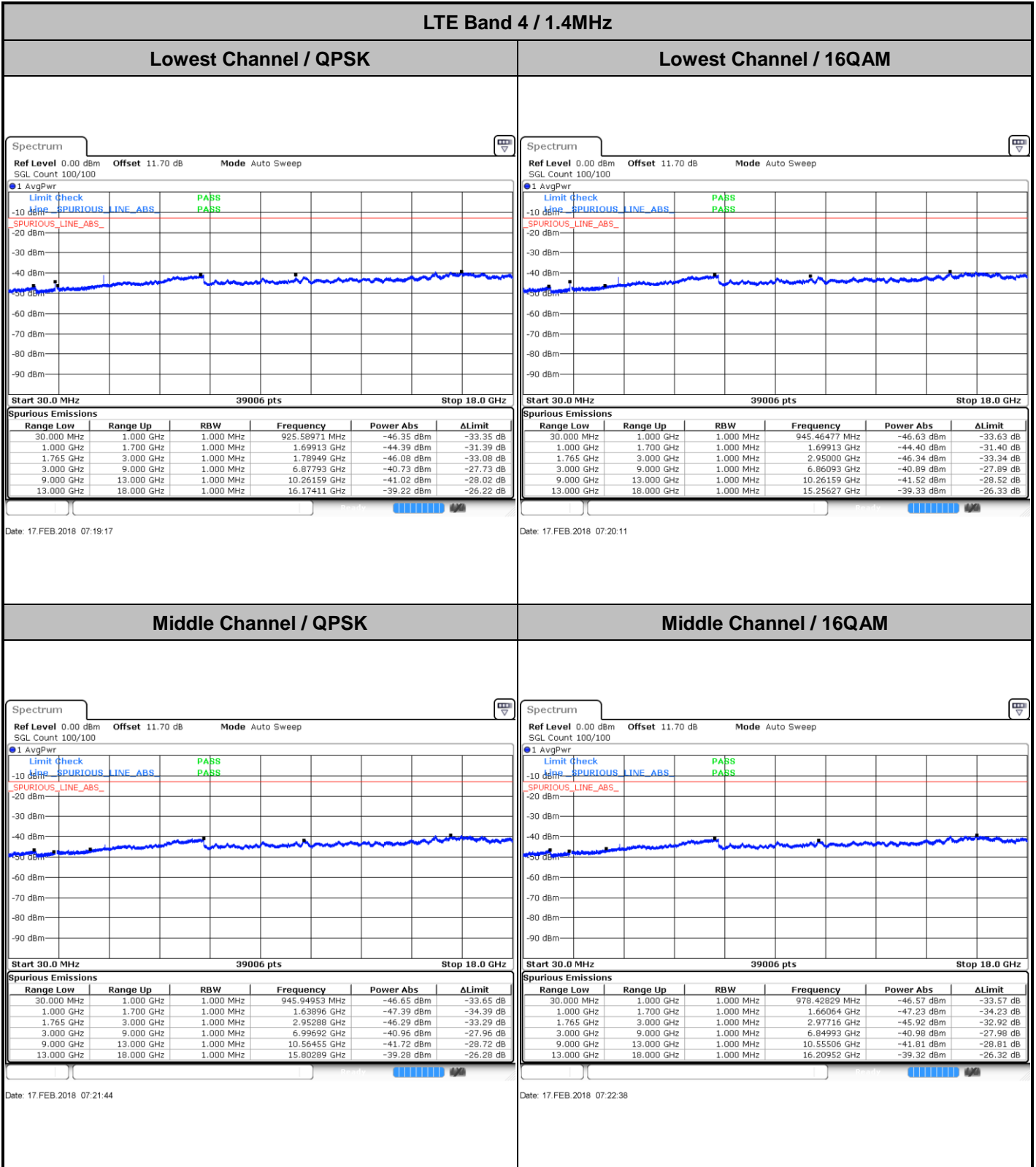




# Conducted Spurious Emission

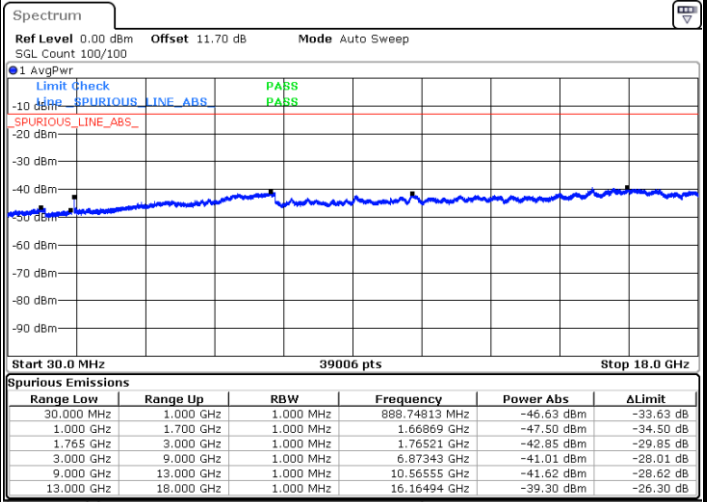
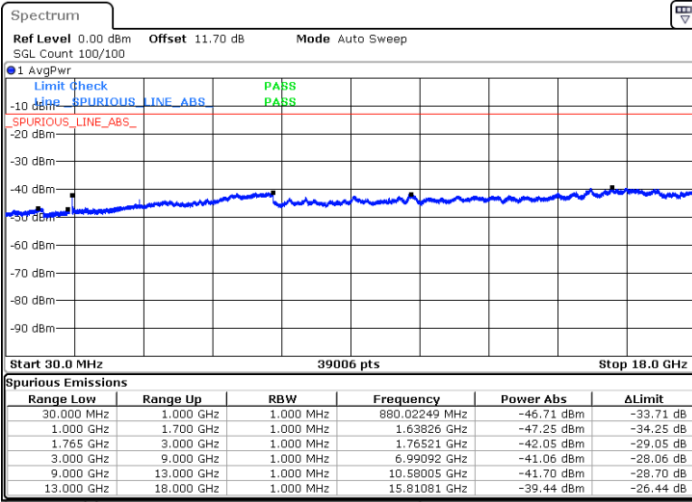




LTE Band 4 / 1.4MHz

Highest Channel / QPSK

Highest Channel / 16QAM



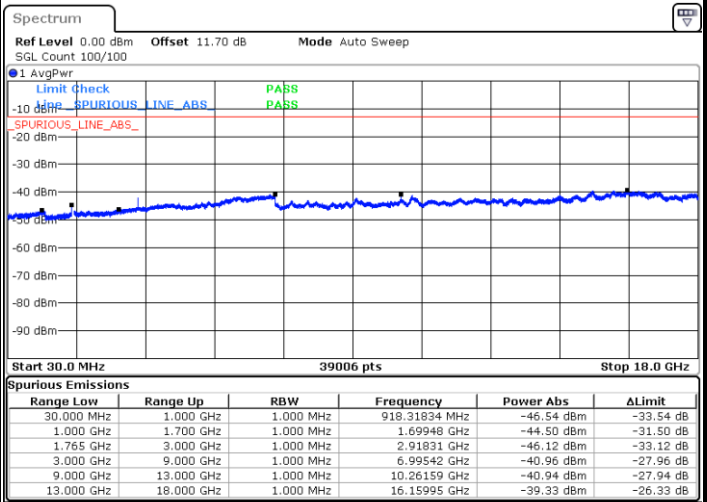
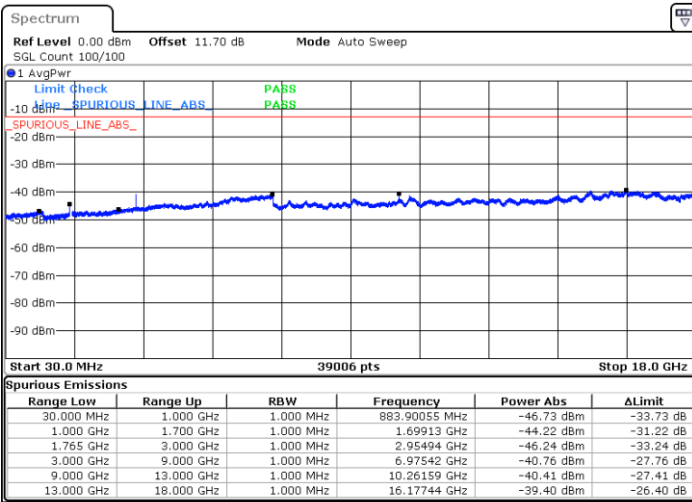
Date: 17.FEB 2018 07:28:40

Date: 17.FEB 2018 07:29:34

LTE Band 4 / 3MHz

Lowest Channel / QPSK

Lowest Channel / 16QAM



Date: 17.FEB 2018 05:57:43

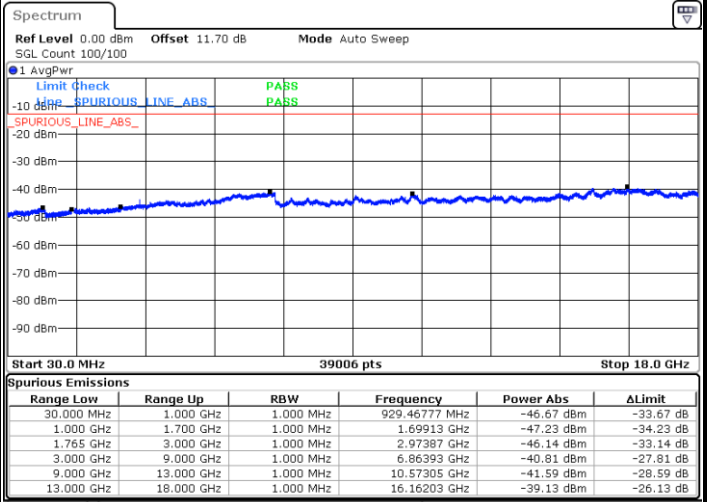
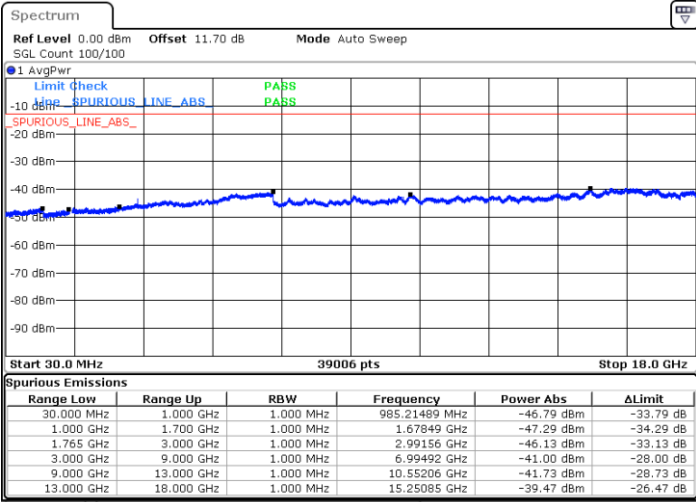
Date: 17.FEB 2018 05:58:37



LTE Band 4 / 3MHz

Middle Channel / QPSK

Middle Channel / 16QAM

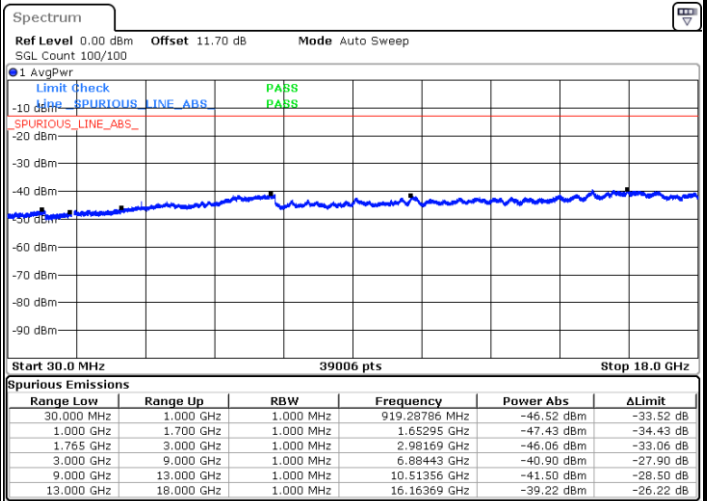
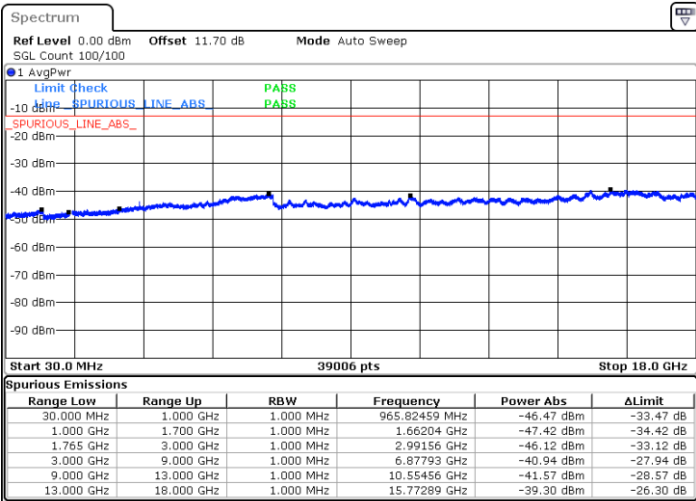


Date: 17.FEB.2018 06:00:10

Date: 17.FEB.2018 06:01:04

Highest Channel / QPSK

Highest Channel / 16QAM



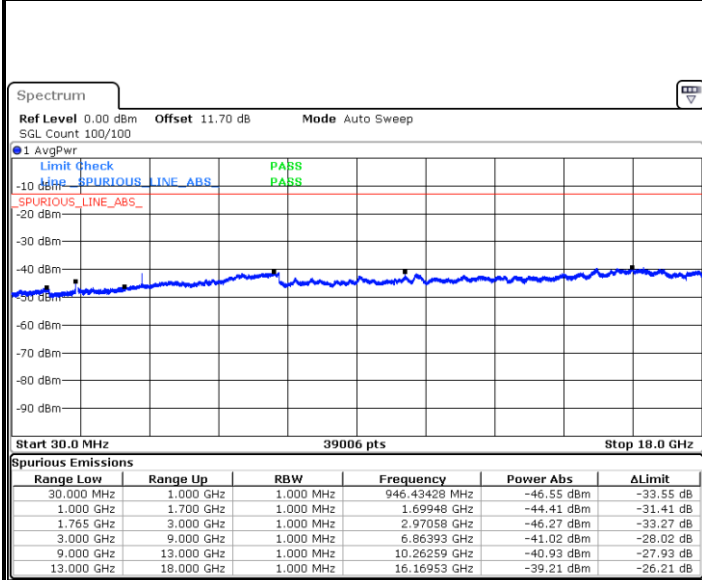
Date: 17.FEB.2018 06:07:06

Date: 17.FEB.2018 06:07:59



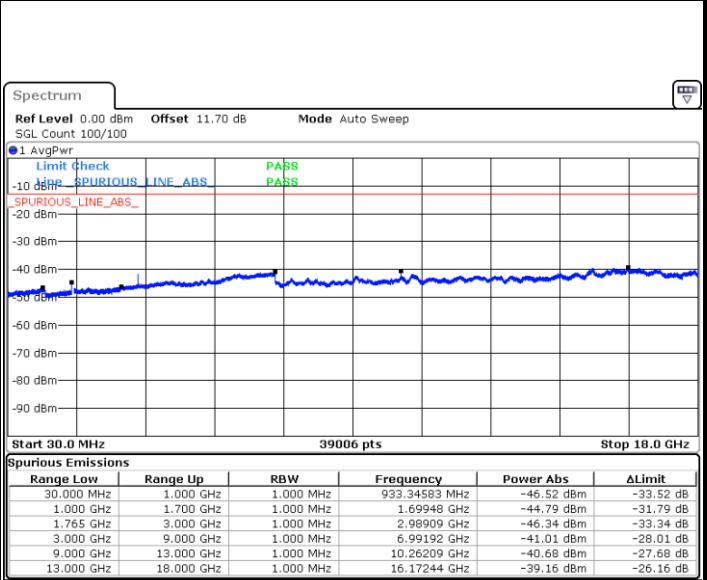
LTE Band 4 / 5MHz

Lowest Channel / QPSK



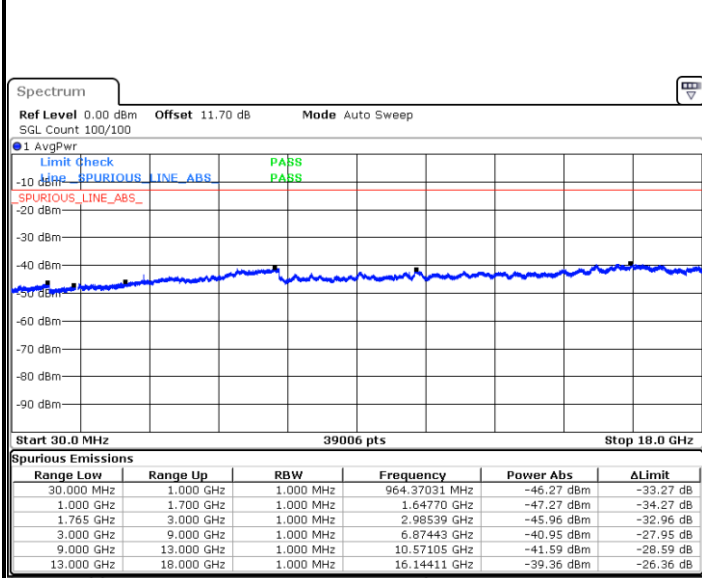
Date: 17.FEB.2018 06:14:02

Lowest Channel / 16QAM



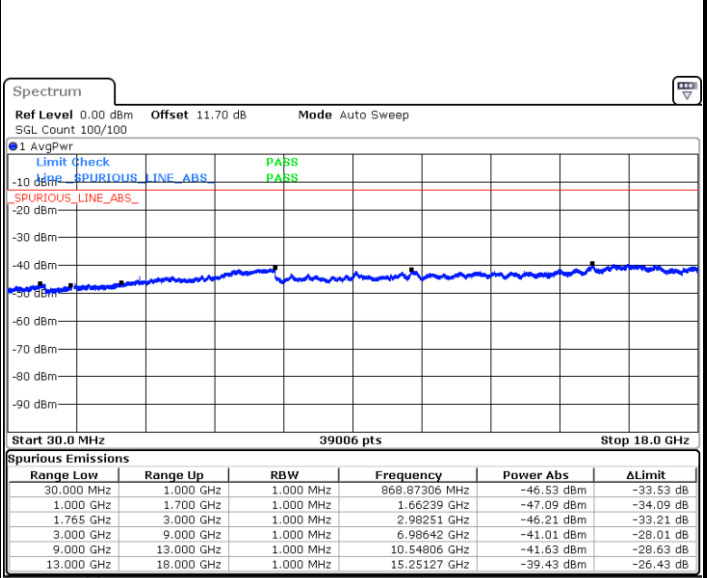
Date: 17.FEB.2018 06:14:55

Middle Channel / QPSK



Date: 17.FEB.2018 06:16:29

Middle Channel / 16QAM

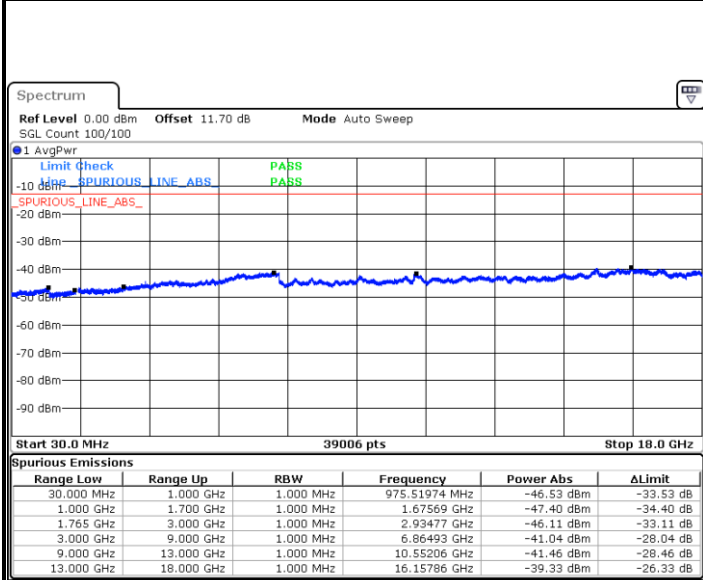


Date: 17.FEB.2018 06:17:22



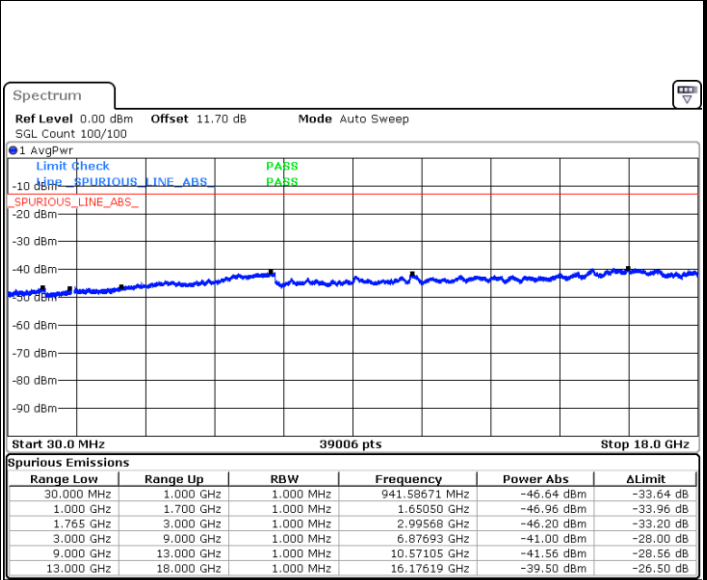
LTE Band 4 / 5MHz

Highest Channel / QPSK



Date: 17.FEB 2018 06:23:25

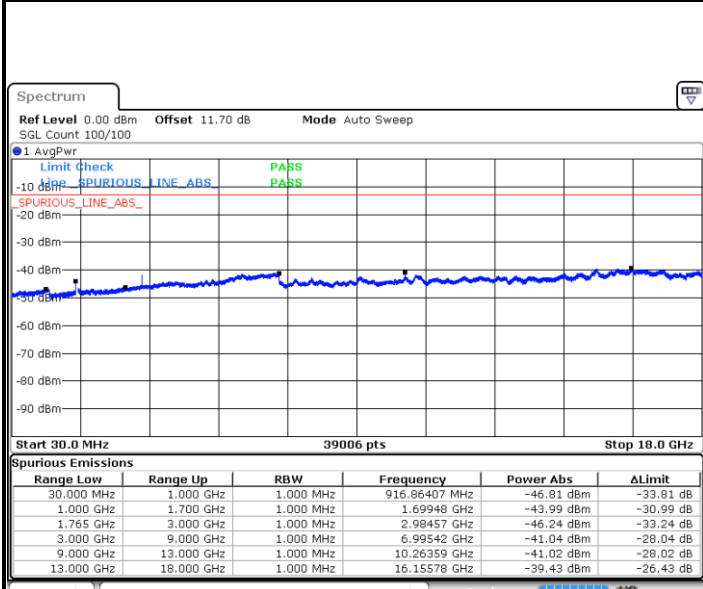
Highest Channel / 16QAM



Date: 17.FEB 2018 06:24:18

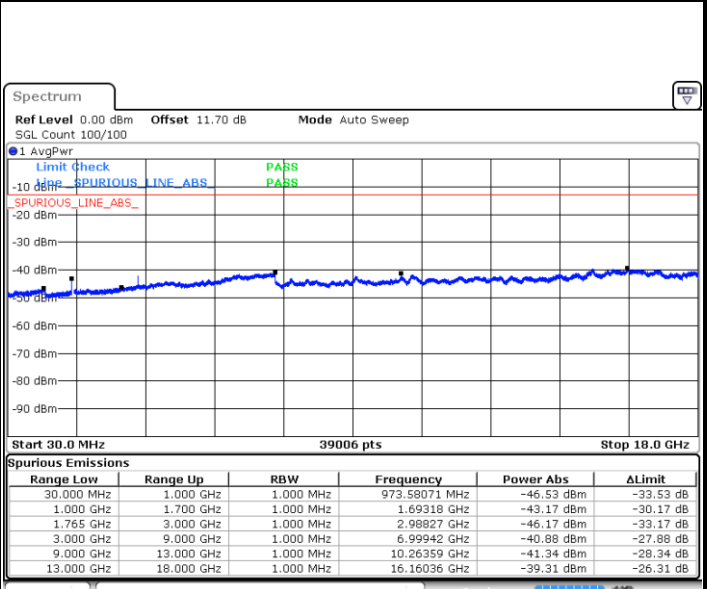
LTE Band 4 / 10MHz

Lowest Channel / QPSK



Date: 17.FEB 2018 06:30:20

Lowest Channel / 16QAM



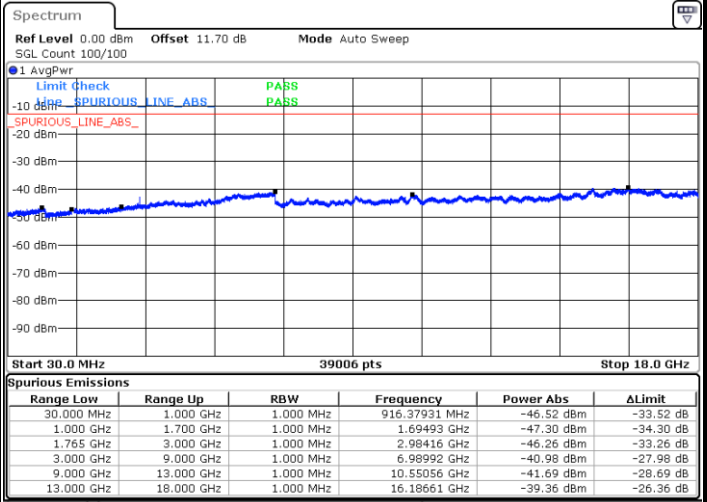
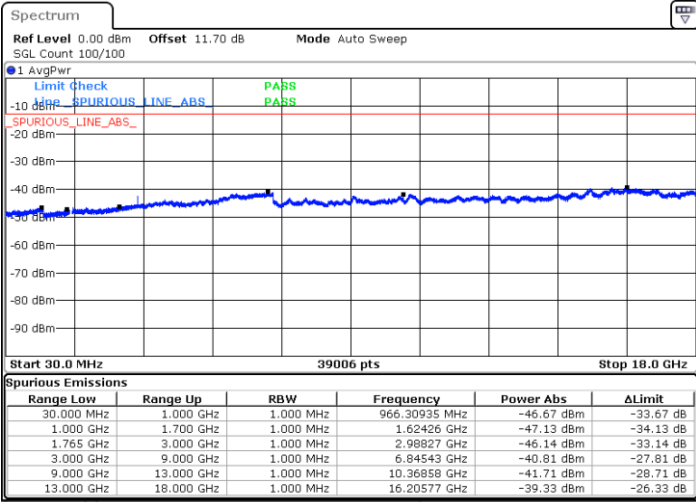
Date: 17.FEB 2018 06:31:14



LTE Band 4 / 10MHz

Middle Channel / QPSK

Middle Channel / 16QAM

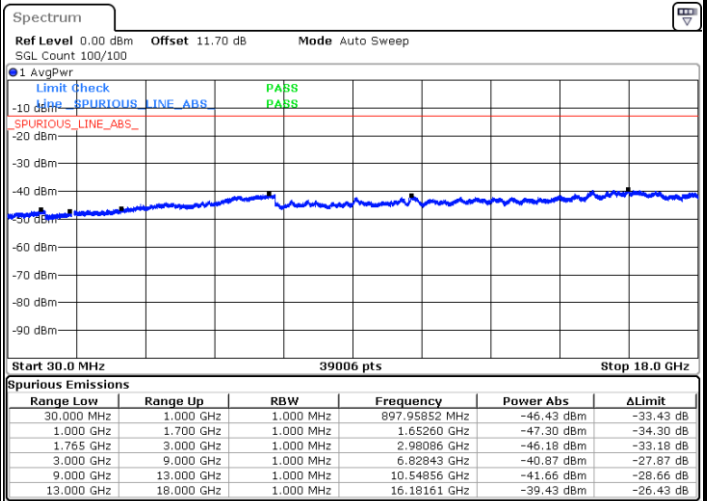
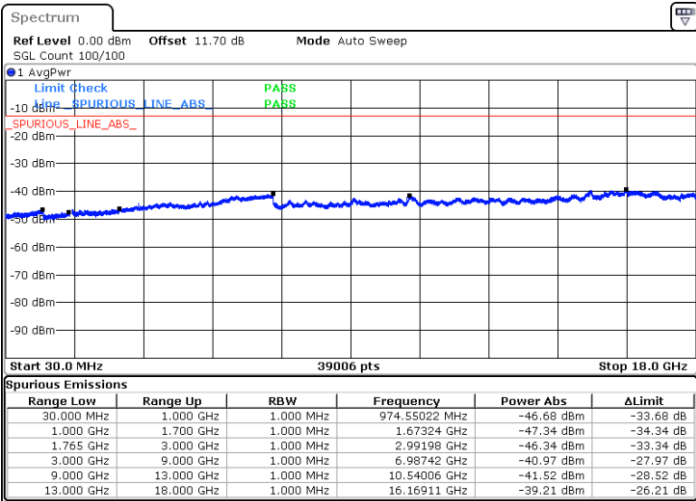


Date: 17.FEB.2018 06:32:48

Date: 17.FEB.2018 06:33:41

Highest Channel / QPSK

Highest Channel / 16QAM



Date: 17.FEB.2018 06:39:43

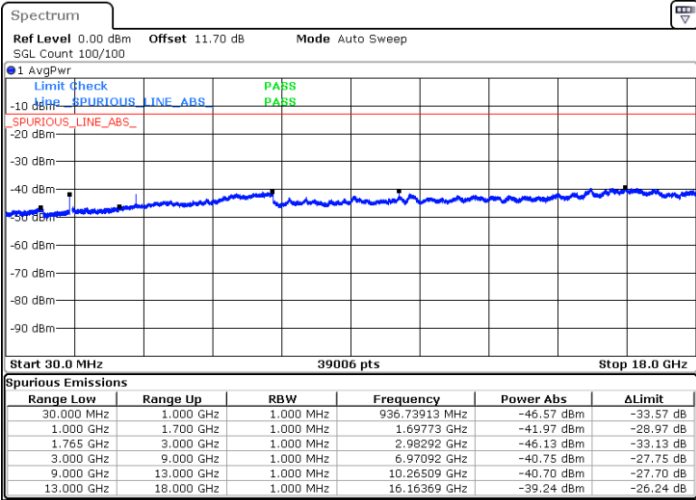
Date: 17.FEB.2018 06:40:37



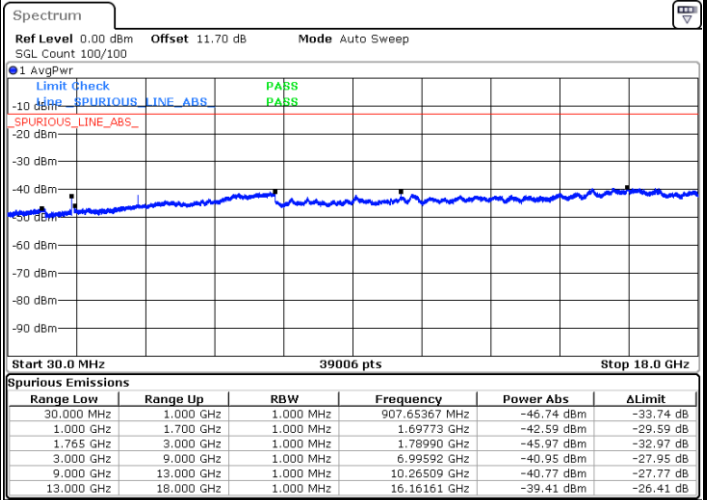
LTE Band 4 / 15MHz

Lowest Channel / QPSK

Lowest Channel / 16QAM



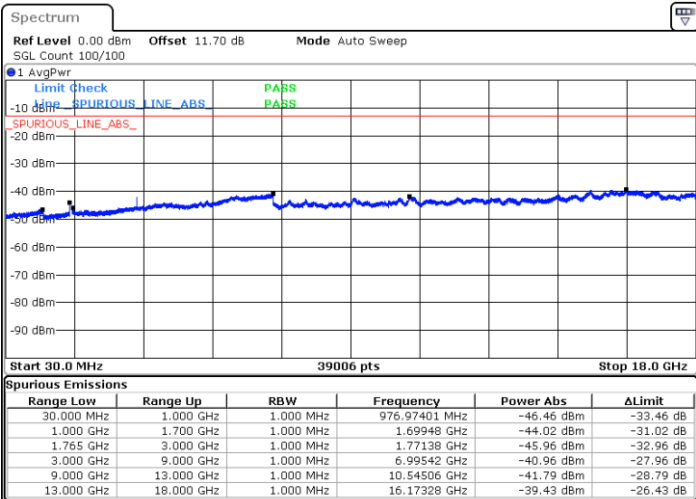
Date: 17.FEB.2018 06:46:39



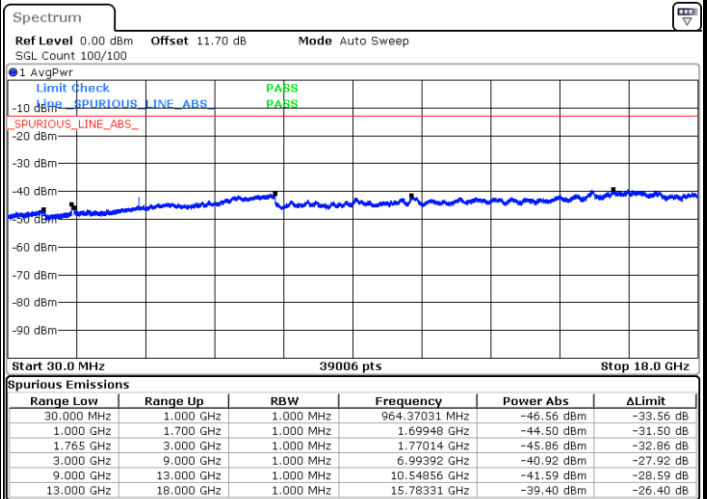
Date: 17.FEB.2018 06:47:33

Middle Channel / QPSK

Middle Channel / 16QAM



Date: 17.FEB.2018 06:49:06

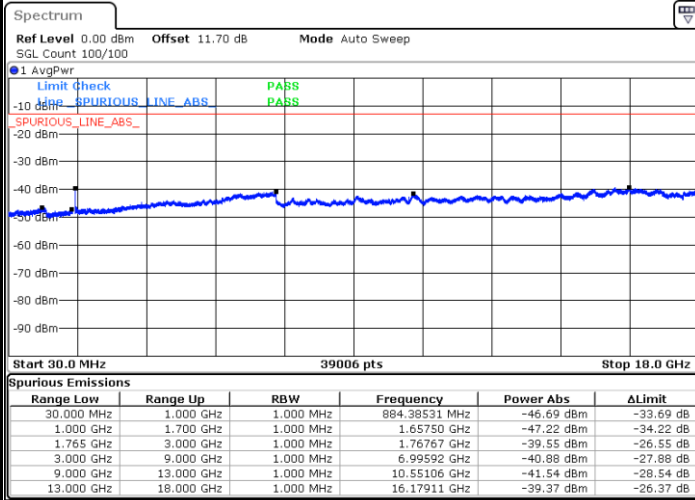


Date: 17.FEB.2018 06:50:00



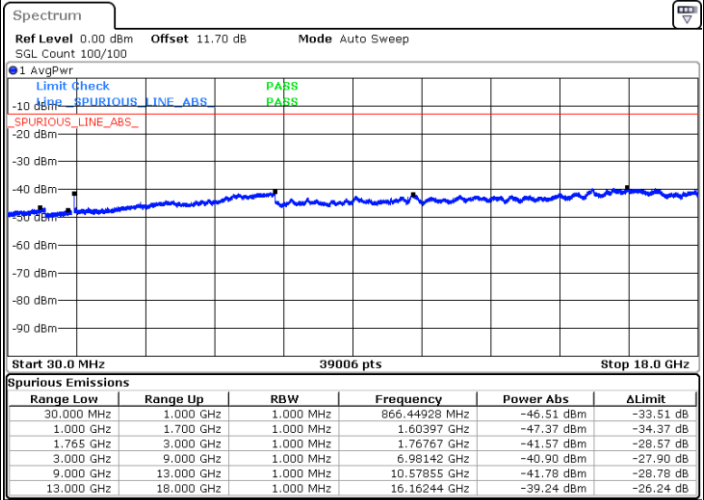
LTE Band 4 / 15MHz

Highest Channel / QPSK



Date: 17.FEB 2018 06:56:02

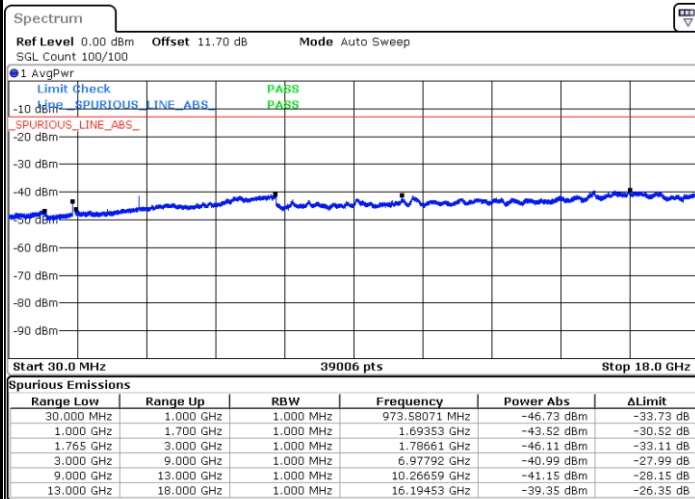
Highest Channel / 16QAM



Date: 17.FEB 2018 06:56:56

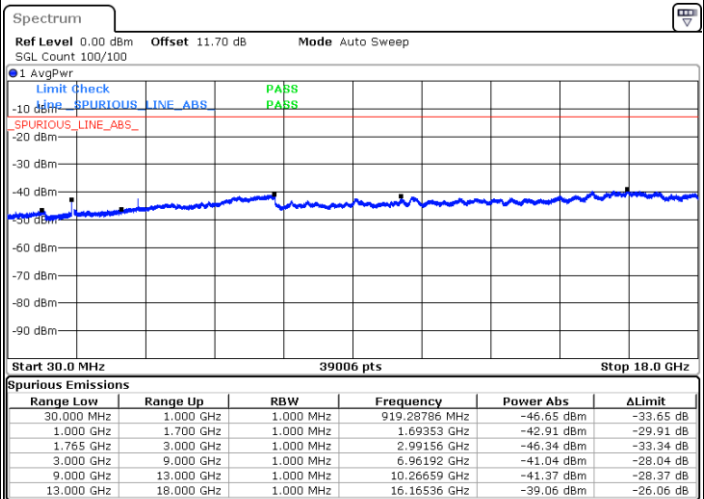
LTE Band 4 / 20MHz

Lowest Channel / QPSK



Date: 17.FEB 2018 07:02:58

Lowest Channel / 16QAM



Date: 17.FEB 2018 07:03:52

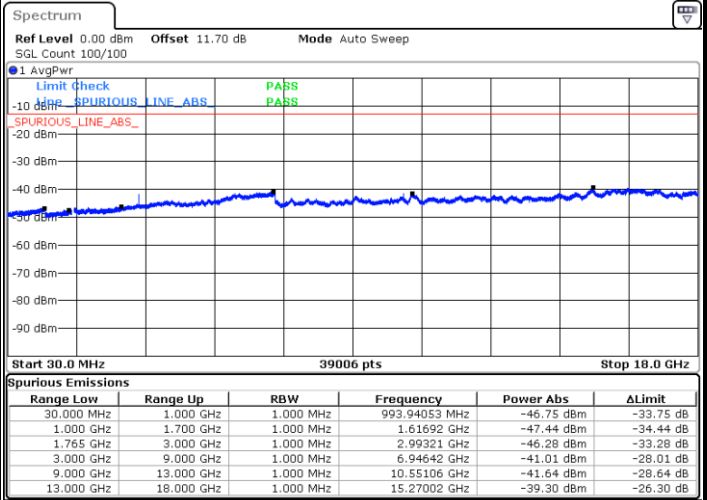
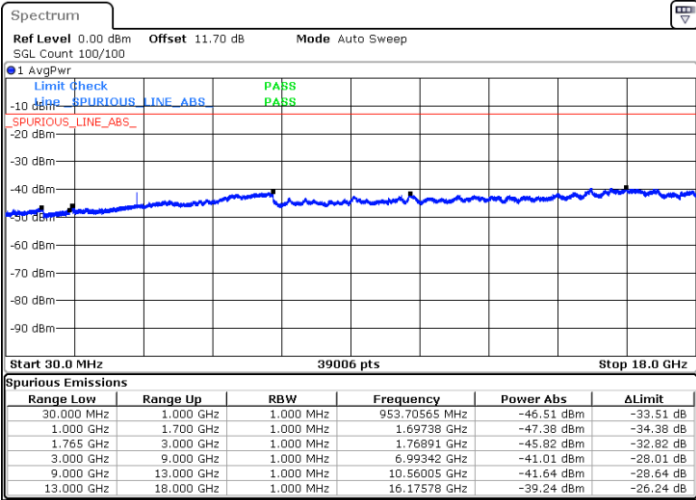




LTE Band 4 / 20MHz

Middle Channel / QPSK

Middle Channel / 16QAM

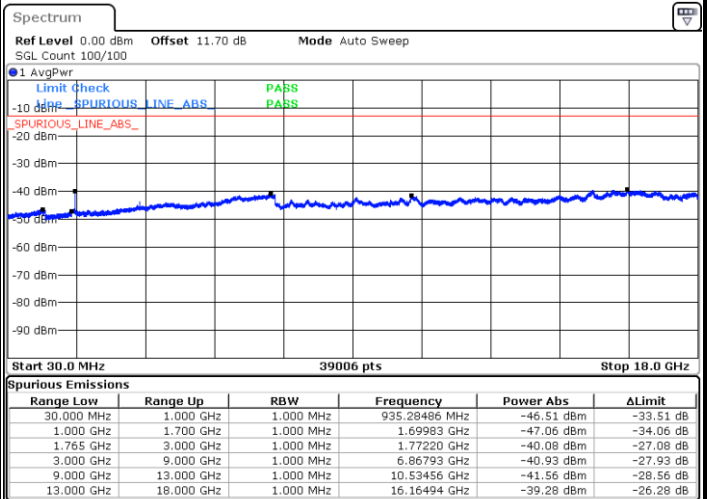
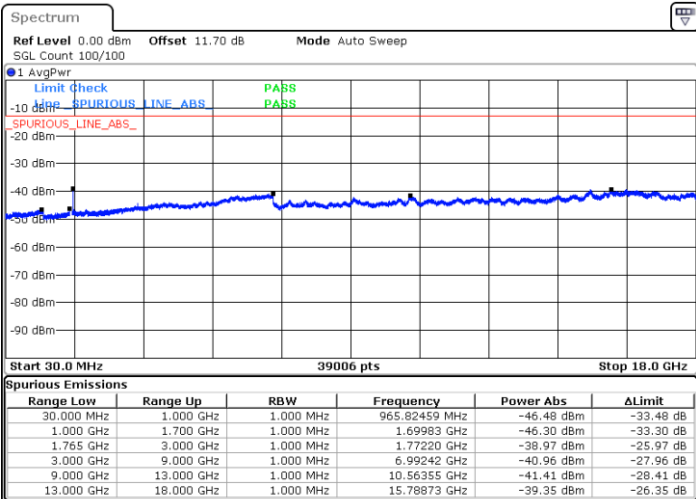


Date: 17.FEB.2018 07:05:25

Date: 17.FEB.2018 07:06:19

Highest Channel / QPSK

Highest Channel / 16QAM



Date: 17.FEB.2018 07:12:21

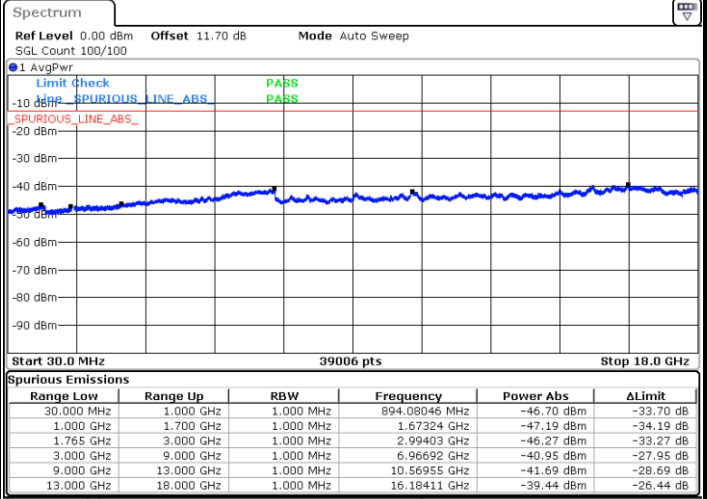
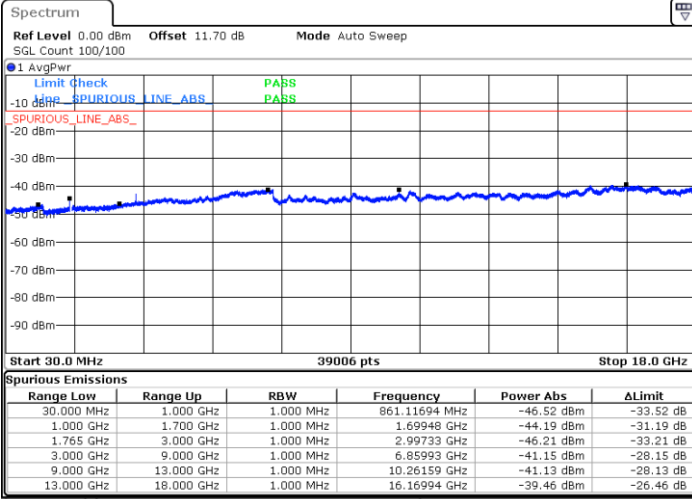
Date: 17.FEB.2018 07:13:15



LTE Band 4 / 1.4MHz

Lowest Channel / 64QAM

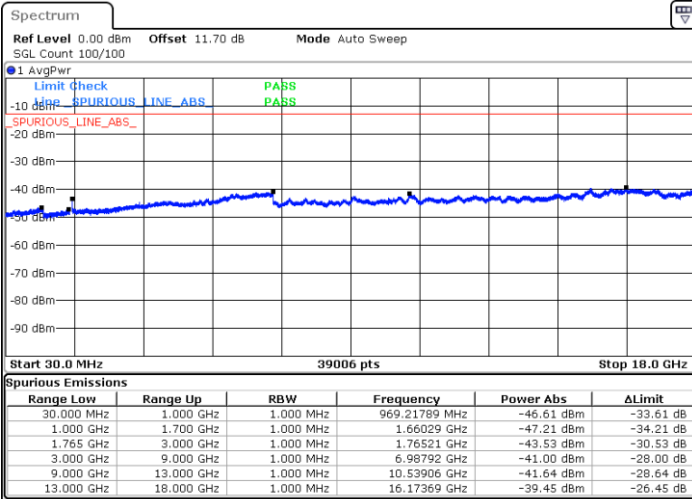
Middle Channel / 64QAM



Date: 17.FEB.2018 08:26:06

Date: 17.FEB.2018 08:27:19

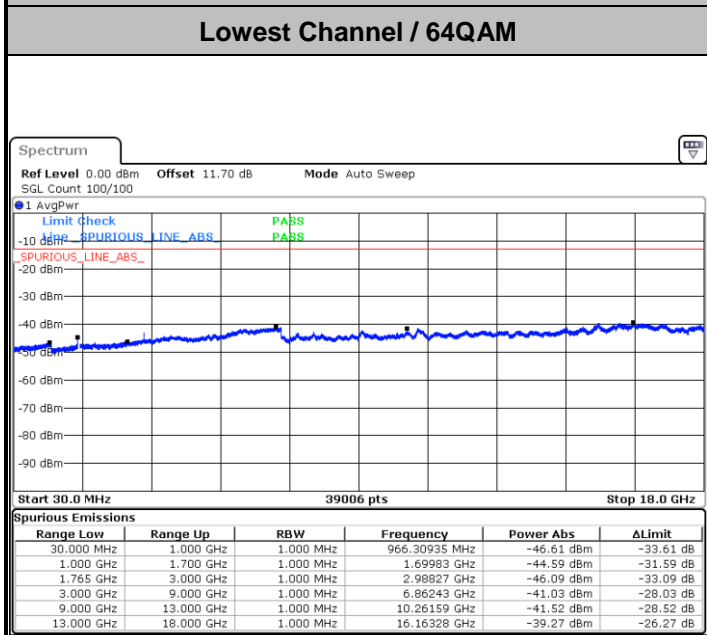
Highest Channel / 64QAM



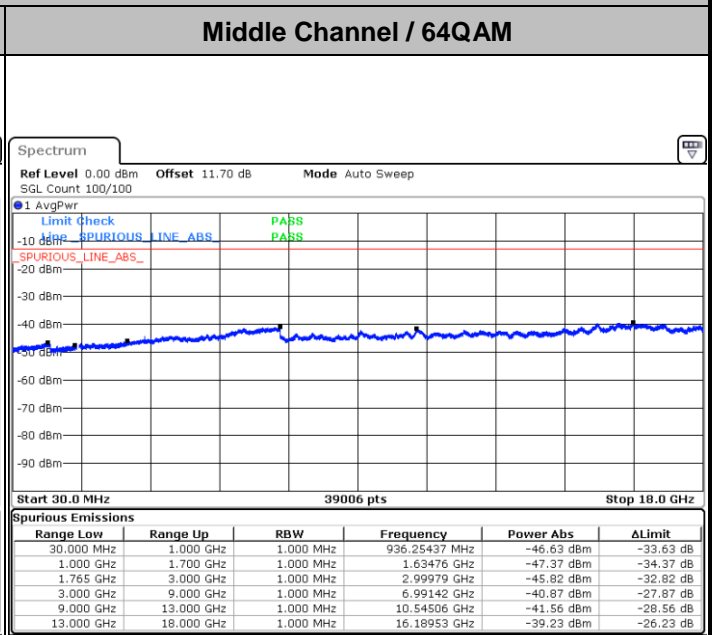
Date: 17.FEB.2018 08:30:47



**LTE Band 4 / 3MHz**

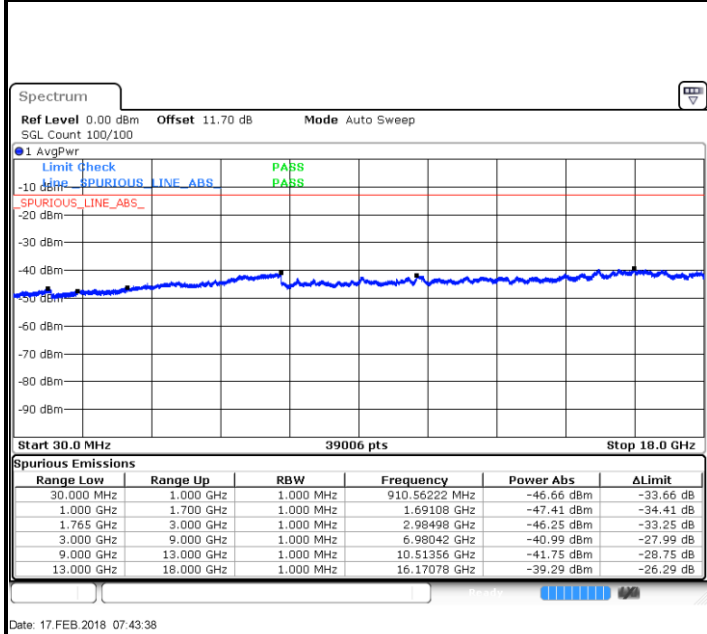


Date: 17.FEB.2018 07:38:56



Date: 17.FEB.2018 07:40:10

**Highest Channel / 64QAM**

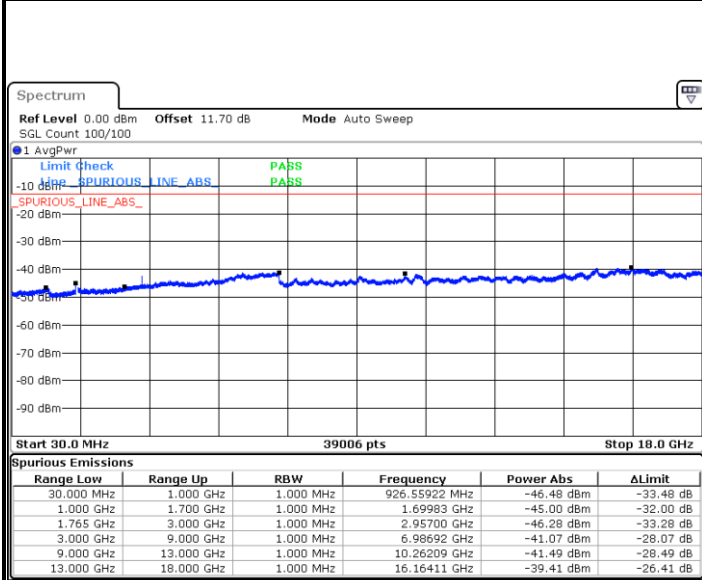


Date: 17.FEB.2018 07:43:38



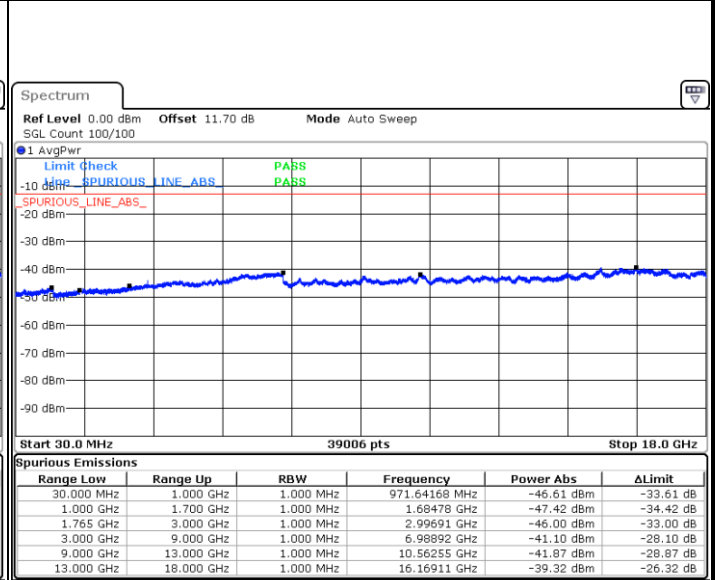
**LTE Band 4 / 5MHz**

**Lowest Channel / 64QAM**



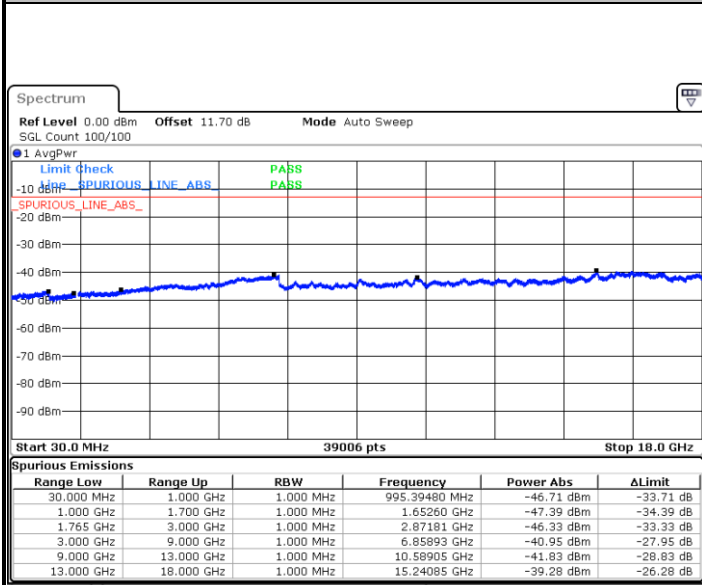
Date: 17.FEB.2018 07:47:06

**Middle Channel / 64QAM**



Date: 17.FEB.2018 07:48:19

**Highest Channel / 64QAM**

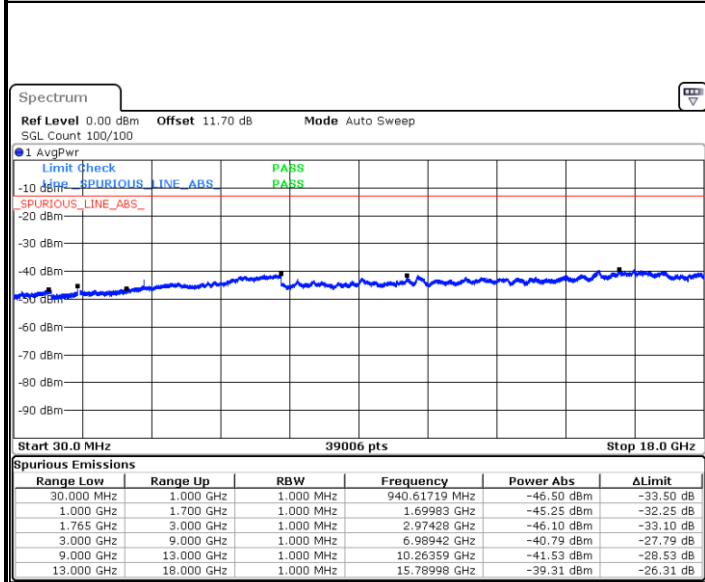


Date: 17.FEB.2018 07:51:47



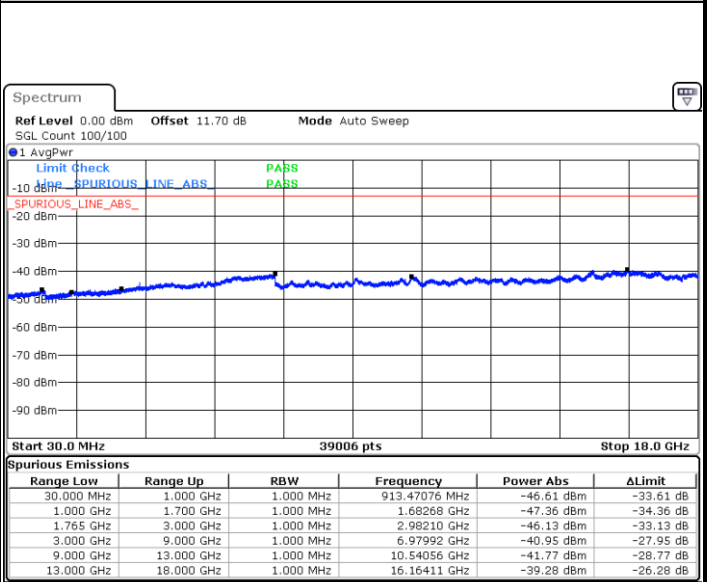
**LTE Band 4 / 10MHz**

**Lowest Channel / 64QAM**



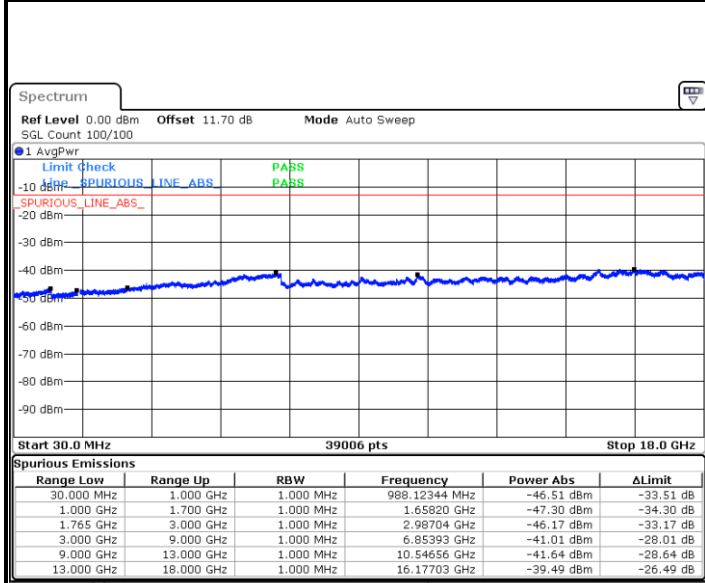
Date: 17.FEB.2018 07:55:15

**Middle Channel / 64QAM**



Date: 17.FEB.2018 07:56:28

**Highest Channel / 64QAM**



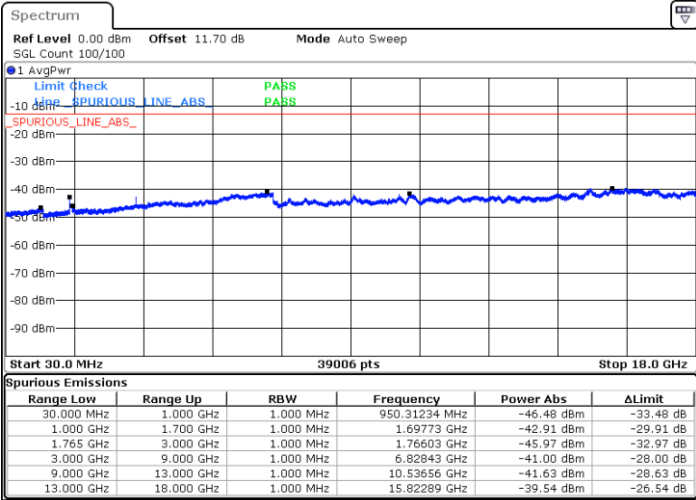
Date: 17.FEB.2018 07:59:56



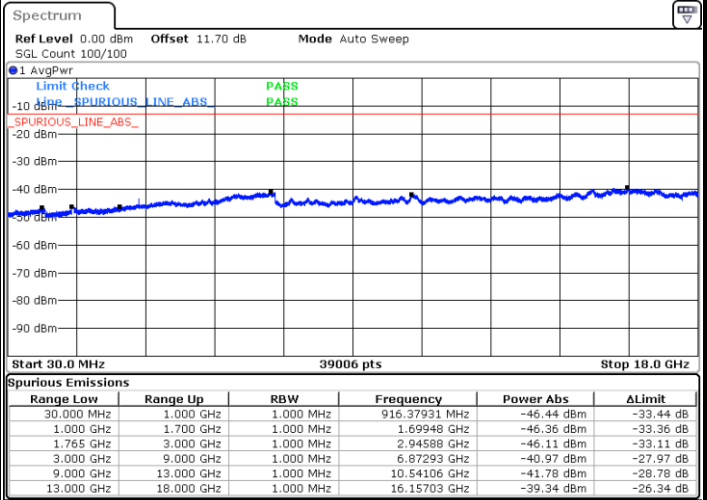
LTE Band 4 / 15MHz

Lowest Channel / 64QAM

Middle Channel / 64QAM

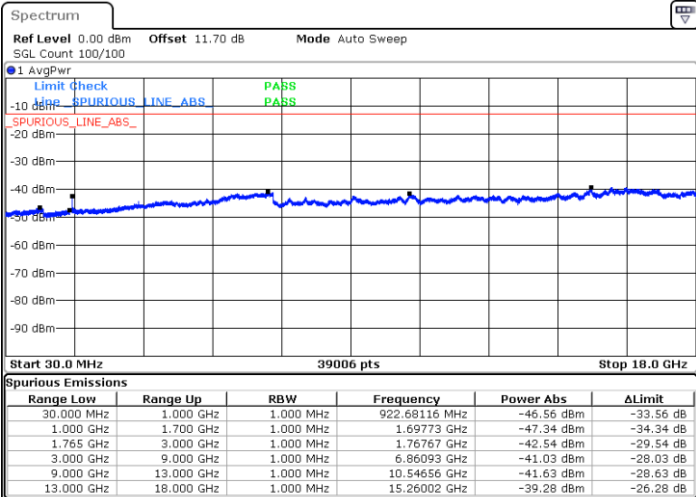


Date: 17.FEB.2018 08:03:24



Date: 17.FEB.2018 08:04:38

Highest Channel / 64QAM



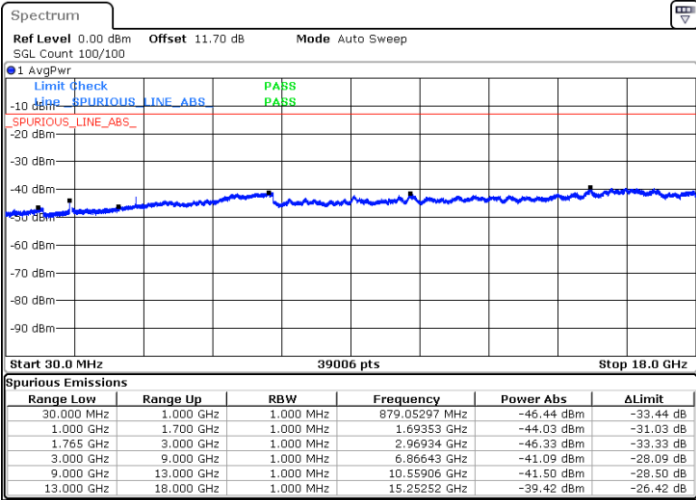
Date: 17.FEB.2018 08:08:06



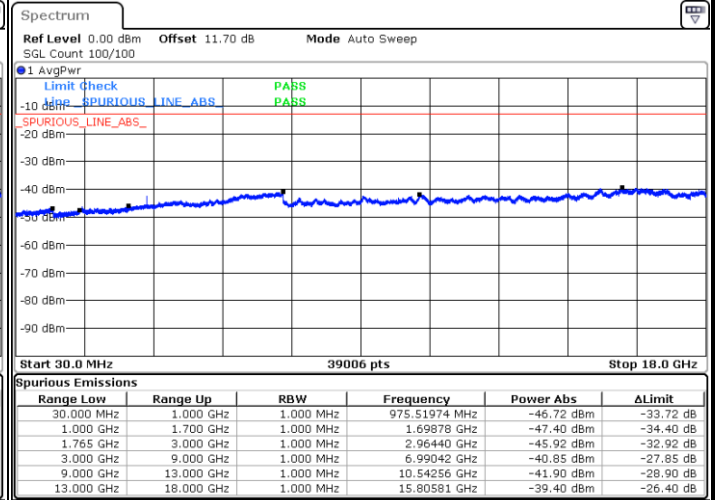
LTE Band 4 / 20MHz

Lowest Channel / 64QAM

Middle Channel / 64QAM

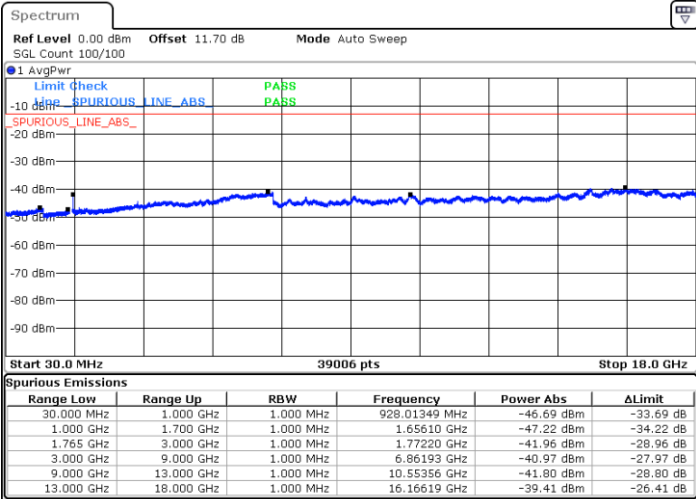


Date: 17.FEB.2018 08:17:56



Date: 17.FEB.2018 08:19:10

Highest Channel / 64QAM



Date: 17.FEB.2018 08:22:38



### Frequency Stability

Test Conditions		LTE Band 4 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0030	PASS
40	Normal Voltage	0.0013	
30	Normal Voltage	0.0022	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0350	
0	Normal Voltage	0.0054	
-10	Normal Voltage	0.0005	
-20	Normal Voltage	0.0091	
-30	Normal Voltage	0.0071	
20	Maximum Voltage	0.0009	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0012	

**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 5

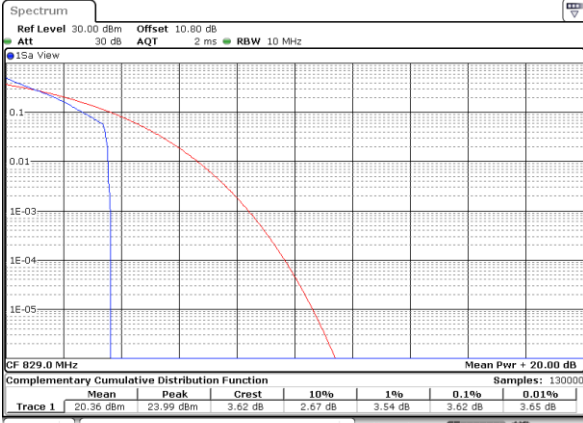
## Peak-to-Average Ratio

Mode	LTE Band 5 / 10MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	3.62	4.67	5.16	5.88	PASS
Middle CH	3.57	4.75	5.39	5.94	
Highest CH	3.71	4.7	5.33	6.12	
Mode	LTE Band 5 / 10MHz				
Mod.	64QAM				Limit: 13dB
RB Size	1RB	Full RB			Result
Lowest CH	7.1	6.32	-	-	PASS
Middle CH	6.87	6.49	-	-	
Highest CH	6.75	6.58	-	-	



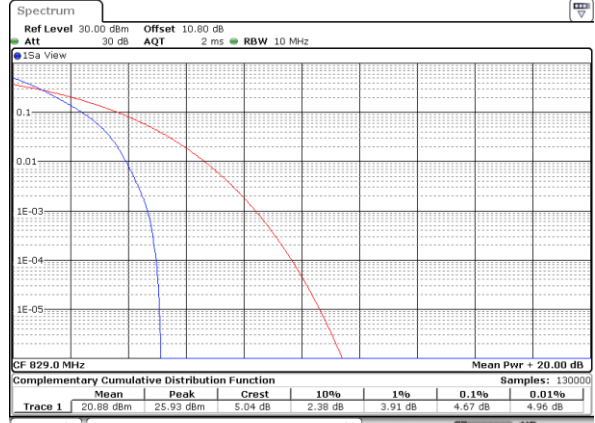
LTE Band 5 / 10MHz / QPSK

Lowest Channel / 1RB



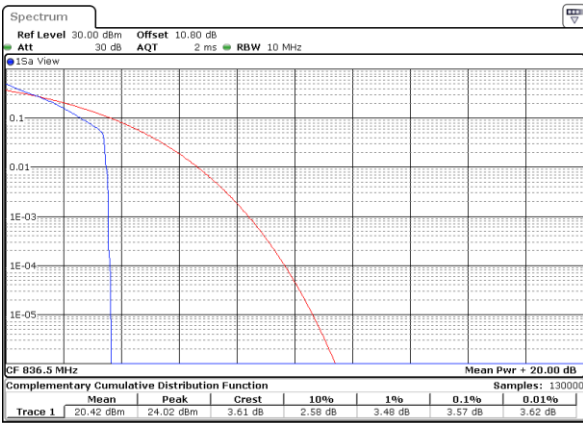
Date: 16 FEB 2018 22:12:00

Lowest Channel / Full RB



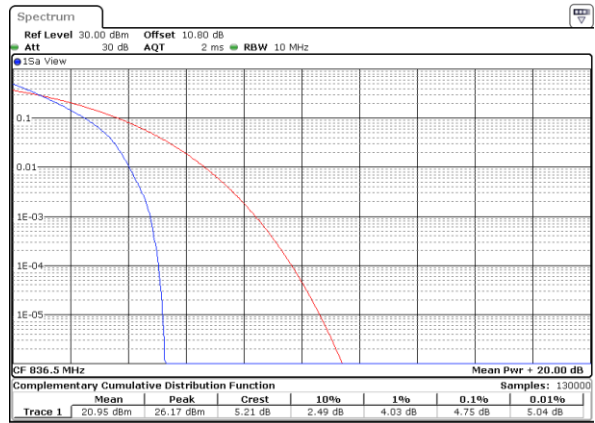
Date: 16 FEB 2018 22:12:08

Middle Channel / 1RB



Date: 16 FEB 2018 22:12:16

Middle Channel / Full RB



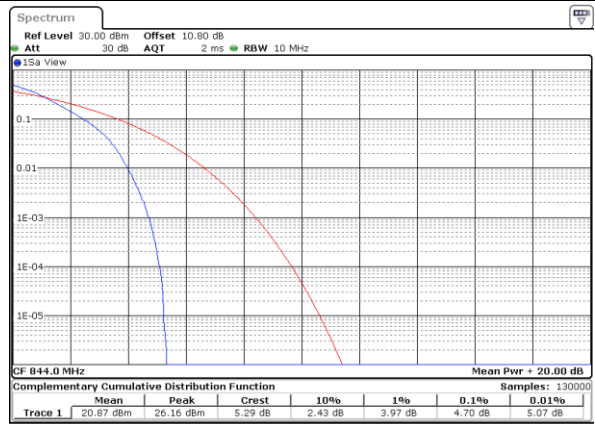
Date: 16 FEB 2018 22:12:24

Highest Channel / 1RB



Date: 16 FEB 2018 22:12:32

Highest Channel / Full RB

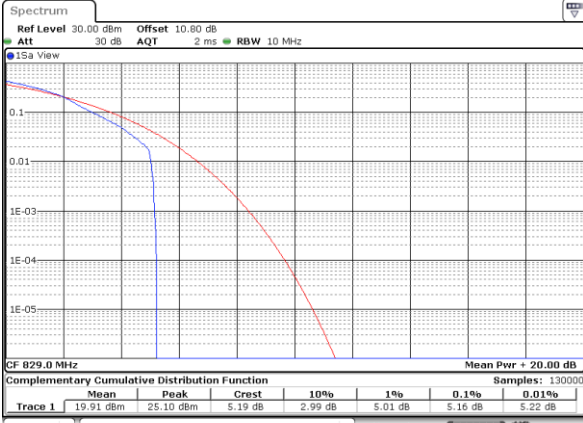


Date: 16 FEB 2018 22:12:40



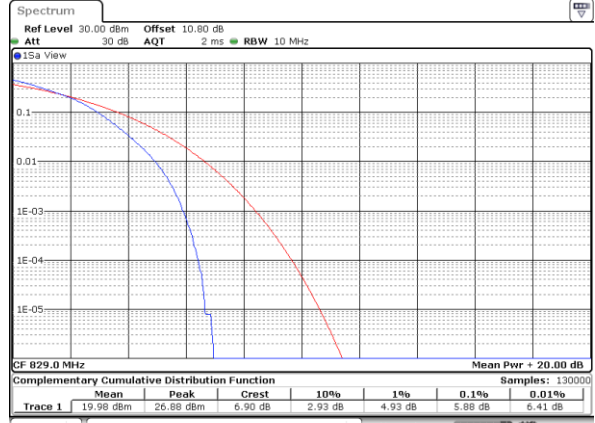
LTE Band 5 / 10MHz / 16QAM

Lowest Channel / 1RB



Date: 16 FEB 2018 22:11:06

Lowest Channel / Full RB



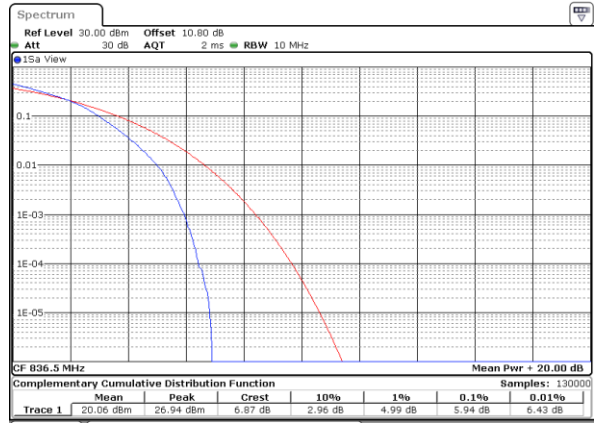
Date: 16 FEB 2018 22:11:15

Middle Channel / 1RB



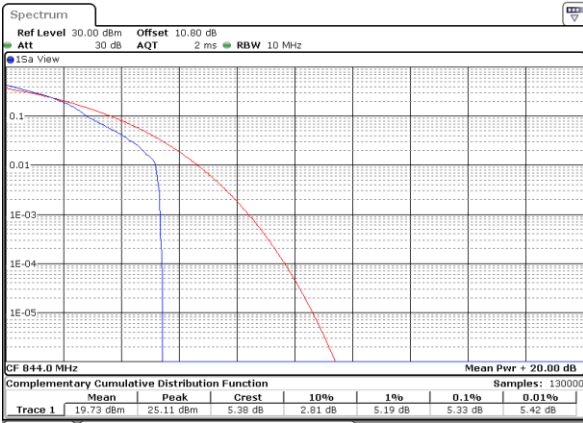
Date: 16 FEB 2018 22:11:24

Middle Channel / Full RB



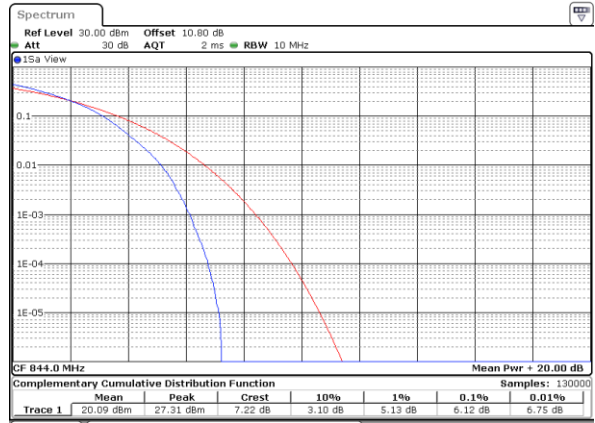
Date: 16 FEB 2018 22:11:36

Highest Channel / 1RB



Date: 16 FEB 2018 22:11:44

Highest Channel / Full RB

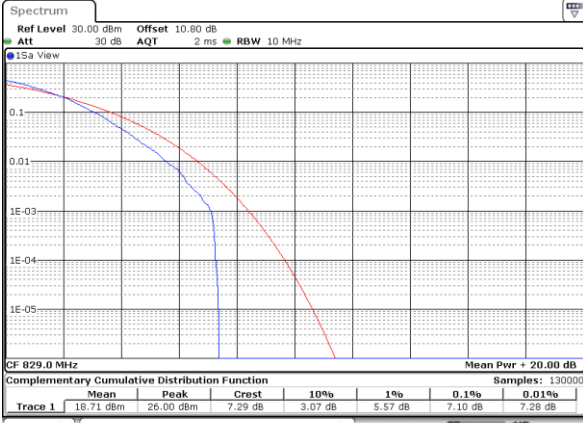


Date: 16 FEB 2018 22:11:52



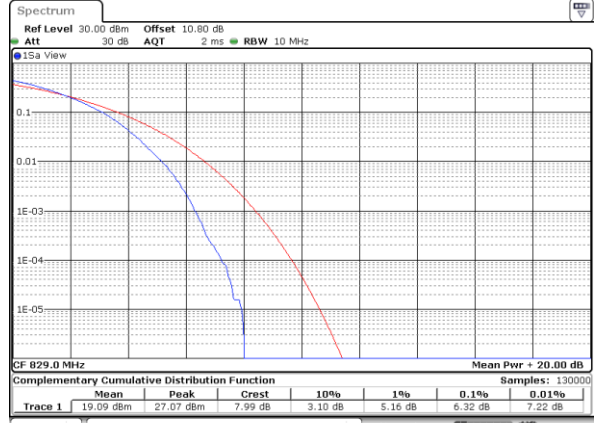
LTE Band 5 / 10MHz / 64QAM

Lowest Channel / 1RB



Date: 16 FEB 2018 22:12:48

Lowest Channel / Full RB



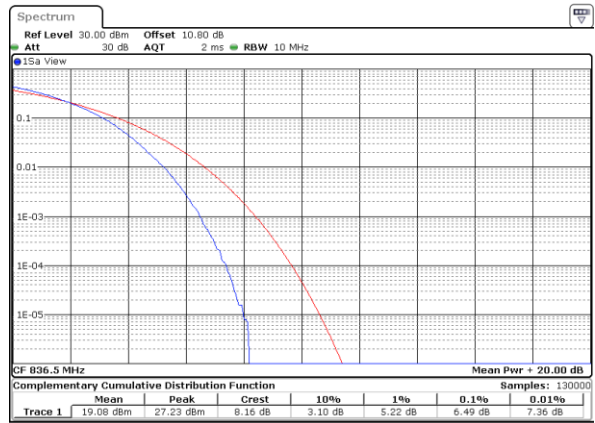
Date: 16 FEB 2018 22:12:56

Middle Channel / 1RB



Date: 16 FEB 2018 22:13:04

Middle Channel / Full RB



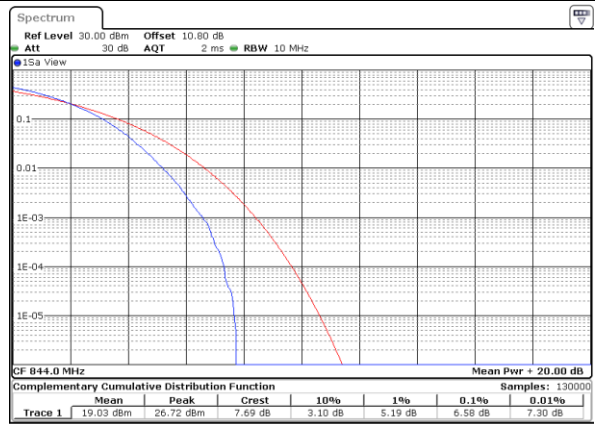
Date: 16 FEB 2018 22:13:12

Highest Channel / 1RB



Date: 16 FEB 2018 22:13:20

Highest Channel / Full RB



Date: 16 FEB 2018 22:13:28



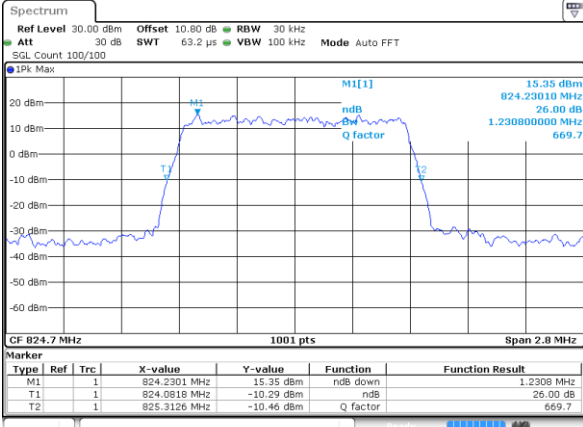
**26dB Bandwidth**

Mode	LTE Band 5 : 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	3.02	2.97	4.86	4.95	9.67	9.73	-	-	-	-
Middle CH	1.24	1.23	3.02	3.05	4.91	4.88	9.69	9.83	-	-	-	-
Highest CH	1.23	1.23	3.00	3.04	4.83	4.92	9.81	9.67	-	-	-	-
Mode	LTE Band 5 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	1.22	-	3.05	-	4.86	-	9.79	-	-	-	-	-
Middle CH	1.23	-	2.99	-	4.91	-	9.95	-	-	-	-	-
Highest CH	1.23	-	2.95	-	4.91	-	9.83	-	-	-	-	-



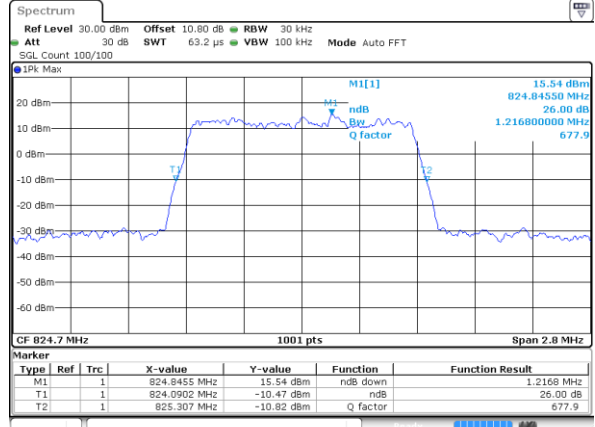
LTE Band 5

Lowest Channel / 1.4MHz / QPSK



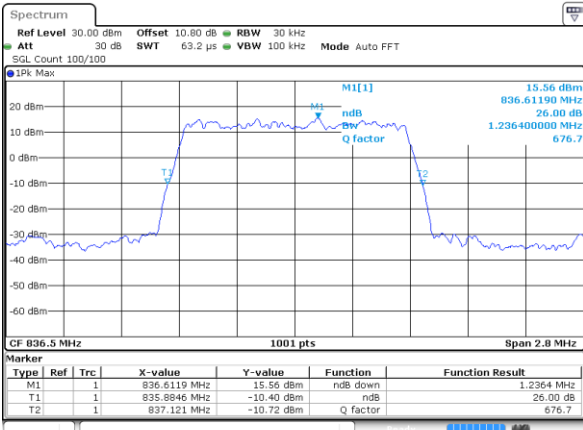
Date: 16 FEB 2018 21:49:41

Lowest Channel / 1.4MHz / 16QAM



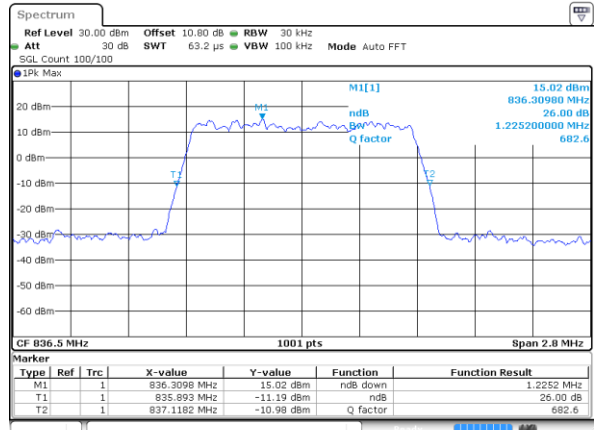
Date: 16 FEB 2018 21:49:31

Middle Channel / 1.4MHz / QPSK



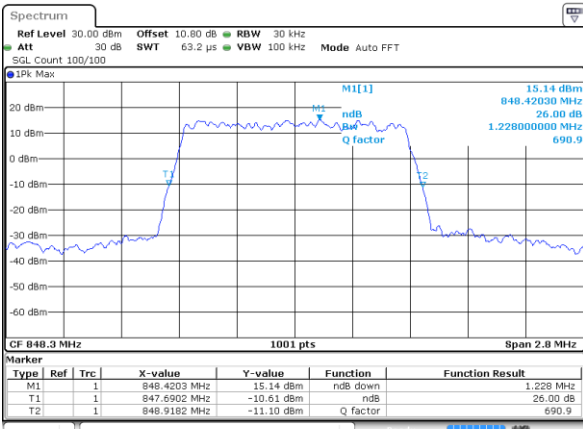
Date: 16 FEB 2018 21:58:27

Middle Channel / 1.4MHz / 16QAM



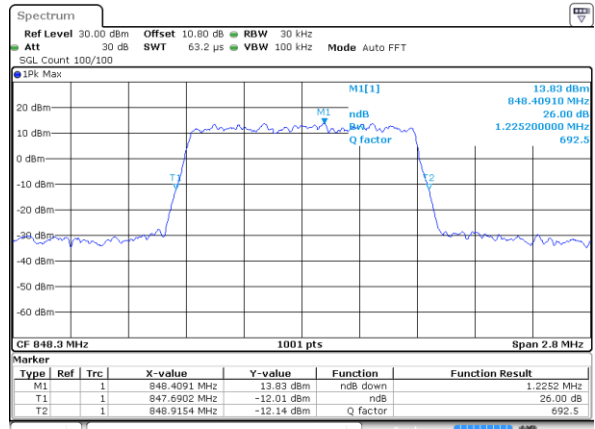
Date: 16 FEB 2018 21:58:37

Highest Channel / 1.4MHz / QPSK



Date: 16 FEB 2018 22:00:55

Highest Channel / 1.4MHz / 16QAM

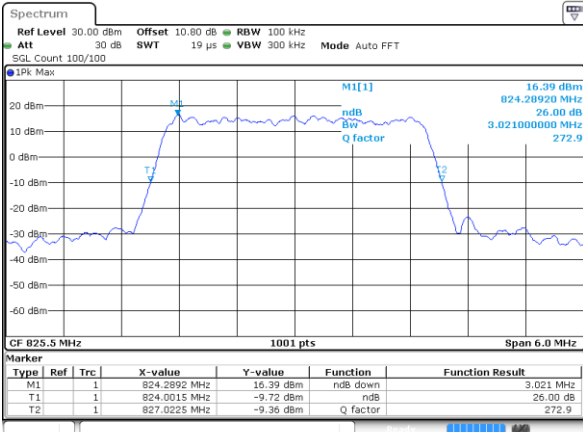


Date: 16 FEB 2018 22:01:05



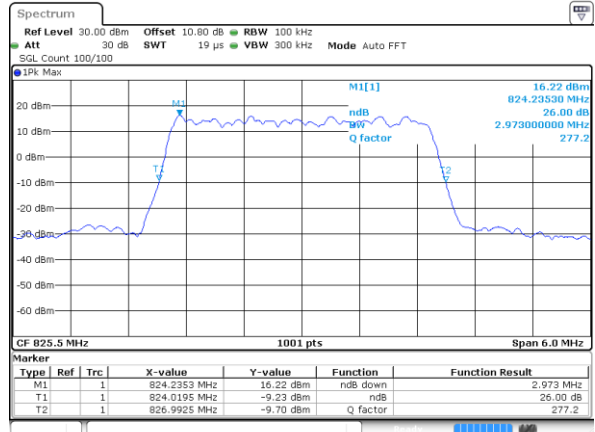
LTE Band 5

Lowest Channel / 3MHz / QPSK



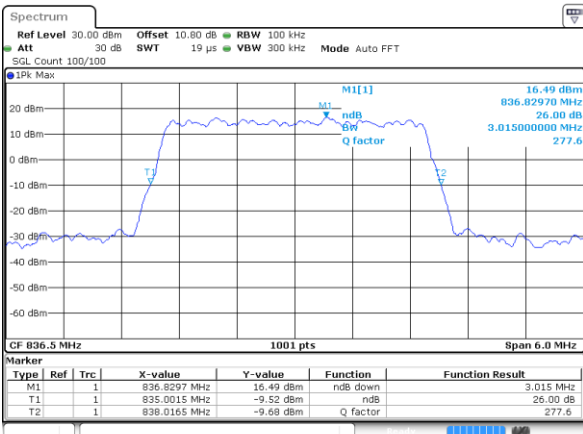
Date: 16 FEB 2018 20:07:57

Lowest Channel / 3MHz / 16QAM



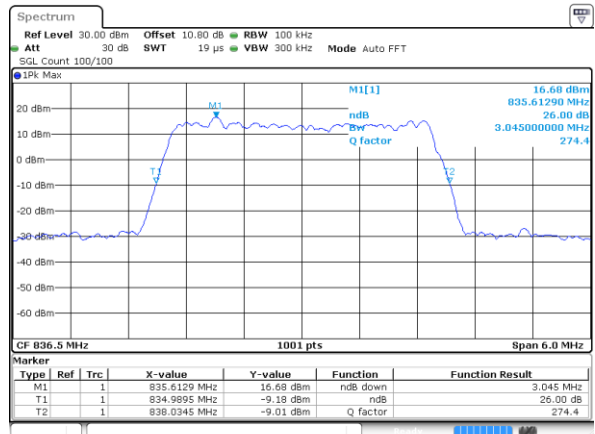
Date: 16 FEB 2018 20:08:07

Middle Channel / 3MHz / QPSK



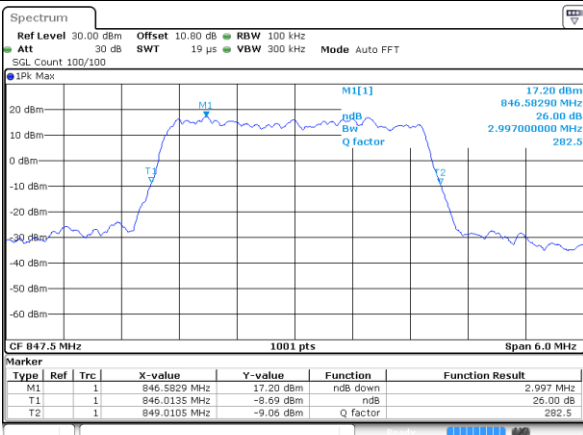
Date: 16 FEB 2018 20:16:53

Middle Channel / 3MHz / 16QAM



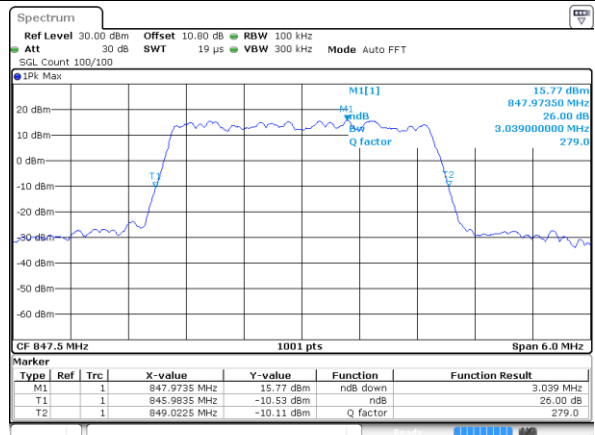
Date: 16 FEB 2018 20:17:03

Highest Channel / 3MHz / QPSK



Date: 16 FEB 2018 20:19:20

Highest Channel / 3MHz / 16QAM

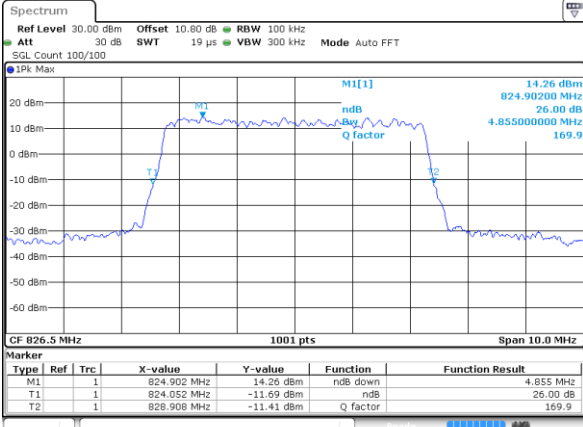


Date: 16 FEB 2018 20:19:30



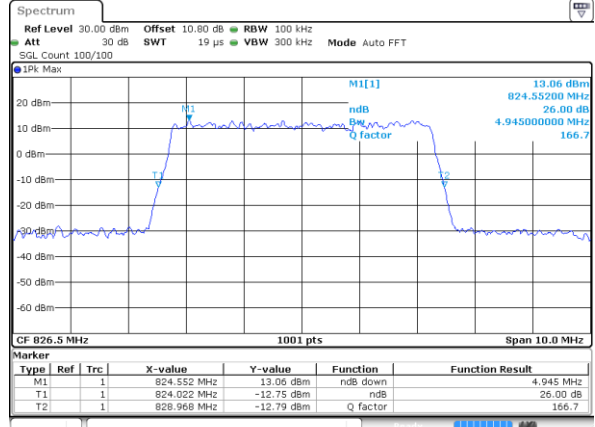
LTE Band 5

Lowest Channel / 5MHz / QPSK



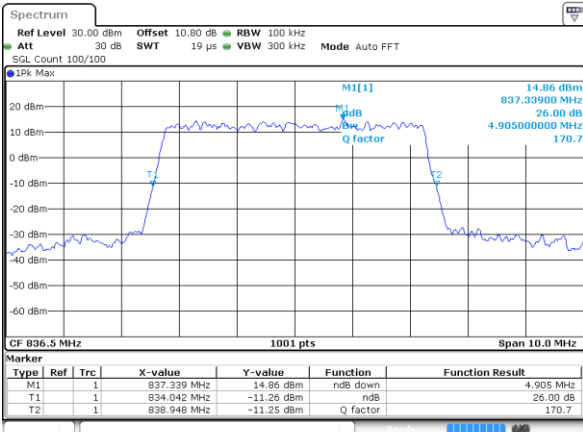
Date: 16 FEB 2018 20:28:15

Lowest Channel / 5MHz / 16QAM



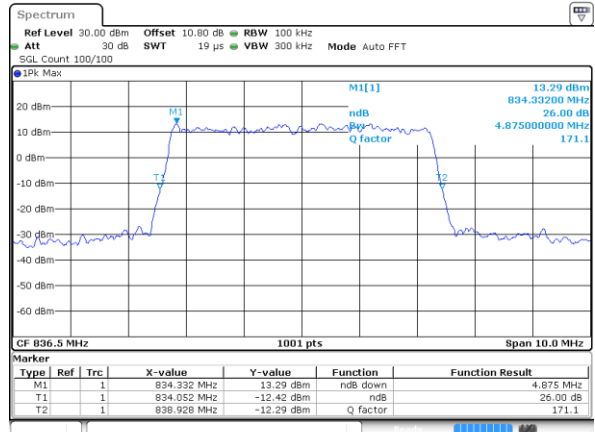
Date: 16 FEB 2018 20:28:25

Middle Channel / 5MHz / QPSK



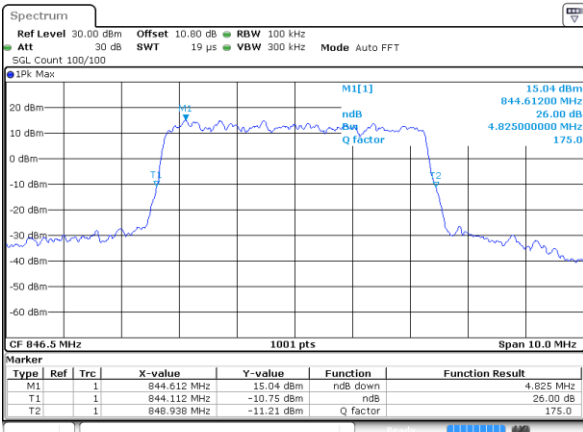
Date: 16 FEB 2018 20:37:11

Middle Channel / 5MHz / 16QAM



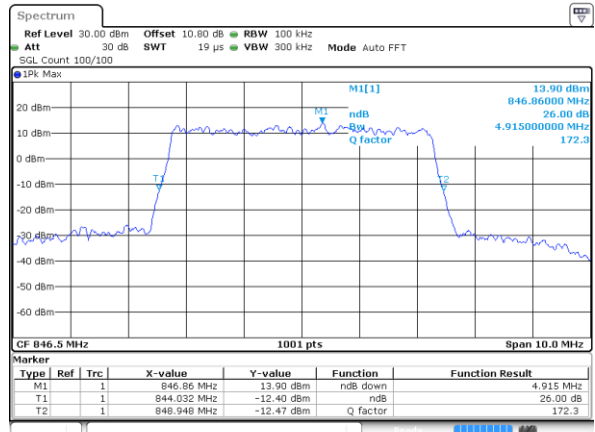
Date: 16 FEB 2018 20:37:21

Highest Channel / 5MHz / QPSK



Date: 16 FEB 2018 20:39:38

Highest Channel / 5MHz / 16QAM



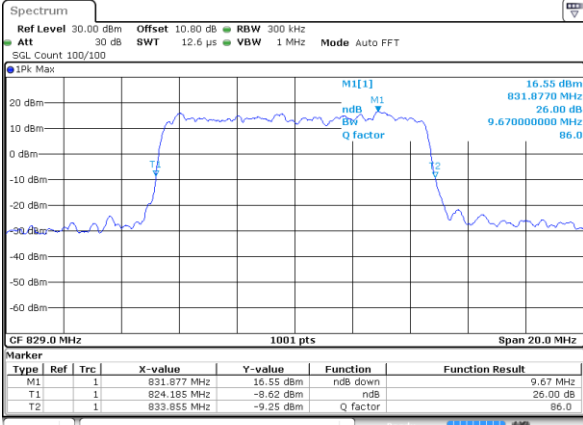
Date: 16 FEB 2018 20:39:48





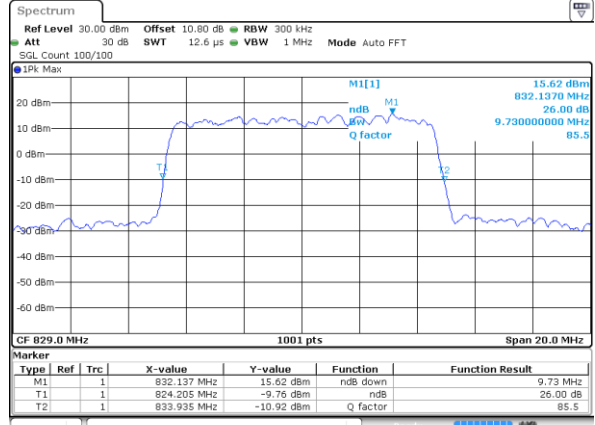
LTE Band 5

Lowest Channel / 10MHz / QPSK



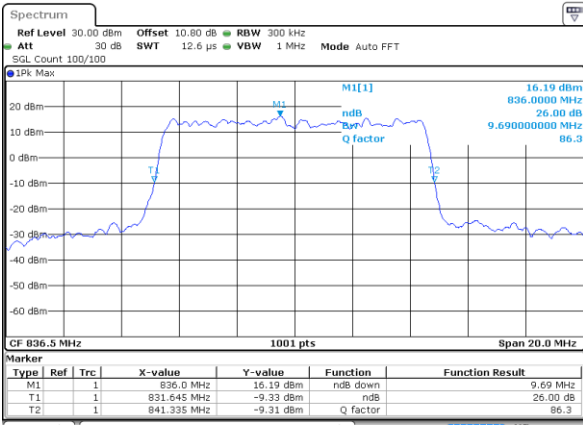
Date: 16 FEB 2018 20:48:34

Lowest Channel / 10MHz / 16QAM



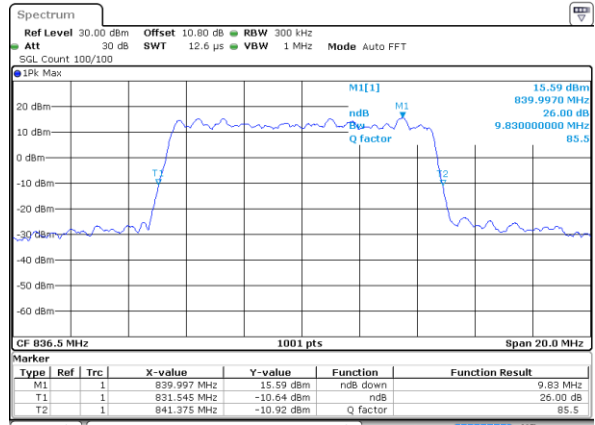
Date: 16 FEB 2018 20:48:44

Middle Channel / 10MHz / QPSK



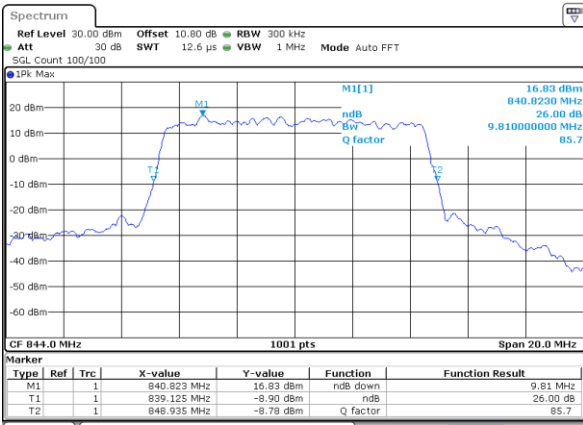
Date: 16 FEB 2018 20:57:30

Middle Channel / 10MHz / 16QAM



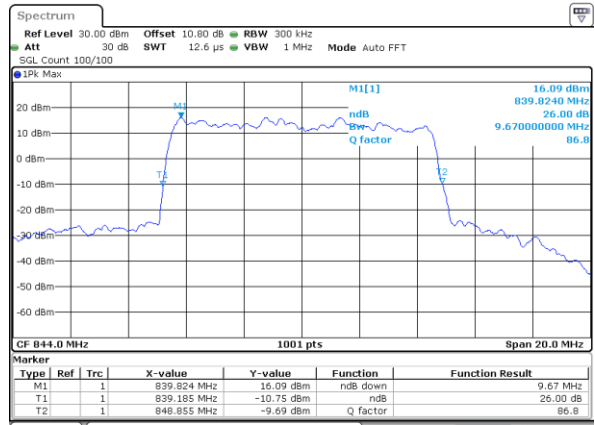
Date: 16 FEB 2018 20:57:40

Highest Channel / 10MHz / QPSK



Date: 16 FEB 2018 20:59:57

Highest Channel / 10MHz / 16QAM

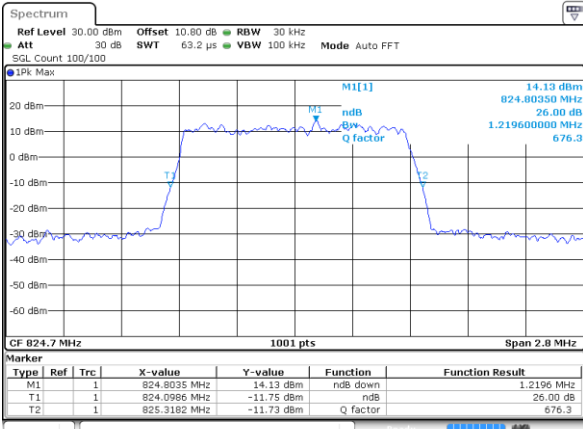


Date: 16 FEB 2018 21:00:06



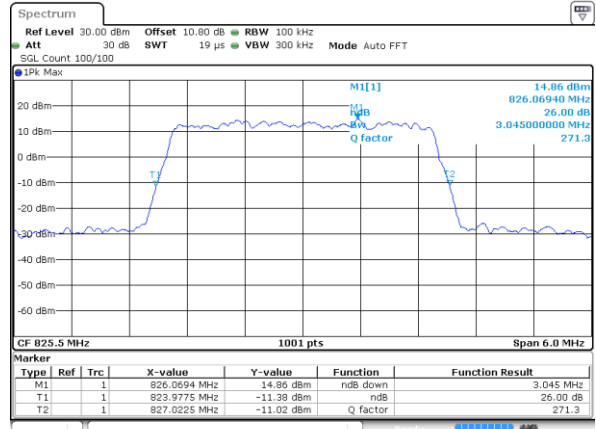
LTE Band 5

Lowest Channel / 1.4MHz / 64QAM



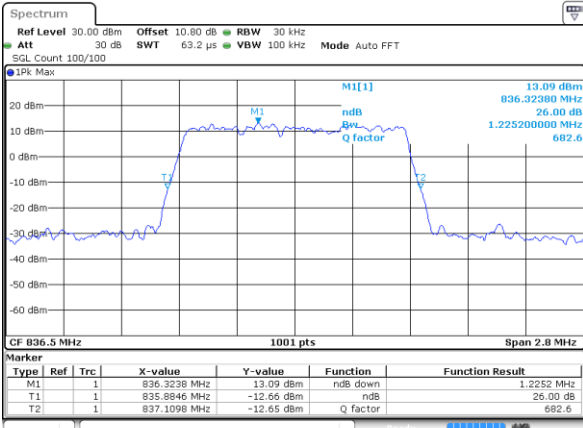
Date: 16 FEB 2018 21:39:10

Lowest Channel / 3MHz / 64QAM



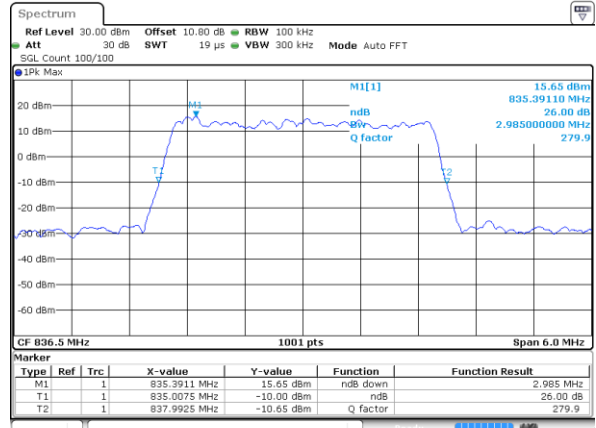
Date: 16 FEB 2018 21:08:42

Middle Channel / 1.4MHz / 64QAM



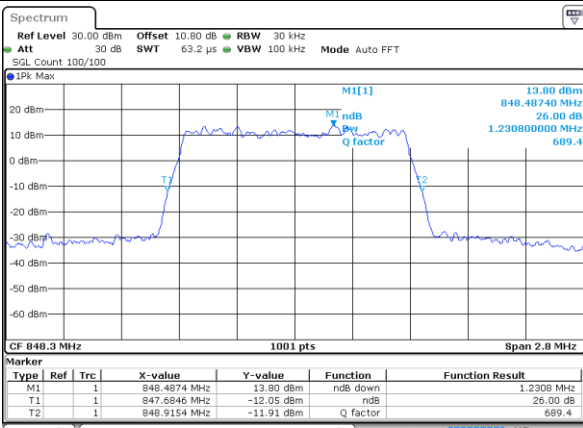
Date: 16 FEB 2018 21:43:38

Middle Channel / 3MHz / 64QAM



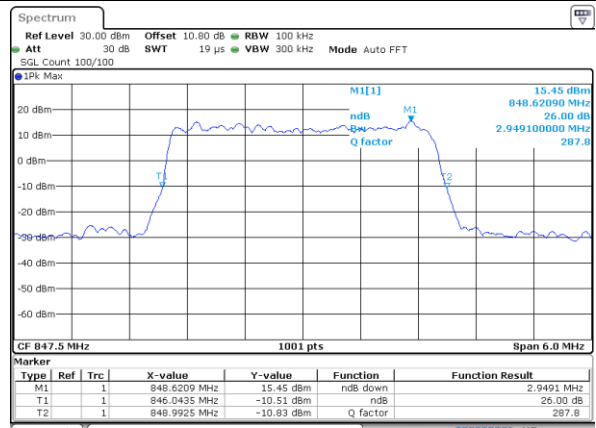
Date: 16 FEB 2018 21:13:10

Highest Channel / 1.4MHz / 64QAM



Date: 16 FEB 2018 21:44:52

Highest Channel / 3MHz / 64QAM



Date: 16 FEB 2018 21:14:24