



LTE Band 12

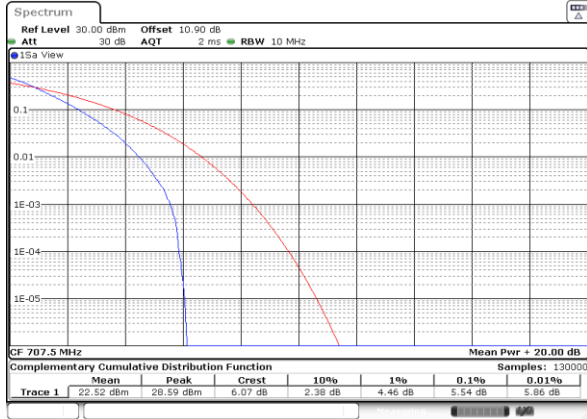
Peak-to-Average Ratio

Mode	LTE Band 12 / 10MHz				
Mod.	QPSK	16QAM	64QAM	256QAM	Limit: 13dB
RB Size	Full RB	Full RB	Full RB	Full RB	Result
Middle CH	5.54	6.09	6.17	6.32	PASS



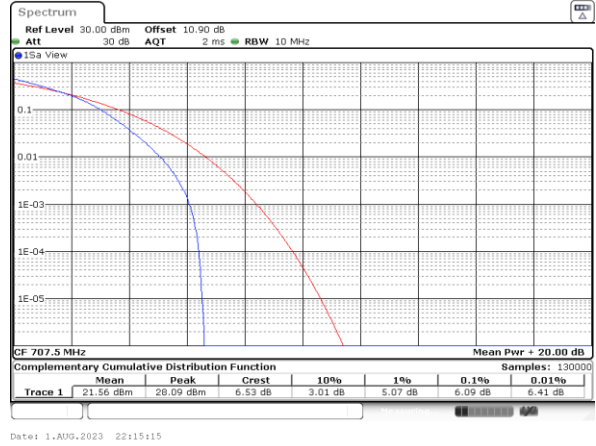
LTE Band 12 / 10MHz / QPSK

Middle Channel / Full RB



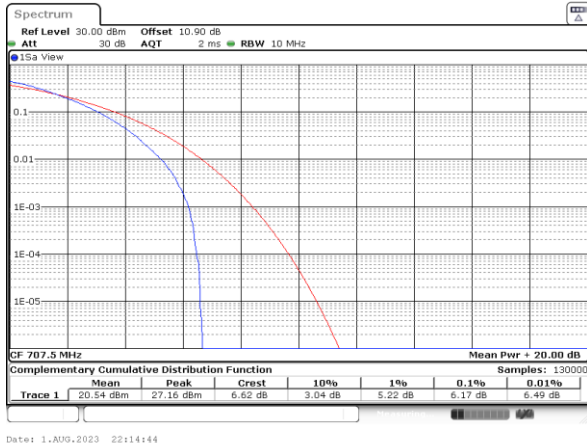
LTE Band 12 / 10MHz / 16QAM

Middle Channel / Full RB



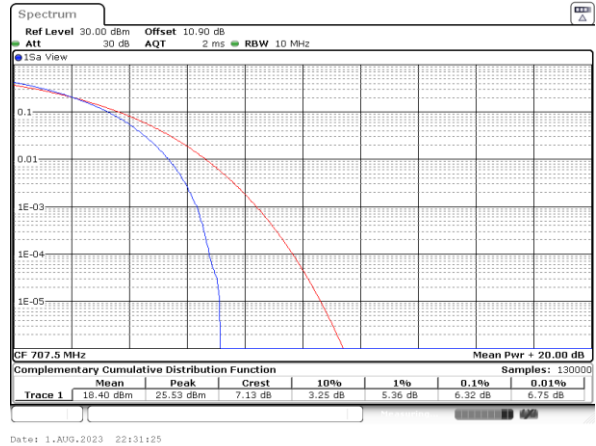
LTE Band 12 / 10MHz / 64QAM

Middle Channel / Full RB



LTE Band 12 / 10MHz / 256QAM

Middle Channel / Full RB





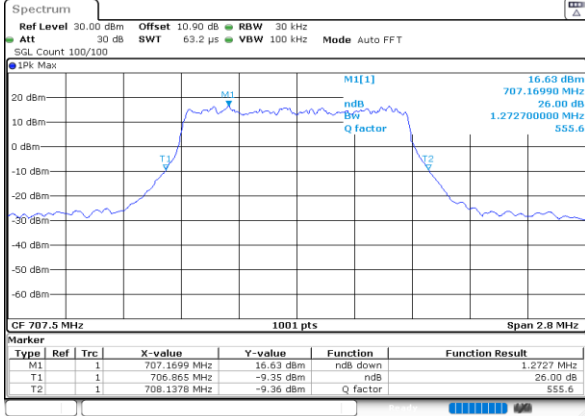
26dB Bandwidth

Mode	LTE Band 12 : 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	1.27	1.31	3.10	2.99	5.48	5.19	10.49	10.37	-	-	-	-
Mode	LTE Band 12 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM
Middle CH	1.28	1.29	3.10	3.09	5.25	5.27	10.21	10.19	-	-	-	-



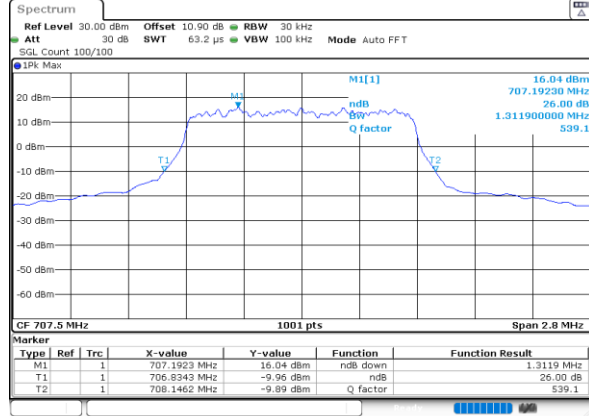
LTE Band 12

Middle Channel / 1.4MHz / QPSK



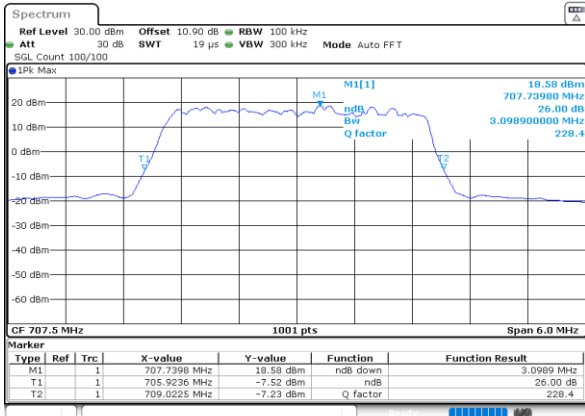
Date: 1.AUG.2023 21:35:28

Middle Channel / 1.4MHz / 16QAM



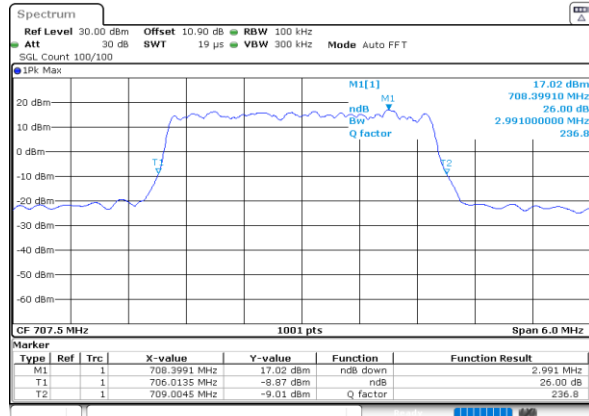
Date: 1.AUG.2023 21:35:57

Middle Channel / 3MHz / QPSK



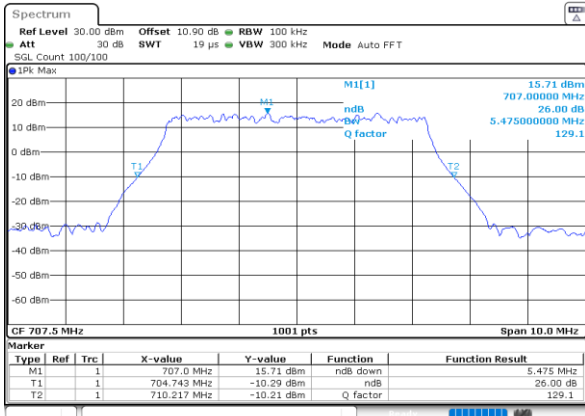
Date: 1.AUG.2023 21:52:07

Middle Channel / 3MHz / 16QAM



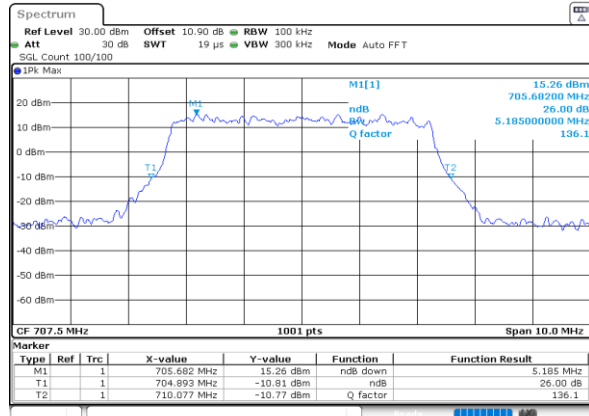
Date: 1.AUG.2023 21:52:36

Middle Channel / 5MHz / QPSK



Date: 1.AUG.2023 22:03:17

Middle Channel / 5MHz / 16QAM

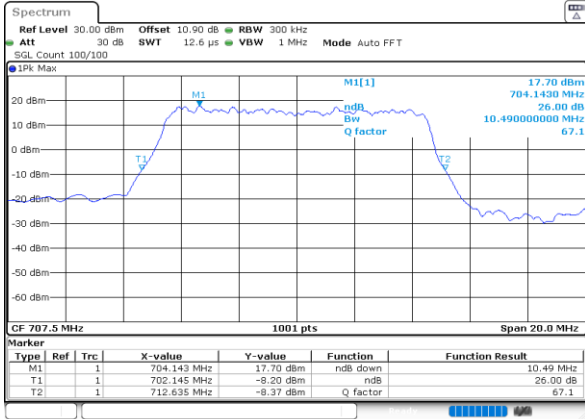


Date: 1.AUG.2023 22:03:46



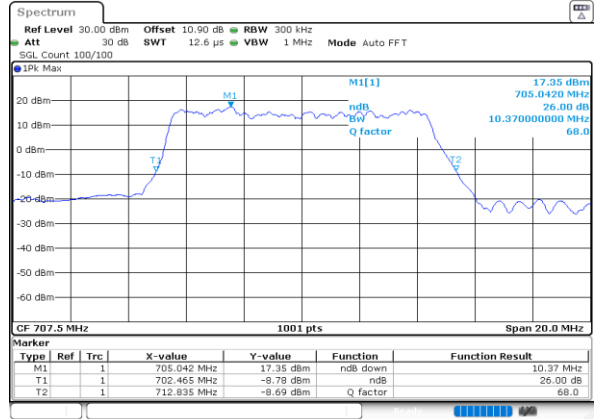
LTE Band 12

Middle Channel / 10MHz / QPSK



Date: 1.AUG.2023 22:09:03

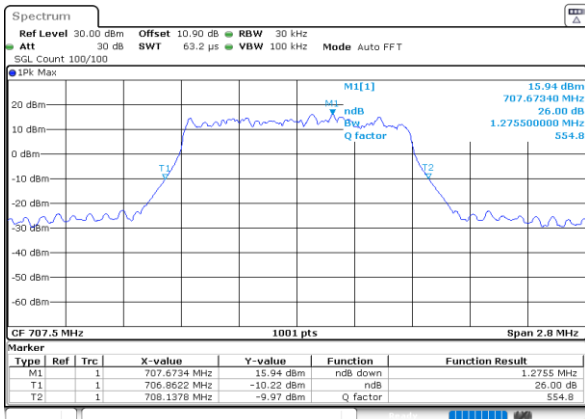
Middle Channel / 10MHz / 16QAM



Date: 1.AUG.2023 22:09:32

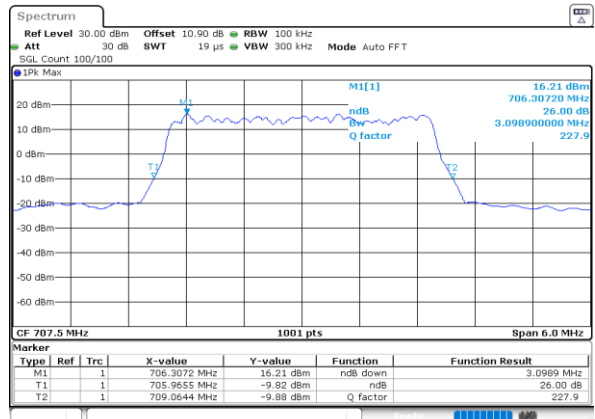
LTE Band 12

Middle Channel / 1.4MHz / 64QAM



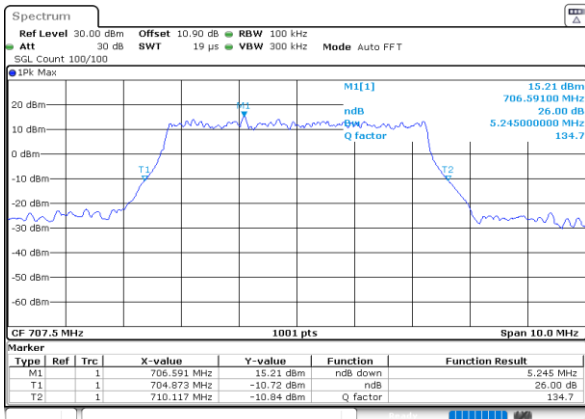
Date: 1.AUG.2023 21:44:56

Middle Channel / 3MHz / 64QAM



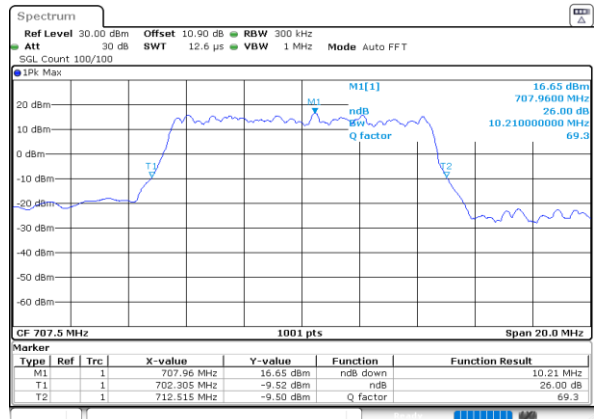
Date: 1.AUG.2023 21:56:19

Middle Channel / 5MHz / 64QAM



Date: 1.AUG.2023 21:59:06

Middle Channel / 10MHz / 64QAM

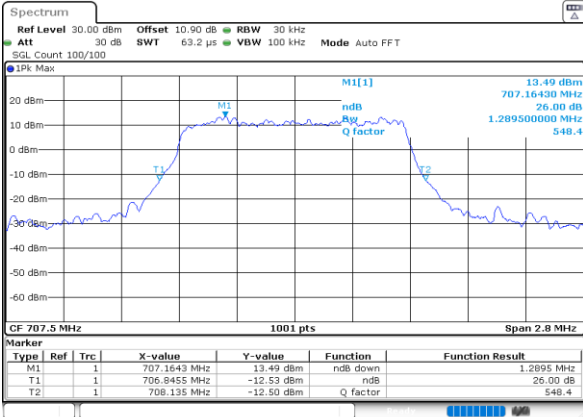


Date: 1.AUG.2023 22:13:15



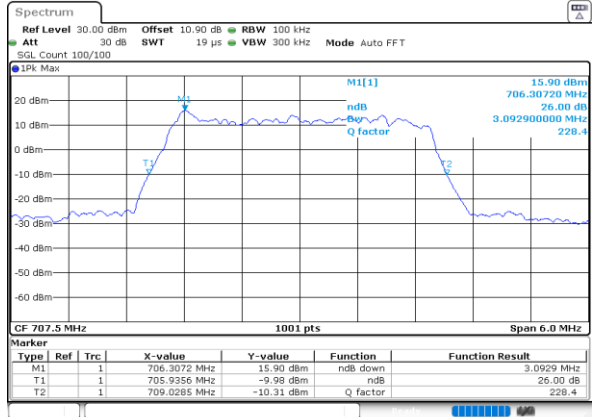
LTE Band 12

Middle Channel / 1.4MHz / 256QAM



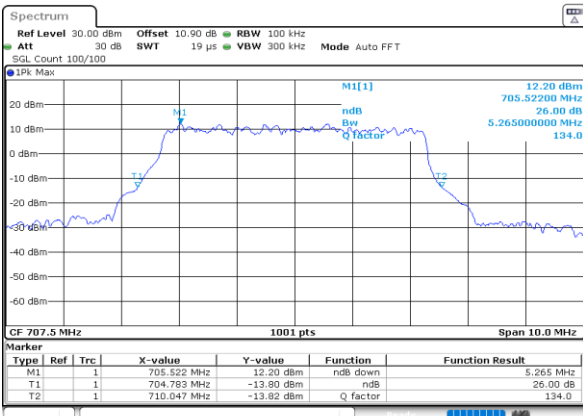
Date: 1.AUG.2023 22:18:33

Middle Channel / 3MHz / 256QAM



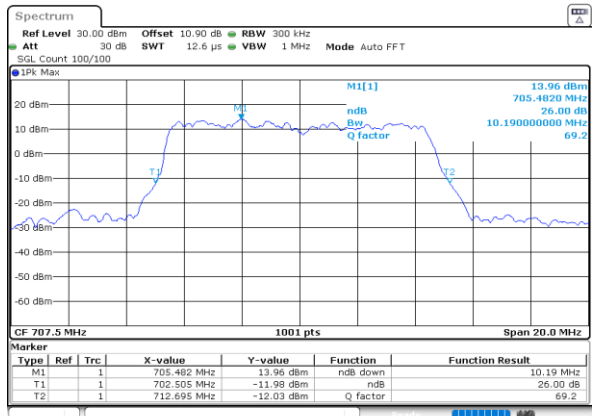
Date: 1.AUG.2023 22:24:21

Middle Channel / 5MHz / 256QAM



Date: 1.AUG.2023 22:12:08

Middle Channel / 10MHz / 256QAM



Date: 1.AUG.2023 22:29:56



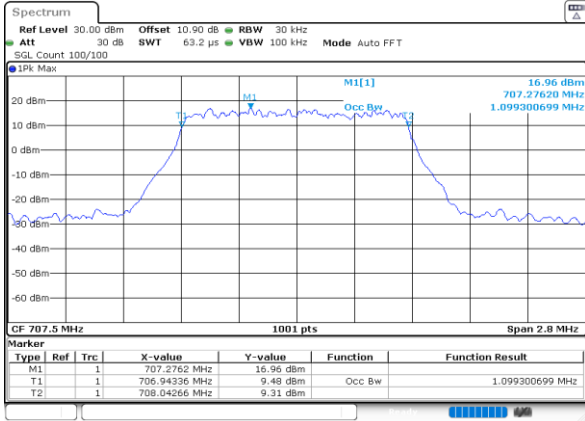
Occupied Bandwidth

Mode	LTE Band 12 : 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	1.10	1.09	2.76	2.73	4.50	4.49	9.05	9.03	-	-	-	-
Mode	LTE Band 12 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM
Middle CH	1.09	1.09	2.75	2.72	4.51	4.51	9.07	9.03	-	-	-	-



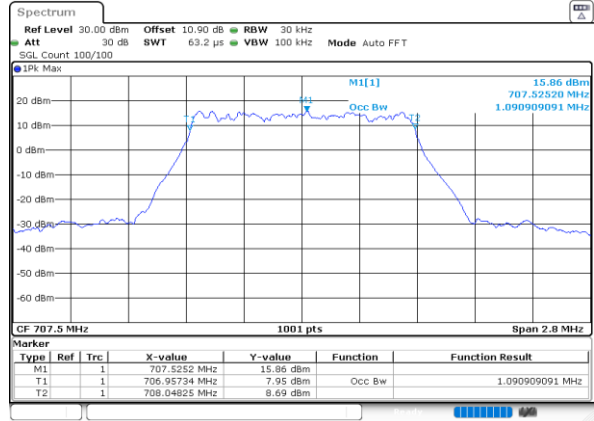
LTE Band 12

Middle Channel / 1.4MHz / QPSK



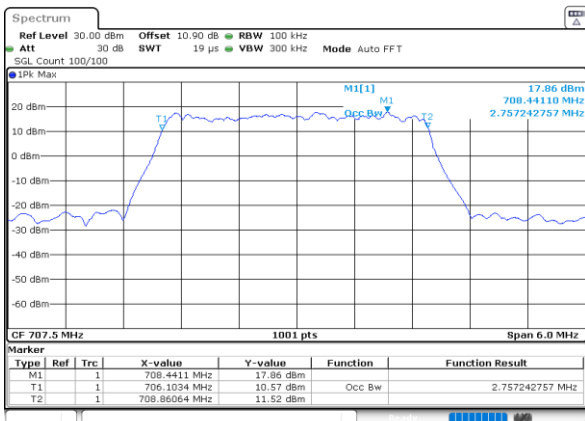
Date: 1.AUG.2023 21:35:14

Middle Channel / 1.4MHz / 16QAM



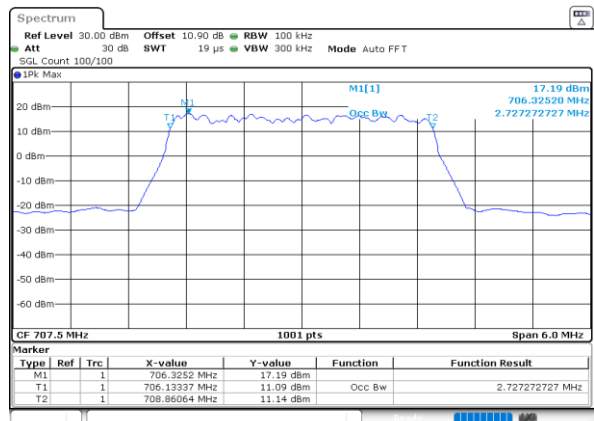
Date: 1.AUG.2023 21:34:45

Middle Channel / 3MHz / QPSK



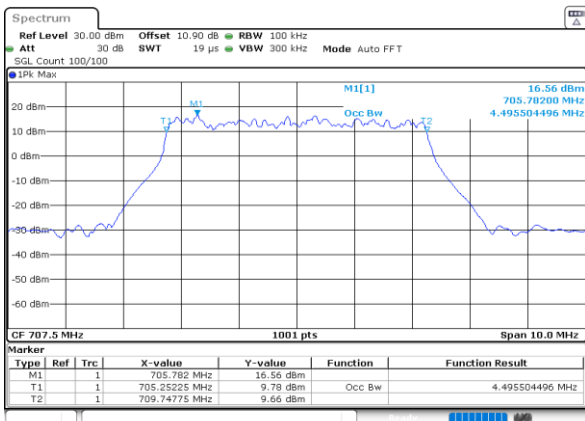
Date: 1.AUG.2023 21:51:53

Middle Channel / 3MHz / 16QAM



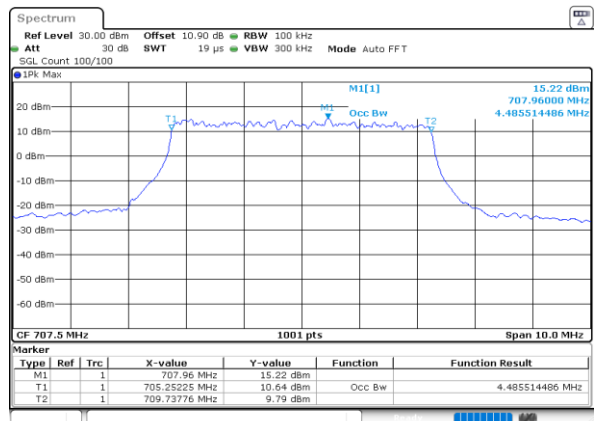
Date: 1.AUG.2023 21:51:25

Middle Channel / 5MHz / QPSK



Date: 1.AUG.2023 22:03:03

Middle Channel / 5MHz / 16QAM

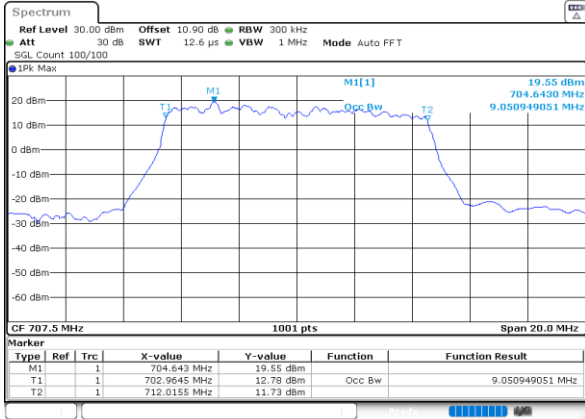


Date: 1.AUG.2023 22:02:35



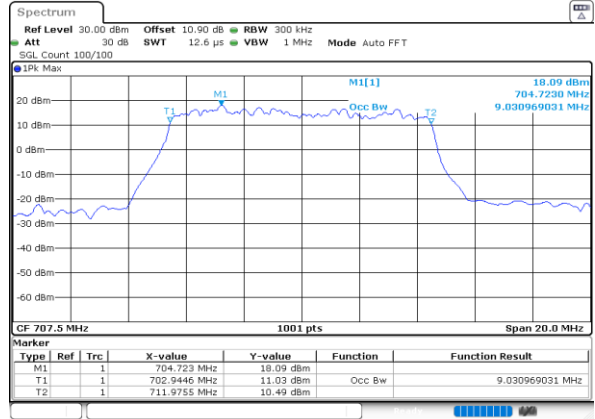
LTE Band 12

Middle Channel / 10MHz / QPSK



Date: 1.AUG.2023 22:08:49

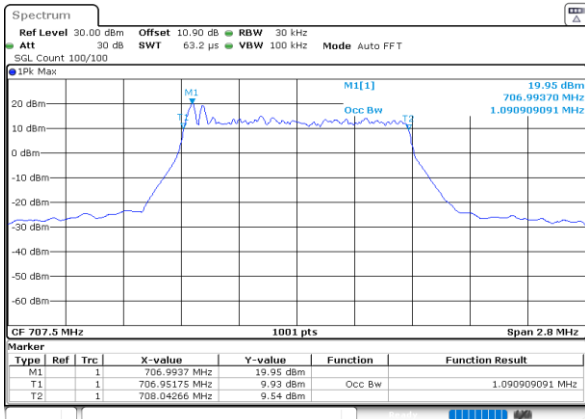
Middle Channel / 10MHz / 16QAM



Date: 1.AUG.2023 22:08:20

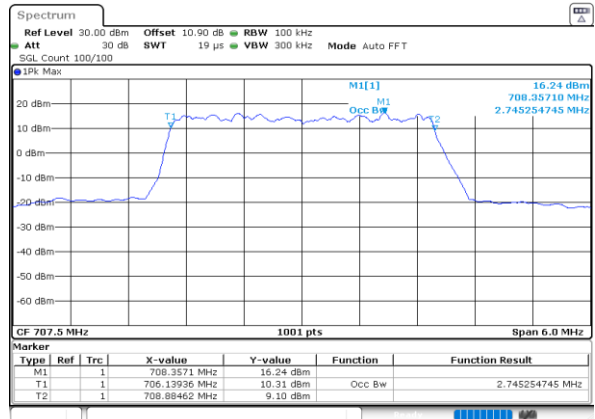
LTE Band 12

Middle Channel / 1.4MHz / 64QAM



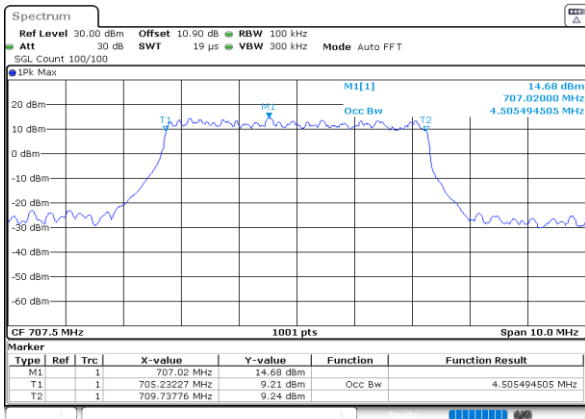
Date: 1.AUG.2023 21:44:42

Middle Channel / 3MHz / 64QAM



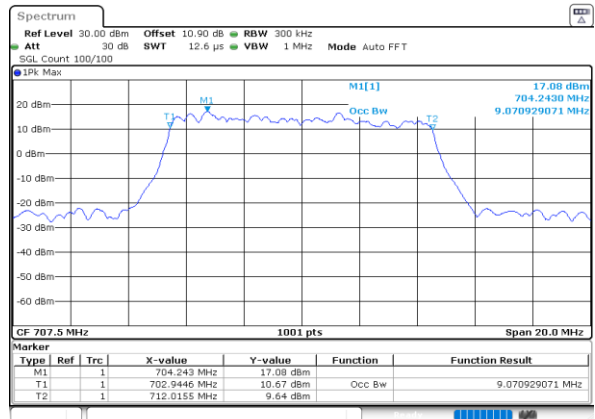
Date: 1.AUG.2023 21:56:05

Middle Channel / 5MHz / 64QAM



Date: 1.AUG.2023 21:58:52

Middle Channel / 10MHz / 64QAM

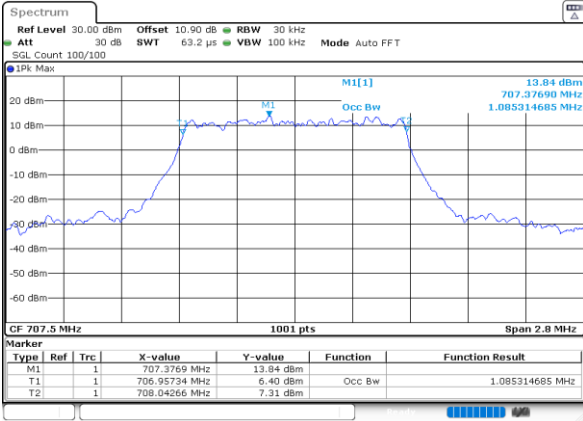


Date: 1.AUG.2023 22:13:01



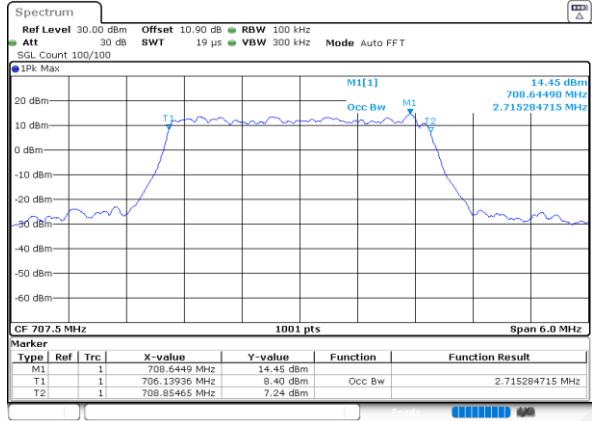
LTE Band 12

Middle Channel / 1.4MHz / 256QAM



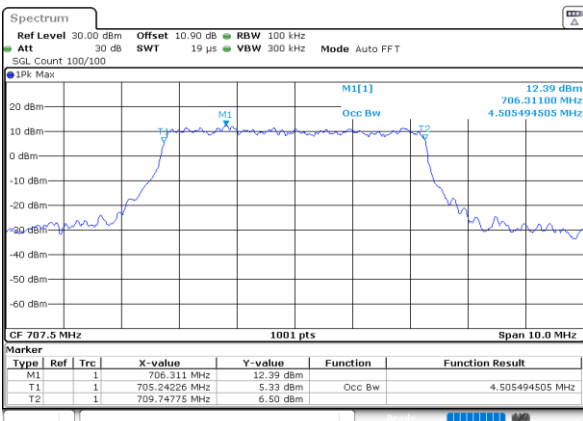
Date: 1.AUG.2023 22:18:19

Middle Channel / 3MHz / 256QAM



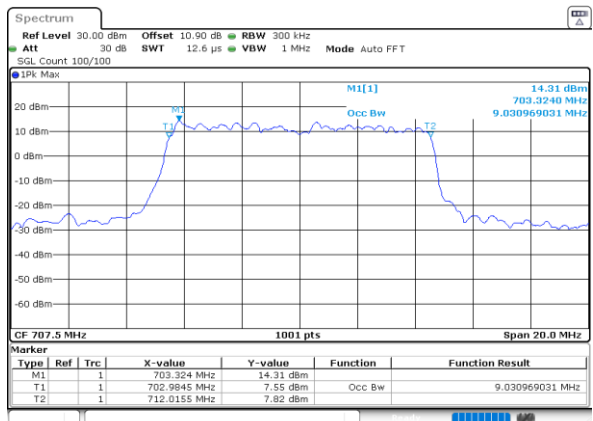
Date: 1.AUG.2023 22:24:06

Middle Channel / 5MHz / 256QAM



Date: 1.AUG.2023 22:26:54

Middle Channel / 10MHz / 256QAM



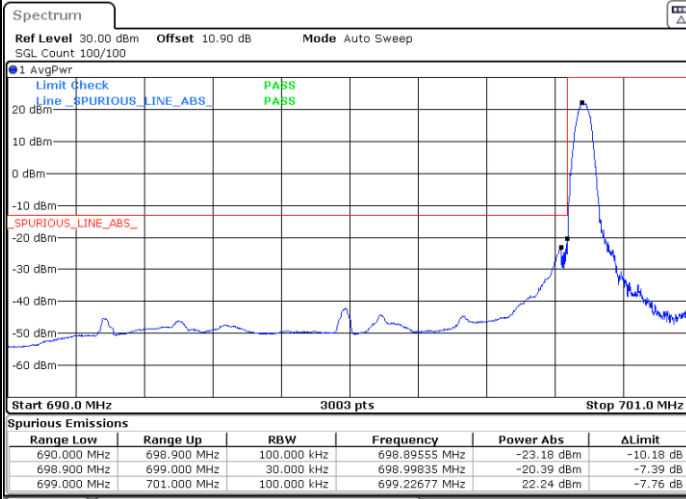
Date: 1.AUG.2023 22:29:42



Conducted Band Edge

LTE Band 12 / 1.4MHz / QPSK

Lowest Band Edge / 1RB



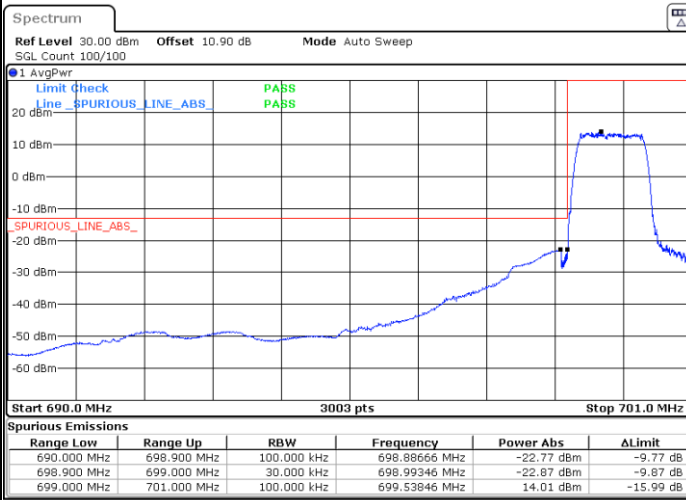
Date: 1.AUG.2023 21:33:22

Highest Band Edge / 1RB



Date: 1.AUG.2023 21:41:03

Lowest Band Edge / Full RB



Date: 1.AUG.2023 21:30:22

Highest Band Edge / Full RB

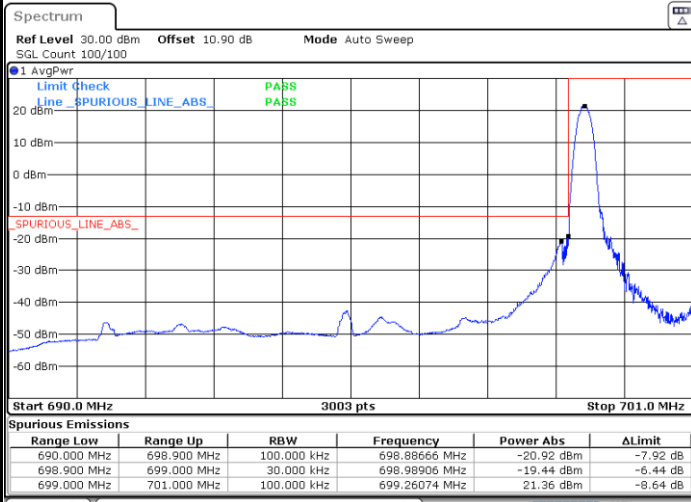


Date: 1.AUG.2023 21:38:03



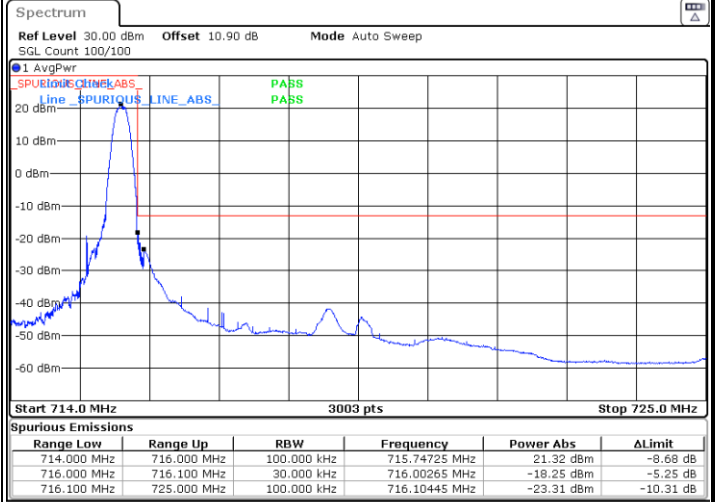
LTE Band 12 / 1.4MHz / 16QAM

Lowest Band Edge / 1 RB



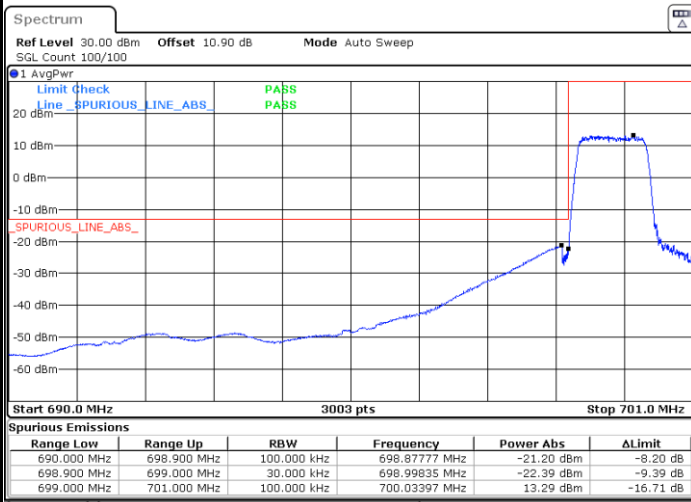
Date: 1.AUG.2023 21:32:22

Highest Band Edge / 1 RB



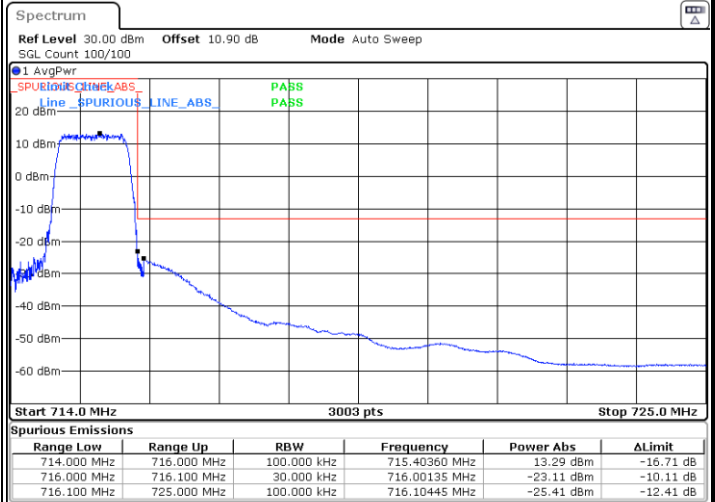
Date: 1.AUG.2023 21:40:03

Lowest Band Edge / Full RB



Date: 1.AUG.2023 21:31:22

Highest Band Edge / Full RB

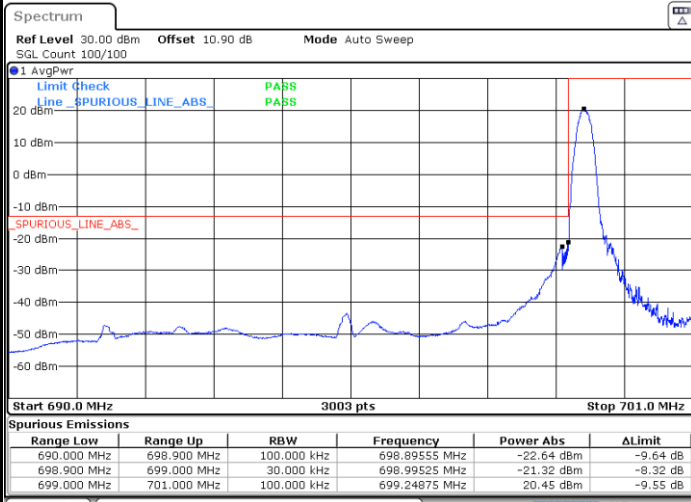


Date: 1.AUG.2023 21:39:03



LTE Band 12 / 1.4MHz / 64QAM

Lowest Band Edge / 1 RB



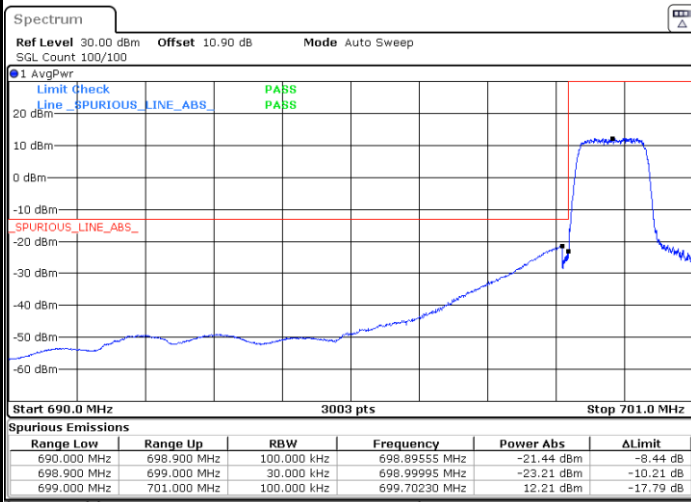
Date: 1.AUG.2023 21:44:11

Highest Band Edge / 1 RB



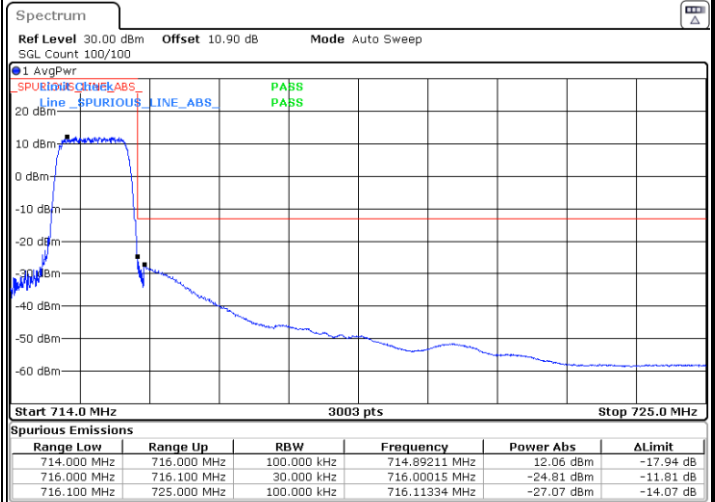
Date: 1.AUG.2023 21:46:54

Lowest Band Edge / Full RB



Date: 1.AUG.2023 21:43:11

Highest Band Edge / Full RB

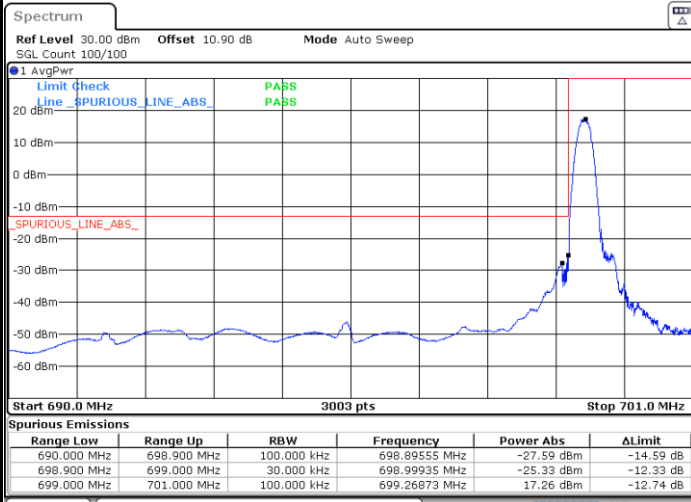


Date: 1.AUG.2023 21:45:54



LTE Band 12 / 1.4MHz / 256QAM

Lowest Band Edge / 1 RB



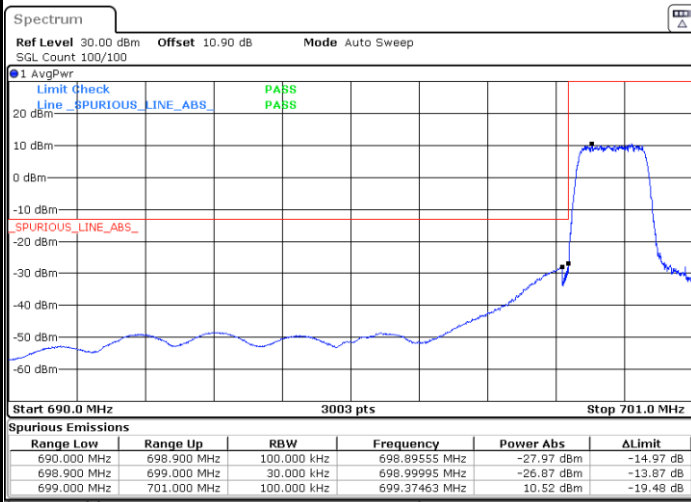
Date: 1.AUG.2023 22:17:49

Highest Band Edge / 1 RB



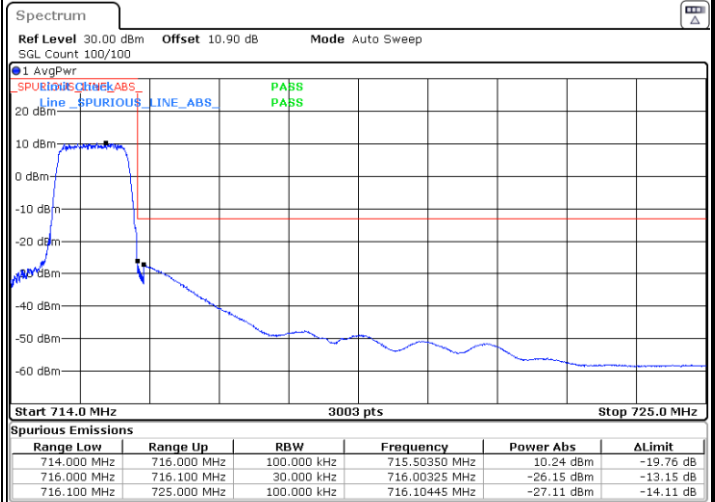
Date: 1.AUG.2023 22:22:31

Lowest Band Edge / Full RB



Date: 1.AUG.2023 22:16:49

Highest Band Edge / Full RB

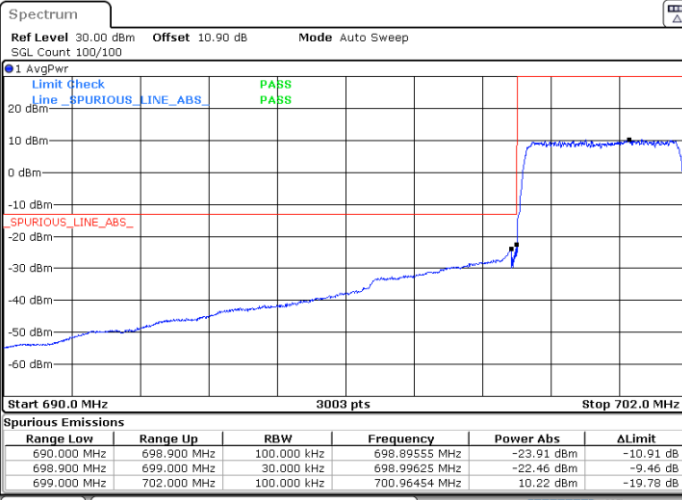


Date: 1.AUG.2023 22:21:31



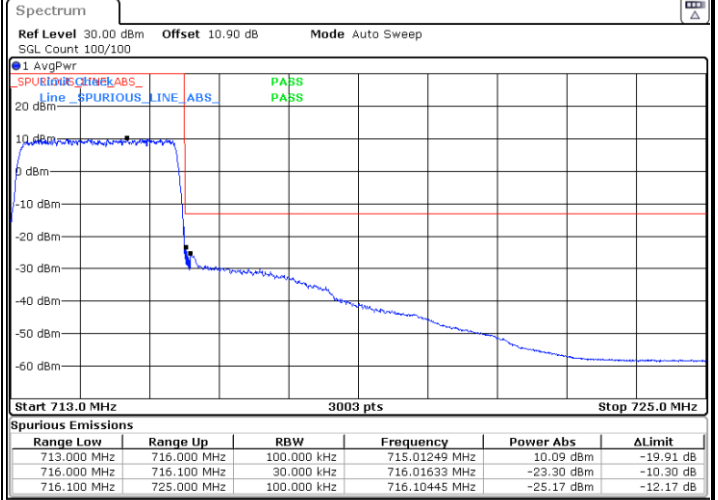
LTE Band 12 / 3MHz / QPSK

Lowest Band Edge / Full RB



Date: 1.AUG.2023 21:49:54

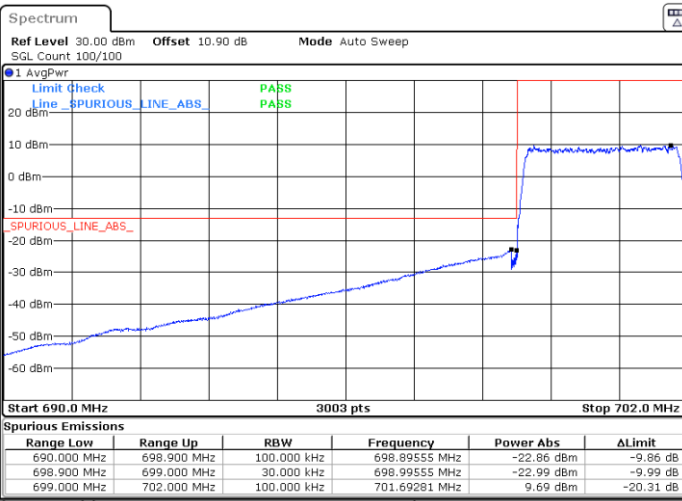
Highest Band Edge / Full RB



Date: 1.AUG.2023 21:53:34

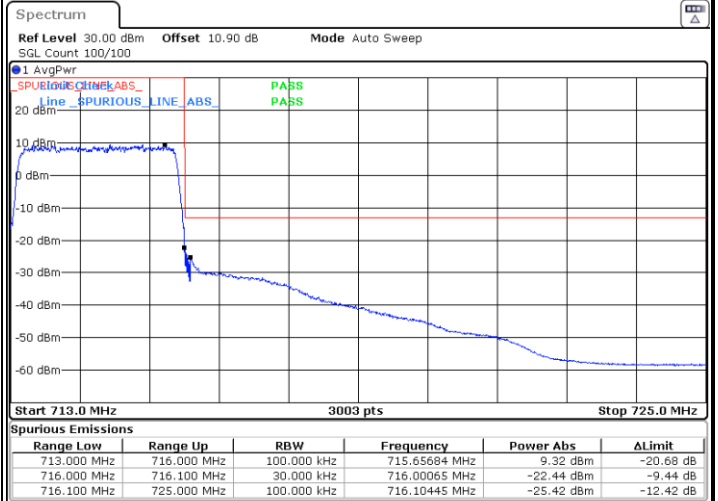
LTE Band 12 / 3MHz / 16QAM

Lowest Band Edge / Full RB



Date: 1.AUG.2023 21:50:54

Highest Band Edge / Full RB

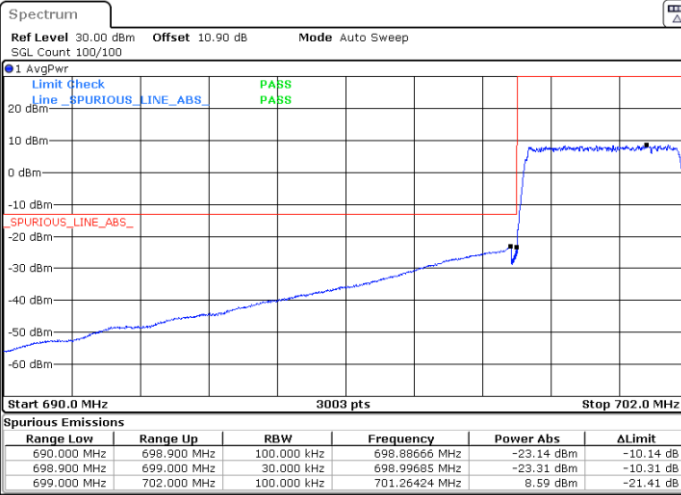


Date: 1.AUG.2023 21:54:34



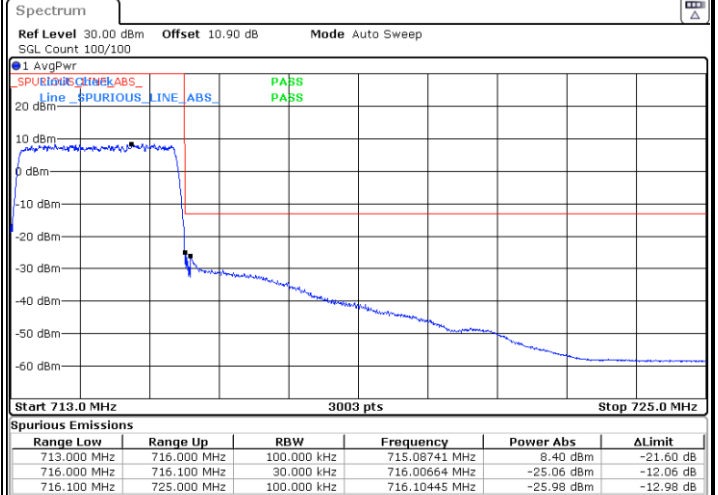
LTE Band 12 / 3MHz / 64QAM

Lowest Band Edge / Full RB



Date: 1.AUG.2023 21:55:34

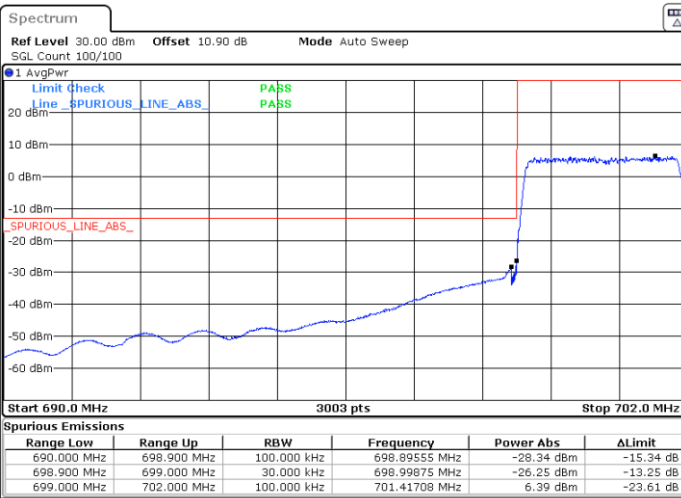
Highest Band Edge / Full RB



Date: 1.AUG.2023 21:57:17

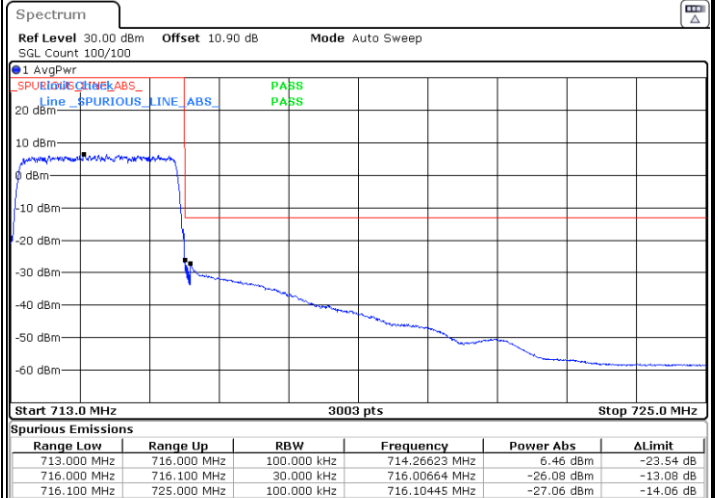
LTE Band 12 / 3MHz / 256QAM

Lowest Band Edge / Full RB



Date: 1.AUG.2023 22:23:36

Highest Band Edge / Full RB

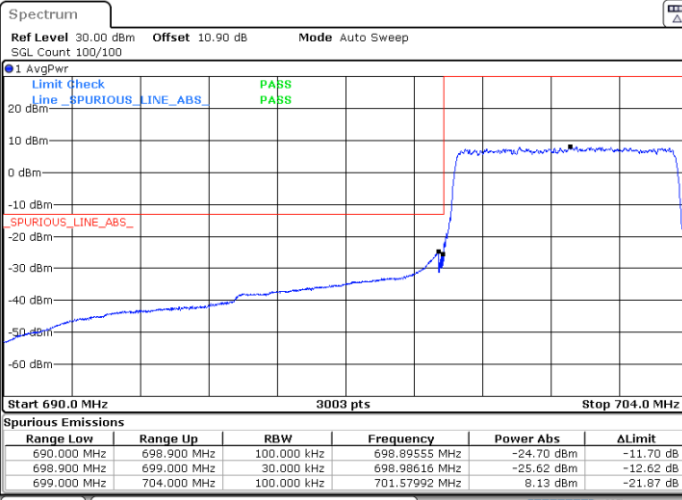


Date: 1.AUG.2023 22:25:19



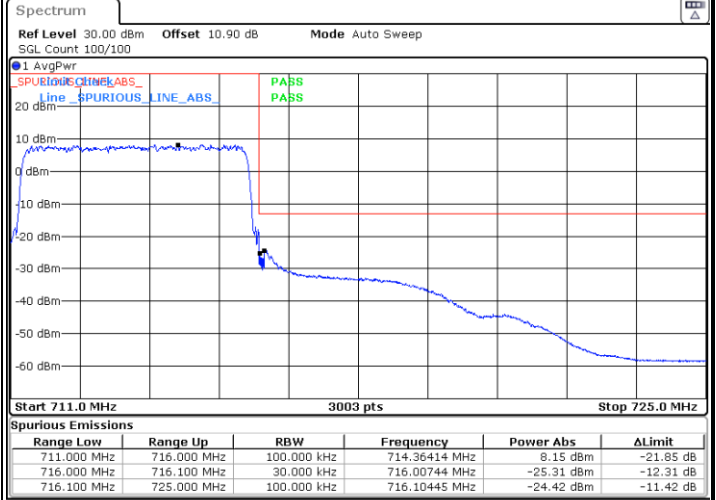
LTE Band 12 / 5MHz / QPSK

Lowest Band Edge / Full RB



Date: 1.AUG.2023 22:01:04

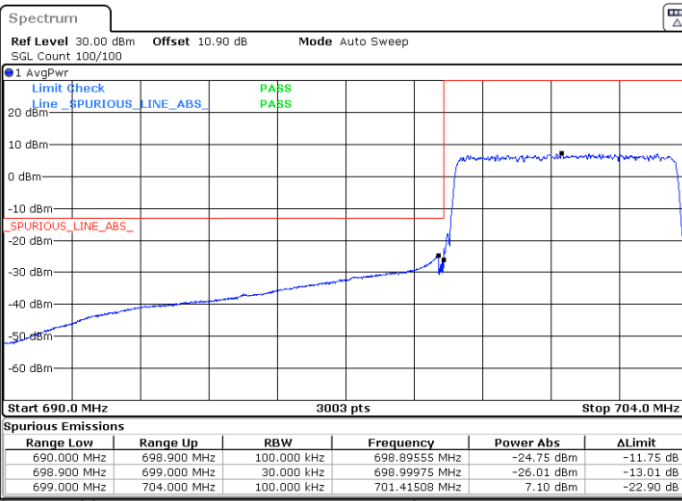
Highest Band Edge / Full RB



Date: 1.AUG.2023 22:04:45

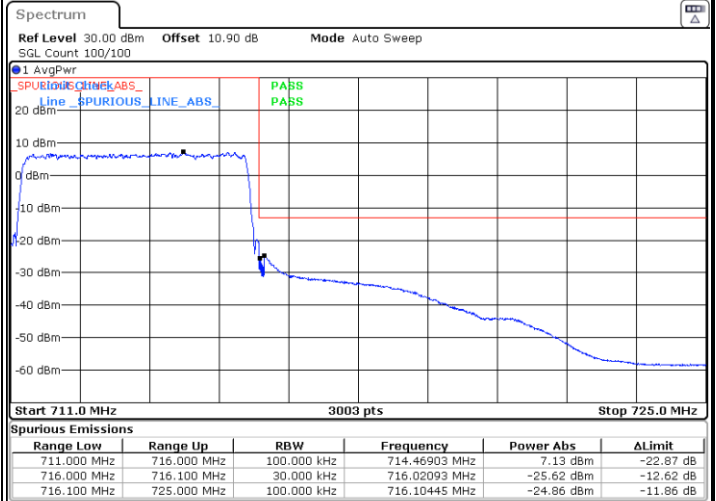
LTE Band 12 / 5MHz / 16QAM

Lowest Band Edge / Full RB



Date: 1.AUG.2023 22:02:04

Highest Band Edge / Full RB

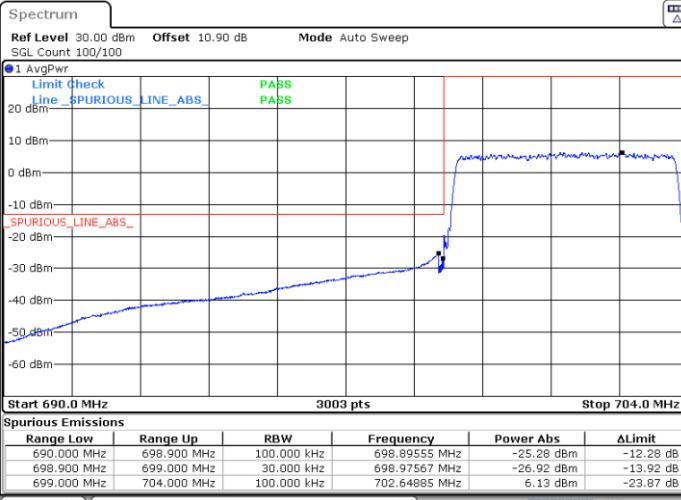


Date: 1.AUG.2023 22:05:45



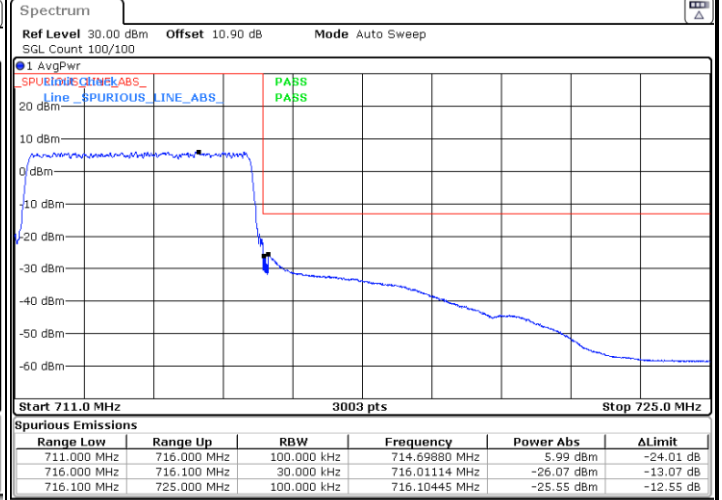
LTE Band 12 / 5MHz / 64QAM

Lowest Band Edge / Full RB



Date: 1.AUG.2023 21:58:22

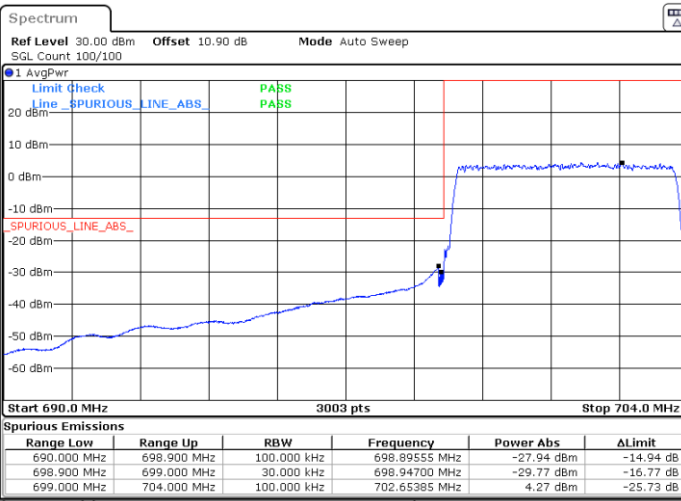
Highest Band Edge / Full RB



Date: 1.AUG.2023 22:00:04

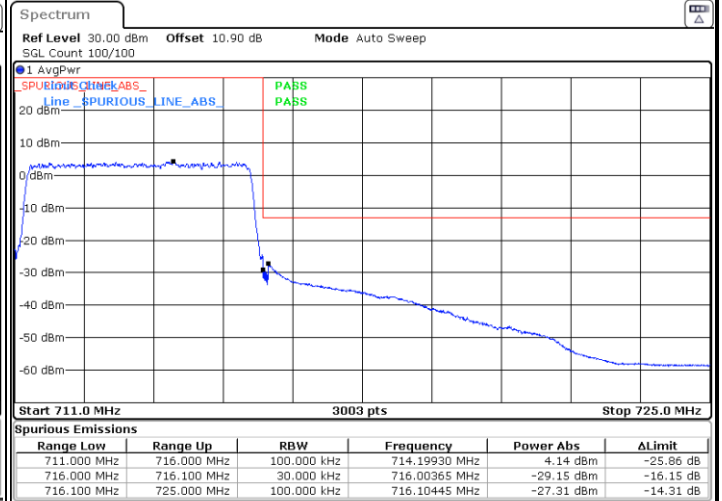
LTE Band 12 / 5MHz / 256QAM

Lowest Band Edge / Full RB



Date: 1.AUG.2023 22:26:24

Highest Band Edge / Full RB

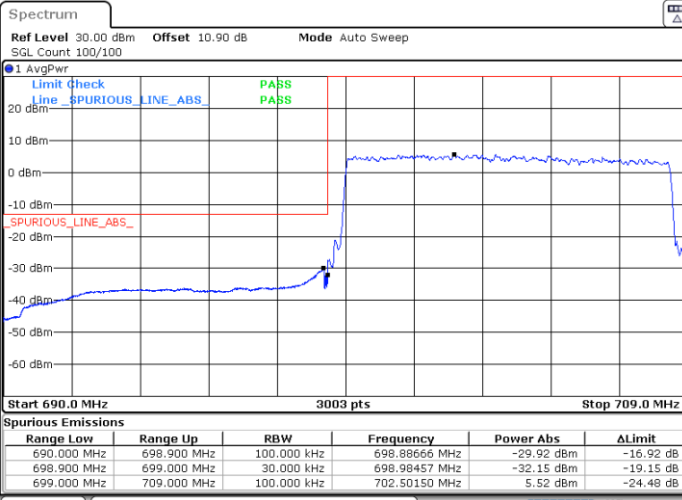


Date: 1.AUG.2023 22:28:06



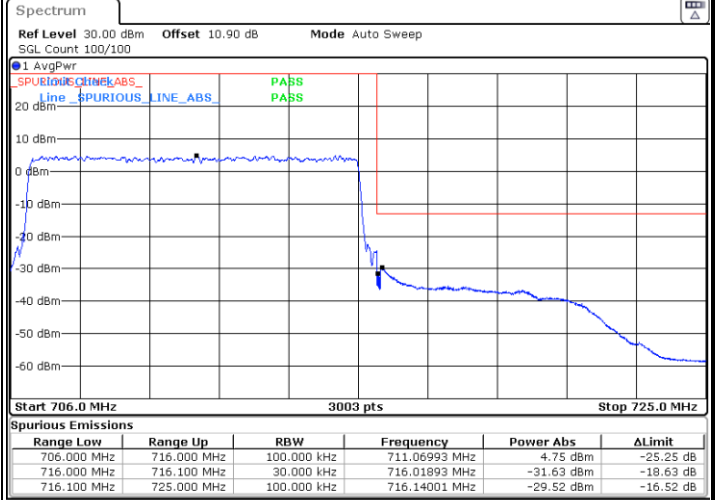
LTE Band 12 / 10MHz / QPSK

Lowest Band Edge / Full RB



Date: 1.AUG.2023 22:06:50

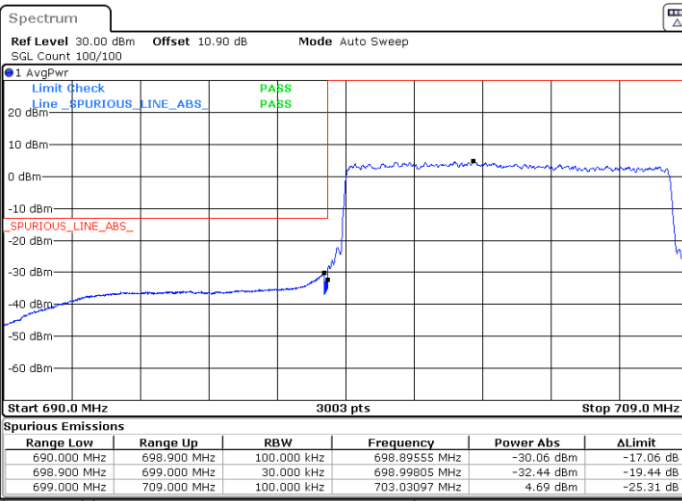
Highest Band Edge / Full RB



Date: 1.AUG.2023 22:10:30

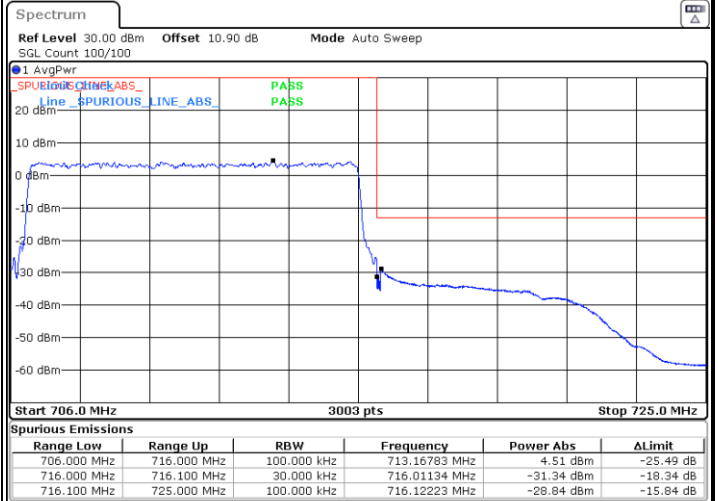
LTE Band 12 / 10MHz / 16QAM

Lowest Band Edge / Full RB



Date: 1.AUG.2023 22:07:50

Highest Band Edge / Full RB

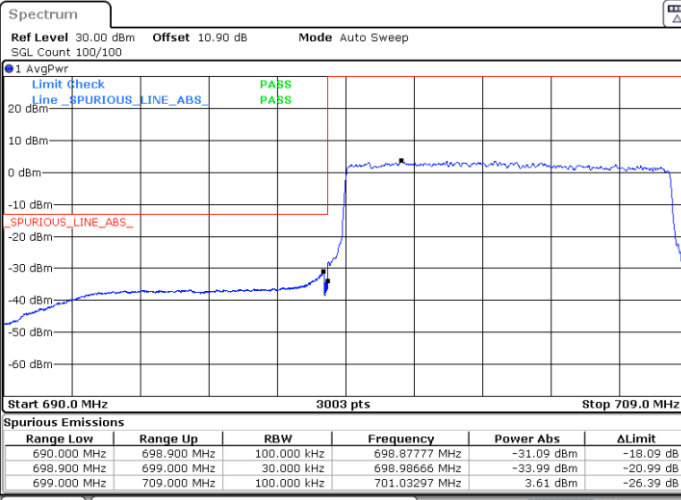


Date: 1.AUG.2023 22:11:30



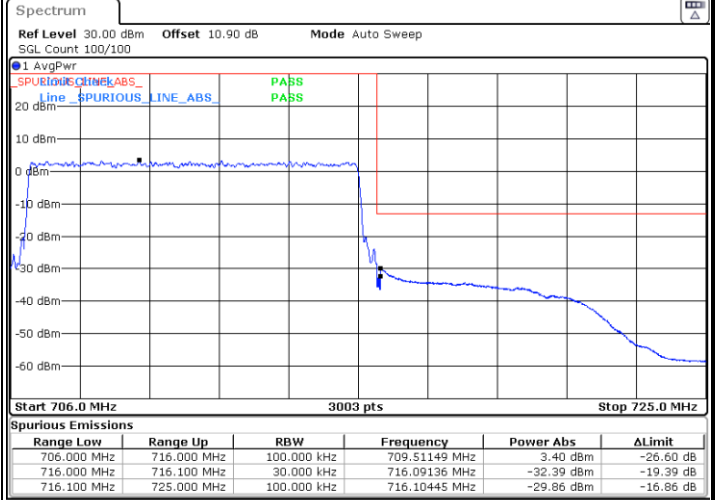
LTE Band 12 / 10MHz / 64QAM

Lowest Band Edge / Full RB



Date: 1.AUG.2023 22:12:30

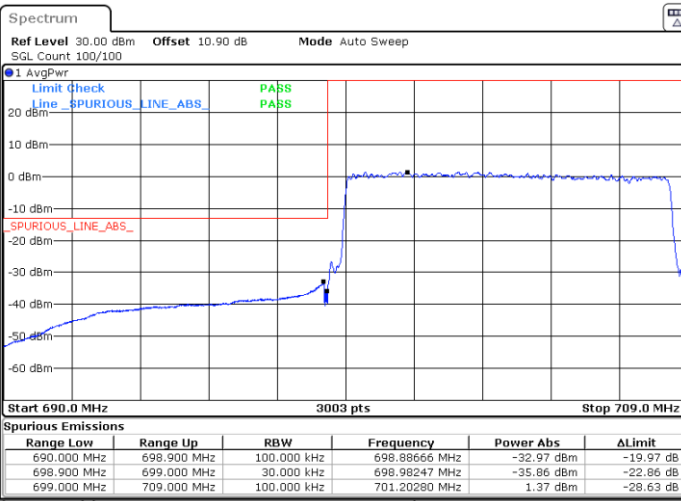
Highest Band Edge / Full RB



Date: 1.AUG.2023 22:14:13

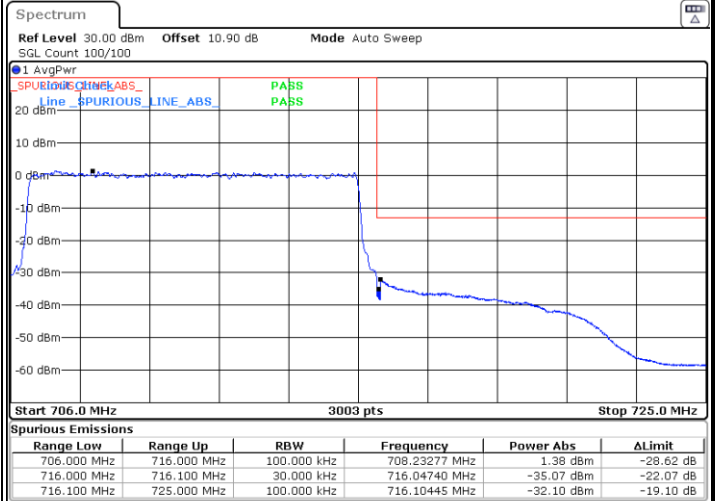
LTE Band 12 / 10MHz / 256QAM

Lowest Band Edge / Full RB



Date: 1.AUG.2023 22:29:11

Highest Band Edge / Full RB



Date: 1.AUG.2023 22:30:54



Conducted Spurious Emission

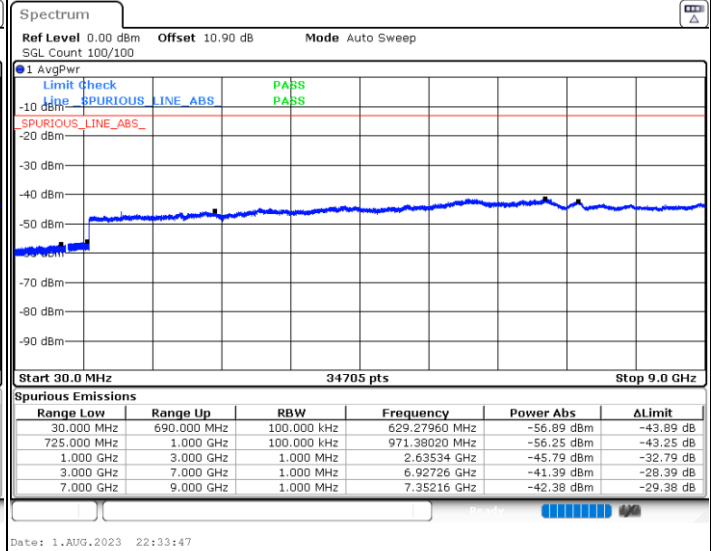
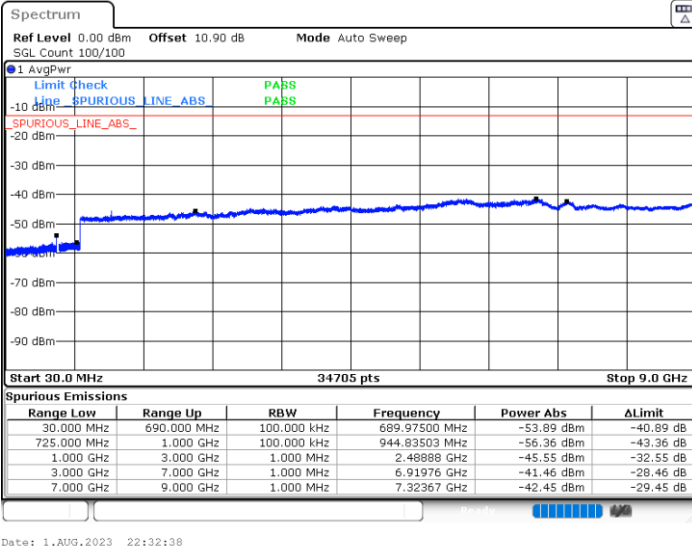




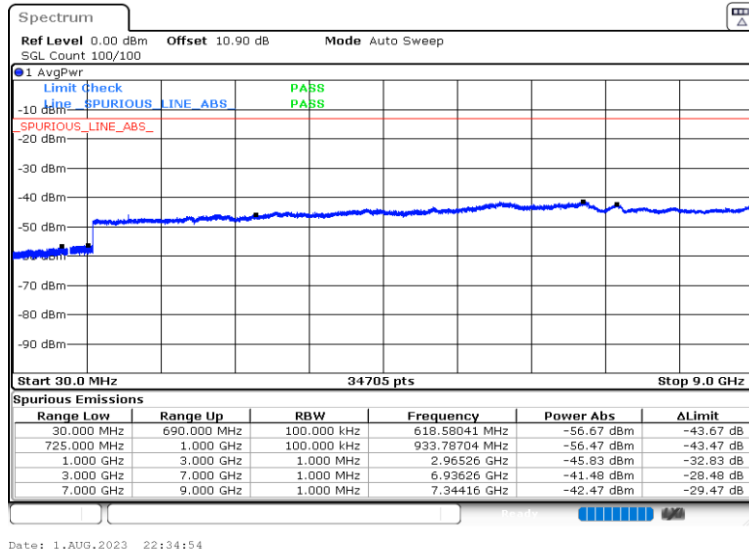
LTE Band 12 / 3MHz

Lowest Channel / QPSK

Middle Channel / QPSK



Highest Channel / QPSK

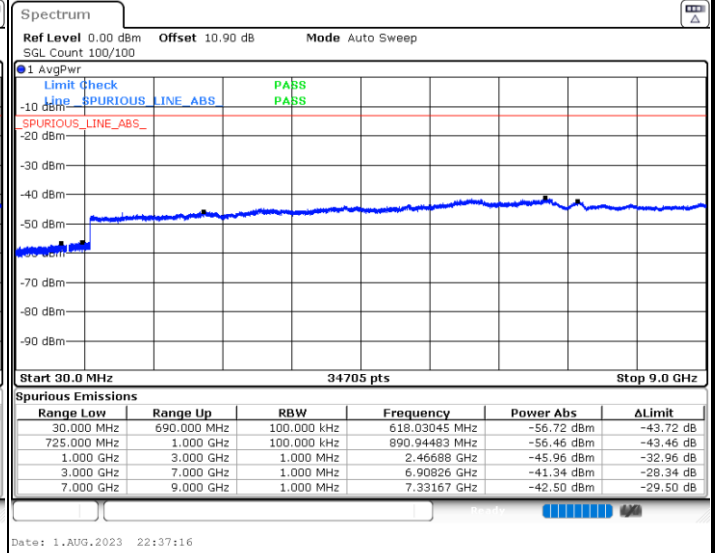
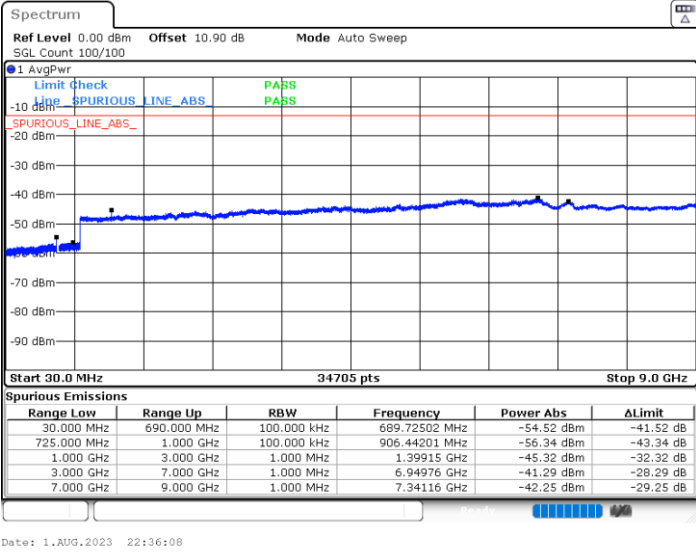




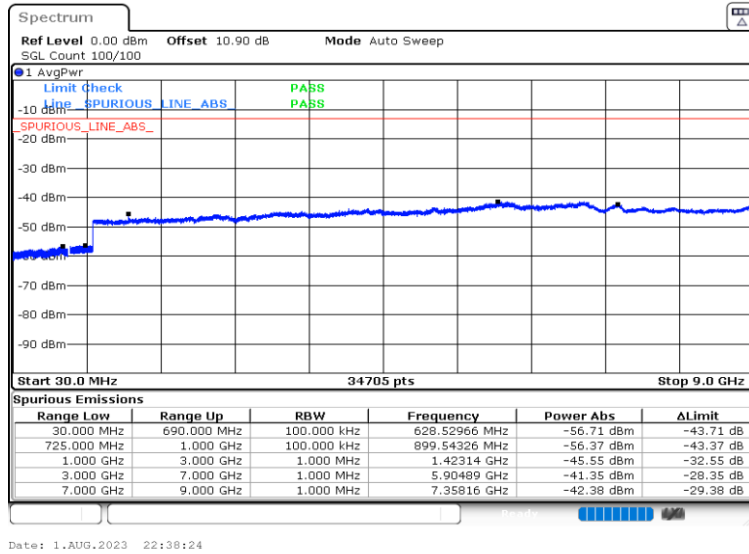
LTE Band 12 / 5MHz

Lowest Channel / QPSK

Middle Channel / QPSK



Highest Channel / QPSK

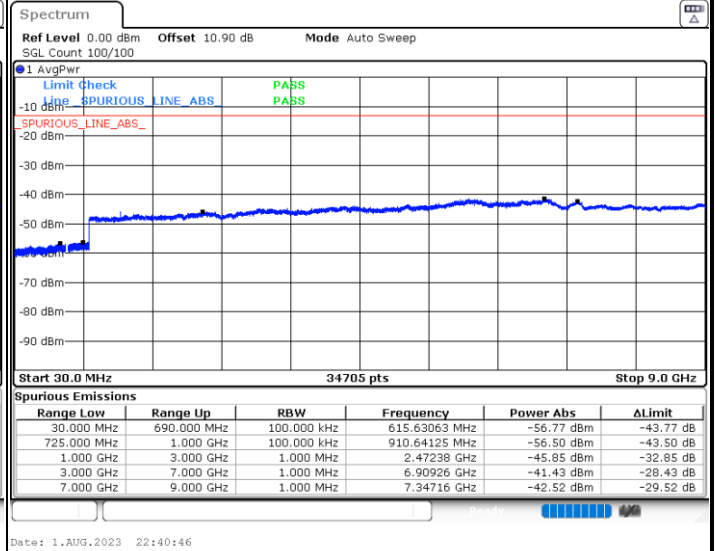
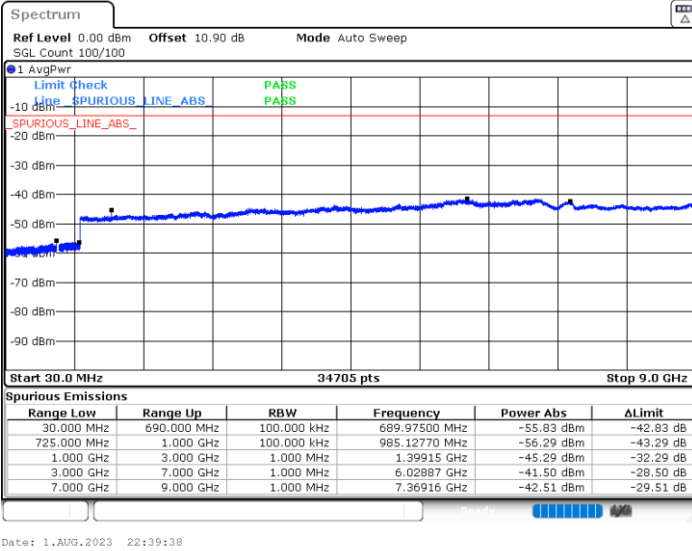




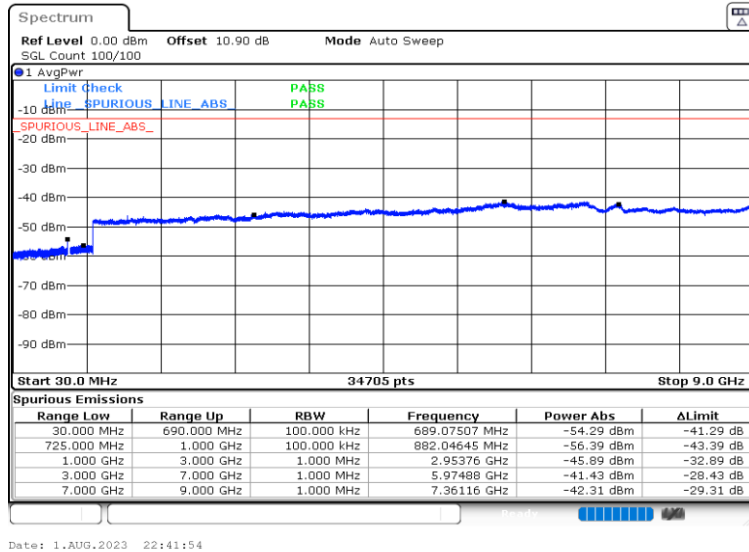
LTE Band 12 / 10MHz

Lowest Channel / QPSK

Middle Channel / QPSK



Highest Channel / QPSK





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	0.0054	PASS
40	Normal Voltage	0.0140	
30	Normal Voltage	0.0040	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0006	
0	Normal Voltage	0.0136	
-10	Normal Voltage	0.0100	
-20	Normal Voltage	0.0011	
-30	Normal Voltage	0.0020	
20	Maximum Voltage	0.0008	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0065	

Note:

1. Normal Voltage = 3.87 V. ; Battery End Point (BEP) = 3.6 V. ; Maximum Voltage = 4.48 V.
2. The frequency fundamental emissions stay within the authorized frequency block.



LTE Band 13

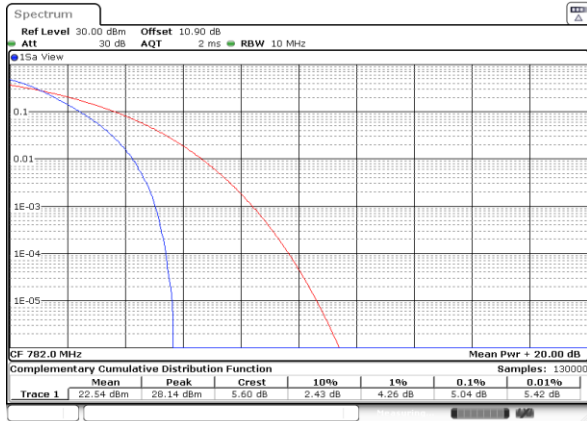
Peak-to-Average Ratio

Mode	LTE Band 13 / 10MHz				
Mod.	QPSK	16QAM	64QAM	256QAM	Limit: 13dB
RB Size	Full RB	Full RB	Full RB	Full RB	Result
Middle CH	5.04	5.65	6.23	6.12	PASS



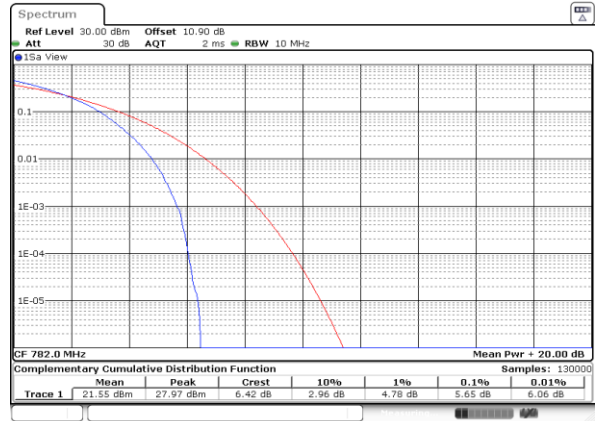
LTE Band 13 / 10MHz / QPSK

Middle Channel / Full RB



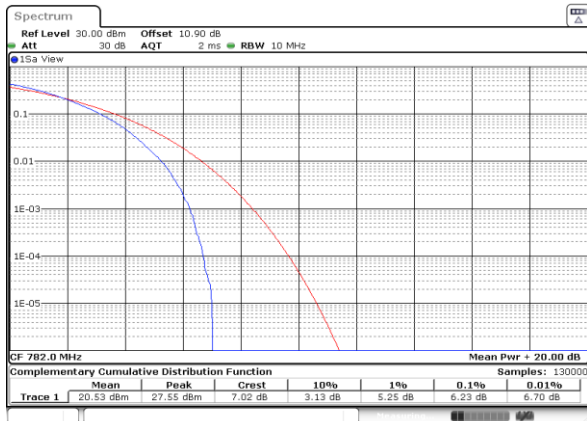
LTE Band 13 / 10MHz / 16QAM

Middle Channel / Full RB



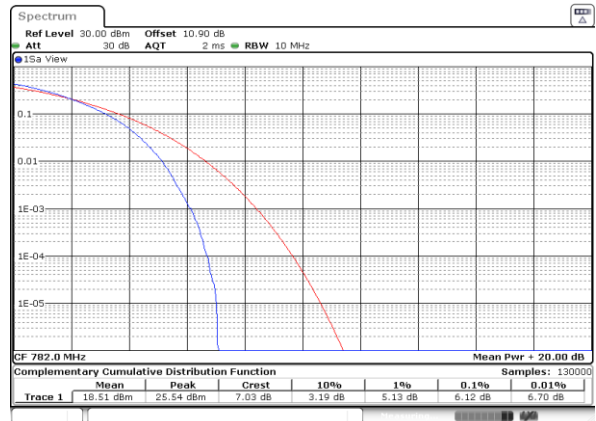
LTE Band 13 / 10MHz / 64QAM

Middle Channel / Full RB



LTE Band 13 / 10MHz / 256QAM

Middle Channel / Full RB





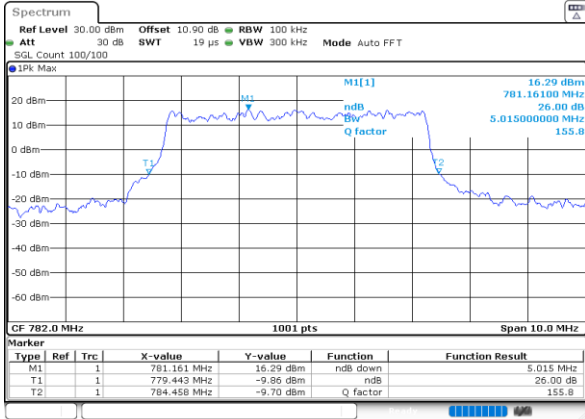
26dB Bandwidth

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	-	-	-	-	5.02	5.56	9.99	9.89	-	-	-	-
Mode	LTE Band 13 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM
Middle CH	-	-	-	-	4.97	5.28	9.89	10.13	-	-	-	-



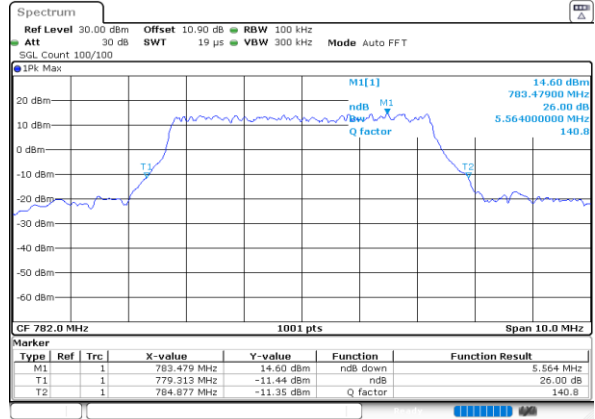
LTE Band 13

Middle Channel / 5MHz / QPSK



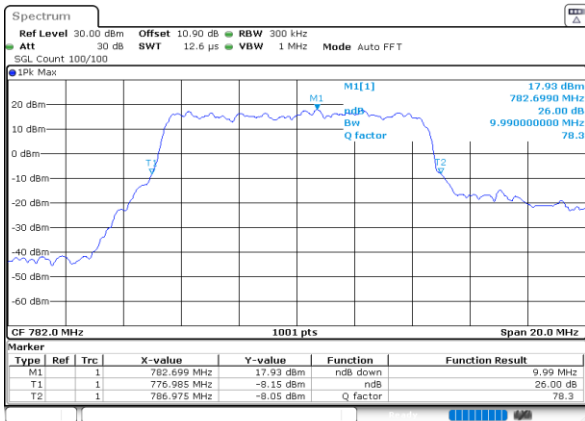
Date: 1.AUG.2023 22:50:25

Middle Channel / 5MHz / 16QAM



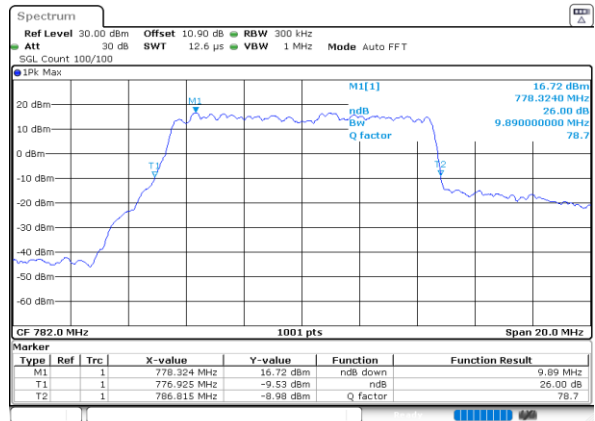
Date: 1.AUG.2023 22:50:54

Middle Channel / 10MHz / QPSK



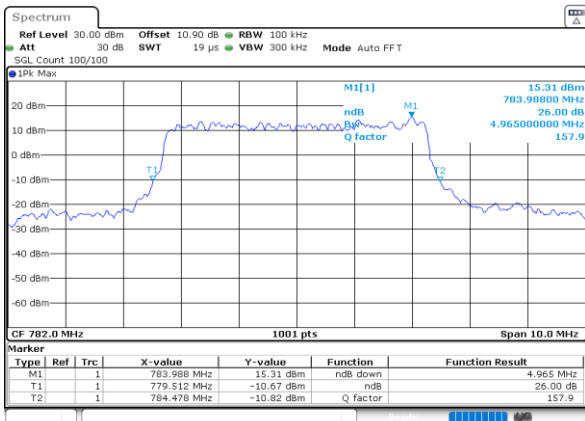
Date: 1.AUG.2023 23:03:15

Middle Channel / 10MHz / 16QAM



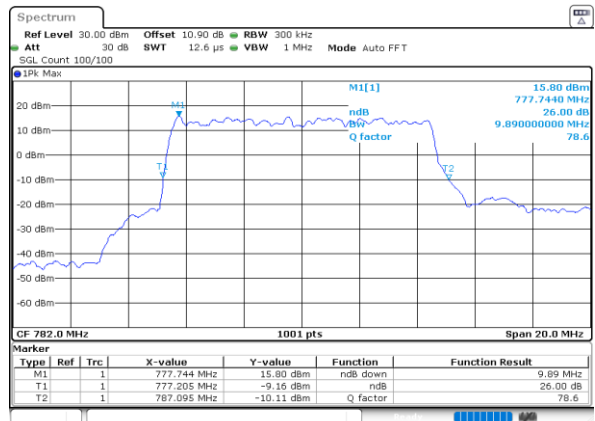
Date: 1.AUG.2023 23:02:46

Middle Channel / 5MHz / 64QAM



Date: 1.AUG.2023 22:59:15

Middle Channel / 10MHz / 64QAM



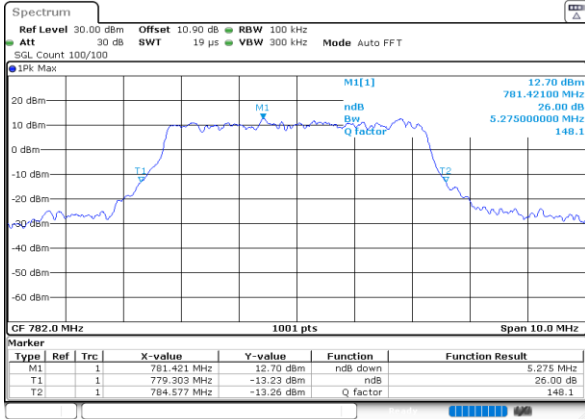
Date: 1.AUG.2023 23:05:42



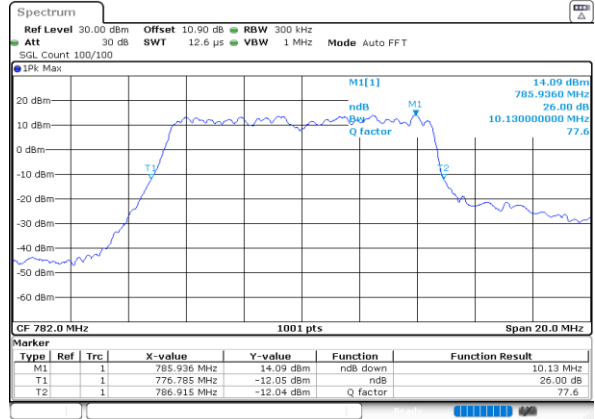
LTE Band 13

Middle Channel / 5MHz / 256QAM

Middle Channel / 10MHz / 256QAM



Date: 1.AUG.2023 23:10:18



Date: 1.AUG.2023 23:13:20



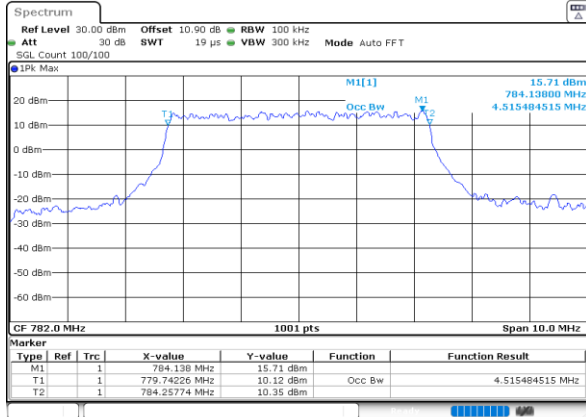
Occupied Bandwidth

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	-	-	-	-	4.52	4.51	9.01	9.09	-	-	-	-
Mode	LTE Band 13 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM
Middle CH	-	-	-	-	4.50	4.50	8.99	9.03	-	-	-	-



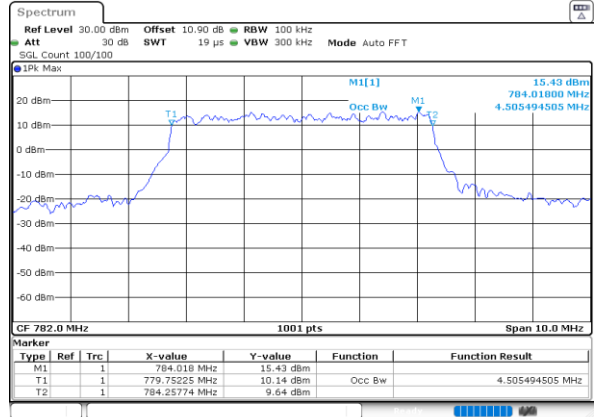
LTE Band 13

Middle Channel / 5MHz / QPSK



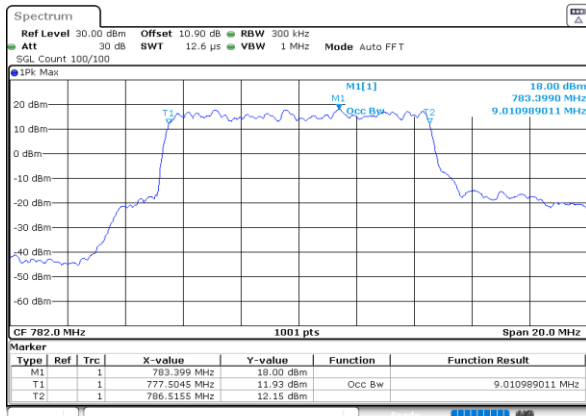
Date: 1.AUG.2023 22:51:37

Middle Channel / 5MHz / 16QAM



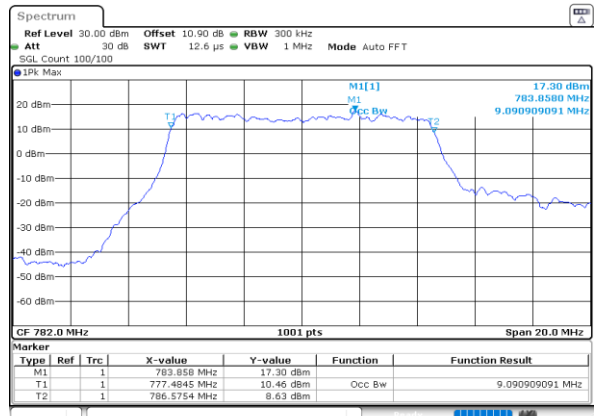
Date: 1.AUG.2023 22:51:08

Middle Channel / 10MHz / QPSK



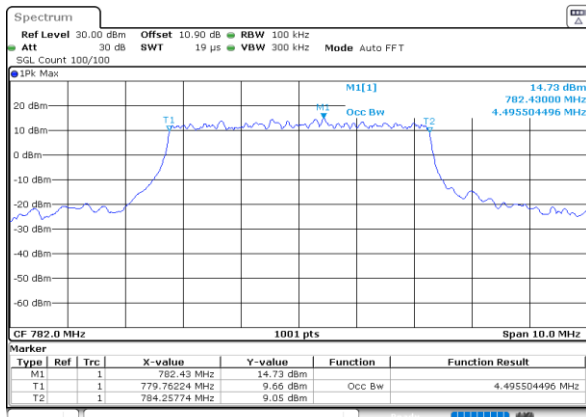
Date: 1.AUG.2023 23:02:03

Middle Channel / 10MHz / 16QAM



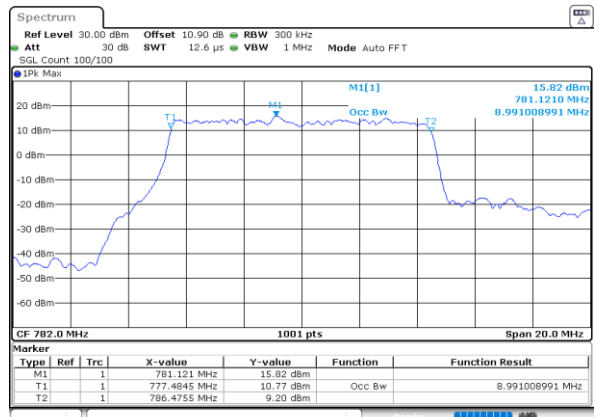
Date: 1.AUG.2023 23:02:32

Middle Channel / 5MHz / 64QAM



Date: 1.AUG.2023 22:59:29

Middle Channel / 10MHz / 64QAM



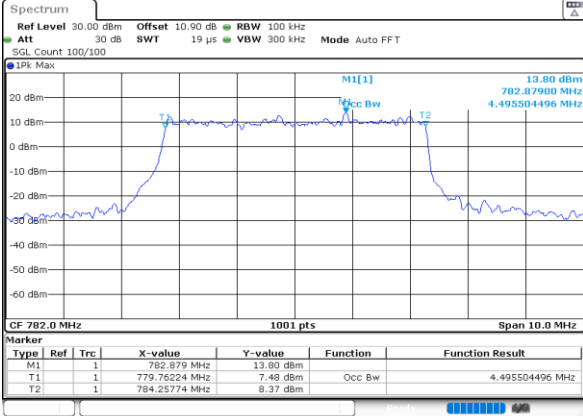
Date: 1.AUG.2023 23:05:28



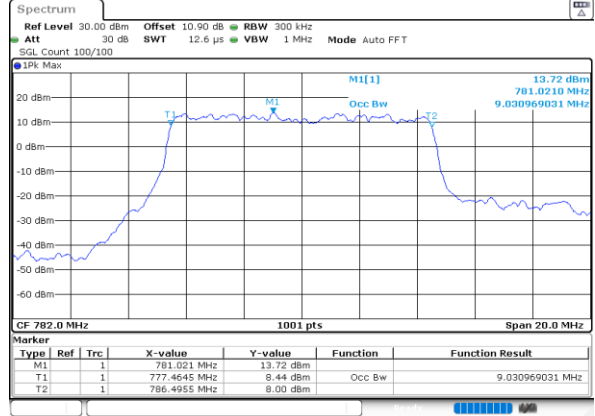
LTE Band 13

Middle Channel / 5MHz / 256QAM

Middle Channel / 10MHz / 256QAM



Date: 1.AUG.2023 23:10:32



Date: 1.AUG.2023 23:13:06

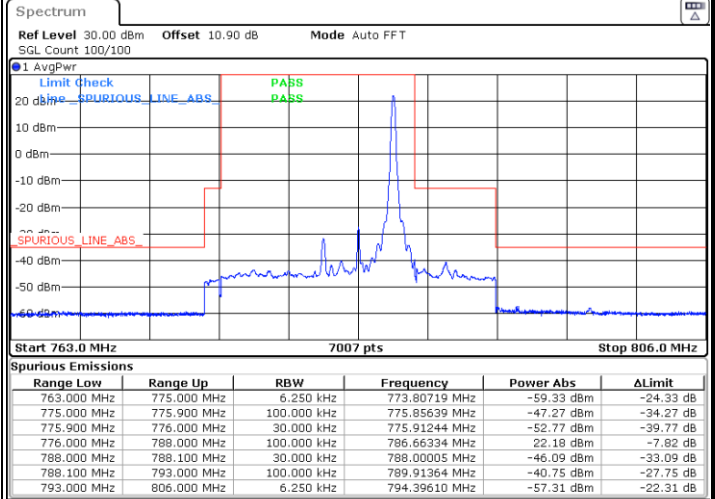
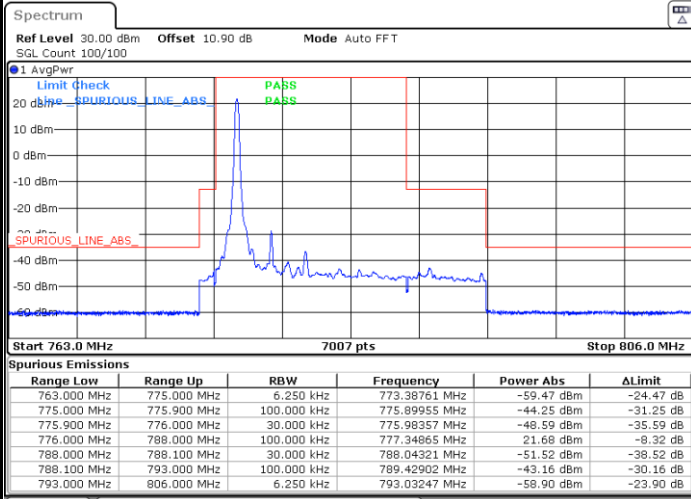


Conducted Band Edge

LTE Band 13 / 5MHz / QPSK

Lowest Band Edge / 1 RB

Highest Band Edge / 1 RB

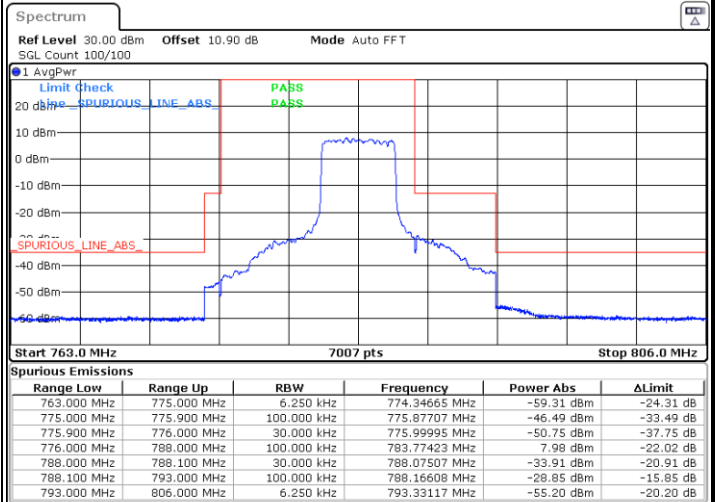
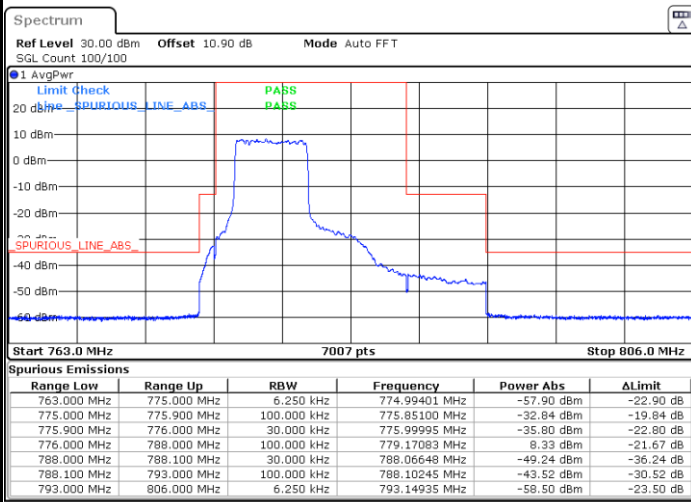


Date: 1.AUG.2023 22:47:53

Date: 1.AUG.2023 22:55:35

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



Date: 1.AUG.2023 22:44:53

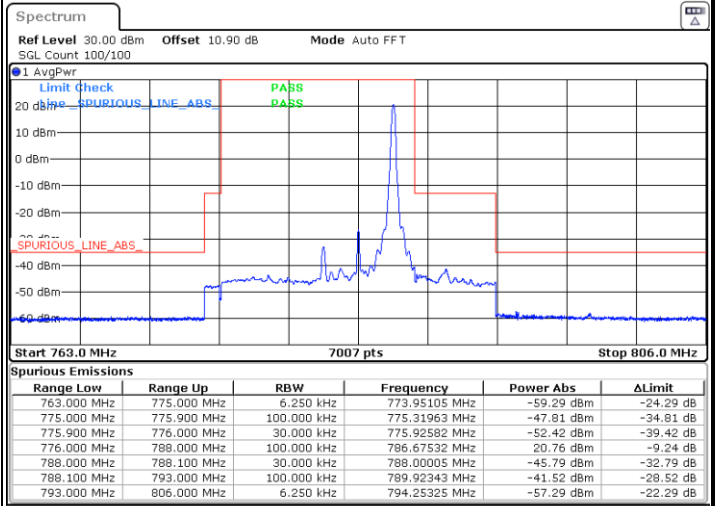
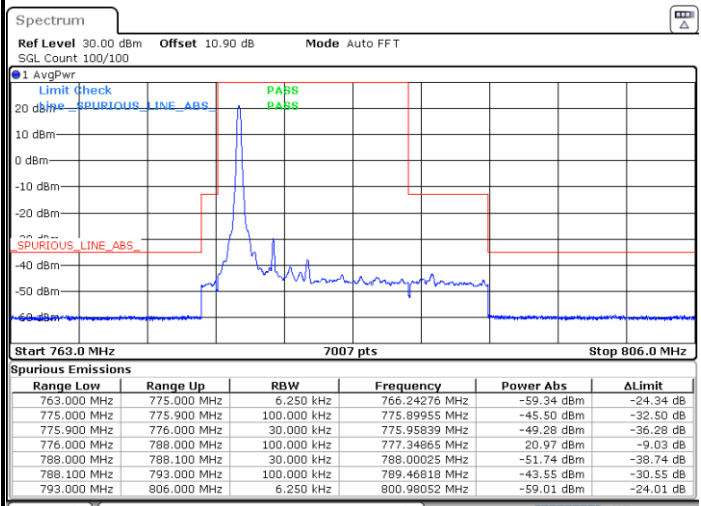
Date: 1.AUG.2023 22:52:35



LTE Band 13 / 5MHz / 16QAM

Lowest Band Edge / 1 RB

Highest Band Edge / 1 RB

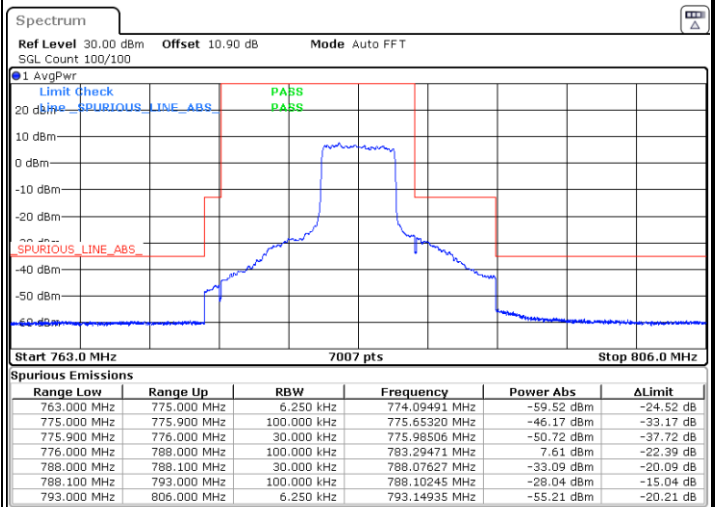
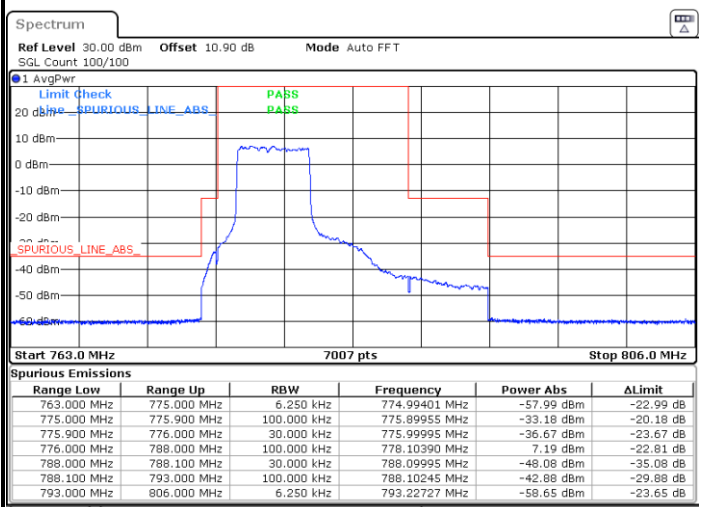


Date: 1.AUG.2023 22:46:53

Date: 1.AUG.2023 22:54:35

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



Date: 1.AUG.2023 22:45:53

Date: 1.AUG.2023 22:53:34