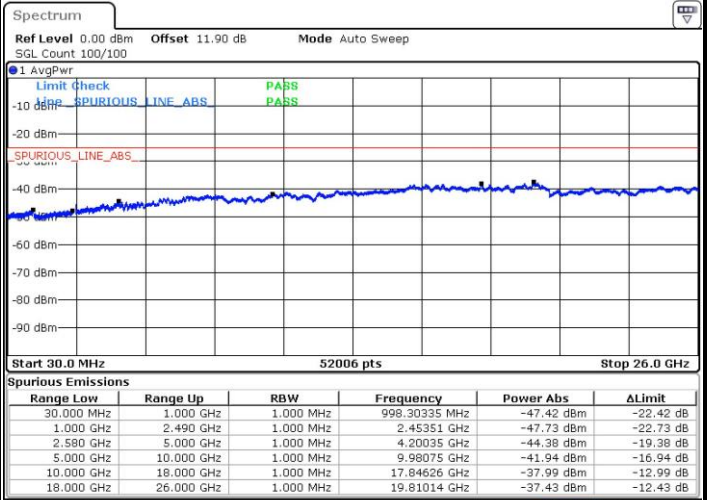
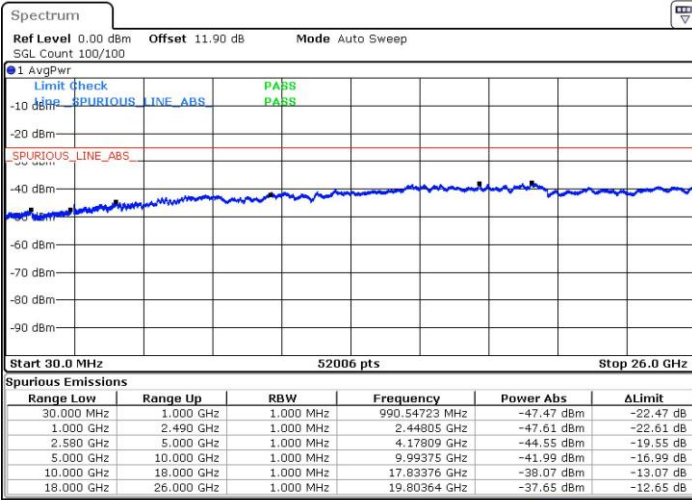




LTE Band 7 / 15MHz

Highest Channel / QPSK

Highest Channel / 16QAM



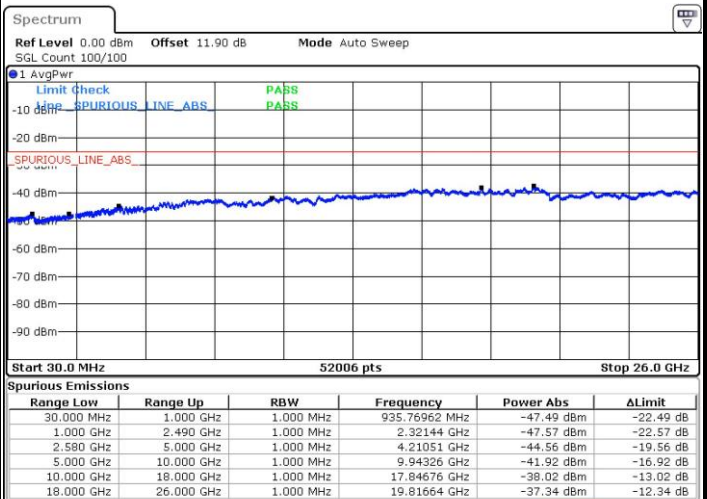
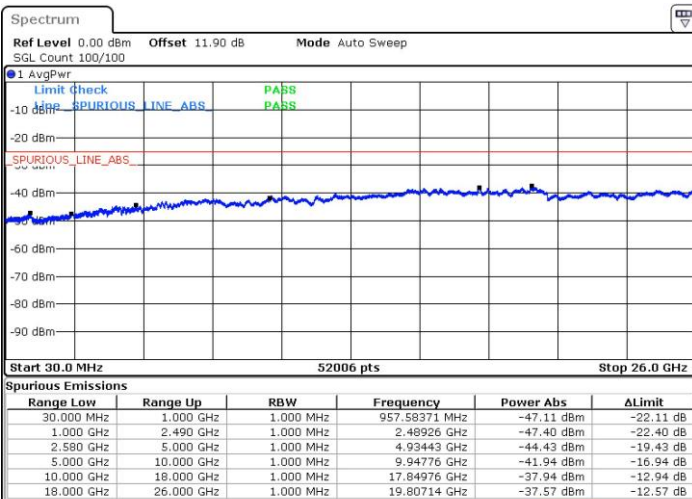
Date: 13.MAY.2019 04:55:44

Date: 13.MAY.2019 04:56:44

LTE Band 7 / 20MHz

Lowest Channel / QPSK

Lowest Channel / 16QAM



Date: 13.MAY.2019 05:08:23

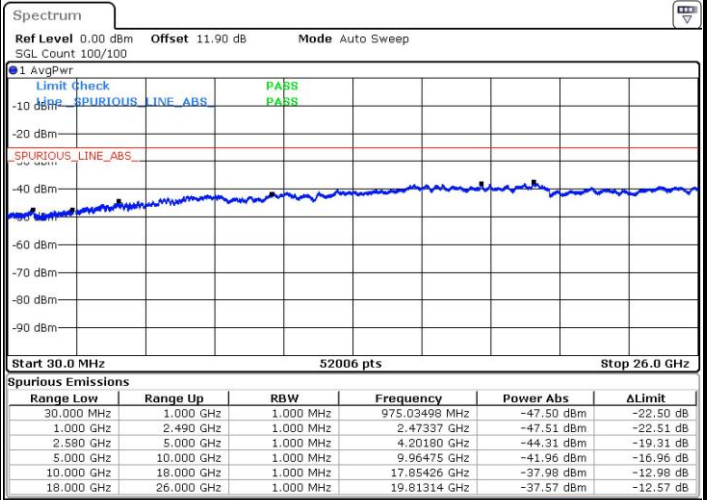
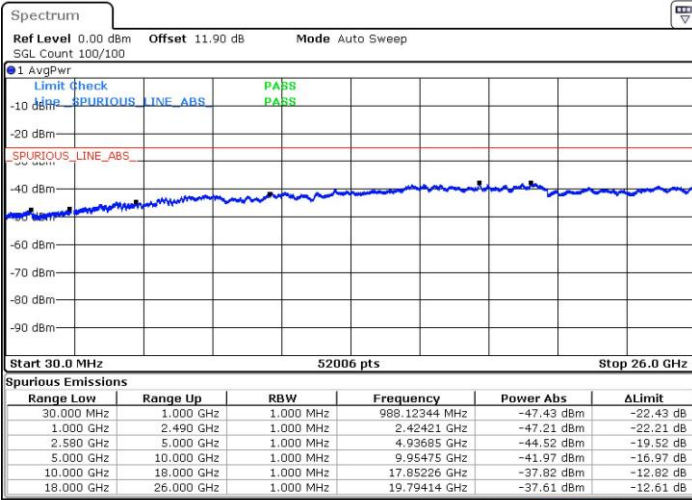
Date: 13.MAY.2019 05:09:24



LTE Band 7 / 20MHz

Middle Channel / QPSK

Middle Channel / 16QAM

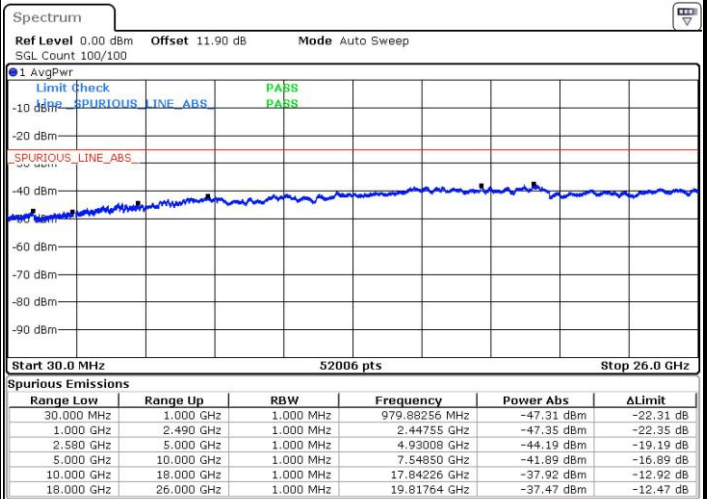
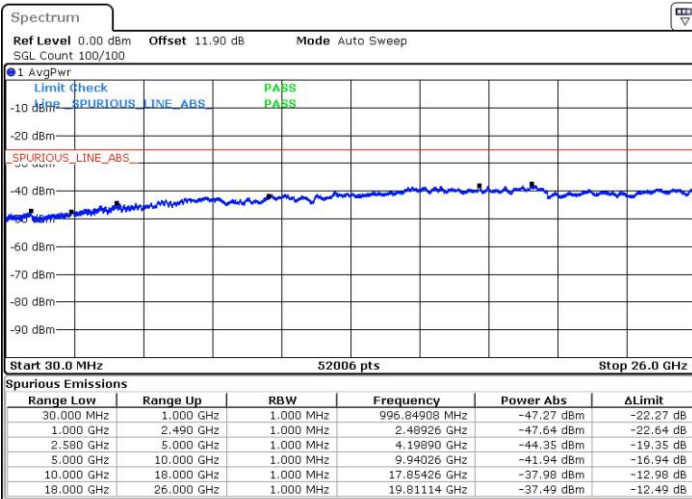


Date: 13.MAY.2019 05:11:11

Date: 13.MAY.2019 05:12:11

Highest Channel / QPSK

Highest Channel / 16QAM



Date: 13.MAY.2019 05:16:49

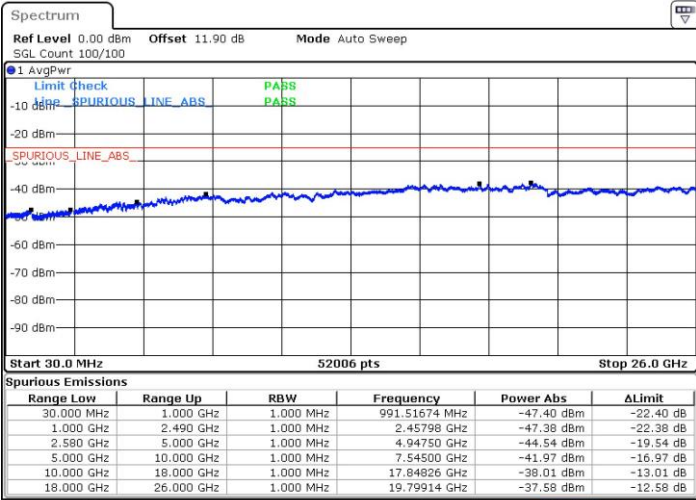
Date: 13.MAY.2019 05:17:49



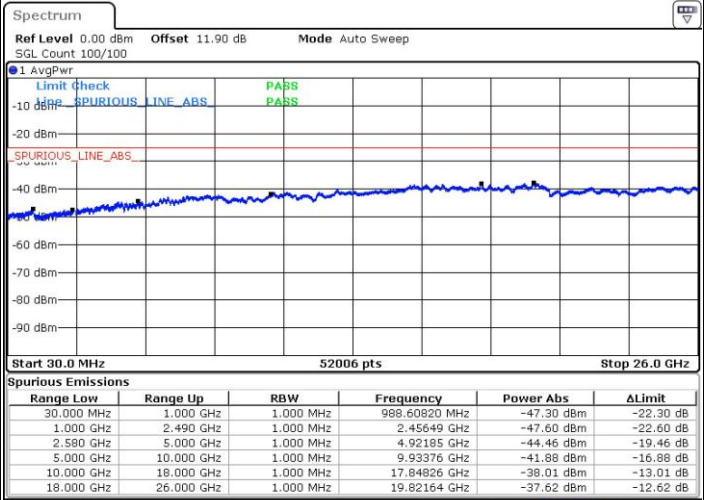
LTE Band 7 / 5MHz

Lowest Channel / 64QAM

Middle Channel / 64QAM

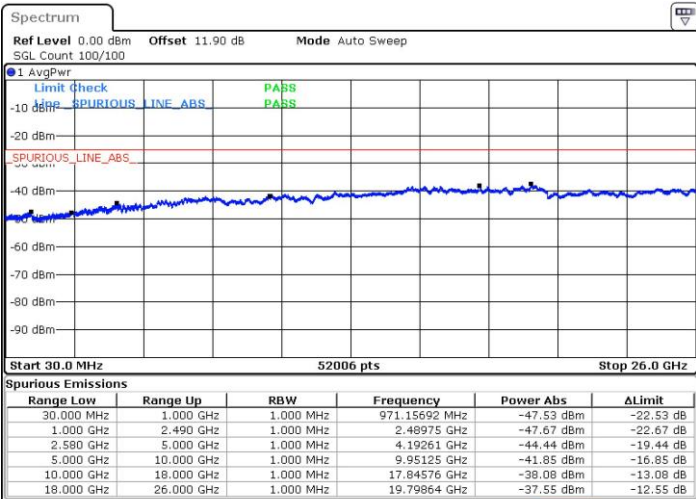


Date: 13.MAY.2019 04:17:23



Date: 13.MAY.2019 04:18:47

Highest Channel / 64QAM



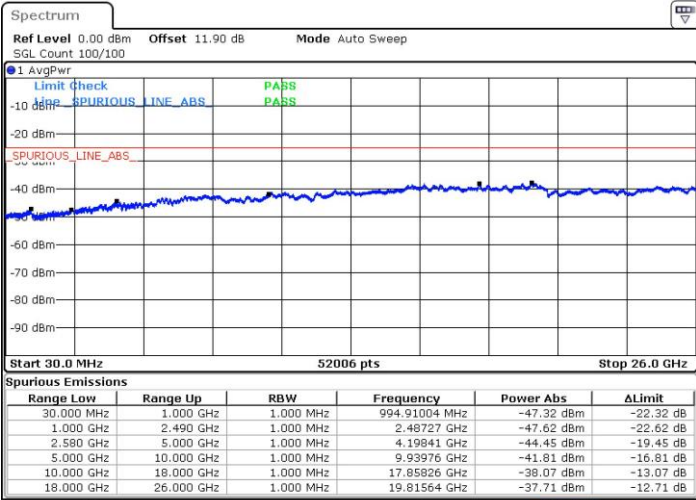
Date: 13.MAY.2019 04:21:35



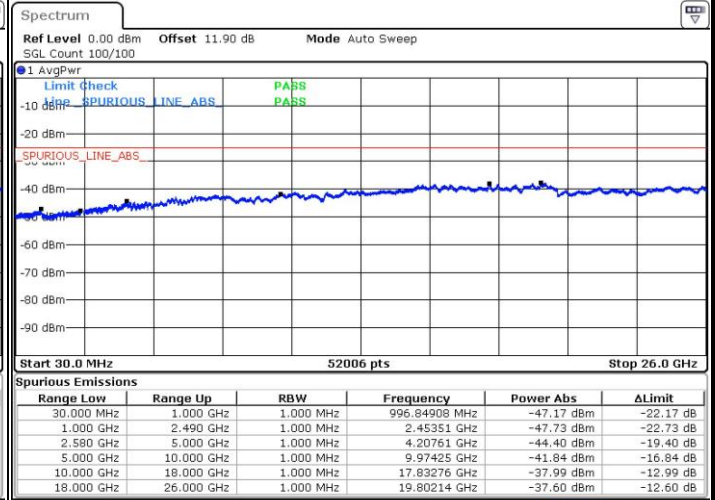
LTE Band 7 / 10MHz

Lowest Channel / 64QAM

Middle Channel / 64QAM

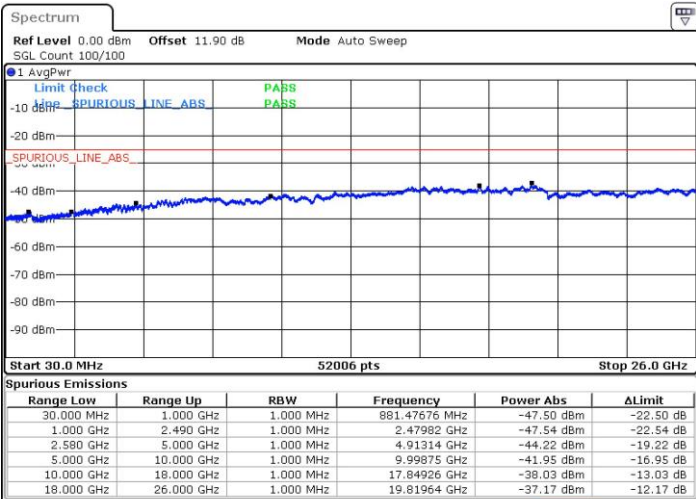


Date: 13.MAY.2019 04:38:28



Date: 13.MAY.2019 04:39:52

Highest Channel / 64QAM



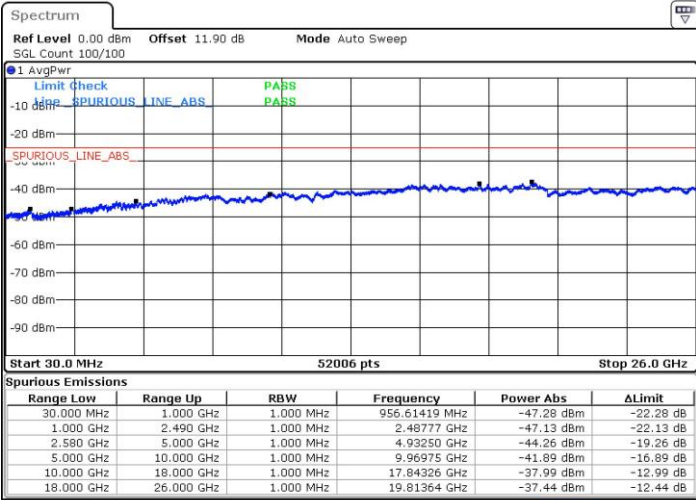
Date: 13.MAY.2019 04:42:41



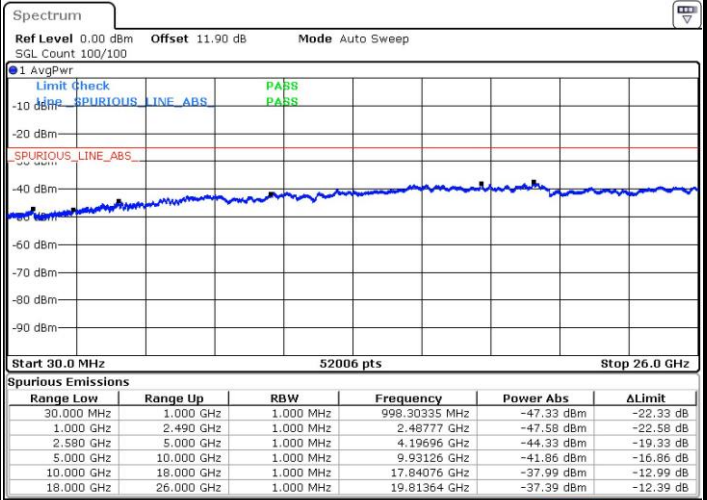
LTE Band 7 / 15MHz

Lowest Channel / 64QAM

Middle Channel / 64QAM

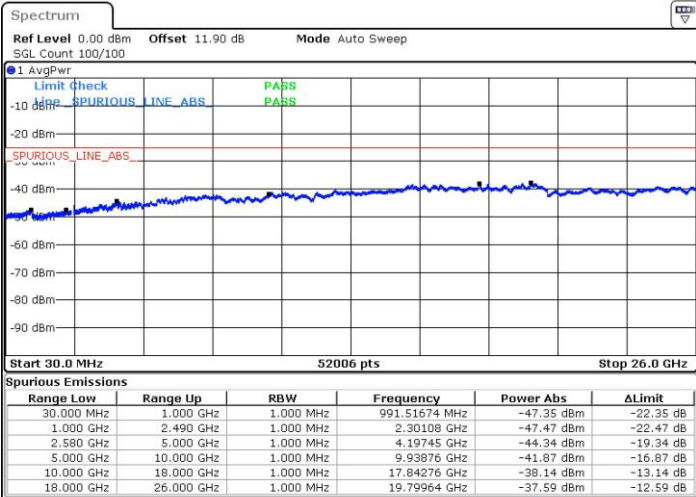


Date: 13.MAY.2019 04:59:34



Date: 13.MAY.2019 05:00:57

Highest Channel / 64QAM



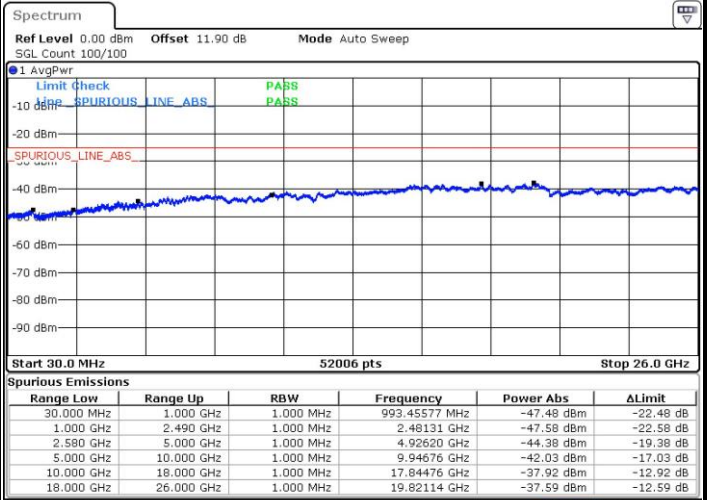
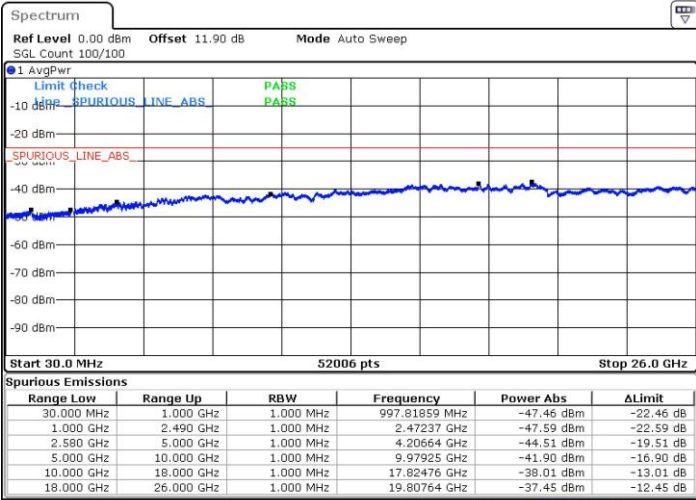
Date: 13.MAY.2019 05:03:46



LTE Band 7 / 20MHz

Lowest Channel / 64QAM

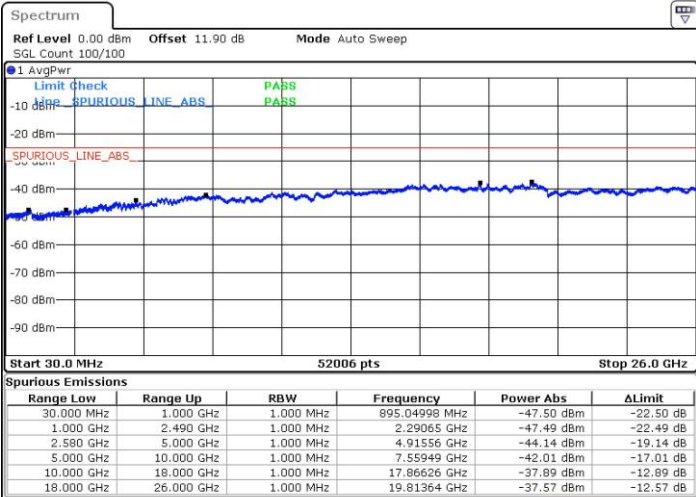
Middle Channel / 64QAM



Date: 13.MAY.2019 05:20:38

Date: 13.MAY.2019 05:27:01

Highest Channel / 64QAM



Date: 13.MAY.2019 05:29:50



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	0.0008	PASS
40	Normal Voltage	0.0042	
30	Normal Voltage	0.0047	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0006	
0	Normal Voltage	0.0043	
-10	Normal Voltage	0.0039	
-20	Normal Voltage	0.0004	
-30	Normal Voltage	0.0009	
20	Maximum Voltage	0.0037	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0044	

Note:

1. Normal Voltage =3.8 V. ; Battery End Point (BEP) =3.6 V. ; Maximum Voltage =4.4 V.
2. The frequency fundamental emissions stay within the authorized frequency block.



# LTE Band 12

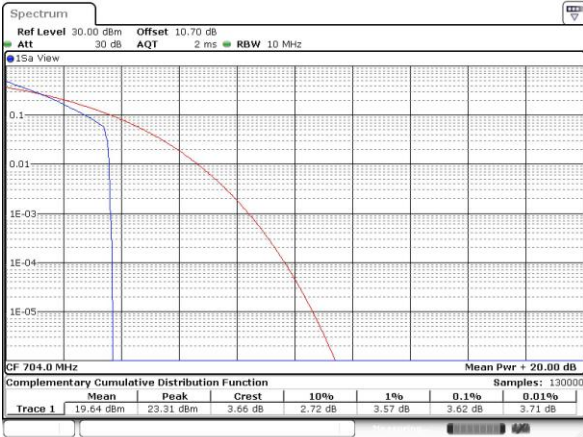
## Peak-to-Average Ratio

Mode	LTE Band 12 / 10MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	3.62	4.75	4.9	6.03	PASS
Middle CH	3.65	4.75	5.39	6.06	
Highest CH	3.62	4.58	5.33	5.88	
Mode	LTE Band 12 / 10MHz				
Mod.	64QAM				Limit: 13dB
RB Size	1RB	Full RB			Result
Lowest CH	6.38	6.67	-	-	PASS
Middle CH	7.13	6.70	-	-	
Highest CH	6.38	6.52	-	-	



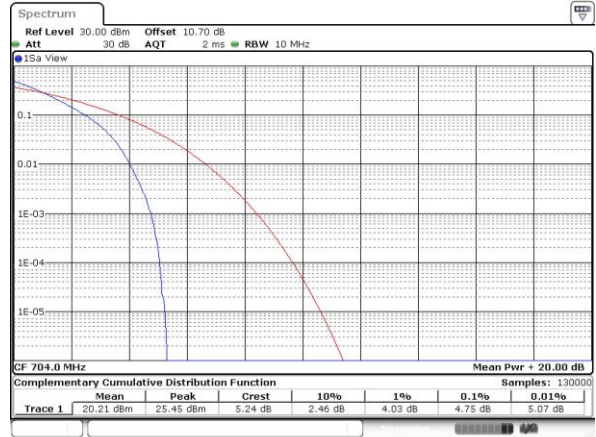
LTE Band 12 / 10MHz / QPSK

Lowest Channel / 1RB



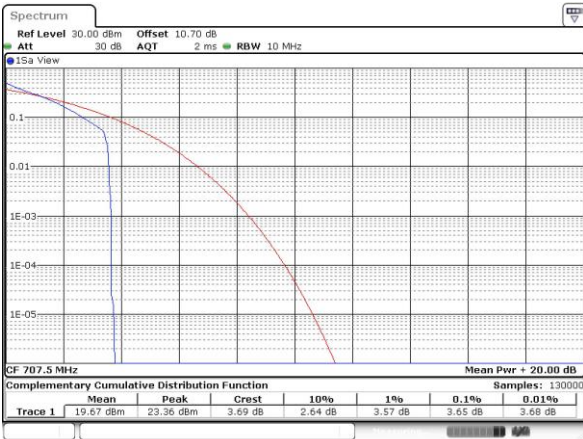
Date: 11 MAY 2019 08:11:00

Lowest Channel / Full RB



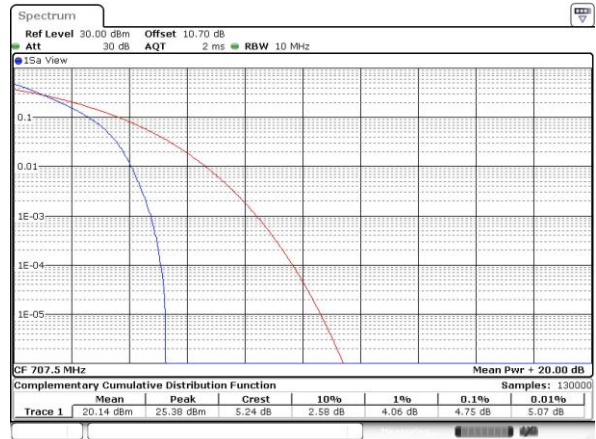
Date: 11 MAY 2019 08:10:47

Middle Channel / 1RB



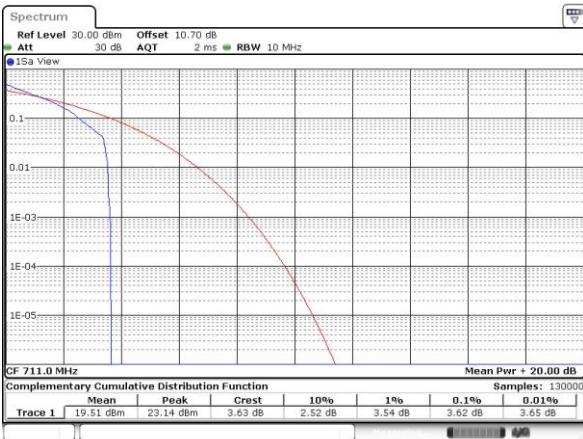
Date: 11 MAY 2019 08:11:13

Middle Channel / Full RB



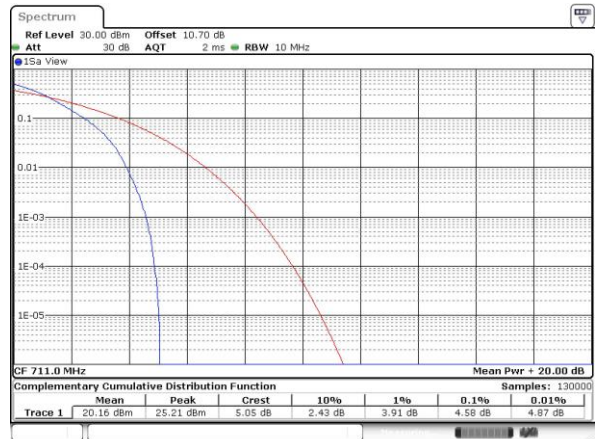
Date: 11 MAY 2019 08:11:24

Highest Channel / 1RB



Date: 11 MAY 2019 08:11:49

Highest Channel / Full RB

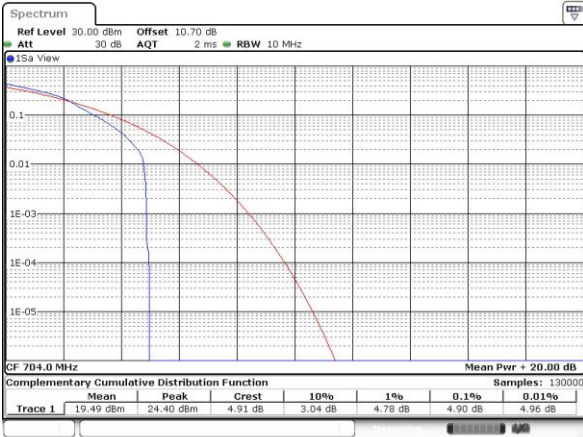


Date: 11 MAY 2019 08:11:38



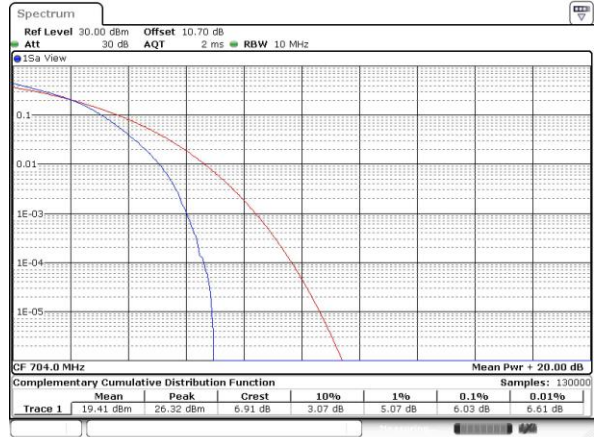
LTE Band 12 / 10MHz / 16QAM

Lowest Channel / 1RB



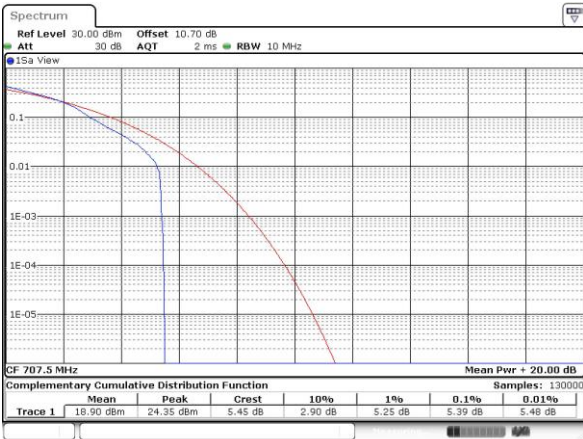
Date: 11 MAY 2019 08:09:32

Lowest Channel / Full RB



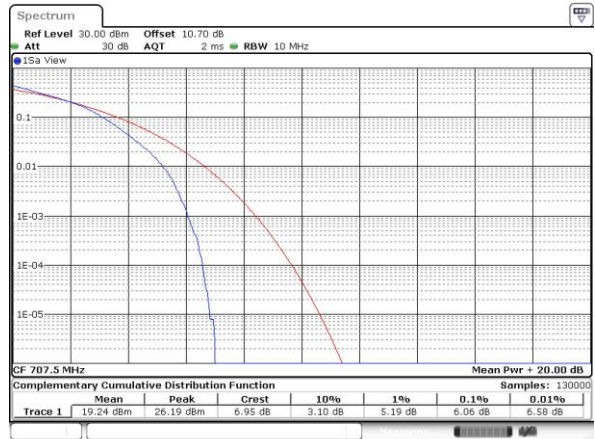
Date: 11 MAY 2019 08:09:19

Middle Channel / 1RB



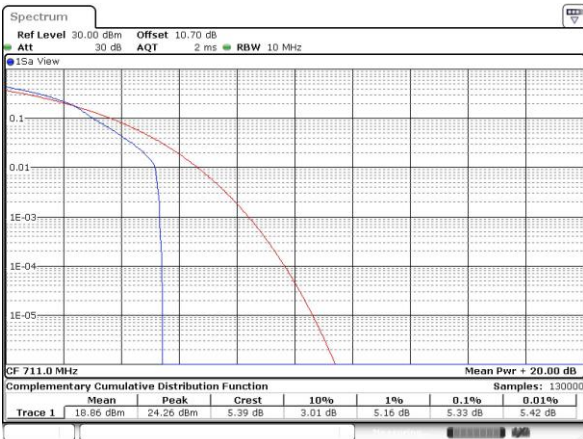
Date: 11 MAY 2019 08:09:49

Middle Channel / Full RB



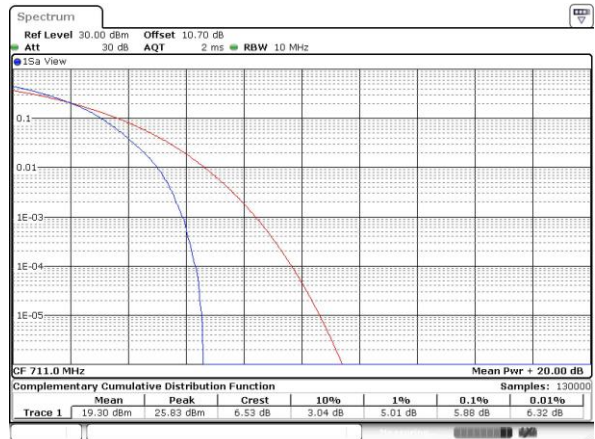
Date: 11 MAY 2019 08:10:06

Highest Channel / 1RB



Date: 11 MAY 2019 08:10:36

Highest Channel / Full RB

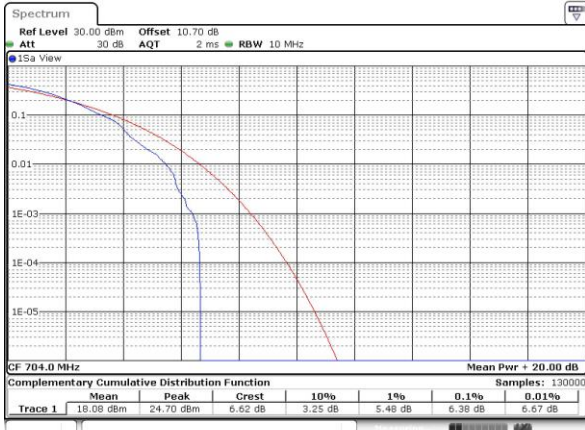


Date: 11 MAY 2019 08:10:23



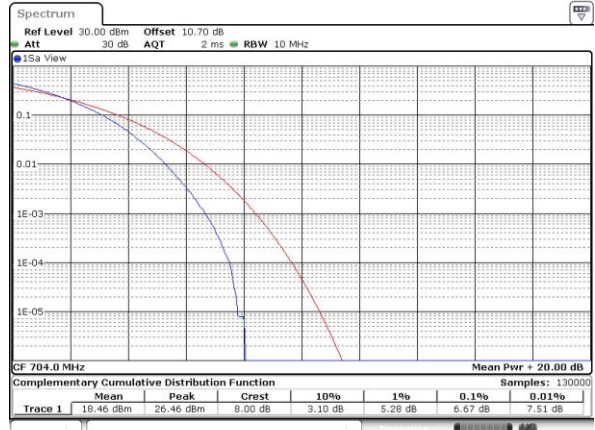
LTE Band 12 / 10MHz / 64QAM

Lowest Channel / 1RB



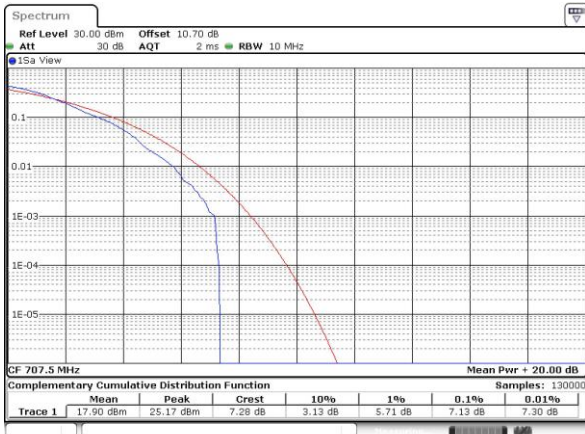
Date: 11.MAY.2019 08:08:16

Lowest Channel / Full RB



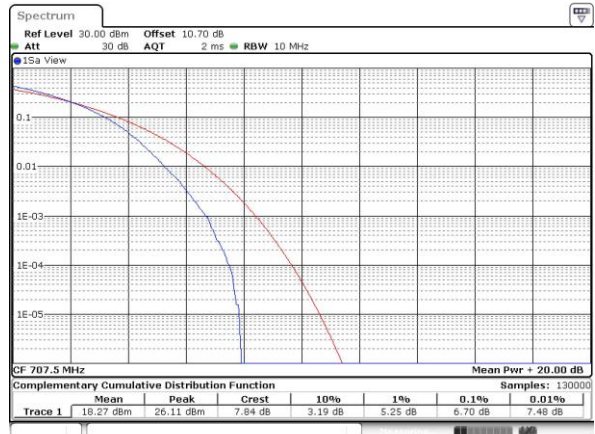
Date: 11.MAY.2019 08:08:06

Middle Channel / 1RB



Date: 11.MAY.2019 08:08:29

Middle Channel / Full RB



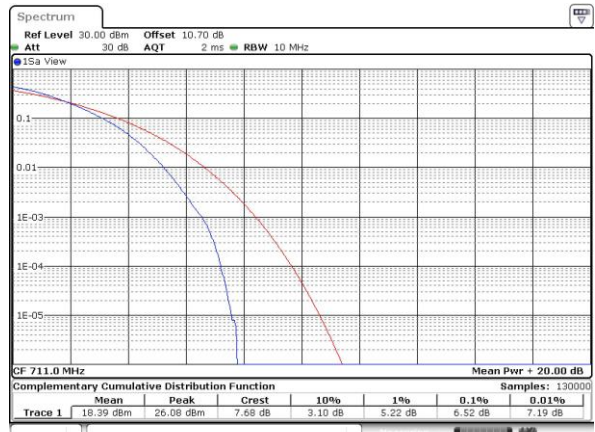
Date: 11.MAY.2019 08:08:43

Highest Channel / 1RB



Date: 11.MAY.2019 08:09:07

Highest Channel / Full RB



Date: 11.MAY.2019 08:08:55



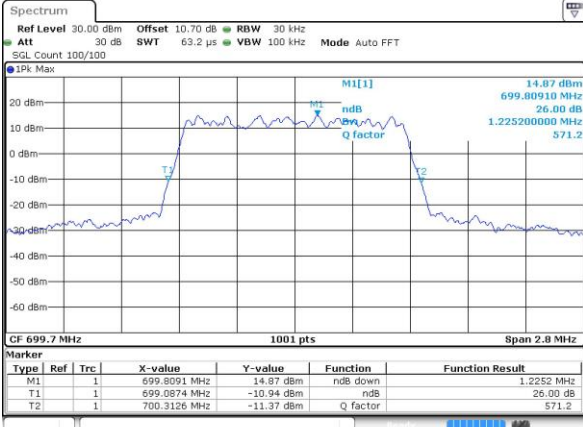
**26dB Bandwidth**

Mode	LTE Band 12 : 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	3.01	3.01	4.91	4.92	9.65	9.71	-	-	-	-
Middle CH	1.22	1.22	3.00	3.05	4.93	4.95	9.89	9.75	-	-	-	-
Highest CH	1.23	1.23	2.99	3.02	4.96	4.97	9.77	9.87	-	-	-	-
Mode	LTE Band 12 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	1.22	-	3.02	-	4.93	-	9.81	-	-	-	-	-
Middle CH	1.23	-	3.03	-	4.96	-	9.77	-	-	-	-	-
Highest CH	1.23	-	3.02	-	4.92	-	9.71	-	-	-	-	-



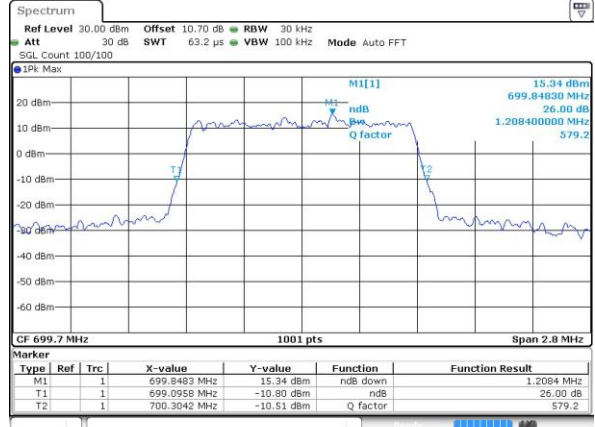
LTE Band 12

Lowest Channel / 1.4MHz / QPSK



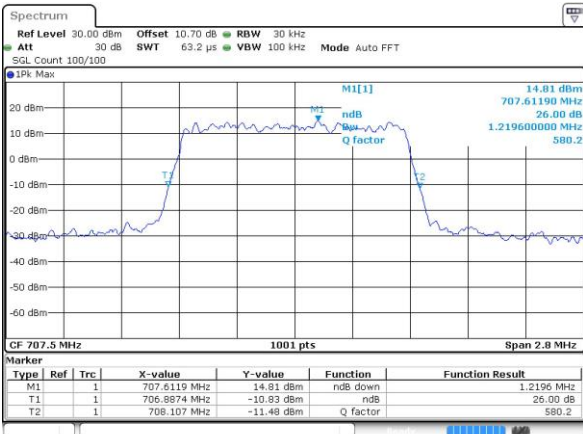
Date: 11 MAY 2019 07:46:26

Lowest Channel / 1.4MHz / 16QAM



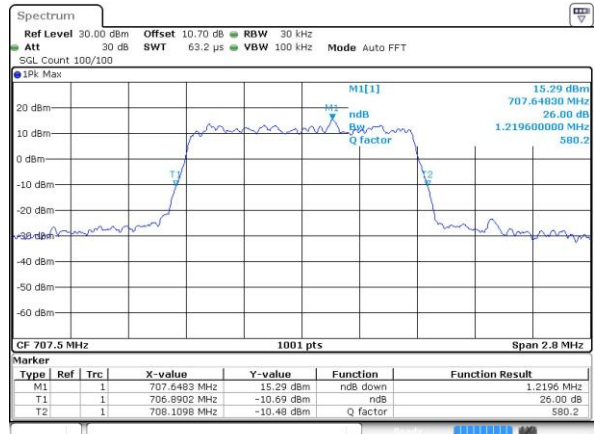
Date: 11 MAY 2019 07:46:14

Middle Channel / 1.4MHz / QPSK



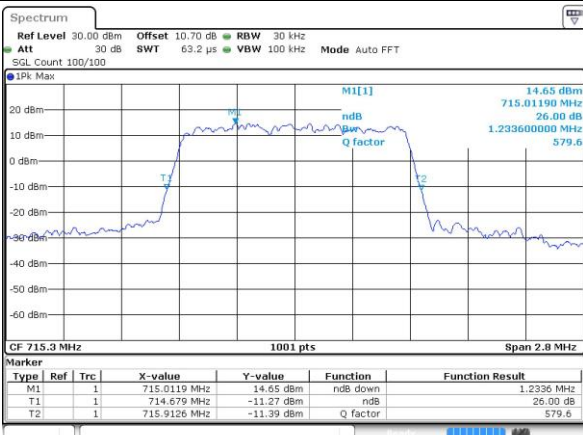
Date: 11 MAY 2019 07:52:29

Middle Channel / 1.4MHz / 16QAM



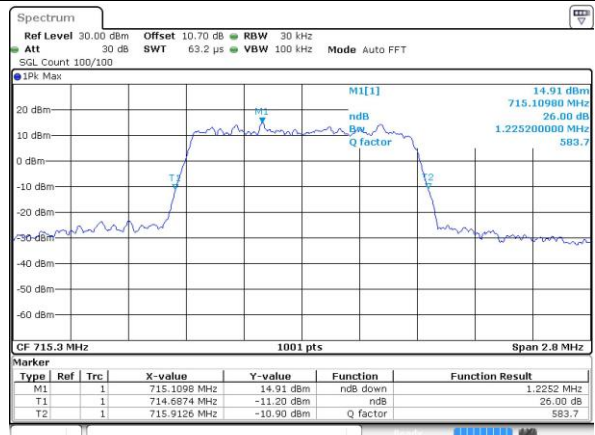
Date: 11 MAY 2019 07:52:41

Highest Channel / 1.4MHz / QPSK



Date: 11 MAY 2019 07:54:51

Highest Channel / 1.4MHz / 16QAM

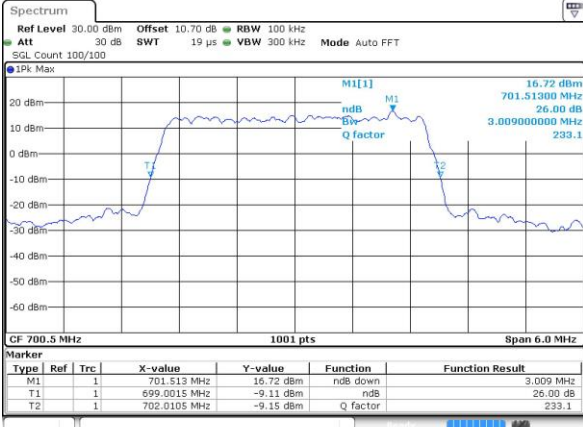


Date: 11 MAY 2019 07:54:39



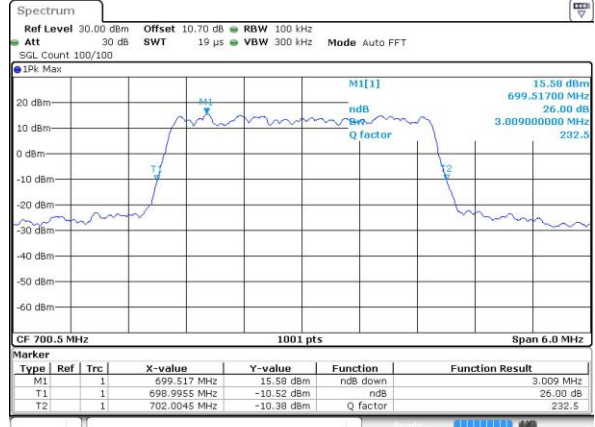
LTE Band 12

Lowest Channel / 3MHz / QPSK



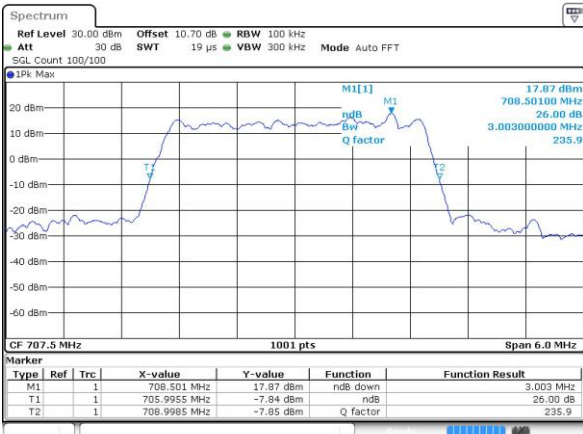
Date: 11 MAY 2019 06:27:39

Lowest Channel / 3MHz / 16QAM



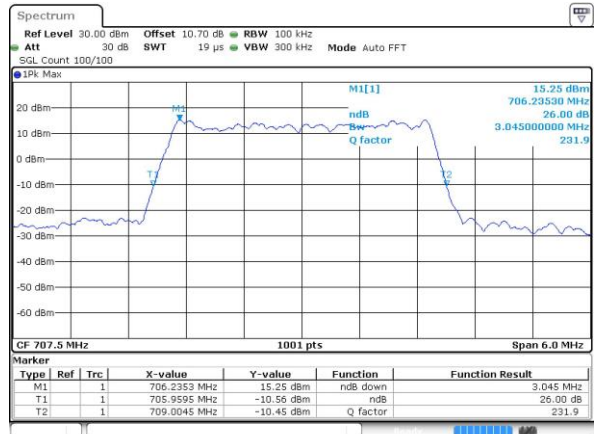
Date: 11 MAY 2019 06:27:26

Middle Channel / 3MHz / QPSK



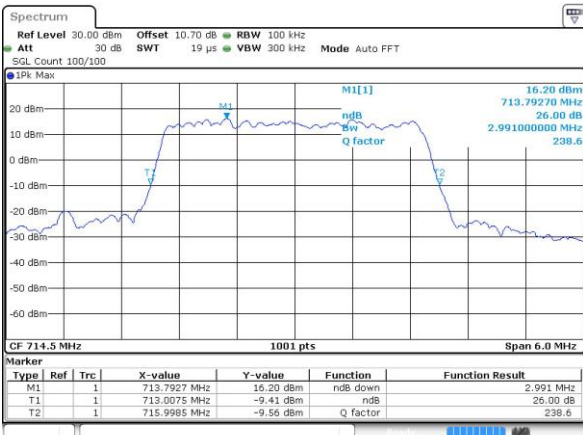
Date: 11 MAY 2019 06:33:41

Middle Channel / 3MHz / 16QAM



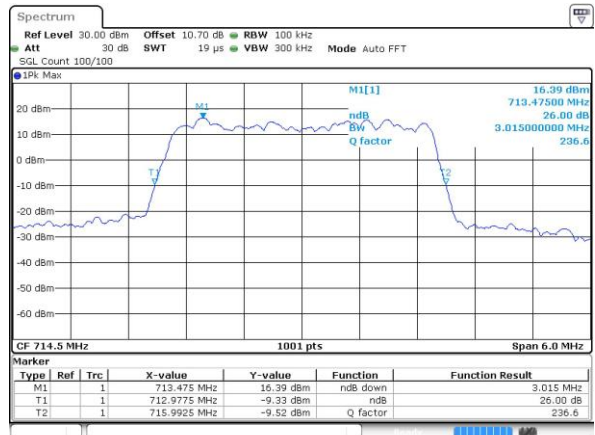
Date: 11 MAY 2019 06:33:53

Highest Channel / 3MHz / QPSK



Date: 11 MAY 2019 06:36:03

Highest Channel / 3MHz / 16QAM

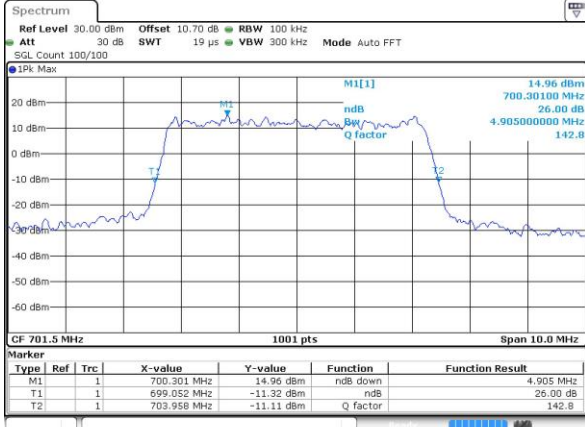


Date: 11 MAY 2019 06:35:50



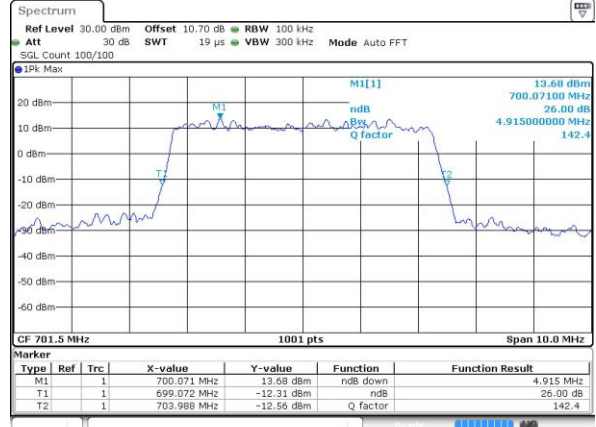
LTE Band 12

Lowest Channel / 5MHz / QPSK



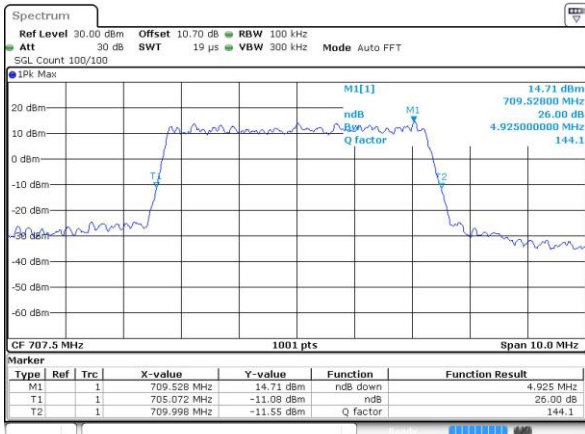
Date: 11 MAY 2019 06:57:00

Lowest Channel / 5MHz / 16QAM



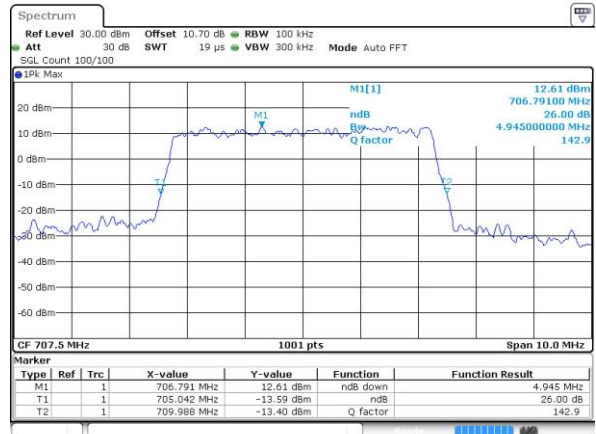
Date: 11 MAY 2019 06:56:48

Middle Channel / 5MHz / QPSK



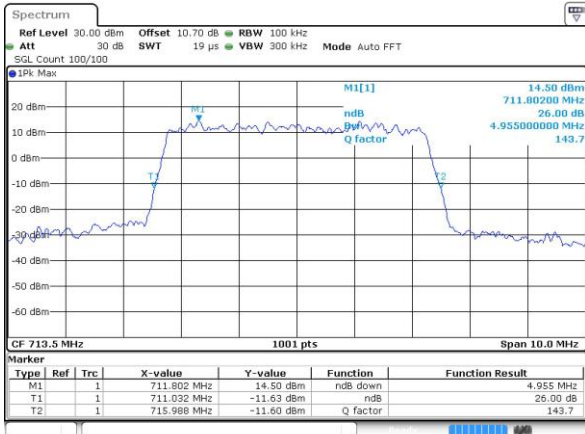
Date: 11 MAY 2019 07:03:03

Middle Channel / 5MHz / 16QAM



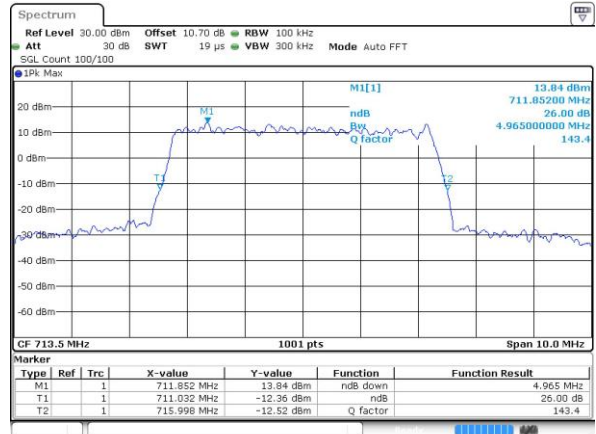
Date: 11 MAY 2019 07:03:14

Highest Channel / 5MHz / QPSK



Date: 11 MAY 2019 07:05:25

Highest Channel / 5MHz / 16QAM

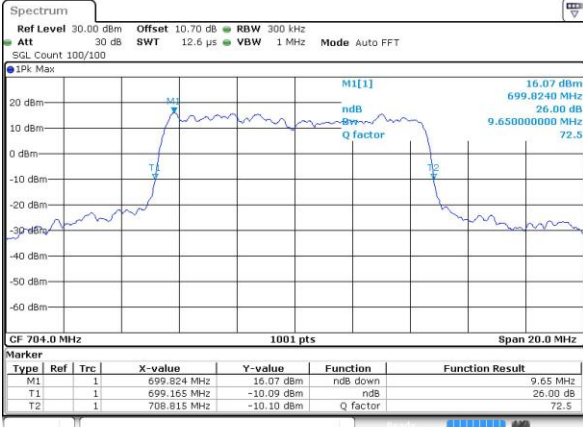


Date: 11 MAY 2019 07:05:12



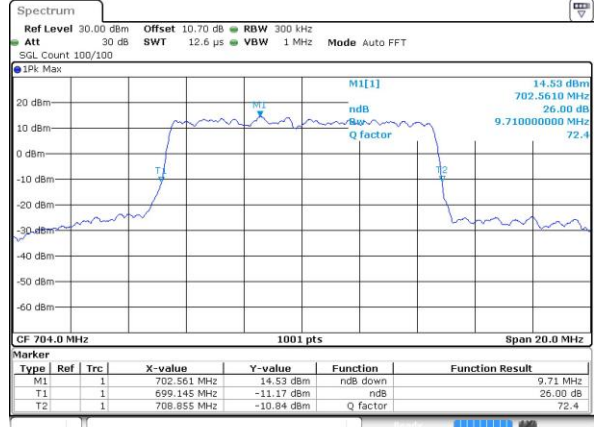
LTE Band 12

Lowest Channel / 10MHz / QPSK



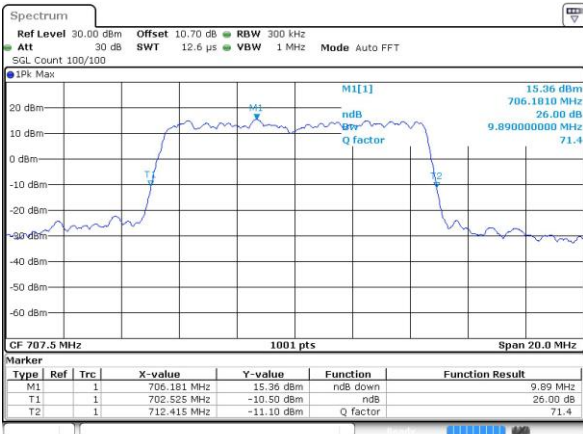
Date: 11 MAY 2019 07:17:48

Lowest Channel / 10MHz / 16QAM



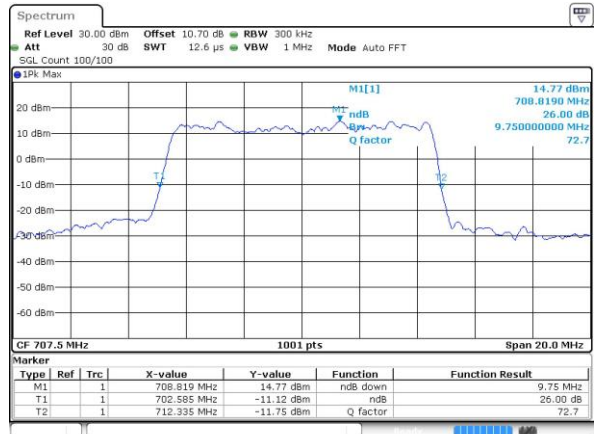
Date: 11 MAY 2019 07:17:35

Middle Channel / 10MHz / QPSK



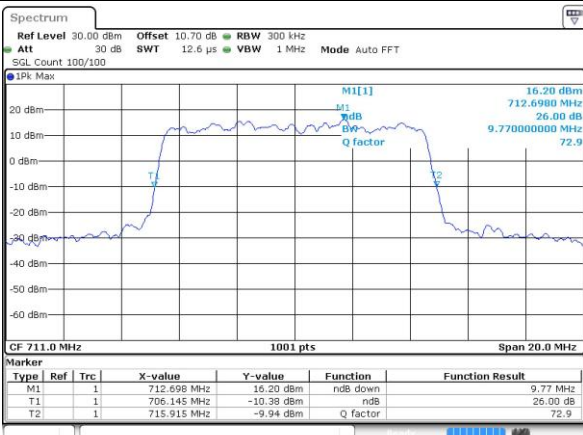
Date: 11 MAY 2019 07:23:50

Middle Channel / 10MHz / 16QAM



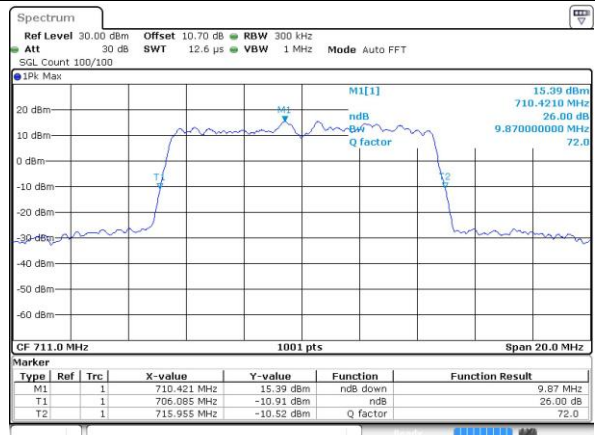
Date: 11 MAY 2019 07:24:02

Highest Channel / 10MHz / QPSK



Date: 11 MAY 2019 07:26:12

Highest Channel / 10MHz / 16QAM

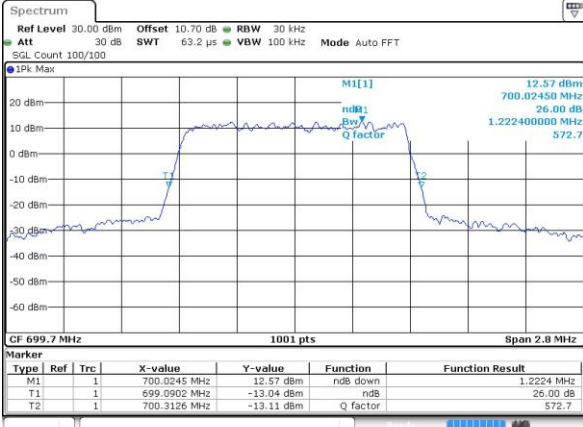


Date: 11 MAY 2019 07:26:00



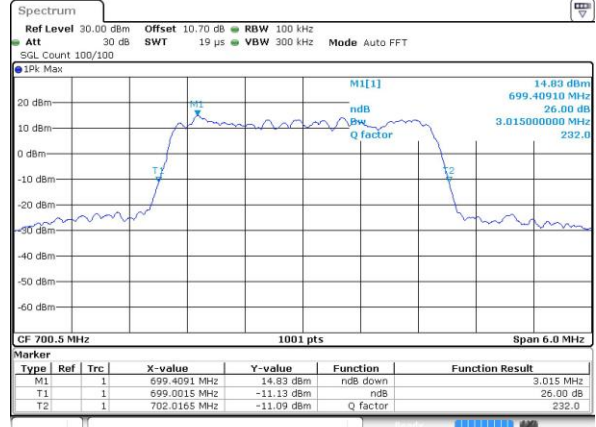
LTE Band 12

Lowest Channel / 1.4MHz / 64QAM



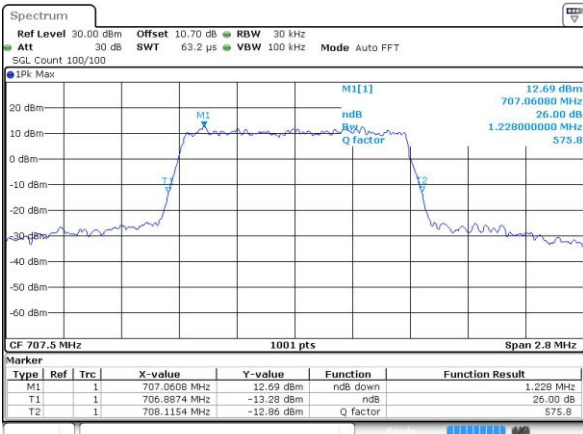
Date: 11 MAY 2019 08:00:44

Lowest Channel / 3MHz / 64QAM



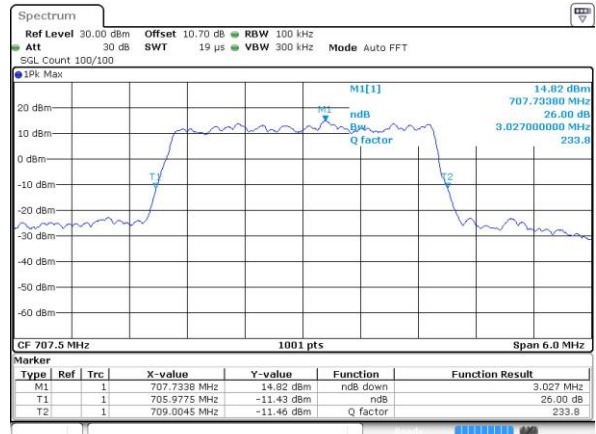
Date: 11 MAY 2019 08:41:54

Middle Channel / 1.4MHz / 64QAM



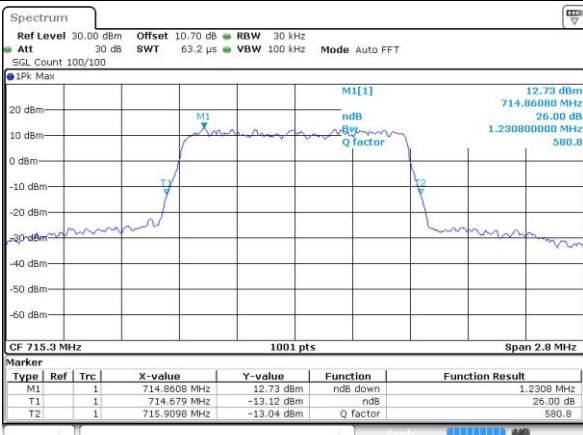
Date: 11 MAY 2019 08:03:51

Middle Channel / 3MHz / 64QAM



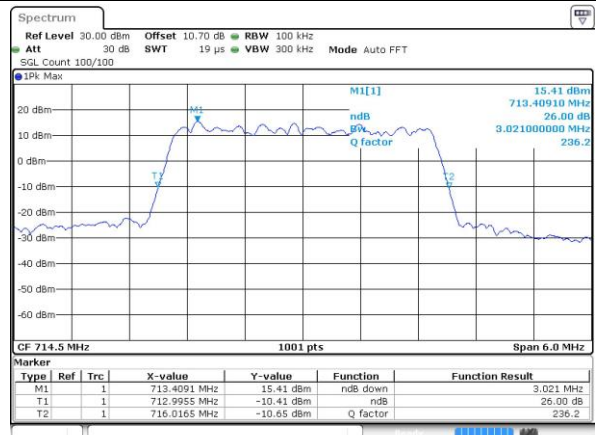
Date: 11 MAY 2019 08:45:01

Highest Channel / 1.4MHz / 64QAM



Date: 11 MAY 2019 08:04:56

Highest Channel / 3MHz / 64QAM

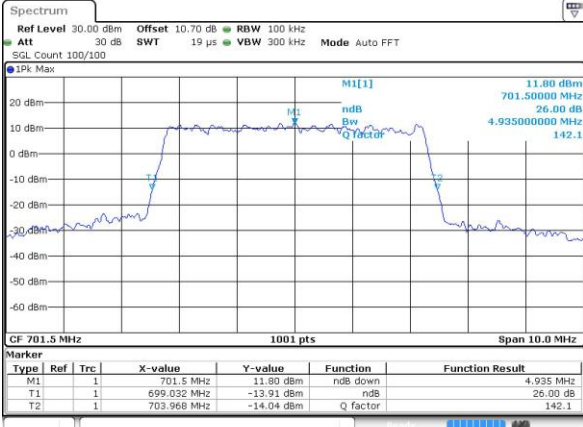


Date: 11 MAY 2019 08:46:06



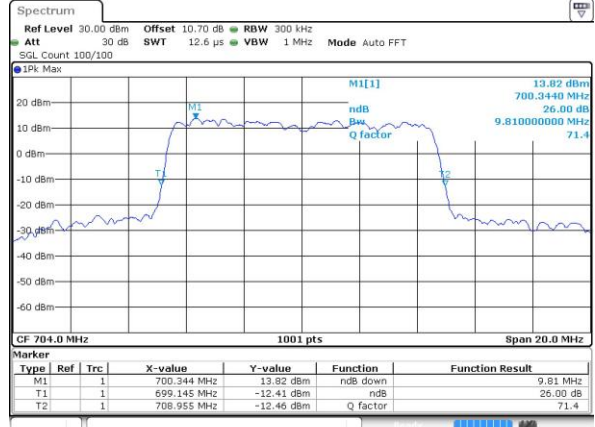
LTE Band 12

Lowest Channel / 5MHz / 64QAM



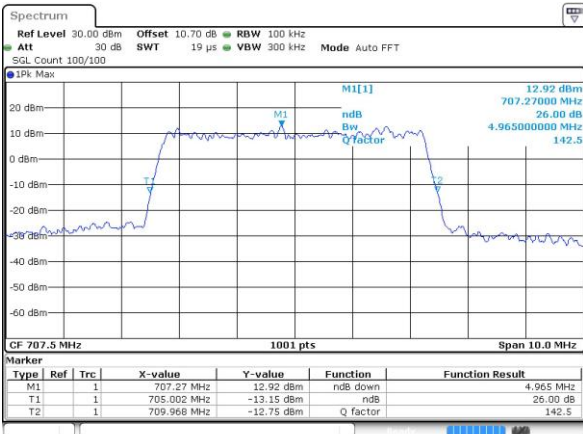
Date: 11 MAY 2019 06:49:14

Lowest Channel / 10MHz / 64QAM



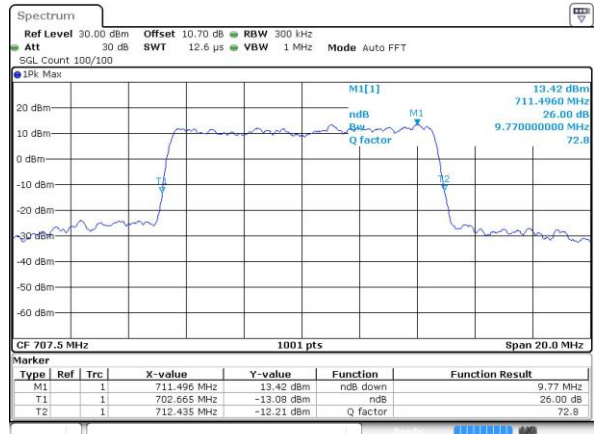
Date: 11 MAY 2019 07:32:04

Middle Channel / 5MHz / 64QAM



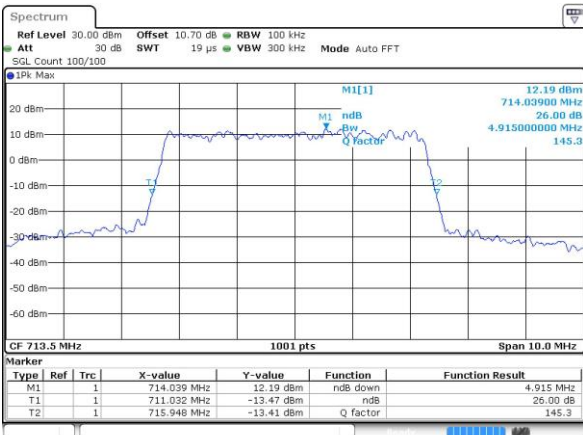
Date: 11 MAY 2019 06:52:22

Middle Channel / 10MHz / 64QAM



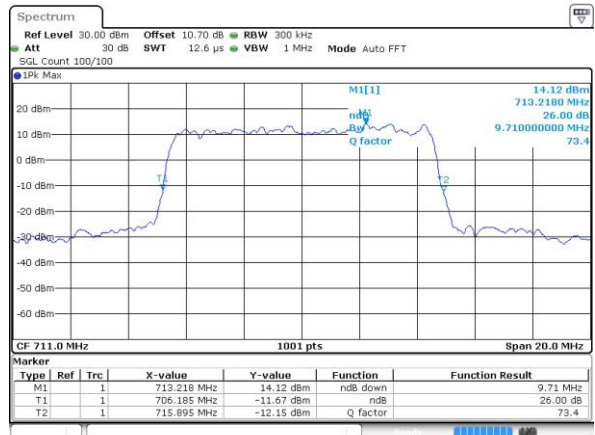
Date: 11 MAY 2019 07:35:11

Highest Channel / 5MHz / 64QAM



Date: 11 MAY 2019 06:53:27

Highest Channel / 10MHz / 64QAM



Date: 11 MAY 2019 07:36:16



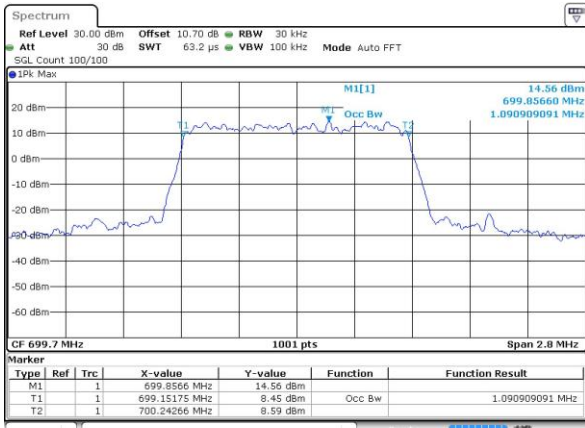
**Occupied Bandwidth**

Mode	LTE Band 12 : 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	2.7	4.48	4.47	8.99	9.01	-	-	-	-
Middle CH	1.09	1.09	2.72	2.74	4.48	4.5	9.07	9.01	-	-	-	-
Highest CH	1.09	1.08	2.72	2.72	4.5	4.5	8.99	8.99	-	-	-	-
Mode	LTE Band 12 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	1.09	-	2.73	-	4.51	-	9.03	-	-	-	-	-
Middle CH	1.09	-	2.73	-	4.50	-	9.05	-	-	-	-	-
Highest CH	1.09	-	2.73	-	4.50	-	9.05	-	-	-	-	-



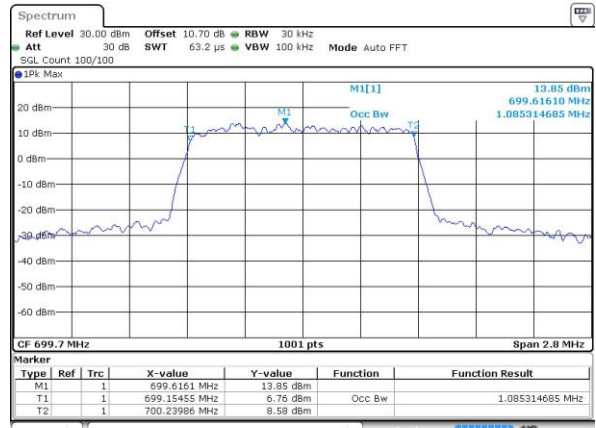
LTE Band 12

Lowest Channel / 1.4MHz / QPSK



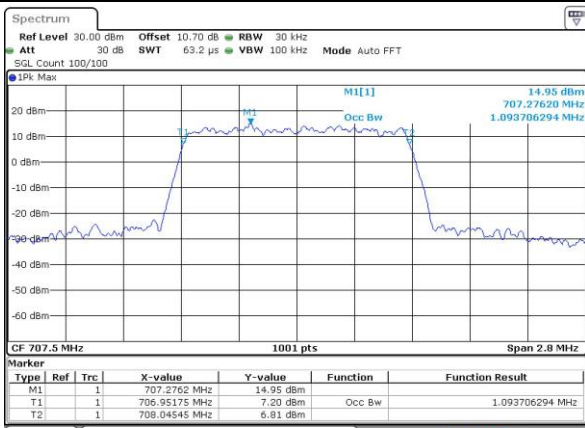
Date: 11 MAY 2019 07:45:49

Lowest Channel / 1.4MHz / 16QAM



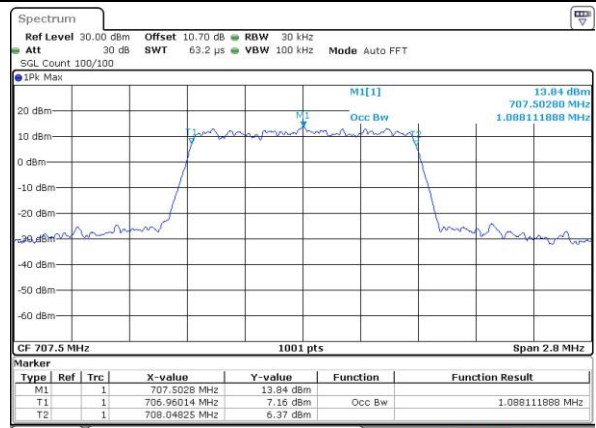
Date: 11 MAY 2019 07:46:02

Middle Channel / 1.4MHz / QPSK



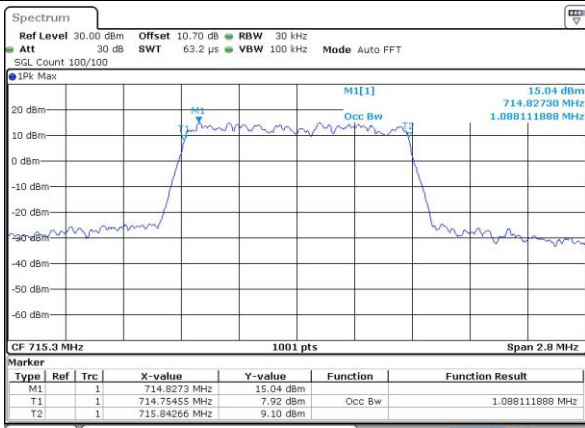
Date: 11 MAY 2019 07:52:17

Middle Channel / 1.4MHz / 16QAM



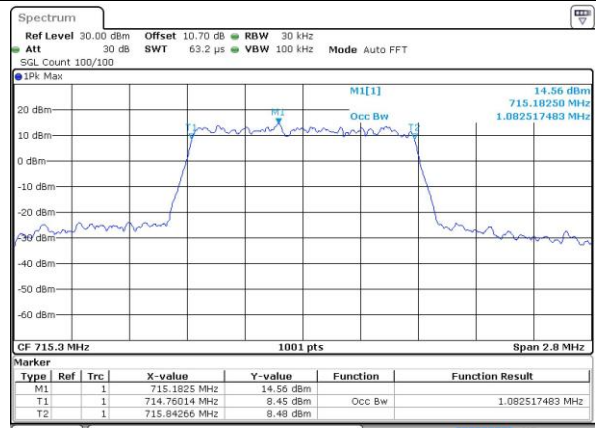
Date: 11 MAY 2019 07:52:06

Highest Channel / 1.4MHz / QPSK



Date: 11 MAY 2019 07:54:14

Highest Channel / 1.4MHz / 16QAM

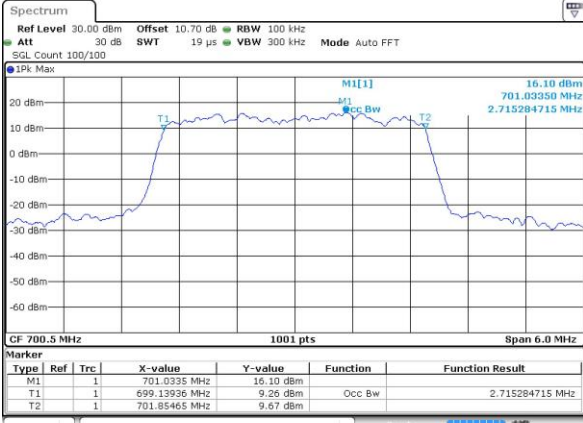


Date: 11 MAY 2019 07:54:27



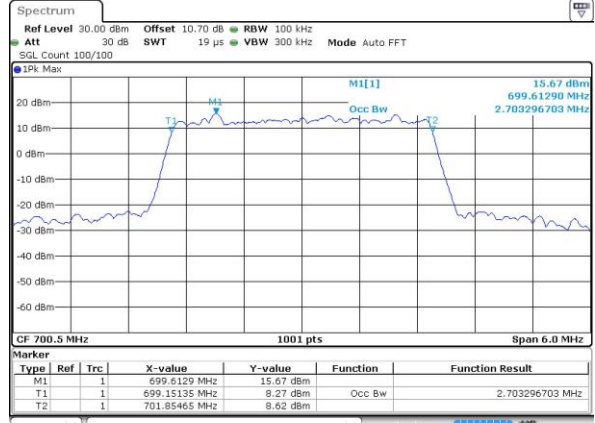
LTE Band 12

Lowest Channel / 3MHz / QPSK



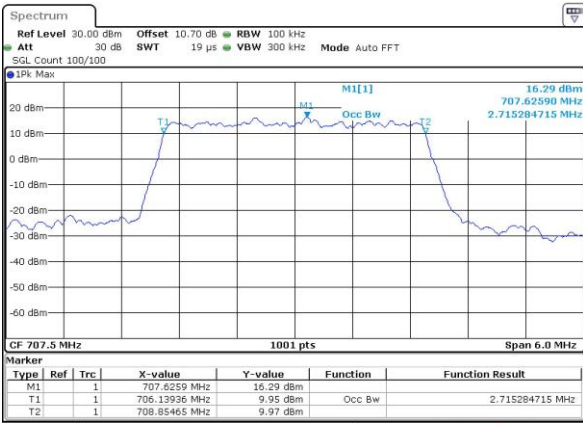
Date: 11 MAY 2019 06:27:00

Lowest Channel / 3MHz / 16QAM



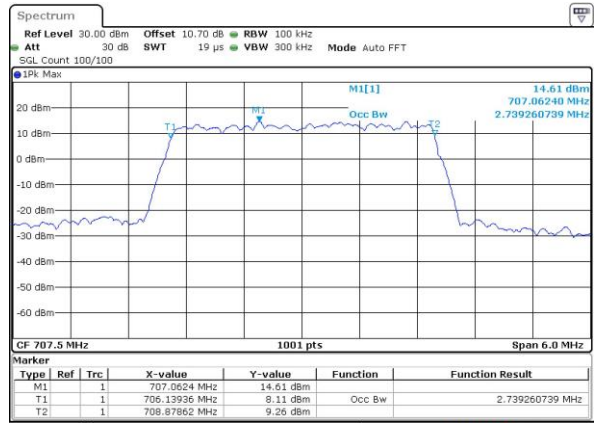
Date: 11 MAY 2019 06:27:13

Middle Channel / 3MHz / QPSK



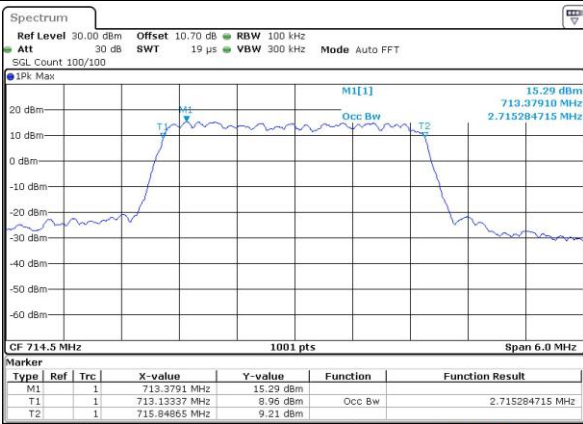
Date: 11 MAY 2019 06:33:29

Middle Channel / 3MHz / 16QAM



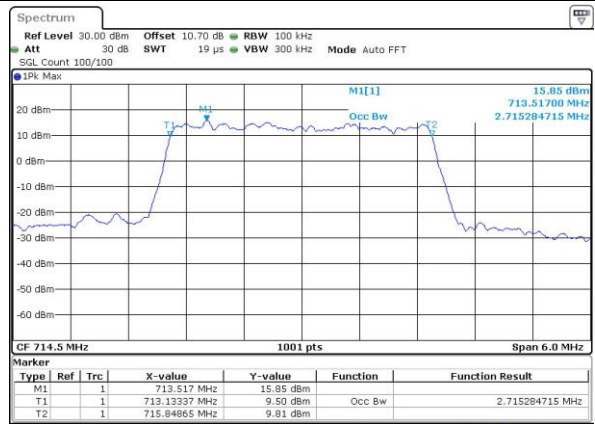
Date: 11 MAY 2019 06:33:17

Highest Channel / 3MHz / QPSK



Date: 11 MAY 2019 06:35:26

Highest Channel / 3MHz / 16QAM



Date: 11 MAY 2019 06:35:38