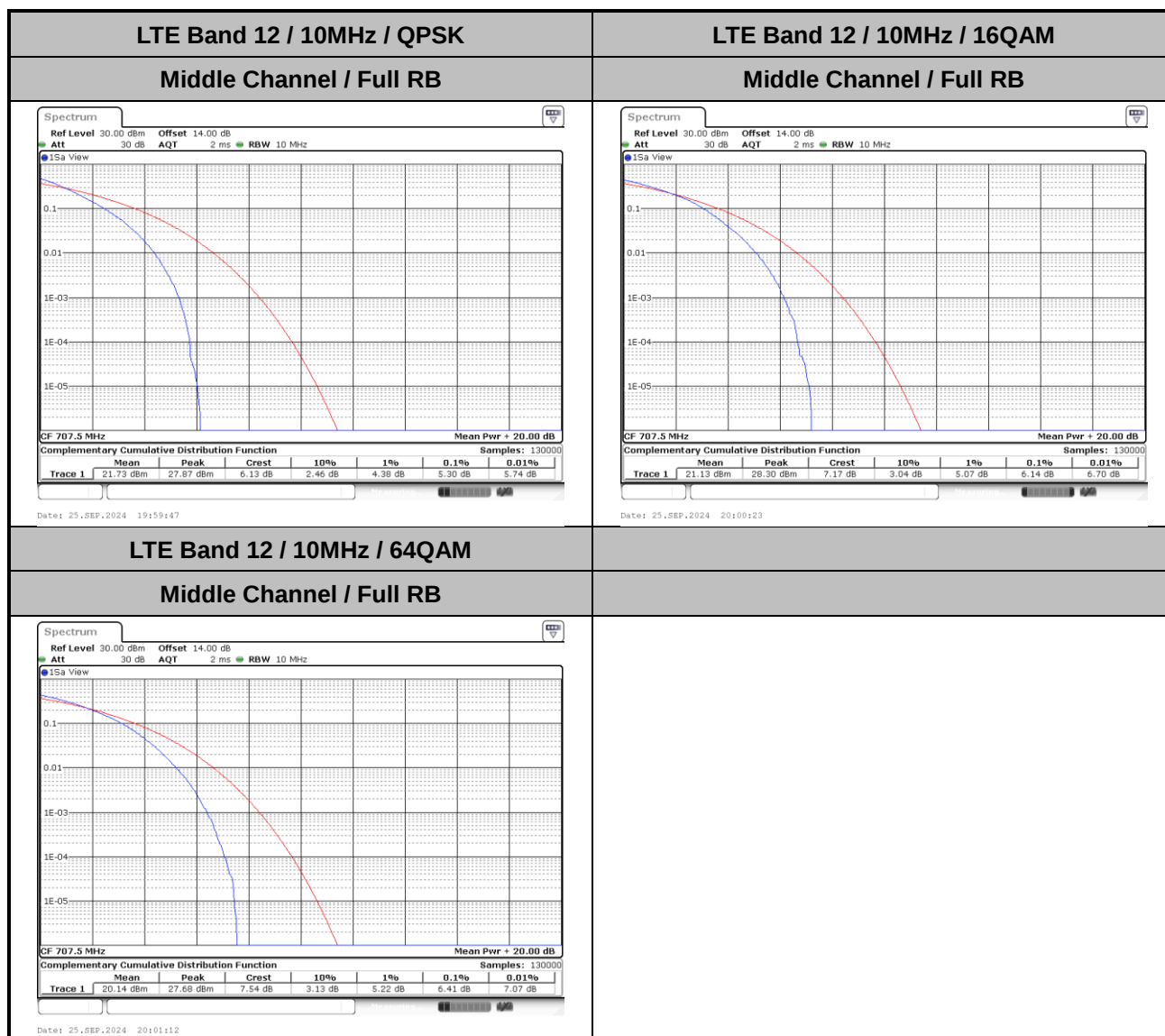




LTE Band 12

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	5.30	6.14	6.41	PASS



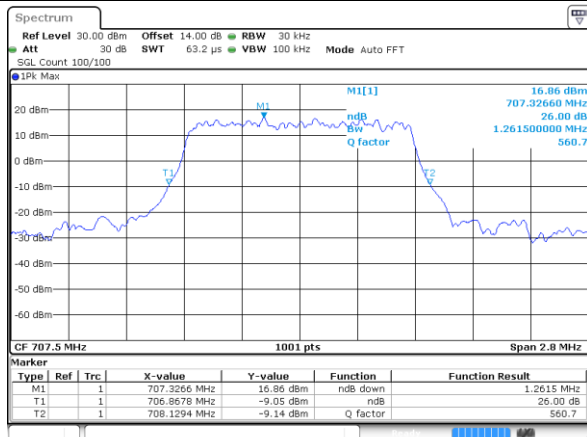


26dB Bandwidth

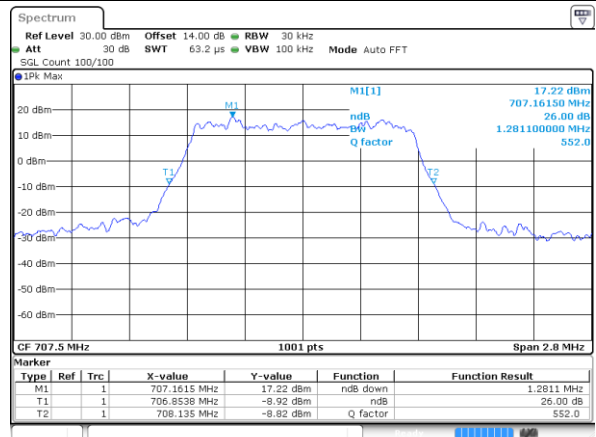
Mode	LTE Band 12 : 26dB BW(MHz)							
BW	1.4MHz		3MHz		5MHz		10MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	1.26	1.28	2.98	3.00	4.99	4.89	9.79	9.67

LTE Band 12

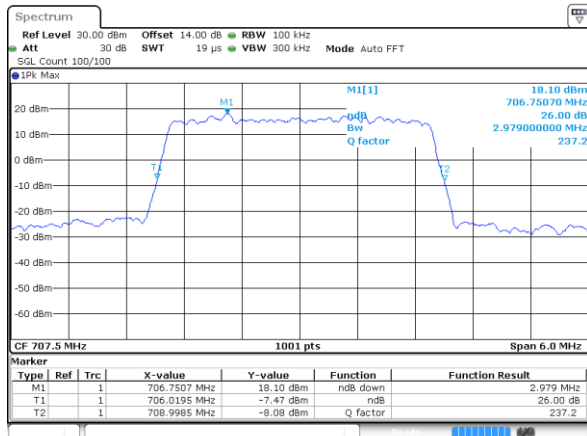
Middle Channel / 1.4MHz / QPSK



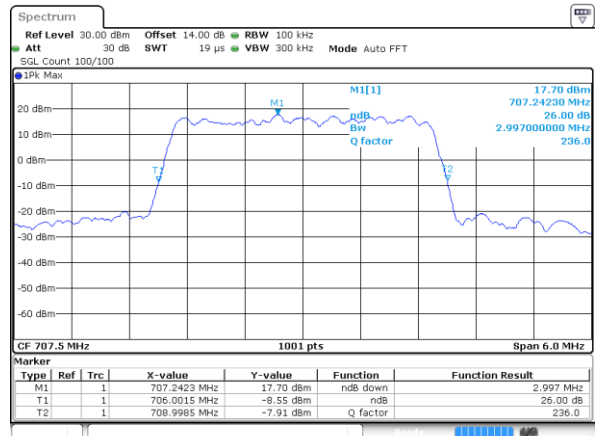
Middle Channel / 1.4MHz / 16QAM



Middle Channel / 3MHz / QPSK

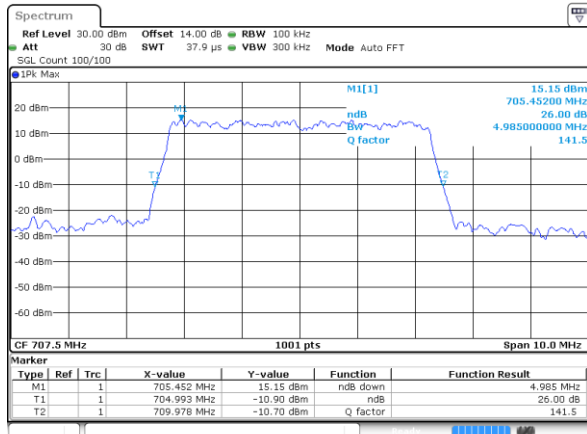


Middle Channel / 3MHz / 16QAM



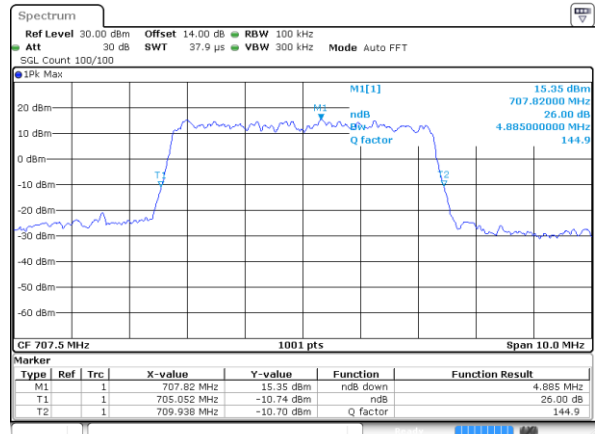


Middle Channel / 5MHz / QPSK



Date: 24 SEP 2024 04:49:30

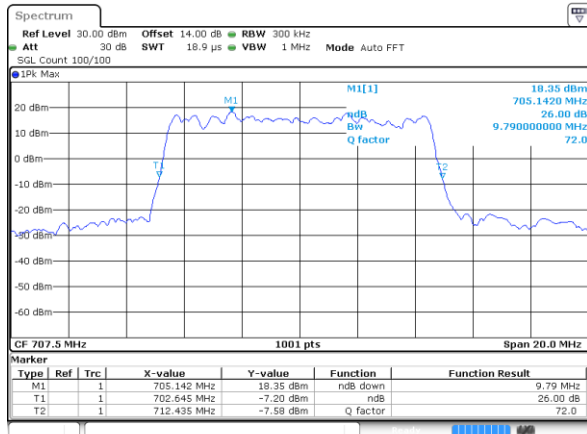
Middle Channel / 5MHz / 16QAM



Date: 24 SEP 2024 04:50:10

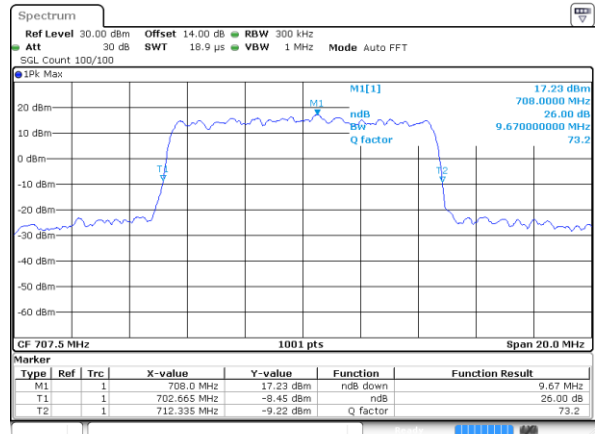
LTE Band 12

Middle Channel / 10MHz / QPSK



Date: 24 SEP 2024 05:08:35

Middle Channel / 10MHz / 16QAM

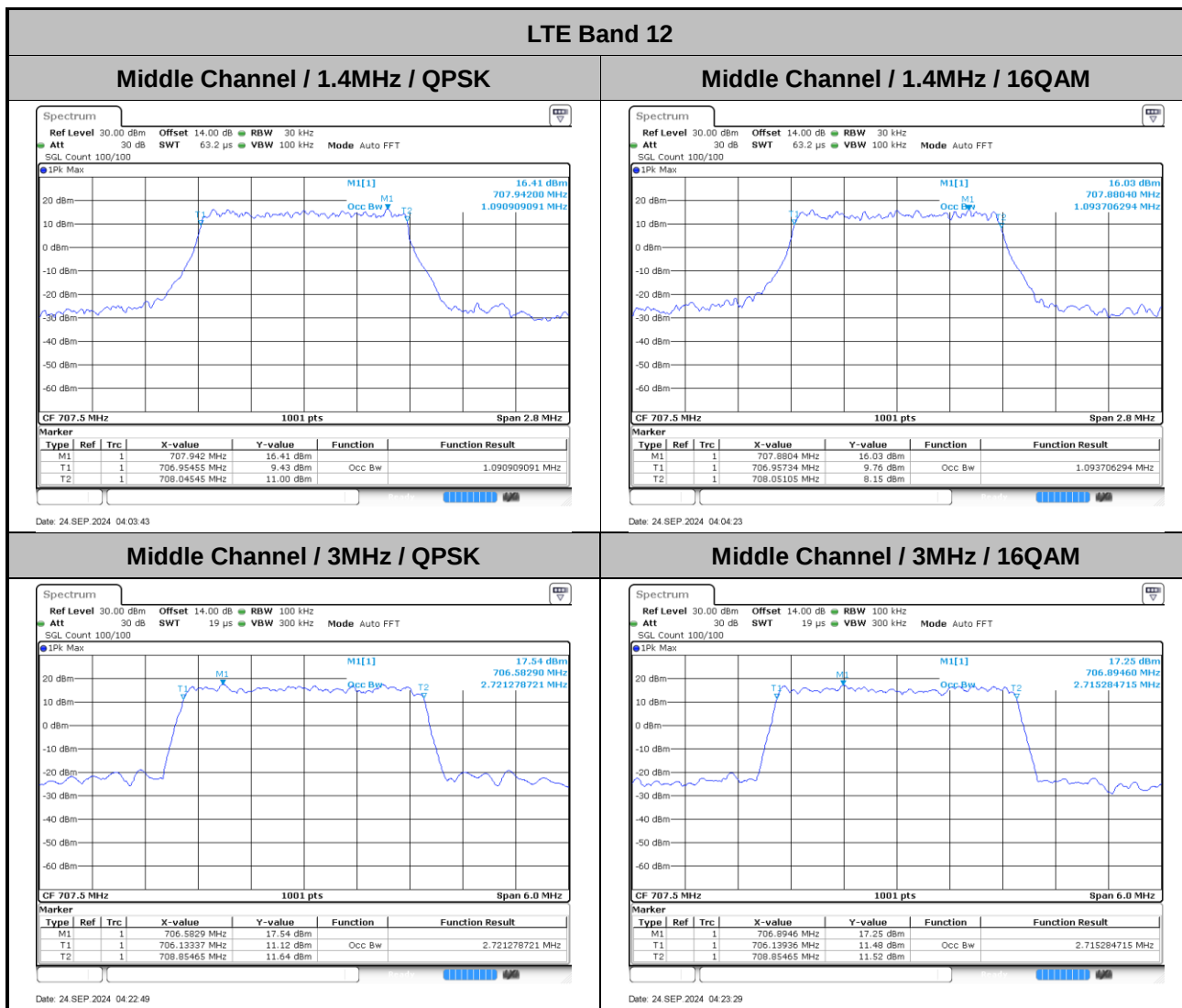


Date: 24 SEP 2024 05:09:15



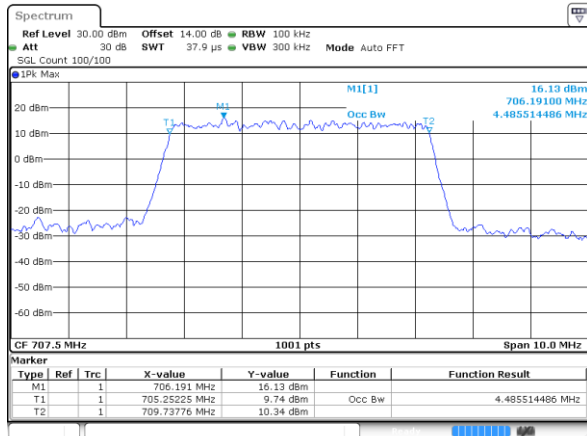
Occupied Bandwidth

Mode	LTE Band 12 : 99%OBW(MHz)							
BW	1.4MHz		3MHz		5MHz		10MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	1.09	1.09	2.72	2.72	4.49	4.48	9.01	9.03



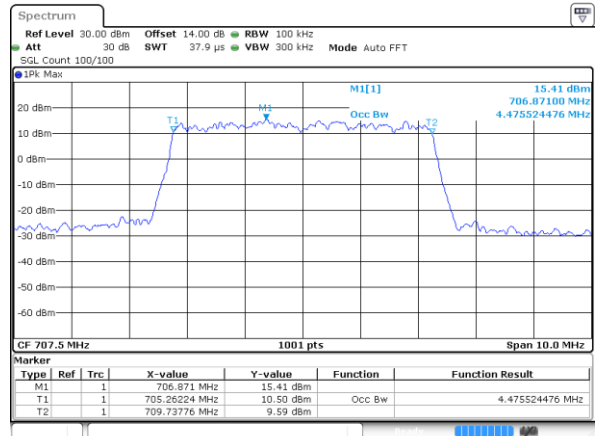


Middle Channel / 5MHz / QPSK



Date: 24 SEP 2024 04:48:16

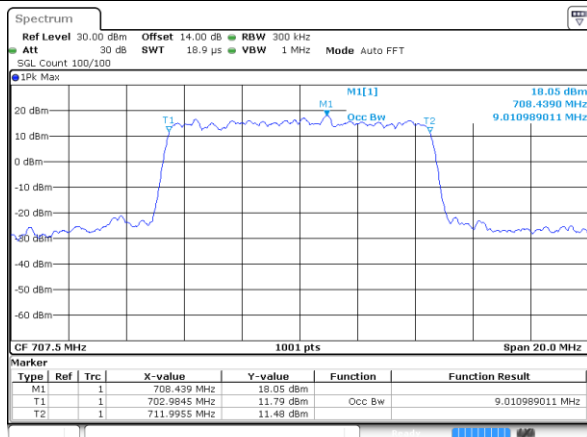
Middle Channel / 5MHz / 16QAM



Date: 24 SEP 2024 04:49:56

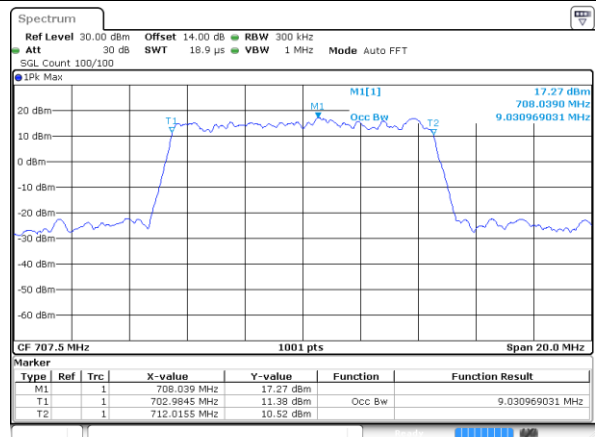
LTE Band 12

Middle Channel / 10MHz / QPSK



Date: 24 SEP 2024 05:08:21

Middle Channel / 10MHz / 16QAM



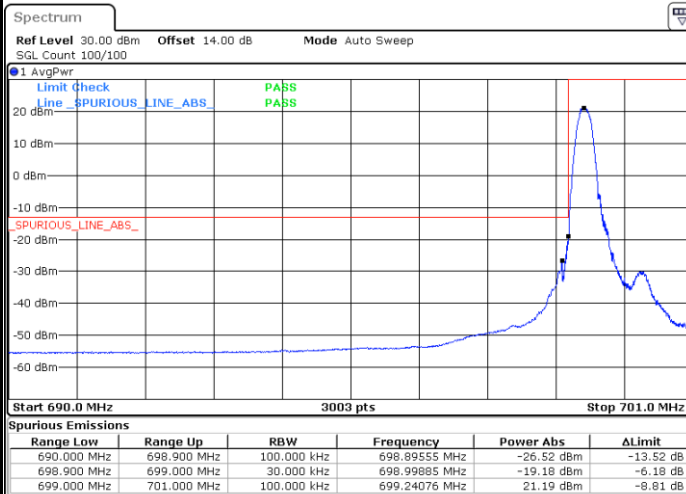
Date: 24 SEP 2024 05:09:01



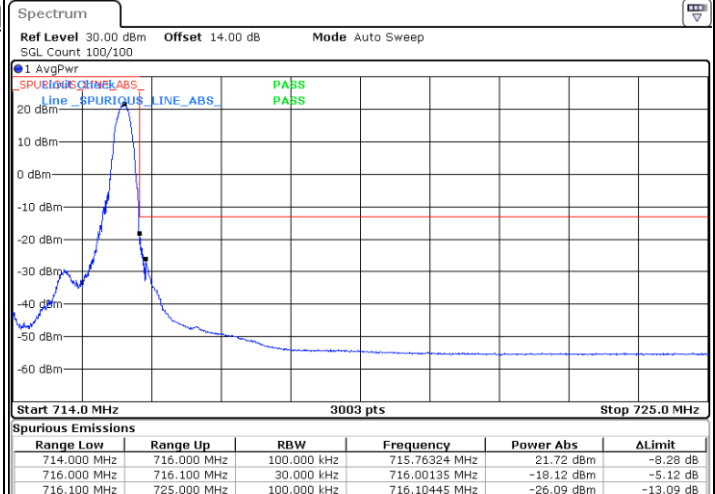
Conducted Band Edge

LTE Band 12 / 1.4MHz / QPSK

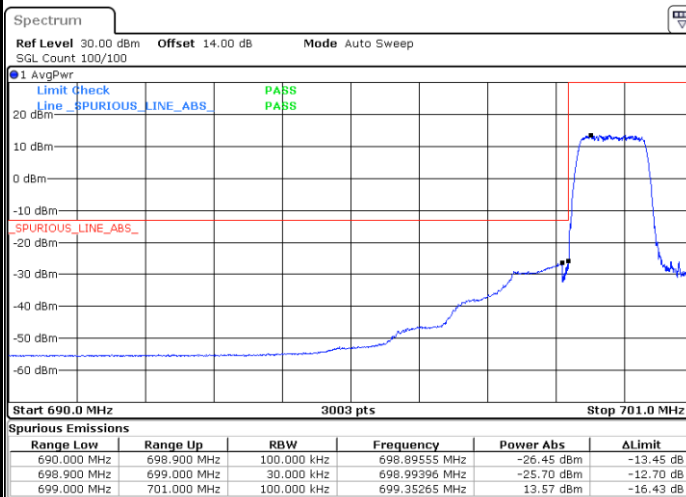
Lowest Band Edge / 1RB



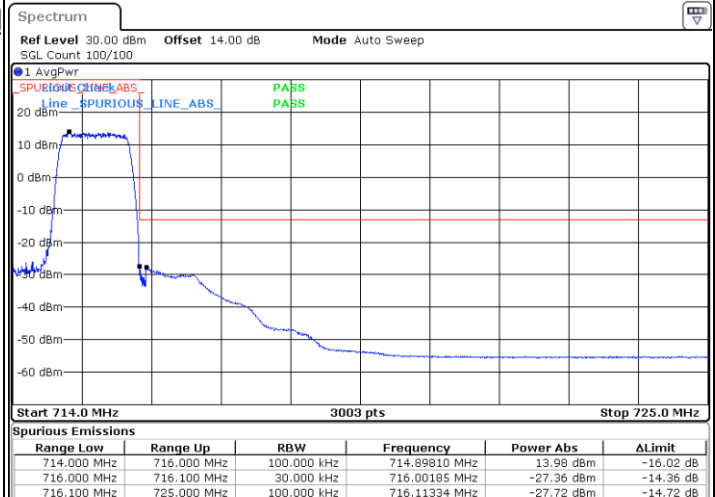
Highest Band Edge / 1RB



Lowest Band Edge / Full RB



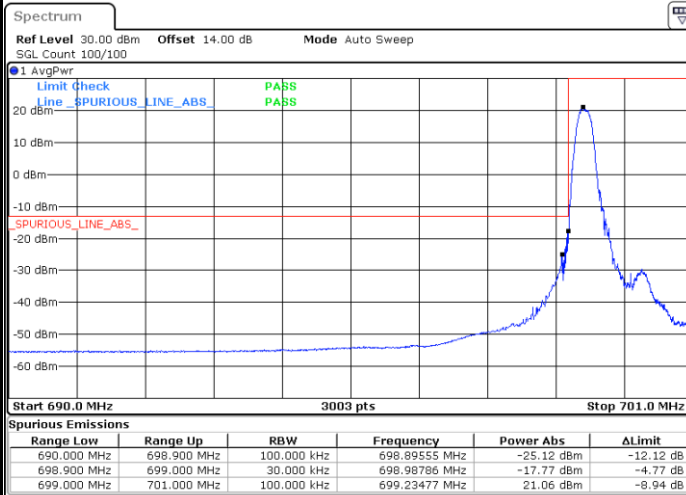
Highest Band Edge / Full RB



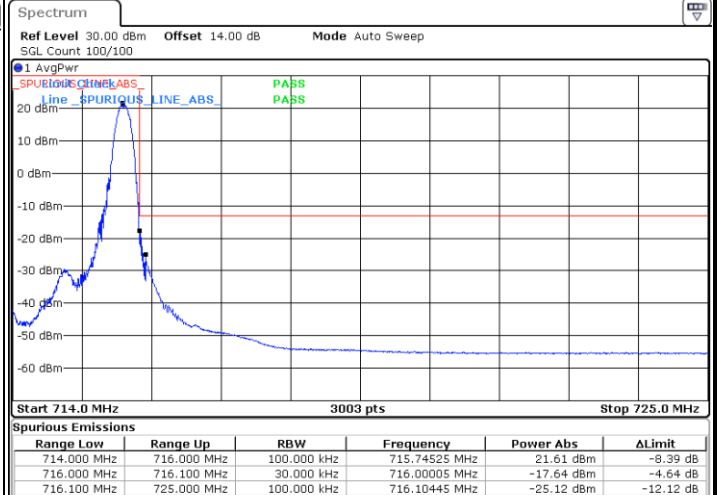


LTE Band 12 / 1.4MHz / 16QAM

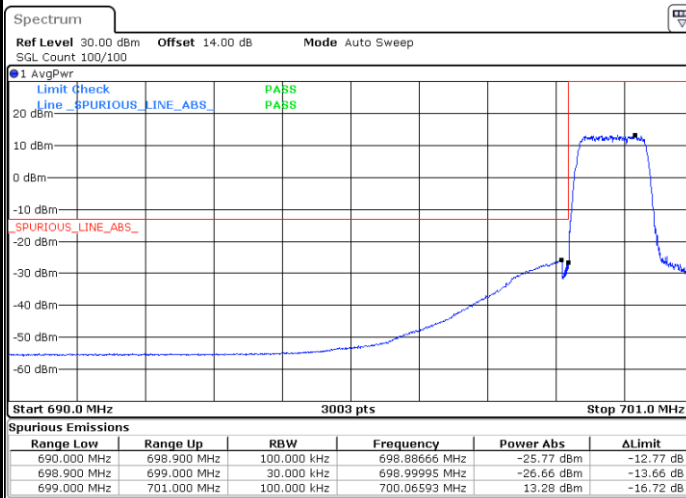
Lowest Band Edge / 1 RB



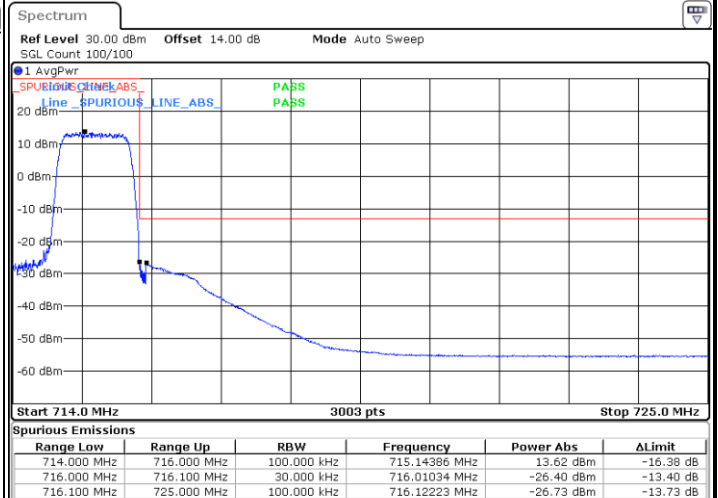
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



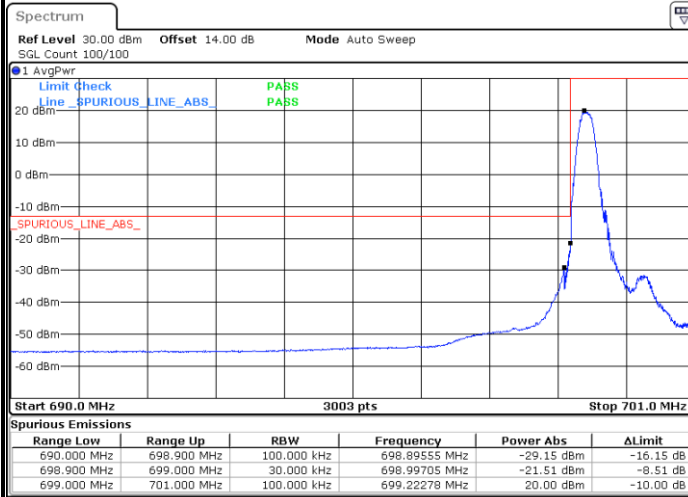
Highest Band Edge / Full RB



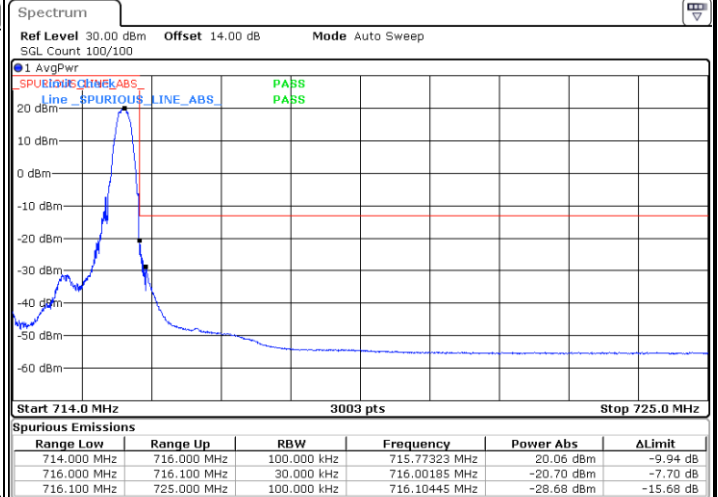


LTE Band 12 / 1.4MHz / 64QAM

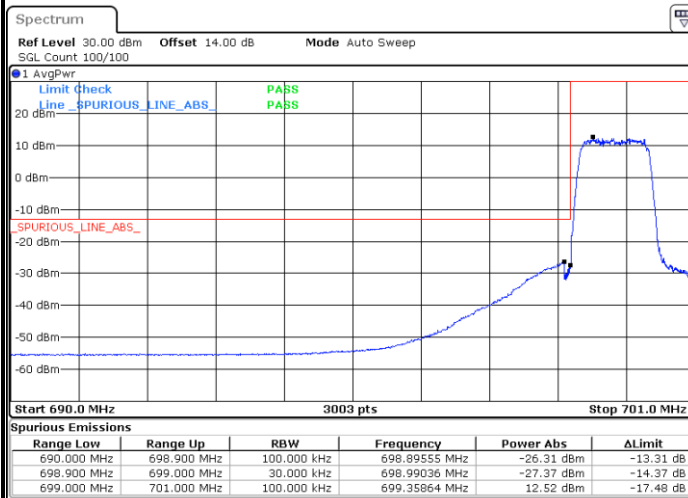
Lowest Band Edge / 1 RB



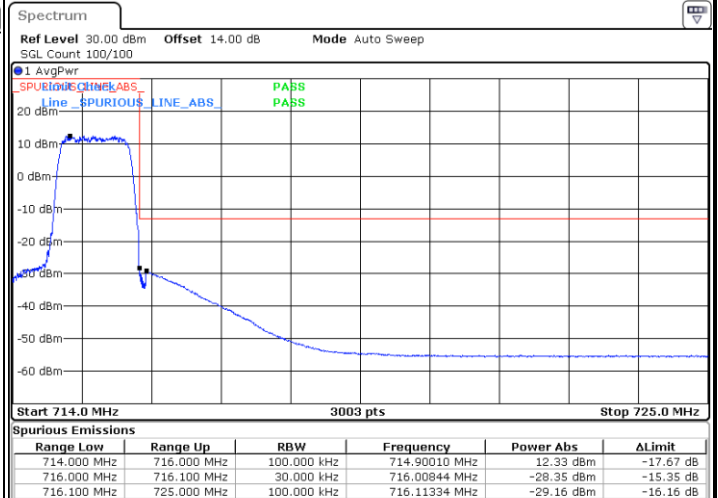
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



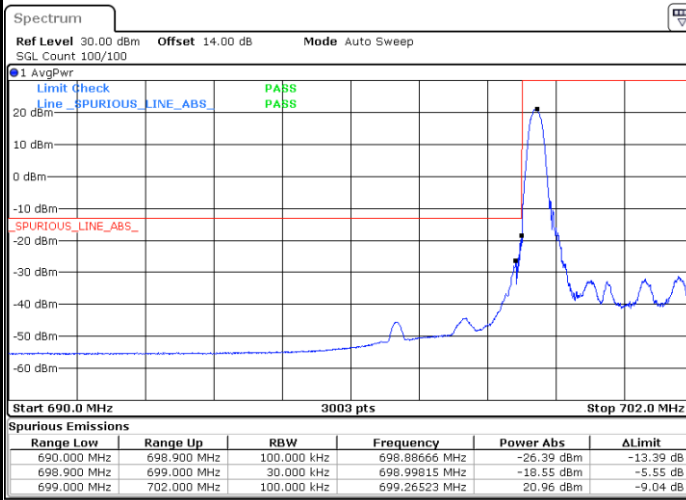
Highest Band Edge / Full RB



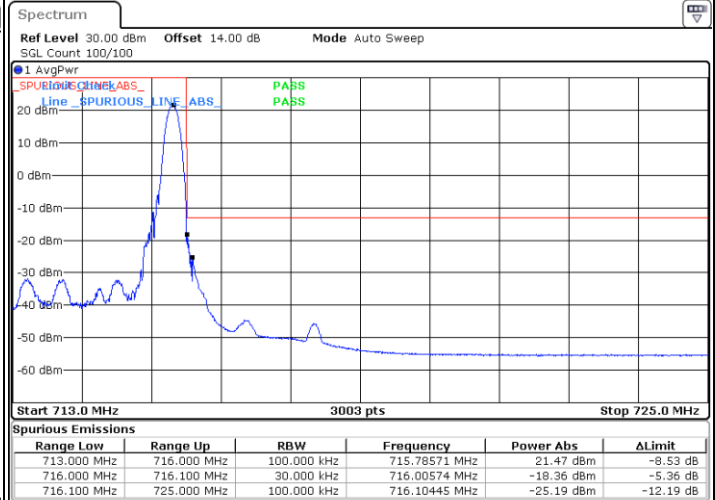


LTE Band 12 / 3MHz / QPSK

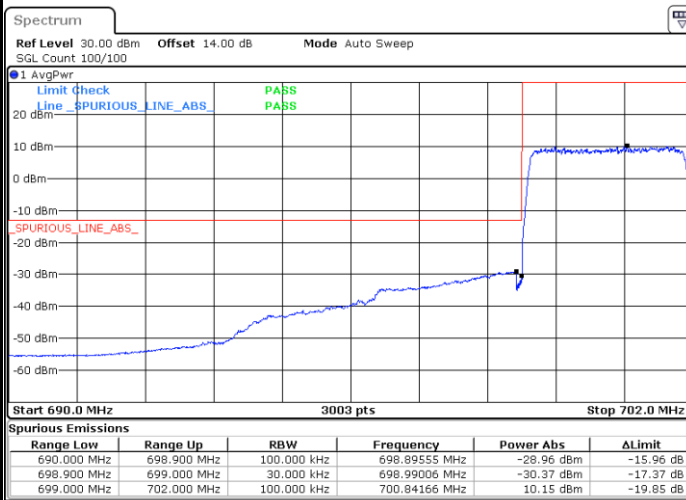
Lowest Band Edge / 1RB



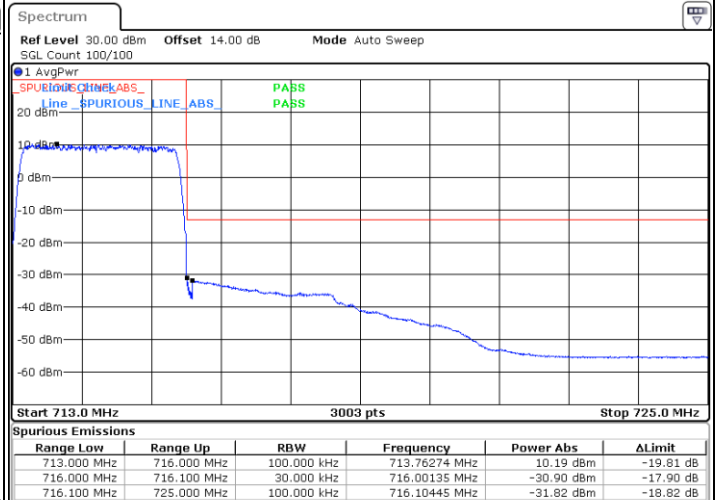
Highest Band Edge / 1RB



Lowest Band Edge / Full RB



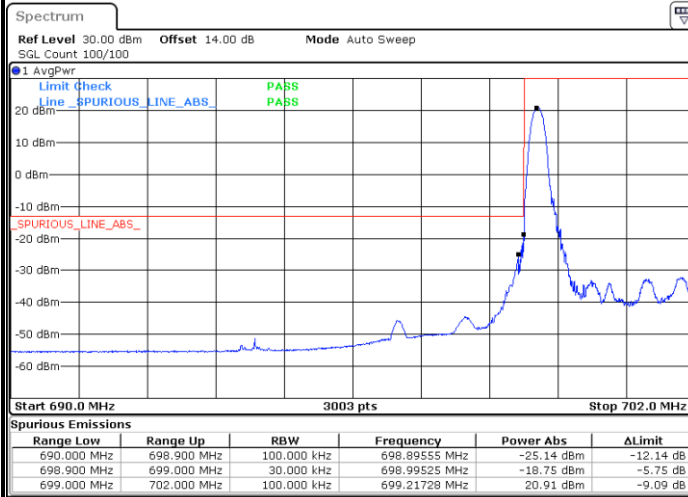
Highest Band Edge / Full RB



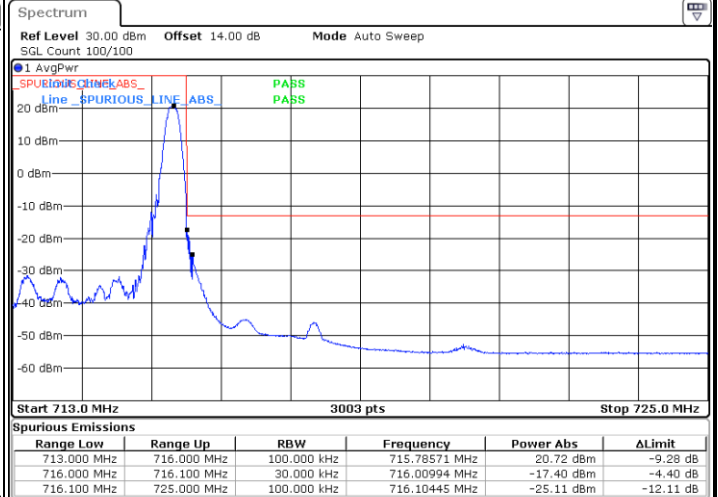


LTE Band 12 / 3MHz / 16QAM

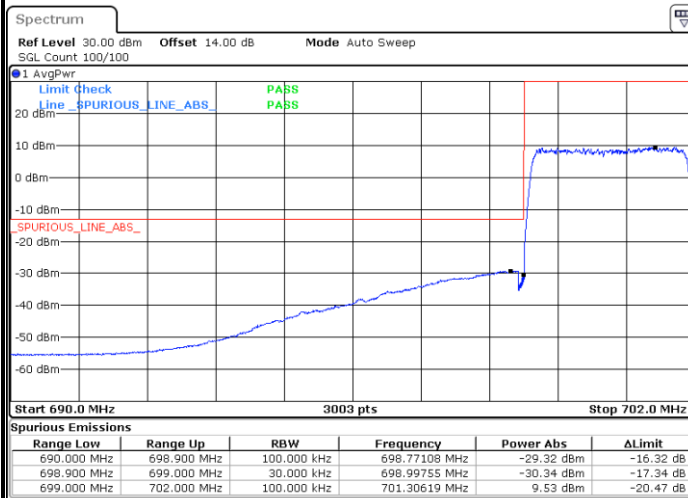
Lowest Band Edge / 1 RB



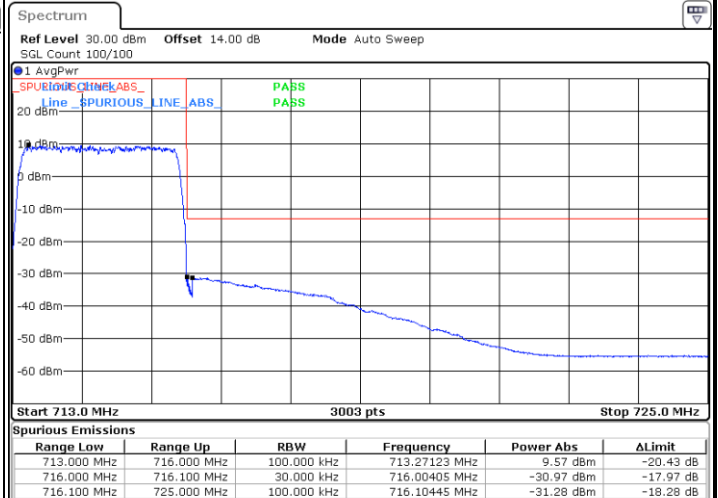
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



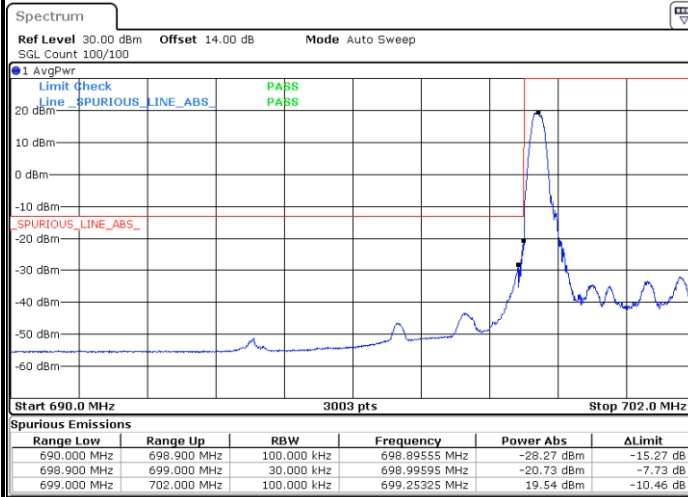
Highest Band Edge / Full RB



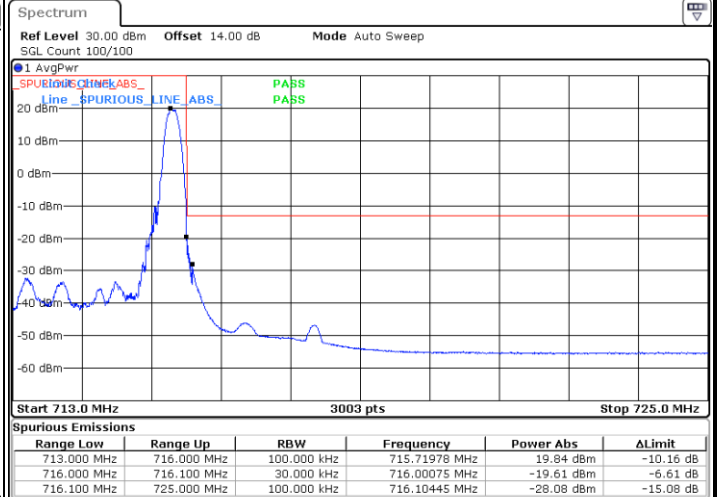


LTE Band 12 / 3MHz / 64QAM

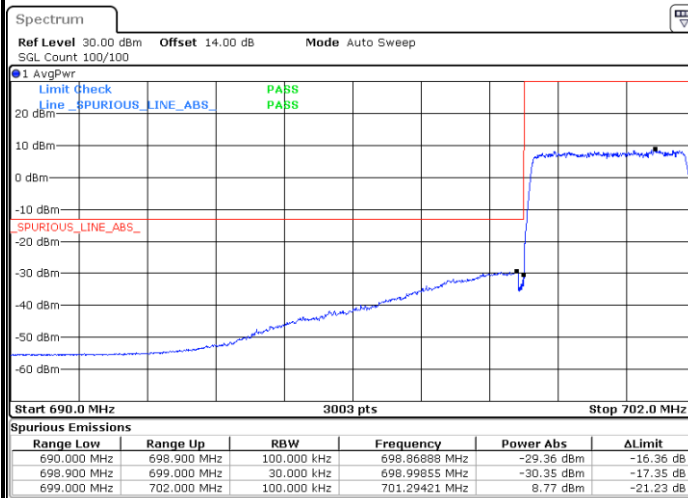
Lowest Band Edge / 1 RB



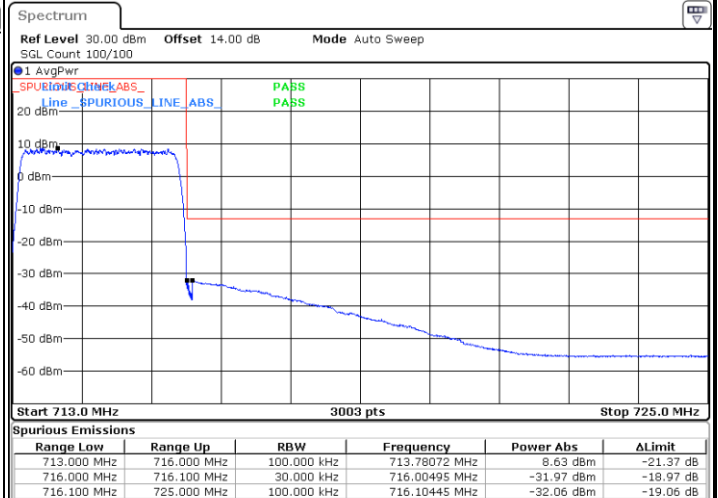
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



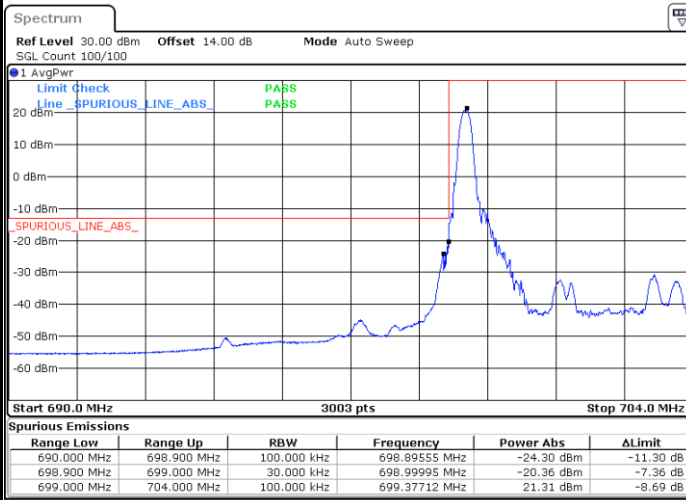
Highest Band Edge / Full RB





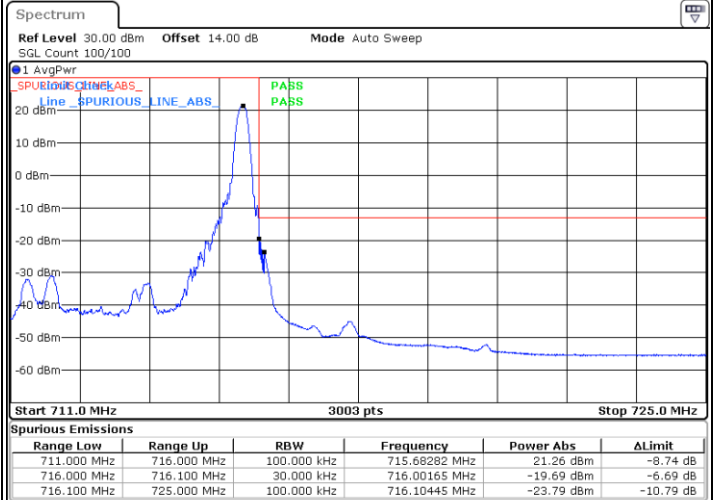
LTE Band 12 / 5MHz / QPSK

Lowest Band Edge / 1RB



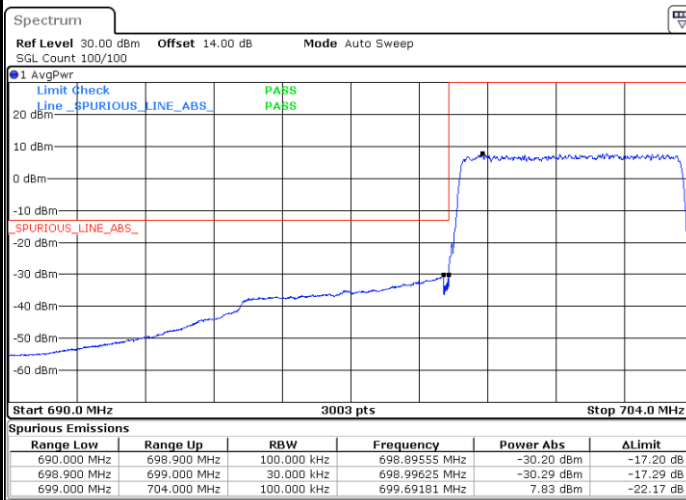
Date: 24 SEP 2024 04:40:48

Highest Band Edge / 1RB



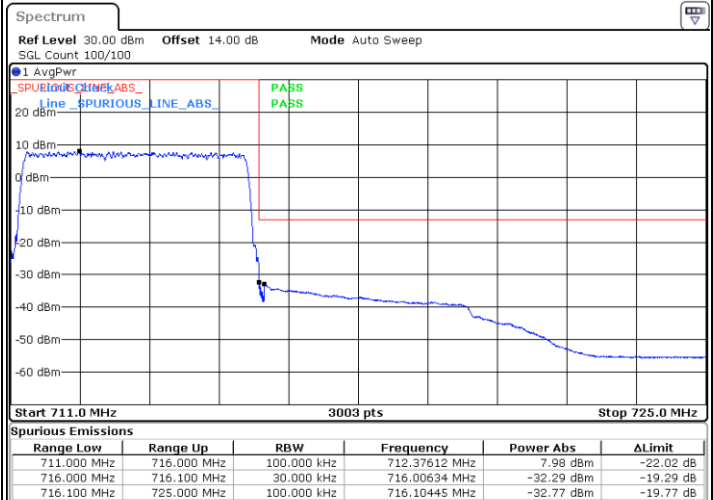
Date: 24 SEP 2024 04:51:15

Lowest Band Edge / Full RB



Date: 24 SEP 2024 04:44:06

Highest Band Edge / Full RB

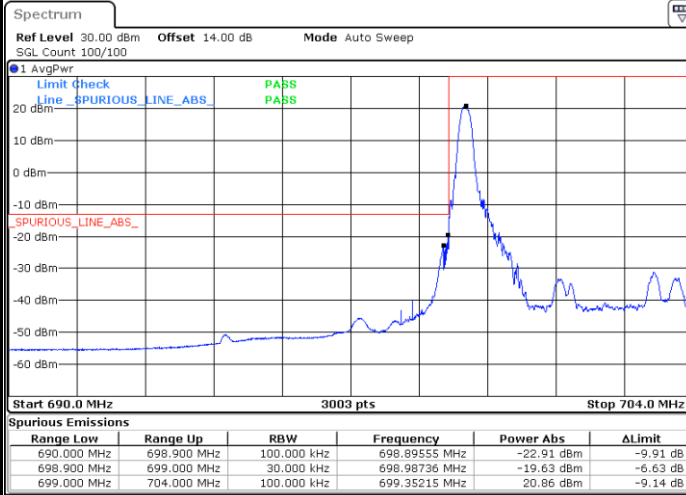


Date: 24 SEP 2024 04:54:34



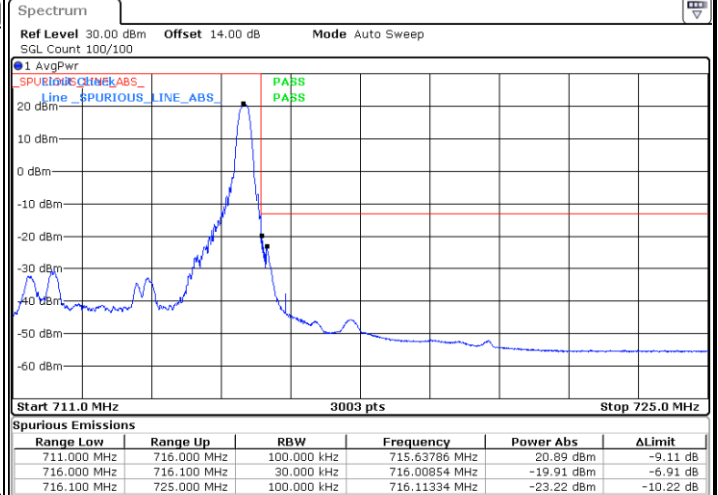
LTE Band 12 / 5MHz / 16QAM

Lowest Band Edge / 1 RB



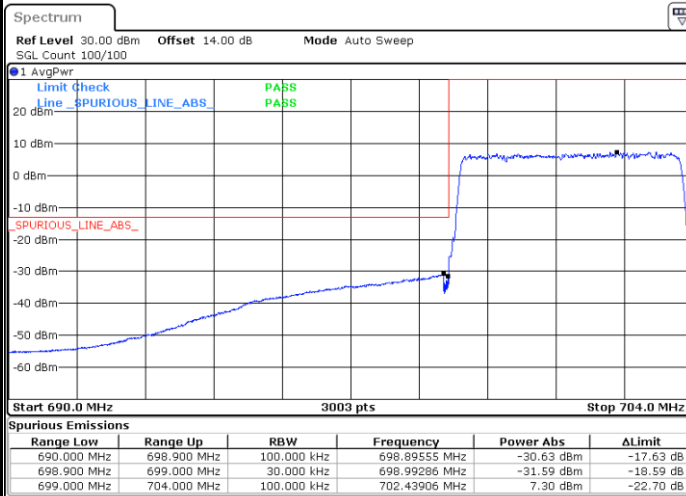
Date: 24 SEP 2024 04:41:54

Highest Band Edge / 1 RB



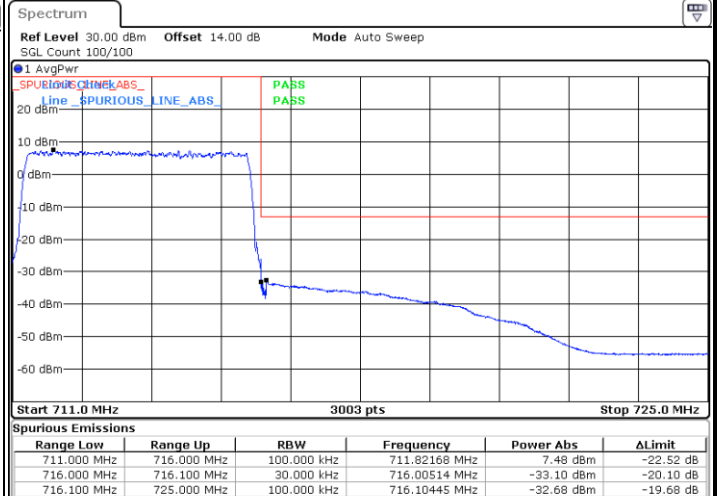
Date: 24 SEP 2024 04:52:21

Lowest Band Edge / Full RB



Date: 24 SEP 2024 04:45:13

Highest Band Edge / Full RB

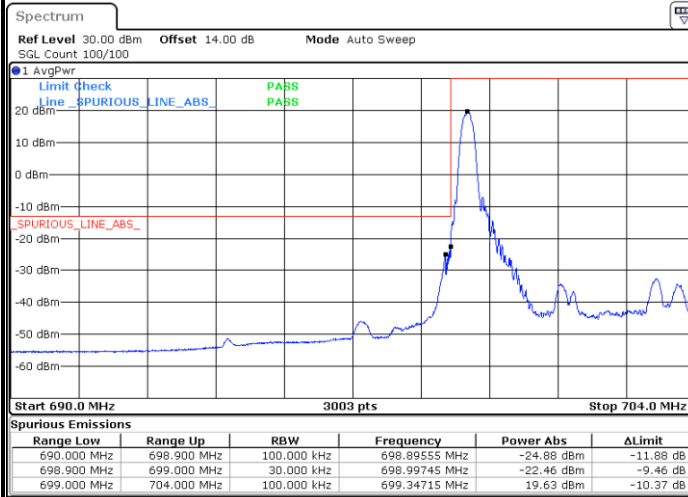


Date: 24 SEP 2024 04:55:40

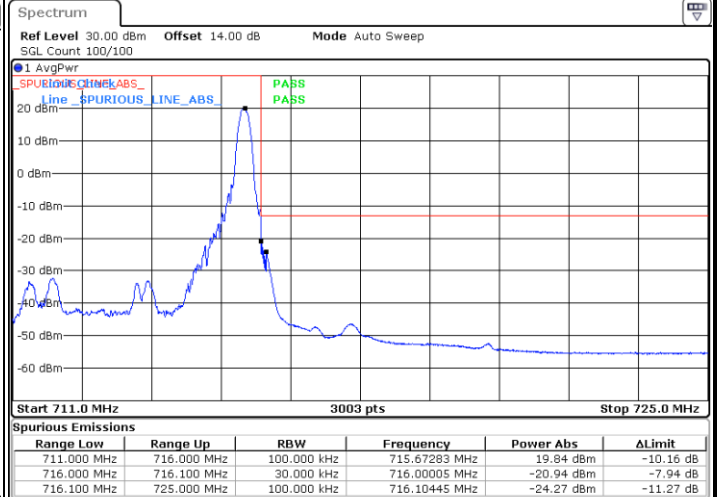


LTE Band 12 / 5MHz / 64QAM

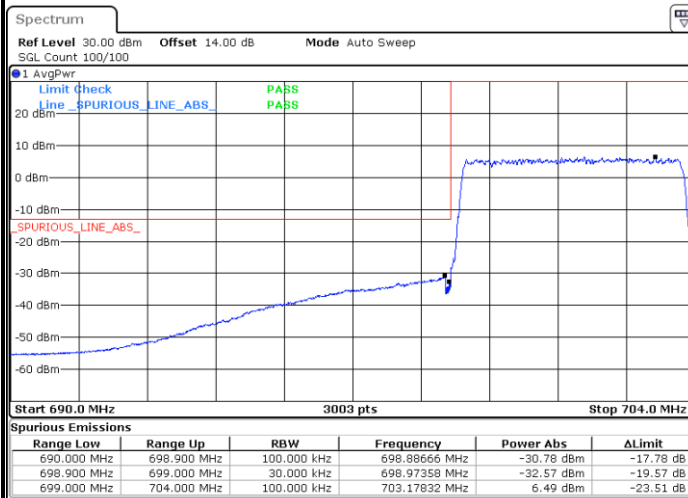
Lowest Band Edge / 1 RB



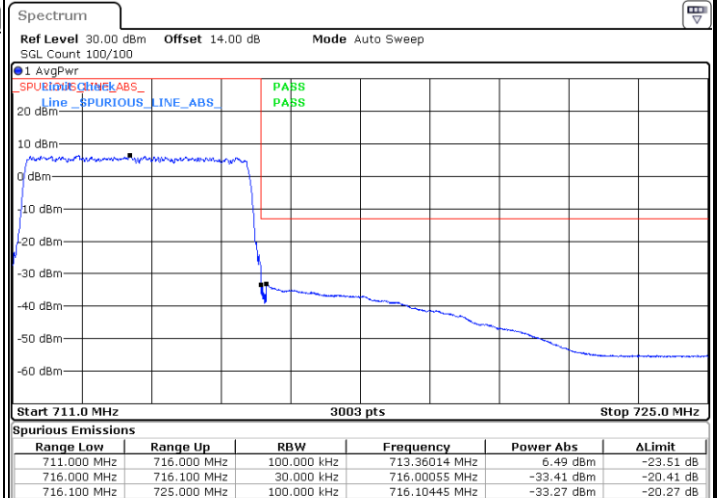
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



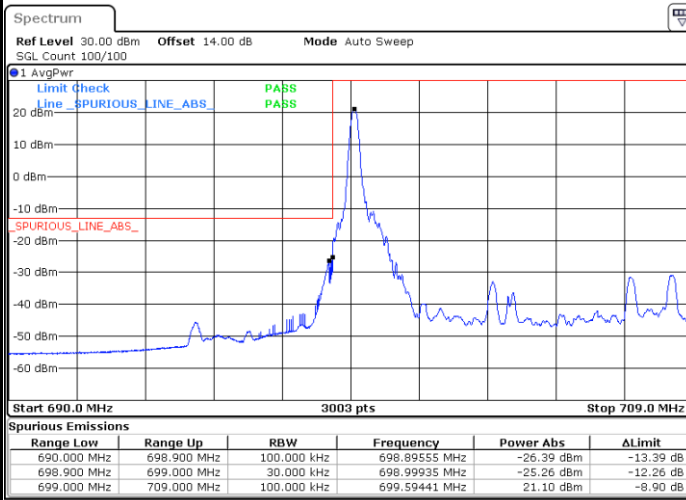
Highest Band Edge / Full RB





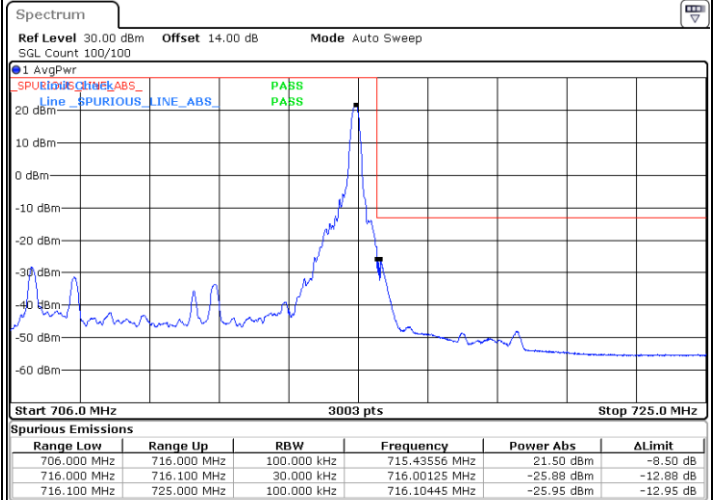
LTE Band 12 / 10MHz / QPSK

Lowest Band Edge / 1RB



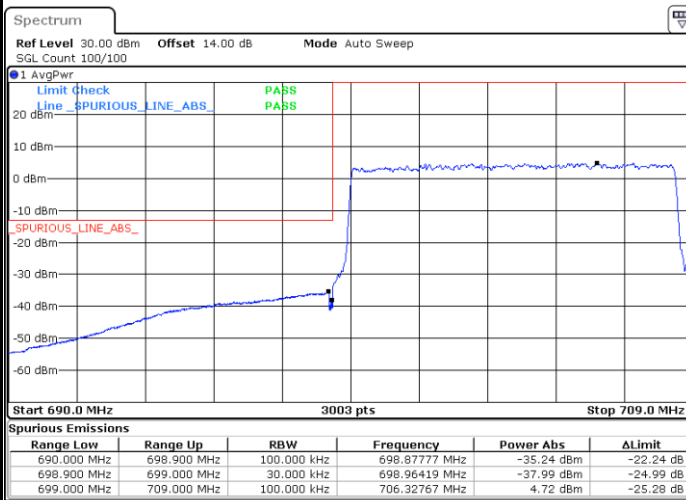
Date: 24 SEP 2024 04:59:54

Highest Band Edge / 1RB



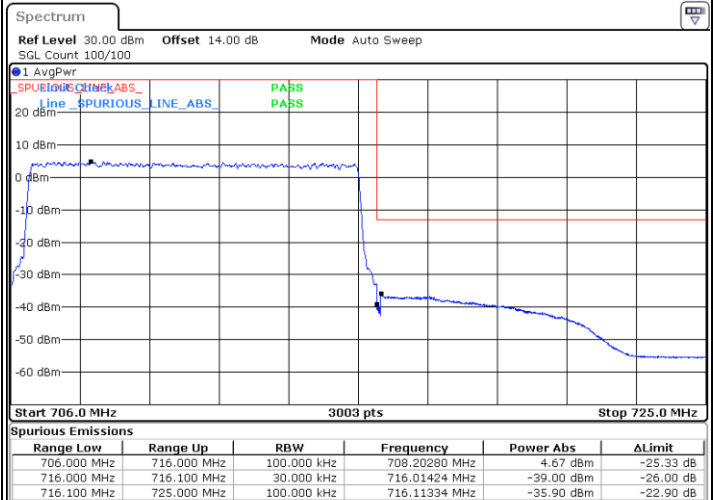
Date: 24 SEP 2024 05:10:21

Lowest Band Edge / Full RB



Date: 24 SEP 2024 05:03:12

Highest Band Edge / Full RB

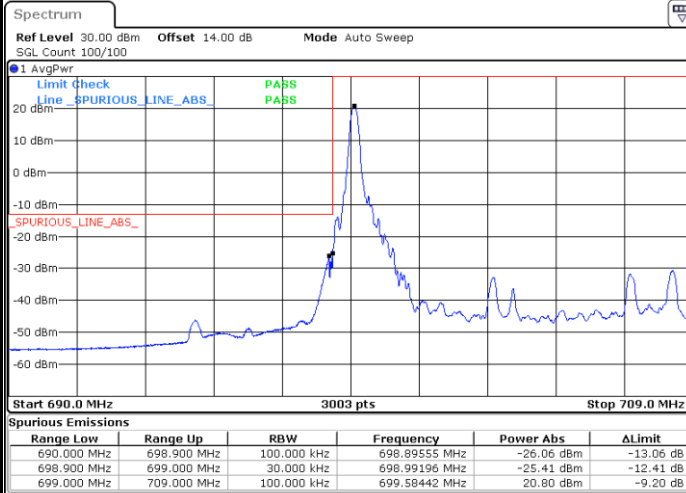


Date: 24 SEP 2024 05:13:39

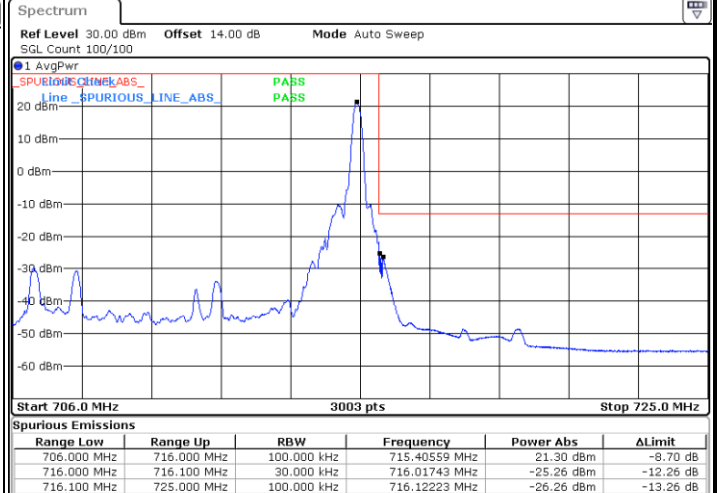


LTE Band 12 / 10MHz / 16QAM

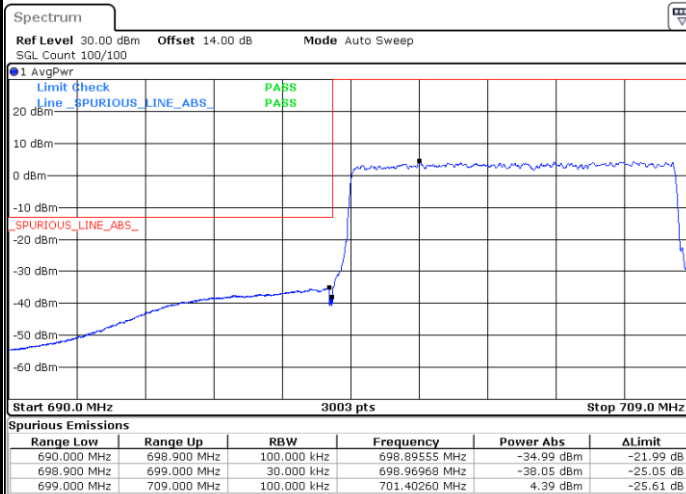
Lowest Band Edge / 1 RB



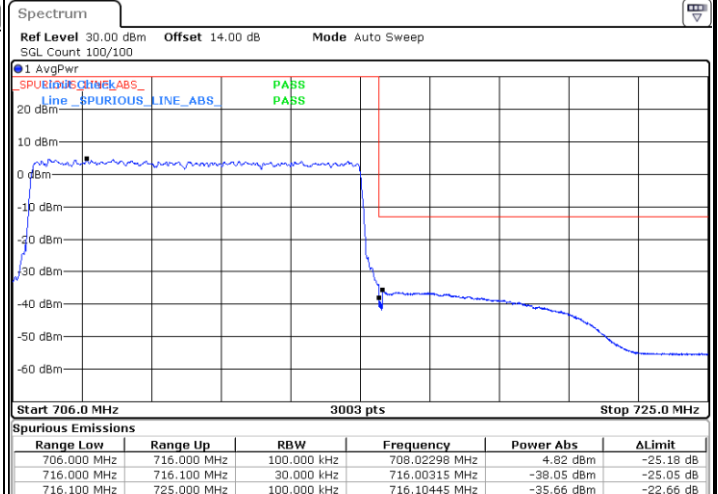
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



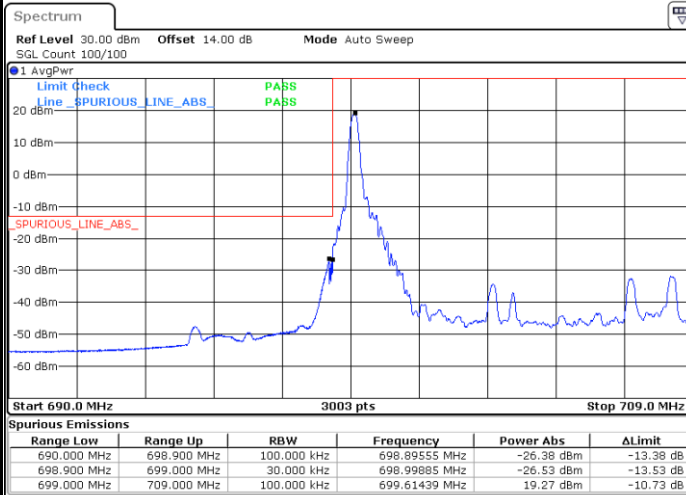
Highest Band Edge / Full RB



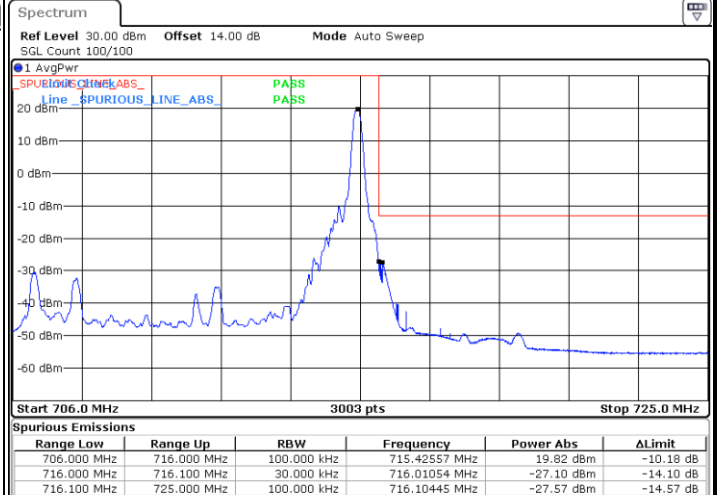


LTE Band 12 / 10MHz / 64QAM

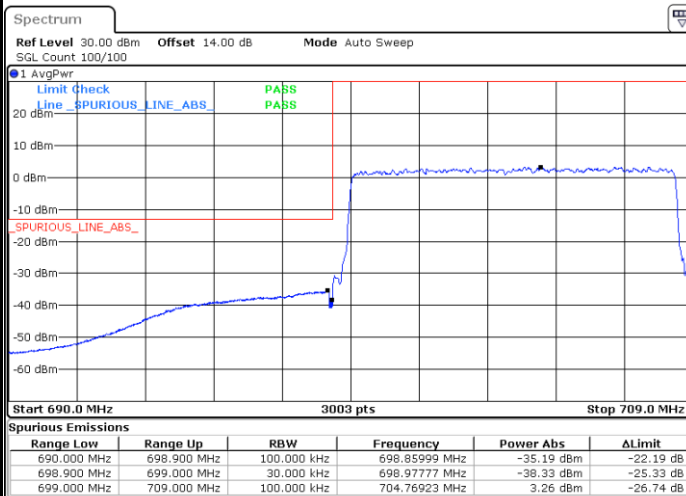
Lowest Band Edge / 1 RB



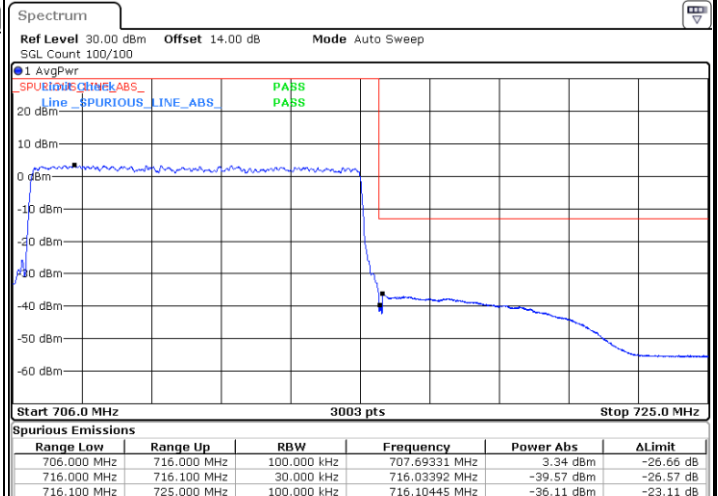
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



Highest Band Edge / Full RB

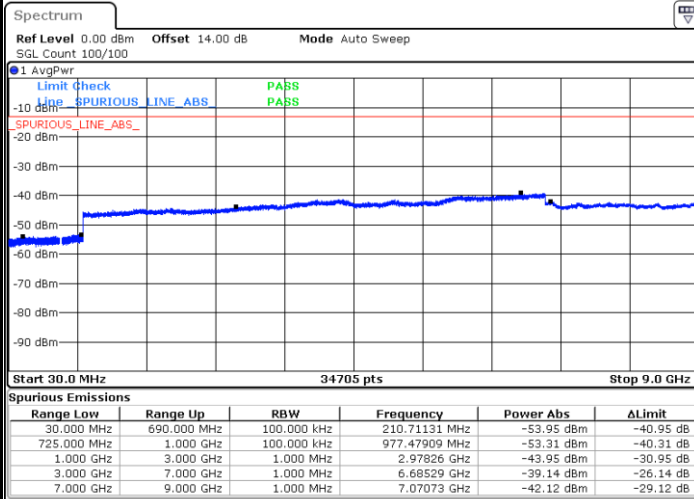




Conducted Spurious Emission

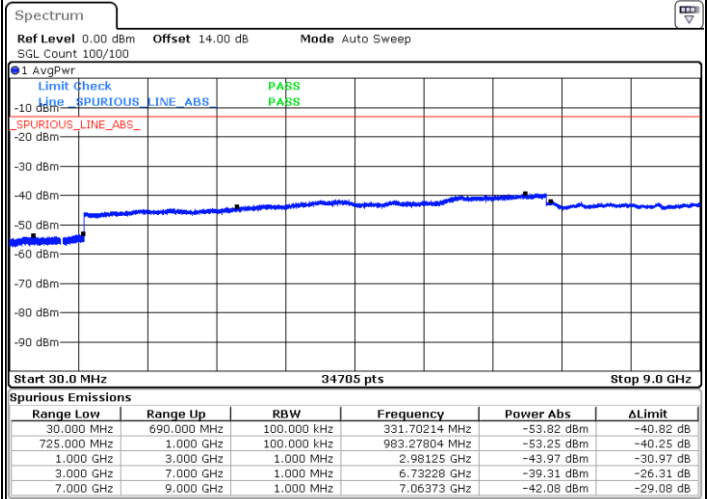
LTE Band 12 / 1.4MHz

Lowest Channel / QPSK



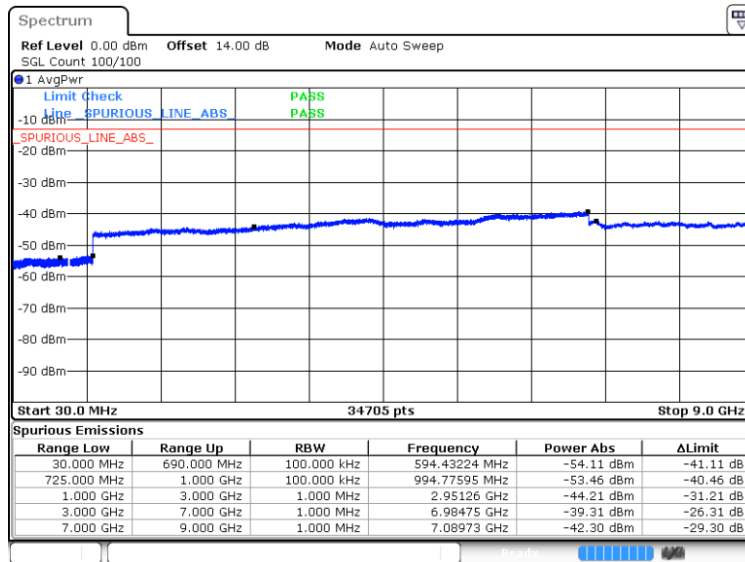
Date: 24 SEP 2024 04:02:02

Middle Channel / QPSK



Date: 24 SEP 2024 04:03:17

Highest Channel / QPSK

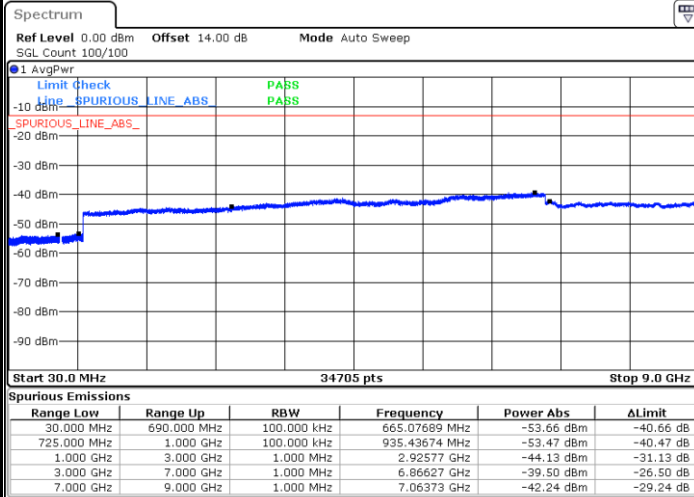


Date: 24 SEP 2024 04:12:29



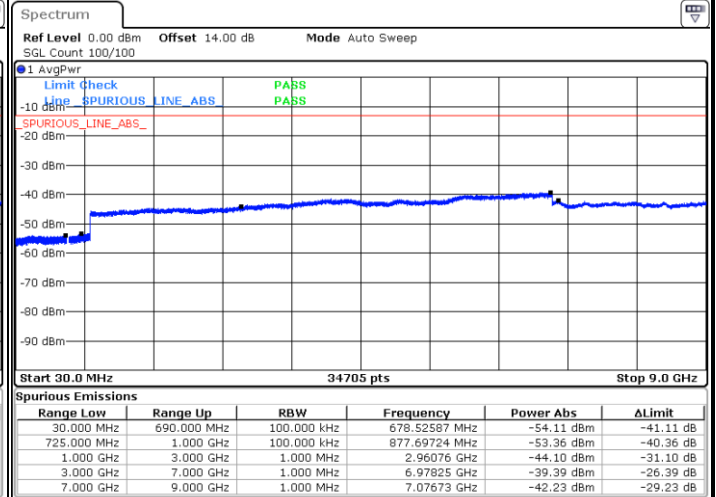
LTE Band 12 / 3MHz

Lowest Channel / QPSK



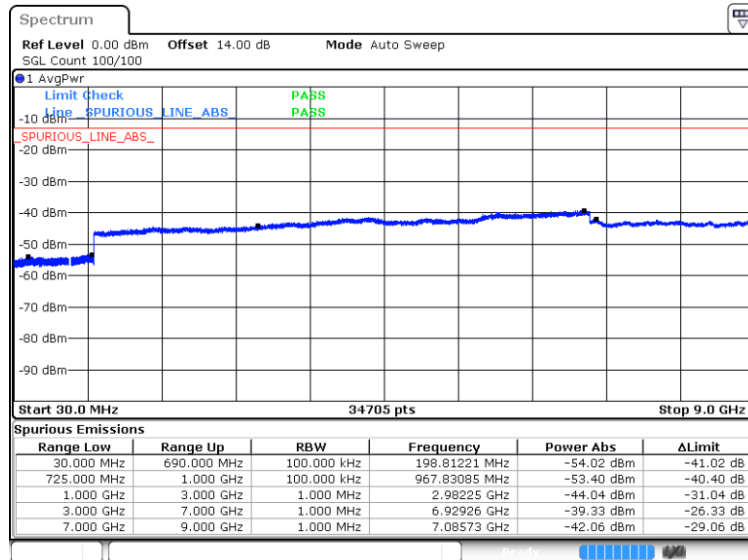
Date: 24 SEP 2024 04:21:08

Middle Channel / QPSK



Date: 24 SEP 2024 04:22:23

Highest Channel / QPSK

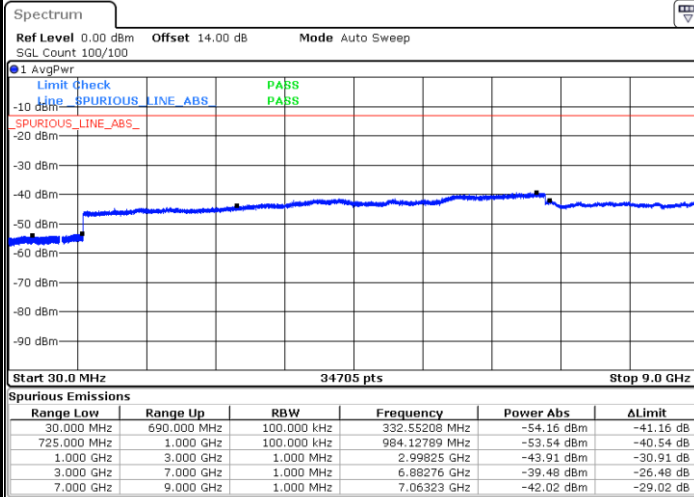


Date: 24 SEP 2024 04:31:35



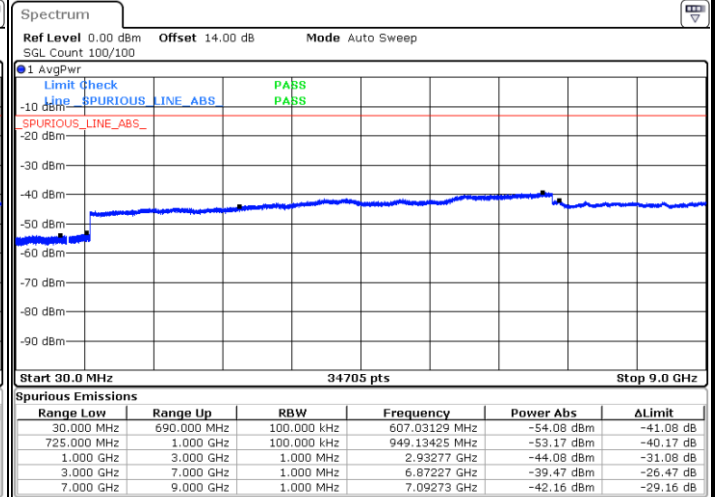
LTE Band 12 / 5MHz

Lowest Channel / QPSK



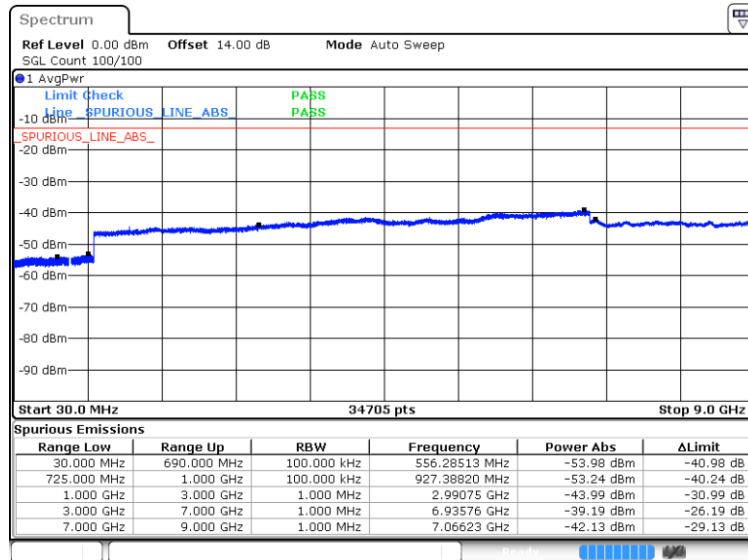
Date: 24 SEP 2024 04:47:35

Middle Channel / QPSK



Date: 24 SEP 2024 04:48:49

Highest Channel / QPSK

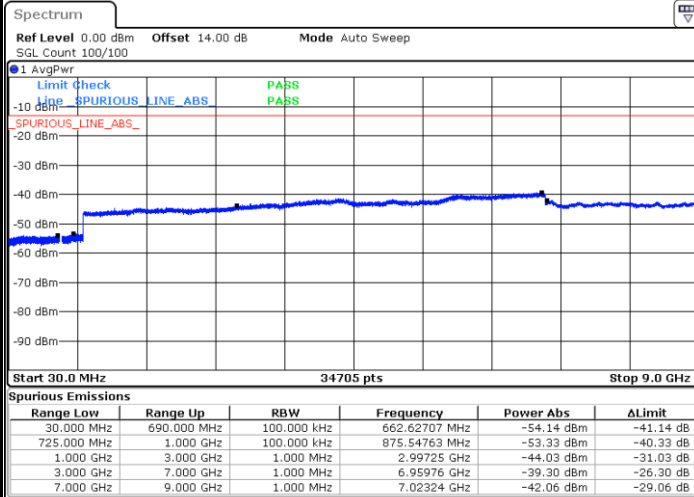


Date: 24 SEP 2024 04:58:02



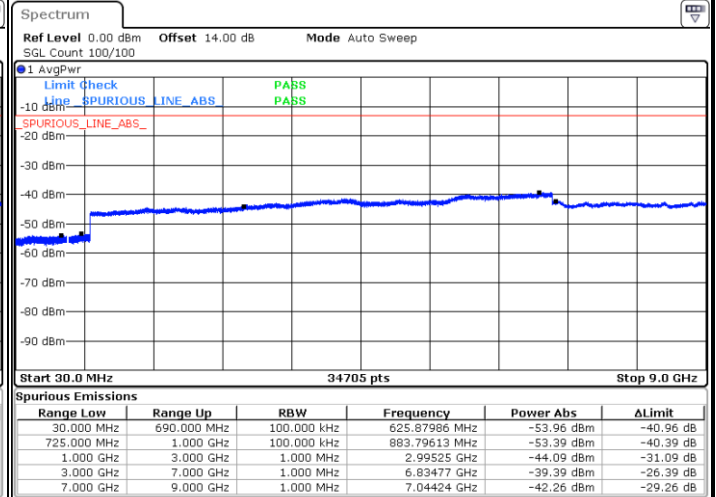
LTE Band 12 / 10MHz

Lowest Channel / QPSK



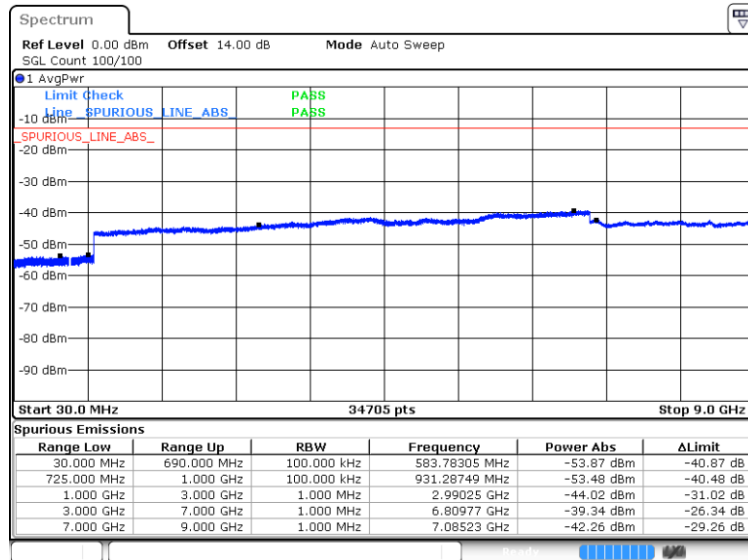
Date: 24 SEP 2024 05:06:40

Middle Channel / QPSK



Date: 24 SEP 2024 05:07:55

Highest Channel / QPSK



Date: 24 SEP 2024 05:17:07

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	0.0046	PASS
40	Normal Voltage	0.0035	
30	Normal Voltage	0.0016	
20(Ref.)	Normal Voltage	0.0002	
10	Normal Voltage	0.0033	
0	Normal Voltage	0.0021	
-10	Normal Voltage	0.0019	
-20	Normal Voltage	0.0012	
-30	Normal Voltage	0.0000	
20	Maximum Voltage	0.0015	
20	Normal Voltage	0.0011	
20	Battery End Point	0.0009	

Note:

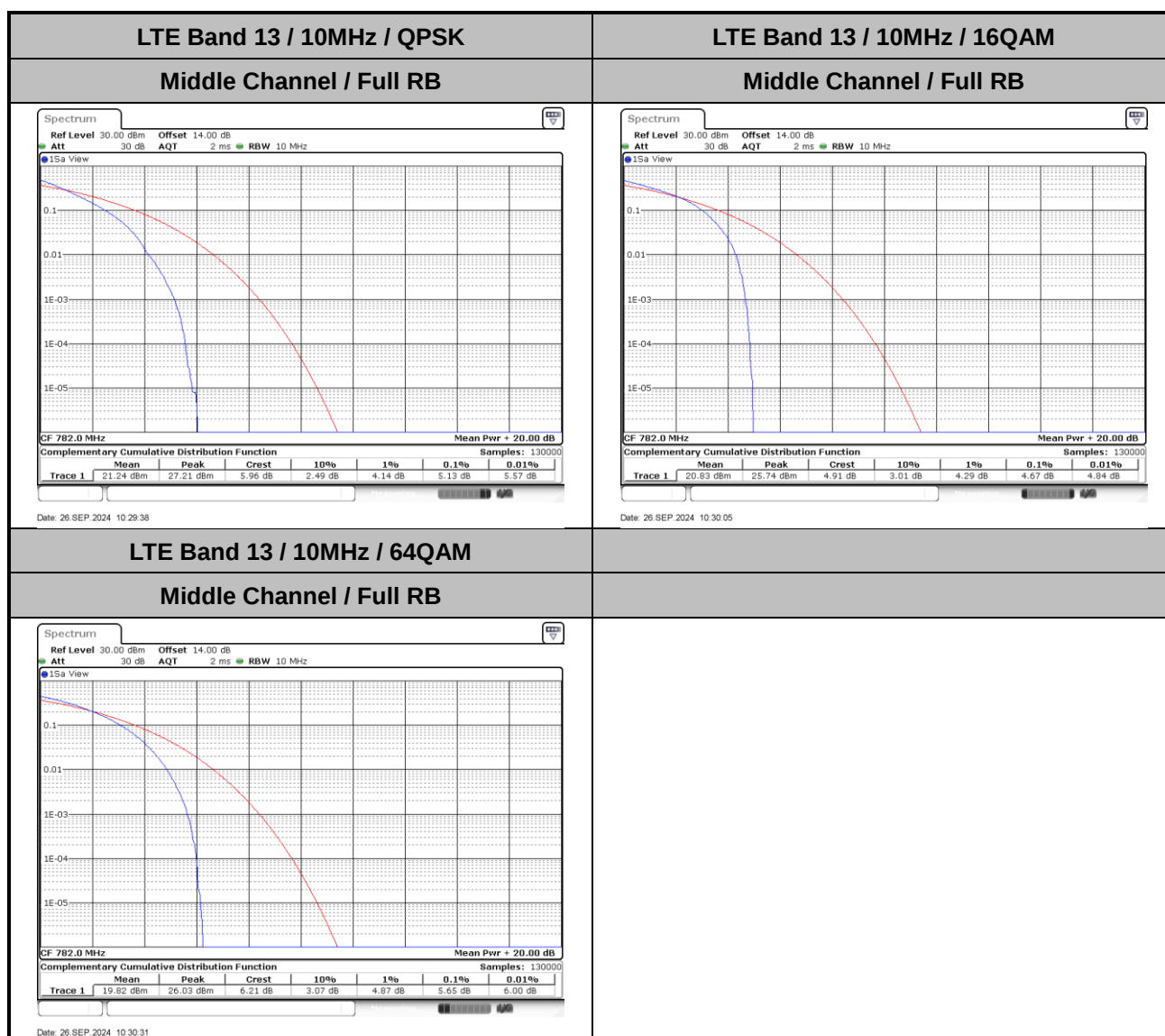
1. Normal Voltage = 4V. ; Battery End Point (BEP) =3.6 V. ; Maximum Voltage = 4.53V.
2. The frequency fundamental emissions stay within the authorized frequency block



LTE Band 13

Peak-to-Average Ratio

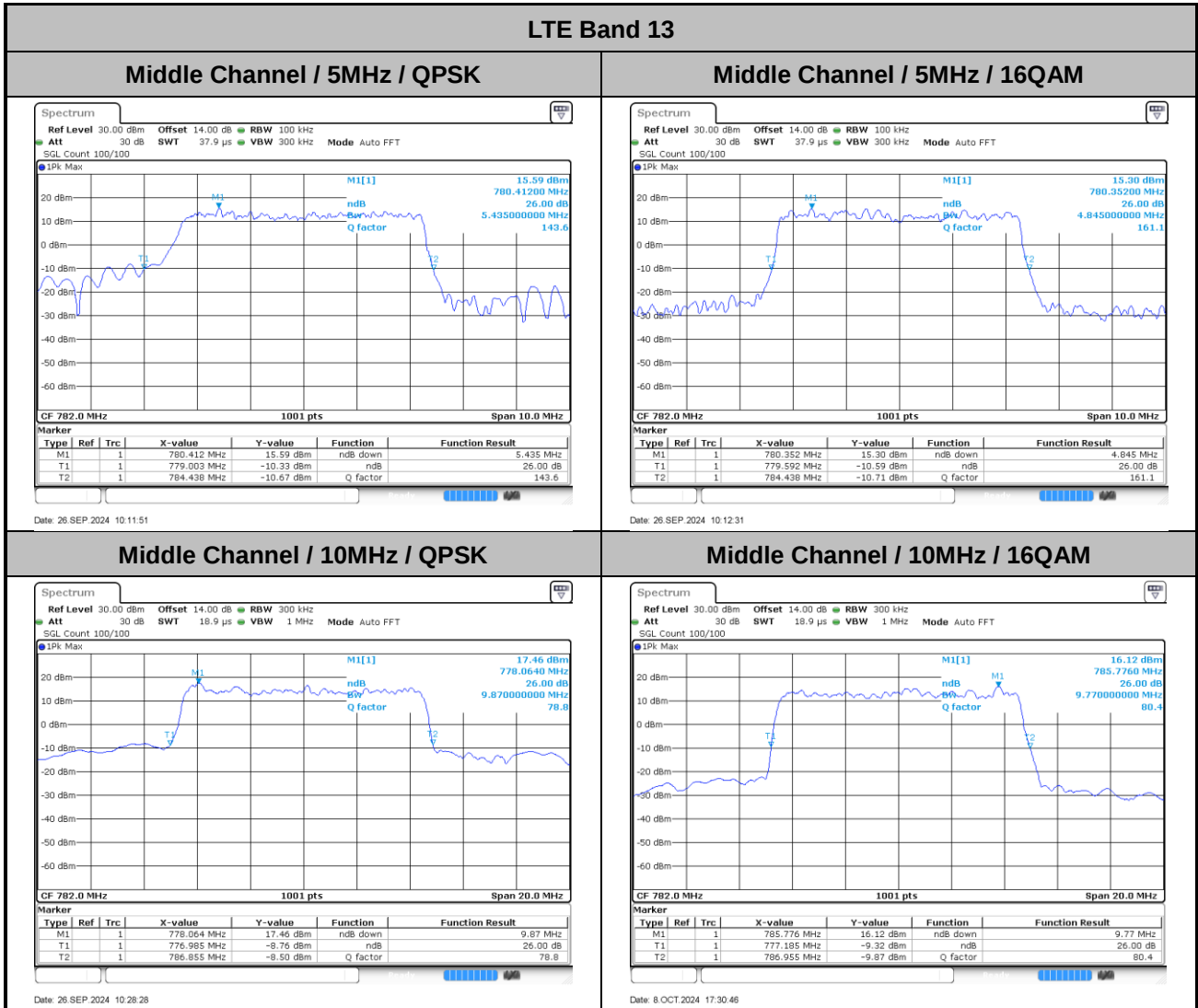
Mode	LTE Band 13 / 10MHz			
Mod.	QPSK	16QAM	64QAM	Limit: 13dB
RB Size	Full RB	Full RB	Full RB	Result
Middle CH	5.13	4.67	5.65	PASS





26dB Bandwidth

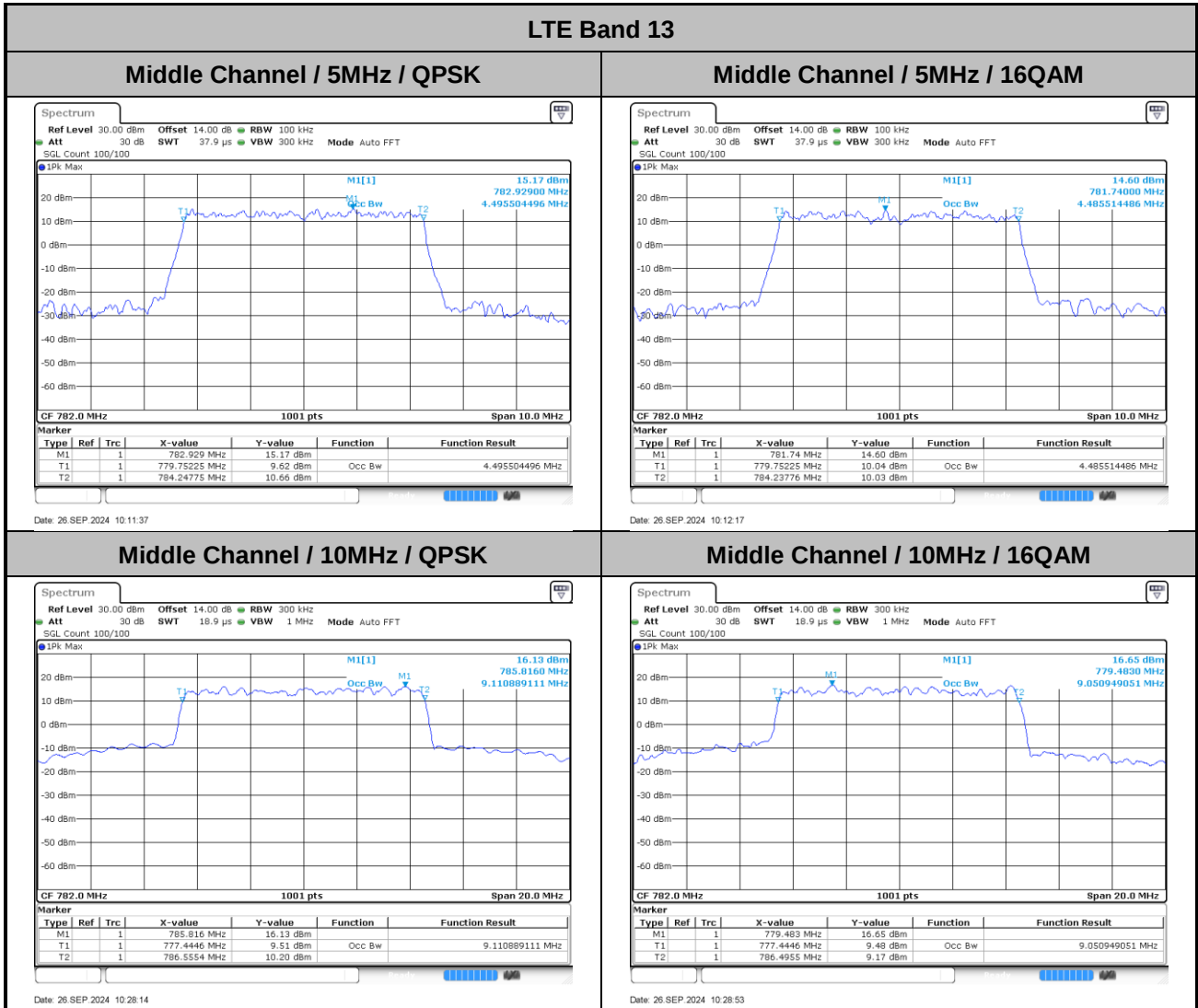
Mode	LTE Band 13 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	-	-	-	-	5.44	4.85	9.87	9.77	-	-	-	-





Occupied Bandwidth

Mode	LTE Band 13 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	-	-	-	-	4.50	4.49	9.11	9.05	-	-	-	-

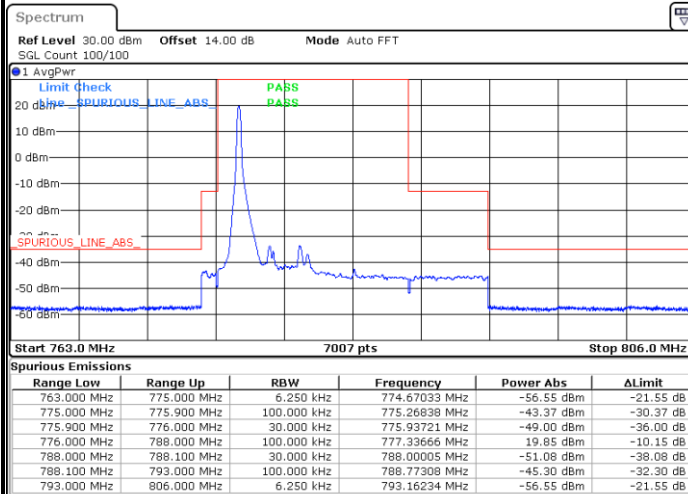




Conducted Band Edge

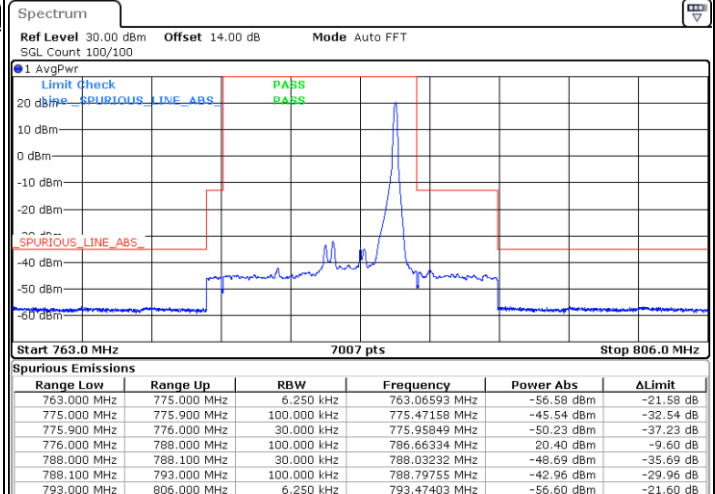
LTE Band 13 / 5MHz / QPSK

Lowest Band Edge / 1 RB



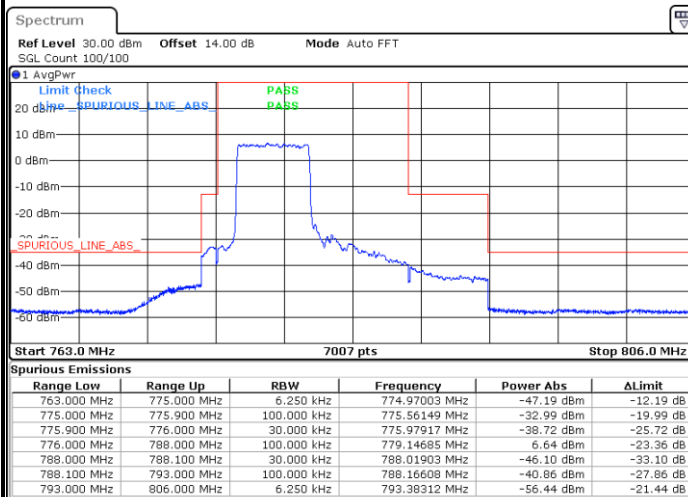
Date: 26 SEP 2024 10:05:24

Highest Band Edge / 1 RB



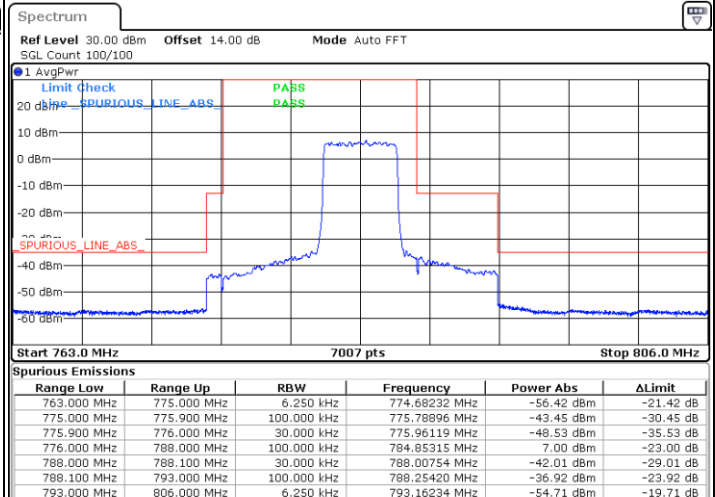
Date: 26 SEP 2024 10:13:15

Lowest Band Edge / Full RB



Date: 26 SEP 2024 10:07:41

Highest Band Edge / Full RB

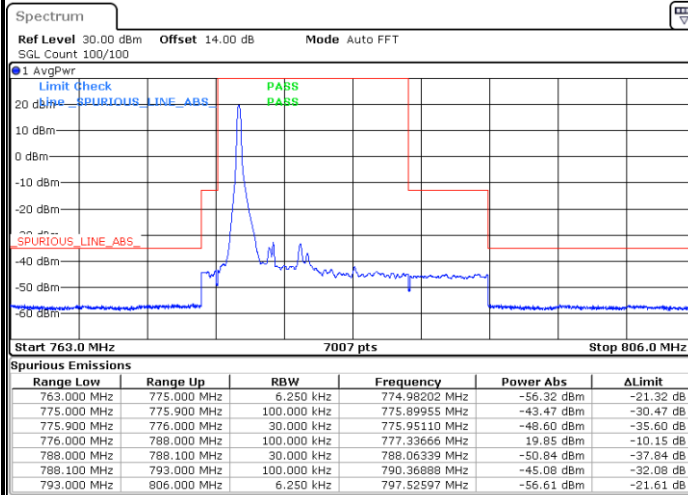


Date: 26 SEP 2024 10:15:33



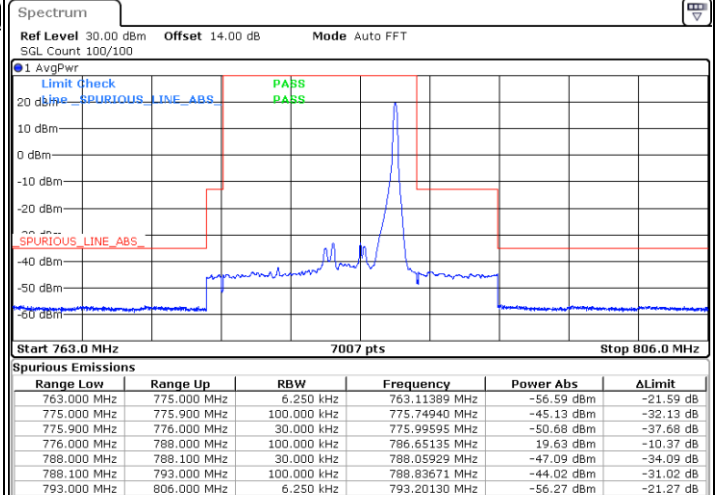
LTE Band 13 / 5MHz / 16QAM

Lowest Band Edge / 1 RB



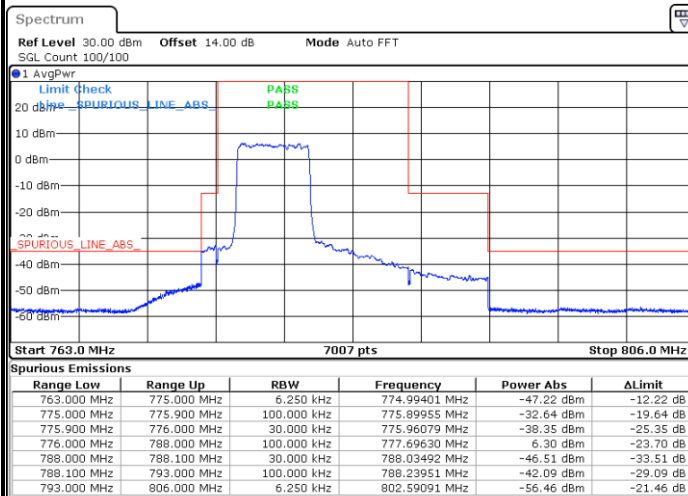
Date: 26 SEP 2024 10:06:10

Highest Band Edge / 1 RB



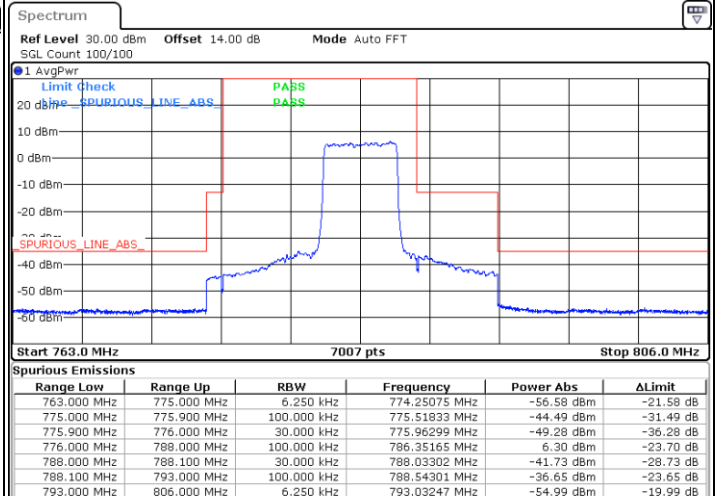
Date: 26 SEP 2024 10:14:01

Lowest Band Edge / Full RB



Date: 26 SEP 2024 10:08:27

Highest Band Edge / Full RB

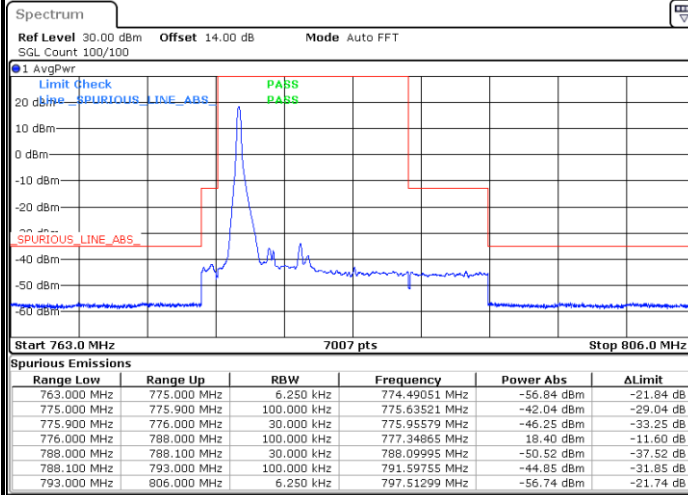


Date: 26 SEP 2024 10:16:18



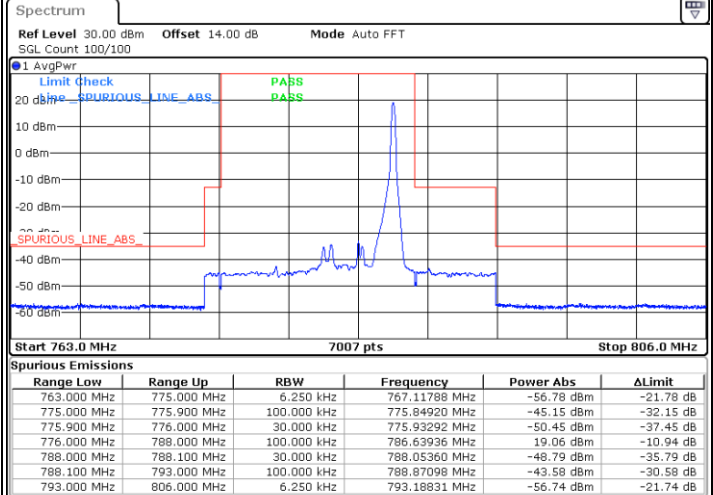
LTE Band 13 / 5MHz / 64QAM

Lowest Band Edge / 1 RB



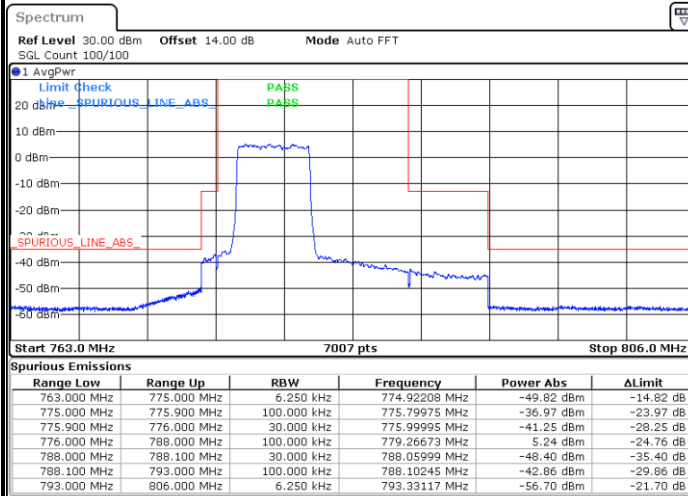
Date: 26 SEP 2024 10:06:55

Highest Band Edge / 1 RB



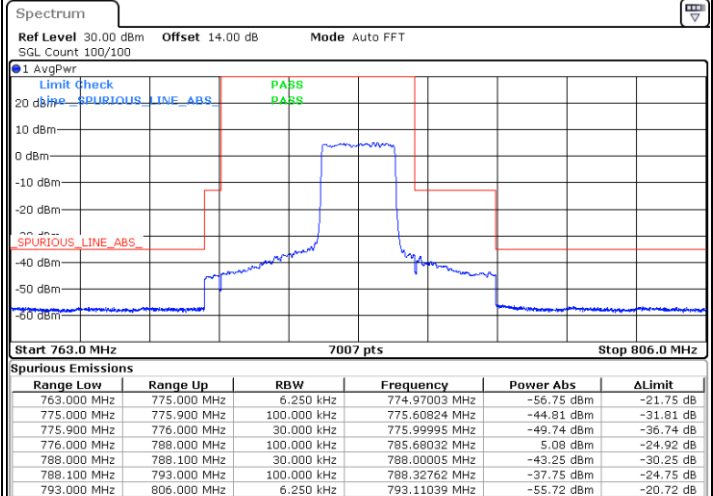
Date: 26 SEP 2024 10:14:47

Lowest Band Edge / Full RB



Date: 26 SEP 2024 10:09:12

Highest Band Edge / Full RB

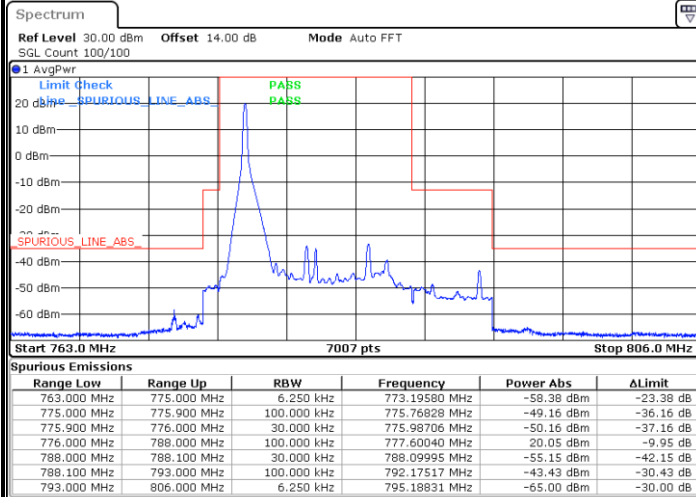


Date: 26 SEP 2024 10:17:04



LTE Band 13 / 10MHz / QPSK

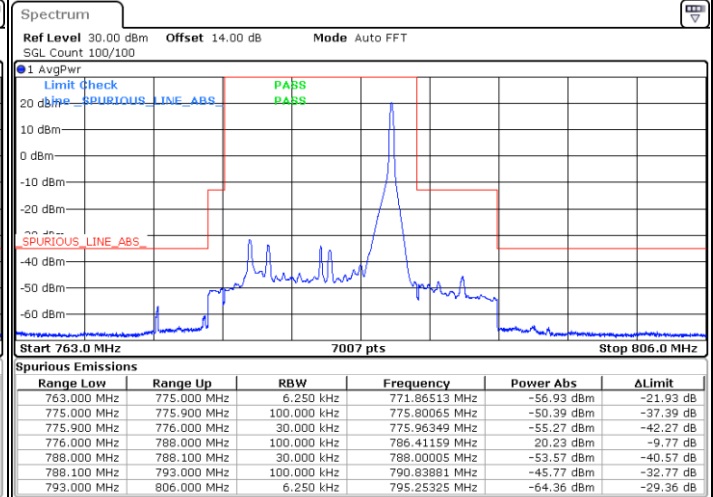
Band Edge / 1 RB



Date: 26 SEP 2024 10:20:47

LTE Band 13 / 10MHz / QPSK

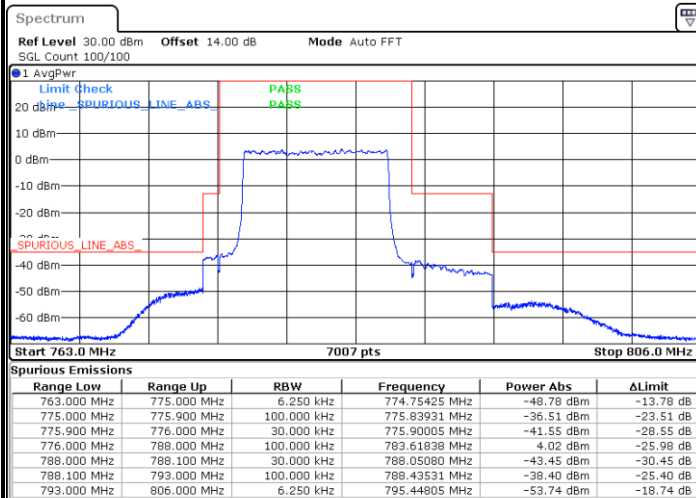
Band Edge / 1 RB



Date: 26 SEP 2024 10:23:03

LTE Band 13 / 10MHz / QPSK

Band Edge / Full RB



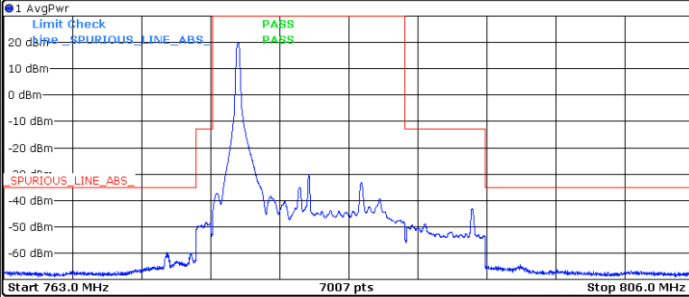
Date: 26 SEP 2024 10:25:18



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

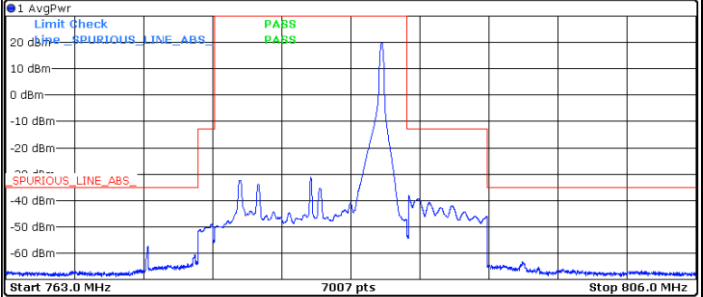
Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
763.000 MHz	775.000 MHz	6.250 kHz	773.19580 MHz	-59.70 dBm	-24.70 dB
775.000 MHz	775.900 MHz	100.000 kHz	775.89955 MHz	-48.48 dBm	-35.48 dB
775.900 MHz	776.000 MHz	30.000 kHz	775.90984 MHz	-52.24 dBm	-39.24 dB
776.000 MHz	788.000 MHz	100.000 kHz	777.60040 MHz	19.84 dBm	-10.16 dB
788.000 MHz	788.100 MHz	30.000 kHz	788.09995 MHz	-55.12 dBm	-42.12 dB
788.100 MHz	793.000 MHz	100.000 kHz	792.17517 MHz	-43.02 dBm	-30.02 dB
793.000 MHz	806.000 MHz	6.250 kHz	795.18831 MHz	-64.45 dBm	-29.45 dB

Date: 26 SEP 2024 10:21:33

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

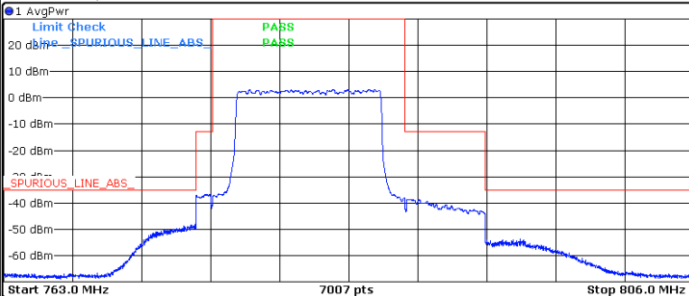
Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
763.000 MHz	775.000 MHz	6.250 kHz	771.86513 MHz	-57.40 dBm	-22.40 dB
775.000 MHz	775.900 MHz	100.000 kHz	775.81863 MHz	-49.06 dBm	-36.06 dB
775.900 MHz	776.000 MHz	30.000 kHz	775.91484 MHz	-54.91 dBm	-41.91 dB
776.000 MHz	788.000 MHz	100.000 kHz	786.41159 MHz	19.73 dBm	-10.27 dB
788.000 MHz	788.100 MHz	30.000 kHz	788.09016 MHz	-53.27 dBm	-40.27 dB
788.100 MHz	793.000 MHz	100.000 kHz	788.10245 MHz	-38.12 dBm	-25.12 dB
793.000 MHz	806.000 MHz	6.250 kHz	795.22727 MHz	-63.25 dBm	-28.25 dB

Date: 26 SEP 2024 10:23:48

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	774.92208 MHz	-48.08 dBm	-13.08 dB
775.000 MHz	775.900 MHz	100.000 kHz	775.82403 MHz	-36.71 dBm	-23.71 dB
775.900 MHz	776.000 MHz	30.000 kHz	775.97338 MHz	-40.77 dBm	-27.77 dB
776.000 MHz	788.000 MHz	100.000 kHz	786.12388 MHz	3.19 dBm	-26.81 dB
788.000 MHz	788.100 MHz	30.000 kHz	788.07527 MHz	-41.79 dBm	-28.79 dB
788.100 MHz	793.000 MHz	100.000 kHz	788.87587 MHz	-38.61 dBm	-25.61 dB
793.000 MHz	806.000 MHz	6.250 kHz	795.16234 MHz	-53.87 dBm	-18.87 dB

Date: 26 SEP 2024 10:26:04