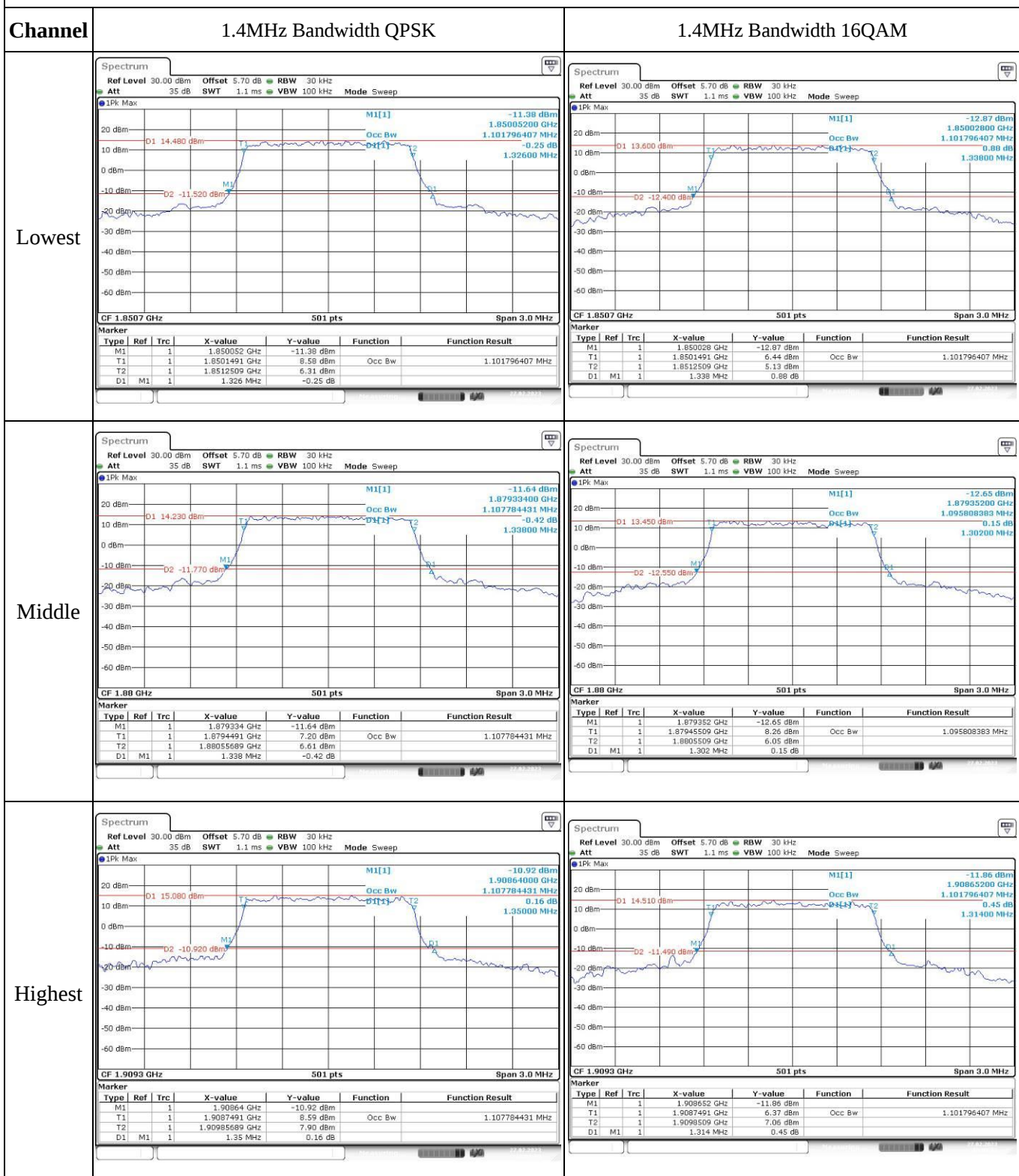


Test Plots(Note: The 5.7dB is the Insertion loss of the RF cable, Coaxial tee connector and DC Block, which was offset into the Spectrum Analyzer):

Occupied Bandwidth



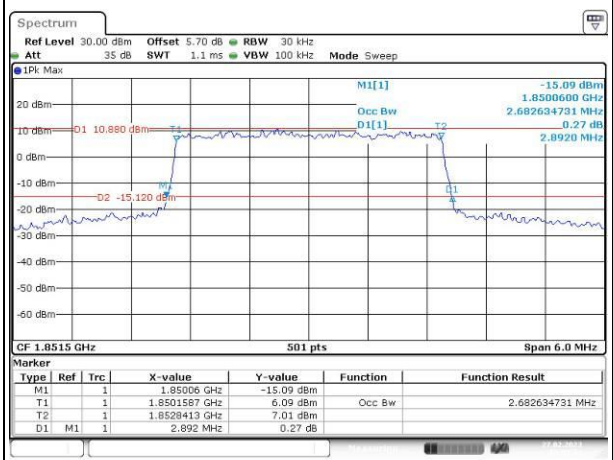
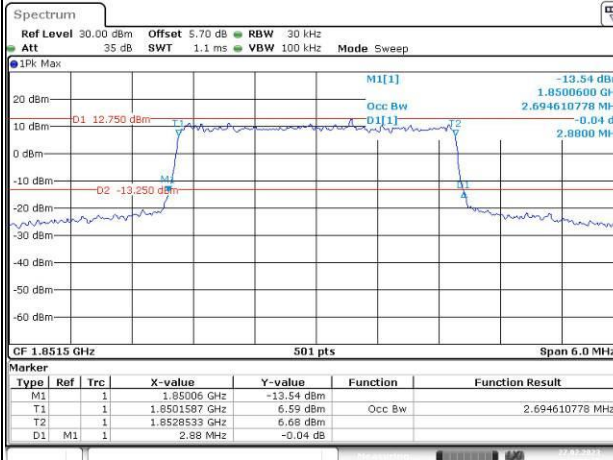
Occupied Bandwidth

Channel

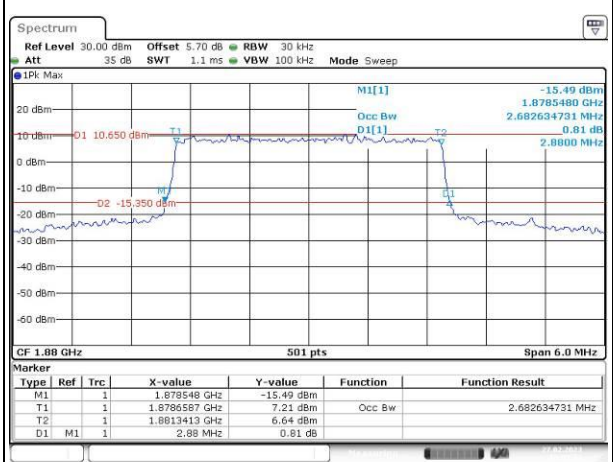
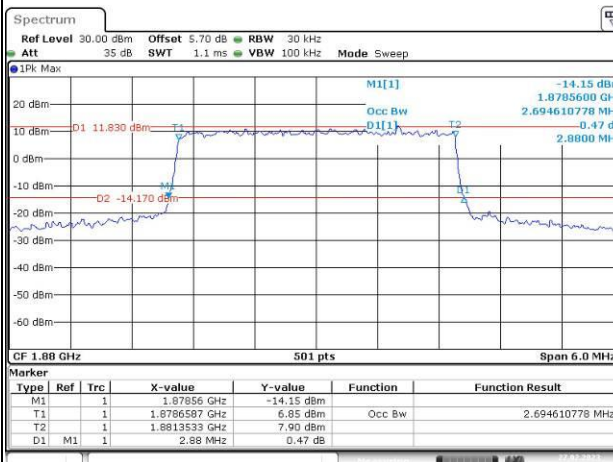
3MHz Bandwidth QPSK

3MHz Bandwidth 16QAM

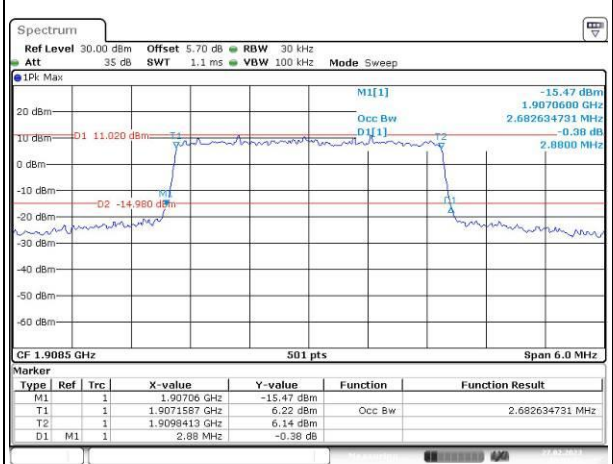
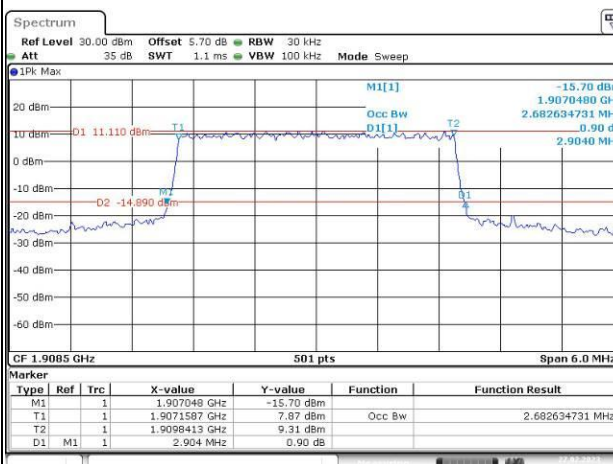
Lowest



Middle



Highest



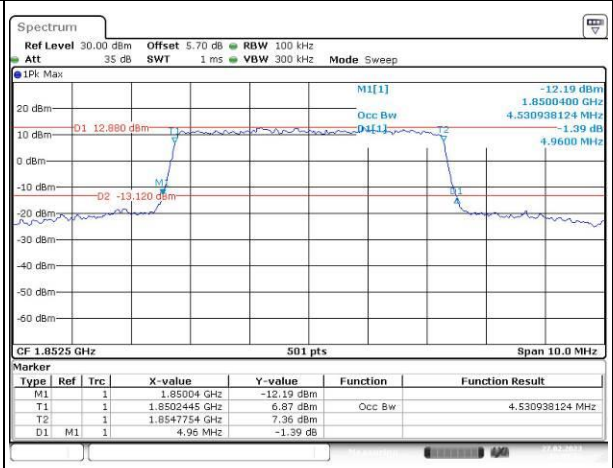
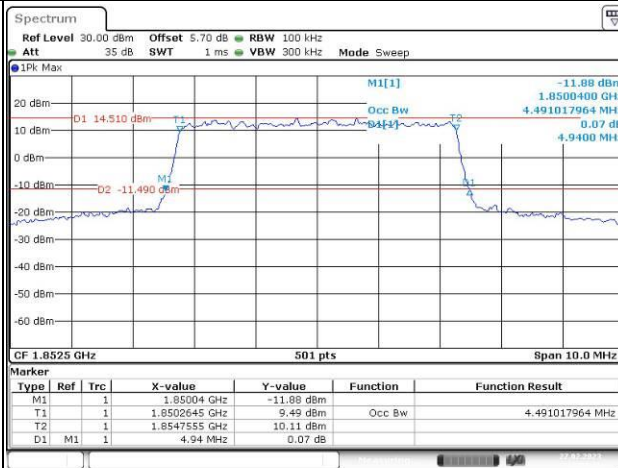
Occupied Bandwidth

Channel

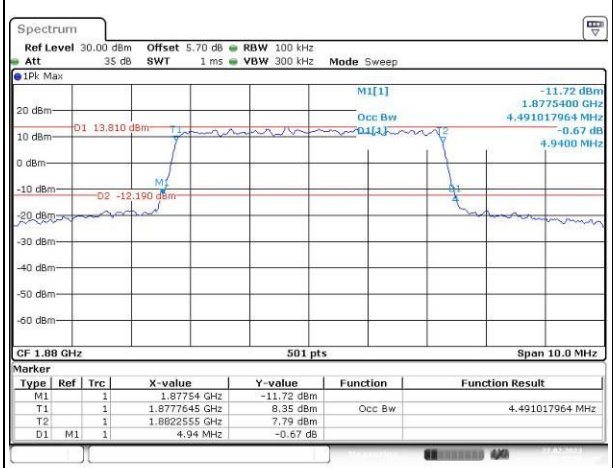
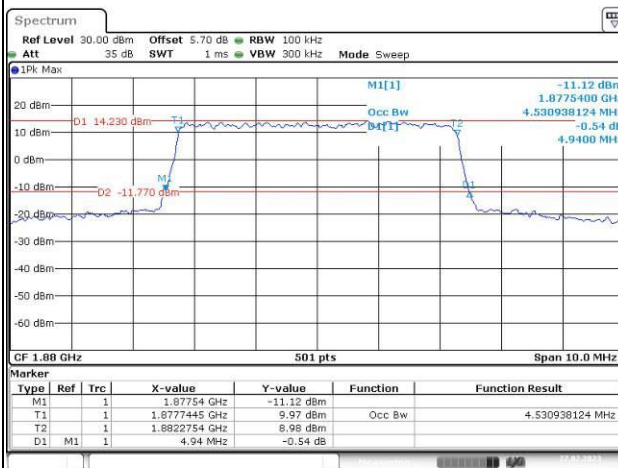
5MHz Bandwidth QPSK

5MHz Bandwidth 16QAM

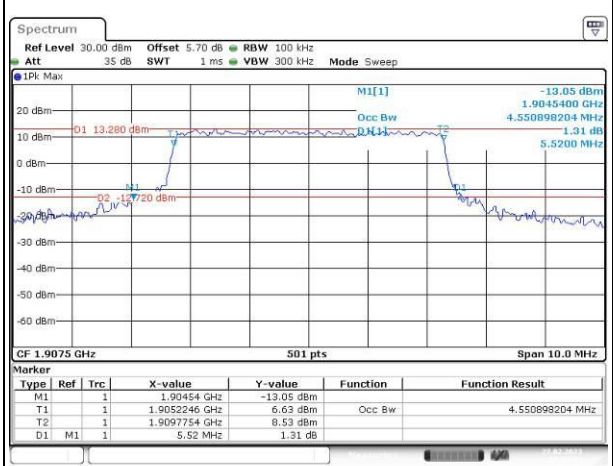
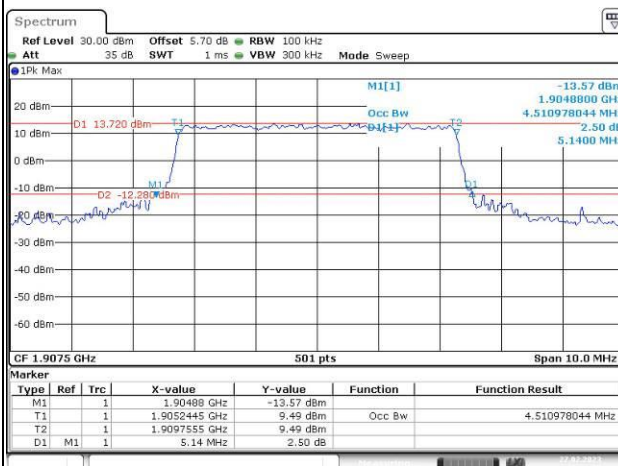
Lowest



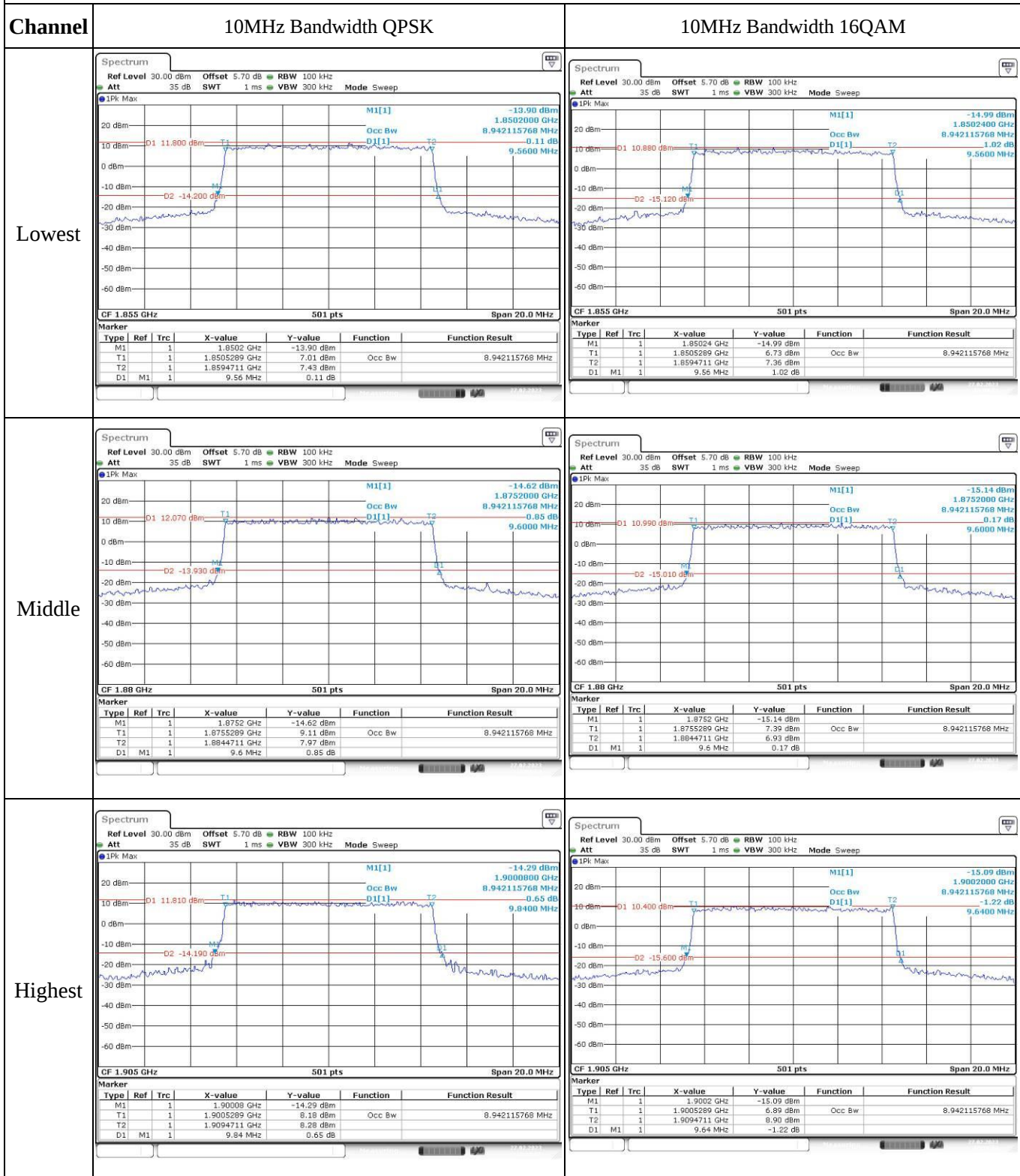
Middle



Highest



Occupied Bandwidth



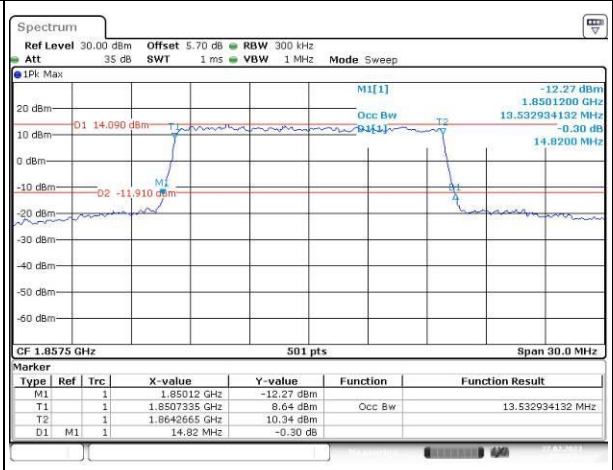
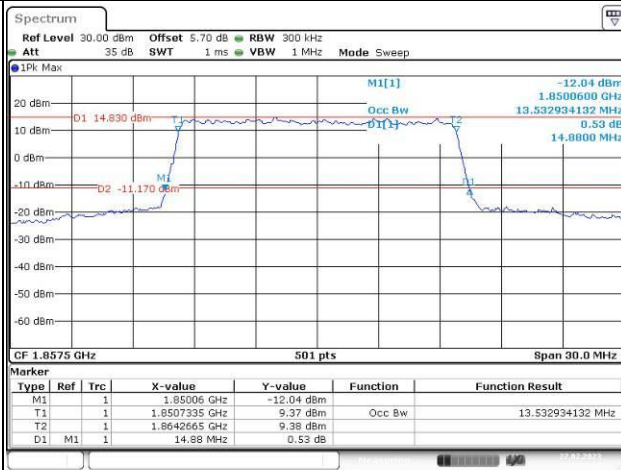
Occupied Bandwidth

Channel

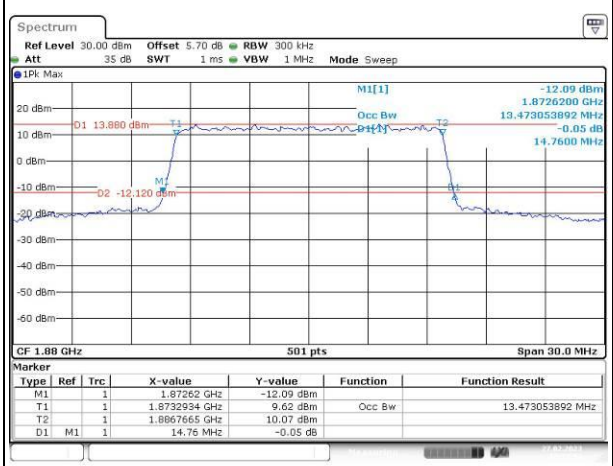
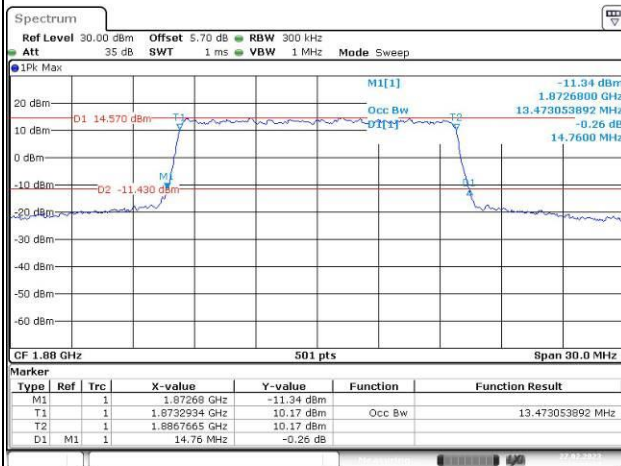
15MHz Bandwidth QPSK

15MHz Bandwidth 16QAM

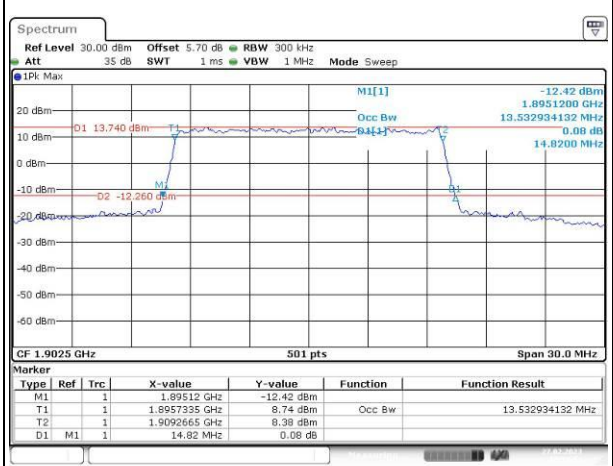
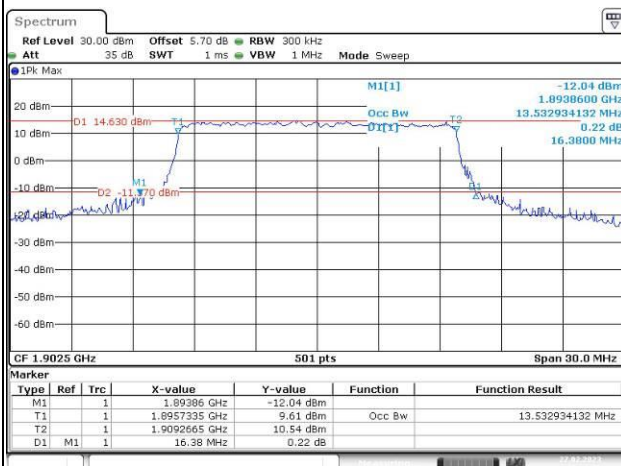
Lowest



Middle



Highest



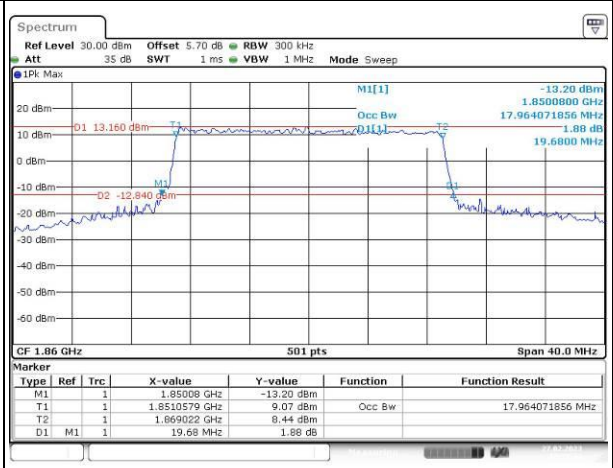
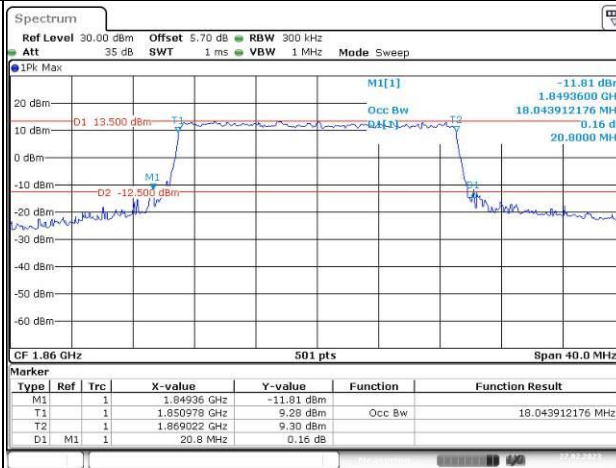
Occupied Bandwidth

Channel

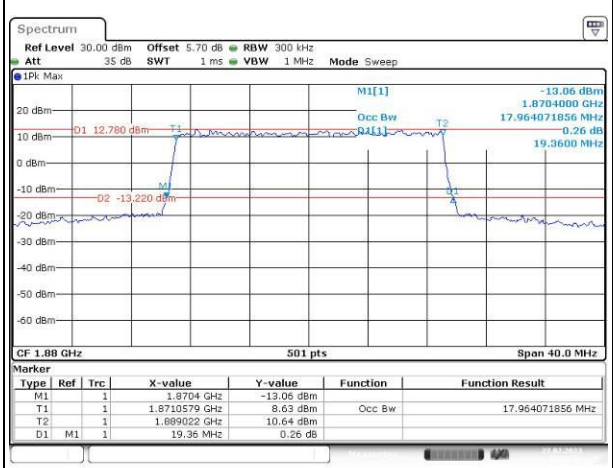
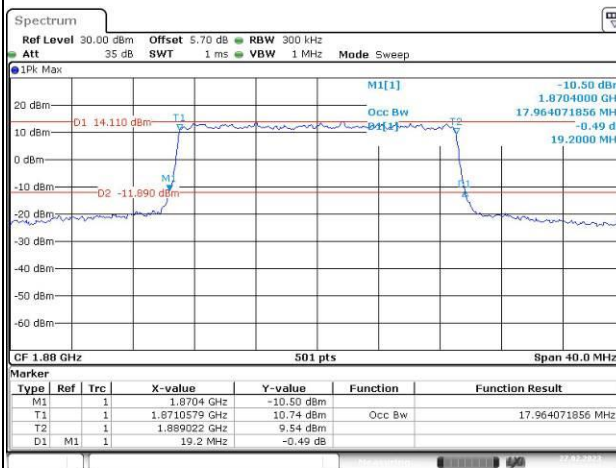
20MHz Bandwidth QPSK

20MHz Bandwidth 16QAM

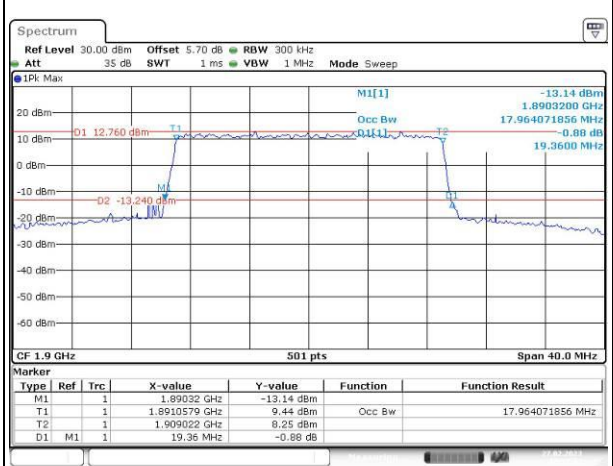
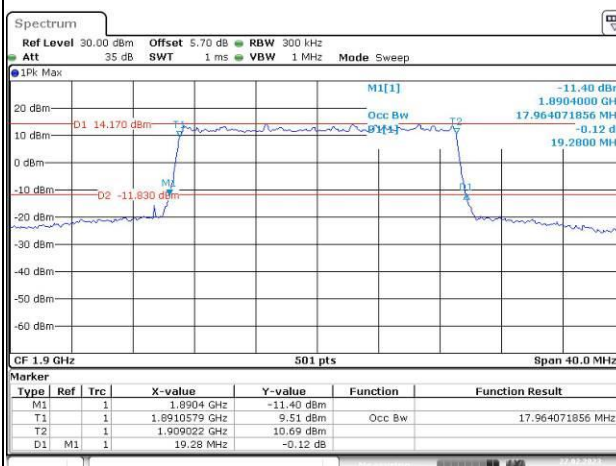
Lowest



Middle



Highest

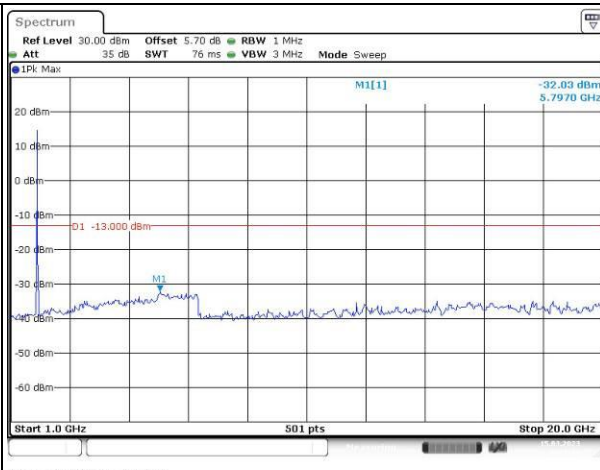
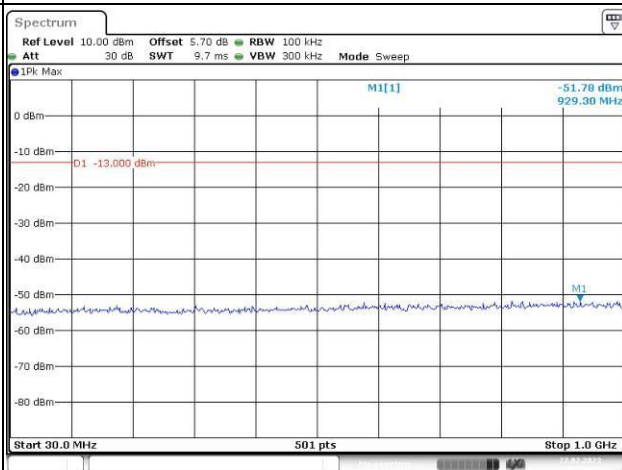


Spurious Emissions at Antenna Terminal

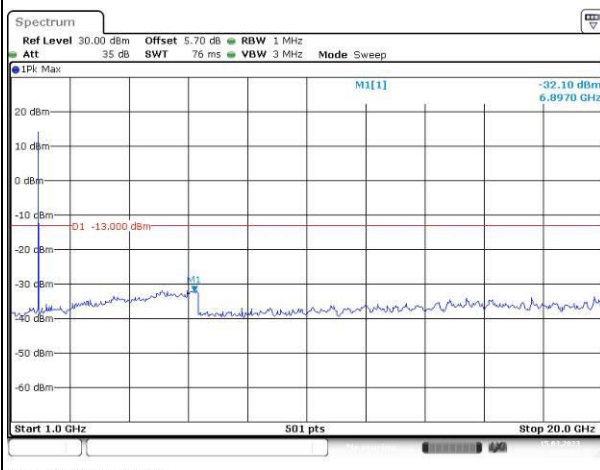
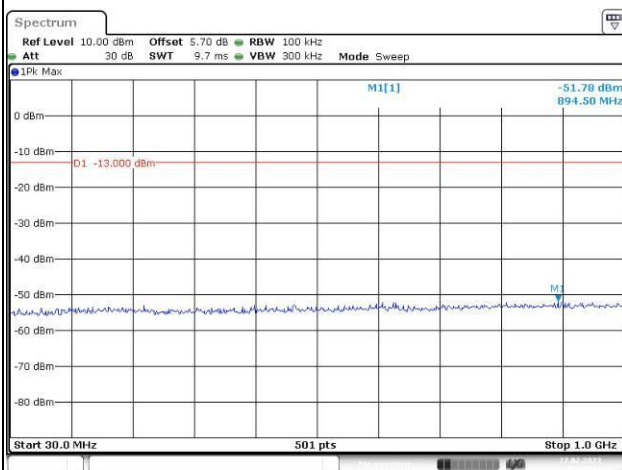
Channel

1.4MHz Bandwidth QPSK

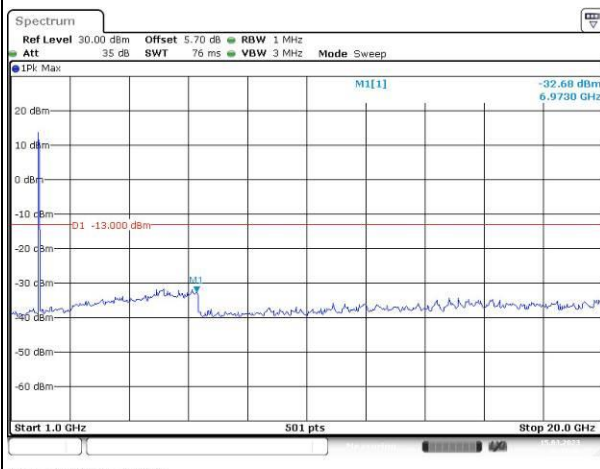
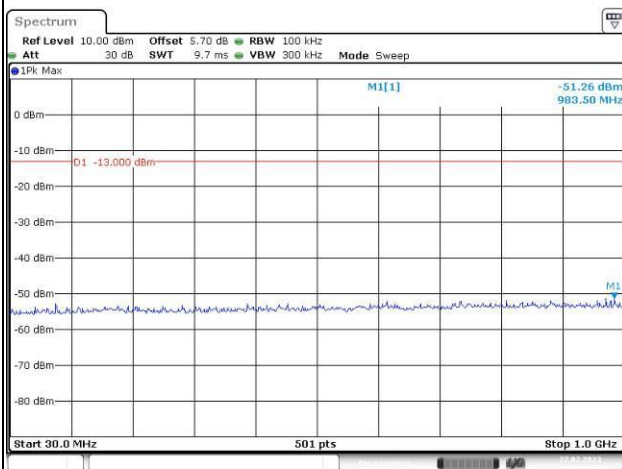
Lowest



Middle



Highest

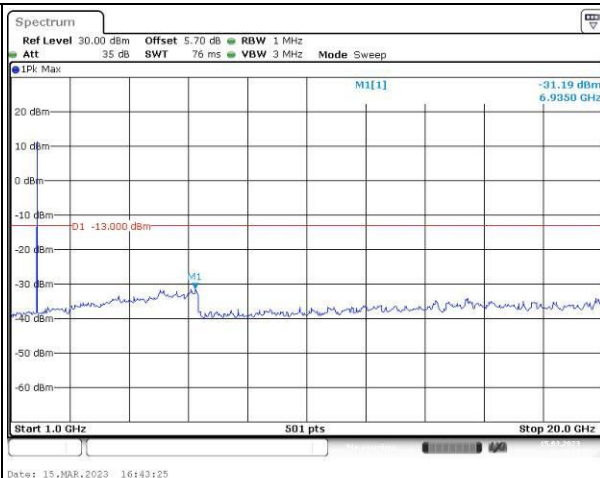
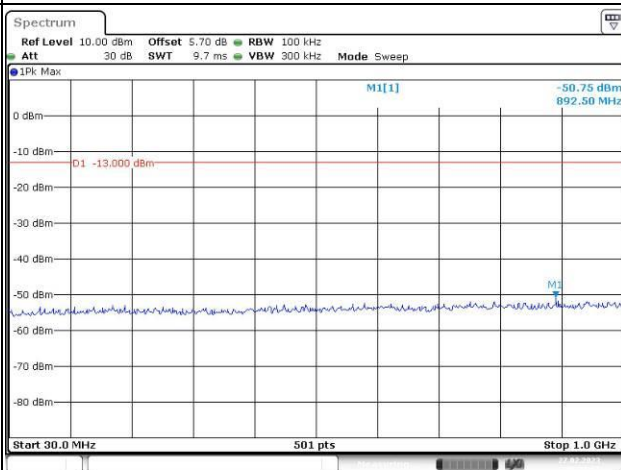


Spurious Emissions at Antenna Terminal

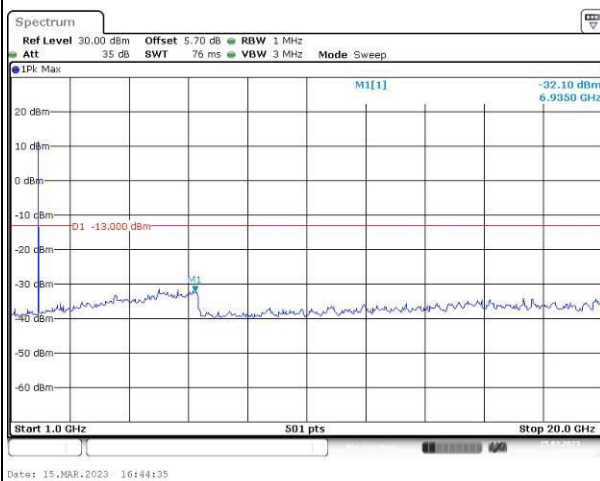
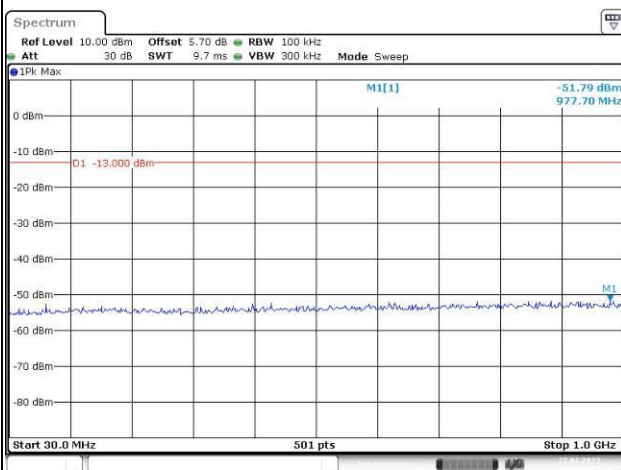
Channel

3MHz Bandwidth QPSK

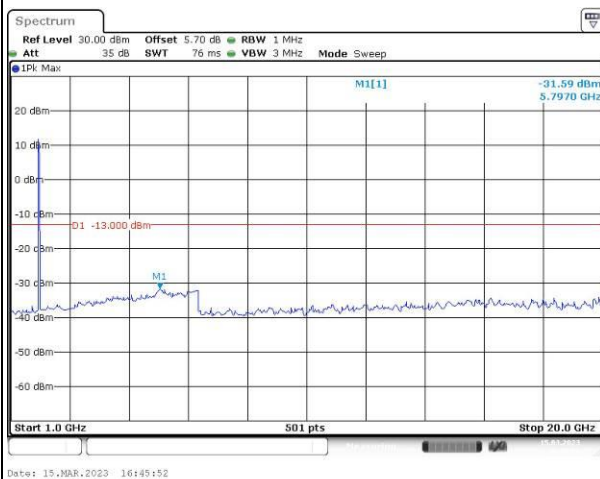
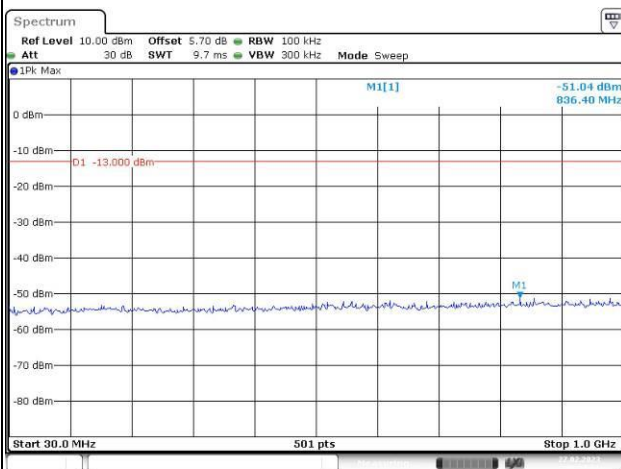
Lowest



Middle



Highest

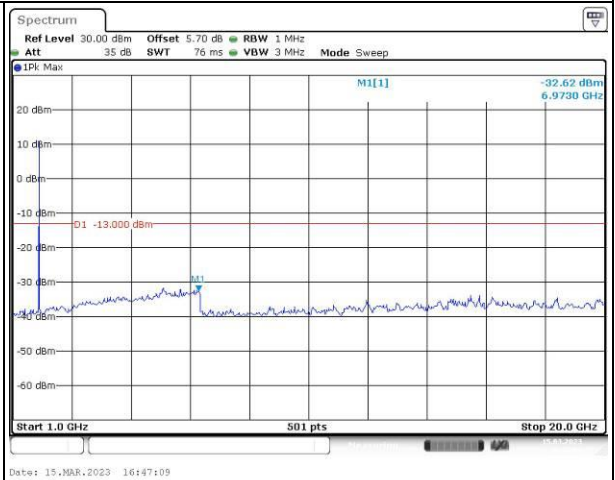
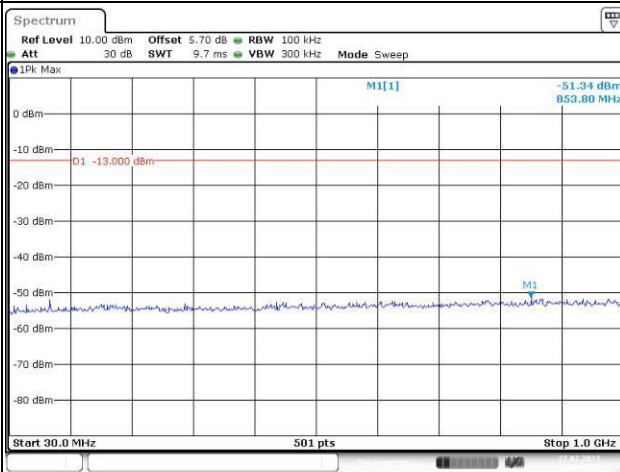


Spurious Emissions at Antenna Terminal

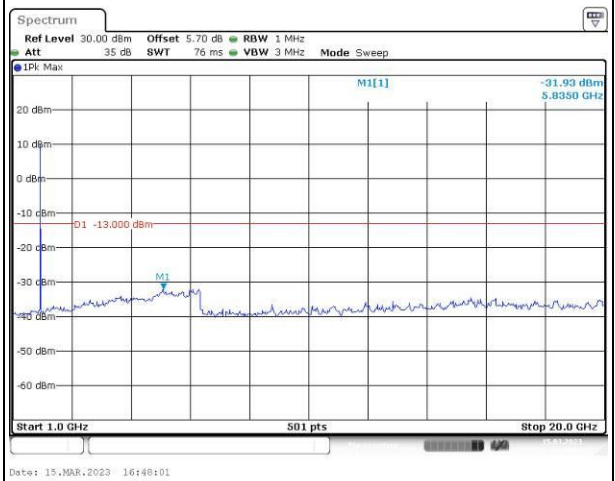
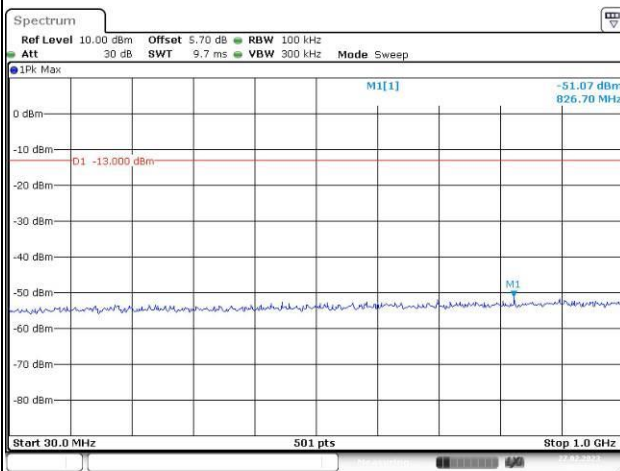
Channel

5MHz Bandwidth QPSK

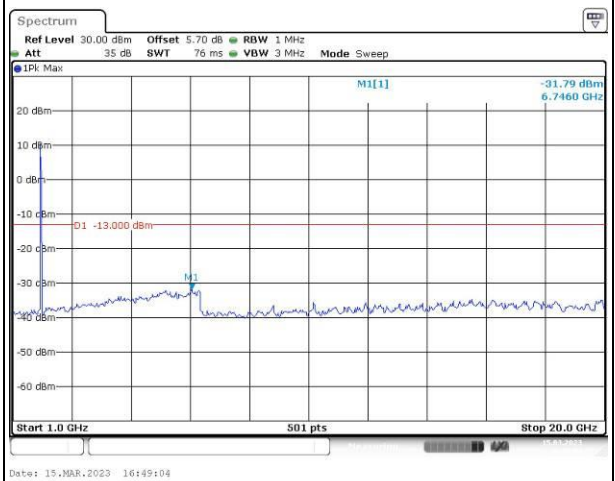
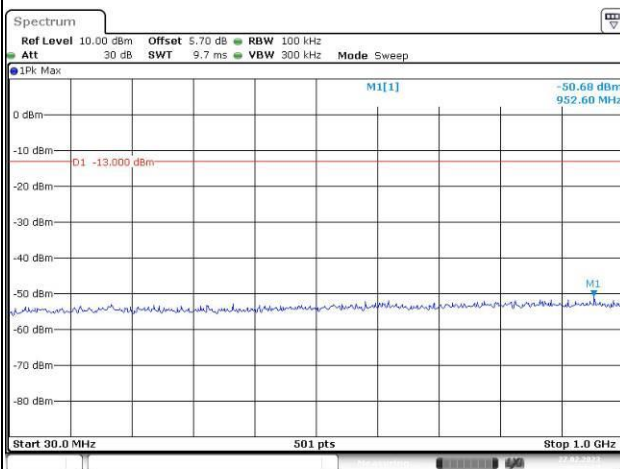
Lowest



Middle



Highest

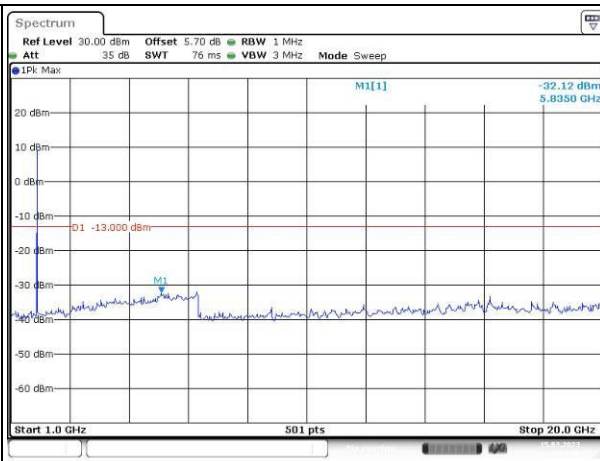
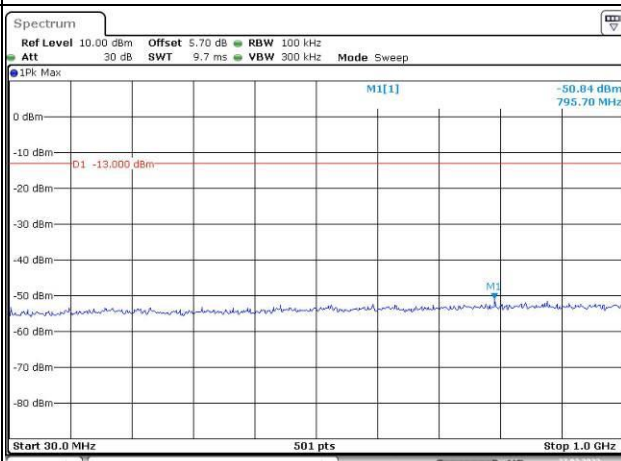


Spurious Emissions at Antenna Terminal

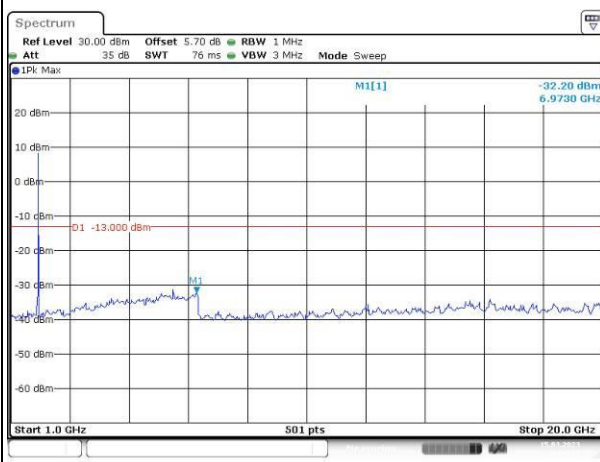
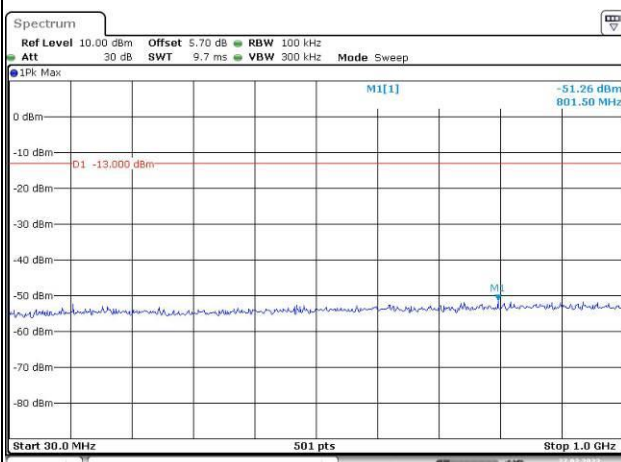
Channel

10MHz Bandwidth QPSK

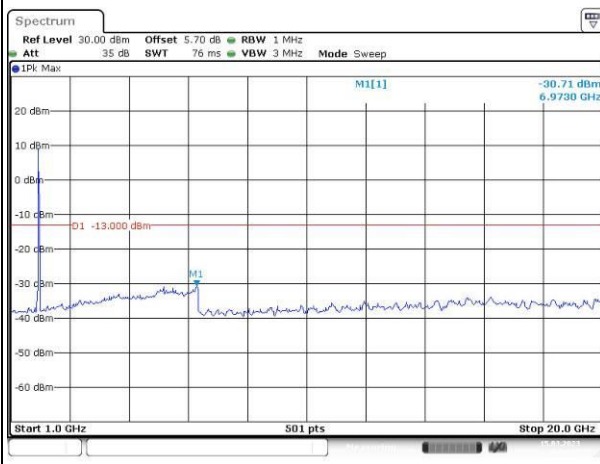
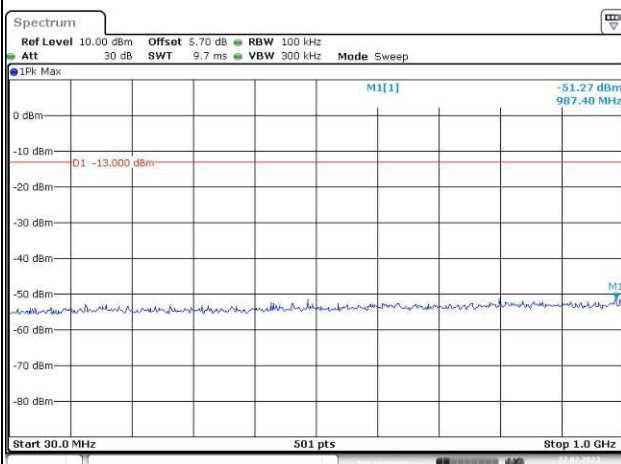
Lowest



Middle



Highest

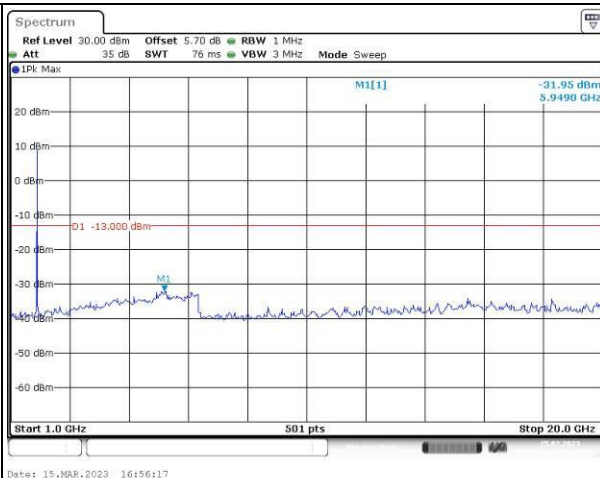
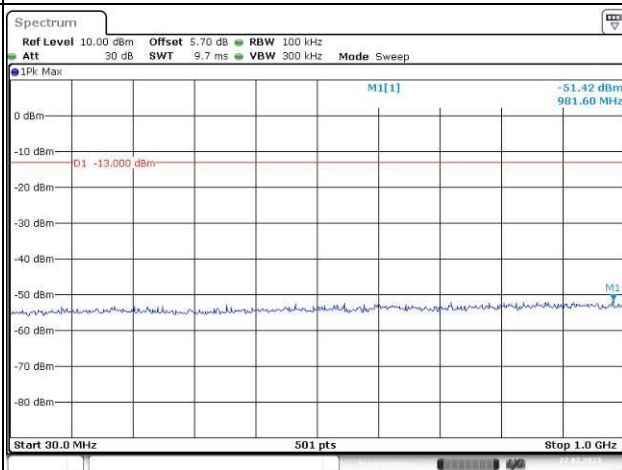


Spurious Emissions at Antenna Terminal

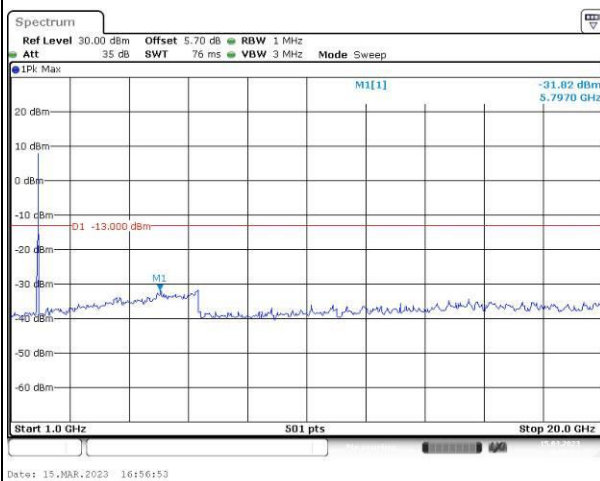
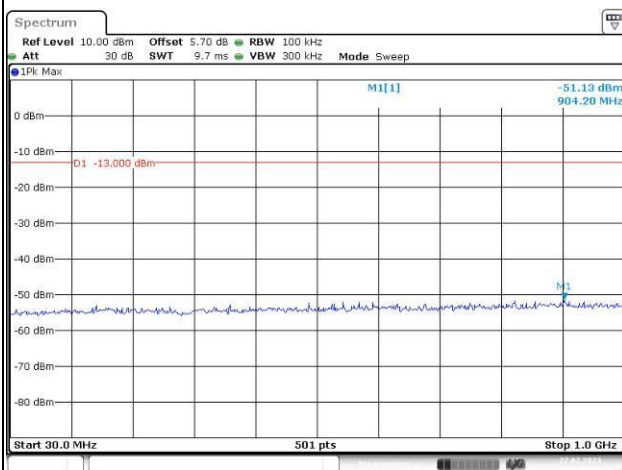
Channel

15MHz Bandwidth QPSK

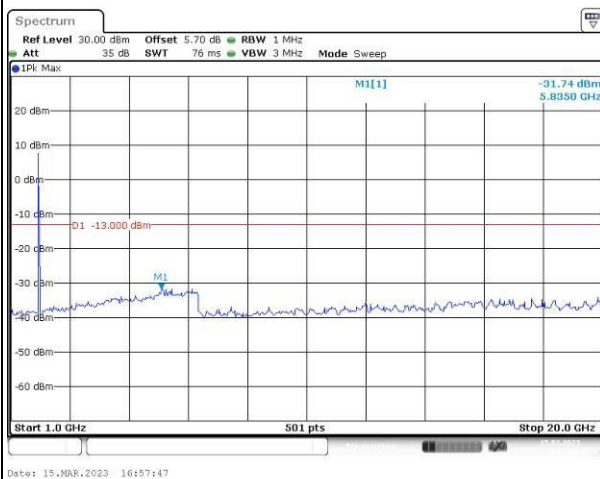
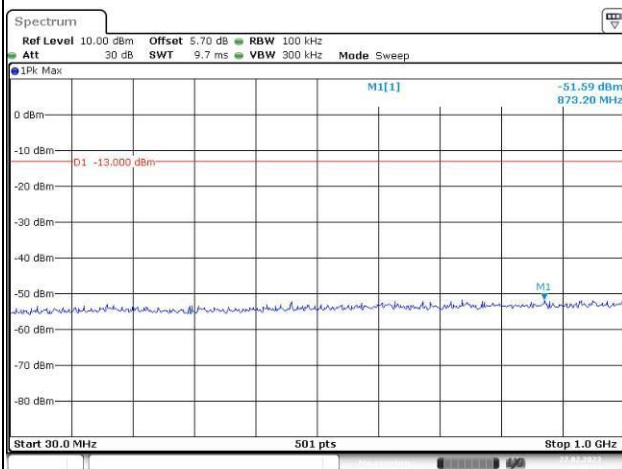
Lowest



Middle



Highest

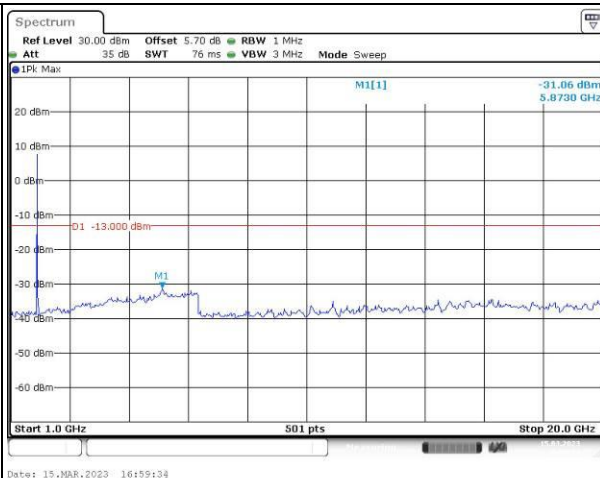
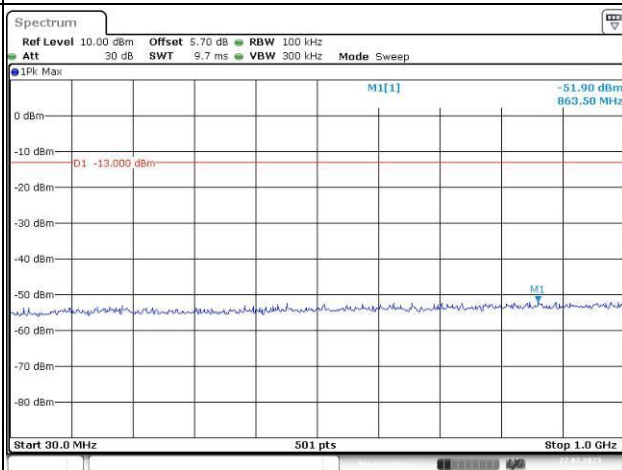


Spurious Emissions at Antenna Terminal

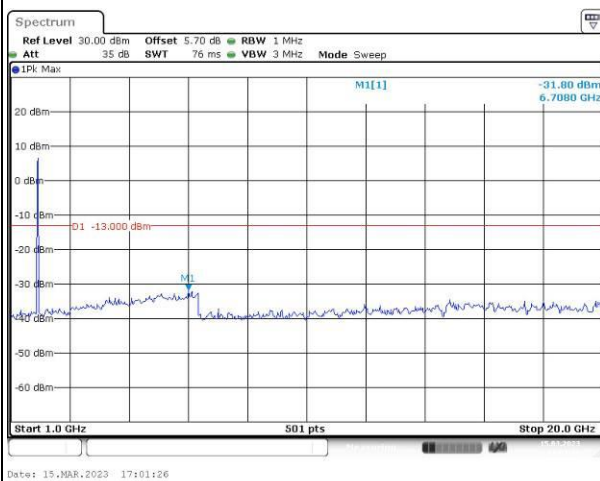
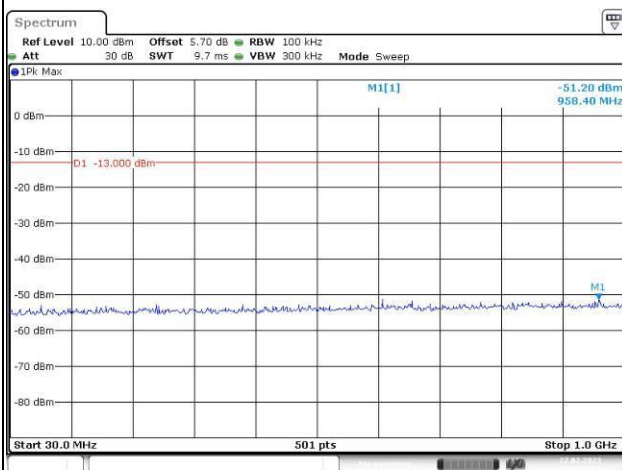
Channel

20MHz Bandwidth QPSK

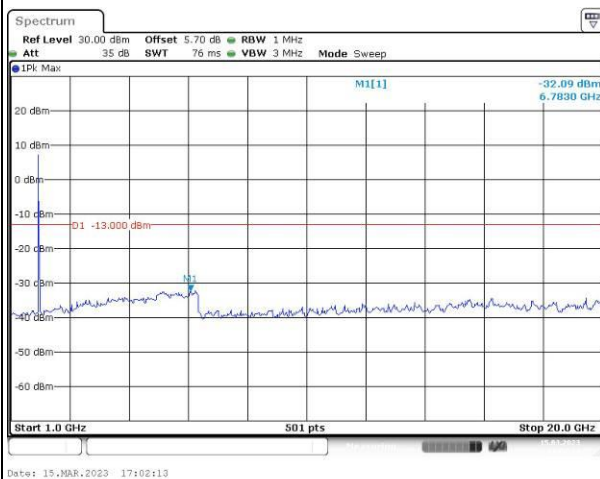
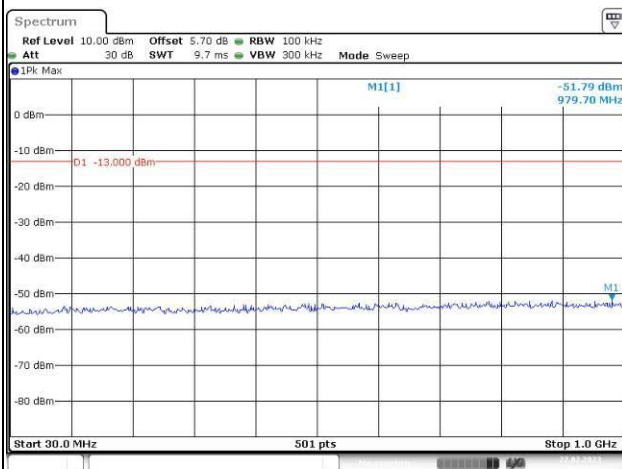
Lowest



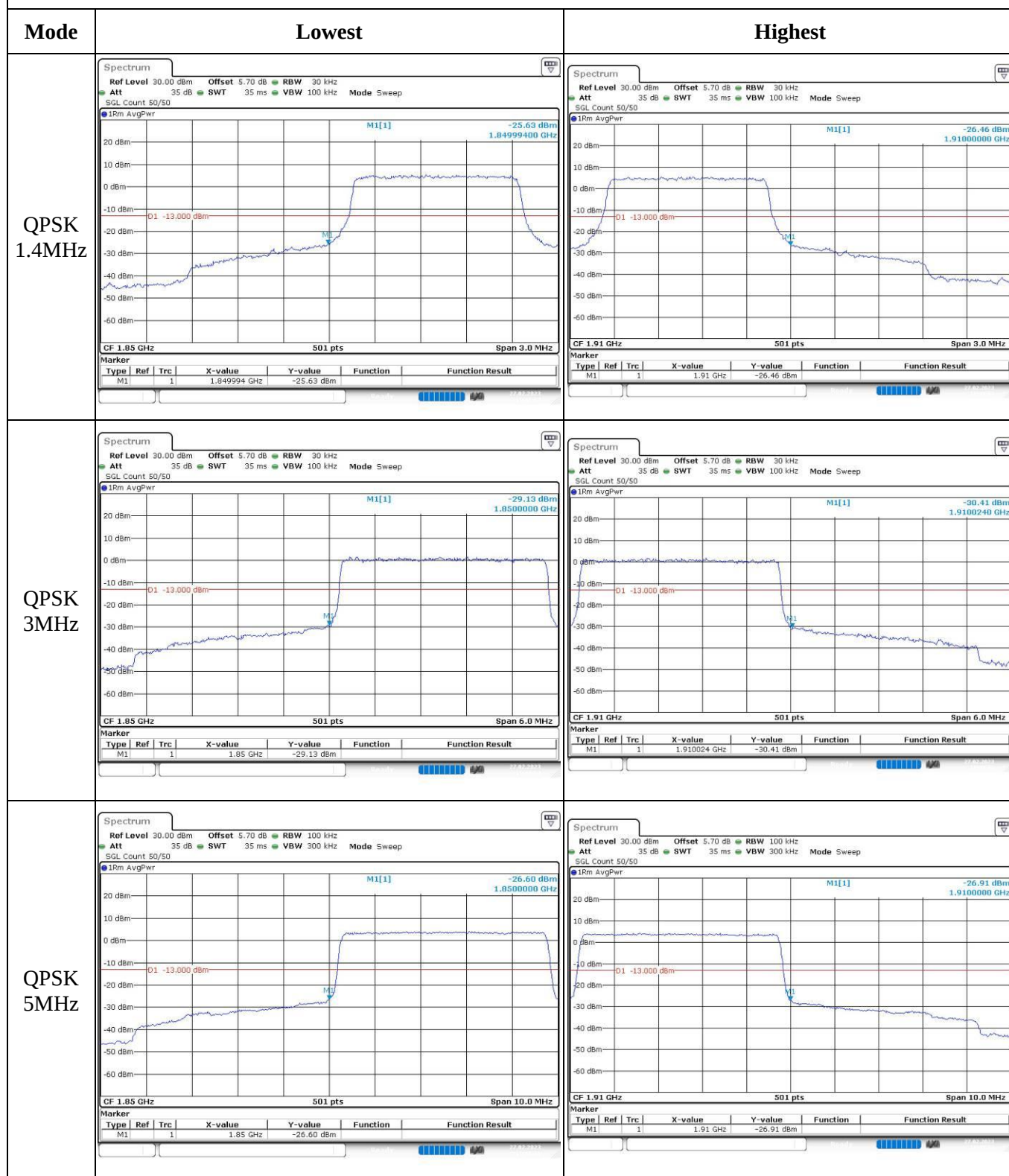
Middle



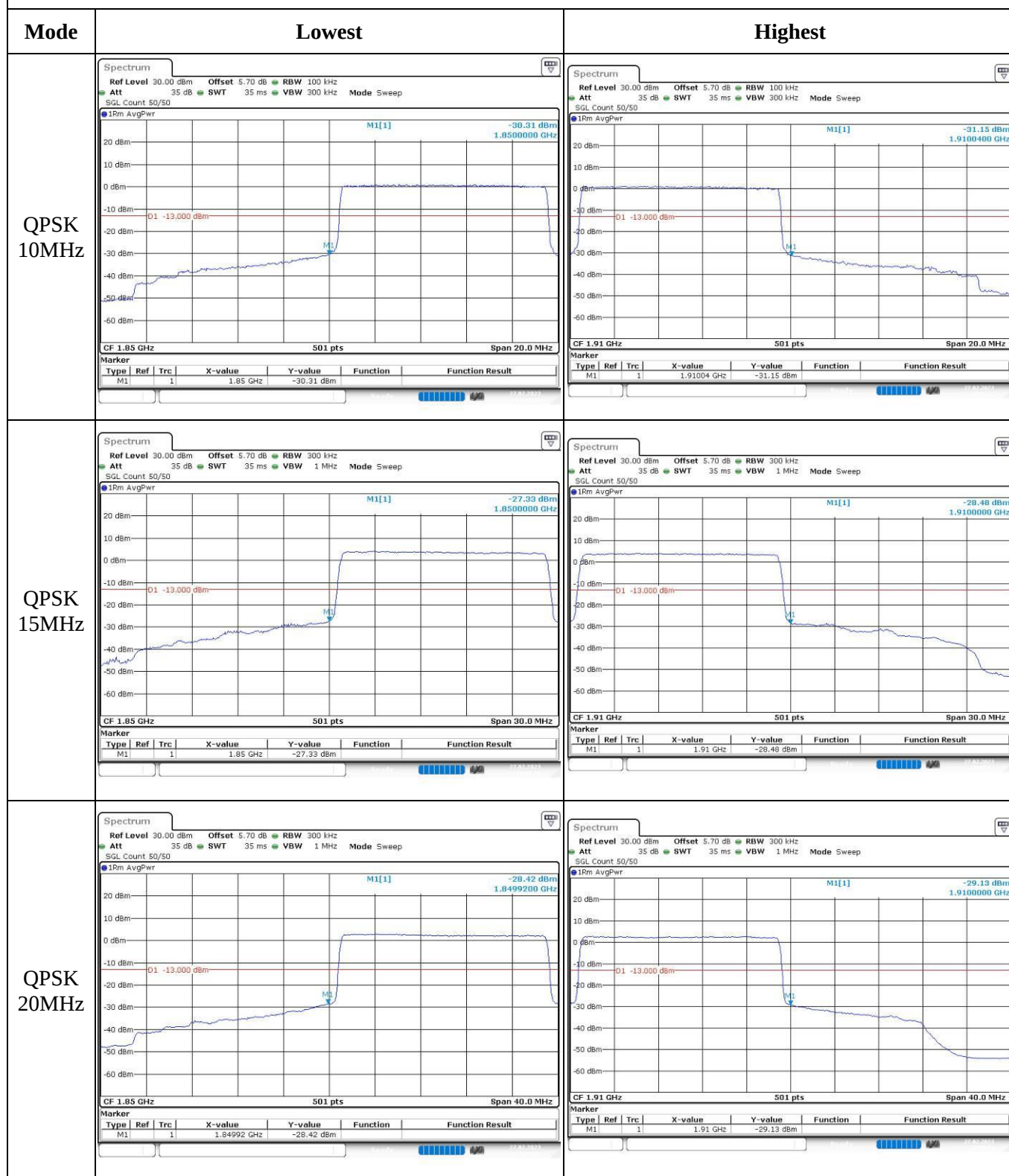
Highest



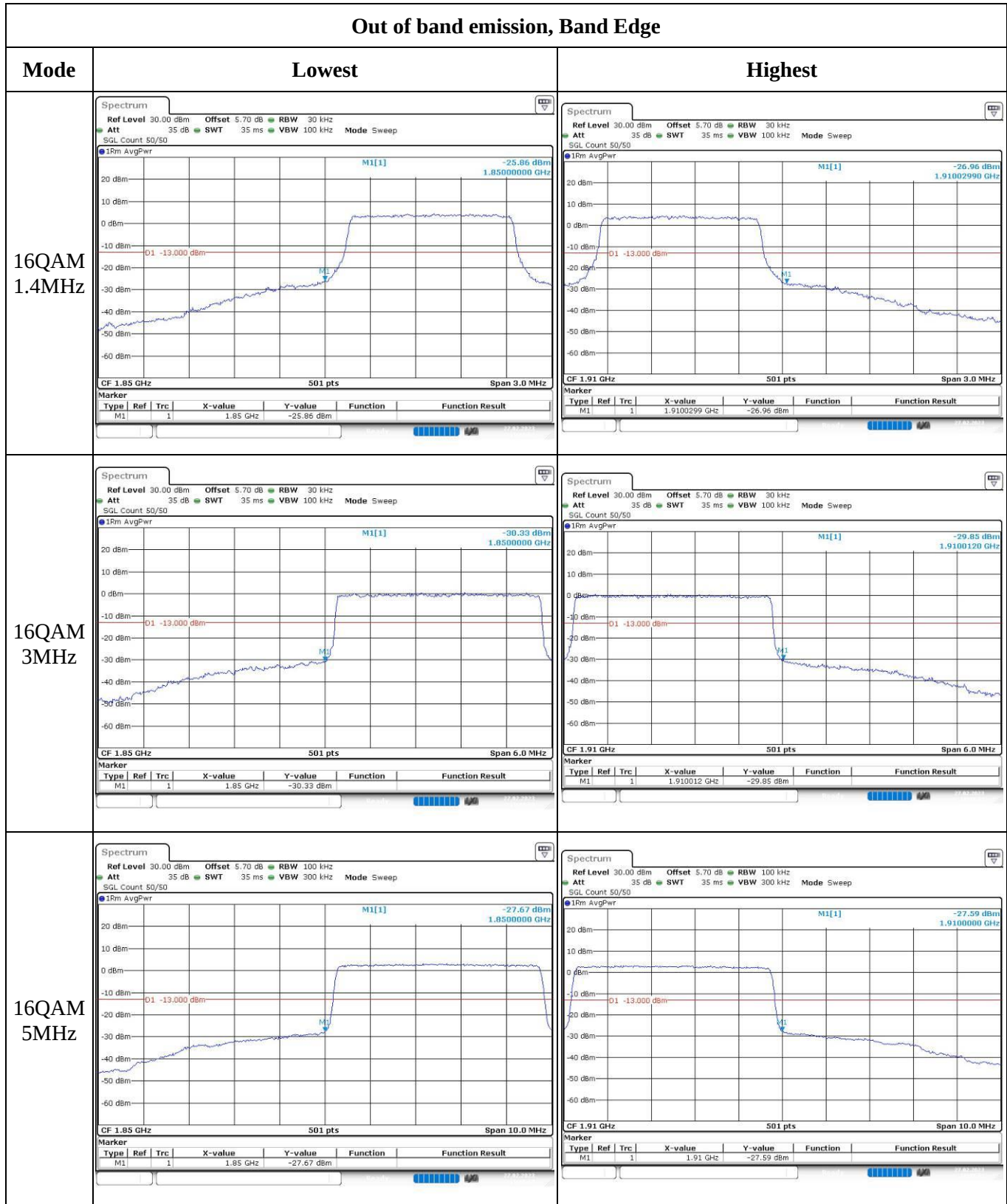
Out of band emission, Band Edge



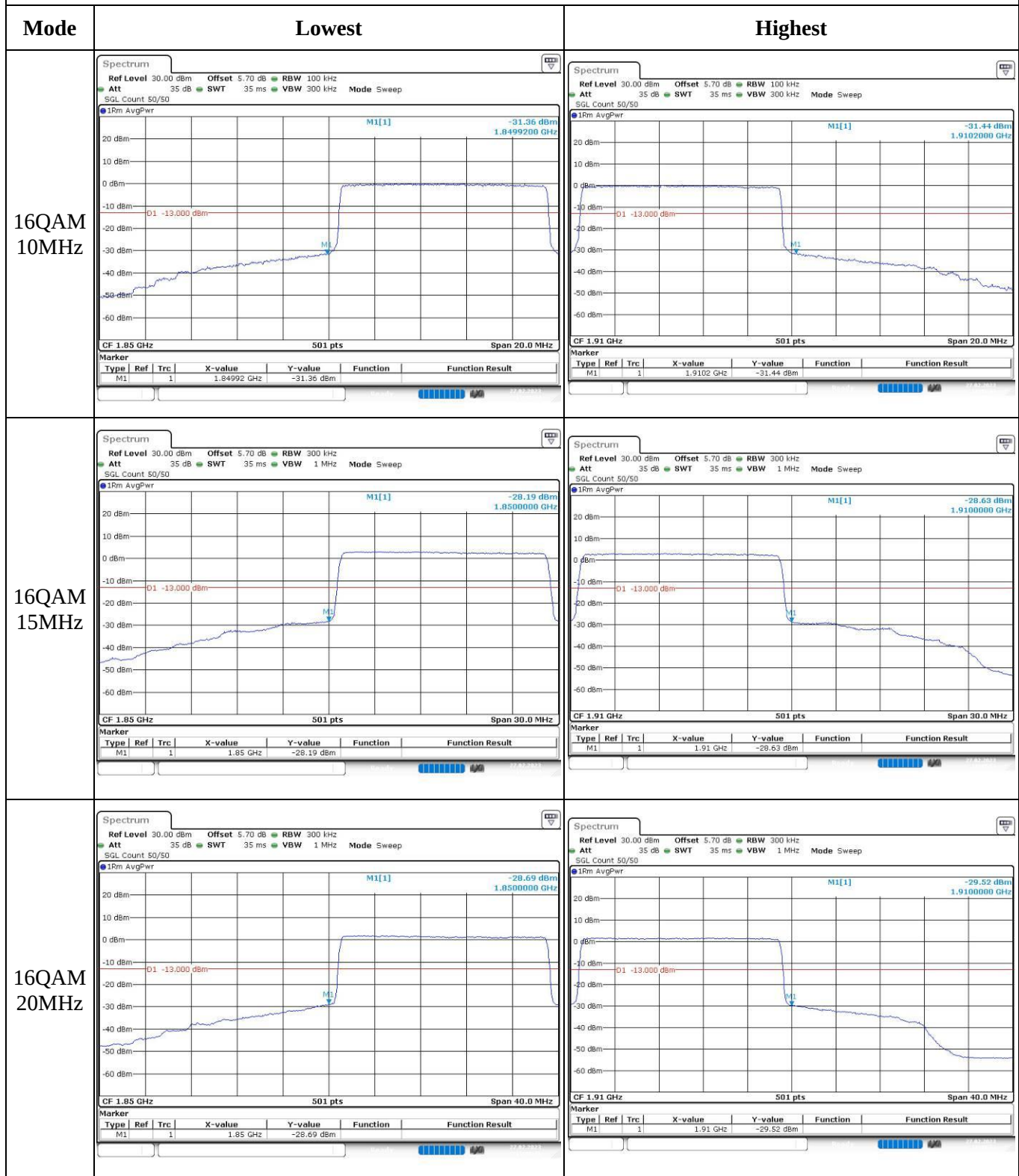
Out of band emission, Band Edge



Out of band emission, Band Edge



Out of band emission, Band Edge



4.6 Antenna Port Test Data and Results for LTE Band 5

Serial Number:	2295	Test Date:	2023/02/27~2023/03/16
Test Site:	RF	Test Mode:	Transmitting
Tester:	George Chen	Test Result:	Pass

Environmental Conditions:

Temperature: (°C)	23.2~23.4	Relative Humidity: (%)	36~38	ATM Pressure: (kPa)	101.2~102.3
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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	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	2022/04/06	2023/04/05
BACL	TEMP&HUMI Test Chamber	BTH-150-40	30174	2022/09/29	2023/09/28
UNI-T	Multimeter	UT39A+	C210582554	N/A	N/A
ZHAOXIN	DC Power Supply	RXN-6010D	21R6010D0912386	2022/07/15	2023/07/14

* 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)
1.4MHz	824.7	836.5	848.3
3MHz	825.5	836.5	847.5
5MHz	826.5	836.5	846.5
10MHz	829	836.5	844

Test Data:**RF Output Power:**

Test Bandwidth & Modulation	Resource Block & RB offset	Conducted Average Output Power(dBm)			Maximum ERP (dBm)	ERP FCC/ISED Limit (dBm)
		Lowest Channel	Middle Channel	Highest Channel		
1.4MHz QPSK	RB1#0	19.77	19.19	19.23	16.99	38.45/34.77
	RB1#3	19.17	19.29	19.78		
	RB1#5	19.56	19.84	19.63		
	RB3#0	19.79	19.53	19.51		
	RB3#3	19.59	19.72	20		
	RB6#0	19	19.72	19.8		
1.4MHz 16QAM	RB1#0	19	19.32	19.87	16.93	38.45/34.77
	RB1#3	19.54	19.66	19.94		
	RB1#5	19.51	19.72	19.65		
	RB3#0	19.43	19.81	19.76		
	RB3#3	19.33	19.38	19.83		
	RB6#0	19.6	19.92	19.88		
3MHz QPSK	RB1#0	19.12	19.02	19.38	16.85	38.45/34.77
	RB1#8	19.85	19.52	19.03		
	RB1#14	19.41	19.83	19.11		
	RB6#0	19.32	19.56	19.82		
	RB6#9	19.02	19.15	19.77		
	RB15#0	19.86	19.1	19.28		
3MHz 16QAM	RB1#0	19.1	19.81	19.34	16.95	38.45/34.77
	RB1#8	19.05	19.77	19.35		
	RB1#14	19.29	19.96	19.66		
	RB6#0	19.88	19.96	19.3		
	RB6#9	19.53	19.48	19.4		
	RB15#0	19.67	19.1	19.65		
5MHz QPSK	RB1#0	19.5	19.02	19.83	16.97	38.45/34.77
	RB1#13	19.24	19.98	19.82		
	RB1#24	19.2	19.27	19.9		
	RB15#0	19.77	19.28	19.19		
	RB15#10	19.23	19.43	19.56		
	RB25#0	19.02	19.05	19.9		
5MHz 16QAM	RB1#0	19	19.1	19.42	16.98	38.45/34.77
	RB1#13	19.89	19.49	19.73		
	RB1#24	19.09	19.24	19.41		
	RB15#0	19.48	19.41	19.52		
	RB15#10	19.04	19.99	19.48		
	RB25#0	19.29	19.02	19.41		

10MHz QPSK	RB1#0	19.9	19.3	19.64	16.91	38.45/34.77
	RB1#25	19.58	19.76	19.37		
	RB1#49	19.82	19.68	19.84		
	RB25#0	19.63	19.92	19.28		
	RB25#25	19.04	19.08	19.54		
	RB50#0	19.59	19.81	19.22		
10MHz 16QAM	RB1#0	19.77	19.07	19.61	16.96	38.45/34.77
	RB1#25	19.03	19.27	19.92		
	RB1#49	19.92	19.74	19.11		
	RB25#0	19.09	19.89	19.27		
	RB25#25	19.29	19.88	19.9		
	RB50#0	19.97	19.93	19.83		

Note:

ERP= Conducted Power(dBm) - Lc(dB) + G_T(dBd)G_T(dBd)=G_T(dBi)-2.15**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	
10MHz QPSK	RB1#0	5.13	4.84	5.3	13
	RB50#0	5.3	5.3	5.25	13
10MHz 16QAM	RB1#0	6.06	5.45	6.14	13
	RB50#0	6.2	6.26	6.14	13
				Result:	Pass

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
1.4MHz QPSK	1.096	1.108	1.102	1.302	1.314	1.284
1.4MHz 16QAM	1.096	1.102	1.102	1.326	1.332	1.29
3MHz QPSK	2.683	2.683	2.683	2.868	2.88	2.892
3MHz 16QAM	2.683	2.683	2.683	2.88	2.88	2.868
5MHz QPSK	4.511	4.491	4.511	4.94	4.94	4.96
5MHz 16QAM	4.531	4.511	4.511	4.94	4.94	4.94
10MHz QPSK	8.942	8.942	8.942	9.64	9.6	9.64
10MHz 16QAM	8.942	8.942	8.942	9.56	9.68	9.64

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

Spurious Emissions at Antenna Terminal

Result:	Pass, Please refer to the test plots of Spurious Emissions at Antenna Terminal.
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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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Frequency Stability For FCC:

Test Modulation:	10 MHz QPSK		Test Channel:	836.5	MHz
Test Item	Temperature (°C)	Voltage (V _{DC})	Frequency Error		Limit
			(Hz)	(ppm)	(ppm)
Frequency Stability vs. Temperature	-30	3.8	-7.9	-0.009	2.5
	-20	3.8	9.12	0.011	2.5
	-10	3.8	8.51	0.010	2.5
	0	3.8	-7.15	-0.009	2.5
	10	3.8	-5.29	-0.006	2.5
	20	3.8	7.24	0.009	2.5
	30	3.8	-5.81	-0.007	2.5
	40	3.8	5.59	0.007	2.5
	50	3.8	6.87	0.008	2.5
Frequency Stability vs. Voltage	20	3.45	9.94	0.012	2.5
	20	4.35	9.99	0.012	2.5
Result:				Pass	

Test Modulation:	10 MHz 16QAM		Test Channel:	836.5	MHz
Test Item	Temperature(°C)	Voltage(V _{DC})	Frequency Error		Limit
			(Hz)	(ppm)	(ppm)
Frequency Stability vs. Temperature	-30	3.8	-5.34	-0.006	2.5
	-20	3.8	6.8	0.008	2.5
	-10	3.8	-9.53	-0.011	2.5
	0	3.8	-8.15	-0.010	2.5
	10	3.8	-8.88	-0.011	2.5
	20	3.8	-9.82	-0.012	2.5
	30	3.8	8.38	0.010	2.5
	40	3.8	6.75	0.008	2.5
	50	3.8	-5.89	-0.007	2.5
Frequency Stability vs. Voltage	20	3.45	8.98	0.011	2.5
	20	4.35	-7.83	-0.009	2.5
Result:				Pass	

Frequency Stability For RSS-132:

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	824.4951	824.000	848.6085	849.000
	-20	3.8	824.4954	824.000	848.6078	849.000
	-10	3.8	824.4933	824.000	848.6038	849.000
	0	3.8	824.012	824.000	848.6049	849.000
	10	3.8	824.4002	824.000	848.6058	849.000
	20	3.8	824.4981	824.000	848.6077	849.000
	30	3.8	824.4010	824.000	848.6013	849.000
	40	3.8	824.4973	824.000	848.6078	849.000
	50	3.8	824.4926	824.000	848.6006	849.000
Frequency Stability vs. Voltage	20	3.45	824.4974	824.000	848.6080	849.000
	20	4.35	824.4978	824.000	848.6002	849.000
					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	824.4066	824.000	848.6013	849.000
	-20	3.8	824.4048	824.000	848.6086	849.000
	-10	3.8	824.4091	824.000	848.6027	849.000
	0	3.8	824.4065	824.000	848.6003	849.000
	10	3.8	824.4082	824.000	848.6067	849.000
	20	3.8	824.4058	824.000	848.6083	849.000
	30	3.8	824.4063	824.000	848.6036	849.000
	40	3.8	824.4097	824.000	848.6082	849.000
	50	3.8	824.4020	824.000	848.6025	849.000
Frequency Stability vs. Voltage	20	3.45	824.4024	824.000	848.6020	849.000
	20	4.35	824.4022	824.000	848.6081	849.000
					Result:	Pass