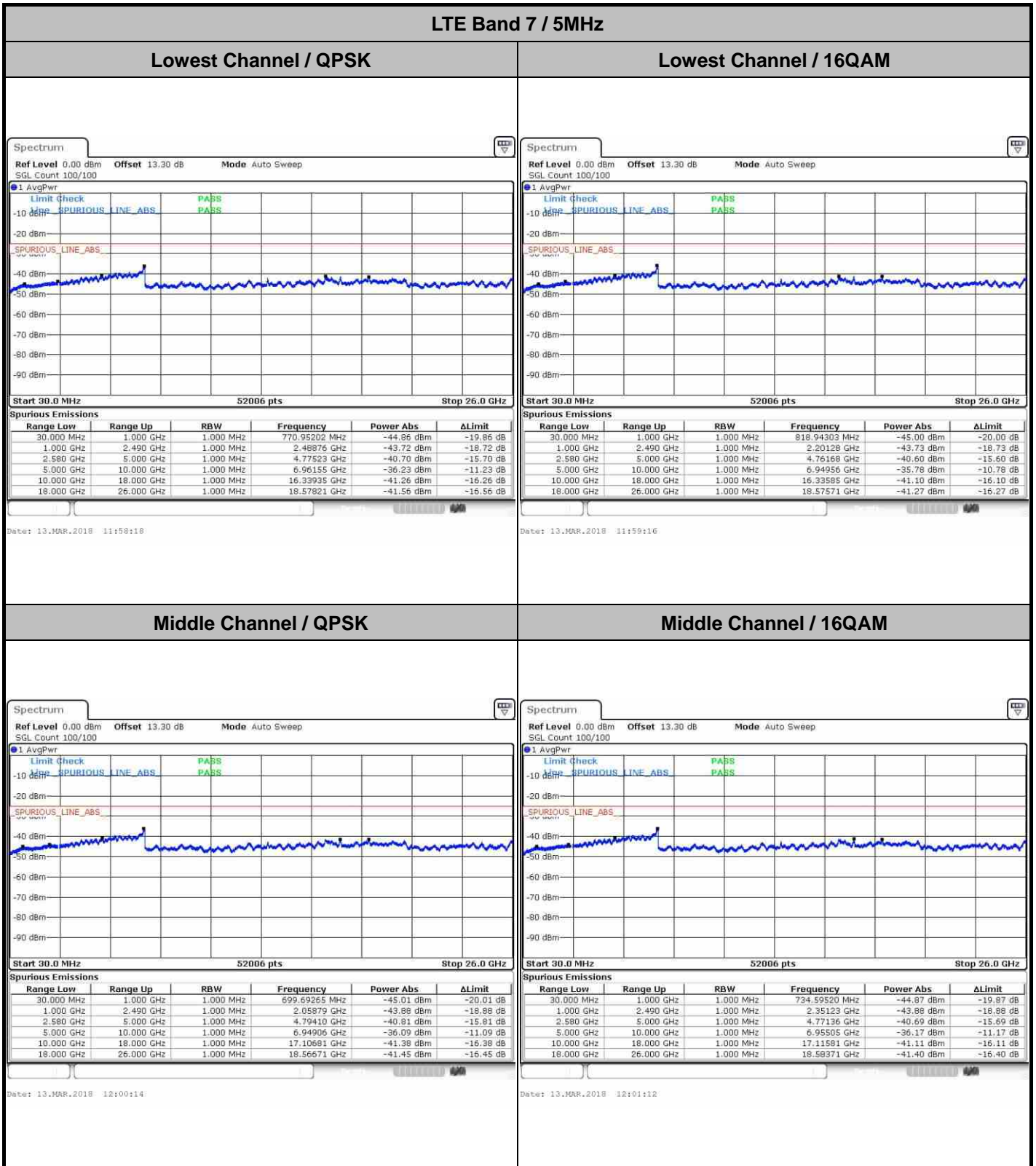




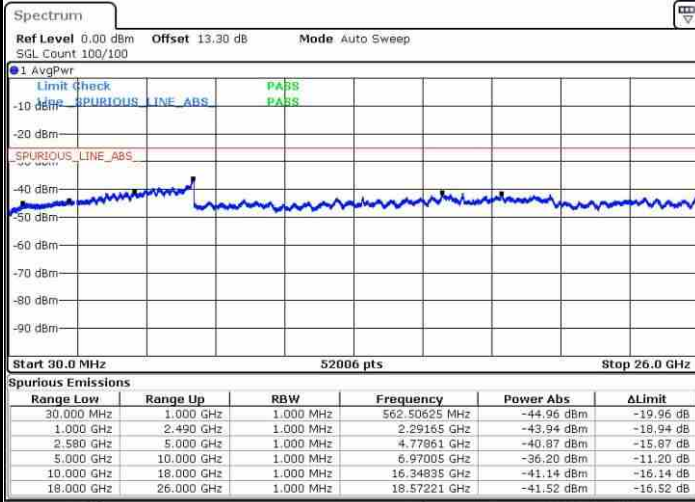
# Conducted Spurious Emission





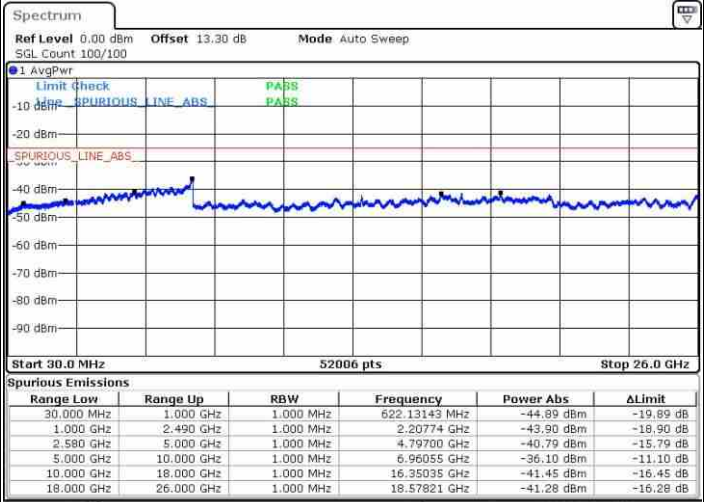
LTE Band 7 / 5MHz

Highest Channel / QPSK



Date: 13.MAR.2018 12:02:10

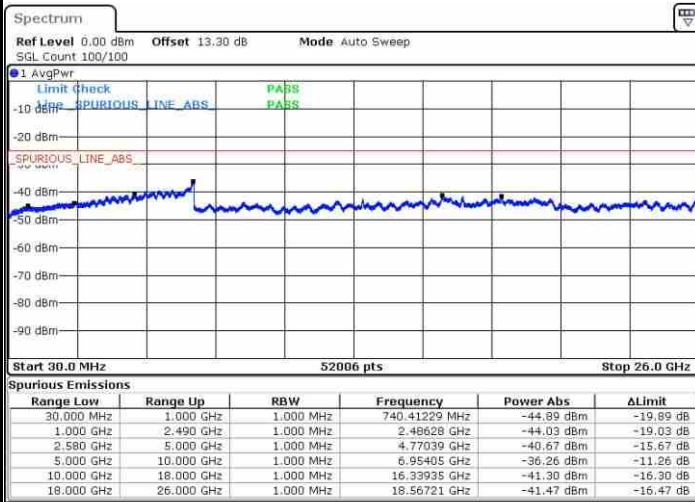
Highest Channel / 16QAM



Date: 13.MAR.2018 12:03:08

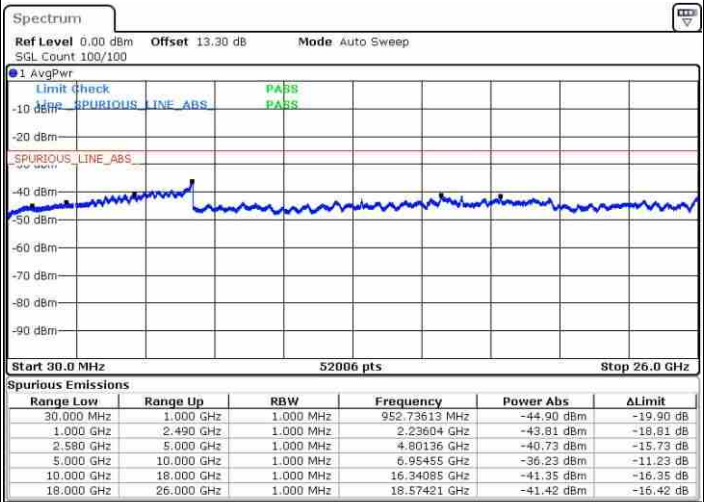
LTE Band 7 / 10MHz

Lowest Channel / QPSK



Date: 13.MAR.2018 12:04:06

Lowest Channel / 16QAM



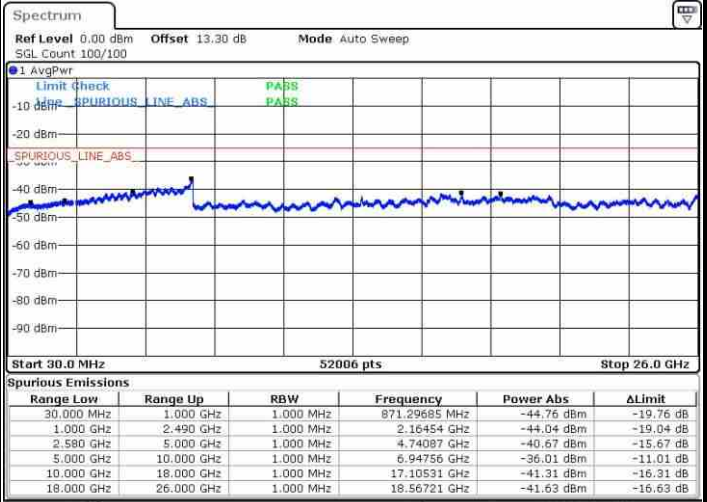
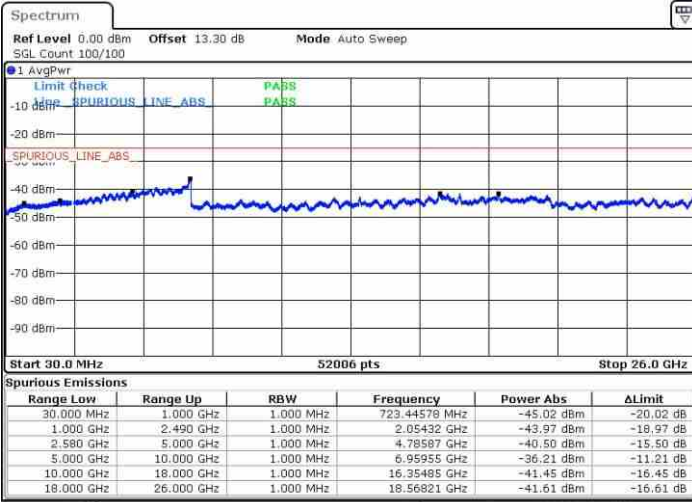
Date: 13.MAR.2018 12:05:04



LTE Band 7 / 10MHz

Middle Channel / QPSK

Middle Channel / 16QAM

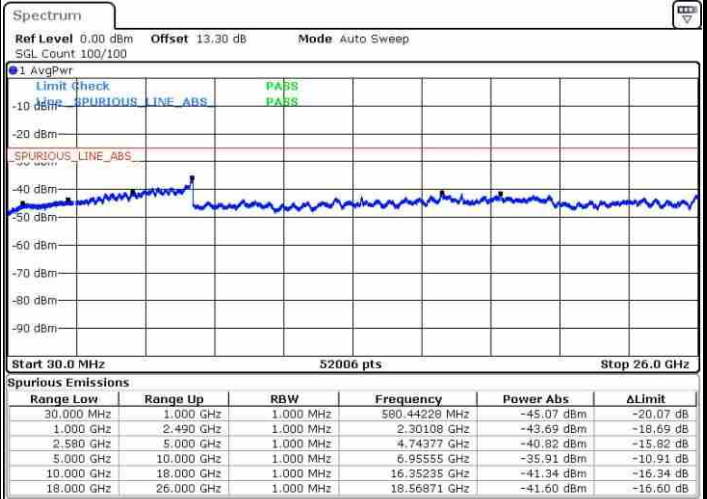
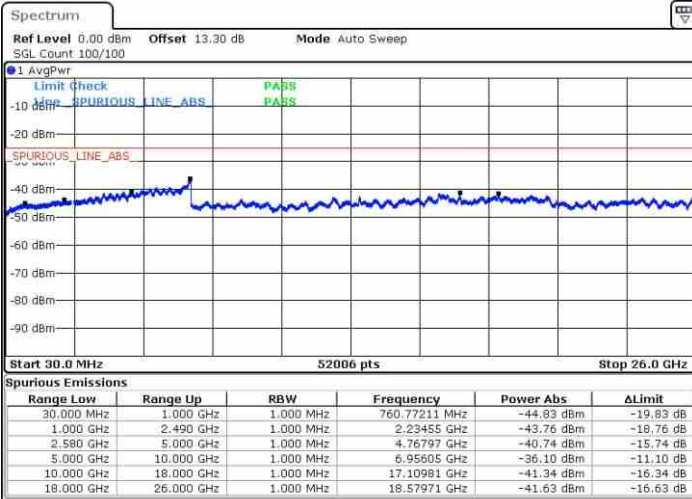


Date: 13.MAR.2018 12:06:02

Date: 13.MAR.2018 12:07:00

Highest Channel / QPSK

Highest Channel / 16QAM



Date: 13.MAR.2018 12:07:59

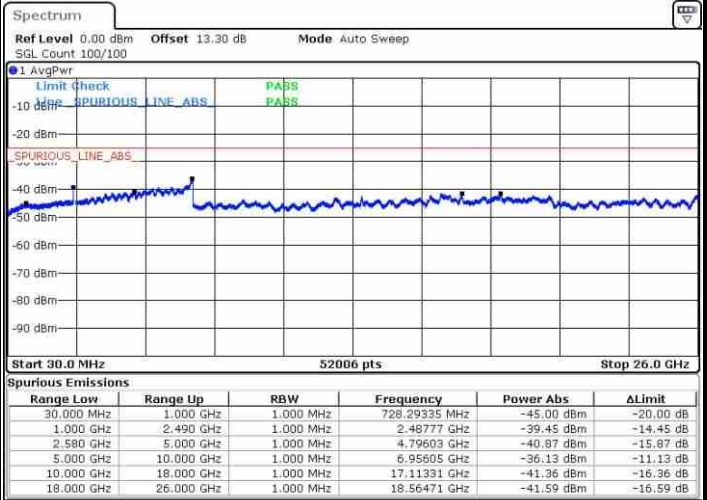
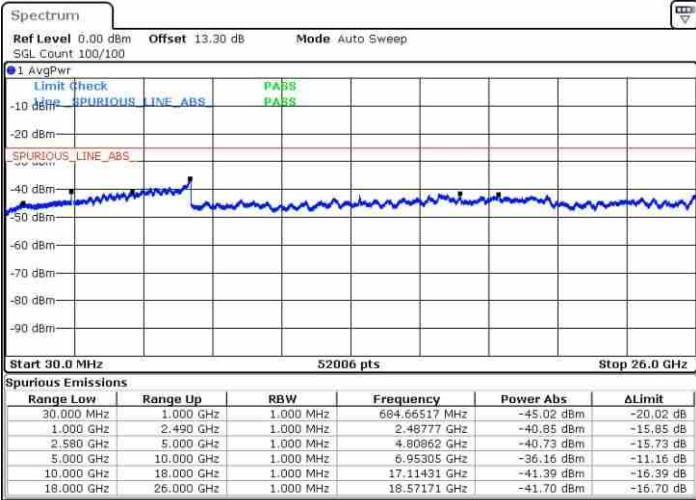
Date: 13.MAR.2018 12:08:56



LTE Band 7 / 15MHz

Lowest Channel / QPSK

Lowest Channel / 16QAM

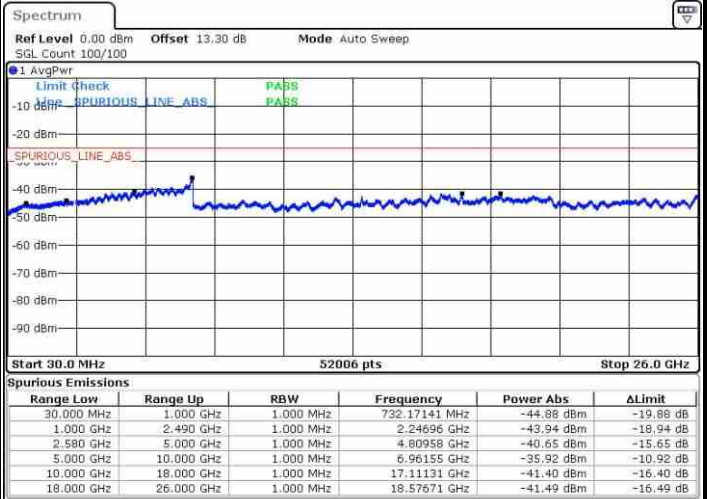
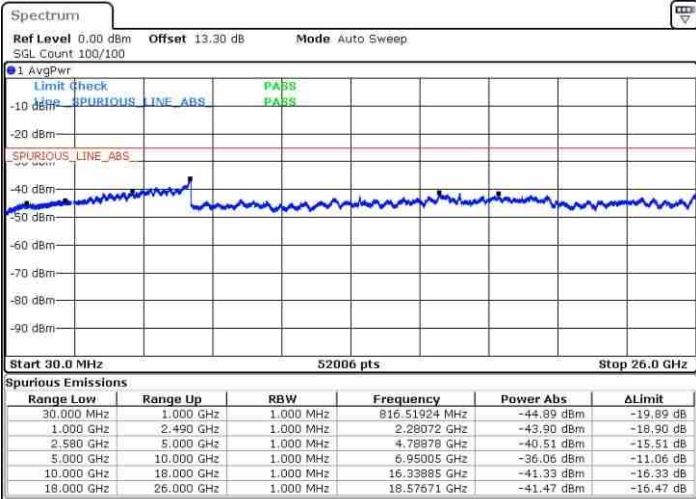


Date: 13.MAR.2018 12:09:54

Date: 13.MAR.2018 12:10:53

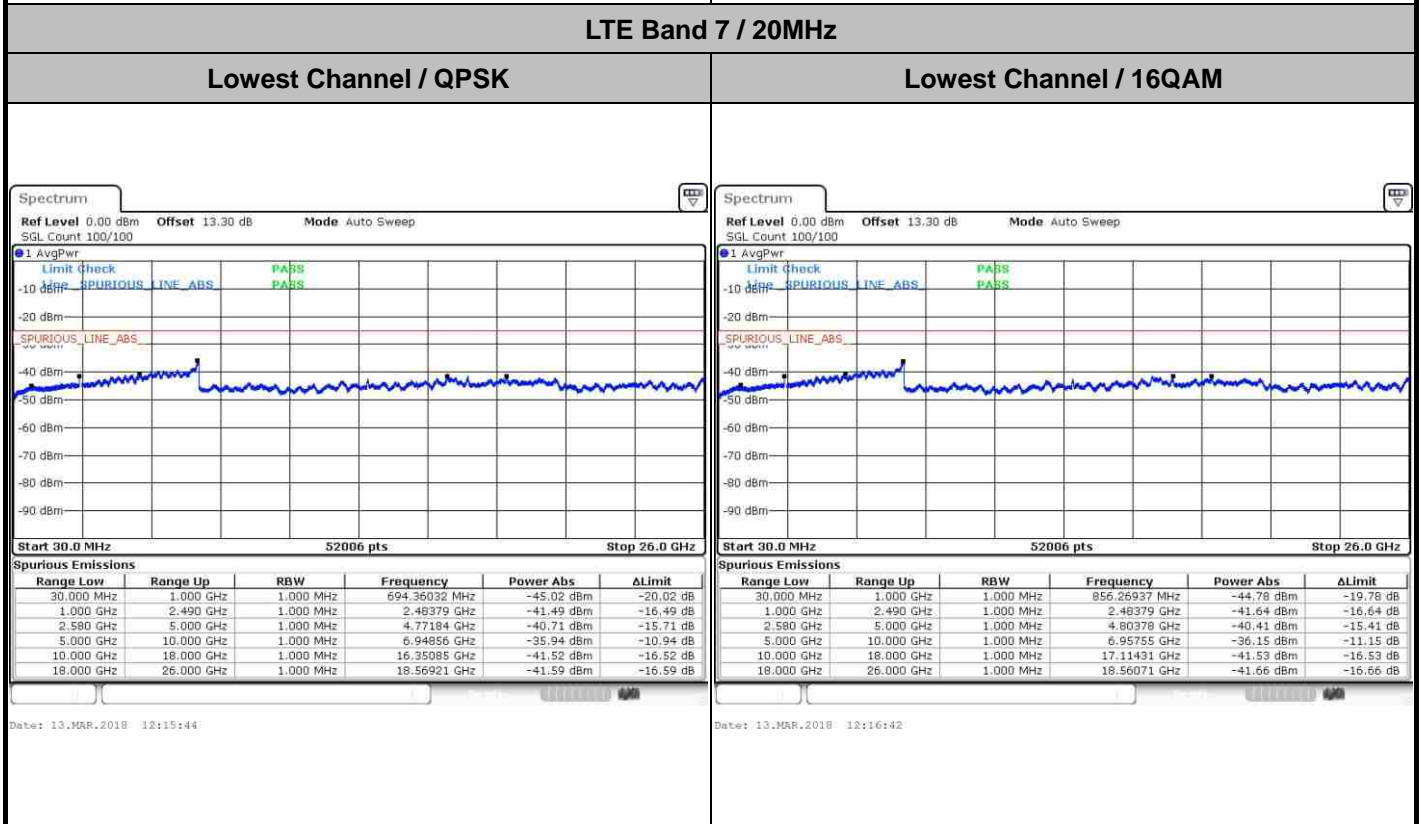
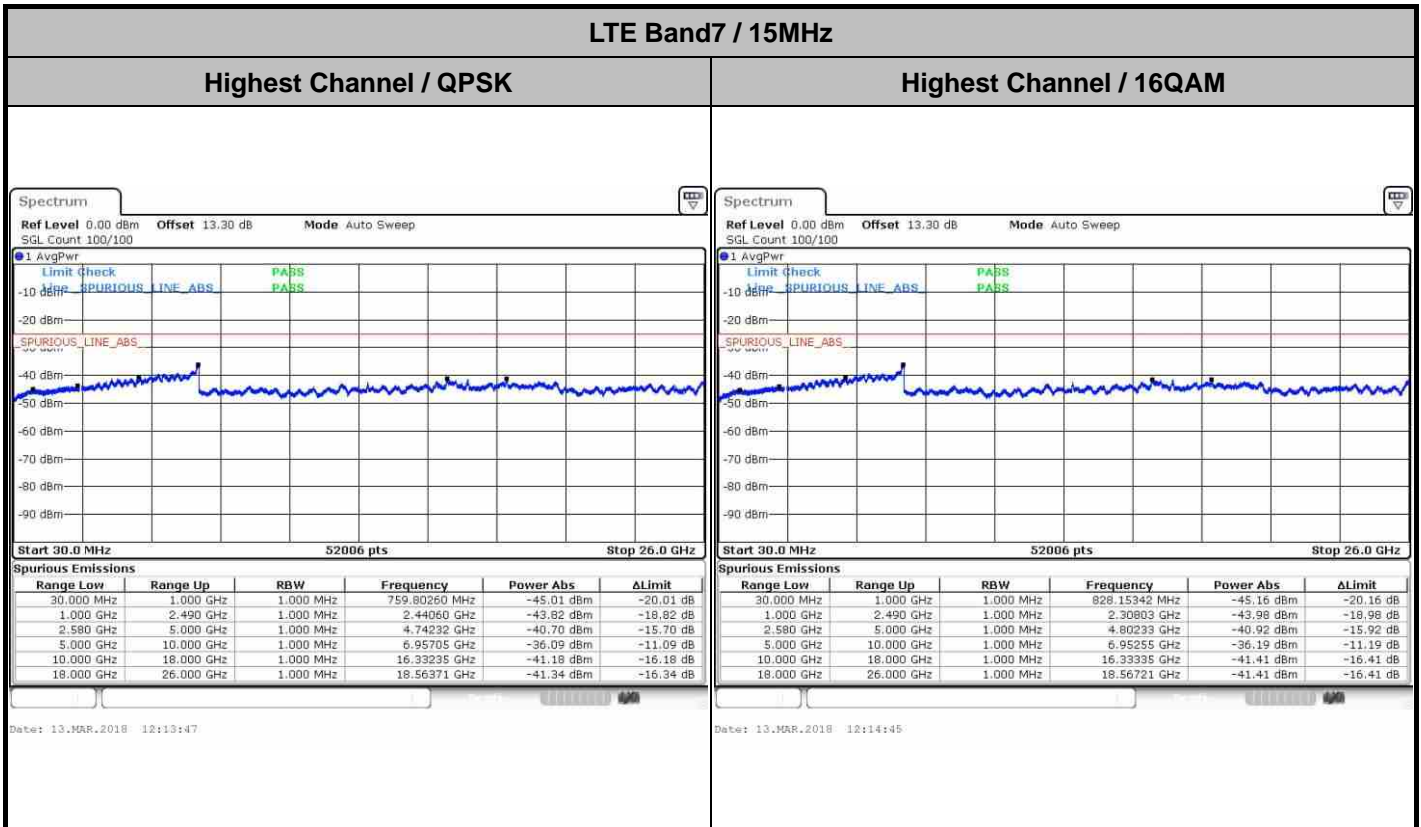
Middle Channel / QPSK

Middle Channel / 16QAM



Date: 13.MAR.2018 12:11:51

Date: 13.MAR.2018 12:12:49

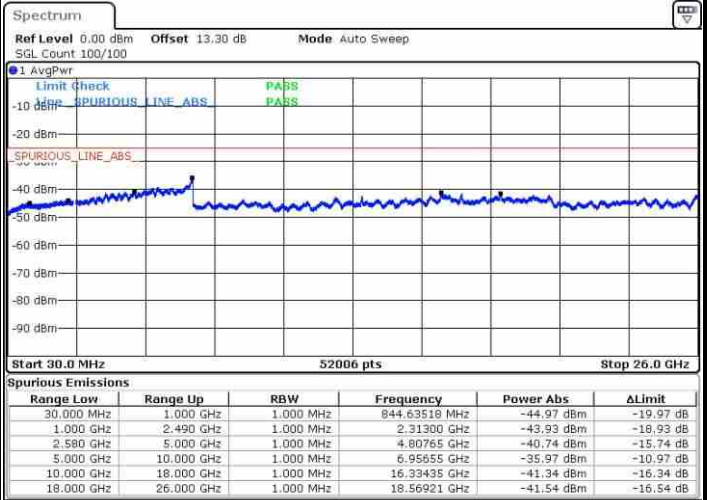
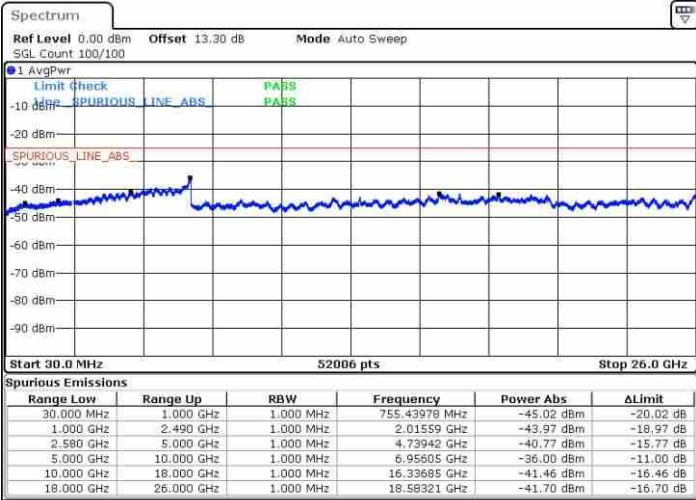




LTE Band 7 / 20MHz

Middle Channel / QPSK

Middle Channel / 16QAM

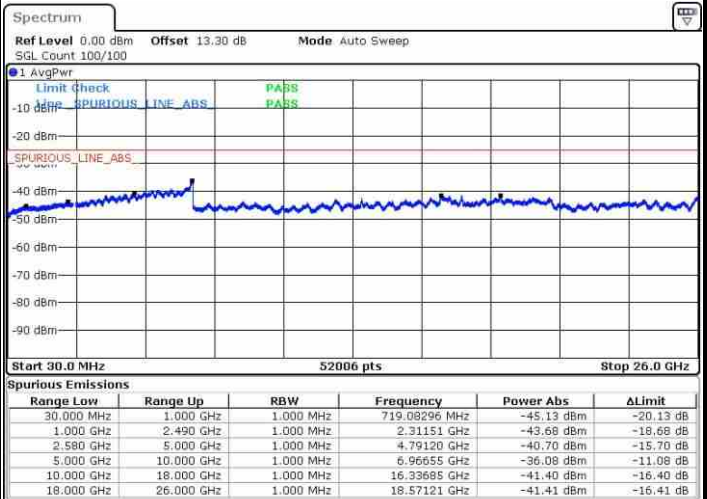
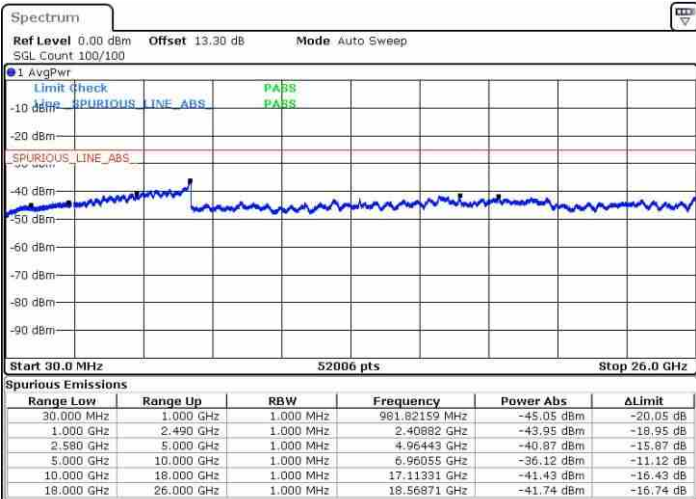


Date: 13.MAR.2018 12:17:40

Date: 13.MAR.2018 12:18:38

Highest Channel / QPSK

Highest Channel / 16QAM



Date: 13.MAR.2018 12:19:35

Date: 13.MAR.2018 12:20:33

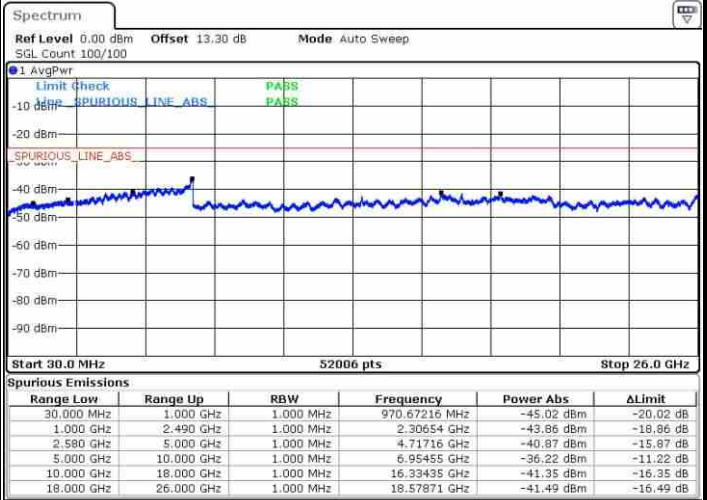
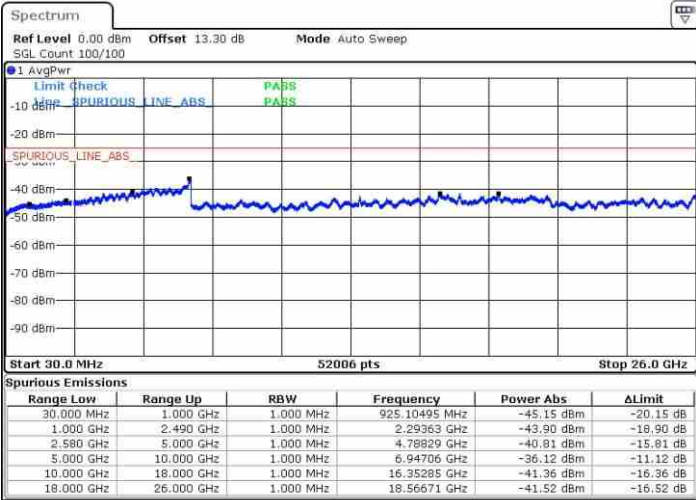




LTE Band 7 / 5MHz

Lowest Channel / 64QAM

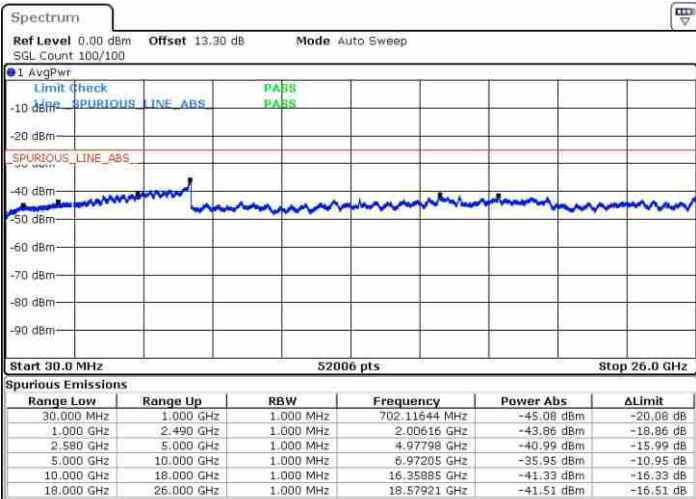
Middle Channel / 64QAM



Date: 16.MAR.2018 10:31:17

Date: 16.MAR.2018 10:32:39

Highest Channel / 64QAM



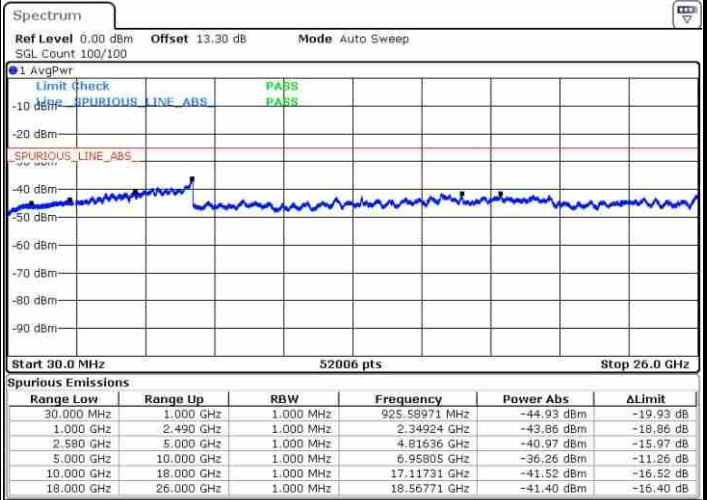
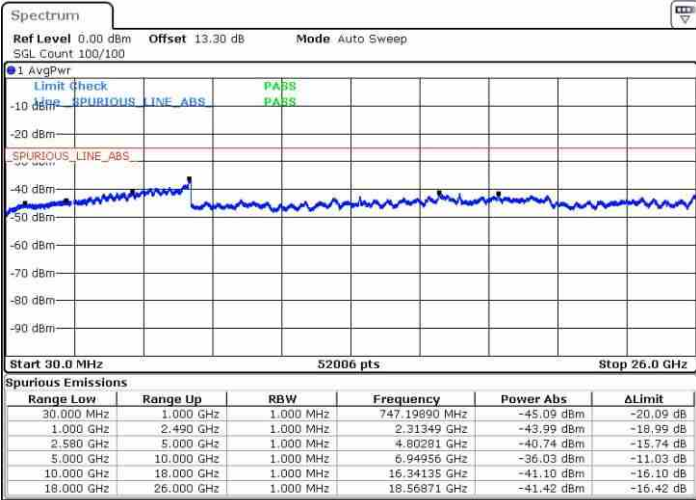
Date: 16.MAR.2018 10:36:22



LTE Band 7 / 10MHz

Lowest Channel / 64QAM

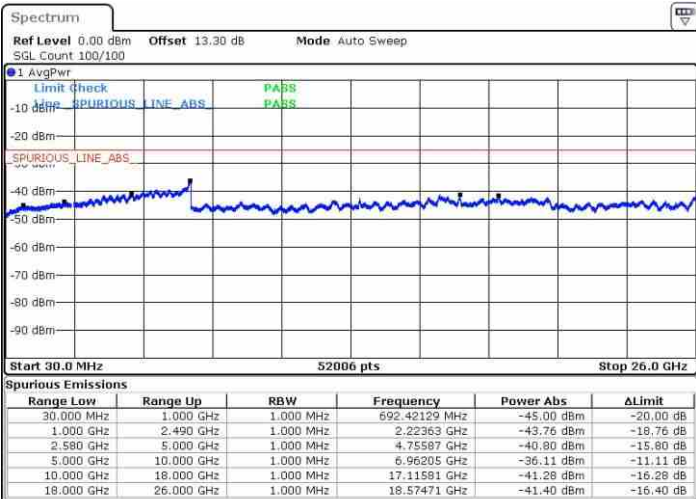
Middle Channel / 64QAM



Date: 16.MAR.2018 10:40:05

Date: 16.MAR.2018 10:42:35

Highest Channel / 64QAM



Date: 16.MAR.2018 10:46:18

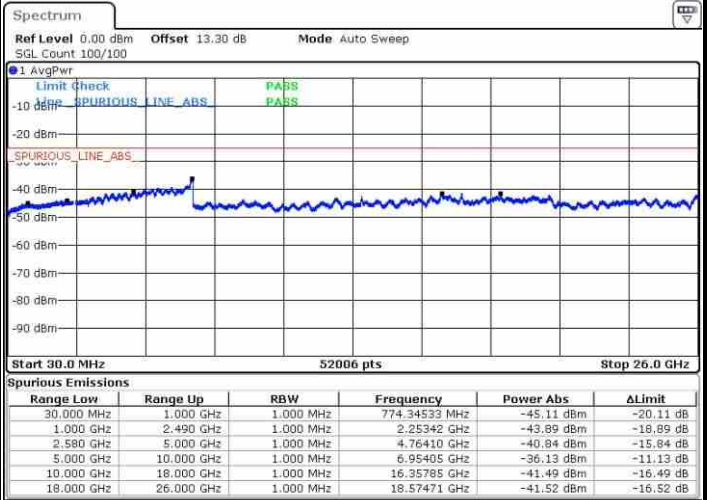
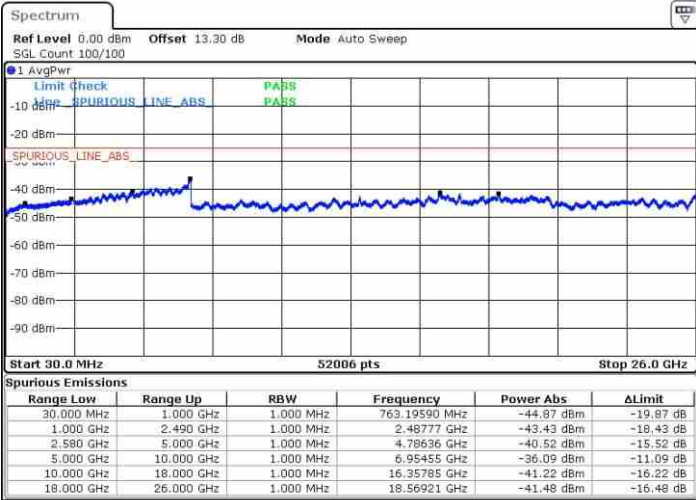




LTE Band 7 / 15MHz

Lowest Channel / 64QAM

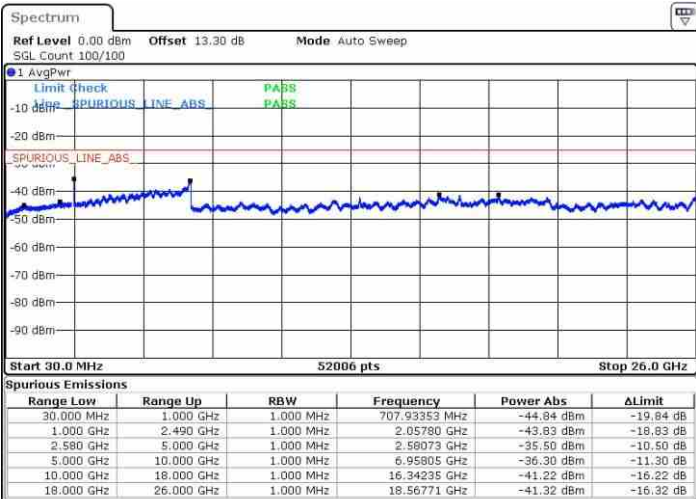
Middle Channel / 64QAM



Date: 16.MAR.2018 10:50:00

Date: 16.MAR.2018 10:51:22

Highest Channel / 64QAM



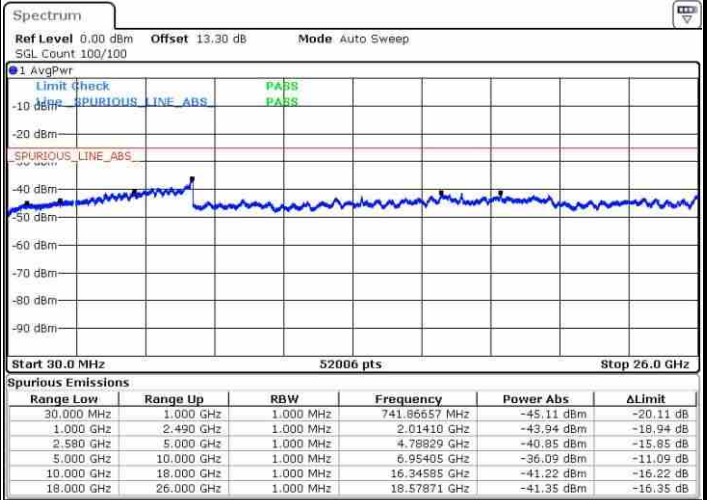
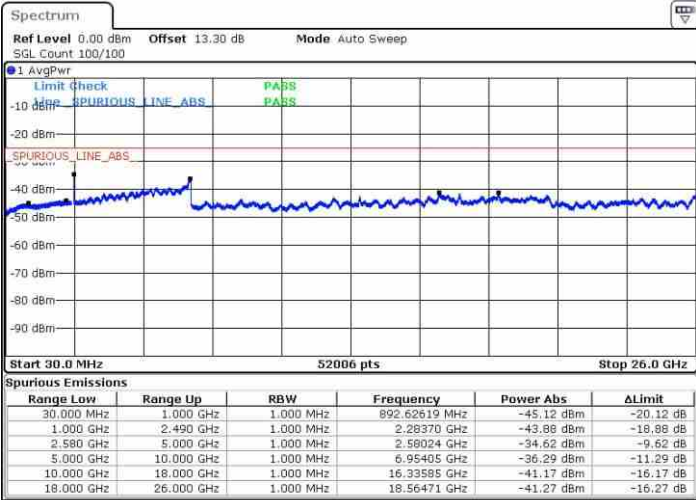
Date: 16.MAR.2018 10:55:22



LTE Band 7 / 20MHz

Lowest Channel / 64QAM

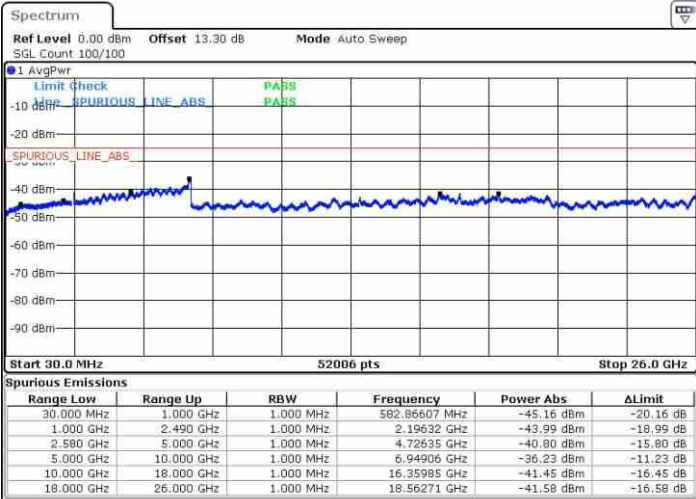
Middle Channel / 64QAM



Date: 16.MAR.2018 10:59:28

Date: 16.MAR.2018 11:25:37

Highest Channel / 64QAM



Date: 16.MAR.2018 11:29:19



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	0.0006	PASS
40	Normal Voltage	0.0030	
30	Normal Voltage	0.0006	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0013	
0	Normal Voltage	0.0061	
-10	Normal Voltage	0.0055	
-20	Normal Voltage	0.0048	
-30	Normal Voltage	0.0041	
20	Maximum Voltage	0.0029	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0033	

Note:

1. Normal Voltage =3.8 V. ; Battery End Point (BEP) =3.4 V. ; Maximum Voltage =4.4 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.



# LTE Band 12

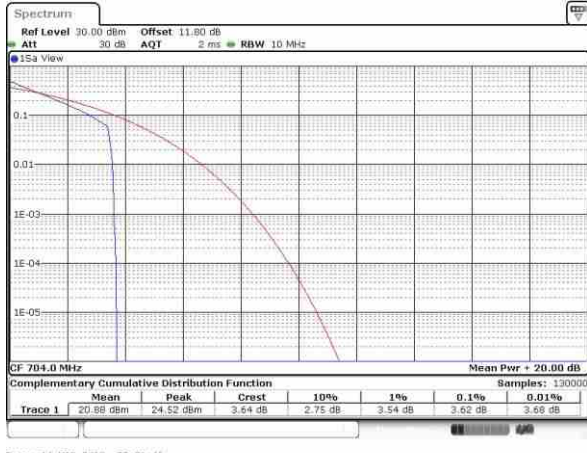
## Peak-to-Average Ratio

Mode	LTE Band 12 / 10MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	3.62	4.61	5.16	5.88	PASS
Middle CH	4.23	4.64	5.83	5.94	
Highest CH	3.65	4.58	5.57	6.03	
Mode	LTE Band 12 / 10MHz				
Mod.	64QAM				Limit: 13dB
RB Size	1RB	Full RB			Result
Lowest CH	6.67	6.49	-	-	PASS
Middle CH	6.84	6.55	-	-	
Highest CH	6.43	6.55	-	-	



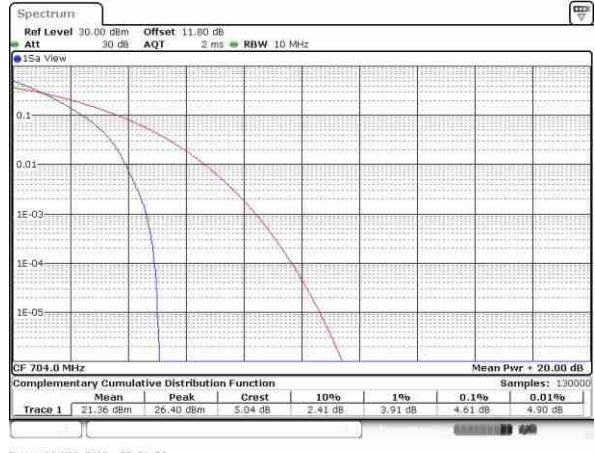
LTE Band 12 / 10MHz / QPSK

Lowest Channel / 1RB



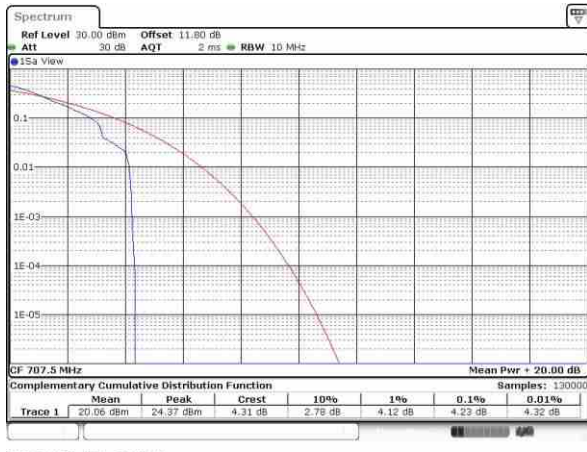
Date: 14, MAR, 2018 22:31:45

Lowest Channel / Full RB



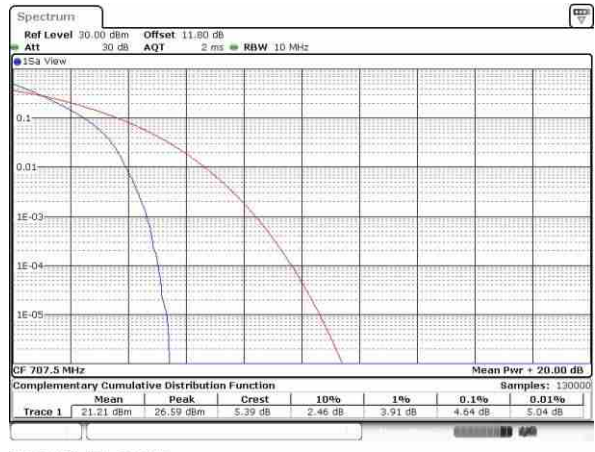
Date: 14, MAR, 2018 22:31:34

Middle Channel / 1RB



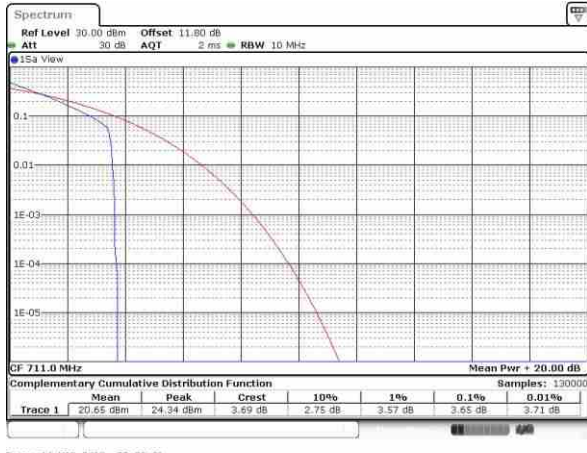
Date: 14, MAR, 2018 22:31:57

Middle Channel / Full RB



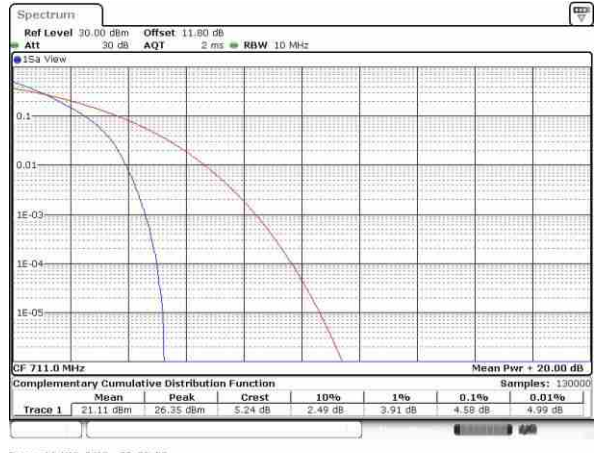
Date: 14, MAR, 2018 22:32:08

Highest Channel / 1RB



Date: 14, MAR, 2018 22:32:31

Highest Channel / Full RB



Date: 14, MAR, 2018 22:32:20



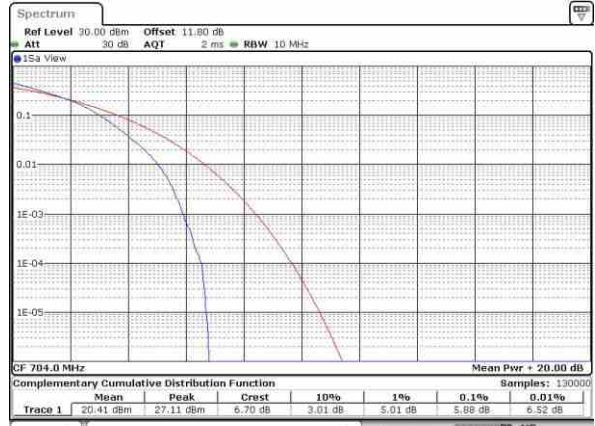
LTE Band 12 / 10MHz / 16QAM

Lowest Channel / 1RB



Date: 14, MAR, 2018 22:38:36

Lowest Channel / Full RB



Date: 14, MAR, 2018 22:38:28

Middle Channel / 1RB



Date: 14, MAR, 2018 22:38:47

Middle Channel / Full RB



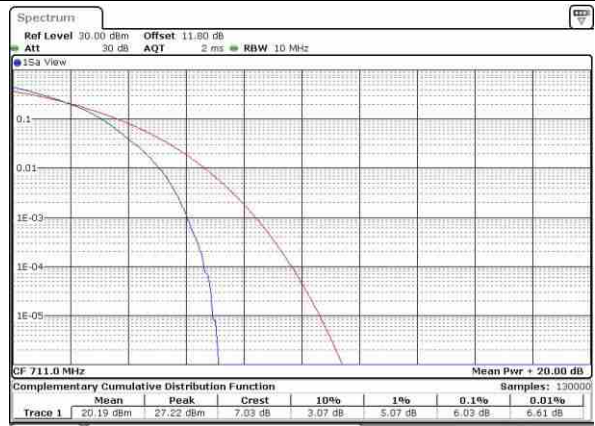
Date: 14, MAR, 2018 22:38:59

Highest Channel / 1RB



Date: 14, MAR, 2018 22:38:22

Highest Channel / Full RB



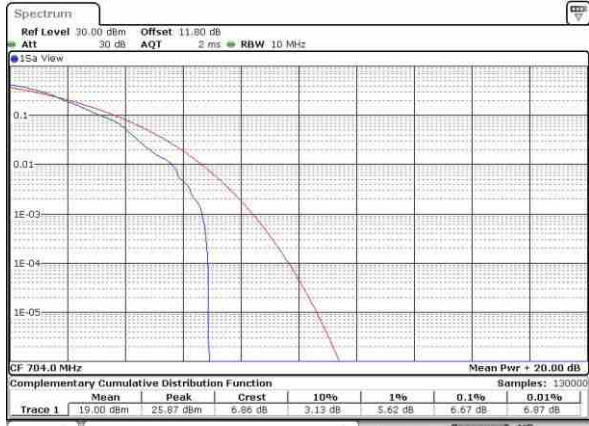
Date: 14, MAR, 2018 22:38:11





LTE Band 12 / 10MHz / 64QAM

Lowest Channel / 1RB



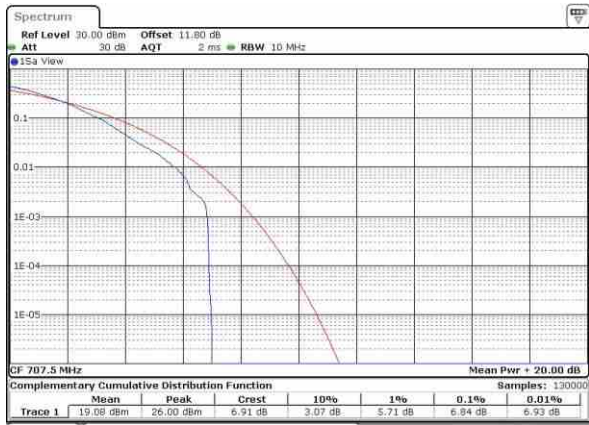
Date: 14, MAR, 2018 23:09:45

Lowest Channel / Full RB



Date: 14, MAR, 2018 23:09:32

Middle Channel / 1RB



Date: 14, MAR, 2018 23:10:07

Middle Channel / Full RB



Date: 14, MAR, 2018 23:10:20

Highest Channel / 1RB



Date: 14, MAR, 2018 23:11:22

Highest Channel / Full RB



Date: 14, MAR, 2018 23:11:07



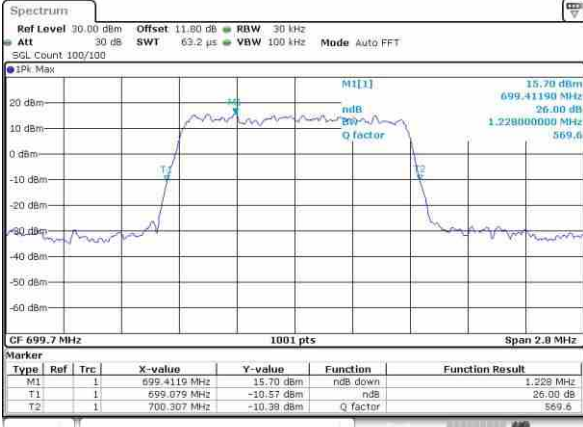
**26dB Bandwidth**

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
Lowest CH	1.23	1.22	3.05	3.02	4.99	4.90	9.81	9.85	-	-	-	-
Middle CH	1.22	1.23	3.02	3.05	4.92	5.00	9.79	9.71	-	-	-	-
Highest CH	1.23	1.24	2.99	3.01	4.83	4.91	9.83	9.71	-	-	-	-
Mode	LTE Band 12 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	1.24	-	2.97	-	4.87	-	9.85	-	-	-	-	-
Middle CH	1.24	-	3.01	-	4.96	-	9.79	-	-	-	-	-
Highest CH	1.22	-	3.01	-	4.92	-	9.67	-	-	-	-	-



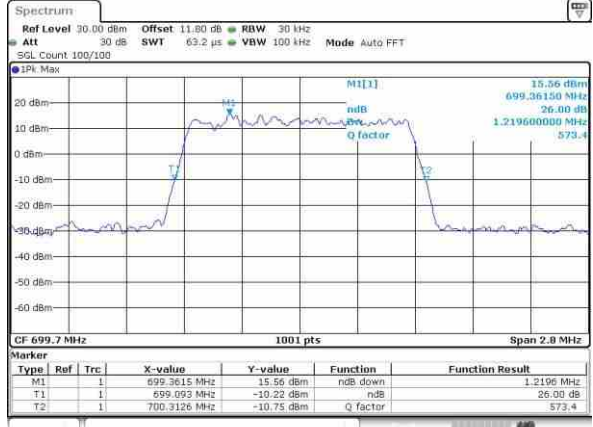
LTE Band 12

Lowest Channel / 1.4MHz / QPSK



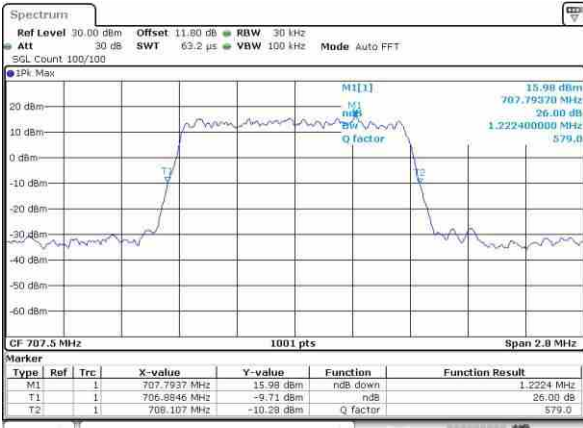
Date: 14, MAR, 2018 22:10:59

Lowest Channel / 1.4MHz / 16QAM



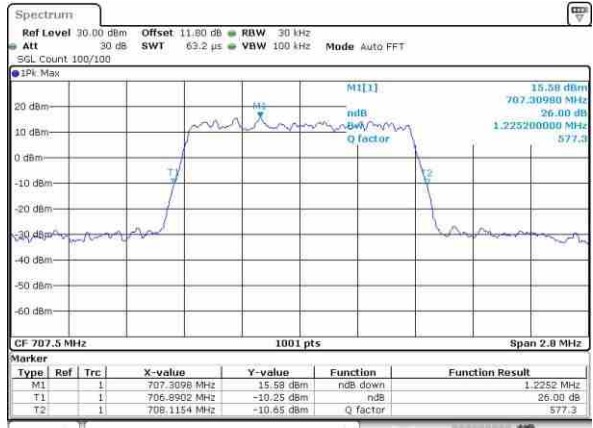
Date: 14, MAR, 2018 22:10:47

Middle Channel / 1.4MHz / QPSK



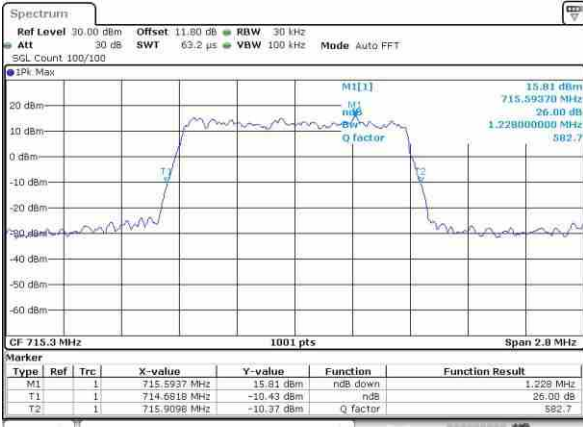
Date: 14, MAR, 2018 22:16:09

Middle Channel / 1.4MHz / 16QAM



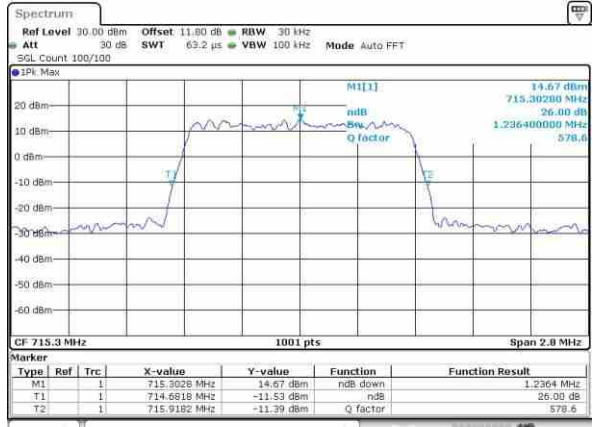
Date: 14, MAR, 2018 22:16:21

Highest Channel / 1.4MHz / QPSK



Date: 14, MAR, 2018 22:19:05

Highest Channel / 1.4MHz / 16QAM

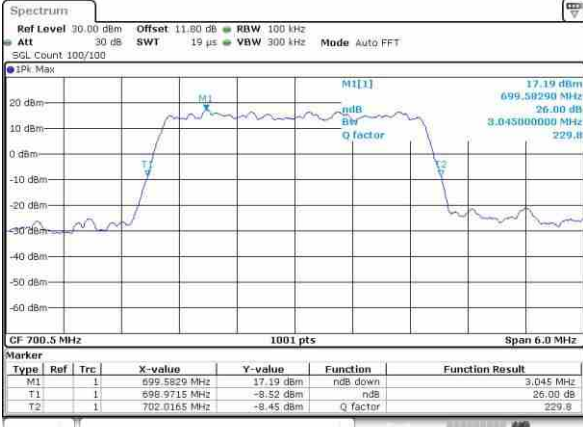


Date: 14, MAR, 2018 22:18:53



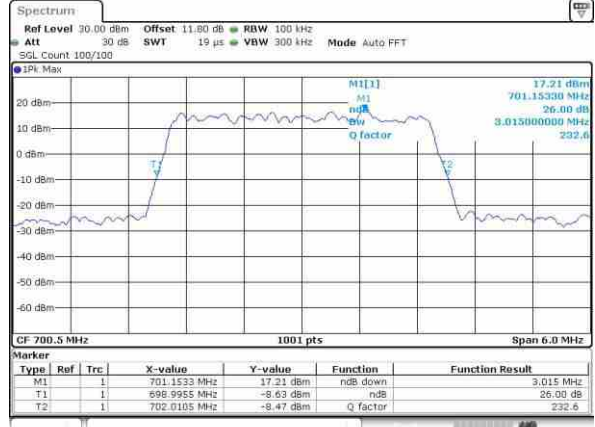
LTE Band 12

Lowest Channel / 3MHz / QPSK



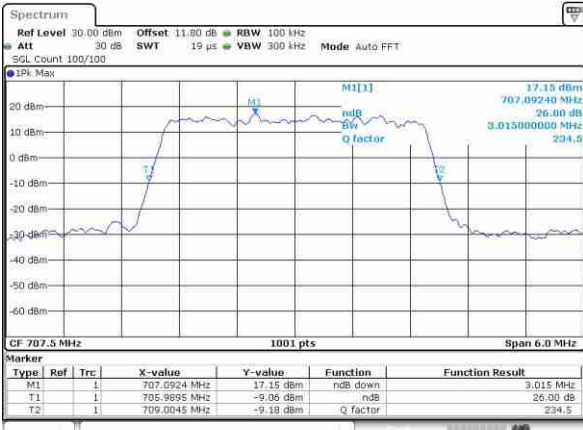
Date: 14, MAR, 2018 21:15:22

Lowest Channel / 3MHz / 16QAM



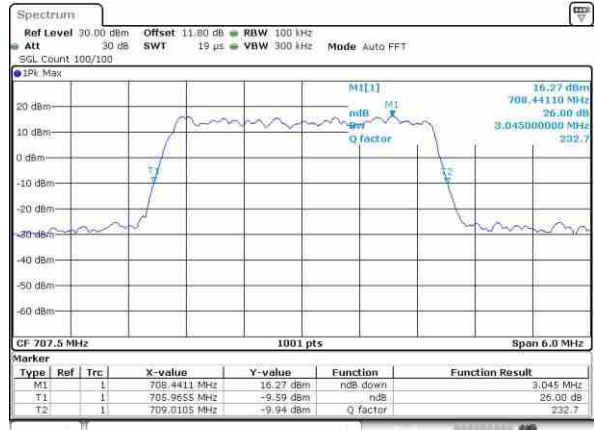
Date: 14, MAR, 2018 21:15:10

Middle Channel / 3MHz / QPSK



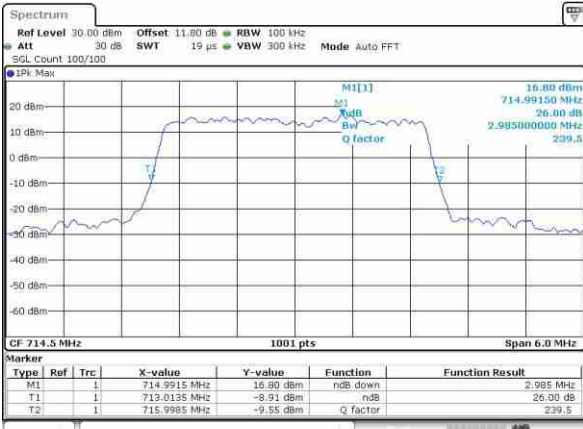
Date: 14, MAR, 2018 21:22:32

Middle Channel / 3MHz / 16QAM



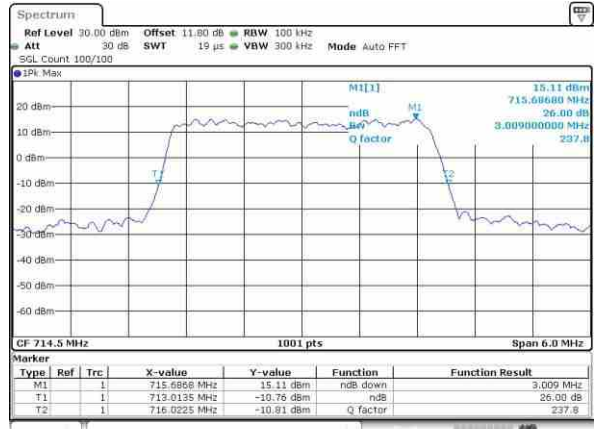
Date: 14, MAR, 2018 21:22:44

Highest Channel / 3MHz / QPSK



Date: 14, MAR, 2018 21:25:29

Highest Channel / 3MHz / 16QAM

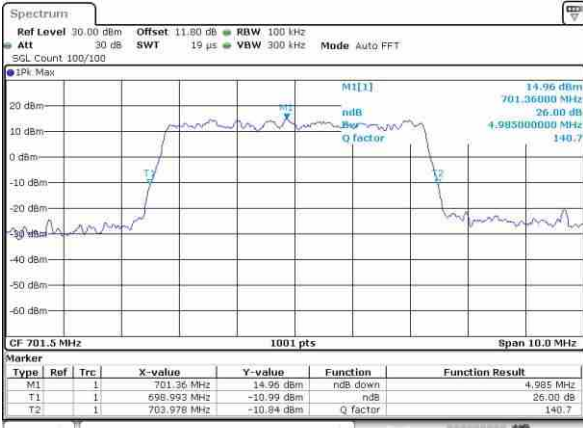


Date: 14, MAR, 2018 21:25:17



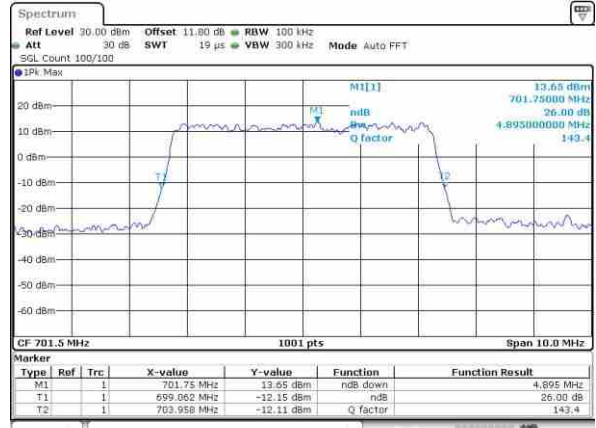
LTE Band 12

Lowest Channel / 5MHz / QPSK



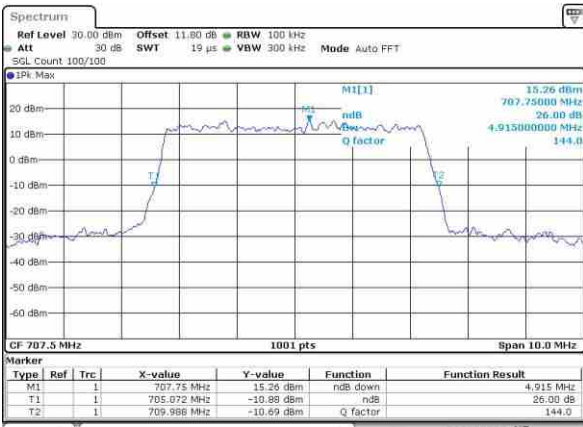
Date: 14, MAR, 2018 21:32:49

Lowest Channel / 5MHz / 16QAM



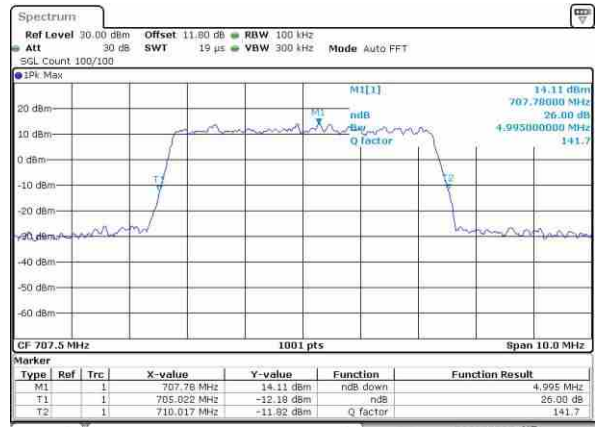
Date: 14, MAR, 2018 21:32:38

Middle Channel / 5MHz / QPSK



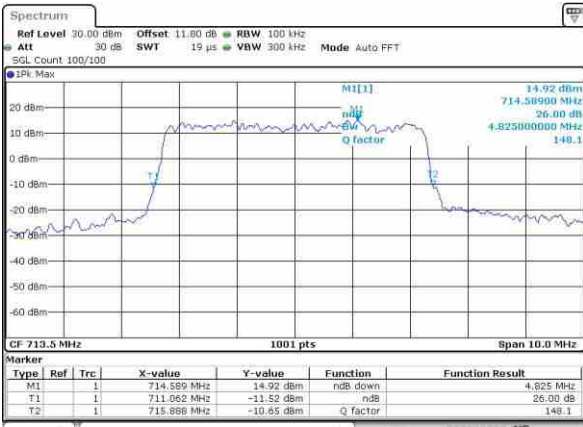
Date: 14, MAR, 2018 21:33:59

Middle Channel / 5MHz / 16QAM



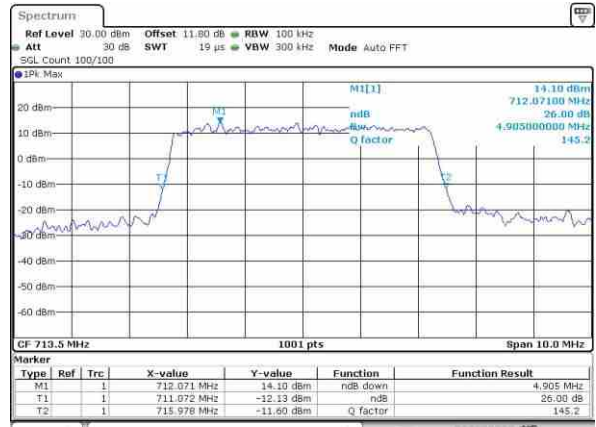
Date: 14, MAR, 2018 21:40:11

Highest Channel / 5MHz / QPSK



Date: 14, MAR, 2018 21:42:55

Highest Channel / 5MHz / 16QAM

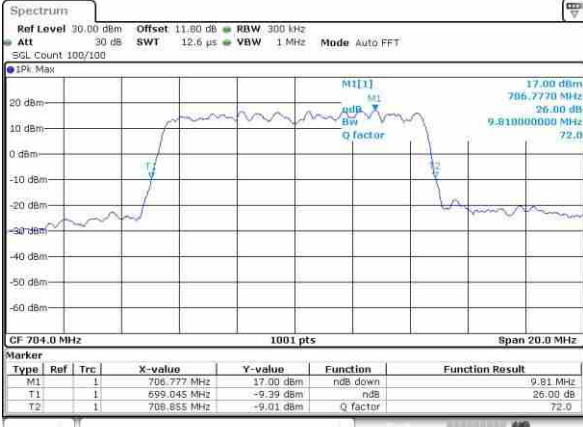


Date: 14, MAR, 2018 21:42:42



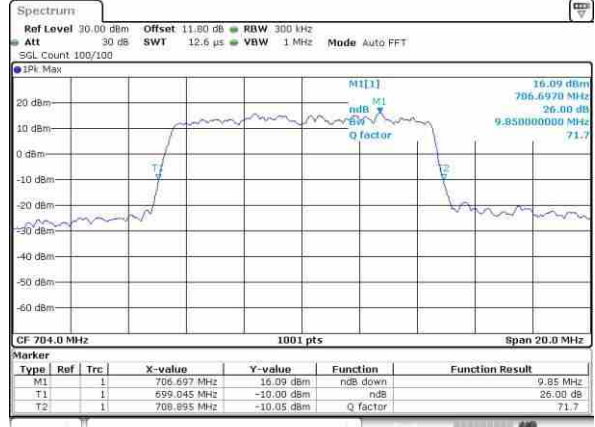
LTE Band 12

Lowest Channel / 10MHz / QPSK



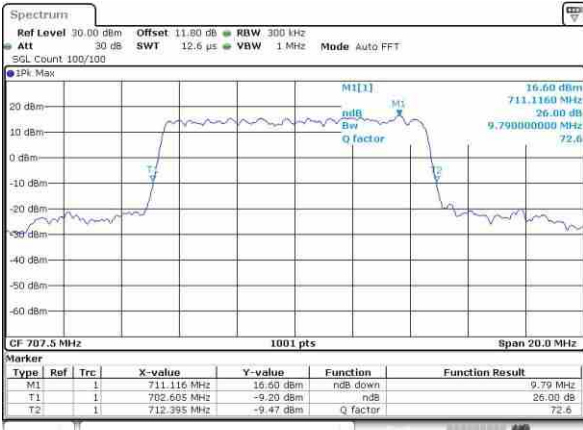
Date: 14, MAR, 2018 21:59:16

Lowest Channel / 10MHz / 16QAM



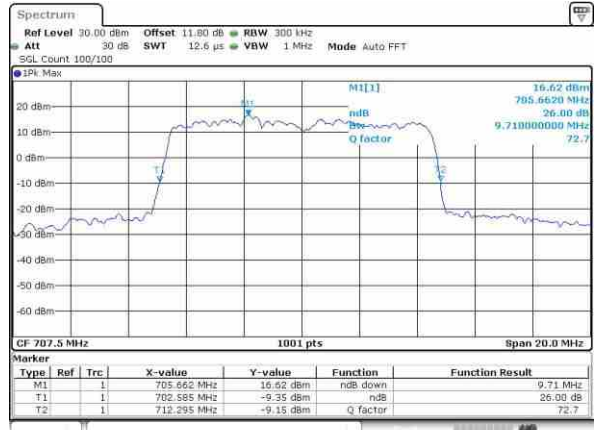
Date: 14, MAR, 2018 21:59:08

Middle Channel / 10MHz / QPSK



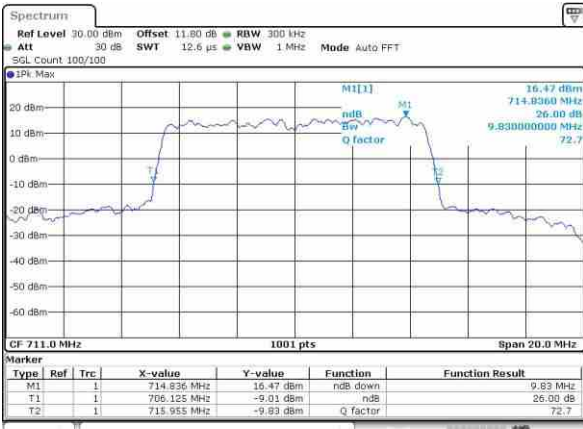
Date: 14, MAR, 2018 21:57:25

Middle Channel / 10MHz / 16QAM



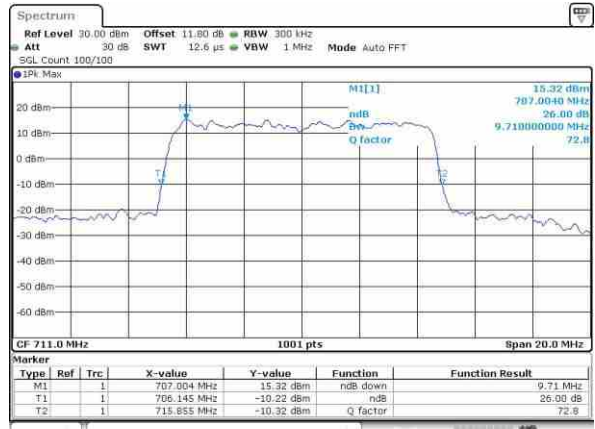
Date: 14, MAR, 2018 21:57:37

Highest Channel / 10MHz / QPSK



Date: 14, MAR, 2018 22:00:21

Highest Channel / 10MHz / 16QAM



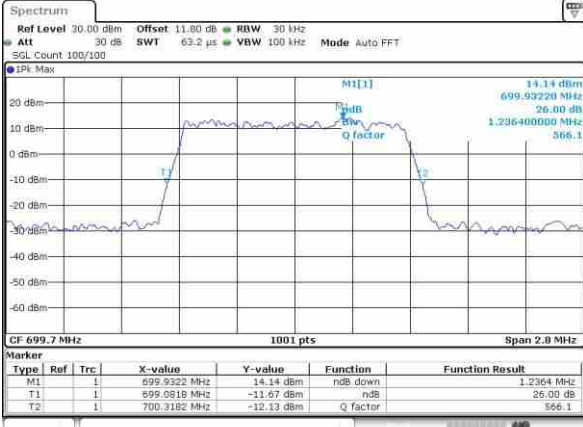
Date: 14, MAR, 2018 22:00:09





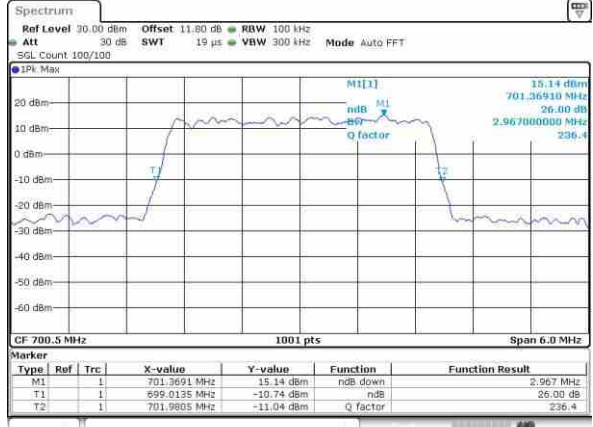
LTE Band 12

Lowest Channel / 1.4MHz / 64QAM



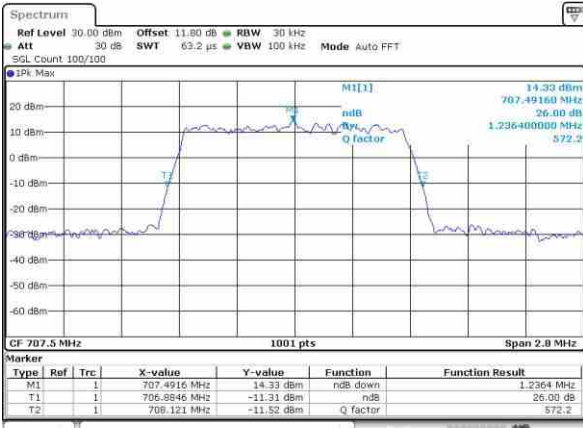
Date: 14, MAR, 2018 23:06:18

Lowest Channel / 3MHz / 64QAM



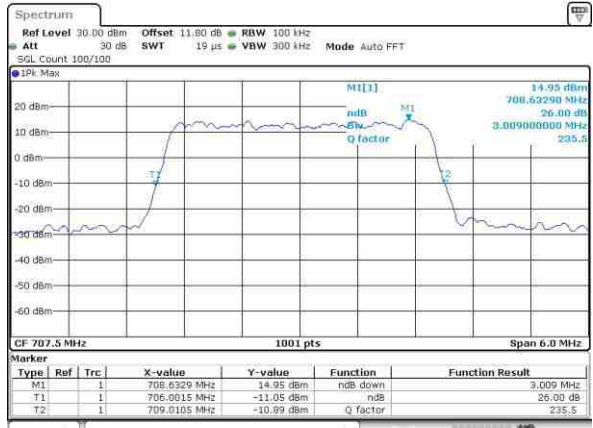
Date: 14, MAR, 2018 22:34:07

Middle Channel / 1.4MHz / 64QAM



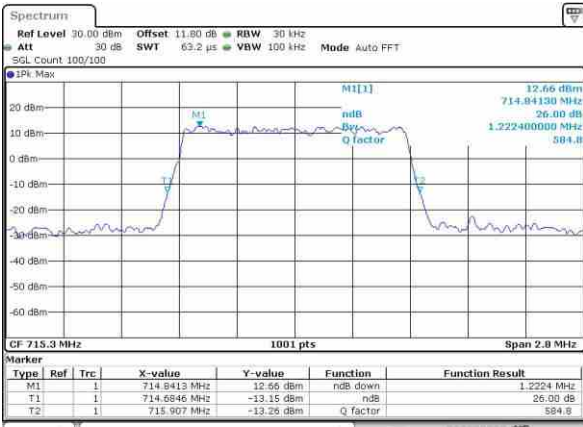
Date: 14, MAR, 2018 23:03:59

Middle Channel / 3MHz / 64QAM



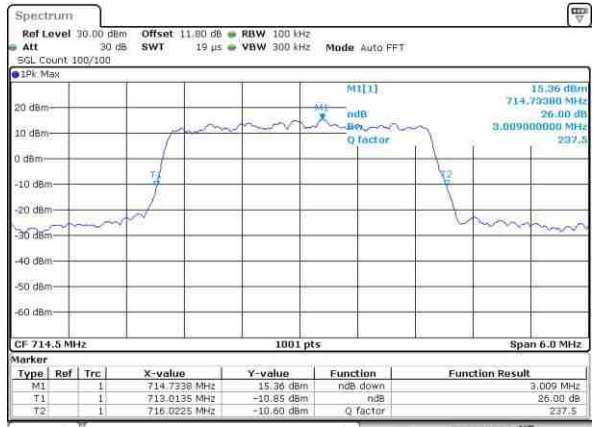
Date: 14, MAR, 2018 22:37:48

Highest Channel / 1.4MHz / 64QAM



Date: 14, MAR, 2018 23:05:21

Highest Channel / 3MHz / 64QAM

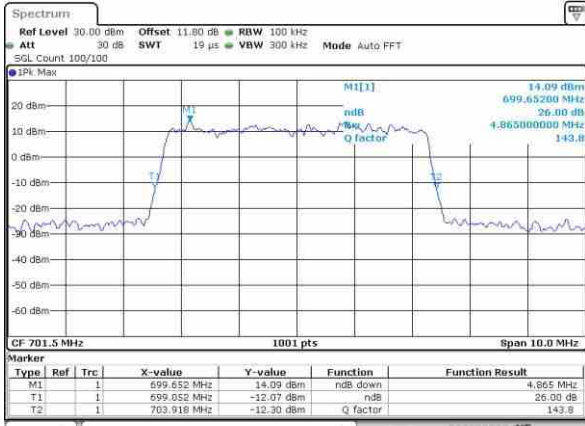


Date: 14, MAR, 2018 22:39:10



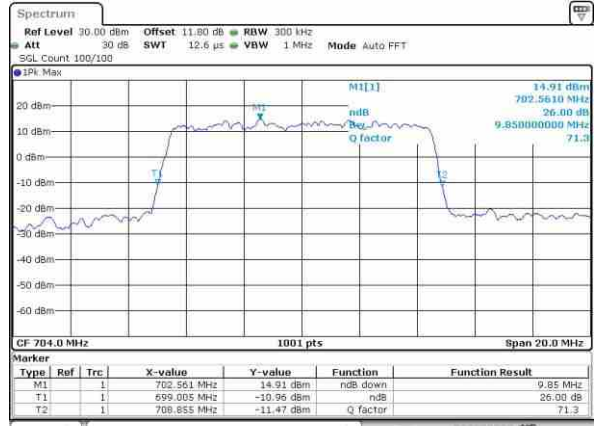
LTE Band 12

Lowest Channel / 5MHz / 64QAM



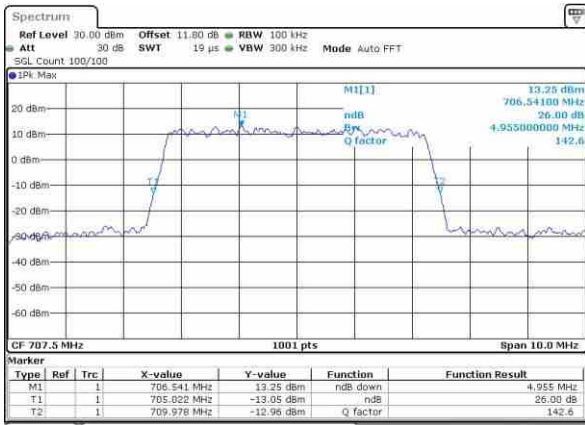
Date: 14, MAR, 2018 22:42:53

Lowest Channel / 10MHz / 64QAM



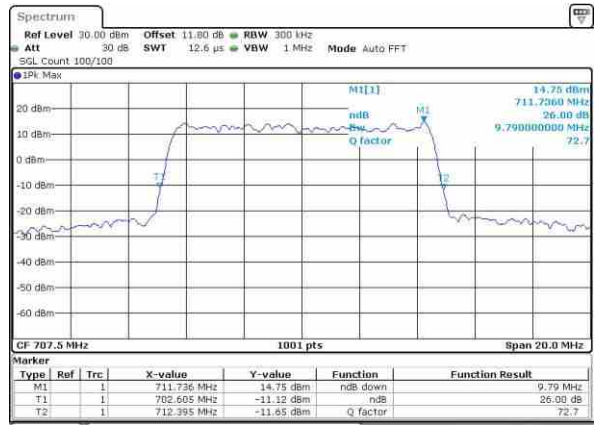
Date: 14, MAR, 2018 22:51:35

Middle Channel / 5MHz / 64QAM



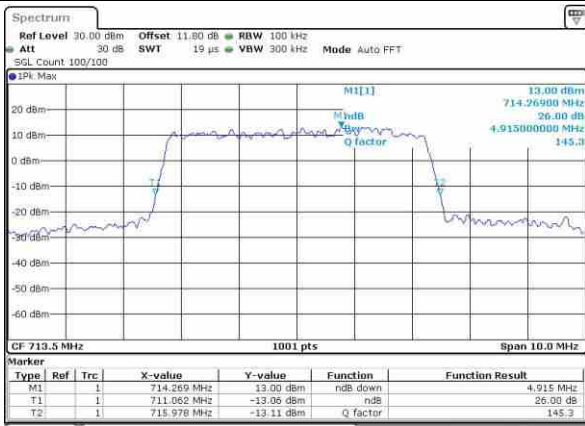
Date: 14, MAR, 2018 22:46:32

Middle Channel / 10MHz / 64QAM



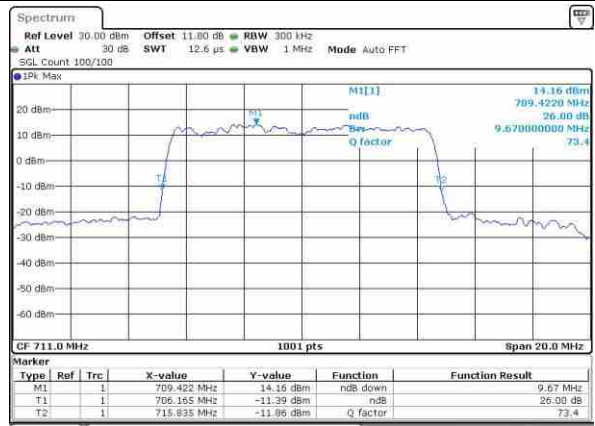
Date: 14, MAR, 2018 22:55:16

Highest Channel / 5MHz / 64QAM



Date: 14, MAR, 2018 22:47:54

Highest Channel / 10MHz / 64QAM



Date: 14, MAR, 2018 22:56:38



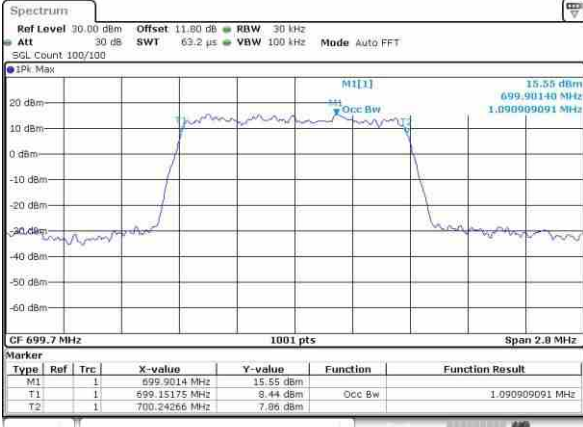
Occupied Bandwidth

Mode	LTE Band 12 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	1.09	1.1	2.72	2.73	4.51	4.49	9.05	8.93	-	-	-	-
Middle CH	1.09	1.09	2.7	2.72	4.48	4.5	9.07	9.07	-	-	-	-
Highest CH	1.09	1.09	2.73	2.72	4.47	4.48	9.01	9.03	-	-	-	-
Mode	LTE Band 12 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	1.24	-	2.97	-	4.87	-	9.85	-	-	-	-	-
Middle CH	1.24	-	3.01	-	4.96	-	9.79	-	-	-	-	-
Highest CH	1.22	-	3.01	-	4.92	-	9.67	-	-	-	-	-



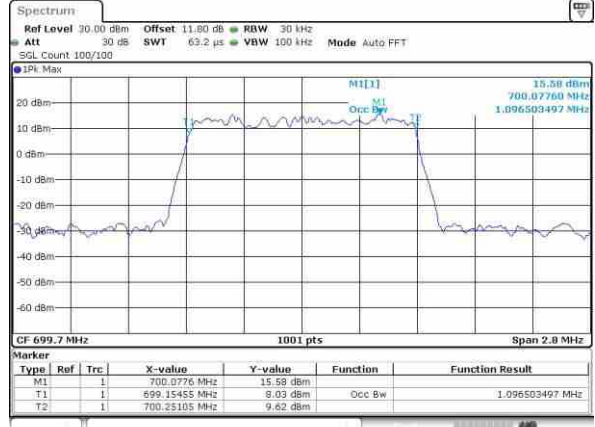
LTE Band 12

Lowest Channel / 1.4MHz / QPSK



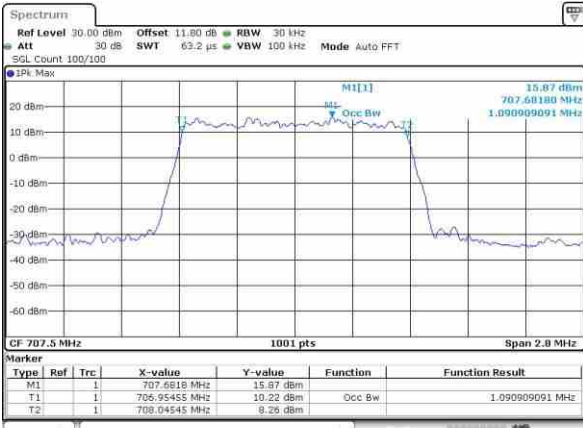
Date: 14, MAR, 2018 22:10:24

Lowest Channel / 1.4MHz / 16QAM



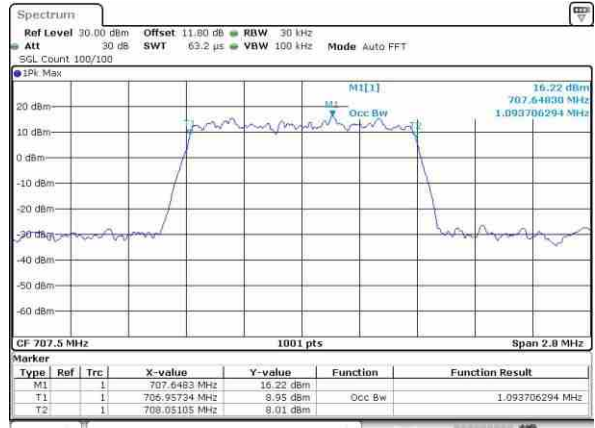
Date: 14, MAR, 2018 22:10:35

Middle Channel / 1.4MHz / QPSK



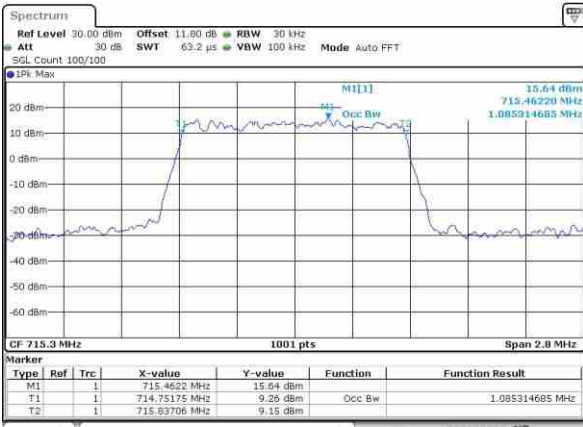
Date: 14, MAR, 2018 22:15:57

Middle Channel / 1.4MHz / 16QAM



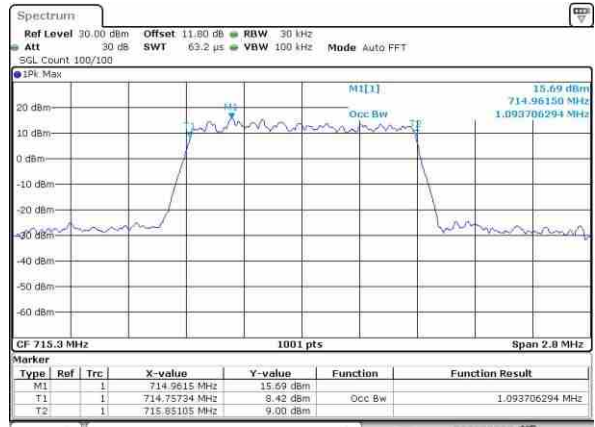
Date: 14, MAR, 2018 22:15:45

Highest Channel / 1.4MHz / QPSK



Date: 14, MAR, 2018 22:18:29

Highest Channel / 1.4MHz / 16QAM

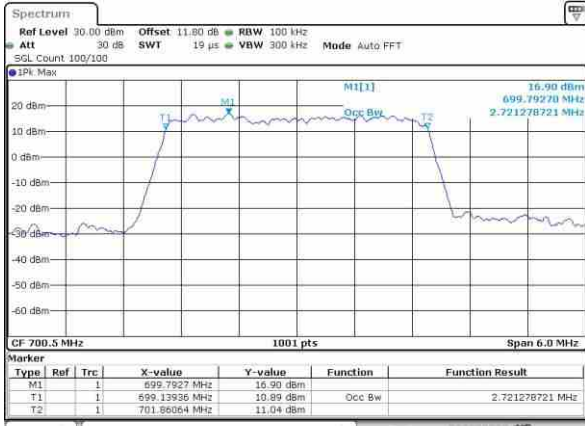


Date: 14, MAR, 2018 22:18:41



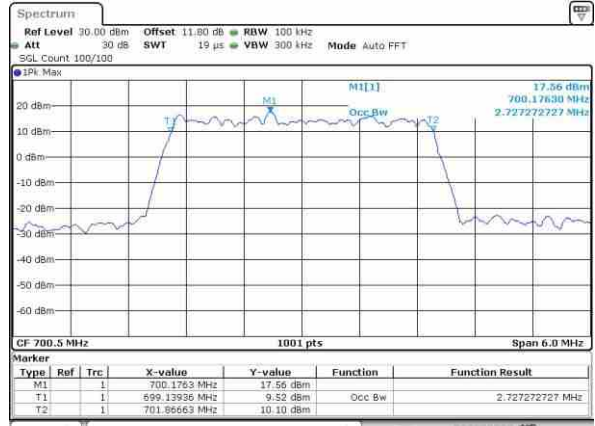
LTE Band 12

Lowest Channel / 3MHz / QPSK



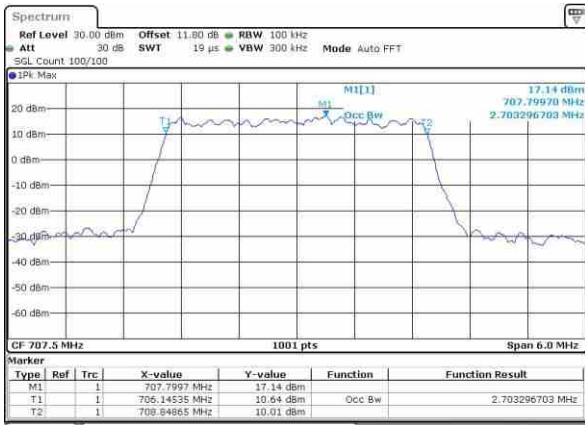
Date: 14, MAR, 2018 21:14:47

Lowest Channel / 3MHz / 16QAM



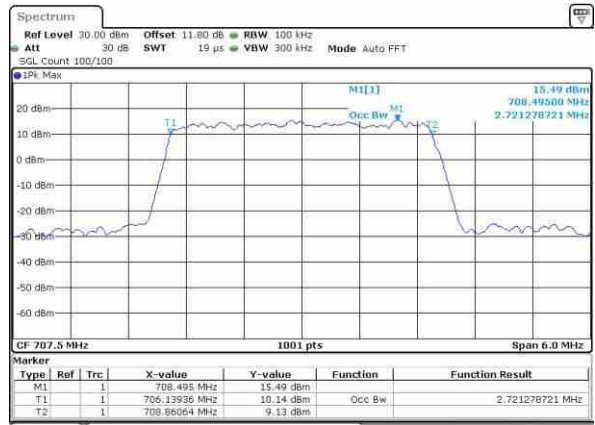
Date: 14, MAR, 2018 21:14:59

Middle Channel / 3MHz / QPSK



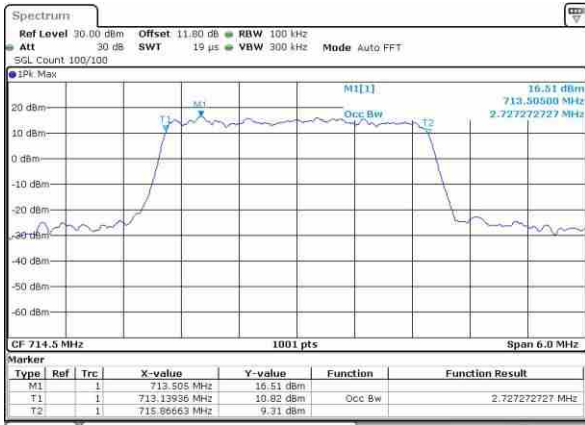
Date: 14, MAR, 2018 21:22:20

Middle Channel / 3MHz / 16QAM



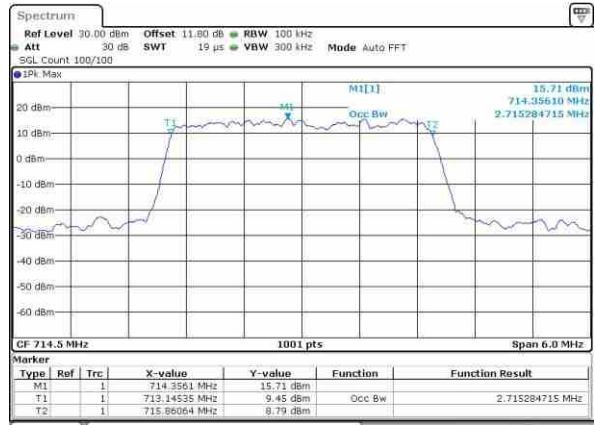
Date: 14, MAR, 2018 21:22:08

Highest Channel / 3MHz / QPSK



Date: 14, MAR, 2018 21:24:53

Highest Channel / 3MHz / 16QAM

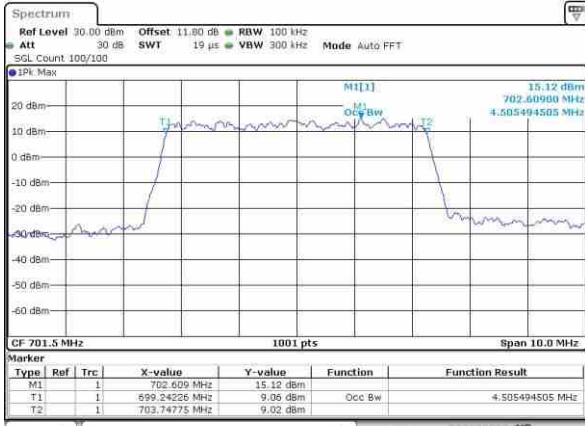


Date: 14, MAR, 2018 21:25:05



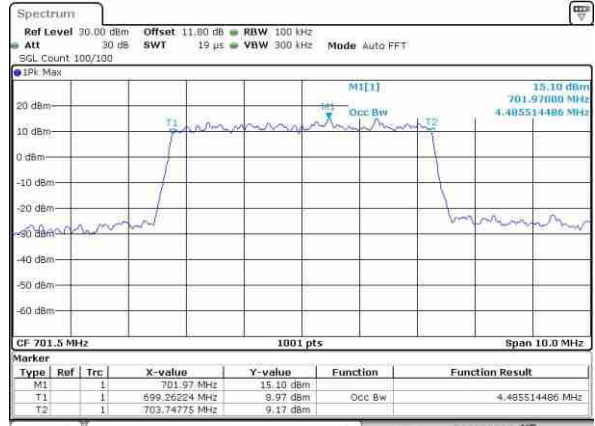
LTE Band 12

Lowest Channel / 5MHz / QPSK



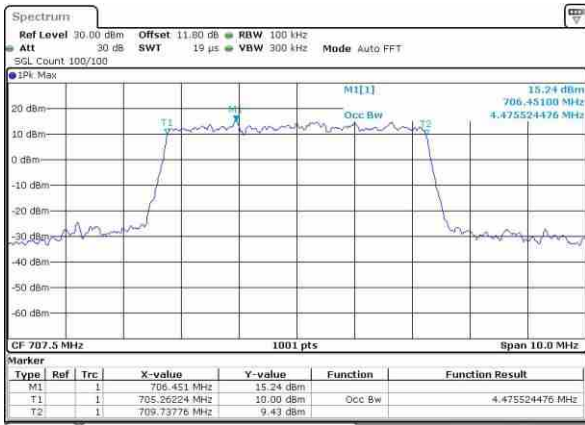
Date: 14, MAR, 2018 21:32:14

Lowest Channel / 5MHz / 16QAM



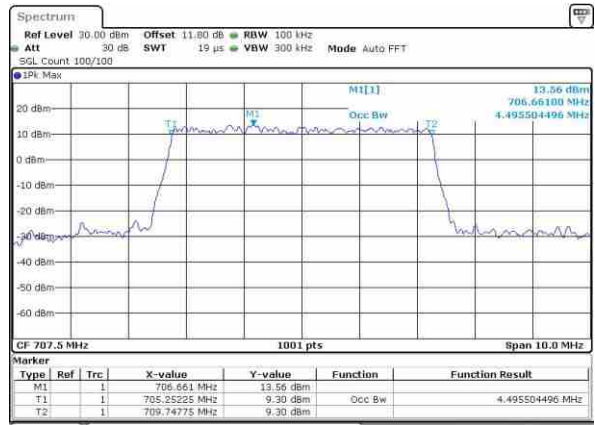
Date: 14, MAR, 2018 21:32:16

Middle Channel / 5MHz / QPSK



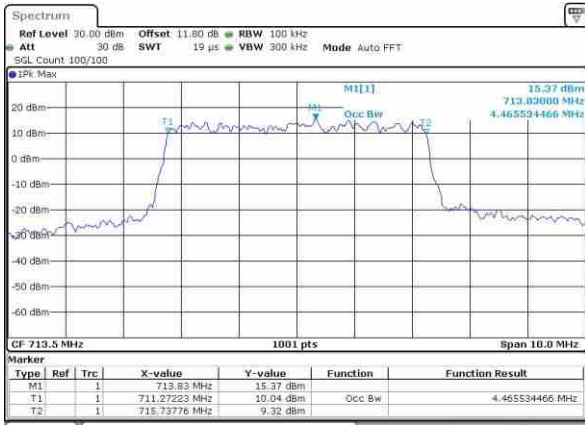
Date: 14, MAR, 2018 21:32:17

Middle Channel / 5MHz / 16QAM



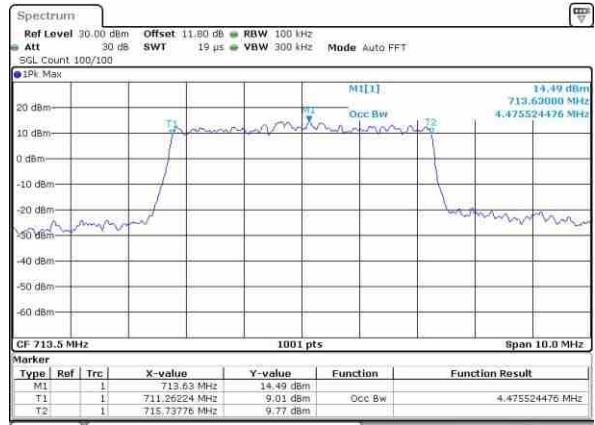
Date: 14, MAR, 2018 21:32:15

Highest Channel / 5MHz / QPSK



Date: 14, MAR, 2018 21:42:19

Highest Channel / 5MHz / 16QAM



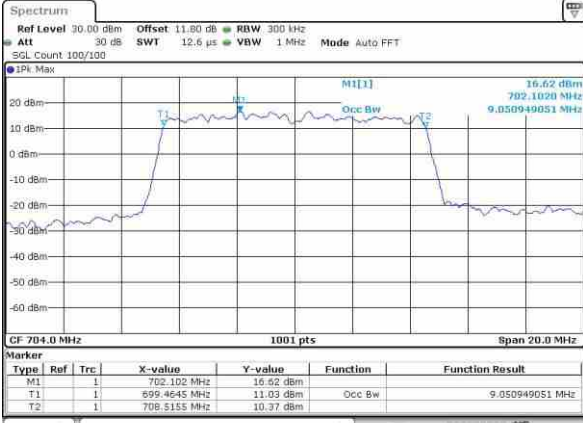
Date: 14, MAR, 2018 21:42:31





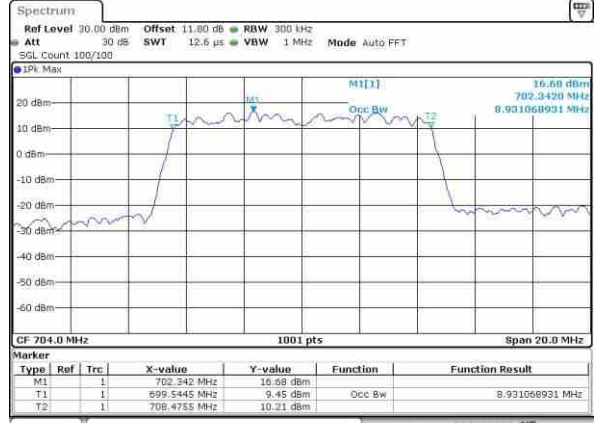
LTE Band 12

Lowest Channel / 10MHz / QPSK



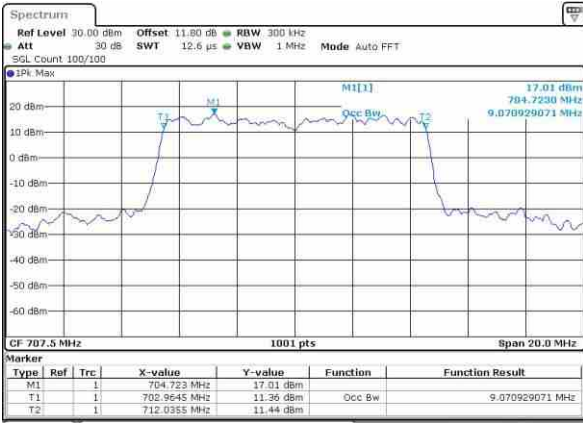
Date: 14, MAR, 2018 21:49:41

Lowest Channel / 10MHz / 16QAM



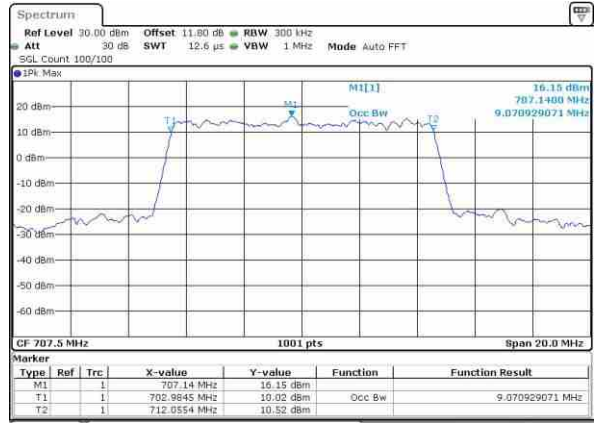
Date: 14, MAR, 2018 21:49:52

Middle Channel / 10MHz / QPSK



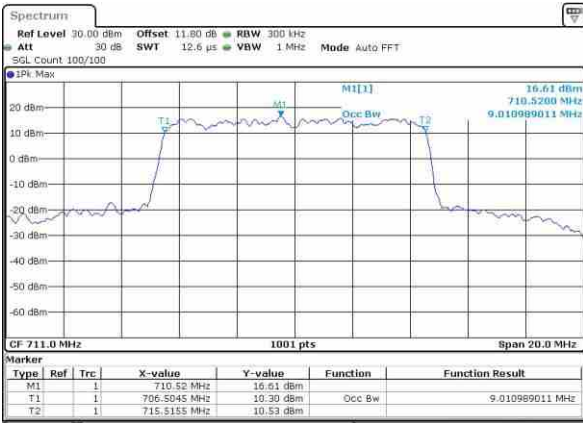
Date: 14, MAR, 2018 21:57:12

Middle Channel / 10MHz / 16QAM



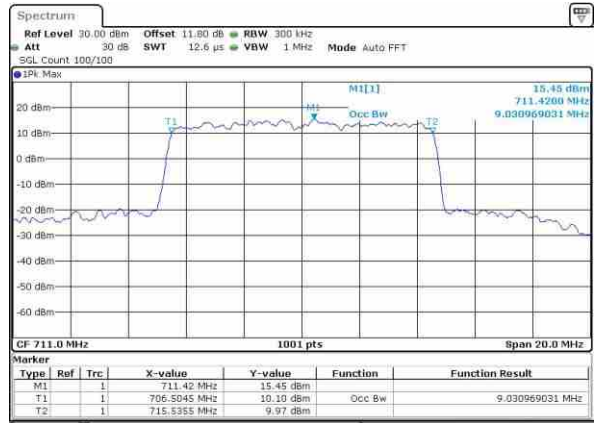
Date: 14, MAR, 2018 21:57:01

Highest Channel / 10MHz / QPSK



Date: 14, MAR, 2018 21:59:45

Highest Channel / 10MHz / 16QAM

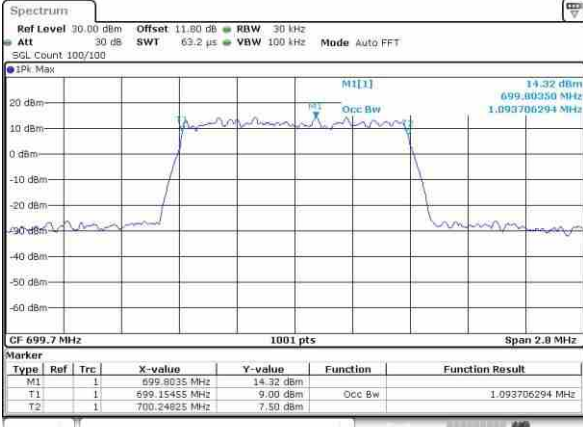


Date: 14, MAR, 2018 21:59:57



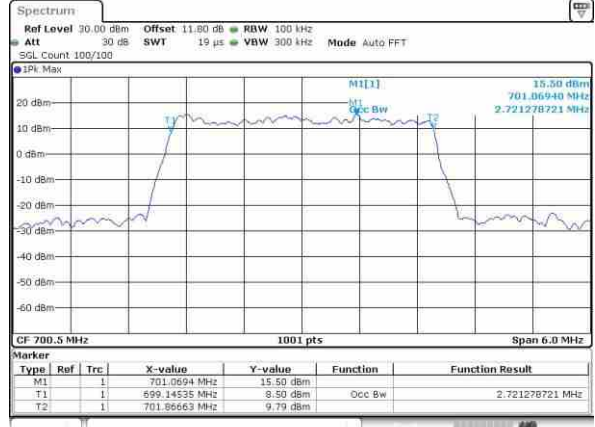
LTE Band 12

Lowest Channel / 1.4MHz / 64QAM



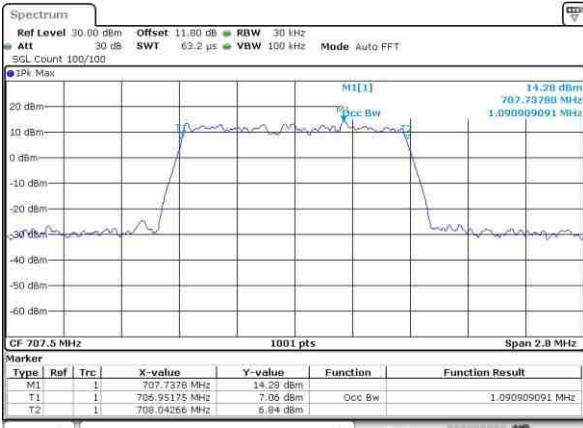
Date: 14, MAR, 2018 23:00:06

Lowest Channel / 3MHz / 64QAM



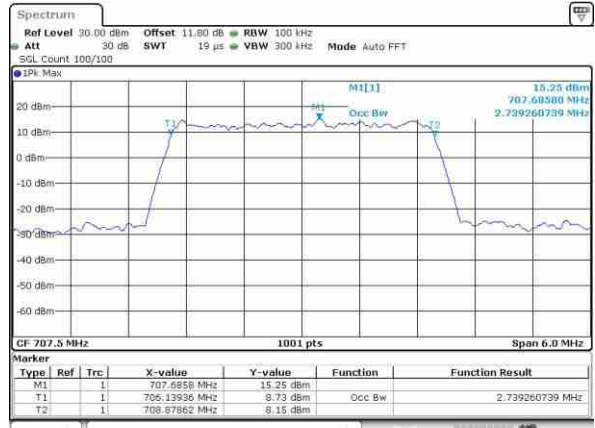
Date: 14, MAR, 2018 22:33:55

Middle Channel / 1.4MHz / 64QAM



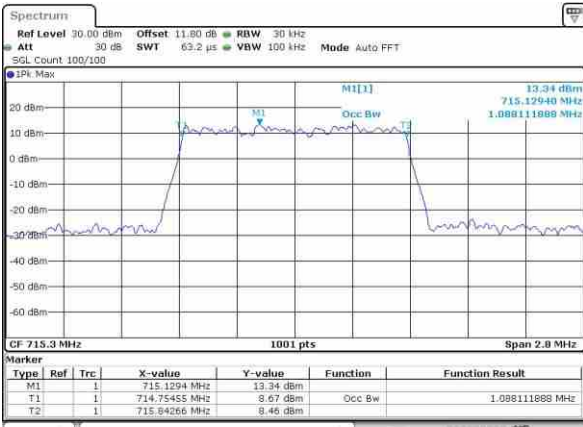
Date: 14, MAR, 2018 23:03:48

Middle Channel / 3MHz / 64QAM



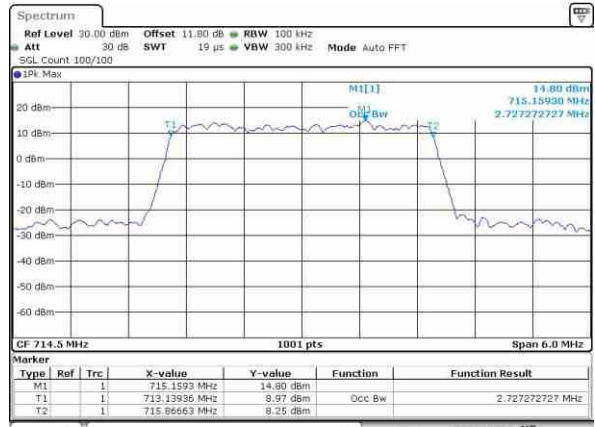
Date: 14, MAR, 2018 22:37:17

Highest Channel / 1.4MHz / 64QAM



Date: 14, MAR, 2018 23:05:09

Highest Channel / 3MHz / 64QAM

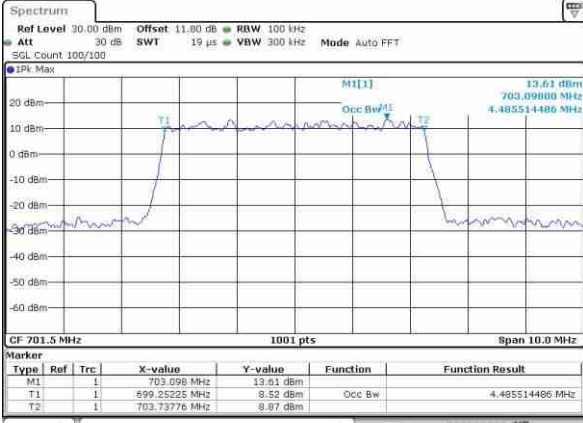


Date: 14, MAR, 2018 22:38:59



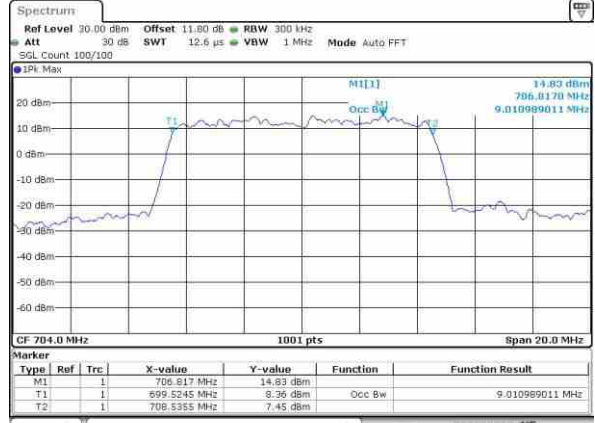
LTE Band 12

Lowest Channel / 5MHz / 64QAM



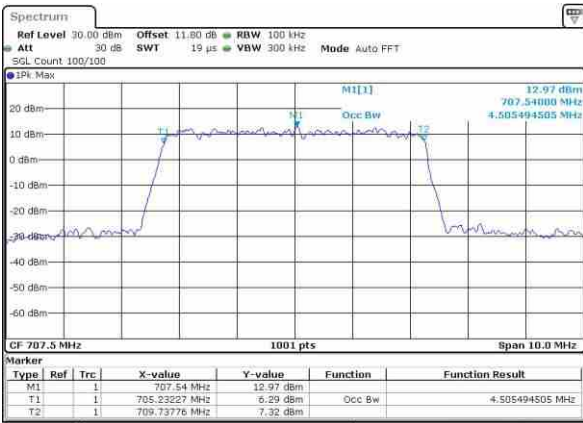
Date: 14, MAR, 2018 22:42:40

Lowest Channel / 10MHz / 64QAM



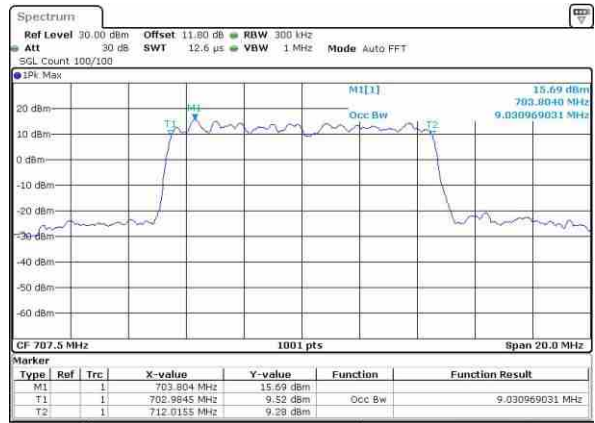
Date: 14, MAR, 2018 22:51:23

Middle Channel / 5MHz / 64QAM



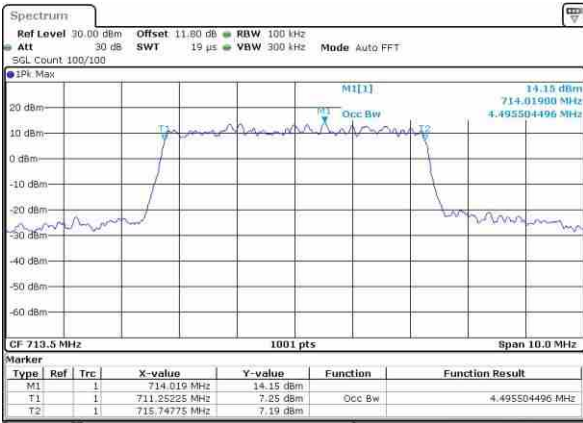
Date: 14, MAR, 2018 22:46:20

Middle Channel / 10MHz / 64QAM



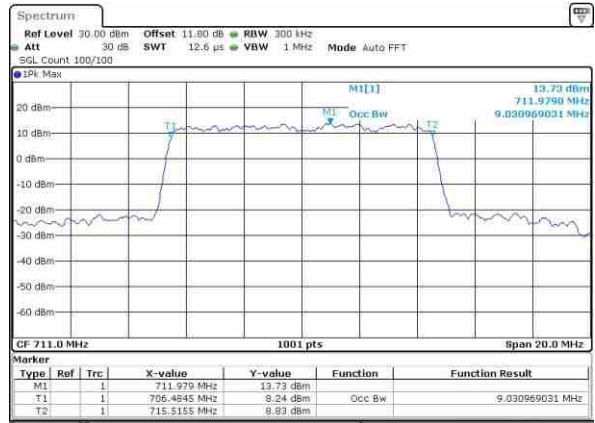
Date: 14, MAR, 2018 22:55:08

Highest Channel / 5MHz / 64QAM



Date: 14, MAR, 2018 22:47:42

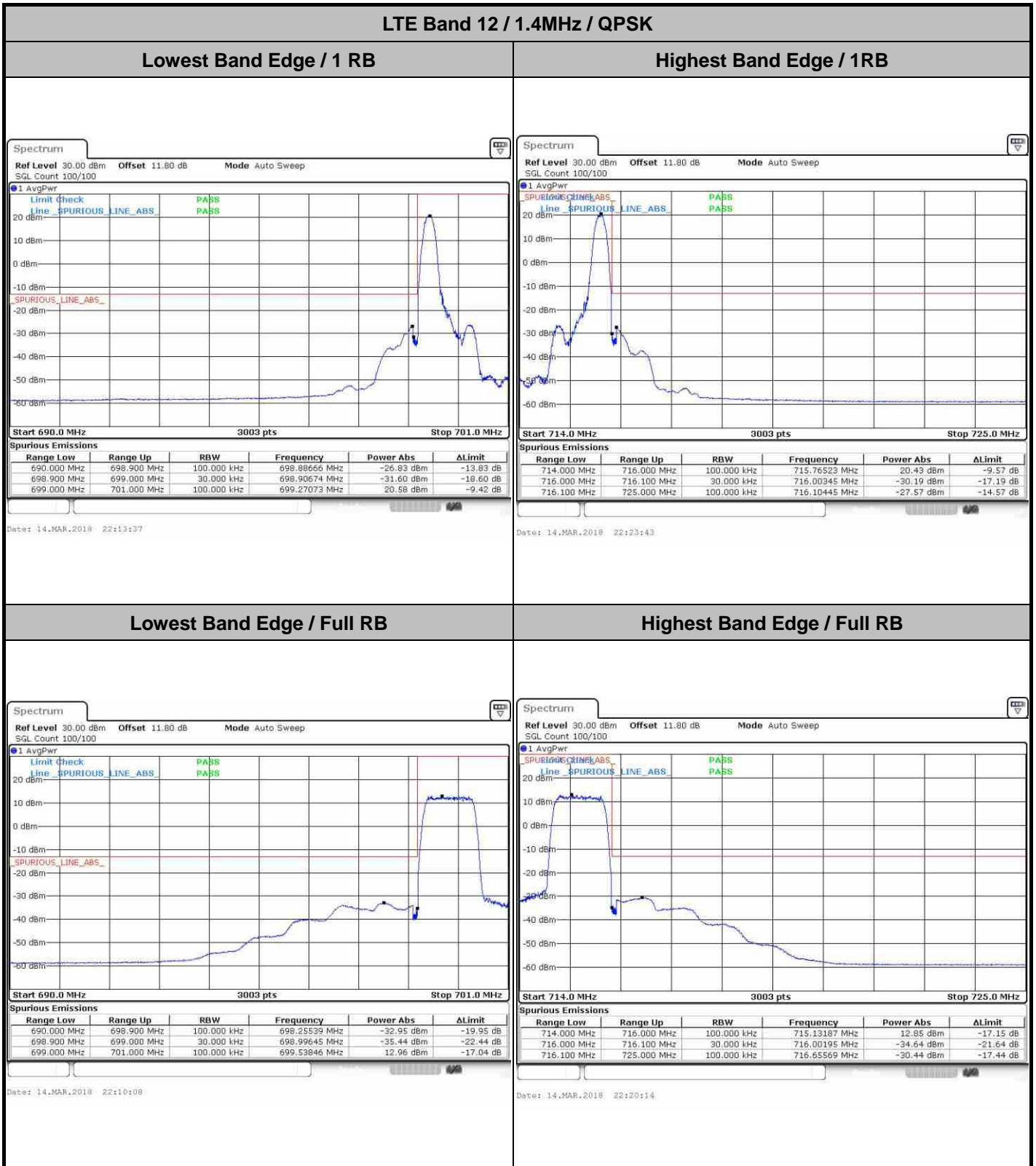
Highest Channel / 10MHz / 64QAM



Date: 14, MAR, 2018 22:56:26



# Conducted Band Edge





LTE Band 12 / 1.4MHz / 16QAM

Lowest Band Edge / 1 RB



Date: 14.MAR.2018 22:12:27

Highest Band Edge / 1 RB



Date: 14.MAR.2018 22:22:33

Lowest Band Edge / Full RB



Date: 14.MAR.2018 22:11:18

Highest Band Edge / Full RB



Date: 14.MAR.2018 22:21:24





LTE Band 12 / 1.4MHz / 64QAM

Lowest Band Edge / 1 RB



Date: 14.MAR.2018 23:02:37

Highest Band Edge / 1 RB



Date: 14.MAR.2018 23:07:40

Lowest Band Edge / Full RB



Date: 14.MAR.2018 23:01:28

Highest Band Edge / Full RB



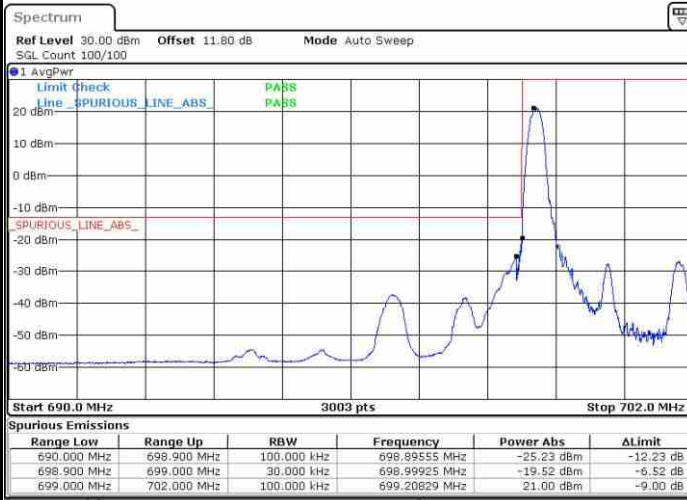
Date: 14.MAR.2018 23:06:31





LTE Band 12 / 3MHz / QPSK

Lowest Band Edge / 1RB



Date: 14.MAR.2018 21:20:00

Highest Band Edge / 1 RB



Date: 14.MAR.2018 21:30:06

Lowest Band Edge / Full RB



Date: 14.MAR.2018 21:16:32

Highest Band Edge / Full RB

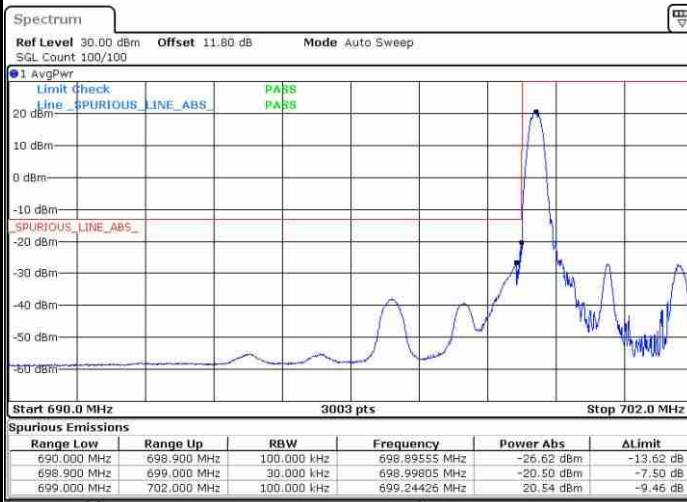


Date: 14.MAR.2018 21:26:38



LTE Band 12 / 3MHz / 16QAM

Lowest Band Edge / 1 RB



Date: 14.MAR.2018 21:18:51

Highest Band Edge / 1 RB



Date: 14.MAR.2018 21:28:57

Lowest Band Edge / Full RB



Date: 14.MAR.2018 21:17:41

Highest Band Edge / Full RB

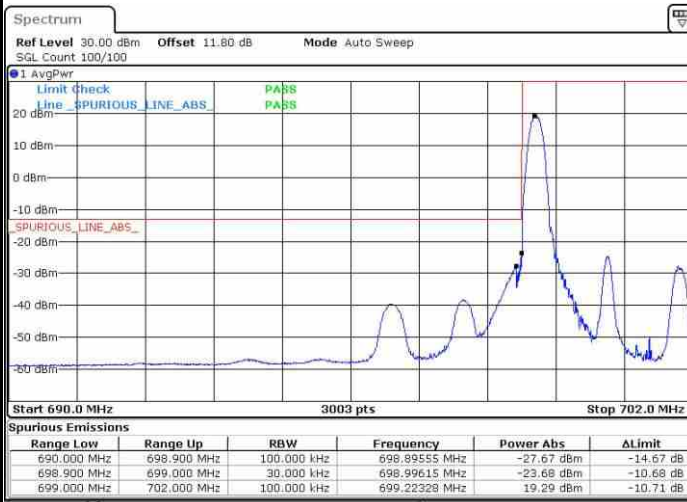


Date: 14.MAR.2018 21:27:48



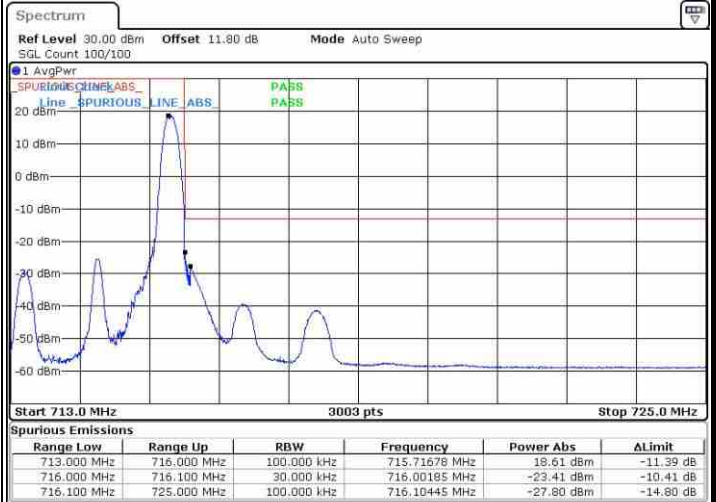
LTE Band 12 / 3MHz / 64QAM

Lowest Band Edge / 1 RB



Date: 14.MAR.2018 22:36:26

Highest Band Edge / 1 RB



Date: 14.MAR.2018 22:41:29

Lowest Band Edge / Full RB



Date: 14.MAR.2018 22:35:17

Highest Band Edge / Full RB

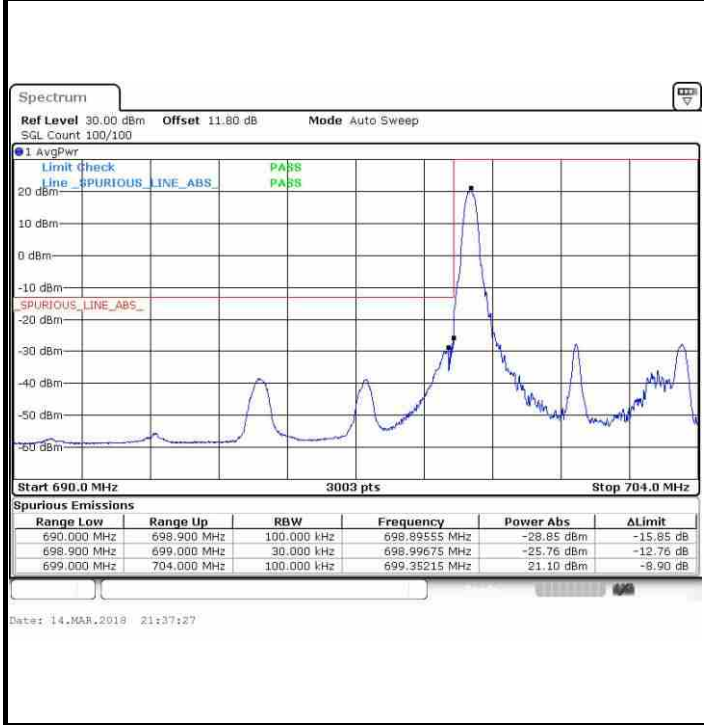


Date: 14.MAR.2018 22:40:20

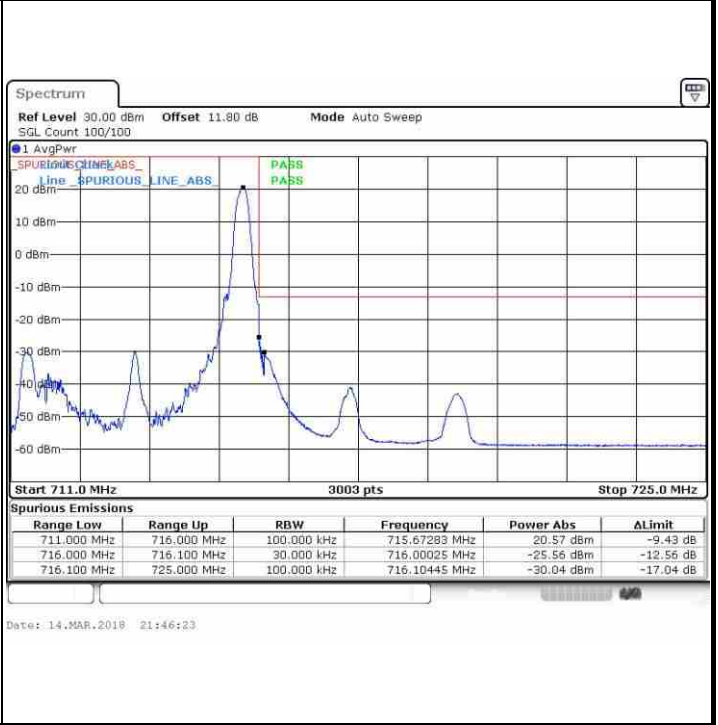


**LTE Band 12 / 5MHz / QPSK**

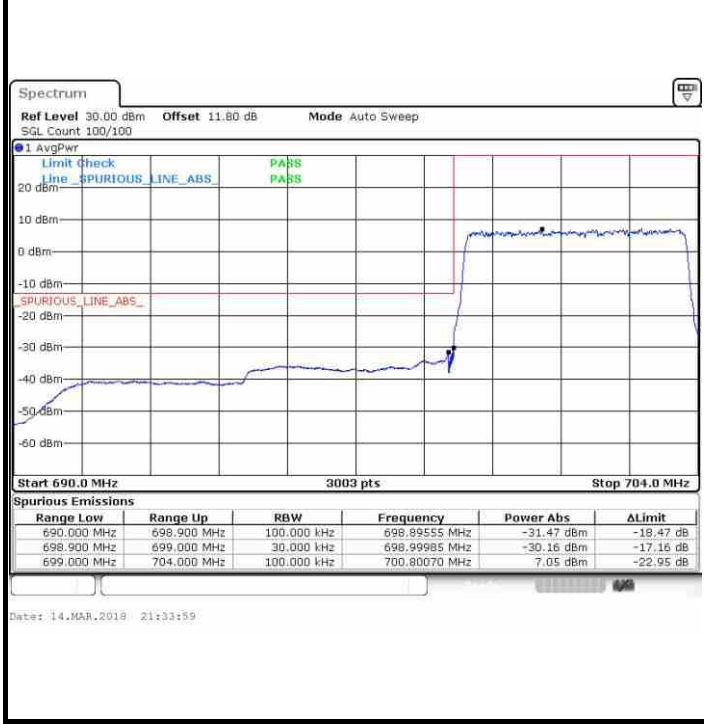
**Lowest Band Edge / 1 RB**



**Highest Band Edge / 1 RB**



**Lowest Band Edge / Full RB**



**Highest Band Edge / Full RB**

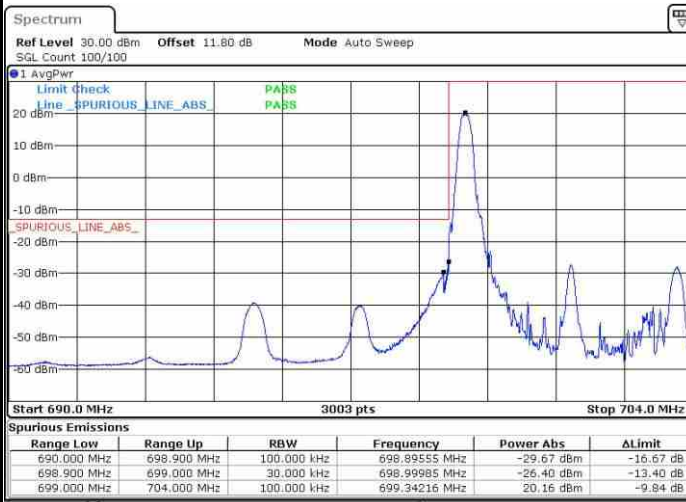




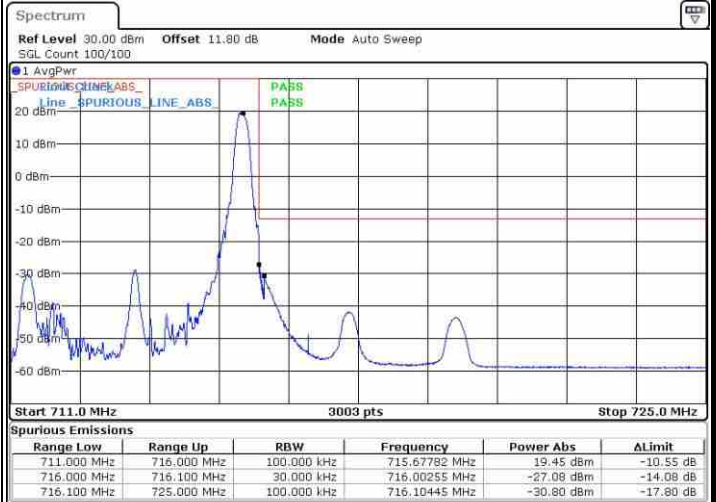


LTE Band 12 / 5MHz / 16QAM

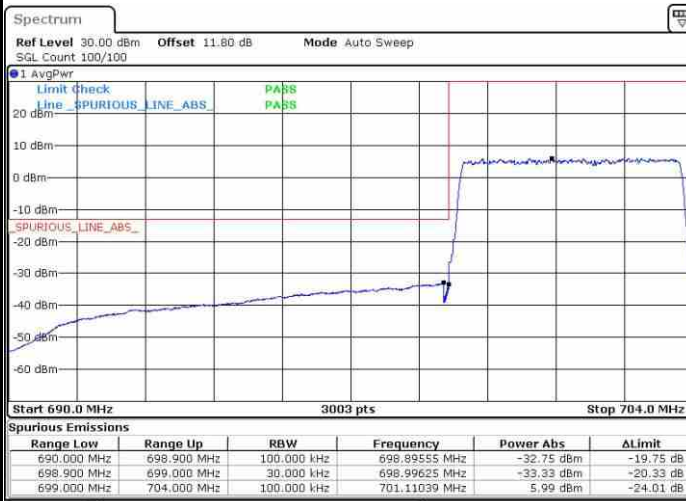
Lowest Band Edge / 1RB



Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



Highest Band Edge / Full RB

