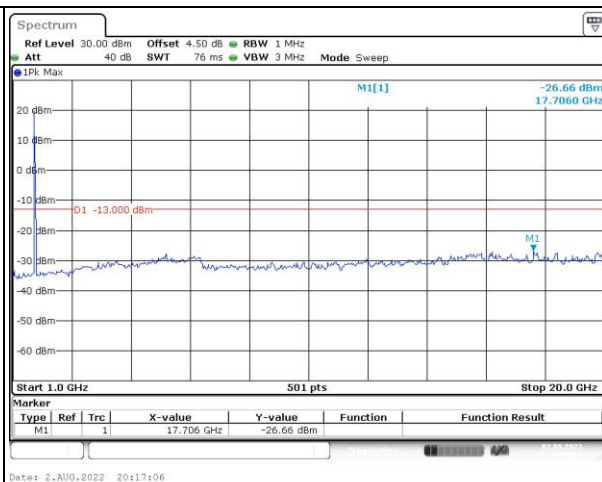
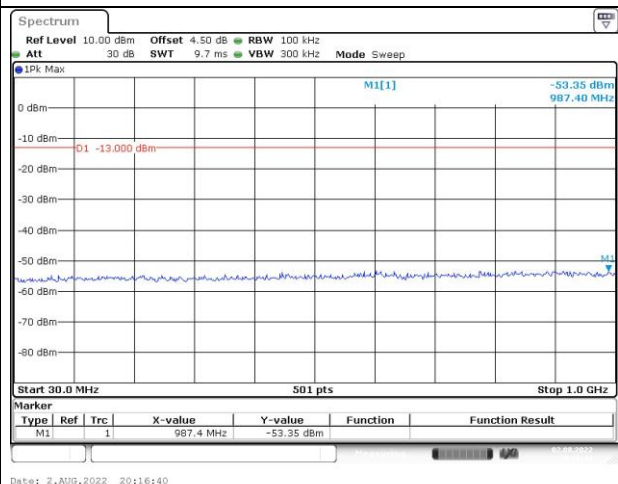


Spurious Emissions at Antenna Terminal

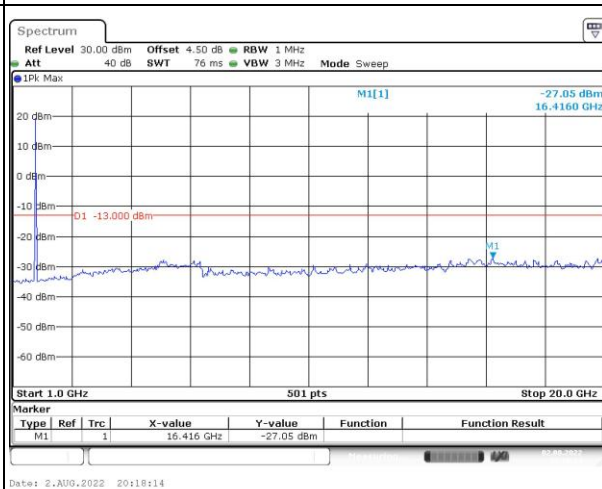
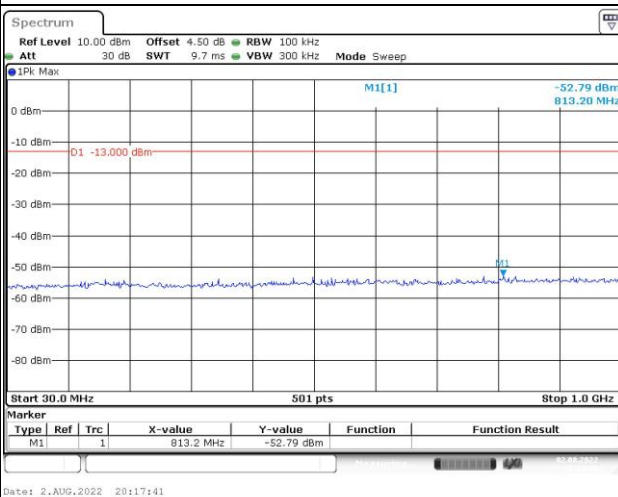
Channel

10MHz Bandwidth QPSK

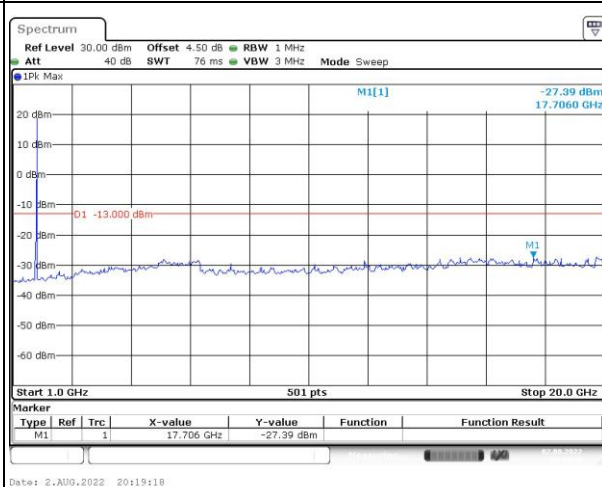
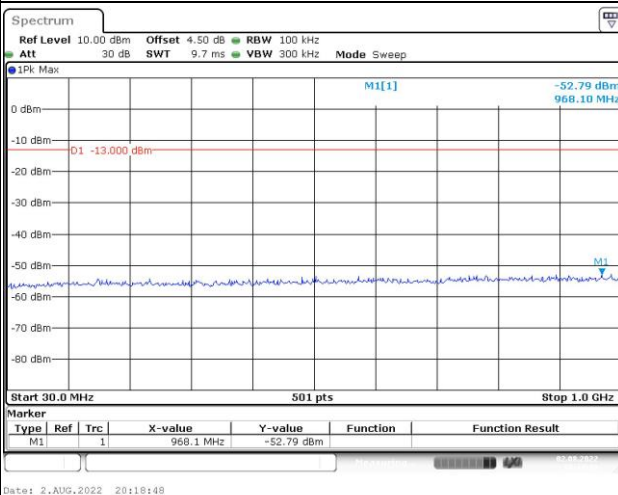
Lowest



Middle



Highest

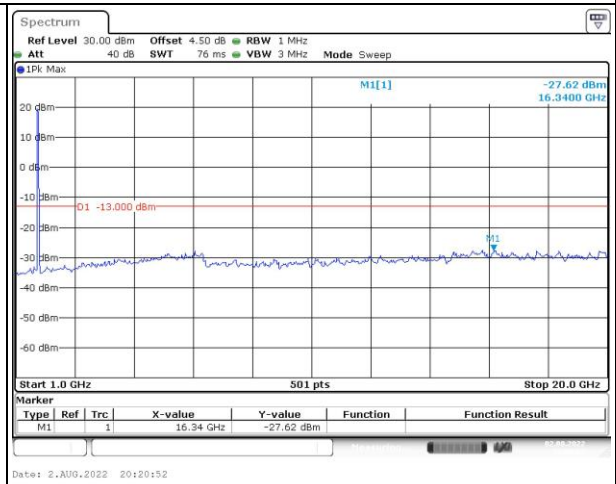
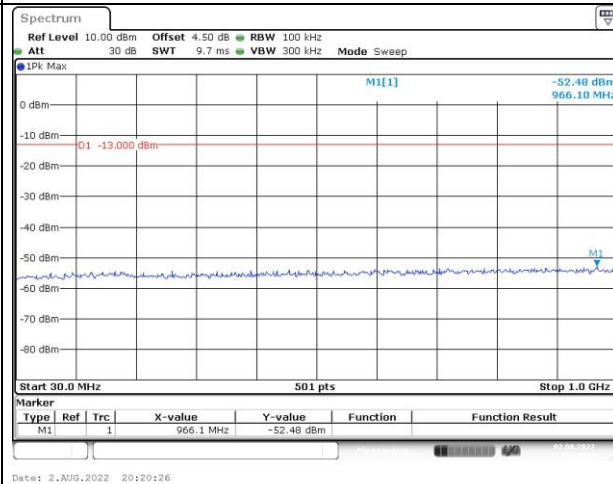


Spurious Emissions at Antenna Terminal

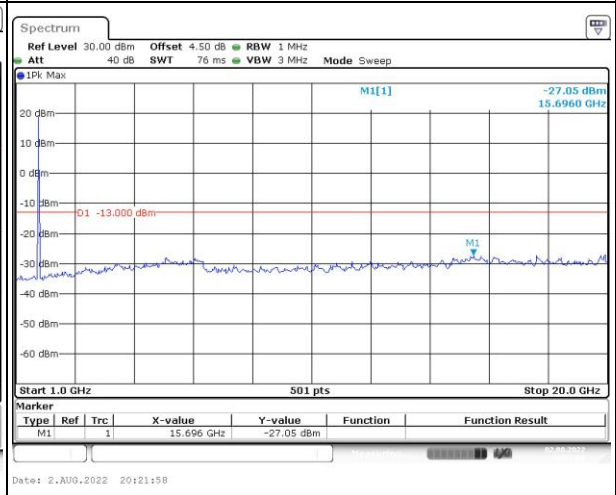
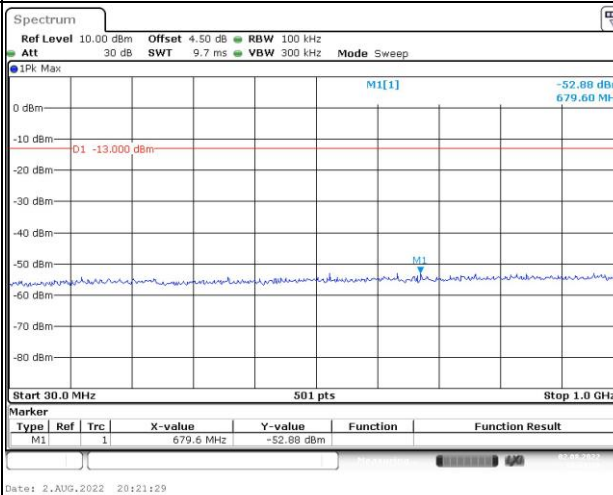
Channel

15MHz Bandwidth QPSK

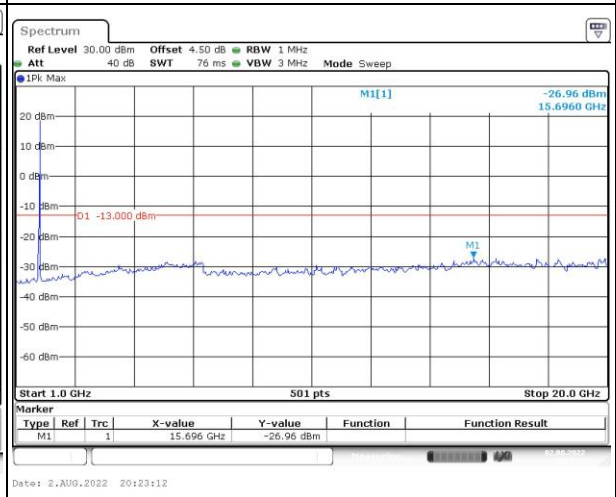
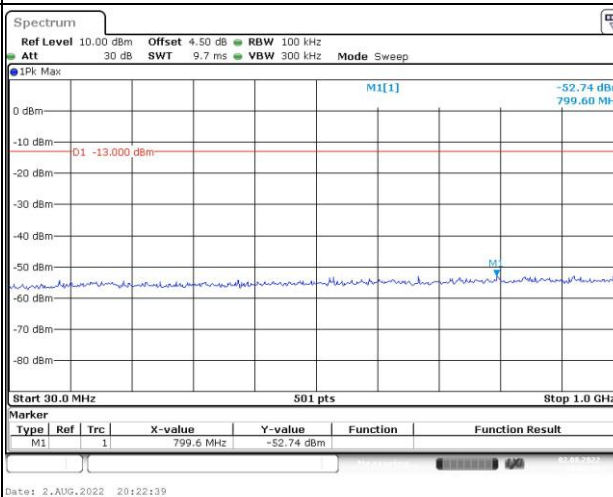
Lowest



Middle



Highest

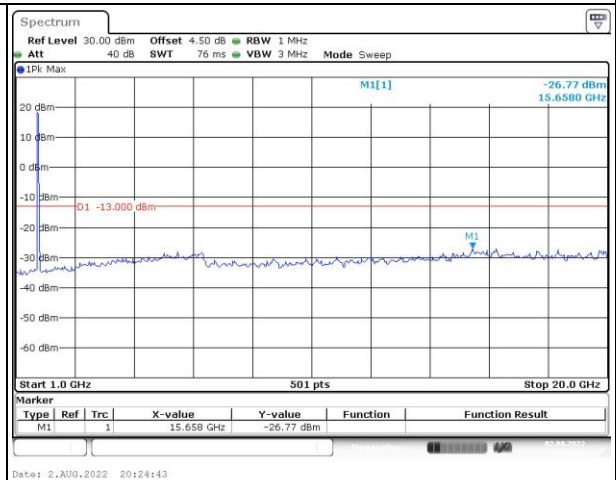
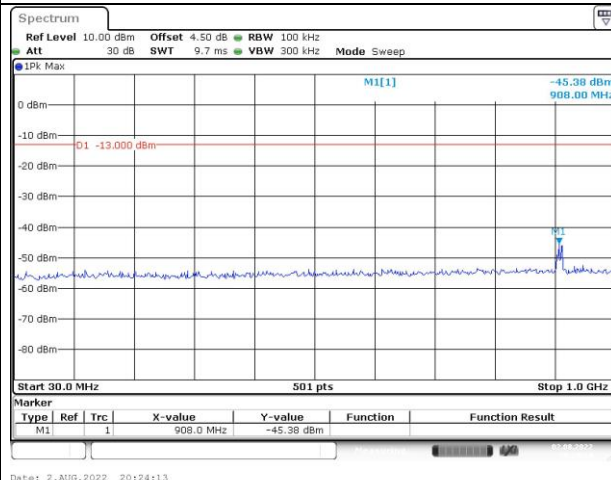


Spurious Emissions at Antenna Terminal

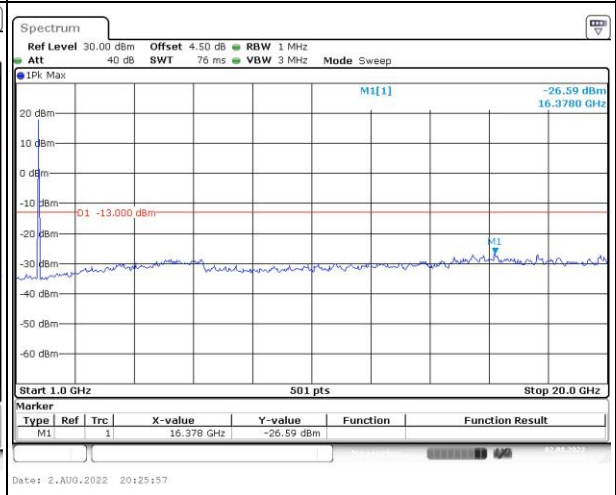
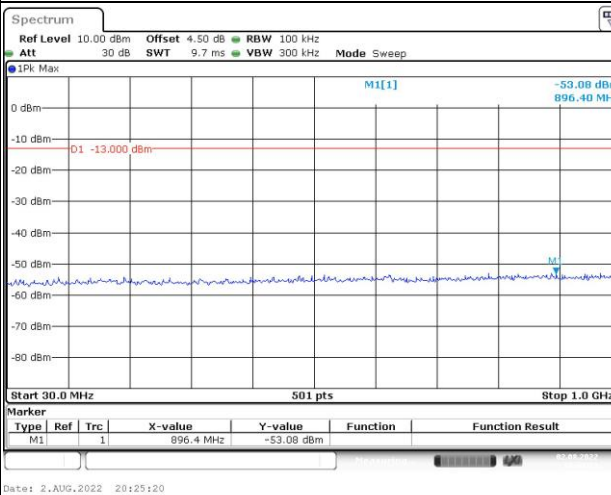
Channel

20MHz Bandwidth QPSK

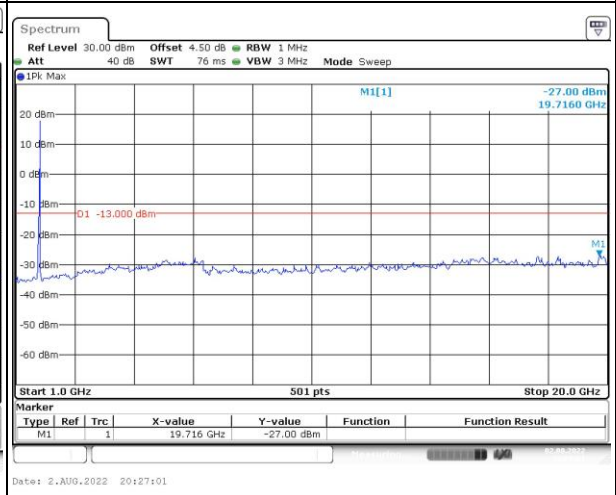
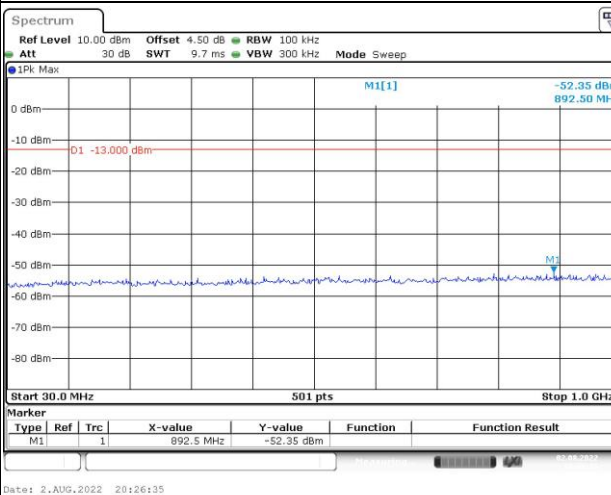
Lowest



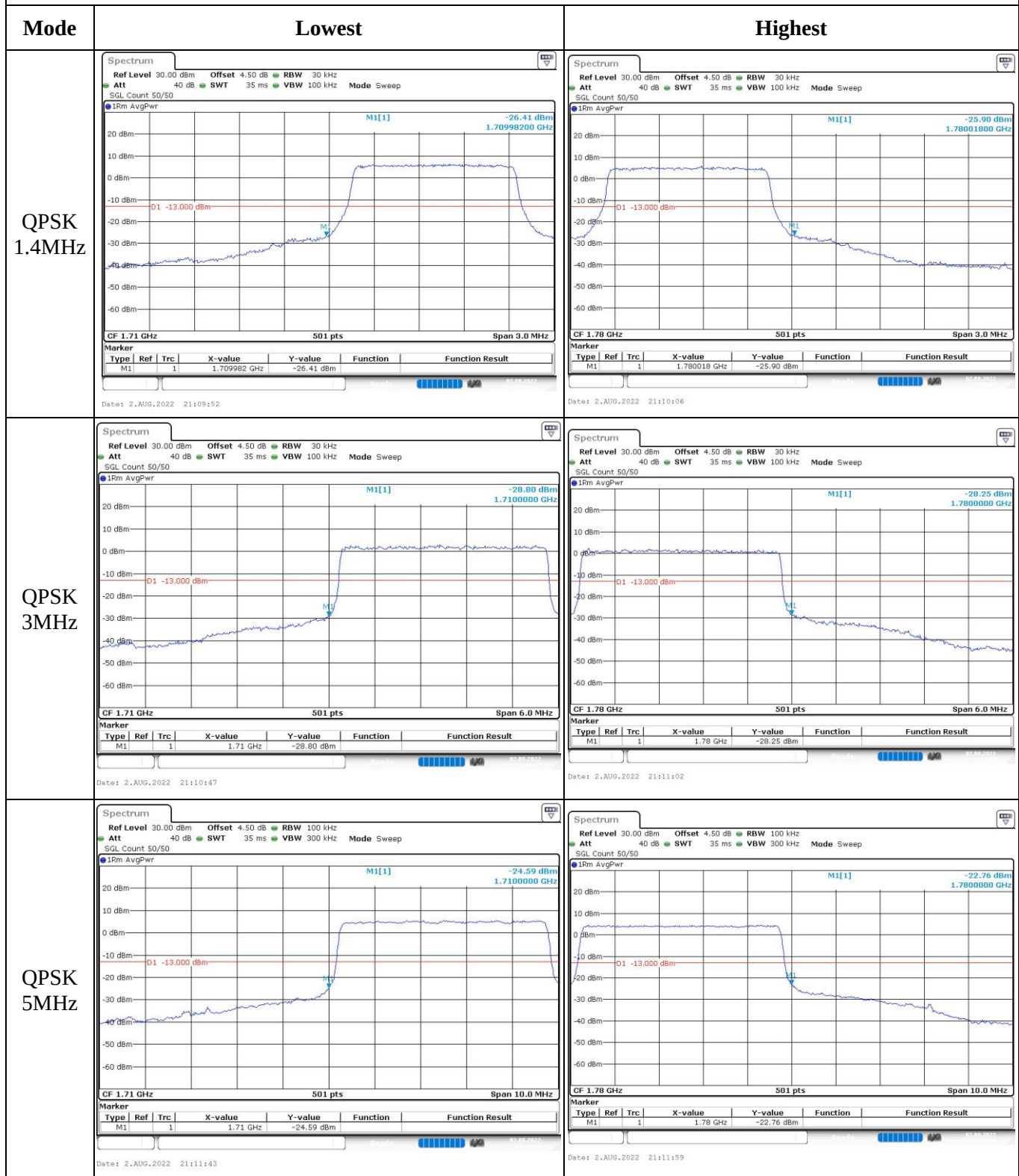
Middle



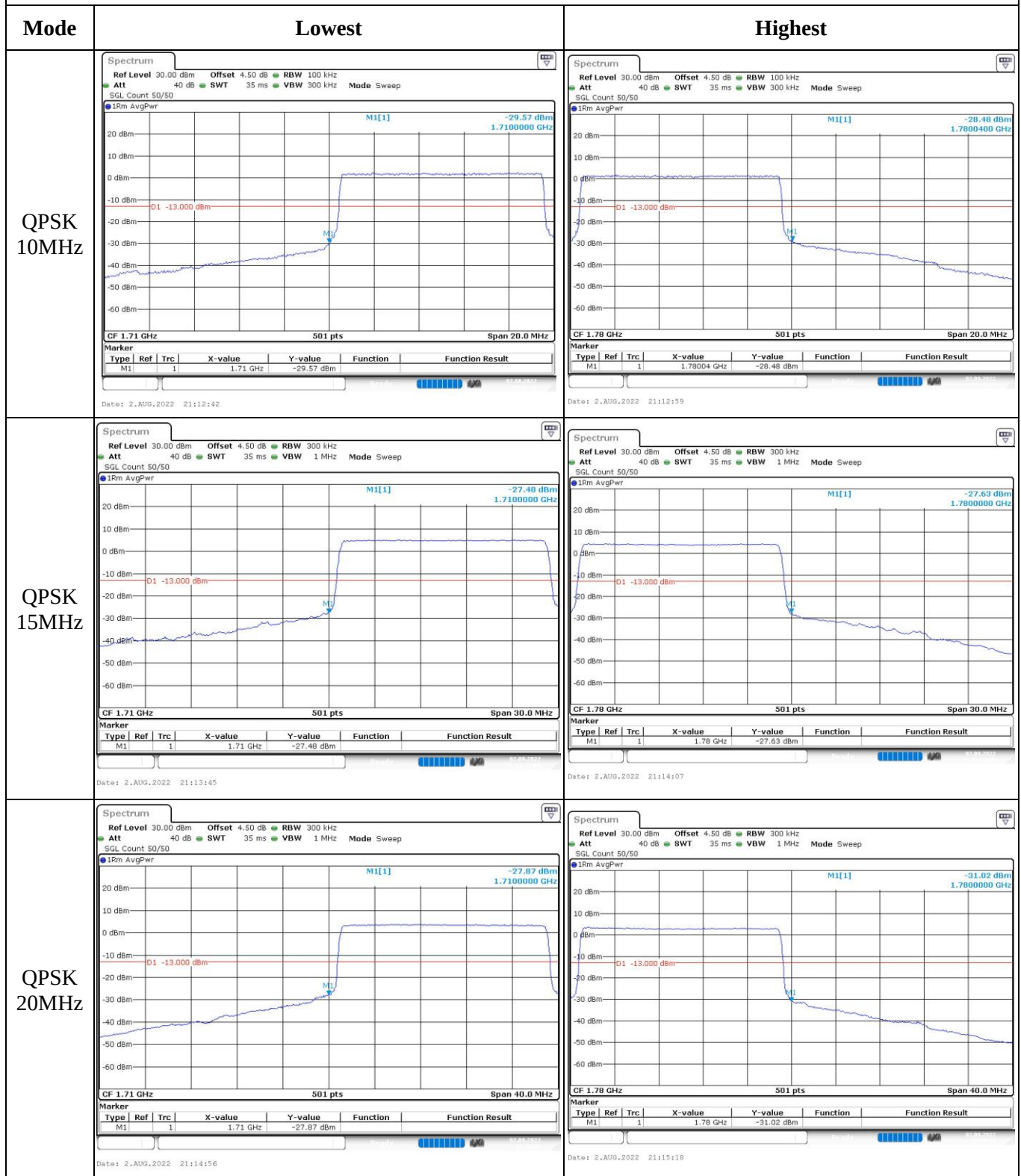
Highest



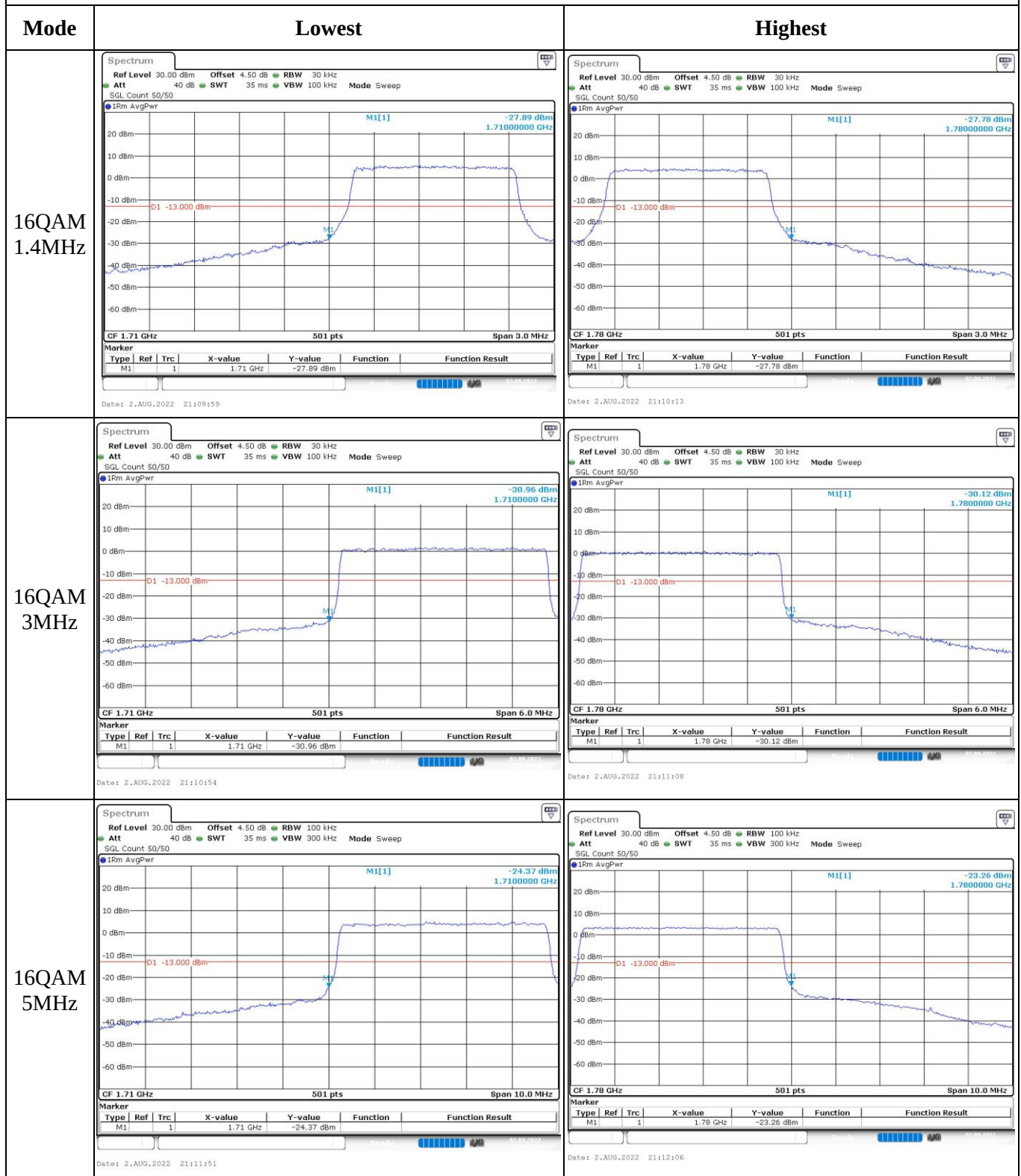
Out of band emission, Band Edge



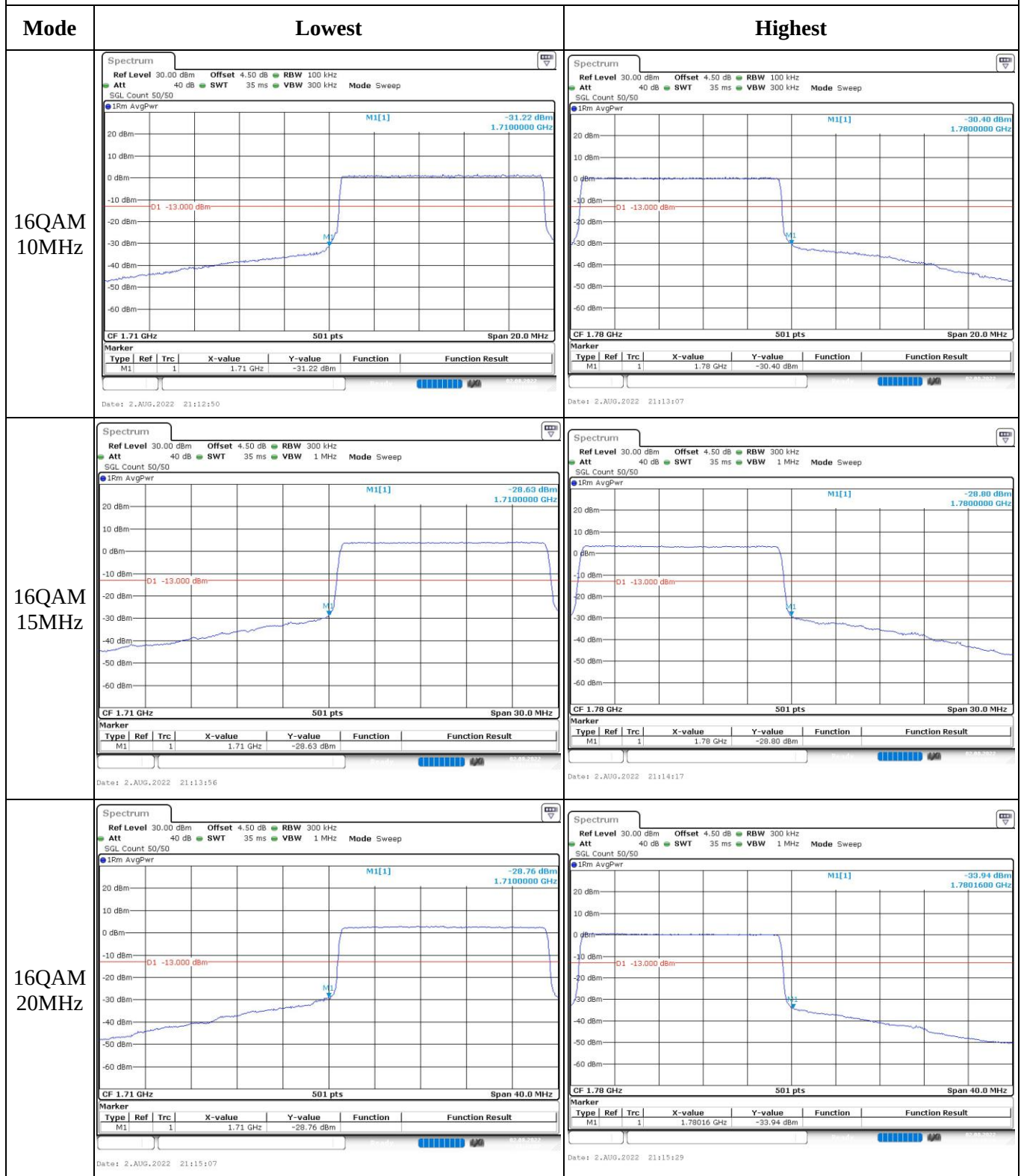
Out of band emission, Band Edge



Out of band emission, Band Edge



Out of band emission, Band Edge



4.12 Antenna Port Test Data and Results for LTE Band 71

Serial Number:	CR22070025-RF-S1	Test Date:	2022-08-03~2022-08-08
Test Site:	RF	Test Mode:	Transmitting
Tester:	George Chen	Test Result:	Pass

Environmental Conditions:

Temperature: (°C)	25.3~25.9	Relative Humidity: (%)	52~62	ATM Pressure: (kPa)	100.1~100.6
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Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSV40	101474	2022-07-15	2023-07-14
zhuoxiang	Coaxial Cable	SMA-178	211002	Each time	N/A
Mini-Circuits	DC Block	BLK-18-S+	1554404	Each time	N/A
Weinschel	Coaxial Attenuators	53-20-34	LN751	Each time	N/A
Unknown	Coaxial tee connector	Unknown	2204006	Each time	N/A
R&S	Wideband Radio Communication Tester	CMW500	149218	2022-07-15	2023-07-14
UNI-T	Multimeter	UT39A+	C210582554	2021-09-30	2022-09-29
BACL	TEMP&HUMI Test Chamber	BTH-150-40	30174	2022-04-06	2023-04-05
ZHAOXIN	DC Power Supply	RXN-6010D	21R6010D0912386	N/A	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).

EUT Information@ LTE Band 71▲:

Antenna Gain G_T (dBi):	-4	Antenna Gain G_T (dBd):	-6.15	Path Loss L_C (dB):	0.1
Operation Voltage(V_{DC}):					
Lowest:	3.3	Normal:	3.8	Highest:	4.2

Test Frequency For Each Mode:

Operation Bandwidth	Lowest Frequency (MHz)	Middle Frequency (MHz)	Highest Frequency (MHz)
5MHz	665.5	680.5	695.5
10MHz	668	680.5	693
15MHz	670.5	680.5	690.5
20MHz	673	680.5	688

Test Data:**FCC §2.1046; § 27.50(c) (10)****RF Output Power:**

Test Bandwidth & Modulation	Resource Block & RB offset	Conducted Average Output Power(dBm)			Maximum ERP (dBm)	ERP Limit (dBm)
		Lowest Channel	Middle Channel	Highest Channel		
5MHz QPSK	RB1#0	24.46	24.45	24.47	18.34	34.77
	RB1#13	24.59	24.59	24.57		
	RB1#24	24.5	24.49	24.52		
	RB15#0	23.51	23.53	23.6		
	RB15#10	23.63	23.58	23.58		
	RB25#0	23.57	23.53	23.53		
5MHz 16QAM	RB1#0	23.48	23.51	23.49	17.37	34.77
	RB1#13	23.62	23.6	23.61		
	RB1#24	23.52	23.51	23.53		
	RB15#0	22.55	22.5	22.57		
	RB15#10	22.64	22.57	22.56		
	RB25#0	22.58	22.52	22.55		
10MHz QPSK	RB1#0	24.53	24.51	24.53	18.52	34.77
	RB1#25	24.73	24.75	24.77		
	RB1#49	24.57	24.52	24.57		
	RB25#0	23.49	23.55	23.61		
	RB25#25	23.58	23.57	23.57		
	RB50#0	23.5	23.58	23.6		
10MHz 16QAM	RB1#0	23.59	23.51	23.44	17.57	34.77
	RB1#25	23.82	23.64	23.62		
	RB1#49	23.62	23.52	23.52		
	RB25#0	22.55	22.6	22.63		
	RB25#25	22.59	22.64	22.62		
	RB50#0	22.52	22.59	22.54		
15MHz QPSK	RB1#0	24.48	24.43	24.41	18.36	34.77
	RB1#38	24.61	24.59	24.56		
	RB1#74	24.54	24.51	24.52		
	RB36#0	23.59	23.61	23.63		
	RB36#39	23.66	23.68	23.66		
	RB75#0	23.61	23.65	23.64		
15MHz 16QAM	RB1#0	23.78	23.76	23.53	17.61	34.77
	RB1#38	23.86	23.85	23.63		
	RB1#74	23.83	23.82	23.6		
	RB36#0	22.54	22.51	22.58		
	RB36#39	22.57	22.6	22.61		
	RB75#0	22.57	22.57	22.55		

20MHz QPSK	RB1#0	24.18	24.2	24.18	18.47	34.77
	RB1#50	24.61	24.66	24.72		
	RB1#99	24.31	24.32	24.36		
	RB50#0	23.42	23.5	23.49		
	RB50#50	23.54	23.6	23.49		
	RB100#0	23.49	23.55	23.48		
20MHz 16QAM	RB1#0	23.73	23.75	23.74	17.95	34.77
	RB1#50	24.2	24.12	24.16		
	RB1#99	23.86	23.79	23.84		
	RB50#0	22.4	22.49	22.46		
	RB50#50	22.47	22.56	22.45		
	RB100#0	22.49	22.54	22.48		
Note: ERP=Conducted Power(dBm) - L _C (dB) + G _T (dBd)						
					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	3.83	4.12	4.09	13
	RB100#0	4.75	4.99	4.52	13
20MHz 16QAM	RB1#0	4.67	5.07	4.84	13
	RB100#0	5.8	5.88	5.36	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	4.53	4.531	4.551	5.68	6.1	5.28
5MHz 16QAM	4.551	4.551	4.531	5.32	5.22	5.16
10MHz QPSK	9.022	8.982	8.942	9.96	10.0	9.92
10MHz 16QAM	8.982	8.982	8.942	10.04	10.0	9.96
15MHz QPSK	13.593	13.533	13.473	15.36	15.18	15.18
15MHz 16QAM	13.593	13.533	13.533	15.18	15.12	15.48
20MHz QPSK	17.964	18.044	17.964	19.6	20.0	19.68
20MHz 16QAM	17.884	17.964	17.964	19.92	19.92	19.84
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.
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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	3.8	663.4583	663.00	697.6222	698.00
	-20	3.8	663.4134	663.00	697.6883	698.00
	-10	3.8	663.4585	663.00	697.6221	698.00
	0	3.8	663.4586	663.00	697.6224	698.00
	10	3.8	663.4587	663.00	697.6223	698.00
	20	3.8	663.4584	663.00	697.6226	698.00
	30	3.8	663.4583	663.00	697.62258	698.00
	40	3.8	663.4583	663.00	697.6227	698.00
	50	3.8	663.4583	663.00	697.6225	698.00
Frequency Stability vs. Voltage	20	3.3	663.4581	663.00	697.6223	698.00
	20	4.2	663.4583	663.00	697.6223	698.00
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	3.8	663.4252	663.00	697.6221	698.00
	-20	3.8	663.4583	663.00	697.6882	698.00
	-10	3.8	663.4583	663.00	697.6223	698.00
	0	3.8	663.4584	663.00	697.6224	698.00
	10	3.8	663.4585	663.00	697.6225	698.00
	20	3.8	663.4584	663.00	697.6226	698.00
	30	3.8	663.4586	663.00	697.6227	698.00
	40	3.8	663.4585	663.00	697.6226	698.00
	50	3.8	663.4586	663.00	697.6225	698.00
Frequency Stability vs. Voltage	20	3.3	663.4584	663.00	697.6223	698.00
	20	4.2	663.4584	663.00	697.6221	698.00
Result:					Pass	

Test Plots:

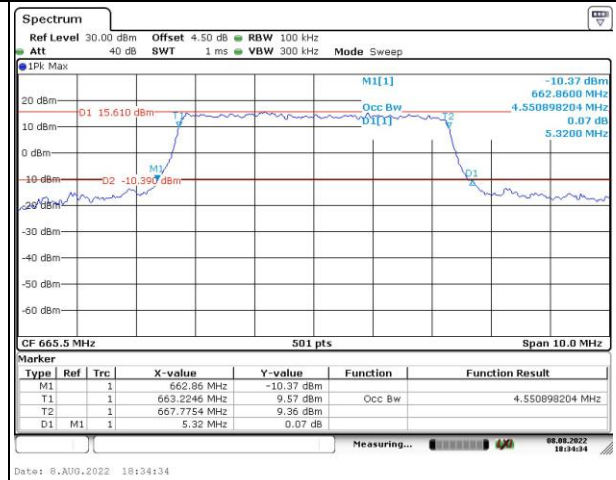
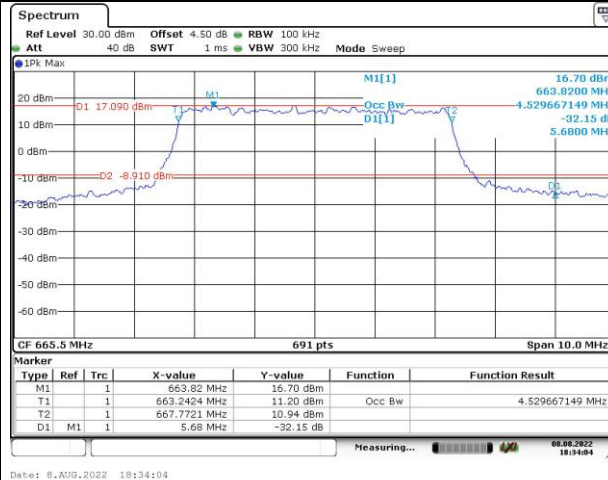
Occupied Bandwidth

Channel

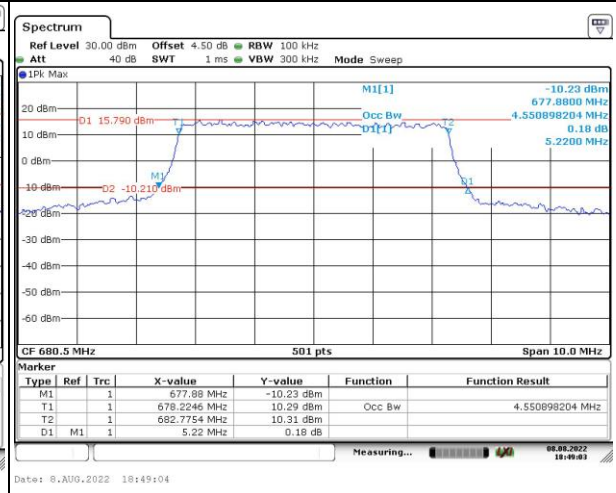
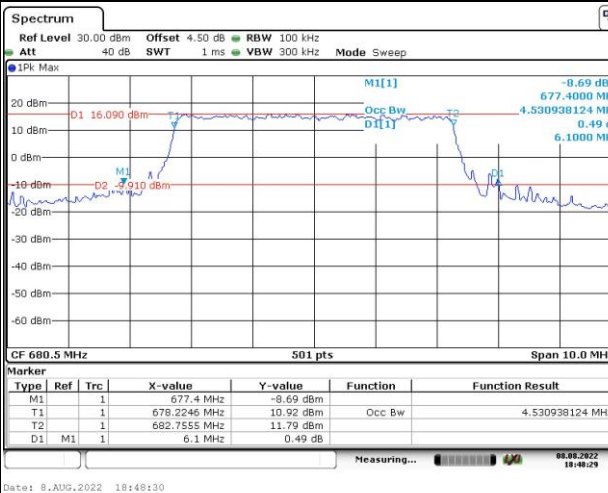
5MHz Bandwidth QPSK

5MHz Bandwidth 16QAM

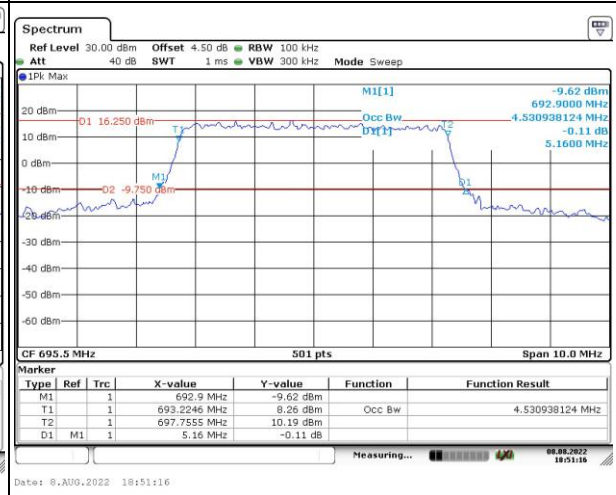
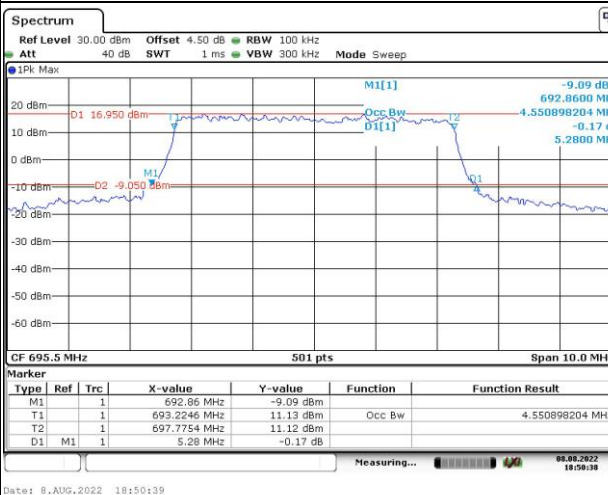
Lowest



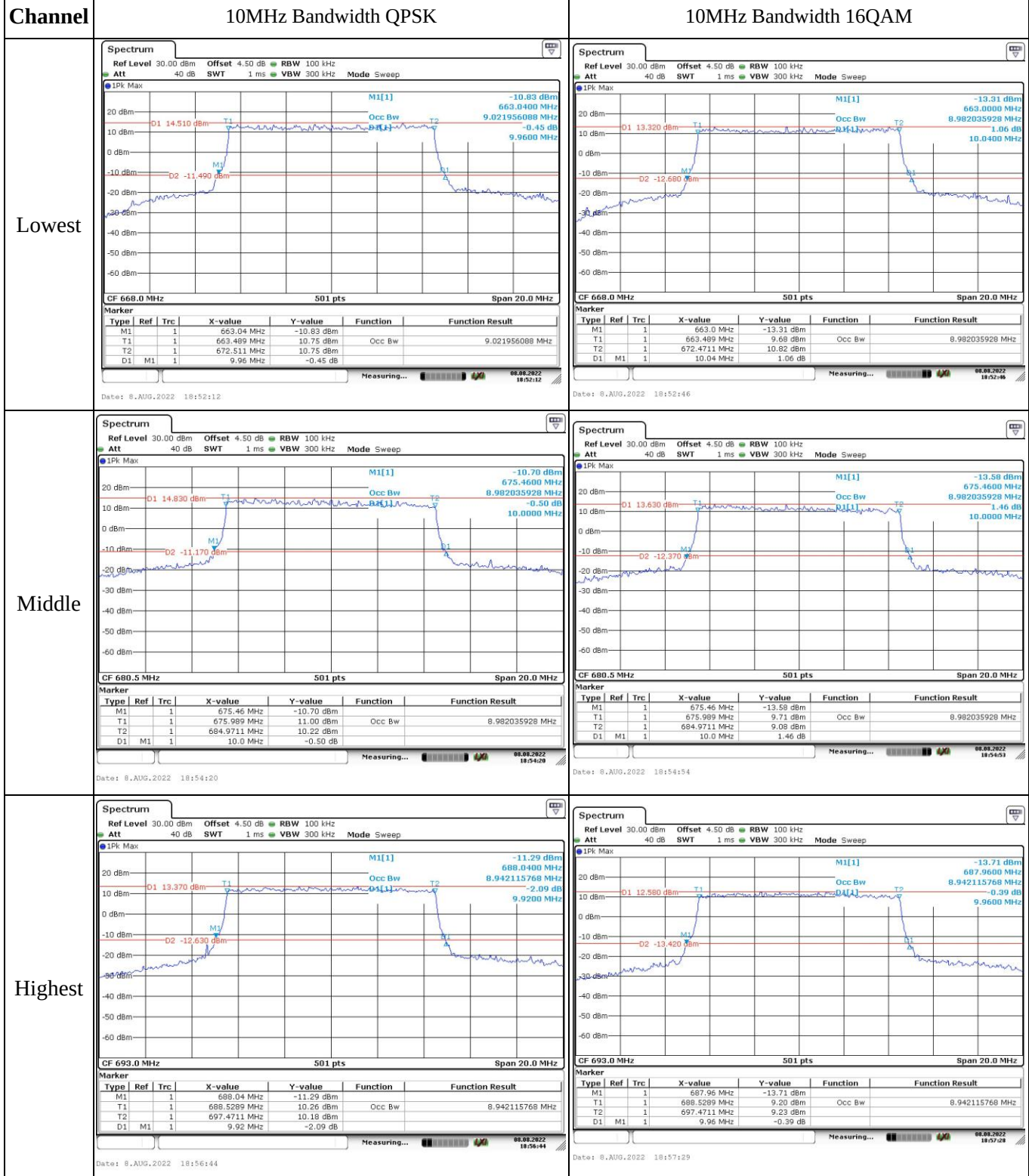
Middle



Highest



Occupied Bandwidth



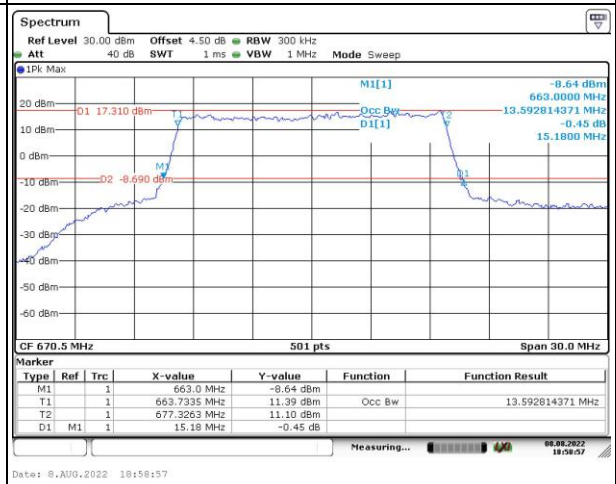
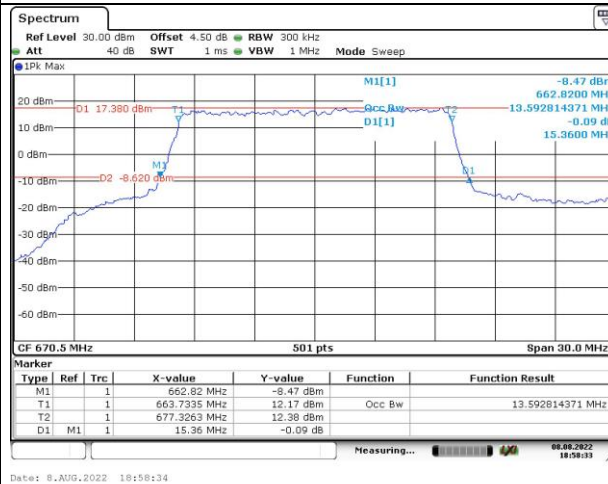
Occupied Bandwidth

Channel

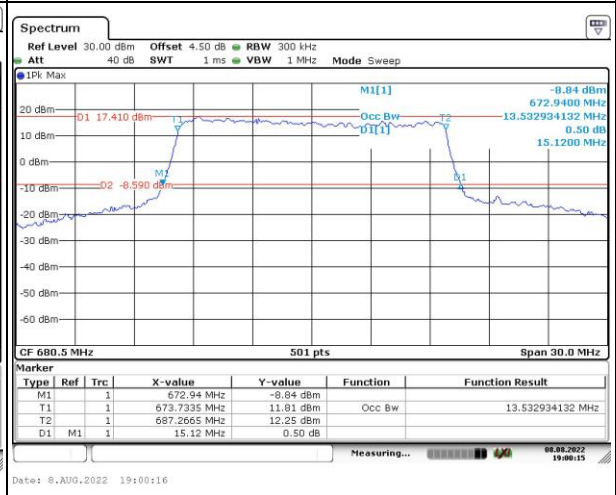
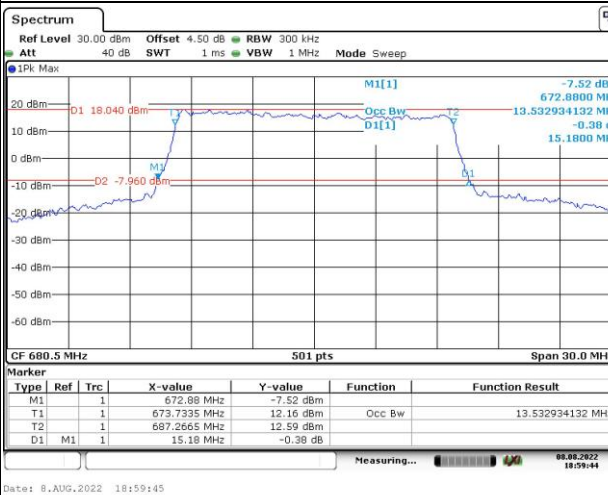
15MHz Bandwidth QPSK

15MHz Bandwidth 16QAM

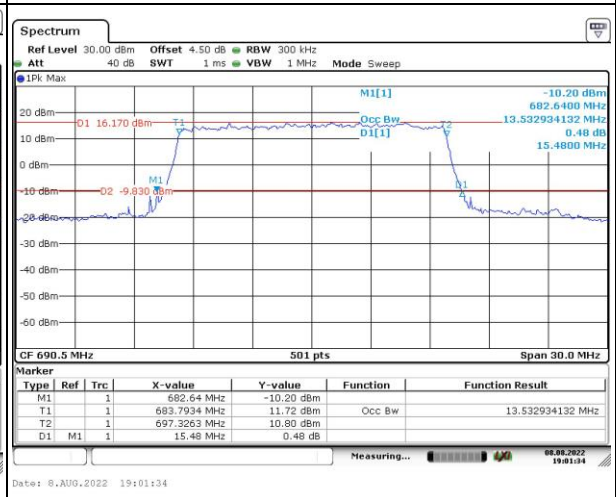
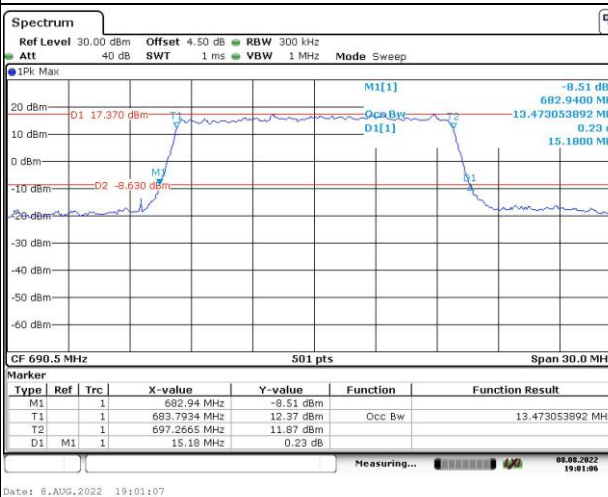
Lowest



Middle



Highest



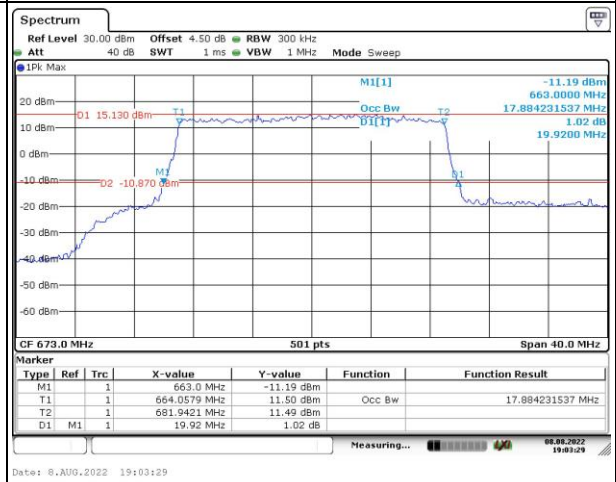
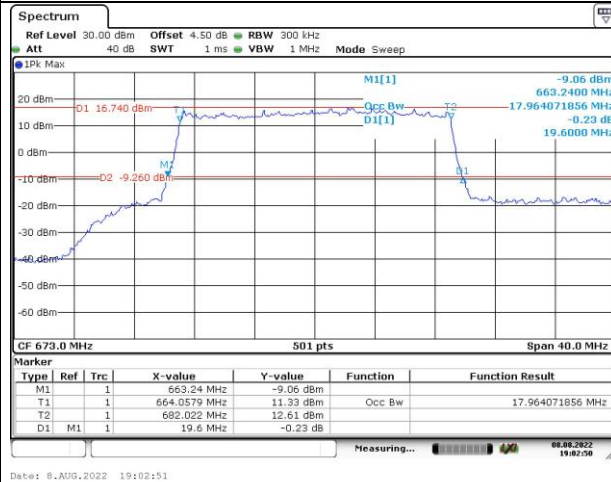
Occupied Bandwidth

Channel

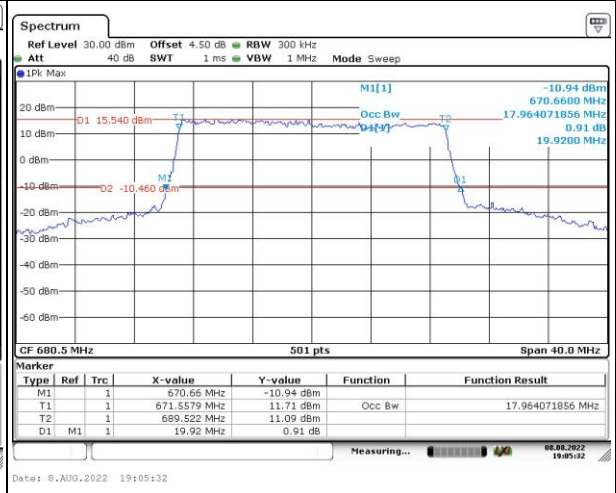
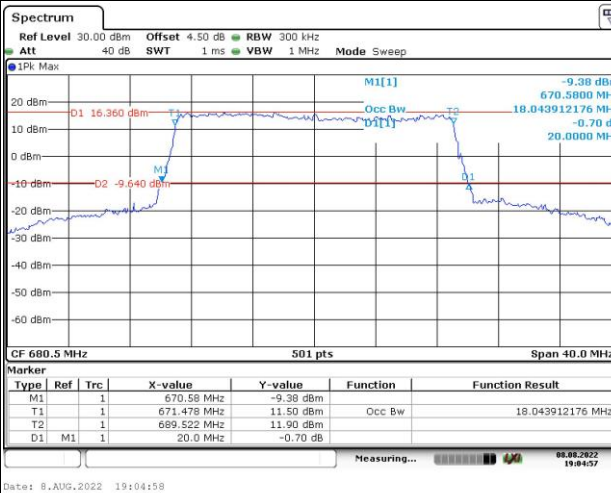
20MHz Bandwidth QPSK

20MHz Bandwidth 16QAM

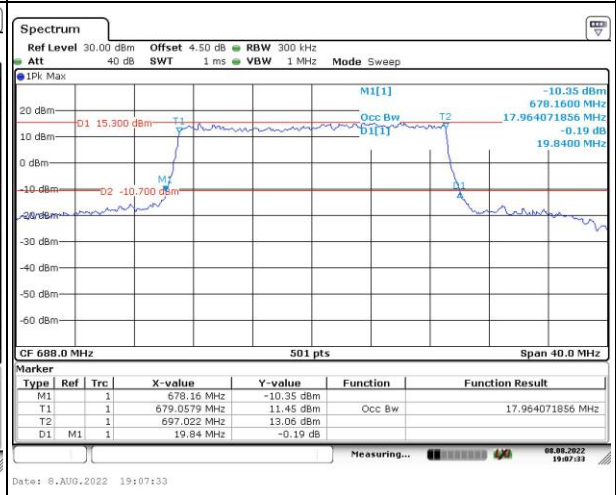
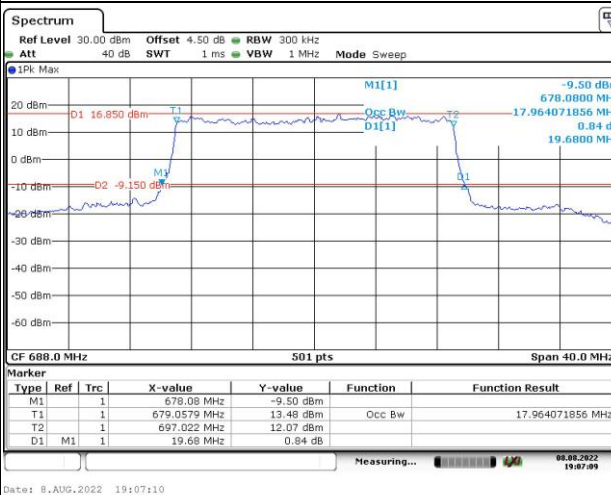
Lowest



Middle



Highest

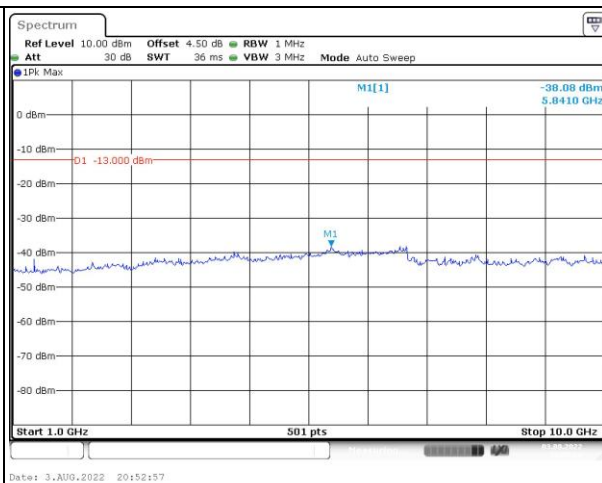
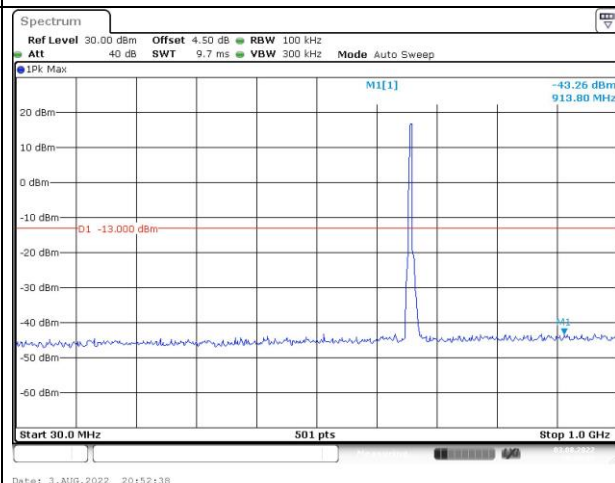


Spurious Emissions at Antenna Terminal

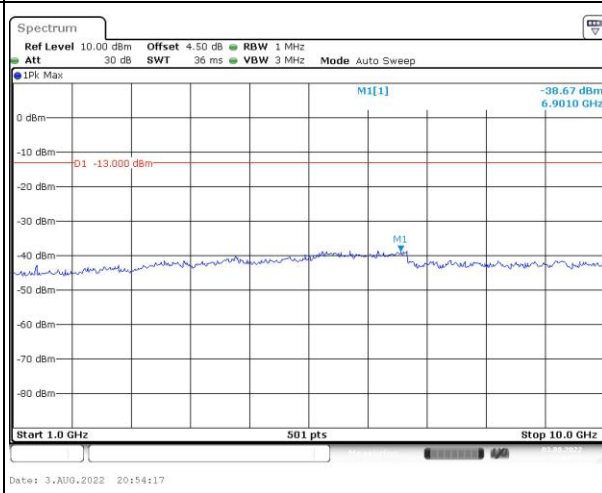
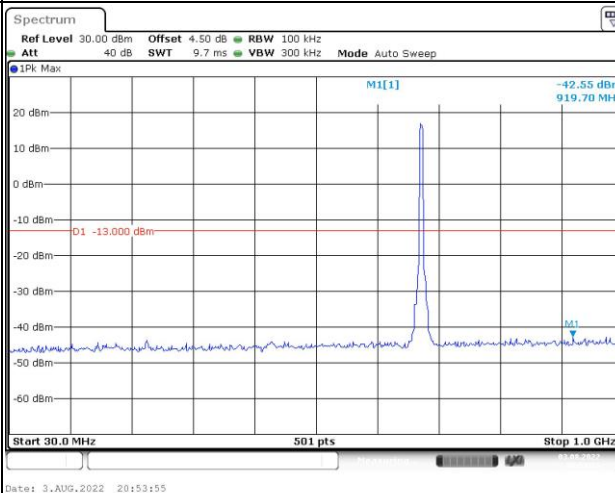
Channel

5MHz Bandwidth QPSK

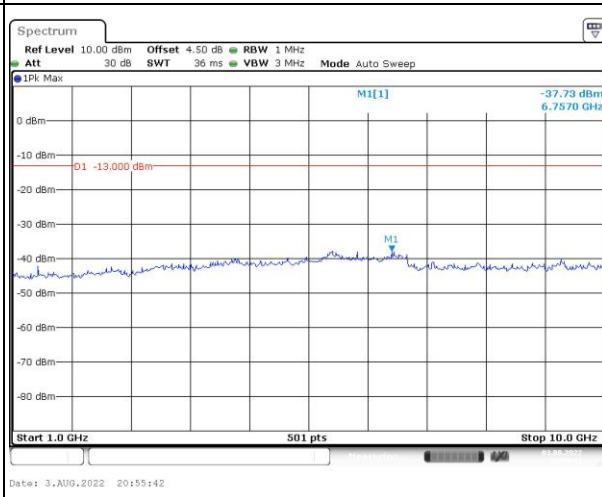
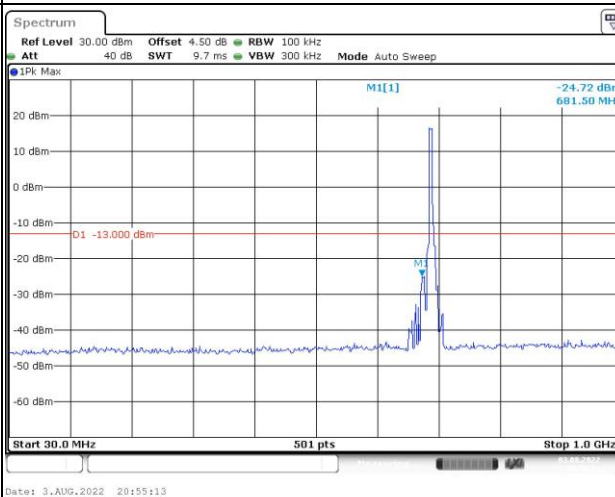
Lowest



Middle



Highest

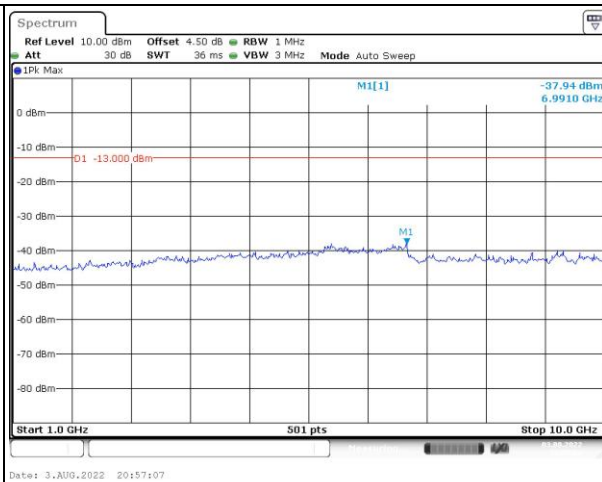
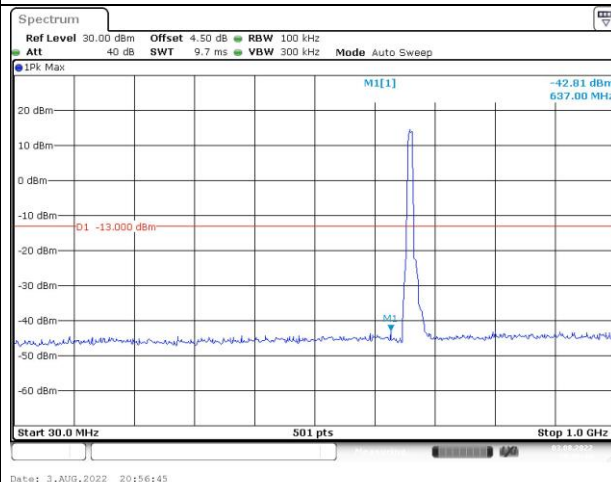


Spurious Emissions at Antenna Terminal

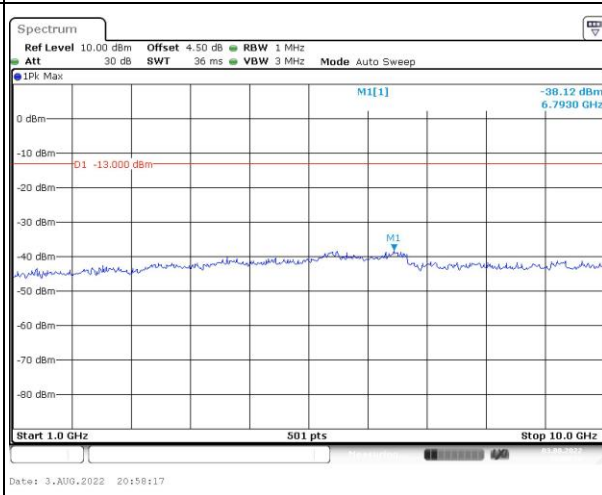
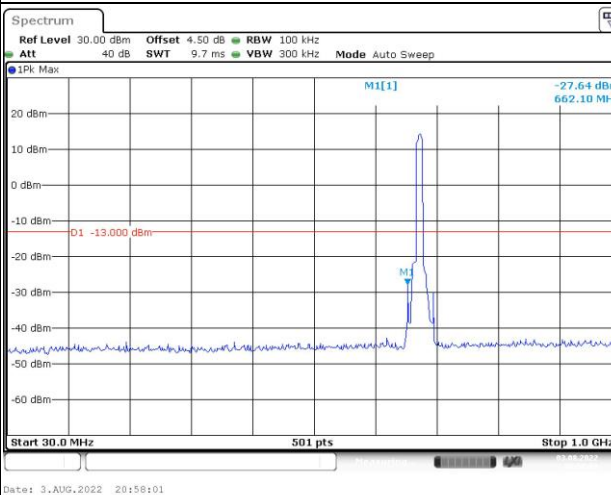
Channel

10MHz Bandwidth QPSK

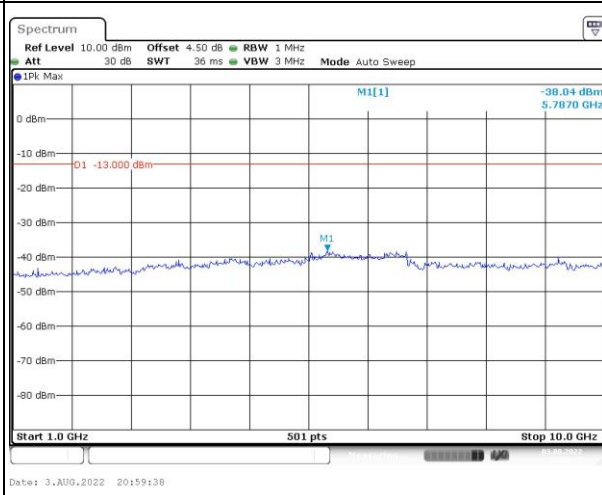
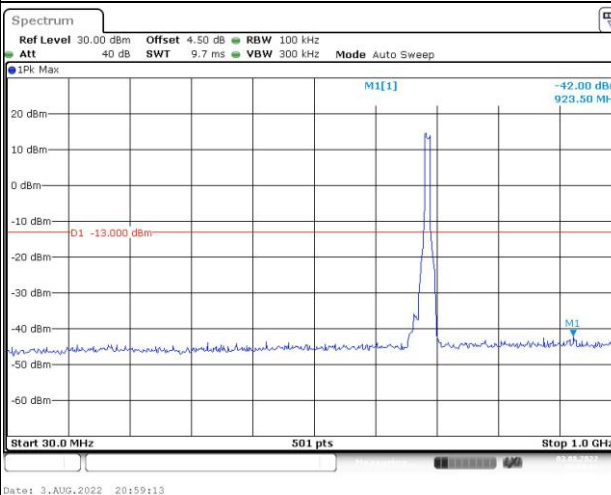
Lowest



Middle



Highest

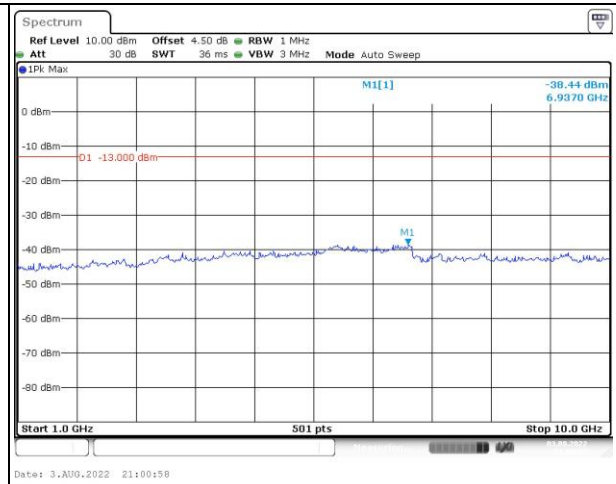
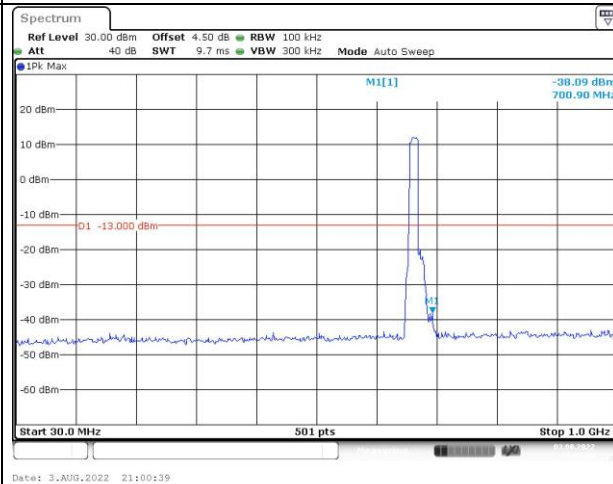


Spurious Emissions at Antenna Terminal

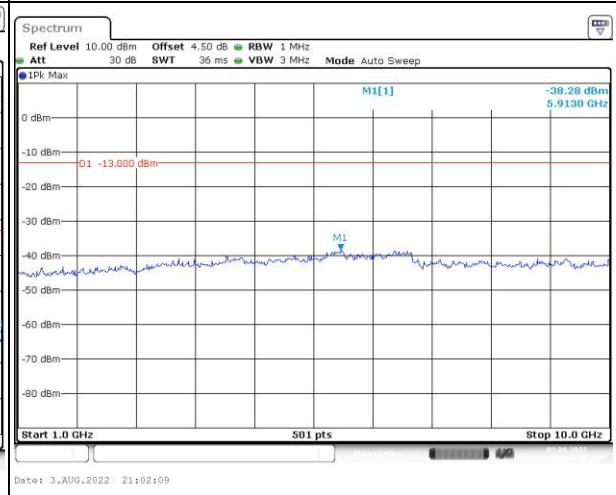
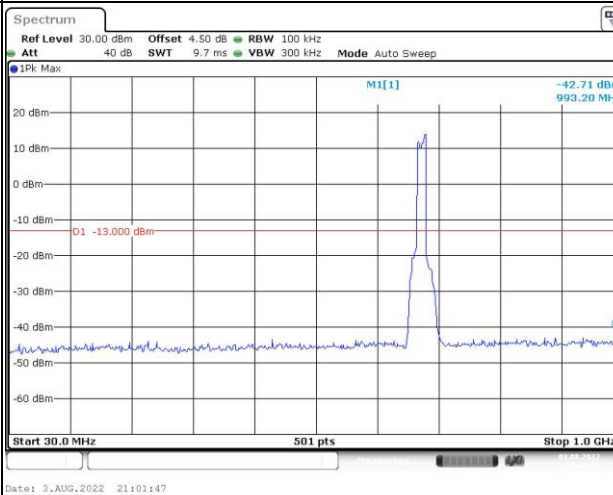
Channel

15MHz Bandwidth QPSK

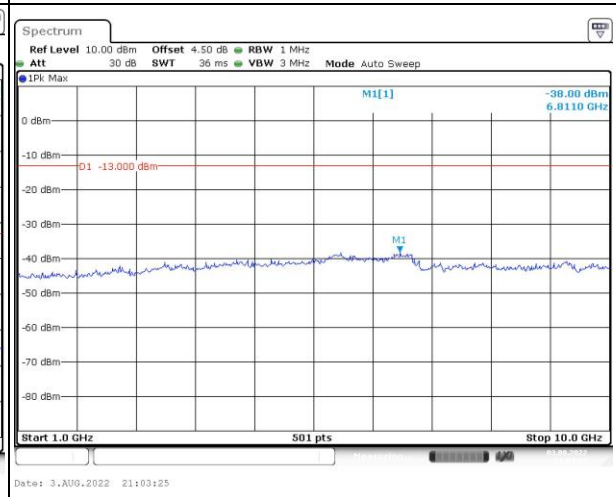
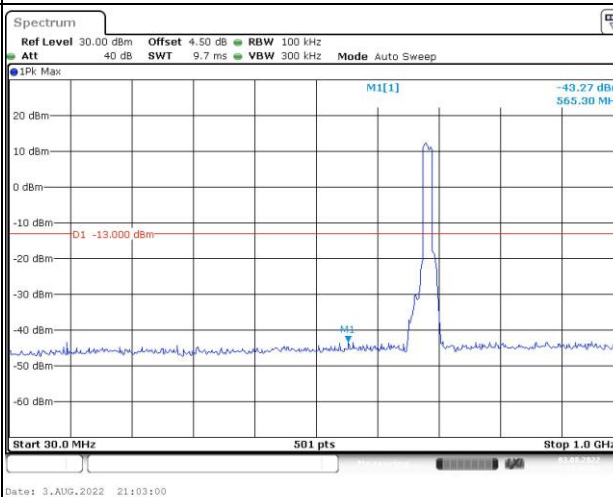
Lowest



Middle



Highest

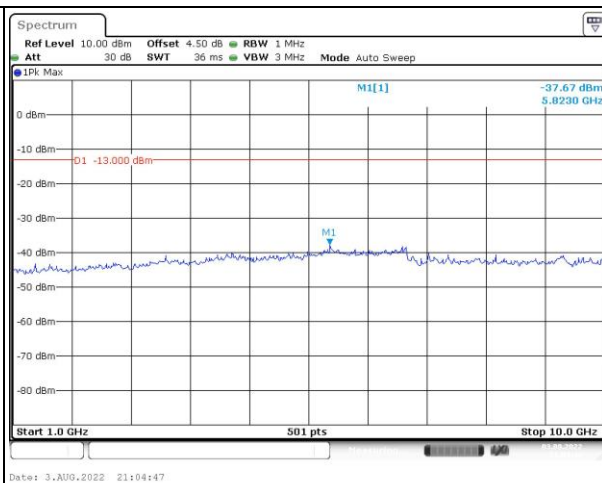
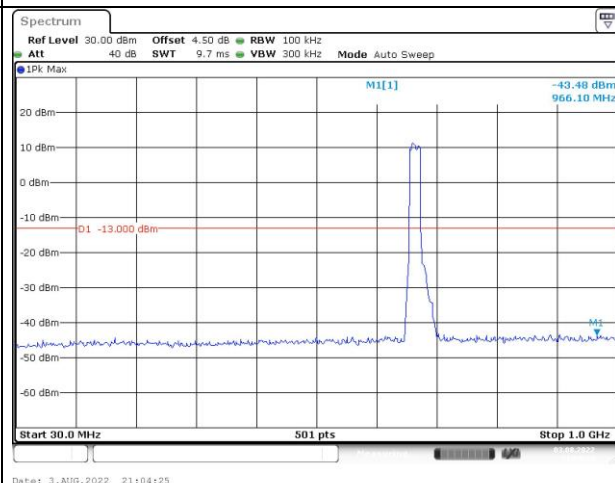


Spurious Emissions at Antenna Terminal

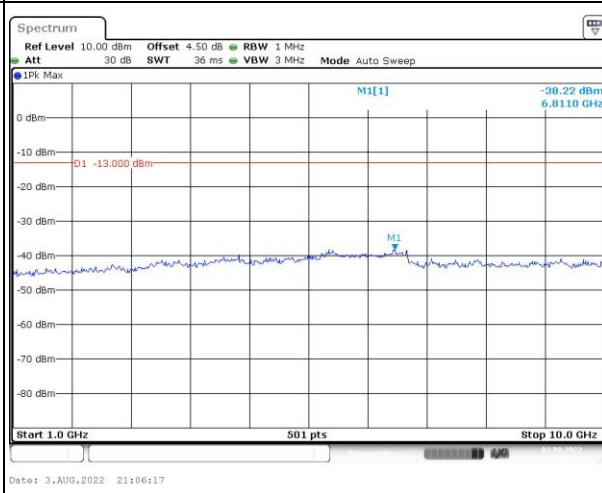
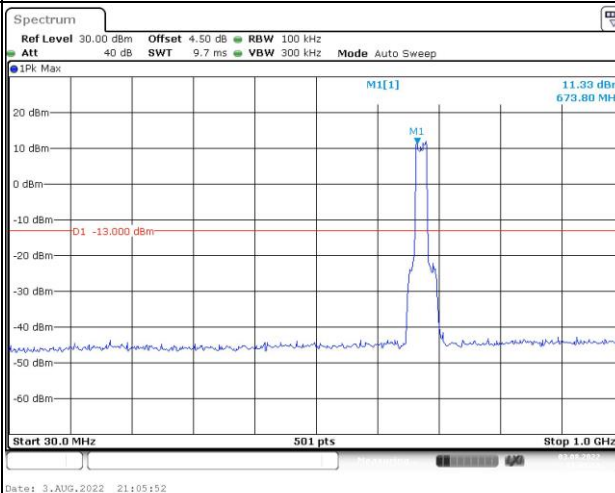
Channel

20MHz Bandwidth QPSK

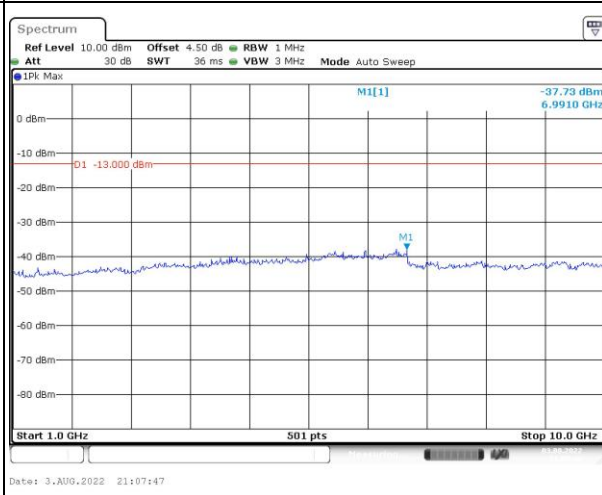
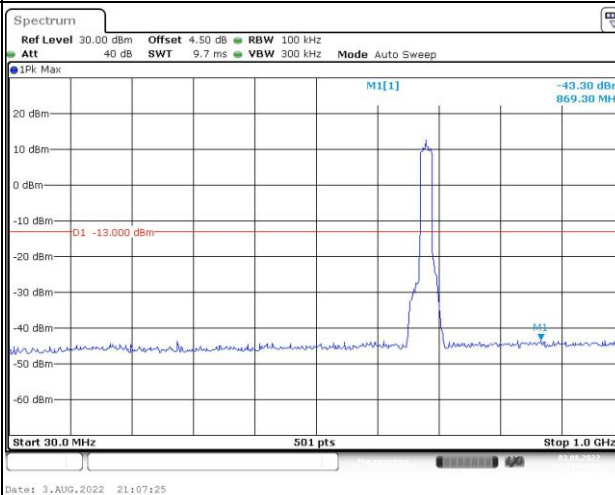
Lowest



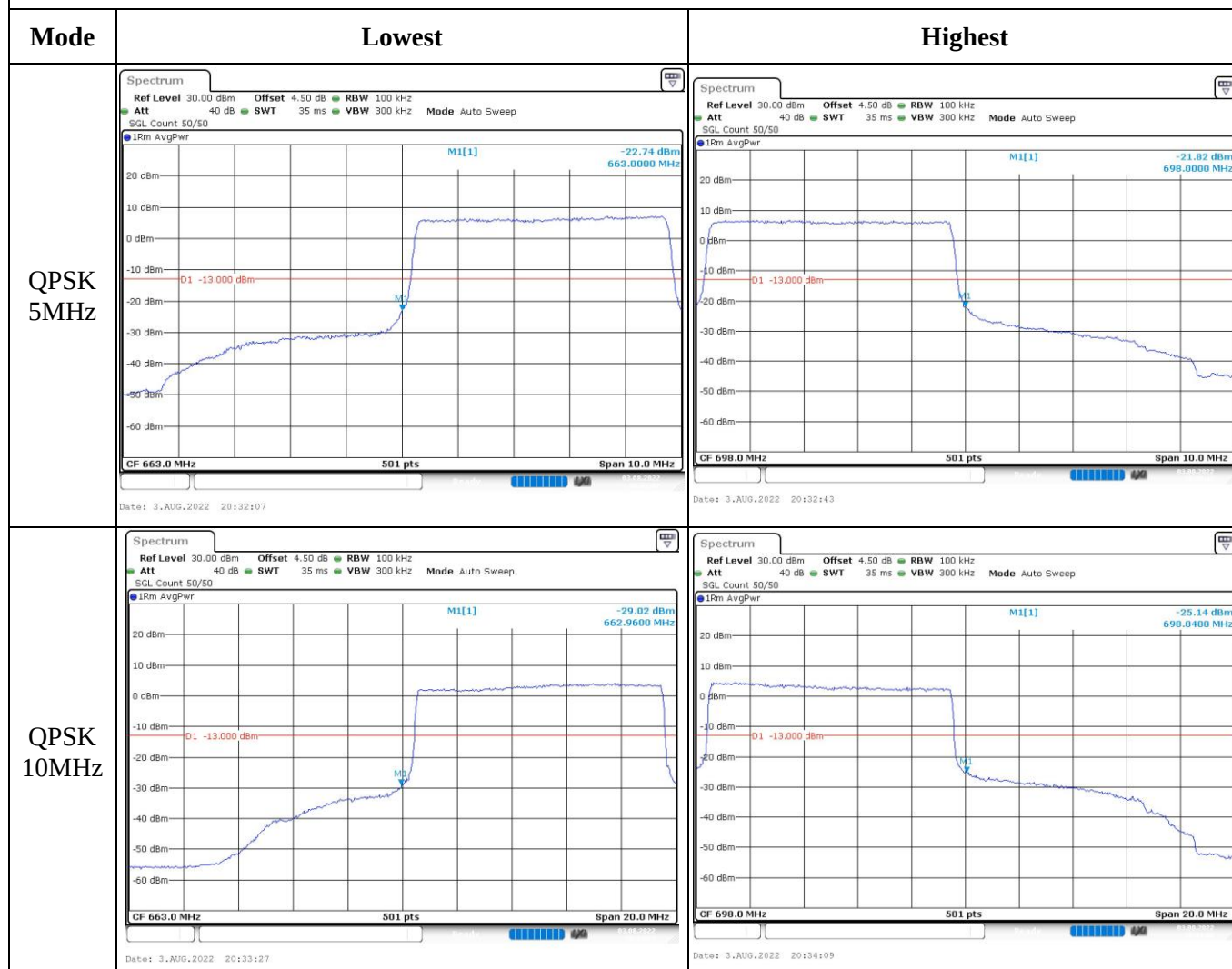
Middle



Highest



Out of band emission, Band Edge



Out of band emission, Band Edge

