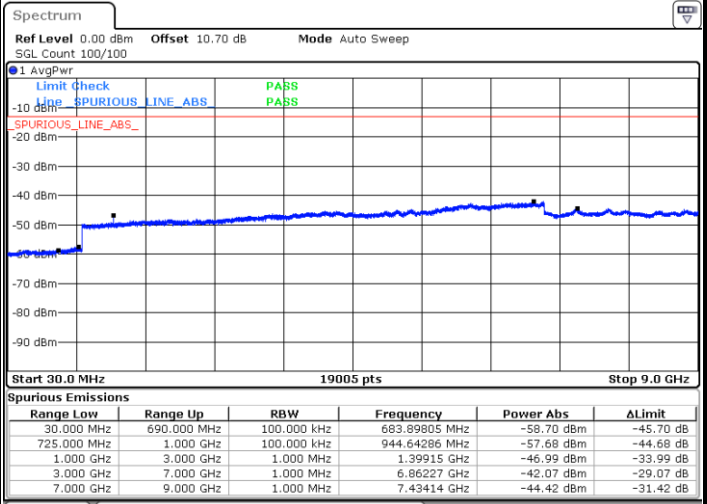
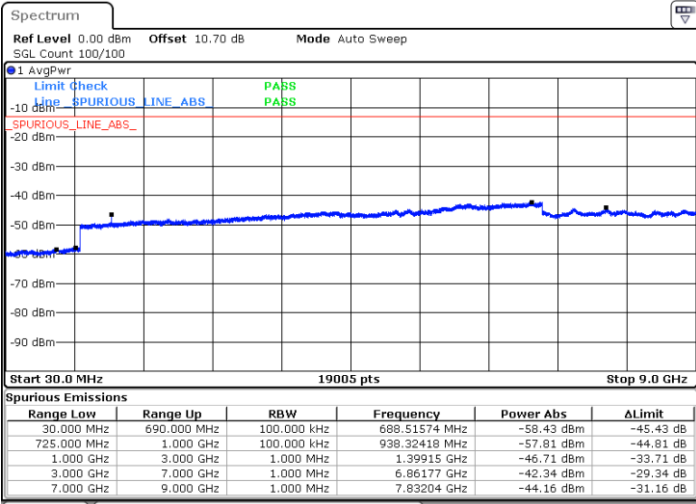




LTE Band 12 / 5MHz

Lowest Channel / QPSK

Lowest Channel / 16QAM

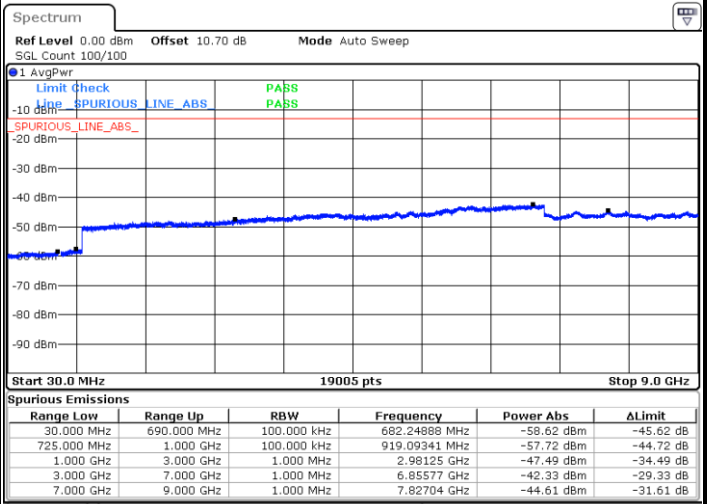
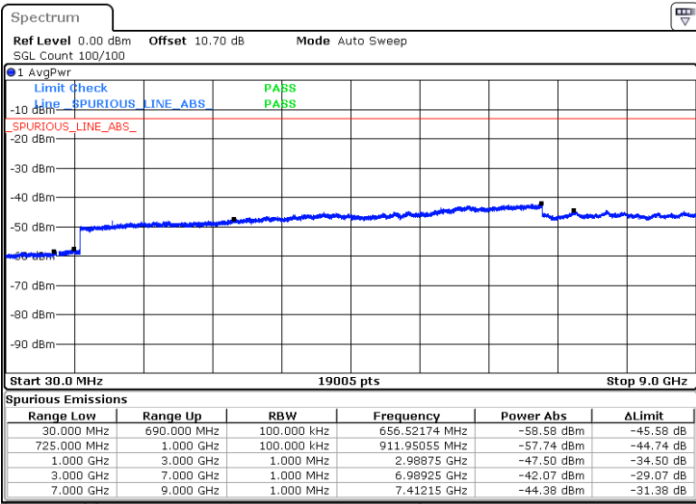


Date: 13.FEB.2018 17:31:56

Date: 13.FEB.2018 17:32:50

Middle Channel / QPSK

Middle Channel / 16QAM



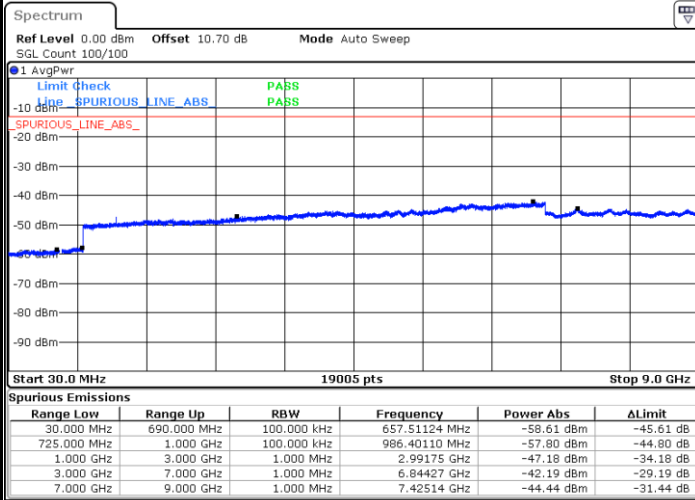
Date: 13.FEB.2018 17:35:17

Date: 13.FEB.2018 17:34:23



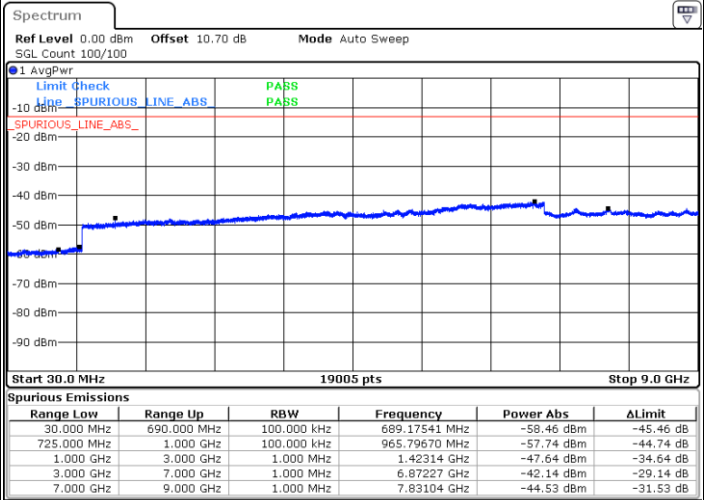
LTE Band 12 / 5MHz

Highest Channel / QPSK



Date: 13.FEB.2018 17:42:13

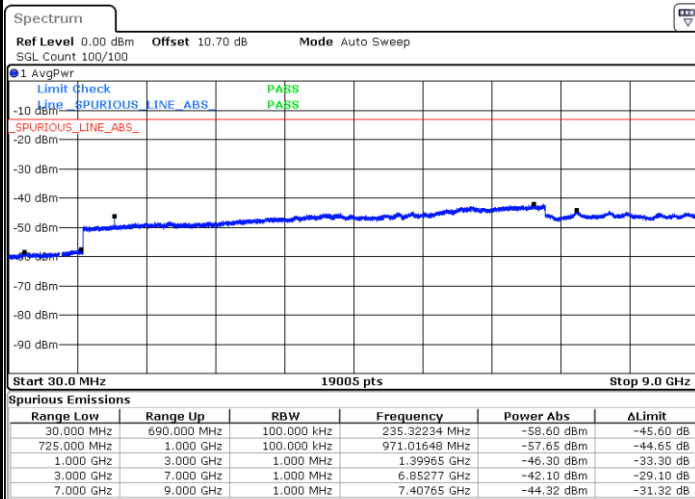
Highest Channel / 16QAM



Date: 13.FEB.2018 17:41:19

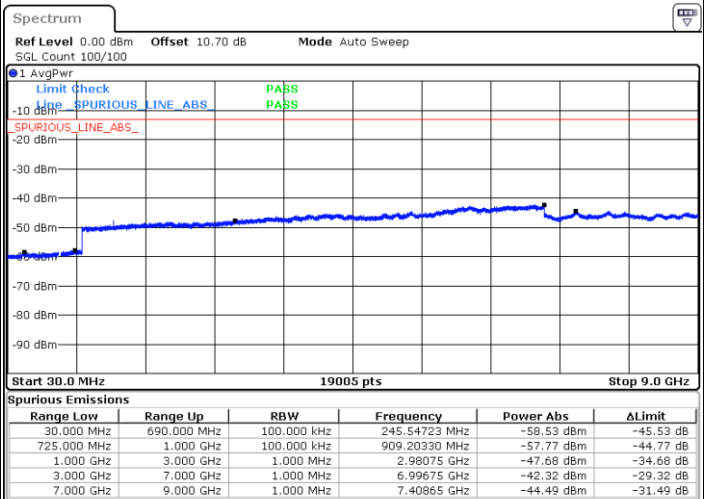
LTE Band 12 / 10MHz

Lowest Channel / QPSK



Date: 13.FEB.2018 17:48:15

Lowest Channel / 16QAM

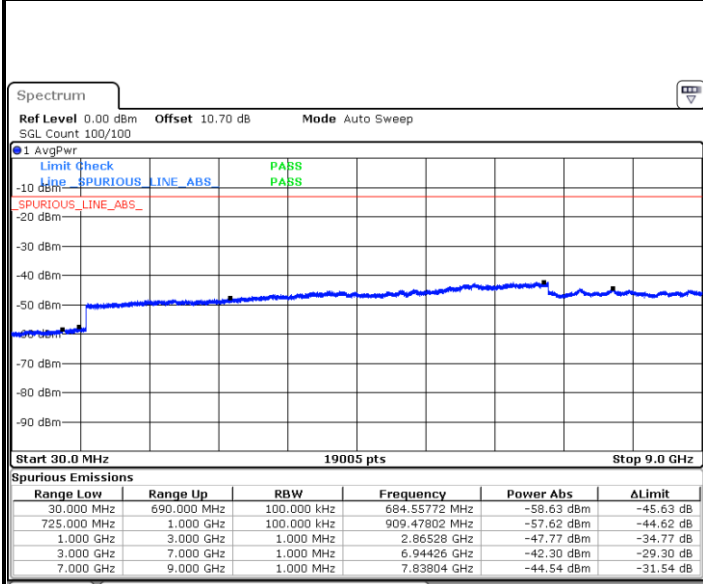


Date: 13.FEB.2018 17:49:08



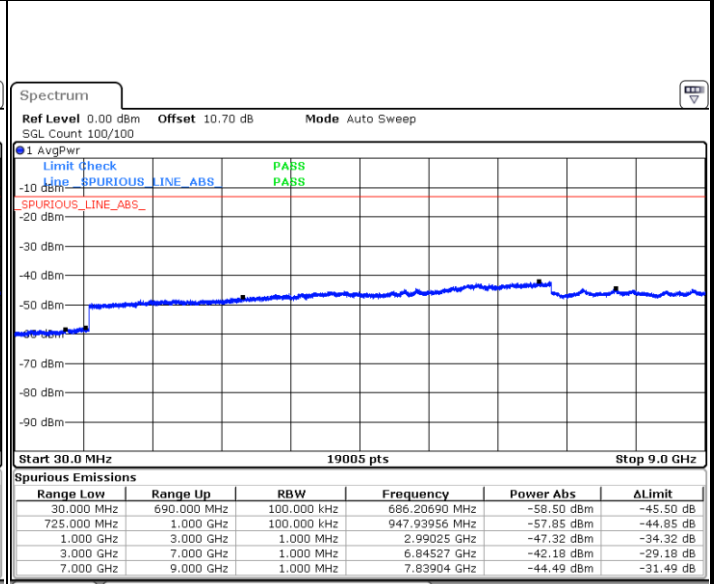
LTE Band 12 / 10MHz

Middle Channel / QPSK



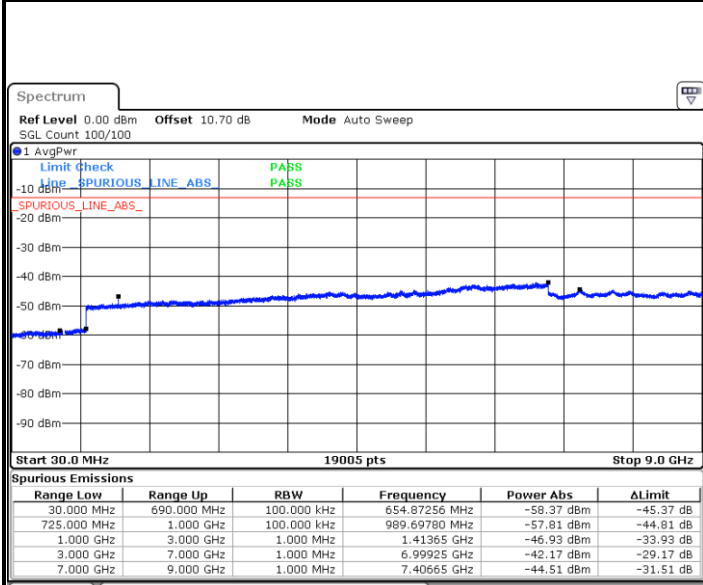
Date: 13.FEB.2018 17:51:35

Middle Channel / 16QAM



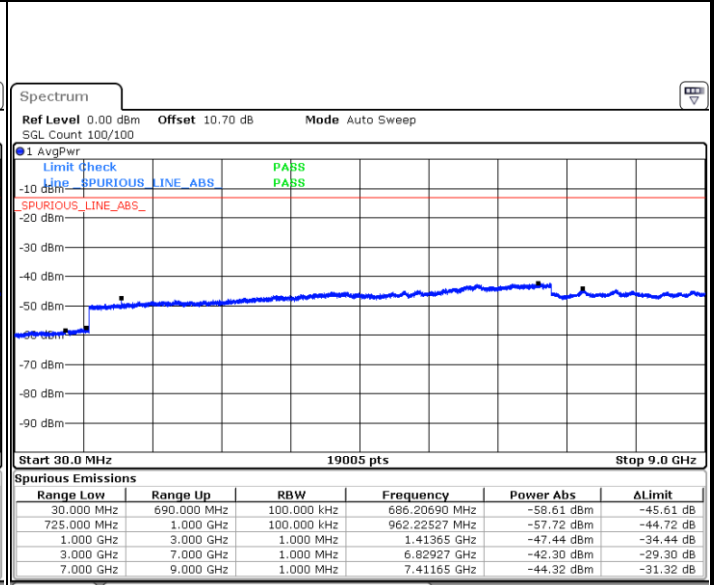
Date: 13.FEB.2018 17:50:41

Highest Channel / QPSK



Date: 13.FEB.2018 17:57:37

Highest Channel / 16QAM



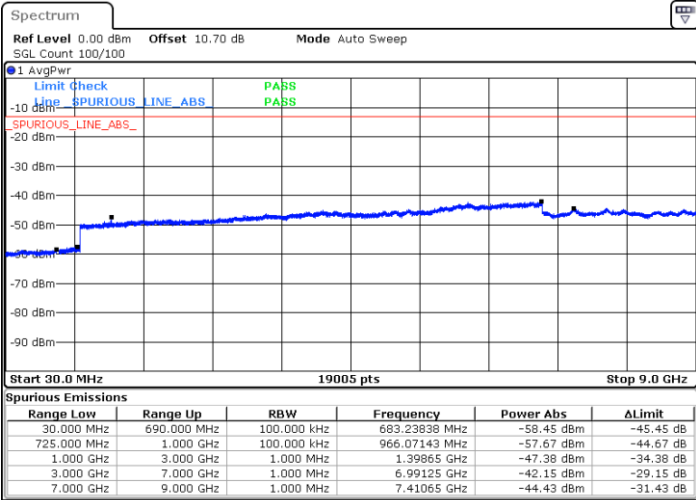
Date: 13.FEB.2018 17:58:31



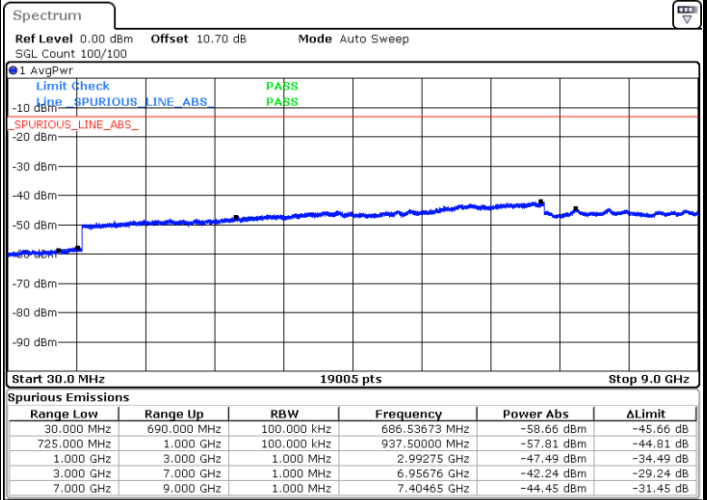
LTE Band 12 / 1.4MHz

Lowest Channel / 64QAM

Middle Channel / 64QAM

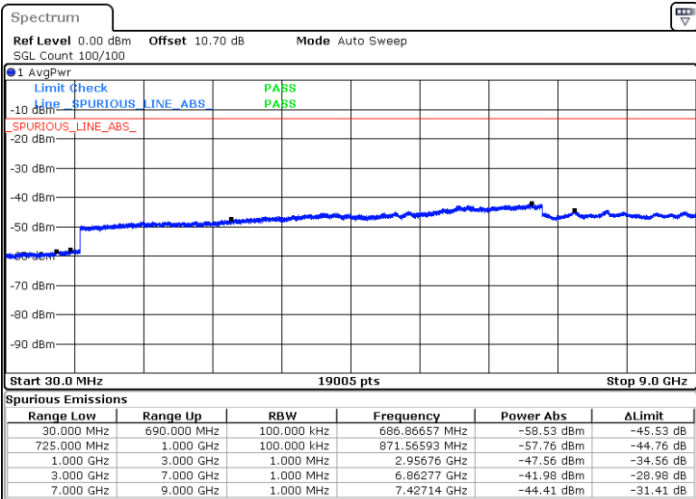


Date: 14.FEB.2018 12:25:00



Date: 14.FEB.2018 12:26:14

Highest Channel / 64QAM



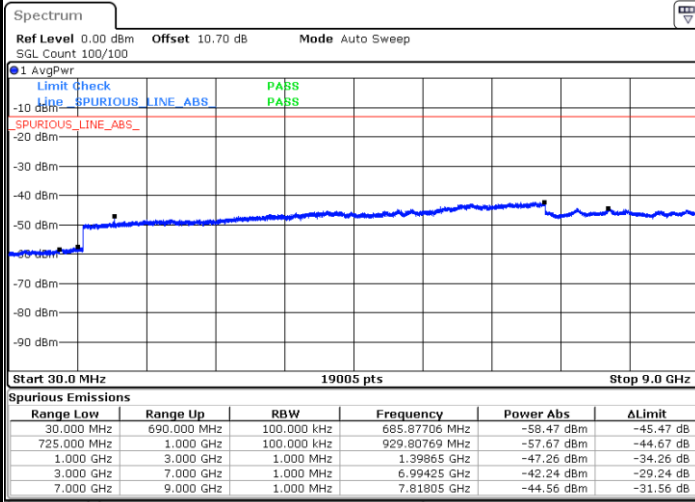
Date: 14.FEB.2018 12:29:42



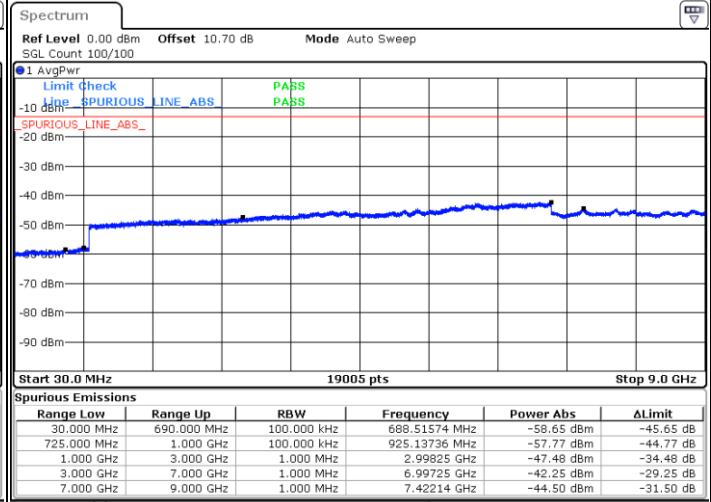
LTE Band 12 / 3MHz

Lowest Channel / 64QAM

Middle Channel / 64QAM

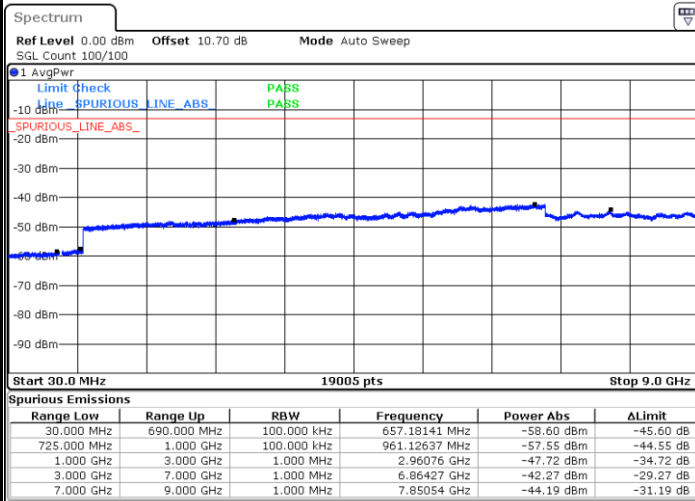


Date: 13.FEB.2018 18:50:55



Date: 13.FEB.2018 18:52:09

Highest Channel / 64QAM



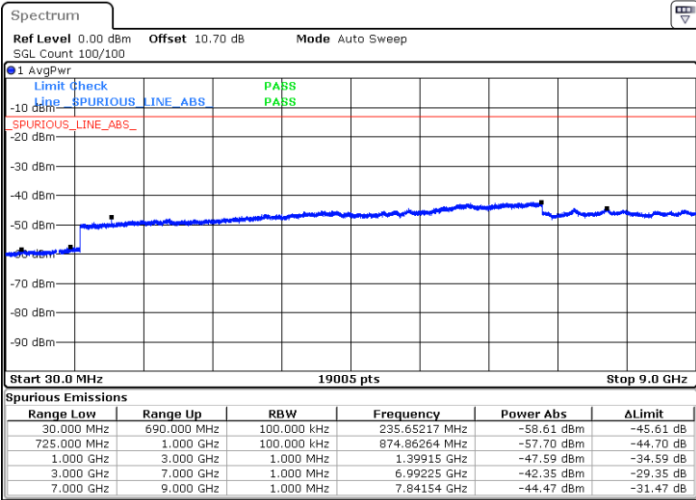
Date: 13.FEB.2018 18:55:37



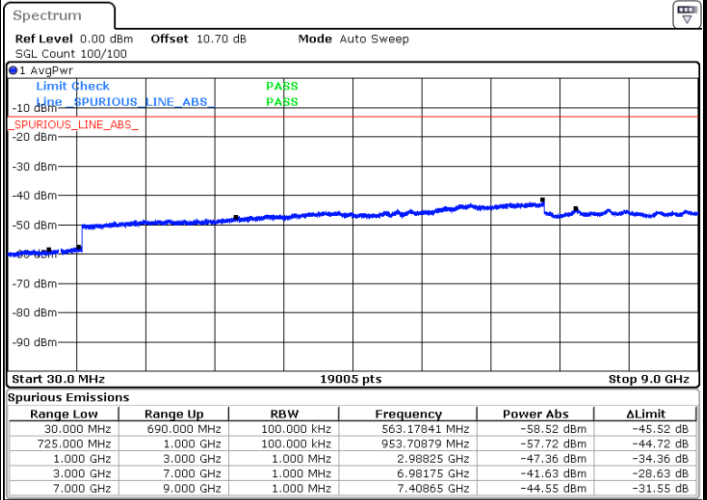
LTE Band 12 / 5MHz

Lowest Channel / 64QAM

Middle Channel / 64QAM

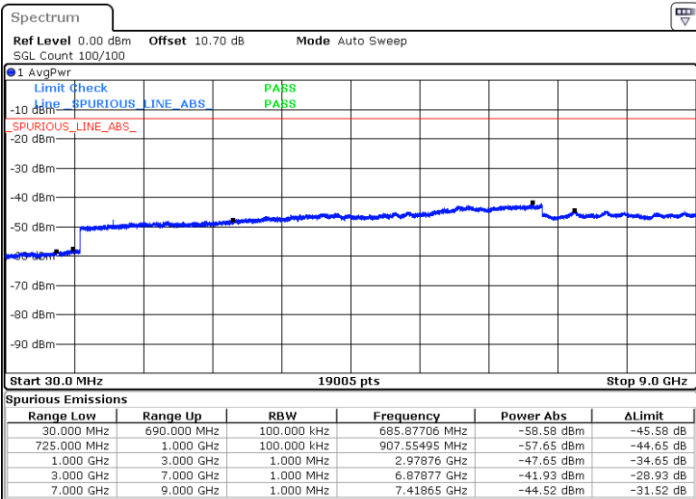


Date: 13.FEB.2018 18:59:05



Date: 13.FEB.2018 19:00:19

Highest Channel / 64QAM

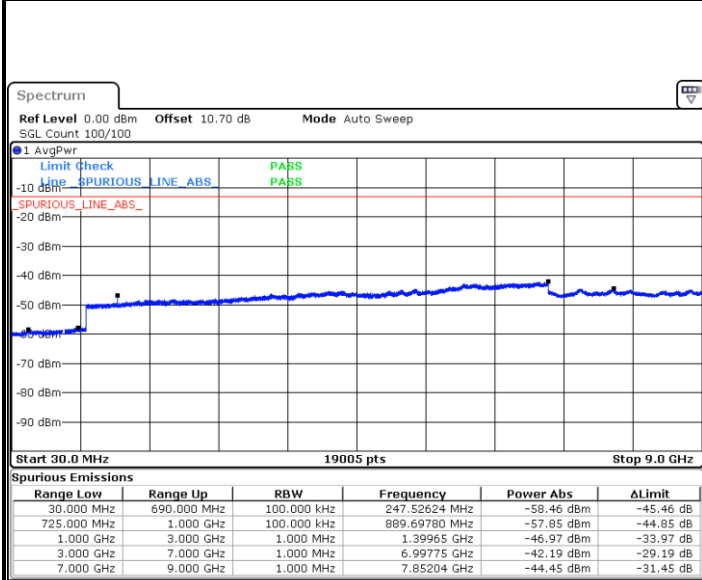


Date: 13.FEB.2018 19:03:47



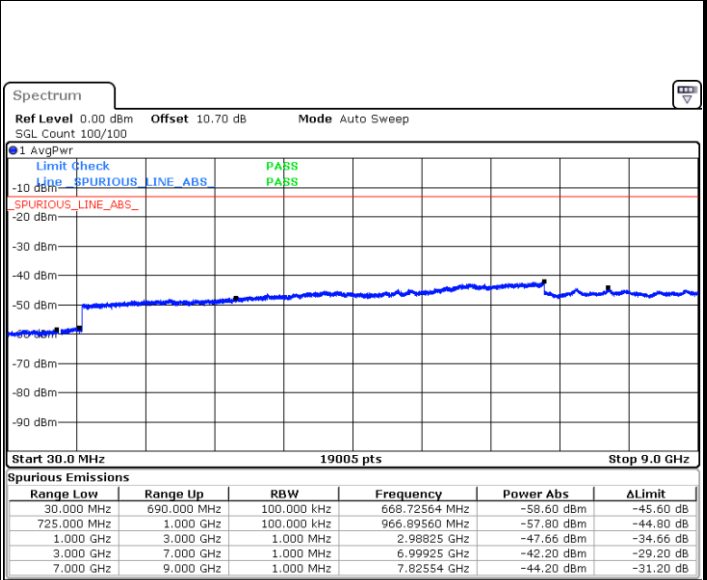
**LTE Band 12 / 10MHz**

**Lowest Channel / 64QAM**



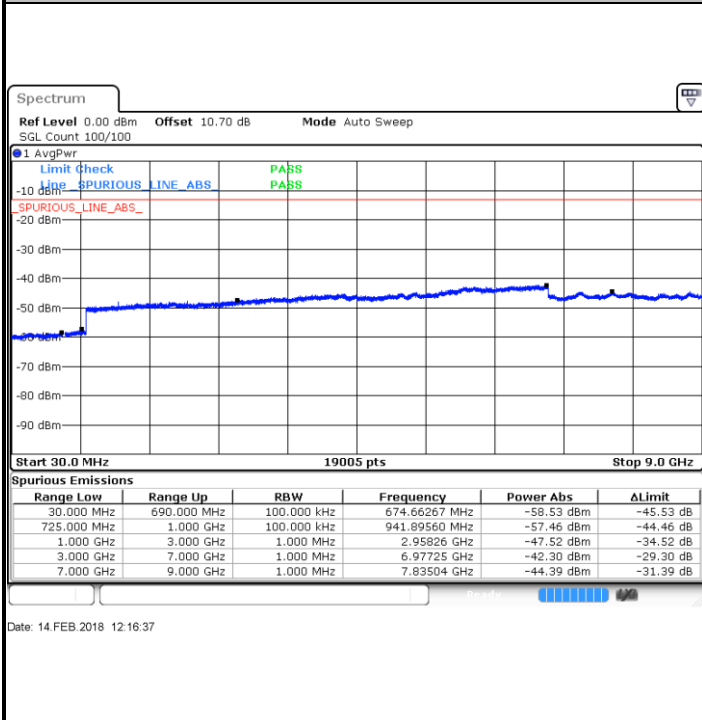
Date: 14.FEB.2018 12:11:56

**Middle Channel / 64QAM**



Date: 14.FEB.2018 12:13:09

**Highest Channel / 64QAM**



Date: 14.FEB.2018 12:16:37



**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	0.0037	PASS
40	Normal Voltage	0.0018	
30	Normal Voltage	0.0069	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0001	
0	Normal Voltage	0.0114	
-10	Normal Voltage	0.0003	
-20	Normal Voltage	0.0041	
-30	Normal Voltage	0.0017	
20	Maximum Voltage	0.0042	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0049	

**Note:**

1. Normal Voltage =3.8 V. ; Battery End Point (BEP) =3.6 V. ; Maximum Voltage =4.4 V.
2. The frequency fundamental emissions stay within the authorized frequency block.





# LTE Band 13

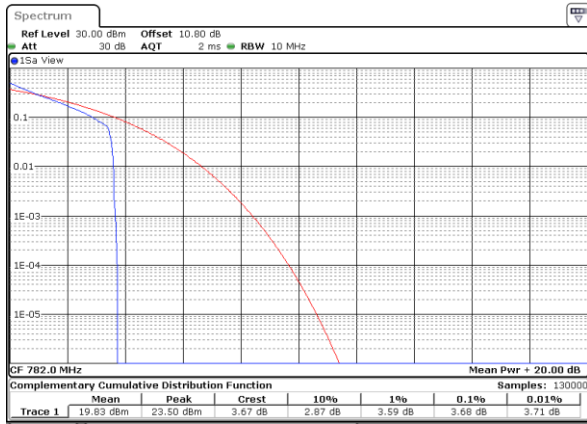
## Peak-to-Average Ratio

Mode	LTE Band 13 / 10MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	-	-	-	-	PASS
Middle CH	3.68	4.7	5.22	6.03	
Highest CH	-	-	-	-	
Mode	LTE Band 13 / 10MHz				
Mod.	64QAM				Limit: 13dB
RB Size	1RB	Full RB			Result
Lowest CH	-	-	-	-	PASS
Middle CH	6.58	6.41	-	-	
Highest CH	-	-	-	-	



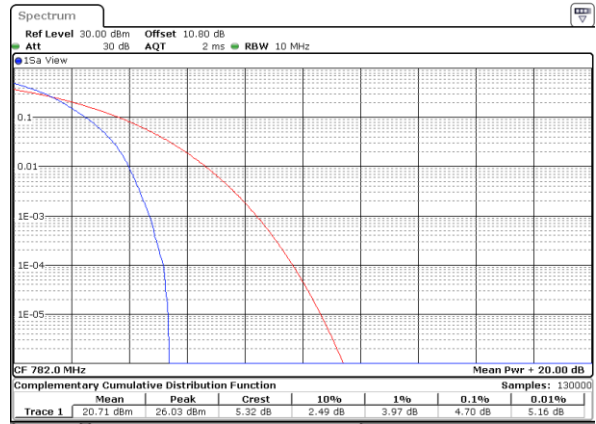
LTE Band 13 / 10MHz / QPSK

Middle Channel / 1RB



Date: 16 FEB 2018 13:44:13

Middle Channel / Full RB



Date: 16 FEB 2018 13:45:41

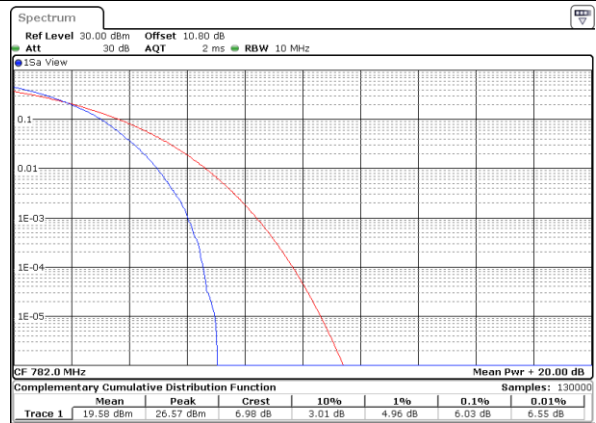
LTE Band 13 / 10MHz / 16QAM

Middle Channel / 1RB



Date: 16 FEB 2018 13:40:28

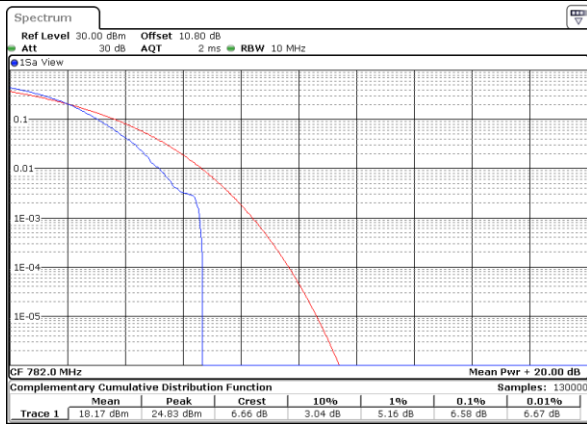
Middle Channel / Full RB



Date: 16 FEB 2018 13:40:46

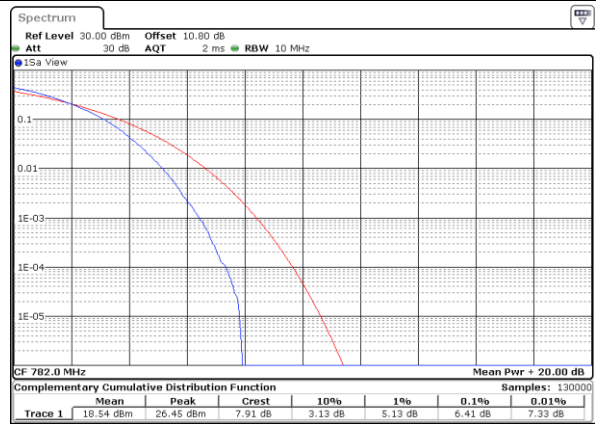
LTE Band 13 / 10MHz / 64QAM

Middle Channel / 1RB



Date: 16 FEB 2018 13:40:00

Middle Channel / Full RB



Date: 16 FEB 2018 13:40:09



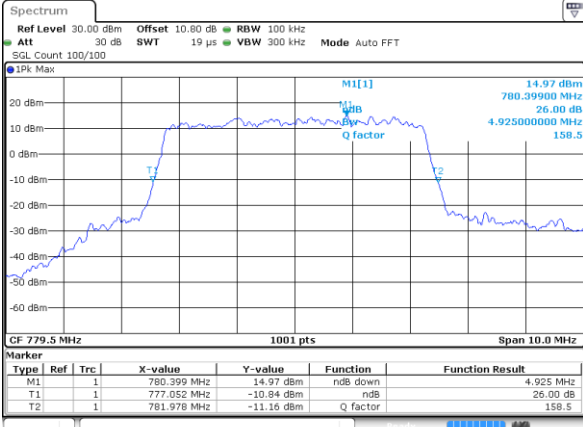
**26dB Bandwidth**

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
Lowest CH	-	-	-	-	4.93	4.92	-	-	-	-	-	-
Middle CH	-	-	-	-	4.84	4.92	9.87	9.69	-	-	-	-
Highest CH	-	-	-	-	4.95	4.89	-	-	-	-	-	-
Mode	LTE Band 13 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	-	-	-	-	4.92	-	-	-	-	-	-	-
Middle CH	-	-	-	-	4.88	-	9.71	-	-	-	-	-
Highest CH	-	-	-	-	4.90	-	-	-	-	-	-	-



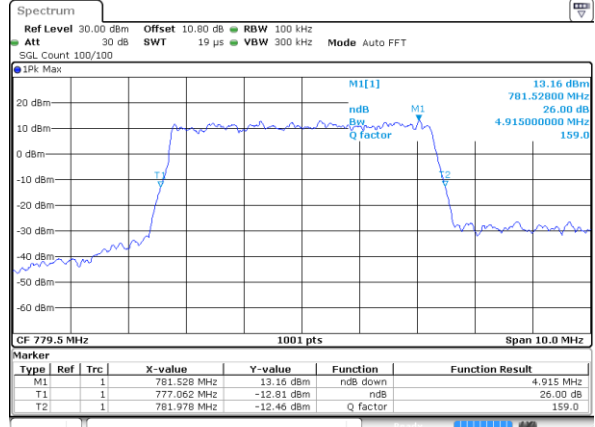
LTE Band 13

Lowest Channel / 5MHz / QPSK



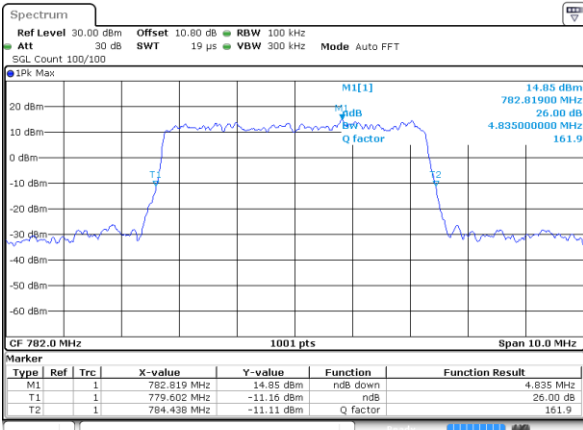
Date: 16 FEB 2018 12:46:43

Lowest Channel / 5MHz / 16QAM



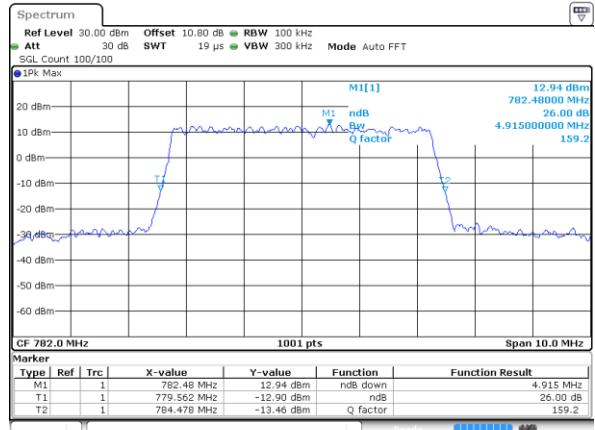
Date: 16 FEB 2018 12:46:33

Middle Channel / 5MHz / QPSK



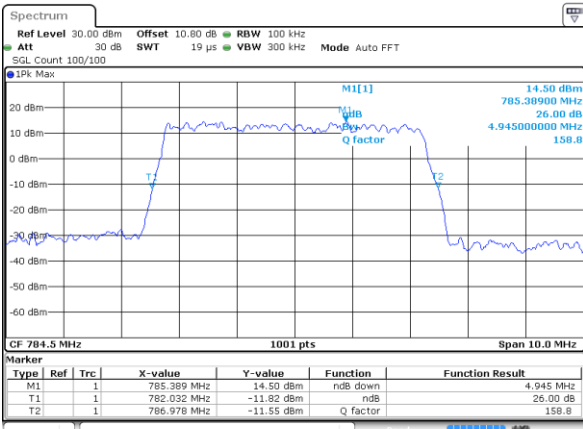
Date: 16 FEB 2018 12:56:55

Middle Channel / 5MHz / 16QAM



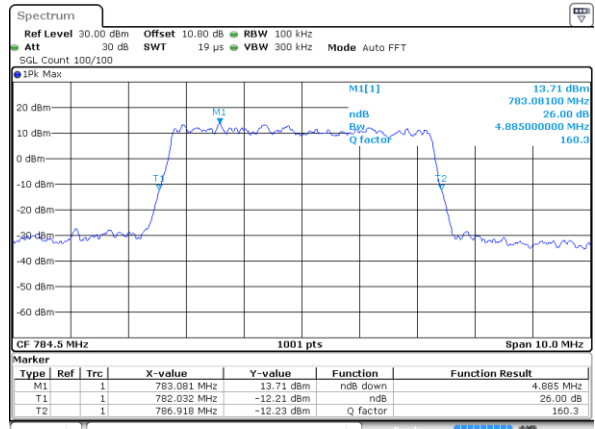
Date: 16 FEB 2018 12:57:05

Highest Channel / 5MHz / QPSK



Date: 16 FEB 2018 12:58:05

Highest Channel / 5MHz / 16QAM



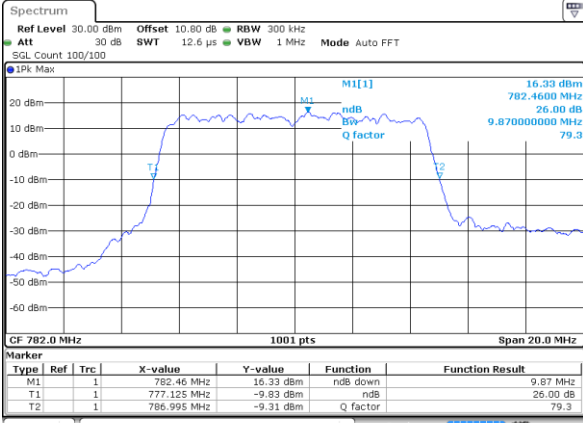
Date: 16 FEB 2018 12:57:55



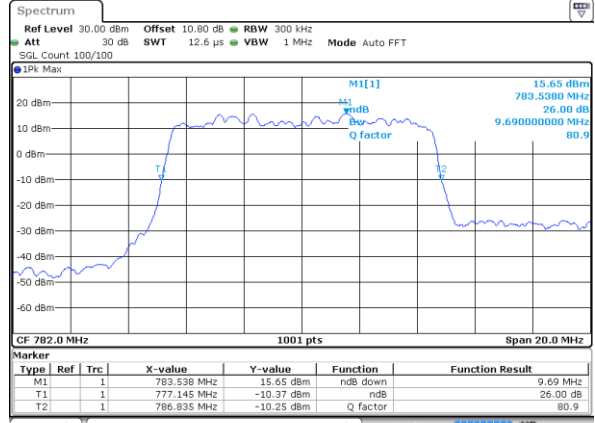
LTE Band 13

Middle Channel / 10MHz / QPSK

Middle Channel / 10MHz / 16QAM



Date: 16 FEB 2018 13:17:09

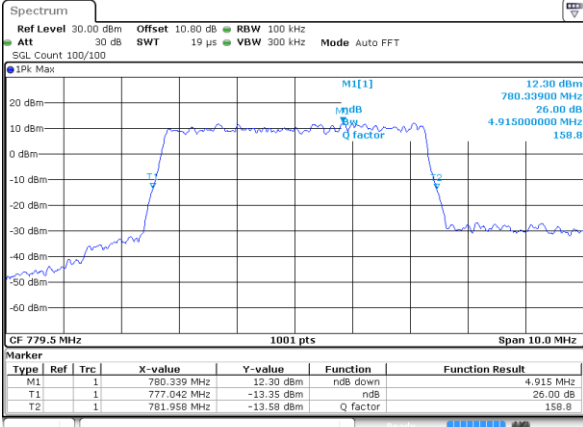


Date: 16 FEB 2018 13:16:59



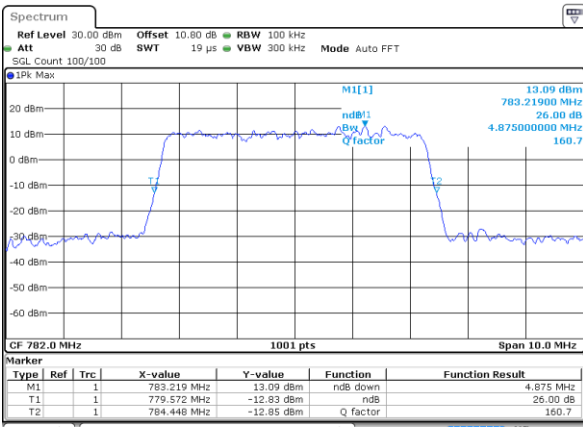
LTE Band 13

Lowest Channel / 5MHz / 64QAM



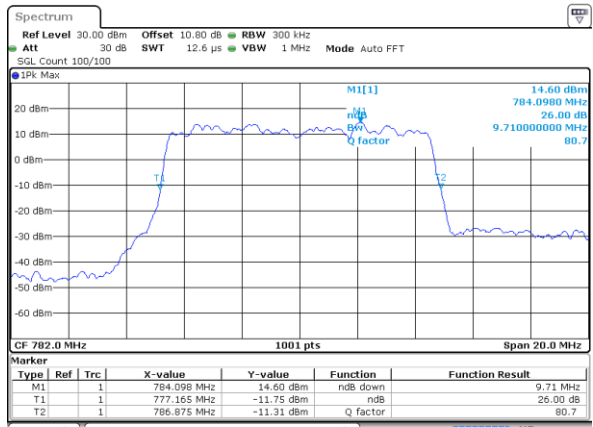
Date: 16 FEB 2018 13:06:40

Middle Channel / 5MHz / 64QAM



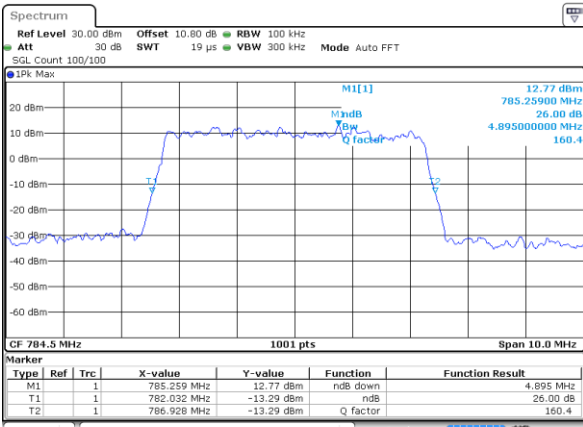
Date: 16 FEB 2018 13:11:52

Middle Channel / 10MHz / 64QAM



Date: 16 FEB 2018 13:29:00

Highest Channel / 5MHz / 64QAM



Date: 16 FEB 2018 13:12:22



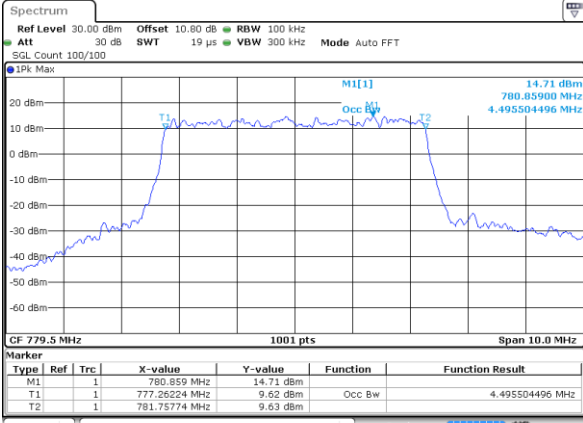
**Occupied Bandwidth**

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
Lowest CH	-	-	-	-	4.5	4.51	-	-	-	-	-	-
Middle CH	-	-	-	-	4.51	4.49	8.97	8.93	-	-	-	-
Highest CH	-	-	-	-	4.49	4.49	-	-	-	-	-	-
Mode	LTE Band 13 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	-	-	-	-	4.46	-	-	-	-	-	-	-
Middle CH	-	-	-	-	4.50	-	8.93	-	-	-	-	-
Highest CH	-	-	-	-	4.51	-	-	-	-	-	-	-



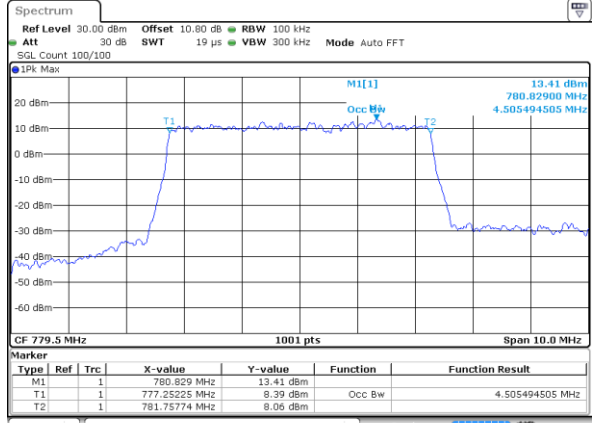
LTE Band 13

Lowest Channel / 5MHz / QPSK



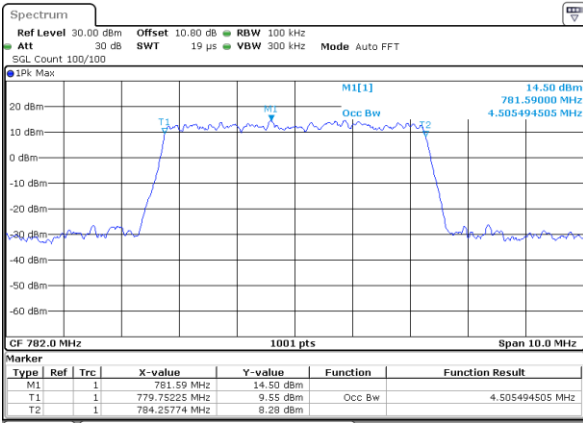
Date: 16 FEB 2018 12:46:13

Lowest Channel / 5MHz / 16QAM



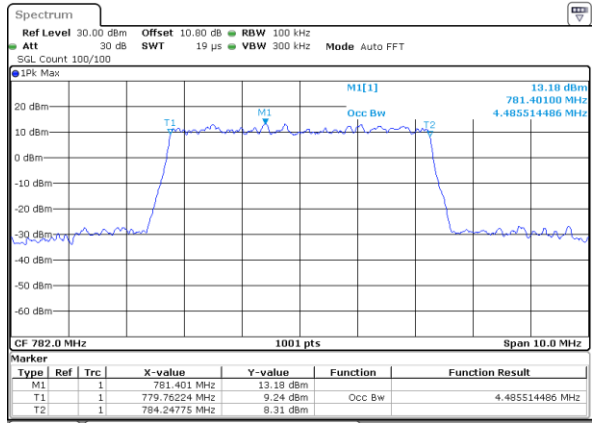
Date: 16 FEB 2018 12:46:23

Middle Channel / 5MHz / QPSK



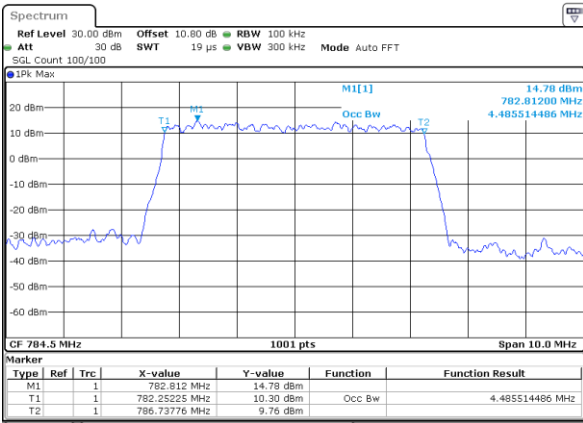
Date: 16 FEB 2018 12:57:25

Middle Channel / 5MHz / 16QAM



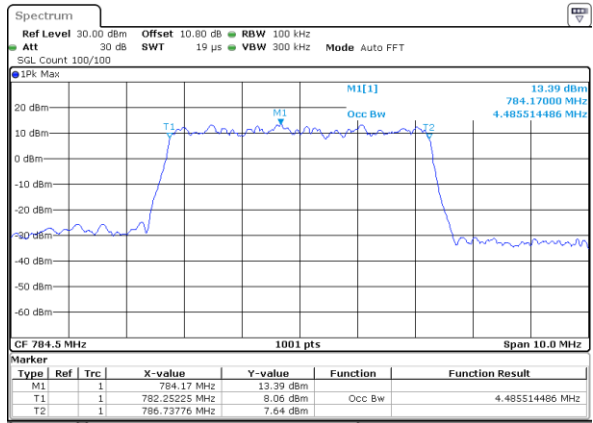
Date: 16 FEB 2018 12:57:15

Highest Channel / 5MHz / QPSK



Date: 16 FEB 2018 12:57:35

Highest Channel / 5MHz / 16QAM



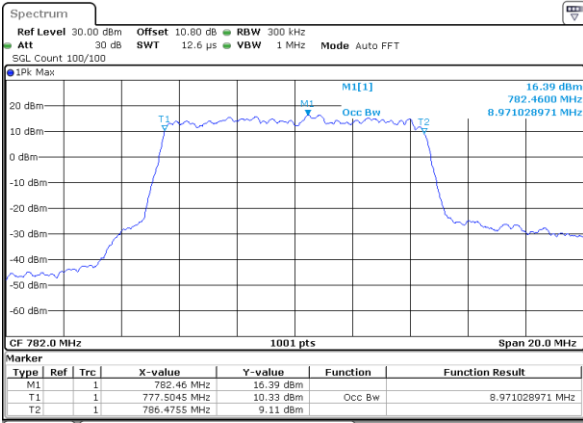
Date: 16 FEB 2018 12:57:45





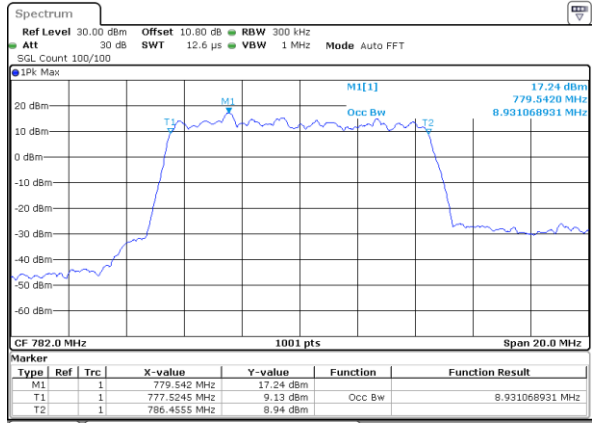
LTE Band 13

Middle Channel / 10MHz / QPSK



Date: 16 FEB 2018 13:16:40

Middle Channel / 10MHz / 16QAM

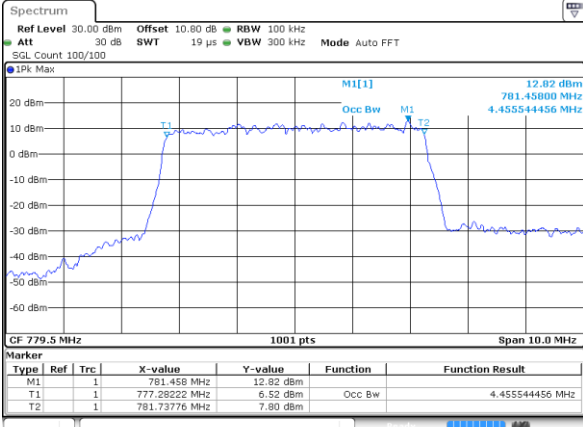


Date: 16 FEB 2018 13:16:50



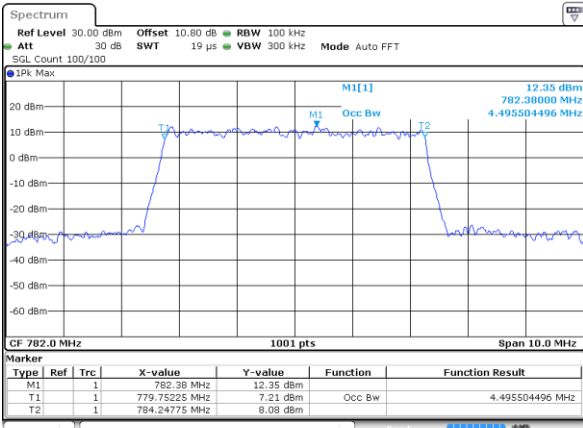
LTE Band 13

Lowest Channel / 5MHz / 64QAM



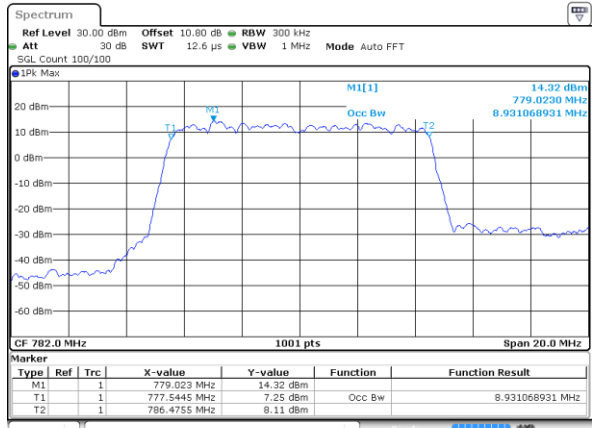
Date: 16 FEB 2018 13:06:31

Middle Channel / 5MHz / 64QAM



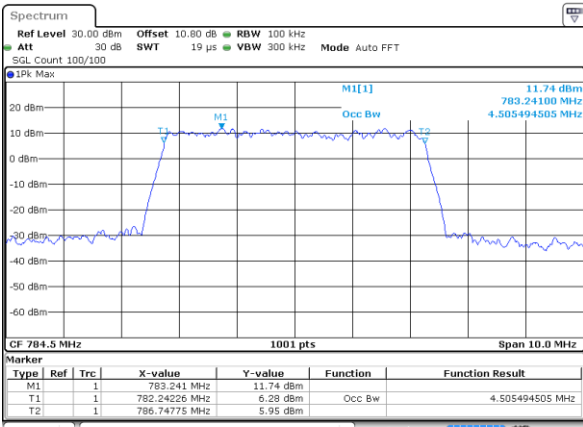
Date: 16 FEB 2018 13:12:02

Middle Channel / 10MHz / 64QAM



Date: 16 FEB 2018 13:28:50

Highest Channel / 5MHz / 64QAM



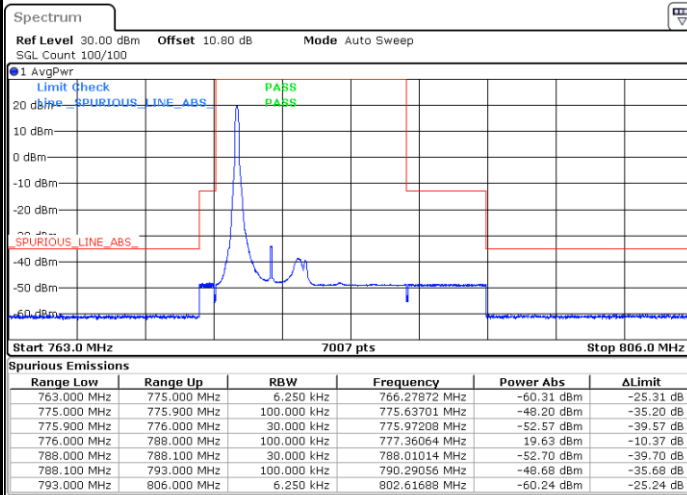
Date: 16 FEB 2018 13:12:12



# Conducted Band Edge

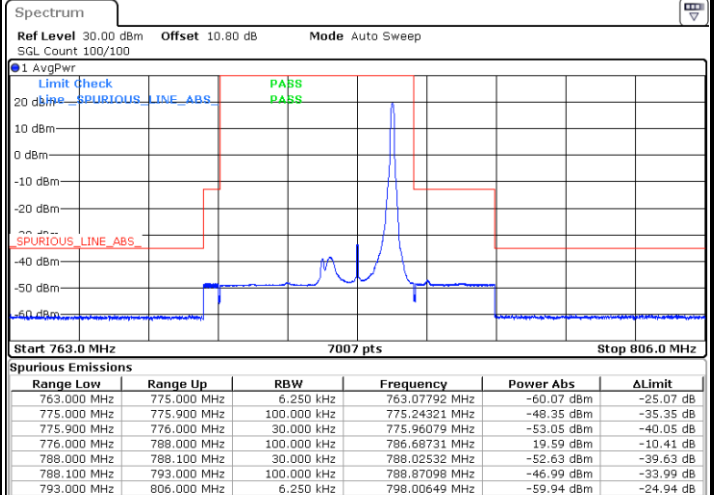
## LTE Band 13 / 5MHz / QPSK

### Lowest Band Edge / 1 RB



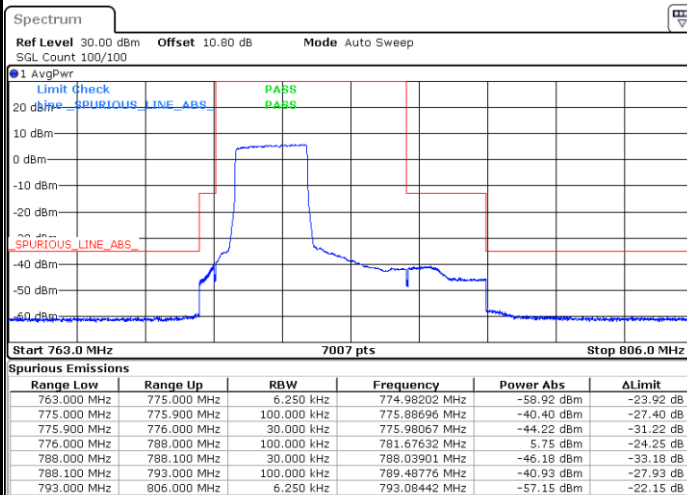
Date: 16.FEB.2018 12:53:12

### Highest Band Edge / 1 RB



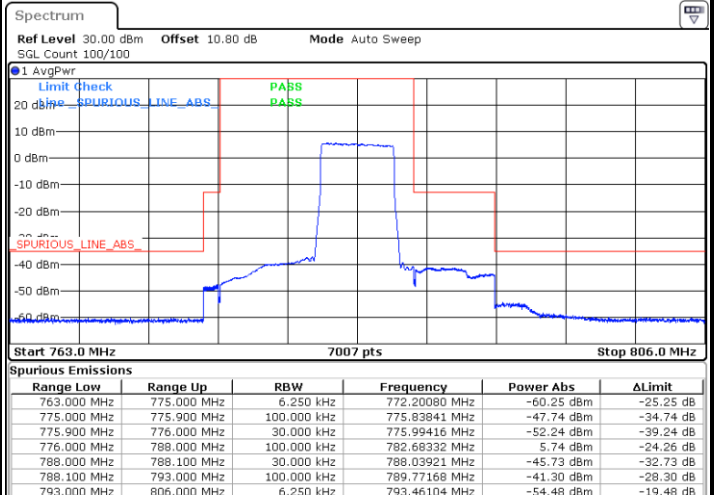
Date: 16.FEB.2018 13:04:34

### Lowest Band Edge / Full RB



Date: 16.FEB.2018 12:48:20

### Highest Band Edge / Full RB



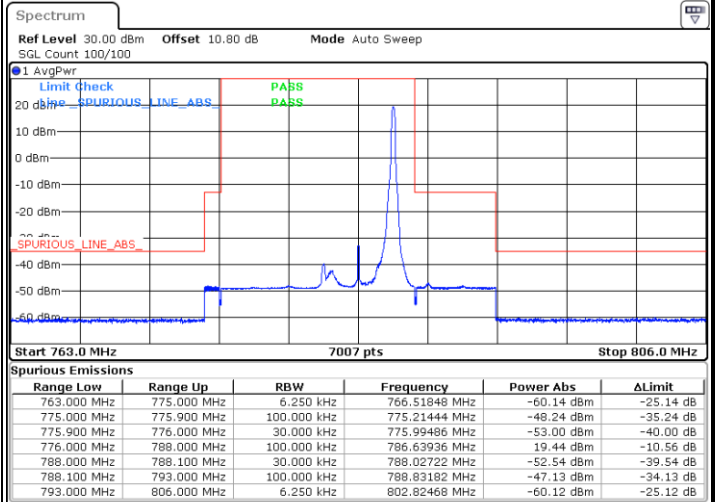
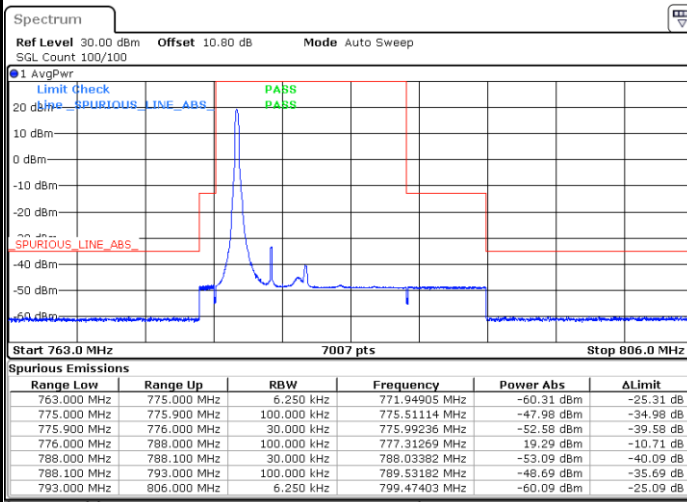
Date: 16.FEB.2018 12:59:42



LTE Band 13 / 5MHz / 16QAM

Lowest Band Edge / 1 RB

Highest Band Edge / 1 RB

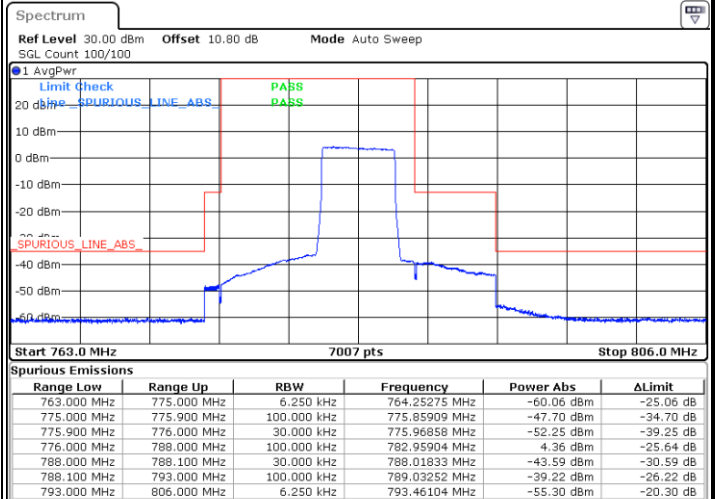
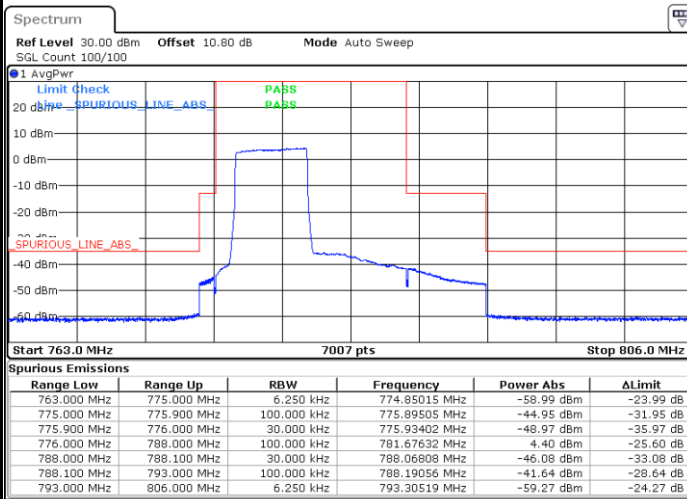


Date: 16.FEB.2018 12:51:35

Date: 16.FEB.2018 13:02:57

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



Date: 16.FEB.2018 12:49:58

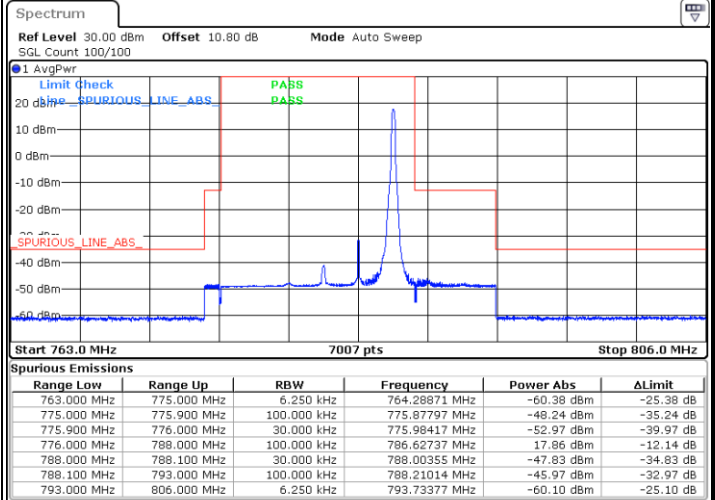
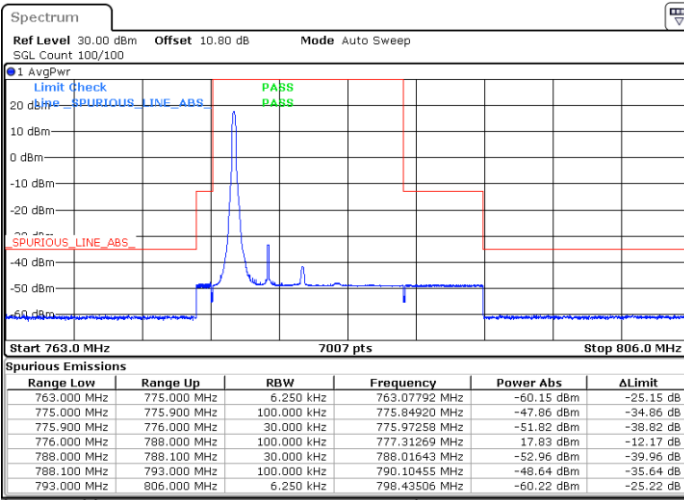
Date: 16.FEB.2018 13:01:20



LTE Band 13 / 5MHz / 64QAM

Lowest Band Edge / 1 RB

Highest Band Edge / 1 RB

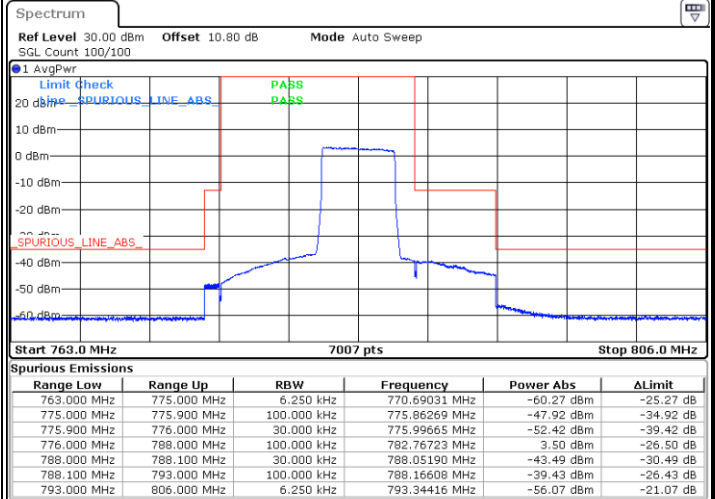
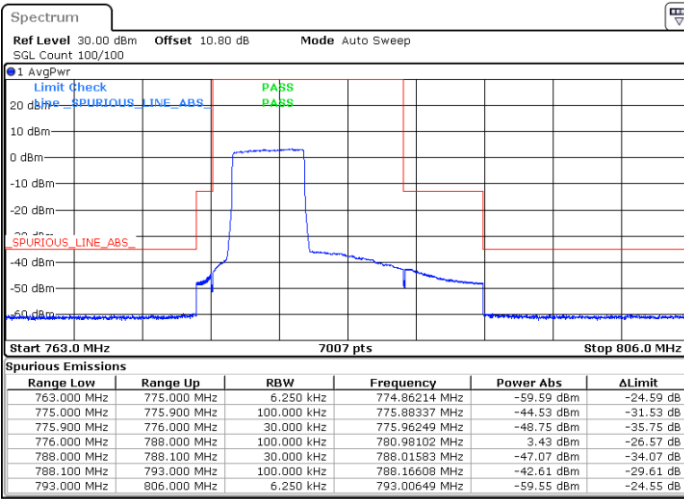


Date: 16.FEB.2018 13:09:55

Date: 16.FEB.2018 13:15:37

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



Date: 16.FEB.2018 13:08:18

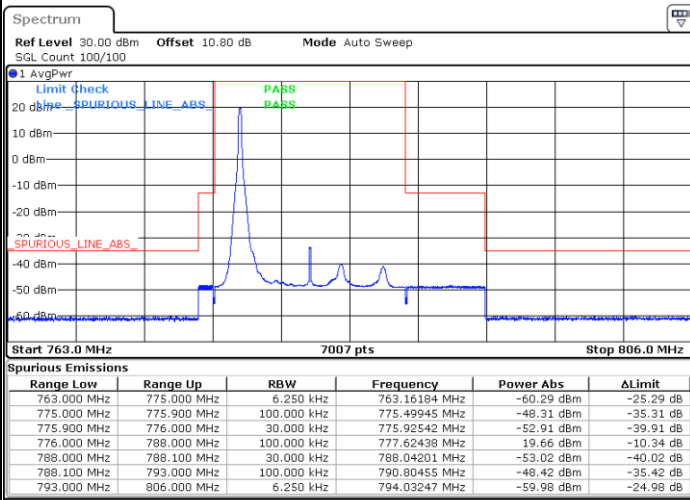
Date: 16.FEB.2018 13:13:59



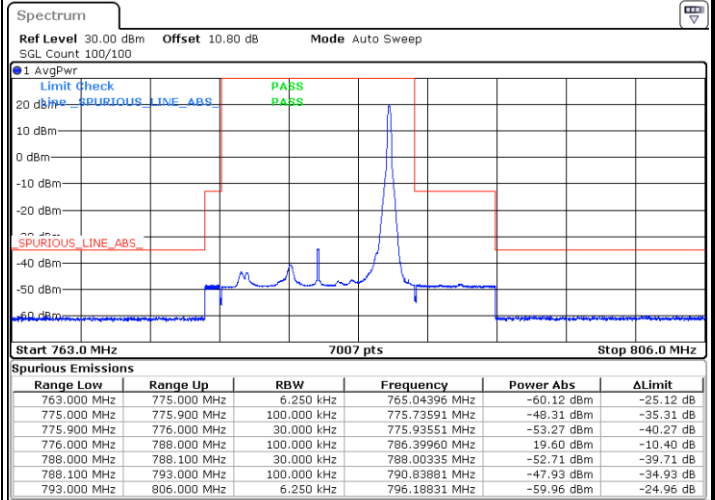
LTE Band 13 / 10MHz / QPSK

Lowest Band Edge / 1 RB

Highest Band Edge / 1 RB

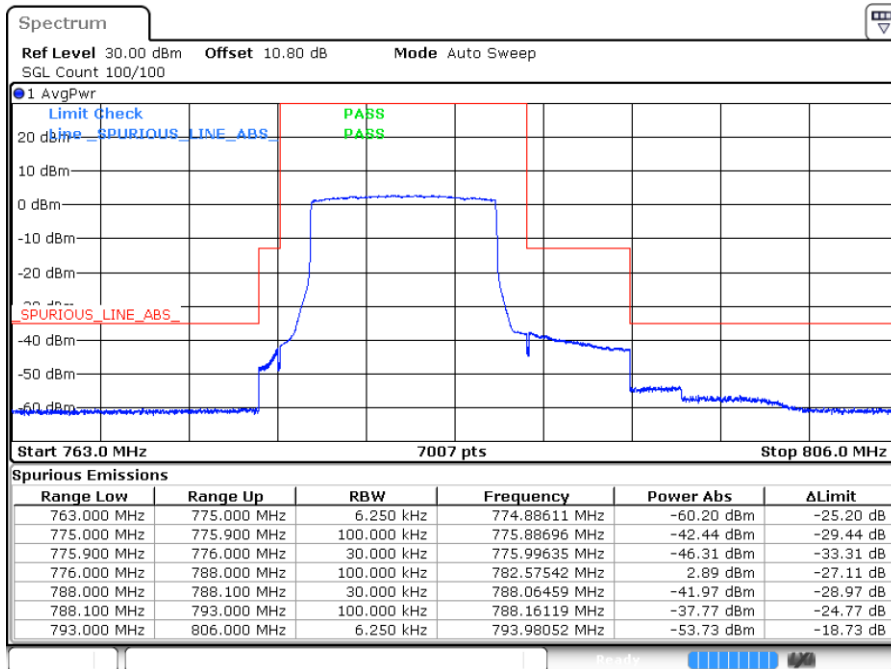


Date: 16.FEB.2018 13:23:39



Date: 16.FEB.2018 13:25:16

Band Edge / Full RB

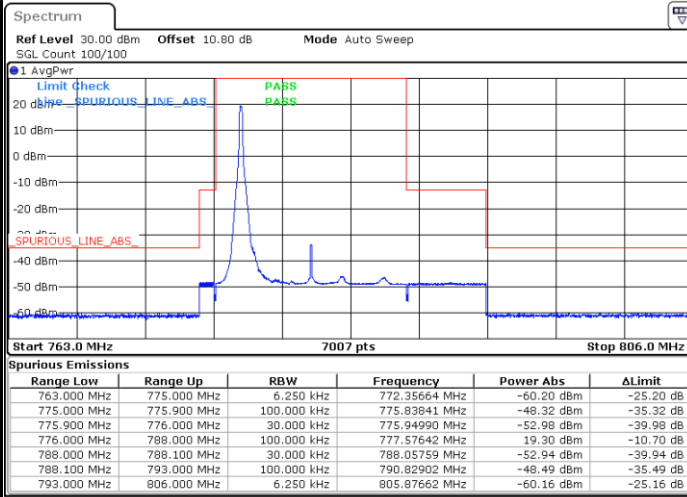


Date: 16.FEB.2018 13:18:47



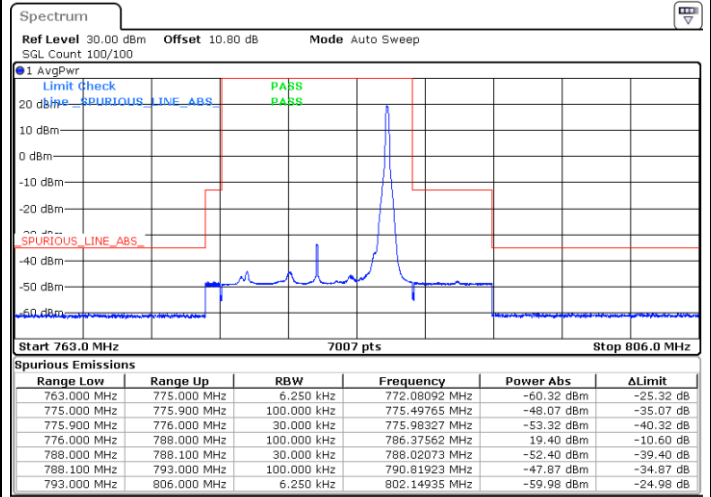
LTE Band 13 / 10MHz / 16QAM

Lowest Band Edge / 1 RB



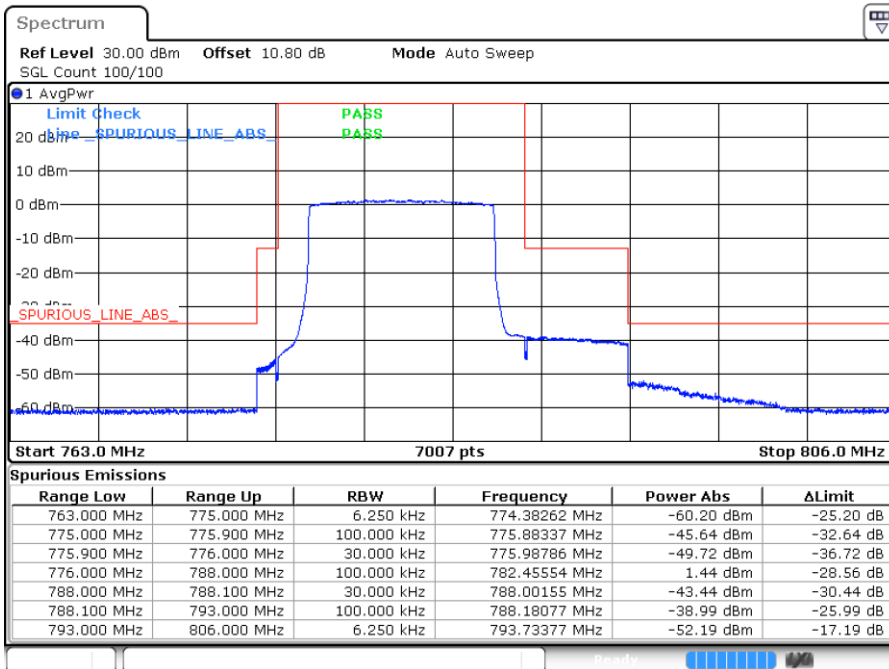
Date: 16.FEB.2018 13:22:02

Highest Band Edge / 1 RB



Date: 16.FEB.2018 13:26:54

Band Edge / Full RB



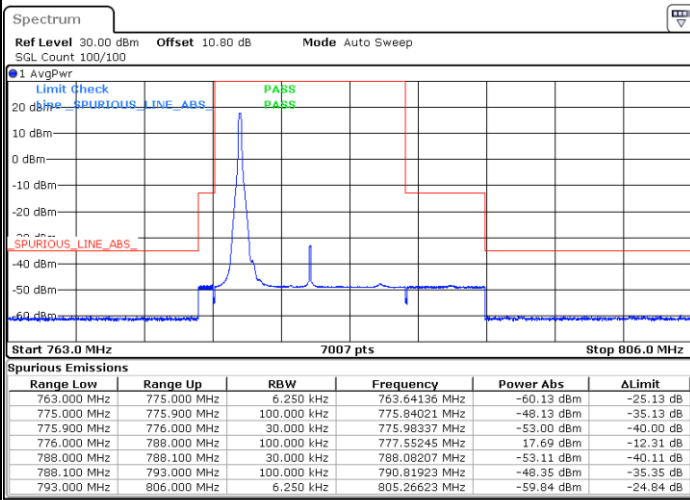
Date: 16.FEB.2018 13:20:24



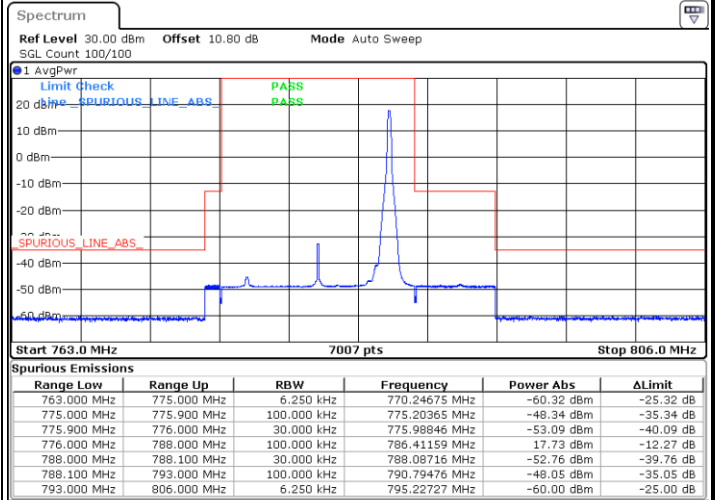
LTE Band 13 / 10MHz / 64QAM

Lowest Band Edge / 1 RB

Highest Band Edge / 1 RB

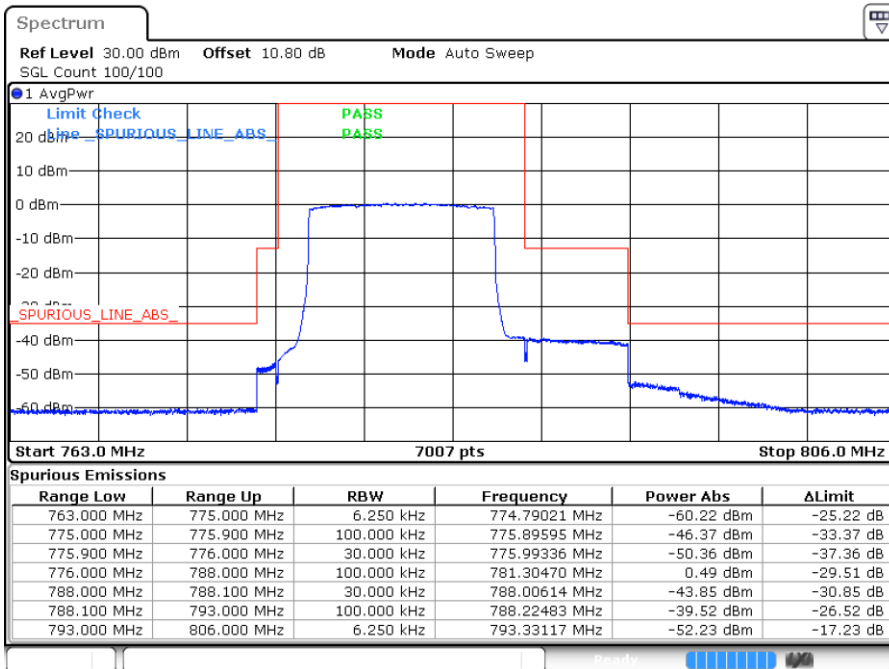


Date: 16.FEB.2018 13:32:15



Date: 16.FEB.2018 13:33:52

Band Edge / Full RB



Date: 16.FEB.2018 13:30:38

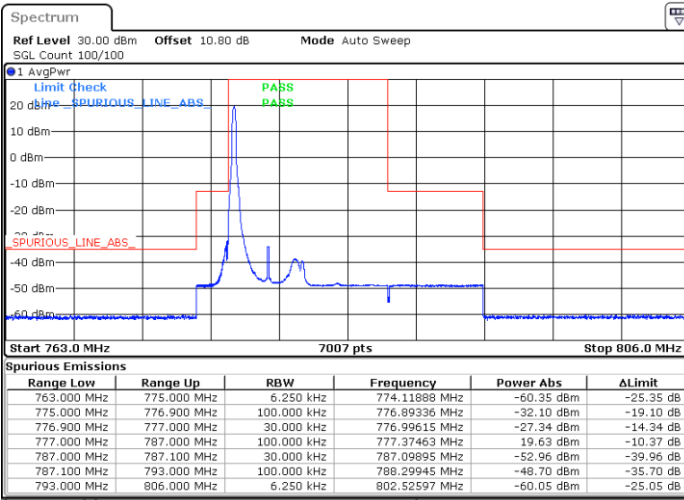




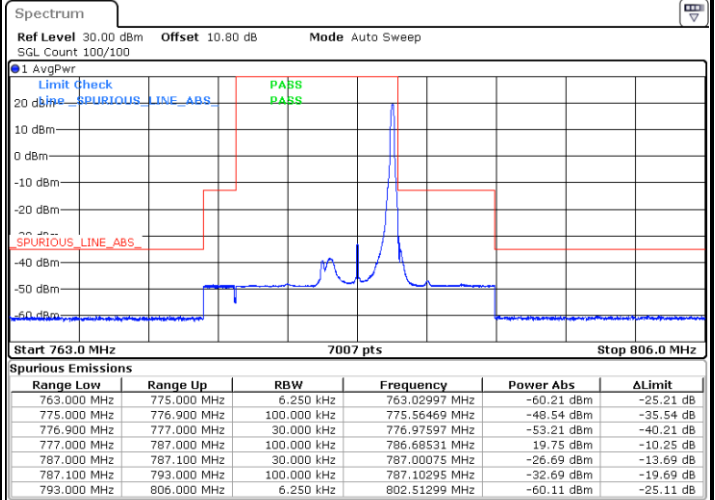
IC LTE Band 13 / 5MHz / QPSK

Lowest Band Edge / 1 RB

Highest Band Edge / 1 RB



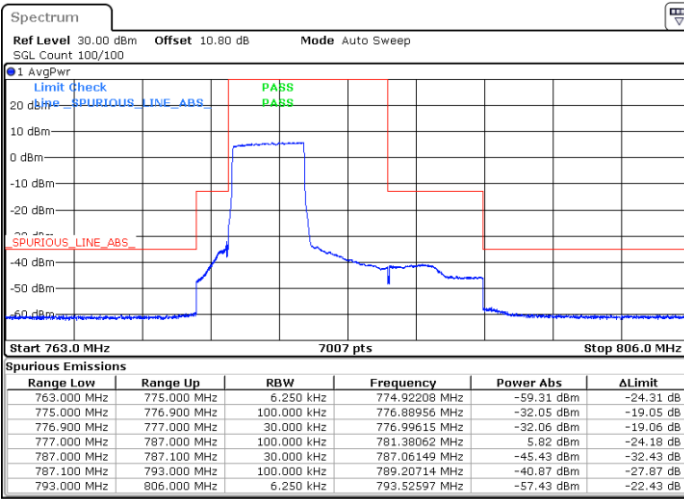
Date: 16.FEB.2018 13:53:35



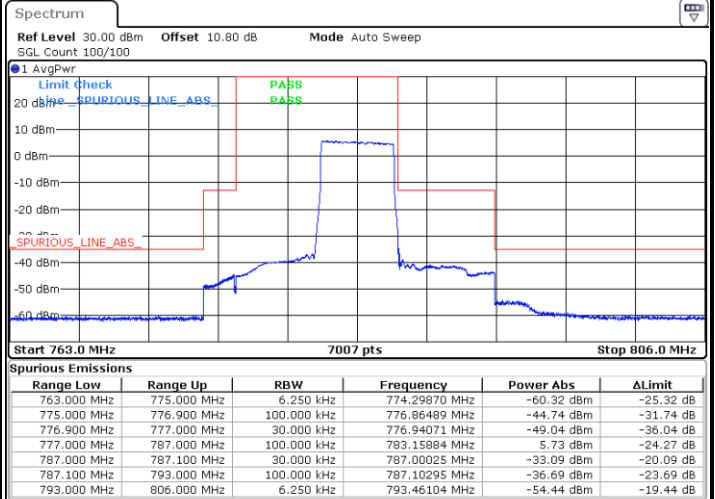
Date: 16.FEB.2018 14:00:04

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



Date: 16.FEB.2018 13:48:43



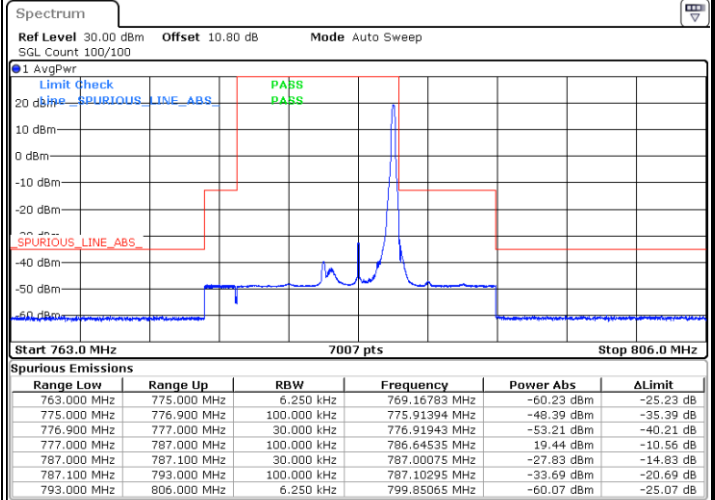
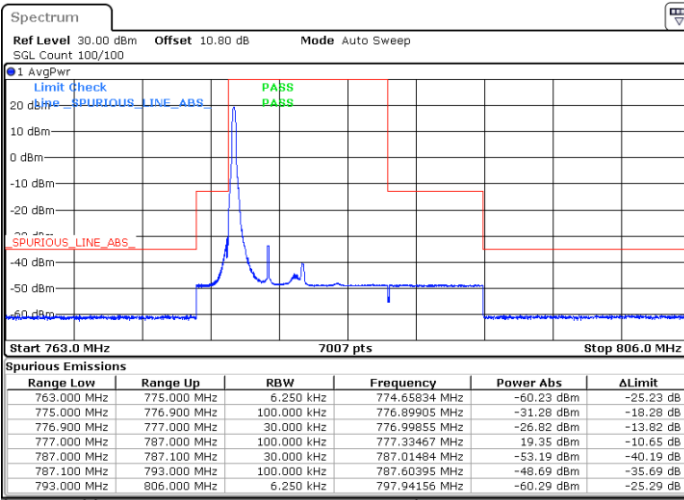
Date: 16.FEB.2018 13:55:12



IC LTE Band 13 / 5MHz / 16QAM

Lowest Band Edge / 1 RB

Highest Band Edge / 1 RB

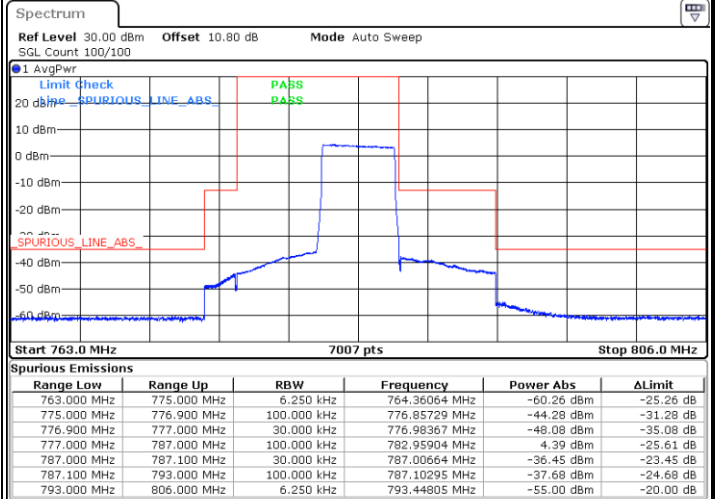
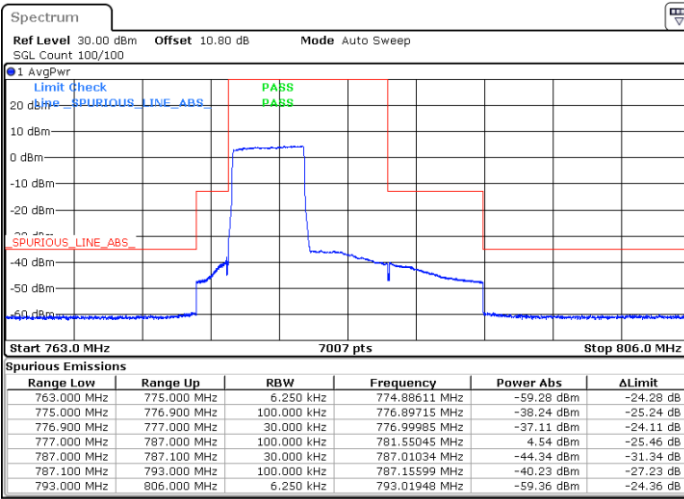


Date: 16.FEB.2018 13:51:58

Date: 16.FEB.2018 13:58:27

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



Date: 16.FEB.2018 13:50:20

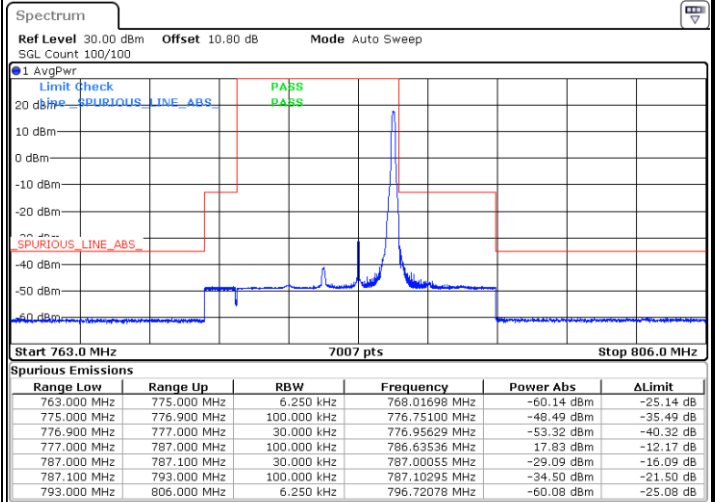
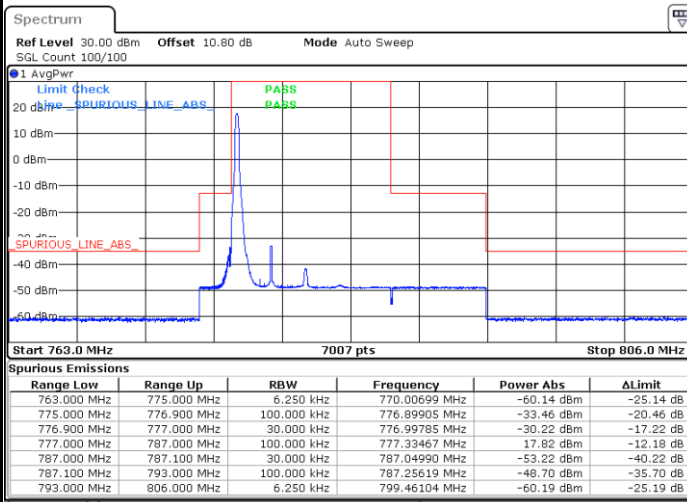
Date: 16.FEB.2018 13:56:50



IC LTE Band 13 / 5MHz / 64QAM

Lowest Band Edge / 1 RB

Highest Band Edge / 1 RB

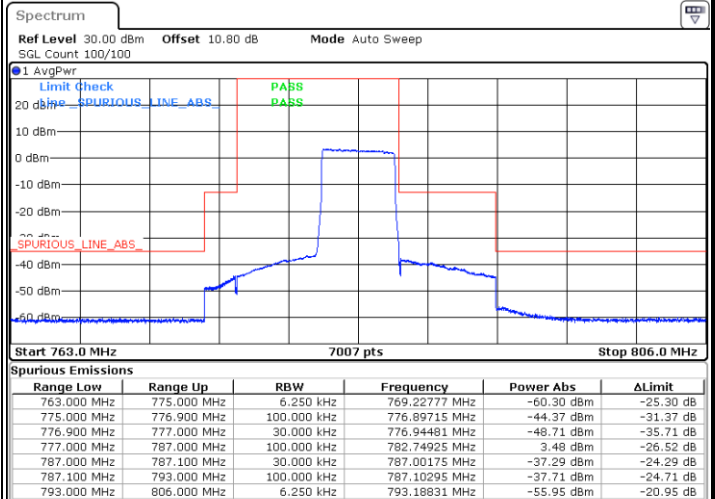
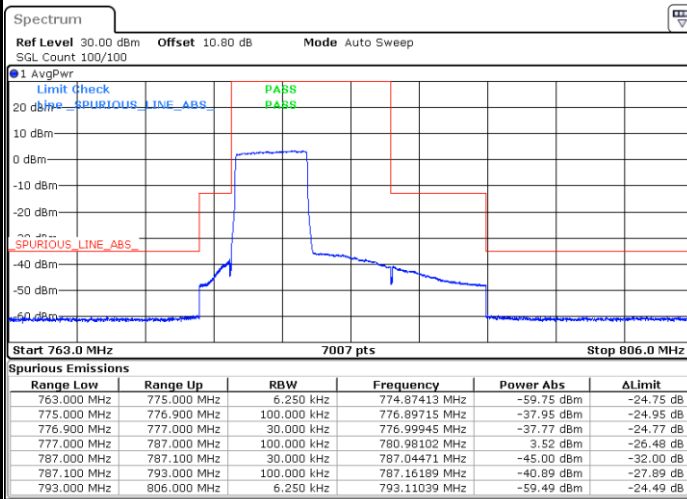


Date: 16.FEB.2018 14:03:19

Date: 16.FEB.2018 14:06:34

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



Date: 16.FEB.2018 14:01:42

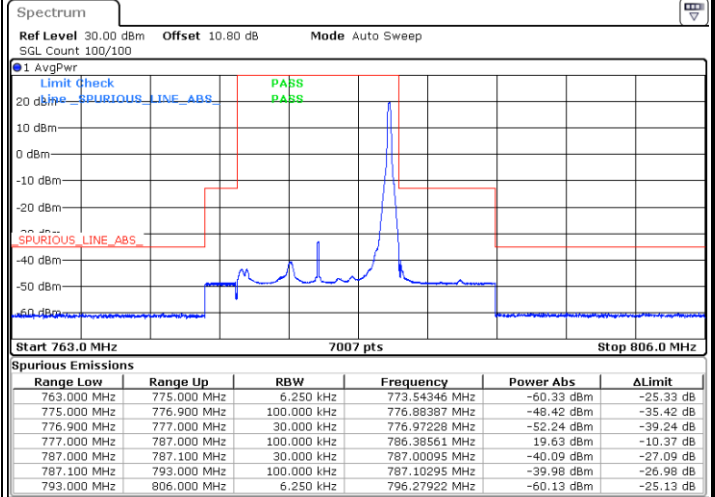
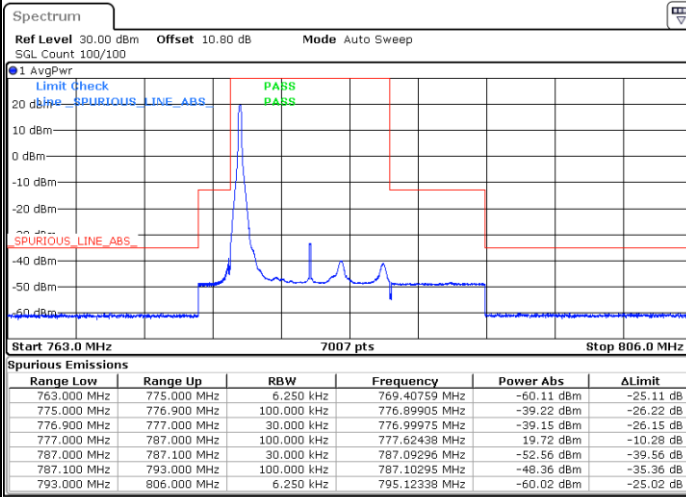
Date: 16.FEB.2018 14:04:56



IC LTE Band 13 / 10MHz / QPSK

Lowest Band Edge / 1 RB

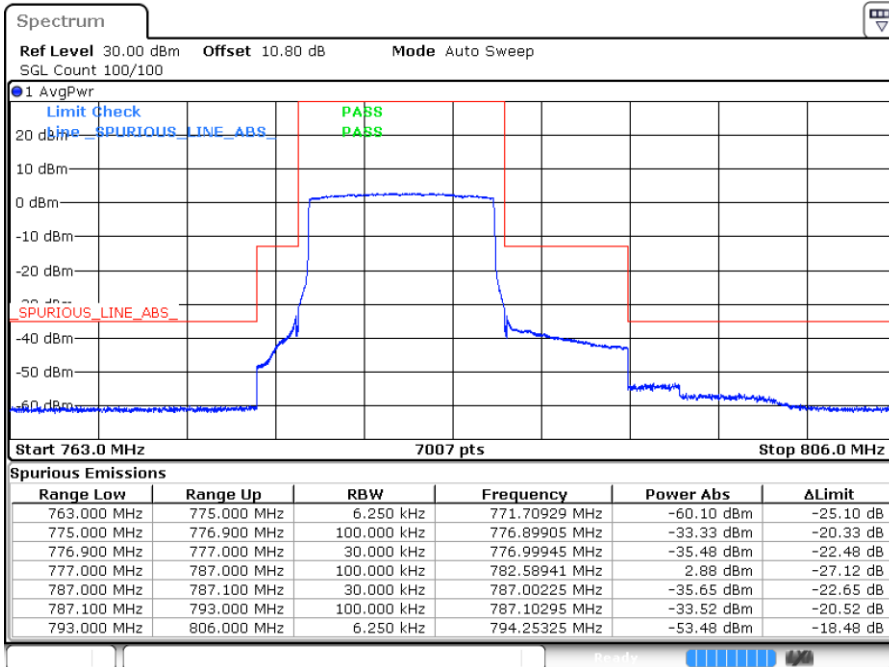
Highest Band Edge / 1 RB



Date: 16.FEB.2018 14:17:55

Date: 16.FEB.2018 14:19:32

Band Edge / Full RB



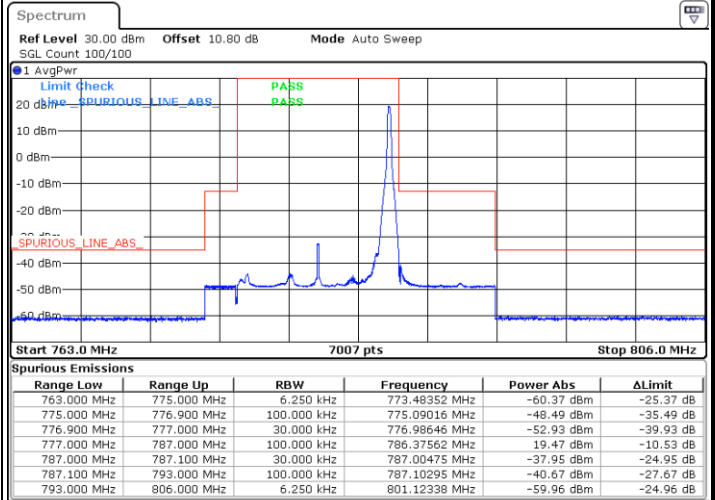
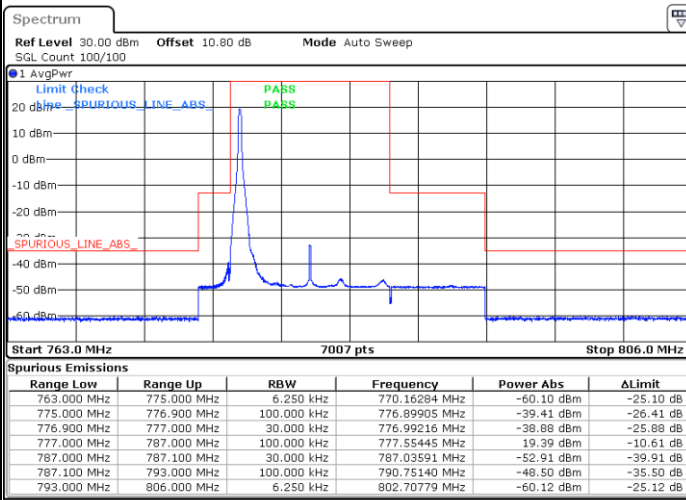
Date: 16.FEB.2018 14:13:03



IC LTE Band 13 / 10MHz / 16QAM

Lowest Band Edge / 1 RB

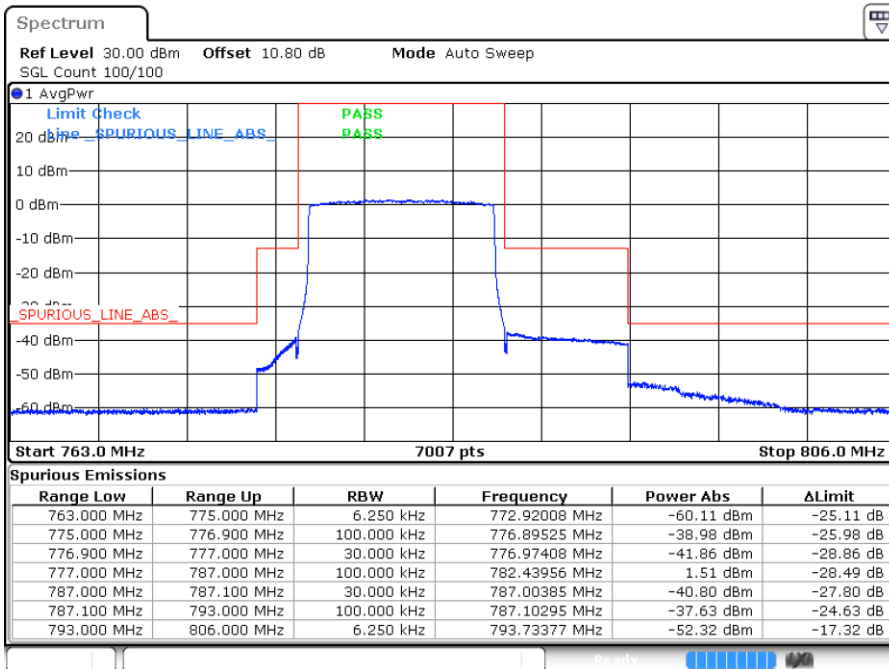
Highest Band Edge / 1 RB



Date: 16.FEB.2018 14:16:18

Date: 16.FEB.2018 14:21:10

Band Edge / Full RB

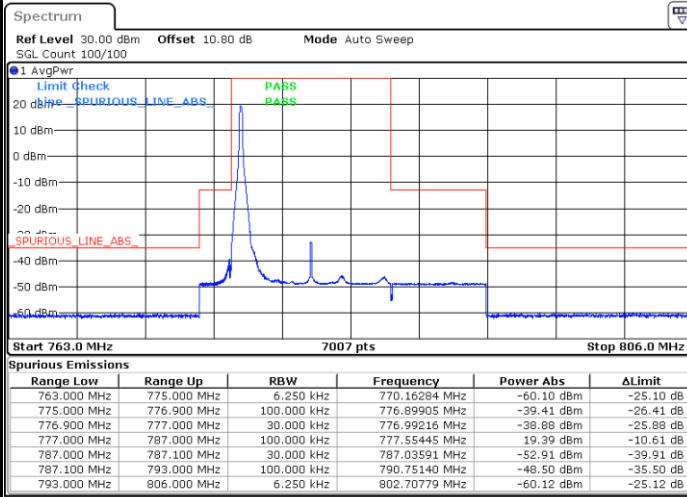


Date: 16.FEB.2018 14:14:40



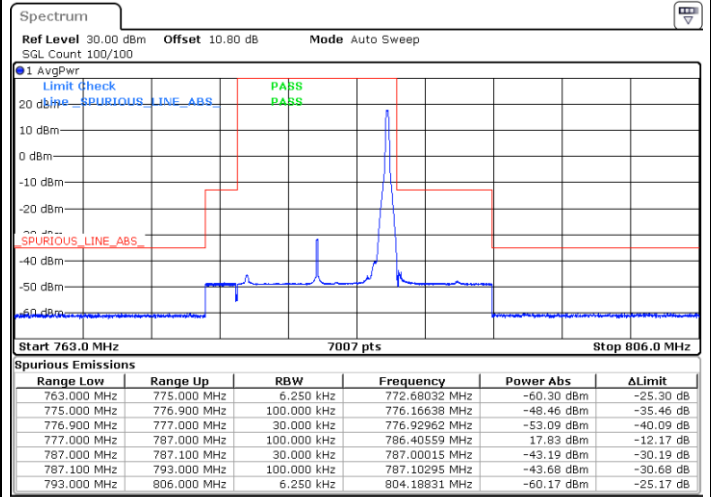
IC LTE Band 13 / 10MHz / 64QAM

Lowest Band Edge / 1 RB



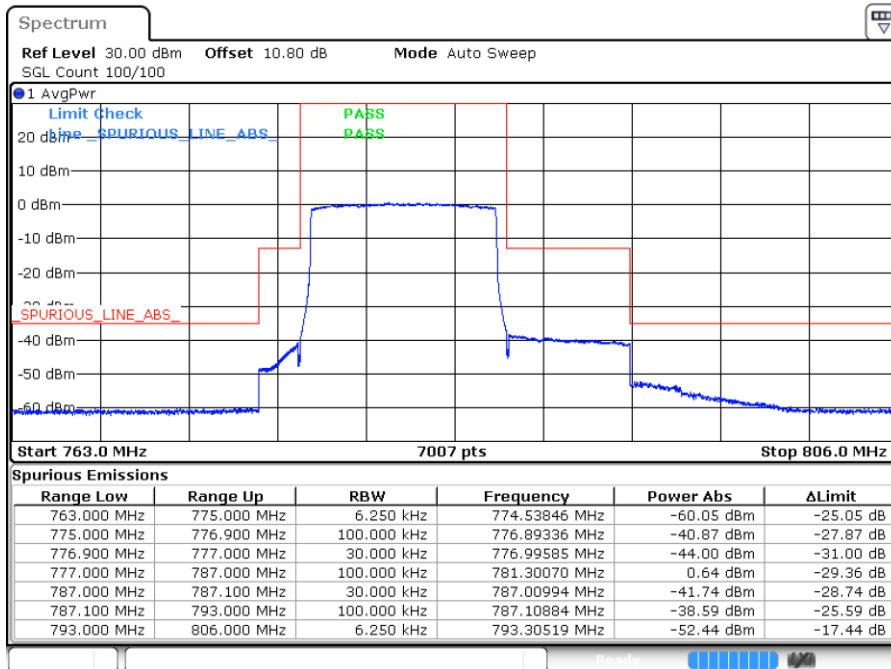
Date: 16.FEB.2018 14:16:18

Highest Band Edge / 1 RB



Date: 16.FEB.2018 14:11:26

Band Edge / Full RB



Date: 16.FEB.2018 14:08:11



# Conducted Spurious Emission

