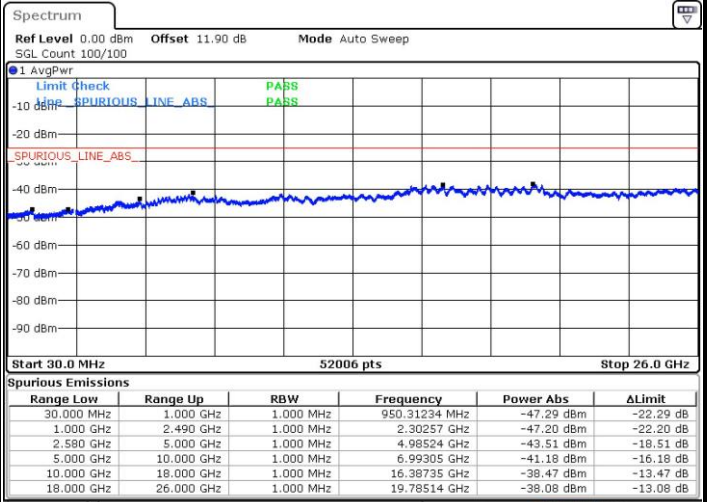
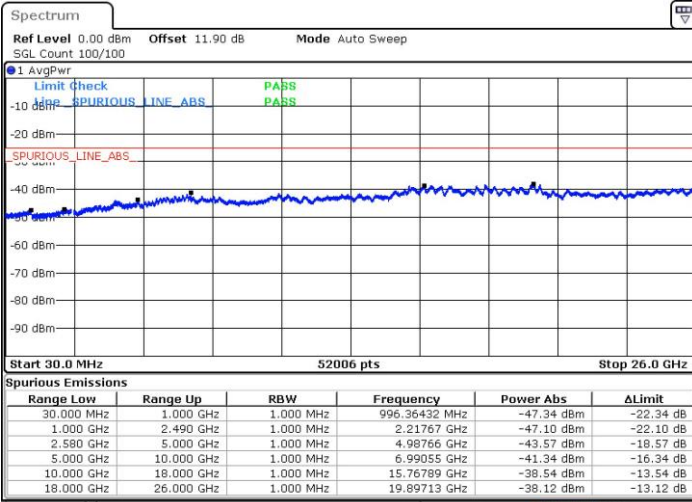




LTE Band 7 / 5MHz

Highest Channel / QPSK

Highest Channel / 16QAM



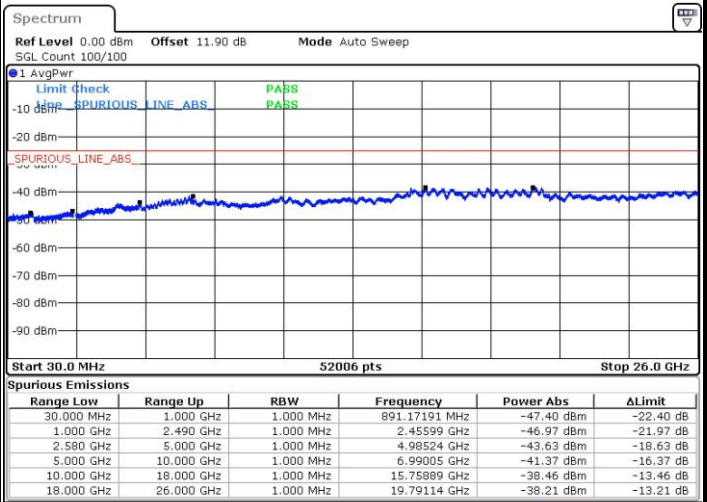
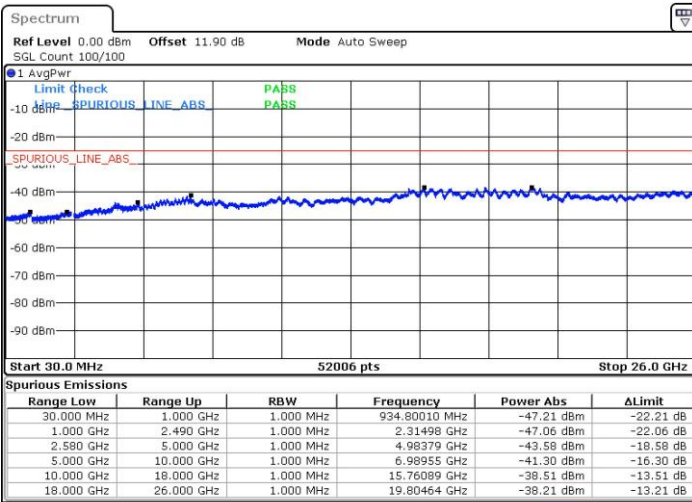
Date: 24 JUN 2017 14:24:13

Date: 24 JUN 2017 14:25:07

LTE Band 7 / 10MHz

Lowest Channel / QPSK

Lowest Channel / 16QAM



Date: 24 JUN 2017 14:31:22

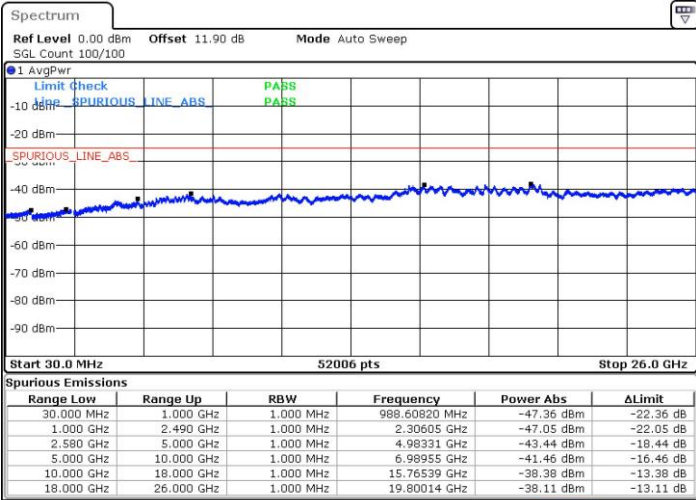
Date: 24 JUN 2017 14:32:16



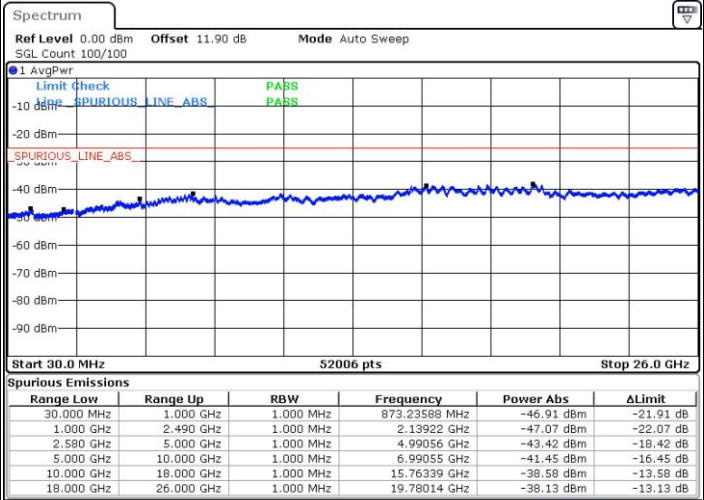
LTE Band 7 / 10MHz

Middle Channel / QPSK

Middle Channel / 16QAM



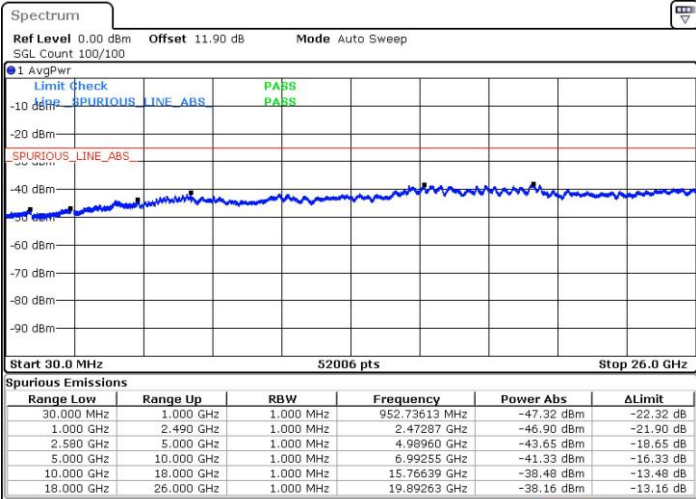
Date: 24 JUN 2017 14:33:52



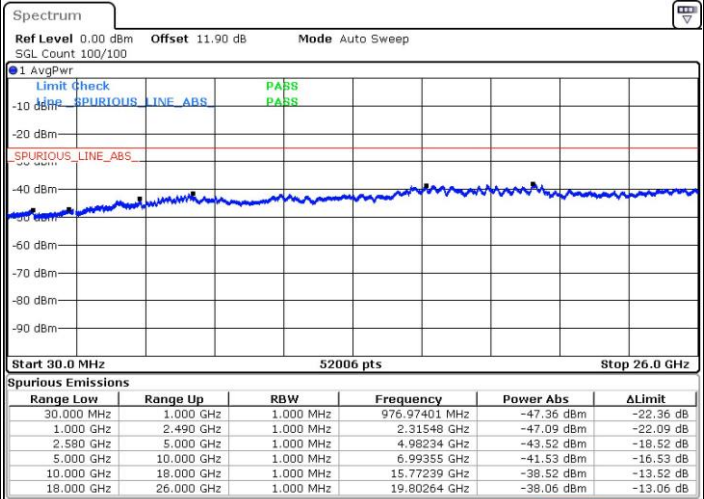
Date: 24 JUN 2017 14:34:46

Highest Channel / QPSK

Highest Channel / 16QAM



Date: 24 JUN 2017 14:41:01



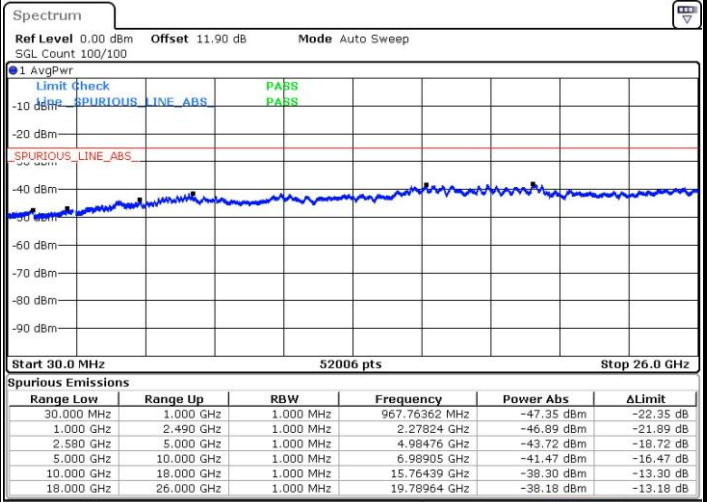
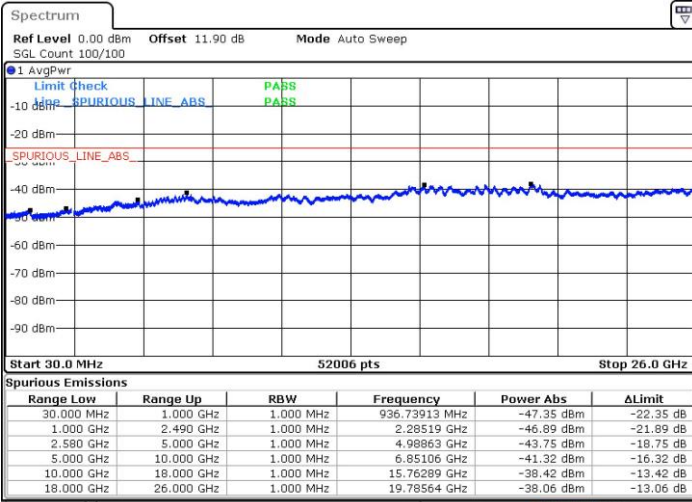
Date: 24 JUN 2017 14:41:55



LTE Band 7 / 15MHz

Lowest Channel / QPSK

Lowest Channel / 16QAM

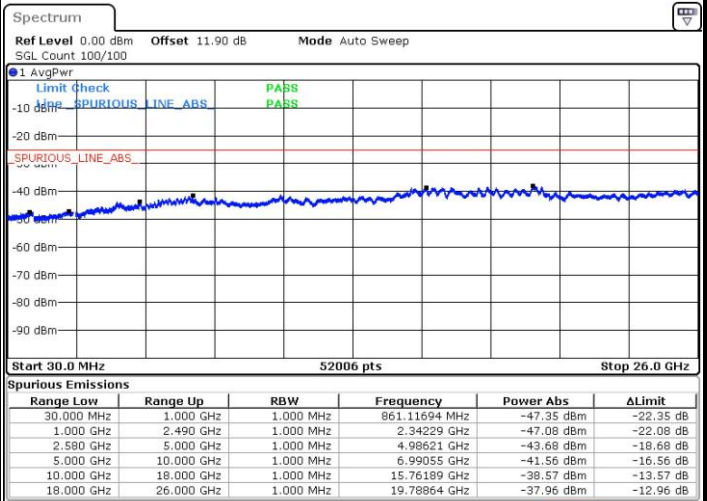
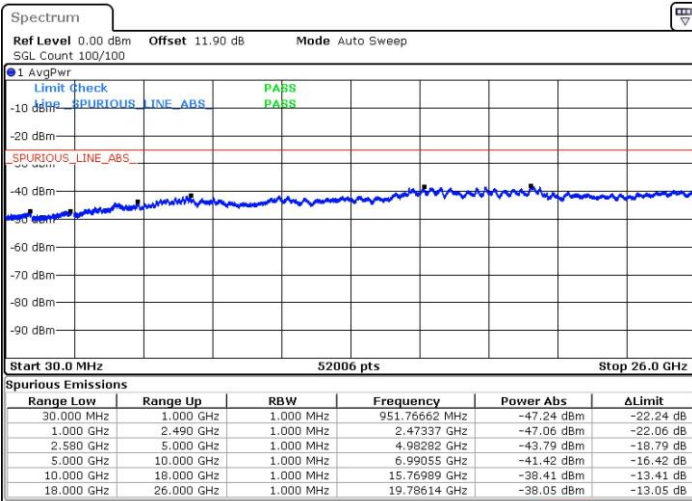


Date: 24 JUN 2017 14:48:09

Date: 24 JUN 2017 14:48:03

Middle Channel / QPSK

Middle Channel / 16QAM



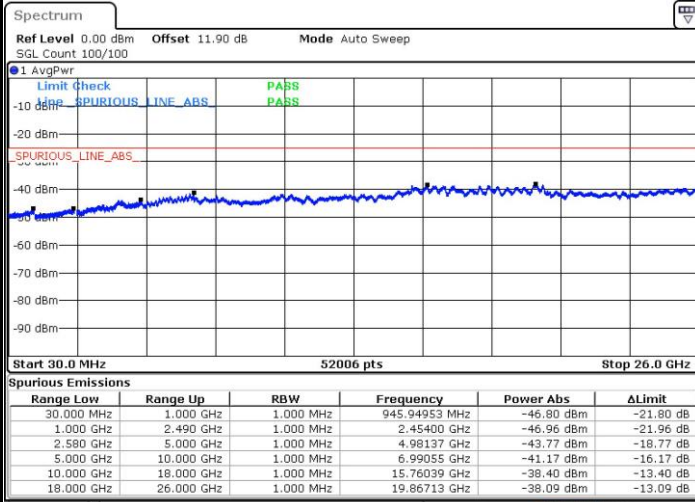
Date: 24 JUN 2017 14:50:38

Date: 24 JUN 2017 14:51:32



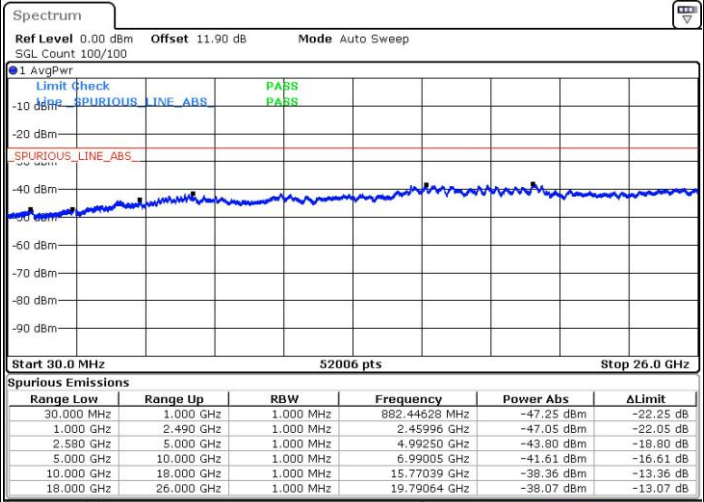
LTE Band 7 / 15MHz

Highest Channel / QPSK



Date: 24 JUN 2017 14:57:47

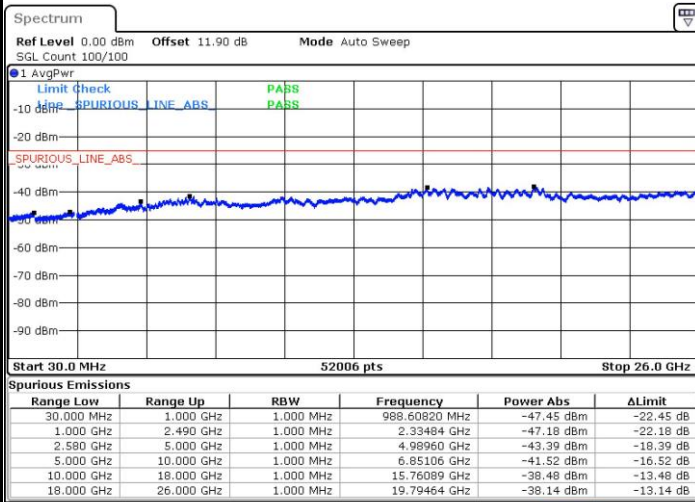
Highest Channel / 16QAM



Date: 24 JUN 2017 14:58:41

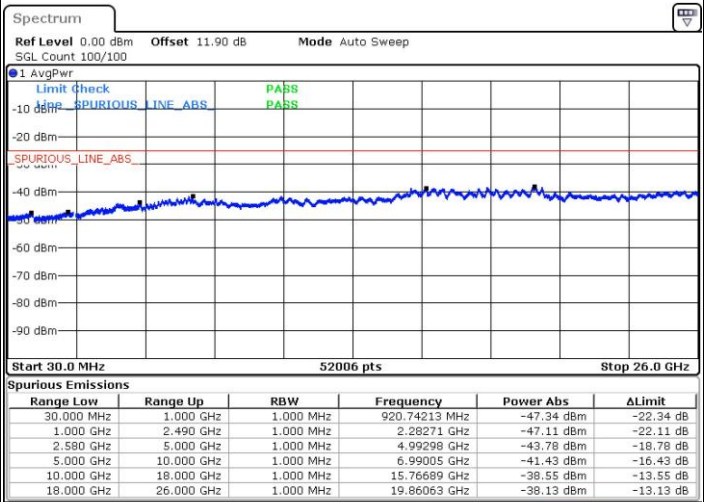
LTE Band 7 / 20MHz

Lowest Channel / QPSK



Date: 24 JUN 2017 15:04:56

Lowest Channel / 16QAM



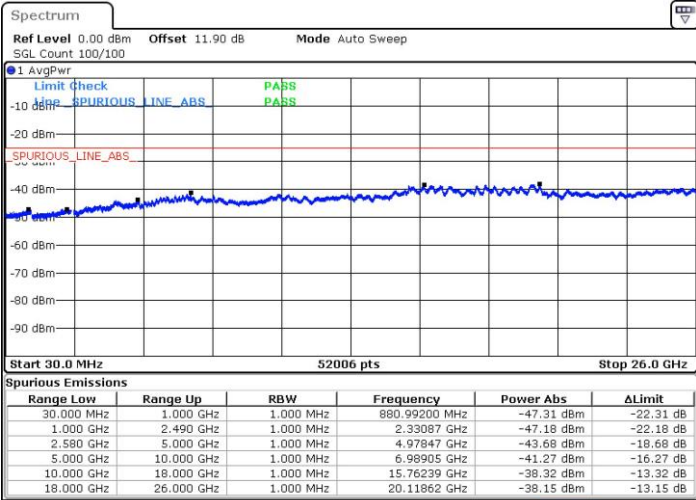
Date: 24 JUN 2017 15:05:50



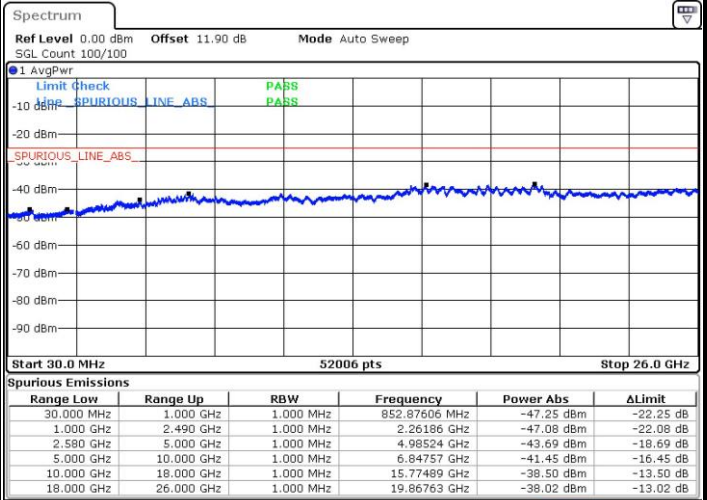
LTE Band 7 / 20MHz

Middle Channel / QPSK

Middle Channel / 16QAM



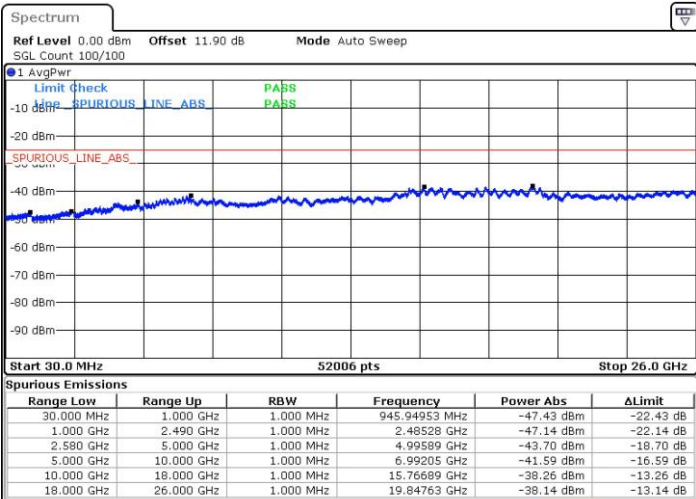
Date: 24 JUN 2017 15:07:25



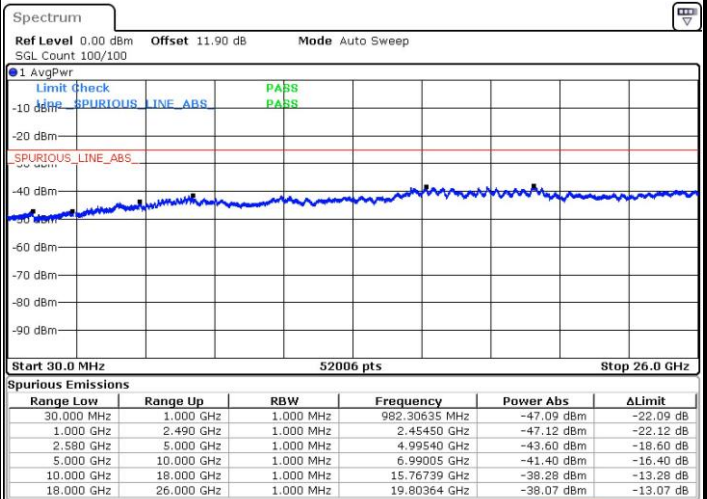
Date: 24 JUN 2017 15:08:19

Highest Channel / QPSK

Highest Channel / 16QAM



Date: 24 JUN 2017 15:14:34



Date: 24 JUN 2017 15:15:28



**Frequency Stability**

Test Conditions		LTE Band 7 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0014	PASS
40	Normal Voltage	0.0028	
30	Normal Voltage	0.0004	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0031	
0	Normal Voltage	0.0011	
-10	Normal Voltage	0.0006	
-20	Normal Voltage	0.0000	
-30	Normal Voltage	0.0029	
20	Maximum Voltage	0.0003	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0004	

**Note:**

1. Normal Voltage =3.85 V. ; Battery End Point (BEP) =3.6 V. ; Maximum Voltage =4.4 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.



## LTE Band 12

### Peak-to-Average Ratio

Mode	LTE Band 12 / 10MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	4.55	5.04	5.39	5.97	<b>PASS</b>
Middle CH	4.41	5.16	5.48	6.06	
Highest CH	4.81	4.81	5.77	5.8	



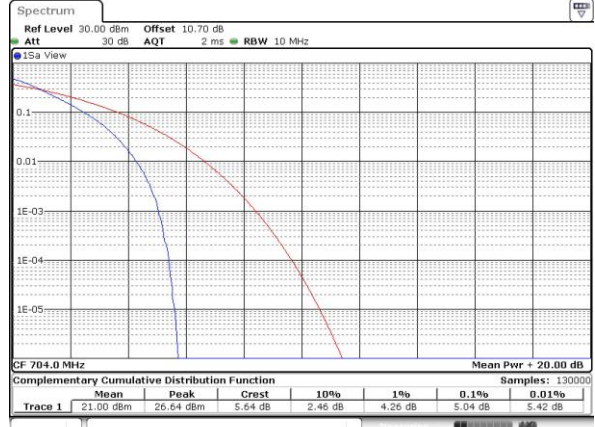
LTE Band 12 / 10MHz / QPSK

Lowest Channel / 1RB



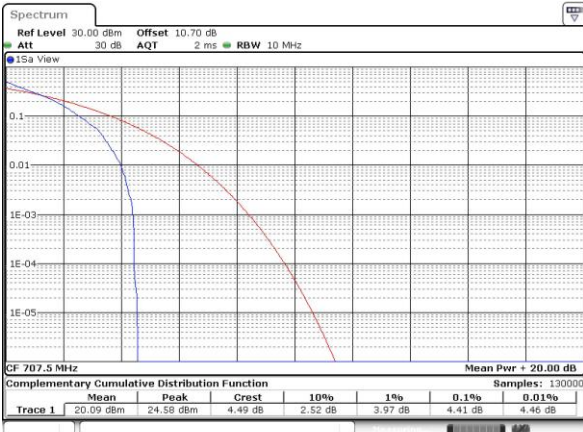
Date: 19 JUN 2017 22:49:04

Lowest Channel / Full RB



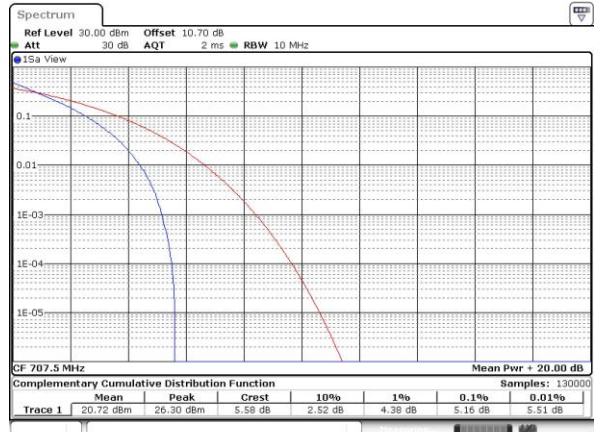
Date: 19 JUN 2017 22:48:54

Middle Channel / 1RB



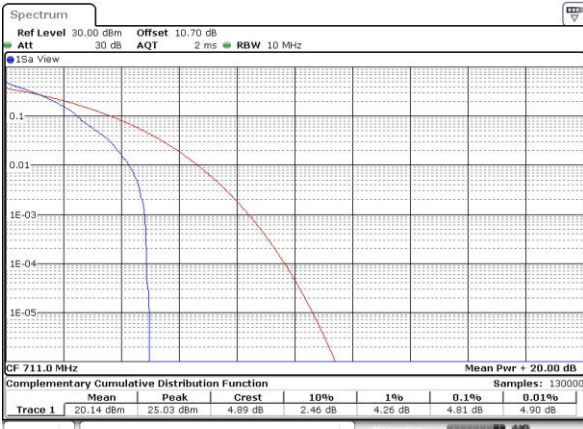
Date: 19 JUN 2017 22:49:14

Middle Channel / Full RB



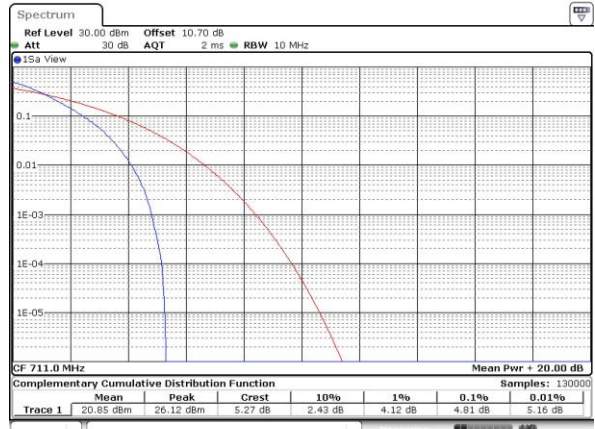
Date: 19 JUN 2017 22:49:24

Highest Channel / 1RB



Date: 19 JUN 2017 22:49:43

Highest Channel / Full RB



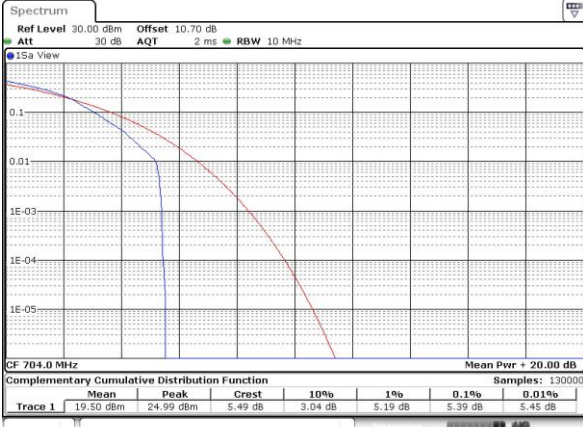
Date: 19 JUN 2017 22:49:33





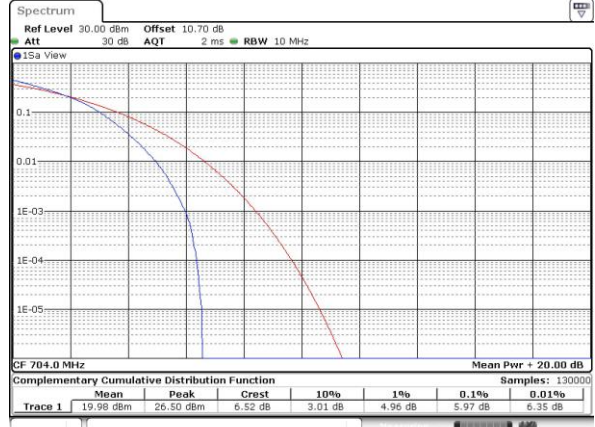
LTE Band 12 / 10MHz / 16QAM

Lowest Channel / 1RB



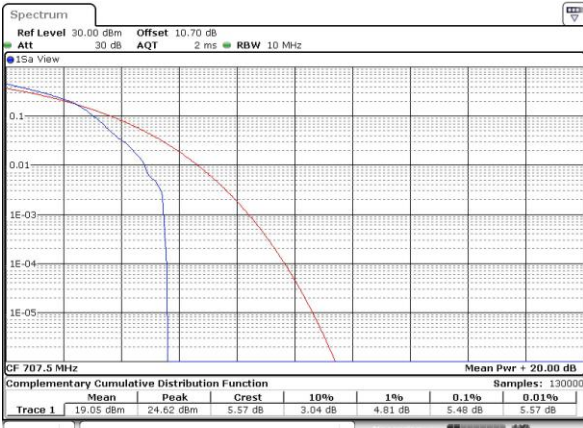
Date: 19 JUN 2017 22:48:06

Lowest Channel / Full RB



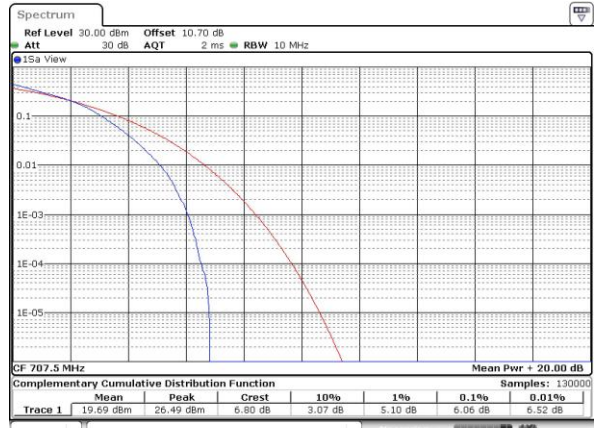
Date: 19 JUN 2017 22:47:56

Middle Channel / 1RB



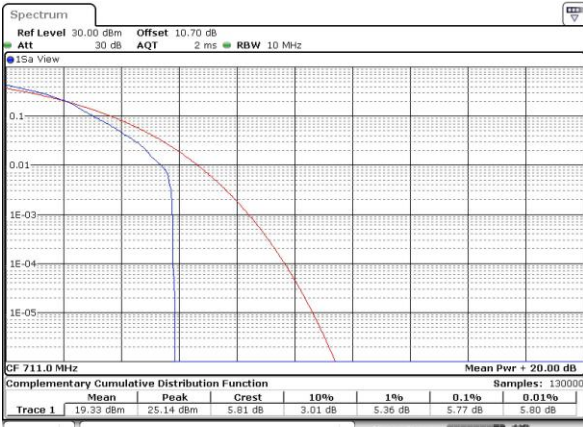
Date: 19 JUN 2017 22:48:16

Middle Channel / Full RB



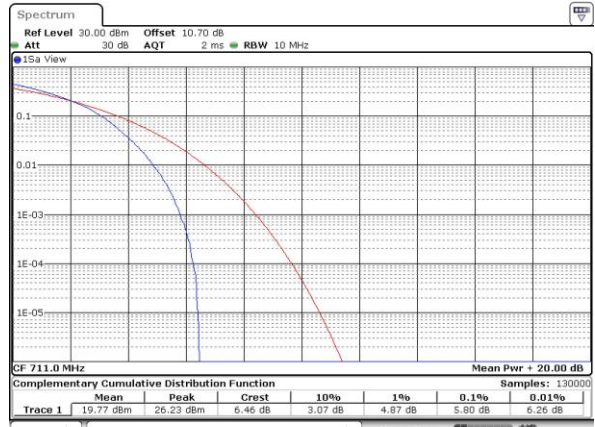
Date: 19 JUN 2017 22:48:25

Highest Channel / 1RB



Date: 19 JUN 2017 22:48:44

Highest Channel / Full RB



Date: 19 JUN 2017 22:48:35



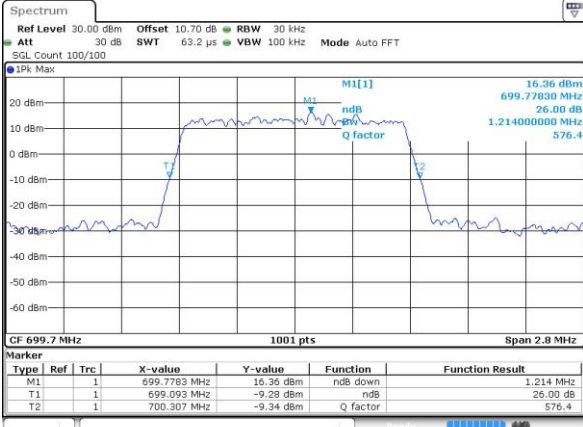
**26dB Bandwidth**

Mode	LTE Band 12 : 26dB BW(MHz)											
	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
BW												
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	1.21	1.23	3.05	3.05	4.91	4.89	9.73	9.65	-	-	-	-
Middle CH	1.24	1.23	3.03	3.03	4.93	4.92	9.77	9.77	-	-	-	-
Highest CH	1.23	1.23	3.03	3.06	4.93	4.82	9.81	9.73	-	-	-	-



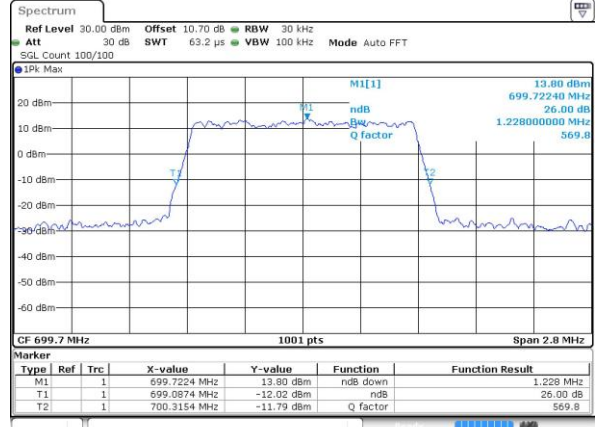
LTE Band 12

Lowest Channel / 1.4MHz / QPSK



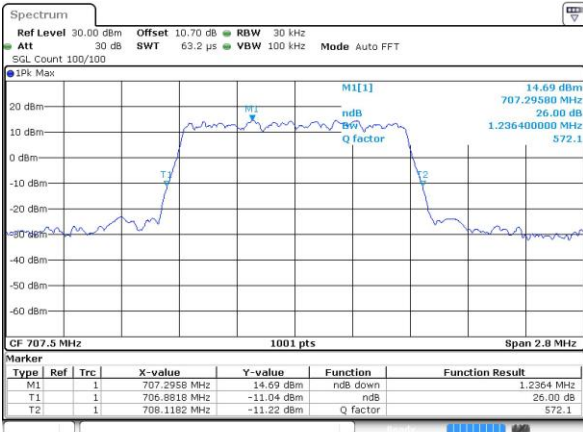
Date: 19 JUN 2017 22:10:01

Lowest Channel / 1.4MHz / 16QAM



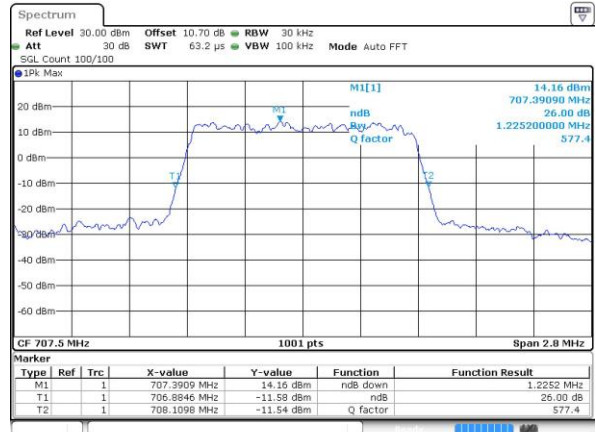
Date: 19 JUN 2017 22:09:51

Middle Channel / 1.4MHz / QPSK



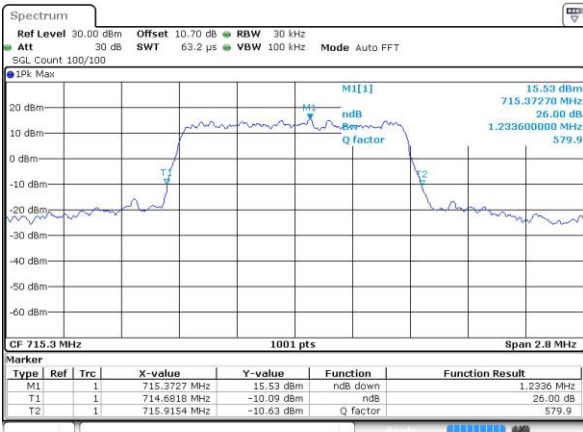
Date: 19 JUN 2017 22:25:31

Middle Channel / 1.4MHz / 16QAM



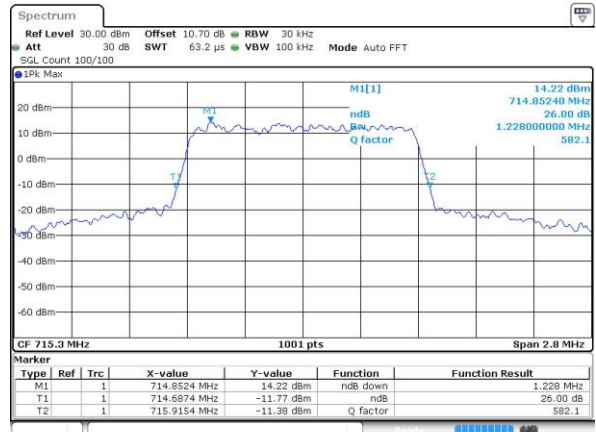
Date: 19 JUN 2017 22:25:41

Highest Channel / 1.4MHz / QPSK



Date: 19 JUN 2017 22:28:11

Highest Channel / 1.4MHz / 16QAM

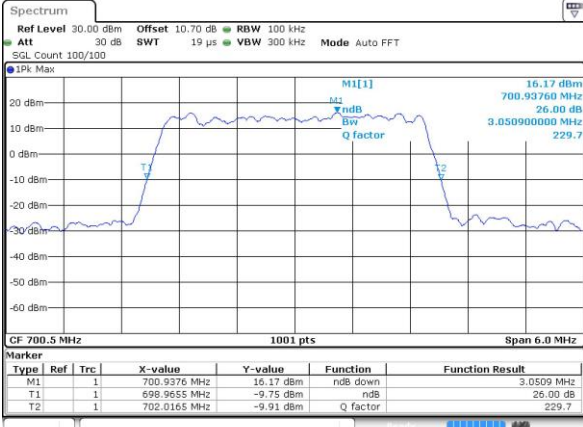


Date: 19 JUN 2017 22:28:01



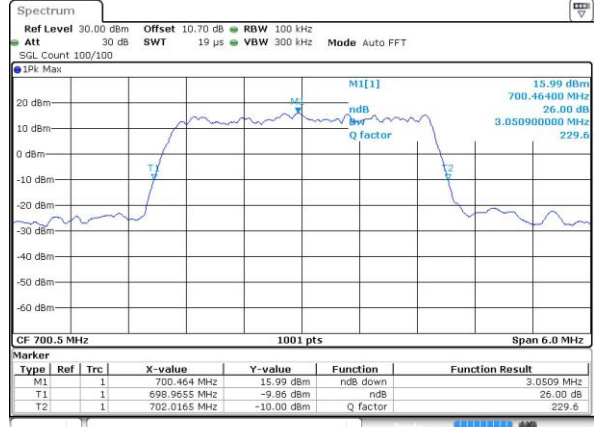
LTE Band 12

Lowest Channel / 3MHz / QPSK



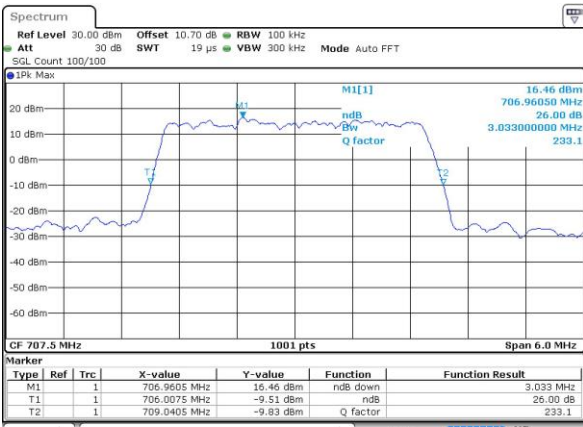
Date: 19 JUN 2017 20:48:11

Lowest Channel / 3MHz / 16QAM



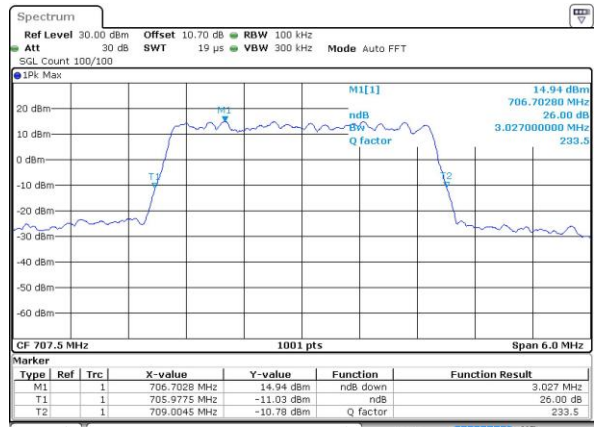
Date: 19 JUN 2017 20:48:01

Middle Channel / 3MHz / QPSK



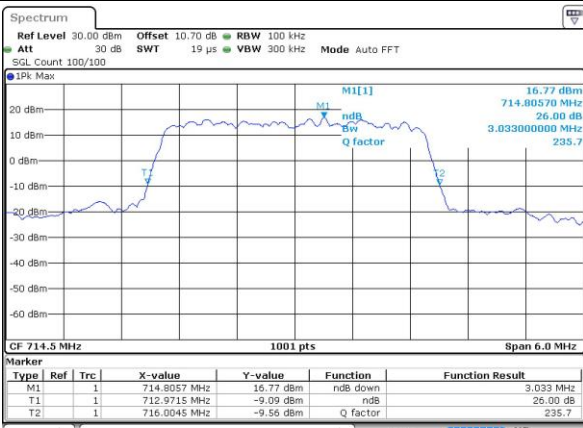
Date: 19 JUN 2017 20:55:08

Middle Channel / 3MHz / 16QAM



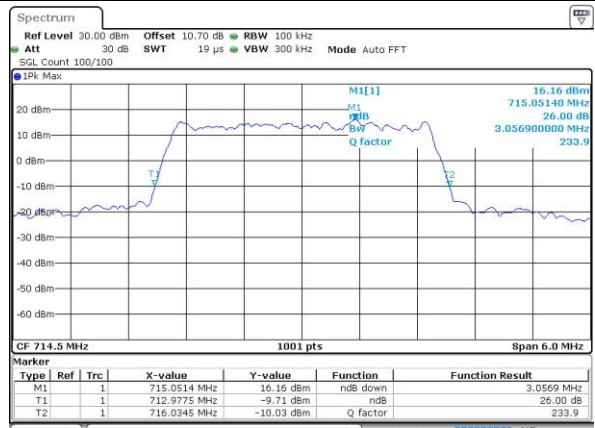
Date: 19 JUN 2017 20:55:18

Highest Channel / 3MHz / QPSK



Date: 19 JUN 2017 20:57:48

Highest Channel / 3MHz / 16QAM

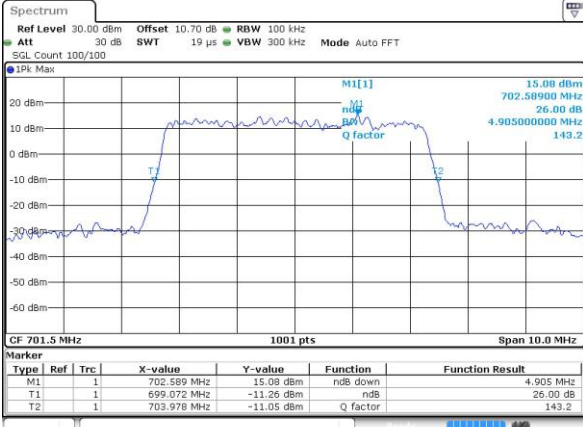


Date: 19 JUN 2017 20:57:38



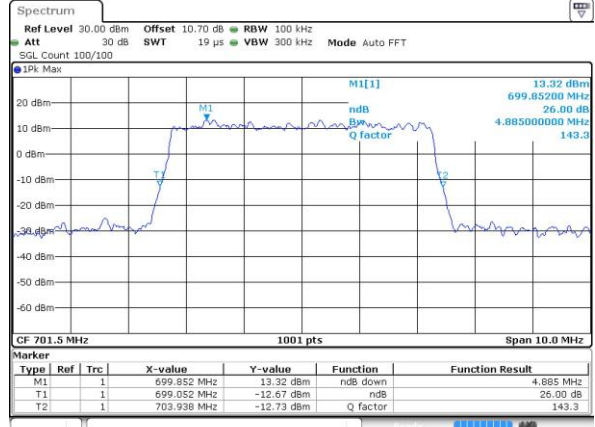
LTE Band 12

Lowest Channel / 5MHz / QPSK



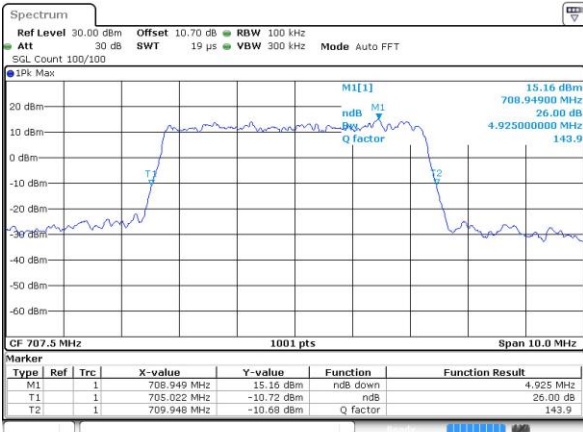
Date: 19 JUN 2017 21:04:55

Lowest Channel / 5MHz / 16QAM



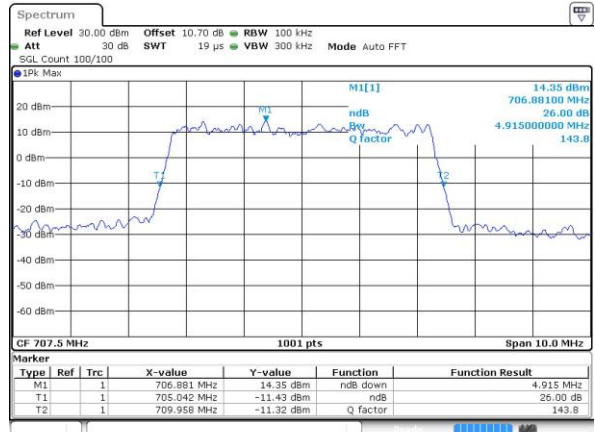
Date: 19 JUN 2017 21:04:44

Middle Channel / 5MHz / QPSK



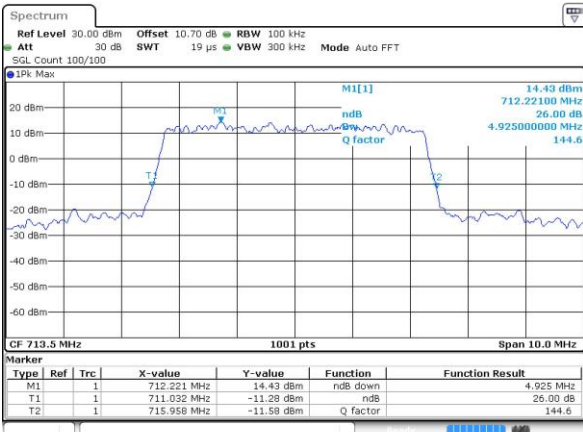
Date: 19 JUN 2017 21:11:51

Middle Channel / 5MHz / 16QAM



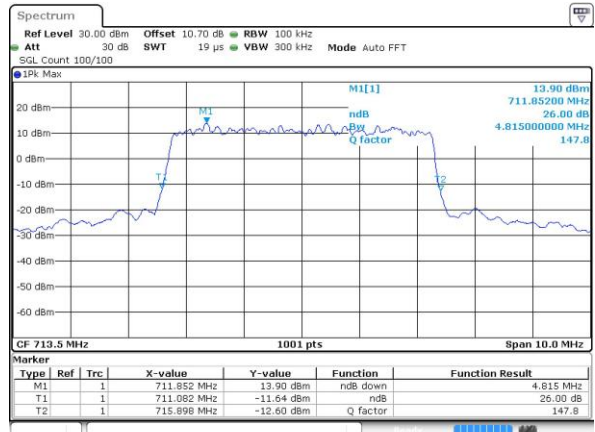
Date: 19 JUN 2017 21:12:01

Highest Channel / 5MHz / QPSK



Date: 19 JUN 2017 21:14:32

Highest Channel / 5MHz / 16QAM

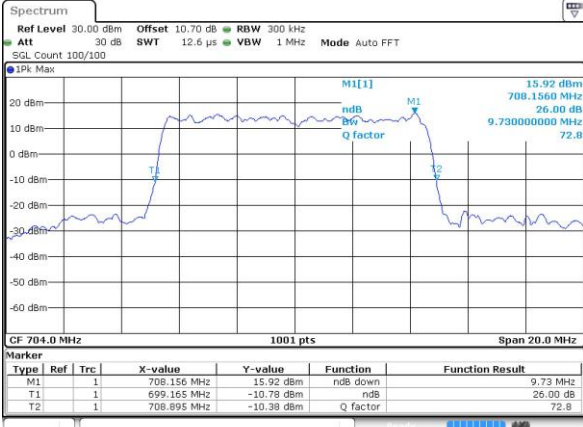


Date: 19 JUN 2017 21:14:21



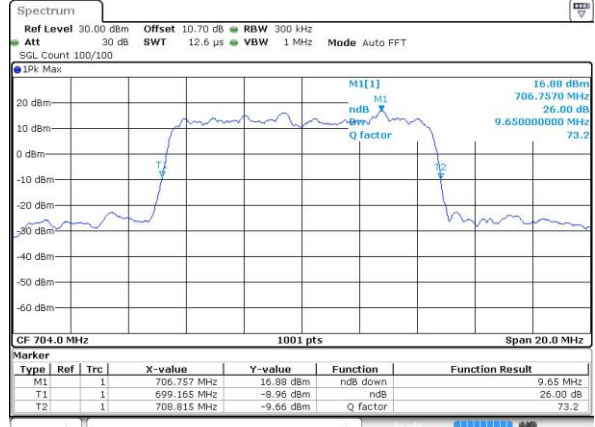
LTE Band 12

Lowest Channel / 10MHz / QPSK



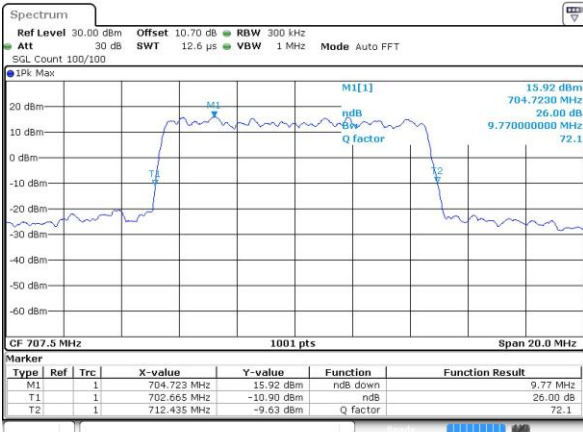
Date: 19 JUN 2017 21:21:39

Lowest Channel / 10MHz / 16QAM



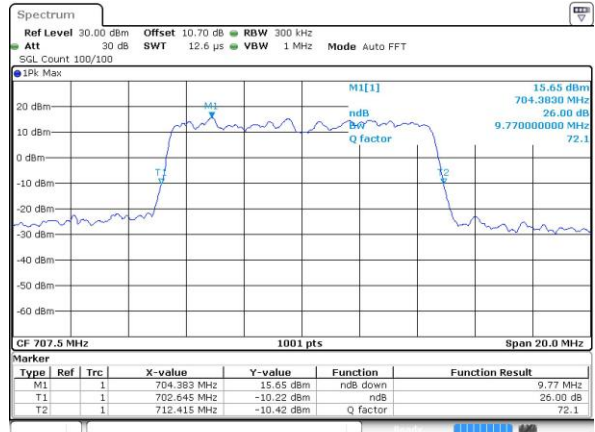
Date: 19 JUN 2017 21:21:28

Middle Channel / 10MHz / QPSK



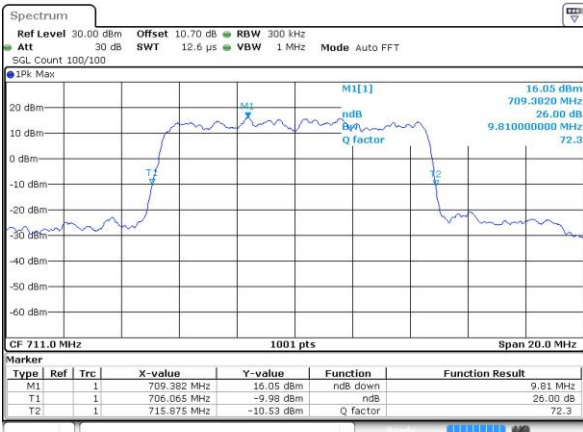
Date: 19 JUN 2017 21:28:35

Middle Channel / 10MHz / 16QAM



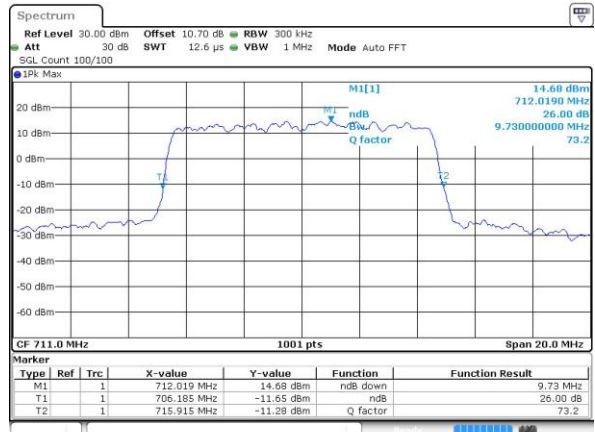
Date: 19 JUN 2017 21:28:45

Highest Channel / 10MHz / QPSK



Date: 19 JUN 2017 21:31:15

Highest Channel / 10MHz / 16QAM



Date: 19 JUN 2017 21:31:05



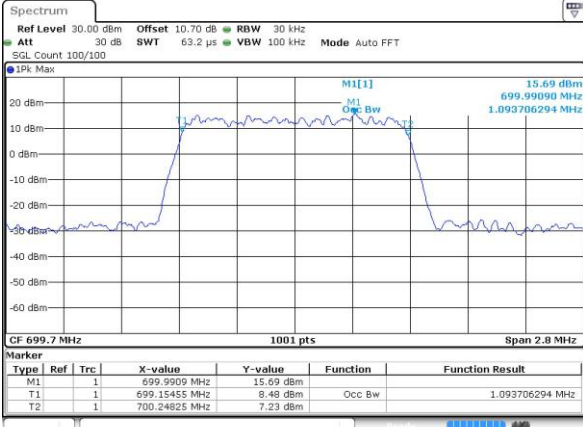
### Occupied Bandwidth

Mode	LTE Band 12 : 99%OBW(MHz)											
	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
BW	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	1.09	1.09	2.72	2.71	4.5	4.5	9.03	9.01	-	-	-	-
Middle CH	1.09	1.08	2.72	2.73	4.52	4.49	9.03	9.03	-	-	-	-
Highest CH	1.09	1.09	2.73	2.72	4.5	4.49	9.01	8.99	-	-	-	-



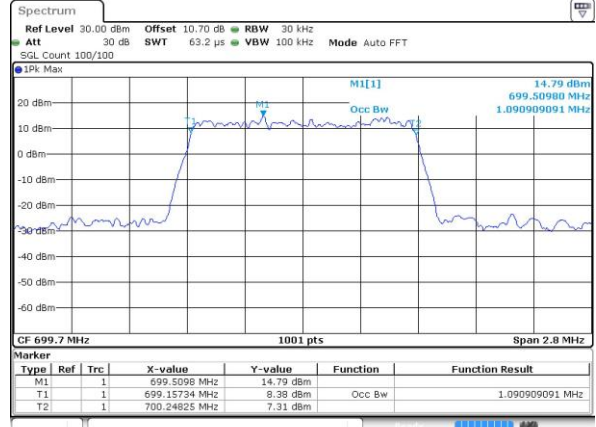
LTE Band 12

Lowest Channel / 1.4MHz / QPSK



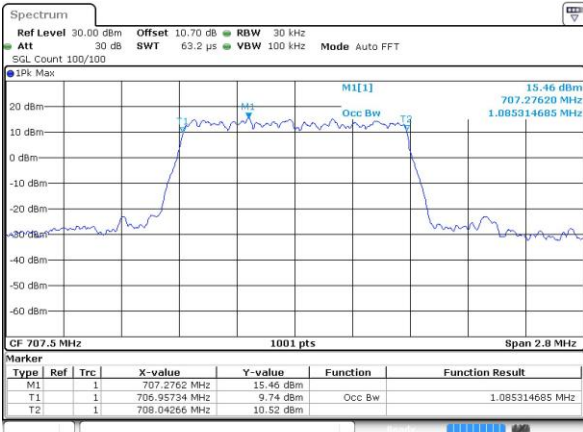
Date: 19 JUN 2017 22:09:30

Lowest Channel / 1.4MHz / 16QAM



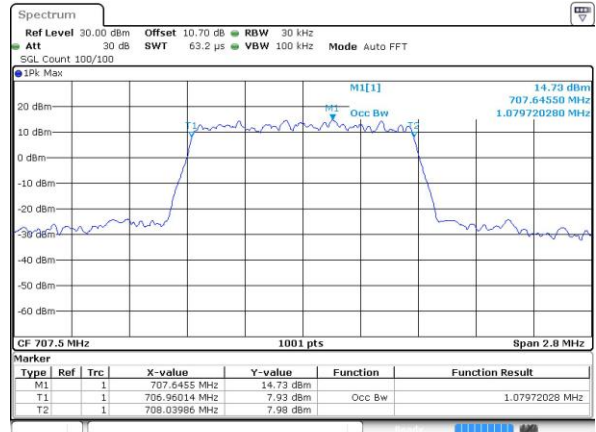
Date: 19 JUN 2017 22:09:41

Middle Channel / 1.4MHz / QPSK



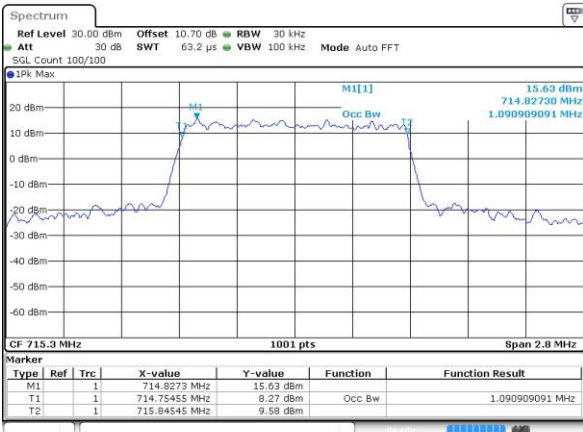
Date: 19 JUN 2017 22:25:21

Middle Channel / 1.4MHz / 16QAM



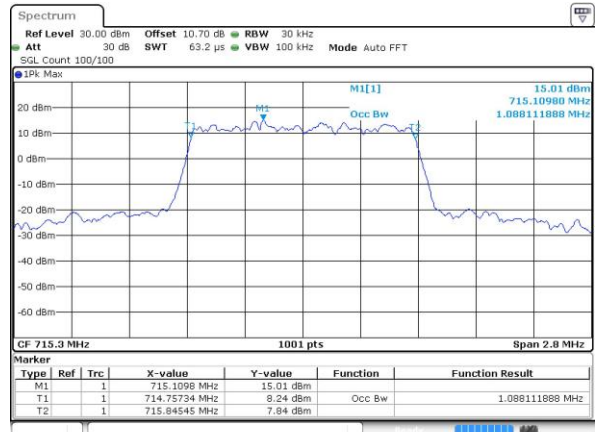
Date: 19 JUN 2017 22:25:11

Highest Channel / 1.4MHz / QPSK



Date: 19 JUN 2017 22:27:40

Highest Channel / 1.4MHz / 16QAM



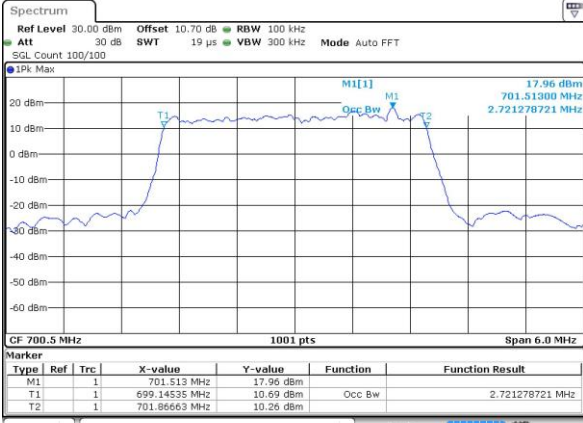
Date: 19 JUN 2017 22:27:50





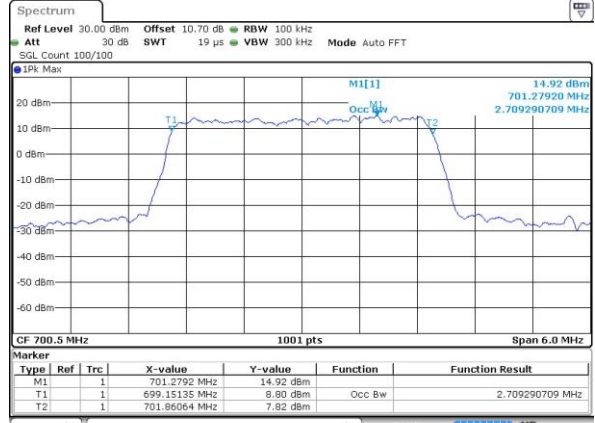
LTE Band 12

Lowest Channel / 3MHz / QPSK



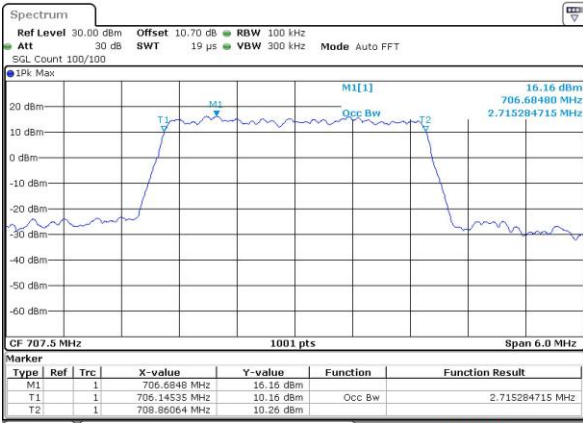
Date: 19 JUN 2017 20:47:40

Lowest Channel / 3MHz / 16QAM



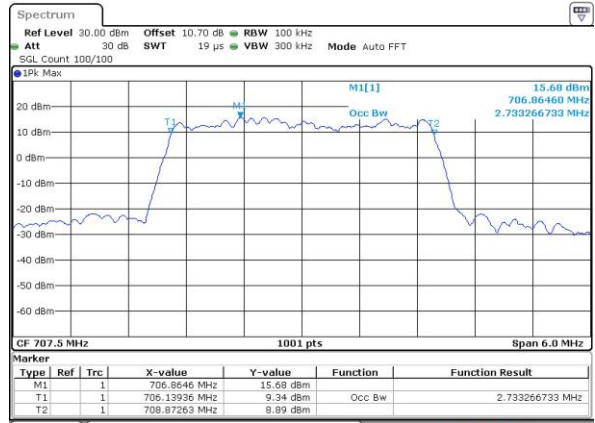
Date: 19 JUN 2017 20:47:50

Middle Channel / 3MHz / QPSK



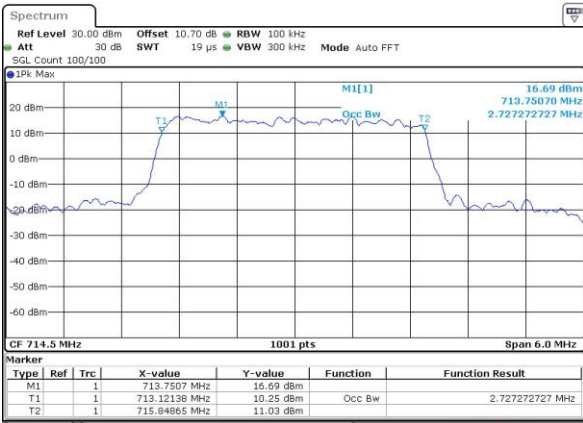
Date: 19 JUN 2017 20:54:58

Middle Channel / 3MHz / 16QAM



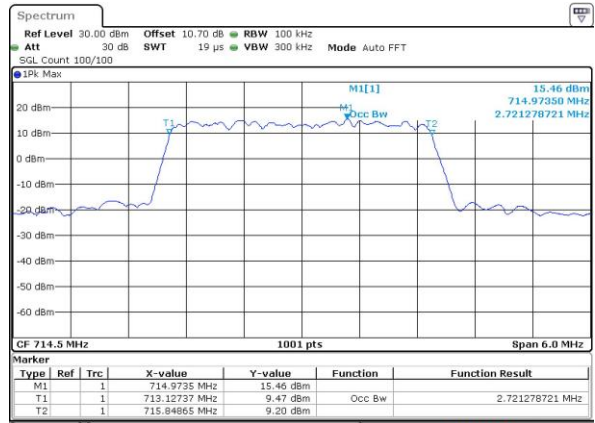
Date: 19 JUN 2017 20:54:47

Highest Channel / 3MHz / QPSK



Date: 19 JUN 2017 20:57:17

Highest Channel / 3MHz / 16QAM

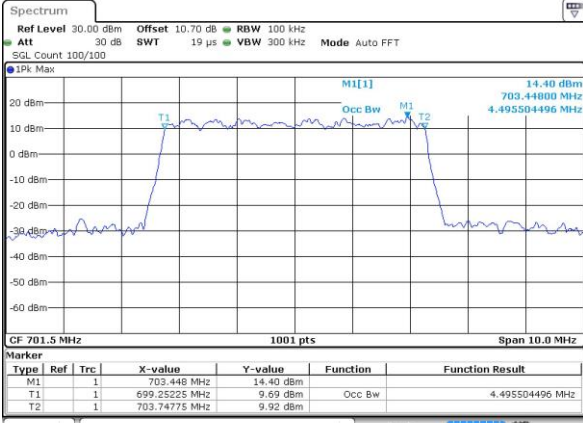


Date: 19 JUN 2017 20:57:28



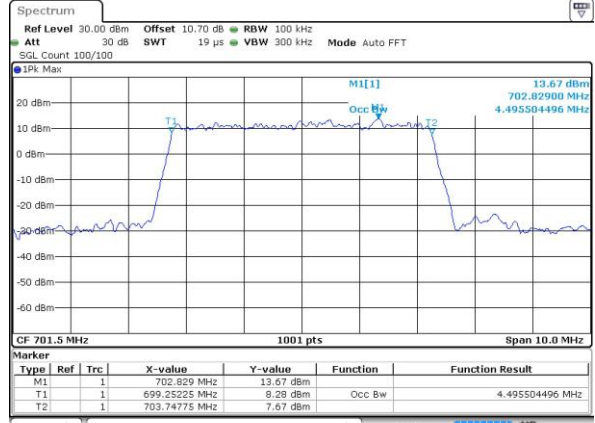
LTE Band 12

Lowest Channel / 5MHz / QPSK



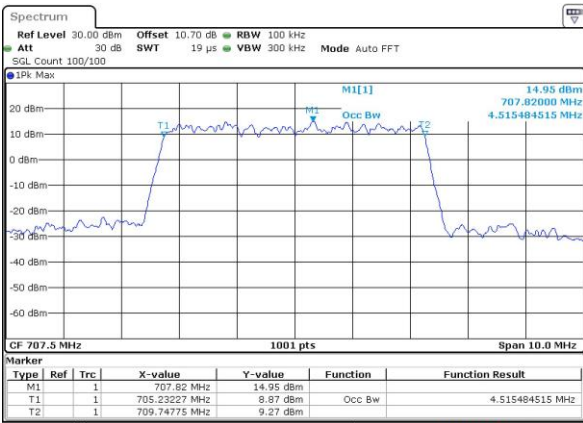
Date: 19 JUN 2017 21:04:24

Lowest Channel / 5MHz / 16QAM



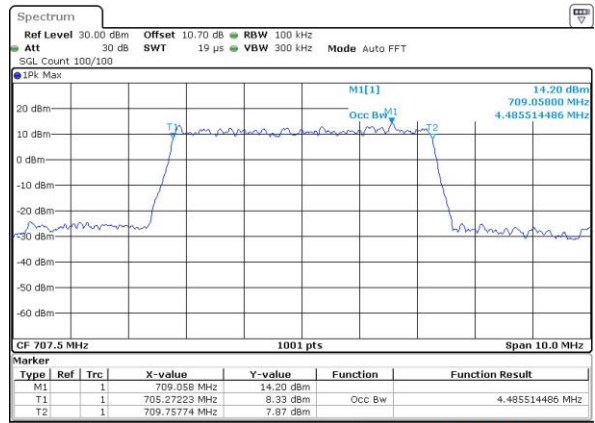
Date: 19 JUN 2017 21:04:34

Middle Channel / 5MHz / QPSK



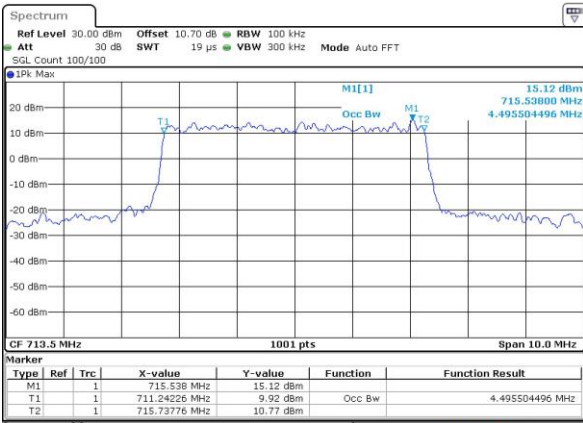
Date: 19 JUN 2017 21:11:40

Middle Channel / 5MHz / 16QAM



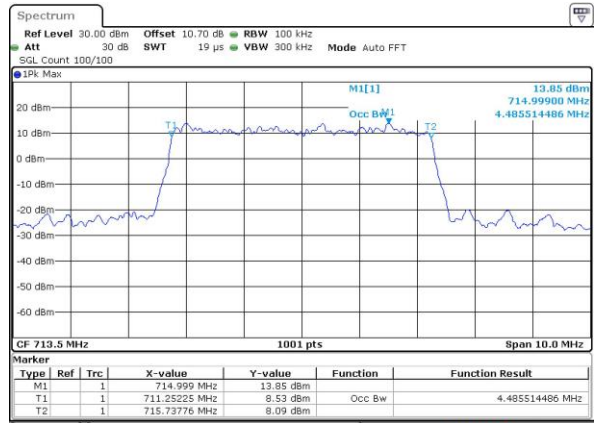
Date: 19 JUN 2017 21:11:30

Highest Channel / 5MHz / QPSK



Date: 19 JUN 2017 21:14:00

Highest Channel / 5MHz / 16QAM

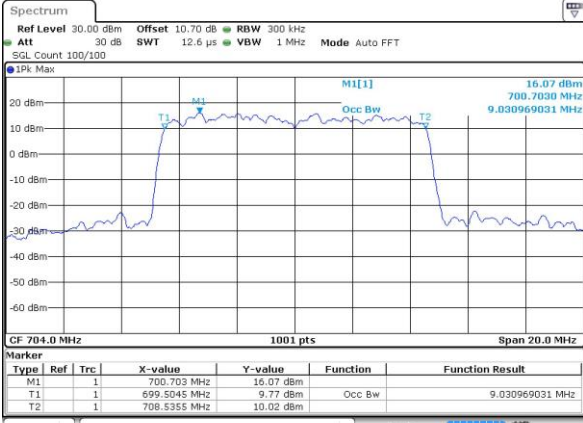


Date: 19 JUN 2017 21:14:11



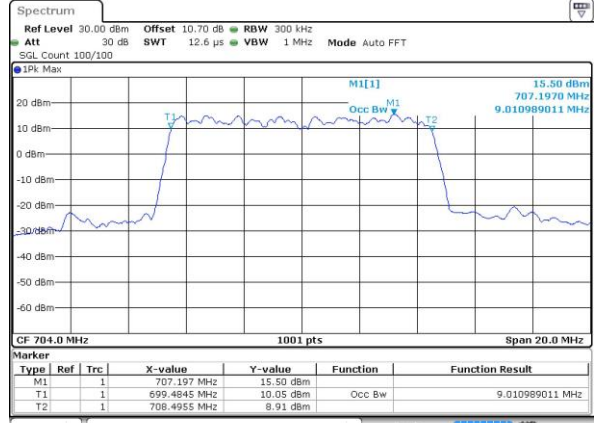
LTE Band 12

Lowest Channel / 10MHz / QPSK



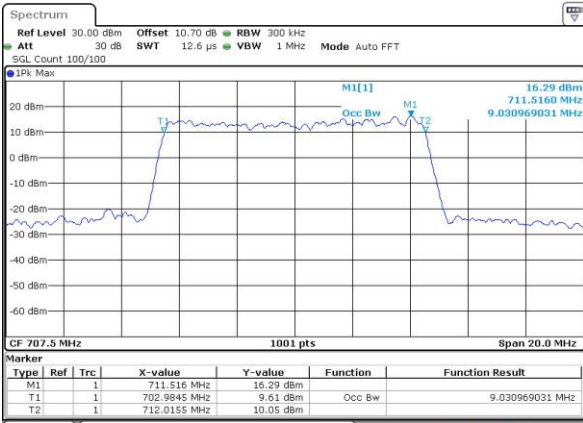
Date: 19 JUN 2017 21:21:07

Lowest Channel / 10MHz / 16QAM



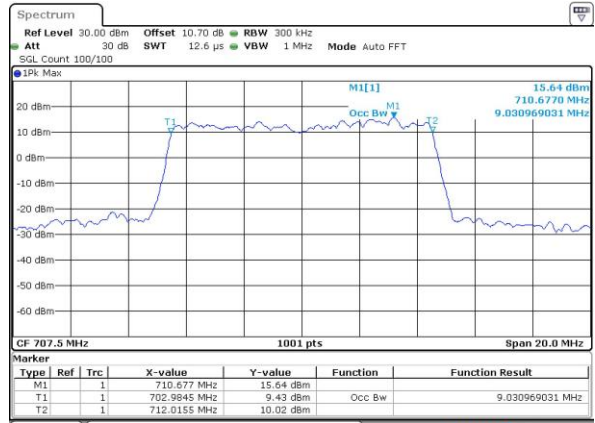
Date: 19 JUN 2017 21:21:18

Middle Channel / 10MHz / QPSK



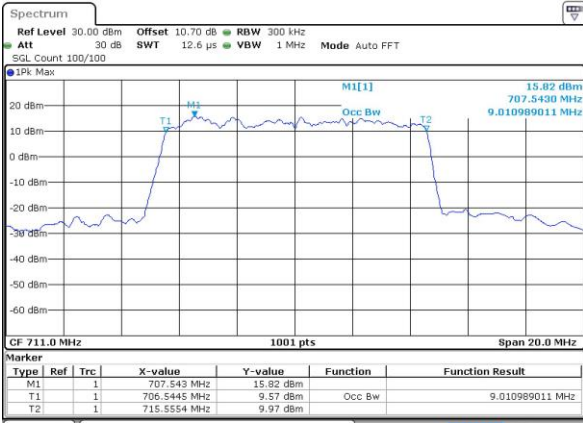
Date: 19 JUN 2017 21:28:24

Middle Channel / 10MHz / 16QAM



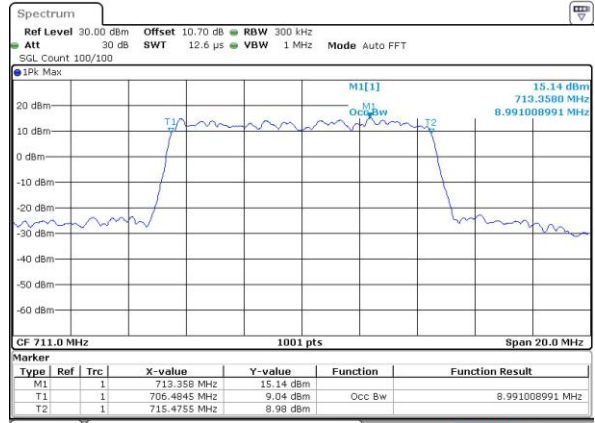
Date: 19 JUN 2017 21:28:14

Highest Channel / 10MHz / QPSK



Date: 19 JUN 2017 21:30:44

Highest Channel / 10MHz / 16QAM



Date: 19 JUN 2017 21:30:54