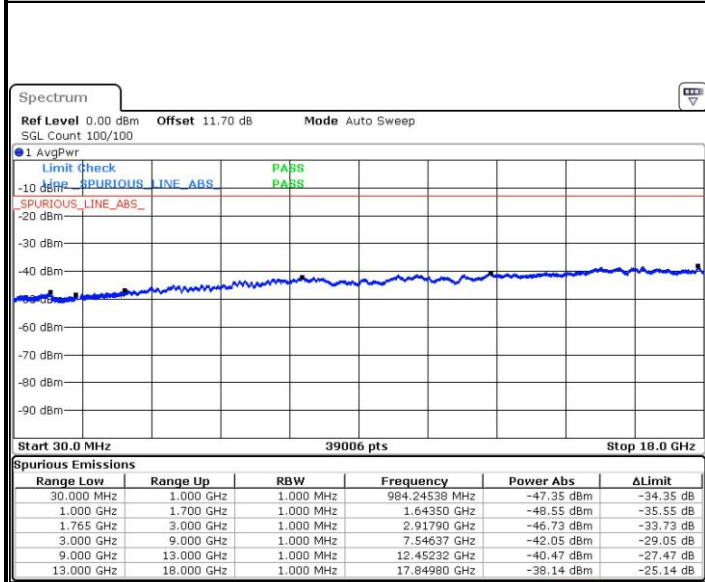




LTE Band 4 / 10MHz

Lowest Channel / 64QAM

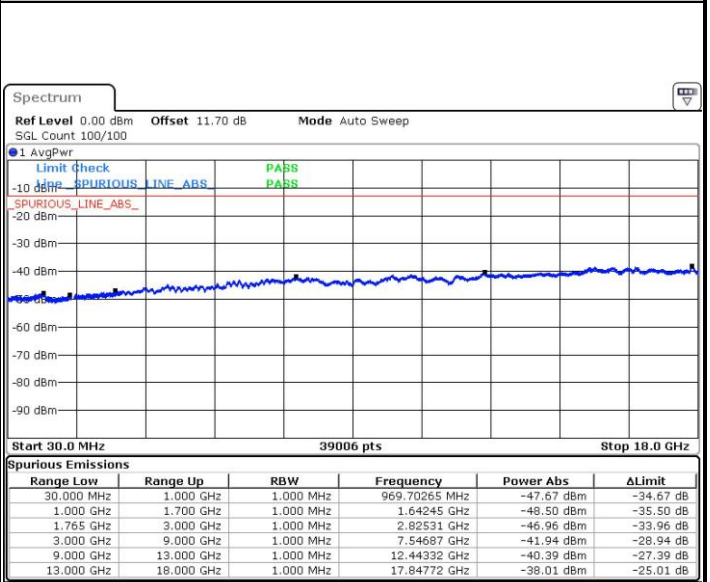


Start 30.0 MHz 39006 pts Stop 18.0 GHz

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	984.24538 MHz	-47.35 dBm	-34.35 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.64350 GHz	-48.55 dBm	-35.55 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.91790 GHz	-46.73 dBm	-33.73 dB
3.000 GHz	9.000 GHz	1.000 MHz	7.54637 GHz	-42.05 dBm	-29.05 dB
9.000 GHz	13.000 GHz	1.000 MHz	12.45232 GHz	-40.47 dBm	-27.47 dB
13.000 GHz	18.000 GHz	1.000 MHz	17.84980 GHz	-38.14 dBm	-25.14 dB

Date: 4 SEP.2018 20:28:15

Middle Channel / 64QAM

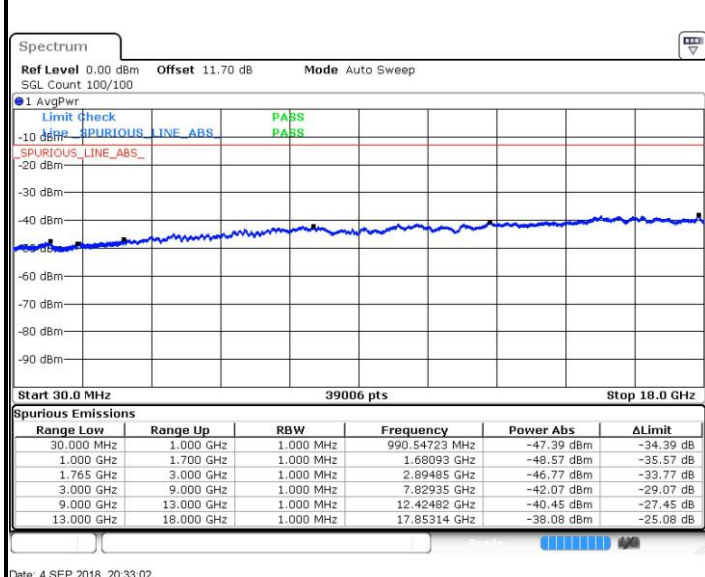


Start 30.0 MHz 39006 pts Stop 18.0 GHz

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	969.70265 MHz	-47.67 dBm	-34.67 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.64245 GHz	-48.50 dBm	-35.50 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.82531 GHz	-46.96 dBm	-33.96 dB
3.000 GHz	9.000 GHz	1.000 MHz	7.54687 GHz	-41.94 dBm	-28.94 dB
9.000 GHz	13.000 GHz	1.000 MHz	12.44332 GHz	-40.39 dBm	-27.39 dB
13.000 GHz	18.000 GHz	1.000 MHz	17.84772 GHz	-38.01 dBm	-25.01 dB

Date: 4 SEP.2018 20:29:28

Highest Channel / 64QAM



Start 30.0 MHz 39006 pts Stop 18.0 GHz

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	990.54723 MHz	-47.39 dBm	-34.39 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.68093 GHz	-48.57 dBm	-35.57 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.89485 GHz	-46.77 dBm	-33.77 dB
3.000 GHz	9.000 GHz	1.000 MHz	7.82935 GHz	-42.07 dBm	-29.07 dB
9.000 GHz	13.000 GHz	1.000 MHz	12.42482 GHz	-40.45 dBm	-27.45 dB
13.000 GHz	18.000 GHz	1.000 MHz	17.85314 GHz	-38.08 dBm	-25.08 dB

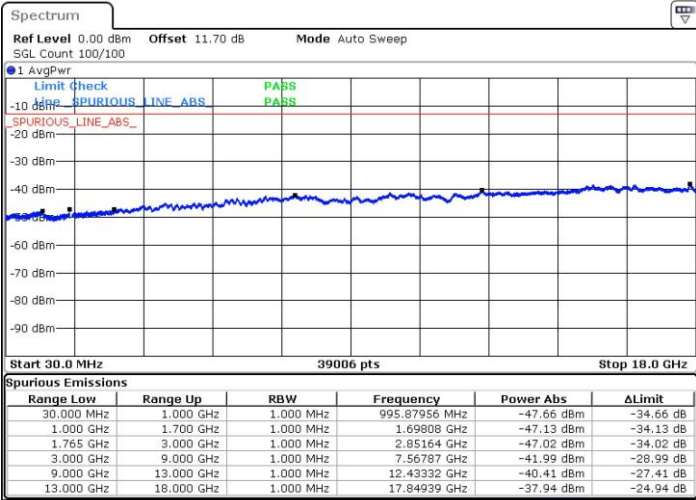
Date: 4 SEP.2018 20:33:02



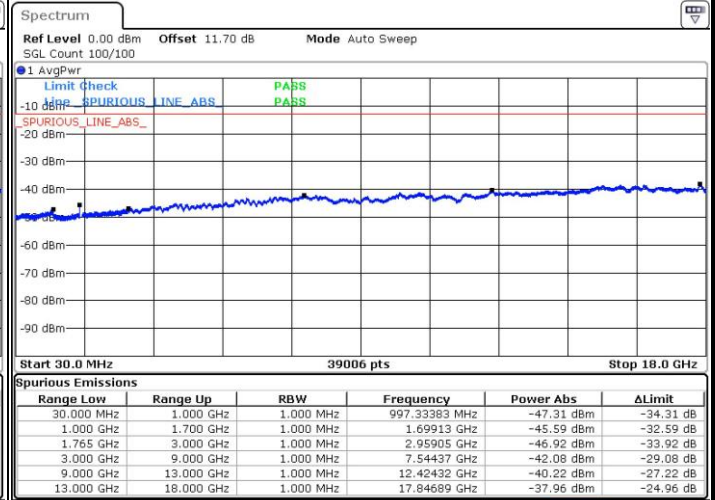
LTE Band 4 / 15MHz

Lowest Channel / 64QAM

Middle Channel / 64QAM

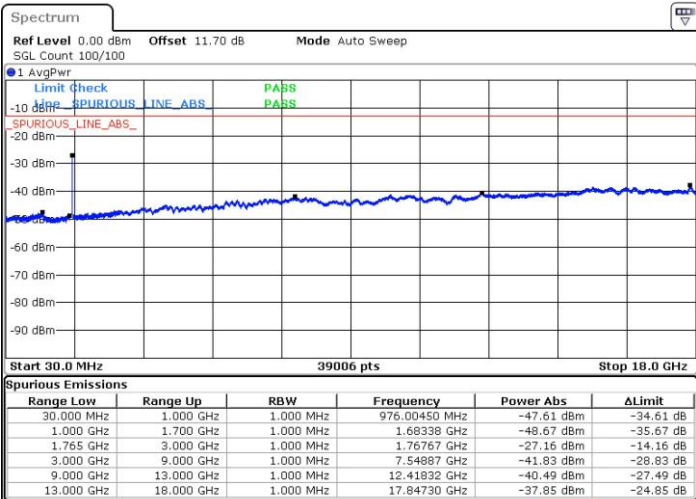


Date: 4 SEP.2018 20:36:35



Date: 4 SEP.2018 20:37:48

Highest Channel / 64QAM



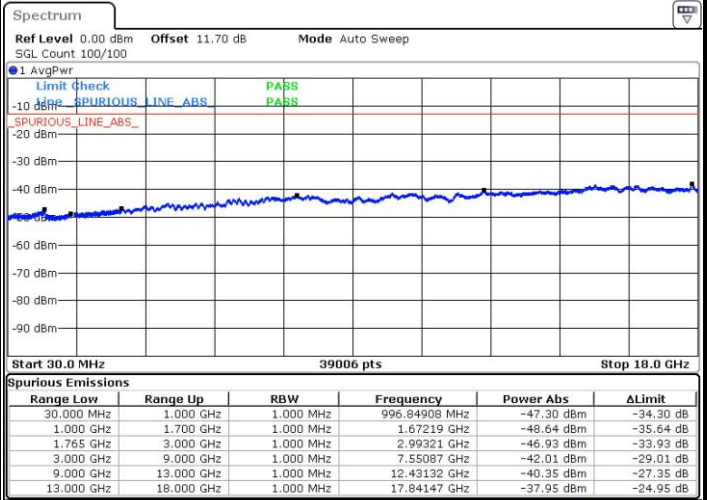
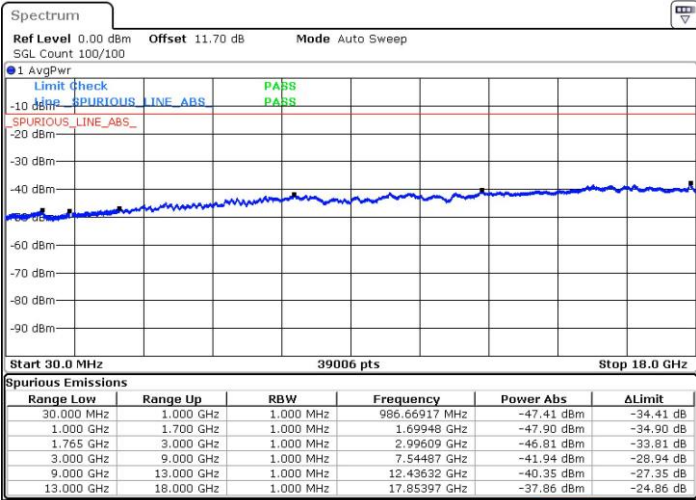
Date: 4 SEP.2018 20:41:22



LTE Band 4 / 20MHz

Lowest Channel / 64QAM

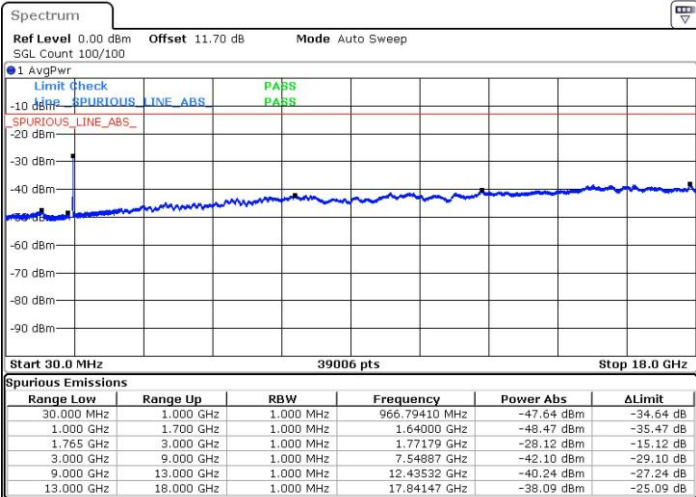
Middle Channel / 64QAM



Date: 4 SEP.2018 20:44:55

Date: 4 SEP.2018 20:46:09

Highest Channel / 64QAM



Date: 4 SEP.2018 20:49:42



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	0.0080	PASS
40	Normal Voltage	0.0073	
30	Normal Voltage	0.0076	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0080	
0	Normal Voltage	0.0009	
-10	Normal Voltage	0.0001	
-20	Normal Voltage	0.0001	
-30	Normal Voltage	0.0003	
20	Maximum Voltage	0.0012	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0080	

Note:

1. Normal Voltage =3.85 V. ; Battery End Point (BEP) =3.5 V. ; Maximum Voltage =4.4 V.
2. The frequency fundamental emissions stay within the authorized frequency block.



LTE Band 5

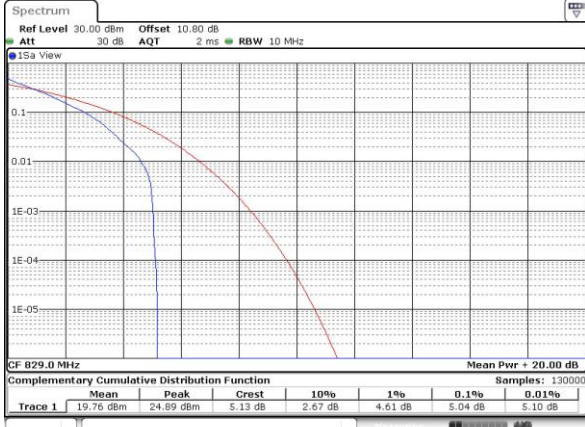
Peak-to-Average Ratio

Mode	LTE Band 5 / 10MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	5.04	5.28	5.71	5.97	PASS
Middle CH	4.64	5.1	5.51	6	
Highest CH	4.61	5.25	5.71	6.03	
Mode	LTE Band 5 / 10MHz				
Mod.	64QAM				Limit: 13dB
RB Size	1RB	Full RB			Result
Lowest CH	6.17	6.35	-	-	PASS
Middle CH	6.17	6.26	-	-	
Highest CH	5.86	6.38	-	-	



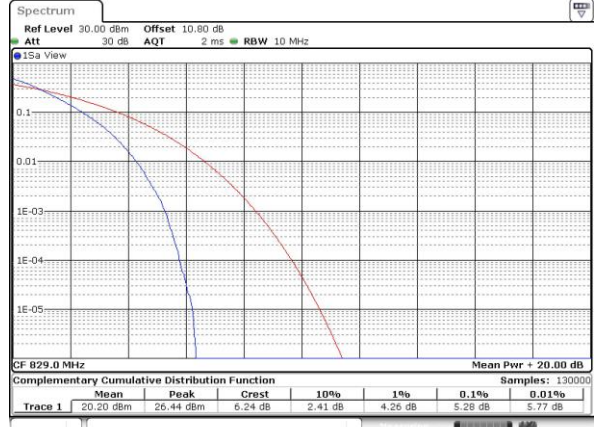
LTE Band 5 / 10MHz / QPSK

Lowest Channel / 1RB



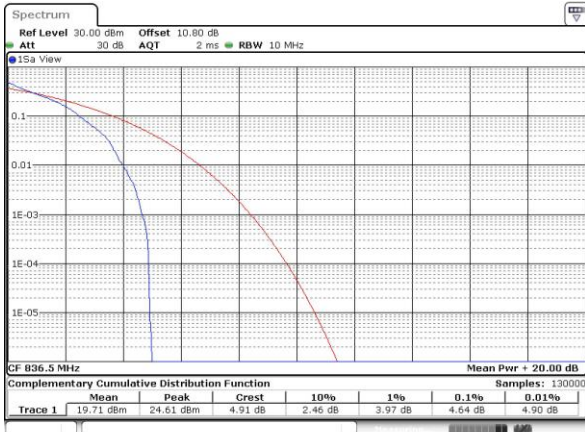
Date: 10 SEP 2018 23:57:35

Lowest Channel / Full RB



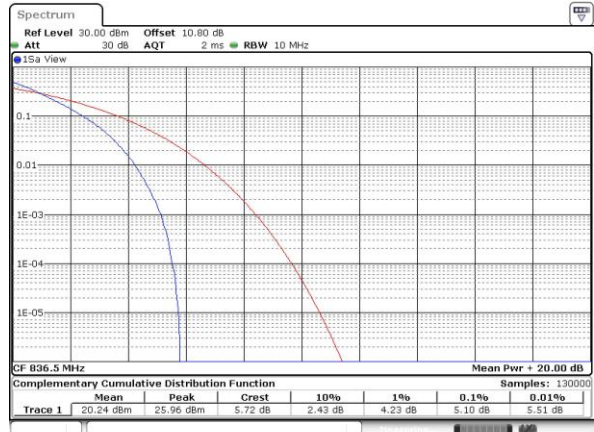
Date: 10 SEP 2018 23:57:45

Middle Channel / 1RB



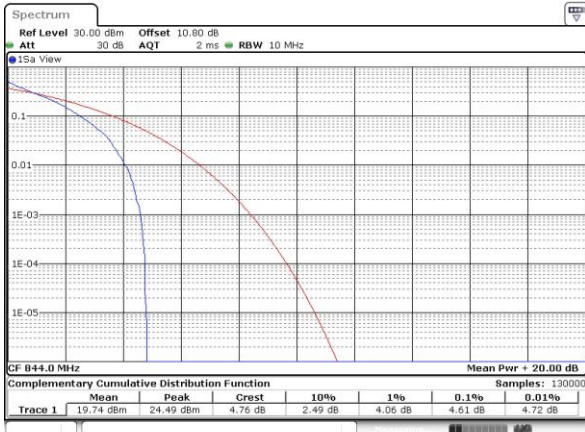
Date: 10 SEP 2018 23:57:55

Middle Channel / Full RB



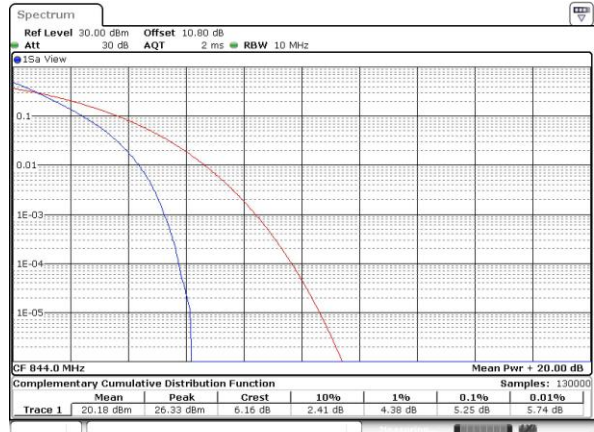
Date: 10 SEP 2018 23:58:06

Highest Channel / 1RB



Date: 10 SEP 2018 23:58:16

Highest Channel / Full RB



Date: 10 SEP 2018 23:58:26



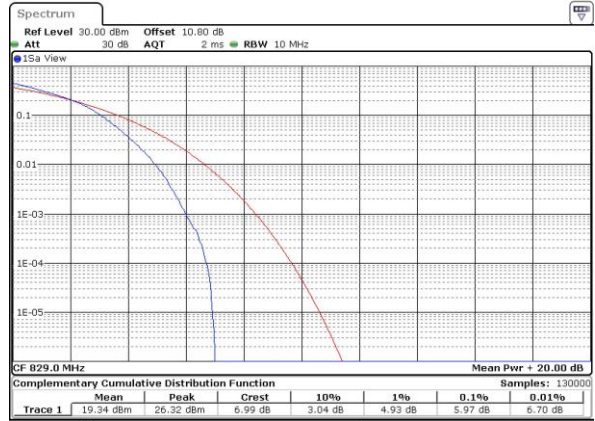
LTE Band 5 / 10MHz / 16QAM

Lowest Channel / 1RB



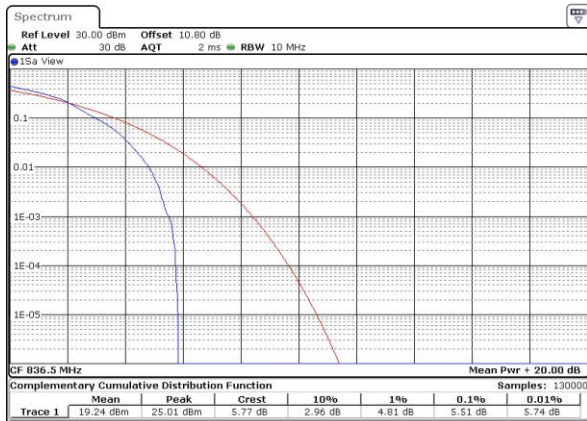
Date: 10 SEP 2018 23:56:35

Lowest Channel / Full RB



Date: 10 SEP 2018 23:56:45

Middle Channel / 1RB



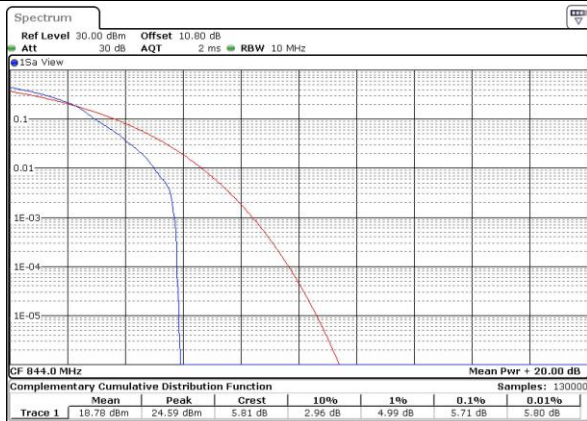
Date: 10 SEP 2018 23:56:55

Middle Channel / Full RB



Date: 10 SEP 2018 23:57:05

Highest Channel / 1RB



Date: 10 SEP 2018 23:57:15

Highest Channel / Full RB

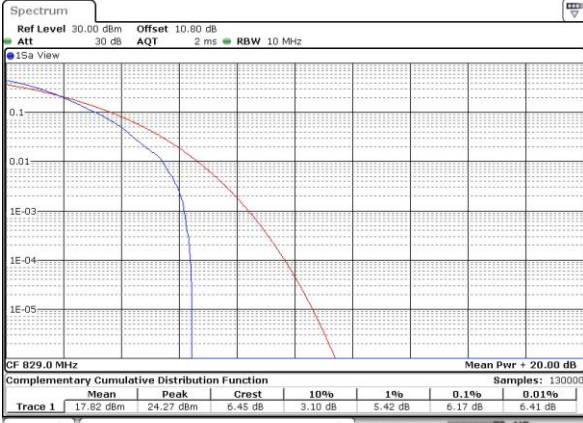


Date: 10 SEP 2018 23:57:25



LTE Band 5 / 10MHz / 64QAM

Lowest Channel / 1RB



Date: 10 SEP 2018 23:58:36

Lowest Channel / Full RB



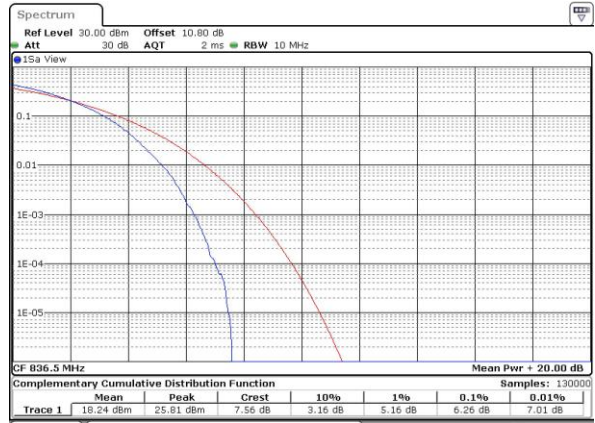
Date: 10 SEP 2018 23:58:46

Middle Channel / 1RB



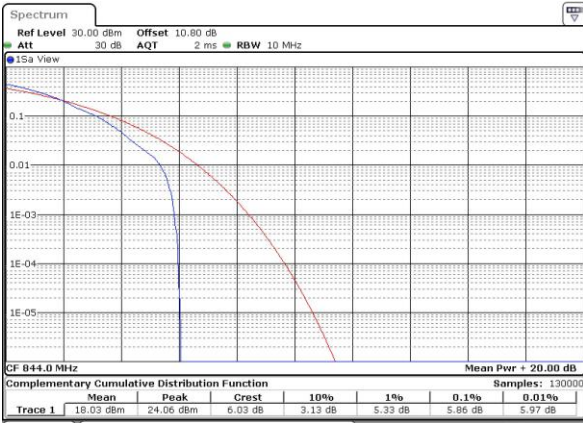
Date: 10 SEP 2018 23:58:56

Middle Channel / Full RB



Date: 10 SEP 2018 23:59:06

Highest Channel / 1RB



Date: 10 SEP 2018 23:59:16

Highest Channel / Full RB



Date: 10 SEP 2018 23:59:26



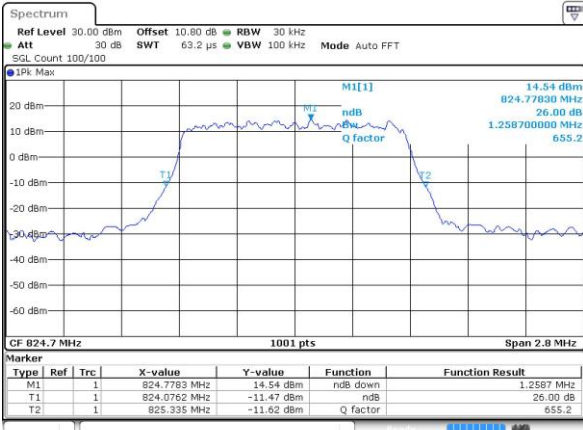
26dB Bandwidth

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	1.26	1.30	2.96	2.96	4.89	4.86	9.63	9.63	-	-	-	-
Middle CH	1.27	1.30	2.96	2.97	4.84	4.77	9.67	9.71	-	-	-	-
Highest CH	1.28	1.26	2.98	2.96	4.85	4.89	9.75	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	1.29	-	2.96	-	4.82	-	9.89	-	-	-	-	-
Middle CH	1.25	-	2.94	-	4.87	-	9.87	-	-	-	-	-
Highest CH	1.25	-	2.93	-	4.93	-	9.71	-	-	-	-	-



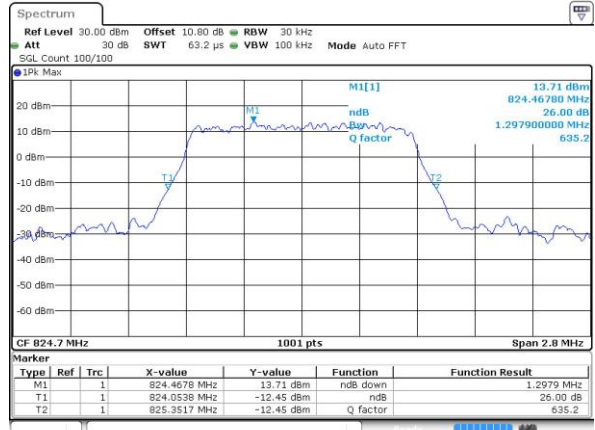
LTE Band 5

Lowest Channel / 1.4MHz / QPSK



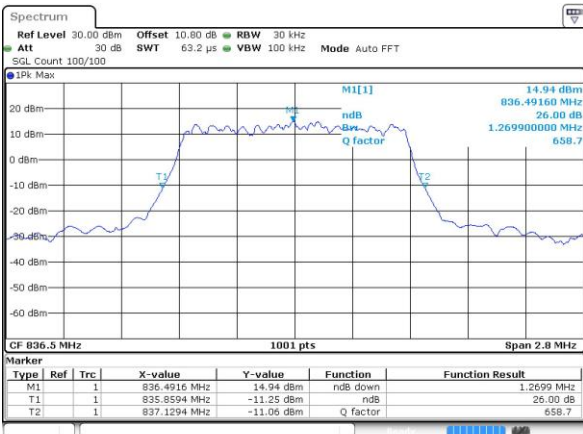
Date: 10 SEP 2018 23:24:05

Lowest Channel / 1.4MHz / 16QAM



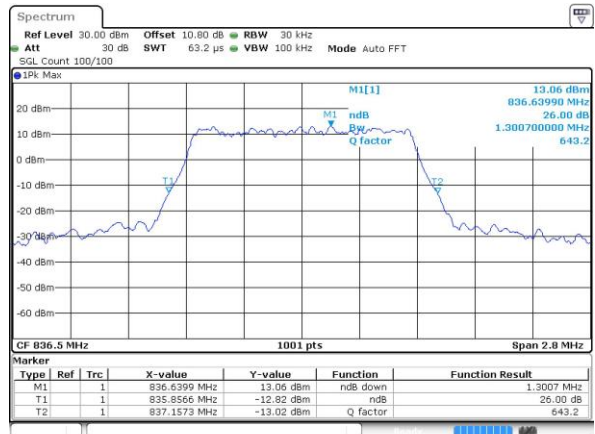
Date: 10 SEP 2018 23:23:53

Middle Channel / 1.4MHz / QPSK



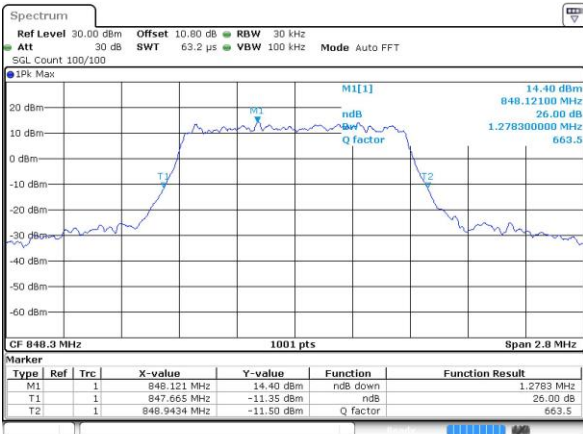
Date: 10 SEP 2018 23:33:00

Middle Channel / 1.4MHz / 16QAM



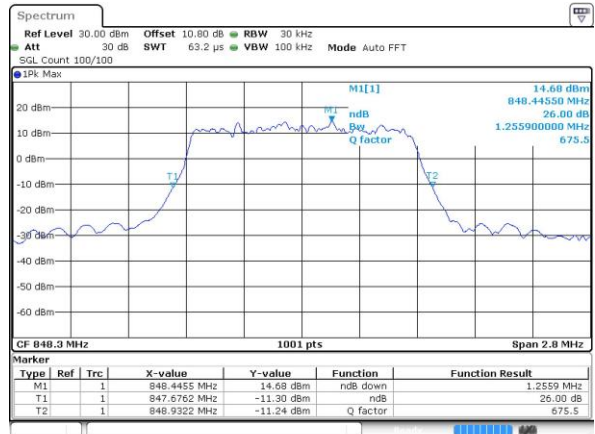
Date: 10 SEP 2018 23:33:12

Highest Channel / 1.4MHz / QPSK



Date: 10 SEP 2018 23:35:27

Highest Channel / 1.4MHz / 16QAM

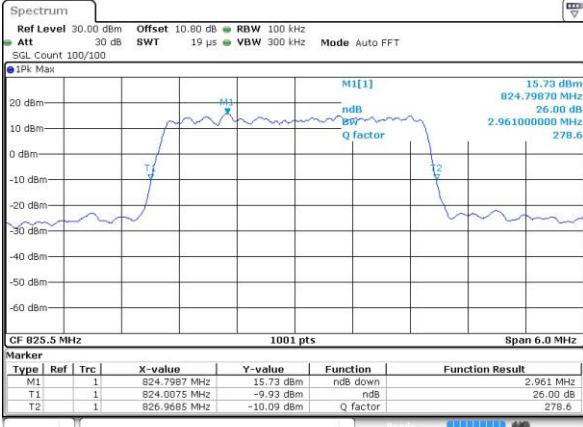


Date: 10 SEP 2018 23:35:39



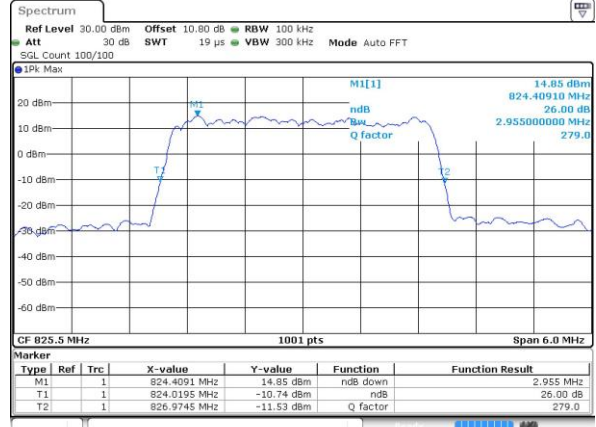
LTE Band 5

Lowest Channel / 3MHz / QPSK



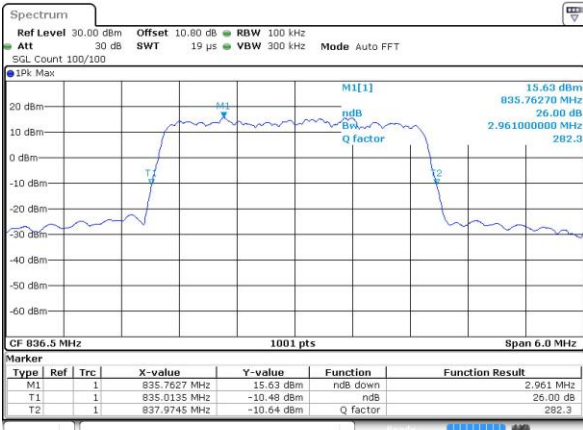
Date: 10 SEP 2018 21:40:22

Lowest Channel / 3MHz / 16QAM



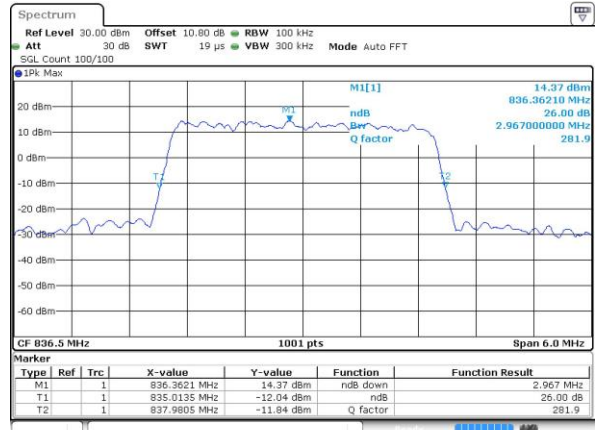
Date: 10 SEP 2018 21:40:34

Middle Channel / 3MHz / QPSK



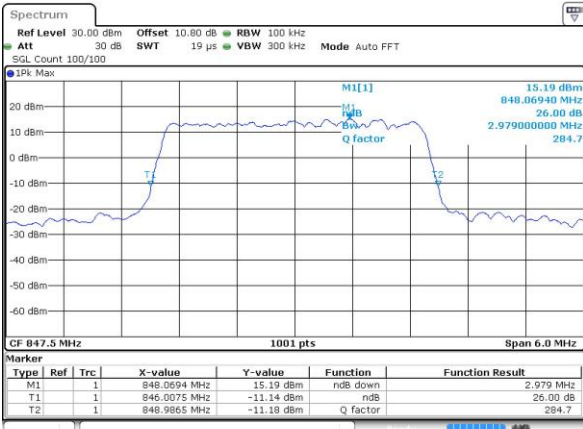
Date: 10 SEP 2018 21:49:30

Middle Channel / 3MHz / 16QAM



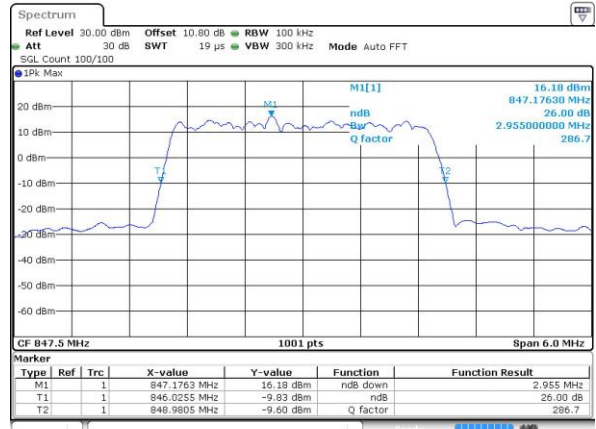
Date: 10 SEP 2018 21:49:41

Highest Channel / 3MHz / QPSK



Date: 10 SEP 2018 21:51:56

Highest Channel / 3MHz / 16QAM

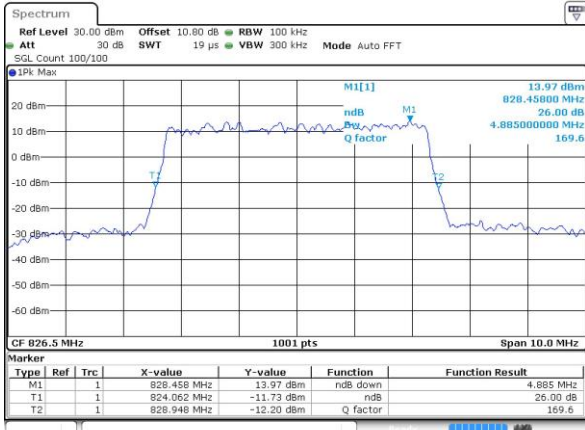


Date: 10 SEP 2018 21:52:08



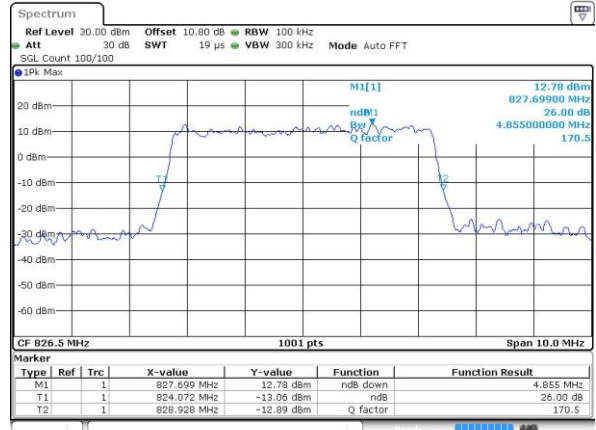
LTE Band 5

Lowest Channel / 5MHz / QPSK



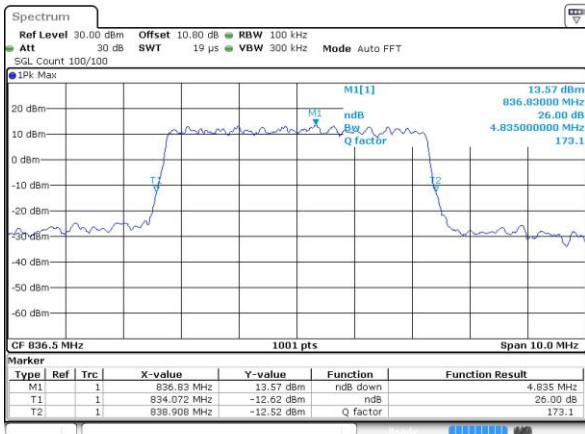
Date: 10 SEP 2018 22:01:04

Lowest Channel / 5MHz / 16QAM



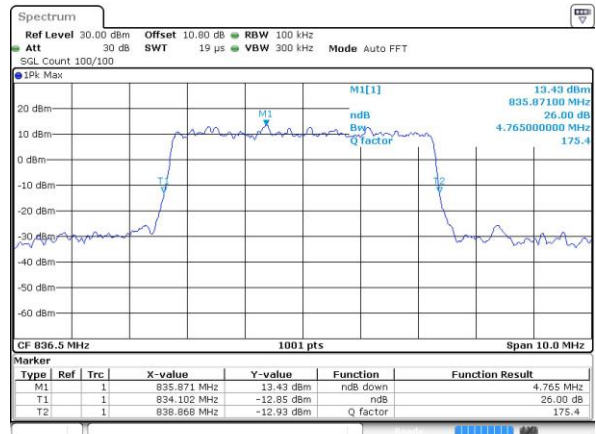
Date: 10 SEP 2018 22:01:16

Middle Channel / 5MHz / QPSK



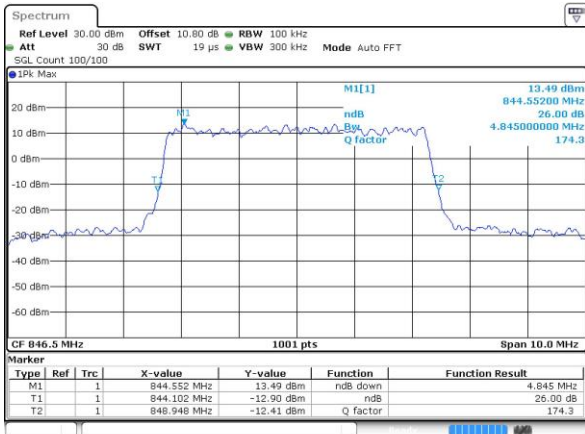
Date: 10 SEP 2018 22:10:12

Middle Channel / 5MHz / 16QAM



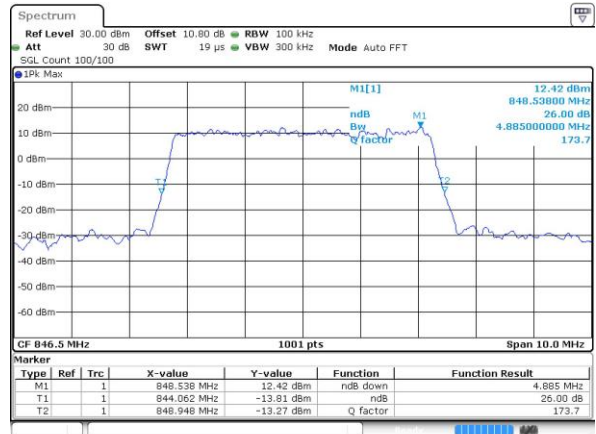
Date: 10 SEP 2018 22:10:23

Highest Channel / 5MHz / QPSK



Date: 10 SEP 2018 22:12:39

Highest Channel / 5MHz / 16QAM

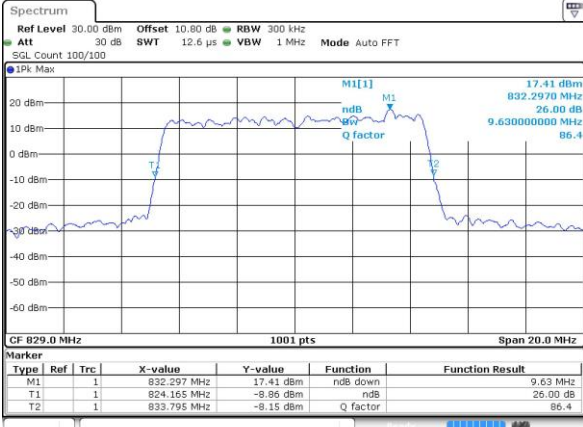


Date: 10 SEP 2018 22:12:50



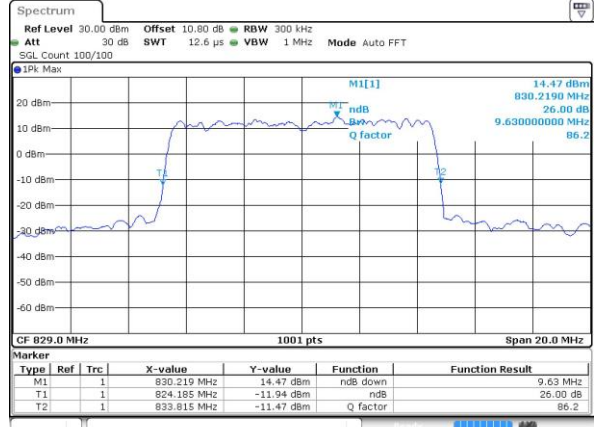
LTE Band 5

Lowest Channel / 10MHz / QPSK



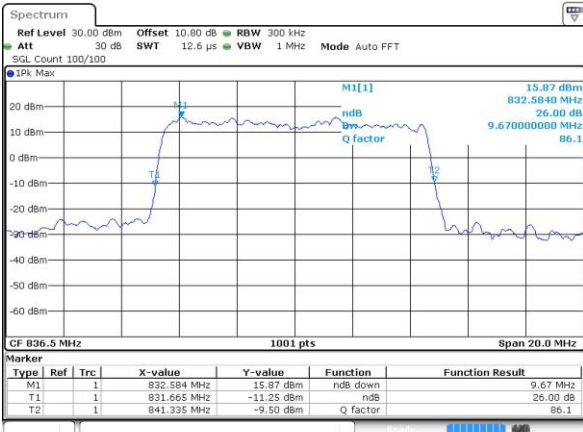
Date: 10 SEP 2018 22:21:46

Lowest Channel / 10MHz / 16QAM



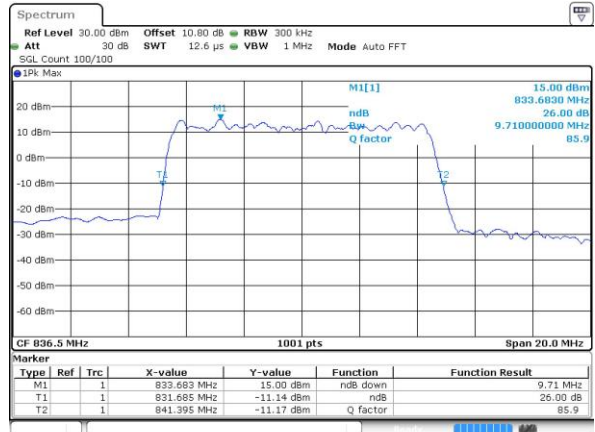
Date: 10 SEP 2018 22:21:58

Middle Channel / 10MHz / QPSK



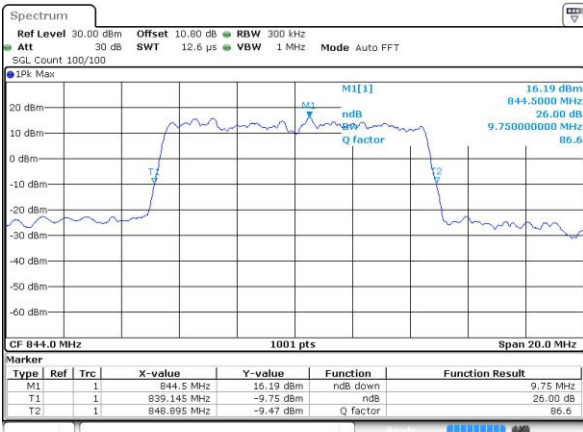
Date: 10 SEP 2018 22:30:54

Middle Channel / 10MHz / 16QAM



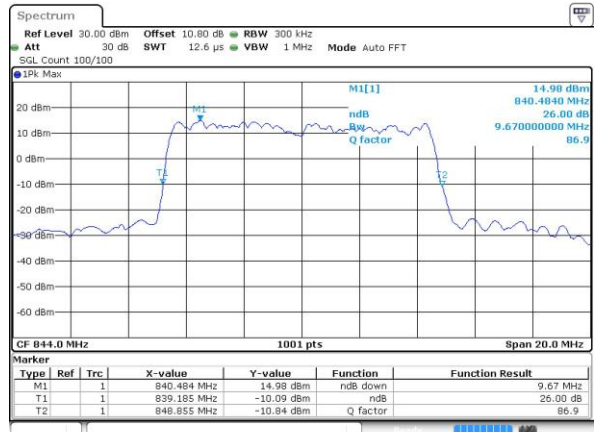
Date: 10 SEP 2018 22:31:06

Highest Channel / 10MHz / QPSK



Date: 10 SEP 2018 22:33:21

Highest Channel / 10MHz / 16QAM

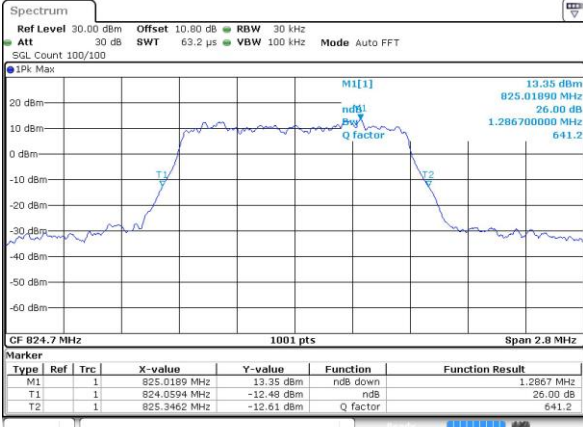


Date: 10 SEP 2018 22:33:33



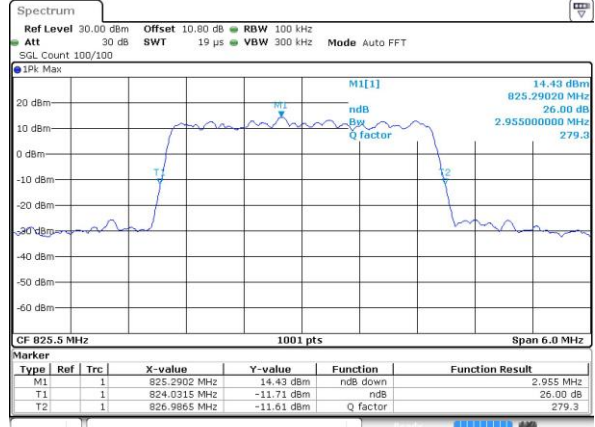
LTE Band 5

Lowest Channel / 1.4MHz / 64QAM



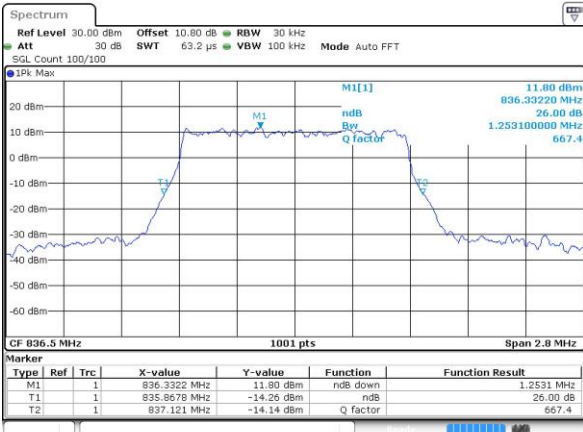
Date: 10 SEP 2018 23:13:21

Lowest Channel / 3MHz / 64QAM



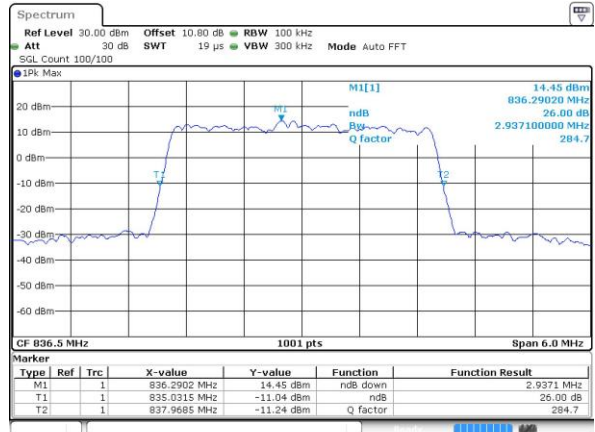
Date: 10 SEP 2018 22:42:17

Middle Channel / 1.4MHz / 64QAM



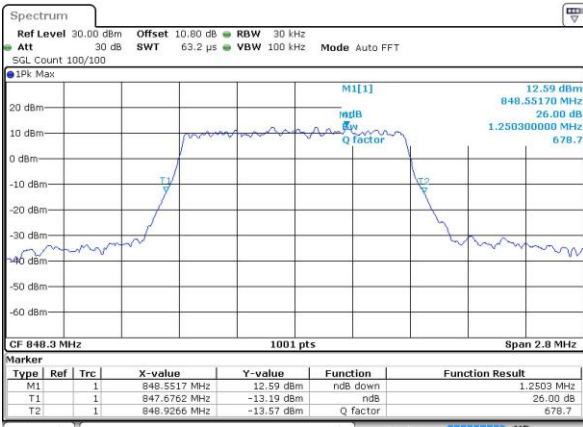
Date: 10 SEP 2018 23:17:54

Middle Channel / 3MHz / 64QAM



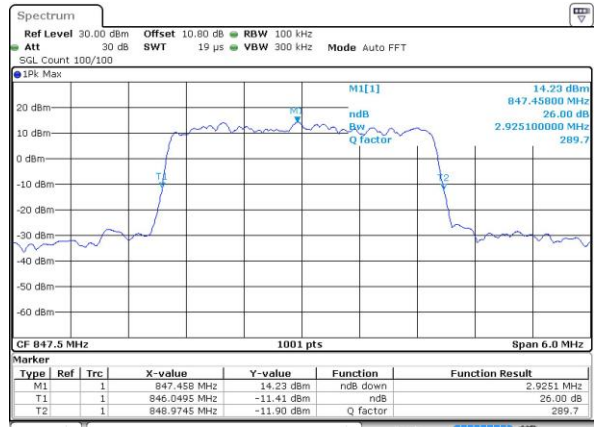
Date: 10 SEP 2018 22:46:51

Highest Channel / 1.4MHz / 64QAM



Date: 10 SEP 2018 23:19:08

Highest Channel / 3MHz / 64QAM

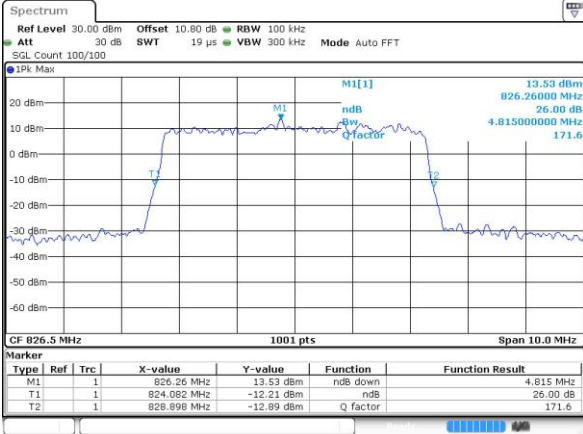


Date: 10 SEP 2018 22:48:04



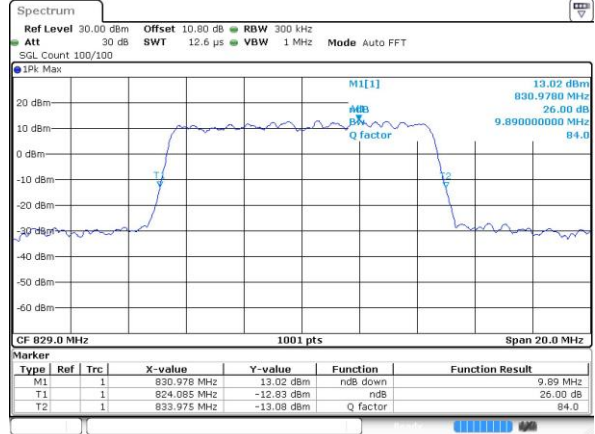
LTE Band 5

Lowest Channel / 5MHz / 64QAM



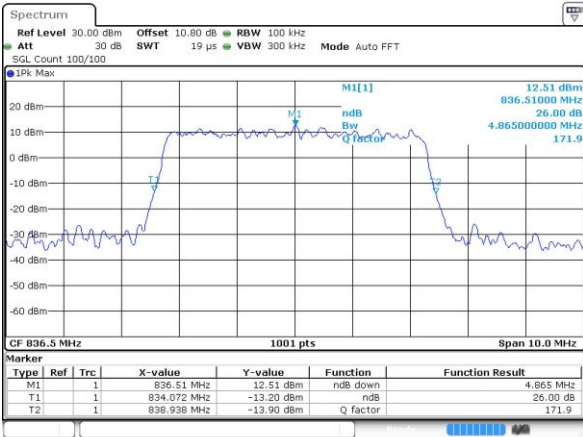
Date: 10 SEP 2018 22:52:38

Lowest Channel / 10MHz / 64QAM



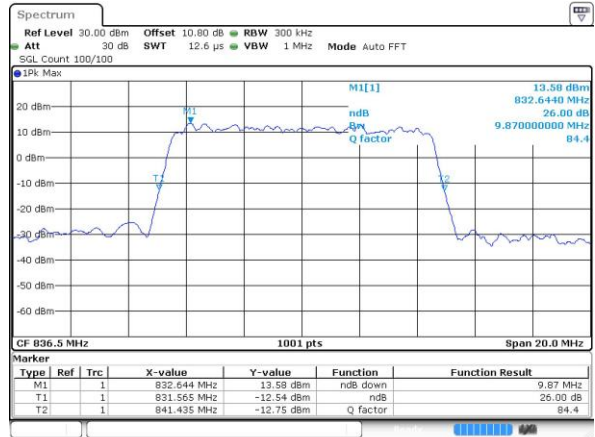
Date: 10 SEP 2018 23:03:00

Middle Channel / 5MHz / 64QAM



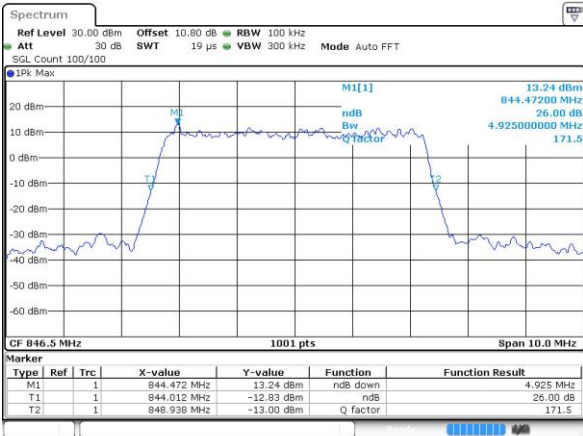
Date: 10 SEP 2018 22:57:12

Middle Channel / 10MHz / 64QAM



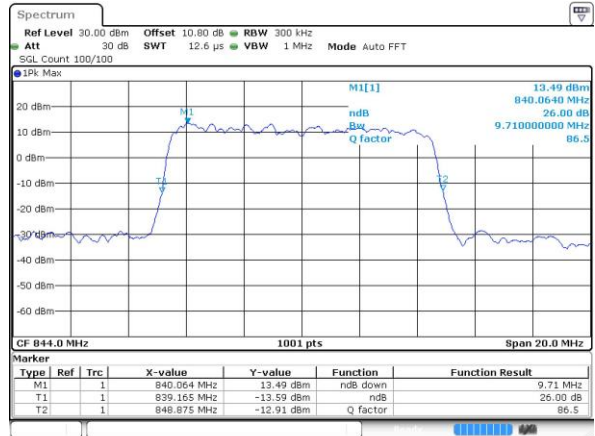
Date: 10 SEP 2018 23:07:33

Highest Channel / 5MHz / 64QAM



Date: 10 SEP 2018 22:58:26

Highest Channel / 10MHz / 64QAM



Date: 10 SEP 2018 23:08:47



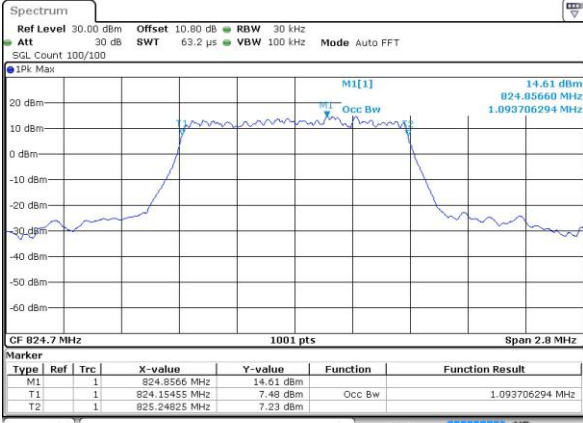
Occupied Bandwidth

Mode	LTE Band 5 : 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	1.09	2.7	2.69	4.48	4.49	9.03	9.05	-	-	-	-
Middle CH	1.09	1.09	2.7	2.69	4.49	4.48	8.99	9.01	-	-	-	-
Highest CH	1.09	1.09	2.71	2.7	4.5	4.49	9.09	9.05	-	-	-	-
Mode	LTE Band 5 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	1.10	-	2.73	-	4.48	-	8.99	-	-	-	-	-
Middle CH	1.09	-	2.73	-	4.48	-	9.03	-	-	-	-	-
Highest CH	1.09	-	2.73	-	4.47	-	9.03	-	-	-	-	-



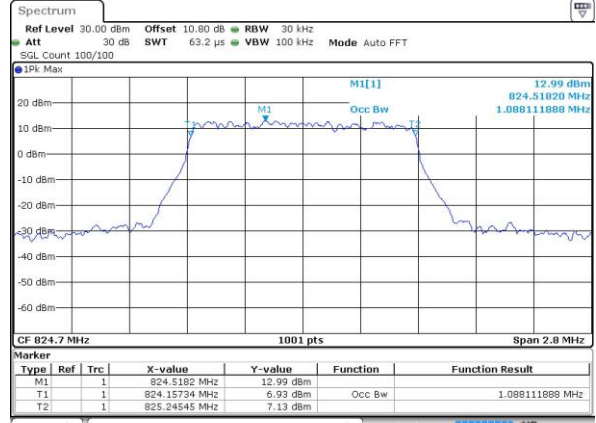
LTE Band 5

Lowest Channel / 1.4MHz / QPSK



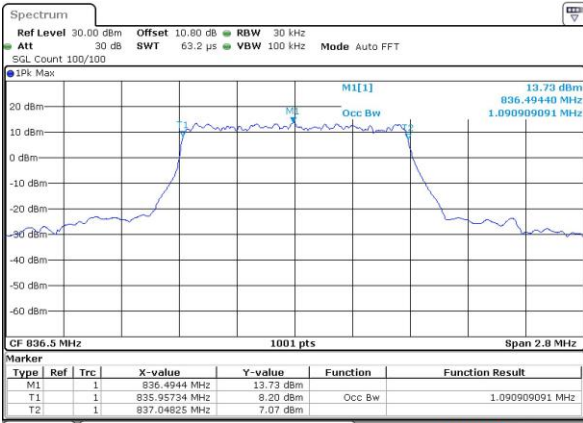
Date: 10 SEP 2018 23:23:30

Lowest Channel / 1.4MHz / 16QAM



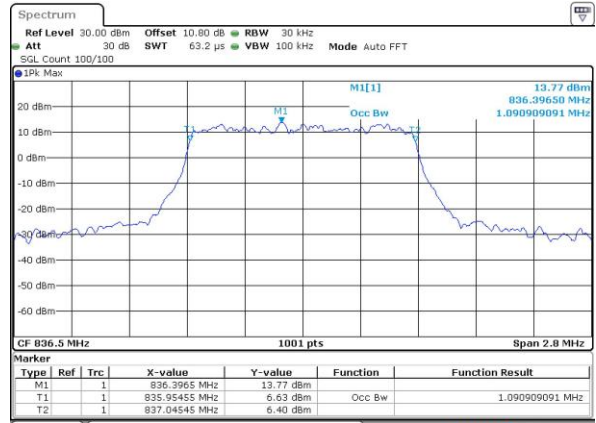
Date: 10 SEP 2018 23:23:42

Middle Channel / 1.4MHz / QPSK



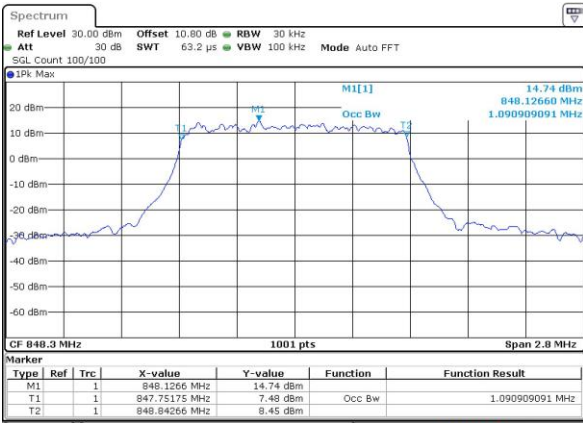
Date: 10 SEP 2018 23:32:37

Middle Channel / 1.4MHz / 16QAM



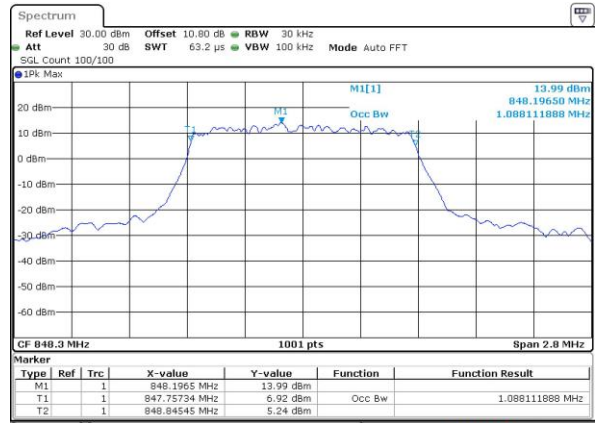
Date: 10 SEP 2018 23:32:49

Highest Channel / 1.4MHz / QPSK



Date: 10 SEP 2018 23:35:04

Highest Channel / 1.4MHz / 16QAM

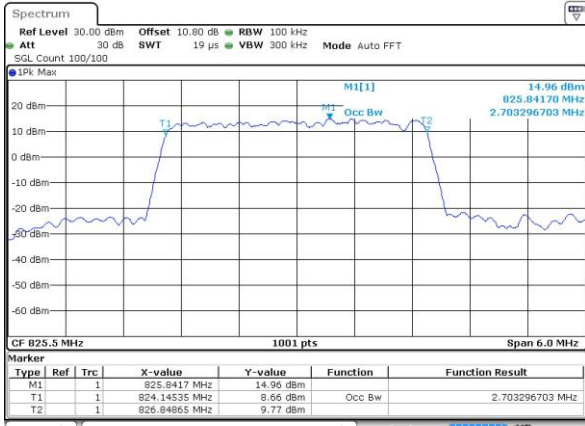


Date: 10 SEP 2018 23:35:16



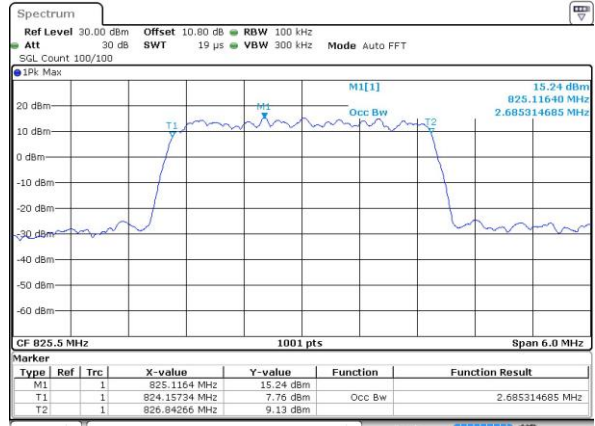
LTE Band 5

Lowest Channel / 3MHz / QPSK



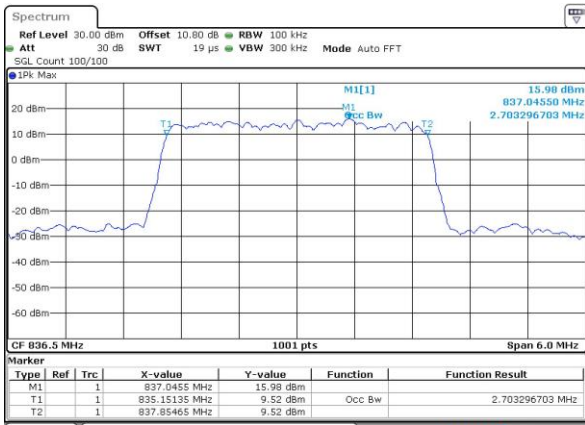
Date: 10 SEP 2018 21:39:59

Lowest Channel / 3MHz / 16QAM



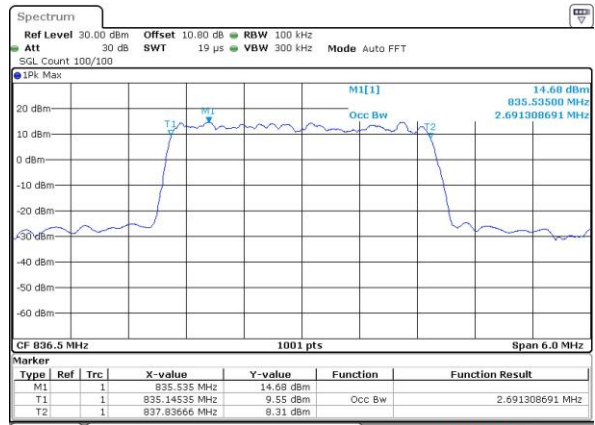
Date: 10 SEP 2018 21:40:11

Middle Channel / 3MHz / QPSK



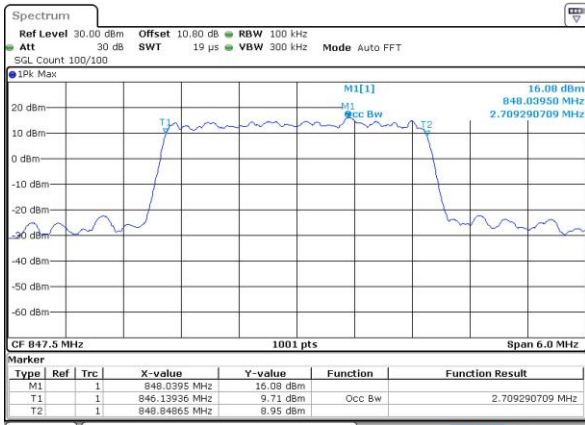
Date: 10 SEP 2018 21:49:07

Middle Channel / 3MHz / 16QAM



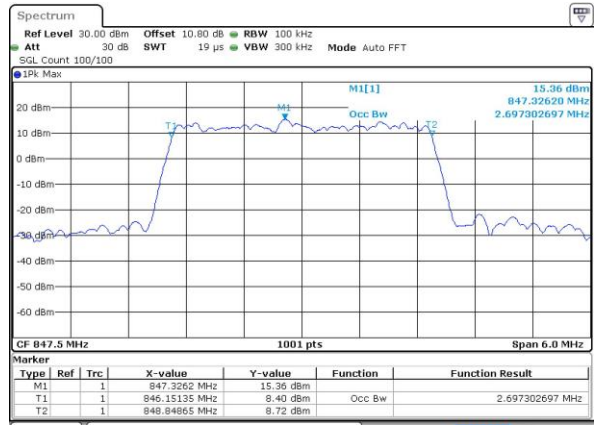
Date: 10 SEP 2018 21:49:18

Highest Channel / 3MHz / QPSK



Date: 10 SEP 2018 21:51:33

Highest Channel / 3MHz / 16QAM

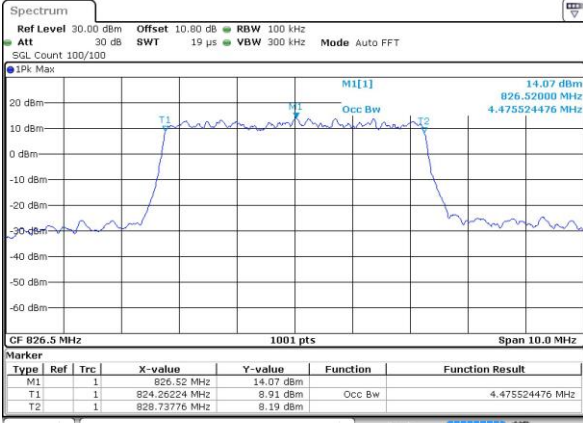


Date: 10 SEP 2018 21:51:45



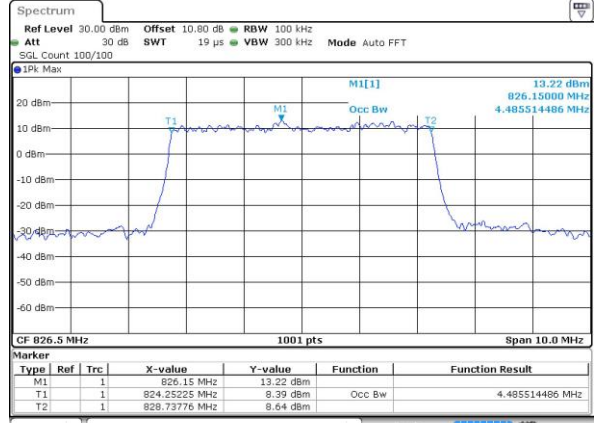
LTE Band 5

Lowest Channel / 5MHz / QPSK



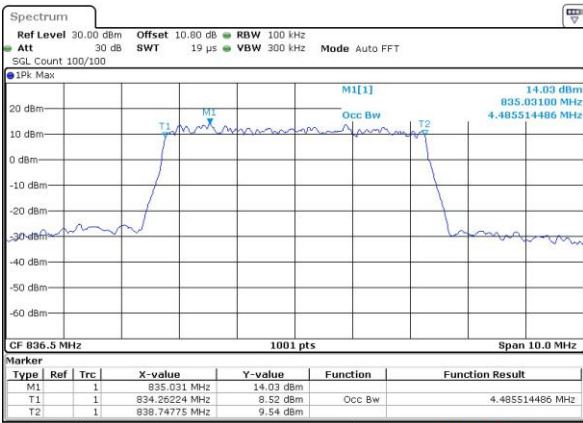
Date: 10 SEP 2018 22:00:41

Lowest Channel / 5MHz / 16QAM



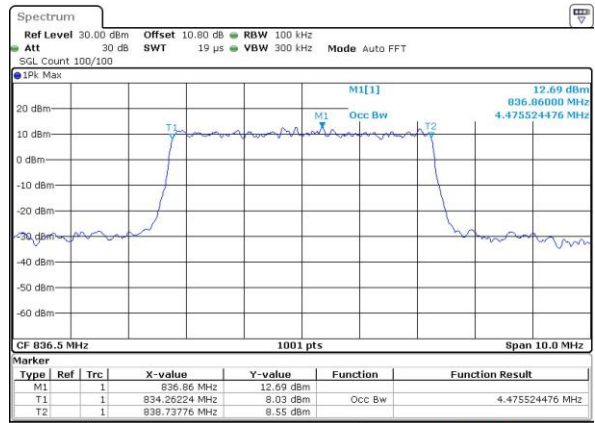
Date: 10 SEP 2018 22:00:53

Middle Channel / 5MHz / QPSK



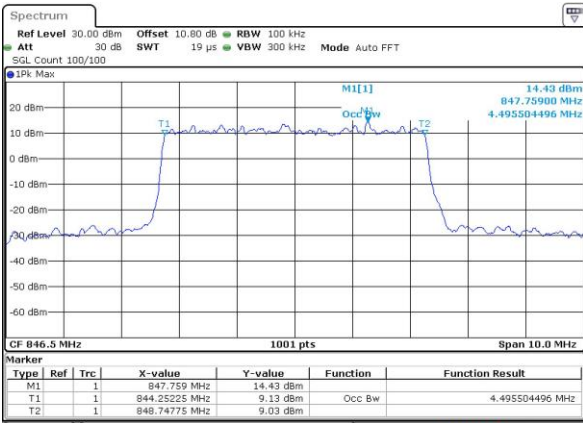
Date: 10 SEP 2018 22:09:49

Middle Channel / 5MHz / 16QAM



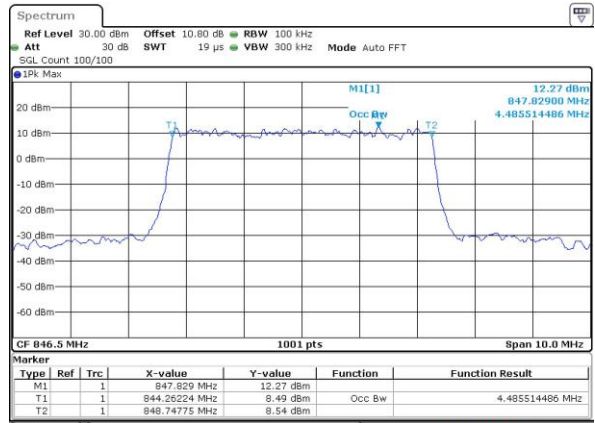
Date: 10 SEP 2018 22:10:00

Highest Channel / 5MHz / QPSK



Date: 10 SEP 2018 22:12:16

Highest Channel / 5MHz / 16QAM

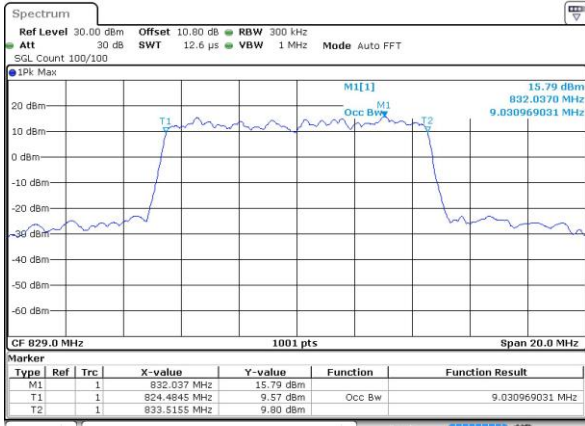


Date: 10 SEP 2018 22:12:27



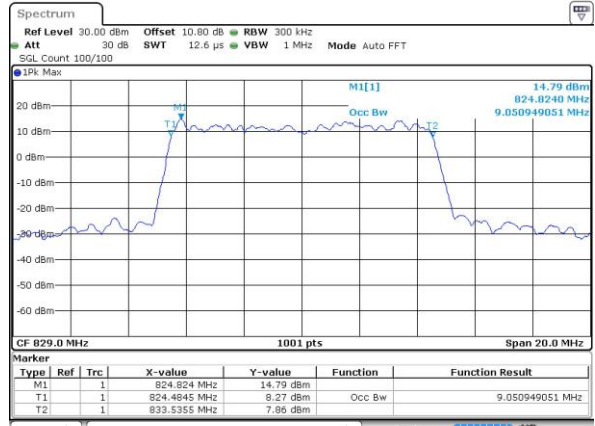
LTE Band 5

Lowest Channel / 10MHz / QPSK



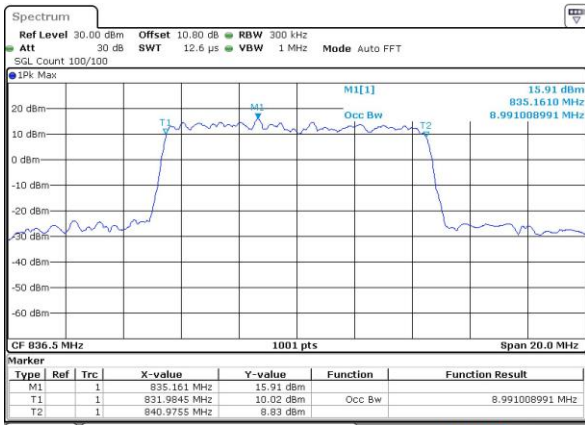
Date: 10 SEP 2018 22:21:23

Lowest Channel / 10MHz / 16QAM



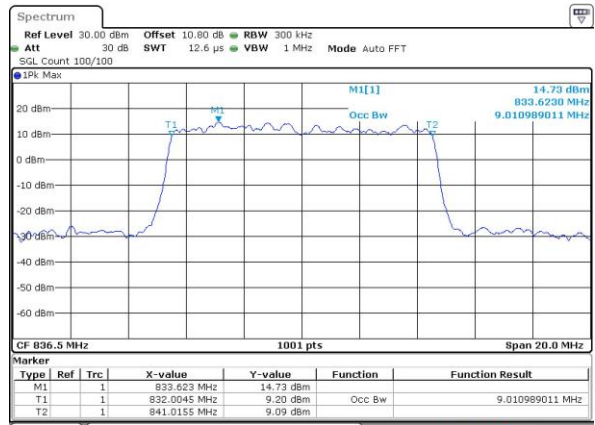
Date: 10 SEP 2018 22:21:35

Middle Channel / 10MHz / QPSK



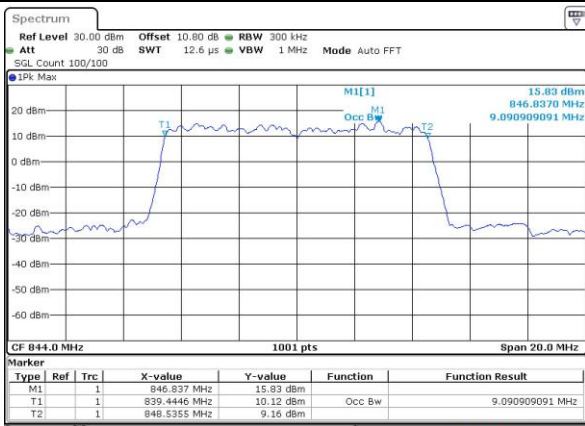
Date: 10 SEP 2018 22:30:31

Middle Channel / 10MHz / 16QAM



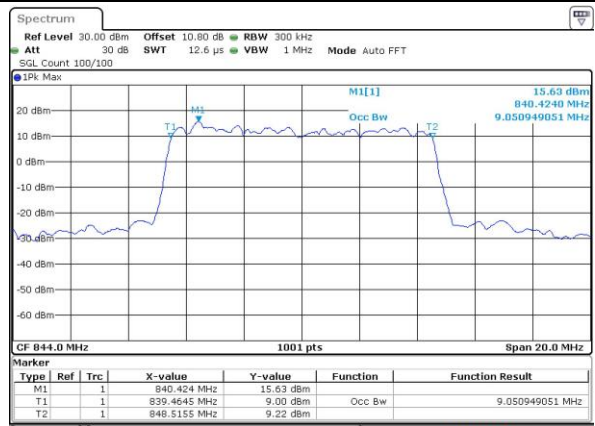
Date: 10 SEP 2018 22:30:42

Highest Channel / 10MHz / QPSK



Date: 10 SEP 2018 22:32:58

Highest Channel / 10MHz / 16QAM

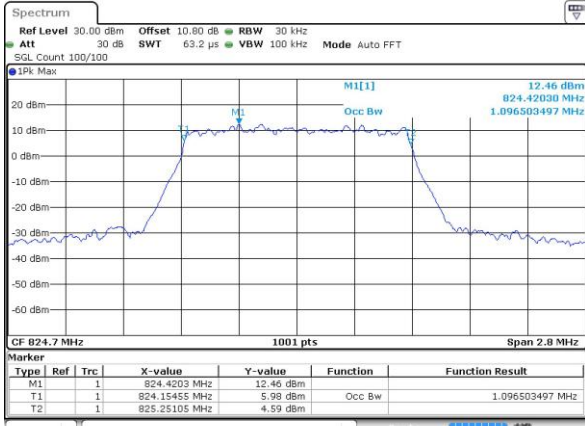


Date: 10 SEP 2018 22:33:10



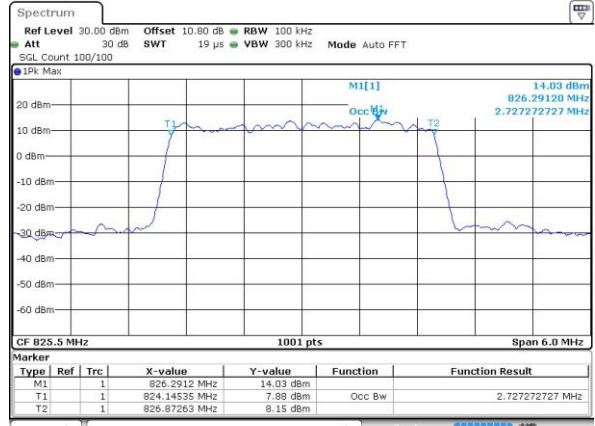
LTE Band 5

Lowest Channel / 1.4MHz / 64QAM



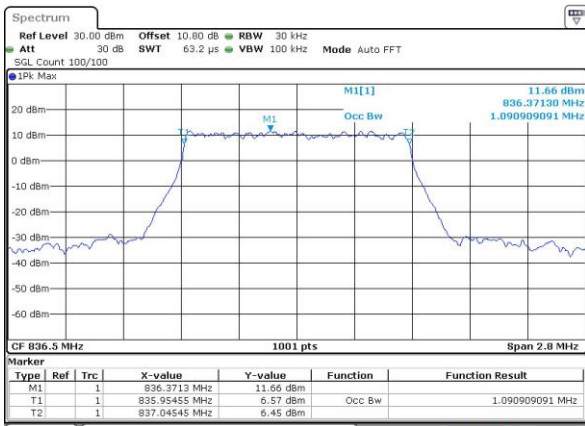
Date: 10 SEP 2018 23:13:09

Lowest Channel / 3MHz / 64QAM



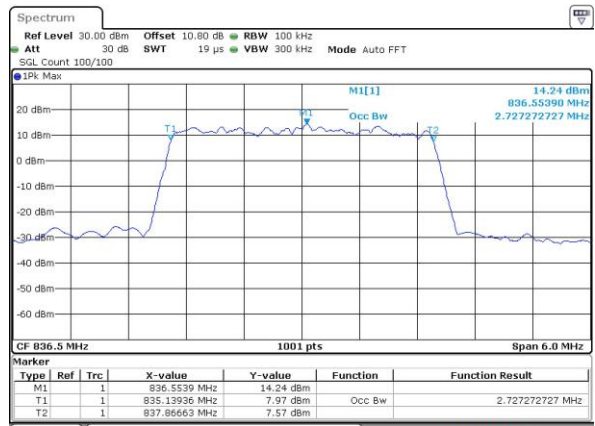
Date: 10 SEP 2018 22:42:06

Middle Channel / 1.4MHz / 64QAM



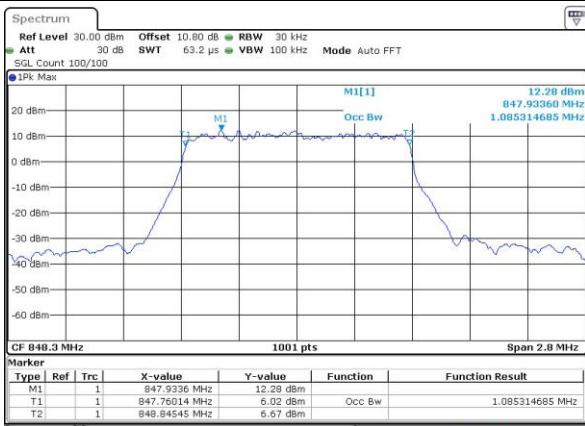
Date: 10 SEP 2018 23:17:43

Middle Channel / 3MHz / 64QAM



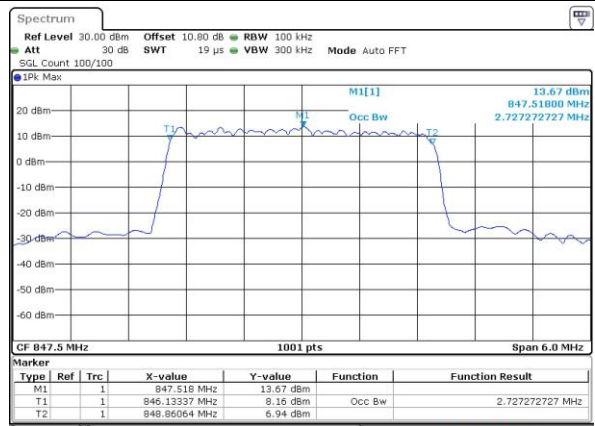
Date: 10 SEP 2018 22:46:39

Highest Channel / 1.4MHz / 64QAM



Date: 10 SEP 2018 23:18:56

Highest Channel / 3MHz / 64QAM



Date: 10 SEP 2018 22:47:53