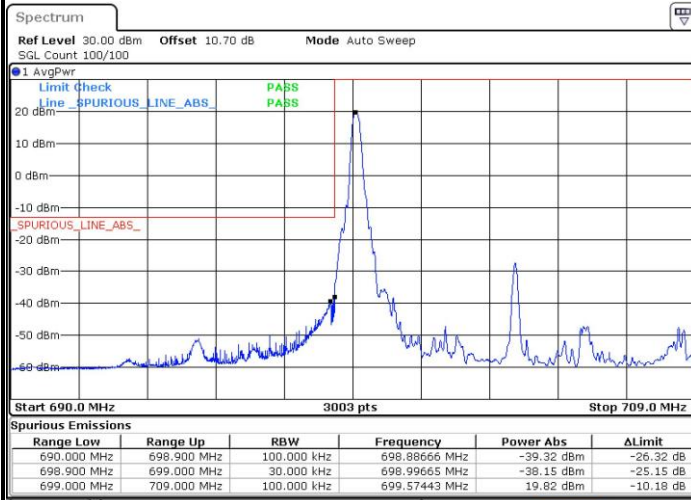


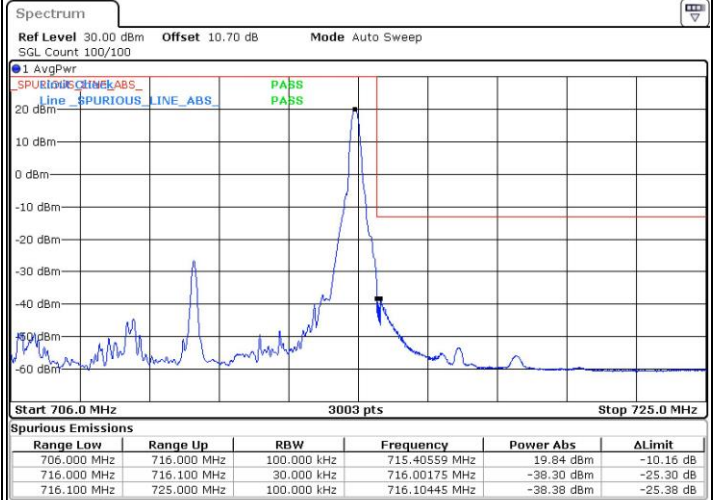


LTE Band 12 / 10MHz / 16QAM

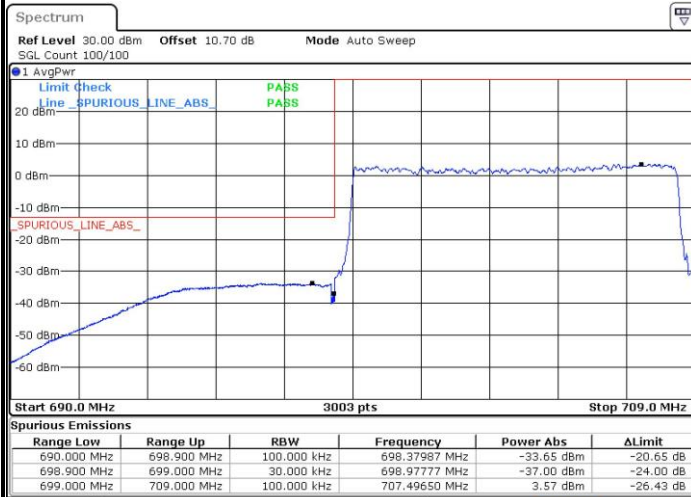
Lowest Band Edge / 1 RB



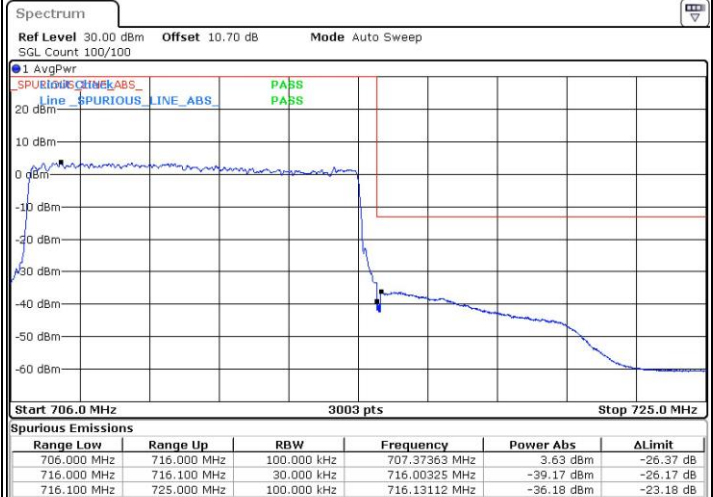
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



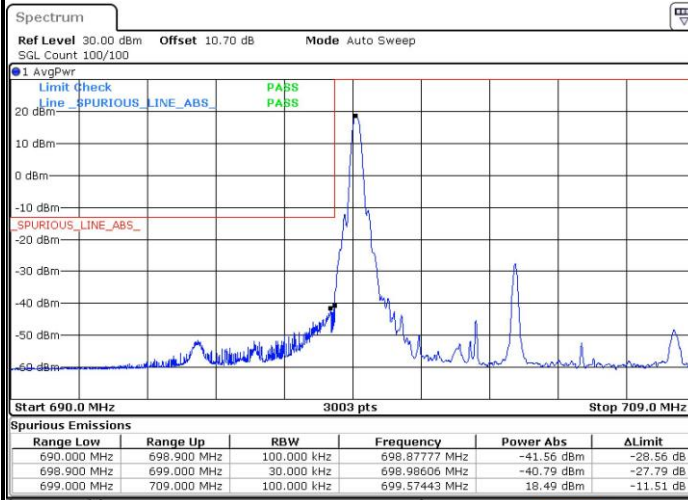
Highest Band Edge / Full RB



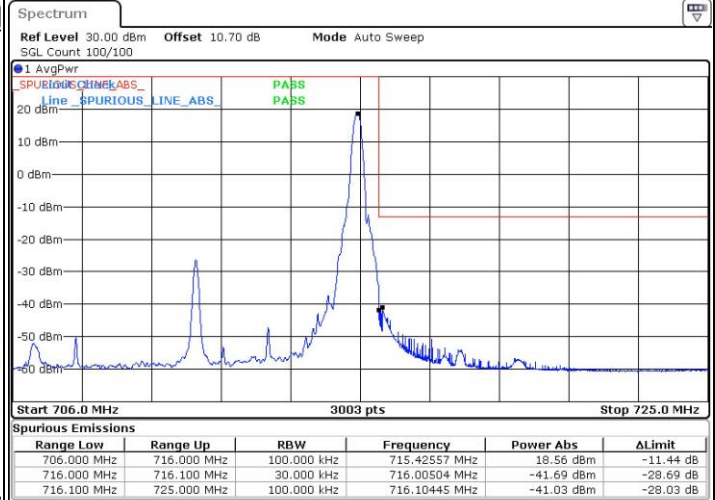


LTE Band 12 / 10MHz / 64QAM

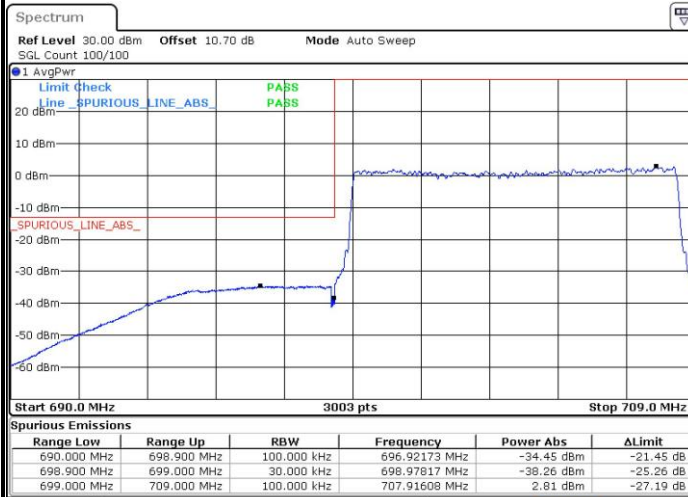
Lowest Band Edge / 1 RB



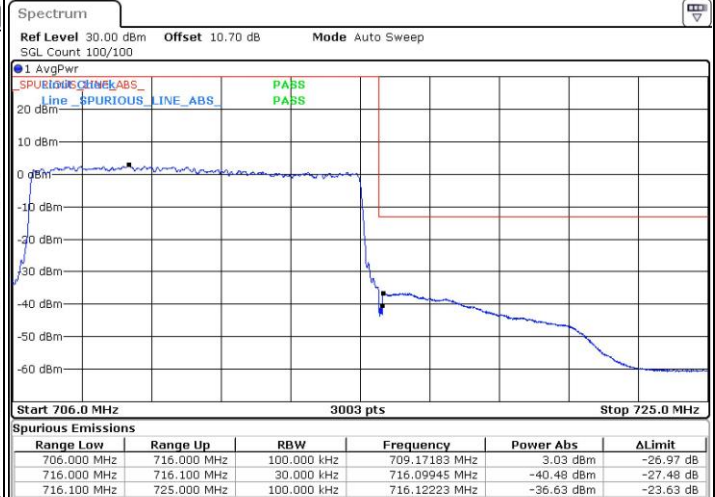
Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



Highest Band Edge / Full RB

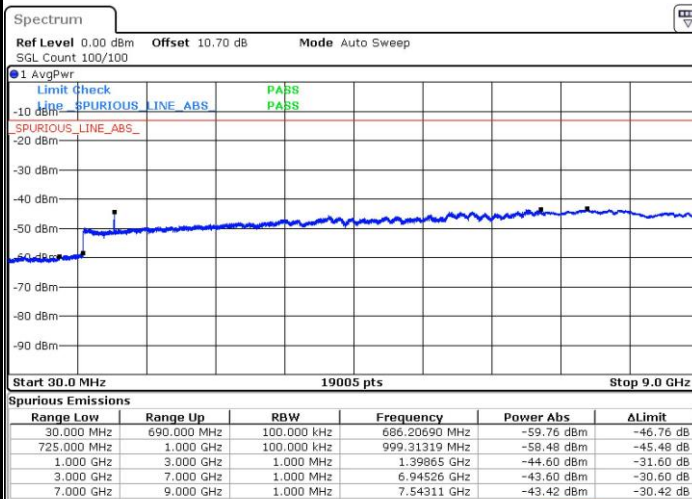




Conducted Spurious Emission

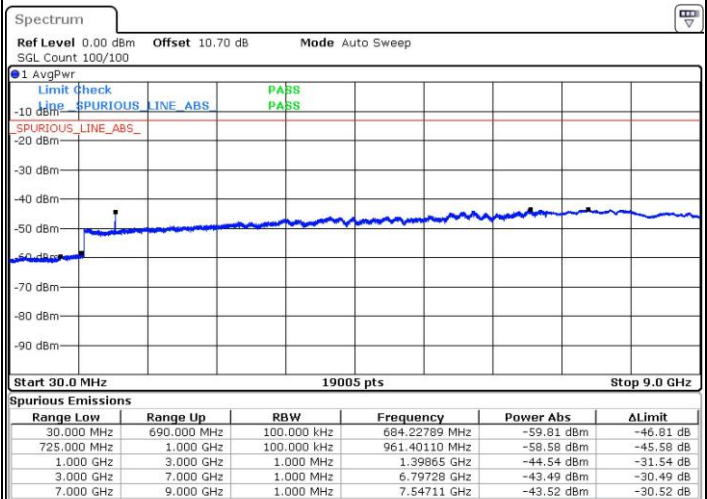
LTE Band 12 / 1.4MHz

Lowest Channel / QPSK



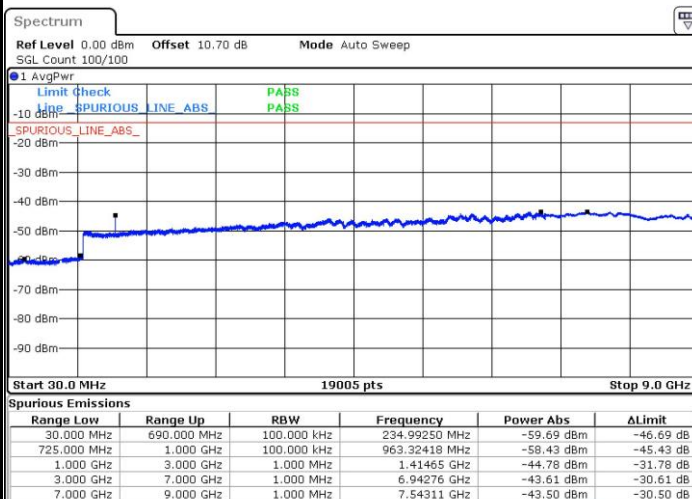
Date: 10 APR 2019 23:20:04

Lowest Channel / 16QAM



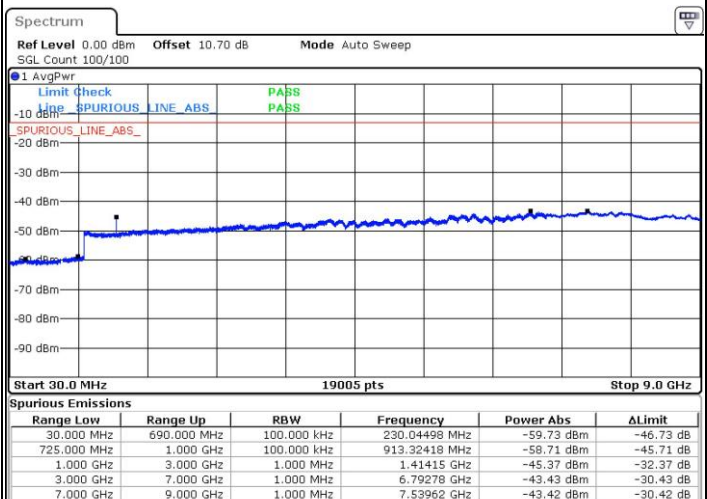
Date: 10 APR 2019 23:20:46

Middle Channel / QPSK



Date: 10 APR 2019 23:22:54

Middle Channel / 16QAM

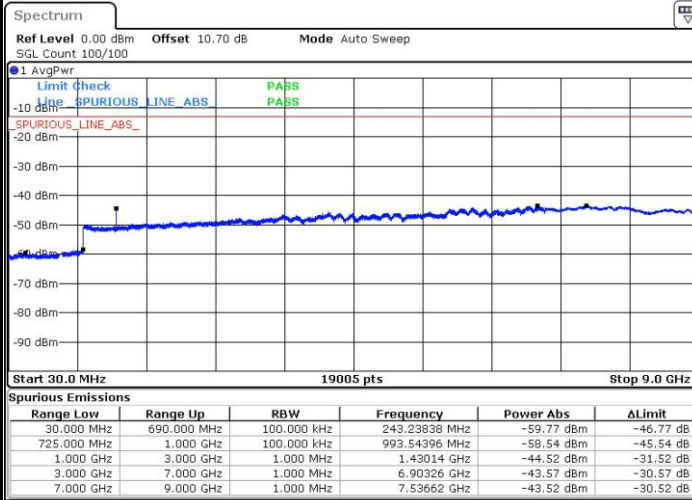


Date: 10 APR 2019 23:22:13



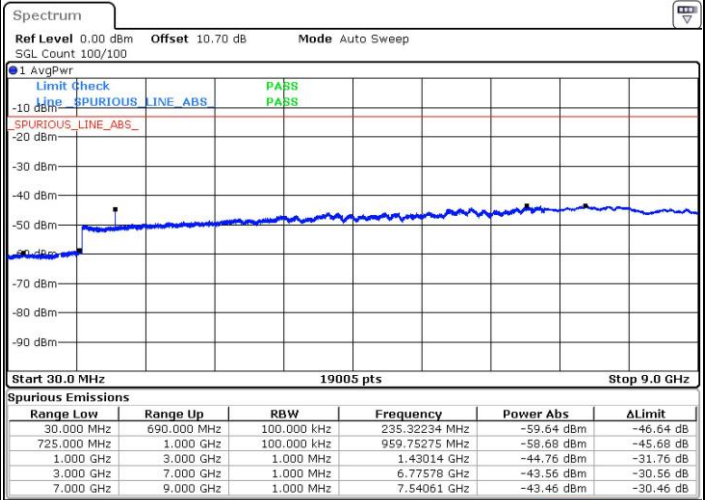
LTE Band 12 / 1.4MHz

Highest Channel / QPSK



Date: 10 APR 2019 23:27:08

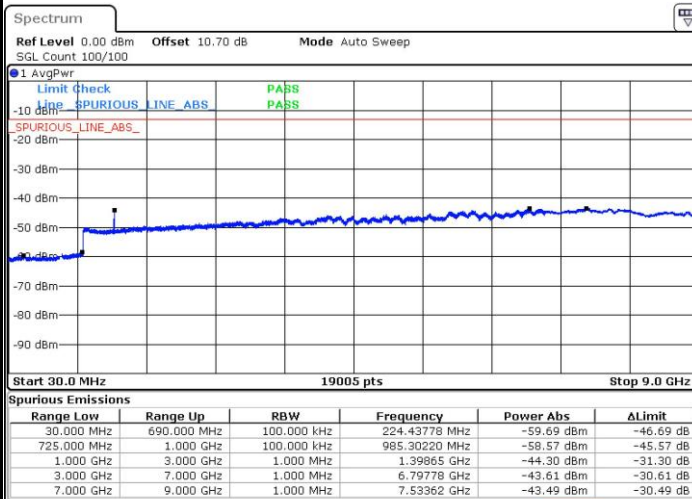
Highest Channel / 16QAM



Date: 10 APR 2019 23:27:49

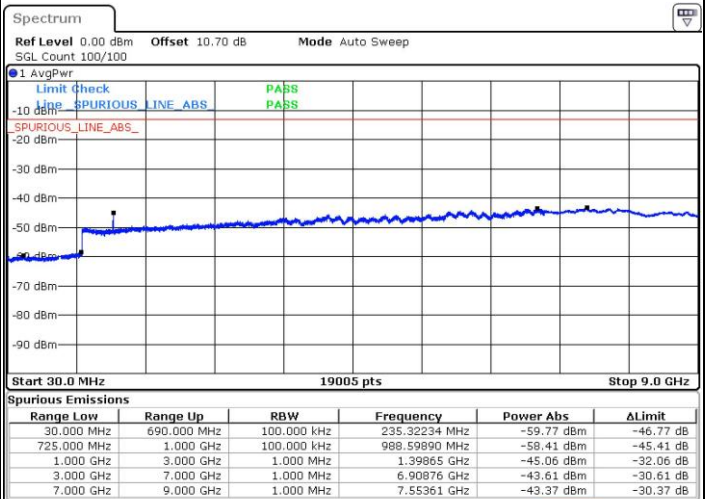
LTE Band 12 / 3MHz

Lowest Channel / QPSK



Date: 10 APR 2019 22:31:44

Lowest Channel / 16QAM

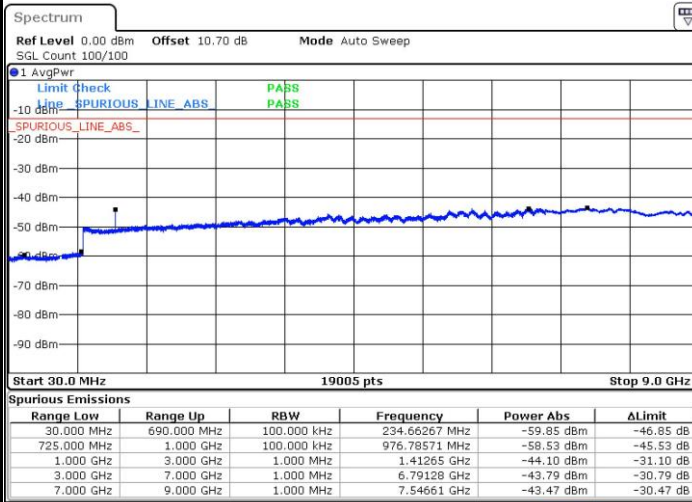


Date: 10 APR 2019 22:32:26



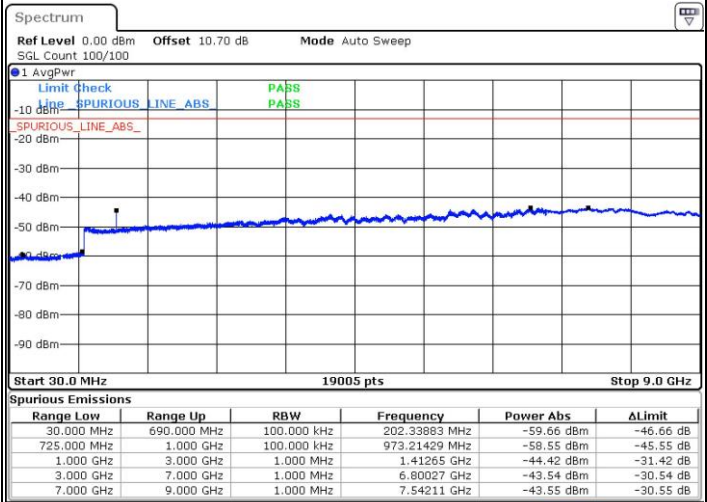
LTE Band 12 / 3MHz

Middle Channel / QPSK



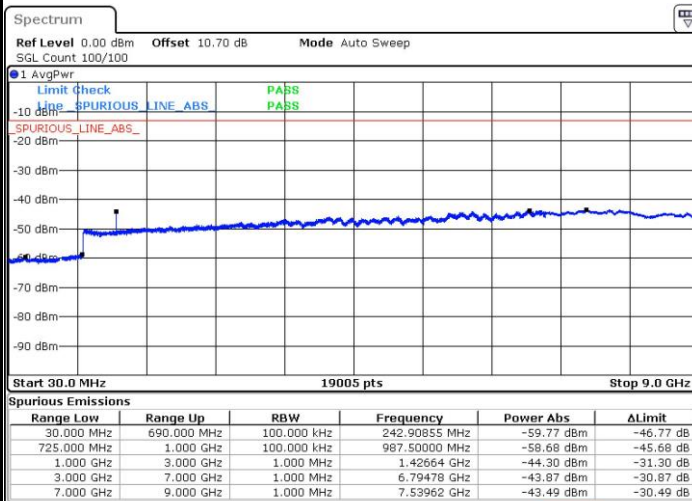
Date: 10 APR 2019 22:34:34

Middle Channel / 16QAM



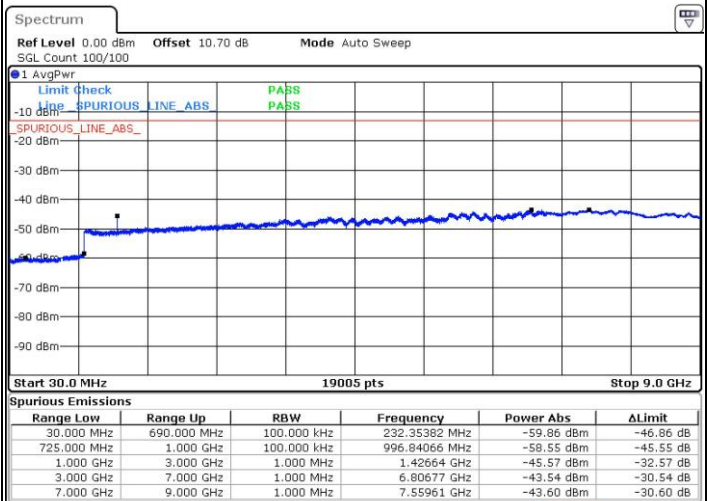
Date: 10 APR 2019 22:33:53

Highest Channel / QPSK



Date: 10 APR 2019 22:41:37

Highest Channel / 16QAM

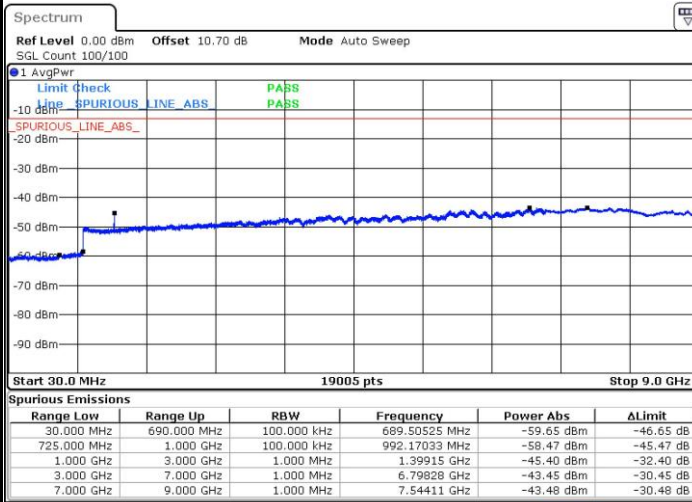


Date: 10 APR 2019 22:42:19



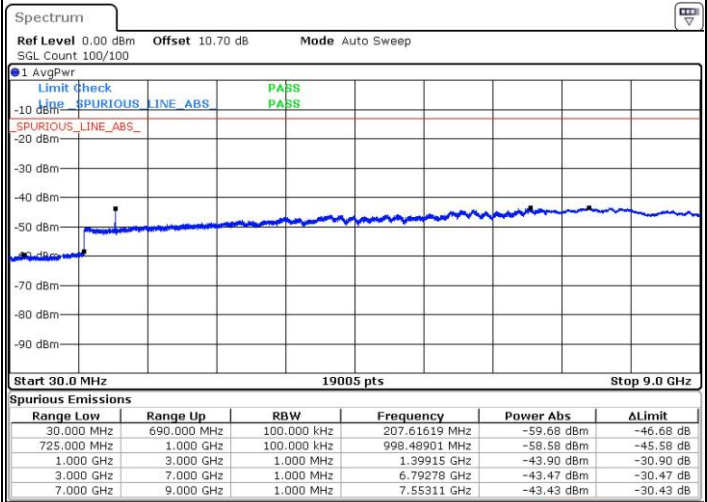
LTE Band 12 / 5MHz

Lowest Channel / QPSK



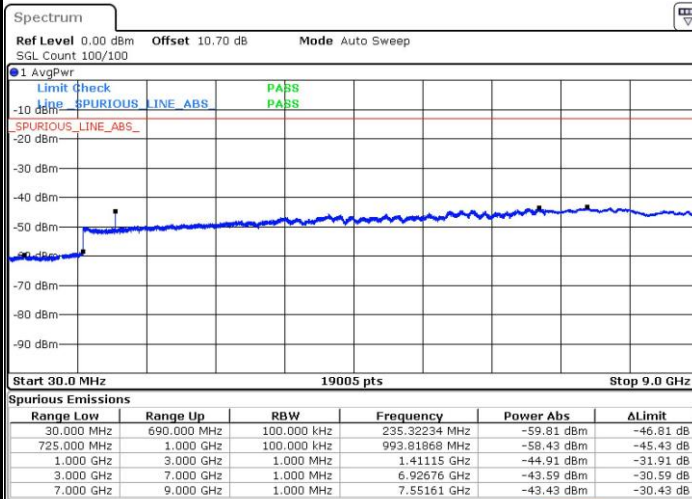
Date: 10 APR 2019 22:55:05

Lowest Channel / 16QAM



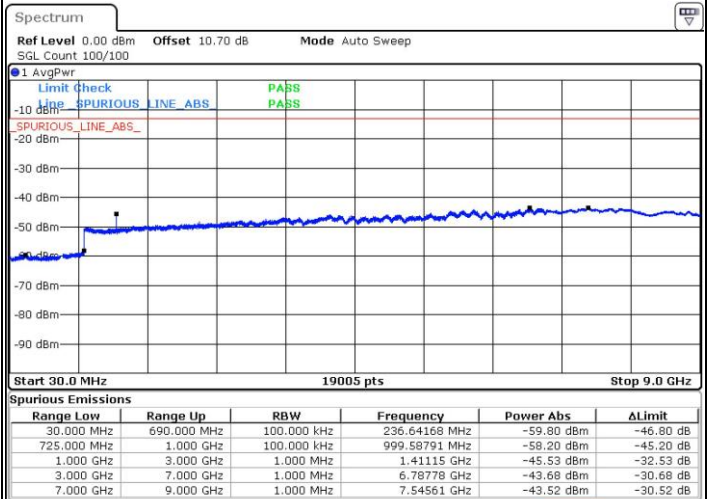
Date: 10 APR 2019 22:55:47

Middle Channel / QPSK



Date: 10 APR 2019 22:57:55

Middle Channel / 16QAM

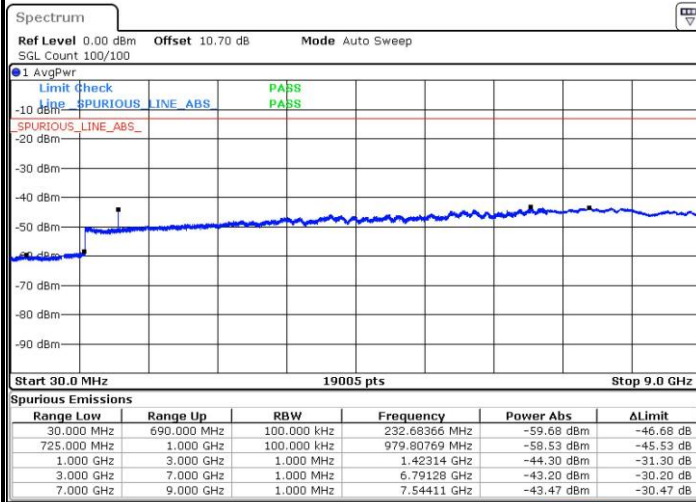


Date: 10 APR 2019 22:57:14



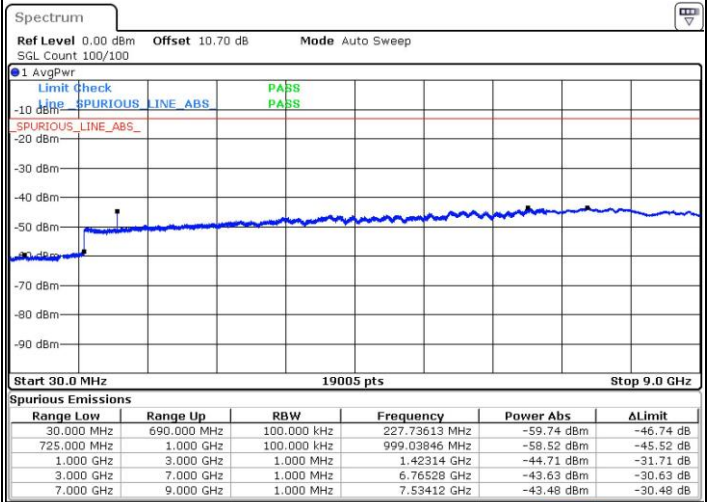
LTE Band 12 / 5MHz

Highest Channel / QPSK



Date: 10 APR 2019 23:02:51

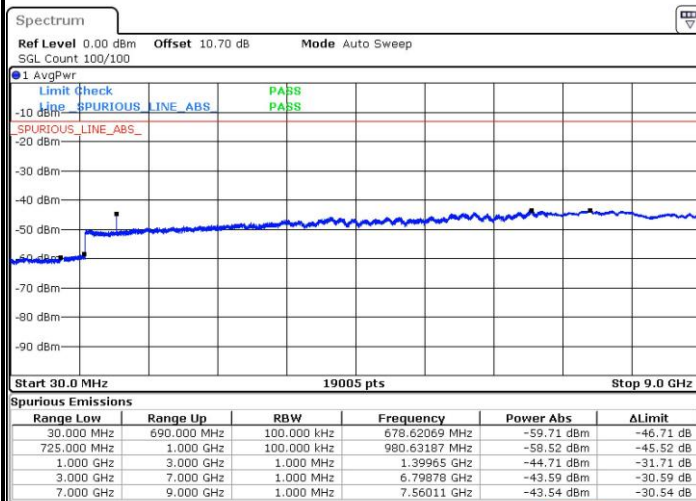
Highest Channel / 16QAM



Date: 10 APR 2019 23:02:09

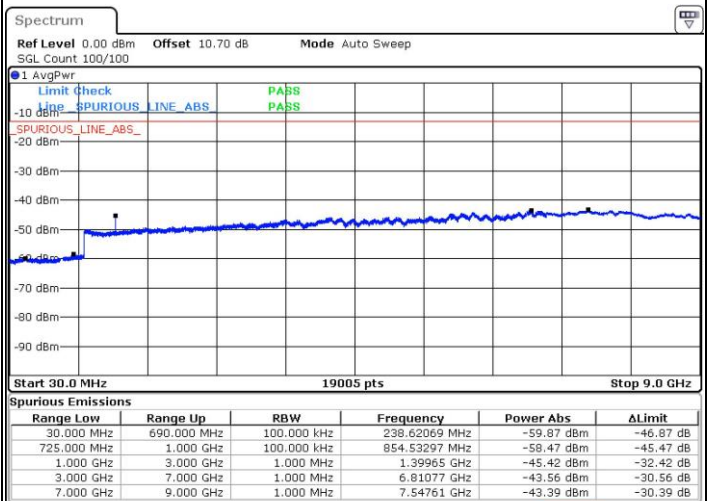
LTE Band 12 / 10MHz

Lowest Channel / QPSK



Date: 10 APR 2019 23:07:06

Lowest Channel / 16QAM

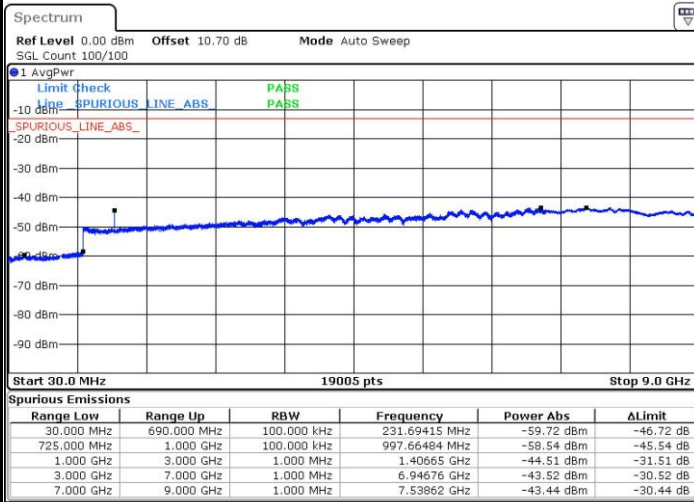


Date: 10 APR 2019 23:07:47



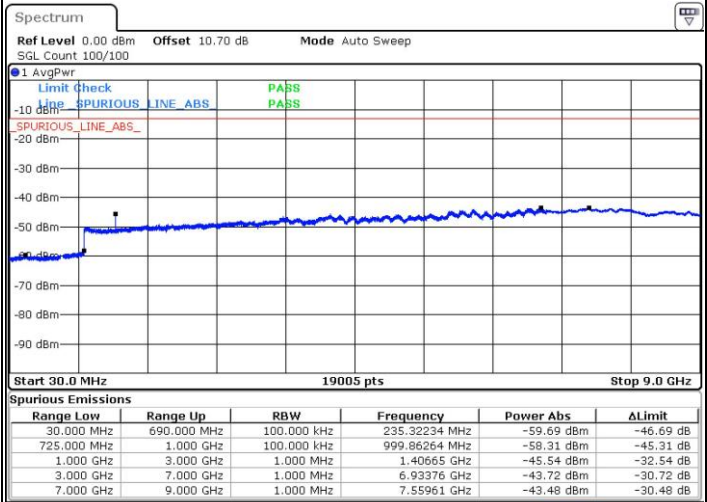
LTE Band 12 / 10MHz

Middle Channel / QPSK



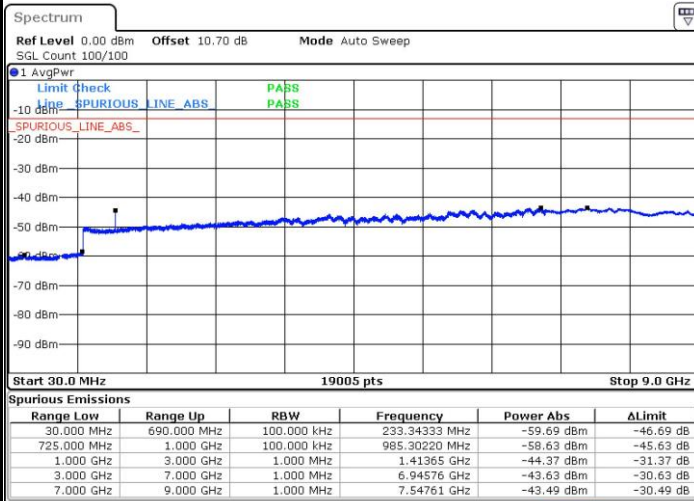
Date: 10 APR 2019 23:09:55

Middle Channel / 16QAM



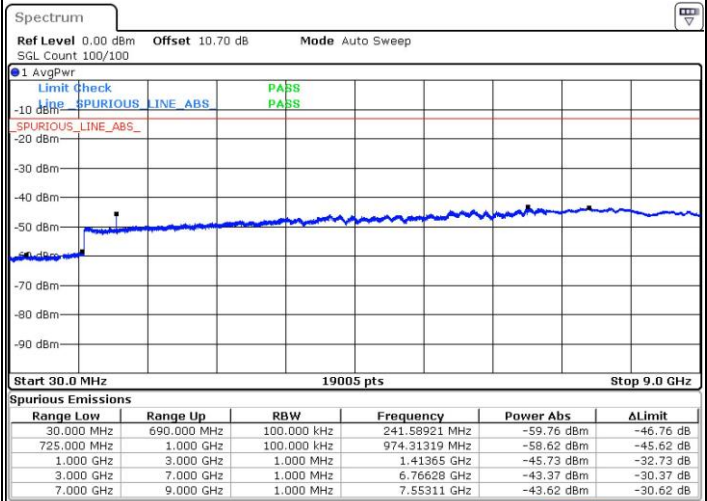
Date: 10 APR 2019 23:09:15

Highest Channel / QPSK



Date: 10 APR 2019 23:14:09

Highest Channel / 16QAM

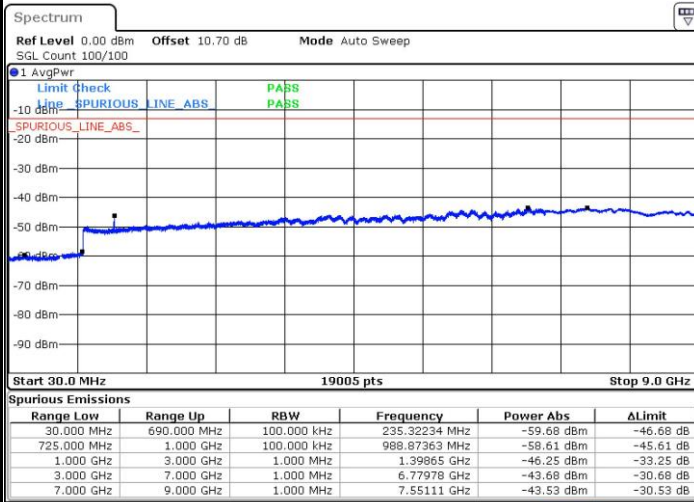


Date: 10 APR 2019 23:14:51



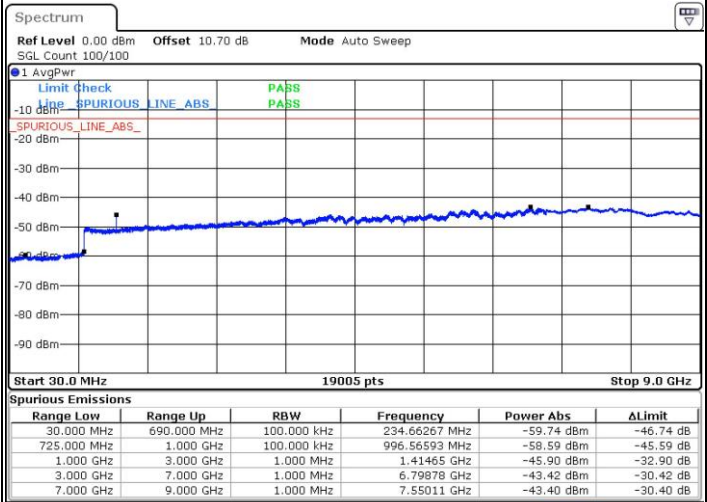
LTE Band 12 / 1.4MHz

Lowest Channel / 64QAM



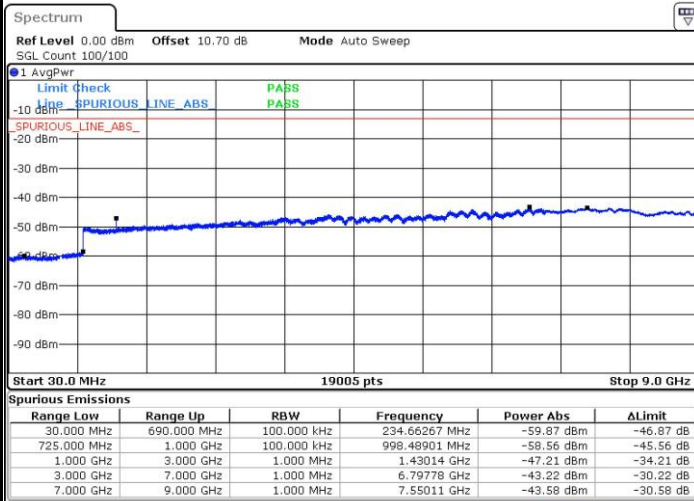
Date: 10 APR 2019 23:48:17

Middle Channel / 64QAM



Date: 10 APR 2019 23:49:22

Highest Channel / 64QAM

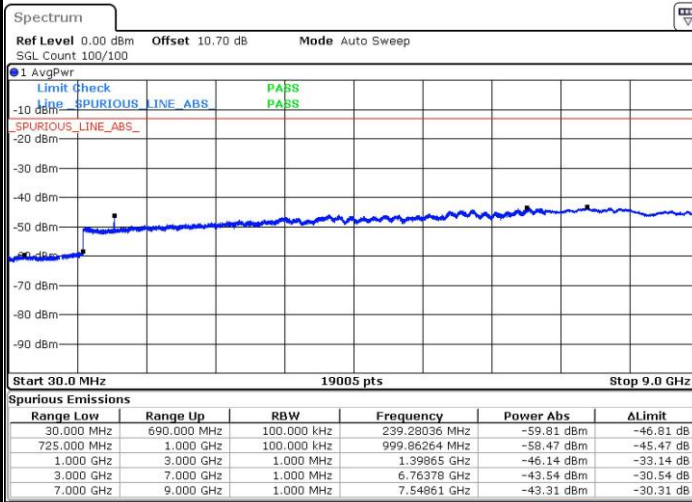


Date: 10 APR 2019 23:51:49



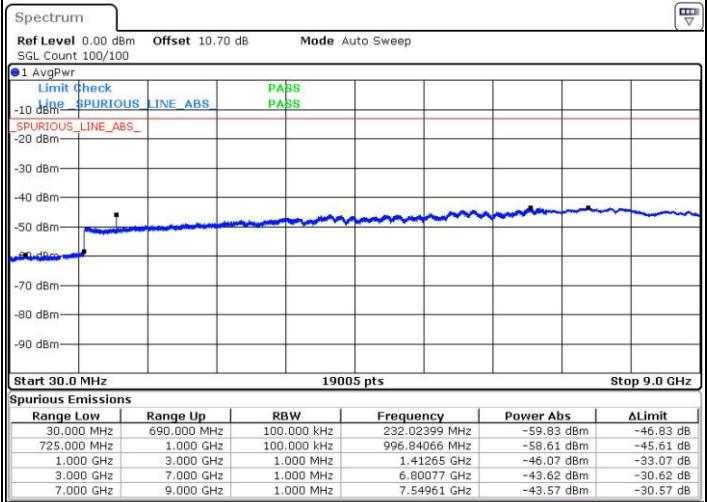
LTE Band 12 / 3MHz

Lowest Channel / 64QAM



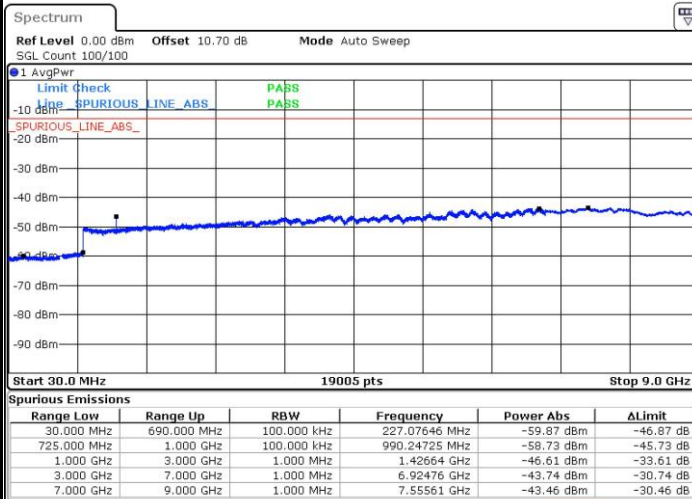
Date: 10 APR 2019 23:30:18

Middle Channel / 64QAM



Date: 10 APR 2019 23:31:22

Highest Channel / 64QAM

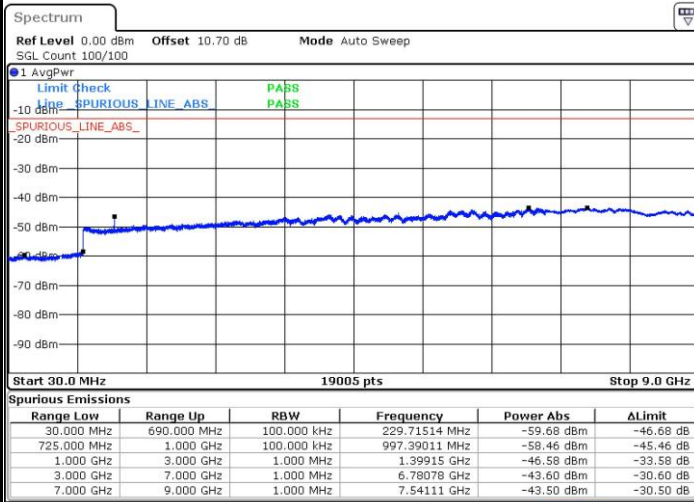


Date: 10 APR 2019 23:33:49



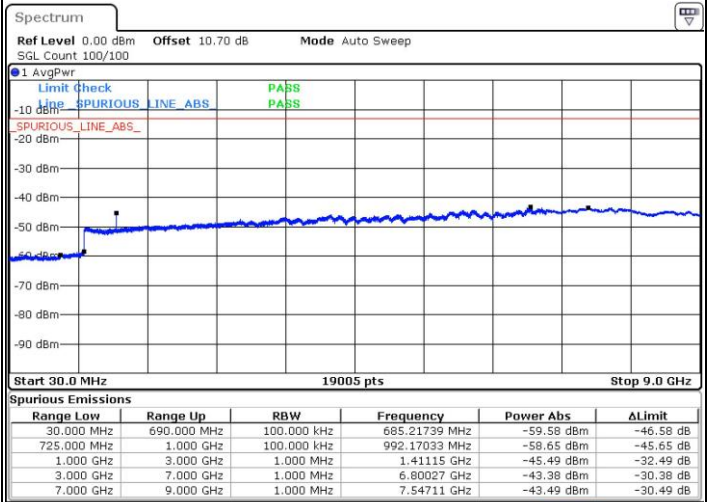
LTE Band 12 / 5MHz

Lowest Channel / 64QAM



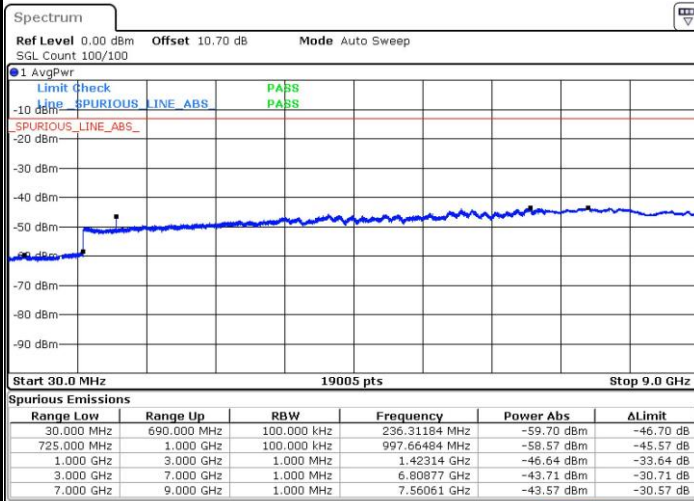
Date: 10 APR 2019 23:36:17

Middle Channel / 64QAM



Date: 10 APR 2019 23:37:22

Highest Channel / 64QAM

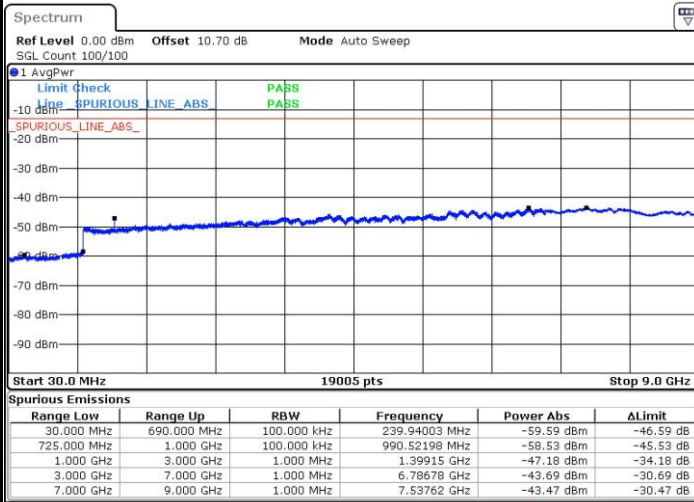


Date: 10 APR 2019 23:39:49



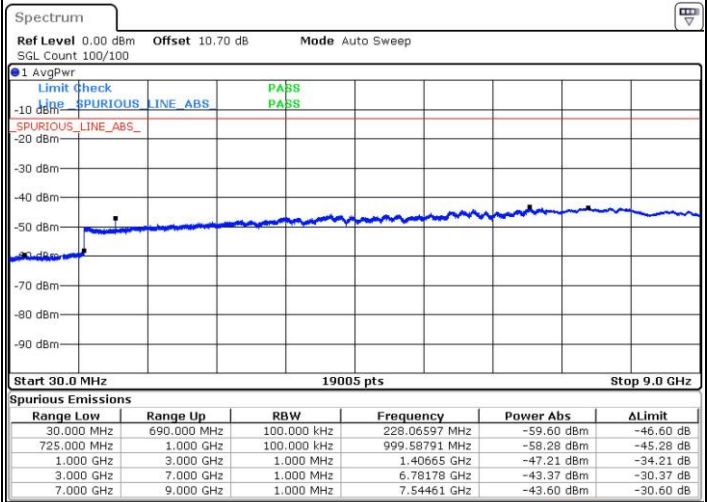
LTE Band 12 / 10MHz

Lowest Channel / 64QAM



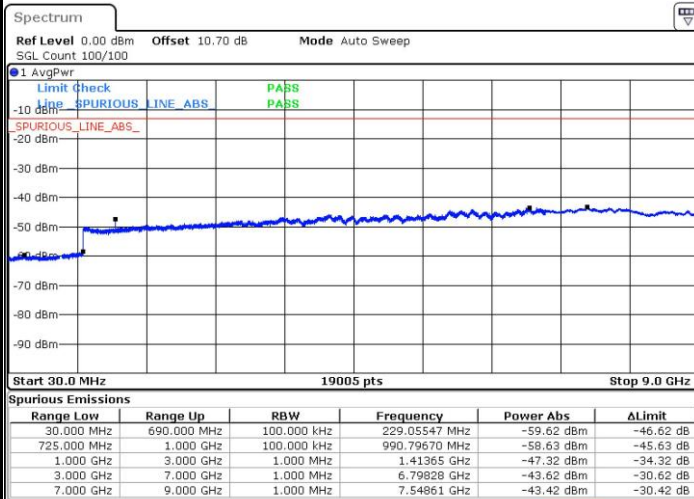
Date: 10 APR 2019 23:42:17

Middle Channel / 64QAM



Date: 10 APR 2019 23:43:22

Highest Channel / 64QAM



Date: 10 APR 2019 23:45:49

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	0.0065	PASS
40	Normal Voltage	0.0031	
30	Normal Voltage	0.0016	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0011	
0	Normal Voltage	0.0027	
-10	Normal Voltage	0.0057	
-20	Normal Voltage	0.0119	
-30	Normal Voltage	0.0008	
20	Maximum Voltage	0.0034	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0078	

Note:

1. Normal Voltage =7.6 V. ; Battery End Point (BEP) =7.0 V. ; Maximum Voltage =8.7 V.
2. The frequency fundamental emissions stay within the authorized frequency block.

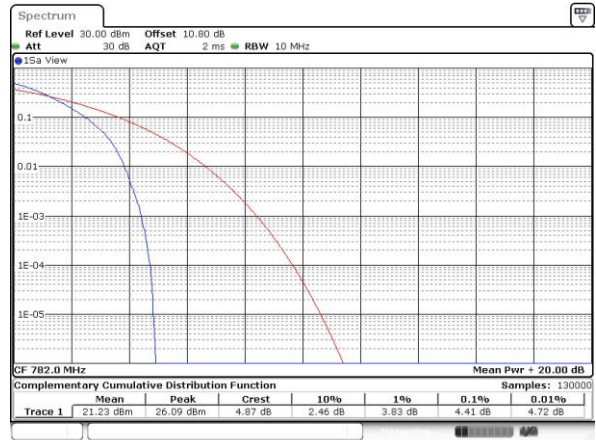
LTE Band 13

Peak-to-Average Ratio

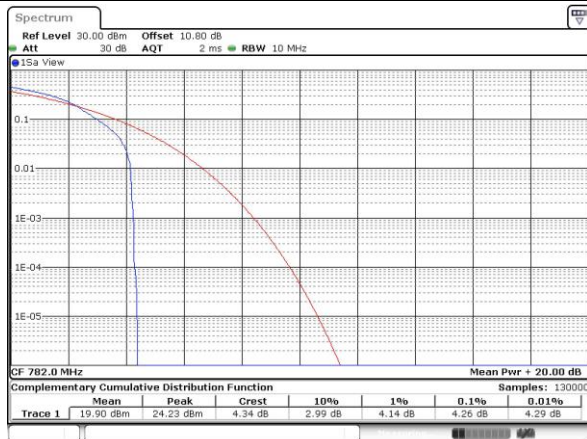
Mode	LTE Band 13 / 10MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	-	-	-	-	PASS
Middle CH	3.13	4.41	4.26	5.68	
Highest CH	-	-	-	-	
Mode	LTE Band 13 / 10MHz				
Mod.	64QAM				Limit: 13dB
RB Size	1RB	Full RB			Result
Lowest CH	-	-	-	-	PASS
Middle CH	5.48	6.29	-	-	
Highest CH	-	-	-	-	

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


Date: 10 APR 2019 20:03:59

Middle Channel / Full RB


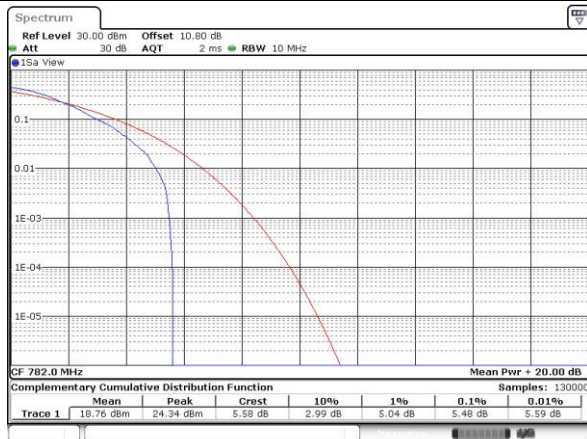
Date: 10 APR 2019 20:04:10

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


Date: 10 APR 2019 20:02:46

Middle Channel / Full RB


Date: 10 APR 2019 20:02:57

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


Date: 10 APR 2019 20:02:24

Middle Channel / Full RB


Date: 10 APR 2019 20:02:36

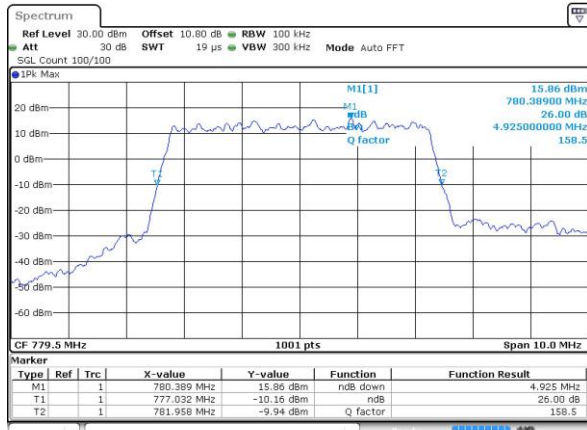
**26dB Bandwidth**

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	4.96	-	-	-	-	-	-
Middle CH	-	-	-	-	4.90	4.91	9.75	9.61	-	-	-	-
Highest CH	-	-	-	-	4.87	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	-	-	-	-	4.83	-	-	-	-	-	-	-
Middle CH	-	-	-	-	4.92	-	9.75	-	-	-	-	-
Highest CH	-	-	-	-	4.92	-	-	-	-	-	-	-



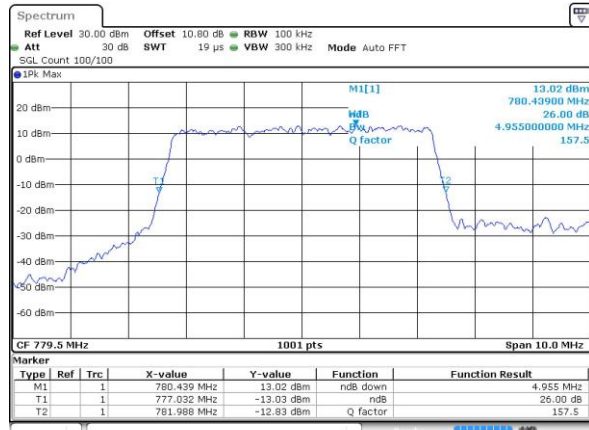
LTE Band 13

Lowest Channel / 5MHz / QPSK



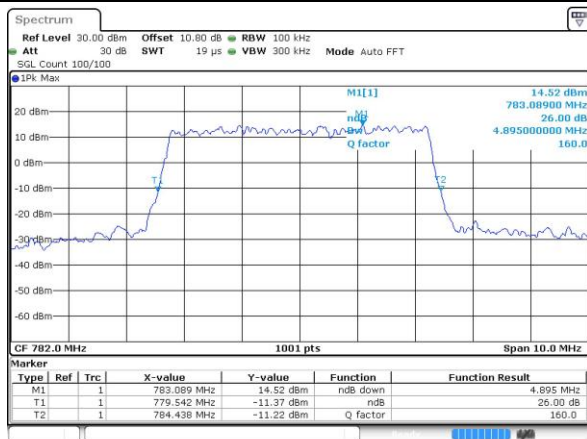
Date: 10 APR 2019 19:11:15

Lowest Channel / 5MHz / 16QAM



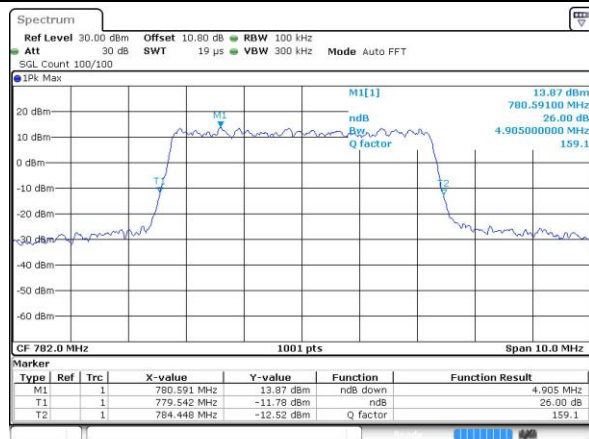
Date: 10 APR 2019 19:11:03

Middle Channel / 5MHz / QPSK



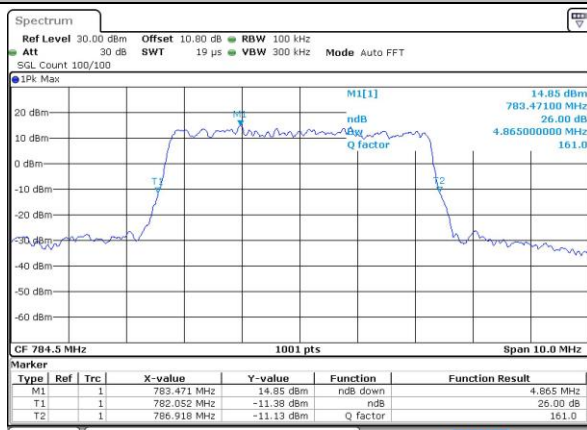
Date: 10 APR 2019 19:21:35

Middle Channel / 5MHz / 16QAM



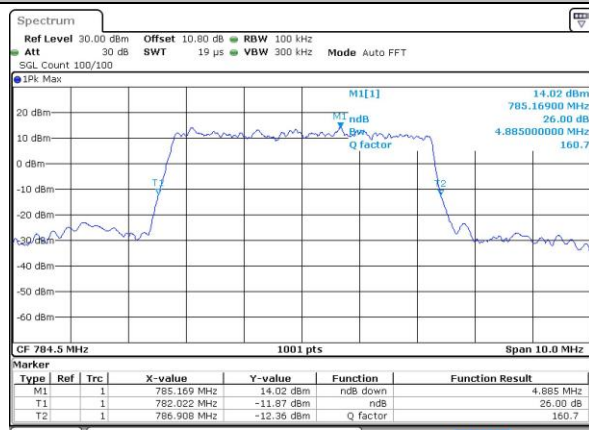
Date: 10 APR 2019 19:21:46

Highest Channel / 5MHz / QPSK



Date: 10 APR 2019 19:22:59

Highest Channel / 5MHz / 16QAM

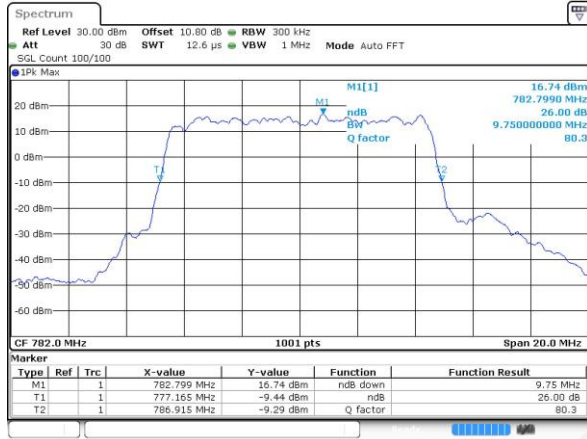


Date: 10 APR 2019 19:22:47



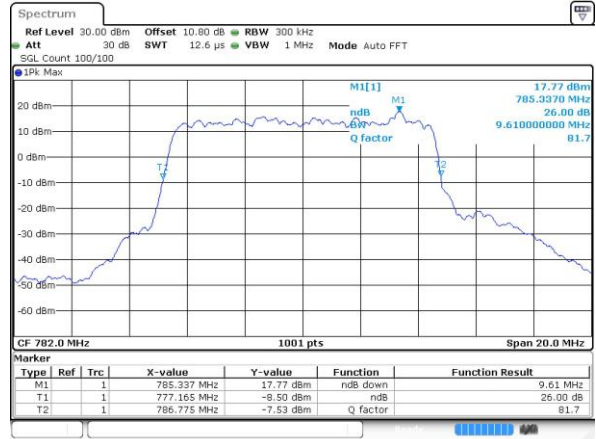
LTE Band 13

Middle Channel / 10MHz / QPSK



Date: 10 APR 2019 19:42:43

Middle Channel / 10MHz / 16QAM

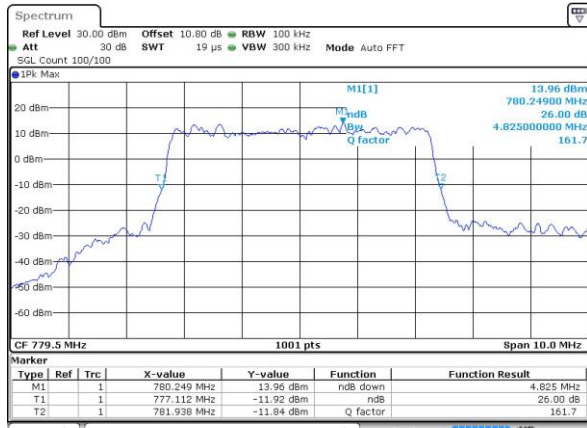


Date: 10 APR 2019 19:42:32



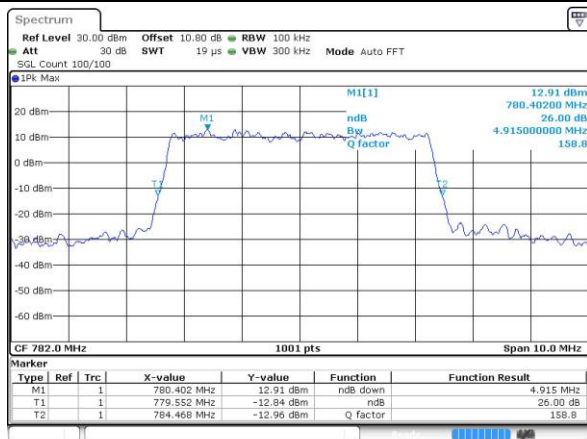
LTE Band 13

Lowest Channel / 5MHz / 64QAM



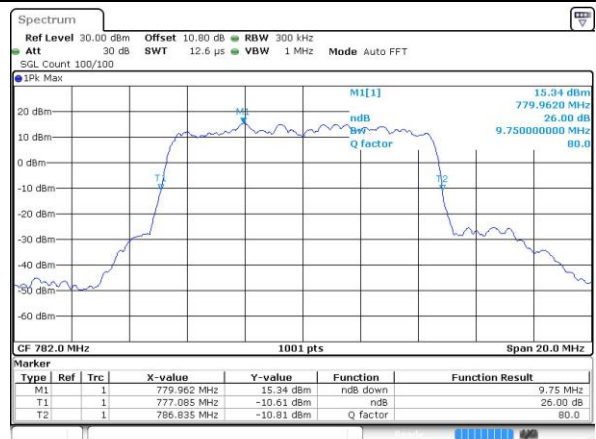
Date: 10 APR 2019 19:31:50

Middle Channel / 5MHz / 64QAM



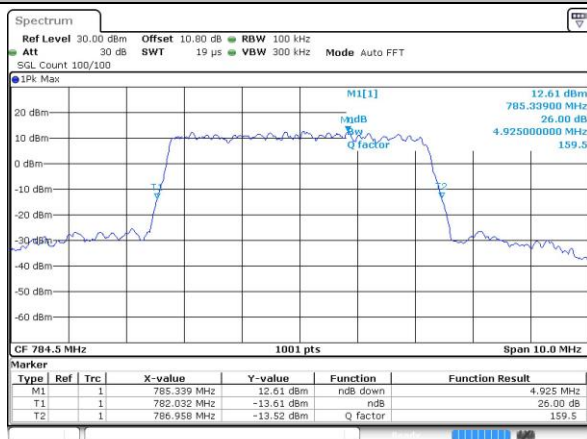
Date: 10 APR 2019 19:37:06

Middle Channel / 10MHz / 64QAM



Date: 10 APR 2019 19:54:51

Highest Channel / 5MHz / 64QAM



Date: 10 APR 2019 19:37:42

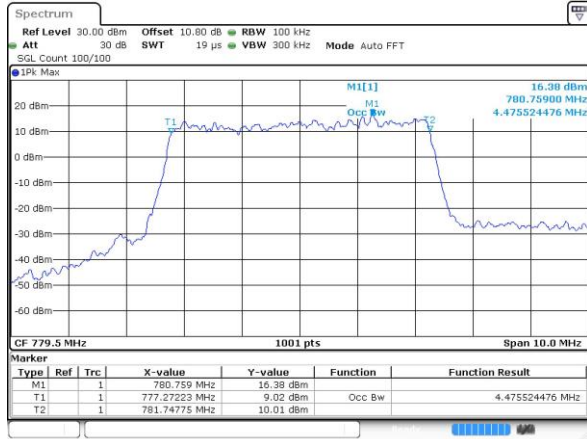
**Occupied Bandwidth**

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	-	-	-	-	4.48	4.50	-	-	-	-	-	-
Middle CH	-	-	-	-	4.50	4.49	9.05	8.89	-	-	-	-
Highest CH	-	-	-	-	4.48	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	-	-	-	-	4.49	-	-	-	-	-	-	-
Middle CH	-	-	-	-	4.50	-	8.95	-	-	-	-	-
Highest CH	-	-	-	-	4.50	-	-	-	-	-	-	-



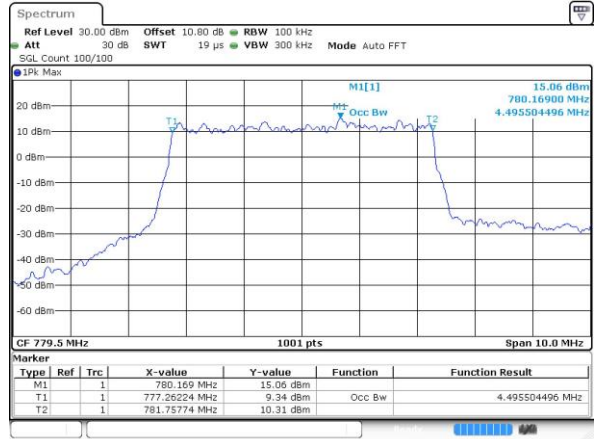
LTE Band 13

Lowest Channel / 5MHz / QPSK



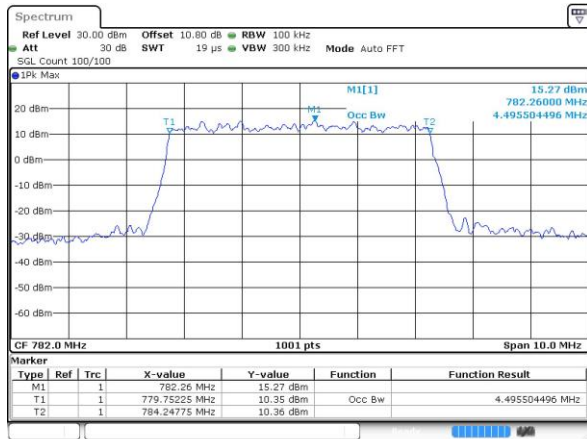
Date: 10 APR 2019 19:10:38

Lowest Channel / 5MHz / 16QAM



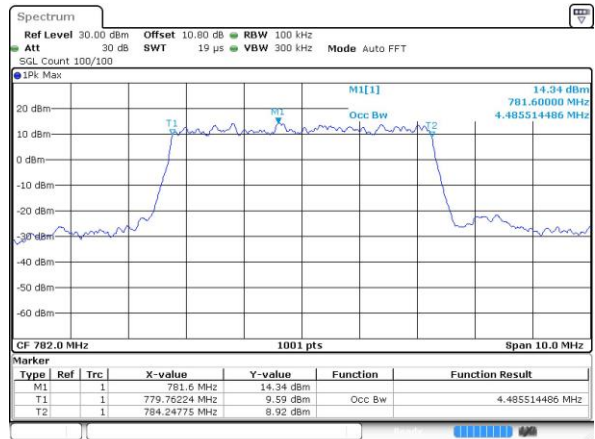
Date: 10 APR 2019 19:10:51

Middle Channel / 5MHz / QPSK



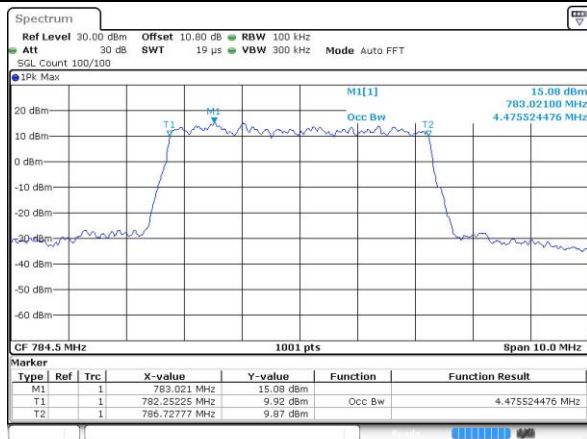
Date: 10 APR 2019 19:22:10

Middle Channel / 5MHz / 16QAM



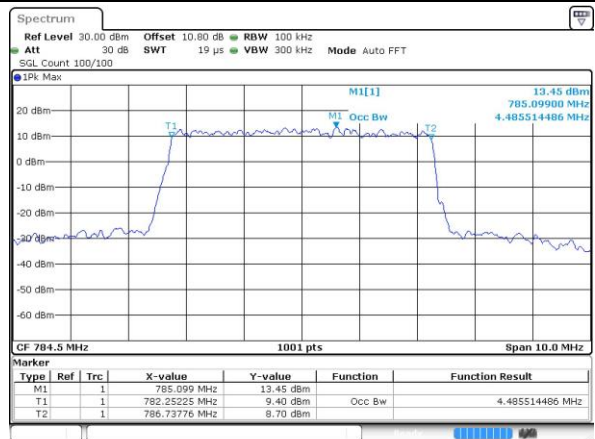
Date: 10 APR 2019 19:21:58

Highest Channel / 5MHz / QPSK



Date: 10 APR 2019 19:22:22

Highest Channel / 5MHz / 16QAM

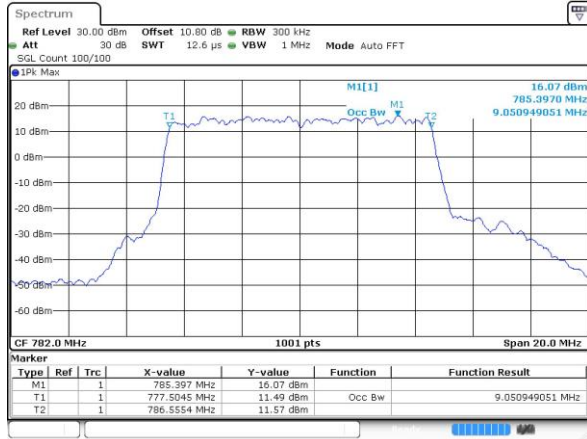


Date: 10 APR 2019 19:22:34



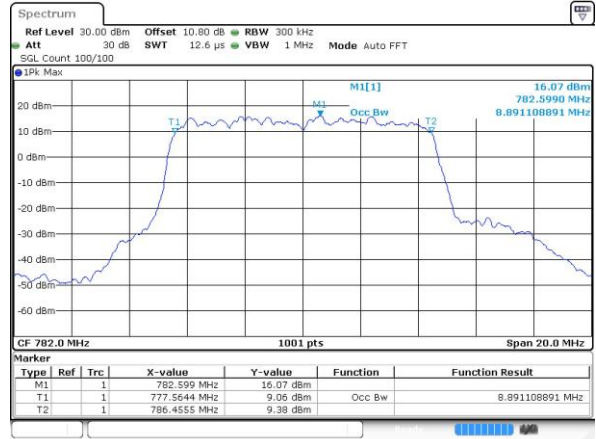
LTE Band 13

Middle Channel / 10MHz / QPSK



Date: 10 APR 2019 19:42:08

Middle Channel / 10MHz / 16QAM

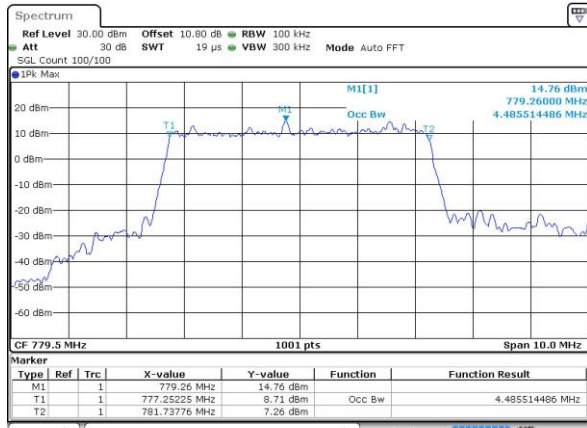


Date: 10 APR 2019 19:42:20



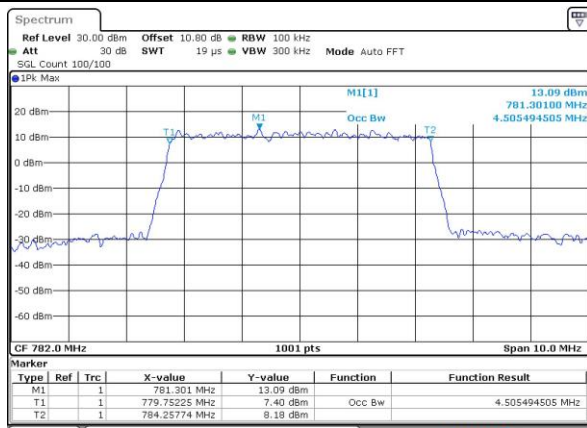
LTE Band 13

Lowest Channel / 5MHz / 64QAM



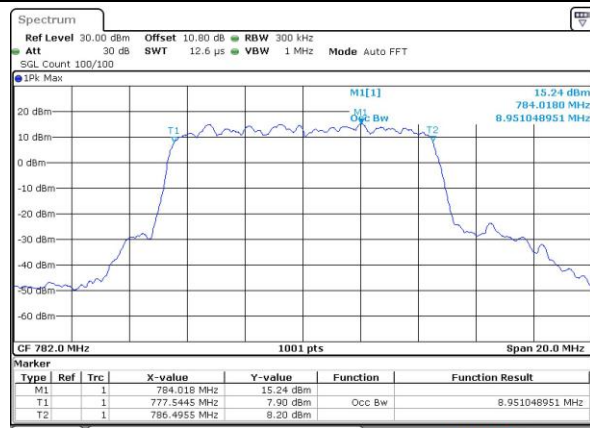
Date: 10 APR 2019 19:31:38

Middle Channel / 5MHz / 64QAM



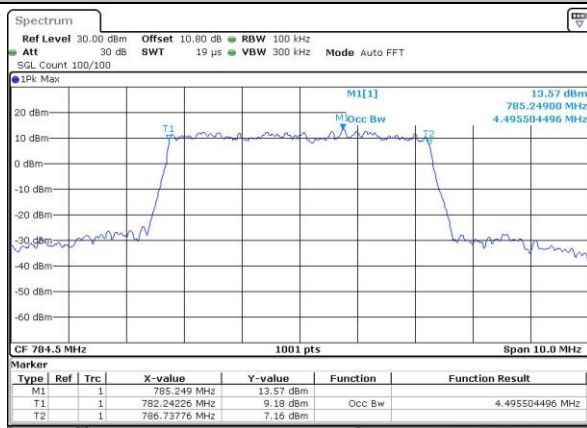
Date: 10 APR 2019 19:37:18

Middle Channel / 10MHz / 64QAM



Date: 10 APR 2019 19:54:39

Highest Channel / 5MHz / 64QAM



Date: 10 APR 2019 19:37:30