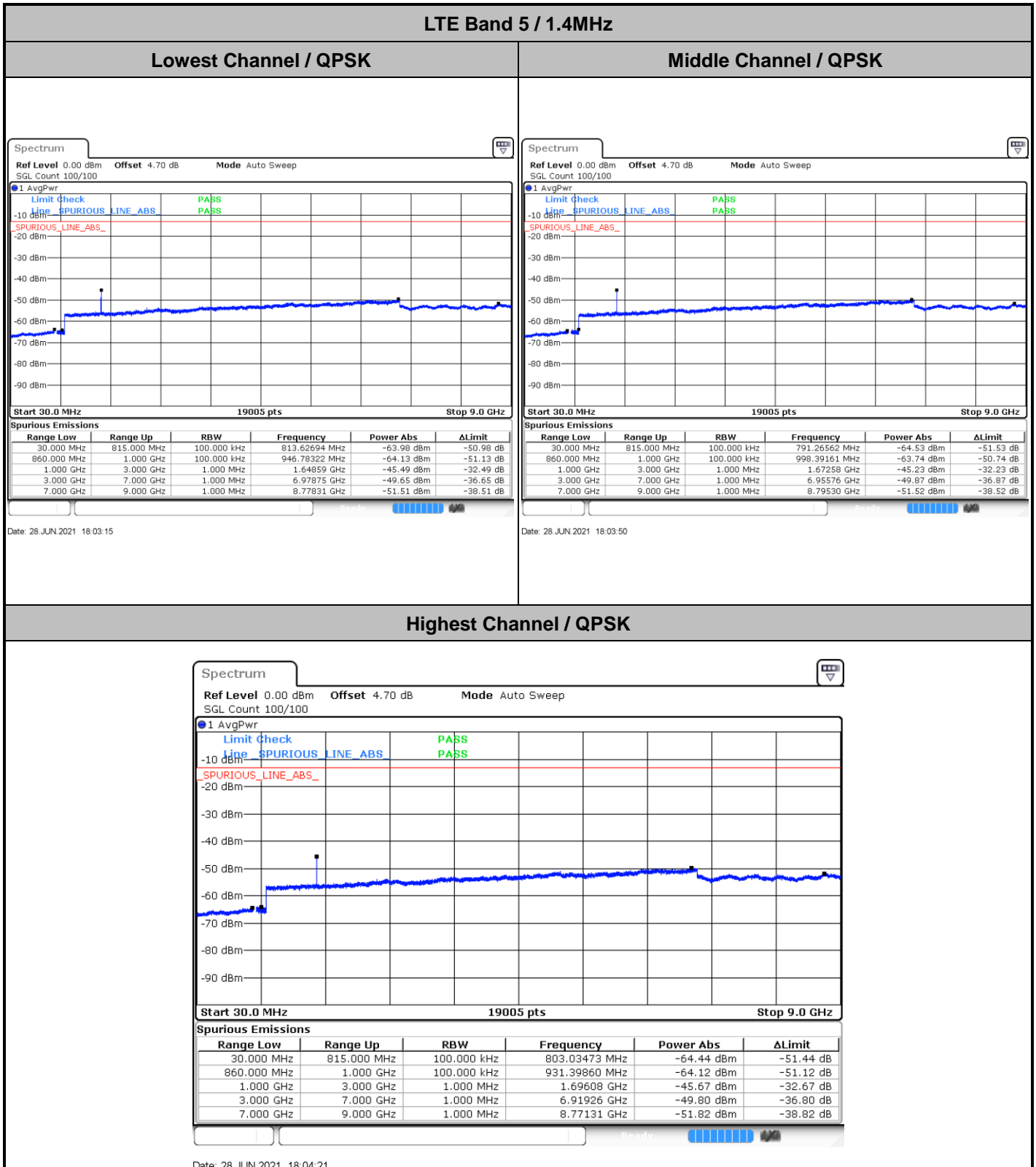




# Conducted Spurious Emission

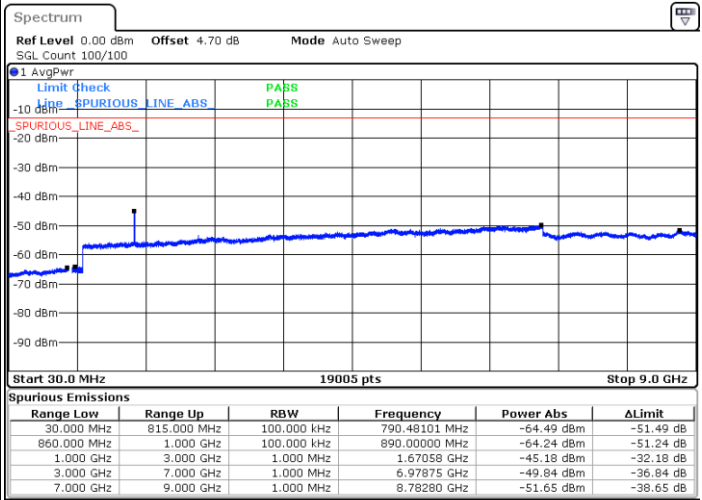
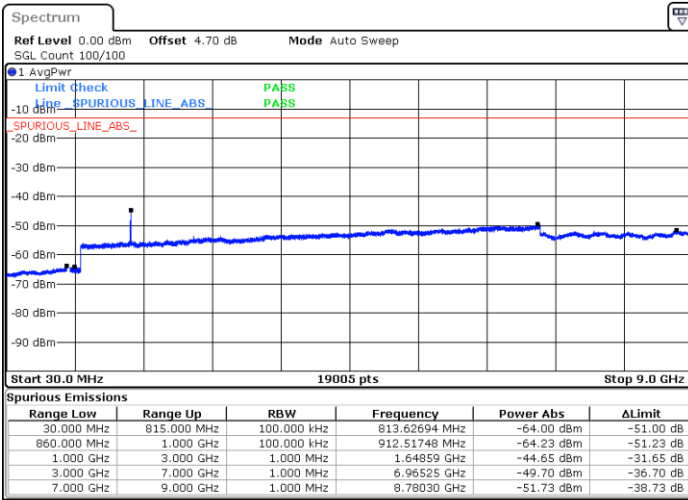




LTE Band 5 / 3MHz

Lowest Channel / QPSK

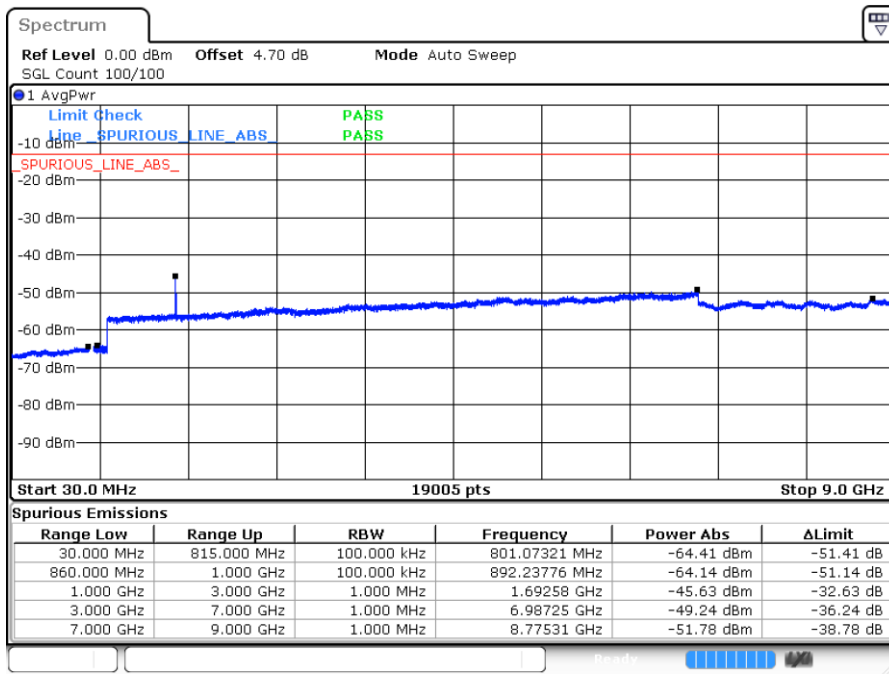
Middle Channel / QPSK



Date: 28 JUN 2021 18:28:28

Date: 28 JUN 2021 18:29:01

Highest Channel / QPSK



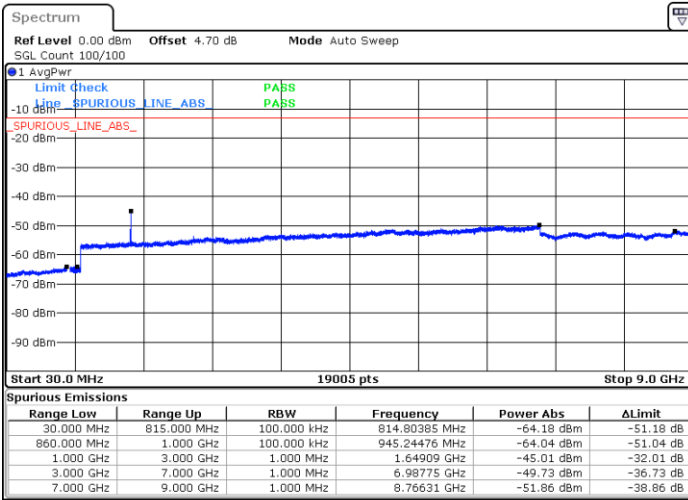
Date: 28 JUN 2021 18:29:31



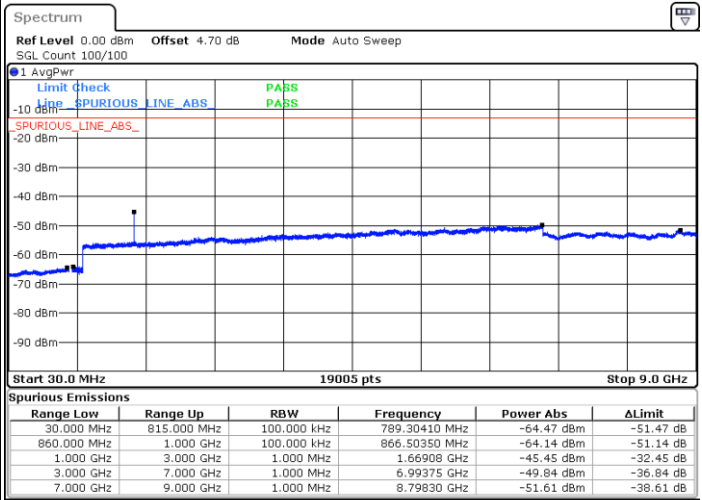
LTE Band 5 / 5MHz

Lowest Channel / QPSK

Middle Channel / QPSK

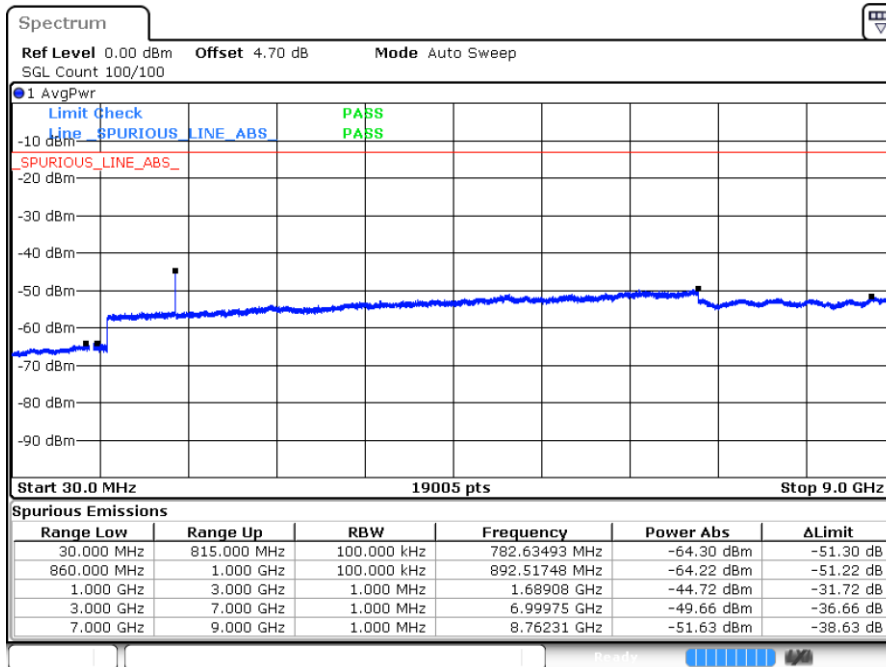


Date: 28 JUN 2021 18:46:37



Date: 28 JUN 2021 18:47:07

Highest Channel / QPSK



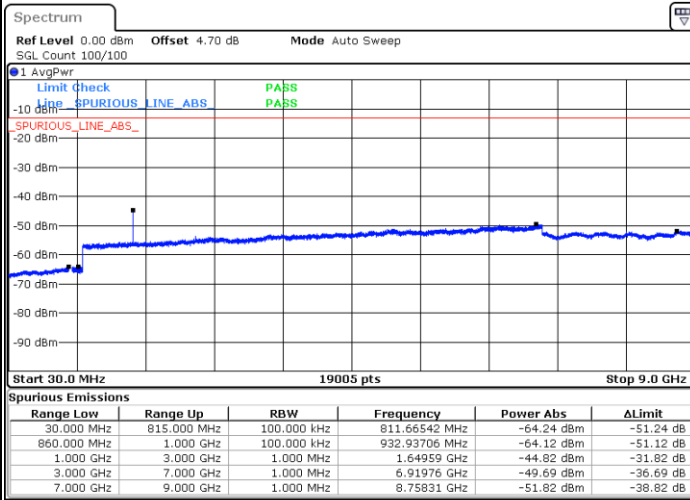
Date: 28 JUN 2021 18:47:38



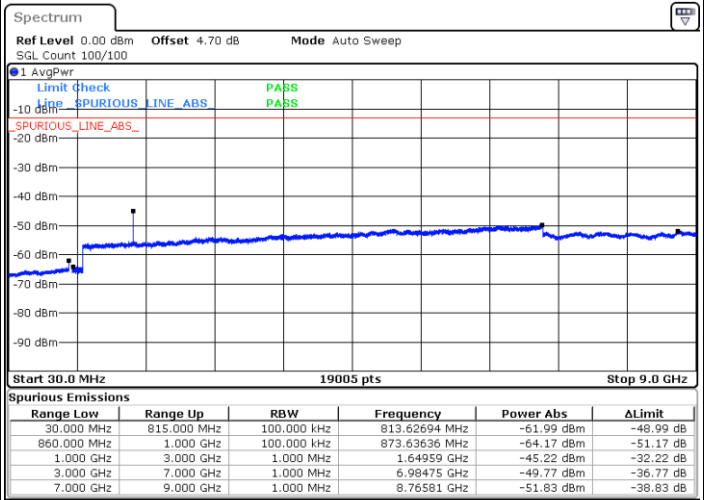
LTE Band 5 / 10MHz

Lowest Channel / QPSK

Middle Channel / QPSK

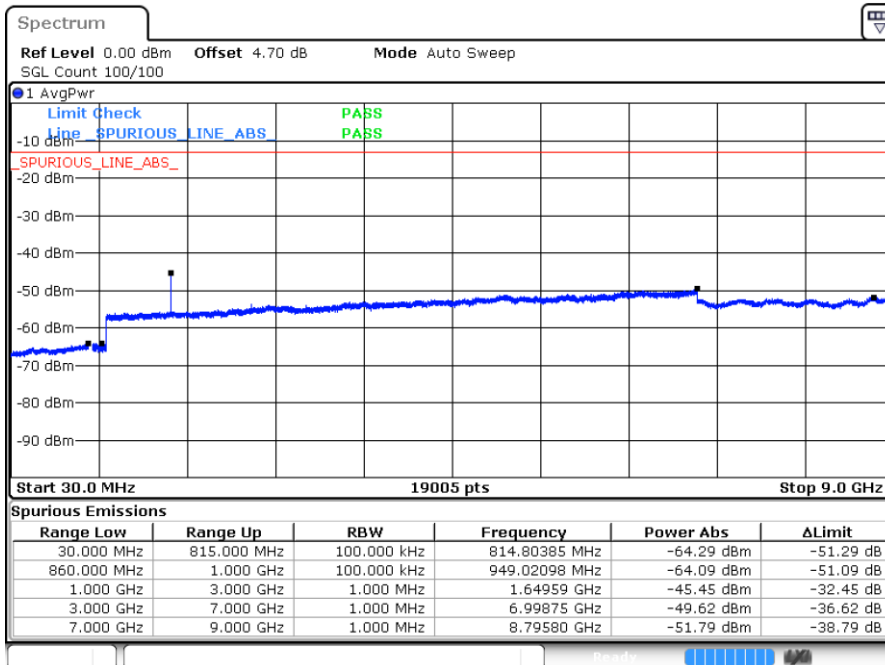


Date: 30 JUN 2021 11:14:03



Date: 30 JUN 2021 11:15:01

Highest Channel / QPSK



Date: 30 JUN 2021 11:15:33



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	

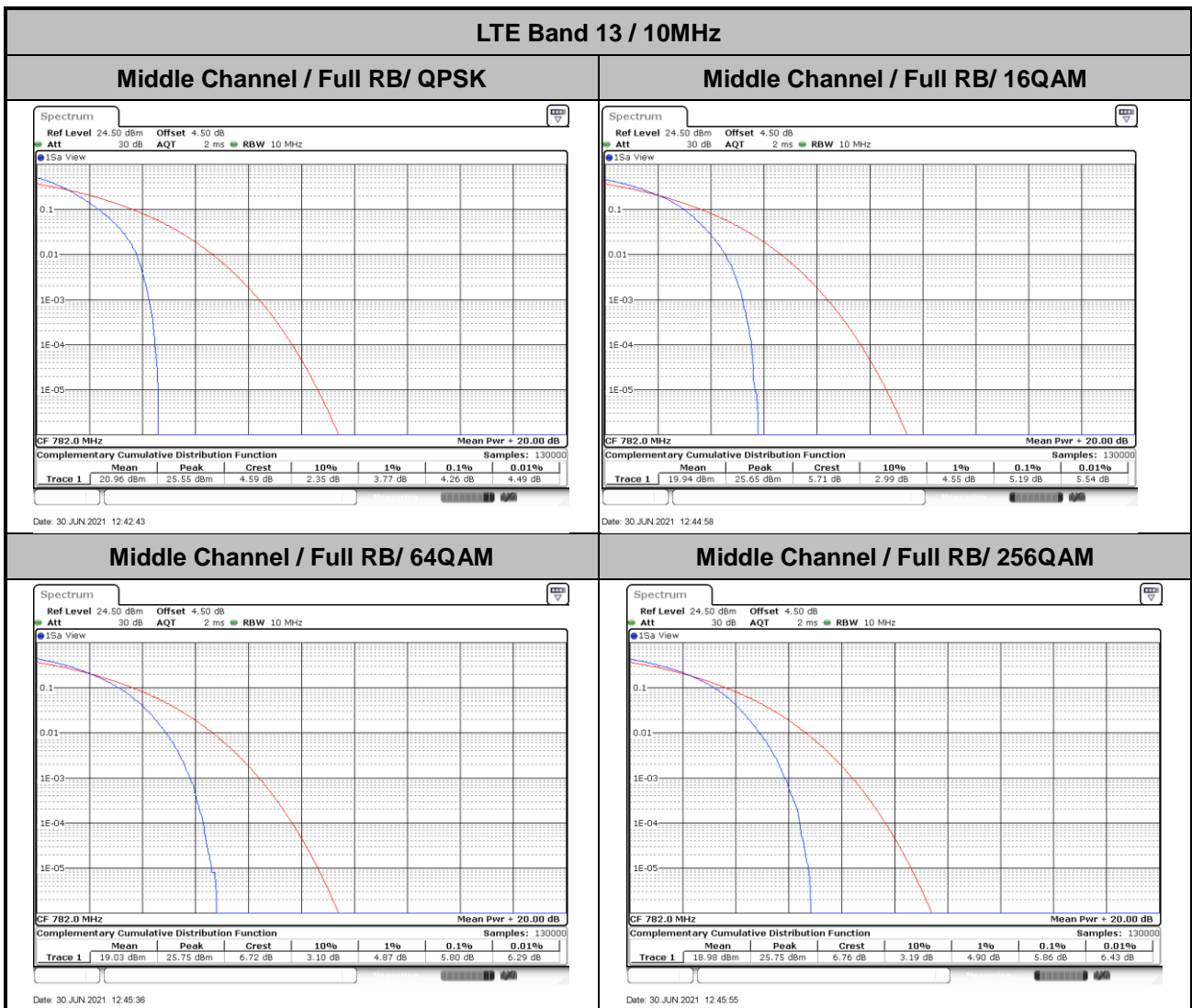
Note: Normal Voltage =3.85 V. ; Battery End Point (BEP) =3.6 V. ; Maximum Voltage =4.4 V.



# LTE Band 13

## Peak-to-Average Ratio

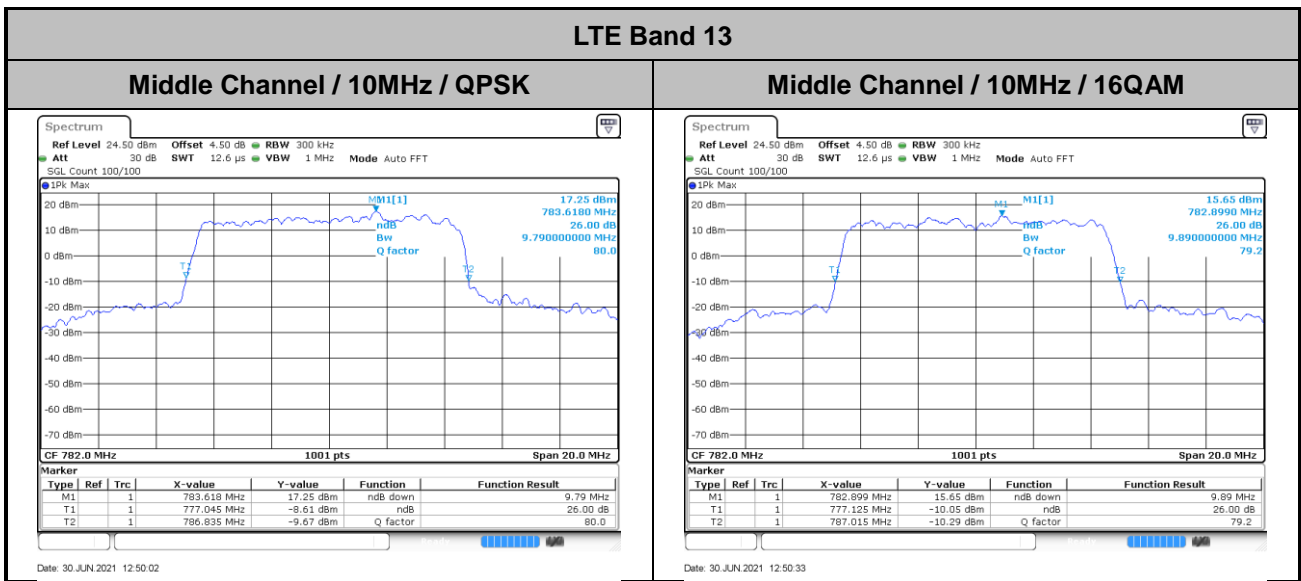
Mode	LTE Band 13 / 10MHz				
Mod.	QPSK	16QAM	64QAM	256QAM	Limit: 13dB
RB Size	Full RB	Full RB	Full RB	Full RB	Result
Middle CH	4.26	5.19	5.80	5.86	PASS





## 26dB Bandwidth

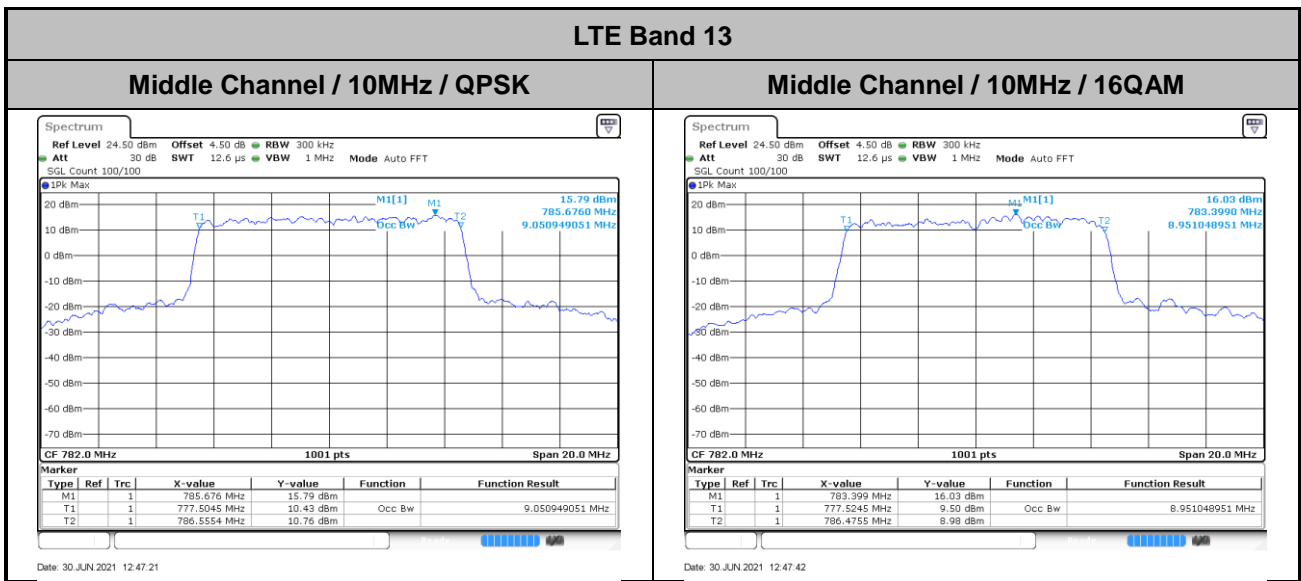
<b>Mode</b>	<b>LTE Band 13 : 26dB BW(MHz)</b>	
<b>BW</b>	<b>10MHz</b>	
<b>Mod.</b>	<b>QPSK</b>	<b>16QAM</b>
<b>Middle CH</b>	<b>9.79</b>	<b>9.89</b>





## Occupied Bandwidth

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





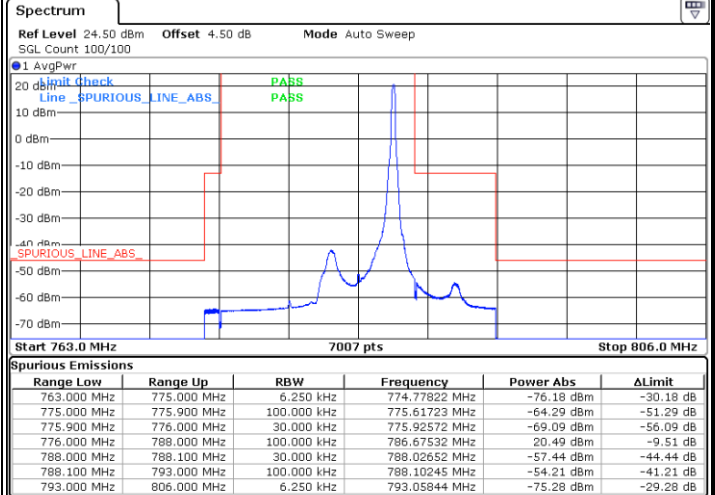
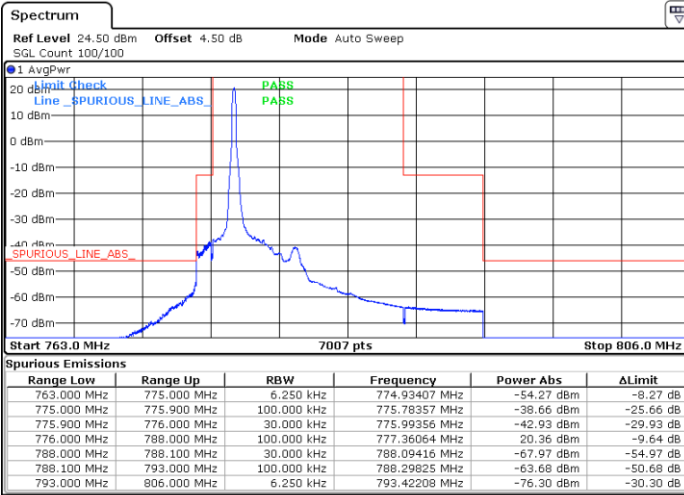


# Conducted Band Edge

## LTE Band 13 / 5MHz / QPSK

### Lowest Band Edge / 1 RB

### Highest Band Edge / 1 RBmax

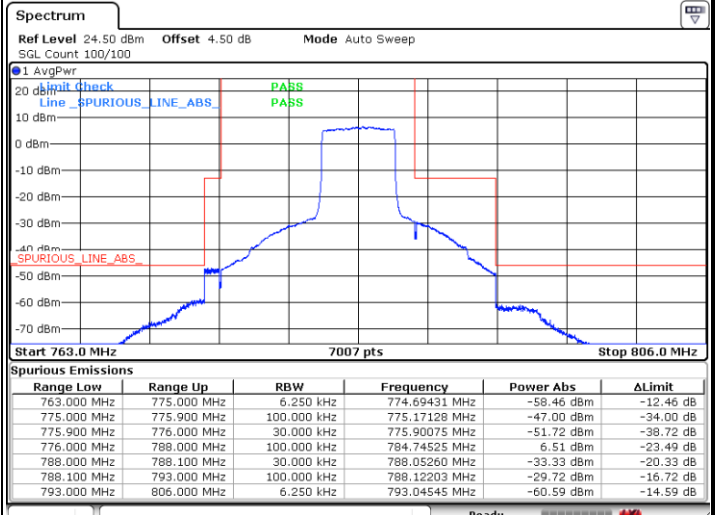
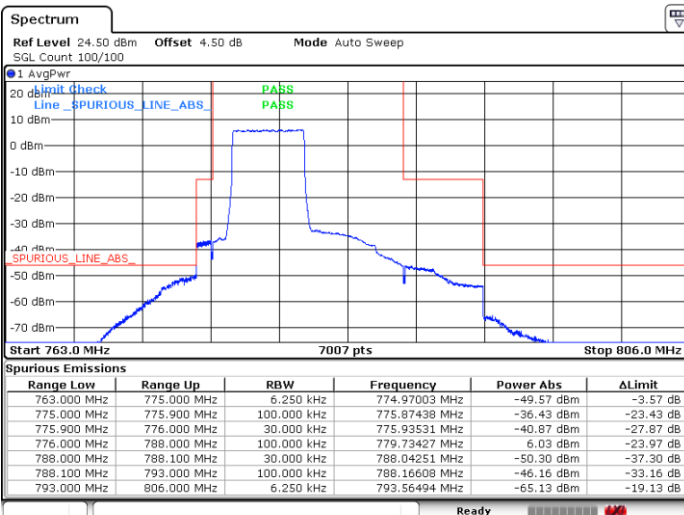


Date: 24 SEP 2021 13:29:23

Date: 24 SEP 2021 14:35:14

### Lowest Band Edge / Full RB

### Highest Band Edge / Full RB



Date: 24 SEP 2021 13:20:21

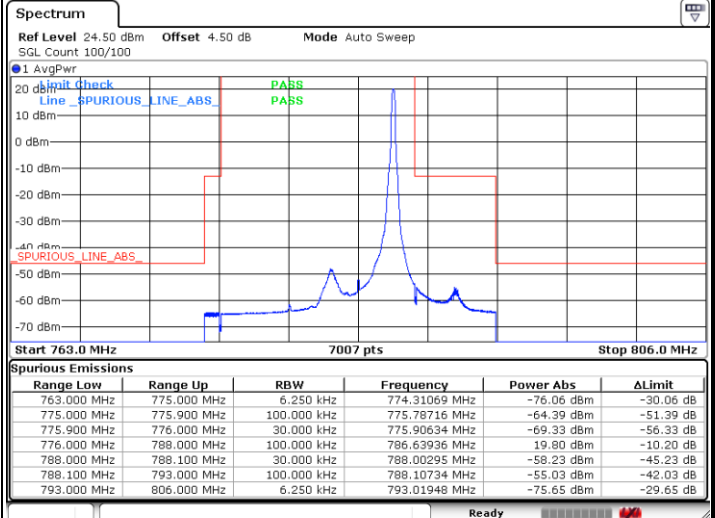
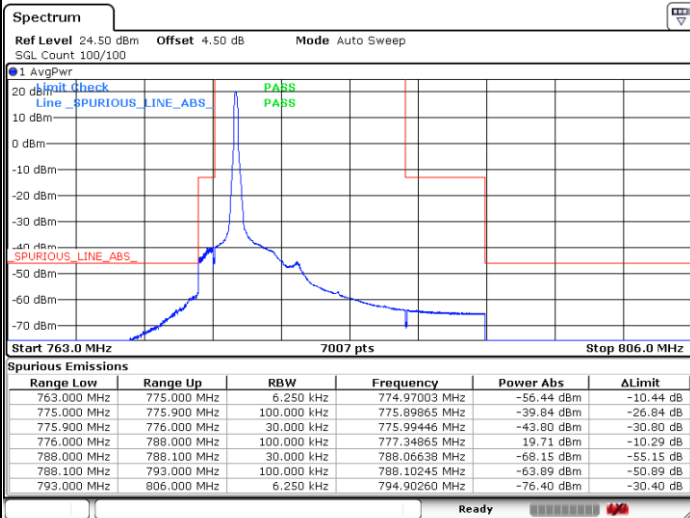
Date: 24 SEP 2021 13:30:47



LTE Band 13 / 5MHz / 16QAM

Lowest Band Edge / 1RB

Highest Band Edge / 1 RBmax

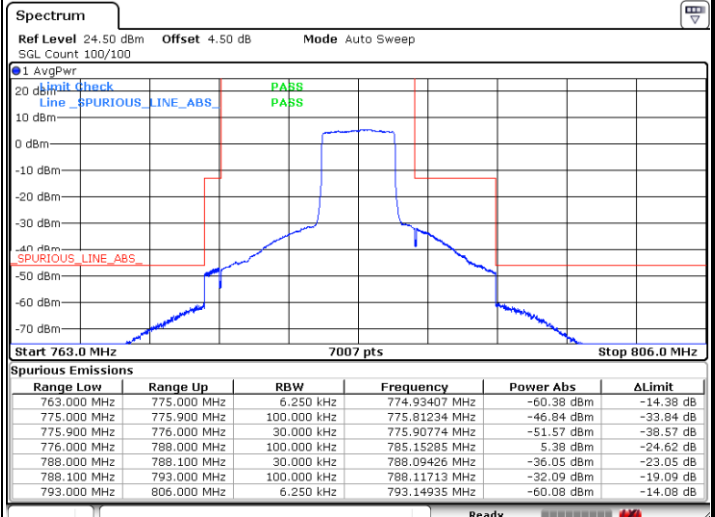
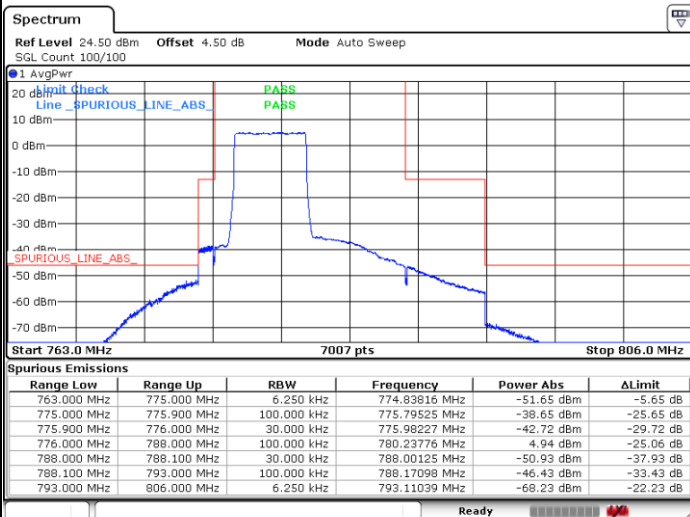


Date: 24.SEP.2021 13:28:10

Date: 24.SEP.2021 14:34:00

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



Date: 24.SEP.2021 13:21:53

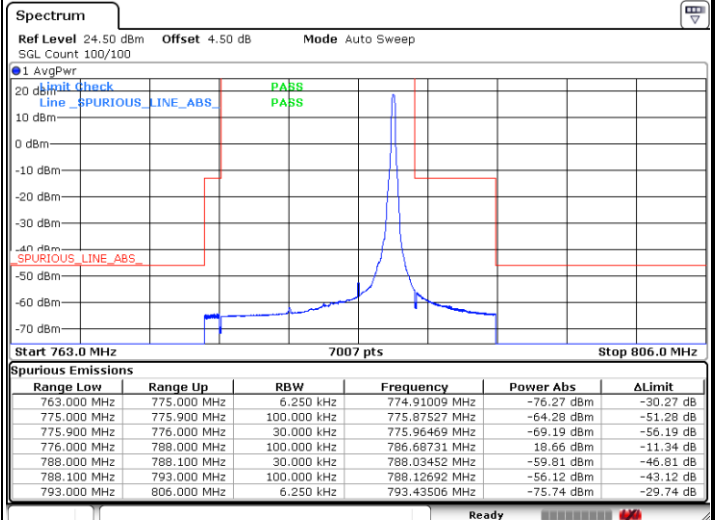
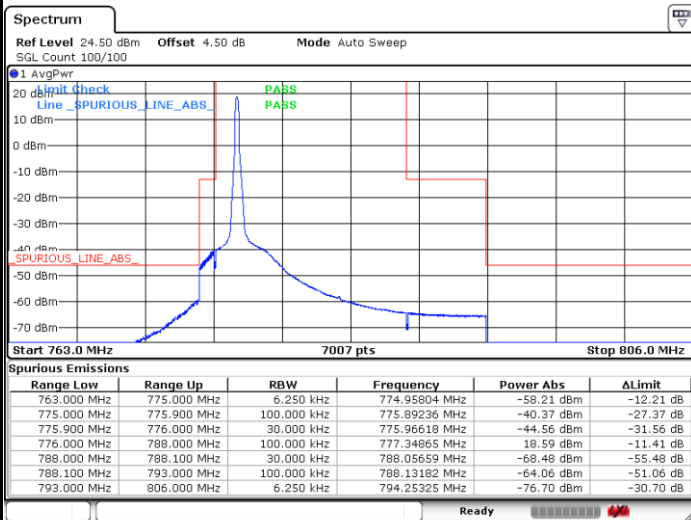
Date: 24.SEP.2021 13:33:45



LTE Band 13 / 5MHz / 64QAM

Lowest Band Edge / 1RB

Highest Band Edge / 1 RBnx

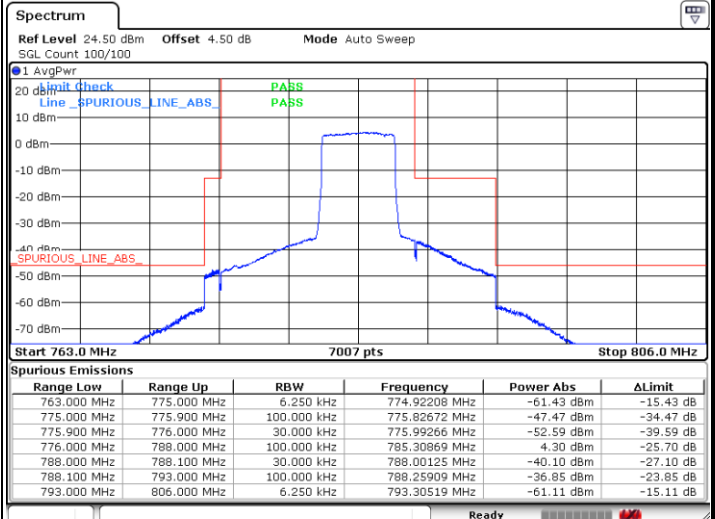
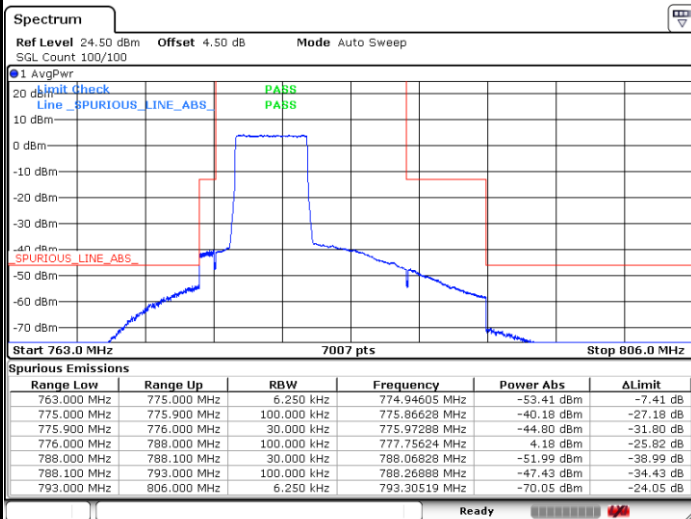


Date: 24.SEP.2021 13:26:57

Date: 24.SEP.2021 14:32:40

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



Date: 24.SEP.2021 13:23:11

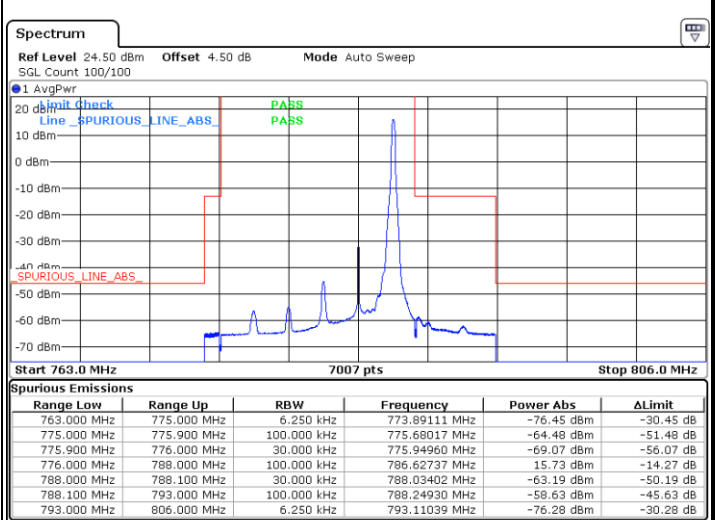
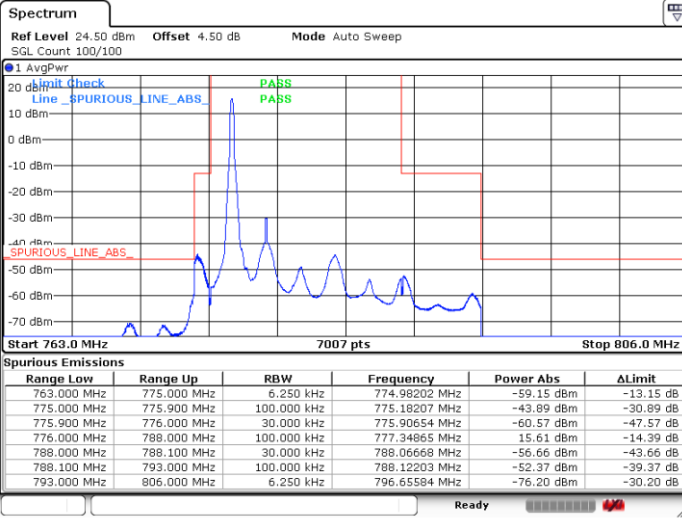
Date: 24.SEP.2021 14:28:14



LTE Band 13 / 5MHz / 256QAM

Lowest Band Edge / 1RB

Highest Band Edge / 1 RBmax

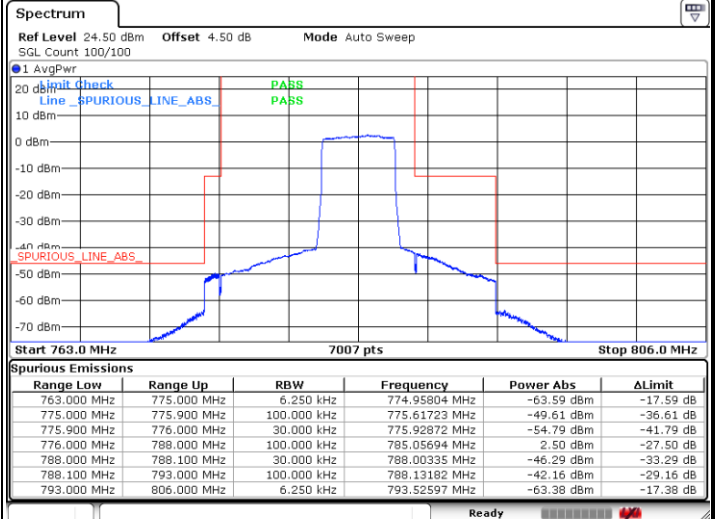
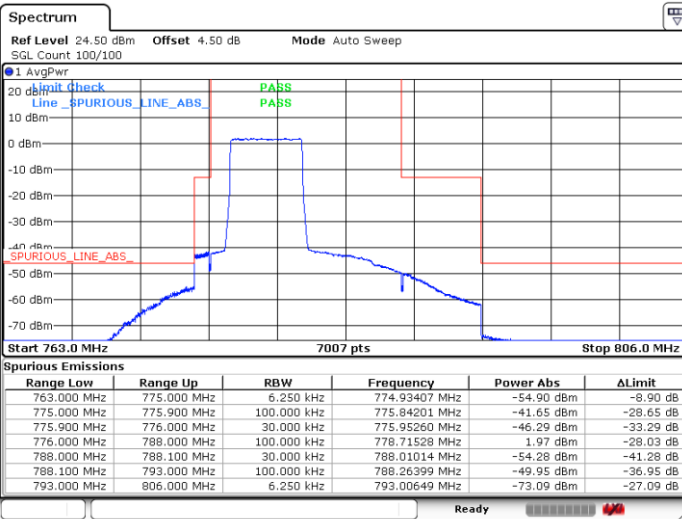


Date: 24 SEP 2021 13:25:40

Date: 24 SEP.2021 14:31:15

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



Date: 24 SEP 2021 13:24:22

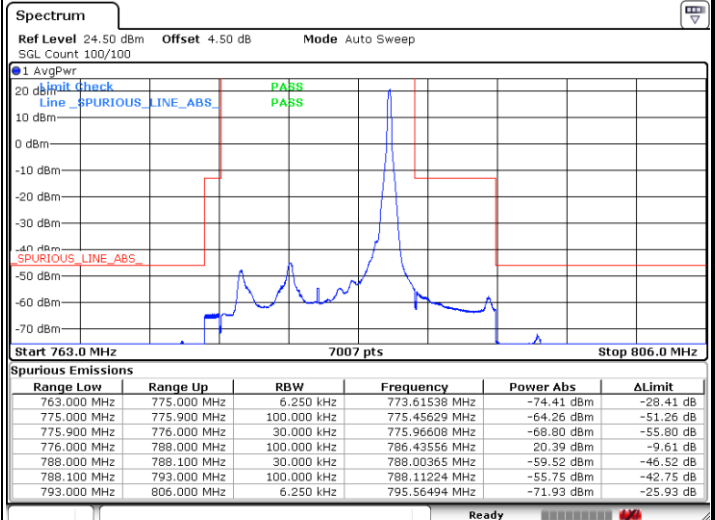
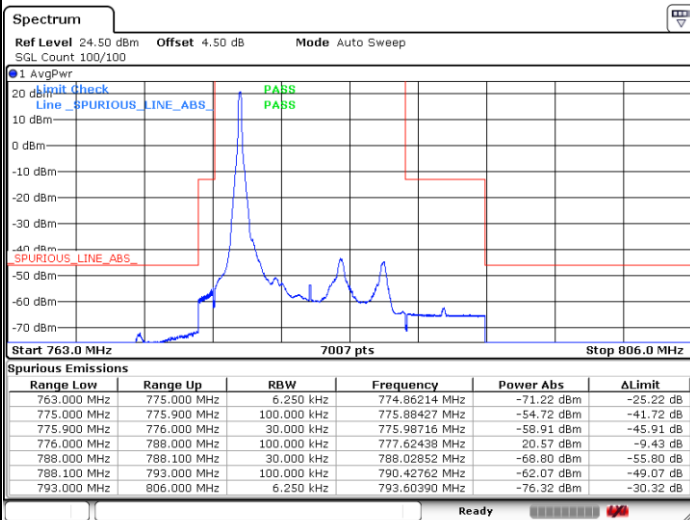
Date: 24 SEP.2021 14:29:38



LTE Band 13 / 10MHz / QPSK

middle Band Edge / 1 RB

middle Band Edge / 1 RBmax

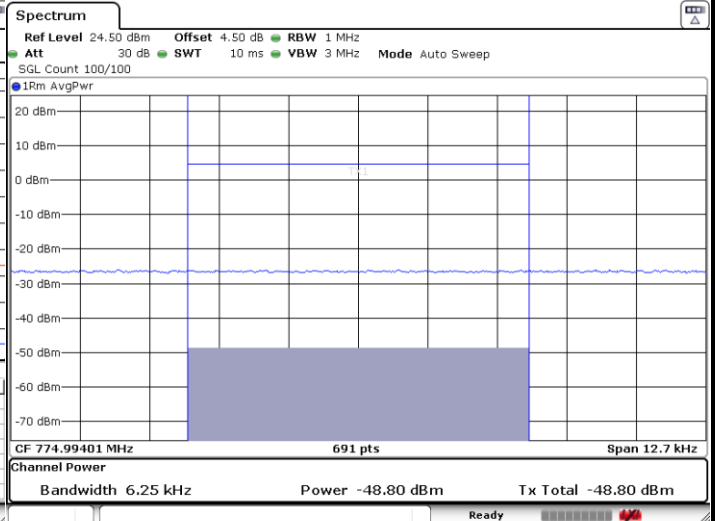
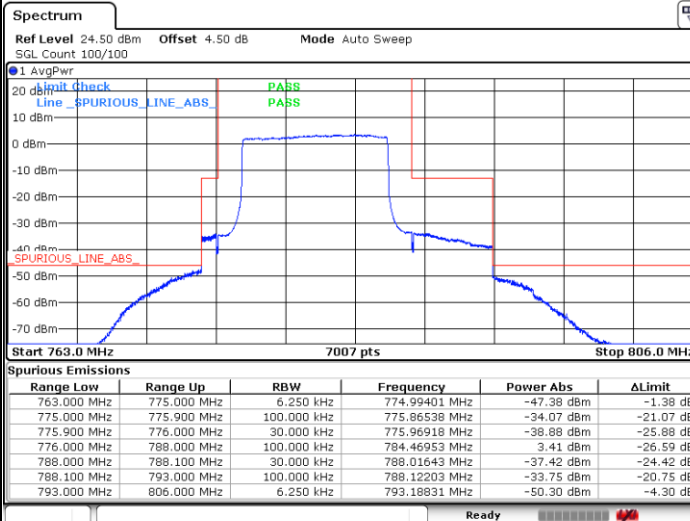


Date: 24.SEP.2021 13:10:59

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

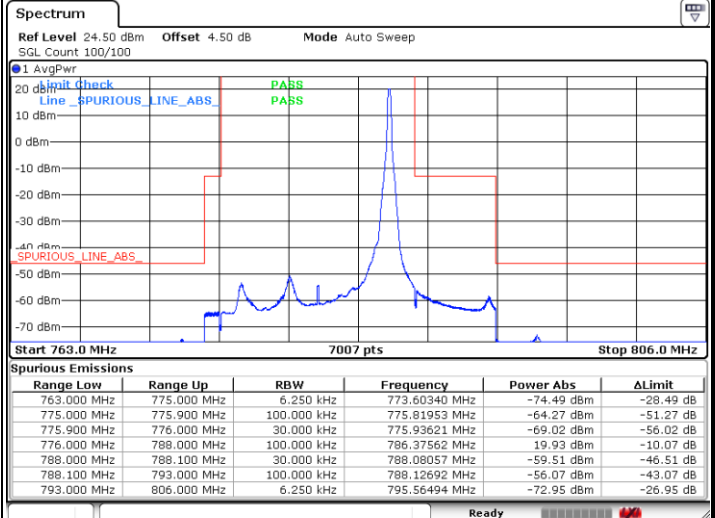
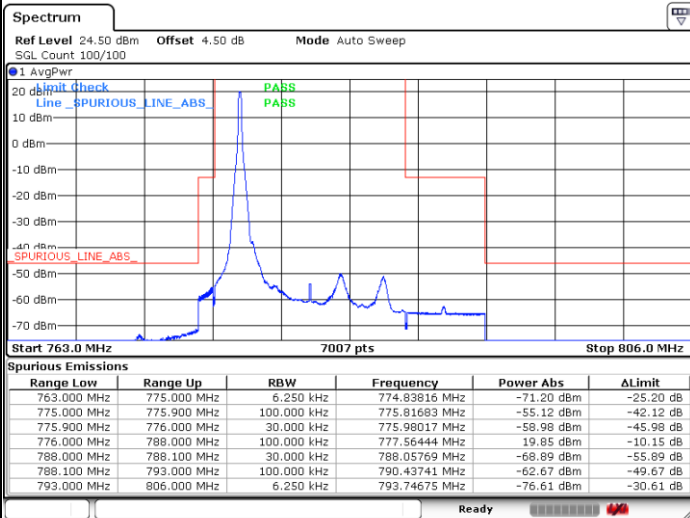
Date: 4.NOV.2021 06:30:34



LTE Band 13 / 10MHz / 16QAM

middle Band Edge / 1 RB

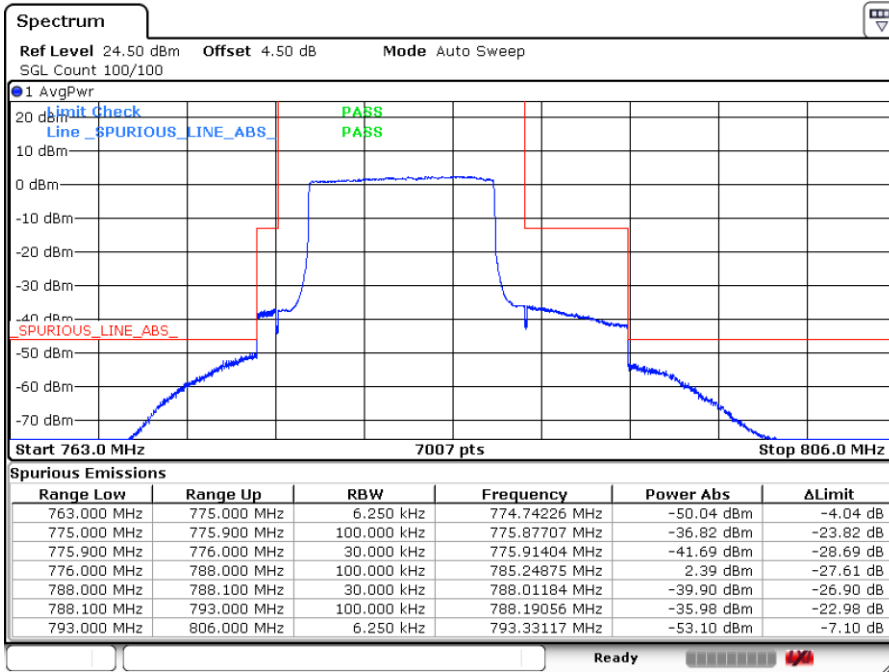
middle Band Edge / 1 RBmax



Date: 24.SEP.2021 13:09:48

Date: 24.SEP.2021 13:13:40

middle Band Edge / Full RB



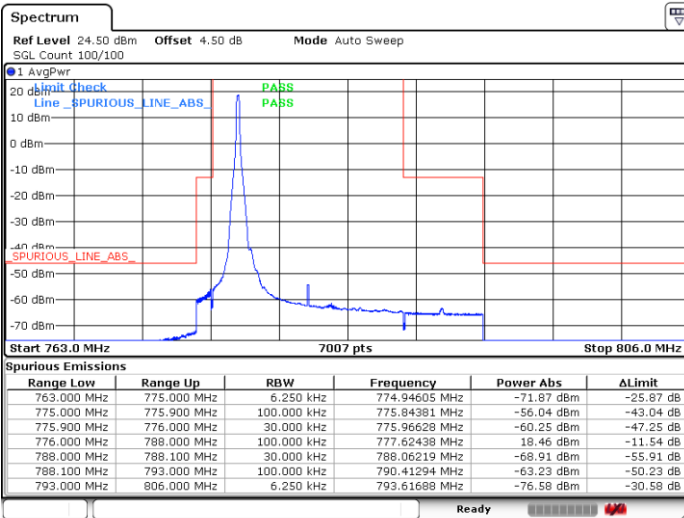
Date: 24.SEP.2021 13:02:57



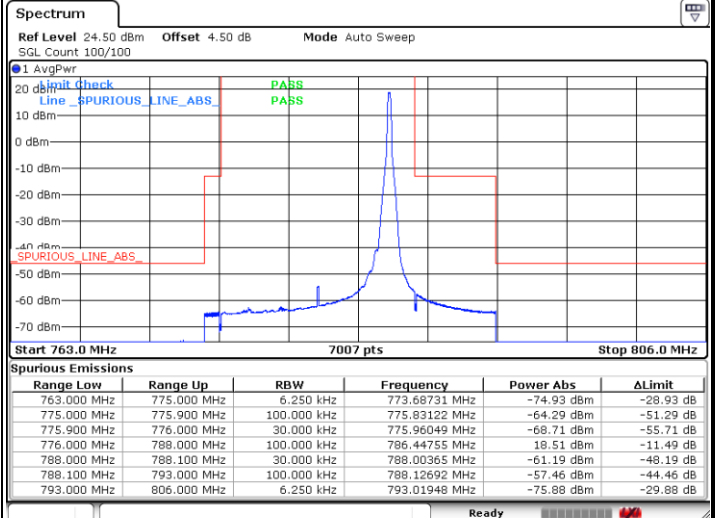
LTE Band 13 / 10MHz / 64QAM

middle Band Edge / 1 RB

middle Band Edge / 1 RBmax

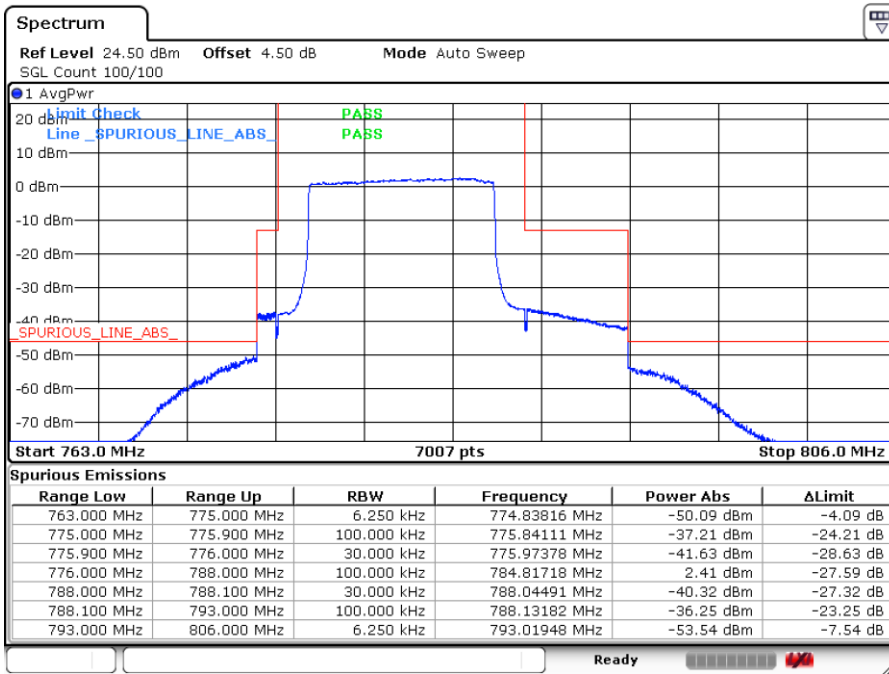


Date: 24.SEP.2021 13:08:32



Date: 24.SEP.2021 13:14:51

middle Band Edge / Full RB



Date: 24.SEP.2021 13:04:20

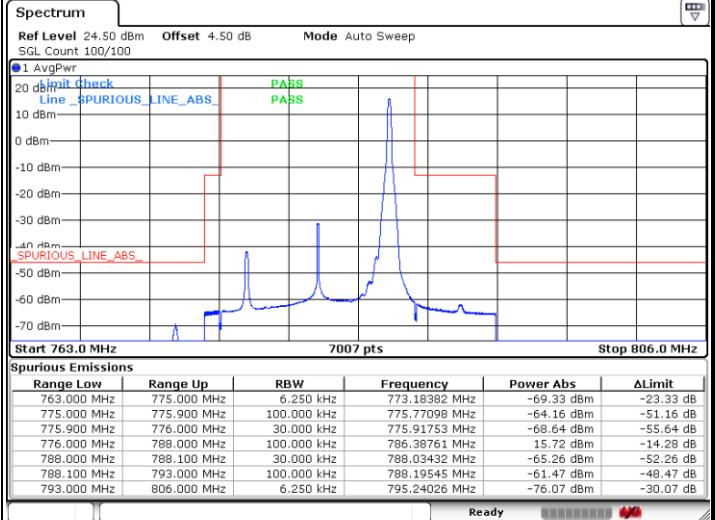
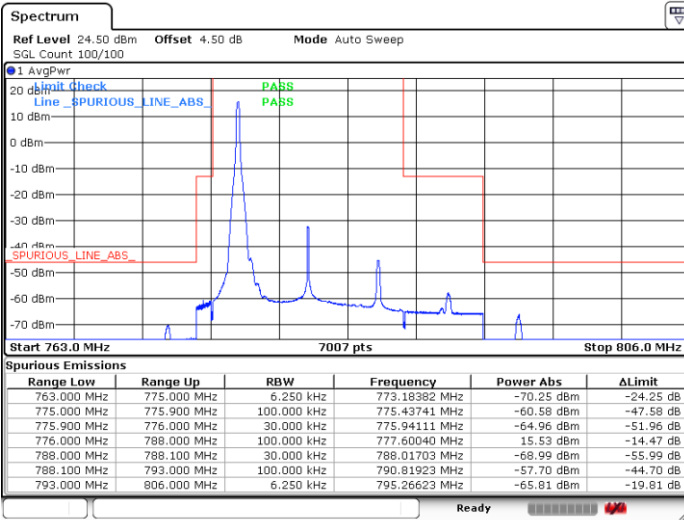




LTE Band 13 / 10MHz / 256QAM

middle Band Edge / 1 RB

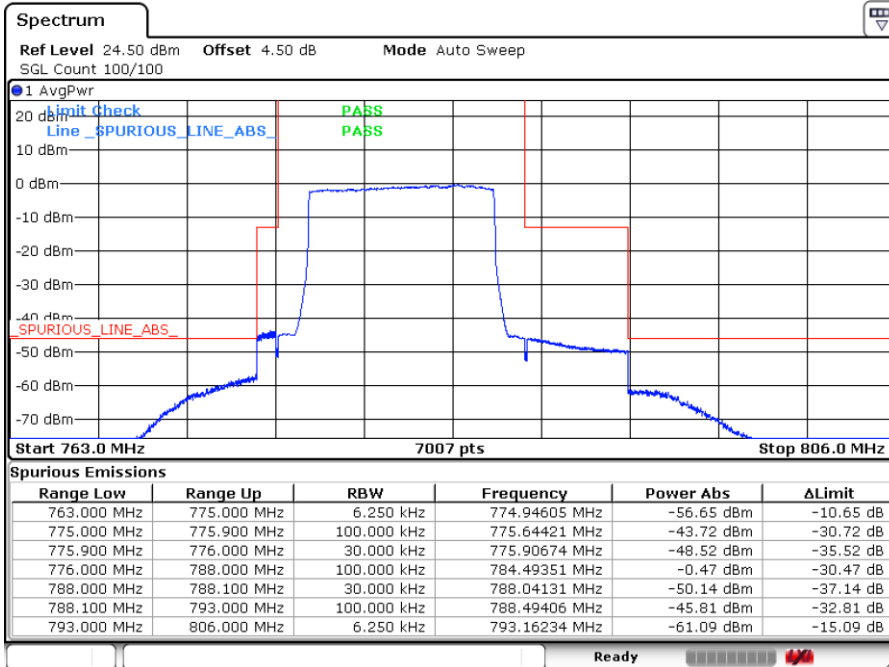
middle Band Edge / 1 RBmax



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

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

middle Band Edge / Full RB

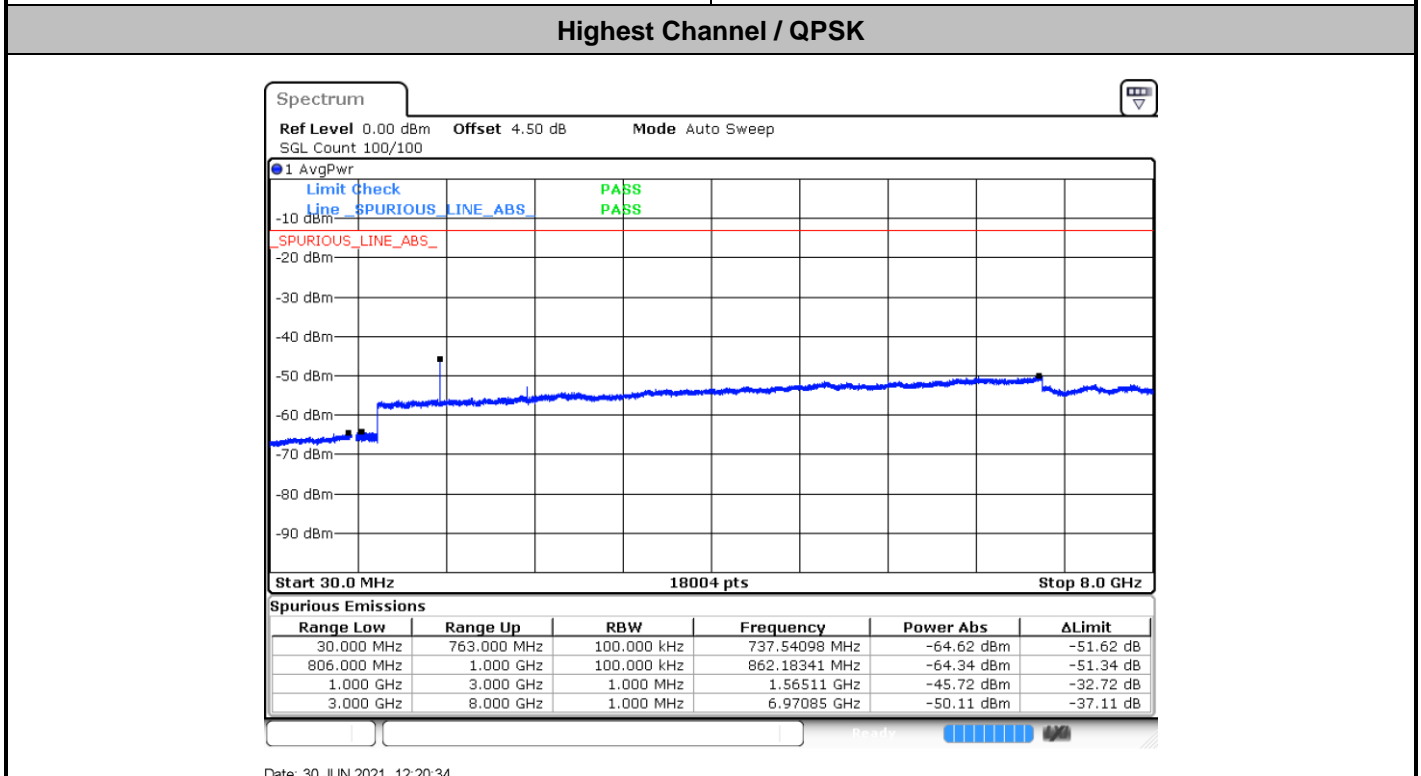
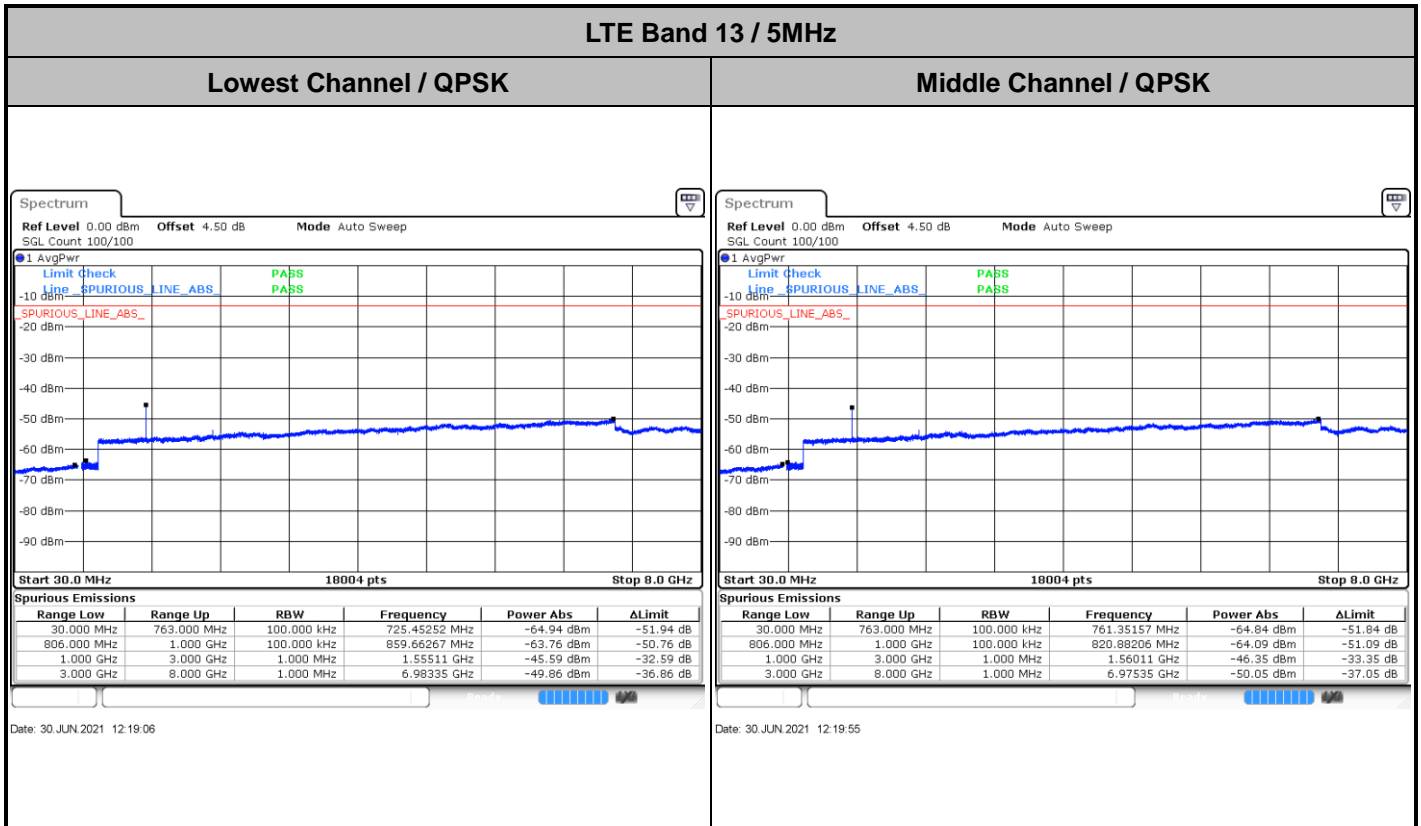


Date: 24.SEP.2021 13:05:46





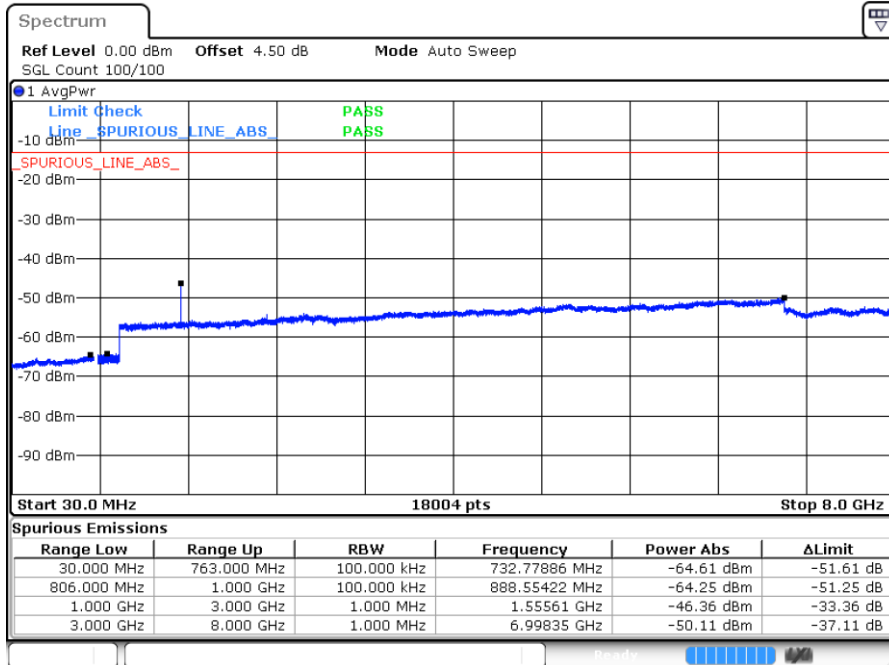
# Conducted Spurious Emission





LTE Band 13 / 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:

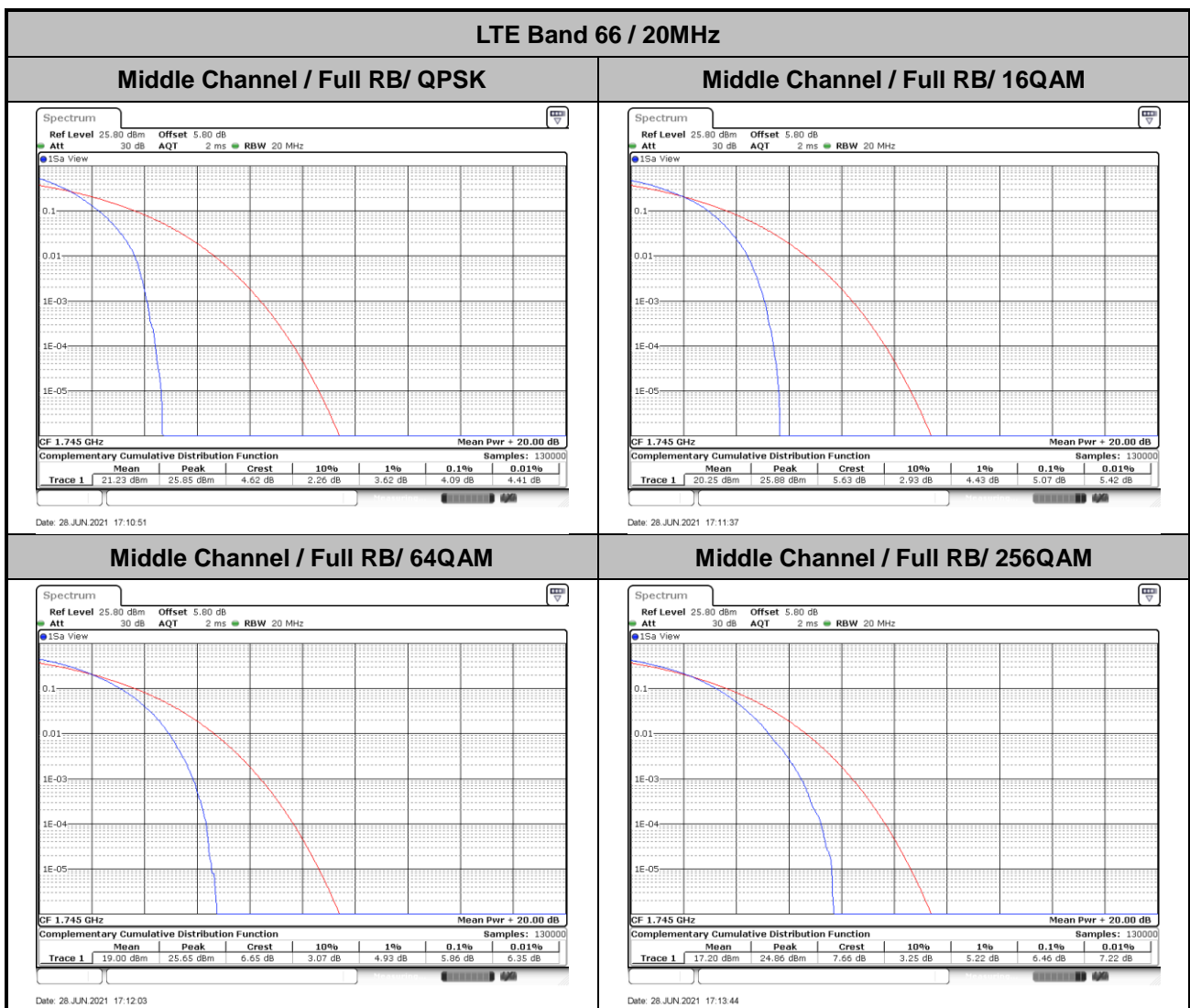
1. Normal Voltage =3.85 V. ; Battery End Point (BEP) =3.6 V. ; Maximum Voltage =4.4 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.



# LTE Band 66

## Peak-to-Average Ratio

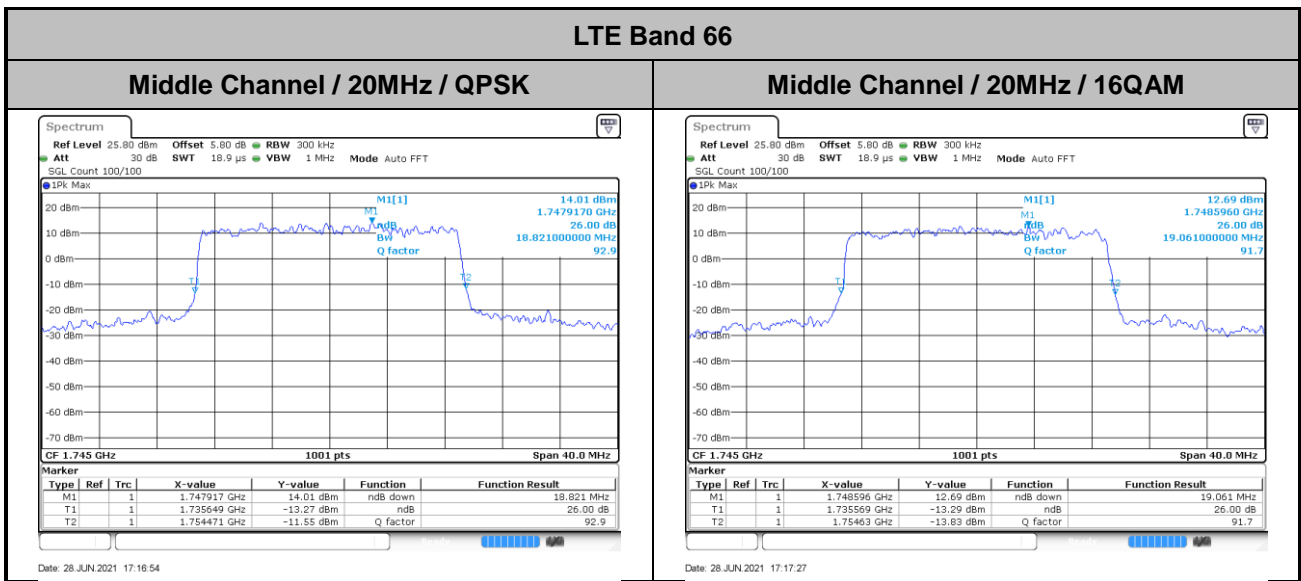
Mode	LTE Band 66 / 20MHz				
Mod.	QPSK	16QAM	64QAM	256QAM	Limit: 13dB
RB Size	Full RB	Full RB	Full RB	Full RB	Result
Middle CH	4.09	5.07	5.86	6.46	PASS





## 26dB Bandwidth

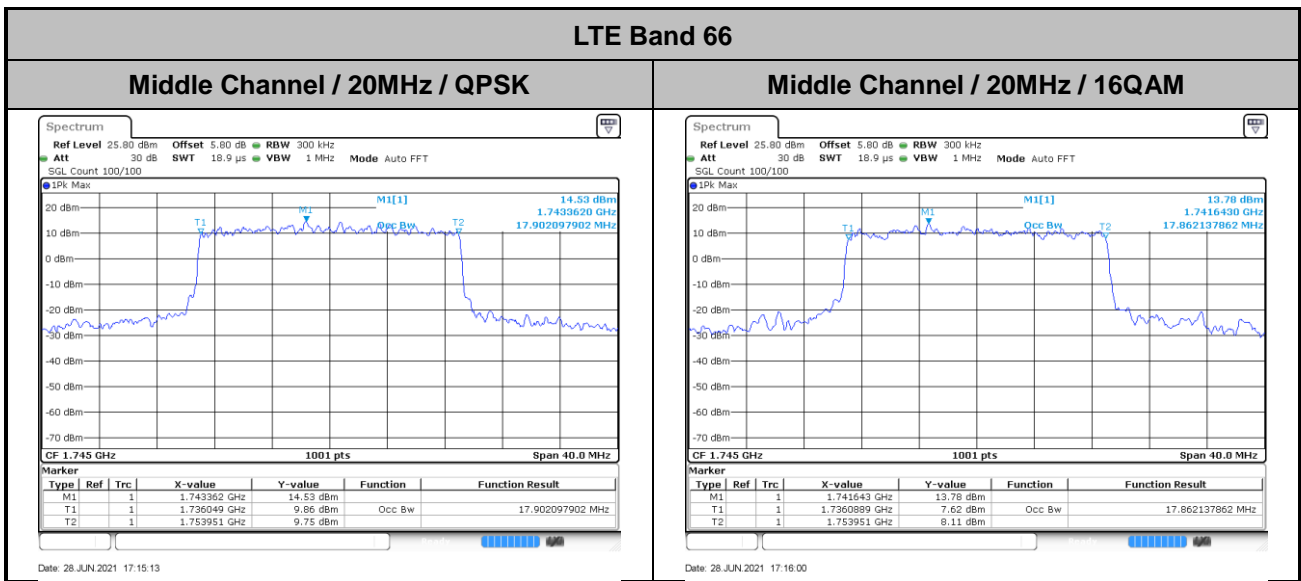
<b>Mode</b>	<b>LTE Band 66 : 26dB BW(MHz)</b>	
<b>BW</b>	<b>20MHz</b>	
<b>Mod.</b>	<b>QPSK</b>	<b>16QAM</b>
<b>Middle CH</b>	18.82	19.06





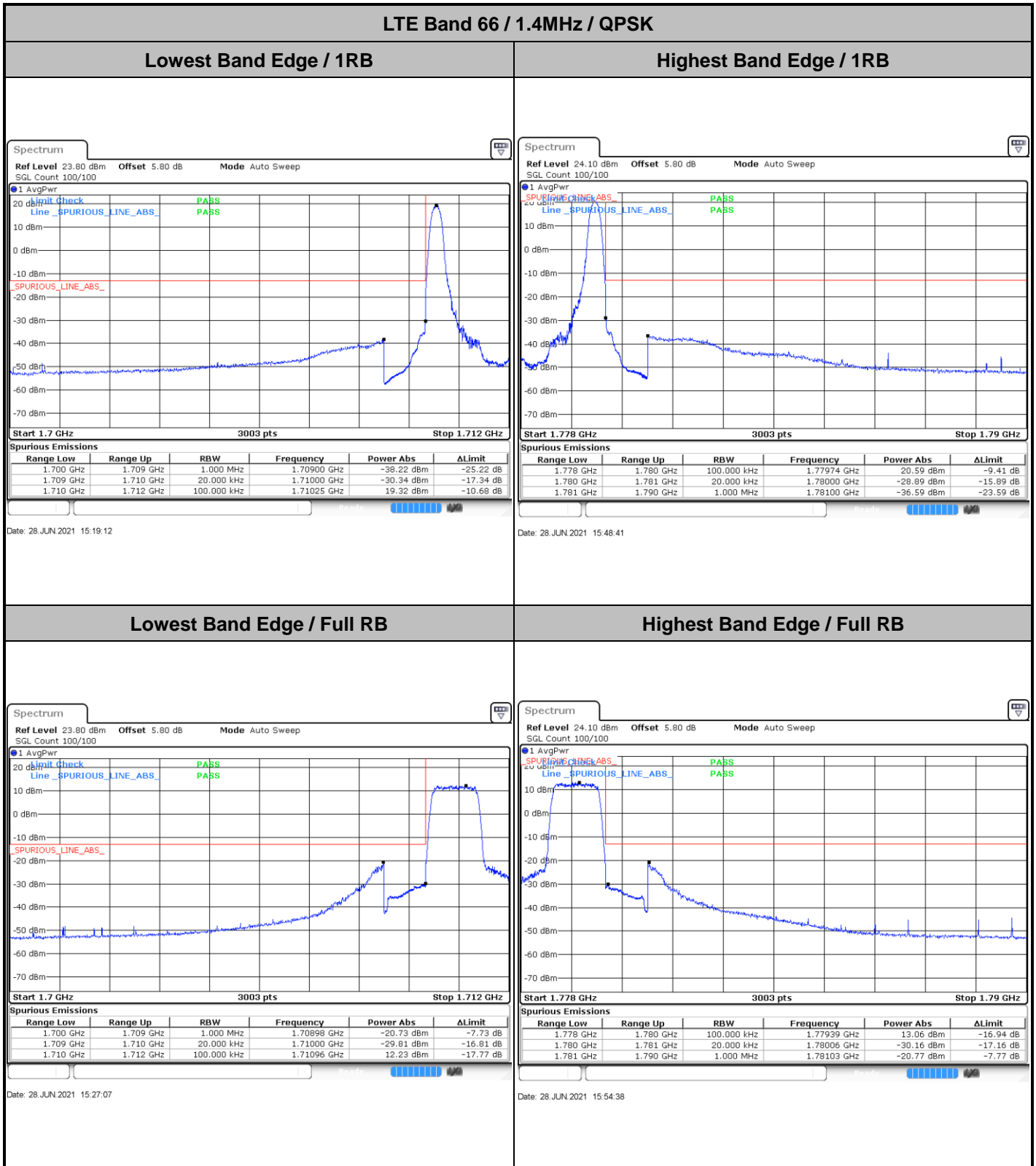
## Occupied Bandwidth

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





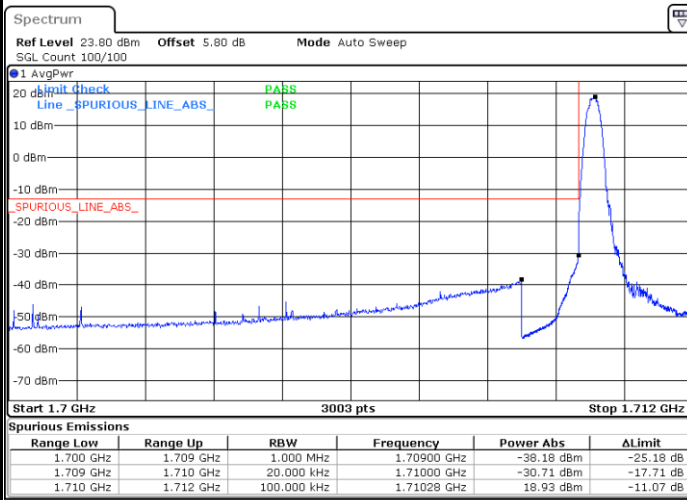
# Conducted Band Edge





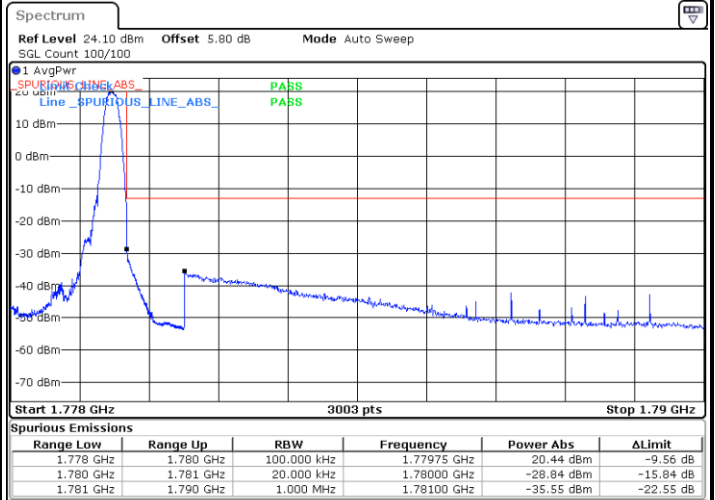
LTE Band 66 / 1.4MHz / 16QAM

Lowest Band Edge / 1 RB



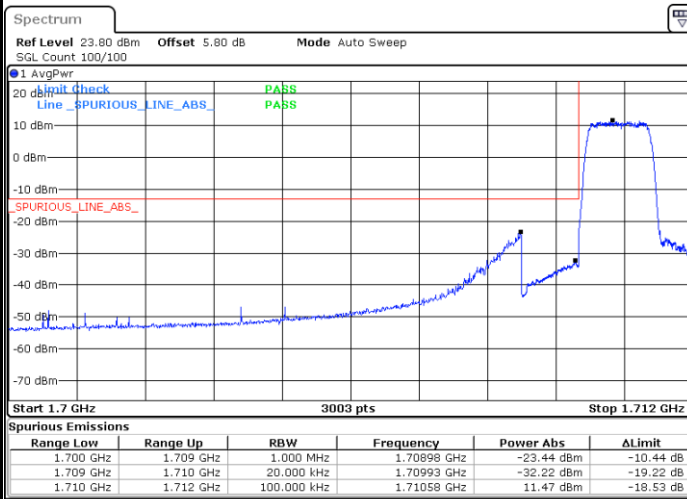
Date: 28 JUN 2021 15:21:59

Highest Band Edge / 1 RB



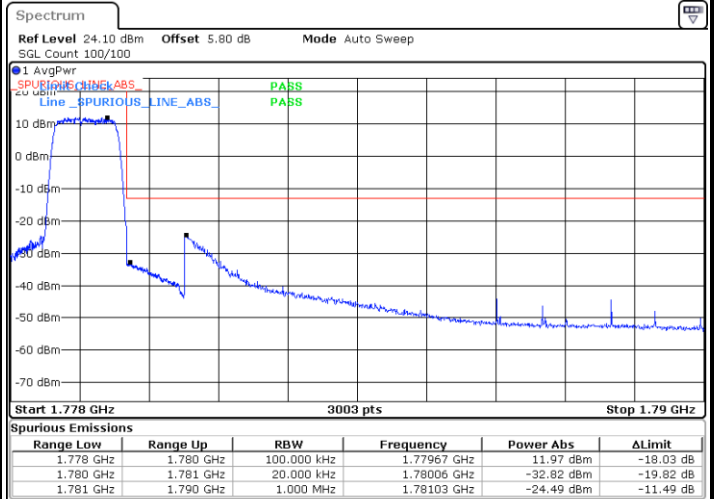
Date: 28 JUN 2021 15:50:01

Lowest Band Edge / Full RB



Date: 28 JUN 2021 15:28:26

Highest Band Edge / Full RB



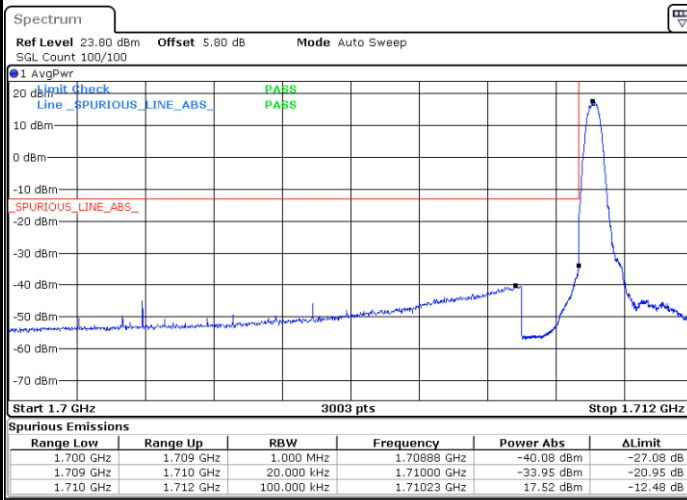
Date: 28 JUN 2021 15:55:57





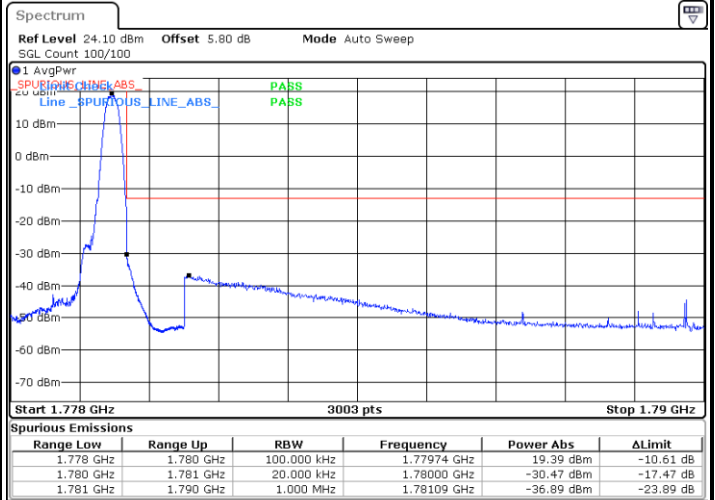
LTE Band 66 / 1.4MHz / 64QAM

Lowest Band Edge / 1 RB



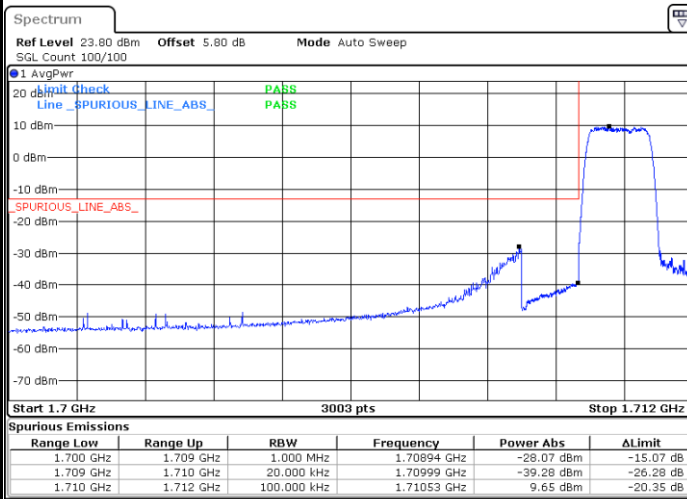
Date: 28 JUN 2021 15:23:23

Highest Band Edge / 1 RB



Date: 28 JUN 2021 15:51:28

Lowest Band Edge / Full RB



Date: 28 JUN 2021 15:31:05

Highest Band Edge / Full RB

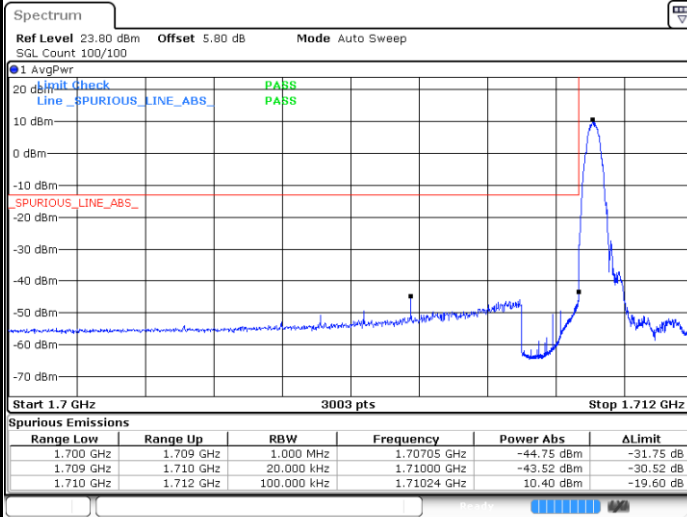


Date: 28 JUN 2021 15:57:12



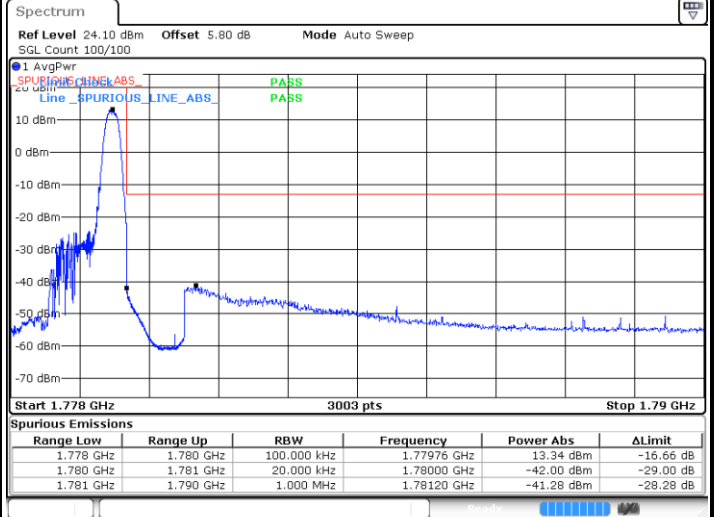
LTE Band 66 / 1.4MHz / 256QAM

Lowest Band Edge / 1 RB



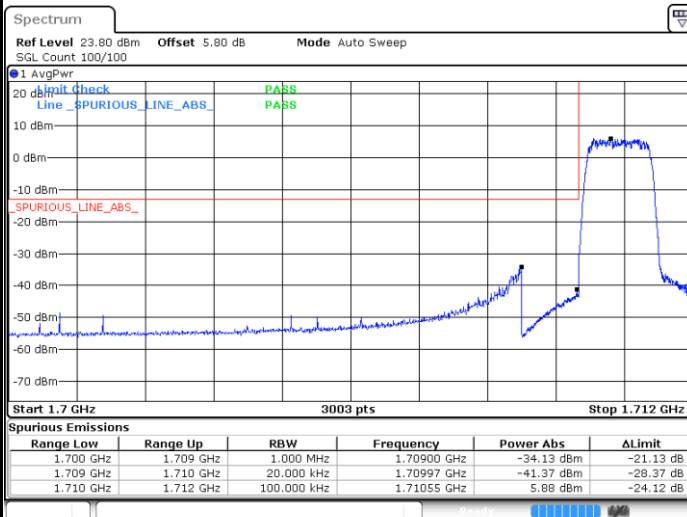
Date: 28 JUN 2021 15:25:18

Highest Band Edge / 1 RB



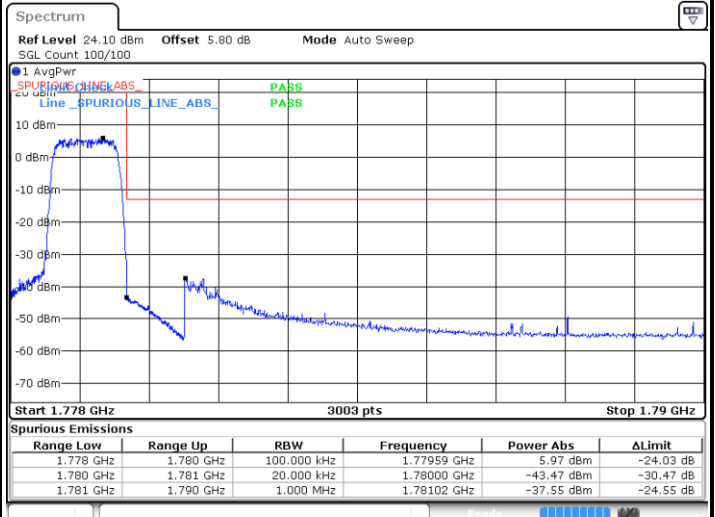
Date: 28 JUN 2021 15:53:10

Lowest Band Edge / Full RB



Date: 28 JUN 2021 15:46:30

Highest Band Edge / Full RB

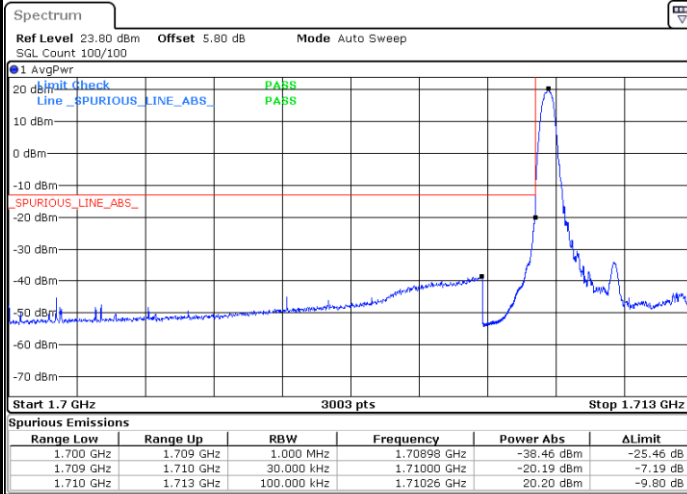


Date: 28 JUN 2021 15:58:29



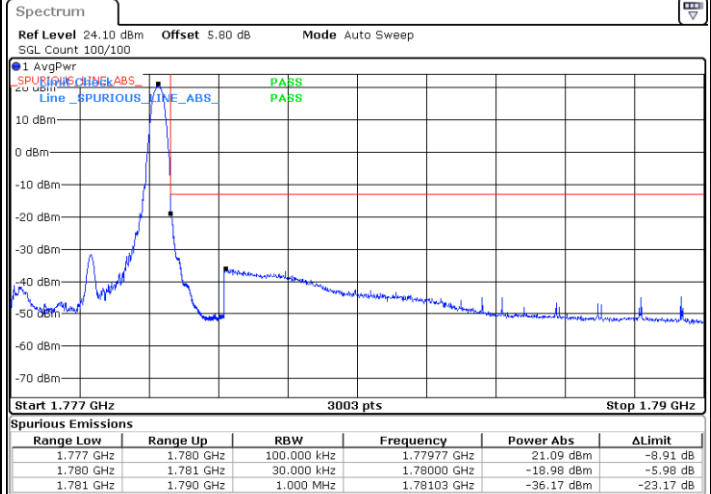
LTE Band 66 / 3MHz / QPSK

Lowest Band Edge / 1RB



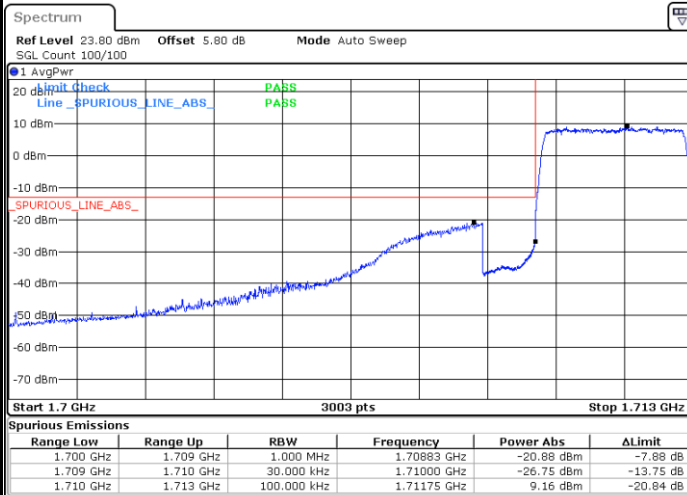
Date: 28 JUN 2021 16:08:01

Highest Band Edge / 1 RB



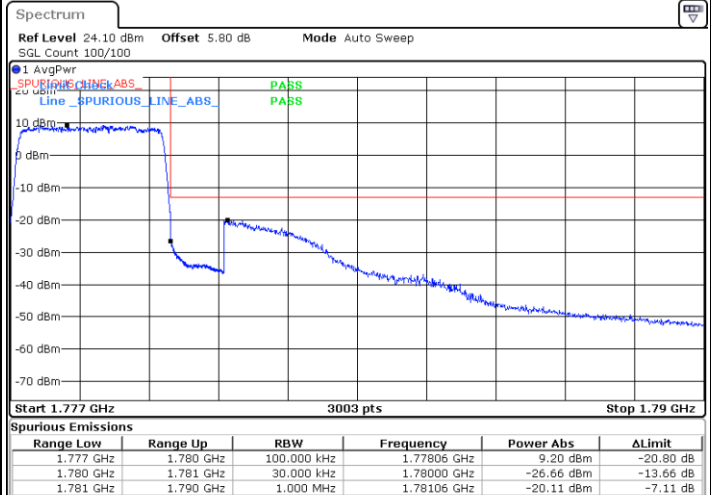
Date: 28 JUN 2021 16:15:21

Lowest Band Edge / Full RB



Date: 28 JUN 2021 16:11:35

Highest Band Edge / Full RB

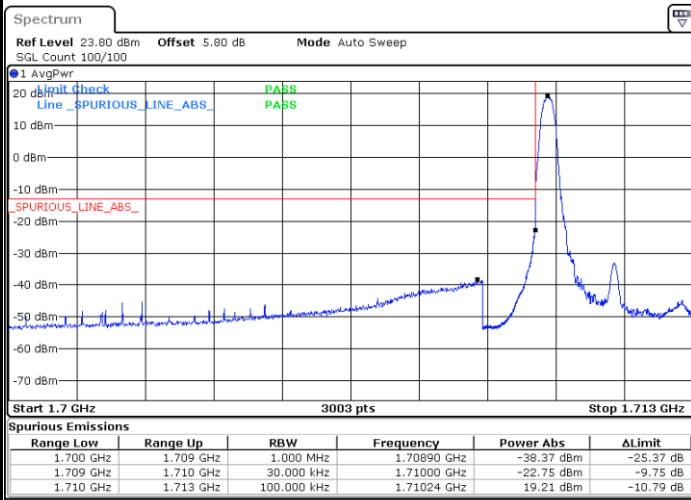


Date: 28 JUN 2021 16:19:02



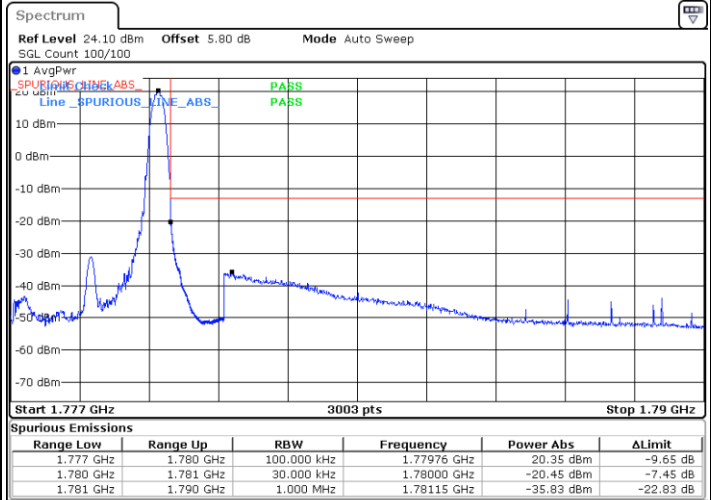
LTE Band 66 / 3MHz / 16QAM

Lowest Band Edge / 1 RB



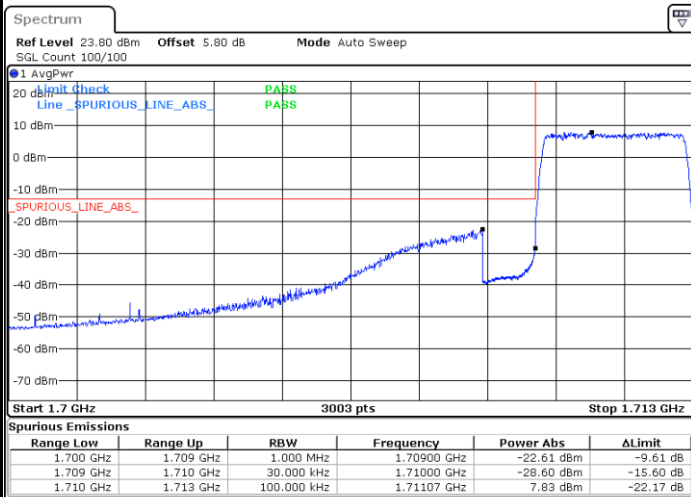
Date: 28 JUN 2021 16:08:51

Highest Band Edge / 1 RB



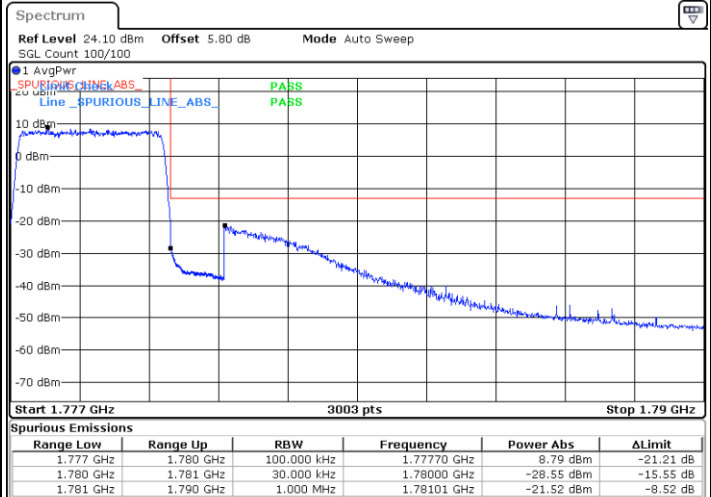
Date: 28 JUN 2021 16:16:11

Lowest Band Edge / Full RB



Date: 28 JUN 2021 16:12:38

Highest Band Edge / Full RB

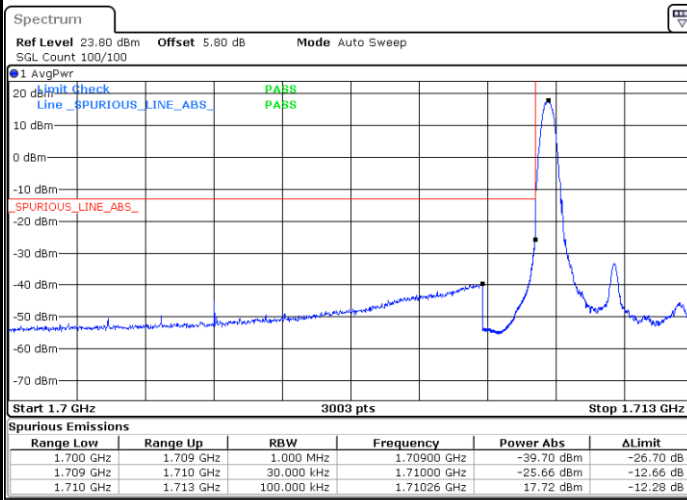


Date: 28 JUN 2021 16:19:48



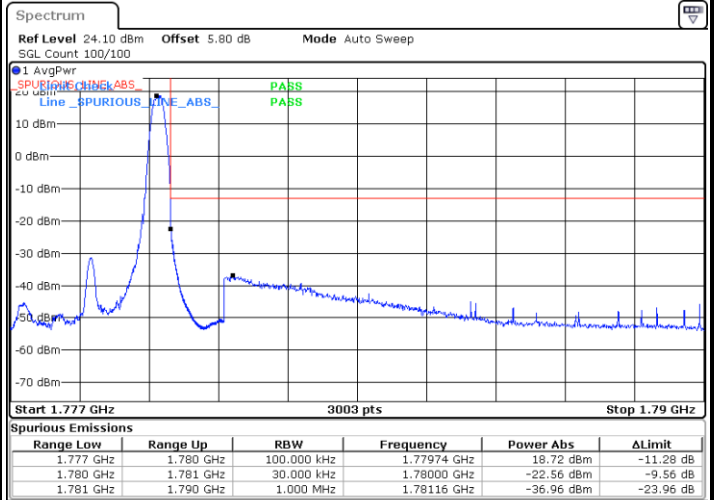
LTE Band 66 / 3MHz / 64QAM

Lowest Band Edge / 1 RB



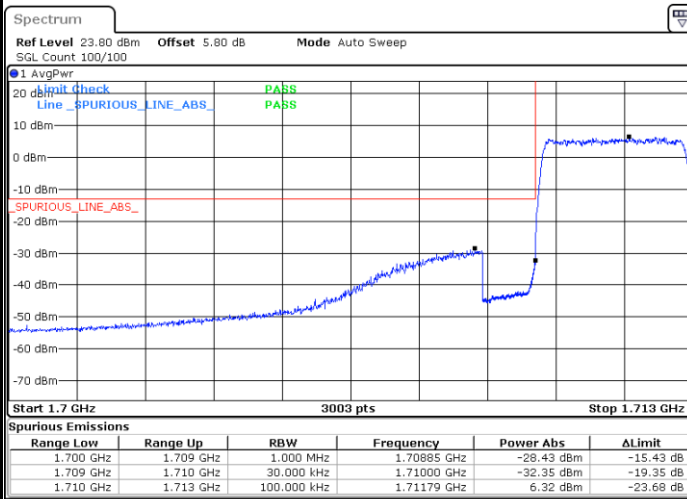
Date: 28 JUN 2021 16:09:37

Highest Band Edge / 1 RB



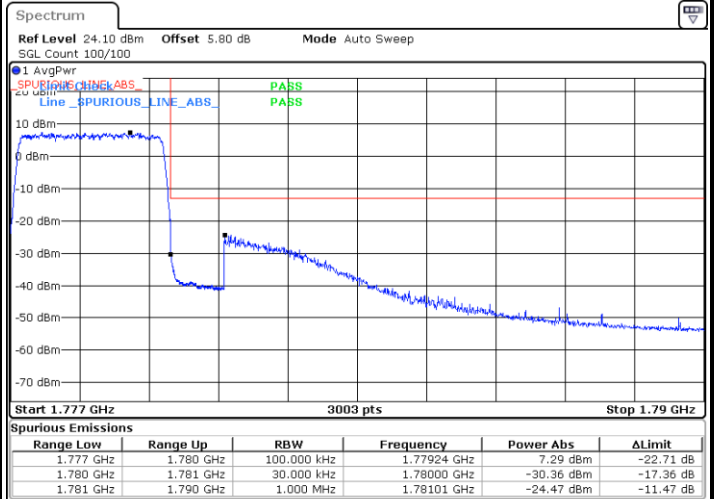
Date: 28 JUN 2021 16:16:55

Lowest Band Edge / Full RB



Date: 28 JUN 2021 16:13:24

Highest Band Edge / Full RB

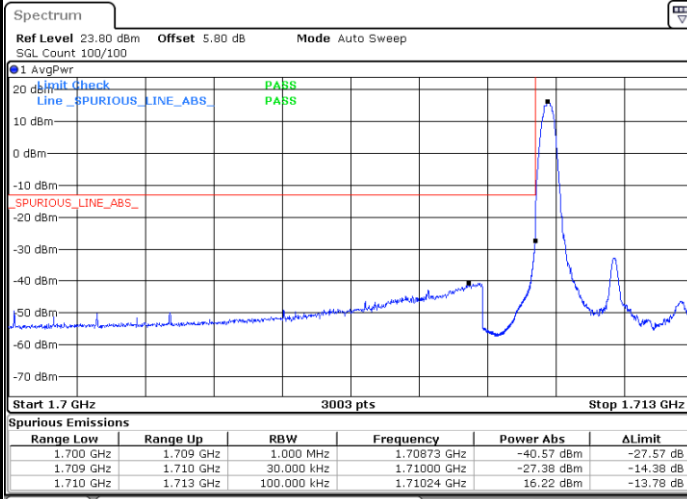


Date: 28 JUN 2021 16:20:35



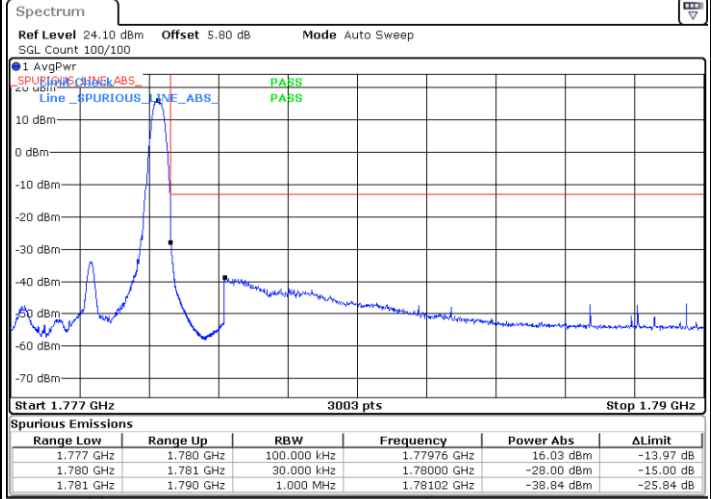
LTE Band 66 / 3MHz / 256QAM

Lowest Band Edge / 1 RB



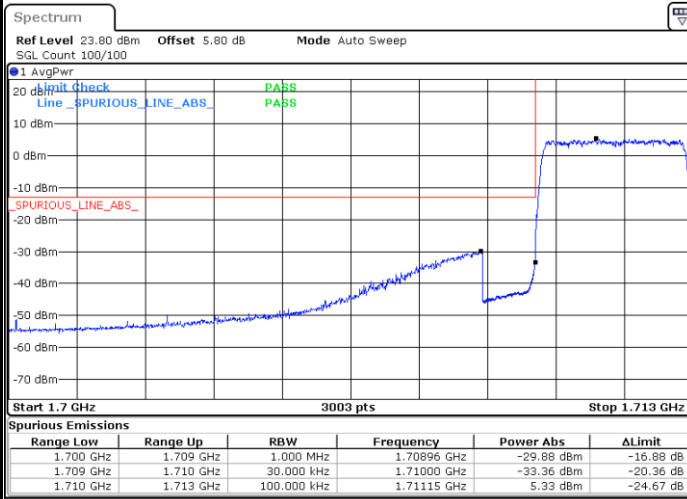
Date: 28 JUN 2021 16:10:24

Highest Band Edge / 1 RB



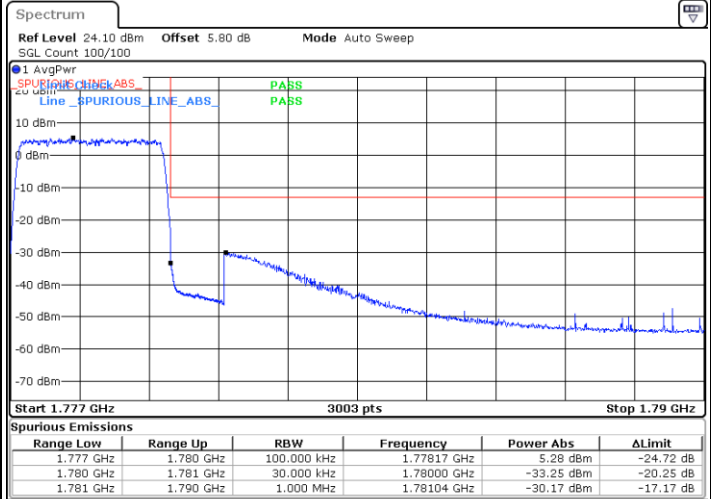
Date: 28 JUN 2021 16:17:40

Lowest Band Edge / Full RB



Date: 28 JUN 2021 16:14:05

Highest Band Edge / Full RB

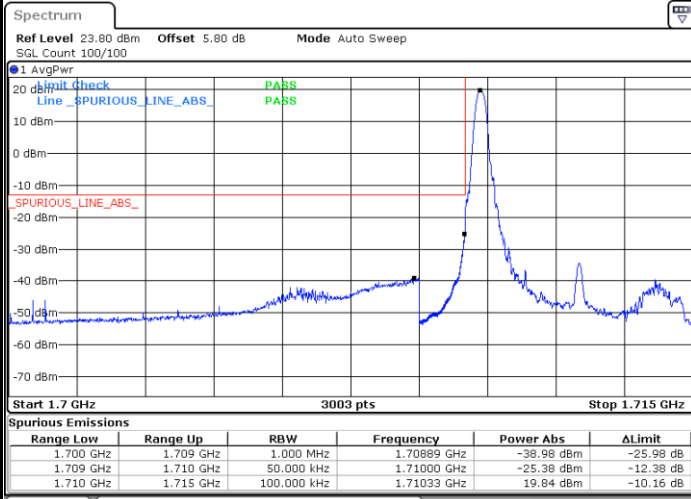


Date: 28 JUN 2021 16:21:15



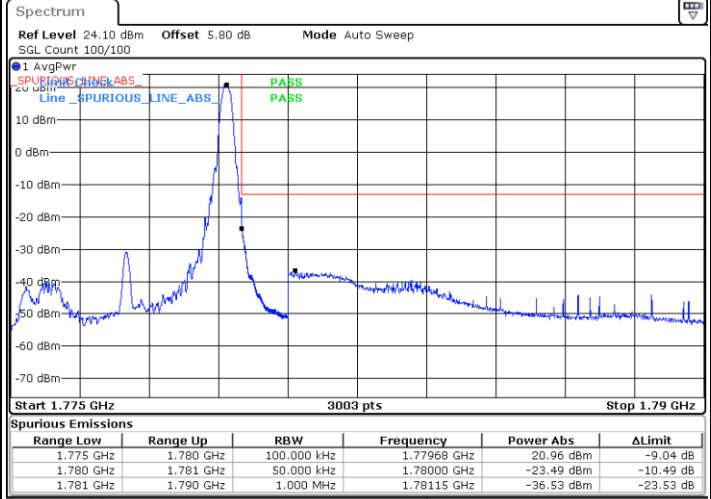
LTE Band 66 / 5MHz / QPSK

Lowest Band Edge / 1 RB



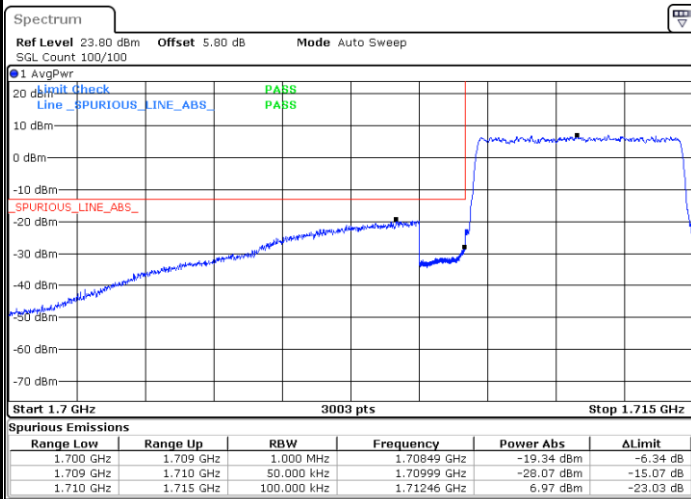
Date: 28 JUN 2021 16:25:29

Highest Band Edge / 1 RB



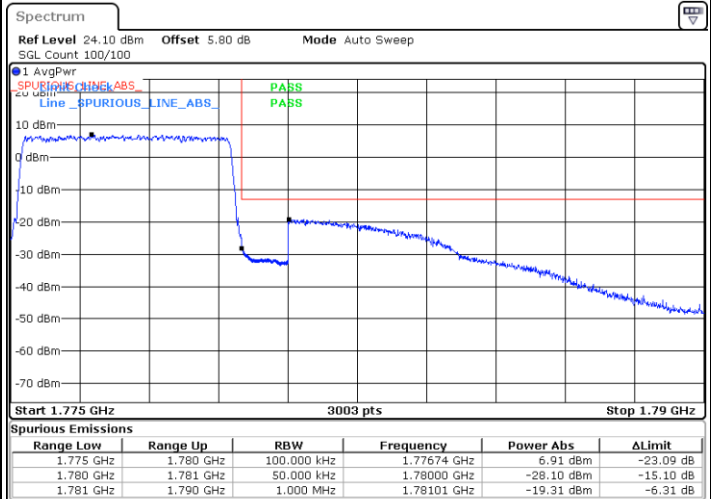
Date: 28 JUN 2021 16:30:07

Lowest Band Edge / Full RB



Date: 28 JUN 2021 16:27:46

Highest Band Edge / Full RB



Date: 28 JUN 2021 16:32:39