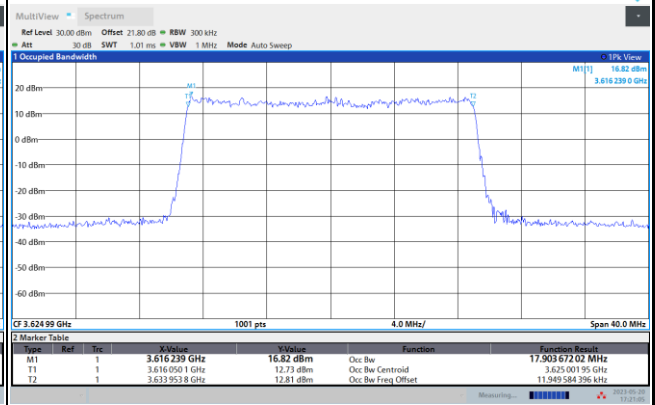
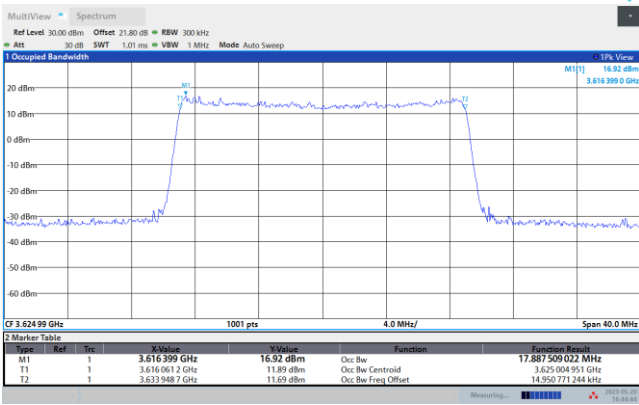




LTE B48 / 20MHz / Middle Channel / 99%OBW

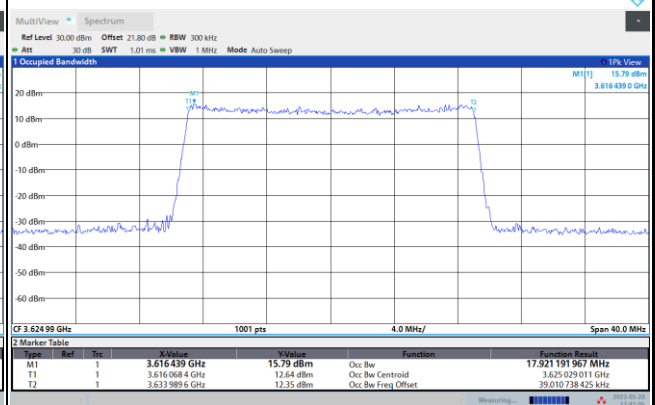
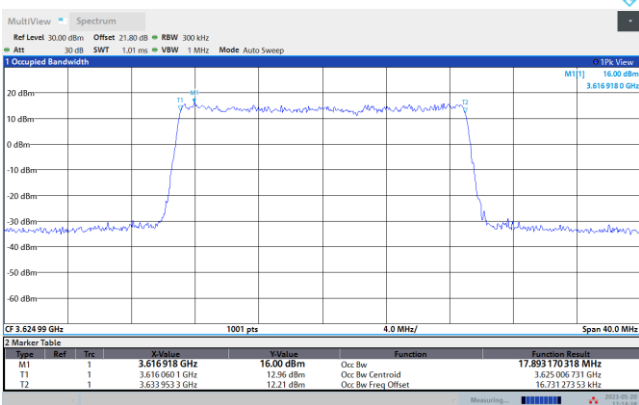
QPSK

16QAM



64QAM

256QAM



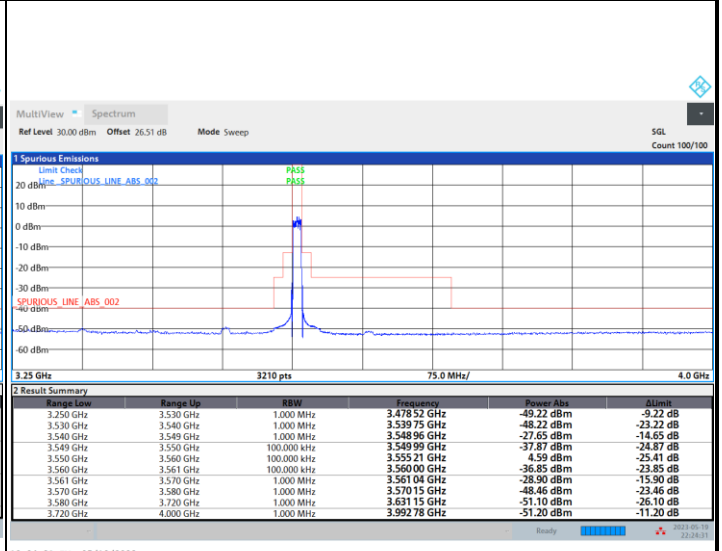
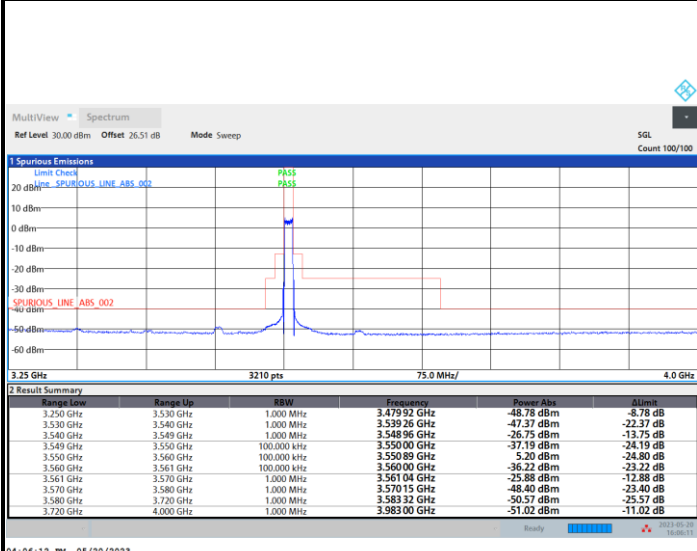


# Unwanted Emission (MASK)

## LTE B48 / 10MHz / Lowest Channel / MASK

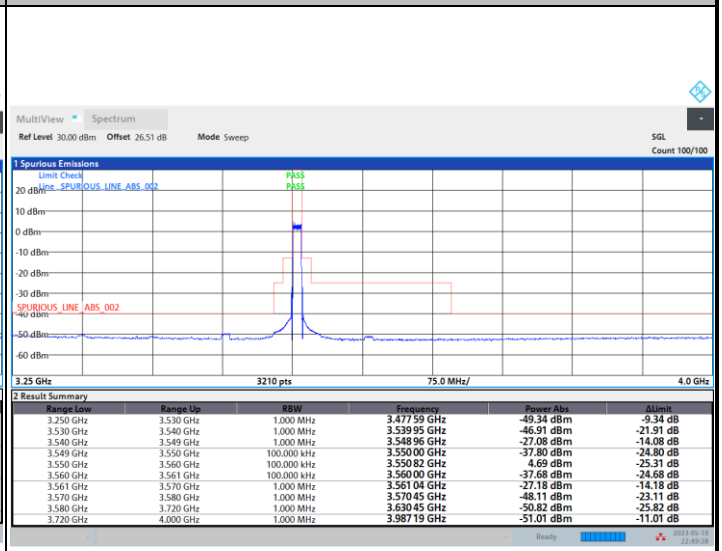
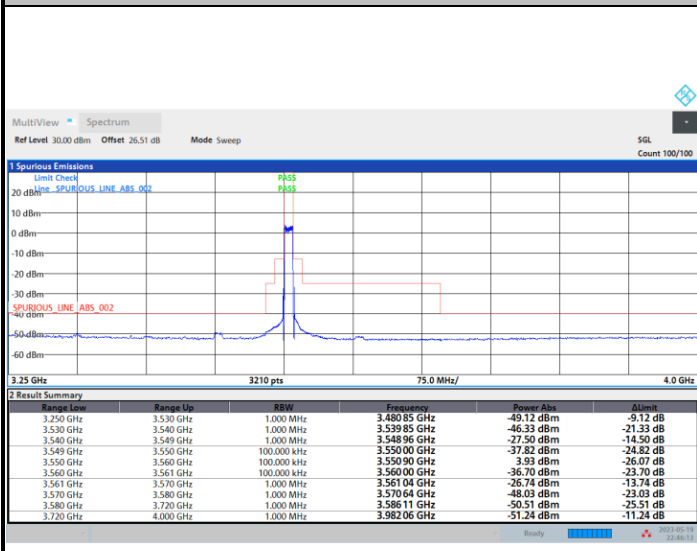
### QPSK

### 16QAM



### 64QAM

### 256QAM

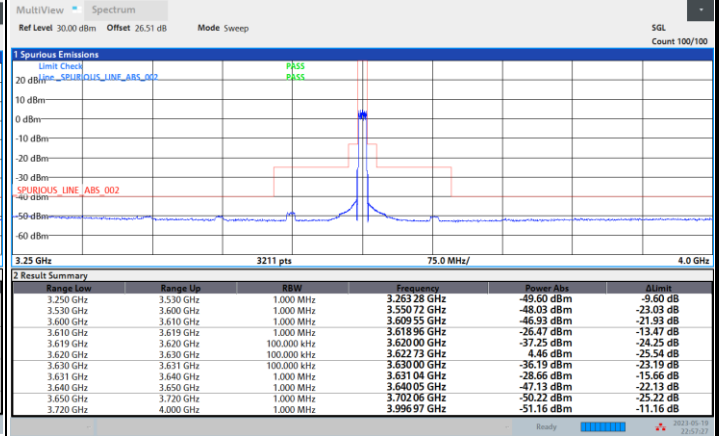
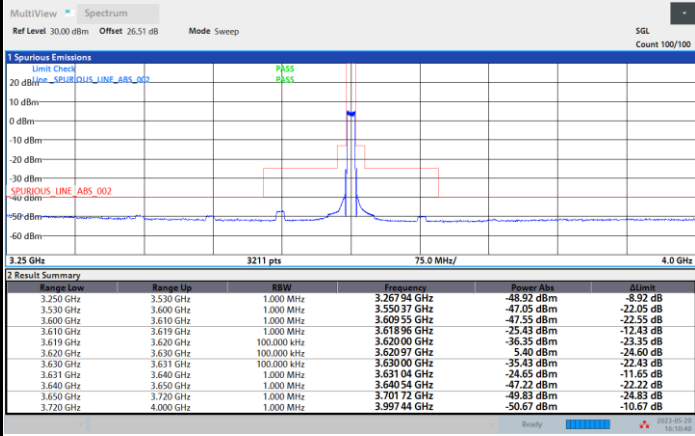




LTE B48 / 10MHz / Middle Channel / MASK

QPSK

16QAM

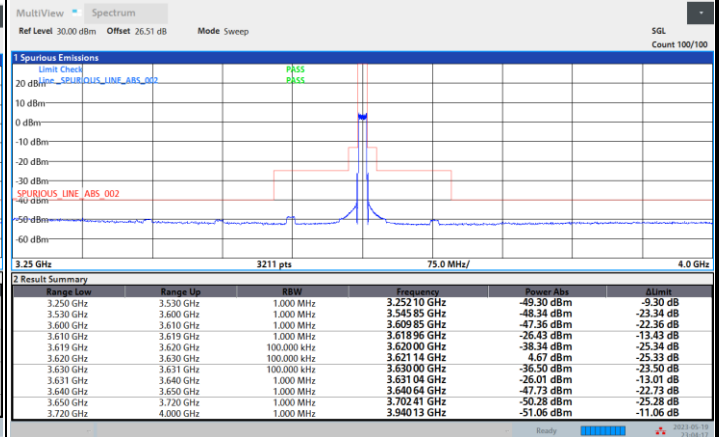
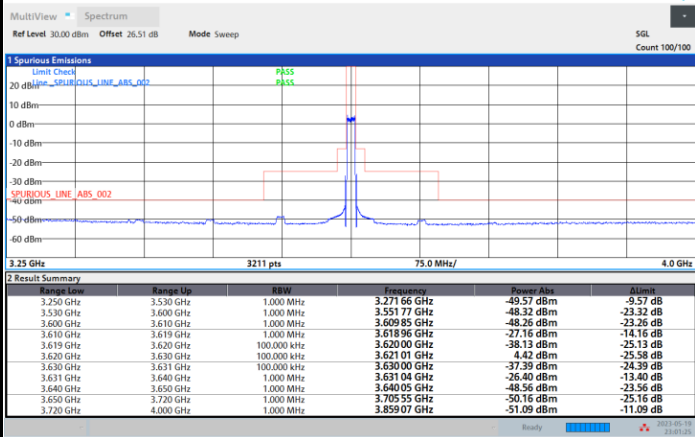


04:10:41 PM 05/20/2023

10:57:27 PM 05/19/2023

64QAM

256QAM



11:01:26 PM 05/19/2023

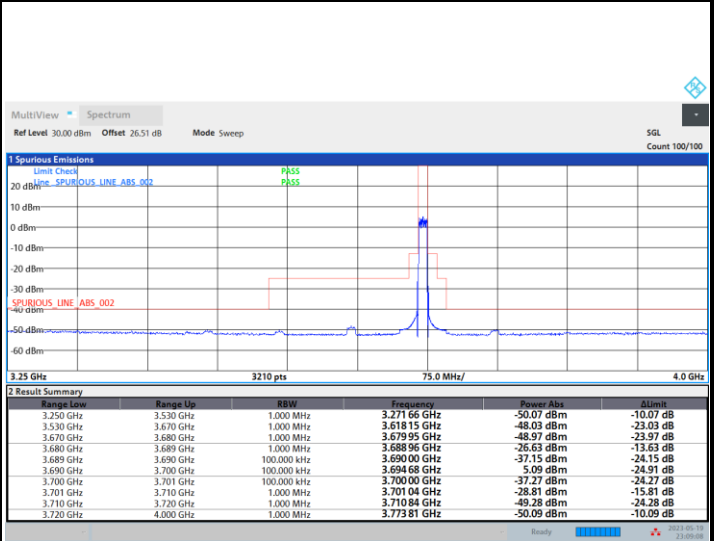
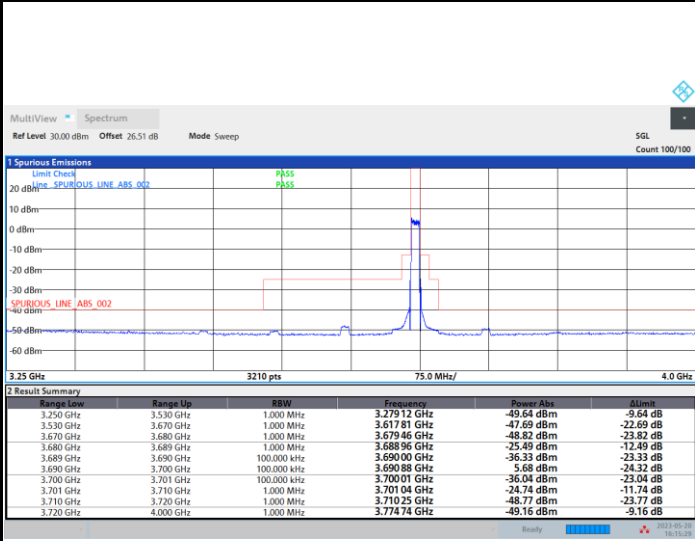
11:04:18 PM 05/19/2023



LTE B48 / 10MHz / Highest Channel / MASK

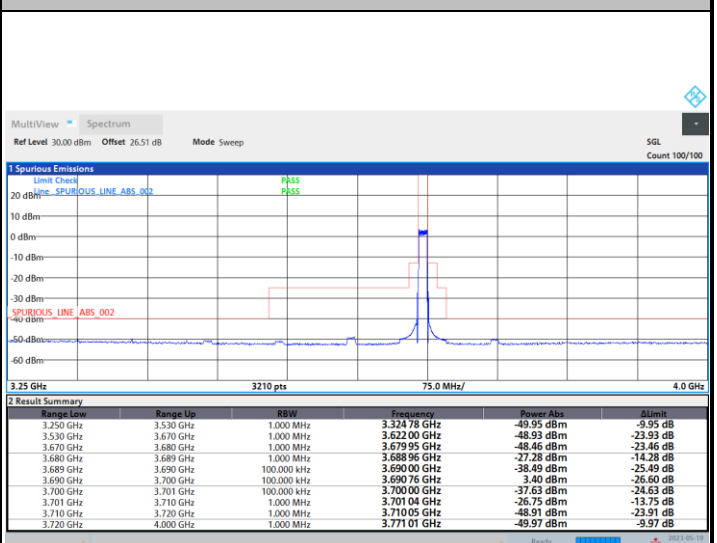
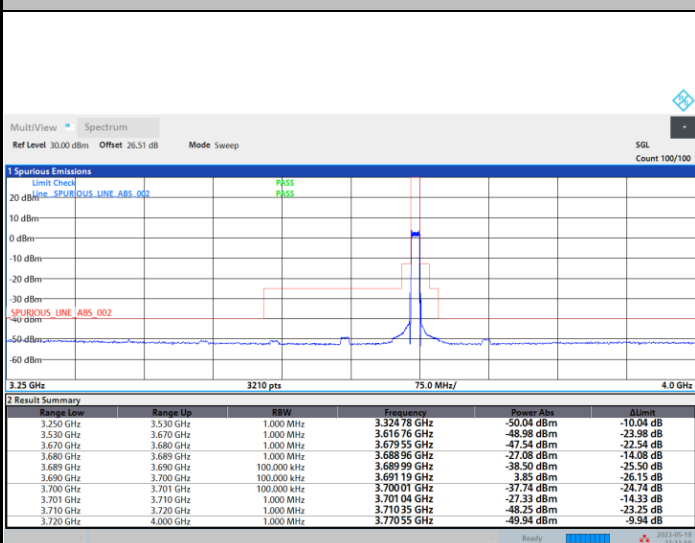
QPSK

16QAM



64QAM

256QAM

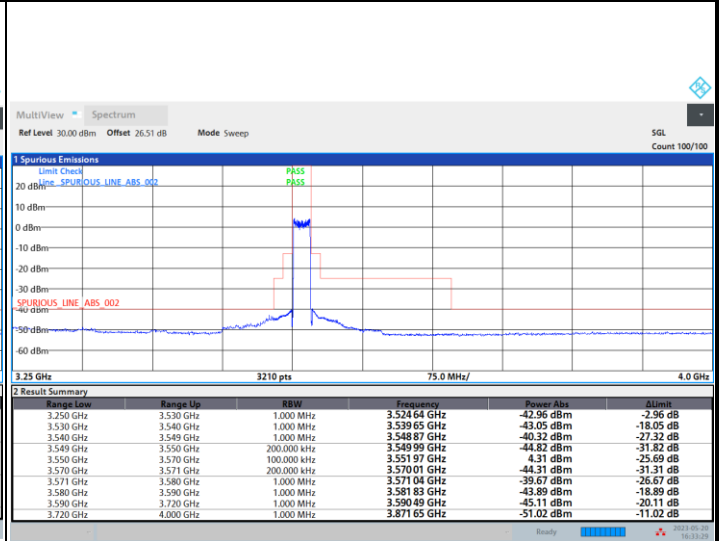
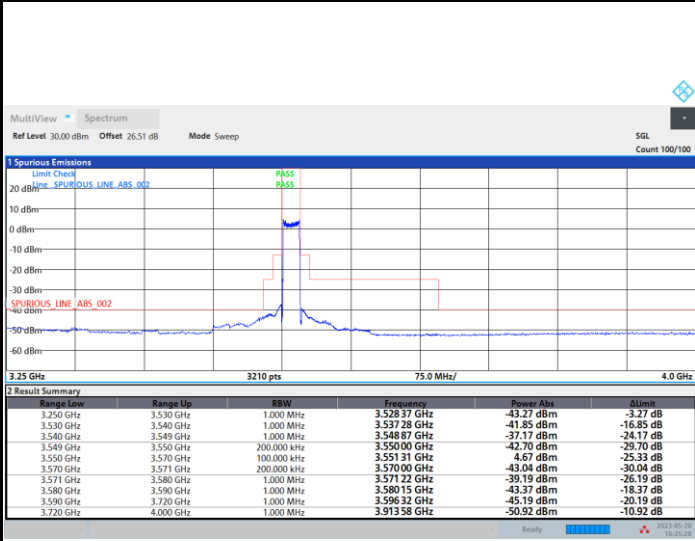




LTE B48 / 20MHz / Lowest Channel / MASK

QPSK

16QAM

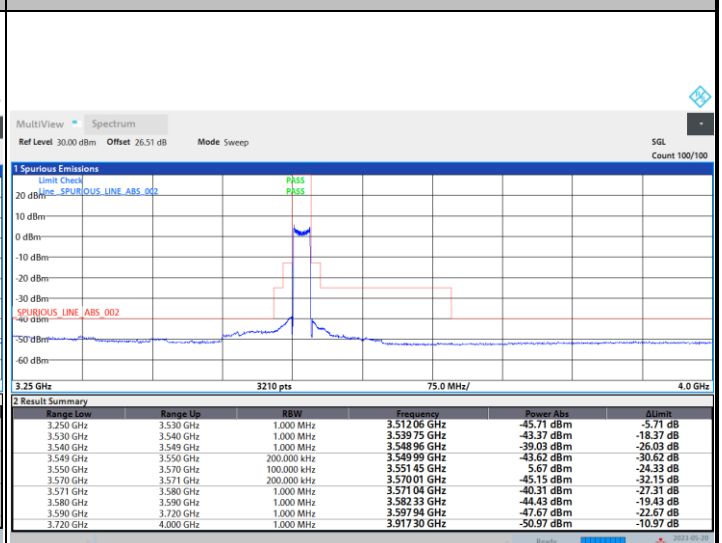
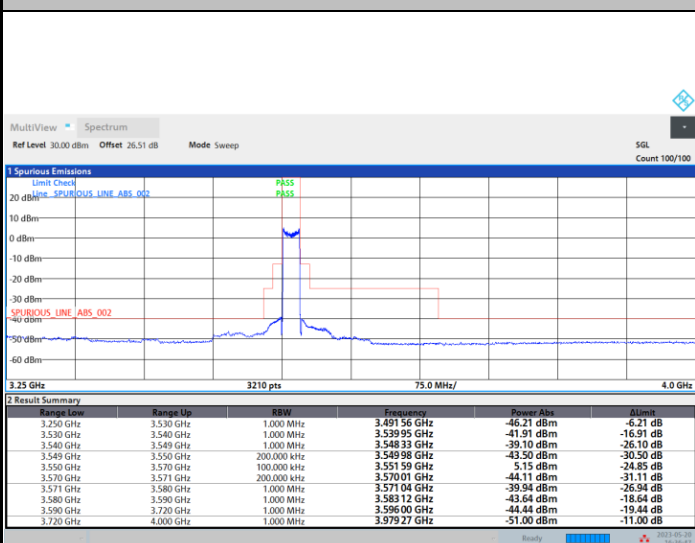


04:25:21 PM 05/20/2023

04:33:29 PM 05/20/2023

64QAM

256QAM



04:36:48 PM 05/20/2023

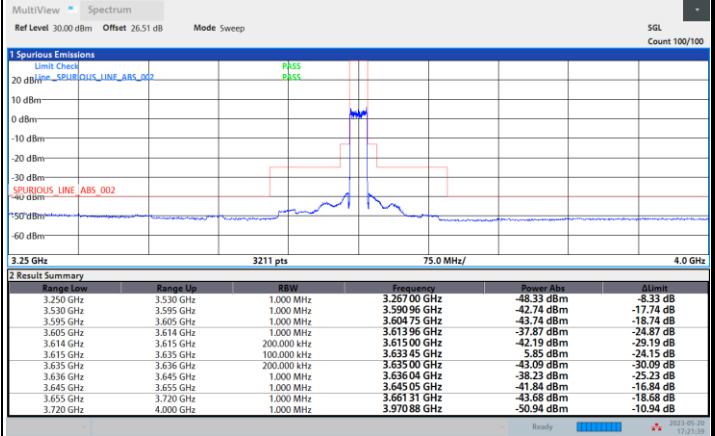
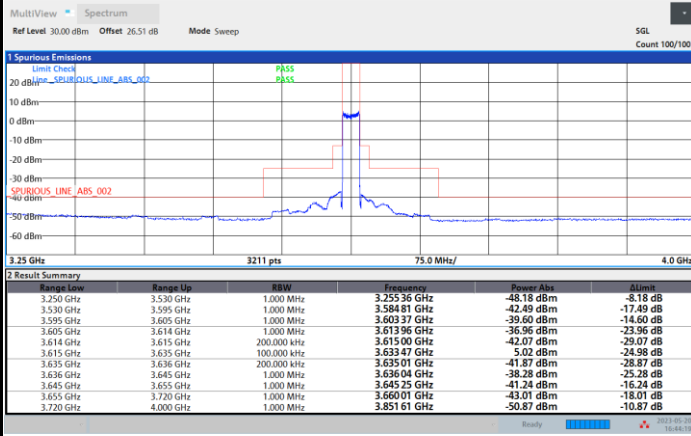
04:40:04 PM 05/20/2023



LTE B48 / 20MHz / Middle Channel / MASK

QPSK

16QAM

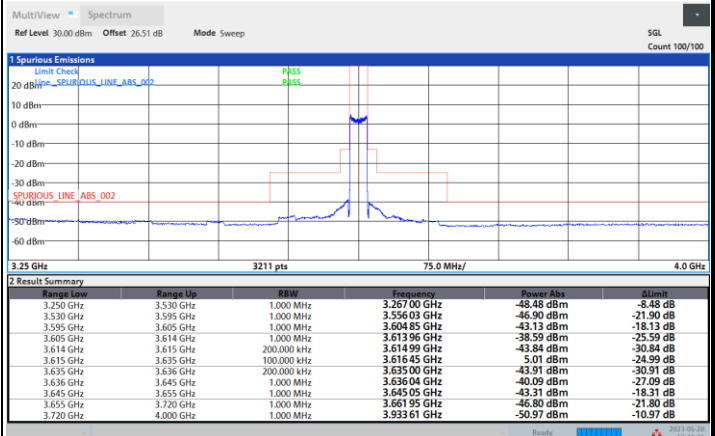
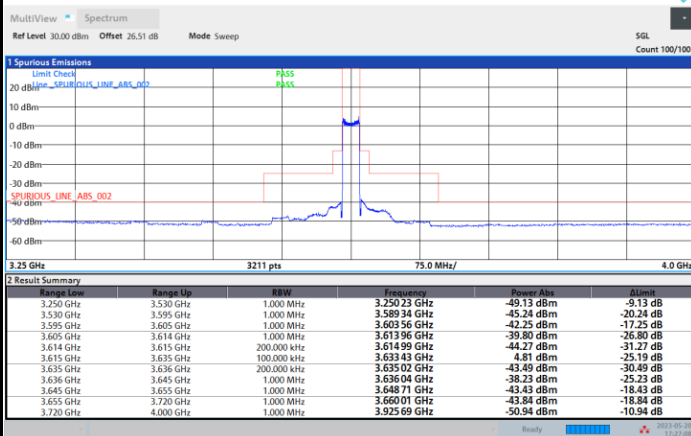


04:44:19 PM 05/20/2023

05:21:39 PM 05/20/2023

64QAM

256QAM



05:27:08 PM 05/20/2023

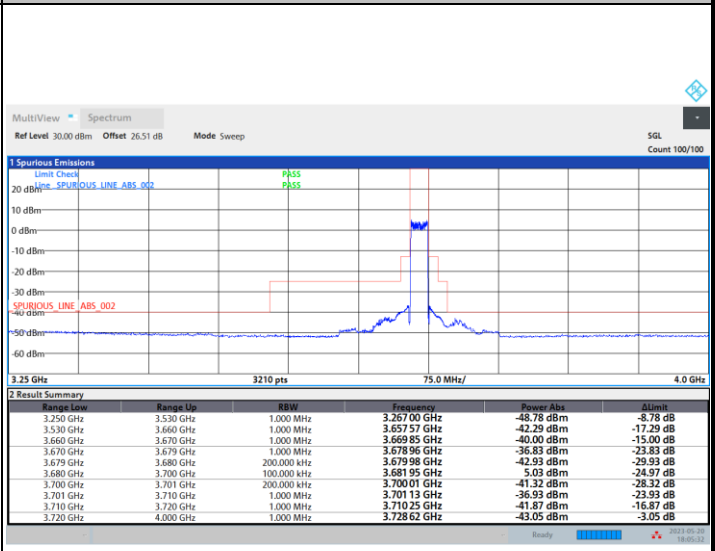
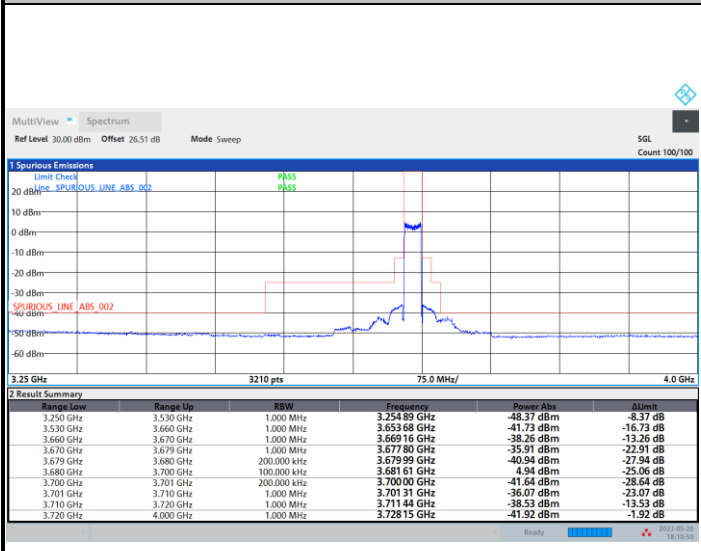
05:41:35 PM 05/20/2023



LTE B48 / 20MHz / Highest Channel / MASK

QPSK

16QAM

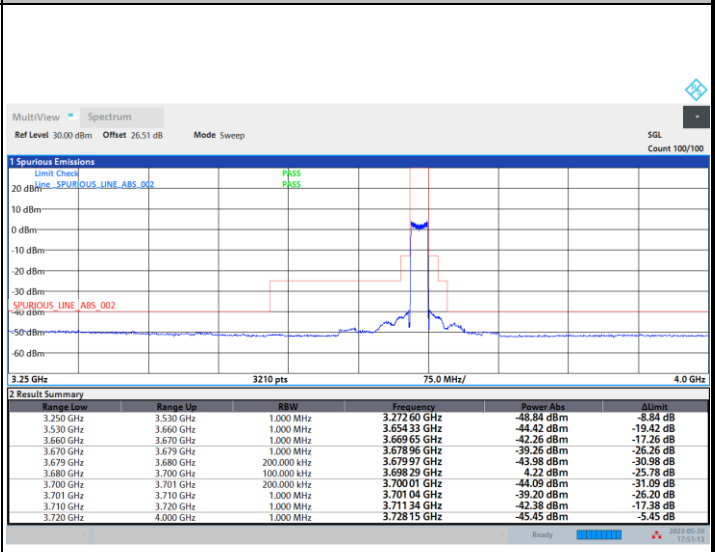
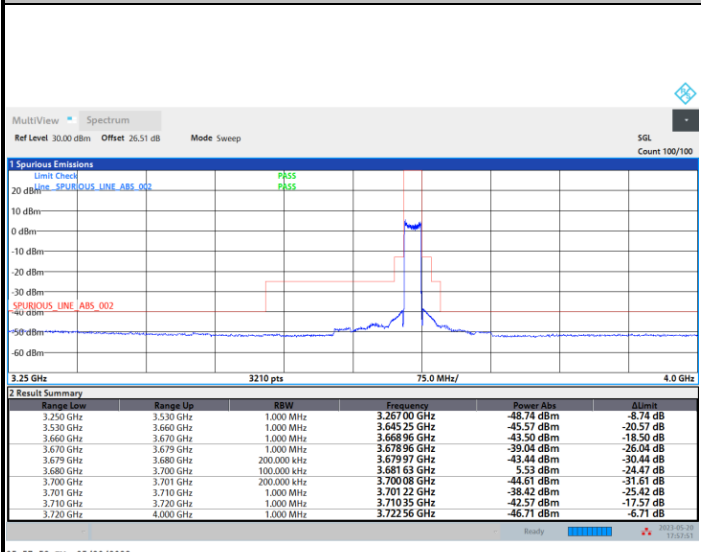


06:10:51 PM 05/20/2023

06:05:34 PM 05/20/2023

64QAM

256QAM



05:57:52 PM 05/20/2023

05:51:14 PM 05/20/2023

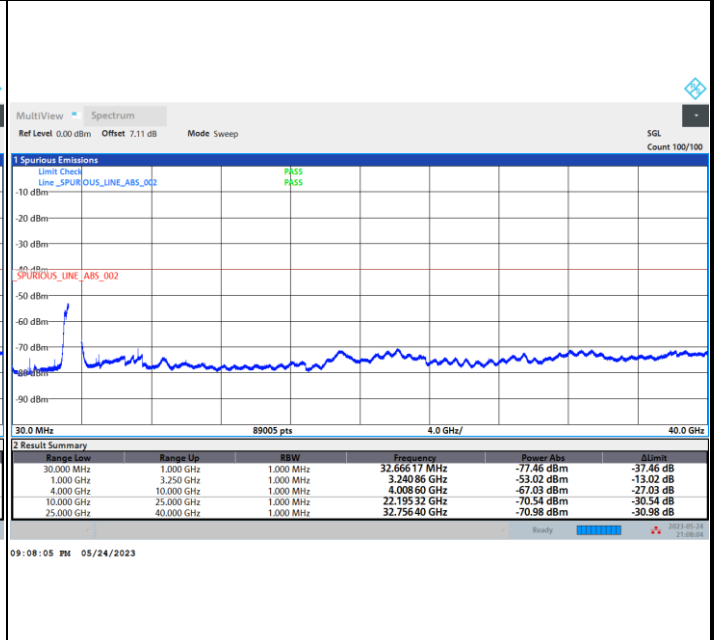
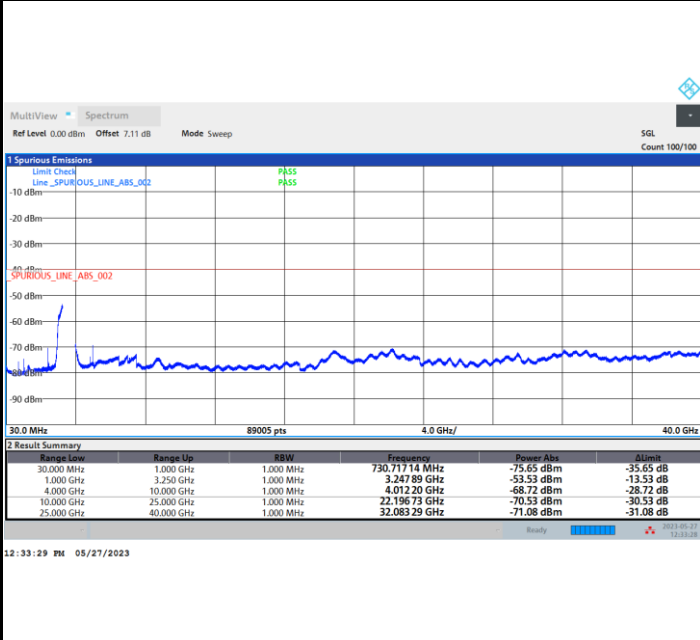


# Conducted Spurious Emission

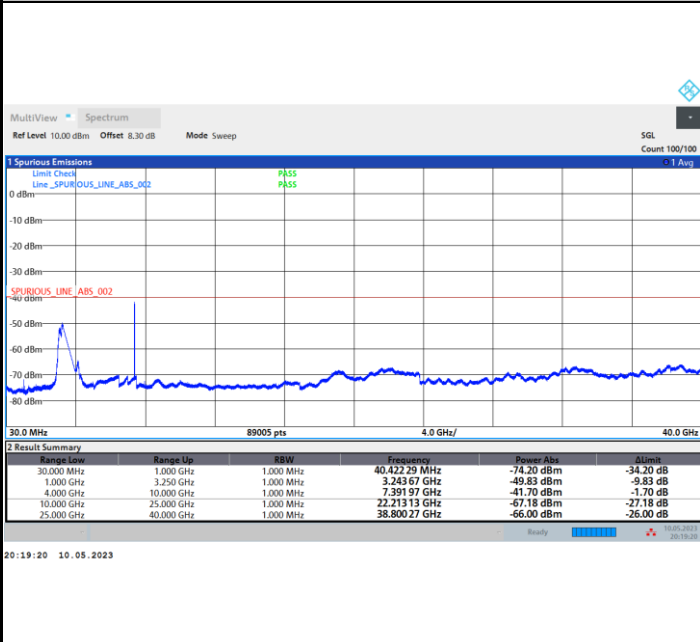
## LTE B48 / 10MHz / QPSK / CSE

### Lowest Channel

### Middle Channel



### Highest Channel



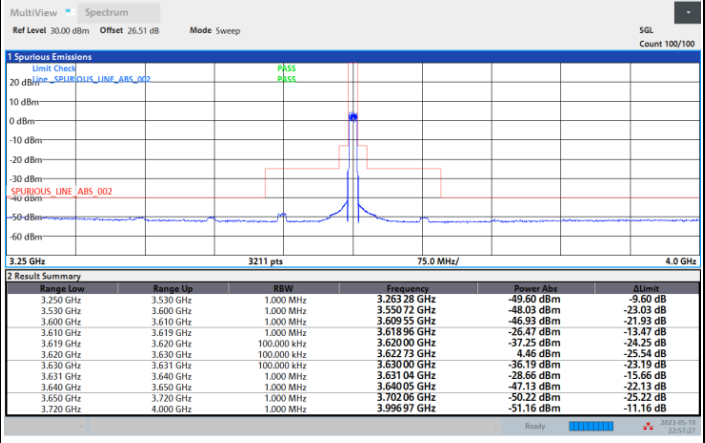
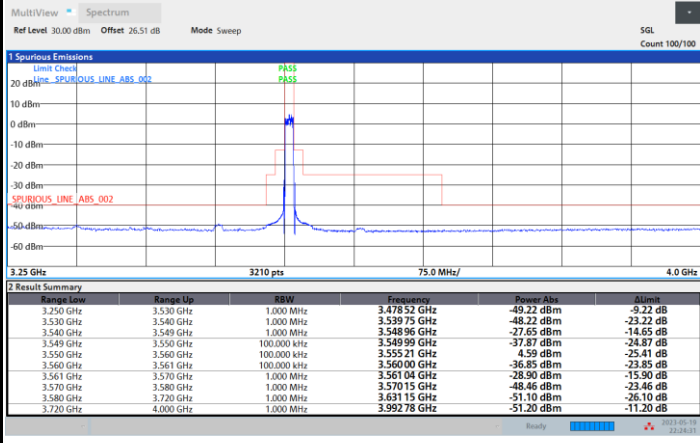




LTE B48 / 10MHz / 16QAM / CSE

Lowest Channel

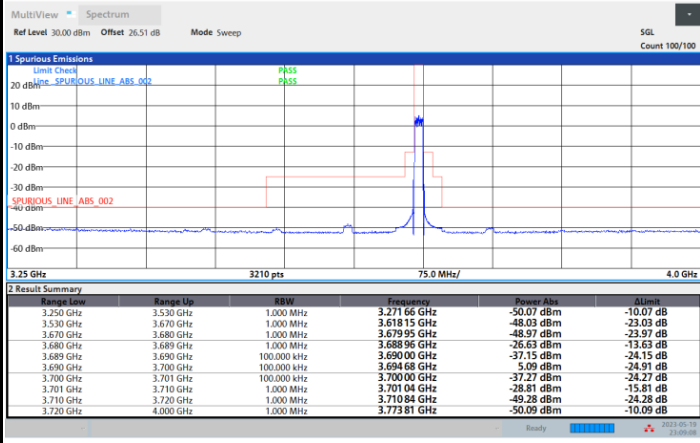
Middle Channel



10:24:31 PM 05/19/2023

10:57:27 PM 05/19/2023

Highest Channel



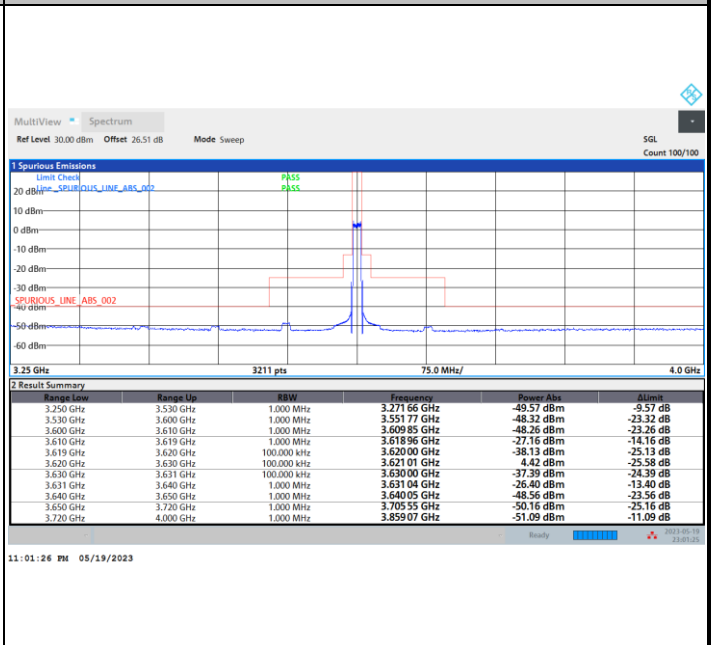
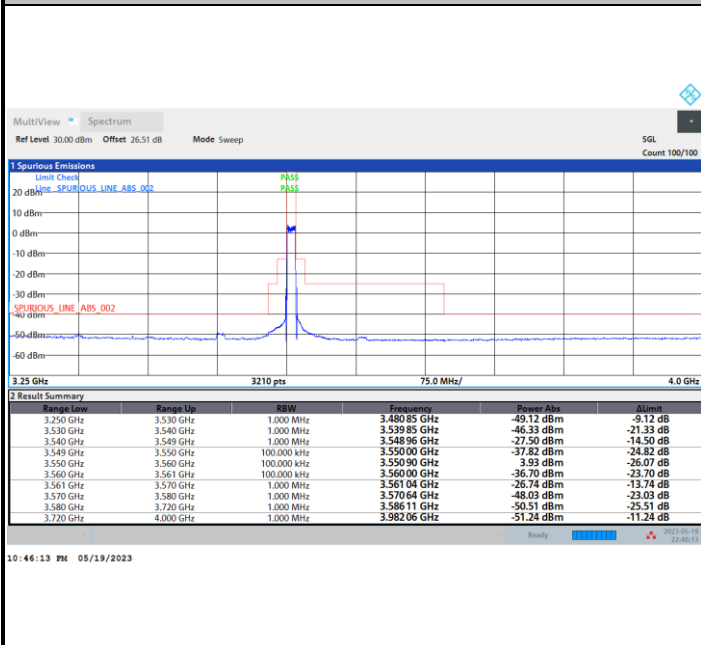
11:09:08 PM 05/19/2023



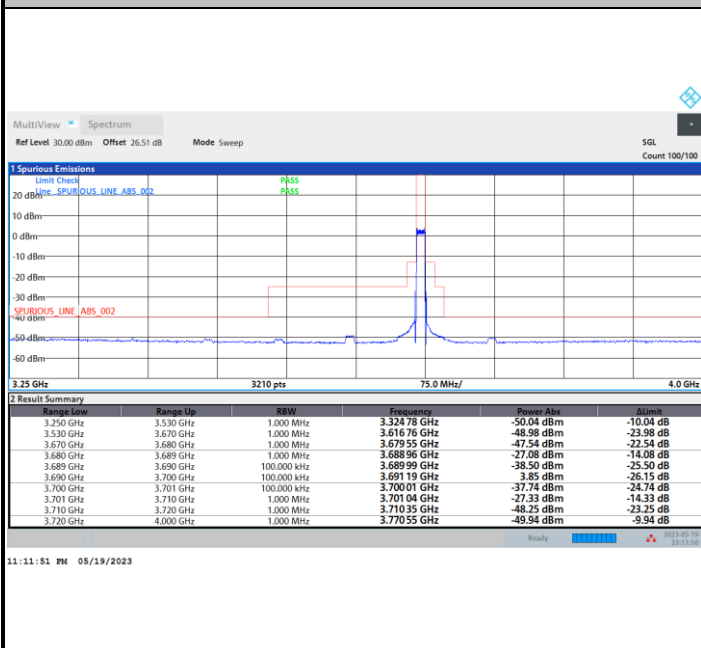
LTE B48 / 10MHz / 64QAM / CSE

Lowest Channel

Middle Channel



Highest Channel

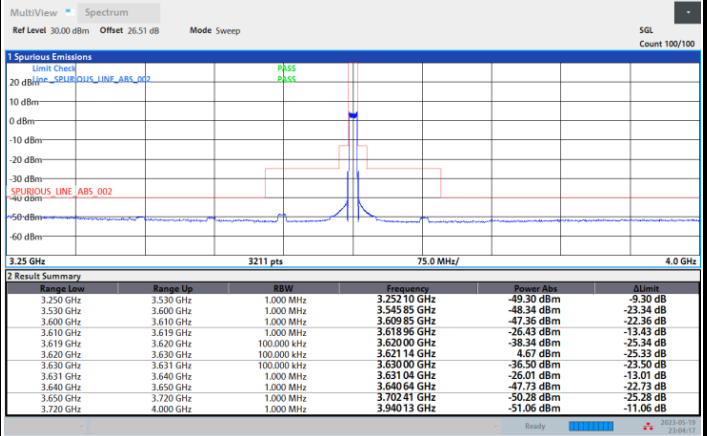
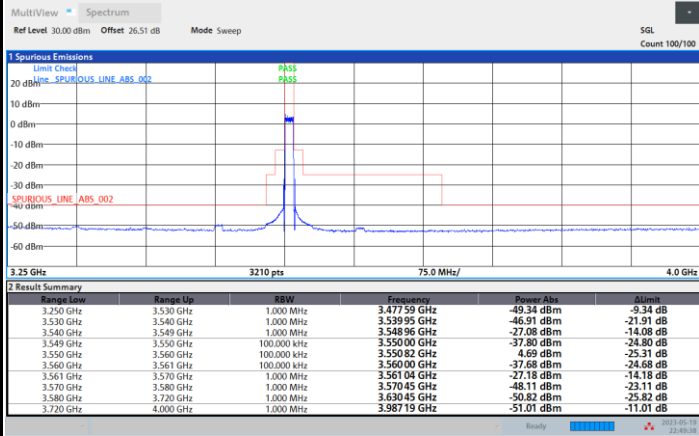




LTE B48 / 10MHz / 256QAM / CSE

Lowest Channel

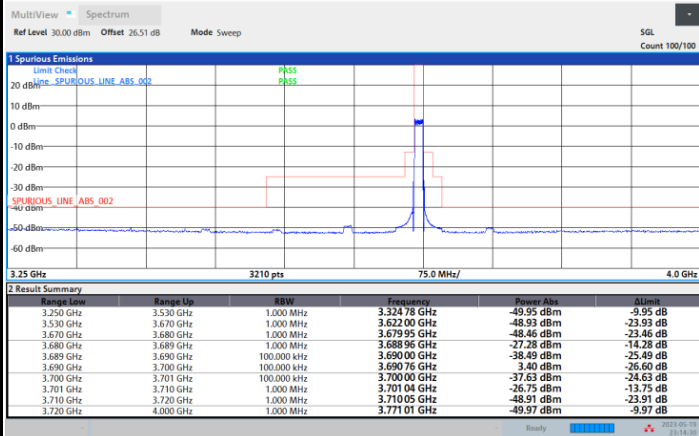
Middle Channel



10:49:39 PM 05/19/2023

11:04:18 PM 05/19/2023

Highest Channel



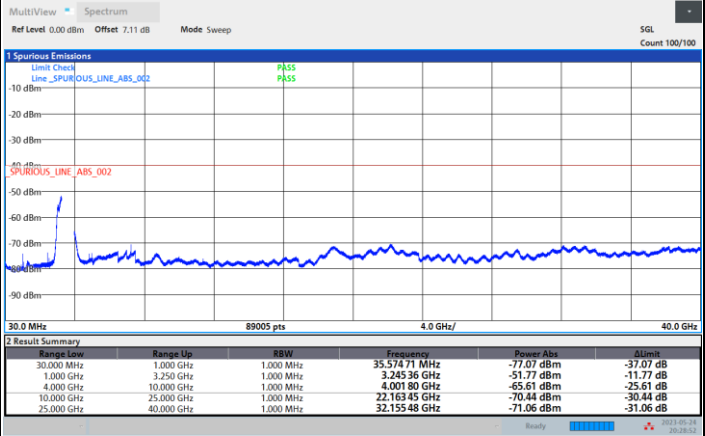
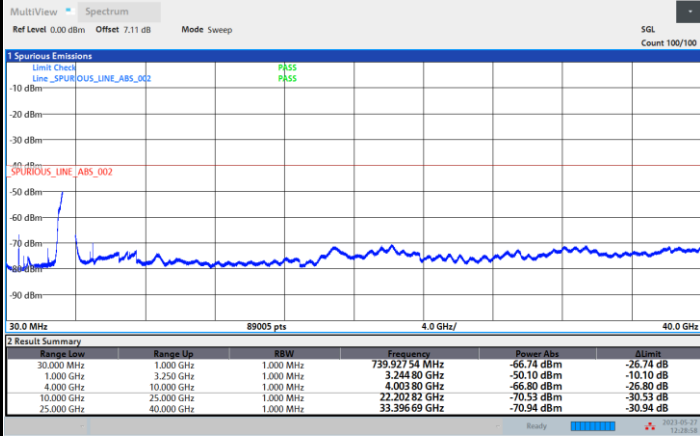
11:14:31 PM 05/19/2023



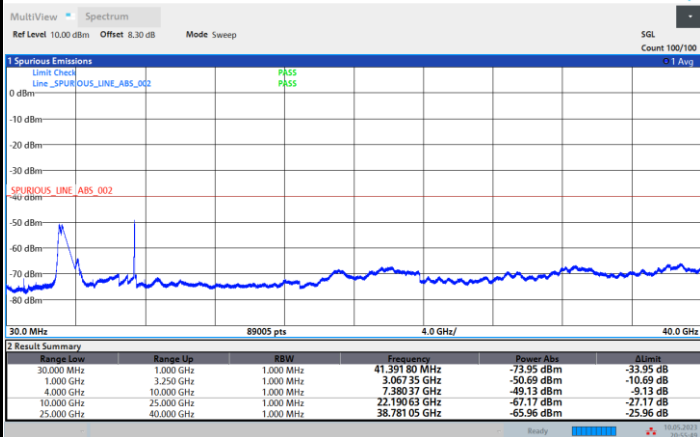
LTE B48 / 20MHz / QPSK / CSE

Lowest Channel

Middle Channel



Highest Channel

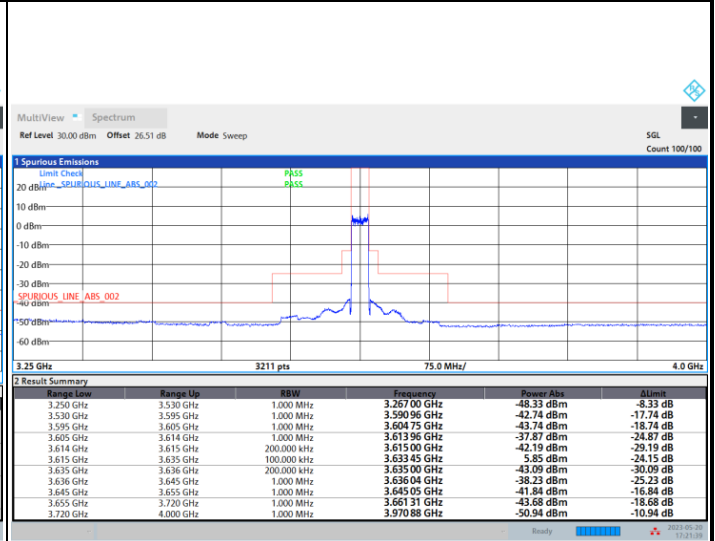
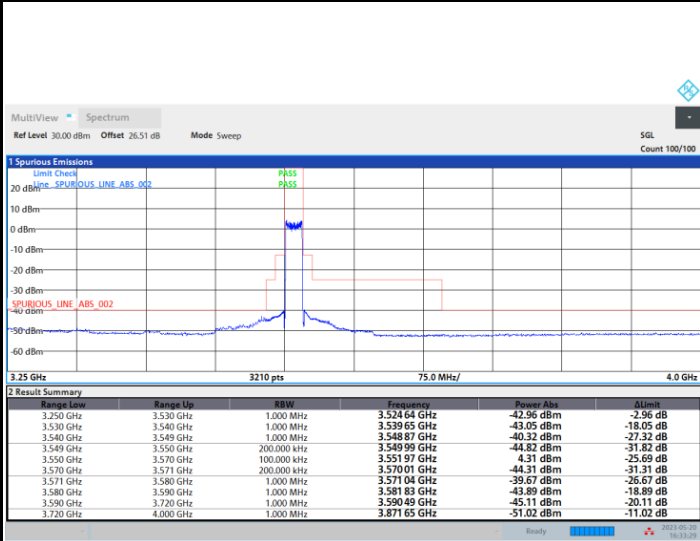




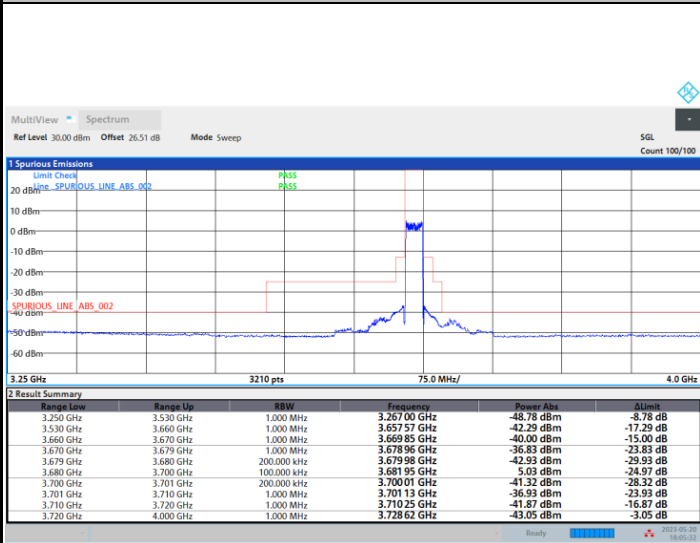
LTE B48 / 20MHz / 16QAM / CSE

Lowest Channel

Middle Channel



Highest Channel

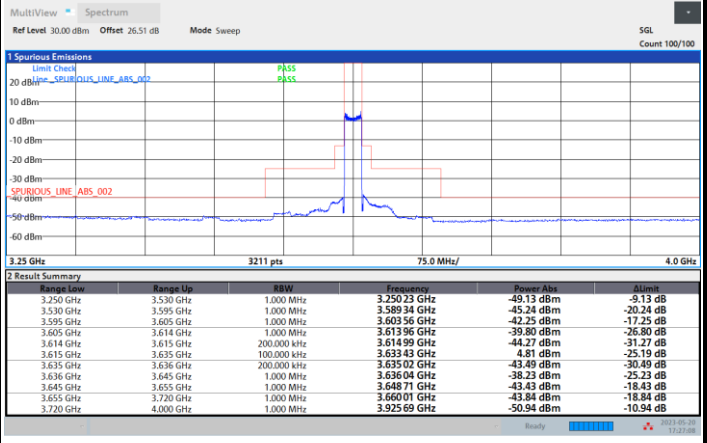
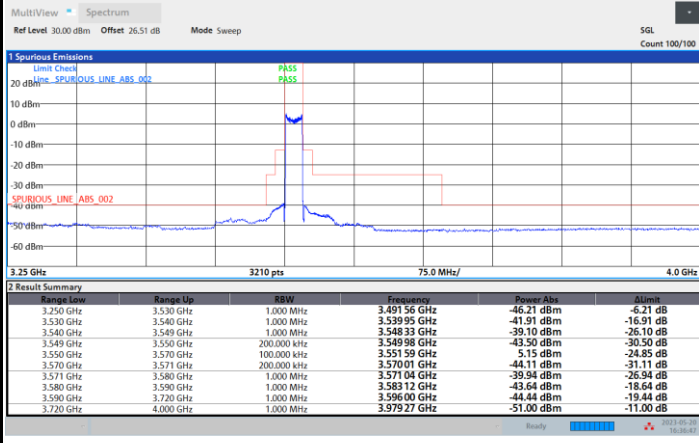




LTE B48 / 20MHz / 64QAM / CSE

Lowest Channel

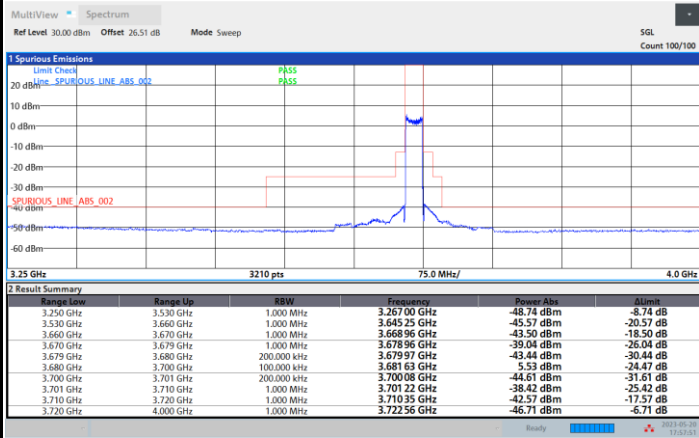
Middle Channel



04:36:48 PM 05/20/2023

05:27:08 PM 05/20/2023

Highest Channel



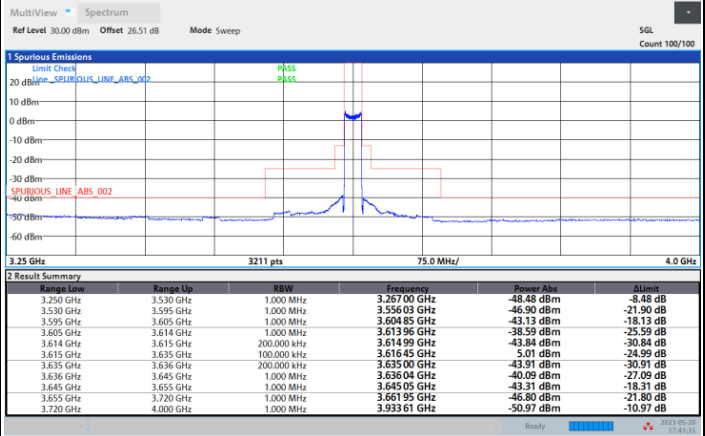
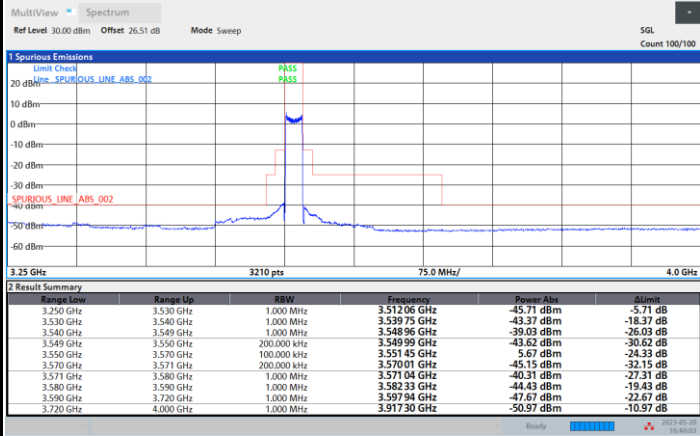
05:57:52 PM 05/20/2023



LTE B48 / 20MHz / 256QAM / CSE

Lowest Channel

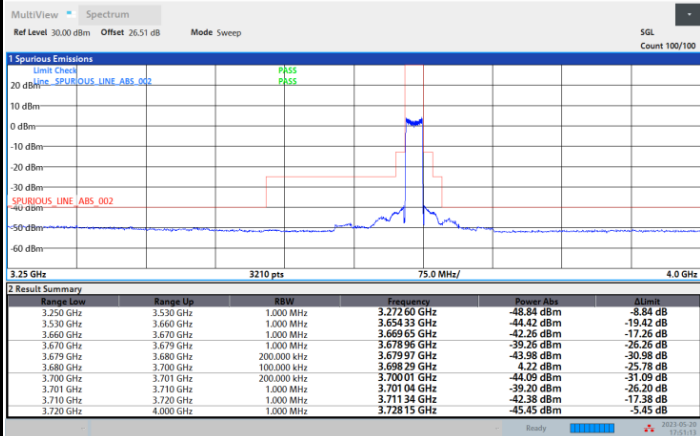
Middle Channel



04:40:04 PM 05/20/2023

05:41:35 PM 05/20/2023

Highest Channel



09:51:14 PM 05/20/2023



### 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	0.8276	PASS
40	Normal Voltage	0.6621	
30	Normal Voltage	1.0483	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.1655	
0	Normal Voltage	0.8276	
-10	Normal Voltage	0.1655	
-20	Normal Voltage	0.0000	
-30	Normal Voltage	0.1655	
20	Maximum Voltage	0.6069	
20	Normal Voltage	0.7724	
20	Minimum Voltage	1.9862	

**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(2)>

**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	18.80	18.33	18.47	18.54	-	-	-	-
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM
Lowest CH	18.83	18.87	18.45	18.66	-	-	-	-

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	28.40	27.93	28.07	28.14	-	-	-	-
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM
Lowest CH	28.43	28.47	28.05	28.26	-	-	-	-
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	19.10	18.05	18.82	18.98	-	-	-	-
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM
Middle CH	18.72	18.69	18.41	18.53	-	-	-	-

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	28.70	27.65	28.42	28.58	-	-	-	-
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM
Middle CH	28.32	28.29	28.01	28.13	-	-	-	-
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	18.74	17.57	18.40	18.40	-	-	-	-
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM
Highest CH	18.62	18.51	18.52	18.56	-	-	-	-

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	28.34	27.17	28.00	28.00	-	-	-	-
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM
Highest CH	28.22	28.11	28.12	28.16	-	-	-	-
Limit	30dBm/10MHz							
Result	PASS							

Note

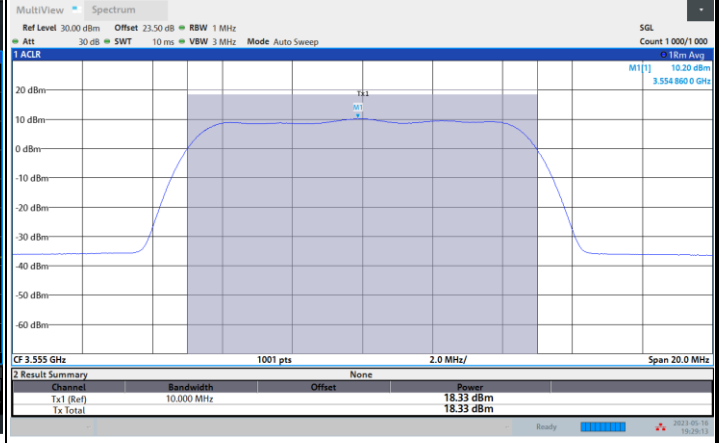
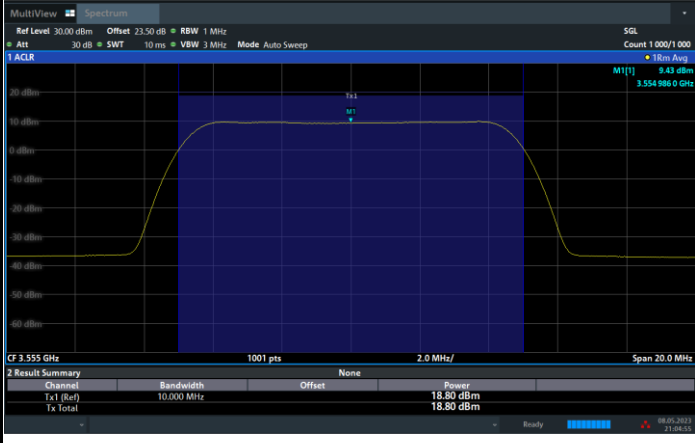
1. The measured conducted result has included duty cycle offset factor.
2. The Maximum EIRP = conducted result + 3.01dB (2TX) + 6.59dBi MIMO antenna gain.



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

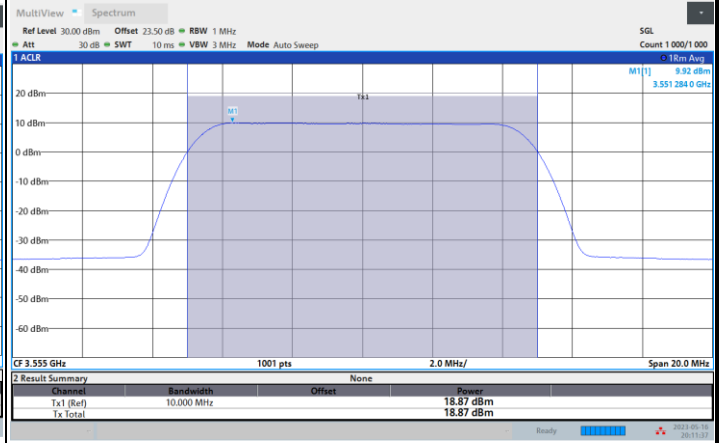
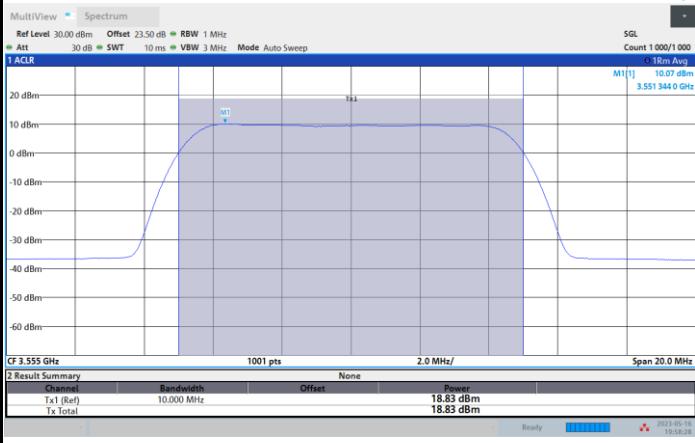
QPSK

16QAM



64QAM

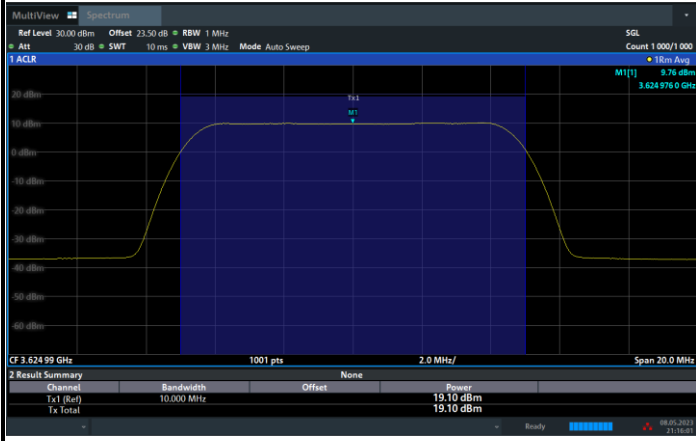
256QAM



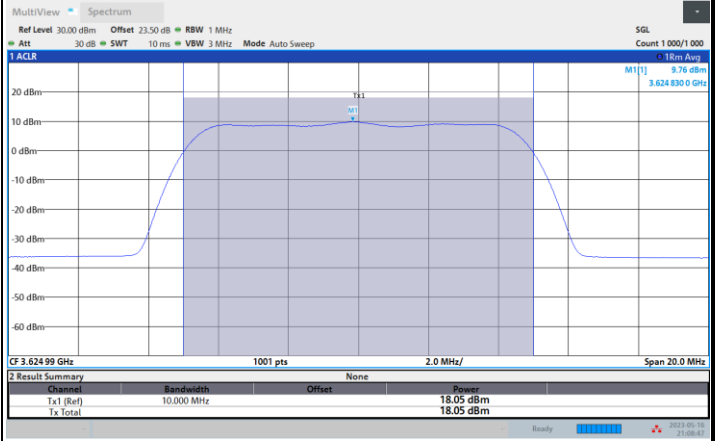


LTE B48 / 10MHz / Middle Channel / Conducted (dBm/10MHz)

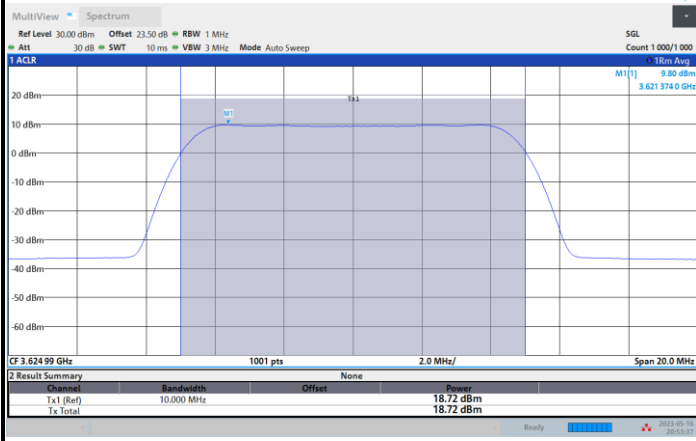
QPSK



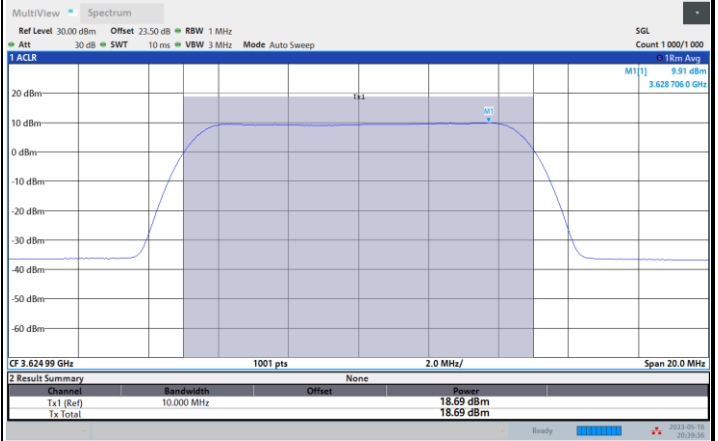
16QAM



64QAM



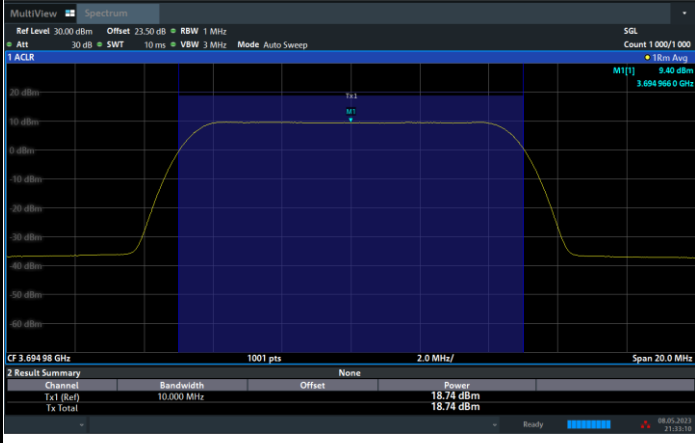
256QAM



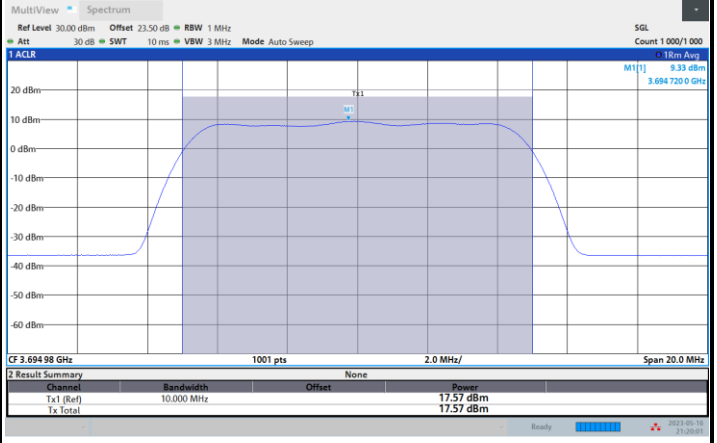


LTE B48 / 10MHz / Highest Channel / Conducted (dBm/10MHz)

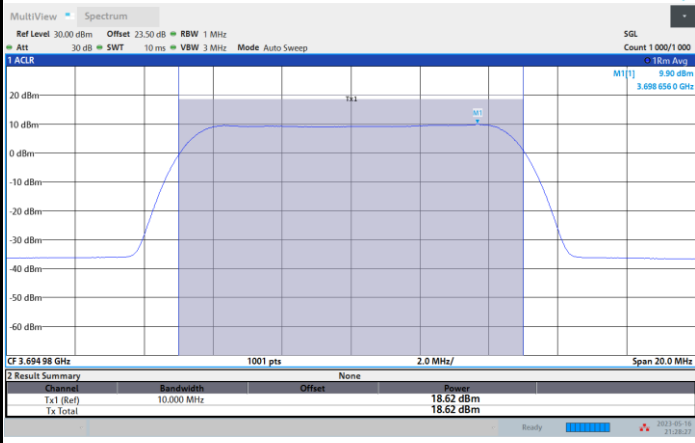
QPSK



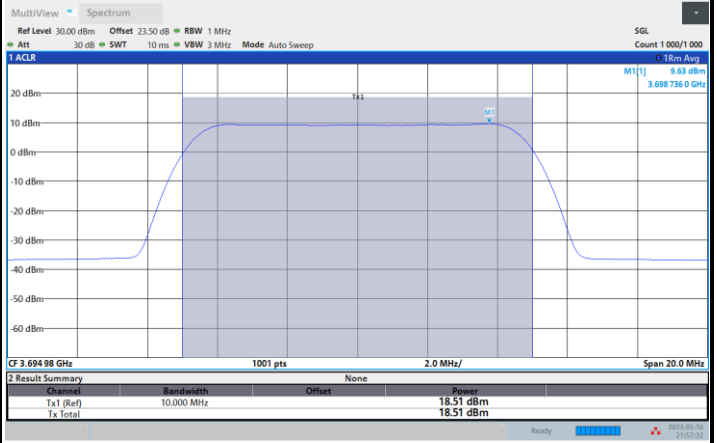
16QAM



64QAM



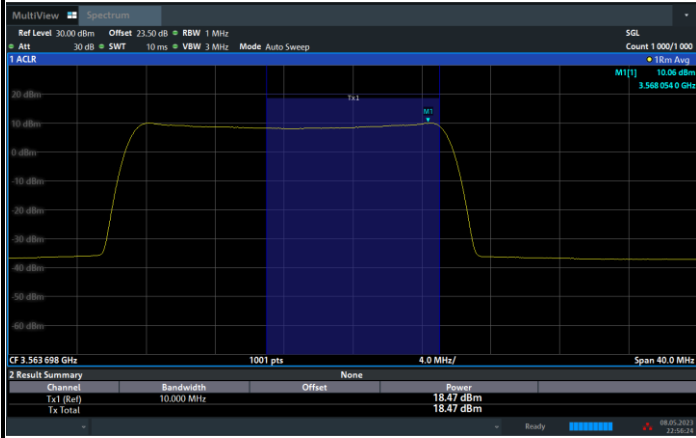
256QAM





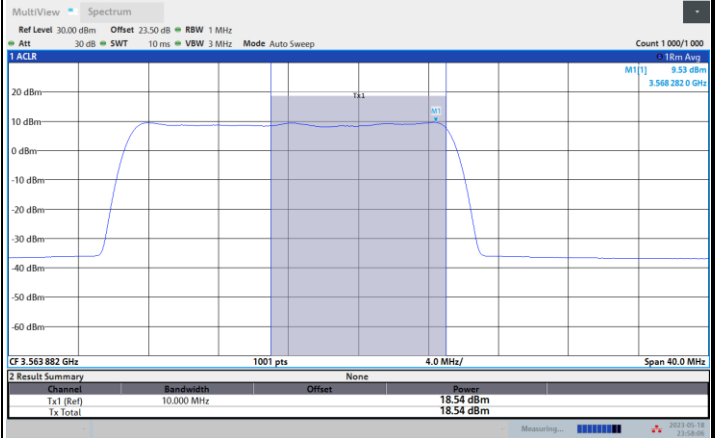
LTE B48 / 20MHz / Lowest Channel / Conducted (dBm/10MHz)

QPSK



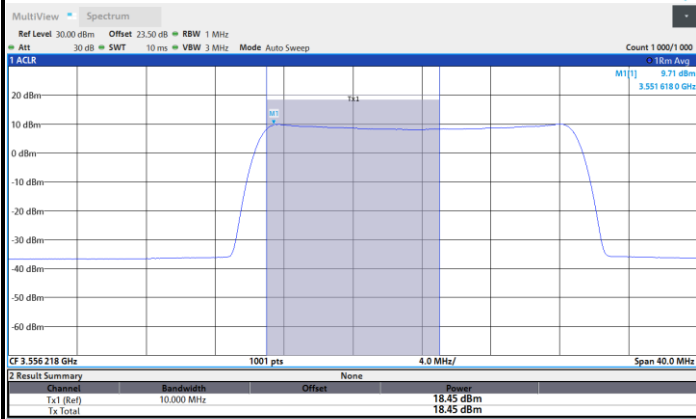
22:56:24 08.05.2023

16QAM



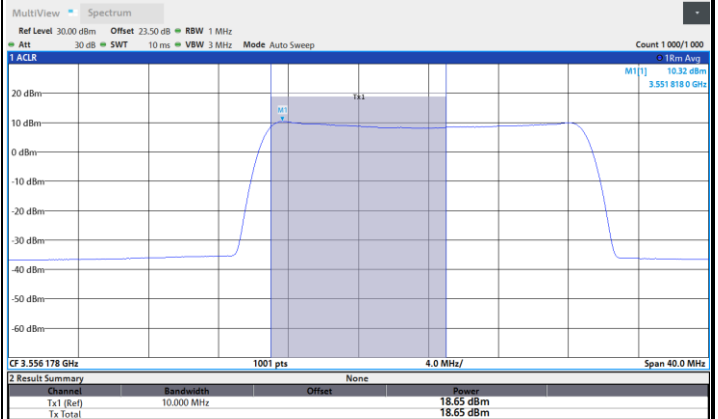
11:58:06 PM 05/18/2023

64QAM



11:32:48 PM 05/18/2023

256QAM



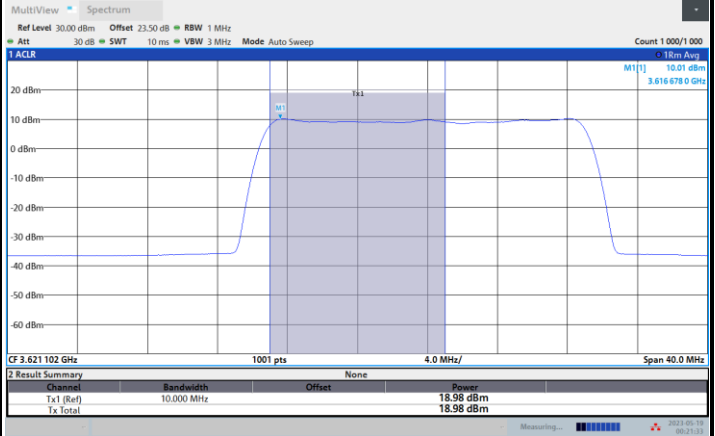
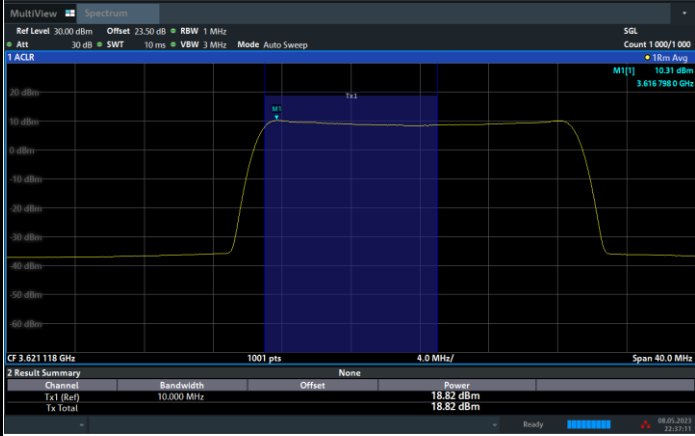
11:53:14 PM 05/18/2023



LTE B48 / 20MHz / Middle Channel / Conducted (dBm/10MHz)

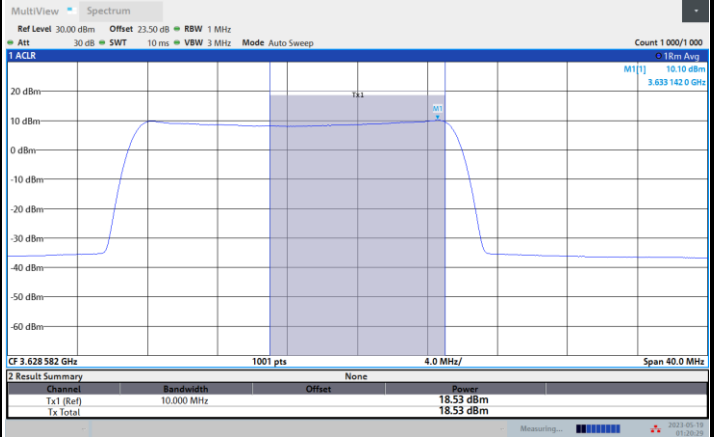
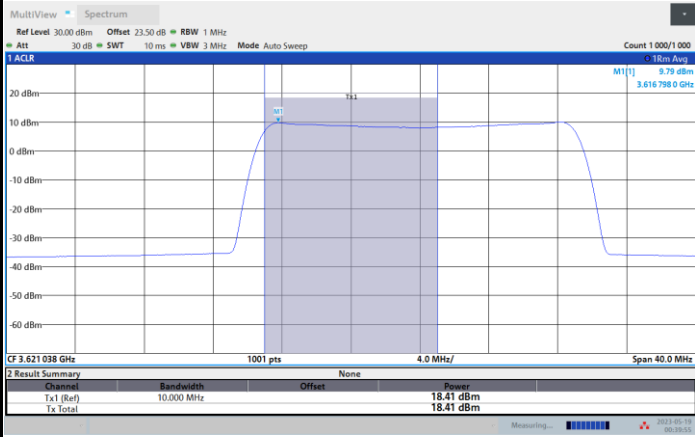
QPSK

16QAM



64QAM

256QAM

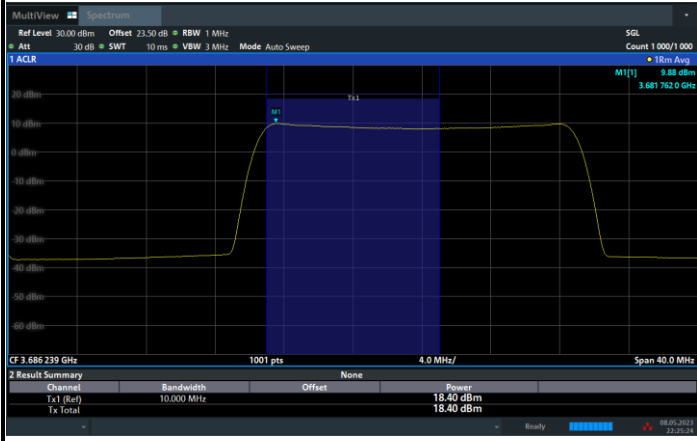




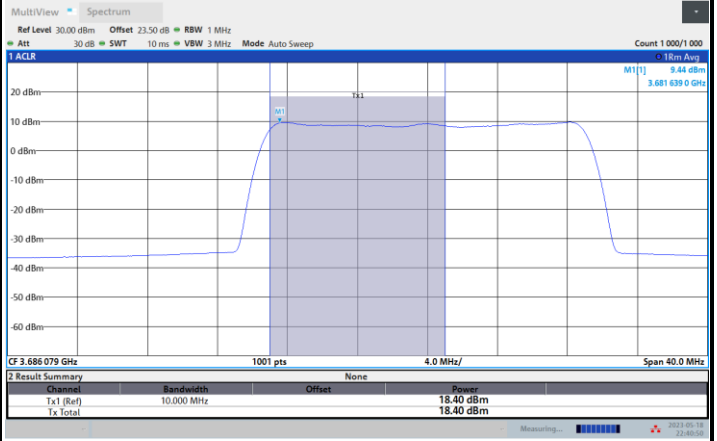


LTE B48 / 20MHz / Highest Channel / Conducted (dBm/10MHz)

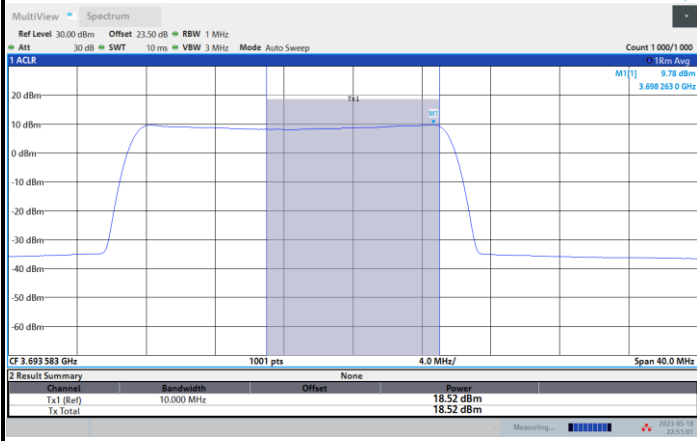
QPSK



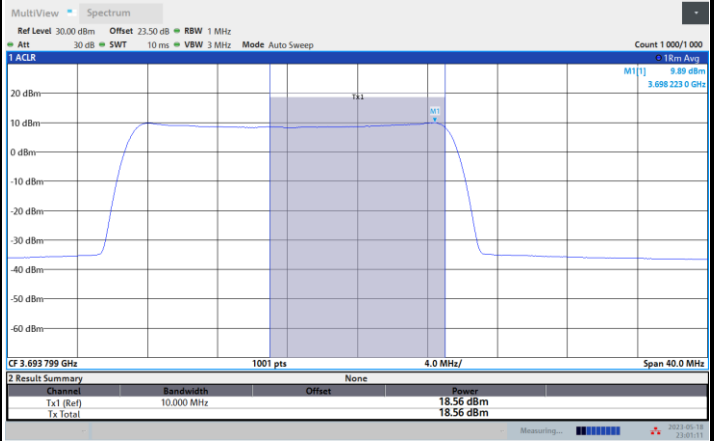
16QAM



64QAM



256QAM





**Power Spectral Density**

Mode	LTE B48 : Conducted PSD (dBm/MHz) <SISO> Lowest Channel							
	10MHz		20MHz		40MHz		50MHz	
BW								
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	10.11	10.37	10.21	9.93	-	-	-	-
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM
Lowest CH	10.29	10.07	10.04	10.23	-	-	-	-

Mode	LTE B48 : EIRP PSD (dBm/MHz) <MIMO 2TX> Lowest Channel							
	10MHz		20MHz		40MHz		50MHz	
BW								
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	19.71	19.97	19.81	19.53	-	-	-	-
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM
Lowest CH	19.89	19.67	19.64	19.83	-	-	-	-
Limit	20dBm/MHz							
Result	PASS							

**Note**

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



Mode	LTE B48 : Conducted PSD (dBm/MHz) <SISO> Middle Channel							
	10MHz		20MHz		40MHz		50MHz	
BW								
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	10.21	10.22	10.33	10.31	-	-	-	-
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM
Middle CH	10.00	10.01	10.08	10.15	-	-	-	-

Mode	LTE B48 : EIRP PSD (dBm/MHz) <MIMO 2TX> Middle Channel							
	10MHz		20MHz		40MHz		50MHz	
BW								
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	19.81	19.82	19.93	19.91	-	-	-	-
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM
Middle CH	19.60	19.61	19.68	19.75	-	-	-	-
Limit	20dBm/MHz							
Result	PASS							

**Note**

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



Mode	LTE B48 : Conducted PSD (dBm/MHz) <SISO> Highest Channel							
	10MHz		20MHz		40MHz		50MHz	
BW								
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Highest CH	10.06	9.80	10.13	10.17	-	-	-	-
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM
Highest CH	10.03	10.07	10.22	10.07	-	-	-	-

Mode	LTE B48 : EIRP PSD (dBm/MHz) <MIMO 2TX> Highest Channel							
	10MHz		20MHz		40MHz		50MHz	
BW								
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Highest CH	19.66	19.40	19.73	19.77	-	-	-	-
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM
Highest CH	19.63	19.67	19.82	19.67	-	-	-	-
Limit	20dBm/MHz							
Result	PASS							

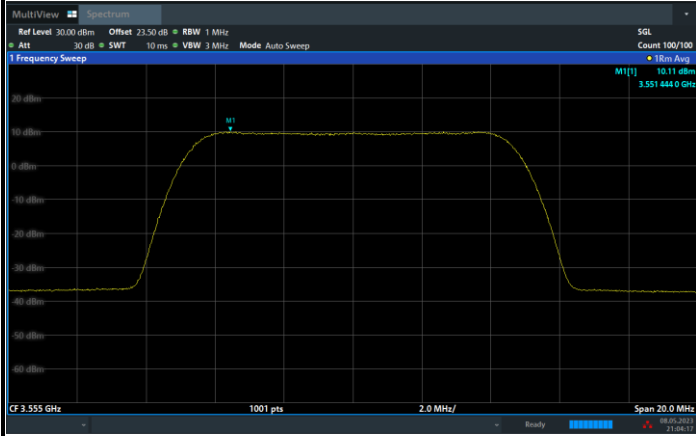
Note

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



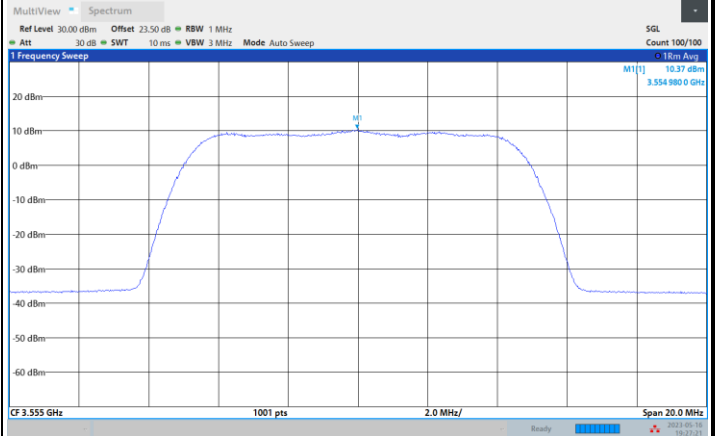
LTE B48 / 10MHz / Lowest Channel / PSD

QPSK



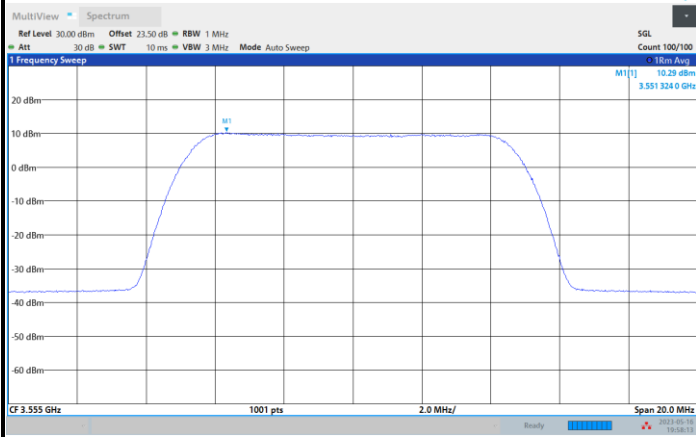
21:04:18 08/05/2023

16QAM



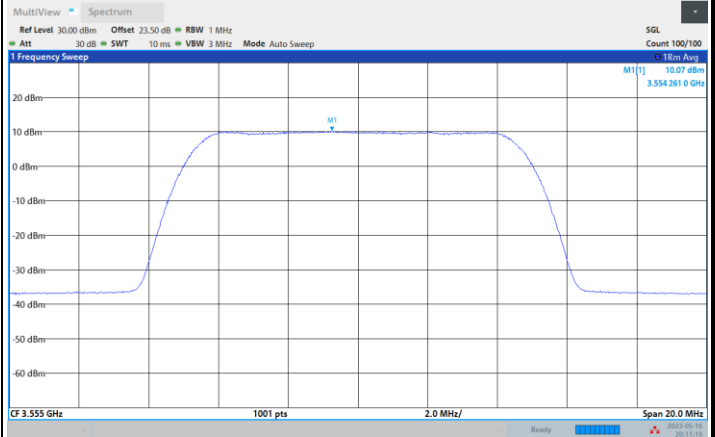
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64QAM



07:58:14 PM 05/16/2023

256QAM

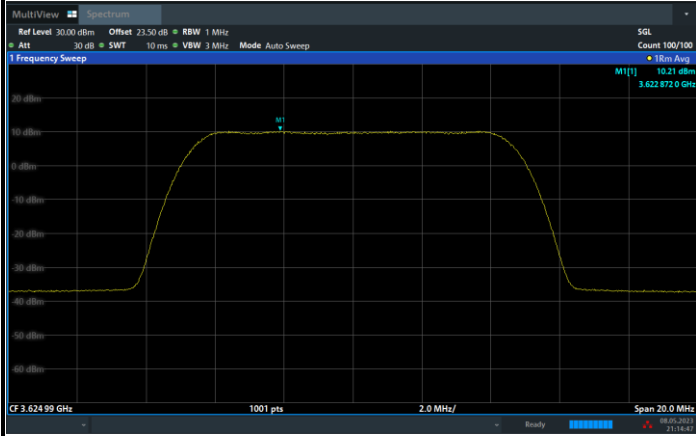


08:11:20 PM 05/16/2023



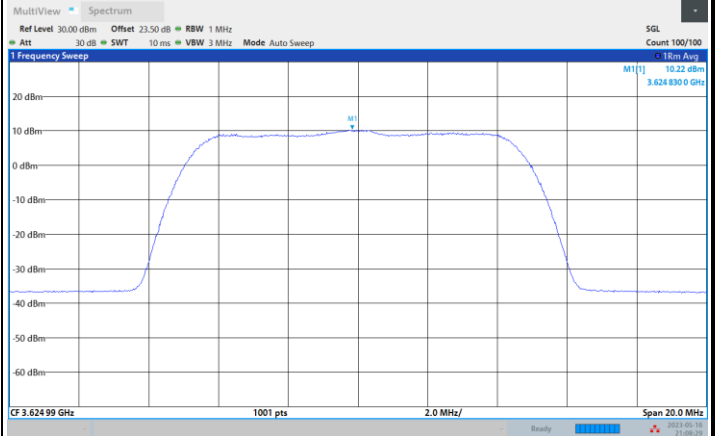
LTE B48 / 10MHz / Middle Channel / PSD

QPSK



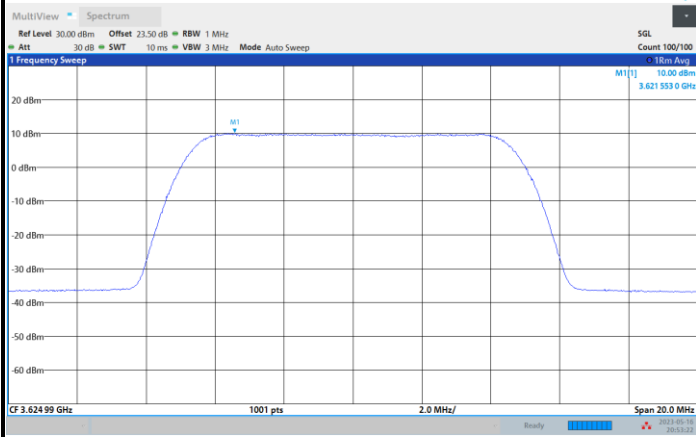
21:14:48 08.05.2023

16QAM



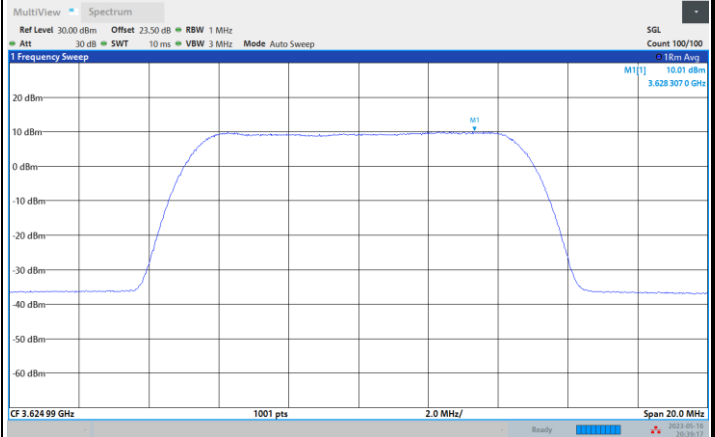
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64QAM



08:53:22 PM 05/16/2023

256QAM

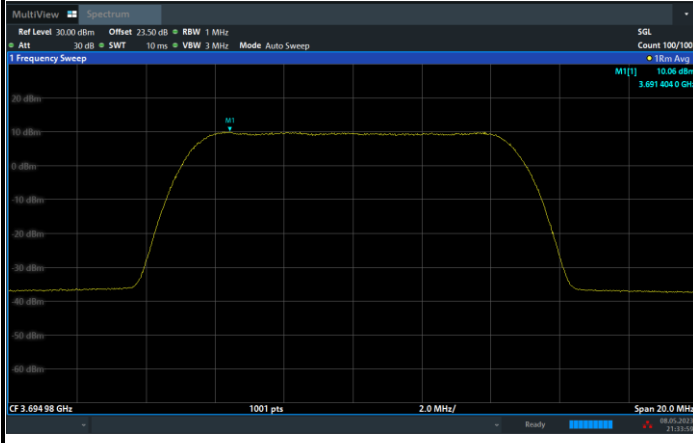


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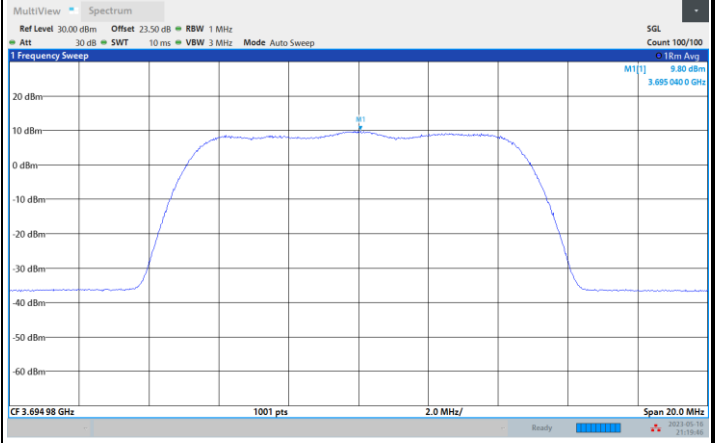
LTE B48 / 10MHz / Highest Channel / PSD

QPSK



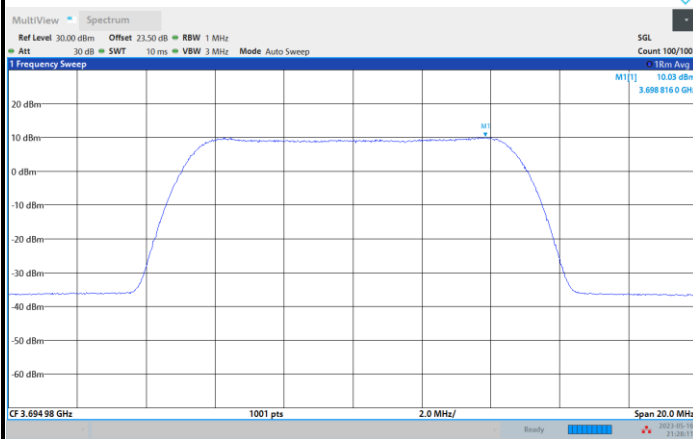
21:33:59 08/05/2023

16QAM



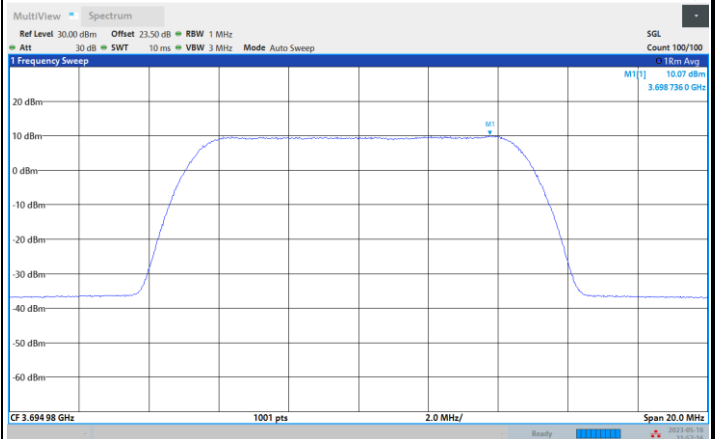
09:19:46 PM 05/16/2023

64QAM



09:28:12 PM 05/16/2023

256QAM

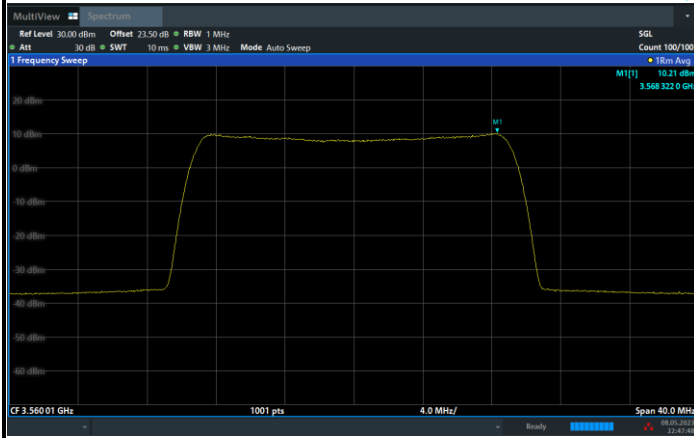


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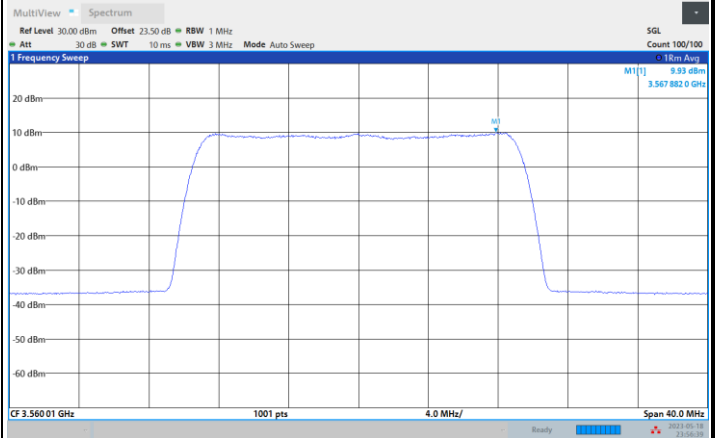
LTE B48 / 20MHz / Lowest Channel / PSD

QPSK



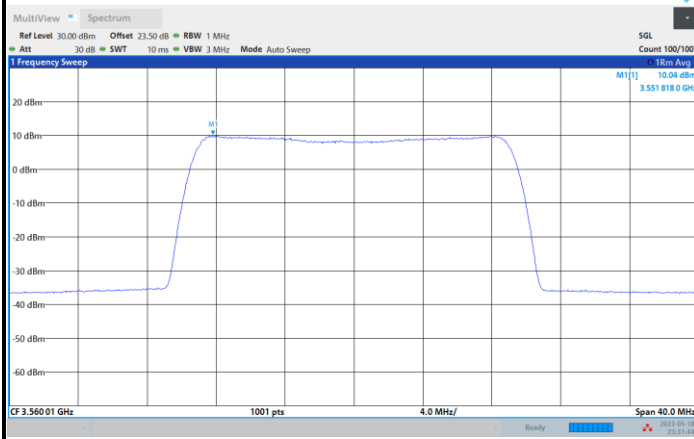
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16QAM



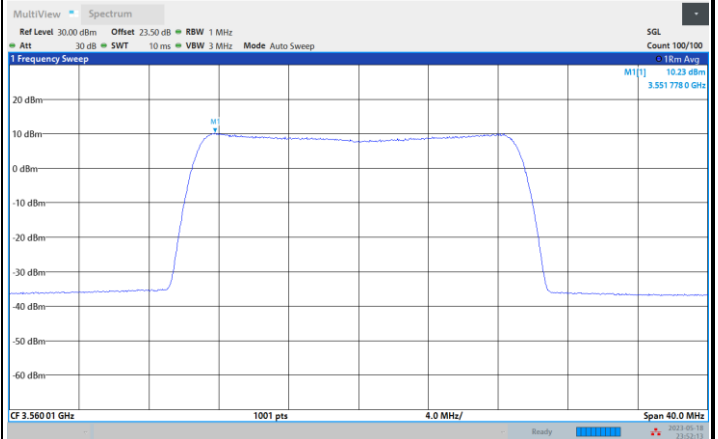
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64QAM



11:31:45 PM 05/18/2023

256QAM



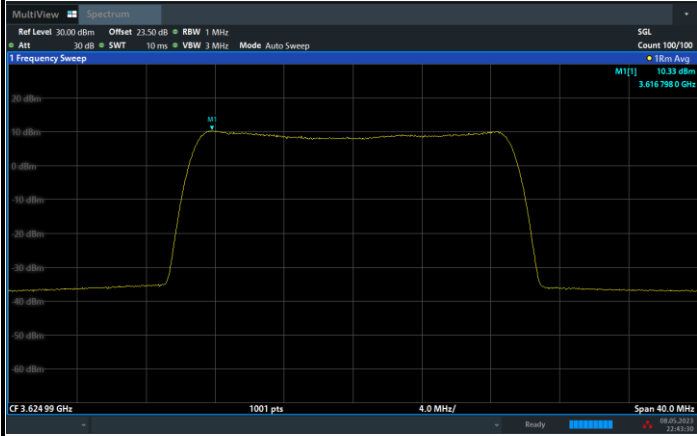
11:52:14 PM 05/18/2023



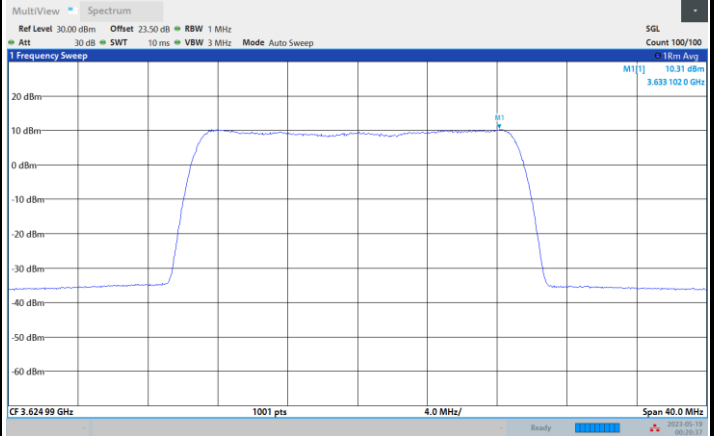


LTE B48 / 20MHz / Middle Channel / PSD

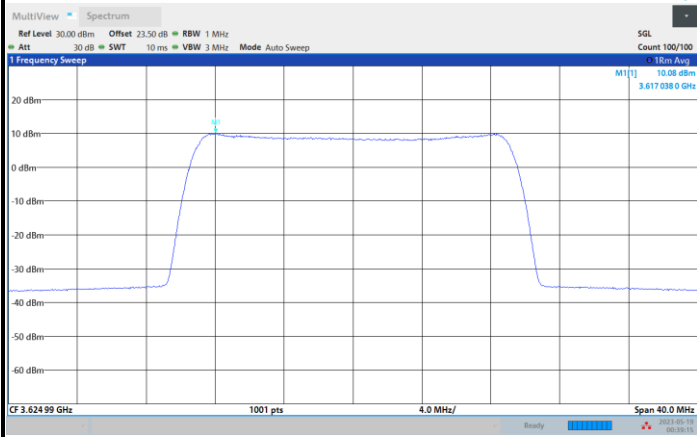
QPSK



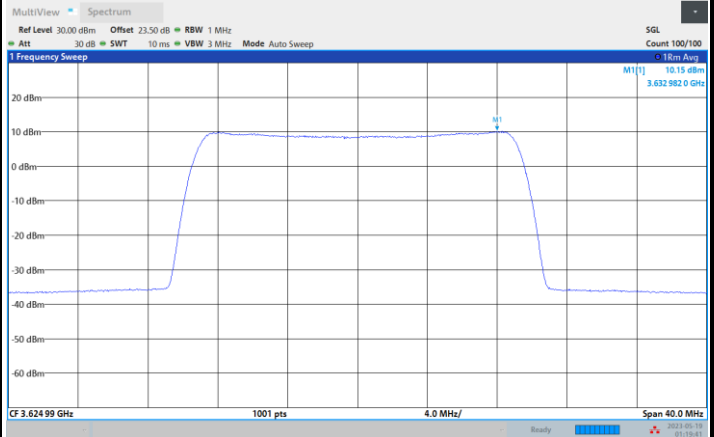
16QAM



64QAM



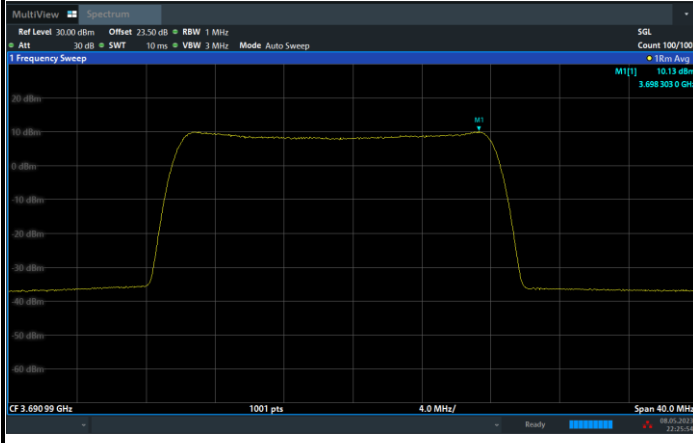
256QAM



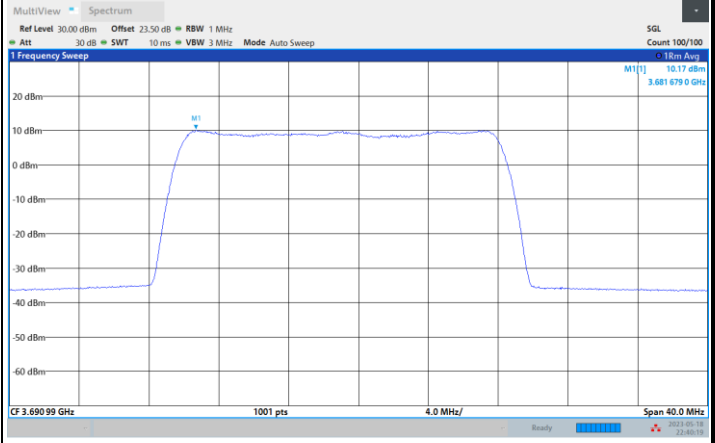


LTE B48 / 20MHz / Highest Channel / PSD

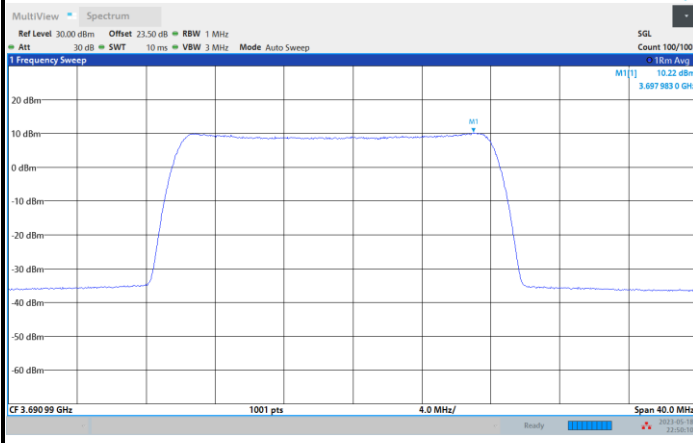
QPSK



16QAM



64QAM



256QAM

