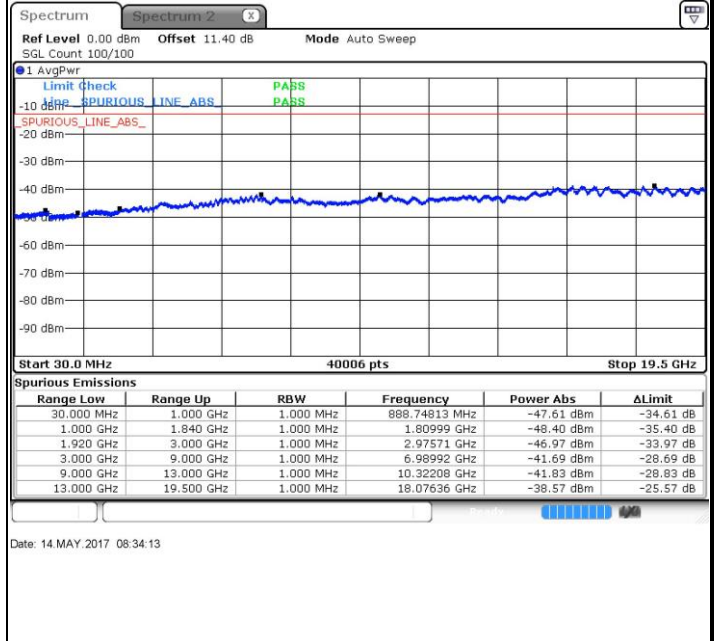


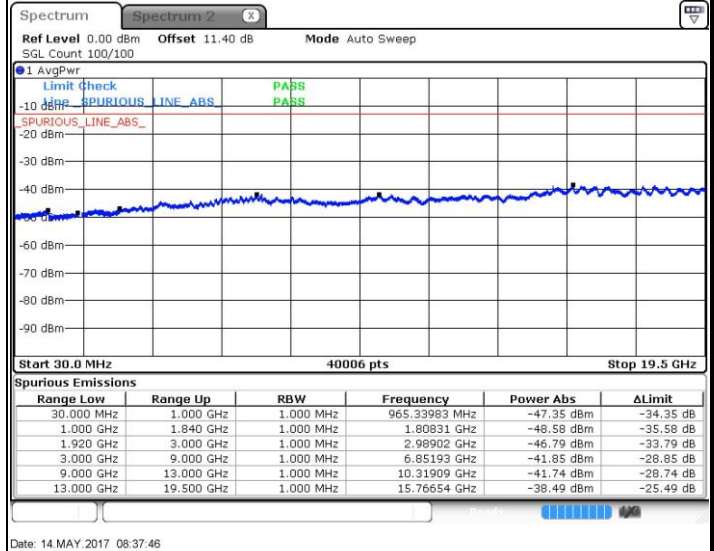


LTE Band 2 / 10MHz

Middle Channel / 64QAM



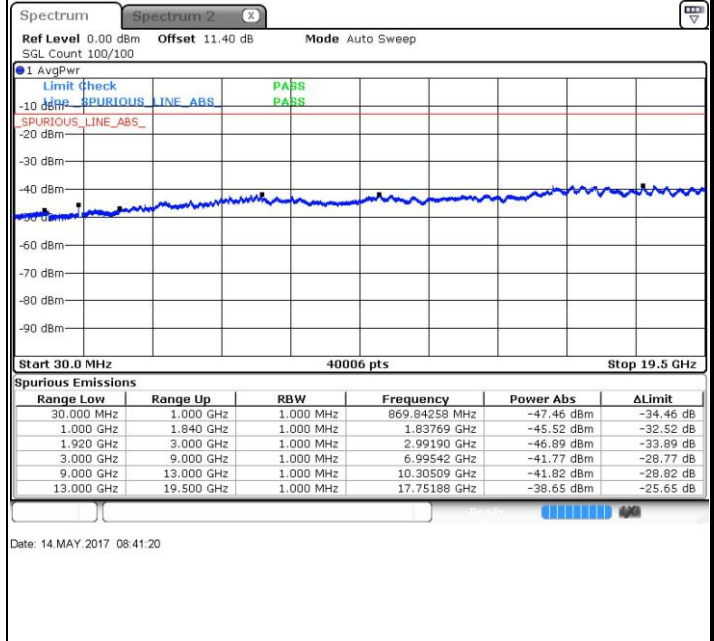
Highest Channel / 64QAM



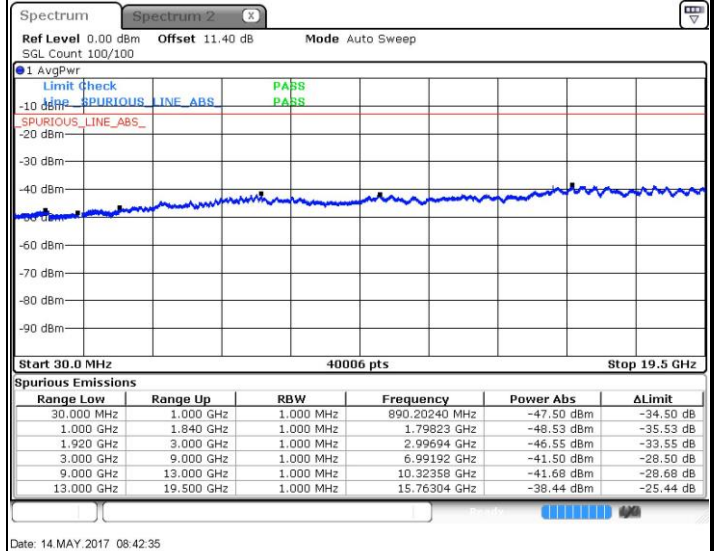


LTE Band 2 / 15MHz

Lowest Channel / 64QAM



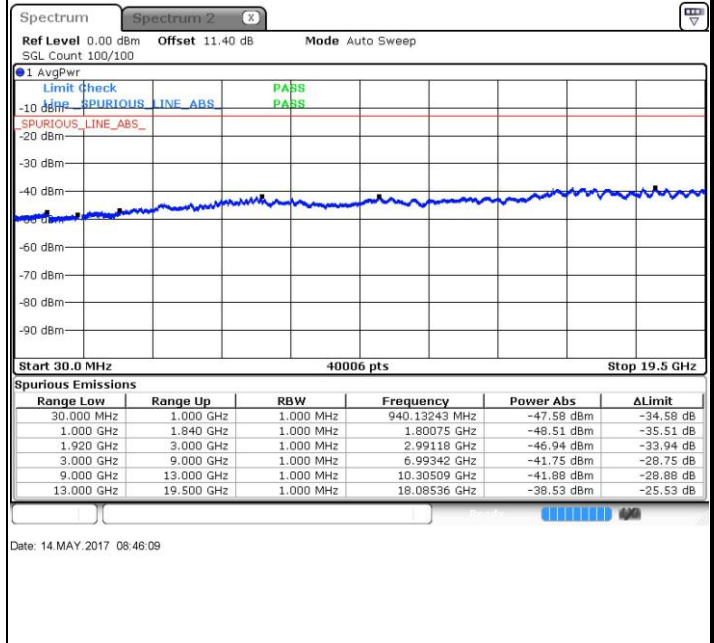
Middle Channel / 64QAM





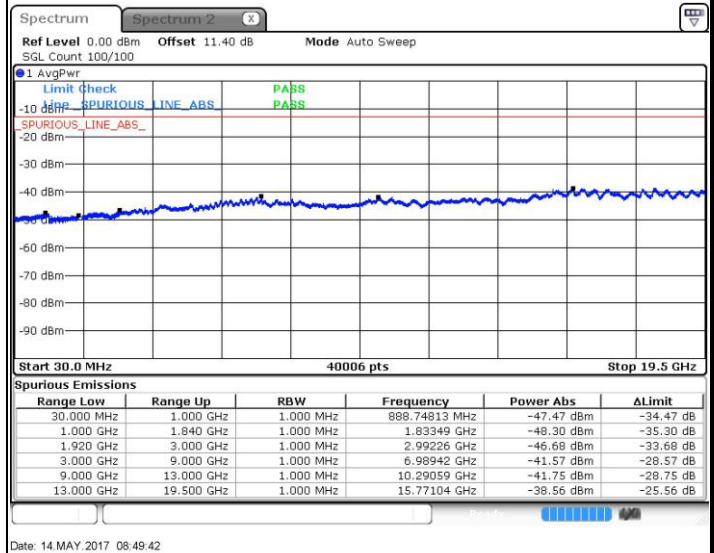
LTE Band 2 / 15MHz

Highest Channel / 64QAM



LTE Band 2 / 20MHz

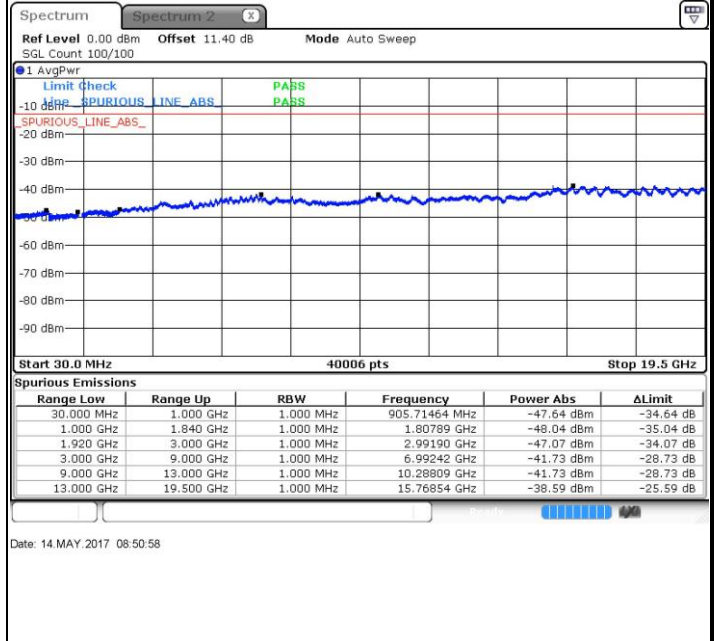
Lowest Channel / 64QAM



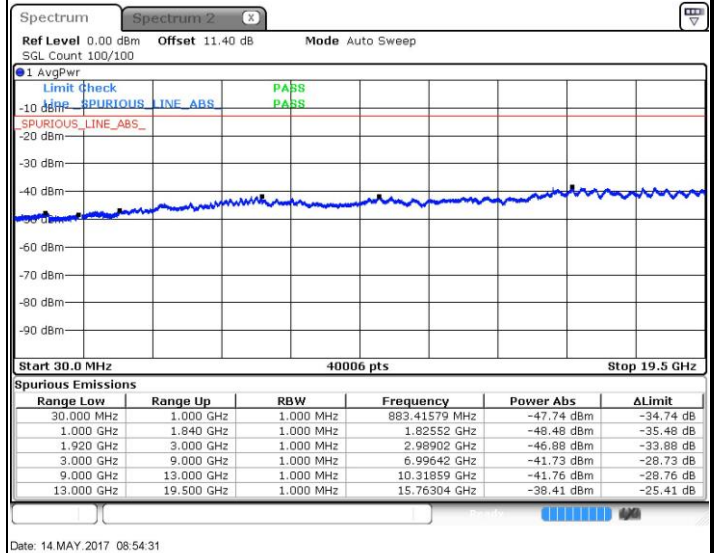


LTE Band 2 / 20MHz

Middle Channel / 64QAM



Highest Channel / 64QAM





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	0.0083	PASS
40	Normal Voltage	0.0009	
30	Normal Voltage	0.0006	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0003	
0	Normal Voltage	0.0006	
-10	Normal Voltage	0.0081	
-20	Normal Voltage	0.0004	
-30	Normal Voltage	0.0086	
20	Maximum Voltage	0.0089	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0003	

Note:

1. Normal Voltage =3.8 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 4

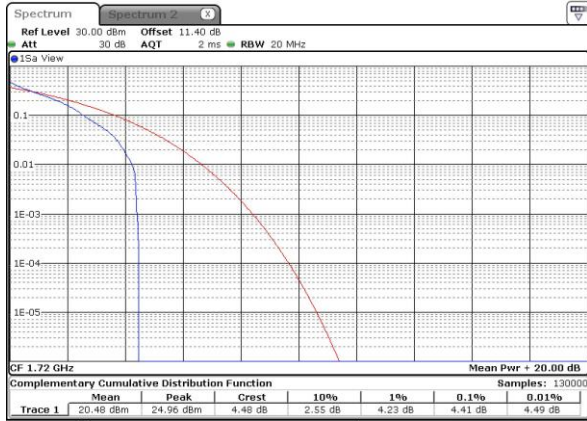
## Peak-to-Average Ratio

Mode	LTE Band 4 / 20MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	4.41	5.16	5.22	6.29	<b>PASS</b>
Middle CH	4.87	4.81	5.54	5.97	
Highest CH	4	4.67	4.72	5.57	
Mod.	-		64QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	-	-	5.33	6.14	<b>PASS</b>
Middle CH	-	-	5.8	6.09	
Highest CH	-	-	4.67	5.68	



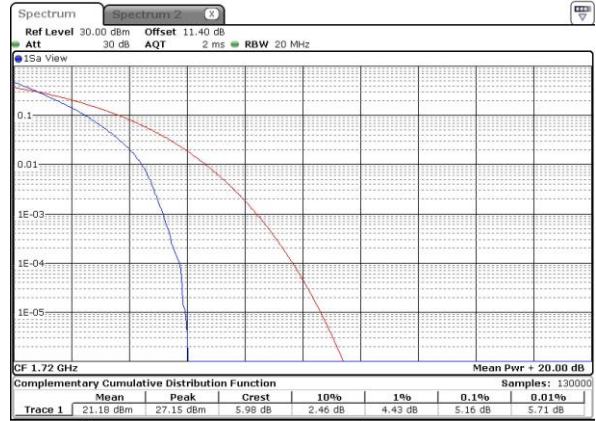
LTE Band 4 / 20MHz / QPSK

Lowest Channel / 1RB



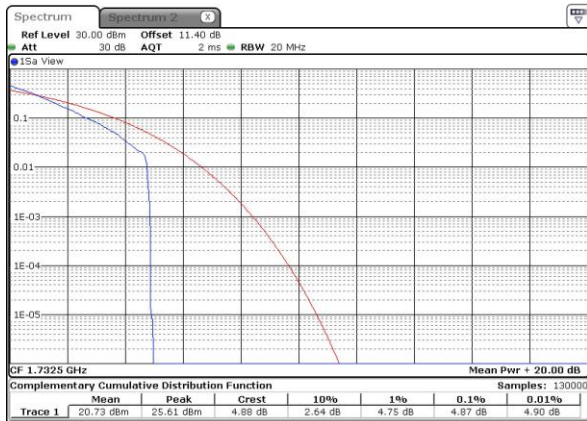
Date: 9 MAY 2017 01:40:25

Lowest Channel / Full RB



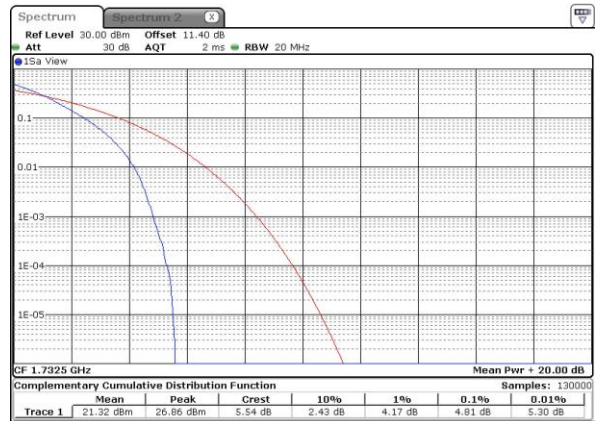
Date: 9 MAY 2017 01:40:35

Middle Channel / 1RB



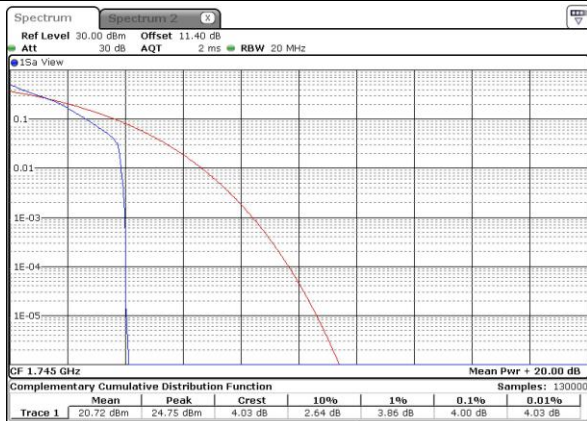
Date: 9 MAY 2017 01:40:44

Middle Channel / Full RB



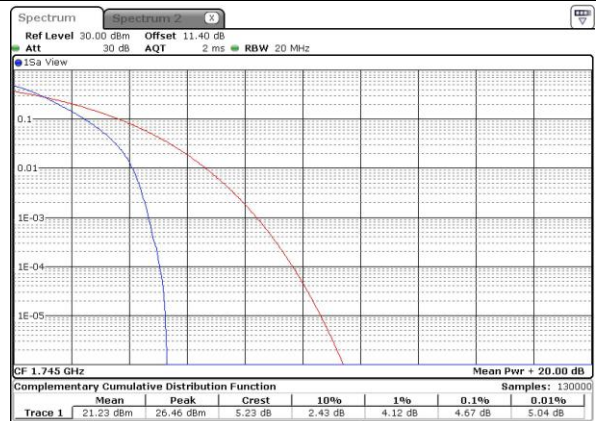
Date: 9 MAY 2017 01:40:55

Highest Channel / 1RB



Date: 9 MAY 2017 01:41:06

Highest Channel / Full RB

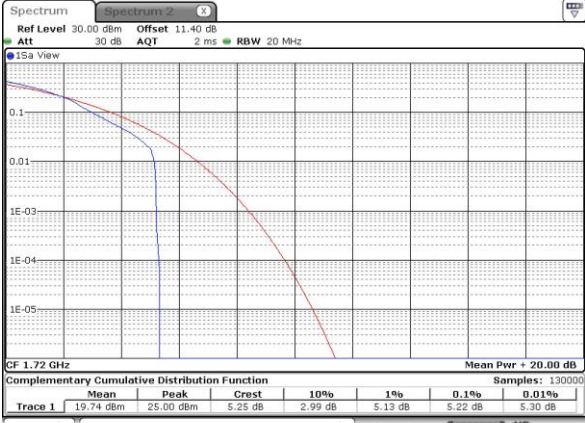


Date: 9 MAY 2017 01:41:18



LTE Band 4 / 20MHz / 16QAM

Lowest Channel / 1RB



Date: 9 MAY 2017 01:39:15

Lowest Channel / Full RB



Date: 9 MAY 2017 01:39:26

Middle Channel / 1RB



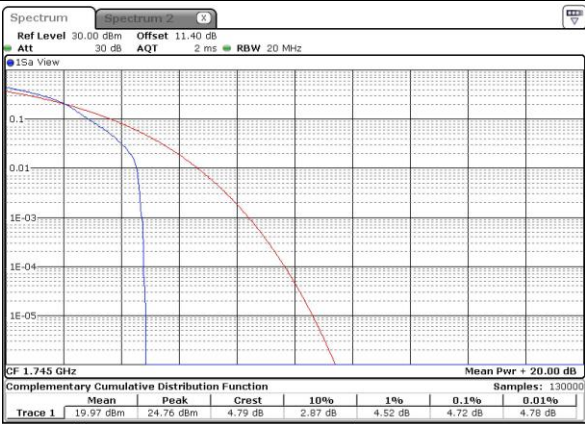
Date: 9 MAY 2017 01:39:44

Middle Channel / Full RB



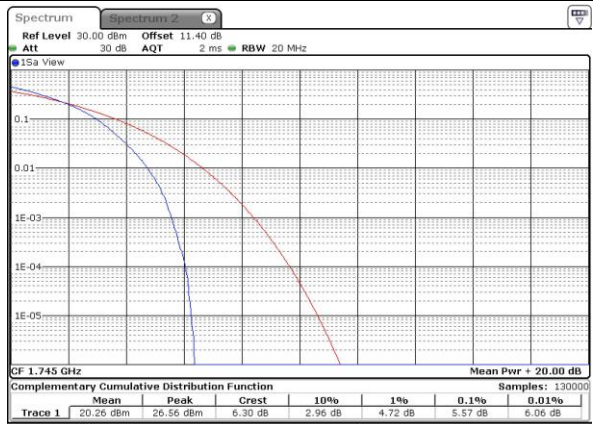
Date: 9 MAY 2017 01:39:54

Highest Channel / 1RB



Date: 9 MAY 2017 01:40:05

Highest Channel / Full RB

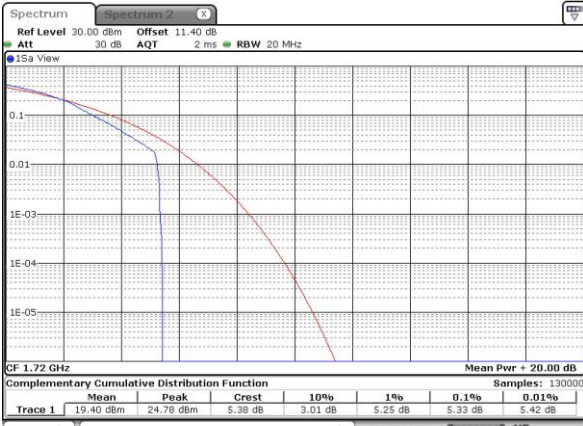


Date: 9 MAY 2017 01:40:15



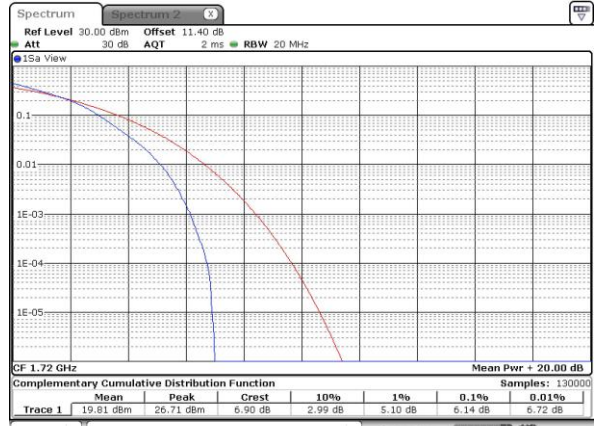
LTE Band 4 / 20MHz / 64QAM

Lowest Channel / 1RB



Date: 14.MAY.2017 10:06:31

Lowest Channel / Full RB



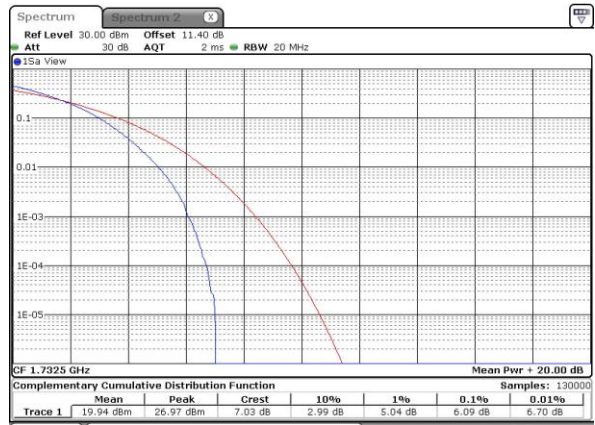
Date: 14.MAY.2017 10:06:46

Middle Channel / 1RB



Date: 14.MAY.2017 10:06:56

Middle Channel / Full RB



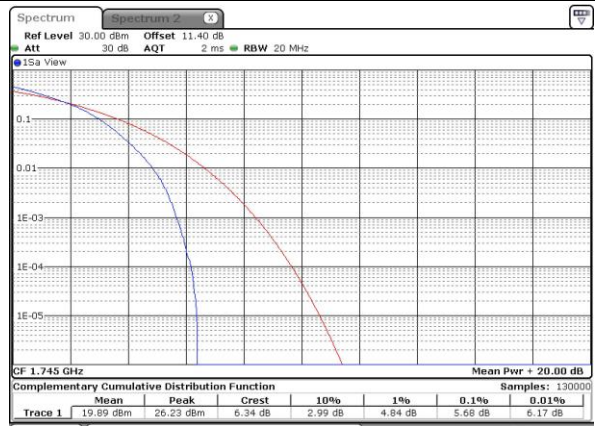
Date: 14.MAY.2017 10:07:06

Highest Channel / 1RB



Date: 14.MAY.2017 10:07:16

Highest Channel / Full RB



Date: 14.MAY.2017 10:07:25



**26dB Bandwidth**

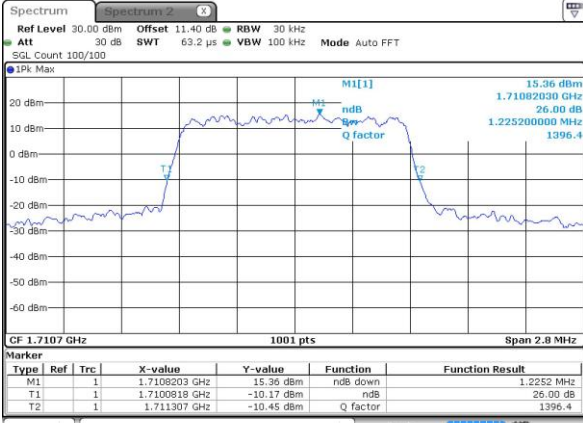
Mode	LTE Band 4 : 26dB BW(MHz)											
	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	1.23	1.21	3.03	3.02	4.93	4.89	9.75	9.73	14.45	14.33	20.22	20.10
Middle CH	1.22	1.22	2.99	2.97	4.82	4.87	9.77	9.73	14.24	14.48	20.14	20.10
Highest CH	1.23	1.23	3.01	3.03	4.93	4.85	9.69	9.91	14.36	14.51	20.10	20.02

BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
	Mod.	64QAM	64QAM	64QAM	64QAM	64QAM	64QAM	64QAM	64QAM	64QAM	64QAM	
Lowest CH	-	1.22	-	3.03	-	4.82	-	9.79	-	14.21	-	20.26
Middle CH	-	1.22	-	3.06	-	4.88	-	9.79	-	14.57	-	20.10
Highest CH	-	1.23	-	2.99	-	4.89	-	9.83	-	14.36	-	20.18



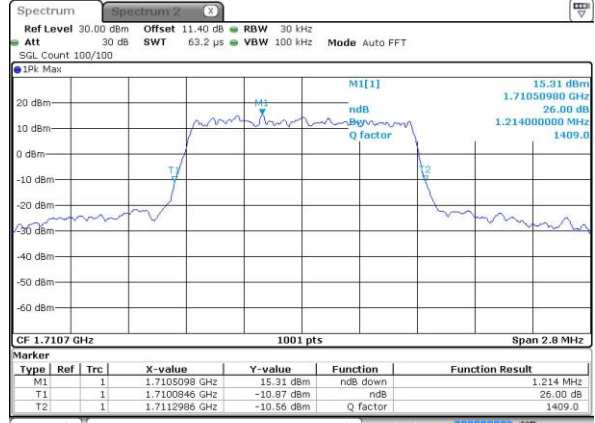
LTE Band 4

Lowest Channel / 1.4MHz / QPSK



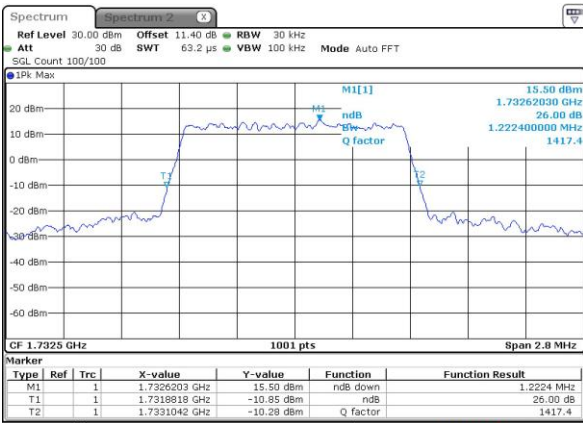
Date: 9 MAY 2017 01:22:12

Lowest Channel / 1.4MHz / 16QAM



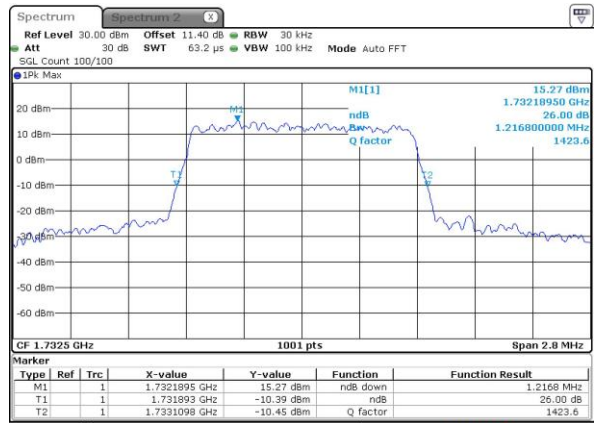
Date: 9 MAY 2017 01:22:23

Middle Channel / 1.4MHz / QPSK



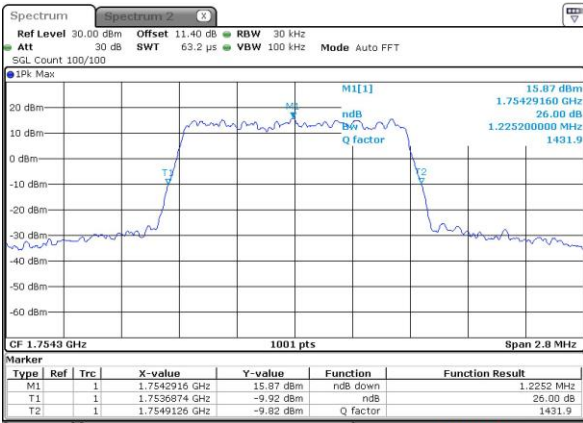
Date: 9 MAY 2017 01:29:19

Middle Channel / 1.4MHz / 16QAM



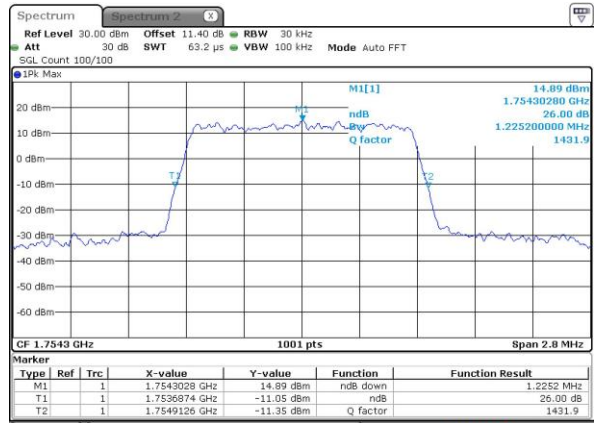
Date: 9 MAY 2017 01:29:30

Highest Channel / 1.4MHz / QPSK



Date: 9 MAY 2017 01:31:50

Highest Channel / 1.4MHz / 16QAM

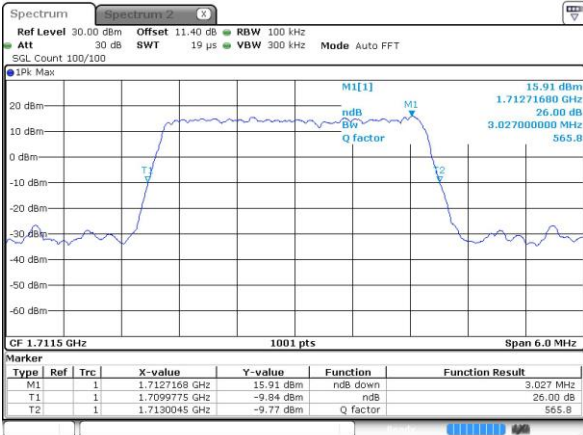


Date: 9 MAY 2017 01:32:00



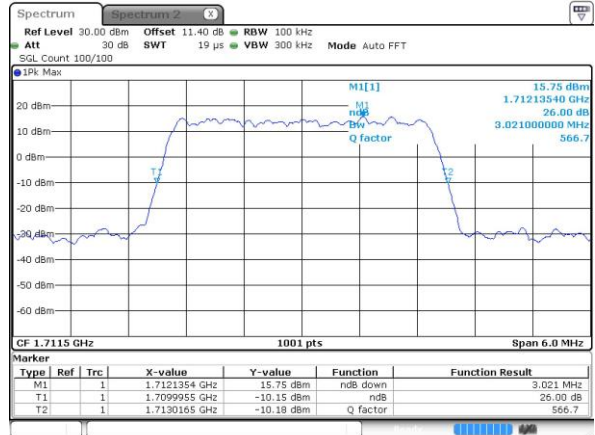
LTE Band 4

Lowest Channel / 3MHz / QPSK



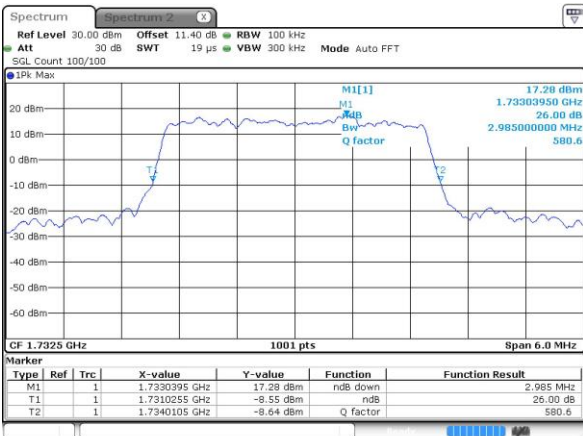
Date: 8 MAY 2017 23:53:43

Lowest Channel / 3MHz / 16QAM



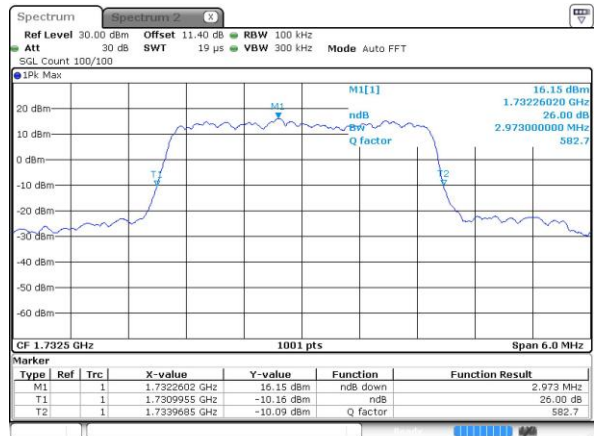
Date: 8 MAY 2017 23:53:53

Middle Channel / 3MHz / QPSK



Date: 9 MAY 2017 00:00:51

Middle Channel / 3MHz / 16QAM



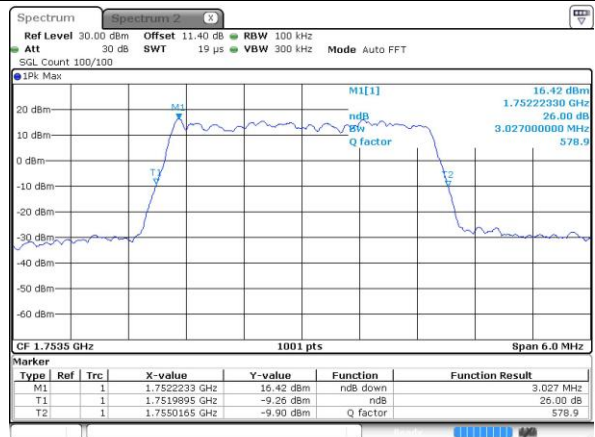
Date: 9 MAY 2017 00:01:01

Highest Channel / 3MHz / QPSK



Date: 9 MAY 2017 00:03:21

Highest Channel / 3MHz / 16QAM

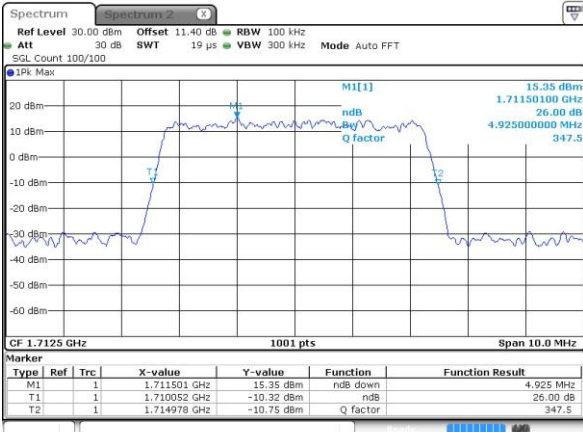


Date: 9 MAY 2017 00:03:32



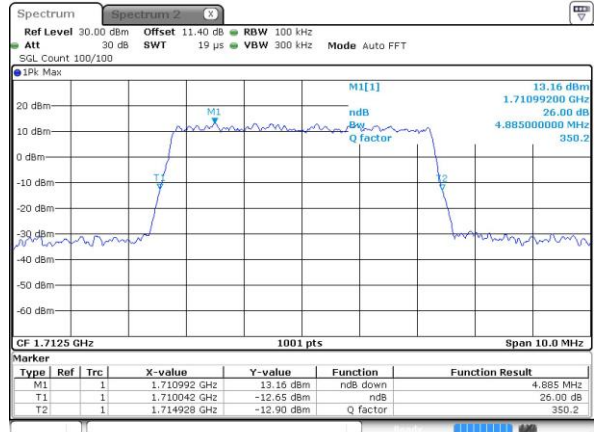
LTE Band 4

Lowest Channel / 5MHz / QPSK



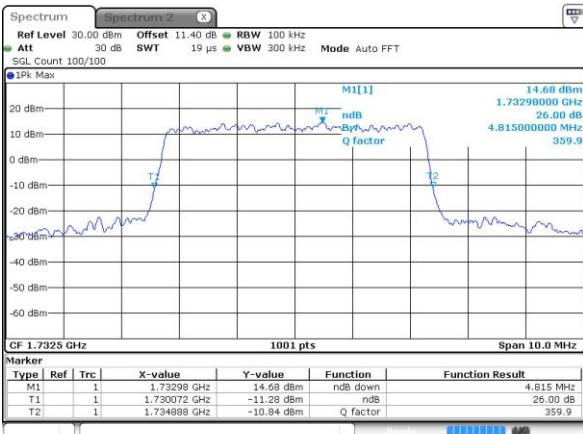
Date: 9 MAY 2017 00:10:28

Lowest Channel / 5MHz / 16QAM



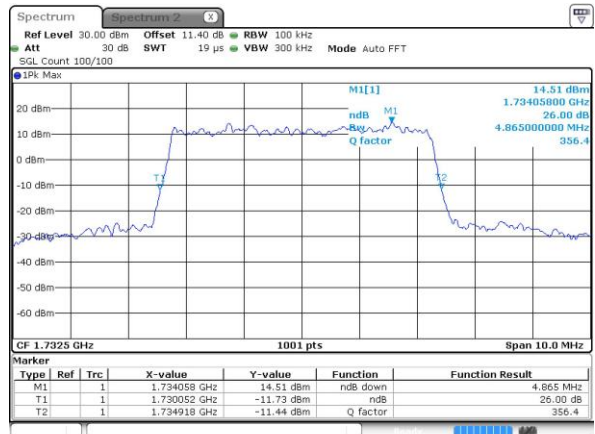
Date: 9 MAY 2017 00:10:39

Middle Channel / 5MHz / QPSK



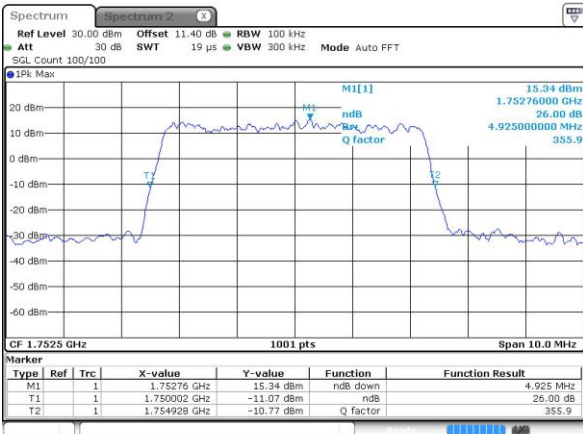
Date: 9 MAY 2017 00:17:35

Middle Channel / 5MHz / 16QAM



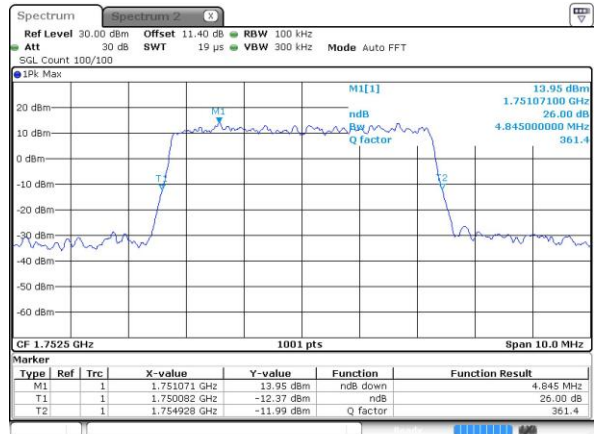
Date: 9 MAY 2017 00:17:46

Highest Channel / 5MHz / QPSK



Date: 9 MAY 2017 00:20:06

Highest Channel / 5MHz / 16QAM

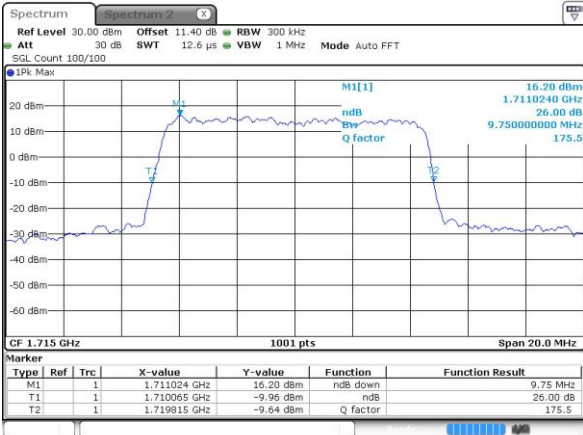


Date: 9 MAY 2017 00:20:16



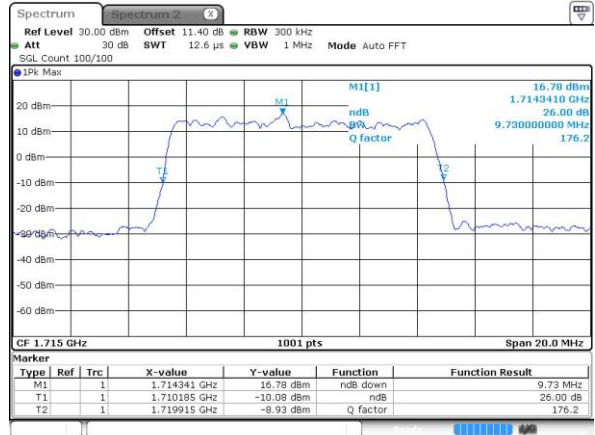
LTE Band 4

Lowest Channel / 10MHz / QPSK



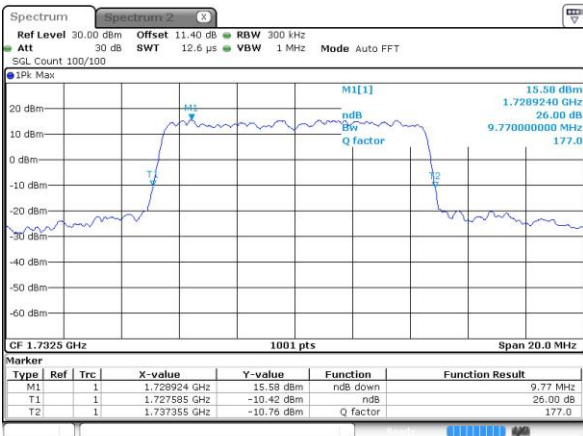
Date: 9 MAY 2017 00:27:13

Lowest Channel / 10MHz / 16QAM



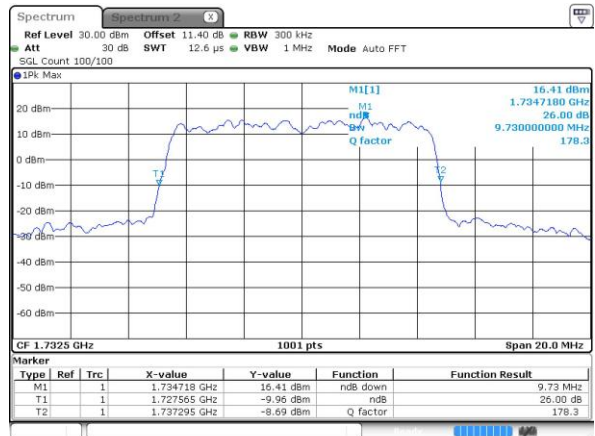
Date: 9 MAY 2017 00:27:23

Middle Channel / 10MHz / QPSK



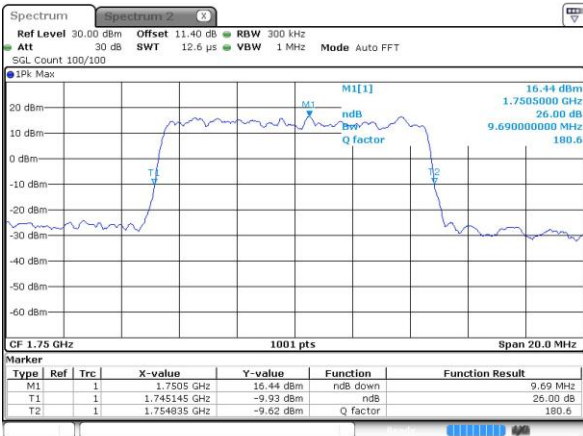
Date: 9 MAY 2017 00:34:20

Middle Channel / 10MHz / 16QAM



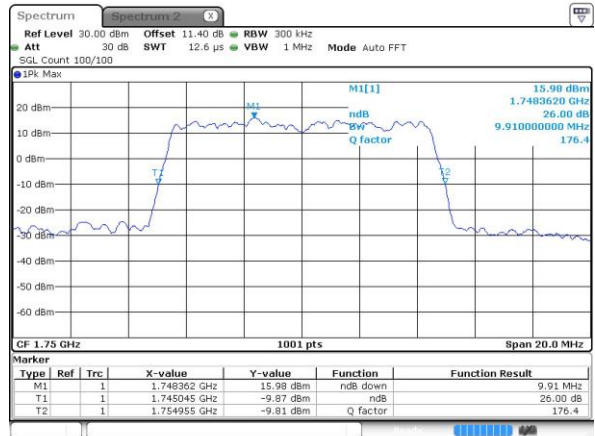
Date: 9 MAY 2017 00:34:31

Highest Channel / 10MHz / QPSK



Date: 9 MAY 2017 00:36:51

Highest Channel / 10MHz / 16QAM

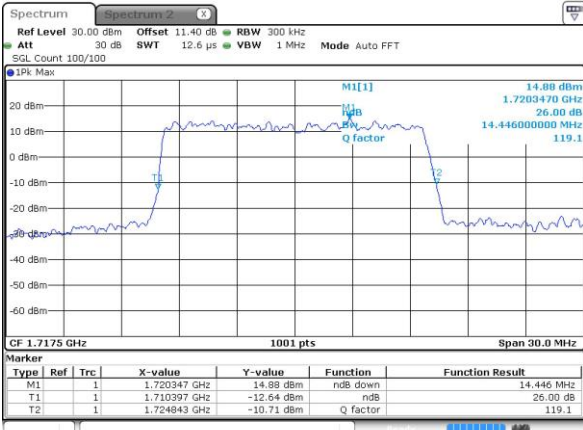


Date: 9 MAY 2017 00:37:01



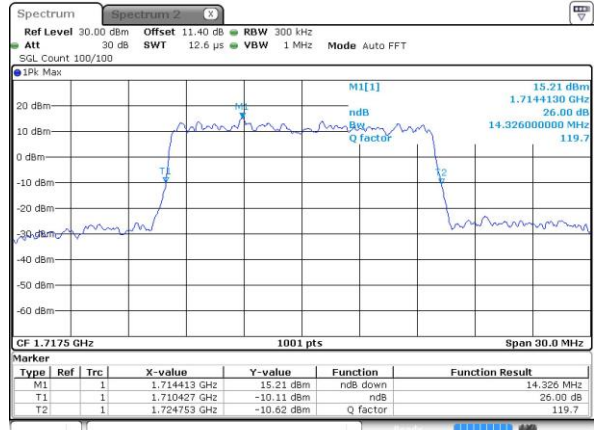
LTE Band 4

Lowest Channel / 15MHz / QPSK



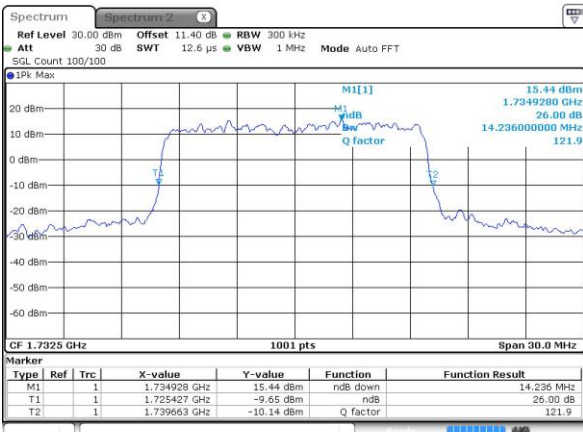
Date: 9 MAY 2017 00:45:27

Lowest Channel / 15MHz / 16QAM



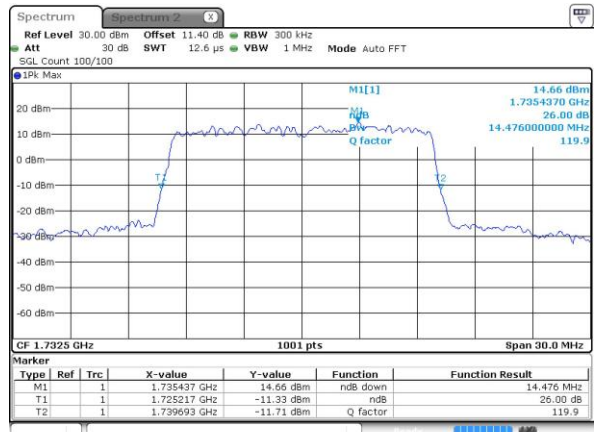
Date: 9 MAY 2017 00:45:38

Middle Channel / 15MHz / QPSK



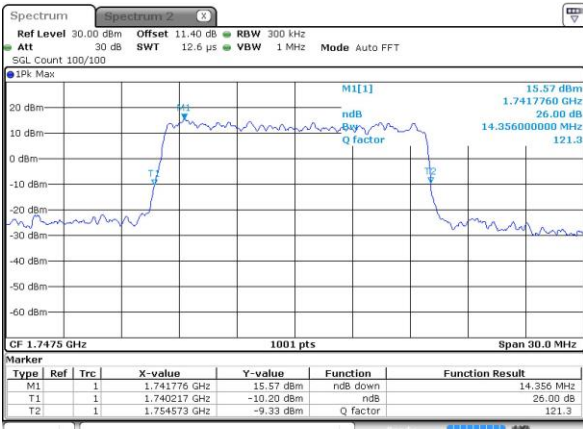
Date: 9 MAY 2017 00:52:34

Middle Channel / 15MHz / 16QAM



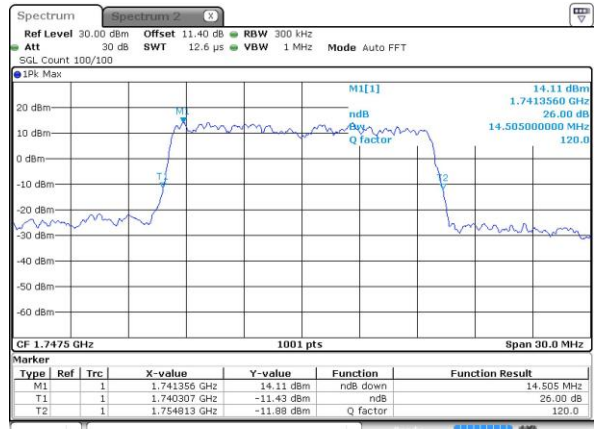
Date: 9 MAY 2017 00:52:45

Highest Channel / 15MHz / QPSK



Date: 9 MAY 2017 00:55:05

Highest Channel / 15MHz / 16QAM

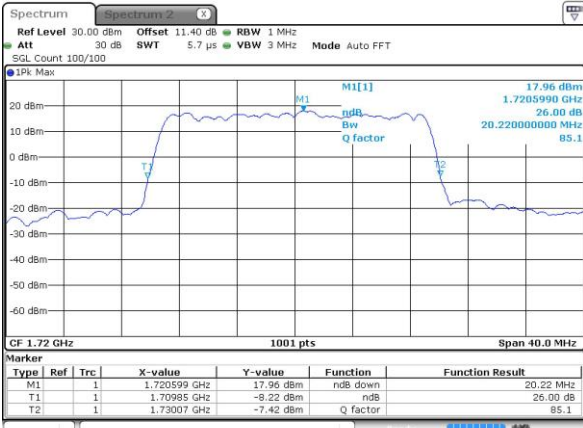


Date: 9 MAY 2017 00:55:15



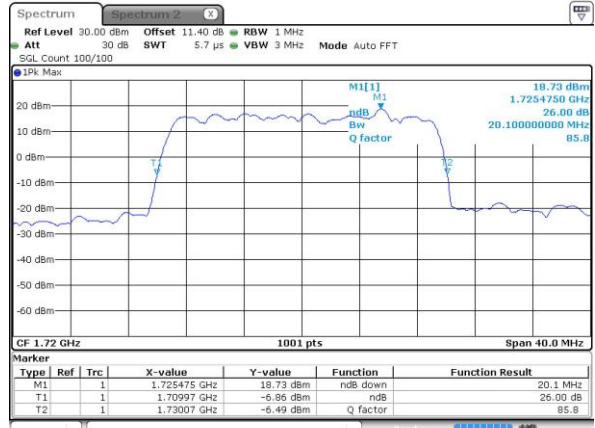
LTE Band 4

Lowest Channel / 20MHz / QPSK



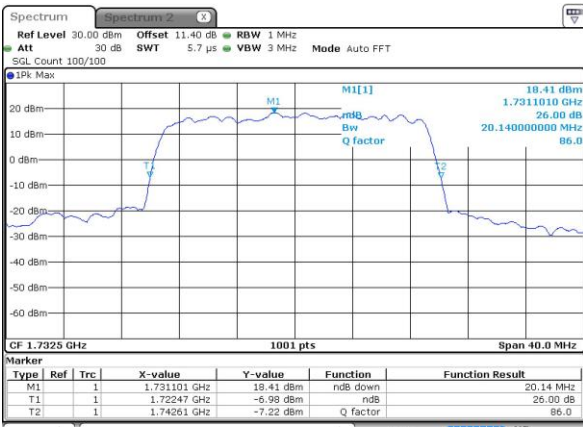
Date: 9 MAY 2017 01:02:12

Lowest Channel / 20MHz / 16QAM



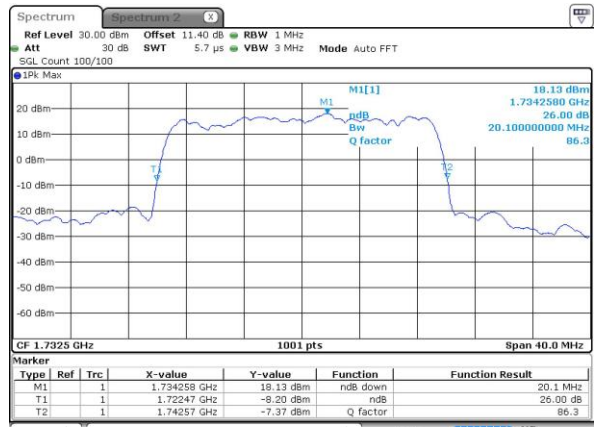
Date: 9 MAY 2017 01:02:22

Middle Channel / 20MHz / QPSK



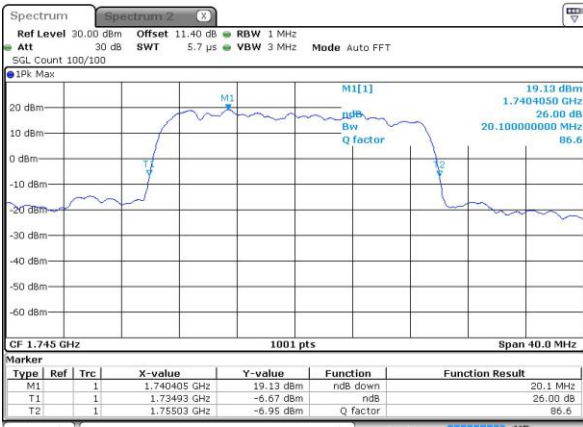
Date: 9 MAY 2017 01:09:19

Middle Channel / 20MHz / 16QAM



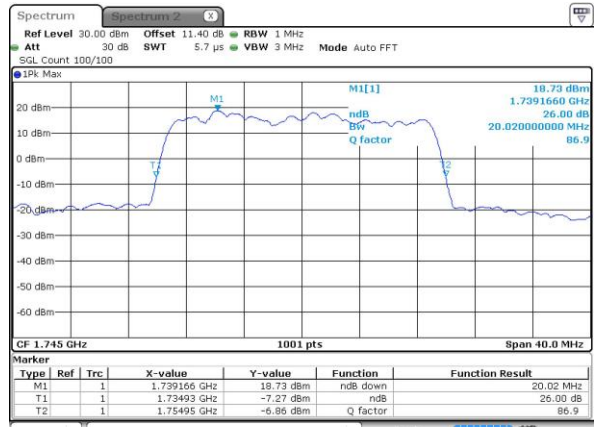
Date: 9 MAY 2017 01:08:29

Highest Channel / 20MHz / QPSK



Date: 9 MAY 2017 01:11:49

Highest Channel / 20MHz / 16QAM

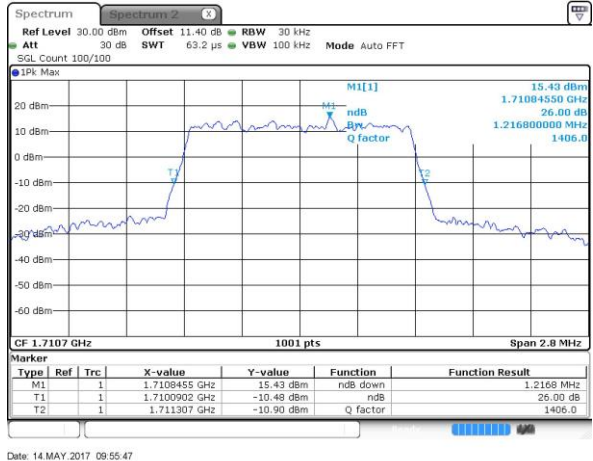


Date: 9 MAY 2017 01:12:00



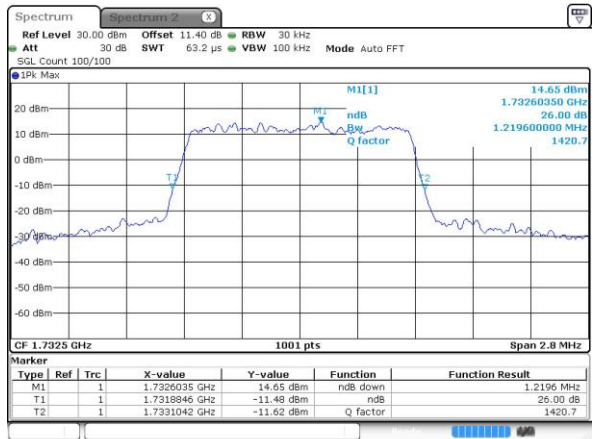
LTE Band 4

Lowest Channel / 1.4MHz / 64QAM



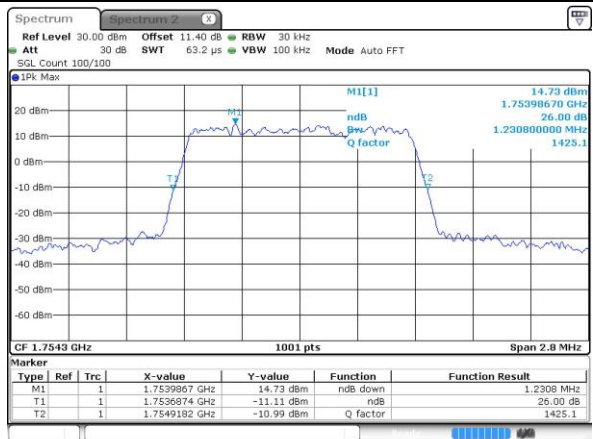
Date: 14.MAY.2017 09:55:47

Middle Channel / 1.4MHz / 64QAM



Date: 14.MAY.2017 09:59:21

Highest Channel / 1.4MHz / 64QAM

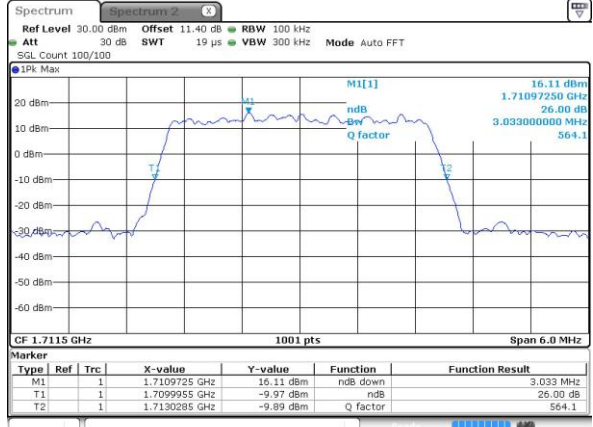


Date: 14.MAY.2017 10:00:36



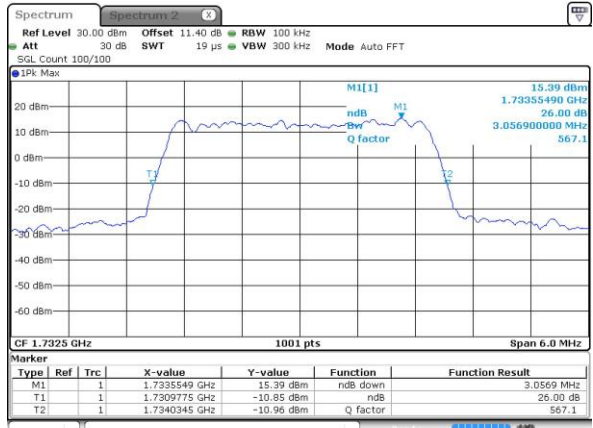
LTE Band 4

Lowest Channel / 3MHz / 64QAM



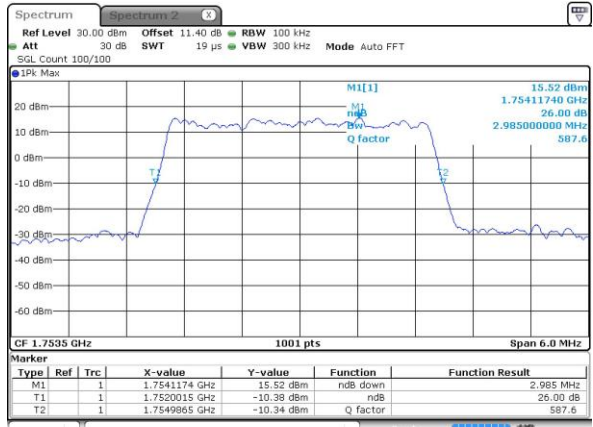
Date: 14.MAY.2017 09:08:13

Middle Channel / 3MHz / 64QAM



Date: 14.MAY.2017 09:11:47

Highest Channel / 3MHz / 64QAM

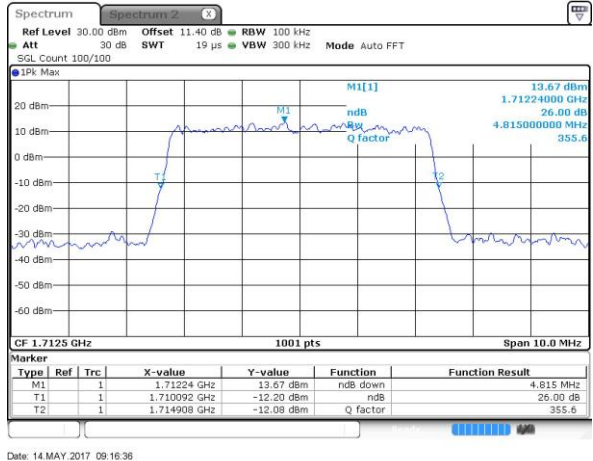


Date: 14.MAY.2017 09:13:02



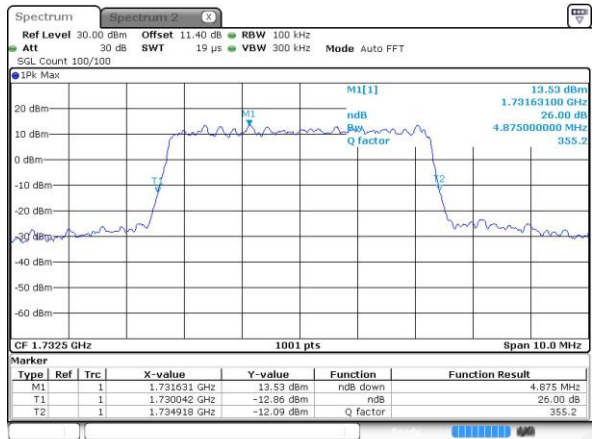
LTE Band 4

Lowest Channel / 5MHz / 64QAM



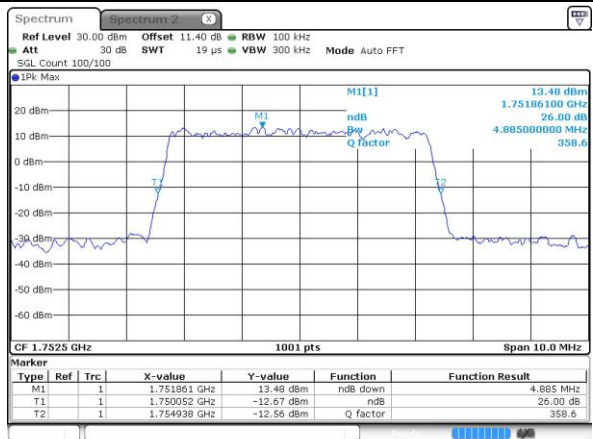
Date: 14.MAY.2017 09:16:36

Middle Channel / 5MHz / 64QAM



Date: 14.MAY.2017 09:20:09

Highest Channel / 5MHz / 64QAM

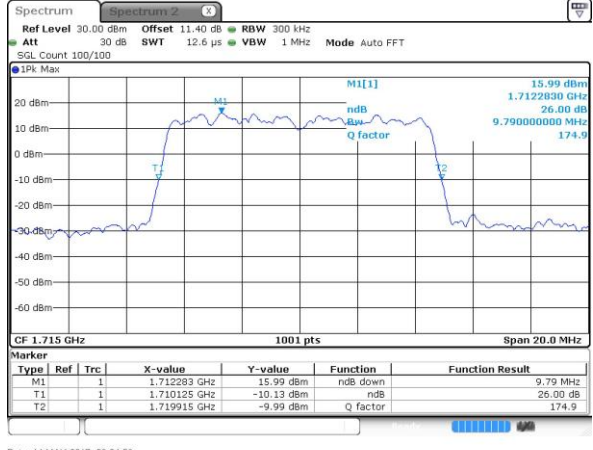


Date: 14.MAY.2017 09:21:24

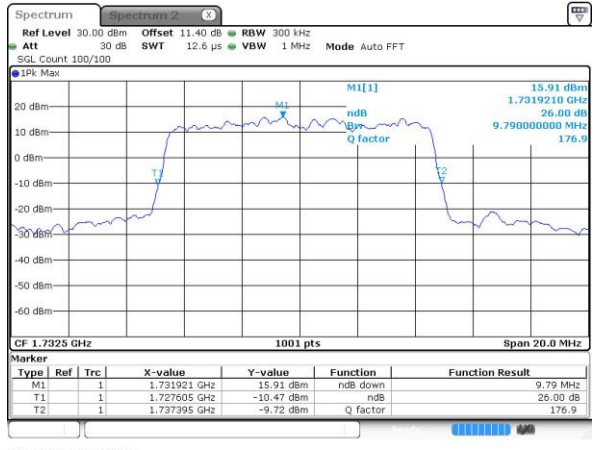


LTE Band 4

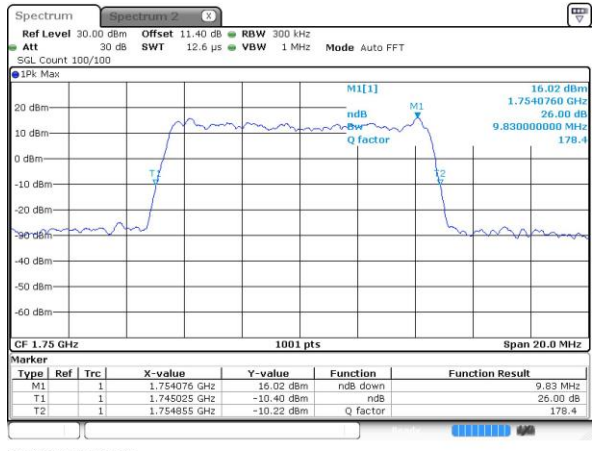
Lowest Channel / 10MHz / 64QAM



Middle Channel / 10MHz / 64QAM



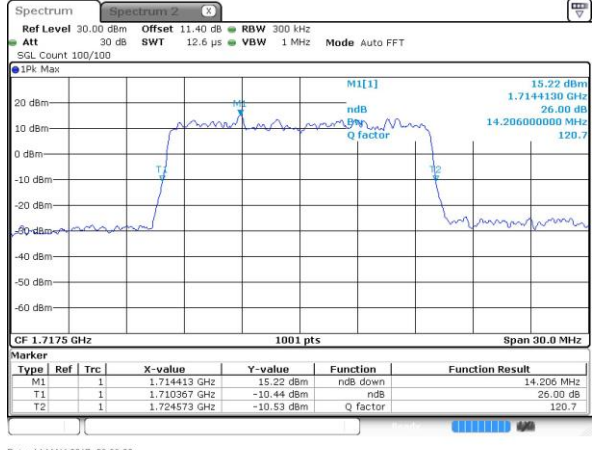
Highest Channel / 10MHz / 64QAM





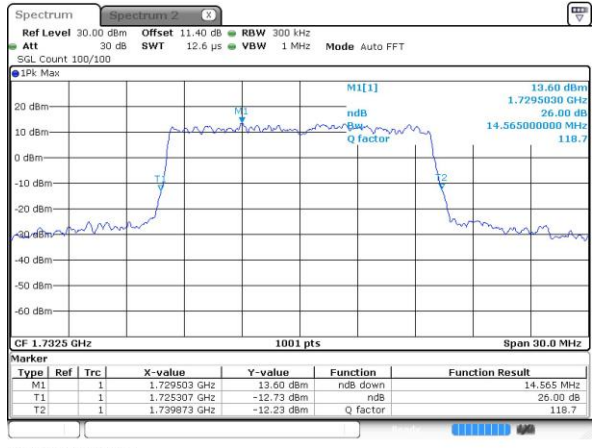
LTE Band 4

Lowest Channel / 15MHz / 64QAM



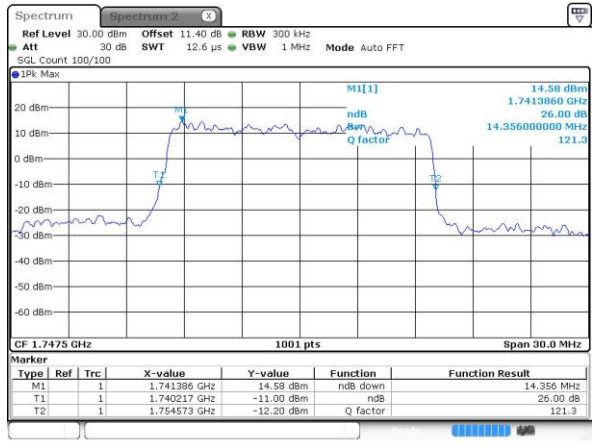
Date: 14.MAY.2017 09:33:20

Middle Channel / 15MHz / 64QAM



Date: 14.MAY.2017 09:36:54

Highest Channel / 15MHz / 64QAM

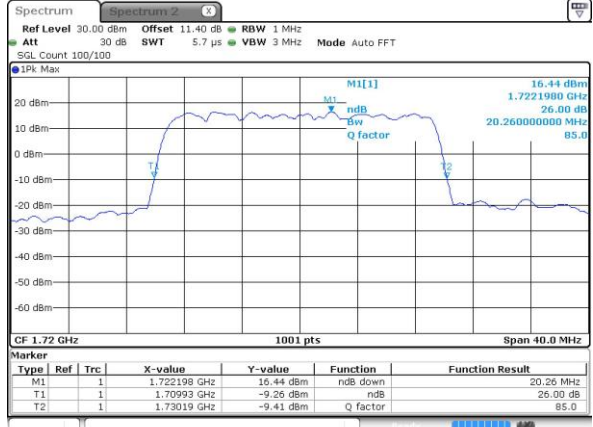


Date: 14.MAY.2017 09:38:09



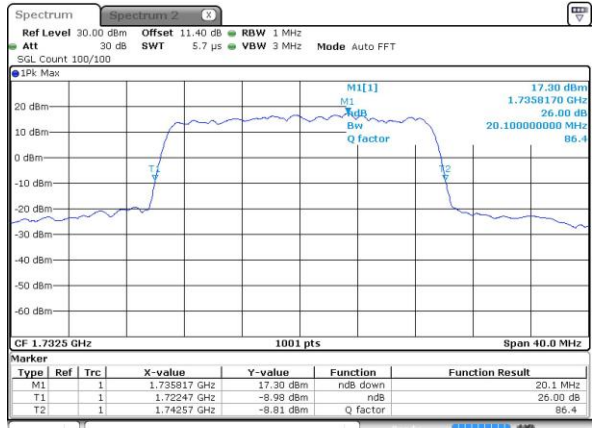
LTE Band 4

Lowest Channel / 20MHz / 64QAM



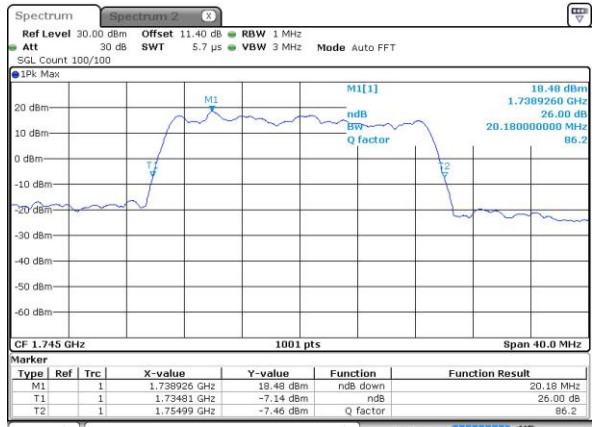
Date: 14.MAY.2017 09:41:42

Middle Channel / 20MHz / 64QAM



Date: 14.MAY.2017 09:49:12

Highest Channel / 20MHz / 64QAM



Date: 14.MAY.2017 09:50:27



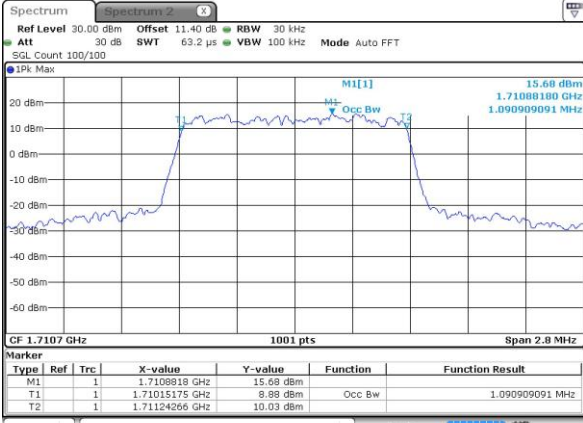
### Occupied Bandwidth

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	1.09	1.09	2.72	2.71	4.49	4.49	8.99	8.99	13.46	13.4	18.42	18.42
Middle CH	1.09	1.09	2.72	2.72	4.47	4.49	8.99	9.01	13.34	13.43	18.3	18.22
Highest CH	1.08	1.09	2.72	2.73	4.5	4.48	9.05	9.03	13.49	13.49	18.34	18.3
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	-	64QAM	-	64QAM	-	64QAM	-	64QAM	-	64QAM	-	64QAM
Lowest CH	-	1.09	-	2.7	-	4.51	-	8.97	-	13.52	-	18.22
Middle CH	-	1.09	-	2.72	-	4.49	-	8.99	-	13.4	-	18.18
Highest CH	-	1.09	-	2.73	-	4.49	-	9.05	-	13.49	-	18.46



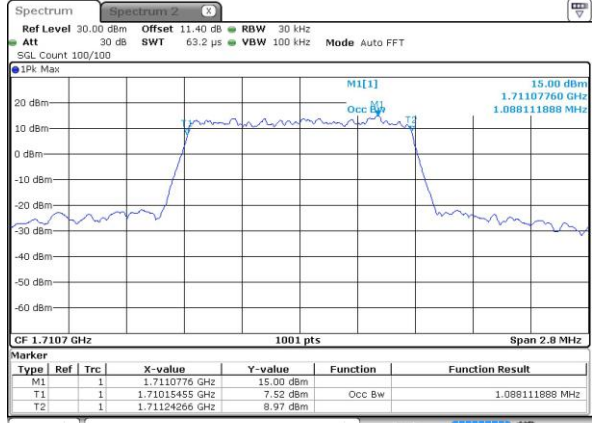
LTE Band 4

Lowest Channel / 1.4MHz / QPSK



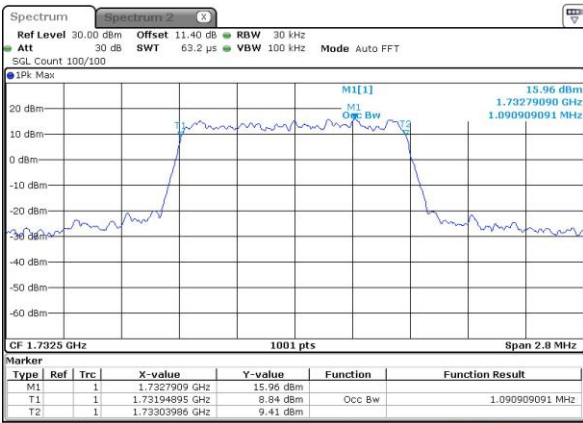
Date: 9 MAY 2017 01:21:52

Lowest Channel / 1.4MHz / 16QAM



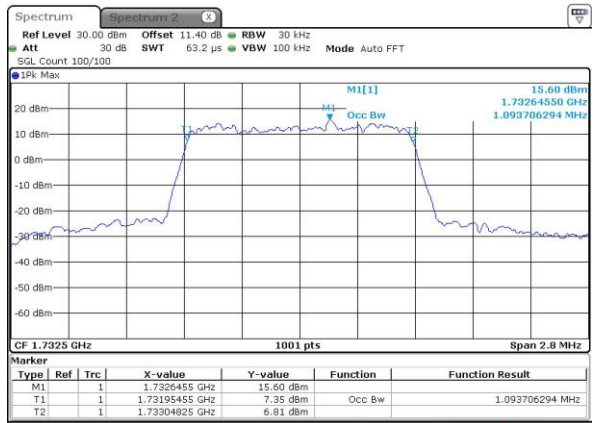
Date: 9 MAY 2017 01:22:02

Middle Channel / 1.4MHz / QPSK



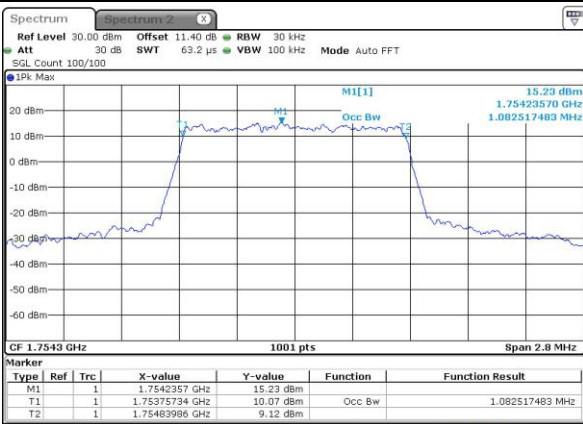
Date: 9 MAY 2017 01:28:59

Middle Channel / 1.4MHz / 16QAM



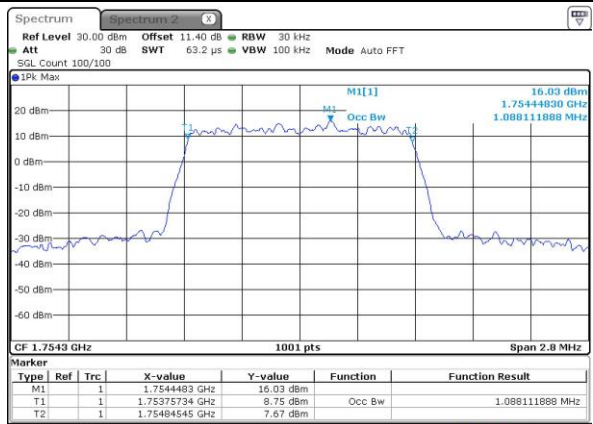
Date: 9 MAY 2017 01:29:09

Highest Channel / 1.4MHz / QPSK



Date: 9 MAY 2017 01:31:29

Highest Channel / 1.4MHz / 16QAM

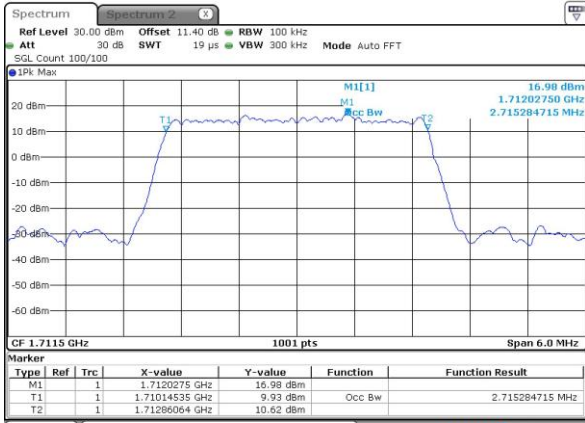


Date: 9 MAY 2017 01:31:40



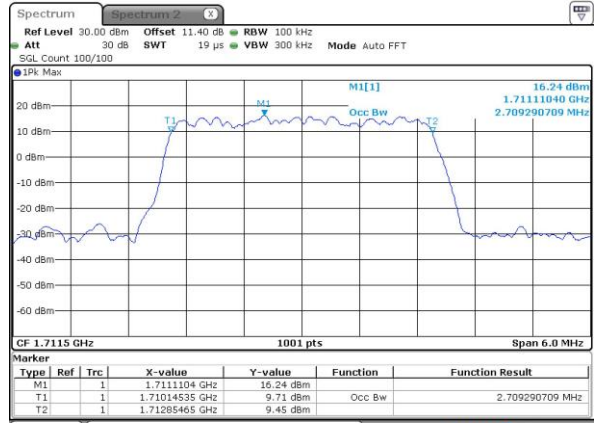
LTE Band 4

Lowest Channel / 3MHz / QPSK



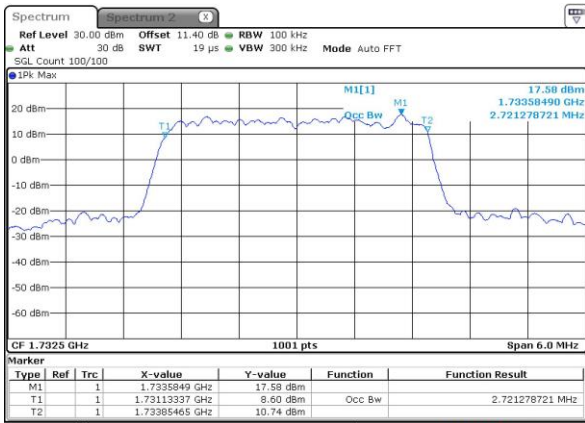
Date: 8 MAY 2017 23:53:22

Lowest Channel / 3MHz / 16QAM



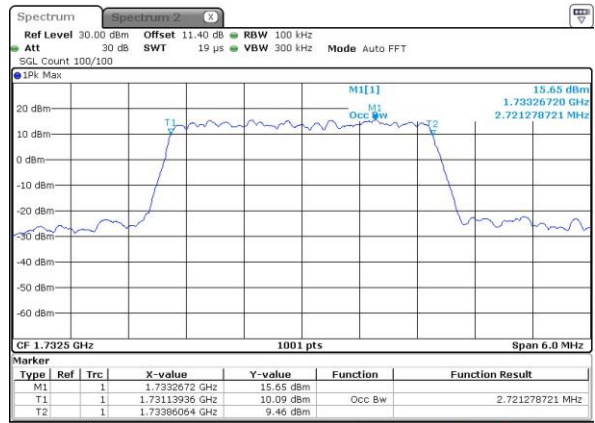
Date: 8 MAY 2017 23:53:33

Middle Channel / 3MHz / QPSK



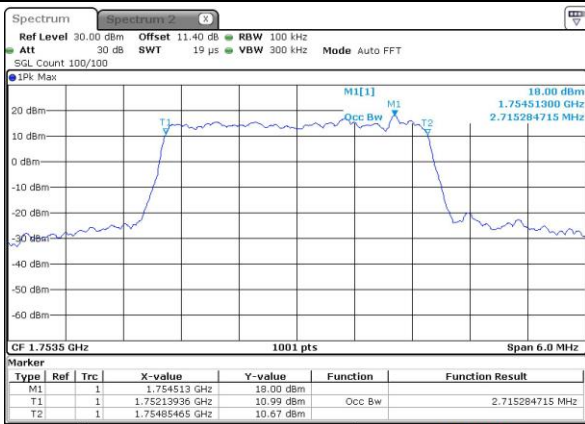
Date: 9 MAY 2017 00:00:30

Middle Channel / 3MHz / 16QAM



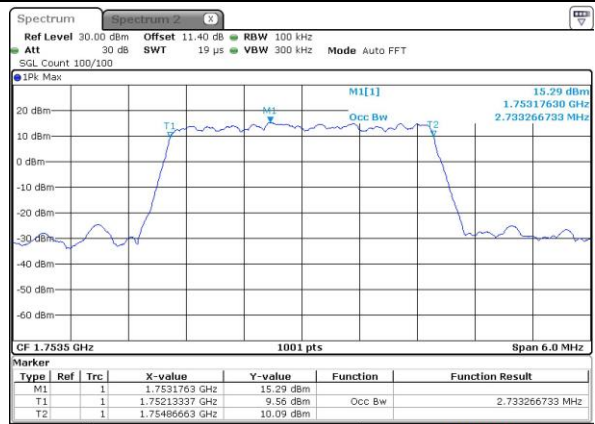
Date: 9 MAY 2017 00:00:40

Highest Channel / 3MHz / QPSK



Date: 9 MAY 2017 00:03:00

Highest Channel / 3MHz / 16QAM



Date: 9 MAY 2017 00:03:11