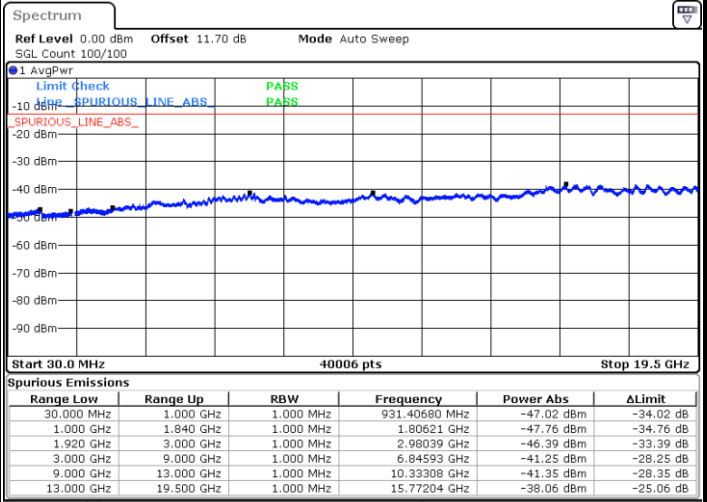
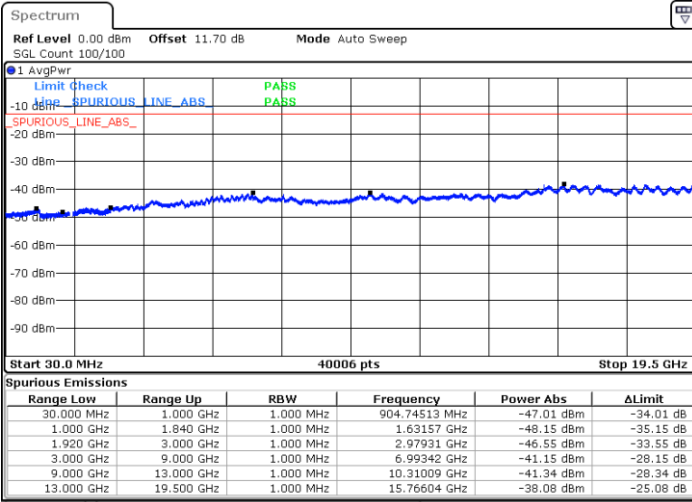




LTE Band 2 / 10MHz

Middle Channel / QPSK

Middle Channel / 16QAM

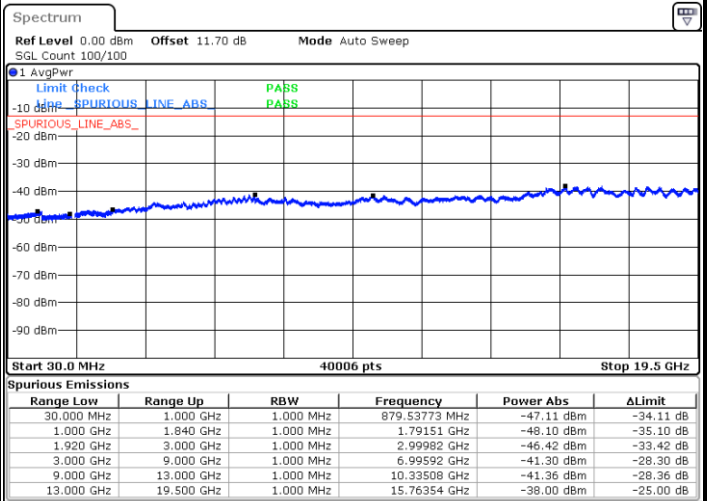
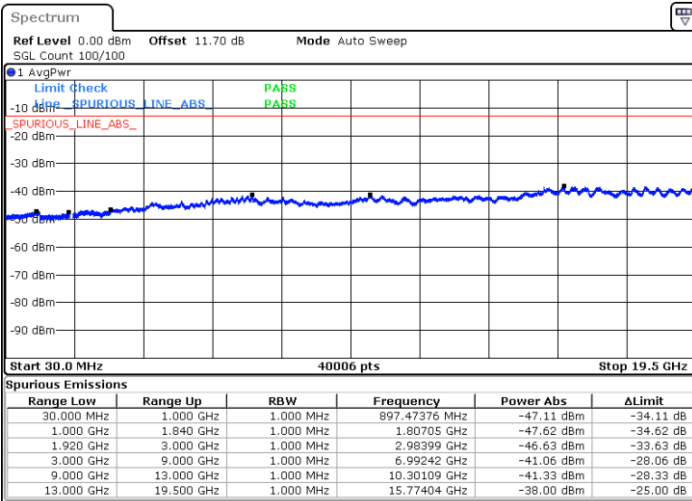


Date: 29 AUG.2017 09:55:33

Date: 29 AUG.2017 09:56:27

Highest Channel / QPSK

Highest Channel / 16QAM



Date: 29 AUG.2017 10:02:36

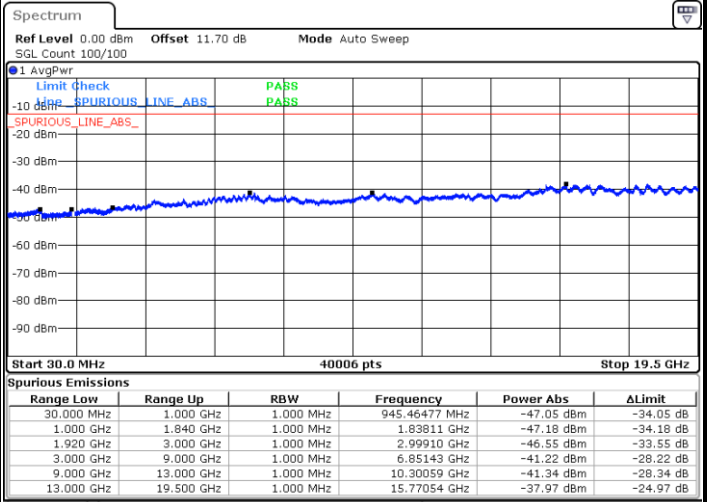
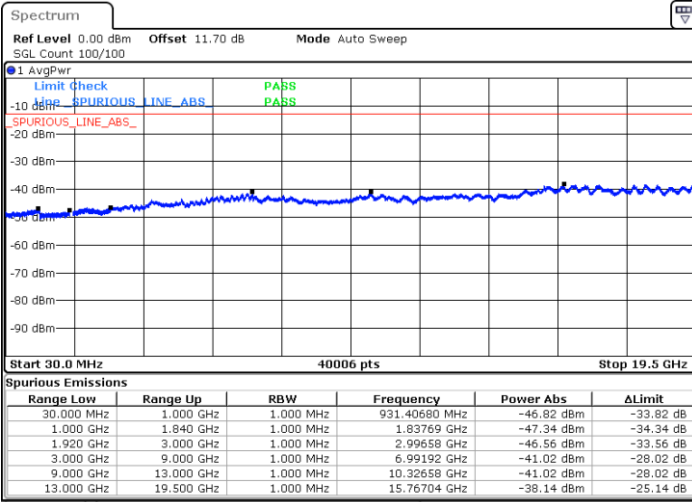
Date: 29 AUG.2017 10:03:30



LTE Band 2 / 15MHz

Lowest Channel / QPSK

Lowest Channel / 16QAM

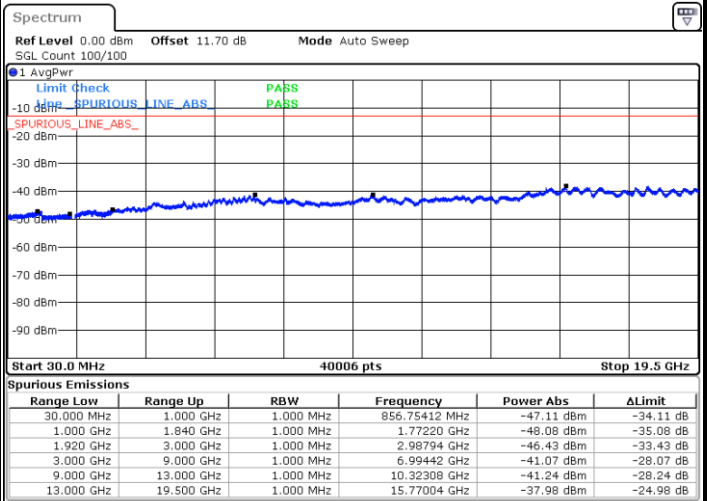
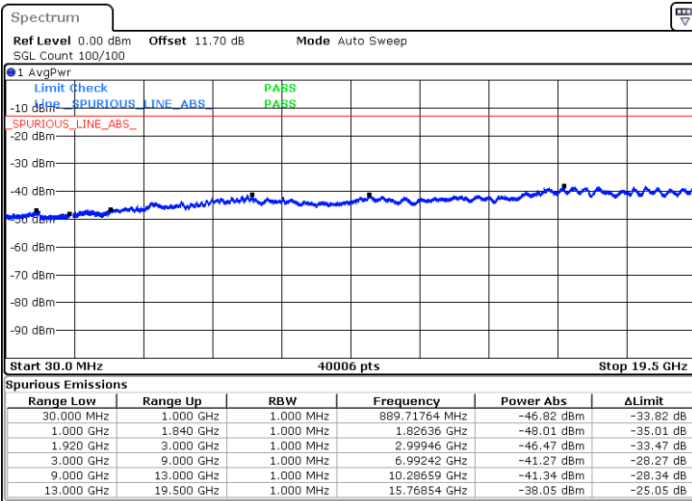


Date: 29 AUG.2017 10:09:39

Date: 29 AUG.2017 10:10:33

Middle Channel / QPSK

Middle Channel / 16QAM



Date: 29 AUG.2017 10:12:07

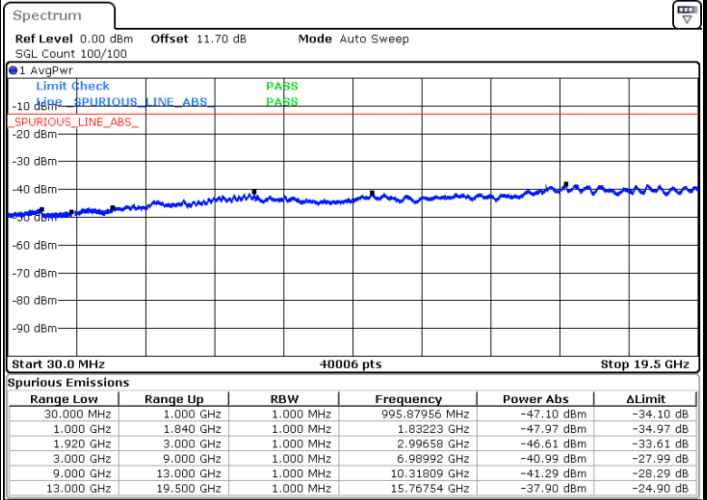
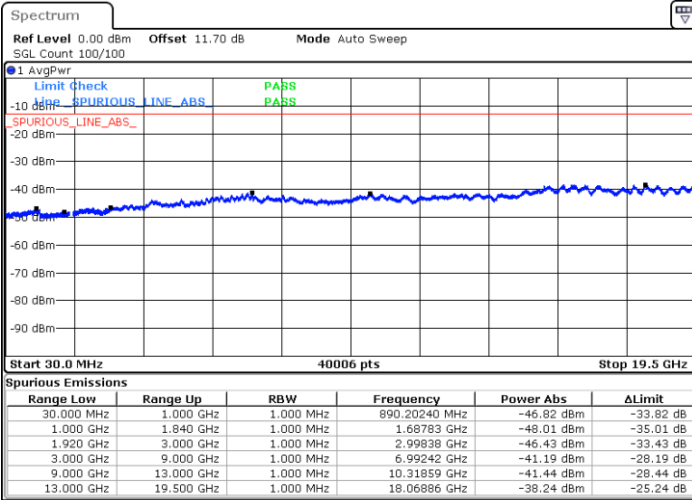
Date: 29 AUG.2017 10:13:02



LTE Band 2 / 15MHz

Highest Channel / QPSK

Highest Channel / 16QAM



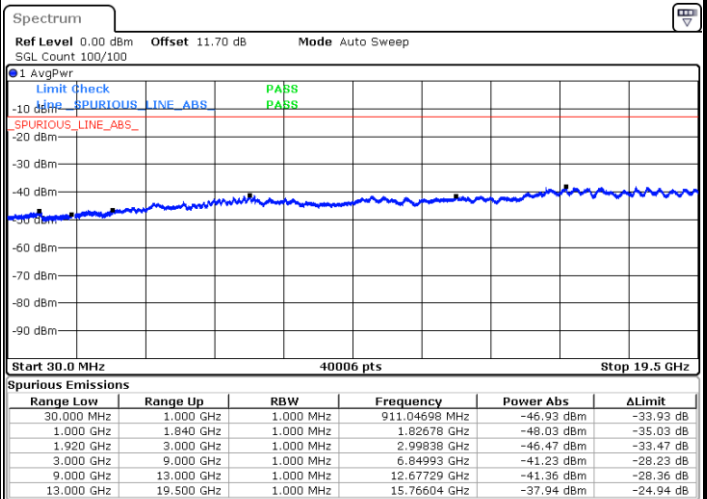
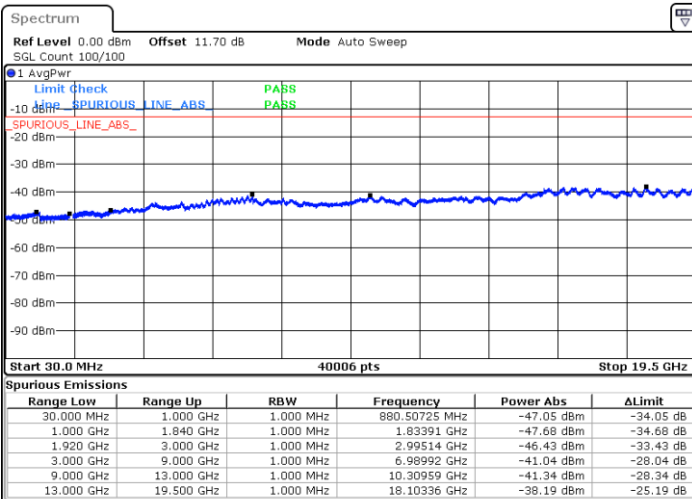
Date: 29 AUG 2017 10:19:11

Date: 29 AUG 2017 10:20:05

LTE Band 2 / 20MHz

Lowest Channel / QPSK

Lowest Channel / 16QAM



Date: 29 AUG 2017 10:26:14

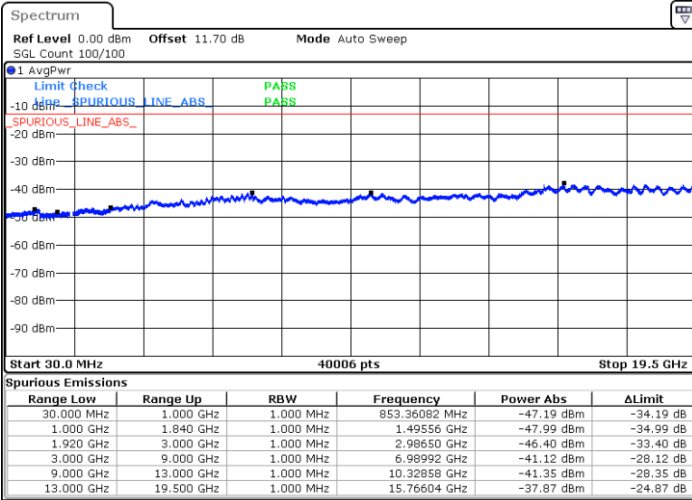
Date: 29 AUG 2017 10:27:08



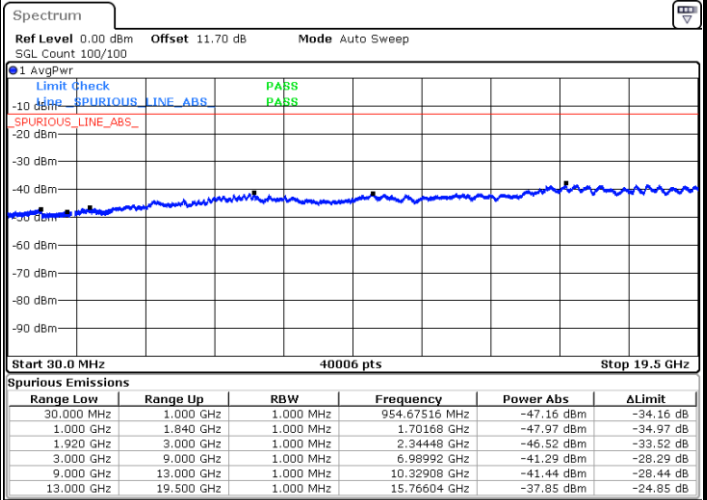
LTE Band 2 / 20MHz

Middle Channel / QPSK

Middle Channel / 16QAM



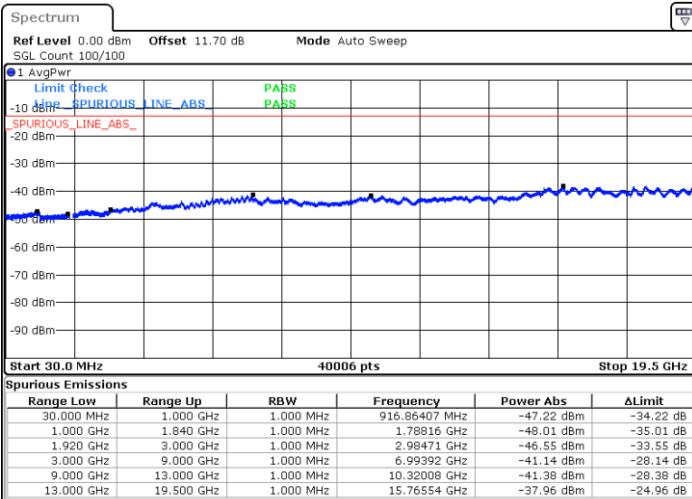
Date: 29 AUG.2017 10:28:42



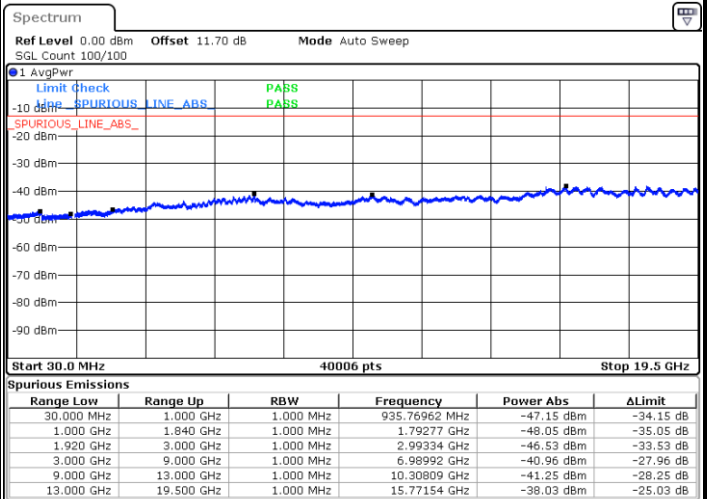
Date: 29 AUG.2017 10:29:35

Highest Channel / QPSK

Highest Channel / 16QAM



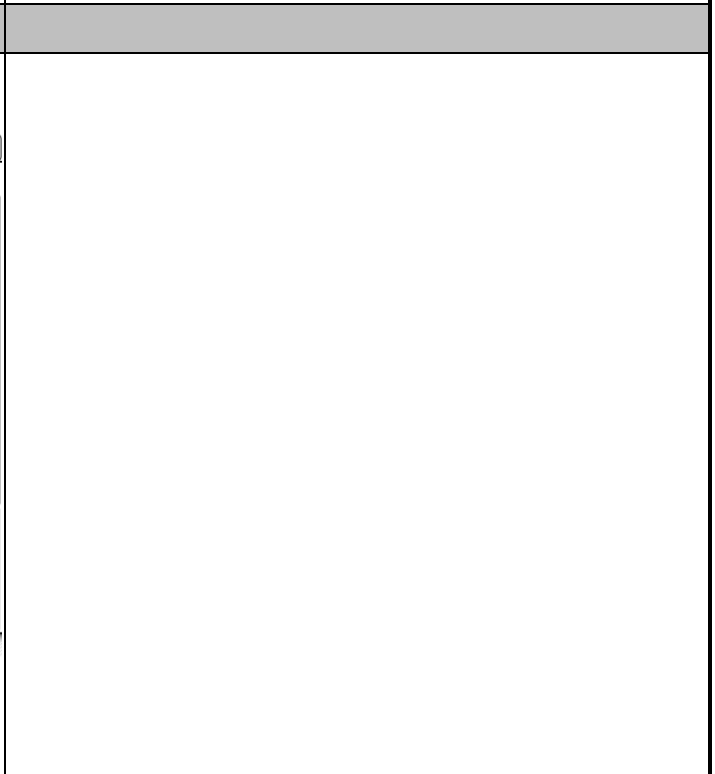
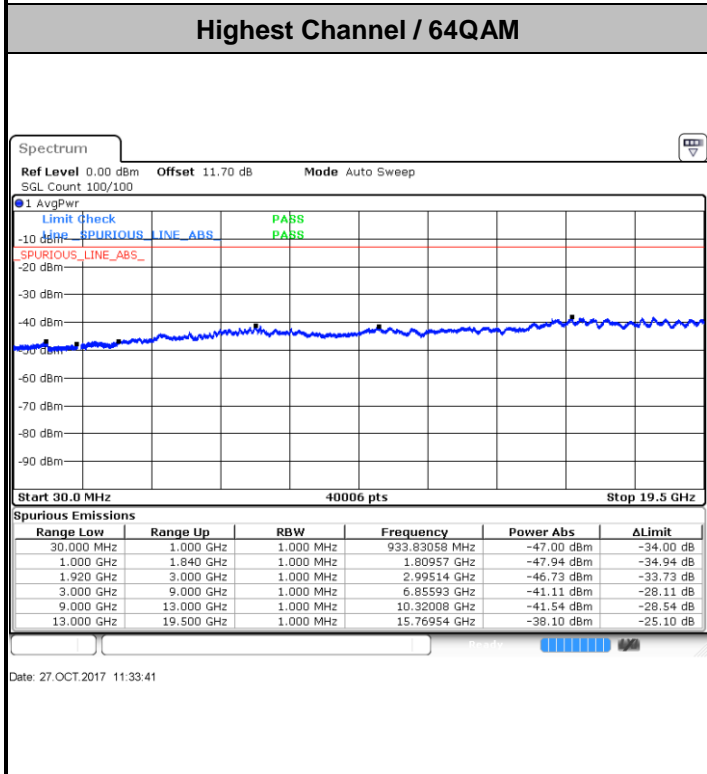
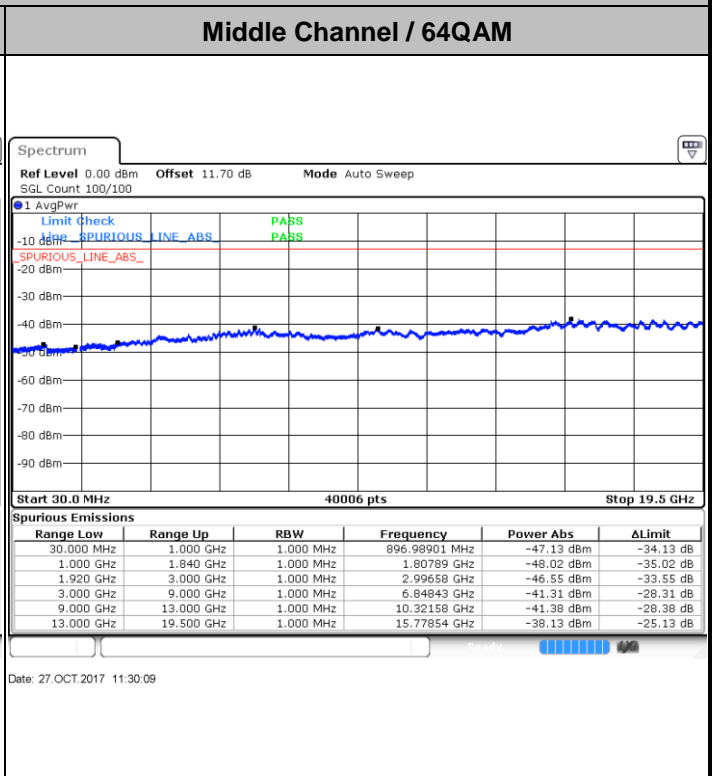
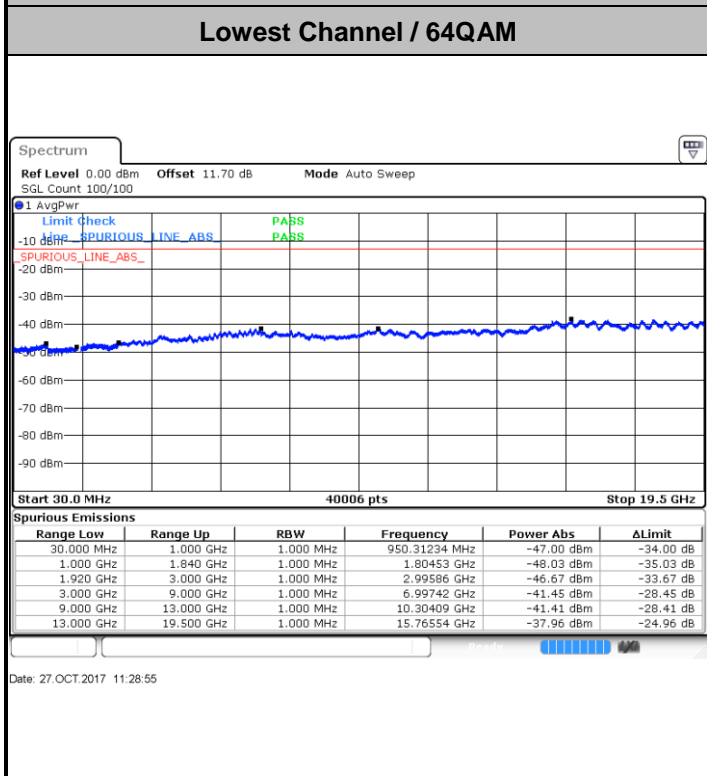
Date: 29 AUG.2017 10:35:44



Date: 29 AUG.2017 10:36:38



**LTE Band 2 / 1.4MHz**

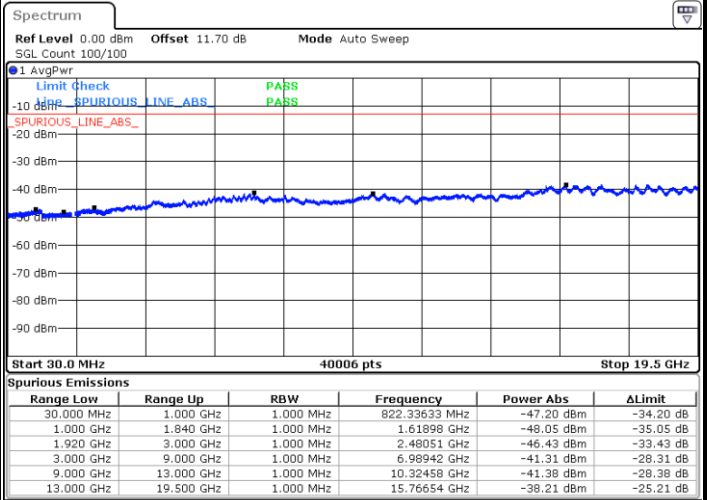
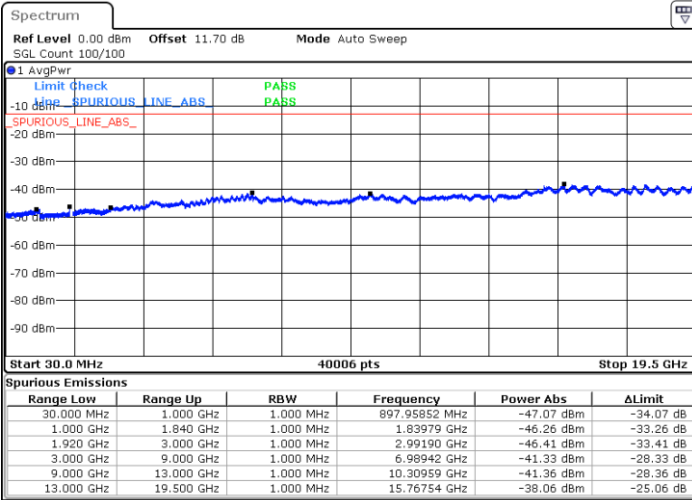




LTE Band 2 / 3MHz

Lowest Channel / 64QAM

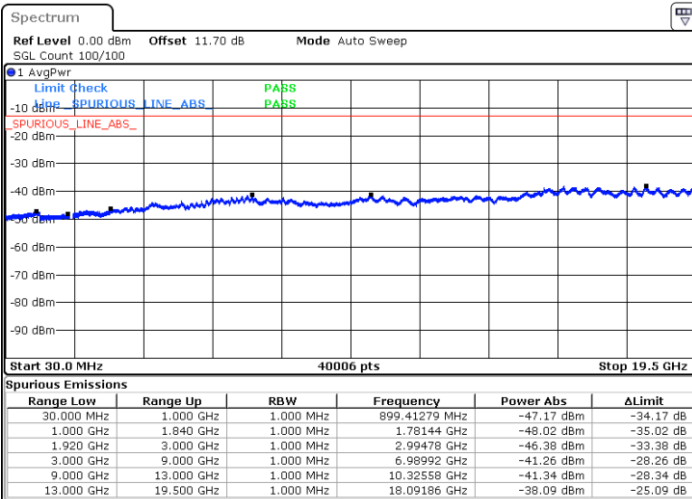
Middle Channel / 64QAM



Date: 27.OCT.2017 10:47:19

Date: 27.OCT.2017 10:48:33

Highest Channel / 64QAM

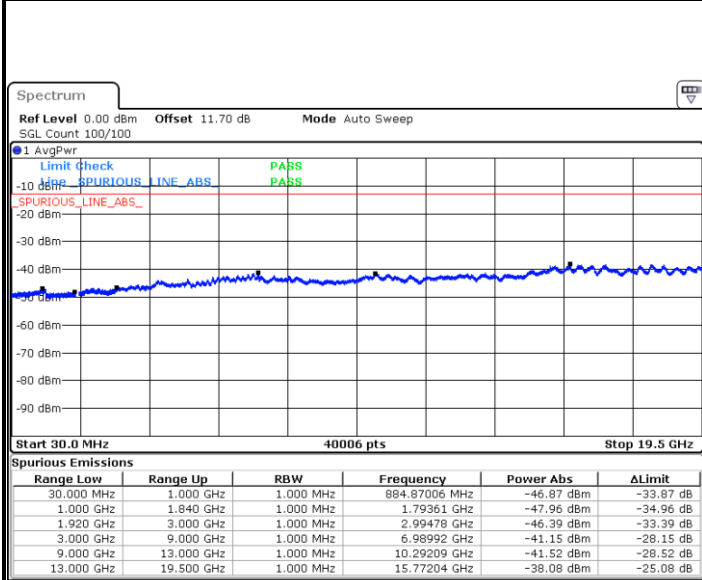


Date: 27.OCT.2017 10:52:04



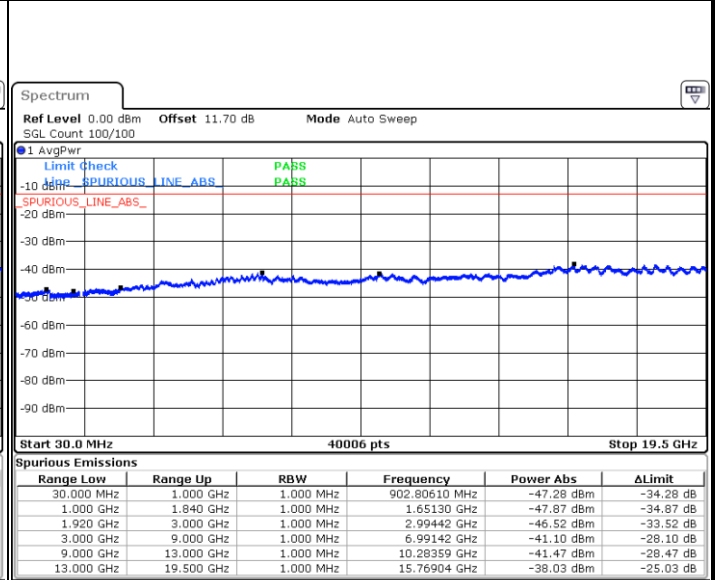
LTE Band 2 / 5MHz

Lowest Channel / 64QAM



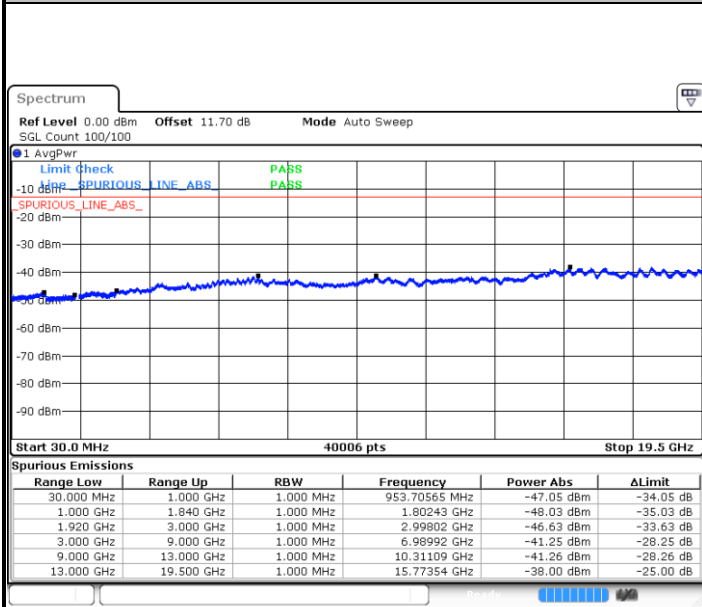
Date: 27.OCT.2017 10:55:36

Middle Channel / 64QAM



Date: 27.OCT.2017 10:56:50

Highest Channel / 64QAM



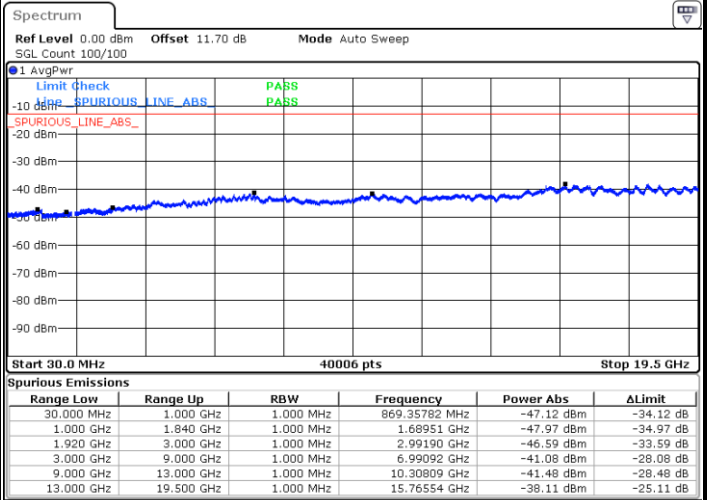
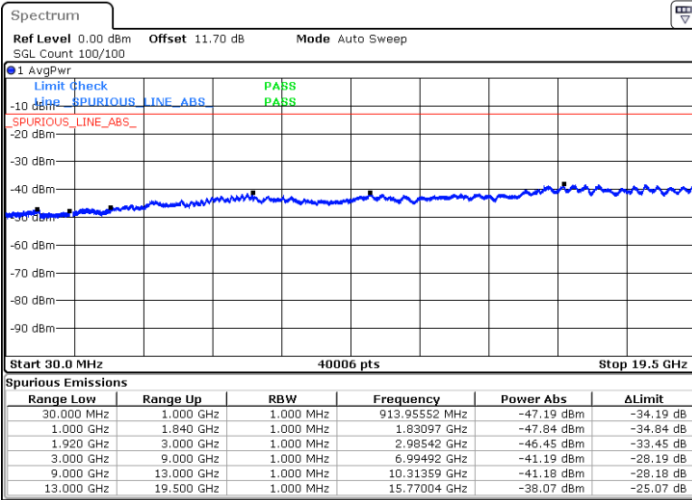
Date: 27.OCT.2017 11:00:21



LTE Band 2 / 10MHz

Lowest Channel / 64QAM

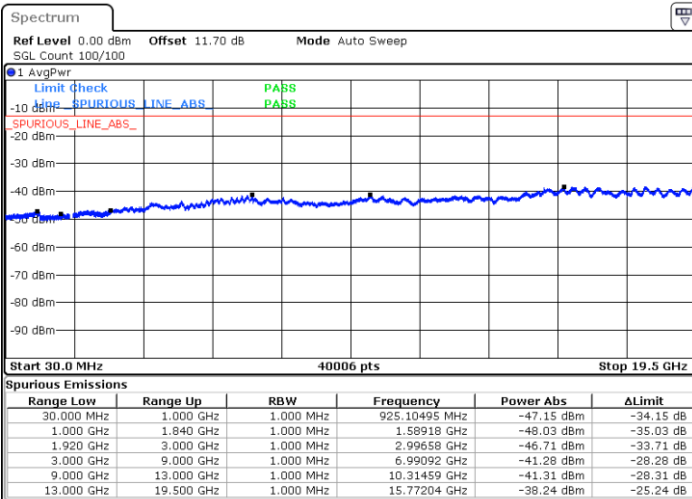
Middle Channel / 64QAM



Date: 27.OCT.2017 11:03:52

Date: 27.OCT.2017 11:05:06

Highest Channel / 64QAM



Date: 27.OCT.2017 11:08:38









**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	0.0004	
30	Normal Voltage	0.0090	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0007	
0	Normal Voltage	0.0086	
-10	Normal Voltage	0.0082	
-20	Normal Voltage	0.0078	
-30	Normal Voltage	0.0090	
20	Maximum Voltage	0.0079	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0000	

**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

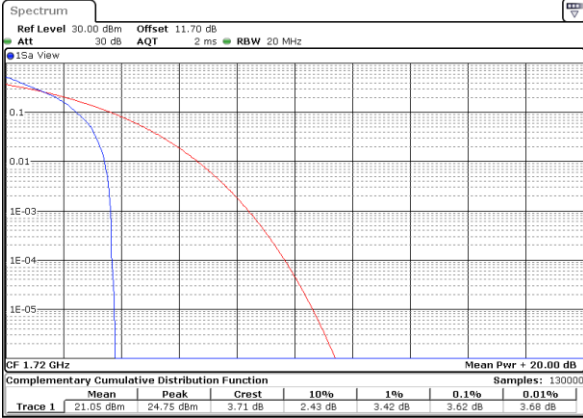
### Peak-to-Average Ratio

Mode	LTE Band 4 / 20MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	3.62	4.49	4.32	5.42	PASS
Middle CH	3.65	4.64	4.49	5.74	
Highest CH	3.71	4	4.81	5.01	
Mode	LTE Band 4 / 20MHz				
Mod.	64QAM				Limit: 13dB
RB Size	1RB	Full RB			Result
Lowest CH	4.26	5.42	-	-	PASS
Middle CH	4.26	5.68	-	-	
Highest CH	4.61	4.93	-	-	



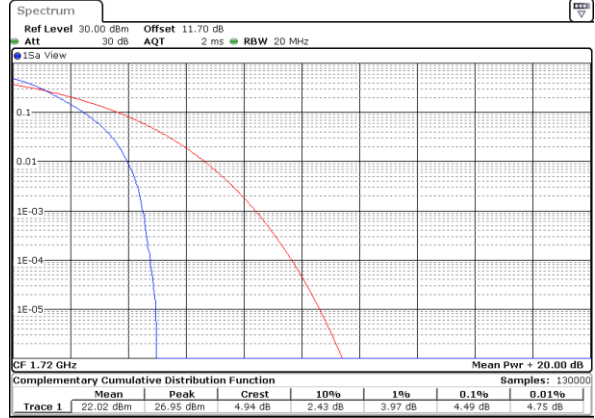
LTE Band 4 / 20MHz / QPSK

Lowest Channel / 1RB



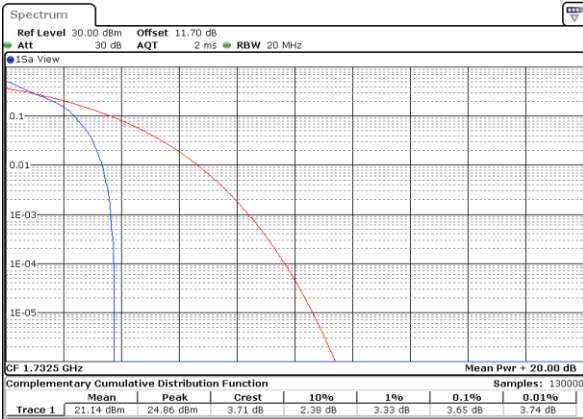
Date: 8 SEP 2017 13:33:03

Lowest Channel / Full RB



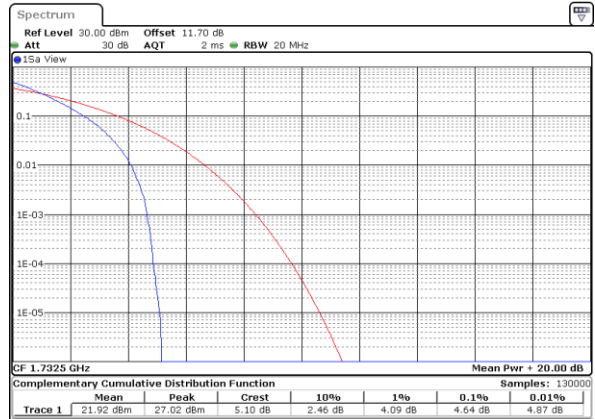
Date: 8 SEP 2017 13:33:51

Middle Channel / 1RB



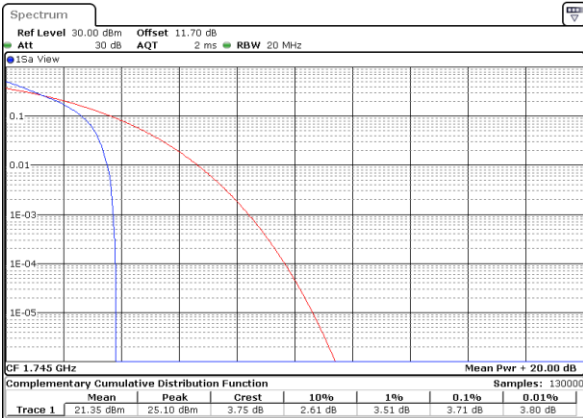
Date: 8 SEP 2017 13:34:02

Middle Channel / Full RB



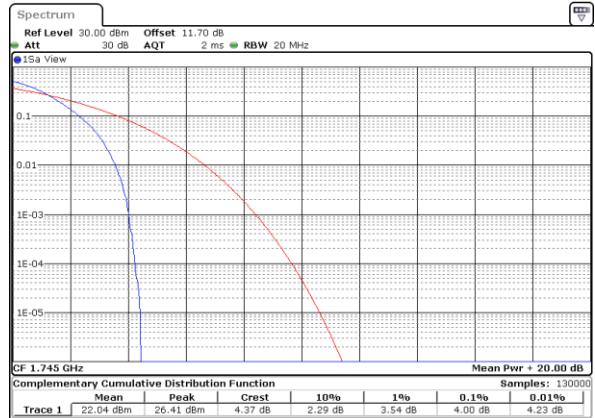
Date: 8 SEP 2017 13:34:12

Highest Channel / 1RB



Date: 8 SEP 2017 13:34:21

Highest Channel / Full RB

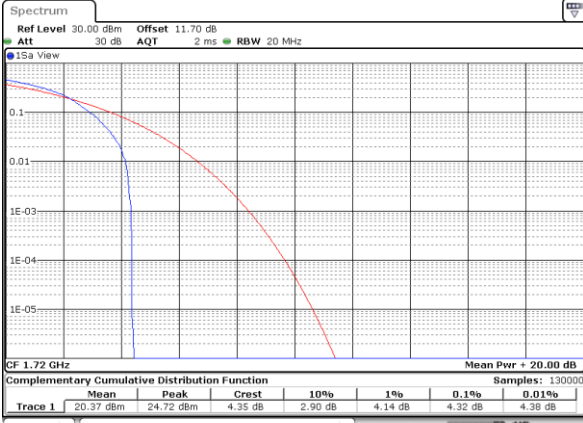


Date: 8 SEP 2017 13:34:31



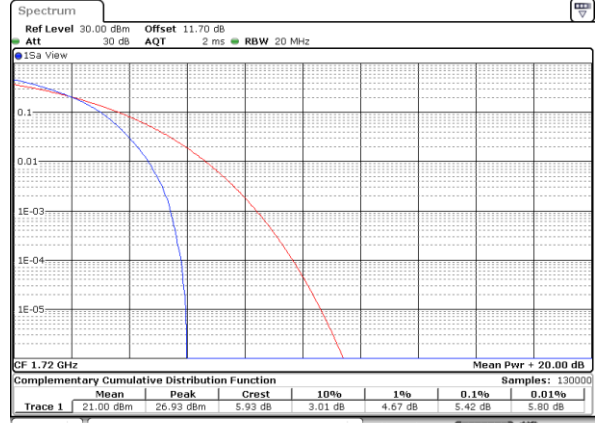
LTE Band 4 / 20MHz / 16QAM

Lowest Channel / 1RB



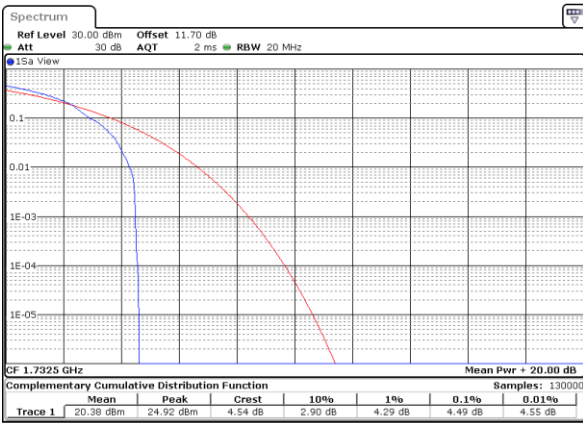
Date: 8 SEP 2017 13:32:00

Lowest Channel / Full RB



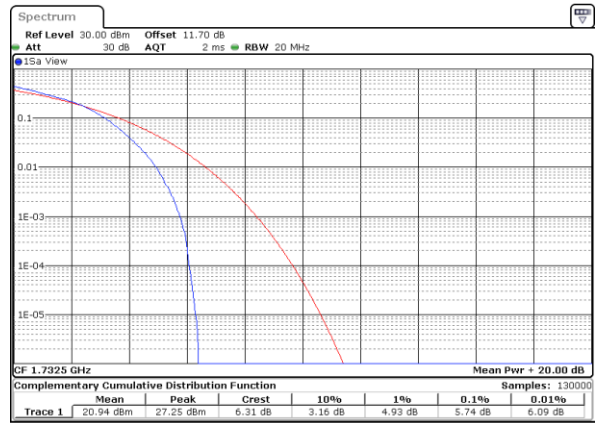
Date: 8 SEP 2017 13:32:15

Middle Channel / 1RB



Date: 8 SEP 2017 13:32:24

Middle Channel / Full RB



Date: 8 SEP 2017 13:32:33

Highest Channel / 1RB



Date: 8 SEP 2017 13:32:43

Highest Channel / Full RB

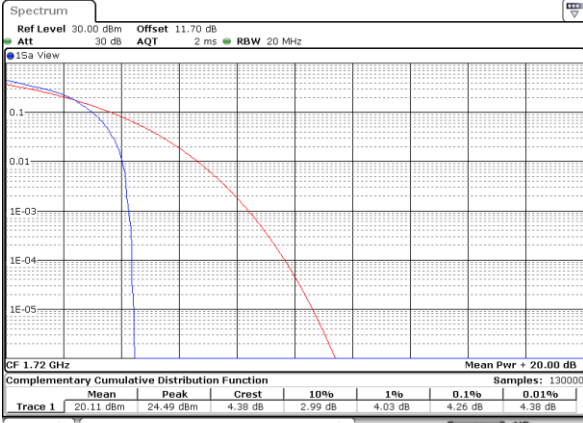


Date: 8 SEP 2017 13:32:52



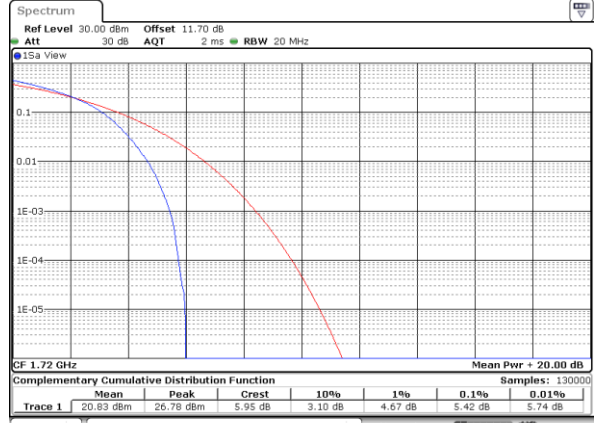
LTE Band 4 / 20MHz / 64QAM

Lowest Channel / 1RB



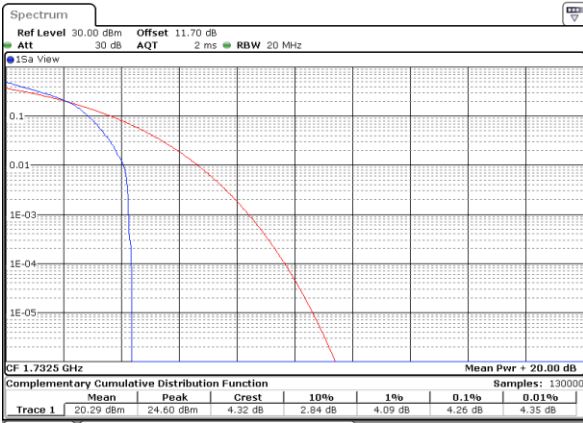
Date: 27.OCT.2017 09:50:55

Lowest Channel / Full RB



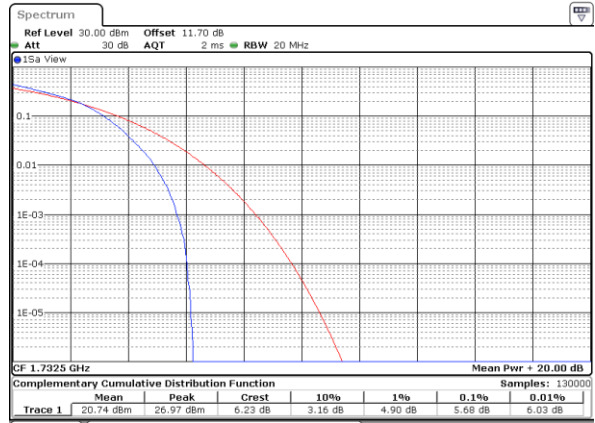
Date: 27.OCT.2017 09:51:04

Middle Channel / 1RB



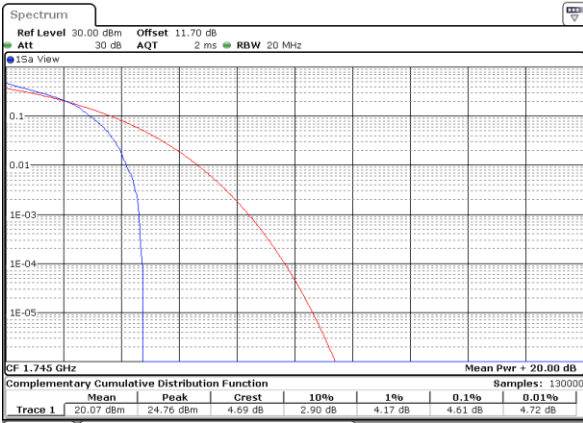
Date: 27.OCT.2017 09:51:13

Middle Channel / Full RB



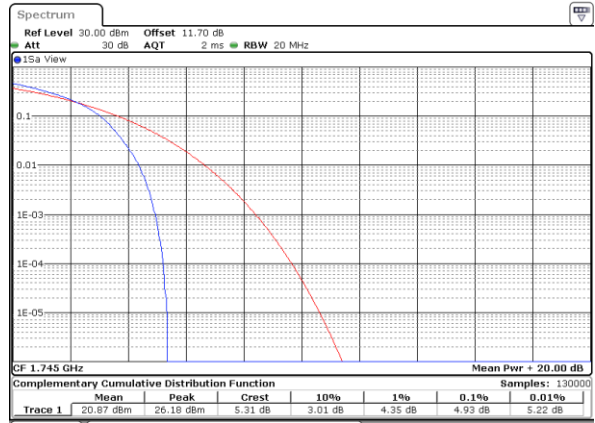
Date: 27.OCT.2017 09:51:22

Highest Channel / 1RB



Date: 27.OCT.2017 09:51:31

Highest Channel / Full RB



Date: 27.OCT.2017 09:51:40



**26dB Bandwidth**

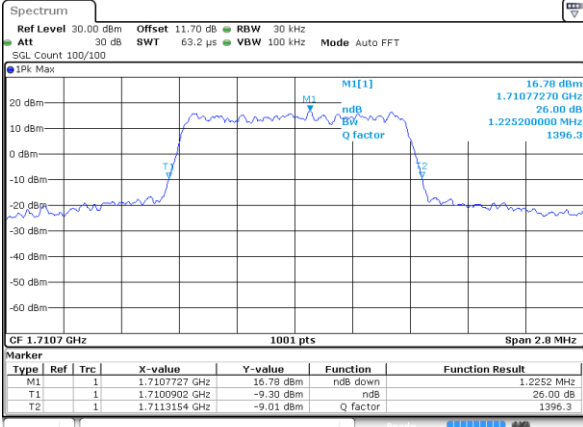
Mode	LTE Band 4 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	1.23	1.21	3.05	3.00	4.90	4.82	9.65	9.87	14.45	14.57	20.10	20.06
Middle CH	1.22	1.23	2.99	3.06	4.80	5.01	9.73	9.73	14.21	14.51	20.10	20.26
Highest CH	1.24	1.22	3.02	3.06	4.90	4.92	9.75	9.81	14.39	14.33	20.26	20.02
Mode	LTE Band 4 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	1.23	-	2.99	-	4.87	-	9.83	-	14.3	-	20.18	-
Middle CH	1.24	-	3.01	-	4.93	-	9.71	-	14.21	-	20.26	-
Highest CH	1.24	-	3	-	4.97	-	9.71	-	14.27	-	20.22	-





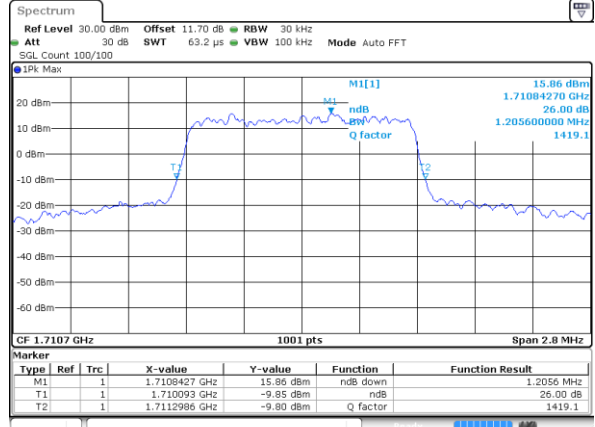
LTE Band 4

Lowest Channel / 1.4MHz / QPSK



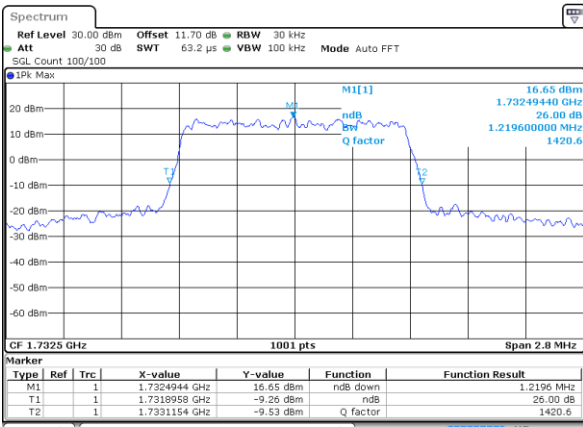
Date: 8 SEP 2017 12:00:24

Lowest Channel / 1.4MHz / 16QAM



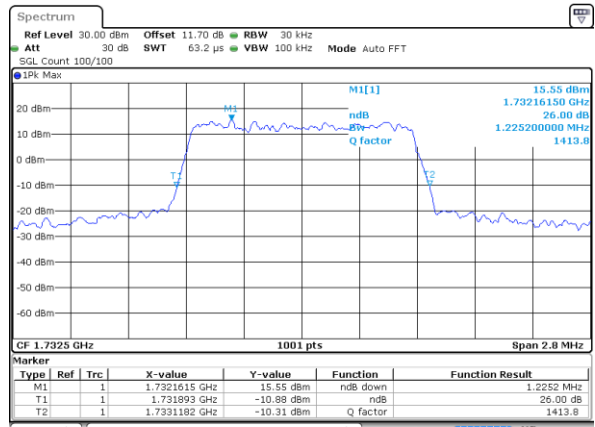
Date: 8 SEP 2017 12:00:34

Middle Channel / 1.4MHz / QPSK



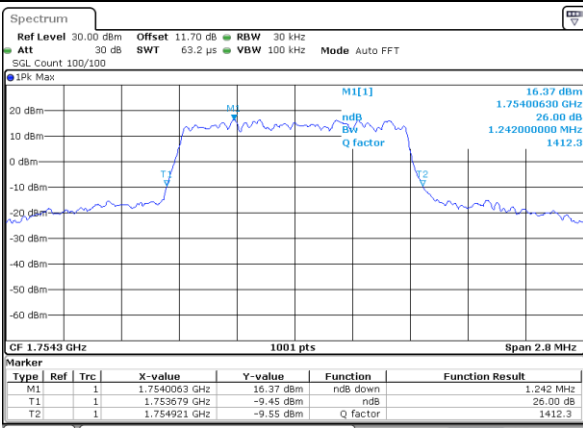
Date: 8 SEP 2017 12:02:52

Middle Channel / 1.4MHz / 16QAM



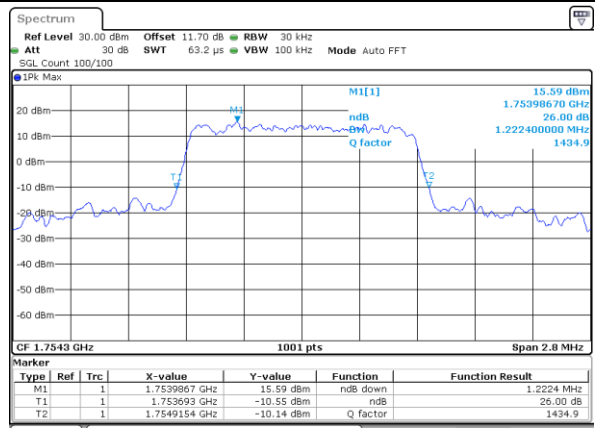
Date: 8 SEP 2017 12:03:02

Highest Channel / 1.4MHz / QPSK



Date: 8 SEP 2017 12:05:20

Highest Channel / 1.4MHz / 16QAM

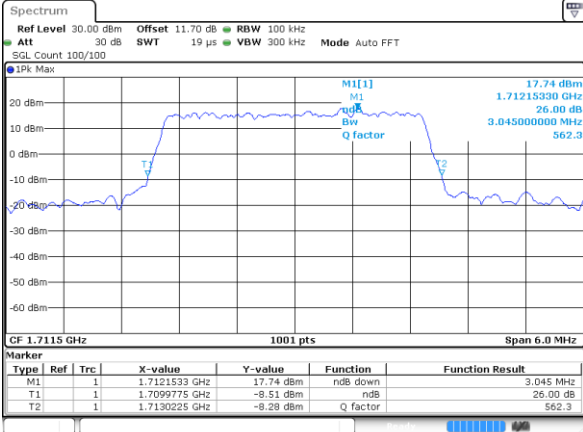


Date: 8 SEP 2017 12:05:30



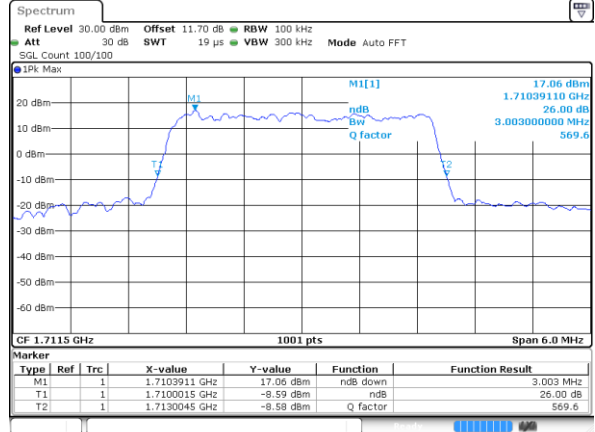
LTE Band 4

Lowest Channel / 3MHz / QPSK



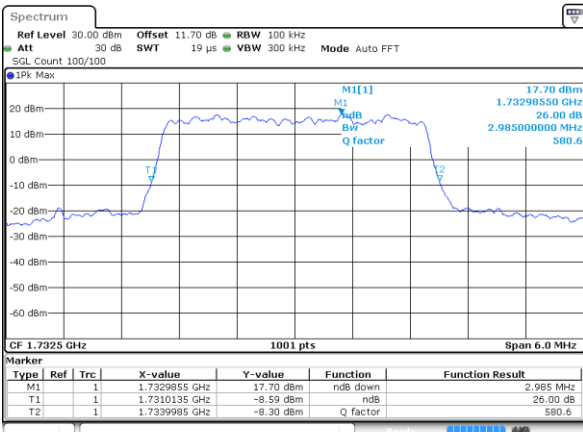
Date: 8 SEP.2017 11:21:42

Lowest Channel / 3MHz / 16QAM



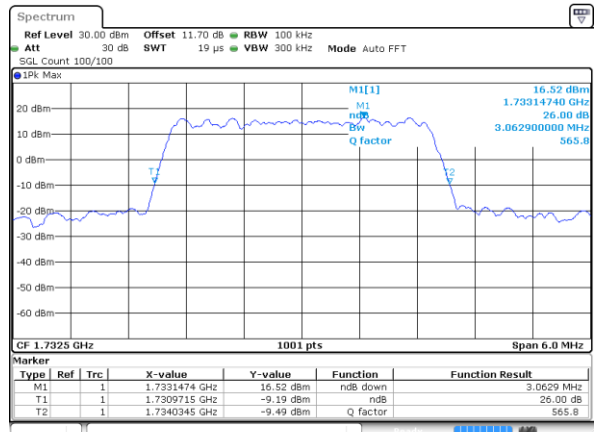
Date: 8 SEP.2017 11:21:52

Middle Channel / 3MHz / QPSK



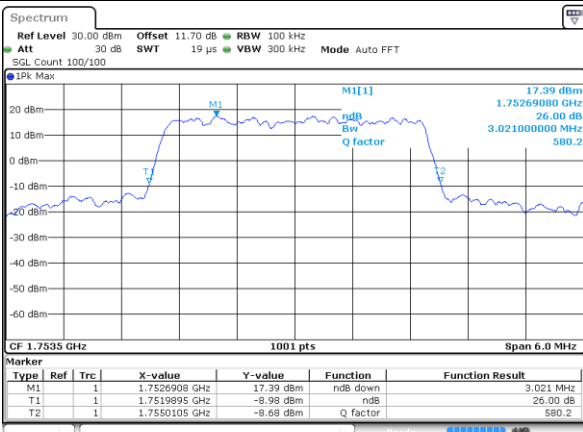
Date: 8 SEP.2017 11:24:10

Middle Channel / 3MHz / 16QAM



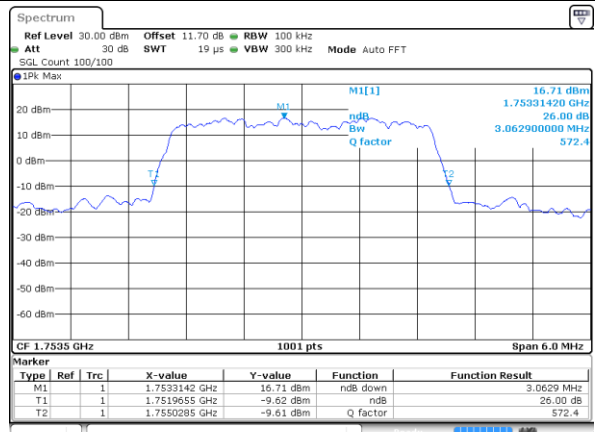
Date: 8 SEP.2017 11:24:20

Highest Channel / 3MHz / QPSK



Date: 8 SEP.2017 11:26:38

Highest Channel / 3MHz / 16QAM

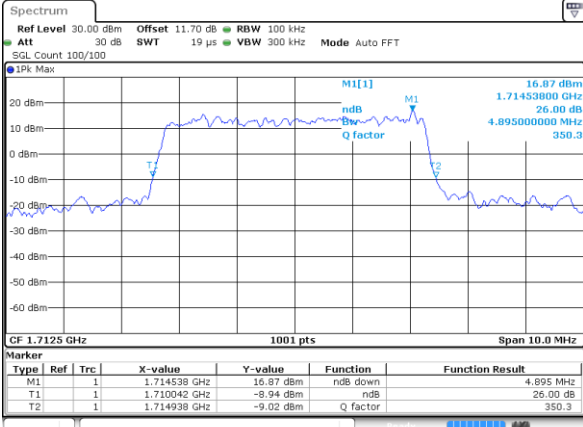


Date: 8 SEP.2017 11:26:48



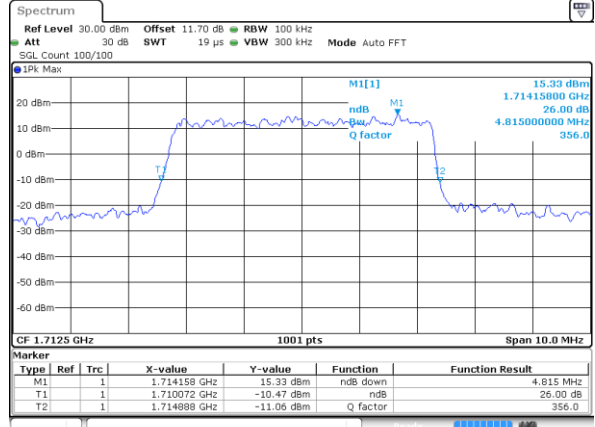
LTE Band 4

Lowest Channel / 5MHz / QPSK



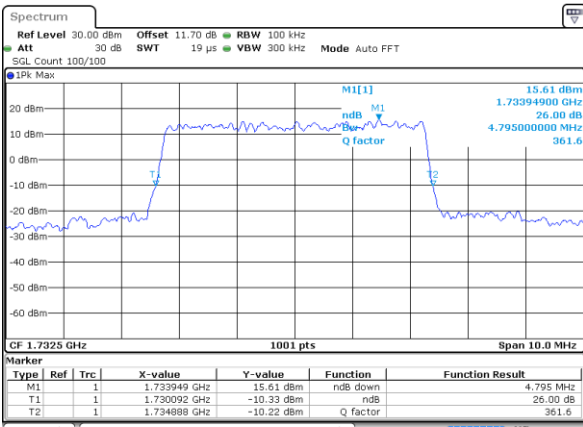
Date: 8 SEP 2017 11:29:06

Lowest Channel / 5MHz / 16QAM



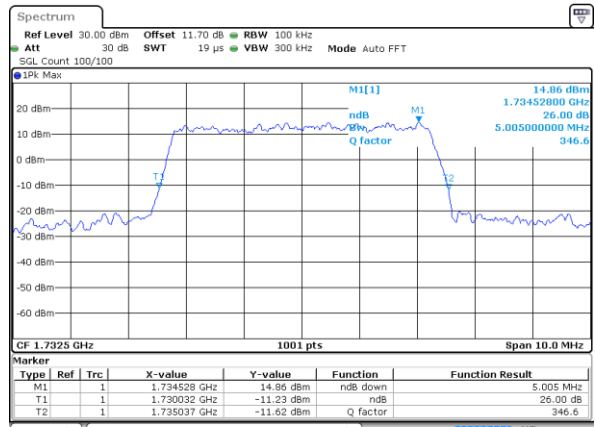
Date: 8 SEP 2017 11:29:16

Middle Channel / 5MHz / QPSK



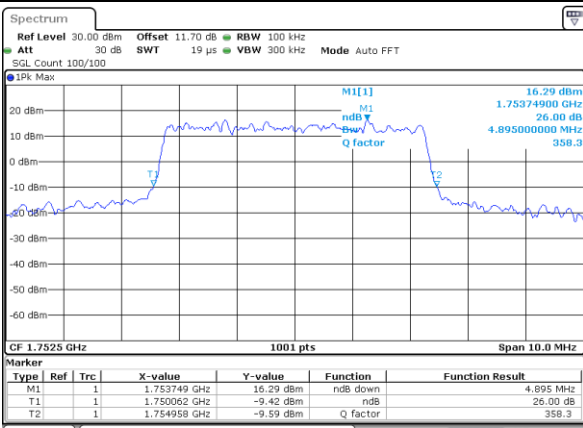
Date: 8 SEP 2017 11:31:34

Middle Channel / 5MHz / 16QAM



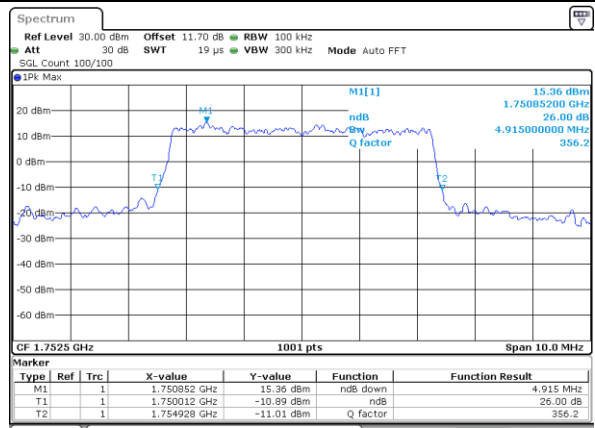
Date: 8 SEP 2017 11:31:44

Highest Channel / 5MHz / QPSK



Date: 8 SEP 2017 11:34:02

Highest Channel / 5MHz / 16QAM

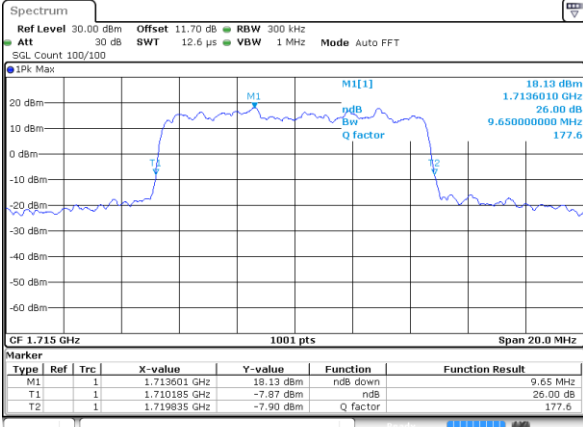


Date: 8 SEP 2017 11:34:12



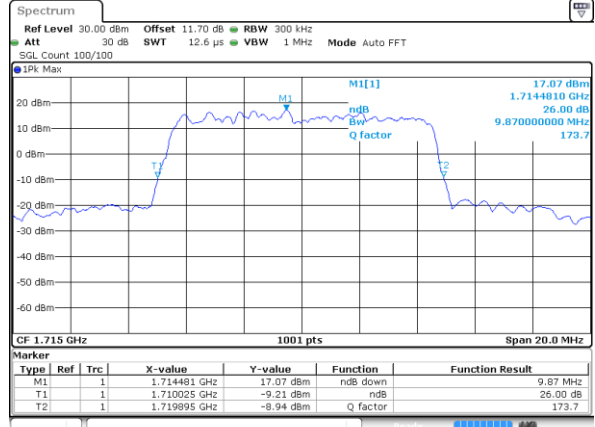
LTE Band 4

Lowest Channel / 10MHz / QPSK



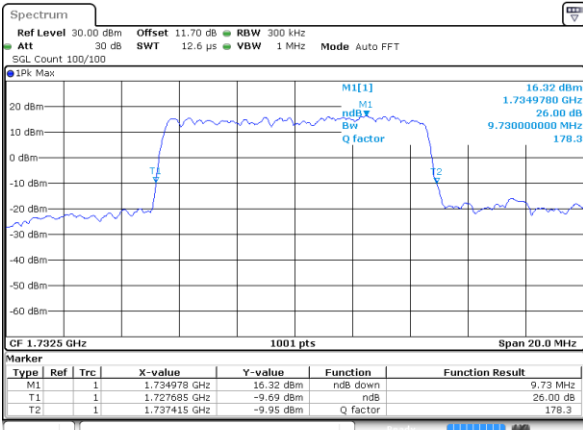
Date: 8 SEP 2017 11:36:30

Lowest Channel / 10MHz / 16QAM



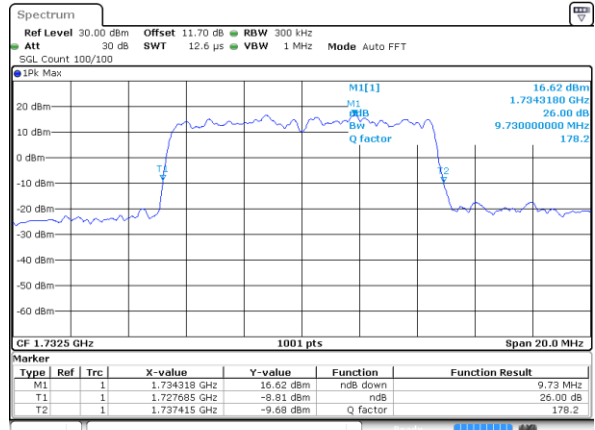
Date: 8 SEP 2017 11:36:40

Middle Channel / 10MHz / QPSK



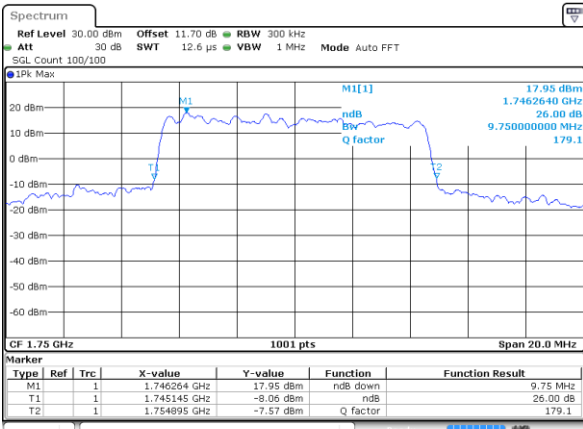
Date: 8 SEP 2017 11:38:58

Middle Channel / 10MHz / 16QAM



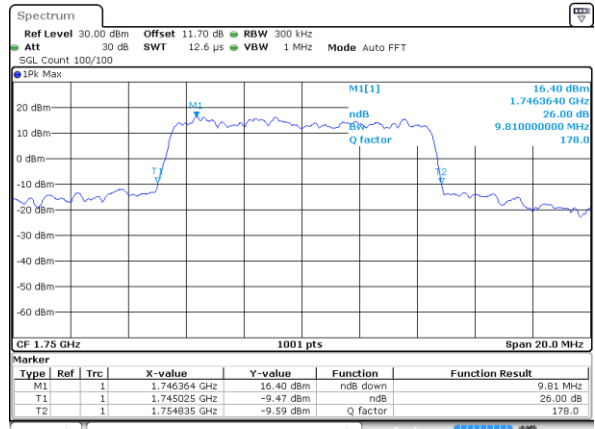
Date: 8 SEP 2017 11:39:08

Highest Channel / 10MHz / QPSK



Date: 8 SEP 2017 11:41:26

Highest Channel / 10MHz / 16QAM

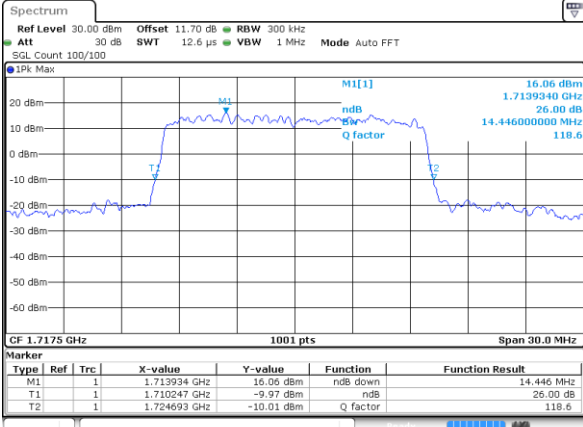


Date: 8 SEP 2017 11:41:36



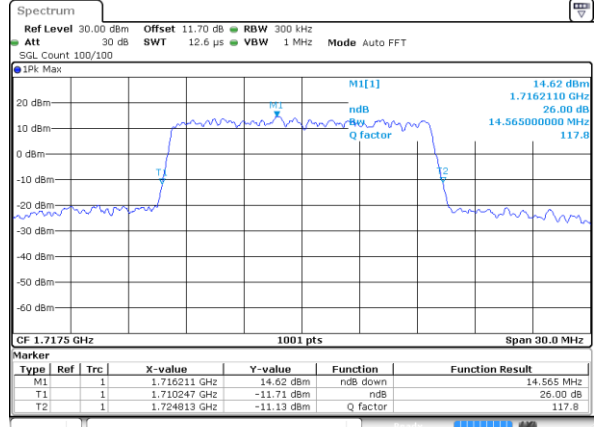
LTE Band 4

Lowest Channel / 15MHz / QPSK



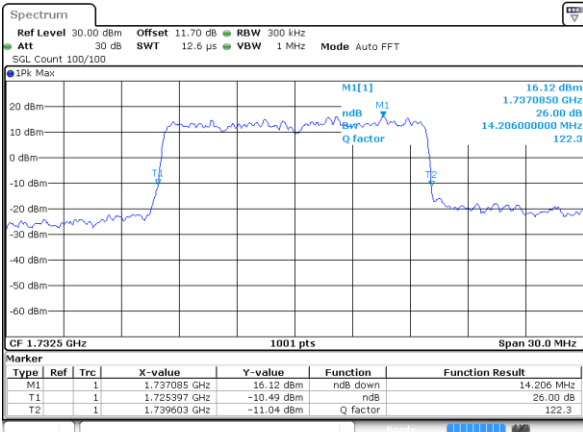
Date: 8 SEP 2017 11:43:54

Lowest Channel / 15MHz / 16QAM



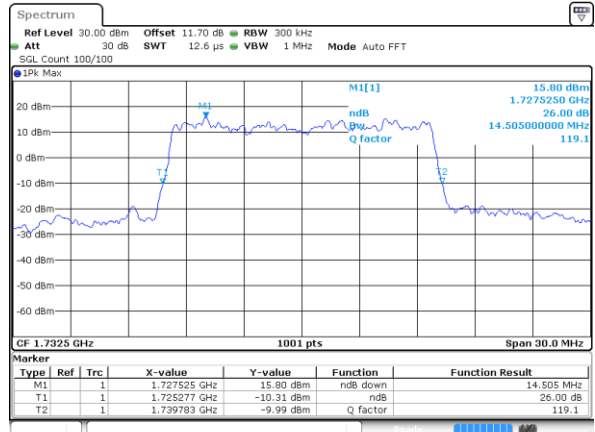
Date: 8 SEP 2017 11:44:04

Middle Channel / 15MHz / QPSK



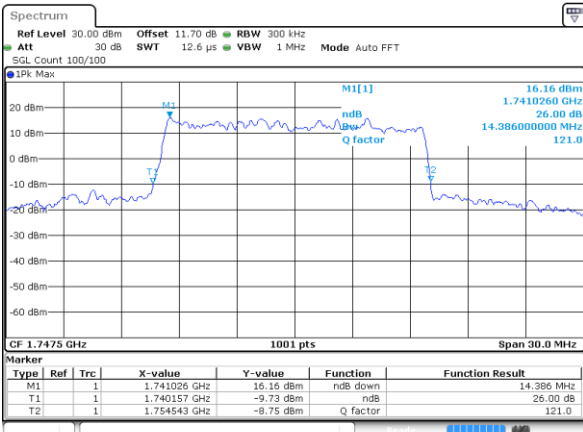
Date: 8 SEP 2017 11:46:23

Middle Channel / 15MHz / 16QAM



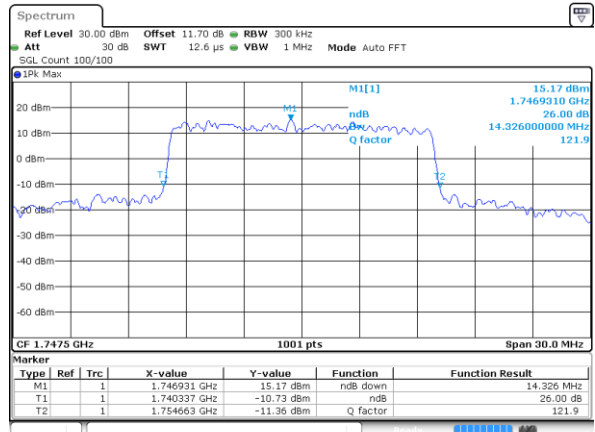
Date: 8 SEP 2017 11:46:33

Highest Channel / 15MHz / QPSK



Date: 8 SEP 2017 11:48:51

Highest Channel / 15MHz / 16QAM

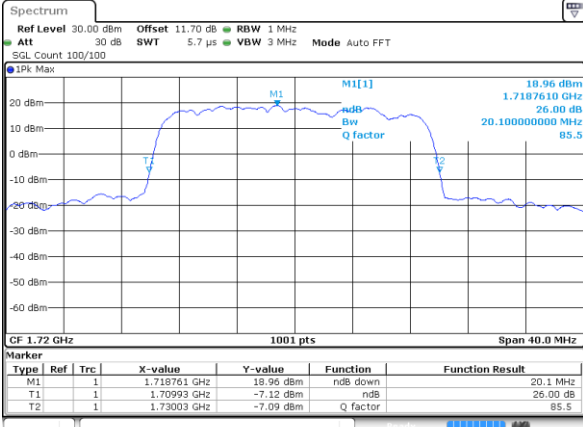


Date: 8 SEP 2017 11:49:01



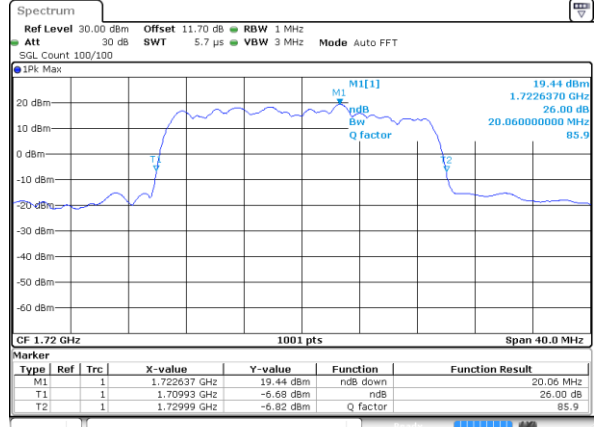
LTE Band 4

Lowest Channel / 20MHz / QPSK



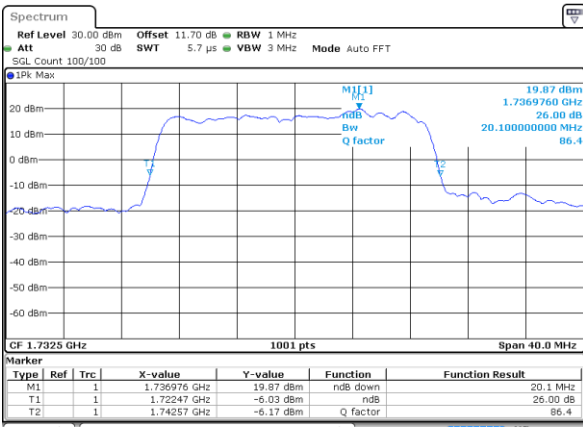
Date: 8 SEP 2017 11:51:19

Lowest Channel / 20MHz / 16QAM



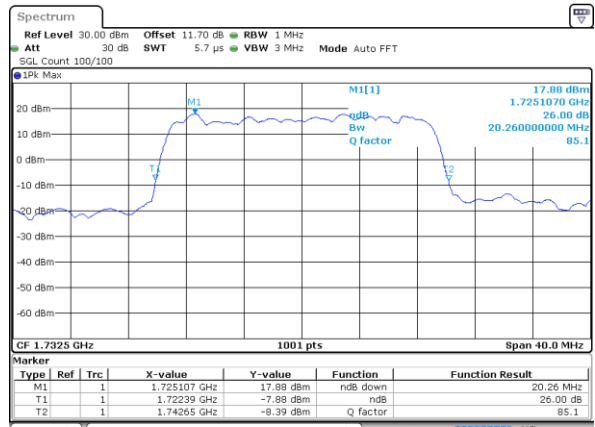
Date: 8 SEP 2017 11:51:29

Middle Channel / 20MHz / QPSK



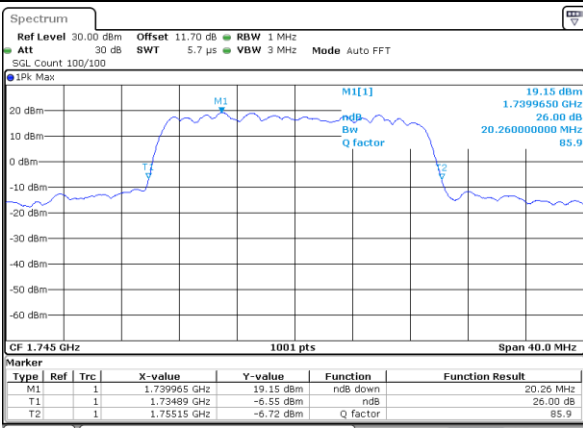
Date: 8 SEP 2017 11:53:47

Middle Channel / 20MHz / 16QAM



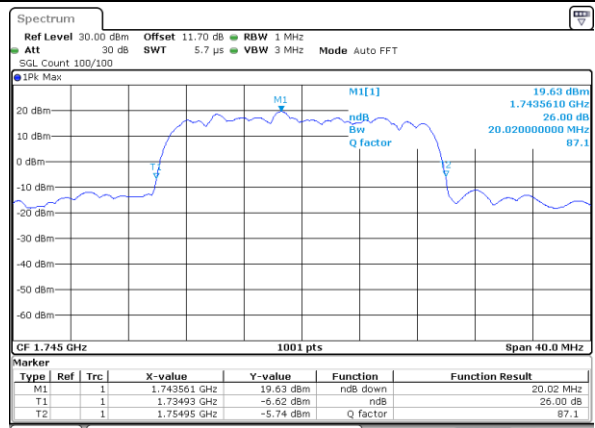
Date: 8 SEP 2017 11:53:57

Highest Channel / 20MHz / QPSK



Date: 8 SEP 2017 11:56:15

Highest Channel / 20MHz / 16QAM

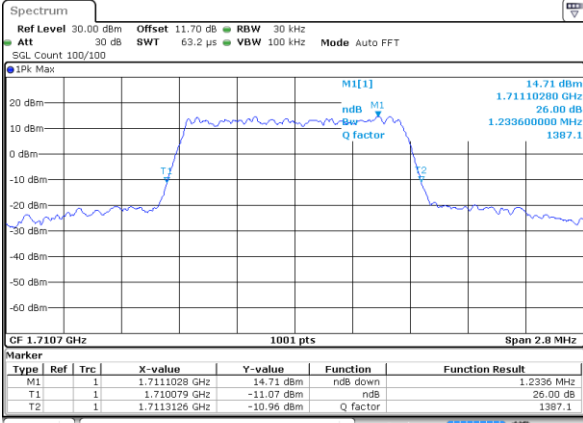


Date: 8 SEP 2017 11:56:25



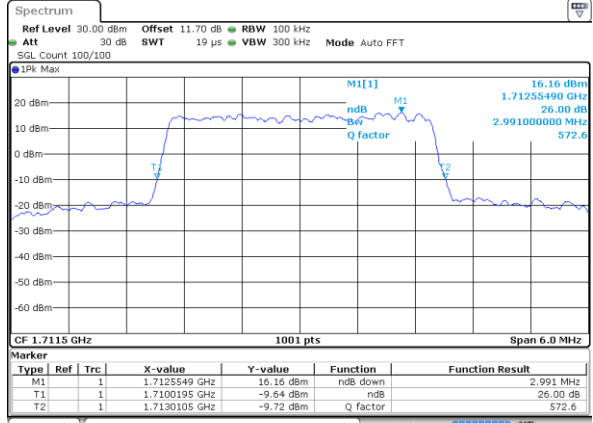
LTE Band 4

Lowest Channel / 1.4MHz / 64QAM



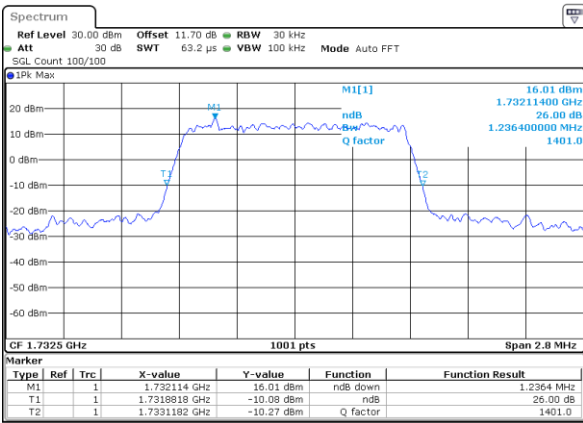
Date: 27.OCT.2017 12:24:47

Lowest Channel / 3MHz / 64QAM



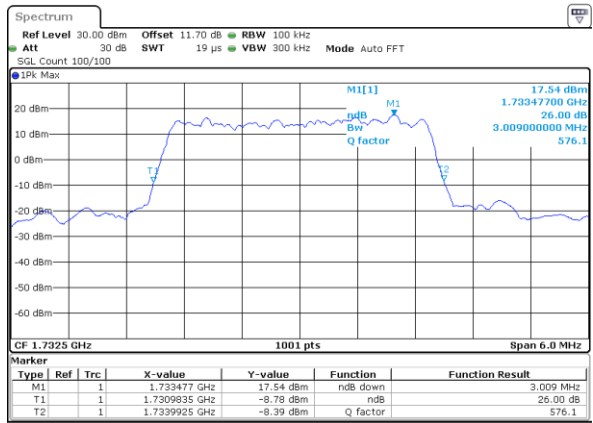
Date: 27.OCT.2017 11:34:21

Middle Channel / 1.4MHz / 64QAM



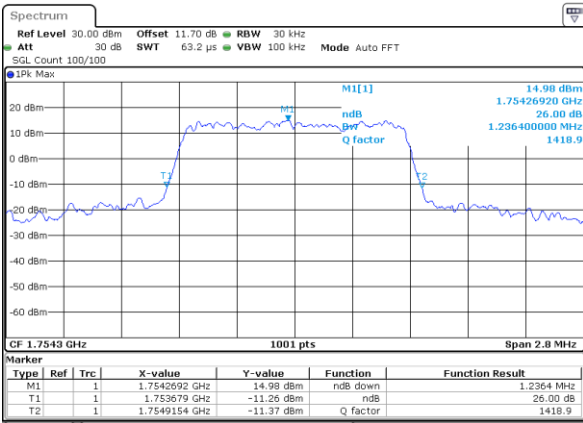
Date: 27.OCT.2017 12:28:18

Middle Channel / 3MHz / 64QAM



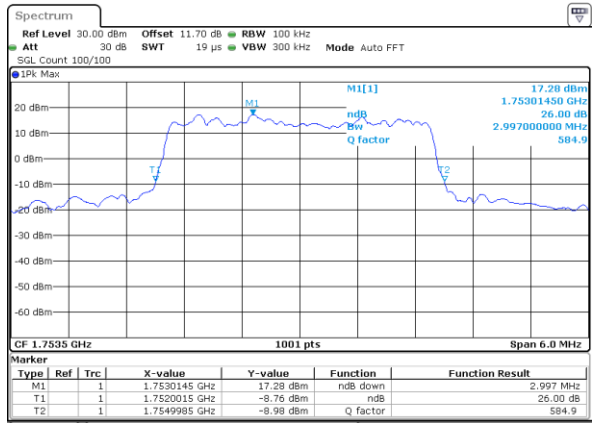
Date: 27.OCT.2017 11:37:53

Highest Channel / 1.4MHz / 64QAM



Date: 27.OCT.2017 12:29:32

Highest Channel / 3MHz / 64QAM

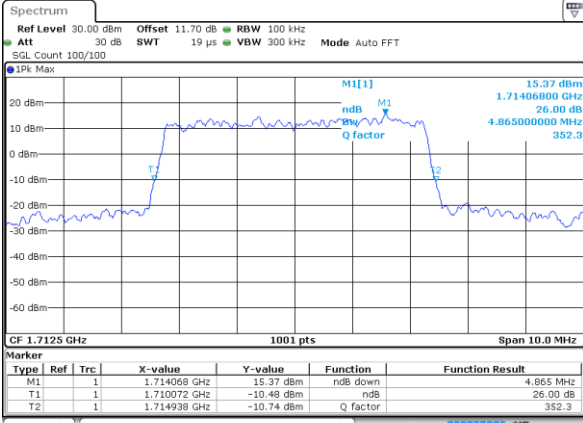


Date: 27.OCT.2017 11:39:07



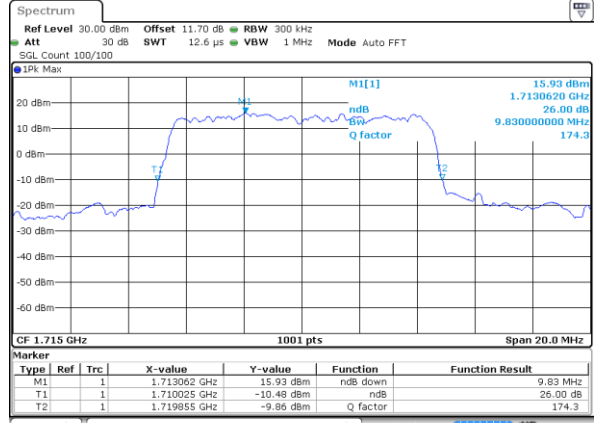
LTE Band 4

Lowest Channel / 5MHz / 64QAM



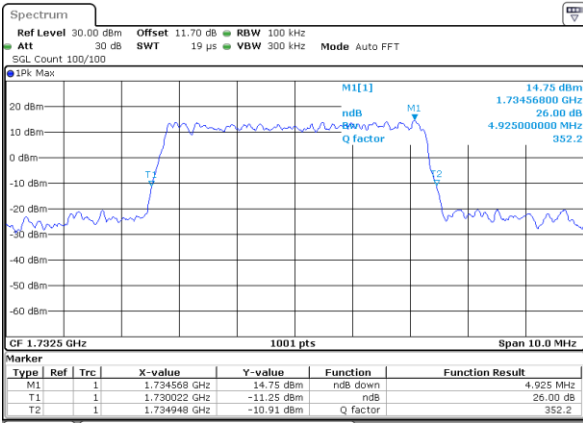
Date: 27.OCT.2017 11:42:38

Lowest Channel / 10MHz / 64QAM



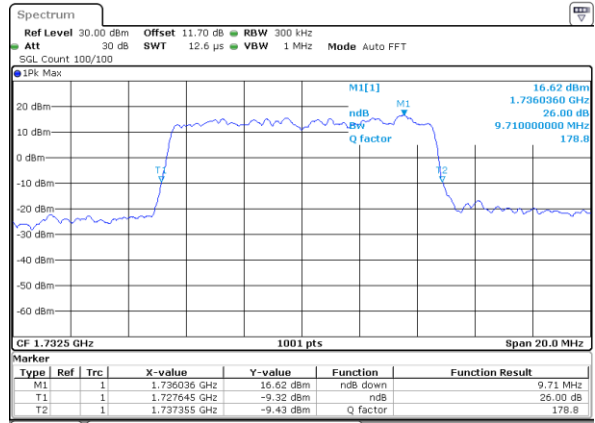
Date: 27.OCT.2017 11:59:57

Middle Channel / 5MHz / 64QAM



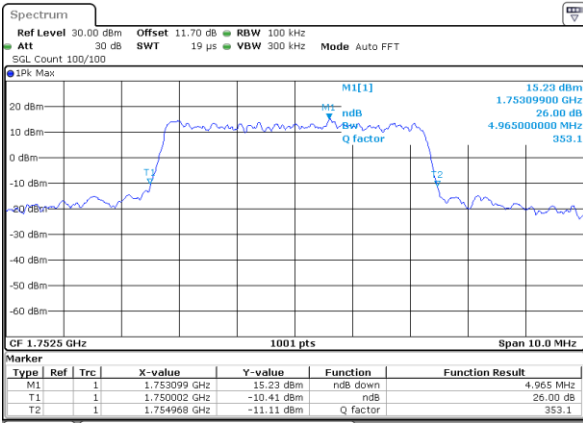
Date: 27.OCT.2017 11:46:09

Middle Channel / 10MHz / 64QAM



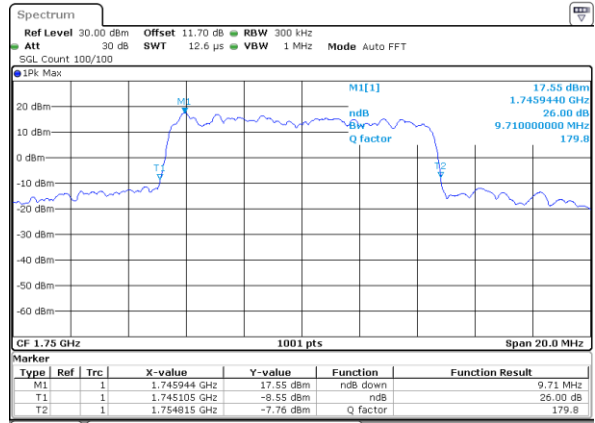
Date: 27.OCT.2017 12:03:28

Highest Channel / 5MHz / 64QAM



Date: 27.OCT.2017 11:47:23

Highest Channel / 10MHz / 64QAM



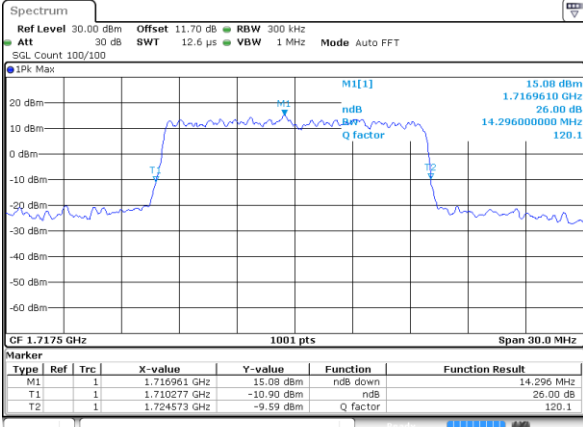
Date: 27.OCT.2017 12:04:42





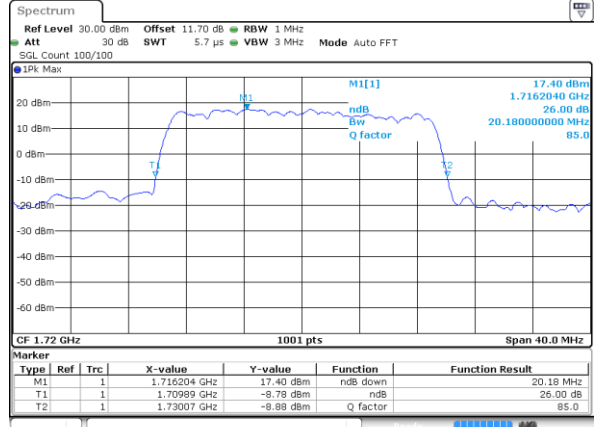
LTE Band 4

Lowest Channel / 15MHz / 64QAM



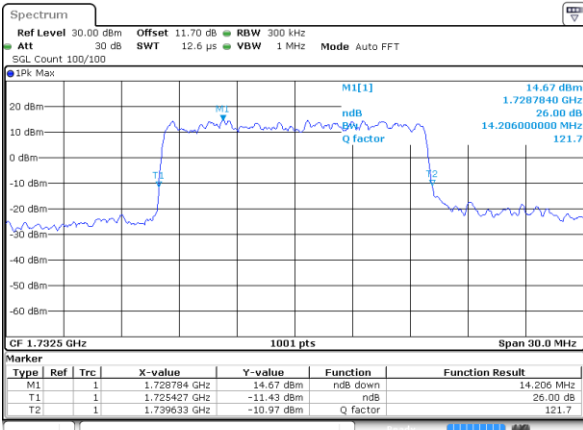
Date: 27.OCT.2017 12:08:14

Lowest Channel / 20MHz / 64QAM



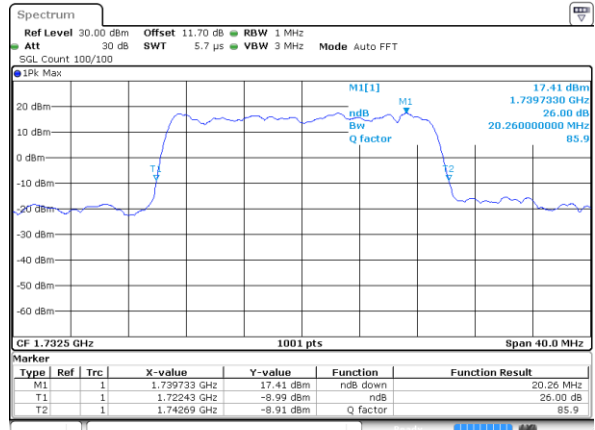
Date: 27.OCT.2017 12:16:30

Middle Channel / 15MHz / 64QAM



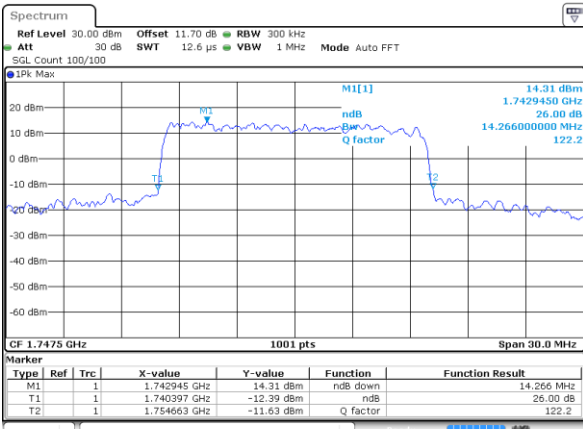
Date: 27.OCT.2017 12:11:45

Middle Channel / 20MHz / 64QAM



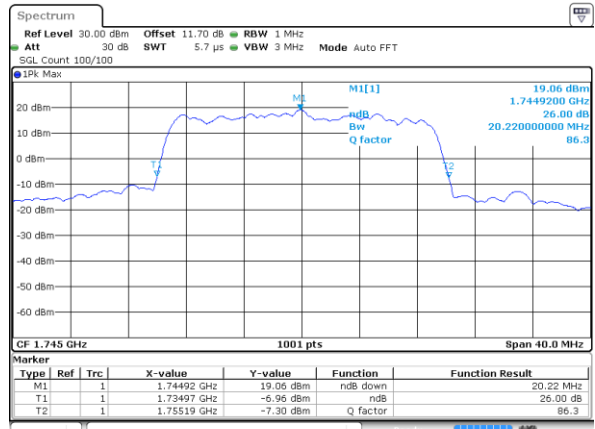
Date: 27.OCT.2017 12:20:02

Highest Channel / 15MHz / 64QAM



Date: 27.OCT.2017 12:12:59

Highest Channel / 20MHz / 64QAM



Date: 27.OCT.2017 12:21:16



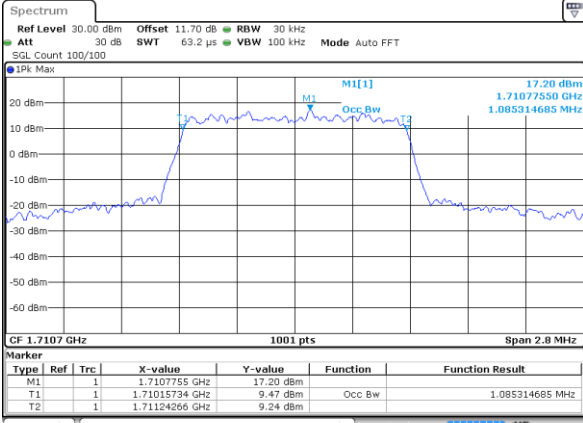
**Occupied Bandwidth**

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	4.51	4.49	9.03	8.99	13.4	13.46	18.3	18.18
Middle CH	1.09	1.09	2.71	2.72	4.51	4.5	9.05	9.05	13.49	13.34	18.46	18.38
Highest CH	1.09	1.1	2.72	2.74	4.5	4.48	9.09	9.01	13.43	13.46	18.34	18.46
Mode	LTE Band 4 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	1.09	-	2.72	-	4.5	-	9.03	-	13.46	-	18.26	-
Middle CH	1.09	-	2.74	-	4.51	-	9.03	-	13.43	-	18.26	-
Highest CH	1.09	-	2.73	-	4.5	-	8.99	-	13.49	-	18.46	-



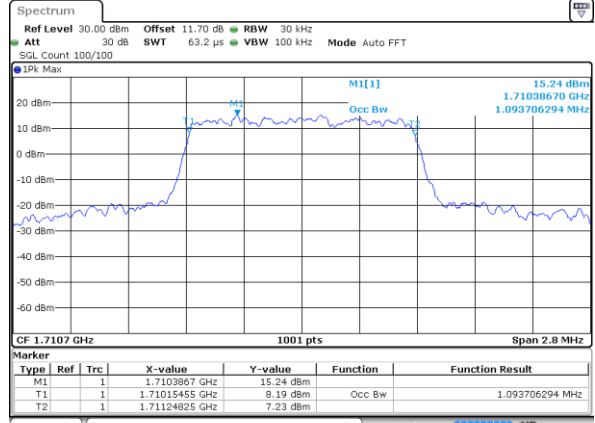
LTE Band 4

Lowest Channel / 1.4MHz / QPSK



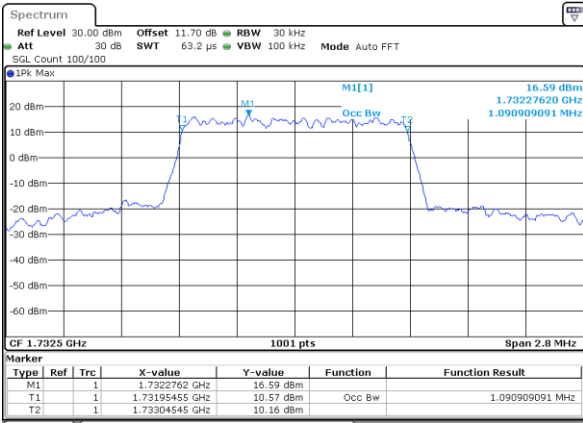
Date: 8 SEP 2017 12:00:04

Lowest Channel / 1.4MHz / 16QAM



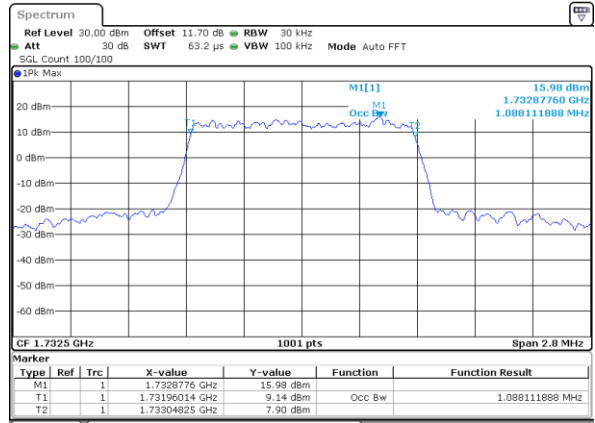
Date: 8 SEP 2017 12:00:14

Middle Channel / 1.4MHz / QPSK



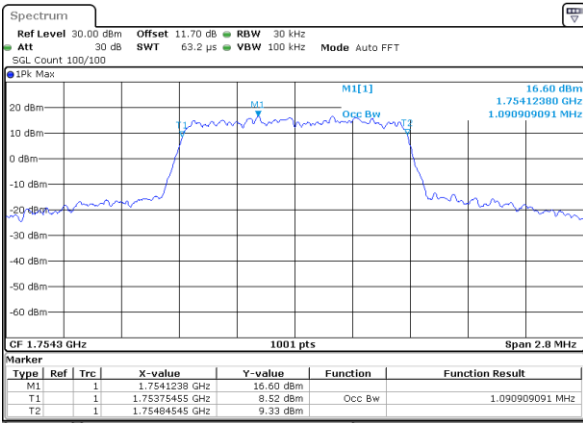
Date: 8 SEP 2017 12:02:32

Middle Channel / 1.4MHz / 16QAM



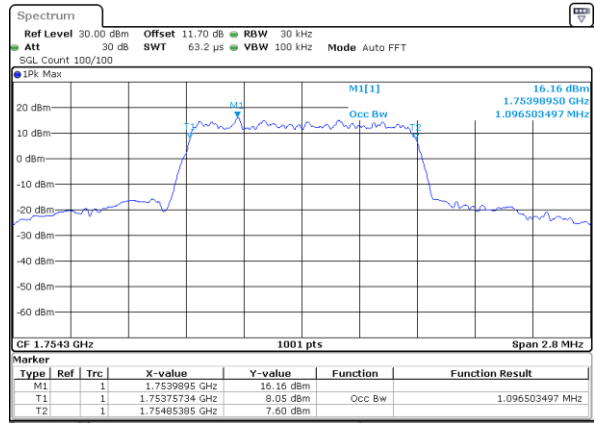
Date: 8 SEP 2017 12:02:42

Highest Channel / 1.4MHz / QPSK



Date: 8 SEP 2017 12:05:00

Highest Channel / 1.4MHz / 16QAM



Date: 8 SEP 2017 12:05:10