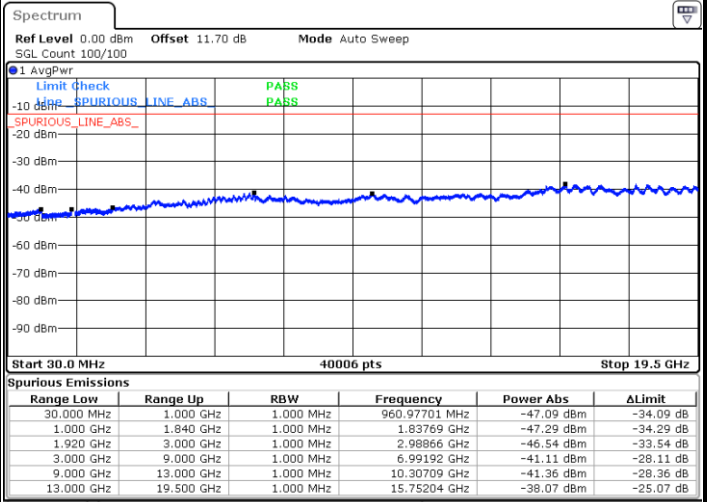
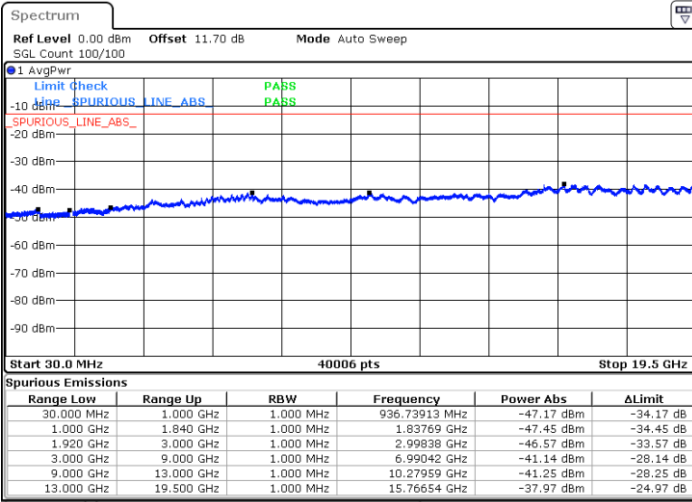




LTE Band 2 / 15MHz

Lowest Channel / QPSK

Lowest Channel / 16QAM

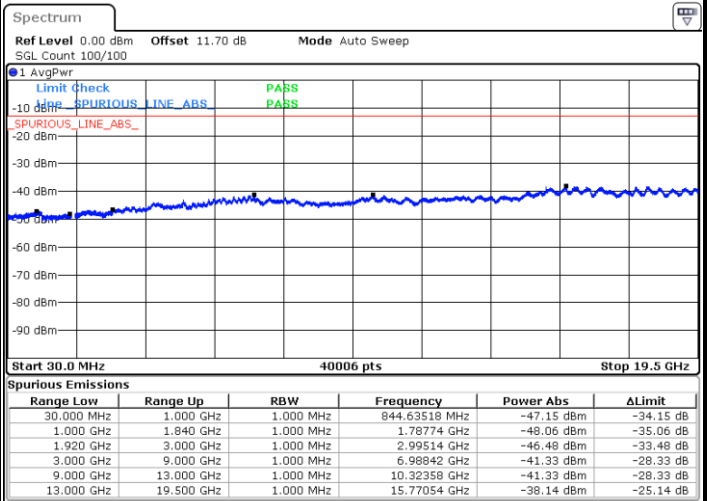
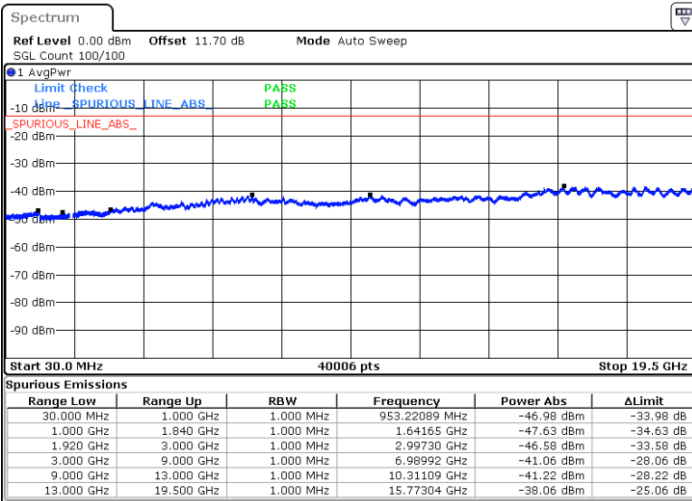


Date: 3.AUG.2017 15:16:46

Date: 3.AUG.2017 15:17:40

Middle Channel / QPSK

Middle Channel / 16QAM



Date: 3.AUG.2017 15:19:14

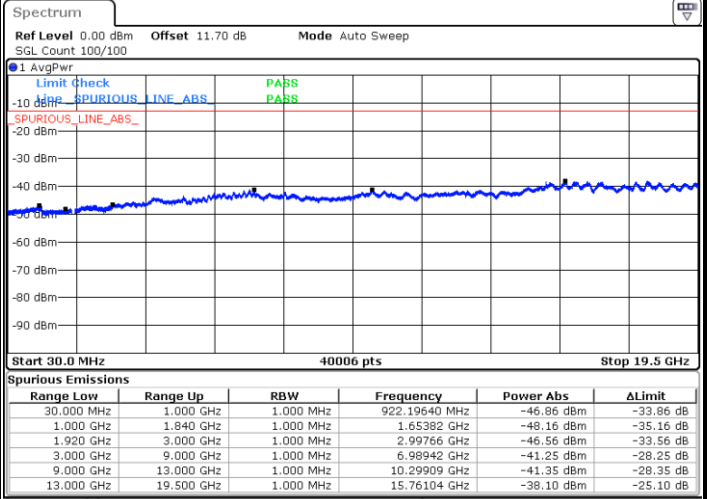
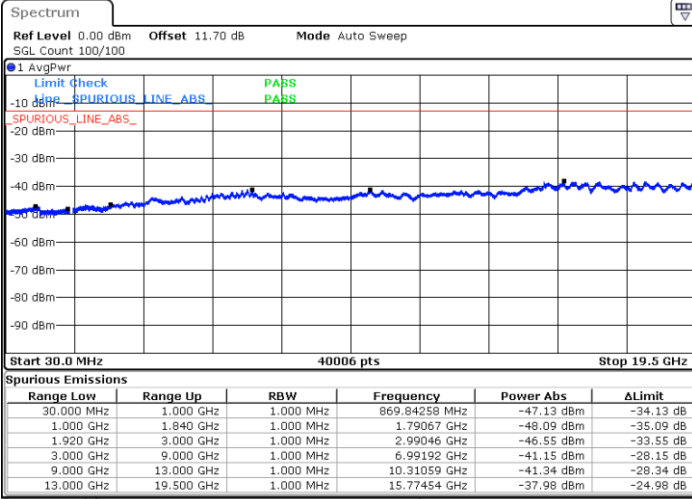
Date: 3.AUG.2017 15:20:08



LTE Band 2 / 15MHz

Highest Channel / QPSK

Highest Channel / 16QAM



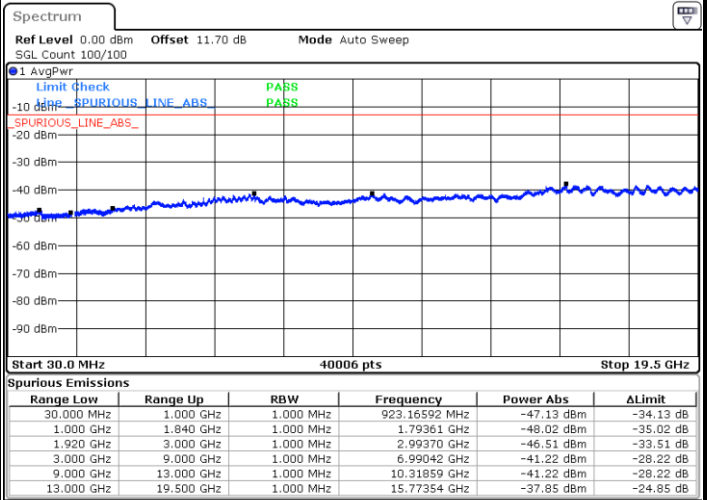
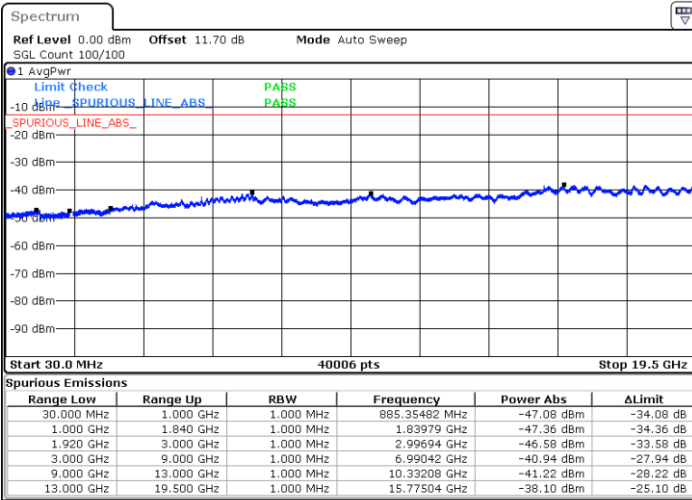
Date: 3.AUG.2017 15:26:17

Date: 3.AUG.2017 15:27:11

LTE Band 2 / 20MHz

Lowest Channel / QPSK

Lowest Channel / 16QAM



Date: 3.AUG.2017 15:33:20

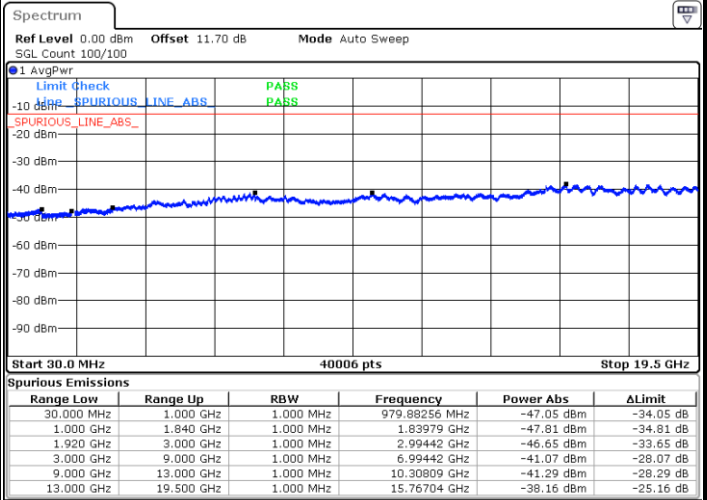
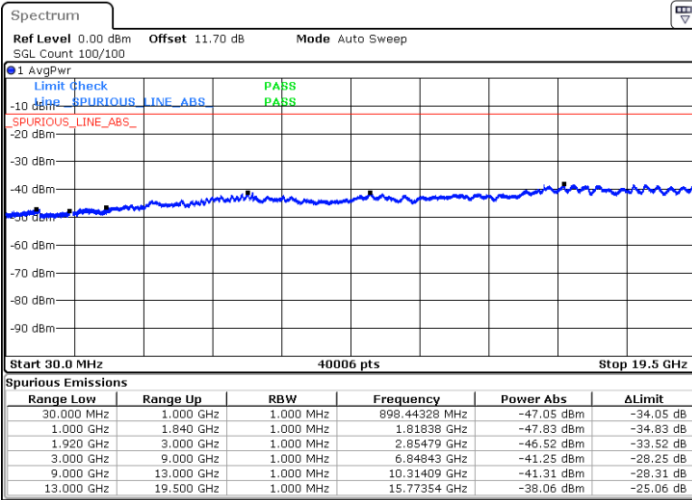
Date: 3.AUG.2017 15:34:14



LTE Band 2 / 20MHz

Middle Channel / QPSK

Middle Channel / 16QAM

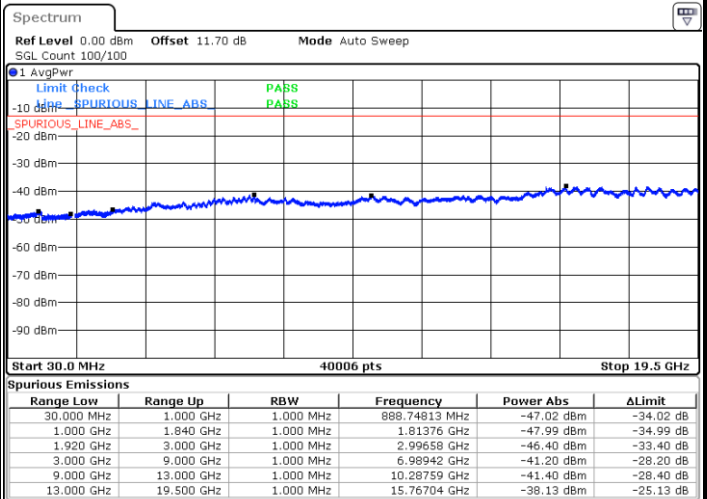
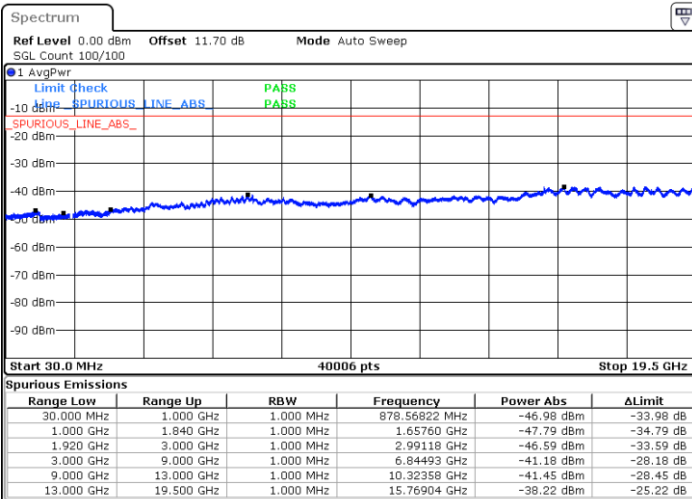


Date: 3 AUG.2017 15:35:48

Date: 3 AUG.2017 15:36:43

Highest Channel / QPSK

Highest Channel / 16QAM



Date: 3 AUG.2017 15:42:52

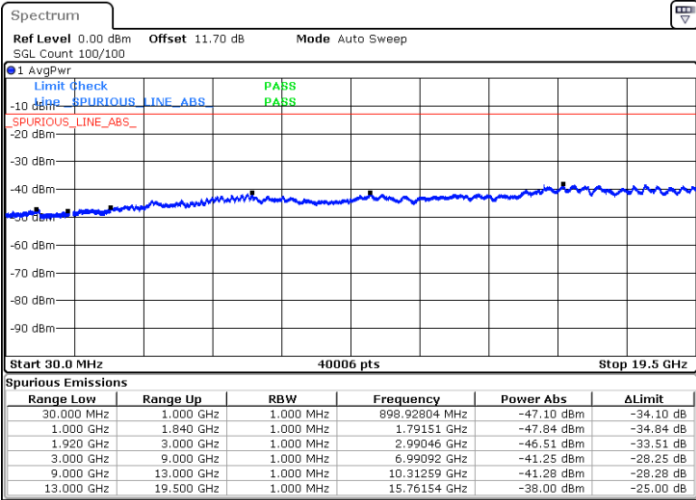
Date: 3 AUG.2017 15:43:46



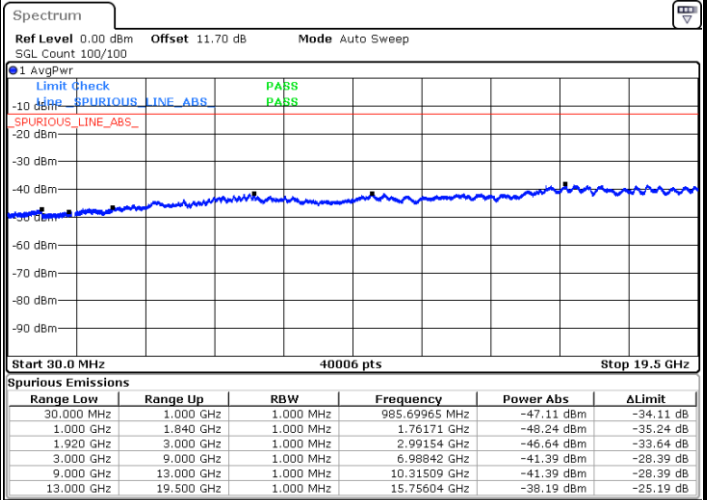
LTE Band 2 / 1.4MHz

Lowest Channel / 64QAM

Middle Channel / 64QAM

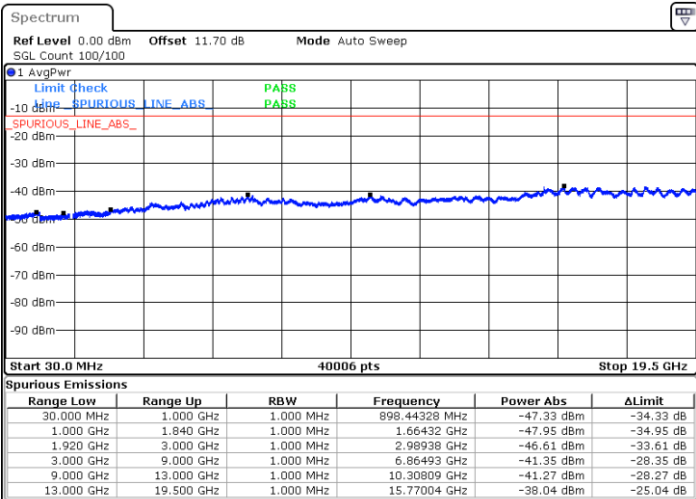


Date: 6.OCT.2017 19:45:46



Date: 6.OCT.2017 19:47:00

Highest Channel / 64QAM

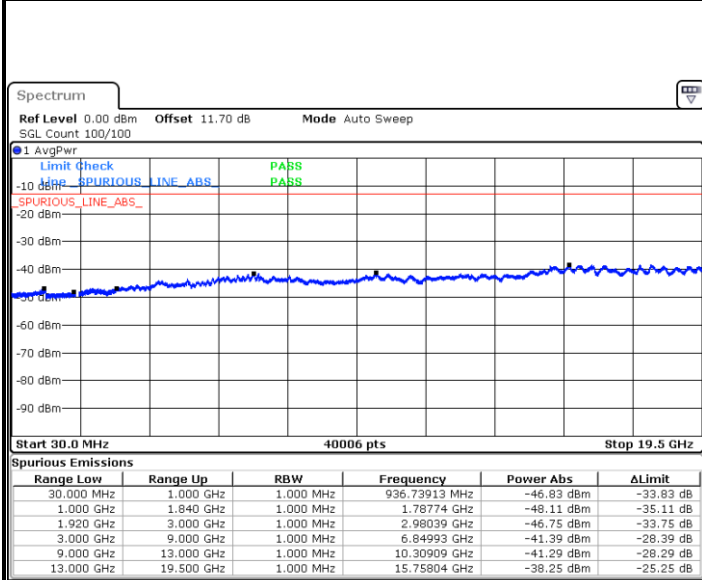


Date: 6.OCT.2017 19:50:31



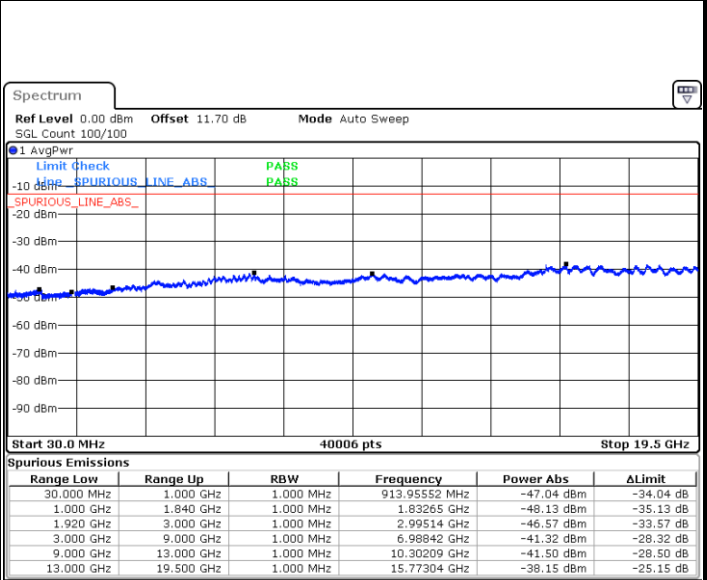
**LTE Band 2 / 3MHz**

**Lowest Channel / 64QAM**



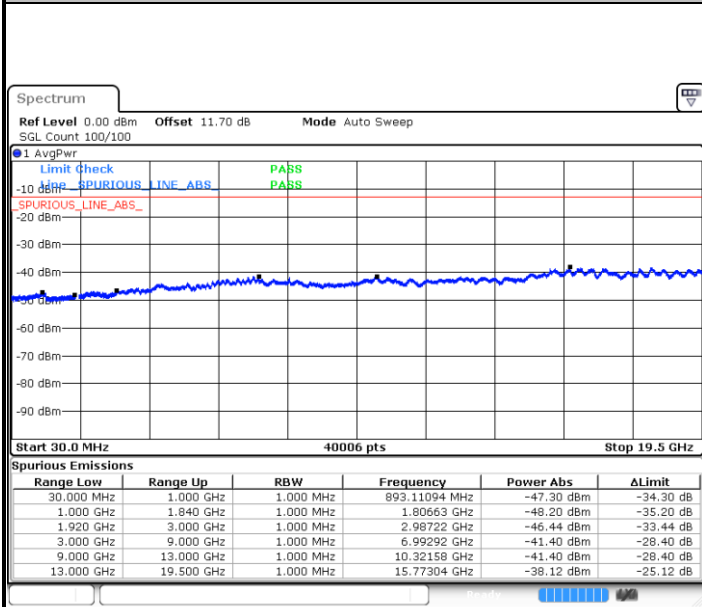
Date: 6.OCT.2017 19:04:22

**Middle Channel / 64QAM**



Date: 6.OCT.2017 19:05:36

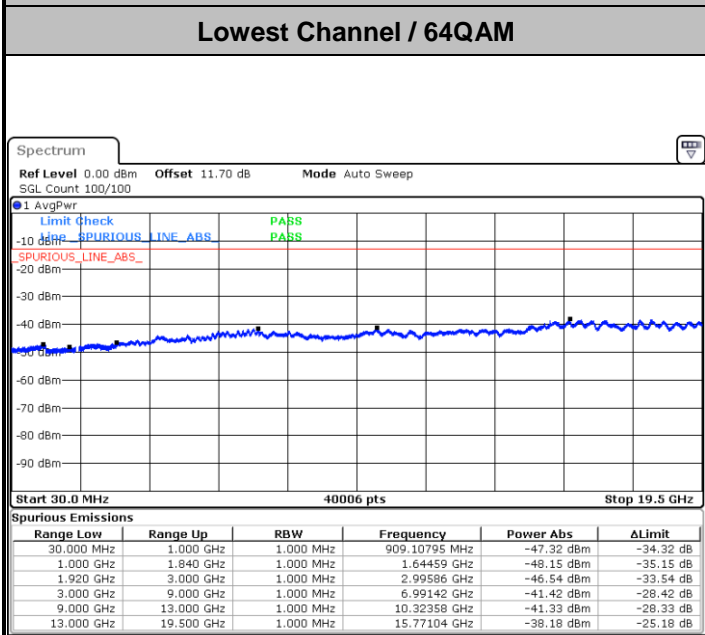
**Highest Channel / 64QAM**



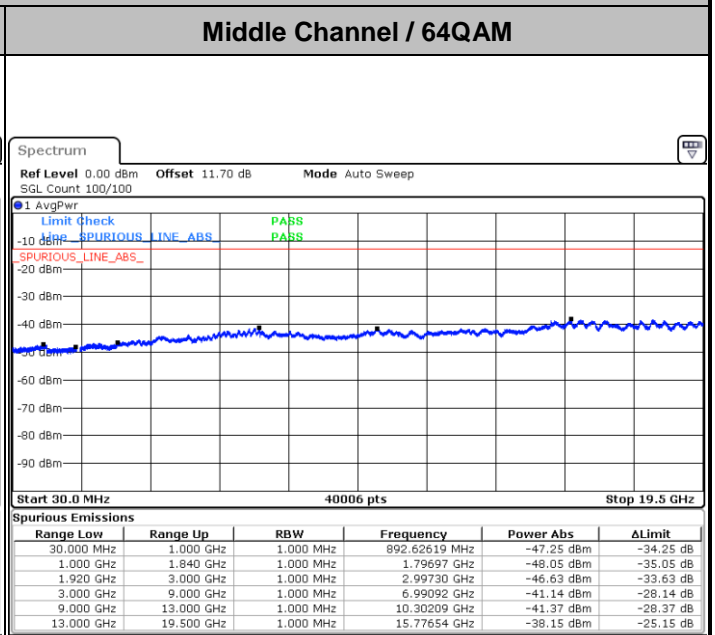
Date: 6.OCT.2017 19:09:07



**LTE Band 2 / 5MHz**

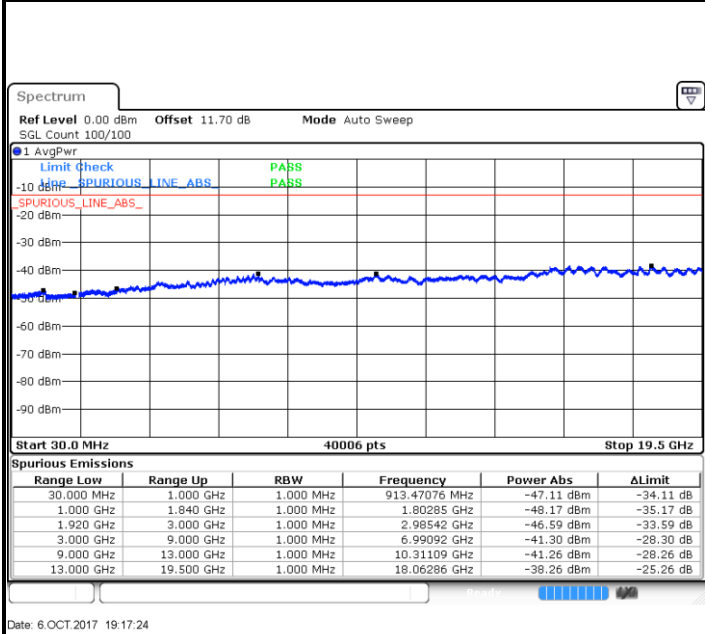


Date: 6.OCT.2017 19:12:39



Date: 6.OCT.2017 19:13:53

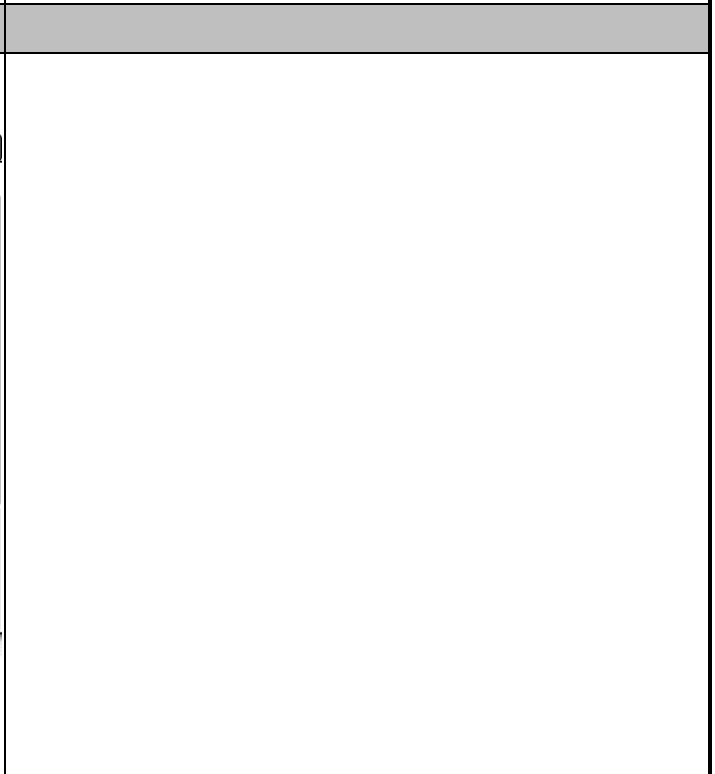
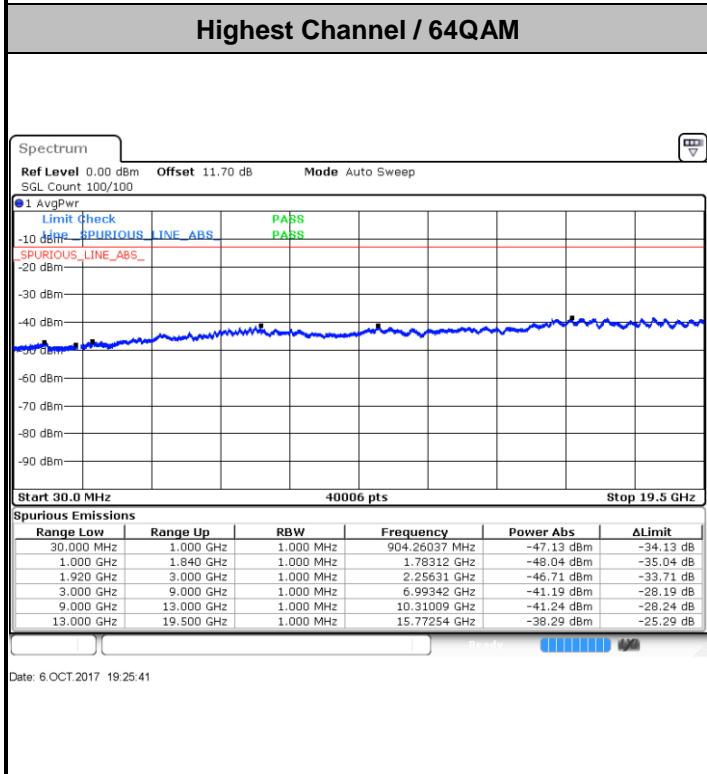
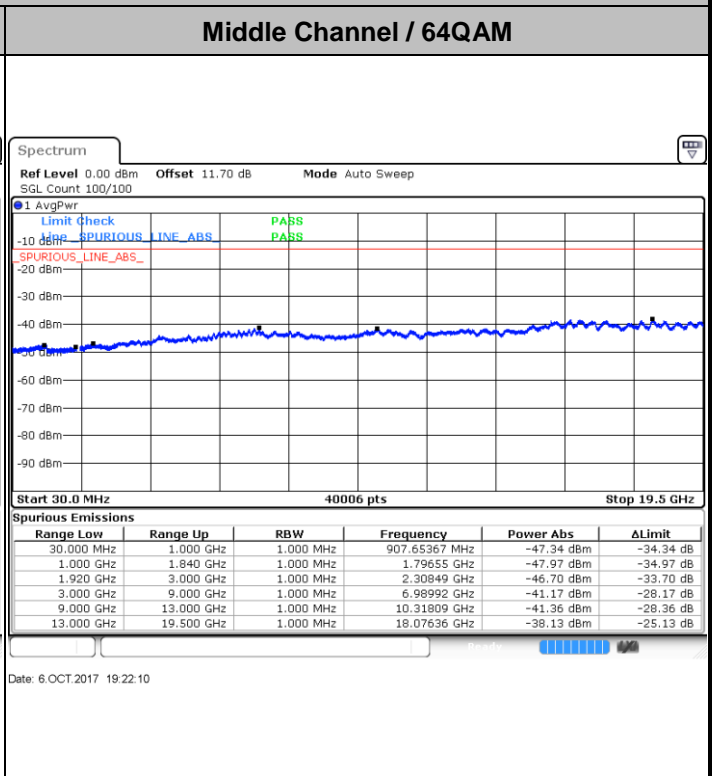
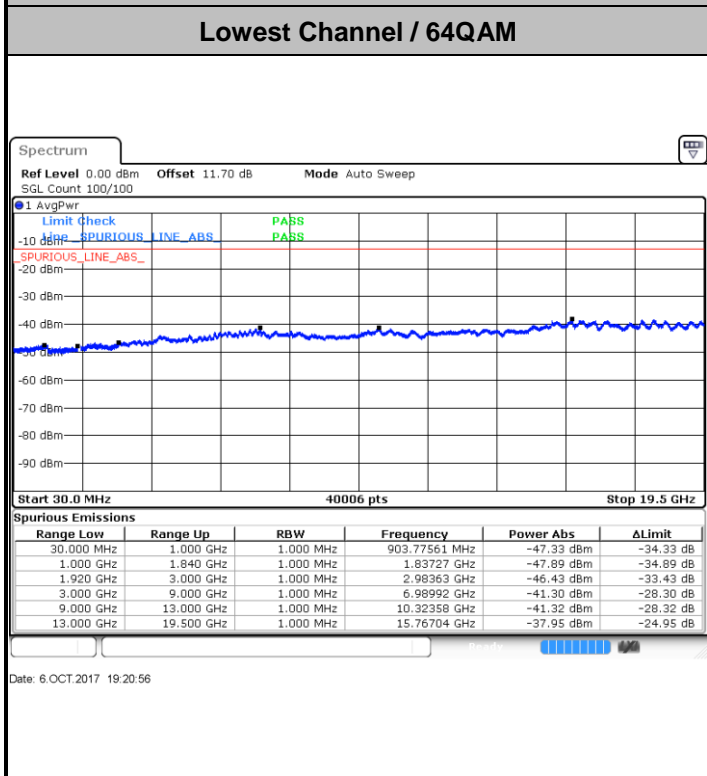
**Highest Channel / 64QAM**



Date: 6.OCT.2017 19:17:24



**LTE Band 2 / 10MHz**

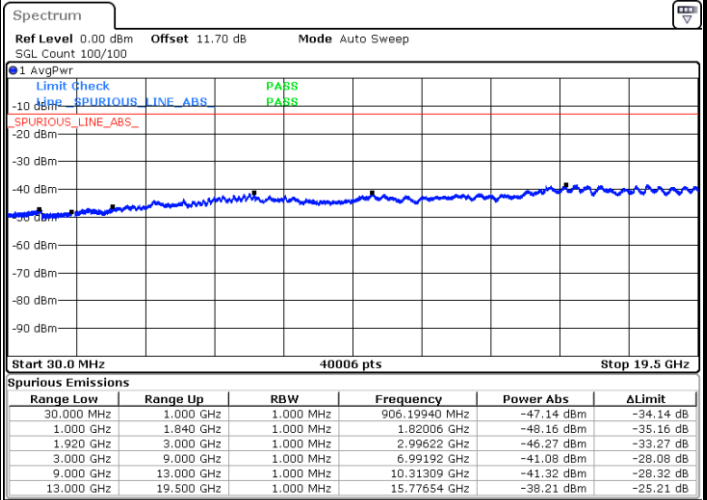
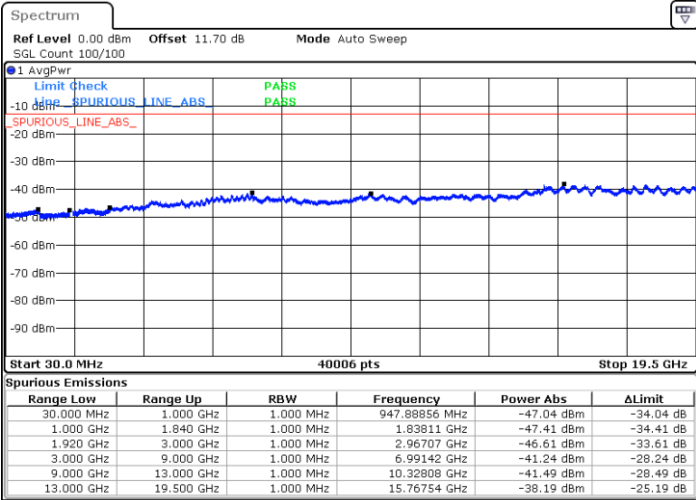




LTE Band 2 / 15MHz

Lowest Channel / 64QAM

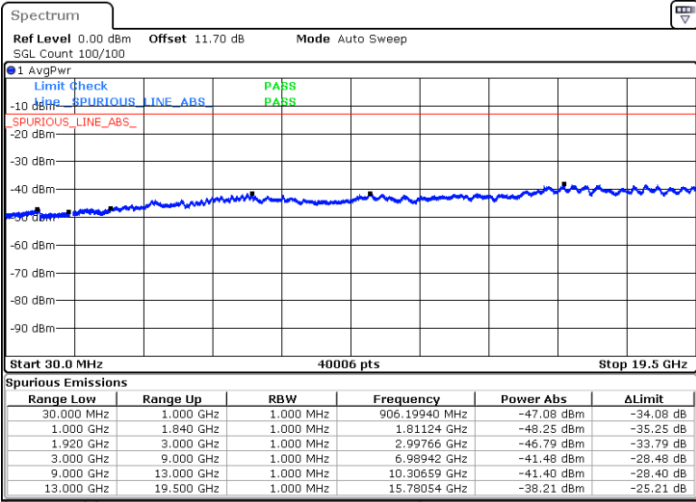
Middle Channel / 64QAM



Date: 6.OCT.2017 19:29:12

Date: 6.OCT.2017 19:30:27

Highest Channel / 64QAM



Date: 6.OCT.2017 19:33:58

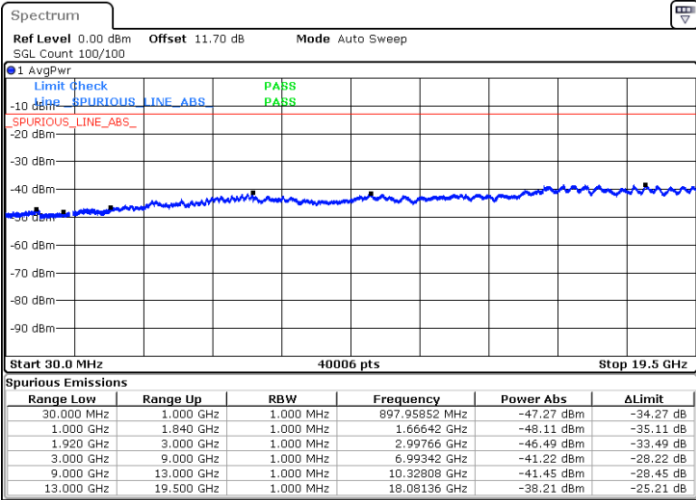




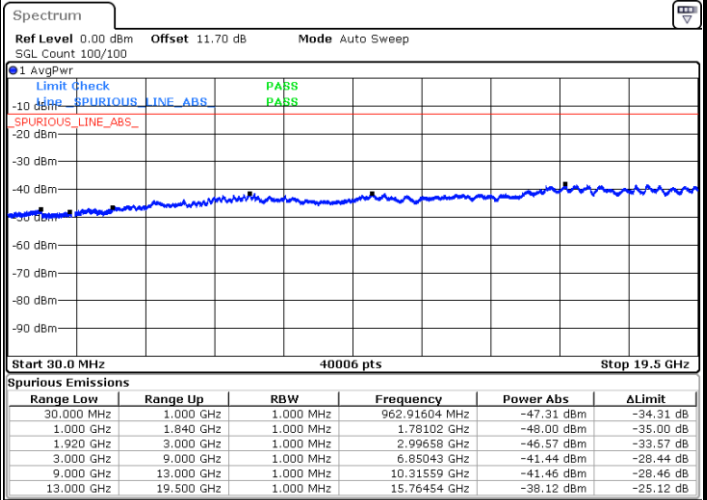
LTE Band 2 / 20MHz

Lowest Channel / 64QAM

Middle Channel / 64QAM

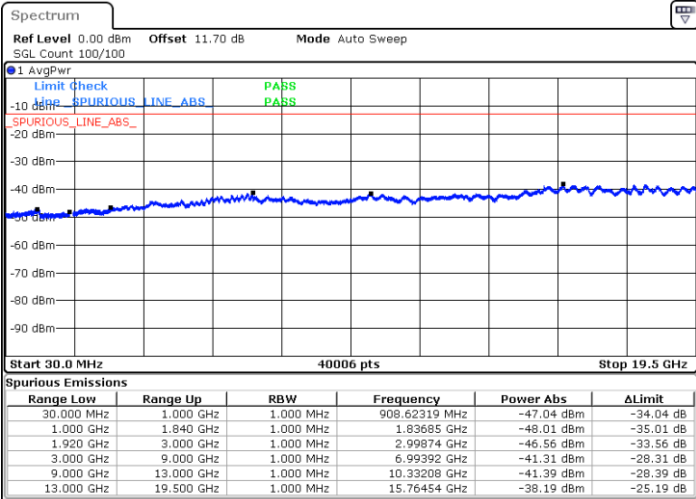


Date: 6.OCT.2017 19:37:29



Date: 6.OCT.2017 19:38:43

Highest Channel / 64QAM



Date: 6.OCT.2017 19:42:14



**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	0.0009	PASS
40	Normal Voltage	0.0015	
30	Normal Voltage	0.0018	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0012	
0	Normal Voltage	0.0018	
-10	Normal Voltage	0.0006	
-20	Normal Voltage	0.0017	
-30	Normal Voltage	0.0019	
20	Maximum Voltage	0.0014	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0004	

**Note:**

1. Normal Voltage =3.85 V. ; Battery End Point (BEP) =3.4 V. ; Maximum Voltage =4.4 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.



## LTE Band 4

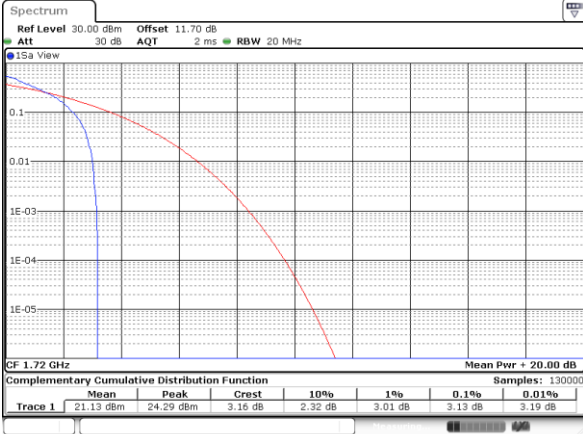
### Peak-to-Average Ratio

Mode	LTE Band 4 / 20MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	3.13	4.23	4	5.22	<b>PASS</b>
Middle CH	3.1	4.32	3.91	5.39	
Highest CH	3.45	4.2	4.23	5.25	
Mode	LTE Band 4 / 20MHz				
Mod.	64QAM				Limit: 13dB
RB Size	1RB	Full RB			Result
Lowest CH	4.38	5.51	-	-	<b>PASS</b>
Middle CH	4.46	5.74	-	-	
Highest CH	4.64	5.04	-	-	



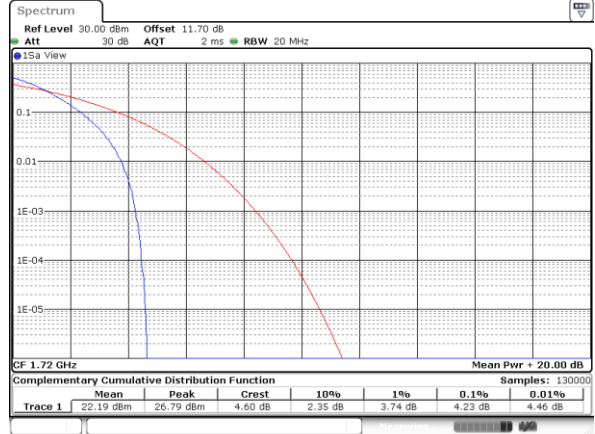
LTE Band 4 / 20MHz / QPSK

Lowest Channel / 1RB



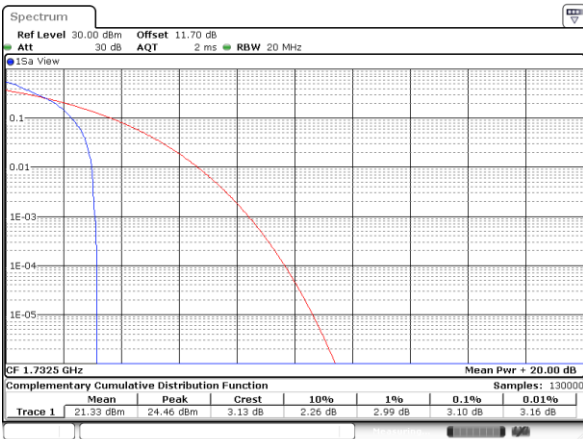
Date: 3 AUG 2017 18:13:36

Lowest Channel / Full RB



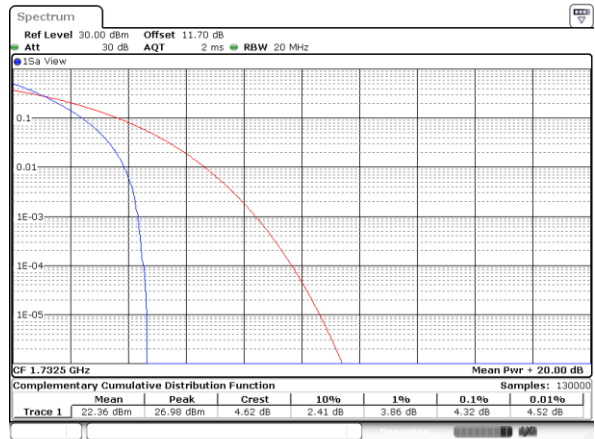
Date: 3 AUG 2017 18:13:46

Middle Channel / 1RB



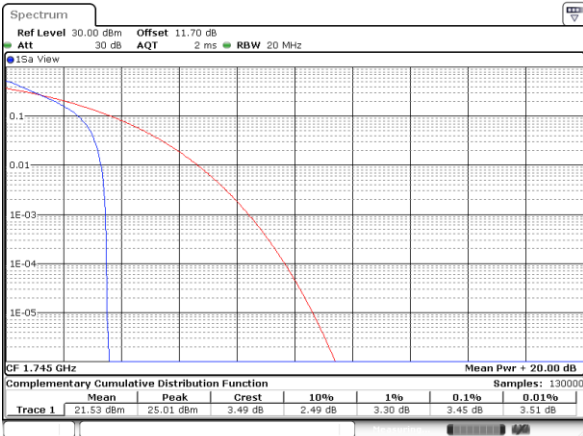
Date: 3 AUG 2017 18:14:06

Middle Channel / Full RB



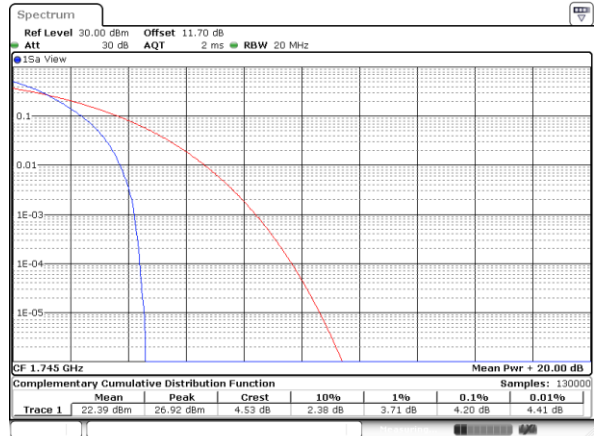
Date: 3 AUG 2017 18:14:15

Highest Channel / 1RB



Date: 3 AUG 2017 18:14:24

Highest Channel / Full RB

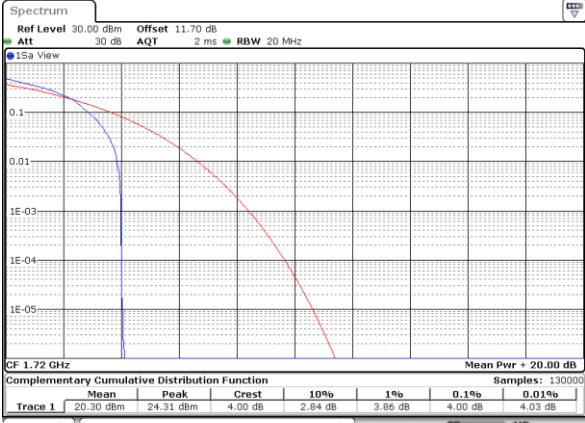


Date: 3 AUG 2017 18:14:33



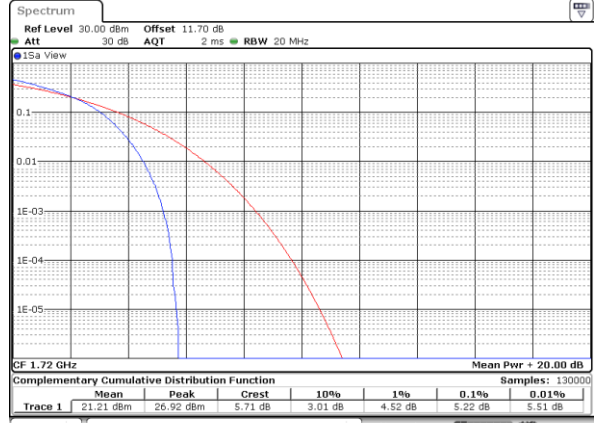
LTE Band 4 / 20MHz / 16QAM

Lowest Channel / 1RB



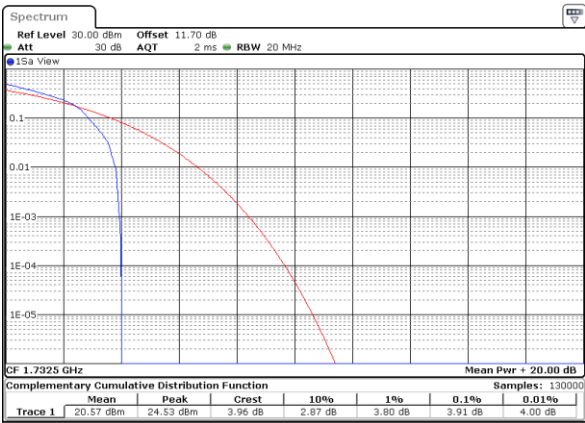
Date: 3 AUG 2017 18:12:30

Lowest Channel / Full RB



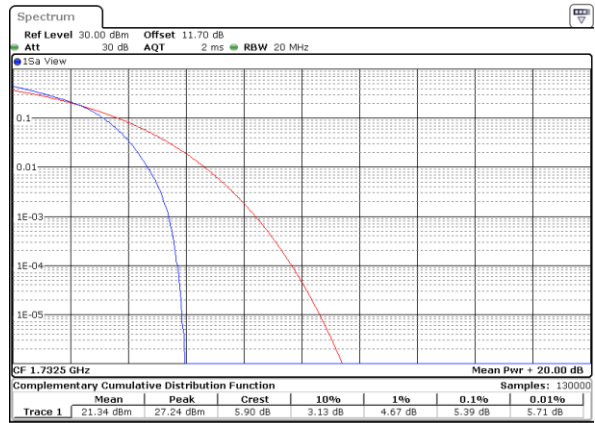
Date: 3 AUG 2017 18:12:42

Middle Channel / 1RB



Date: 3 AUG 2017 18:12:52

Middle Channel / Full RB



Date: 3 AUG 2017 18:13:01

Highest Channel / 1RB



Date: 3 AUG 2017 18:13:11

Highest Channel / Full RB

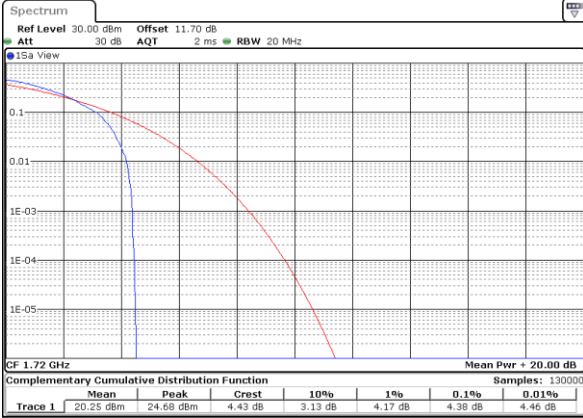


Date: 3 AUG 2017 18:13:20



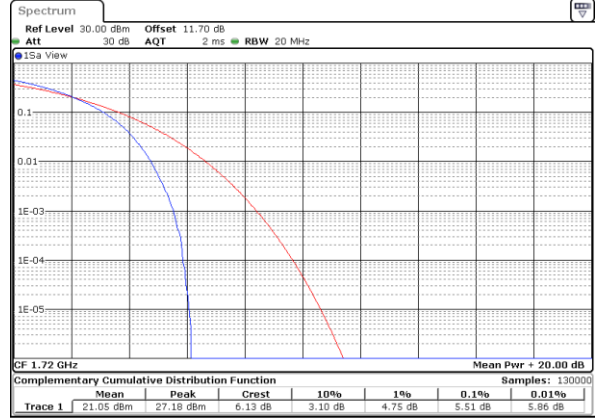
LTE Band 4 / 20MHz / 64QAM

Lowest Channel / 1RB



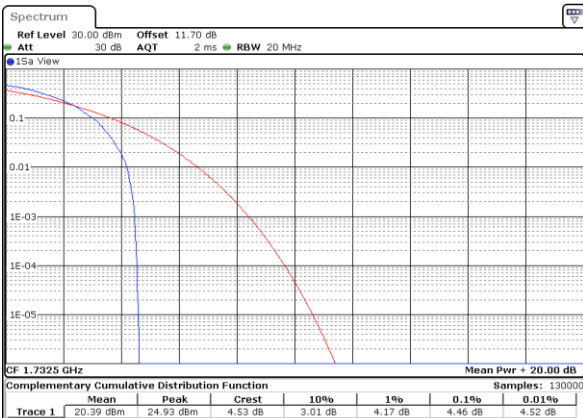
Date: 6 OCT.2017 20:42:25

Lowest Channel / Full RB



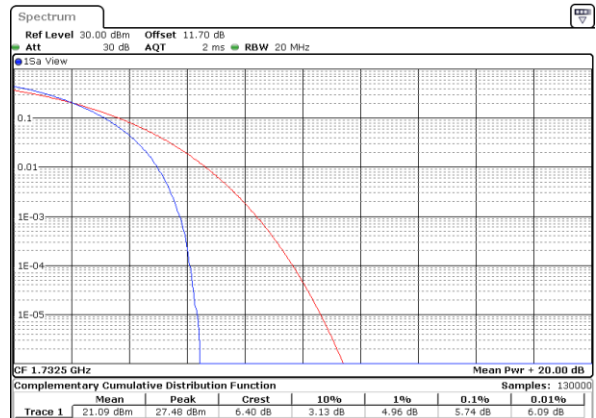
Date: 6 OCT.2017 20:42:35

Middle Channel / 1RB



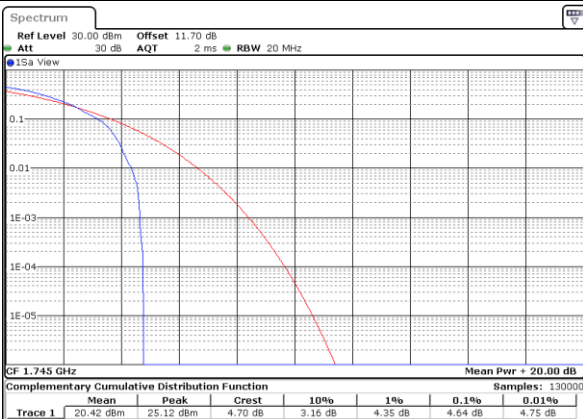
Date: 6 OCT.2017 20:42:47

Middle Channel / Full RB



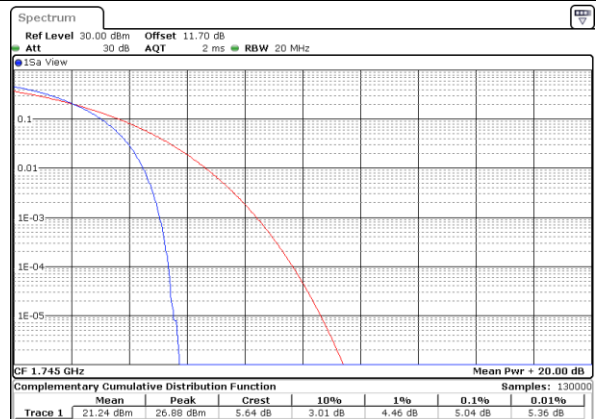
Date: 6 OCT.2017 20:43:18

Highest Channel / 1RB



Date: 6 OCT.2017 20:43:28

Highest Channel / Full RB



Date: 6 OCT.2017 20:43:37



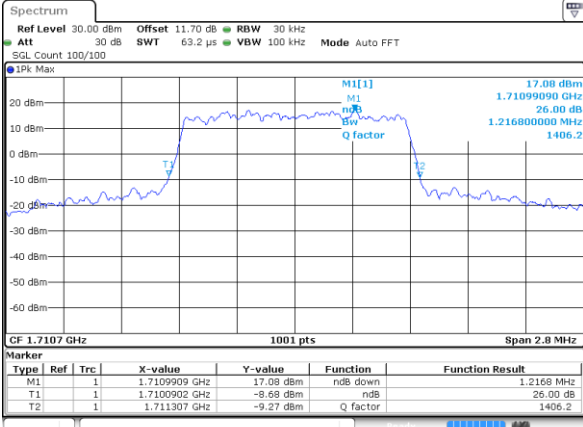
**26dB Bandwidth**

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	1.22	1.21	3.03	3.03	4.92	4.90	9.83	9.83	14.39	14.63	20.10	20.14
Middle CH	1.21	1.23	3.00	2.99	4.91	4.97	9.77	9.79	14.33	14.39	20.06	20.10
Highest CH	1.23	1.22	3.07	3.00	4.97	4.84	9.75	9.77	14.36	14.66	20.10	20.10
Mode	LTE Band 4 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	1.22	-	2.95	-	4.94	-	9.71	-	14.27	-	20.18	-
Middle CH	1.22	-	3.03	-	4.99	-	9.71	-	14.63	-	20.3	-
Highest CH	1.21	-	3.02	-	4.94	-	9.85	-	14.45	-	20.26	-



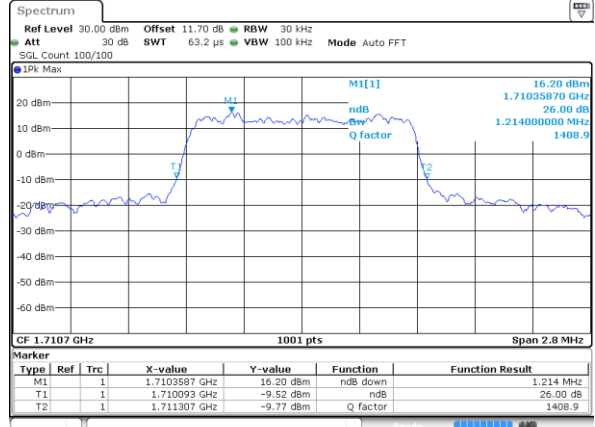
LTE Band 4

Lowest Channel / 1.4MHz / QPSK



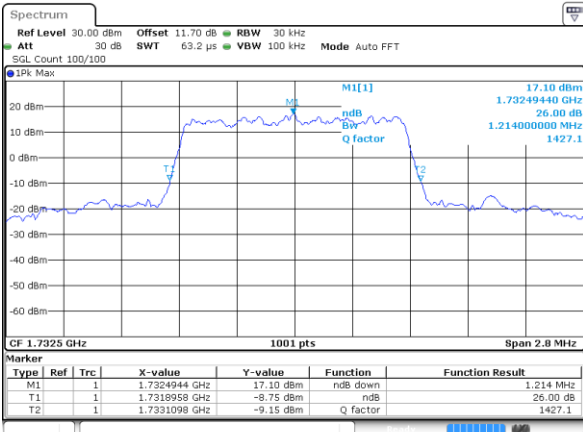
Date: 3 AUG 2017 17:48:43

Lowest Channel / 1.4MHz / 16QAM



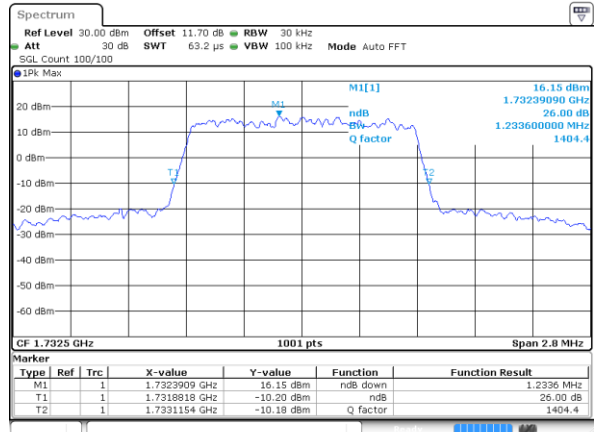
Date: 3 AUG 2017 17:48:53

Middle Channel / 1.4MHz / QPSK



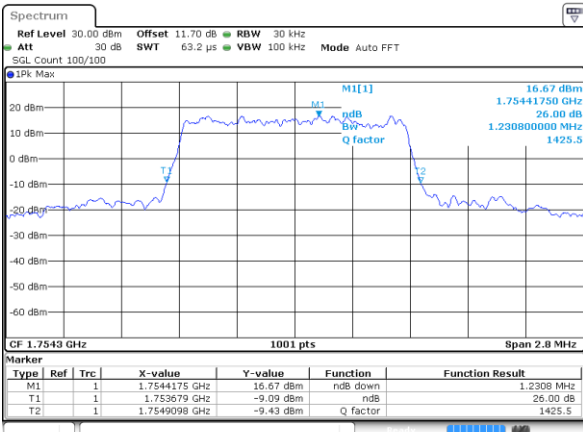
Date: 3 AUG 2017 17:55:46

Middle Channel / 1.4MHz / 16QAM



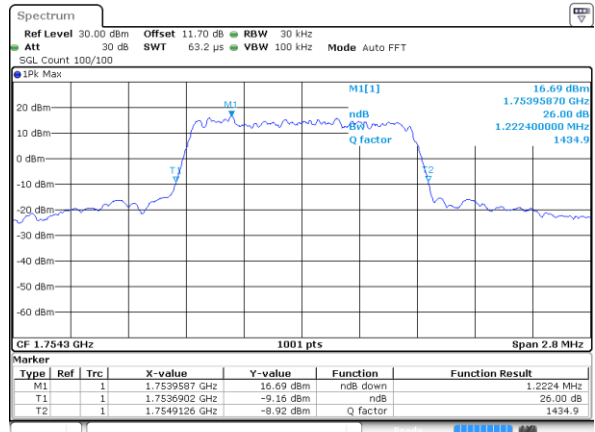
Date: 3 AUG 2017 17:55:56

Highest Channel / 1.4MHz / QPSK



Date: 3 AUG 2017 17:58:14

Highest Channel / 1.4MHz / 16QAM



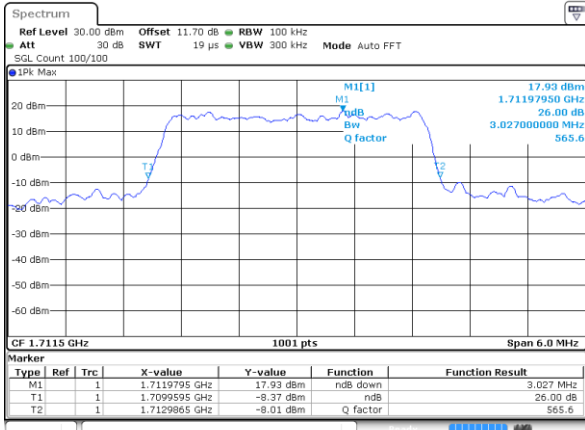
Date: 3 AUG 2017 17:58:24





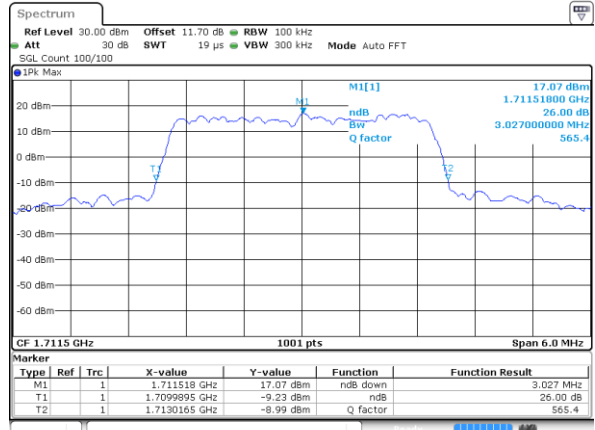
LTE Band 4

Lowest Channel / 3MHz / QPSK



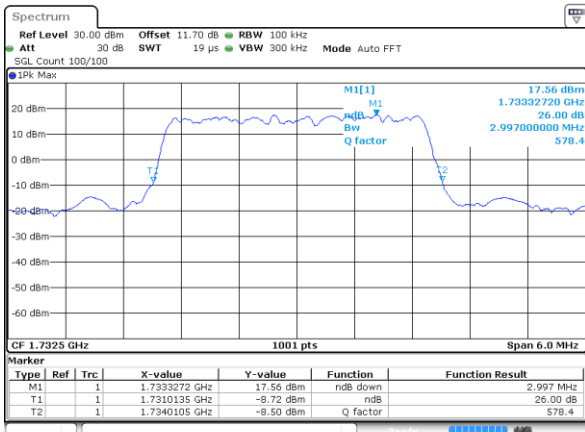
Date: 3 AUG 2017 16:21:41

Lowest Channel / 3MHz / 16QAM



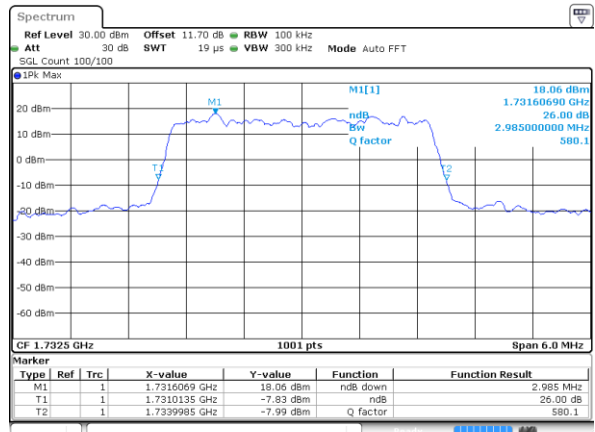
Date: 3 AUG 2017 16:21:51

Middle Channel / 3MHz / QPSK



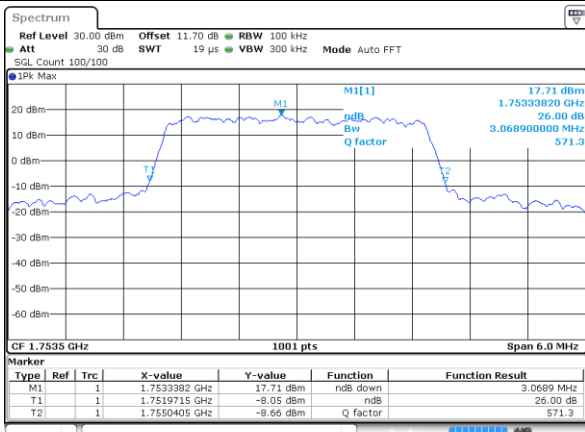
Date: 3 AUG 2017 16:28:45

Middle Channel / 3MHz / 16QAM



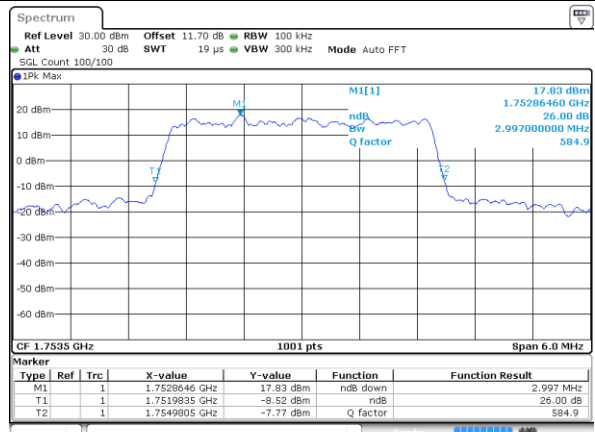
Date: 3 AUG 2017 16:28:55

Highest Channel / 3MHz / QPSK



Date: 3 AUG 2017 16:31:13

Highest Channel / 3MHz / 16QAM

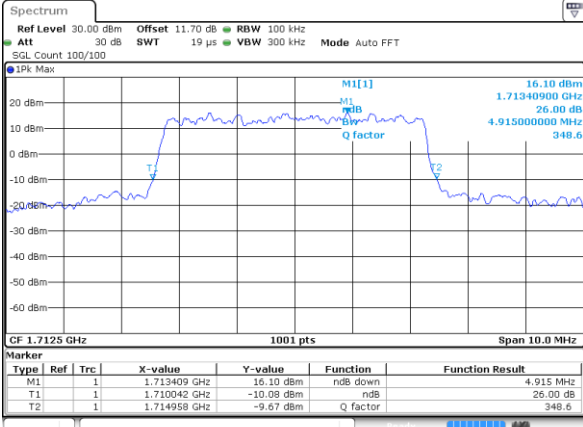


Date: 3 AUG 2017 16:31:23



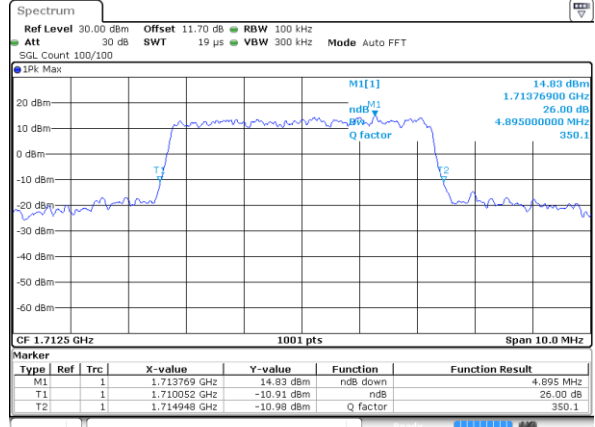
LTE Band 4

Lowest Channel / 5MHz / QPSK



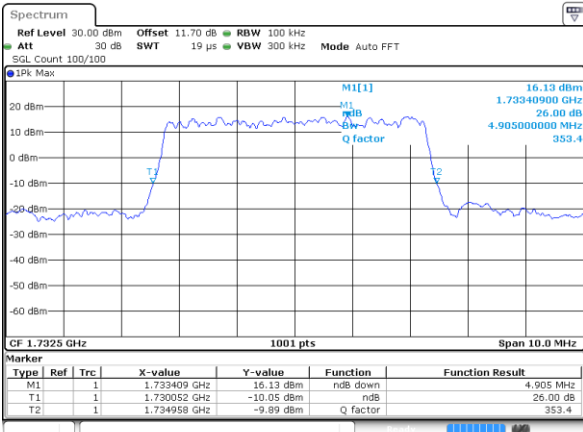
Date: 3 AUG 2017 16:38:15

Lowest Channel / 5MHz / 16QAM



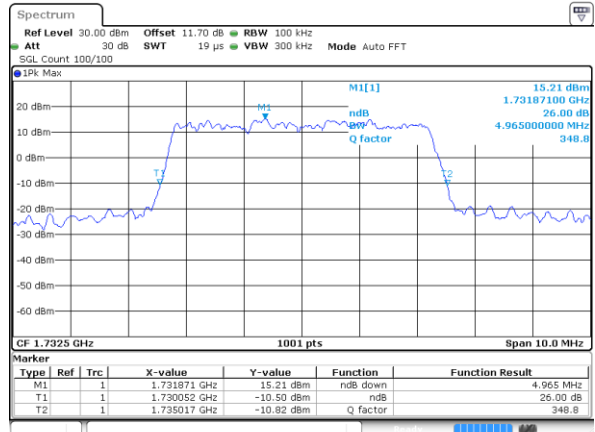
Date: 3 AUG 2017 16:38:25

Middle Channel / 5MHz / QPSK



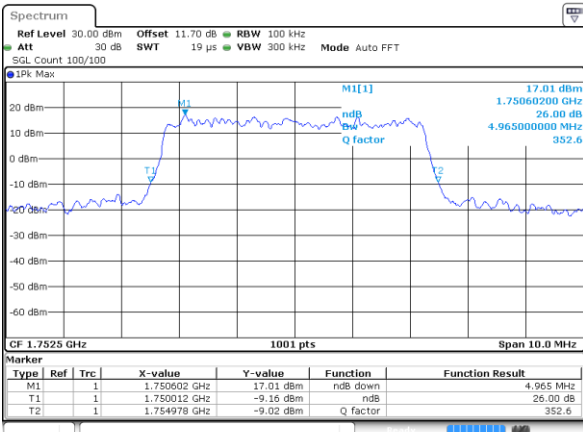
Date: 3 AUG 2017 16:45:18

Middle Channel / 5MHz / 16QAM



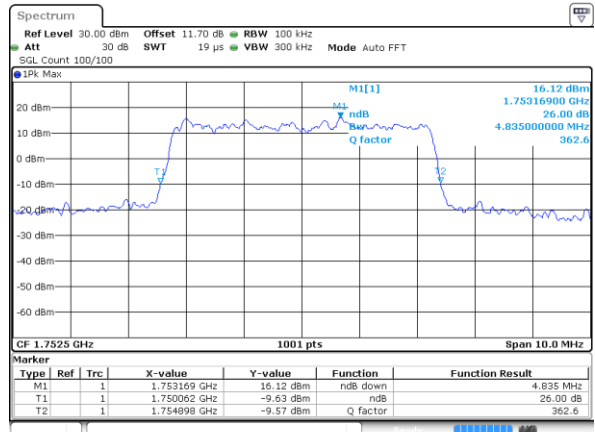
Date: 3 AUG 2017 16:45:28

Highest Channel / 5MHz / QPSK



Date: 3 AUG 2017 16:47:46

Highest Channel / 5MHz / 16QAM

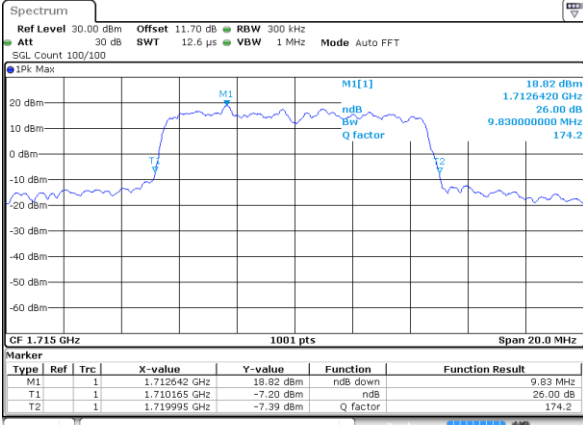


Date: 3 AUG 2017 16:47:56



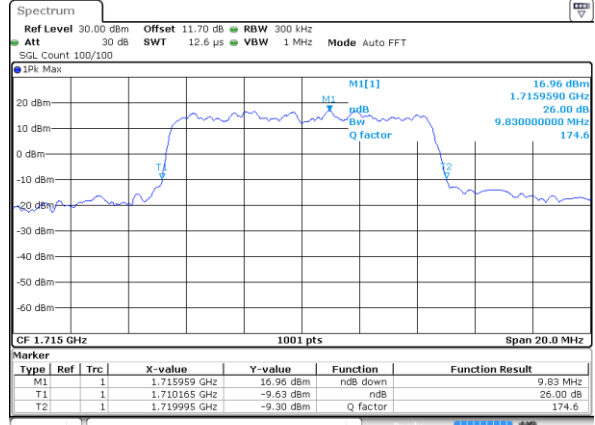
LTE Band 4

Lowest Channel / 10MHz / QPSK



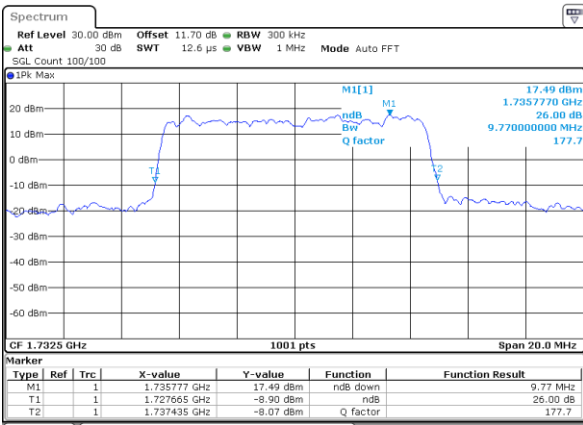
Date: 3 AUG 2017 16:54:49

Lowest Channel / 10MHz / 16QAM



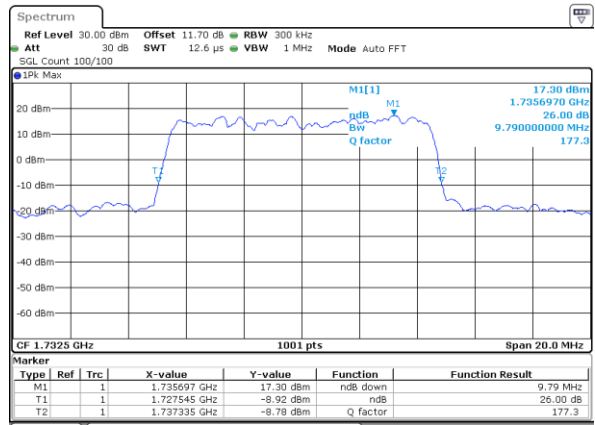
Date: 3 AUG 2017 16:54:59

Middle Channel / 10MHz / QPSK



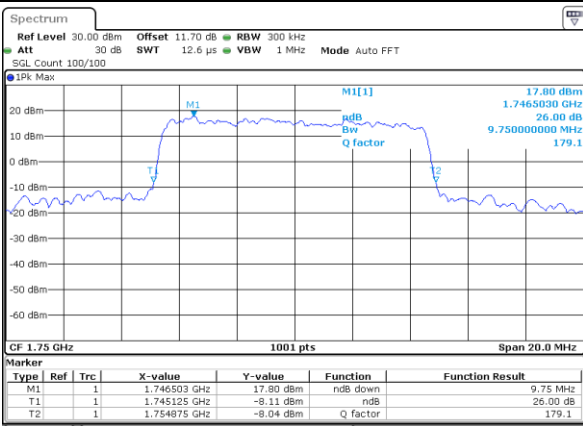
Date: 3 AUG 2017 17:01:52

Middle Channel / 10MHz / 16QAM



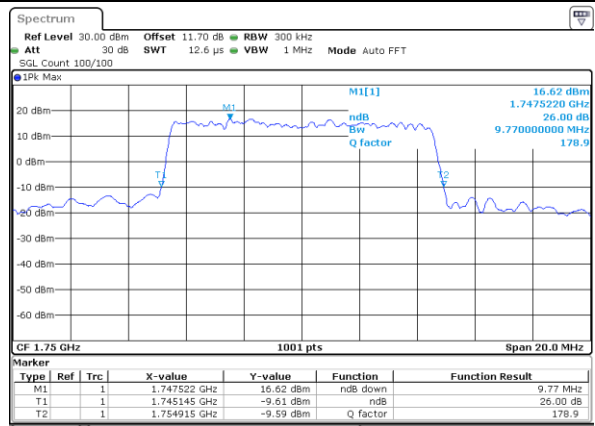
Date: 3 AUG 2017 17:02:02

Highest Channel / 10MHz / QPSK



Date: 3 AUG 2017 17:05:43

Highest Channel / 10MHz / 16QAM

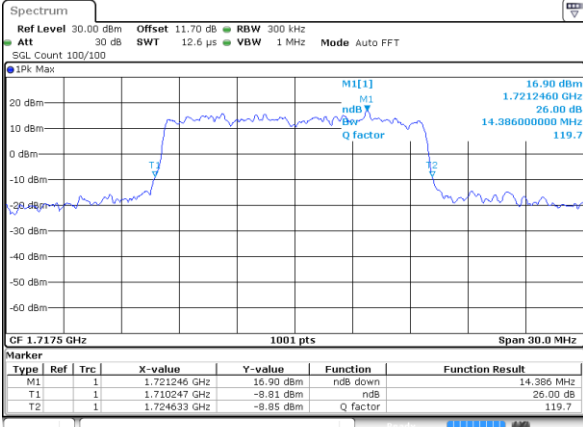


Date: 3 AUG 2017 19:44:53



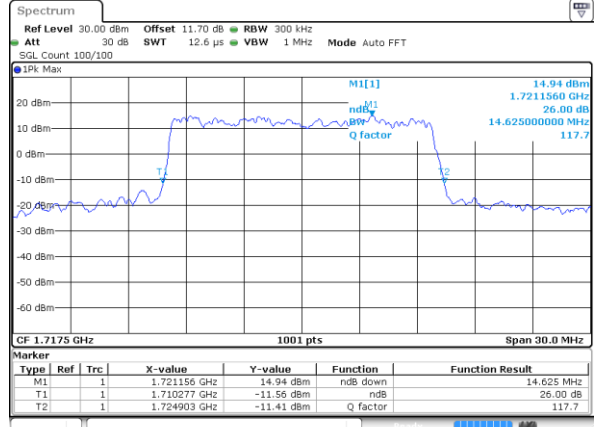
LTE Band 4

Lowest Channel / 15MHz / QPSK



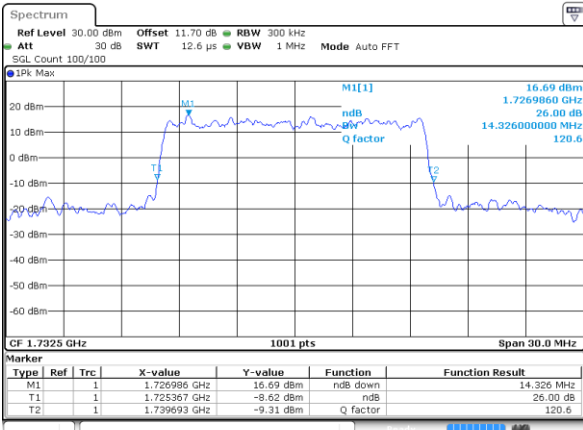
Date: 3 AUG 2017 17:14:43

Lowest Channel / 15MHz / 16QAM



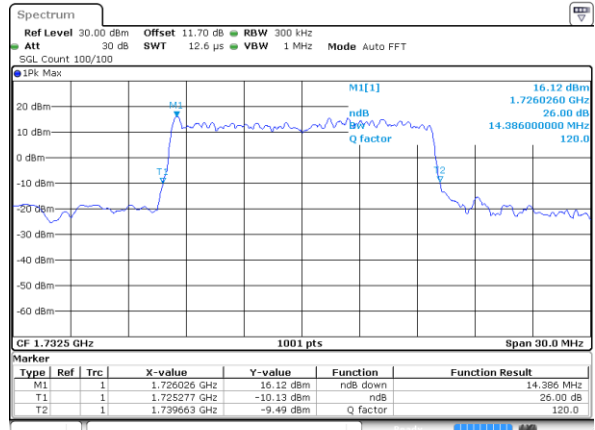
Date: 3 AUG 2017 17:14:53

Middle Channel / 15MHz / QPSK



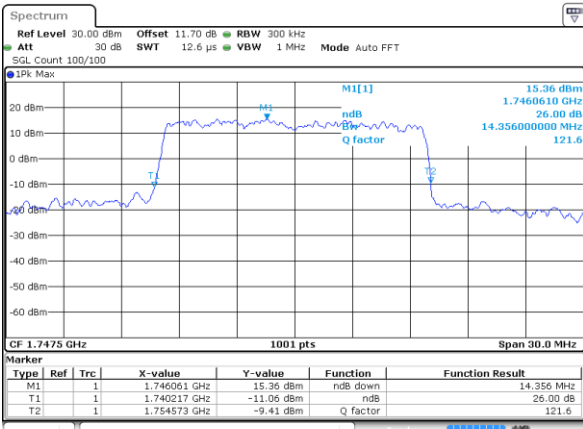
Date: 3 AUG 2017 17:21:46

Middle Channel / 15MHz / 16QAM



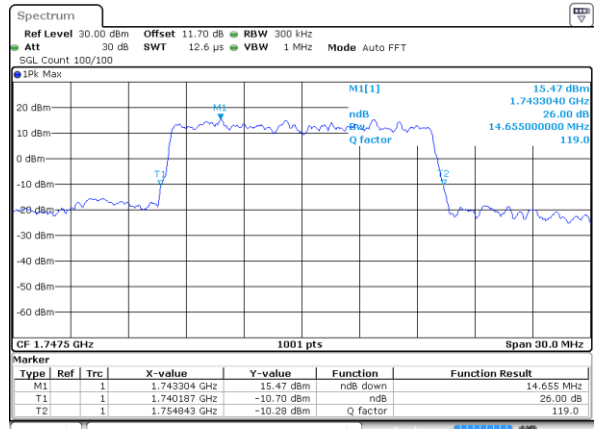
Date: 3 AUG 2017 17:21:56

Highest Channel / 15MHz / QPSK



Date: 3 AUG 2017 17:24:14

Highest Channel / 15MHz / 16QAM

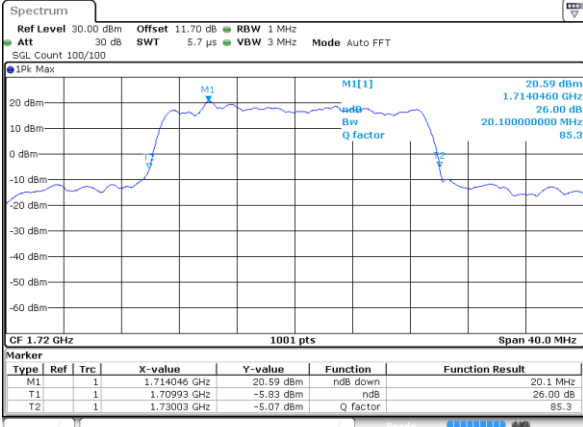


Date: 3 AUG 2017 17:24:24



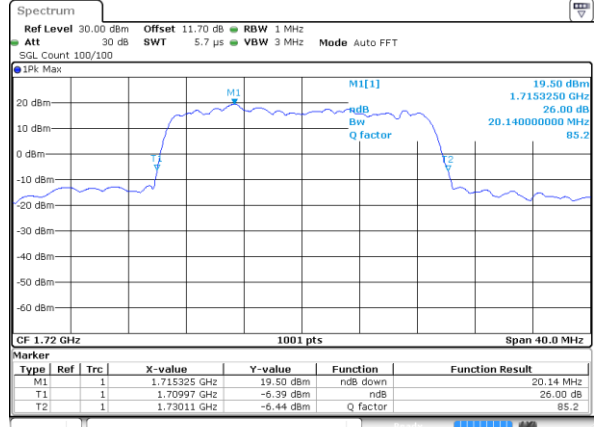
LTE Band 4

Lowest Channel / 20MHz / QPSK



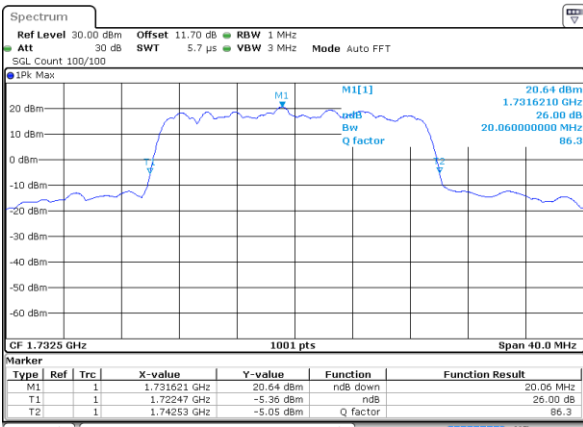
Date: 3 AUG 2017 17:31:17

Lowest Channel / 20MHz / 16QAM



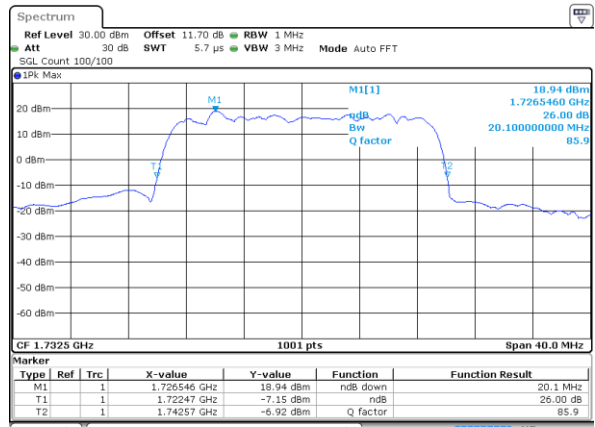
Date: 3 AUG 2017 17:31:27

Middle Channel / 20MHz / QPSK



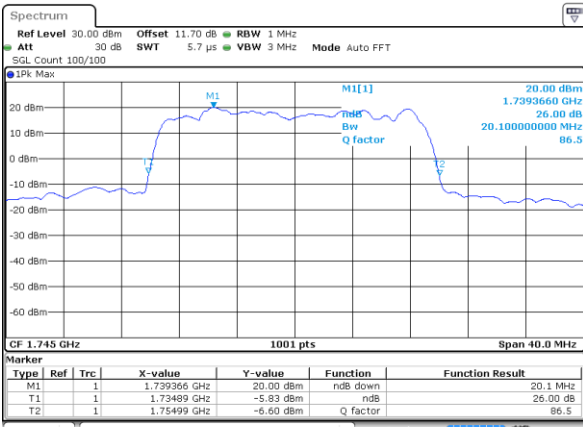
Date: 3 AUG 2017 17:38:20

Middle Channel / 20MHz / 16QAM



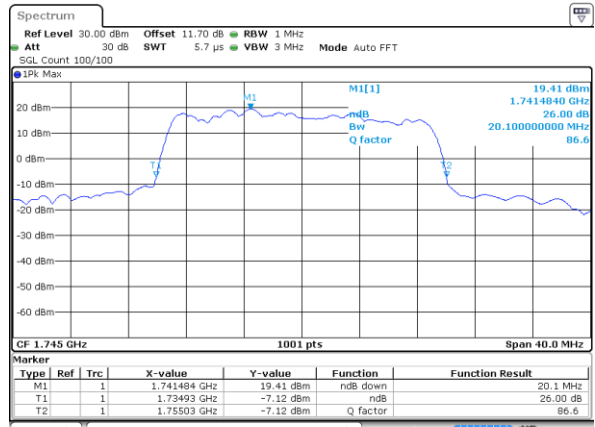
Date: 3 AUG 2017 17:38:30

Highest Channel / 20MHz / QPSK



Date: 3 AUG 2017 17:40:48

Highest Channel / 20MHz / 16QAM

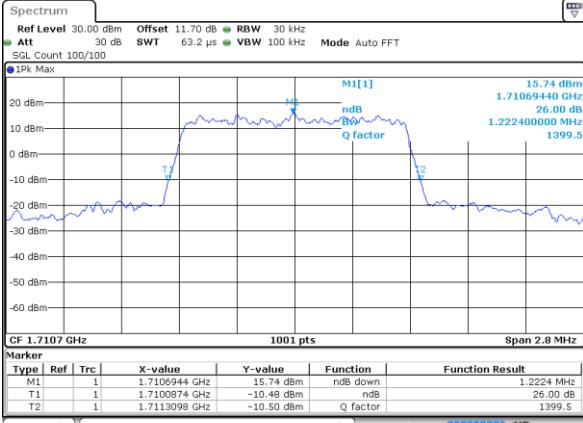


Date: 3 AUG 2017 17:40:58



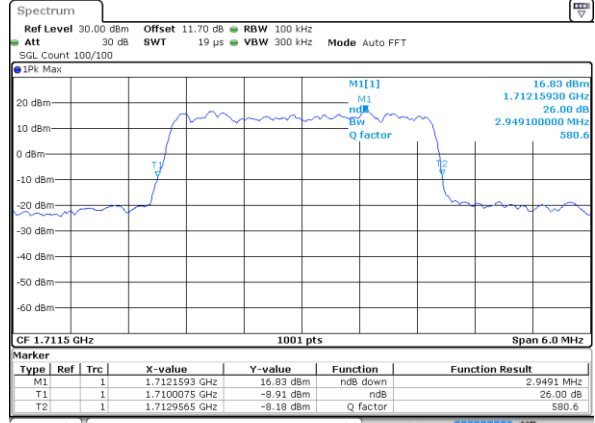
LTE Band 4

Lowest Channel / 1.4MHz / 64QAM



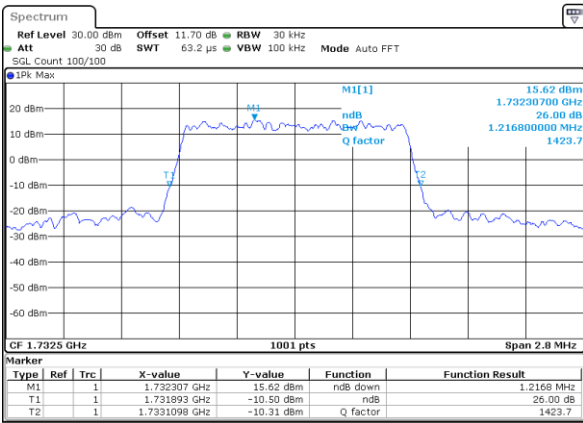
Date: 6 OCT 2017 20:34:18

Lowest Channel / 3MHz / 64QAM



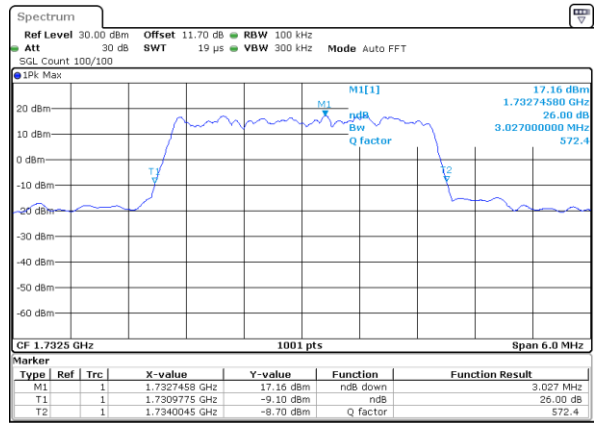
Date: 6 OCT 2017 19:52:54

Middle Channel / 1.4MHz / 64QAM



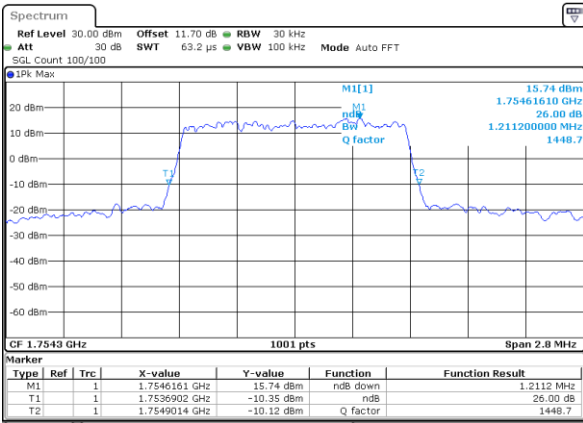
Date: 6 OCT 2017 20:37:49

Middle Channel / 3MHz / 64QAM



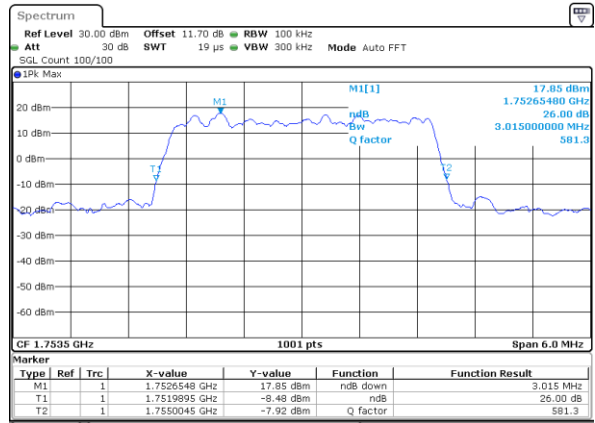
Date: 6 OCT 2017 19:56:25

Highest Channel / 1.4MHz / 64QAM



Date: 6 OCT 2017 20:39:03

Highest Channel / 3MHz / 64QAM

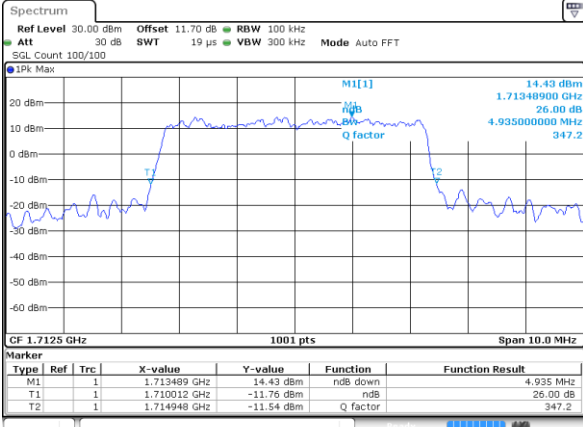


Date: 6 OCT 2017 19:57:39



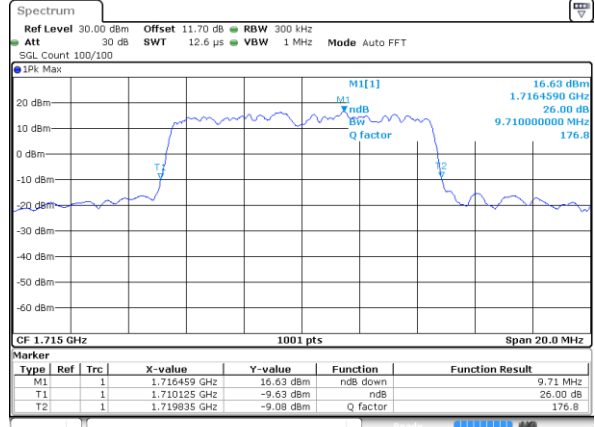
LTE Band 4

Lowest Channel / 5MHz / 64QAM



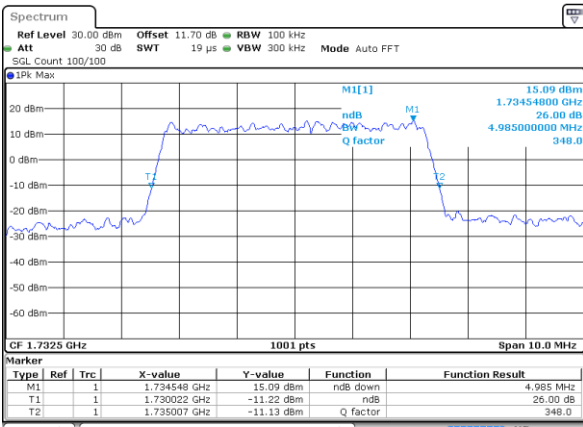
Date: 6.OCT.2017 20:01:11

Lowest Channel / 10MHz / 64QAM



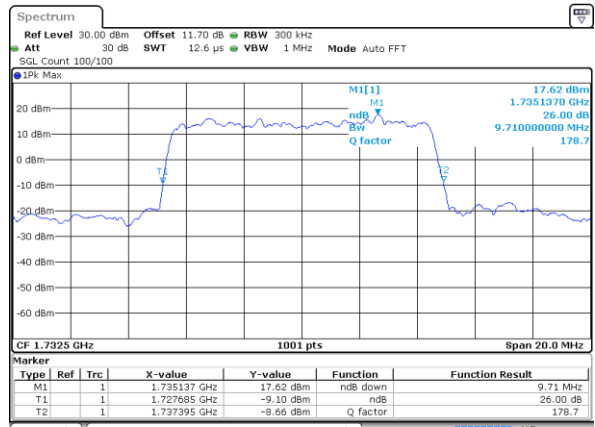
Date: 6.OCT.2017 20:09:27

Middle Channel / 5MHz / 64QAM



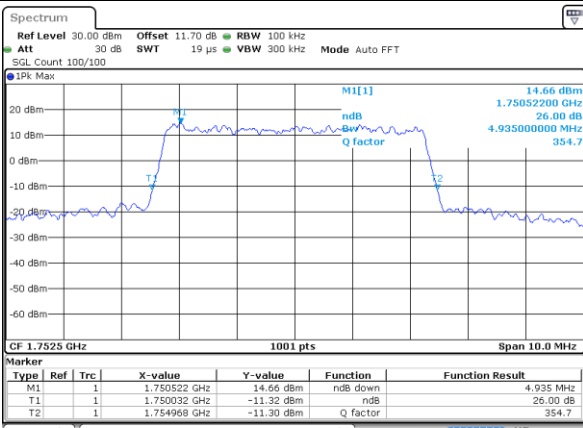
Date: 6.OCT.2017 20:04:42

Middle Channel / 10MHz / 64QAM



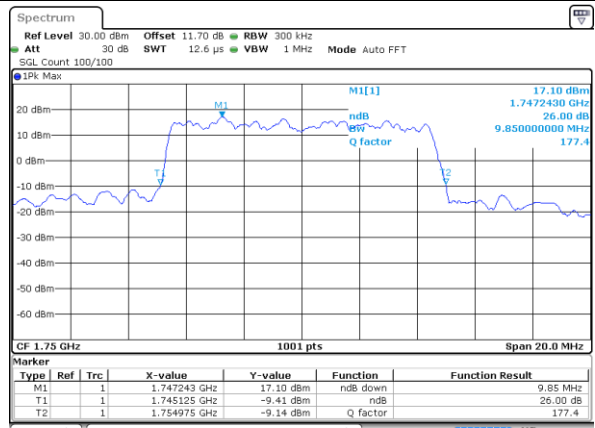
Date: 6.OCT.2017 20:12:59

Highest Channel / 5MHz / 64QAM



Date: 6.OCT.2017 20:05:56

Highest Channel / 10MHz / 64QAM

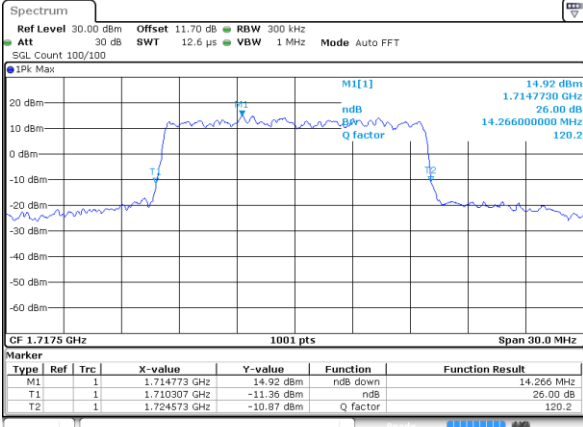


Date: 6.OCT.2017 20:14:13



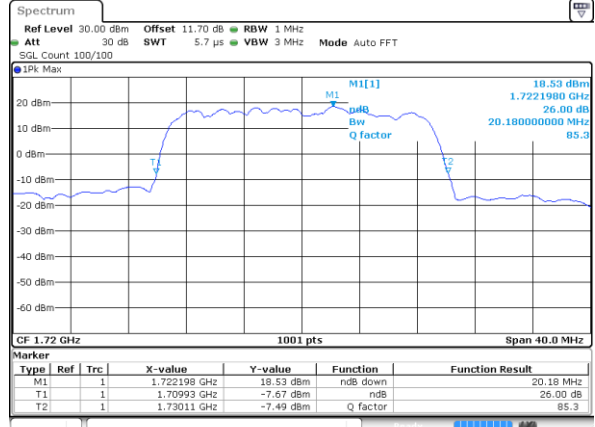
LTE Band 4

Lowest Channel / 15MHz / 64QAM



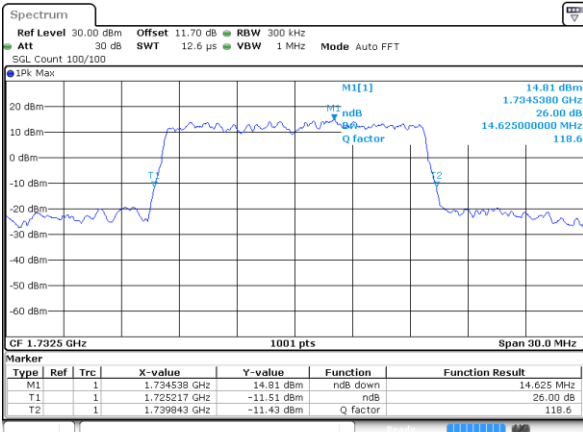
Date: 6 OCT 2017 20:17:44

Lowest Channel / 20MHz / 64QAM



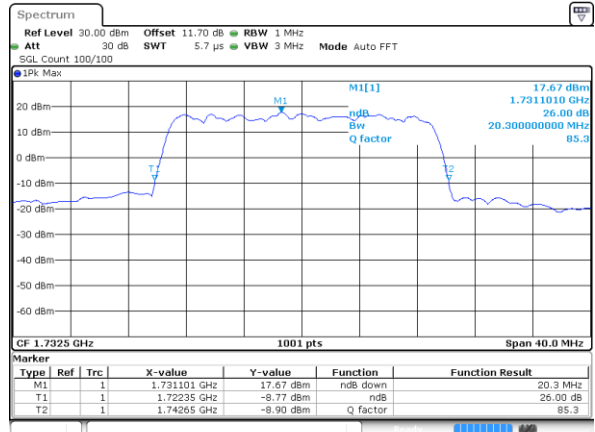
Date: 6 OCT 2017 20:26:01

Middle Channel / 15MHz / 64QAM



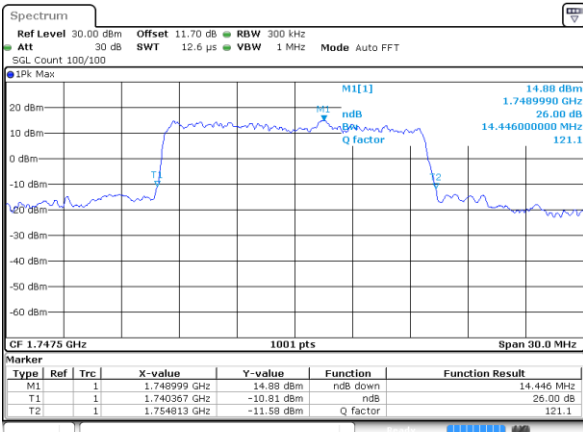
Date: 6 OCT 2017 20:21:15

Middle Channel / 20MHz / 64QAM



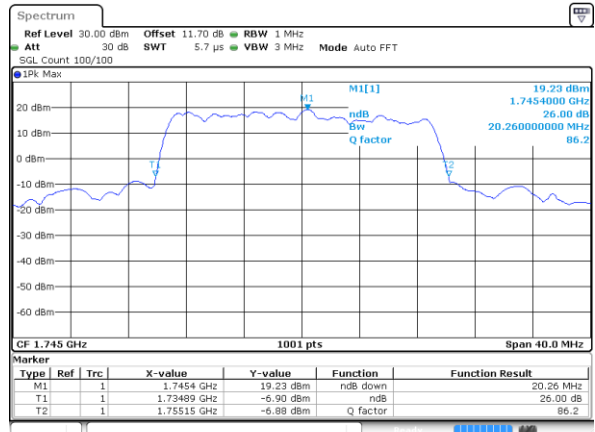
Date: 6 OCT 2017 20:29:32

Highest Channel / 15MHz / 64QAM



Date: 6 OCT 2017 20:22:29

Highest Channel / 20MHz / 64QAM



Date: 6 OCT 2017 20:30:46





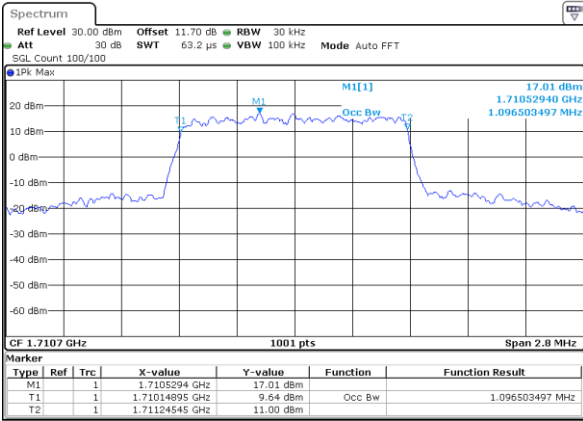
**Occupied Bandwidth**

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	1.09	2.75	2.72	4.49	4.5	9.03	9.05	13.46	13.43	18.42	18.3
Middle CH	1.09	1.09	2.72	2.72	4.49	4.49	9.05	9.03	13.43	13.46	18.5	18.38
Highest CH	1.09	1.09	2.71	2.71	4.51	4.47	9.03	9.01	13.4	13.55	18.3	18.34
Mode	LTE Band 4 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	1.1	-	2.73	-	4.48	-	9.05	-	13.4	-	18.3	-
Middle CH	1.09	-	2.74	-	4.49	-	9.01	-	13.46	-	18.5	-
Highest CH	1.09	-	2.73	-	4.5	-	9.07	-	13.49	-	18.38	-



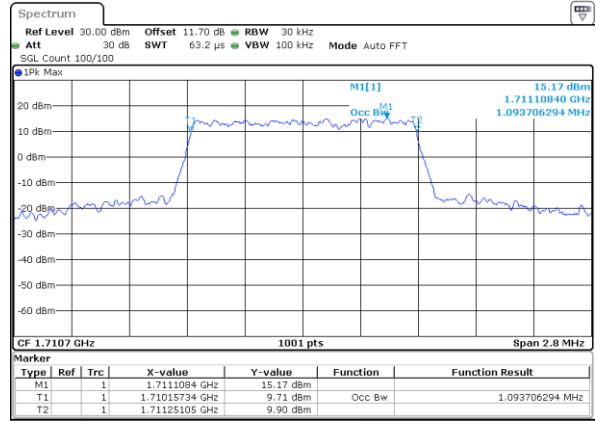
LTE Band 4

Lowest Channel / 1.4MHz / QPSK



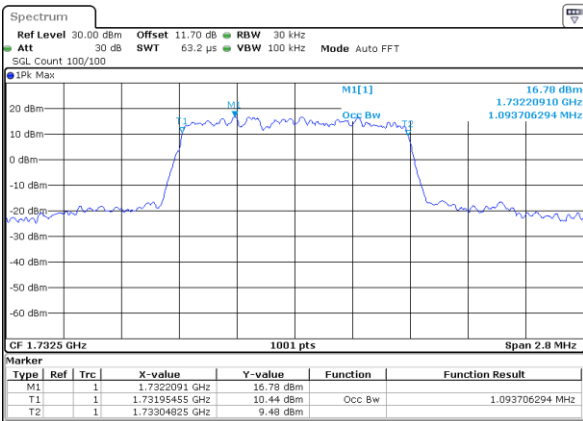
Date: 3 AUG 2017 17:48:23

Lowest Channel / 1.4MHz / 16QAM



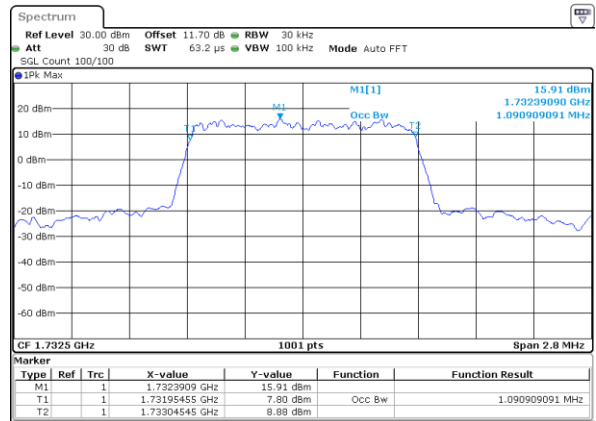
Date: 3 AUG 2017 17:48:33

Middle Channel / 1.4MHz / QPSK



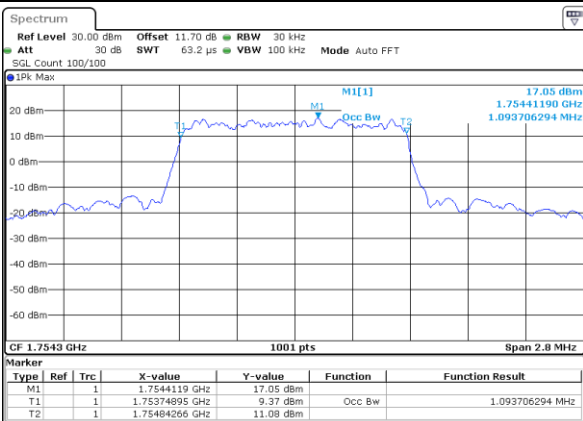
Date: 3 AUG 2017 17:55:26

Middle Channel / 1.4MHz / 16QAM



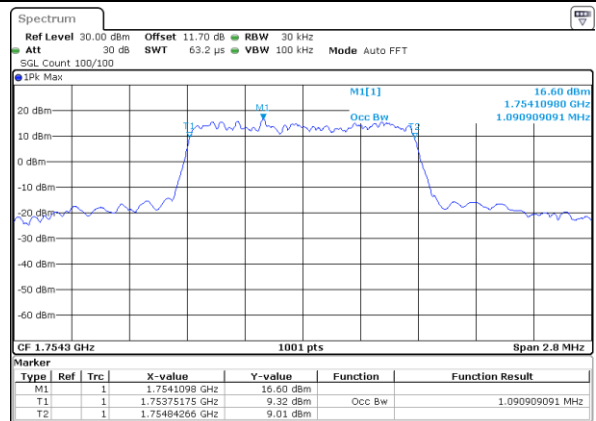
Date: 3 AUG 2017 17:55:36

Highest Channel / 1.4MHz / QPSK



Date: 3 AUG 2017 17:57:54

Highest Channel / 1.4MHz / 16QAM

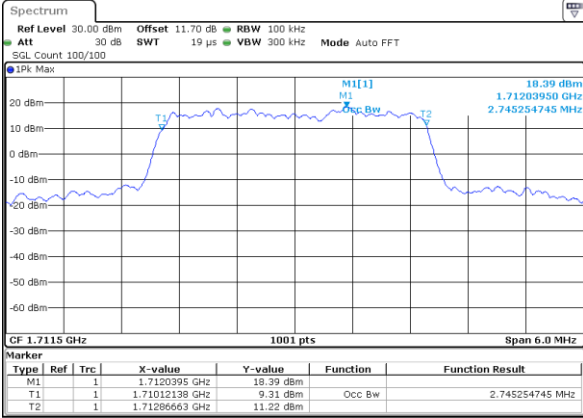


Date: 3 AUG 2017 17:58:04



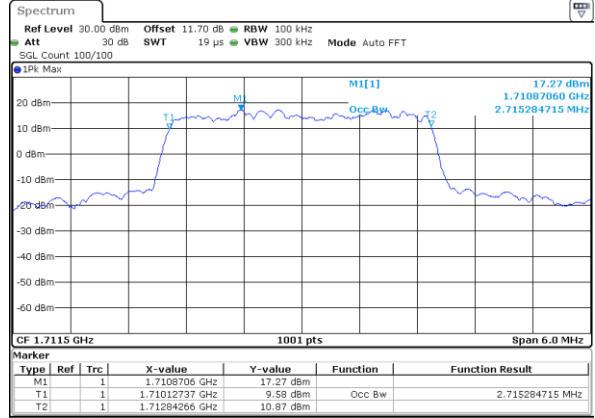
LTE Band 4

Lowest Channel / 3MHz / QPSK



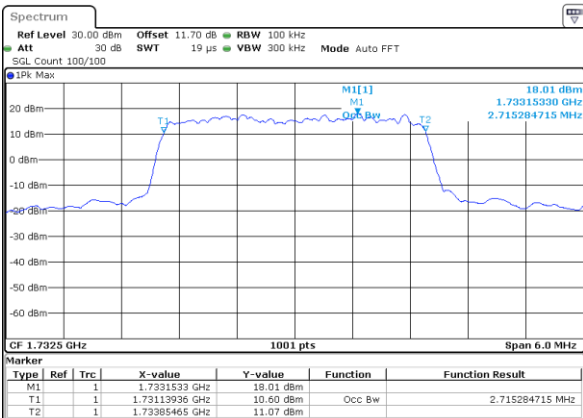
Date: 3 AUG 2017 16:21:21

Lowest Channel / 3MHz / 16QAM



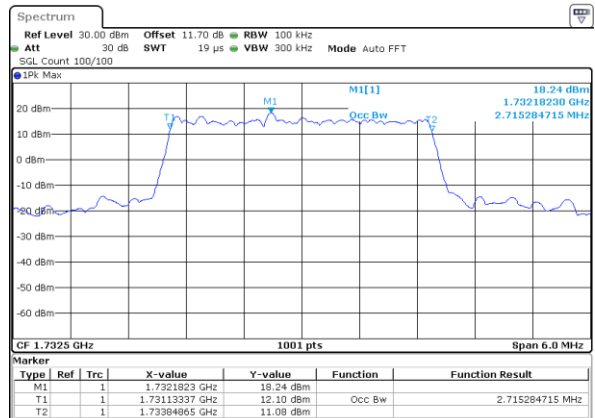
Date: 3 AUG 2017 16:21:31

Middle Channel / 3MHz / QPSK



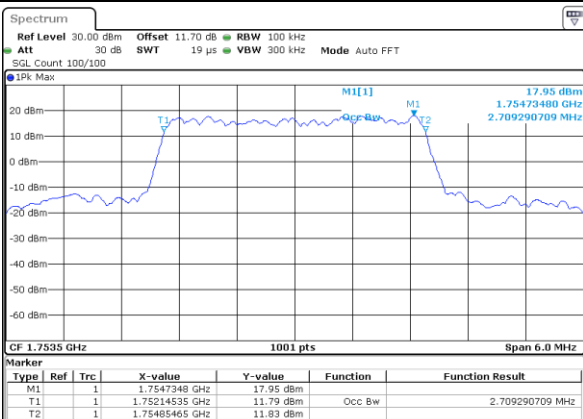
Date: 3 AUG 2017 16:28:25

Middle Channel / 3MHz / 16QAM



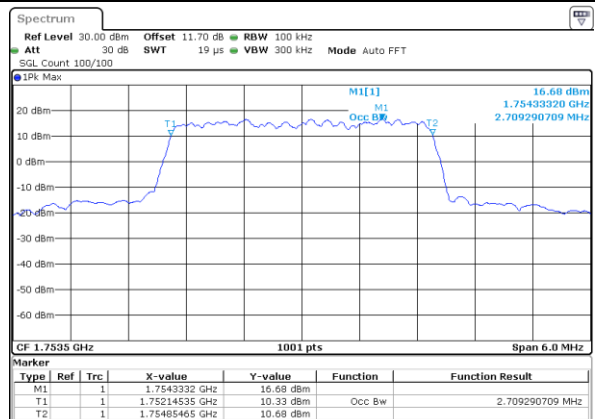
Date: 3 AUG 2017 16:28:35

Highest Channel / 3MHz / QPSK



Date: 3 AUG 2017 16:30:53

Highest Channel / 3MHz / 16QAM



Date: 3 AUG 2017 16:31:03