

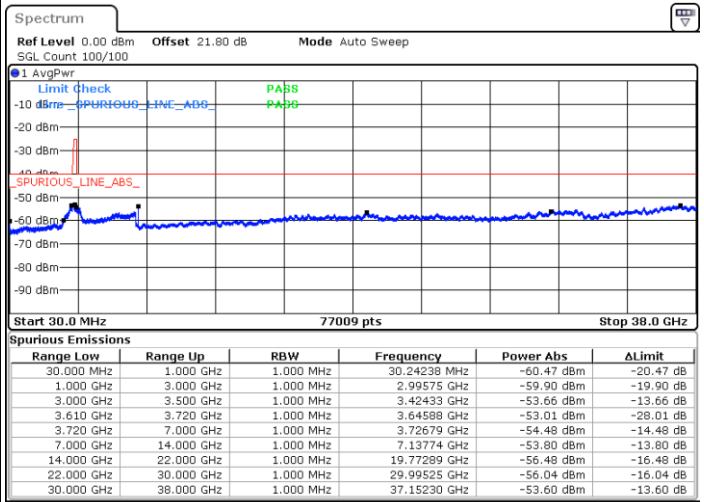
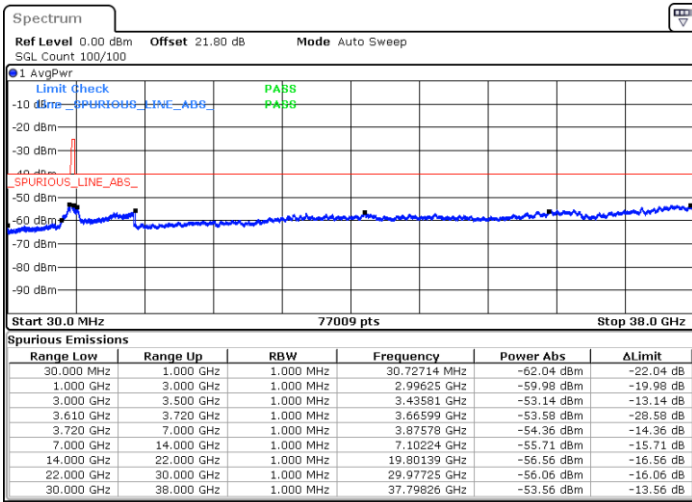


LTE Band 48 / 20MHz

64QAM

Lowest Channel / 1RB0

Lowest Channel / 1RBmax

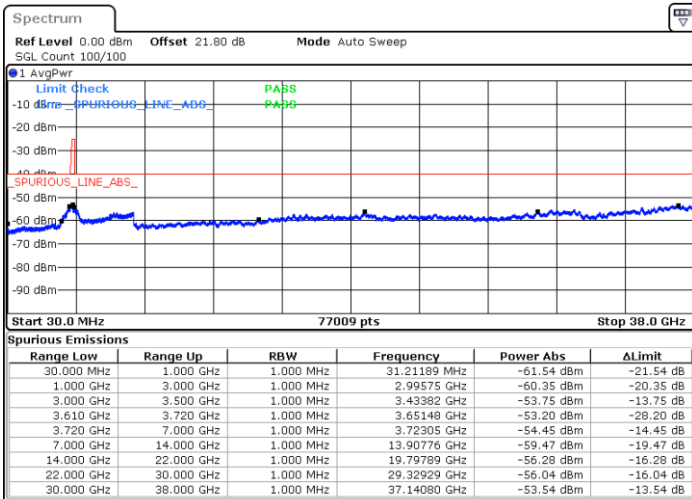


Date: 1.SEP.2021 17:10:25

Date: 1.SEP.2021 17:18:47

Lowest Channel / Full RB

N/A



Date: 1.SEP.2021 17:23:11

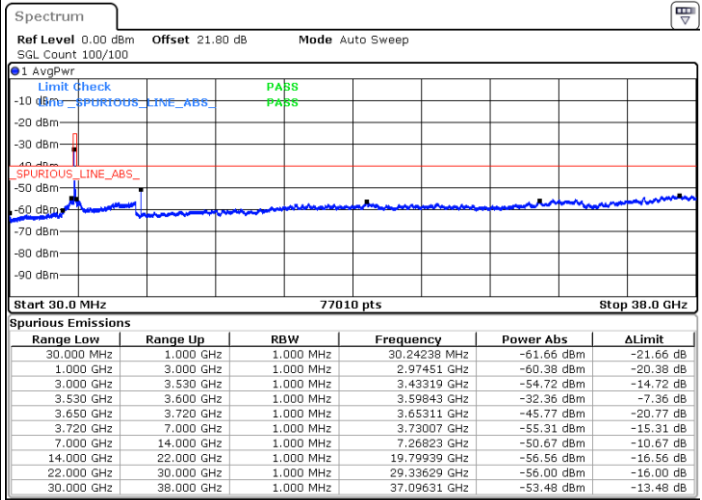
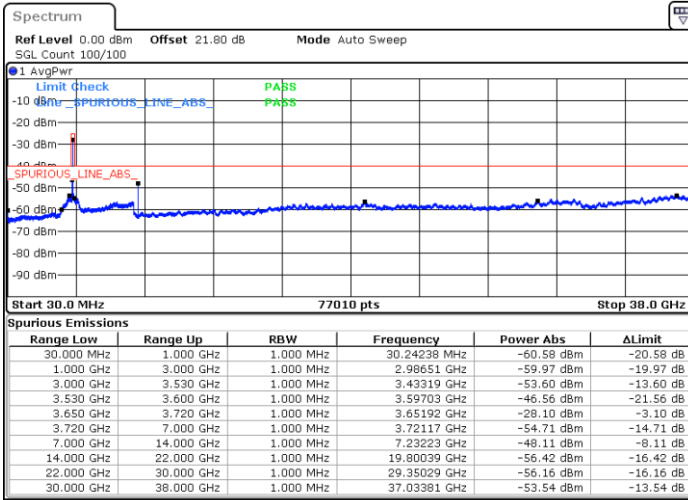


LTE Band 48 / 20MHz

64QAM

Middle Channel / 1RB0

Middle Channel / 1RBmax

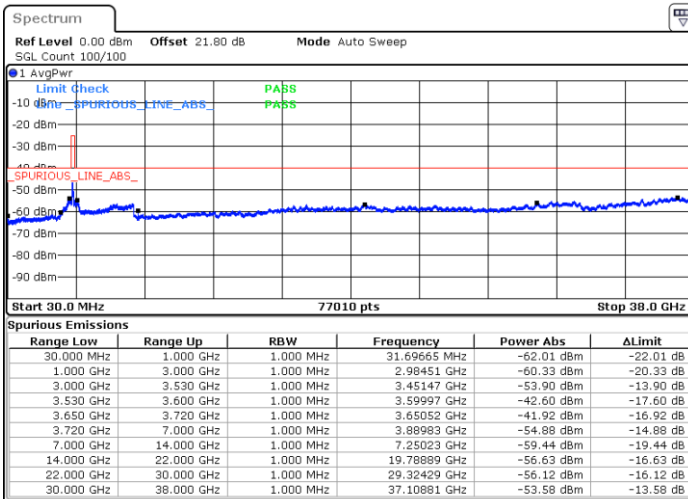


Date: 1.SEP.2021 17:38:45

Date: 1.SEP.2021 17:52:05

Middle Channel / Full RB

N/A



Date: 1.SEP.2021 18:00:34

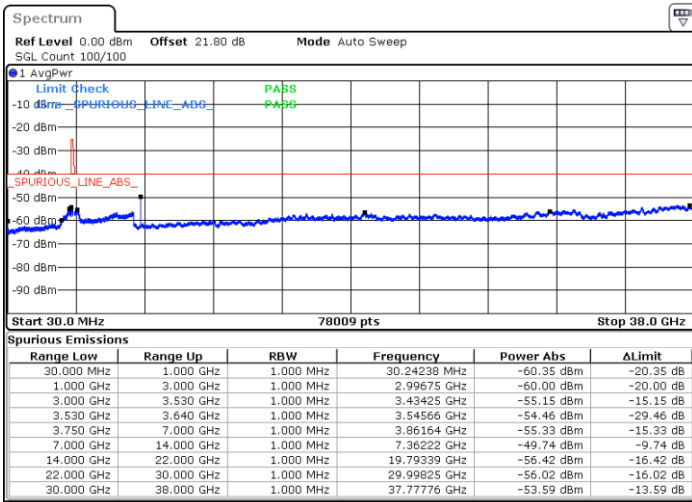


LTE Band 48 / 20MHz

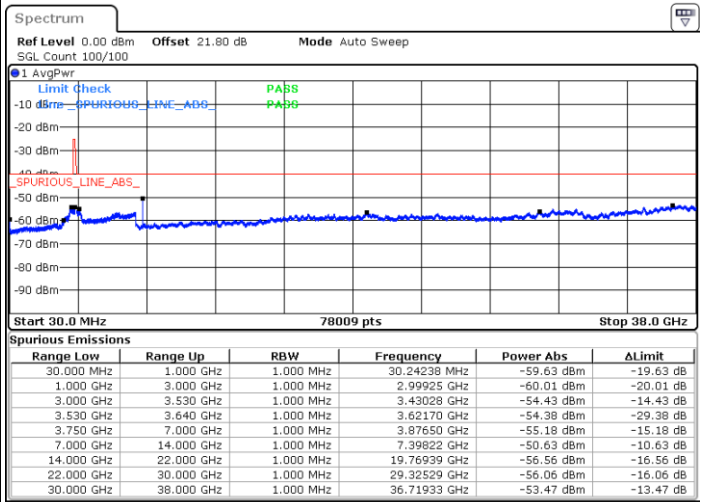
64QAM

Highest Channel / 1RB0

Highest Channel / 1RBmax



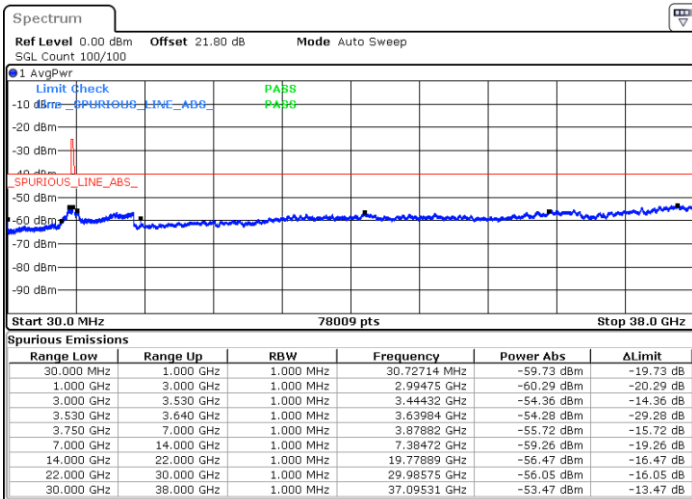
Date: 1.SEP.2021 18:04:46



Date: 1.SEP.2021 18:14:14

Highest Channel / Full RB

N/A



Date: 1.SEP.2021 18:25:12



### Frequency Stability

Test Conditions		LTE Band 48 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0007	PASS
40	Normal Voltage	0.0003	
30	Normal Voltage	0.0073	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0007	
0	Normal Voltage	0.0003	
-10	Normal Voltage	0.0073	
-20	Normal Voltage	0.0012	
-30	Normal Voltage	0.0013	
20	Maximum Voltage	0.0072	
20	Normal Voltage	0.0000	
20	Minimum Voltage	0.0006	

**Note:**

- 1. Normal Voltage =48 V. ; Minimum Voltage =36V. ; Maximum Voltage =55 V.
- 2. Note: The frequency fundamental emissions stay within the authorized frequency block.



### LTE Band 48 <CDD mode Ant. 2>

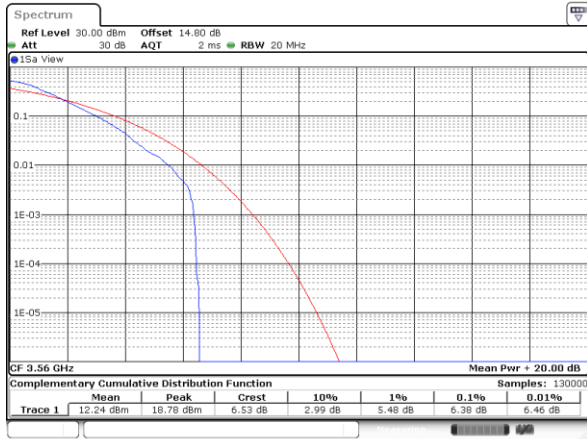
#### Peak-to-Average Ratio

Mode	LTE Band 48 / 20MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	6.38	5.04	6.58	6.58	PASS
Middle CH	6.09	7.45	7.10	6.90	
Highest CH	6.70	6.00	7.04	5.94	
Mode	LTE Band 48 / 20MHz				
Mod.	64QAM				Limit: 13dB
RB Size	1RB	Full RB			Result
Lowest CH	6.35	7.36	-	-	PASS
Middle CH	6.41	6.32	-	-	
Highest CH	6.09	6.26	-	-	



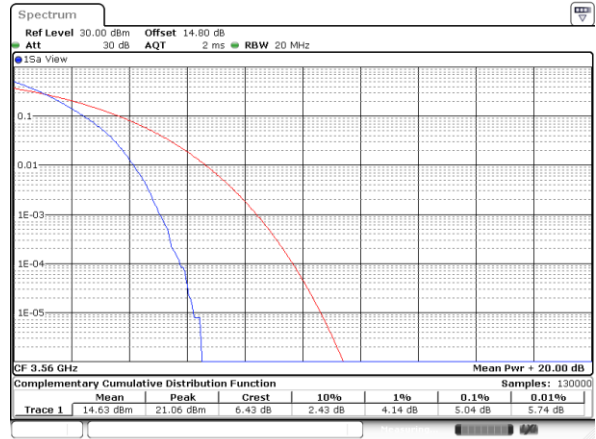
LTE Band 48 / 20MHz / QPSK

Lowest Channel / 1RB



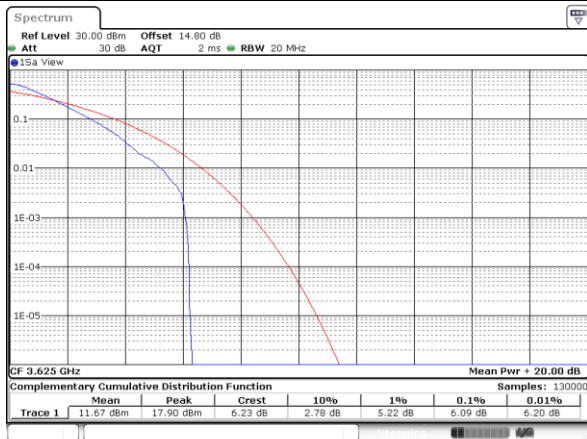
Date: 5\_SEP.2021 18:19:48

Lowest Channel / Full RB



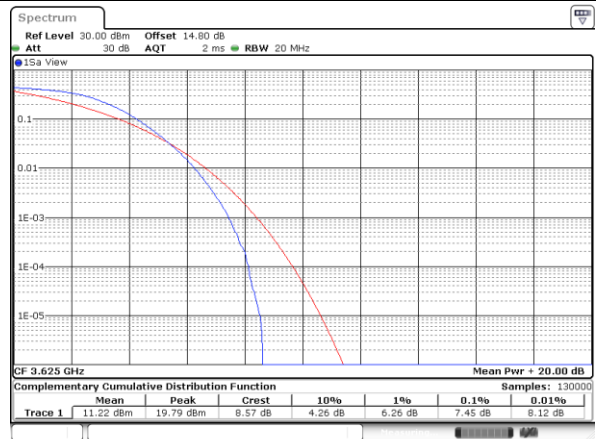
Date: 5\_SEP.2021 18:22:38

Middle Channel / 1RB



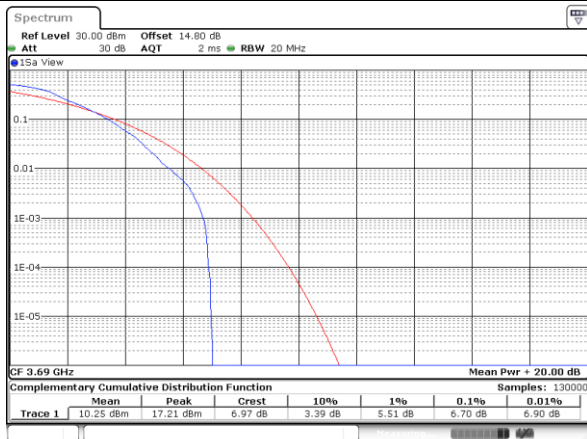
Date: 5\_SEP.2021 18:26:32

Middle Channel / Full RB



Date: 5\_SEP.2021 18:23:19

Highest Channel / 1RB



Date: 5\_SEP.2021 18:27:24

Highest Channel / Full RB

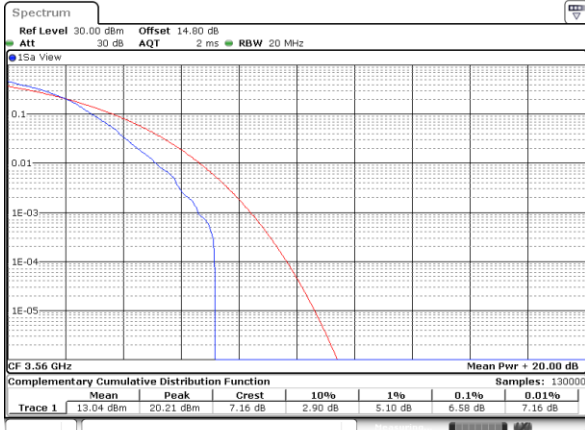


Date: 5\_SEP.2021 18:28:55



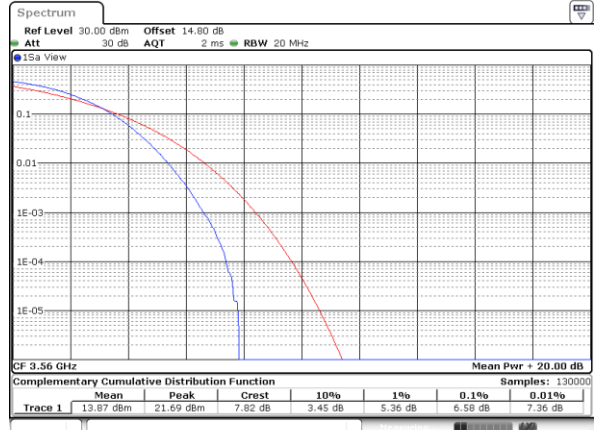
LTE Band 48 / 20MHz / 16QAM

Lowest Channel / 1RB



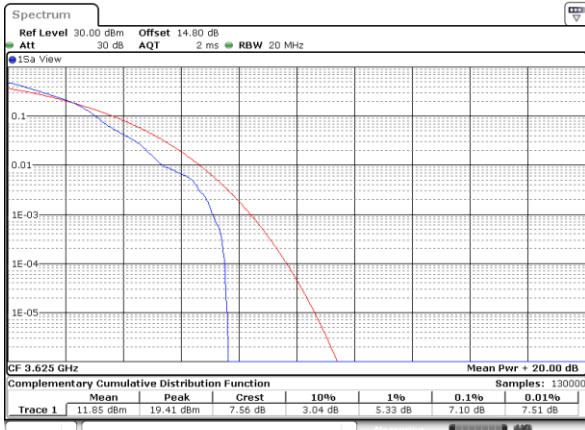
Date: 5\_SEP.2021 18:20:31

Lowest Channel / Full RB



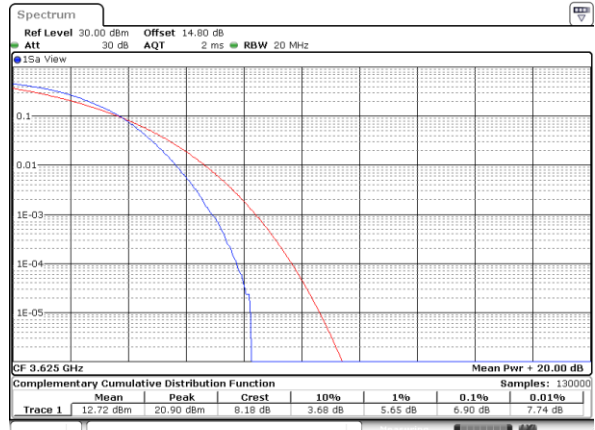
Date: 5\_SEP.2021 18:22:18

Middle Channel / 1RB



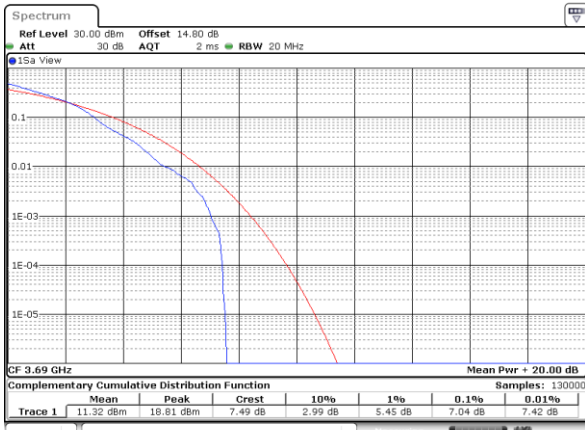
Date: 5\_SEP.2021 18:25:50

Middle Channel / Full RB



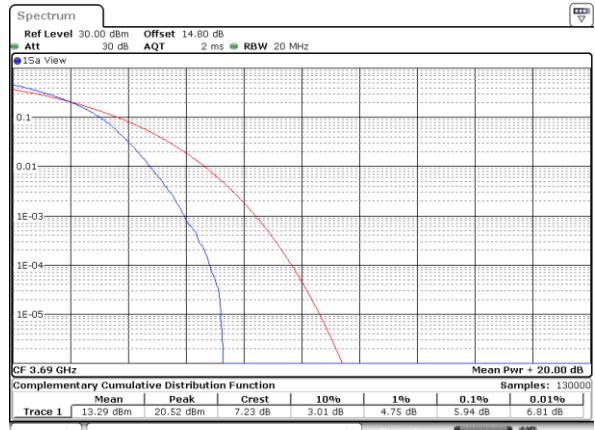
Date: 5\_SEP.2021 18:23:46

Highest Channel / 1RB



Date: 5\_SEP.2021 18:27:50

Highest Channel / Full RB

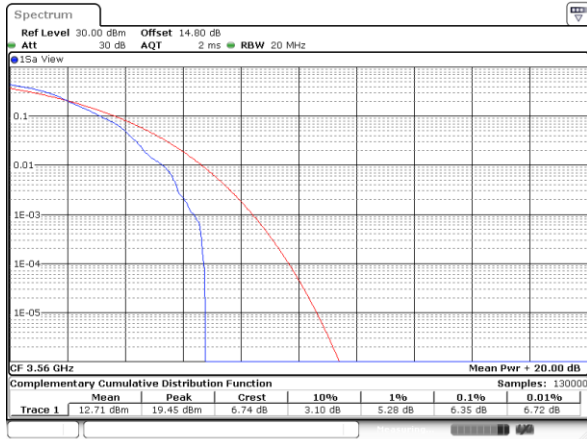


Date: 5\_SEP.2021 18:28:43



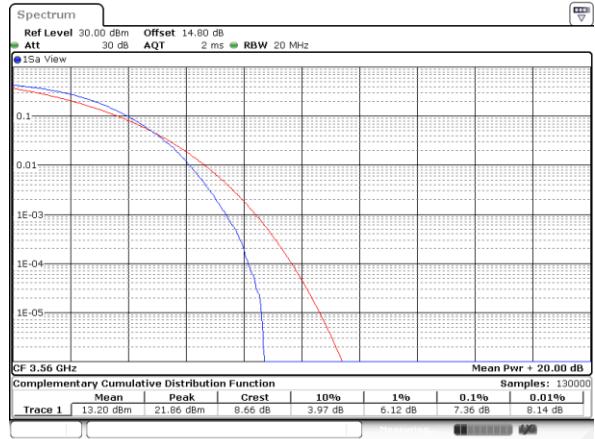
LTE Band 48 / 20MHz / 64QAM

Lowest Channel / 1RB



Date: 5\_SEP.2021 18:21:20

Lowest Channel / Full RB



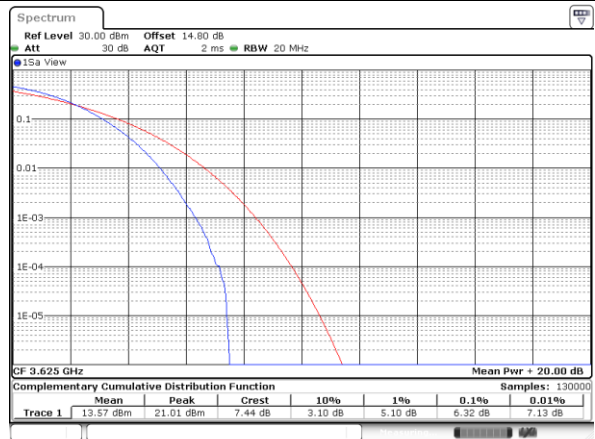
Date: 5\_SEP.2021 18:21:50

Middle Channel / 1RB



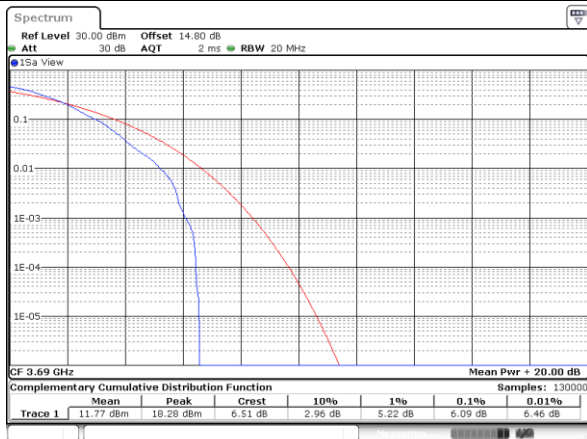
Date: 5\_SEP.2021 18:24:53

Middle Channel / Full RB



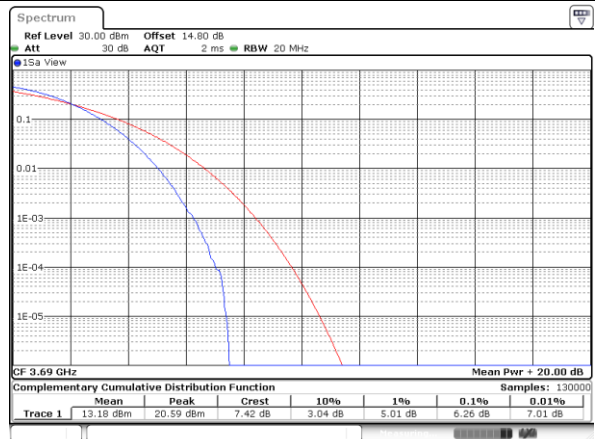
Date: 5\_SEP.2021 18:24:13

Highest Channel / 1RB



Date: 5\_SEP.2021 18:28:06

Highest Channel / Full RB



Date: 5\_SEP.2021 18:28:23





**Maximum Power Spectral Density**

Mode	LTE Band 48 : Conducted Power Density (dBm/MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	16.85	16.56	17.53	17.86	17.50	17.70	17.52	18.26
Middle CH	-	-	-	-	16.05	16.52	16.85	16.46	16.94	16.65	16.96	17.25
Highest CH	-	-	-	-	15.83	16.06	16.53	16.21	16.11	16.10	15.79	16.39

Mode	LTE Band 48 : Conducted Power Density (dBm/MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	-	-	-	-	17.26	-	18.02	-	18.08	-	18.20	-
Middle CH	-	-	-	-	16.27	-	16.53	-	16.99	-	17.36	-
Highest CH	-	-	-	-	15.82	-	15.86	-	16.48	-	16.21	-

Mode	LTE Band 48 : EIRP Power Density (dBm/MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	34.86	34.57	35.54	35.87	35.51	35.71	35.53	36.27
Middle CH	-	-	-	-	34.06	34.53	34.86	34.47	34.95	34.66	34.97	35.26
Highest CH	-	-	-	-	33.84	34.07	34.54	34.22	34.12	34.11	33.80	34.4

Mode	LTE Band 48 : EIRP Power Density (dBm/MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	-	-	-	-	35.27	-	36.03	-	36.09	-	36.21	-
Middle CH	-	-	-	-	34.28	-	34.54	-	35.00	-	35.37	-
Highest CH	-	-	-	-	33.83	-	33.87	-	34.49	-	34.22	-
Antenna Gain	18.01 dBi											
Limit	37 dBm/MHz											
Result	Pass											

Remark: The "Offset" in the Conducted Power Density plots already add 10 log2 (dB).

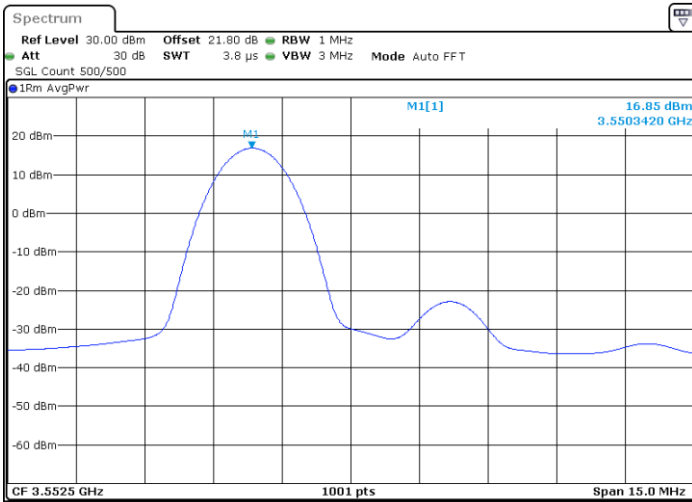


LTE Band 48 / 5MHz

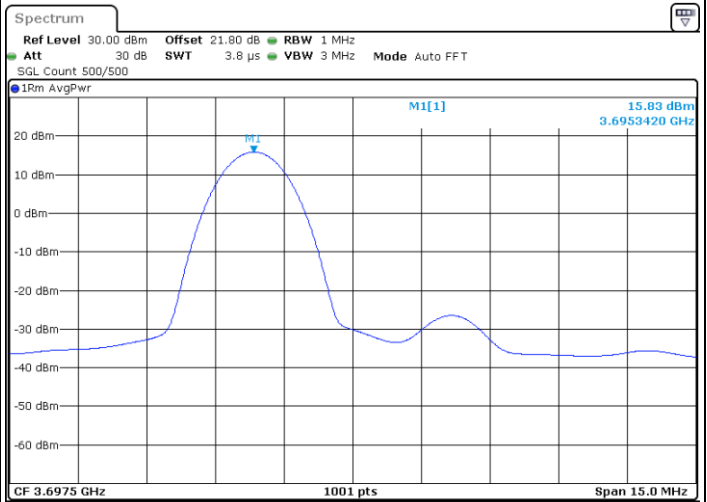
QPSK

Lowest Channel / 1RB0

Highest Channel / 1RB0



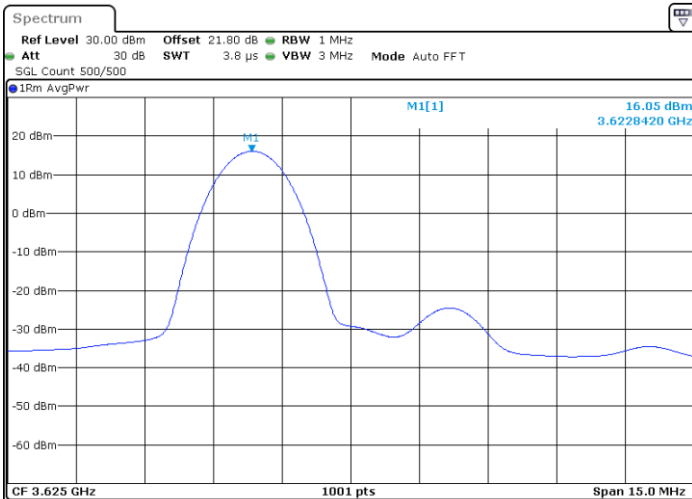
Date: 31.AUG.2021 15:50:55



Date: 31.AUG.2021 15:55:06

Middle Channel / 1RB0

N/A



Date: 31.AUG.2021 15:53:06

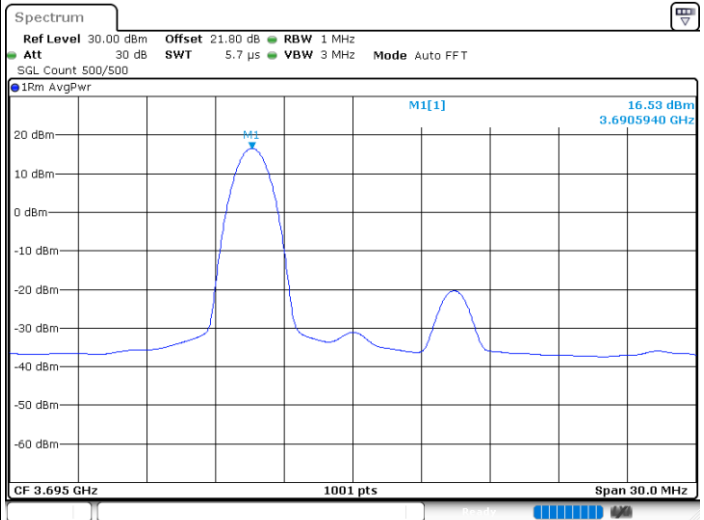
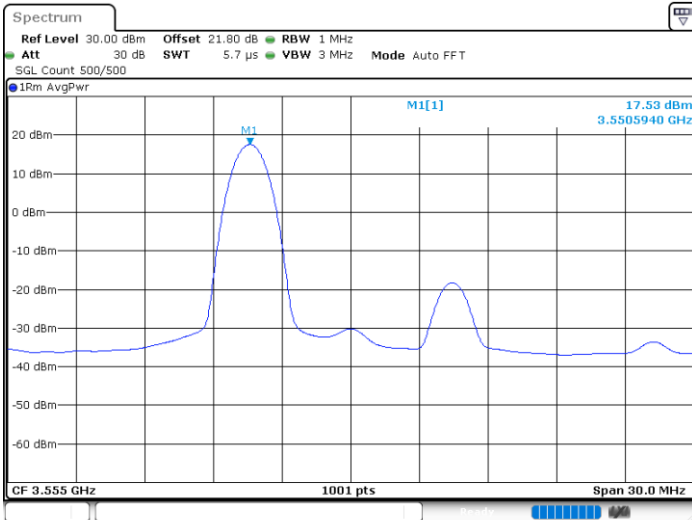


LTE Band 48 / 10MHz

QPSK

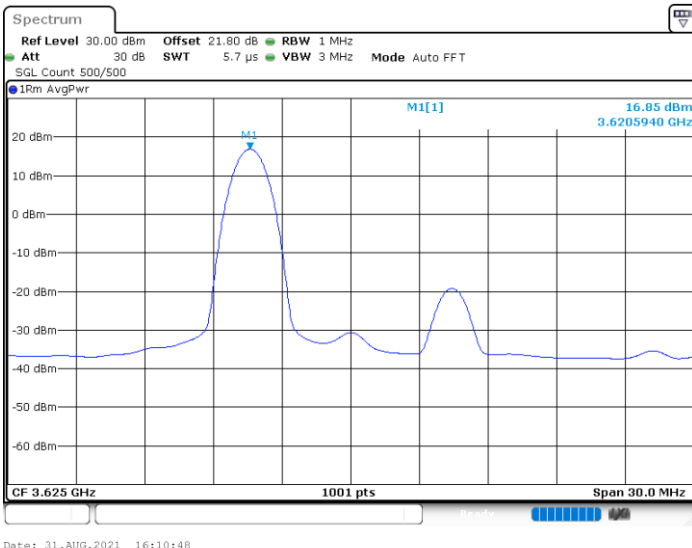
Lowest Channel / 1RB0

Highest Channel / 1RB0



Middle Channel / 1RB0

N/A



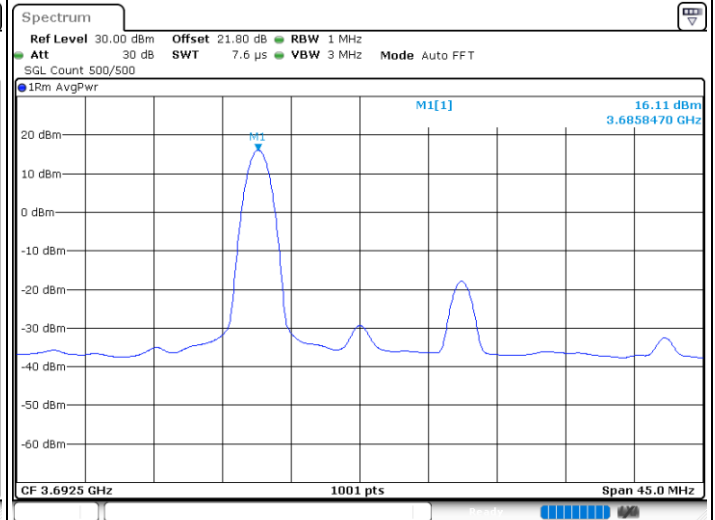
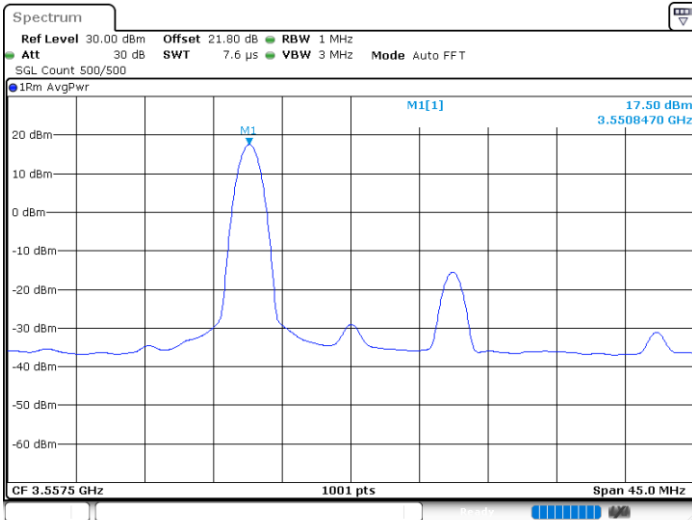


LTE Band 48 / 15MHz

QPSK

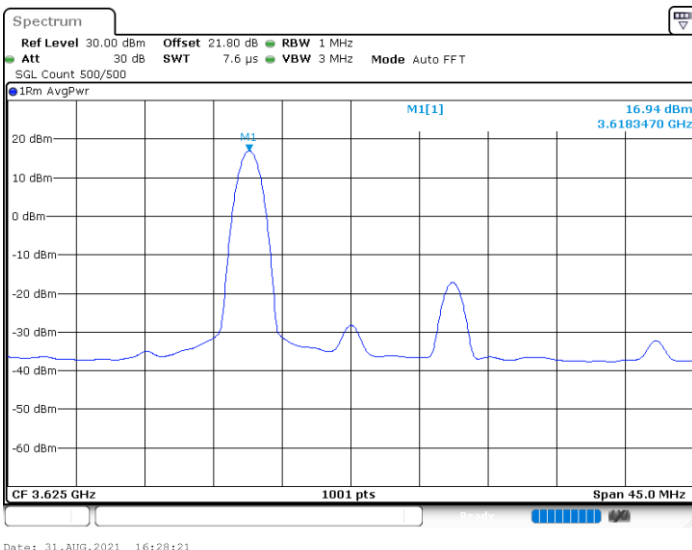
Lowest Channel / 1RB0

Highest Channel / 1RB0



Middle Channel / 1RB0

N/A



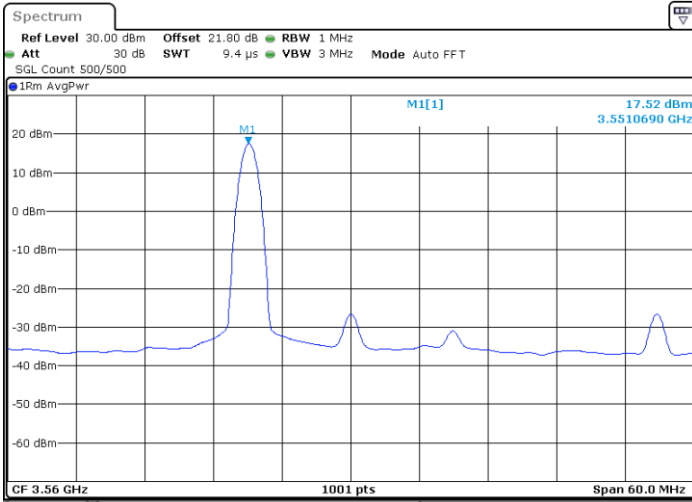


LTE Band 48 /20MHz

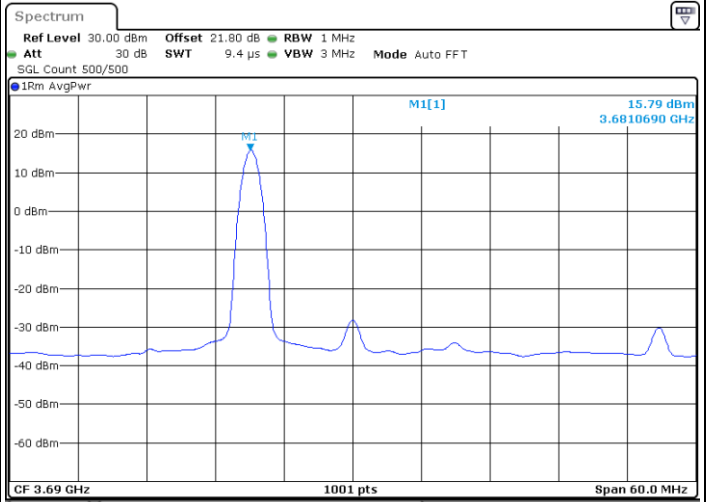
QPSK

Lowest Channel / 1RB0

Highest Channel / 1RB0



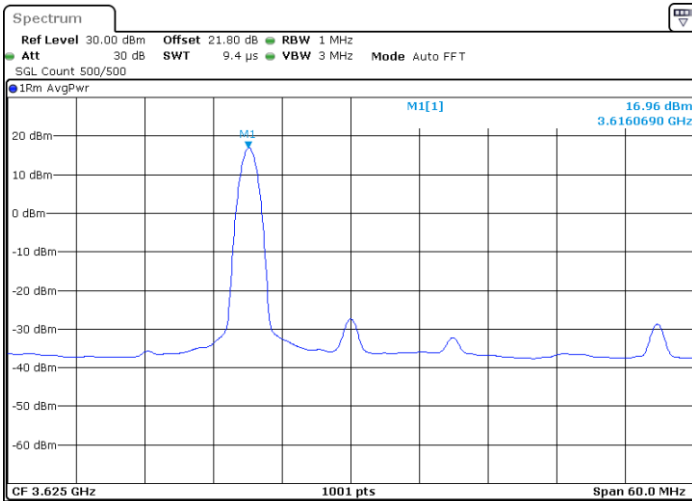
Date: 31.AUG.2021 16:36:42



Date: 31.AUG.2021 16:42:27

Middle Channel / 1RB0

N/A



Date: 31.AUG.2021 16:39:02

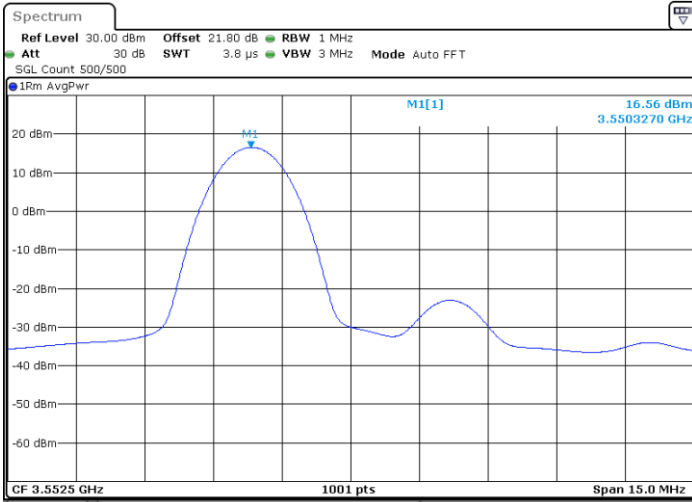


LTE Band 48 / 5MHz

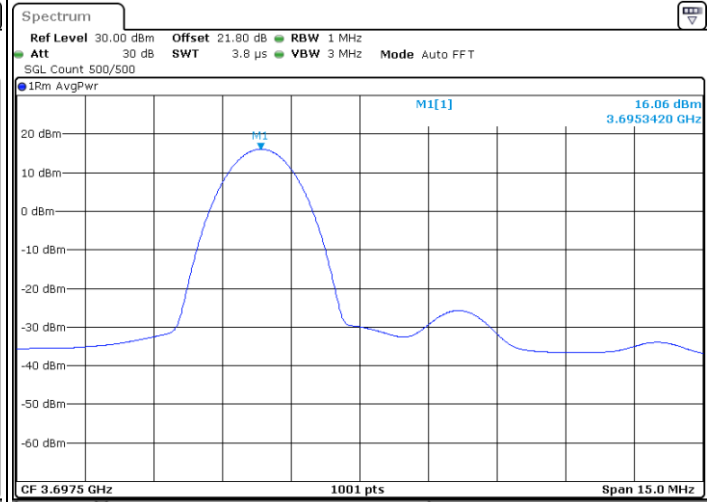
16QAM

Lowest Channel / 1RB0

Highest Channel / 1RB0



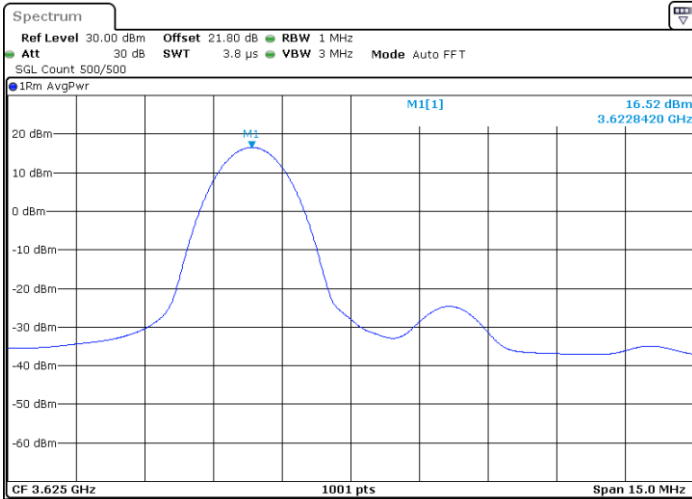
Date: 31.AUG.2021 15:51:25



Date: 31.AUG.2021 15:56:23

Middle Channel / 1RB0

N/A



Date: 31.AUG.2021 15:53:31

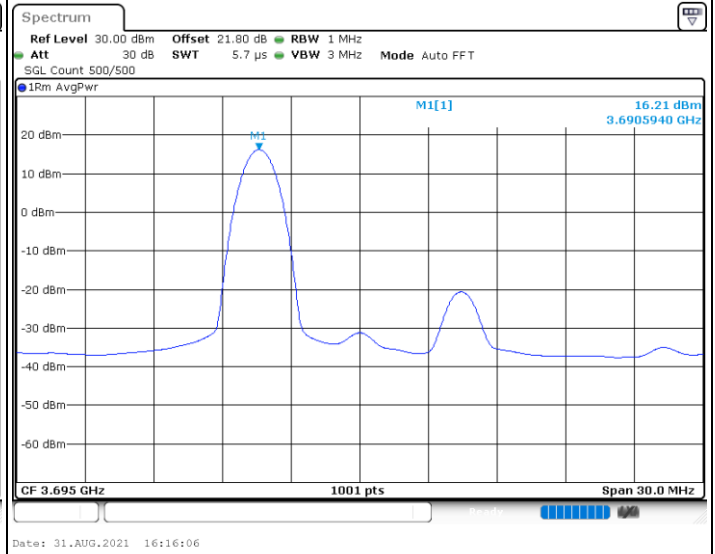
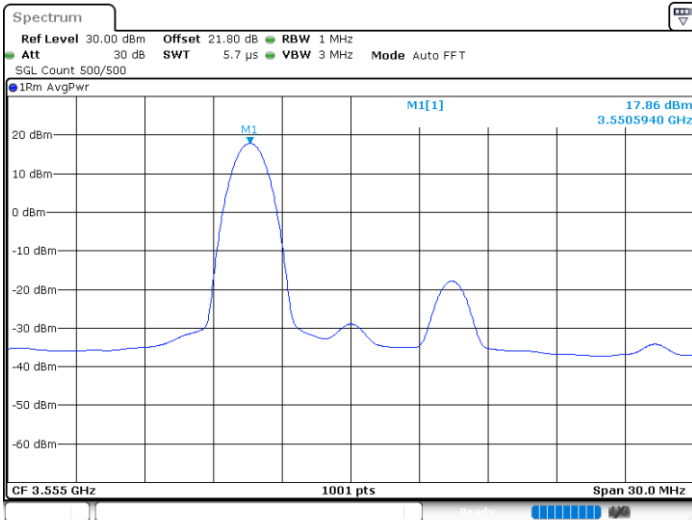


LTE Band 48 / 10MHz

16QAM

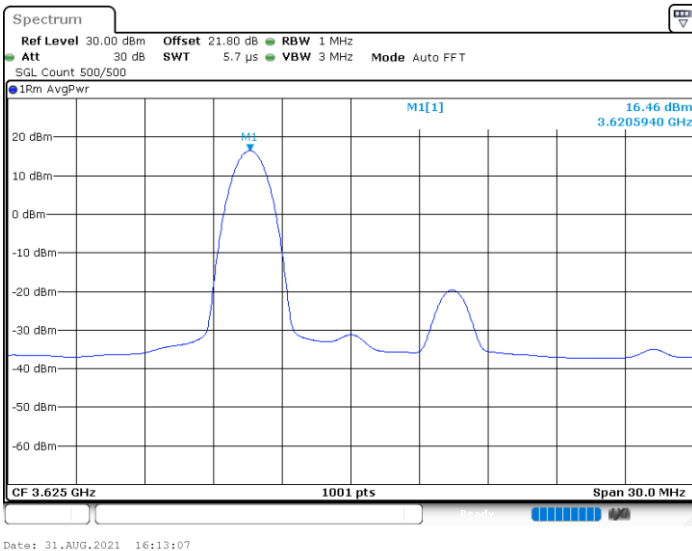
Lowest Channel / 1RB0

Highest Channel / 1RB0



MiddleChannel / 1RB0

N/A



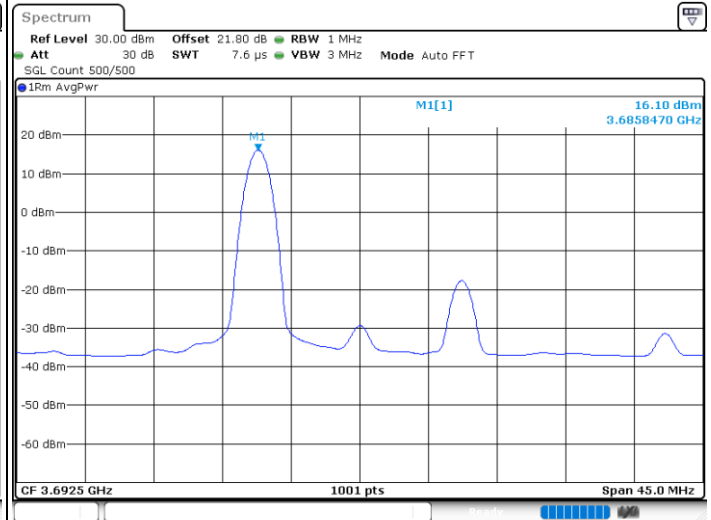
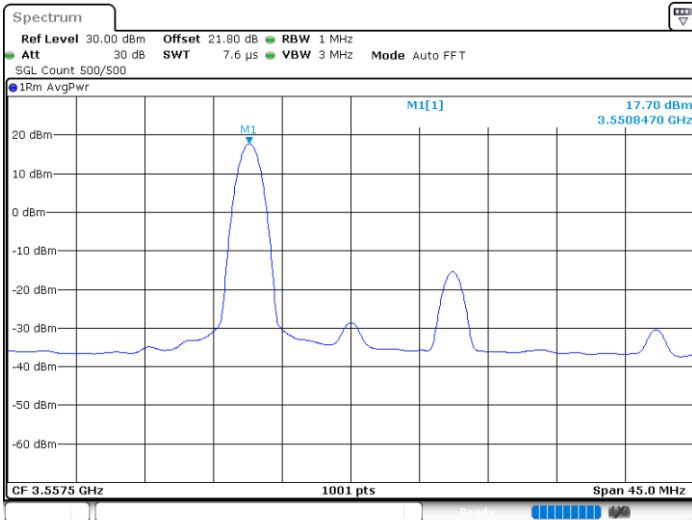


LTE Band 48 / 15MHz

16QAM

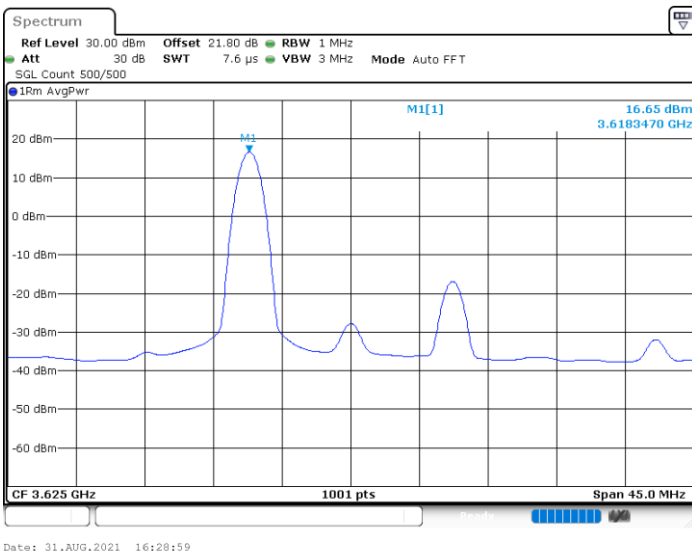
Lowest Channel / 1RB0

Highest Channel / 1RB0



Middle Channel / 1RB0

N/A





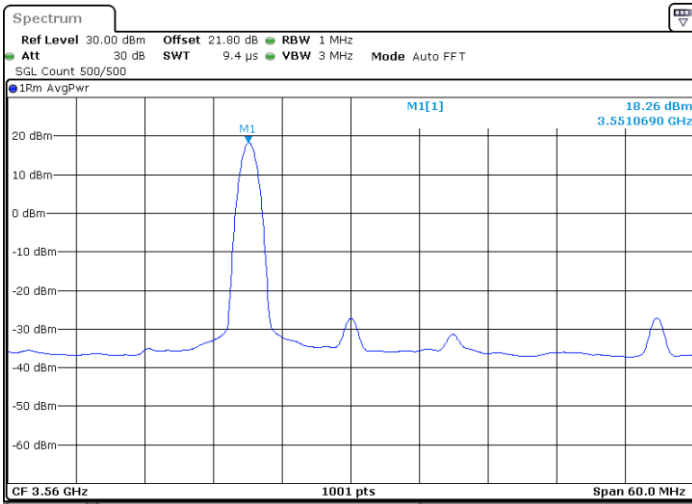


LTE Band 48 /20MHz

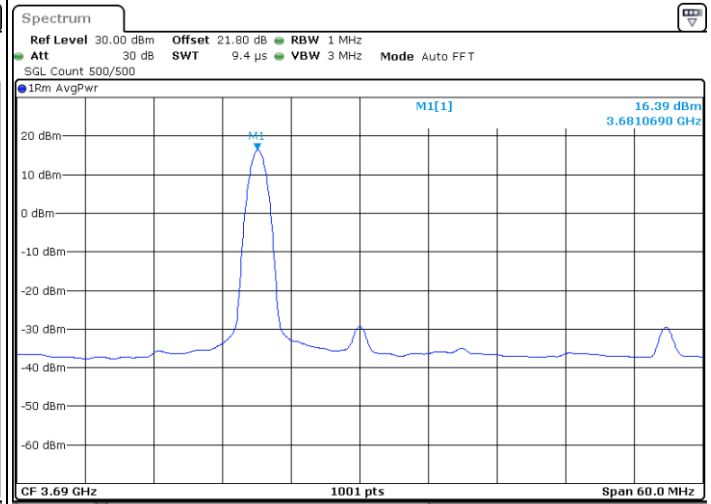
16QAM

Lowest Channel / 1RB0

Highest Channel / 1RB0



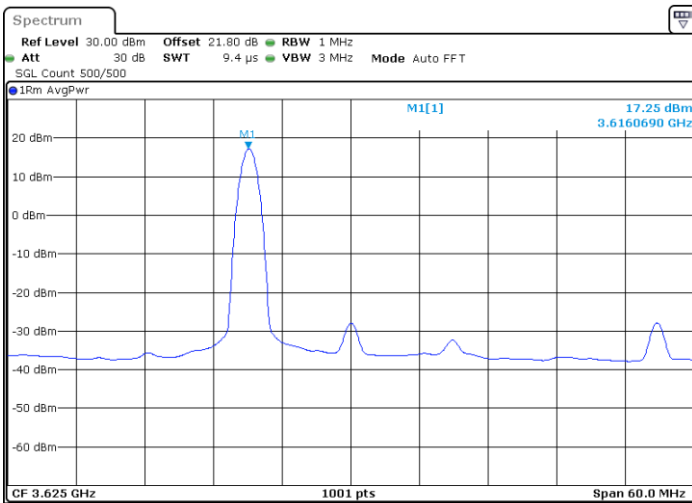
Date: 31.AUG.2021 16:37:37



Date: 31.AUG.2021 16:42:56

Middle Channel / 1RB0

N/A



Date: 31.AUG.2021 16:40:52

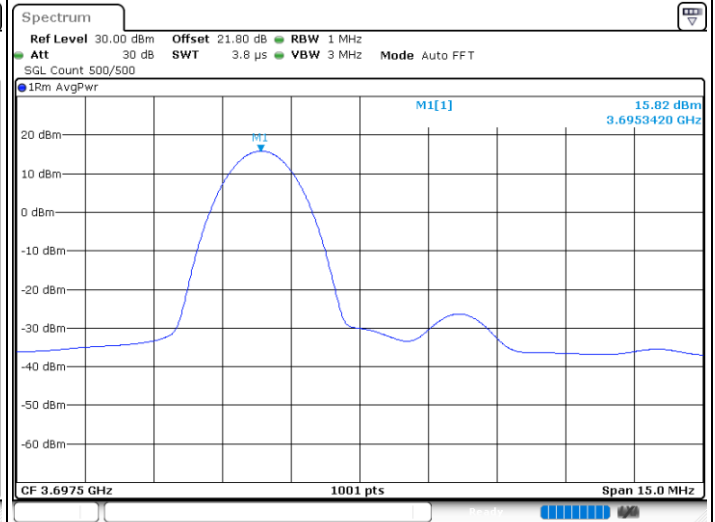
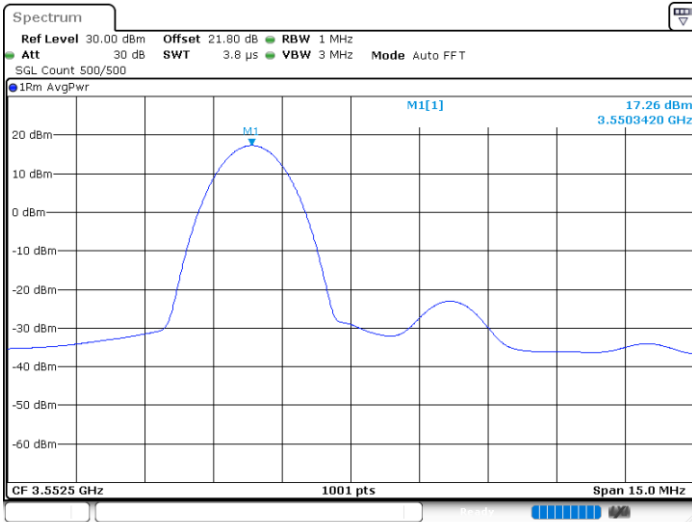


LTE Band 48 / 5MHz

64QAM

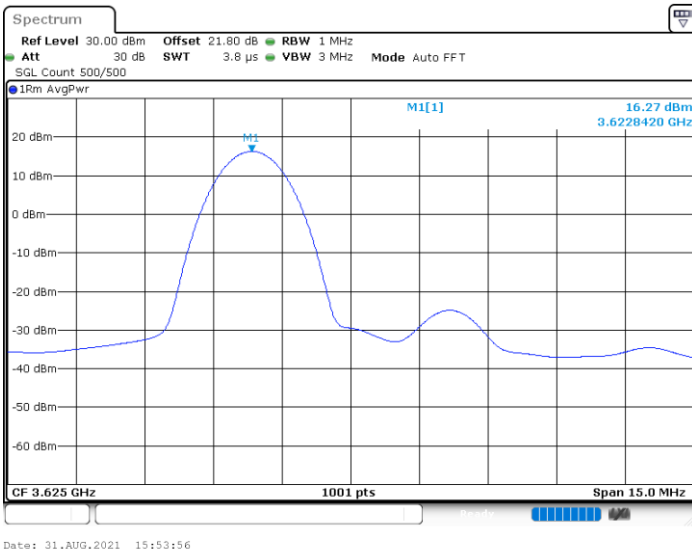
Lowest Channel / 1RB0

Highest Channel / 1RB0



Middle Channel / 1RB0

N/A



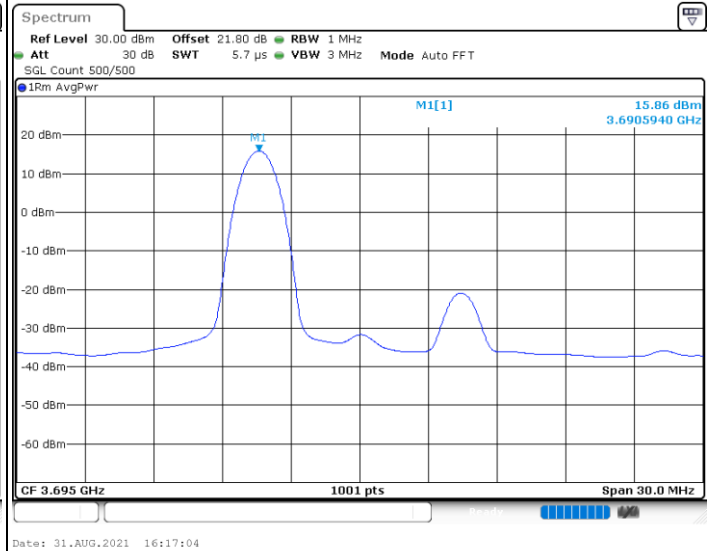
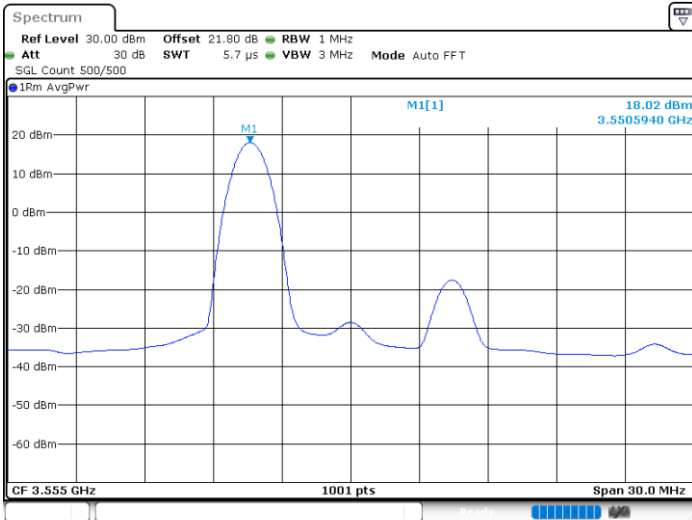


LTE Band 48 / 10MHz

64QAM

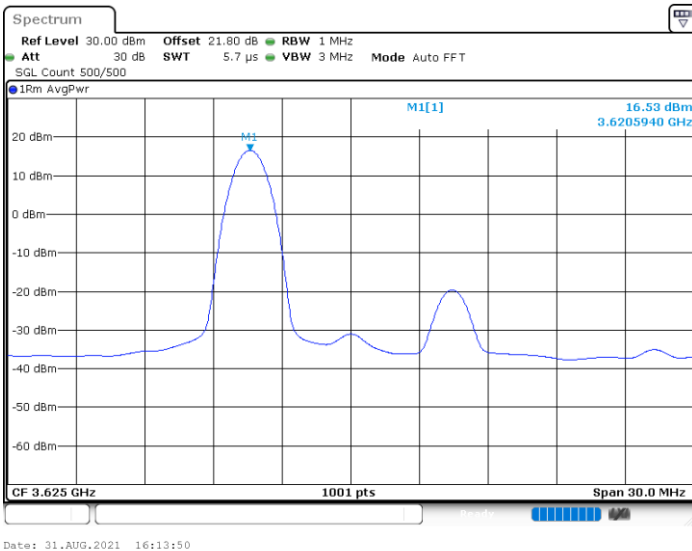
Lowest Channel / 1RB0

Highest Channel / 1RB0



MiddleChannel / 1RB0

N/A



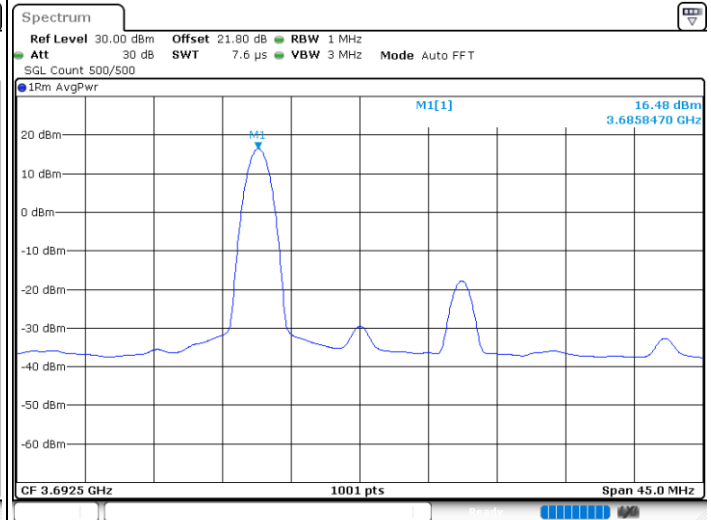
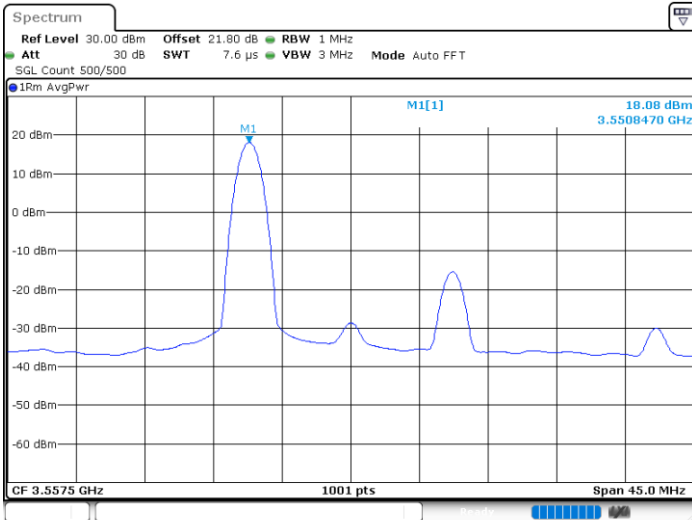


LTE Band 48 / 15MHz

64QAM

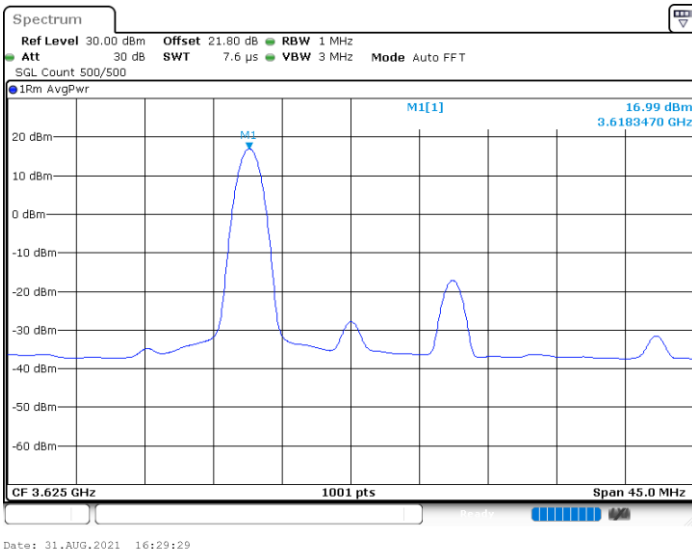
Lowest Channel / 1RB0

Highest Channel / 1RB0



Middle Channel / 1RB0

N/A



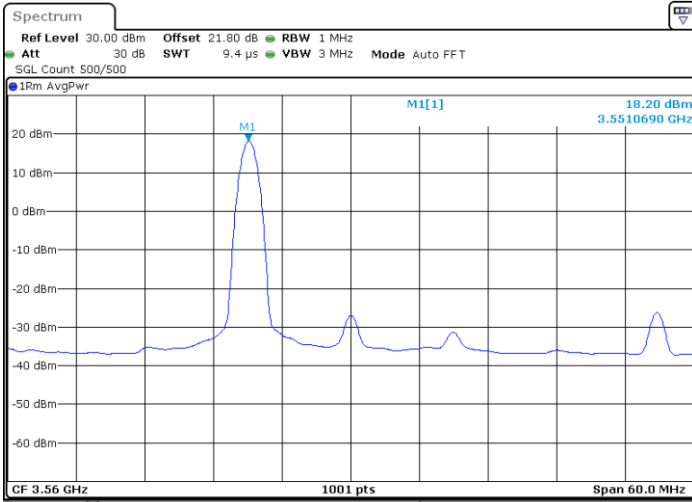


LTE Band 48 /20MHz

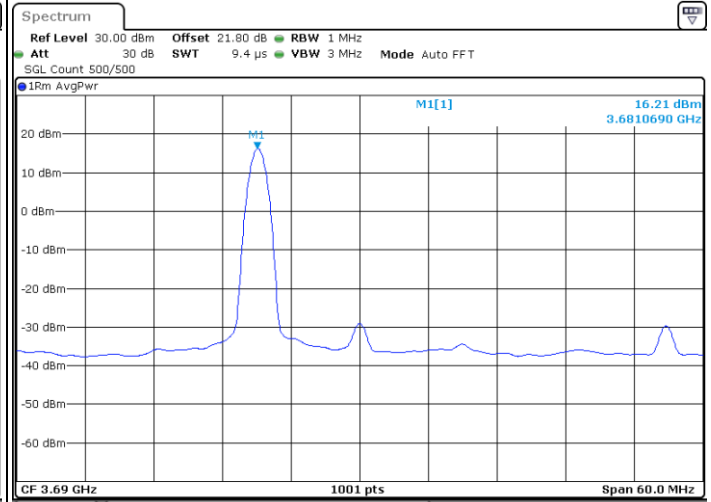
64QAM

Lowest Channel / 1RB0

Highest Channel / 1RB0



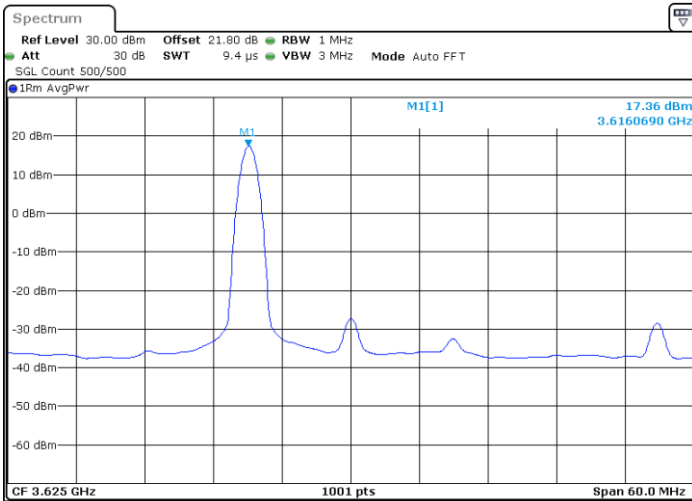
Date: 31.AUG.2021 16:38:01



Date: 31.AUG.2021 16:43:20

Middle Channel / 1RB0

N/A



Date: 31.AUG.2021 16:41:47



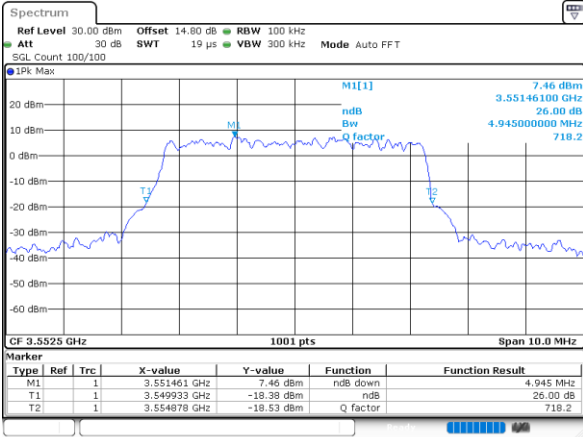
**26dB Bandwidth**

Mode	LTE Band 48 : 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	-	-	-	-	4.95	5.18	9.73	9.69	14.45	14.12	18.74	18.62
Middle CH	-	-	-	-	5.13	5.09	9.79	9.77	14.33	14.36	18.86	18.82
Highest CH	-	-	-	-	4.83	4.97	9.77	9.83	14.33	14.18	18.66	19.06
Mode	LTE Band 48 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	-	-	-	-	4.95	-	9.61	-	14.60	-	19.10	-
Middle CH	-	-	-	-	5.15	-	9.65	-	14.24	-	18.62	-
Highest CH	-	-	-	-	4.99	-	9.89	-	14.42	-	18.90	-



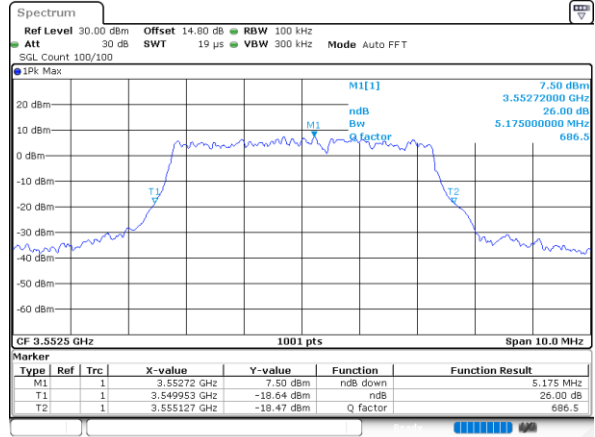
LTE Band 48

Lowest Channel / 5MHz / QPSK



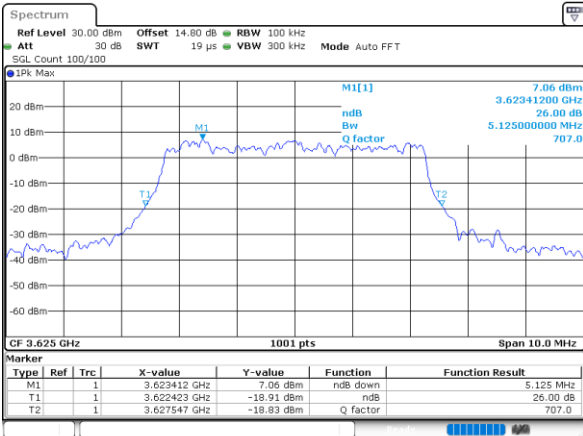
Date: 5,SEP,2021 17:40:01

Lowest Channel / 5MHz / 16QAM



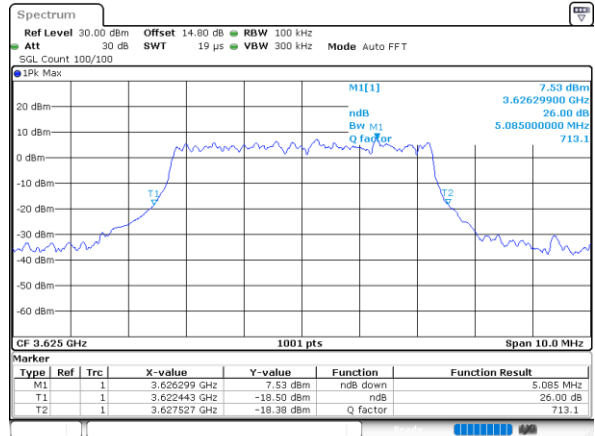
Date: 5,SEP,2021 17:40:23

Middle Channel / 5MHz / QPSK



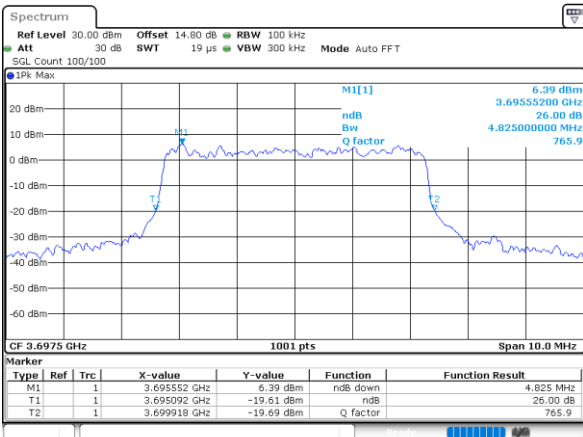
Date: 5,SEP,2021 17:42:05

Middle Channel / 5MHz / 16QAM



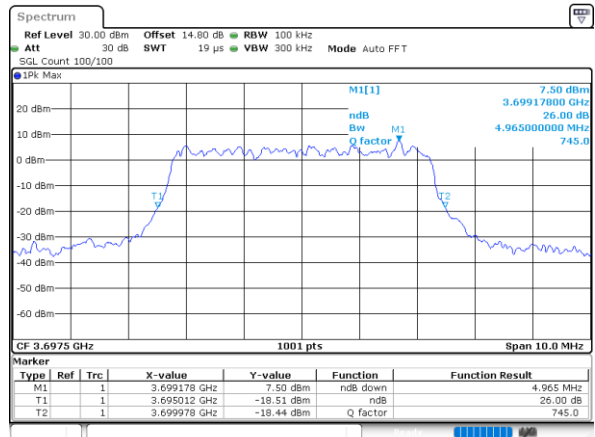
Date: 5,SEP,2021 17:41:46

Highest Channel / 5MHz / QPSK



Date: 5,SEP,2021 17:42:57

Highest Channel / 5MHz / 16QAM

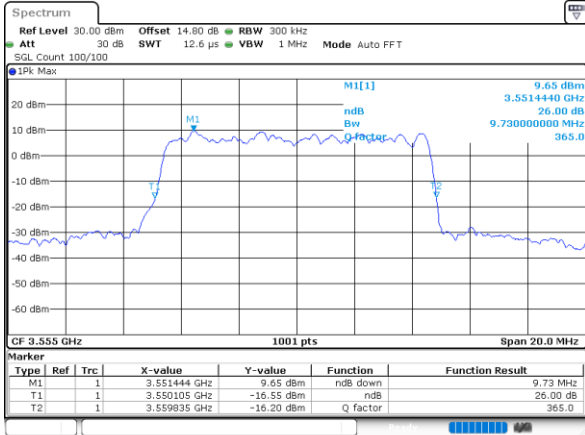


Date: 5,SEP,2021 17:43:28



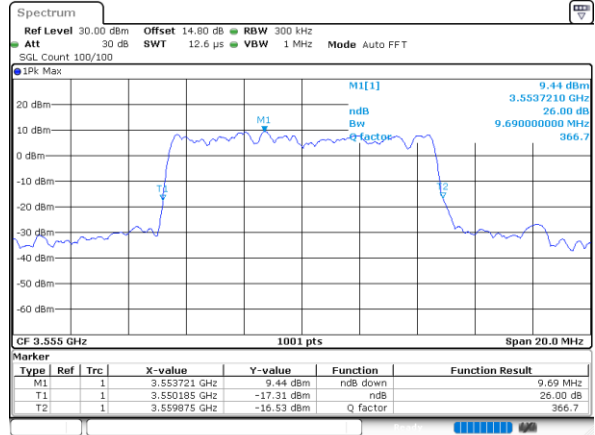
LTE Band 48

Lowest Channel / 10MHz / QPSK



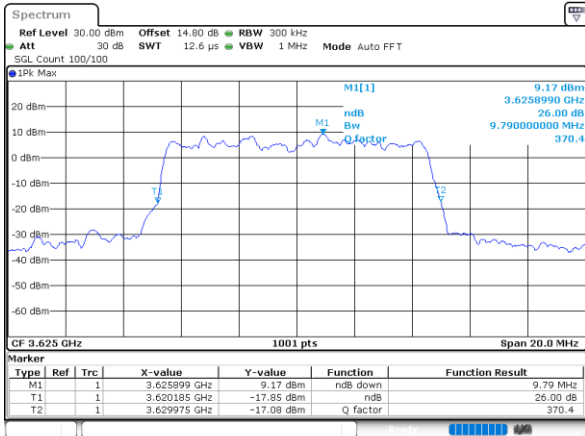
Date: 5,SEP,2021 17:45:13

Lowest Channel / 10MHz / 16QAM



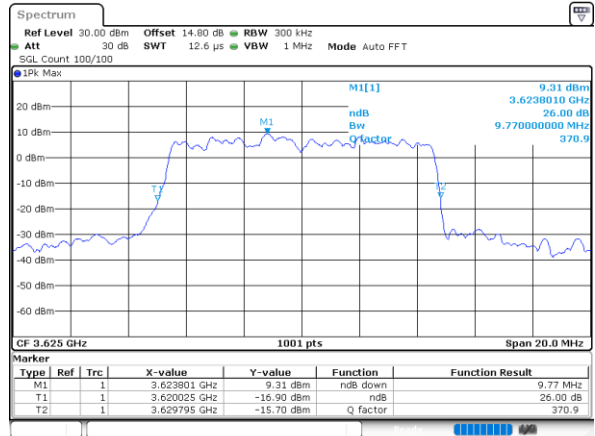
Date: 5,SEP,2021 17:44:52

Middle Channel / 10MHz / QPSK



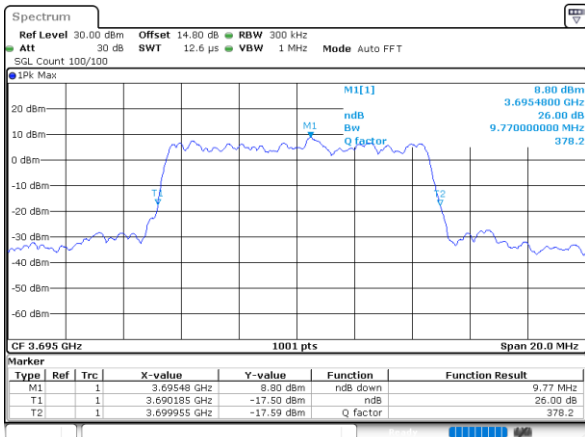
Date: 5,SEP,2021 17:45:13

Middle Channel / 10MHz / 16QAM



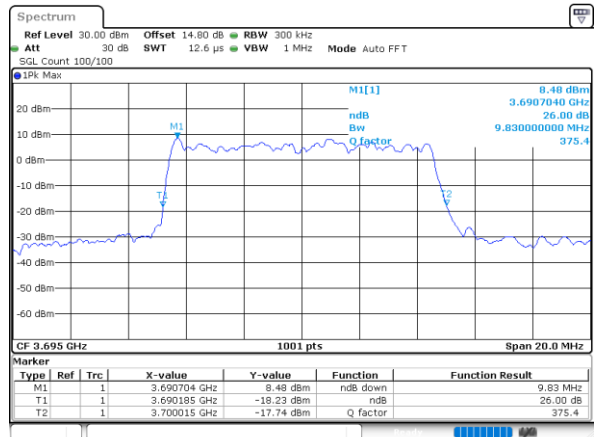
Date: 5,SEP,2021 17:46:17

Highest Channel / 10MHz / QPSK



Date: 5,SEP,2021 17:48:06

Highest Channel / 10MHz / 16QAM



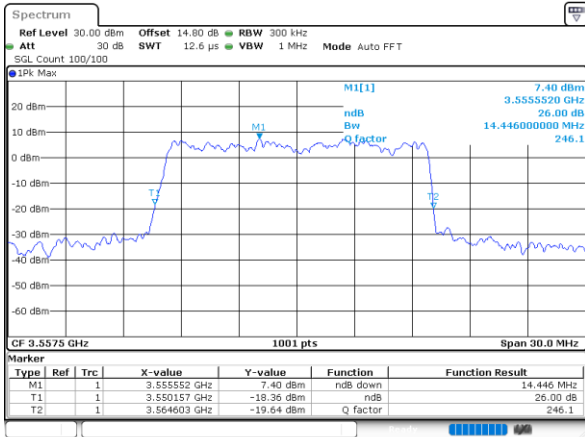
Date: 5,SEP,2021 17:47:45





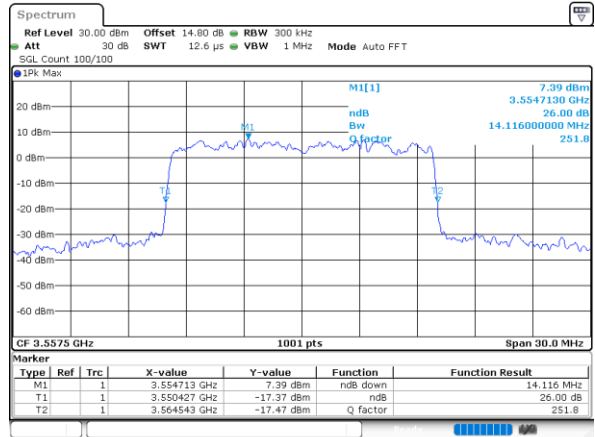
LTE Band 48

Lowest Channel / 15MHz / QPSK



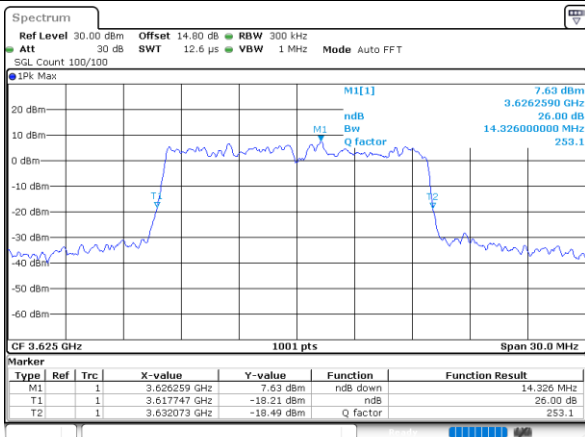
Date: 5\_SEP.2021 17:48:48

Lowest Channel / 15MHz / 16QAM



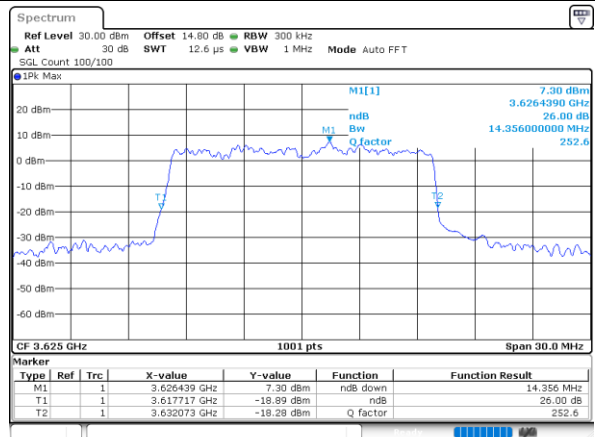
Date: 5\_SEP.2021 17:49:19

Middle Channel / 15MHz / QPSK



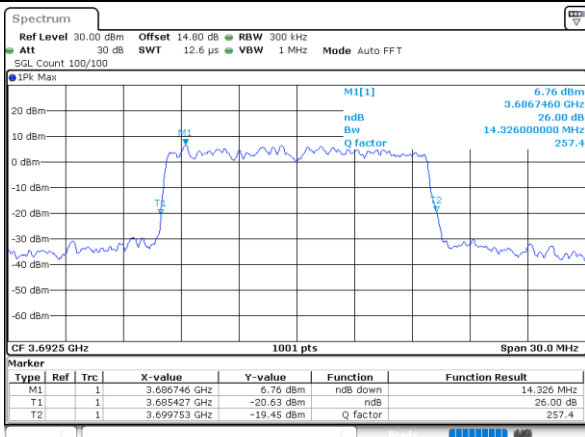
Date: 5\_SEP.2021 17:51:53

Middle Channel / 15MHz / 16QAM



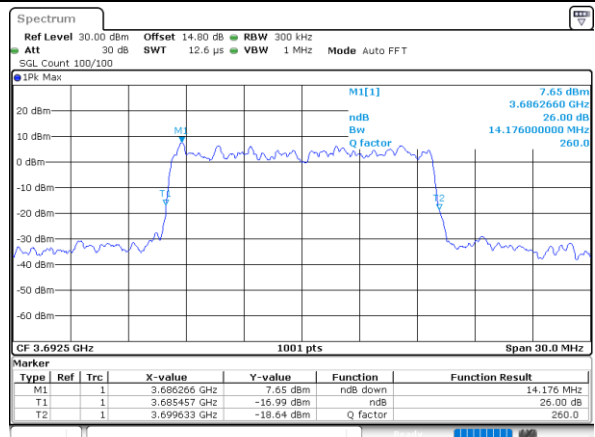
Date: 5\_SEP.2021 17:51:28

Highest Channel / 15MHz / QPSK



Date: 5\_SEP.2021 17:52:27

Highest Channel / 15MHz / 16QAM

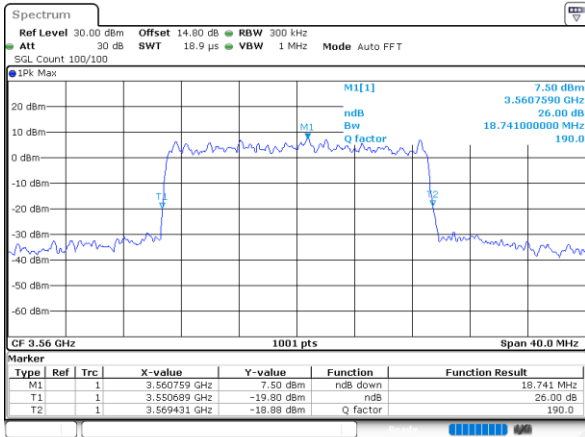


Date: 5\_SEP.2021 17:53:09



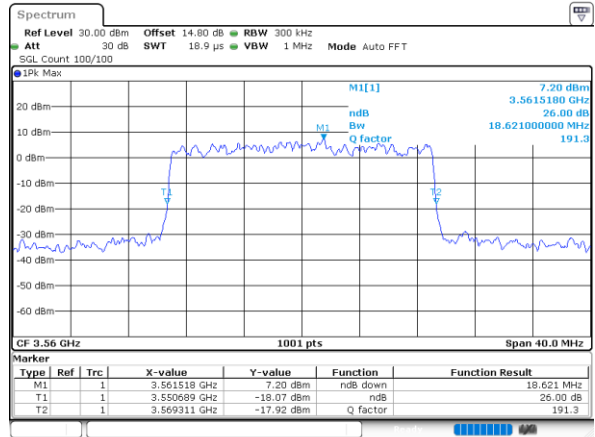
LTE Band 48

Lowest Channel / 20MHz / QPSK



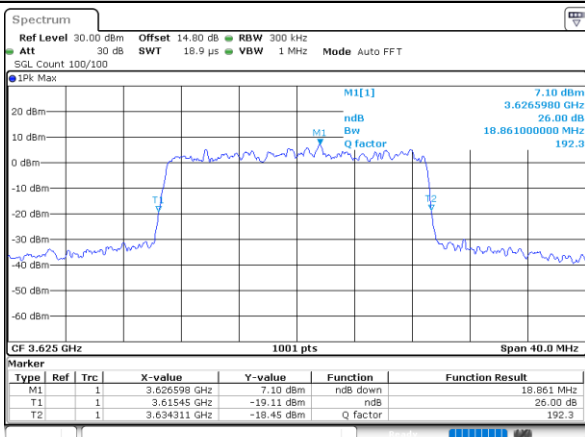
Date: 5\_SEP.2021 17:55:28

Lowest Channel / 20MHz / 16QAM



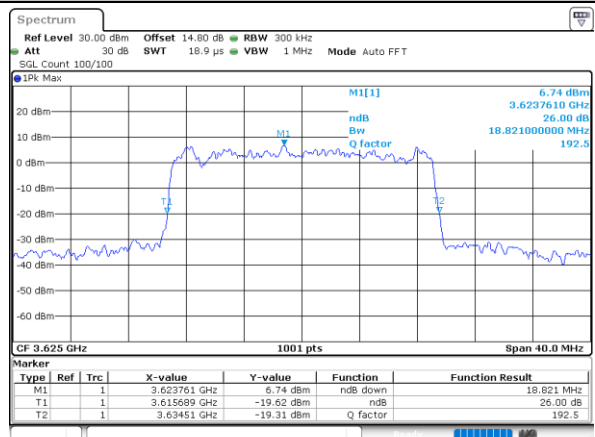
Date: 5\_SEP.2021 17:55:57

Middle Channel / 20MHz / QPSK



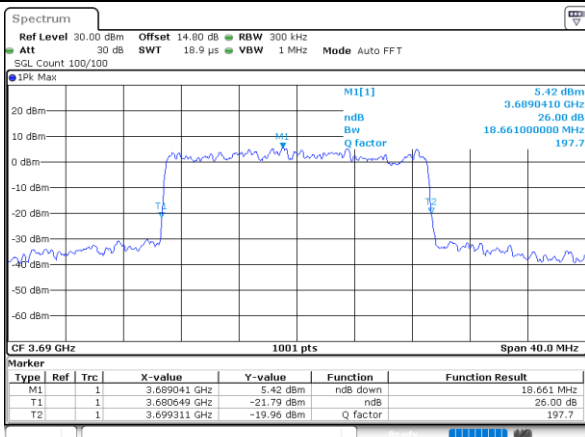
Date: 5\_SEP.2021 17:58:11

Middle Channel / 20MHz / 16QAM



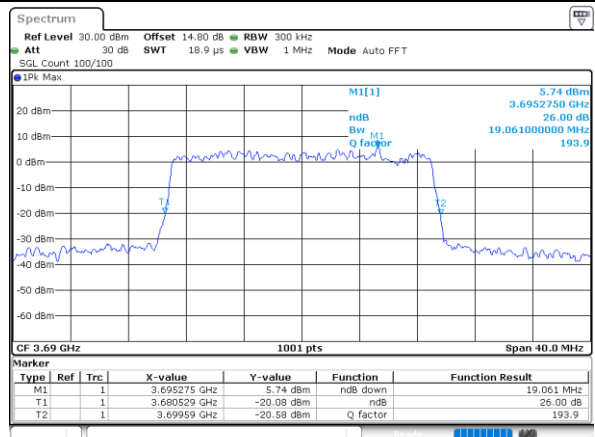
Date: 5\_SEP.2021 17:57:37

Highest Channel / 20MHz / QPSK



Date: 5\_SEP.2021 18:00:14

Highest Channel / 20MHz / 16QAM

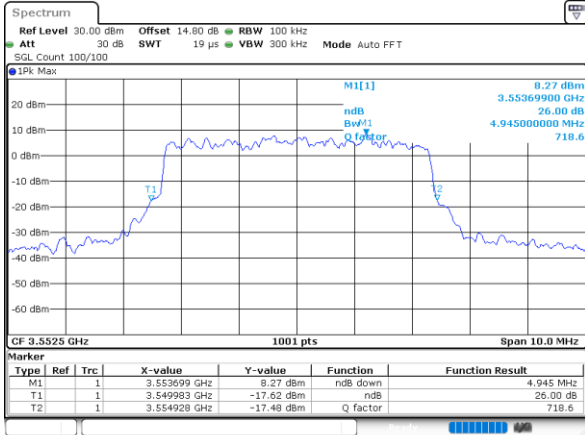


Date: 5\_SEP.2021 18:00:54



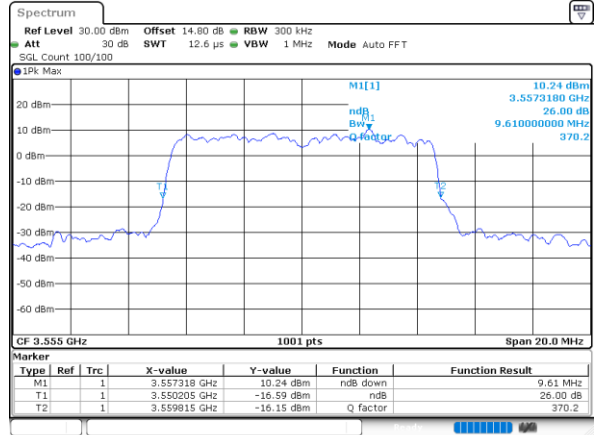
LTE Band 48

Lowest Channel / 5MHz / 64QAM



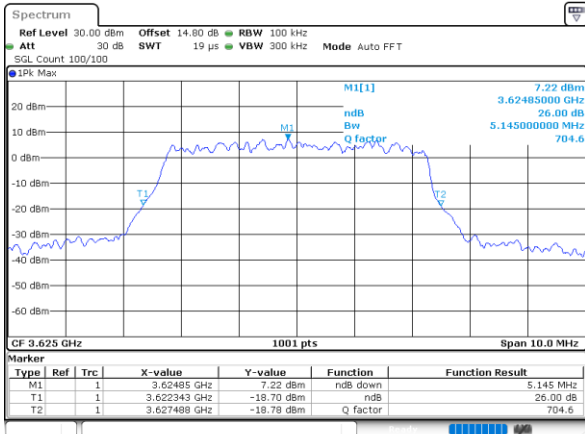
Date: 5,SEP,2021 17:40:48

Lowest Channel / 10MHz / 64QAM



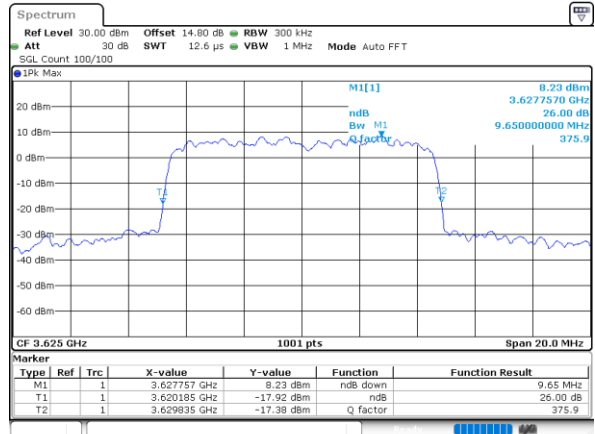
Date: 5,SEP,2021 17:44:31

Middle Channel / 5MHz / 64QAM



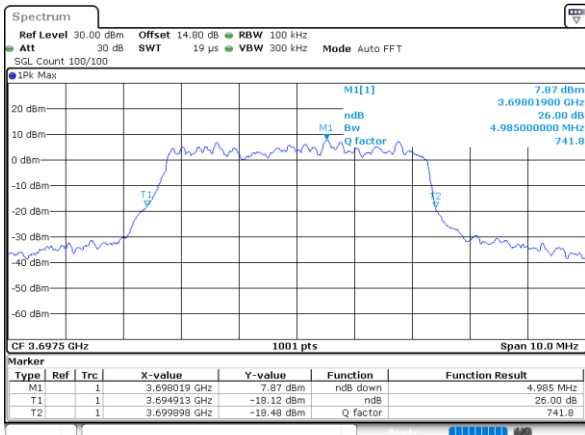
Date: 5,SEP,2021 17:41:10

Middle Channel / 10MHz / 64QAM



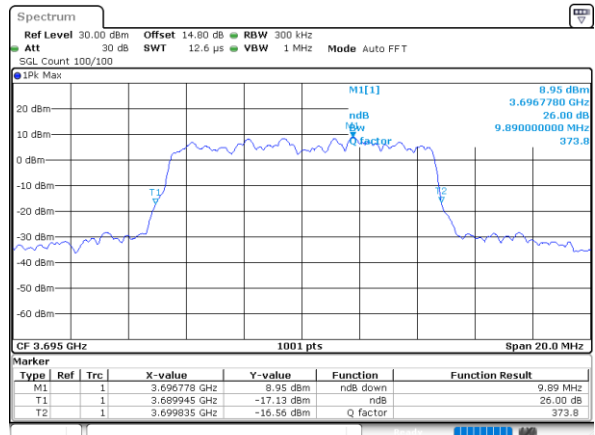
Date: 5,SEP,2021 17:46:39

Highest Channel / 5MHz / 64QAM



Date: 5,SEP,2021 17:43:54

Highest Channel / 10MHz / 64QAM

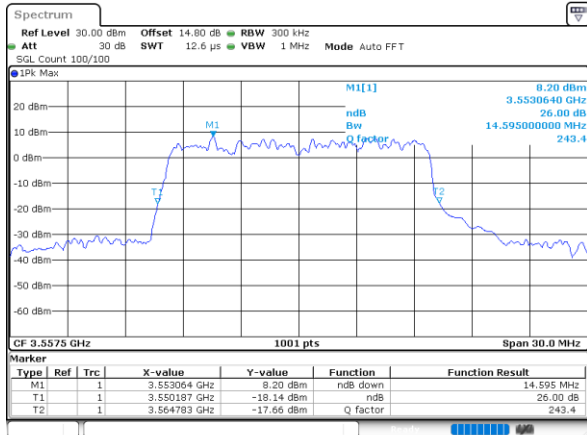


Date: 5,SEP,2021 17:47:20



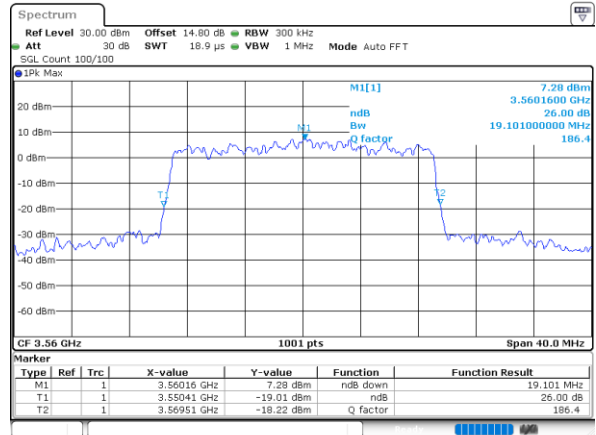
LTE Band 48

Lowest Channel / 15MHz / 64QAM



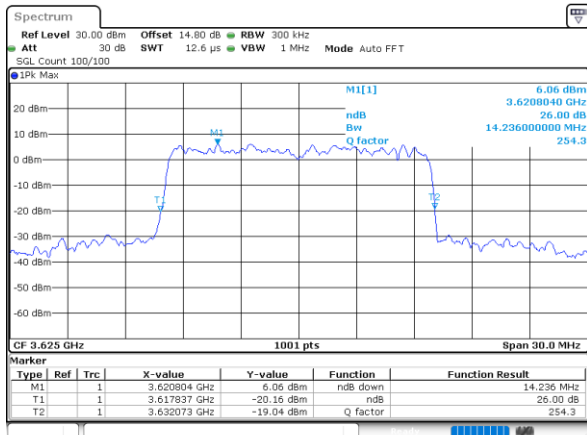
Date: 5,SEP,2021 17:50:18

Lowest Channel / 20MHz / 64QAM



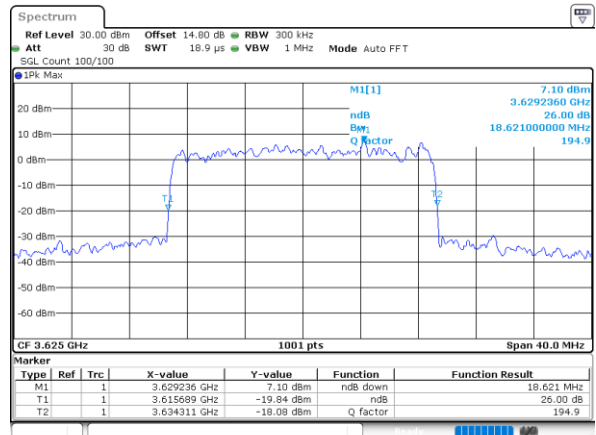
Date: 5,SEP,2021 17:56:20

Middle Channel / 15MHz / 64QAM



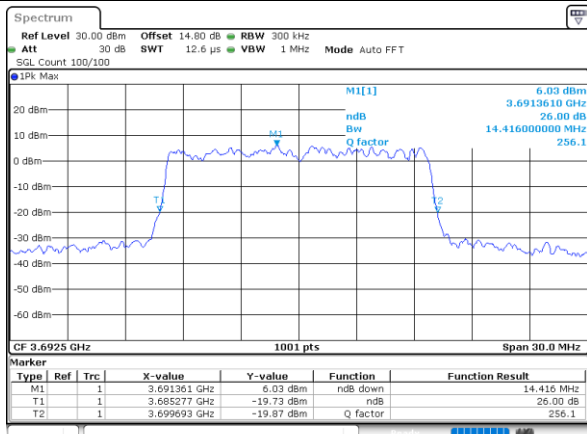
Date: 5,SEP,2021 17:51:00

Middle Channel / 20MHz / 64QAM



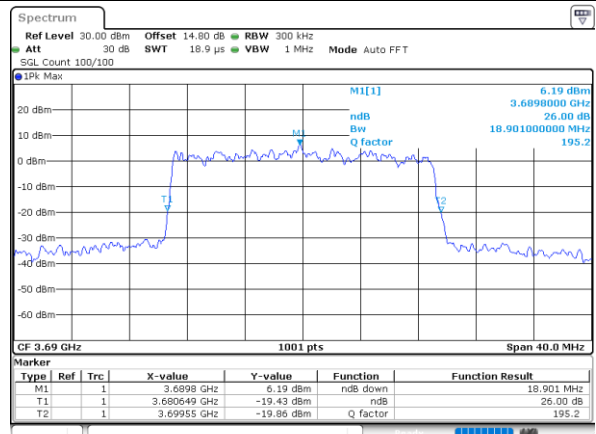
Date: 5,SEP,2021 17:56:51

Highest Channel / 15MHz / 64QAM



Date: 5,SEP,2021 17:54:05

Highest Channel / 20MHz / 64QAM



Date: 5,SEP,2021 18:01:15



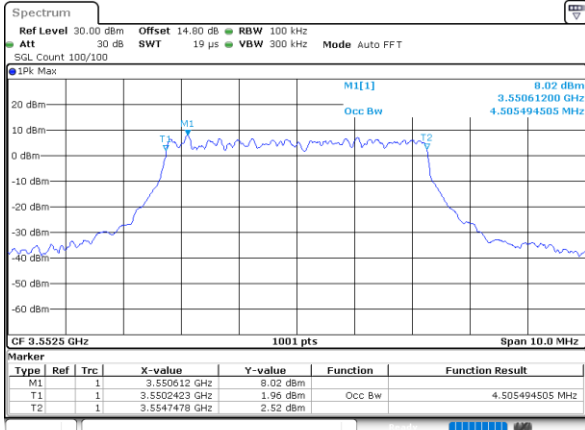
Occupied Bandwidth

Mode	LTE Band 48 : 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	-	-	-	-	4.51	4.49	9.03	9.01	13.46	13.49	17.82	17.78
Middle CH	-	-	-	-	4.51	4.50	9.07	9.01	13.43	13.52	17.82	17.82
Highest CH	-	-	-	-	4.49	4.51	9.03	8.99	13.46	13.43	17.94	17.74
Mode	LTE Band 48 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	-	-	-	-	4.52	-	9.01	-	13.40	-	17.90	-
Middle CH	-	-	-	-	4.50	-	9.03	-	13.43	-	17.78	-
Highest CH	-	-	-	-	4.44	-	9.01	-	13.46	-	17.90	-



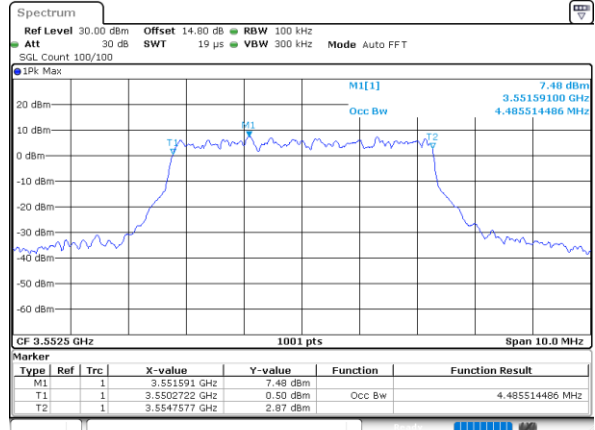
LTE Band 48

Lowest Channel / 5MHz / QPSK



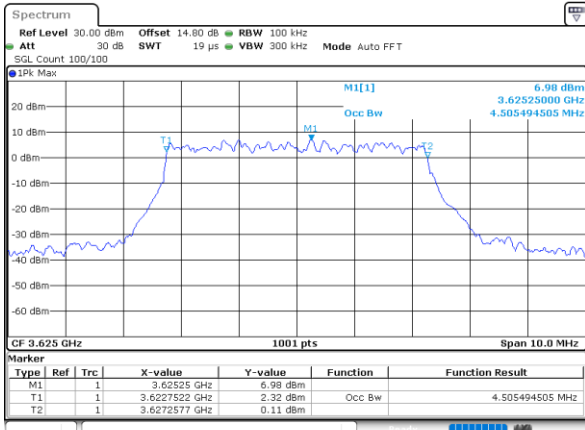
Date: 5,SEP,2021 17:39:54

Lowest Channel / 5MHz / 16QAM



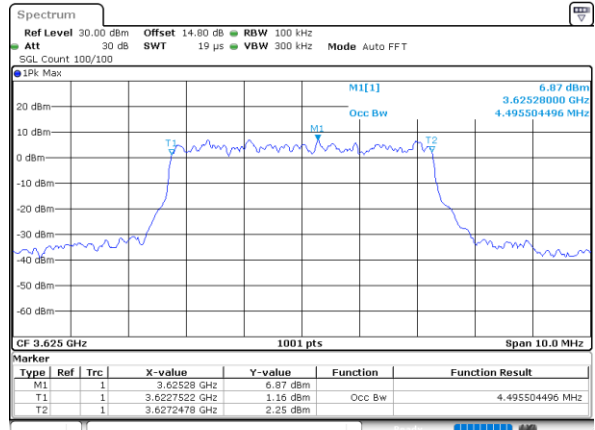
Date: 5,SEP,2021 17:40:16

Middle Channel / 5MHz / QPSK



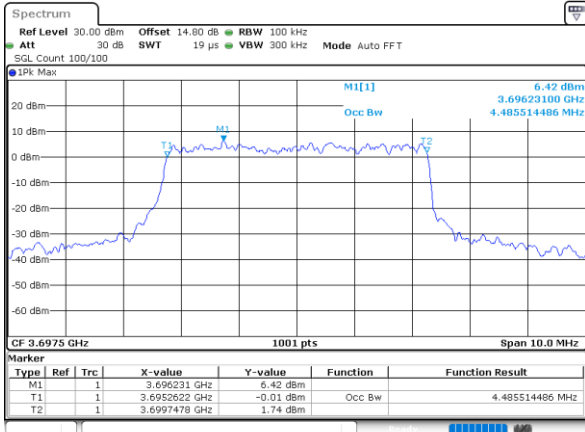
Date: 5,SEP,2021 17:41:50

Middle Channel / 5MHz / 16QAM



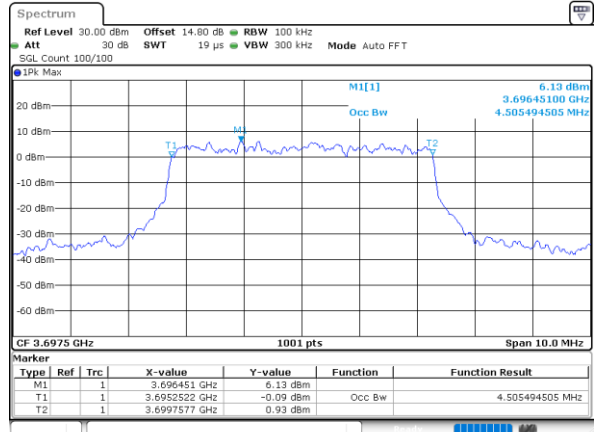
Date: 5,SEP,2021 17:41:39

Highest Channel / 5MHz / QPSK



Date: 5,SEP,2021 17:42:42

Highest Channel / 5MHz / 16QAM

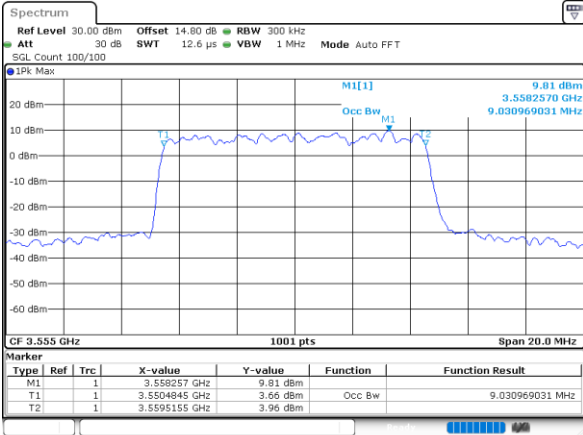


Date: 5,SEP,2021 17:43:12



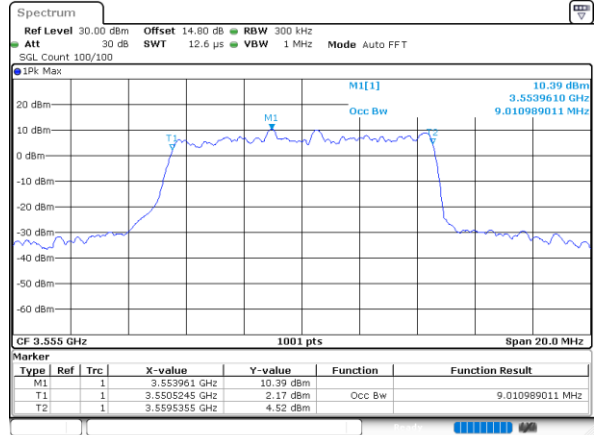
LTE Band 48

Lowest Channel / 10MHz / QPSK



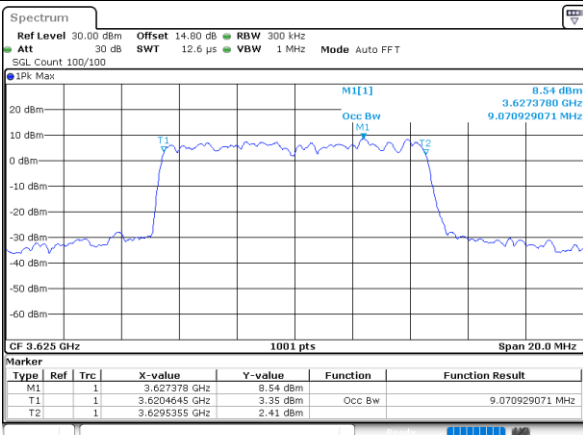
Date: 5,SEP,2021 17:45:05

Lowest Channel / 10MHz / 16QAM



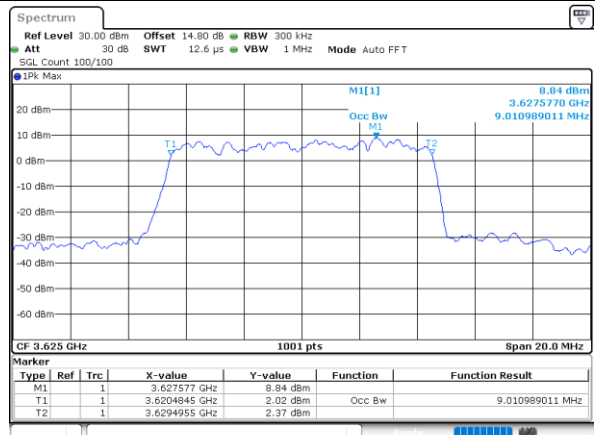
Date: 5,SEP,2021 17:44:45

Middle Channel / 10MHz / QPSK



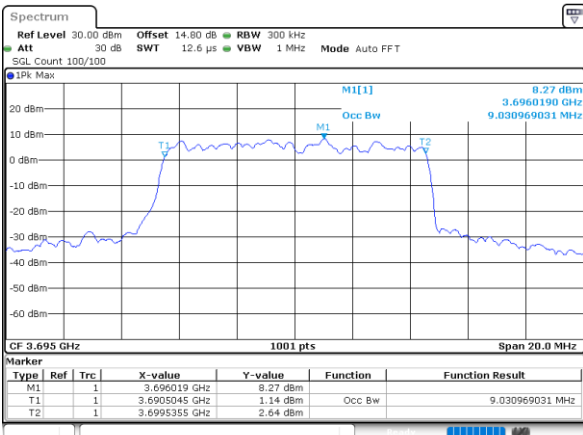
Date: 5,SEP,2021 17:45:14

Middle Channel / 10MHz / 16QAM



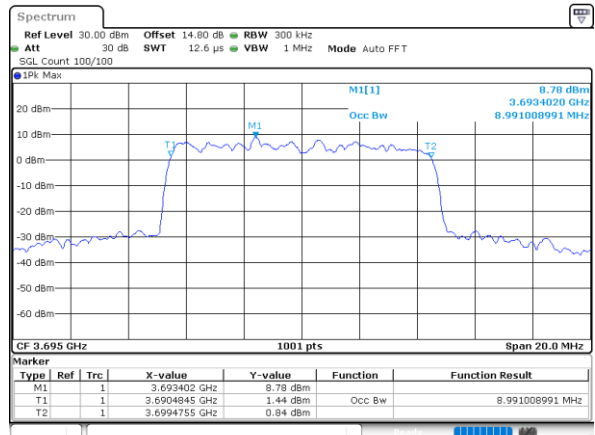
Date: 5,SEP,2021 17:46:10

Highest Channel / 10MHz / QPSK



Date: 5,SEP,2021 17:47:58

Highest Channel / 10MHz / 16QAM

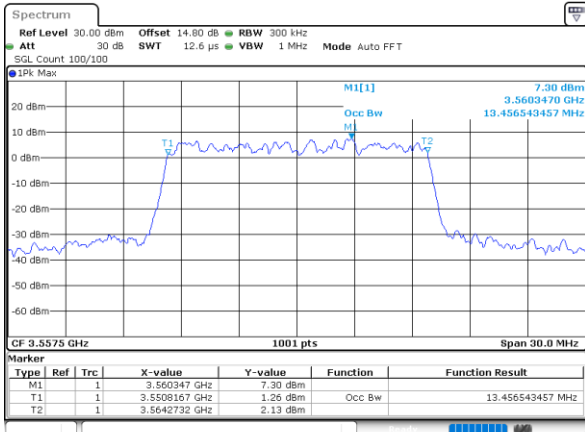


Date: 5,SEP,2021 17:47:36



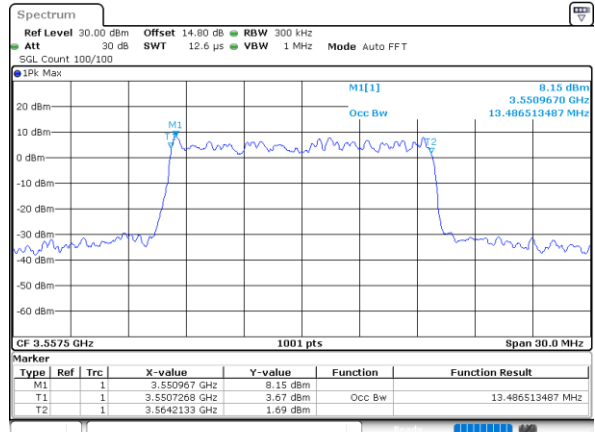
LTE Band 48

Lowest Channel / 15MHz / QPSK



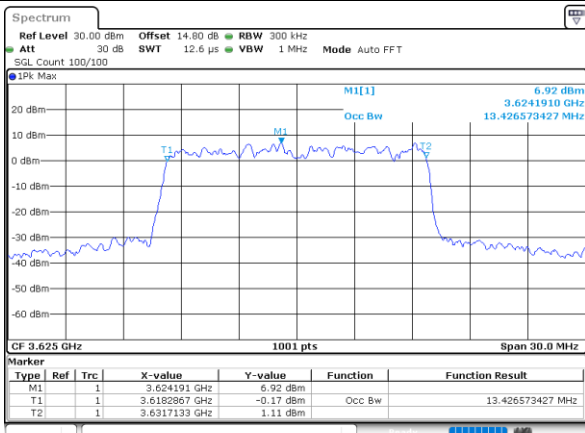
Date: 5\_SEP.2021 17:48:38

Lowest Channel / 15MHz / 16QAM



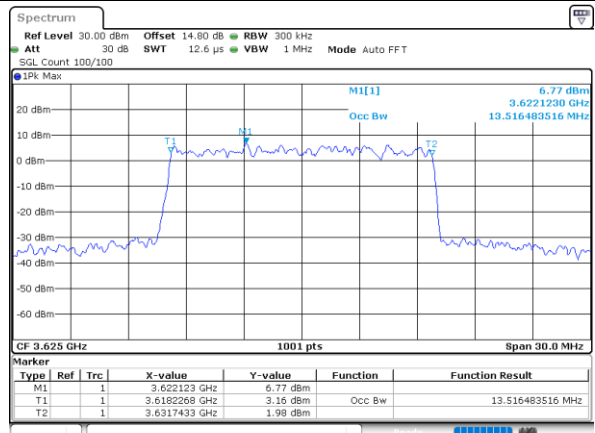
Date: 5\_SEP.2021 17:49:28

Middle Channel / 15MHz / QPSK



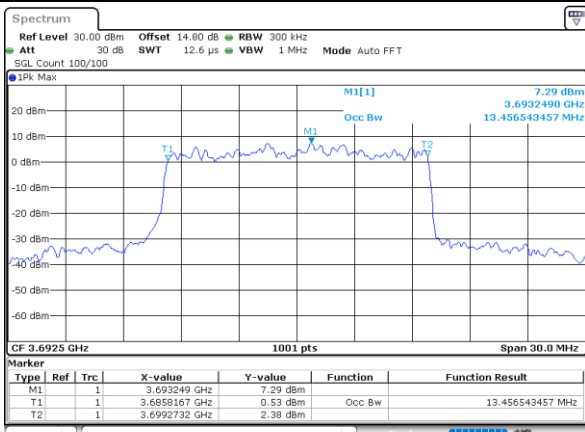
Date: 5\_SEP.2021 17:51:45

Middle Channel / 15MHz / 16QAM



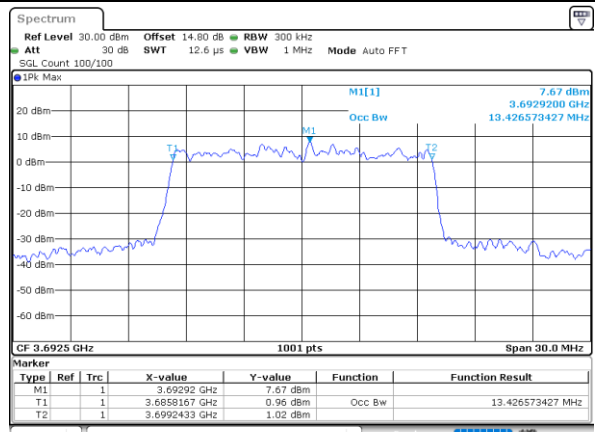
Date: 5\_SEP.2021 17:51:19

Highest Channel / 15MHz / QPSK



Date: 5\_SEP.2021 17:52:17

Highest Channel / 15MHz / 16QAM



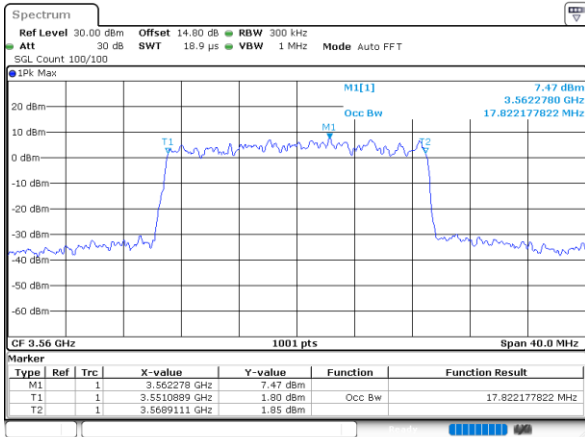
Date: 5\_SEP.2021 17:53:02



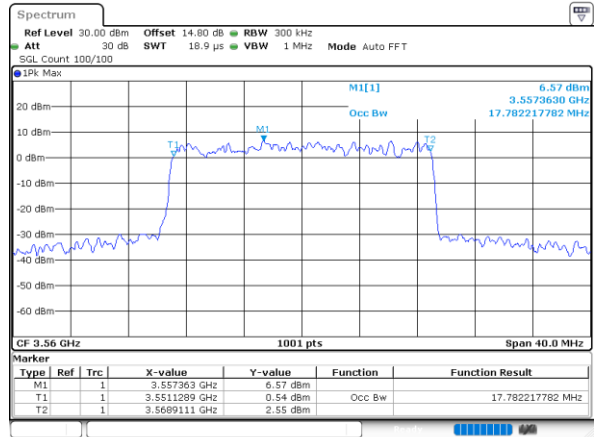


LTE Band 48

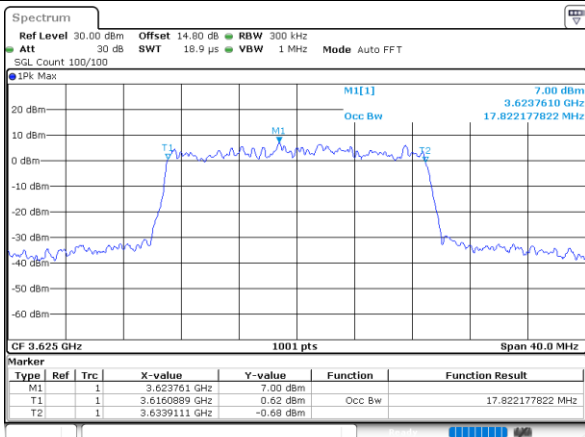
Lowest Channel / 20MHz / QPSK



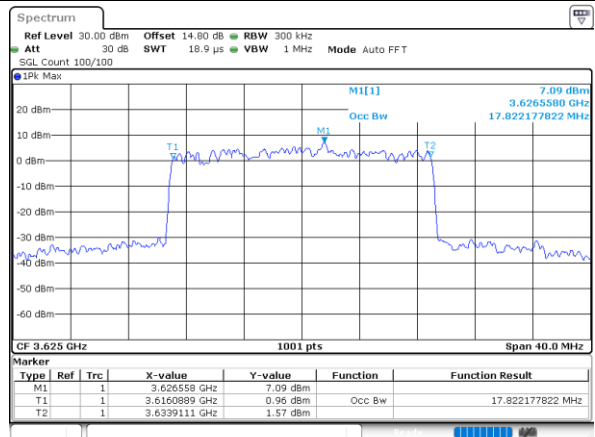
Lowest Channel / 20MHz / 16QAM



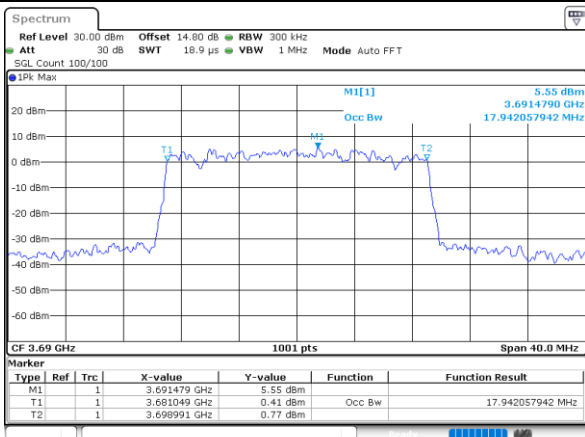
Middle Channel / 20MHz / QPSK



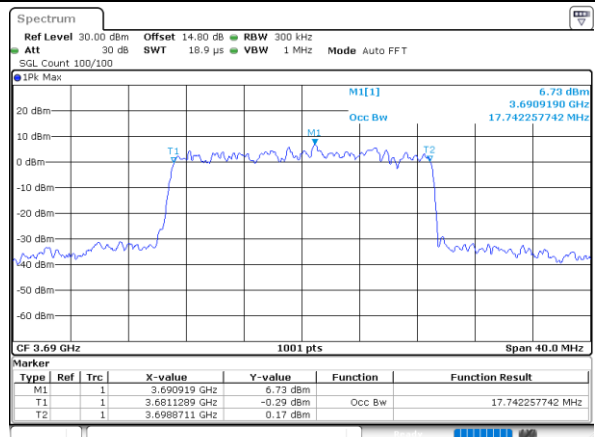
Middle Channel / 20MHz / 16QAM



Highest Channel / 20MHz / QPSK



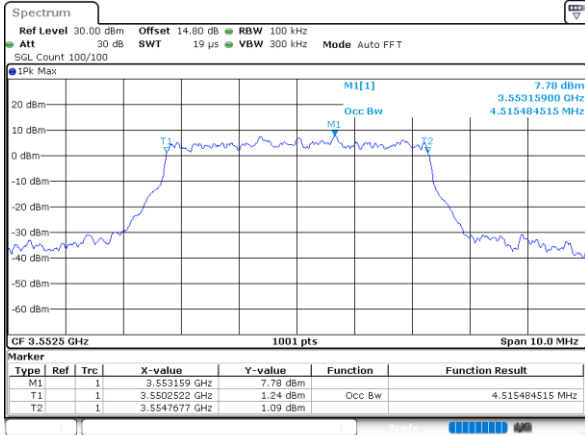
Highest Channel / 20MHz / 16QAM





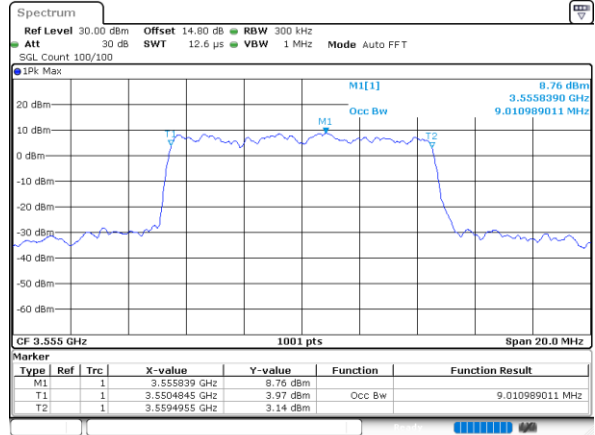
LTE Band 48

Lowest Channel / 5MHz / 64QAM



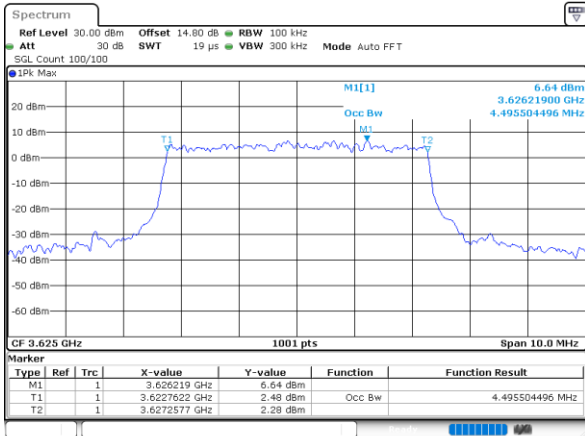
Date: 5\_SEP\_2021 17:40:42

Lowest Channel / 10MHz / 64QAM



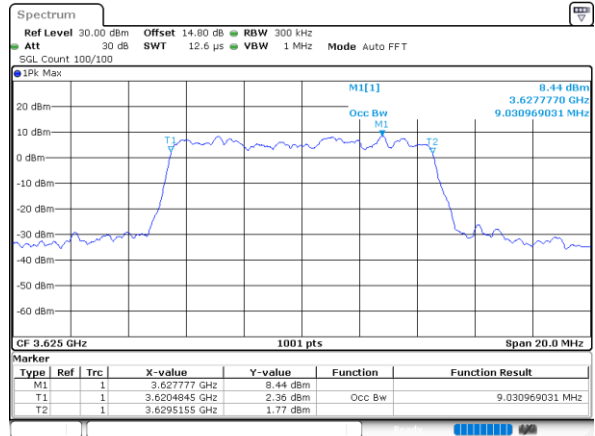
Date: 5\_SEP\_2021 17:44:21

Middle Channel / 5MHz / 64QAM



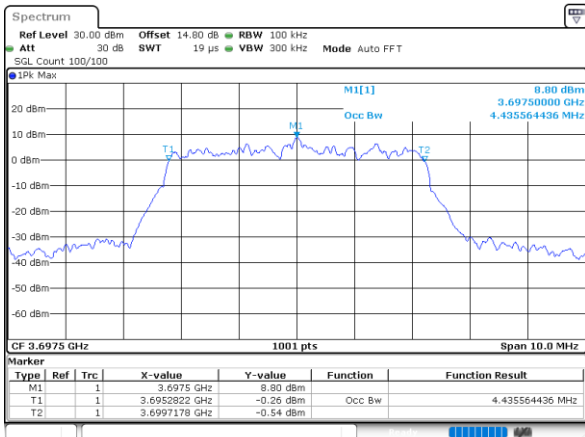
Date: 5\_SEP\_2021 17:41:09

Middle Channel / 10MHz / 64QAM



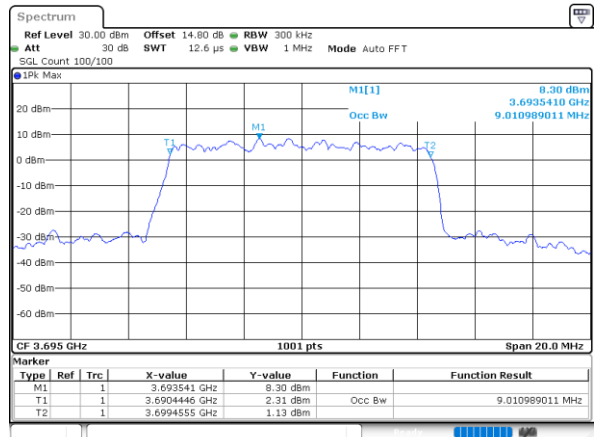
Date: 5\_SEP\_2021 17:46:31

Highest Channel / 5MHz / 64QAM



Date: 5\_SEP\_2021 17:43:46

Highest Channel / 10MHz / 64QAM



Date: 5\_SEP\_2021 17:47:13