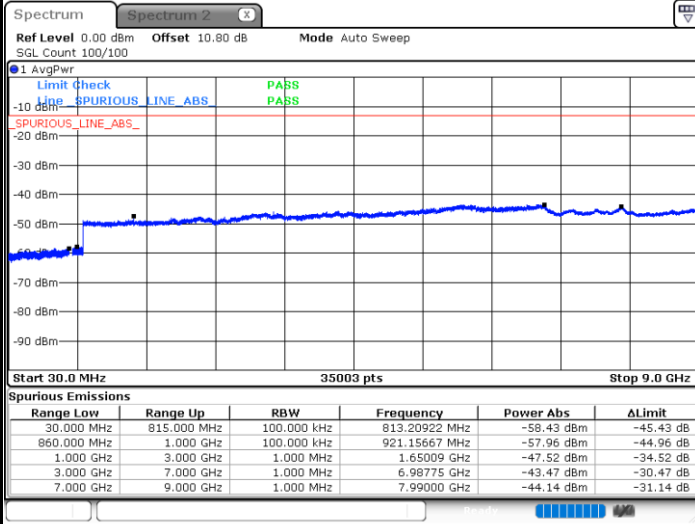




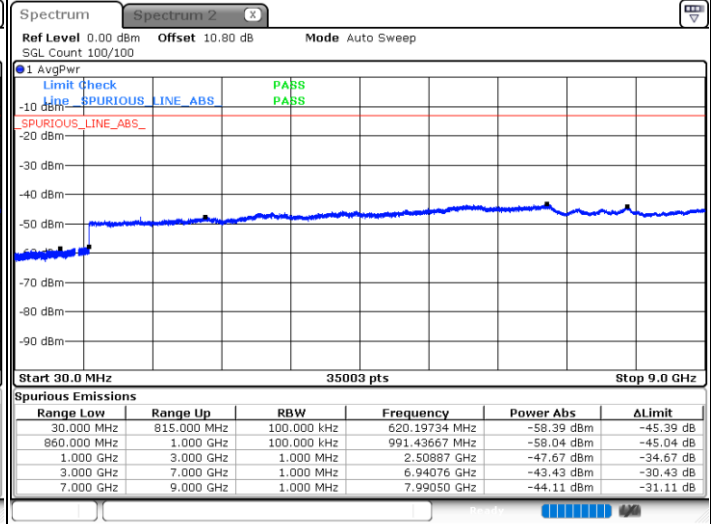
LTE Band 5 / 5MHz

Lowest Channel / QPSK



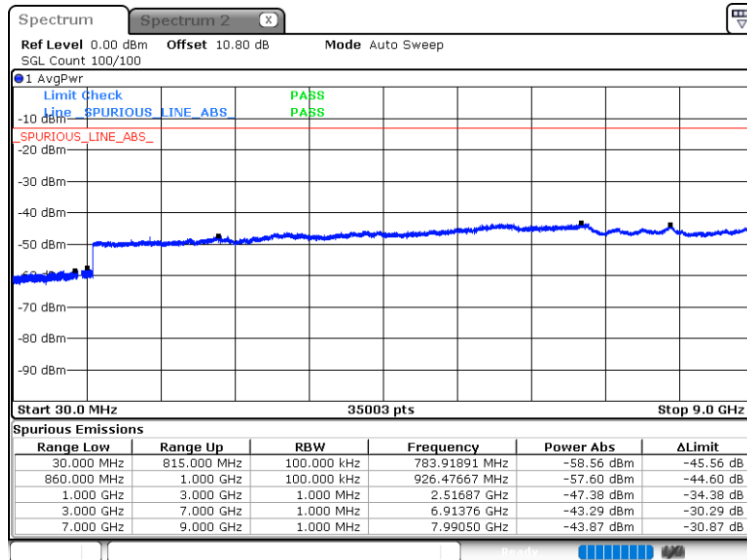
Date: 25.MAY.2021 09:36:23

Middle Channel / QPSK



Date: 25.MAY.2021 09:38:27

Highest Channel / QPSK

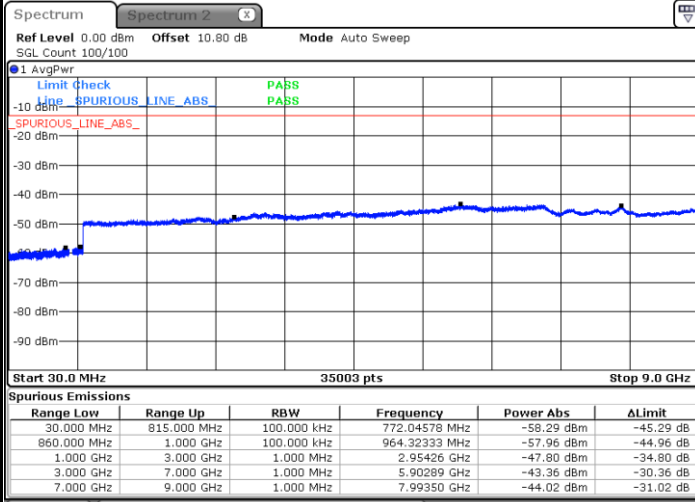


Date: 25.MAY.2021 09:49:19



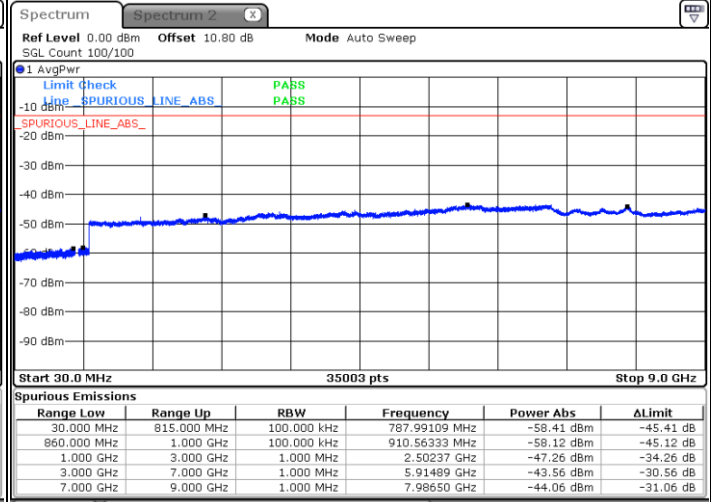
LTE Band 5 / 10MHz

Lowest Channel / QPSK



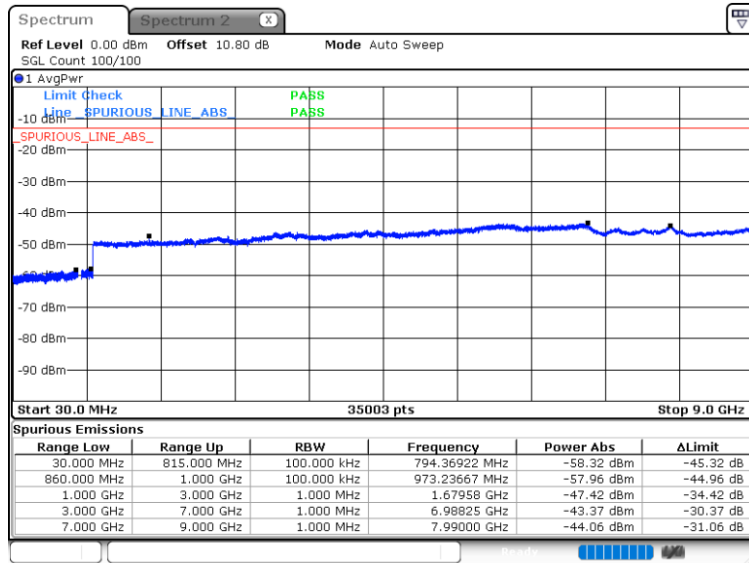
Date: 25.MAY.2021 10:05:30

Middle Channel / QPSK



Date: 25.MAY.2021 10:07:34

Highest Channel / QPSK



Date: 25.MAY.2021 10:15:37



### Frequency Stability

Test Conditions		LTE Band 5 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0024	PASS
40	Normal Voltage	0.0105	
30	Normal Voltage	0.0065	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0118	
0	Normal Voltage	0.0063	
-10	Normal Voltage	0.0008	
-20	Normal Voltage	0.0055	
-30	Normal Voltage	0.0075	
20	Maximum Voltage	0.0139	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0004	

**Note:**

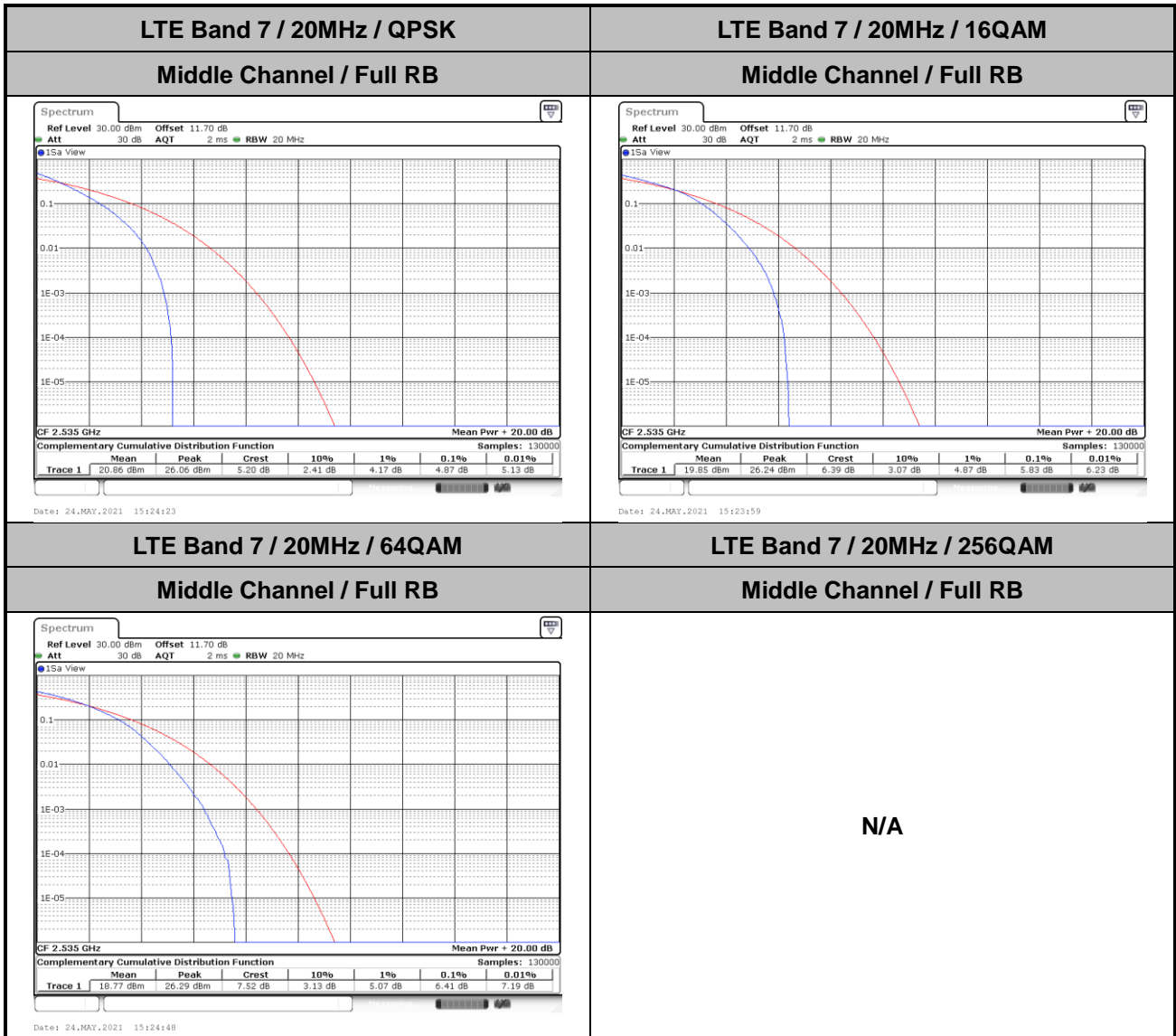
- 1. Normal Voltage =3.85 V. ; Battery End Point (BEP) =3.55 V. ; Maximum Voltage =4.35 V.
- 2. The frequency fundamental emissions stay within the authorized frequency block.



## LTE Band 7

### Peak-to-Average Ratio

Mode	LTE Band 7 / 20MHz				
Mod.	QPSK	16QAM	64QAM	256QAM	Limit: 13dB
RB Size	Full RB	Full RB	Full RB	Full RB	Result
Middle CH	4.87	5.83	6.41	-	PASS





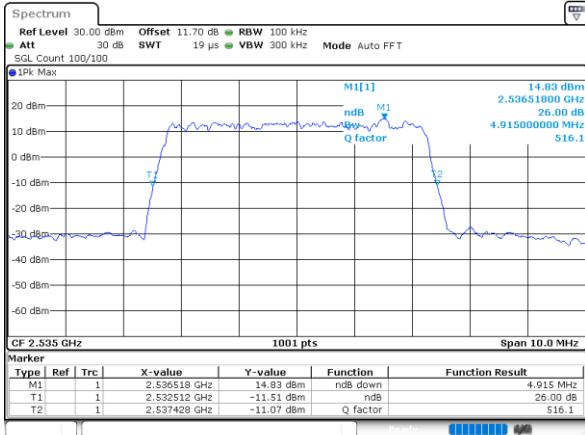
**26dB Bandwidth**

Mode	LTE Band 7 : 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	-	-	-	-	4.92	4.90	9.85	9.67	14.30	14.42	19.14	18.78
Mode	LTE Band 7 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM	256 QAM	64QAM	256 QAM	64QAM	256 QAM	64QAM	256 QAM	64QAM	256 QAM	64QAM	256 QAM
Middle CH	-	-	-	-	4.89	-	9.69	-	14.42	-	19.06	-



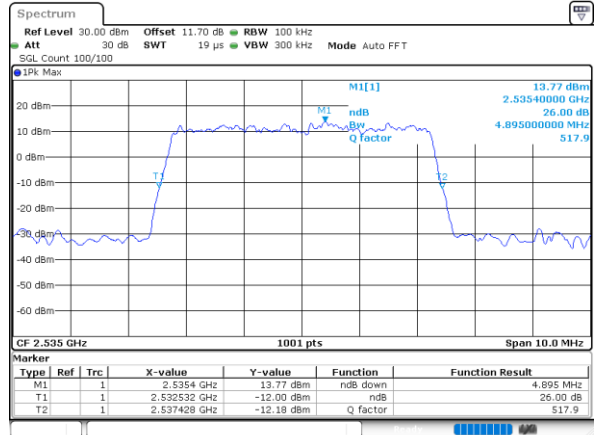
LTE Band 7

Middle Channel / 5MHz / QPSK



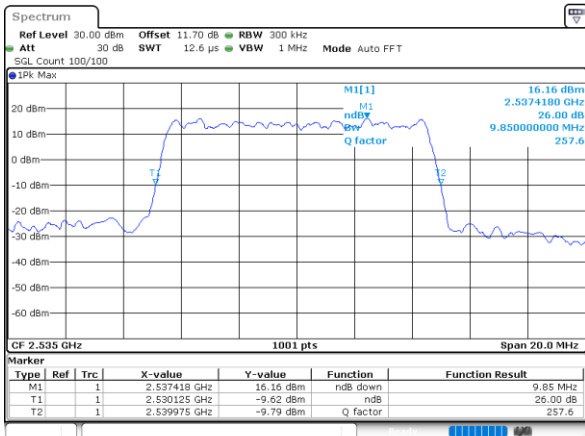
Date: 24.MAY.2021 14:46:03

Middle Channel / 5MHz / 16QAM



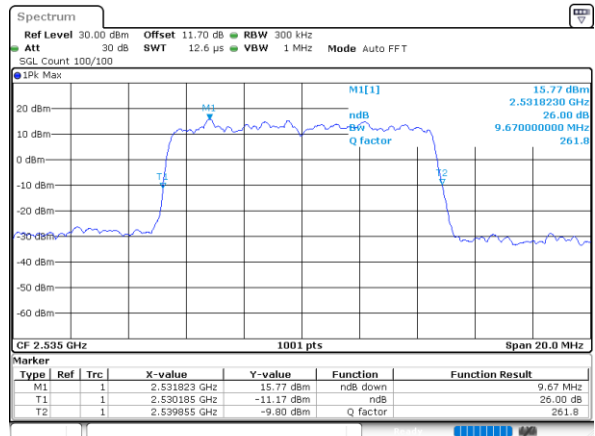
Date: 24.MAY.2021 14:46:24

Middle Channel / 10MHz / QPSK



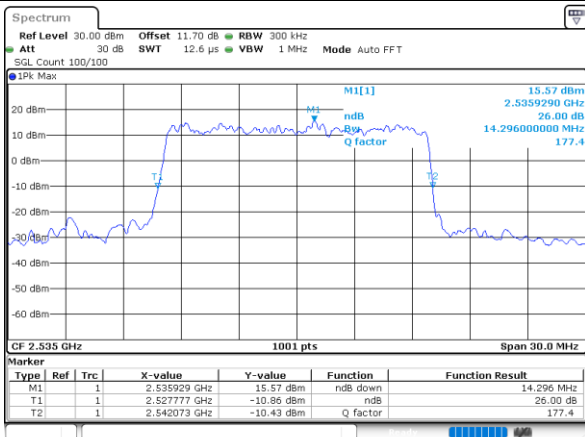
Date: 24.MAY.2021 14:56:23

Middle Channel / 10MHz / 16QAM



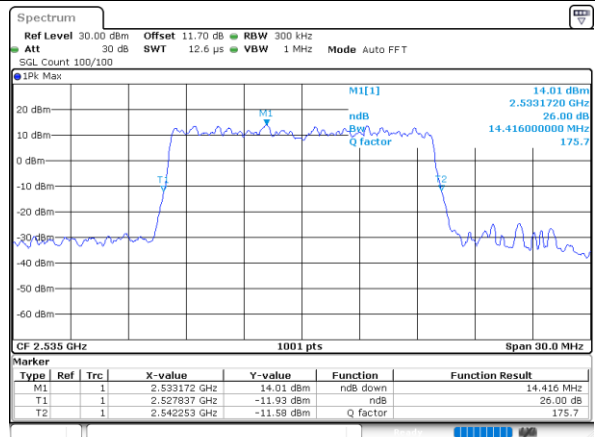
Date: 24.MAY.2021 14:56:44

Middle Channel / 15MHz / QPSK



Date: 24.MAY.2021 15:06:44

Middle Channel / 15MHz / 16QAM

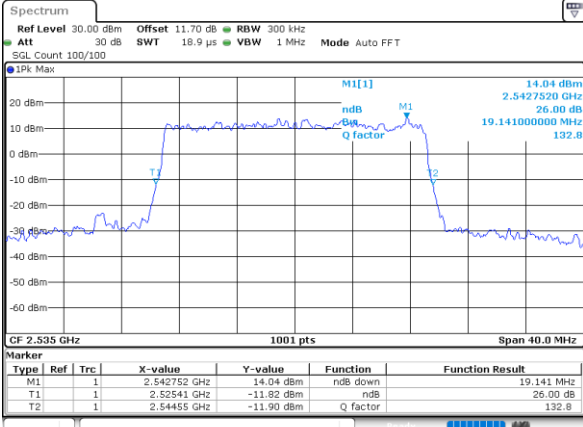


Date: 24.MAY.2021 15:07:05



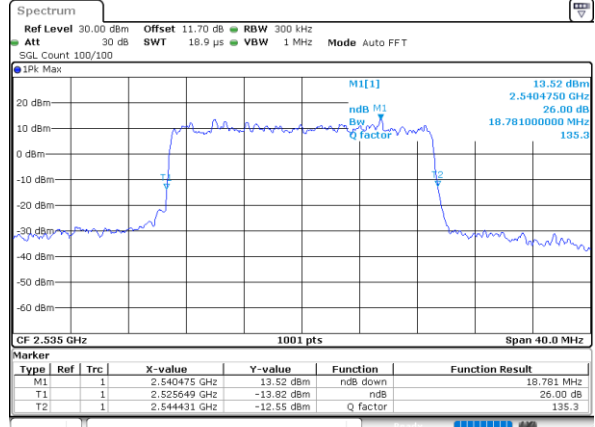
LTE Band 7

Middle Channel / 20MHz / QPSK



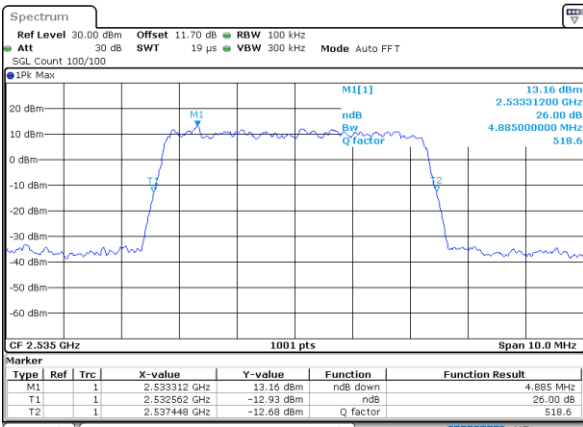
Date: 24.MAY.2021 15:17:07

Middle Channel / 20MHz / 16QAM



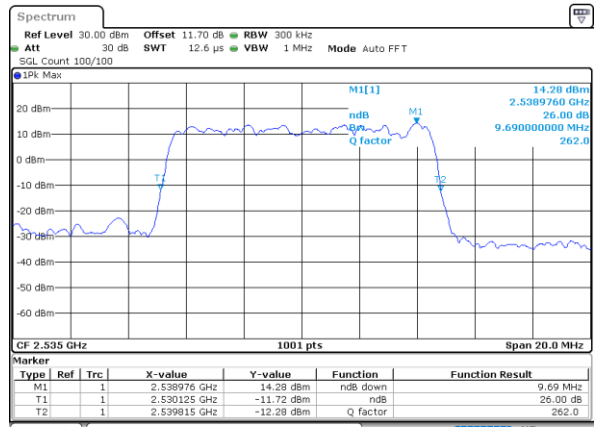
Date: 24.MAY.2021 15:17:27

Middle Channel / 5MHz / 64QAM



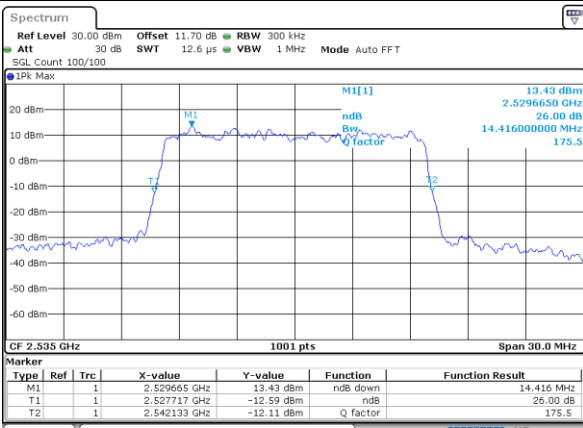
Date: 24.MAY.2021 14:51:42

Middle Channel / 10MHz / 64QAM



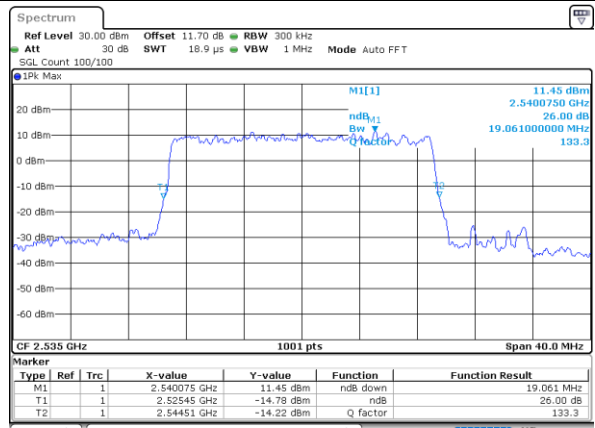
Date: 24.MAY.2021 15:02:02

Middle Channel / 15MHz / 64QAM



Date: 24.MAY.2021 15:12:23

Middle Channel / 20MHz / 64QAM



Date: 24.MAY.2021 15:22:45





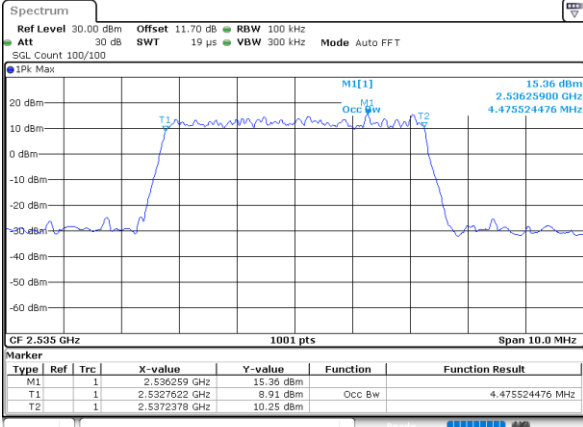
**Occupied Bandwidth**

Mode	LTE Band 7 : 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	-	-	-	-	4.48	4.50	9.05	9.01	13.43	13.46	17.82	17.74
Mode	LTE Band 7 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM	256 QAM	64QAM	256 QAM	64QAM	256 QAM	64QAM	256 QAM	64QAM	256 QAM	64QAM	256 QAM
Middle CH	-	-	-	-	4.48	-	9.03	-	13.40	-	17.86	-



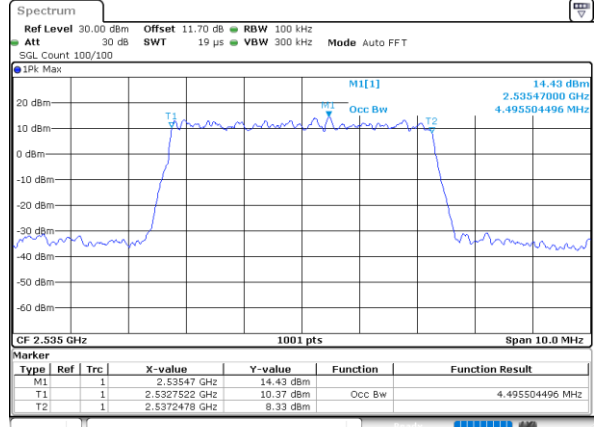
LTE Band 7

Middle Channel / 5MHz / QPSK



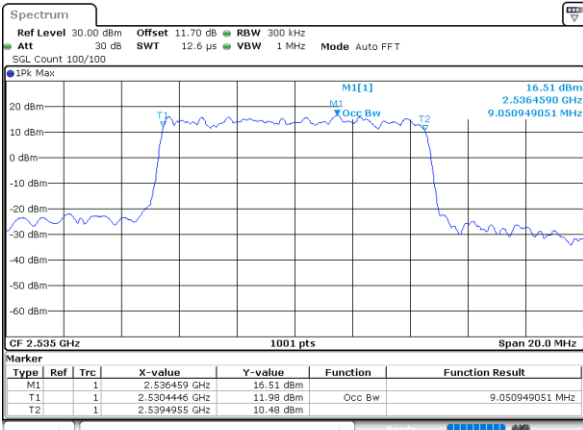
Date: 24.MAY.2021 14:45:10

Middle Channel / 5MHz / 16QAM



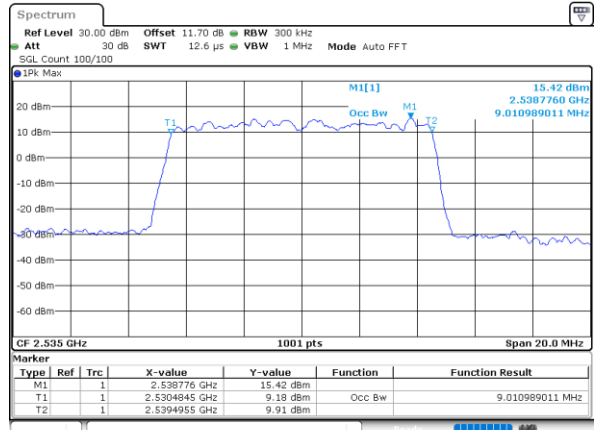
Date: 24.MAY.2021 14:45:41

Middle Channel / 10MHz / QPSK



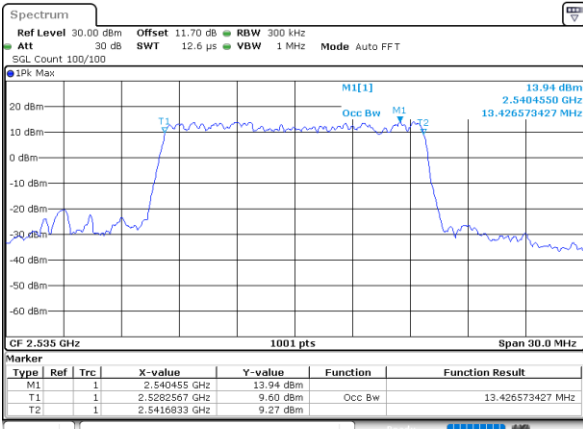
Date: 24.MAY.2021 14:55:08

Middle Channel / 10MHz / 16QAM



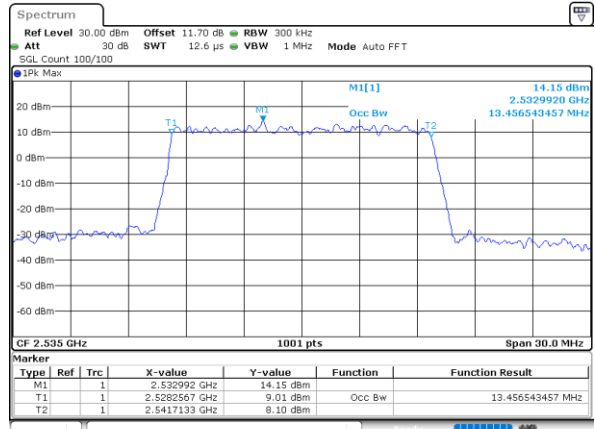
Date: 24.MAY.2021 14:56:01

Middle Channel / 15MHz / QPSK



Date: 24.MAY.2021 15:05:59

Middle Channel / 15MHz / 16QAM

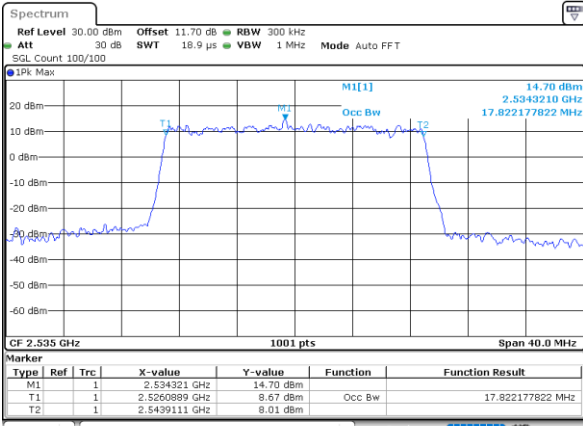


Date: 24.MAY.2021 15:06:22



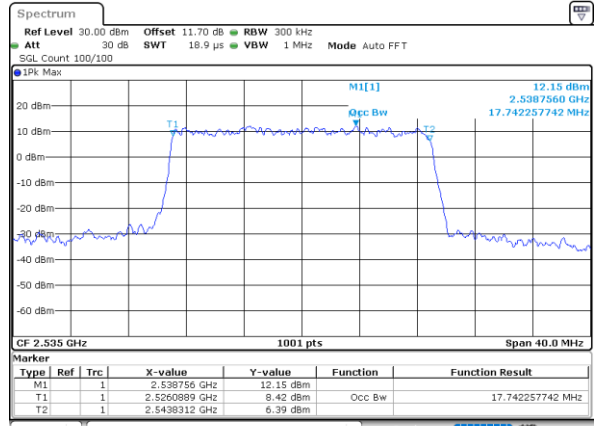
LTE Band 7

Middle Channel / 20MHz / QPSK



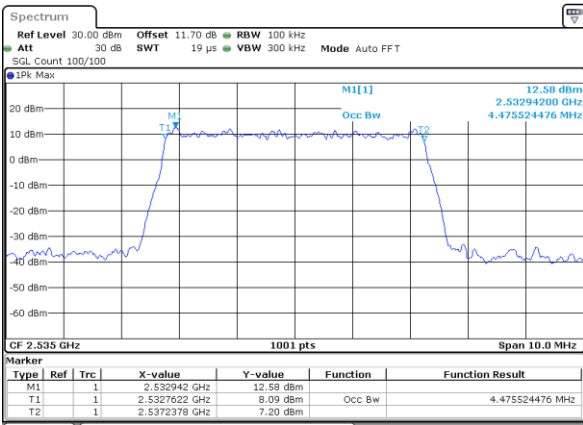
Date: 24.MAY.2021 15:16:21

Middle Channel / 20MHz / 16QAM



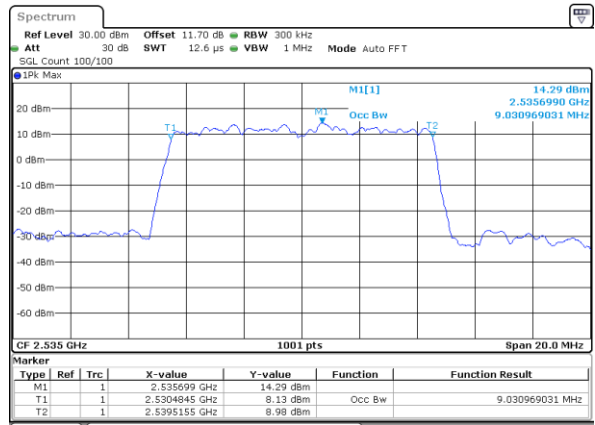
Date: 24.MAY.2021 15:16:43

Middle Channel / 5MHz / 64QAM



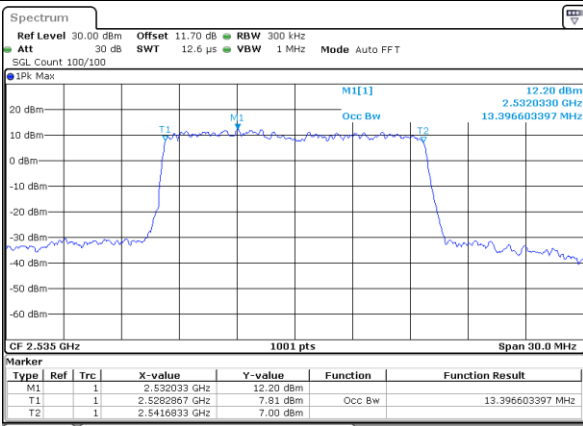
Date: 24.MAY.2021 14:51:20

Middle Channel / 10MHz / 64QAM



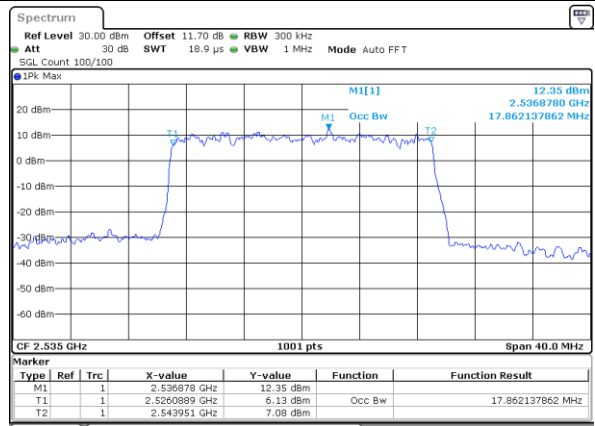
Date: 24.MAY.2021 15:01:39

Middle Channel / 15MHz / 64QAM



Date: 24.MAY.2021 15:12:01

Middle Channel / 20MHz / 64QAM



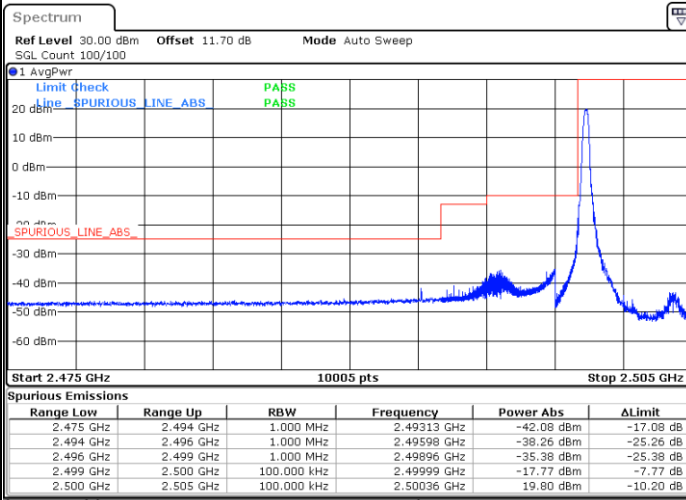
Date: 24.MAY.2021 15:22:23



# Conducted Band Edge

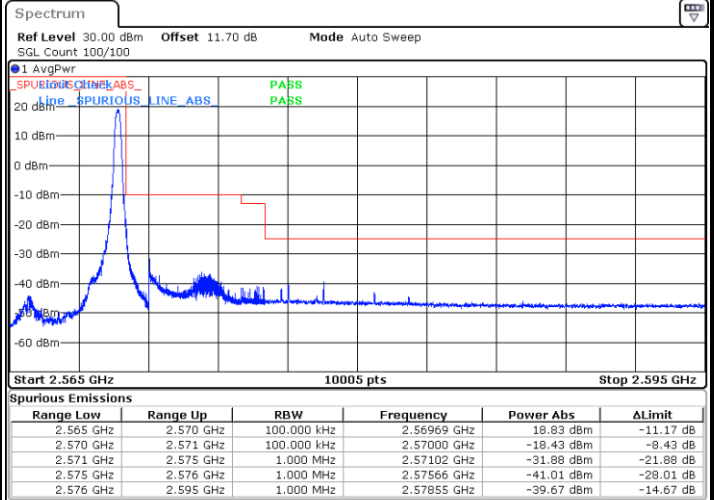
## LTE Band 7 / 5MHz / QPSK

### Lowest Band Edge / 1 RB



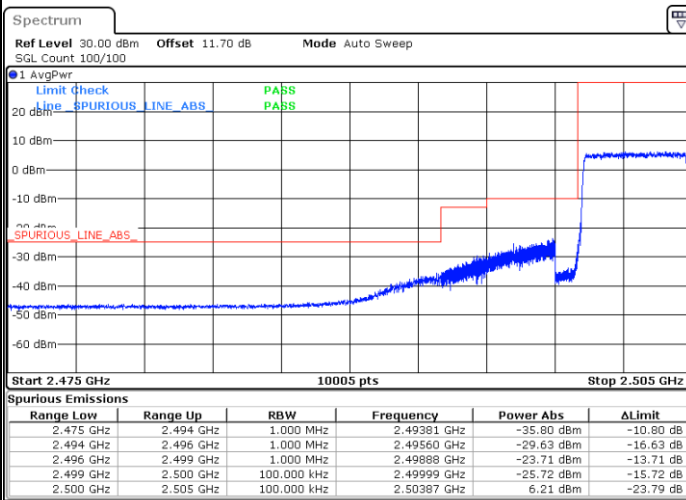
Date: 24.MAY.2021 14:42:38

### Highest Band Edge / 1 RB



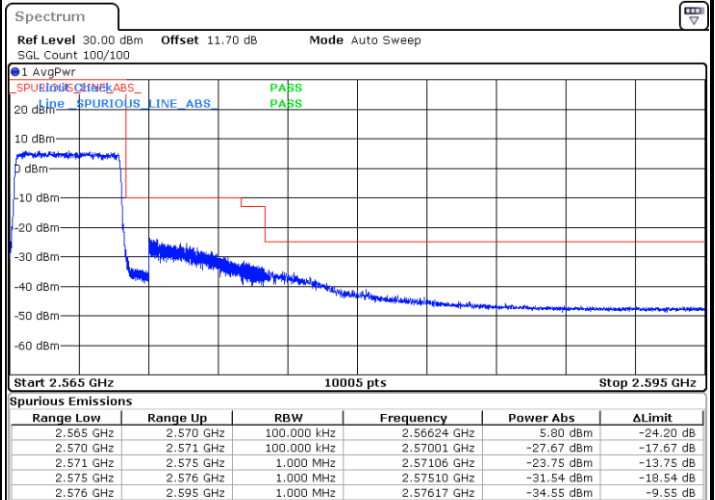
Date: 24.MAY.2021 14:47:49

### Lowest Band Edge / Full RB



Date: 24.MAY.2021 14:43:31

### Highest Band Edge / Full RB

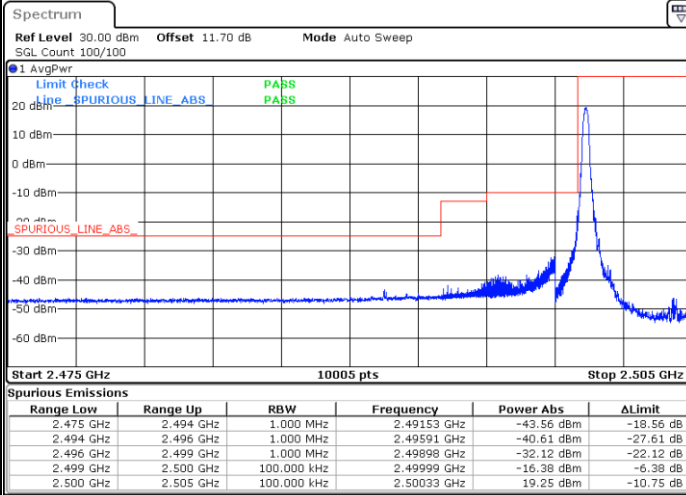


Date: 24.MAY.2021 14:48:40



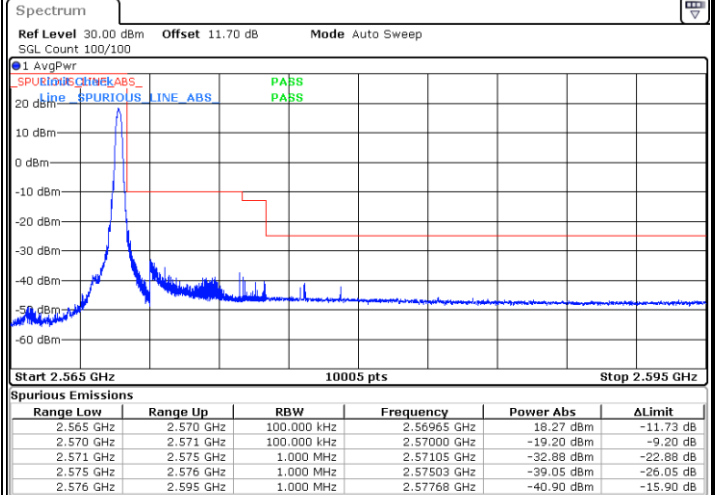
LTE Band 7 / 5MHz / 16QAM

Lowest Band Edge / 1RB



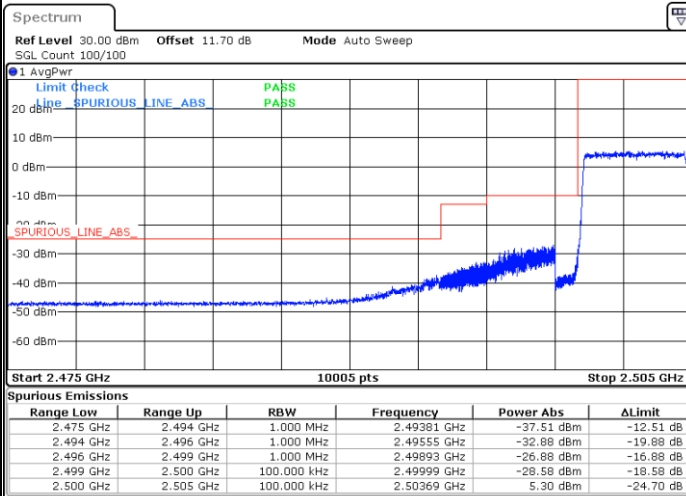
Date: 24.MAY.2021 14:43:04

Highest Band Edge / 1 RB



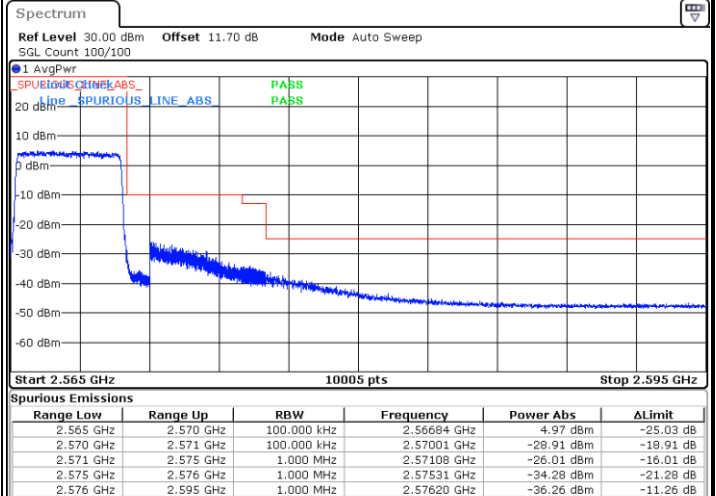
Date: 24.MAY.2021 14:48:14

Lowest Band Edge / Full RB



Date: 24.MAY.2021 14:43:57

Highest Band Edge / Full RB

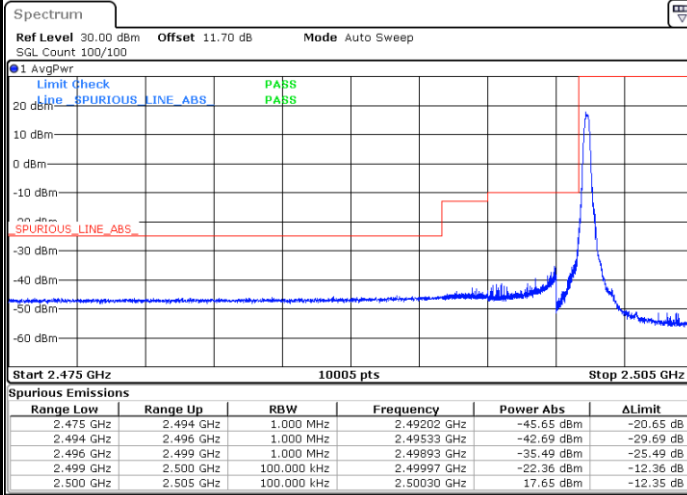


Date: 24.MAY.2021 14:49:07



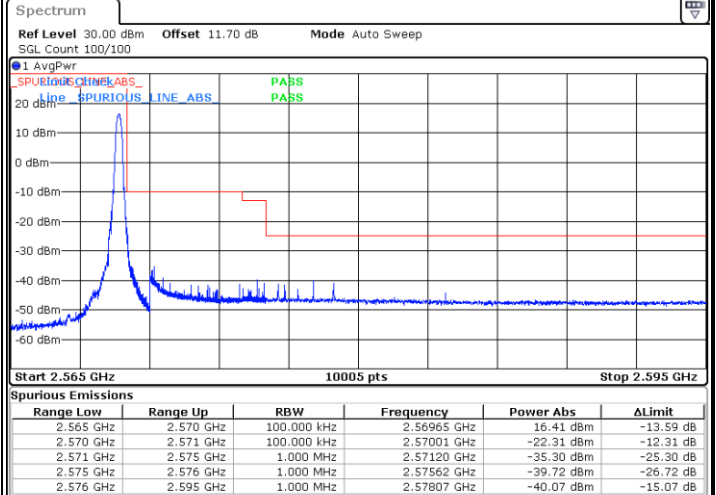
LTE Band 7 / 5MHz / 64QAM

Lowest Band Edge / 1RB



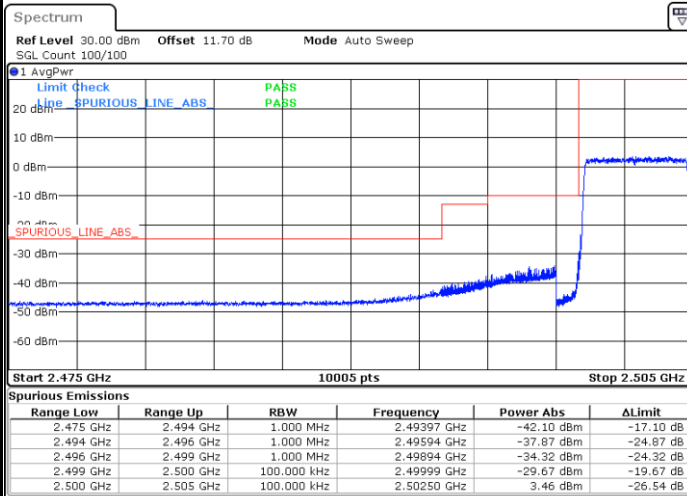
Date: 24.MAY.2021 14:50:33

Highest Band Edge / 1 RB



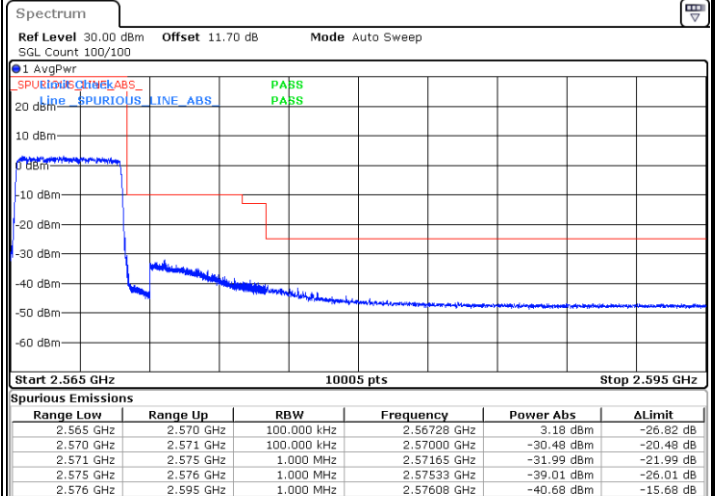
Date: 24.MAY.2021 14:52:08

Lowest Band Edge / Full RB



Date: 24.MAY.2021 14:50:59

Highest Band Edge / Full RB

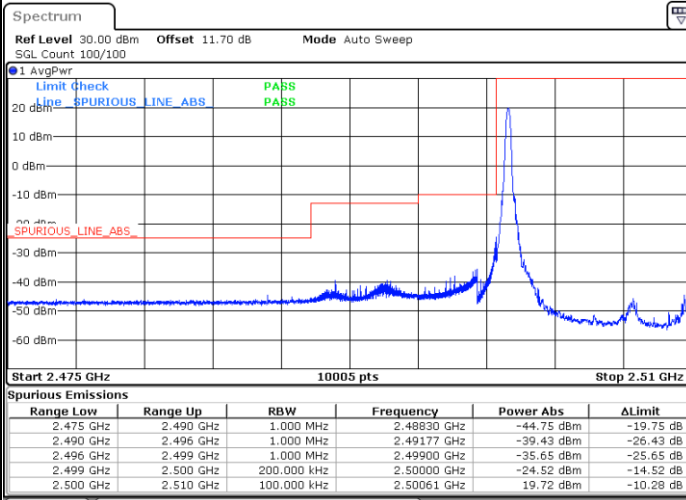


Date: 24.MAY.2021 14:52:33



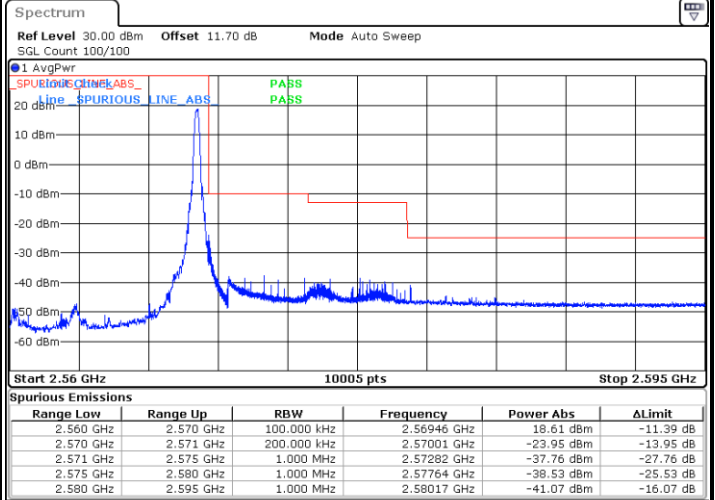
LTE Band 7 / 10MHz / QPSK

Lowest Band Edge / 1 RB



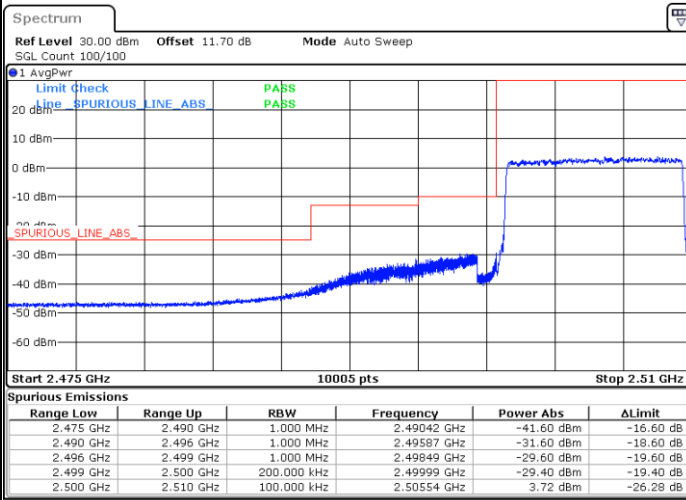
Date: 24.MAY.2021 14:53:00

Highest Band Edge / 1 RB



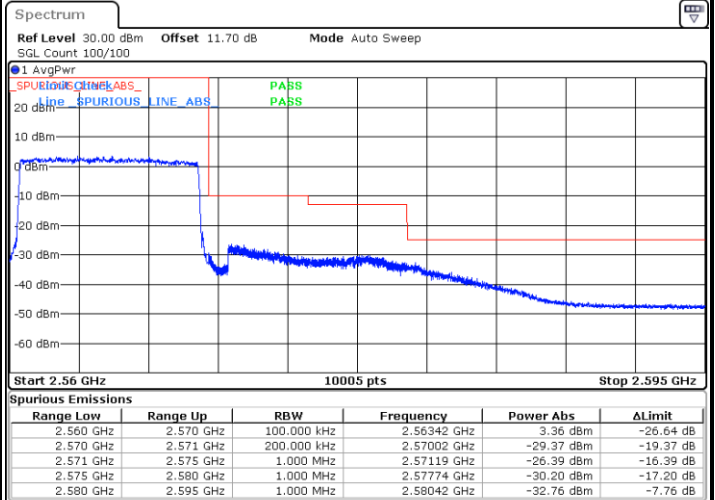
Date: 24.MAY.2021 14:58:09

Lowest Band Edge / Full RB



Date: 24.MAY.2021 14:53:51

Highest Band Edge / Full RB

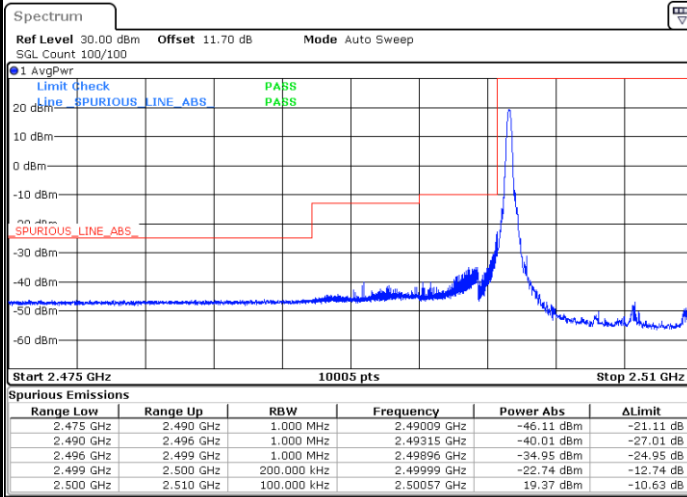


Date: 24.MAY.2021 14:59:01



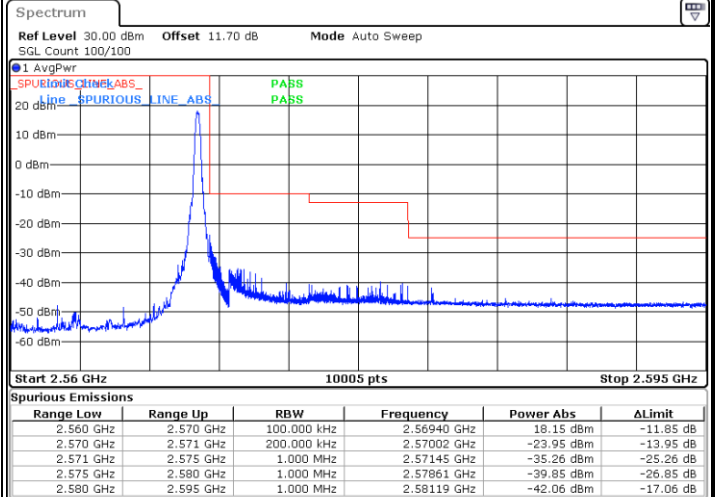
LTE Band 7 / 10MHz / 16QAM

Lowest Band Edge / 1 RB



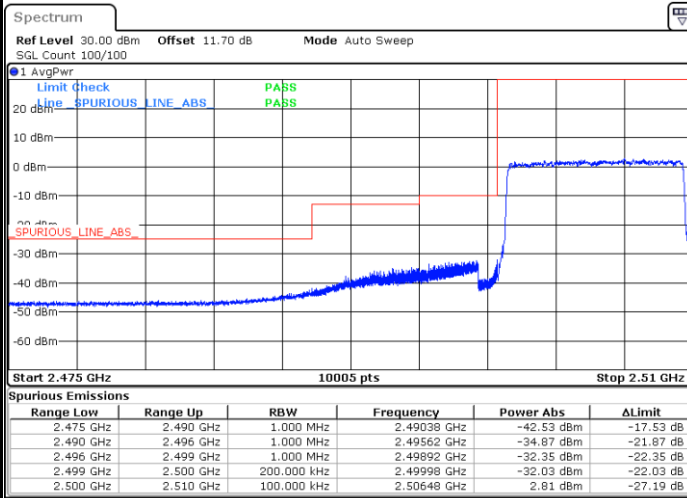
Date: 24.MAY.2021 14:53:25

Highest Band Edge / 1 RB



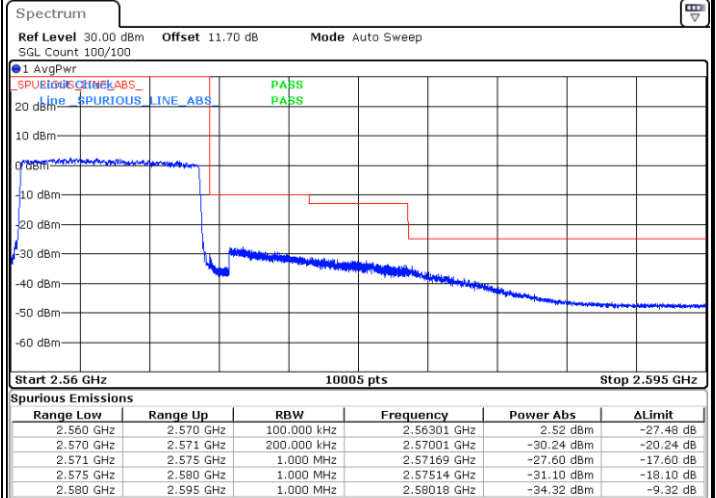
Date: 24.MAY.2021 14:58:35

Lowest Band Edge / Full RB



Date: 24.MAY.2021 14:54:17

Highest Band Edge / Full RB



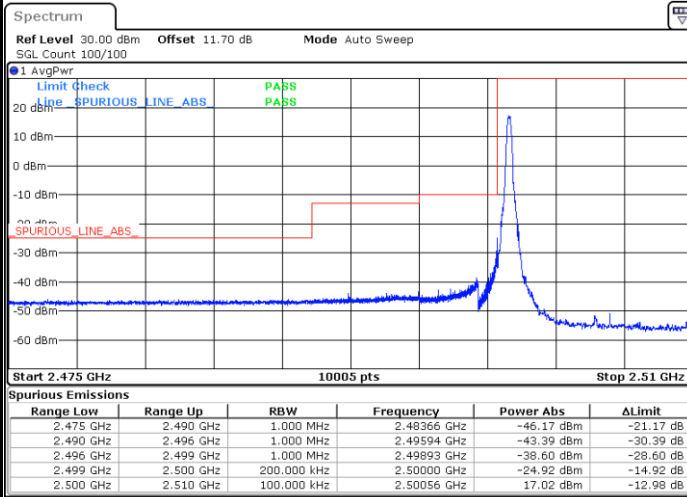
Date: 24.MAY.2021 14:59:26





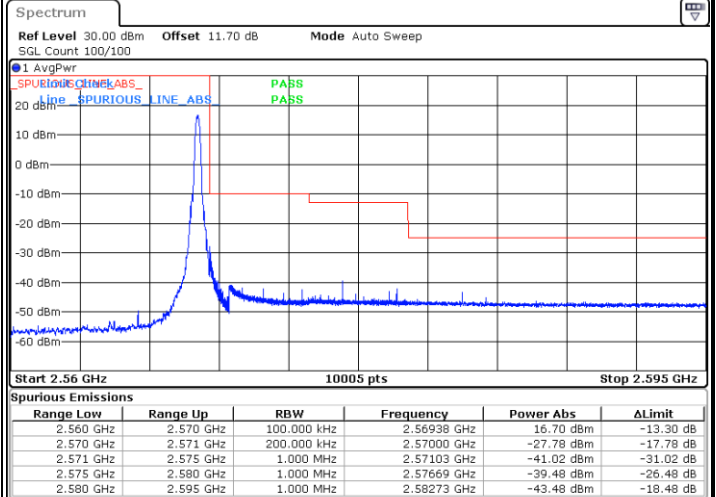
LTE Band 7 / 10MHz / 64QAM

Lowest Band Edge / 1 RB



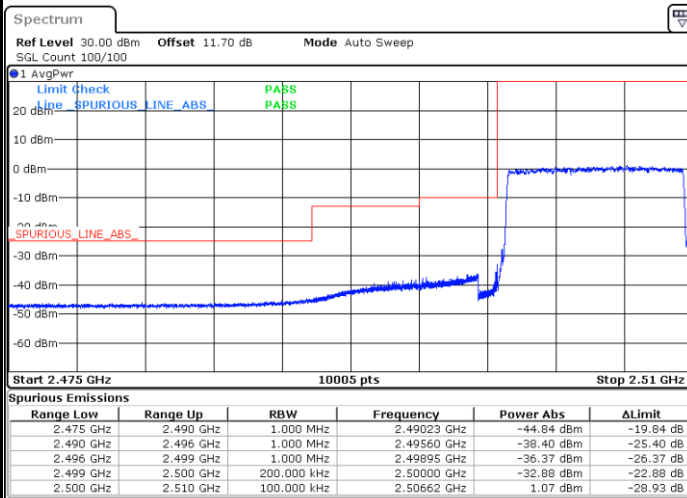
Date: 24.MAY.2021 15:00:52

Highest Band Edge / 1 RB



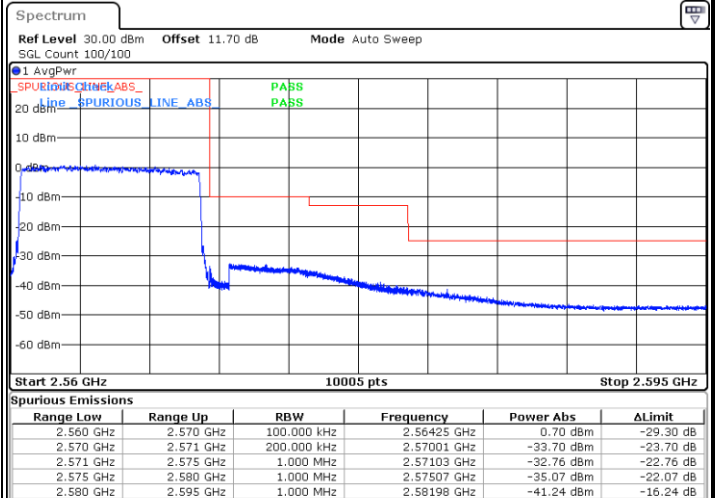
Date: 24.MAY.2021 15:02:27

Lowest Band Edge / Full RB



Date: 24.MAY.2021 15:01:18

Highest Band Edge / Full RB

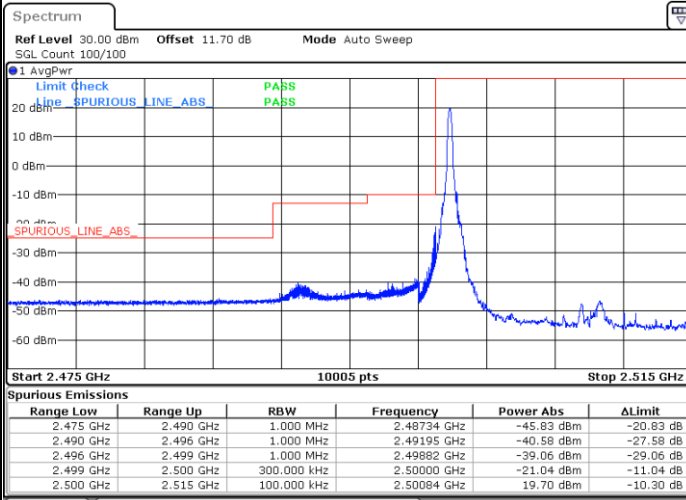


Date: 24.MAY.2021 15:02:53



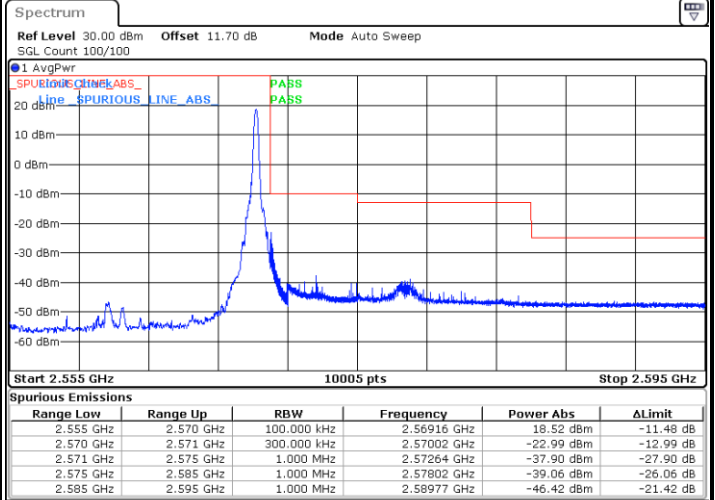
LTE Band 7 / 15MHz / QPSK

Lowest Band Edge / 1 RB



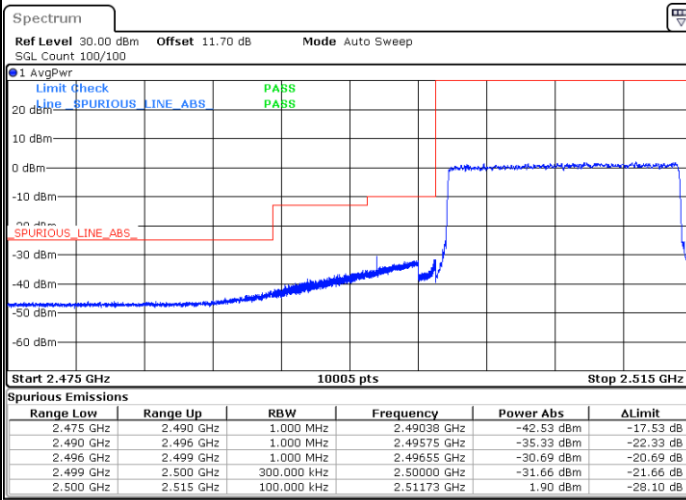
Date: 24.MAY.2021 15:03:19

Highest Band Edge / 1 RB



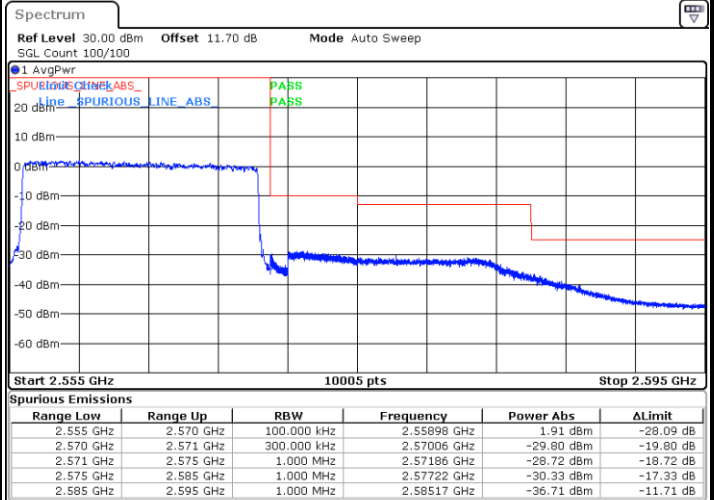
Date: 24.MAY.2021 15:08:30

Lowest Band Edge / Full RB



Date: 24.MAY.2021 15:04:11

Highest Band Edge / Full RB

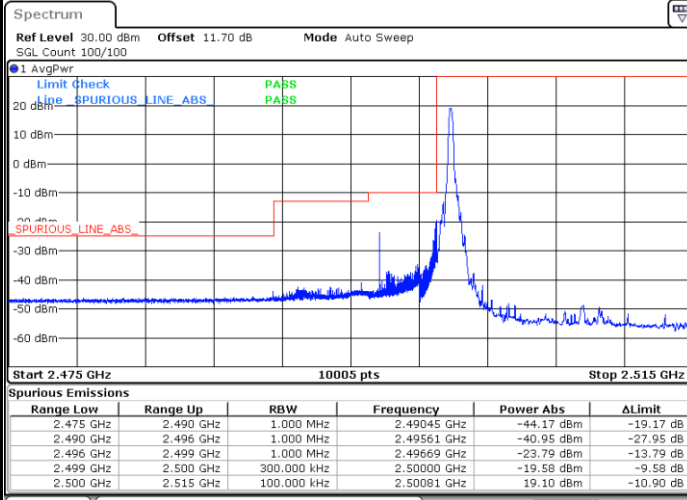


Date: 24.MAY.2021 15:09:21



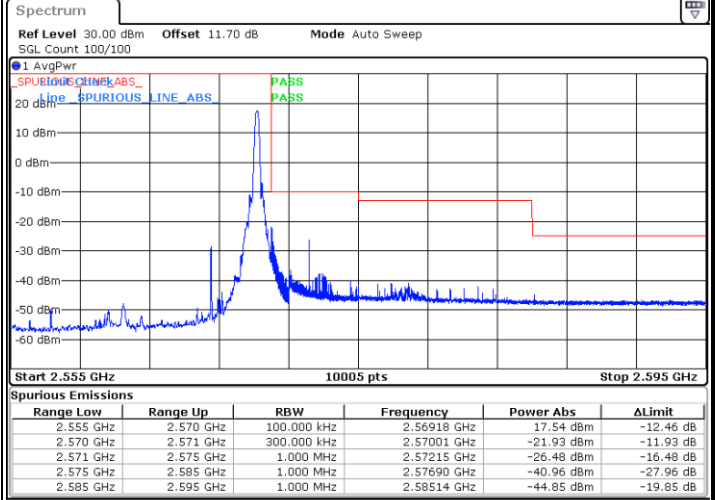
LTE Band 7 / 15MHz / 16QAM

Lowest Band Edge / 1 RB



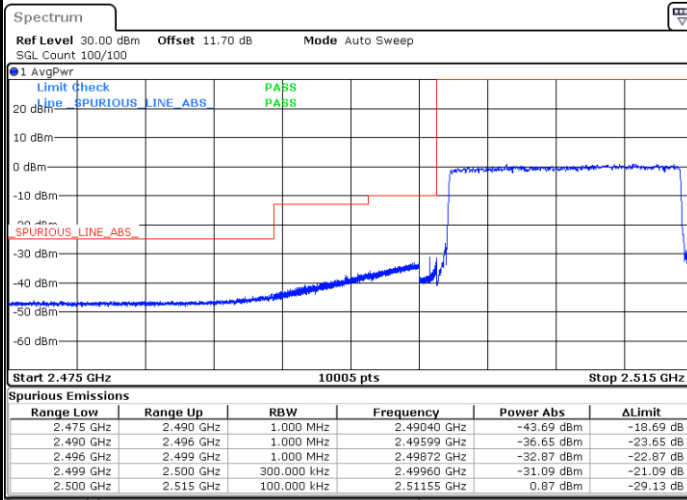
Date: 24.MAY.2021 15:03:45

Highest Band Edge / 1 RB



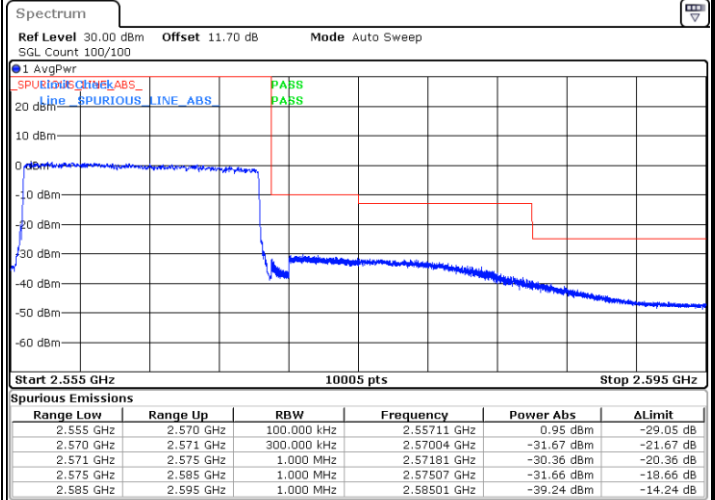
Date: 24.MAY.2021 15:08:56

Lowest Band Edge / Full RB



Date: 24.MAY.2021 15:04:37

Highest Band Edge / Full RB

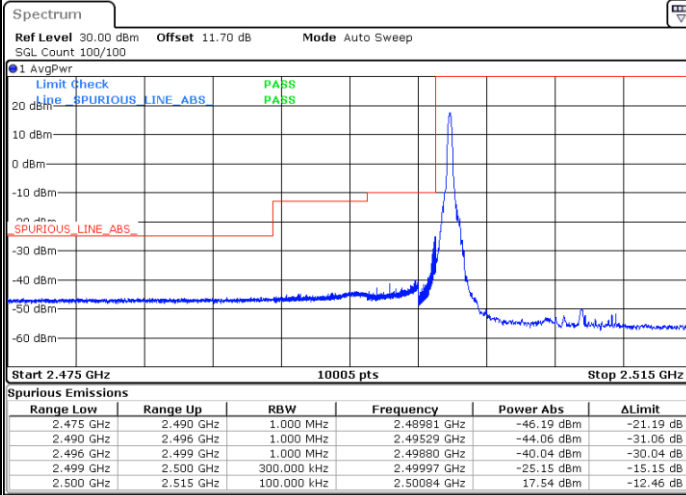


Date: 24.MAY.2021 15:09:47



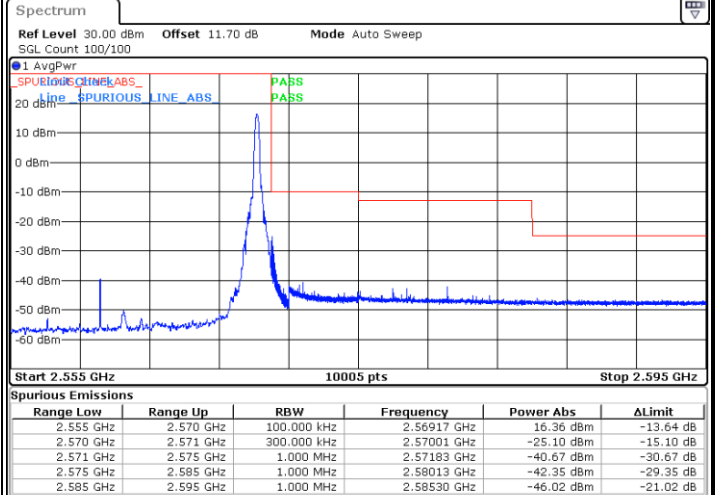
LTE Band 7 / 15MHz / 64QAM

Lowest Band Edge / 1 RB



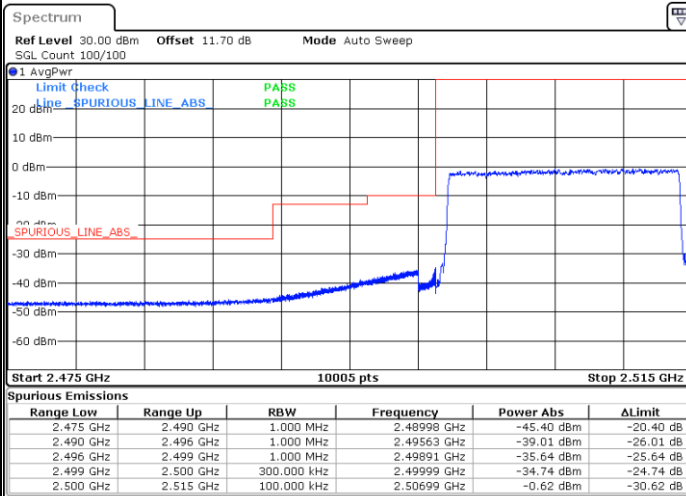
Date: 24.MAY.2021 15:11:13

Highest Band Edge / 1 RB



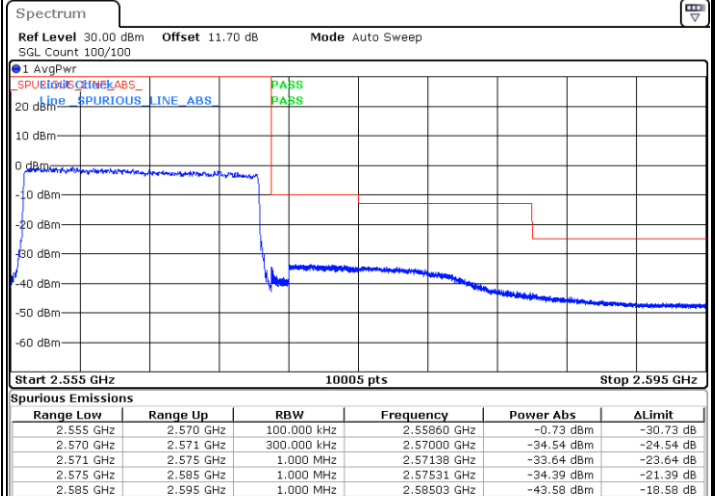
Date: 24.MAY.2021 15:12:48

Lowest Band Edge / Full RB



Date: 24.MAY.2021 15:11:39

Highest Band Edge / Full RB

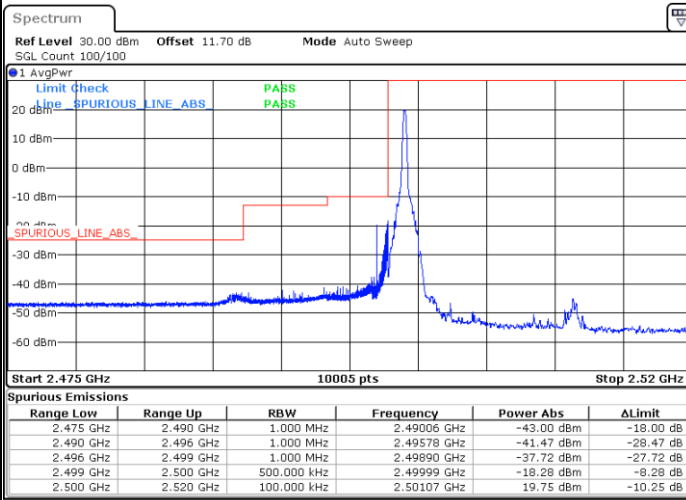


Date: 24.MAY.2021 15:13:14



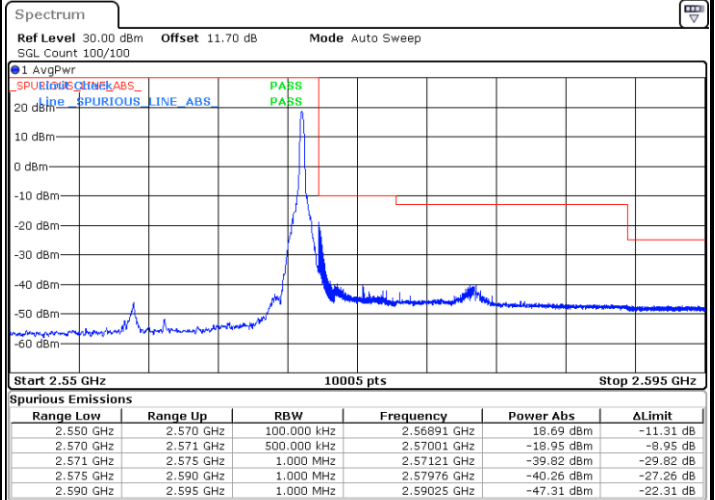
LTE Band 7 / 20MHz / QPSK

Lowest Band Edge / 1 RB



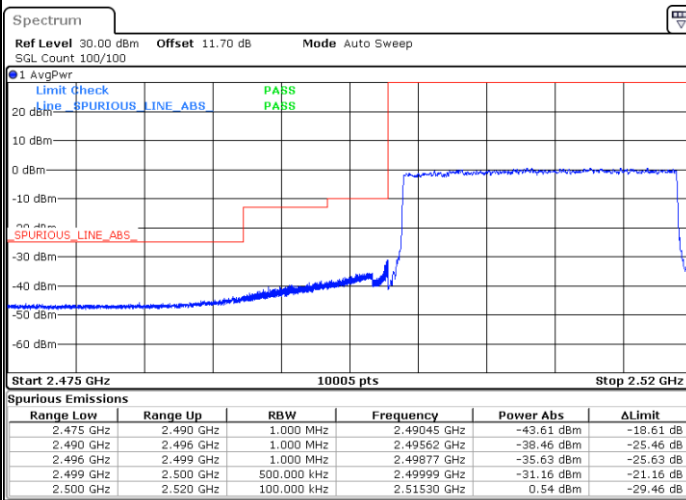
Date: 24.MAY.2021 15:13:41

Highest Band Edge / 1 RB



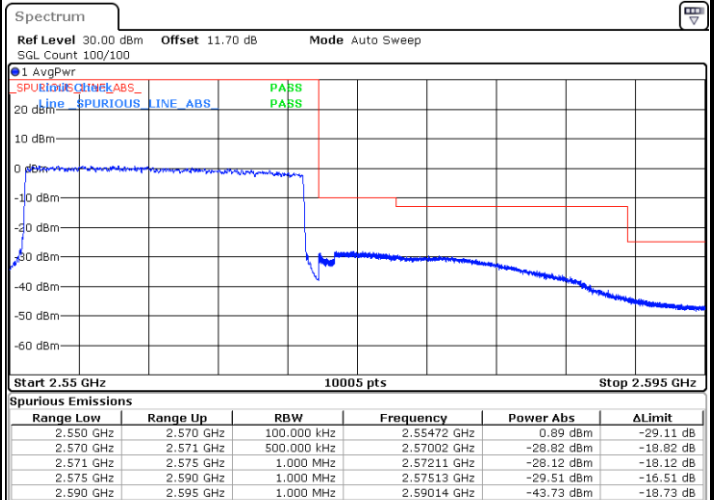
Date: 24.MAY.2021 15:18:52

Lowest Band Edge / Full RB



Date: 24.MAY.2021 15:14:33

Highest Band Edge / Full RB

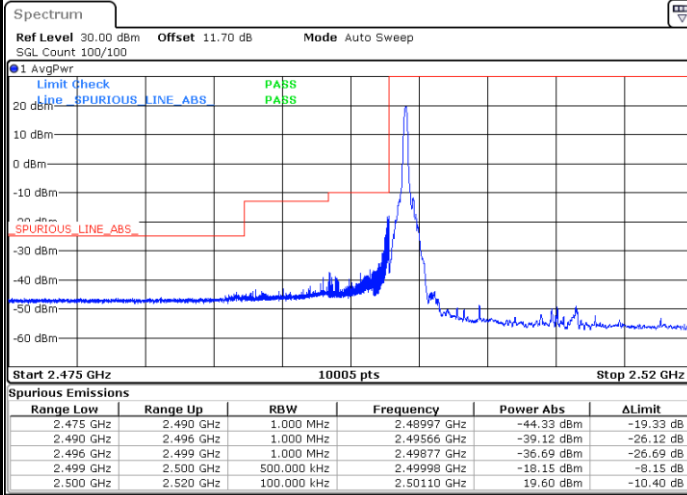


Date: 24.MAY.2021 15:20:09



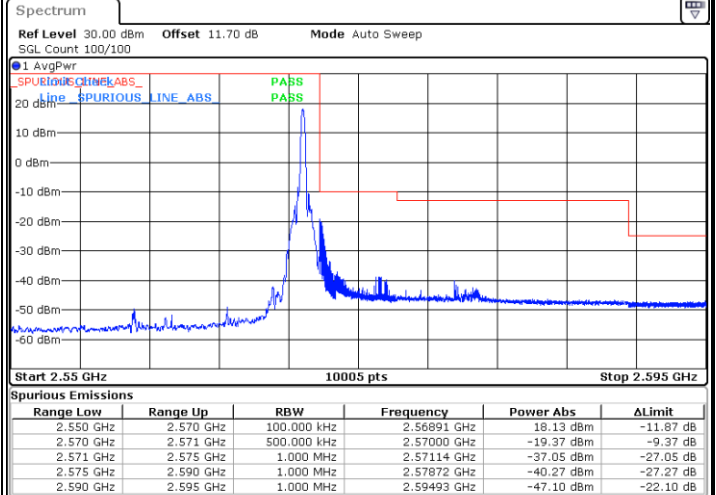
LTE Band 7 / 20MHz / 16QAM

Lowest Band Edge / 1 RB



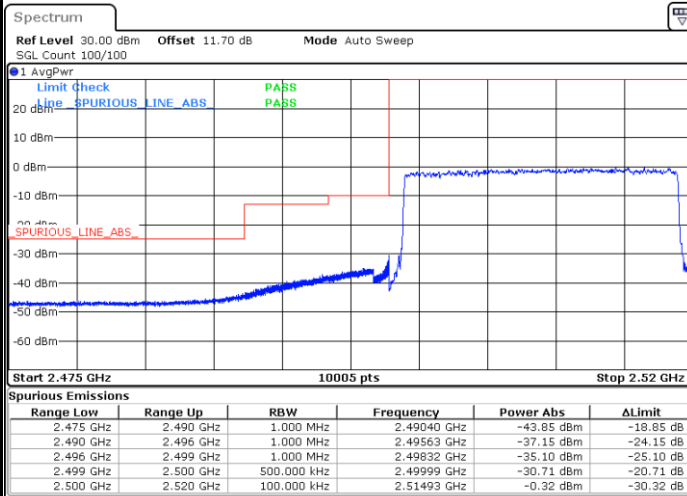
Date: 24.MAY.2021 15:14:07

Highest Band Edge / 1 RB



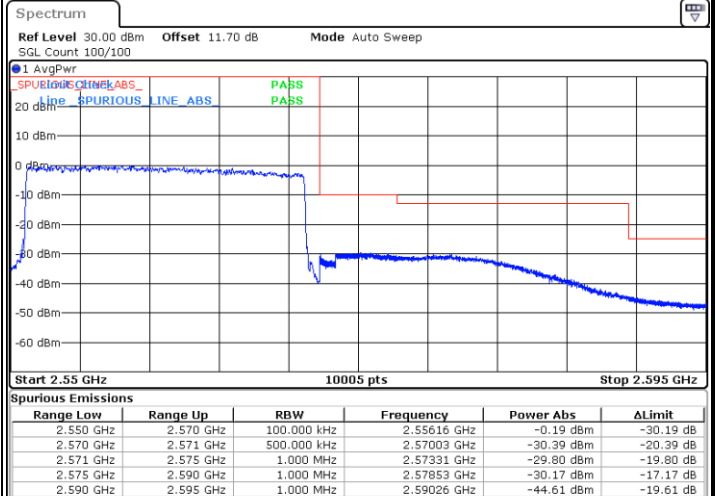
Date: 24.MAY.2021 15:19:18

Lowest Band Edge / Full RB



Date: 24.MAY.2021 15:14:59

Highest Band Edge / Full RB

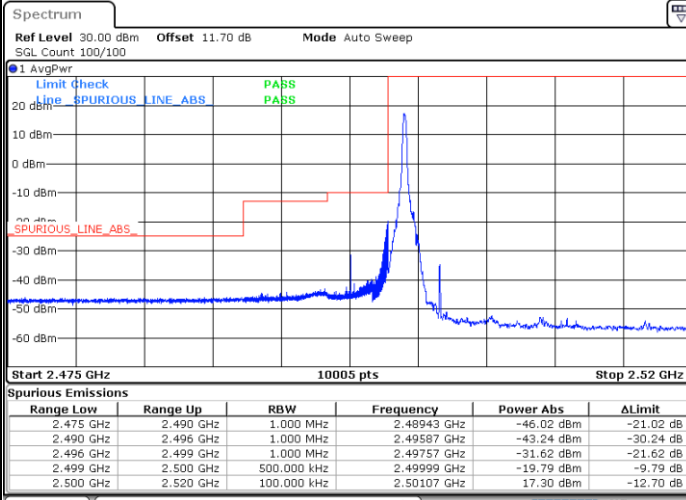


Date: 24.MAY.2021 15:19:43



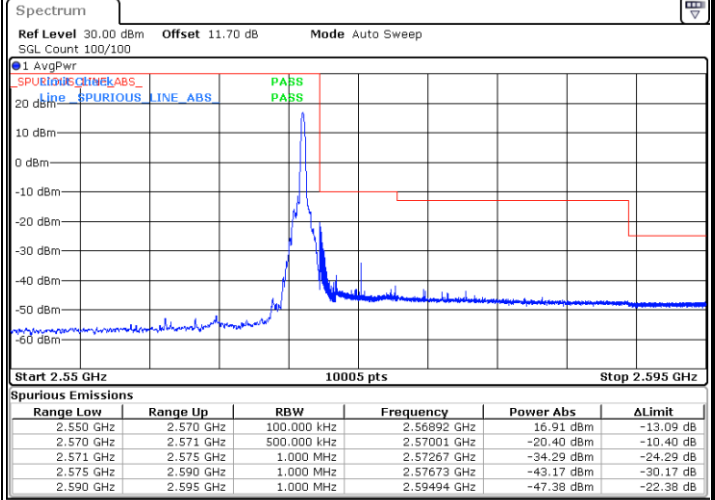
LTE Band 7 / 20MHz / 64QAM

Lowest Band Edge / 1 RB



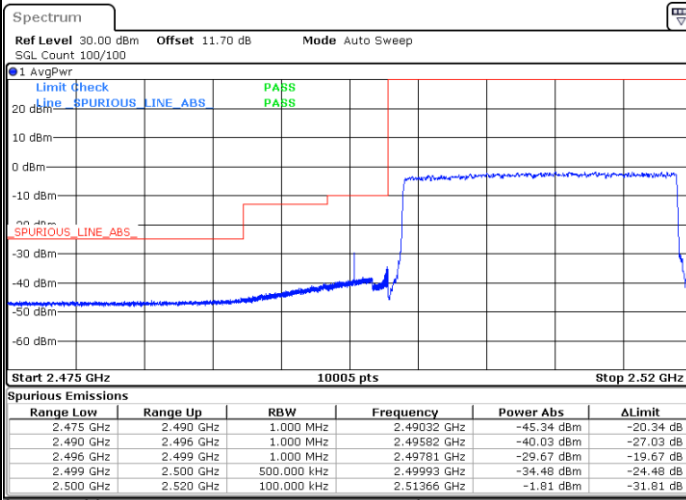
Date: 24.MAY.2021 15:21:35

Highest Band Edge / 1 RB



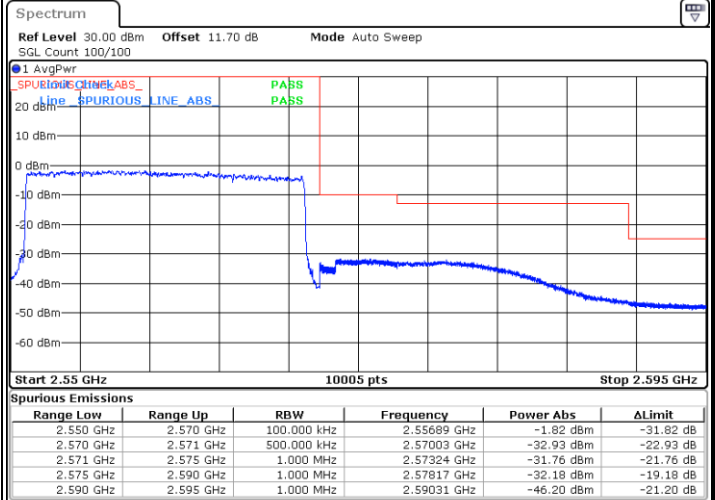
Date: 24.MAY.2021 15:23:10

Lowest Band Edge / Full RB



Date: 24.MAY.2021 15:22:01

Highest Band Edge / Full RB



Date: 24.MAY.2021 15:23:36

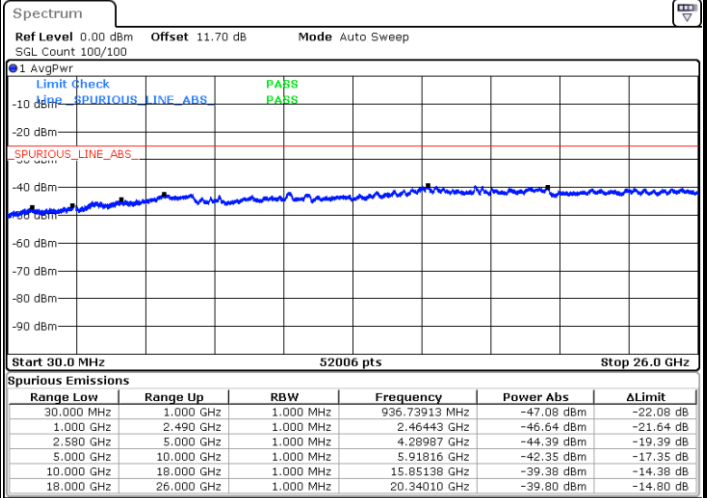
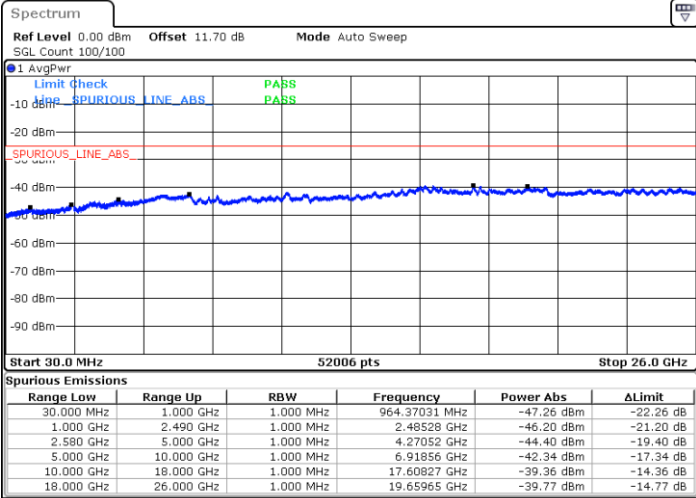


# Conducted Spurious Emission

## LTE Band 7 / 5MHz

### Lowest Channel / QPSK

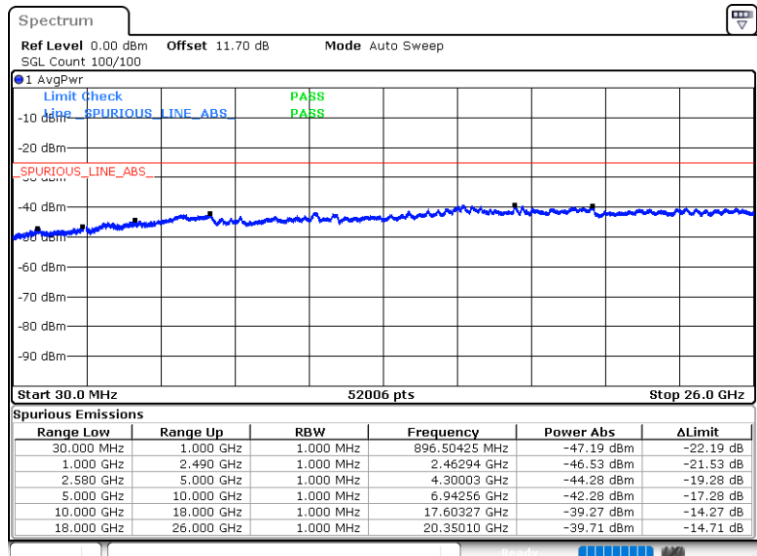
### Middle Channel / QPSK



Date: 24.MAY.2021 14:44:56

Date: 24.MAY.2021 14:47:23

### Highest Channel / QPSK



Date: 24.MAY.2021 14:50:06

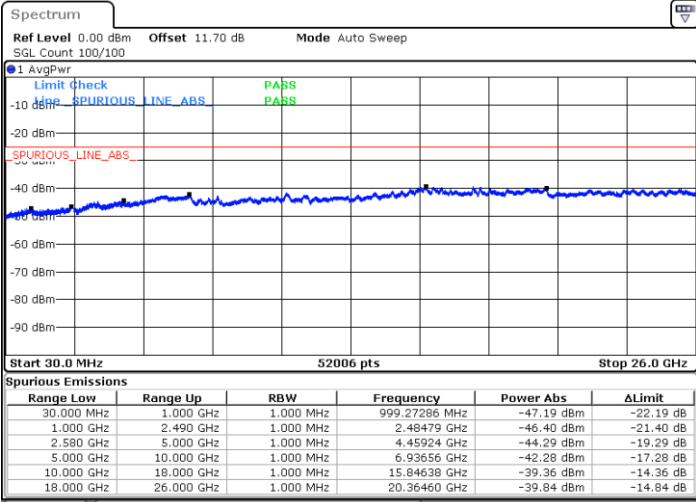




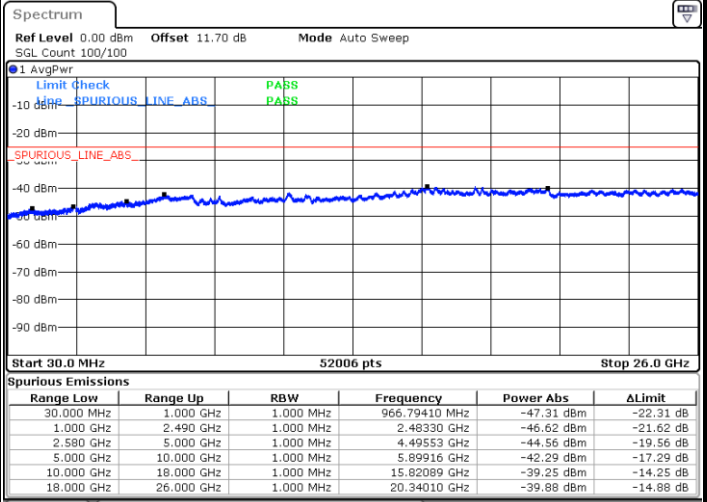
LTE Band 7 / 10MHz

Lowest Channel / QPSK

Middle Channel / QPSK

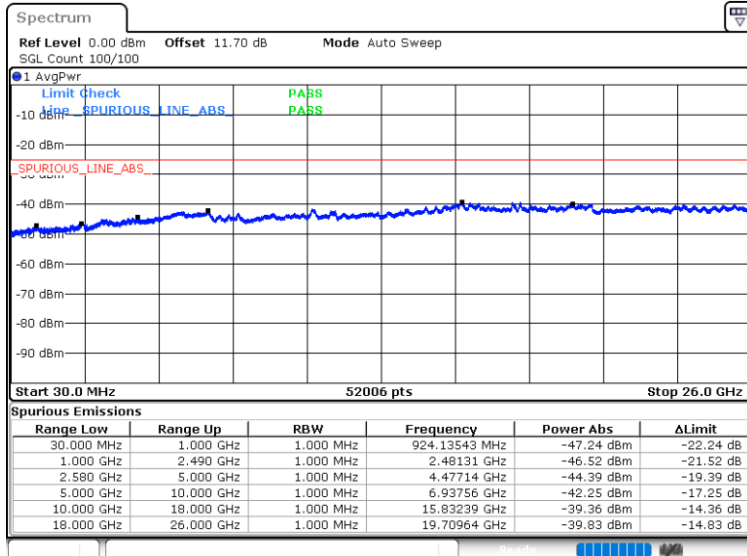


Date: 24.MAY.2021 14:55:16



Date: 24.MAY.2021 14:57:42

Highest Channel / QPSK



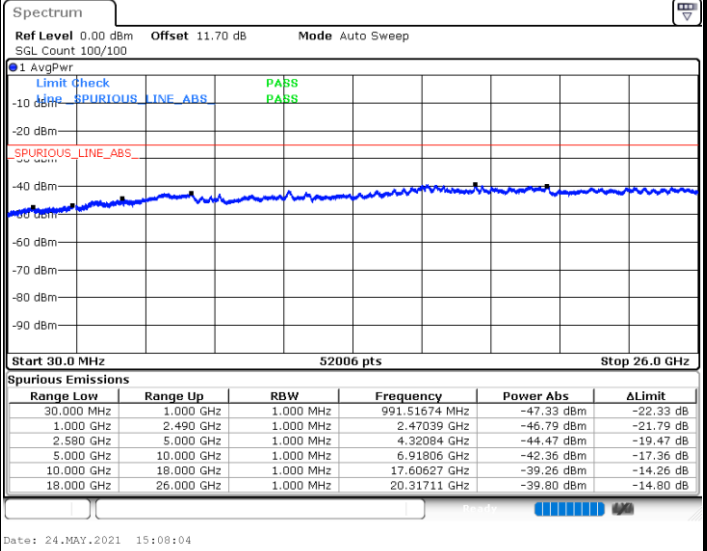
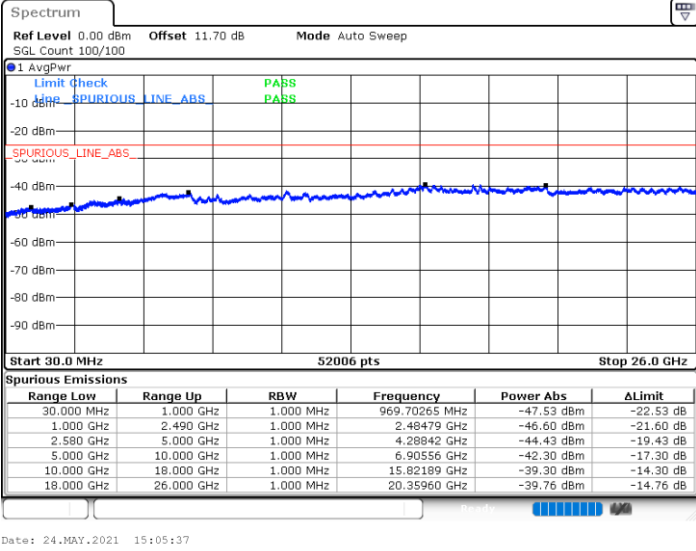
Date: 24.MAY.2021 15:00:26



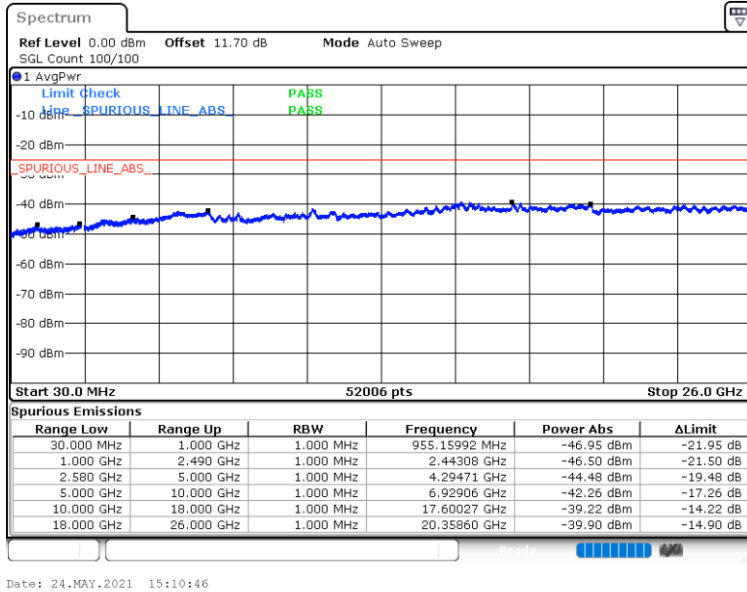
LTE Band 7 / 15MHz

Lowest Channel / QPSK

Middle Channel / QPSK



Highest Channel / QPSK

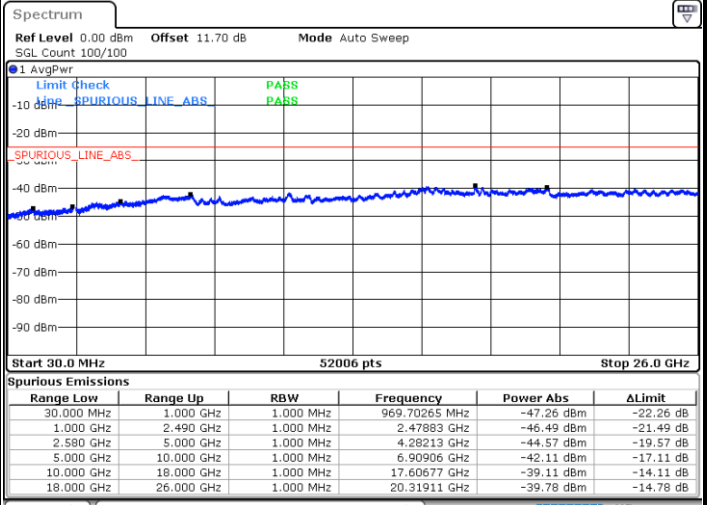
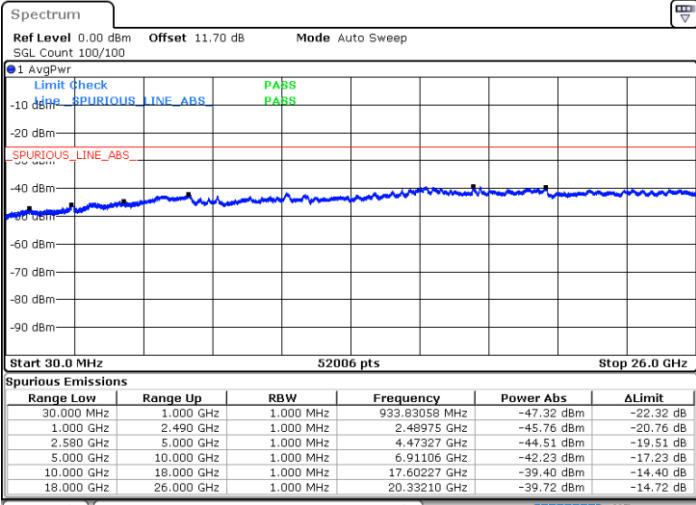




LTE Band 7 / 20MHz

Lowest Channel / QPSK

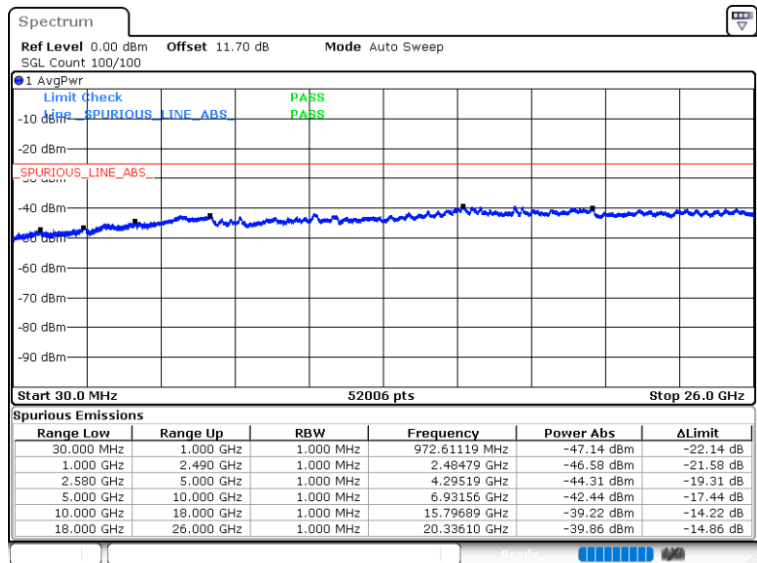
Middle Channel / QPSK



Date: 24.MAY.2021 15:15:58

Date: 24.MAY.2021 15:18:26

Highest Channel / QPSK



Date: 24.MAY.2021 15:21:08



### Frequency Stability

Test Conditions		LTE Band 7 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0011	PASS
40	Normal Voltage	0.0052	
30	Normal Voltage	0.0058	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0045	
0	Normal Voltage	0.0015	
-10	Normal Voltage	0.0006	
-20	Normal Voltage	0.0060	
-30	Normal Voltage	0.0059	
20	Maximum Voltage	0.0037	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0043	

**Note:**

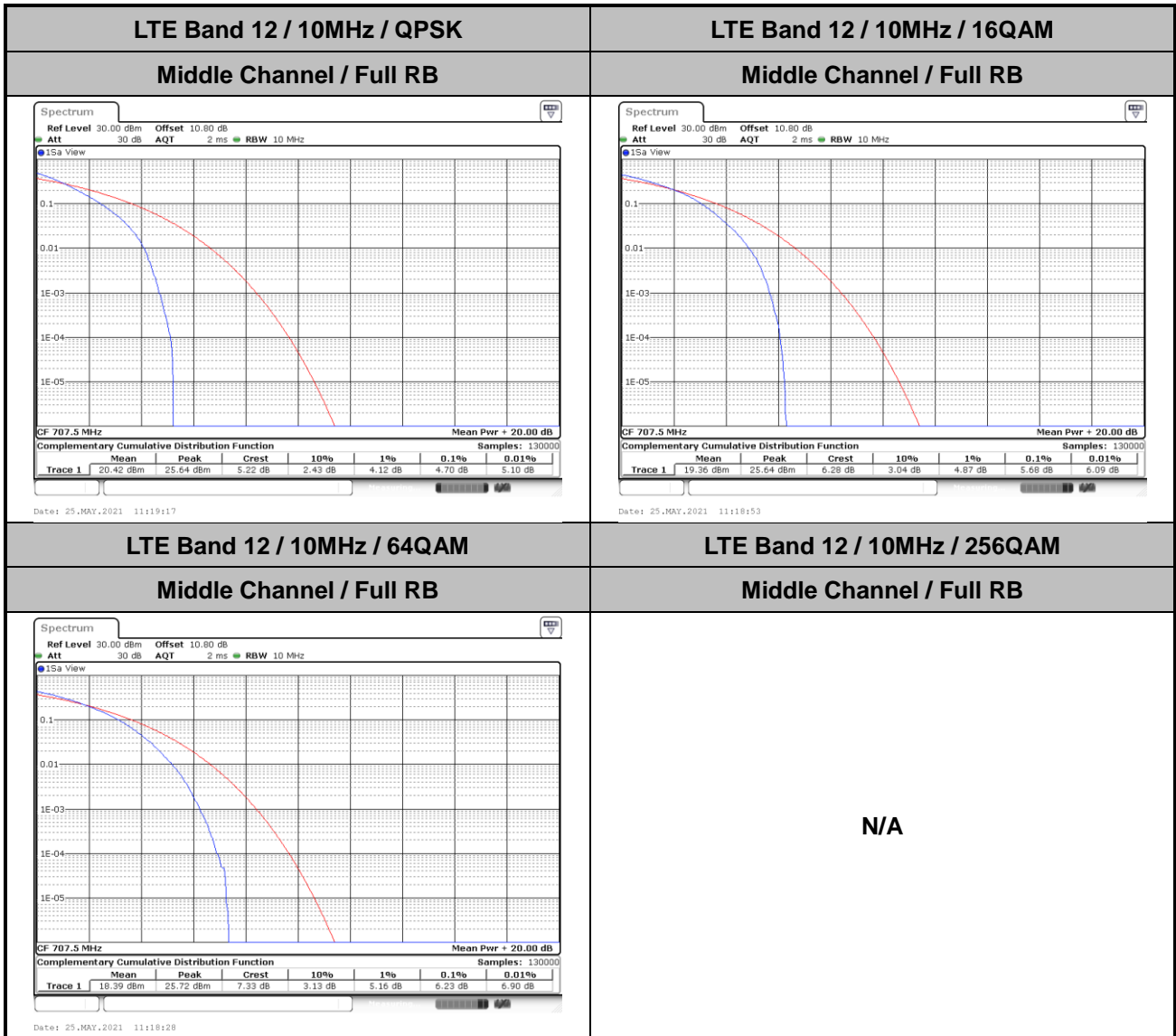
- 1. Normal Voltage =3.85 V. ; Battery End Point (BEP) =3.55 V. ; Maximum Voltage =4.35 V.
- 2. The frequency fundamental emissions stay within the authorized frequency block.



## 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	4.70	5.68	6.23	-	PASS





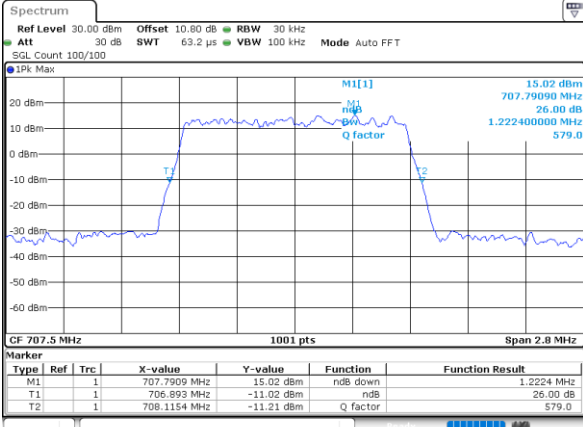
**26dB Bandwidth**

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	1.22	1.21	2.98	3.00	4.92	4.88	9.75	9.87	-	-	-	-
Mode	LTE Band 12 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM	256 QAM	64QAM	256 QAM	64QAM	256 QAM	64QAM	256 QAM	64QAM	256 QAM	64QAM	256 QAM
Middle CH	1.21	-	3.00	-	4.87	-	9.81	-	-	-	-	-



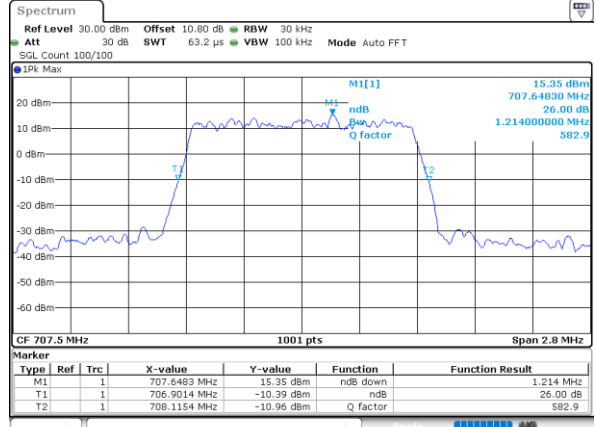
LTE Band 12

Middle Channel / 1.4MHz / QPSK



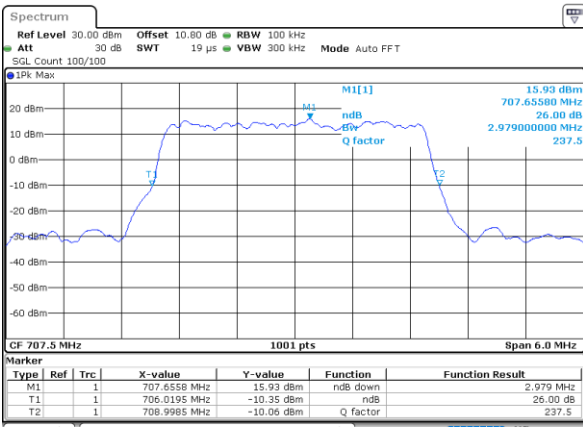
Date: 25\_MAY.2021 10:32:14

Middle Channel / 1.4MHz / 16QAM



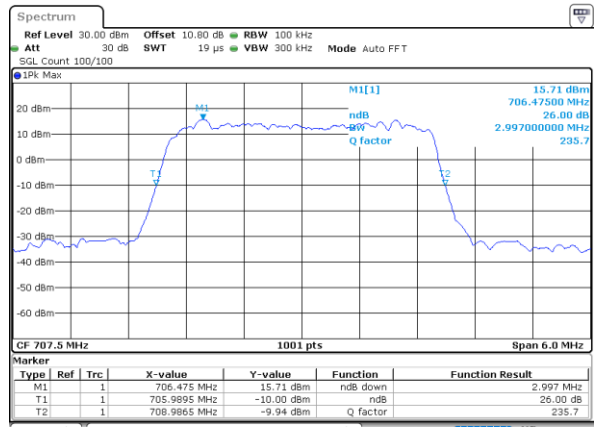
Date: 25\_MAY.2021 10:32:35

Middle Channel / 3MHz / QPSK



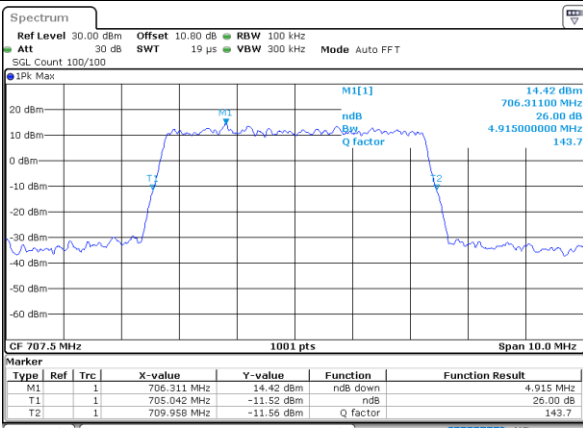
Date: 25\_MAY.2021 10:44:32

Middle Channel / 3MHz / 16QAM



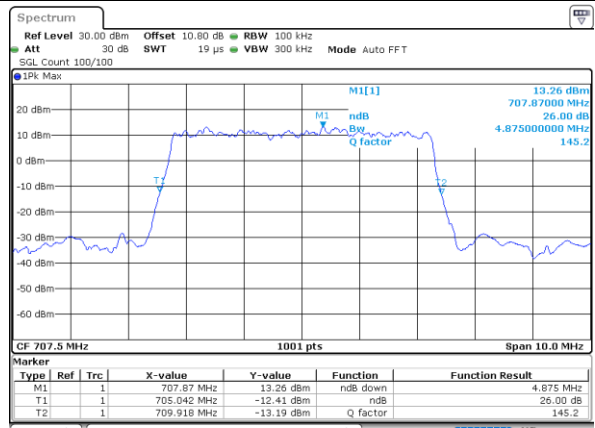
Date: 25\_MAY.2021 10:44:53

Middle Channel / 5MHz / QPSK



Date: 25\_MAY.2021 11:00:19

Middle Channel / 5MHz / 16QAM



Date: 25\_MAY.2021 11:00:40