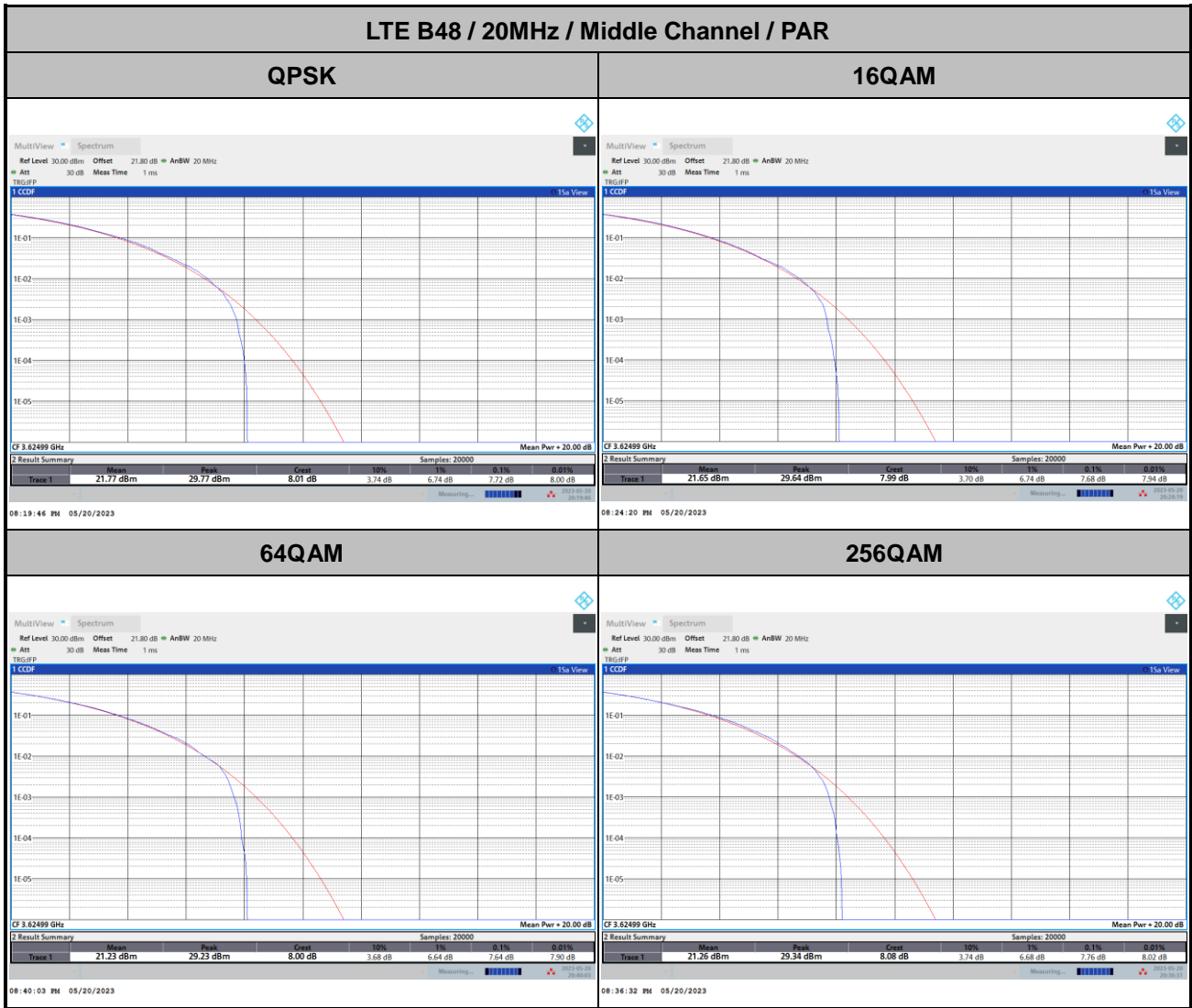




# Peak-to-Average Ratio

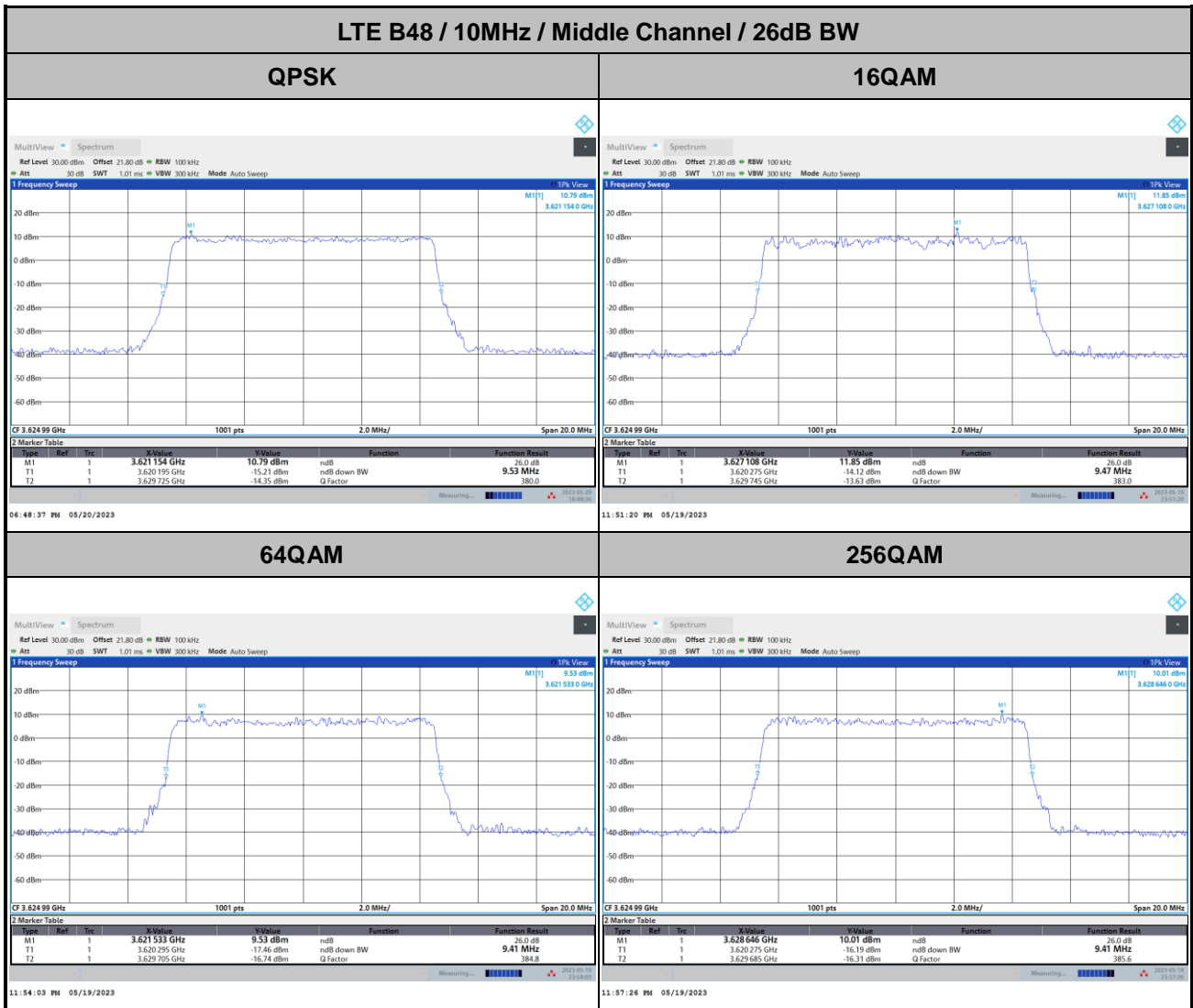
Mode	LTE B48 / 20MHz / PAR (dB)				Limit: 13dB
Mod.	QPSK	16QAM	64QAM	256QAM	Result
Middle CH	7.72	7.68	7.64	7.76	PASS





# 26dB Bandwidth

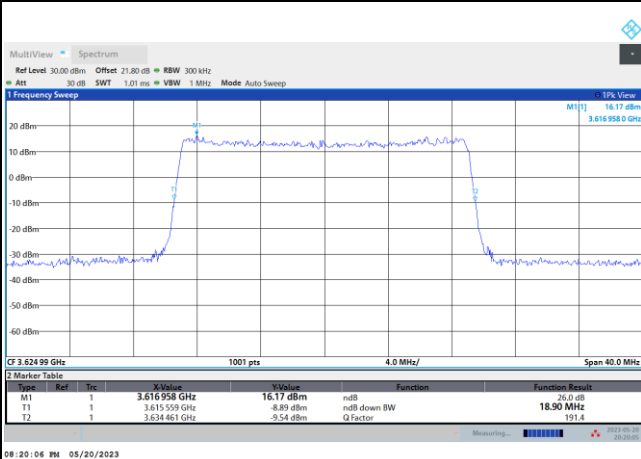
Mode	LTE B48 : 26dB BW(MHz)							
	10MHz		20MHz		40MHz		50MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	9.53	9.47	18.90	18.90	-	-	-	-
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM
Middle CH	9.41	9.41	18.98	18.98	-	-	-	-



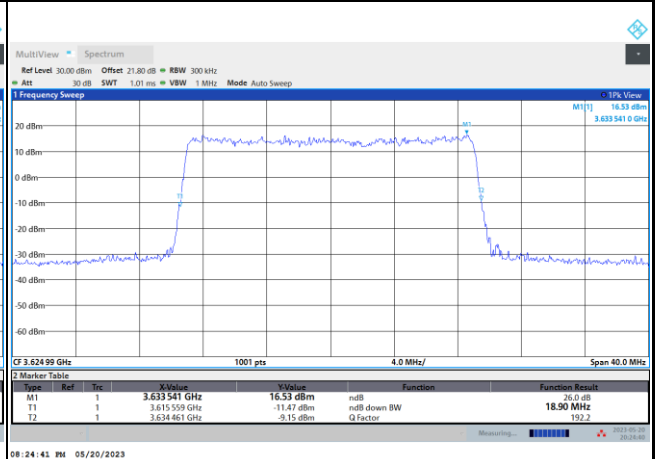


LTE B48 / 20MHz / Middle Channel / 26dB BW

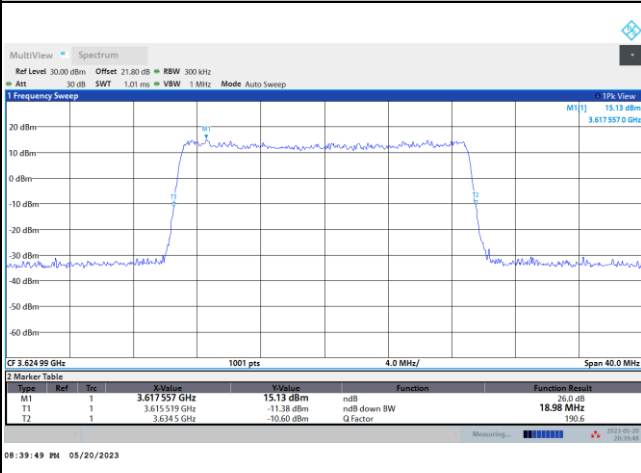
QPSK



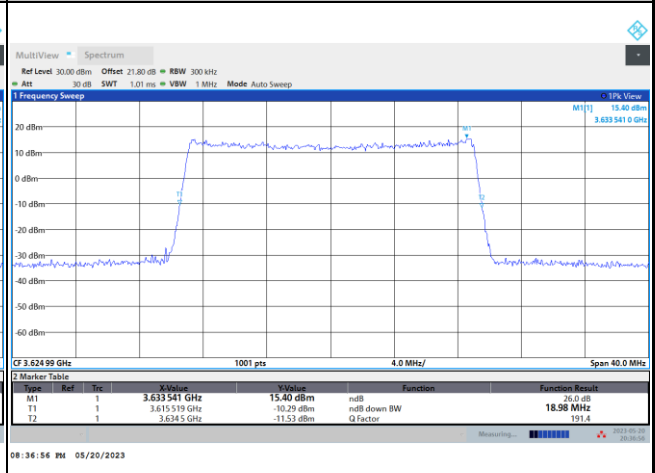
16QAM



64QAM



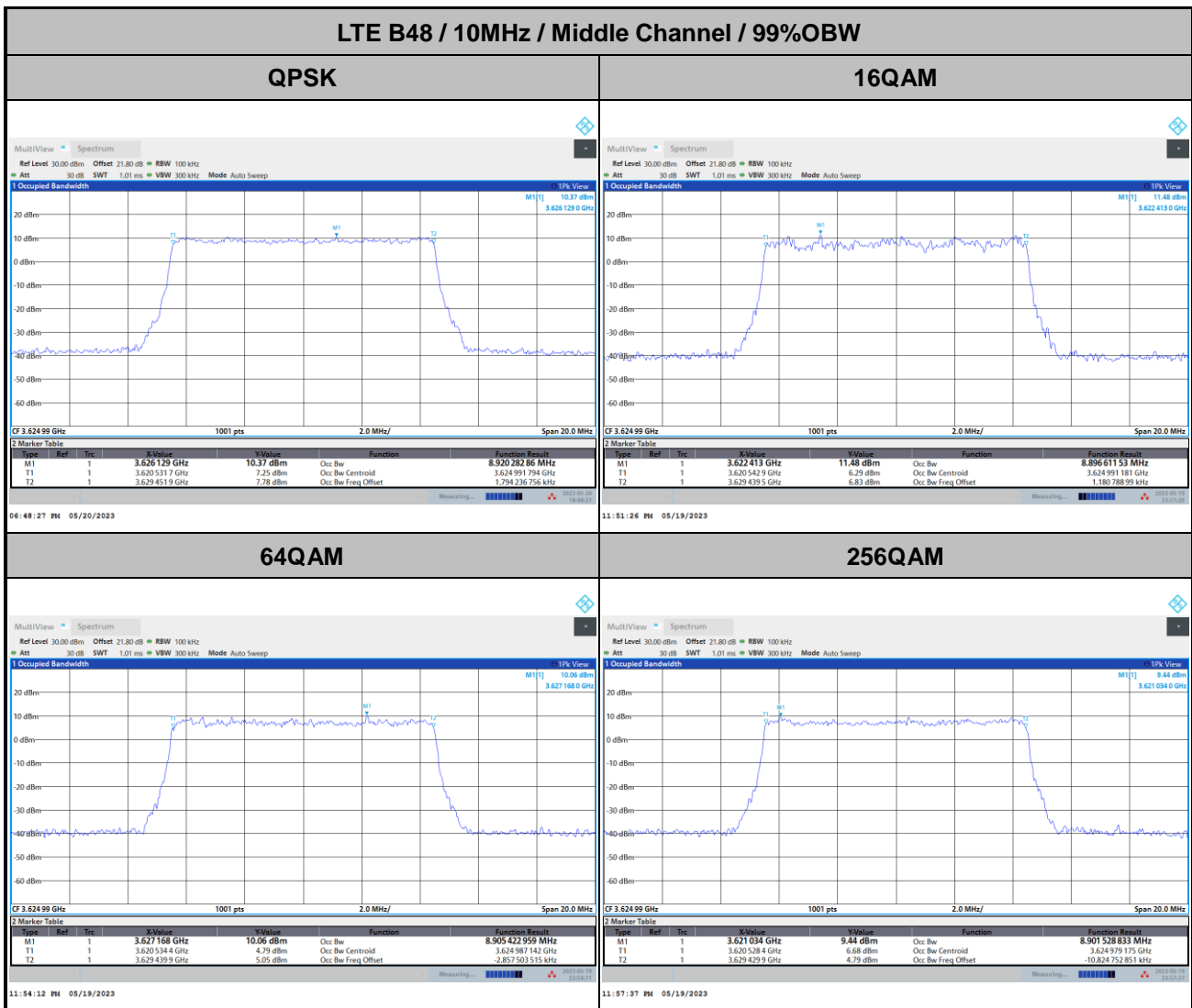
256QAM





# Occupied Bandwidth

Mode		LTE B48 : 99%OBW (MHz)							
BW		10MHz		20MHz		40MHz		50MHz	
Mod.		QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH		8.92	8.89	17.92	17.89	-	-	-	-
Mod.		64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM
Middle CH		8.90	8.90	17.89	17.90	-	-	-	-

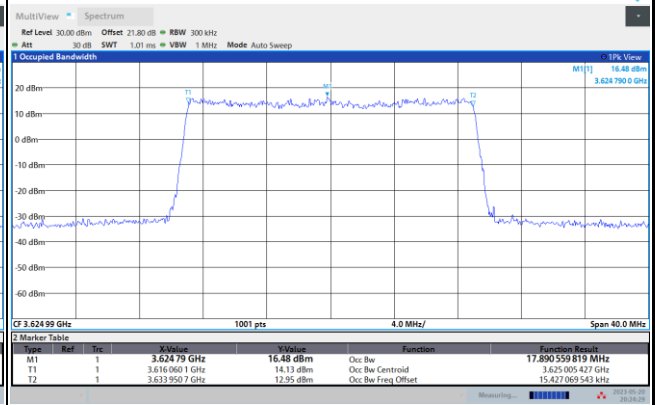
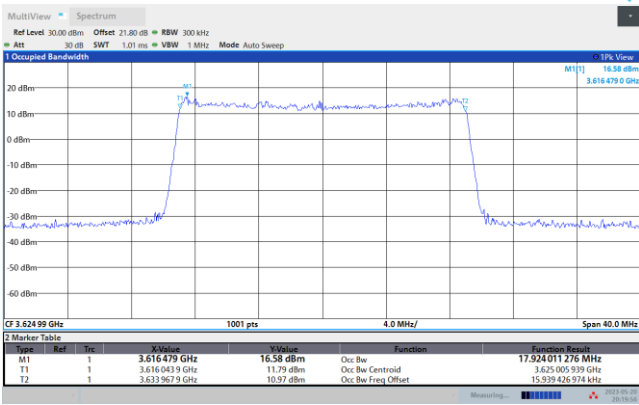




LTE B48 / 20MHz / Middle Channel / 99%OBW

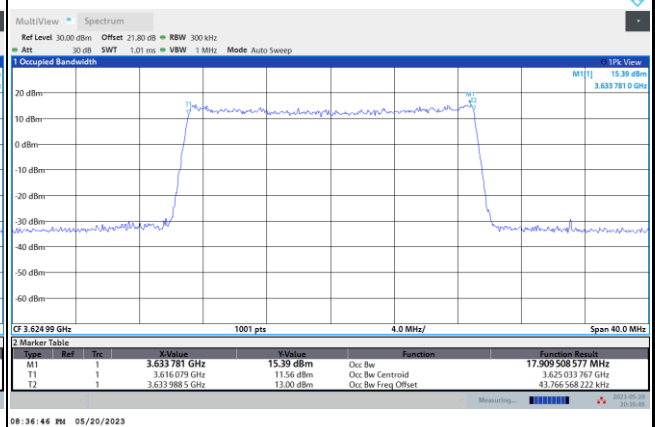
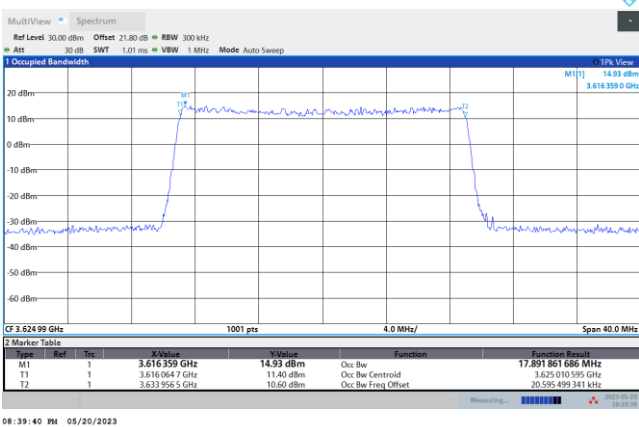
QPSK

16QAM



64QAM

256QAM



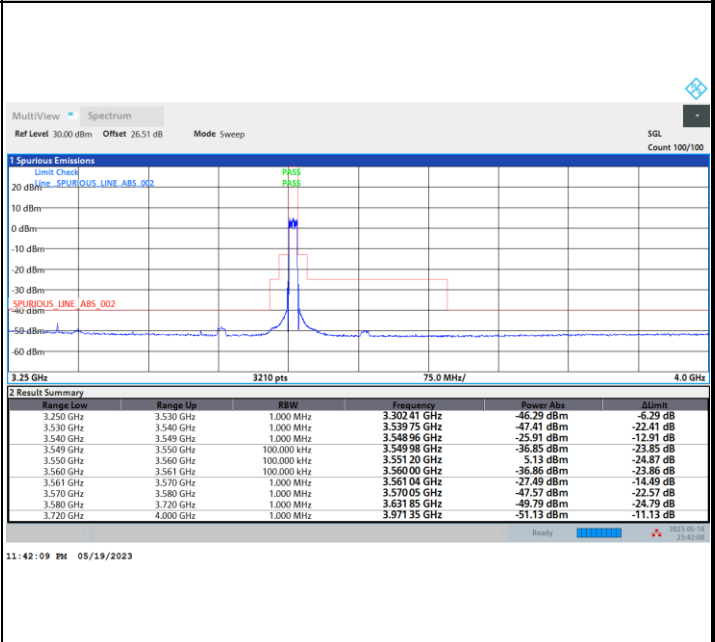
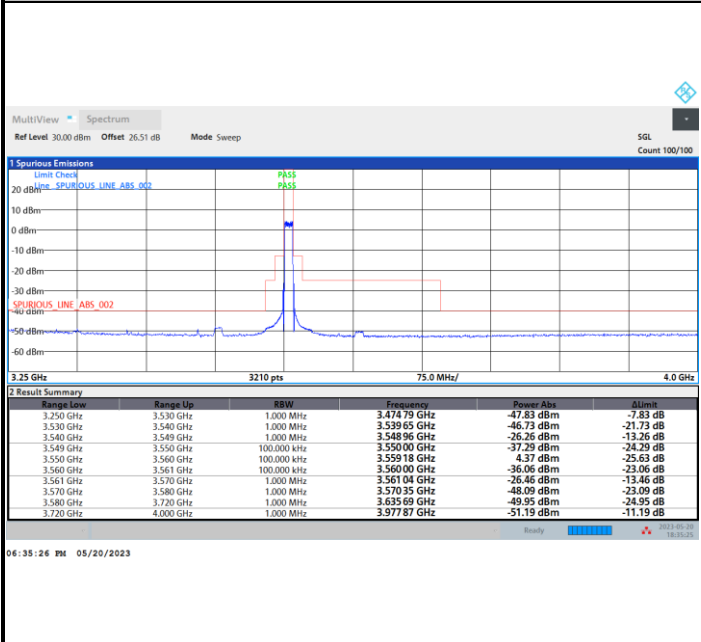


Unwanted Emission (MASK)

LTE B48 / 10MHz / Lowest Channel / MASK

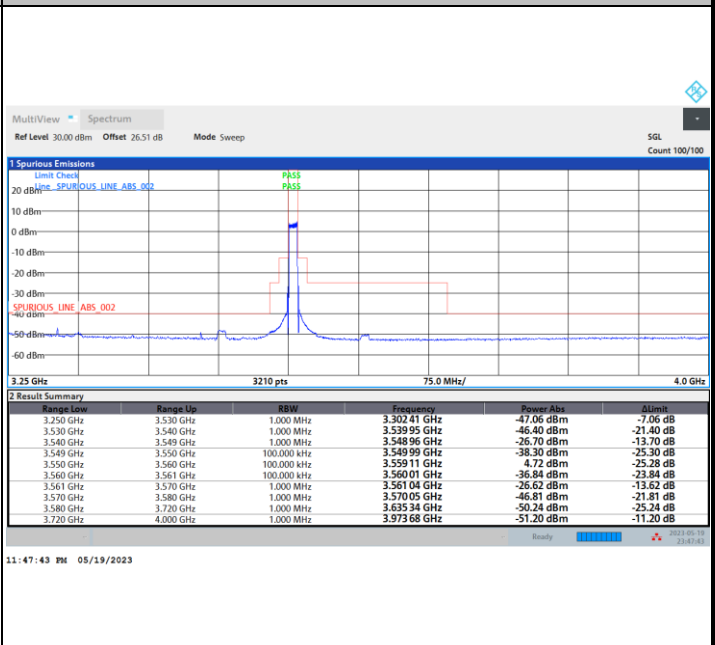
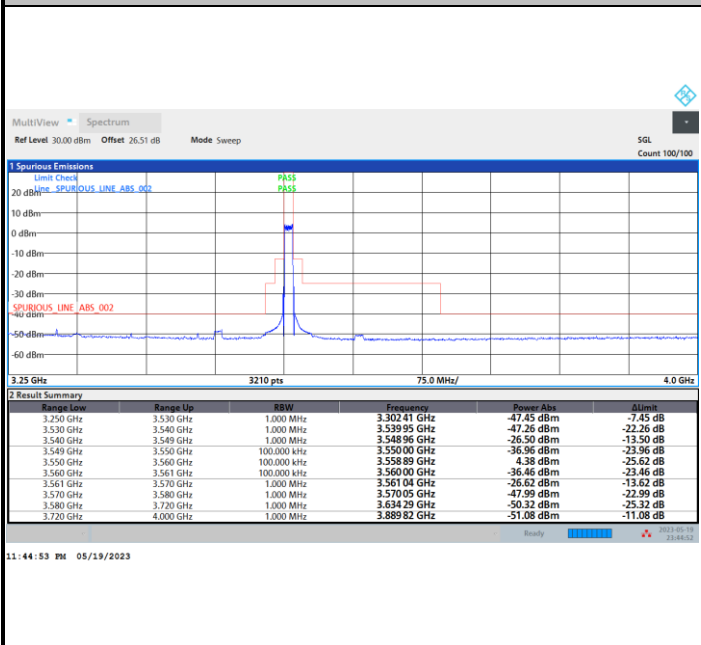
QPSK

16QAM



64QAM

256QAM

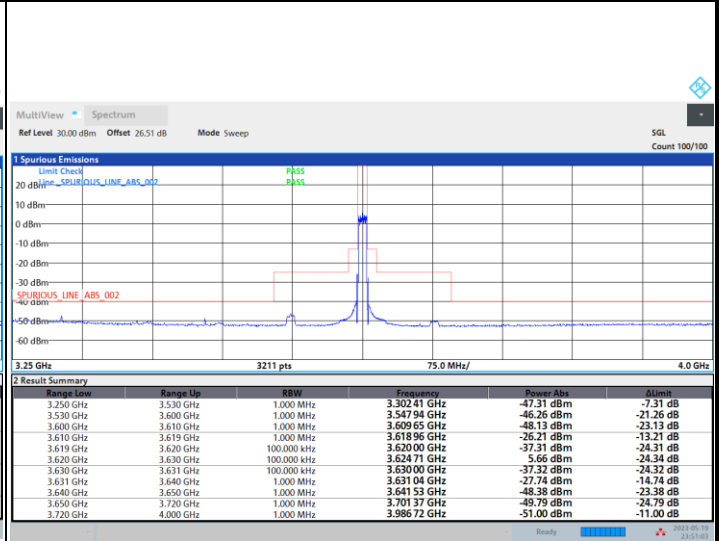
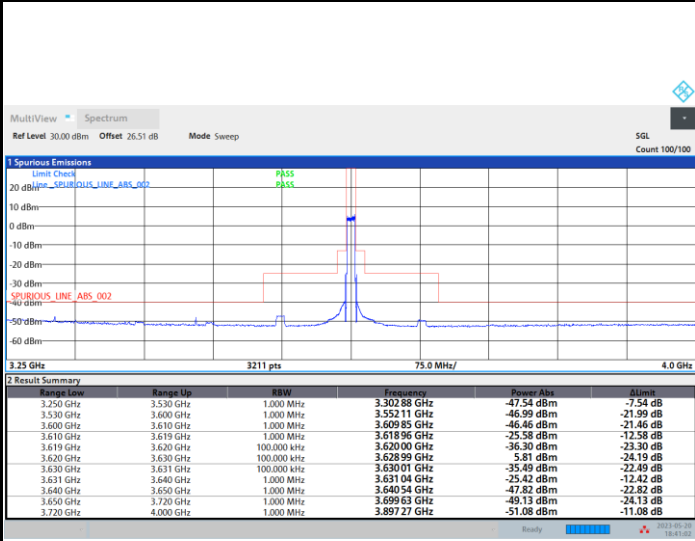




LTE B48 / 10MHz / Middle Channel / MASK

QPSK

16QAM

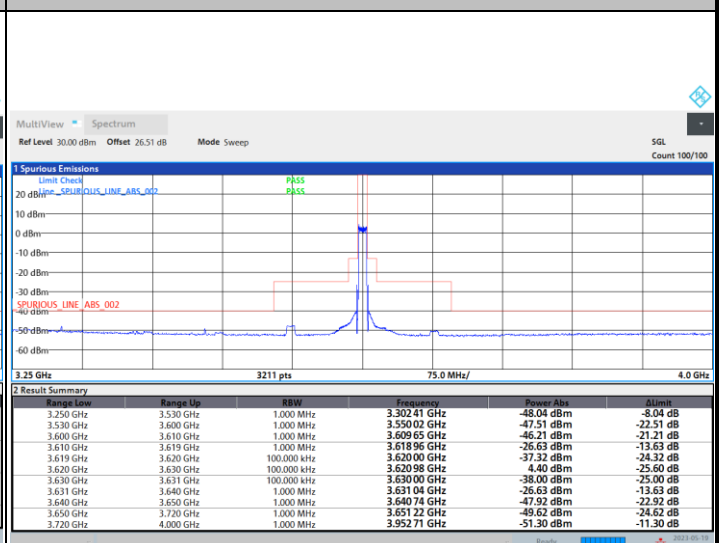
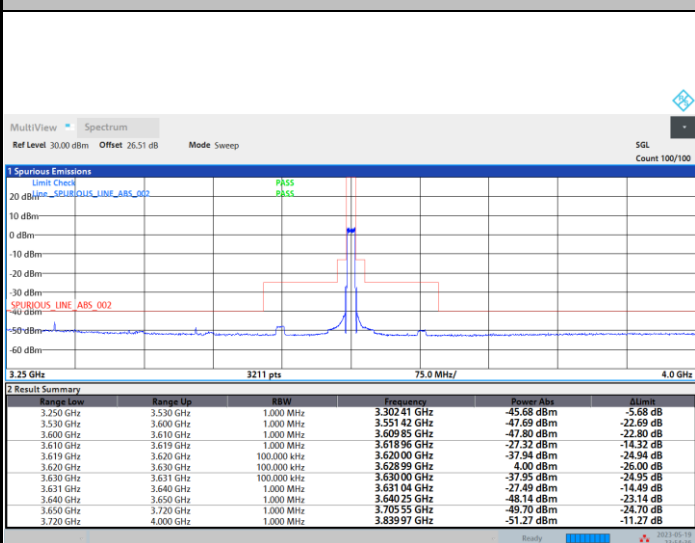


06:41:03 PM 05/20/2023

11:51:03 PM 05/19/2023

64QAM

256QAM



11:54:37 PM 05/19/2023

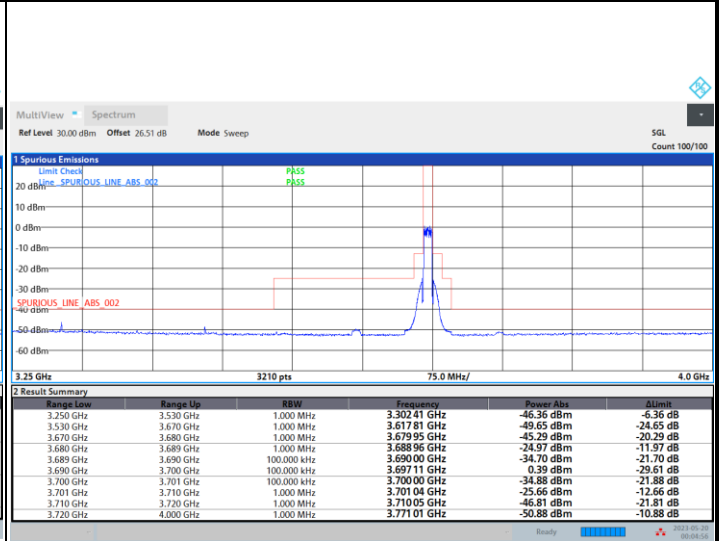
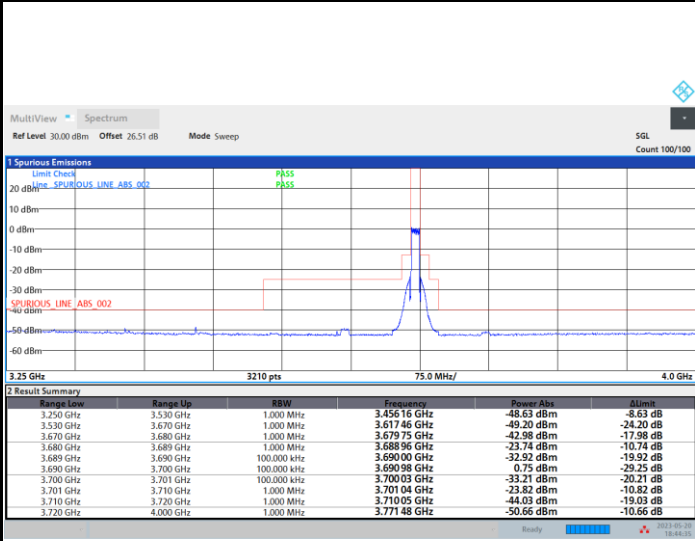
11:57:14 PM 05/19/2023



LTE B48 / 10MHz / Highest Channel / MASK

QPSK

16QAM

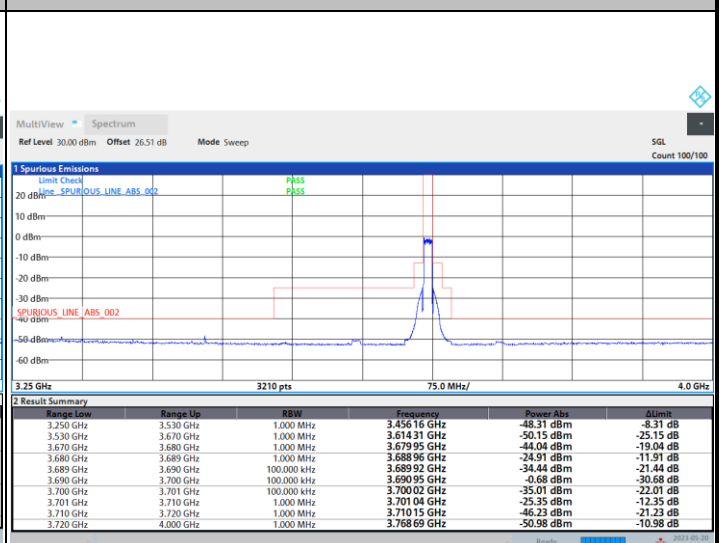
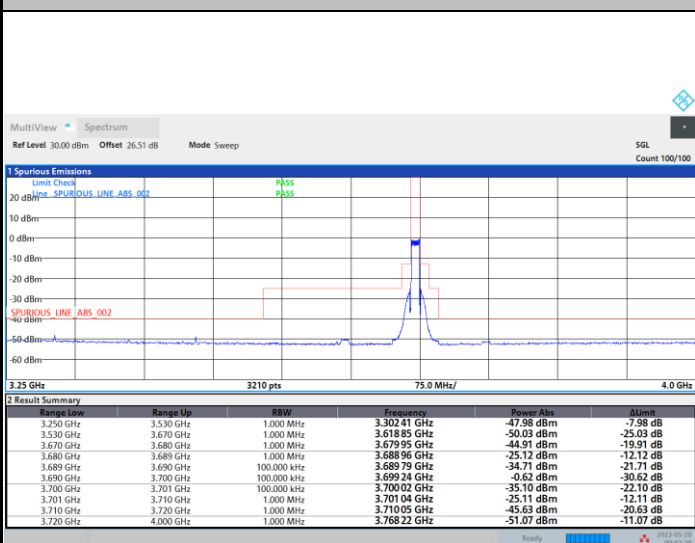


06:44:36 PM 05/20/2023

12:04:56 AM 05/20/2023

64QAM

256QAM



12:07:30 AM 05/20/2023

12:10:07 AM 05/20/2023

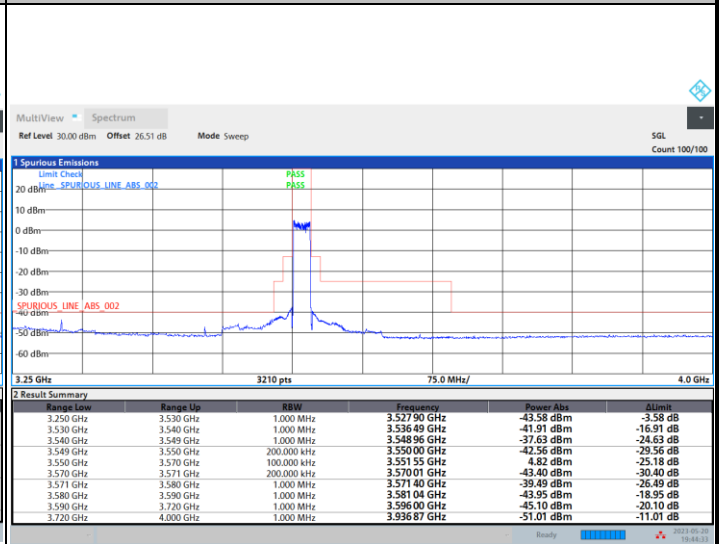
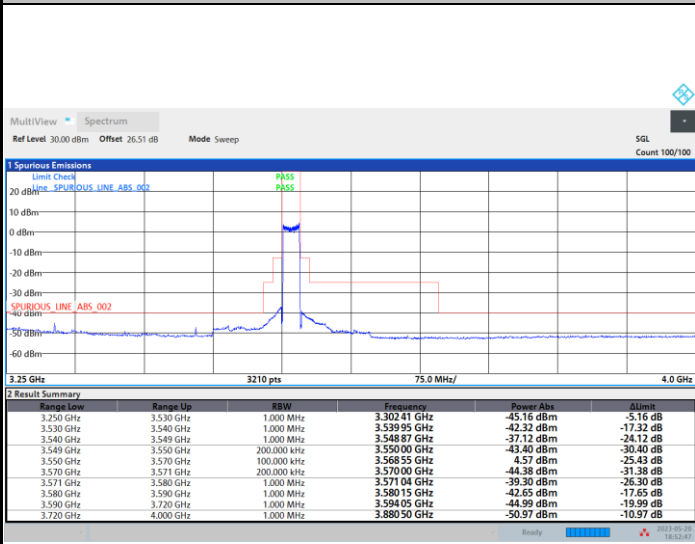




LTE B48 / 20MHz / Lowest Channel / MASK

QPSK

16QAM

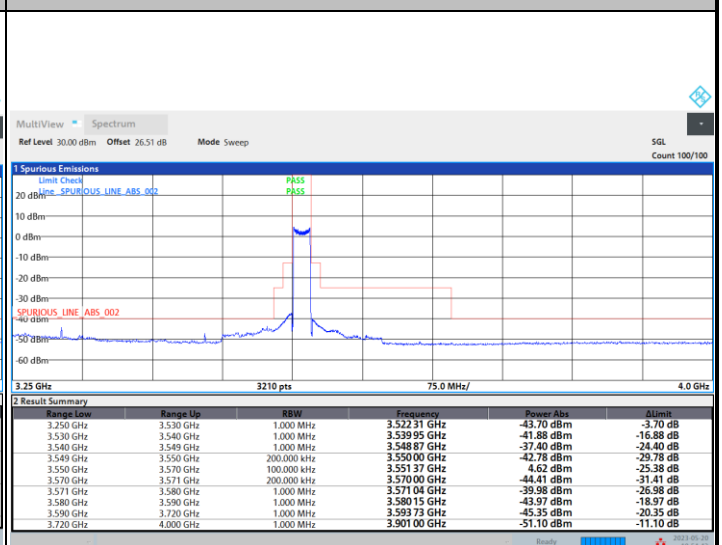
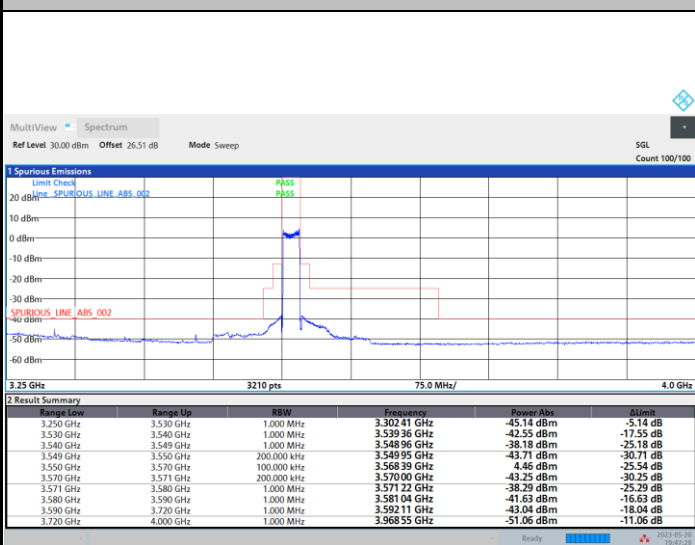


06:52:47 PM 05/20/2023

07:44:33 PM 05/20/2023

64QAM

256QAM



07:47:29 PM 05/20/2023

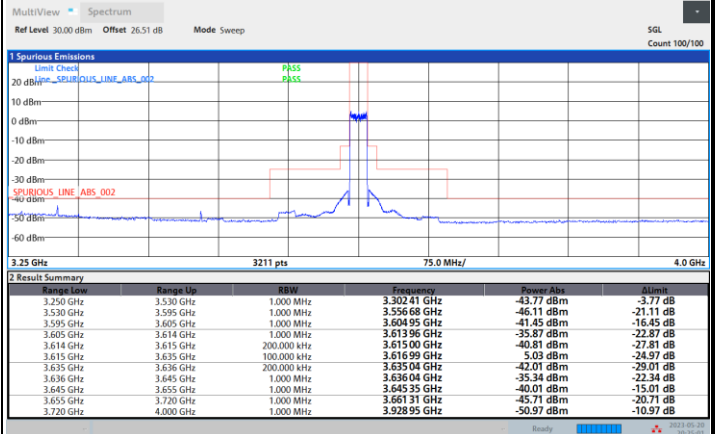
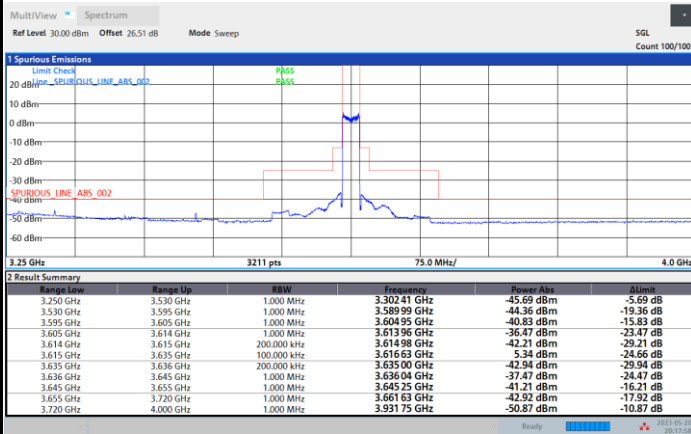
07:54:43 PM 05/20/2023



LTE B48 / 20MHz / Middle Channel / MASK

QPSK

16QAM

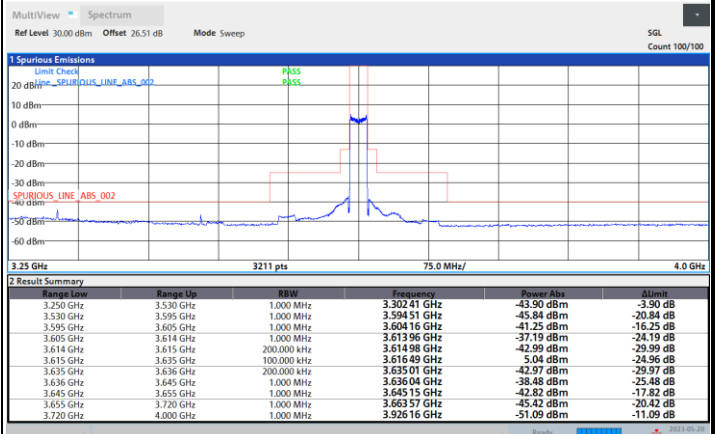
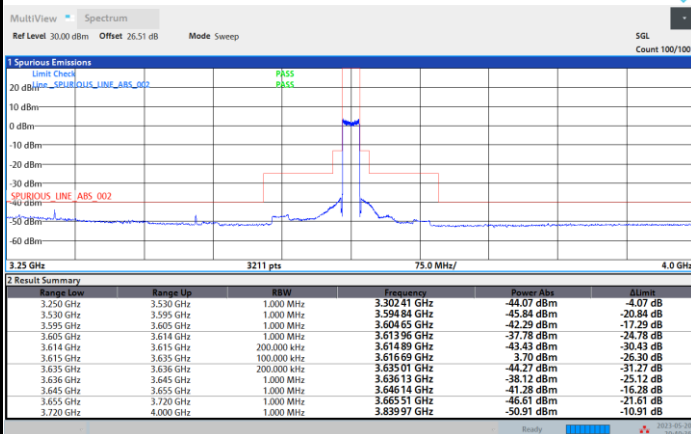


08:17:59 PM 05/20/2023

08:25:02 PM 05/20/2023

64QAM

256QAM



08:40:37 PM 05/20/2023

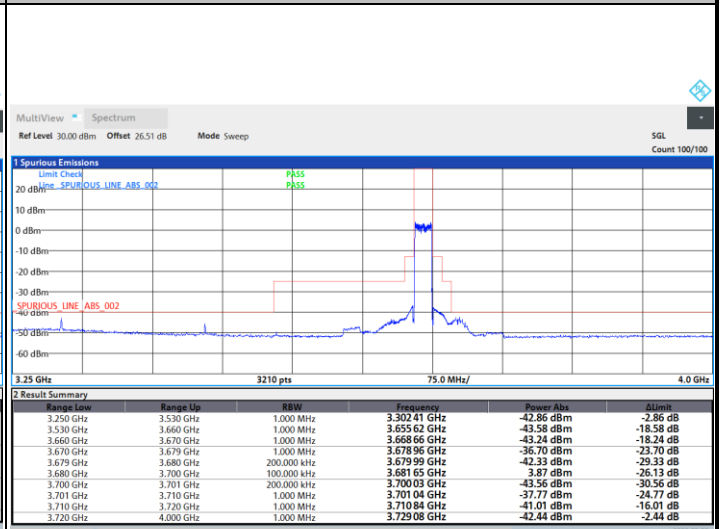
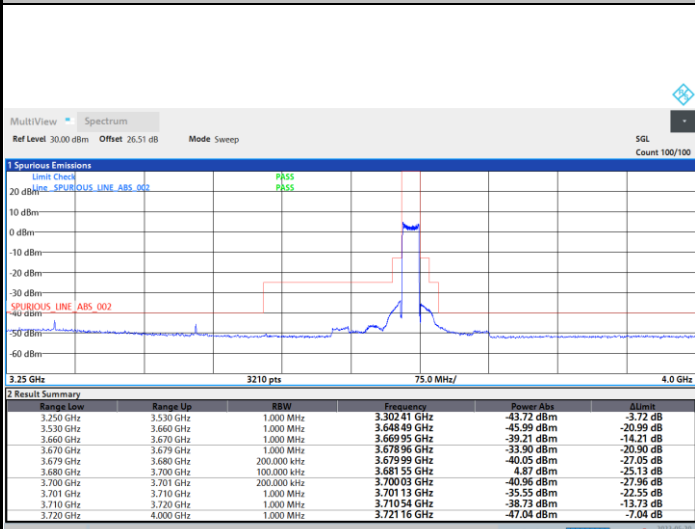
08:36:21 PM 05/20/2023



LTE B48 / 20MHz / Highest Channel / MASK

QPSK

16QAM

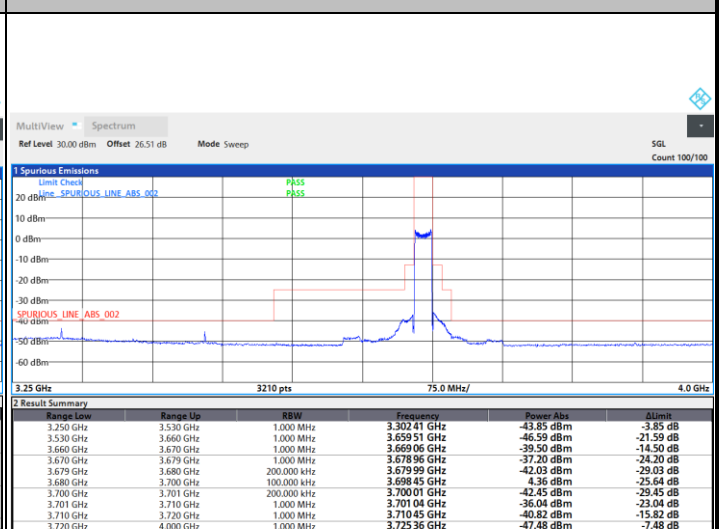
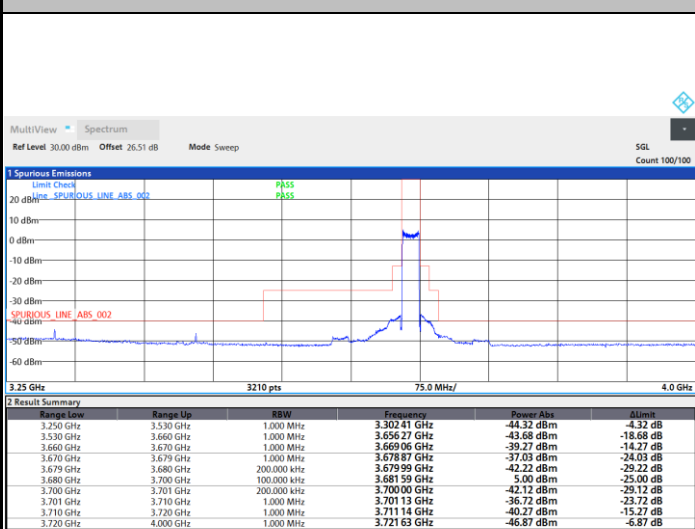


09:07:54 PM 05/20/2023

09:02:54 PM 05/20/2023

64QAM

256QAM



08:49:40 PM 05/20/2023

08:45:00 PM 05/20/2023

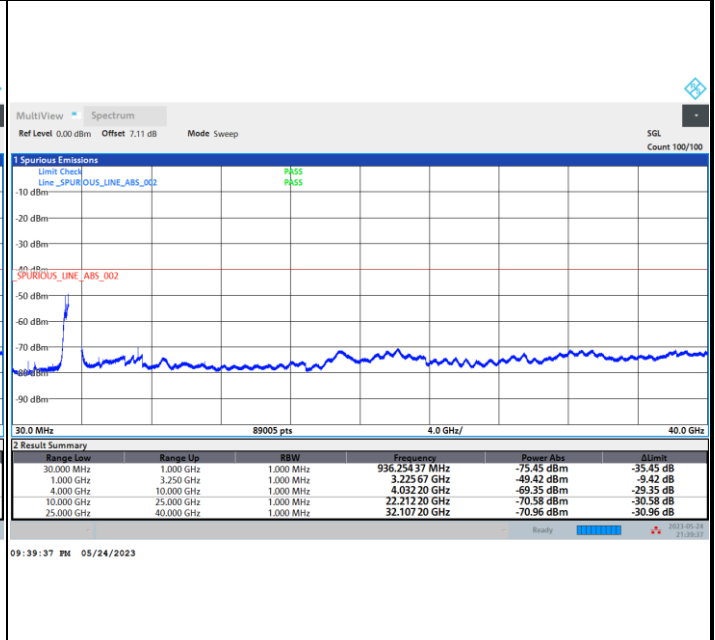
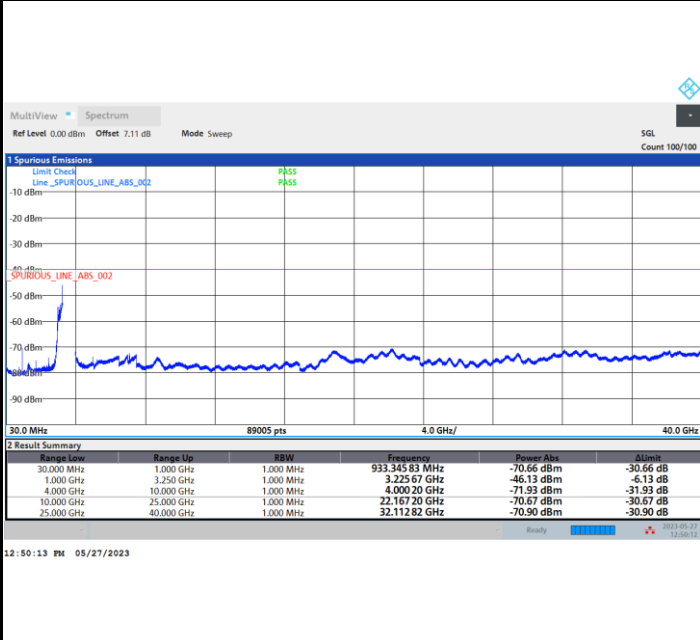


# Conducted Spurious Emission

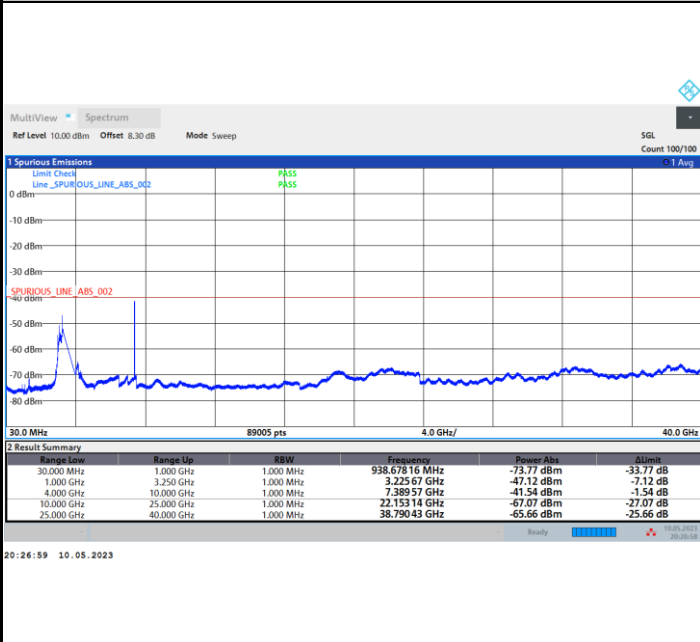
## LTE B48 / 10MHz / QPSK / CSE

### Lowest Channel

### Middle Channel



### Highest Channel

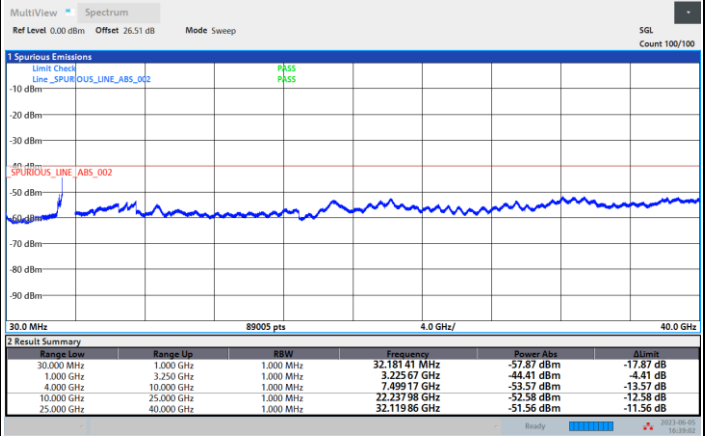
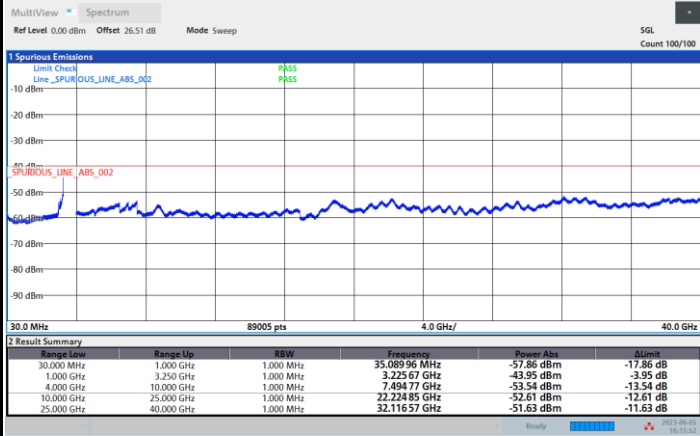




LTE B48 / 10MHz / 16QAM / CSE

Lowest Channel

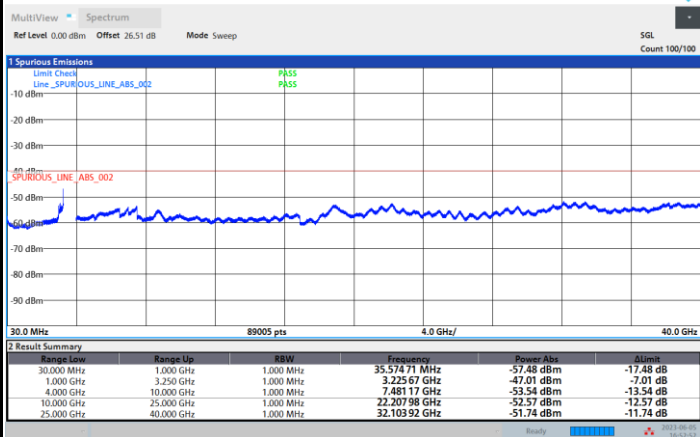
Middle Channel



04:15:53 PM 06/05/2023

04:19:03 PM 06/05/2023

Highest Channel



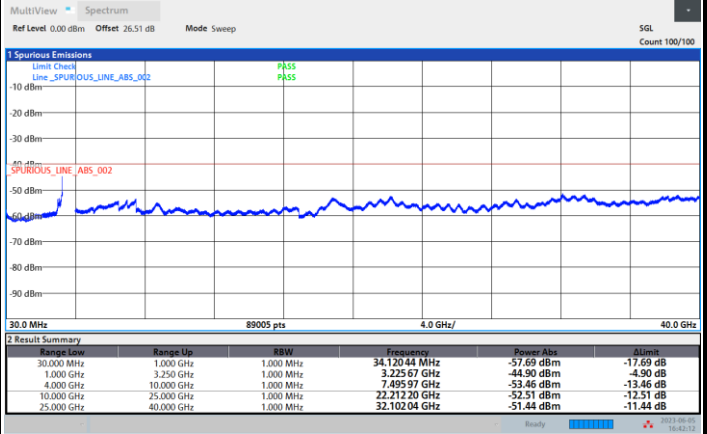
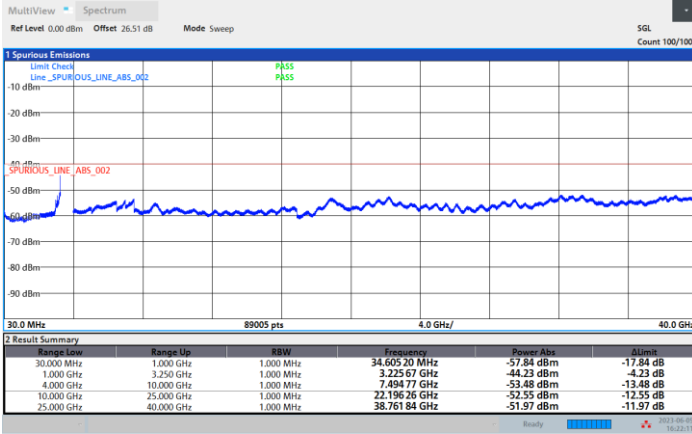
04:52:52 PM 06/05/2023



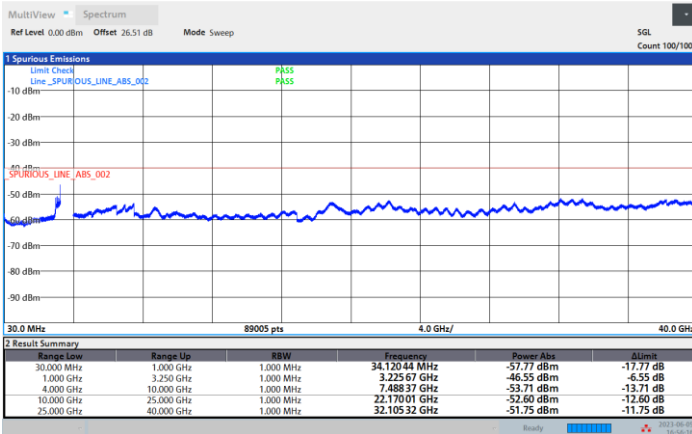
LTE B48 / 10MHz / 64QAM / CSE

Lowest Channel

Middle Channel



Highest Channel

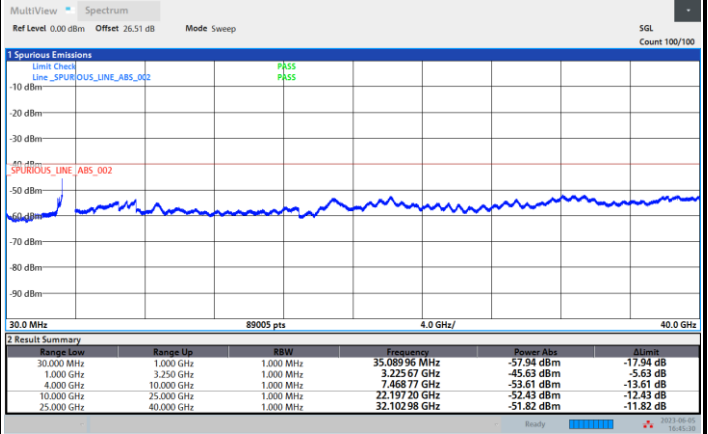
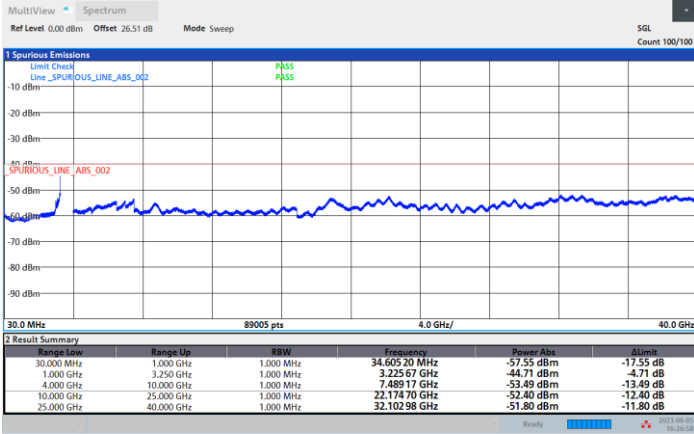




LTE B48 / 10MHz / 26QAM / CSE

Lowest Channel

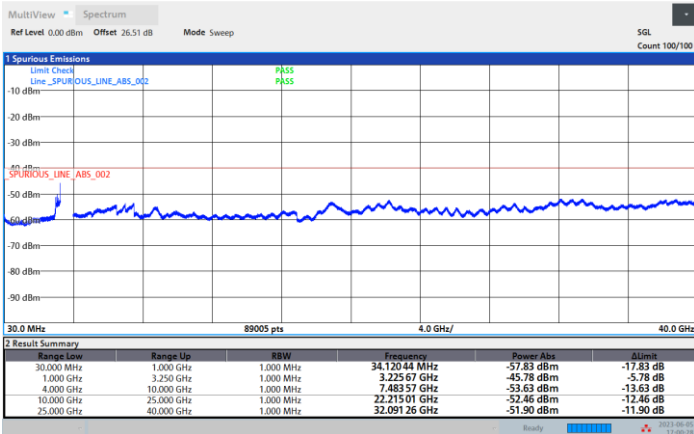
Middle Channel



04:27:00 PM 06/05/2023

04:45:30 PM 06/05/2023

Highest Channel



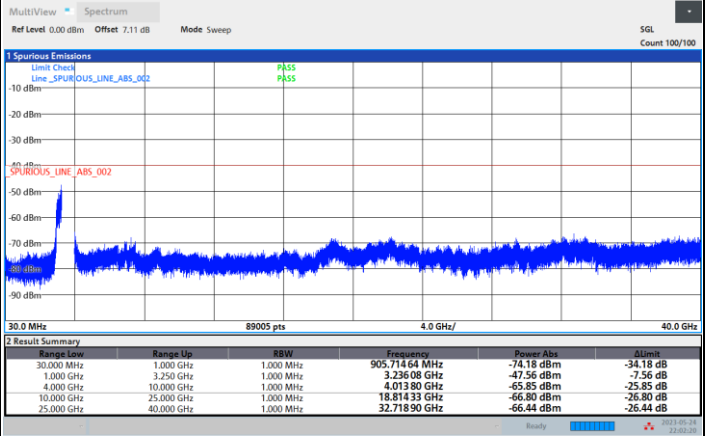
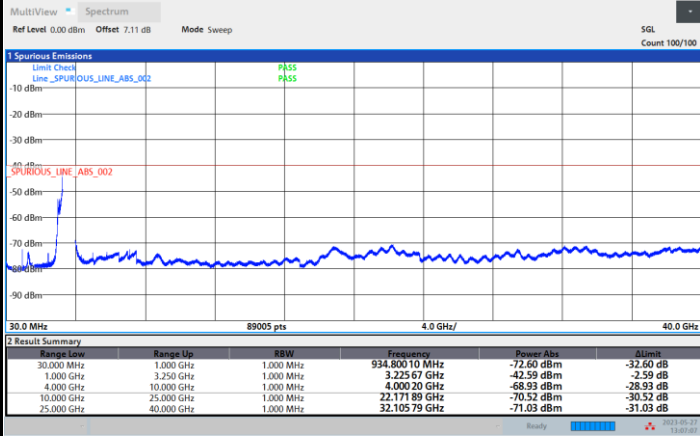
05:00:28 PM 06/05/2023



LTE B48 / 20MHz / QPSK / CSE

Lowest Channel

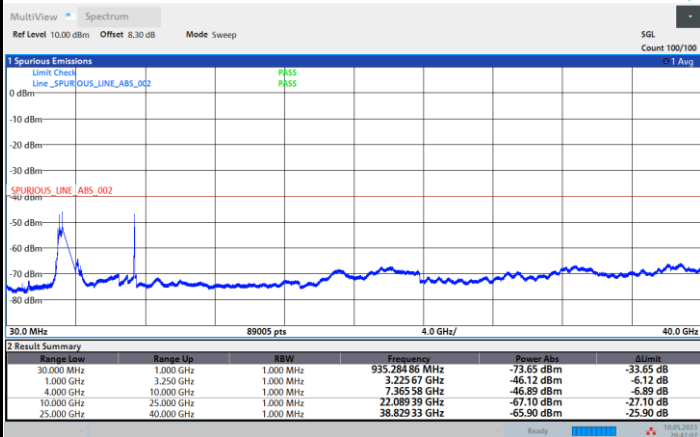
Middle Channel



01:07:07 PM 05/27/2023

10:02:21 PM 05/24/2023

Highest Channel



20:47:08 10.05.2023

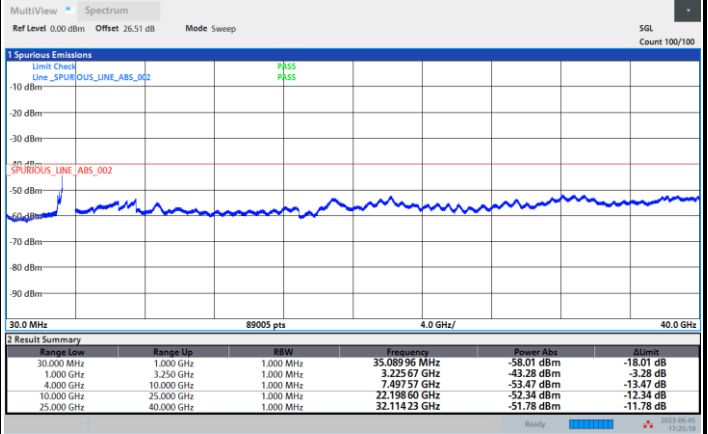
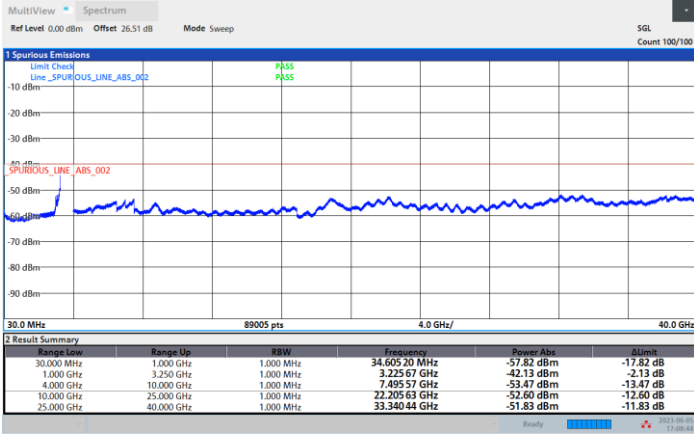




LTE B48 / 20MHz / 16QAM / CSE

Lowest Channel

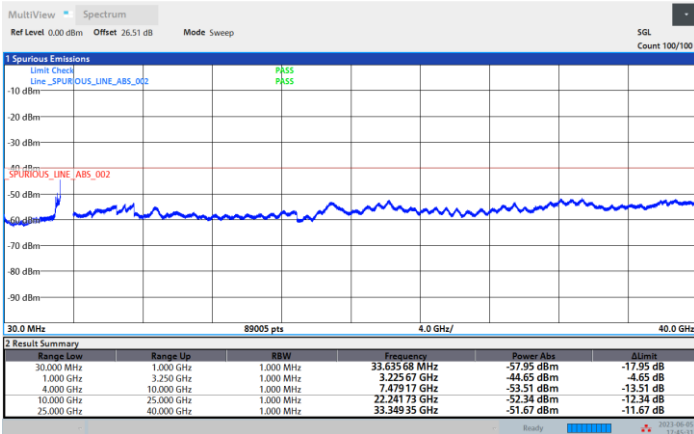
Middle Channel



05:08:44 PM 06/05/2023

05:25:11 PM 06/05/2023

Highest Channel



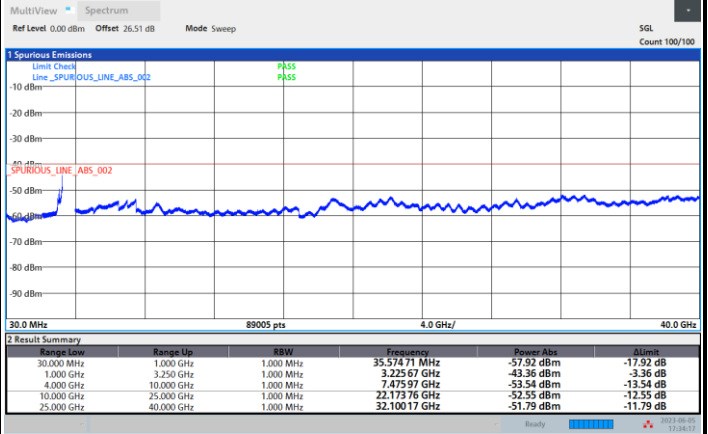
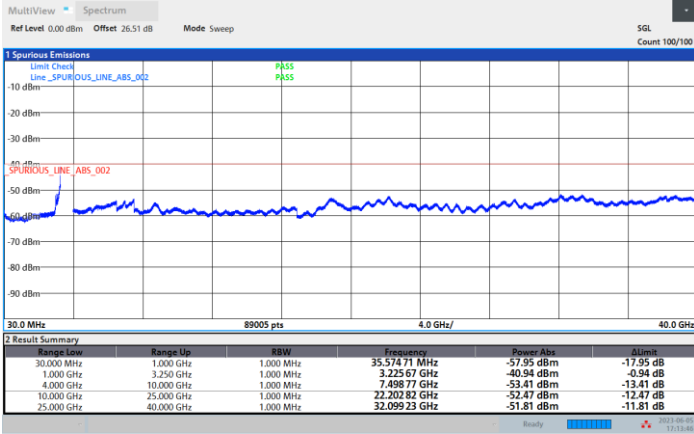
05:45:31 PM 06/05/2023



LTE B48 / 20MHz / 64QAM / CSE

Lowest Channel

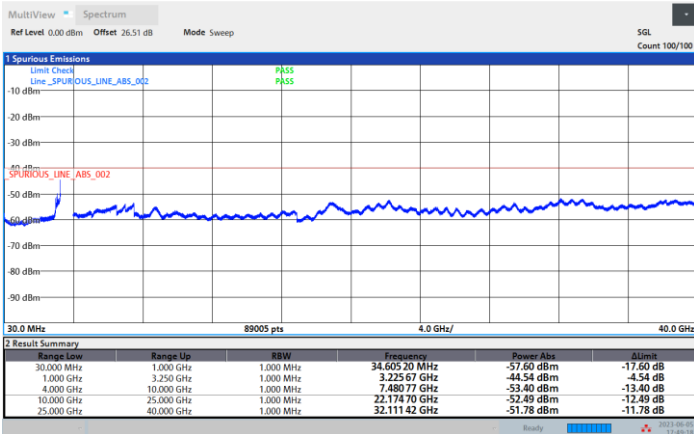
Middle Channel



05:13:46 PM 06/05/2023

05:34:18 PM 06/05/2023

Highest Channel



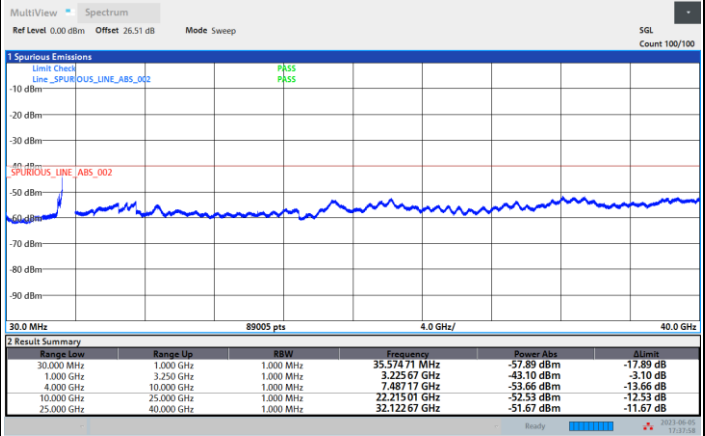
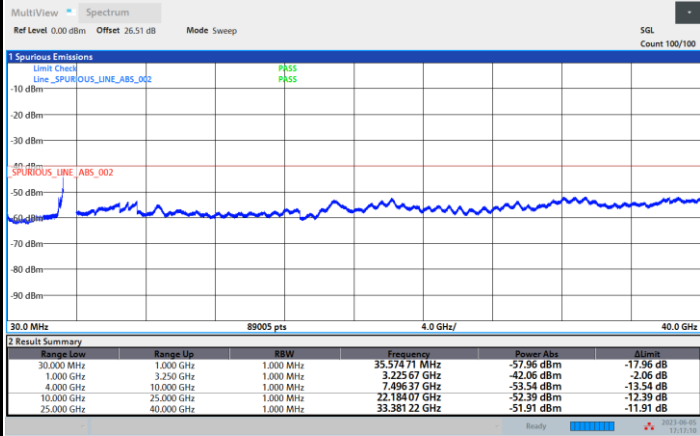
05:49:18 PM 06/05/2023



LTE B48 / 20MHz / 256QAM / CSE

Lowest Channel

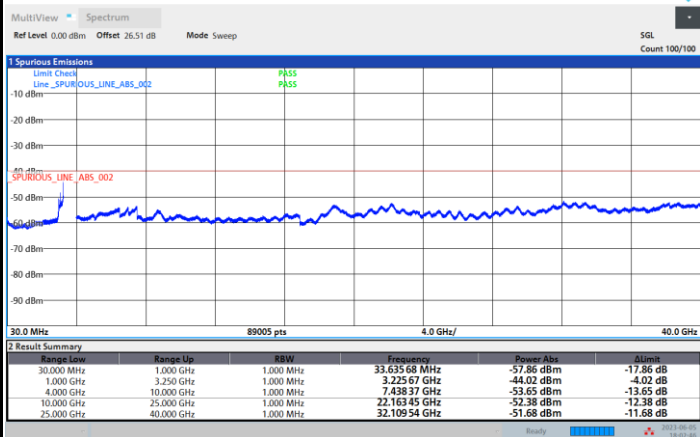
Middle Channel



05:17:10 PM 06/05/2023

05:37:58 PM 06/05/2023

Highest Channel



06:02:46 PM 06/05/2023



### Frequency Stability

Test Conditions		LTE B48 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 20MHz	Note 2.
		Frequency offset (ppm)	Result
50	Normal Voltage	1.8759	PASS
40	Normal Voltage	0.8276	
30	Normal Voltage	2.2069	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	1.8207	
0	Normal Voltage	1.4897	
-10	Normal Voltage	0.0000	
-20	Normal Voltage	0.6621	
-30	Normal Voltage	0.3862	
20	Maximum Voltage	0.3862	
20	Normal Voltage	0.7172	
20	Minimum Voltage	0.4966	

**Note:**

- 1. Normal Voltage = 48 V. ; Minimum Voltage = 43.2 V. ; Maximum Voltage = 57 V.
- 2. The frequency fundamental emissions stay within the authorized frequency block.



MIMO <ANT 2+3(3)>

Maximum EIRP (dBm/10MHz)

Mode	LTE B48 : Conducted (dBm/10MHz) <SISO> Lowest Channel							
	10MHz		20MHz		40MHz		50MHz	
BW								
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	18.62	18.05	18.28	18.74	-	-	-	-
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM
Lowest CH	18.41	18.41	18.52	18.58	-	-	-	-

Mode	LTE B48 : Maximum EIRP (dBm/10MHz) <MIMO 2TX> Lowest Channel							
	10MHz		20MHz		40MHz		50MHz	
BW								
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	28.22	27.65	27.88	28.34	-	-	-	-
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM
Lowest CH	28.01	28.01	28.12	28.18	-	-	-	-
Limit	30dBm/10MHz							
Result	PASS							

Note

1. The measured conducted result has included duty cycle offset factor.
2. The Maximum EIRP = conducted result + 3.01dB (2TX) + 6.59dBi MIMO antenna gain.



Mode	LTE B48 : Conducted (dBm/10MHz) <SISO> Middle Channel							
	10MHz		20MHz		40MHz		50MHz	
BW								
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	18.98	17.96	18.58	18.93	-	-	-	-
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM
Middle CH	18.28	18.99	18.47	18.55	-	-	-	-

Mode	LTE B48 : Maximum EIRP (dBm/10MHz) <MIMO 2TX> Middle Channel							
	10MHz		20MHz		40MHz		50MHz	
BW								
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	28.58	27.56	28.18	28.53	-	-	-	-
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM
Middle CH	27.88	28.59	28.07	28.15	-	-	-	-
Limit	30dBm/10MHz							
Result	PASS							

Note

1. The measured conducted result has included duty cycle offset factor.
2. The Maximum EIRP = conducted result + 3.01dB (2TX) + 6.59dBi MIMO antenna gain.



Mode	LTE B48 : Conducted (dBm/10MHz) <SISO> Highest Channel							
	10MHz		20MHz		40MHz		50MHz	
BW								
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Highest CH	18.85	18.49	18.76	18.66	-	-	-	-
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM
Highest CH	18.97	18.24	18.34	18.33	-	-	-	-

Mode	LTE B48 : Maximum EIRP (dBm/10MHz) <MIMO 2TX> Highest Channel							
	10MHz		20MHz		40MHz		50MHz	
BW								
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Highest CH	28.45	28.09	28.36	28.26	-	-	-	-
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM
Highest CH	28.57	27.84	27.94	27.93	-	-	-	-
Limit	30dBm/10MHz							
Result	PASS							

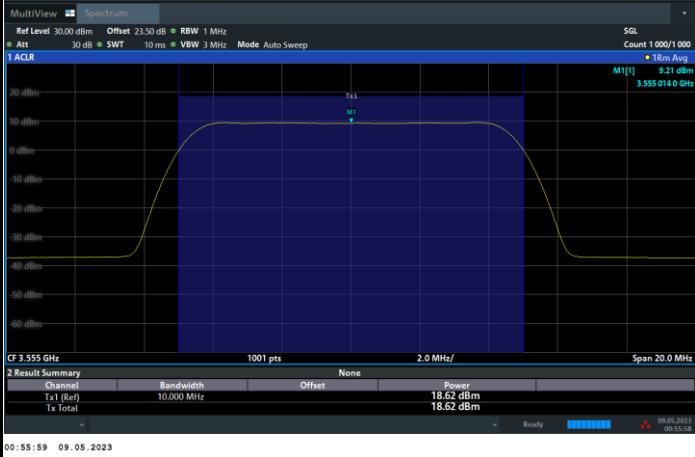
Note

1. The measured conducted result has included duty cycle offset factor.
2. The Maximum EIRP = conducted result + 3.01dB (2TX) + 6.59dBi MIMO antenna gain.

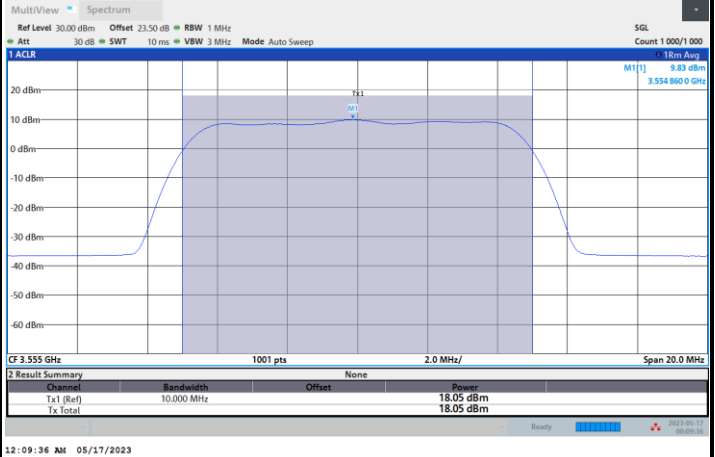


LTE B48 / 10MHz / Lowest Channel / Conducted (dBm/10MHz)

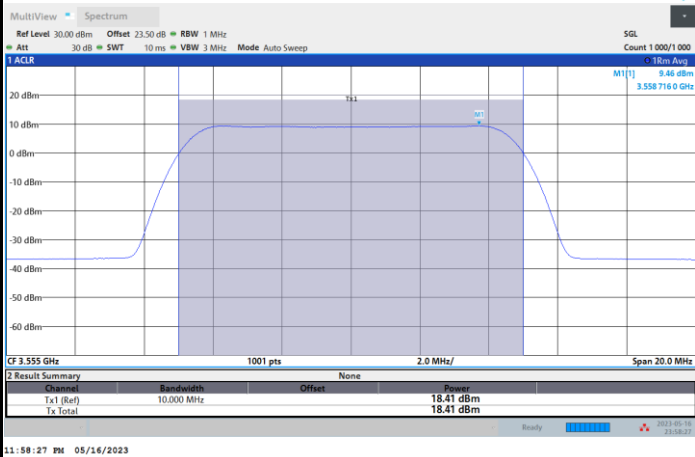
QPSK



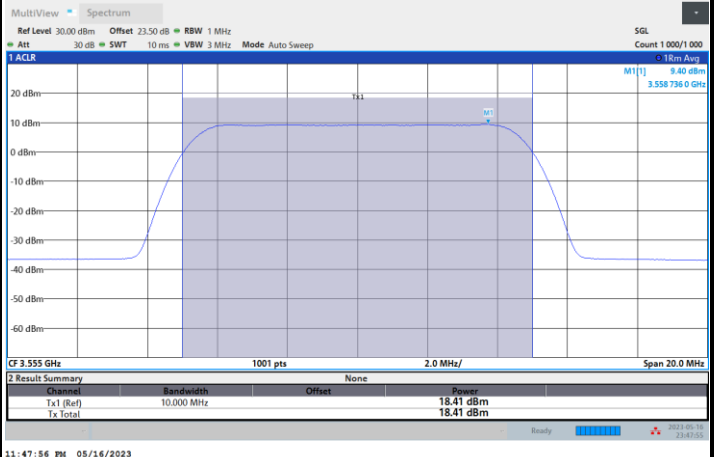
16QAM



64QAM



256QAM

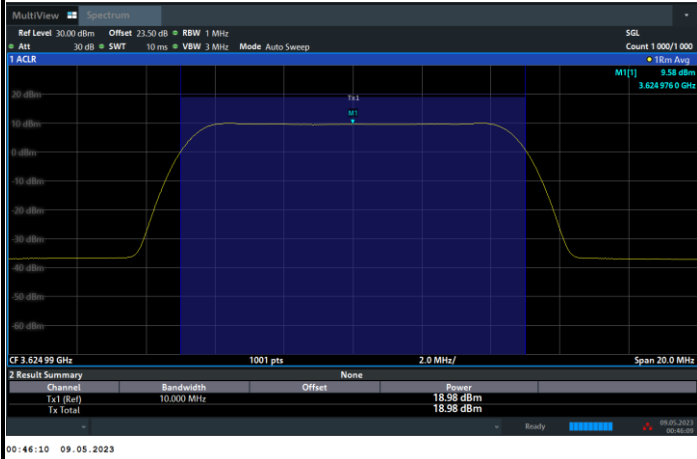




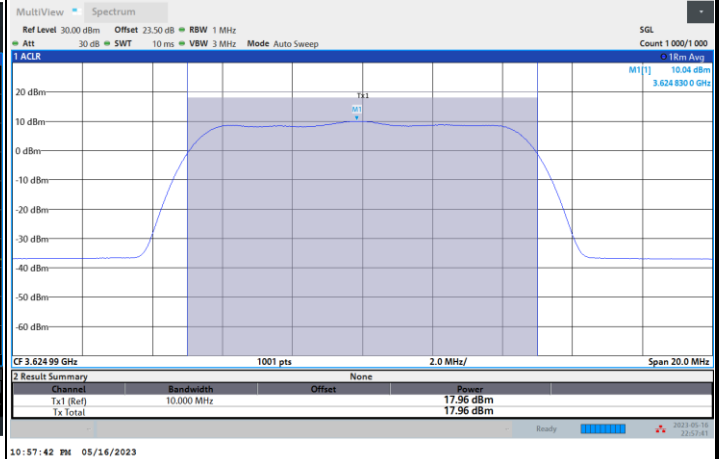


LTE B48 / 10MHz / Middle Channel / Conducted (dBm/10MHz)

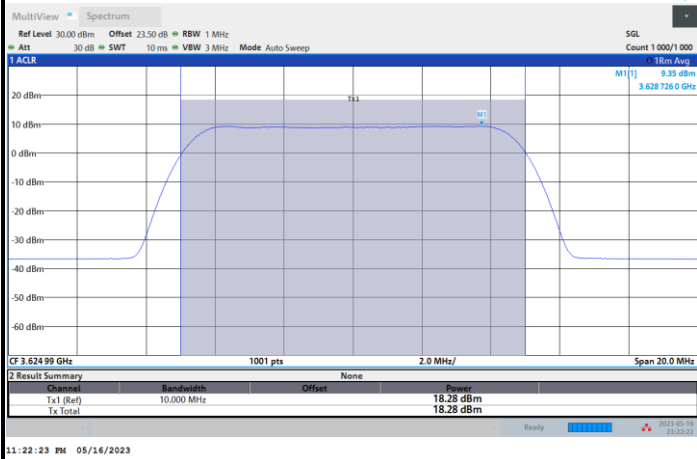
QPSK



16QAM



64QAM



256QAM

