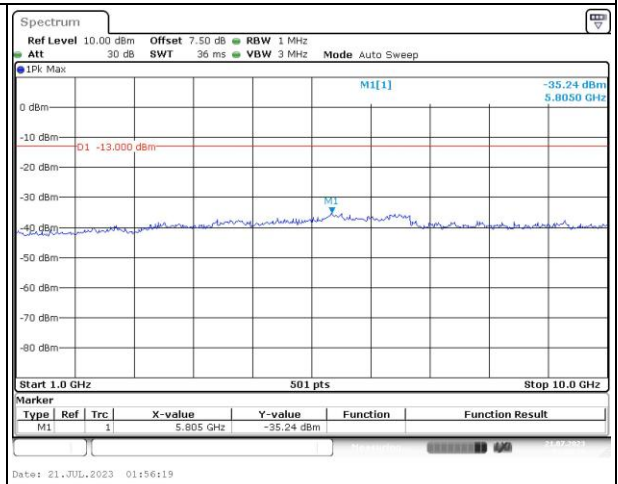
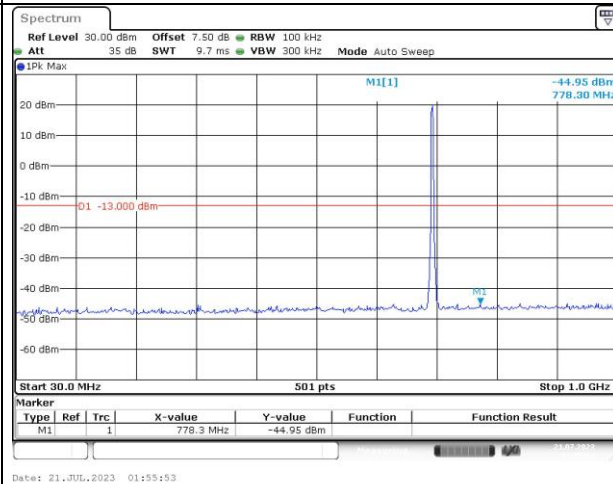


Spurious Emissions at Antenna Terminal

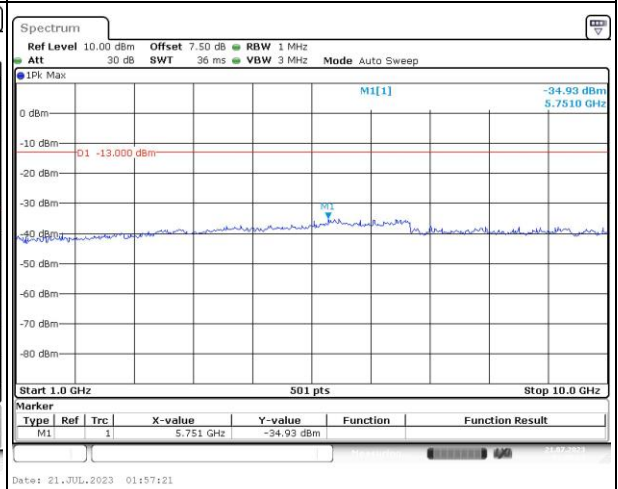
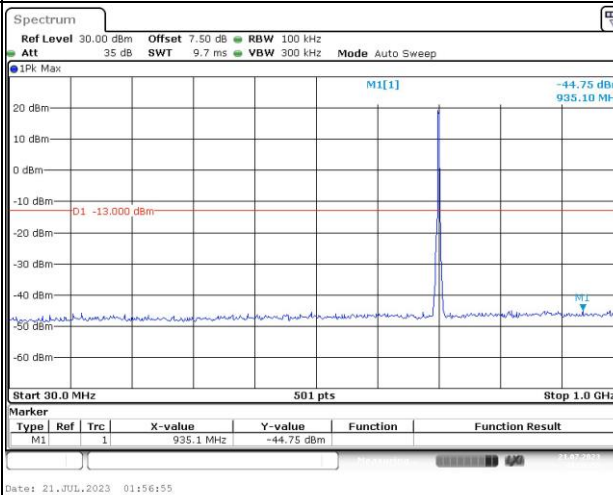
Channel

3MHz Bandwidth QPSK

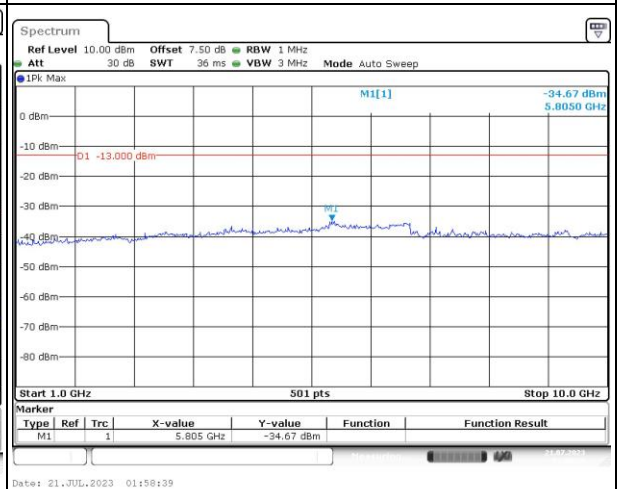
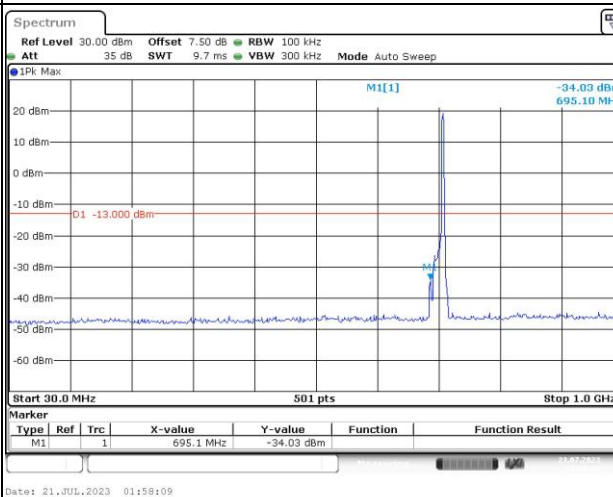
Lowest



Middle



Highest

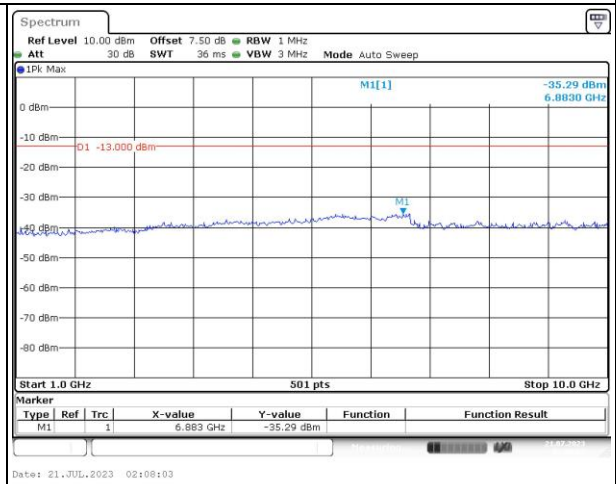
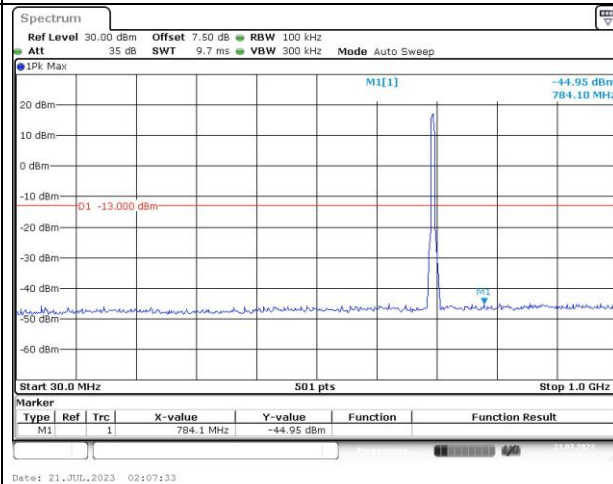


Spurious Emissions at Antenna Terminal

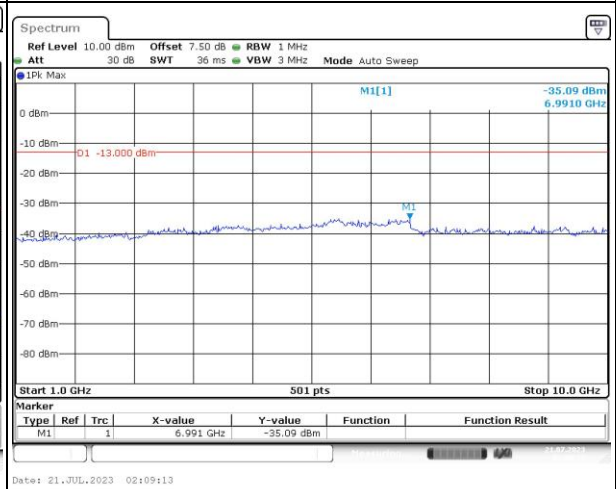
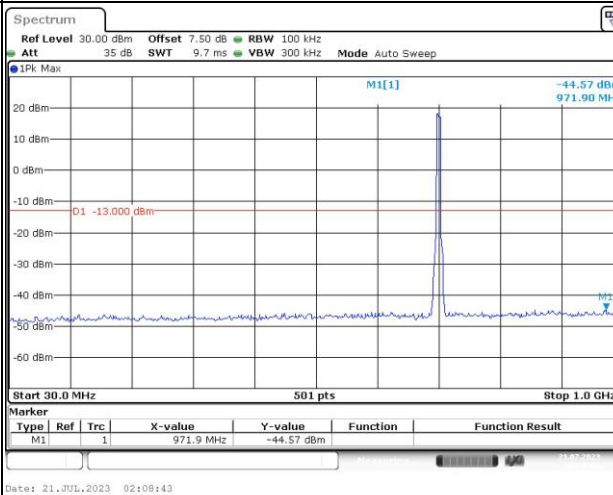
Channel

5MHz Bandwidth QPSK

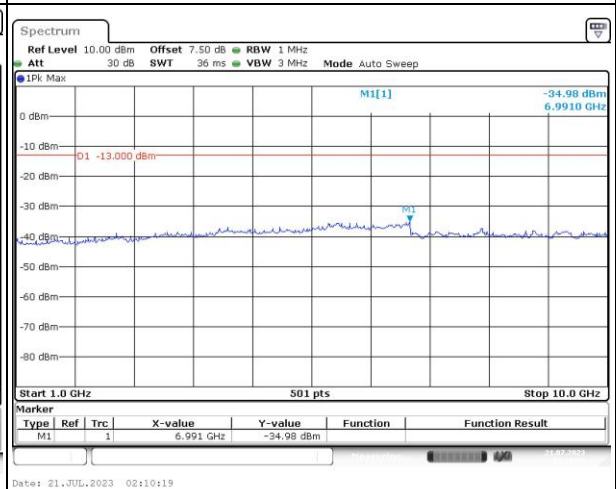
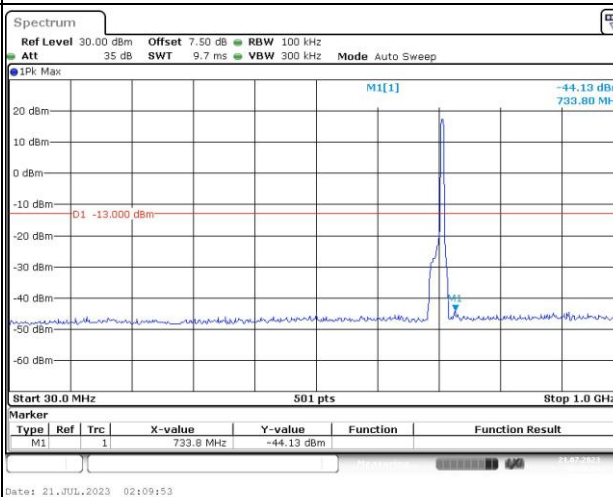
Lowest



Middle



Highest

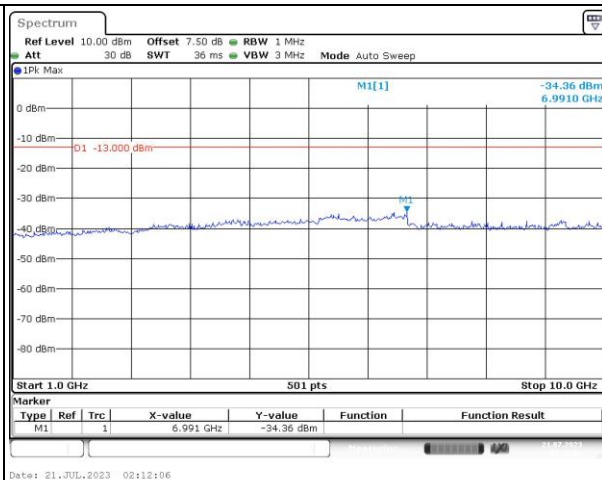
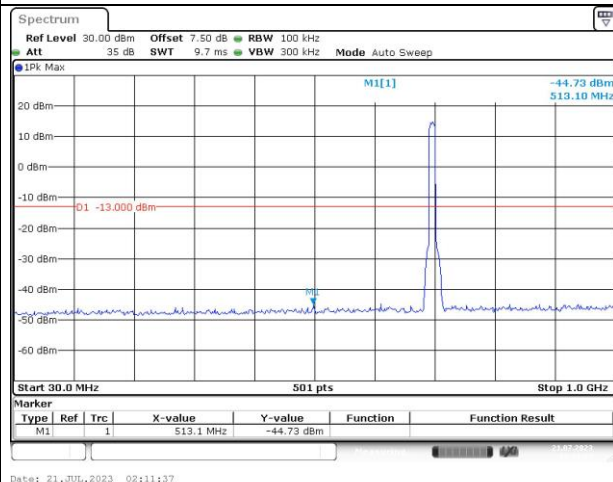


Spurious Emissions at Antenna Terminal

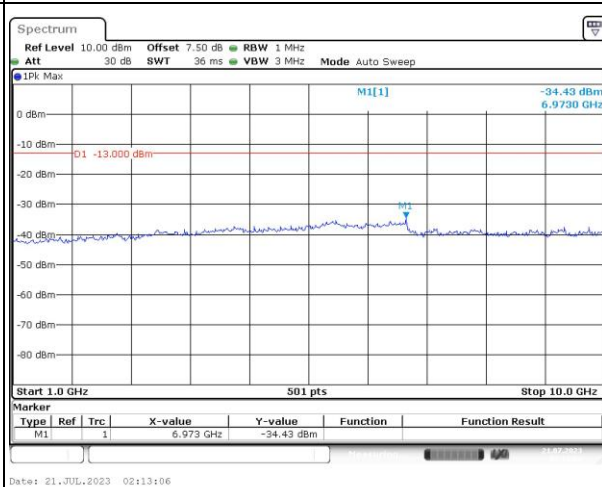
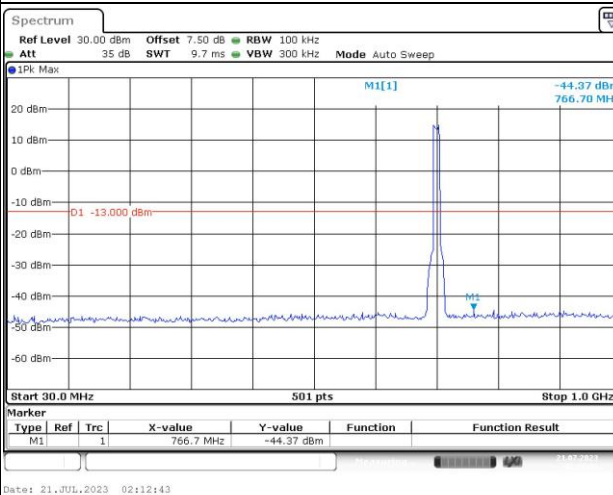
Channel

10MHz Bandwidth QPSK

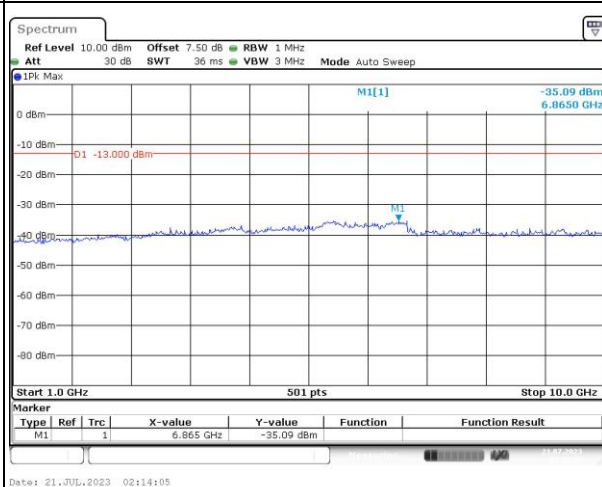
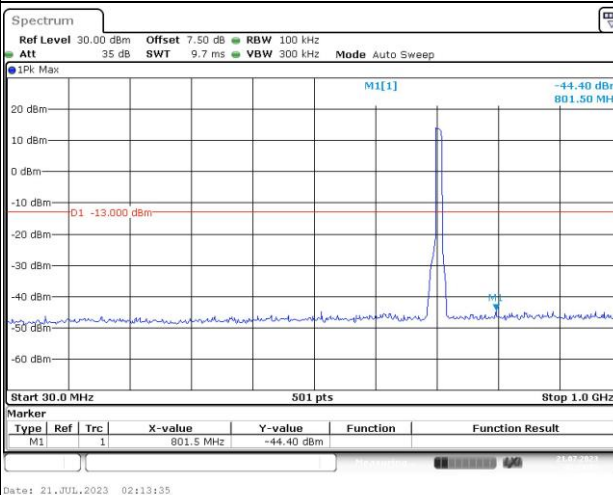
Lowest



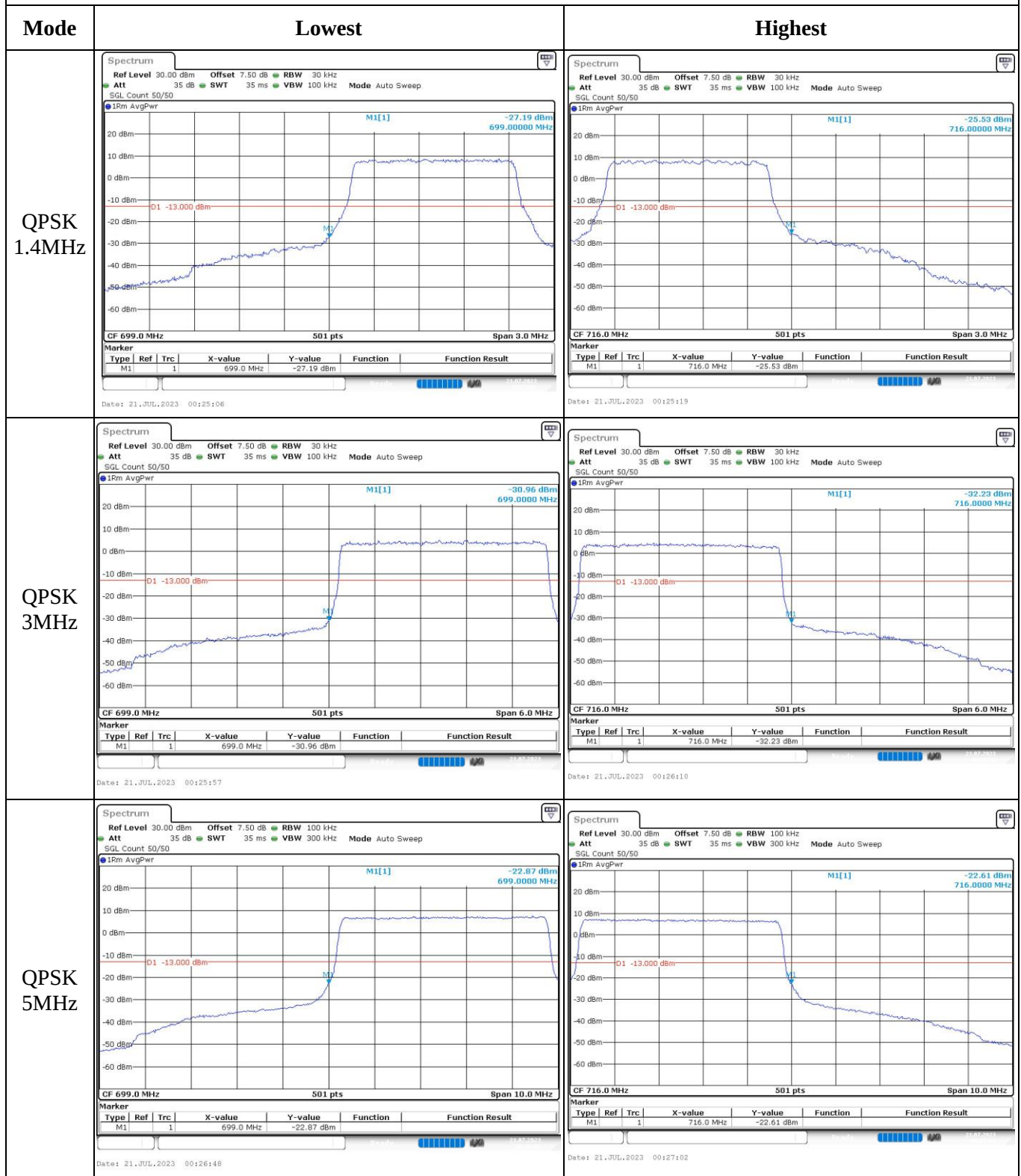
Middle



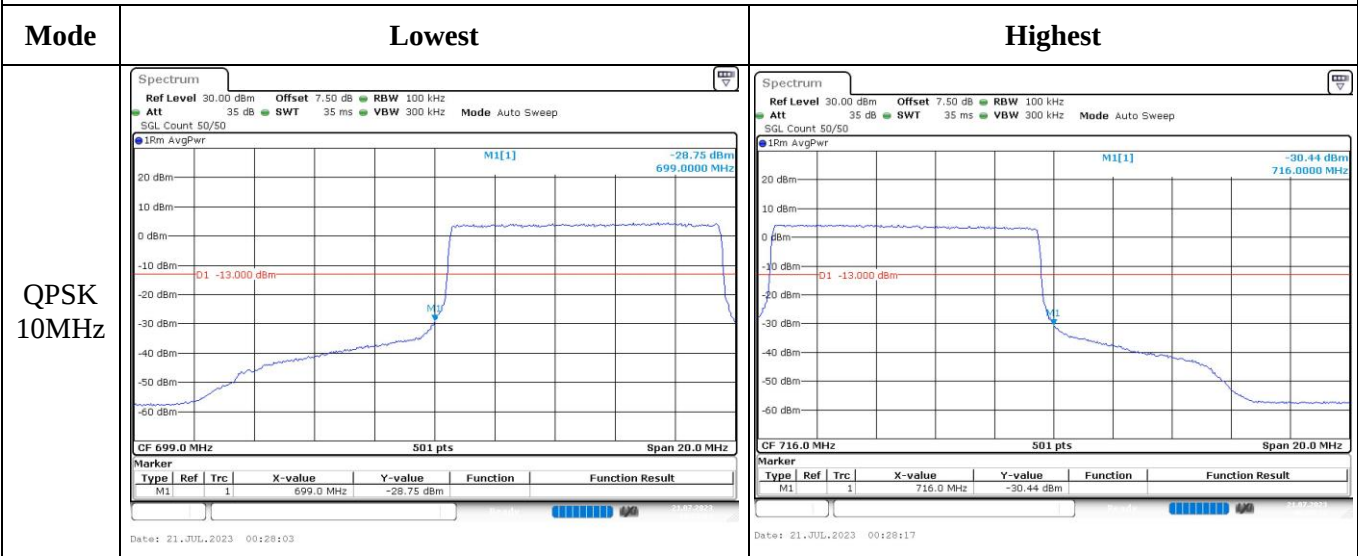
Highest



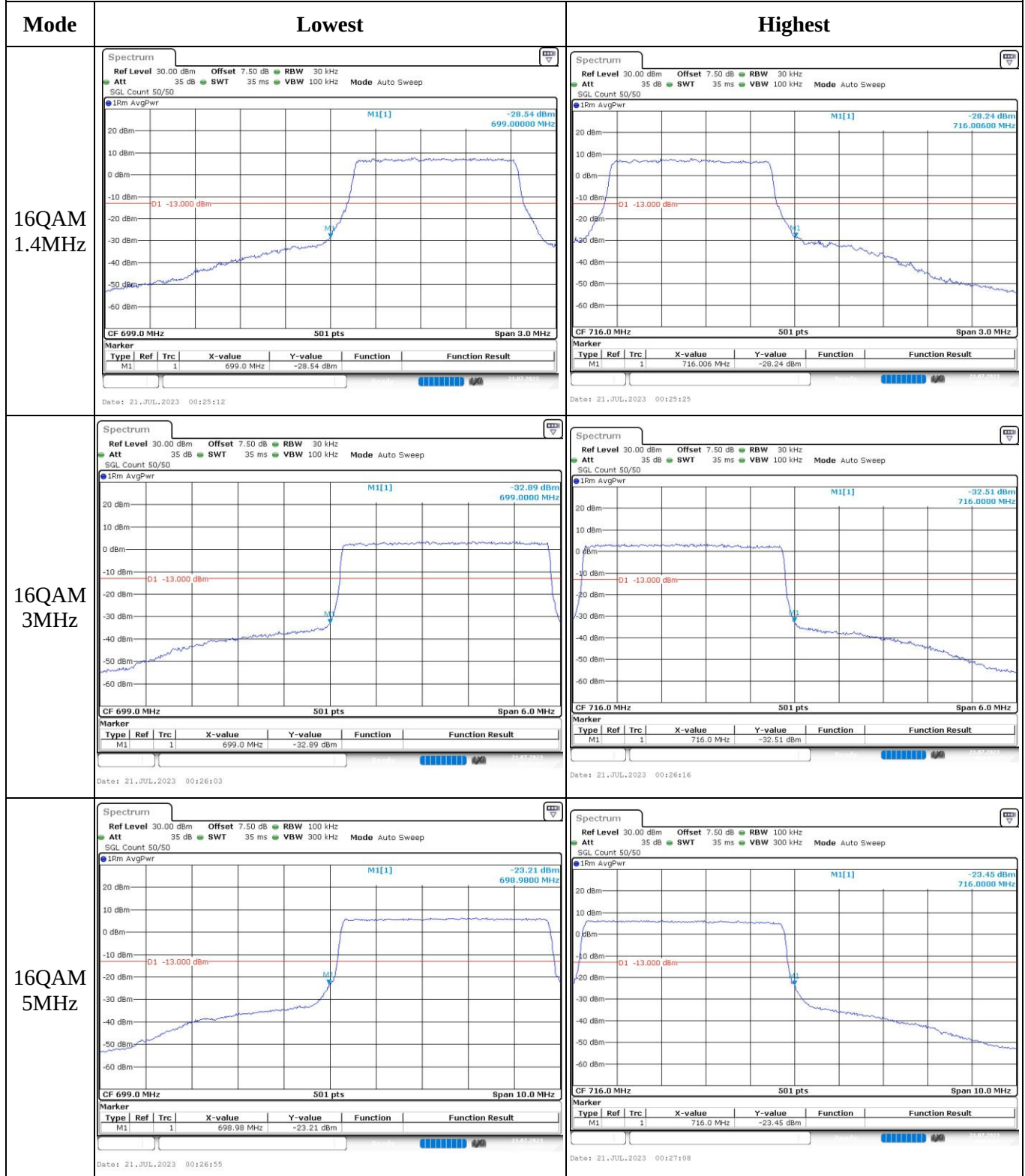
Out of band emission, Band Edge



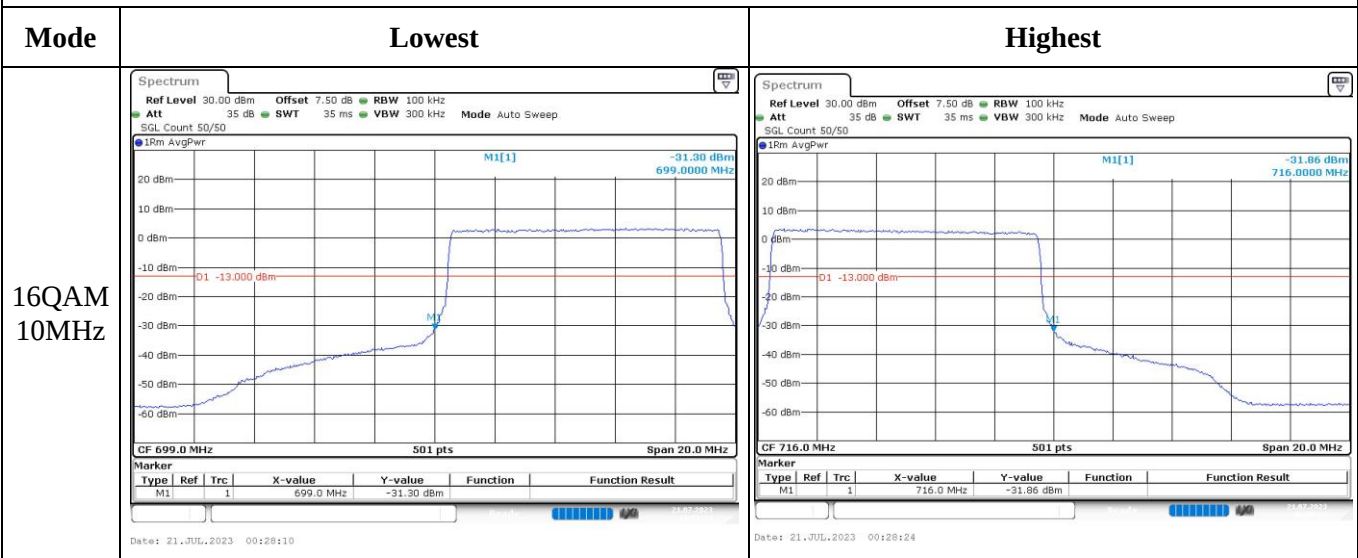
Out of band emission, Band Edge



Out of band emission, Band Edge



Out of band emission, Band Edge



4.11 Antenna Port Test Data and Results for LTE Band 13

Serial Number:	287E_1	Test Date:	2023/7/17~2023/8/29
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
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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
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	779.5	/	784.5
10MHz	/	782	/

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	24.31	/	24.2	18.39	34.77
	RB1#13	24.44	/	24.43		
	RB1#24	24.34	/	24.29		
	RB15#0	23.32	/	23.4		
	RB15#10	23.37	/	23.34		
	RB25#0	23.29	/	23.3		
5MHz 16QAM	RB1#0	23.5	/	23.06	17.57	34.77
	RB1#13	23.62	/	23.2		
	RB1#24	23.52	/	23.1		
	RB15#0	22.28	/	22.38		
	RB15#10	22.37	/	22.31		
	RB25#0	22.28	/	22.32		
10MHz QPSK	RB1#0	/	24.37	/	18.52	34.77
	RB1#25	/	24.57	/		
	RB1#49	/	24.49	/		
	RB25#0	/	23.33	/		
	RB25#25	/	23.41	/		
	RB50#0	/	23.34	/		
10MHz 16QAM	RB1#0	/	23.38	/	17.56	34.77
	RB1#25	/	23.61	/		
	RB1#49	/	23.46	/		
	RB25#0	/	22.35	/		
	RB25#25	/	22.34	/		
	RB50#0	/	22.31	/		

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	/	3.74	/	13
	RB50#0	/	4.41	/	13
10MHz 16QAM	RB1#0	/	4.52	/	13
	RB50#0	/	5.42	/	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	4.511	/	4.551	5.16	/	5.28
5MHz 16QAM	4.551	/	4.511	5.22	/	5.16
10MHz QPSK	/	8.942	/	/	10	/
10MHz 16QAM	/	8.942	/	/	9.76	/

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.
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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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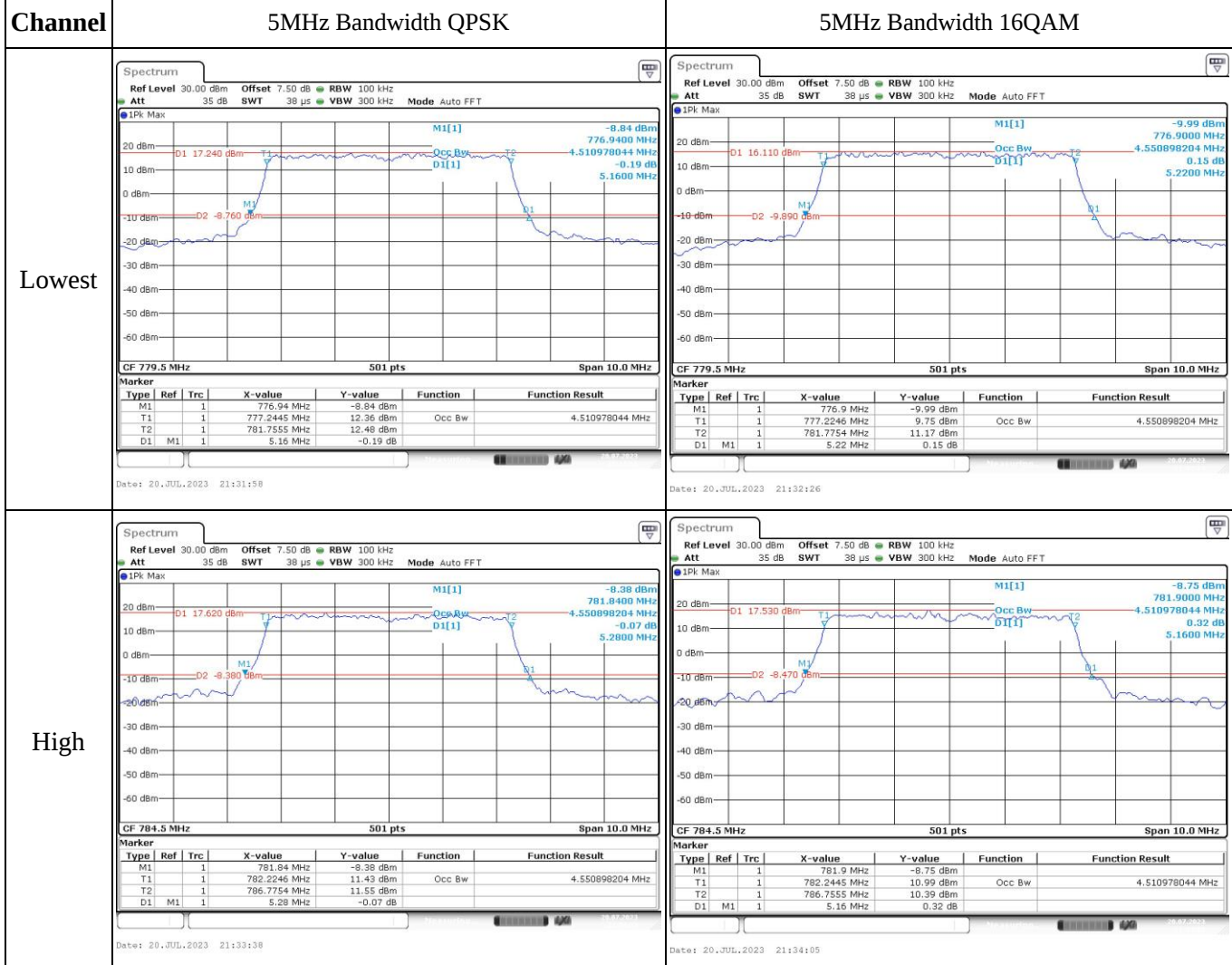
FCC §2.1055, §27.54: Frequency Stability

Test Mode:	10M 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	777.582	777.00	786.499	787.00
	-20	3.78	777.553	777.00	786.484	787.00
	-10	3.78	777.544	777.00	786.485	787.00
	0	3.78	777.511	777.00	786.497	787.00
	10	3.78	777.549	777.00	786.439	787.00
	20	3.78	777.529	777.00	786.471	787.00
	30	3.78	777.592	777.00	786.443	787.00
	40	3.78	777.533	777.00	786.476	787.00
	50	3.78	777.558	777.00	786.446	787.00
Frequency Stability vs. Voltage	20	3.6	777.530	777.00	786.420	787.00
	20	4.4	777.544	777.00	786.410	787.00
Result:					Pass	

Test Mode:	10M 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	777.588	777.00	786.463	787.00
	-20	3.78	777.503	777.00	786.450	787.00
	-10	3.78	777.512	777.00	786.469	787.00
	0	3.78	777.573	777.00	786.442	787.00
	10	3.78	777.527	777.00	786.428	787.00
	20	3.78	777.599	777.00	786.471	787.00
	30	3.78	777.521	777.00	786.451	787.00
	40	3.78	777.533	777.00	786.426	787.00
	50	3.78	777.535	777.00	786.488	787.00
Frequency Stability vs. Voltage	20	3.6	777.565	777.00	786.449	787.00
	20	4.4	777.584	777.00	786.445	787.00
					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



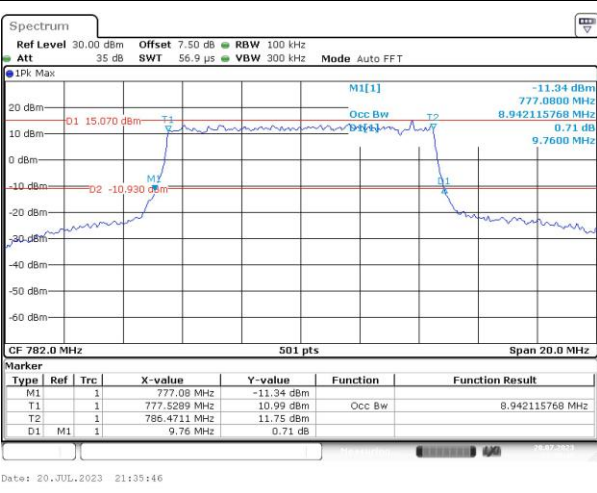
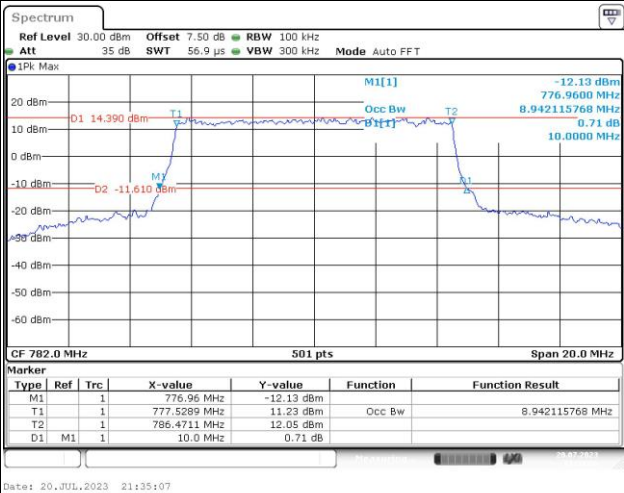
Occupied Bandwidth

Channel

10MHz Bandwidth QPSK

10MHz Bandwidth 16QAM

Middle

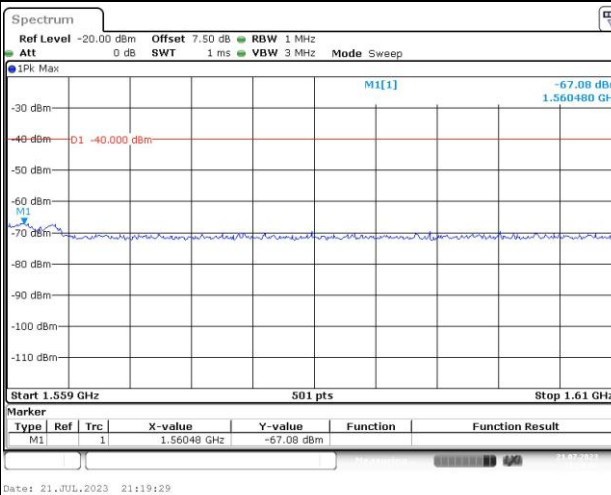
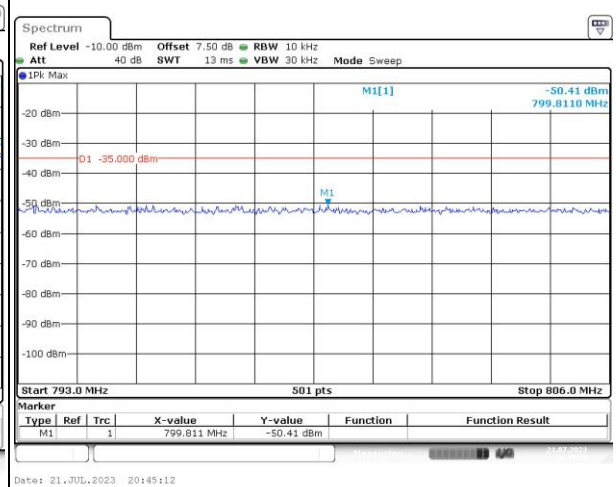
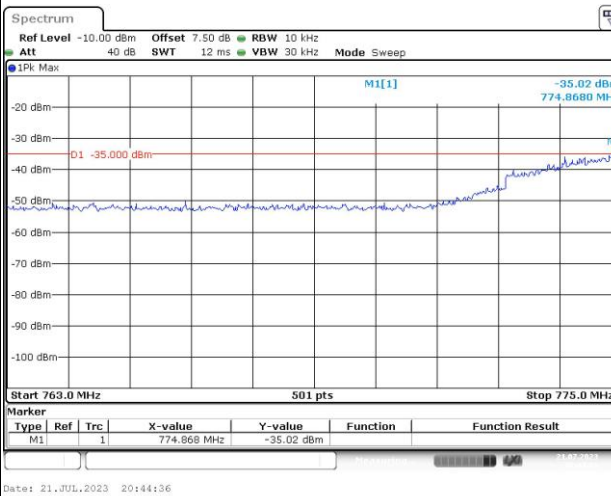
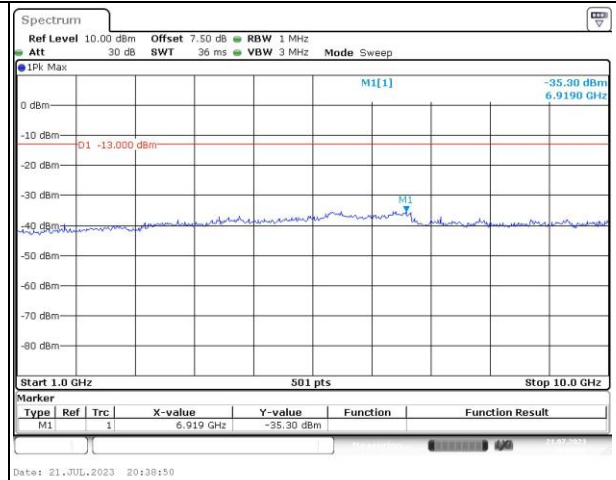
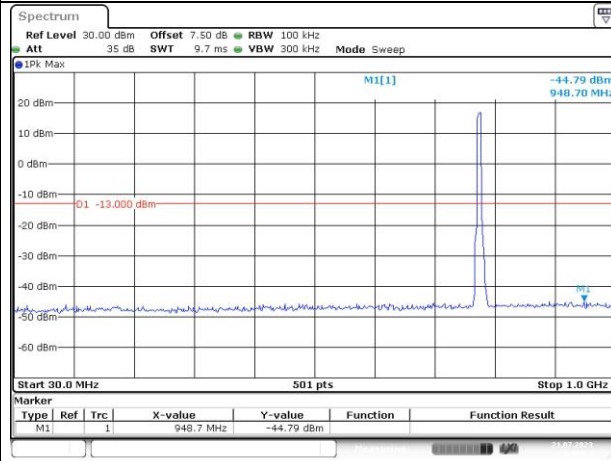


Spurious Emissions at Antenna Terminal

Channel

5MHz Bandwidth QPSK

Low

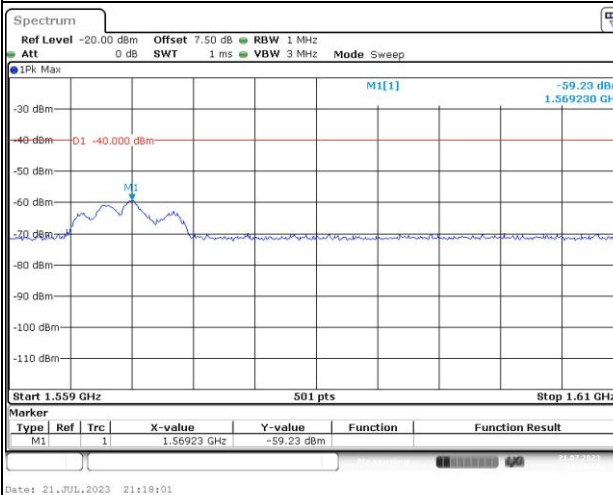
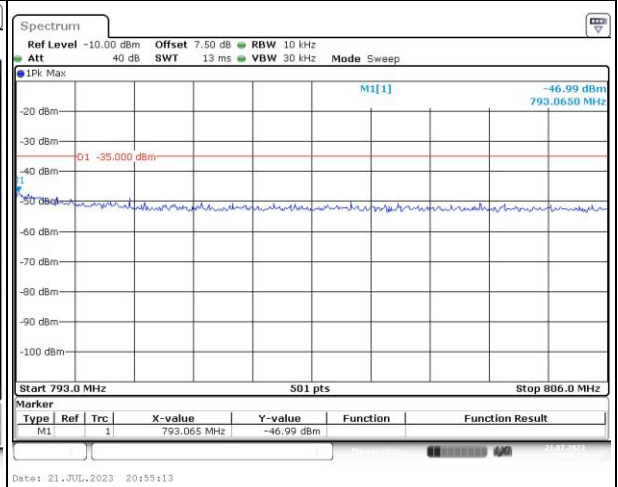
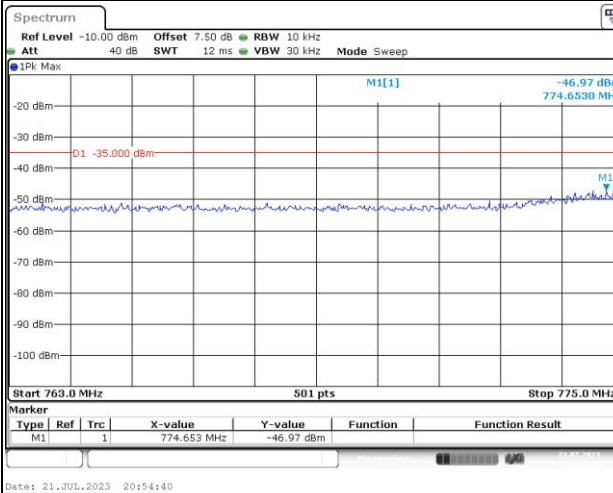
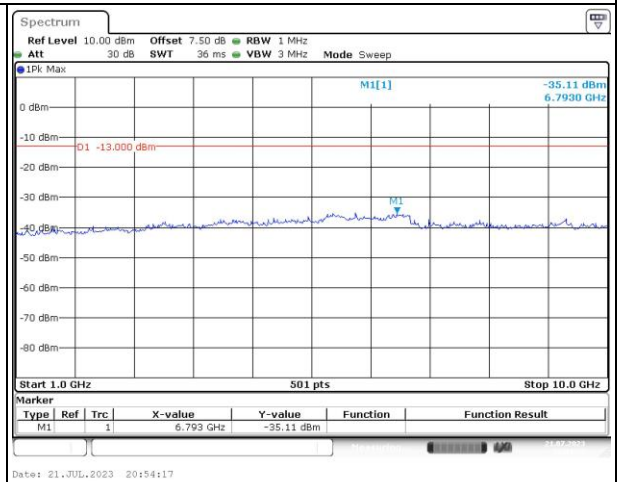
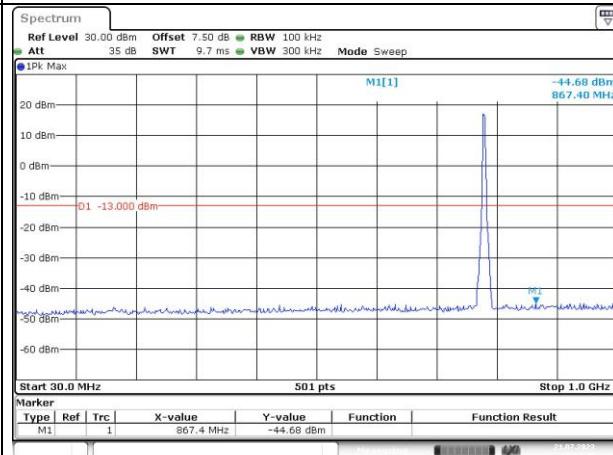


Spurious Emissions at Antenna Terminal

Channel

5MHz Bandwidth QPSK

High

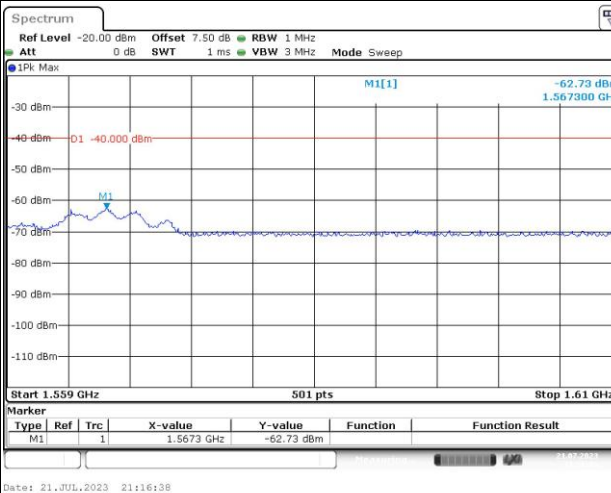
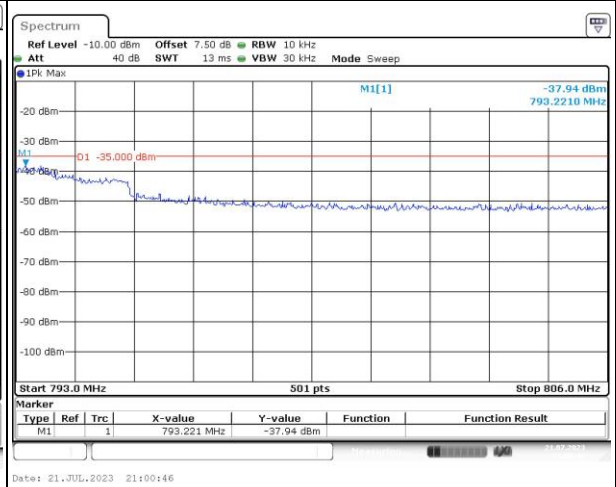
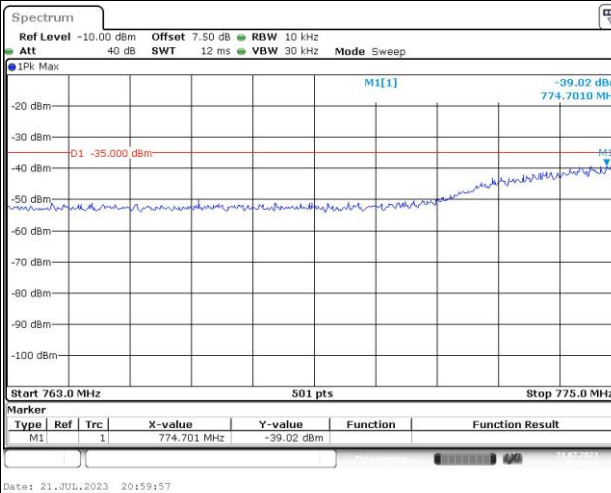
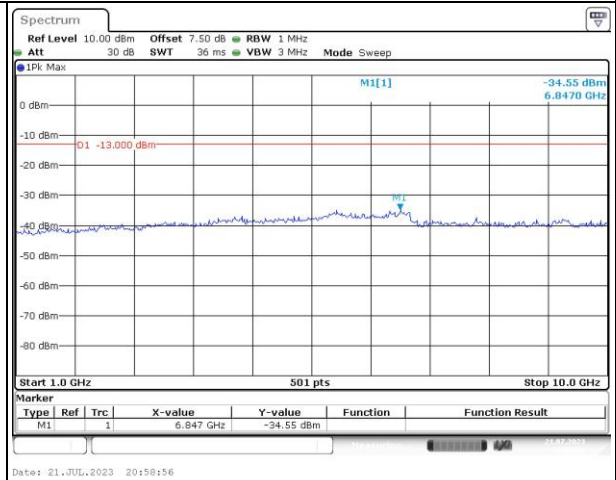
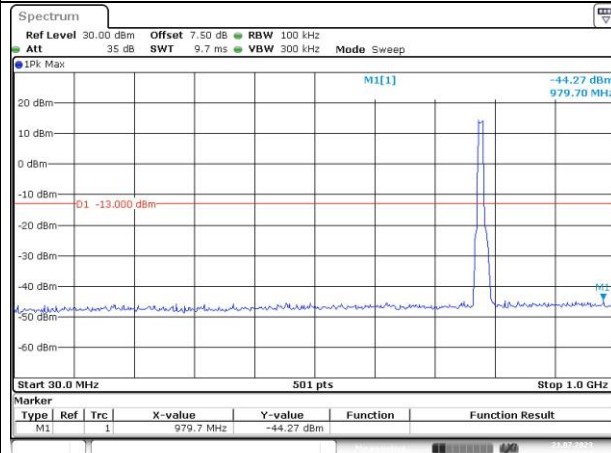


Spurious Emissions at Antenna Terminal

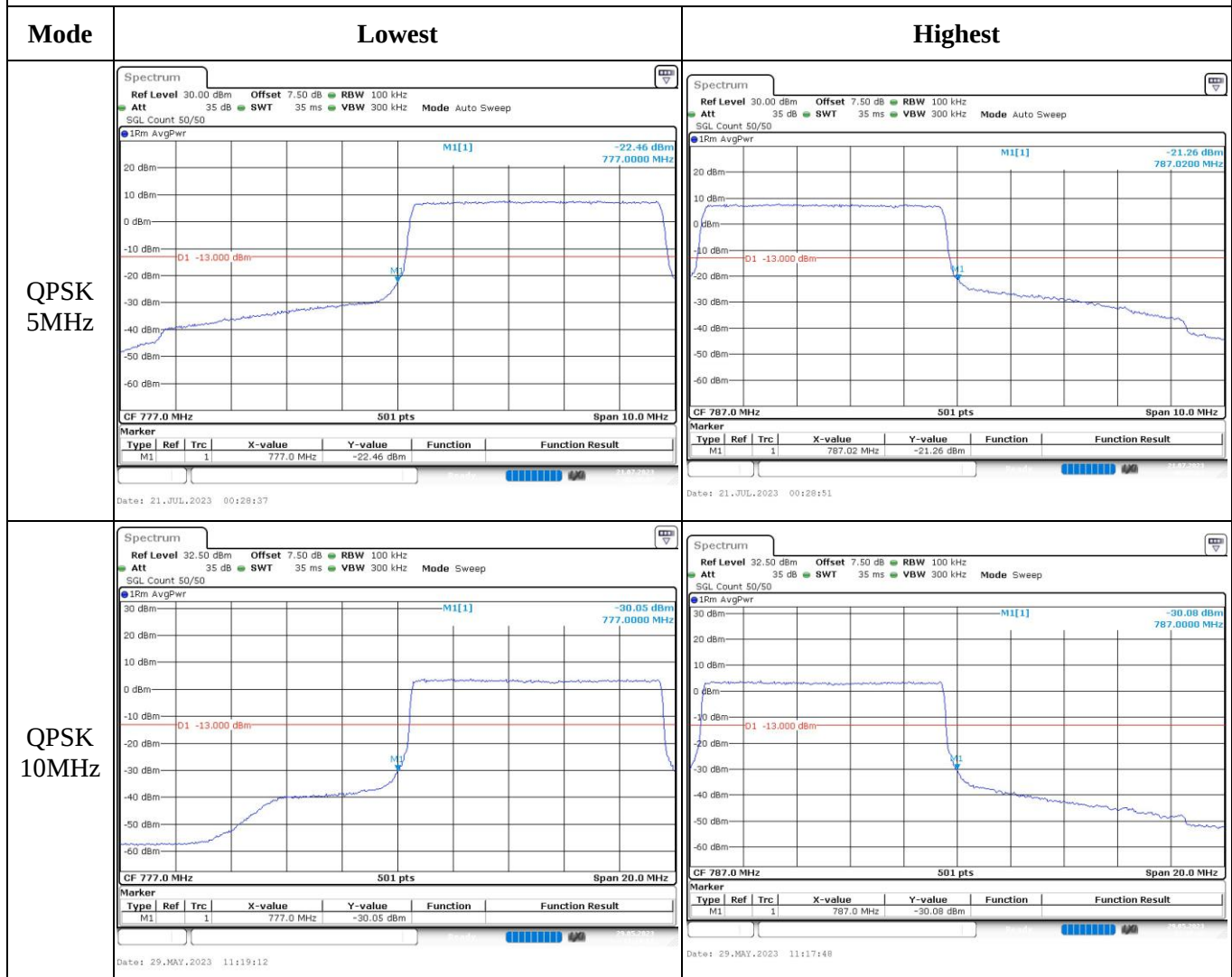
Channel

10MHz Bandwidth QPSK

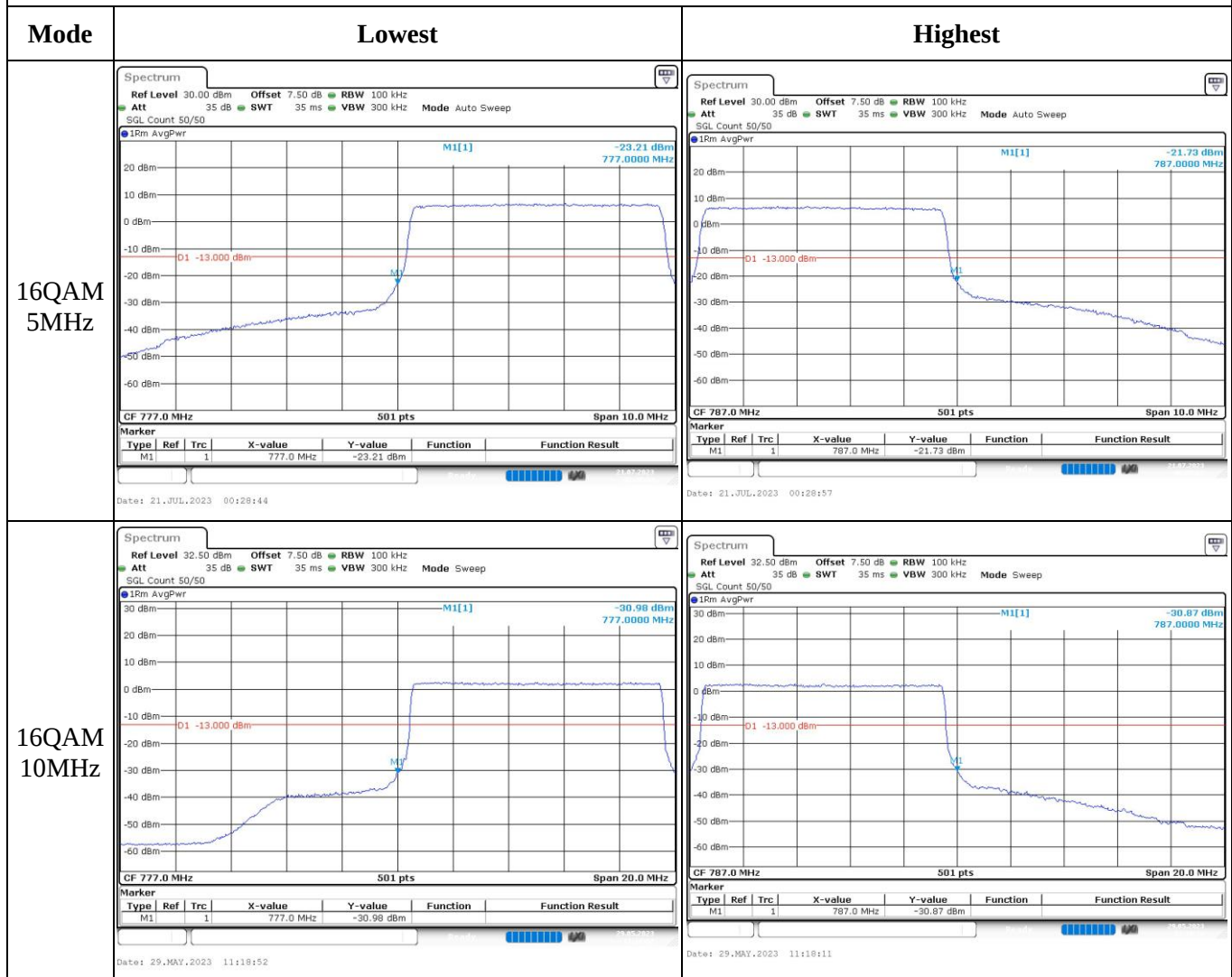
Middle



Out of band emission, Band Edge



Out of band emission, Band Edge



4.12 Antenna Port Test Data and Results for LTE Band 17

Serial Number:	287E_1	Test Date:	2023/7/17~2023/7/28
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
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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
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	706.5	710	713.5
10MHz	709	710	711

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	24.04	23.95	23.93	18.07	34.77
	RB1#13	24.12	24.03	24.06		
	RB1#24	24	24	23.97		
	RB15#0	23.03	23.07	23.1		
	RB15#10	23.04	23.03	22.96		
	RB25#0	23.01	22.98	23		
5MHz 16QAM	RB1#0	23.26	22.98	22.8	17.32	34.77
	RB1#13	23.37	23.08	22.92		
	RB1#24	23.22	23.03	22.83		
	RB15#0	22.05	22.12	22.17		
	RB15#10	22.08	22.08	22.05		
	RB25#0	22.09	22.07	22.12		
10MHz QPSK	RB1#0	24.13	24	24.06	18.27	34.77
	RB1#25	24.32	24.24	24.25		
	RB1#49	24.16	24.12	24.13		
	RB25#0	23.13	23.13	23.09		
	RB25#25	23.1	23.06	23.1		
	RB50#0	23.08	23.07	23.08		
10MHz 16QAM	RB1#0	23.05	23.54	23.16	17.64	34.77
	RB1#25	23.17	23.69	23.34		
	RB1#49	23.1	23.63	23.21		
	RB25#0	22.27	22.21	22.14		
	RB25#25	22.23	22.15	22.18		
	RB50#0	22.15	22.16	22.14		

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	4.58	4.58	4.23	13
	RB50#0	4.96	4.96	4.9	13
10MHz 16QAM	RB1#0	5.3	5.57	5.01	13
	RB50#0	5.88	5.86	5.83	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	4.511	4.511	4.531	5.18	5.18	5.24
5MHz 16QAM	4.551	4.551	4.531	5.2	5.24	5.16
10MHz QPSK	8.982	8.982	8.942	9.96	9.96	9.8
10MHz 16QAM	8.982	8.942	8.982	9.92	9.8	9.84

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.
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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:	10M 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	704.449	704.00	715.426	716.00
	-20	3.78	704.438	704.00	715.448	716.00
	-10	3.78	704.406	704.00	715.491	716.00
	0	3.78	704.450	704.00	715.467	716.00
	10	3.78	704.452	704.00	715.475	716.00
	20	3.78	704.489	704.00	715.471	716.00
	30	3.78	704.474	704.00	715.436	716.00
	40	3.78	704.417	704.00	715.470	716.00
	50	3.78	704.408	704.00	715.440	716.00
Frequency Stability vs. Voltage	20	3.6	704.419	704.00	715.463	716.00
	20	4.4	704.442	704.00	715.471	716.00
Result:					Pass	

Test Mode:	10M 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	704.476	704.00	715.448	716.00
	-20	3.78	704.483	704.00	715.423	716.00
	-10	3.78	704.438	704.00	715.463	716.00
	0	3.78	704.472	704.00	715.404	716.00
	10	3.78	704.493	704.00	715.496	716.00
	20	3.78	704.489	704.00	715.471	716.00
	30	3.78	704.425	704.00	715.493	716.00
	40	3.78	704.410	704.00	715.484	716.00
	50	3.78	704.442	704.00	715.405	716.00
Frequency Stability vs. Voltage	20	3.6	704.484	704.00	715.498	716.00
	20	4.4	704.446	704.00	715.405	716.00
					Result:	Pass

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

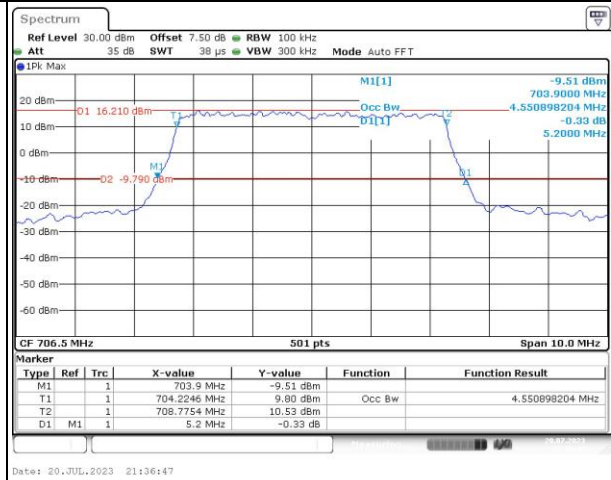
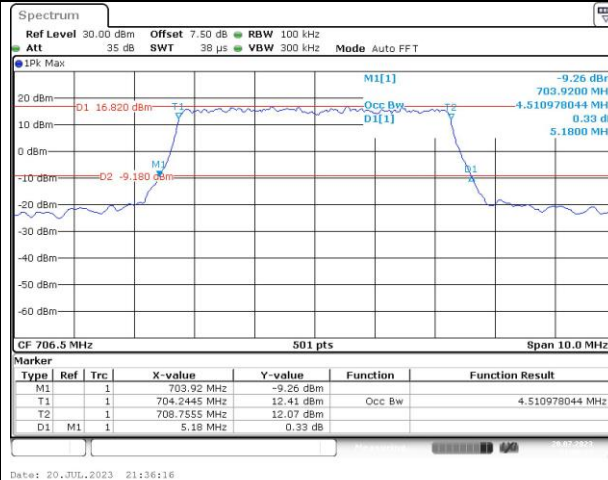
Occupied Bandwidth

Channel

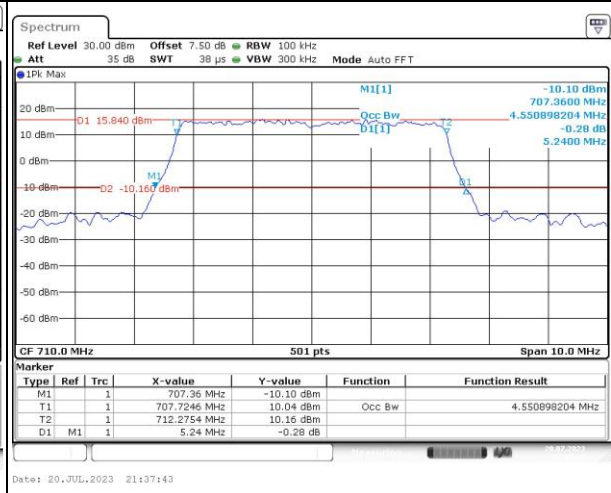
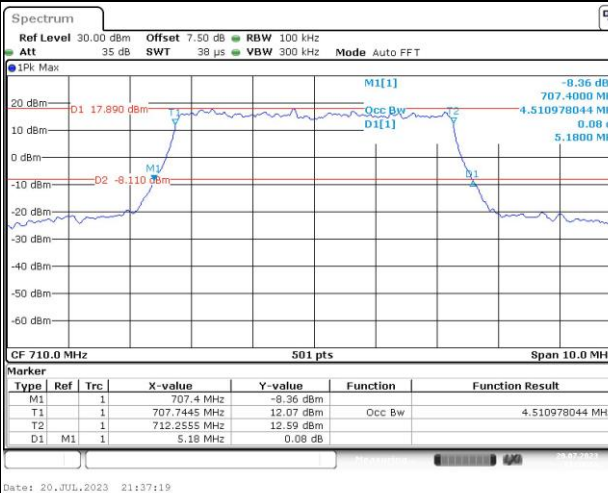
5MHz Bandwidth QPSK

5MHz Bandwidth 16QAM

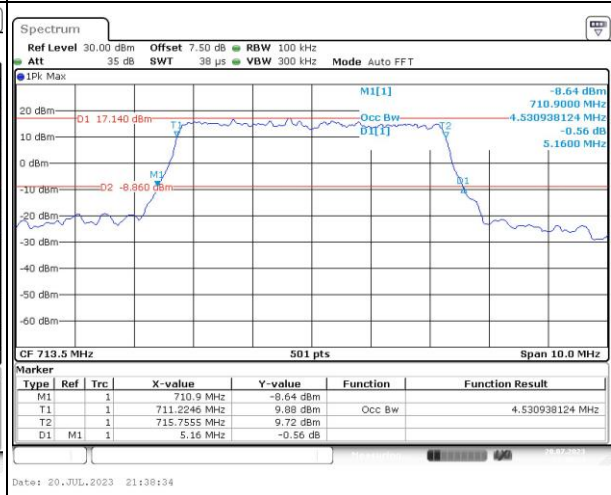
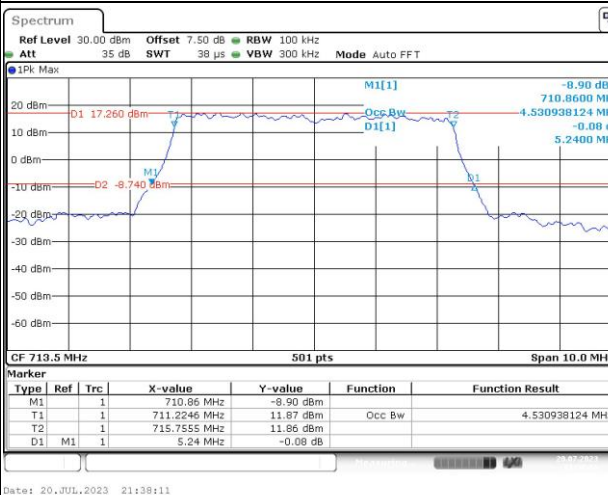
Lowest



Middle



Highest



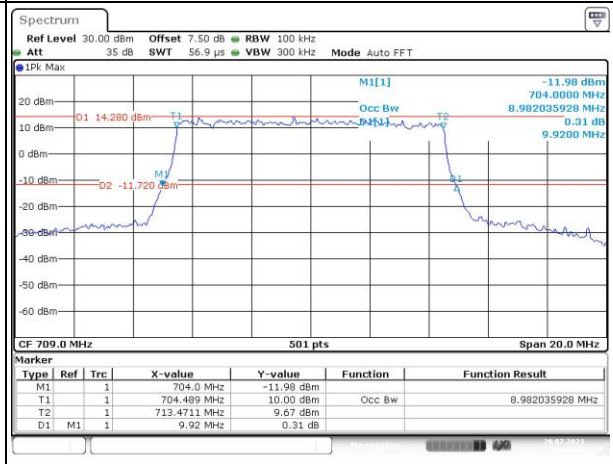
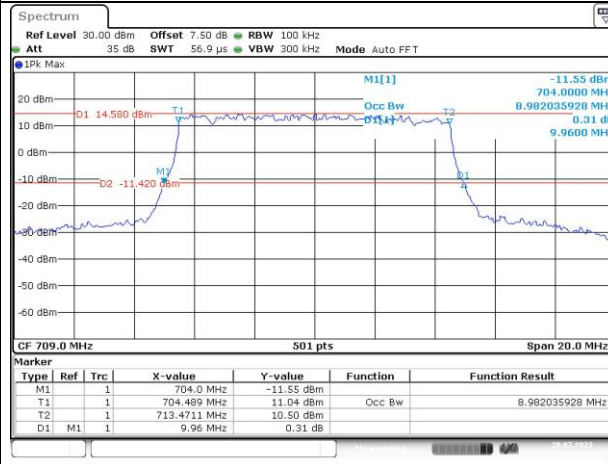
Occupied Bandwidth

Channel

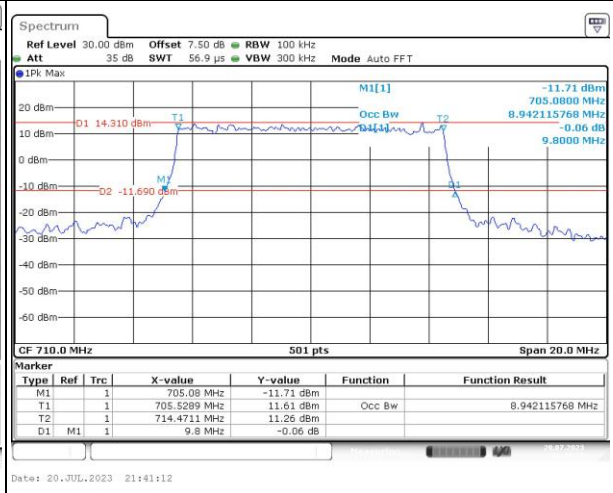
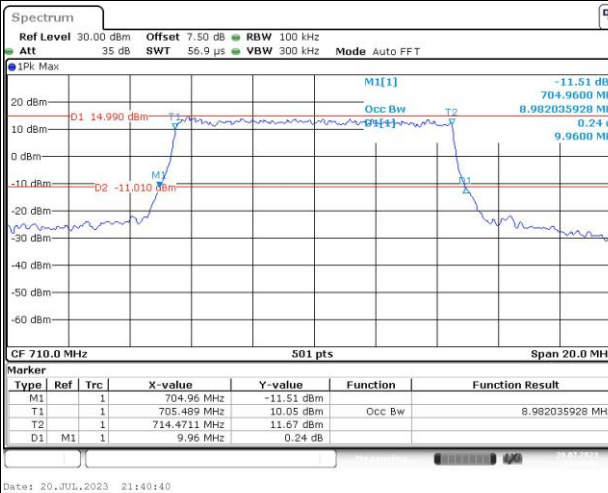
10MHz Bandwidth QPSK

10MHz Bandwidth 16QAM

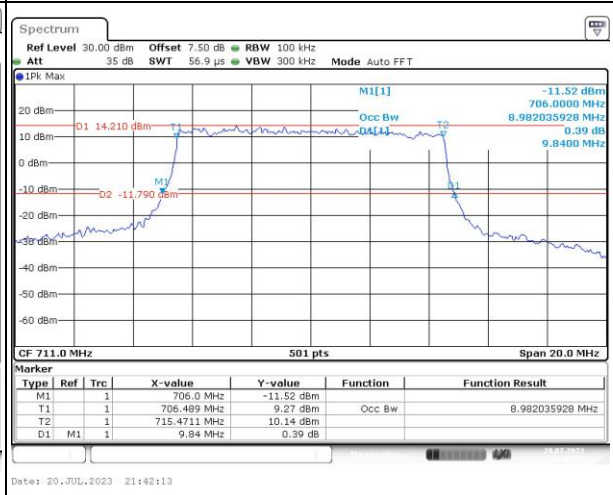
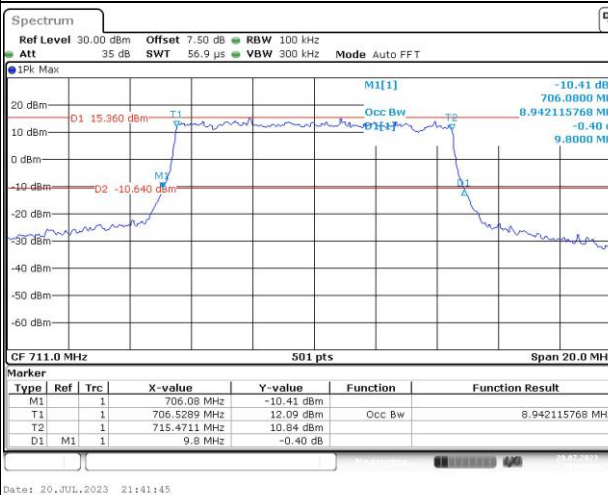
Lowest



Middle



Highest

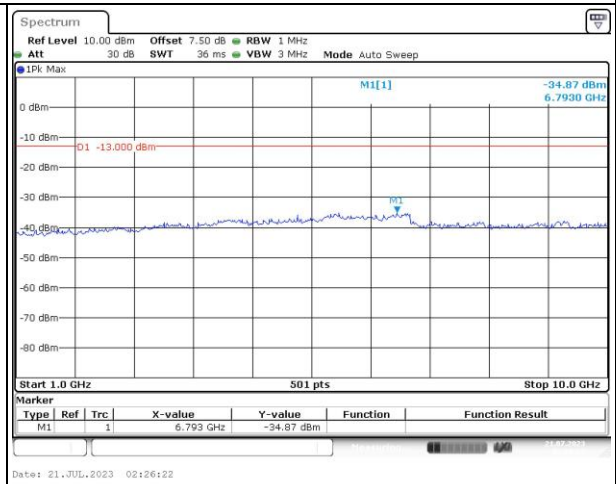
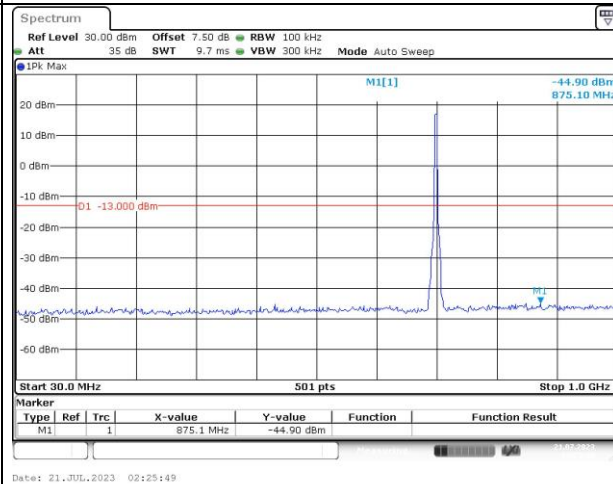


Spurious Emissions at Antenna Terminal

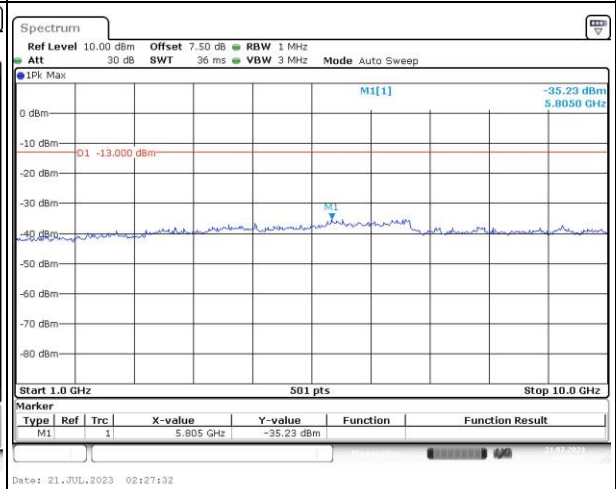
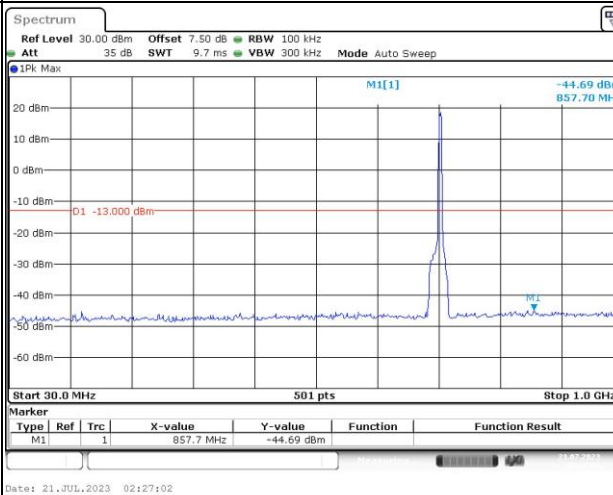
Channel

5MHz Bandwidth QPSK

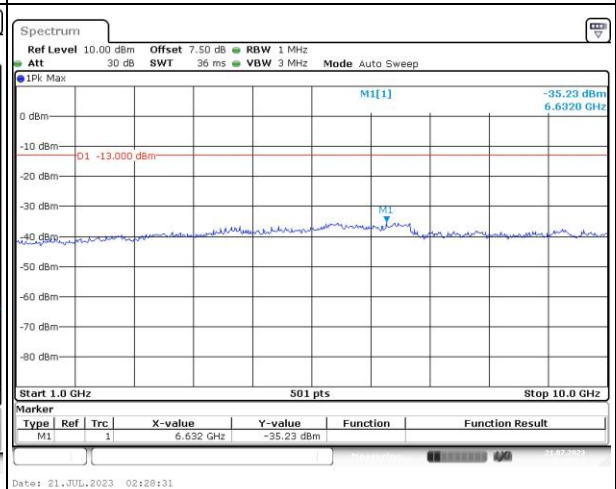
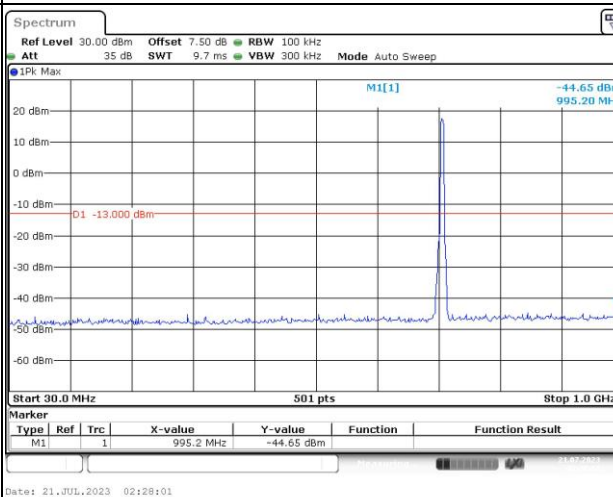
Lowest



Middle



Highest

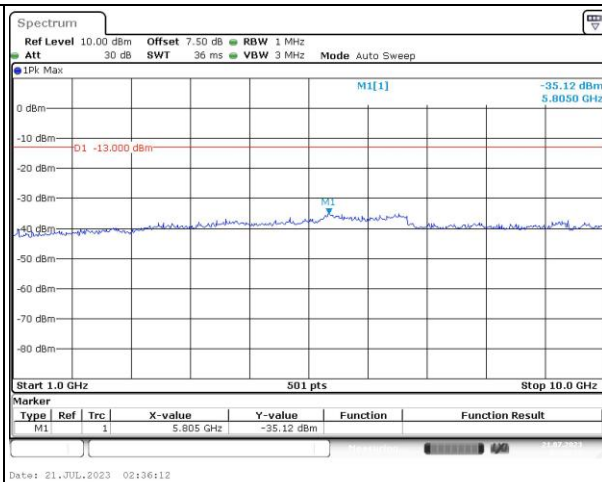
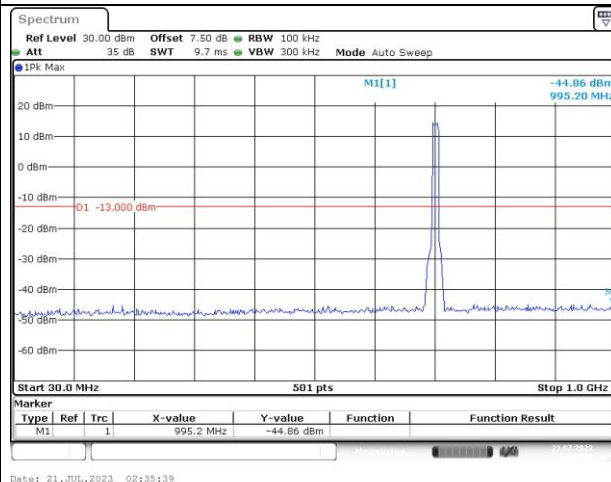


Spurious Emissions at Antenna Terminal

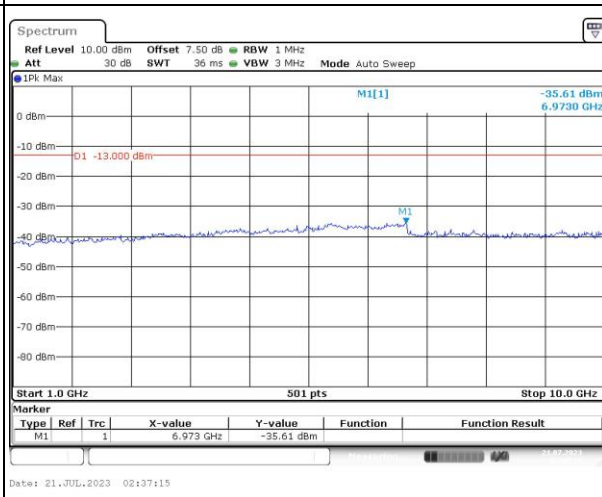
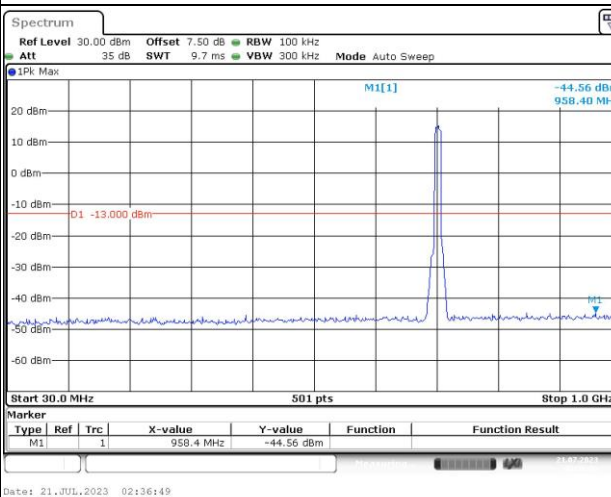
Channel

10MHz Bandwidth QPSK

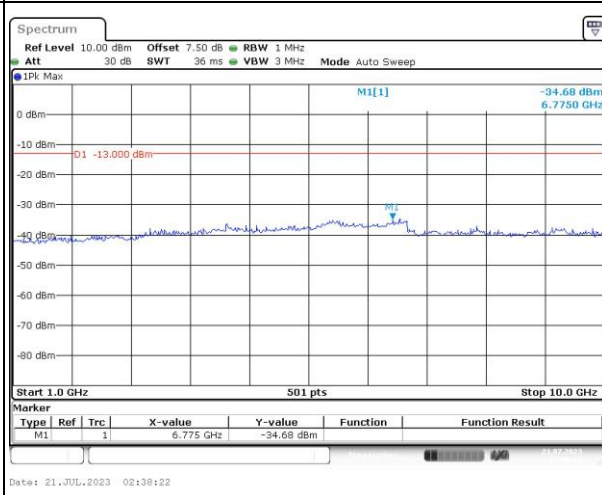
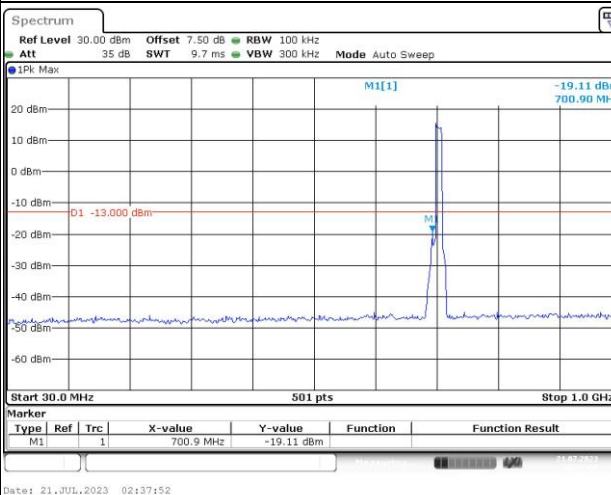
Lowest



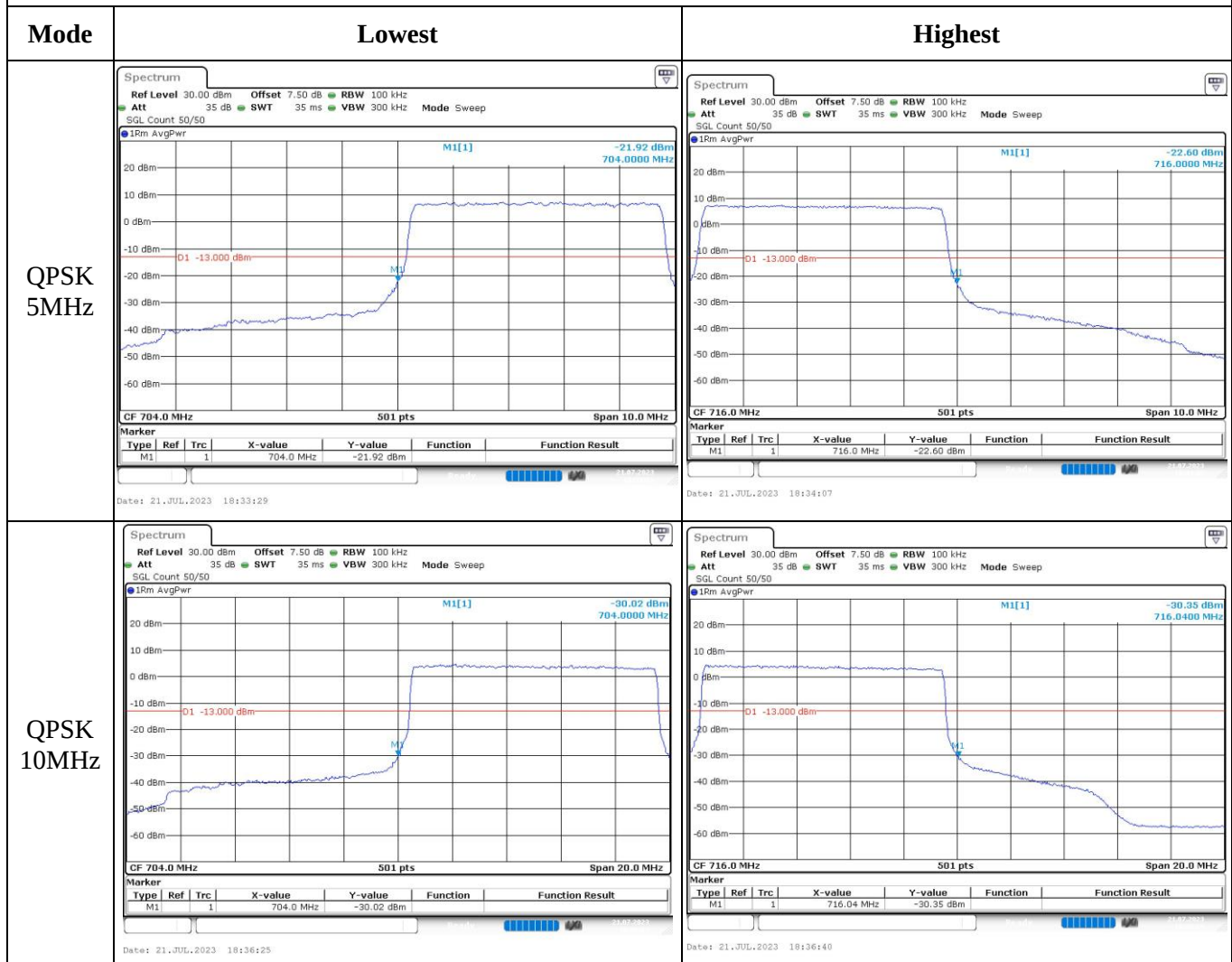
Middle



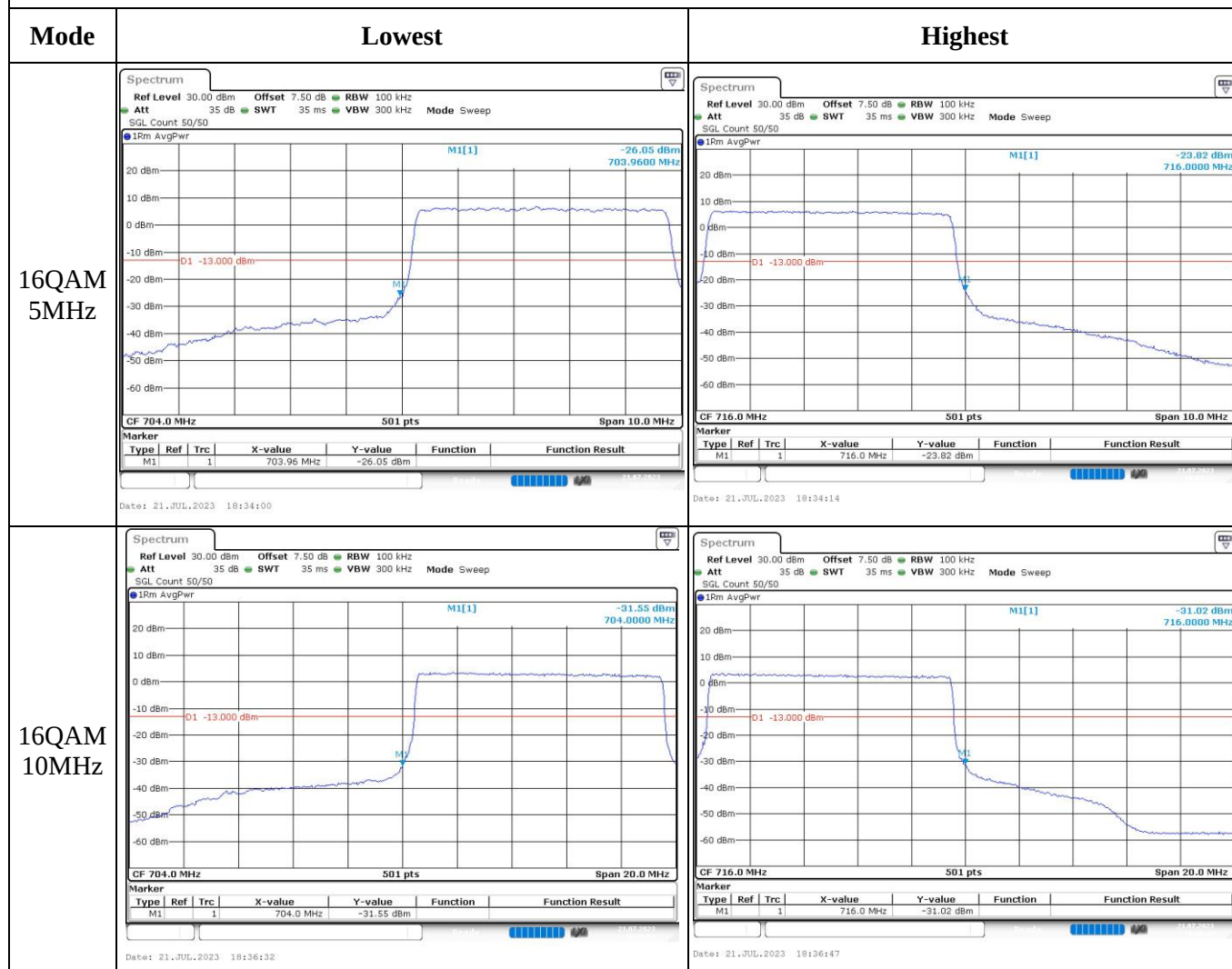
Highest



Out of band emission, Band Edge



Out of band emission, Band Edge



4.13 Antenna Port Test Data and Results for LTE Band 25

Serial Number:	287E_1	Test Date:	2023/7/17~2023/7/28
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
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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
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)
1.4MHz	1850.7	1882.5	1914.3
3MHz	1851.5	1882.5	1913.5
5MHz	1852.5	1882.5	1912.5
10MHz	1855	1882.5	1910
15MHz	1857.5	1882.5	1907.5
20MHz	1860	1882.5	1905