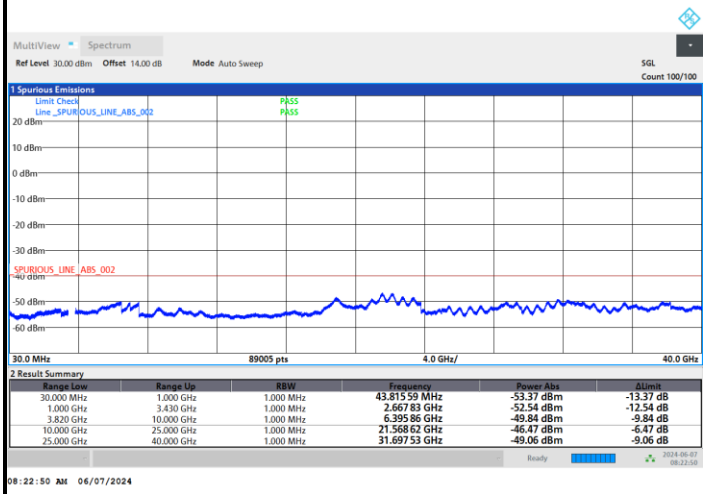
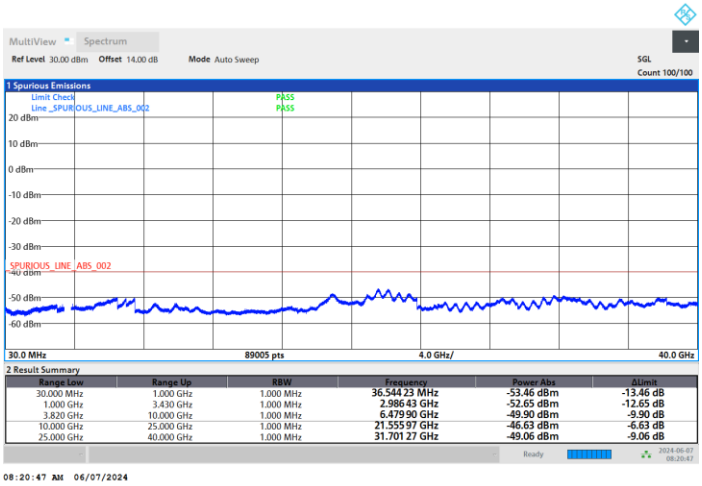
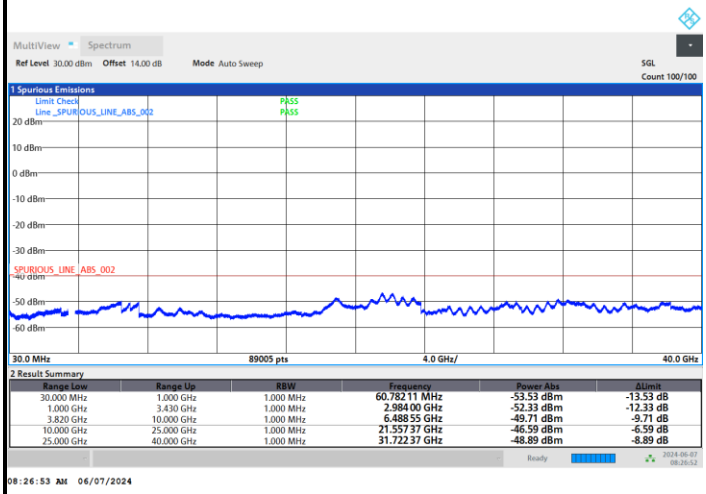
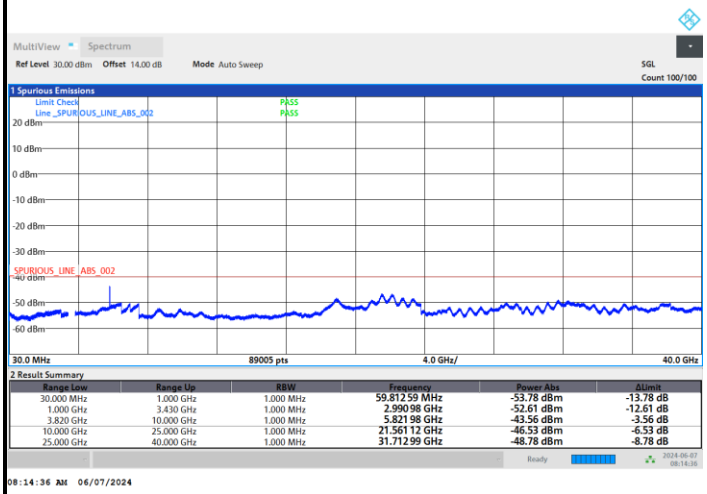
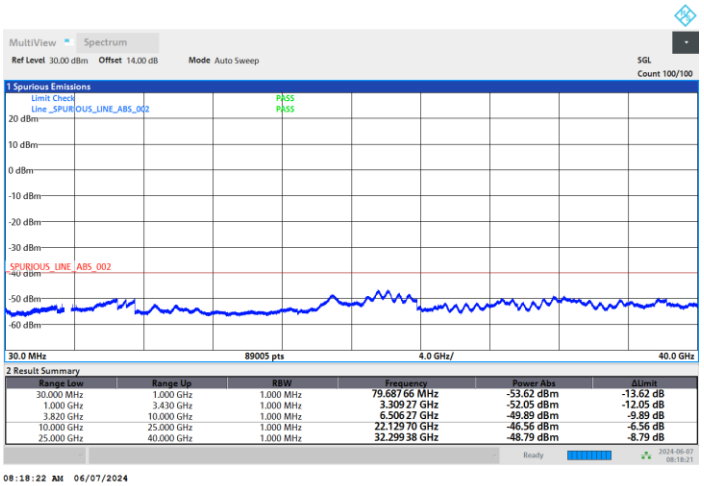
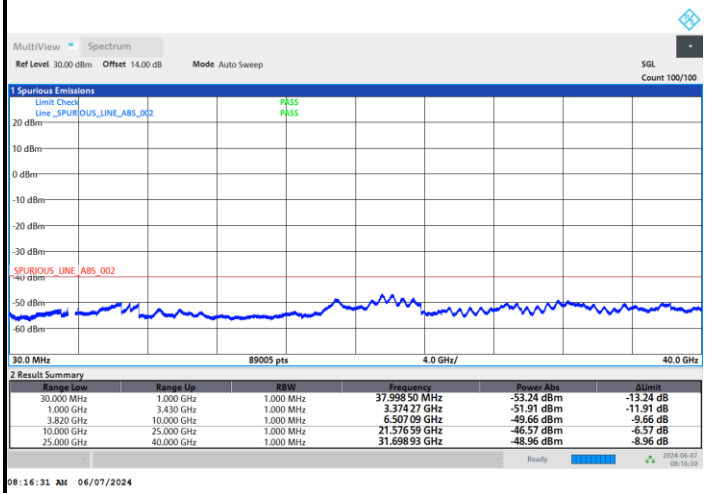
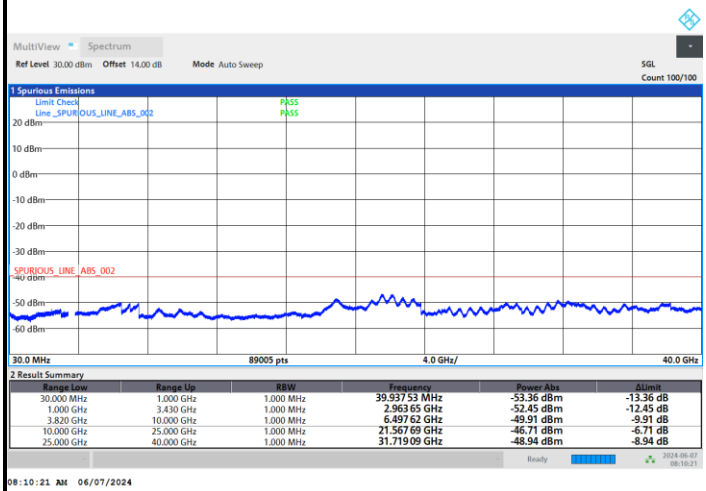
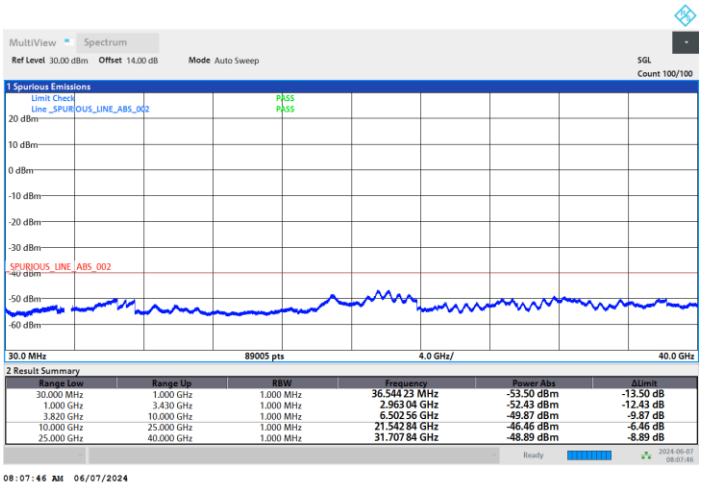
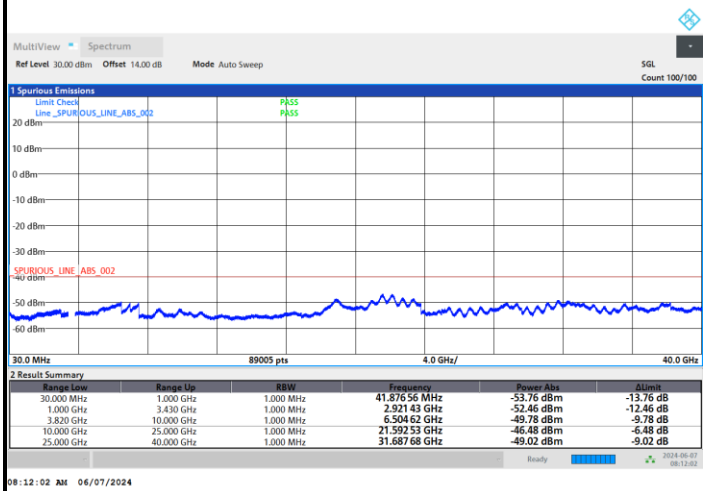
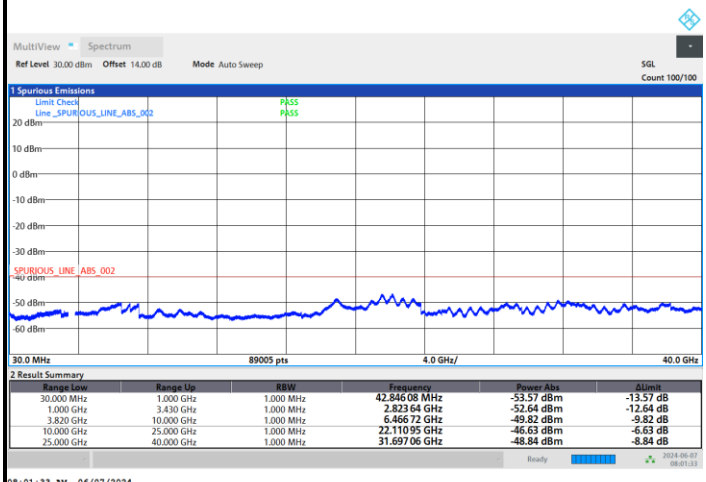
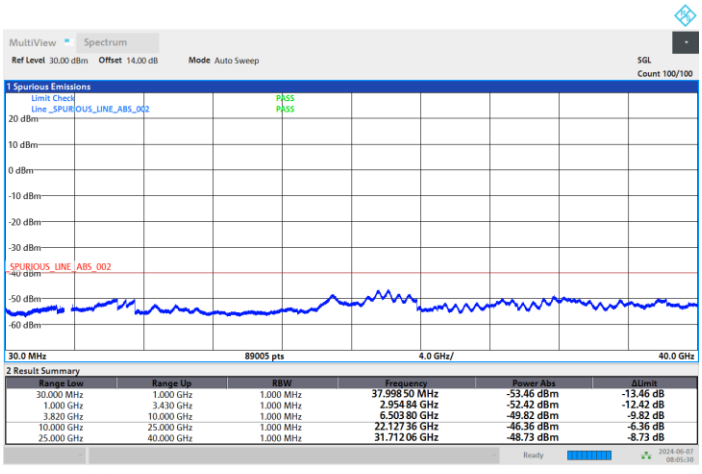
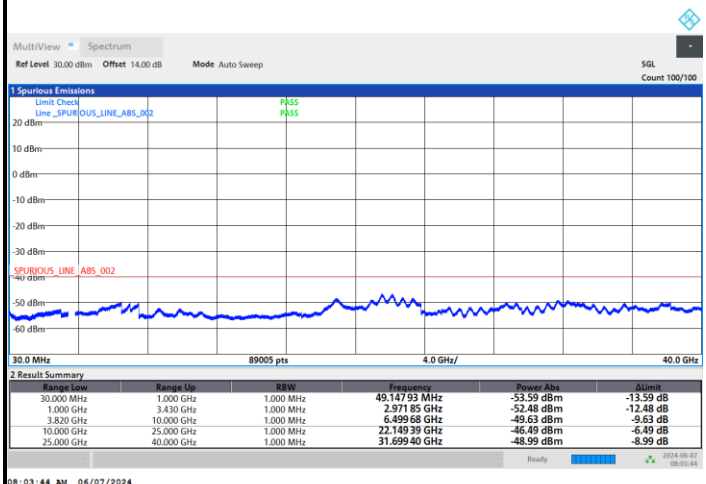
Conducted Spurious Emission

FR1 n48 / 10MHz / CP OFDM / QPSK / 1RB1	
Lowest Channel	**Middle Channel**
	
Highest Channel	
	

FR1 n48 / 20MHz / CP OFDM / QPSK / 1RB1	
Lowest Channel	Middle Channel
	
Highest Channel	
	

FR1 n48 / 30MHz / CP OFDM / QPSK / 1RB1	
Lowest Channel	**Middle Channel**
	
Highest Channel	
	

FR1 n48 / 40MHz / CP OFDM / QPSK / 1RB1	
Lowest Channel	**Middle Channel**
	
Highest Channel	
	

Frequency Stability

Test Conditions		FR1 n48 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 20MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0040	PASS
40	Normal Voltage	0.0022	
30	Normal Voltage	0.0007	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0000	
0	Normal Voltage	0.0035	
-10	Normal Voltage	0.0005	
-20	Normal Voltage	0.0018	
-30	Normal Voltage	0.0007	
20	Maximum Voltage	0.0019	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0017	

Note:

1. Normal Voltage = 3.86 V. ; Battery End Point (BEP) = 3.5 V. ; Maximum Voltage = 4.4 V.
2. The frequency fundamental emissions stay within the authorized frequency block.

<MIMO Mode>

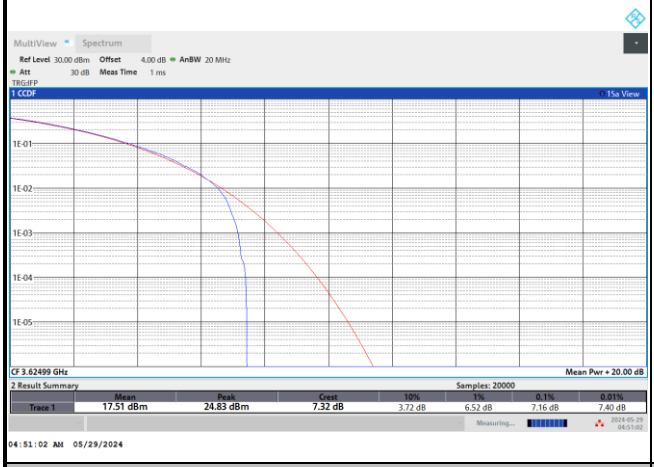
MIMO <Ant. 7>

Peak-to-Average Ratio

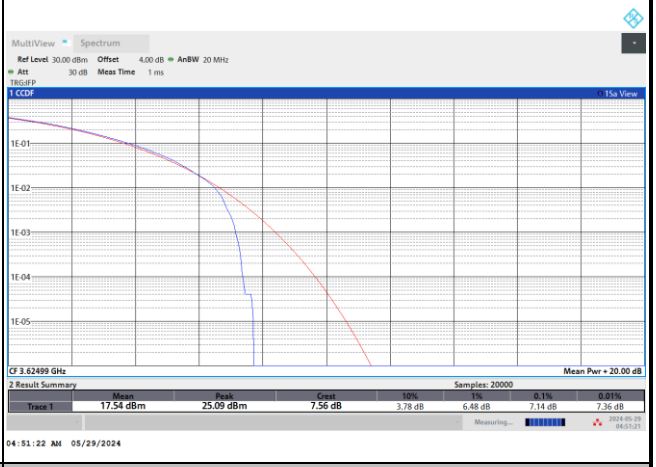
Mode	FR1 n48 / 20MHz / CP OFDM				
Mod.	QPSK	16QAM	64QAM	256QAM	Limit: 13dB
RB Size	Full RB	Full RB	Full RB	Full RB	Result
Middle CH	7.16	7.14	7.44	8.56	PASS

FR1 n48 / 20MHz / CP OFDM / Middle Channel / Full RB

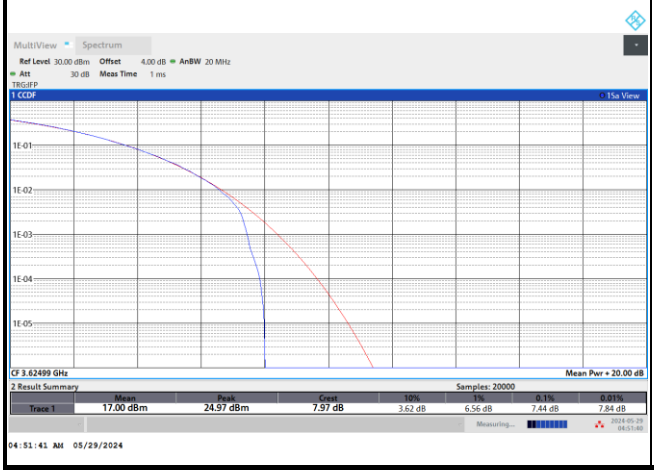
QPSK



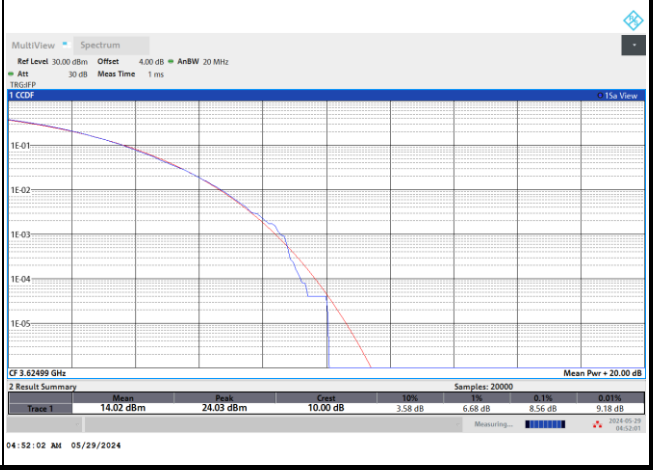
16QAM



64QAM



256QAM

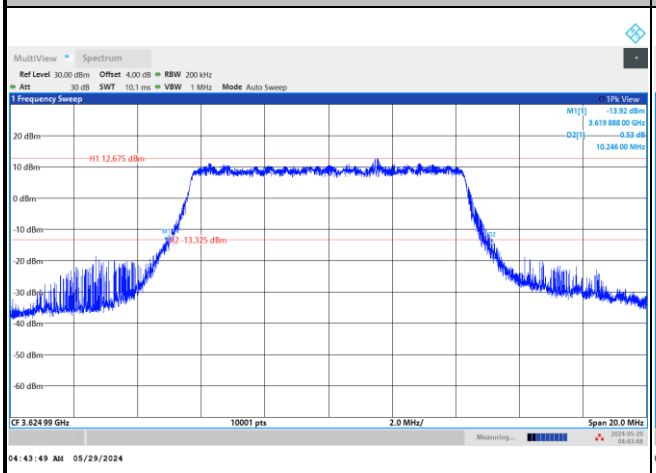


26dB Bandwidth

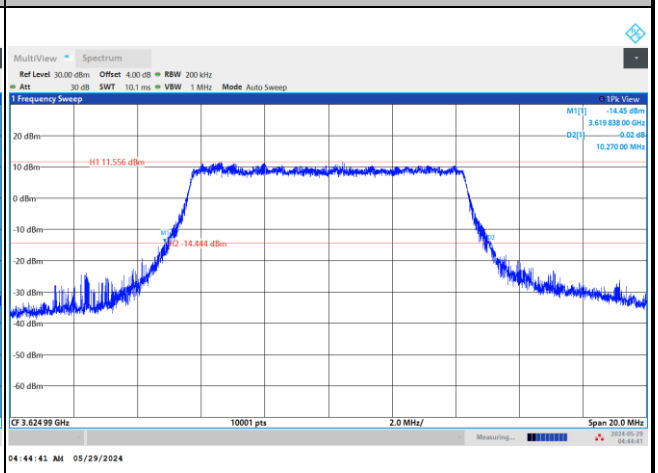
Mode	FR1 n48 : 26dB BW(MHz) / CP OFDM							
BW	10MHz		20MHz		30MHz		40MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	10.25	10.27	21.66	20.62	32.00	33.44	40.98	41.46
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM
Middle CH	10.18	10.08	21.04	21.79	32.19	32.18	41.98	41.54

FR1 n48 / 10MHz / CP OFDM / Middle Channel / Full RB

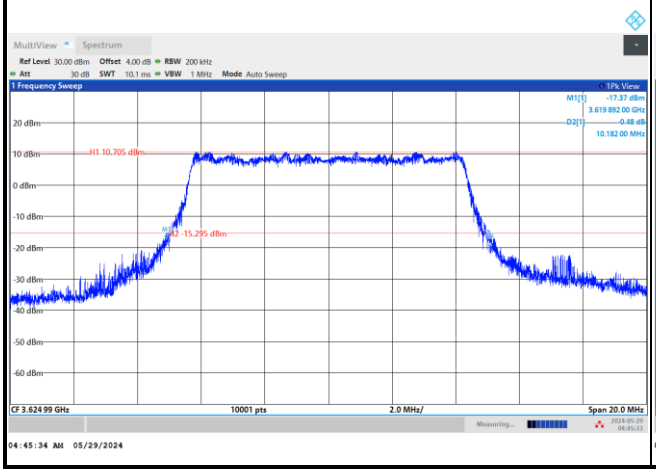
QPSK



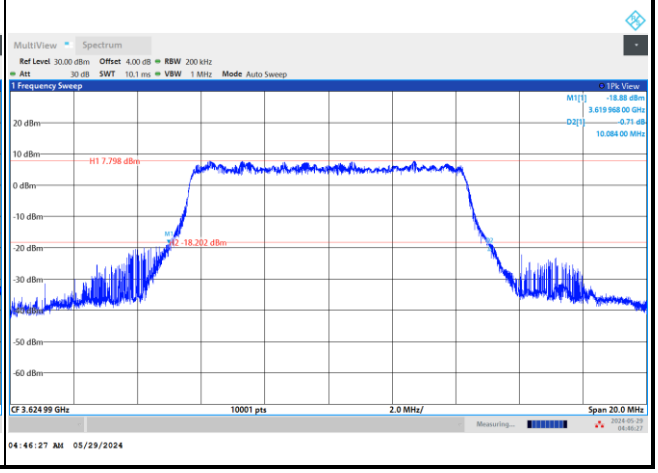
16QAM

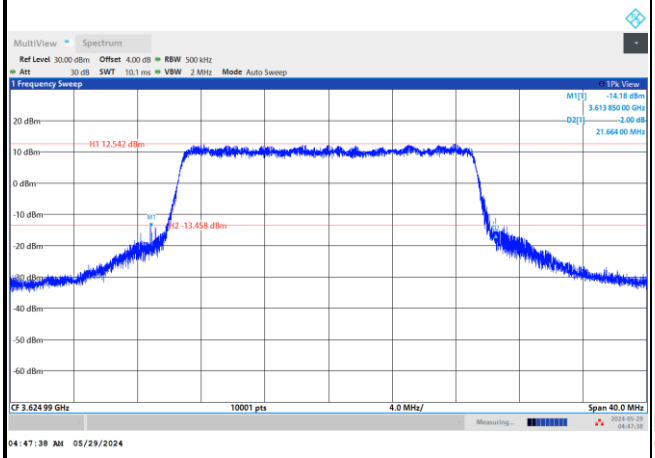
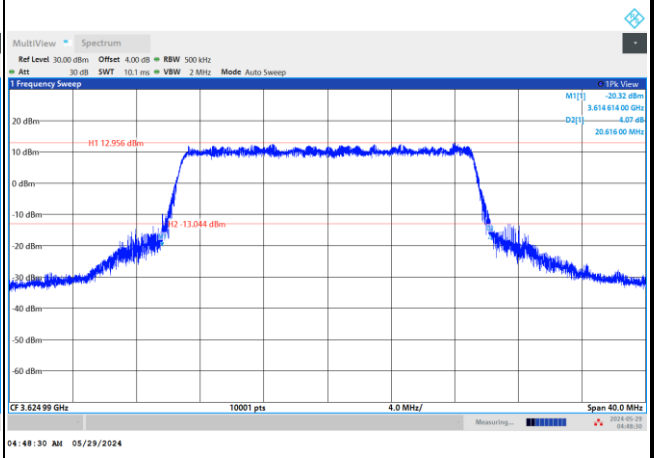
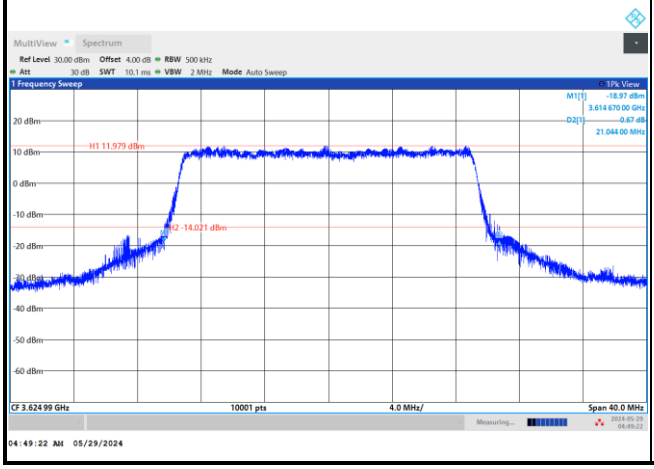
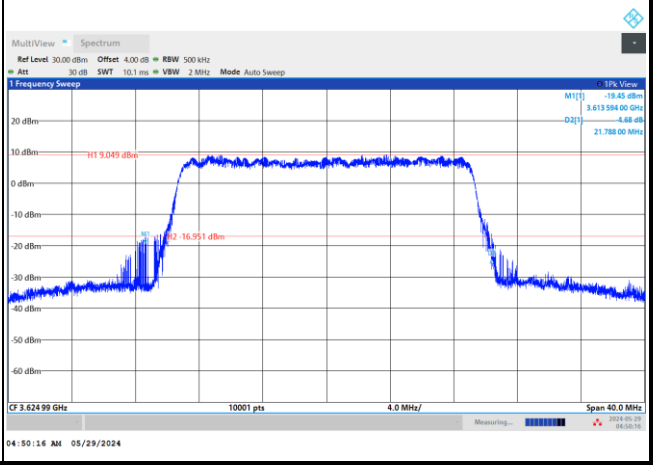


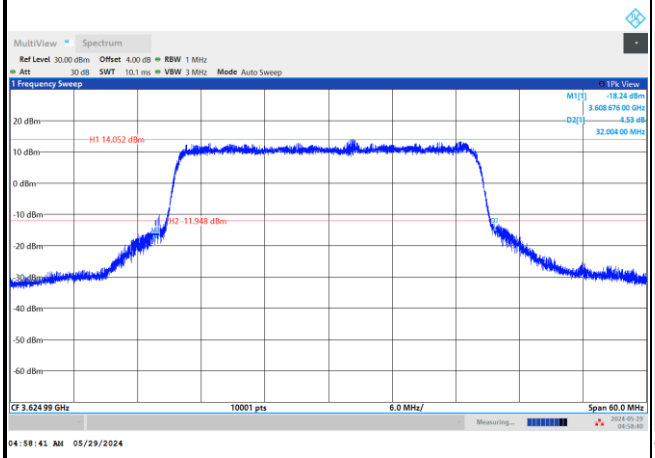
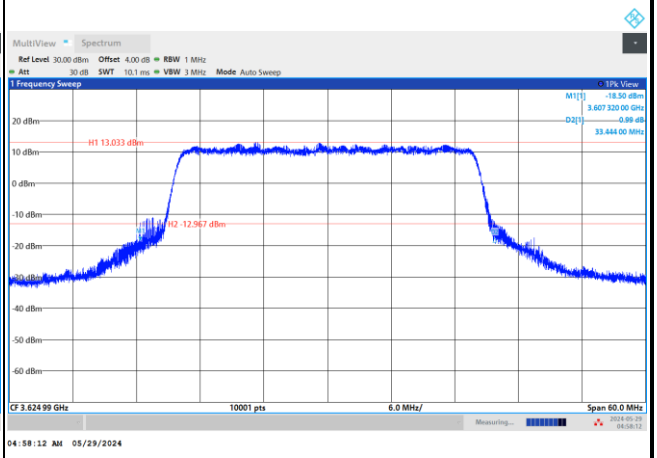
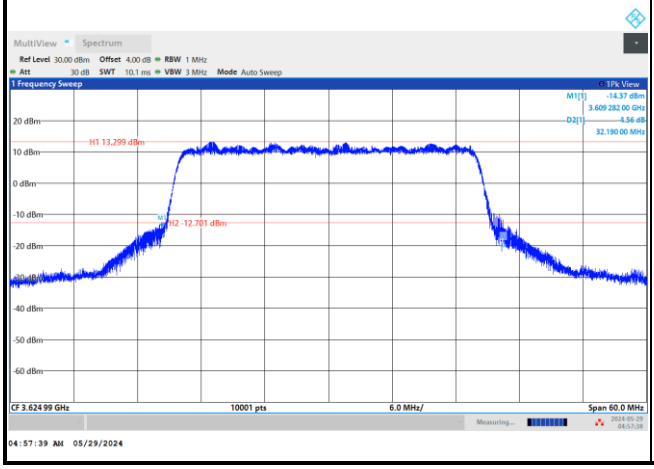
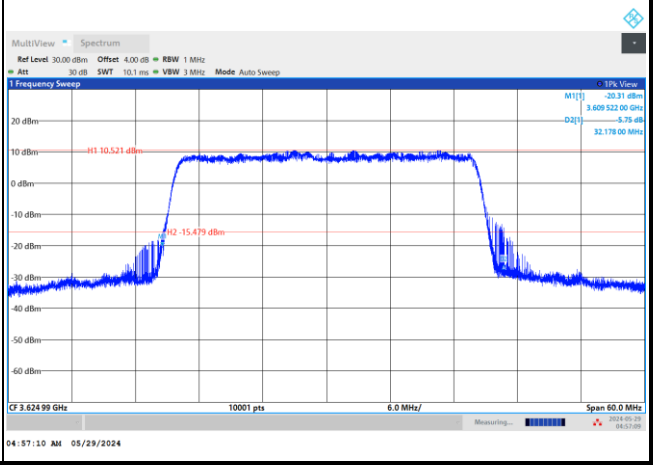
64QAM

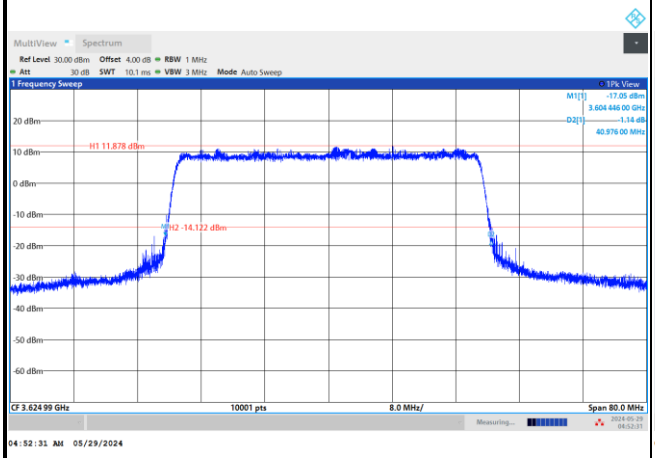
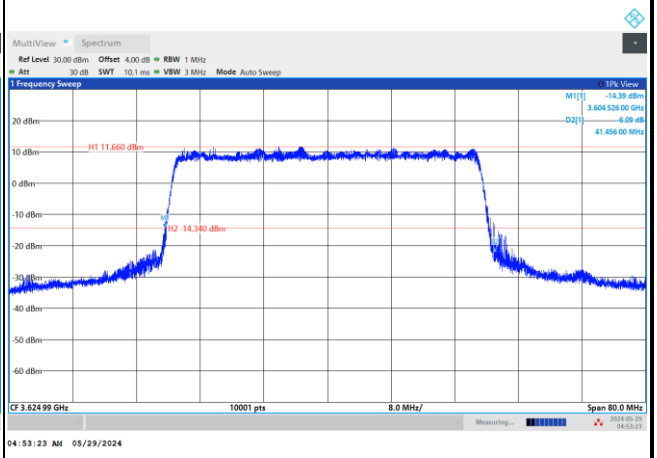
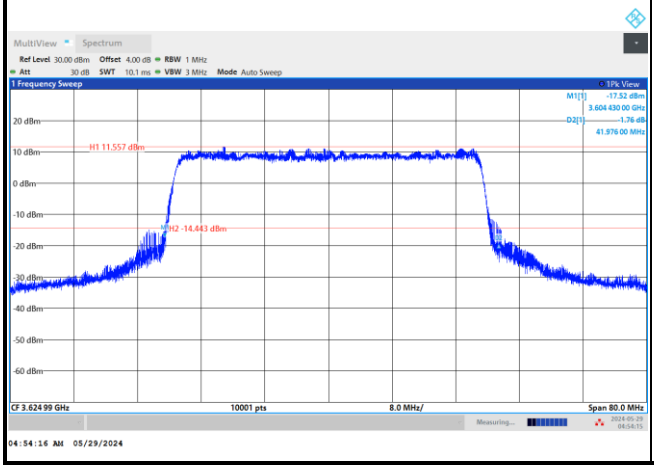
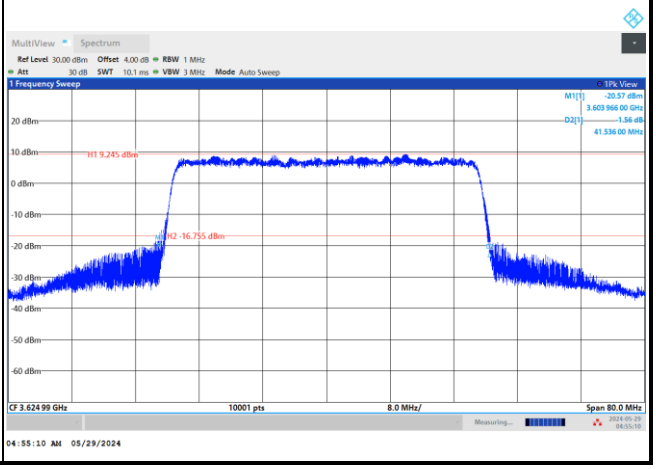


256QAM



FR1 n48 / 20MHz / CP OFDM / Middle Channel / Full RB	
QPSK	16QAM
	
64QAM	256QAM
	

FR1 n48 / 30MHz / CP OFDM / Middle Channel / Full RB	
QPSK	16QAM
	
64QAM	256QAM
	

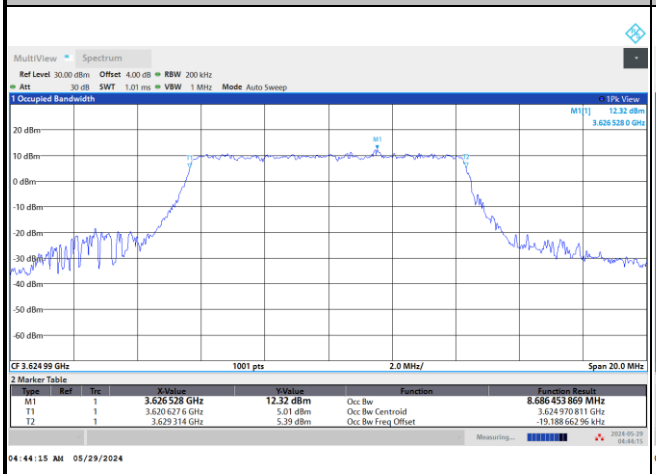
FR1 n48 / 40MHz / CP OFDM / Middle Channel / Full RB	
QPSK	16QAM
	
64QAM	256QAM
	

Occupied Bandwidth

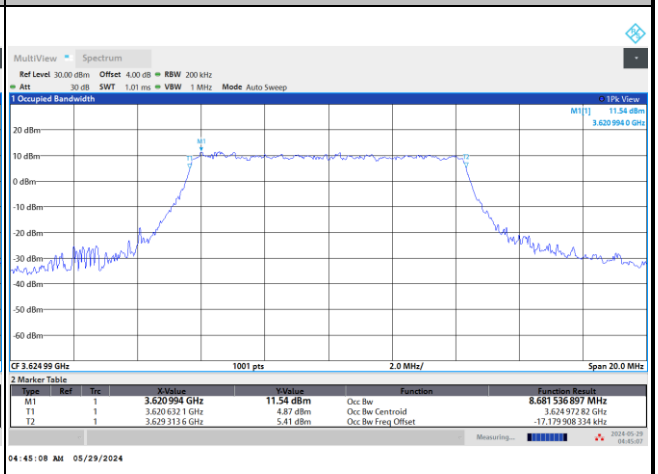
Mode	FR1 n48 : OB BW(MHz) / CP OFDM							
BW	10MHz		20MHz		30MHz		40MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Middle CH	8.68	8.68	18.39	18.43	28.19	28.16	38.06	38.17
Mod.	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM	64QAM	256QAM
Middle CH	8.64	8.67	18.38	18.32	28.19	28.21	38.06	38.06

FR1 n48 / 10MHz / CP OFDM / Middle Channel / Full RB

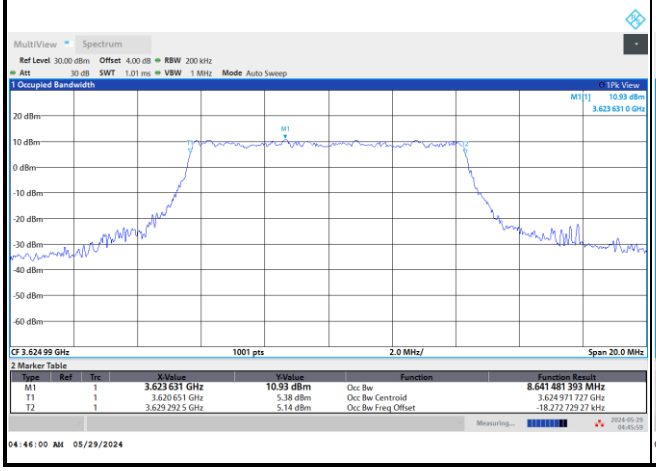
QPSK



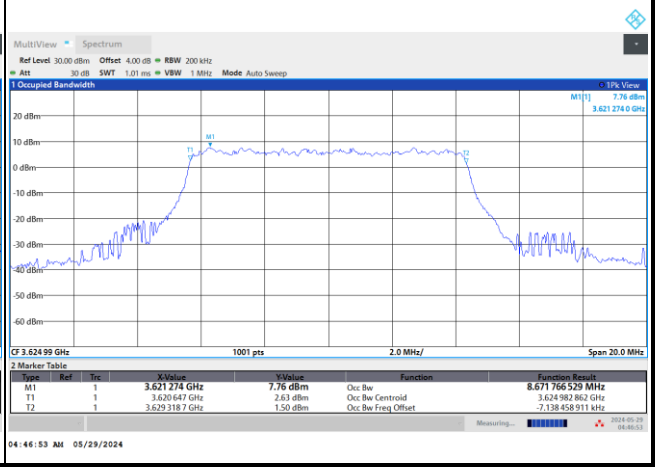
16QAM

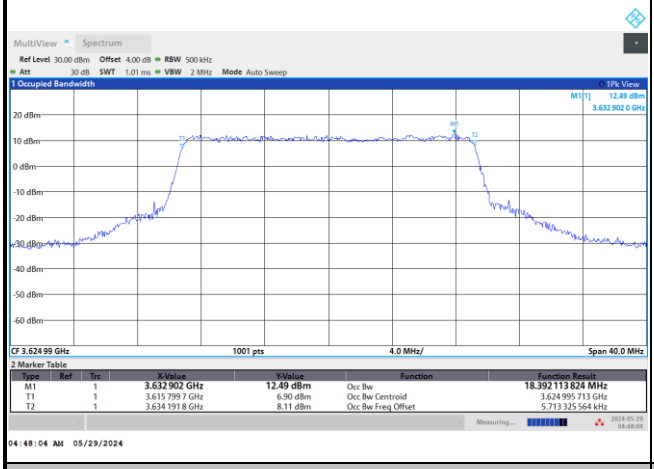
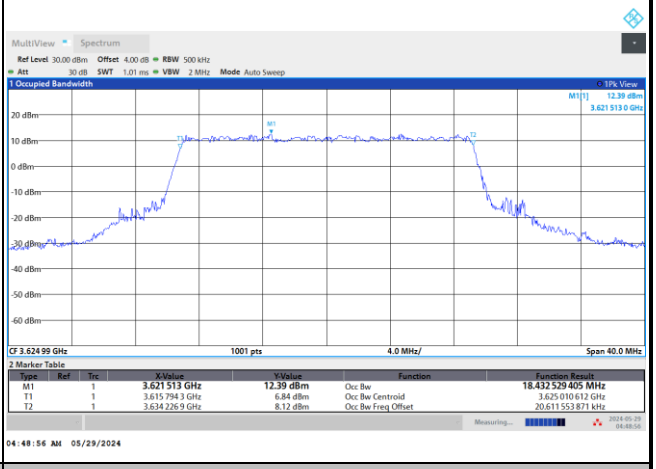
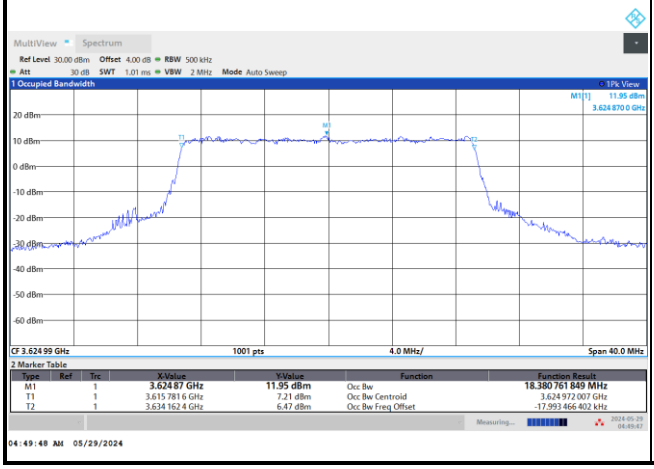
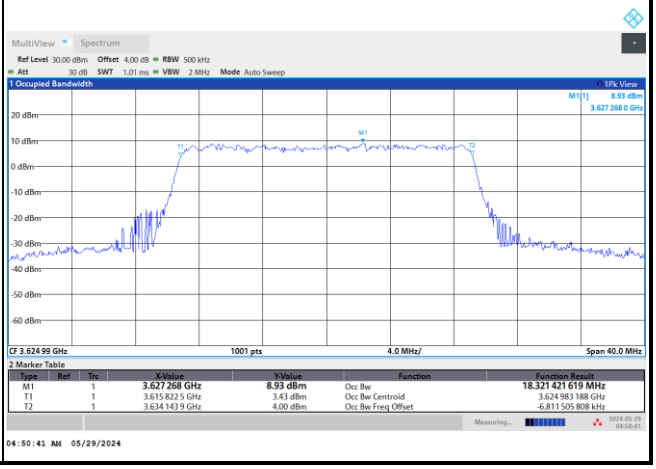


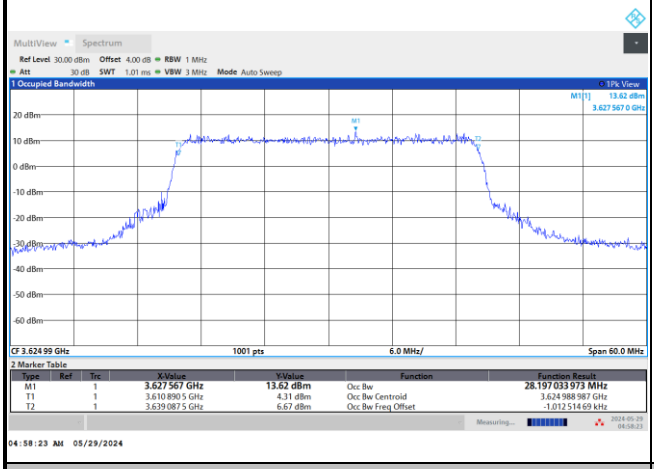
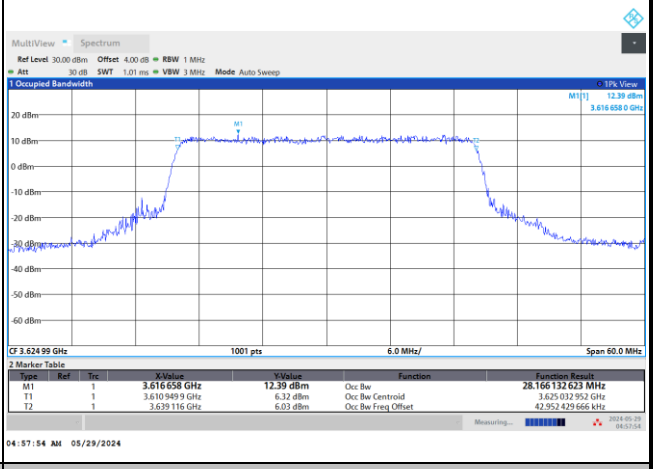
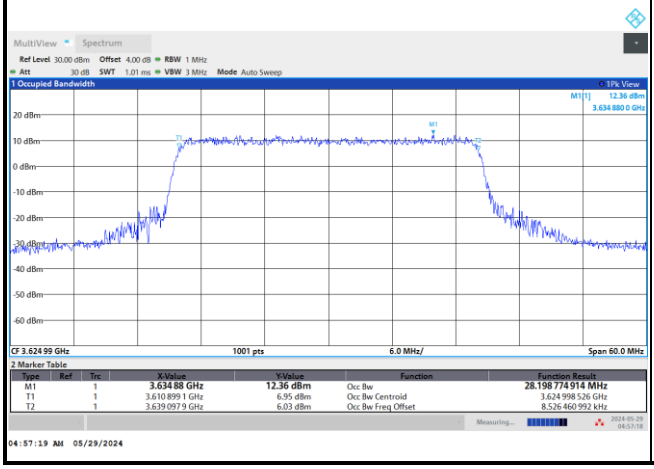
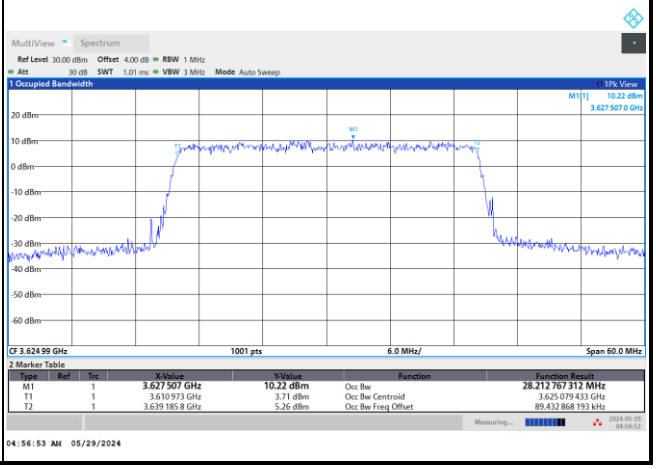
64QAM

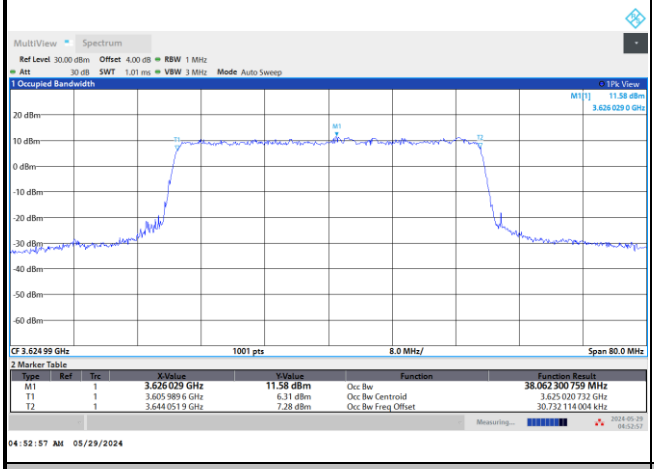
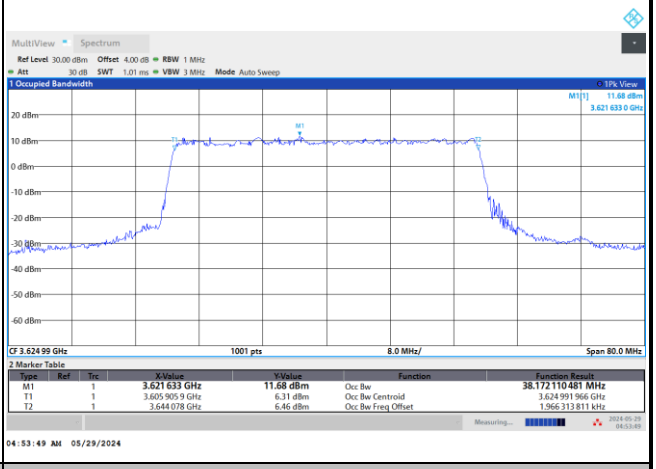
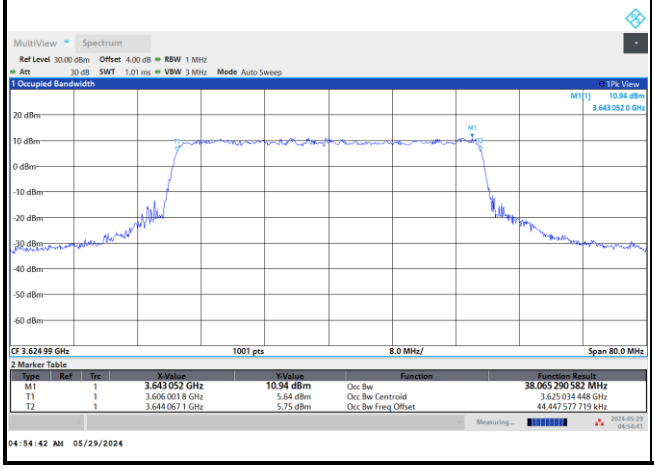
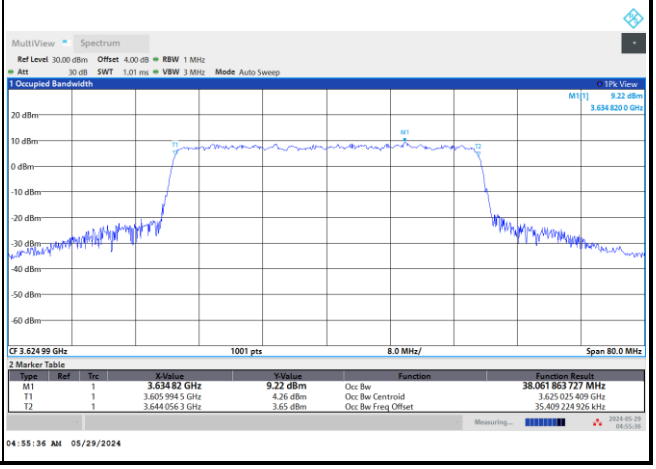


256QAM

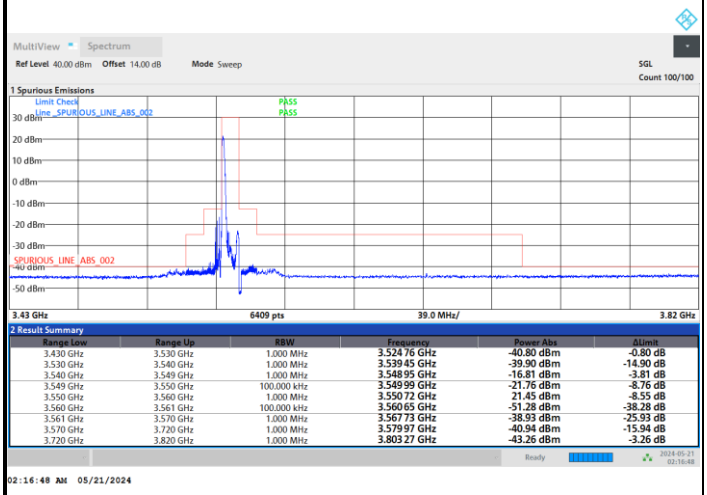
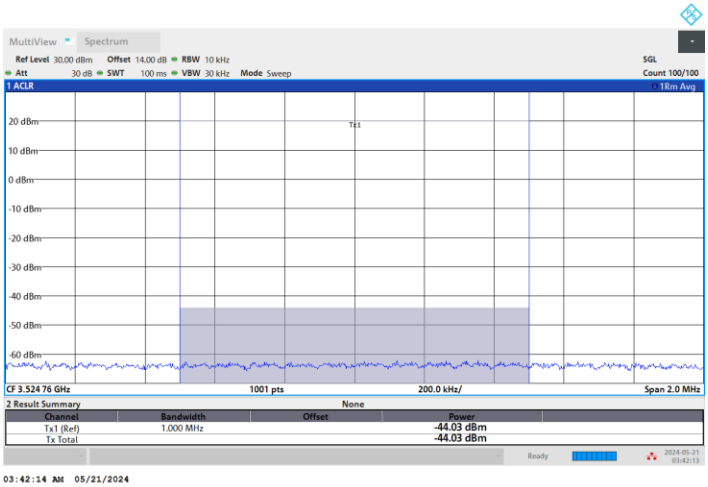
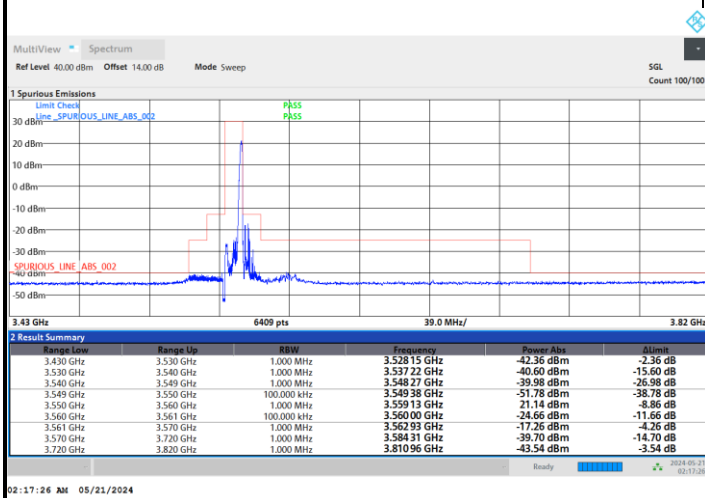


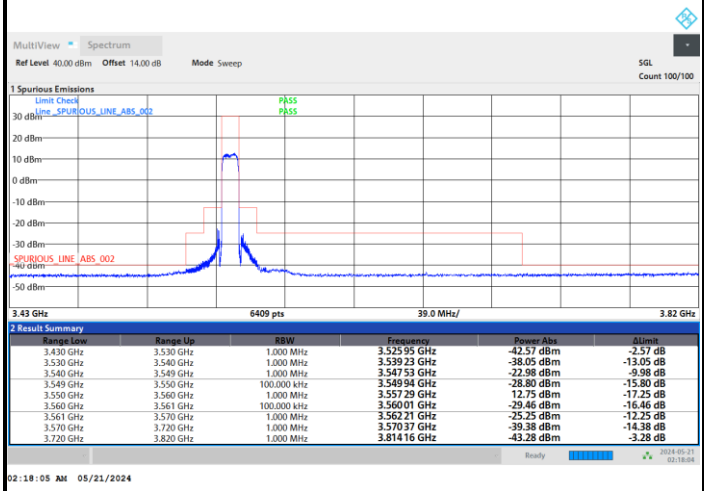
FR1 n48 / 20MHz / CP OFDM / Middle Channel / Full RB	
QPSK	16QAM
	
64QAM	256QAM
	

FR1 n48 / 30MHz / CP OFDM / Middle Channel / Full RB	
QPSK	16QAM
	
64QAM	256QAM
	

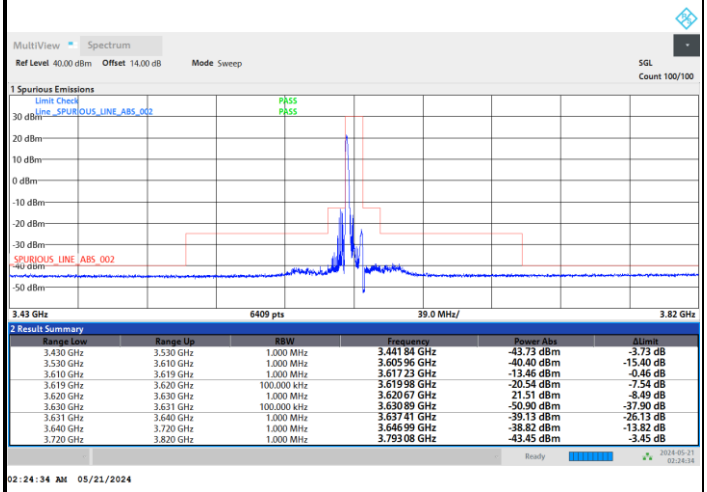
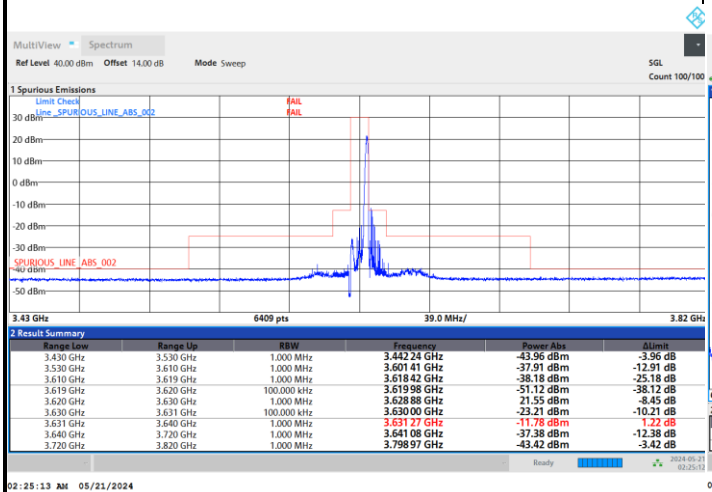
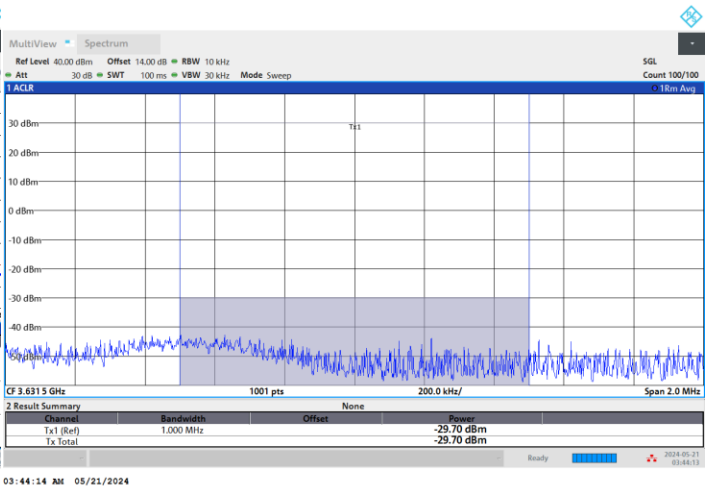
FR1 n48 / 40MHz / CP OFDM / Middle Channel / Full RB	
QPSK	16QAM
	
64QAM	256QAM
	

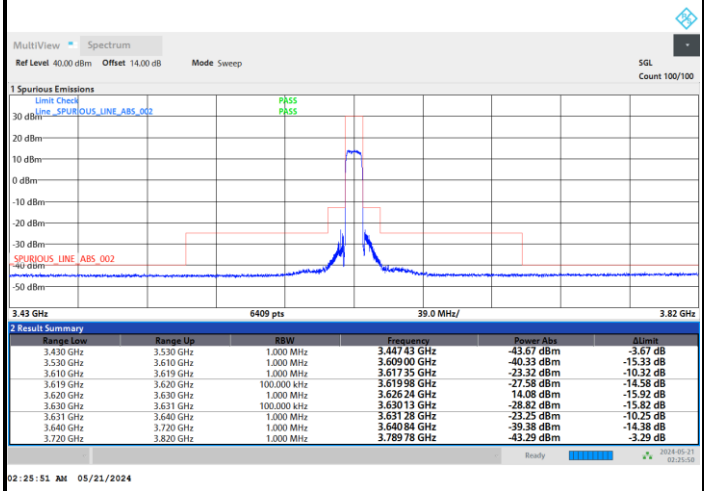
Unwanted Emission (MASK)

FR1 n48 / 10MHz / CP OFDM / QPSK	
Lowest Channel	
1RB0	Power Limit -40dBm -44.03 dBm Pass
	
1RBmax	
	

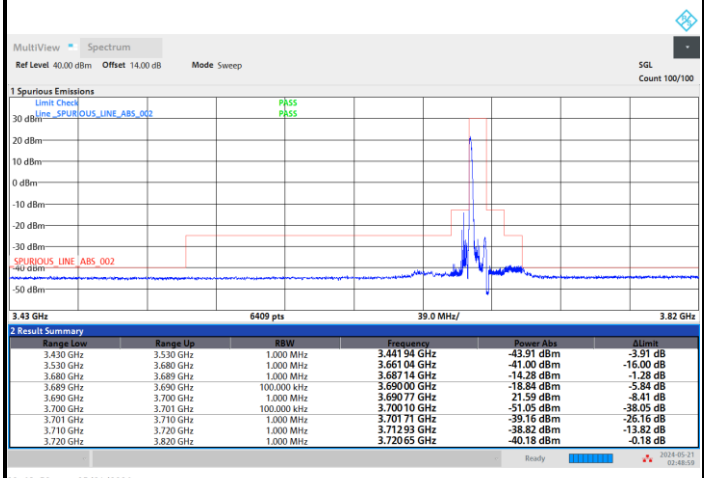
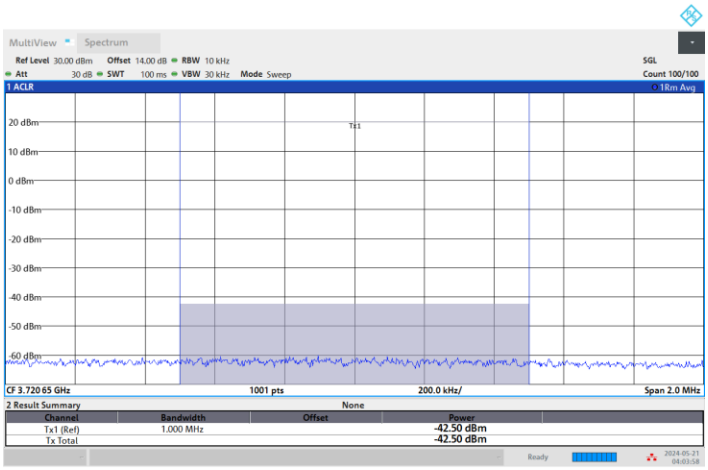
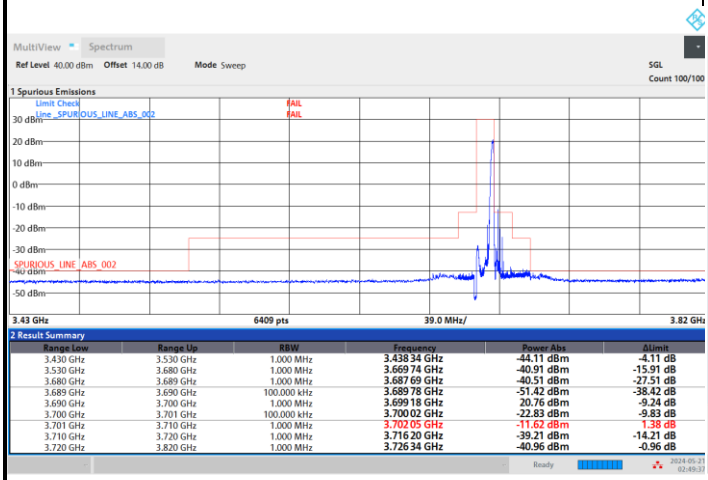
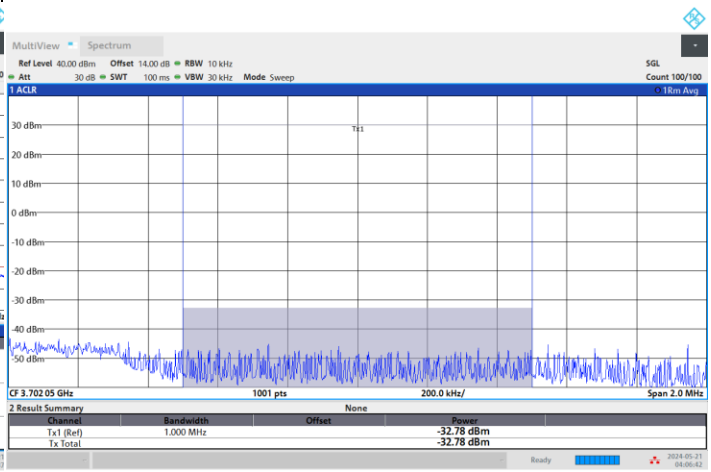
Full RB	
	

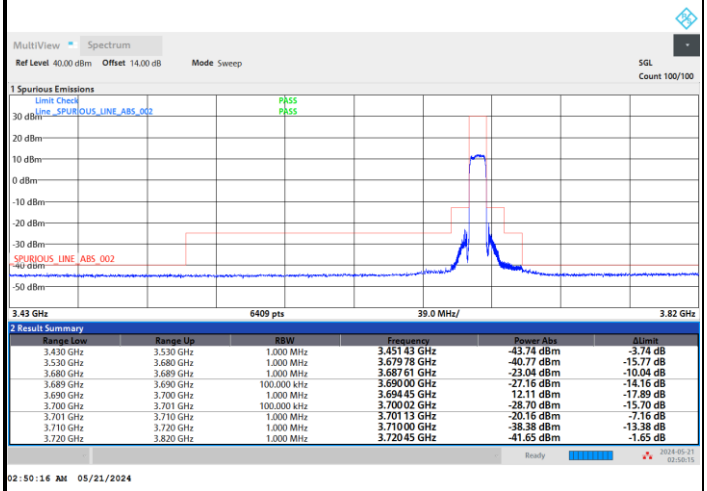
MultiView
Spectrum
Ref Level 40.00 dBm Offset 14.00 dB Mode Sweep
SGL
Count 100/100
1 Spurious Emissions
Limit Check PASS
Line_SPURIOUS_LINE_ABS_002 PASS
30 dBm
20 dBm
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
SPURIOUS_LINE_ABS_002
3.43 GHz
6409 pts
39.0 MHz/
3.82 GHz
2 Result Summary
Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit
3.430 GHz | 3.530 GHz | 1.000 MHz | 3.525 95 GHz | -42.57 dBm | -2.57 dB
3.530 GHz | 3.540 GHz | 1.000 MHz | 3.539 23 GHz | -38.05 dBm | -13.05 dB
3.540 GHz | 3.549 GHz | 1.000 MHz | 3.547 53 GHz | -22.98 dBm | -9.98 dB
3.549 GHz | 3.550 GHz | 100.000 kHz | 3.549 94 GHz | -28.80 dBm | -15.80 dB
3.550 GHz | 3.560 GHz | 1.000 MHz | 3.557 29 GHz | 12.75 dBm | -17.25 dB
3.560 GHz | 3.561 GHz | 100.000 kHz | 3.560 01 GHz | -29.46 dBm | -16.46 dB
3.561 GHz | 3.570 GHz | 1.000 MHz | 3.562 21 GHz | -25.25 dBm | -12.25 dB
3.570 GHz | 3.720 GHz | 1.000 MHz | 3.570 37 GHz | -39.38 dBm | -14.38 dB
3.720 GHz | 3.820 GHz | 1.000 MHz | 3.814 16 GHz | -43.28 dBm | -3.28 dB
Ready
02:18:05 AM 05/21/2024

FR1 n48 / 10MHz / CP OFDM / QPSK	
Middle Channel	
1RB0	Power Limit -40dBm -29.70 dBm Pass
	
1RBmax	**Power Limit -13dBm -29.70 dBm Pass**
	

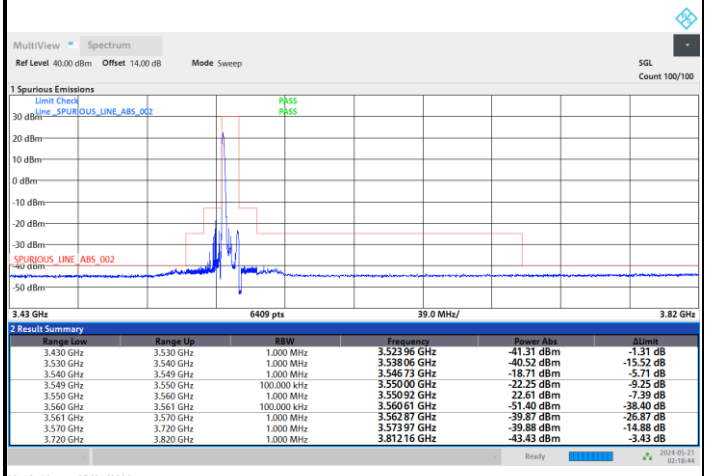
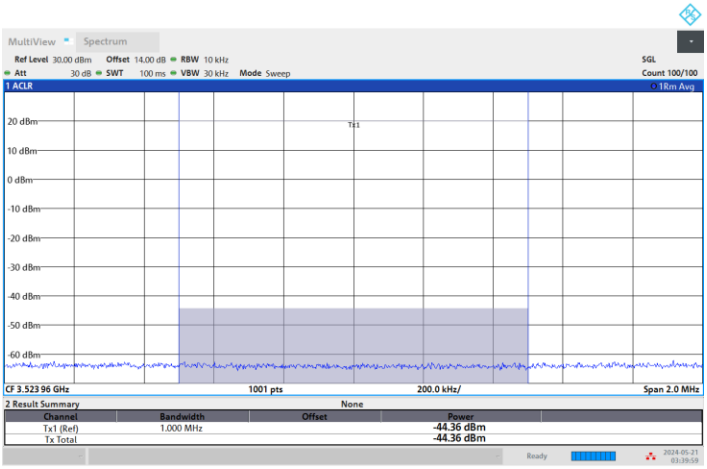
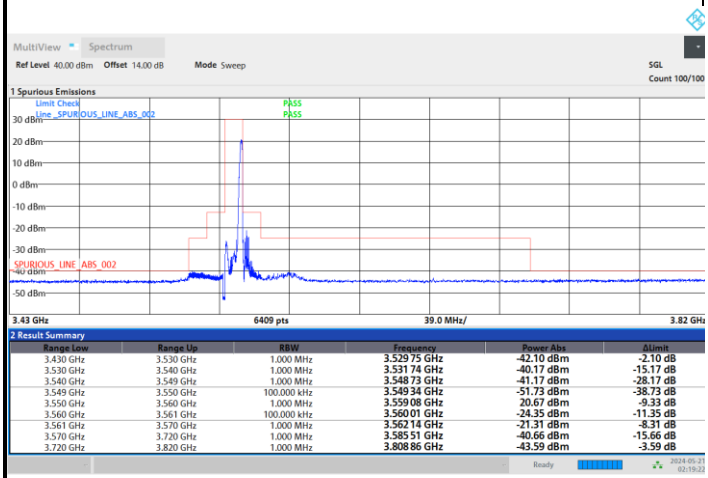
Full RB	
	

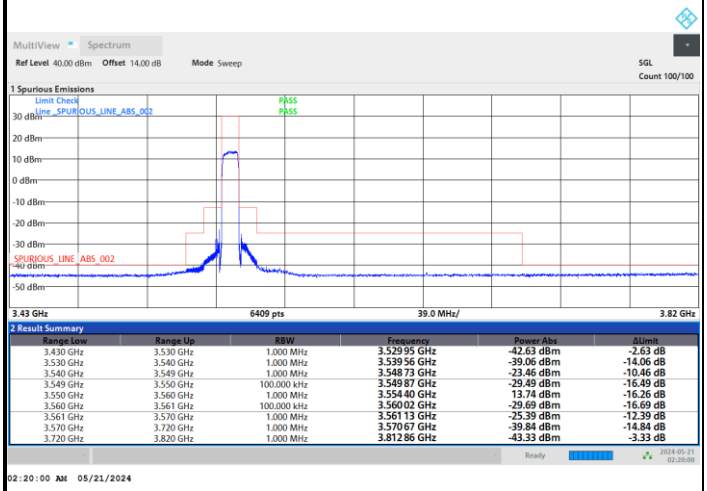
MultiView
Spectrum
Ref Level 40.00 dBm Offset 14.00 dB Mode Sweep
SGL
Count 100/100
1 Spurious Emissions
Limit Check PASS
Line_SPURIOUS_LINE_ABS_002 PASS
30 dBm
20 dBm
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
SPURIOUS_LINE_ABS_002
3.43 GHz
6409 pts
39.0 MHz/
3.82 GHz
2 Result Summary
Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit
3.430 GHz | 3.530 GHz | 1.000 MHz | 3.447 43 GHz | -43.67 dBm | -3.67 dB
3.530 GHz | 3.610 GHz | 1.000 MHz | 3.609 00 GHz | -40.33 dBm | -15.33 dB
3.610 GHz | 3.619 GHz | 1.000 MHz | 3.617 35 GHz | -23.32 dBm | -10.32 dB
3.619 GHz | 3.620 GHz | 100.000 kHz | 3.619 98 GHz | -27.58 dBm | -14.58 dB
3.620 GHz | 3.630 GHz | 1.000 MHz | 3.626 24 GHz | 14.08 dBm | -15.92 dB
3.630 GHz | 3.631 GHz | 100.000 kHz | 3.630 13 GHz | -28.82 dBm | -15.82 dB
3.631 GHz | 3.640 GHz | 1.000 MHz | 3.631 28 GHz | -23.25 dBm | -10.25 dB
3.640 GHz | 3.720 GHz | 1.000 MHz | 3.640 84 GHz | -39.38 dBm | -14.38 dB
3.720 GHz | 3.820 GHz | 1.000 MHz | 3.789 78 GHz | -43.29 dBm | -3.29 dB
Ready
02:25:51 AM 05/21/2024

FR1 n48 / 10MHz / CP OFDM / QPSK	
Highest Channel	
1RB0	Power Limit -40dBm -42.50 dBm Pass
	
1RBmax	Power Limit -13dBm -32.78 dBm Pass
	

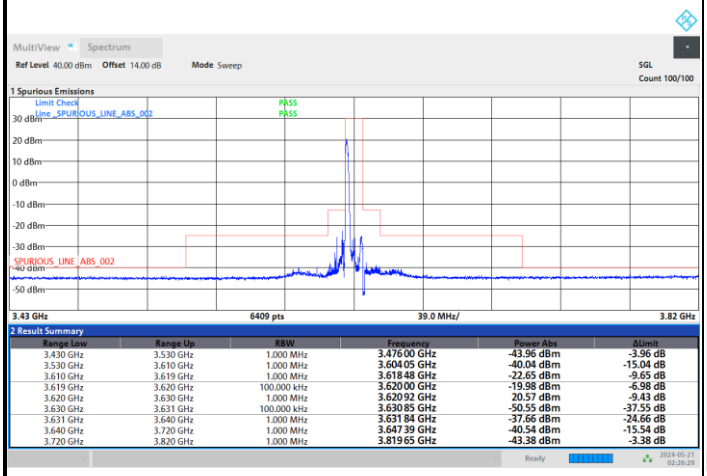
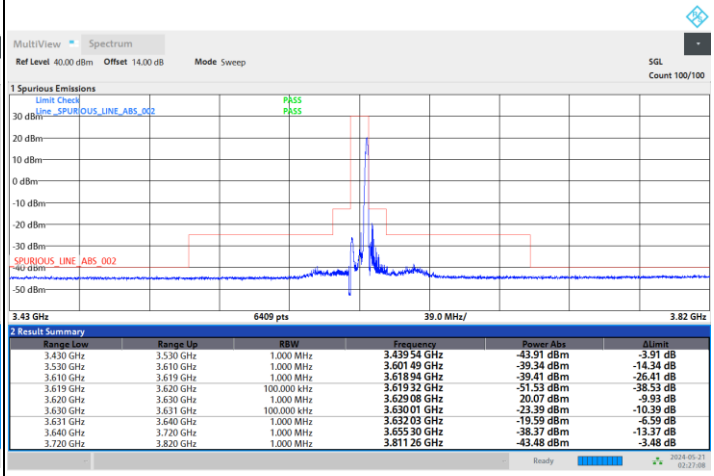
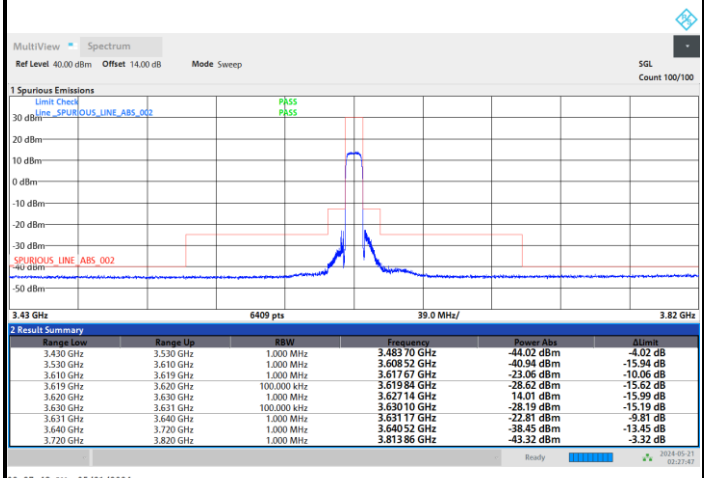
Full RB	
	

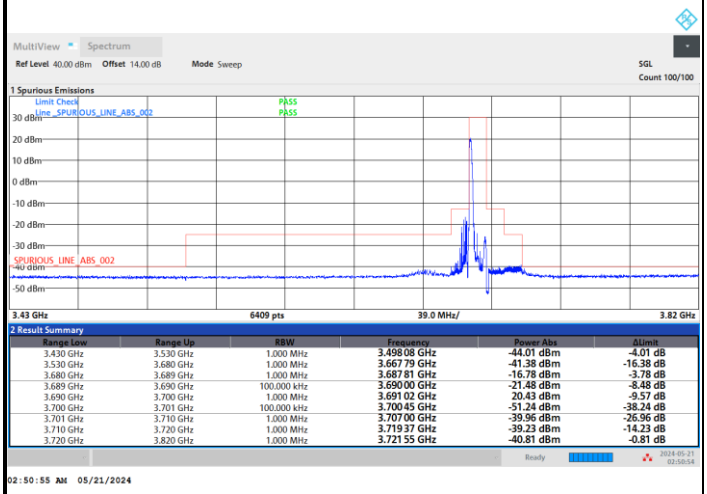
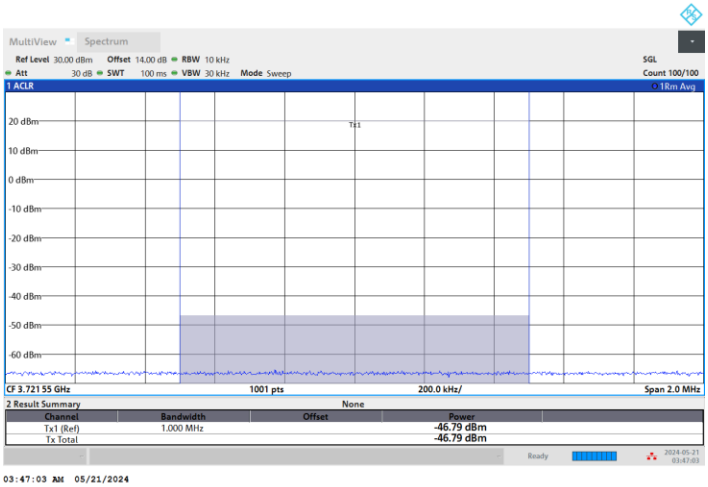
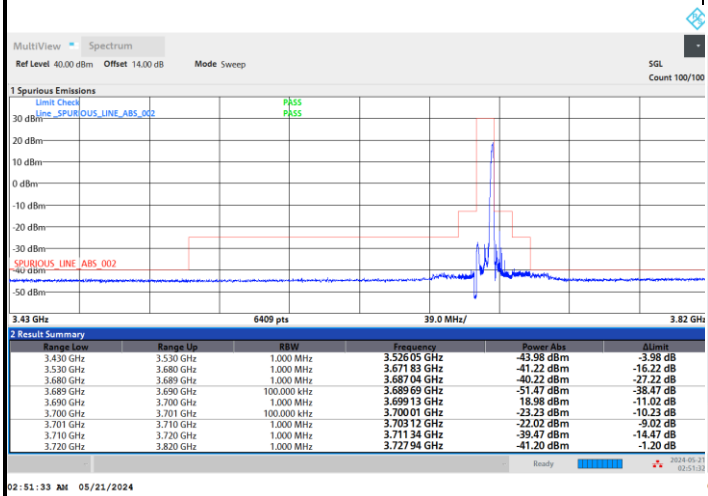
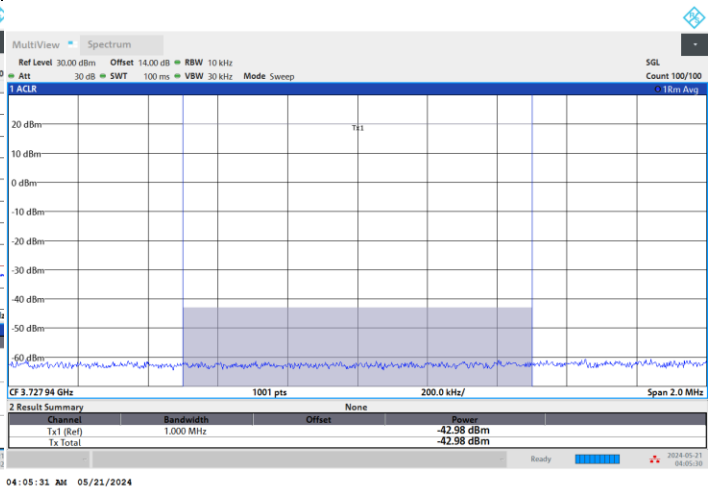
MultiView
Spectrum
Ref Level 40.00 dBm Offset 14.00 dB Mode Sweep
SGL
Count 100/100
1 Spurious Emissions
Limit Check PASS
Line_SPURIOUS_LINE_ABS_002 PASS
30 dBm
20 dBm
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
SPURIOUS_LINE_ABS_002
3.43 GHz
6409 pts
39.0 MHz/
3.82 GHz
2 Result Summary
Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit
3.430 GHz | 3.530 GHz | 1.000 MHz | 3.451 43 GHz | -43.74 dBm | -3.74 dB
3.530 GHz | 3.680 GHz | 1.000 MHz | 3.679 78 GHz | -40.77 dBm | -15.77 dB
3.680 GHz | 3.689 GHz | 1.000 MHz | 3.687 61 GHz | -23.04 dBm | -10.04 dB
3.689 GHz | 3.690 GHz | 100.000 kHz | 3.690 00 GHz | -27.16 dBm | -14.16 dB
3.690 GHz | 3.700 GHz | 1.000 MHz | 3.694 45 GHz | 12.11 dBm | -17.89 dB
3.700 GHz | 3.701 GHz | 100.000 kHz | 3.700 02 GHz | -28.70 dBm | -15.70 dB
3.701 GHz | 3.710 GHz | 1.000 MHz | 3.701 13 GHz | -20.16 dBm | -7.16 dB
3.710 GHz | 3.720 GHz | 1.000 MHz | 3.710 00 GHz | -38.38 dBm | -13.38 dB
3.720 GHz | 3.820 GHz | 1.000 MHz | 3.720 45 GHz | -41.65 dBm | -1.65 dB
Ready
02:50:16 AM 05/21/2024

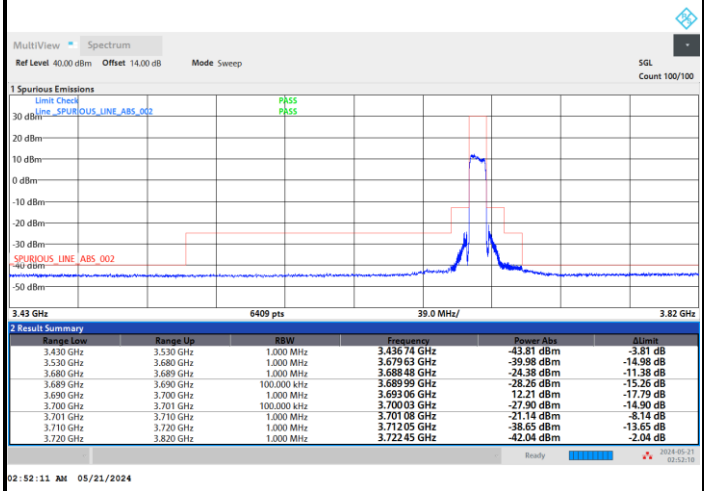
FR1 n48 / 10MHz / CP OFDM / 16QAM	
Lowest Channel	
1RB0	Power Limit -40dBm -44.36 dBm Pass
	
1RBmax	
	

Full RB	
	

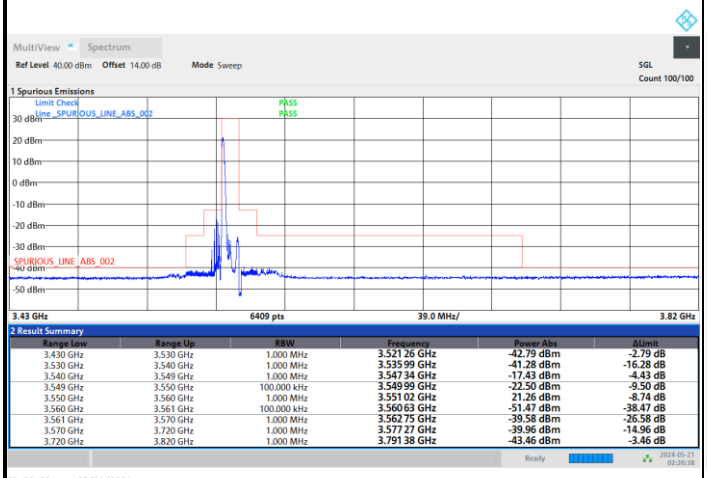
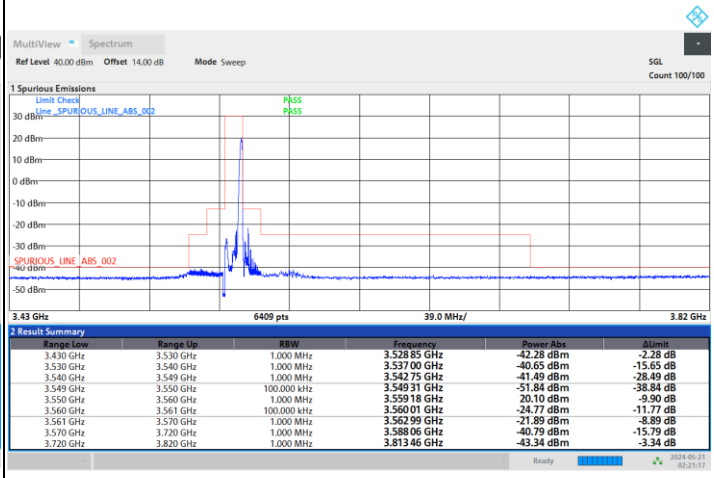
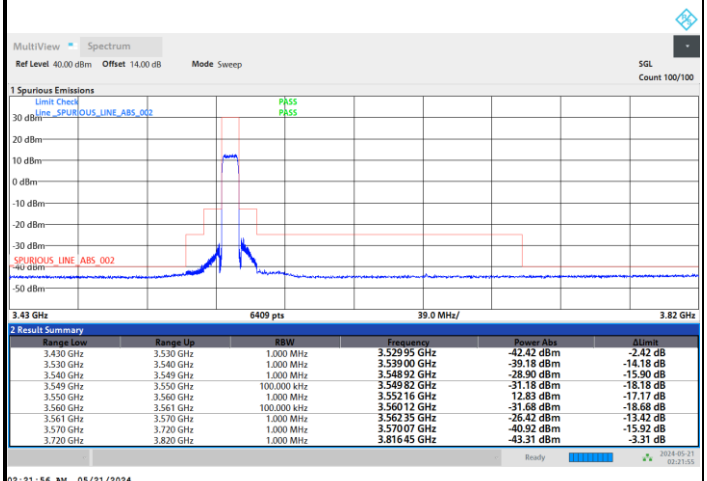
MultiView
Spectrum
Ref Level 40.00 dBm Offset 14.00 dB Mode Sweep
SGL
Count 100/100
1 Spurious Emissions
Limit Check PASS
Line_SPURIOUS_LINE_ABS_002 PASS
30 dBm
20 dBm
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
SPURIOUS_LINE_ABS_002
3.43 GHz
6409 pts
39.0 MHz/
3.82 GHz
2 Result Summary
Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit
3.430 GHz | 3.530 GHz | 1.000 MHz | 3.529 95 GHz | -42.63 dBm | -2.63 dB
3.530 GHz | 3.540 GHz | 1.000 MHz | 3.539 56 GHz | -39.06 dBm | -14.06 dB
3.540 GHz | 3.549 GHz | 1.000 MHz | 3.548 73 GHz | -23.46 dBm | -10.46 dB
3.549 GHz | 3.550 GHz | 100.000 kHz | 3.549 87 GHz | -29.49 dBm | -16.49 dB
3.550 GHz | 3.560 GHz | 1.000 MHz | 3.554 40 GHz | 13.74 dBm | -16.26 dB
3.560 GHz | 3.561 GHz | 100.000 kHz | 3.560 02 GHz | -29.69 dBm | -16.69 dB
3.561 GHz | 3.570 GHz | 1.000 MHz | 3.561 13 GHz | -25.39 dBm | -12.39 dB
3.570 GHz | 3.720 GHz | 1.000 MHz | 3.570 67 GHz | -39.84 dBm | -14.84 dB
3.720 GHz | 3.820 GHz | 1.000 MHz | 3.812 86 GHz | -43.33 dBm | -3.33 dB
Ready
02:20:00 AM 05/21/2024

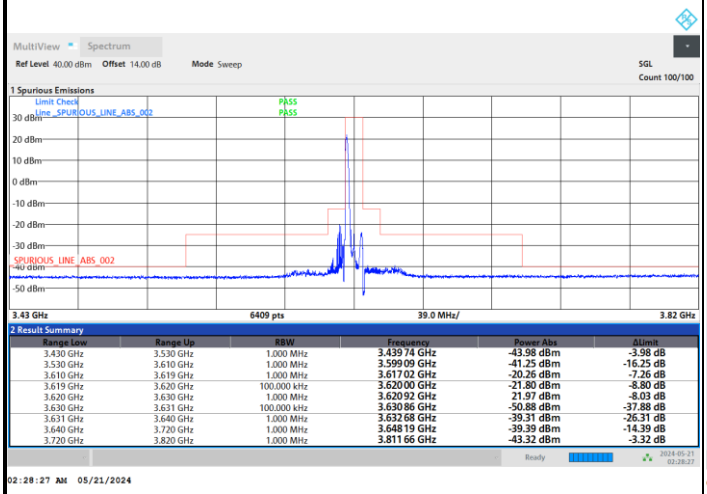
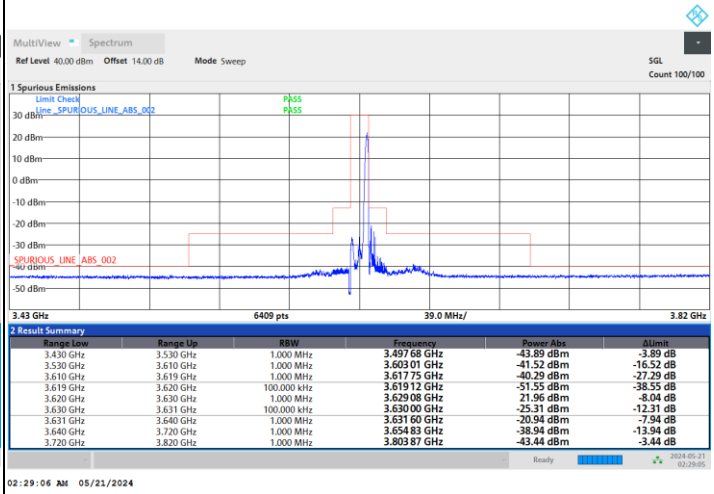
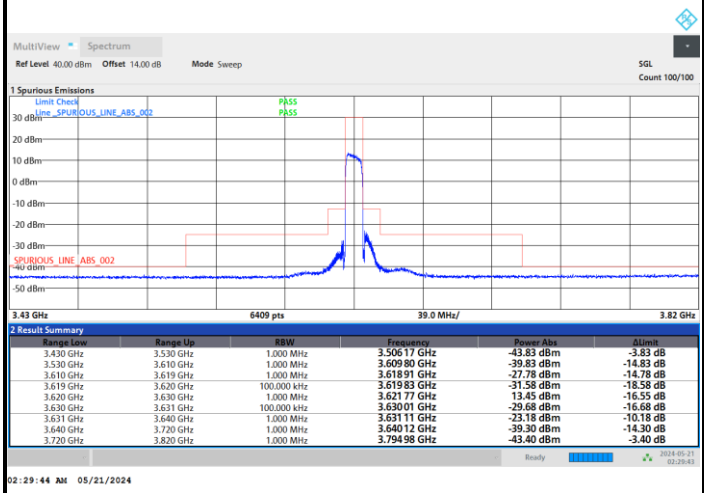
FR1 n48 / 10MHz / CP OFDM / 16QAM	
Middle Channel	
1RB0	1RBmax
	
Full RB	
	

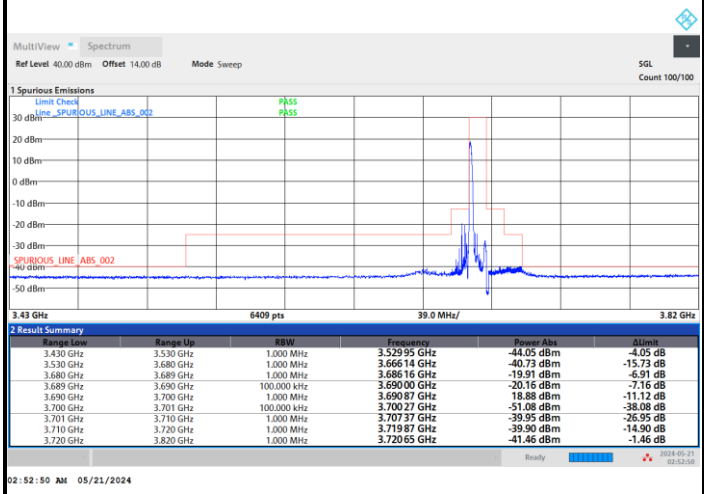
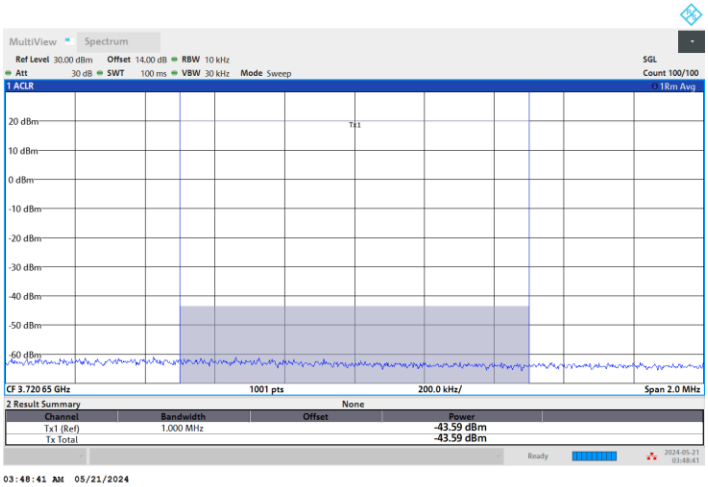
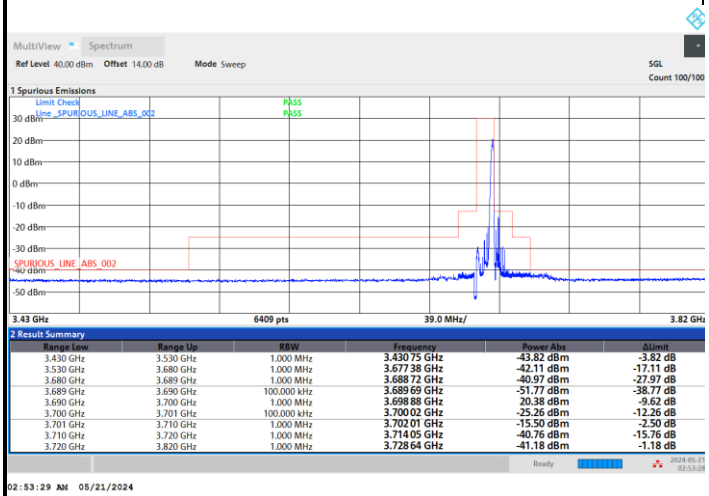
FR1 n48 / 10MHz / CP OFDM / 16QAM	
Highest Channel	
1RB0	Power Limit -40dBm -46.79 dBm Pass
	
1RBmax	Power Limit -40dBm -42.98 dBm Pass
	

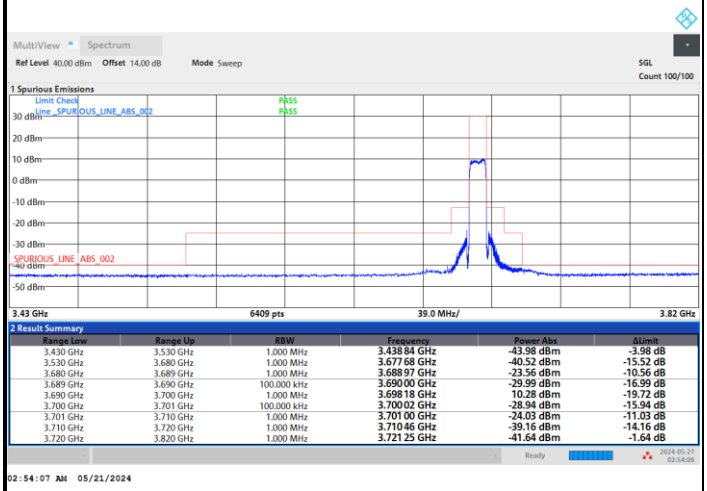
Full RB	
	

MultiView
Spectrum
Ref Level 40.00 dBm Offset 14.00 dB Mode Sweep
SGL
Count 100/100
1 Spurious Emissions
Limit Check PASS
Line_SPURIOUS_LINE_ABS_002 PASS
30 dBm
20 dBm
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
SPURIOUS_LINE_ABS_002
3.43 GHz
6409 pts
39.0 MHz/
3.82 GHz
2 Result Summary
Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit
3.430 GHz | 3.530 GHz | 1.000 MHz | 3.436 74 GHz | -43.81 dBm | -3.81 dB
3.530 GHz | 3.680 GHz | 1.000 MHz | 3.679 63 GHz | -39.98 dBm | -14.98 dB
3.680 GHz | 3.689 GHz | 1.000 MHz | 3.688 48 GHz | -24.38 dBm | -11.38 dB
3.689 GHz | 3.690 GHz | 100.000 kHz | 3.689 99 GHz | -28.26 dBm | -15.26 dB
3.690 GHz | 3.700 GHz | 1.000 MHz | 3.693 06 GHz | 12.21 dBm | -17.79 dB
3.700 GHz | 3.701 GHz | 100.000 kHz | 3.700 03 GHz | -27.90 dBm | -14.90 dB
3.701 GHz | 3.710 GHz | 1.000 MHz | 3.701 08 GHz | -21.14 dBm | -8.14 dB
3.710 GHz | 3.720 GHz | 1.000 MHz | 3.712 05 GHz | -38.65 dBm | -13.65 dB
3.720 GHz | 3.820 GHz | 1.000 MHz | 3.722 45 GHz | -42.04 dBm | -2.04 dB
Ready
02:52:11 AM 05/21/2024

FR1 n48 / 10MHz / CP OFDM / 64QAM	
Lowest Channel	
1RB0	1RBmax
	
Full RB	
	

FR1 n48 / 10MHz / CP OFDM / 64QAM	
Middle Channel	
1RB0	1RBmax
	
Full RB	
	

FR1 n48 / 10MHz / CP OFDM / 64QAM	
Highest Channel	
1RB0	Power Limit -40dBm -43.59 dBm Pass
	
1RBmax	Power Limit -40dBm -41. dBm Pass
	

Full RB	
	

MultiView
Spectrum
Ref Level 40.00 dBm Offset 14.00 dB Mode Sweep
SGL
Count 100/100
1 Spurious Emissions
Limit Check PASS
Line_SPURIOUS_LINE_ABS_002 PASS
30 dBm
20 dBm
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
SPURIOUS_LINE_ABS_002
3.43 GHz
6409 pts
39.0 MHz/
3.82 GHz
2 Result Summary
Range Low | Range Up | RBW | Frequency | Power Abs | ΔLimit
3.430 GHz | 3.530 GHz | 1.000 MHz | 3.438 84 GHz | -43.98 dBm | -3.98 dB
3.530 GHz | 3.680 GHz | 1.000 MHz | 3.677 68 GHz | -40.52 dBm | -15.52 dB
3.680 GHz | 3.689 GHz | 1.000 MHz | 3.688 97 GHz | -23.56 dBm | -10.56 dB
3.689 GHz | 3.690 GHz | 100.000 kHz | 3.690 00 GHz | -29.99 dBm | -16.99 dB
3.690 GHz | 3.700 GHz | 1.000 MHz | 3.698 18 GHz | 10.28 dBm | -19.72 dB
3.700 GHz | 3.701 GHz | 100.000 kHz | 3.700 02 GHz | -28.94 dBm | -15.94 dB
3.701 GHz | 3.710 GHz | 1.000 MHz | 3.701 00 GHz | -24.03 dBm | -11.03 dB
3.710 GHz | 3.720 GHz | 1.000 MHz | 3.710 46 GHz | -39.16 dBm | -14.16 dB
3.720 GHz | 3.820 GHz | 1.000 MHz | 3.721 25 GHz | -41.64 dBm | -1.64 dB
Ready
02:54:07 AM 05/21/2024