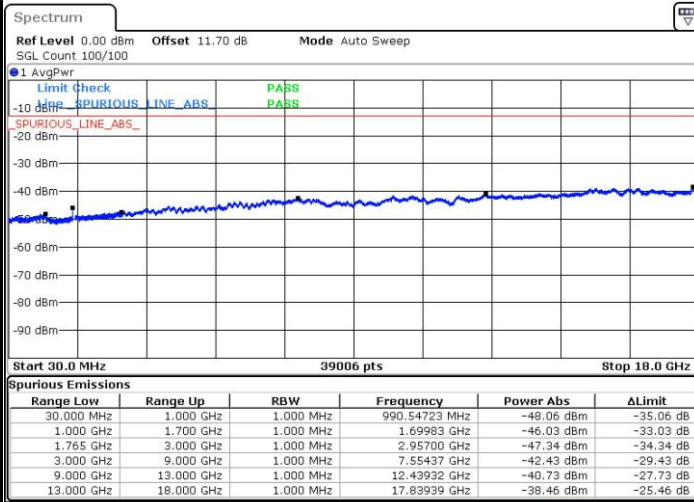




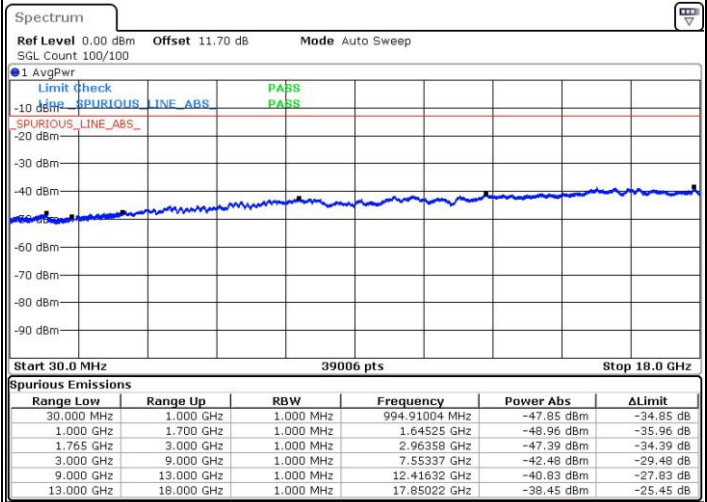
LTE Band 4 / 5MHz

Lowest Channel / 64QAM



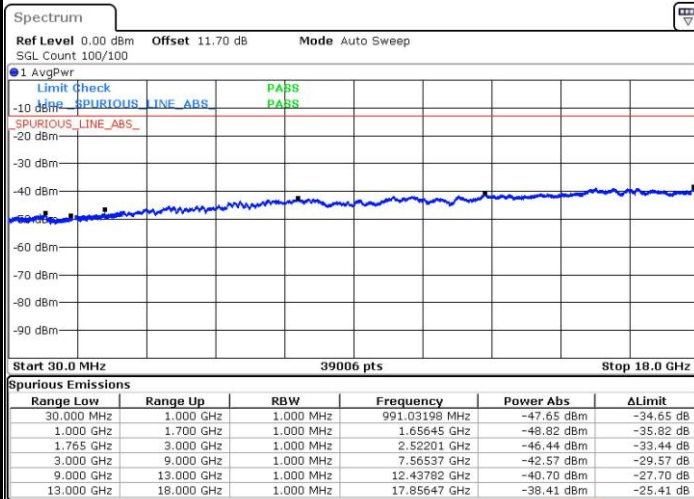
Date: 4.FEB.2019 12:26:16

Middle Channel / 64QAM



Date: 4.FEB.2019 12:27:19

Highest Channel / 64QAM

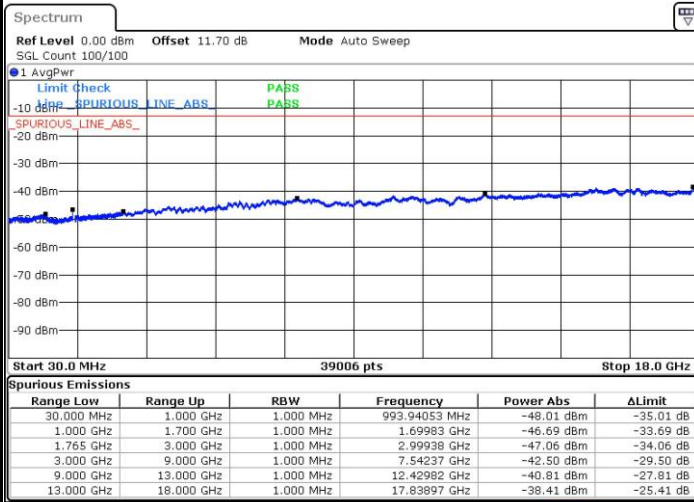


Date: 4.FEB.2019 12:30:23



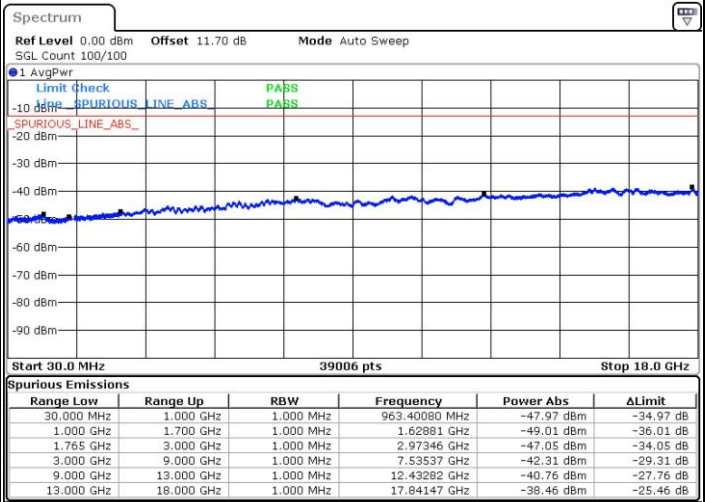
LTE Band 4 / 10MHz

Lowest Channel / 64QAM



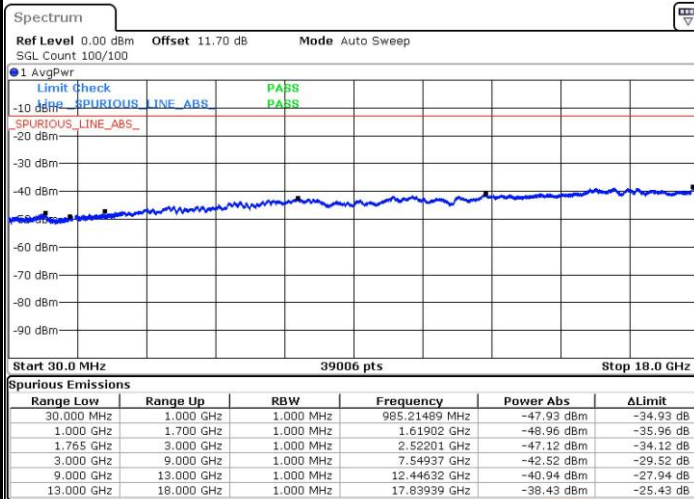
Date: 4.FEB.2019 12:33:26

Middle Channel / 64QAM



Date: 4.FEB.2019 12:34:30

Highest Channel / 64QAM

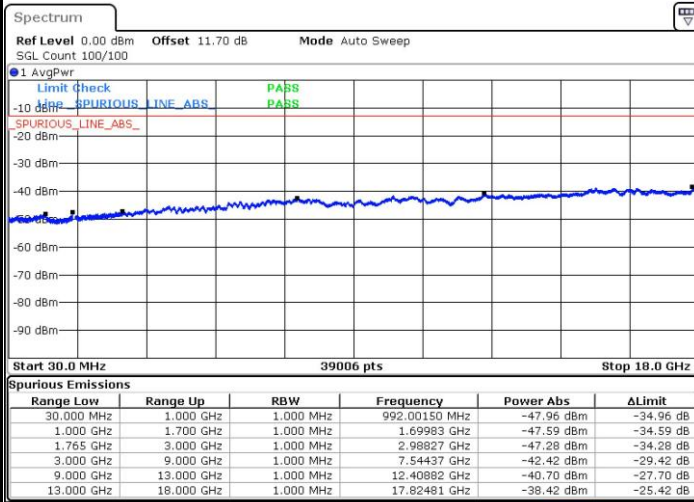


Date: 4.FEB.2019 12:37:33



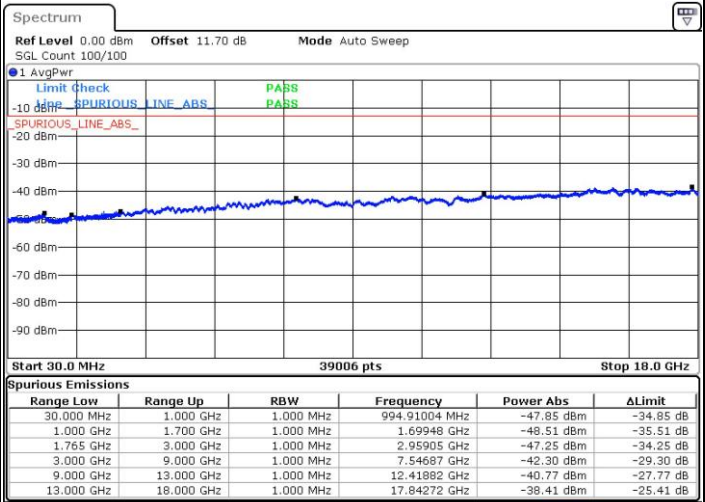
LTE Band 4 / 15MHz

Lowest Channel / 64QAM



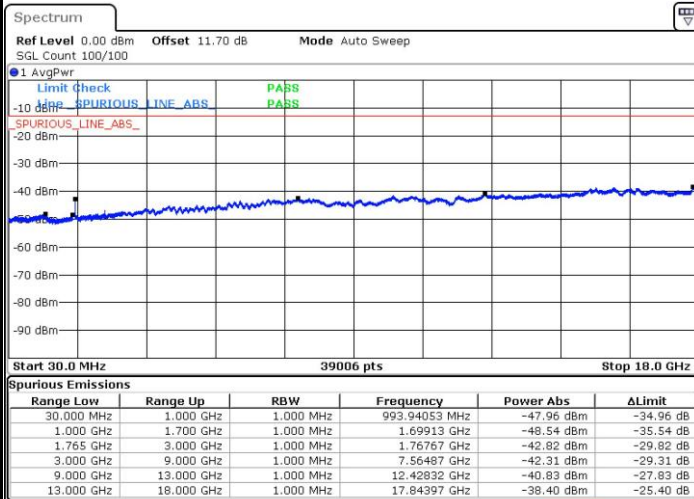
Date: 4.FEB.2019 12:40:37

Middle Channel / 64QAM



Date: 4.FEB.2019 12:41:41

Highest Channel / 64QAM

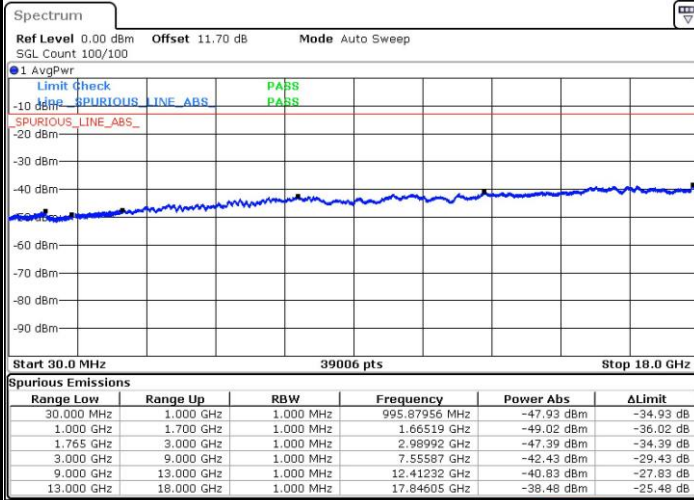


Date: 4.FEB.2019 12:44:44



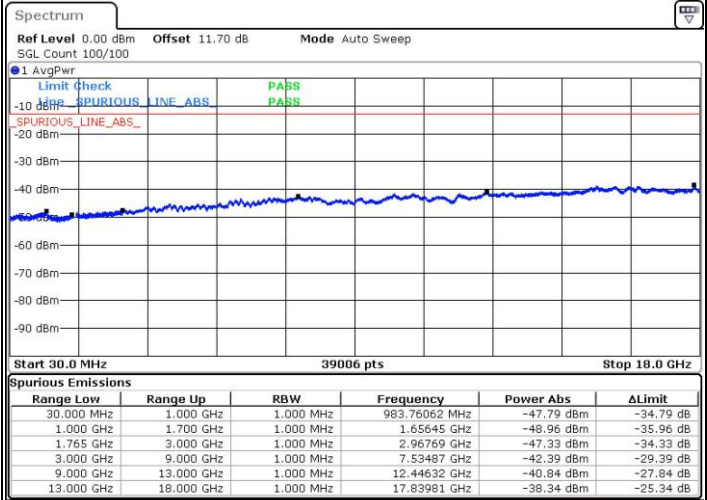
LTE Band 4 / 20MHz

Lowest Channel / 64QAM



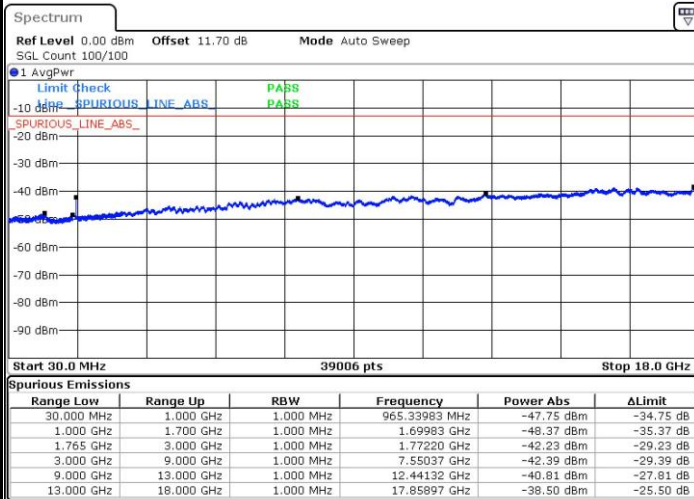
Date: 4.FEB.2019 12:47:48

Middle Channel / 64QAM



Date: 4.FEB.2019 12:48:51

Highest Channel / 64QAM



Date: 4.FEB.2019 12:51:55

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	0.0002	PASS
40	Normal Voltage	0.0002	
30	Normal Voltage	0.0008	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0001	
0	Normal Voltage	0.0075	
-10	Normal Voltage	0.0065	
-20	Normal Voltage	0.0072	
-30	Normal Voltage	0.0075	
20	Maximum Voltage	0.0075	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0002	

Note:

1. Normal Voltage =3.9 V. ; Battery End Point (BEP) =3.4 V. ; Maximum Voltage =4.35 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.

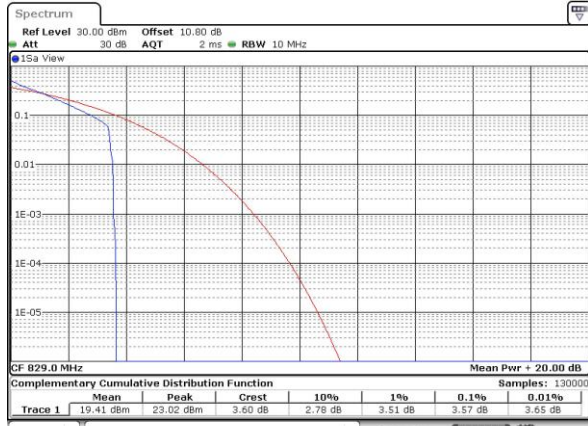
LTE Band 5

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	3.57	4.43	4.7	5.57	PASS
Middle CH	3.48	4.38	4.49	5.48	
Highest CH	3.62	4.41	4.7	5.51	
Mode	LTE Band 5 / 10MHz				
Mod.	64QAM				Limit: 13dB
RB Size	1RB	Full RB			Result
Lowest CH	5.94	6.32	-	-	PASS
Middle CH	5.16	6.23	-	-	
Highest CH	5.48	6.26	-	-	

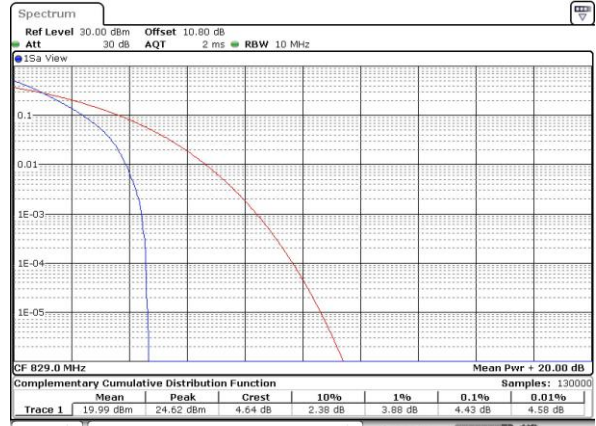
LTE Band 5 / 10MHz / QPSK

Lowest Channel / 1RB



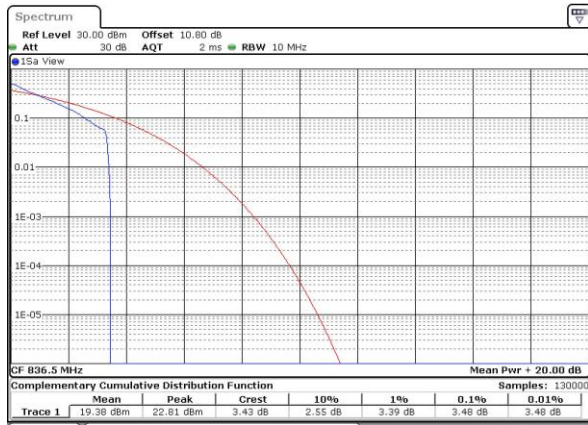
Date: 4 FEB 2019 15:01:53

Lowest Channel / Full RB



Date: 4 FEB 2019 15:02:03

Middle Channel / 1RB



Date: 4 FEB 2019 15:02:13

Middle Channel / Full RB



Date: 4 FEB 2019 15:02:22

Highest Channel / 1RB

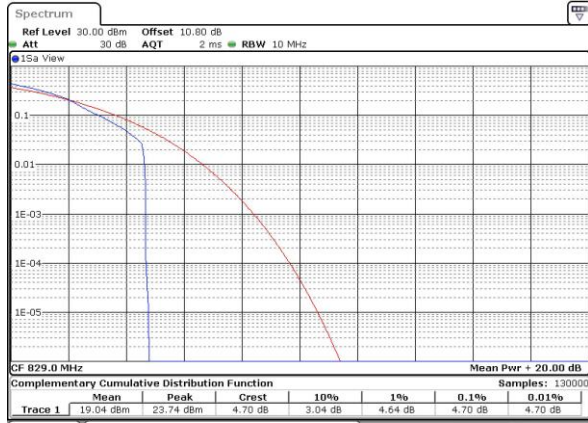


Date: 4 FEB 2019 15:02:32

Highest Channel / Full RB



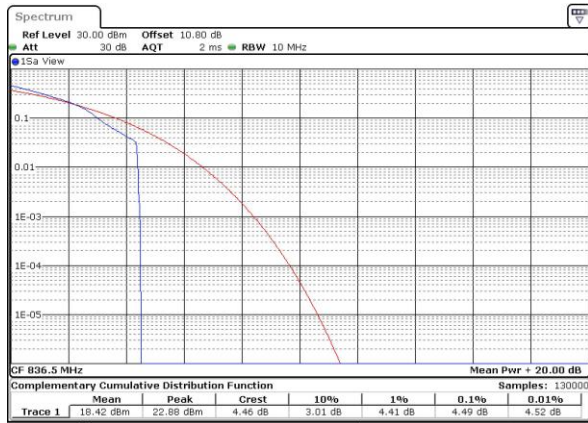
Date: 4 FEB 2019 15:02:42

LTE Band 5 / 10MHz / 16QAM
Lowest Channel / 1RB


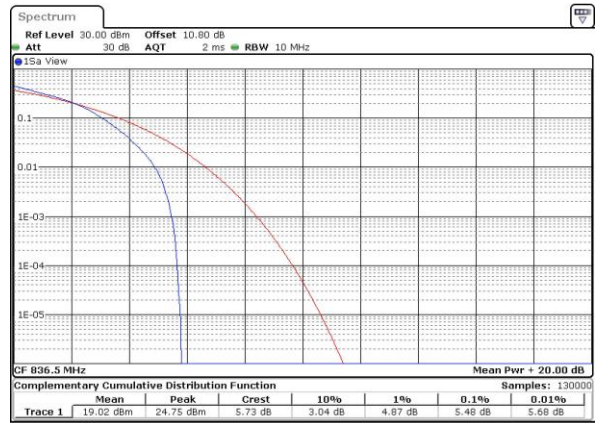
Date: 4 FEB 2019 15:00:53

Lowest Channel / Full RB


Date: 4 FEB 2019 15:01:03

Middle Channel / 1RB


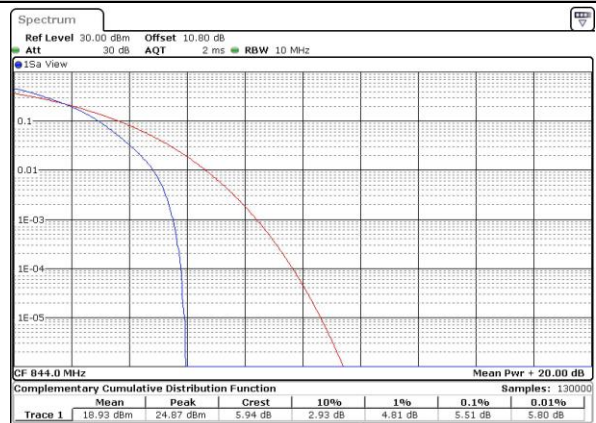
Date: 4 FEB 2019 15:01:13

Middle Channel / Full RB


Date: 4 FEB 2019 15:01:23

Highest Channel / 1RB


Date: 4 FEB 2019 15:01:33

Highest Channel / Full RB


Date: 4 FEB 2019 15:01:43



LTE Band 5 / 10MHz / 64QAM

Lowest Channel / 1RB



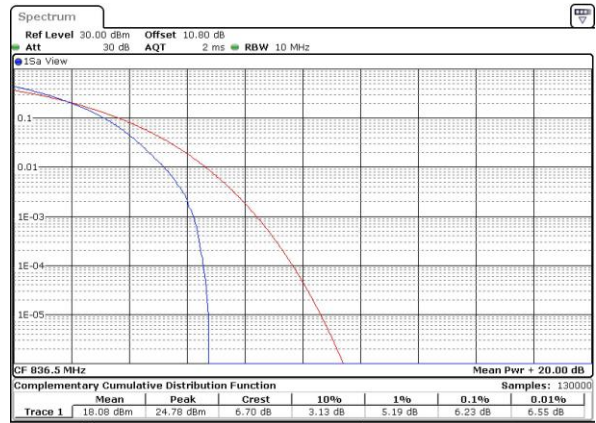
Lowest Channel / Full RB



Middle Channel / 1RB



Middle Channel / Full RB



Highest Channel / 1RB



Highest Channel / Full RB



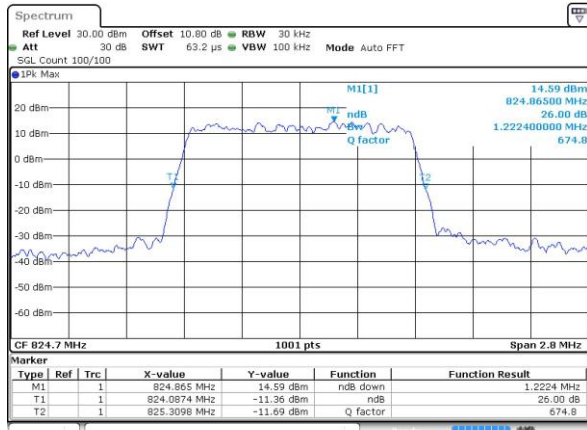
**26dB Bandwidth**

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	1.22	1.21	2.99	3.04	4.92	4.84	9.91	9.95	-	-	-	-
Middle CH	1.23	1.23	3.06	3.04	4.86	4.91	9.77	9.69	-	-	-	-
Highest CH	1.21	1.24	3.08	3.00	4.96	4.93	9.85	9.77	-	-	-	-
Mode	LTE Band 5 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	1.23	-	2.96	-	4.88	-	9.71	-	-	-	-	-
Middle CH	1.23	-	3.02	-	4.88	-	9.69	-	-	-	-	-
Highest CH	1.22	-	3.03	-	4.92	-	9.91	-	-	-	-	-



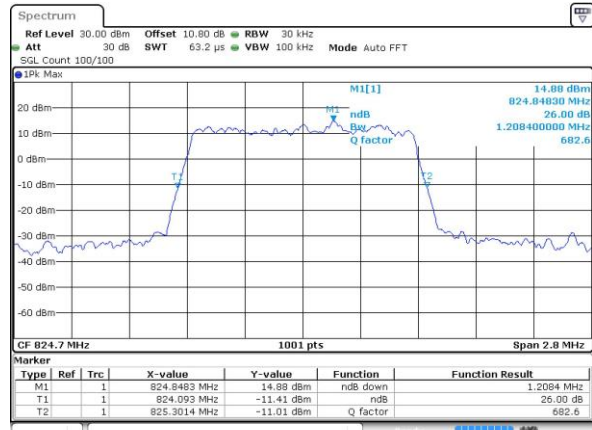
LTE Band 5

Lowest Channel / 1.4MHz / QPSK



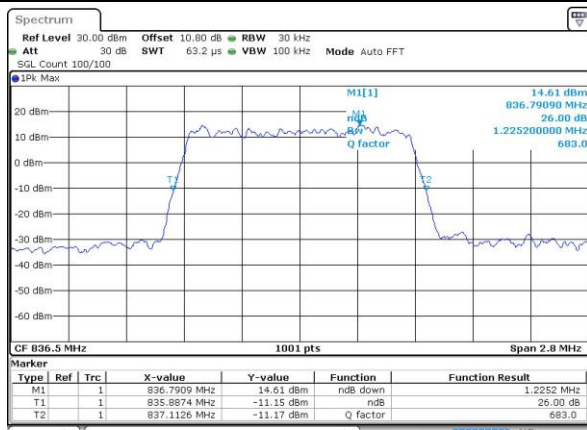
Date: 4 FEB 2019 13:39:39

Lowest Channel / 1.4MHz / 16QAM



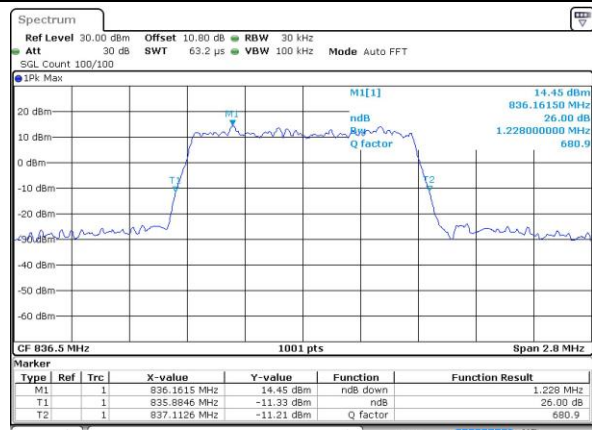
Date: 4 FEB 2019 13:39:28

Middle Channel / 1.4MHz / QPSK



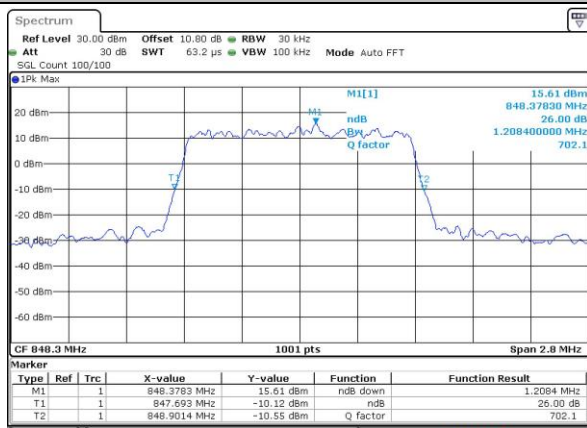
Date: 4 FEB 2019 13:48:15

Middle Channel / 1.4MHz / 16QAM



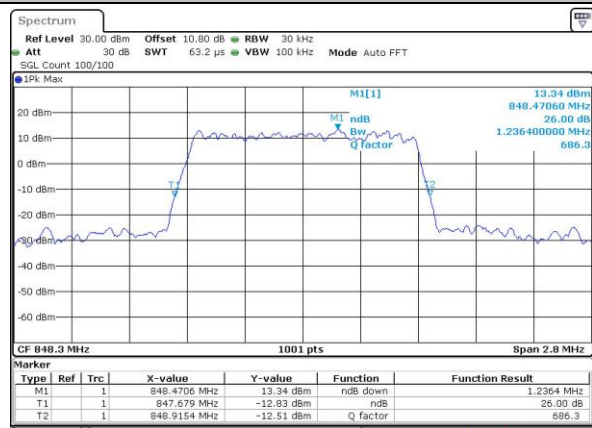
Date: 4 FEB 2019 13:48:27

Highest Channel / 1.4MHz / QPSK



Date: 4 FEB 2019 13:50:21

Highest Channel / 1.4MHz / 16QAM

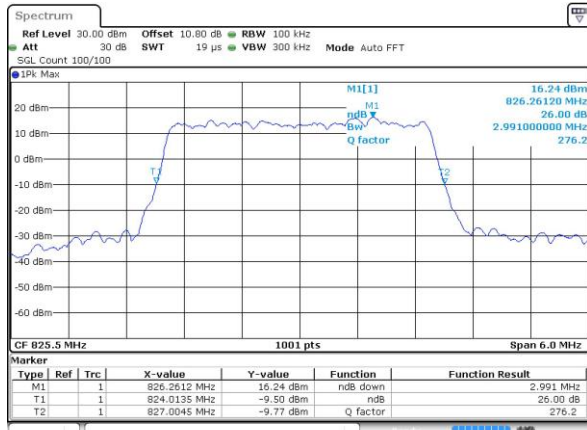


Date: 4 FEB 2019 13:50:33



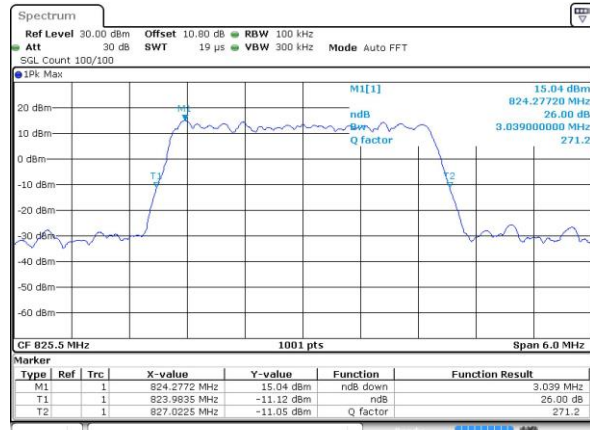
LTE Band 5

Lowest Channel / 3MHz / QPSK



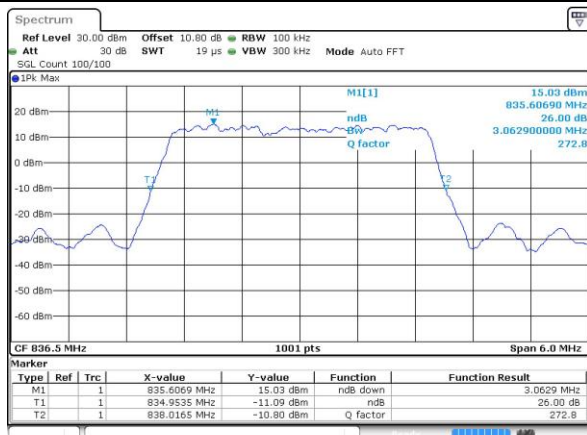
Date: 4 FEB 2019 13:59:08

Lowest Channel / 3MHz / 16QAM



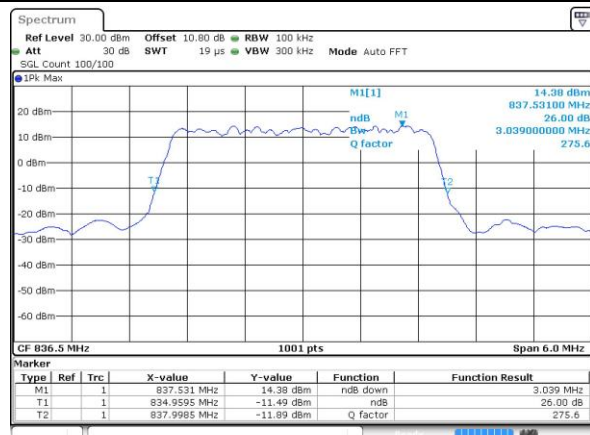
Date: 4 FEB 2019 13:59:19

Middle Channel / 3MHz / QPSK



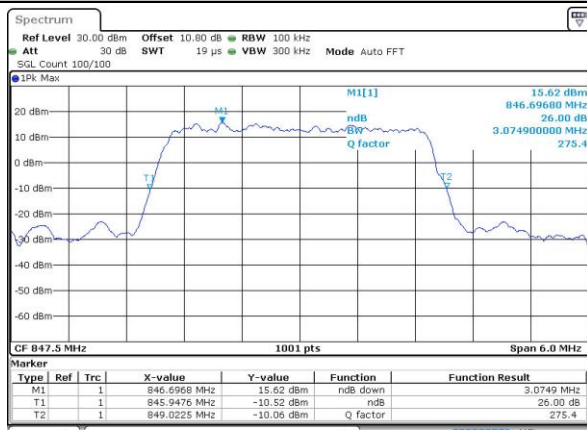
Date: 4 FEB 2019 14:07:55

Middle Channel / 3MHz / 16QAM



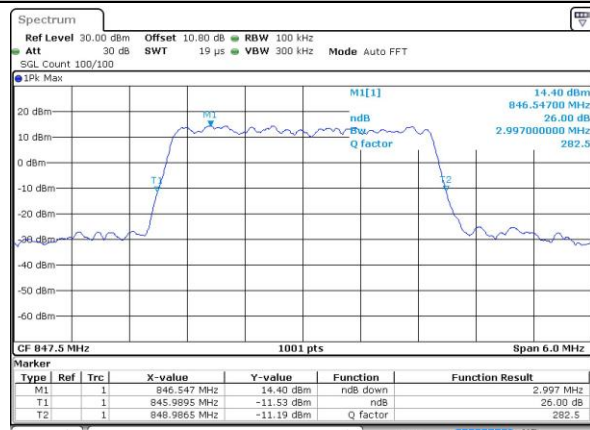
Date: 4 FEB 2019 14:08:06

Highest Channel / 3MHz / QPSK



Date: 4 FEB 2019 14:10:01

Highest Channel / 3MHz / 16QAM

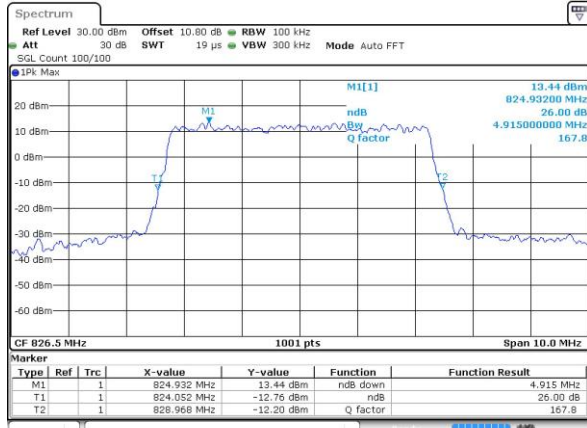


Date: 4 FEB 2019 14:10:12



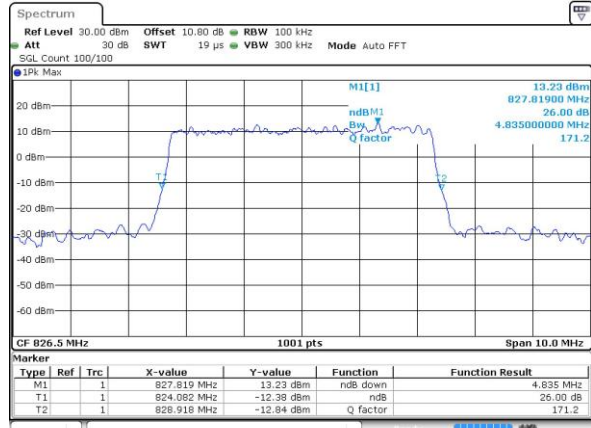
LTE Band 5

Lowest Channel / 5MHz / QPSK



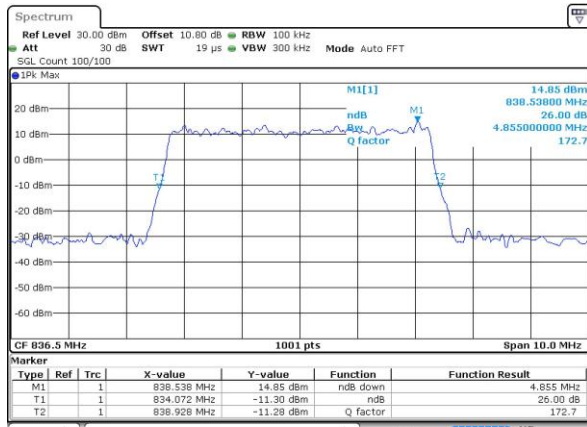
Date: 4 FEB 2019 14:18:48

Lowest Channel / 5MHz / 16QAM



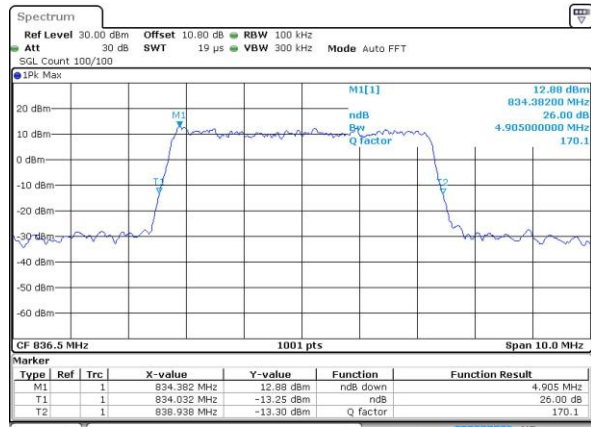
Date: 4 FEB 2019 14:18:59

Middle Channel / 5MHz / QPSK



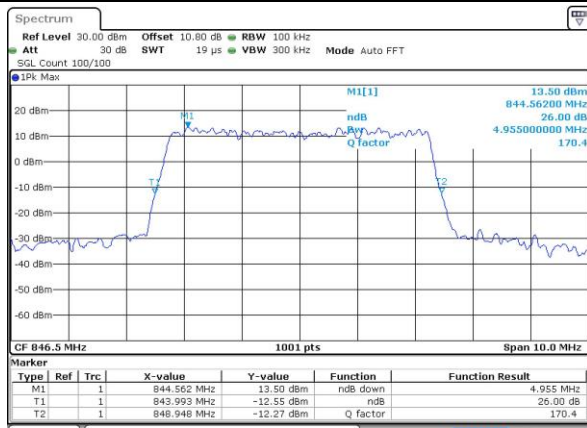
Date: 4 FEB 2019 14:27:35

Middle Channel / 5MHz / 16QAM



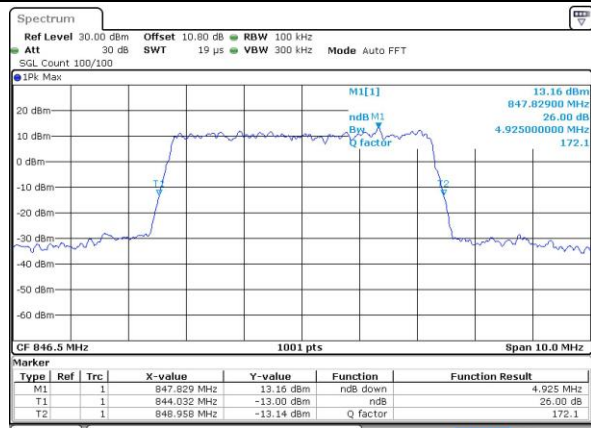
Date: 4 FEB 2019 14:27:46

Highest Channel / 5MHz / QPSK



Date: 4 FEB 2019 14:29:41

Highest Channel / 5MHz / 16QAM

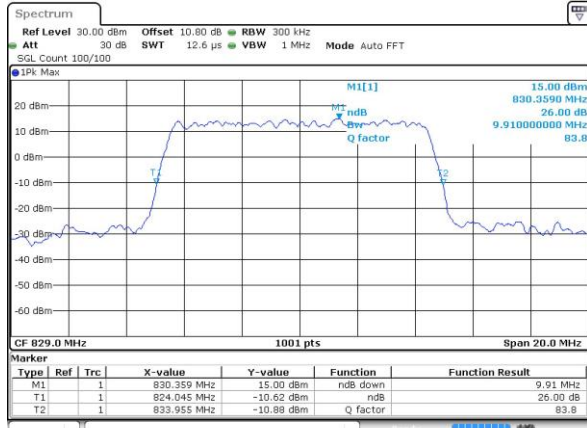


Date: 4 FEB 2019 14:29:52



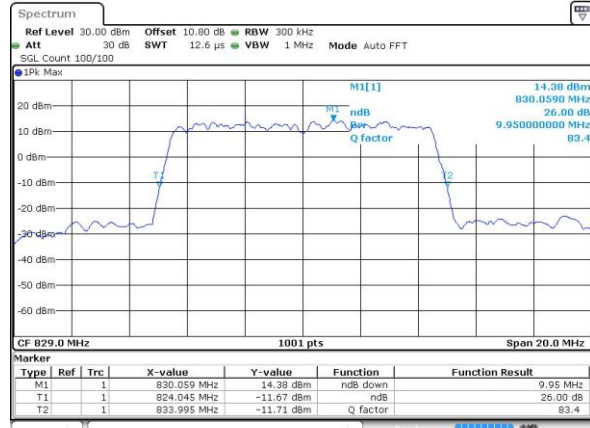
LTE Band 5

Lowest Channel / 10MHz / QPSK



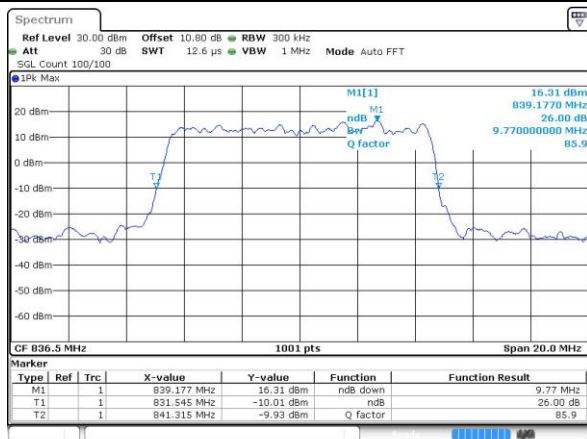
Date: 4 FEB 2019 14:38:28

Lowest Channel / 10MHz / 16QAM



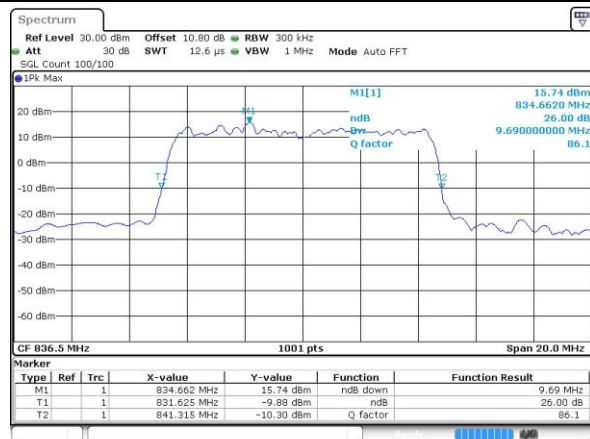
Date: 4 FEB 2019 14:38:39

Middle Channel / 10MHz / QPSK



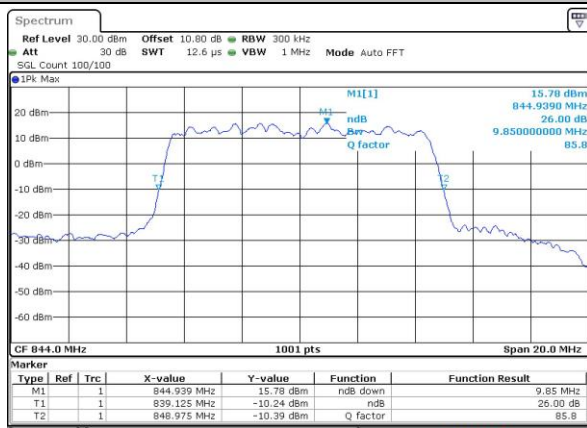
Date: 4 FEB 2019 14:47:14

Middle Channel / 10MHz / 16QAM



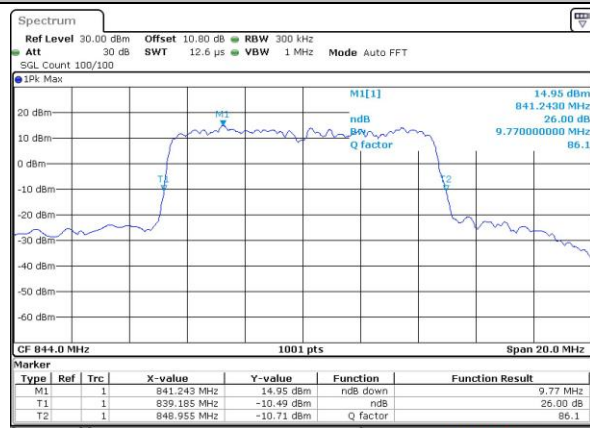
Date: 4 FEB 2019 14:47:26

Highest Channel / 10MHz / QPSK



Date: 4 FEB 2019 14:49:20

Highest Channel / 10MHz / 16QAM

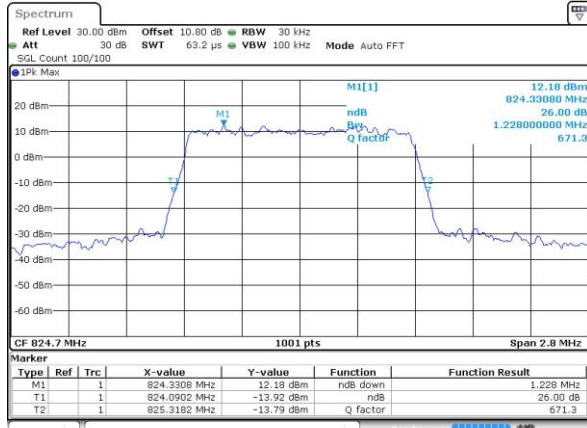


Date: 4 FEB 2019 14:49:32



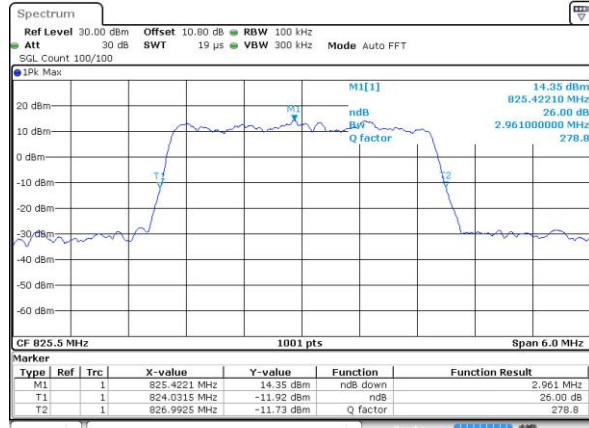
LTE Band 5

Lowest Channel / 1.4MHz / 64QAM



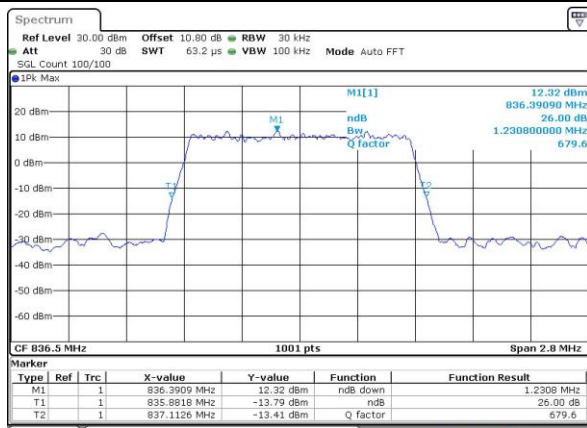
Date: 4 FEB 2019 15:39:05

Lowest Channel / 3MHz / 64QAM



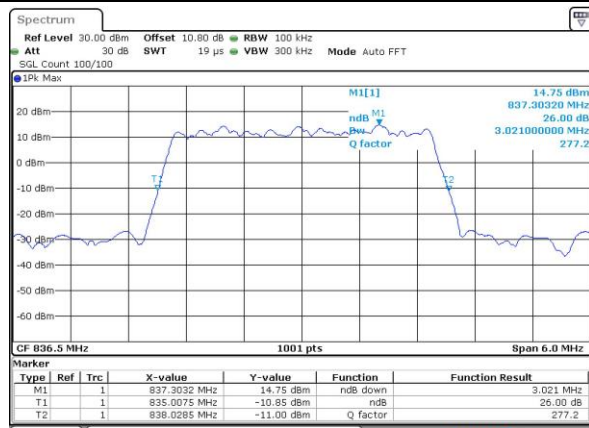
Date: 4 FEB 2019 15:09:35

Middle Channel / 1.4MHz / 64QAM



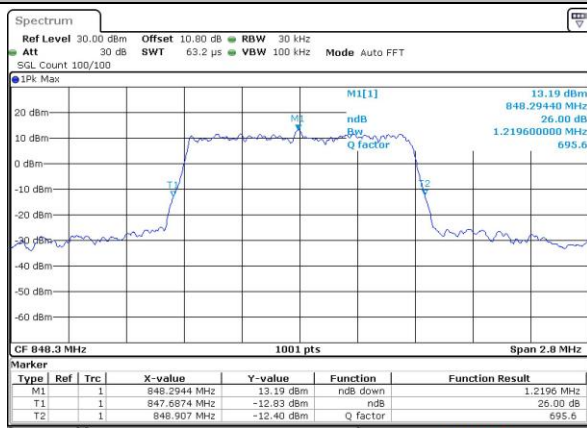
Date: 4 FEB 2019 15:43:28

Middle Channel / 3MHz / 64QAM



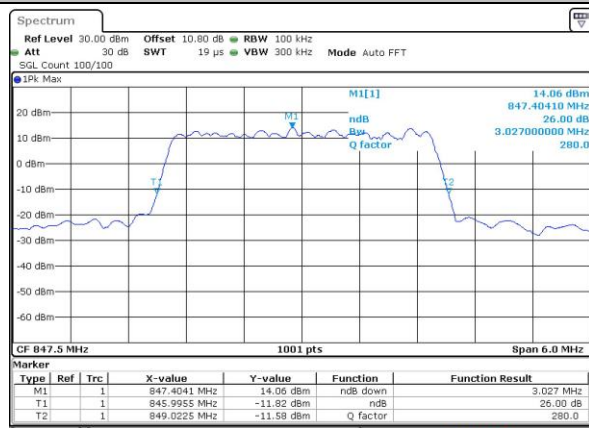
Date: 4 FEB 2019 15:13:58

Highest Channel / 1.4MHz / 64QAM



Date: 4 FEB 2019 15:44:31

Highest Channel / 3MHz / 64QAM

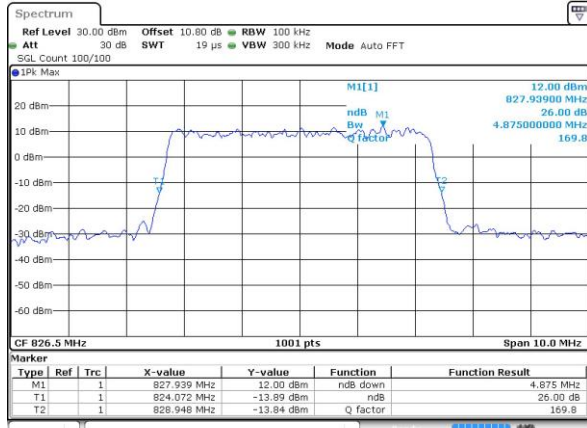


Date: 4 FEB 2019 15:15:01

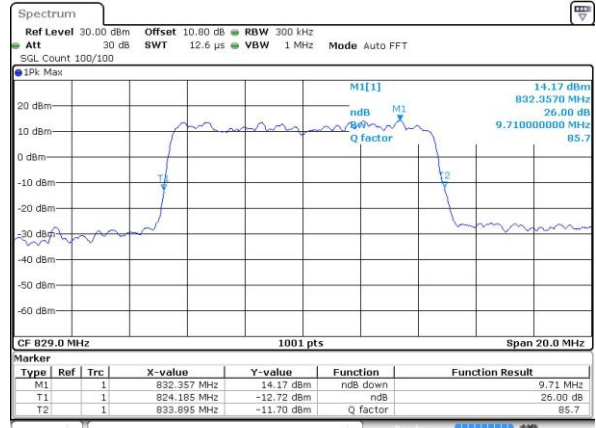


LTE Band 5

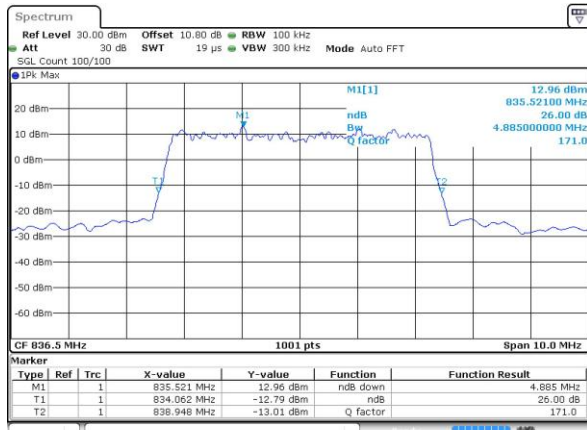
Lowest Channel / 5MHz / 64QAM



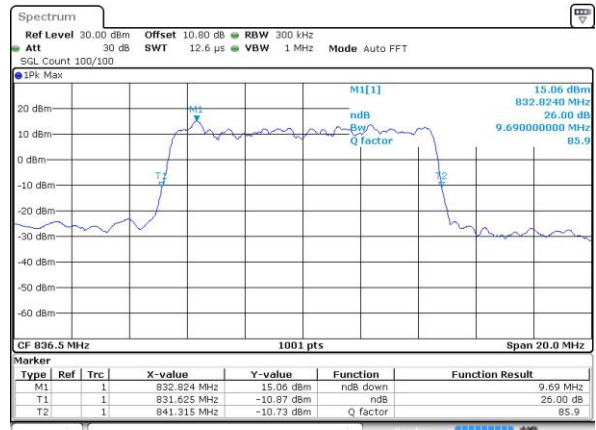
Lowest Channel / 10MHz / 64QAM



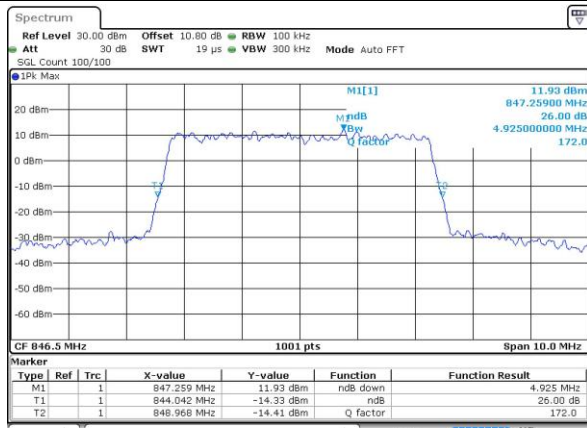
Middle Channel / 5MHz / 64QAM



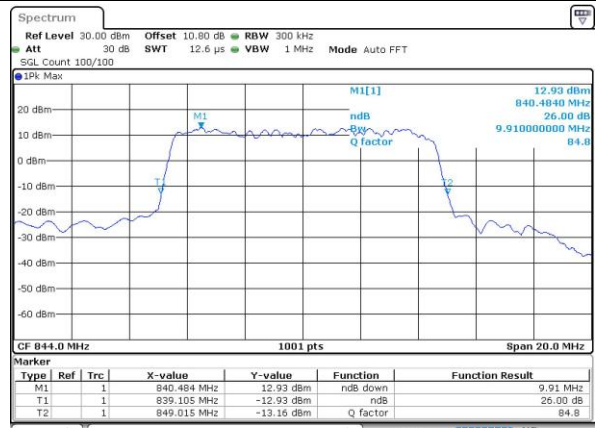
Middle Channel / 10MHz / 64QAM



Highest Channel / 5MHz / 64QAM



Highest Channel / 10MHz / 64QAM



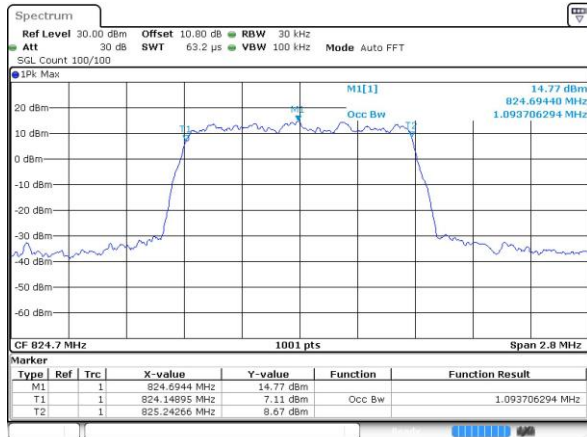
**Occupied Bandwidth**

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	1.08	2.72	2.72	4.5	4.5	9.09	9.07	-	-	-	-
Middle CH	1.09	1.09	2.71	2.71	4.5	4.5	9.05	8.95	-	-	-	-
Highest CH	1.09	1.09	2.72	2.72	4.5	4.48	8.99	9.01	-	-	-	-
Mode	LTE Band 5 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	1.09	-	2.73	-	4.50	-	8.99	-	-	-	-	-
Middle CH	1.09	-	2.73	-	4.50	-	9.01	-	-	-	-	-
Highest CH	1.09	-	2.72	-	4.48	-	8.99	-	-	-	-	-



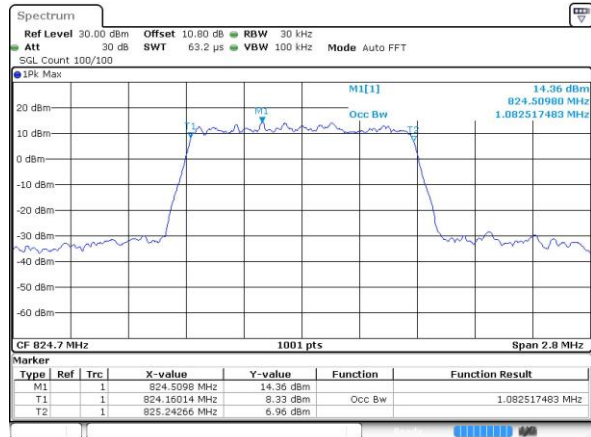
LTE Band 5

Lowest Channel / 1.4MHz / QPSK



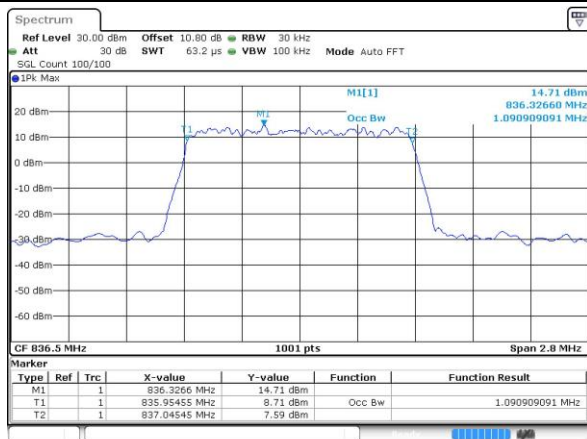
Date: 4 FEB 2019 13:39:05

Lowest Channel / 1.4MHz / 16QAM



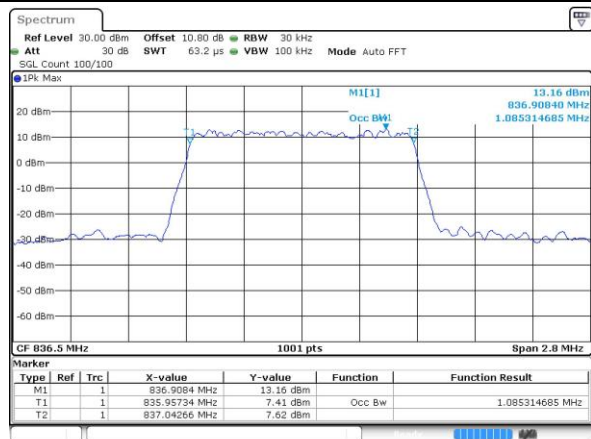
Date: 4 FEB 2019 13:39:17

Middle Channel / 1.4MHz / QPSK



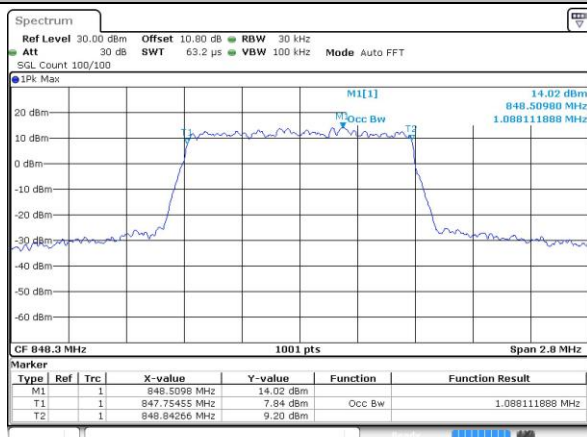
Date: 4 FEB 2019 13:47:52

Middle Channel / 1.4MHz / 16QAM



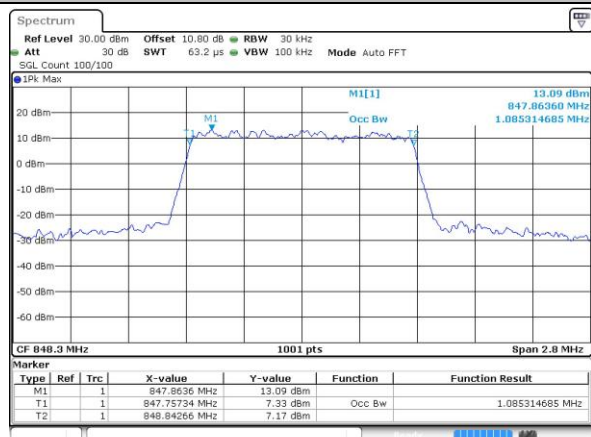
Date: 4 FEB 2019 13:48:04

Highest Channel / 1.4MHz / QPSK



Date: 4 FEB 2019 13:49:59

Highest Channel / 1.4MHz / 16QAM

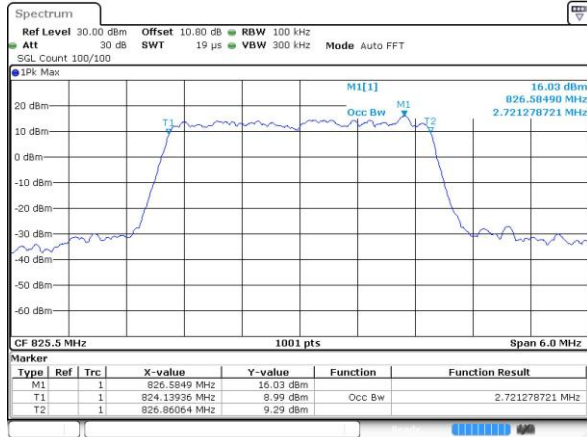


Date: 4 FEB 2019 13:50:10

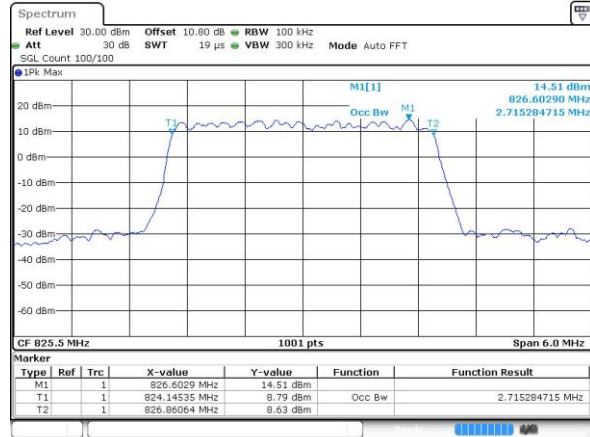


LTE Band 5

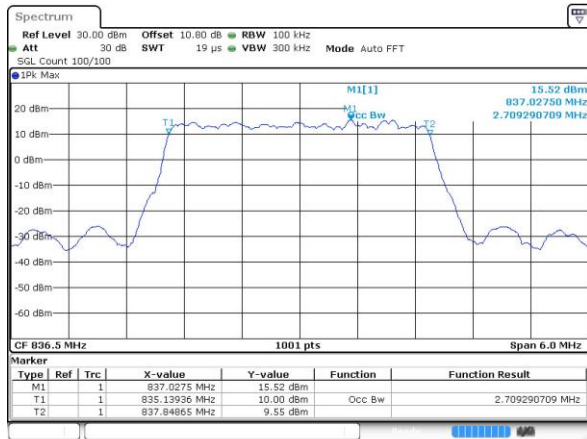
Lowest Channel / 3MHz / QPSK



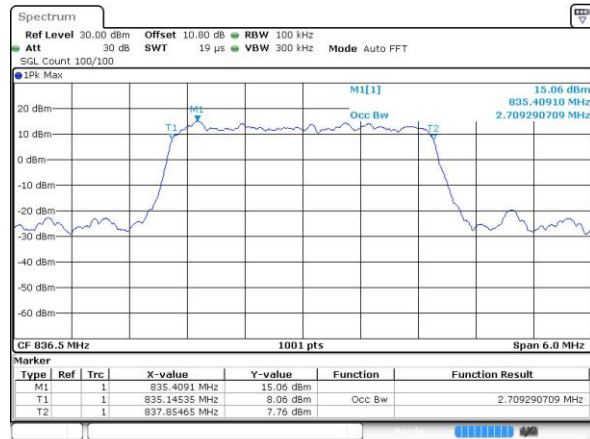
Lowest Channel / 3MHz / 16QAM



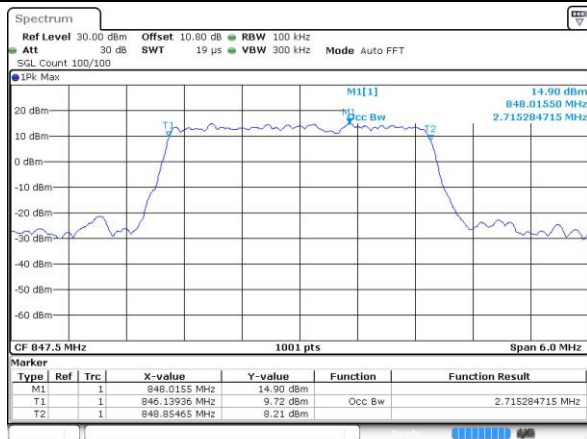
Middle Channel / 3MHz / QPSK



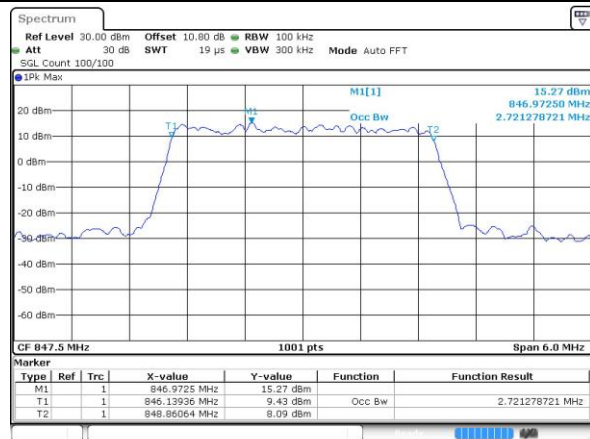
Middle Channel / 3MHz / 16QAM



Highest Channel / 3MHz / QPSK



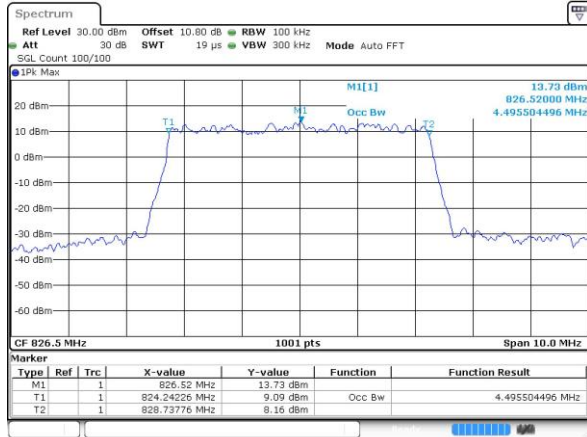
Highest Channel / 3MHz / 16QAM



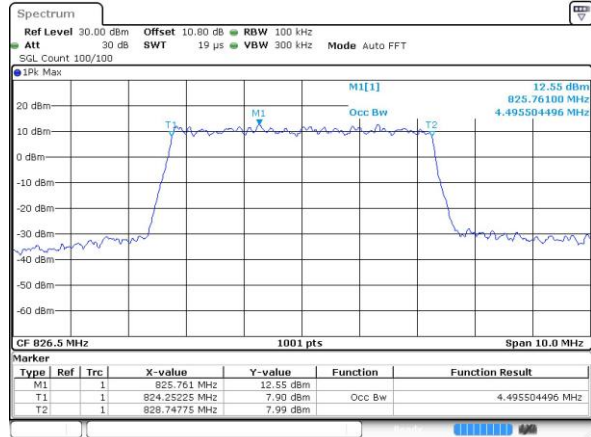


LTE Band 5

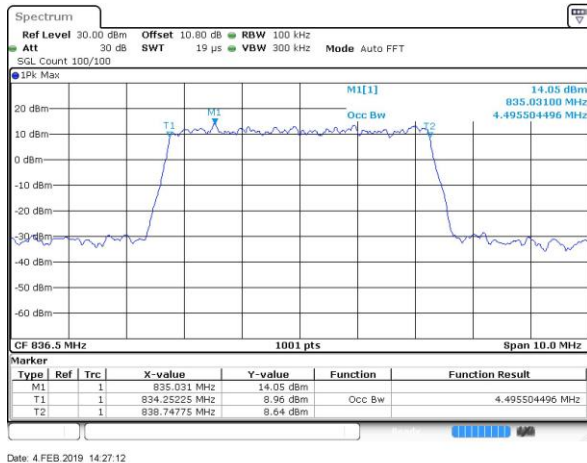
Lowest Channel / 5MHz / QPSK



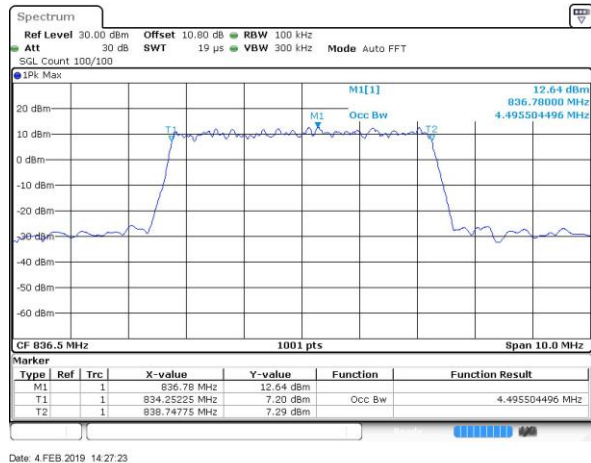
Lowest Channel / 5MHz / 16QAM



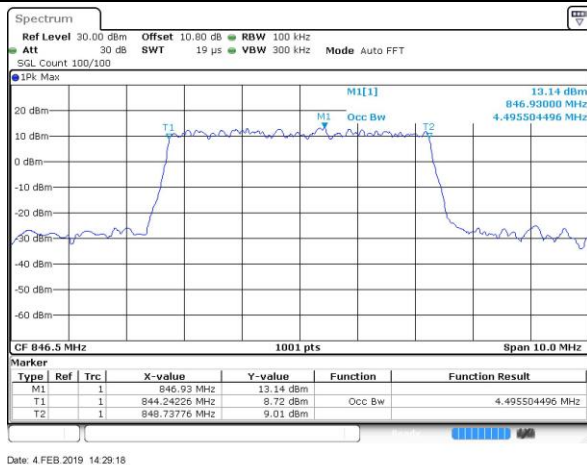
Middle Channel / 5MHz / QPSK



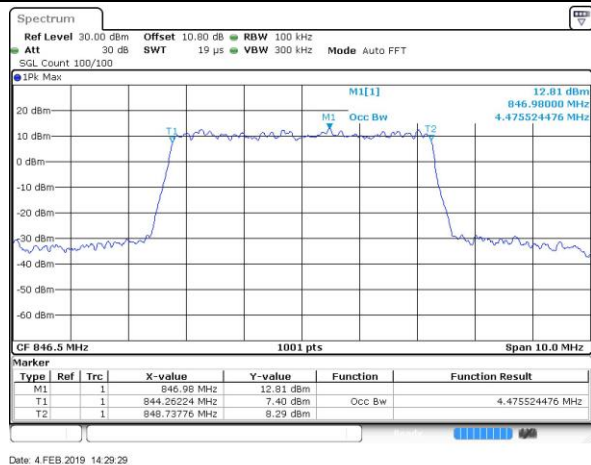
Middle Channel / 5MHz / 16QAM



Highest Channel / 5MHz / QPSK



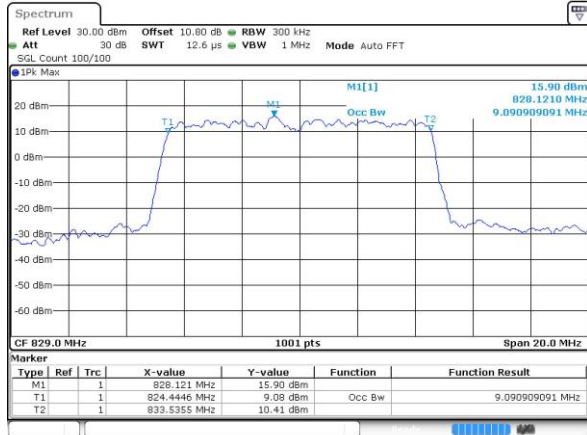
Highest Channel / 5MHz / 16QAM





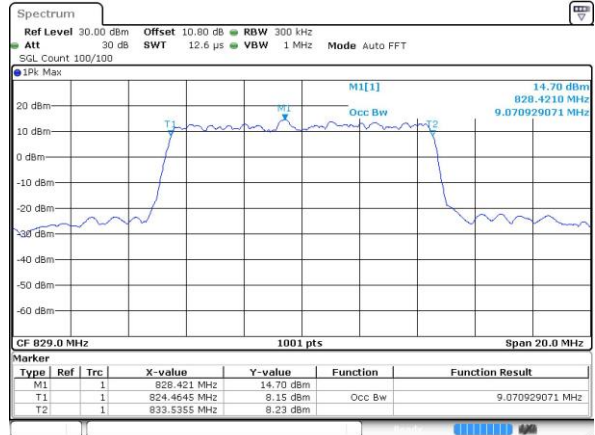
LTE Band 5

Lowest Channel / 10MHz / QPSK



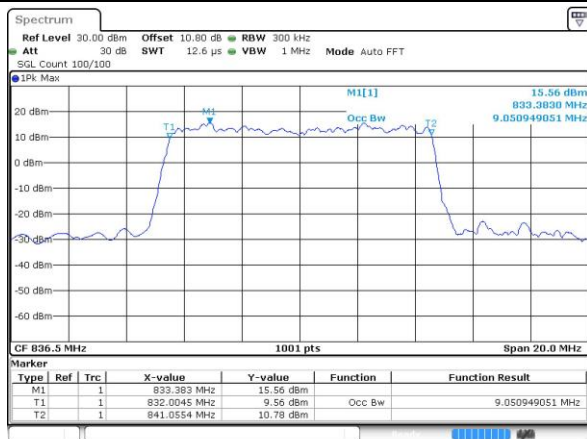
Date: 4 FEB 2019 14:38:05

Lowest Channel / 10MHz / 16QAM



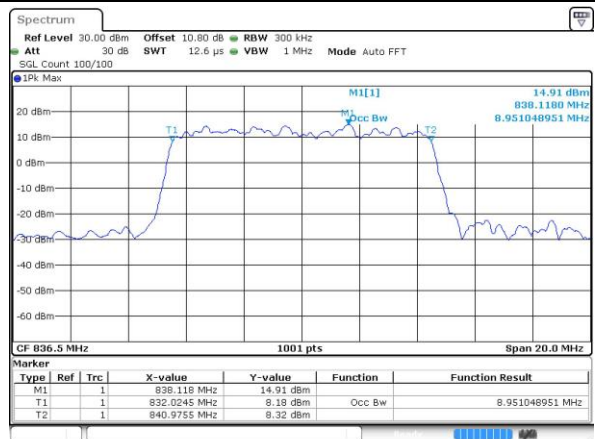
Date: 4 FEB 2019 14:38:16

Middle Channel / 10MHz / QPSK



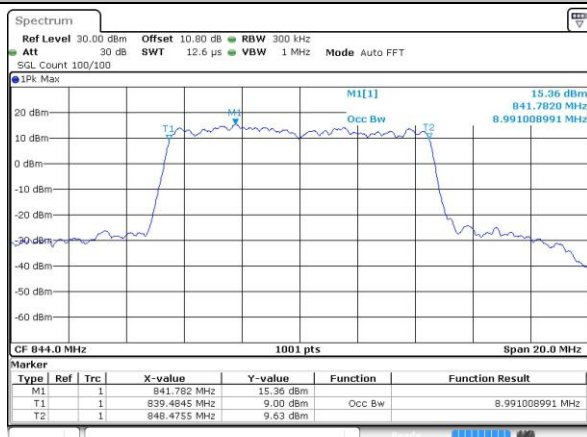
Date: 4 FEB 2019 14:46:52

Middle Channel / 10MHz / 16QAM



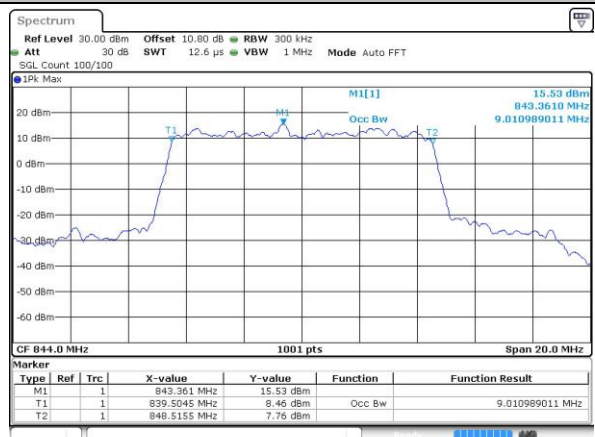
Date: 4 FEB 2019 14:47:03

Highest Channel / 10MHz / QPSK



Date: 4 FEB 2019 14:48:58

Highest Channel / 10MHz / 16QAM



Date: 4 FEB 2019 14:49:09