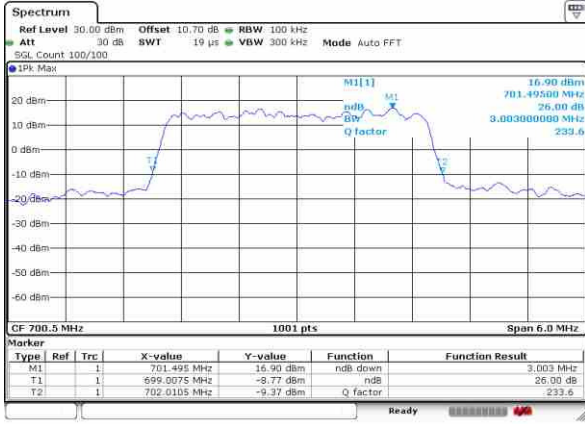




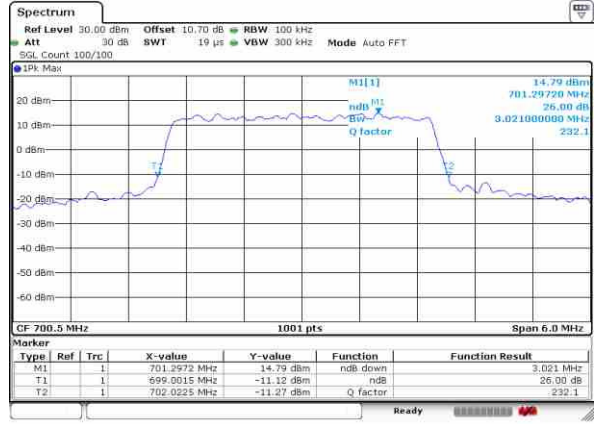
LTE Band 12

Lowest Channel / 3MHz / QPSK



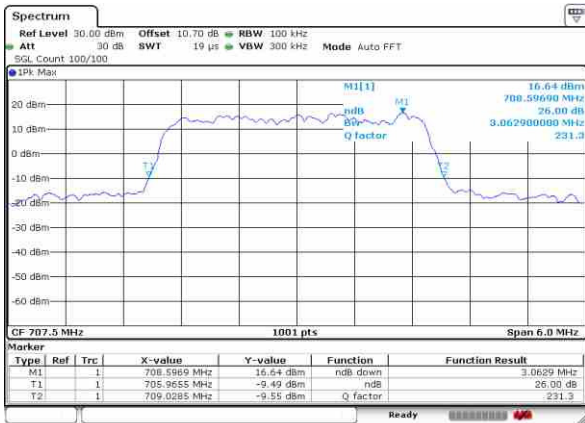
Date: 11.FEB.2019 23:54:48

Lowest Channel / 3MHz / 16QAM



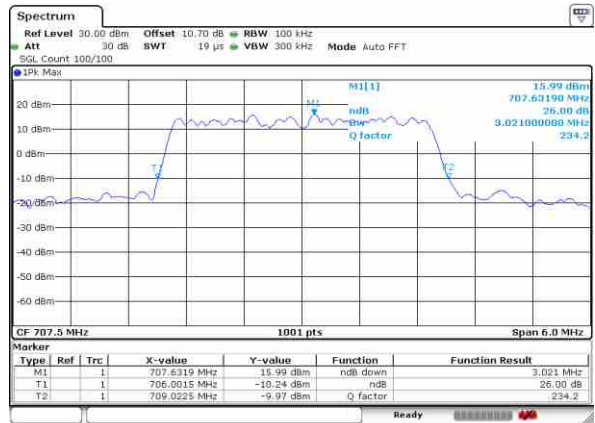
Date: 11.FEB.2019 23:54:36

Middle Channel / 3MHz / QPSK



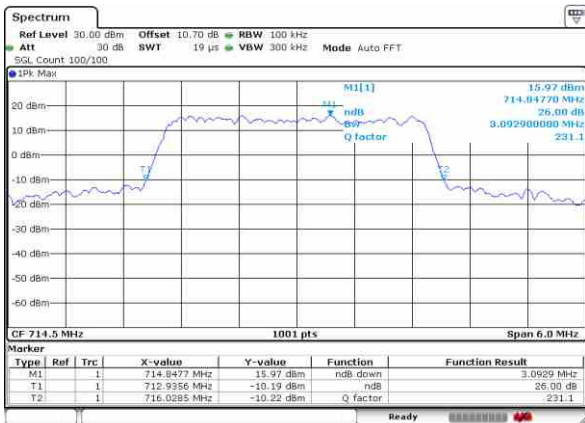
Date: 11.FEB.2019 23:01:57

Middle Channel / 3MHz / 16QAM



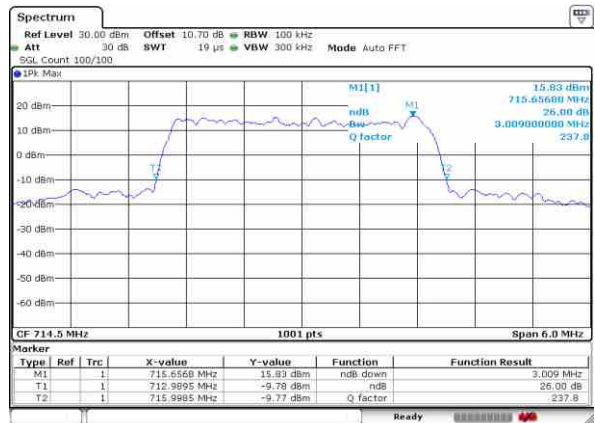
Date: 11.FEB.2019 23:02:08

Highest Channel / 3MHz / QPSK



Date: 11.FEB.2019 23:04:50

Highest Channel / 3MHz / 16QAM

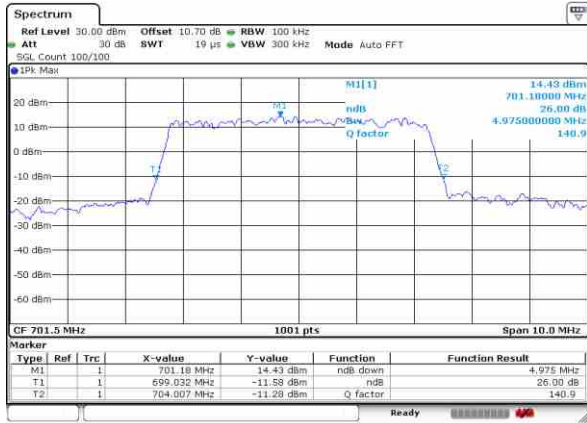


Date: 11.FEB.2019 23:04:38



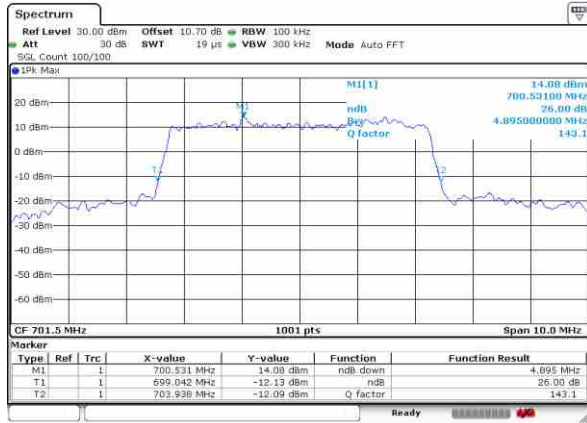
LTE Band 12

Lowest Channel / 5MHz / QPSK



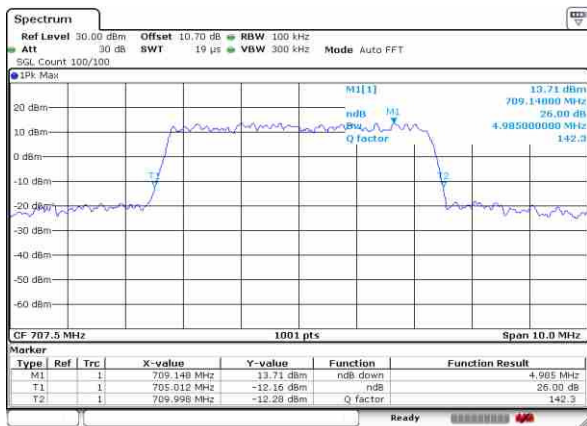
Date: 11.FEB.2019 23:12:13

Lowest Channel / 5MHz / 16QAM



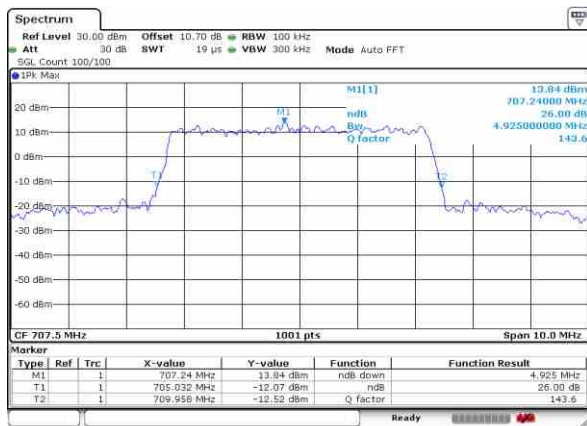
Date: 11.FEB.2019 23:12:01

Middle Channel / 5MHz / QPSK



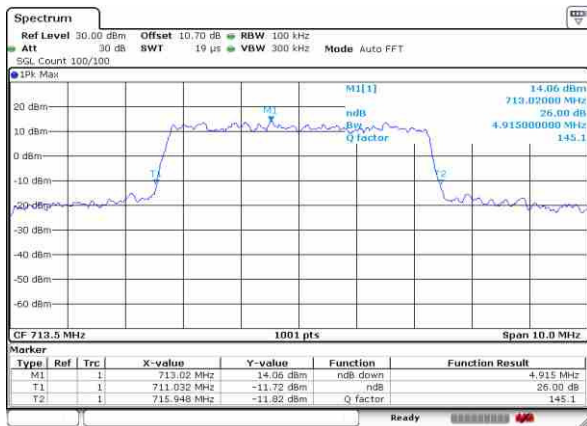
Date: 11.FEB.2019 23:15:15

Middle Channel / 5MHz / 16QAM



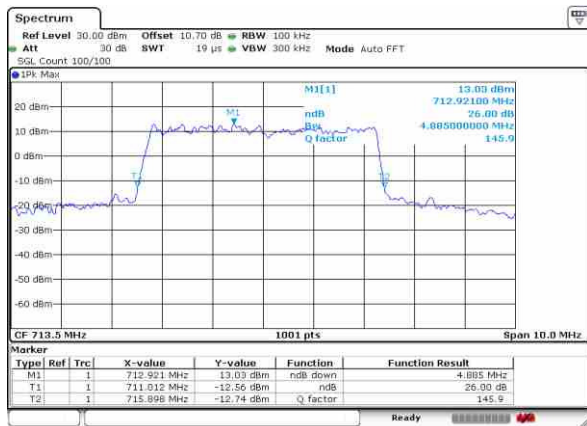
Date: 11.FEB.2019 23:15:31

Highest Channel / 5MHz / QPSK



Date: 11.FEB.2019 23:22:14

Highest Channel / 5MHz / 16QAM

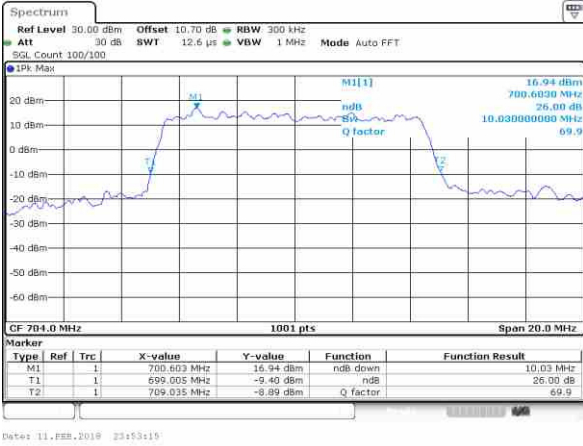


Date: 11.FEB.2019 23:22:03



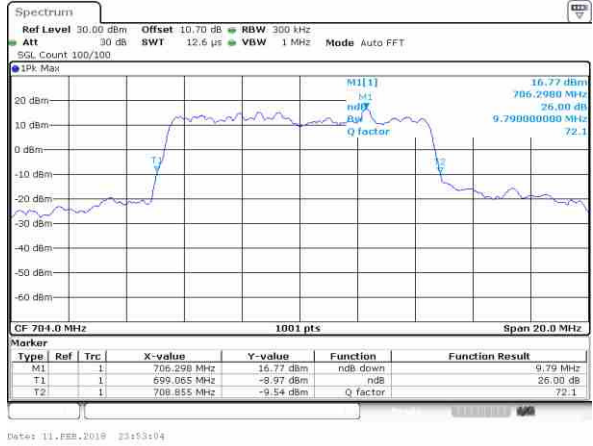
LTE Band 12

Lowest Channel / 10MHz / QPSK



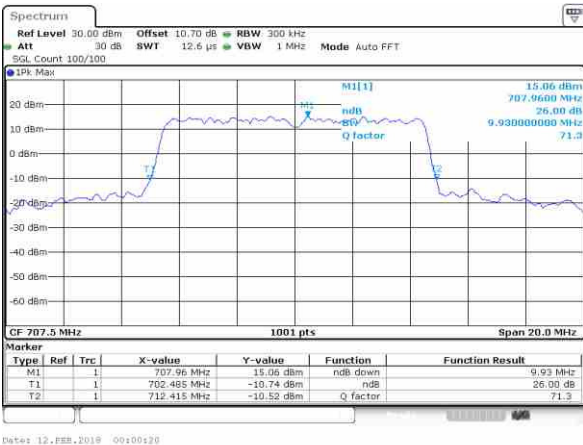
Date: 11.FEB.2019 23:53:19

Lowest Channel / 10MHz / 16QAM



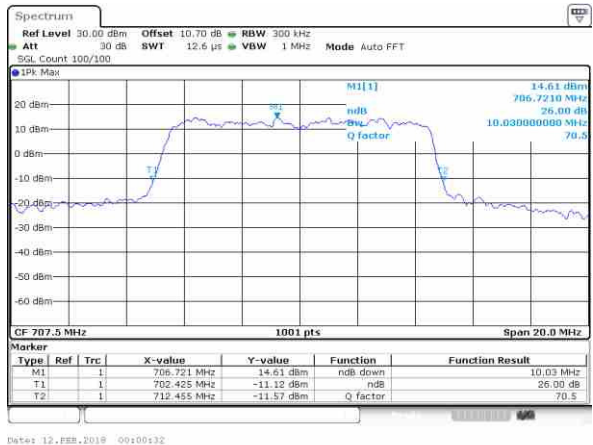
Date: 11.FEB.2019 23:53:04

Middle Channel / 10MHz / QPSK



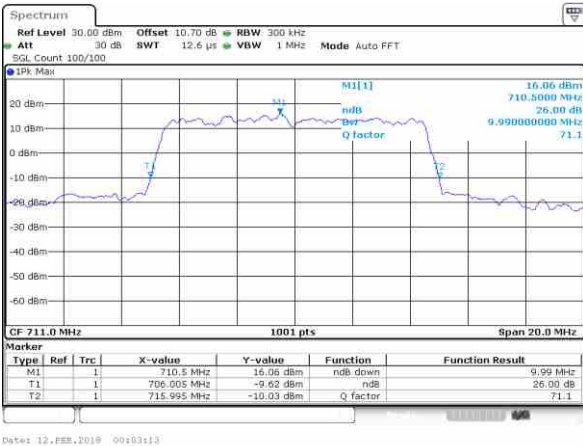
Date: 12.FEB.2019 00:00:20

Middle Channel / 10MHz / 16QAM



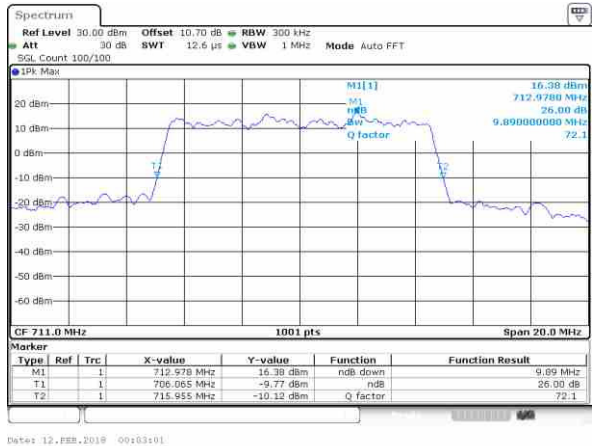
Date: 12.FEB.2019 00:00:32

Highest Channel / 10MHz / QPSK



Date: 12.FEB.2019 00:03:13

Highest Channel / 10MHz / 16QAM

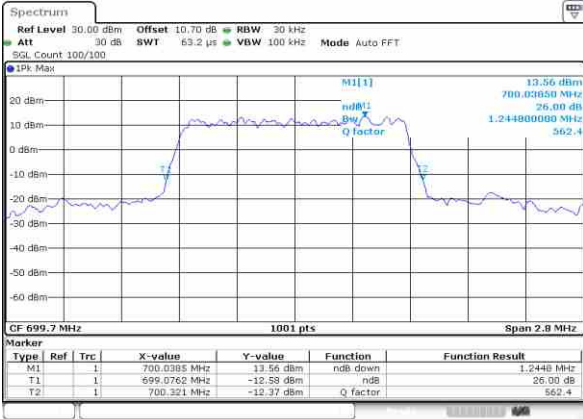


Date: 12.FEB.2019 00:03:01



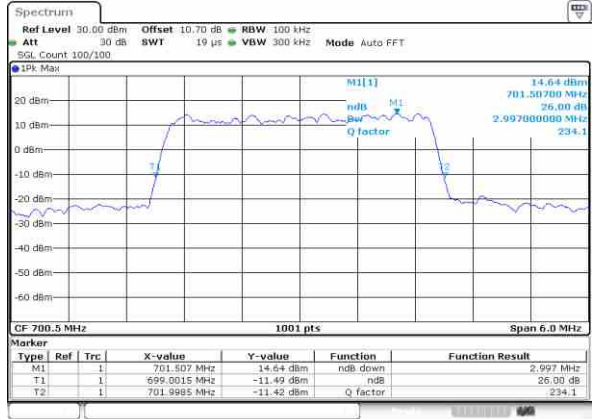
LTE Band 12

Lowest Channel / 1.4MHz / 64QAM



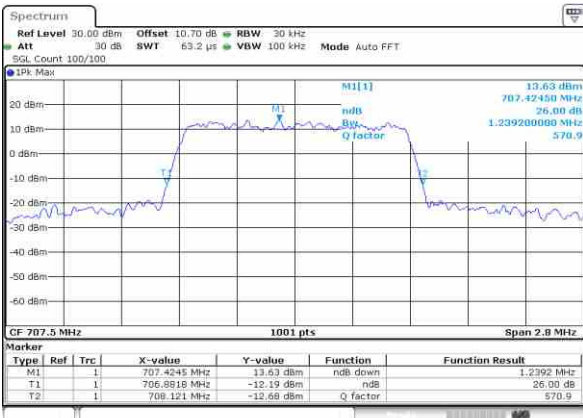
Date: 12.FEB.2019 01:27:44

Lowest Channel / 3MHz / 64QAM



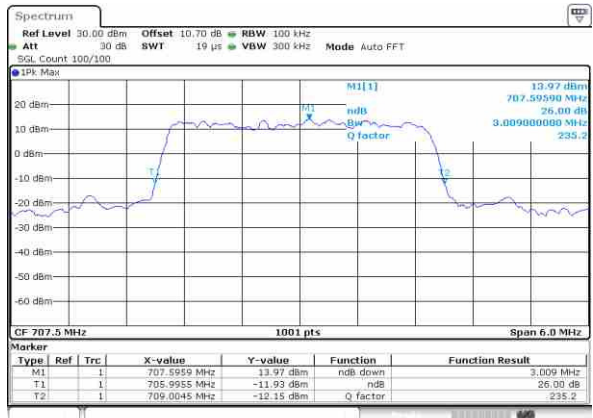
Date: 12.FEB.2019 01:10:51

Middle Channel / 1.4MHz / 64QAM



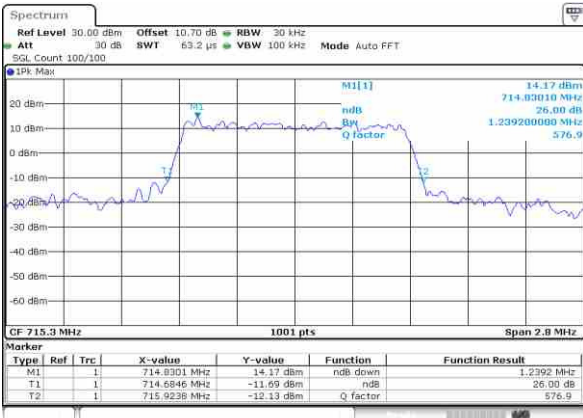
Date: 12.FEB.2019 01:31:23

Middle Channel / 3MHz / 64QAM



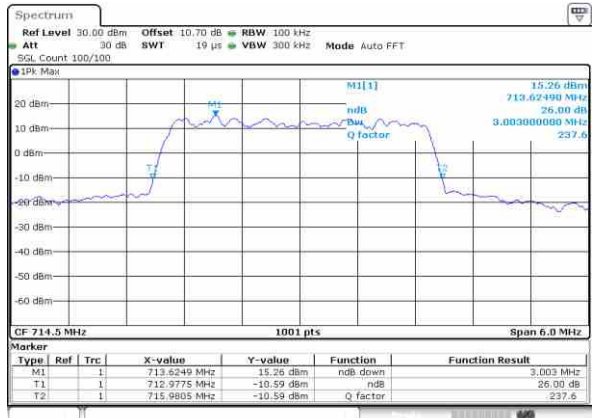
Date: 12.FEB.2019 01:10:30

Highest Channel / 1.4MHz / 64QAM



Date: 12.FEB.2019 01:32:44

Highest Channel / 3MHz / 64QAM

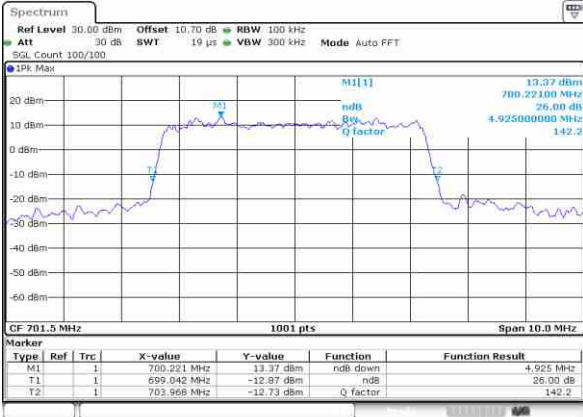


Date: 12.FEB.2019 01:10:51



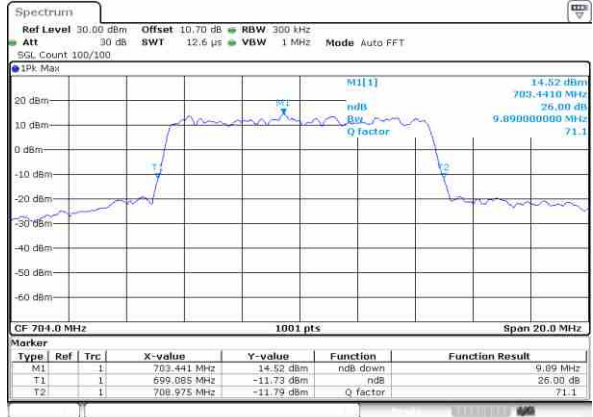
LTE Band 12

Lowest Channel / 5MHz / 64QAM



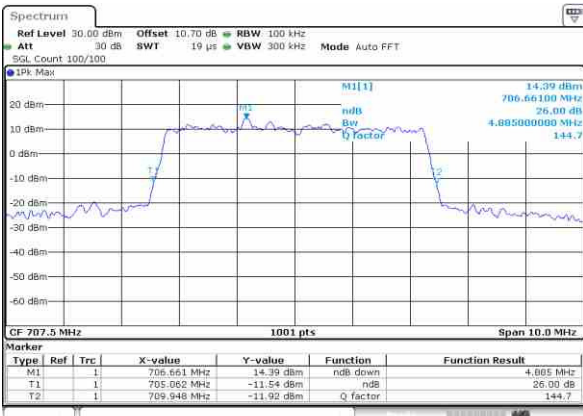
Date: 12.FEB.2018 01:10:29

Lowest Channel / 10MHz / 64QAM



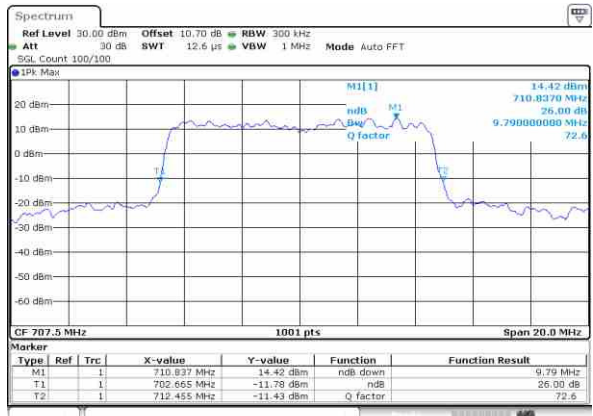
Date: 12.FEB.2018 01:19:06

Middle Channel / 5MHz / 64QAM



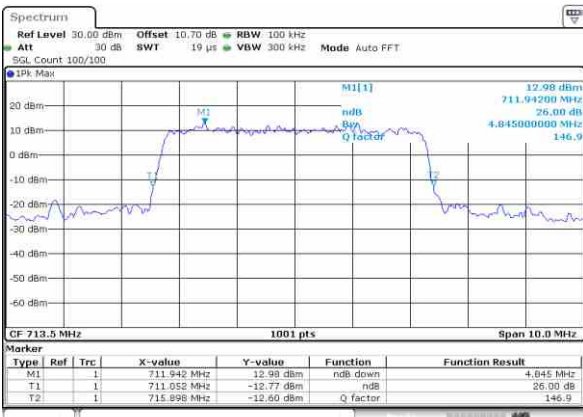
Date: 12.FEB.2018 01:14:07

Middle Channel / 10MHz / 64QAM



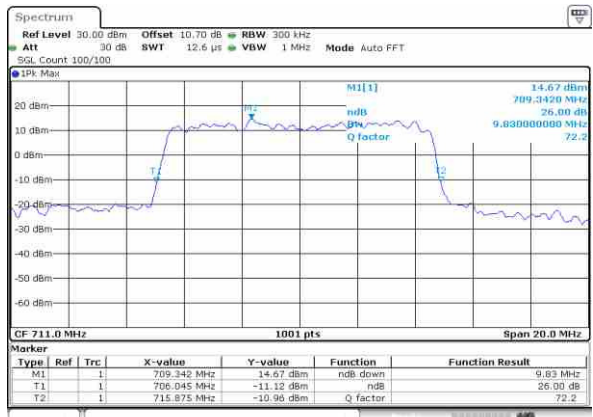
Date: 12.FEB.2018 01:22:45

Highest Channel / 5MHz / 64QAM



Date: 12.FEB.2018 01:15:28

Highest Channel / 10MHz / 64QAM



Date: 12.FEB.2018 01:24:06



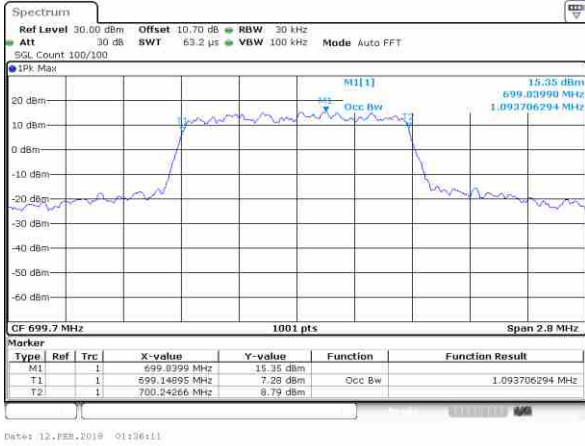
Occupied Bandwidth

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	2.73	2.72	4.48	4.5	8.99	9.01	-	-	-	-
Middle CH	1.1	1.1	2.74	2.72	4.5	4.5	9.05	9.07	-	-	-	-
Highest CH	1.1	1.11	2.77	2.72	4.5	4.5	9.11	9.07	-	-	-	-
Mode	LTE Band 12 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	1.10	-	2.74	-	4.51	-	9.03	-	-	-	-	-
Middle CH	1.08	-	2.74	-	4.49	-	9.07	-	-	-	-	-
Highest CH	1.09	-	2.71	-	4.50	-	9.03	-	-	-	-	-



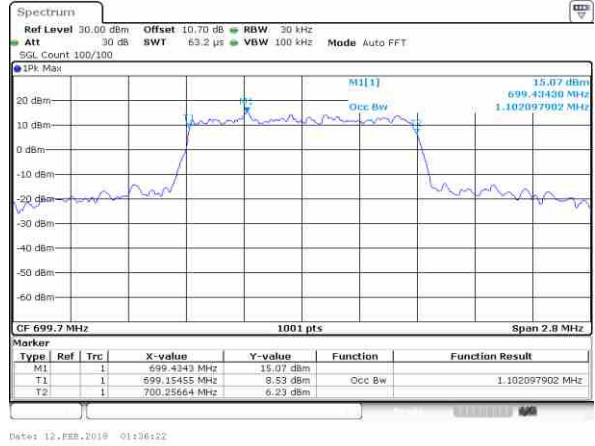
LTE Band 12

Lowest Channel / 1.4MHz / QPSK



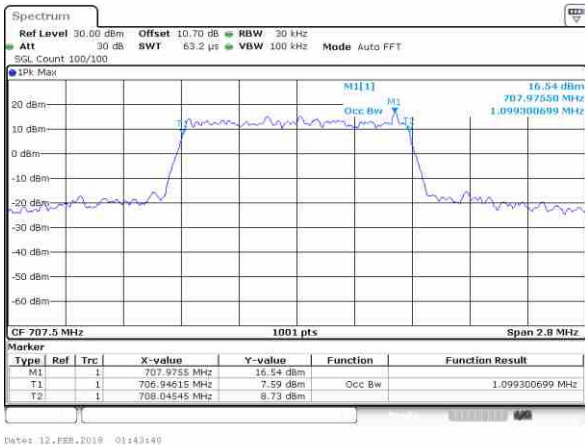
Date: 12.FEB.2019 01:36:11

Lowest Channel / 1.4MHz / 16QAM



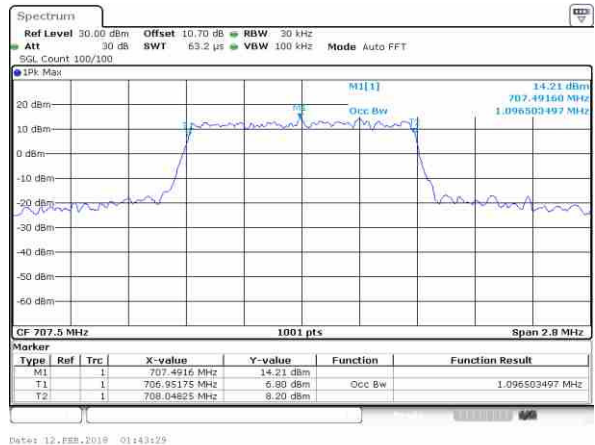
Date: 12.FEB.2019 01:36:22

Middle Channel / 1.4MHz / QPSK



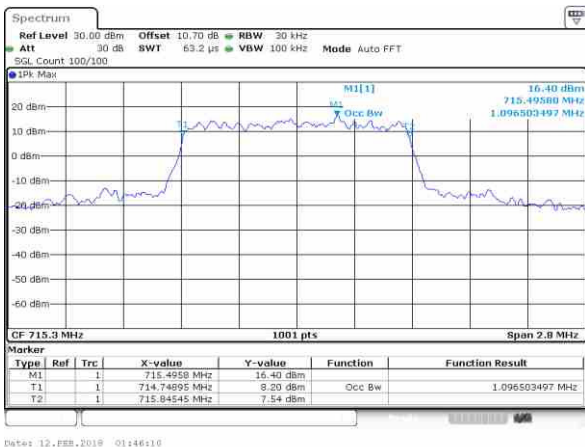
Date: 12.FEB.2019 01:43:40

Middle Channel / 1.4MHz / 16QAM



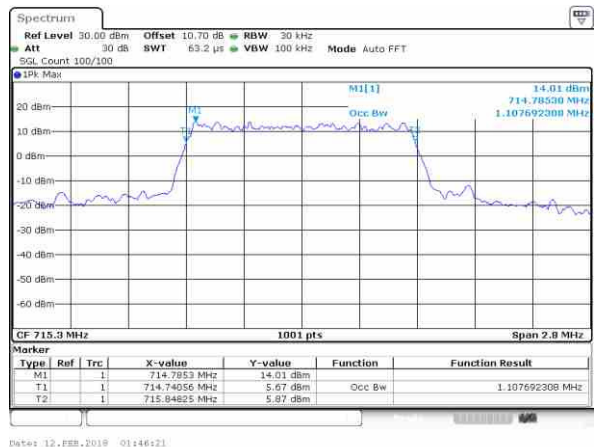
Date: 12.FEB.2019 01:43:29

Highest Channel / 1.4MHz / QPSK



Date: 12.FEB.2019 01:46:10

Highest Channel / 1.4MHz / 16QAM

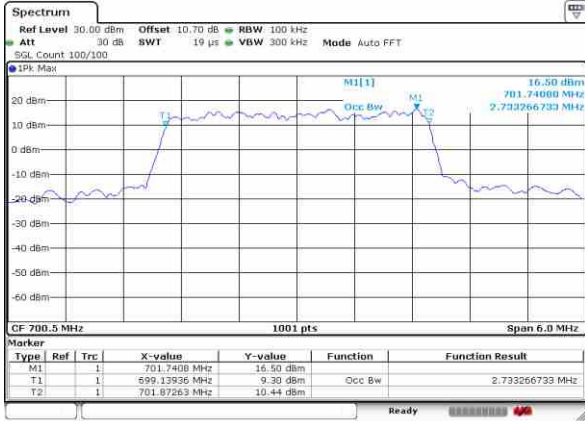


Date: 12.FEB.2019 01:46:21



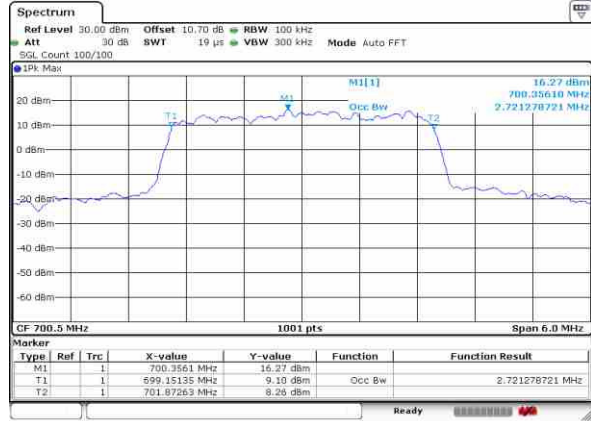
LTE Band 12

Lowest Channel / 3MHz / QPSK



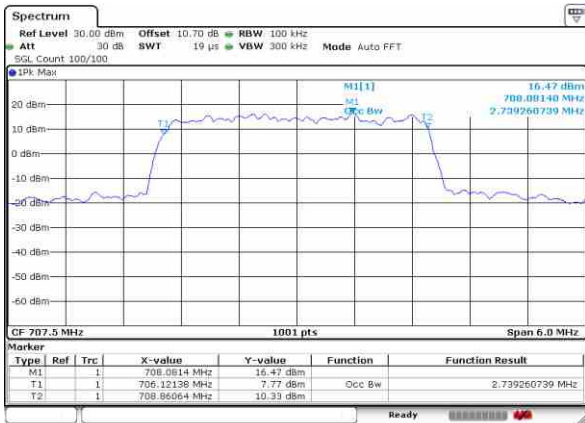
Date: 11.FEB.2019 23:54:13

Lowest Channel / 3MHz / 16QAM



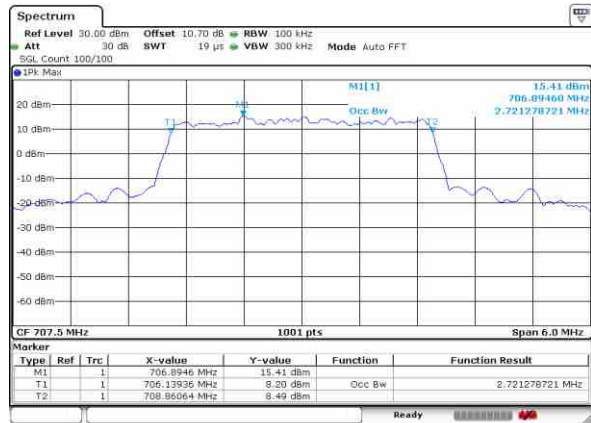
Date: 11.FEB.2019 23:54:25

Middle Channel / 3MHz / QPSK



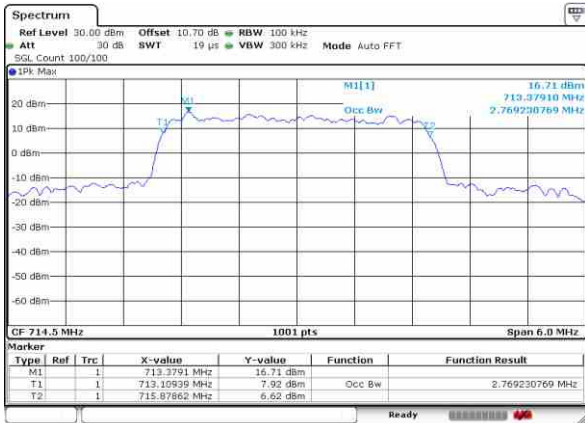
Date: 11.FEB.2019 23:01:45

Middle Channel / 3MHz / 16QAM



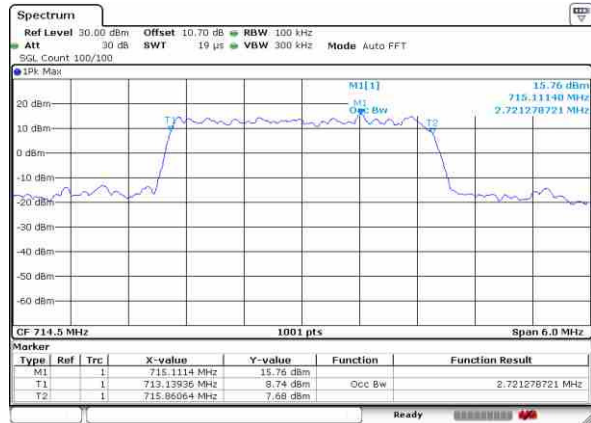
Date: 11.FEB.2019 23:01:34

Highest Channel / 3MHz / QPSK



Date: 11.FEB.2019 23:04:19

Highest Channel / 3MHz / 16QAM

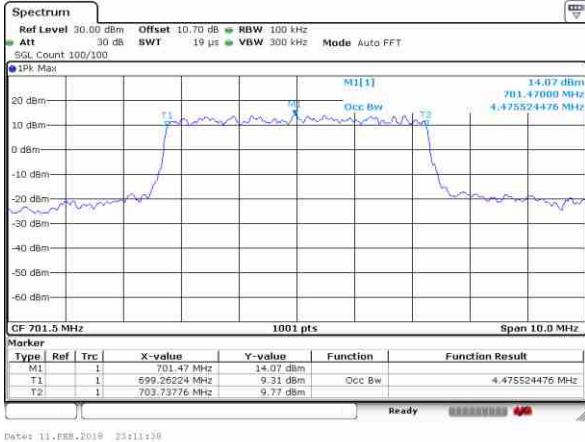


Date: 11.FEB.2019 23:04:27



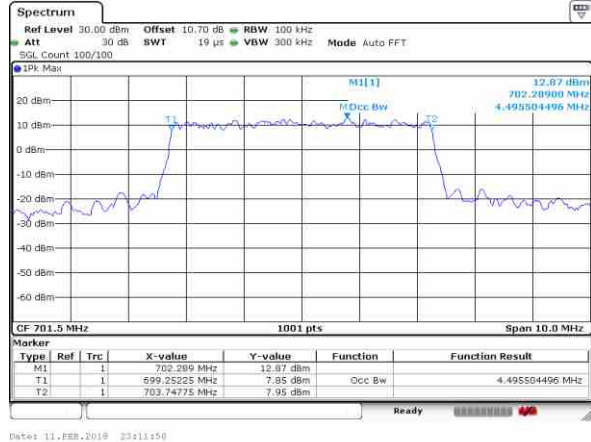
LTE Band 12

Lowest Channel / 5MHz / QPSK



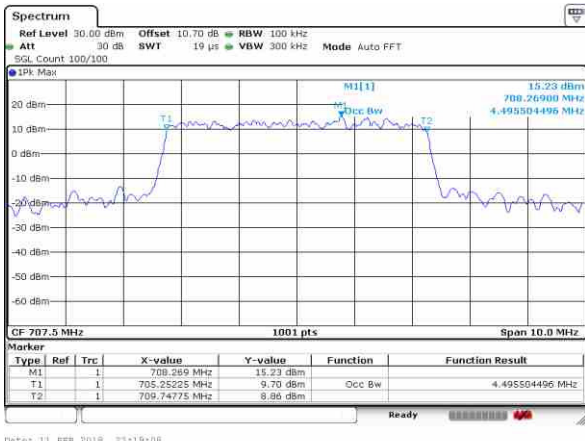
Date: 11.FEB.2019 23:11:56

Lowest Channel / 5MHz / 16QAM



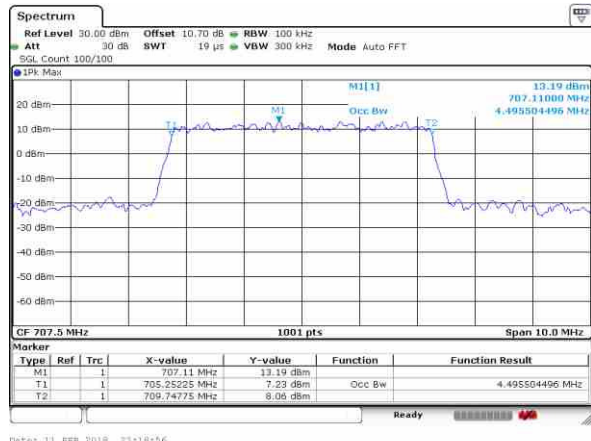
Date: 11.FEB.2019 23:11:56

Middle Channel / 5MHz / QPSK



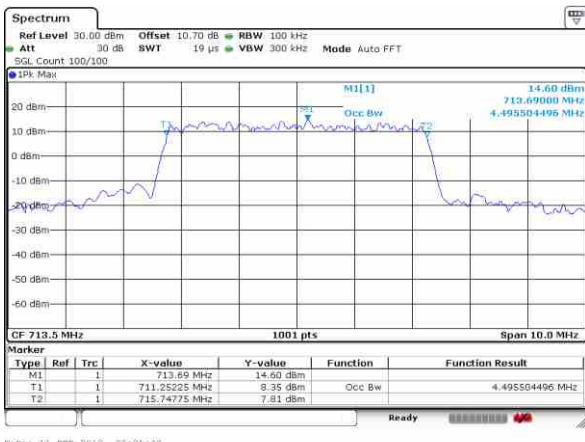
Date: 11.FEB.2019 23:15:08

Middle Channel / 5MHz / 16QAM



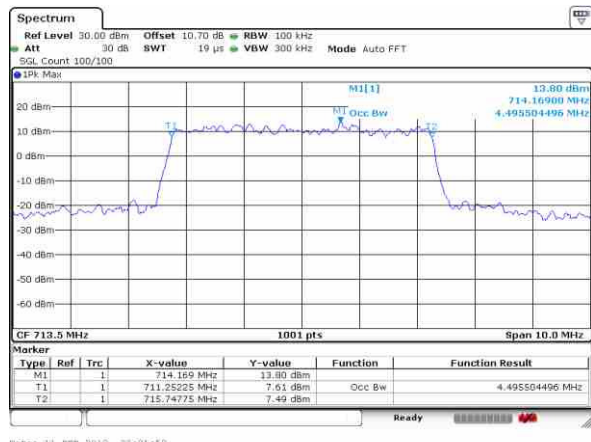
Date: 11.FEB.2019 23:18:56

Highest Channel / 5MHz / QPSK



Date: 11.FEB.2019 23:21:40

Highest Channel / 5MHz / 16QAM

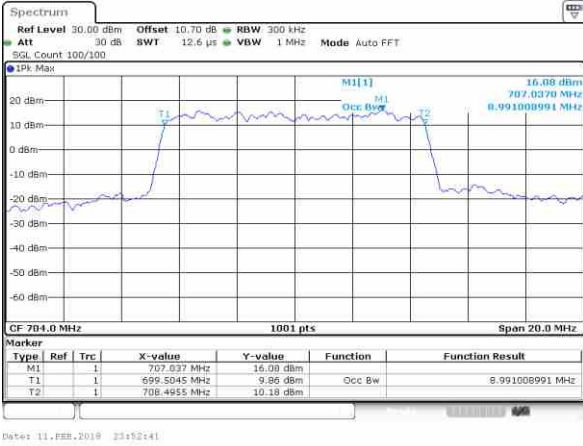


Date: 11.FEB.2019 23:21:52



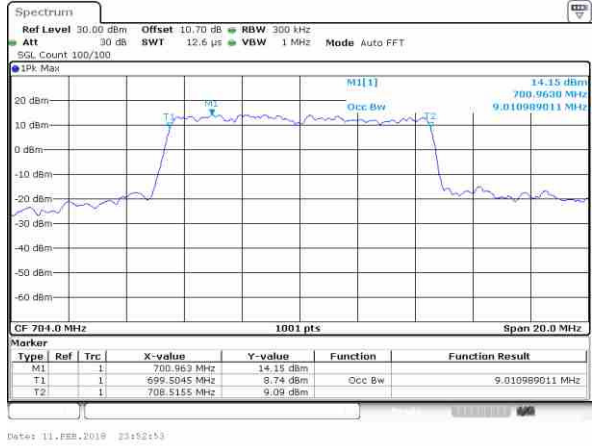
LTE Band 12

Lowest Channel / 10MHz / QPSK



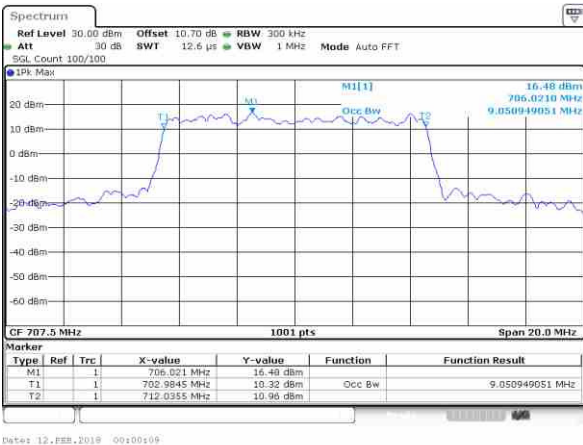
Date: 11.FEB.2019 23:52:41

Lowest Channel / 10MHz / 16QAM



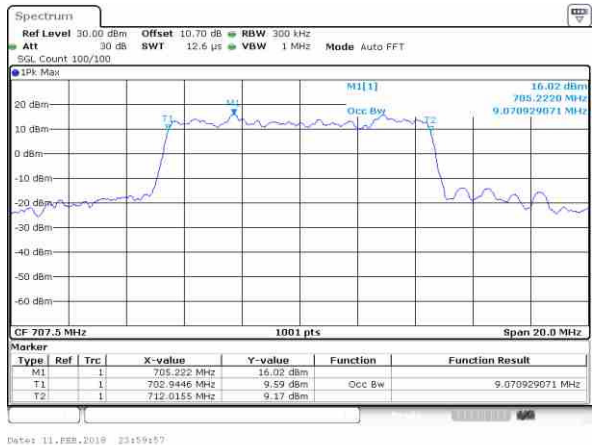
Date: 11.FEB.2019 23:52:53

Middle Channel / 10MHz / QPSK



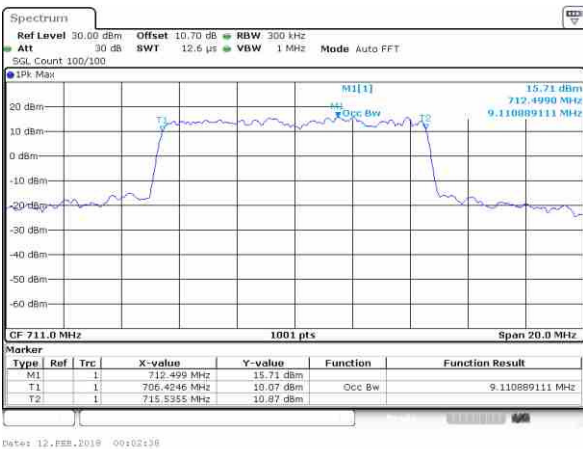
Date: 12.FEB.2019 00:00:09

Middle Channel / 10MHz / 16QAM



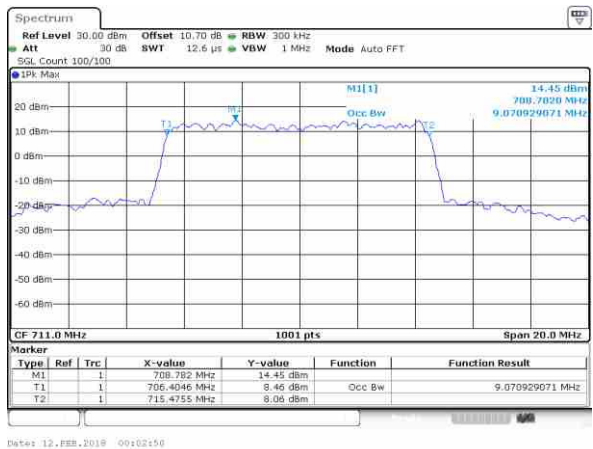
Date: 11.FEB.2019 23:59:57

Highest Channel / 10MHz / QPSK



Date: 12.FEB.2019 00:02:39

Highest Channel / 10MHz / 16QAM

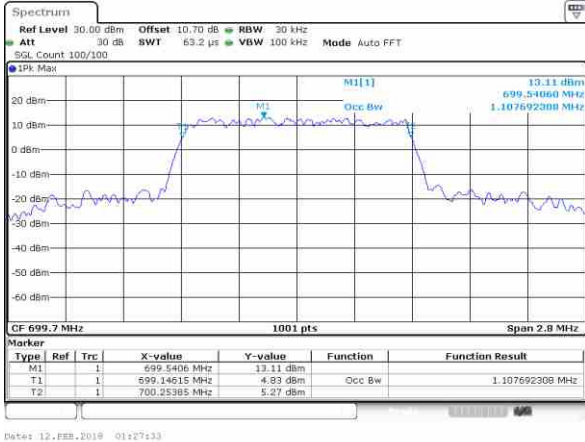


Date: 12.FEB.2019 00:02:59



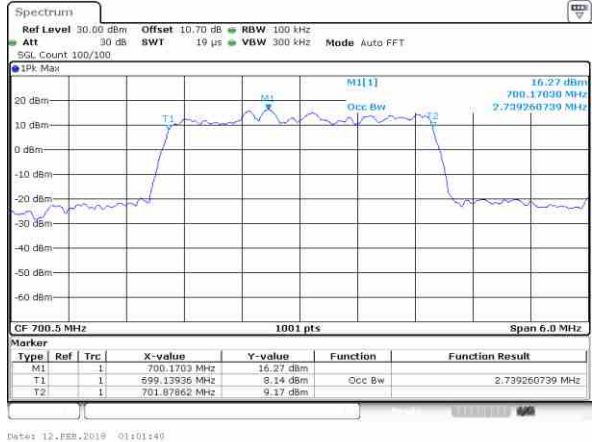
LTE Band 12

Lowest Channel / 1.4MHz / 64QAM



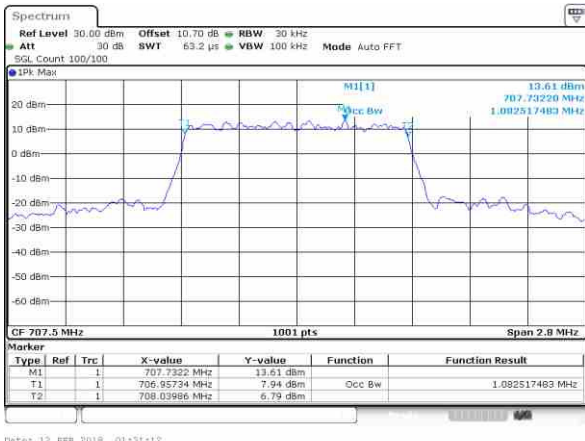
Date: 12.FEB.2019 01:27:33

Lowest Channel / 3MHz / 64QAM



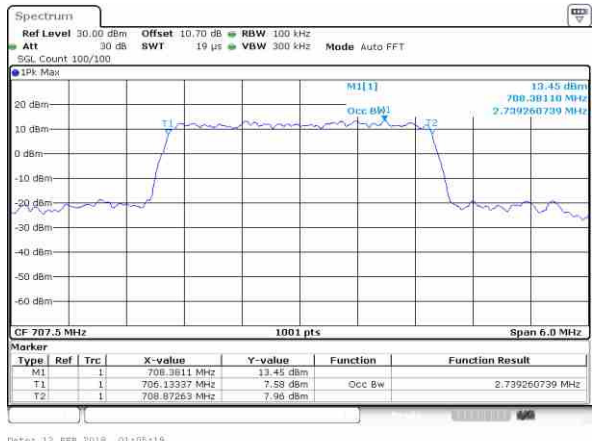
Date: 12.FEB.2019 01:01:49

Middle Channel / 1.4MHz / 64QAM



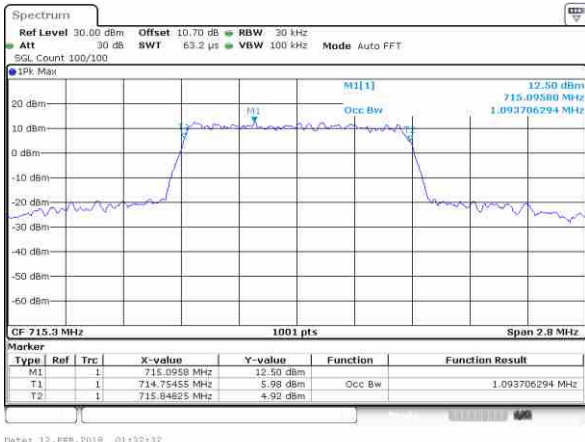
Date: 12.FEB.2019 01:31:12

Middle Channel / 3MHz / 64QAM



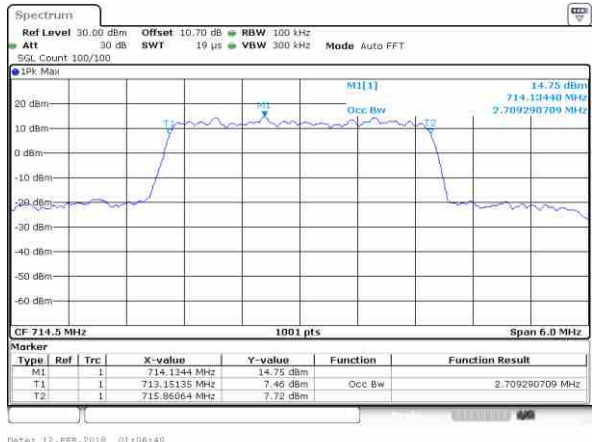
Date: 12.FEB.2019 01:05:19

Highest Channel / 1.4MHz / 64QAM



Date: 12.FEB.2019 01:32:32

Highest Channel / 3MHz / 64QAM

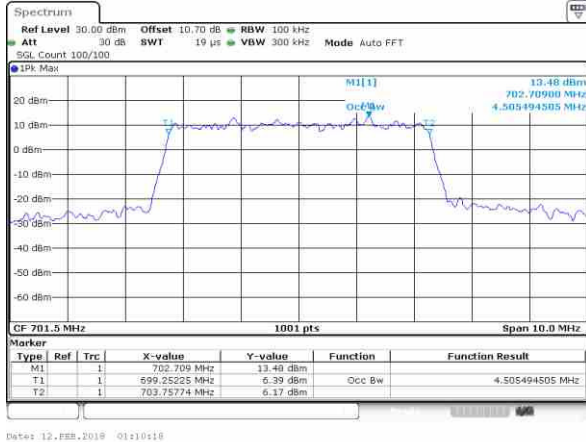


Date: 12.FEB.2019 01:06:49

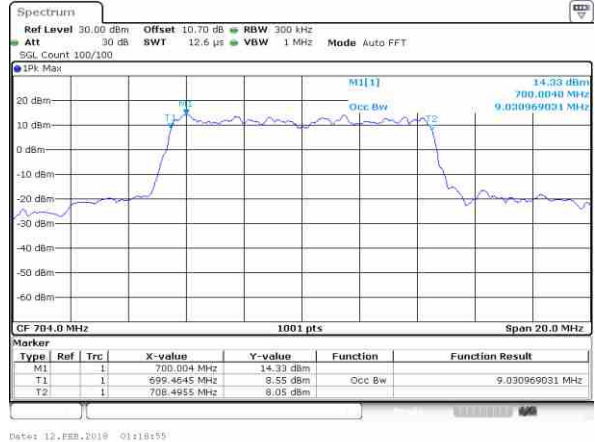


LTE Band 12

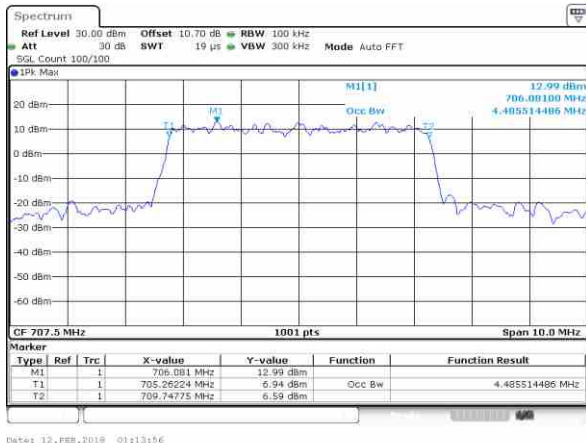
Lowest Channel / 5MHz / 64QAM



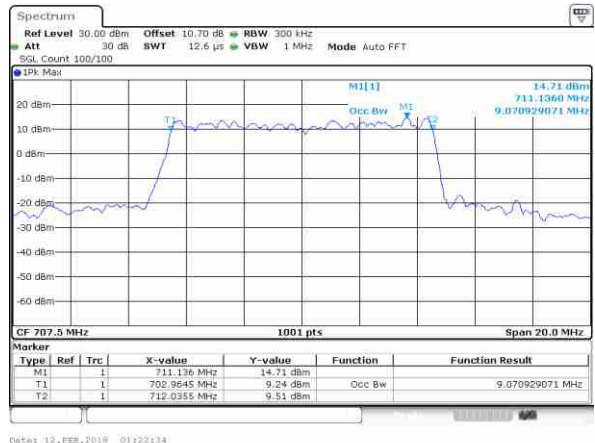
Lowest Channel / 10MHz / 64QAM



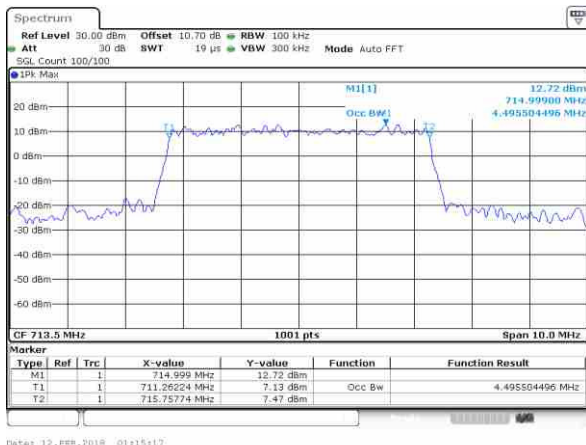
Middle Channel / 5MHz / 64QAM



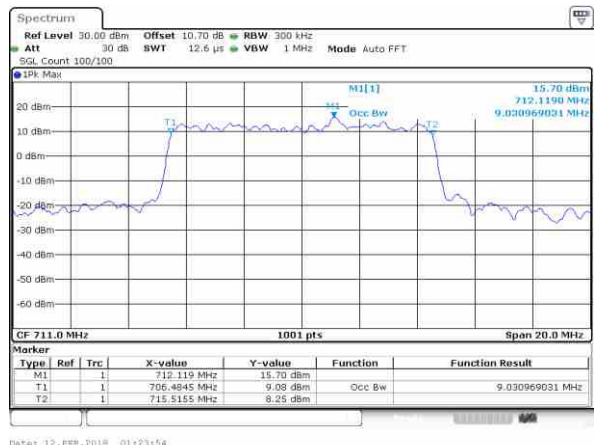
Middle Channel / 10MHz / 64QAM



Highest Channel / 5MHz / 64QAM



Highest Channel / 10MHz / 64QAM





Conducted Band Edge



LTE Band 12 / 1.4MHz / QPSK

Lowest Band Edge / 1 RB



Date: 12.FEB.2018 01:41:22

Highest Band Edge / 1RB



Date: 12.FEB.2018 01:51:20

Lowest Band Edge / Full RB



Date: 12.FEB.2018 01:37:54

Highest Band Edge / Full RB

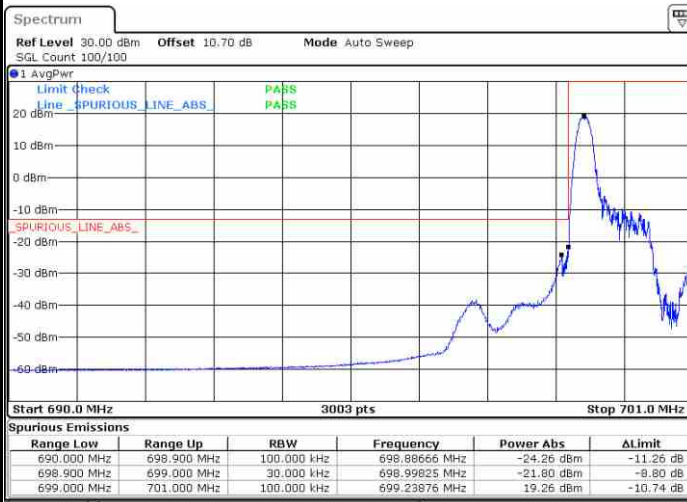


Date: 12.FEB.2018 01:47:53



LTE Band 12 / 1.4MHz / 16QAM

Lowest Band Edge / 1 RB



Date: 12.FEB.2018 01:40:13

Highest Band Edge / 1 RB



Date: 12.FEB.2018 01:50:11

Lowest Band Edge / Full RB



Date: 12.FEB.2018 01:39:03

Highest Band Edge / Full RB

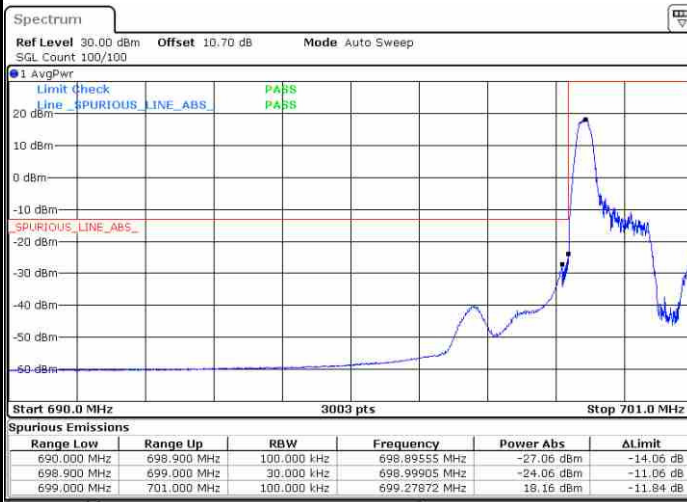


Date: 12.FEB.2018 01:45:02



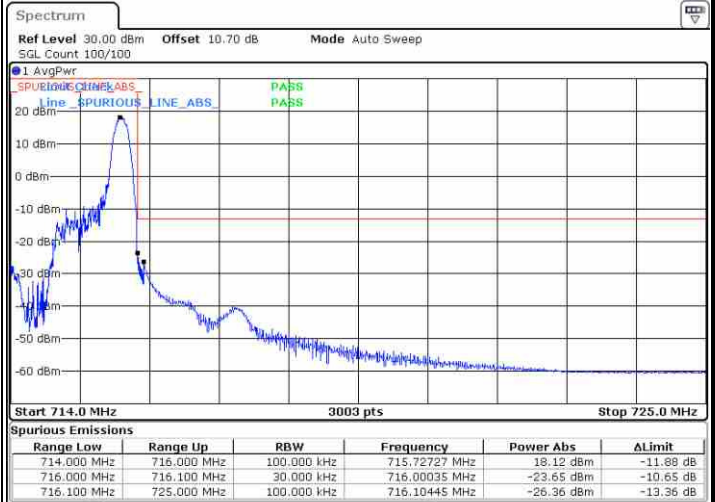
LTE Band 12 / 1.4MHz / 64QAM

Lowest Band Edge / 1 RB



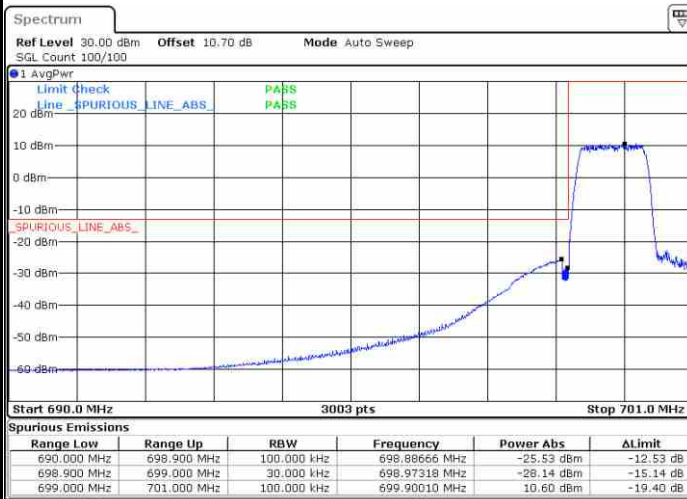
Date: 12.FEB.2018 01:30:03

Highest Band Edge / 1 RB



Date: 12.FEB.2018 01:35:02

Lowest Band Edge / Full RB



Date: 12.FEB.2018 01:28:54

Highest Band Edge / Full RB



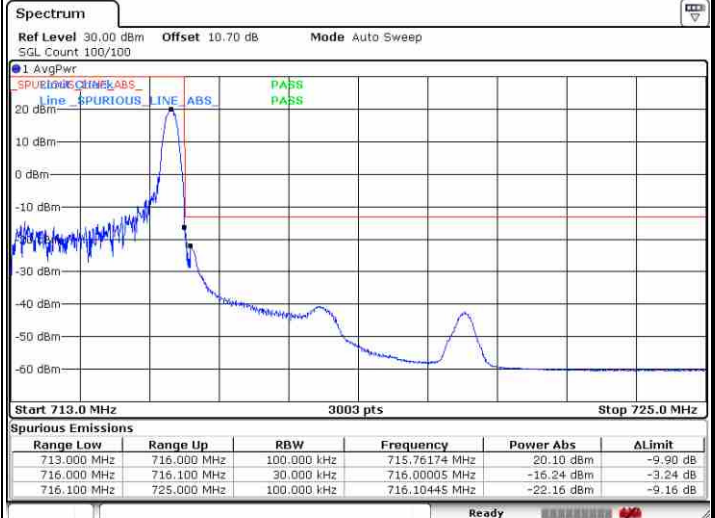
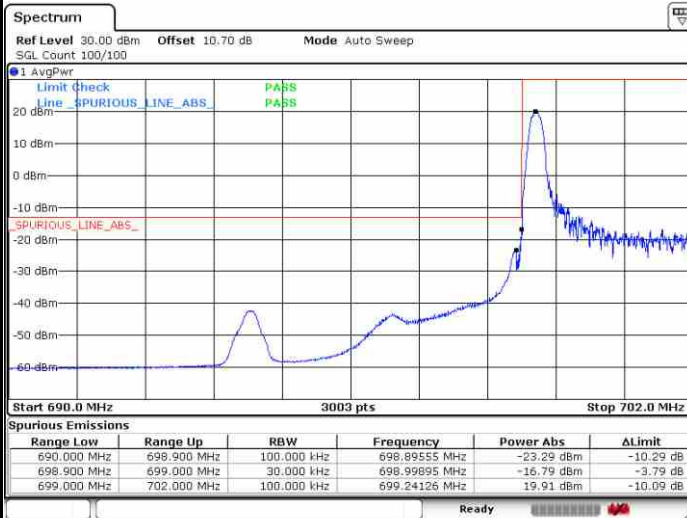
Date: 12.FEB.2018 01:33:53



LTE Band 12 / 3MHz / QPSK

Lowest Band Edge / 1RB

Highest Band Edge / 1 RB



Date: 11.FEB.2018 22:59:26

Date: 11.FEB.2018 23:09:26

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



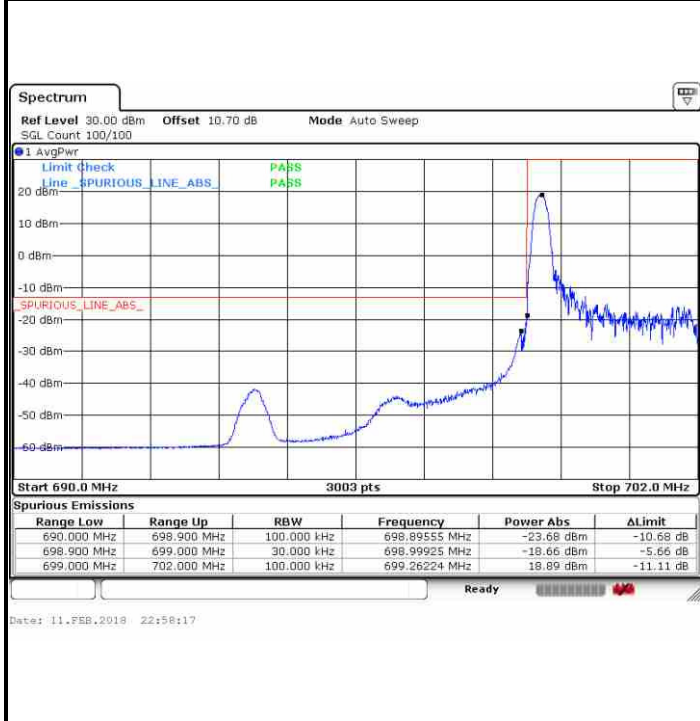
Date: 11.FEB.2018 22:55:57

Date: 11.FEB.2018 23:05:59

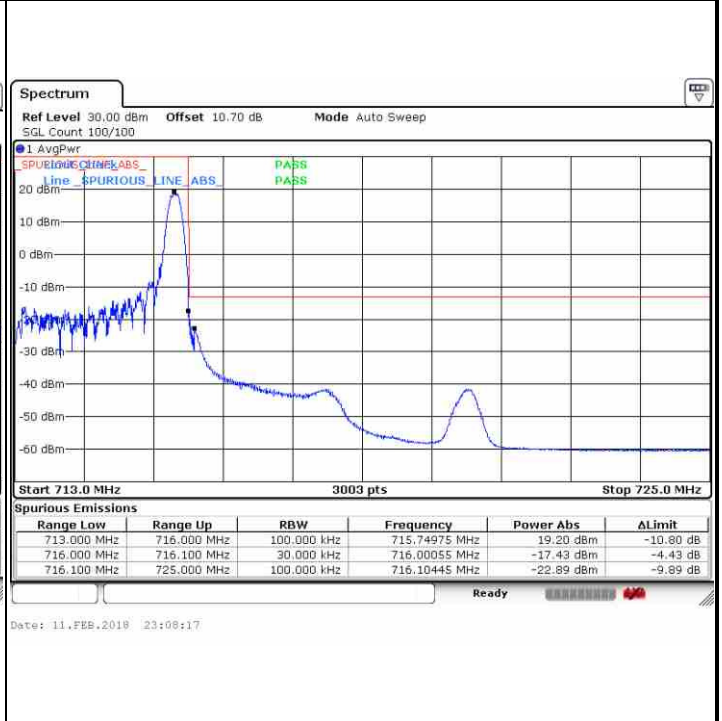


LTE Band 12 / 3MHz / 16QAM

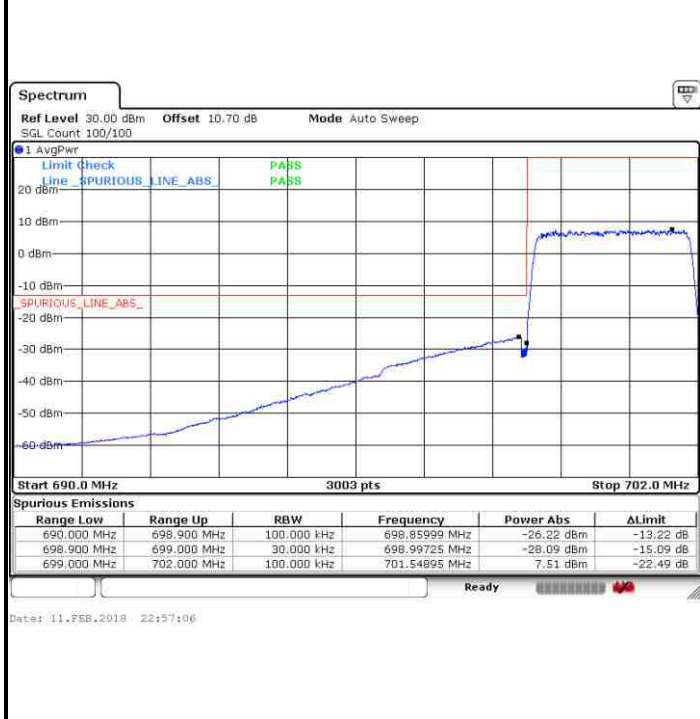
Lowest Band Edge / 1 RB



Highest Band Edge / 1 RB



Lowest Band Edge / Full RB



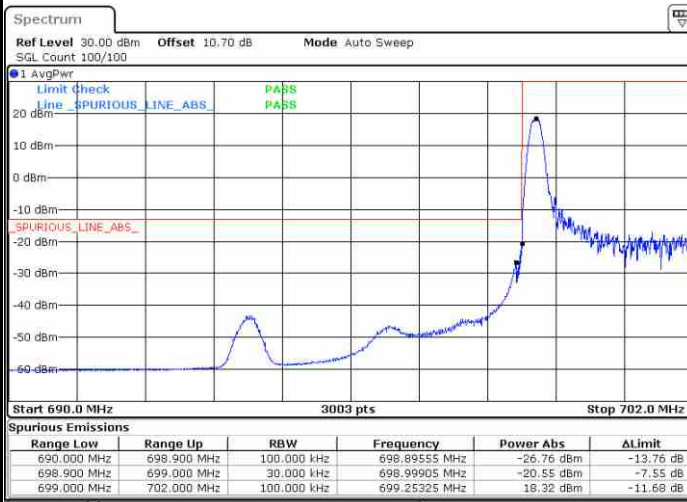
Highest Band Edge / Full RB





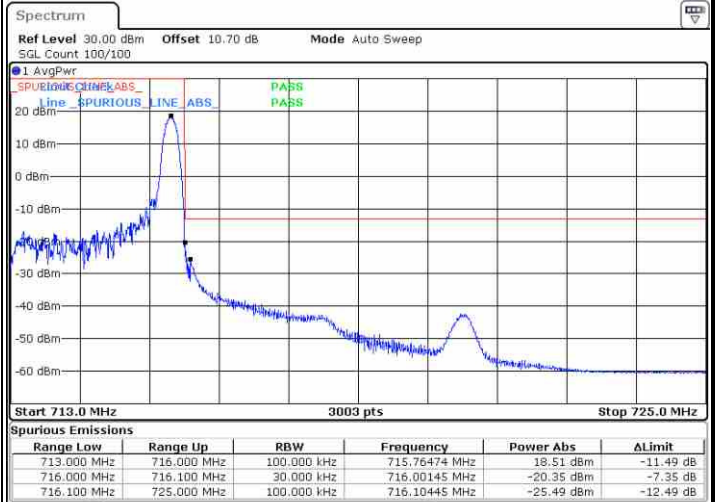
LTE Band 12 / 3MHz / 64QAM

Lowest Band Edge / 1 RB



Date: 12.FEB.2018 01:04:10

Highest Band Edge / 1 RB



Date: 12.FEB.2018 01:09:09

Lowest Band Edge / Full RB



Date: 12.FEB.2018 01:03:01

Highest Band Edge / Full RB



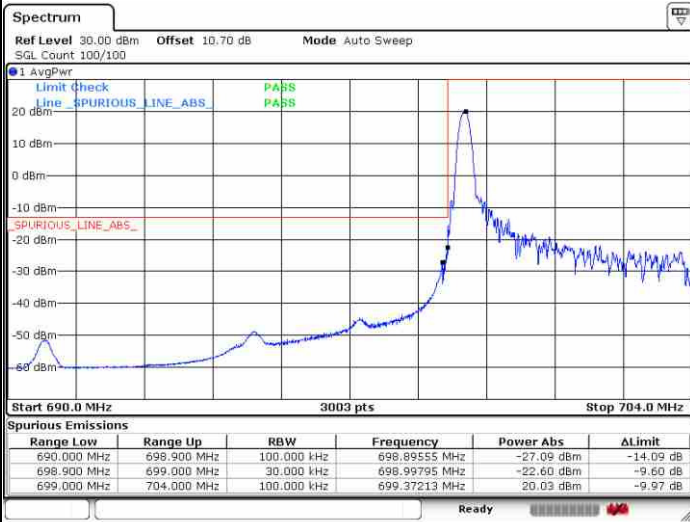
Date: 12.FEB.2018 01:08:00



LTE Band 12 / 5MHz / QPSK

Lowest Band Edge / 1 RB

Highest Band Edge / 1 RB

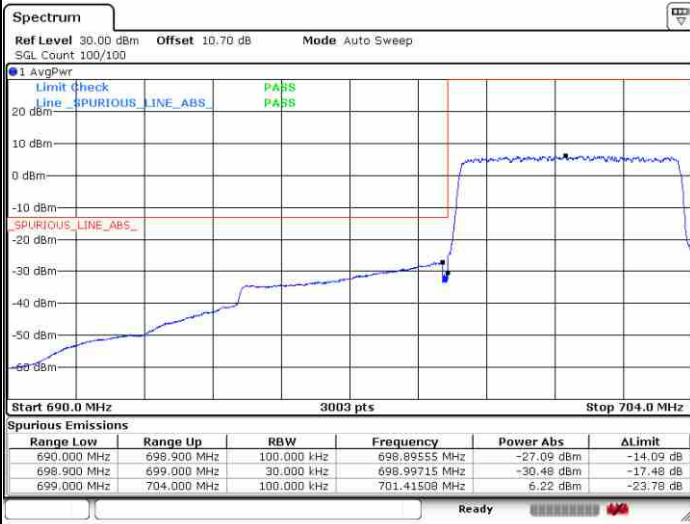


Date: 11.FEB.2018 23:16:50

Date: 11.FEB.2018 23:25:42

Lowest Band Edge / Full RB

Highest Band Edge / Full RB



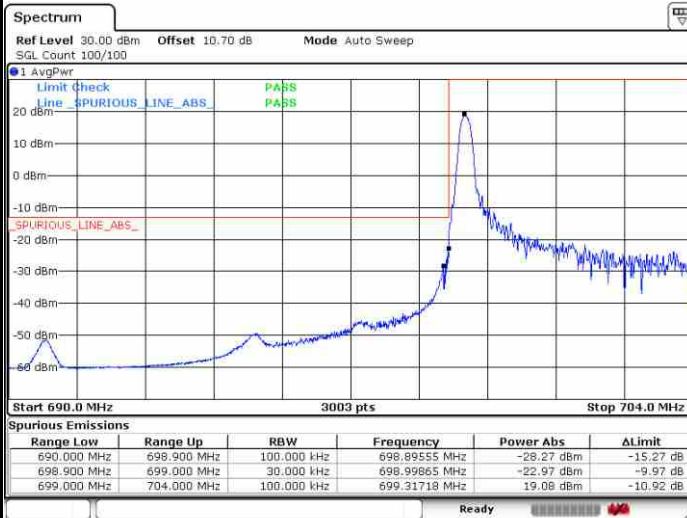
Date: 11.FEB.2018 23:13:22

Date: 11.FEB.2018 23:23:24



LTE Band 12 / 5MHz / 16QAM

Lowest Band Edge / 1RB



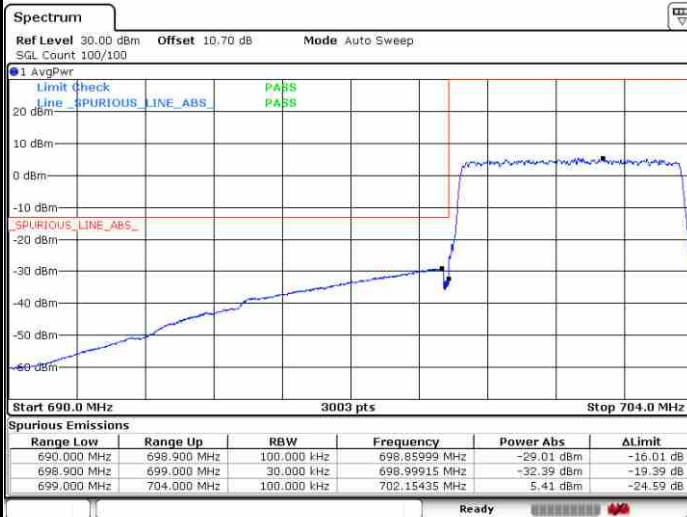
Date: 11.FEB.2018 23:15:41

Highest Band Edge / 1 RB



Date: 11.FEB.2018 23:26:51

Lowest Band Edge / Full RB



Date: 11.FEB.2018 23:14:32

Highest Band Edge / Full RB

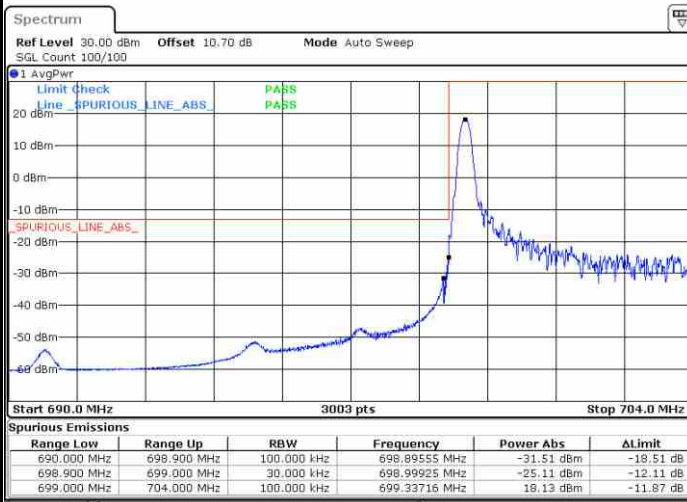


Date: 11.FEB.2018 23:24:33



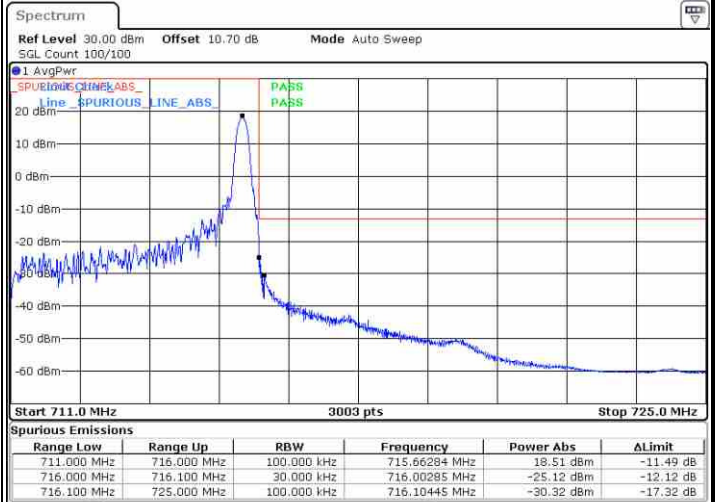
LTE Band 12 / 5MHz / 64QAM

Lowest Band Edge / 1RB



Date: 12.FEB.2018 01:12:47

Highest Band Edge / 1 RB



Date: 12.FEB.2018 01:17:46

Lowest Band Edge / Full RB



Date: 12.FEB.2018 01:11:38

Highest Band Edge / Full RB

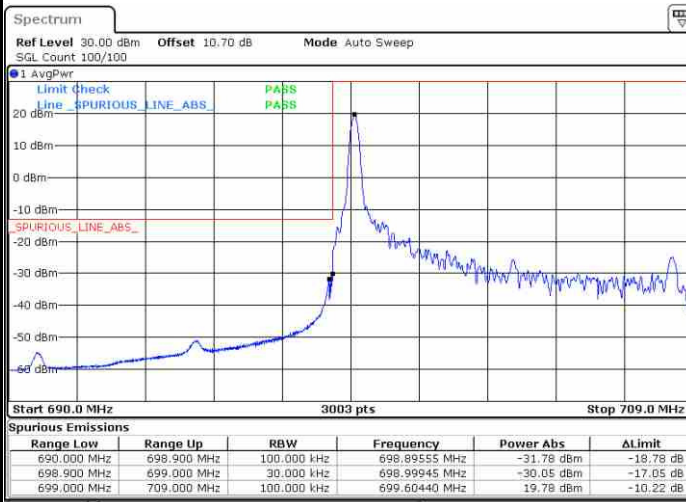


Date: 12.FEB.2018 01:16:37



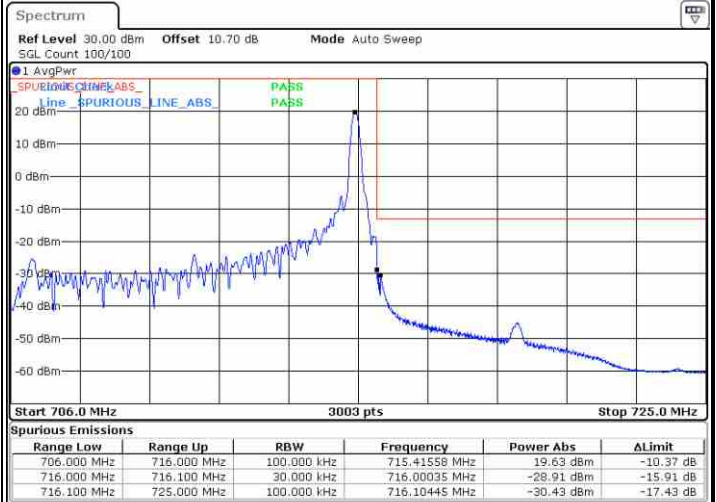
LTE Band 12 / 10MHz / QPSK

Lowest Band Edge / 1 RB



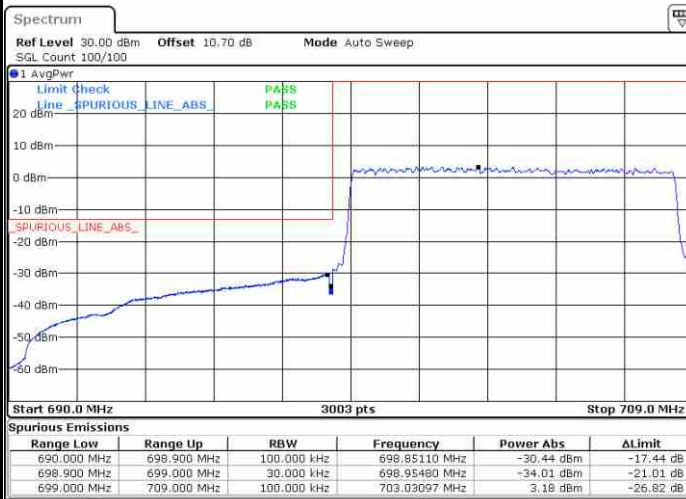
Date: 11.FEB.2018 23:57:51

Highest Band Edge / 1 RB



Date: 12.FEB.2018 00:07:49

Lowest Band Edge / Full RB



Date: 11.FEB.2018 23:54:24

Highest Band Edge / Full RB

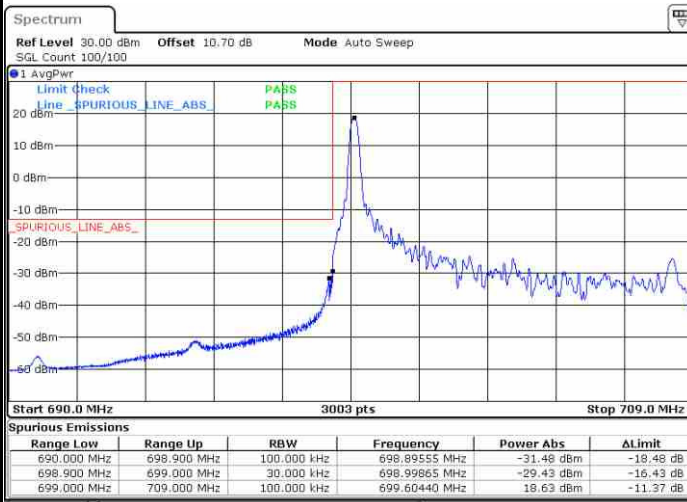


Date: 12.FEB.2018 00:04:22



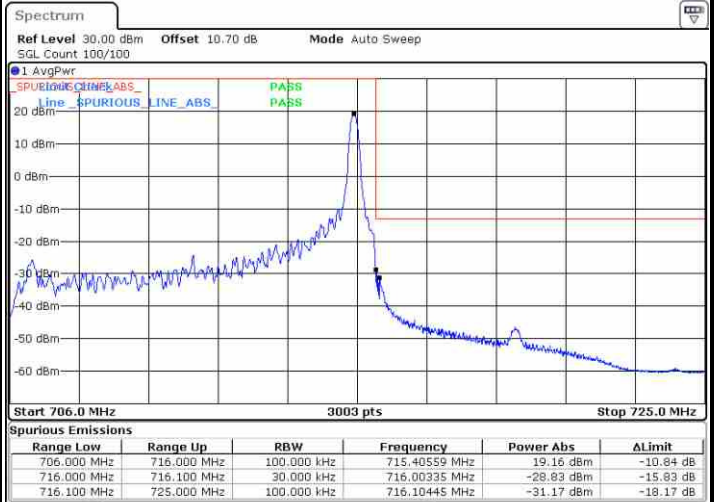
LTE Band 12 / 10MHz / 16QAM

Lowest Band Edge / 1 RB



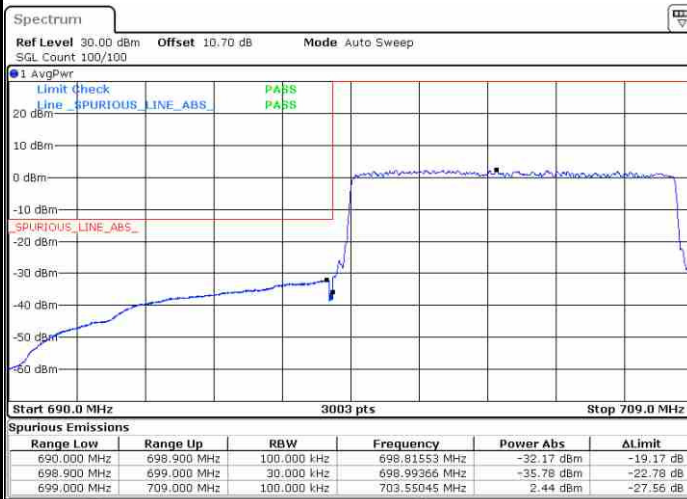
Date: 11.FEB.2018 23:56:42

Highest Band Edge / 1 RB



Date: 12.FEB.2018 00:06:40

Lowest Band Edge / Full RB



Date: 11.FEB.2018 23:55:34

Highest Band Edge / Full RB

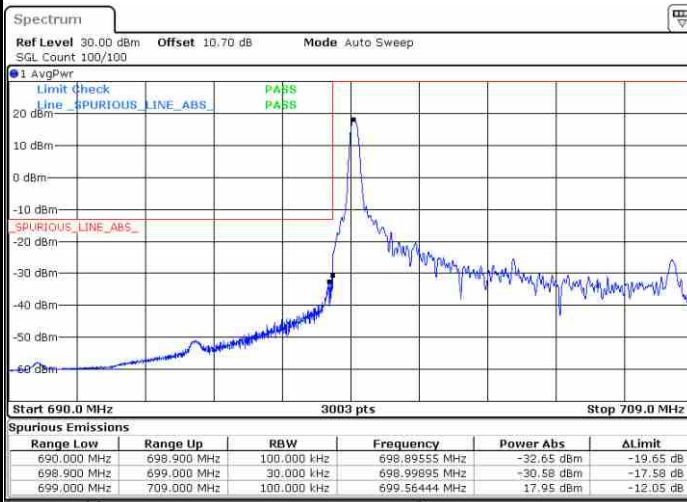


Date: 12.FEB.2018 00:05:31



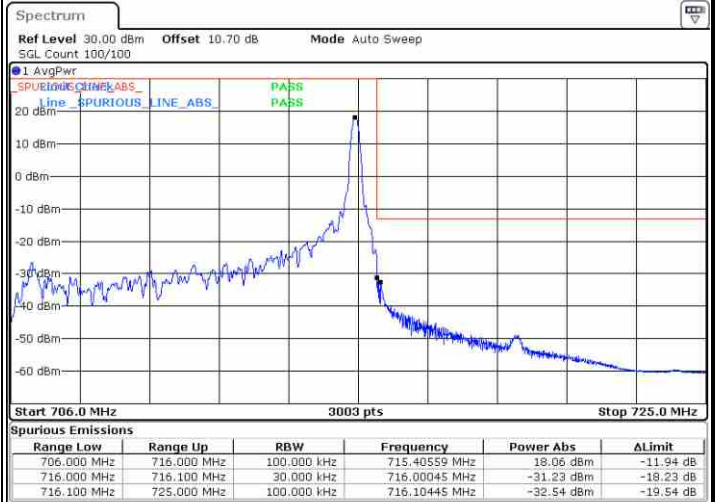
LTE Band 12 / 10MHz / 64QAM

Lowest Band Edge / 1 RB



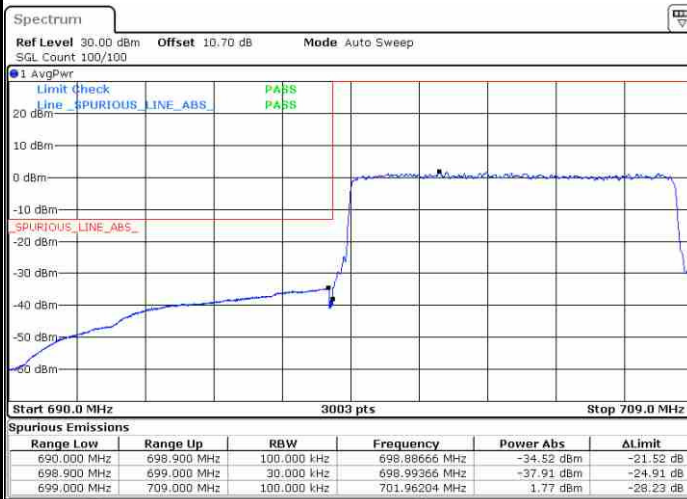
Date: 12.FEB.2018 01:21:25

Highest Band Edge / 1 RB



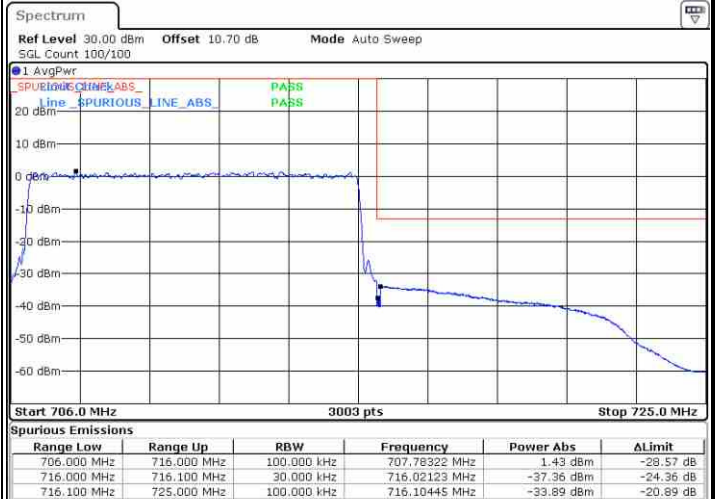
Date: 12.FEB.2018 01:26:24

Lowest Band Edge / Full RB



Date: 12.FEB.2018 01:20:15

Highest Band Edge / Full RB



Date: 12.FEB.2018 01:25:15



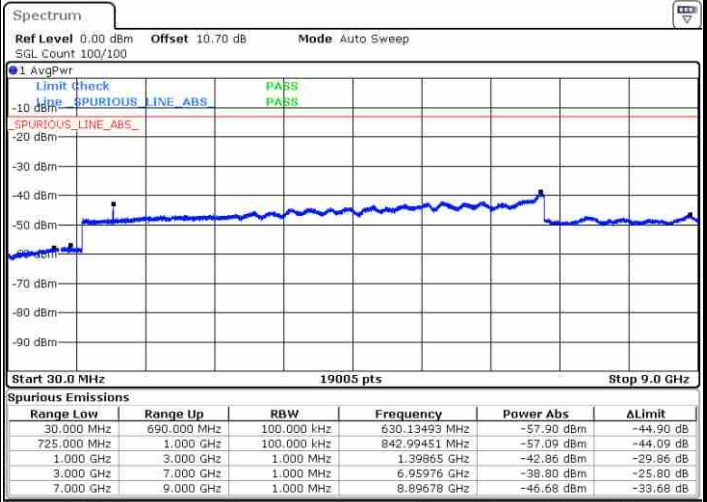
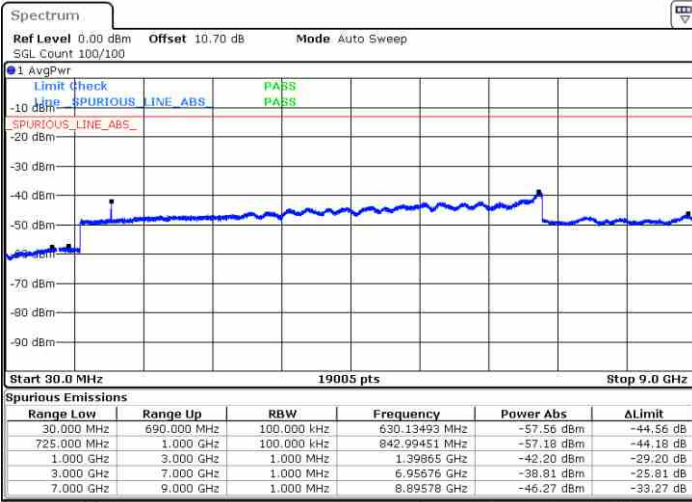
Conducted Spurious Emission



LTE Band 12 / 1.4MHz

Lowest Channel / QPSK

Lowest Channel / 16QAM

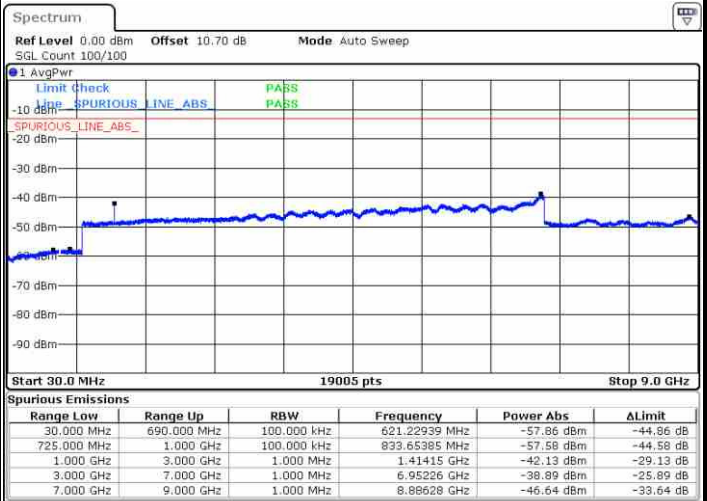
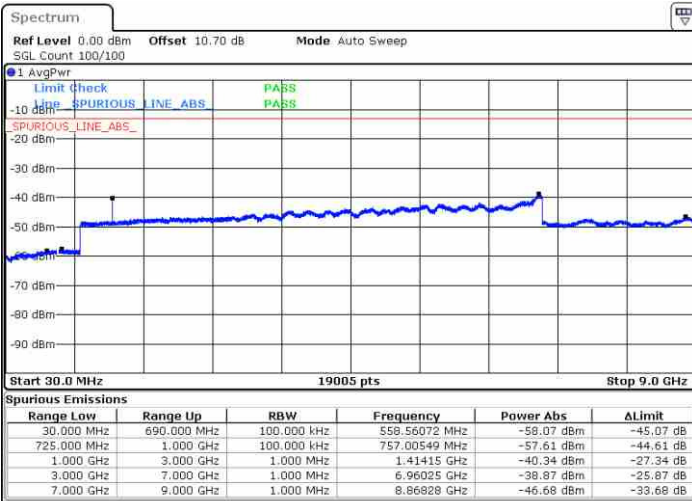


Date: 12.FEB.2018 01:42:19

Date: 12.FEB.2018 01:43:16

Middle Channel / QPSK

Middle Channel / 16QAM



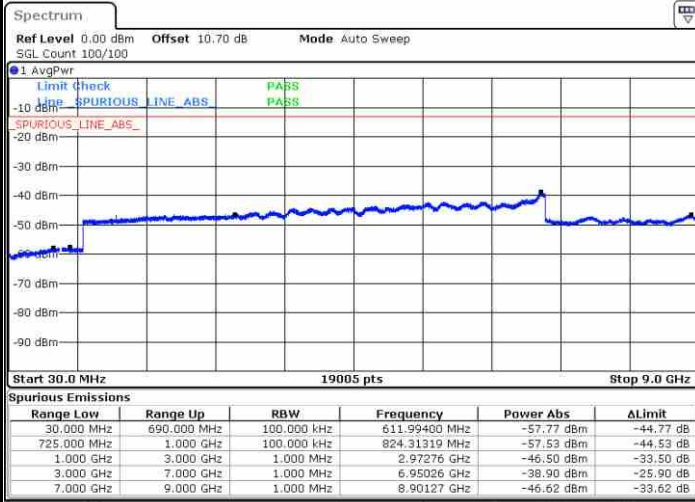
Date: 12.FEB.2018 01:45:59

Date: 12.FEB.2018 01:45:00



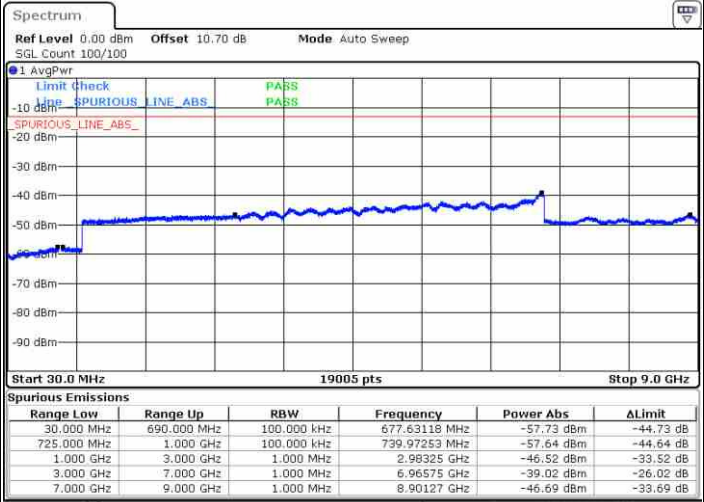
LTE Band 12 / 1.4MHz

Highest Channel / QPSK



Date: 12.FEB.2018 01:52:17

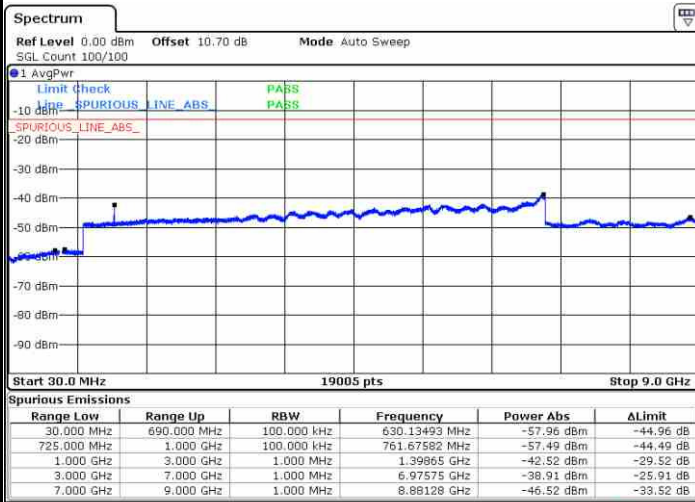
Highest Channel / 16QAM



Date: 12.FEB.2018 01:53:15

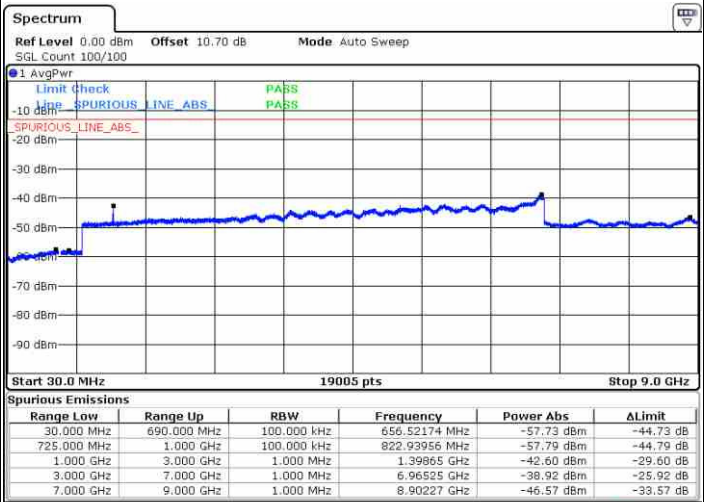
LTE Band 12 / 3MHz

Lowest Channel / QPSK



Date: 11.FEB.2018 23:00:23

Lowest Channel / 16QAM



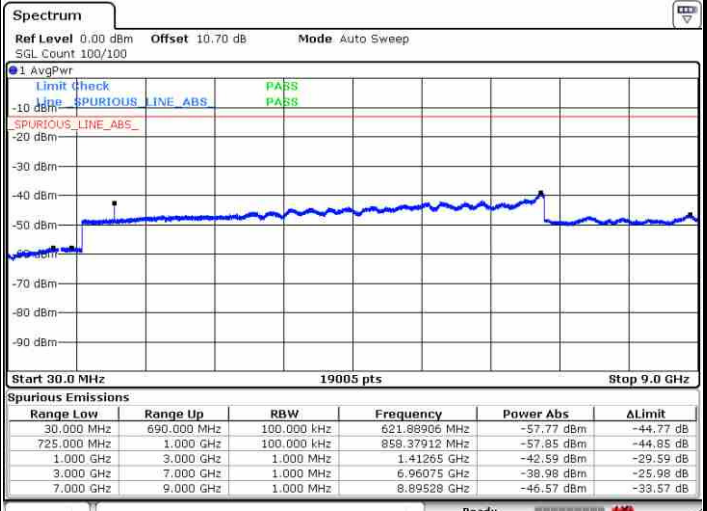
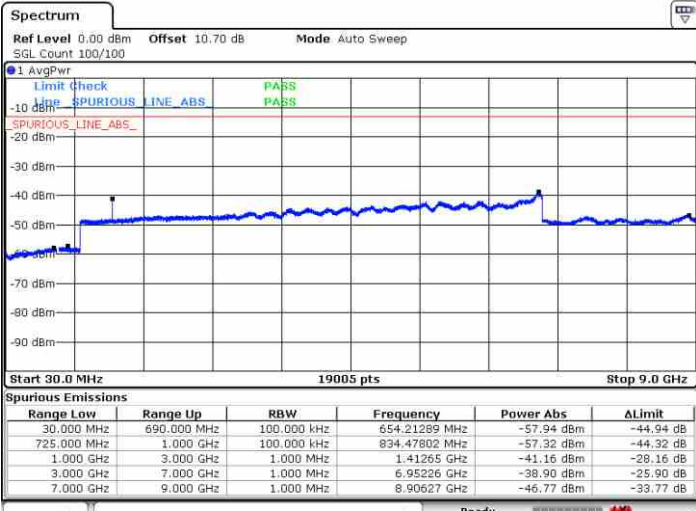
Date: 11.FEB.2018 23:01:21



LTE Band 12 / 3MHz

Middle Channel / QPSK

Middle Channel / 16QAM

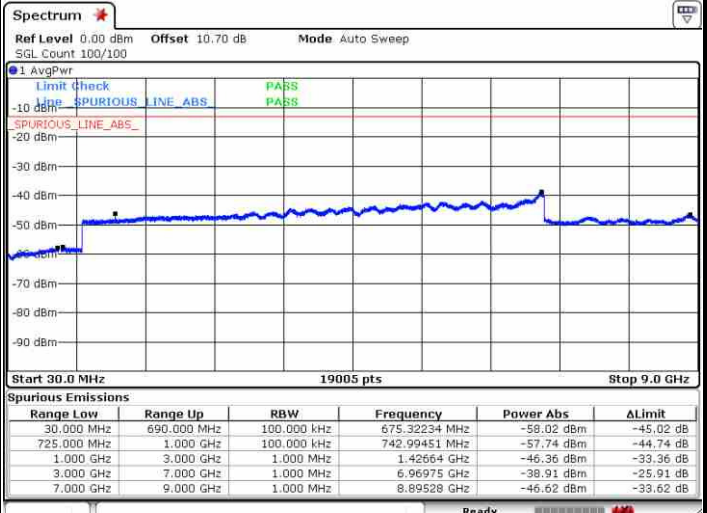
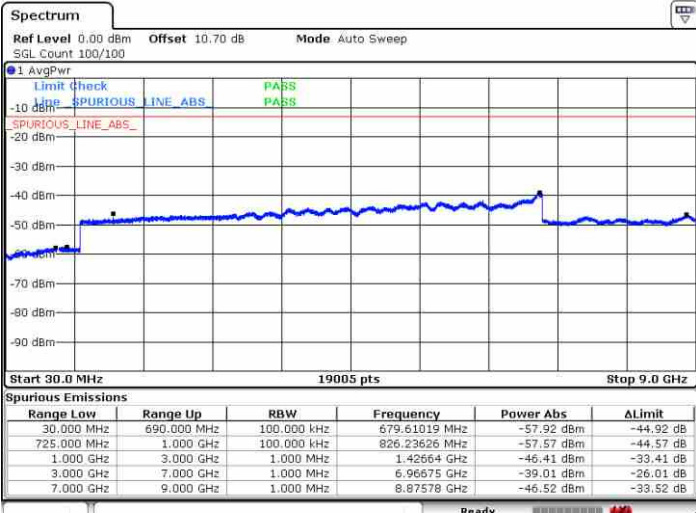


Date: 11.FEB.2018 23:04:03

Date: 11.FEB.2018 23:03:05

Highest Channel / QPSK

Highest Channel / 16QAM



Date: 11.FEB.2018 23:10:23

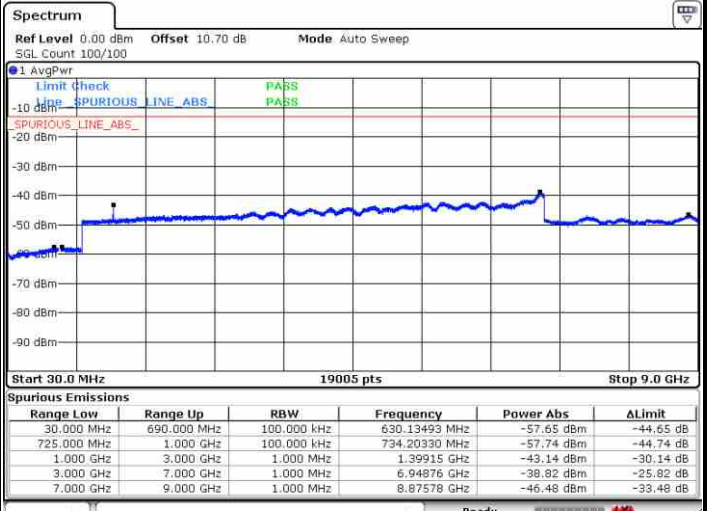
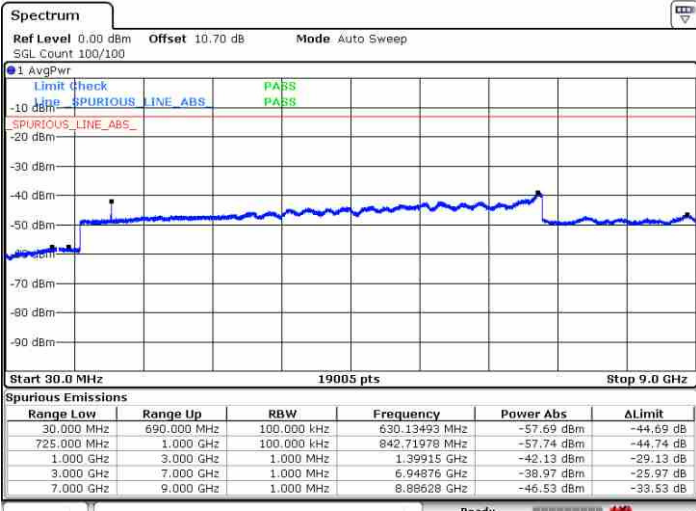
Date: 11.FEB.2018 23:11:26



LTE Band 12 / 5MHz

Lowest Channel / QPSK

Lowest Channel / 16QAM

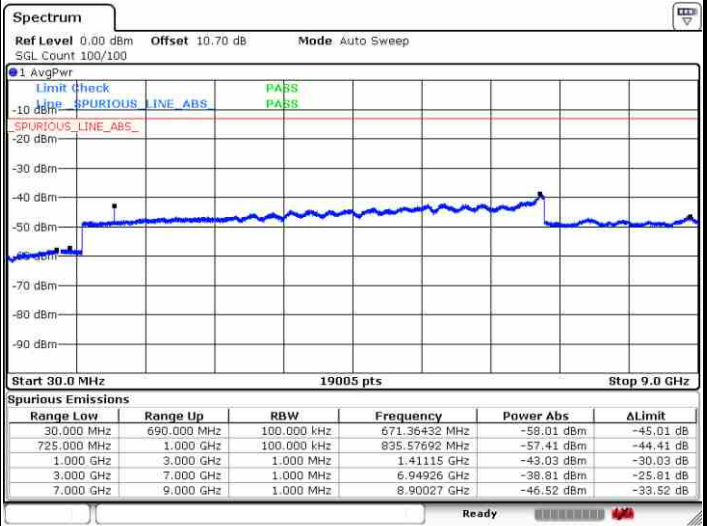
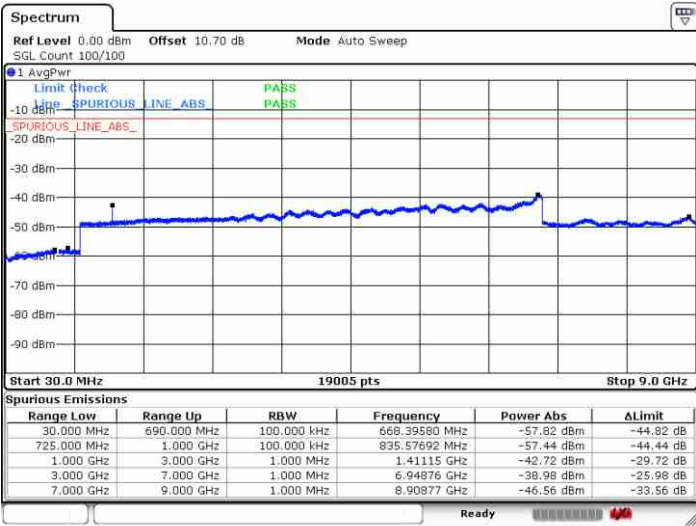


Date: 11.FEB.2018 23:17:47

Date: 11.FEB.2018 23:18:44

Middle Channel / QPSK

Middle Channel / 16QAM



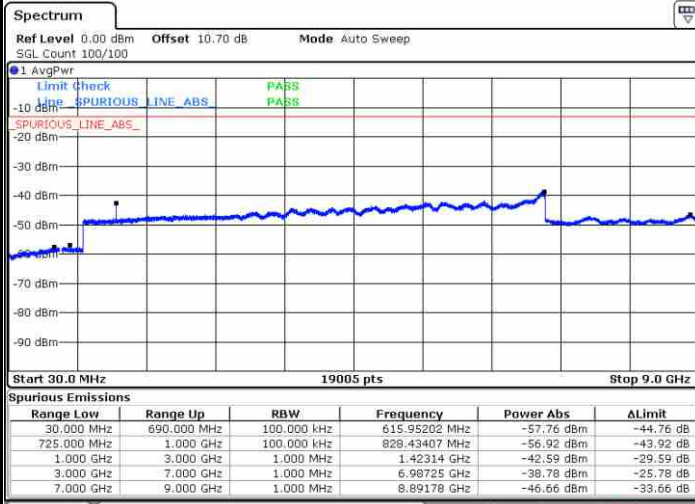
Date: 11.FEB.2018 23:21:28

Date: 11.FEB.2018 23:20:30



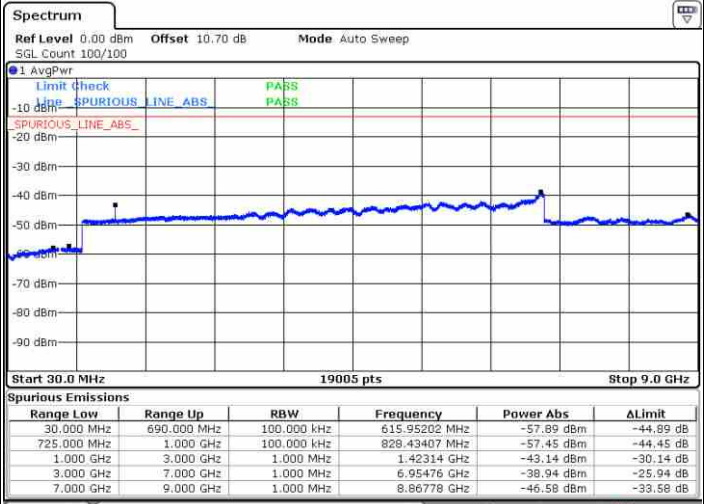
LTE Band 12 / 5MHz

Highest Channel / QPSK



Date: 11.FEB.2018 23:28:44

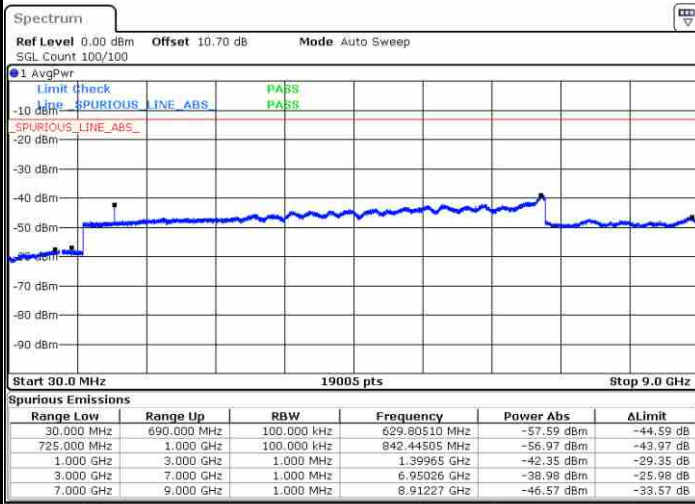
Highest Channel / 16QAM



Date: 11.FEB.2018 23:27:47

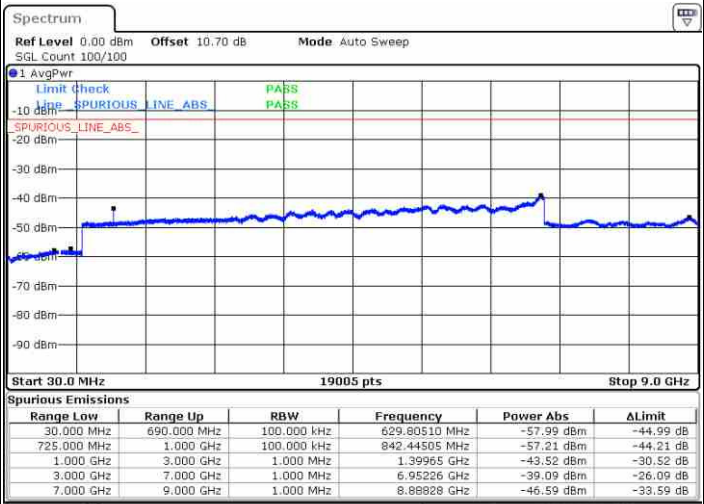
LTE Band 12 / 10MHz

Lowest Channel / QPSK



Date: 11.FEB.2018 23:58:48

Lowest Channel / 16QAM



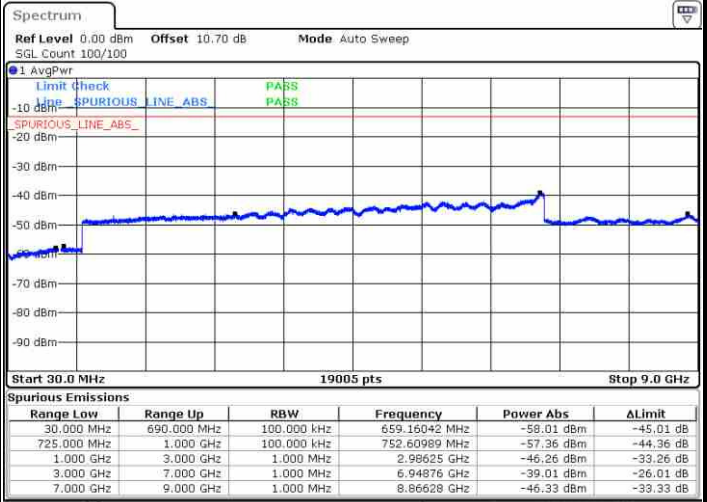
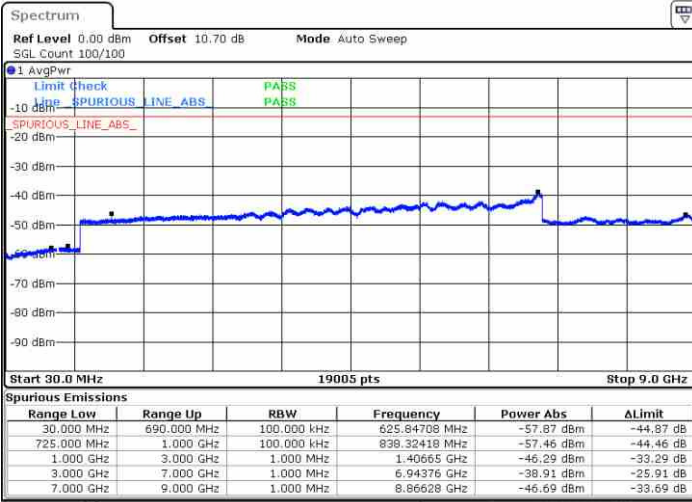
Date: 11.FEB.2018 23:59:46



LTE Band 12 / 10MHz

Middle Channel / QPSK

Middle Channel / 16QAM

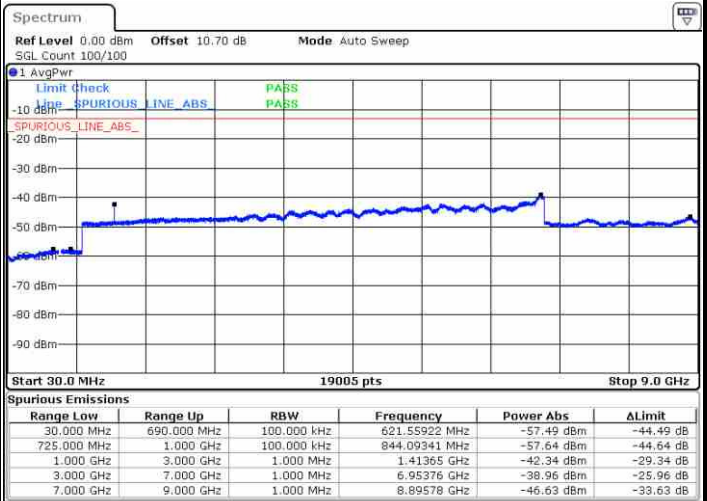
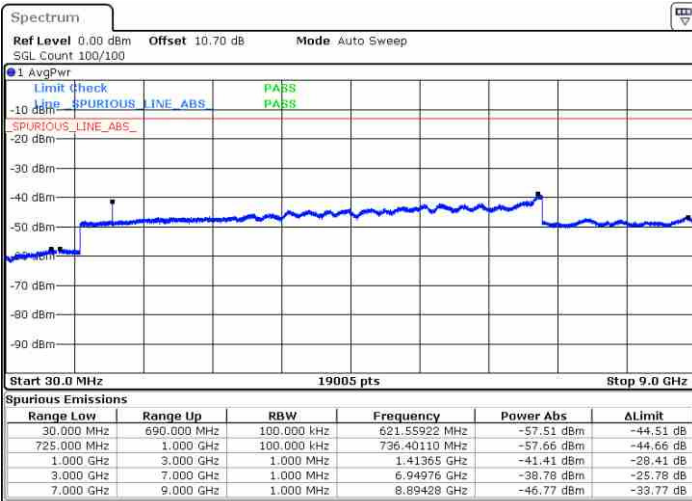


Date: 12.FEB.2018 00:02:27

Date: 12.FEB.2018 00:01:29

Highest Channel / QPSK

Highest Channel / 16QAM



Date: 12.FEB.2018 00:08:46

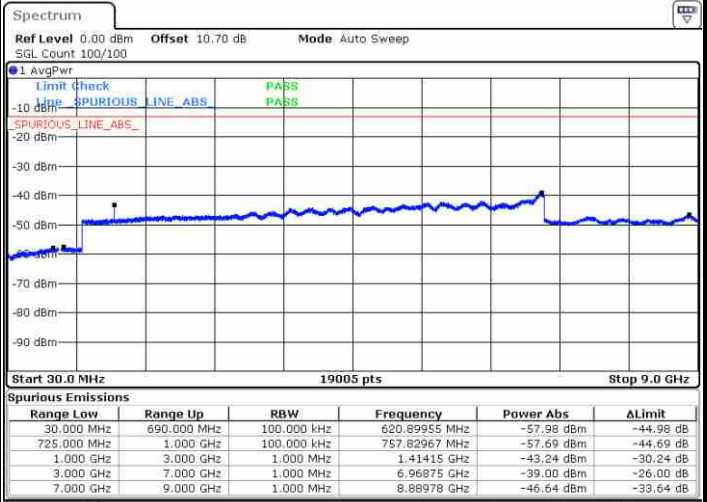
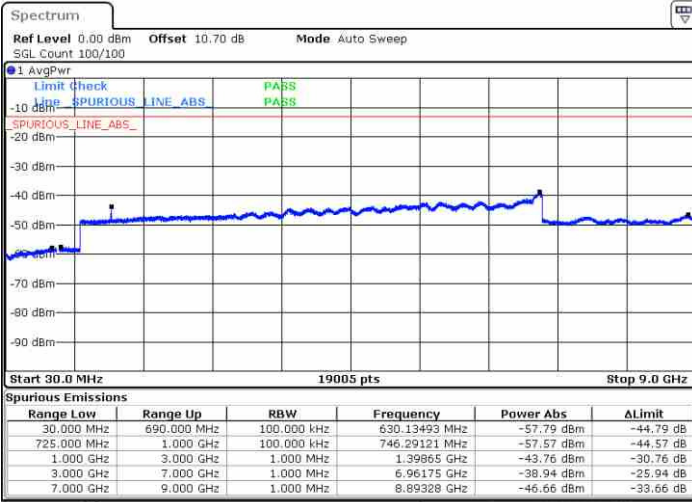
Date: 12.FEB.2018 00:09:44



LTE Band 12 / 1.4MHz

Lowest Channel / 64QAM

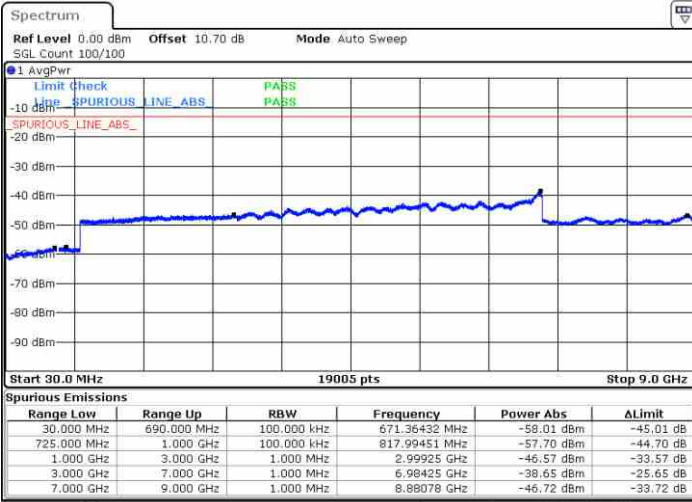
Middle Channel / 64QAM



Date: 12.FEB.2018 01:31:00

Date: 12.FEB.2018 01:32:20

Highest Channel / 64QAM



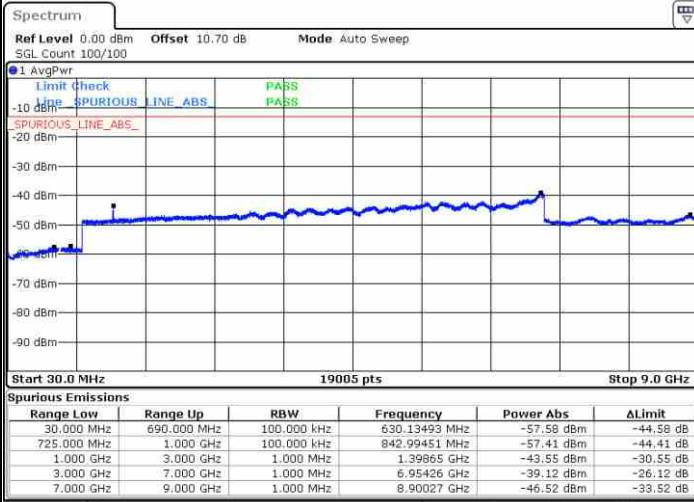
Date: 12.FEB.2018 01:35:59



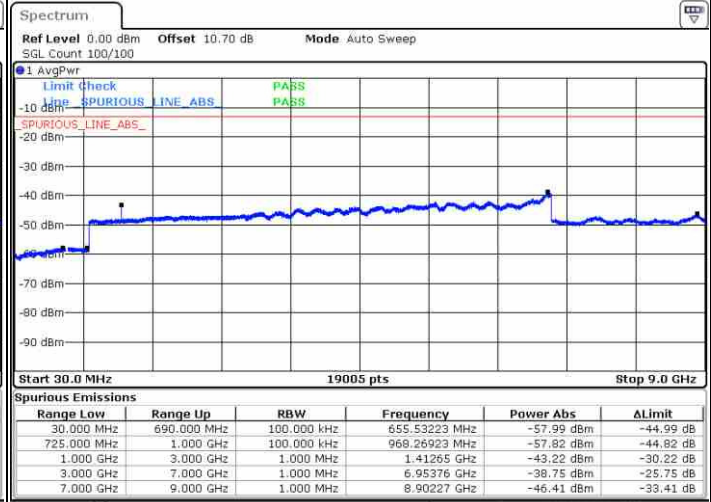
LTE Band 12 / 3MHz

Lowest Channel / 64QAM

Middle Channel / 64QAM

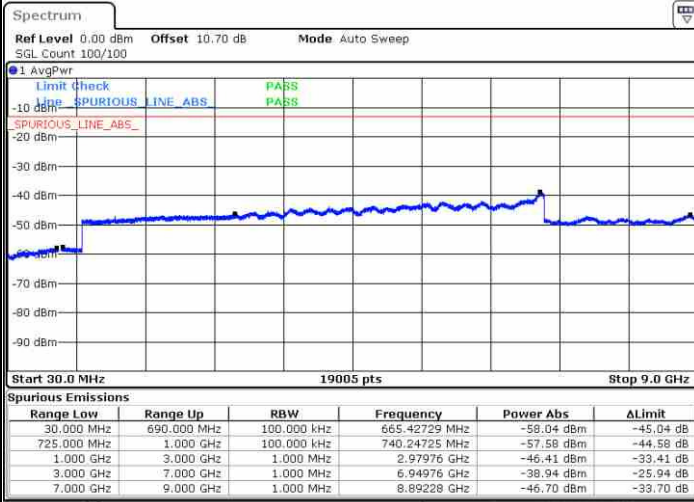


Date: 12.FEB.2018 01:05:07



Date: 12.FEB.2018 01:06:28

Highest Channel / 64QAM



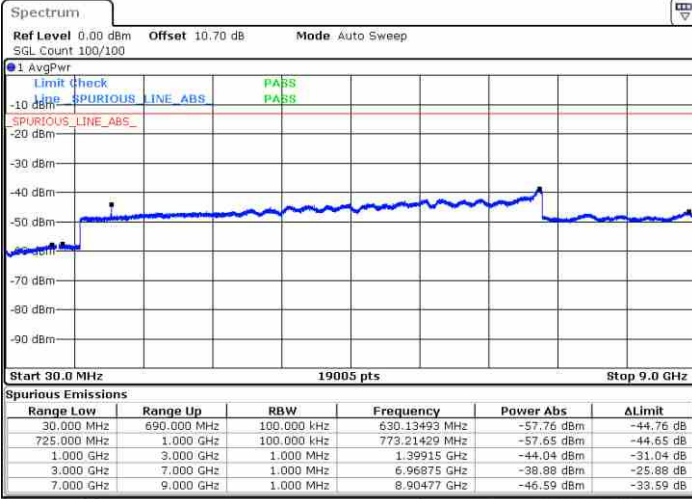
Date: 12.FEB.2018 01:10:06



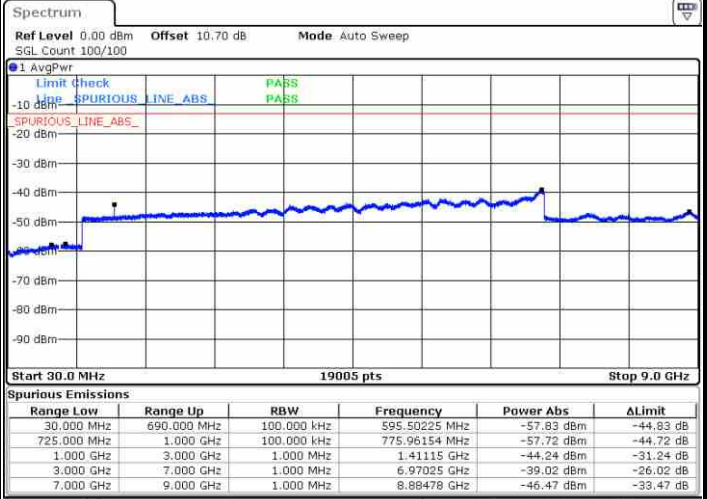
LTE Band 12 / 5MHz

Lowest Channel / 64QAM

Middle Channel / 64QAM

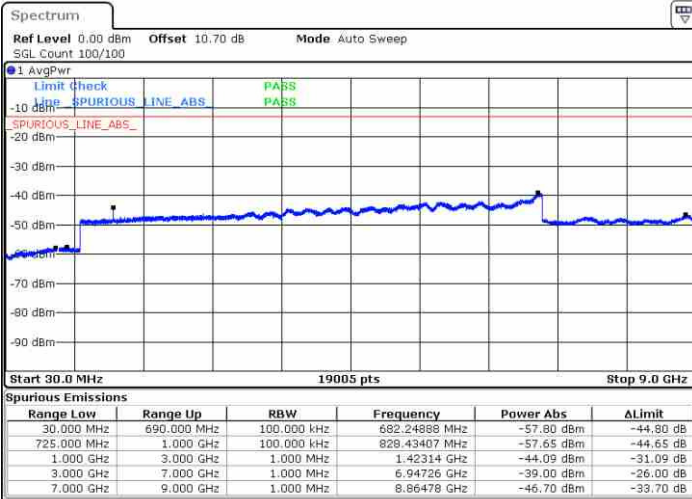


Date: 12.FEB.2018 01:13:44



Date: 12.FEB.2018 01:15:04

Highest Channel / 64QAM

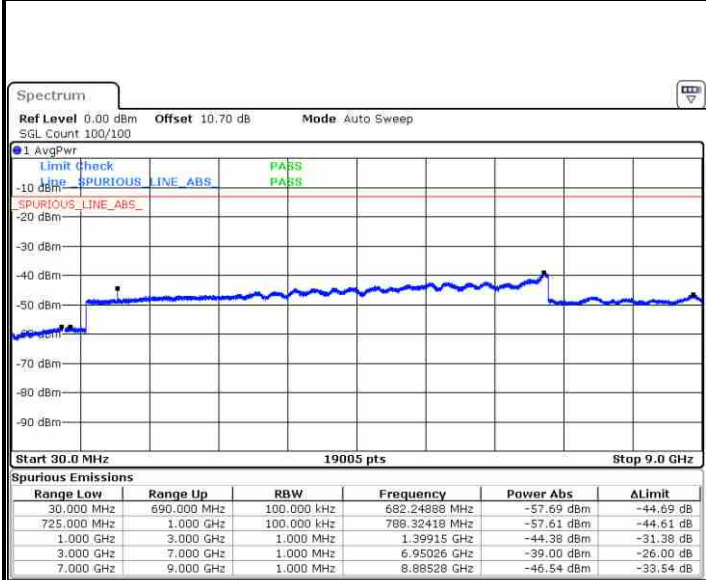


Date: 12.FEB.2018 01:18:43



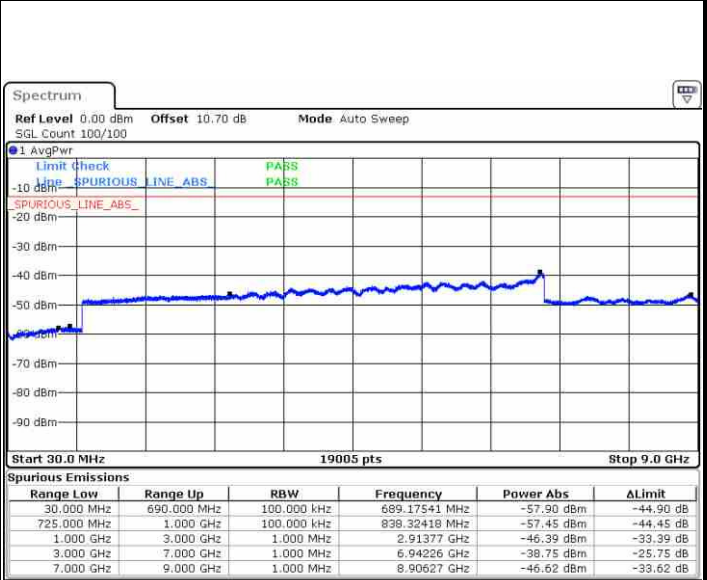
LTE Band 12 / 10MHz

Lowest Channel / 64QAM



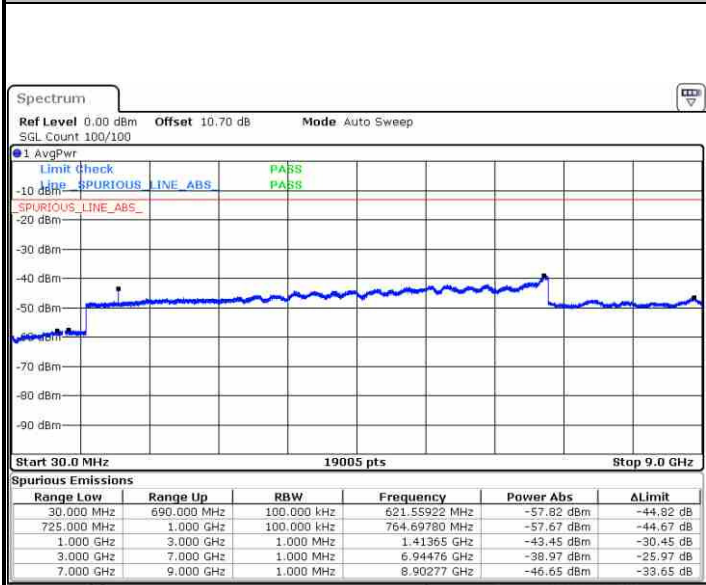
Date: 12.FEB.2018 01:22:22

Middle Channel / 64QAM



Date: 12.FEB.2018 01:23:42

Highest Channel / 64QAM



Date: 12.FEB.2018 01:27:21



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	0.0099	PASS
40	Normal Voltage	0.0001	
30	Normal Voltage	0.0024	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0010	
0	Normal Voltage	0.0001	
-10	Normal Voltage	0.0086	
-20	Normal Voltage	0.0093	
-30	Normal Voltage	0.0105	
20	Maximum Voltage	0.0088	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0079	

Note:

- 3. Normal Voltage =3.82 V. ; Battery End Point (BEP) =3.6 V. ; Maximum Voltage =4.4 V.
- 4. Note: The frequency fundamental emissions stay within the authorized frequency block.



A8. LTE Band 17

<For Up Antenna>

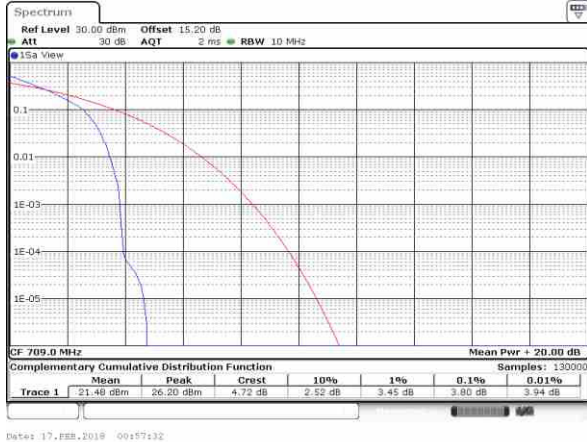
Peak-to-Average Ratio

Mode	LTE Band 17 / 10MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	3.80	4.52	4.72	5.48	PASS
Middle CH	3.88	4.46	4.23	5.33	
Highest CH	3.88	4.43	4.35	5.42	
Mode	LTE Band 17 / 10MHz				
Mod.	64QAM				Limit: 13dB
RB Size	1RB	Full RB			Result
Lowest CH	4.99	5.86	-	-	PASS
Middle CH	4.99	5.94	-	-	
Highest CH	5.13	5.97	-	-	

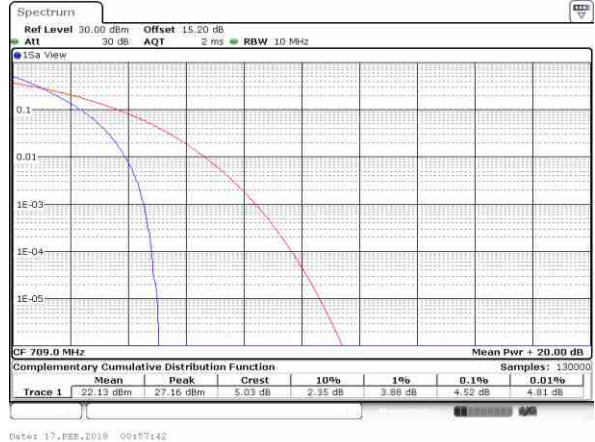


LTE Band 17 / 10MHz / QPSK

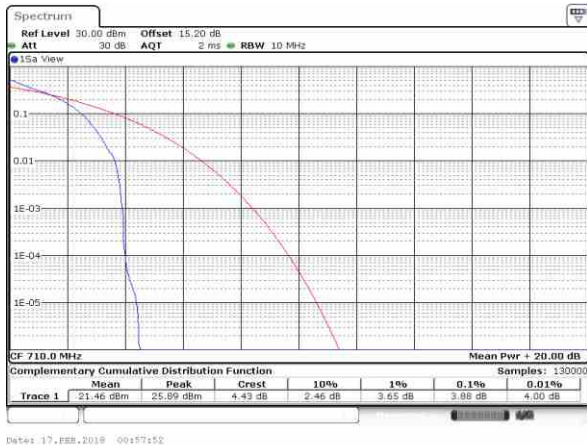
Lowest Channel / 1RB



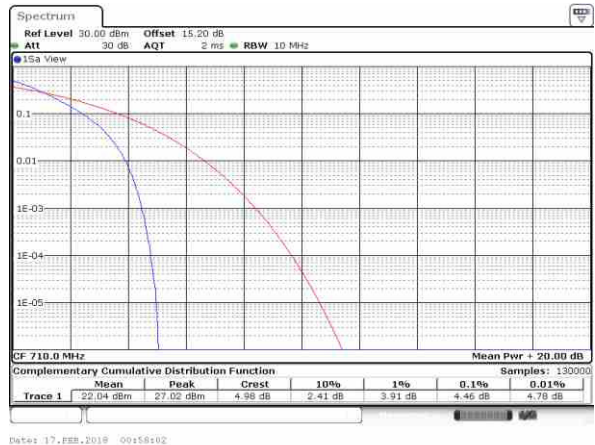
Lowest Channel / Full RB



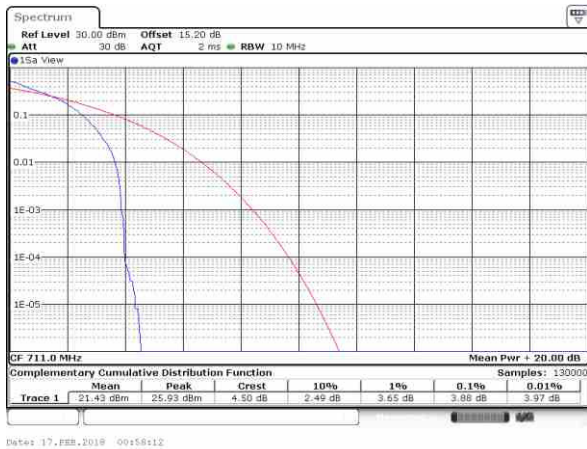
Middle Channel / 1RB



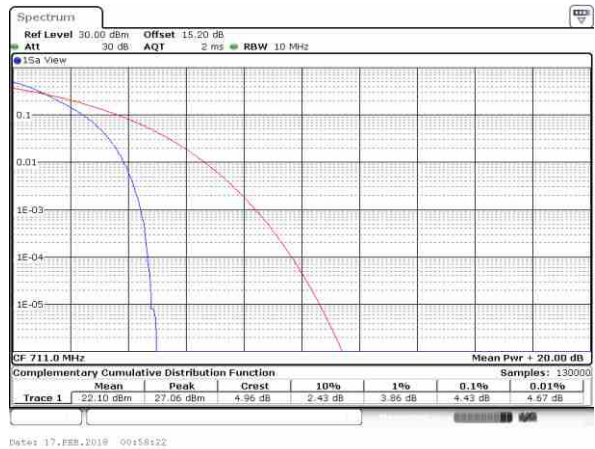
Middle Channel / Full RB



Highest Channel / 1RB



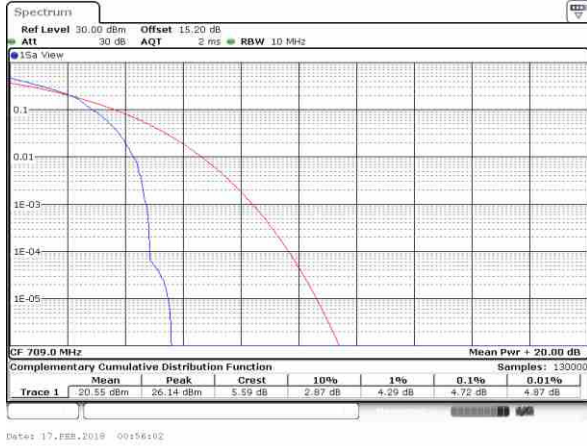
Highest Channel / Full RB



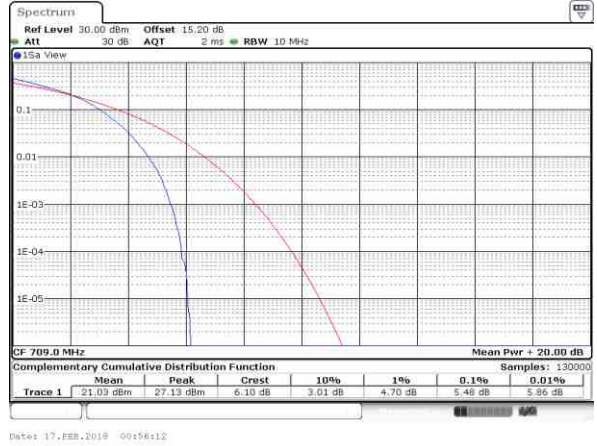


LTE Band 17 / 10MHz / 16QAM

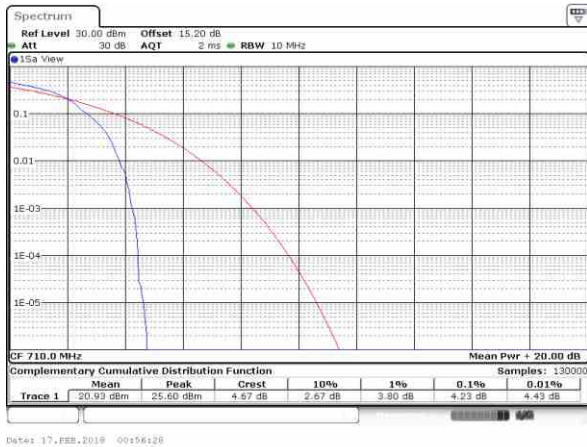
Lowest Channel / 1RB



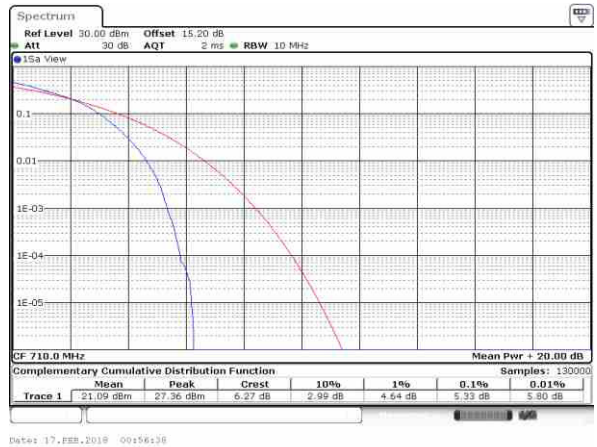
Lowest Channel / Full RB



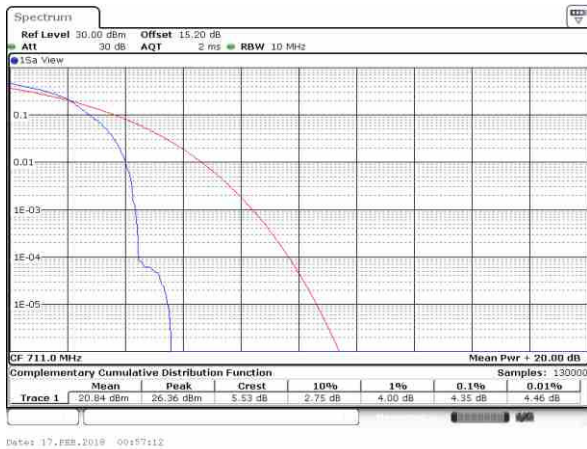
Middle Channel / 1RB



Middle Channel / Full RB



Highest Channel / 1RB



Highest Channel / Full RB

