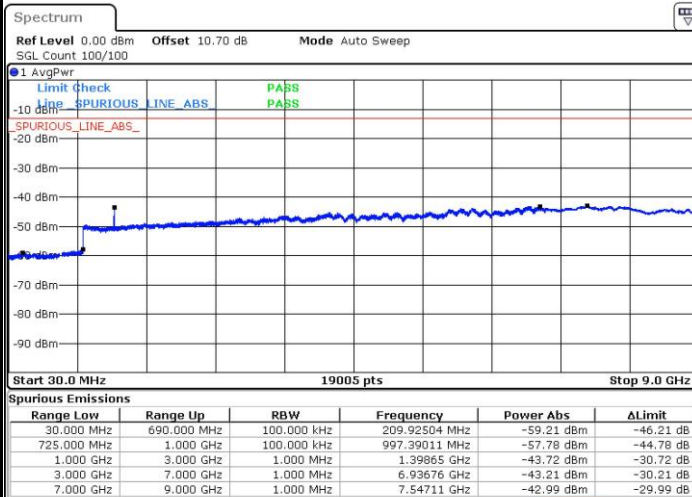




Conducted Spurious Emission

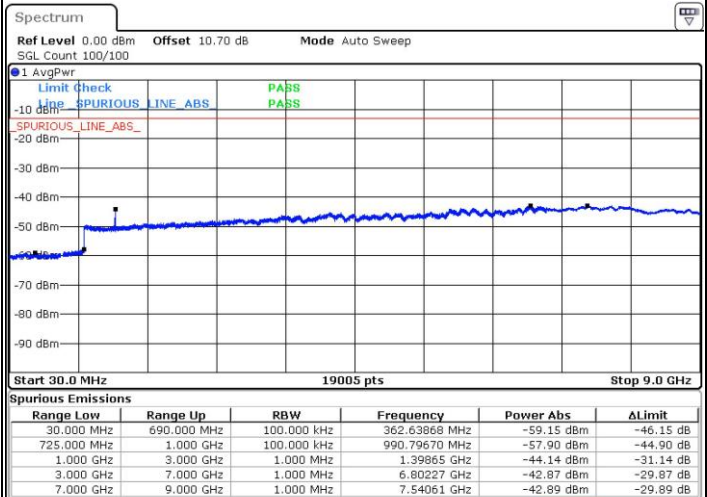
LTE Band 12 / 1.4MHz

Lowest Channel / QPSK



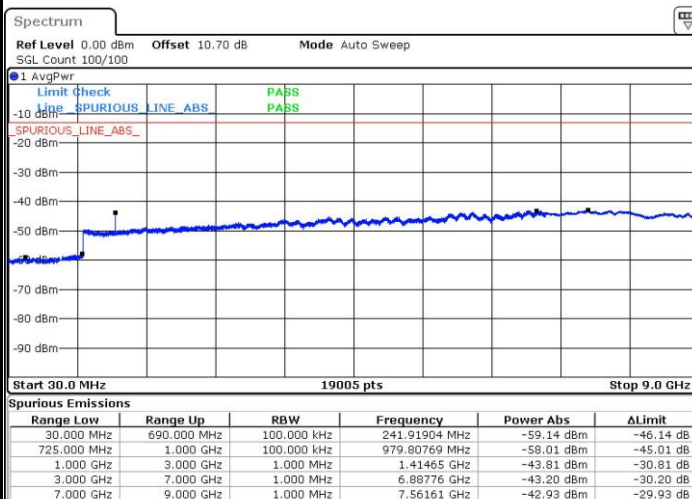
Date: 19.AUG.2018 19:16:53

Lowest Channel / 16QAM



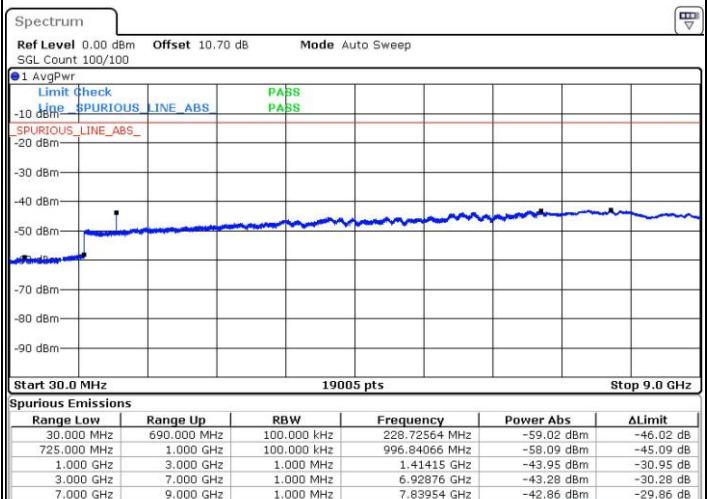
Date: 19.AUG.2018 19:17:53

Middle Channel / QPSK



Date: 19.AUG.2018 19:20:40

Middle Channel / 16QAM

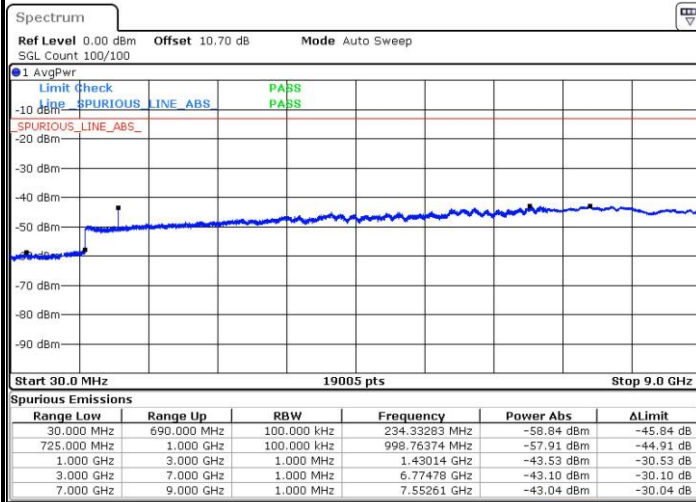


Date: 19.AUG.2018 19:19:39



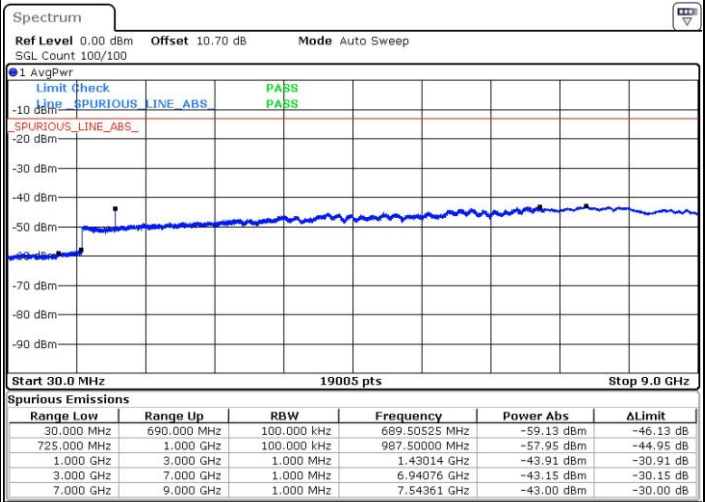
LTE Band 12 / 1.4MHz

Highest Channel / QPSK



Date: 19.AUG.2018 19:25:46

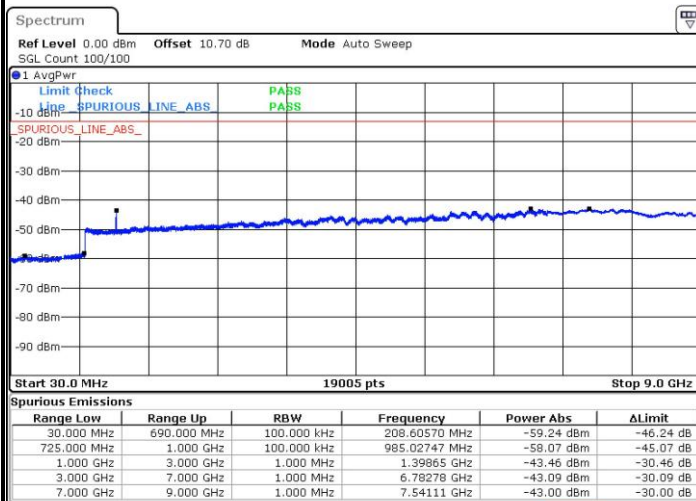
Highest Channel / 16QAM



Date: 19.AUG.2018 19:26:46

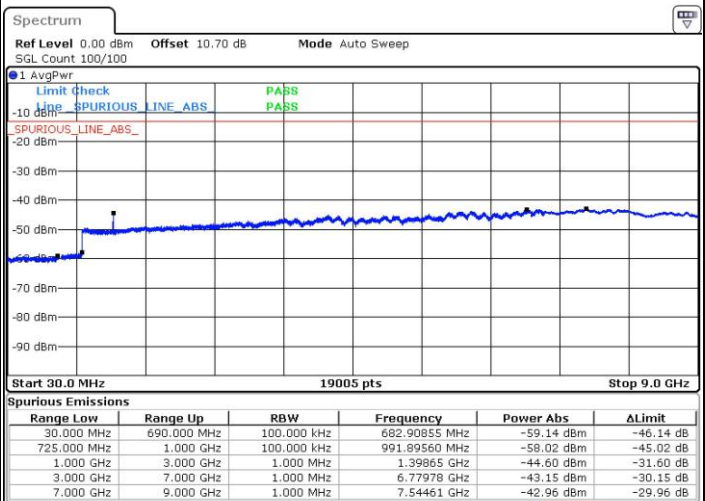
LTE Band 12 / 3MHz

Lowest Channel / QPSK



Date: 19.AUG.2018 18:17:22

Lowest Channel / 16QAM

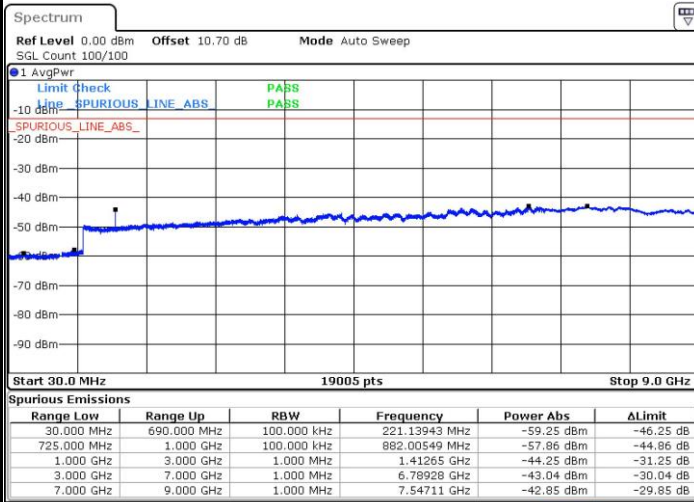


Date: 19.AUG.2018 18:18:22



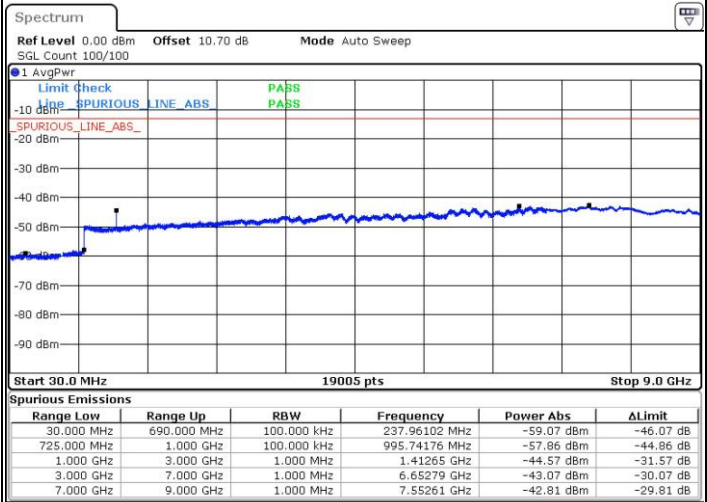
LTE Band 12 / 3MHz

Middle Channel / QPSK



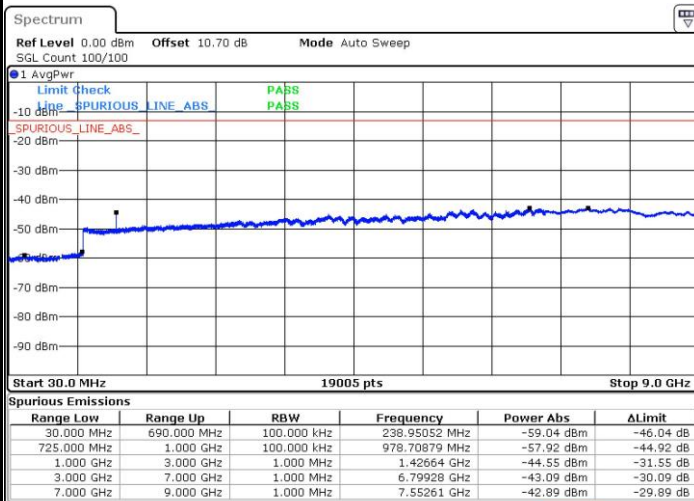
Date: 19.AUG.2018 18:21:24

Middle Channel / 16QAM



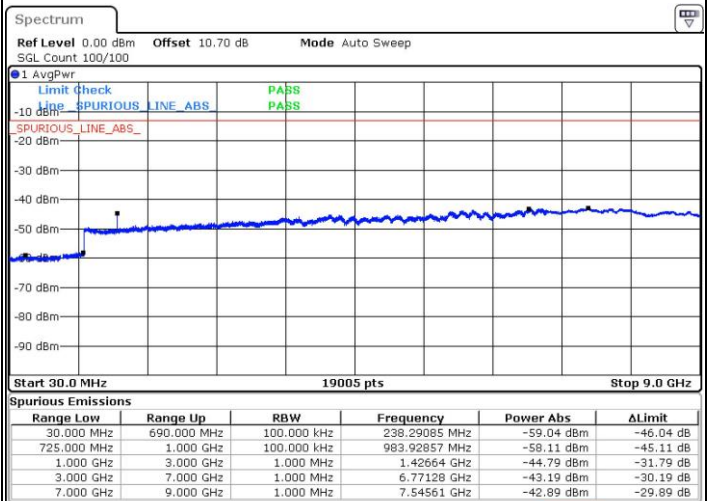
Date: 19.AUG.2018 18:20:24

Highest Channel / QPSK



Date: 19.AUG.2018 18:26:31

Highest Channel / 16QAM

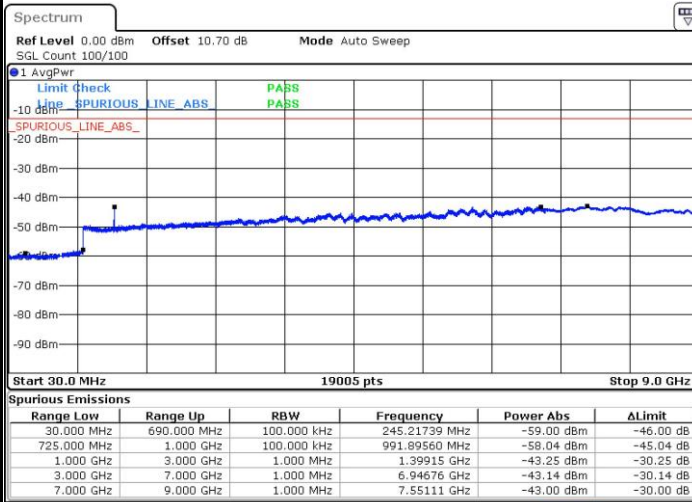


Date: 19.AUG.2018 18:27:31



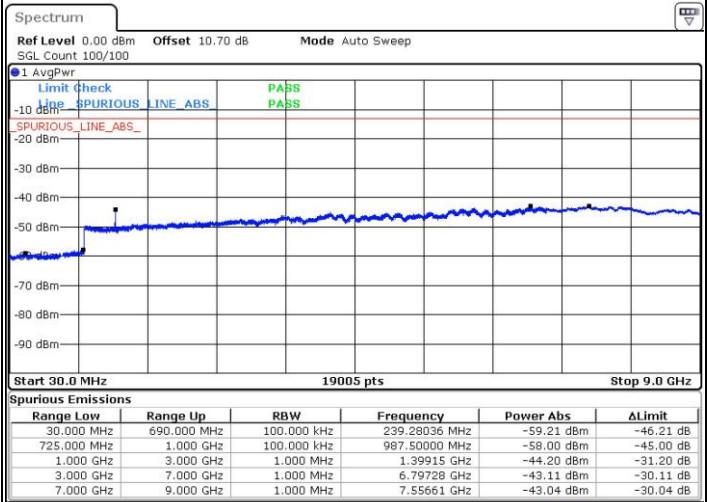
LTE Band 12 / 5MHz

Lowest Channel / QPSK



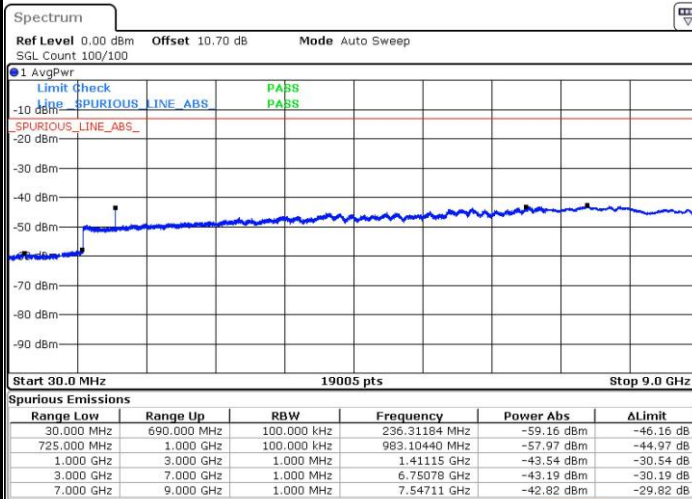
Date: 19 AUG 2018 18:32:37

Lowest Channel / 16QAM



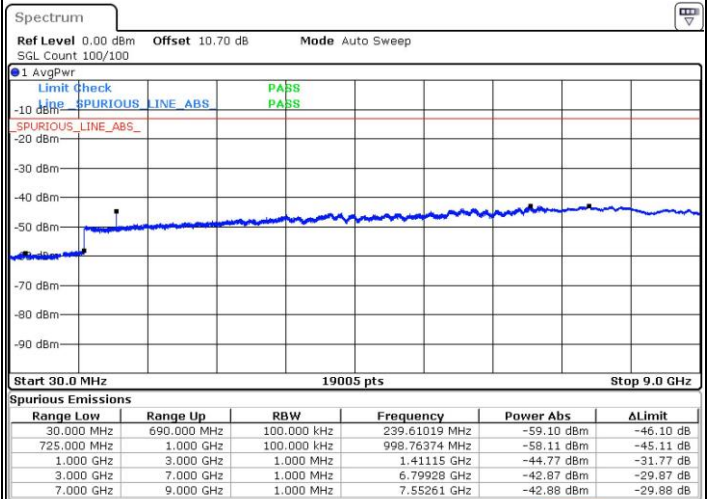
Date: 19 AUG 2018 18:33:37

Middle Channel / QPSK



Date: 19 AUG 2018 18:36:23

Middle Channel / 16QAM

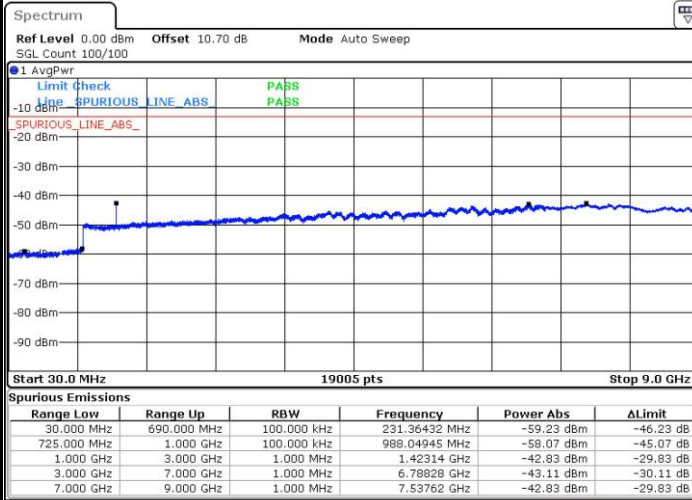


Date: 19 AUG 2018 18:35:23



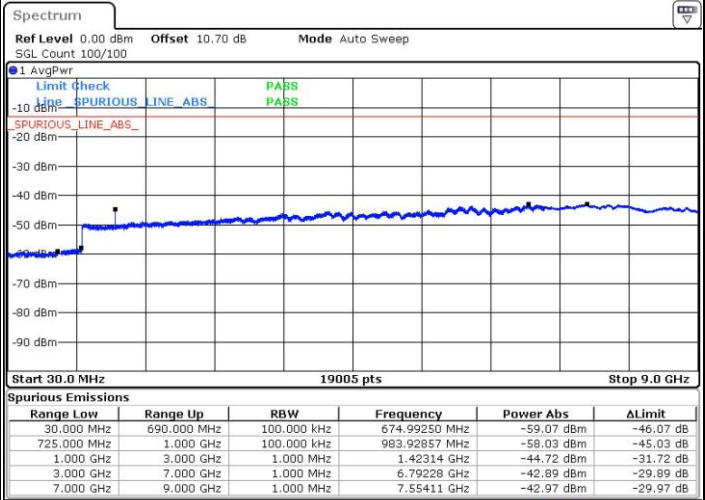
LTE Band 12 / 5MHz

Highest Channel / QPSK



Date: 19.AUG.2018 18:42:29

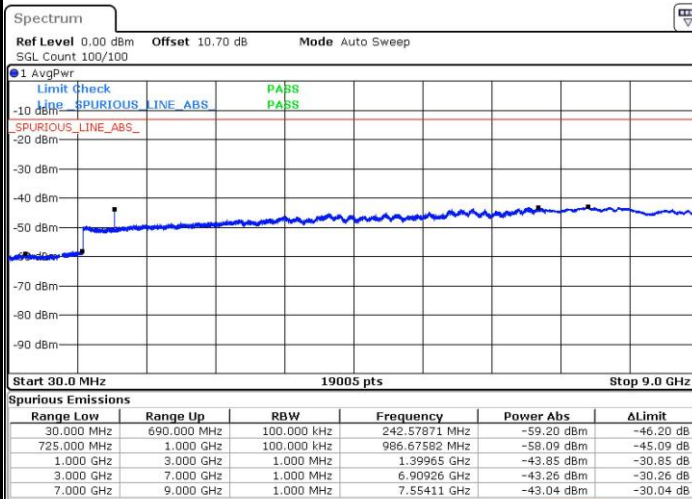
Highest Channel / 16QAM



Date: 19.AUG.2018 18:41:29

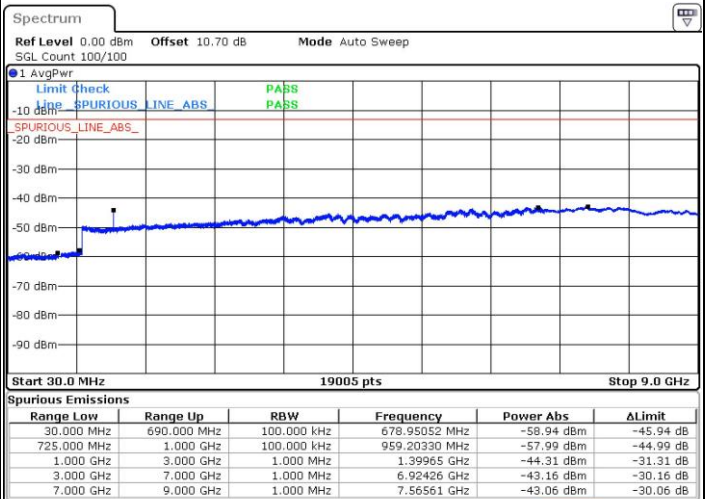
LTE Band 12 / 10MHz

Lowest Channel / QPSK



Date: 19.AUG.2018 18:47:36

Lowest Channel / 16QAM

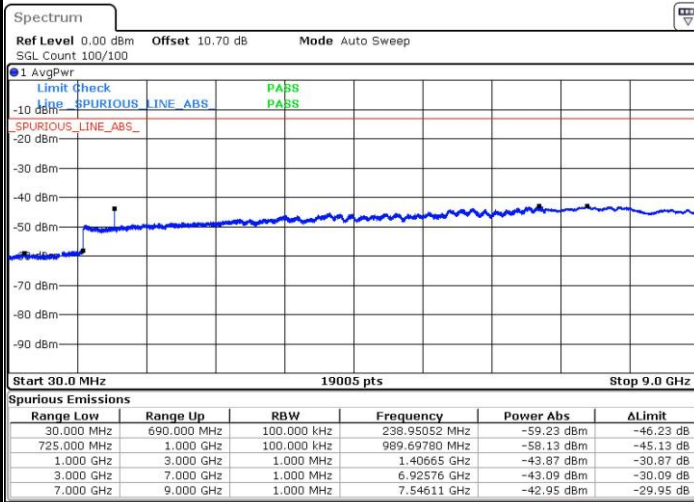


Date: 19.AUG.2018 18:48:36



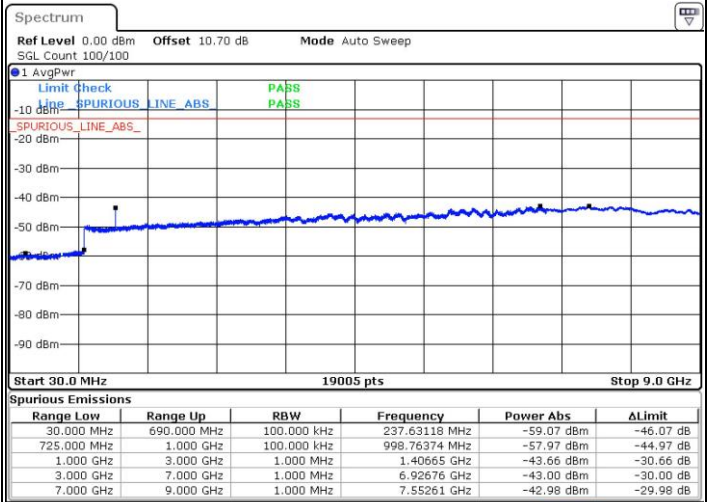
LTE Band 12 / 10MHz

Middle Channel / QPSK



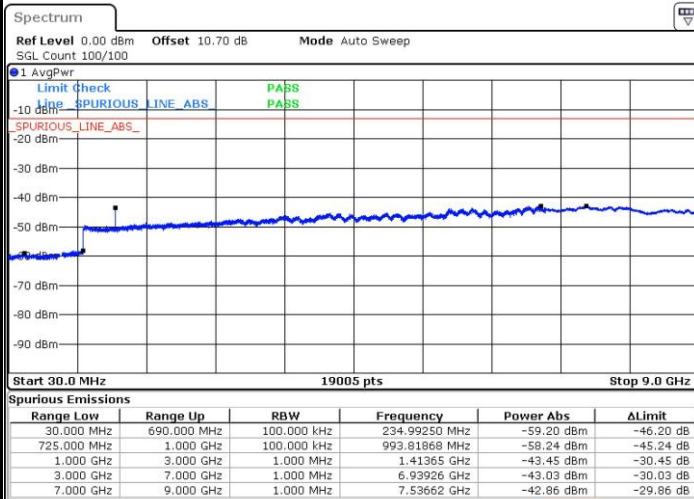
Date: 19.AUG.2018 18:51:22

Middle Channel / 16QAM



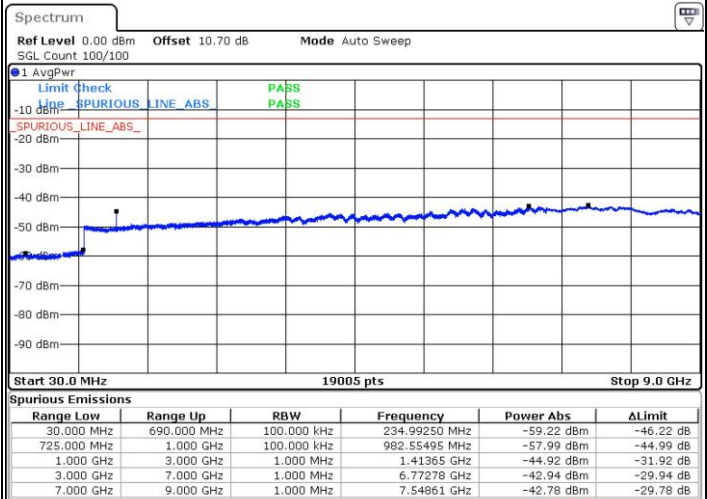
Date: 19.AUG.2018 18:50:22

Highest Channel / QPSK



Date: 19.AUG.2018 19:10:47

Highest Channel / 16QAM

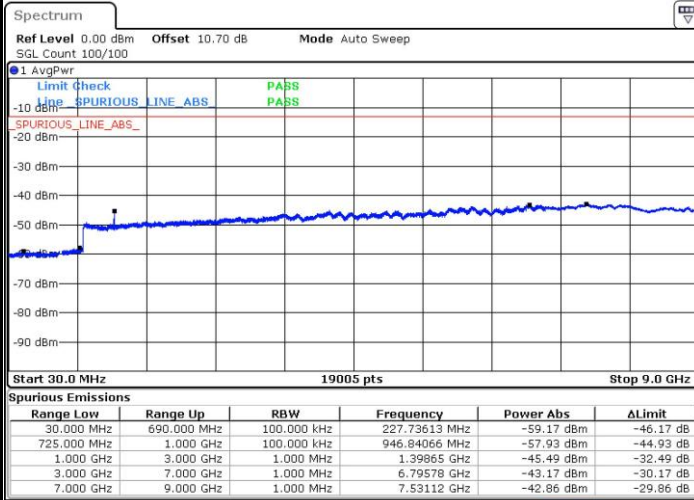


Date: 19.AUG.2018 19:11:47



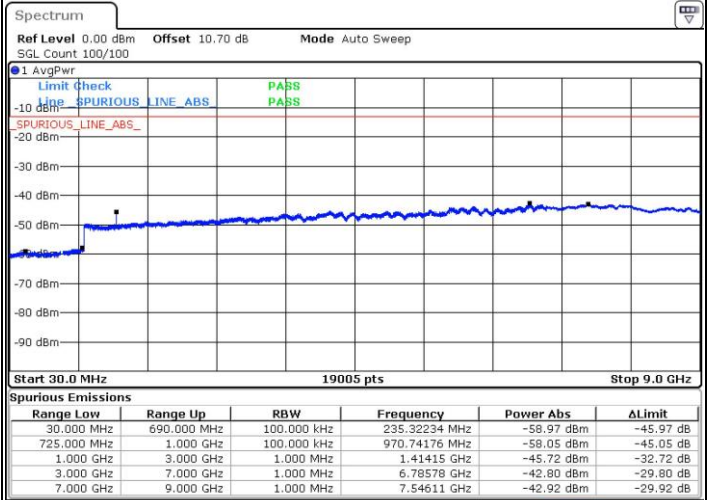
LTE Band 12 / 1.4MHz

Lowest Channel / 64QAM



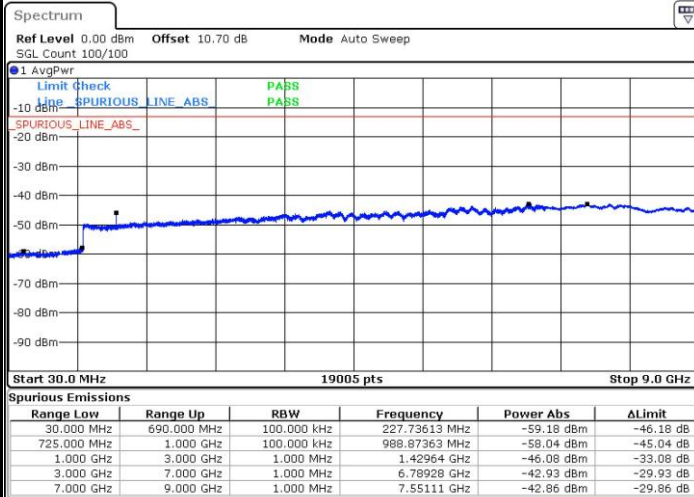
Date: 19.AUG.2018 19:52:20

Middle Channel / 64QAM



Date: 19.AUG.2018 19:53:43

Highest Channel / 64QAM

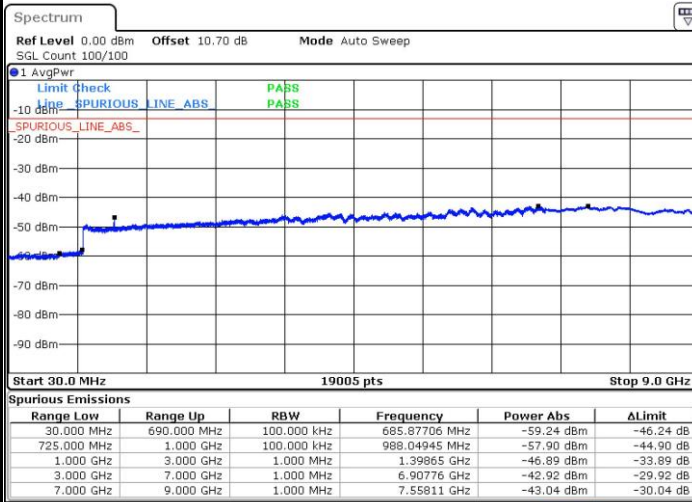


Date: 19.AUG.2018 19:56:46



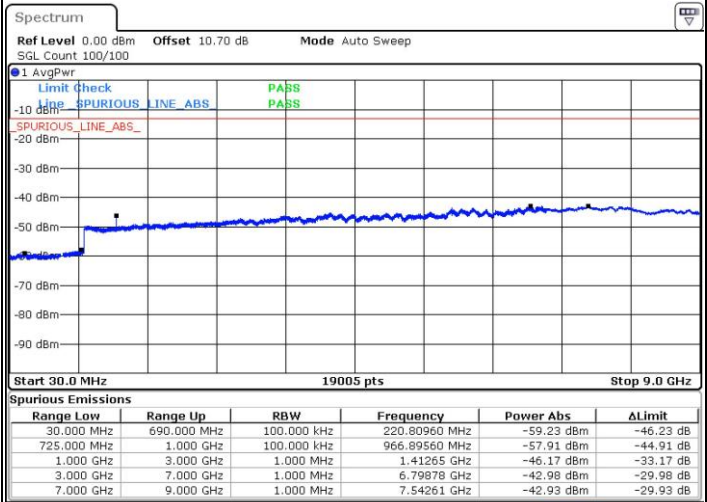
LTE Band 12 / 3MHz

Lowest Channel / 64QAM



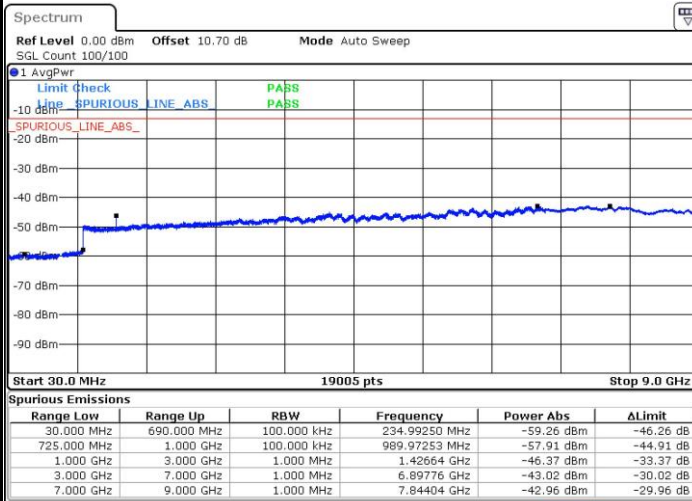
Date: 19.AUG.2018 19:29:50

Middle Channel / 64QAM



Date: 19.AUG.2018 19:31:13

Highest Channel / 64QAM

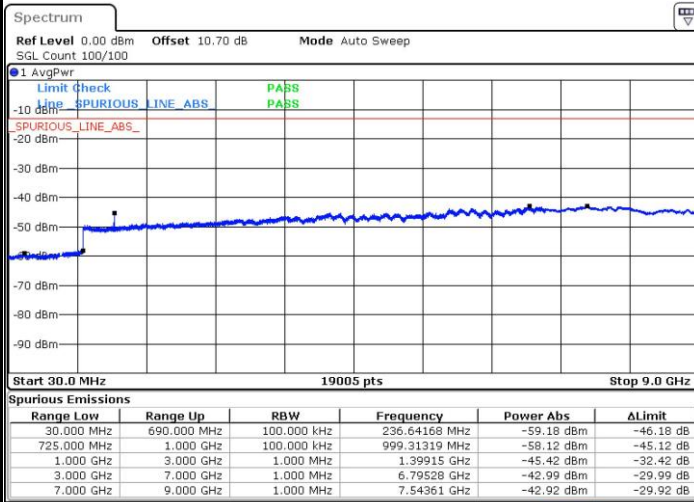


Date: 19.AUG.2018 19:34:16



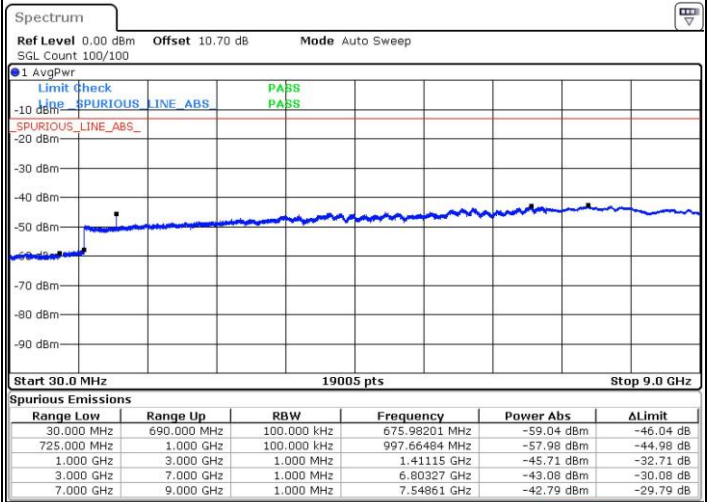
LTE Band 12 / 5MHz

Lowest Channel / 64QAM



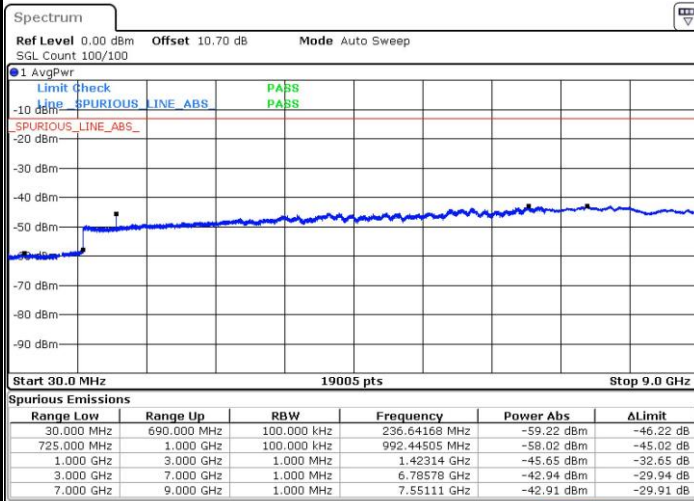
Date: 19.AUG.2018 19:37:19

Middle Channel / 64QAM



Date: 19.AUG.2018 19:38:43

Highest Channel / 64QAM

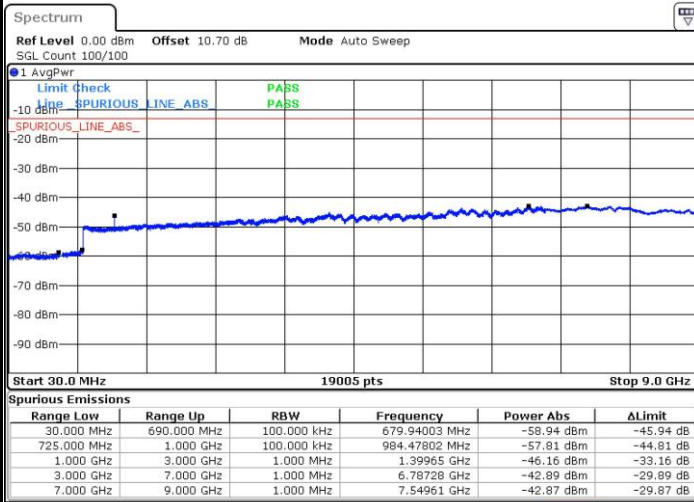


Date: 19.AUG.2018 19:41:46



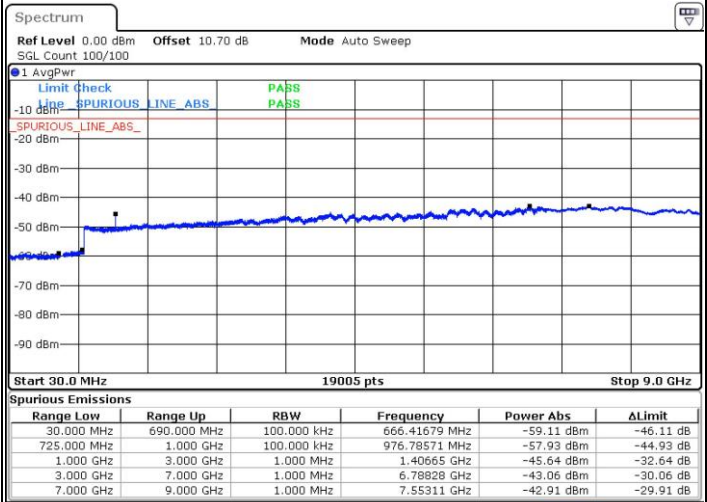
LTE Band 12 / 10MHz

Lowest Channel / 64QAM



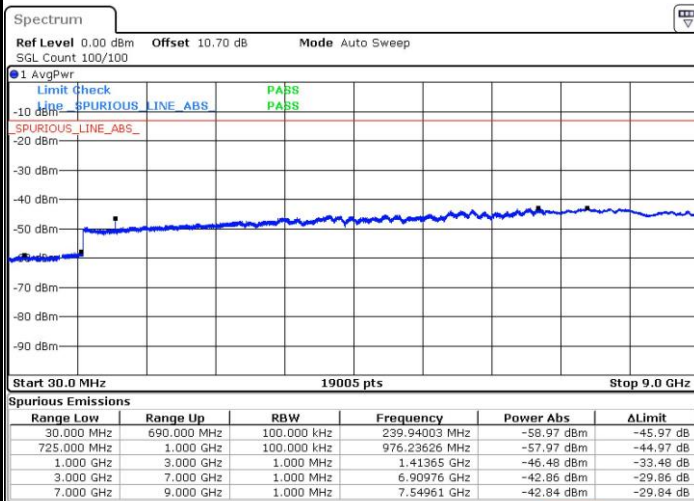
Date: 19.AUG.2018 19:44:50

Middle Channel / 64QAM



Date: 19.AUG.2018 19:46:13

Highest Channel / 64QAM



Date: 19.AUG.2018 19:49:16

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	0.0146	PASS
40	Normal Voltage	0.0124	
30	Normal Voltage	0.0023	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0134	
0	Normal Voltage	0.0035	
-10	Normal Voltage	0.0119	
-20	Normal Voltage	0.0130	
-30	Normal Voltage	0.0020	
20	Maximum Voltage	0.0001	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0003	

Note:

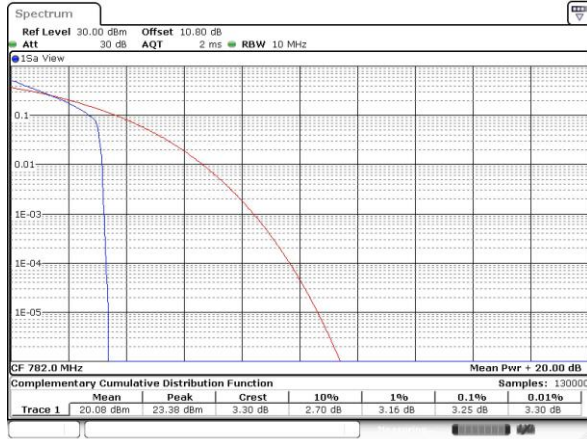
1. Normal Voltage =3.8 V. ; Battery End Point (BEP) =3.5 V. ; Maximum Voltage =4.2 V.
2. The frequency fundamental emissions stay within the authorized frequency block.



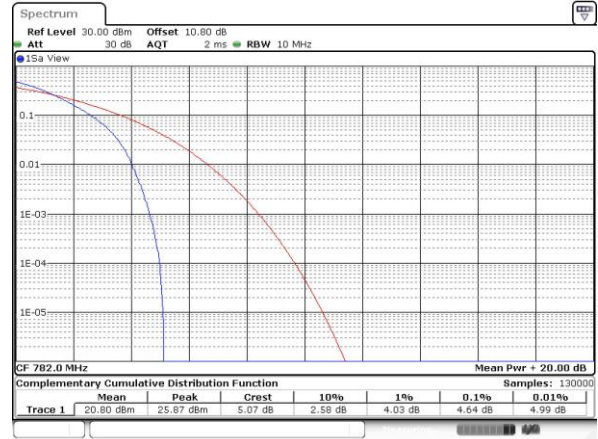
LTE Band 13

Peak-to-Average Ratio

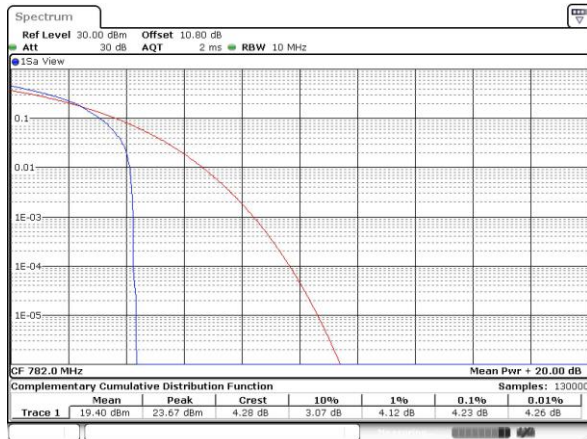
Mode	LTE Band 13 / 10MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	-	-	-	-	PASS
Middle CH	3.25	4.64	4.23	5.88	
Highest CH	-	-	-	-	
Mode	LTE Band 13 / 10MHz				
Mod.	64QAM				Limit: 13dB
RB Size	1RB	Full RB			Result
Lowest CH			-	-	PASS
Middle CH	4.09	5.86	-	-	
Highest CH			-	-	

LTE Band 13 / 10MHz / QPSK
Middle Channel / 1RB


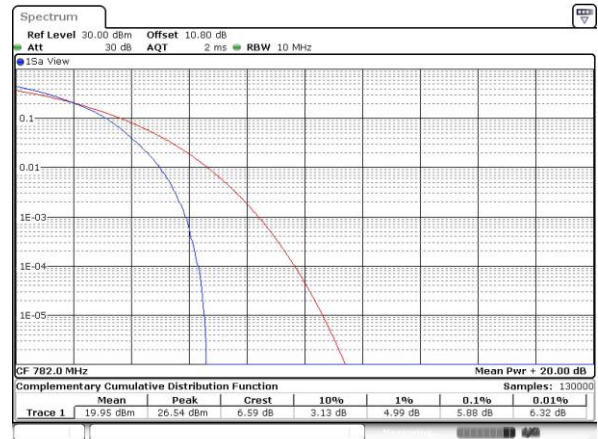
Date: 22 AUG 2018 09:30:53

Middle Channel / Full RB


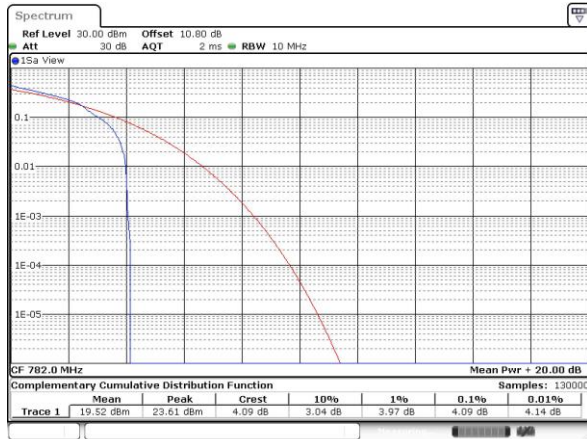
Date: 22 AUG 2018 09:37:13

LTE Band 13 / 10MHz / 16QAM
Middle Channel / 1RB


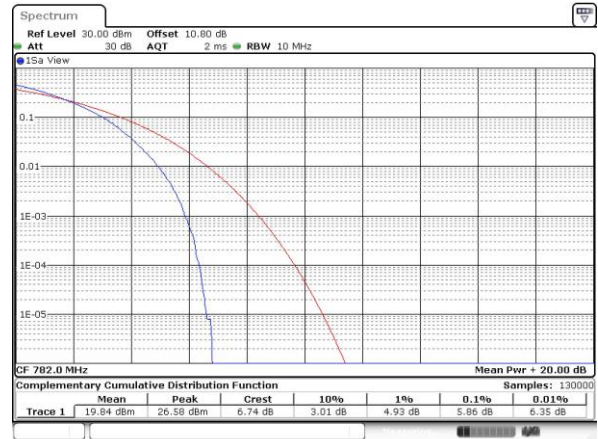
Date: 22 AUG 2018 09:29:15

Middle Channel / Full RB


Date: 22 AUG 2018 09:29:36

LTE Band 13 / 10MHz / 64QAM
Middle Channel / 1RB


Date: 22 AUG 2018 09:28:51

Middle Channel / Full RB


Date: 22 AUG 2018 09:29:03

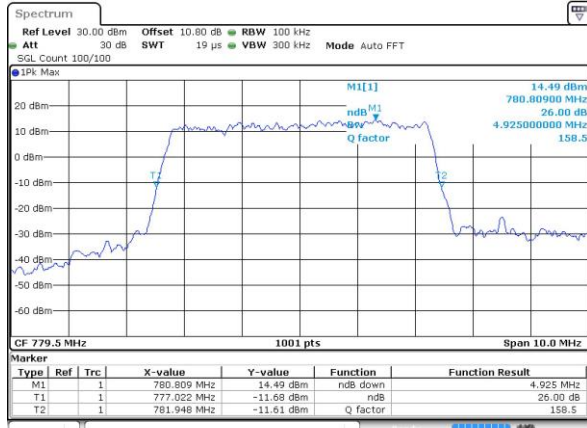
**26dB Bandwidth**

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	4.87	-	-	-	-	-	-
Middle CH	-	-	-	-	4.99	4.88	9.63	9.77	-	-	-	-
Highest CH	-	-	-	-	4.88	4.88	-	-	-	-	-	-
Mode	LTE Band 13 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	-	-	-	-	4.88	-		-	-	-	-	-
Middle CH	-	-	-	-	4.89	-	9.81	-	-	-	-	-
Highest CH	-	-	-	-	4.84	-		-	-	-	-	-

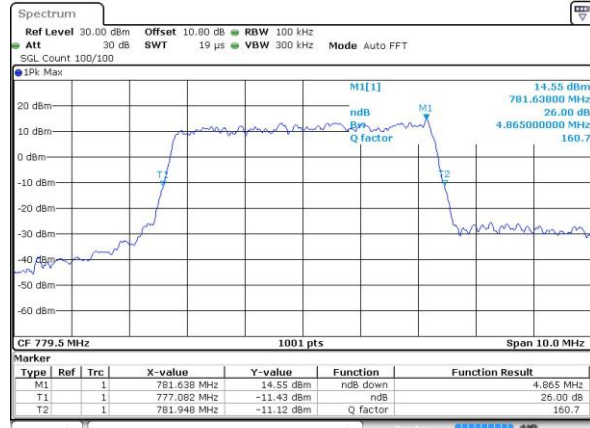


LTE Band 13

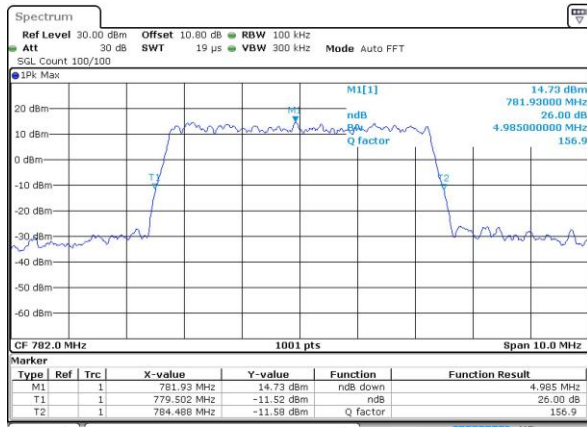
Lowest Channel / 5MHz / QPSK



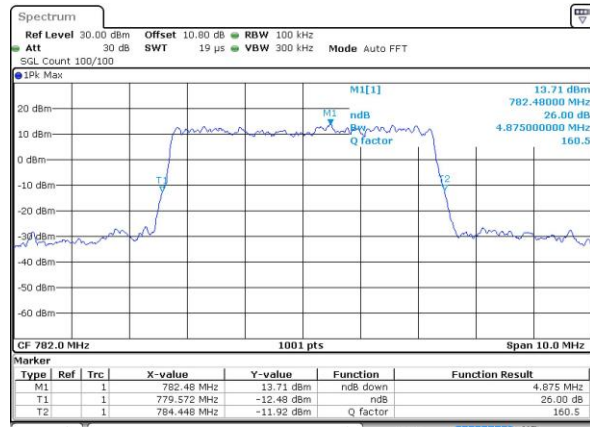
Lowest Channel / 5MHz / 16QAM



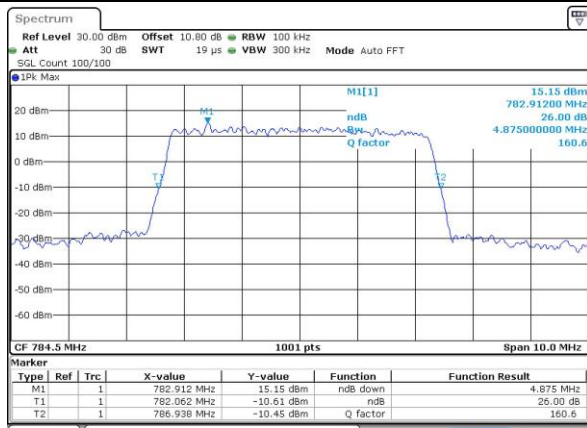
Middle Channel / 5MHz / QPSK



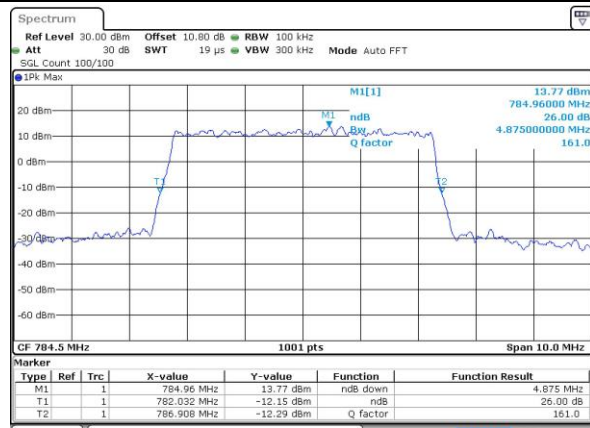
Middle Channel / 5MHz / 16QAM



Highest Channel / 5MHz / QPSK



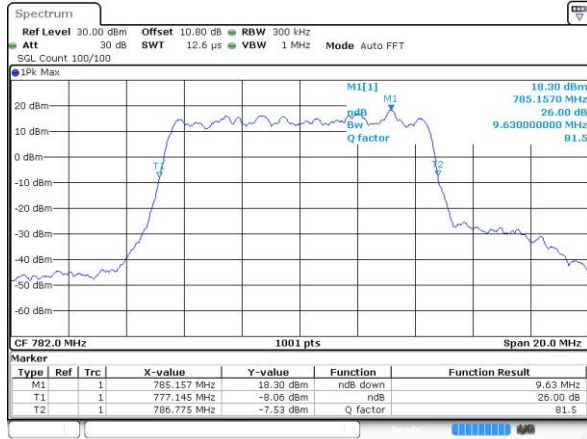
Highest Channel / 5MHz / 16QAM



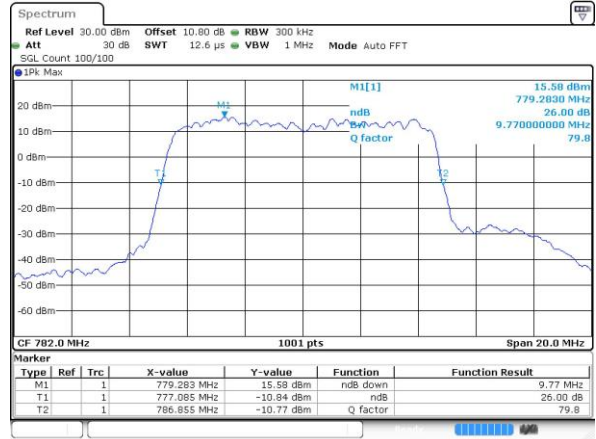


LTE Band 13

Middle Channel / 10MHz / QPSK



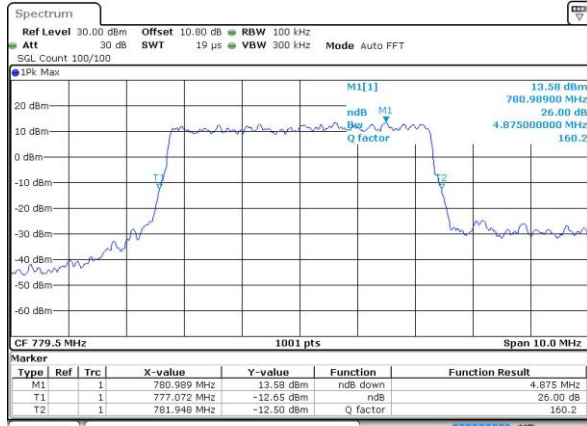
Middle Channel / 10MHz / 16QAM



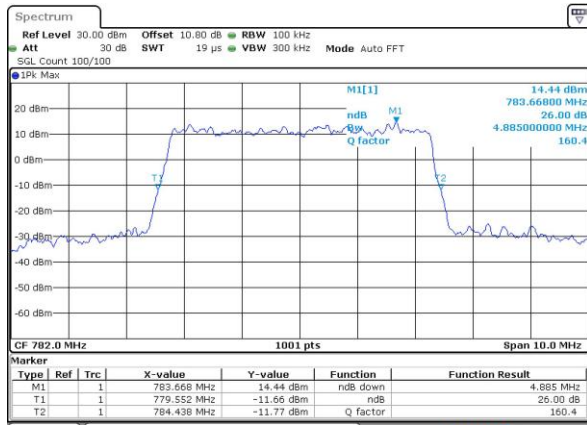


LTE Band 13

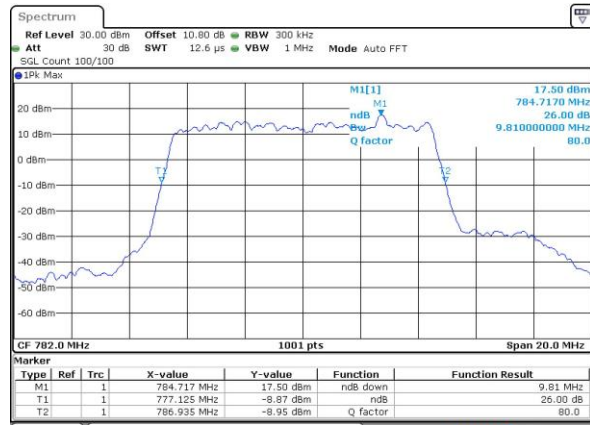
Lowest Channel / 5MHz / 64QAM



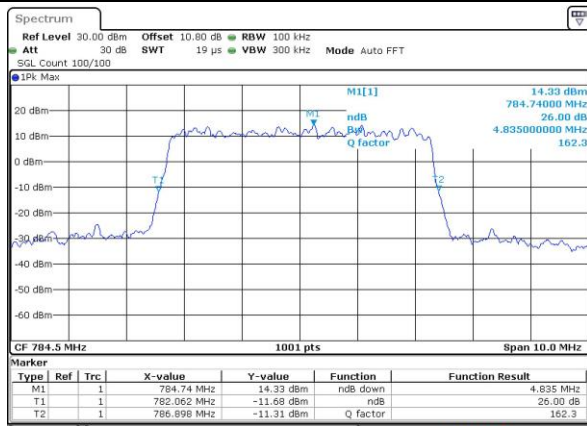
Middle Channel / 5MHz / 64QAM



Middle Channel / 10MHz / 64QAM



Highest Channel / 5MHz / 64QAM



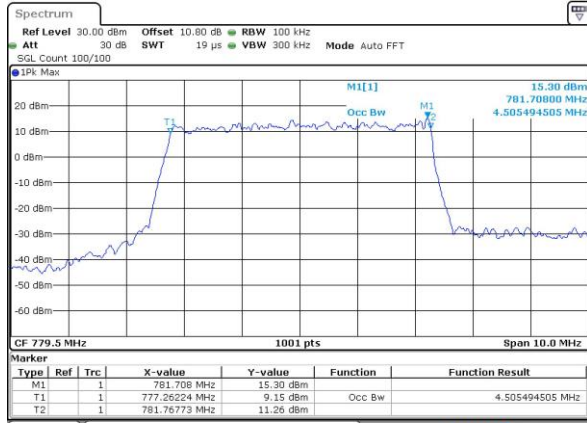
**Occupied Bandwidth**

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	-	-	-	-	4.51	4.5	-	-	-	-	-	-
Middle CH	-	-	-	-	4.5	4.48	9.01	8.95	-	-	-	-
Highest CH	-	-	-	-	4.49	4.5	-	-	-	-	-	-
Mode	LTE Band 13 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	-	-	-	-	4.48	-		-	-	-	-	-
Middle CH	-	-	-	-	4.50	-	9.01	-	-	-	-	-
Highest CH	-	-	-	-	4.47	-		-	-	-	-	-



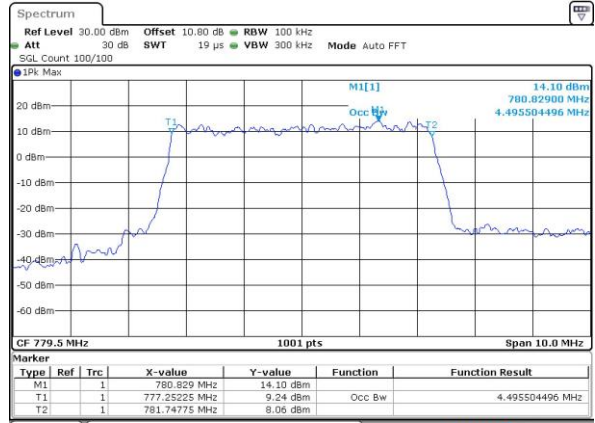
LTE Band 13

Lowest Channel / 5MHz / QPSK



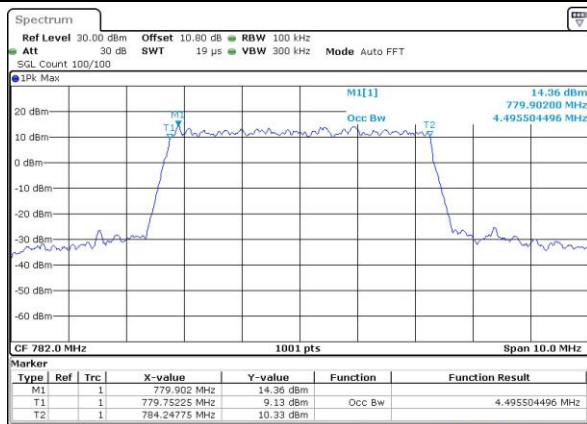
Date: 22 AUG 2018 08:25:29

Lowest Channel / 5MHz / 16QAM



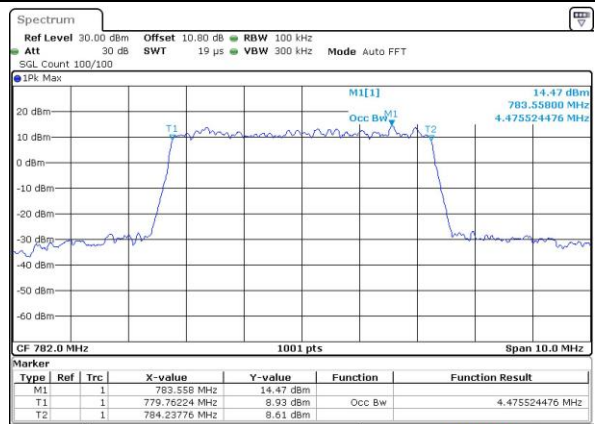
Date: 22 AUG 2018 08:25:41

Middle Channel / 5MHz / QPSK



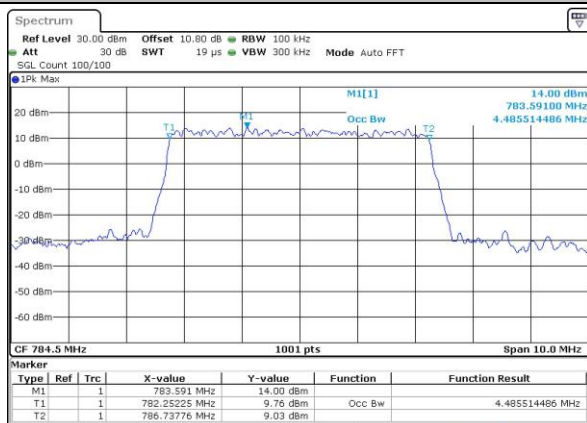
Date: 22 AUG 2018 08:37:31

Middle Channel / 5MHz / 16QAM



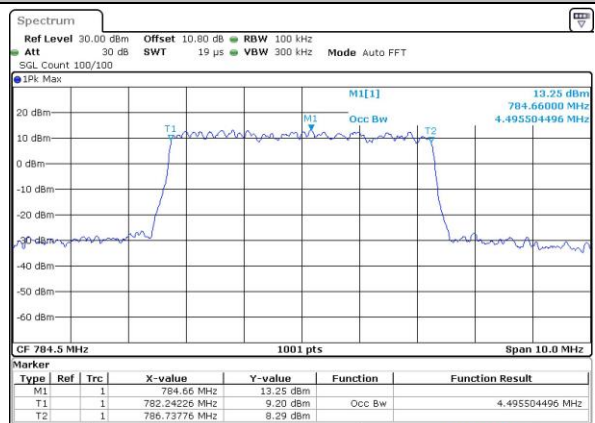
Date: 22 AUG 2018 08:37:20

Highest Channel / 5MHz / QPSK



Date: 22 AUG 2018 08:37:42

Highest Channel / 5MHz / 16QAM

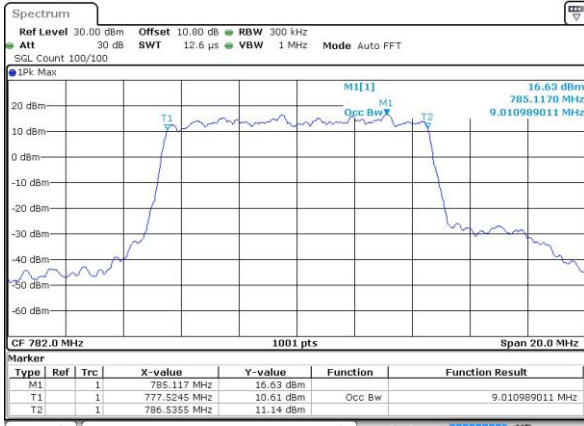


Date: 22 AUG 2018 08:37:54



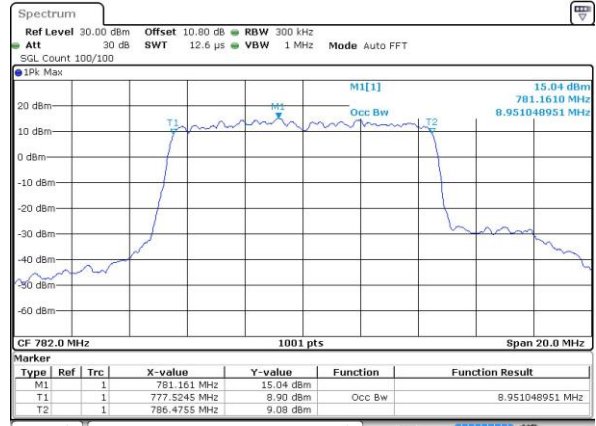
LTE Band 13

Middle Channel / 10MHz / QPSK



Date: 22 AUG 2018 08:57:59

Middle Channel / 10MHz / 16QAM

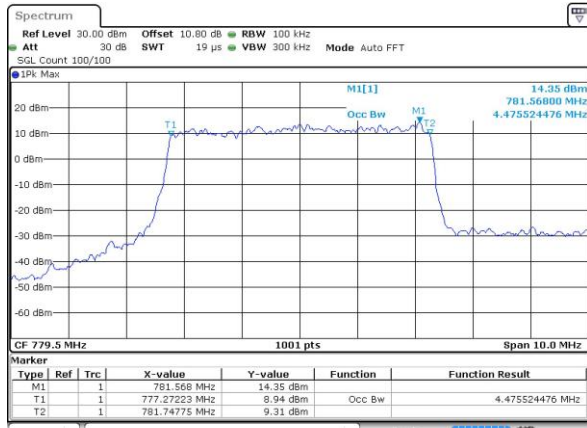


Date: 22 AUG 2018 08:58:11



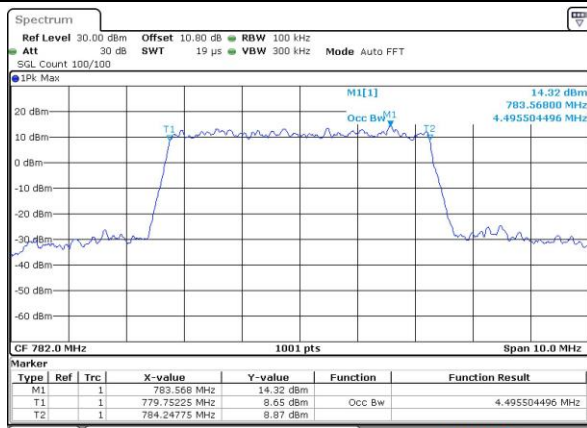
LTE Band 13

Lowest Channel / 5MHz / 64QAM



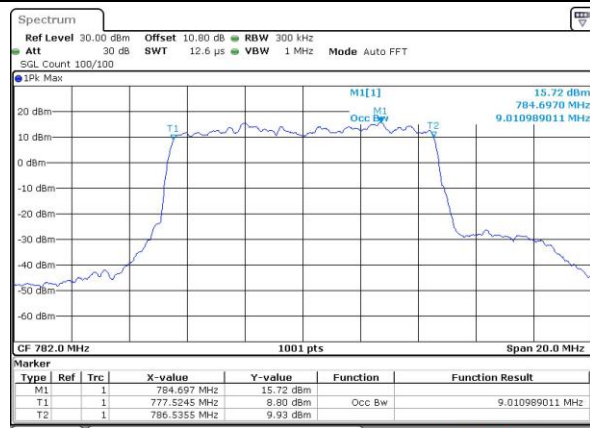
Date: 22 AUG 2018 08:47:09

Middle Channel / 5MHz / 64QAM



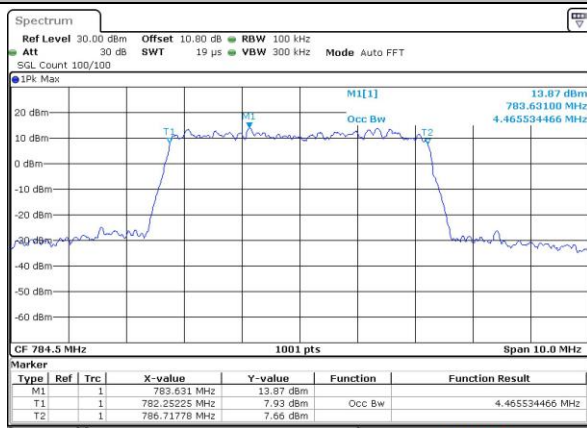
Date: 22 AUG 2018 08:53:04

Middle Channel / 10MHz / 64QAM

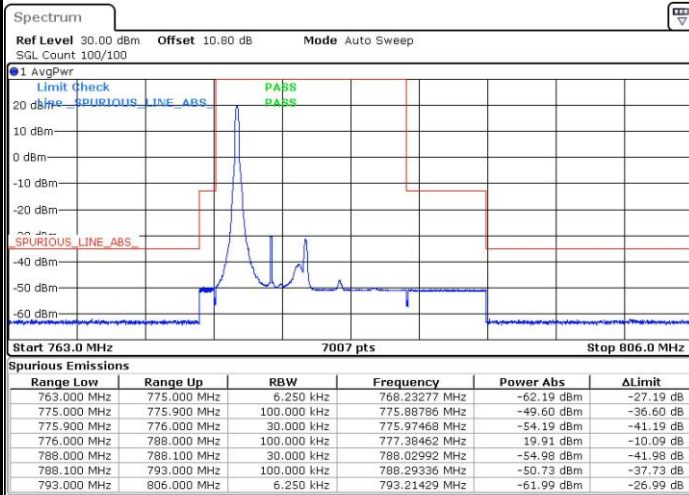


Date: 22 AUG 2018 09:10:47

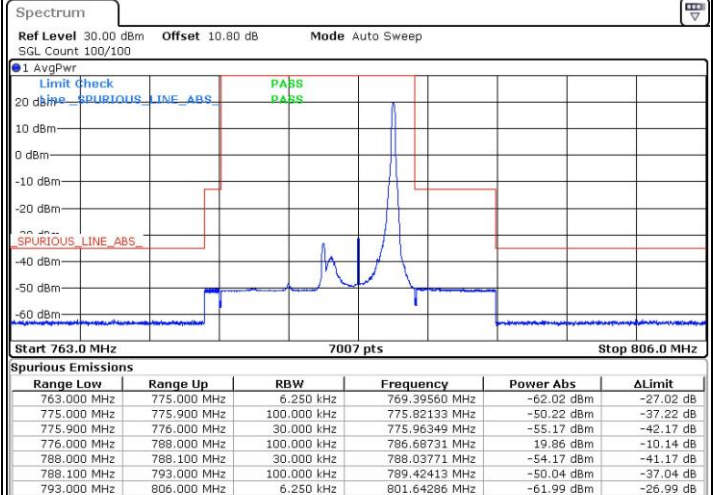
Highest Channel / 5MHz / 64QAM



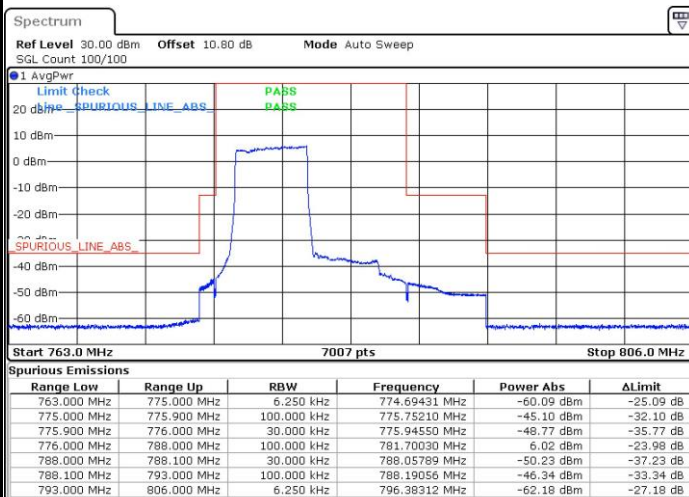
Date: 22 AUG 2018 08:53:16

**Conducted Band Edge****LTE Band 13 / 5MHz / QPSK****Lowest Band Edge / 1 RB**

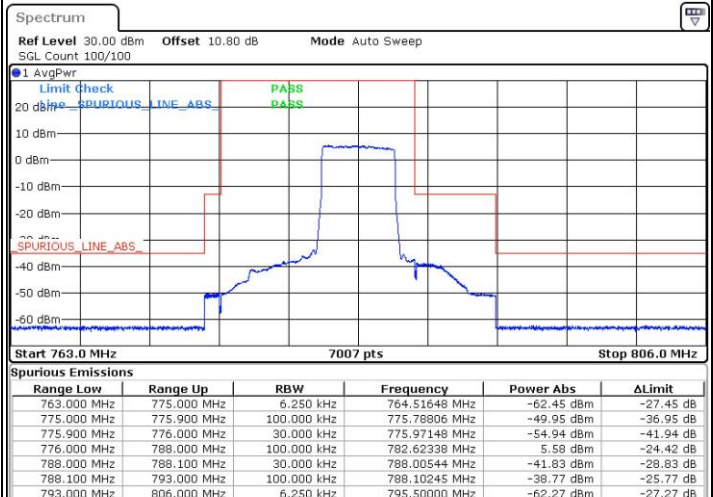
Date: 22 AUG 2018 08:32:45

Highest Band Edge / 1 RB

Date: 22 AUG 2018 08:44:57

Lowest Band Edge / Full RB

Date: 22 AUG 2018 08:27:44

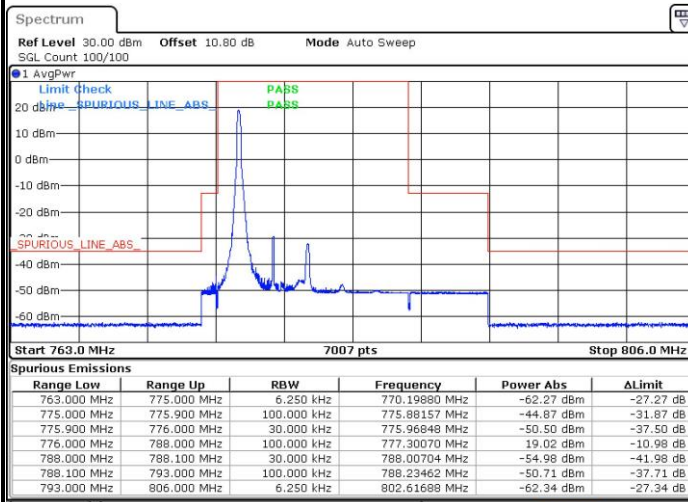
Highest Band Edge / Full RB

Date: 22 AUG 2018 08:39:56



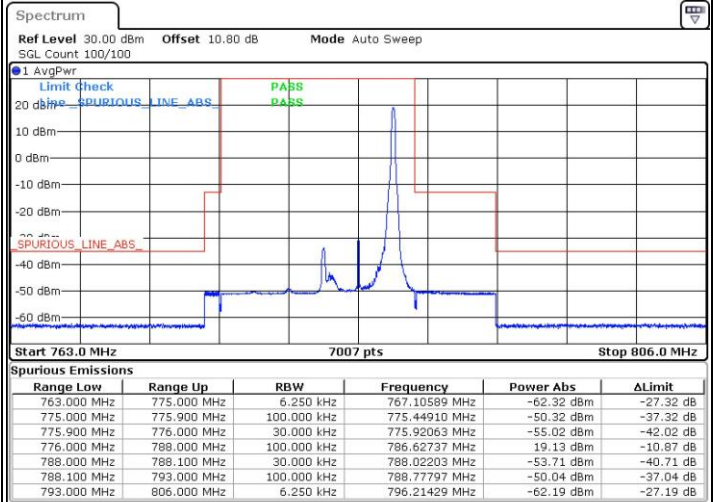
LTE Band 13 / 5MHz / 16QAM

Lowest Band Edge / 1 RB



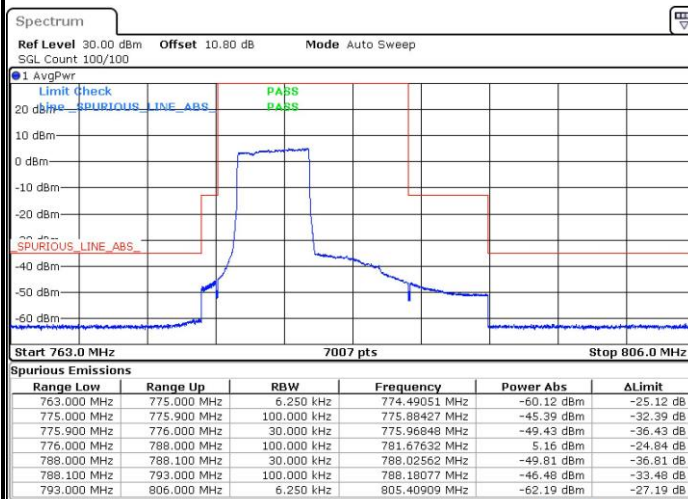
Date: 22 AUG 2018 08:31:04

Highest Band Edge / 1 RB



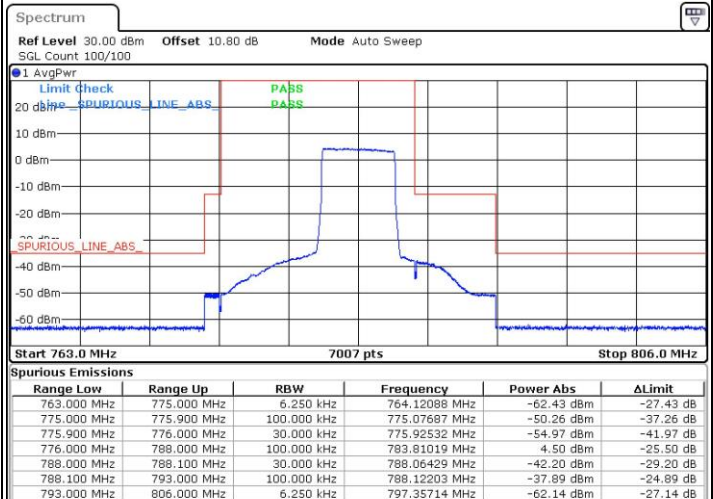
Date: 22 AUG 2018 08:43:17

Lowest Band Edge / Full RB



Date: 22 AUG 2018 08:29:24

Highest Band Edge / Full RB



Date: 22 AUG 2018 08:41:37