



Frequency Stability

Test Conditions		LTE Band 2 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 20MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0007	PASS
40	Normal Voltage	0.0009	
30	Normal Voltage	0.0010	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0001	
0	Normal Voltage	0.0011	
-10	Normal Voltage	0.0007	
-20	Normal Voltage	0.0004	
-30	Normal Voltage	0.0018	
20	Maximum Voltage	0.0007	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0014	

Note:

1. Normal Voltage =3.87 V. ; Battery End Point (BEP) =3.4 V. ; Maximum Voltage =4.48 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.

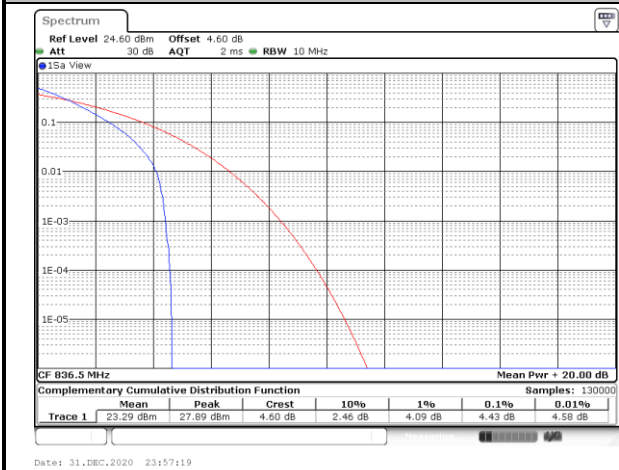


LTE Band 5

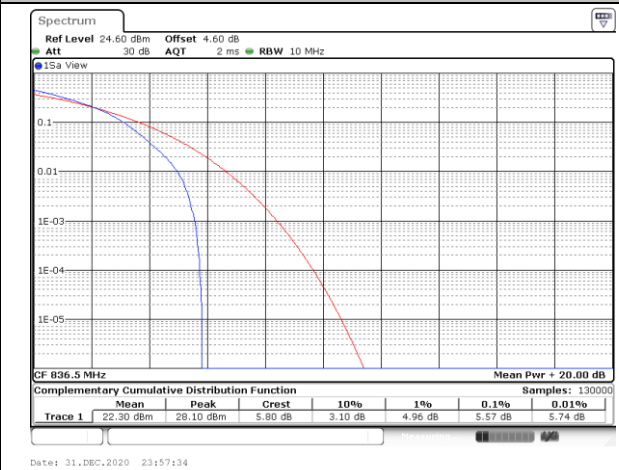
Peak-to-Average Ratio

Mode	LTE Band 5 / 10MHz			
Mod.	QPSK	16QAM	64QAM	Limit: 13dB
RB Size	Full RB	Full RB	Full RB	Result
Middle CH	4.43	5.57	6.49	PASS

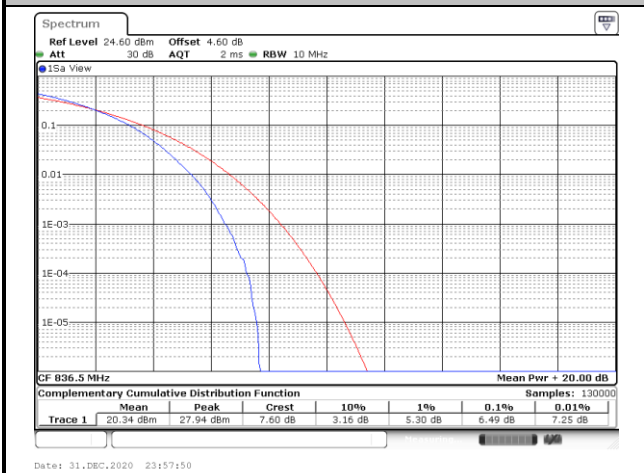
LTE Band 5 / 10MHz / QPSK Middle Channel / Full RB



LTE Band 5 / 10MHz / 16QAM Middle Channel / Full RB



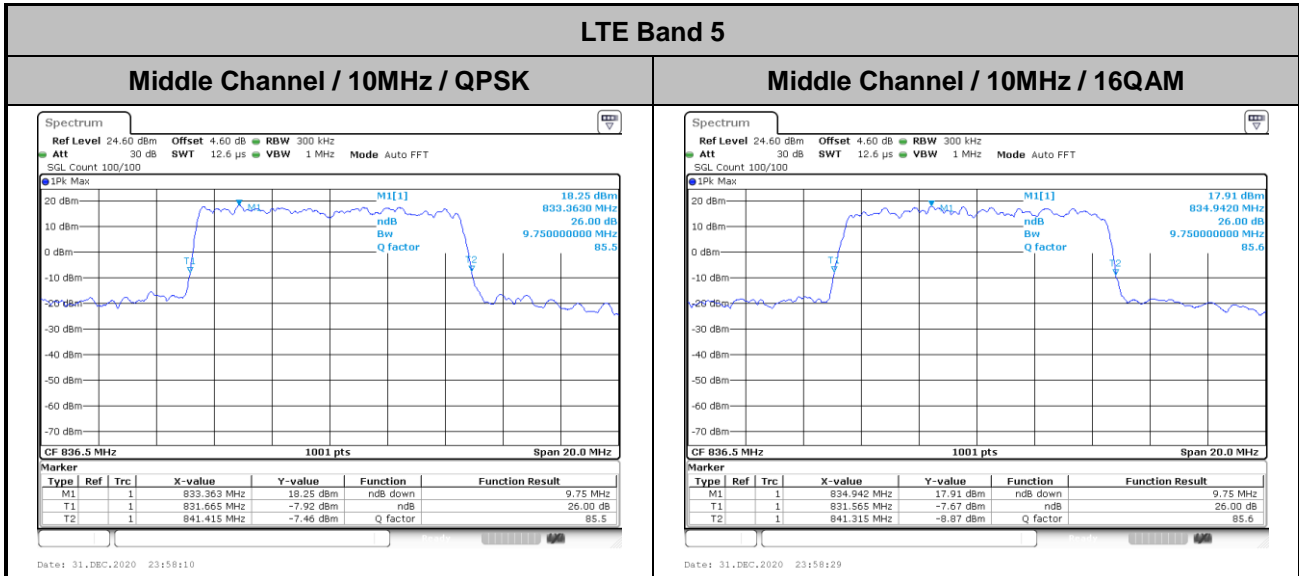
LTE Band 5 / 10MHz / 64QAM Middle Channel / Full RB





26dB Bandwidth

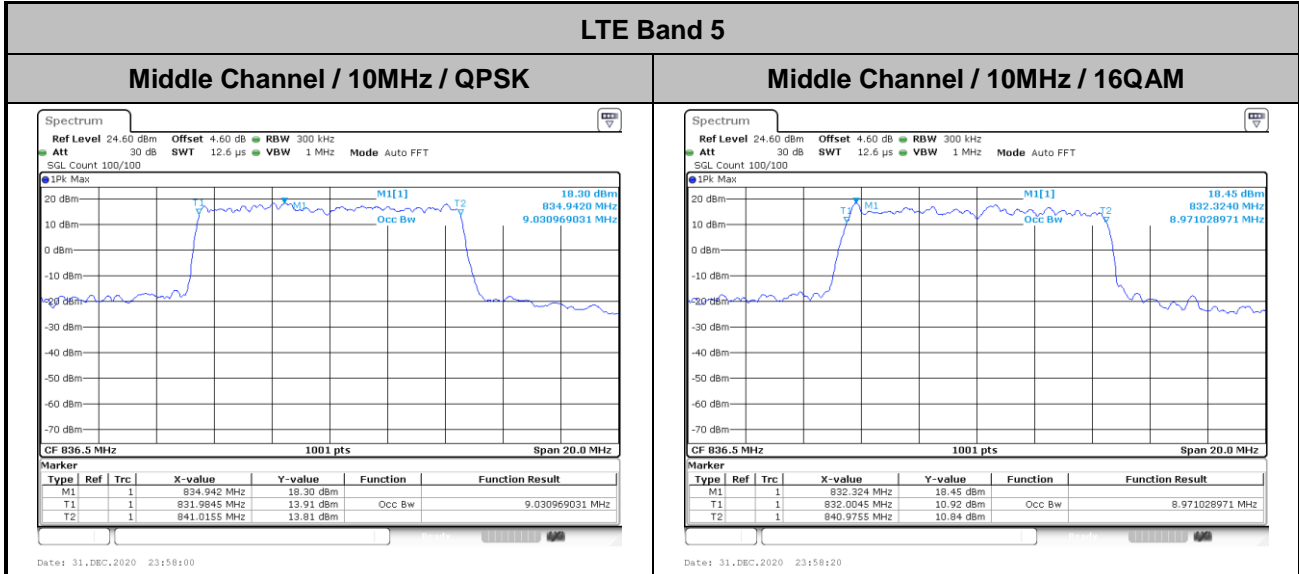
Mode	LTE Band 5 : 26dB BW(MHz)	
BW	10MHz	
Mod.	QPSK	16QAM
Middle CH	9.75	9.75





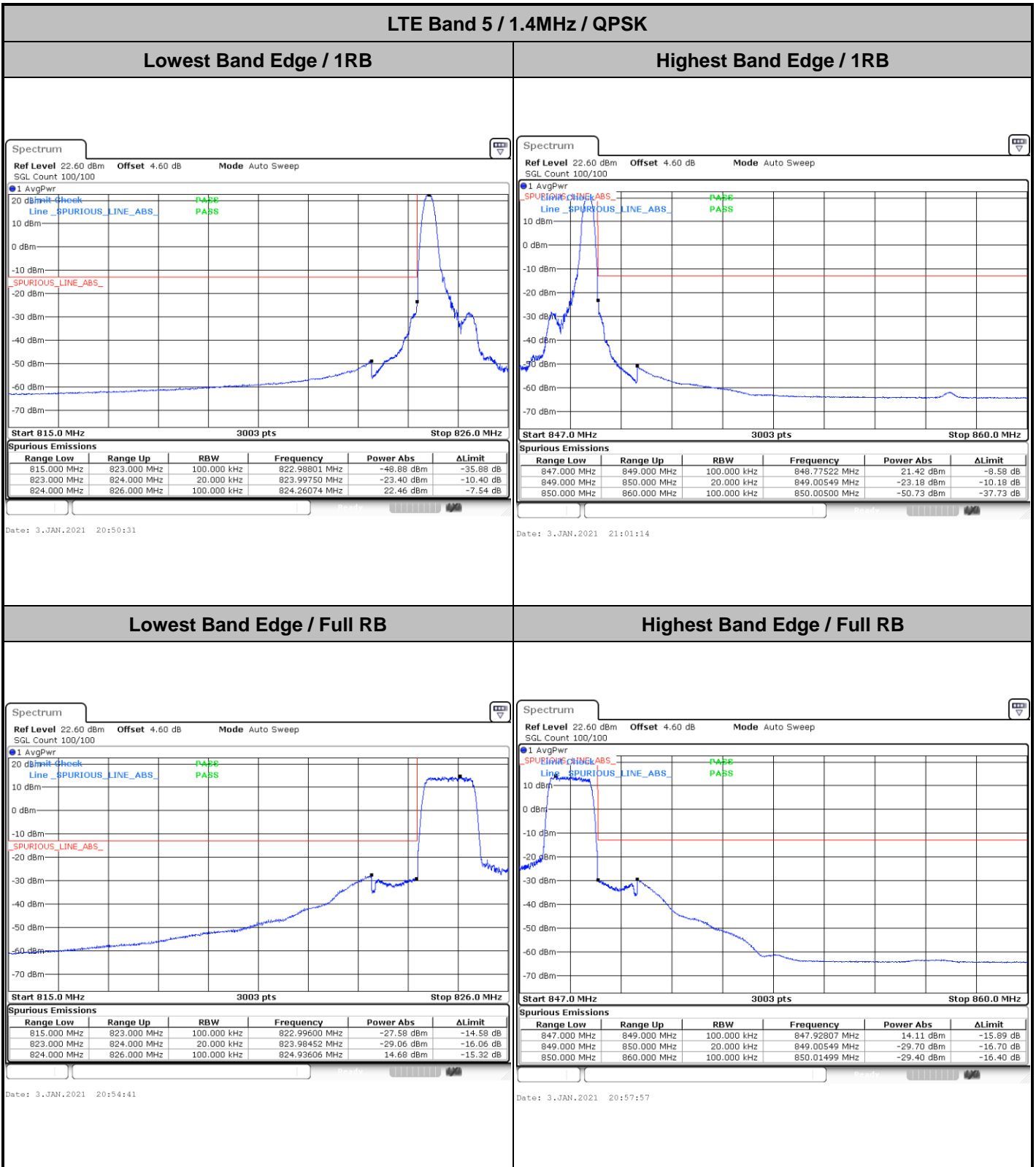
Occupied Bandwidth

Mode	LTE Band 5 : 99%OBW(MHz)	
BW	10MHz	
Mod.	QPSK	16QAM
Middle CH	9.03	8.97





Conducted Band Edge





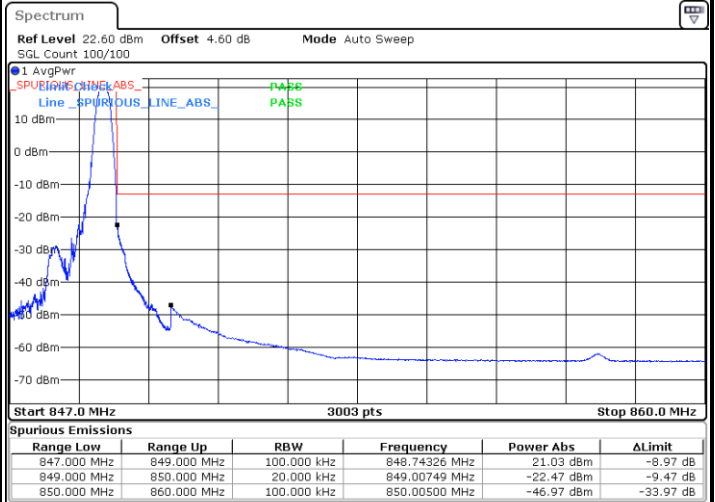
LTE Band 5 / 1.4MHz / 16QAM

Lowest Band Edge / 1 RB



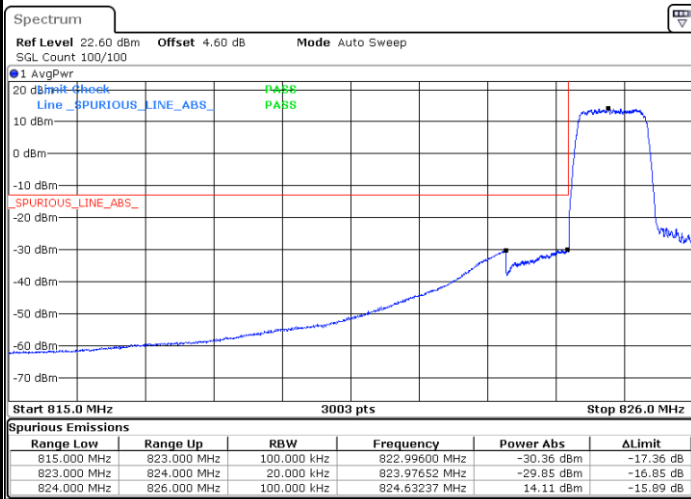
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Highest Band Edge / 1 RB



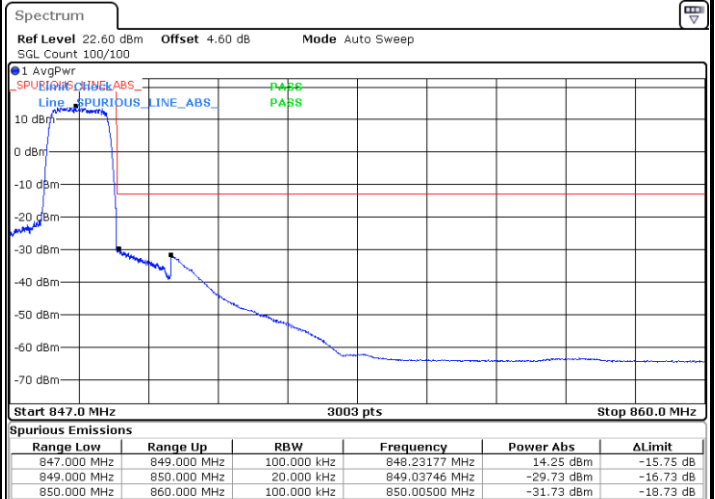
Date: 3.JAN.2021 21:02:52

Lowest Band Edge / Full RB



Date: 3.JAN.2021 20:56:19

Highest Band Edge / Full RB



Date: 3.JAN.2021 20:59:35



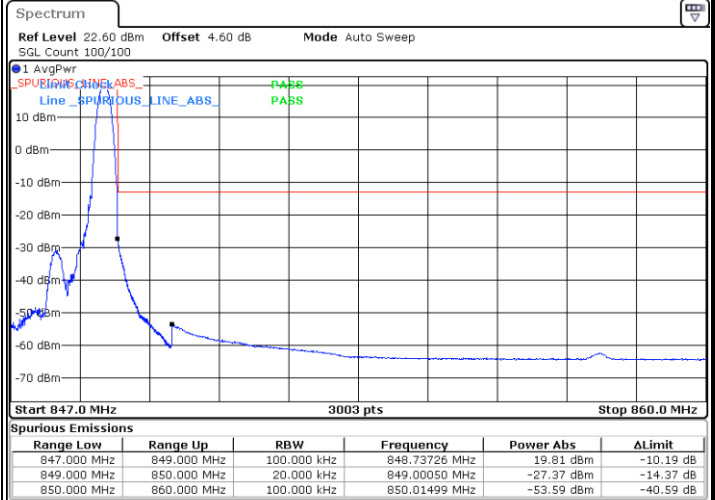
LTE Band 5 / 1.4MHz / 64QAM

Lowest Band Edge / 1 RB



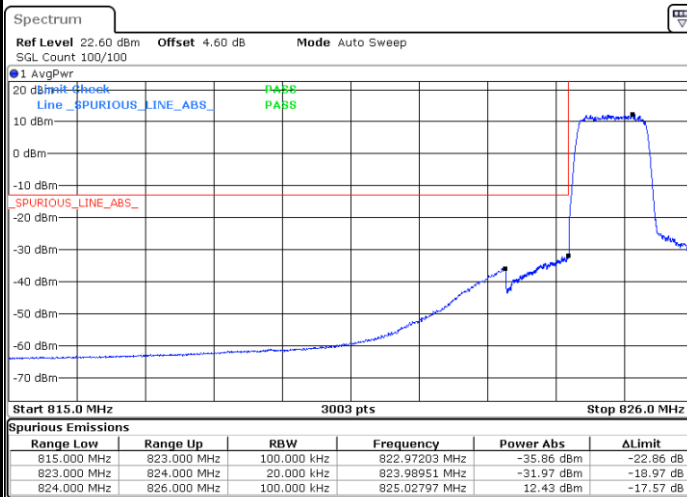
Date: 3.JAN.2021 21:51:51

Highest Band Edge / 1 RB



Date: 3.JAN.2021 21:55:06

Lowest Band Edge / Full RB



Date: 3.JAN.2021 21:50:13

Highest Band Edge / Full RB

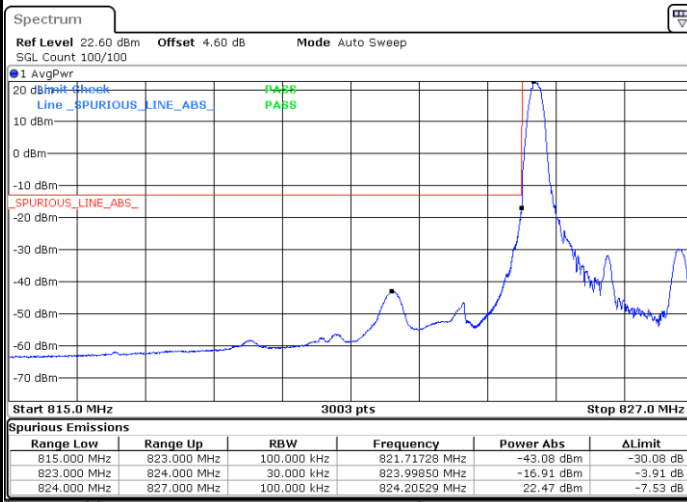


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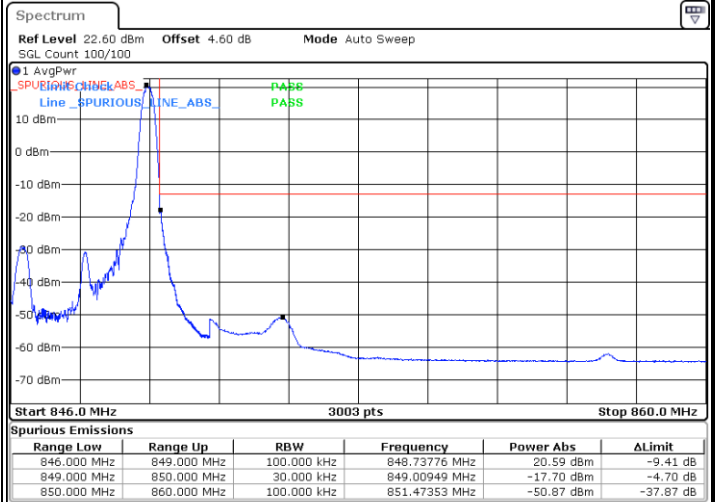
LTE Band 5 / 3MHz / QPSK

Lowest Band Edge / 1RB



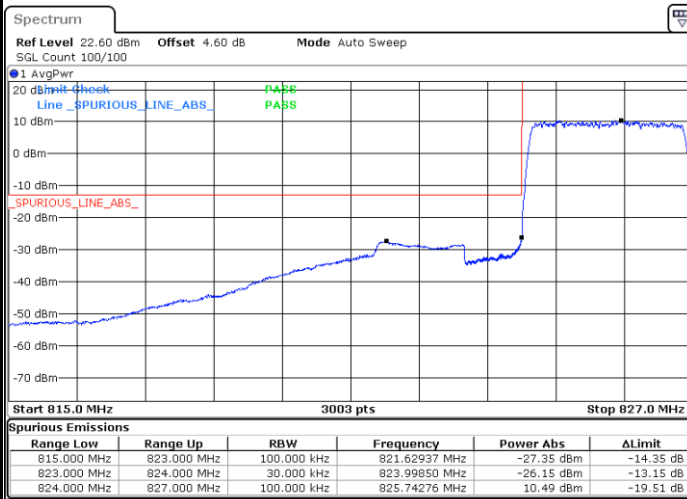
Date: 31.DEC.2020 22:36:22

Highest Band Edge / 1 RB



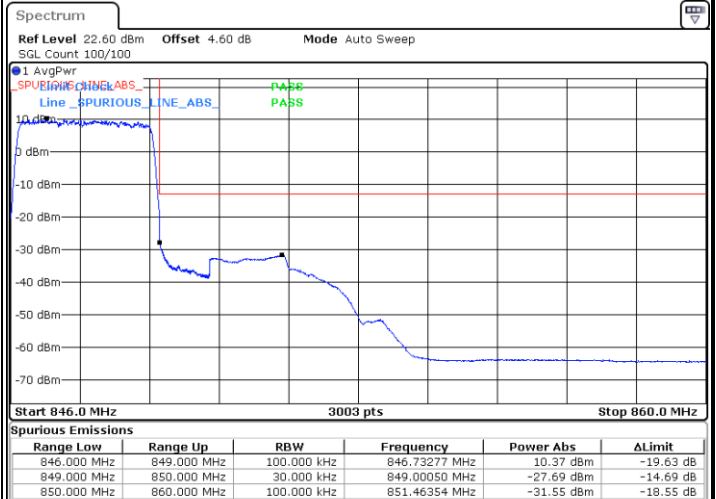
Date: 31.DEC.2020 22:42:55

Lowest Band Edge / Full RB



Date: 31.DEC.2020 22:39:38

Highest Band Edge / Full RB

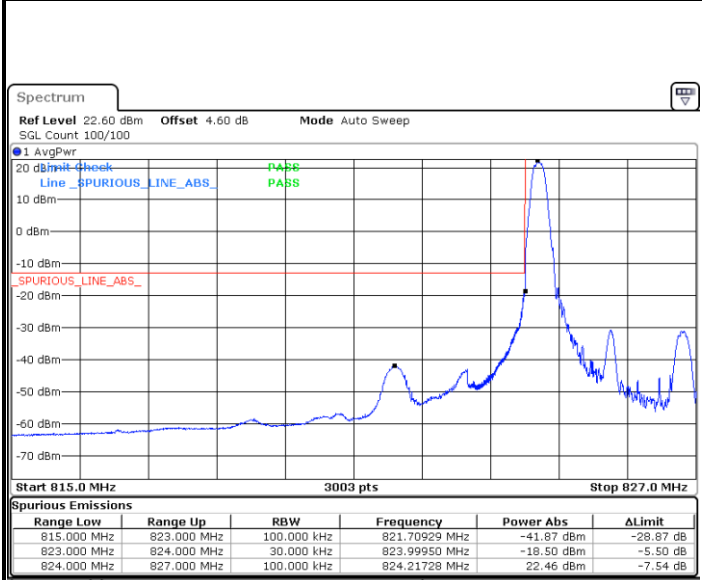


Date: 31.DEC.2020 22:46:12



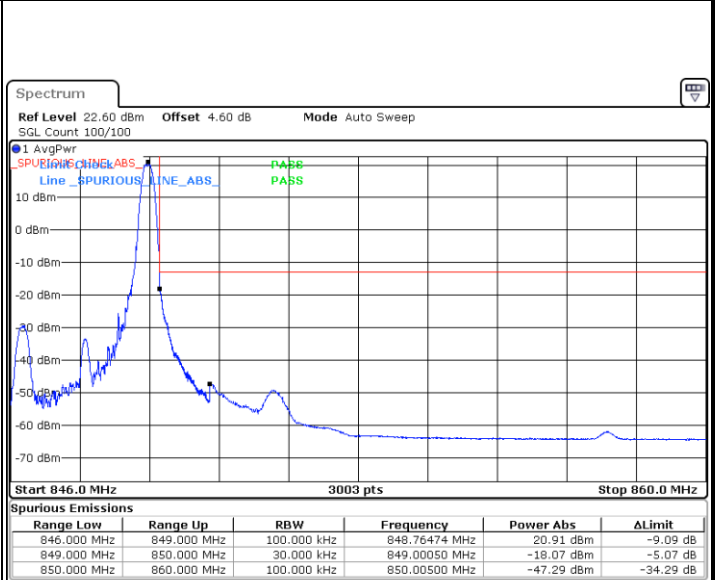
LTE Band 5 / 3MHz / 16QAM

Lowest Band Edge / 1 RB



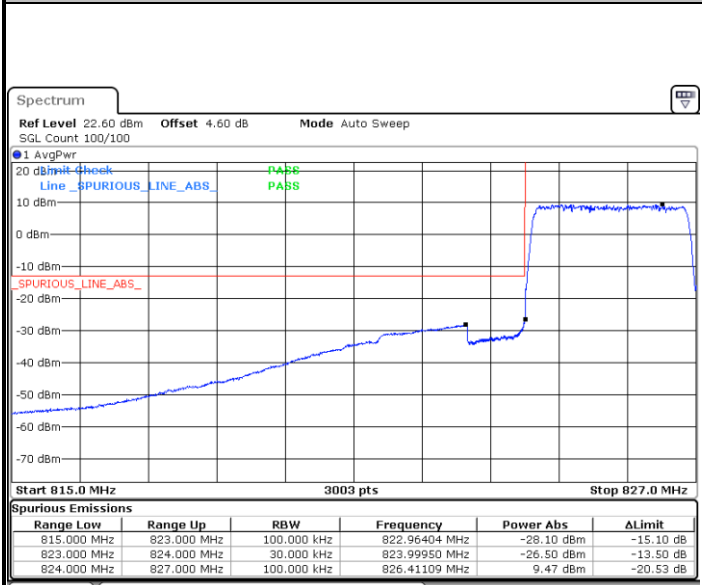
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Highest Band Edge / 1 RB



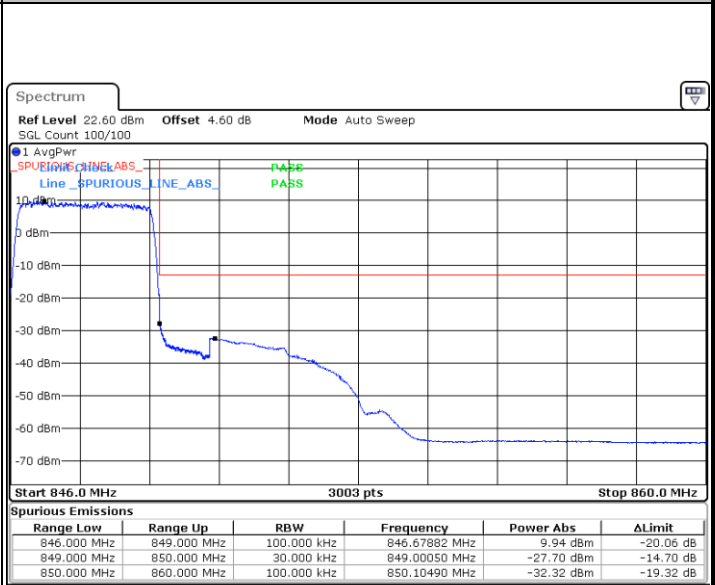
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Lowest Band Edge / Full RB



Date: 31.DEC.2020 22:41:17

Highest Band Edge / Full RB

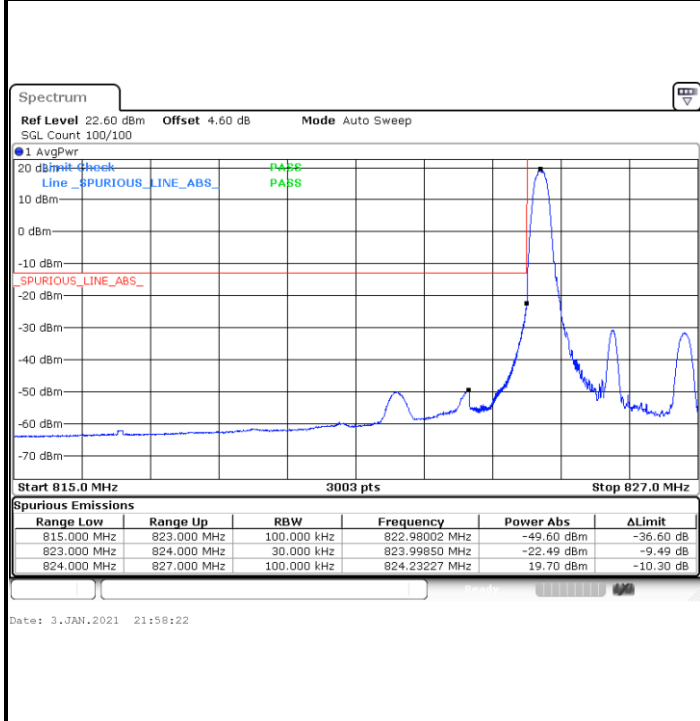


Date: 31.DEC.2020 22:47:51

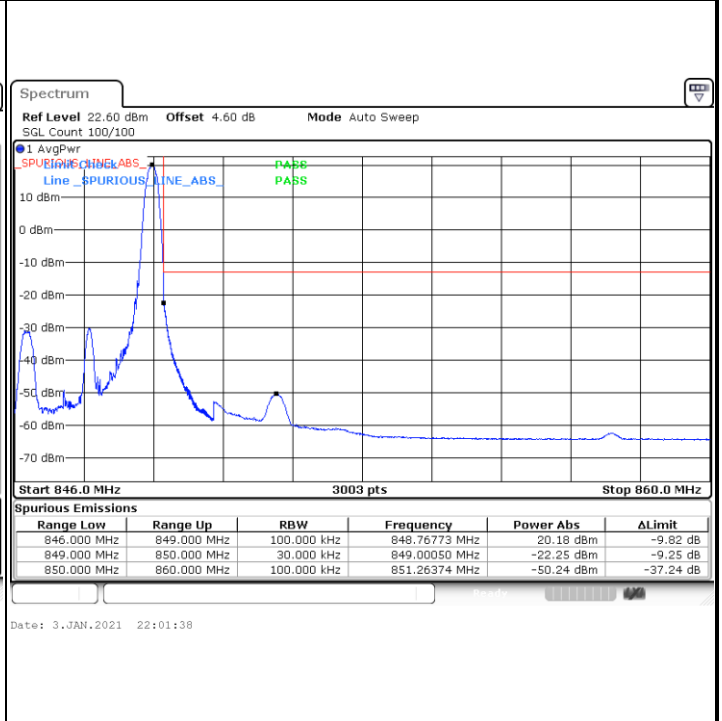


LTE Band 5 / 3MHz / 64QAM

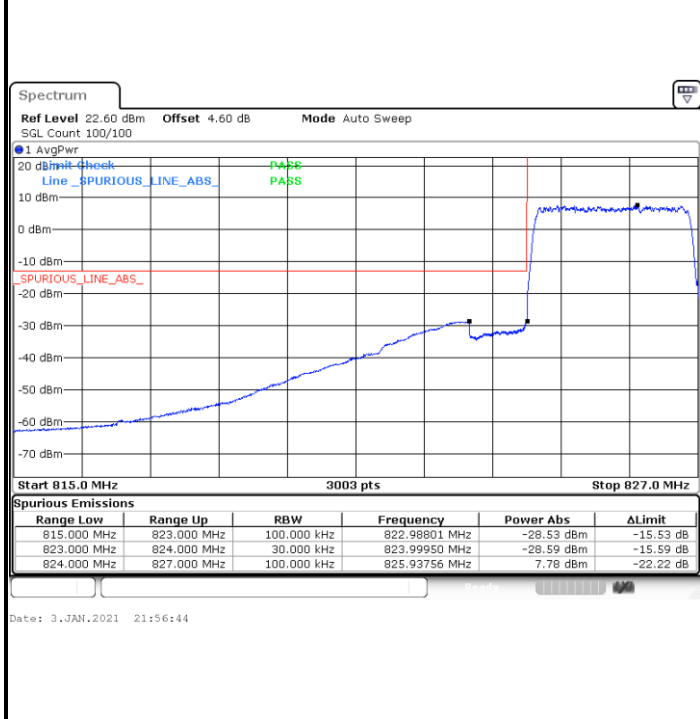
Lowest Band Edge / 1 RB



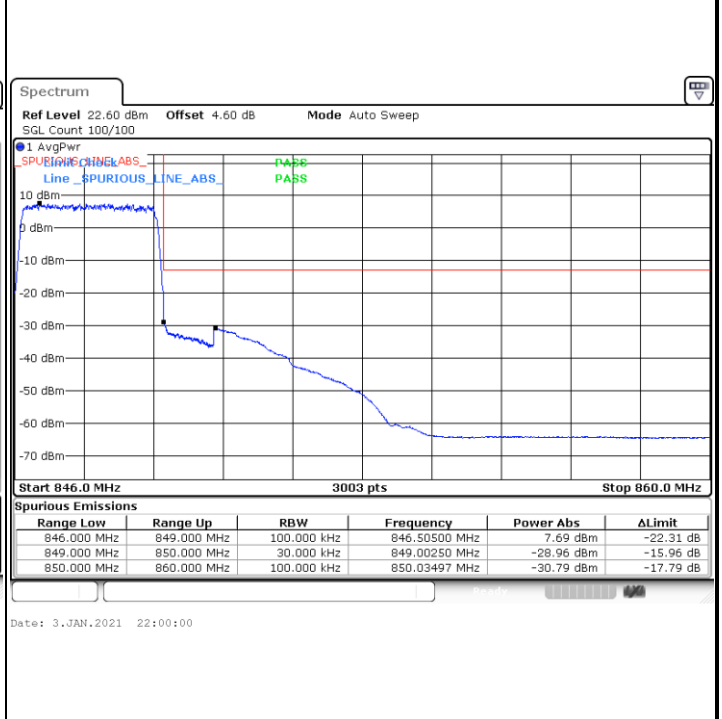
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



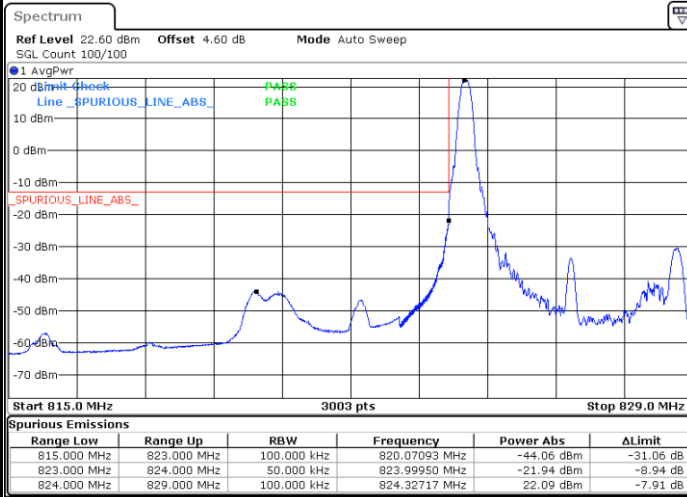
Highest Band Edge / Full RB





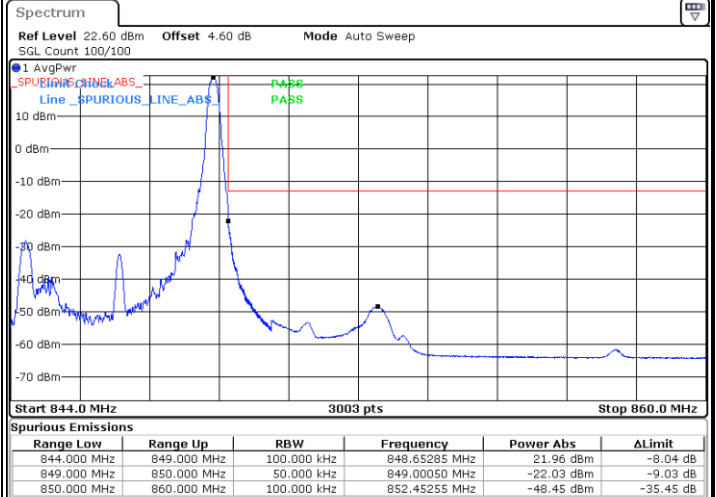
LTE Band 5 / 5MHz / QPSK

Lowest Band Edge / 1 RB



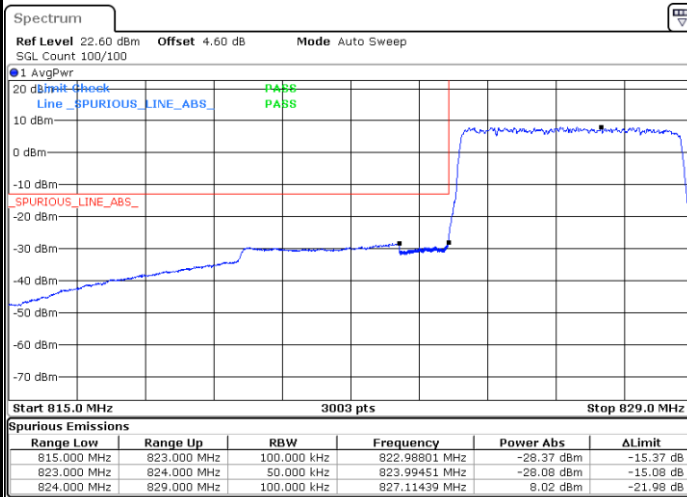
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Highest Band Edge / 1 RB



Date: 3. JAN. 2021 21:04:30

Lowest Band Edge / Full RB



Date: 31. DEC. 2020 22:52:46

Highest Band Edge / Full RB

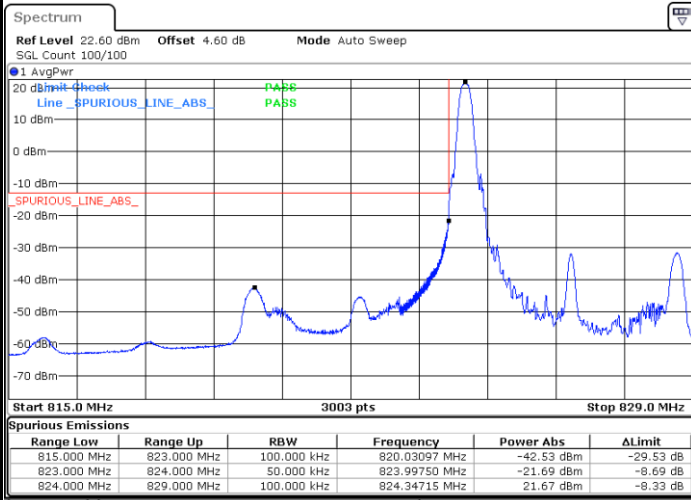


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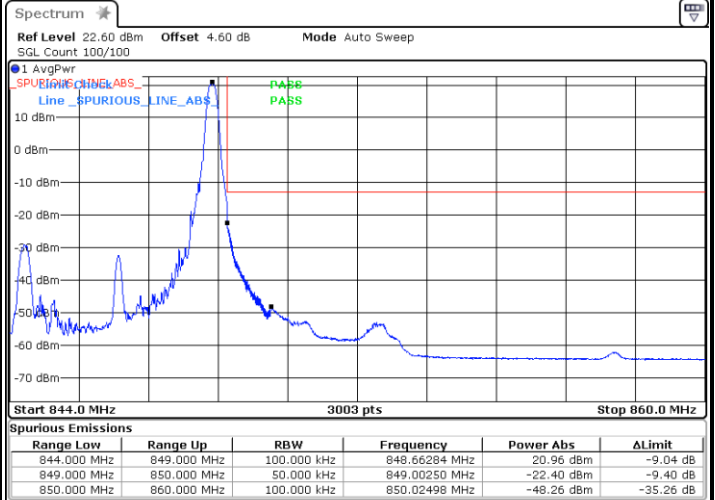


LTE Band 5 / 5MHz / 16QAM

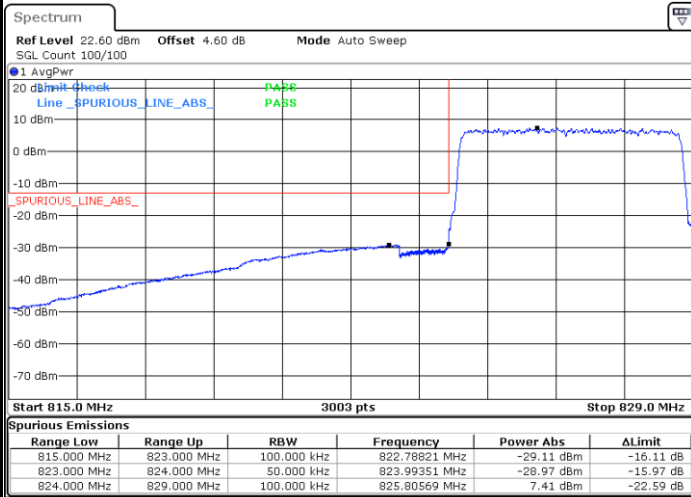
Lowest Band Edge / 1RB



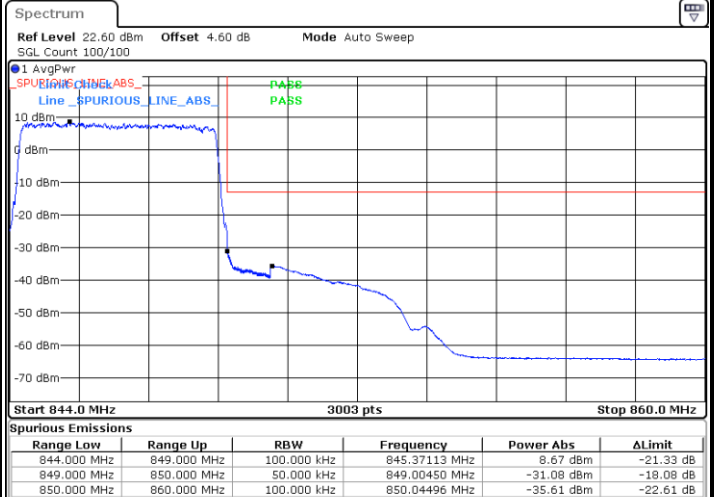
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



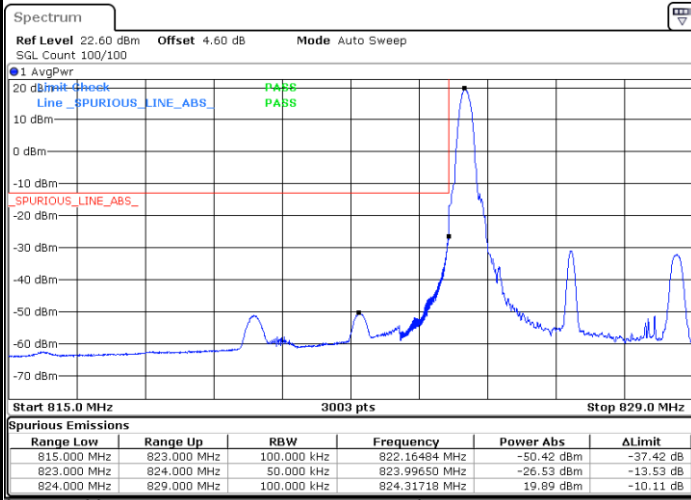
Highest Band Edge / Full RB





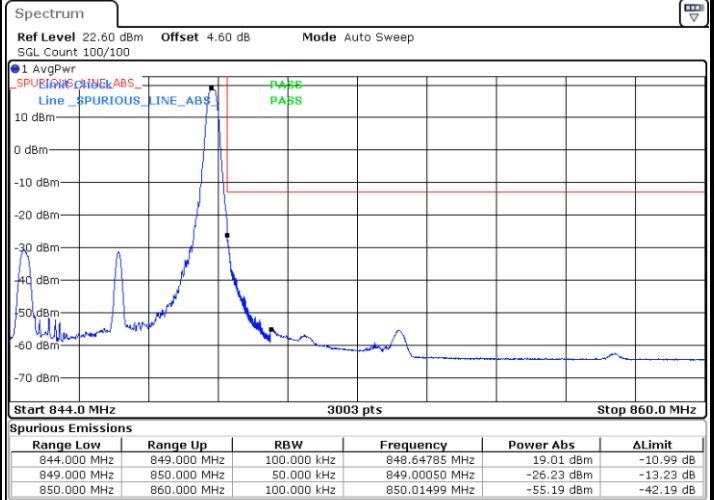
LTE Band 5 / 5MHz / 64QAM

Lowest Band Edge / 1RB



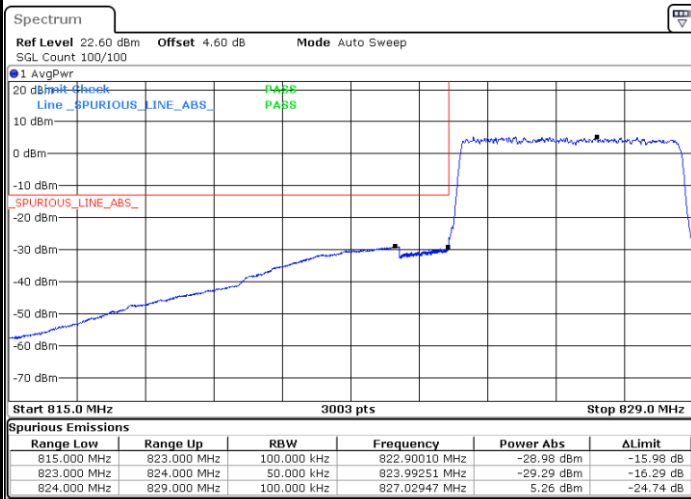
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Highest Band Edge / 1 RB



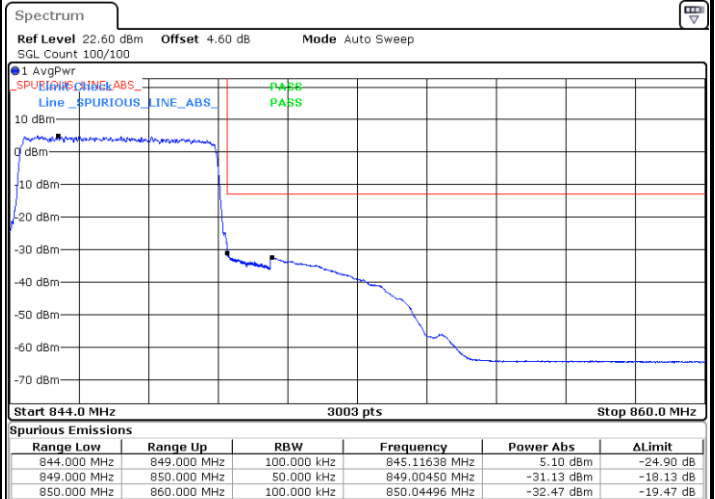
Date: 3.JAN.2021 22:08:09

Lowest Band Edge / Full RB



Date: 3.JAN.2021 22:03:15

Highest Band Edge / Full RB



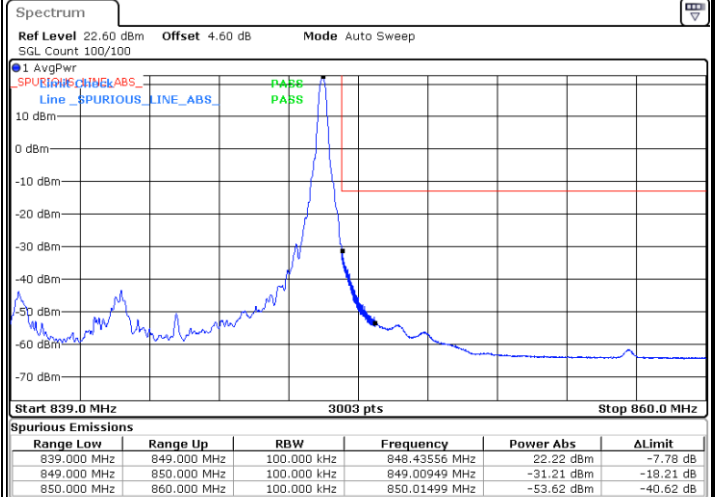
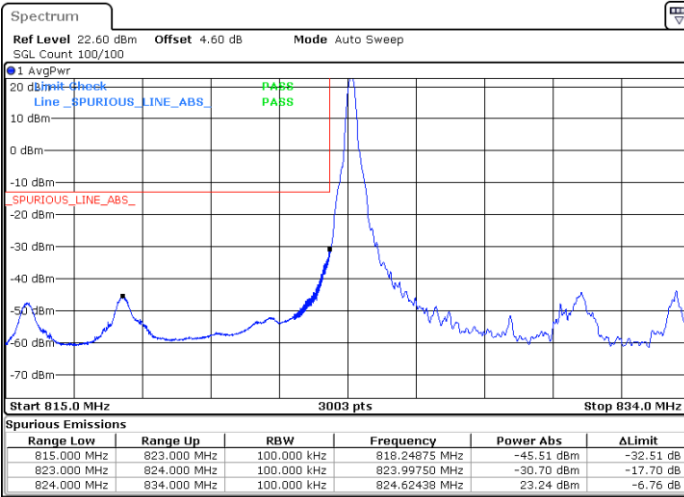
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LTE Band 5 / 10MHz / QPSK

Lowest Band Edge / 1 RB

Highest Band Edge / 1 RB

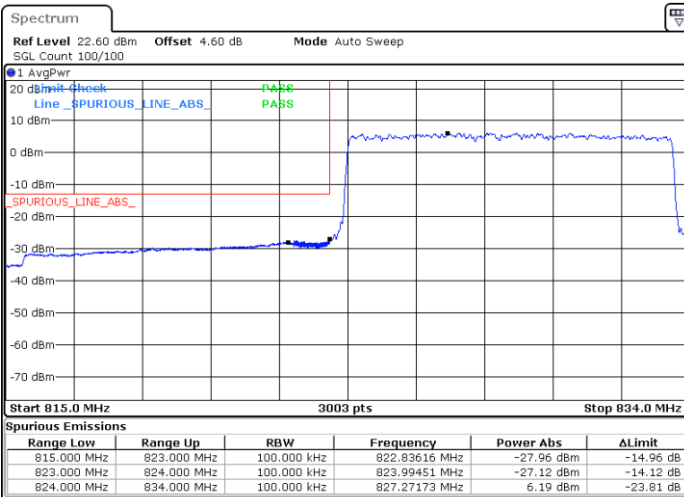


Date: 3.JAN.2021 21:11:02

Date: 3.JAN.2021 21:17:34

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



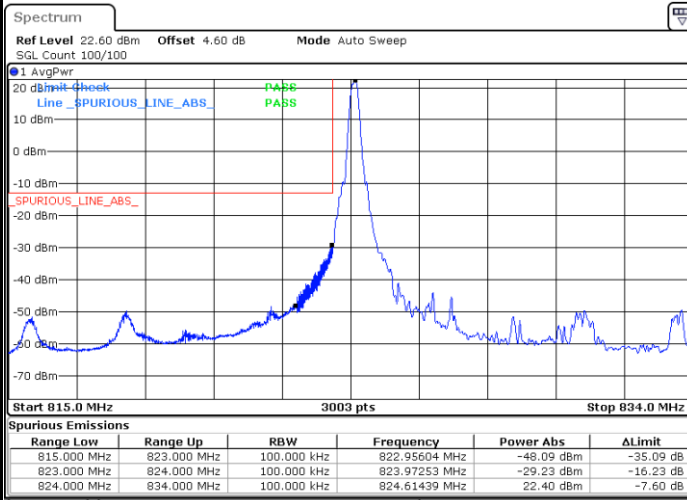
Date: 3.JAN.2021 21:14:18

Date: 3.JAN.2021 21:20:50



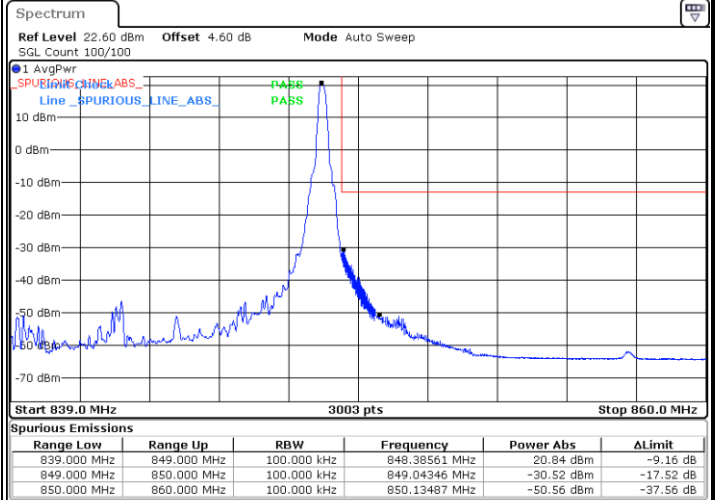
LTE Band 5 / 10MHz / 16QAM

Lowest Band Edge / 1 RB



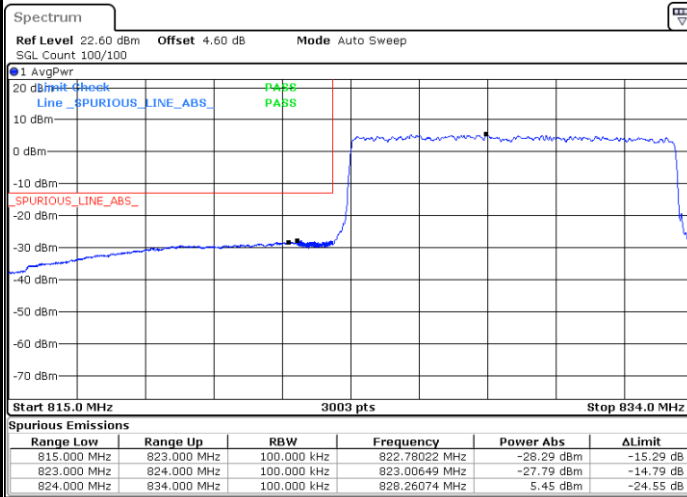
Date: 3.JAN.2021 21:12:40

Highest Band Edge / 1 RB



Date: 3.JAN.2021 21:19:11

Lowest Band Edge / Full RB



Date: 3.JAN.2021 21:15:56

Highest Band Edge / Full RB

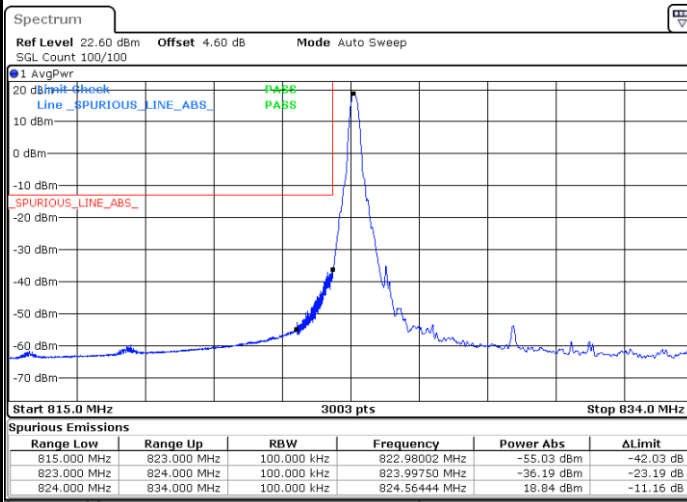


Date: 3.JAN.2021 21:22:28



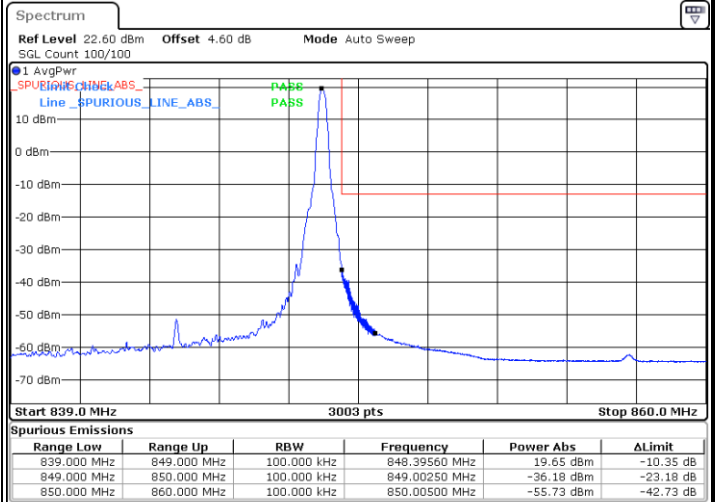
LTE Band 5 / 10MHz / 64QAM

Lowest Band Edge / 1 RB



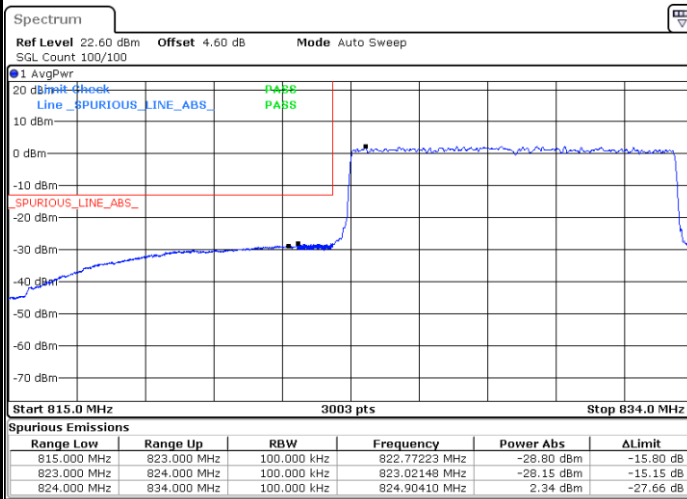
Date: 3.JAN.2021 22:11:25

Highest Band Edge / 1 RB



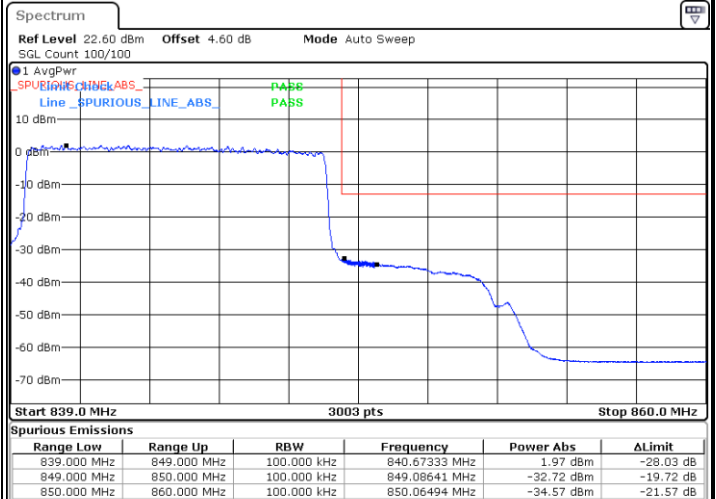
Date: 3.JAN.2021 22:14:40

Lowest Band Edge / Full RB



Date: 3.JAN.2021 22:09:47

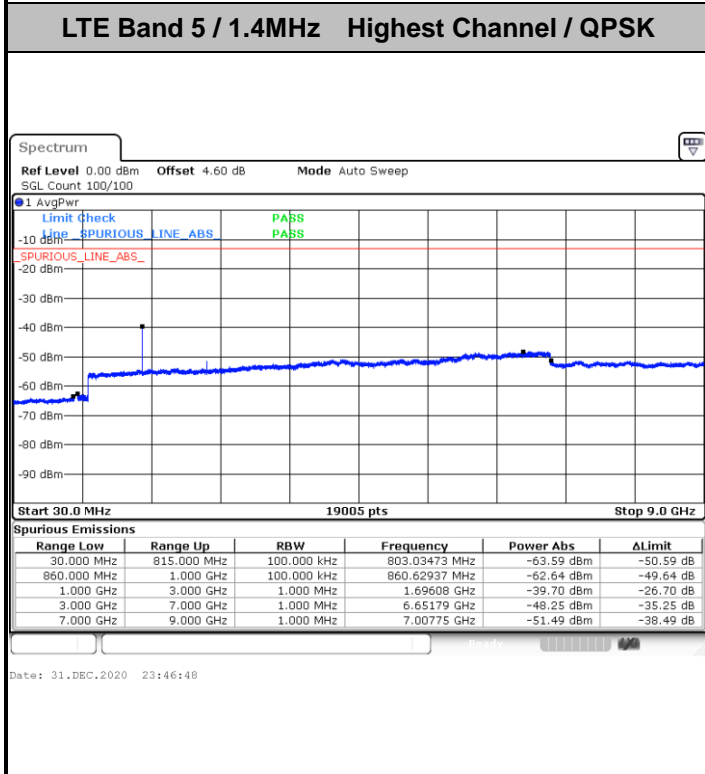
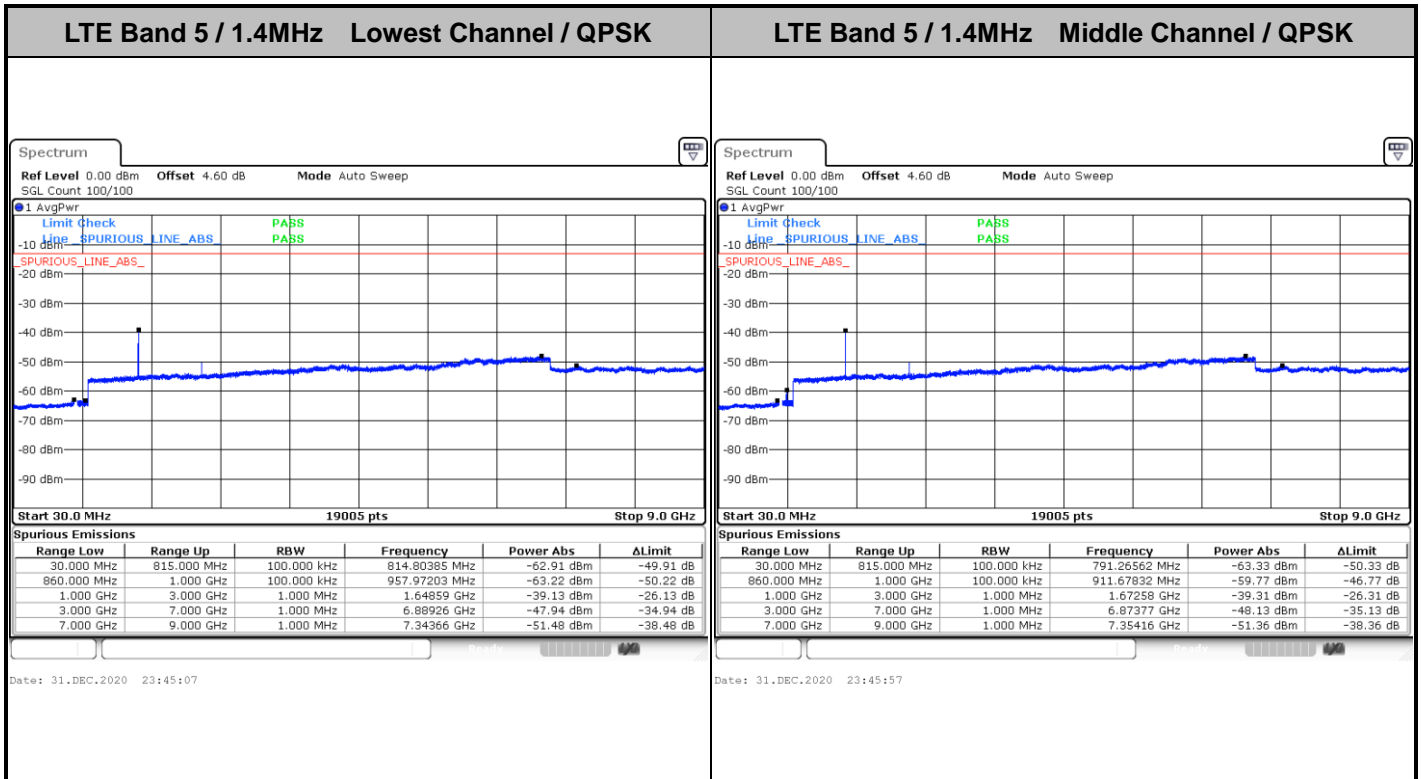
Highest Band Edge / Full RB

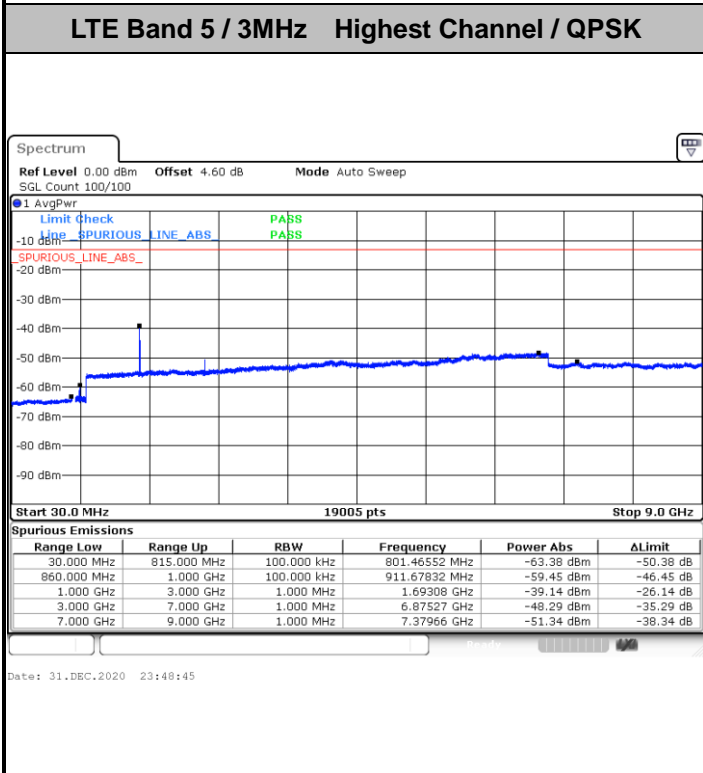
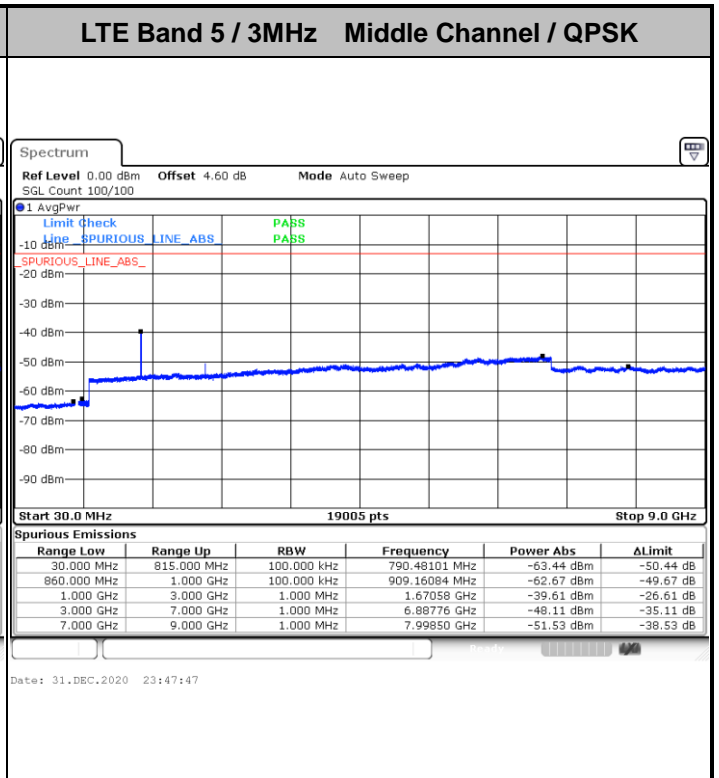
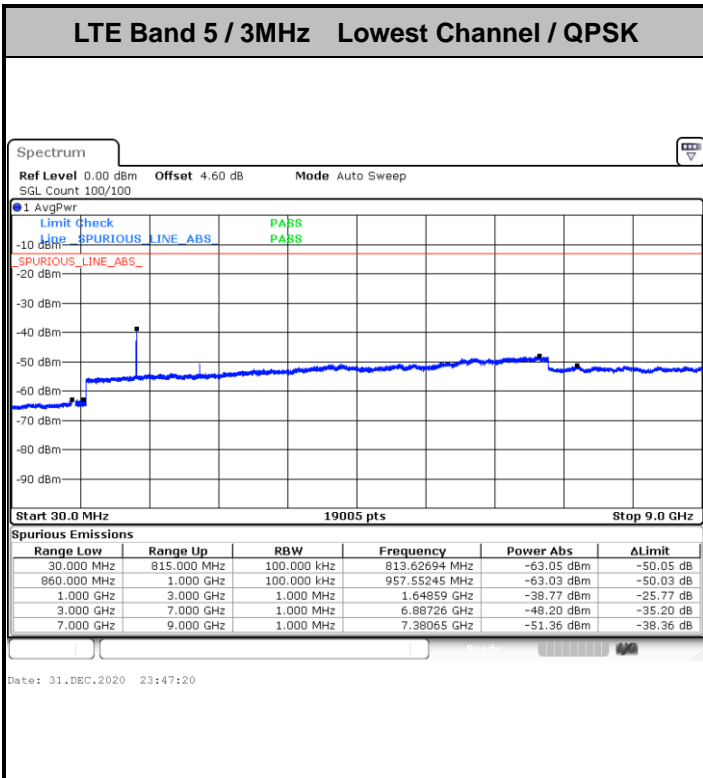


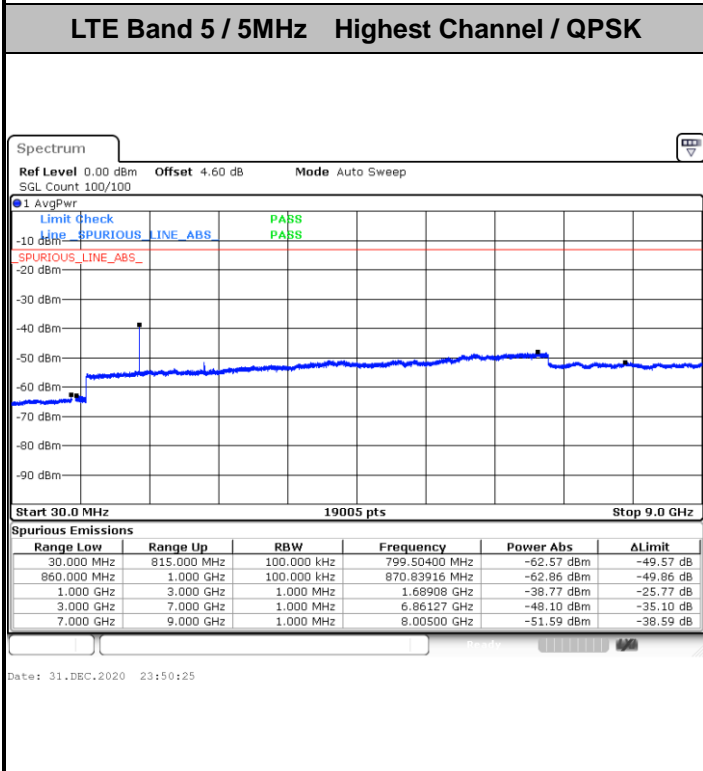
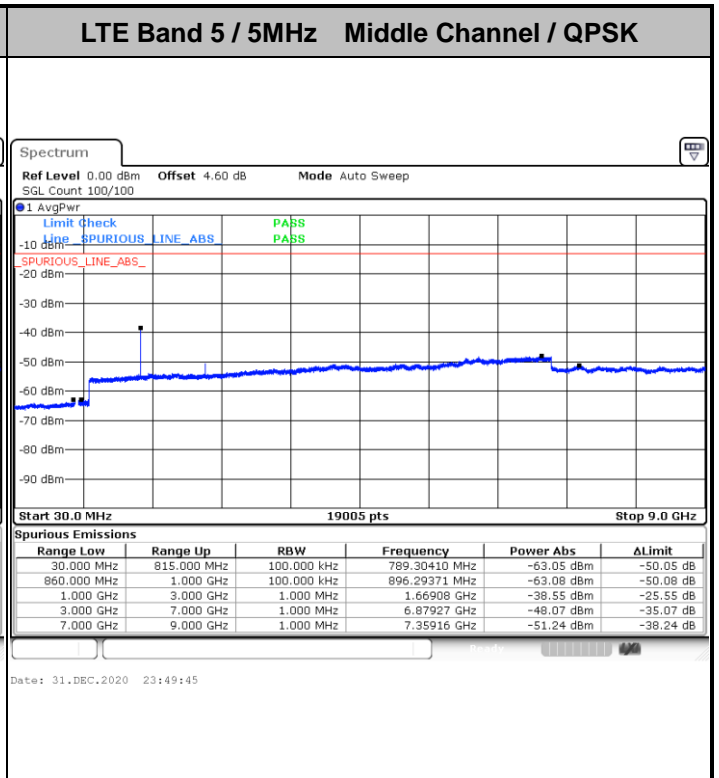
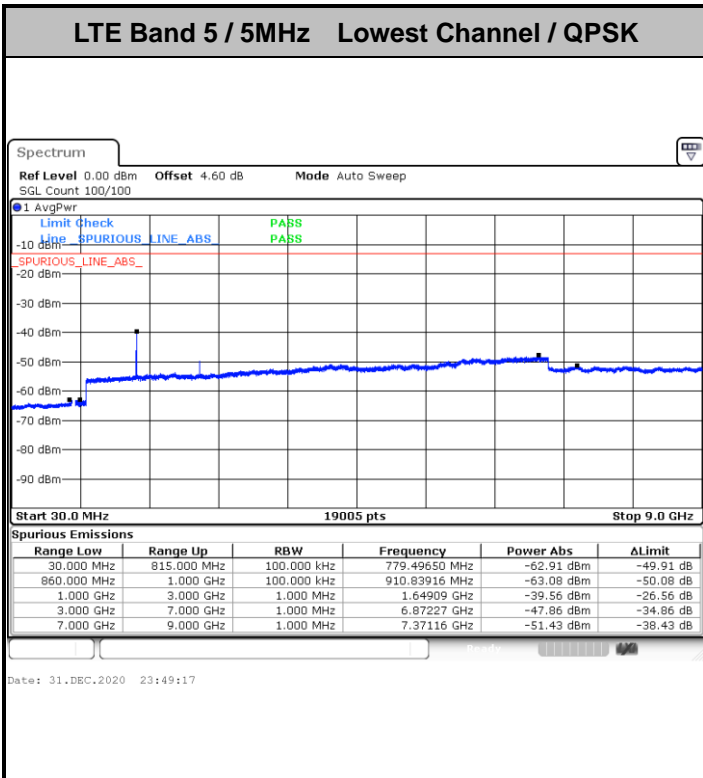
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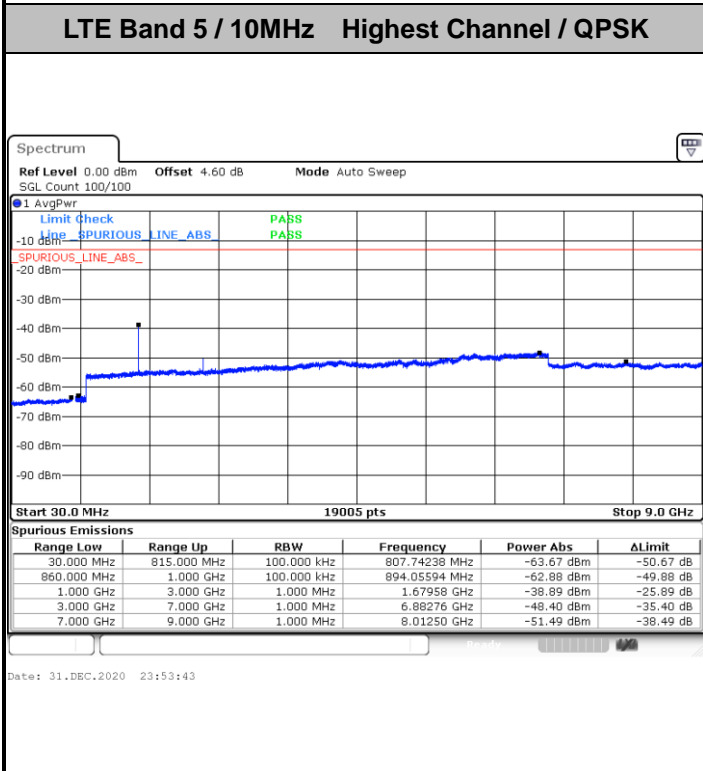
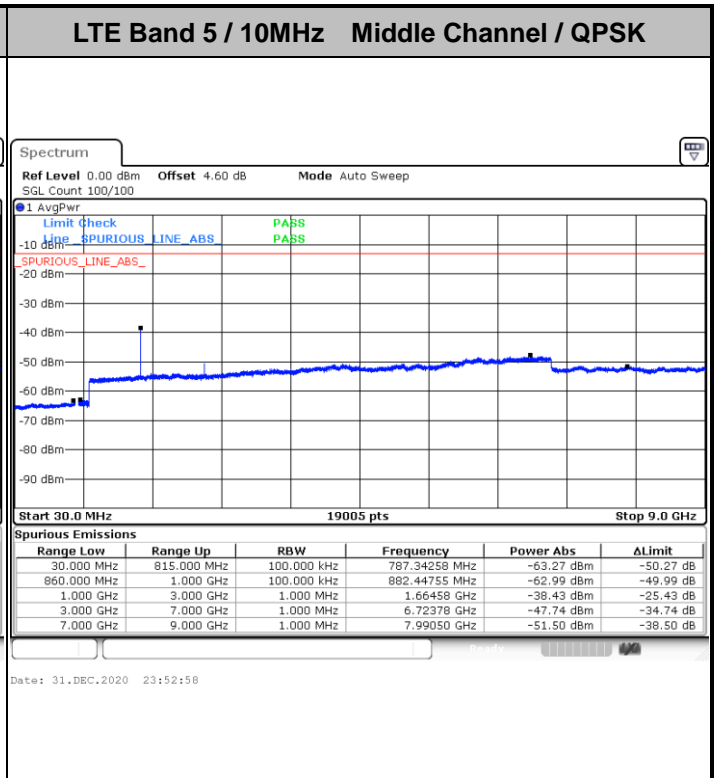
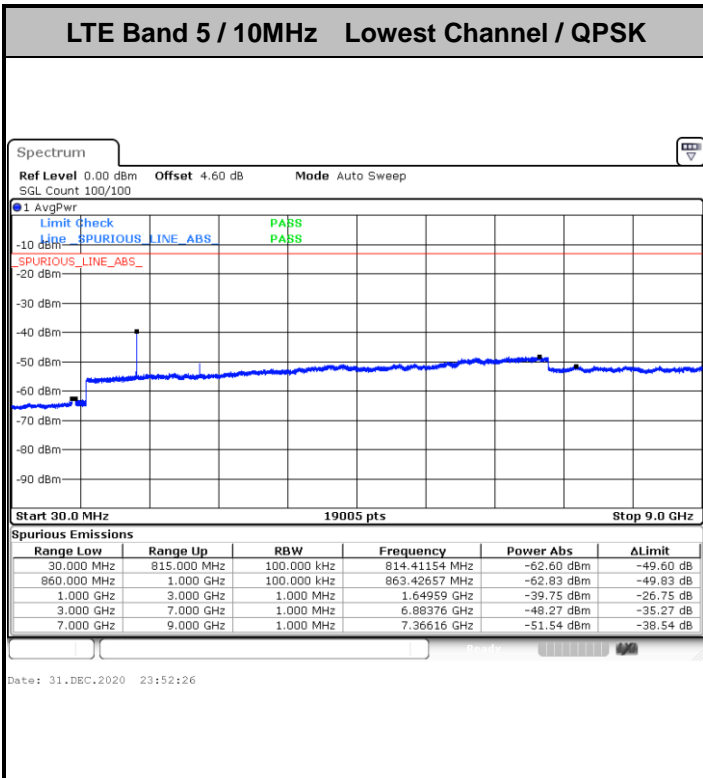


Conducted Spurious Emission











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	0.0043	PASS
40	Normal Voltage	0.0062	
30	Normal Voltage	0.0012	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0008	
0	Normal Voltage	0.0010	
-10	Normal Voltage	0.0013	
-20	Normal Voltage	0.0045	
-30	Normal Voltage	0.0059	
20	Maximum Voltage	0.0008	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0011	

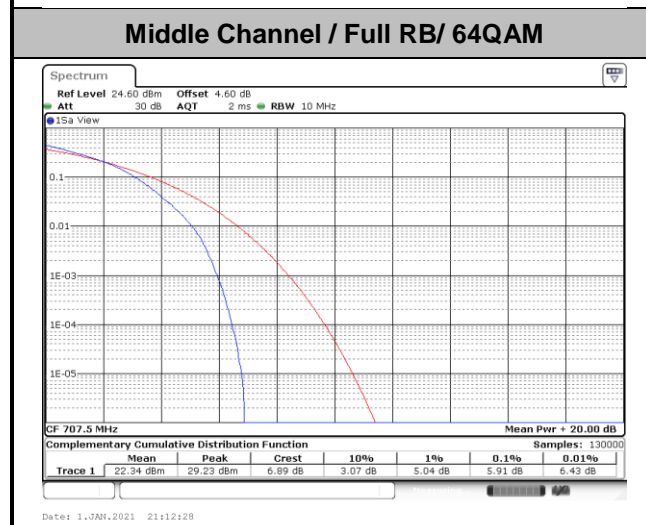
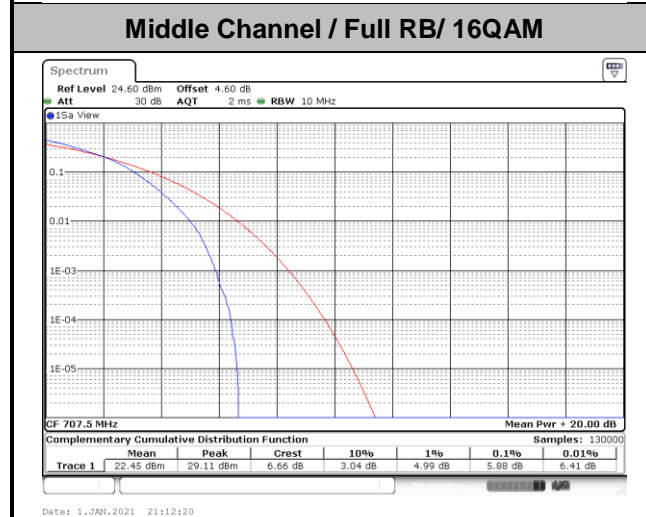
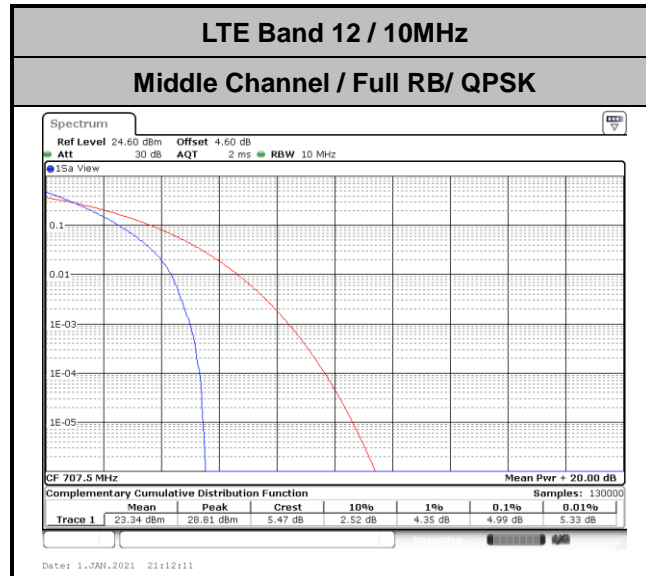
Note: Normal Voltage =3.87 V. ; Battery End Point (BEP) =3.4 V. ; Maximum Voltage =4.48 V.



LTE Band 12

Peak-to-Average Ratio

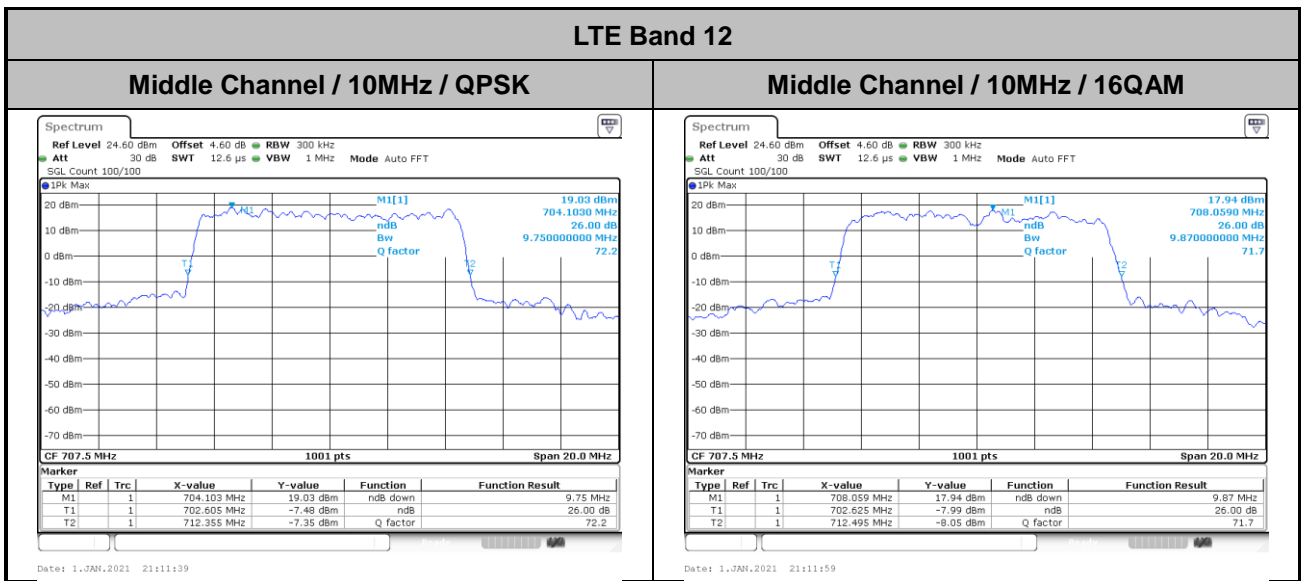
Mode	LTE Band 12 / 10MHz			
Mod.	QPSK	16QAM	64QAM	Limit: 13dB
RB Size	Full RB	Full RB	Full RB	Result
Middle CH	4.99	5.88	5.91	PASS





26dB Bandwidth

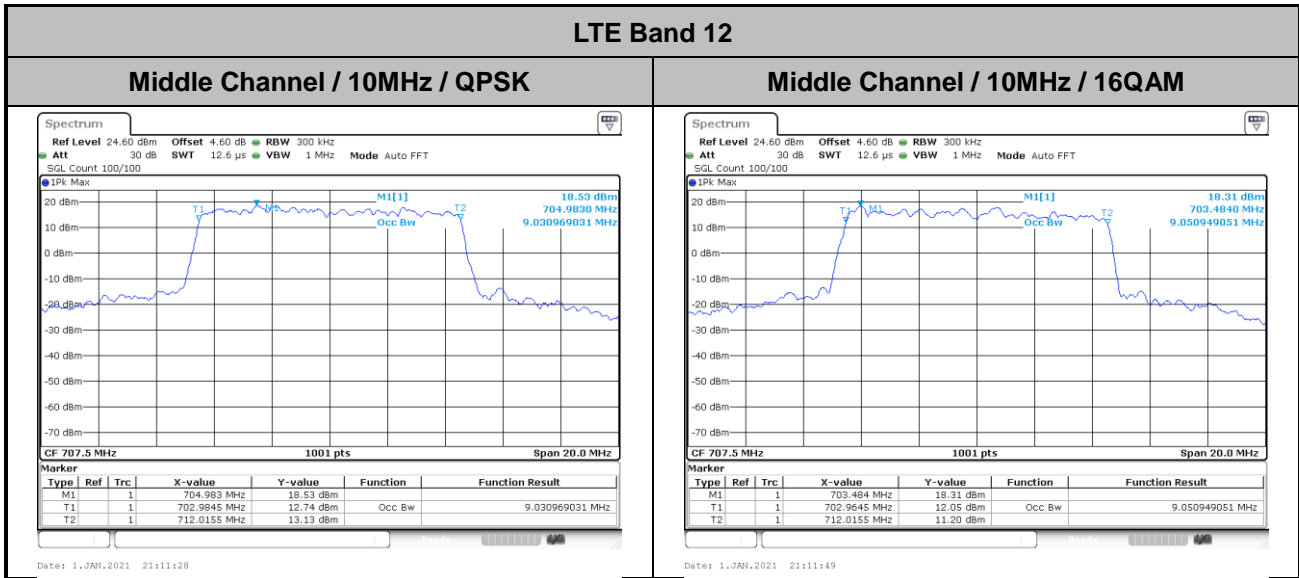
Mode	LTE Band 12 : 26dB BW(MHz)	
BW	10MHz	
Mod.	QPSK	16QAM
Middle CH	9.75	9.87





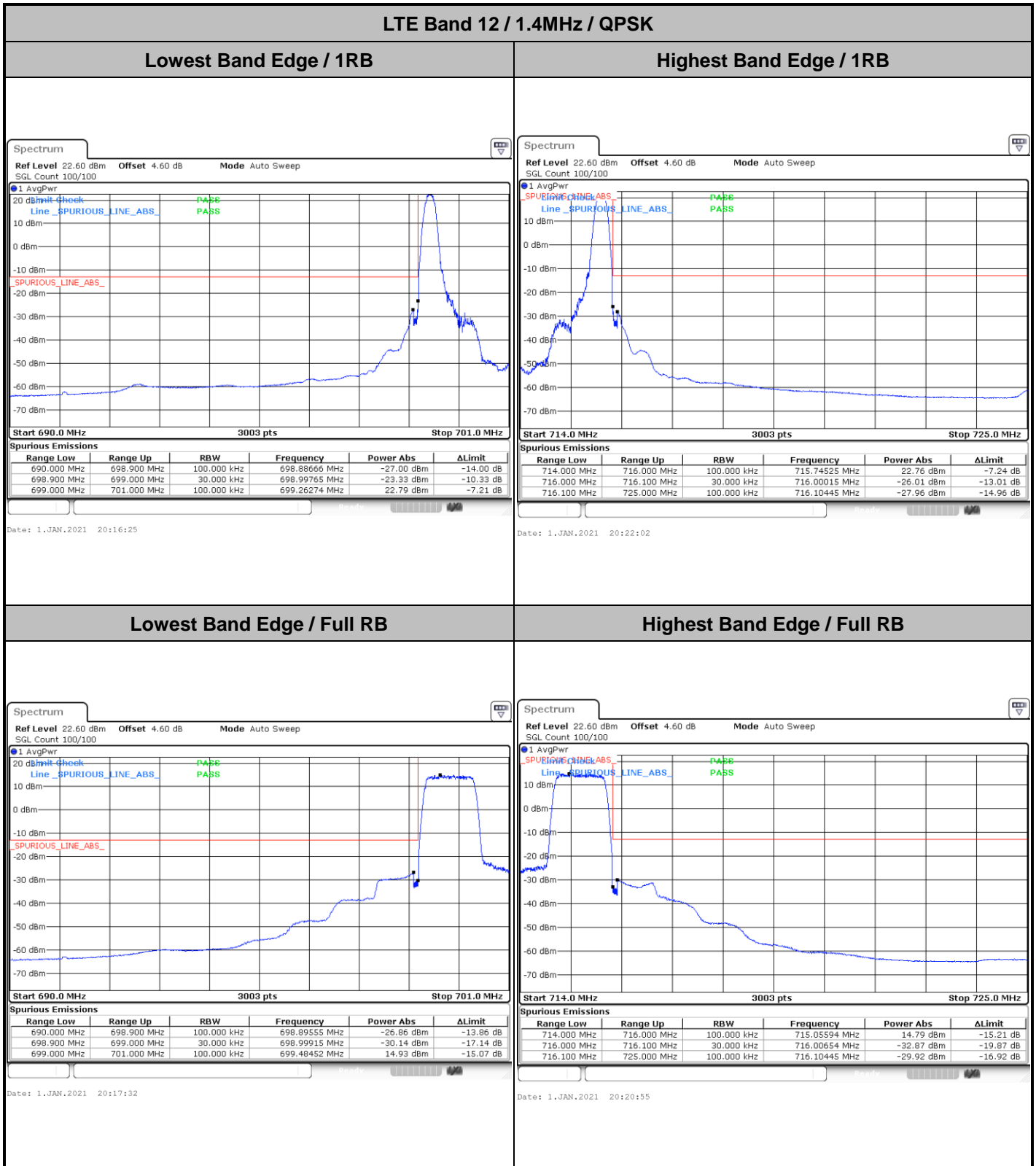
Occupied Bandwidth

Mode	LTE Band 12 : 99%OBW(MHz)	
BW	10MHz	
Mod.	QPSK	16QAM
Middle CH	9.03	9.05





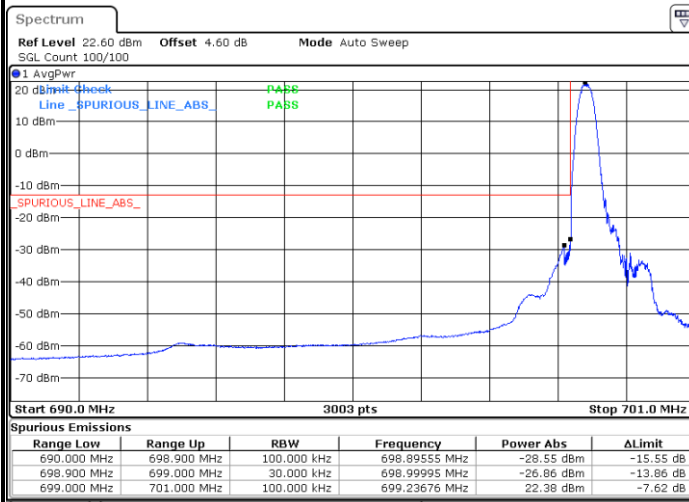
Conducted Band Edge





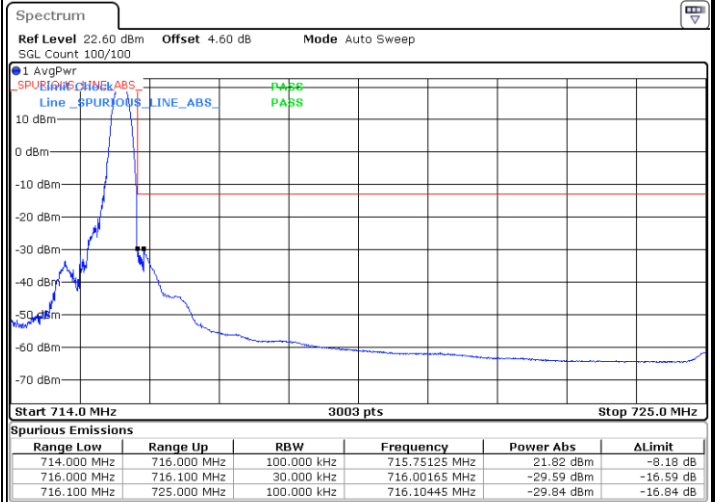
LTE Band 12 / 1.4MHz / 16QAM

Lowest Band Edge / 1 RB



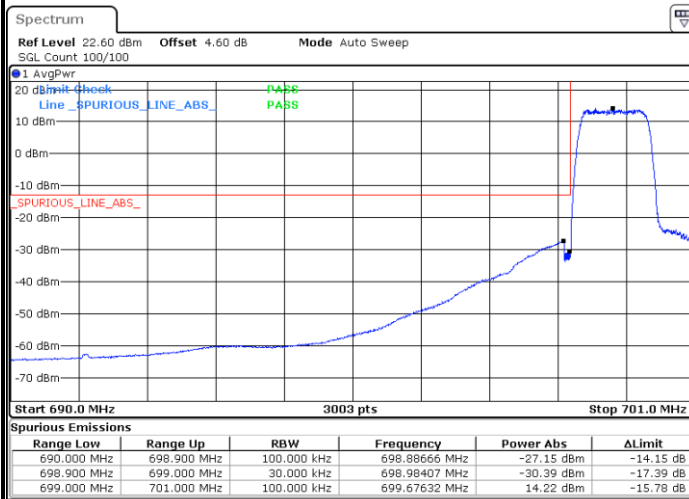
Date: 1.JAN.2021 20:15:17

Highest Band Edge / 1 RB



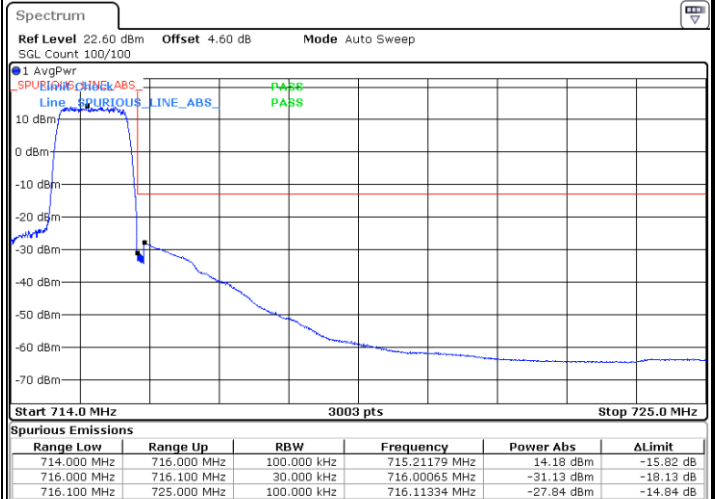
Date: 1.JAN.2021 20:23:10

Lowest Band Edge / Full RB



Date: 1.JAN.2021 20:18:40

Highest Band Edge / Full RB

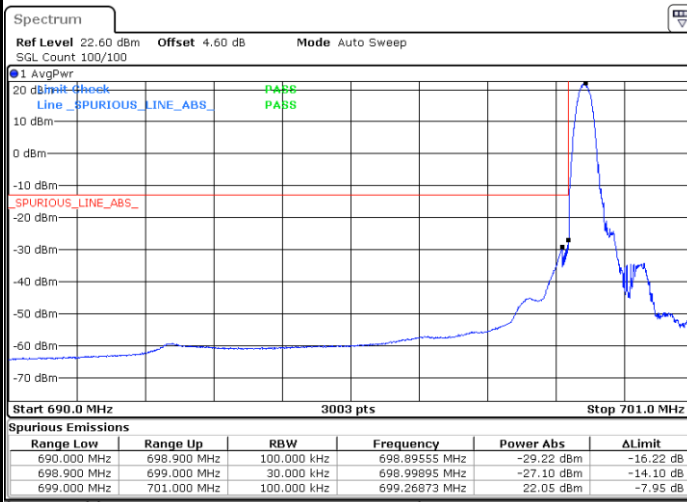


Date: 1.JAN.2021 20:19:47



LTE Band 12 / 1.4MHz / 64QAM

Lowest Band Edge / 1 RB



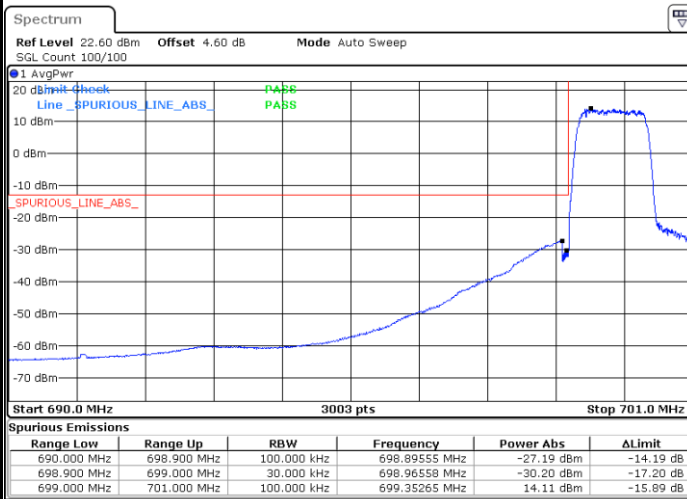
Date: 1.JAN.2021 20:53:34

Highest Band Edge / 1 RB



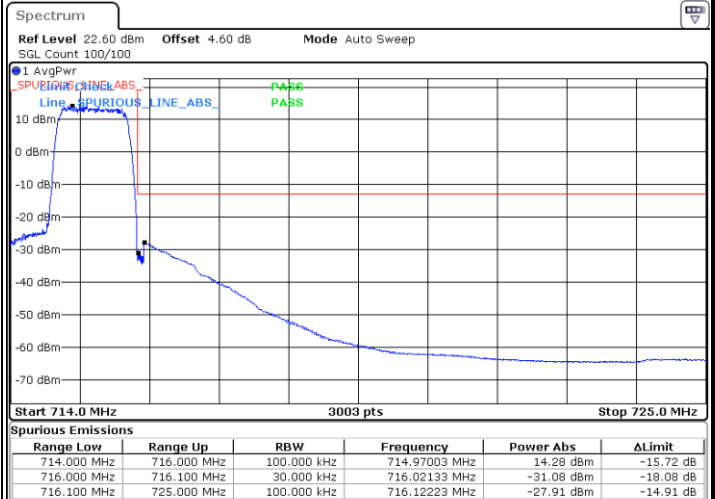
Date: 1.JAN.2021 20:51:18

Lowest Band Edge / Full RB



Date: 1.JAN.2021 20:54:41

Highest Band Edge / Full RB

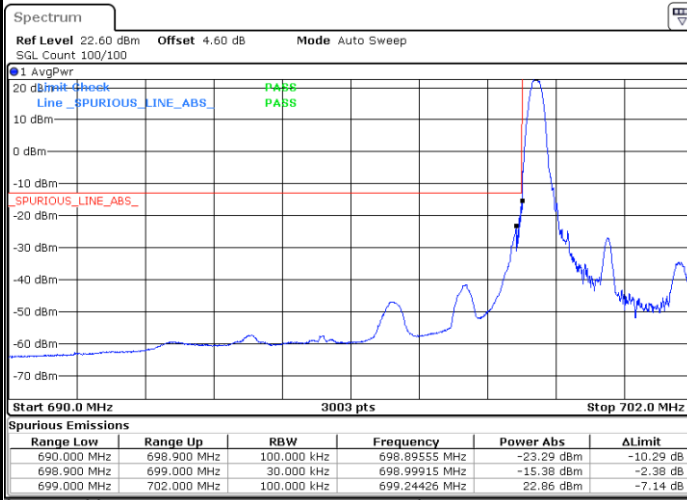


Date: 1.JAN.2021 20:52:26



LTE Band 12 / 3MHz / QPSK

Lowest Band Edge / 1RB



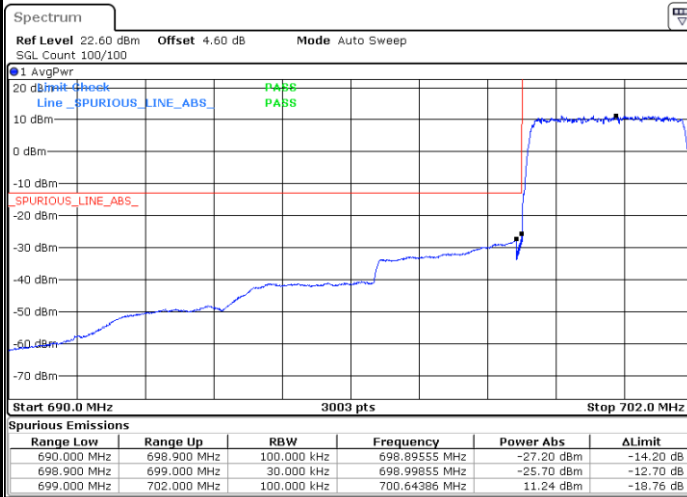
Date: 1.JAN.2021 20:25:25

Highest Band Edge / 1 RB



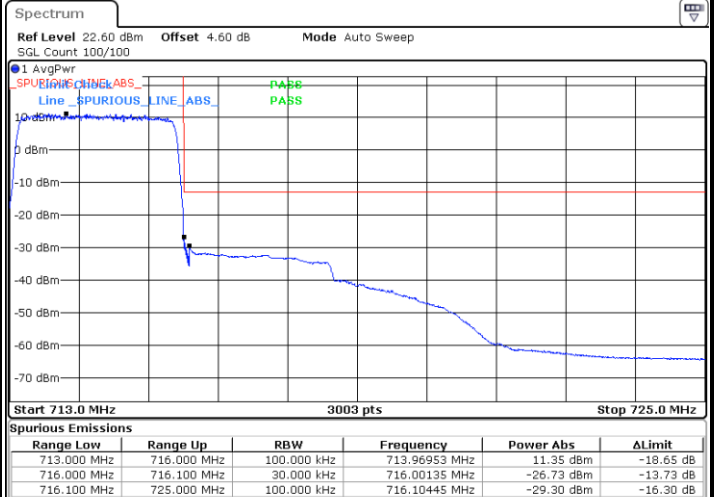
Date: 1.JAN.2021 20:31:02

Lowest Band Edge / Full RB



Date: 1.JAN.2021 20:26:32

Highest Band Edge / Full RB

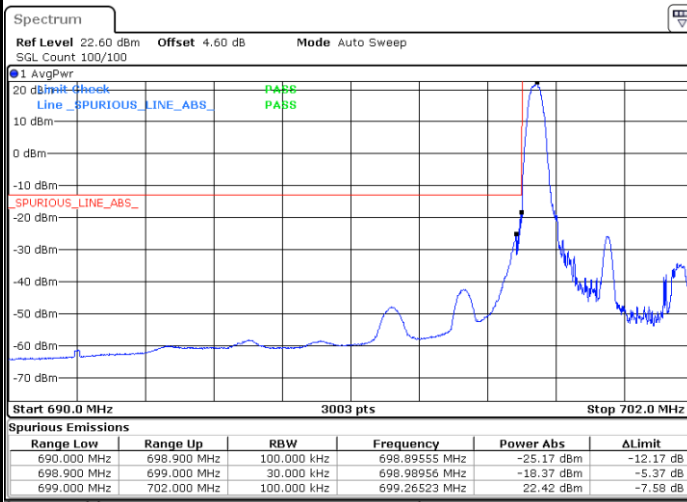


Date: 1.JAN.2021 20:29:55



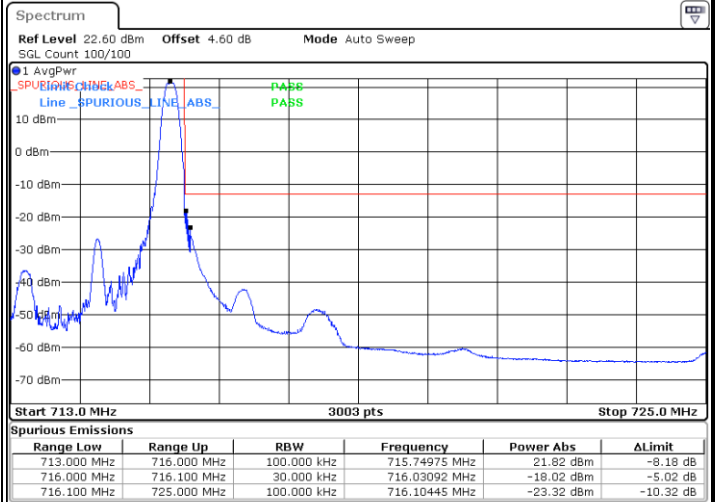
LTE Band 12 / 3MHz / 16QAM

Lowest Band Edge / 1 RB



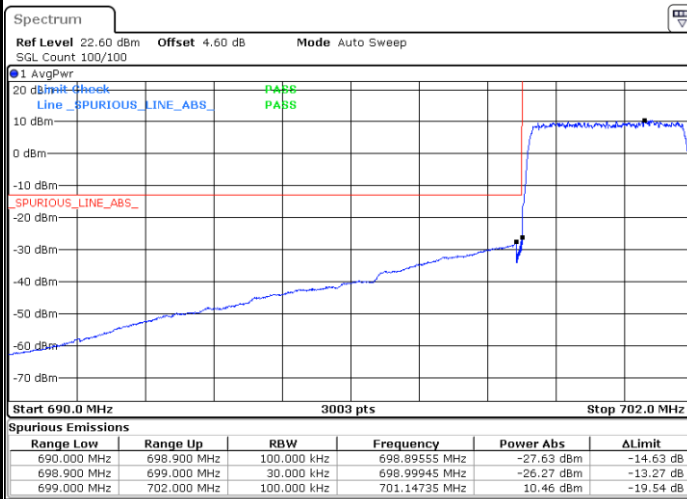
Date: 1.JAN.2021 20:24:17

Highest Band Edge / 1 RB



Date: 1.JAN.2021 20:32:10

Lowest Band Edge / Full RB



Date: 1.JAN.2021 20:27:40

Highest Band Edge / Full RB



Date: 1.JAN.2021 20:28:47