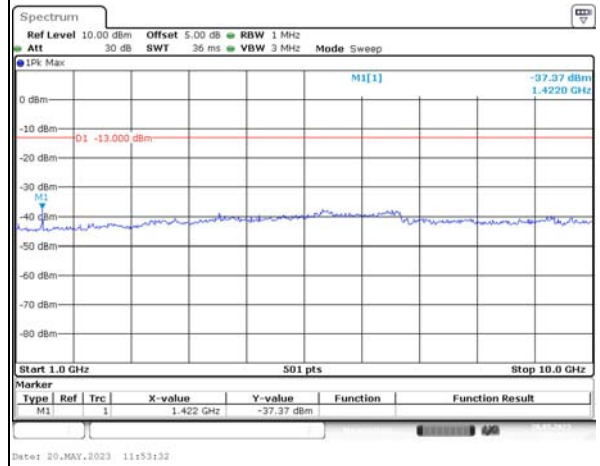
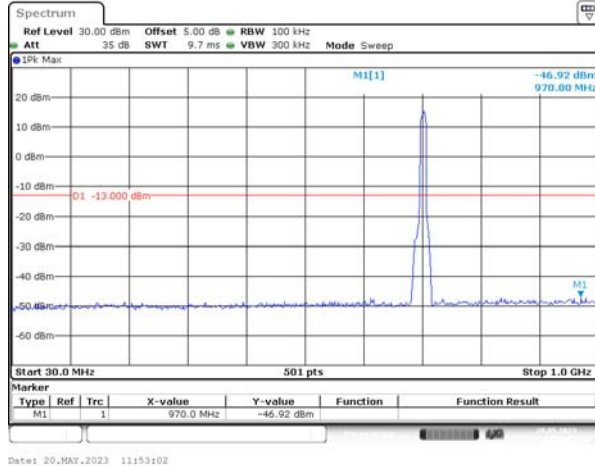


Spurious Emissions at Antenna Terminal

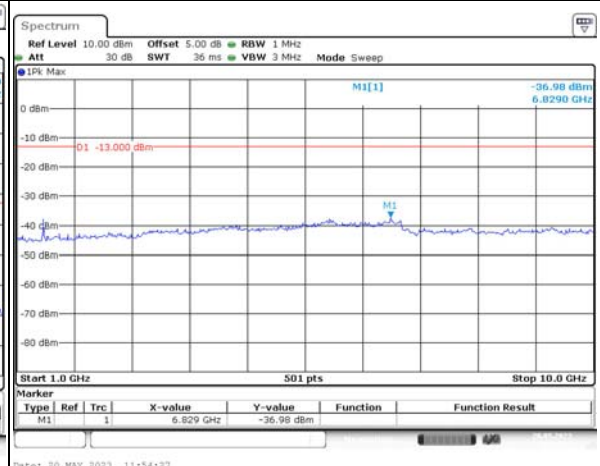
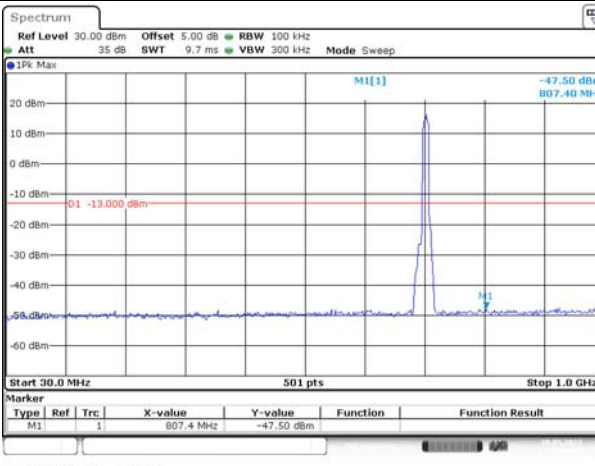
Channel

10MHz Bandwidth QPSK

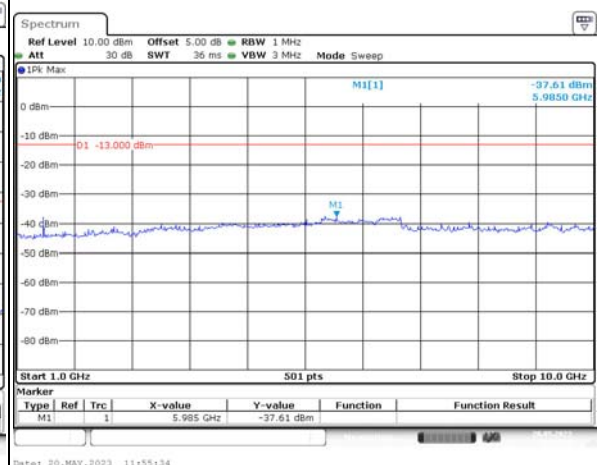
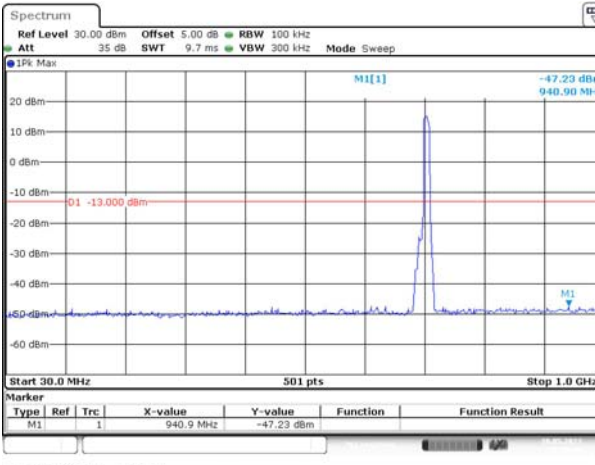
Lowest



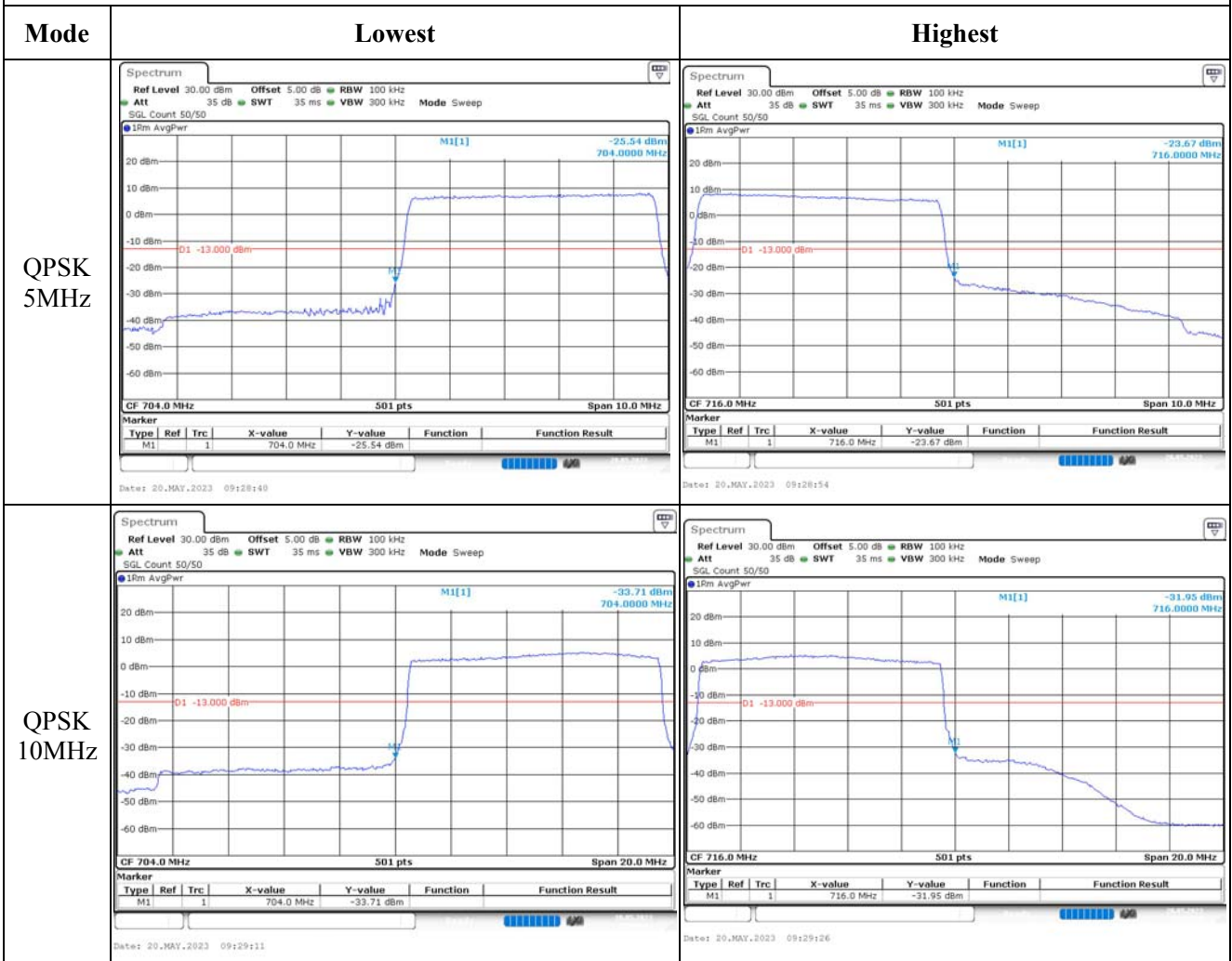
Middle



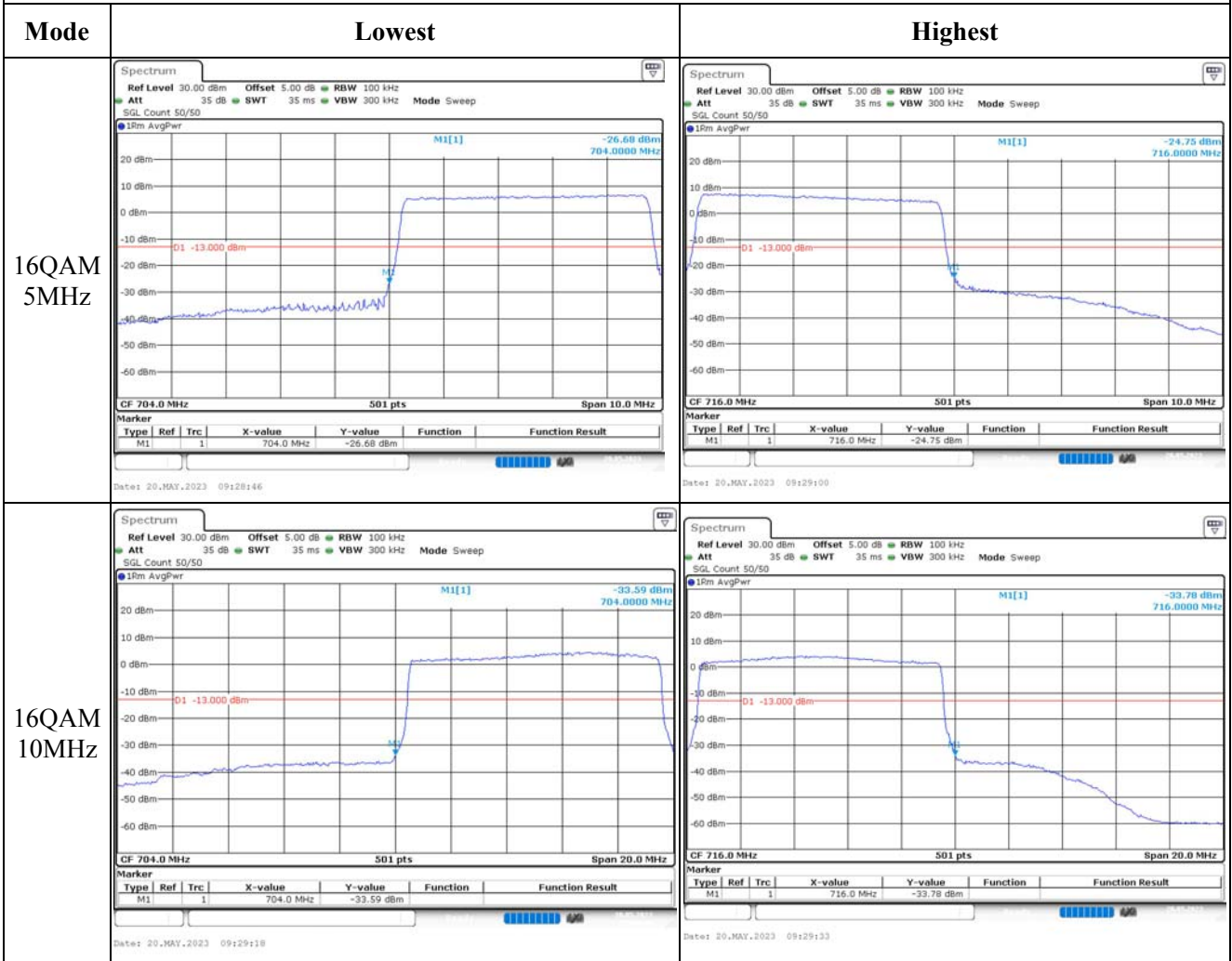
Highest



Out of band emission, Band Edge



Out of band emission, Band Edge



4.12 Antenna Port Test Data and Results for LTE Band 38

Serial Number:	25TU-1	Test Date:	2023/05/20~2023/06/07
Test Site:	RF	Test Mode:	Transmitting
Tester:	George Chen	Test Result:	Pass

Environmental Conditions:

Temperature: (°C)	22.3~26.8	Relative Humidity: (%)	39~59	ATM Pressure: (kPa)	100.1~102.3
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Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSV40	101474	2022/07/15	2023/07/14
zhuoxiang	Coaxial Cable	SMA-178	211001	Each time	N/A
YINSAIGE	Coaxial Cable	SS402	SJ0100001	Each time	N/A
Mini-Circuits	DC Block	BLK-18-S+	1554403	Each time	N/A
Weinschel	Power Splitter	1515	RA914	Each time	N/A
R&S	Wideband Radio Communication Tester	CMW500	149218	2022/07/15	2023/07/14
BACL	TEMP&HUMI Test Chamber	BTH-150-40	30174	2022/09/29	2023/09/28
UNI-T	Multimeter	UT39A+	C210582554	2022/9/29	2023/9/28
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)
5MHz	2572.5	2595	2617.5
10MHz	2575	2595	2615
15MHz	2577.5	2595	2612.5
20MHz	2580	2595	2610

Test Data:

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		
5MHz QPSK	RB1#0	21.86	21.65	21.81	22.05	33
	RB1#13	22.25	22.17	21.81		
	RB1#24	21.71	21.72	21.75		
	RB15#0	21.32	21.16	20.65		
	RB15#10	21.29	21.21	20.74		
	RB25#0	21.28	21.16	20.67		
5MHz 16QAM	RB1#0	21.89	21.15	20.75	21.69	33
	RB1#13	21.85	21.12	20.72		
	RB1#24	21.76	21.01	21.15		
	RB15#0	20.62	20.63	20.04		
	RB15#10	20.58	20.66	19.96		
	RB25#0	20.6	20.26	19.97		
10MHz QPSK	RB1#0	22.25	21.97	22.02	22.27	33
	RB1#25	22.38	22.31	21.88		
	RB1#49	22.47	22.18	21.8		
	RB25#0	21.32	21.23	20.99		
	RB25#25	21.36	21.34	20.87		
	RB50#0	21.4	21.17	20.84		
10MHz 16QAM	RB1#0	22.08	22	21.15	22.17	33
	RB1#25	22.25	22.35	20.9		
	RB1#49	22.37	22.36	20.77		
	RB25#0	20.67	20.6	20.14		
	RB25#25	20.67	20.64	19.97		
	RB50#0	20.58	20.48	20.18		
15MHz QPSK	RB1#0	22.46	21.95	22.03	22.26	33
	RB1#38	22.36	21.95	21.95		
	RB1#74	22.19	21.95	21.88		
	RB36#0	21.43	21.25	20.99		
	RB36#39	21.32	21.24	20.82		
	RB75#0	21.37	21.18	20.99		
15MHz 16QAM	RB1#0	22.3	21.66	21.25	22.1	33
	RB1#38	22.24	21.66	21.08		
	RB1#74	22.08	21.56	20.9		
	RB36#0	20.75	20.49	20.28		
	RB36#39	20.64	20.46	20.01		
	RB75#0	20.55	20.49	20.2		
20MHz QPSK	RB1#0	22.27	22.26	22.04	22.15	33
	RB1#50	22.09	22.35	21.96		
	RB1#99	22.11	22.2	21.76		
	RB50#0	21.31	21.14	20.92		

	RB50#50	21.21	21.05	20.69		
	RB100#0	21.26	21.13	20.8		
20MHz 16QAM	RB1#0	21.01	22.01	21.57	21.81	33
	RB1#50	21.02	21.85	21.23		
	RB1#99	20.86	21.82	21.07		
	RB50#0	20.51	20.37	20.36		
	RB50#50	20.51	20.39	20.17		
	RB100#0	20.49	20.43	20.02		
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	
10MHz QPSK	RB1#0	8.87	9.36	9.25	13
	RB50#0	9.04	9.13	9.22	13
10MHz 16QAM	RB1#0	9.19	10.17	9.88	13
	RB50#0	9.94	9.91	9.94	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
5MHz QPSK	4.531	4.531	4.491	5.34	5.1	4.96
5MHz 16QAM	4.511	4.511	4.511	5.3	5.24	5.1
10MHz QPSK	8.982	8.942	8.982	9.84	9.96	9.84
10MHz 16QAM	8.942	8.942	8.982	9.76	10.08	9.8
15MHz QPSK	13.473	13.533	13.593	15.12	15.96	16.56
15MHz 16QAM	13.593	13.593	13.593	15.54	15.24	16.02
20MHz QPSK	17.964	17.964	17.964	19.84	20.16	19.68
20MHz 16QAM	17.964	17.964	17.964	19.6	20	19.68
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.

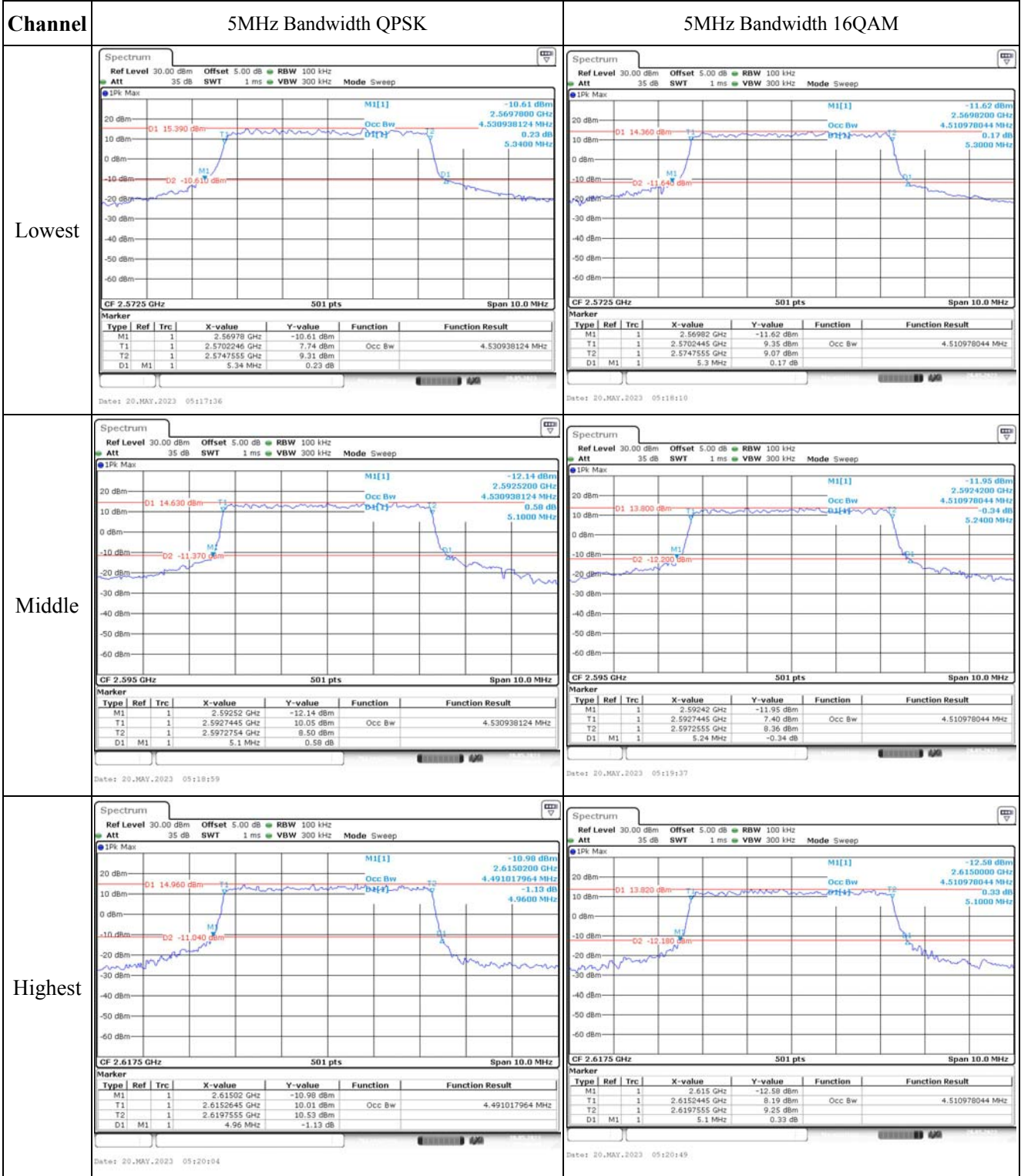
Out of band emission, Band Edge	
Result:	Pass, Please refer to the test plots of Out of band emission, Band Edge.

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	3.85	2571.047	2570.00	2619.057	2620
	-20	3.85	2571.082	2570.00	2619.044	2620
	-10	3.85	2571.051	2570.00	2619.085	2620
	0	3.85	2571.047	2570.00	2619.036	2620
	10	3.85	2571.008	2570.00	2619.035	2620
	20	3.85	2571.058	2570.00	2619.022	2620
	30	3.85	2571.002	2570.00	2619.046	2620
	40	3.85	2571.050	2570.00	2619.081	2620
	50	3.85	2571.021	2570.00	2619.052	2620
Frequency Stability vs. Voltage	20	3.5	2571.050	2570.00	2619.016	2620
	20	4.4	2571.013	2570.00	2619.023	2620
					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	3.85	2571.053	2570.00	2619.026	2620
	-20	3.85	2571.031	2570.00	2619.087	2620
	-10	3.85	2571.082	2570.00	2619.085	2620
	0	3.85	2571.062	2570.00	2619.085	2620
	10	3.85	2571.089	2570.00	2619.085	2620
	20	3.85	2571.058	2570.00	2619.022	2620
	30	3.85	2571.051	2570.00	2619.092	2620
	40	3.85	2571.096	2570.00	2619.075	2620
	50	3.85	2571.033	2570.00	2619.096	2620
Frequency Stability vs. Voltage	20	3.5	2571.058	2570.00	2619.009	2620
	20	4.4	2571.072	2570.00	2619.035	2620
					Result:	Pass

Test Plots(Note: The 5.0dB is the Insertion loss of the RF cable, Power Splitter and DC Block, which was offset into the Spectrum Analyzer):

Occupied Bandwidth



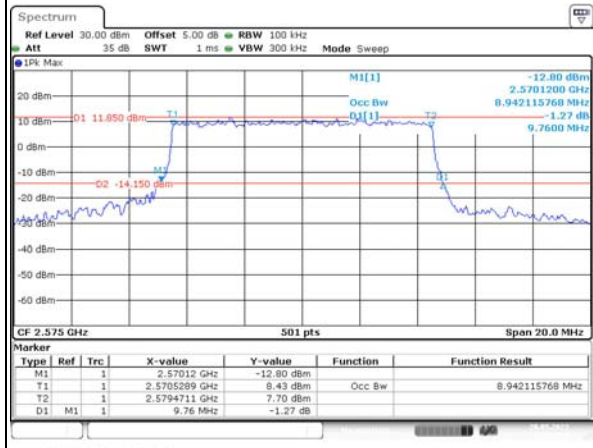
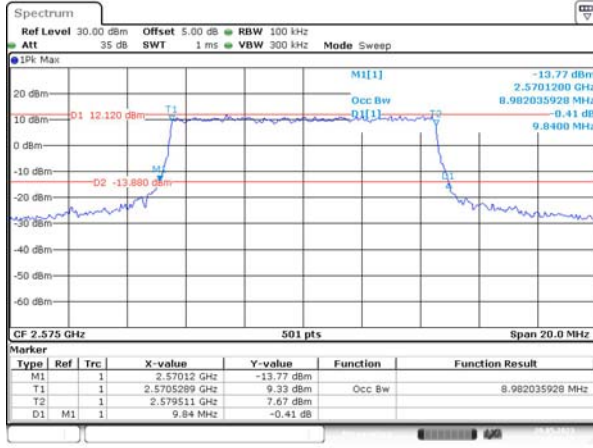
Occupied Bandwidth

Channel

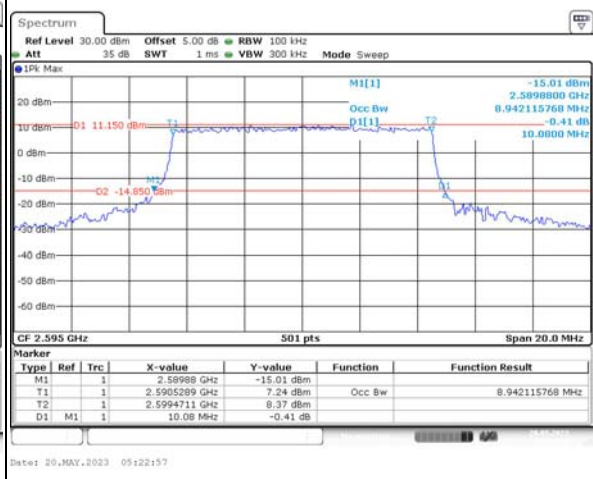
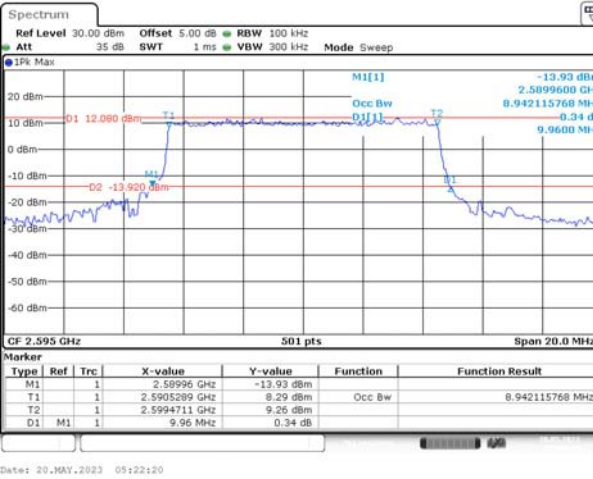
10MHz Bandwidth QPSK

10MHz Bandwidth 16QAM

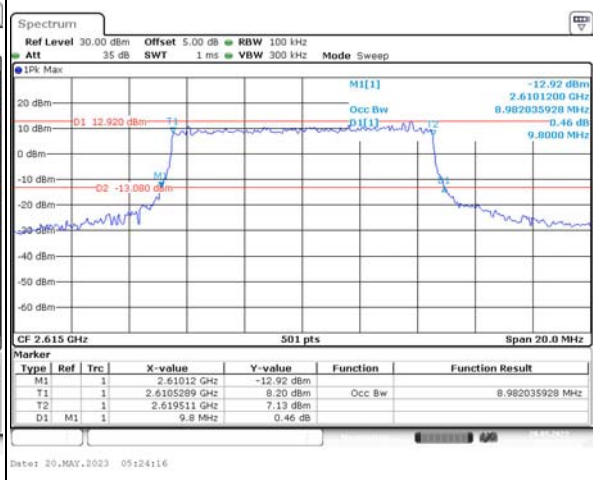
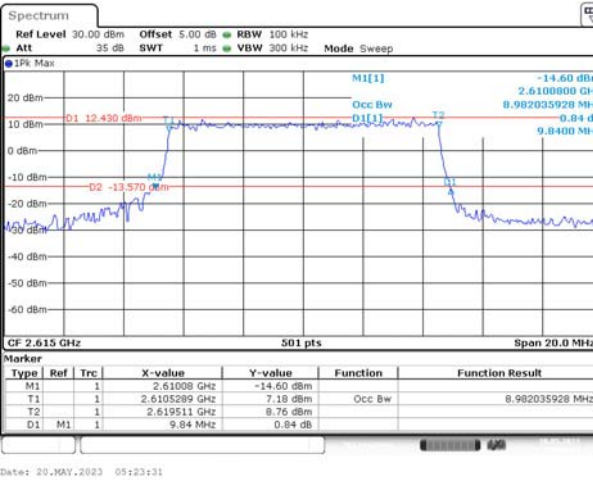
Lowest



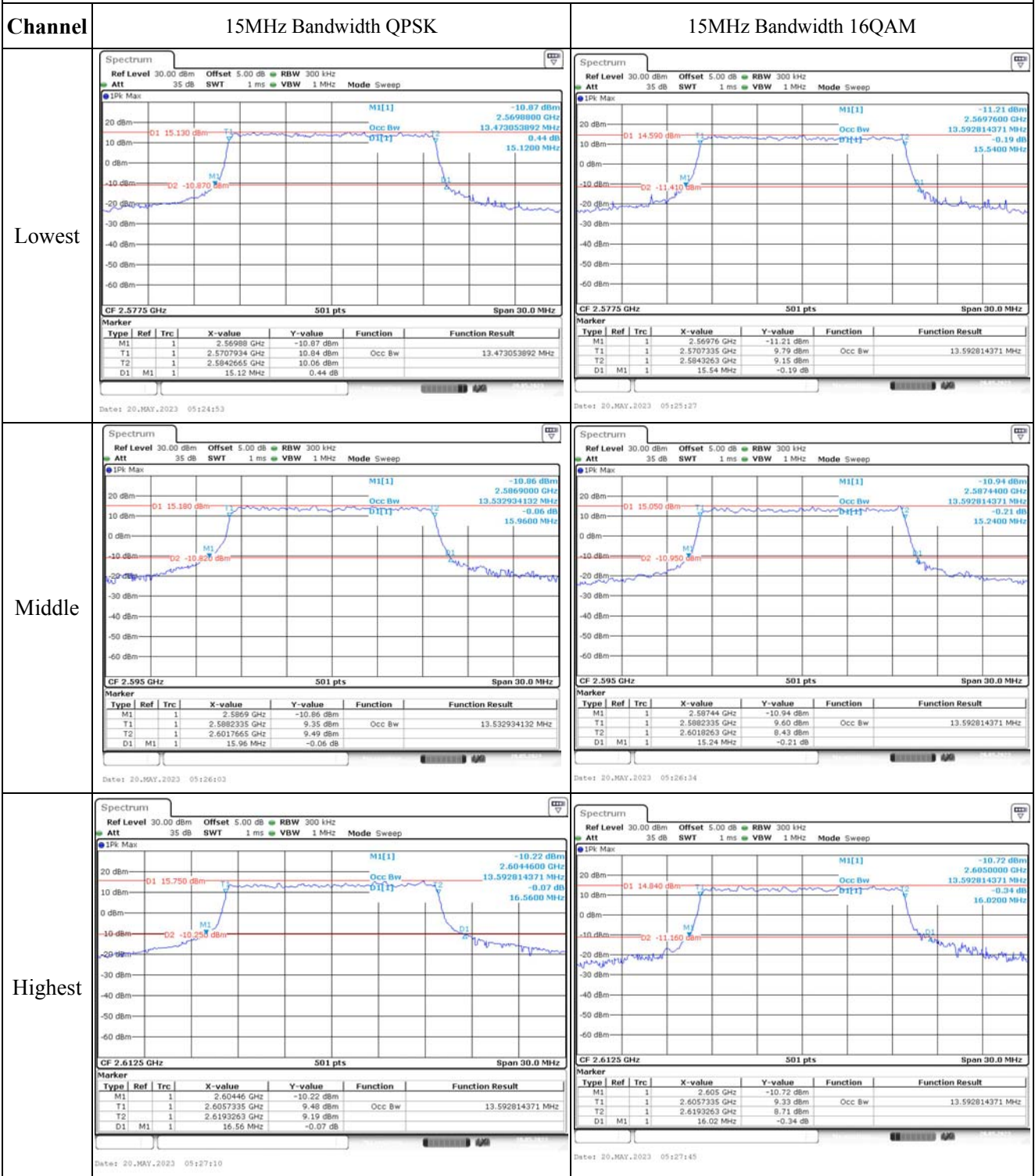
Middle



Highest



Occupied Bandwidth



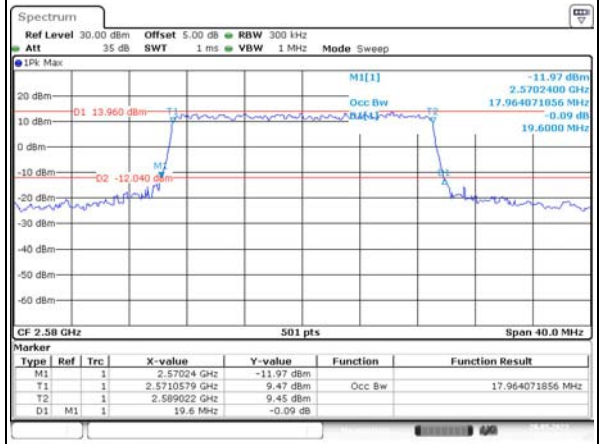
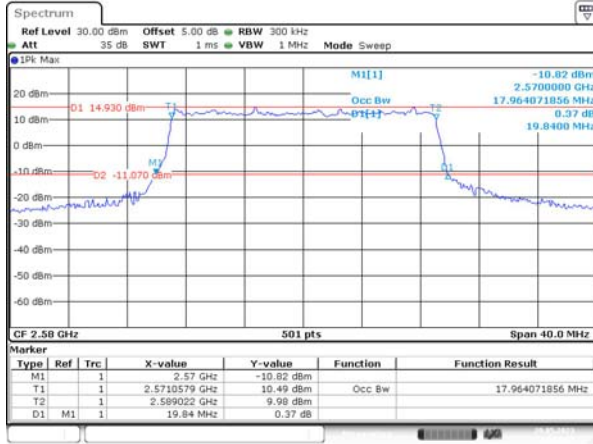
Occupied Bandwidth

Channel

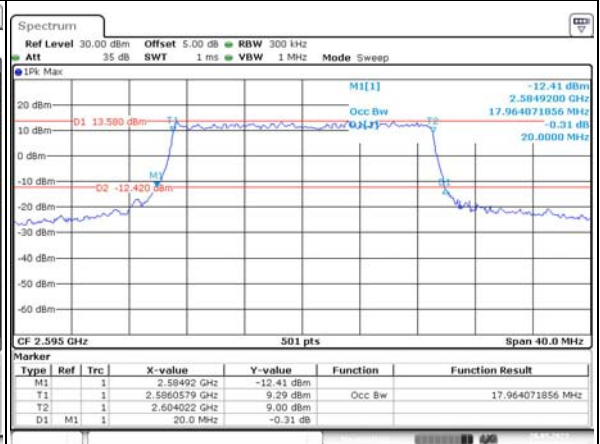
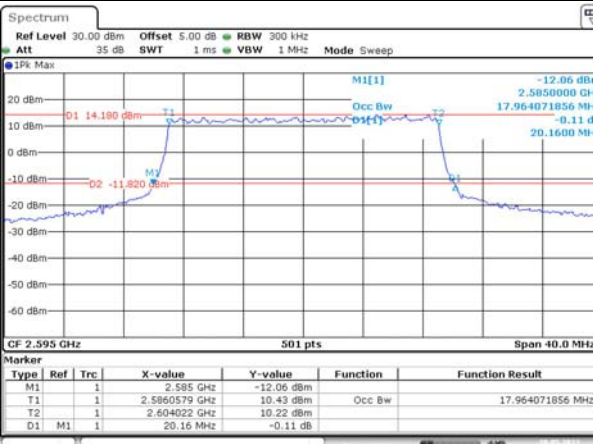
20MHz Bandwidth QPSK

20MHz Bandwidth 16QAM

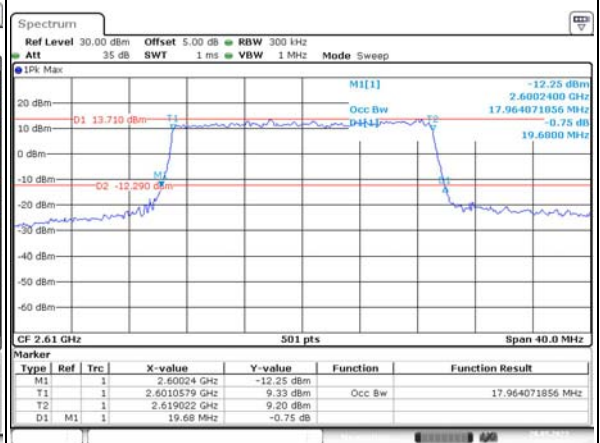
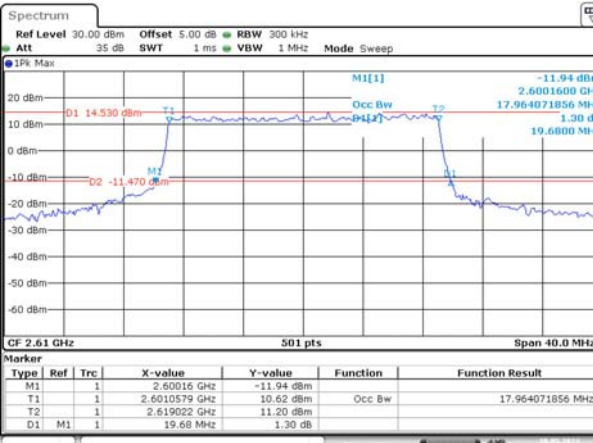
Lowest



Middle



Highest

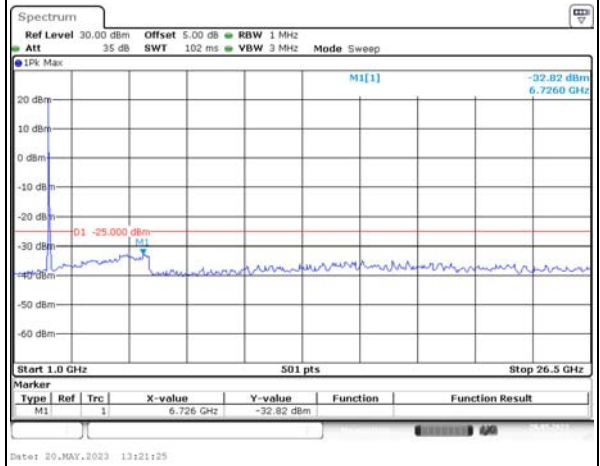
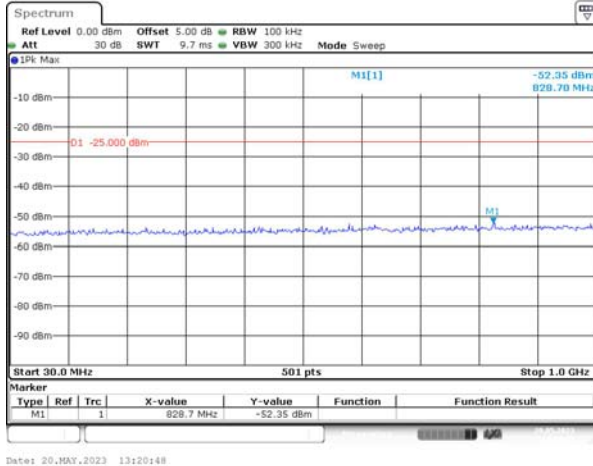


Spurious Emissions at Antenna Terminal

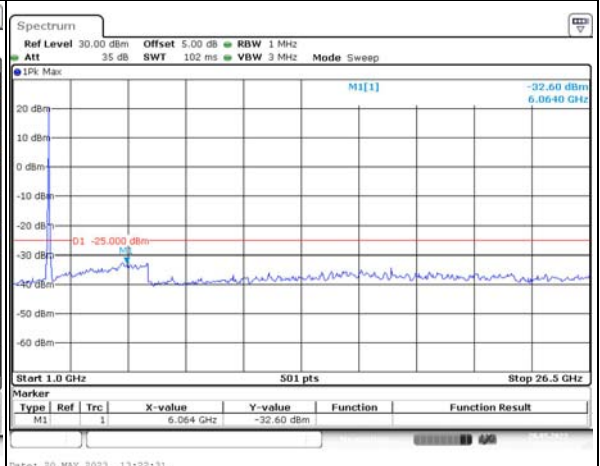
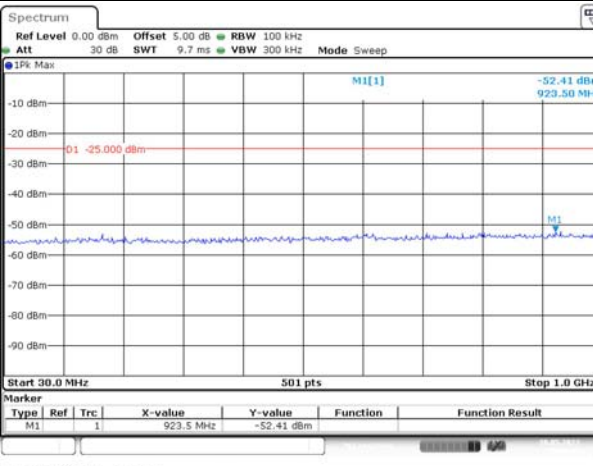
Channel

5MHz Bandwidth QPSK

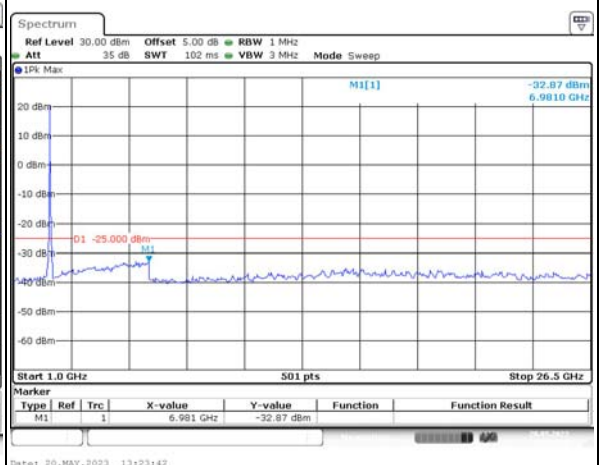
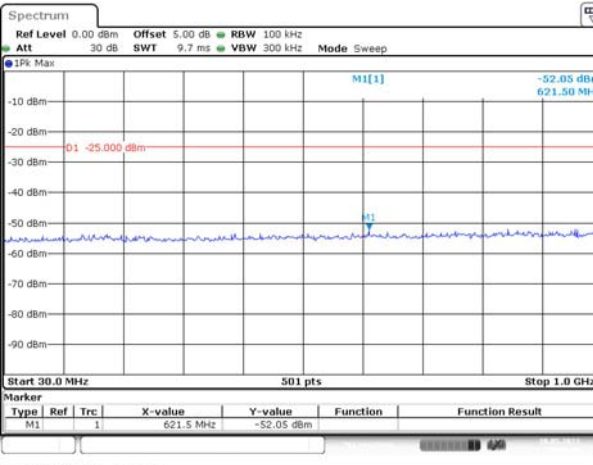
Lowest



Middle



Highest

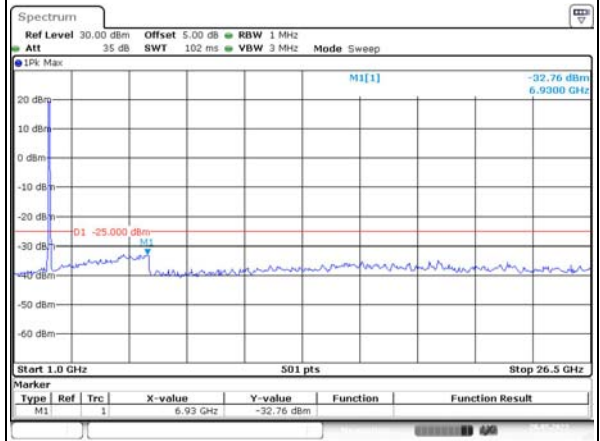
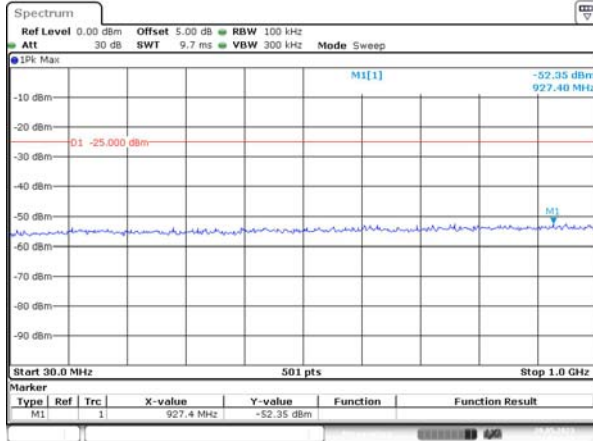


Spurious Emissions at Antenna Terminal

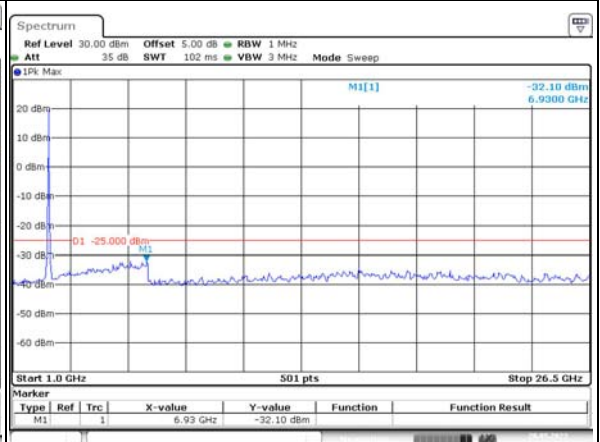
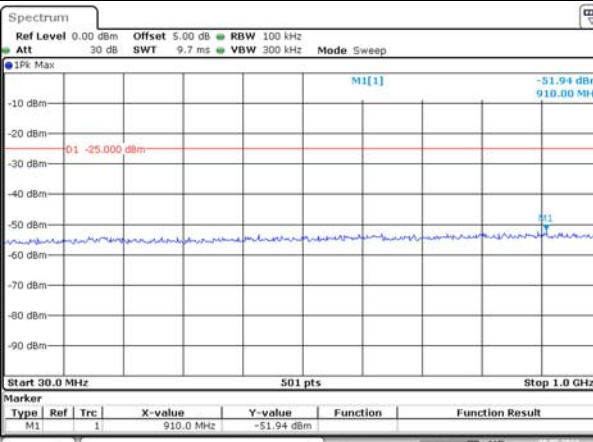
Channel

10MHz Bandwidth QPSK

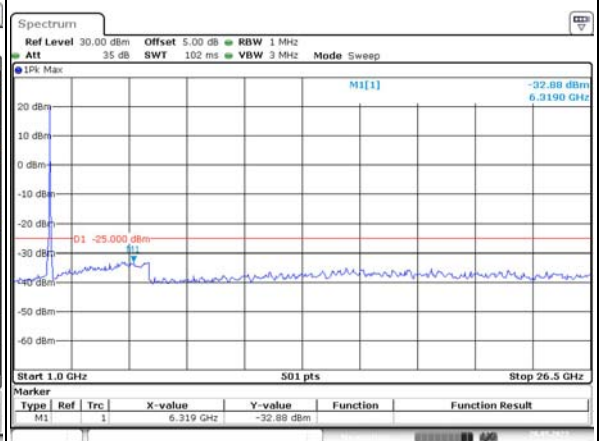
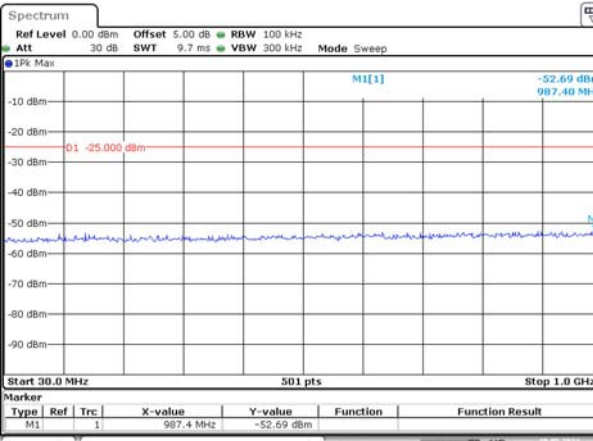
Lowest



Middle



Highest

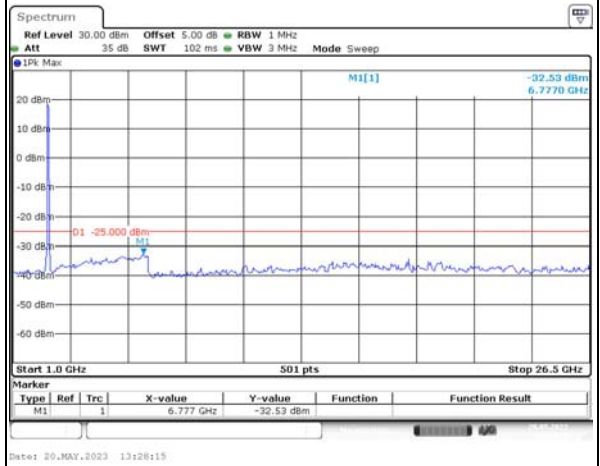
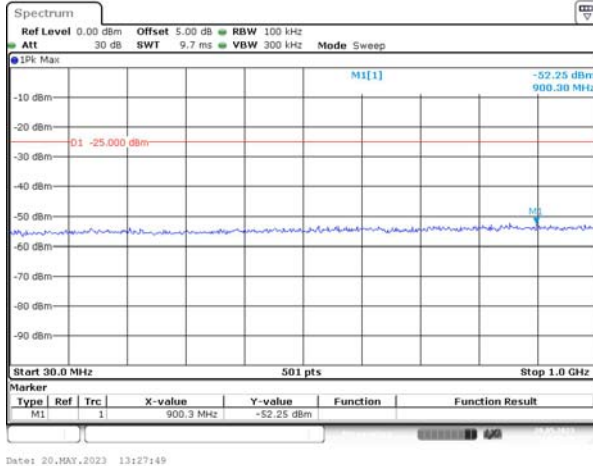


Spurious Emissions at Antenna Terminal

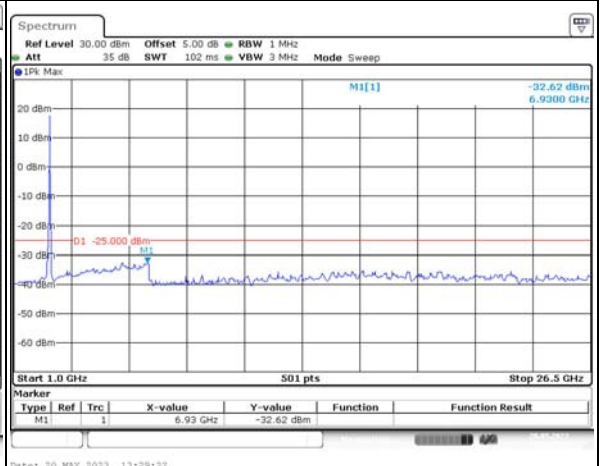
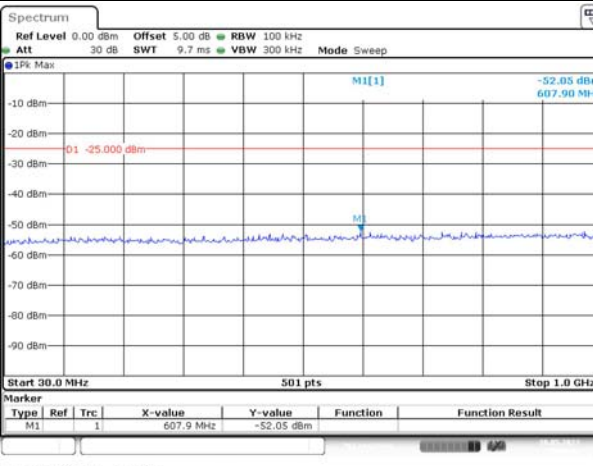
Channel

15MHz Bandwidth QPSK

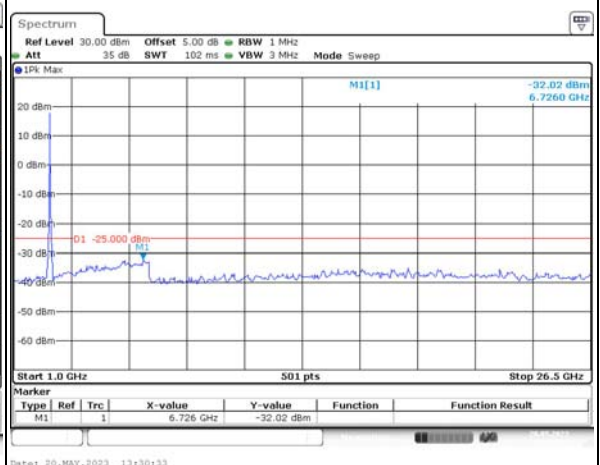
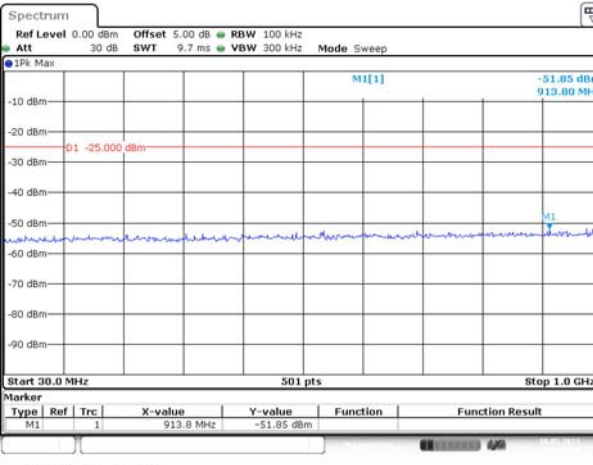
Lowest



Middle



Highest

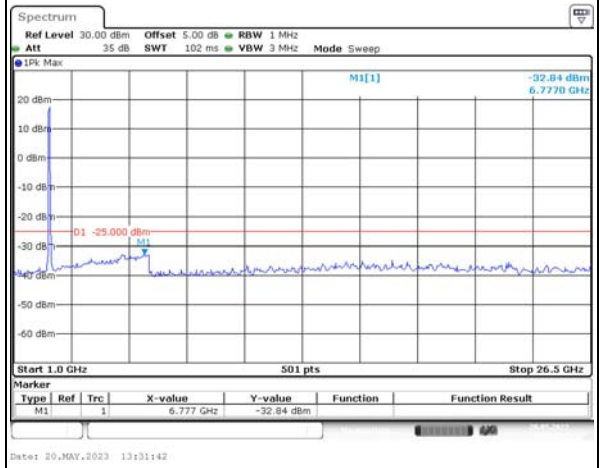
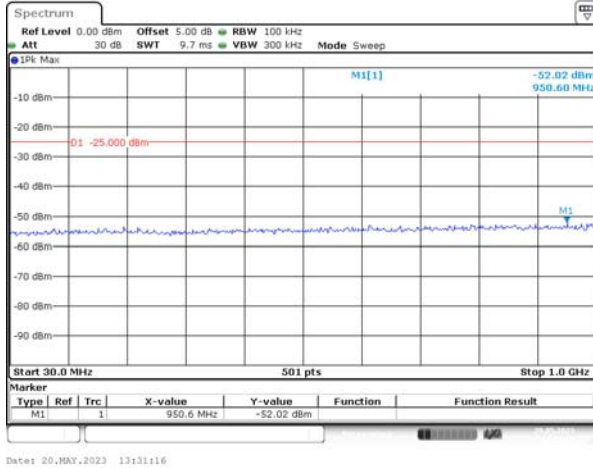


Spurious Emissions at Antenna Terminal

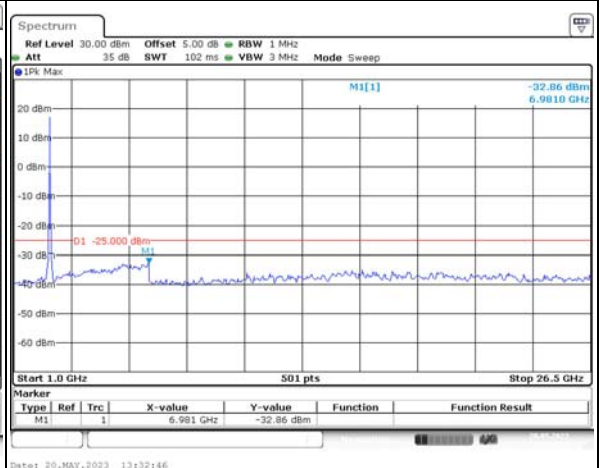
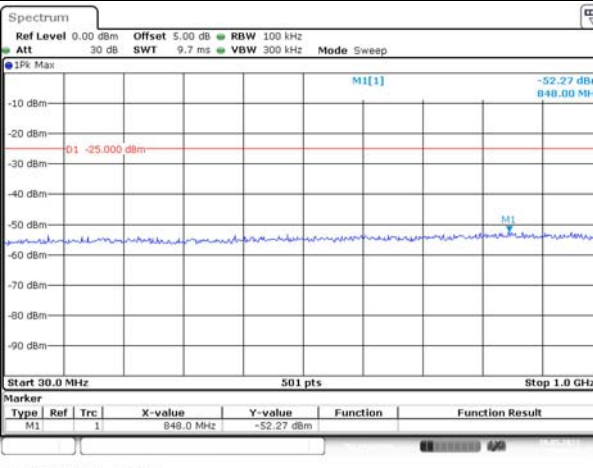
Channel

20MHz Bandwidth QPSK

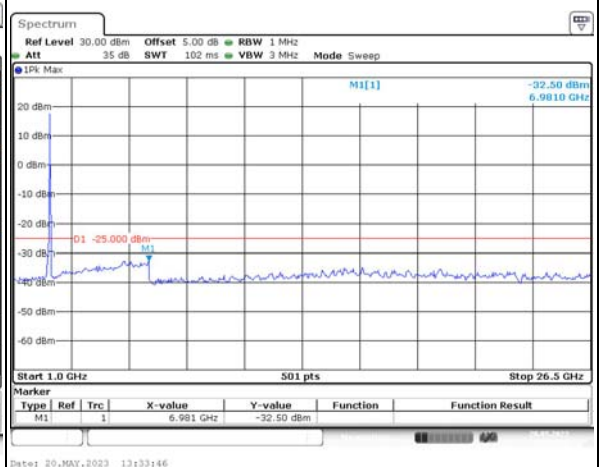
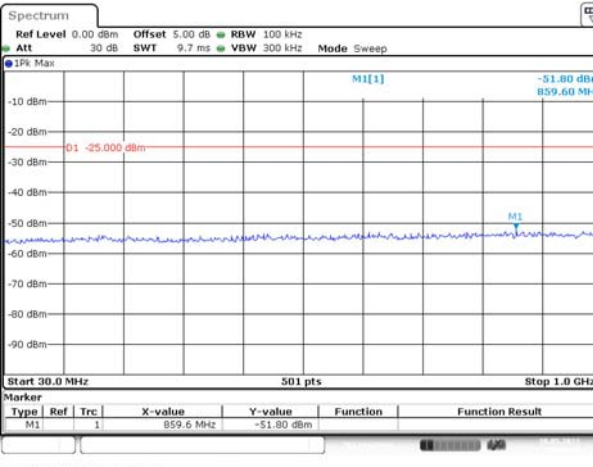
Lowest



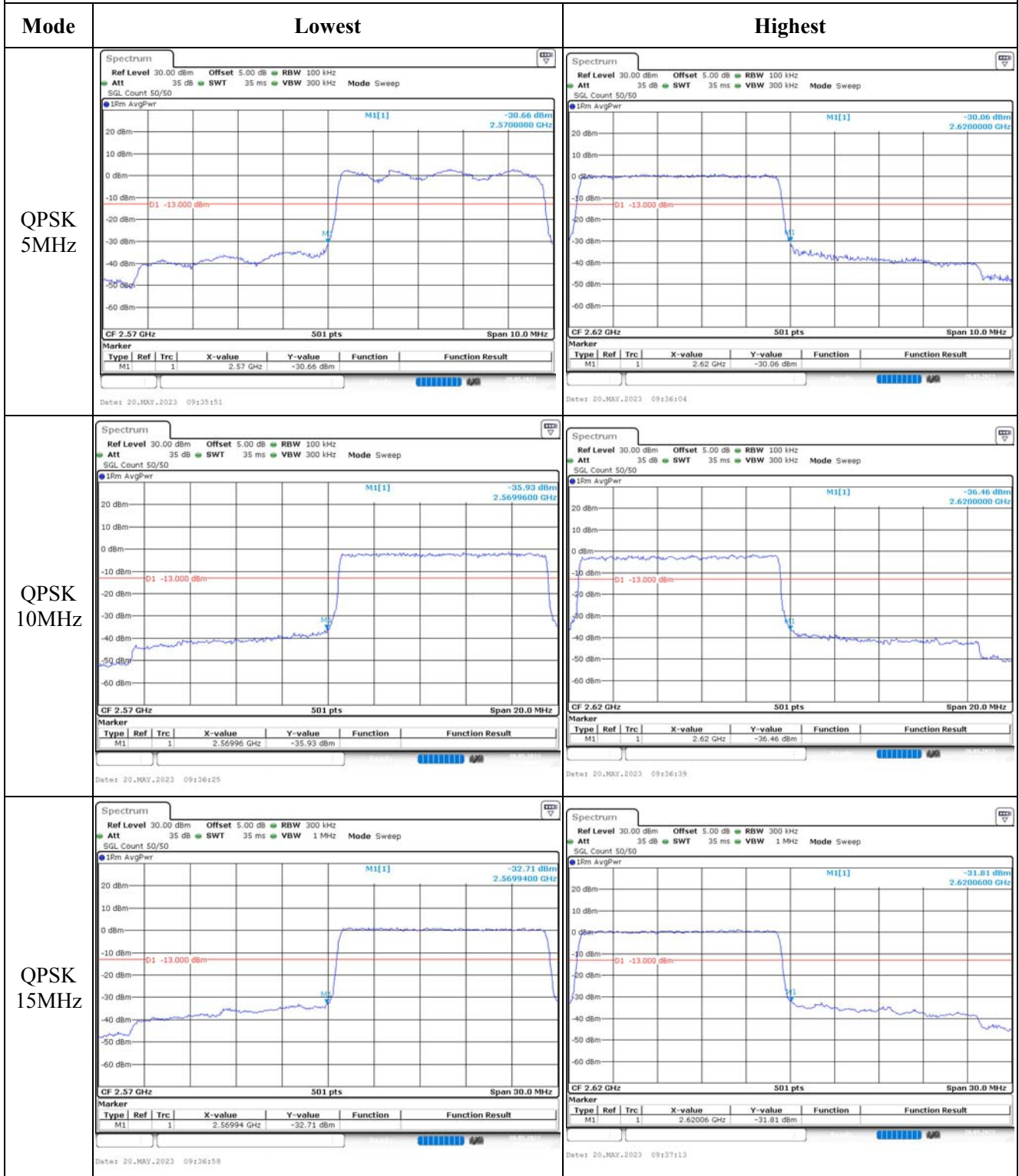
Middle



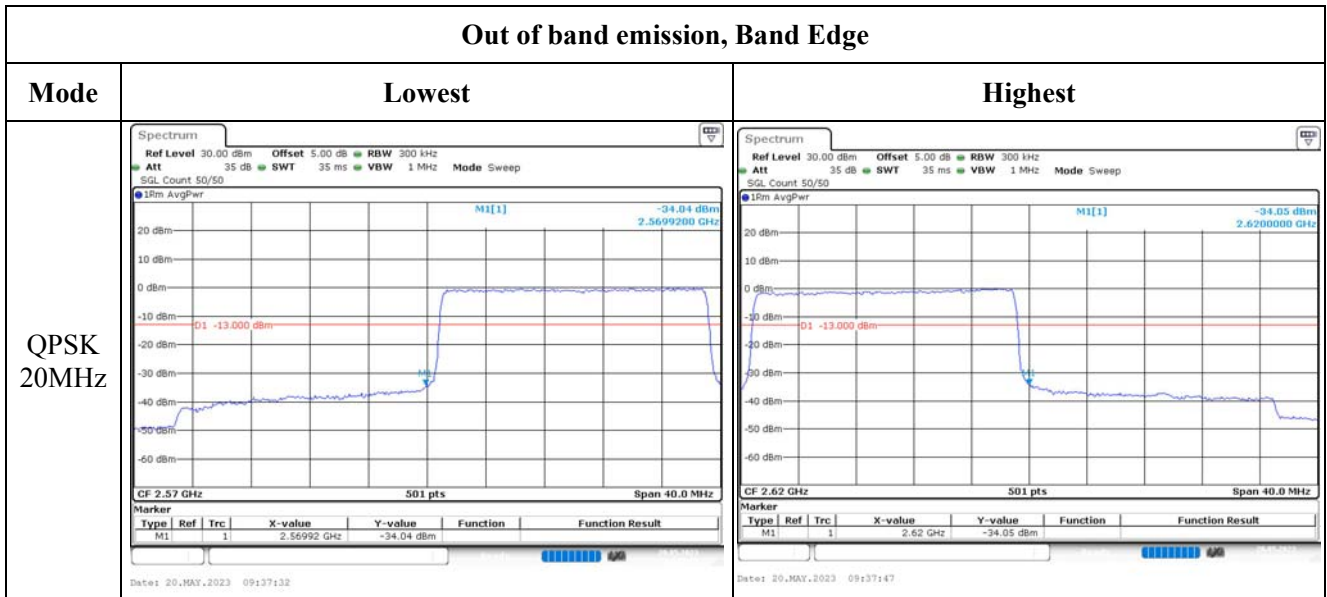
Highest



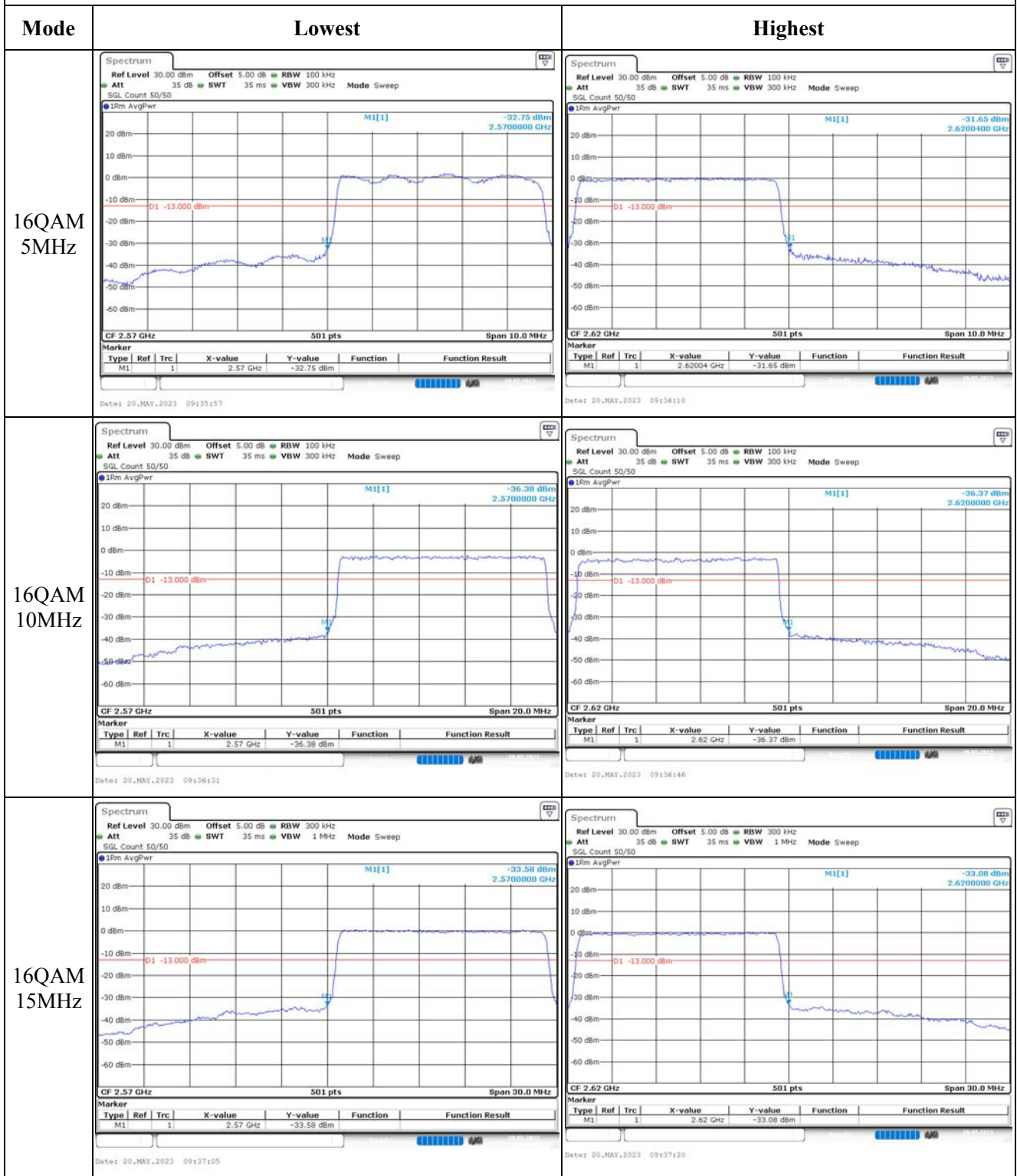
Out of band emission, Band Edge



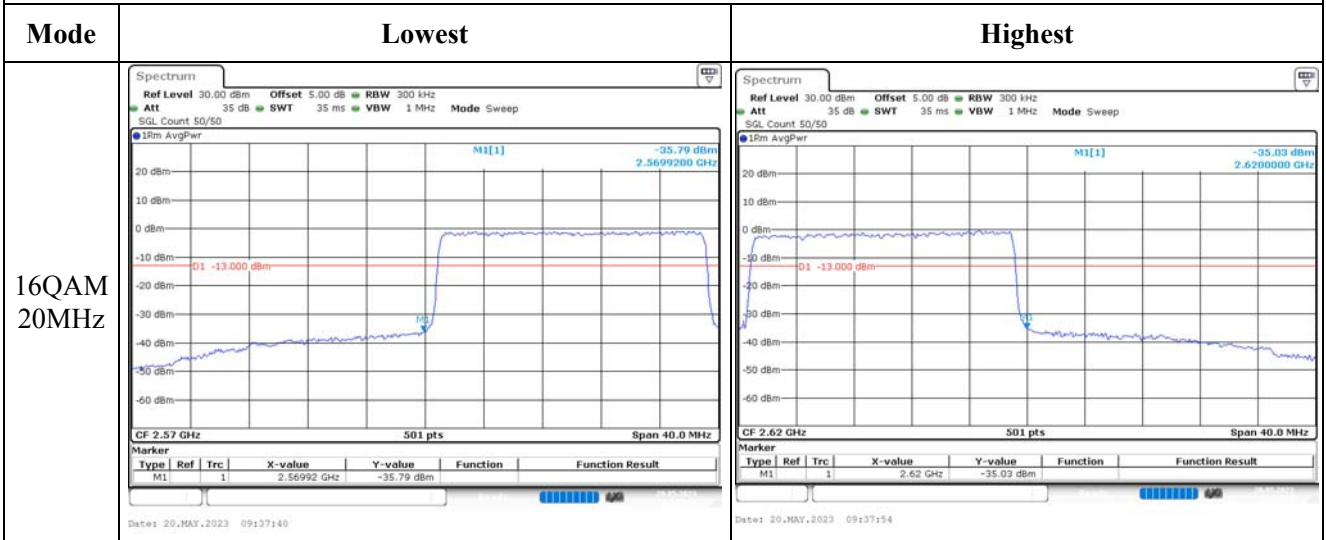
Out of band emission, Band Edge



Out of band emission, Band Edge



Out of band emission, Band Edge



4.13 Antenna Port Test Data and Results for LTE Band 41

Serial Number:	25TU-1	Test Date:	2023/05/20~2023/06/20
Test Site:	RF	Test Mode:	Transmitting
Tester:	George Chen	Test Result:	Pass

Environmental Conditions:

Temperature: (°C)	22.3~26.8	Relative Humidity: (%)	39~59	ATM Pressure: (kPa)	100.1~102.3
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Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSV40	101474	2022/07/15	2023/07/14
zhuoxiang	Coaxial Cable	SMA-178	211001	Each time	N/A
YINSAIGE	Coaxial Cable	SS402	SJ0100001	Each time	N/A
Mini-Circuits	DC Block	BLK-18-S+	1554403	Each time	N/A
Weinschel	Power Splitter	1515	RA914	Each time	N/A
R&S	Wideband Radio Communication Tester	CMW500	149218	2022/07/15	2023/07/14
BACL	TEMP&HUMI Test Chamber	BTH-150-40	30174	2022/09/29	2023/09/28
UNI-T	Multimeter	UT39A+	C210582554	2022/9/29	2023/9/28
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)
5MHz	2498.5	2593	2687.5
10MHz	2501	2593	2685
15MHz	2503.5	2593	2682.5
20MHz	2506	2593	2680

Test Data:

FCC§2.1046;§ 27.50(h)(2)						
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		
5MHz QPSK	RB1#0	22.80	21.91	21.35	23.82	33
	RB1#13	22.82	22.00	21.43		
	RB1#24	22.74	21.89	21.13		
	RB15#0	21.71	21.15	20.26		
	RB15#10	21.81	21.16	20.30		
	RB25#0	21.73	21.12	20.33		
5MHz 16QAM	RB1#0	22.38	21.24	20.84	23.38	33
	RB1#13	22.29	21.28	20.54		
	RB1#24	22.32	21.04	20.42		
	RB15#0	21.18	20.50	19.62		
	RB15#10	21.11	20.50	19.63		
	RB25#0	21.22	20.14	19.61		
10MHz QPSK	RB1#0	22.84	22.15	21.34	23.97	33
	RB1#25	22.97	22.29	21.38		
	RB1#49	22.94	22.29	21.58		
	RB25#0	21.79	21.27	20.35		
	RB25#25	21.86	21.32	20.42		
	RB50#0	21.84	21.18	20.45		
10MHz 16QAM	RB1#0	22.71	22.14	20.30	23.71	33
	RB1#25	22.26	22.43	20.43		
	RB1#49	22.69	22.33	20.59		
	RB25#0	21.22	20.59	19.45		
	RB25#25	21.14	20.63	19.74		
	RB50#0	21.13	20.49	19.60		
15MHz QPSK	RB1#0	22.95	21.93	21.16	23.95	33
	RB1#38	22.83	22.03	21.32		
	RB1#74	22.94	21.95	21.57		
	RB36#0	21.87	21.24	20.31		
	RB36#39	21.88	21.30	20.54		
	RB75#0	21.82	21.26	20.34		
15MHz 16QAM	RB1#0	22.79	21.59	20.13	23.79	33
	RB1#38	22.20	21.60	20.33		
	RB1#74	22.57	21.53	20.65		
	RB36#0	21.09	20.43	19.37		
	RB36#39	21.24	20.39	19.66		
	RB75#0	21.07	20.44	19.54		
20MHz QPSK	RB1#0	22.81	22.37	20.77	23.88	33
	RB1#50	22.76	22.28	21.00		
	RB1#99	22.88	22.24	21.41		

	RB50#0	21.84	21.11	20.00		
	RB50#50	21.81	21.10	20.31		
	RB100#0	21.77	21.19	20.00		
20MHz 16QAM	RB1#0	21.62	21.95	20.32	22.95	33
	RB1#50	21.57	21.89	20.58		
	RB1#99	21.66	21.84	20.90		
	RB50#0	20.97	20.42	19.26		
	RB50#50	21.01	20.39	19.66		
	RB100#0	21.05	20.33	19.37		

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	
10MHz QPSK	RB1#0	8.93	9.33	9.07	13
	RB50#0	9.13	9.13	9.22	13
10MHz 16QAM	RB1#0	9.07	10.12	9.48	13
	RB50#0	9.94	9.88	10	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	4.531	4.491	4.531	5.10	4.98	5.34
5MHz 16QAM	4.511	4.511	4.531	5.24	5.08	5.30
10MHz QPSK	8.982	8.942	8.942	9.92	9.84	9.96
10MHz 16QAM	8.942	8.942	8.942	9.80	9.92	9.84
15MHz QPSK	13.473	13.533	13.593	15.18	15.96	17.58
15MHz 16QAM	13.593	13.593	13.533	16.08	15.18	15.36
20MHz QPSK	17.964	17.964	18.044	19.84	20.08	19.84
20MHz 16QAM	17.964	17.964	17.964	20.40	20.00	19.68

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

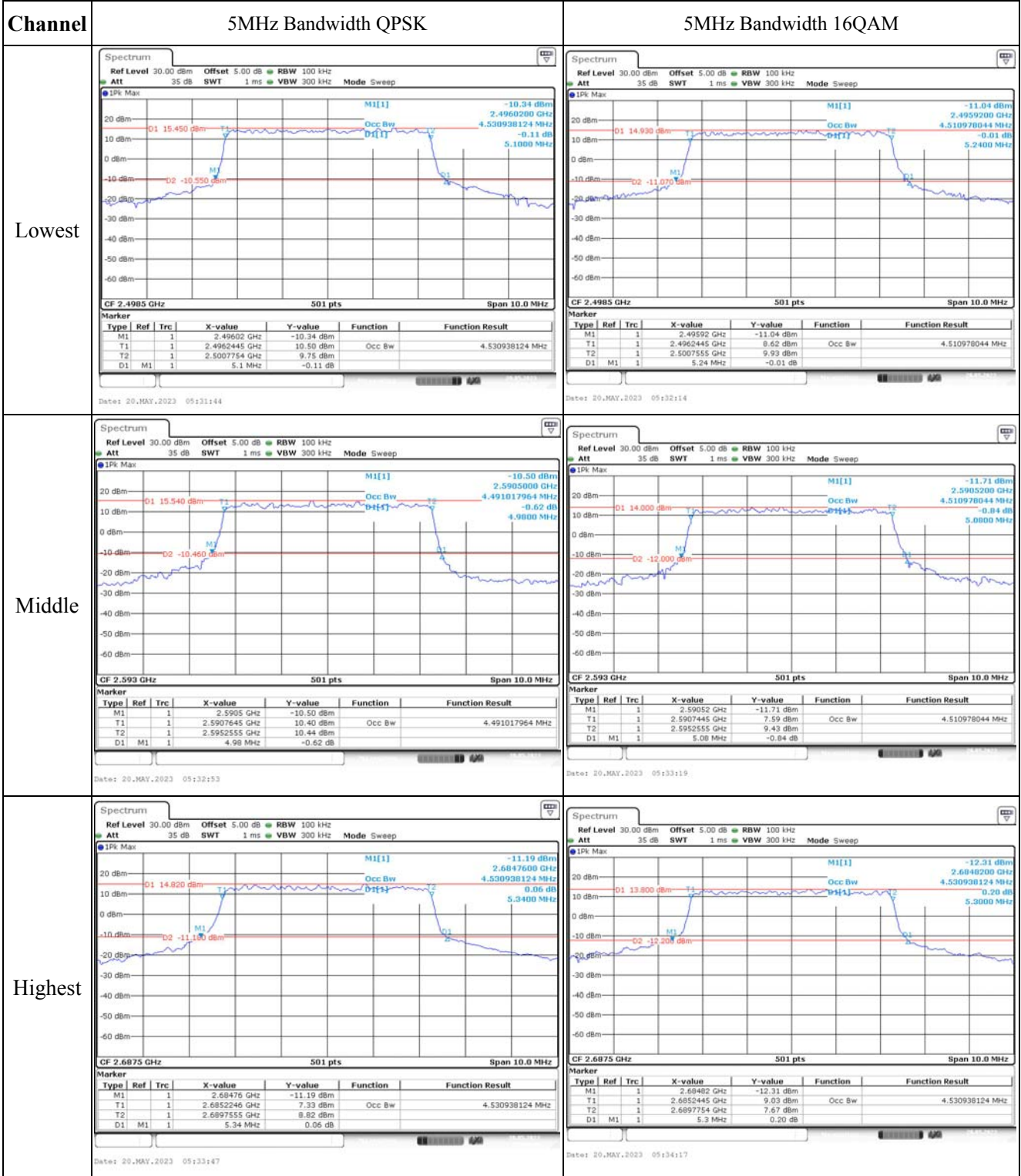
Result: **Pass, Please refer to the test plots of Out of band emission, Band Edge.**

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	3.85	2497.050	2496.00	2689.093	2690
	-20	3.85	2497.075	2496.00	2689.055	2690
	-10	3.85	2497.048	2496.00	2689.033	2690
	0	3.85	2497.059	2496.00	2689.046	2690
	10	3.85	2497.016	2496.00	2689.073	2690
	20	3.85	2497.058	2496.00	2689.022	2690
	30	3.85	2497.034	2496.00	2689.041	2690
	40	3.85	2497.078	2496.00	2689.083	2690
	50	3.85	2497.045	2496.00	2689.095	2690
Frequency Stability vs. Voltage	20	3.5	2497.019	2496.00	2689.025	2690
	20	4.4	2497.029	2496.00	2689.030	2690
					Result:	Pass

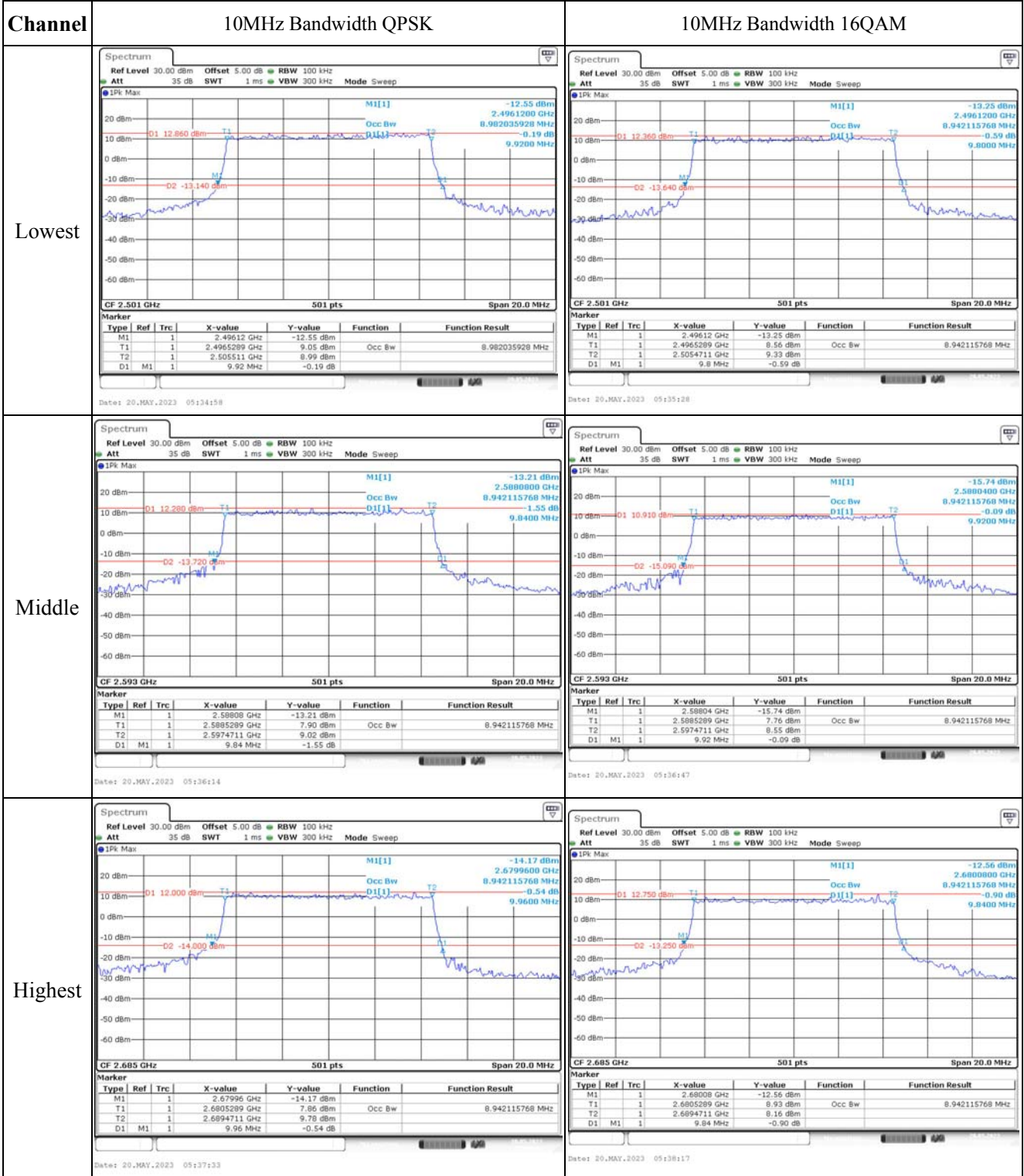
Test Mode:	20M 16QAM	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (°C)	Voltage (V _{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.85	2497.005	2496.00	2688.947	2690
	-20	3.85	2497.037	2496.00	2688.930	2690
	-10	3.85	2497.012	2496.00	2688.930	2690
	0	3.85	2497.093	2496.00	2688.915	2690
	10	3.85	2497.056	2496.00	2688.921	2690
	20	3.85	2497.058	2496.00	2688.942	2690
	30	3.85	2497.082	2496.00	2688.900	2690
	40	3.85	2497.012	2496.00	2688.949	2690
	50	3.85	2497.005	2496.00	2688.963	2690
Frequency Stability vs. Voltage	20	3.5	2497.030	2496.00	2688.989	2690
	20	4.4	2497.088	2496.00	2688.974	2690
					Result:	Pass

Test Plots(Note: The 5.0dB is the Insertion loss of the RF cable, Power Splitter and DC Block, which was offset into the Spectrum Analyzer):

Occupied Bandwidth



Occupied Bandwidth



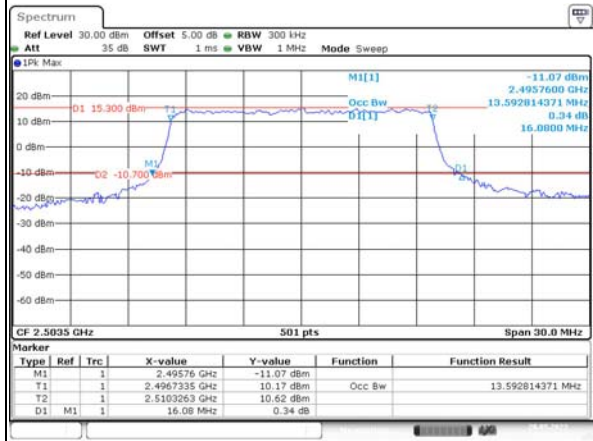
Occupied Bandwidth

Channel

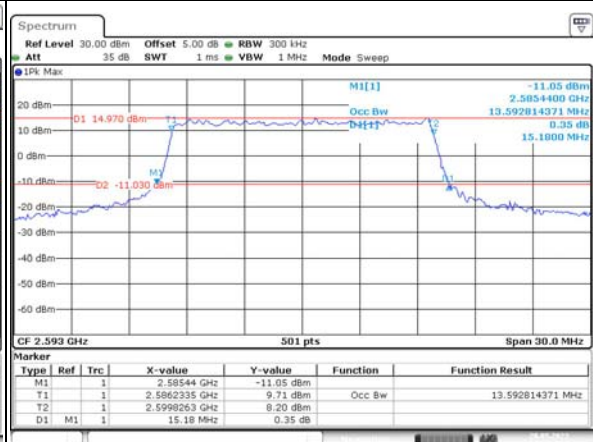
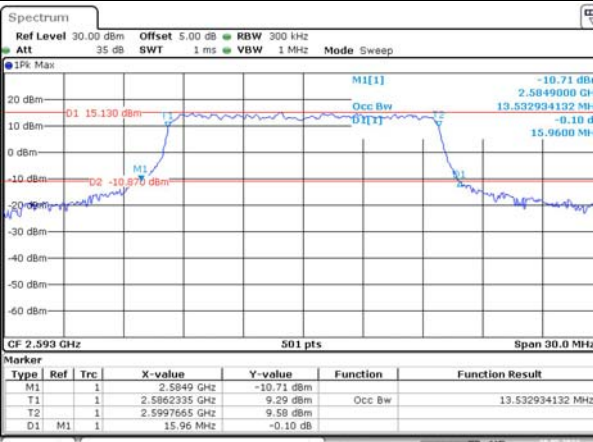
15MHz Bandwidth QPSK

15MHz Bandwidth 16QAM

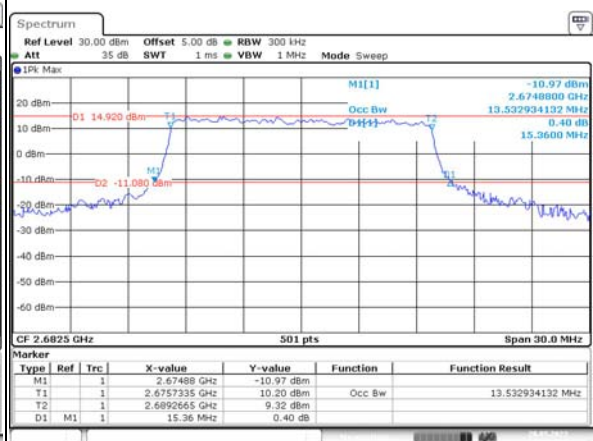
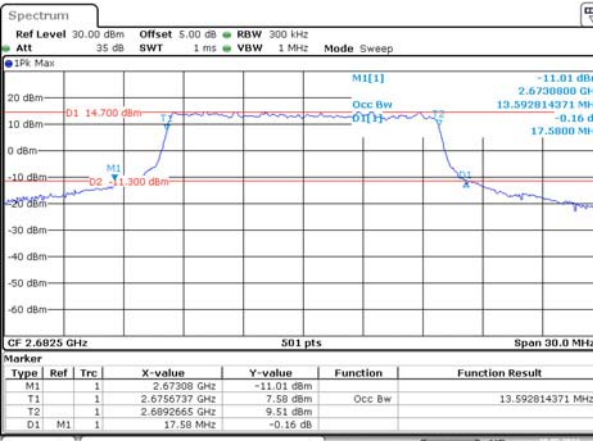
Lowest



Middle



Highest



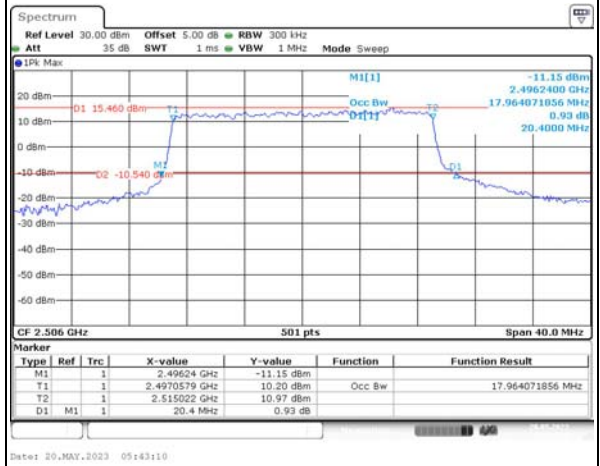
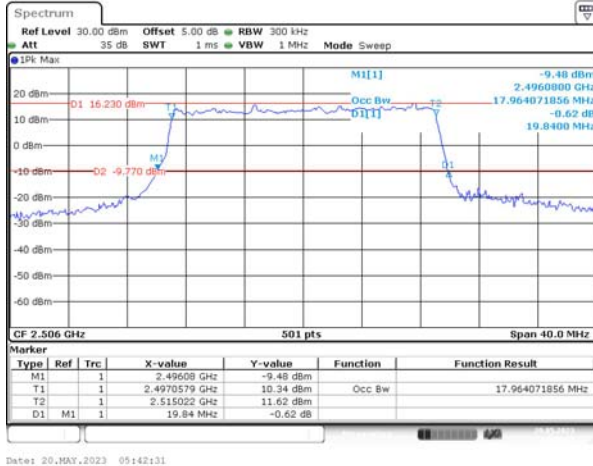
Occupied Bandwidth

Channel

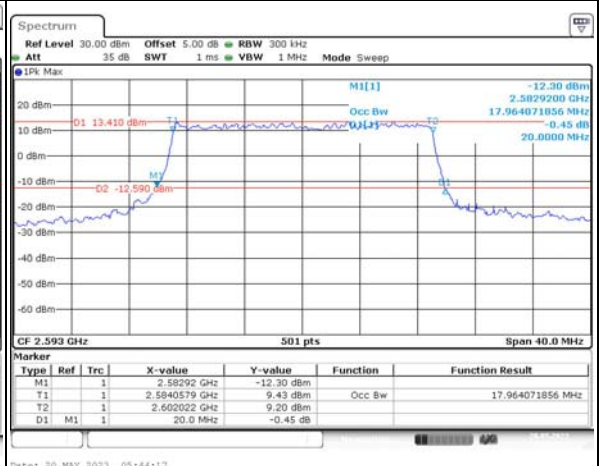
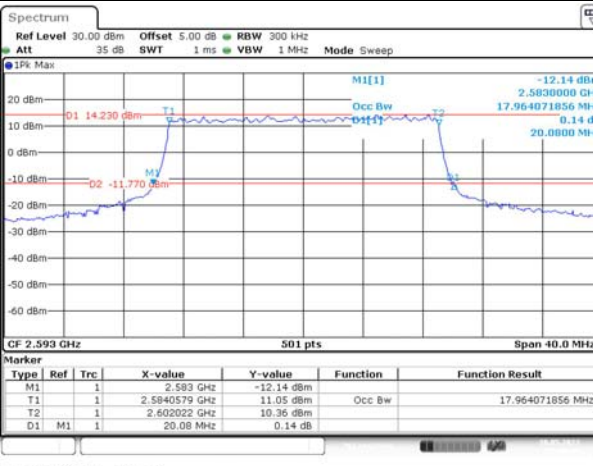
20MHz Bandwidth QPSK

20MHz Bandwidth 16QAM

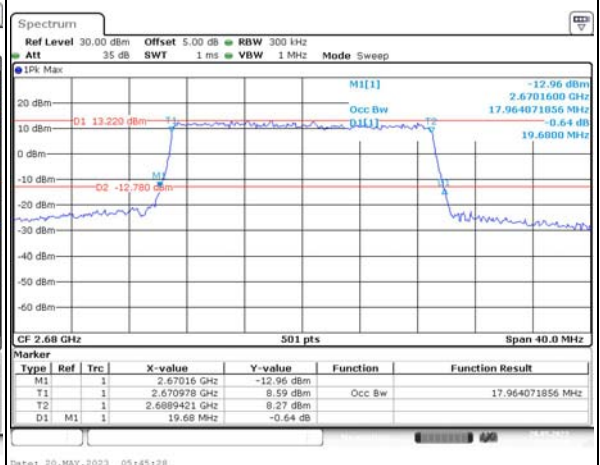
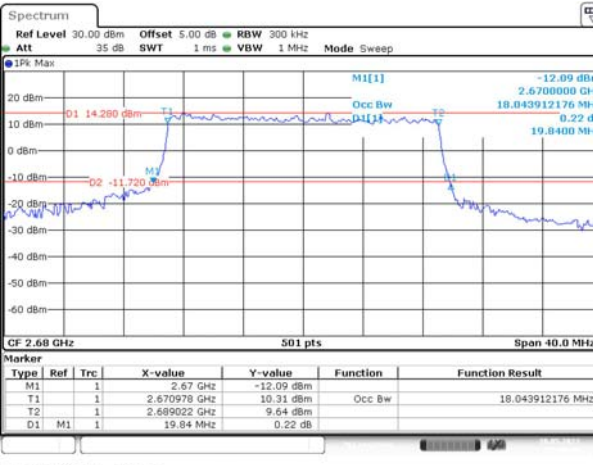
Lowest



Middle



Highest

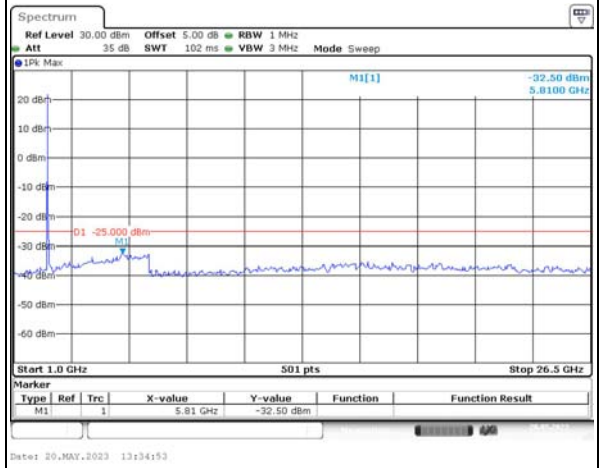
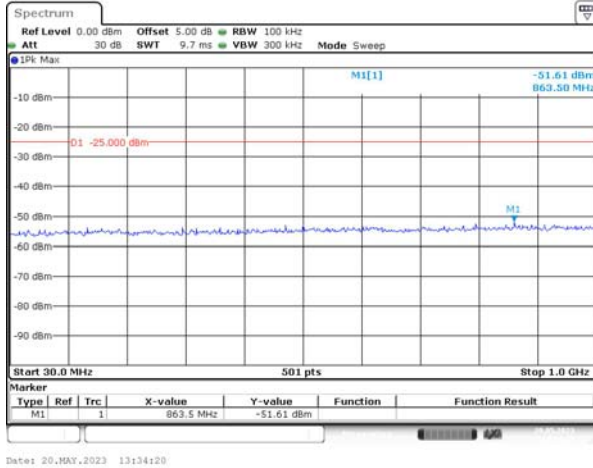


Spurious Emissions at Antenna Terminal

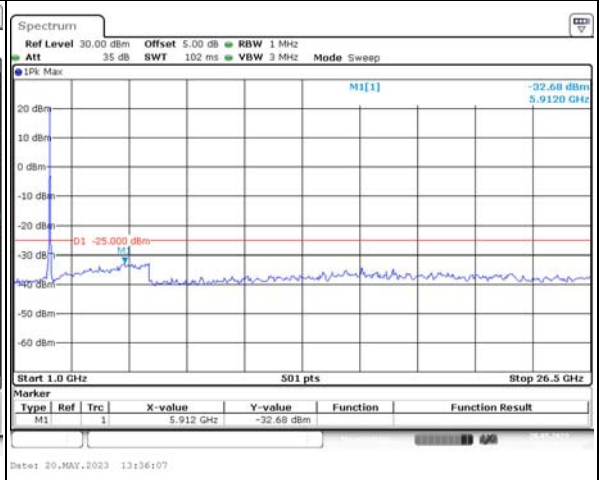
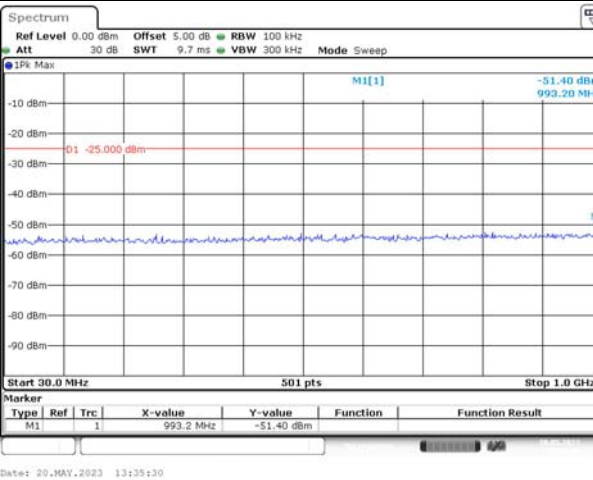
Channel

5MHz Bandwidth QPSK

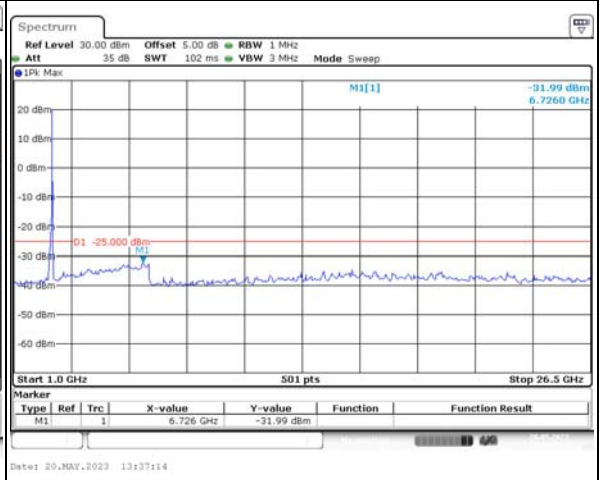
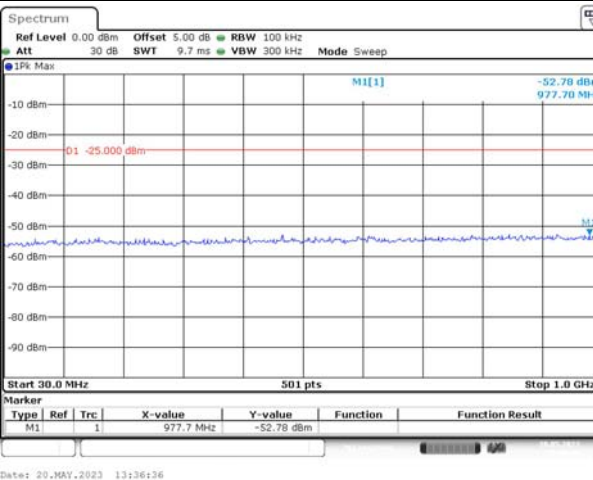
Lowest



Middle



Highest

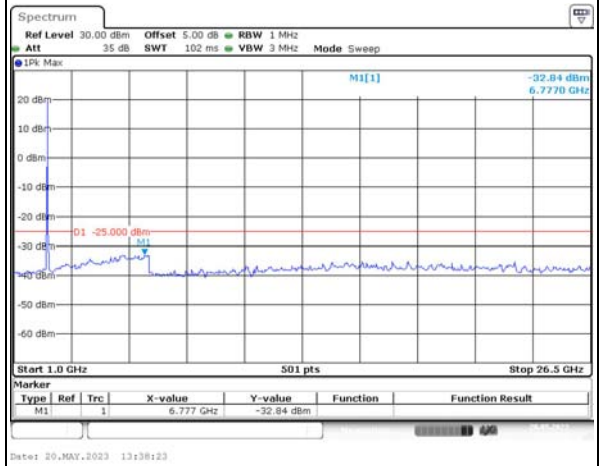
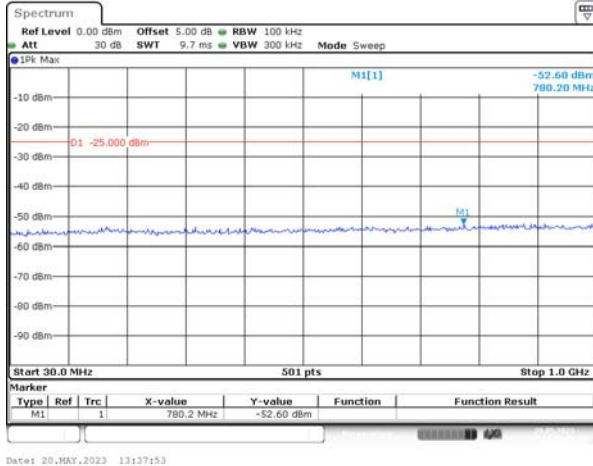


Spurious Emissions at Antenna Terminal

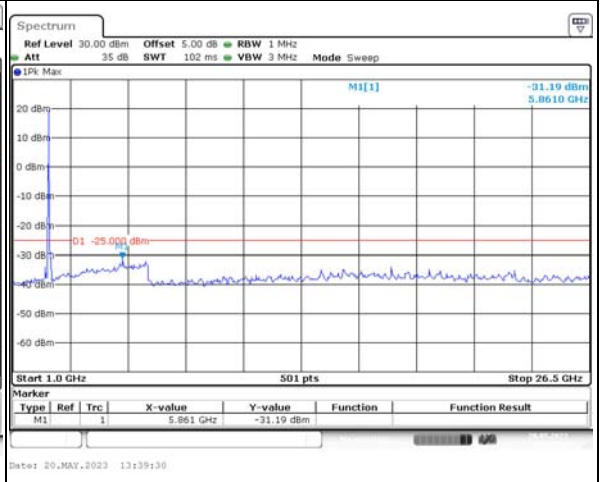
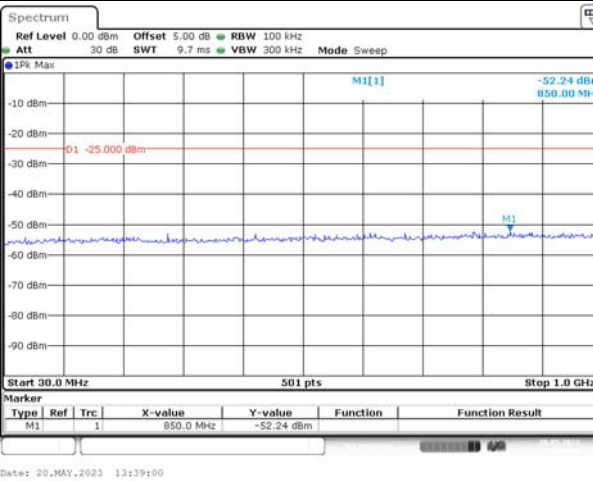
Channel

10MHz Bandwidth QPSK

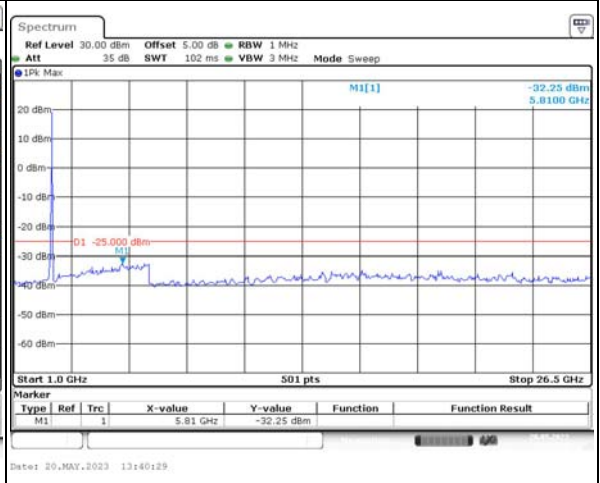
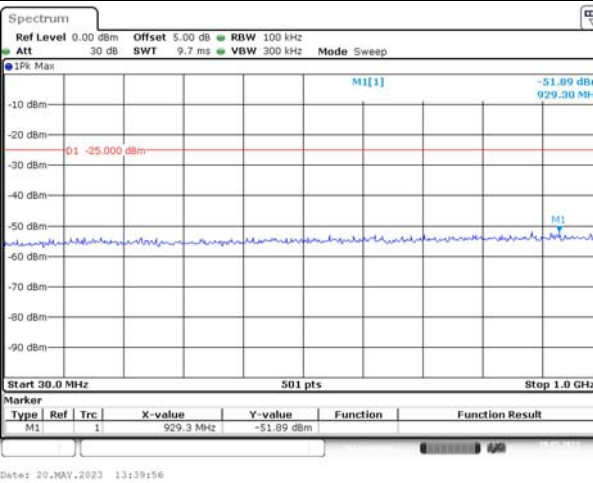
Lowest



Middle



Highest

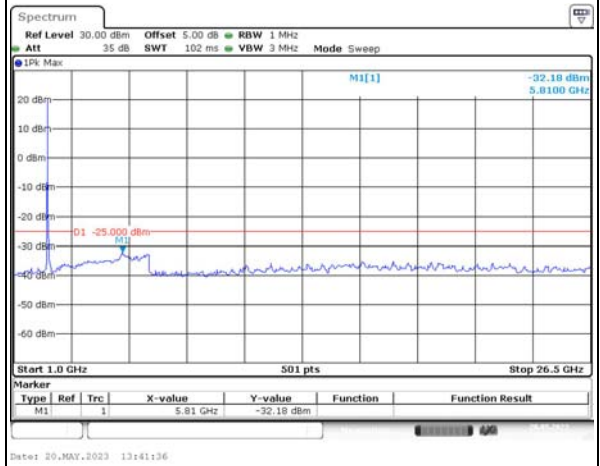
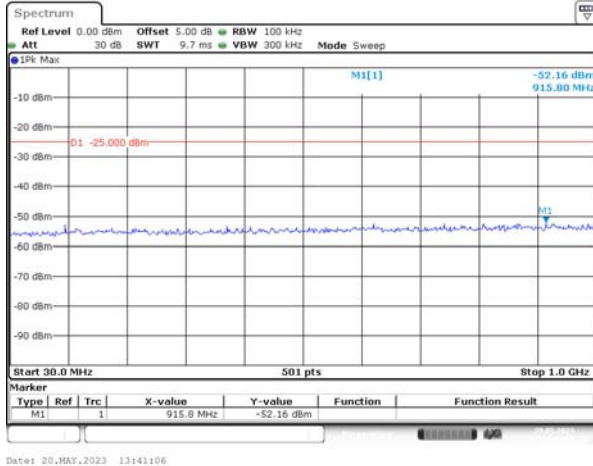


Spurious Emissions at Antenna Terminal

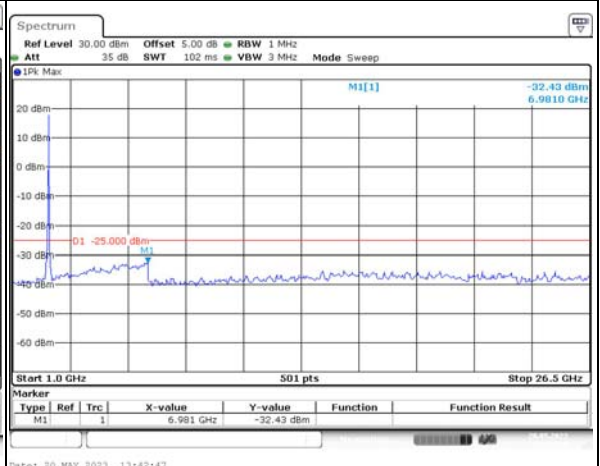
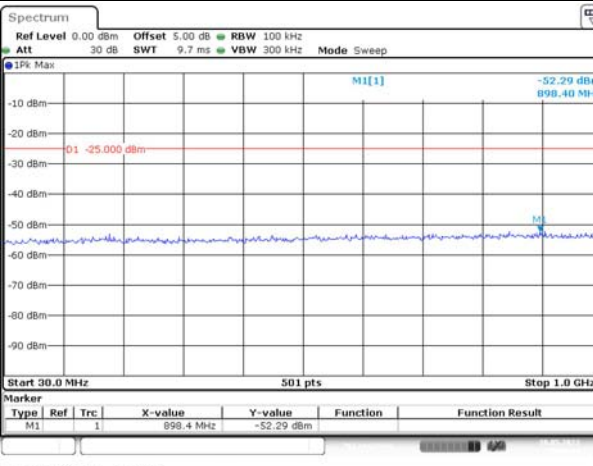
Channel

15MHz Bandwidth QPSK

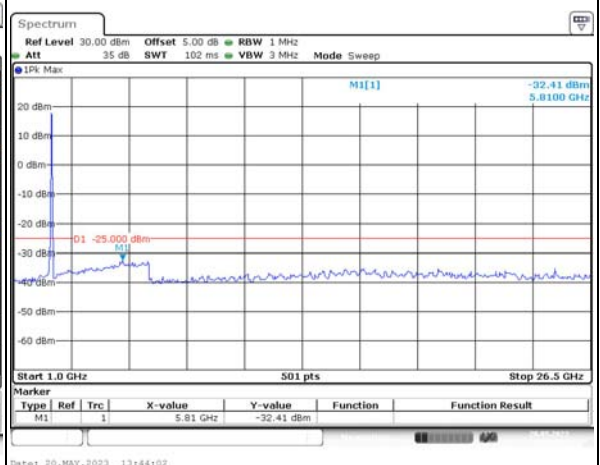
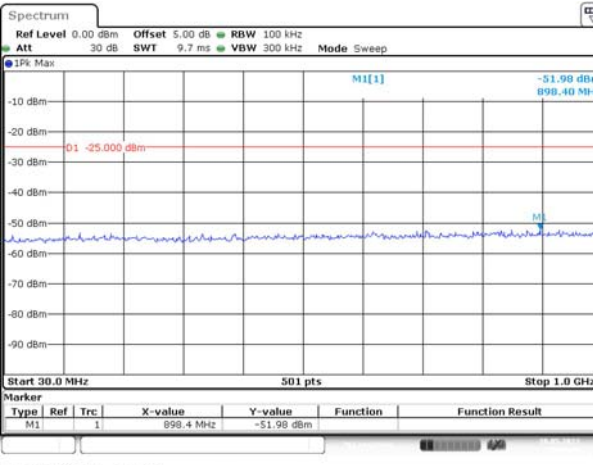
Lowest



Middle



Highest

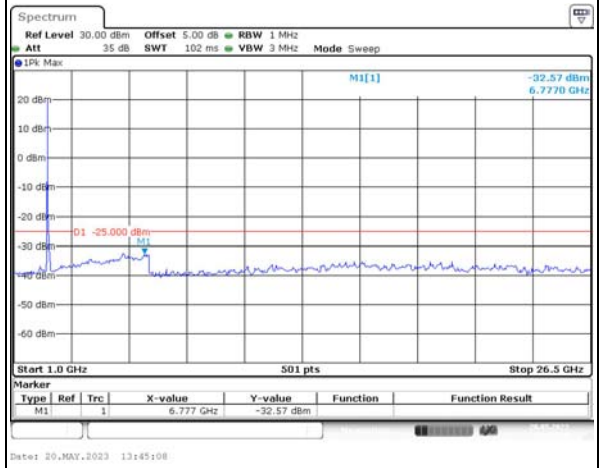
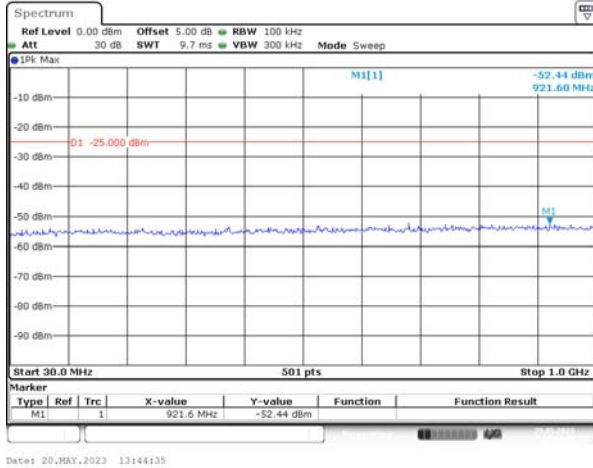


Spurious Emissions at Antenna Terminal

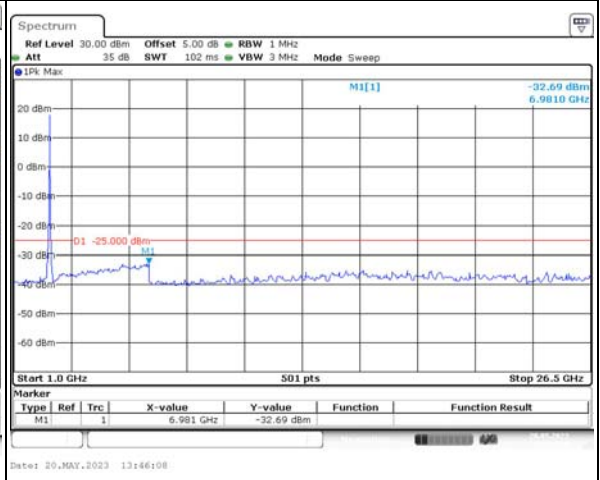
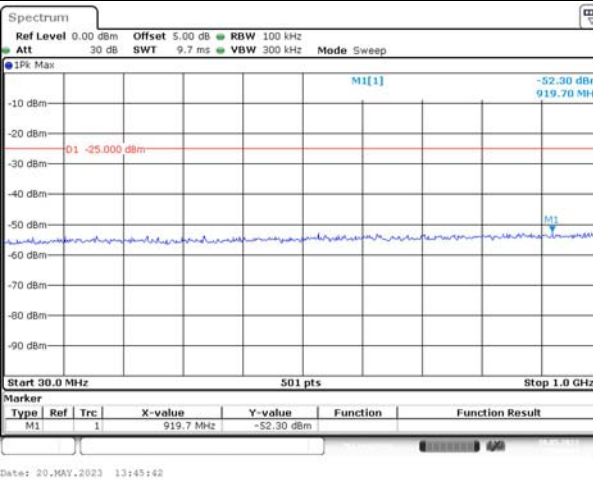
Channel

20MHz Bandwidth QPSK

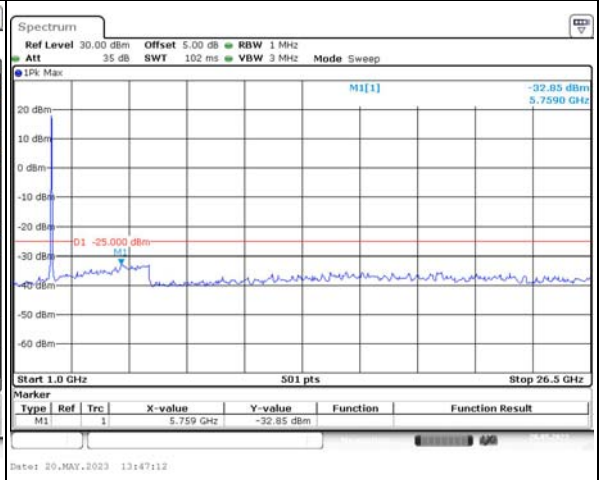
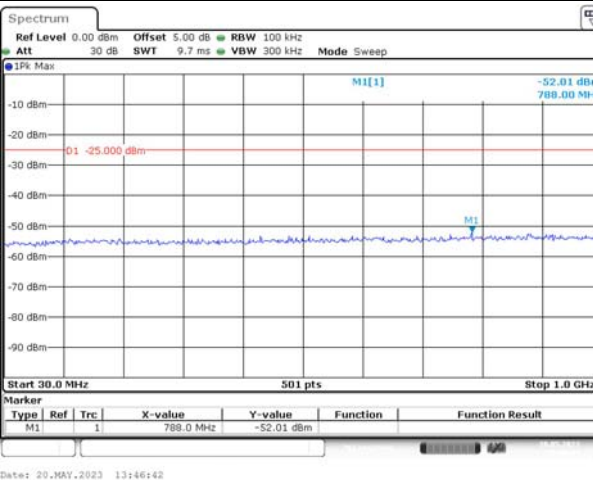
Lowest



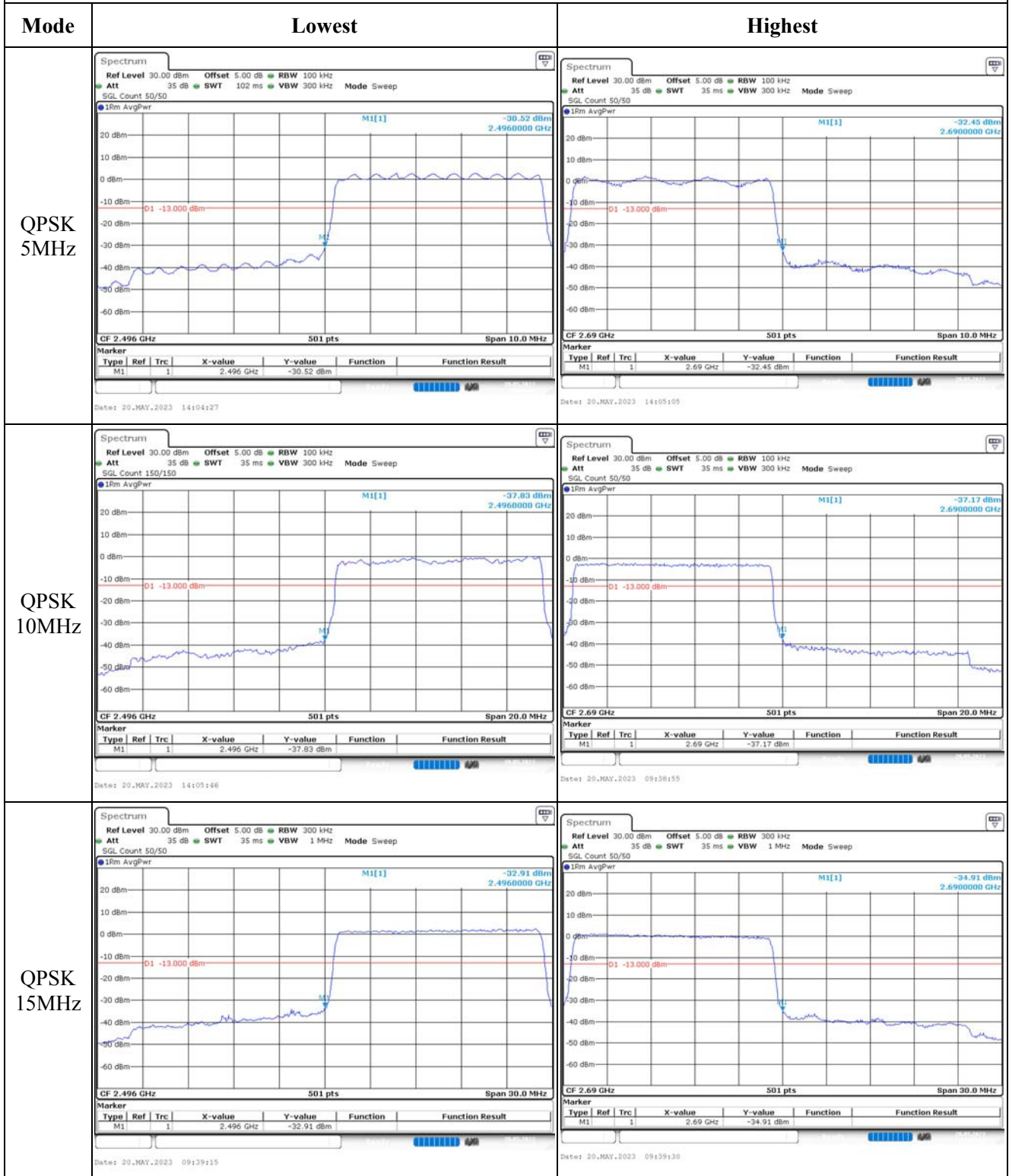
Middle



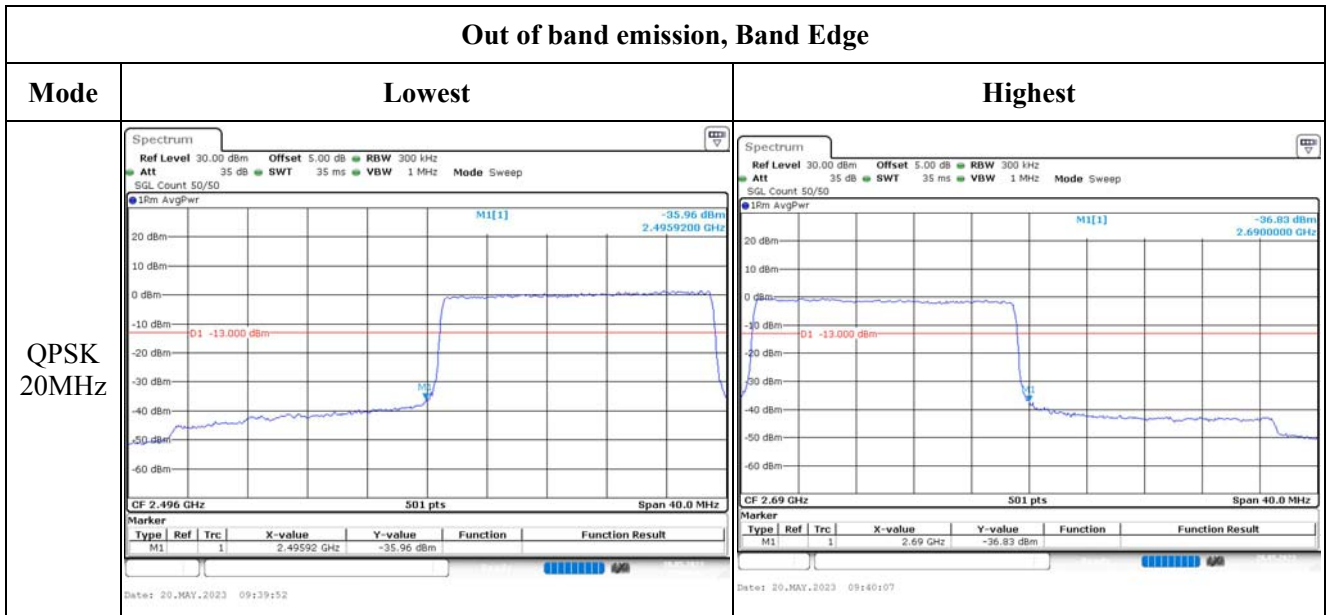
Highest



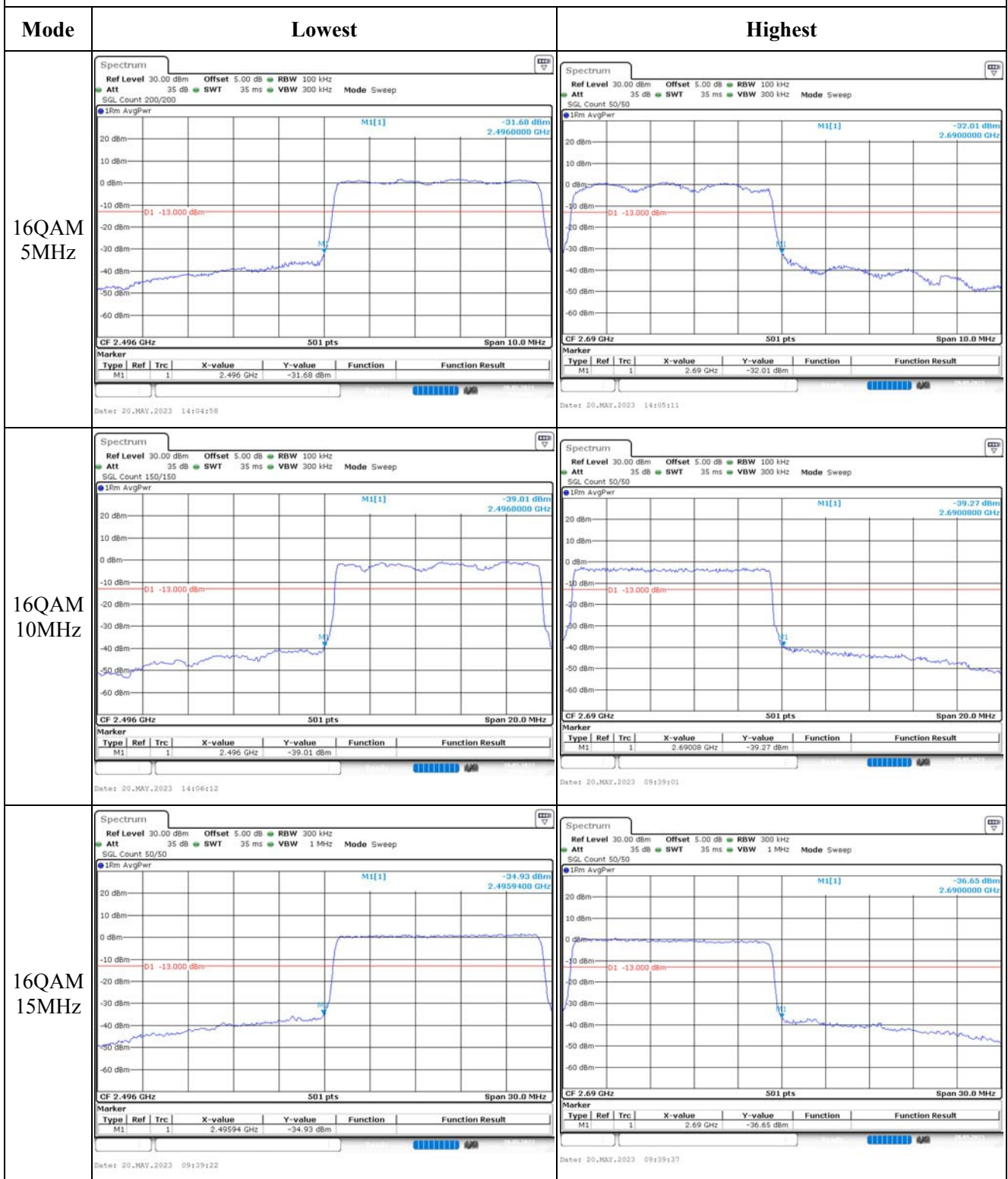
Out of band emission, Band Edge



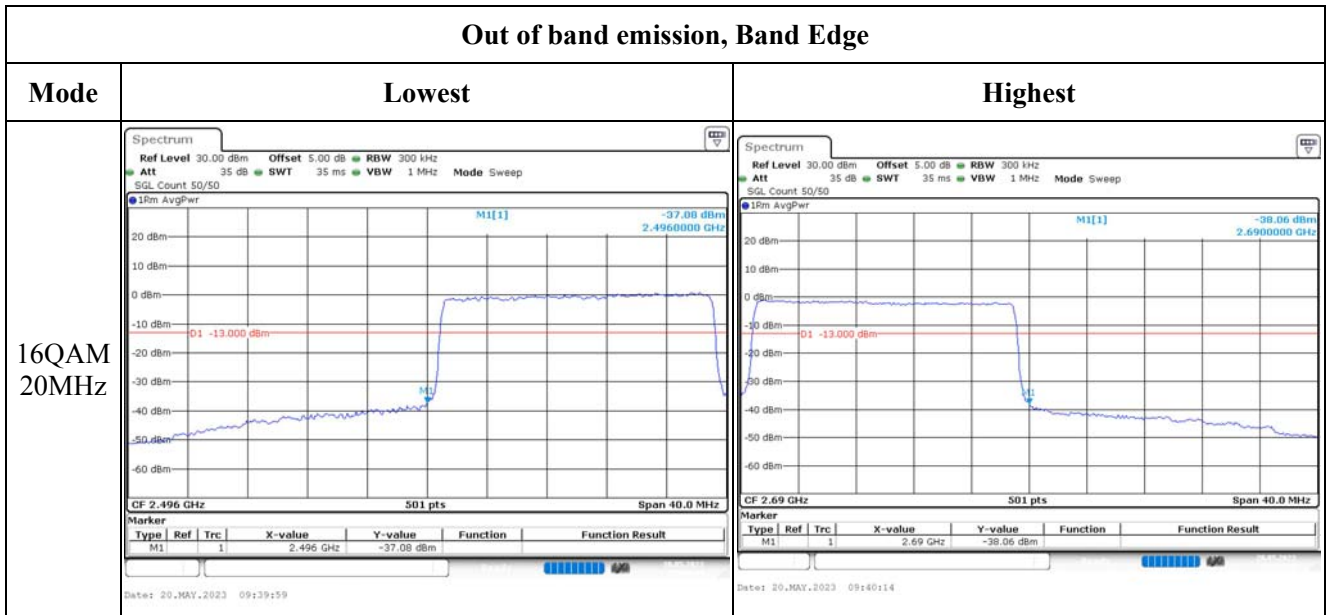
Out of band emission, Band Edge



Out of band emission, Band Edge



Out of band emission, Band Edge



4.14 Antenna Port Test Data and Results for LTE Band 66

Serial Number:	25TU-1	Test Date:	2023/05/20~2023/06/20
Test Site:	RF	Test Mode:	Transmitting
Tester:	George Chen	Test Result:	Pass

Environmental Conditions:

Temperature: (°C)	22.3~26.8	Relative Humidity: (%)	39~59	ATM Pressure: (kPa)	100.1~102.3
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Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSV40	101474	2022/07/15	2023/07/14
zhuoxiang	Coaxial Cable	SMA-178	211001	Each time	N/A
YINSAIGE	Coaxial Cable	SS402	SJ0100001	Each time	N/A
Mini-Circuits	DC Block	BLK-18-S+	1554403	Each time	N/A
Weinschel	Power Splitter	1515	RA914	Each time	N/A
R&S	Wideband Radio Communication Tester	CMW500	149218	2022/07/15	2023/07/14
BACL	TEMP&HUMI Test Chamber	BTH-150-40	30174	2022/09/29	2023/09/28
UNI-T	Multimeter	UT39A+	C210582554	2022/9/29	2023/9/28
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	1745	1779.3
3MHz	1711.5	1745	1778.5
5MHz	1712.5	1745	1777.5
10MHz	1715	1745	1775
15MHz	1717.5	1745	1772.5
20MHz	1720	1745	1770

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	23.8	23.65	23.06	25.32	30
	RB1#3	23.76	23.62	23.01		
	RB1#5	23.82	23.68	23.07		
	RB3#0	23.7	23.55	23.16		
	RB3#3	23.78	23.64	23.17		
	RB6#0	22.74	22.62	22.05		
1.4MHz 16QAM	RB1#0	22.91	22.54	22.87	24.50	30
	RB1#3	22.92	22.58	22.87		
	RB1#5	23	22.54	22.89		
	RB3#0	22.95	22.62	22.26		
	RB3#3	23	22.62	22.24		
	RB6#0	21.97	21.99	21.49		
3MHz QPSK	RB1#0	23.71	23.65	23.04	25.29	30
	RB1#8	23.66	23.7	23.05		
	RB1#14	23.7	23.79	23.01		
	RB6#0	22.77	22.58	22.11		
	RB6#9	22.79	22.61	22.12		
	RB15#0	22.66	22.61	22.15		
3MHz 16QAM	RB1#0	23.48	22.61	22.61	24.98	30
	RB1#8	23.48	22.6	22.54		
	RB1#14	23.47	22.53	22.44		
	RB6#0	21.88	21.94	21.16		
	RB6#9	21.89	21.97	21.18		
	RB15#0	21.84	21.74	21.34		
5MHz QPSK	RB1#0	23.81	23.55	23.12	25.31	30
	RB1#13	23.81	23.53	23.09		
	RB1#24	23.79	23.54	23.05		
	RB15#0	22.67	22.62	22.24		
	RB15#10	22.73	22.64	22.16		
	RB25#0	22.74	22.59	22.14		
5MHz 16QAM	RB1#0	22.94	22.33	21.29	24.46	30
	RB1#13	22.94	22.3	21.26		
	RB1#24	22.96	22.32	21.25		
	RB15#0	21.76	21.77	21.33		
	RB15#10	21.81	21.69	21.31		
	RB25#0	21.82	21.66	21.4		
10MHz QPSK	RB1#0	23.79	23.72	23.1	25.38	30
	RB1#25	23.88	23.66	23		
	RB1#49	23.88	23.6	22.98		

	RB25#0	22.72	22.57	22.09		
	RB25#25	22.78	22.48	22.18		
	RB50#0	22.79	22.57	22.1		
10MHz 16QAM	RB1#0	22.87	22.18	22.48	24.47	30
	RB1#25	22.91	22.17	22.38		
	RB1#49	22.97	22.13	22.34		
	RB25#0	21.97	21.79	21.33		
	RB25#25	22.04	21.8	21.25		
	RB50#0	21.95	21.71	21.32		
15MHz QPSK	RB1#0	23.79	23.67	23.17	25.42	30
	RB1#38	23.85	23.58	23.03		
	RB1#74	23.92	23.58	22.97		
	RB36#0	22.79	22.65	22.18		
	RB36#39	22.8	22.57	22.09		
	RB75#0	22.79	22.63	22.15		
15MHz 16QAM	RB1#0	22.91	23.07	22.55	24.57	30
	RB1#38	22.91	23	22.46		
	RB1#74	23.03	22.94	22.31		
	RB36#0	21.9	21.79	21.38		
	RB36#39	21.96	21.72	21.3		
	RB75#0	21.97	21.78	21.35		
20MHz QPSK	RB1#0	23.76	23.77	23.3	25.48	30
	RB1#50	23.93	23.63	23.26		
	RB1#99	23.98	23.53	23.09		
	RB50#0	22.73	22.63	22.33		
	RB50#50	22.81	22.57	22.14		
	RB100#0	22.73	22.48	22.12		
20MHz 16QAM	RB1#0	22.75	23.54	22.47	25.04	30
	RB1#50	22.76	23.26	22.37		
	RB1#99	22.87	23.31	22.31		
	RB50#0	21.81	21.76	21.46		
	RB50#50	21.92	21.71	21.36		
	RB100#0	21.9	21.86	21.33		

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	
10MHz QPSK	RB1#0	5.13	5.77	5.45	13
	RB50#0	5.07	5.45	5.36	13
10MHz 16QAM	RB1#0	5.77	6.75	6.43	13
	RB50#0	6	6.32	6.26	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	1.108	1.102	1.102	1.326	1.308	1.296
1.4MHz 16QAM	1.096	1.108	1.108	1.302	1.326	1.290
3MHz QPSK	2.707	2.695	2.695	3.036	3.024	3.012
3MHz 16QAM	2.695	2.707	2.683	3.072	3.072	2.868
5MHz QPSK	4.531	4.531	4.531	5.220	5.480	5.300
5MHz 16QAM	4.551	4.551	4.531	5.540	5.400	5.280
10MHz QPSK	8.942	8.942	8.982	9.840	10.000	9.840
10MHz 16QAM	8.982	8.942	8.982	9.960	10.200	9.920
15MHz QPSK	13.473	13.593	13.533	15.360	14.760	15.600
15MHz 16QAM	13.533	13.593	13.593	15.240	15.060	15.180
20MHz QPSK	17.884	18.044	17.964	19.840	20.400	19.920
20MHz 16QAM	17.964	18.044	17.964	19.840	20.320	20.160

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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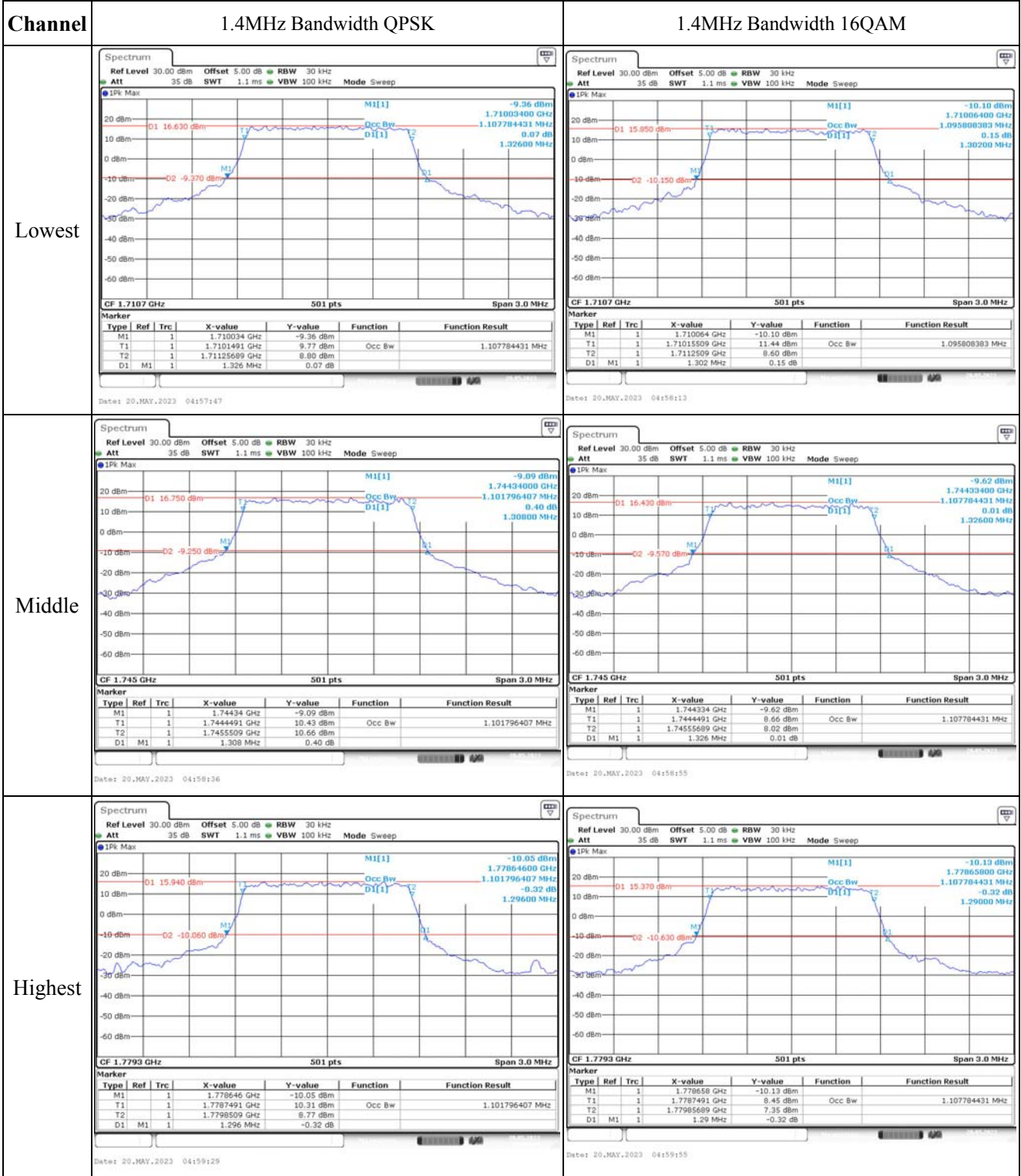
FCC §2.1055, §27.54: Frequency Stability

Test Mode:	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	3.85	1711.134	1710.00	1779.009	1780
	-20	3.85	1711.145	1710.00	1779.018	1780
	-10	3.85	1711.175	1710.00	1779.099	1780
	0	3.85	1711.178	1710.00	1779.012	1780
	10	3.85	1711.174	1710.00	1779.039	1780
	20	3.85	1711.138	1710.00	1779.022	1780
	30	3.85	1711.150	1710.00	1779.011	1780
	40	3.85	1711.175	1710.00	1779.026	1780
Frequency Stability vs. Voltage	20	3.5	1711.188	1710.00	1779.056	1780
	20	4.4	1711.143	1710.00	1779.067	1780
					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	3.85	1711.072	1710.00	1779.093	1780
	-20	3.85	1711.027	1710.00	1779.071	1780
	-10	3.85	1711.091	1710.00	1779.071	1780
	0	3.85	1711.070	1710.00	1779.146	1780
	10	3.85	1711.083	1710.00	1779.081	1780
	20	3.85	1711.058	1710.00	1779.102	1780
	30	3.85	1711.036	1710.00	1779.160	1780
	40	3.85	1711.067	1710.00	1779.062	1780
	50	3.85	1711.099	1710.00	1779.075	1780
Frequency Stability vs. Voltage	20	3.5	1711.022	1710.00	1779.150	1780
	20	4.4	1711.018	1710.00	1779.104	1780
					Result:	Pass

Test Plots(Note: The 5.0dB is the Insertion loss of the RF cable, Power Splitter and DC Block, which was offset into the Spectrum Analyzer):

Occupied Bandwidth



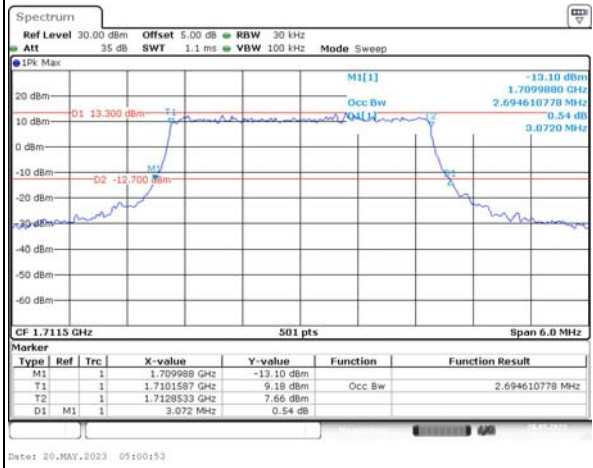
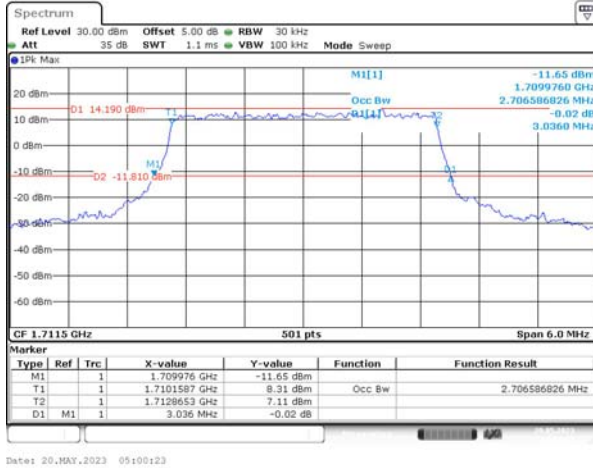
Occupied Bandwidth

Channel

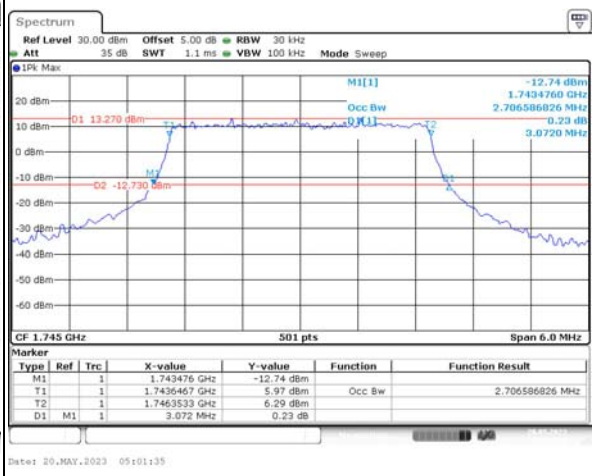
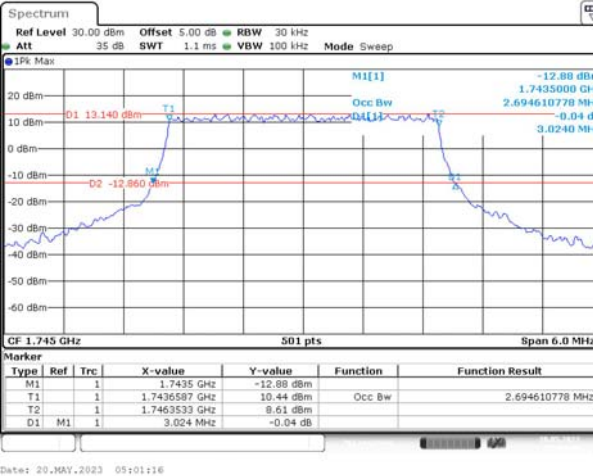
3MHz Bandwidth QPSK

3MHz Bandwidth 16QAM

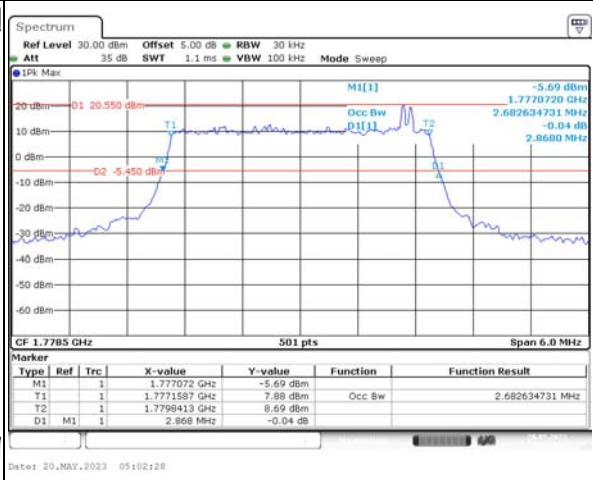
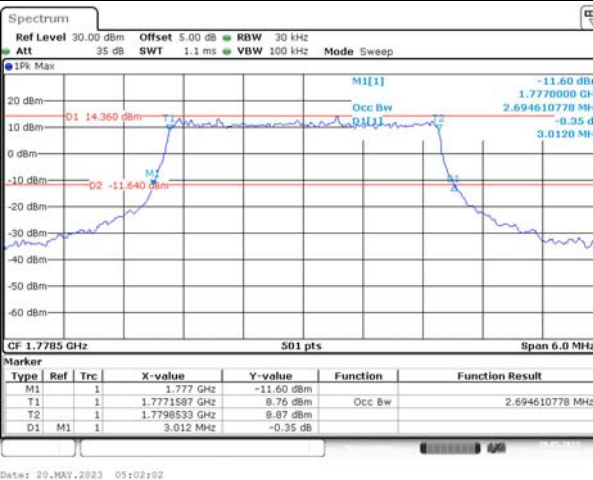
Lowest



Middle



Highest



Occupied Bandwidth

Channel	5MHz Bandwidth QPSK	5MHz Bandwidth 16QAM																																																																						
Lowest	<p>CF 1.7125 GHz 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>1.70995 GHz</td> <td>-9.99 dBm</td> <td></td> <td></td> </tr> <tr> <td>T1</td> <td>1</td> <td></td> <td>1.7102445 GHz</td> <td>10.23 dBm</td> <td></td> <td></td> </tr> <tr> <td>T2</td> <td>1</td> <td></td> <td>1.7147754 GHz</td> <td>10.40 dBm</td> <td></td> <td></td> </tr> <tr> <td>D1</td> <td>M1</td> <td>1</td> <td>5.22 MHz</td> <td>0.14 dB</td> <td>Occ Bw</td> <td>4.530938124 MHz</td> </tr> </tbody> </table> <p>Date: 20.MAY.2023 05:03:07</p>	Type	Ref	Trc	X-value	Y-value	Function	Function Result	M1	1		1.70995 GHz	-9.99 dBm			T1	1		1.7102445 GHz	10.23 dBm			T2	1		1.7147754 GHz	10.40 dBm			D1	M1	1	5.22 MHz	0.14 dB	Occ Bw	4.530938124 MHz	<p>CF 1.7125 GHz 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>1.70994 GHz</td> <td>-11.17 dBm</td> <td></td> <td></td> </tr> <tr> <td>T1</td> <td>1</td> <td></td> <td>1.7102445 GHz</td> <td>9.55 dBm</td> <td></td> <td></td> </tr> <tr> <td>T2</td> <td>1</td> <td></td> <td>1.7147954 GHz</td> <td>8.45 dBm</td> <td></td> <td></td> </tr> <tr> <td>D1</td> <td>M1</td> <td>1</td> <td>5.54 MHz</td> <td>0.17 dB</td> <td>Occ Bw</td> <td>4.550898204 MHz</td> </tr> </tbody> </table> <p>Date: 20.MAY.2023 05:03:37</p>	Type	Ref	Trc	X-value	Y-value	Function	Function Result	M1	1		1.70994 GHz	-11.17 dBm			T1	1		1.7102445 GHz	9.55 dBm			T2	1		1.7147954 GHz	8.45 dBm			D1	M1	1	5.54 MHz	0.17 dB	Occ Bw	4.550898204 MHz
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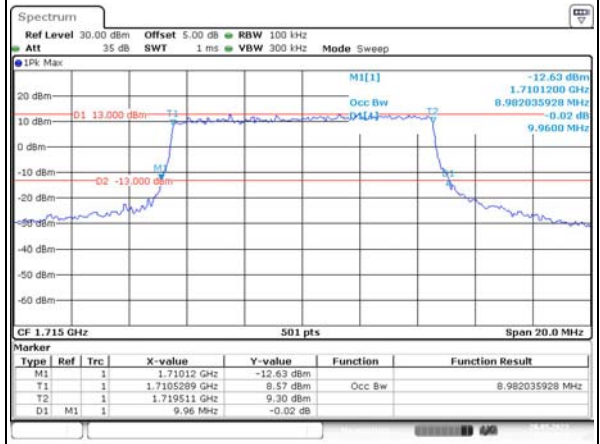
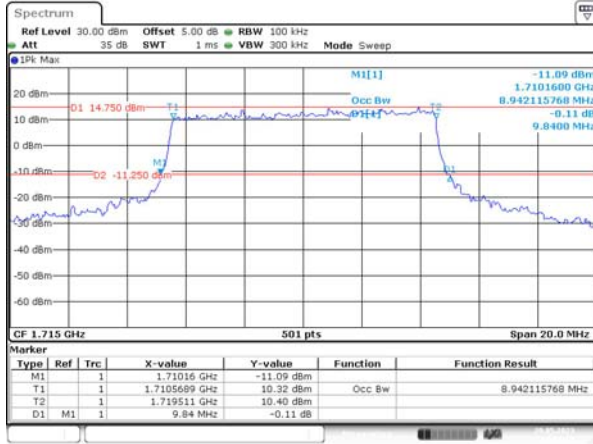
Occupied Bandwidth

Channel

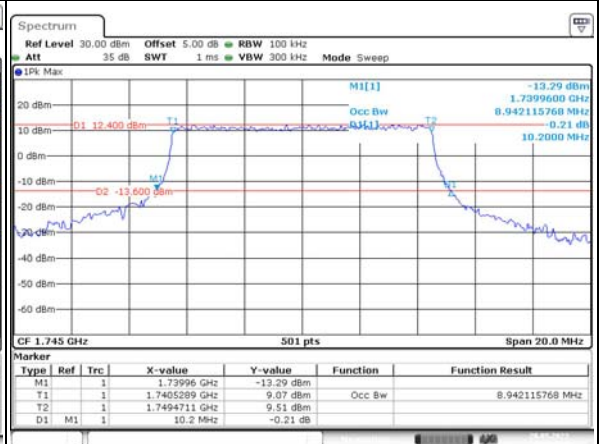
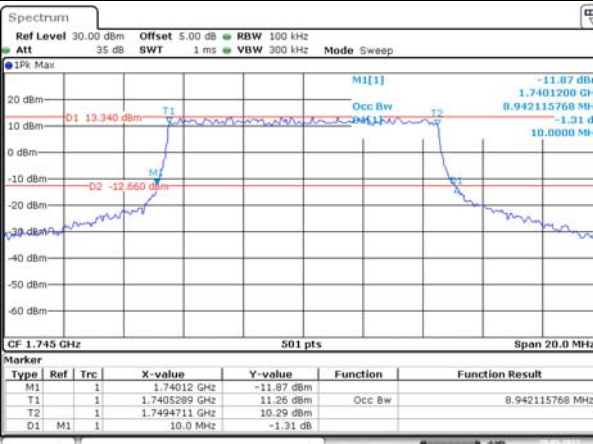
10MHz Bandwidth QPSK

10MHz Bandwidth 16QAM

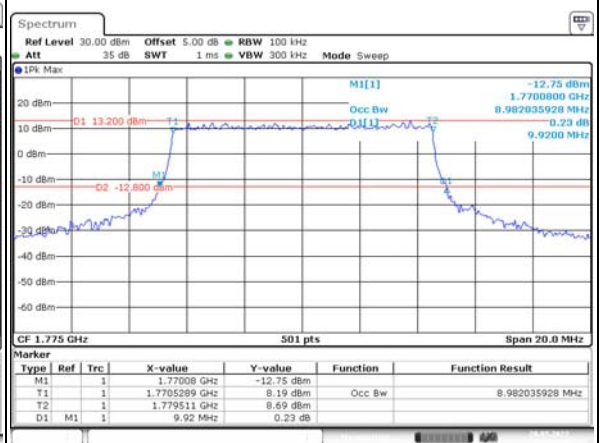
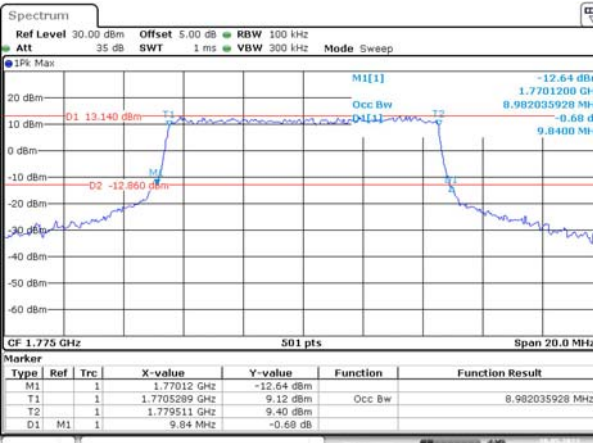
Lowest



Middle



Highest



Occupied Bandwidth

