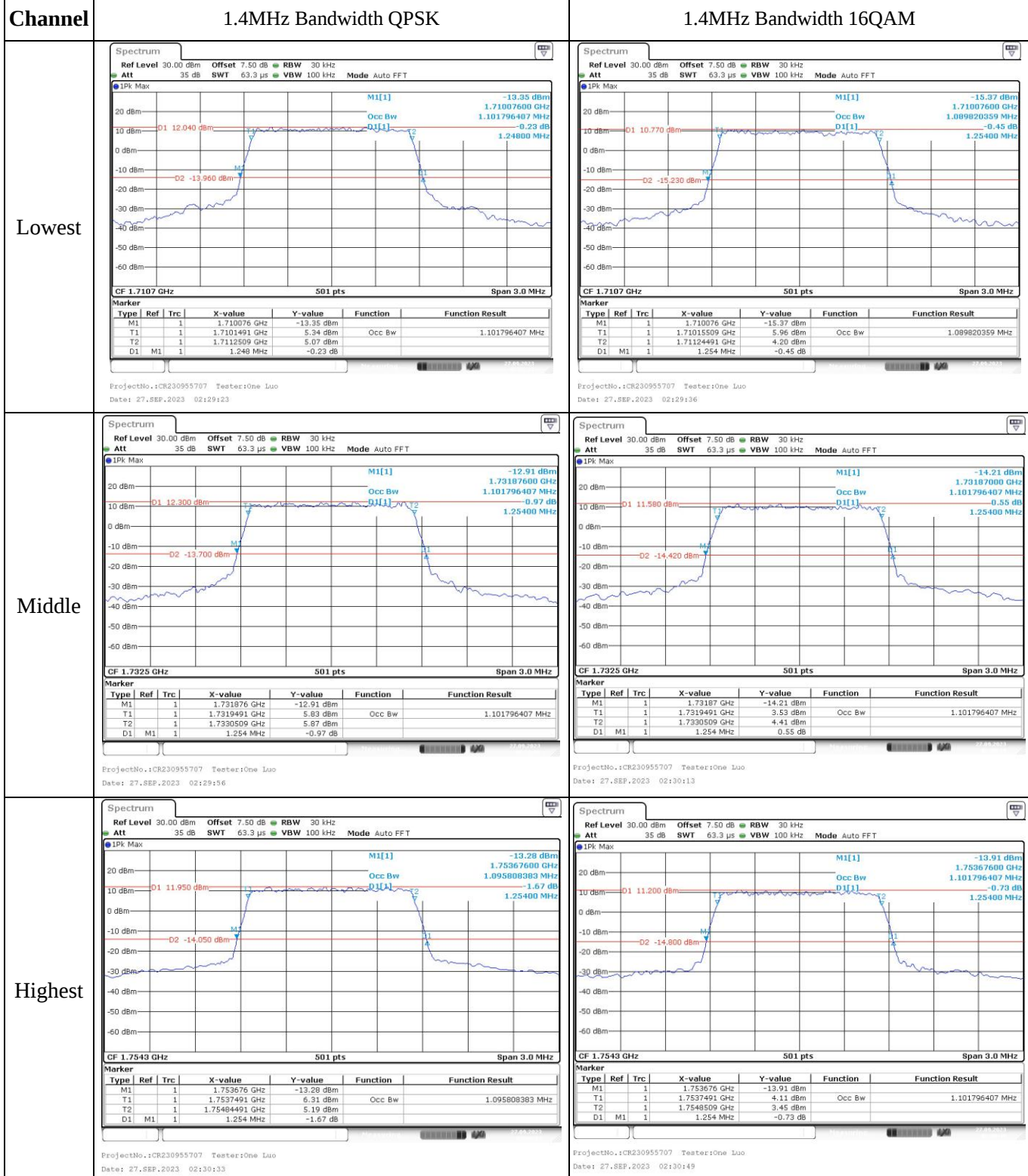


Test Mode:	20M 16QAM	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (°C)	Voltage (V _{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.85	1710.996	1710.00	1754.076	1755
	-20	3.85	1710.950	1710.00	1754.095	1755
	-10	3.85	1710.971	1710.00	1754.013	1755
	0	3.85	1710.985	1710.00	1754.070	1755
	10	3.85	1710.913	1710.00	1754.084	1755
	20	3.85	1710.978	1710.00	1754.022	1755
	30	3.85	1710.976	1710.00	1754.055	1755
	40	3.85	1710.928	1710.00	1754.037	1755
	50	3.85	1710.938	1710.00	1754.002	1755
Frequency Stability vs. Voltage	20	3.6	1710.962	1710.00	1754.058	1755
	20	4.4	1710.993	1710.00	1754.051	1755
					Result:	Pass

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

Occupied Bandwidth



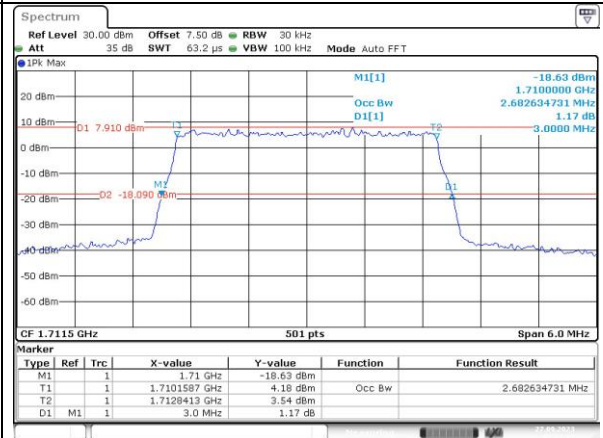
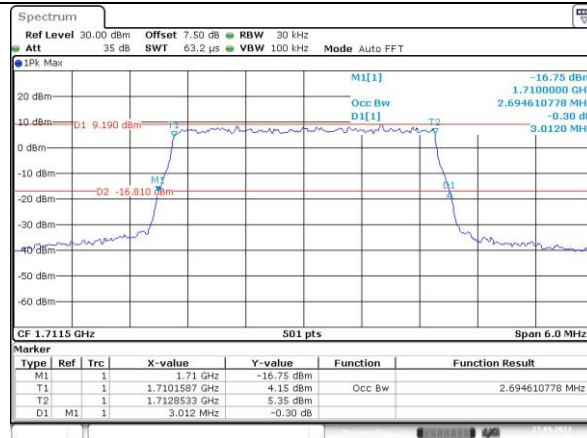
Occupied Bandwidth

Channel

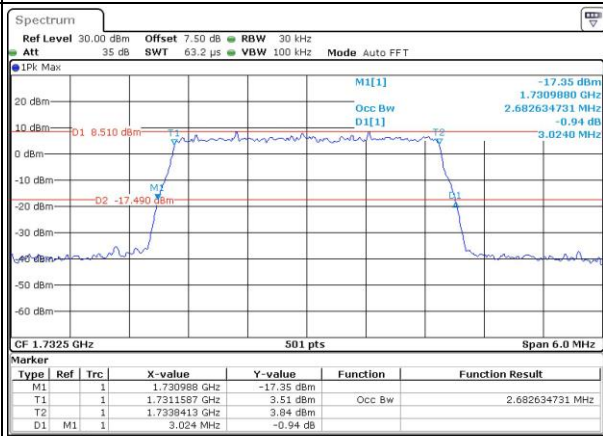
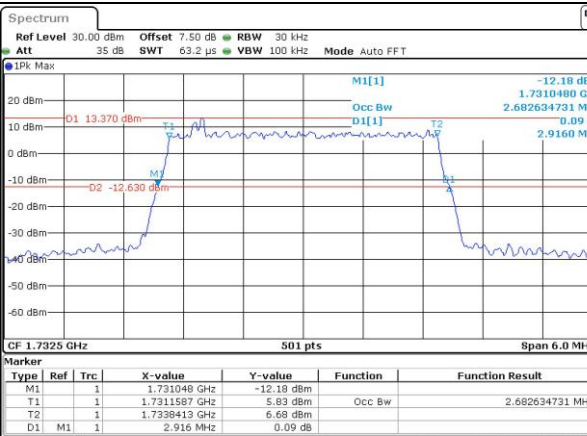
3MHz Bandwidth QPSK

3MHz Bandwidth 16QAM

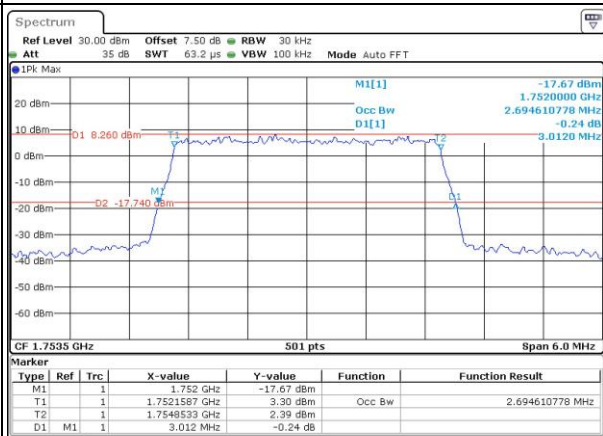
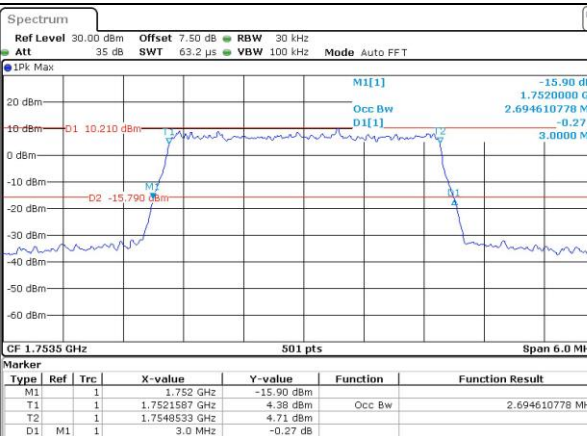
Lowest



Middle



Highest



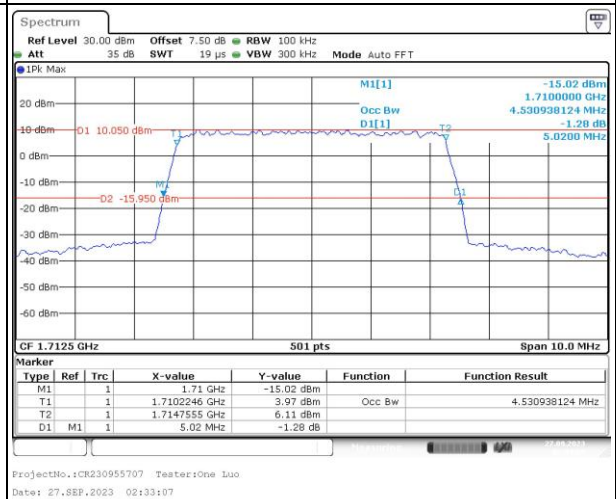
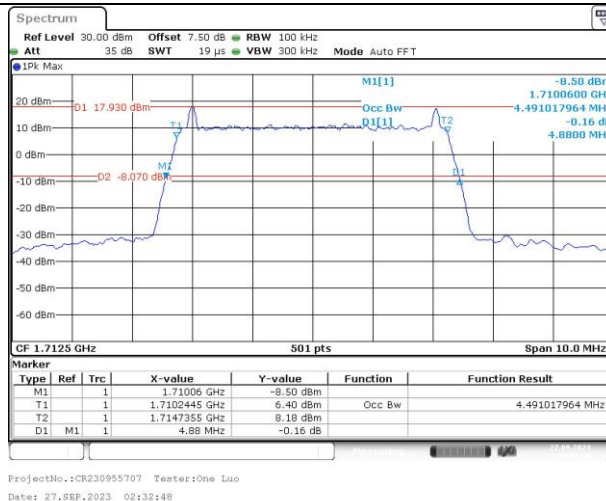
Occupied Bandwidth

Channel

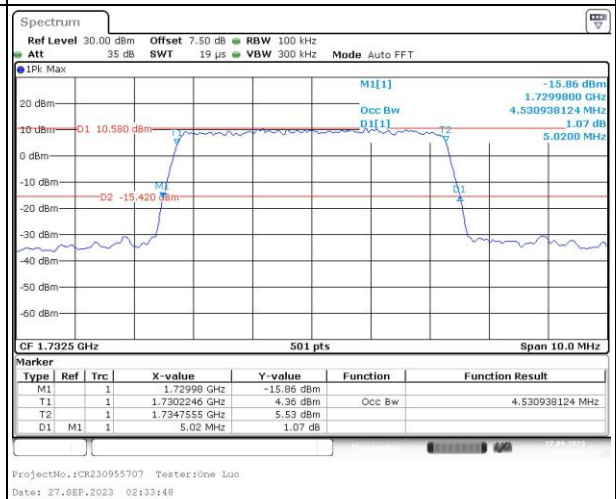
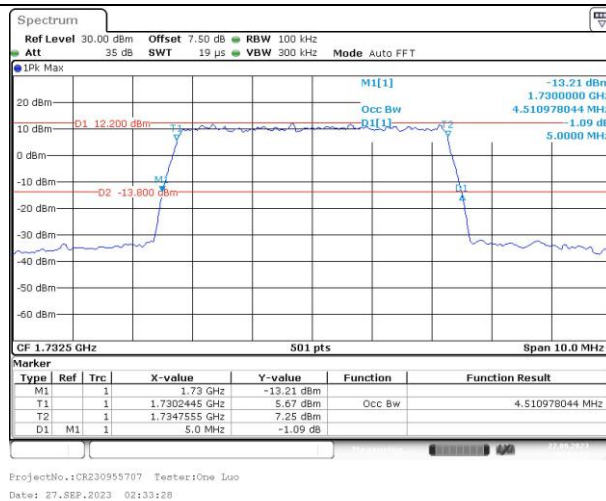
5MHz Bandwidth QPSK

5MHz Bandwidth 16QAM

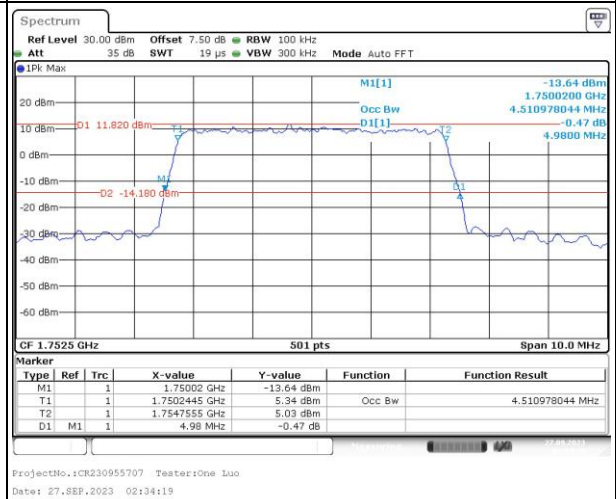
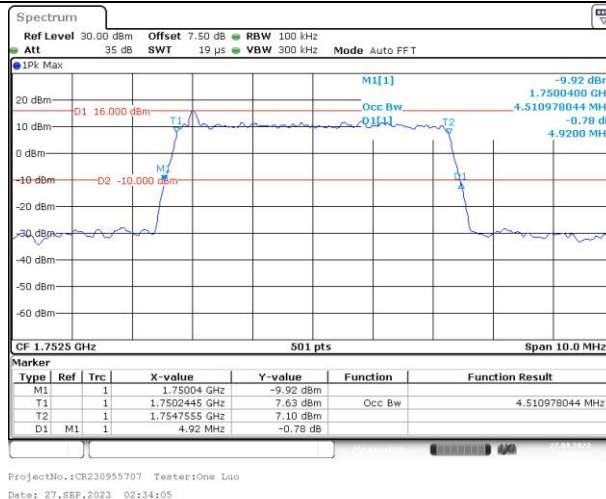
Lowest



Middle



Highest



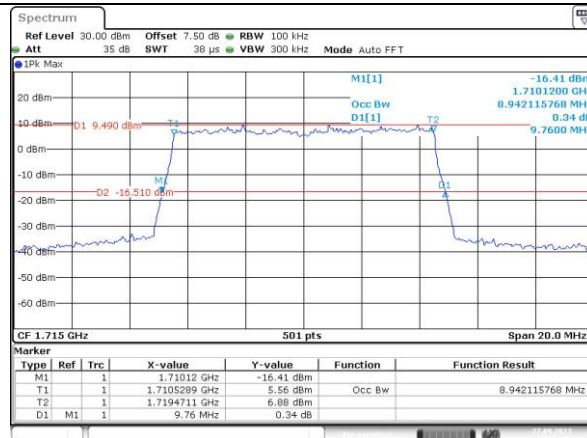
Occupied Bandwidth

Channel

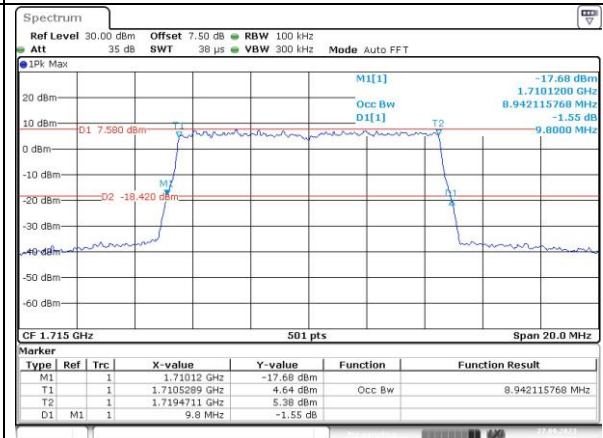
10MHz Bandwidth QPSK

10MHz Bandwidth 16QAM

Lowest

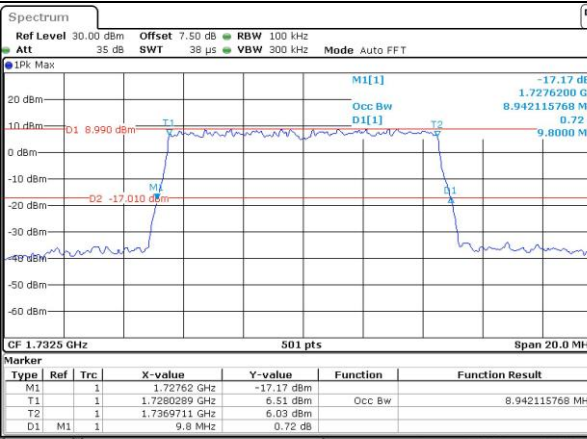


ProjectNo.:CR230955707 Tester:One Luo
Date: 27.SEP.2023 02:34:46

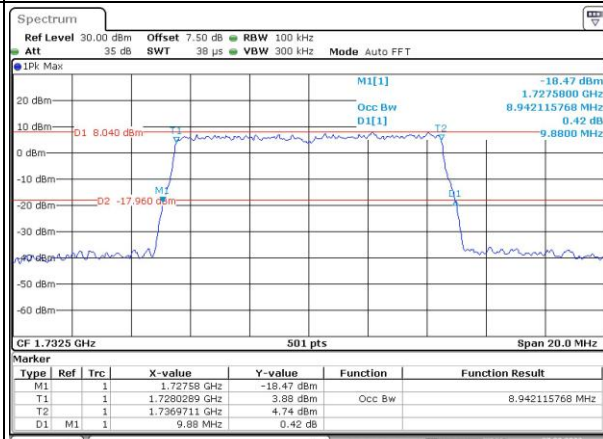


ProjectNo.:CR230955707 Tester:One Luo
Date: 27.SEP.2023 02:35:12

Middle

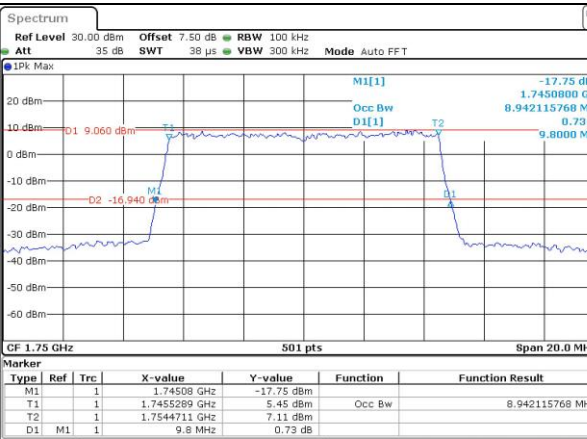


ProjectNo.:CR230955707 Tester:One Luo
Date: 27.SEP.2023 02:35:36

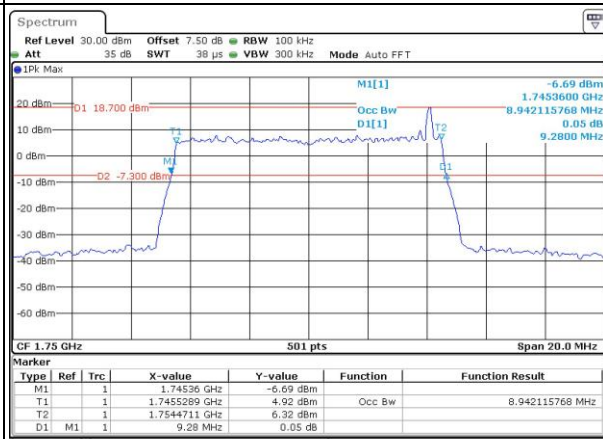


ProjectNo.:CR230955707 Tester:One Luo
Date: 27.SEP.2023 02:35:55

Highest



ProjectNo.:CR230955707 Tester:One Luo
Date: 27.SEP.2023 02:36:22



ProjectNo.:CR230955707 Tester:One Luo
Date: 27.SEP.2023 02:36:45

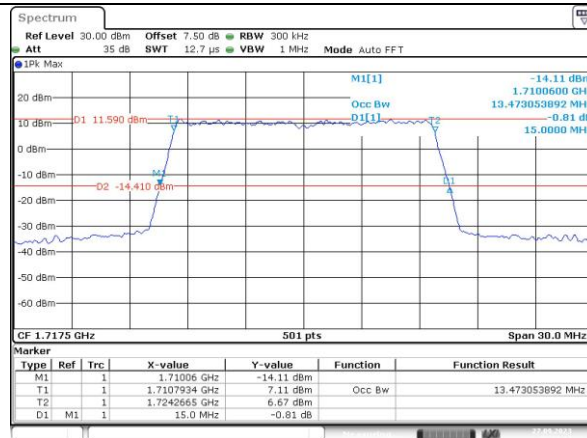
Occupied Bandwidth

Channel

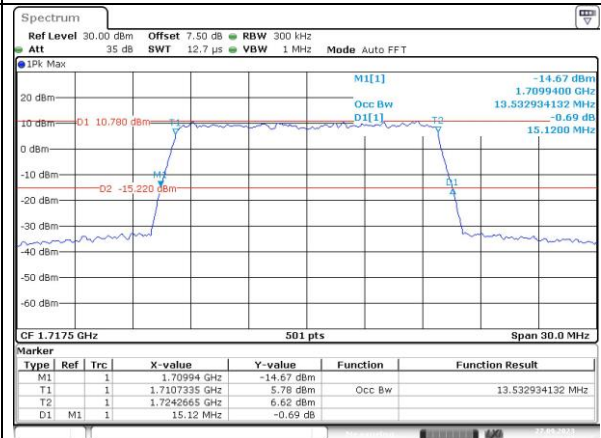
15MHz Bandwidth QPSK

15MHz Bandwidth 16QAM

Lowest

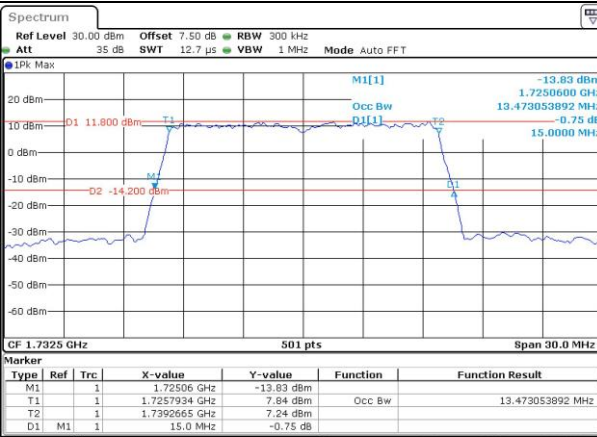


ProjectNo.:CR230955707 Tester:One Luo
Date: 27.SEP.2023 02:37:14

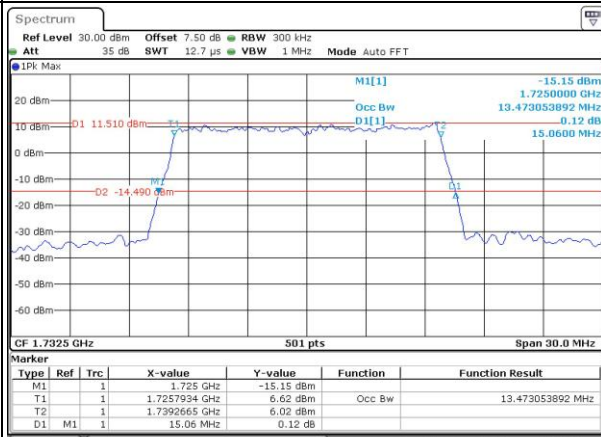


ProjectNo.:CR230955707 Tester:One Luo
Date: 27.SEP.2023 02:37:37

Middle

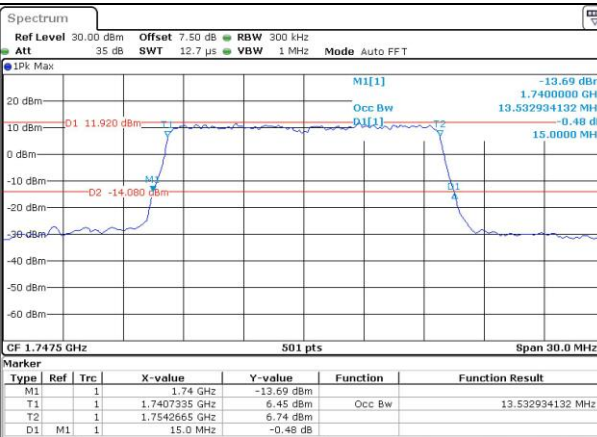


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Date: 27.SEP.2023 02:37:59

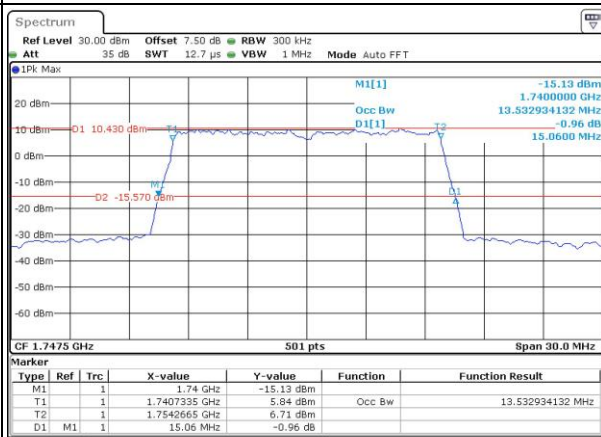


ProjectNo.:CR230955707 Tester:One Luo
Date: 27.SEP.2023 02:38:23

Highest



ProjectNo.:CR230955707 Tester:One Luo
Date: 27.SEP.2023 02:38:51



ProjectNo.:CR230955707 Tester:One Luo
Date: 27.SEP.2023 02:39:12

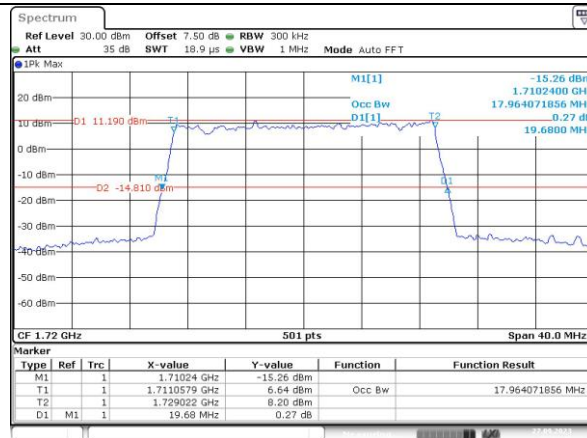
Occupied Bandwidth

Channel

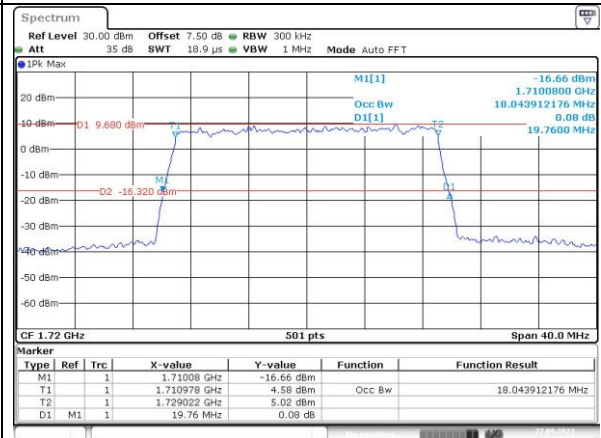
20MHz Bandwidth QPSK

20MHz Bandwidth 16QAM

Lowest



ProjectNo.:CR230955707 Tester:One Luo
Date: 27.SEP.2023 02:39:40



ProjectNo.:CR230955707 Tester:One Luo
Date: 27.SEP.2023 02:40:01

Middle

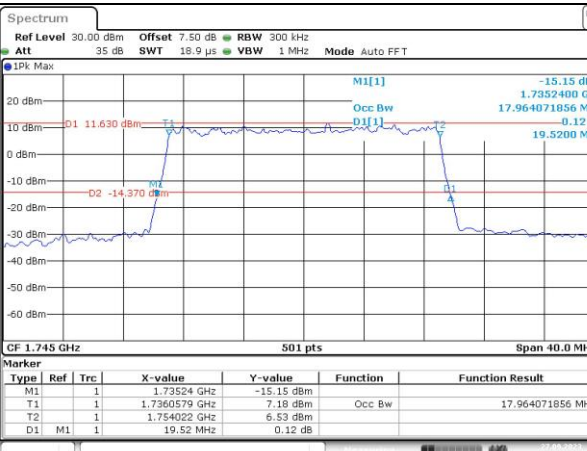


ProjectNo.:CR230955707 Tester:One Luo
Date: 27.SEP.2023 02:40:23

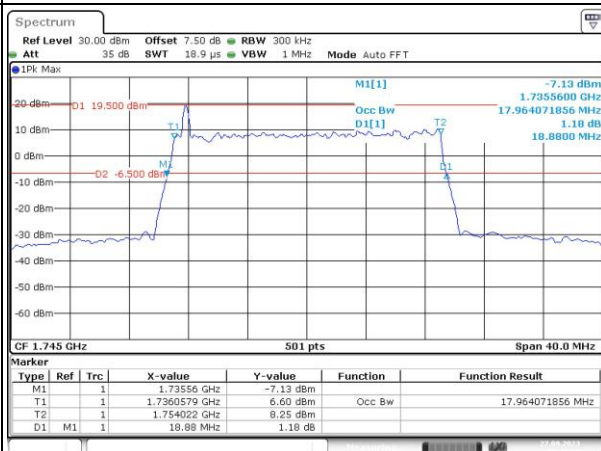


ProjectNo.:CR230955707 Tester:One Luo
Date: 27.SEP.2023 02:40:47

Highest



ProjectNo.:CR230955707 Tester:One Luo
Date: 27.SEP.2023 02:41:09



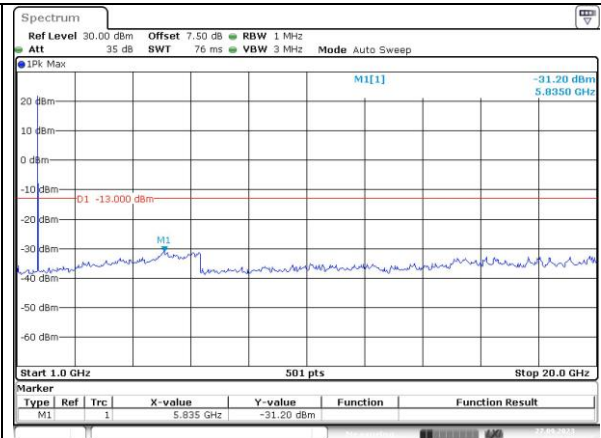
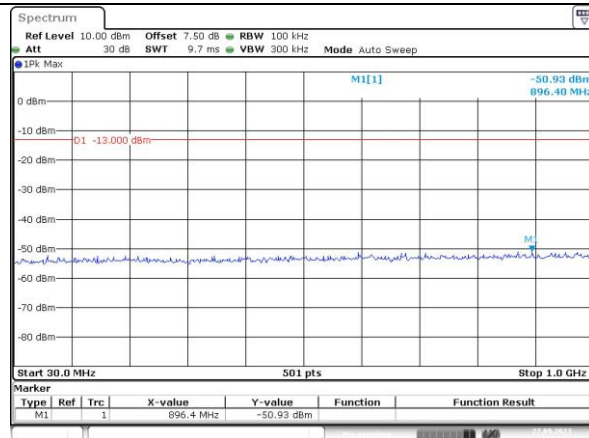
ProjectNo.:CR230955707 Tester:One Luo
Date: 27.SEP.2023 02:41:36

Spurious Emissions at Antenna Terminal

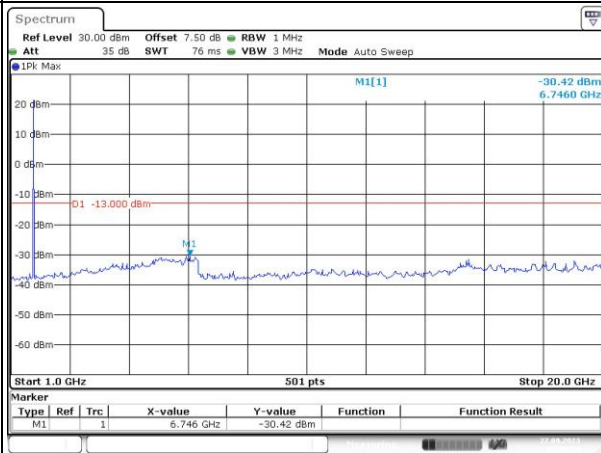
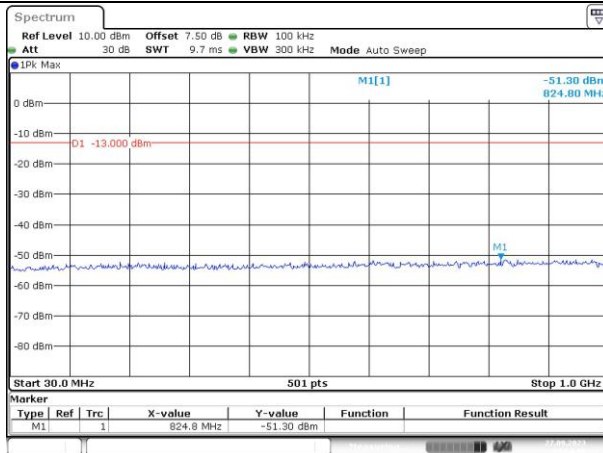
Channel

1.4MHz Bandwidth QPSK

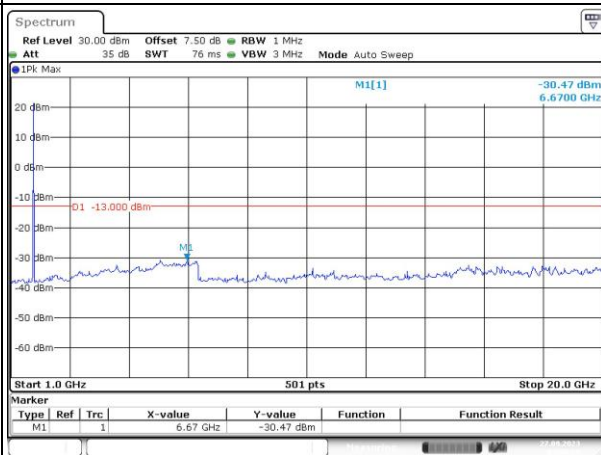
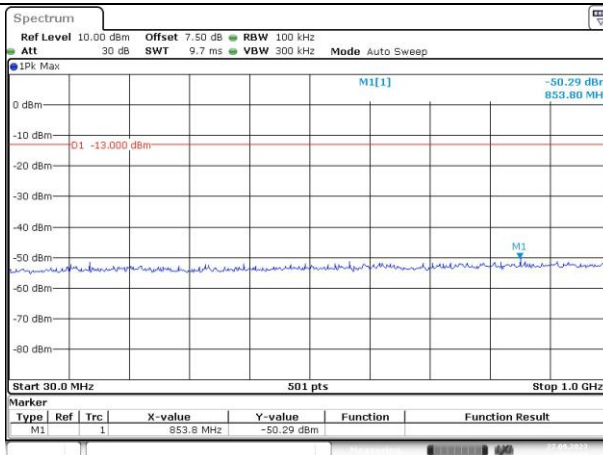
Lowest



Middle



Highest

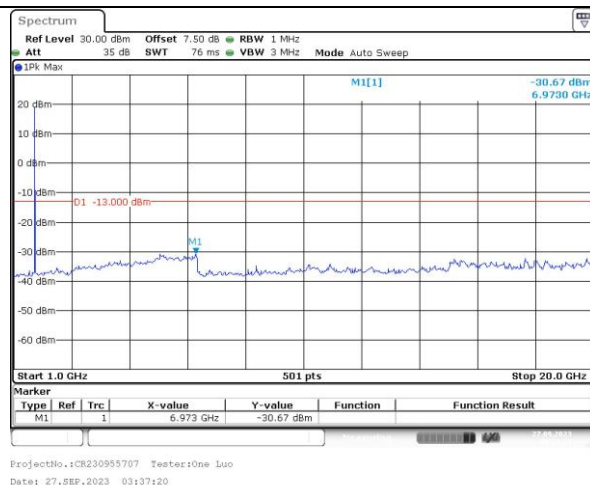
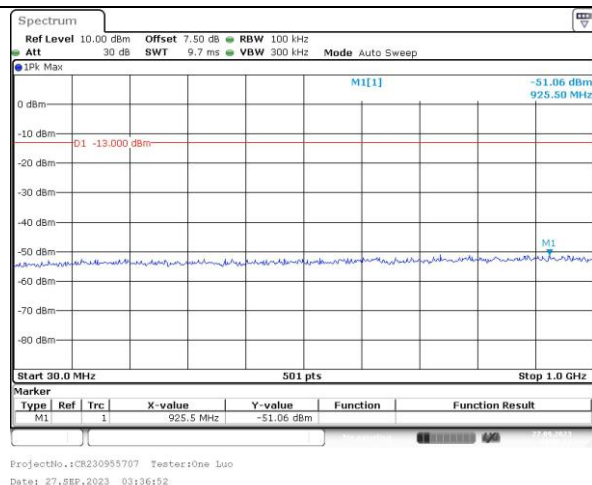


Spurious Emissions at Antenna Terminal

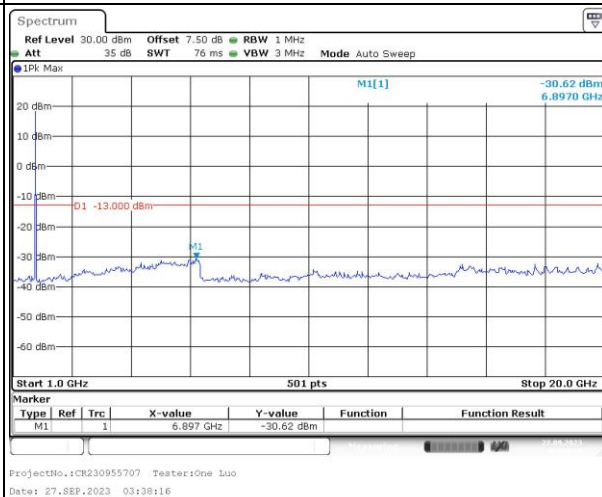
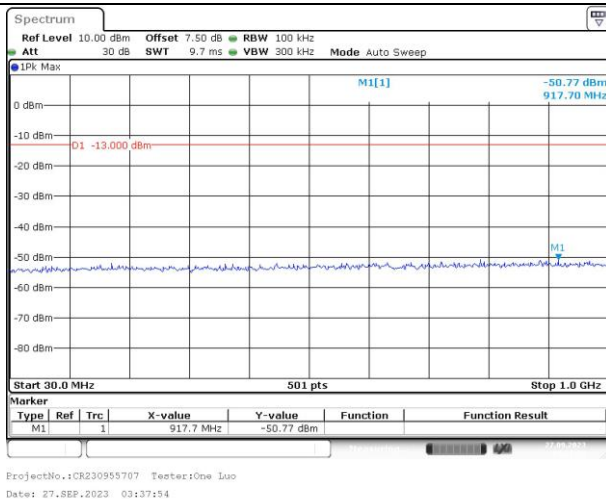
Channel

3MHz Bandwidth QPSK

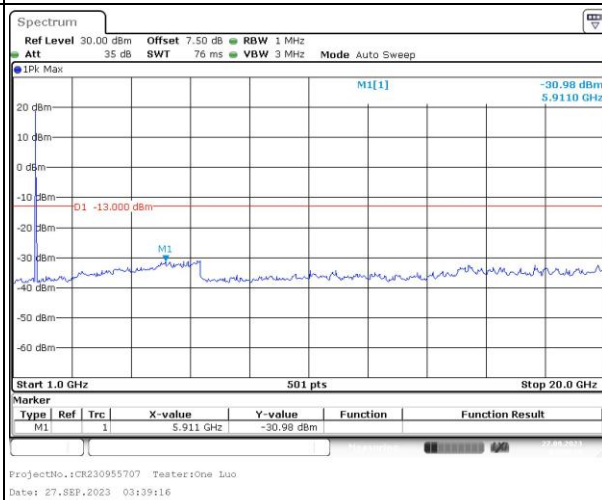
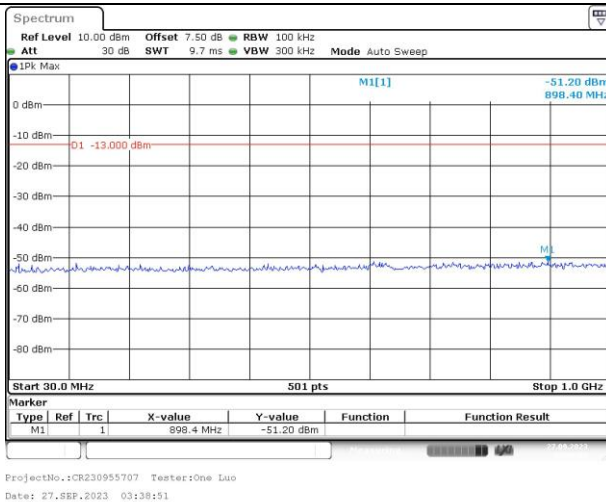
Lowest



Middle



Highest

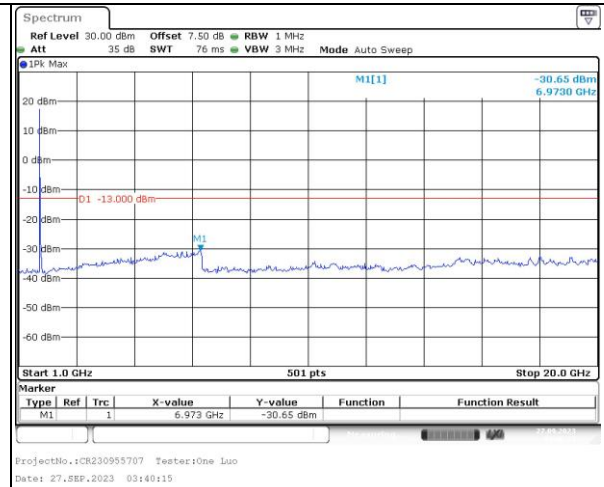
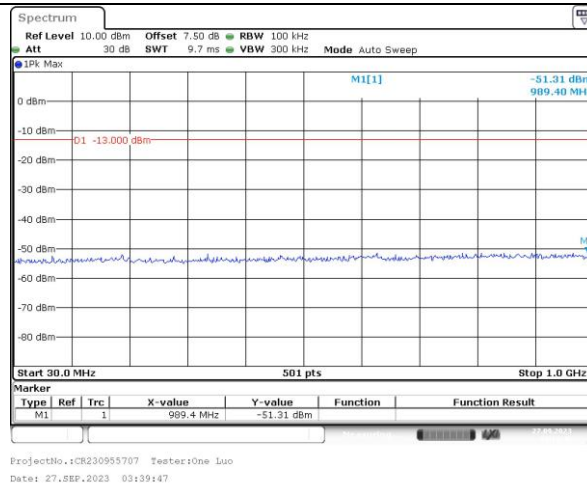


Spurious Emissions at Antenna Terminal

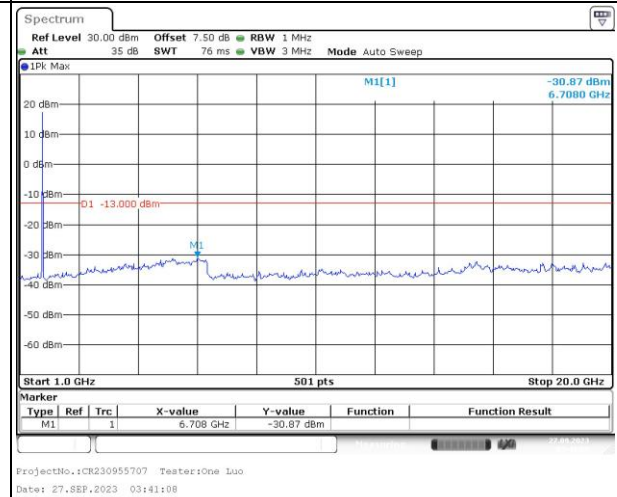
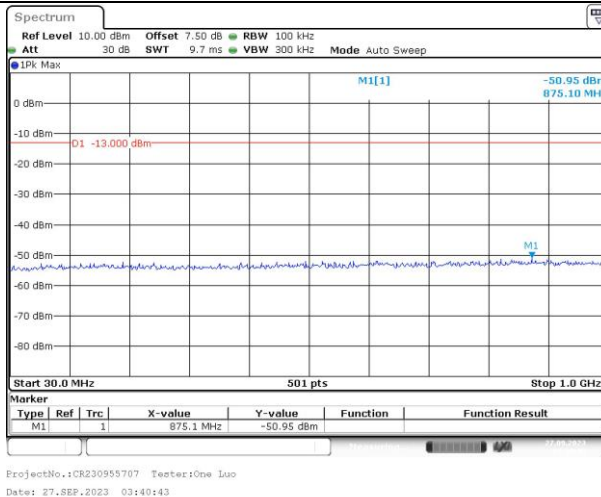
Channel

5MHz Bandwidth QPSK

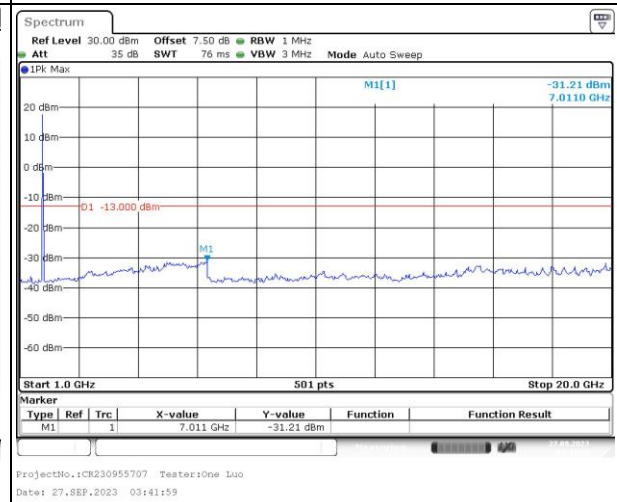
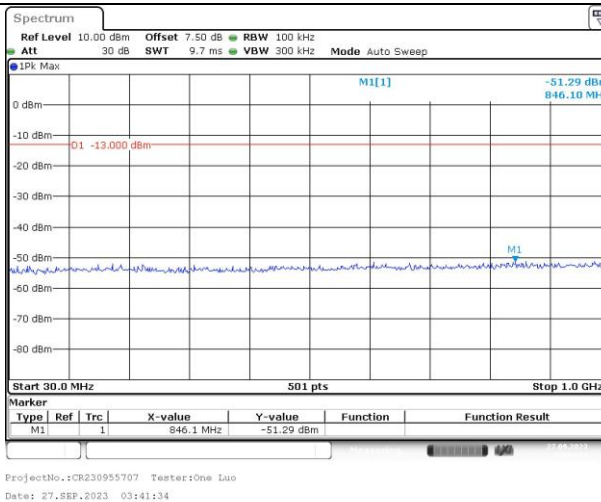
Lowest



Middle



Highest

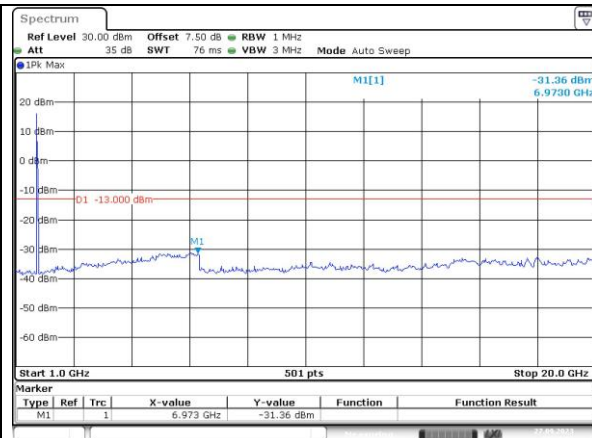
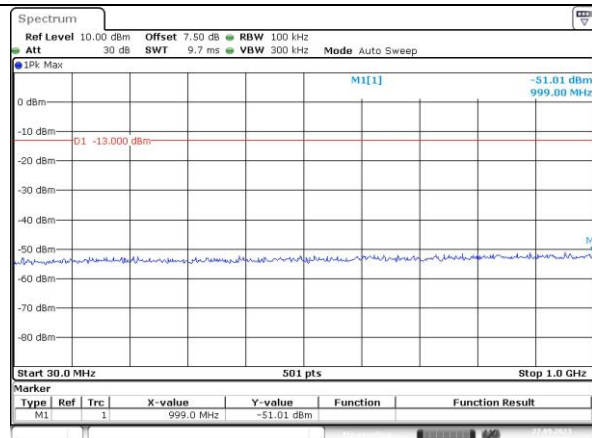


Spurious Emissions at Antenna Terminal

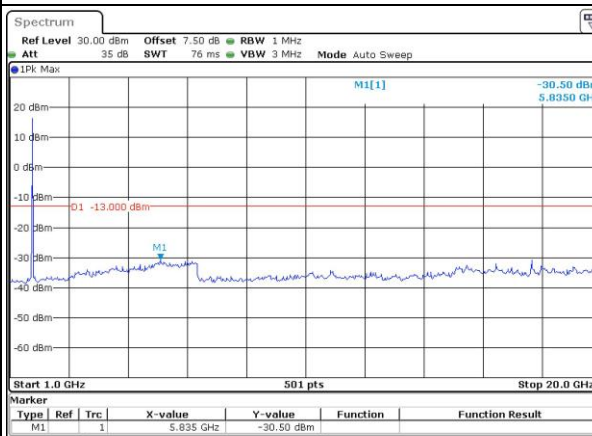
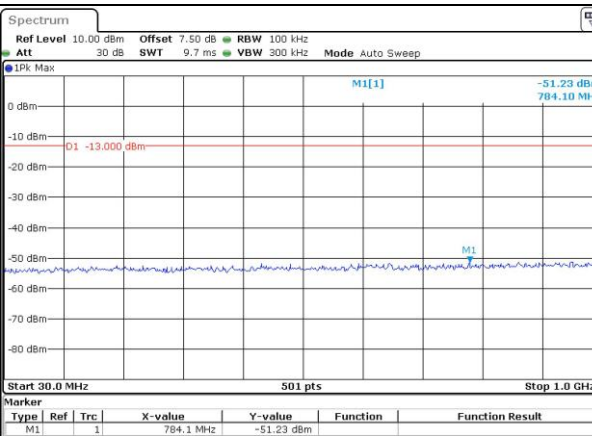
Channel

10MHz Bandwidth QPSK

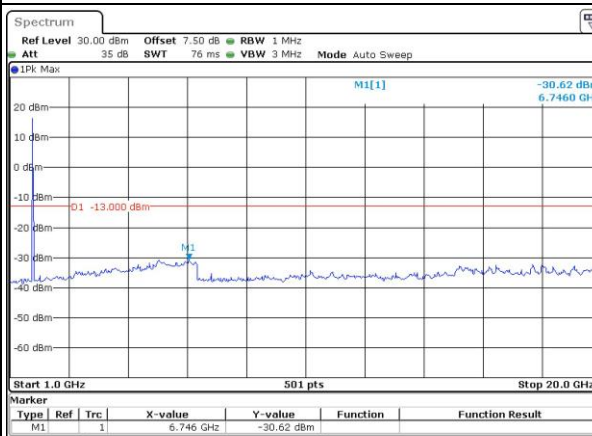
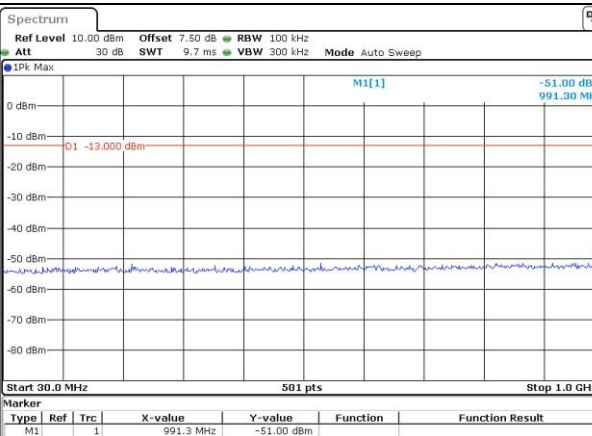
Lowest



Middle



Highest

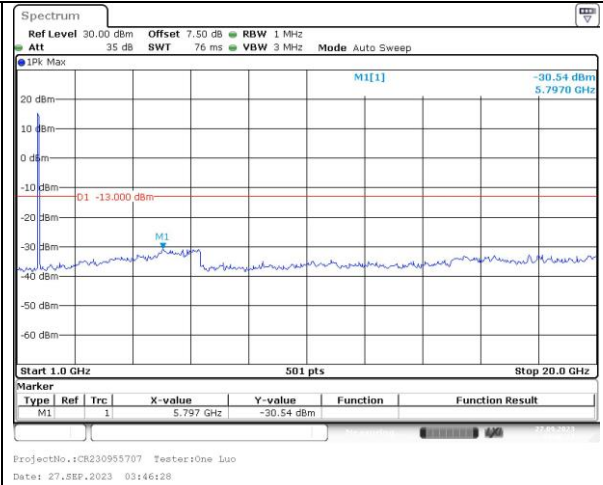
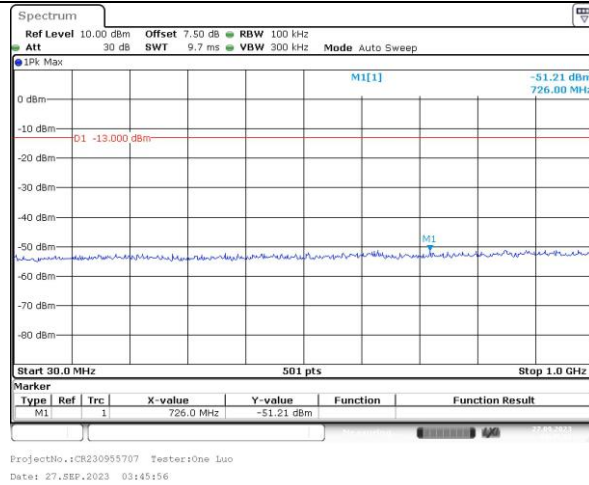


Spurious Emissions at Antenna Terminal

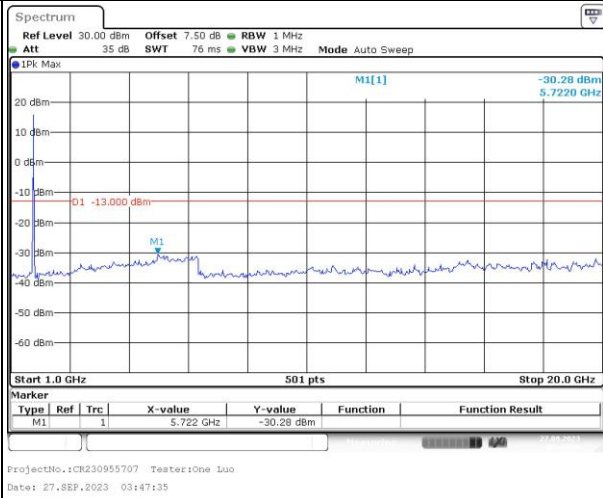
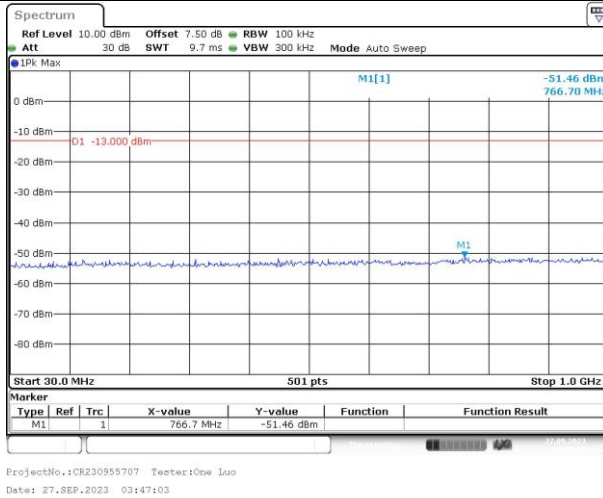
Channel

15MHz Bandwidth QPSK

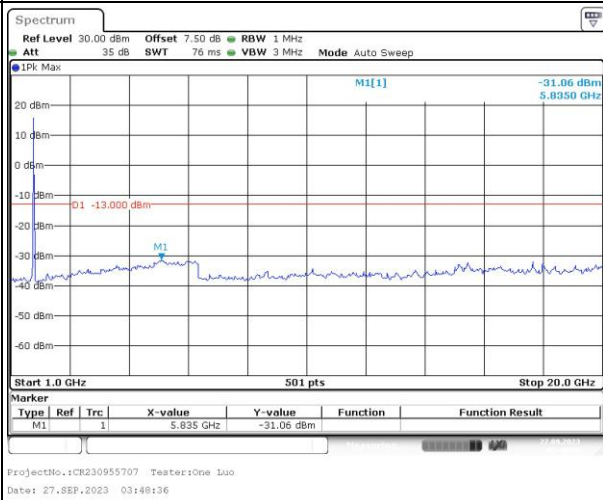
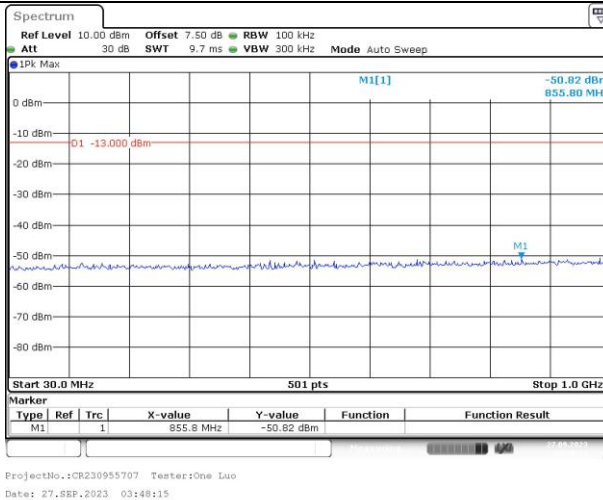
Lowest



Middle



Highest

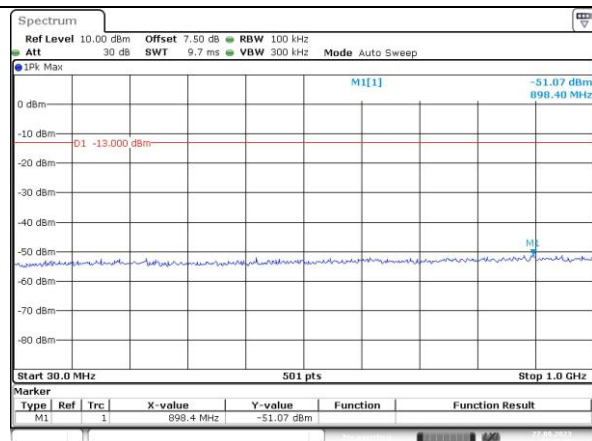


Spurious Emissions at Antenna Terminal

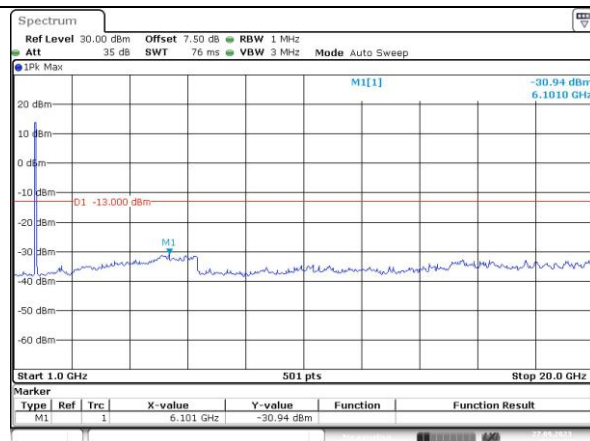
Channel

20MHz Bandwidth QPSK

Lowest

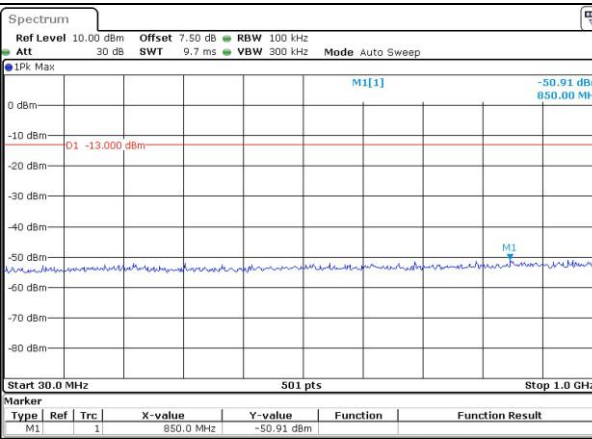


ProjectNo.:CR230955707 Tester:One Luo
Date: 27.SEP.2023 03:49:07

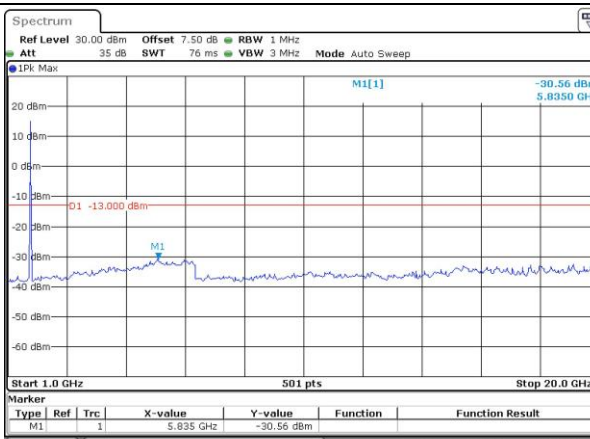


ProjectNo.:CR230955707 Tester:One Luo
Date: 27.SEP.2023 03:49:34

Middle

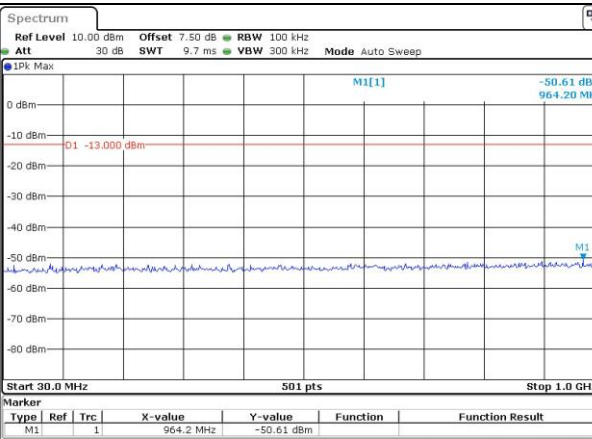


ProjectNo.:CR230955707 Tester:One Luo
Date: 27.SEP.2023 03:49:59

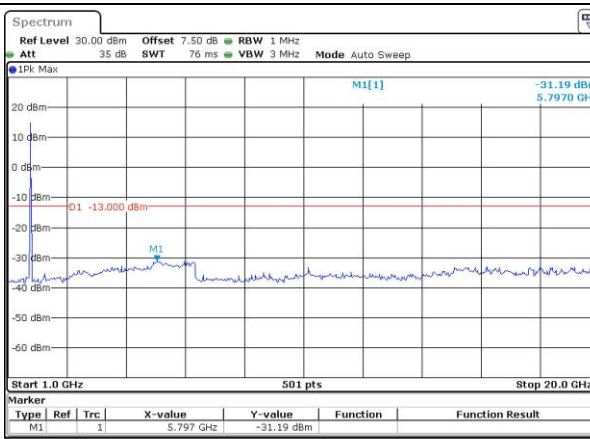


ProjectNo.:CR230955707 Tester:One Luo
Date: 27.SEP.2023 03:50:26

Highest

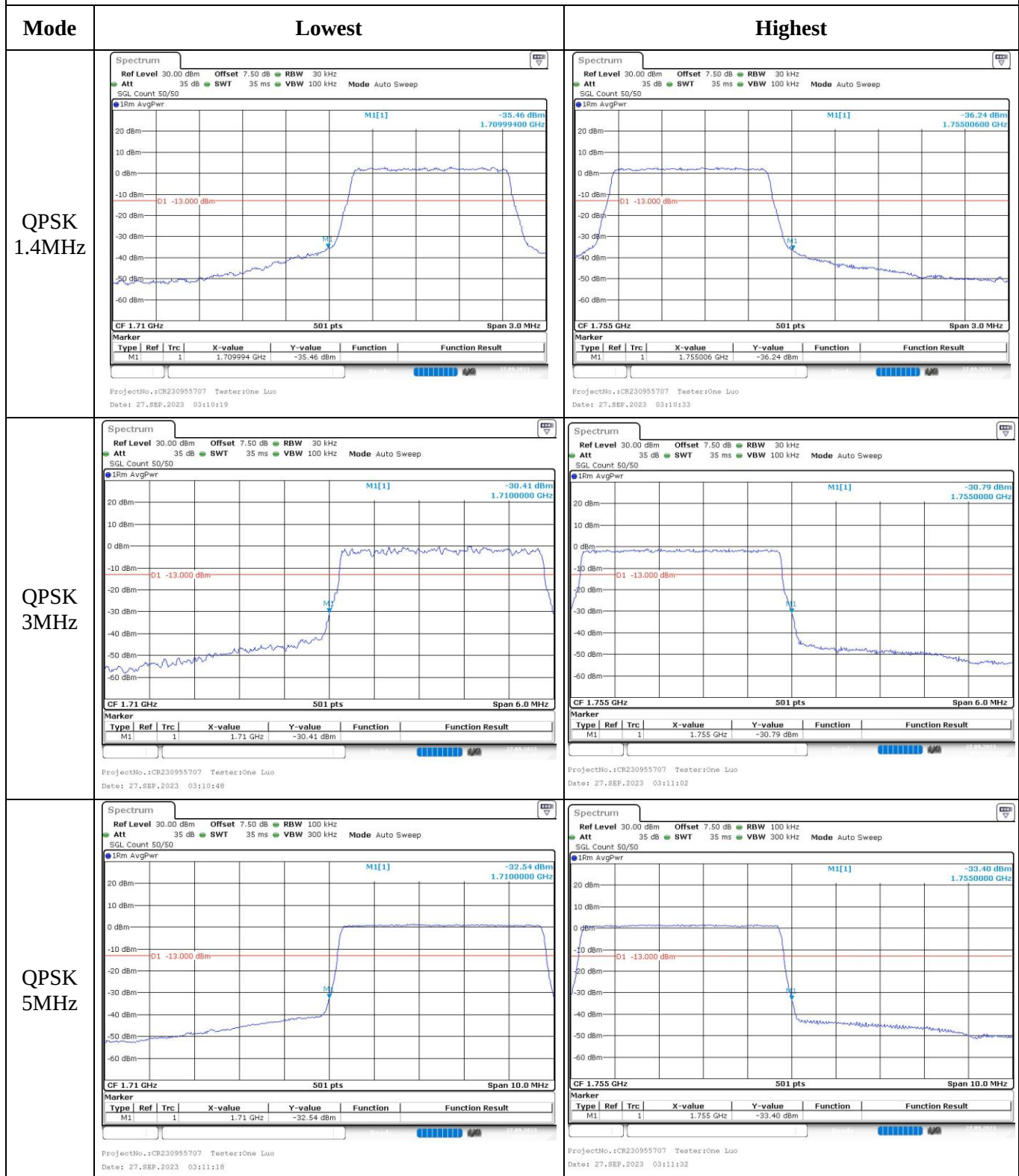


ProjectNo.:CR230955707 Tester:One Luo
Date: 27.SEP.2023 03:50:57

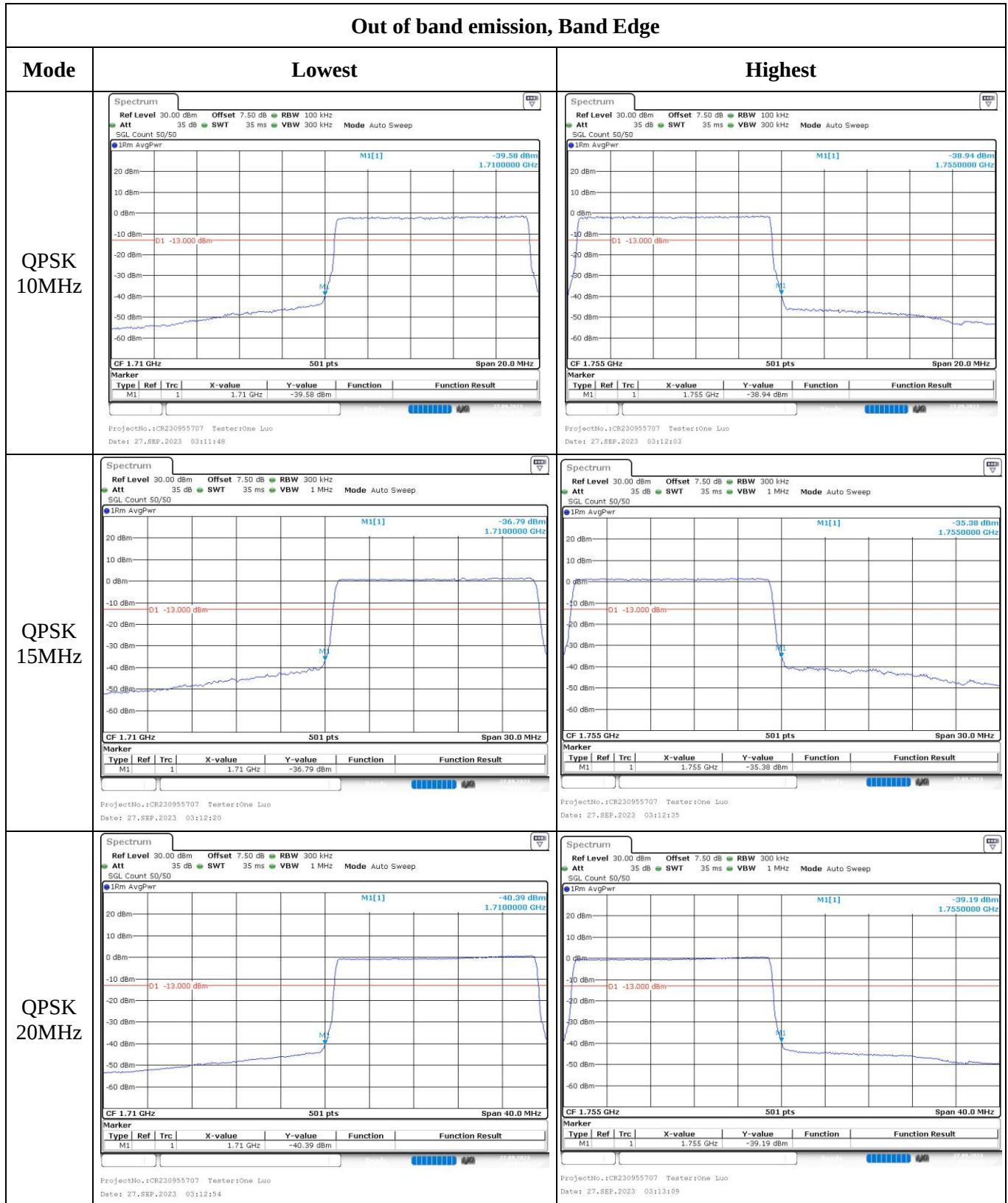


ProjectNo.:CR230955707 Tester:One Luo
Date: 27.SEP.2023 03:51:31

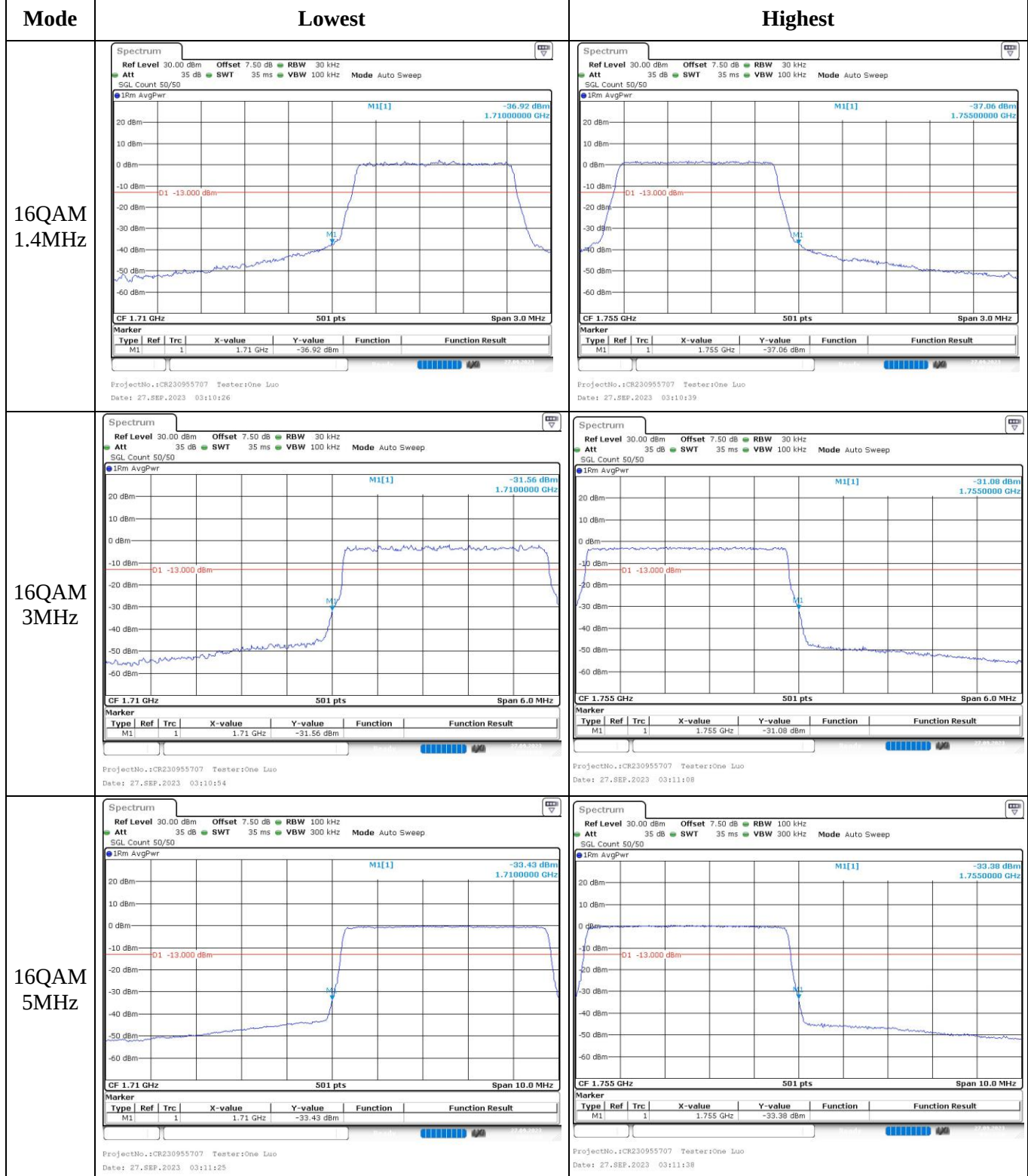
Out of band emission, Band Edge



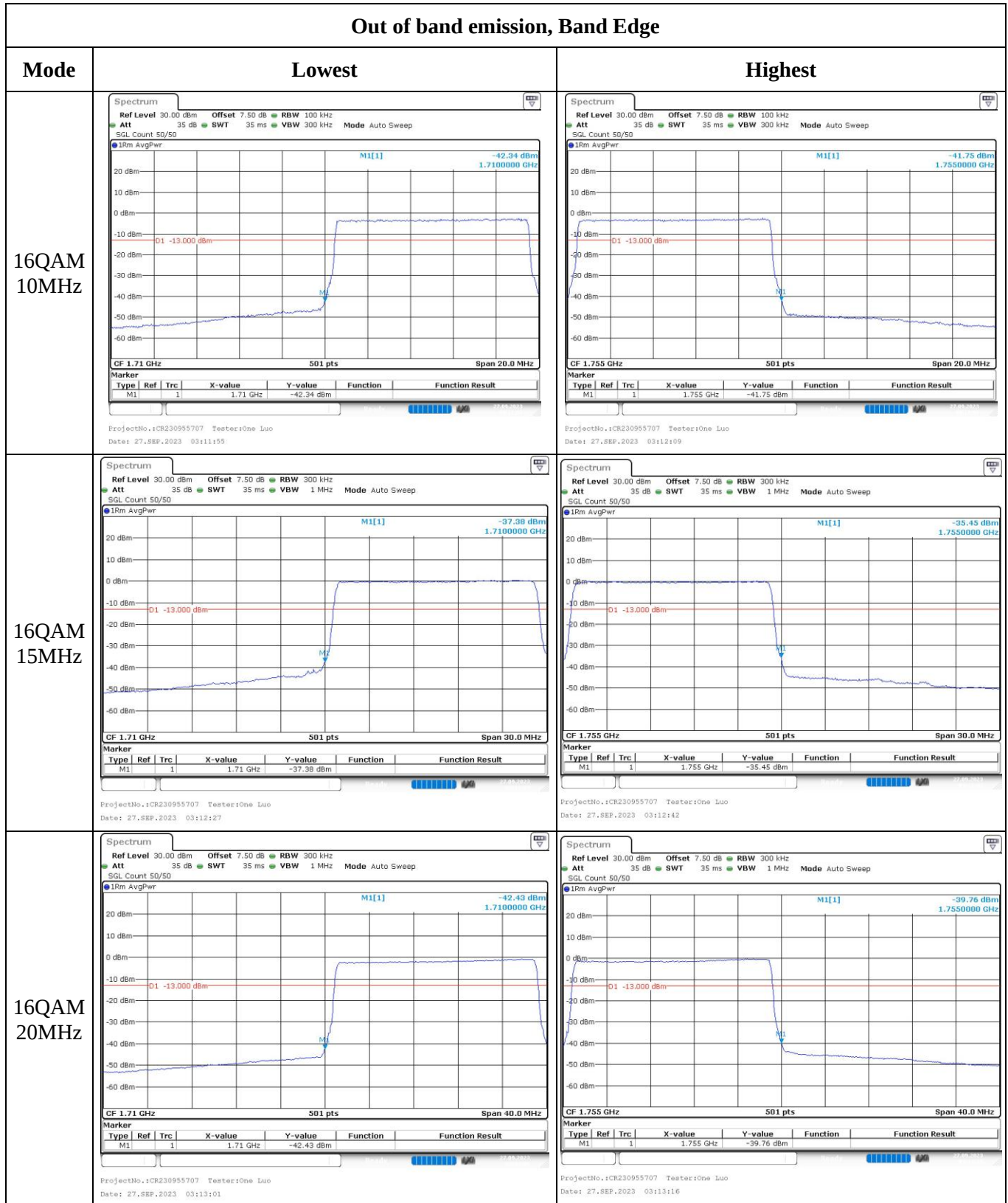
Out of band emission, Band Edge



Out of band emission, Band Edge



Out of band emission, Band Edge



4.8 Antenna Port Test Data and Results for LTE Band 5

Serial Number:	2BKJ-2	Test Date:	2023/9/27
Test Site:	RF	Test Mode:	Transmitting
Tester:	One Luo	Test Result:	Pass

Environmental Conditions:

Temperature: (°C)	26.3	Relative Humidity: (%)	45	ATM Pressure: (kPa)	100.5
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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	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
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
Weinschel	Power Splitter	1515	RA914	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)
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 Limit (dBm)
		Lowest Channel	Middle Channel	Highest Channel		
1.4MHz QPSK	RB1#0	22.1	22.11	22.2	16.21	38.45
	RB1#3	22.21	22.15	22.1		
	RB1#5	22.15	22.13	22.05		
	RB3#0	22.01	22.17	22.1		
	RB3#3	22.06	22.14	22.09		
	RB6#0	21.63	21.66	21.43		
1.4MHz 16QAM	RB1#0	21.82	21.09	21.35	15.82	38.45
	RB1#3	21.71	21.03	21.5		
	RB1#5	21.65	20.98	21.44		
	RB3#0	21.03	20.98	21.01		
	RB3#3	21.02	20.93	21.11		
	RB6#0	20.26	20.05	20.42		
3MHz QPSK	RB1#0	22.13	22.07	22.03	16.23	38.45
	RB1#8	22.04	22.2	21.99		
	RB1#14	22.15	22.23	22.03		
	RB6#0	21.69	21.62	21.73		
	RB6#9	21.71	21.74	21.63		
	RB15#0	21.67	21.85	21.63		
3MHz 16QAM	RB1#0	21.88	20.78	21.36	15.88	38.45
	RB1#8	21.84	20.92	21.28		
	RB1#14	21.22	20.85	21.32		
	RB6#0	20.31	20.77	20.25		
	RB6#9	20.33	20.29	20.09		
	RB15#0	20.1	20.13	20.17		
5MHz QPSK	RB1#0	22.33	22.36	22.41	16.45	38.45
	RB1#13	22.45	22.42	22.41		
	RB1#24	22.44	22.37	22.23		
	RB15#0	21.75	21.91	21.89		
	RB15#10	21.93	22.03	21.9		
	RB25#0	21.9	22.08	21.85		
5MHz 16QAM	RB1#0	21.49	21.03	20.49	15.54	38.45
	RB1#13	21.54	21.18	20.36		
	RB1#24	21.35	21.14	20.38		
	RB15#0	20.22	20.88	20.87		
	RB15#10	20.3	20.5	20.41		
	RB25#0	20.41	20.35	20.41		
10MHz QPSK	RB1#0	22.47	22.34	22.3	16.53	38.45
	RB1#25	22.49	22.53	22.34		
	RB1#49	22.53	22.41	22.17		

10MHz 16QAM	RB25#0	22	21.87	21.81	15.67	38.45
	RB25#25	21.88	21.87	21.89		
	RB50#0	21.94	22.11	22		
	RB1#0	21.5	20.74	21.52		
	RB1#25	21.51	20.91	21.64		
	RB1#49	21.67	20.85	21.52		
	RB25#0	20.61	20.98	20.49		
	RB25#25	20.97	20.69	20.46		
	RB50#0	20.56	20.41	20.53		

Note:

ERP= Conducted Power(dBm) - L_c(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	5.10	5.68	4.26	13
	RB50#0	5.42	4.9	5.16	13
10MHz 16QAM	RB1#0	5.94	6.64	5.28	13
	RB50#0	6.41	6.06	6.26	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	1.102	1.102	1.096	1.254	1.254	1.254
1.4MHz 16QAM	1.09	1.09	1.102	1.248	1.23	1.26
3MHz QPSK	2.695	2.683	2.695	3.012	3	2.988
3MHz 16QAM	2.683	2.683	2.695	3	3.024	3.012
5MHz QPSK	4.511	4.511	4.511	5.02	5	4.98
5MHz 16QAM	4.531	4.531	4.511	5.02	5.02	5
10MHz QPSK	8.942	8.942	8.982	9.76	9.8	9.8
10MHz 16QAM	8.982	8.942	8.942	9.84	9.8	9.76

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					
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	3.85	15.42	0.018	2.5
	-20	3.85	-6.97	-0.008	2.5
	-10	3.85	-5.5	-0.007	2.5
	0	3.85	6.06	0.007	2.5
	10	3.85	9.8	0.012	2.5
	20	3.85	5.03	0.006	2.5
	30	3.85	-6.62	-0.008	2.5
	40	3.85	-8.73	-0.010	2.5
	50	3.85	-7.05	-0.008	2.5
Frequency Stability vs. Voltage	20	3.6	8.99	0.011	2.5
	20	4.4	-7.17	-0.009	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	3.85	5.88	0.007	2.5
	-20	3.85	8.1	0.010	2.5
	-10	3.85	-8.59	-0.010	2.5
	0	3.85	9.33	0.011	2.5
	10	3.85	-6.94	-0.008	2.5
	20	3.85	7.54	0.009	2.5
	30	3.85	6.43	0.008	2.5
	40	3.85	-6.17	-0.007	2.5
	50	3.85	-6.44	-0.008	2.5
Frequency Stability vs. Voltage	20	3.6	6.34	0.008	2.5
	20	4.4	-6.89	-0.008	2.5
				Result:	Pass