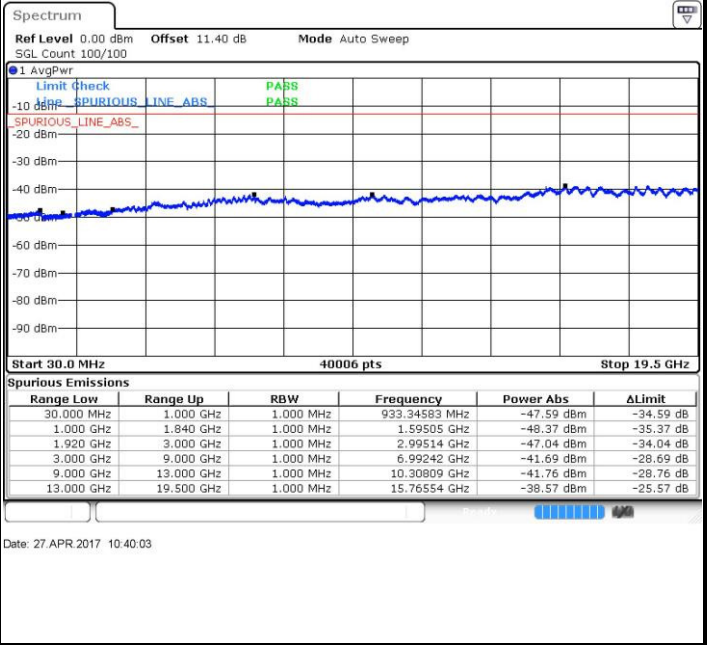


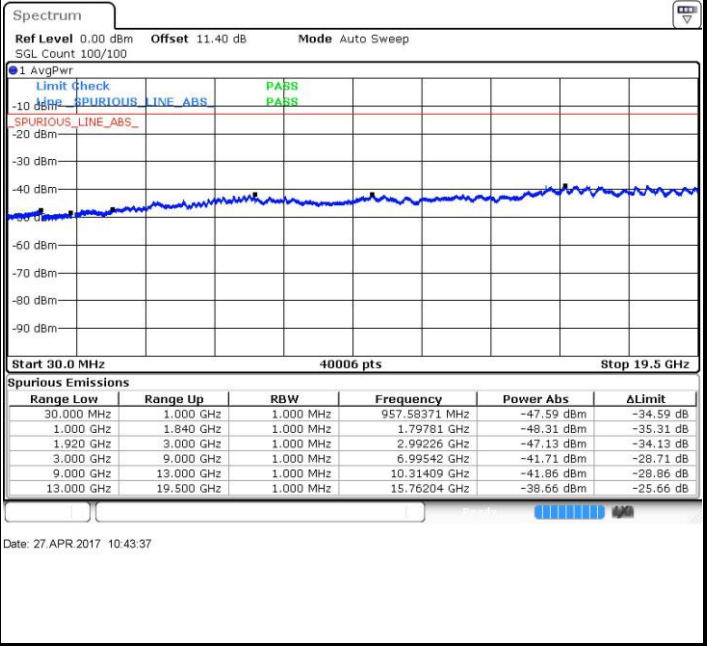


LTE Band 2 / 20MHz

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	0.0005	PASS
40	Normal Voltage	0.0009	
30	Normal Voltage	0.0086	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0080	
0	Normal Voltage	0.0003	
-10	Normal Voltage	0.0000	
-20	Normal Voltage	0.0009	
-30	Normal Voltage	0.0002	
20	Maximum Voltage	0.0082	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0013	

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	4.46	5.01	5.45	5.83	PASS
Middle CH	4.14	4.9	5.01	6.06	
Highest CH	4.55	5.19	4.99	5.97	
Mod.	-		64QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	-	-	4.9	5.94	PASS
Middle CH	-	-	4.84	5.86	
Highest CH	-	-	4.87	6.06	



LTE Band 4 / 20MHz / QPSK

Lowest Channel / 1RB



Date: 5 APR 2017 14:09:08

Lowest Channel / Full RB



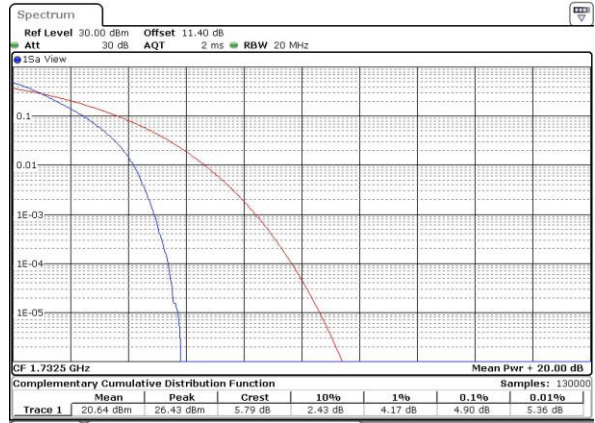
Date: 5 APR 2017 14:14:12

Middle Channel / 1RB



Date: 5 APR 2017 14:15:33

Middle Channel / Full RB



Date: 5 APR 2017 14:15:48

Highest Channel / 1RB



Date: 5 APR 2017 14:15:59

Highest Channel / Full RB

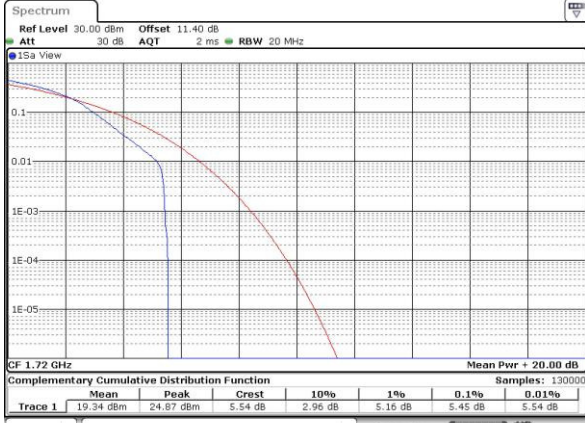


Date: 5 APR 2017 14:16:16



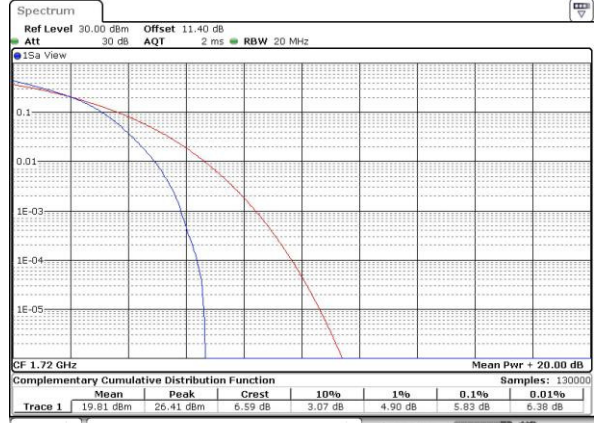
LTE Band 4 / 20MHz / 16QAM

Lowest Channel / 1RB



Date: 5 APR 2017 13:51:02

Lowest Channel / Full RB



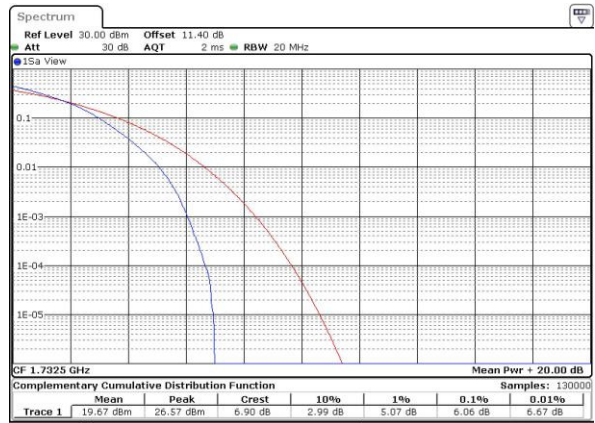
Date: 5 APR 2017 14:05:41

Middle Channel / 1RB



Date: 5 APR 2017 14:06:11

Middle Channel / Full RB



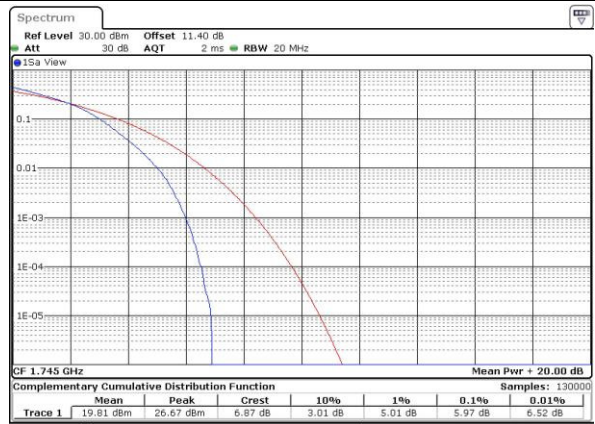
Date: 5 APR 2017 14:06:21

Highest Channel / 1RB



Date: 5 APR 2017 14:06:32

Highest Channel / Full RB



Date: 5 APR 2017 14:06:28



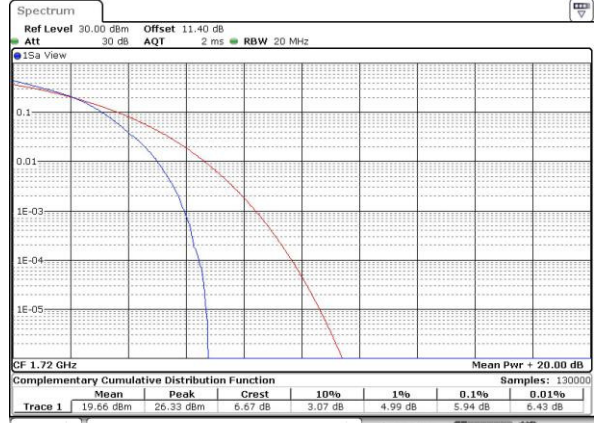
LTE Band 4 / 20MHz / 64QAM

Lowest Channel / 1RB



Date: 27 APR 2017 13:37:19

Lowest Channel / Full RB



Date: 27 APR 2017 13:38:00

Middle Channel / 1RB



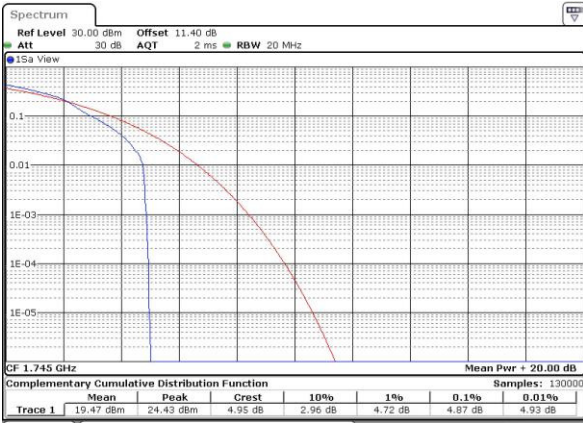
Date: 27 APR 2017 13:39:27

Middle Channel / Full RB



Date: 27 APR 2017 13:43:53

Highest Channel / 1RB



Date: 27 APR 2017 13:44:04

Highest Channel / Full RB



Date: 27 APR 2017 13:44:14



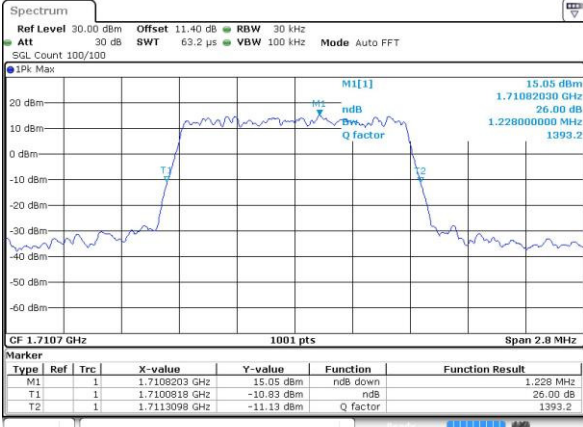
26dB Bandwidth

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	1.23	1.23	3.02	3.00	4.89	4.89	9.91	9.81	14.54	14.51	20.06	20.06
Middle CH	1.23	1.23	3.04	3.04	4.90	4.94	9.71	9.83	14.27	14.39	20.34	20.22
Highest CH	1.23	1.23	3.00	3.06	4.90	4.94	9.91	9.89	14.63	14.45	20.22	20.30
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	-	64QAM	-	64QAM	-	64QAM	-	64QAM	-	64QAM	-	64QAM
Lowest CH	-	1.21	-	3.05	-	4.89	-	9.79	-	14.21	-	20.22
Middle CH	-	1.23	-	3.06	-	4.87	-	9.79	-	14.60	-	20.10
Highest CH	-	1.22	-	3.03	-	4.85	-	9.67	-	14.54	-	20.22



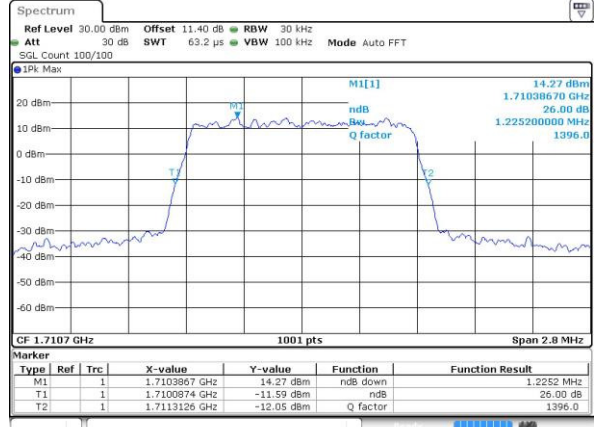
LTE Band 4

Lowest Channel / 1.4MHz / QPSK



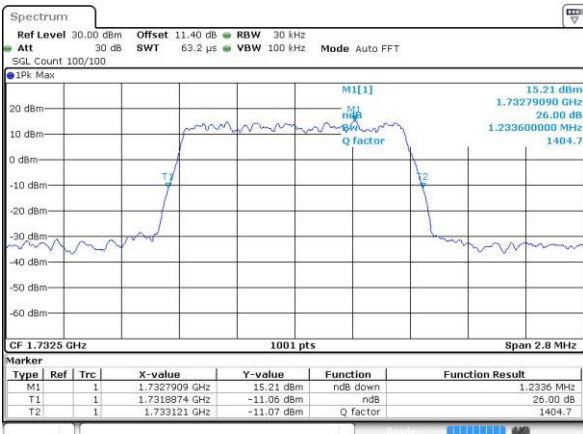
Date: 5 APR 2017 13:34:17

Lowest Channel / 1.4MHz / 16QAM



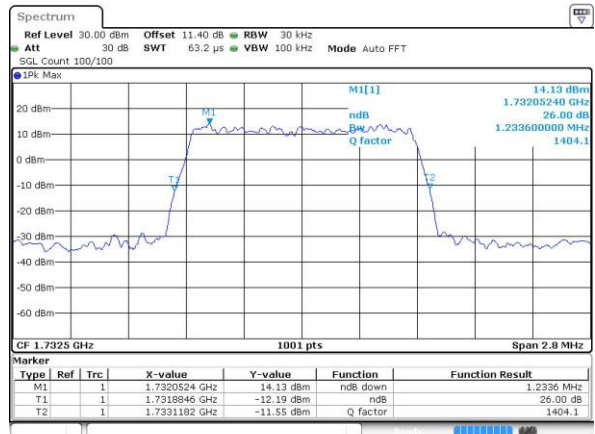
Date: 5 APR 2017 13:34:28

Middle Channel / 1.4MHz / QPSK



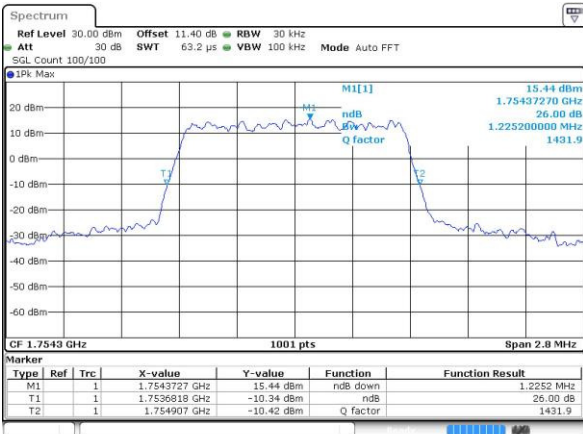
Date: 5 APR 2017 13:41:25

Middle Channel / 1.4MHz / 16QAM



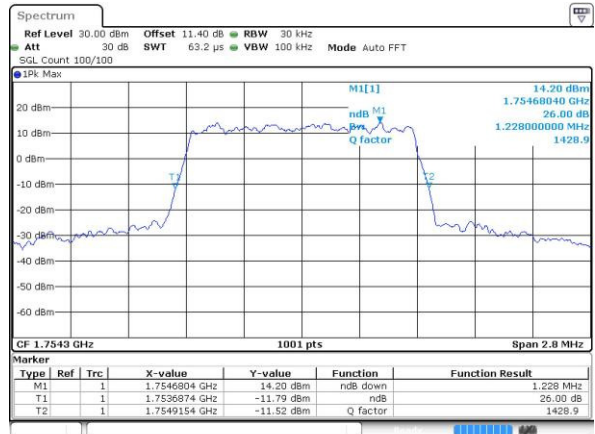
Date: 5 APR 2017 13:41:35

Highest Channel / 1.4MHz / QPSK



Date: 5 APR 2017 13:43:55

Highest Channel / 1.4MHz / 16QAM

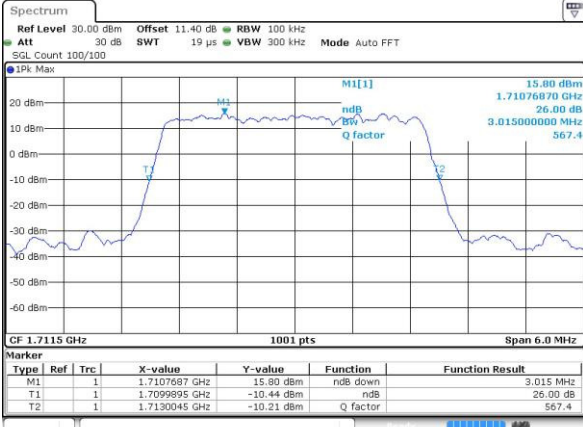


Date: 5 APR 2017 13:44:06



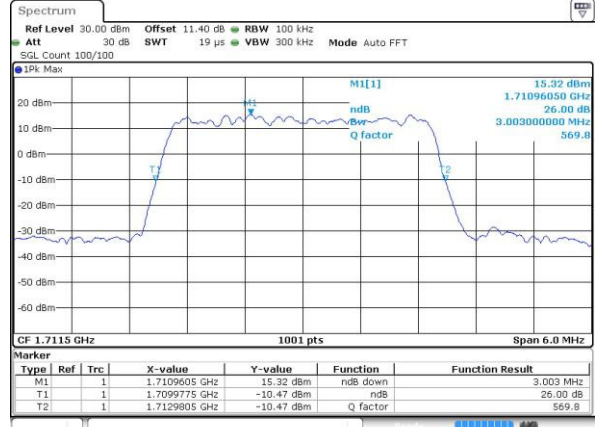
LTE Band 4

Lowest Channel / 3MHz / QPSK



Date: 5 APR 2017 10:52:03

Lowest Channel / 3MHz / 16QAM



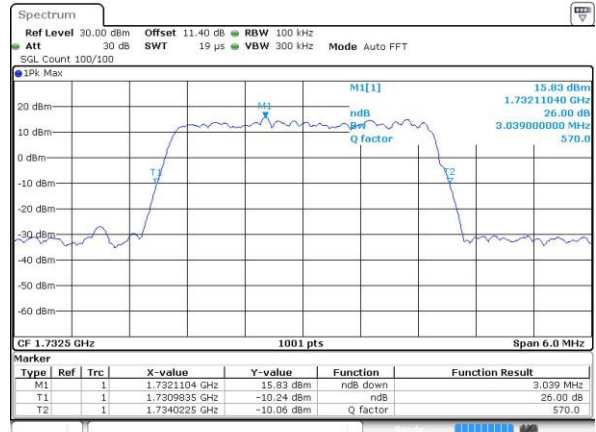
Date: 5 APR 2017 10:52:13

Middle Channel / 3MHz / QPSK



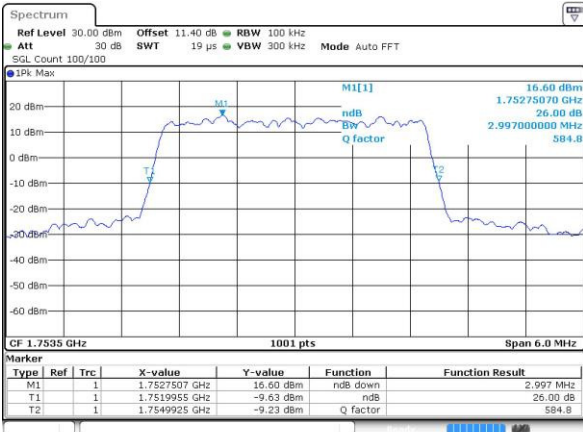
Date: 5 APR 2017 10:59:10

Middle Channel / 3MHz / 16QAM



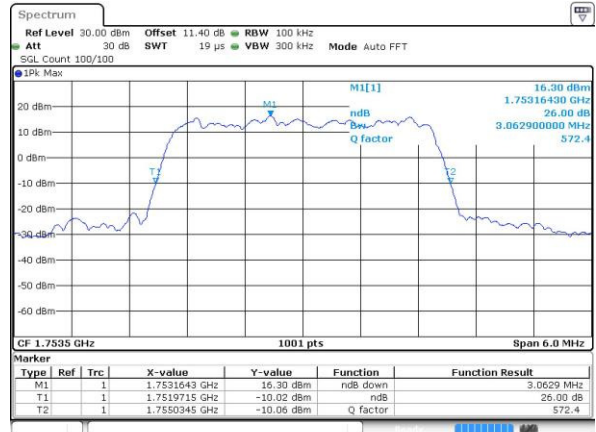
Date: 5 APR 2017 10:59:20

Highest Channel / 3MHz / QPSK



Date: 5 APR 2017 11:01:41

Highest Channel / 3MHz / 16QAM

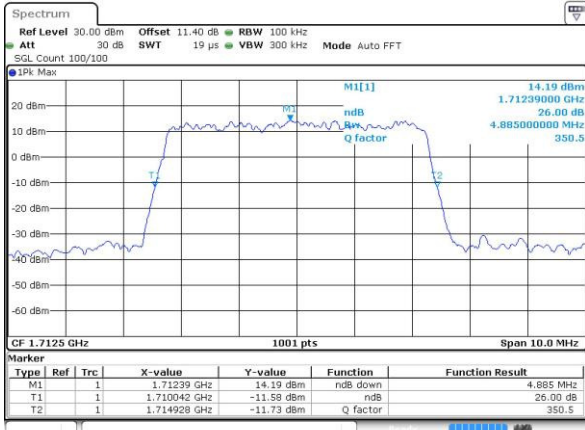


Date: 5 APR 2017 11:01:51



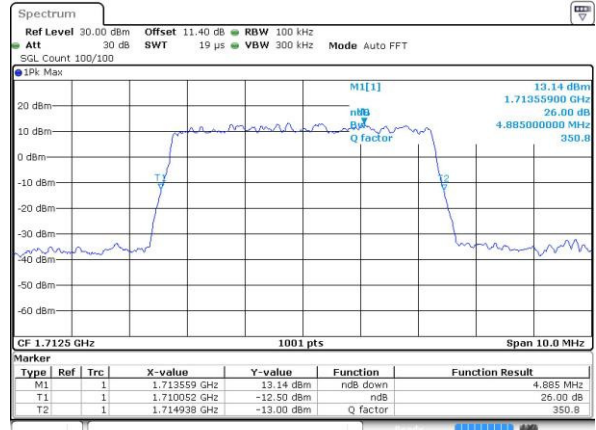
LTE Band 4

Lowest Channel / 5MHz / QPSK



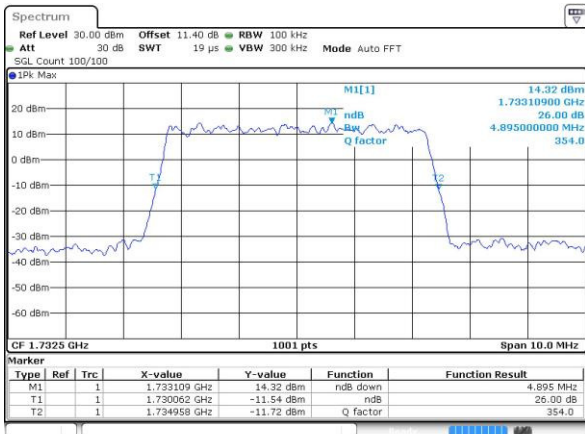
Date: 5 APR 2017 11:08:48

Lowest Channel / 5MHz / 16QAM



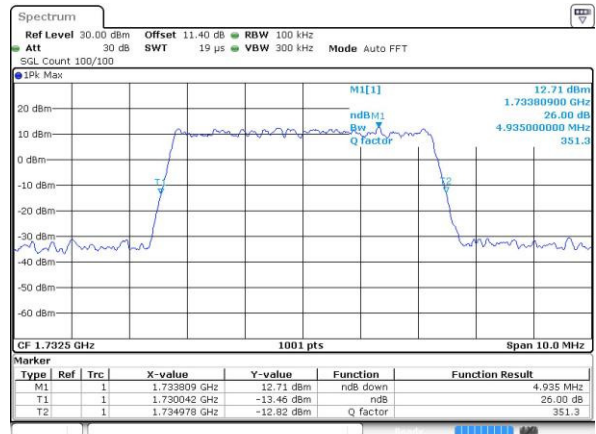
Date: 5 APR 2017 11:08:59

Middle Channel / 5MHz / QPSK



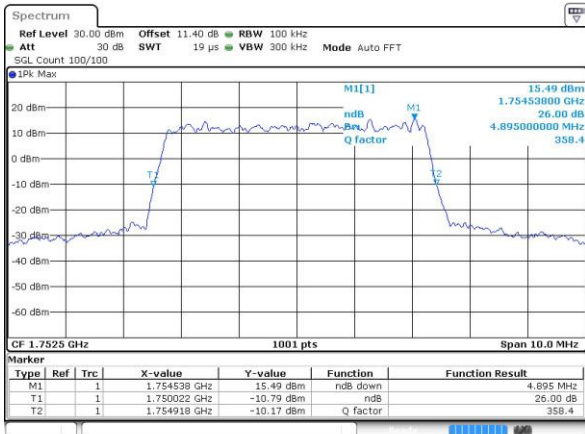
Date: 5 APR 2017 11:15:55

Middle Channel / 5MHz / 16QAM



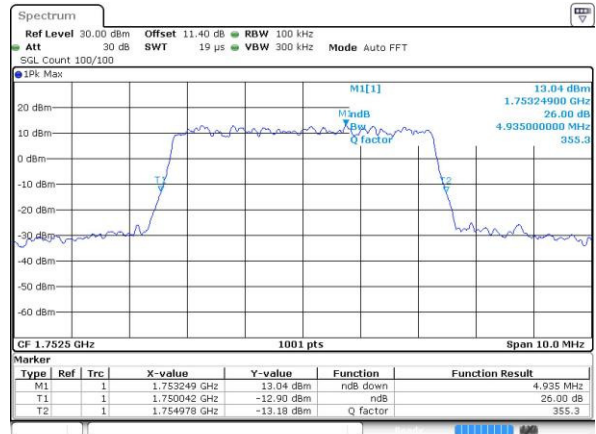
Date: 5 APR 2017 11:16:05

Highest Channel / 5MHz / QPSK



Date: 5 APR 2017 11:18:25

Highest Channel / 5MHz / 16QAM

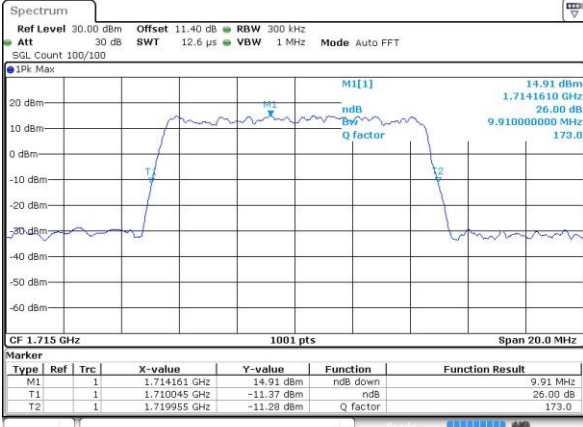


Date: 5 APR 2017 11:18:36



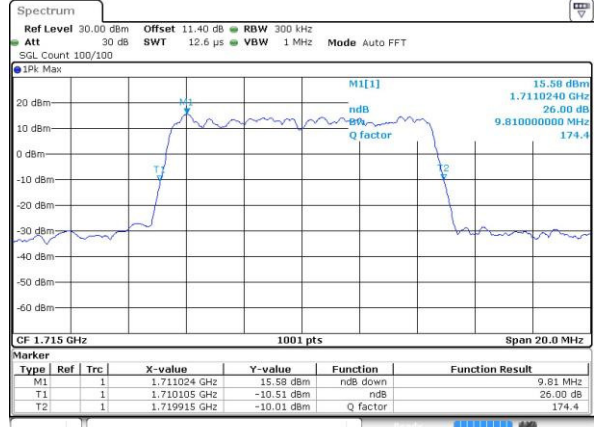
LTE Band 4

Lowest Channel / 10MHz / QPSK



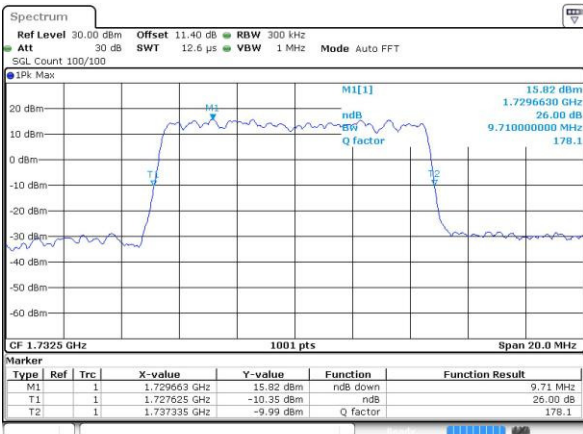
Date: 5 APR 2017 11:25:32

Lowest Channel / 10MHz / 16QAM



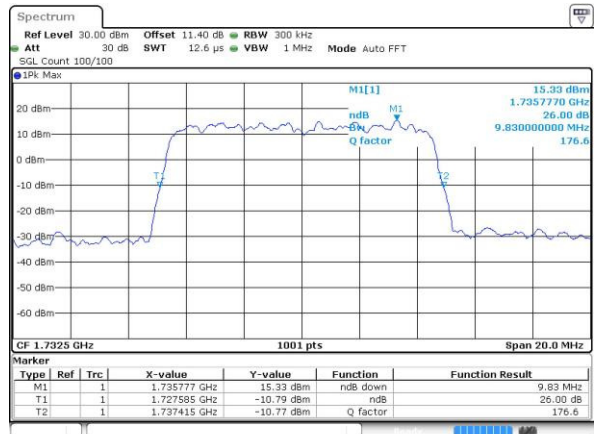
Date: 5 APR 2017 11:25:42

Middle Channel / 10MHz / QPSK



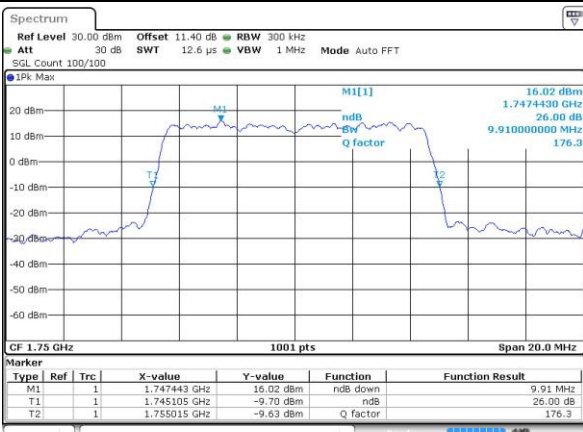
Date: 5 APR 2017 11:32:39

Middle Channel / 10MHz / 16QAM



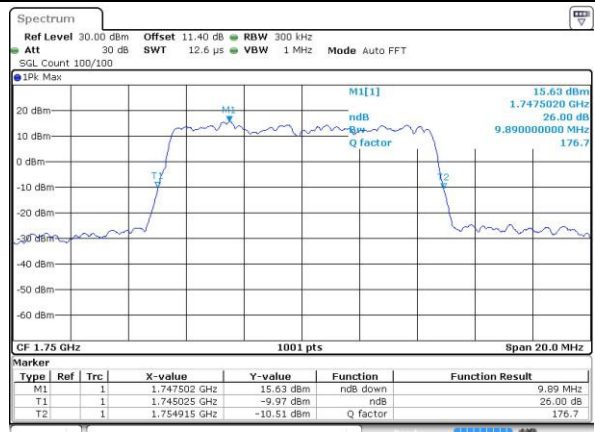
Date: 5 APR 2017 11:32:45

Highest Channel / 10MHz / QPSK



Date: 5 APR 2017 11:35:09

Highest Channel / 10MHz / 16QAM

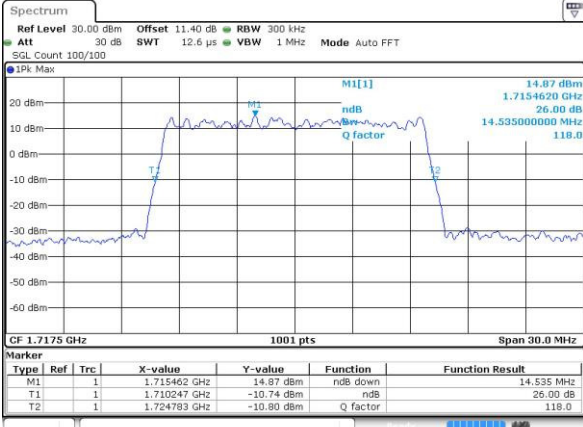


Date: 5 APR 2017 11:35:20



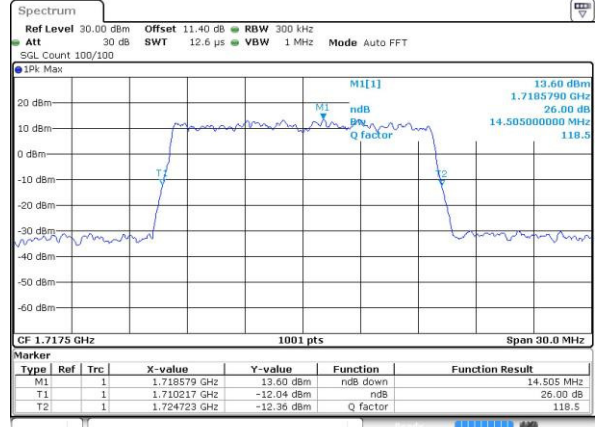
LTE Band 4

Lowest Channel / 15MHz / QPSK



Date: 5 APR 2017 11:42:16

Lowest Channel / 15MHz / 16QAM



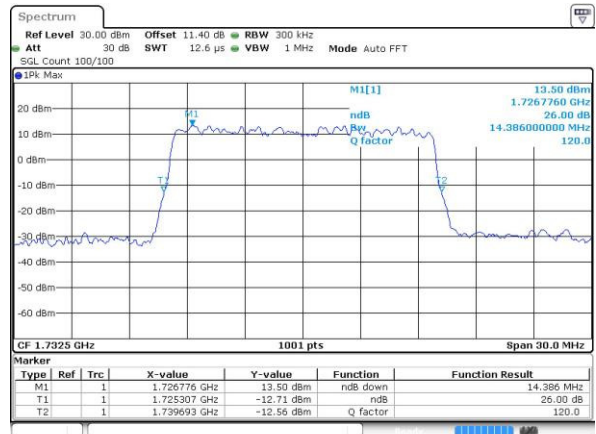
Date: 5 APR 2017 11:42:27

Middle Channel / 15MHz / QPSK



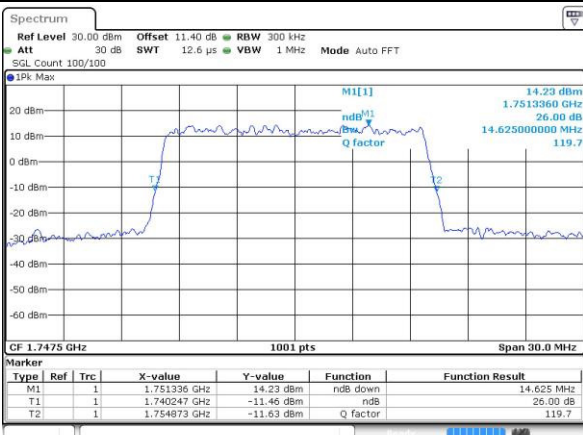
Date: 5 APR 2017 11:49:23

Middle Channel / 15MHz / 16QAM



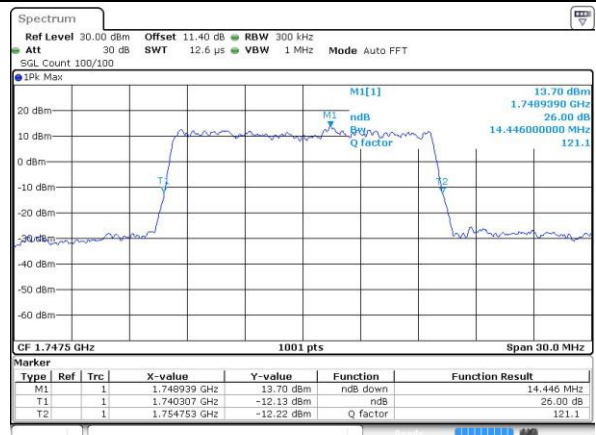
Date: 5 APR 2017 11:49:34

Highest Channel / 15MHz / QPSK



Date: 5 APR 2017 11:51:53

Highest Channel / 15MHz / 16QAM

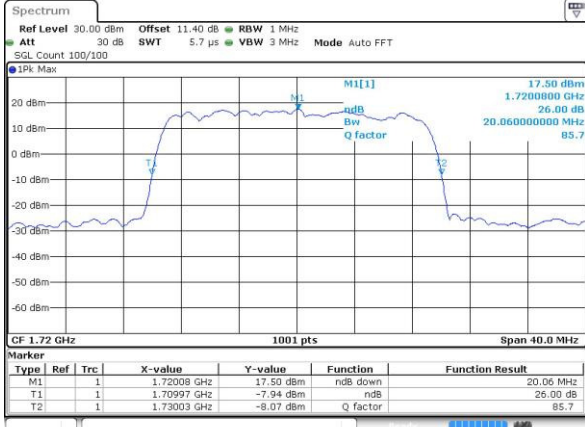


Date: 5 APR 2017 11:52:04



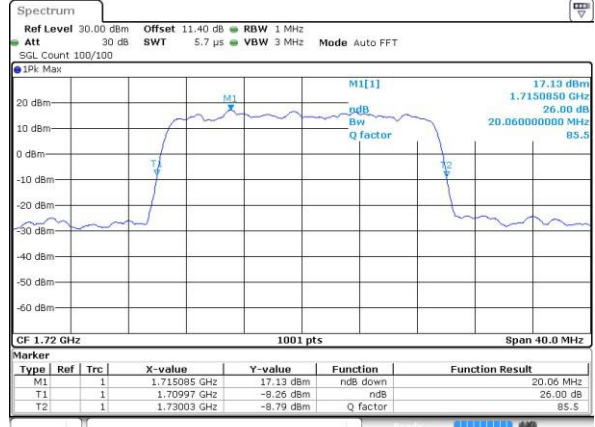
LTE Band 4

Lowest Channel / 20MHz / QPSK



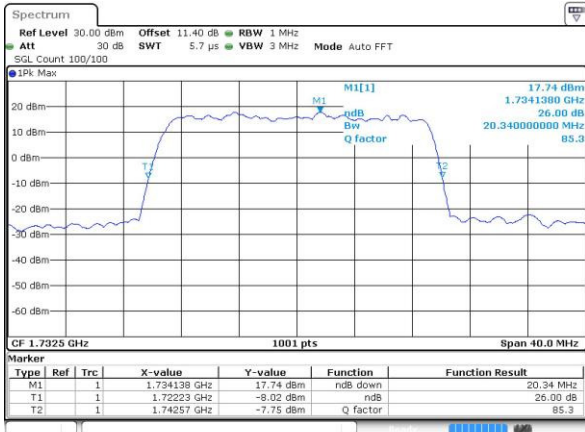
Date: 5 APR 2017 11:59:00

Lowest Channel / 20MHz / 16QAM



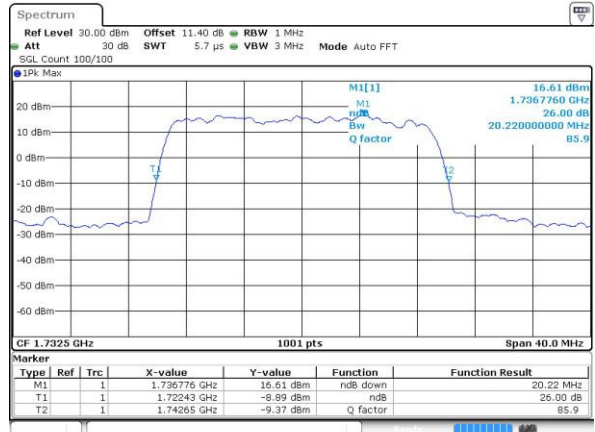
Date: 5 APR 2017 11:59:11

Middle Channel / 20MHz / QPSK



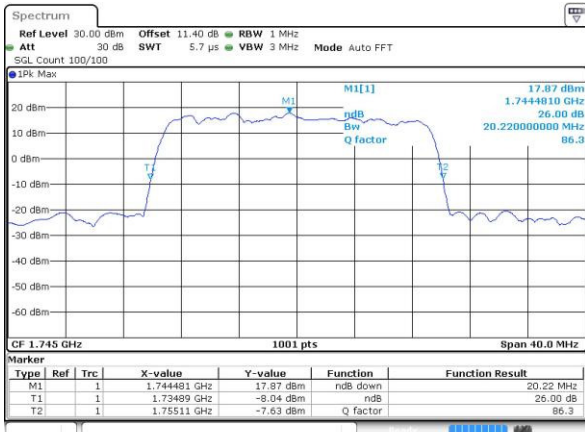
Date: 5 APR 2017 12:06:07

Middle Channel / 20MHz / 16QAM



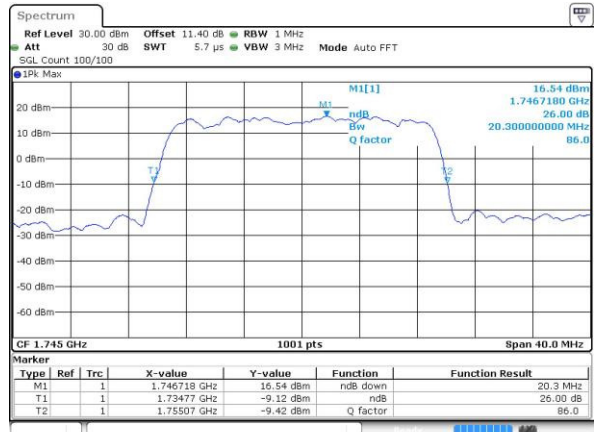
Date: 5 APR 2017 12:06:16

Highest Channel / 20MHz / QPSK



Date: 5 APR 2017 12:06:38

Highest Channel / 20MHz / 16QAM

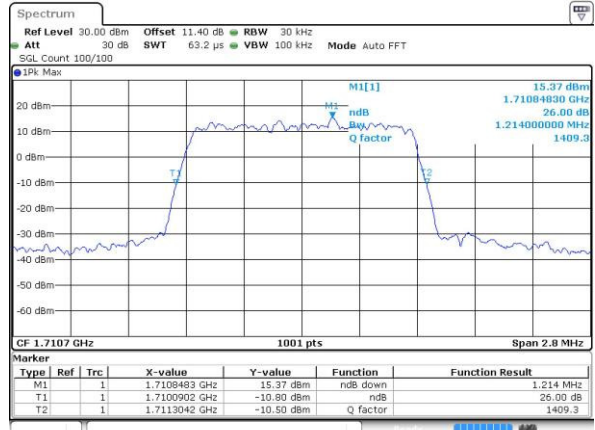


Date: 5 APR 2017 12:06:48

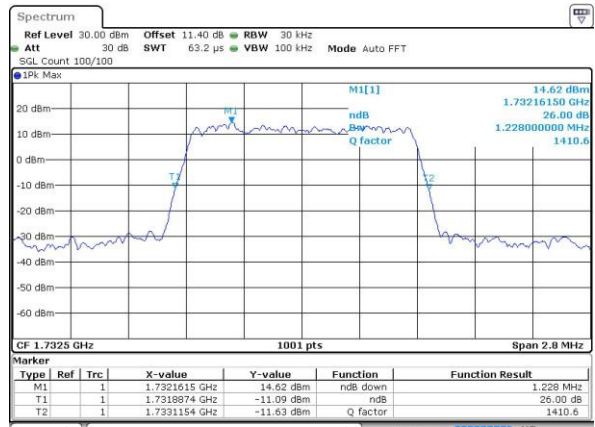


LTE Band 4

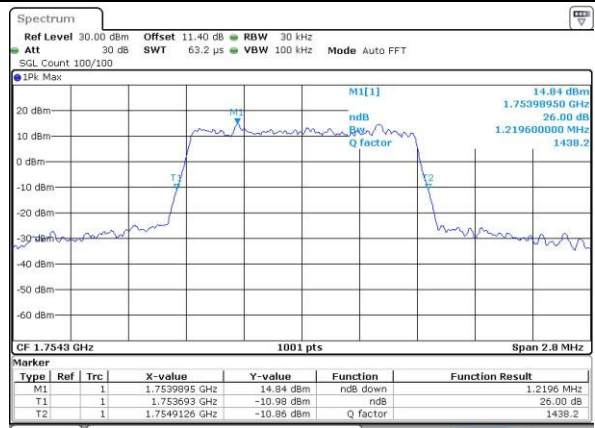
Lowest Channel / 1.4MHz / 64QAM



Middle Channel / 1.4MHz / 64QAM



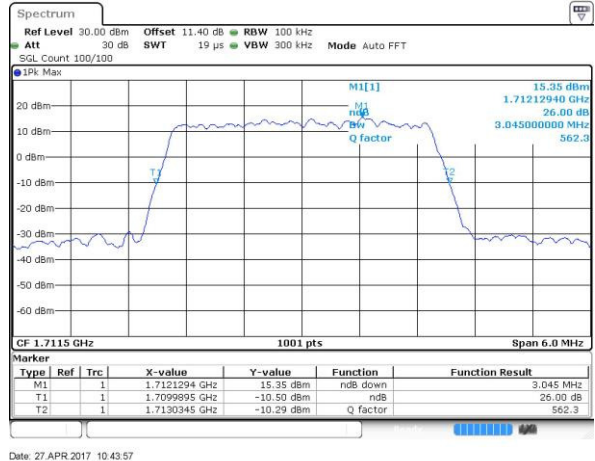
Highest Channel / 1.4MHz / 64QAM



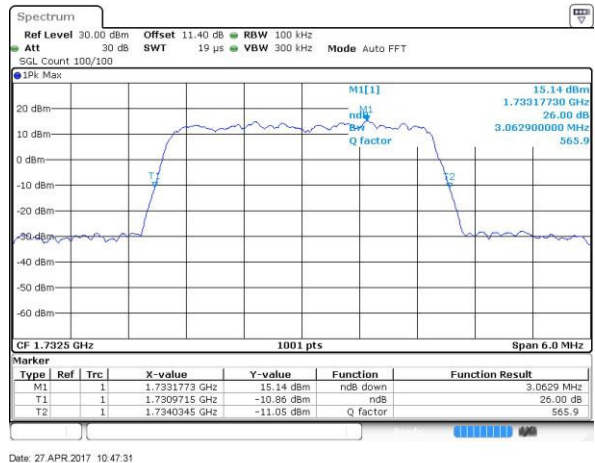


LTE Band 4

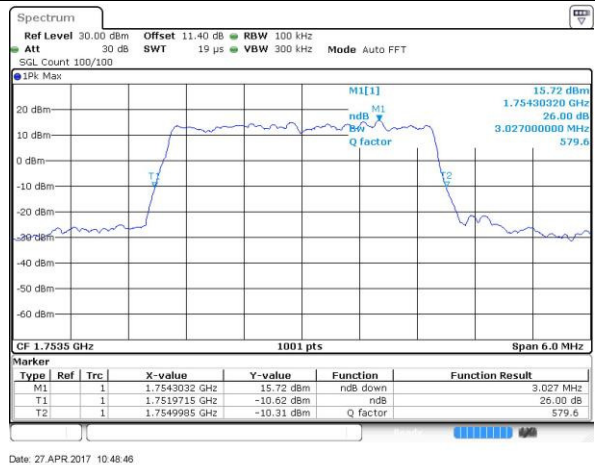
Lowest Channel / 3MHz / 64QAM



Middle Channel / 3MHz / 64QAM



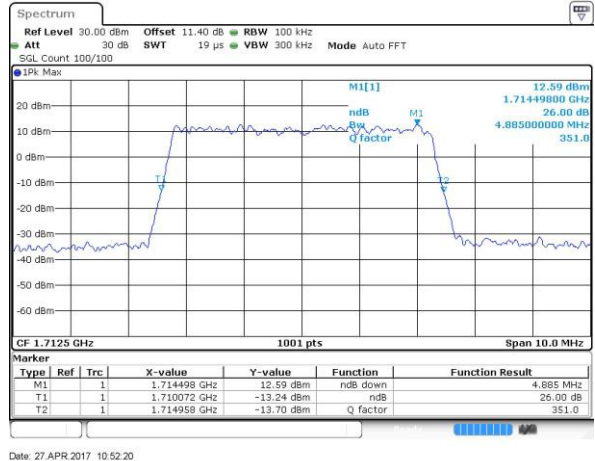
Highest Channel / 3MHz / 64QAM





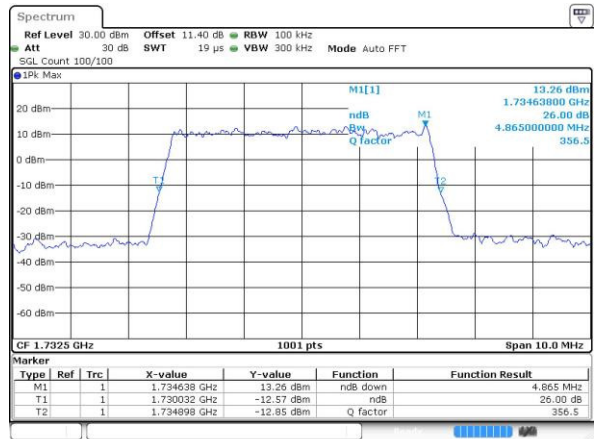
LTE Band 4

Lowest Channel / 5MHz / 64QAM



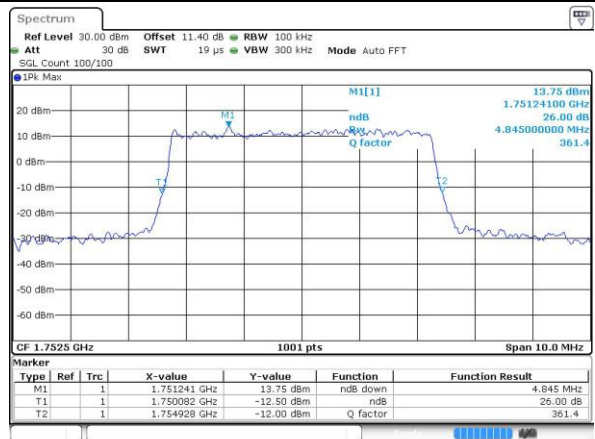
Date: 27 APR 2017 10:52:20

Middle Channel / 5MHz / 64QAM



Date: 27 APR 2017 10:55:53

Highest Channel / 5MHz / 64QAM

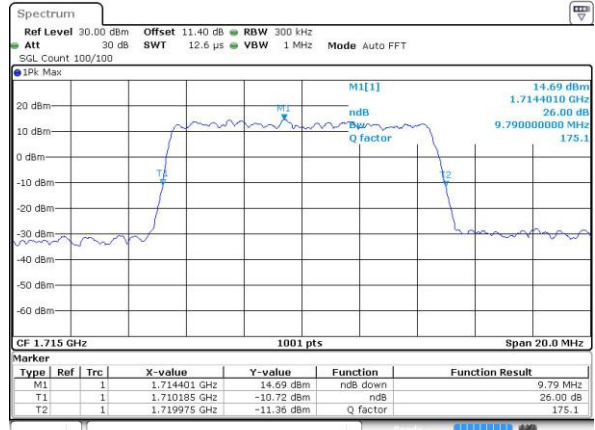


Date: 27 APR 2017 10:57:08



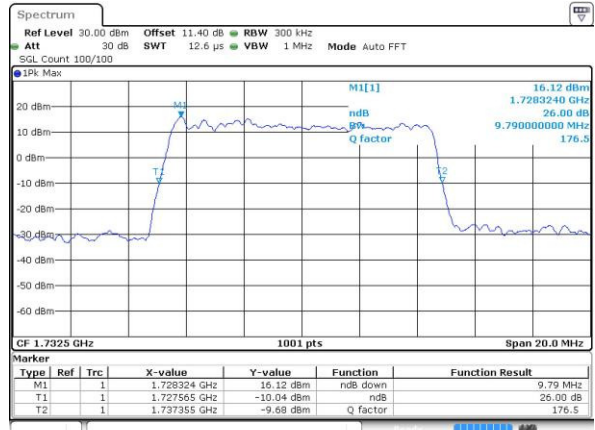
LTE Band 4

Lowest Channel / 10MHz / 64QAM



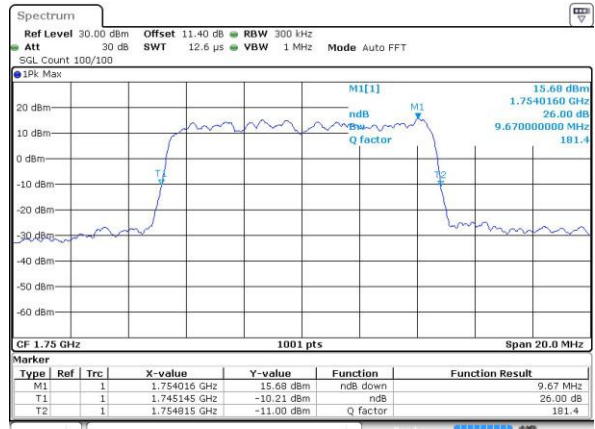
Date: 27 APR 2017 11:00:41

Middle Channel / 10MHz / 64QAM



Date: 27 APR 2017 11:04:14

Highest Channel / 10MHz / 64QAM

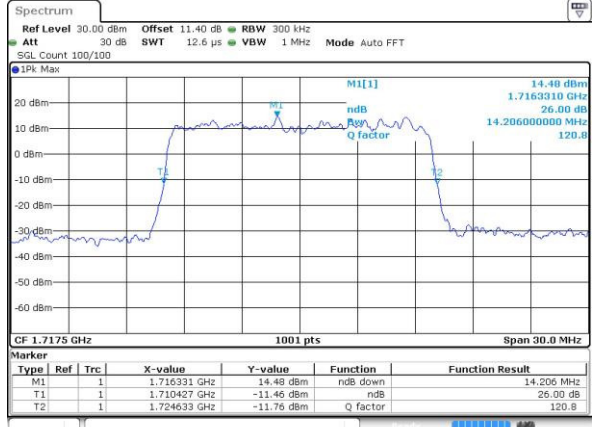


Date: 27 APR 2017 11:05:29



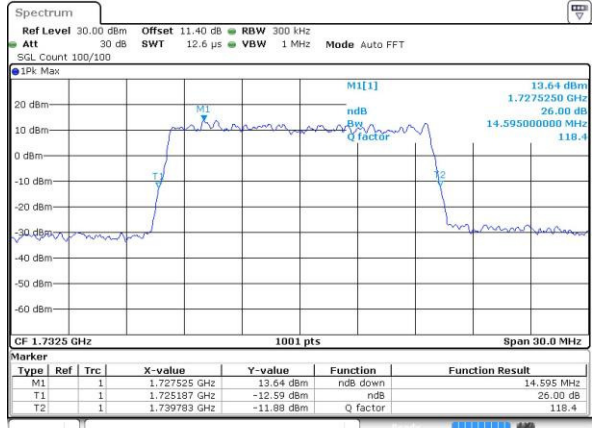
LTE Band 4

Lowest Channel / 15MHz / 64QAM



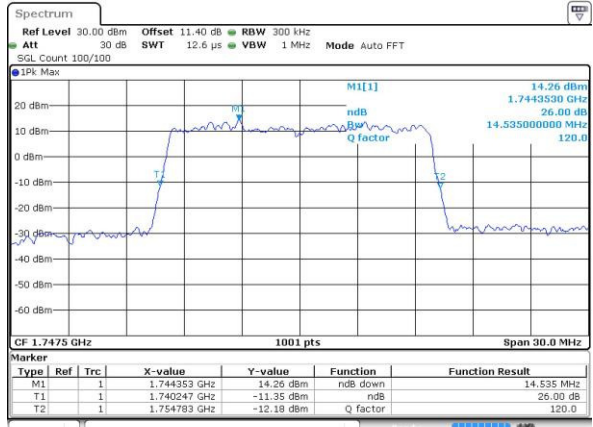
Date: 27 APR 2017 11:09:02

Middle Channel / 15MHz / 64QAM



Date: 27 APR 2017 11:12:35

Highest Channel / 15MHz / 64QAM

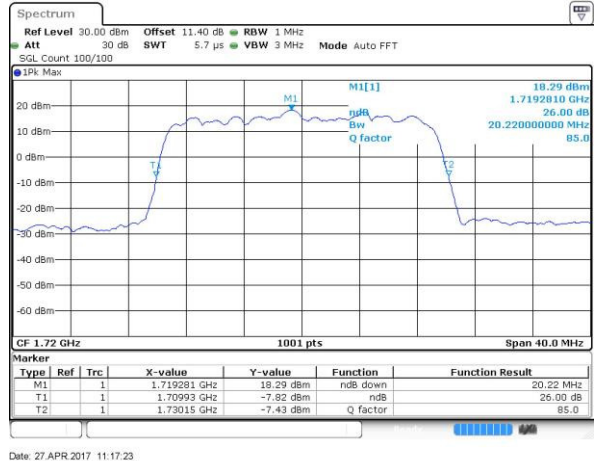


Date: 27 APR 2017 11:13:50

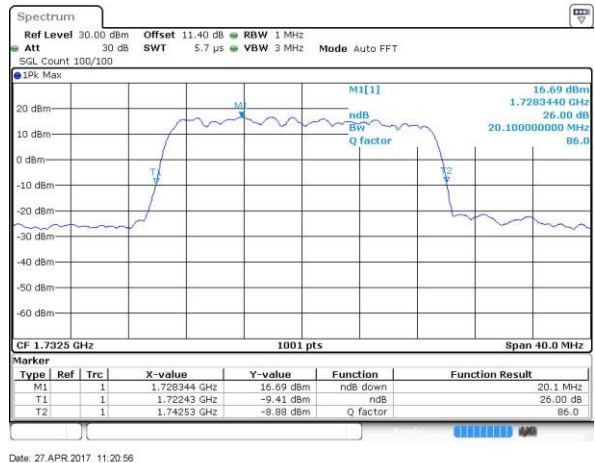


LTE Band 4

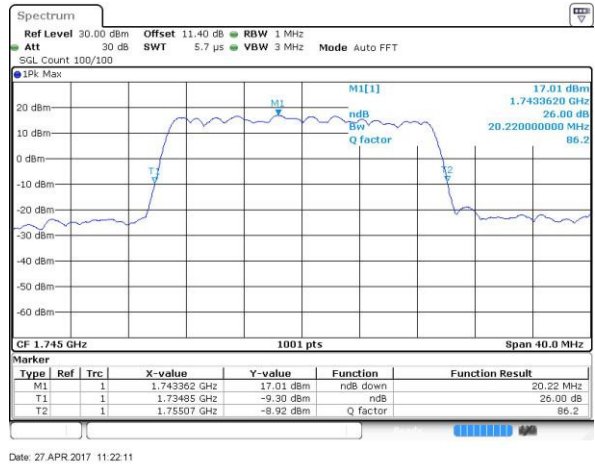
Lowest Channel / 20MHz / 64QAM



Middle Channel / 20MHz / 64QAM



Highest Channel / 20MHz / 64QAM





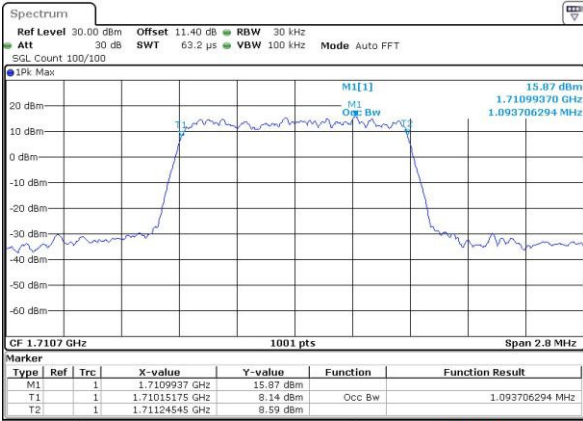
Occupied Bandwidth

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	4.48	4.49	9.07	9.07	13.37	13.4	18.26	18.38
Middle CH	1.09	1.1	2.71	2.71	4.49	4.47	9.03	9.01	13.46	13.4	18.3	18.22
Highest CH	1.1	1.1	2.72	2.7	4.48	4.49	9.05	9.05	13.52	13.43	18.34	18.34
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	-	64QAM	-	64QAM	-	64QAM	-	64QAM	-	64QAM	-	64QAM
Lowest CH	-	1.09	-	2.71	-	4.49	-	8.95	-	13.49	-	18.42
Middle CH	-	1.09	-	2.72	-	4.48	-	8.97	-	13.46	-	18.22
Highest CH	-	1.09	-	2.72	-	4.49	-	9.07	-	13.55	-	18.3



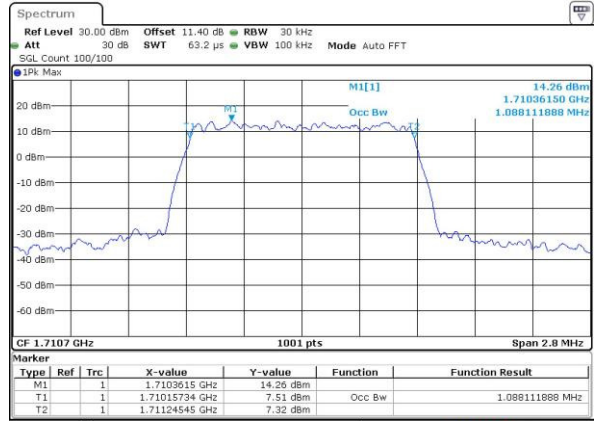
LTE Band 4

Lowest Channel / 1.4MHz / QPSK



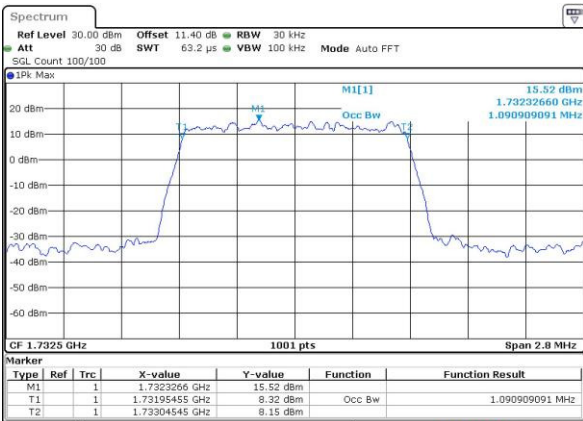
Date: 5 APR 2017 13:33:57

Lowest Channel / 1.4MHz / 16QAM



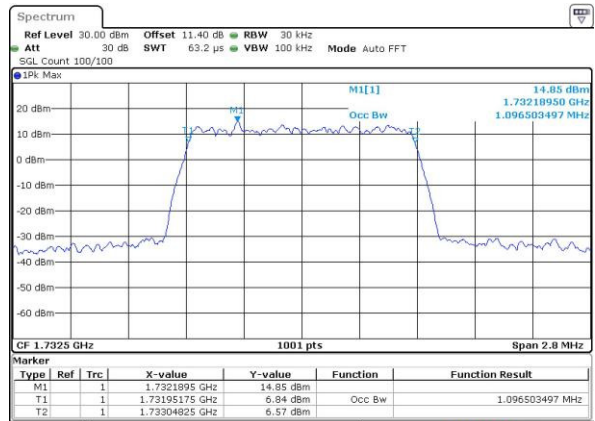
Date: 5 APR 2017 13:34:07

Middle Channel / 1.4MHz / QPSK



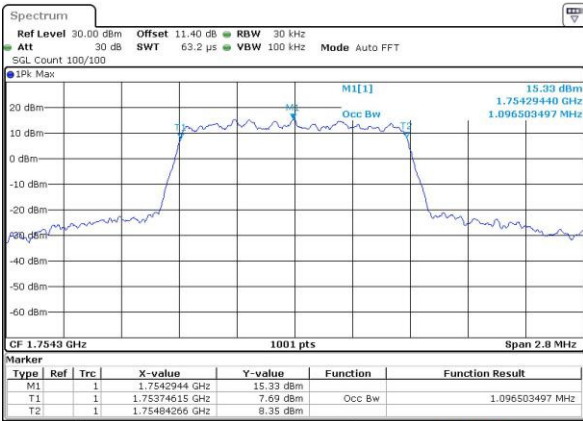
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Middle Channel / 1.4MHz / 16QAM



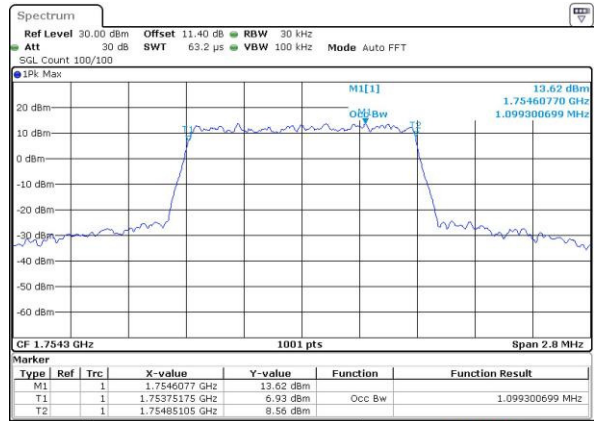
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Highest Channel / 1.4MHz / QPSK



Date: 5 APR 2017 13:43:35

Highest Channel / 1.4MHz / 16QAM

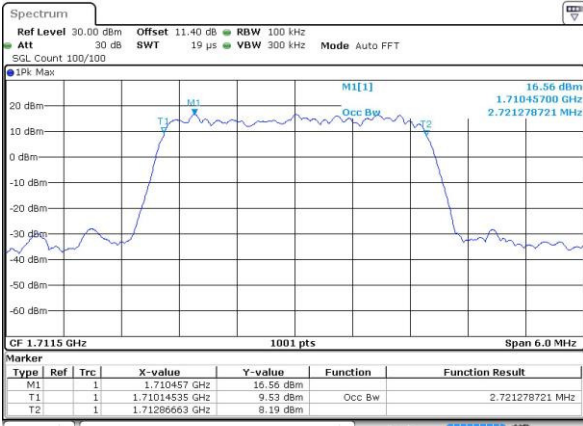


Date: 5 APR 2017 13:43:45



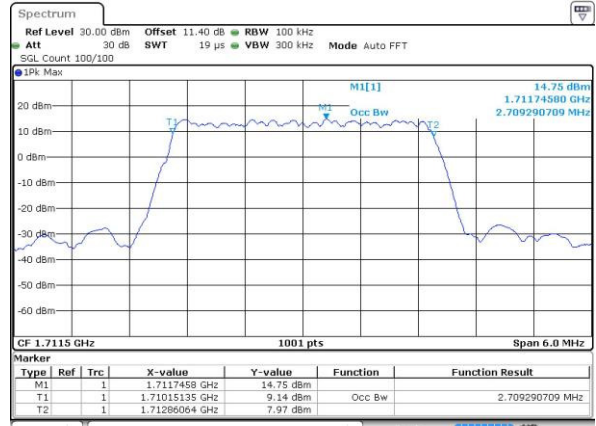
LTE Band 4

Lowest Channel / 3MHz / QPSK



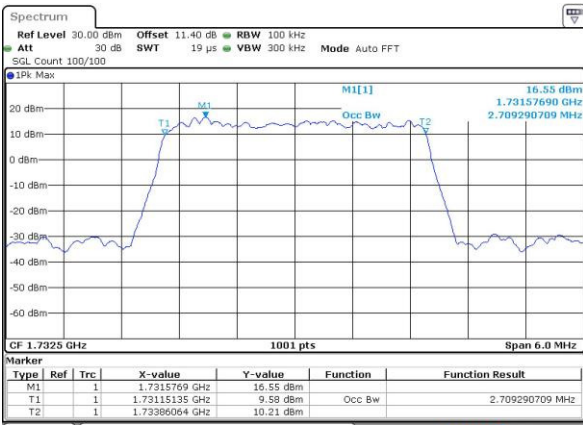
Date: 5 APR 2017 10:51:42

Lowest Channel / 3MHz / 16QAM



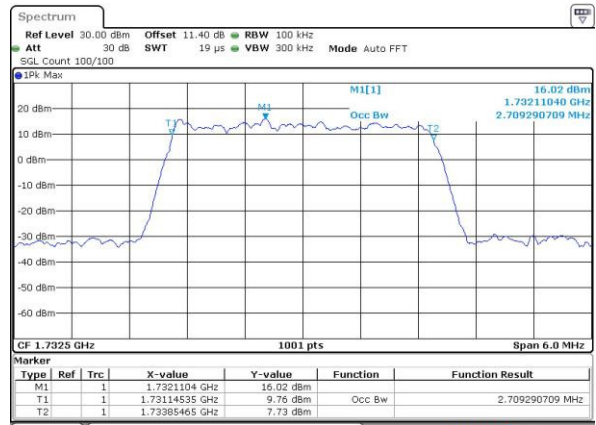
Date: 5 APR 2017 10:51:52

Middle Channel / 3MHz / QPSK



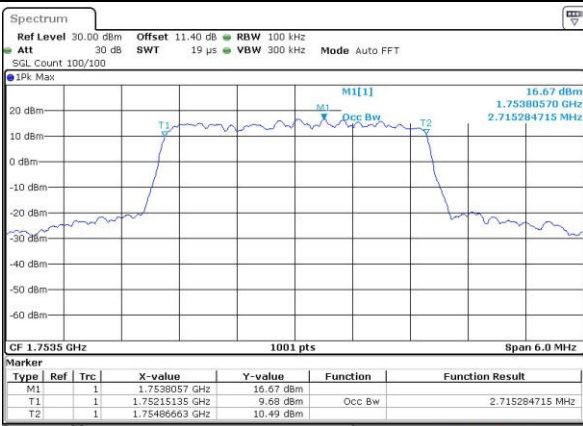
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Middle Channel / 3MHz / 16QAM



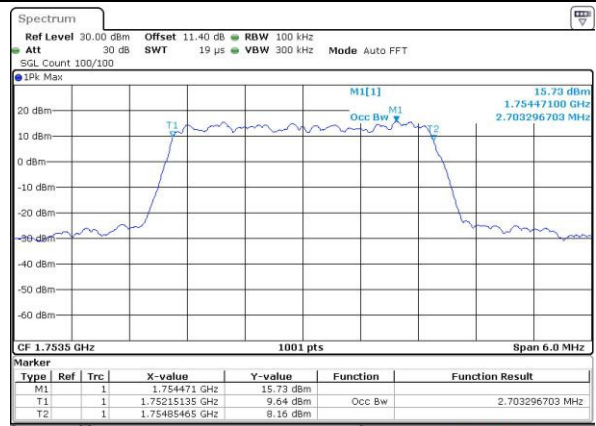
Date: 5 APR 2017 10:59:00

Highest Channel / 3MHz / QPSK



Date: 5 APR 2017 11:01:20

Highest Channel / 3MHz / 16QAM

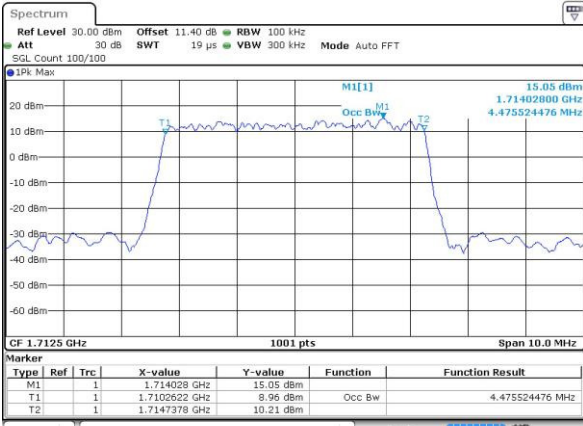


Date: 5 APR 2017 11:01:30



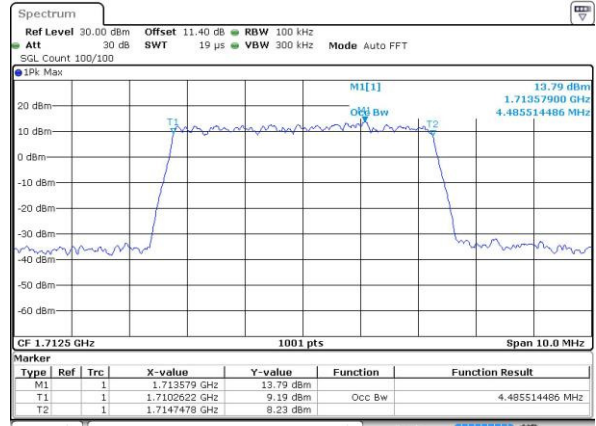
LTE Band 4

Lowest Channel / 5MHz / QPSK



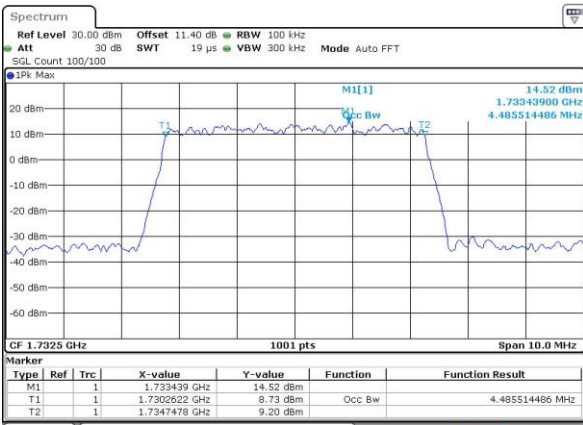
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Lowest Channel / 5MHz / 16QAM



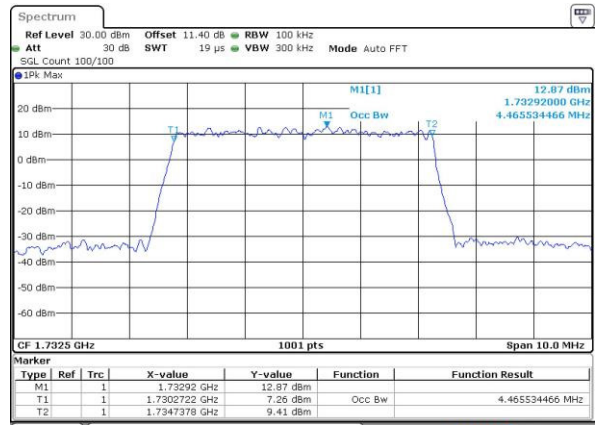
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Middle Channel / 5MHz / QPSK



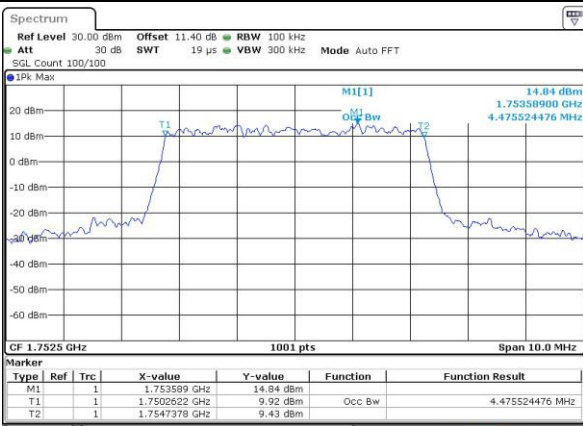
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Middle Channel / 5MHz / 16QAM



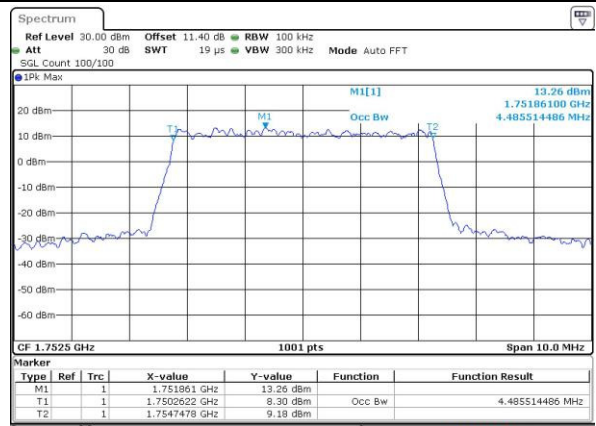
Date: 5 APR 2017 11:15:45

Highest Channel / 5MHz / QPSK



Date: 5 APR 2017 11:18:05

Highest Channel / 5MHz / 16QAM

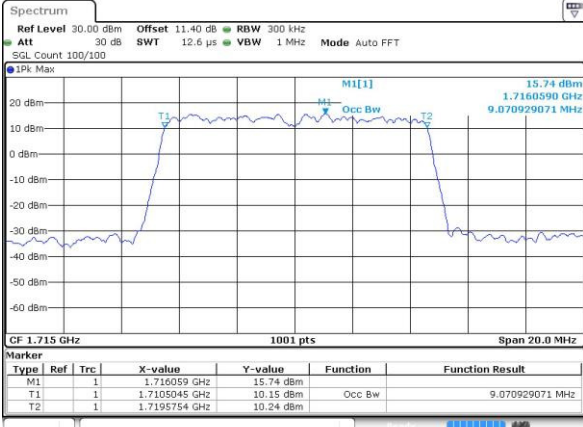


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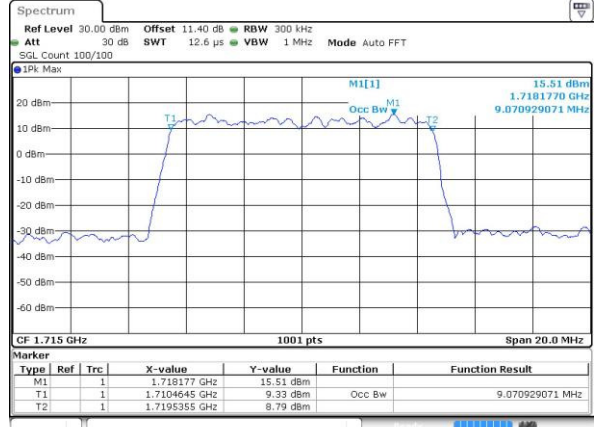
LTE Band 4

Lowest Channel / 10MHz / QPSK



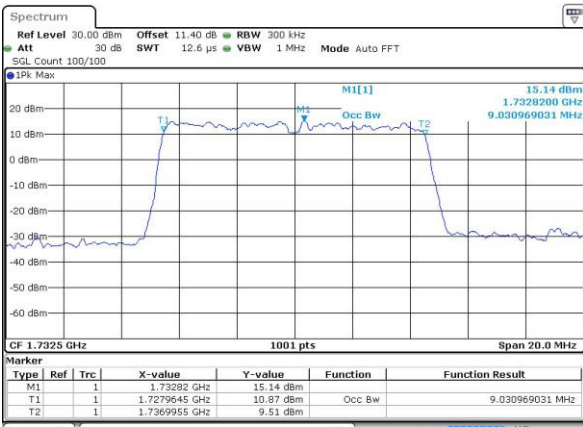
Date: 5 APR 2017 11:25:12

Lowest Channel / 10MHz / 16QAM



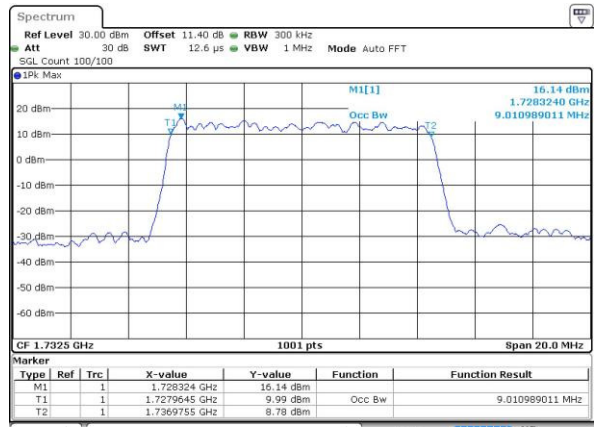
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Middle Channel / 10MHz / QPSK



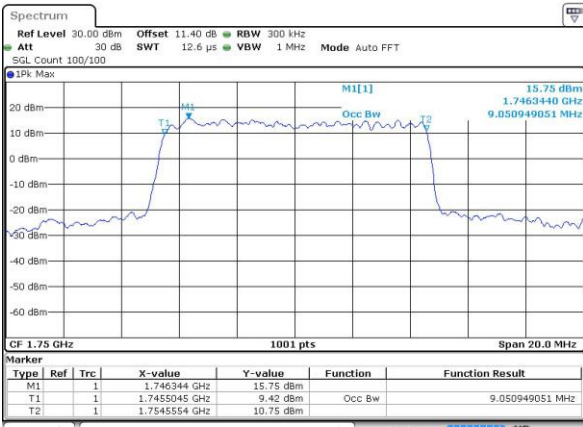
Date: 5 APR 2017 11:32:18

Middle Channel / 10MHz / 16QAM



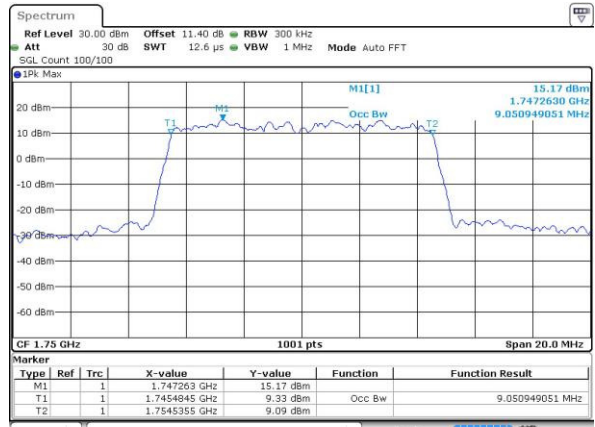
Date: 5 APR 2017 11:32:28

Highest Channel / 10MHz / QPSK



Date: 5 APR 2017 11:34:49

Highest Channel / 10MHz / 16QAM



Date: 5 APR 2017 11:34:59