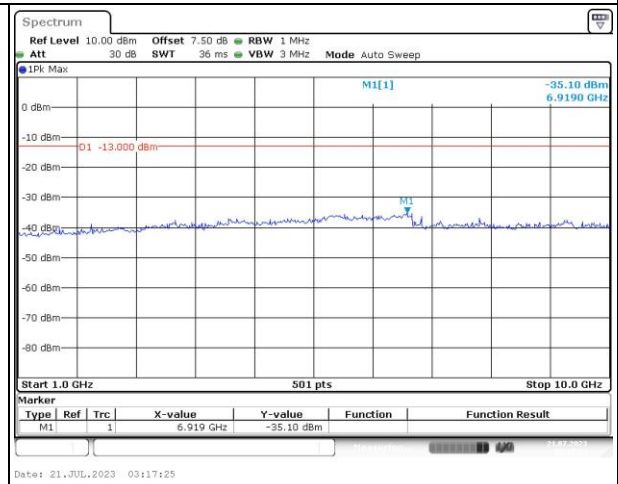
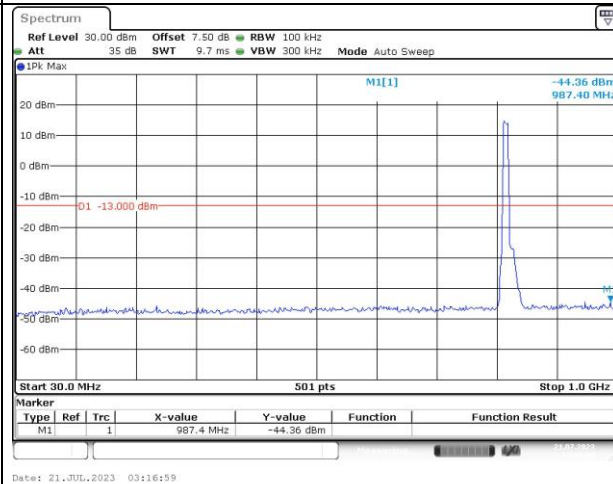
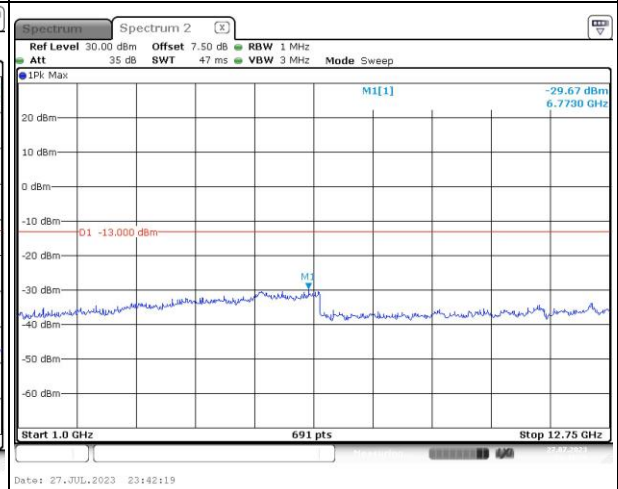
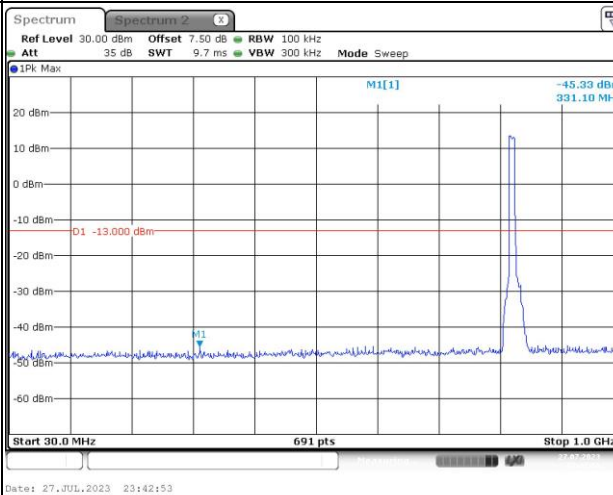


Spurious Emissions at Antenna Terminal

Channel

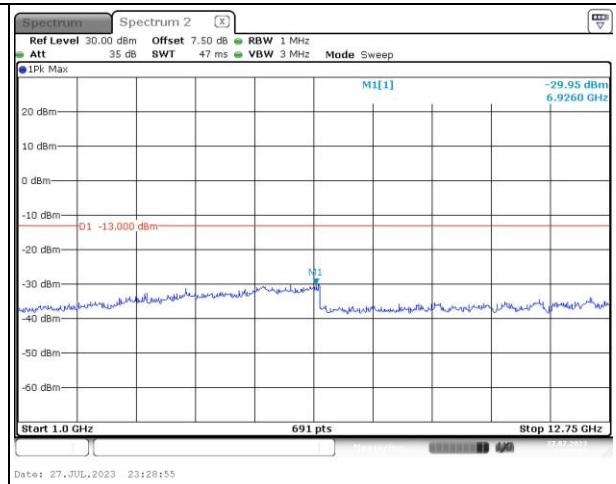
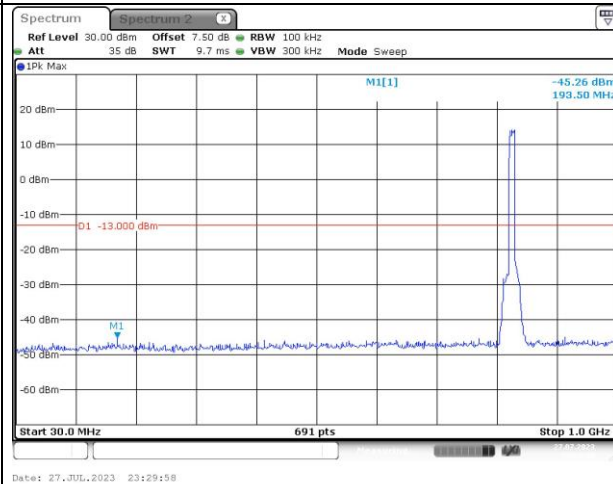
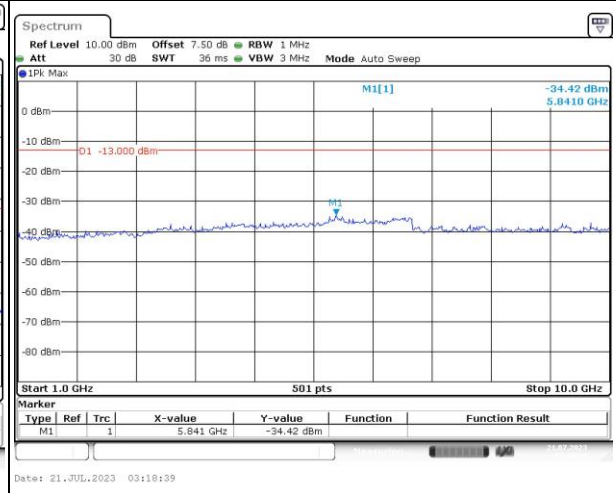
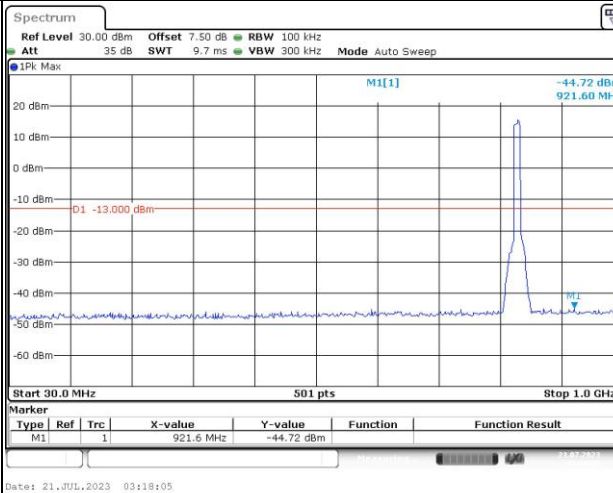
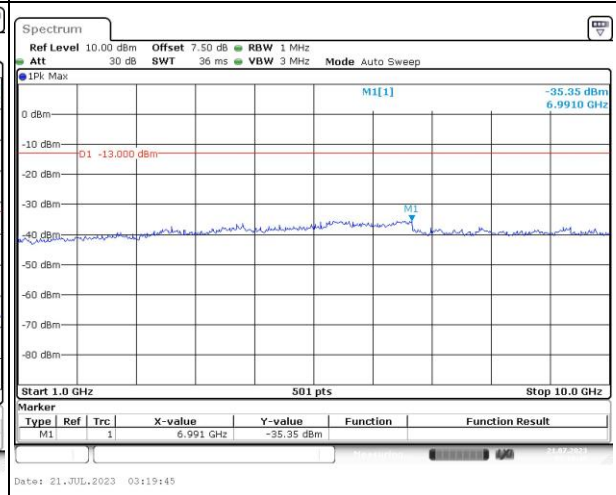
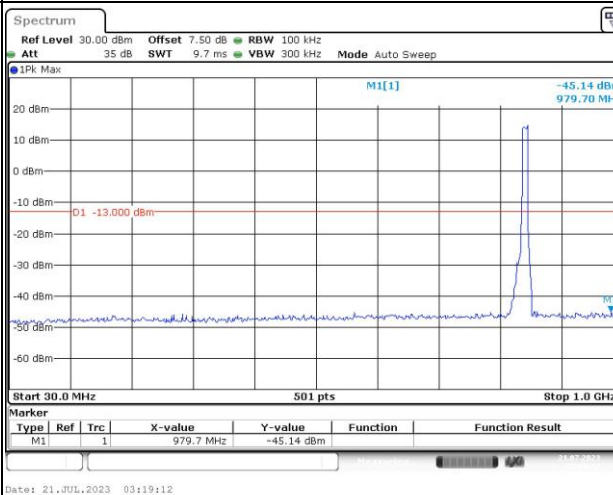
10MHz Bandwidth QPSK

Lowest
For 90SCross
Channel

Spurious Emissions at Antenna Terminal

Channel

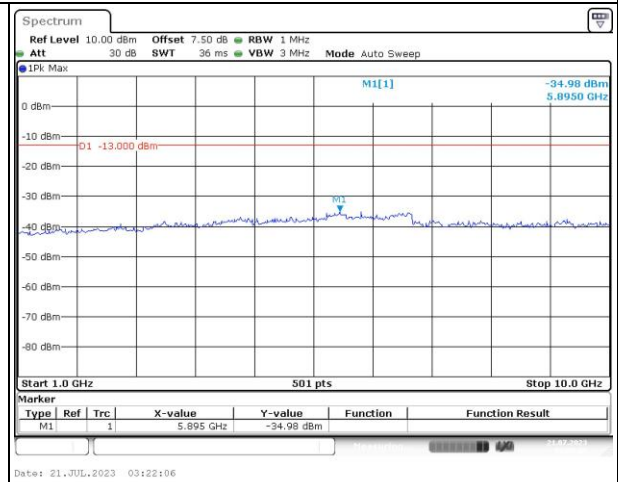
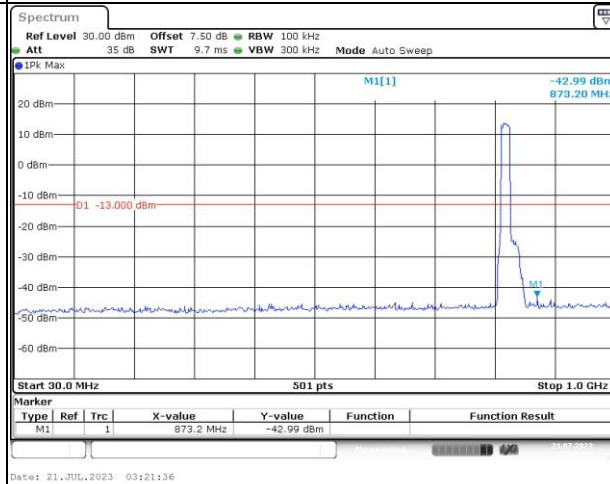
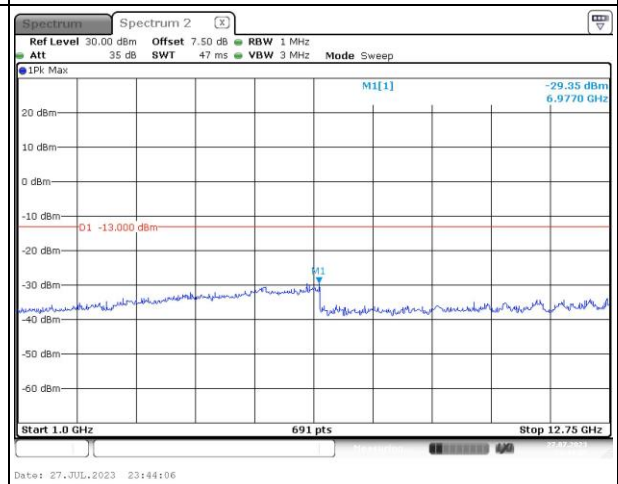
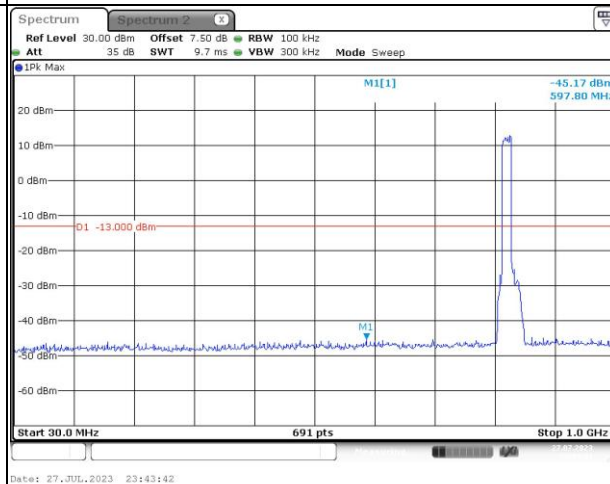
10MHz Bandwidth QPSK

Lowest
For 22HMiddle
For 22HHighest
For 22H

Spurious Emissions at Antenna Terminal

Channel

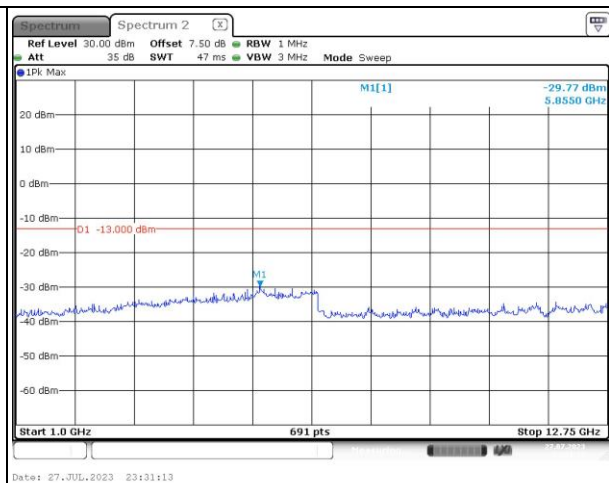
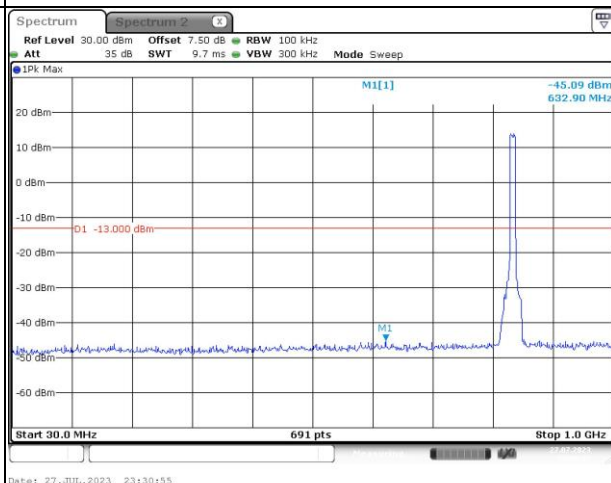
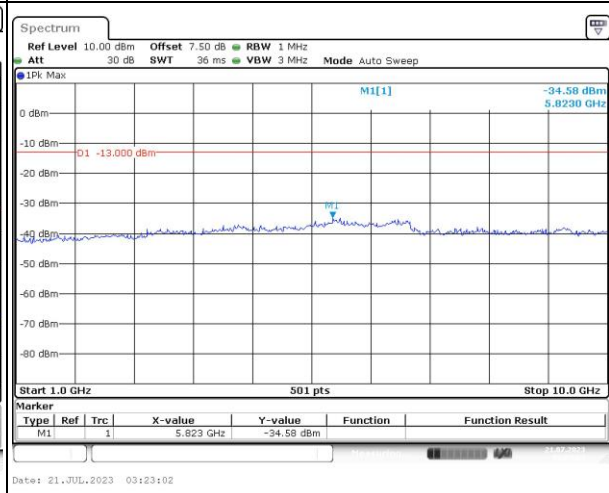
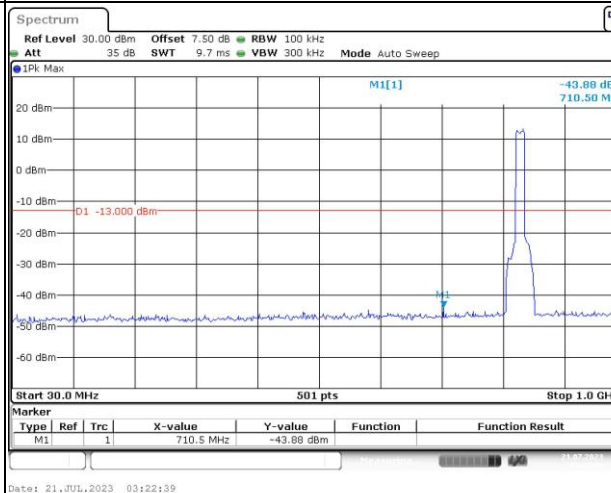
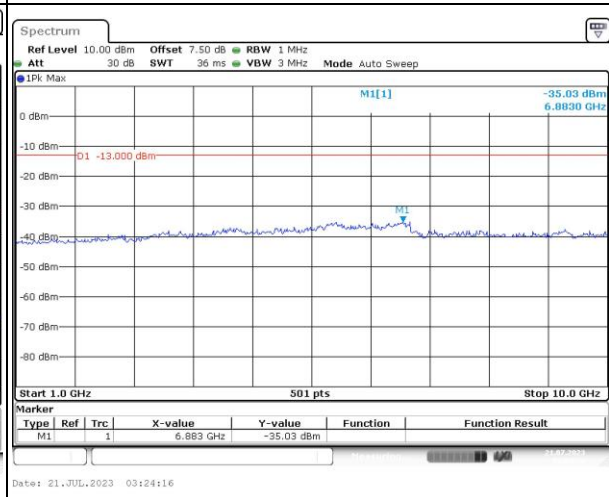
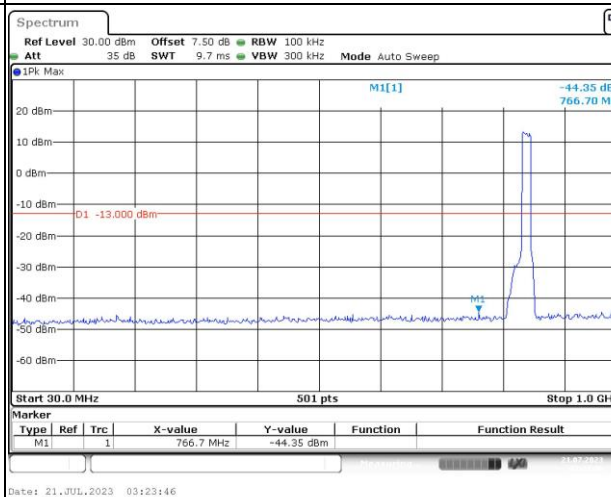
15MHz Bandwidth QPSK

Lowest
For 90SCross
Channel

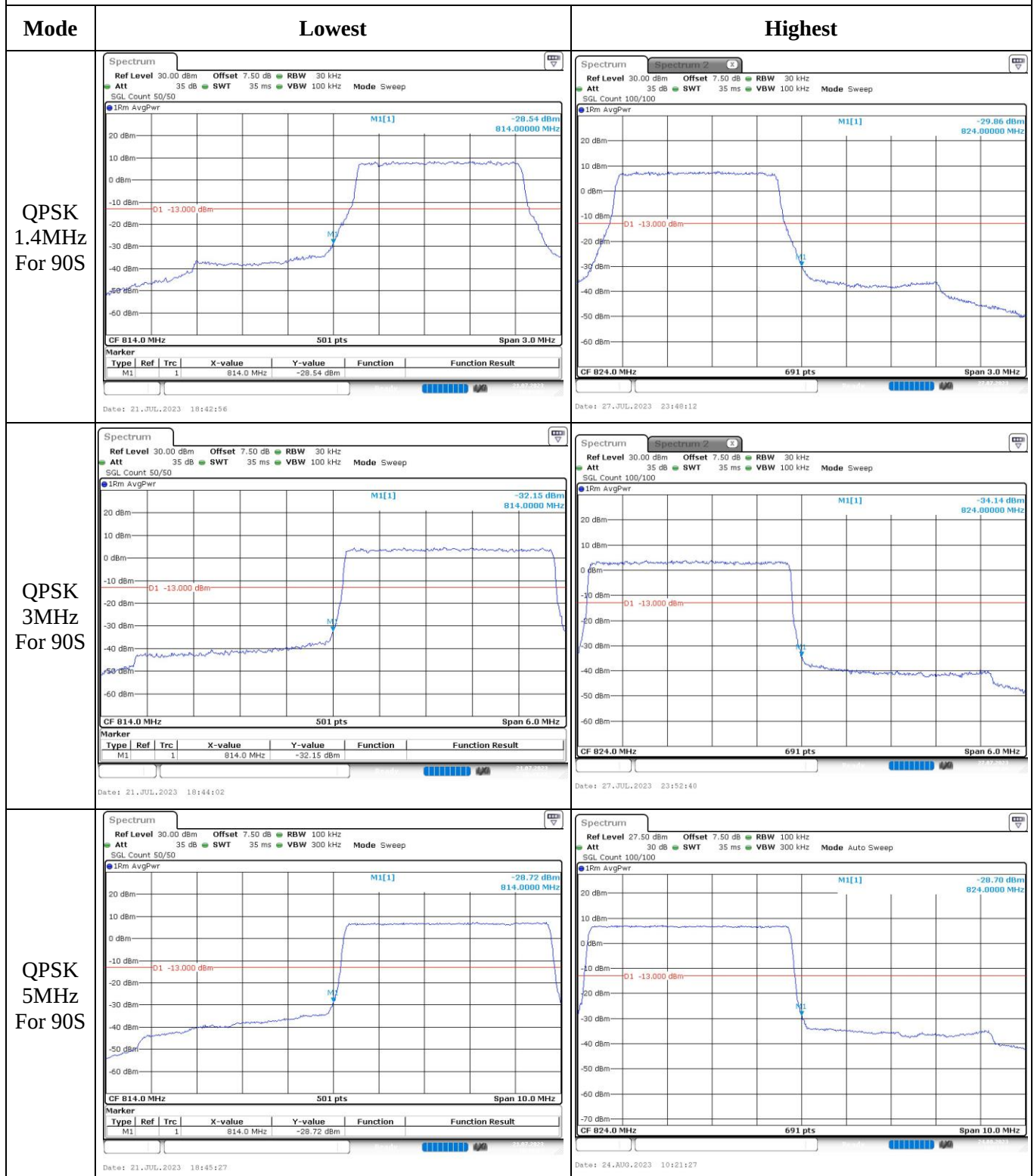
Spurious Emissions at Antenna Terminal

Channel

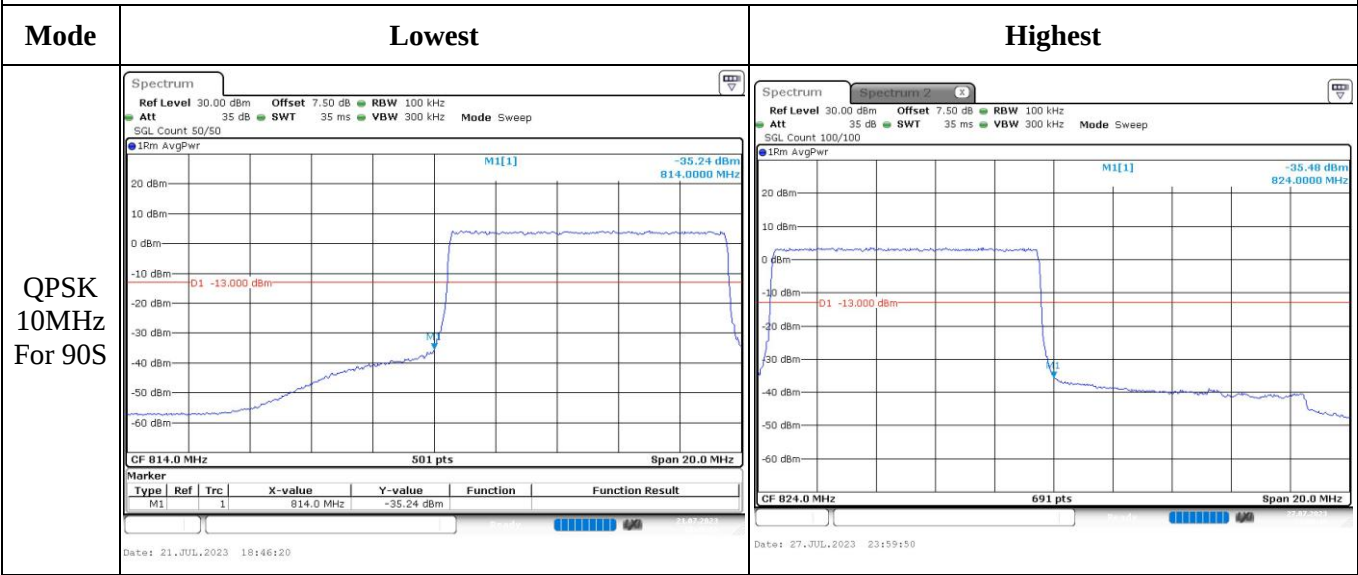
15MHz Bandwidth QPSK

Lowest
For 22HMiddle
For 22HHighest
For 22H

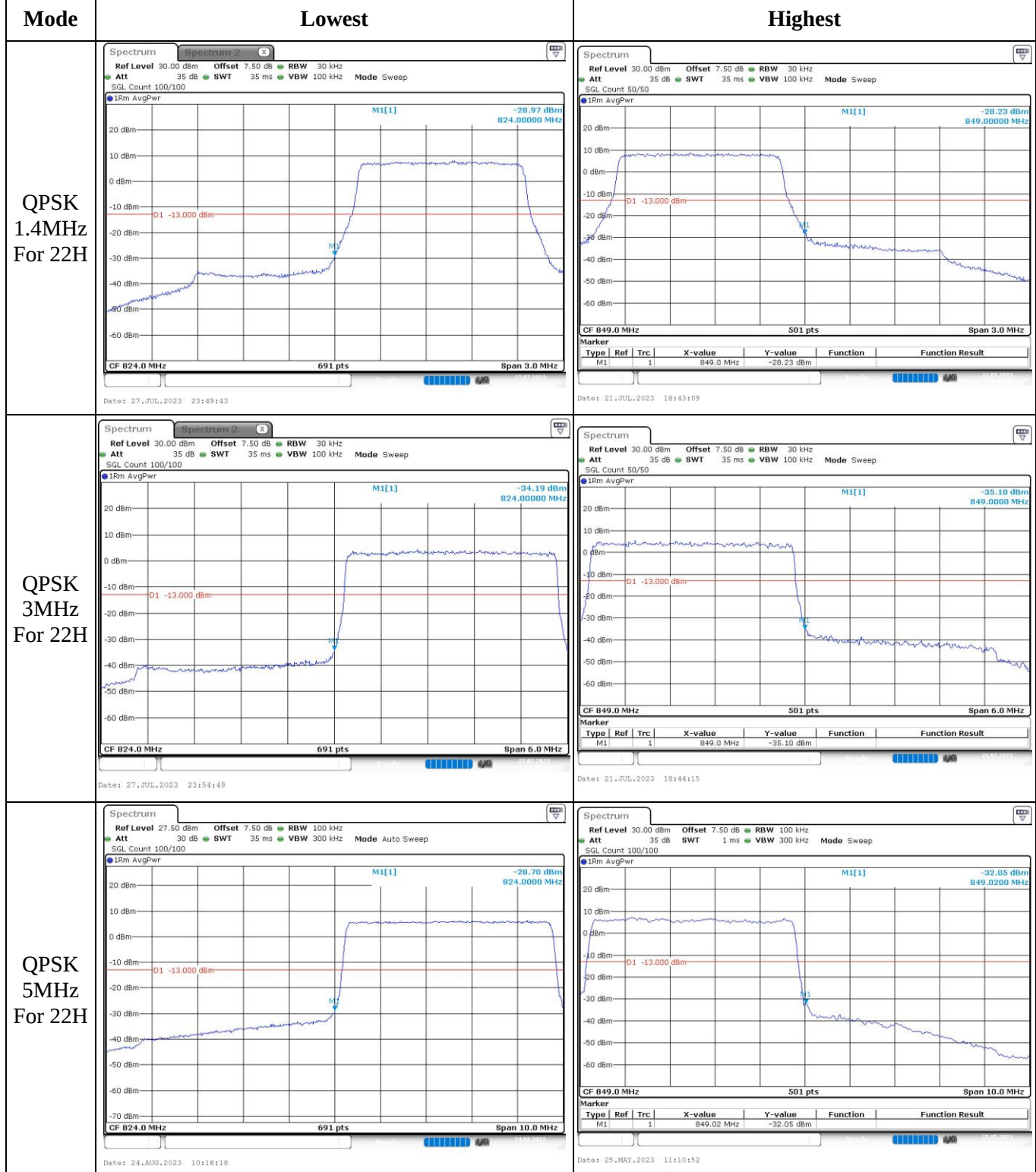
Out of band emission, Band Edge



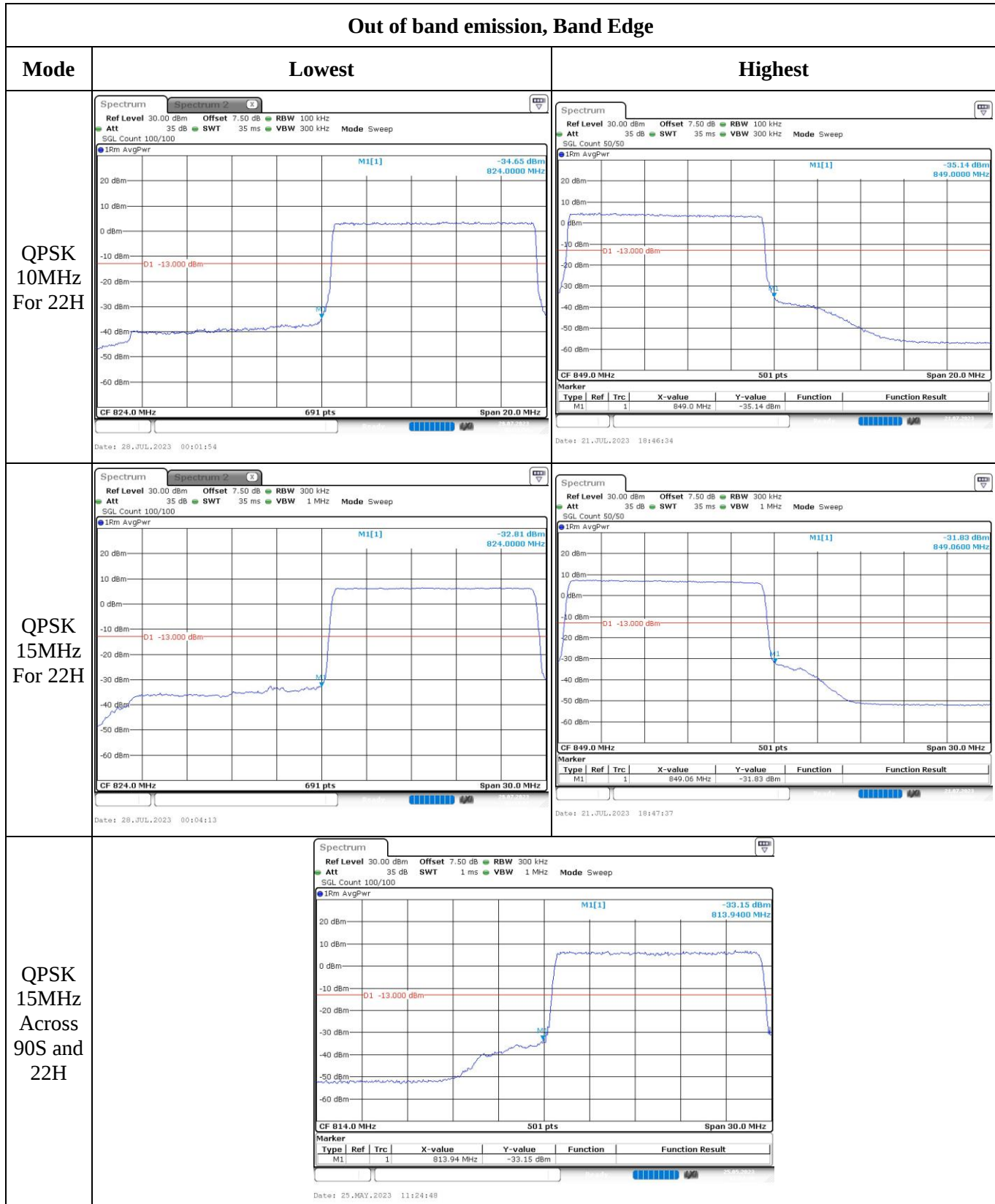
Out of band emission, Band Edge



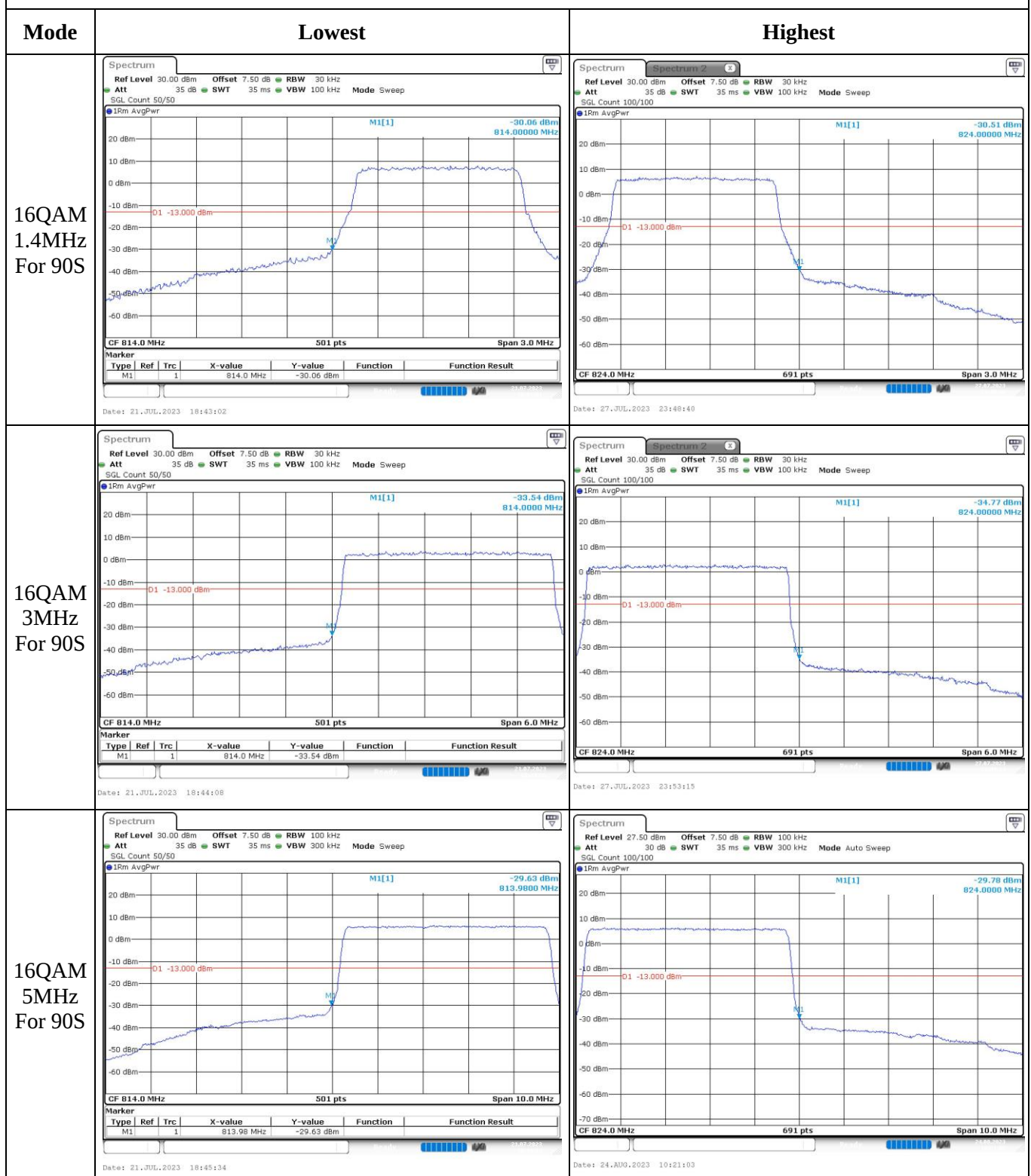
Out of band emission, Band Edge



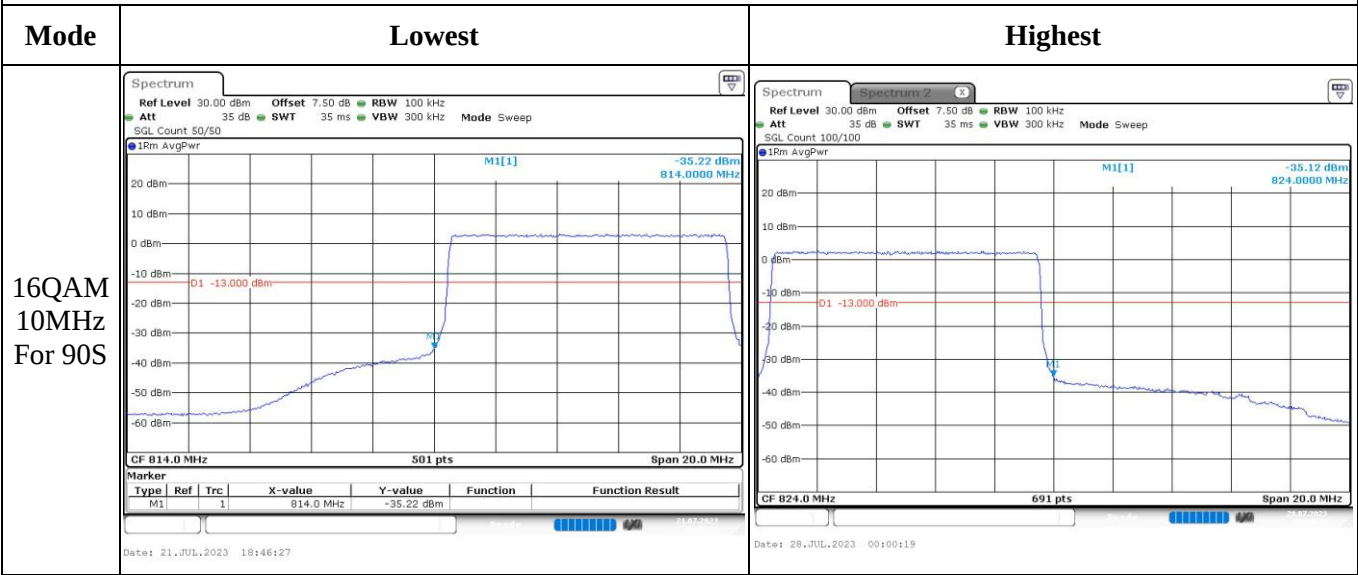
Out of band emission, Band Edge



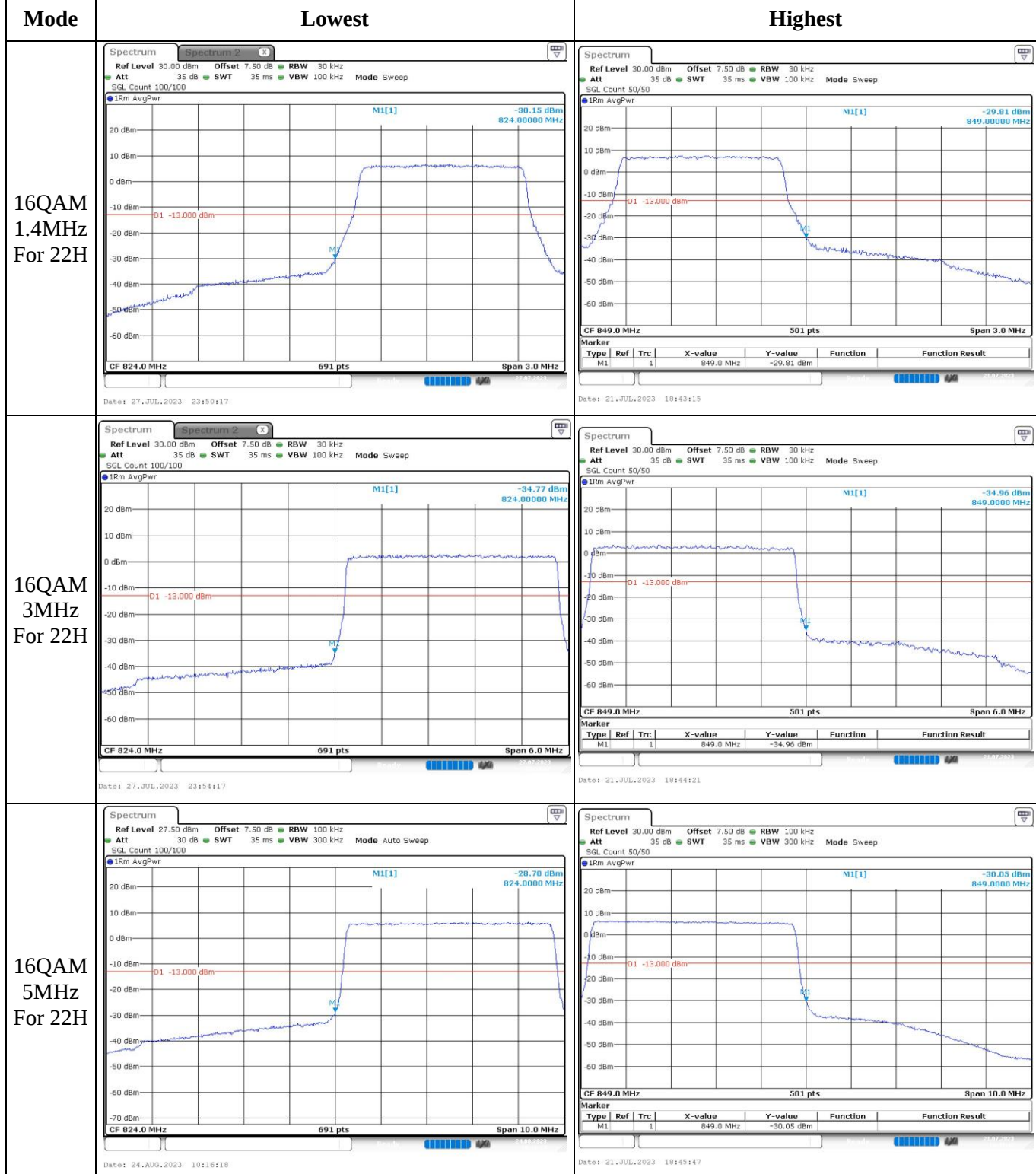
Out of band emission, Band Edge



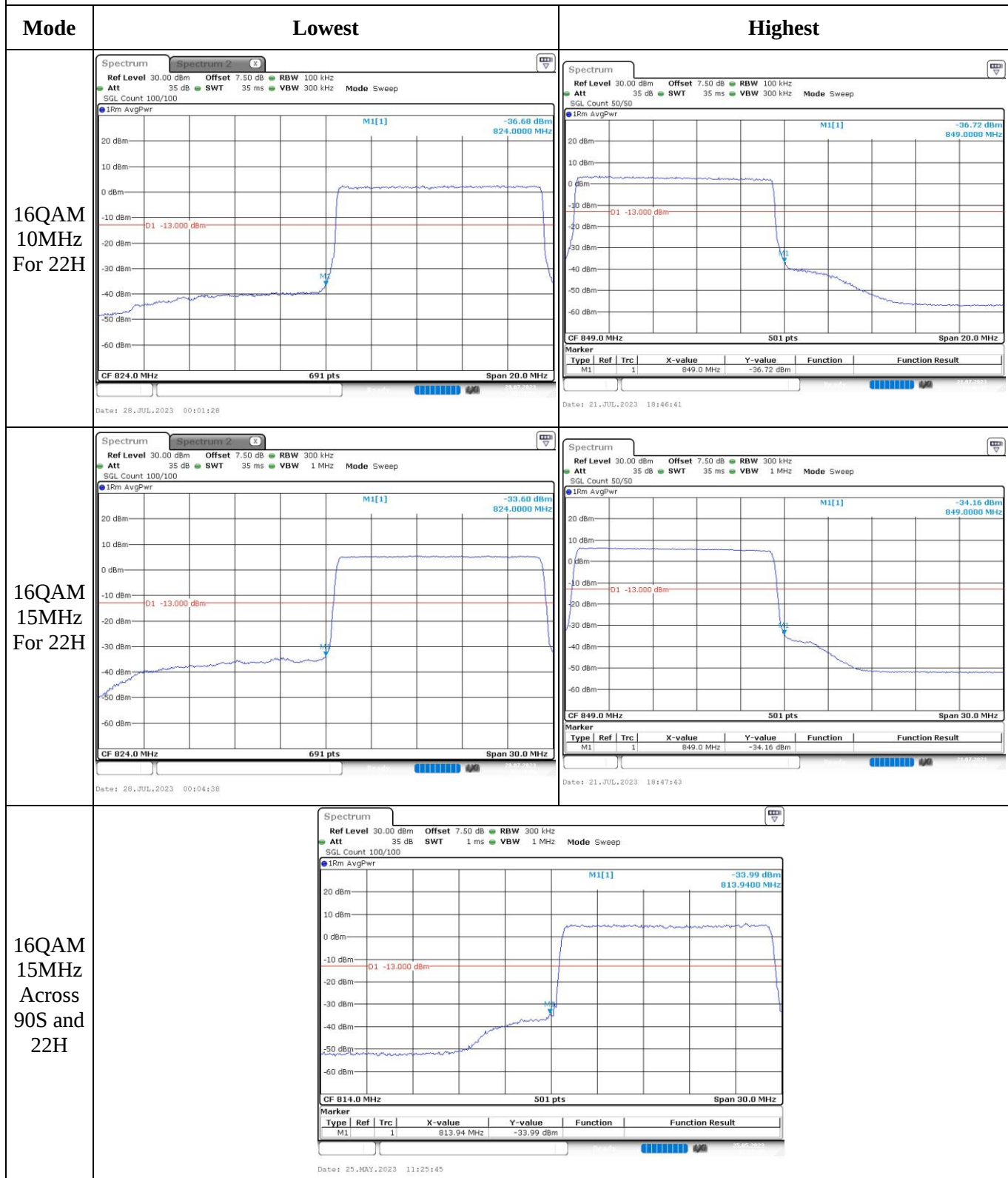
Out of band emission, Band Edge



Out of band emission, Band Edge



Out of band emission, Band Edge



4.15 Antenna Port Test Data and Results for LTE Band 41

Serial Number:	287E_1	Test Date:	2023/7/17~2023/8/25
Test Site:	RF	Test Mode:	Transmitting
Tester:	One Luo	Test Result:	Pass

Environmental Conditions:

Temperature: (°C)	25.8~27.2	Relative Humidity: (%)	46~55	ATM Pressure: (kPa)	99.1~100.3
-------------------	-----------	------------------------	-------	---------------------	------------

Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSV40	101474	2023/7/15	2024/7/14
zhuoxiang	Coaxial Cable	SMA-178	211001	Each time	N/A
YINSAIGE	Coaxial Cable	SS402	SJ0100001	Each time	N/A
Mini-Circuits	DC Block	BLK-18-S+	1554403	Each time	N/A
Weinschel	Power Splitter	1515	RA914	Each time	N/A
R&S	Wideband Radio Communication Tester	CMW500	149218	2023/7/15	2024/7/14
BACL	TEMP&HUMI Test Chamber	BTH-150-40	30174	2023/3/31	2024/3/30
UNI-T	Multimeter	UT39A+	C210582554	2022/9/29	2023/9/28
ZHAOXIN	DC Power Supply	RXN-6010D	21R6010D0912386	N/A	N/A
eastsheep	Coaxial Attenuator	2W-SMA-JK-18G	21060301	Each time	N/A

* Statement of Traceability: China Certification ICT Co., Ltd (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

Test Frequency For Each Mode:

Operation Bandwidth	Lowest Frequency (MHz)	Middle Frequency (MHz)	Highest Frequency (MHz)
5MHz	2557.5	2605	2652.5
10MHz	2560	2605	2650
15MHz	2562.5	2605	2647.5
20MHz	2565	2605	2645

Test Data:**FCC §2.1046; § 27.50(h)(2)****RF Output Power:**

Test Bandwidth & Modulation	Resource Block & RB offset	Conducted Average Output Power(dBm)			Maximum EIRP (dBm)	EIRP Limit (dBm)
		Lowest Channel	Middle Channel	Highest Channel		
5MHz QPSK	RB1#0	23.08	23.05	23.1	20.09	33
	RB1#13	23.19	23.19	23.19		
	RB1#24	23.09	23.08	23.08		
	RB15#0	22.1	22.16	22.17		
	RB15#10	22.14	22.13	22.16		
	RB25#0	22.09	22.14	22.14		
5MHz 16QAM	RB1#0	22.08	22.22	22.07	19.24	33
	RB1#13	22.2	22.34	22.18		
	RB1#24	22.11	22.27	22.05		
	RB15#0	21.06	21.16	21.06		
	RB15#10	21.12	21.11	21.05		
	RB25#0	21.13	21.06	21.09		
10MHz QPSK	RB1#0	23.1	23.16	23.23	20.41	33
	RB1#25	23.42	23.44	23.51		
	RB1#49	23.18	23.16	23.21		
	RB25#0	22.11	22.22	22.24		
	RB25#25	22.16	22.17	22.21		
	RB50#0	22.13	22.15	22.2		
10MHz 16QAM	RB1#0	22.27	22	22.27	19.47	33
	RB1#25	22.57	22.31	22.52		
	RB1#49	22.25	22.05	22.22		
	RB25#0	21.06	21.19	21.21		
	RB25#25	21.12	21.2	21.19		
	RB50#0	21.09	21.14	21.18		
15MHz QPSK	RB1#0	23.12	23.17	23.14	20.17	33
	RB1#38	23.25	23.27	23.25		
	RB1#74	23.13	23.12	23.06		
	RB36#0	22.23	22.32	22.31		
	RB36#39	22.27	22.29	22.3		
	RB75#0	22.24	22.32	22.29		
15MHz 16QAM	RB1#0	22.03	22.26	22.31	19.3	33
	RB1#38	22.14	22.39	22.4		
	RB1#74	22.02	22.28	22.25		
	RB36#0	21.13	21.26	21.19		
	RB36#39	21.14	21.19	21.19		
	RB75#0	21.16	21.21	21.18		
20MHz QPSK	RB1#0	22.45	22.29	22.77	20.23	33
	RB1#50	22.93	22.84	23.33		
	RB1#99	22.41	22.36	22.87		

20MHz 16QAM	RB50#0	21.64	21.55	21.95	19.44	33
	RB50#50	21.61	21.64	22.01		
	RB100#0	21.66	21.62	21.99		
	RB1#0	21.53	21.22	21.99		
	RB1#50	21.94	21.79	22.54		
	RB1#99	21.4	21.39	22.08		
	RB50#0	20.62	20.57	20.94		
	RB50#50	20.58	20.62	21.01		
	RB100#0	20.62	20.58	20.97		

Note: EIRP=Conducted Power(dBm) - Lc(dB) + Gr(dBi)

Result:

Pass

Peak-to-average Ratio(PAR)

Test Bandwidth & Modulation	Resource Block & RB offset	Peak-to-average Ratio(dB)			Limit (dB)
		Lowest Channel	Middle Channel	Highest Channel	
20MHz QPSK	RB1#0	8.72	8.2	8.9	13
	RB100#0	8.06	8.09	8.17	13
20MHz 16QAM	RB1#0	9.36	9.01	9.59	13
	RB100#0	9.68	8.96	9.68	13
				Result:	Pass

FCC §2.1049, §27.53:Occupied Bandwidth

Operation Mode	99% Occupied Bandwidth (MHz)			26 dB Occupied Bandwidth (MHz)		
	Low Channel	Middle channel	High Channel	Low Channel	Middle Channel	High Channel
5MHz QPSK	4.491	4.511	4.511	5.26	5.02	5.08
5MHz 16QAM	4.491	4.511	4.511	4.94	4.98	5.12
10MHz QPSK	8.942	8.942	8.942	9.68	9.76	9.88
10MHz 16QAM	8.942	8.942	8.942	10.12	9.52	9.68
15MHz QPSK	13.413	13.533	13.473	14.58	15.54	15.42
15MHz 16QAM	13.533	13.533	13.473	14.82	14.76	14.76
20MHz QPSK	18.044	17.884	17.884	19.44	19.76	19.44
20MHz 16QAM	17.884	17.964	17.884	19.28	19.68	19.2

Note: The test plots please refer to the Plots of Occupied Bandwidth

FCC §2.1051, §27.53:Spurious Emissions at Antenna Terminal

Result:	Pass, Please refer to the test plots of Spurious Emissions at Antenna Terminal.
----------------	--

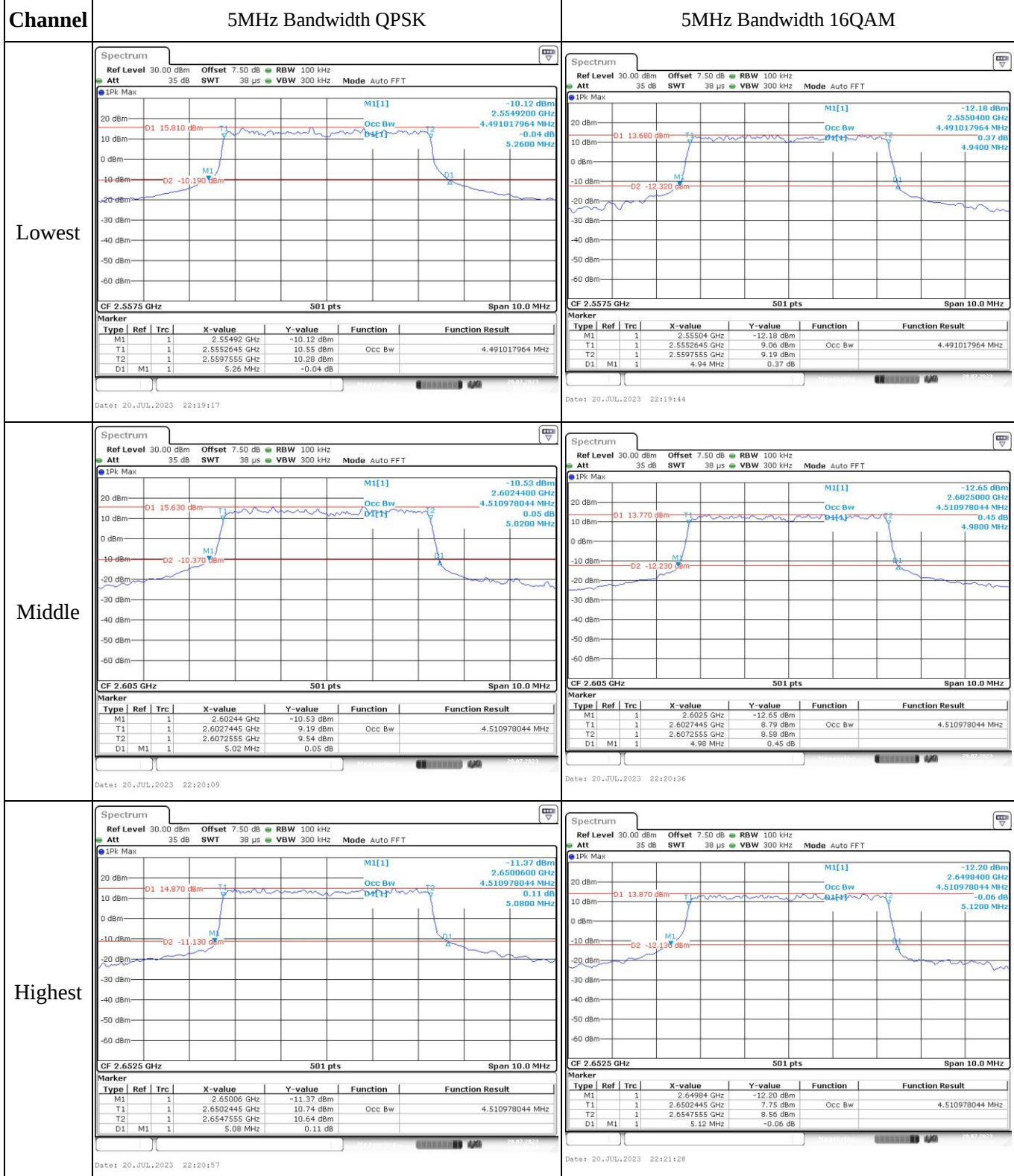
FCC §2.1051, §27.53:Out of band emission, Band Edge

Result:	Pass, Please refer to the test plots of Out of band emission, Band Edge.
----------------	---

FCC §2.1055, §27.54: Frequency Stability						
Test Mode:	20M QPSK	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (°C)	Voltage (V _{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.78	2555.916	2555.00	2653.936	2655
	-20	3.78	2555.944	2555.00	2653.905	2655
	-10	3.78	2555.979	2555.00	2653.921	2655
	0	3.78	2555.903	2555.00	2653.928	2655
	10	3.78	2555.934	2555.00	2653.949	2655
	20	3.78	2555.978	2555.00	2653.942	2655
	30	3.78	2555.966	2555.00	2653.989	2655
	40	3.78	2555.996	2555.00	2653.975	2655
	50	3.78	2555.931	2555.00	2653.952	2655
Frequency Stability vs. Voltage	20	3.6	2555.988	2555.00	2653.984	2655
	20	4.4	2555.954	2555.00	2653.997	2655
					Result:	Pass
Test Mode:	20M 16QAM	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (°C)	Voltage (V _{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.78	2556.033	2555.00	2653.930	2655
	-20	3.78	2556.100	2555.00	2653.980	2655
	-10	3.78	2556.076	2555.00	2653.962	2655
	0	3.78	2556.094	2555.00	2653.901	2655
	10	3.78	2556.086	2555.00	2653.999	2655
	20	3.78	2556.058	2555.00	2653.942	2655
	30	3.78	2556.065	2555.00	2653.919	2655
	40	3.78	2556.029	2555.00	2653.918	2655
	50	3.78	2556.059	2555.00	2653.965	2655
Frequency Stability vs. Voltage	20	3.6	2556.022	2555.00	2653.936	2655
	20	4.4	2556.099	2555.00	2653.954	2655
					Result:	Pass

Test Plots(Note: The 7.5 dB is the Insertion loss of the RF cable, Power Splitter and DC Block, which was offset into the Spectrum Analyzer):

Occupied Bandwidth



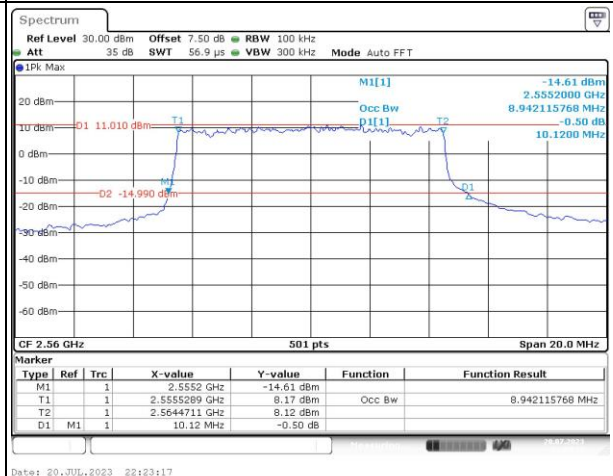
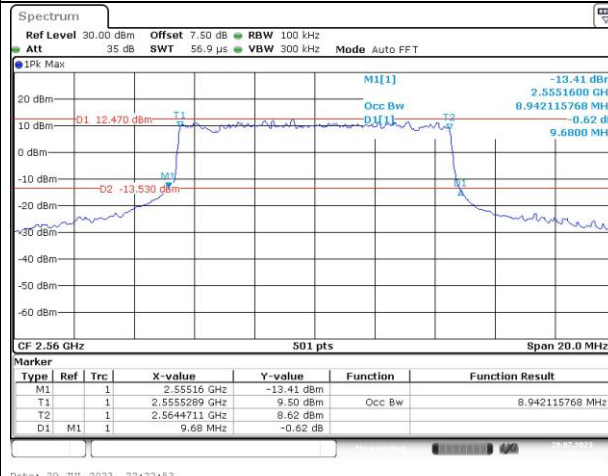
Occupied Bandwidth

Channel

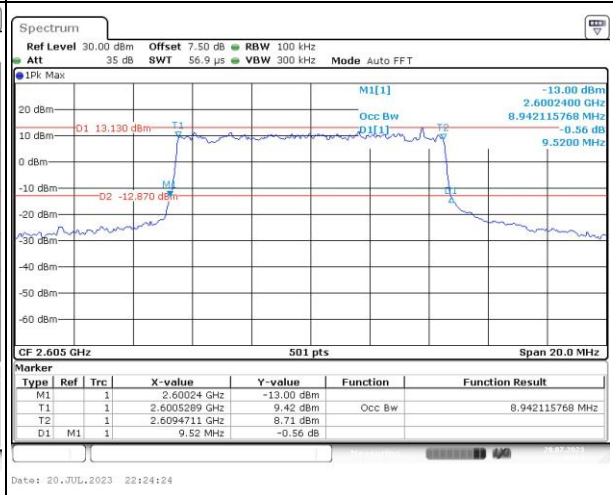
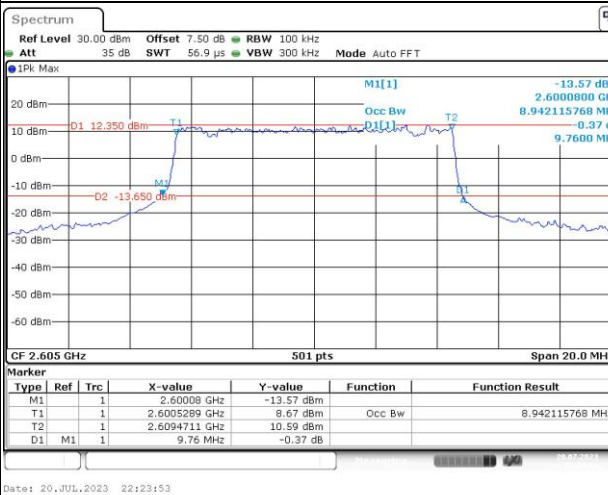
10MHz Bandwidth QPSK

10MHz Bandwidth 16QAM

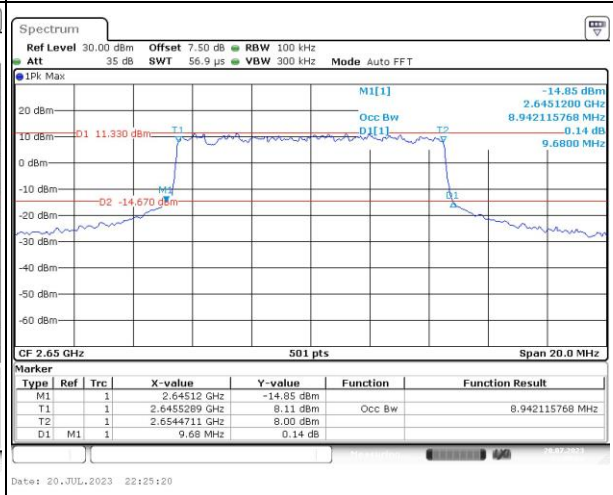
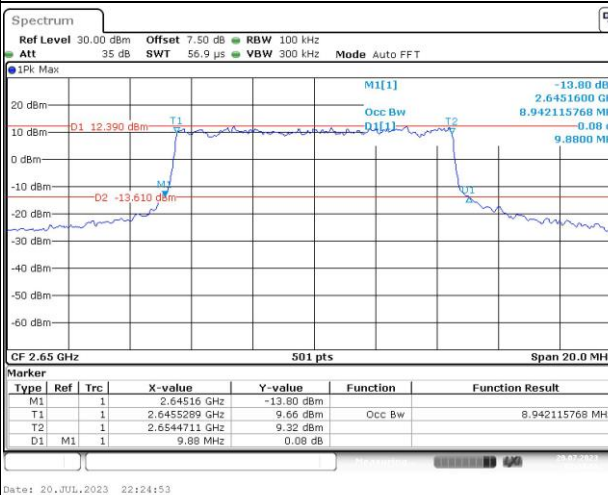
Lowest



Middle



Highest



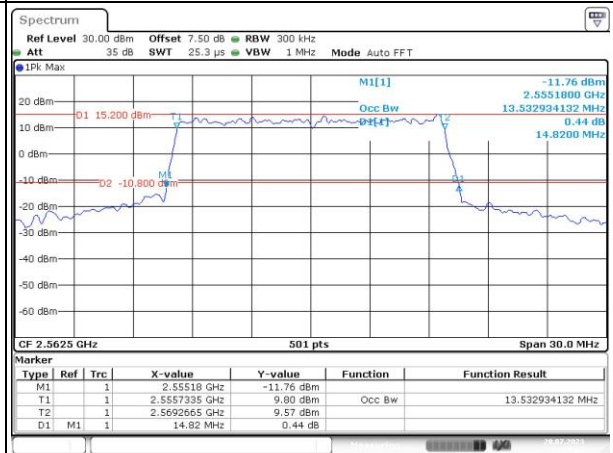
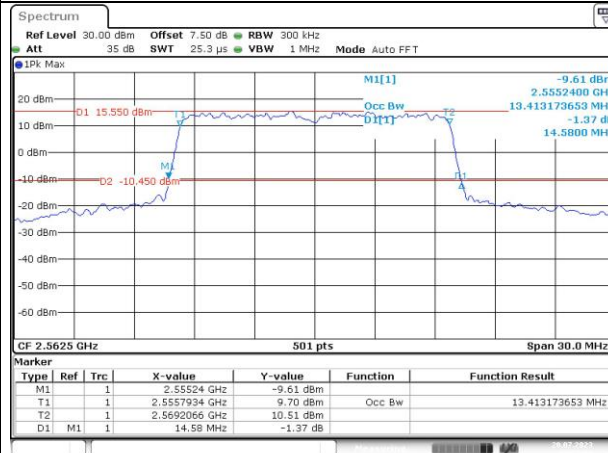
Occupied Bandwidth

Channel

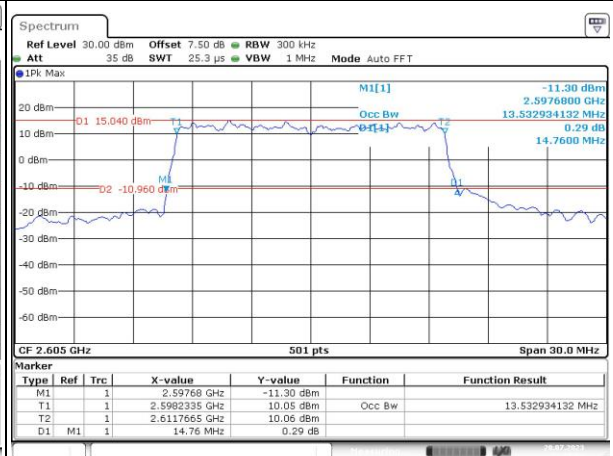
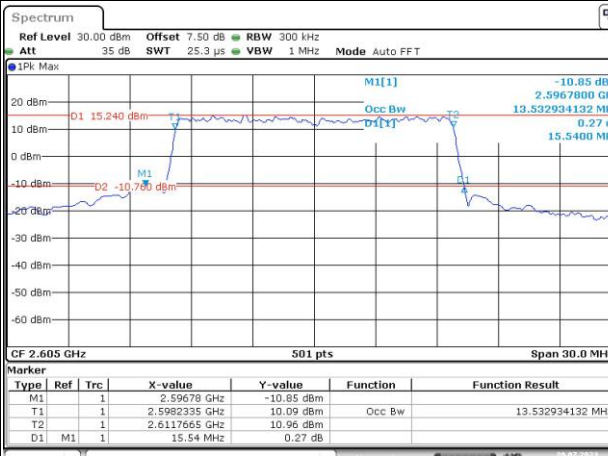
15MHz Bandwidth QPSK

15MHz Bandwidth 16QAM

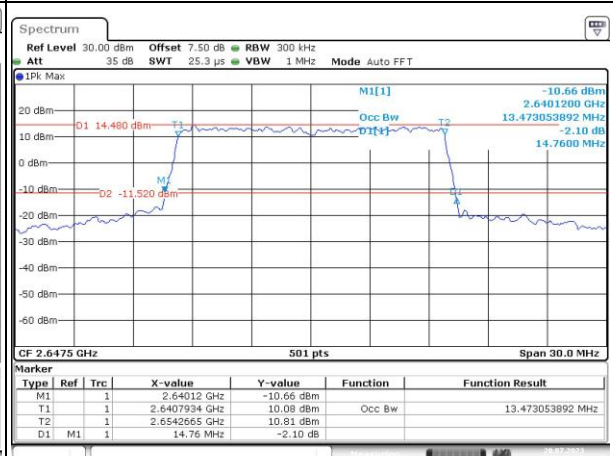
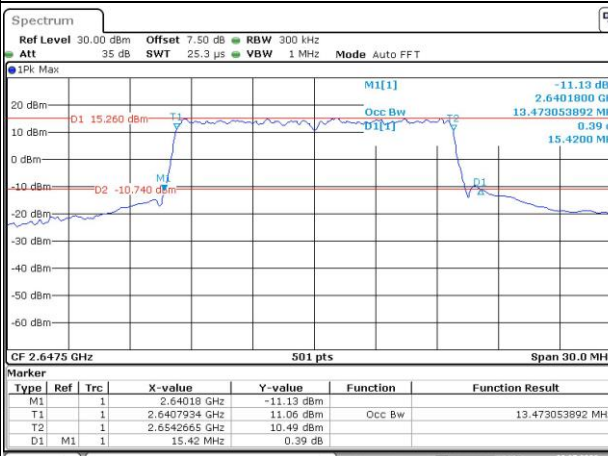
Lowest



Middle



Highest



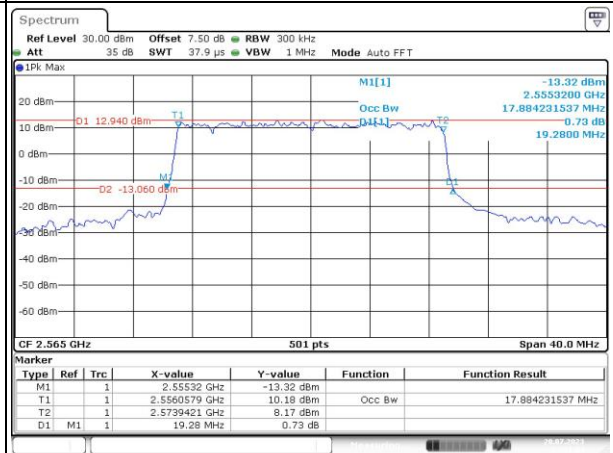
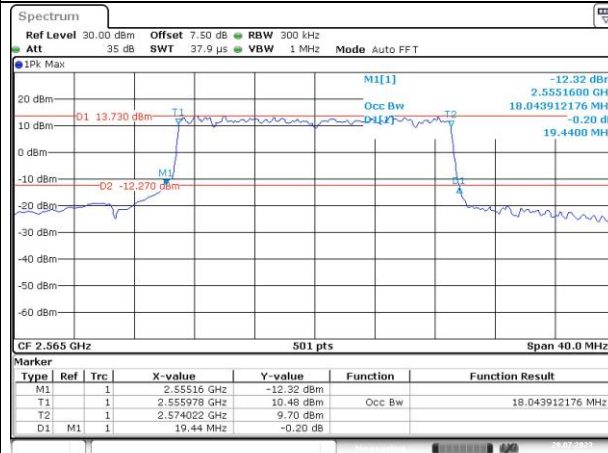
Occupied Bandwidth

Channel

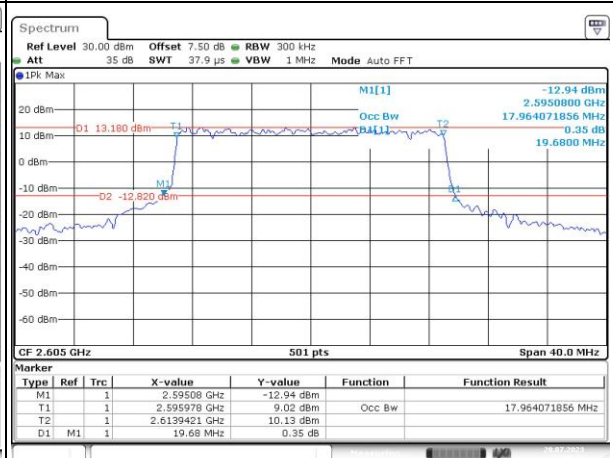
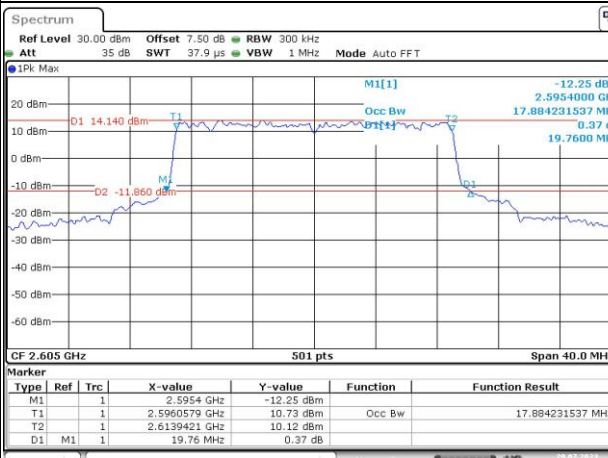
20MHz Bandwidth QPSK

20MHz Bandwidth 16QAM

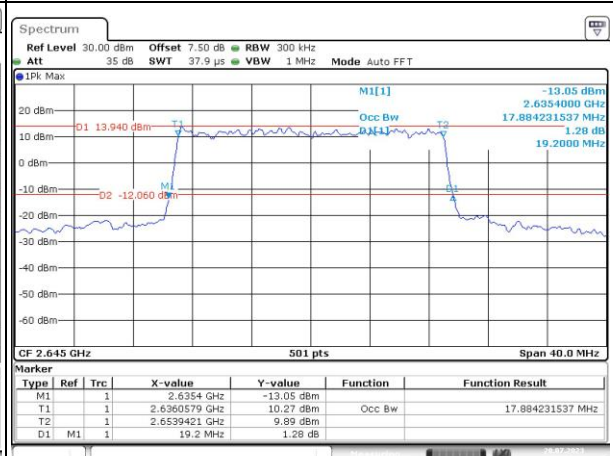
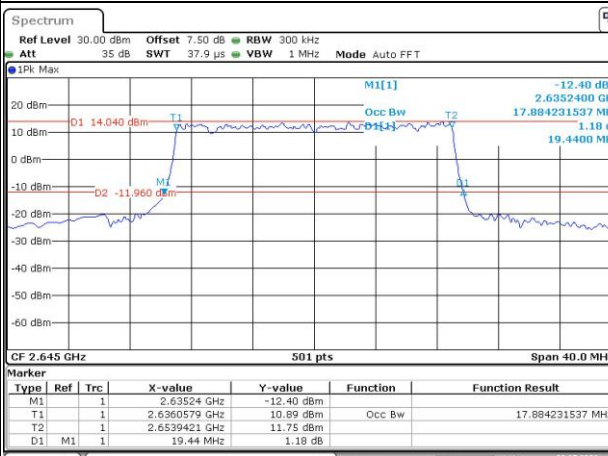
Lowest



Middle



Highest

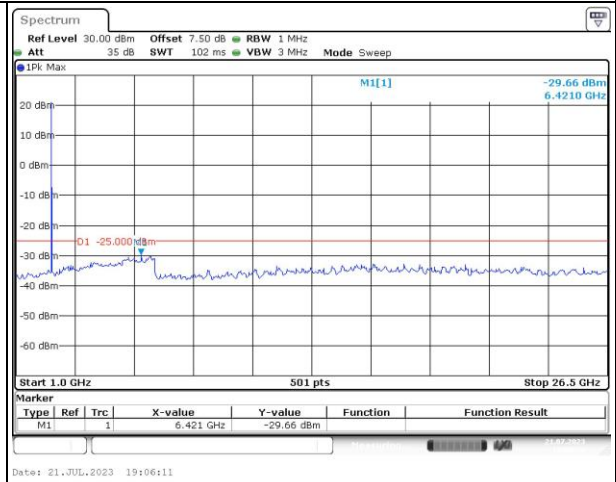
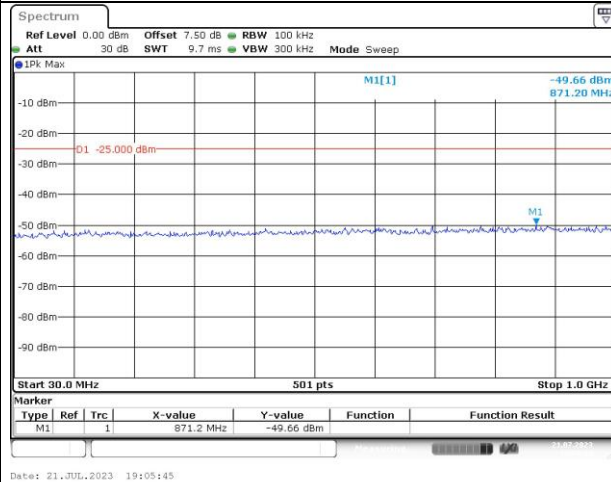


Spurious Emissions at Antenna Terminal

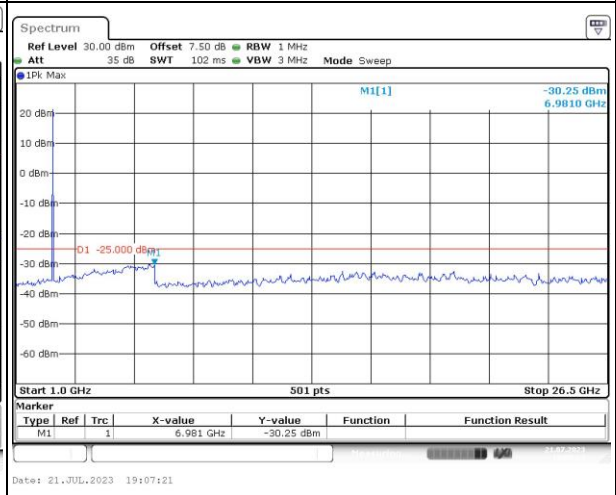
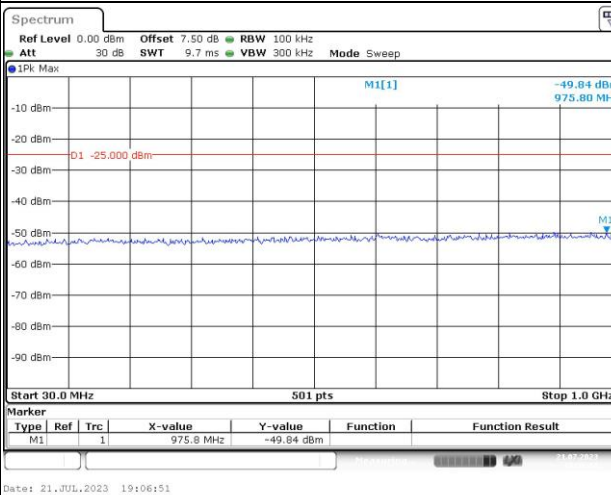
Channel

5MHz Bandwidth QPSK

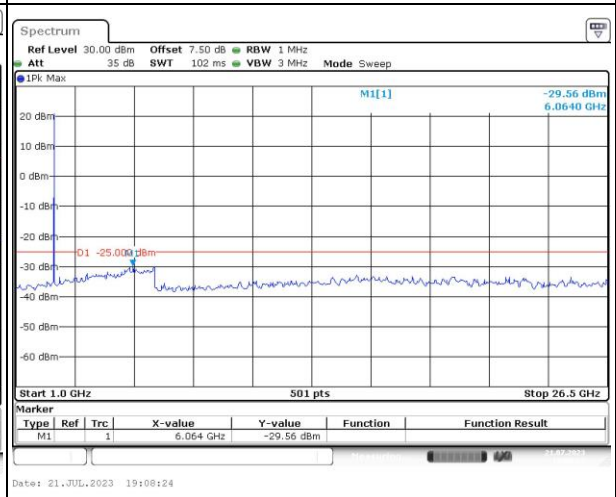
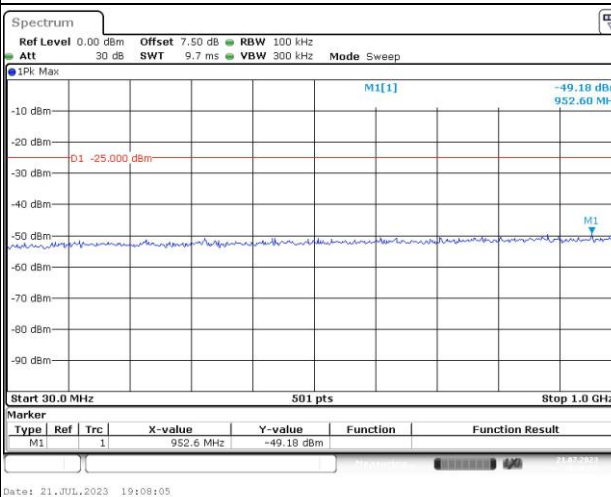
Lowest



Middle



Highest

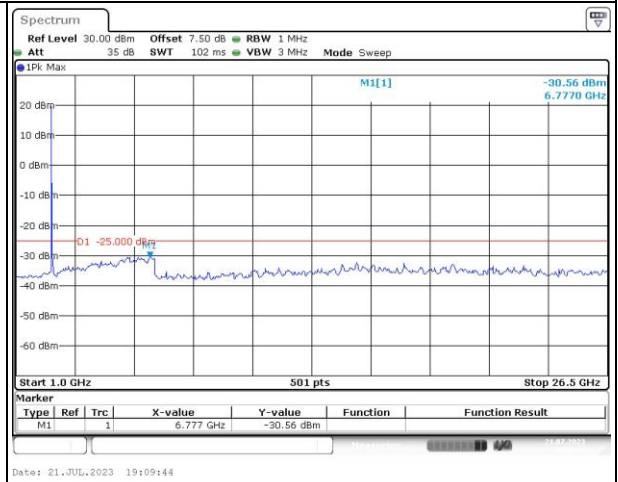
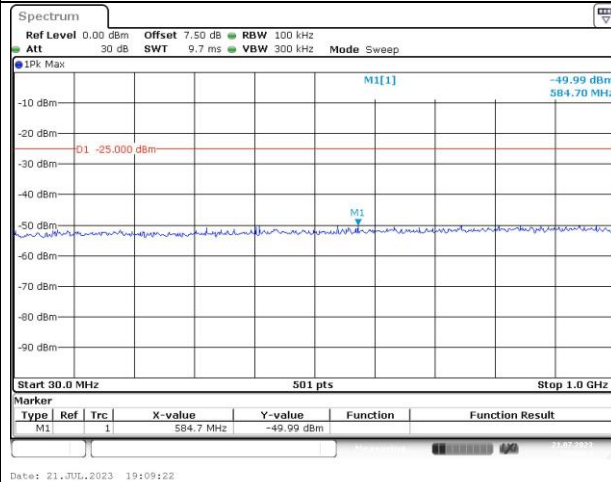


Spurious Emissions at Antenna Terminal

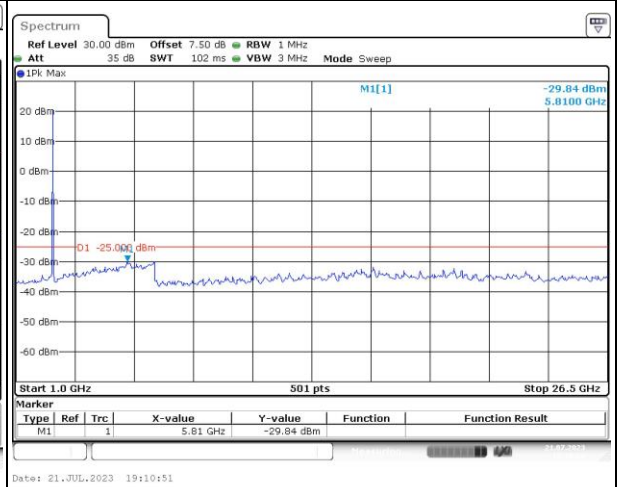
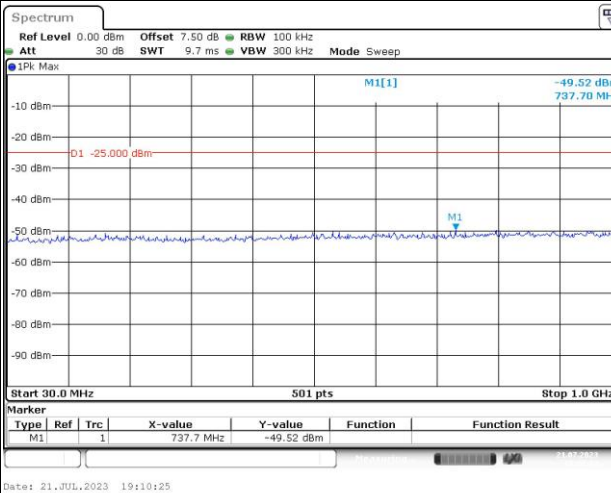
Channel

10MHz Bandwidth QPSK

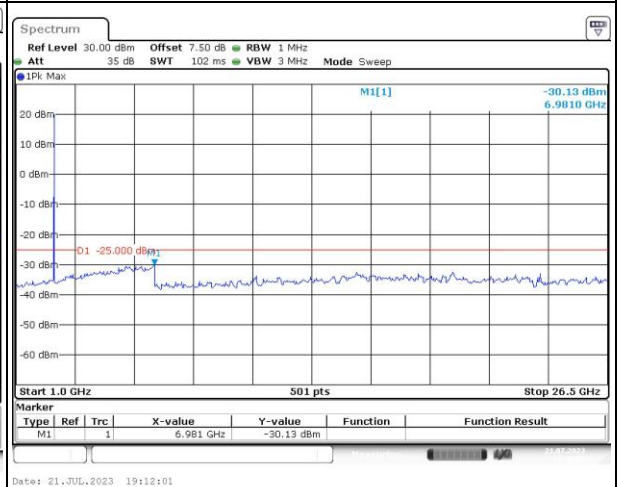
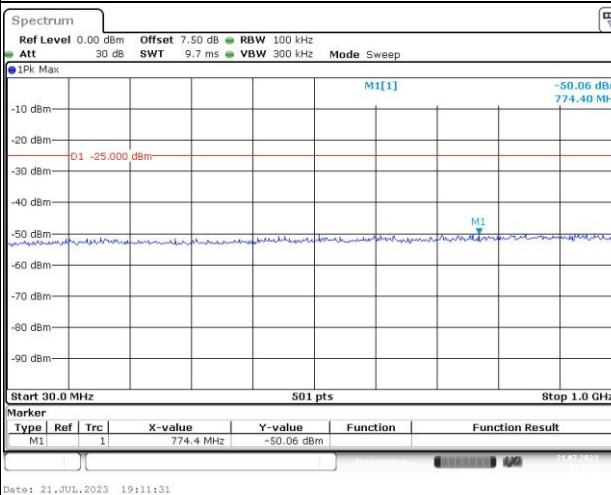
Lowest



Middle



Highest

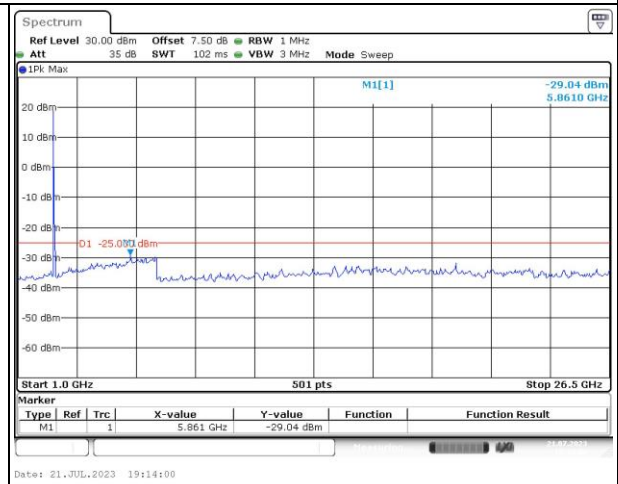
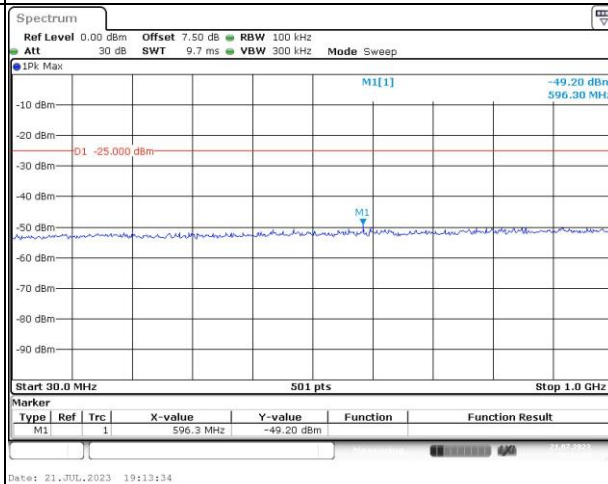


Spurious Emissions at Antenna Terminal

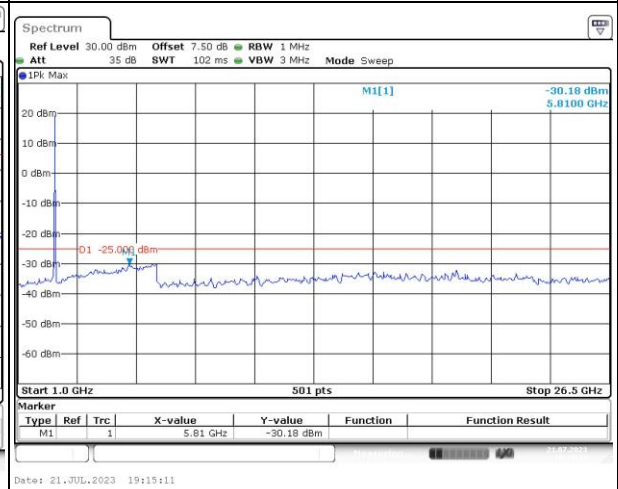
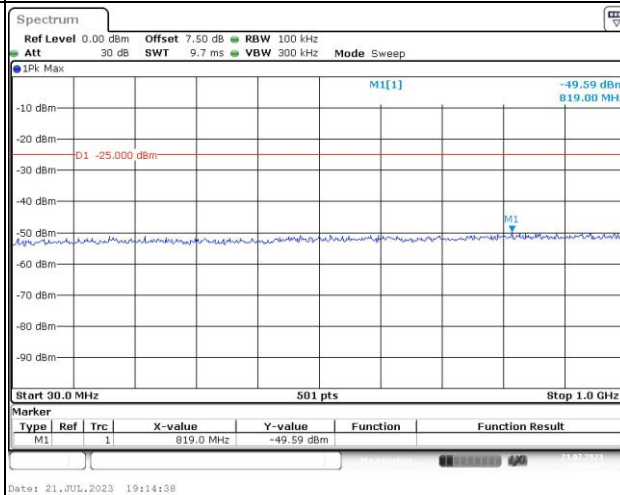
Channel

15MHz Bandwidth QPSK

Lowest



Middle



Highest

