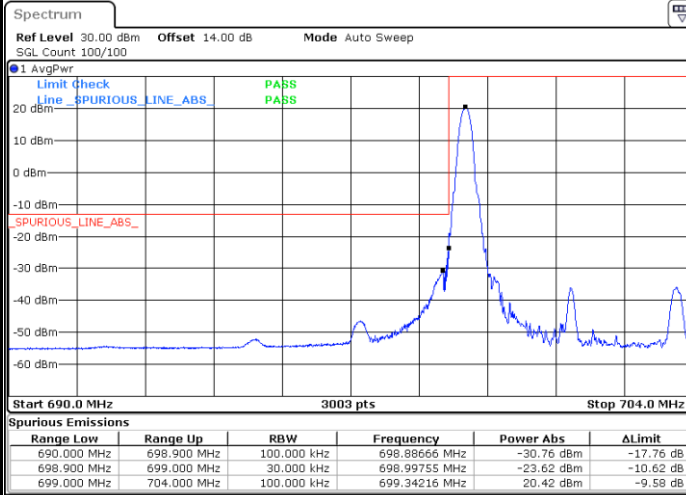
Highest Band Edge / Full RB



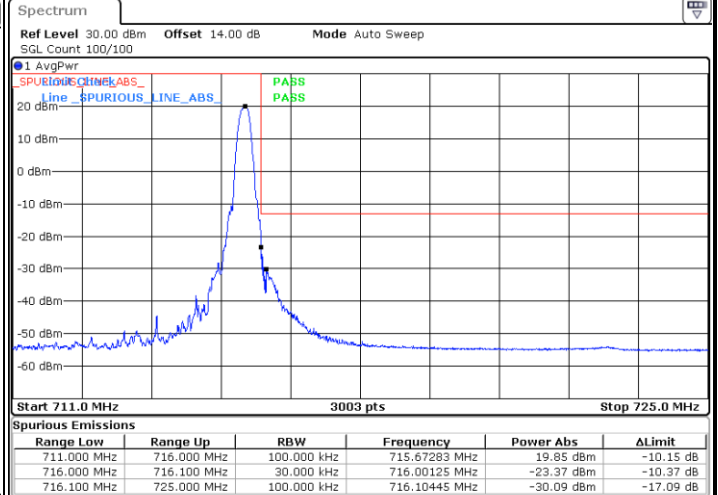


LTE Band 12 / 5MHz / 64QAM

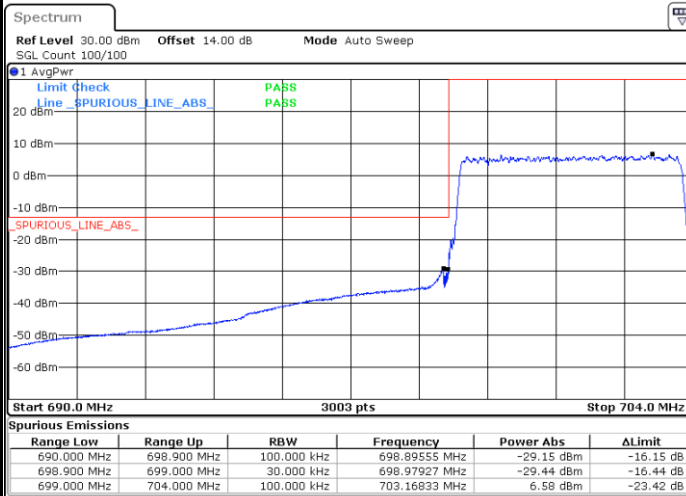
Lowest Band Edge / 1 RB



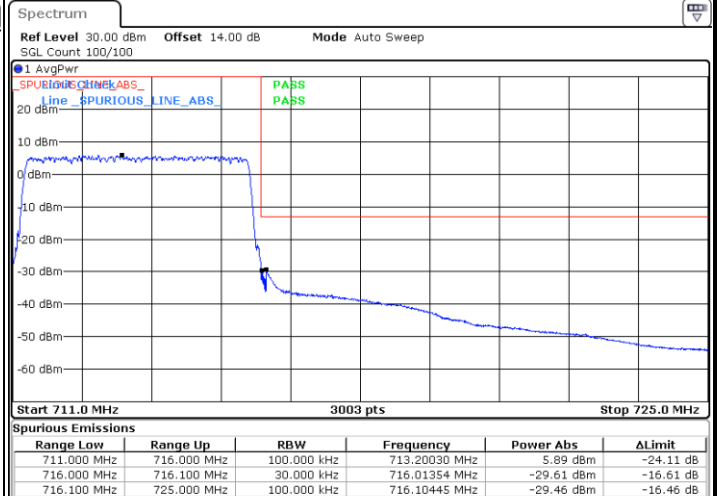
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



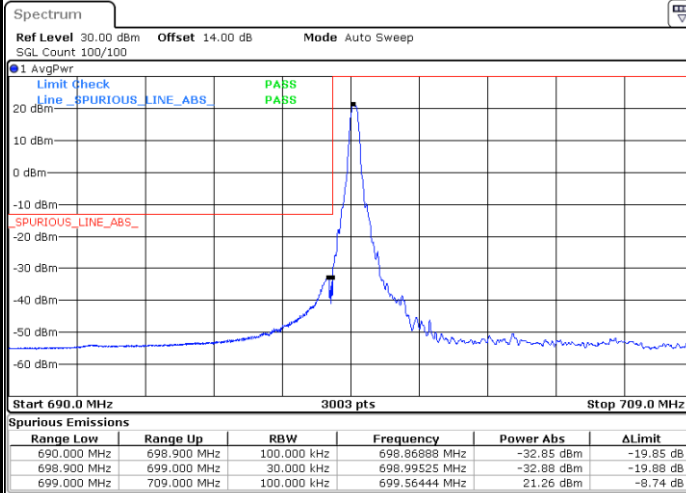
Highest Band Edge / Full RB



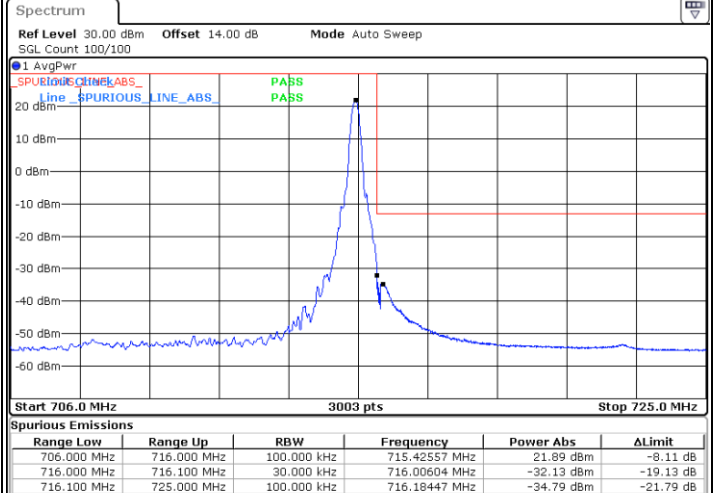


LTE Band 12 / 10MHz / QPSK

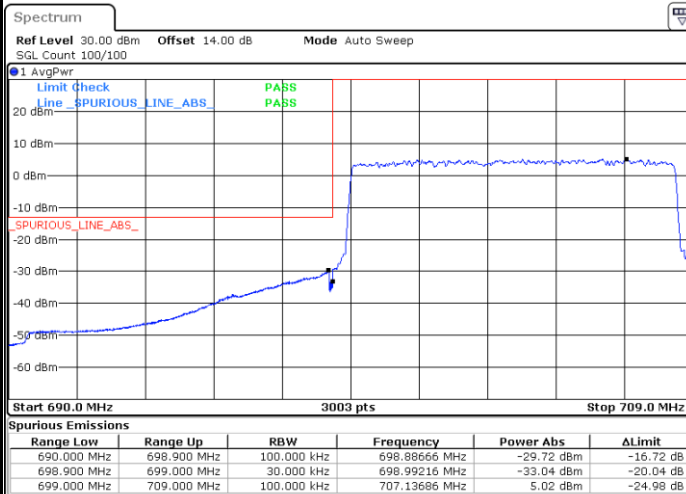
Lowest Band Edge / 1RB



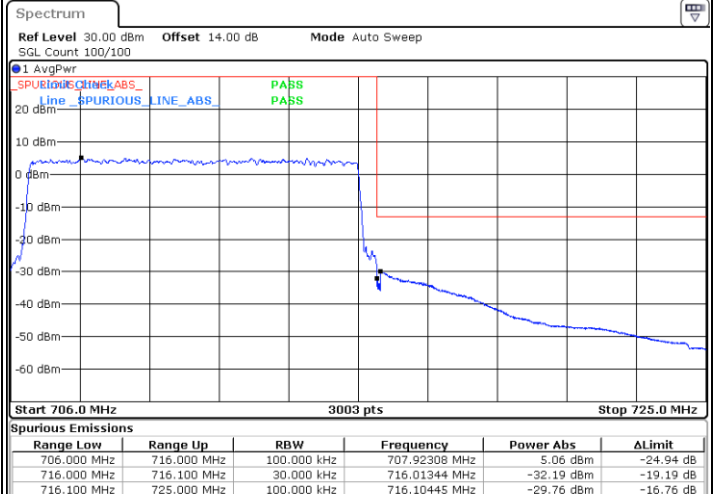
Highest Band Edge / 1RB



Lowest Band Edge / Full RB



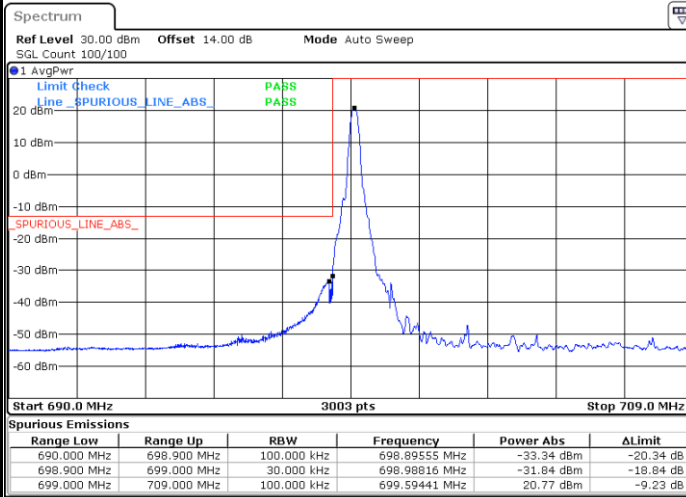
Highest Band Edge / Full RB



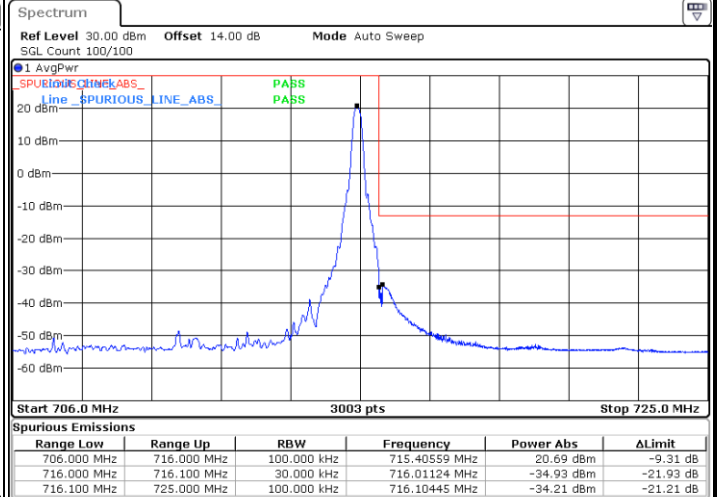


LTE Band 12 / 10MHz / 16QAM

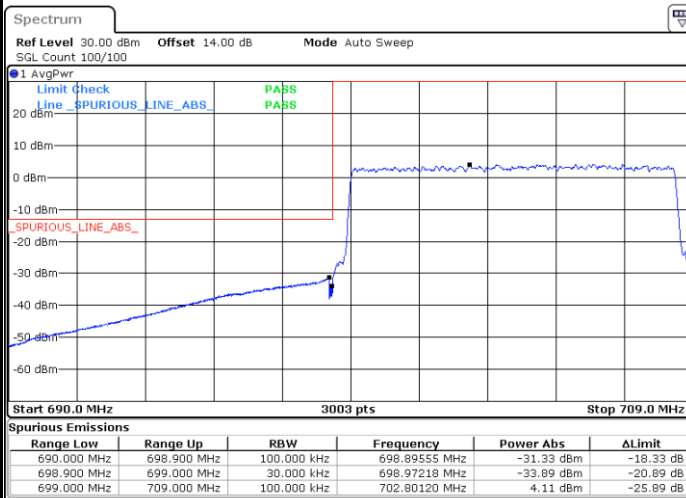
Lowest Band Edge / 1 RB



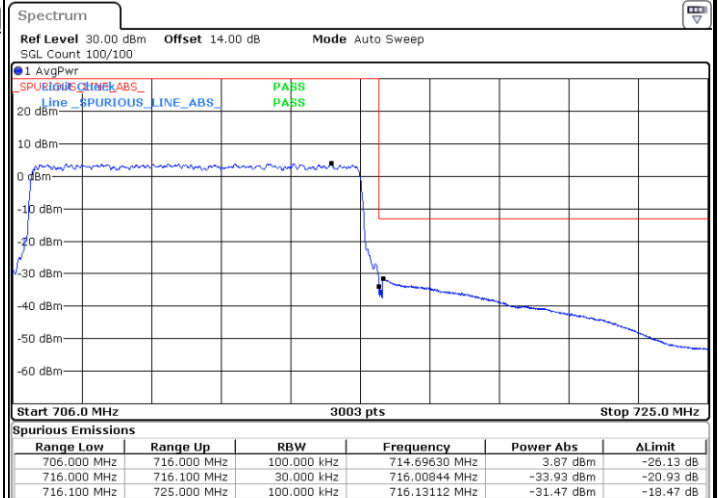
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



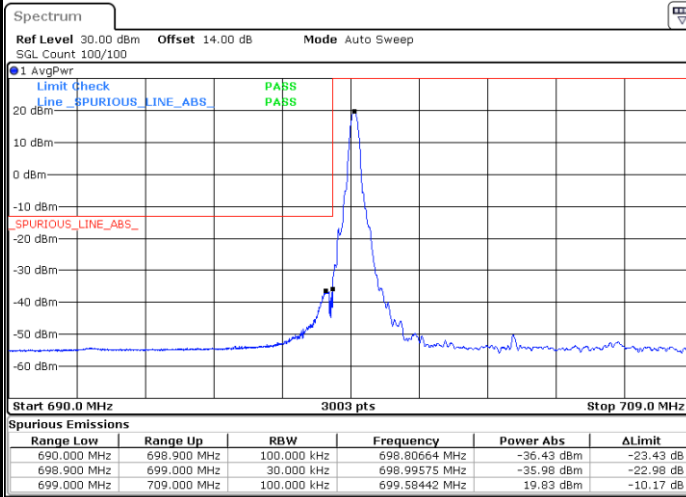
Highest Band Edge / Full RB



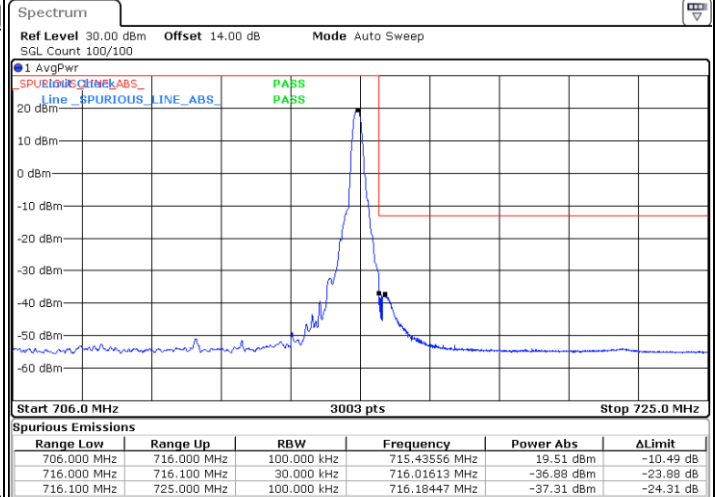


LTE Band 12 / 10MHz / 64QAM

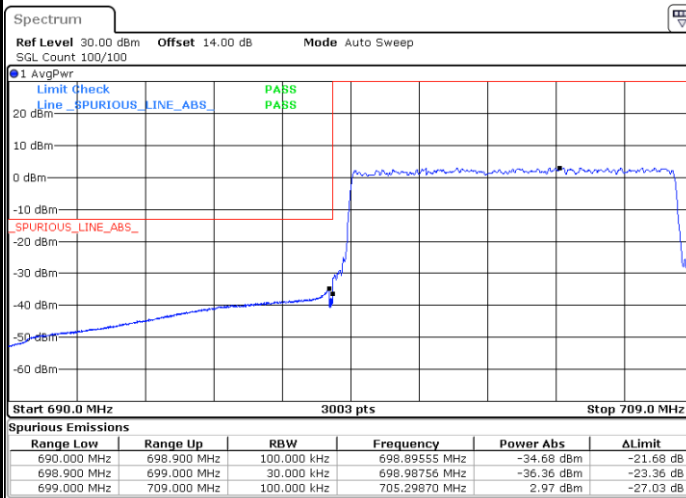
Lowest Band Edge / 1 RB



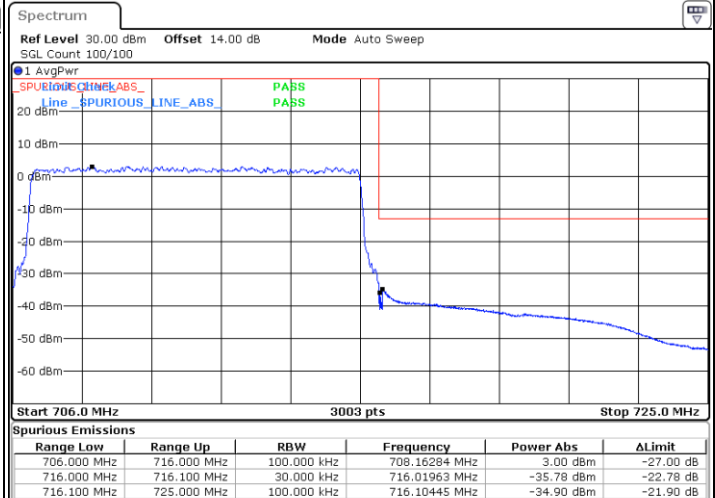
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



Highest Band Edge / Full RB

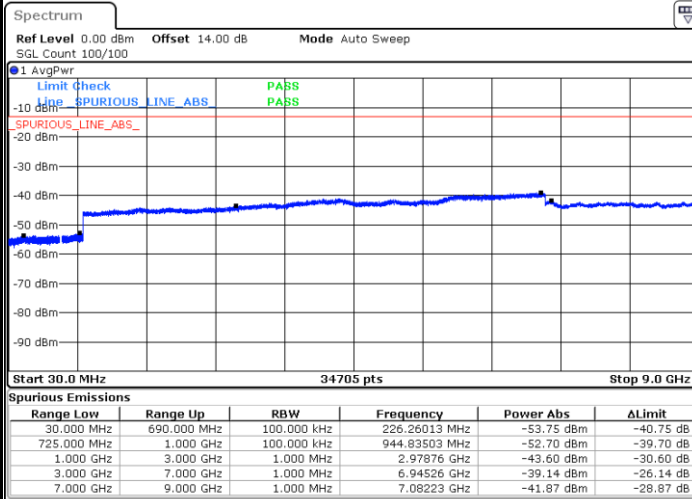




Conducted Spurious Emission

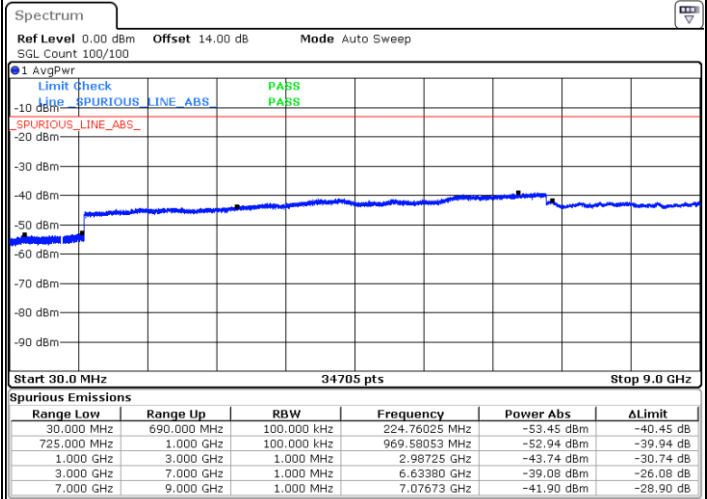
LTE Band 12 / 1.4MHz

Lowest Channel / QPSK



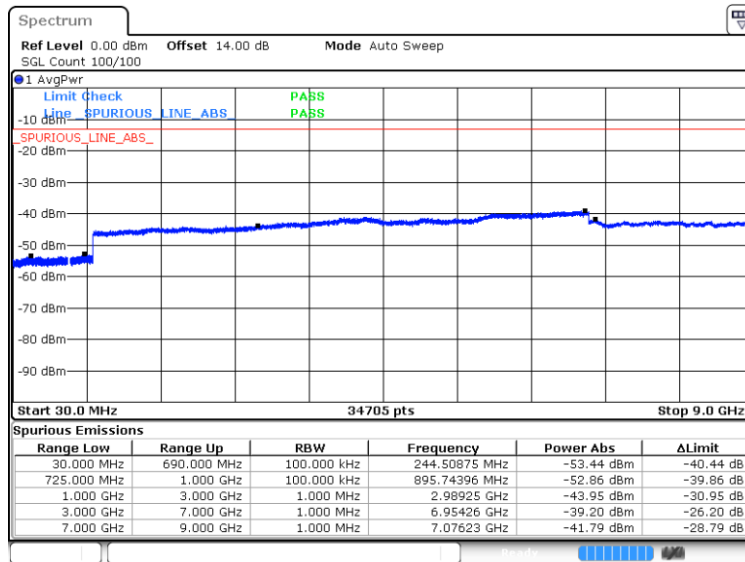
Date: 5 SEP. 2023 23:11:58

Middle Channel / QPSK



Date: 5 SEP. 2023 23:13:12

Highest Channel / QPSK

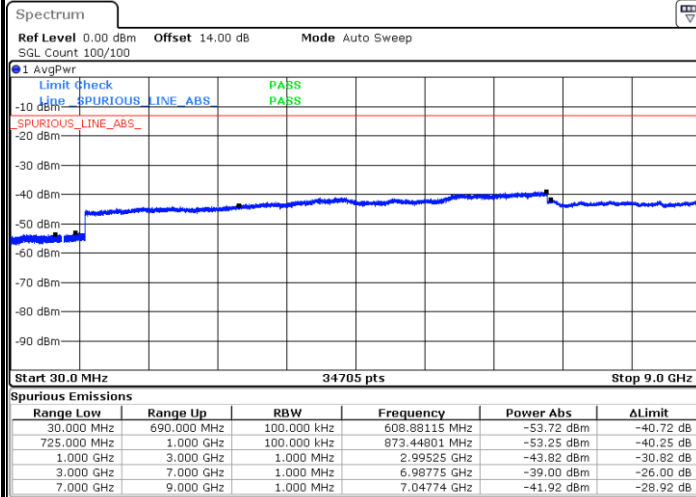


Date: 5 SEP. 2023 23:22:20



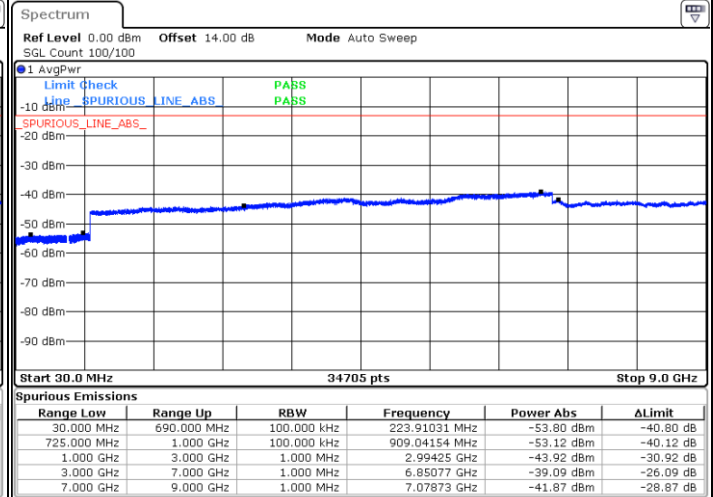
LTE Band 12 / 3MHz

Lowest Channel / QPSK



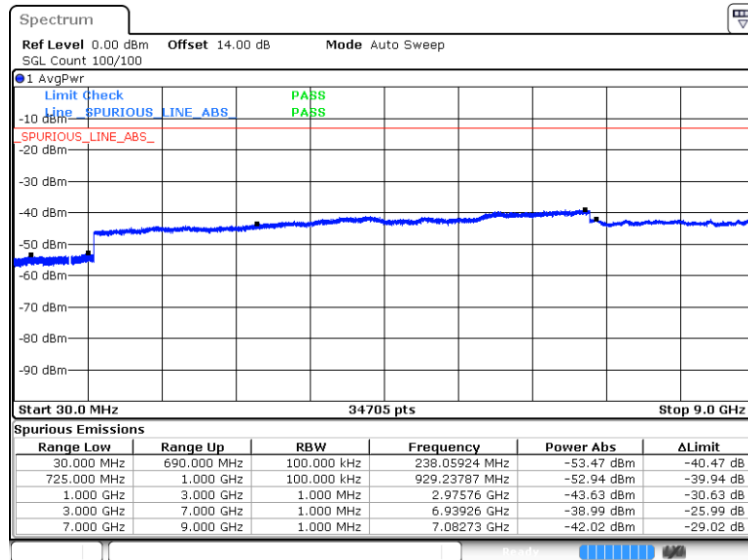
Date: 6 SEP.2023 00:02:45

Middle Channel / QPSK



Date: 6 SEP.2023 00:03:59

Highest Channel / QPSK

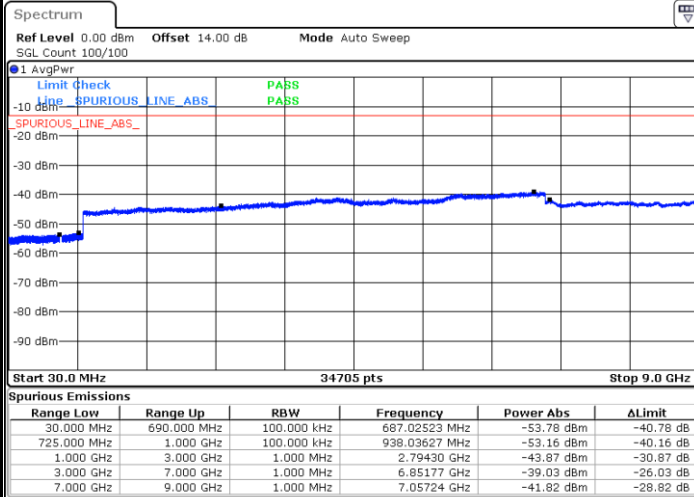


Date: 6 SEP.2023 00:13:07



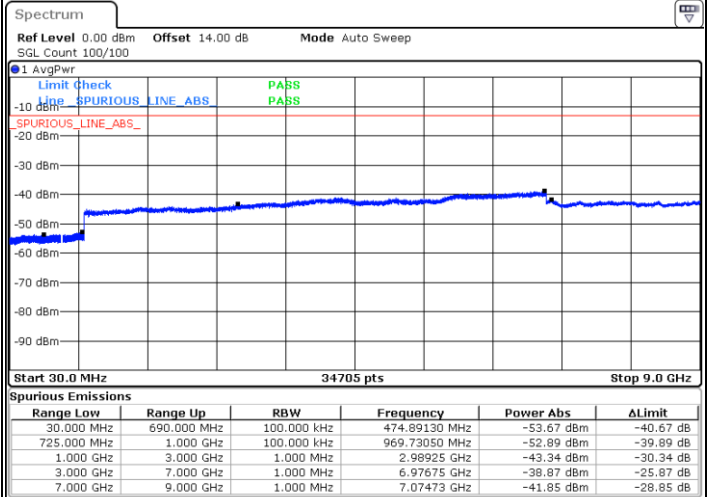
LTE Band 12 / 5MHz

Lowest Channel / QPSK



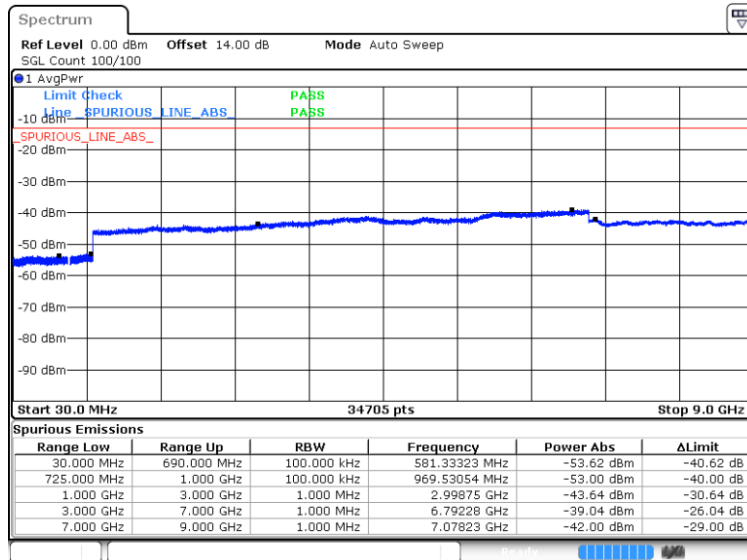
Date: 6 SEP. 2023 01:17:52

Middle Channel / QPSK



Date: 6 SEP. 2023 01:19:10

Highest Channel / QPSK

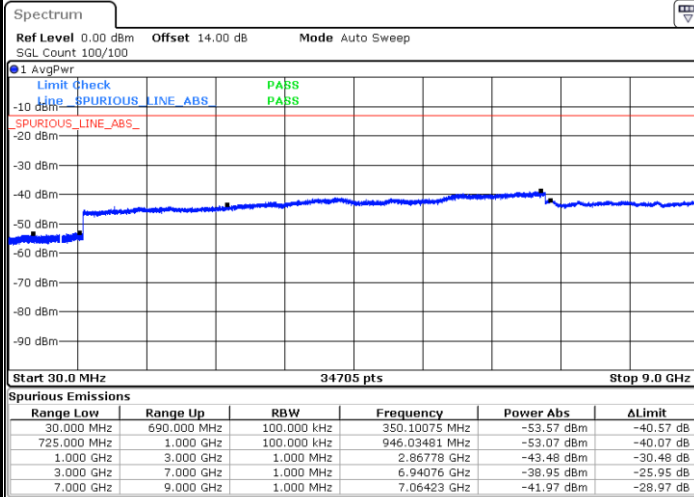


Date: 6 SEP. 2023 01:38:59



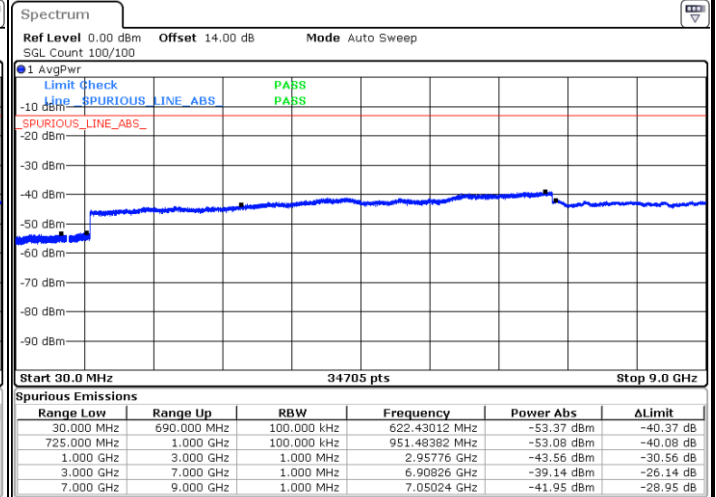
LTE Band 12 / 10MHz

Lowest Channel / QPSK



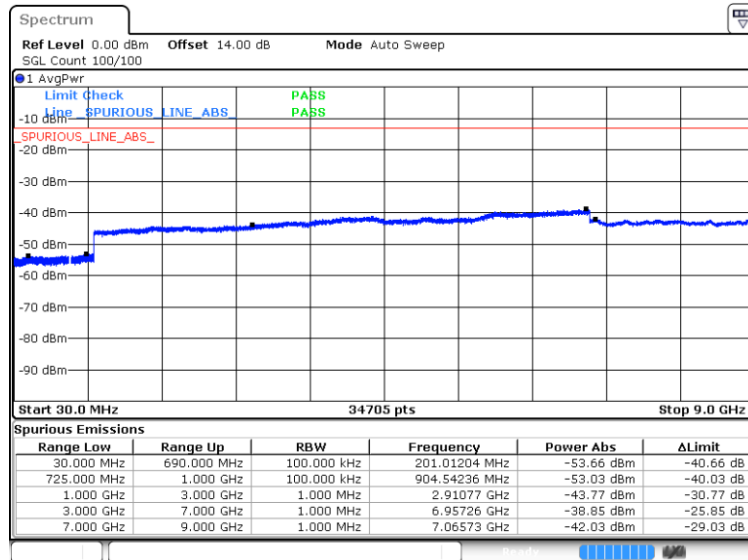
Date: 6 SEP.2023 01:49:11

Middle Channel / QPSK



Date: 6 SEP.2023 01:50:29

Highest Channel / QPSK



Date: 6 SEP.2023 02:00:05

**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	0.0010	PASS
40	Normal Voltage	0.0013	
30	Normal Voltage	0.0004	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0007	
0	Normal Voltage	0.0011	
-10	Normal Voltage	0.0014	
-20	Normal Voltage	0.0001	
-30	Normal Voltage	0.0007	
20	Maximum Voltage	0.0017	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0010	

Note:

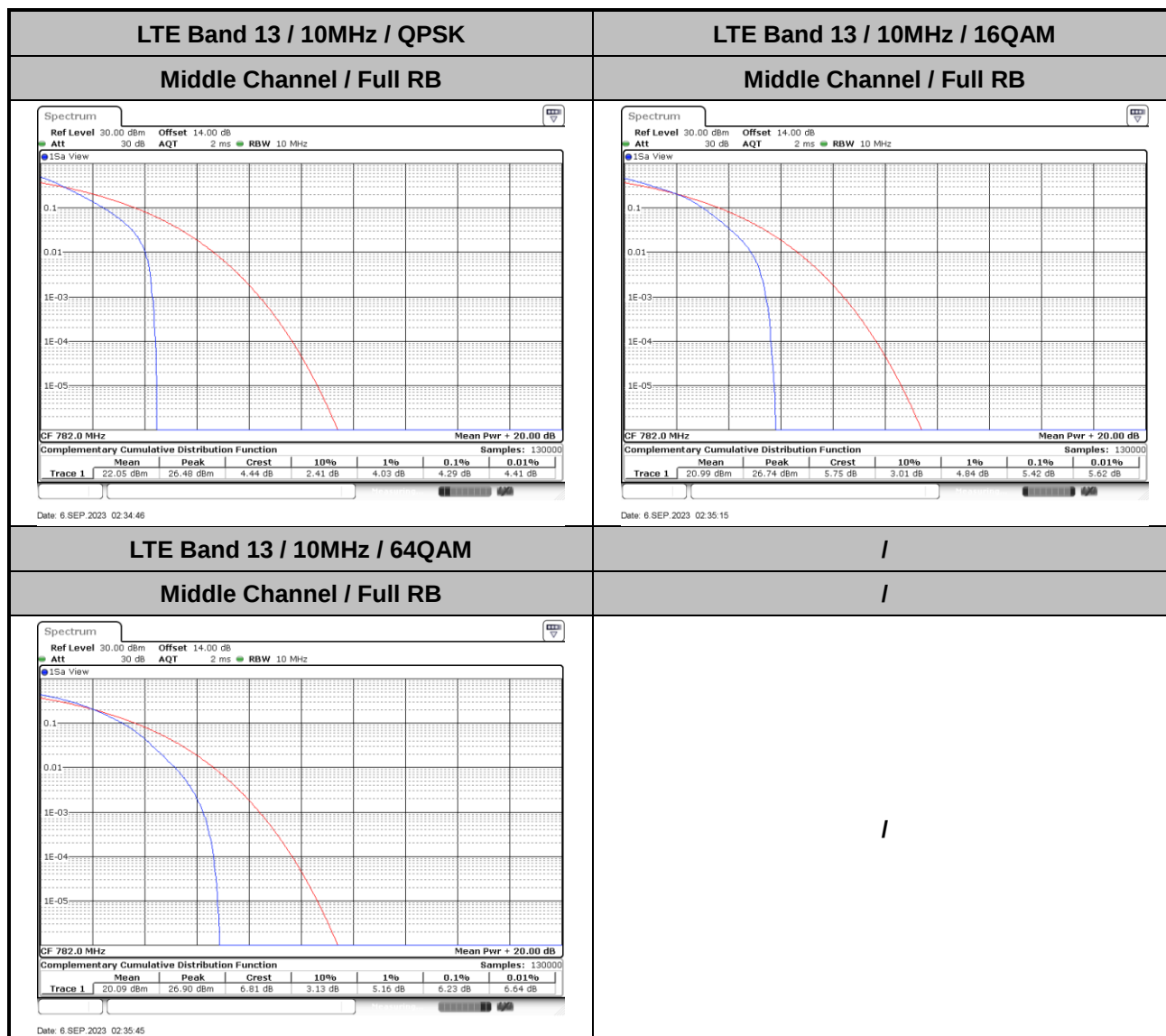
1. Normal Voltage = 7.82 V. ; Battery End Point (BEP) = 6.8 V. ; Maximum Voltage = 9.0 V.
2. The frequency fundamental emissions stay within the authorized frequency block.



LTE Band 13

Peak-to-Average Ratio

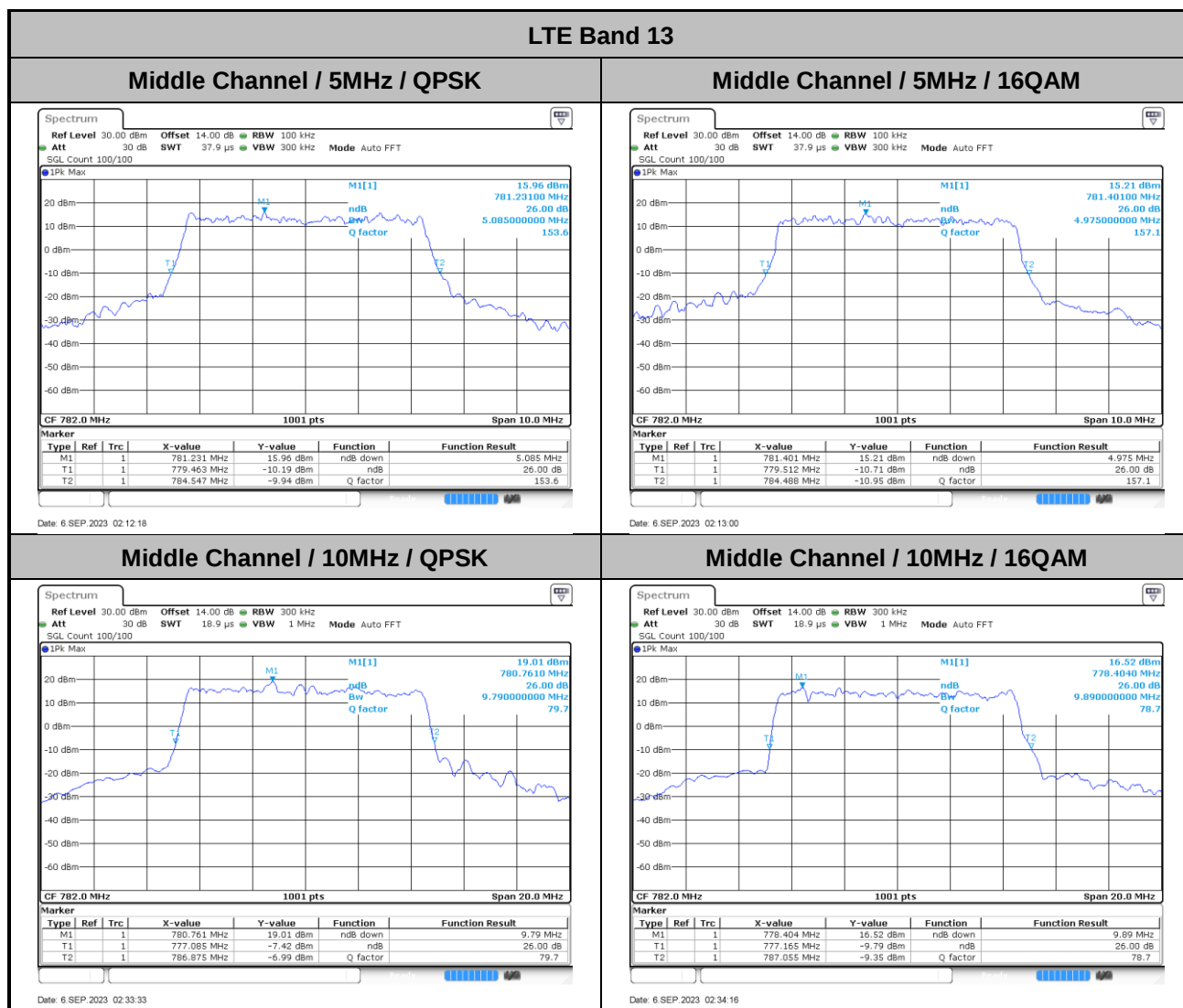
Mode	LTE Band 13 / 10MHz			
Mod.	QPSK	16QAM	64QAM	Limit: 13dB
RB Size	Full RB	Full RB	Full RB	Result
Middle CH	4.29	5.42	6.23	PASS





26dB Bandwidth

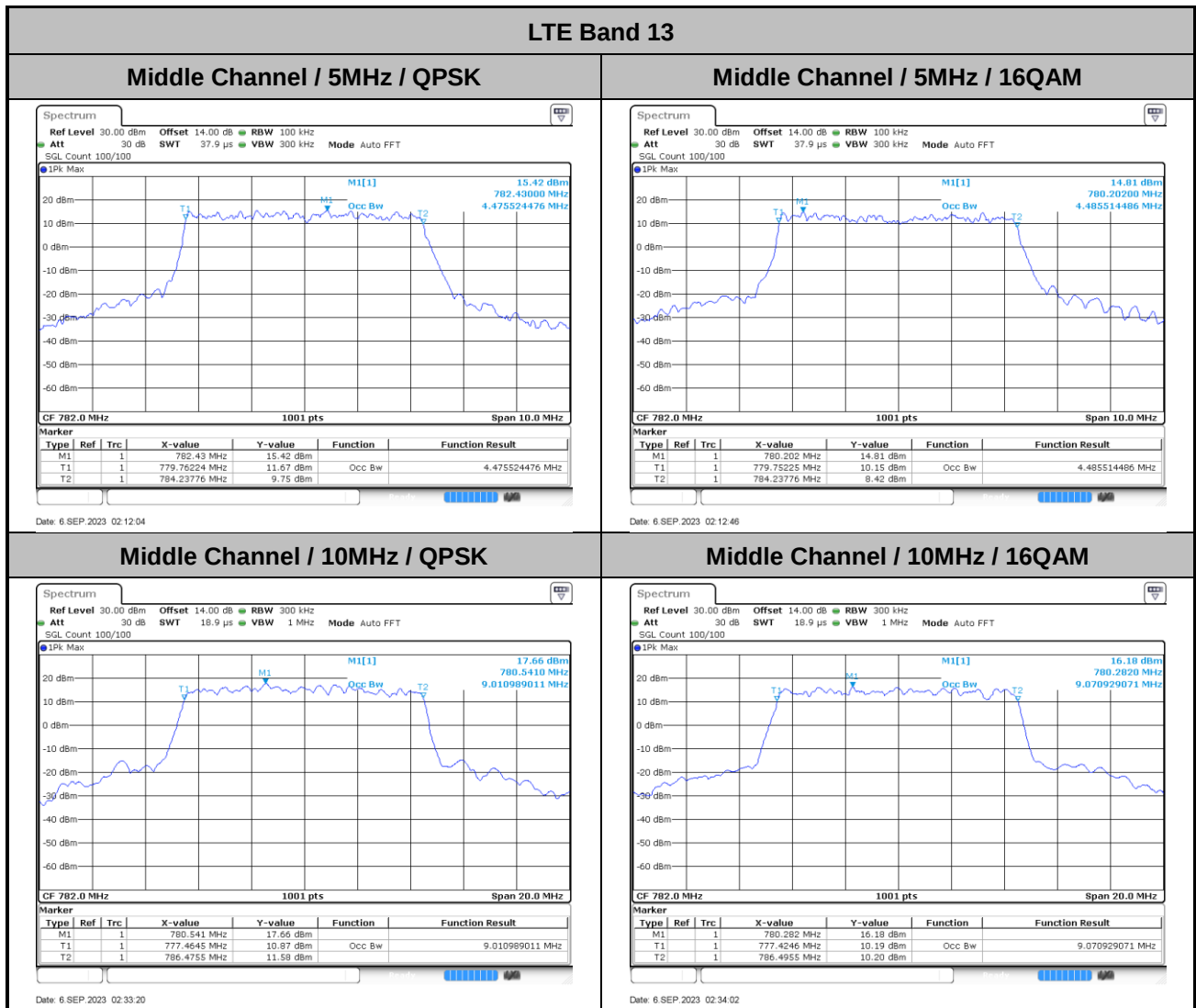
Mode	LTE Band 13 : 26dB BW(MHz)			
BW	5MHz		10MHz	
Mod.	QPSK	16QAM	QPSK	16QAM
Middle CH	5.09	4.98	9.79	9.89





Occupied Bandwidth

Mode	LTE Band 13 : 99%OBW(MHz)			
BW	5MHz		10MHz	
Mod.	QPSK	16QAM	QPSK	16QAM
Middle CH	4.48	4.49	9.01	9.07

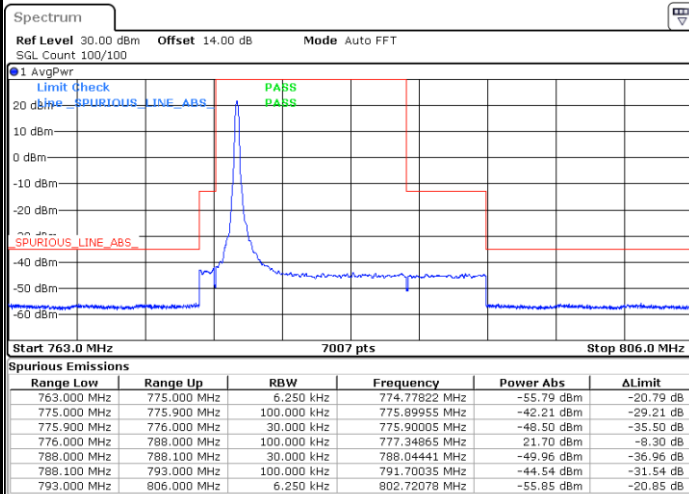




Conducted Band Edge

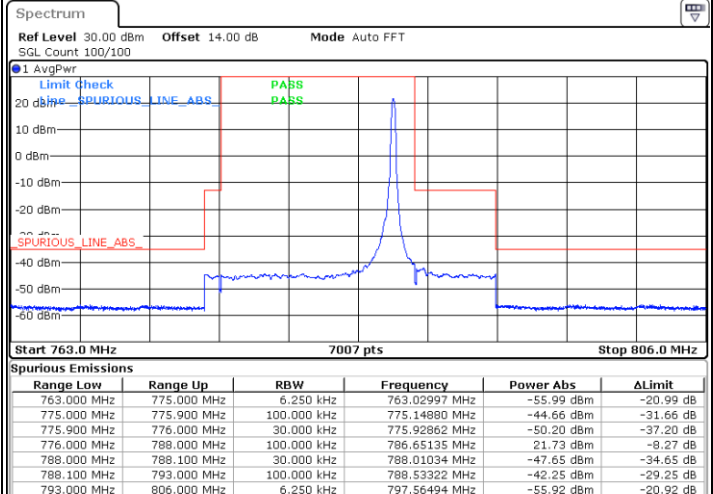
LTE Band 13 / 5MHz / QPSK

Lowest Band Edge / 1 RB



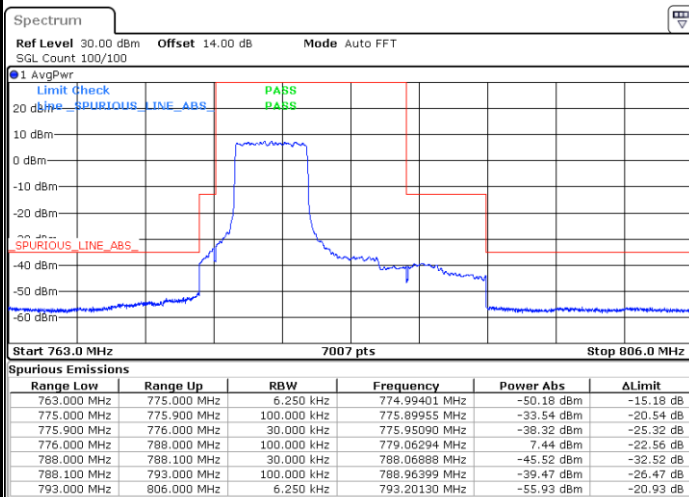
Date: 6 SEP 2023 02:03:13

Highest Band Edge / 1 RB



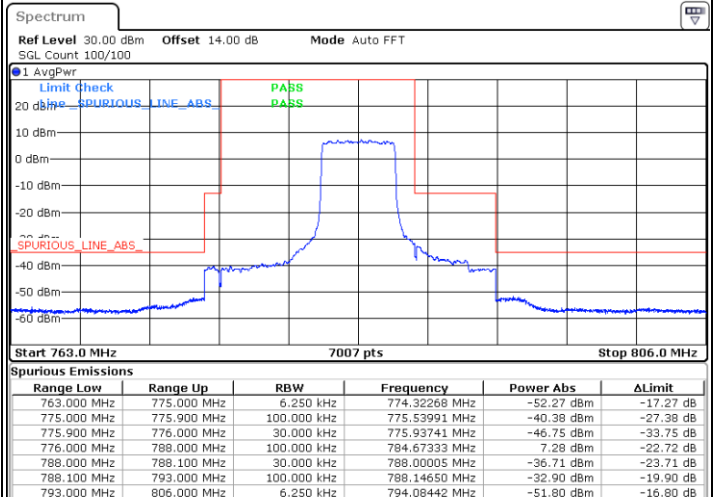
Date: 6 SEP 2023 02:14:08

Lowest Band Edge / Full RB



Date: 6 SEP 2023 02:06:40

Highest Band Edge / Full RB

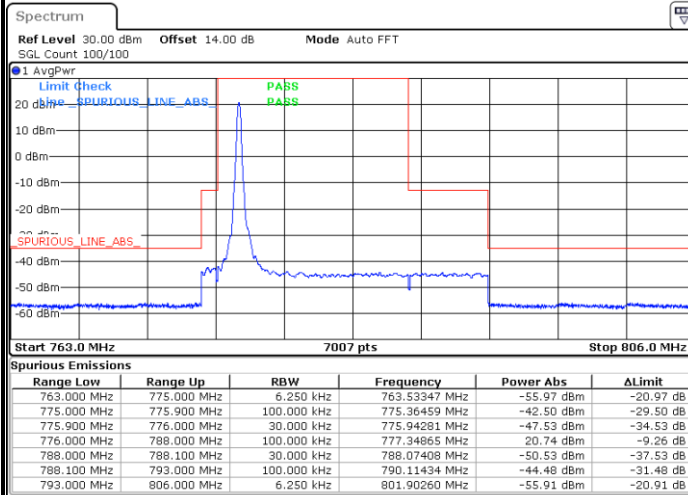


Date: 6 SEP 2023 02:17:35



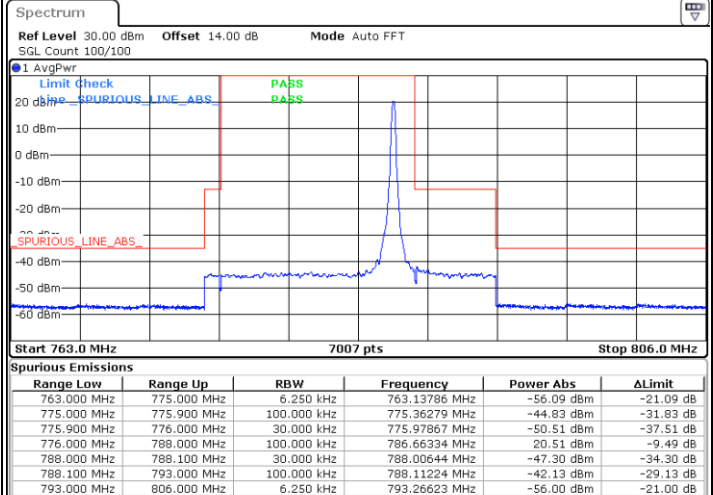
LTE Band 13 / 5MHz / 16QAM

Lowest Band Edge / 1 RB



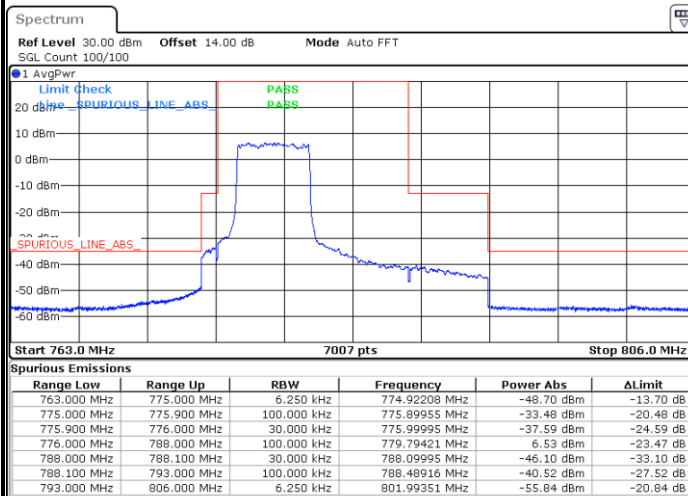
Date: 6 SEP 2023 02:04:22

Highest Band Edge / 1 RB



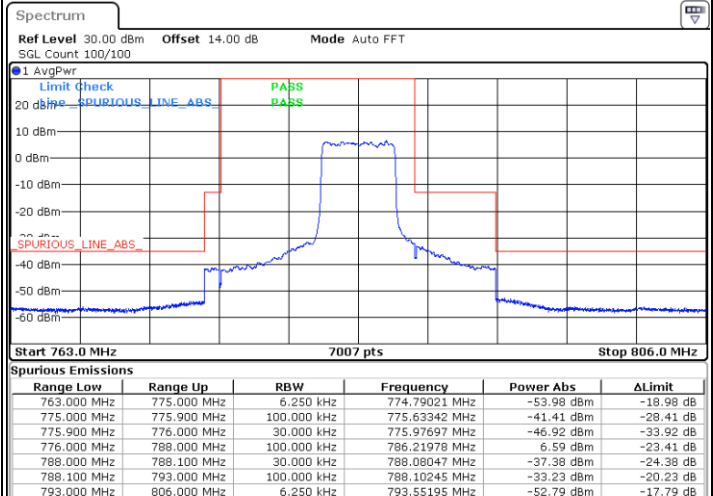
Date: 6 SEP 2023 02:15:17

Lowest Band Edge / Full RB



Date: 6 SEP 2023 02:07:49

Highest Band Edge / Full RB

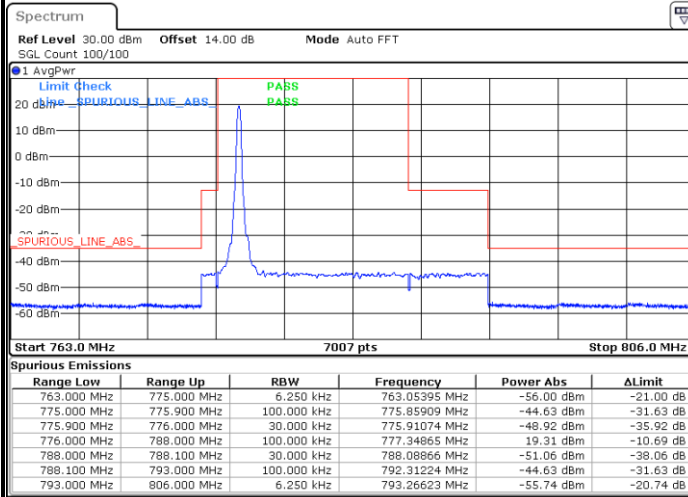


Date: 6 SEP 2023 02:18:44



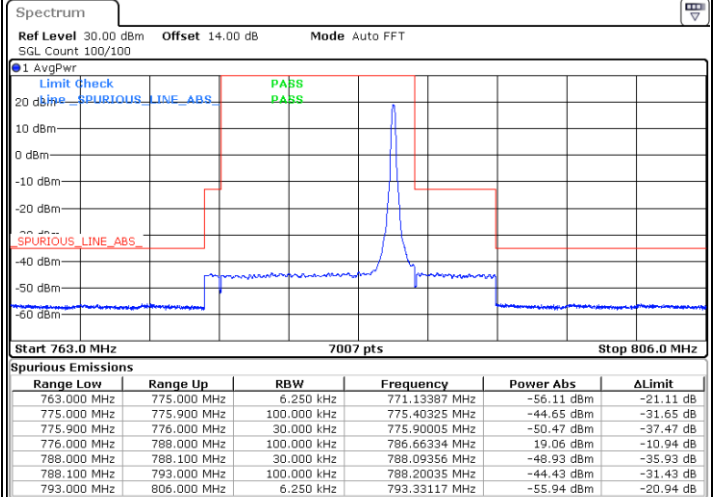
LTE Band 13 / 5MHz / 64QAM

Lowest Band Edge / 1 RB



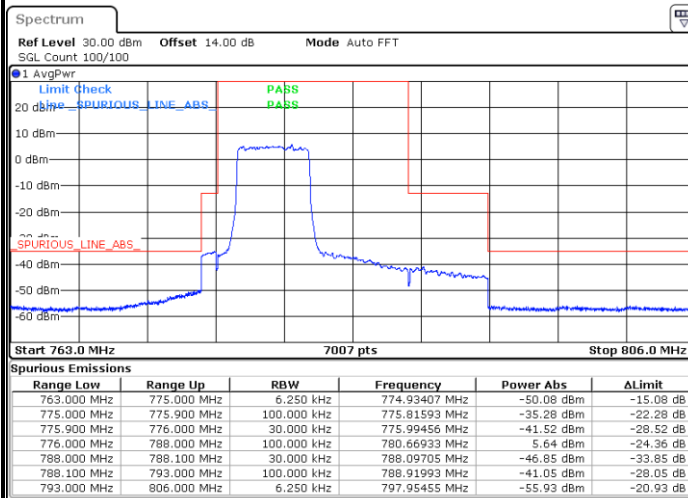
Date: 6 SEP 2023 02:05:31

Highest Band Edge / 1 RB



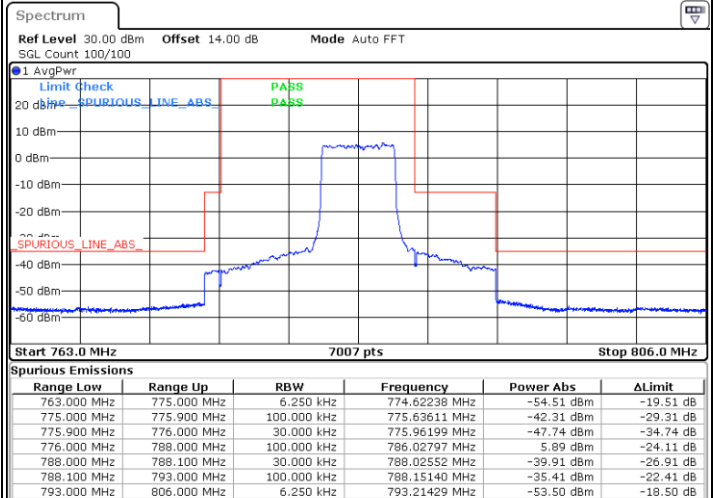
Date: 6 SEP 2023 02:16:26

Lowest Band Edge / Full RB



Date: 6 SEP 2023 02:08:59

Highest Band Edge / Full RB

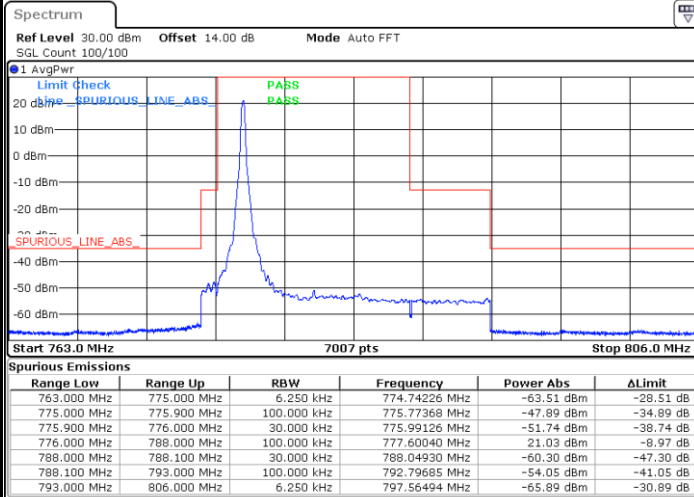


Date: 6 SEP 2023 02:19:53



LTE Band 13 / 10MHz / QPSK

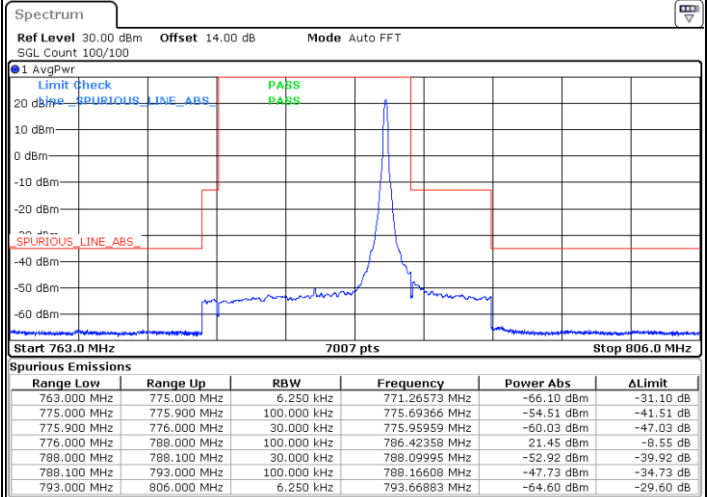
Band Edge / 1 RB



Date: 6 SEP. 2023 02:22:25

LTE Band 13 / 10MHz / QPSK

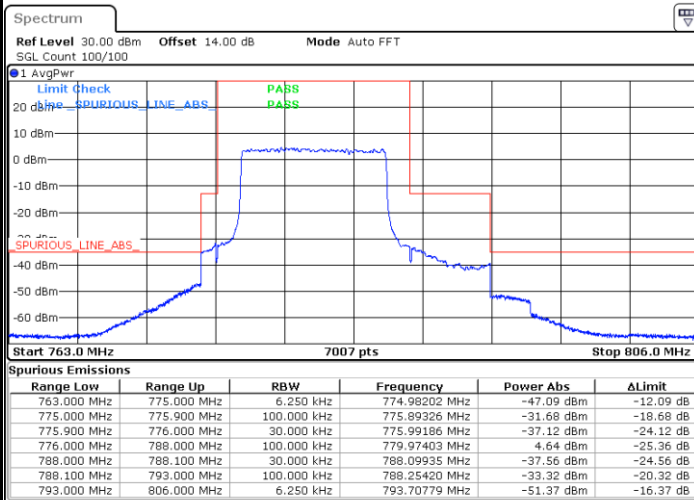
Band Edge / 1 RB



Date: 6 SEP. 2023 02:25:50

LTE Band 13 / 10MHz / QPSK

Band Edge / Full RB



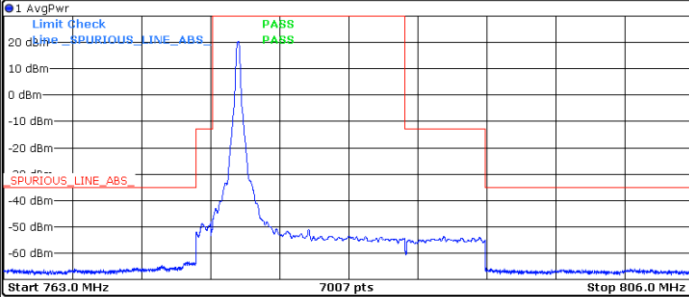
Date: 6 SEP. 2023 02:29:16



LTE Band 13 / 10MHz / 16QAM

Band Edge / 1 RB

Spectrum

Ref Level 30.00 dBm Offset 14.00 dB Mode Auto FFT
SGL Count 100/100

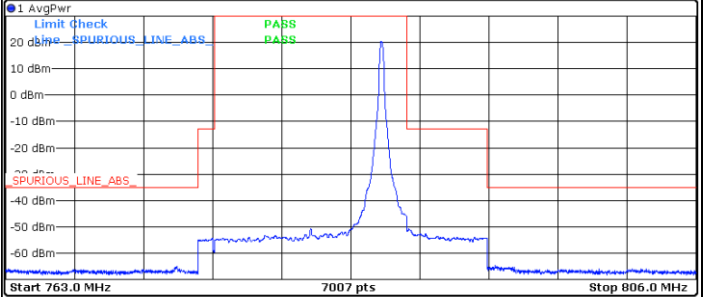
Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
763.000 MHz	775.000 MHz	6.250 kHz	774.41858 MHz	-63.31 dBm	-28.31 dB
775.000 MHz	775.900 MHz	100.000 kHz	775.89955 MHz	-48.24 dBm	-35.24 dB
775.900 MHz	776.000 MHz	30.000 kHz	775.95200 MHz	-50.97 dBm	-37.97 dB
776.000 MHz	788.000 MHz	100.000 kHz	777.60040 MHz	20.43 dBm	-9.57 dB
788.000 MHz	788.100 MHz	30.000 kHz	788.00834 MHz	-59.24 dBm	-46.24 dB
788.100 MHz	793.000 MHz	100.000 kHz	790.41783 MHz	-53.75 dBm	-40.75 dB
793.000 MHz	806.000 MHz	6.250 kHz	793.03247 MHz	-65.72 dBm	-30.72 dB

Date: 6 SEP.2023 02:23:33

LTE Band 13 / 10MHz / 16QAM

Band Edge / 1 RB

Spectrum

Ref Level 30.00 dBm Offset 14.00 dB Mode Auto FFT
SGL Count 100/100

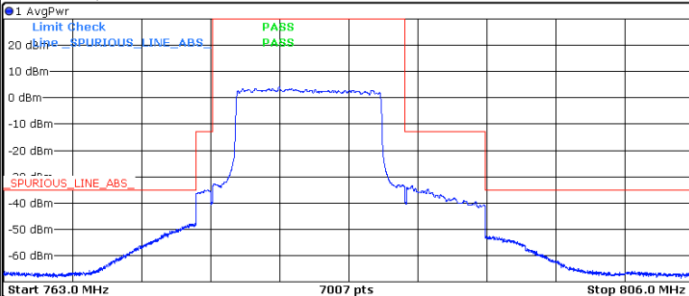
Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
763.000 MHz	775.000 MHz	6.250 kHz	773.68731 MHz	-65.02 dBm	-30.02 dB
775.000 MHz	775.900 MHz	100.000 kHz	775.87078 MHz	-54.41 dBm	-41.41 dB
775.900 MHz	776.000 MHz	30.000 kHz	775.91973 MHz	-58.93 dBm	-45.93 dB
776.000 MHz	788.000 MHz	100.000 kHz	786.38761 MHz	20.45 dBm	-9.55 dB
788.000 MHz	788.100 MHz	30.000 kHz	788.09116 MHz	-51.30 dBm	-38.30 dB
788.100 MHz	793.000 MHz	100.000 kHz	788.10245 MHz	-50.88 dBm	-37.88 dB
793.000 MHz	806.000 MHz	6.250 kHz	793.47403 MHz	-64.84 dBm	-29.84 dB

Date: 6 SEP.2023 02:26:59

LTE Band 13 / 10MHz / 16QAM

Band Edge / Full RB

Spectrum

Ref Level 30.00 dBm Offset 14.00 dB Mode Auto FFT
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	-47.67 dBm	-12.67 dB
775.000 MHz	775.900 MHz	100.000 kHz	775.69905 MHz	-35.10 dBm	-22.10 dB
775.900 MHz	776.000 MHz	30.000 kHz	775.92602 MHz	-39.66 dBm	-26.66 dB
776.000 MHz	788.000 MHz	100.000 kHz	780.15385 MHz	4.15 dBm	-25.85 dB
788.000 MHz	788.100 MHz	30.000 kHz	788.00105 MHz	-39.59 dBm	-26.59 dB
788.100 MHz	793.000 MHz	100.000 kHz	788.43042 MHz	-33.54 dBm	-20.54 dB
793.000 MHz	806.000 MHz	6.250 kHz	793.25325 MHz	-52.58 dBm	-17.58 dB

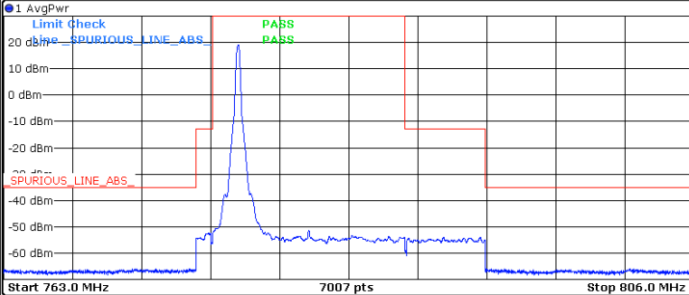
Date: 6 SEP.2023 02:30:24



LTE Band 13 / 10MHz / 64QAM

Band Edge / 1 RB

Spectrum

Ref Level 30.00 dBm Offset 14.00 dB Mode Auto FFT
SGL Count 100/100

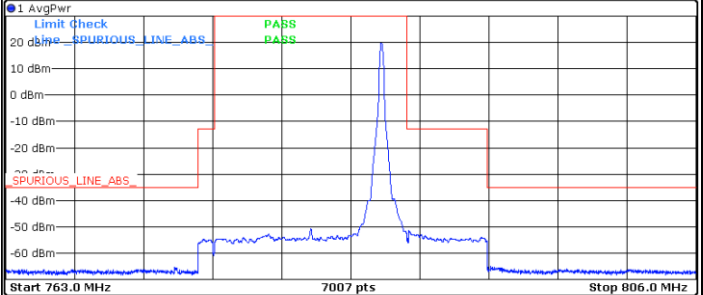
Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
763.000 MHz	775.000 MHz	6.250 kHz	771.28971 MHz	-65.96 dBm	-30.96 dB
775.000 MHz	775.900 MHz	100.000 kHz	775.74760 MHz	-52.41 dBm	-39.41 dB
775.900 MHz	776.000 MHz	30.000 kHz	775.94411 MHz	-56.20 dBm	-43.20 dB
776.000 MHz	788.000 MHz	100.000 kHz	777.60040 MHz	19.05 dBm	-10.95 dB
788.000 MHz	788.100 MHz	30.000 kHz	788.01693 MHz	-59.03 dBm	-46.03 dB
788.100 MHz	793.000 MHz	100.000 kHz	792.67448 MHz	-54.08 dBm	-41.08 dB
793.000 MHz	806.000 MHz	6.250 kHz	793.03247 MHz	-66.08 dBm	-31.08 dB

Date: 6 SEP. 2023 02:24:42

LTE Band 13 / 10MHz / 64QAM

Band Edge / 1 RB

Spectrum

Ref Level 30.00 dBm Offset 14.00 dB Mode Auto FFT
SGL Count 100/100

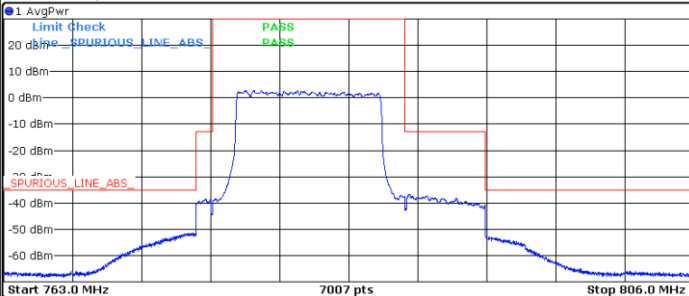
Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
763.000 MHz	775.000 MHz	6.250 kHz	773.53147 MHz	-65.46 dBm	-30.46 dB
775.000 MHz	775.900 MHz	100.000 kHz	775.33581 MHz	-54.61 dBm	-41.61 dB
775.900 MHz	776.000 MHz	30.000 kHz	775.99995 MHz	-59.78 dBm	-46.78 dB
776.000 MHz	788.000 MHz	100.000 kHz	786.39960 MHz	19.84 dBm	-10.16 dB
788.000 MHz	788.100 MHz	30.000 kHz	788.02712 MHz	-54.49 dBm	-41.49 dB
788.100 MHz	793.000 MHz	100.000 kHz	788.10245 MHz	-51.47 dBm	-38.47 dB
793.000 MHz	806.000 MHz	6.250 kHz	793.20130 MHz	-65.14 dBm	-30.14 dB

Date: 6 SEP. 2023 02:28:07

LTE Band 13 / 10MHz / 64QAM

Band Edge / Full RB

Spectrum

Ref Level 30.00 dBm Offset 14.00 dB Mode Auto FFT
SGL Count 100/100

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
763.000 MHz	775.000 MHz	6.250 kHz	774.77822 MHz	-51.29 dBm	-16.29 dB
775.000 MHz	775.900 MHz	100.000 kHz	775.57138 MHz	-39.52 dBm	-25.52 dB
775.900 MHz	776.000 MHz	30.000 kHz	775.90694 MHz	-44.03 dBm	-31.03 dB
776.000 MHz	788.000 MHz	100.000 kHz	778.58342 MHz	2.71 dBm	-27.29 dB
788.000 MHz	788.100 MHz	30.000 kHz	788.07897 MHz	-42.07 dBm	-29.07 dB
788.100 MHz	793.000 MHz	100.000 kHz	788.24930 MHz	-36.71 dBm	-23.71 dB
793.000 MHz	806.000 MHz	6.250 kHz	793.00649 MHz	-52.52 dBm	-17.52 dB

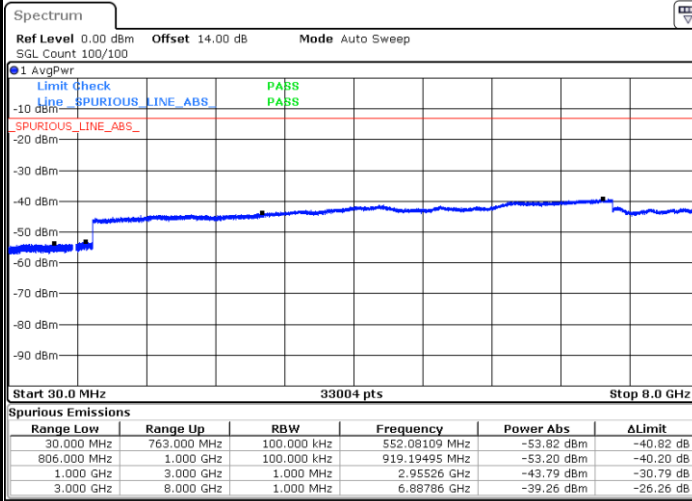
Date: 6 SEP. 2023 02:31:33



Conducted Spurious Emission

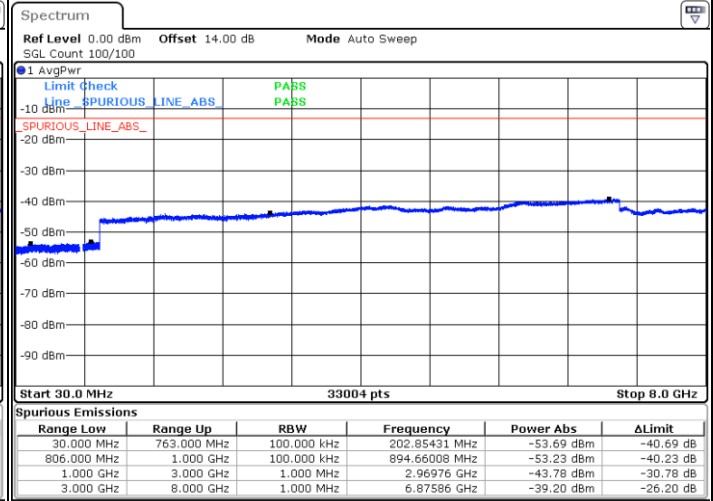
LTE Band 13 / 5MHz

Lowest Channel / QPSK



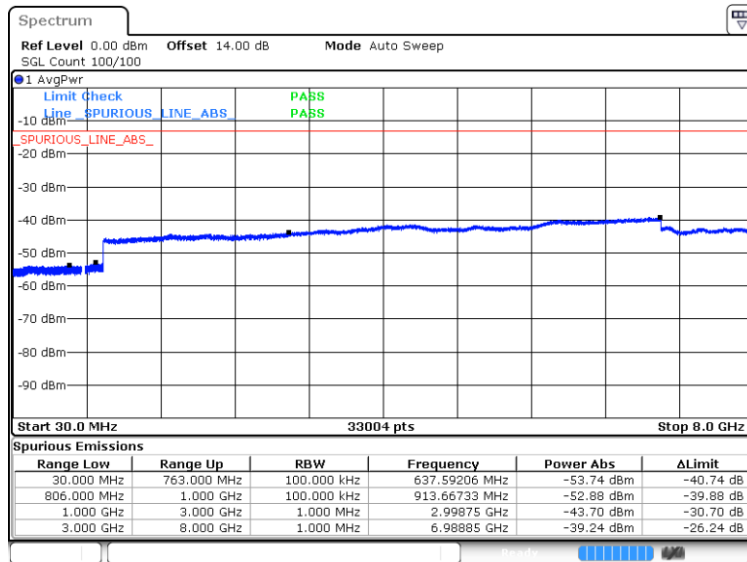
Date: 6 SEP. 2023 02:10:17

Middle Channel / QPSK



Date: 6 SEP. 2023 02:11:35

Highest Channel / QPSK

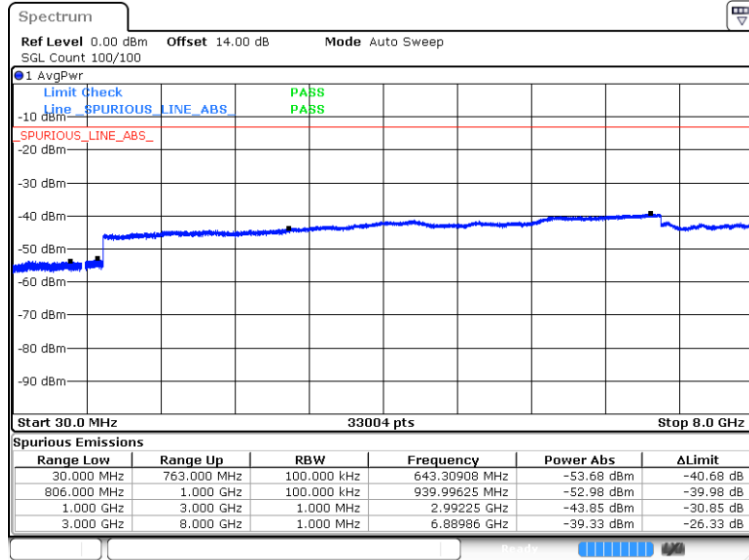


Date: 6 SEP. 2023 02:21:12



LTE Band 13 / 10MHz

Middle Channel / QPSK



Date: 6 SEP. 2023 02:32:51

**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	0.0008	PASS
40	Normal Voltage	0.0005	
30	Normal Voltage	0.0010	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0004	
0	Normal Voltage	0.0012	
-10	Normal Voltage	0.0014	
-20	Normal Voltage	0.0003	
-30	Normal Voltage	0.0005	
20	Maximum Voltage	0.0003	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0005	

Note:

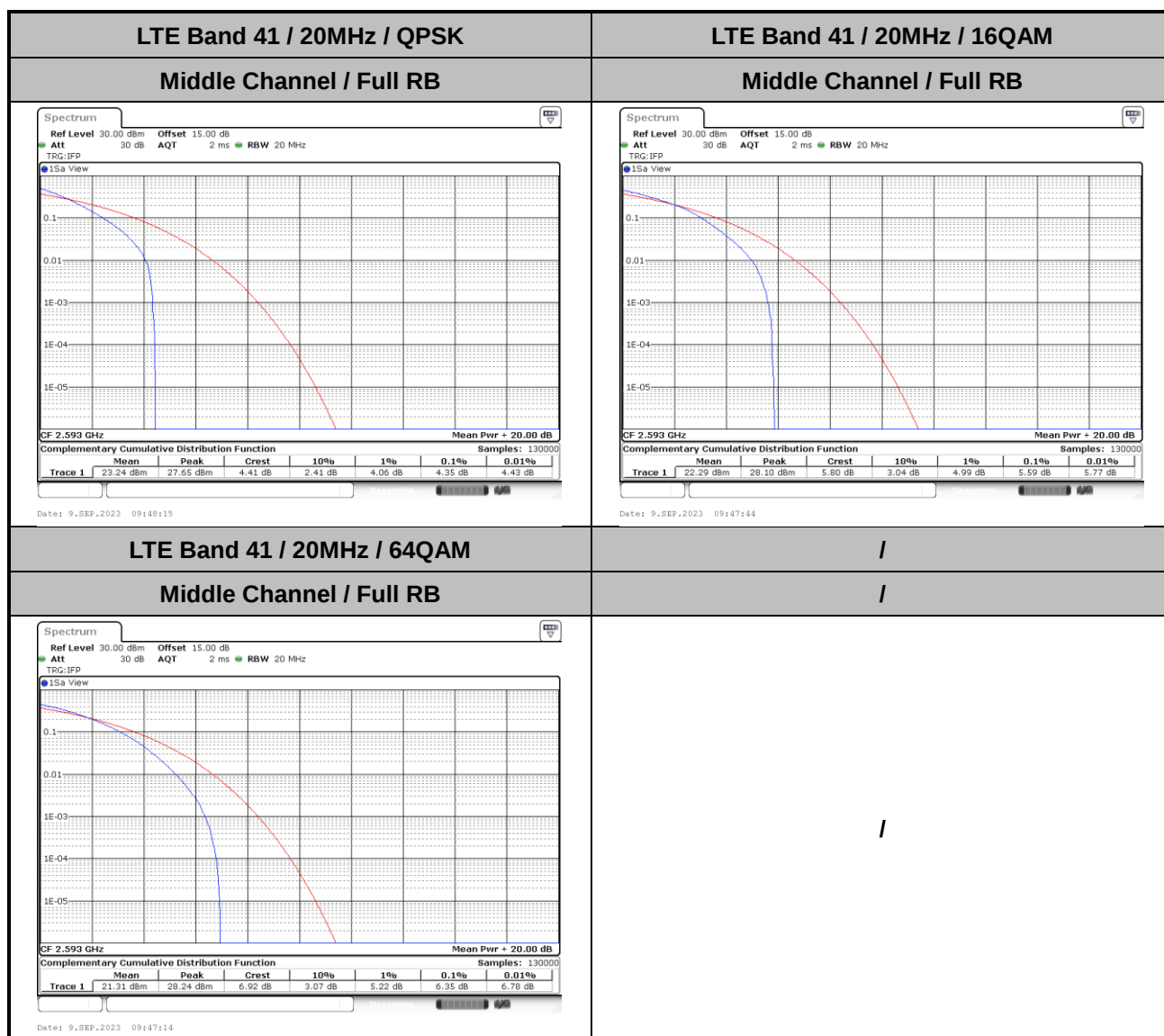
1. Normal Voltage =7.82 V. ; Battery End Point (BEP) =6.8 V. ; Maximum Voltage =9.0 V.
2. The frequency fundamental emissions stay within the authorized frequency block.



LTE Band 41(Main PA)

Peak-to-Average Ratio

Mode	LTE Band 41 / 20MHz			
Mod.	QPSK	16QAM	64QAM	Limit: 13dB
RB Size	Full RB	Full RB	Full RB	Result
Middle CH	4.35	5.59	6.35	PASS



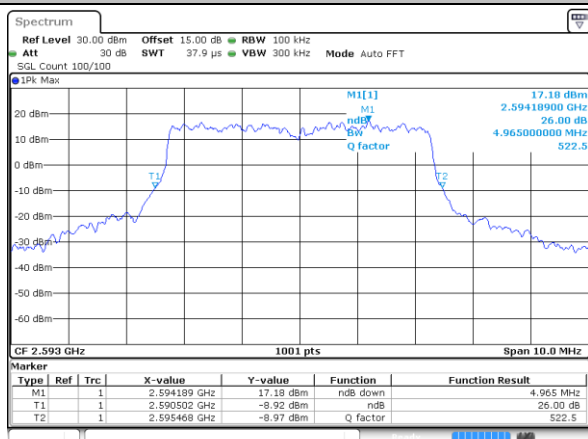


26dB Bandwidth

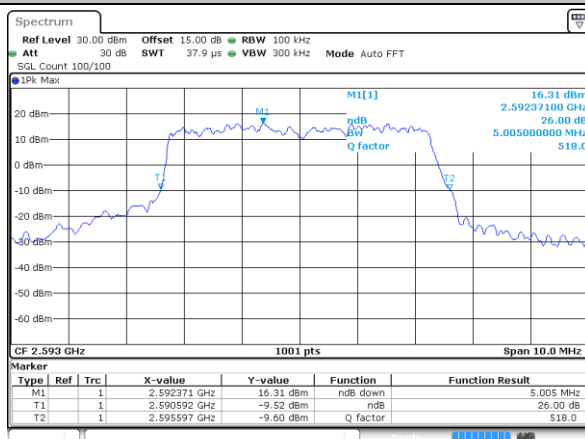
Mode	LTE Band 41 : 26dB BW(MHz)							
BW	5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	4.97	5.01	9.67	9.81	14.45	14.45	19.38	18.90

LTE Band 41

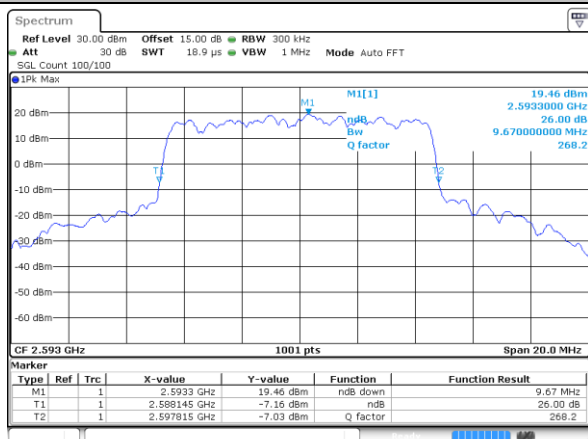
Middle Channel / 5MHz / QPSK



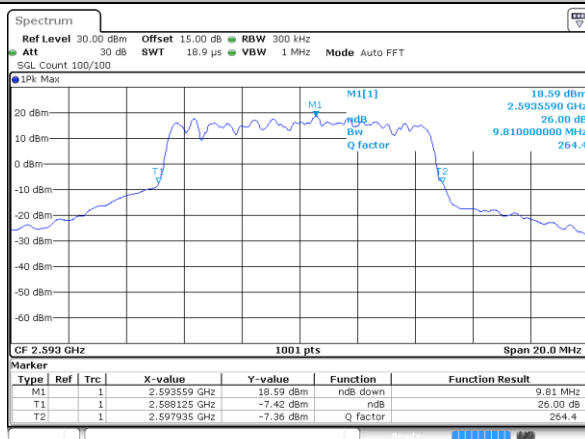
Middle Channel / 5MHz / 16QAM



Middle Channel / 10MHz / QPSK



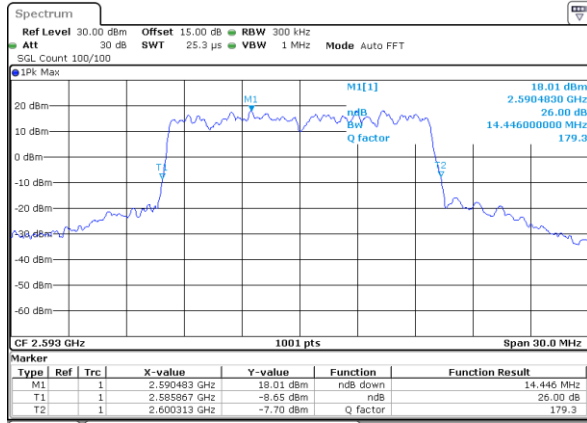
Middle Channel / 10MHz / 16QAM





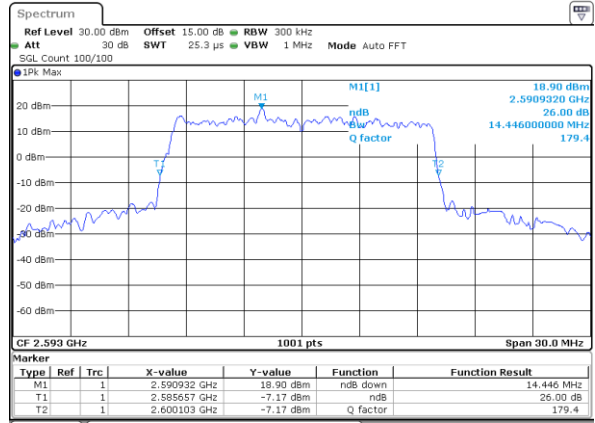
LTE Band 41

Middle Channel / 15MHz / QPSK



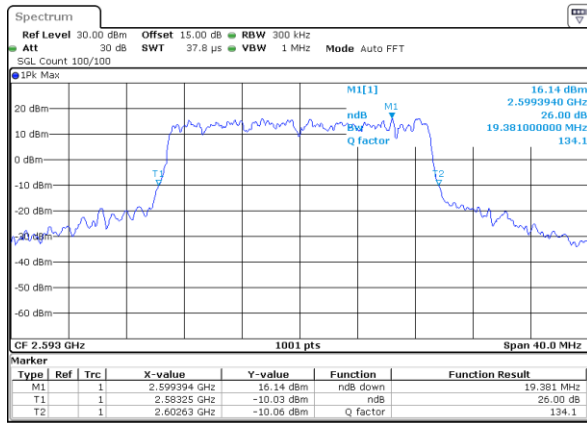
Date: 6 SEP 2023 11:41:42

Middle Channel / 15MHz / 16QAM



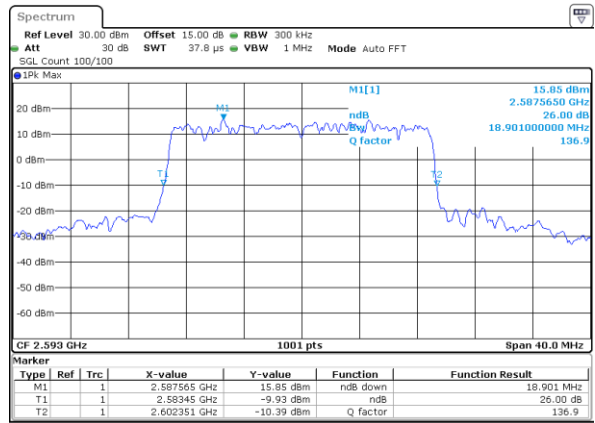
Date: 6 SEP 2023 11:42:24

Middle Channel / 20MHz / QPSK



Date: 6 SEP 2023 12:16:43

Middle Channel / 20MHz / 16QAM

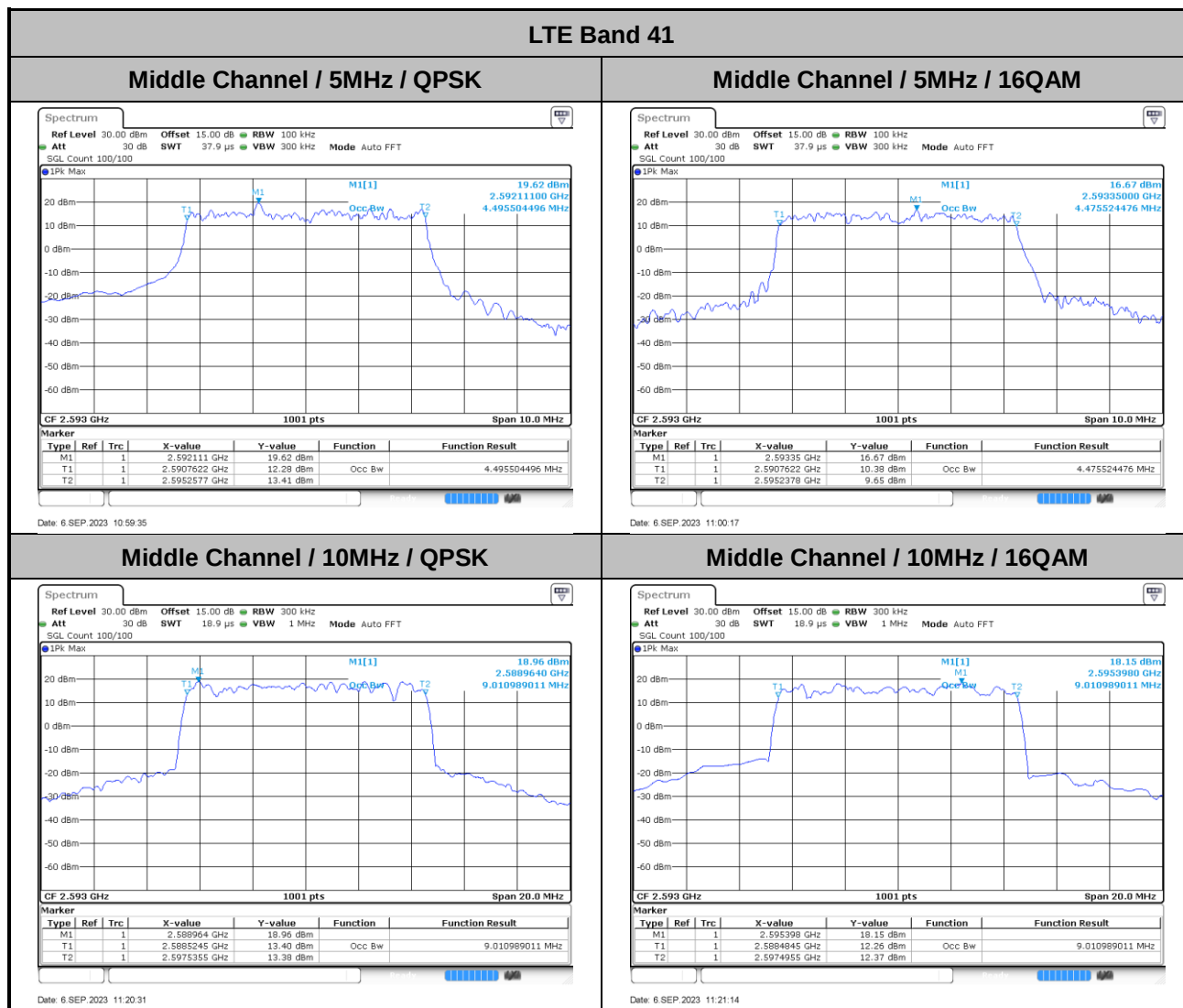


Date: 6 SEP 2023 12:17:26



Occupied Bandwidth

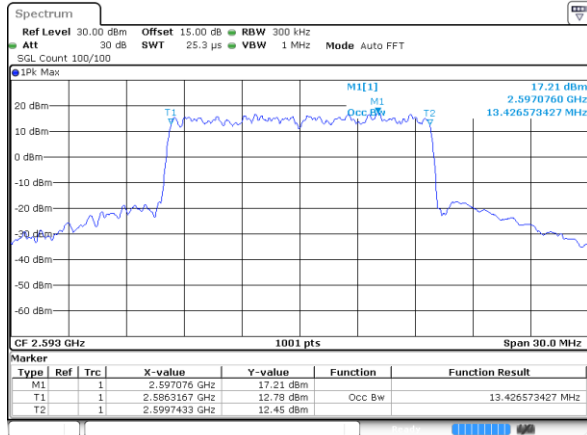
Mode	LTE Band 41 : 99%OBW(MHz)							
BW	5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	4.50	4.48	9.01	9.01	13.43	13.40	17.82	17.90





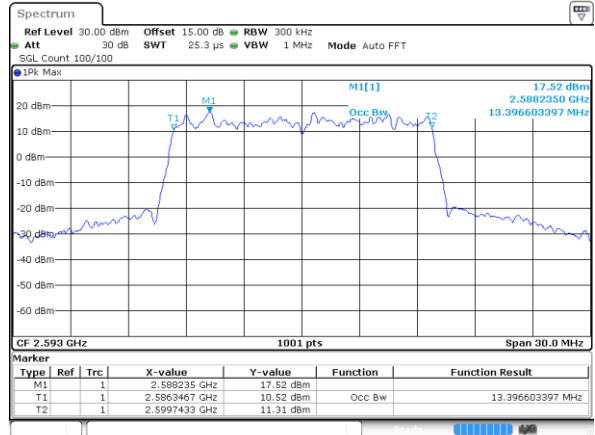
LTE Band 41

Middle Channel / 15MHz / QPSK



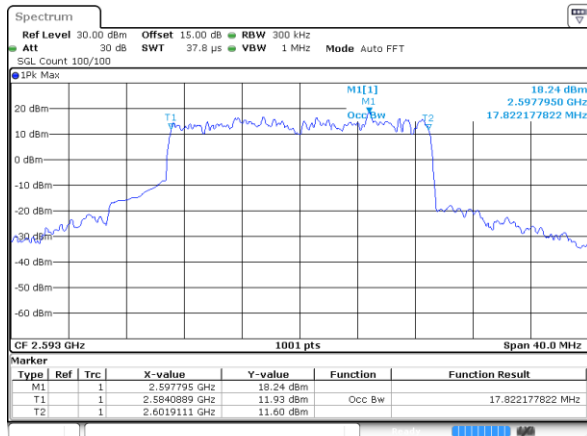
Date: 6 SEP 2023 11:41:28

Middle Channel / 15MHz / 16QAM



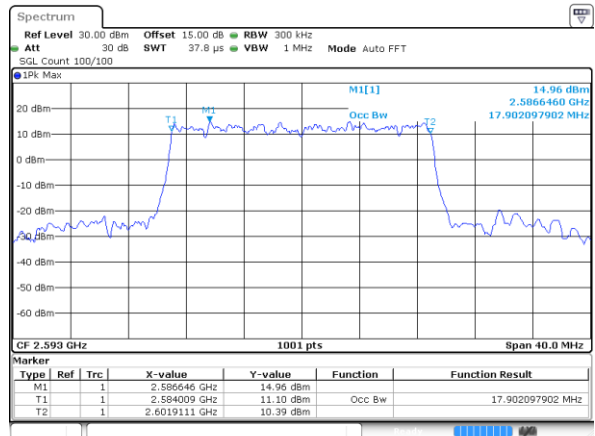
Date: 6 SEP 2023 11:42:11

Middle Channel / 20MHz / QPSK



Date: 6 SEP 2023 12:16:29

Middle Channel / 20MHz / 16QAM



Date: 6 SEP 2023 12:17:12