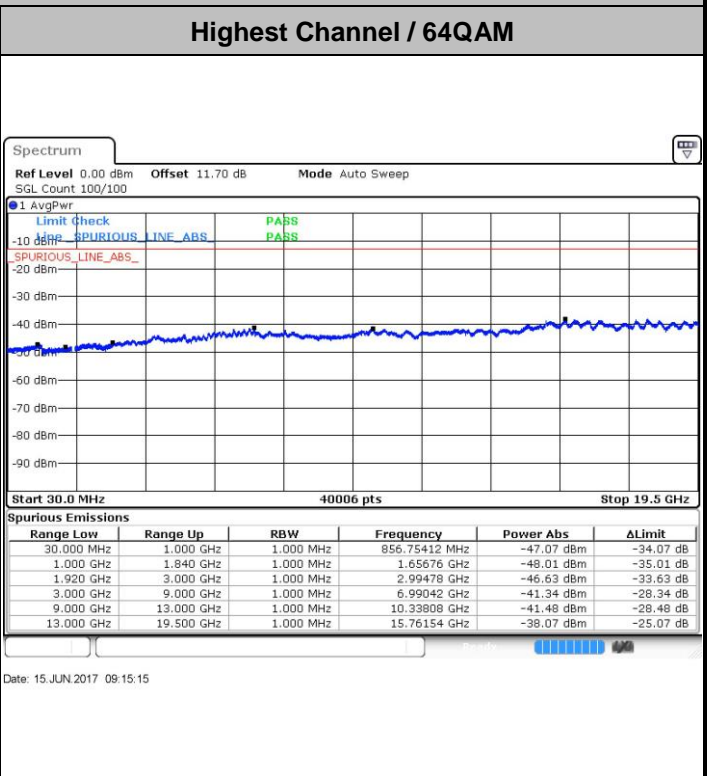
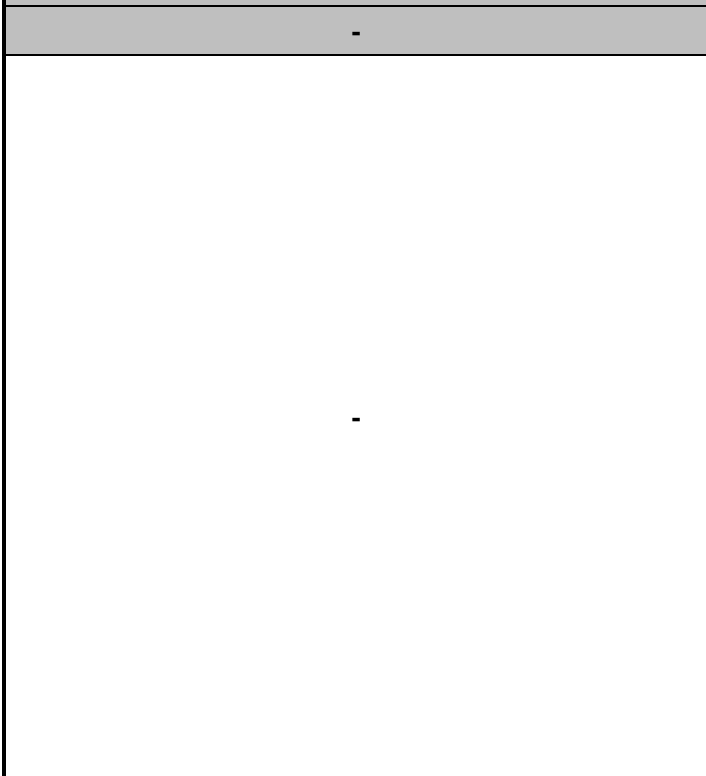
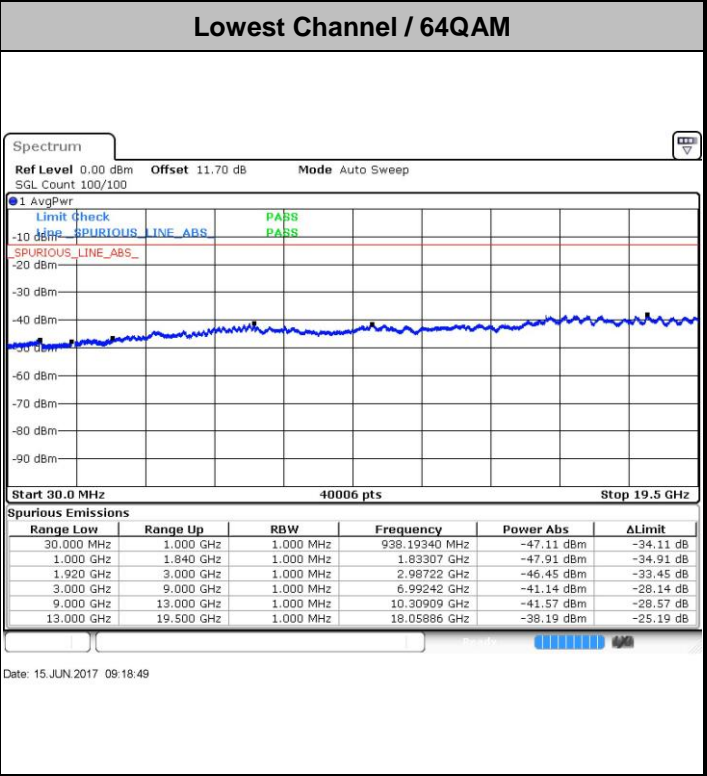
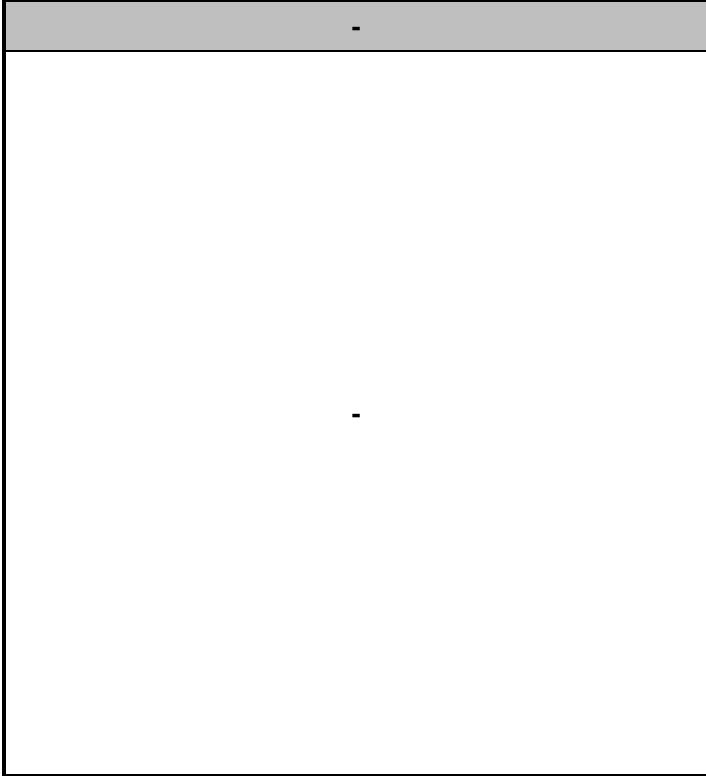




LTE Band 2 / 5MHz



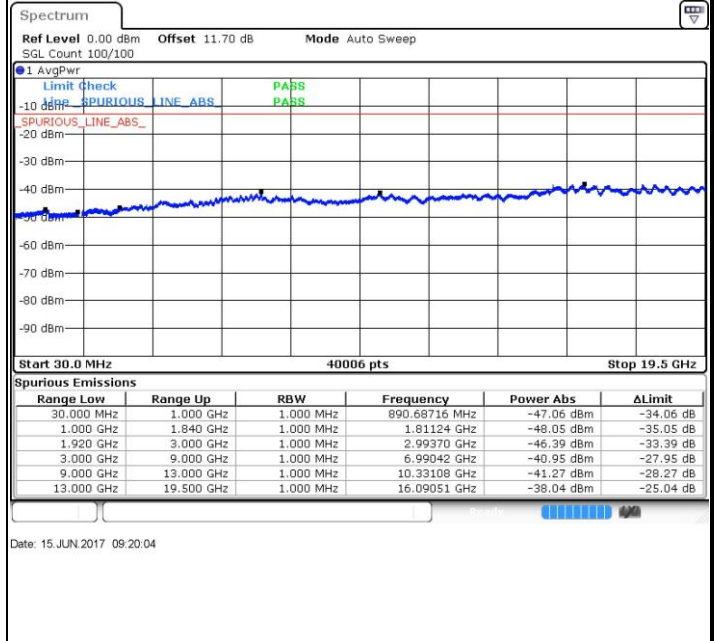
LTE Band 2 / 10MHz



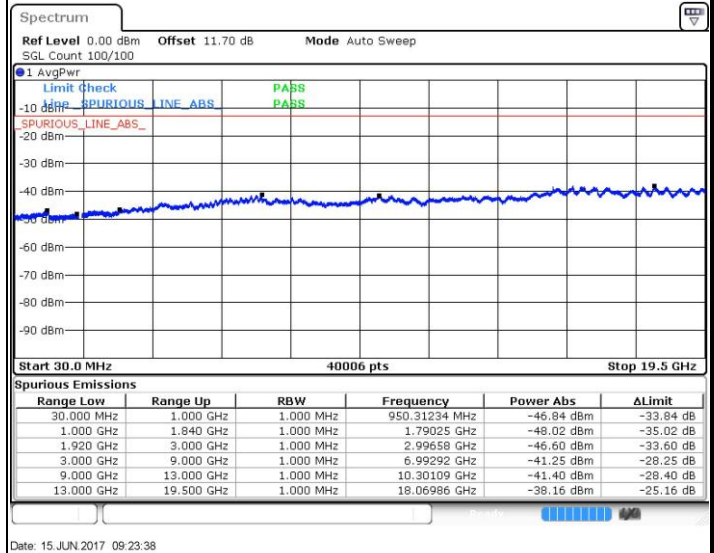


LTE Band 2 / 10MHz

Middle Channel / 64QAM



Highest Channel / 64QAM

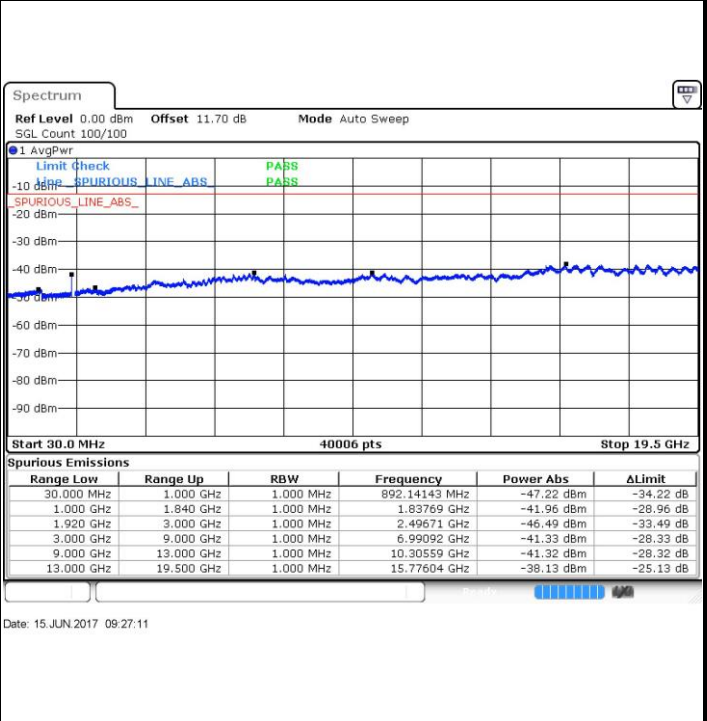




LTE Band 2 / 15MHz

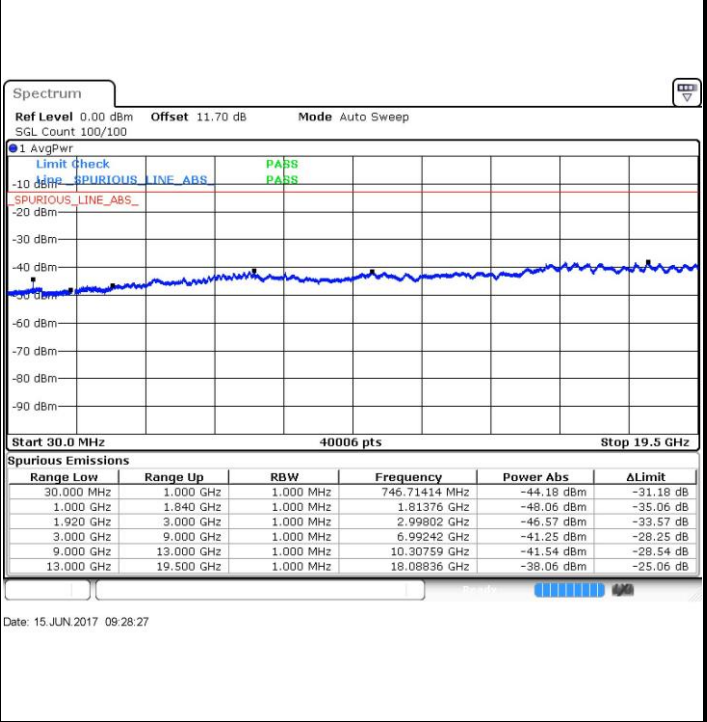
-

Lowest Channel / 64QAM



-

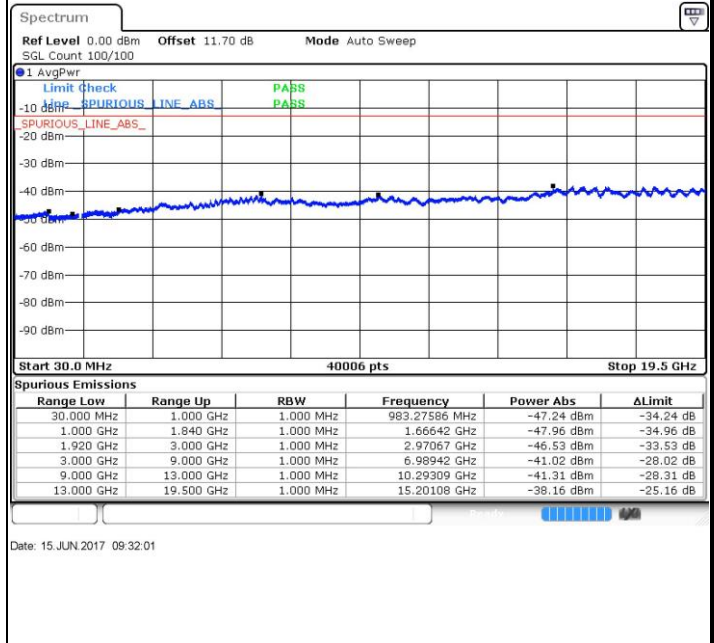
Middle Channel / 64QAM





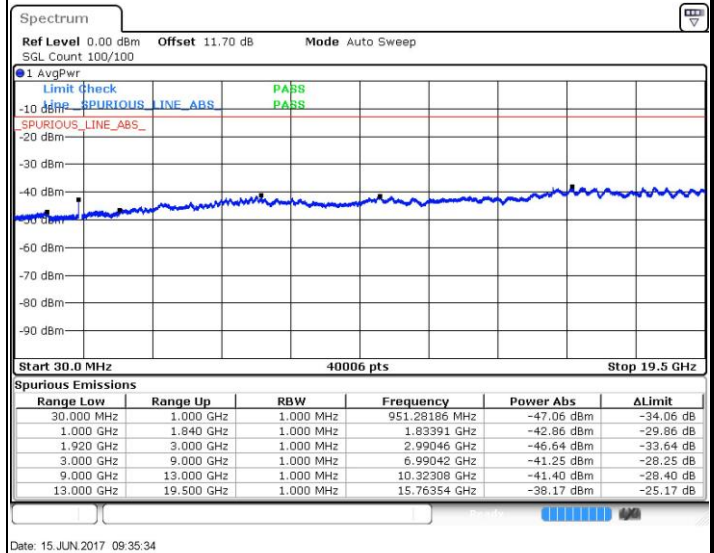
LTE Band 2 / 15MHz

Highest Channel / 64QAM



LTE Band 2 / 20MHz

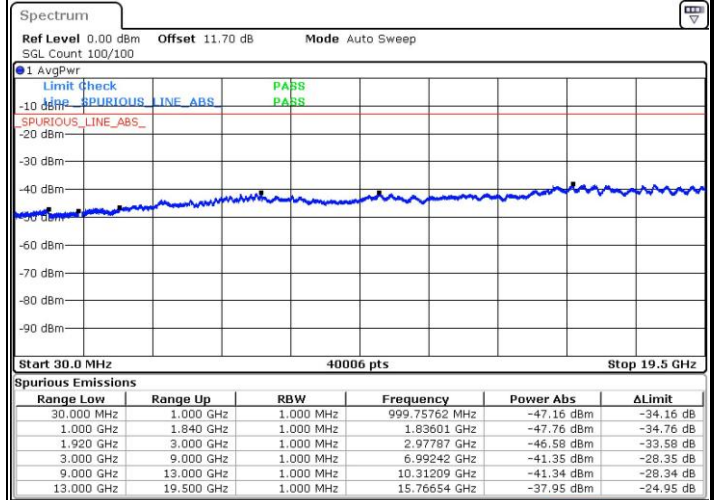
Lowest Channel / 64QAM





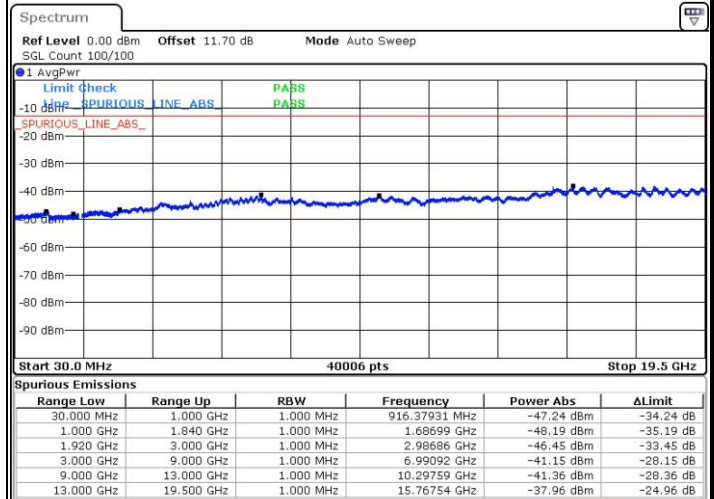
LTE Band 2 / 20MHz

Middle Channel / 64QAM



Date: 15 JUN 2017 09:36:50

Highest Channel / 64QAM



Date: 15 JUN 2017 09:40:23



Frequency Stability

Test Conditions		LTE Band 2 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0013	PASS
40	Normal Voltage	0.0008	
30	Normal Voltage	0.0006	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0008	
0	Normal Voltage	0.0009	
-10	Normal Voltage	0.0010	
-20	Normal Voltage	0.0028	
-30	Normal Voltage	0.0010	
20	Maximum Voltage	0.0001	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0029	

Note:

1. Normal Voltage =3.85 V. ; Battery End Point (BEP) =3.6 V. ; Maximum Voltage =4.2 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.



# LTE Band 4

## Peak-to-Average Ratio

Mode	LTE Band 4 / 20MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	3.3	4.23	3.88	5.28	PASS
Middle CH	3.36	4.41	4.29	5.42	
Highest CH	3.74	4.46	4.49	5.51	
Mode	LTE Band 4 / 20MHz				
Mod.	QPSK		64QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	-	-	4.12	5.33	PASS
Middle CH	-	-	4.09	5.45	
Highest CH	-	-	4.41	5.48	



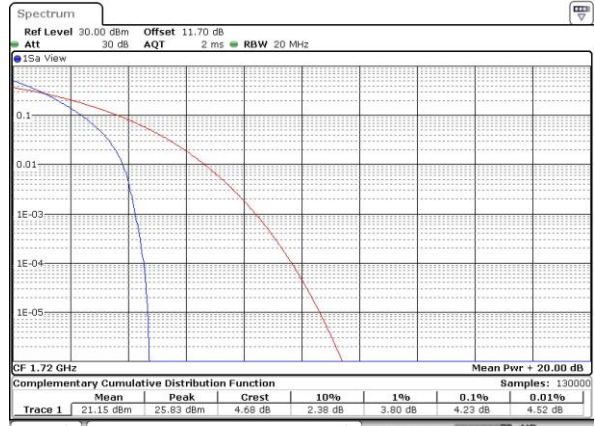
LTE Band 4 / 20MHz / QPSK

Lowest Channel / 1RB



Date: 12 JUN 2017 16:13:06

Lowest Channel / Full RB



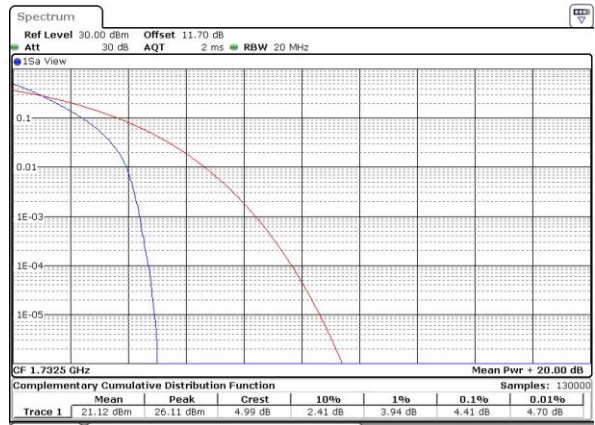
Date: 12 JUN 2017 16:13:16

Middle Channel / 1RB



Date: 12 JUN 2017 16:13:26

Middle Channel / Full RB



Date: 12 JUN 2017 16:13:39

Highest Channel / 1RB



Date: 12 JUN 2017 16:13:49

Highest Channel / Full RB



Date: 12 JUN 2017 16:13:59





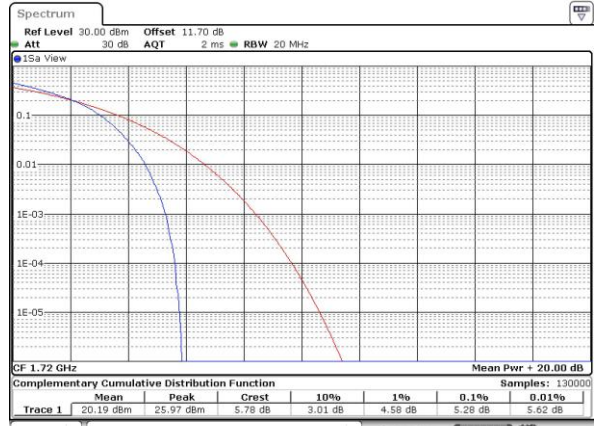
LTE Band 4 / 20MHz / 16QAM

Lowest Channel / 1RB



Date: 12 JUN 2017 16:12:07

Lowest Channel / Full RB



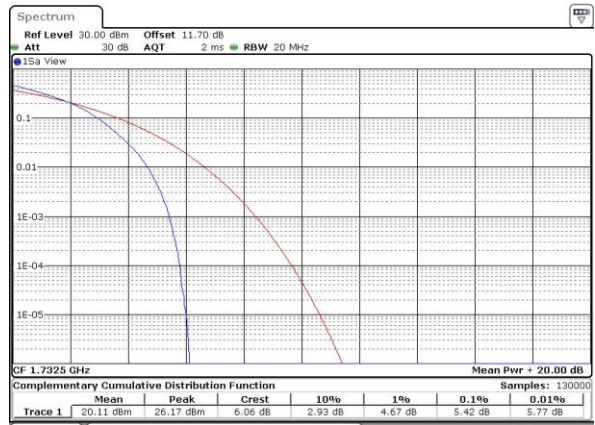
Date: 12 JUN 2017 16:12:17

Middle Channel / 1RB



Date: 12 JUN 2017 16:12:27

Middle Channel / Full RB



Date: 12 JUN 2017 16:12:36

Highest Channel / 1RB



Date: 12 JUN 2017 16:12:47

Highest Channel / Full RB

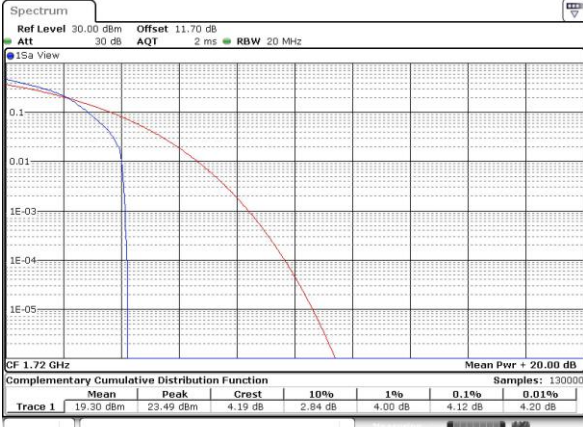


Date: 12 JUN 2017 16:12:56



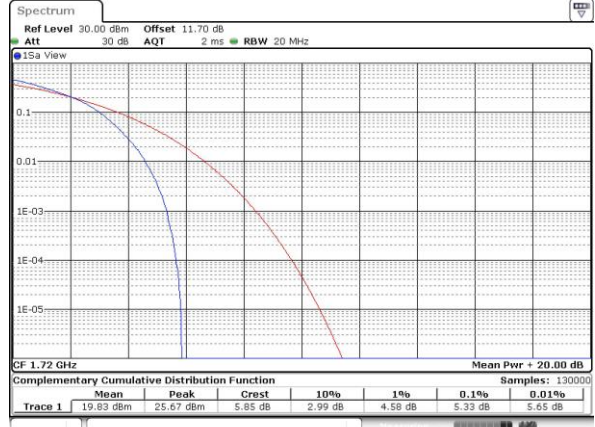
LTE Band 4 / 20MHz / 64QAM

Lowest Channel / 1RB



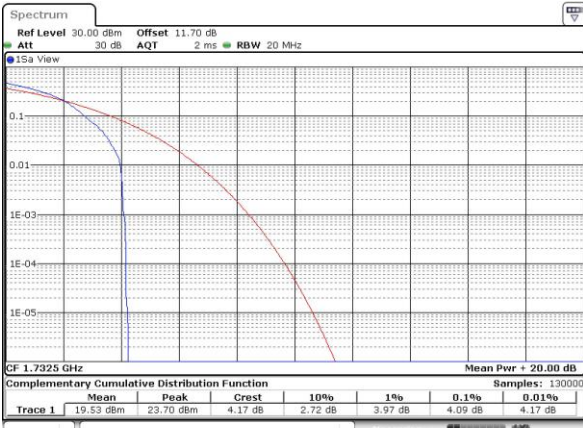
Date: 15 JUN 2017 11:33:17

Lowest Channel / Full RB



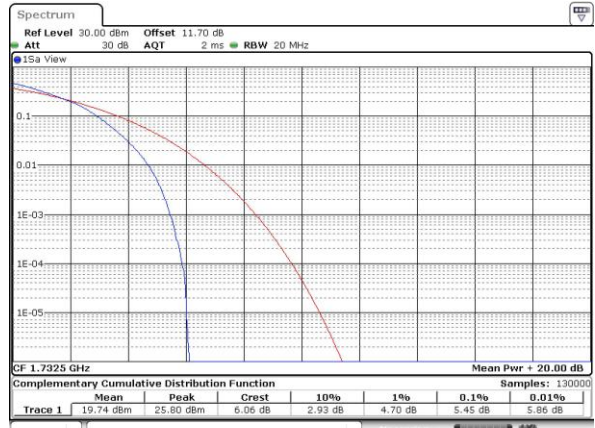
Date: 15 JUN 2017 11:33:44

Middle Channel / 1RB



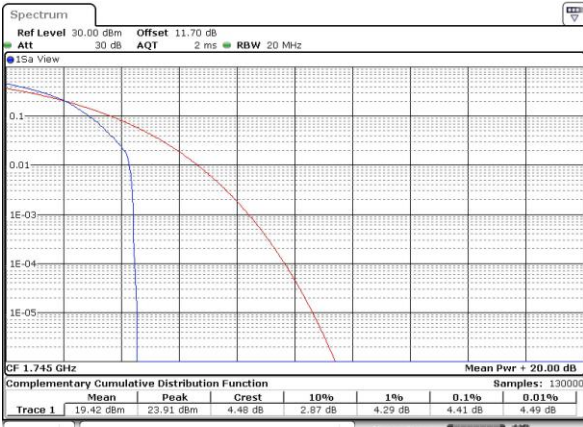
Date: 15 JUN 2017 11:33:55

Middle Channel / Full RB



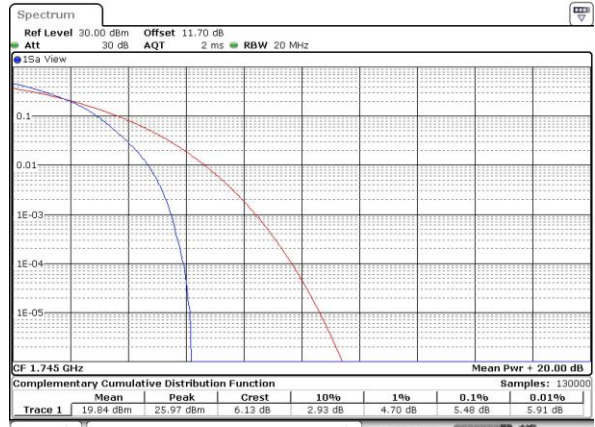
Date: 15 JUN 2017 11:34:06

Highest Channel / 1RB



Date: 15 JUN 2017 11:34:16

Highest Channel / Full RB



Date: 15 JUN 2017 11:34:27



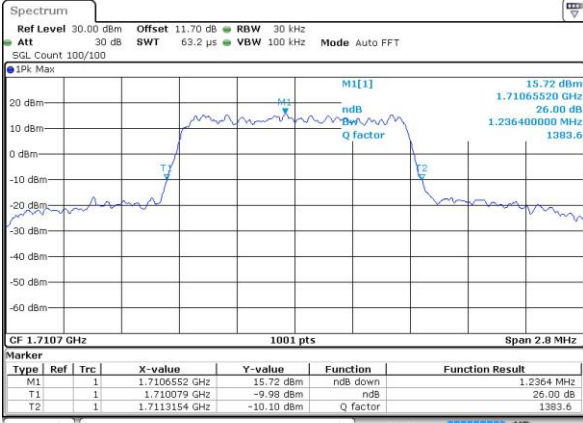
**26dB Bandwidth**

Mode	LTE Band 4 : 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	1.236	1.225	3.009	3.021	4.915	4.895	9.71	9.67	14.505	14.236	20.26	20.18
Middle CH	1.234	1.225	2.997	3.045	4.825	4.905	9.95	9.77	14.446	14.565	20.14	20.3
Highest CH	1.225	1.236	3.057	3.021	4.905	4.905	9.75	9.89	14.326	14.356	20.18	20.22
Mode	LTE Band 4 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	64QAM	QPSK	64QAM	QPSK	64QAM	QPSK	64QAM	QPSK	64QAM	QPSK	64QAM
Lowest CH	-	1.225	-	3.045	-	4.885	-	9.77	-	14.386	-	20.18
Middle CH	-	1.236	-	3.033	-	4.835	-	9.73	-	14.356	-	20.26
Highest CH	-	1.214	-	3.003	-	4.875	-	9.63	-	14.476	-	20.18



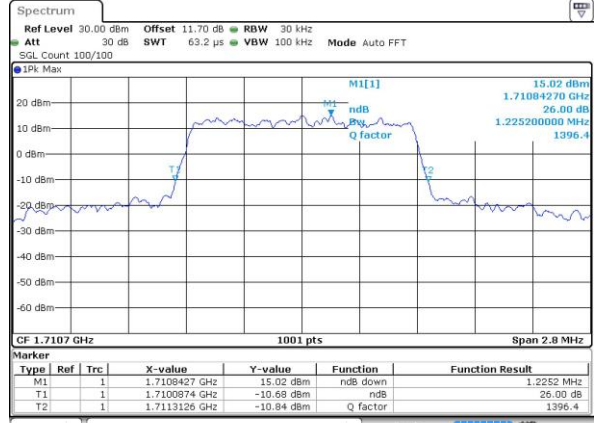
LTE Band 4

Lowest Channel / 1.4MHz / QPSK



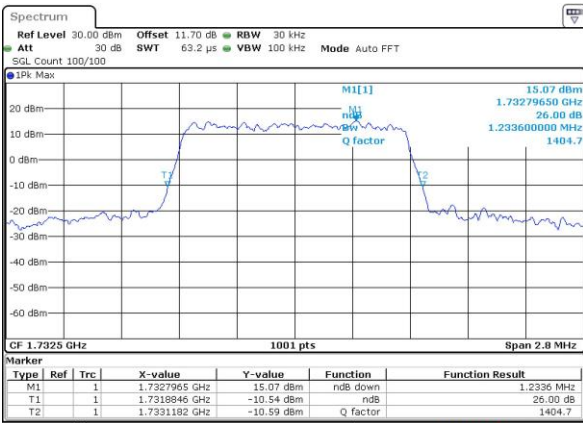
Date: 12 JUN 2017 15:54:09

Lowest Channel / 1.4MHz / 16QAM



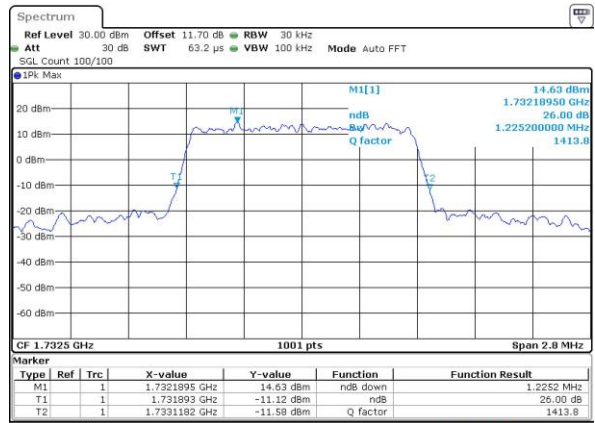
Date: 12 JUN 2017 15:54:19

Middle Channel / 1.4MHz / QPSK



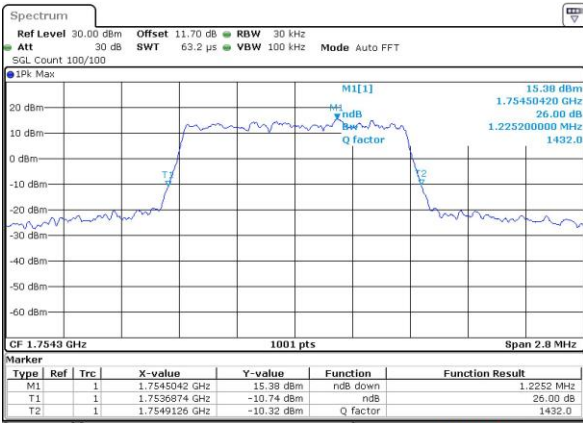
Date: 12 JUN 2017 16:01:15

Middle Channel / 1.4MHz / 16QAM



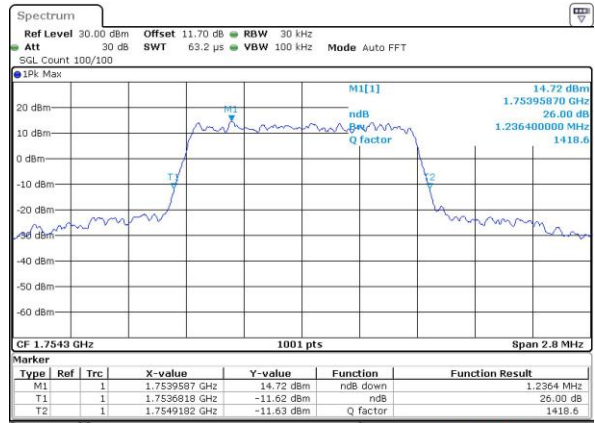
Date: 12 JUN 2017 16:01:26

Highest Channel / 1.4MHz / QPSK



Date: 12 JUN 2017 16:03:46

Highest Channel / 1.4MHz / 16QAM

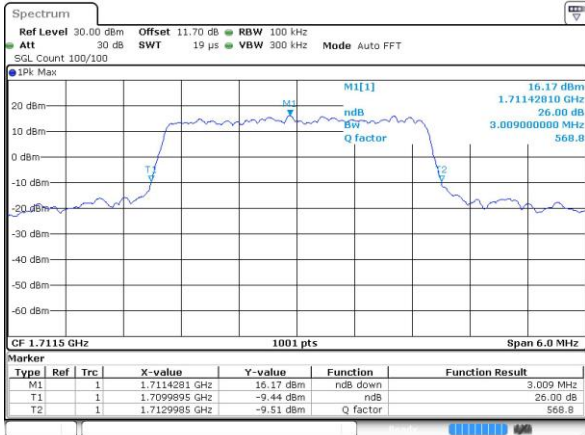


Date: 12 JUN 2017 16:03:56



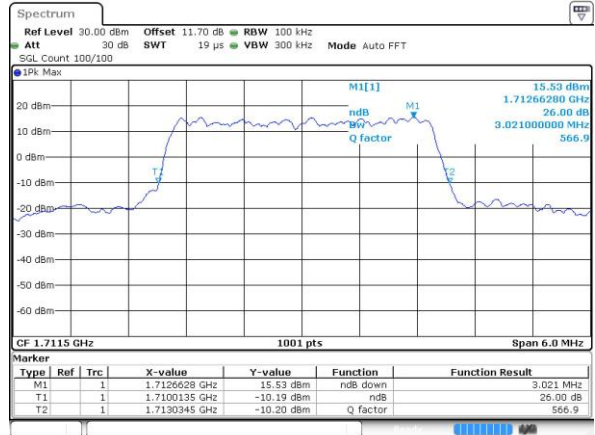
LTE Band 4

Lowest Channel / 3MHz / QPSK



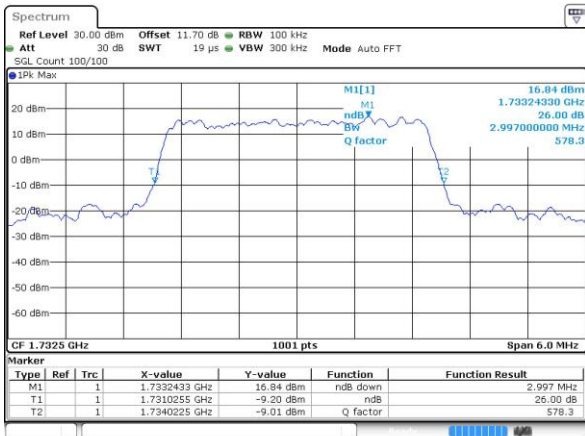
Date: 12 JUN 2017 14:30:27

Lowest Channel / 3MHz / 16QAM



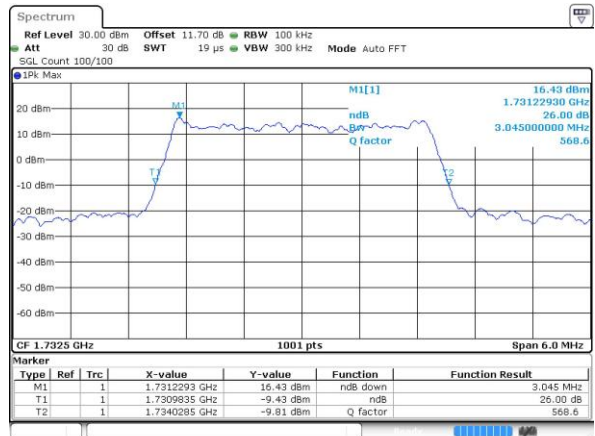
Date: 12 JUN 2017 14:30:38

Middle Channel / 3MHz / QPSK



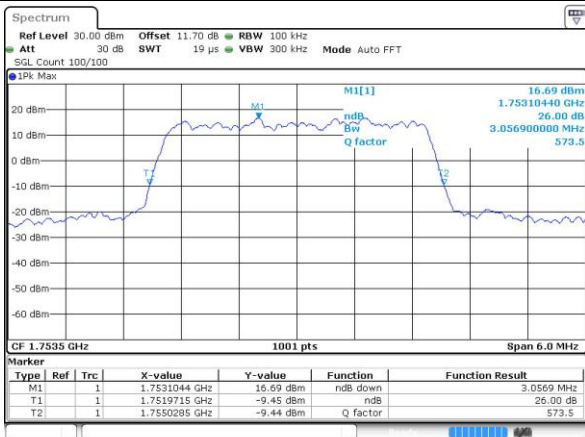
Date: 12 JUN 2017 14:37:34

Middle Channel / 3MHz / 16QAM



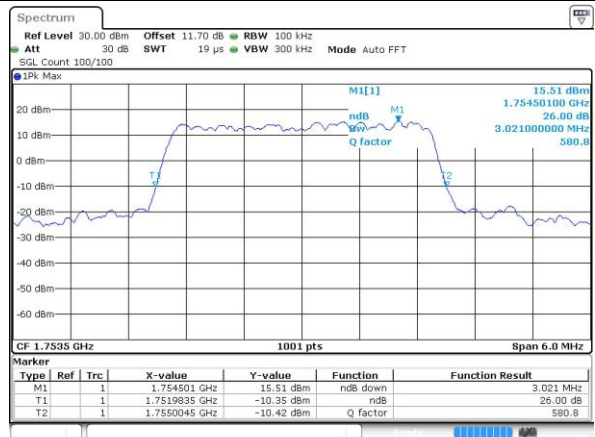
Date: 12 JUN 2017 14:37:44

Highest Channel / 3MHz / QPSK



Date: 12 JUN 2017 14:40:05

Highest Channel / 3MHz / 16QAM

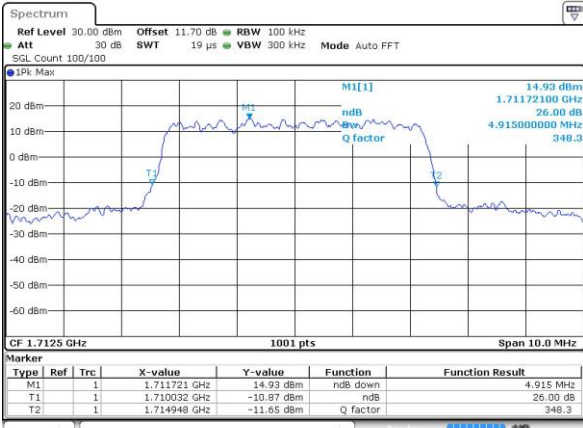


Date: 12 JUN 2017 14:40:15



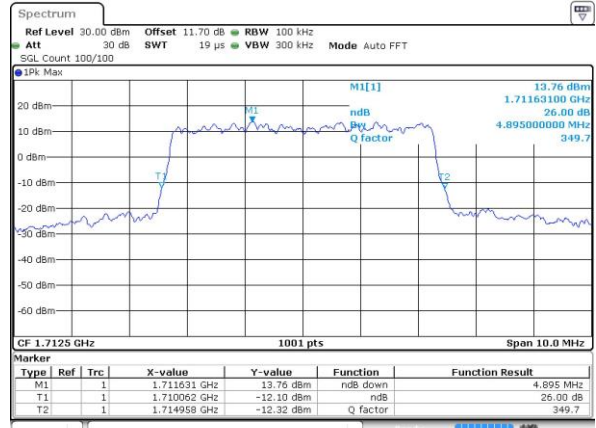
LTE Band 4

Lowest Channel / 5MHz / QPSK



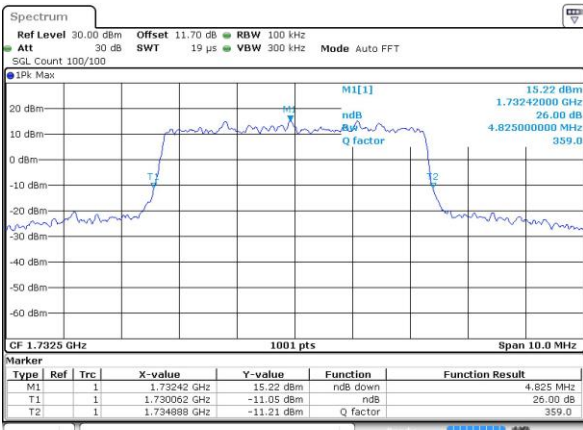
Date: 12 JUN 2017 14:47:12

Lowest Channel / 5MHz / 16QAM



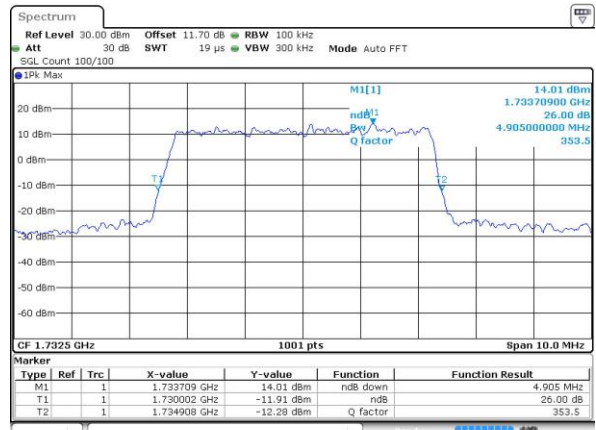
Date: 12 JUN 2017 14:47:22

Middle Channel / 5MHz / QPSK



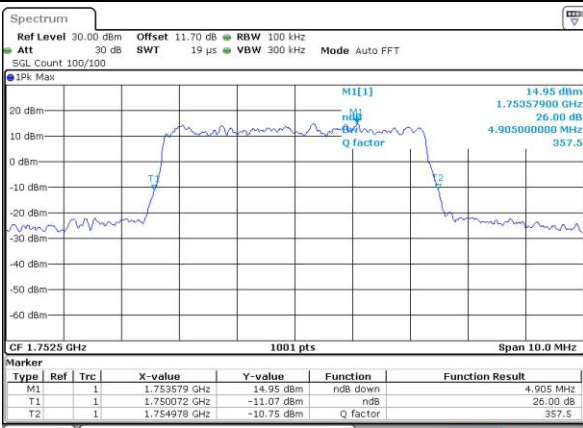
Date: 12 JUN 2017 14:54:19

Middle Channel / 5MHz / 16QAM



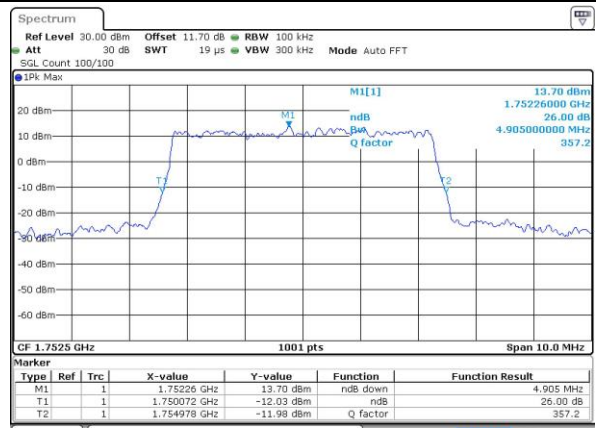
Date: 12 JUN 2017 14:54:29

Highest Channel / 5MHz / QPSK



Date: 12 JUN 2017 14:56:49

Highest Channel / 5MHz / 16QAM

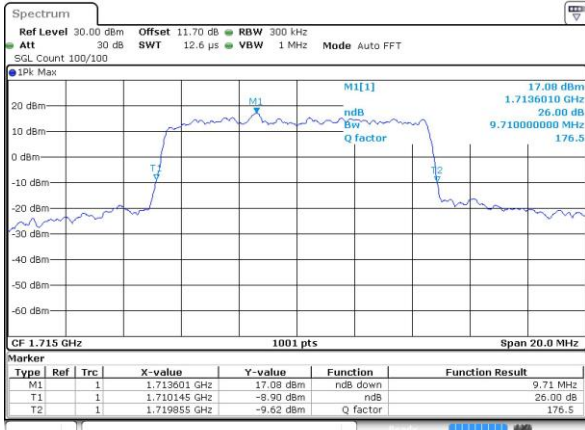


Date: 12 JUN 2017 14:56:59



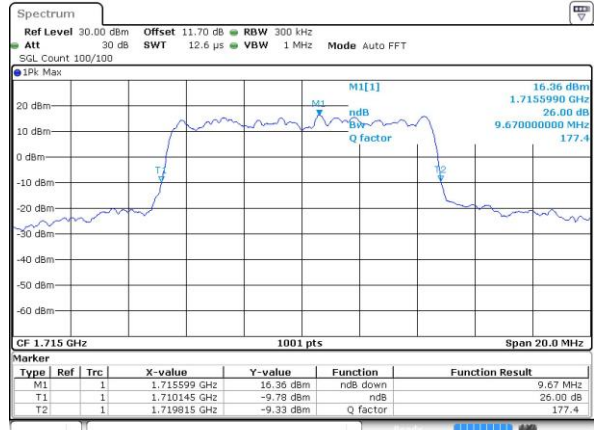
LTE Band 4

Lowest Channel / 10MHz / QPSK



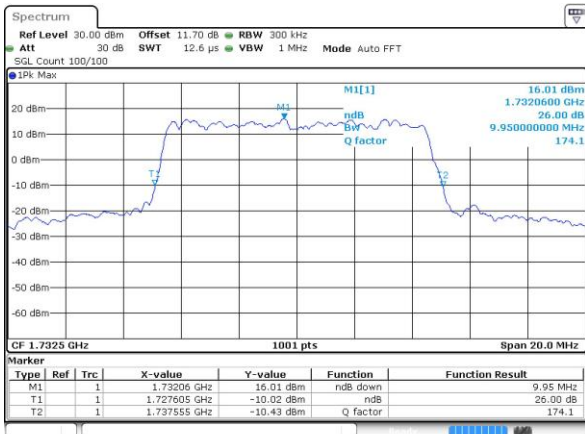
Date: 12 JUN 2017 15:03:56

Lowest Channel / 10MHz / 16QAM



Date: 12 JUN 2017 15:04:06

Middle Channel / 10MHz / QPSK



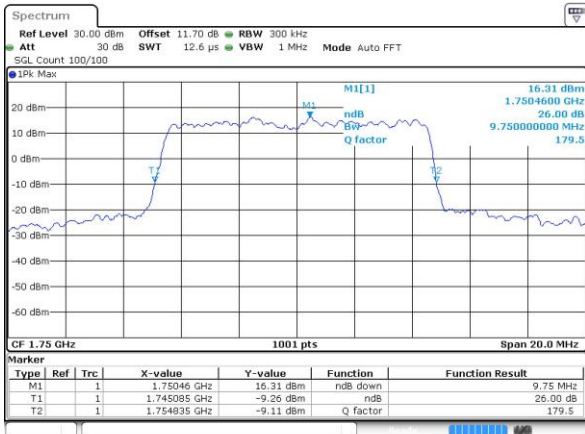
Date: 12 JUN 2017 15:11:02

Middle Channel / 10MHz / 16QAM



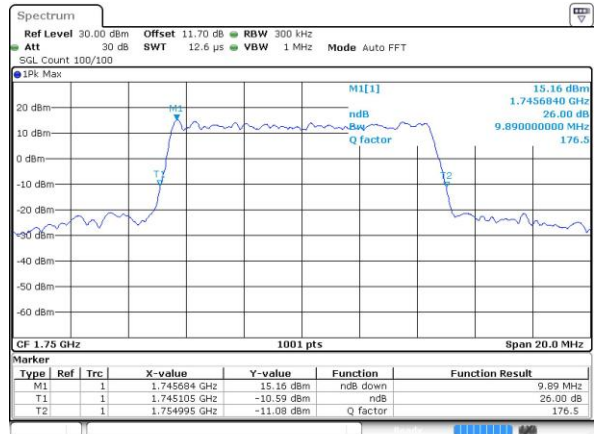
Date: 12 JUN 2017 15:11:13

Highest Channel / 10MHz / QPSK



Date: 12 JUN 2017 15:13:33

Highest Channel / 10MHz / 16QAM

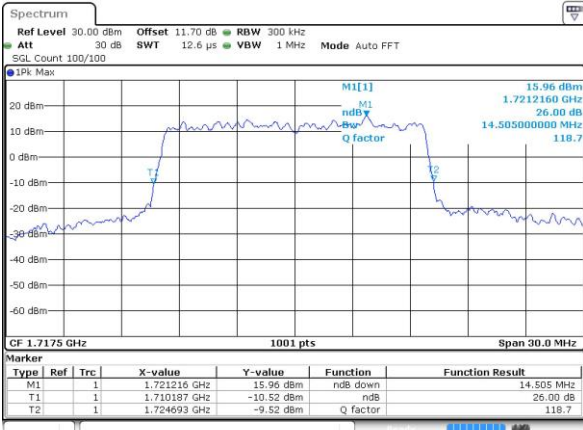


Date: 12 JUN 2017 15:13:43



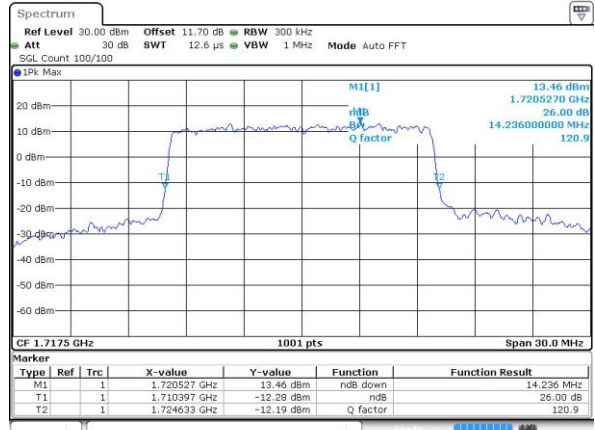
LTE Band 4

Lowest Channel / 15MHz / QPSK



Date: 12 JUN 2017 15:20:39

Lowest Channel / 15MHz / 16QAM



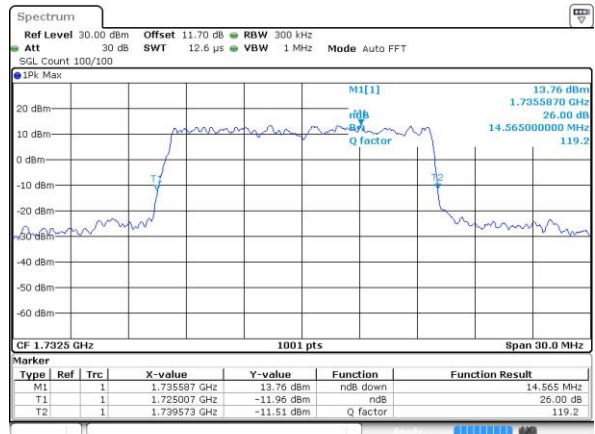
Date: 12 JUN 2017 15:20:50

Middle Channel / 15MHz / QPSK



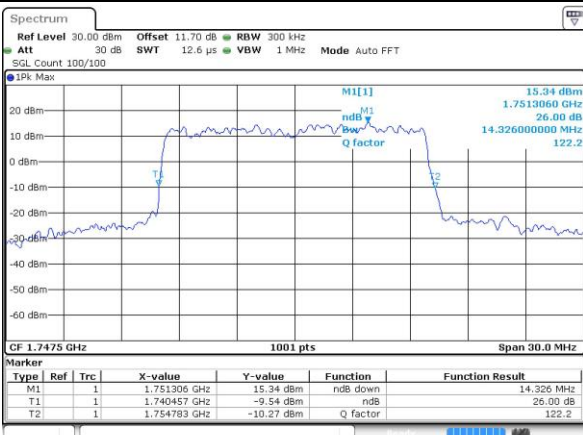
Date: 12 JUN 2017 15:27:48

Middle Channel / 15MHz / 16QAM



Date: 12 JUN 2017 15:27:56

Highest Channel / 15MHz / QPSK



Date: 12 JUN 2017 15:30:16

Highest Channel / 15MHz / 16QAM



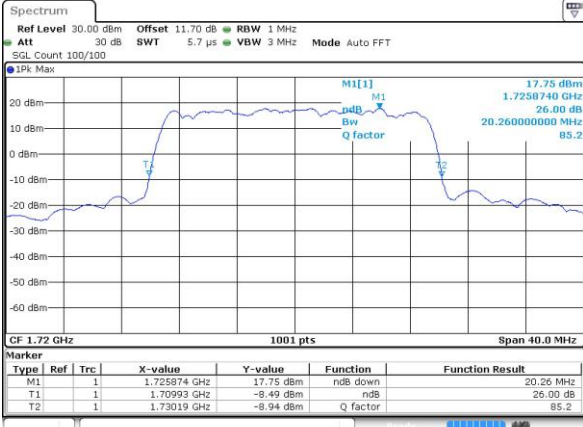
Date: 12 JUN 2017 15:30:26





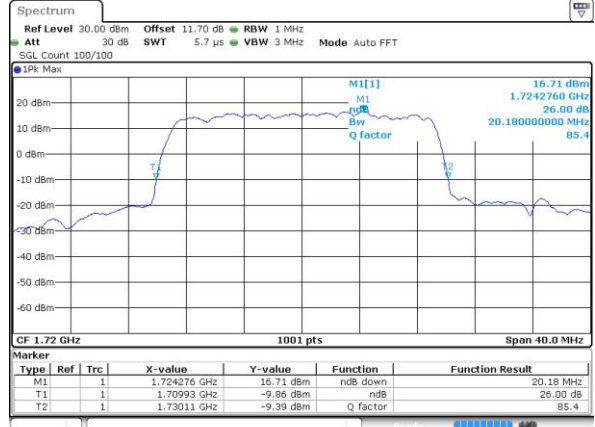
LTE Band 4

Lowest Channel / 20MHz / QPSK



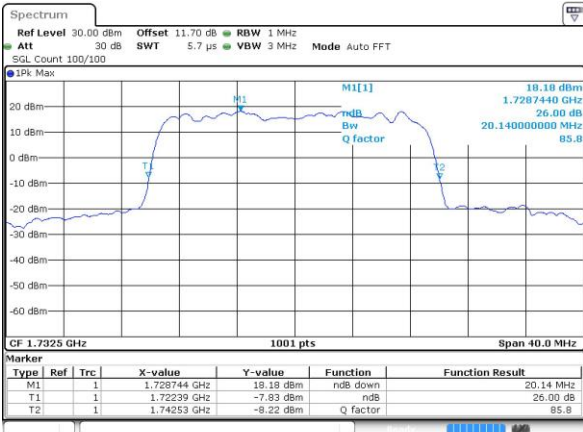
Date: 12 JUN 2017 15:37:25

Lowest Channel / 20MHz / 16QAM



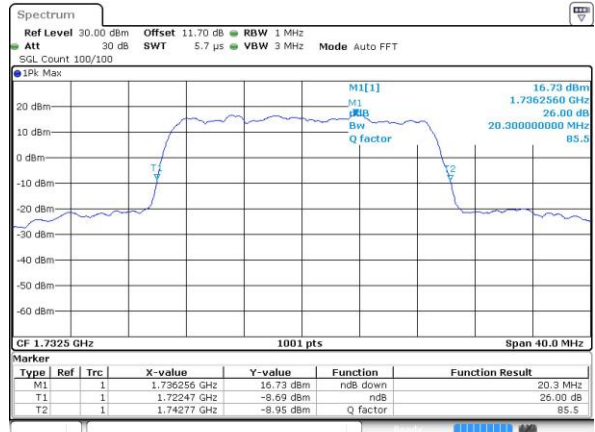
Date: 12 JUN 2017 15:37:35

Middle Channel / 20MHz / QPSK



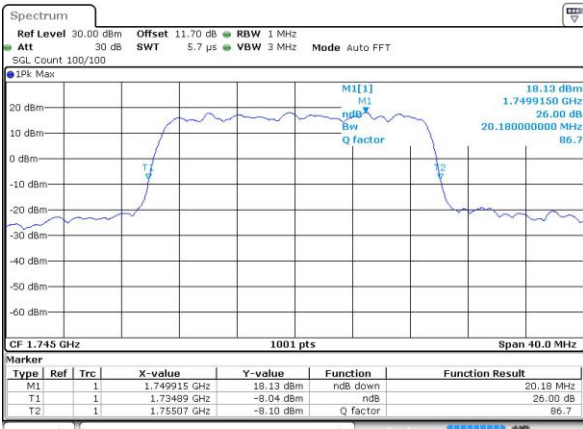
Date: 12 JUN 2017 15:44:32

Middle Channel / 20MHz / 16QAM



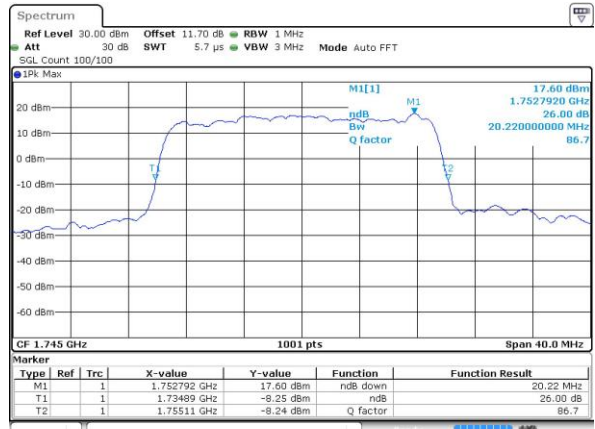
Date: 12 JUN 2017 15:44:42

Highest Channel / 20MHz / QPSK



Date: 12 JUN 2017 15:47:02

Highest Channel / 20MHz / 16QAM

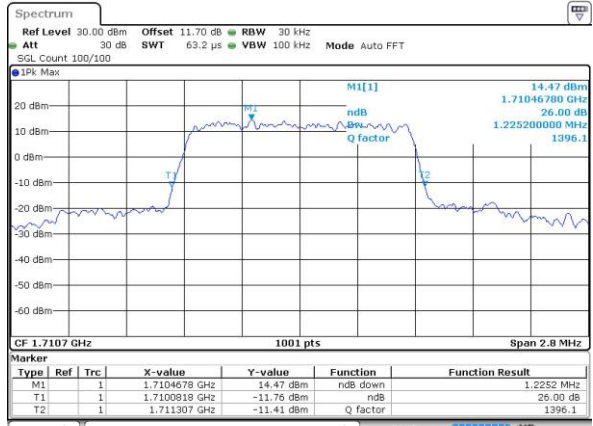


Date: 12 JUN 2017 15:47:12



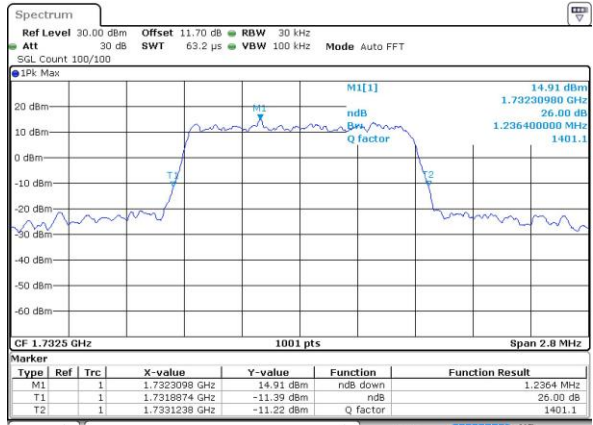
LTE Band 4

Lowest Channel / 1.4MHz / 64QAM



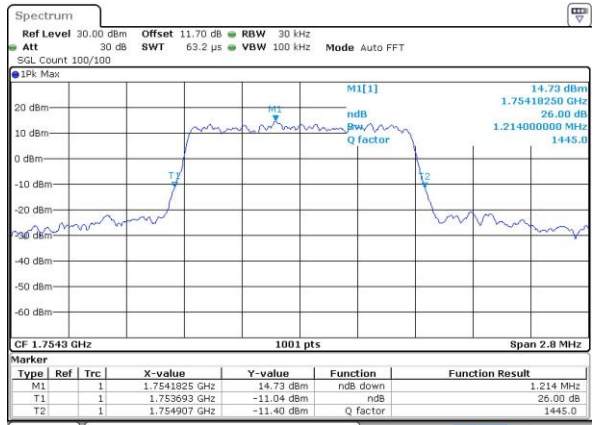
Date: 15 JUN 2017 11:18:52

Middle Channel / 1.4MHz / 64QAM



Date: 15 JUN 2017 11:22:25

Highest Channel / 1.4MHz / 64QAM

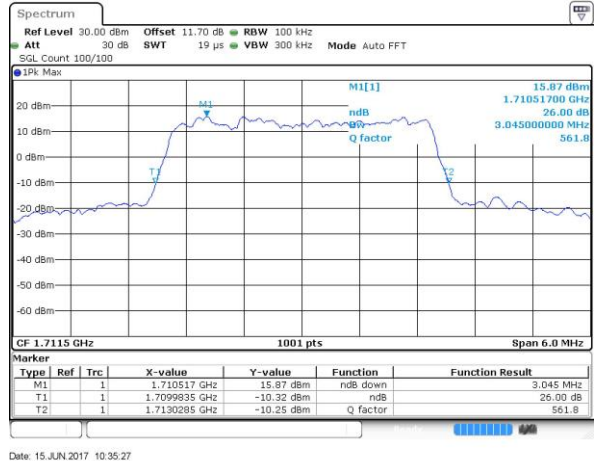


Date: 15 JUN 2017 11:23:41

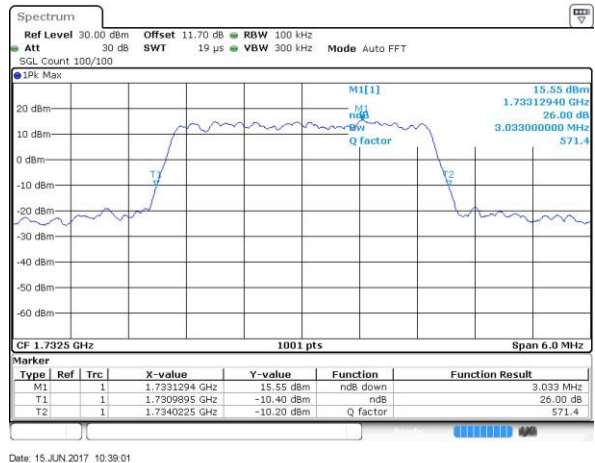


LTE Band 4

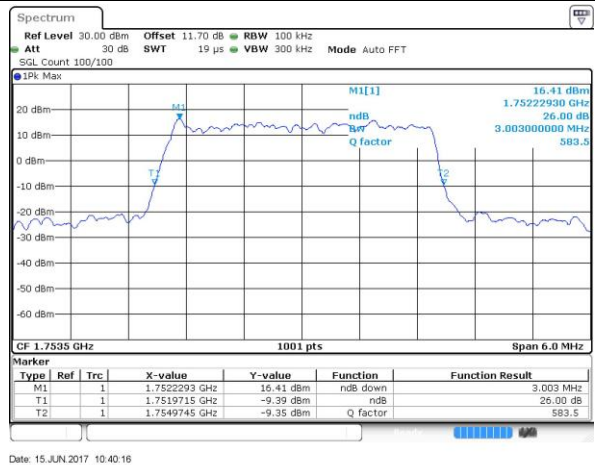
Lowest Channel / 3MHz / 64QAM



Middle Channel / 3MHz / 64QAM



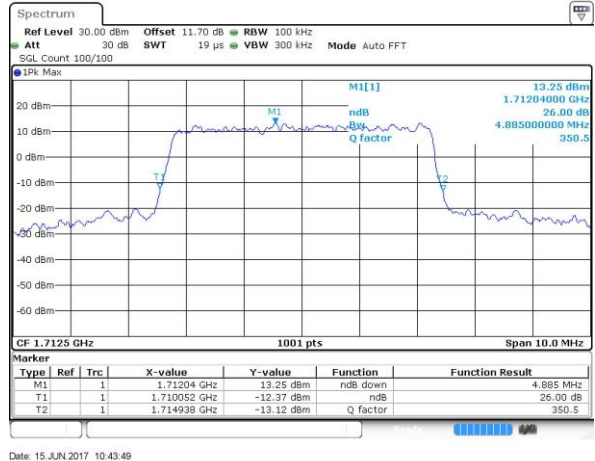
Highest Channel / 3MHz / 64QAM



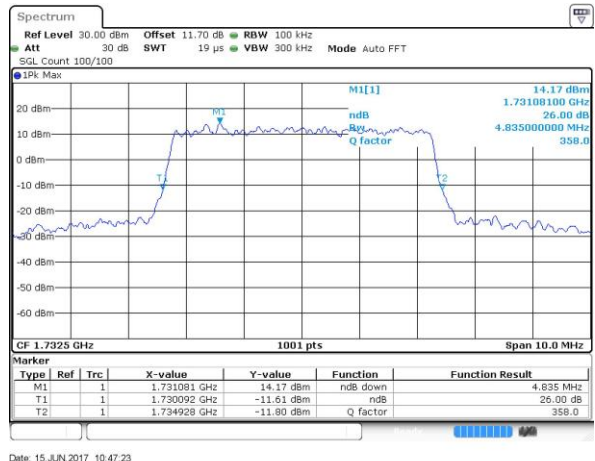


LTE Band 4

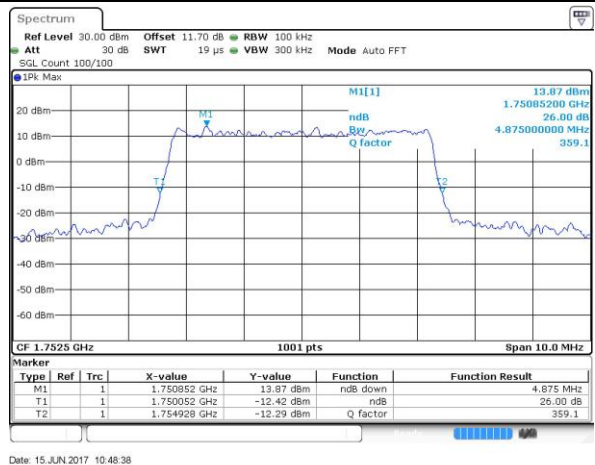
Lowest Channel / 5MHz / 64QAM



Middle Channel / 5MHz / 64QAM



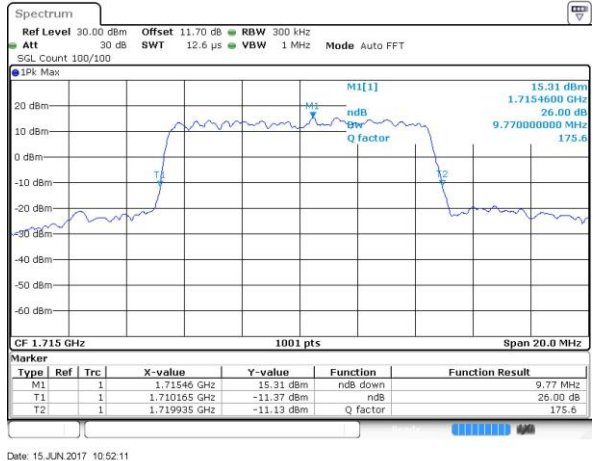
Highest Channel / 5MHz / 64QAM



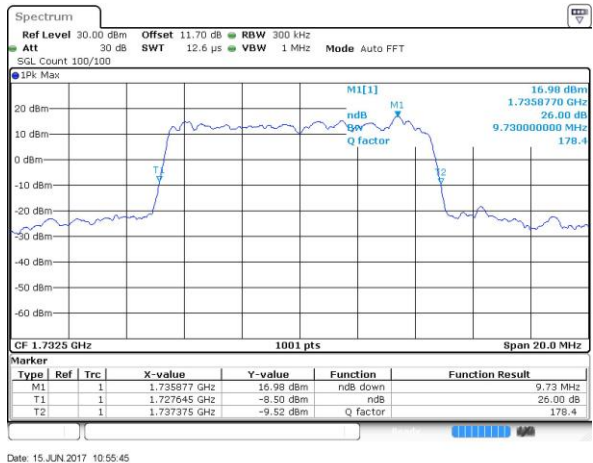


LTE Band 4

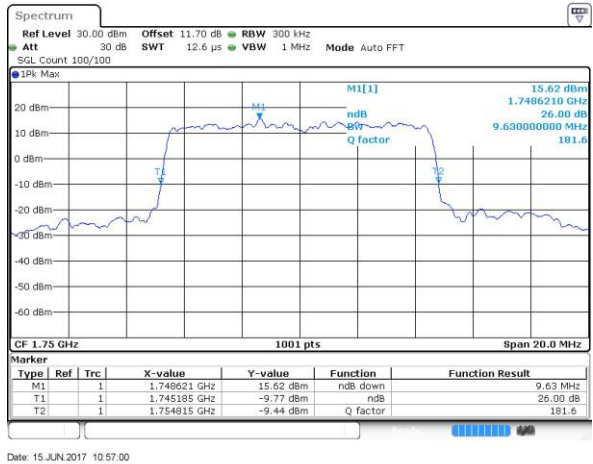
Lowest Channel / 10MHz / 64QAM



Middle Channel / 10MHz / 64QAM



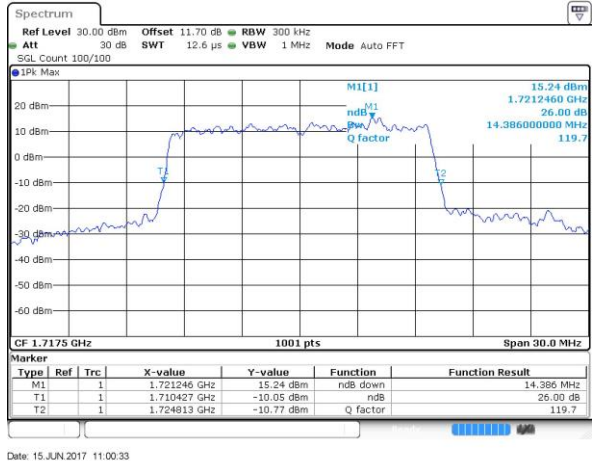
Highest Channel / 10MHz / 64QAM



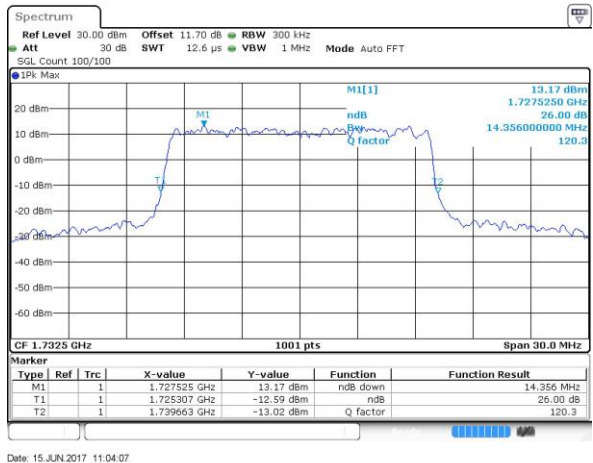


LTE Band 4

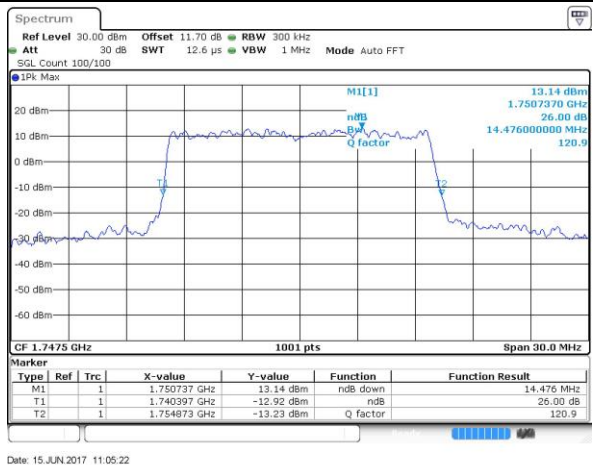
Lowest Channel / 15MHz / 64QAM



Middle Channel / 15MHz / 64QAM



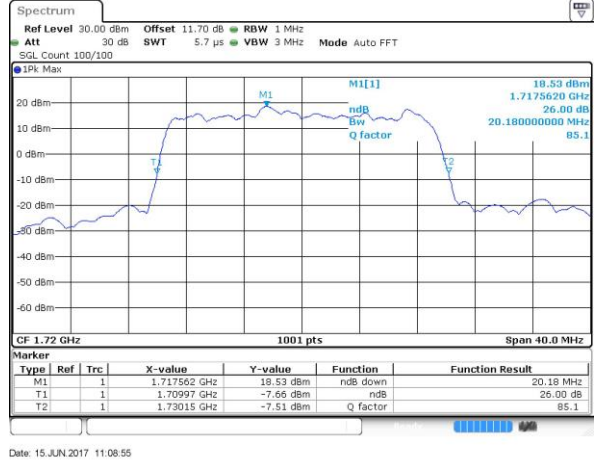
Highest Channel / 15MHz / 64QAM





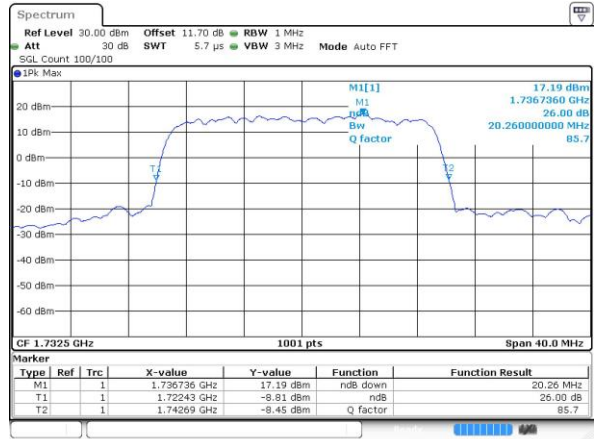
LTE Band 4

Lowest Channel / 20MHz / 64QAM



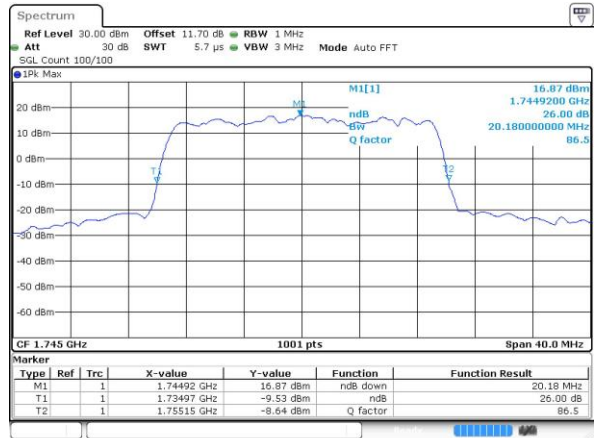
Date: 15 JUN 2017 11:08:55

Middle Channel / 20MHz / 64QAM



Date: 15 JUN 2017 11:12:28

Highest Channel / 20MHz / 64QAM



Date: 15 JUN 2017 11:13:43



**Occupied Bandwidth**

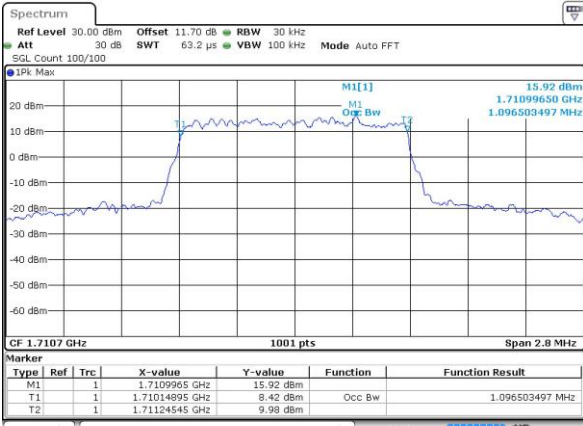
Mode	LTE Band 4 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	1.1	1.1	2.72	2.72	4.5	4.48	9.01	9.03	13.4	13.46	18.26	18.3
Middle CH	1.09	1.09	2.72	2.73	4.5	4.48	9.11	9.03	13.43	13.46	18.38	18.3
Highest CH	1.09	1.09	2.74	2.72	4.5	4.5	9.01	8.97	13.46	13.46	18.3	18.38
Mode	LTE Band 4 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	64QAM	QPSK	64QAM	QPSK	64QAM	QPSK	64QAM	QPSK	64QAM	QPSK	64QAM
Lowest CH	-	1.09	-	2.71	-	4.51	-	8.99	-	13.49	-	18.14
Middle CH	-	1.09	-	2.7	-	4.5	-	9.01	-	13.4	-	18.5
Highest CH	-	1.1	-	2.72	-	4.49	-	9.01	-	13.43	-	18.26





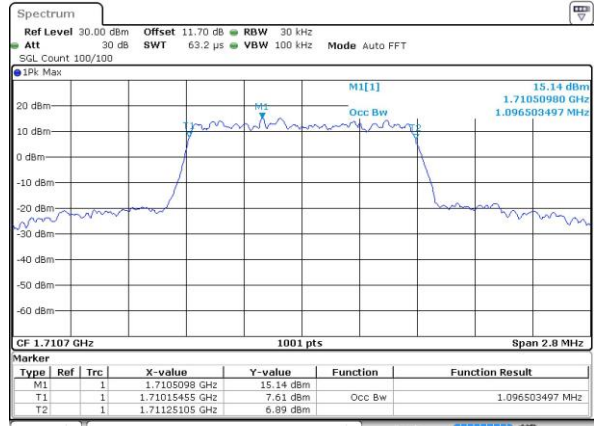
LTE Band 4

Lowest Channel / 1.4MHz / QPSK



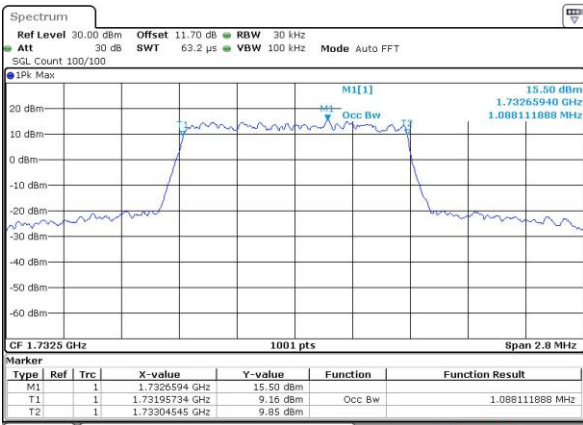
Date: 12 JUN 2017 15:53:48

Lowest Channel / 1.4MHz / 16QAM



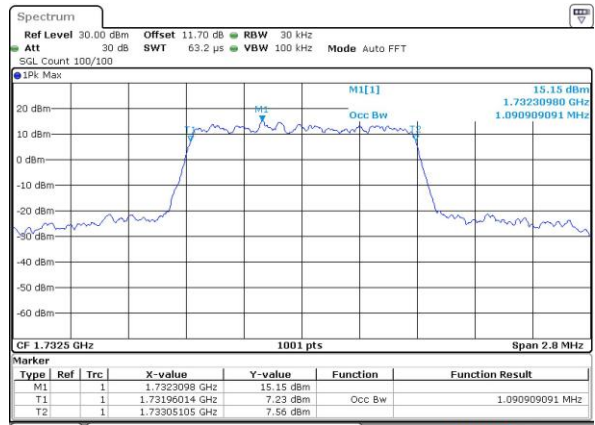
Date: 12 JUN 2017 15:53:58

Middle Channel / 1.4MHz / QPSK



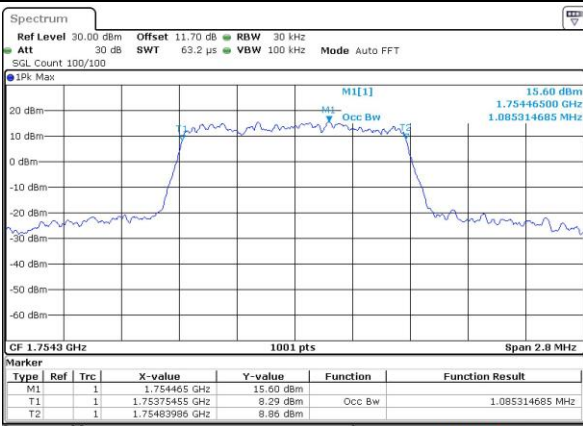
Date: 12 JUN 2017 16:00:55

Middle Channel / 1.4MHz / 16QAM



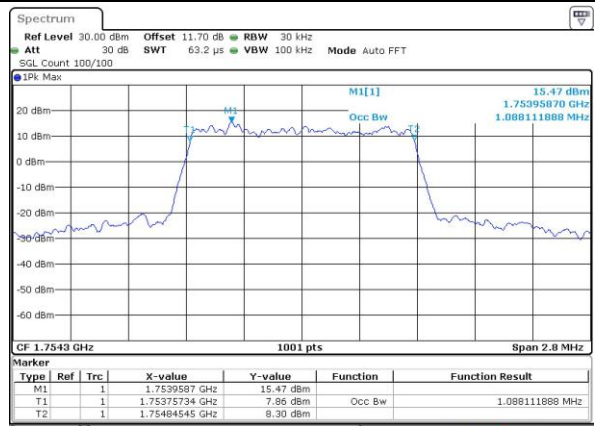
Date: 12 JUN 2017 16:01:05

Highest Channel / 1.4MHz / QPSK



Date: 12 JUN 2017 16:03:25

Highest Channel / 1.4MHz / 16QAM

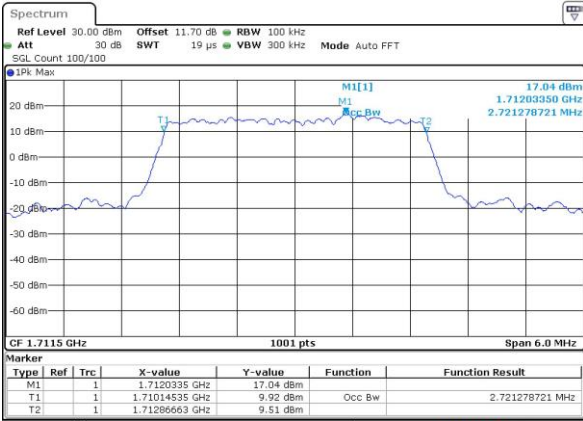


Date: 12 JUN 2017 16:03:35



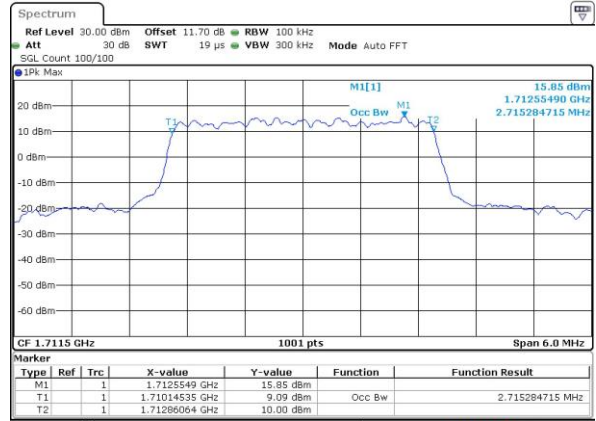
LTE Band 4

Lowest Channel / 3MHz / QPSK



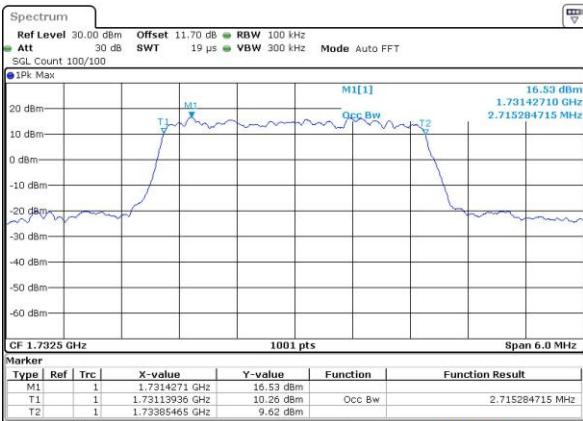
Date: 12 JUN 2017 14:30:07

Lowest Channel / 3MHz / 16QAM



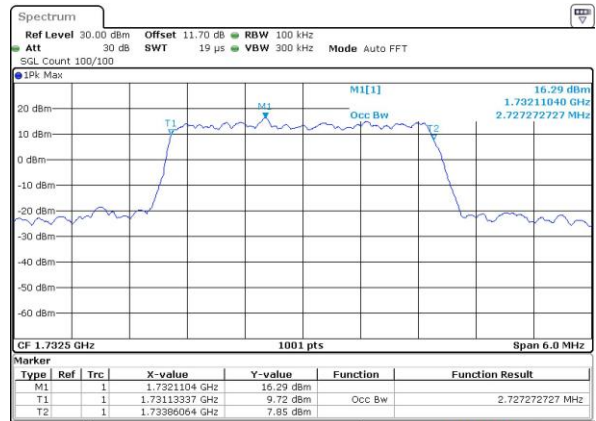
Date: 12 JUN 2017 14:30:17

Middle Channel / 3MHz / QPSK



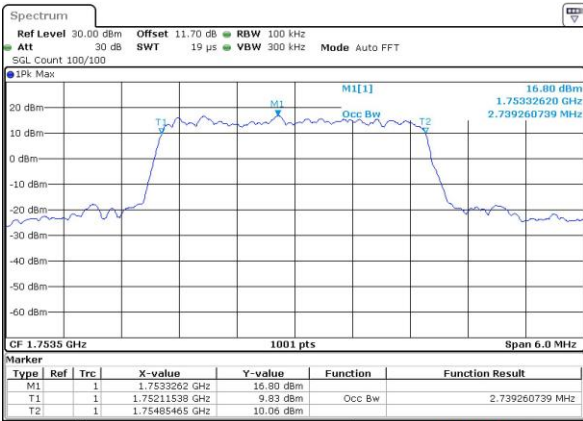
Date: 12 JUN 2017 14:37:13

Middle Channel / 3MHz / 16QAM



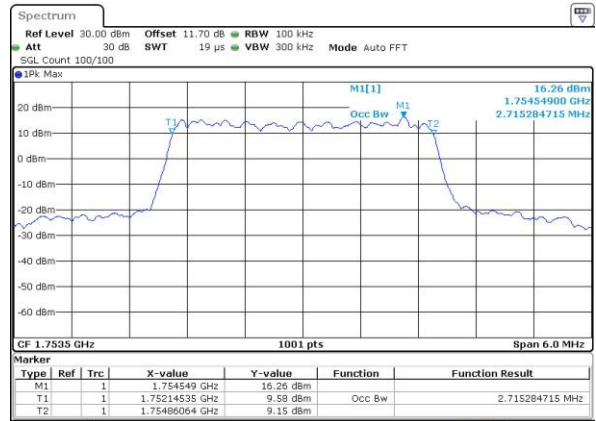
Date: 12 JUN 2017 14:37:24

Highest Channel / 3MHz / QPSK



Date: 12 JUN 2017 14:39:44

Highest Channel / 3MHz / 16QAM



Date: 12 JUN 2017 14:39:54