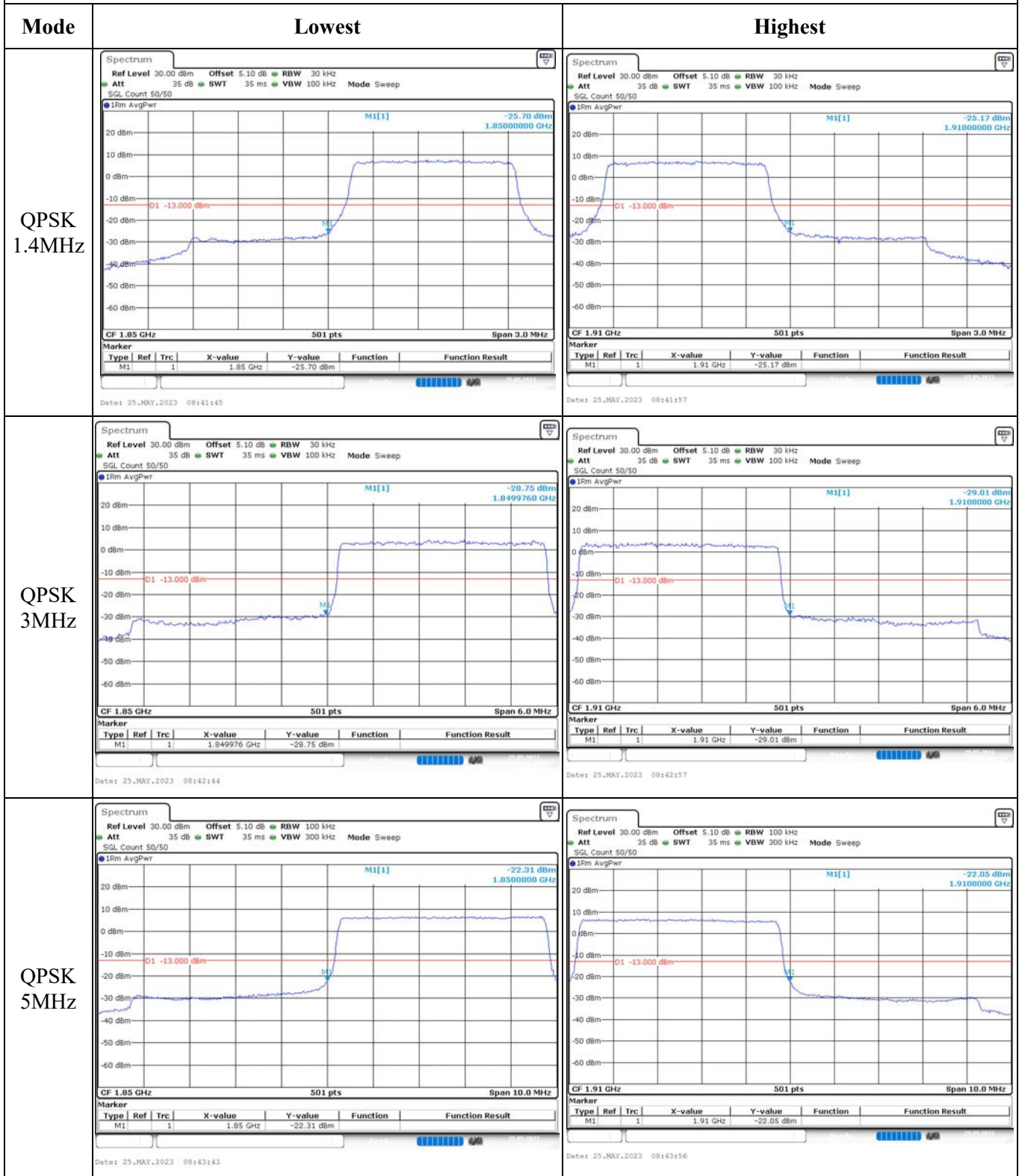
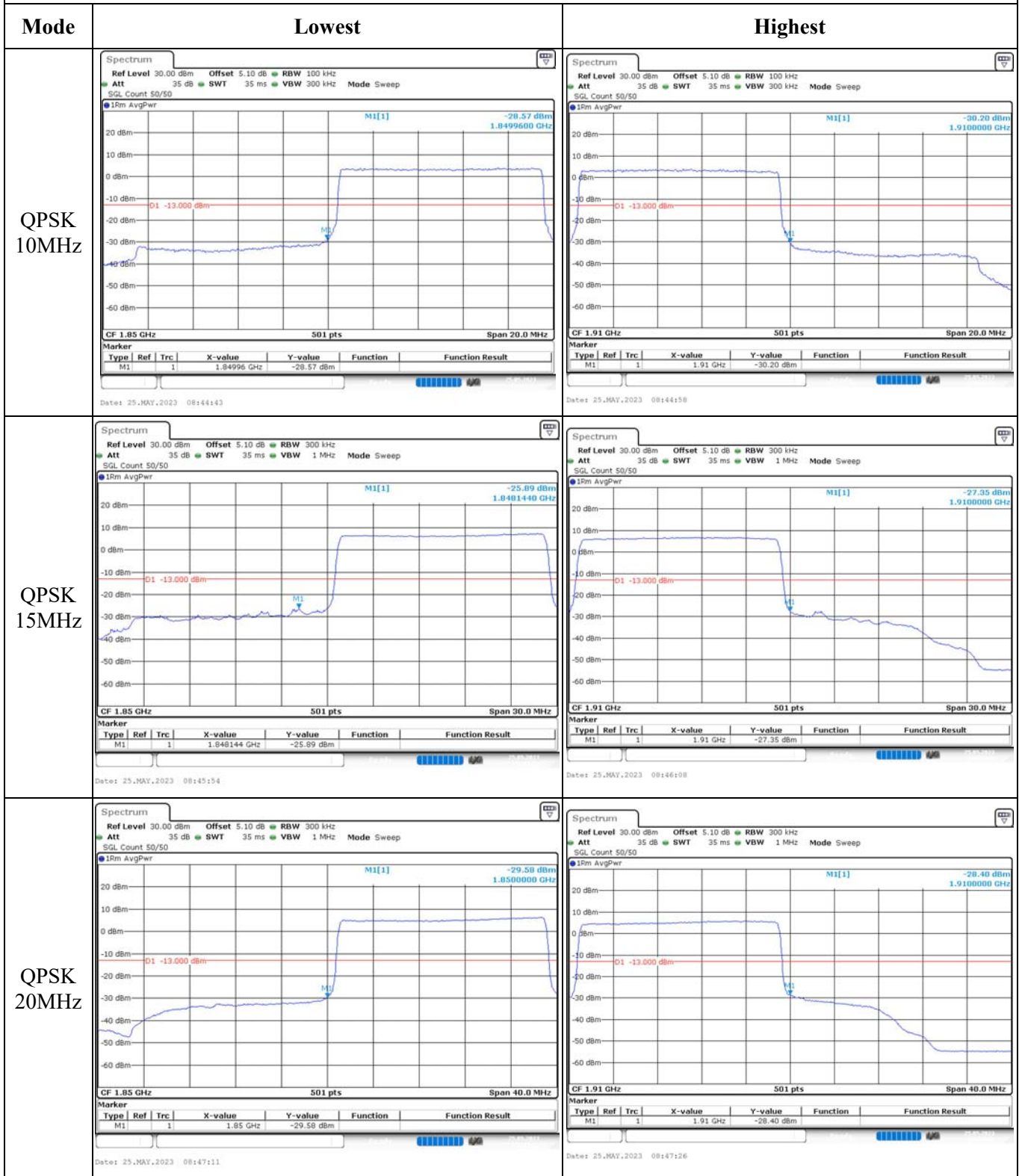


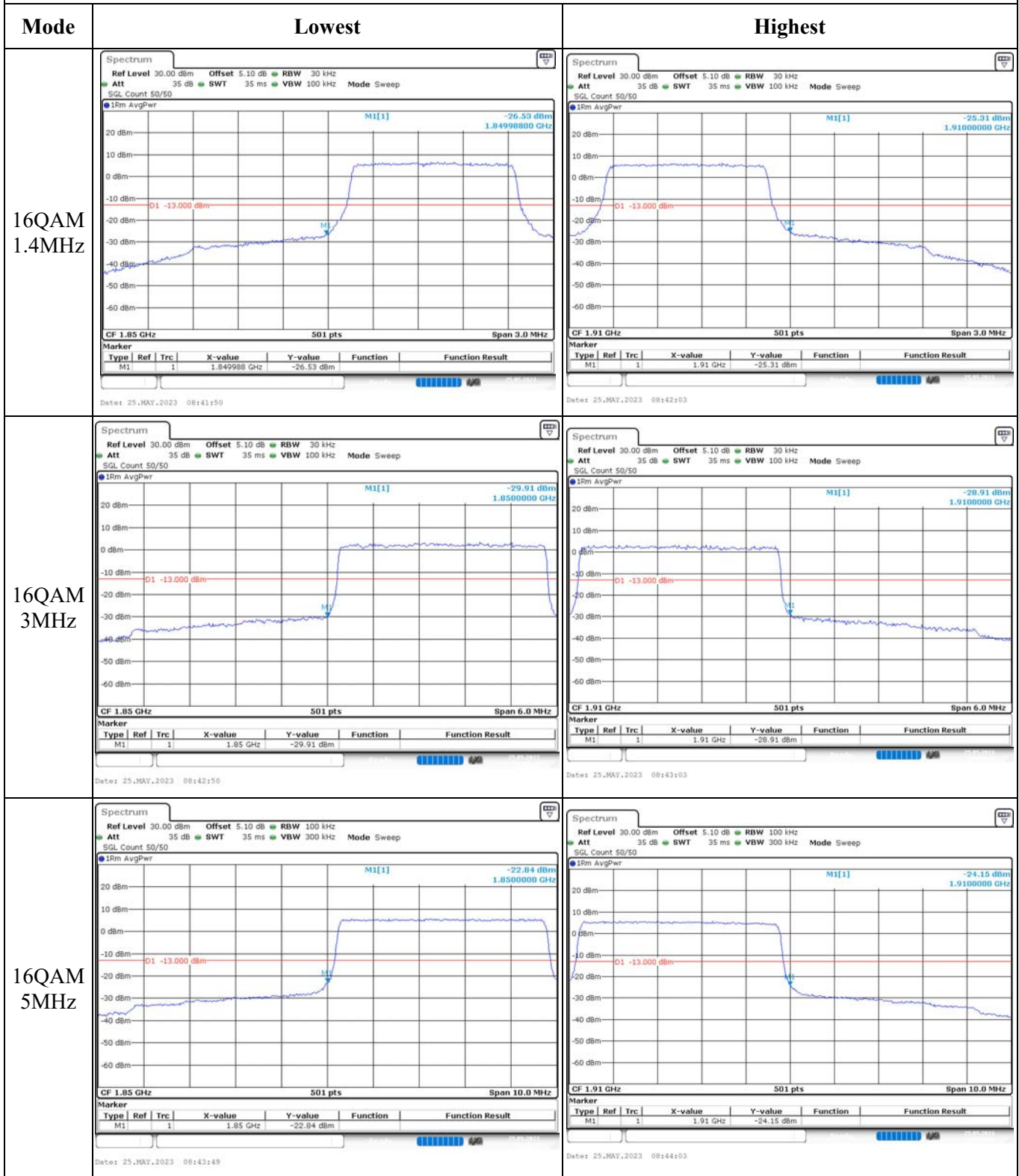
Out of band emission, Band Edge



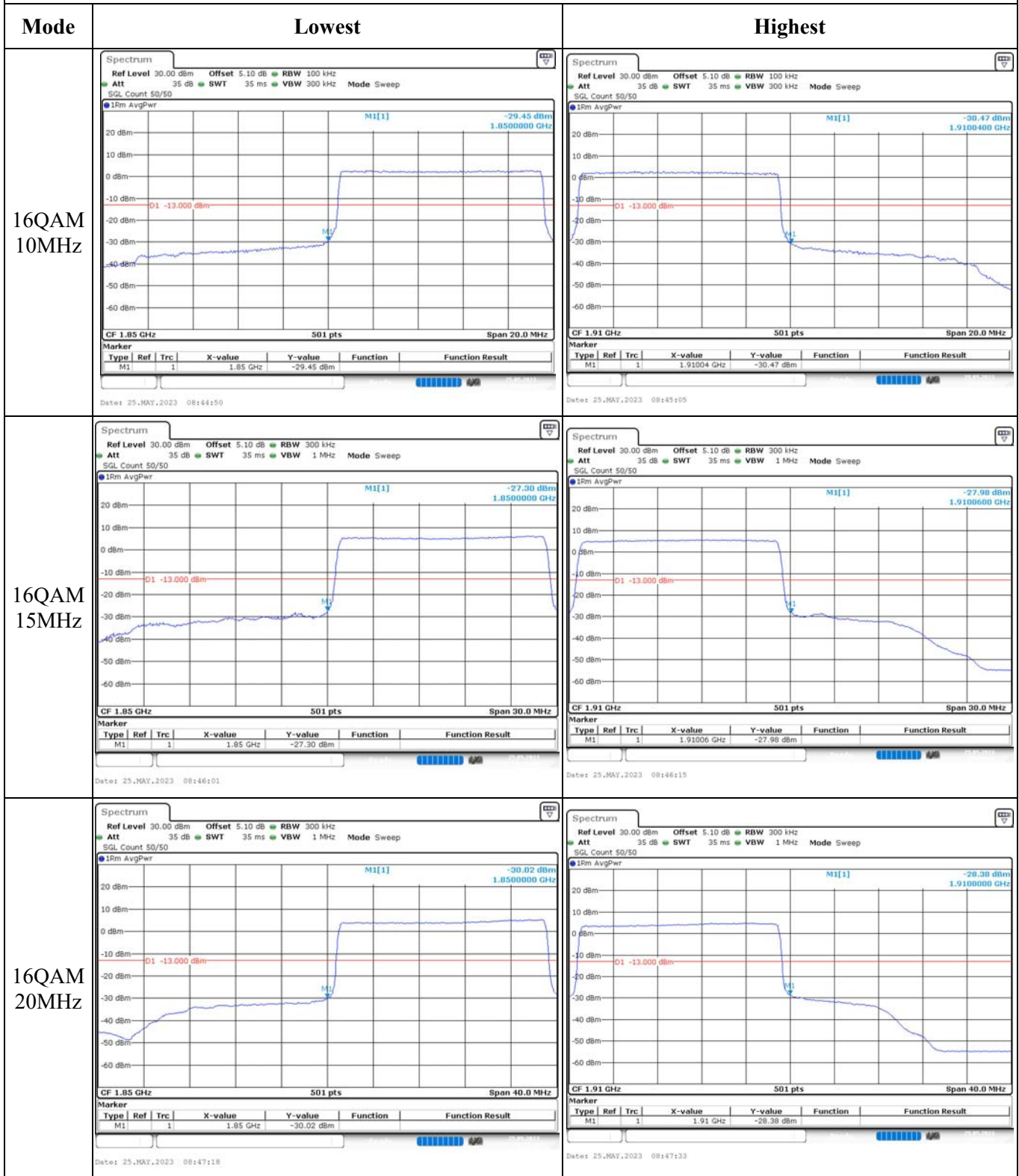
Out of band emission, Band Edge



Out of band emission, Band Edge



Out of band emission, Band Edge



4.7 Antenna Port Test Data and Results for LTE Band 4

Serial Number:	25UK-5	Test Date:	2023/05/24~2023/06/01
Test Site:	RF	Test Mode:	Transmitting
Tester:	George Chen	Test Result:	Pass

Environmental Conditions:

Temperature: (°C)	23.8~26.5	Relative Humidity: (%)	42~56	ATM Pressure: (kPa)	100.3~101.9
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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	SJ0100004	Each time	N/A
Mini-Circuits	DC Block	BLK-18-S+	1554403	Each time	N/A
Unknown	Coaxial tee connector	Unknown	2204004	Each time	N/A
R&S	Wideband Radio Communication Tester	CMW500	149218	2022-07-15	2023-07-14
BACL	TEMP&HUMI Test Chamber	BTH-150-40	30174	2022-09-29	2023-09-28
UNI-T	Multimeter	UT39A+	C210582554	2022-09-29	2023-09-28
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).

Test Frequency For Each Mode:

Operation Bandwidth	Lowest Frequency (MHz)	Middle Frequency (MHz)	Highest Frequency (MHz)
1.4MHz	1710.7	1732.5	1754.3
3MHz	1711.5	1732.5	1753.5
5MHz	1712.5	1732.5	1752.5
10MHz	1715	1732.5	1750
15MHz	1717.5	1732.5	1747.5
20MHz	1720	1732.5	1745

Test Data:

FCC§2.1046;§ 27.50(d)(4)						
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		
1.4MHz QPSK	RB1#0	22.54	22.44	22.37	18.21	30
	RB1#3	22.71	22.63	22.47		
	RB1#5	22.55	22.46	22.35		
	RB3#0	22.62	22.53	22.45		
	RB3#3	22.64	22.52	22.39		
	RB6#0	21.63	21.5	21.37		
1.4MHz 16QAM	RB1#0	21.64	21.38	21.31	17.32	30
	RB1#3	21.82	21.59	21.52		
	RB1#5	21.65	21.46	21.33		
	RB3#0	21.57	21.62	21.59		
	RB3#3	21.59	21.6	21.6		
	RB6#0	20.63	20.42	20.37		
3MHz QPSK	RB1#0	23.11	23.06	22.33	18.61	30
	RB1#8	23.11	23.03	22.34		
	RB1#14	23.09	22.99	22.34		
	RB6#0	22.07	21.97	21.31		
	RB6#9	22.05	21.97	21.35		
	RB15#0	22.11	21.99	21.35		
3MHz 16QAM	RB1#0	22.19	21.75	21.87	17.69	30
	RB1#8	22.16	21.75	21.89		
	RB1#14	22.18	21.68	21.91		
	RB6#0	21.03	20.71	20.33		
	RB6#9	21.06	20.86	20.36		
	RB15#0	21.01	20.99	20.38		
5MHz QPSK	RB1#0	23.02	22.91	22.31	18.63	30
	RB1#13	23.13	22.98	22.39		
	RB1#24	23	22.71	22.3		
	RB15#0	22.07	21.91	21.4		
	RB15#10	22.05	21.68	21.35		
	RB25#0	22.02	21.63	21.37		
5MHz 16QAM	RB1#0	22.26	21.44	21.15	17.83	30
	RB1#13	22.33	21.53	21.28		
	RB1#24	22.23	21.43	21.21		
	RB15#0	20.99	20.81	20.47		
	RB15#10	21.01	20.87	20.38		
	RB25#0	21	20.97	20.38		
10MHz QPSK	RB1#0	23.09	23	22.34	18.82	30
	RB1#25	23.32	23.12	22.51		
	RB1#49	23.13	22.85	22.35		

	RB25#0	22.03	21.92	21.4		
	RB25#25	22.06	22.06	21.34		
	RB50#0	22.07	21.89	21.39		
10MHz 16QAM	RB1#0	22.05	22.05	21.51	17.68	30
	RB1#25	22.18	22.16	21.6		
	RB1#49	22	21.97	21.48		
	RB25#0	21.1	20.68	20.45		
	RB25#25	21.15	20.6	20.38		
	RB50#0	21.04	20.64	20.38		
15MHz QPSK	RB1#0	23.04	22.48	22.27	18.64	30
	RB1#38	23.14	22.52	22.38		
	RB1#74	23.03	22.31	22.34		
	RB36#0	22.15	21.62	21.5		
	RB36#39	22.19	21.72	21.36		
	RB75#0	22.15	21.73	21.48		
15MHz 16QAM	RB1#0	22.28	21.91	21.42	17.81	30
	RB1#38	22.31	22.01	21.52		
	RB1#74	22.03	21.86	21.44		
	RB36#0	21.07	20.58	20.5		
	RB36#39	21.11	20.63	20.4		
	RB75#0	21.07	20.62	20.4		
20MHz QPSK	RB1#0	22.8	22.34	22.22	18.72	30
	RB1#50	23.22	22.64	22.54		
	RB1#99	22.75	22.18	22.23		
	RB50#0	22.06	21.58	21.45		
	RB50#50	22.01	21.46	21.31		
	RB100#0	22.04	21.5	21.38		
20MHz 16QAM	RB1#0	22.04	21.54	21.42	17.87	30
	RB1#50	22.37	21.93	21.75		
	RB1#99	21.99	21.46	21.36		
	RB50#0	20.84	20.56	20.47		
	RB50#50	21.01	20.4	20.31		
	RB100#0	21.03	20.6	20.39		

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	4.26	3.74	4.03	13
	RB100#0	4.7	4.64	4.93	13
20MHz 16QAM	RB1#0	5.25	4.61	4.87	13
	RB100#0	5.71	5.68	5.88	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
1.4MHz QPSK	1.096	1.102	1.096	1.308	1.29	1.296
1.4MHz 16QAM	1.096	1.102	1.102	1.284	1.296	1.314
3MHz QPSK	2.683	2.683	2.683	2.892	2.88	2.88
3MHz 16QAM	2.683	2.683	2.683	2.88	2.892	2.88
5MHz QPSK	4.511	4.531	4.531	5.18	5.2	5.22
5MHz 16QAM	4.531	4.511	4.551	5.2	5.14	5.2
10MHz QPSK	8.942	8.982	8.942	9.96	10.04	9.84
10MHz 16QAM	8.942	8.942	8.982	9.88	9.76	9.96
15MHz QPSK	13.473	13.533	13.533	15.12	15.24	15.36
15MHz 16QAM	13.533	13.533	13.533	15.12	15.18	15.12
20MHz QPSK	18.044	18.044	17.964	19.92	19.84	19.6
20MHz 16QAM	17.964	17.964	18.044	20.72	19.76	19.84

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

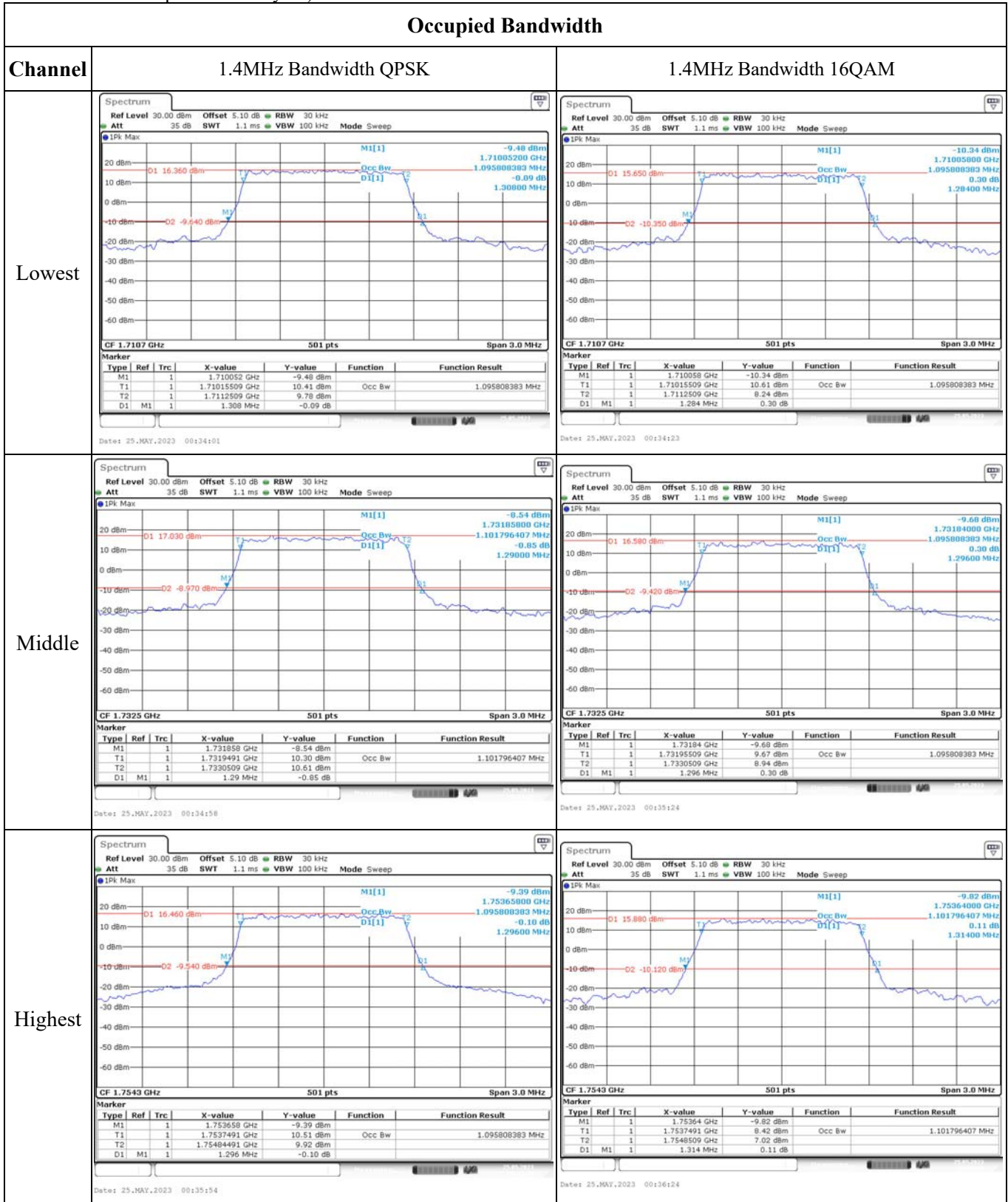
FCC §2.1051, § 27.53:Spurious Emissions at Antenna Terminal	
Result:	Pass, Please refer to the test plots of Spurious Emissions at Antenna Terminal.

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.

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	1710.951	1710.00	1754.049	1755
	-20	3.8	1710.962	1710.00	1754.067	1755
	-10	3.8	1710.925	1710.00	1754.005	1755
	0	3.8	1710.967	1710.00	1754.087	1755
	10	3.8	1710.914	1710.00	1754.020	1755
	20	3.8	1710.978	1710.00	1754.022	1755
	30	3.8	1710.970	1710.00	1754.056	1755
	40	3.8	1710.965	1710.00	1754.034	1755
	50	3.8	1710.904	1710.00	1754.025	1755
Frequency Stability vs. Voltage	20	3.5	1710.939	1710.00	1754.059	1755
	20	4.35	1710.979	1710.00	1754.004	1755
					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	1711.020	1710.00	1754.088	1755
	-20	3.8	1711.078	1710.00	1754.080	1755
	-10	3.8	1711.040	1710.00	1754.012	1755
	0	3.8	1711.086	1710.00	1754.005	1755
	10	3.8	1711.058	1710.00	1754.070	1755
	20	3.8	1711.058	1710.00	1754.022	1755
	30	3.8	1711.062	1710.00	1754.076	1755
	40	3.8	1711.094	1710.00	1754.084	1755
Frequency Stability vs. Voltage	50	3.8	1711.042	1710.00	1754.054	1755
	20	3.5	1711.071	1710.00	1754.012	1755
	20	4.35	1711.075	1710.00	1754.088	1755
					Result:	Pass

Test Plots(Note: The 5.1dB is the Insertion loss of the RF cable, Coaxial tee connector and DC Block, which was offset into the Spectrum Analyzer):



Occupied Bandwidth

Channel	3MHz Bandwidth QPSK	3MHz Bandwidth 16QAM																																																																						
Lowest	<p>CF 1.7115 GHz 501 pts Span 6.0 MHz</p> <table border="1"> <thead> <tr> <th>Type</th> <th>Ref</th> <th>Trc</th> <th>X-value</th> <th>Y-value</th> <th>Function</th> <th>Function Result</th> </tr> </thead> <tbody> <tr> <td>M1</td> <td>1</td> <td></td> <td>1.71006 GHz</td> <td>-12.47 dBm</td> <td></td> <td></td> </tr> <tr> <td>T1</td> <td>1</td> <td></td> <td>1.7101587 GHz</td> <td>9.88 dBm</td> <td>Occ Bw</td> <td>2.682634731 MHz</td> </tr> <tr> <td>T2</td> <td>1</td> <td></td> <td>1.7128413 GHz</td> <td>11.58 dBm</td> <td></td> <td></td> </tr> <tr> <td>D1</td> <td>M1</td> <td>1</td> <td>2.892 MHz</td> <td>-1.01 dB</td> <td></td> <td></td> </tr> </tbody> </table> <p>Date: 25.MAY.2023 00:137:20</p>	Type	Ref	Trc	X-value	Y-value	Function	Function Result	M1	1		1.71006 GHz	-12.47 dBm			T1	1		1.7101587 GHz	9.88 dBm	Occ Bw	2.682634731 MHz	T2	1		1.7128413 GHz	11.58 dBm			D1	M1	1	2.892 MHz	-1.01 dB			<p>CF 1.7115 GHz 501 pts Span 6.0 MHz</p> <table border="1"> <thead> <tr> <th>Type</th> <th>Ref</th> <th>Trc</th> <th>X-value</th> <th>Y-value</th> <th>Function</th> <th>Function Result</th> </tr> </thead> <tbody> <tr> <td>M1</td> <td>1</td> <td></td> <td>1.71006 GHz</td> <td>-12.15 dBm</td> <td></td> <td></td> </tr> <tr> <td>T1</td> <td>1</td> <td></td> <td>1.7101587 GHz</td> <td>8.18 dBm</td> <td>Occ Bw</td> <td>2.682634731 MHz</td> </tr> <tr> <td>T2</td> <td>1</td> <td></td> <td>1.7128413 GHz</td> <td>8.92 dBm</td> <td></td> <td></td> </tr> <tr> <td>D1</td> <td>M1</td> <td>1</td> <td>2.88 MHz</td> <td>-0.00 dB</td> <td></td> <td></td> </tr> </tbody> </table> <p>Date: 25.MAY.2023 00:137:50</p>	Type	Ref	Trc	X-value	Y-value	Function	Function Result	M1	1		1.71006 GHz	-12.15 dBm			T1	1		1.7101587 GHz	8.18 dBm	Occ Bw	2.682634731 MHz	T2	1		1.7128413 GHz	8.92 dBm			D1	M1	1	2.88 MHz	-0.00 dB		
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T1	1		1.7521587 GHz	8.96 dBm	Occ Bw	2.682634731 MHz																																																																		
T2	1		1.7548413 GHz	8.05 dBm																																																																				
D1	M1	1	2.88 MHz	-0.22 dB																																																																				

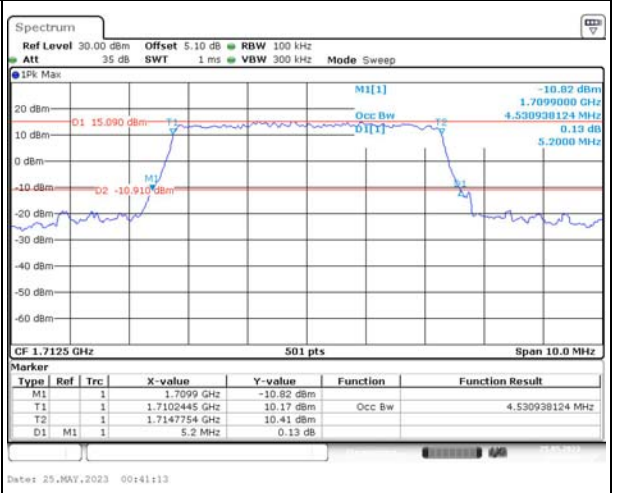
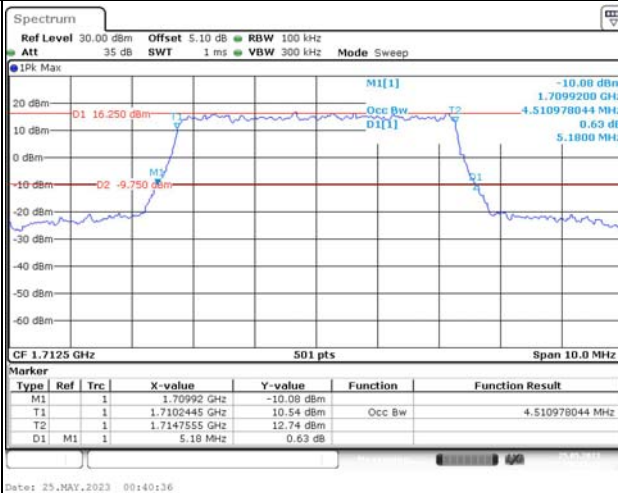
Occupied Bandwidth

Channel

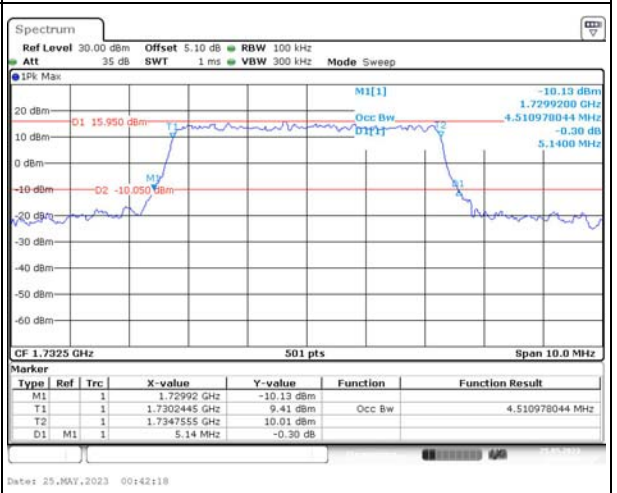
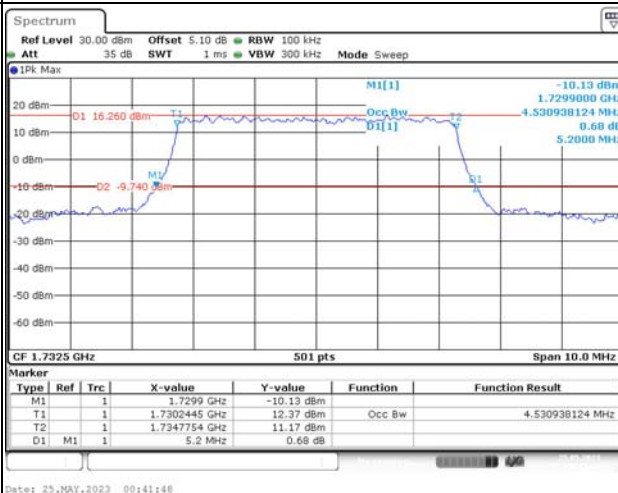
5MHz Bandwidth QPSK

5MHz Bandwidth 16QAM

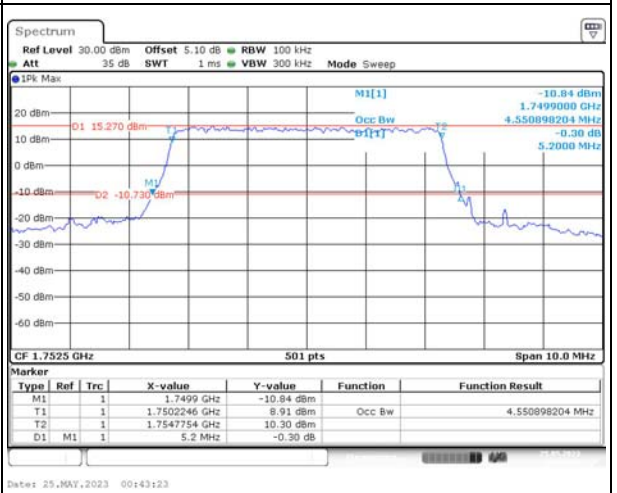
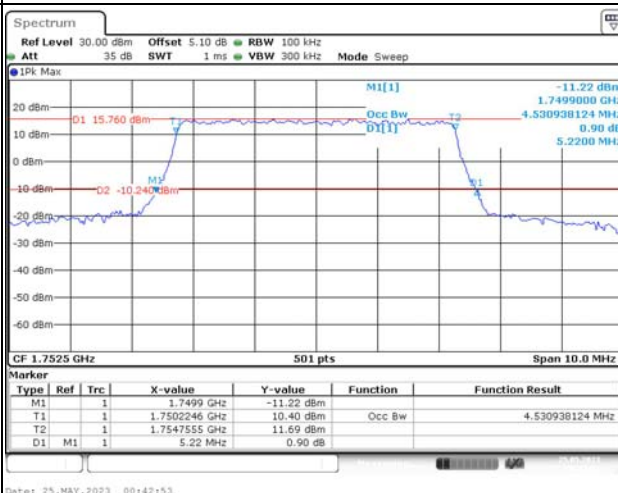
Lowest



Middle



Highest



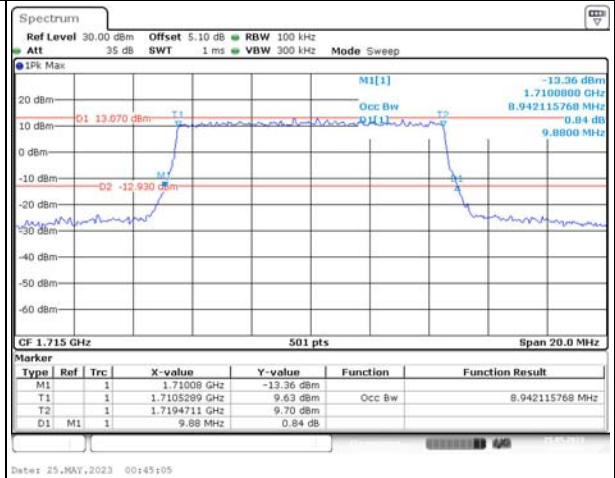
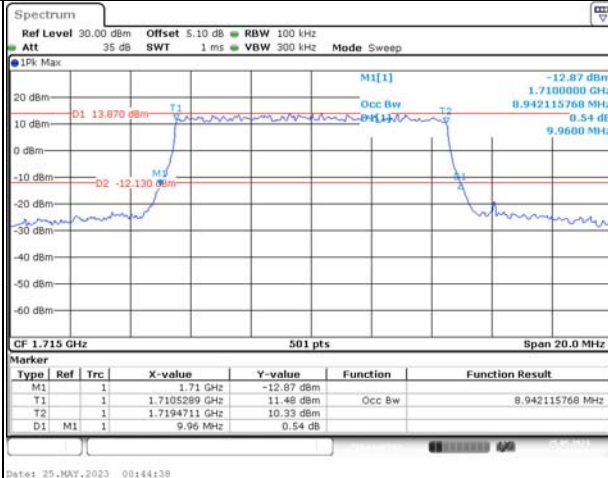
Occupied Bandwidth

Channel

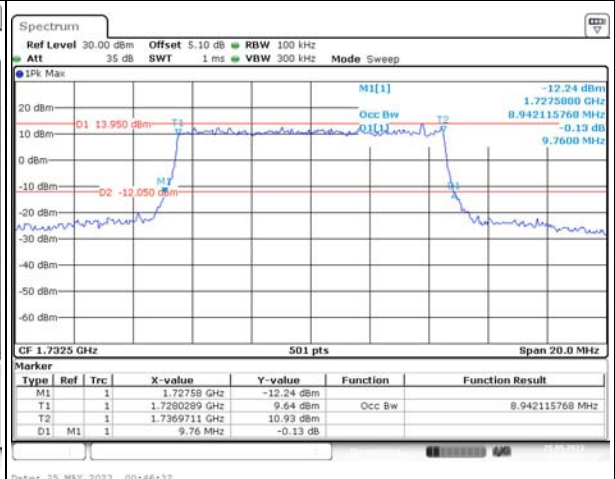
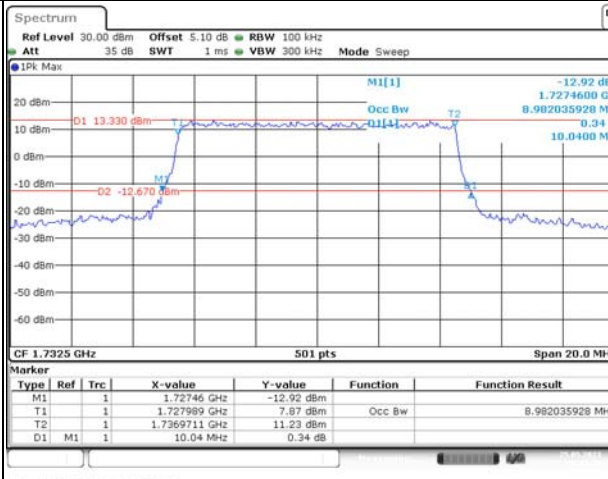
10MHz Bandwidth QPSK

10MHz Bandwidth 16QAM

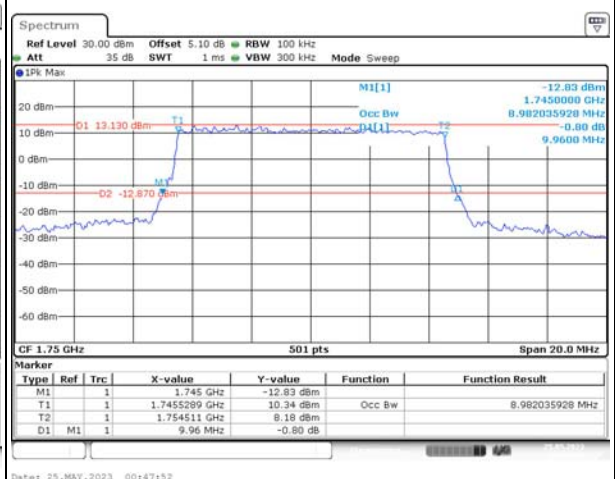
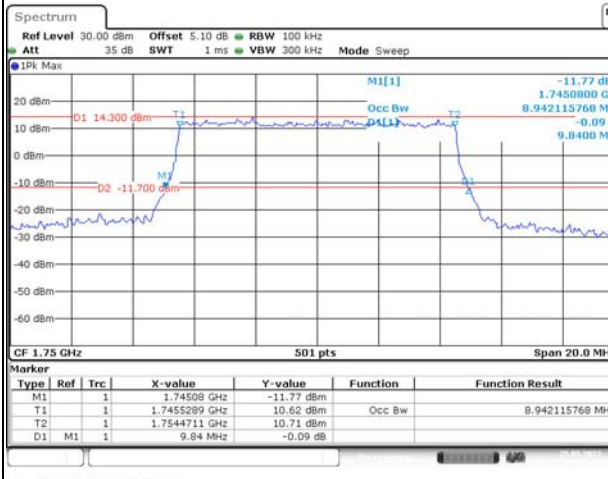
Lowest



Middle



Highest



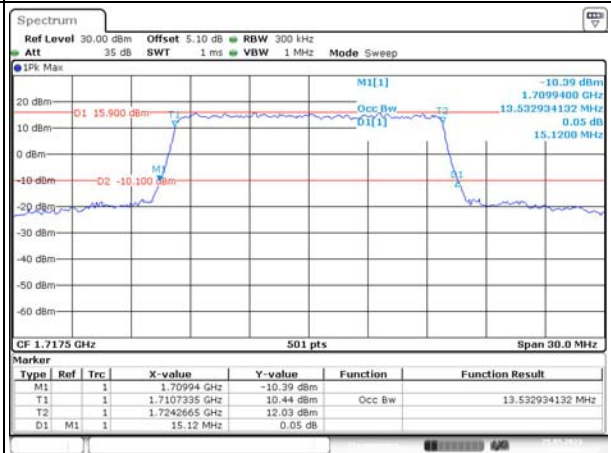
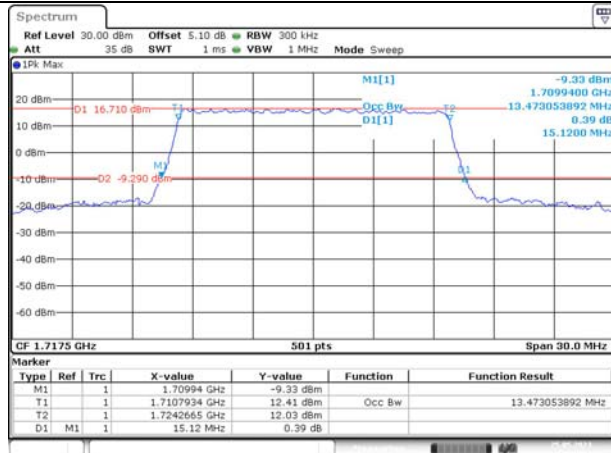
Occupied Bandwidth

Channel

15MHz Bandwidth QPSK

15MHz Bandwidth 16QAM

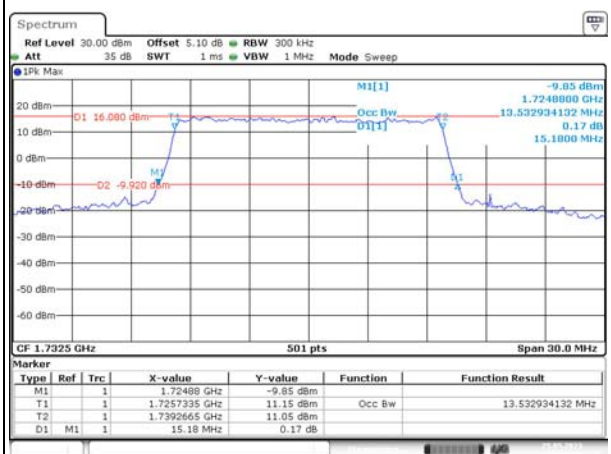
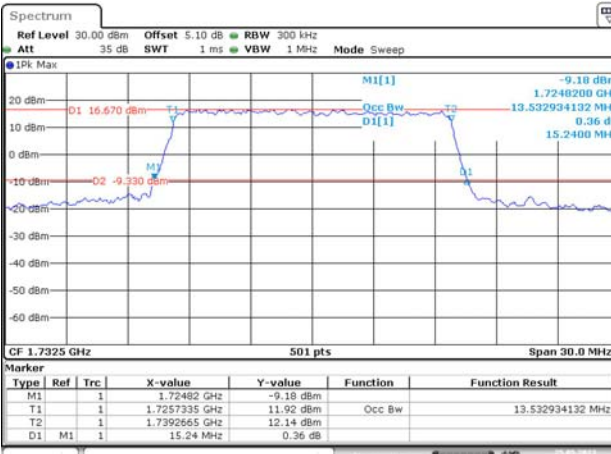
Lowest



Date: 25.MAY.2023 00:49:01

Date: 25.MAY.2023 00:49:28

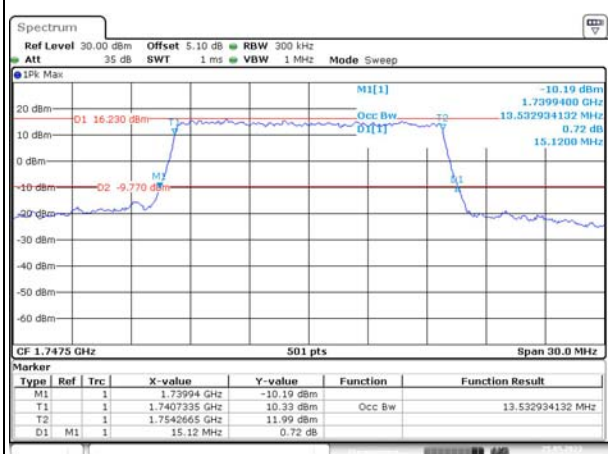
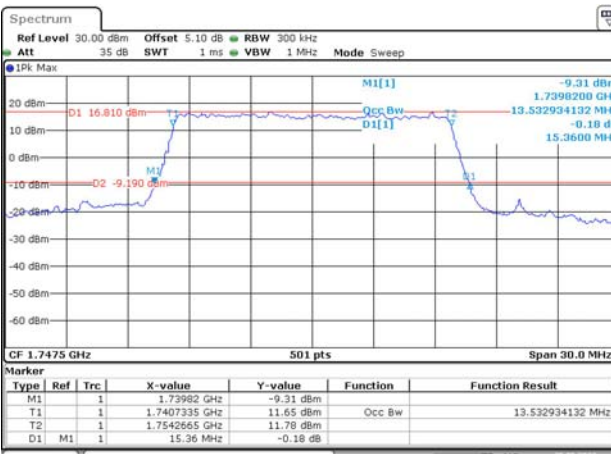
Middle



Date: 25.MAY.2023 00:50:01

Date: 25.MAY.2023 00:50:32

Highest



Date: 25.MAY.2023 00:51:01

Date: 25.MAY.2023 00:51:28

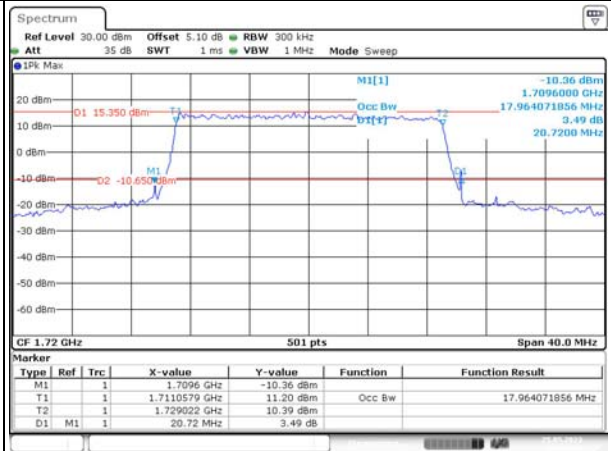
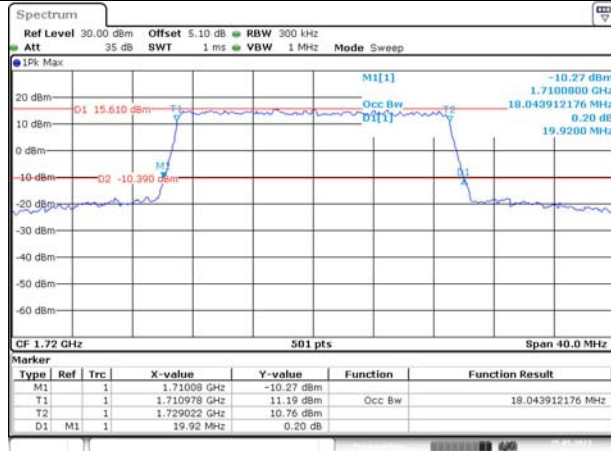
Occupied Bandwidth

Channel

20MHz Bandwidth QPSK

20MHz Bandwidth 16QAM

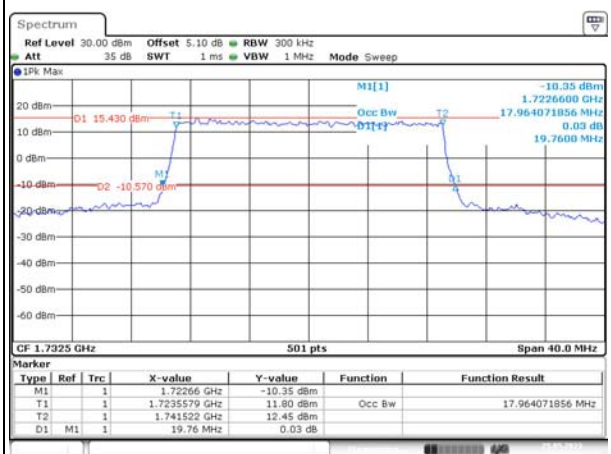
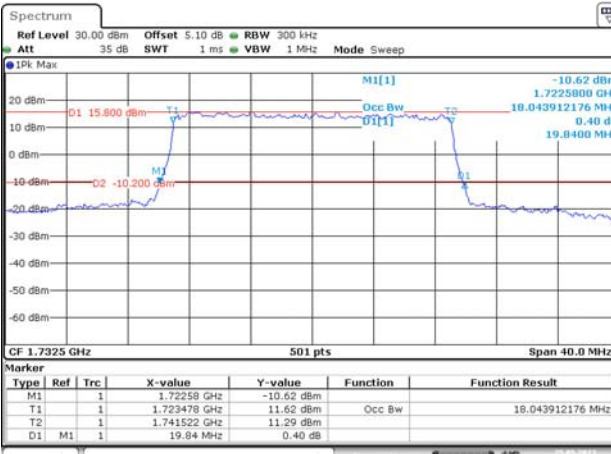
Lowest



Date: 25.MAY.2023 00:15:22

Date: 25.MAY.2023 00:15:13

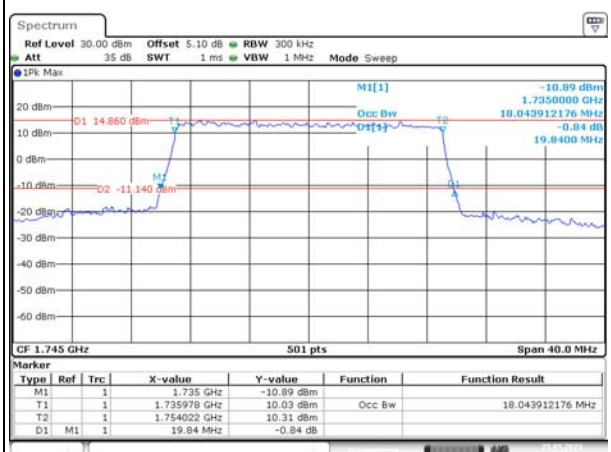
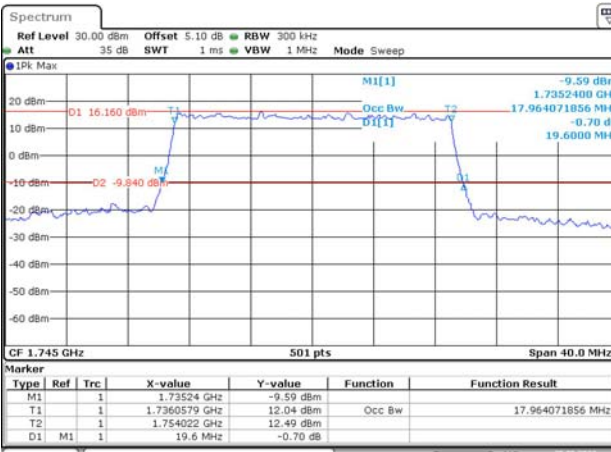
Middle



Date: 25.MAY.2023 00:15:25

Date: 25.MAY.2023 00:15:10

Highest



Date: 25.MAY.2023 00:15:33

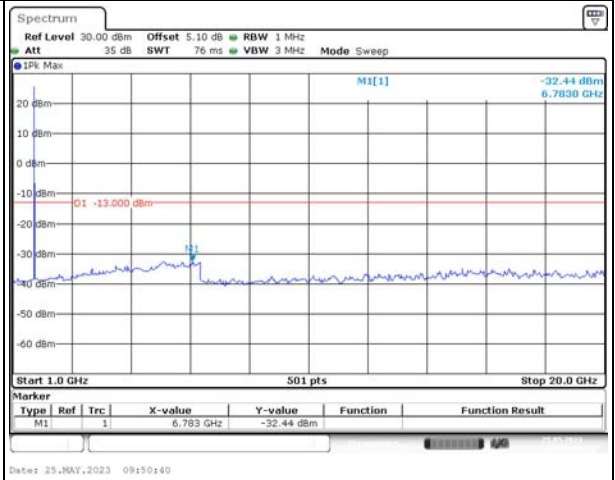
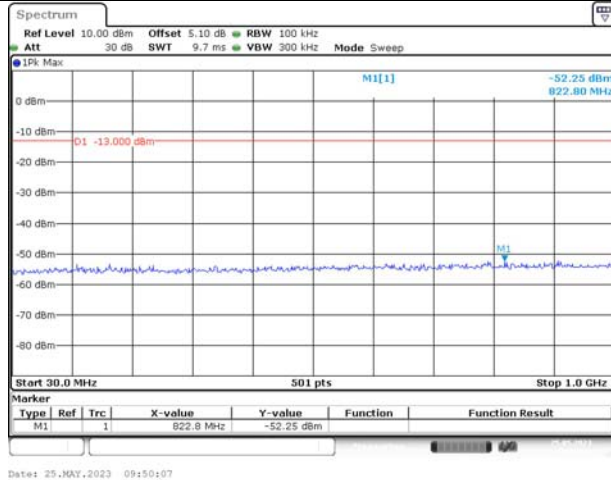
Date: 25.MAY.2023 00:15:10

Spurious Emissions at Antenna Terminal

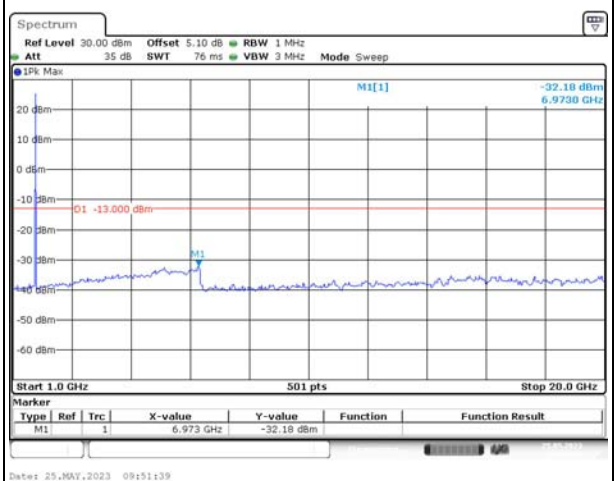
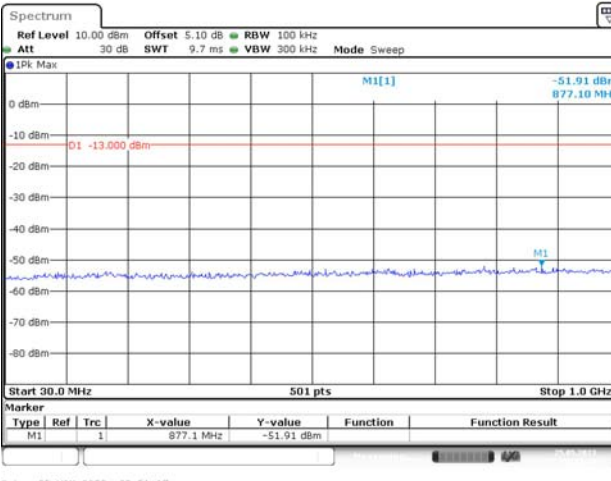
Channel

1.4MHz Bandwidth QPSK

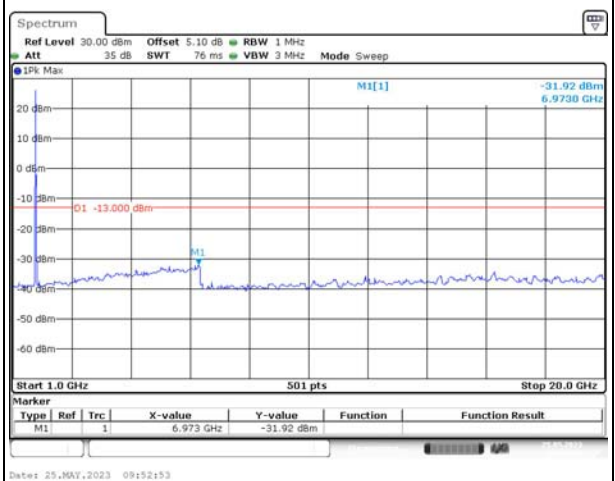
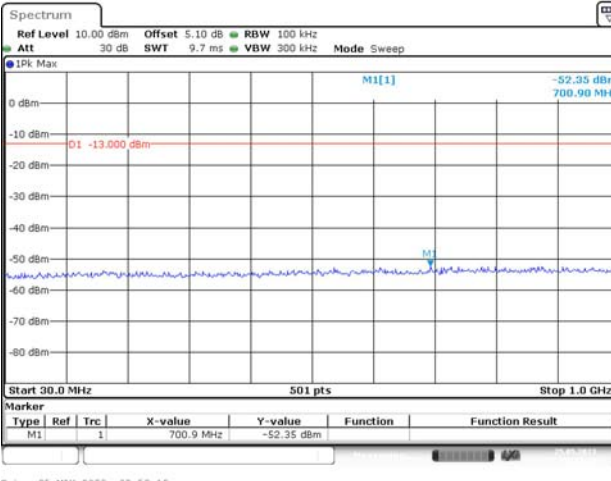
Lowest



Middle



Highest

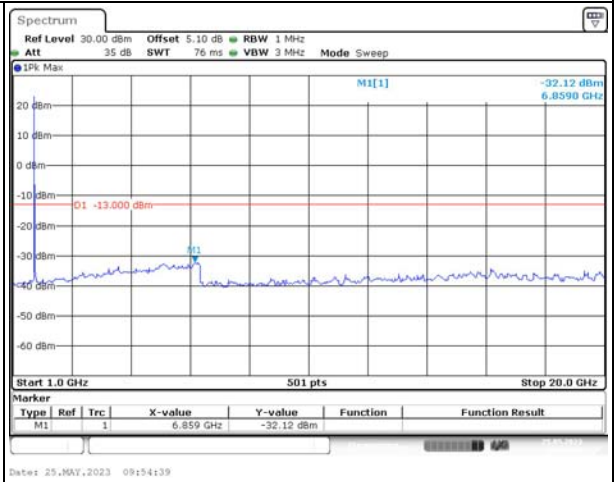
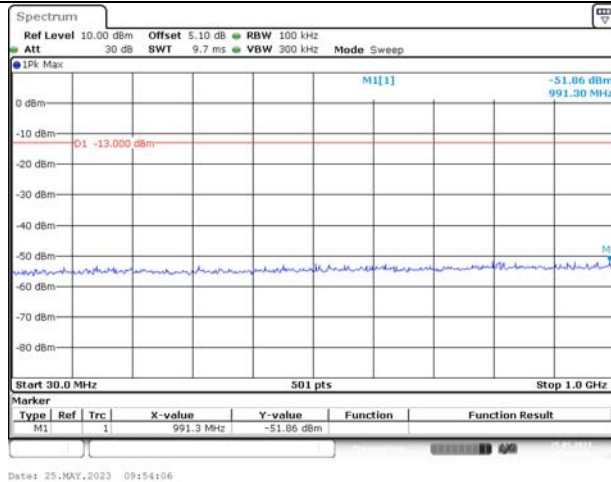


Spurious Emissions at Antenna Terminal

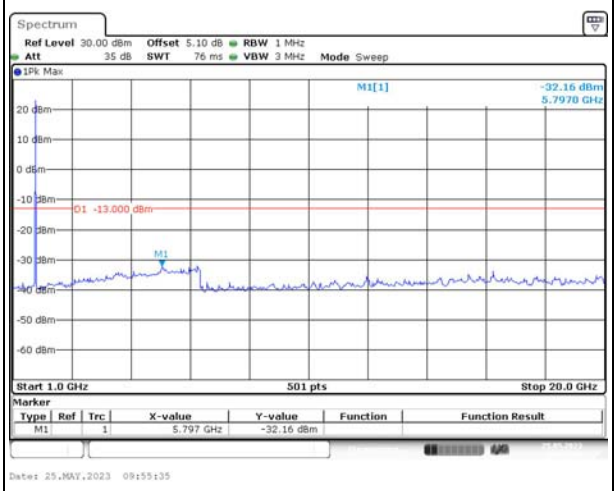
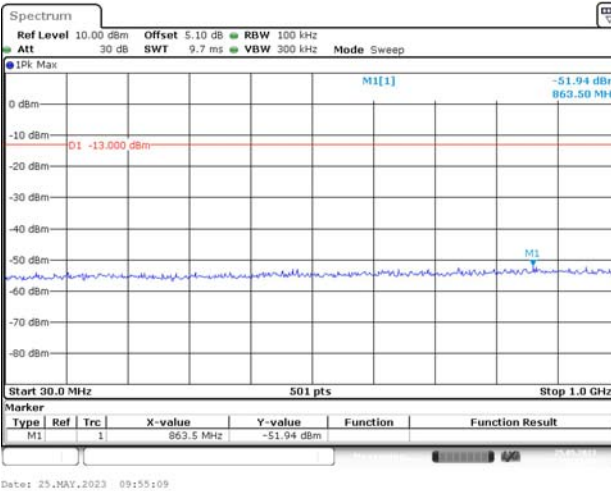
Channel

3MHz Bandwidth QPSK

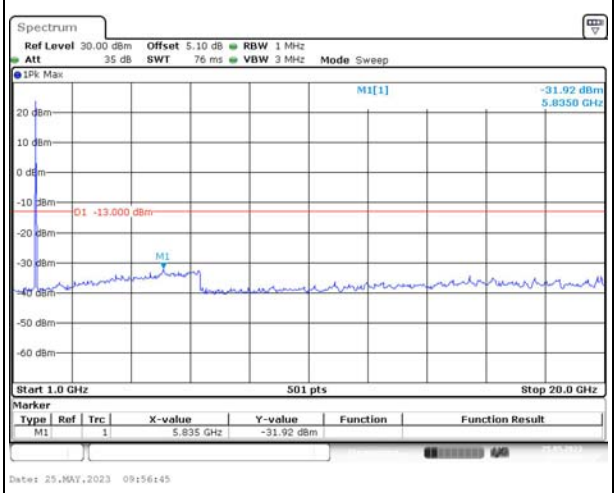
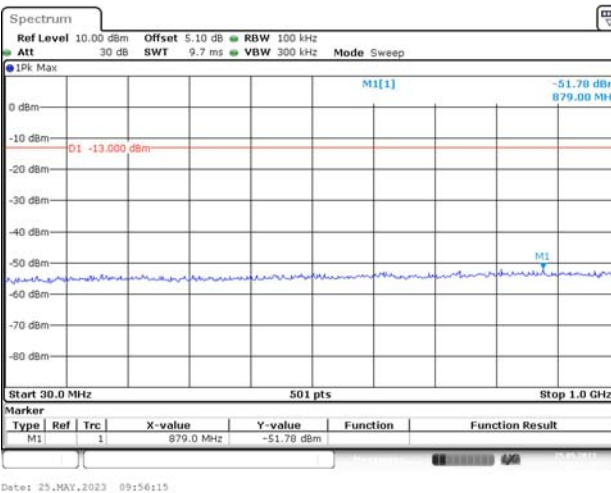
Lowest



Middle



Highest

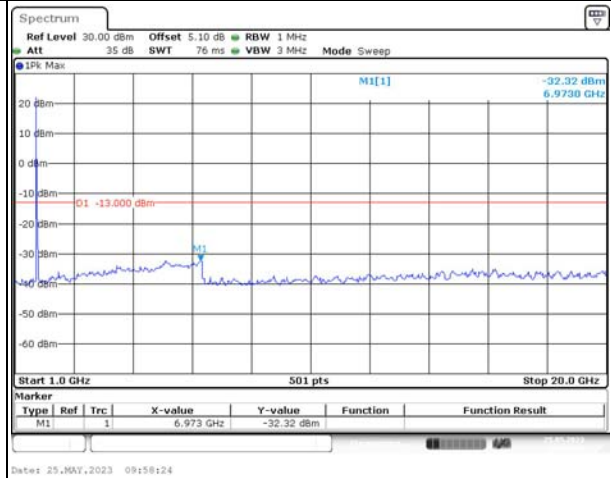
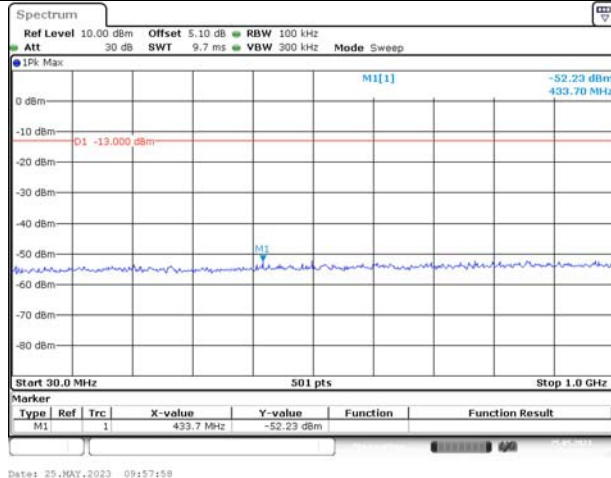


Spurious Emissions at Antenna Terminal

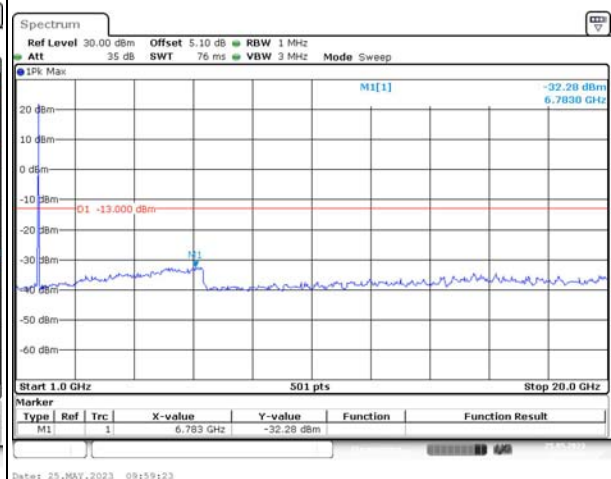
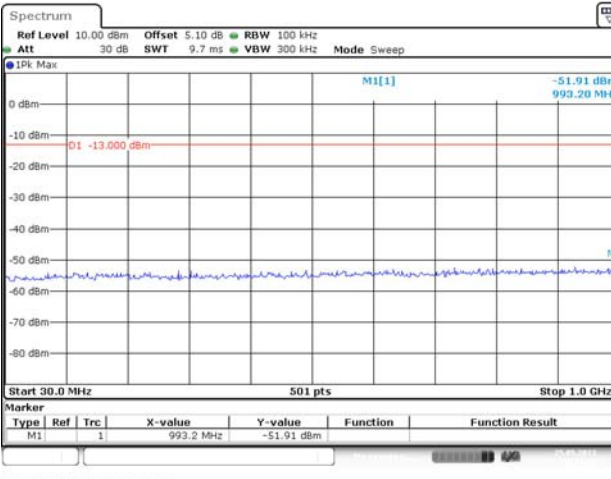
Channel

5MHz Bandwidth QPSK

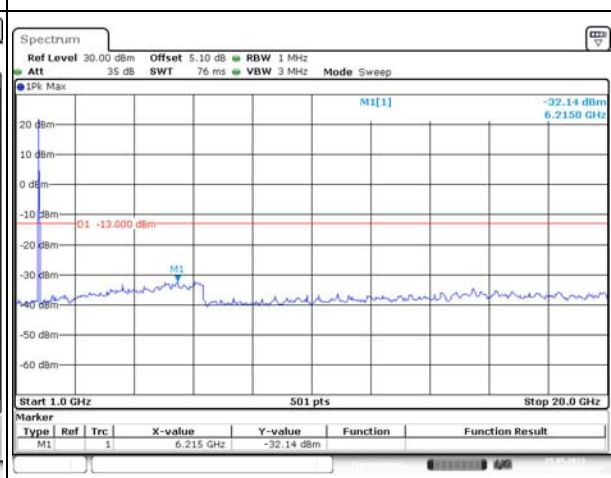
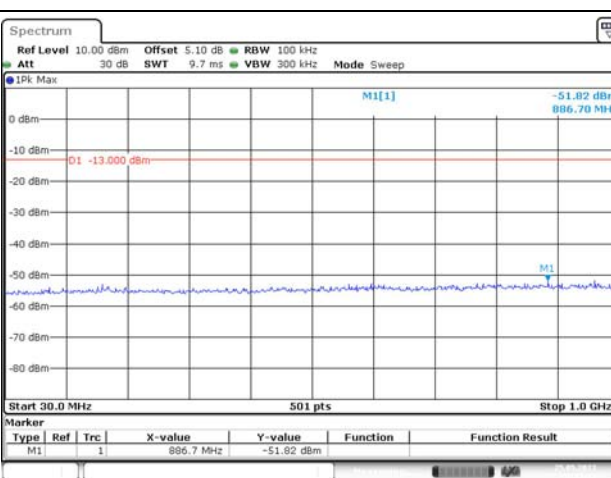
Lowest



Middle



Highest

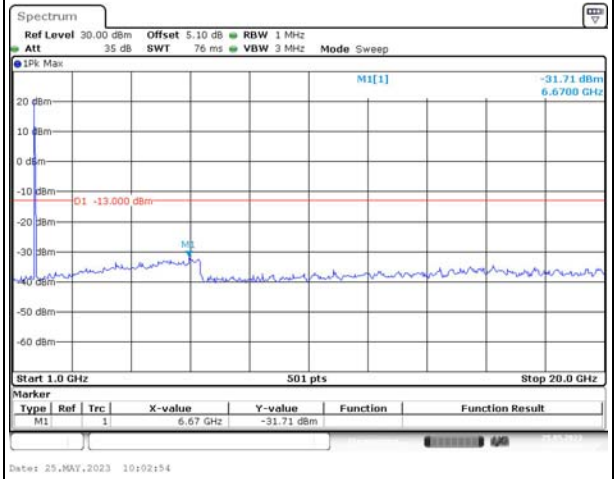
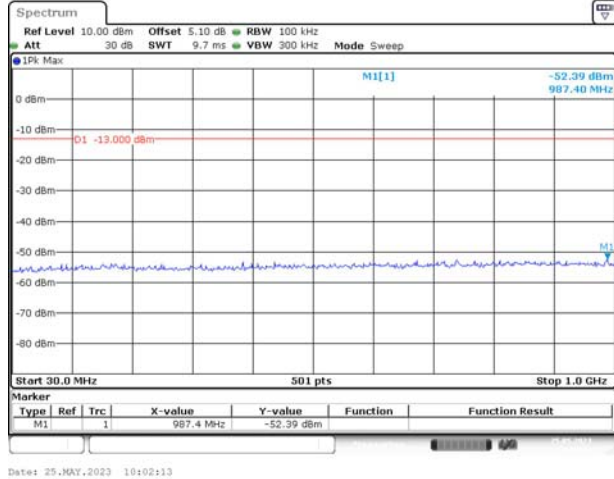


Spurious Emissions at Antenna Terminal

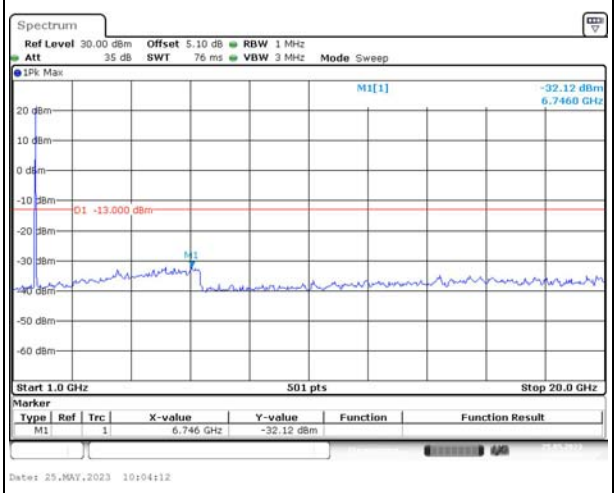
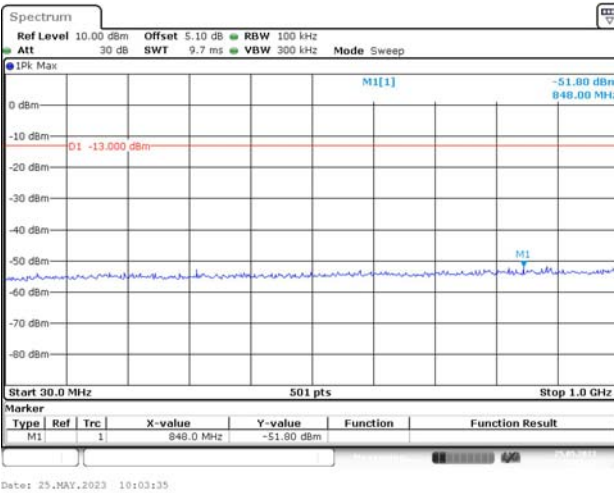
Channel

10MHz Bandwidth QPSK

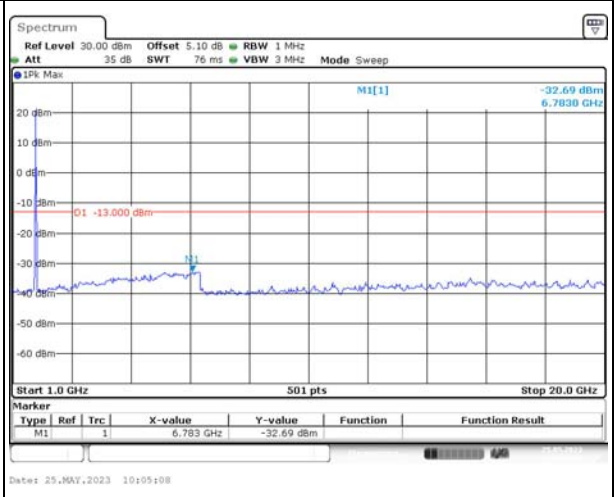
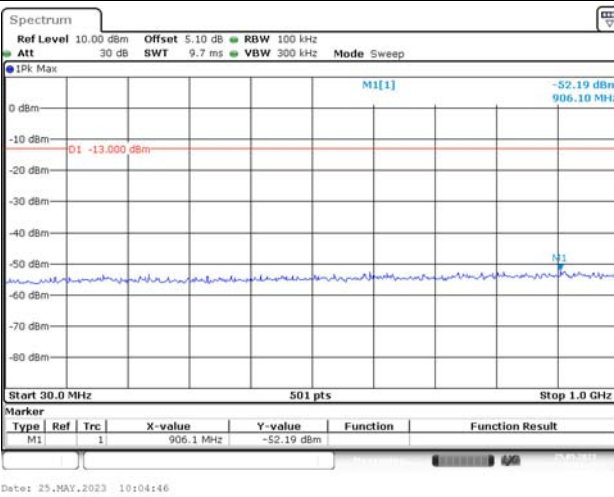
Lowest



Middle



Highest

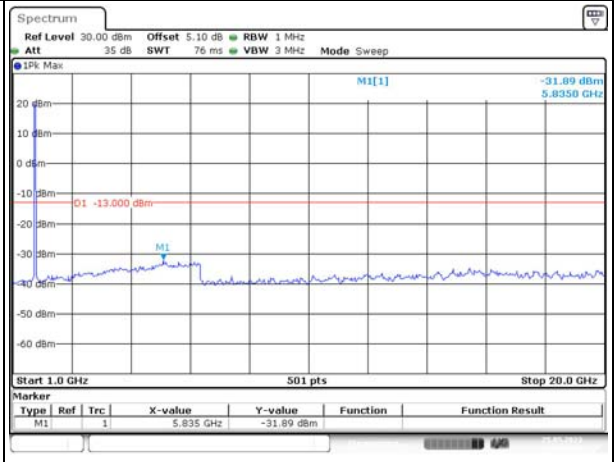
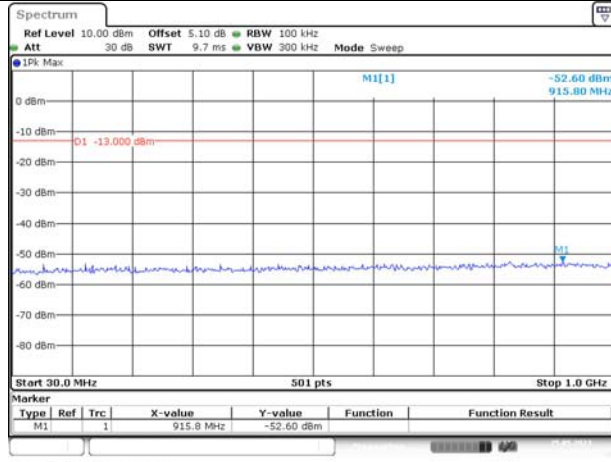


Spurious Emissions at Antenna Terminal

Channel

15MHz Bandwidth QPSK

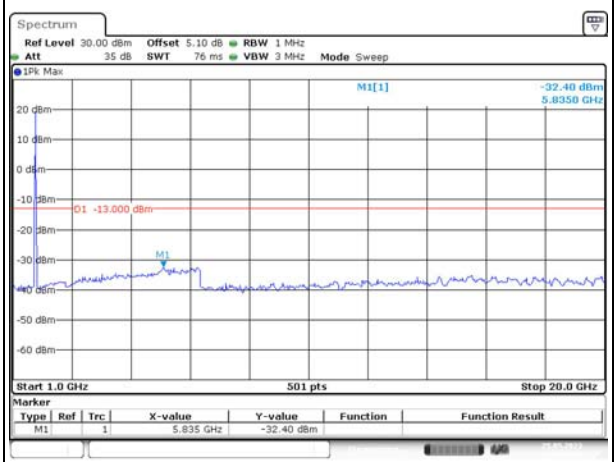
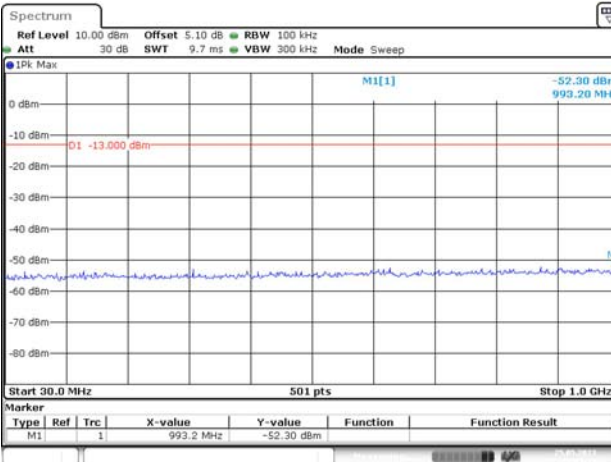
Lowest



Date: 25.MAY.2023 10:06:18

Date: 25.MAY.2023 10:06:48

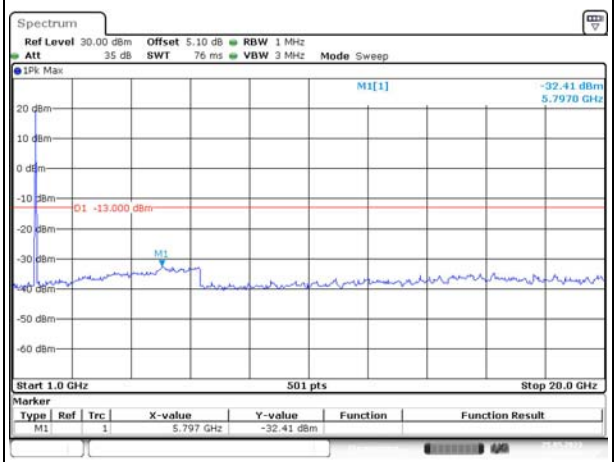
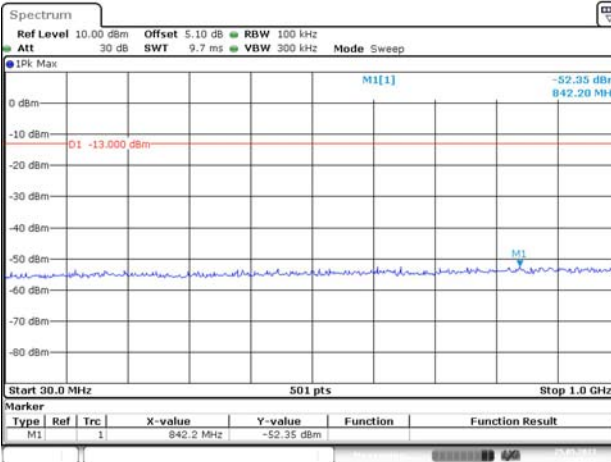
Middle



Date: 25.MAY.2023 10:07:18

Date: 25.MAY.2023 10:07:48

Highest



Date: 25.MAY.2023 10:08:22

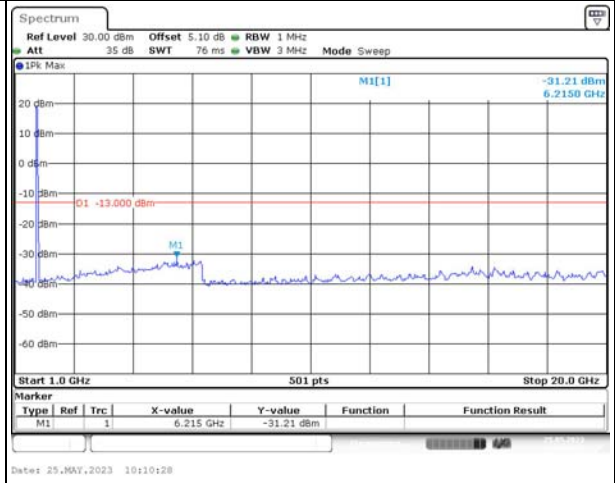
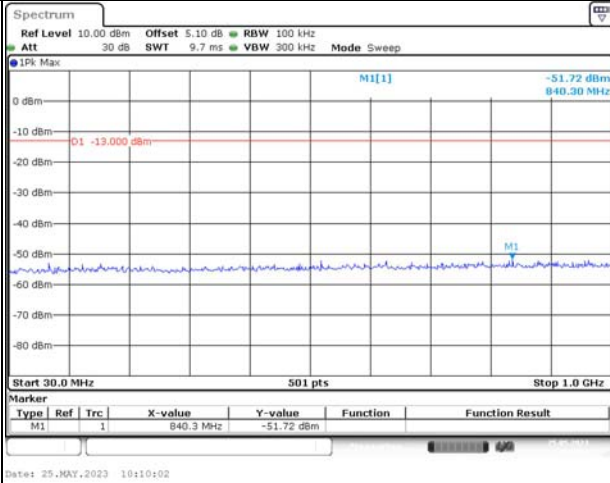
Date: 25.MAY.2023 10:08:59

Spurious Emissions at Antenna Terminal

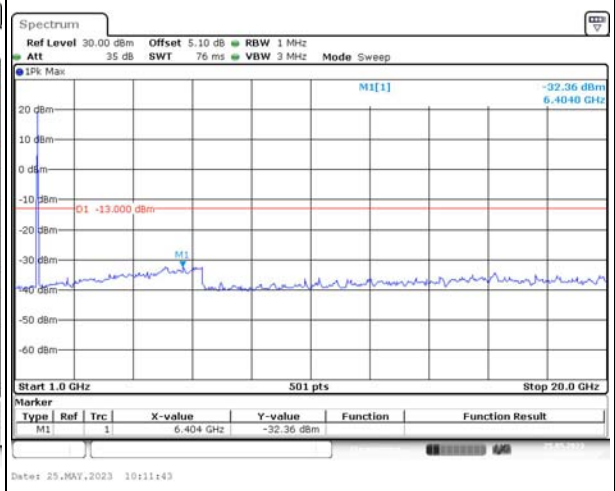
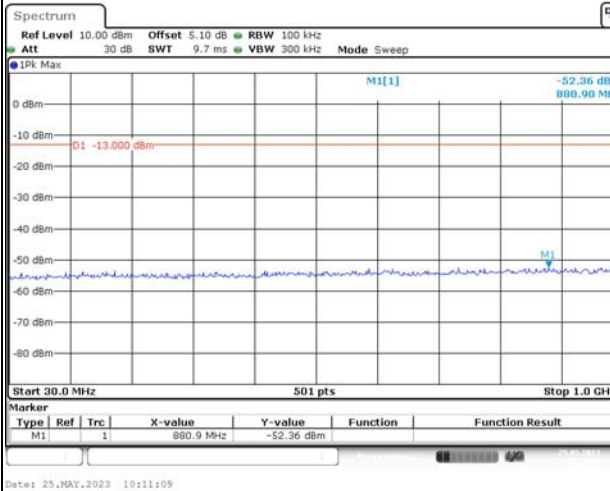
Channel

20MHz Bandwidth QPSK

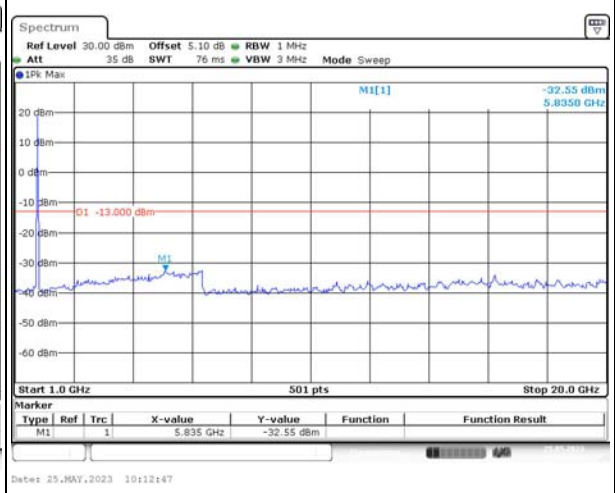
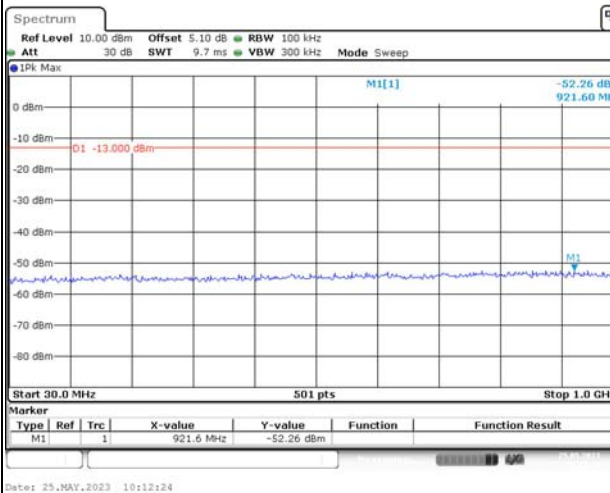
Lowest



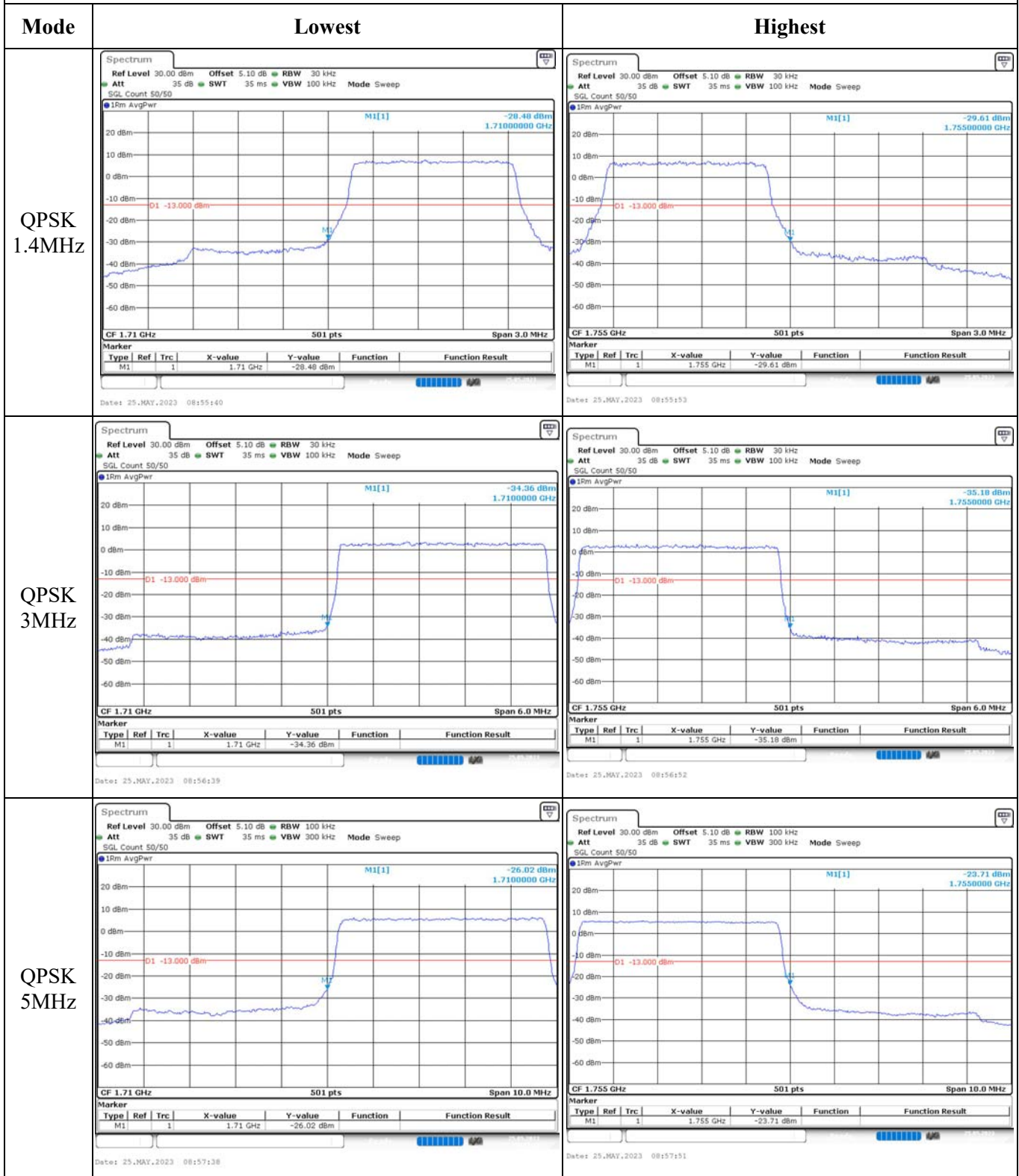
Middle



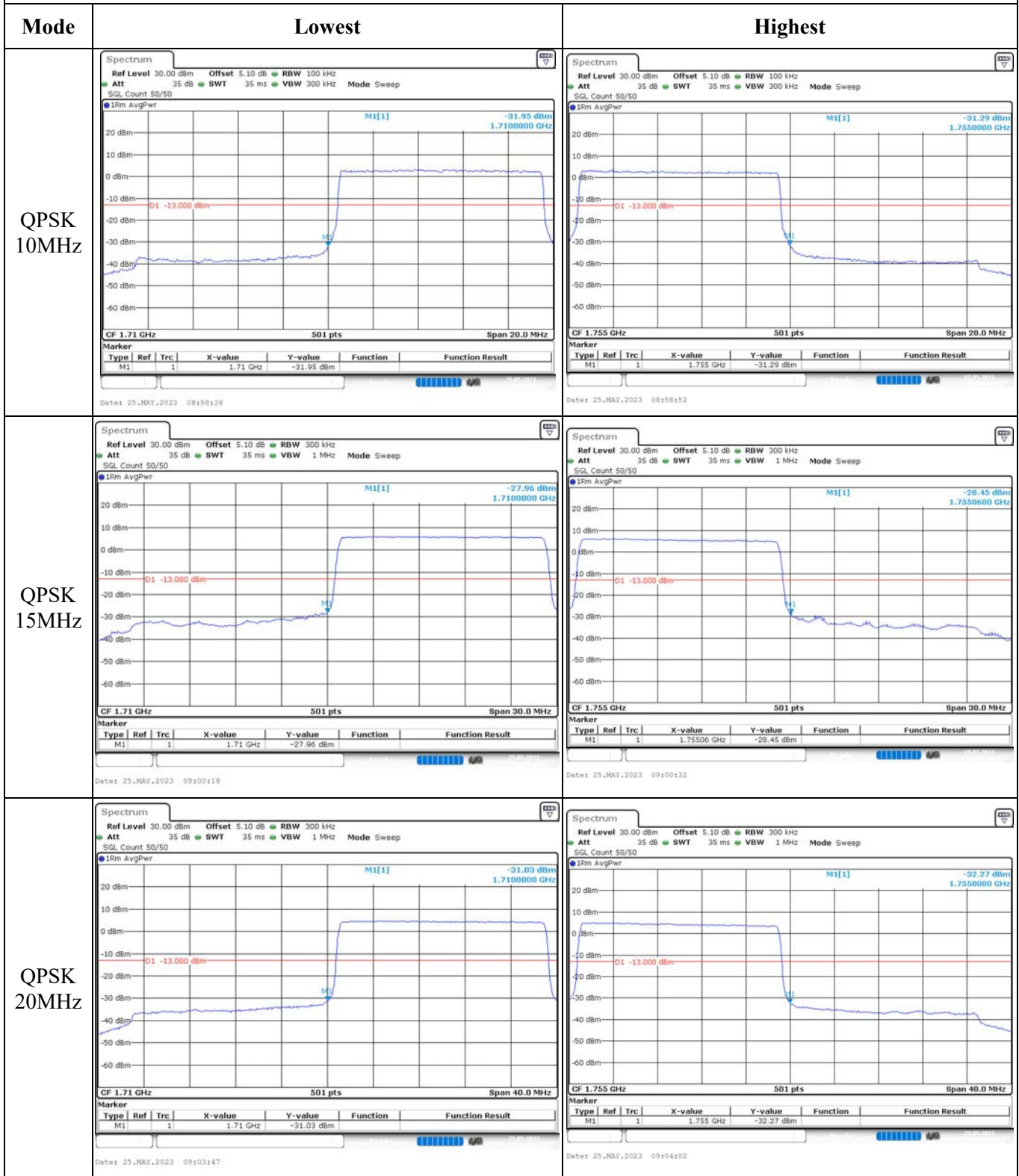
Highest



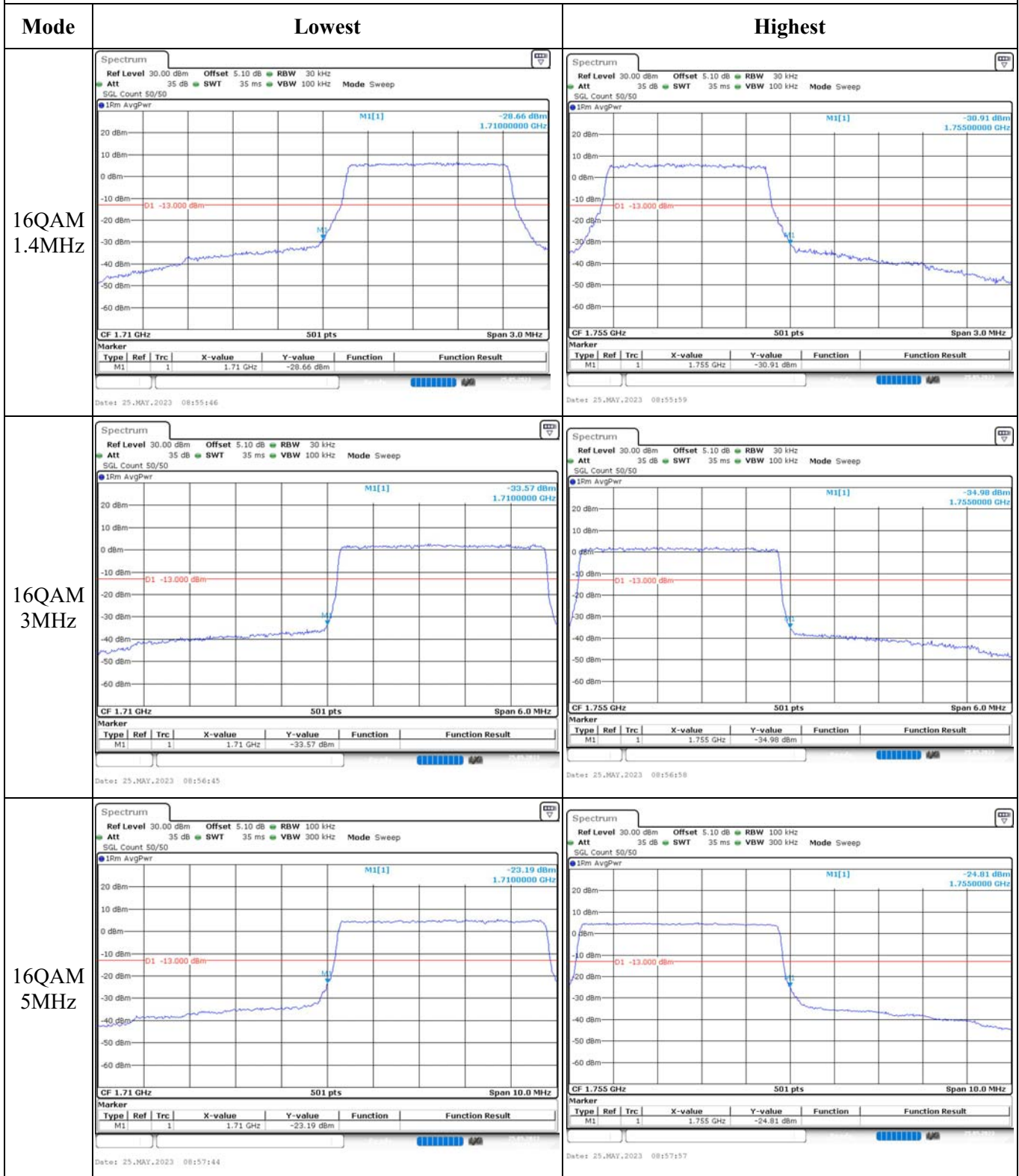
Out of band emission, Band Edge



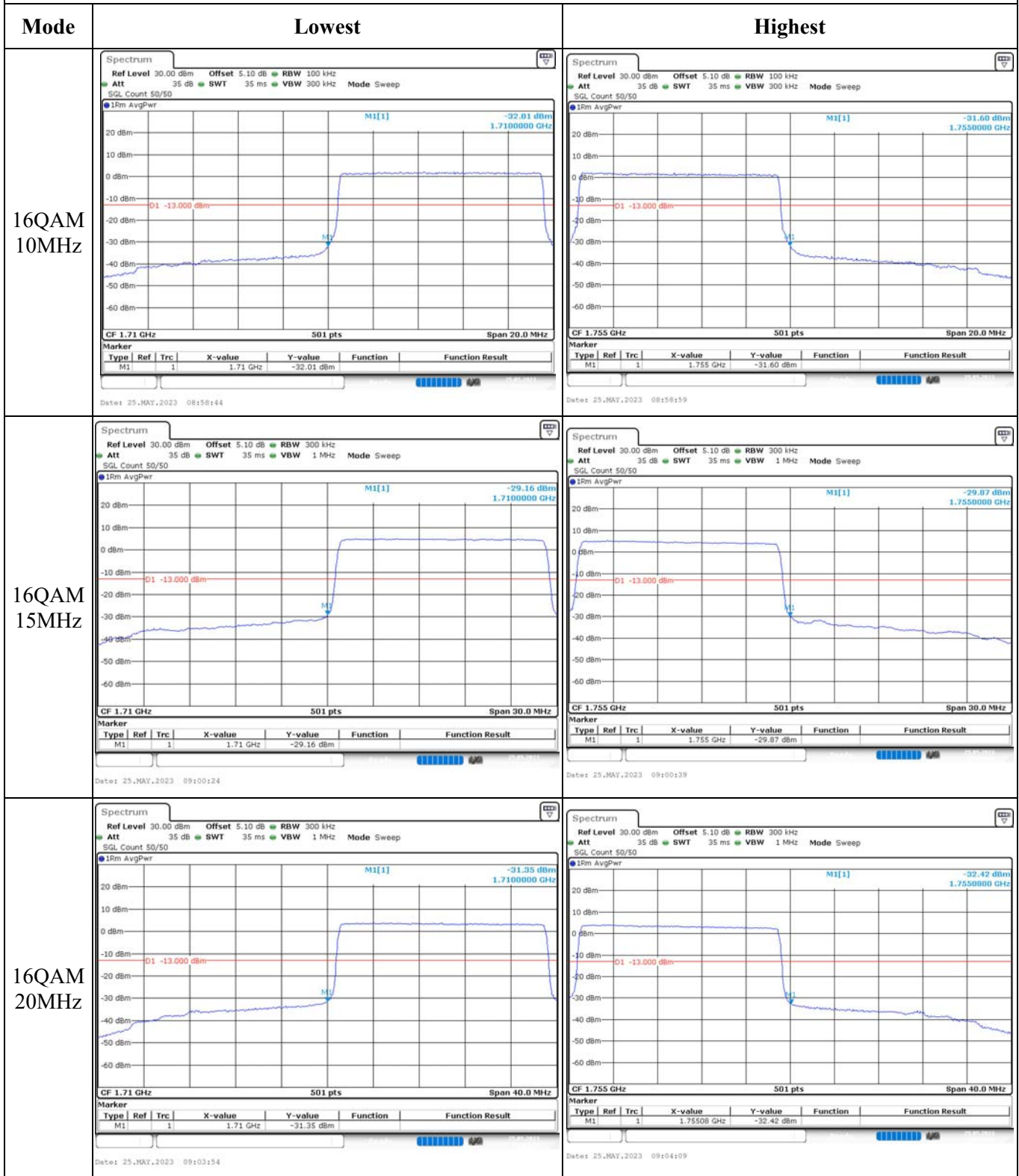
Out of band emission, Band Edge



Out of band emission, Band Edge



Out of band emission, Band Edge



4.8 Antenna Port Test Data and Results for LTE Band 5

Serial Number:	25UK-5	Test Date:	2023/05/24~2023/06/01
Test Site:	RF	Test Mode:	Transmitting
Tester:	George Chen	Test Result:	Pass

Environmental Conditions:

Temperature: (°C)	23.8~26.5	Relative Humidity: (%)	42~56	ATM Pressure: (kPa)	100.3~101.9
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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	SJ0100004	Each time	N/A
Mini-Circuits	DC Block	BLK-18-S+	1554403	Each time	N/A
Unknown	Coaxial tee connector	Unknown	2204004	Each time	N/A
R&S	Wideband Radio Communication Tester	CMW500	149218	2022-07-15	2023-07-14
BACL	TEMP&HUMI Test Chamber	BTH-150-40	30174	2022-09-29	2023-09-28
UNI-T	Multimeter	UT39A+	C210582554	2022-09-29	2023-09-28
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).

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:

FCC§2.1046;§ 22.913 (a)						
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	21.54	21.43	21.35	13.27	38.45
	RB1#3	21.69	21.49	21.51		
	RB1#5	21.5	21.36	21.44		
	RB3#0	21.55	21.51	21.47		
	RB3#3	21.56	21.61	21.44		
	RB6#0	20.52	20.38	20.4		
1.4MHz 16QAM	RB1#0	20.58	20.39	20.35	12.37	38.45
	RB1#3	20.79	20.62	20.51		
	RB1#5	20.6	20.43	20.45		
	RB3#0	20.6	20.64	20.63		
	RB3#3	20.58	20.65	20.65		
	RB6#0	19.51	19.36	19.45		
3MHz QPSK	RB1#0	22.07	21.49	21.4	13.68	38.45
	RB1#8	22.1	21.47	21.39		
	RB1#14	22.04	21.45	21.35		
	RB6#0	20.98	20.42	20.3		
	RB6#9	20.96	20.4	20.37		
	RB15#0	21.03	20.51	20.4		
3MHz 16QAM	RB1#0	21.21	20.49	20.98	12.79	38.45
	RB1#8	21.14	20.46	20.98		
	RB1#14	21.16	20.47	21		
	RB6#0	19.8	19.3	19.4		
	RB6#9	19.88	19.36	19.4		
	RB15#0	19.79	19.53	19.46		
5MHz QPSK	RB1#0	22.02	21.38	21.3	13.7	38.45
	RB1#13	22.12	21.49	21.47		
	RB1#24	21.93	21.33	21.4		
	RB15#0	20.9	20.54	20.44		
	RB15#10	21.07	20.53	20.34		
	RB25#0	20.98	20.55	20.34		
5MHz 16QAM	RB1#0	21	20.48	20.16	12.58	38.45
	RB1#13	20.84	20.64	20.31		
	RB1#24	20.66	20.48	20.25		
	RB15#0	19.34	19.57	19.43		
	RB15#10	19.51	19.58	19.35		
	RB25#0	19.48	19.56	19.38		
10MHz QPSK	RB1#0	22.08	22	21.93	13.82	38.45
	RB1#25	22.24	22.11	22.06		
	RB1#49	22.03	21.99	21.89		

	RB25#0	20.83	21.2	20.81		
	RB25#25	20.9	21.28	20.85		
	RB50#0	20.9	21.28	20.87		
10MHz 16QAM	RB1#0	21.18	20.96	21.61	13.21	38.45
	RB1#25	21.29	21.17	21.63		
	RB1#49	21.12	20.98	21.57		
	RB25#0	19.87	20.27	19.8		
	RB25#25	19.89	20.35	19.91		
	RB50#0	19.87	20.26	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	6.12	6.23	6.43	13
	RB50#0	5.42	6.52	5.42	13
10MHz 16QAM	RB1#0	6.99	7.39	6.96	13
	RB50#0	6.29	7.22	6.38	13
Result:					Pass

FCC §2.1049, §22.905: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	1.108	1.096	1.108	1.296	1.302	1.32
1.4MHz 16QAM	1.096	1.108	1.09	1.302	1.332	1.29
3MHz QPSK	2.683	2.683	2.683	2.88	2.868	2.88
3MHz 16QAM	2.683	2.683	2.683	2.88	2.904	2.88
5MHz QPSK	4.511	4.551	4.511	5.16	5.22	5.18
5MHz 16QAM	4.531	4.511	4.551	5.2	5.2	5.16
10MHz QPSK	8.942	9.022	8.942	9.8	10.08	9.84
10MHz 16QAM	8.942	9.022	8.942	9.84	9.88	9.84

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

FCC §2.1051, §22.917(a):Spurious Emissions at Antenna Terminal

Result:	Pass, Please refer to the test plots of Spurious Emissions at Antenna Terminal.
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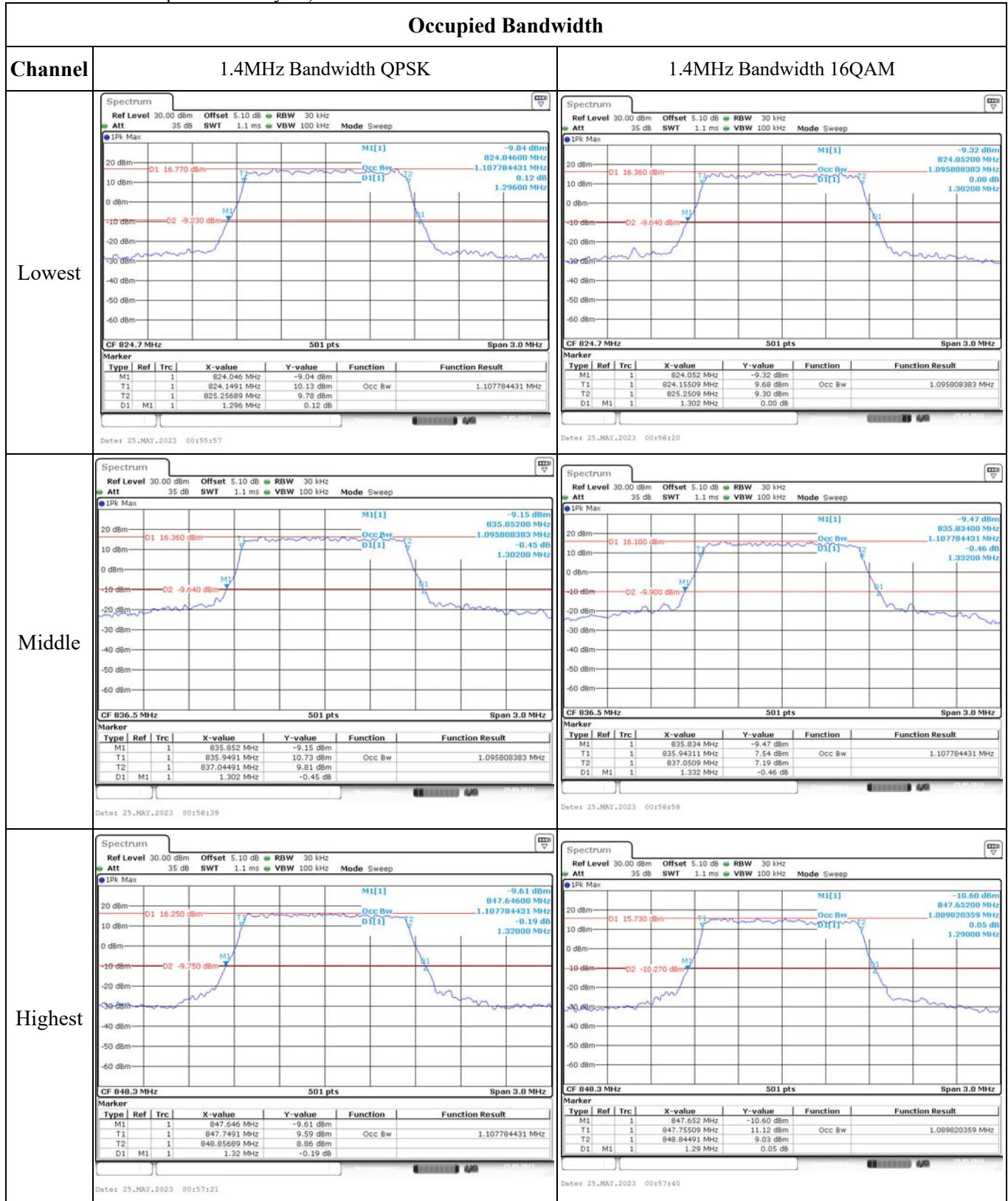
FCC §2.1051, §22.917(a):Out of band emission, Band Edge

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

FCC §2.1055, §22.355: 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	3.8	-9.14	-0.011	2.5
	-20	3.8	-6.97	-0.008	2.5
	-10	3.8	-5.5	-0.007	2.5
	0	3.8	6.06	0.007	2.5
	10	3.8	9.8	0.012	2.5
	20	3.8	5.03	0.006	2.5
	30	3.8	-6.62	-0.008	2.5
	40	3.8	-8.73	-0.010	2.5
	50	3.8	-7.05	-0.008	2.5
Frequency Stability vs. Voltage	20	3.5	8.99	0.011	2.5
	20	4.35	-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	3.8	-6.42	-0.008	2.5
	-20	3.8	8.1	0.010	2.5
	-10	3.8	-8.59	-0.010	2.5
	0	3.8	9.33	0.011	2.5
	10	3.8	-6.94	-0.008	2.5
	20	3.8	7.54	0.009	2.5
	30	3.8	6.43	0.008	2.5
	40	3.8	-6.17	-0.007	2.5
	50	3.8	-6.44	-0.008	2.5
Frequency Stability vs. Voltage	20	3.5	6.34	0.008	2.5
	20	4.35	-6.89	-0.008	2.5
				Result:	Pass

Test Plots(Note: The 5.1dB is the Insertion loss of the RF cable, Coaxial tee connector and DC Block, which was offset into the Spectrum Analyzer):



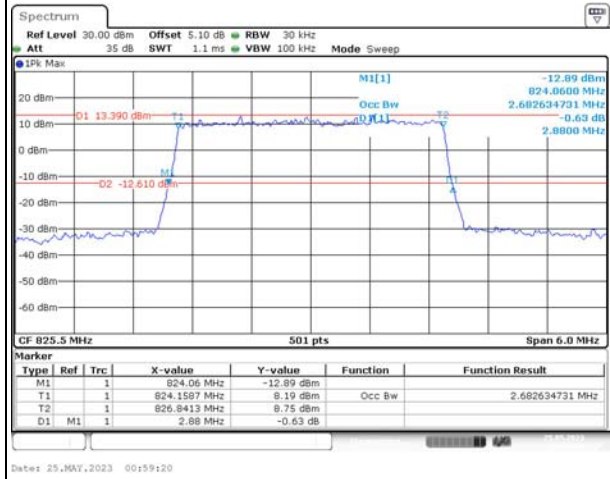
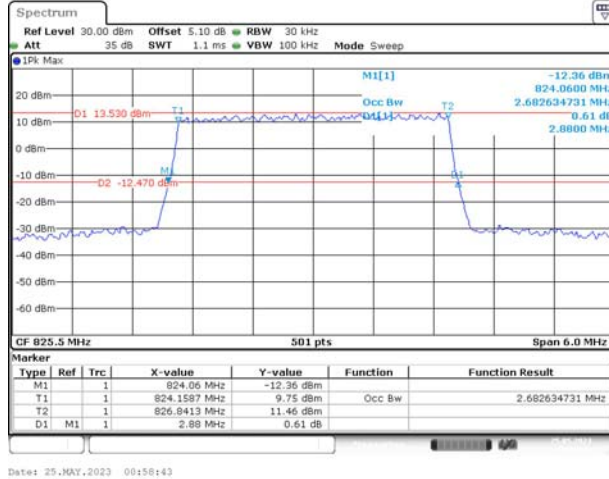
Occupied Bandwidth

Channel

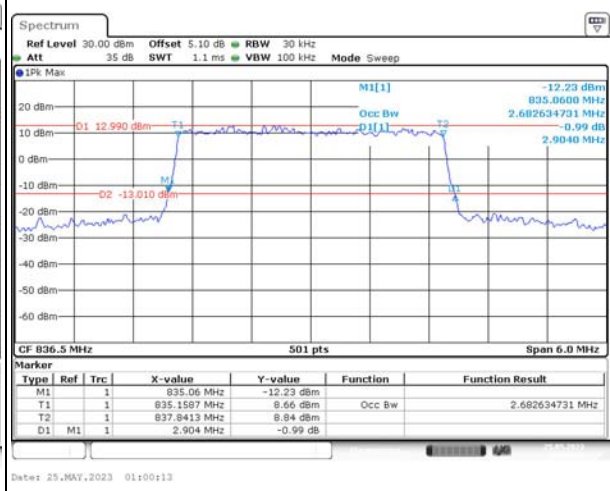
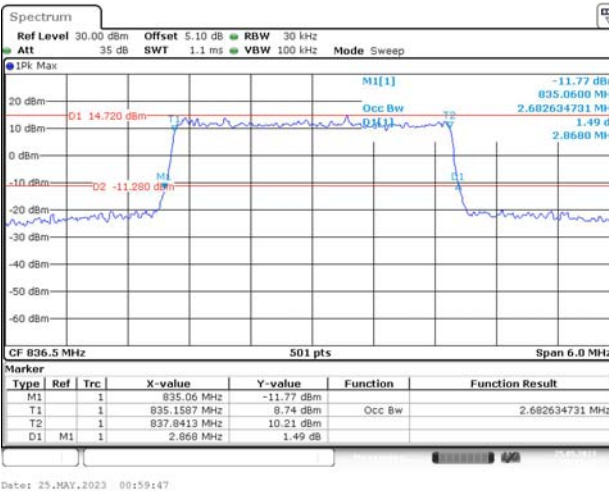
3MHz Bandwidth QPSK

3MHz Bandwidth 16QAM

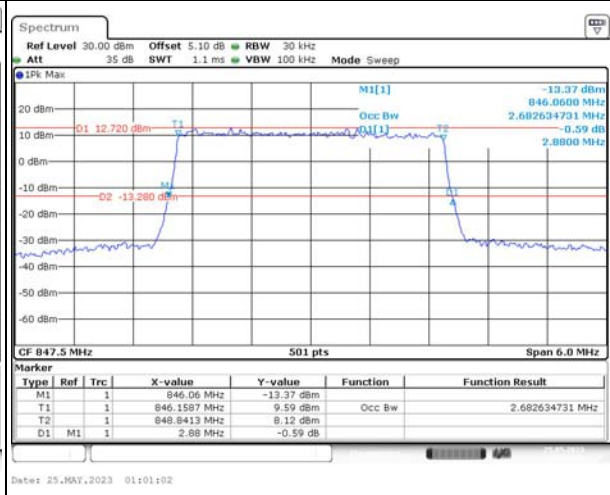
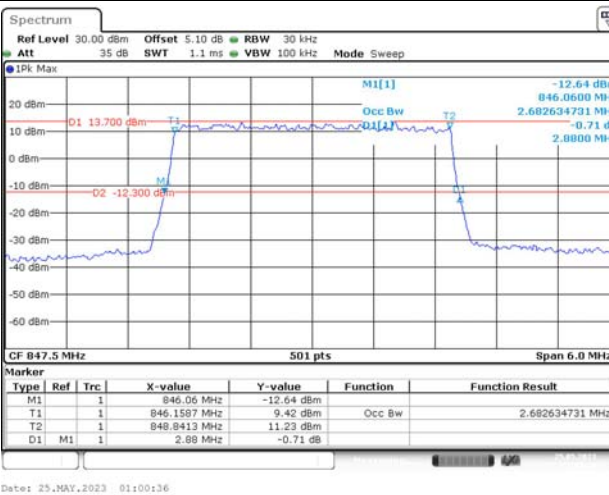
Lowest



Middle



Highest



Occupied Bandwidth

Channel	5MHz Bandwidth QPSK	5MHz Bandwidth 16QAM																																																																						
Lowest	<p>CF 826.5 MHz 501 pts Span 10.0 MHz</p> <table border="1"> <thead> <tr> <th>Type</th> <th>Ref</th> <th>Trc</th> <th>X-value</th> <th>Y-value</th> <th>Function</th> <th>Function Result</th> </tr> </thead> <tbody> <tr> <td>M1</td> <td>1</td> <td></td> <td>823.94 MHz</td> <td>-9.24 dBm</td> <td></td> <td></td> </tr> <tr> <td>T1</td> <td>1</td> <td></td> <td>824.2645 MHz</td> <td>11.29 dBm</td> <td>Occ Bw</td> <td>4.510978044 MHz</td> </tr> <tr> <td>T2</td> <td>1</td> <td></td> <td>828.7754 MHz</td> <td>11.02 dBm</td> <td></td> <td></td> </tr> <tr> <td>D1</td> <td>M1</td> <td>1</td> <td>5.16 MHz</td> <td>-0.29 dB</td> <td></td> <td></td> </tr> </tbody> </table> <p>Date: 25.MAY.2023 01:02:06</p>	Type	Ref	Trc	X-value	Y-value	Function	Function Result	M1	1		823.94 MHz	-9.24 dBm			T1	1		824.2645 MHz	11.29 dBm	Occ Bw	4.510978044 MHz	T2	1		828.7754 MHz	11.02 dBm			D1	M1	1	5.16 MHz	-0.29 dB			<p>CF 826.5 MHz 501 pts Span 10.0 MHz</p> <table border="1"> <thead> <tr> <th>Type</th> <th>Ref</th> <th>Trc</th> <th>X-value</th> <th>Y-value</th> <th>Function</th> <th>Function Result</th> </tr> </thead> <tbody> <tr> <td>M1</td> <td>1</td> <td></td> <td>823.92 MHz</td> <td>-11.08 dBm</td> <td></td> <td></td> </tr> <tr> <td>T1</td> <td>1</td> <td></td> <td>824.2445 MHz</td> <td>9.60 dBm</td> <td>Occ Bw</td> <td>4.530938124 MHz</td> </tr> <tr> <td>T2</td> <td>1</td> <td></td> <td>828.7754 MHz</td> <td>9.57 dBm</td> <td></td> <td></td> </tr> <tr> <td>D1</td> <td>M1</td> <td>1</td> <td>5.2 MHz</td> <td>0.20 dB</td> <td></td> <td></td> </tr> </tbody> </table> <p>Date: 25.MAY.2023 01:02:44</p>	Type	Ref	Trc	X-value	Y-value	Function	Function Result	M1	1		823.92 MHz	-11.08 dBm			T1	1		824.2445 MHz	9.60 dBm	Occ Bw	4.530938124 MHz	T2	1		828.7754 MHz	9.57 dBm			D1	M1	1	5.2 MHz	0.20 dB		
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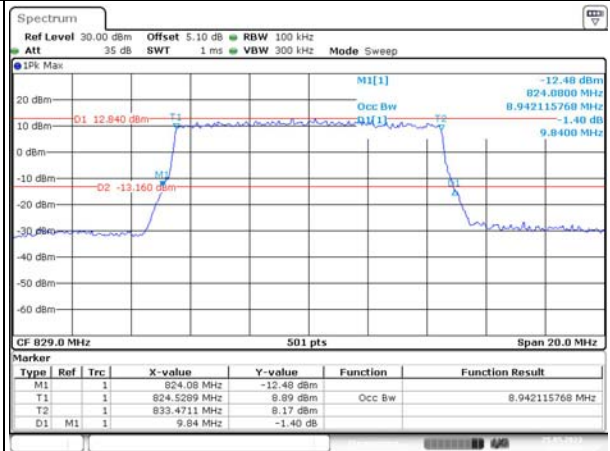
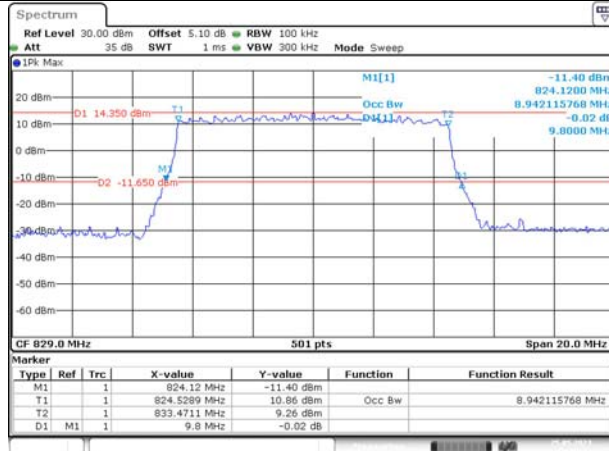
Occupied Bandwidth

Channel

10MHz Bandwidth QPSK

10MHz Bandwidth 16QAM

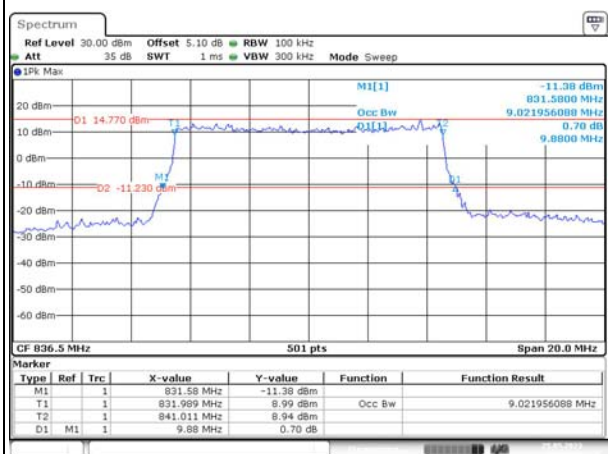
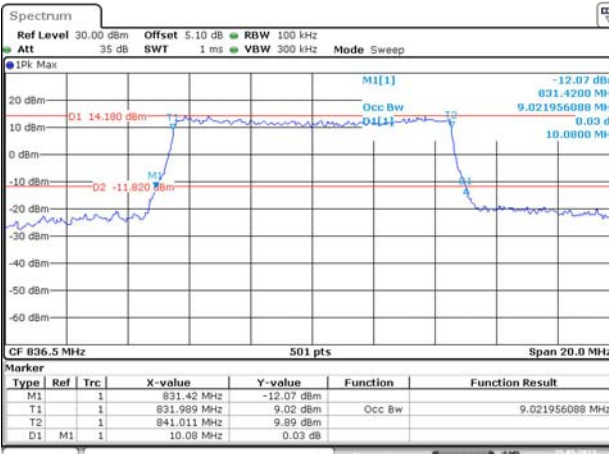
Lowest



Date: 25.MAY.2023 01:06:12

Date: 25.MAY.2023 01:06:46

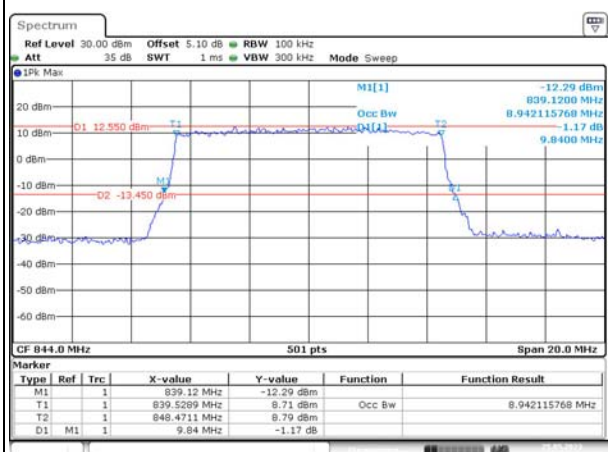
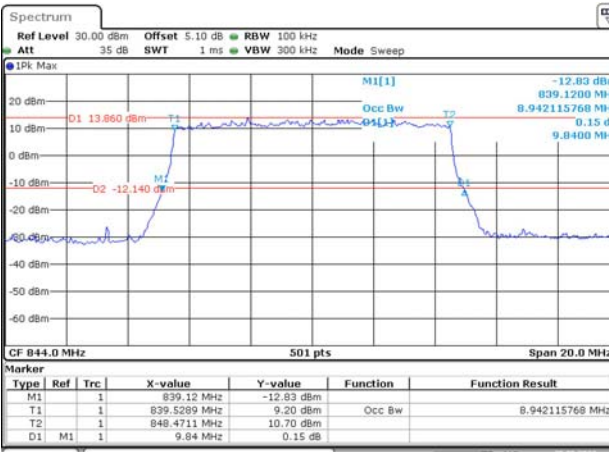
Middle



Date: 25.MAY.2023 01:07:25

Date: 25.MAY.2023 01:08:02

Highest



Date: 25.MAY.2023 01:08:33

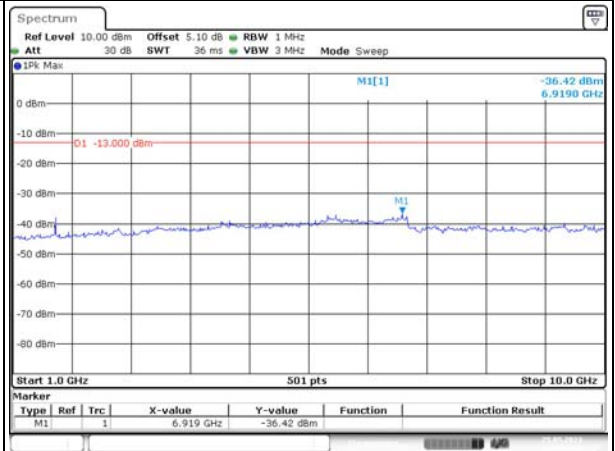
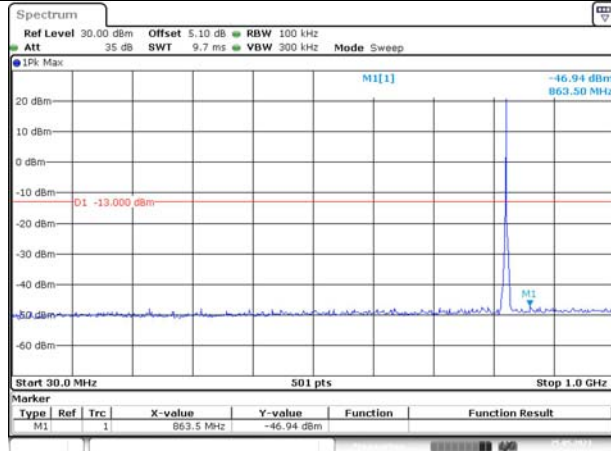
Date: 25.MAY.2023 01:09:03

Spurious Emissions at Antenna Terminal

Channel

1.4MHz Bandwidth QPSK

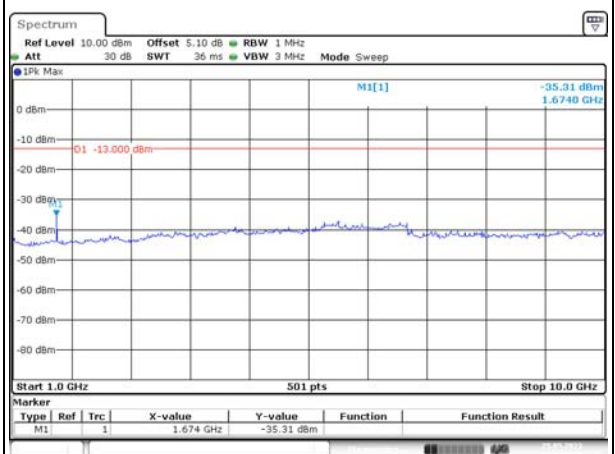
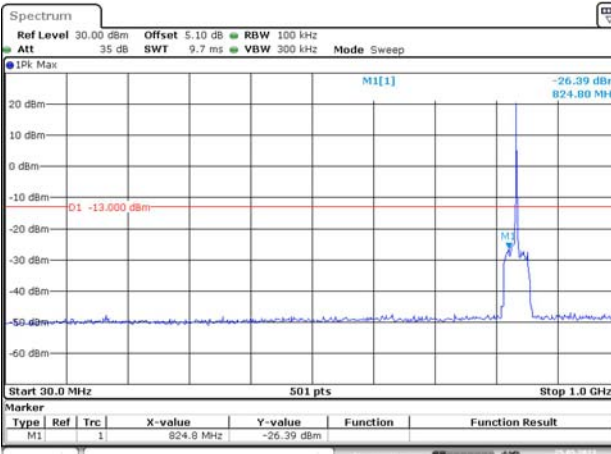
Lowest



Date: 25.MAY.2023 10:13:57

Date: 25.MAY.2023 10:14:31

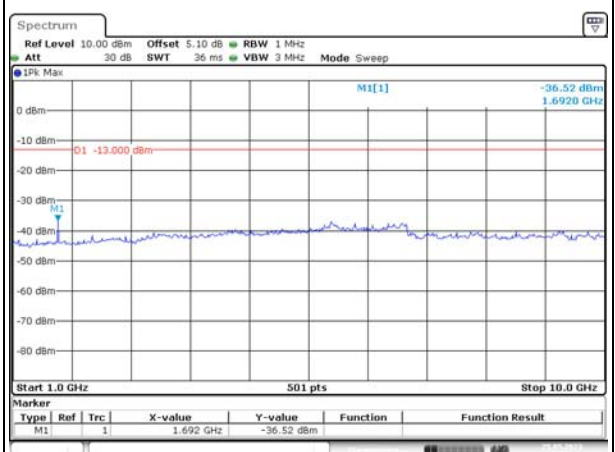
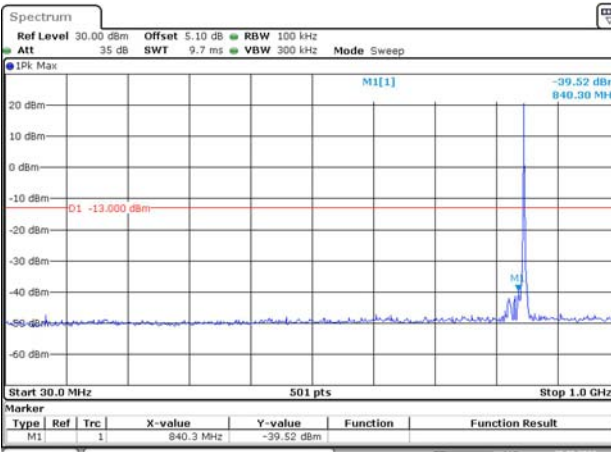
Middle



Date: 25.MAY.2023 10:15:18

Date: 25.MAY.2023 10:15:48

Highest



Date: 25.MAY.2023 10:16:28

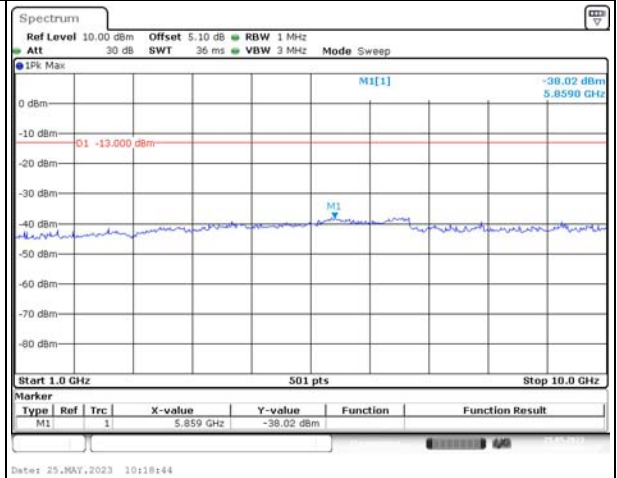
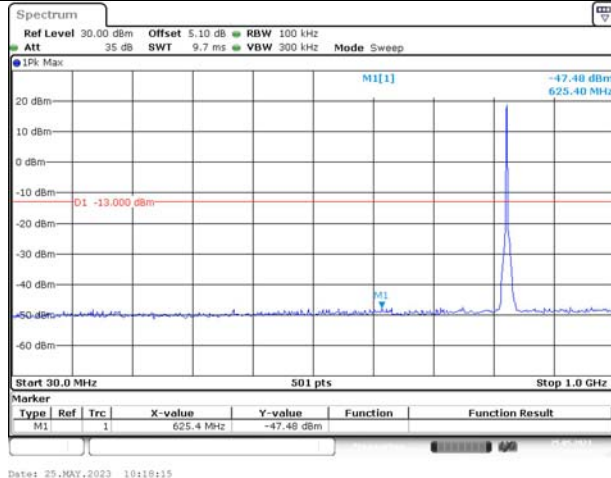
Date: 25.MAY.2023 10:17:02

Spurious Emissions at Antenna Terminal

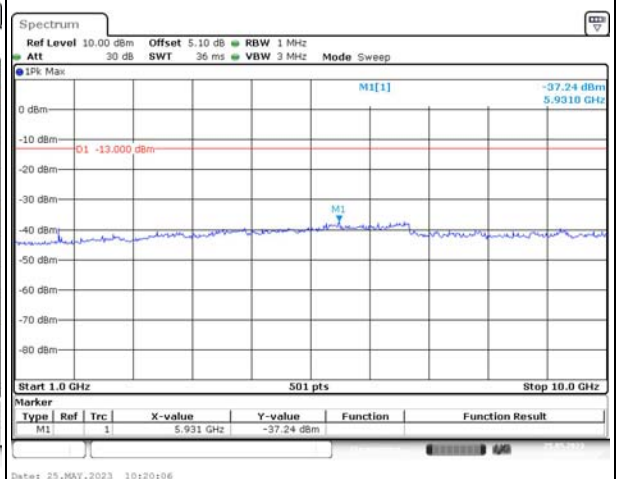
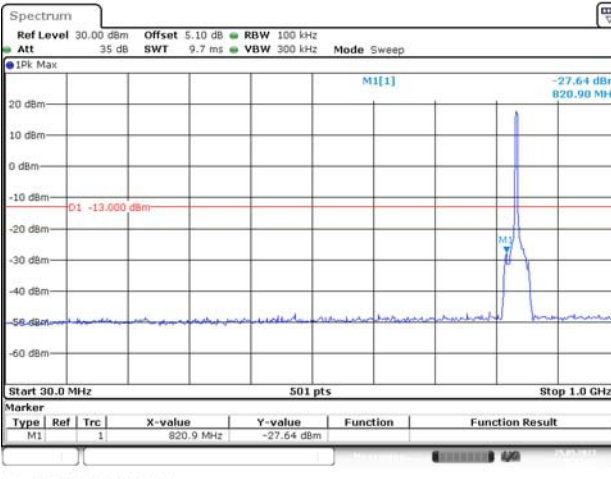
Channel

3MHz Bandwidth QPSK

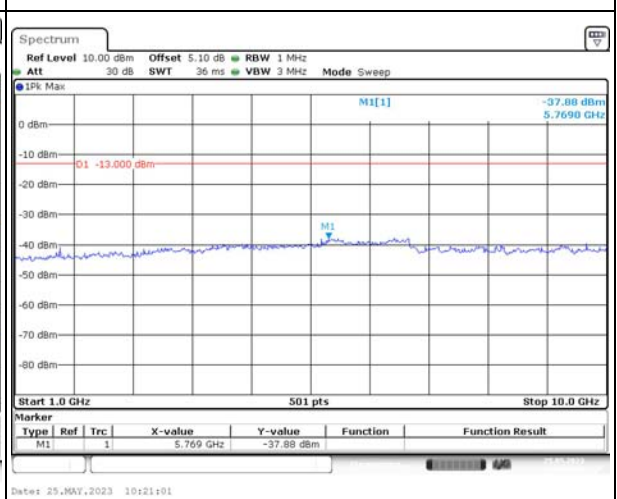
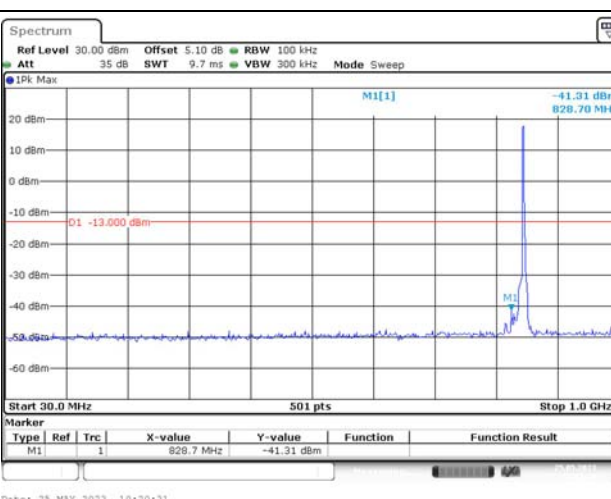
Lowest



Middle



Highest

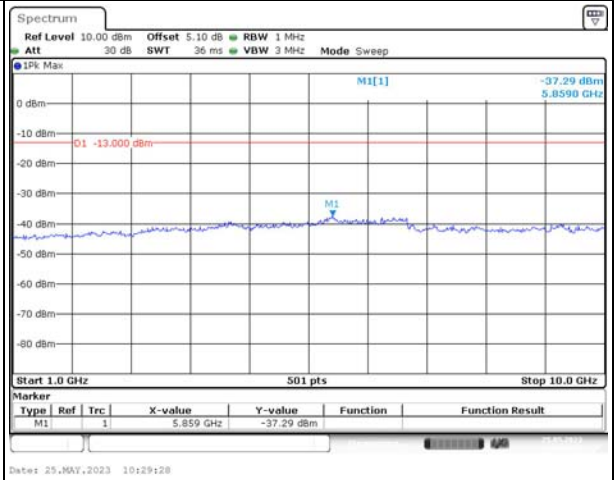
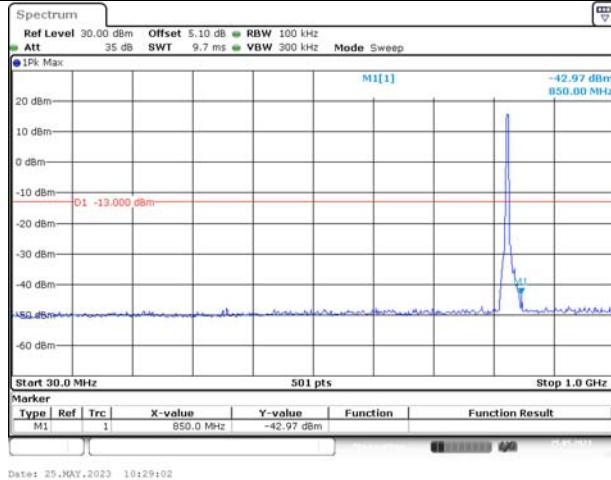


Spurious Emissions at Antenna Terminal

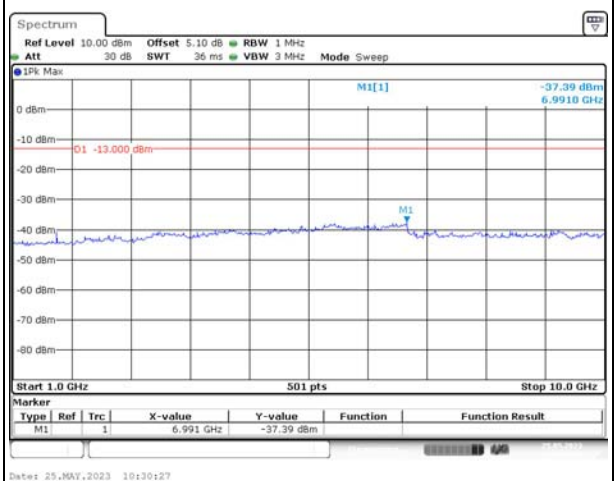
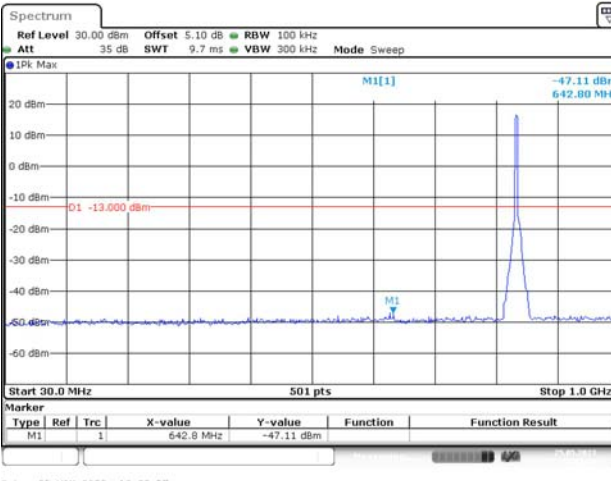
Channel

5MHz Bandwidth QPSK

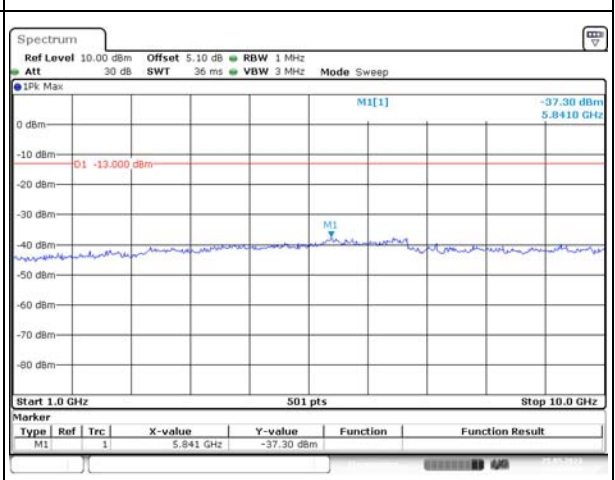
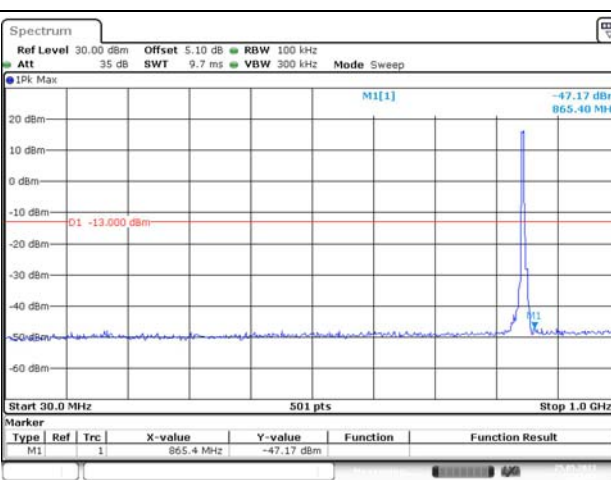
Lowest



Middle



Highest

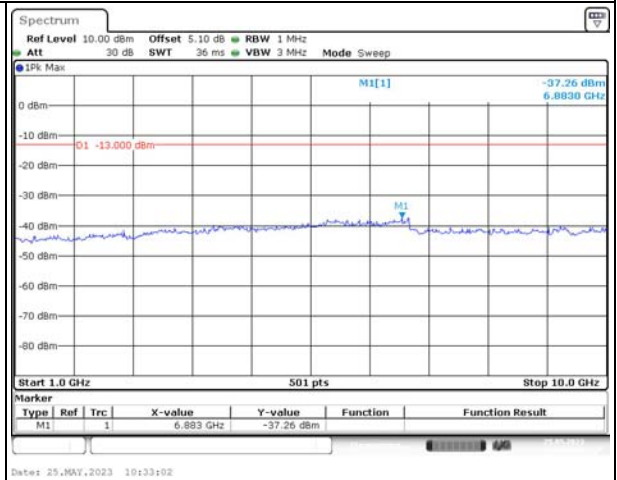
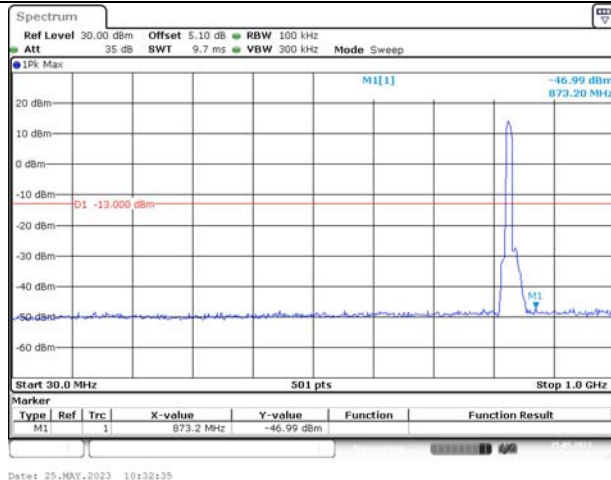


Spurious Emissions at Antenna Terminal

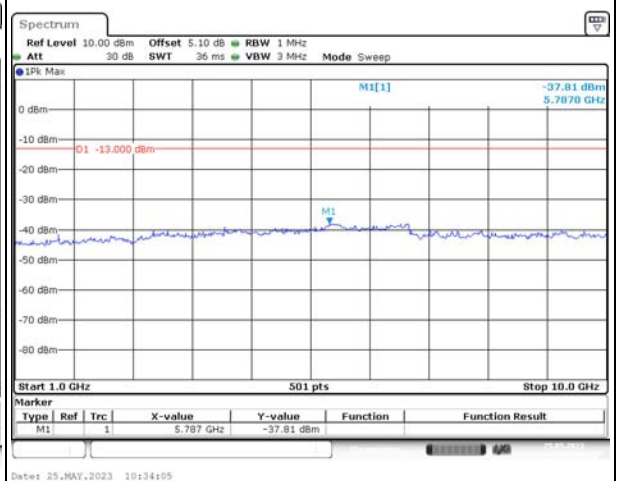
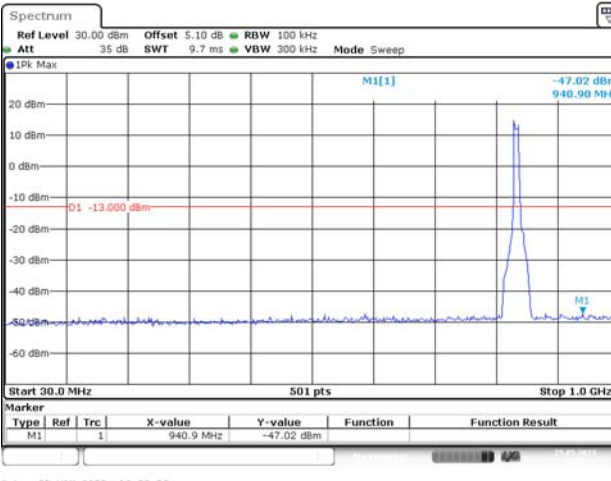
Channel

10MHz Bandwidth QPSK

Lowest



Middle



Highest

