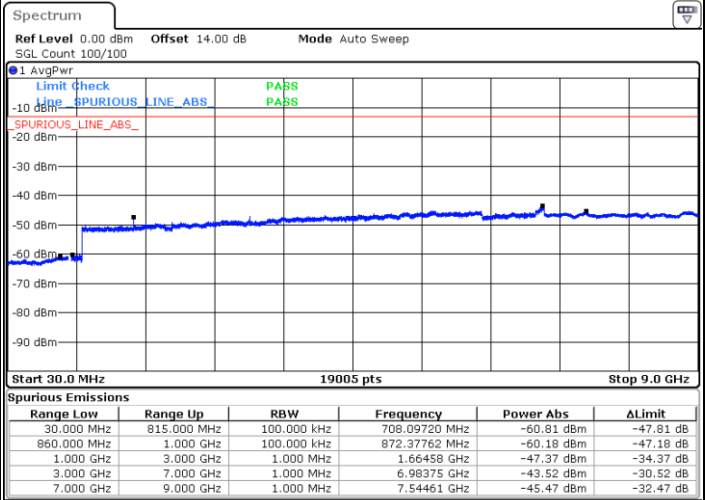
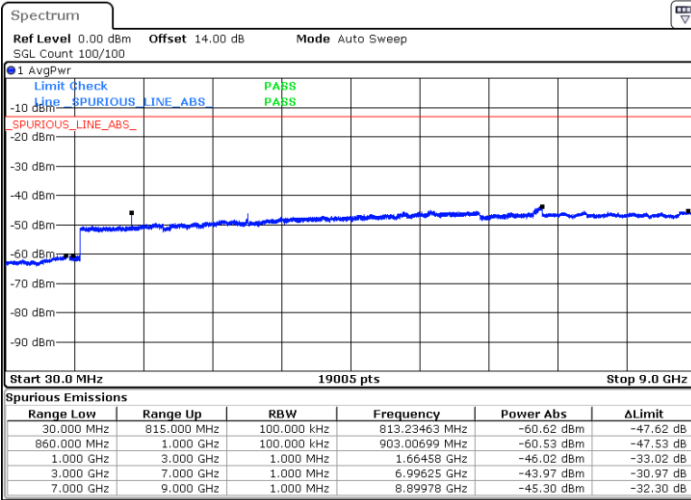




LTE Band 5 / 10MHz

Middle Channel / QPSK

Middle Channel / 16QAM

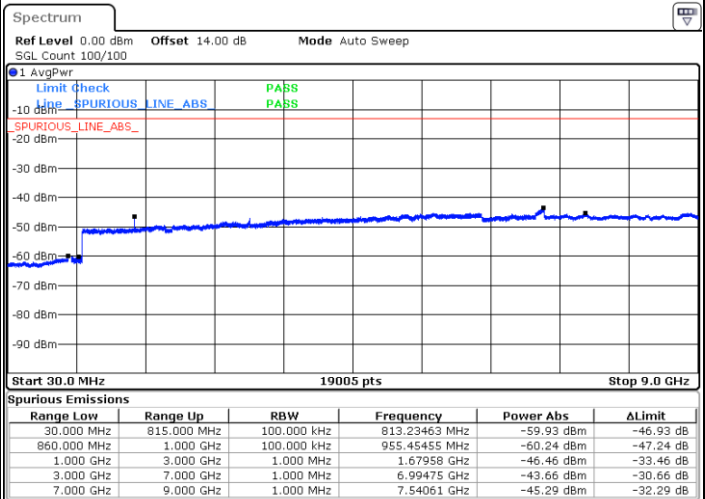
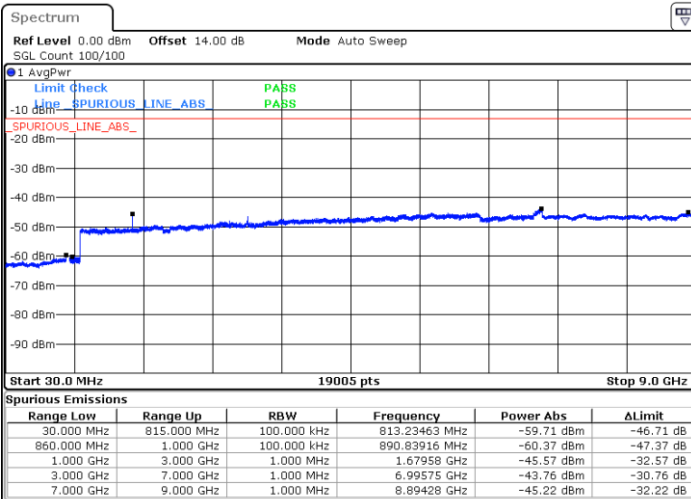


Date: 14.AUG.2020 12:29:18

Date: 14.AUG.2020 12:29:42

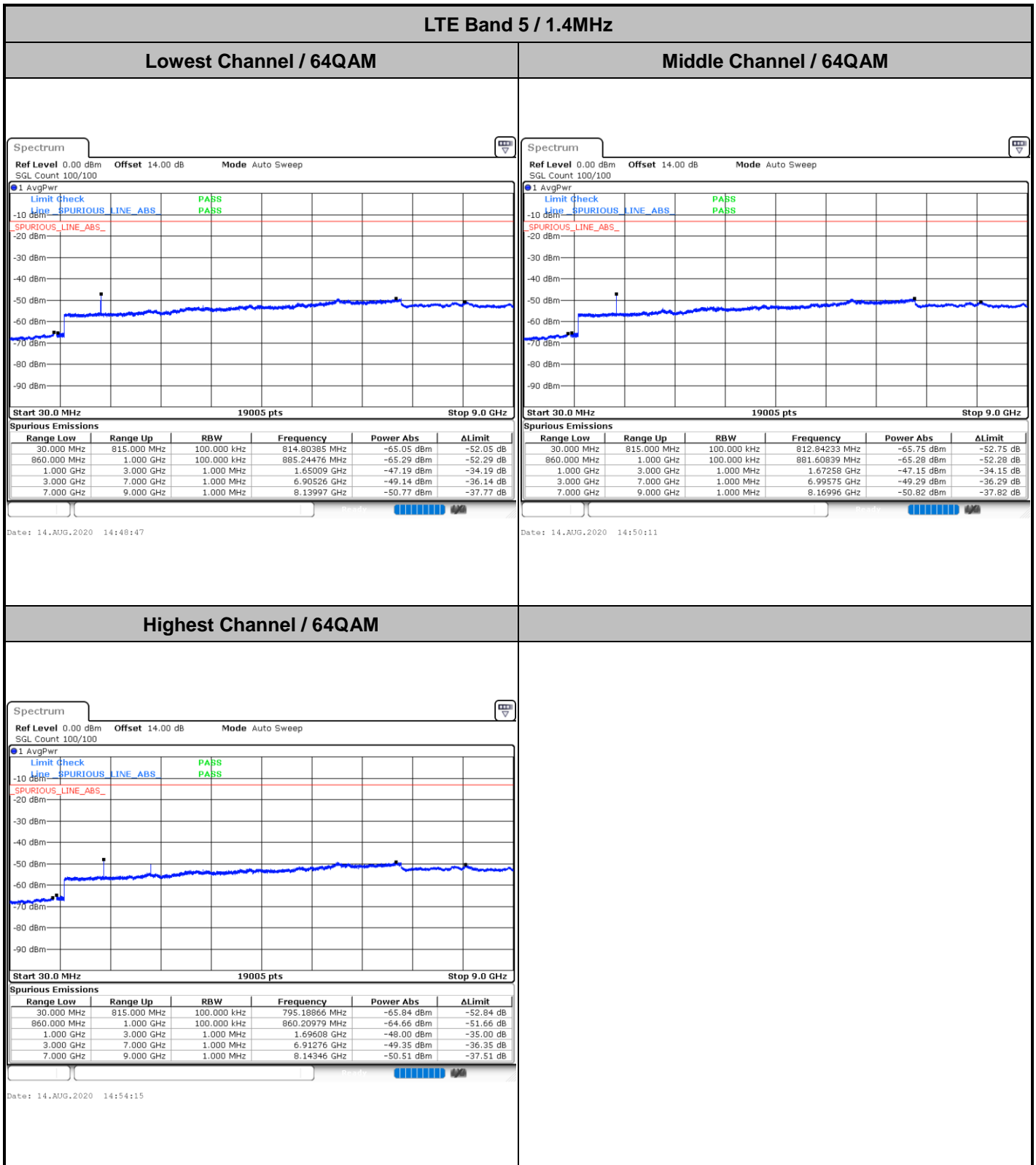
Highest Channel / QPSK

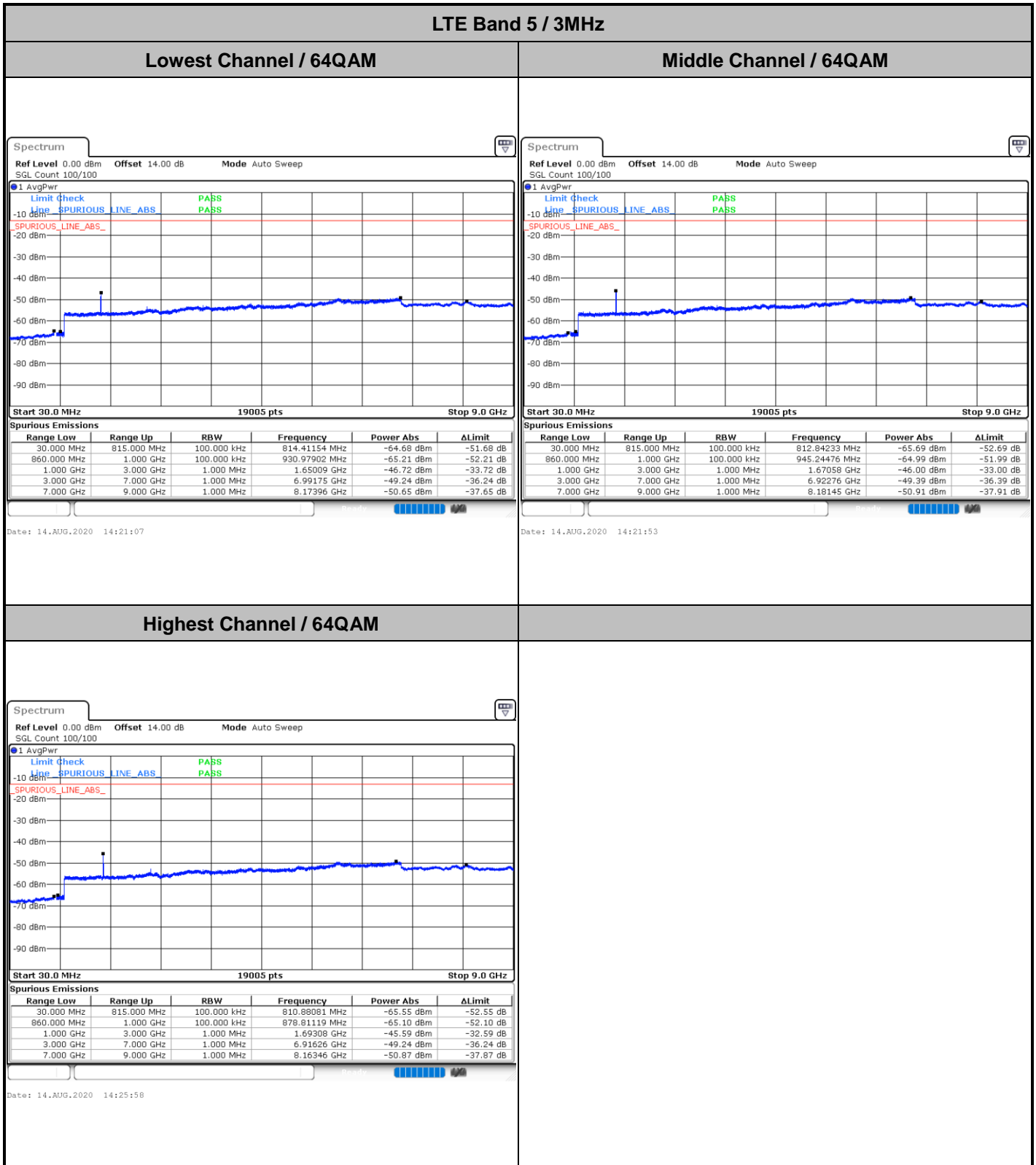
Highest Channel / 16QAM



Date: 14.AUG.2020 12:30:07

Date: 14.AUG.2020 12:30:31



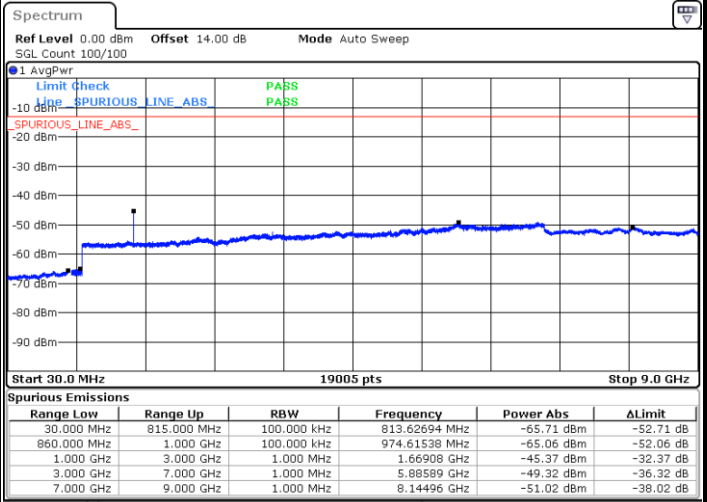
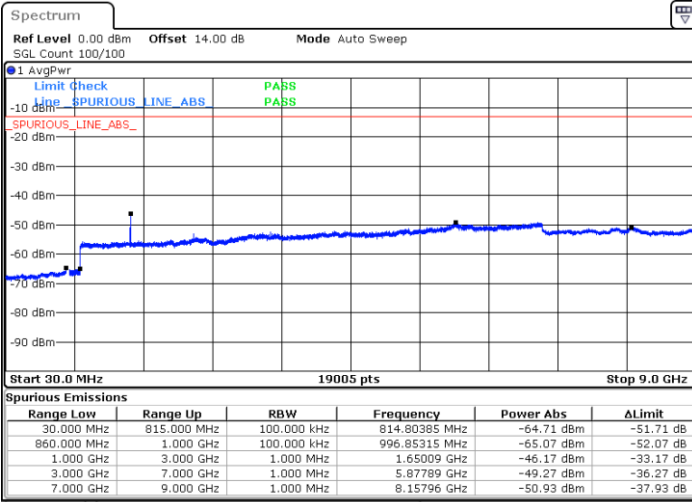




LTE Band 5 / 5MHz

Lowest Channel / 64QAM

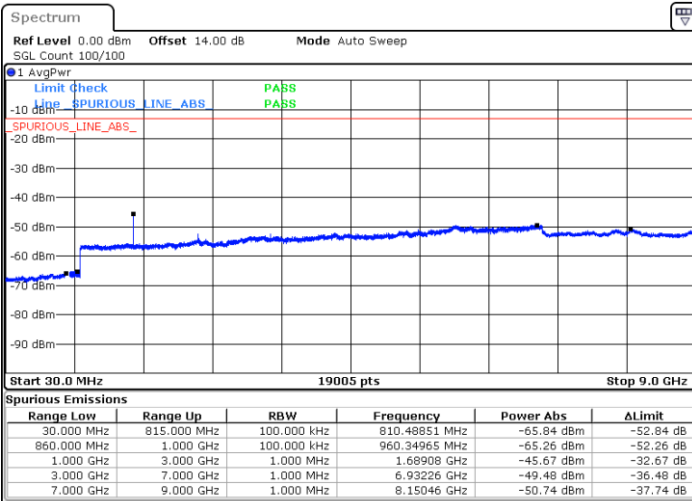
Middle Channel / 64QAM



Date: 14.AUG.2020 14:30:02

Date: 14.AUG.2020 14:30:48

Highest Channel / 64QAM



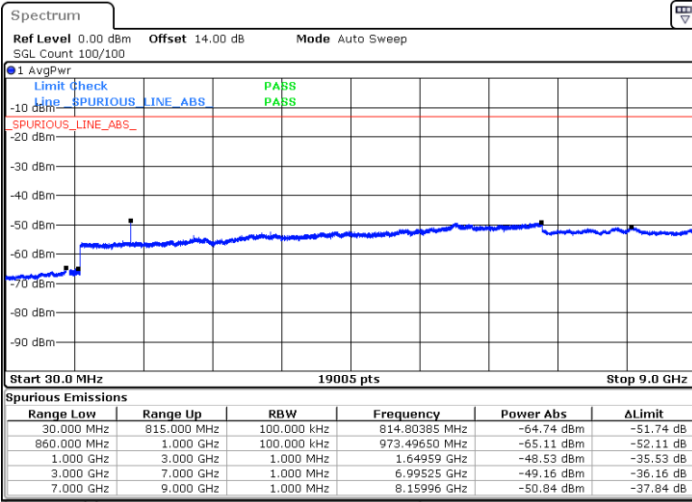
Date: 14.AUG.2020 14:34:52



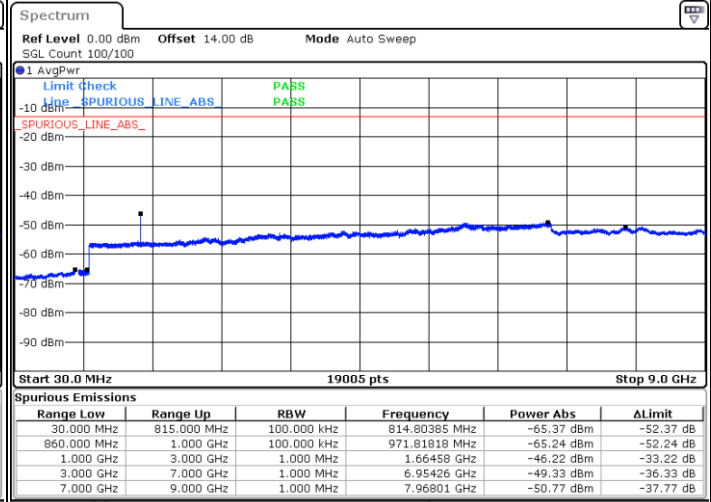
LTE Band 5 / 10MHz

Lowest Channel / 64QAM

Middle Channel / 64QAM

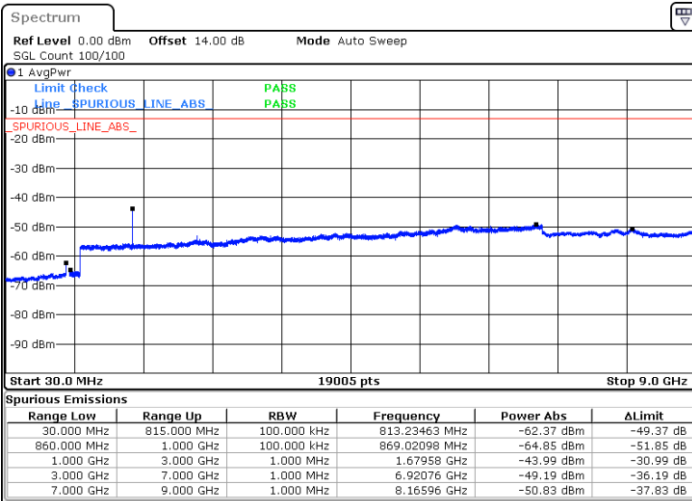


Date: 14.AUG.2020 14:38:56



Date: 14.AUG.2020 14:39:42

Highest Channel / 64QAM



Date: 14.AUG.2020 14:43:46



Frequency Stability

Test Conditions		LTE Band 5 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	2.5ppm
		Deviation (ppm)	Result
50	Normal Voltage	0.0029	PASS
40	Normal Voltage	0.0014	
30	Normal Voltage	0.0001	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0017	
0	Normal Voltage	0.0041	
-10	Normal Voltage	0.0001	
-20	Normal Voltage	0.0012	
-30	Normal Voltage	0.0007	
20	Maximum Voltage	0.0007	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0004	

Note: Normal Voltage =4 V. ; Battery End Point (BEP) =3.7 V. ; Maximum Voltage =4 V.



# LTE Band 12

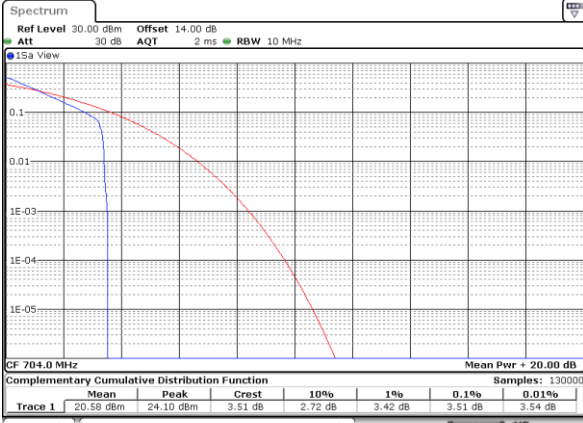
## Peak-to-Average Ratio

Mode	LTE Band 12 / 10MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	3.51	4.55	4.84	5.74	PASS
Middle CH	3.48	4.58	4.81	5.74	
Highest CH	3.59	4.23	5.22	5.62	
Mode	LTE Band 12 / 10MHz				
Mod.	64QAM				Limit: 13dB
RB Size	1RB	Full RB			Result
Lowest CH	5.07	5.74	-	-	PASS
Middle CH	4.99	5.80	-	-	
Highest CH	5.30	5.59	-	-	



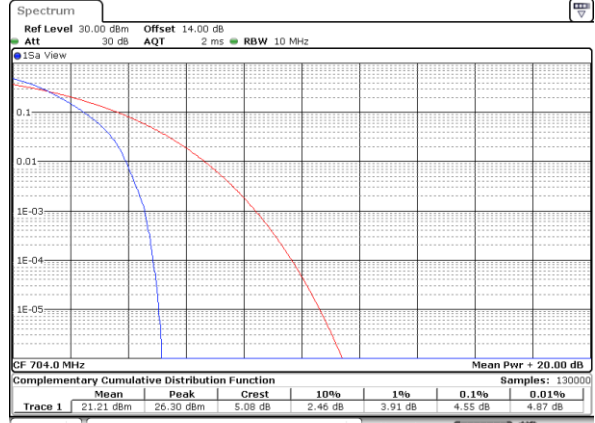
LTE Band 12 / 10MHz / QPSK

Lowest Channel / 1RB



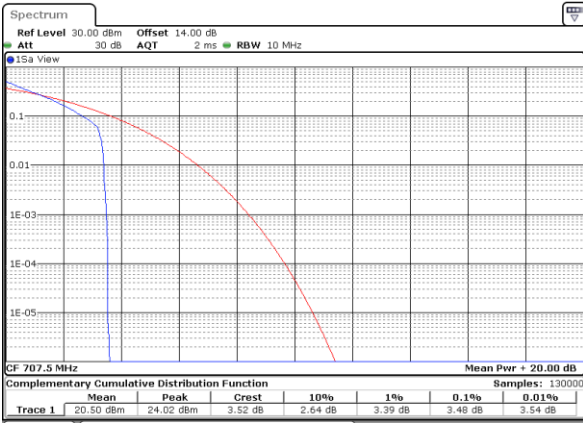
Date: 17\_AUG.2020 10:07:19

Lowest Channel / Full RB



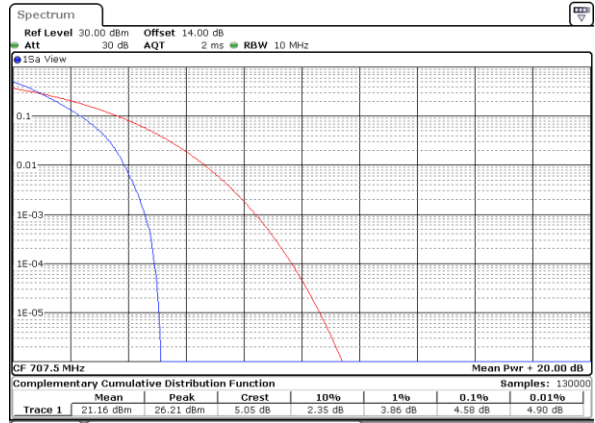
Date: 17\_AUG.2020 10:07:27

Middle Channel / 1RB



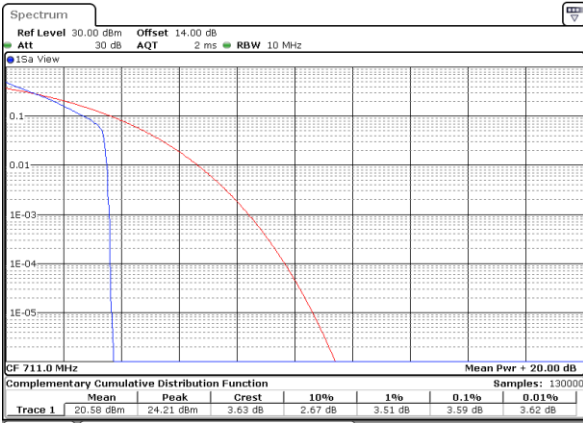
Date: 17\_AUG.2020 10:07:50

Middle Channel / Full RB



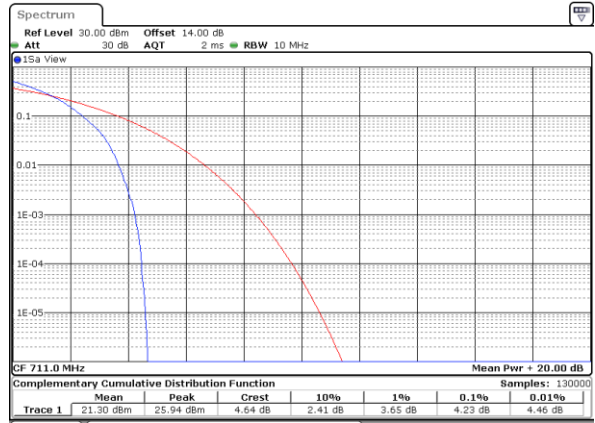
Date: 17\_AUG.2020 10:08:02

Highest Channel / 1RB



Date: 17\_AUG.2020 10:08:31

Highest Channel / Full RB



Date: 17\_AUG.2020 10:08:13





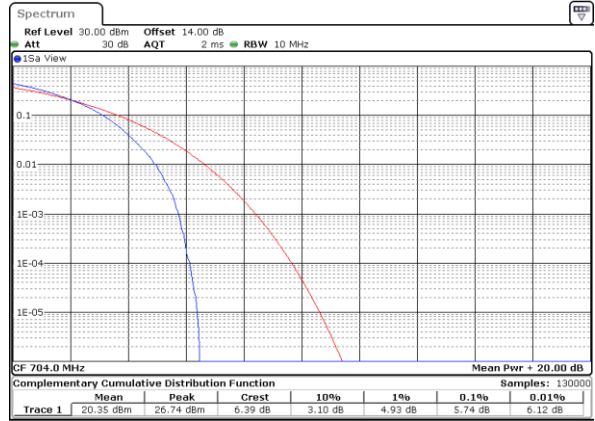
LTE Band 12 / 10MHz / 16QAM

Lowest Channel / 1RB



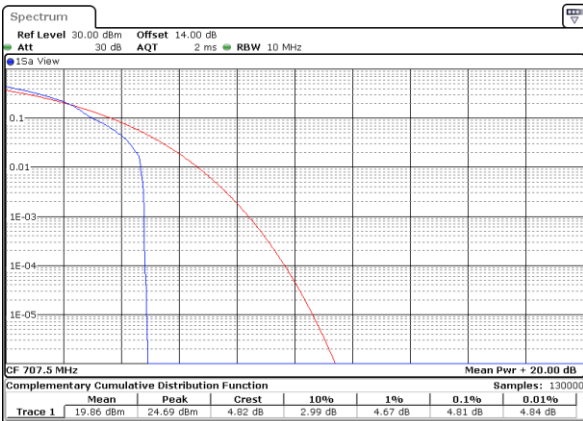
Date: 17\_AUG.2020 10:06:30

Lowest Channel / Full RB



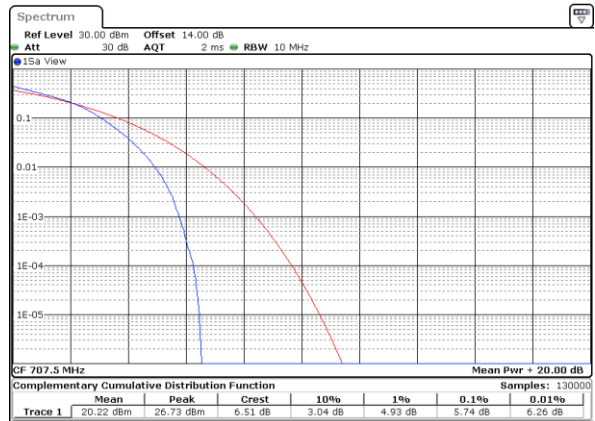
Date: 17\_AUG.2020 10:06:16

Middle Channel / 1RB



Date: 17\_AUG.2020 10:06:42

Middle Channel / Full RB



Date: 17\_AUG.2020 10:06:54

Highest Channel / 1RB



Date: 17\_AUG.2020 10:07:16

Highest Channel / Full RB

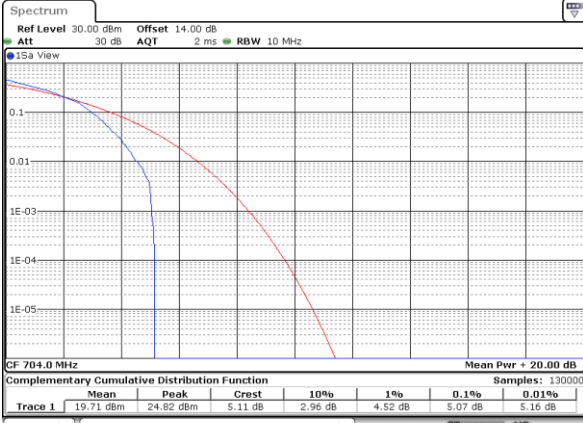


Date: 17\_AUG.2020 10:07:05



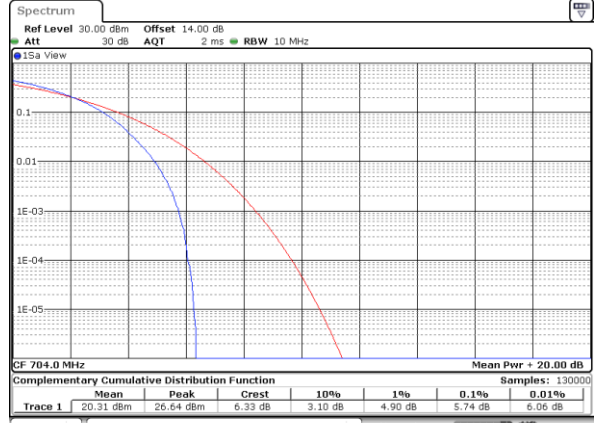
LTE Band 12 / 10MHz / 64QAM

Lowest Channel / 1RB



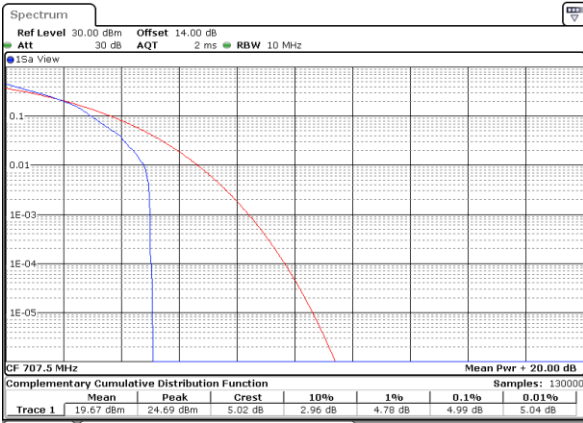
Date: 17\_AUG.2020 10:35:23

Lowest Channel / Full RB



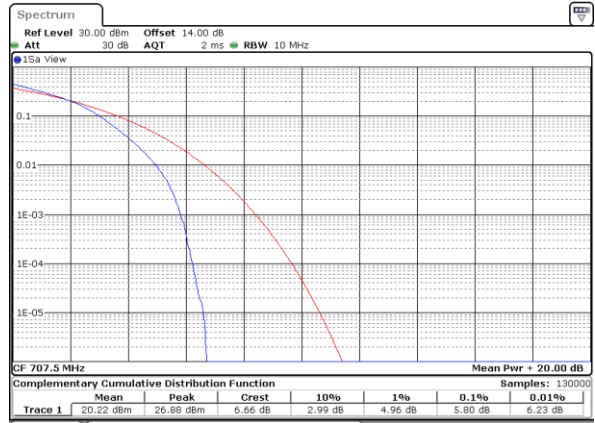
Date: 17\_AUG.2020 10:35:11

Middle Channel / 1RB



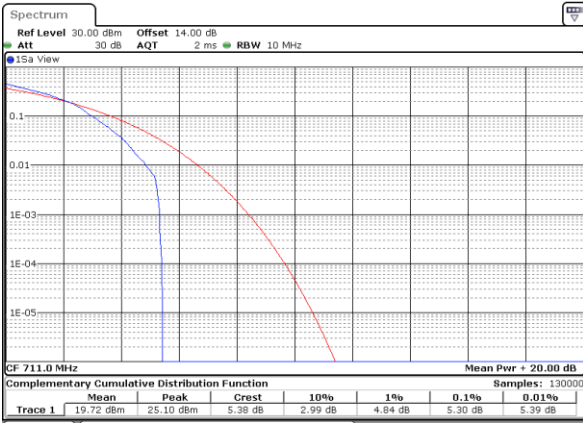
Date: 17\_AUG.2020 10:35:34

Middle Channel / Full RB



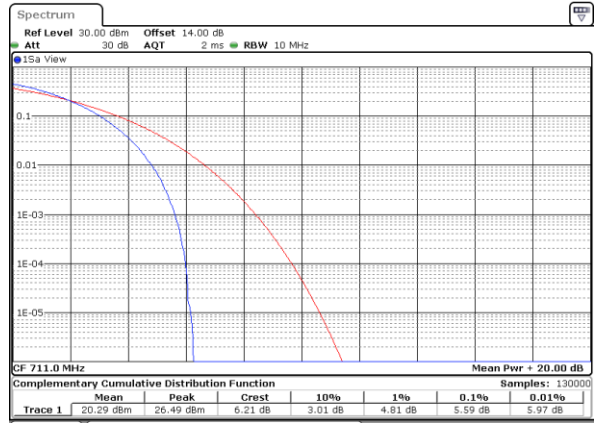
Date: 17\_AUG.2020 10:35:46

Highest Channel / 1RB



Date: 17\_AUG.2020 10:36:15

Highest Channel / Full RB



Date: 17\_AUG.2020 10:36:00



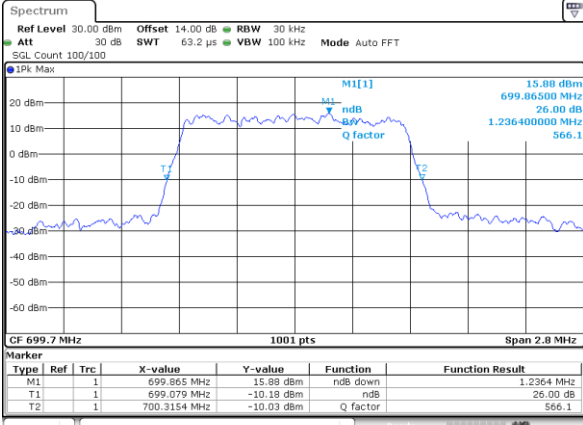
26dB Bandwidth

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	1.24	1.23	3.01	3.02	4.94	4.94	9.77	9.75	-	-	-	-
Middle CH	1.24	1.24	3.05	3.02	4.89	4.88	9.81	9.75	-	-	-	-
Highest CH	1.23	1.22	3.00	3.05	4.92	4.83	9.67	9.77	-	-	-	-
Mode	LTE Band 12 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	1.23	-	3.02	-	4.86	-	9.75	-	-	-	-	-
Middle CH	1.24	-	3.01	-	4.87	-	9.73	-	-	-	-	-
Highest CH	1.24	-	3.05	-	4.88	-	9.69	-	-	-	-	-



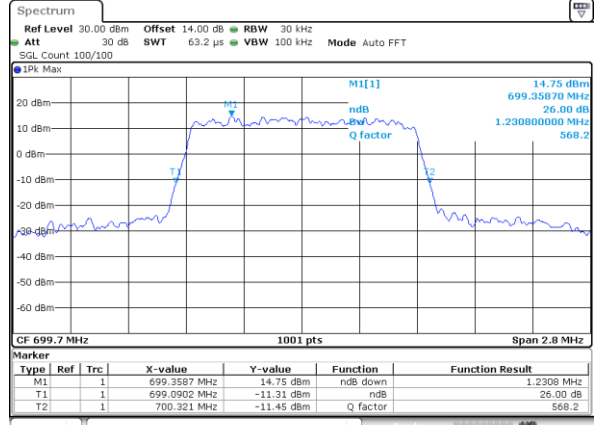
LTE Band 12

Lowest Channel / 1.4MHz / QPSK



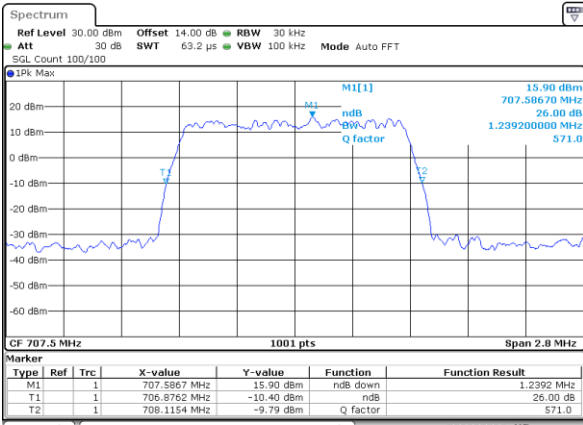
Date: 17\_AUG.2020 09:53:00

Lowest Channel / 1.4MHz / 16QAM



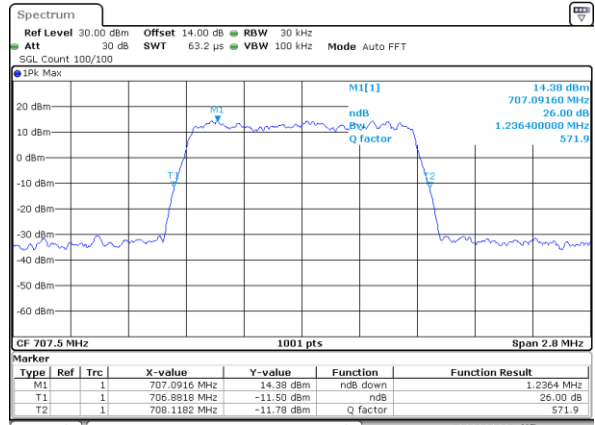
Date: 17\_AUG.2020 09:52:49

Middle Channel / 1.4MHz / QPSK



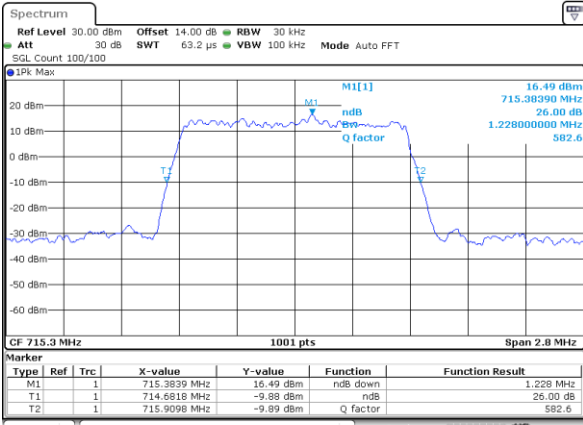
Date: 17\_AUG.2020 09:58:09

Middle Channel / 1.4MHz / 16QAM



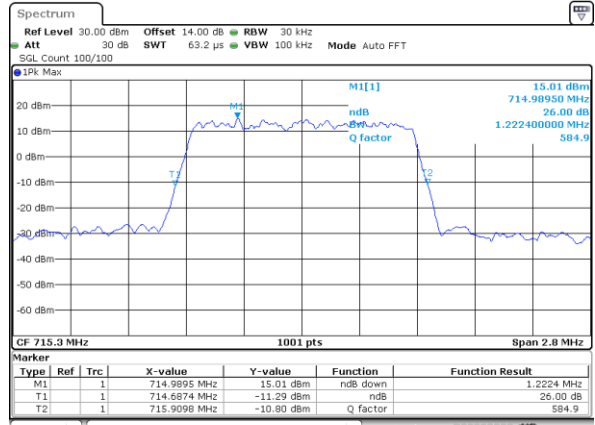
Date: 17\_AUG.2020 09:58:20

Highest Channel / 1.4MHz / QPSK



Date: 17\_AUG.2020 10:00:30

Highest Channel / 1.4MHz / 16QAM

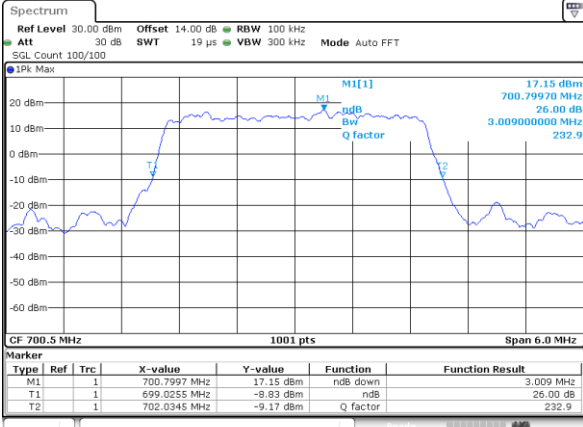


Date: 17\_AUG.2020 10:00:19



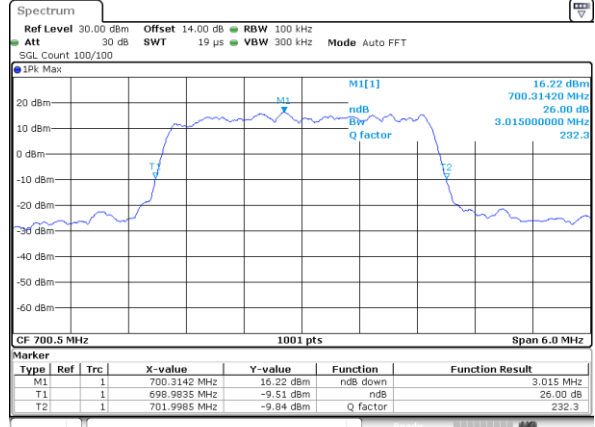
LTE Band 12

Lowest Channel / 3MHz / QPSK



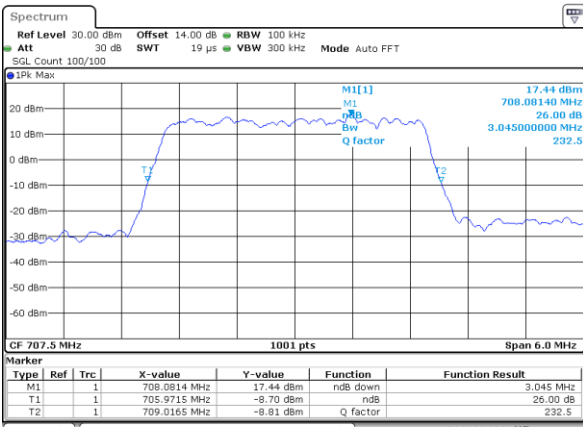
Date: 17\_AUG.2020 09:08:15

Lowest Channel / 3MHz / 16QAM



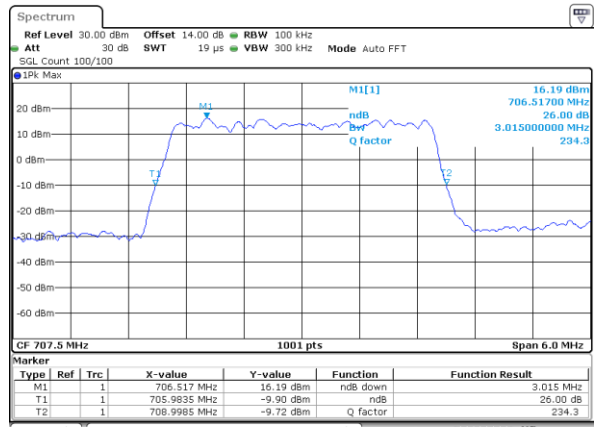
Date: 17\_AUG.2020 09:08:04

Middle Channel / 3MHz / QPSK



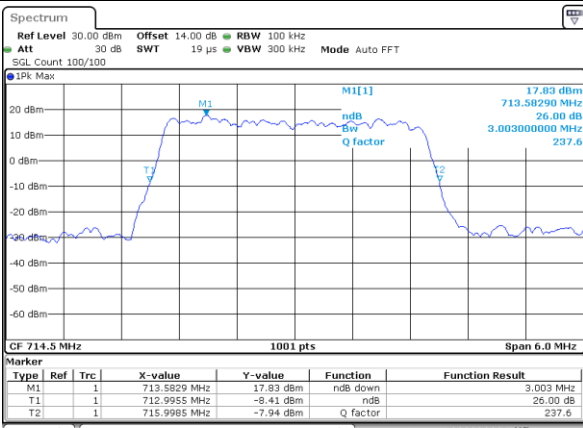
Date: 17\_AUG.2020 09:14:34

Middle Channel / 3MHz / 16QAM



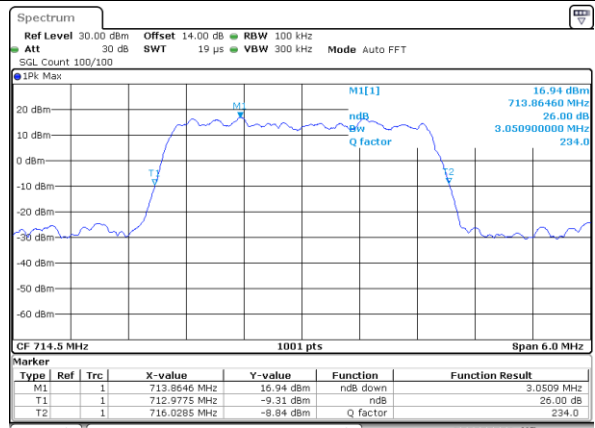
Date: 17\_AUG.2020 09:14:45

Highest Channel / 3MHz / QPSK



Date: 17\_AUG.2020 09:19:36

Highest Channel / 3MHz / 16QAM

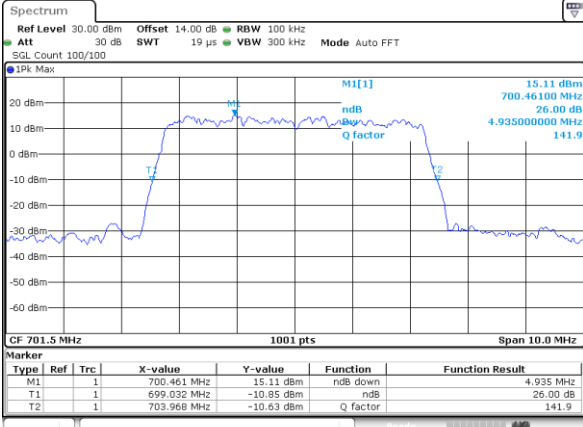


Date: 17\_AUG.2020 09:19:25



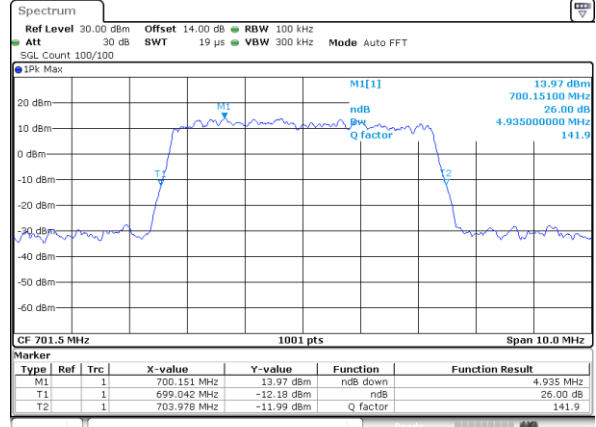
LTE Band 12

Lowest Channel / 5MHz / QPSK



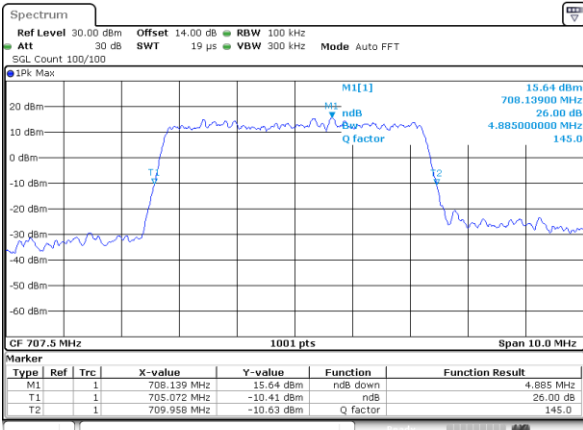
Date: 17\_AUG.2020 09:24:47

Lowest Channel / 5MHz / 16QAM



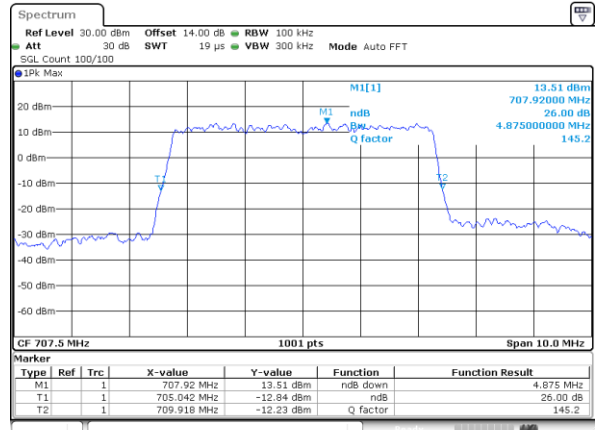
Date: 17\_AUG.2020 09:24:36

Middle Channel / 5MHz / QPSK



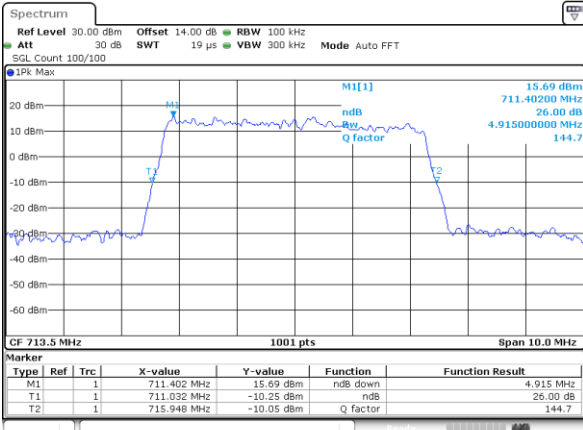
Date: 17\_AUG.2020 09:29:47

Middle Channel / 5MHz / 16QAM



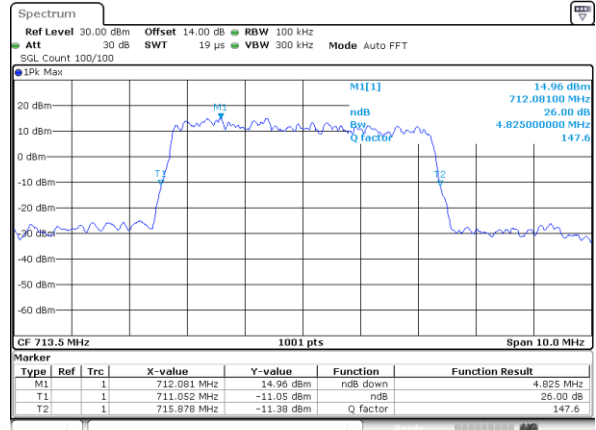
Date: 17\_AUG.2020 09:29:58

Highest Channel / 5MHz / QPSK



Date: 17\_AUG.2020 09:32:07

Highest Channel / 5MHz / 16QAM

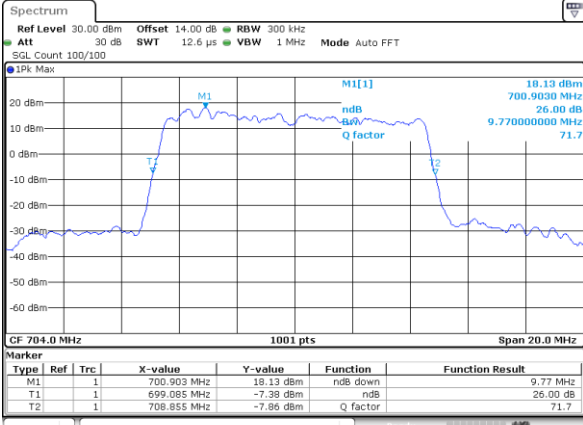


Date: 17\_AUG.2020 09:31:56



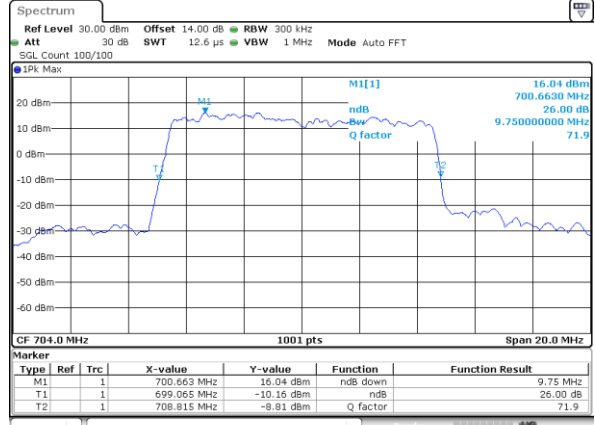
LTE Band 12

Lowest Channel / 10MHz / QPSK



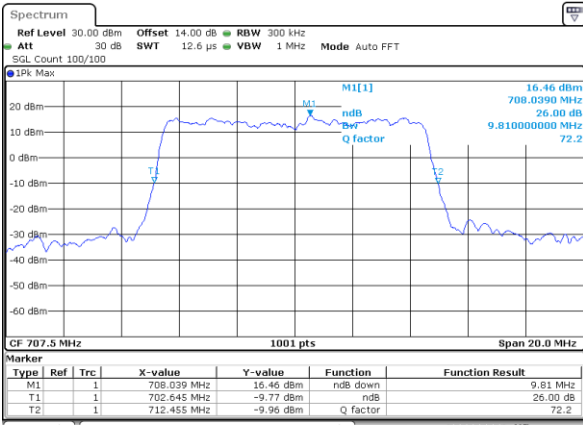
Date: 17\_AUG.2020 09:37:18

Lowest Channel / 10MHz / 16QAM



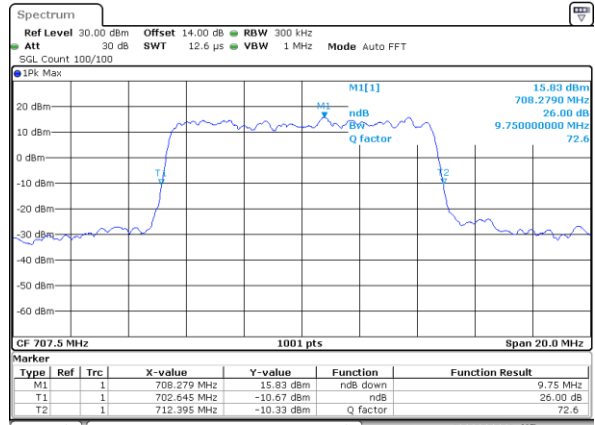
Date: 17\_AUG.2020 09:37:07

Middle Channel / 10MHz / QPSK



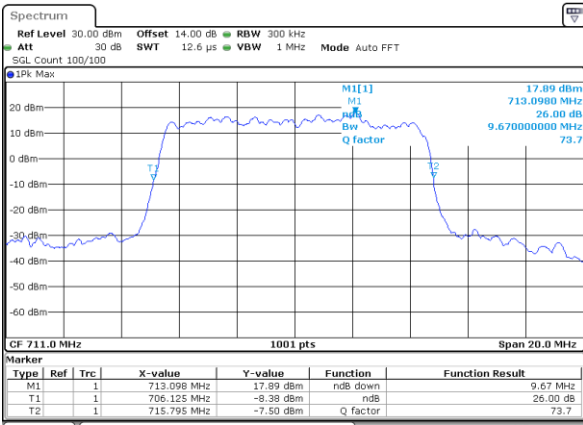
Date: 17\_AUG.2020 09:42:19

Middle Channel / 10MHz / 16QAM



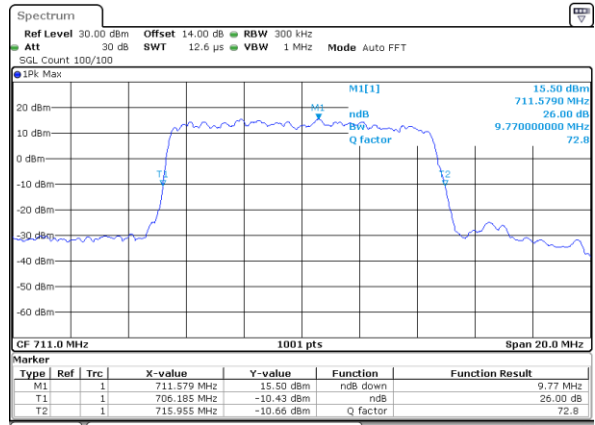
Date: 17\_AUG.2020 09:42:30

Highest Channel / 10MHz / QPSK



Date: 17\_AUG.2020 09:44:40

Highest Channel / 10MHz / 16QAM

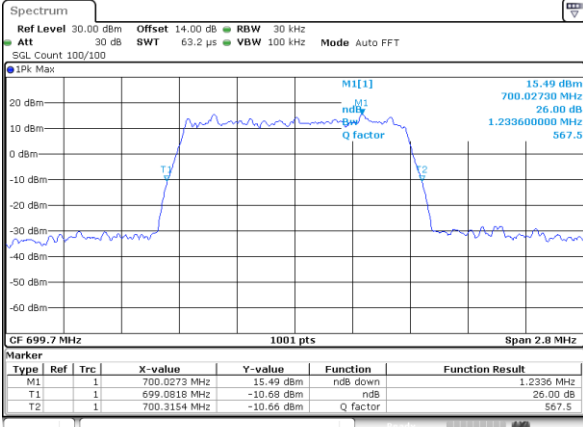


Date: 17\_AUG.2020 09:44:28



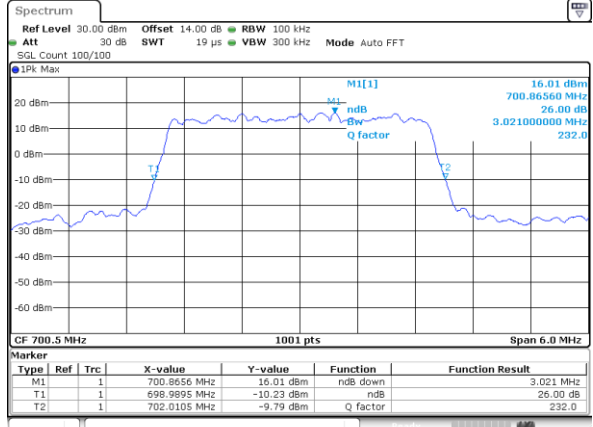
LTE Band 12

Lowest Channel / 1.4MHz / 64QAM



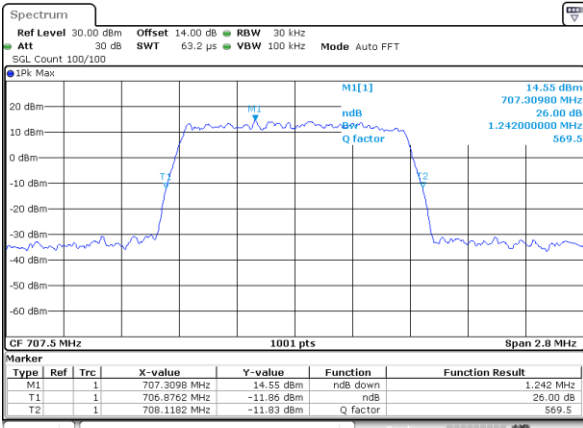
Date: 17\_AUG.2020 10:28:50

Lowest Channel / 3MHz / 64QAM



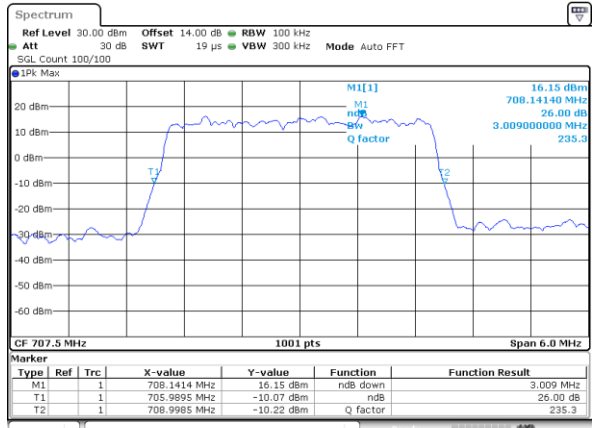
Date: 17\_AUG.2020 10:11:05

Middle Channel / 1.4MHz / 64QAM



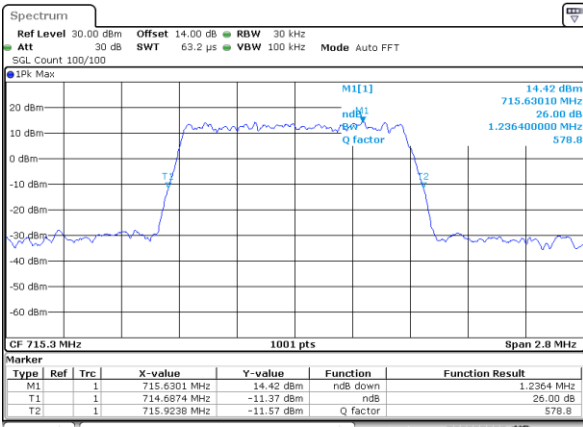
Date: 17\_AUG.2020 10:31:26

Middle Channel / 3MHz / 64QAM



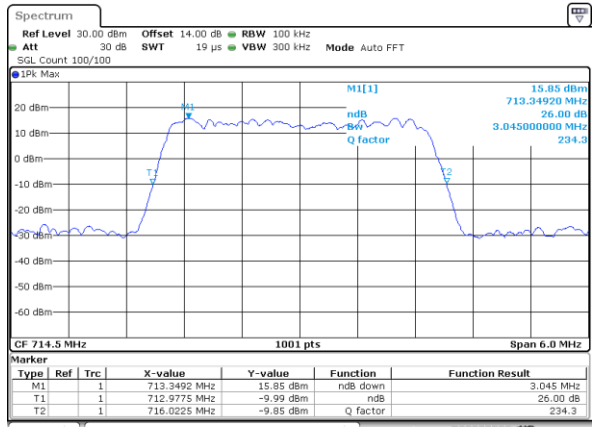
Date: 17\_AUG.2020 10:11:41

Highest Channel / 1.4MHz / 64QAM



Date: 17\_AUG.2020 10:32:30

Highest Channel / 3MHz / 64QAM



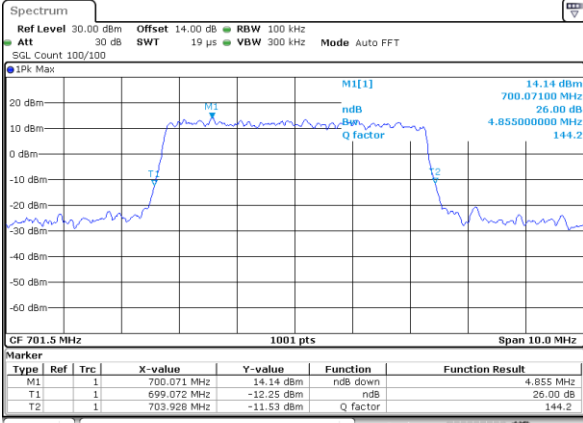
Date: 17\_AUG.2020 10:11:45





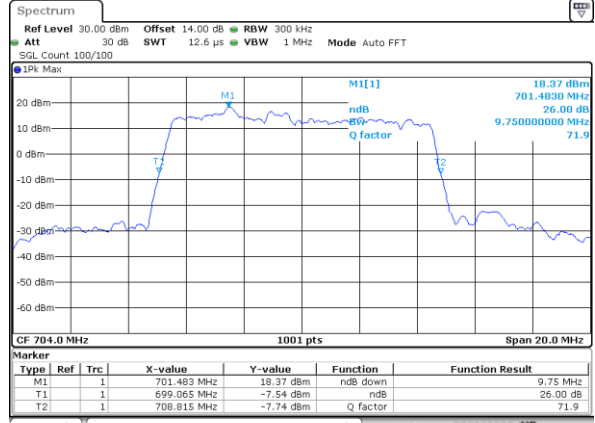
LTE Band 12

Lowest Channel / 5MHz / 64QAM



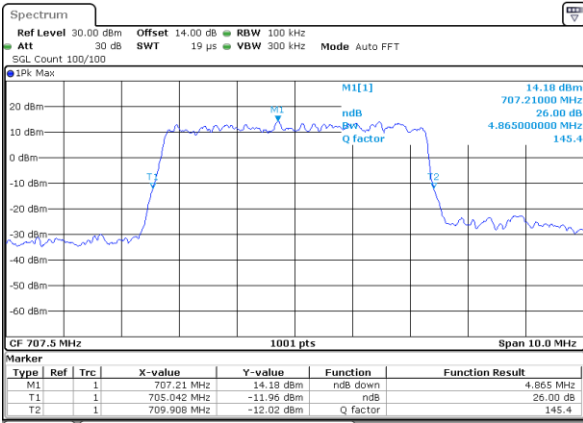
Date: 17\_AUG.2020 10:16:20

Lowest Channel / 10MHz / 64QAM



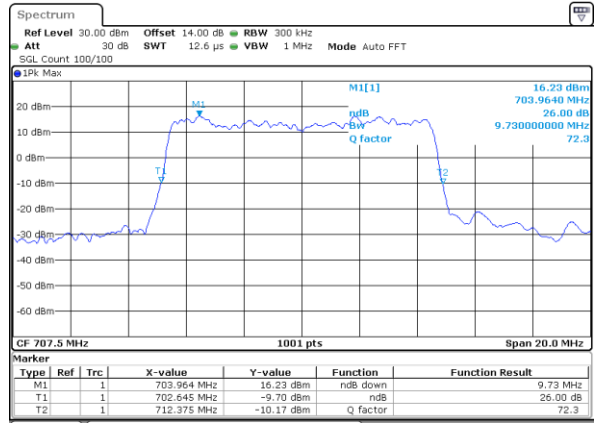
Date: 17\_AUG.2020 10:22:35

Middle Channel / 5MHz / 64QAM



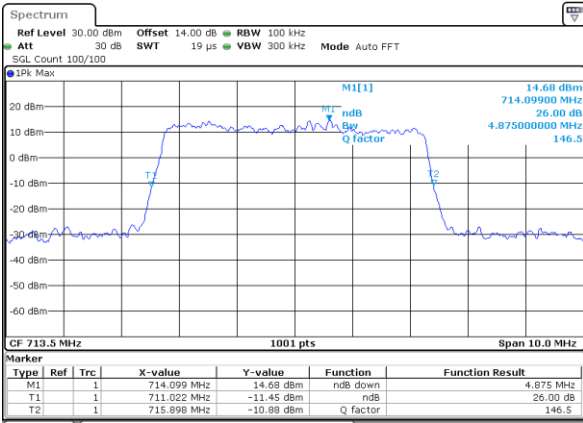
Date: 17\_AUG.2020 10:18:55

Middle Channel / 10MHz / 64QAM



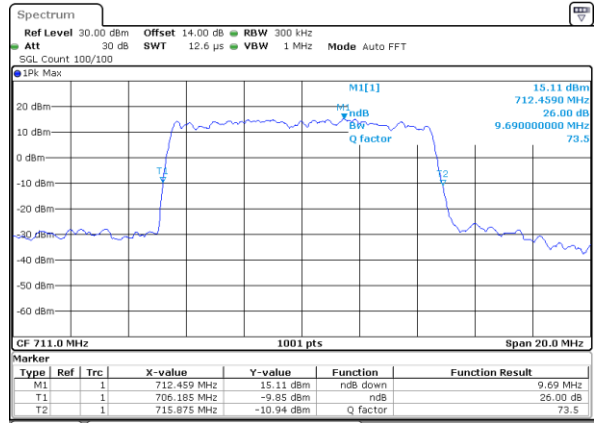
Date: 17\_AUG.2020 10:25:10

Highest Channel / 5MHz / 64QAM



Date: 17\_AUG.2020 10:20:00

Highest Channel / 10MHz / 64QAM



Date: 17\_AUG.2020 10:26:15



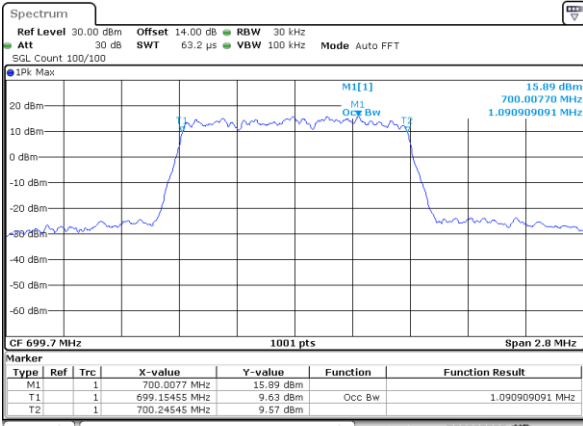
### Occupied Bandwidth

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	2.73	2.73	4.47	4.48	8.97	9.03	-	-	-	-
Middle CH	1.09	1.09	2.73	2.72	4.50	4.49	9.01	9.03	-	-	-	-
Highest CH	1.09	1.09	2.72	2.72	4.48	4.49	9.01	8.91	-	-	-	-
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	-	2.72	-	4.50	-	9.01	-	-	-	-	-
Middle CH	1.09	-	2.72	-	4.50	-	9.05	-	-	-	-	-
Highest CH	1.09	-	2.75	-	4.48	-	8.99	-	-	-	-	-



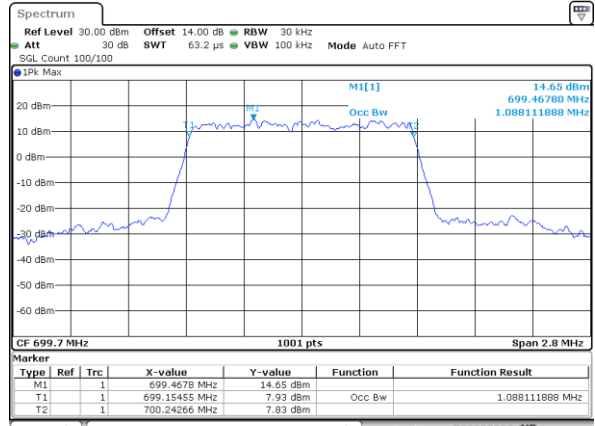
LTE Band 12

Lowest Channel / 1.4MHz / QPSK



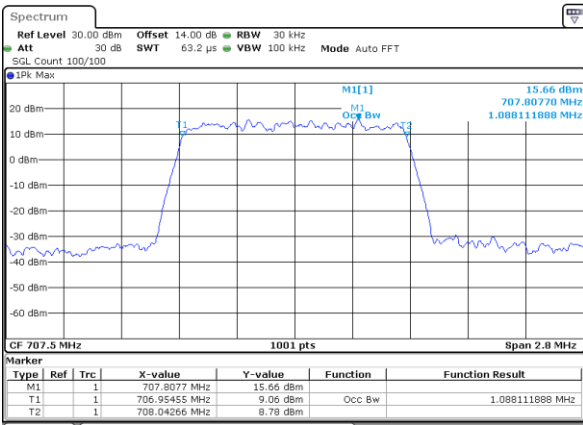
Date: 17\_AUG.2020 09:52:27

Lowest Channel / 1.4MHz / 16QAM



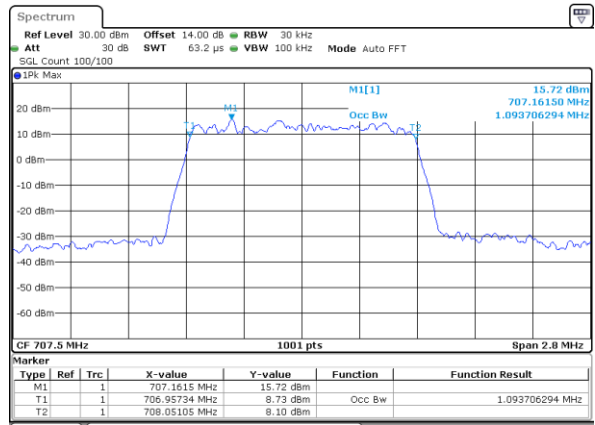
Date: 17\_AUG.2020 09:52:38

Middle Channel / 1.4MHz / QPSK



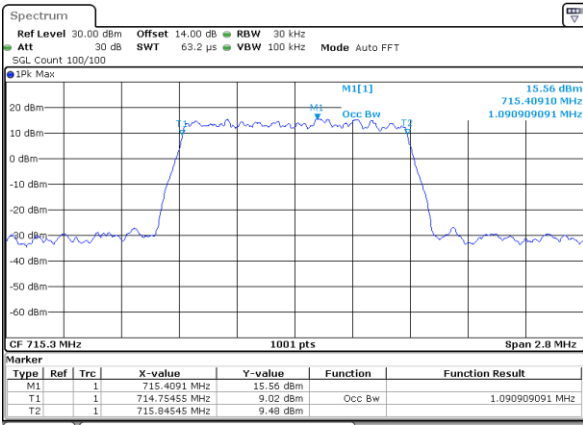
Date: 17\_AUG.2020 09:57:08

Middle Channel / 1.4MHz / 16QAM



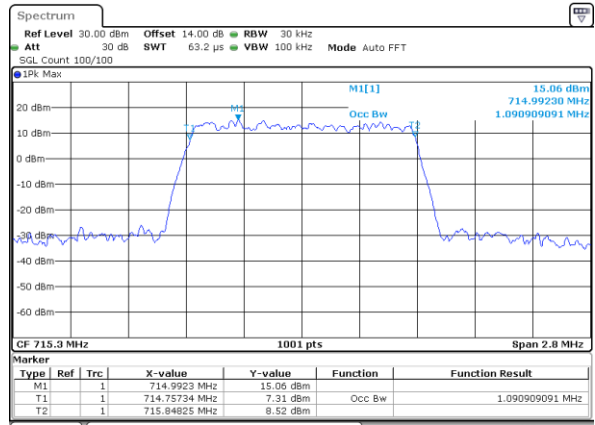
Date: 17\_AUG.2020 09:57:47

Highest Channel / 1.4MHz / QPSK



Date: 17\_AUG.2020 09:59:56

Highest Channel / 1.4MHz / 16QAM

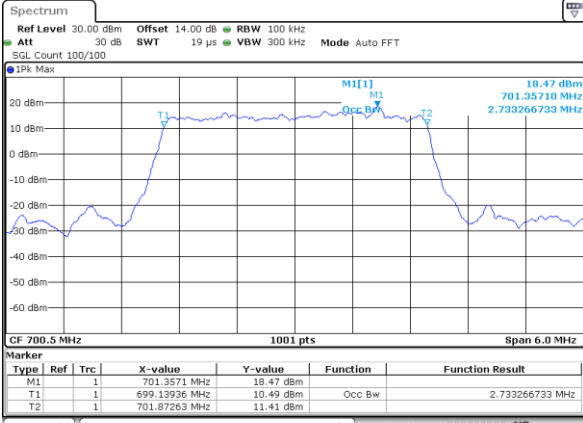


Date: 17\_AUG.2020 10:00:08



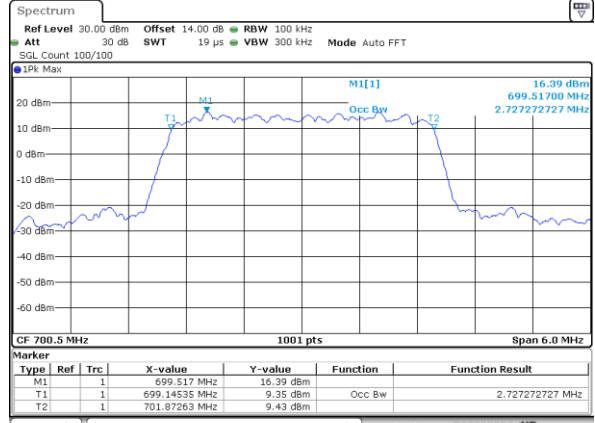
LTE Band 12

Lowest Channel / 3MHz / QPSK



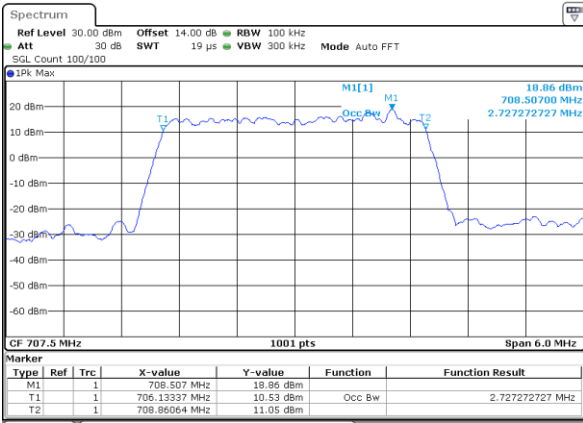
Date: 17\_AUG.2020 09:07:41

Lowest Channel / 3MHz / 16QAM



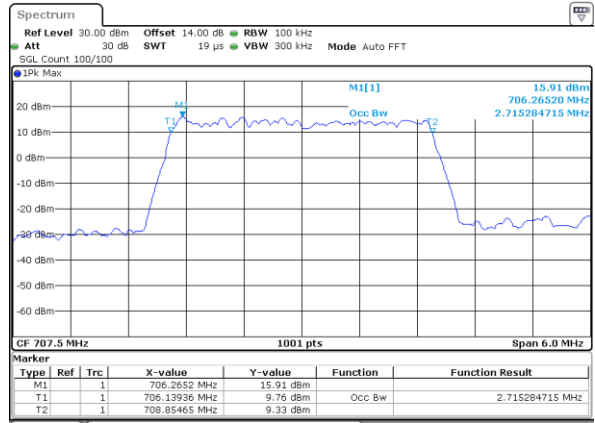
Date: 17\_AUG.2020 09:07:52

Middle Channel / 3MHz / QPSK



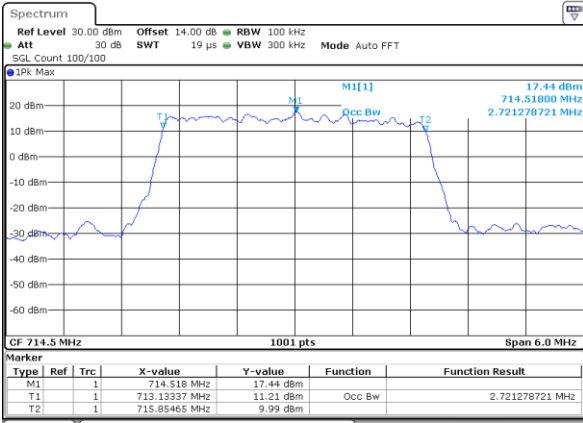
Date: 17\_AUG.2020 09:14:23

Middle Channel / 3MHz / 16QAM



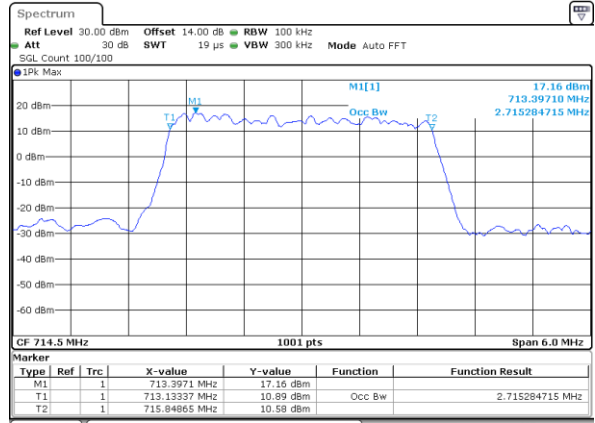
Date: 17\_AUG.2020 09:14:12

Highest Channel / 3MHz / QPSK



Date: 17\_AUG.2020 09:16:20

Highest Channel / 3MHz / 16QAM

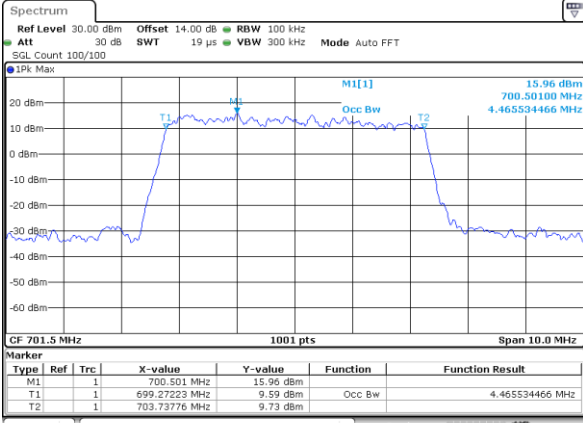


Date: 17\_AUG.2020 10:40:20



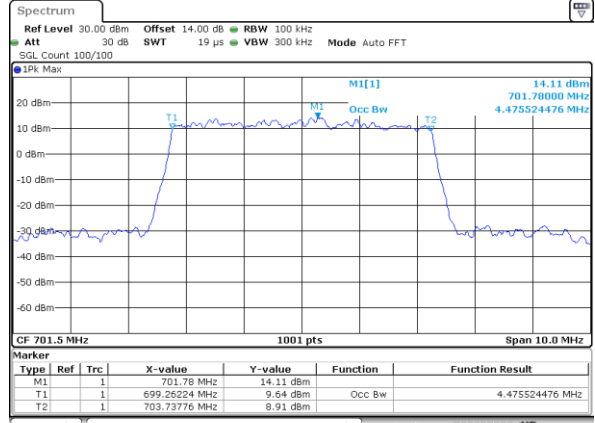
LTE Band 12

Lowest Channel / 5MHz / QPSK



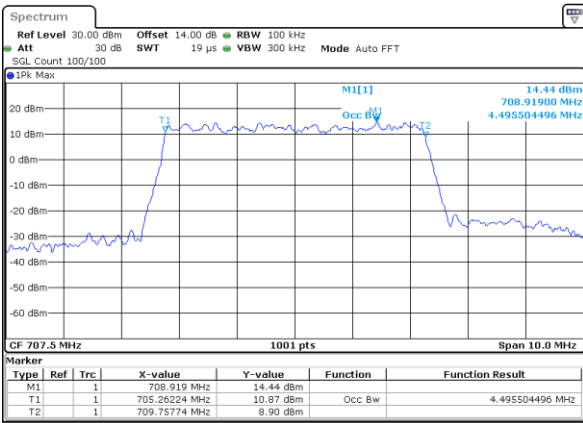
Date: 17\_AUG.2020 09:24:14

Lowest Channel / 5MHz / 16QAM



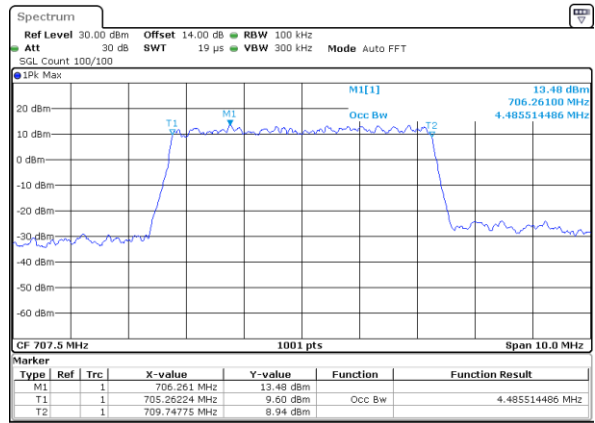
Date: 17\_AUG.2020 09:24:25

Middle Channel / 5MHz / QPSK



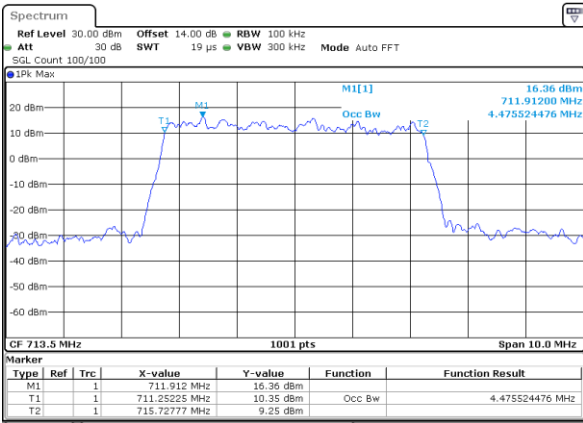
Date: 17\_AUG.2020 09:29:06

Middle Channel / 5MHz / 16QAM



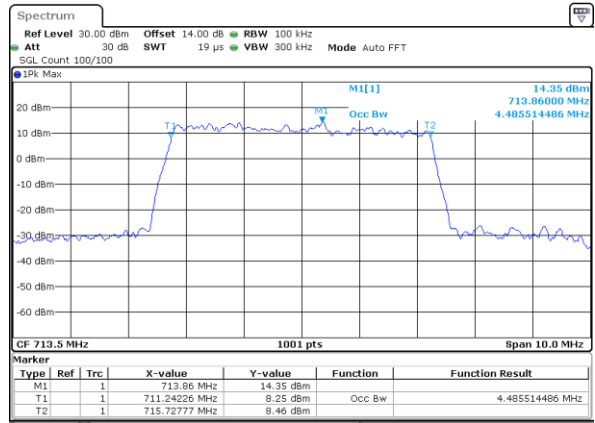
Date: 17\_AUG.2020 09:29:25

Highest Channel / 5MHz / QPSK



Date: 17\_AUG.2020 09:31:34

Highest Channel / 5MHz / 16QAM

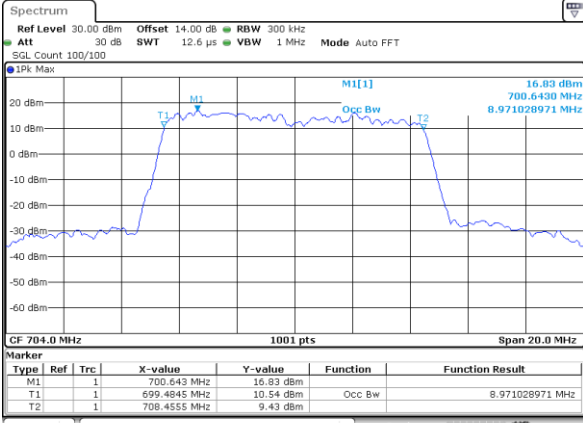


Date: 17\_AUG.2020 09:31:45



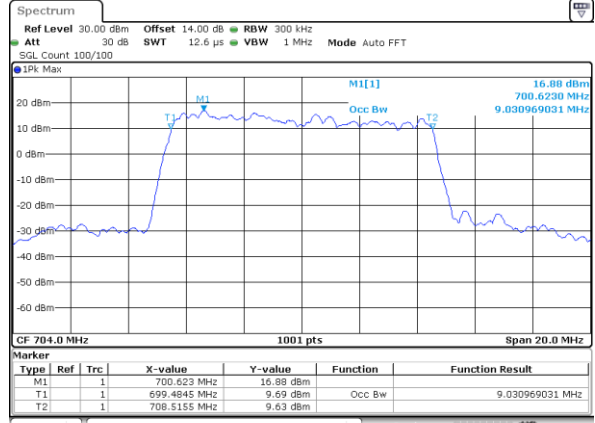
LTE Band 12

Lowest Channel / 10MHz / QPSK



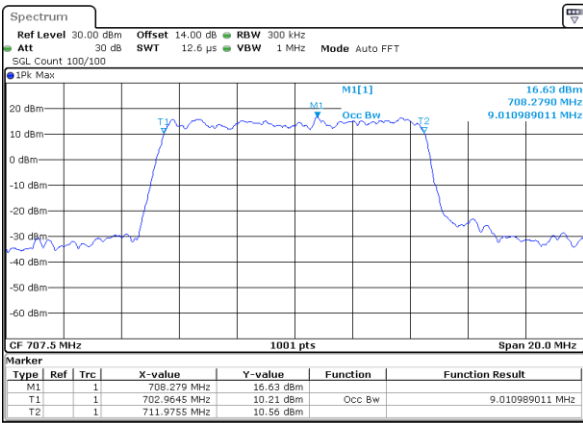
Date: 17\_AUG.2020 09:36:45

Lowest Channel / 10MHz / 16QAM



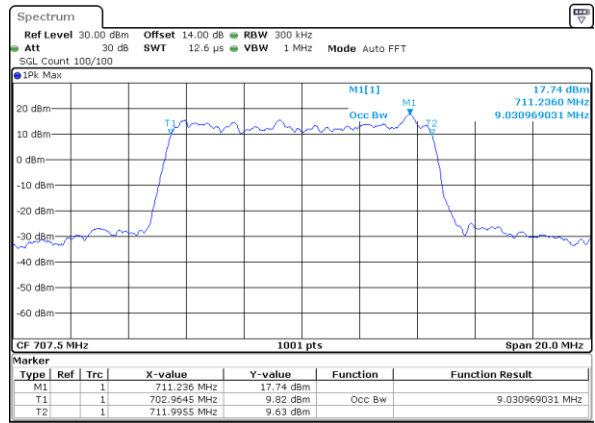
Date: 17\_AUG.2020 09:36:56

Middle Channel / 10MHz / QPSK



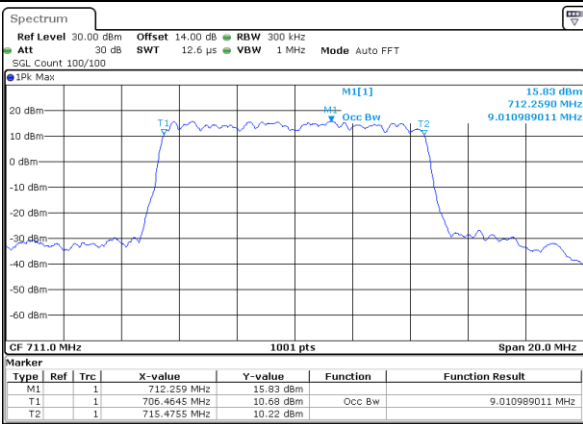
Date: 17\_AUG.2020 09:42:08

Middle Channel / 10MHz / 16QAM



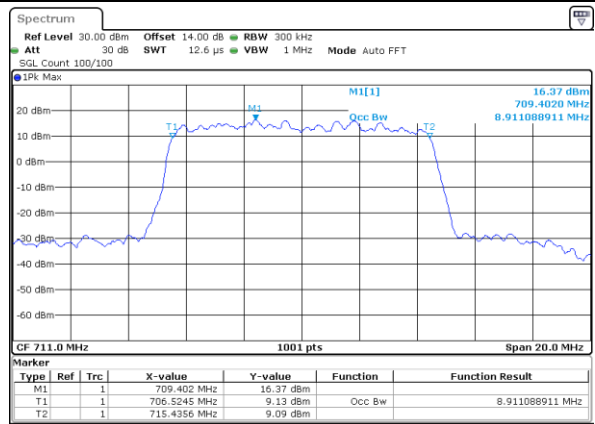
Date: 17\_AUG.2020 09:44:56

Highest Channel / 10MHz / QPSK



Date: 17\_AUG.2020 09:44:06

Highest Channel / 10MHz / 16QAM

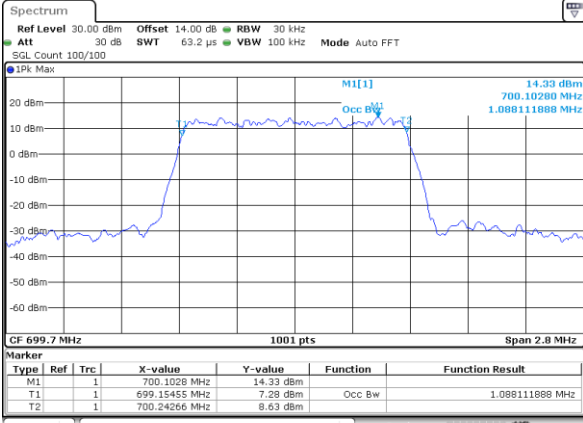


Date: 17\_AUG.2020 09:44:17



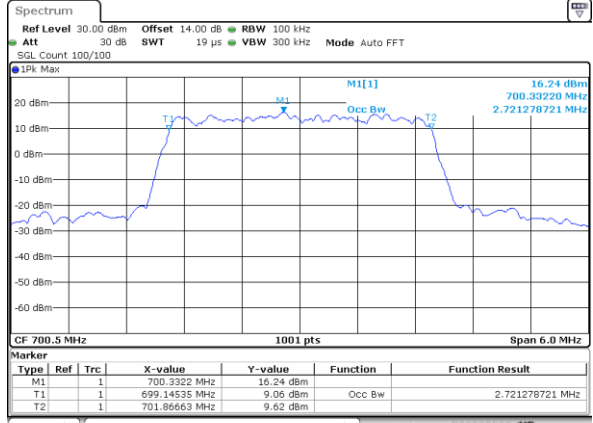
LTE Band 12

Lowest Channel / 1.4MHz / 64QAM



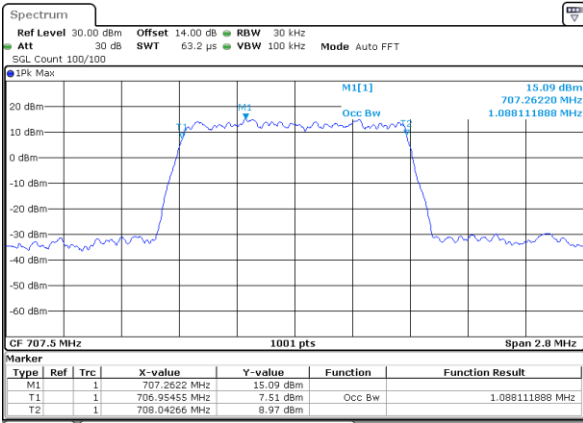
Date: 17\_AUG.2020 10:28:39

Lowest Channel / 3MHz / 64QAM



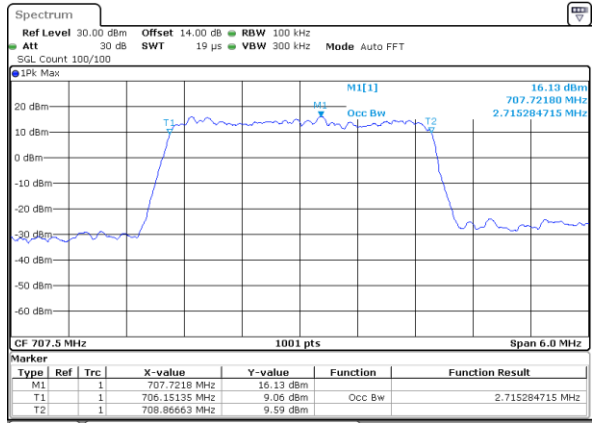
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Middle Channel / 1.4MHz / 64QAM



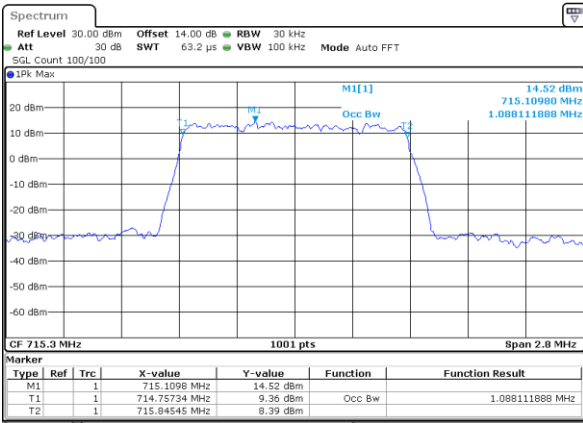
Date: 17\_AUG.2020 10:31:15

Middle Channel / 3MHz / 64QAM



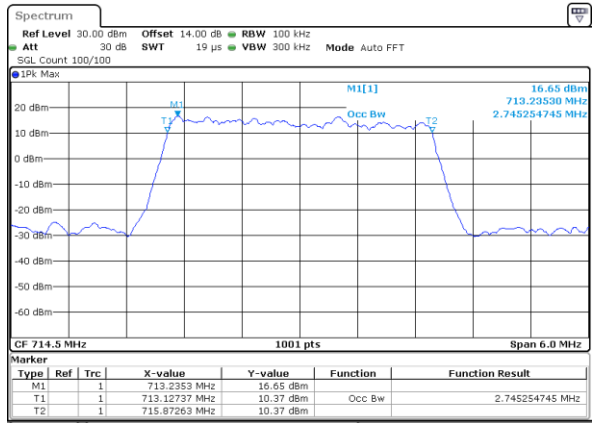
Date: 17\_AUG.2020 10:11:30

Highest Channel / 1.4MHz / 64QAM



Date: 17\_AUG.2020 10:32:19

Highest Channel / 3MHz / 64QAM

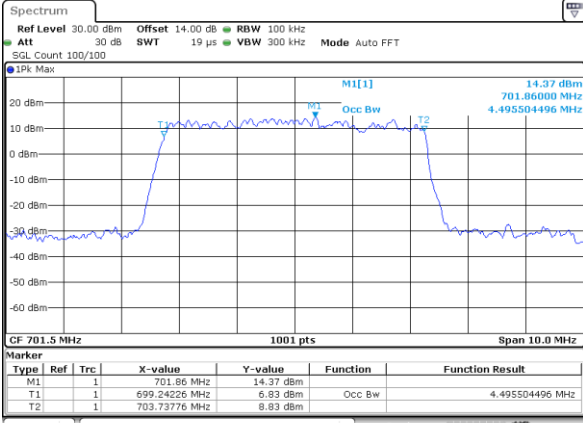


Date: 17\_AUG.2020 10:11:34



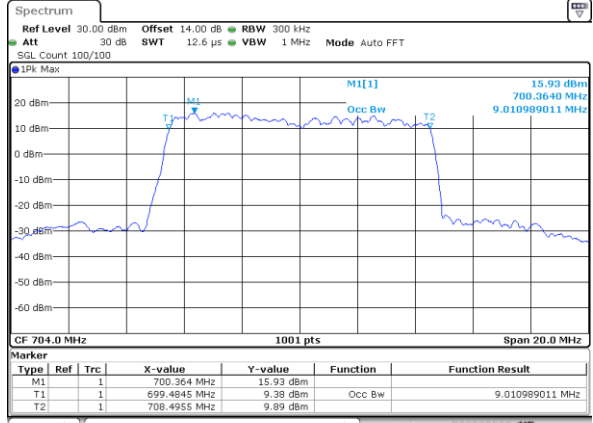
LTE Band 12

Lowest Channel / 5MHz / 64QAM



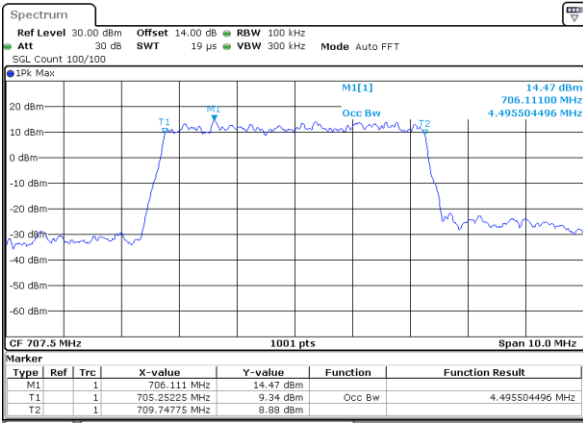
Date: 17\_AUG.2020 10:16:09

Lowest Channel / 10MHz / 64QAM



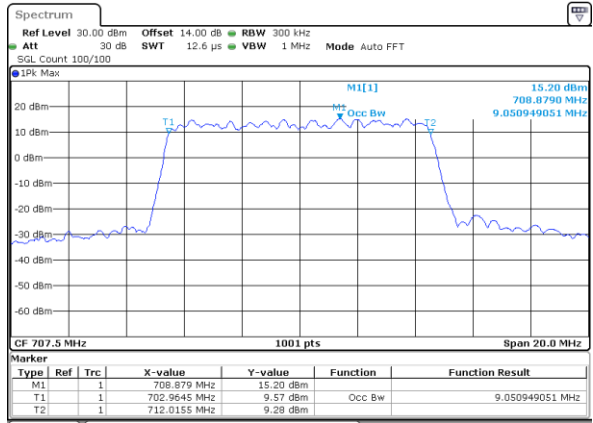
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Middle Channel / 5MHz / 64QAM



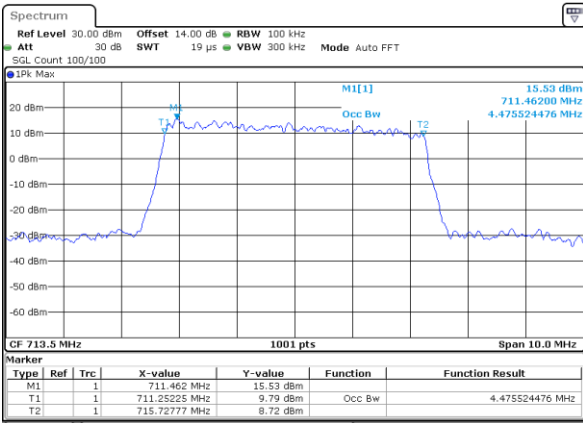
Date: 17\_AUG.2020 10:18:44

Middle Channel / 10MHz / 64QAM



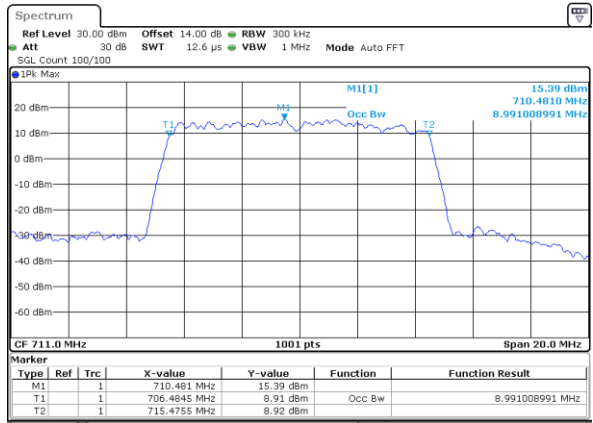
Date: 17\_AUG.2020 10:24:59

Highest Channel / 5MHz / 64QAM



Date: 17\_AUG.2020 10:19:49

Highest Channel / 10MHz / 64QAM



Date: 17\_AUG.2020 10:26:04





# Conducted Band Edge

