

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	0.0065	PASS
40	Normal Voltage	0.0031	
30	Normal Voltage	0.0016	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0011	
0	Normal Voltage	0.0027	
-10	Normal Voltage	0.0057	
-20	Normal Voltage	0.0119	
-30	Normal Voltage	0.0008	
20	Maximum Voltage	0.0034	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0078	

Note:

1. Normal Voltage =3.85 V. ; Battery End Point (BEP) =3.65 V. ; Maximum Voltage =4.25 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.



LTE Band 41

Peak-to-Average Ratio

Mode	LTE Band 41 / 20MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	3.68	4.78	4.29	5.74	PASS
Middle CH	3.65	4.78	4.32	5.77	
Highest CH	3.86	4.96	4.46	6.32	
Mode	LTE Band 41 / 20MHz				
Mod.	64QAM				Limit: 13dB
RB Size	1RB	Full RB			Result
Lowest CH	5.01	6.81	-	-	PASS
Middle CH	5.07	6.61	-	-	
Highest CH	5.51	6.87	-	-	

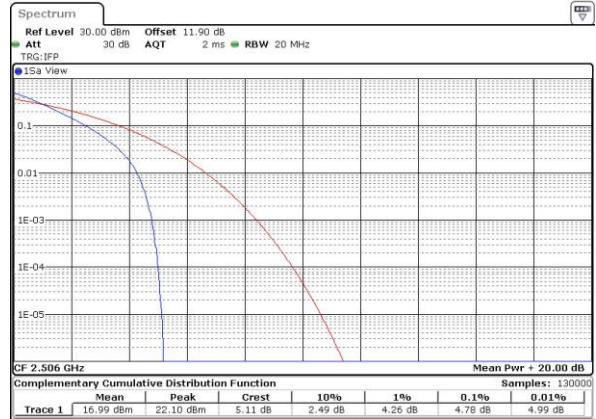


LTE Band 41 / 20MHz / QPSK

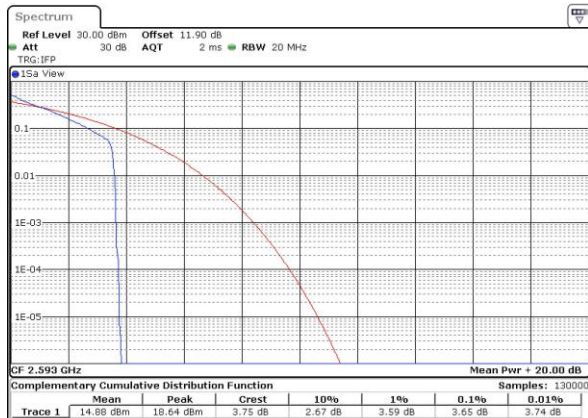
Lowest Channel / 1RB



Lowest Channel / Full RB



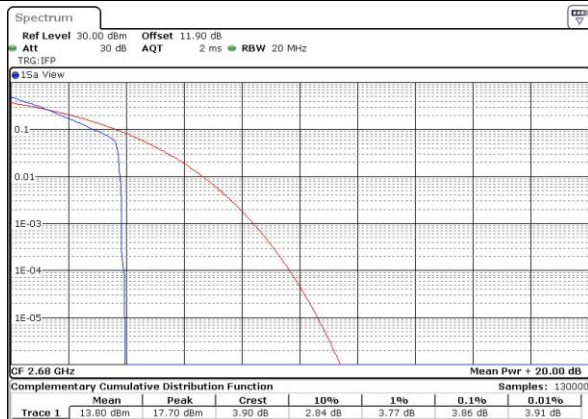
Middle Channel / 1RB



Middle Channel / Full RB



Highest Channel / 1RB



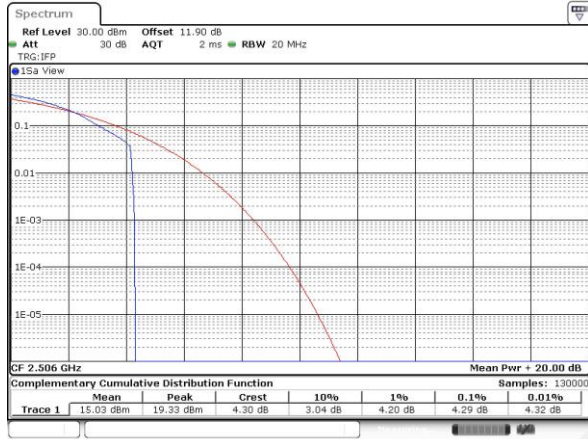
Highest Channel / Full RB



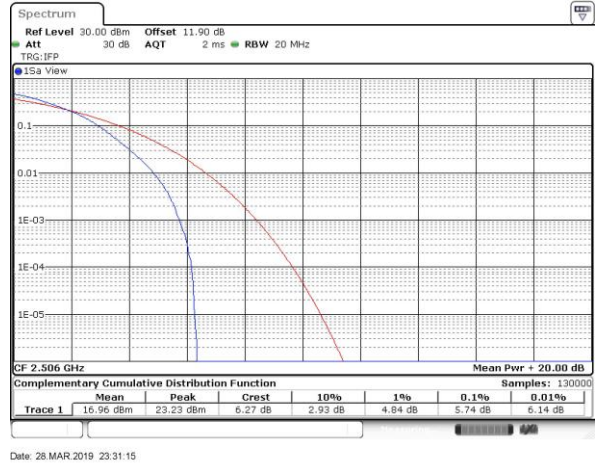


LTE Band 41 / 20MHz / 16QAM

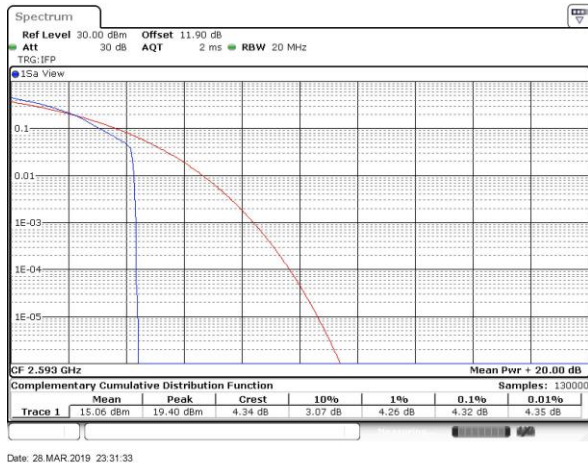
Lowest Channel / 1RB



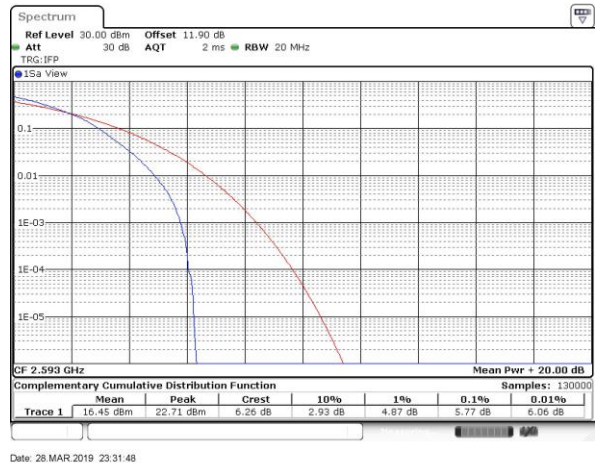
Lowest Channel / Full RB



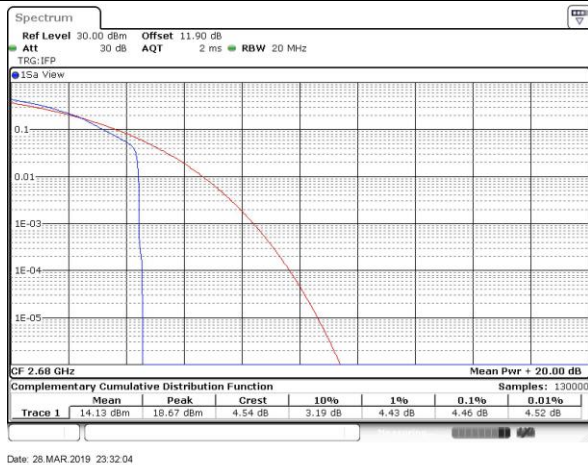
Middle Channel / 1RB



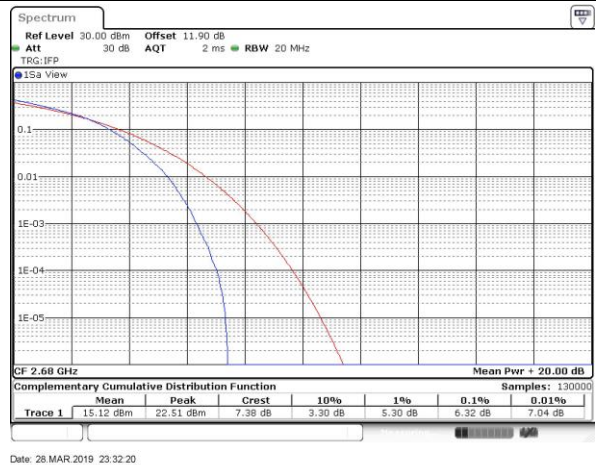
Middle Channel / Full RB



Highest Channel / 1RB



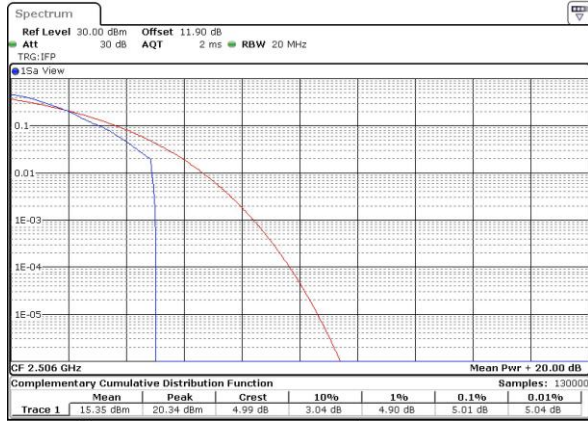
Highest Channel / Full RB



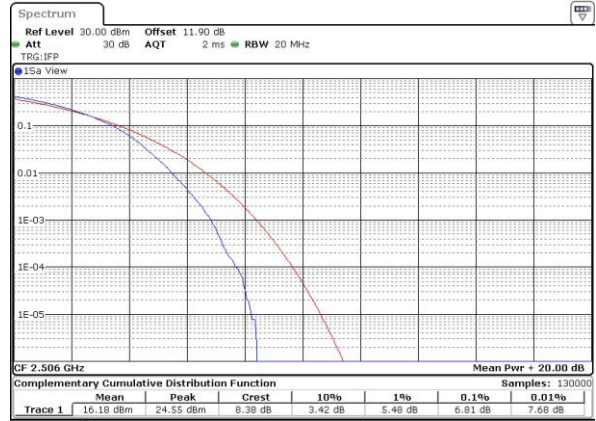


LTE Band 41 / 20MHz / 64QAM

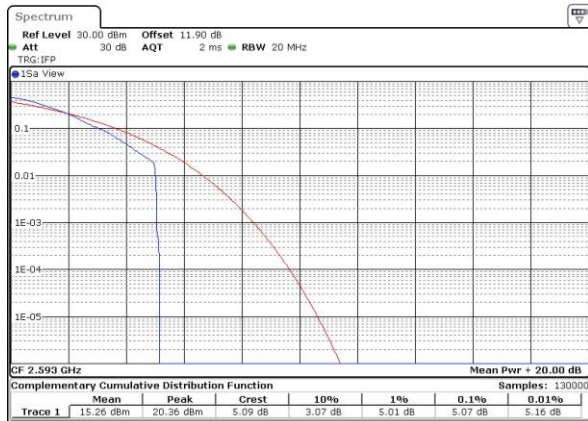
Lowest Channel / 1RB



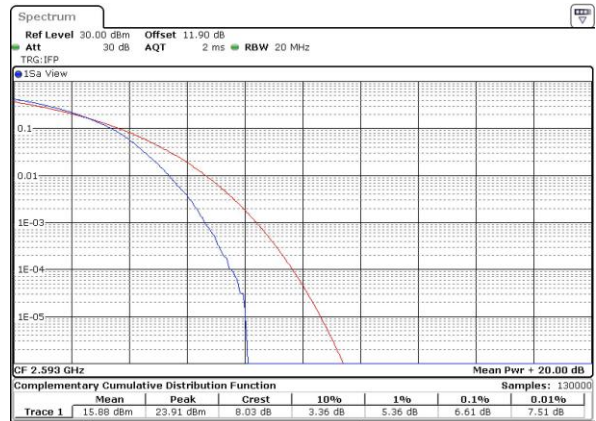
Lowest Channel / Full RB



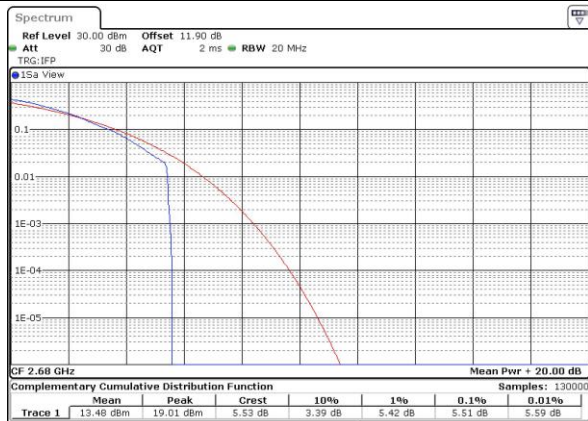
Middle Channel / 1RB



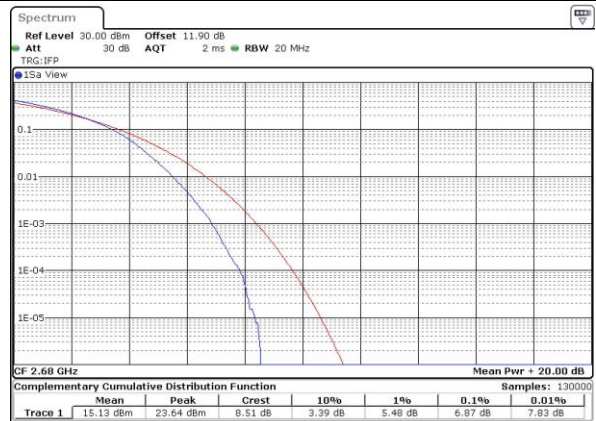
Middle Channel / Full RB



Highest Channel / 1RB



Highest Channel / Full RB



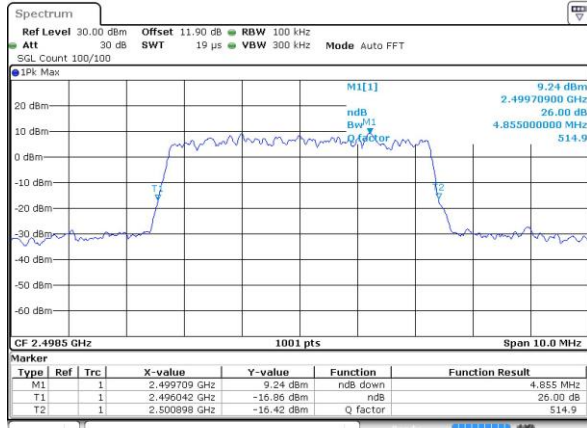
**26dB Bandwidth**

Mode	LTE Band 41 : 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					4.86	4.92	9.73	9.65	14.42	14.30	20.22	20.22
Middle CH					4.92	4.91	9.61	9.63	14.12	14.15	20.26	20.10
Highest CH					4.92	4.90	9.75	9.69	14.36	14.21	20.26	20.02
Mode	LTE Band 41 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	-	-	-	-	4.97	-	9.61	-	14.21	-	20.14	-
Middle CH	-	-	-	-	4.87	-	9.73	-	14.36	-	20.14	-
Highest CH	-	-	-	-	4.82	-	9.65	-	14.33	-	20.14	-



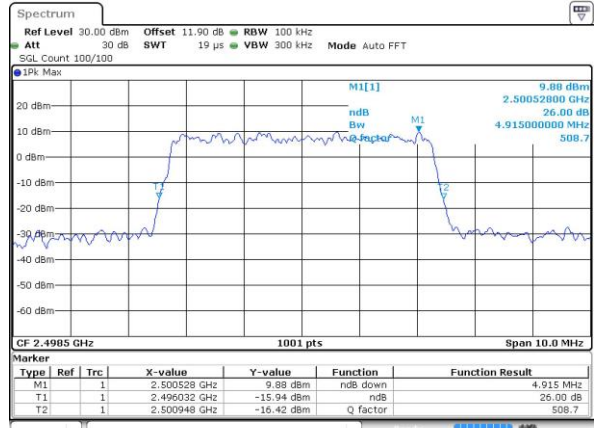
LTE Band 41

Lowest Channel / 5MHz / QPSK



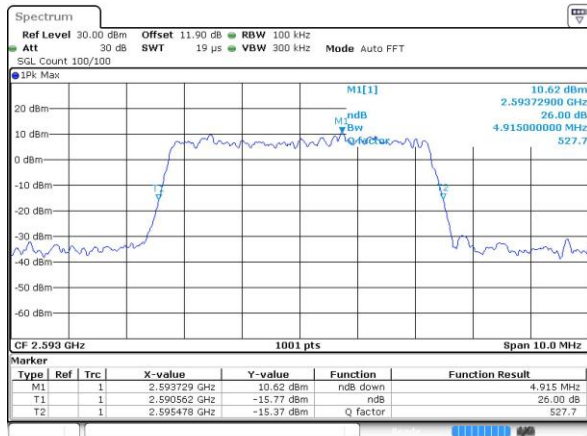
Date: 28 MAR 2019 23:14:31

Lowest Channel / 5MHz / 16QAM



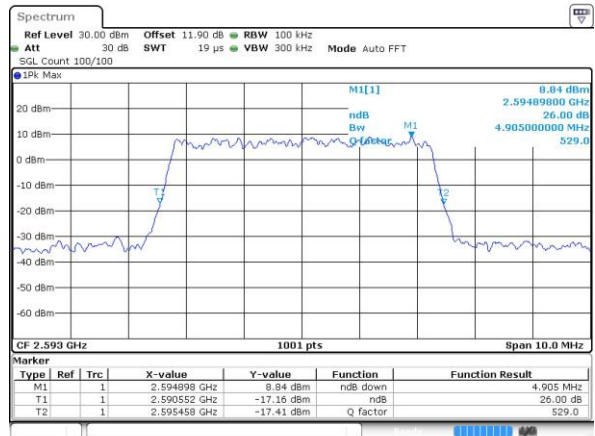
Date: 28 MAR 2019 23:14:43

Middle Channel / 5MHz / QPSK



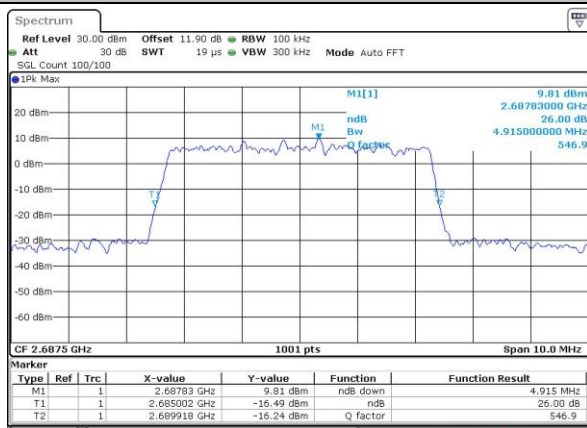
Date: 28 MAR 2019 23:15:18

Middle Channel / 5MHz / 16QAM



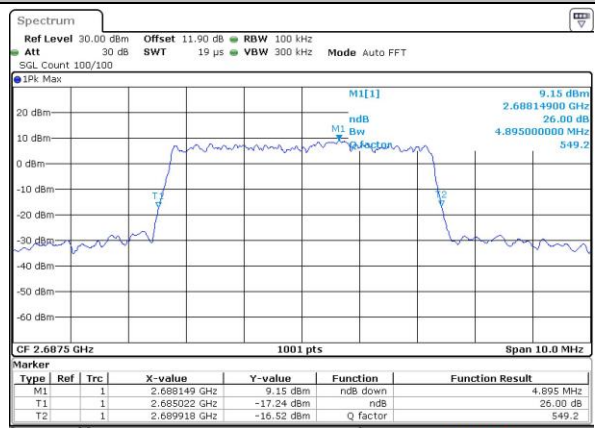
Date: 28 MAR 2019 23:15:30

Highest Channel / 5MHz / QPSK



Date: 28 MAR 2019 23:16:07

Highest Channel / 5MHz / 16QAM

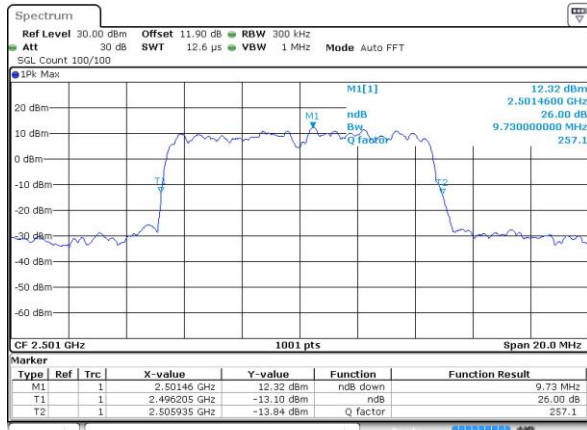


Date: 28 MAR 2019 23:16:19



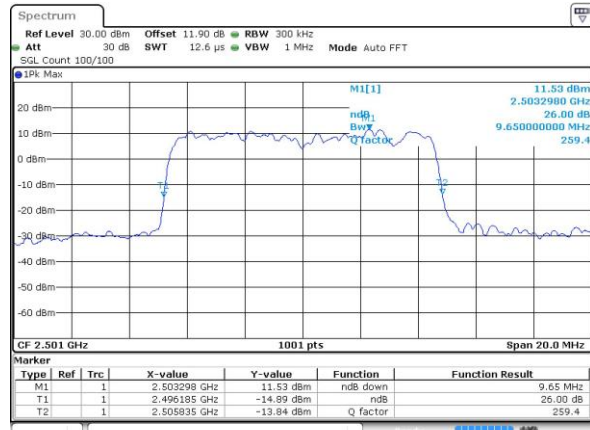
LTE Band 41

Lowest Channel / 10MHz / QPSK



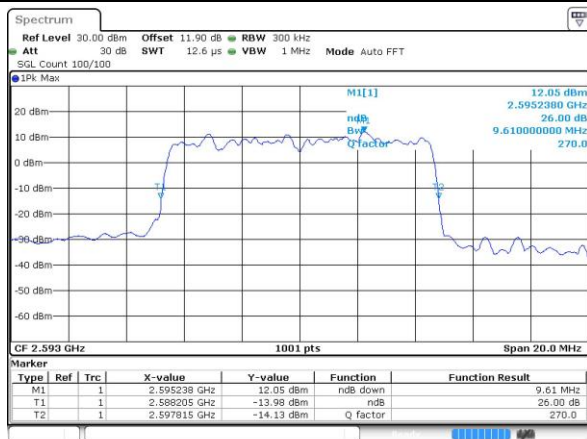
Date: 28 MAR 2019 23:16:56

Lowest Channel / 10MHz / 16QAM



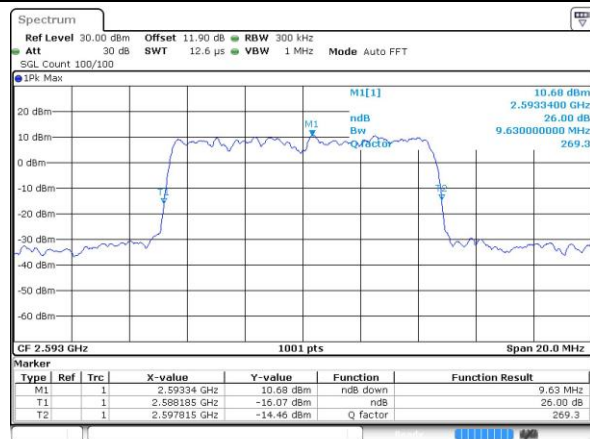
Date: 28 MAR 2019 23:17:09

Middle Channel / 10MHz / QPSK



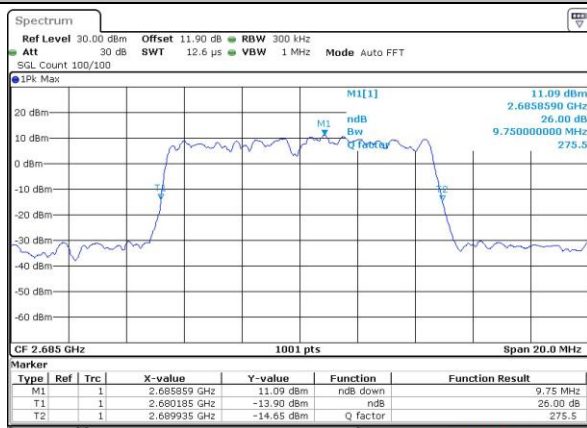
Date: 28 MAR 2019 23:17:44

Middle Channel / 10MHz / 16QAM



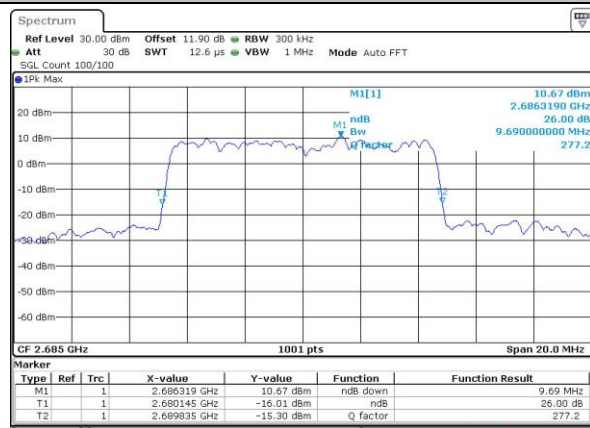
Date: 28 MAR 2019 23:17:56

Highest Channel / 10MHz / QPSK



Date: 28 MAR 2019 23:18:33

Highest Channel / 10MHz / 16QAM

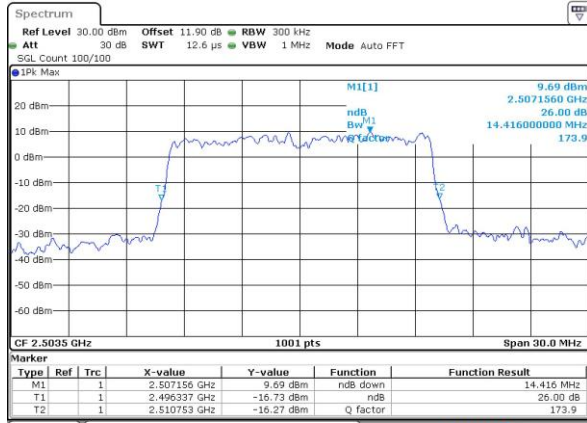


Date: 28 MAR 2019 23:18:45



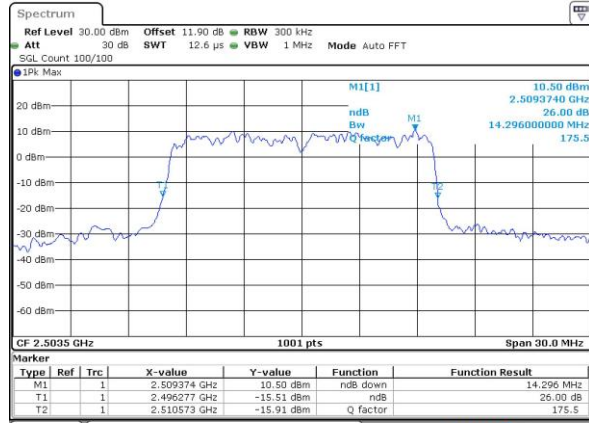
LTE Band 41

Lowest Channel / 15MHz / QPSK



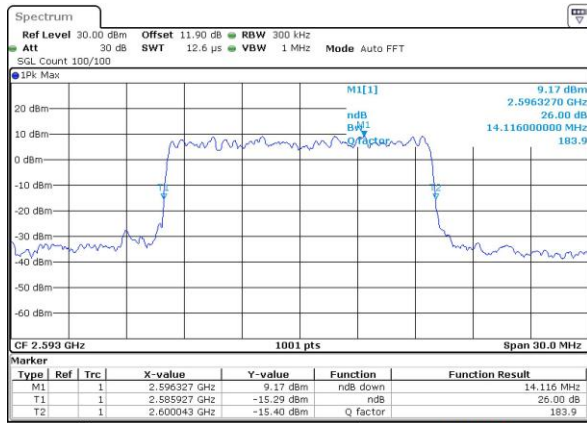
Date: 28 MAR 2019 23:19:22

Lowest Channel / 15MHz / 16QAM



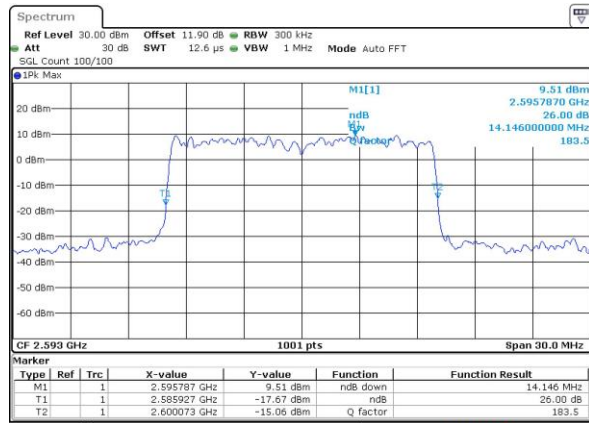
Date: 28 MAR 2019 23:19:34

Middle Channel / 15MHz / QPSK



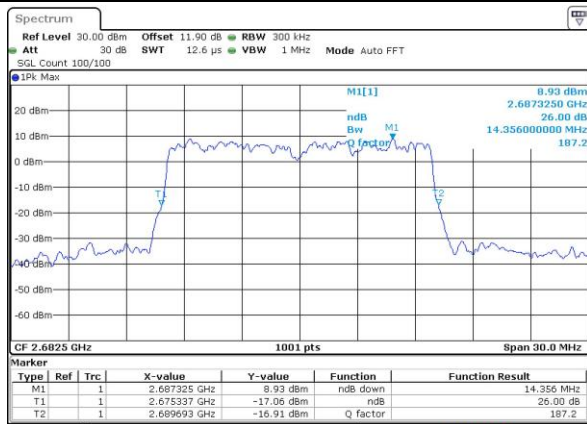
Date: 28 MAR 2019 23:20:10

Middle Channel / 15MHz / 16QAM



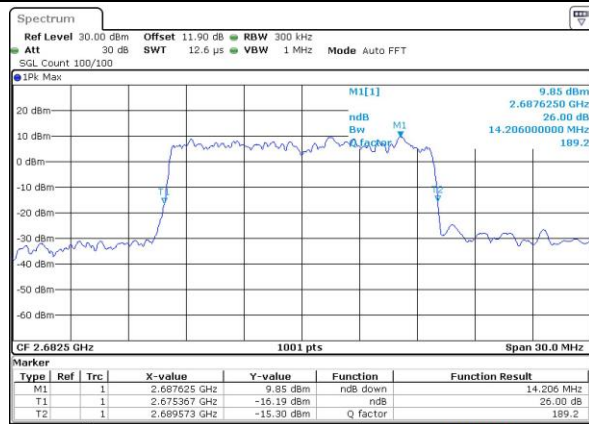
Date: 28 MAR 2019 23:20:22

Highest Channel / 15MHz / QPSK



Date: 28 MAR 2019 23:20:59

Highest Channel / 15MHz / 16QAM

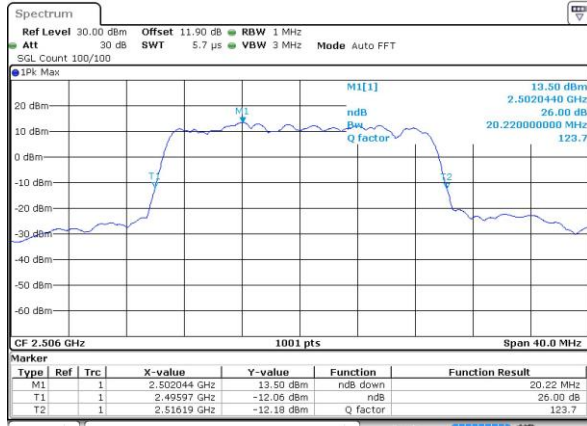


Date: 28 MAR 2019 23:21:11



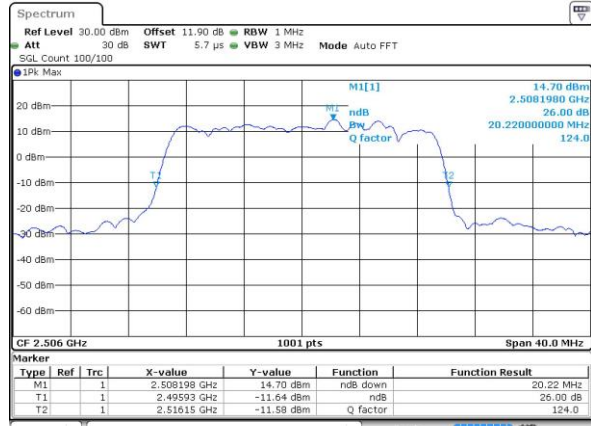
LTE Band 41

Lowest Channel / 20MHz / QPSK



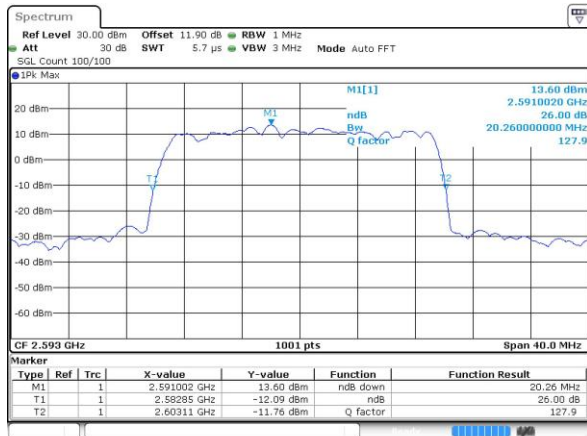
Date: 28 MAR 2019 23:21:48

Lowest Channel / 20MHz / 16QAM



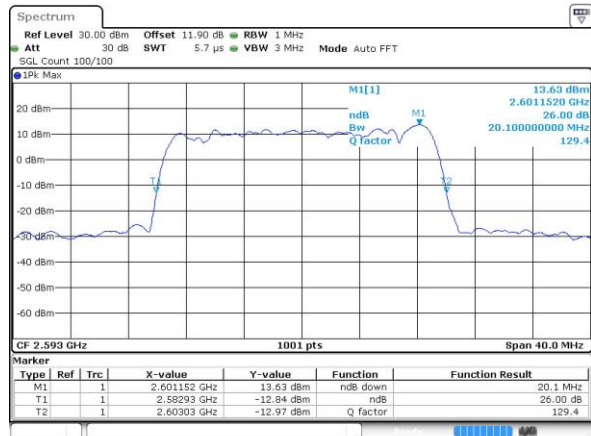
Date: 28 MAR 2019 23:22:00

Middle Channel / 20MHz / QPSK



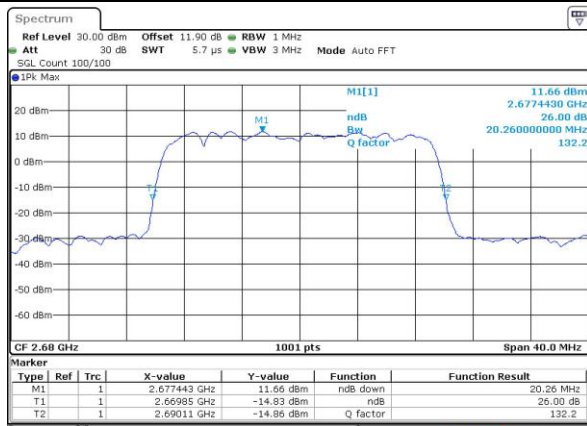
Date: 28 MAR 2019 23:22:36

Middle Channel / 20MHz / 16QAM



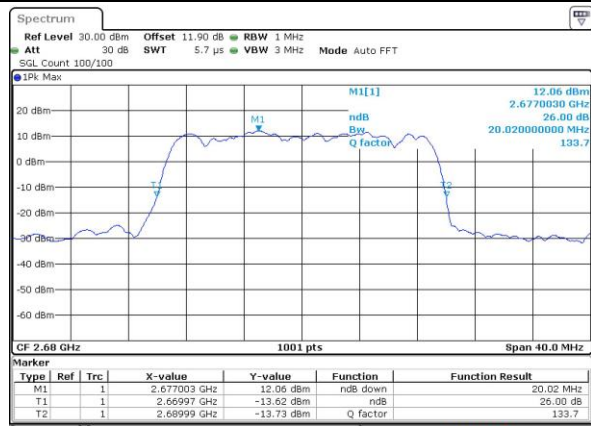
Date: 28 MAR 2019 23:22:48

Highest Channel / 20MHz / QPSK



Date: 28 MAR 2019 23:23:24

Highest Channel / 20MHz / 16QAM

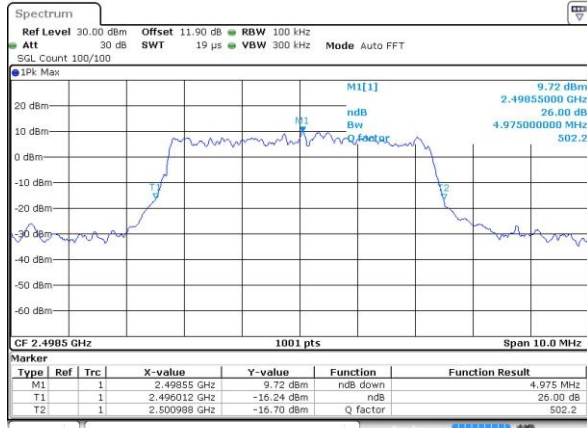


Date: 28 MAR 2019 23:23:37



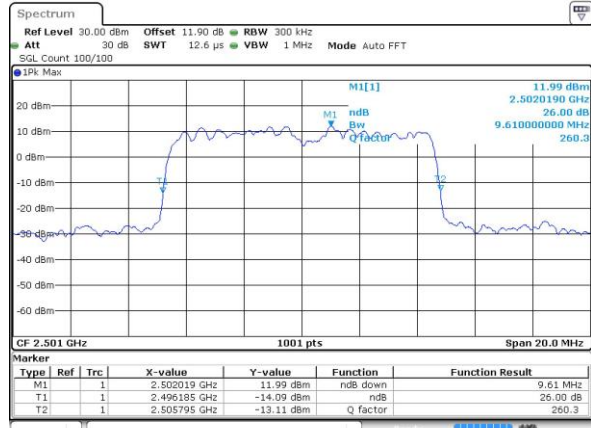
LTE Band 41

Lowest Channel / 5MHz / 64QAM



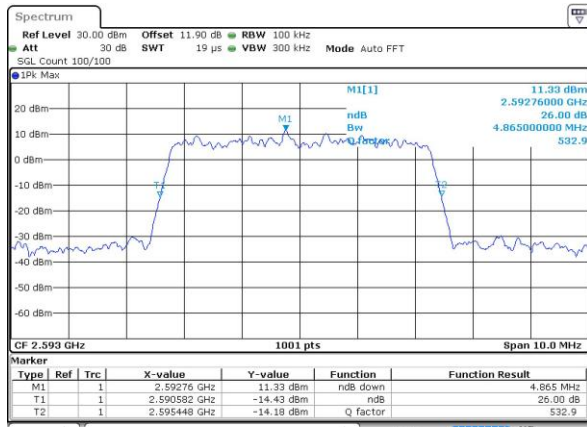
Date: 28 MAR 2019 23:24:02

Lowest Channel / 10MHz / 64QAM



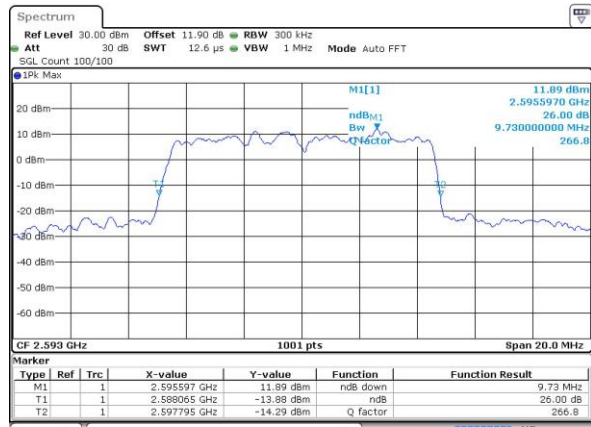
Date: 28 MAR 2019 23:25:14

Middle Channel / 5MHz / 64QAM



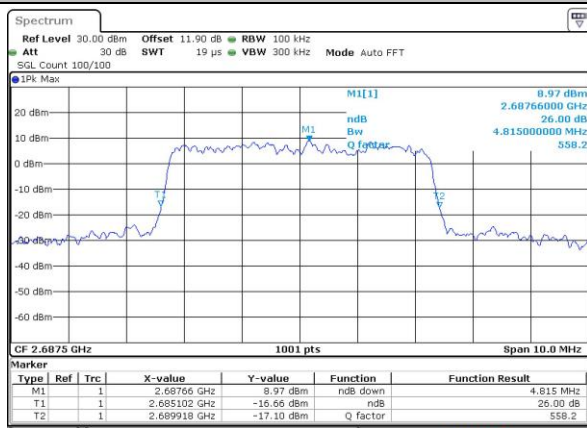
Date: 28 MAR 2019 23:24:25

Middle Channel / 10MHz / 64QAM



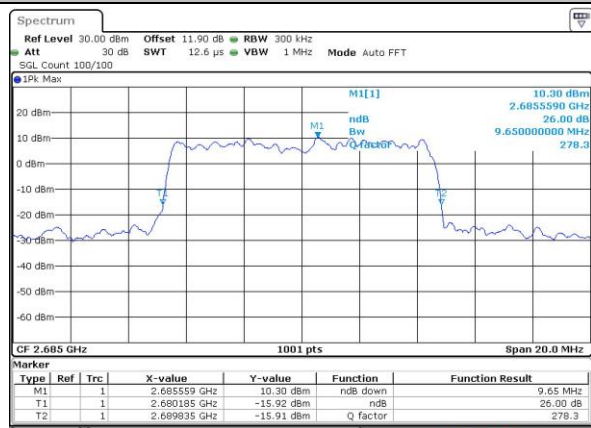
Date: 28 MAR 2019 23:25:38

Highest Channel / 5MHz / 64QAM



Date: 28 MAR 2019 23:24:49

Highest Channel / 10MHz / 64QAM

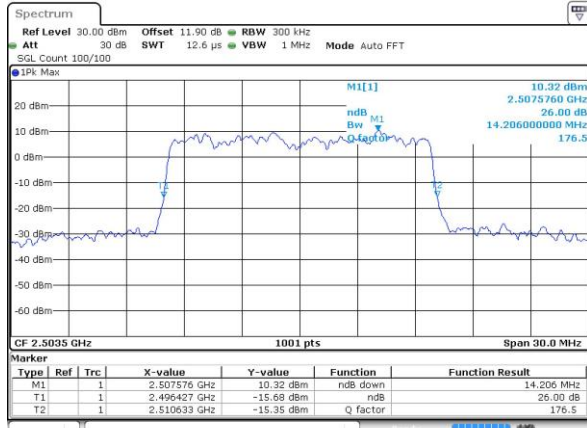


Date: 28 MAR 2019 23:26:02



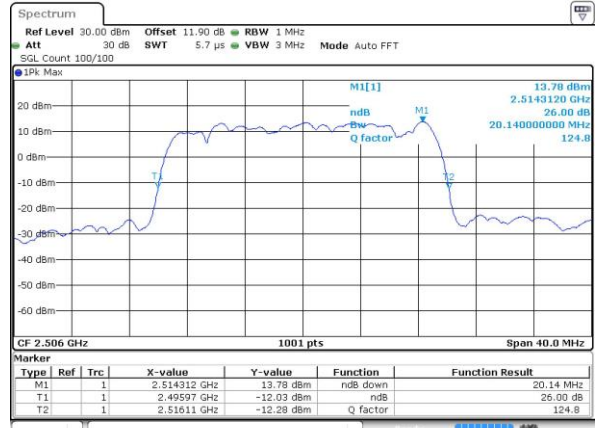
LTE Band 41

Lowest Channel / 15MHz / 64QAM



Date: 28 MAR 2019 23:26:27

Lowest Channel / 20MHz / 64QAM



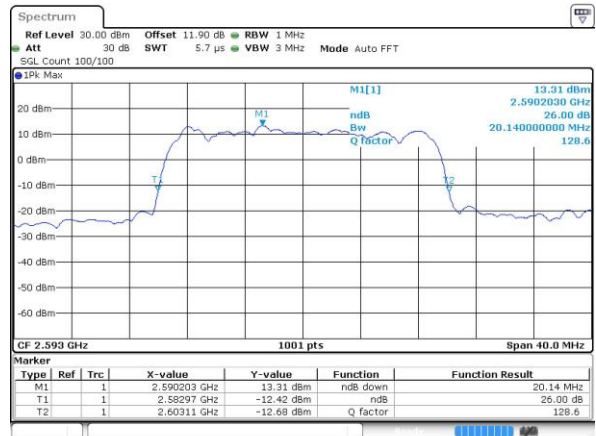
Date: 28 MAR 2019 23:27:40

Middle Channel / 15MHz / 64QAM



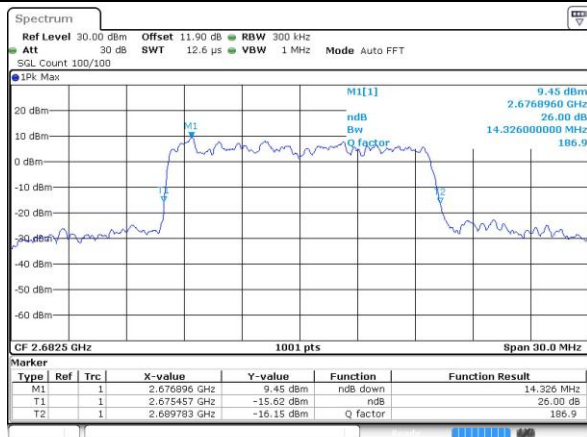
Date: 28 MAR 2019 23:26:51

Middle Channel / 20MHz / 64QAM



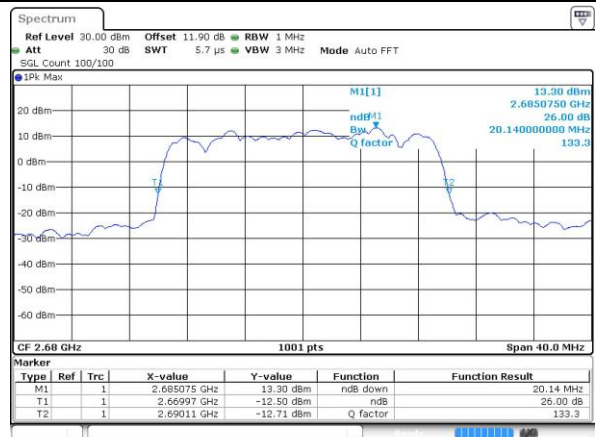
Date: 28 MAR 2019 23:28:04

Highest Channel / 15MHz / 64QAM



Date: 28 MAR 2019 23:27:15

Highest Channel / 20MHz / 64QAM



Date: 28 MAR 2019 23:28:28

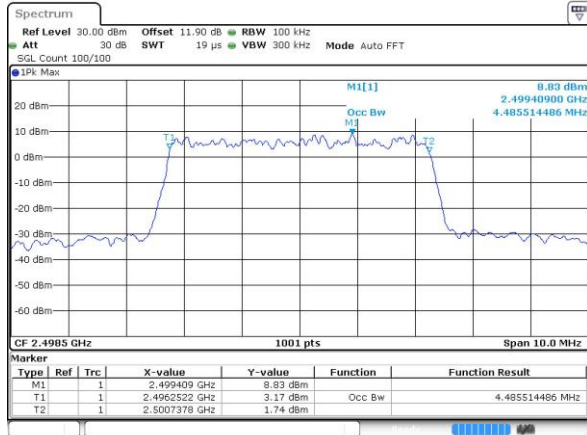
**Occupied Bandwidth**

Mode	LTE Band 41 : 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					4.49	4.50	9.07	8.97	13.40	13.52	17.86	17.86
Middle CH					4.49	4.49	9.03	8.99	13.46	13.46	17.78	17.94
Highest CH					4.49	4.46	8.99	8.99	13.46	13.49	17.86	17.86
Mode	LTE Band 41 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	-	-	-	-	4.49	-	9.07	-	13.37	-	17.78	-
Middle CH	-	-	-	-	4.50	-	9.03	-	13.43	-	17.86	-
Highest CH	-	-	-	-	4.50	-	9.03	-	13.43	-	17.86	-

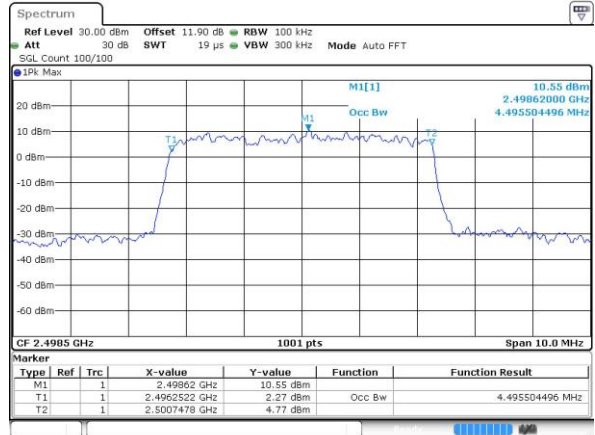


LTE Band 41

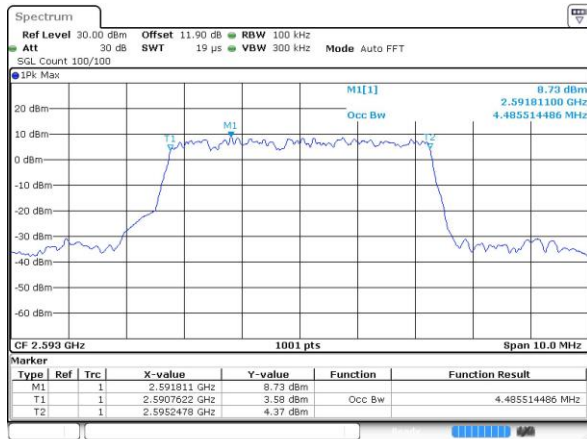
Lowest Channel / 5MHz / QPSK



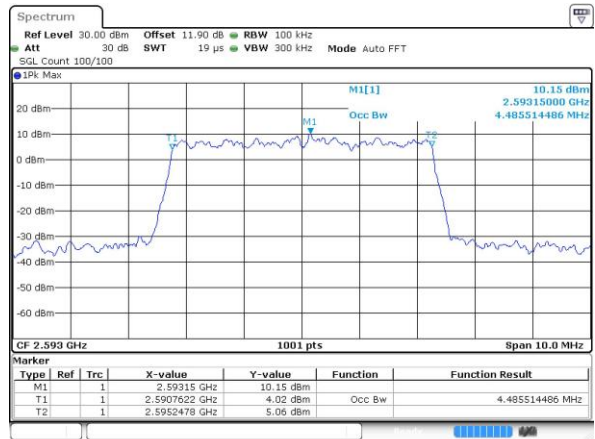
Lowest Channel / 5MHz / 16QAM



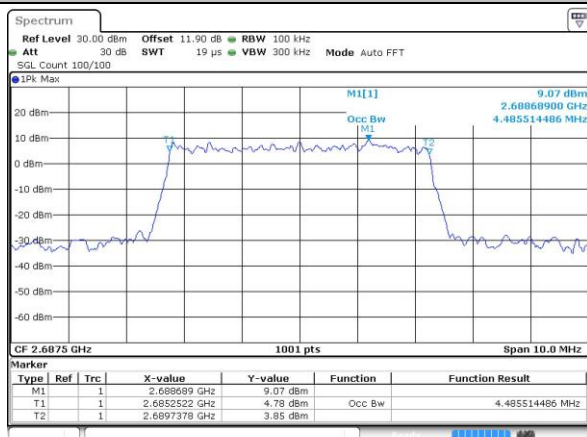
Middle Channel / 5MHz / QPSK



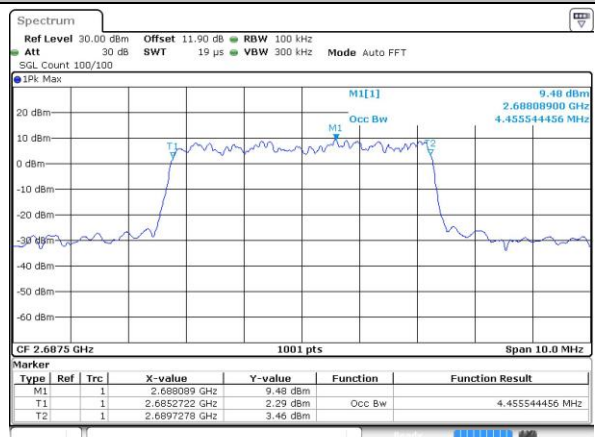
Middle Channel / 5MHz / 16QAM



Highest Channel / 5MHz / QPSK



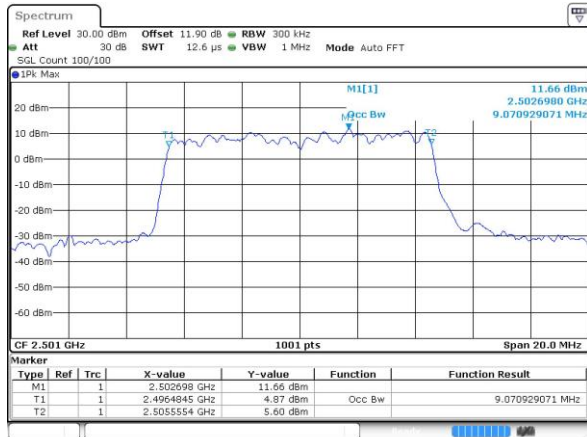
Highest Channel / 5MHz / 16QAM



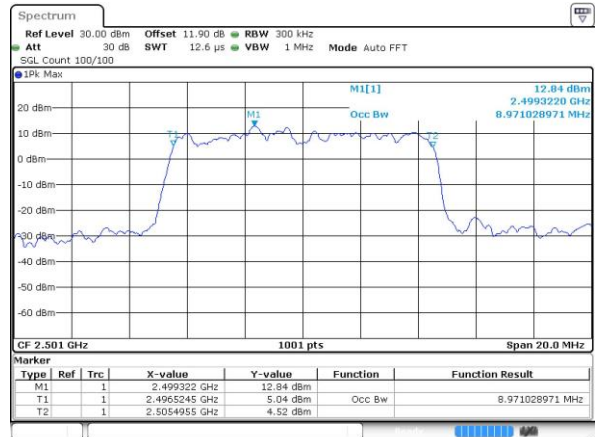


LTE Band 41

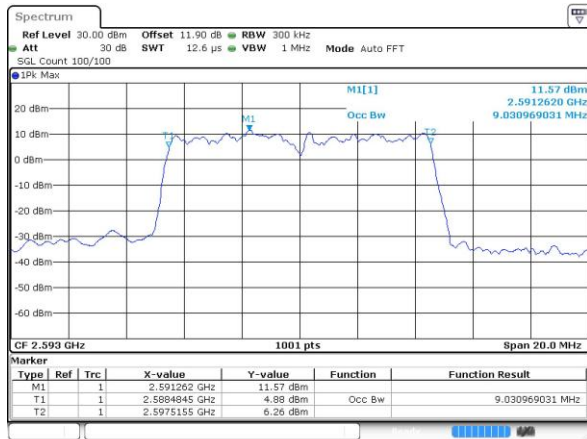
Lowest Channel / 10MHz / QPSK



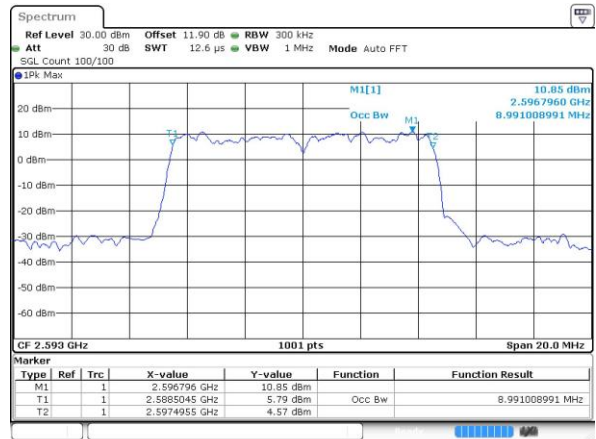
Lowest Channel / 10MHz / 16QAM



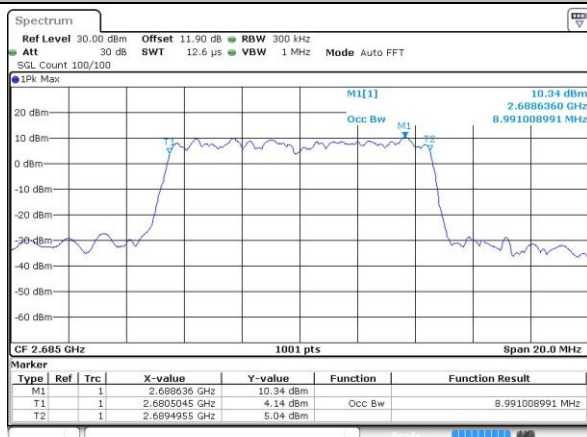
Middle Channel / 10MHz / QPSK



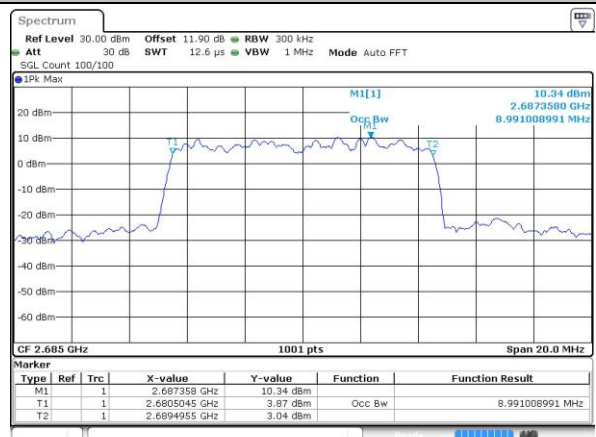
Middle Channel / 10MHz / 16QAM



Highest Channel / 10MHz / QPSK



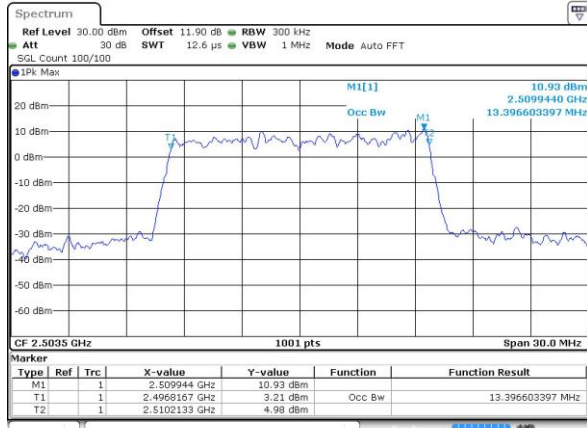
Highest Channel / 10MHz / 16QAM



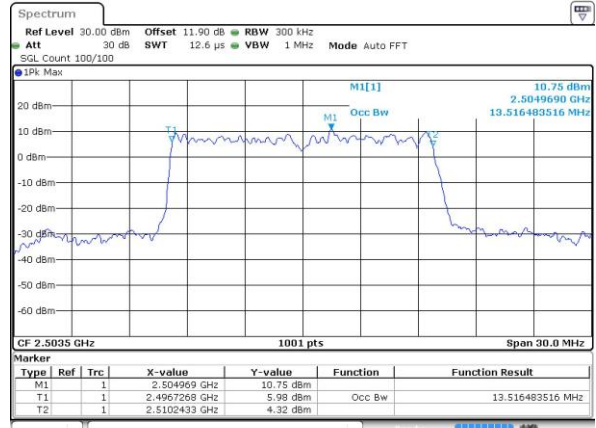


LTE Band 41

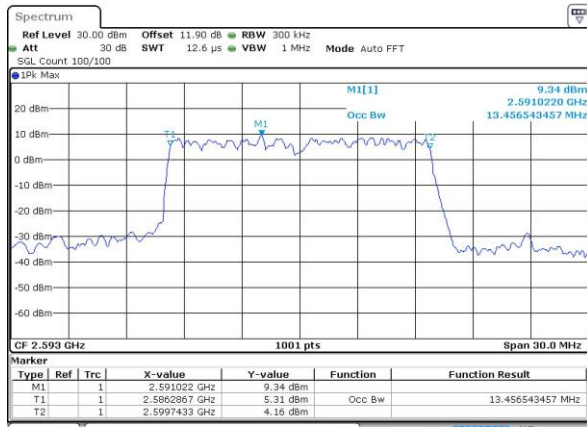
Lowest Channel / 15MHz / QPSK



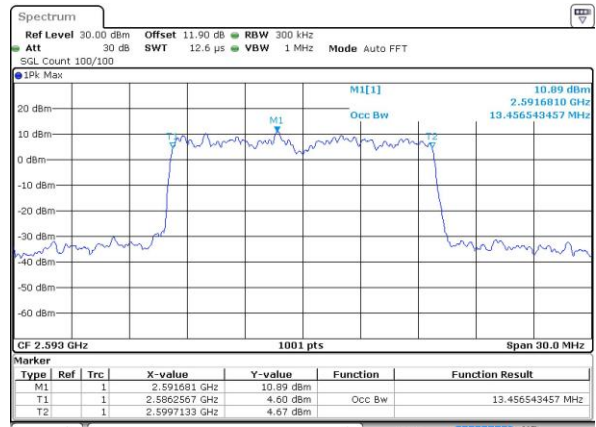
Lowest Channel / 15MHz / 16QAM



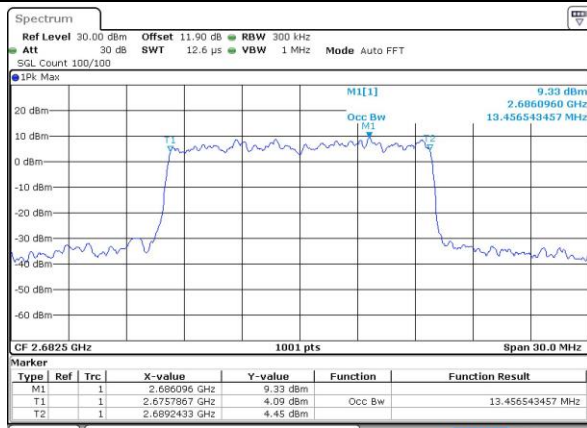
Middle Channel / 15MHz / QPSK



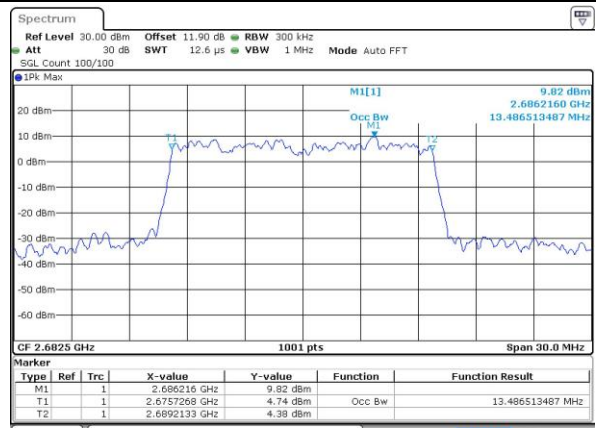
Middle Channel / 15MHz / 16QAM



Highest Channel / 15MHz / QPSK



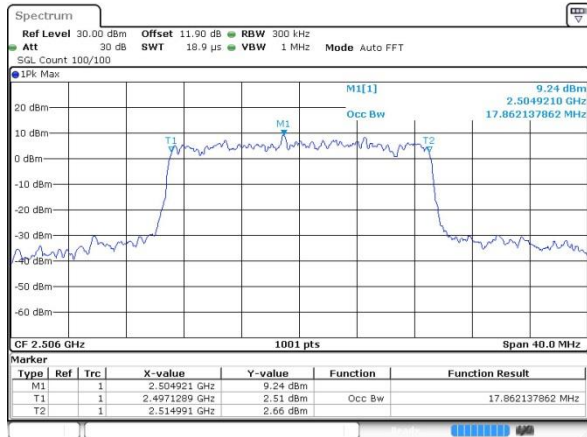
Highest Channel / 15MHz / 16QAM





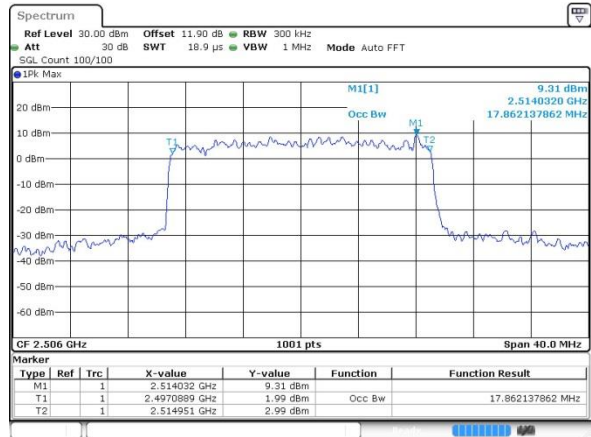
LTE Band 41

Lowest Channel / 20MHz / QPSK



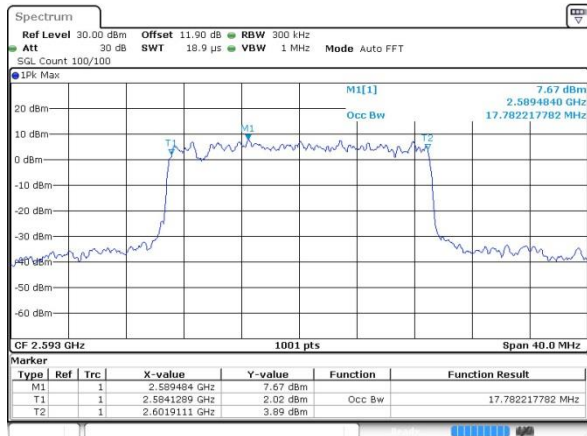
Date: 2 APR 2019 15:54:21

Lowest Channel / 20MHz / 16QAM



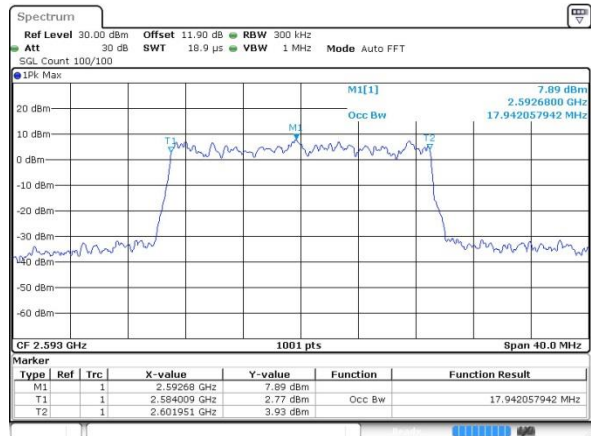
Date: 2 APR 2019 15:54:34

Middle Channel / 20MHz / QPSK



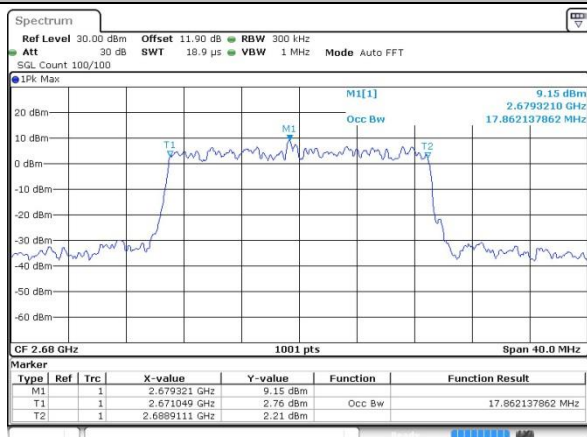
Date: 2 APR 2019 15:54:46

Middle Channel / 20MHz / 16QAM



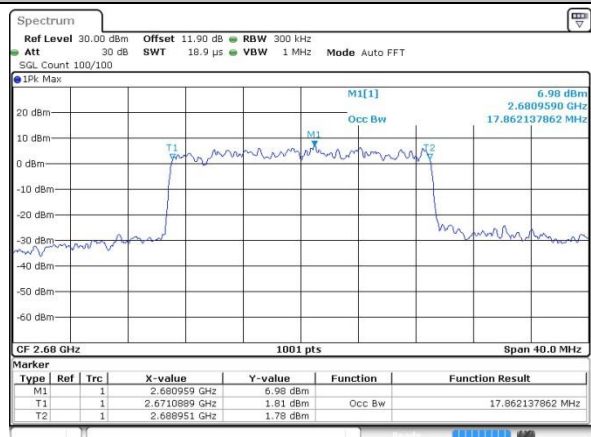
Date: 2 APR 2019 15:54:58

Highest Channel / 20MHz / QPSK



Date: 2 APR 2019 15:55:11

Highest Channel / 20MHz / 16QAM

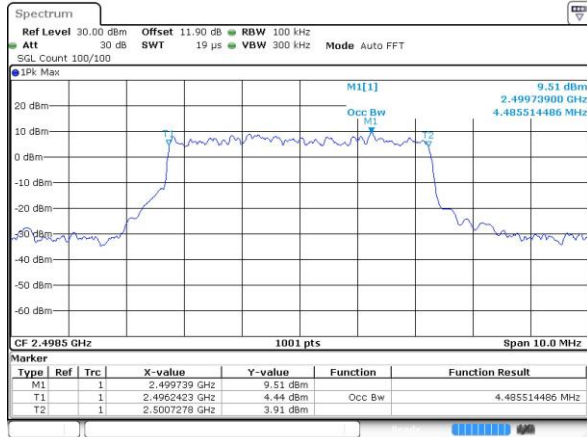


Date: 2 APR 2019 15:55:23

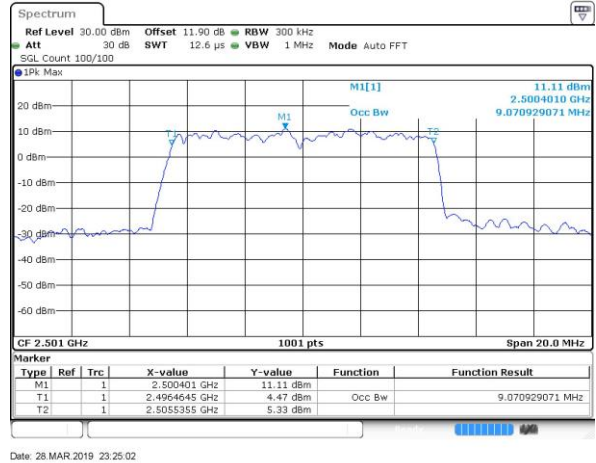


LTE Band 41

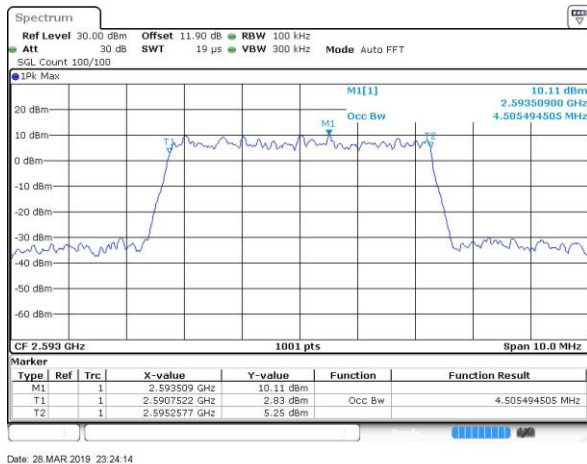
Lowest Channel / 5MHz / 64QAM



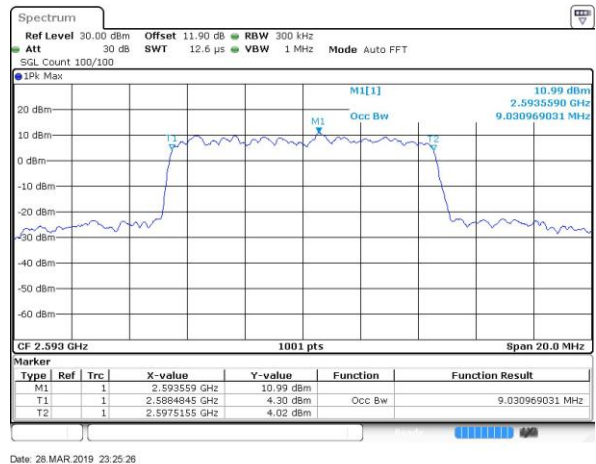
Lowest Channel / 10MHz / 64QAM



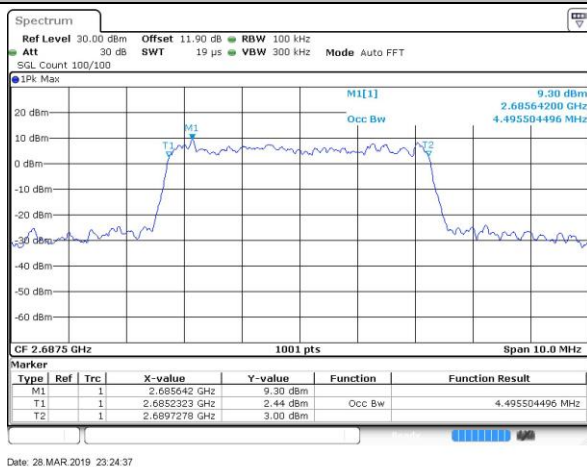
Middle Channel / 5MHz / 64QAM



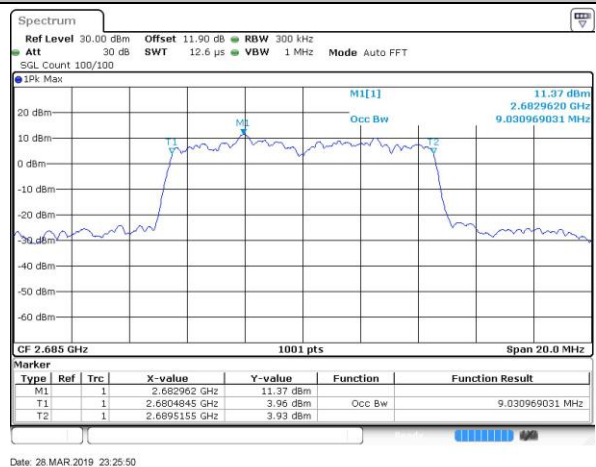
Middle Channel / 10MHz / 64QAM



Highest Channel / 5MHz / 64QAM



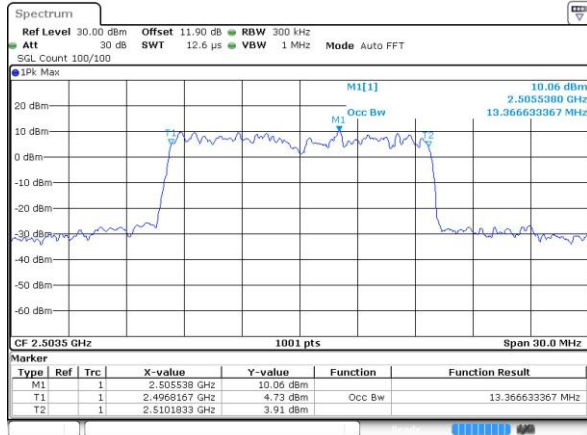
Highest Channel / 10MHz / 64QAM





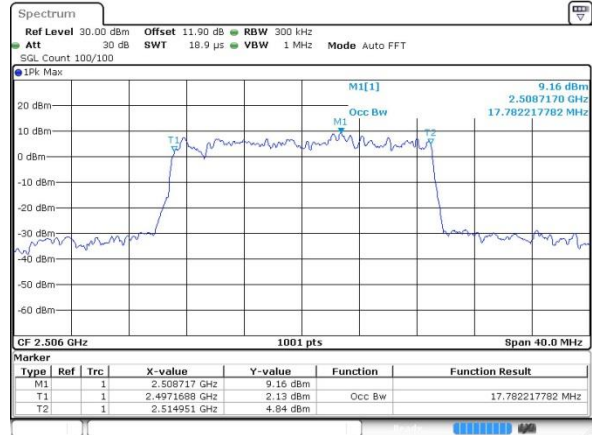
LTE Band 41

Lowest Channel / 15MHz / 64QAM



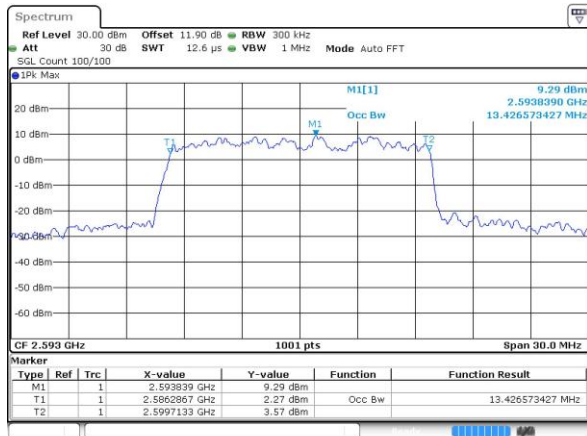
Date: 28 MAR 2019 23:26:15

Lowest Channel / 20MHz / 64QAM



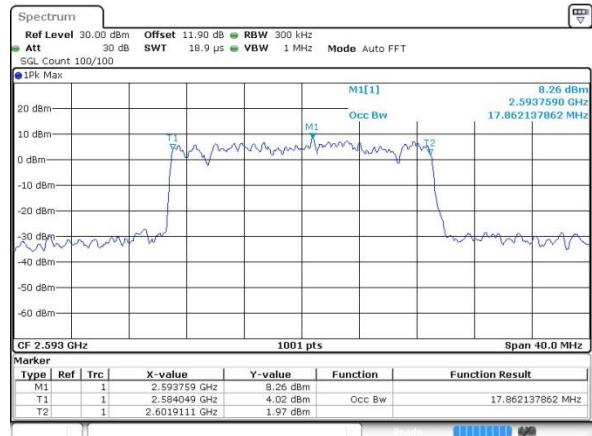
Date: 2 APR 2019 15:55:36

Middle Channel / 15MHz / 64QAM



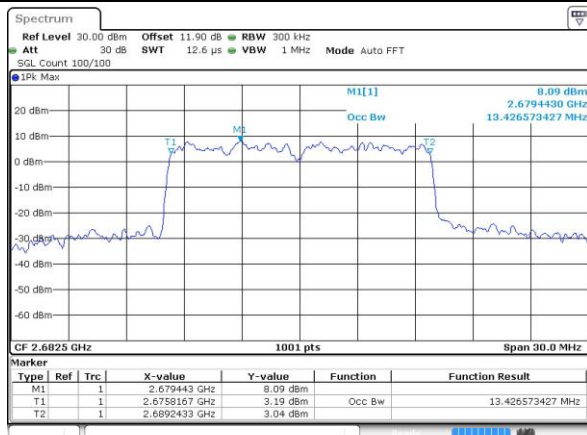
Date: 28 MAR 2019 23:26:39

Middle Channel / 20MHz / 64QAM



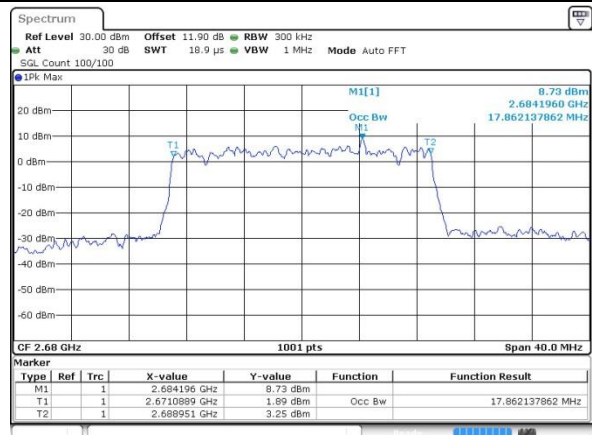
Date: 2 APR 2019 15:55:48

Highest Channel / 15MHz / 64QAM



Date: 28 MAR 2019 23:27:03

Highest Channel / 20MHz / 64QAM



Date: 2 APR 2019 15:55:01