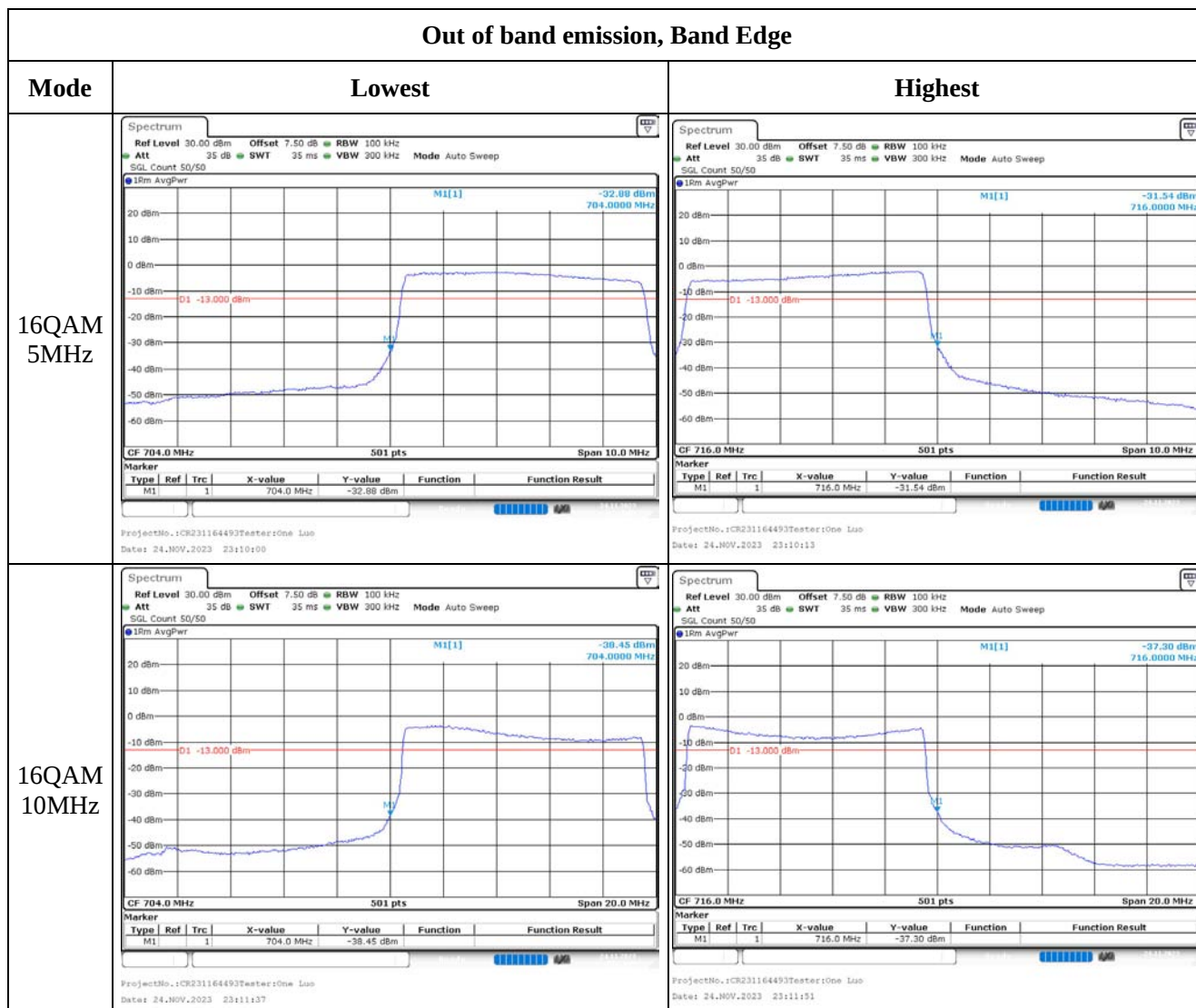


Out of band emission, Band Edge



4.12 Antenna Port Test Data and Results for LTE Band 38

Serial Number:	2D1L-2	Test Date:	2023/11/24~2023/12/20
Test Site:	RF	Test Mode:	Transmitting
Tester:	One Luo	Test Result:	Pass

Environmental Conditions:

Temperature: (°C)	22.3~25.8	Relative Humidity: (%)	31~52	ATM Pressure: (kPa)	100.9~101.9
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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	2023/3/31	2024/3/30
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	143458	2023/3/31	2024/3/30
BACL	TEMP&HUMI Test Chamber	BTH-150-40	30174	2023/3/31	2024/3/30
UNI-T	Multimeter	UT39A+	C210582554	2023/9/29	2024/9/28
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	23.46	23.66	23.47	26.95	33
	RB1#13	23.57	23.75	23.5		
	RB1#24	23.44	23.62	23.38		
	RB15#0	22.56	22.72	22.57		
	RB15#10	22.5	22.65	22.57		
	RB25#0	22.61	22.67	22.5		
5MHz 16QAM	RB1#0	22.47	22.86	22.48	26.13	33
	RB1#13	22.59	22.93	22.45		
	RB1#24	22.53	22.82	22.45		
	RB15#0	21.73	21.69	21.45		
	RB15#10	21.7	21.66	21.47		
	RB25#0	21.75	21.63	21.61		
10MHz QPSK	RB1#0	23.52	23.79	23.55	27.11	33
	RB1#25	23.87	23.91	23.81		
	RB1#49	23.69	23.67	23.45		
	RB25#0	22.83	22.74	22.57		
	RB25#25	22.76	22.7	22.62		
	RB50#0	22.76	22.66	22.58		
10MHz 16QAM	RB1#0	22.85	22.59	22.72	26.27	33
	RB1#25	23.07	22.74	22.95		
	RB1#49	22.85	22.45	22.66		
	RB25#0	21.81	21.66	21.61		
	RB25#25	21.7	21.55	21.57		
	RB50#0	21.74	21.53	21.59		
15MHz QPSK	RB1#0	23.7	23.53	23.64	26.94	33
	RB1#38	23.73	23.74	23.65		
	RB1#74	23.71	23.6	23.45		
	RB36#0	22.87	22.89	22.62		
	RB36#39	22.8	22.78	22.69		
	RB75#0	22.93	22.84	22.69		
15MHz 16QAM	RB1#0	22.82	22.87	22.57	26.14	33
	RB1#38	22.91	22.94	22.61		
	RB1#74	22.85	22.78	22.4		
	RB36#0	21.82	21.84	21.65		
	RB36#39	21.79	21.76	21.65		
	RB75#0	21.73	21.74	21.69		
20MHz QPSK	RB1#0	23.56	23.45	23.38	27.22	33
	RB1#50	24.02	23.85	23.82		
	RB1#99	23.62	23.37	23.32		

20MHz 16QAM	RB50#0	22.7	22.66	22.65	26.35	33
	RB50#50	22.6	22.56	22.71		
	RB100#0	22.67	22.63	22.7		
	RB1#0	22.7	22.49	22.44		
	RB1#50	23.15	22.88	22.82		
	RB1#99	22.78	22.48	22.35		
	RB50#0	21.72	21.62	21.66		
	RB50#50	21.55	21.52	21.73		
	RB100#0	21.6	21.52	21.66		

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	6.93	7.94	8.03	13
	RB50#0	8.41	8.96	8.9	13
10MHz 16QAM	RB1#0	7.88	8.96	8.99	13
	RB50#0	9.1	9.68	9.86	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	4.511	4.531	4.551	5.26	5.22	7.06
5MHz 16QAM	4.551	4.551	4.551	5.92	5.26	5.38
10MHz QPSK	9.022	8.942	9.022	10.08	9.88	9.84
10MHz 16QAM	8.942	8.942	8.982	9.84	9.8	11.16
15MHz QPSK	13.533	13.533	13.533	16.5	14.82	16.92
15MHz 16QAM	13.593	13.533	13.593	15.42	14.88	18.36
20MHz QPSK	17.964	17.964	17.964	21.44	19.52	19.68
20MHz 16QAM	17.964	17.964	17.964	19.6	19.76	19.92

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

Spurious Emissions at Antenna Terminal

Result:	Pass, Please refer to the test plots of Spurious Emissions at Antenna Terminal.
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Out of band emission, Band Edge

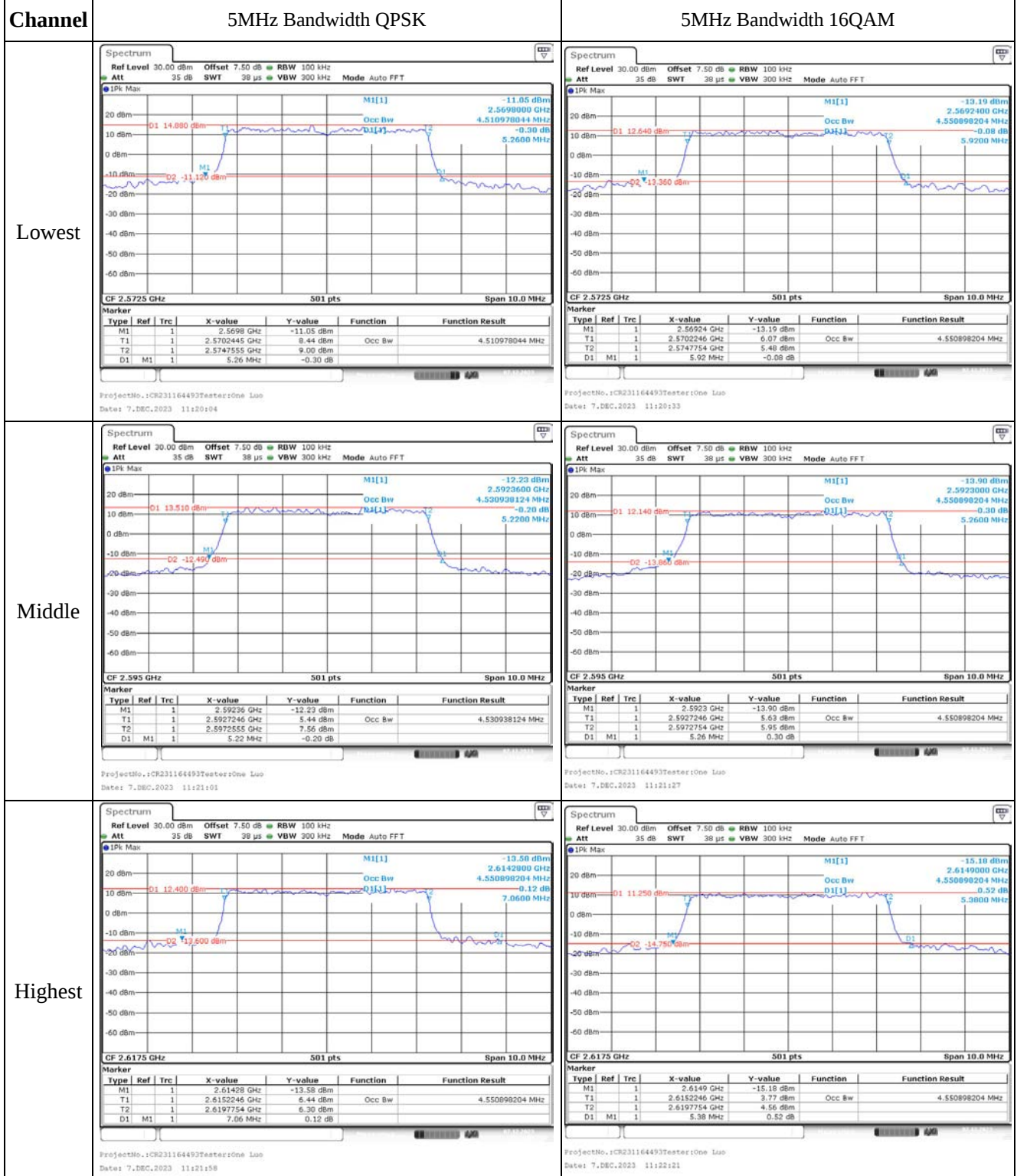
Result:	Pass, Please refer to the test plots of Out of band emission, Band Edge.
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Frequency Stability						
Test Mode:	20M QPSK	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (°C)	Voltage (V _{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.8	2570.977	2570.00	2619.041	2620
	-20	3.8	2570.928	2570.00	2619.070	2620
	-10	3.8	2570.994	2570.00	2619.021	2620
	0	3.8	2570.969	2570.00	2619.055	2620
	10	3.8	2570.928	2570.00	2619.089	2620
	20	3.8	2570.978	2570.00	2619.022	2620
	30	3.8	2570.914	2570.00	2619.008	2620
	40	3.8	2570.973	2570.00	2619.023	2620
	50	3.8	2570.937	2570.00	2619.004	2620
Frequency Stability vs. Voltage	20	3.2	2570.967	2570.00	2619.073	2620
	20	4.4	2570.918	2570.00	2619.055	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	3.8	2570.983	2570.00	2619.037	2620
	-20	3.8	2570.970	2570.00	2619.079	2620
	-10	3.8	2570.955	2570.00	2619.090	2620
	0	3.8	2570.936	2570.00	2619.090	2620
	10	3.8	2570.913	2570.00	2619.045	2620
	20	3.8	2570.978	2570.00	2619.022	2620
	30	3.8	2570.992	2570.00	2619.028	2620
	40	3.8	2570.951	2570.00	2619.093	2620
	50	3.8	2570.984	2570.00	2619.085	2620
Frequency Stability vs. Voltage	20	3.2	2570.962	2570.00	2619.095	2620
	20	4.4	2570.957	2570.00	2619.032	2620
					Result:	Pass

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

Occupied Bandwidth



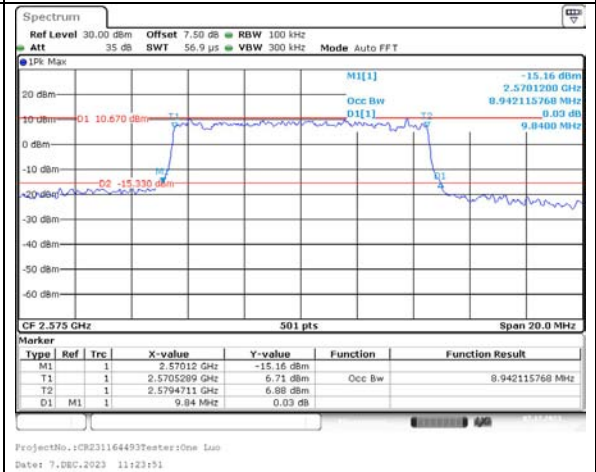
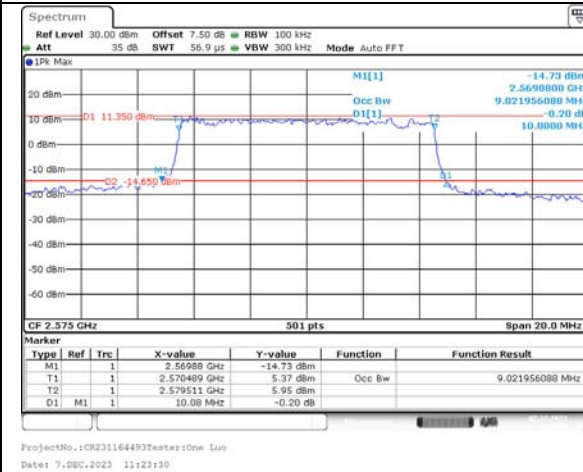
Occupied Bandwidth

Channel

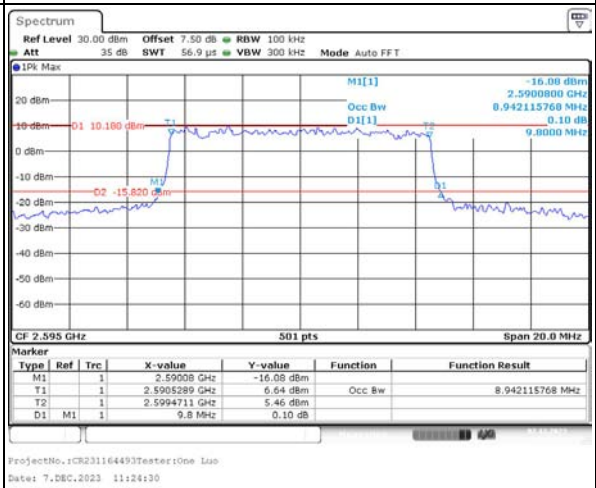
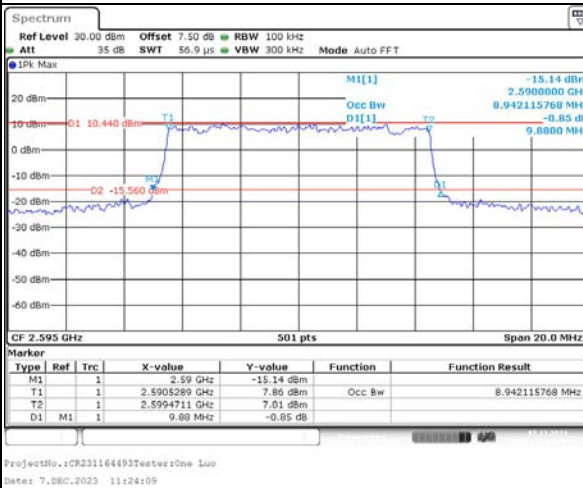
10MHz Bandwidth QPSK

10MHz Bandwidth 16QAM

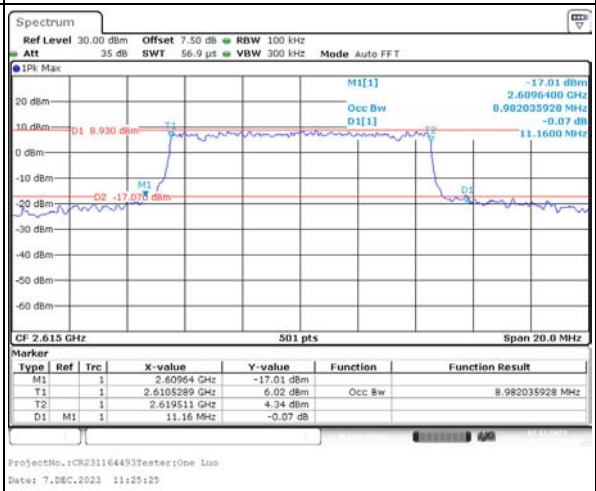
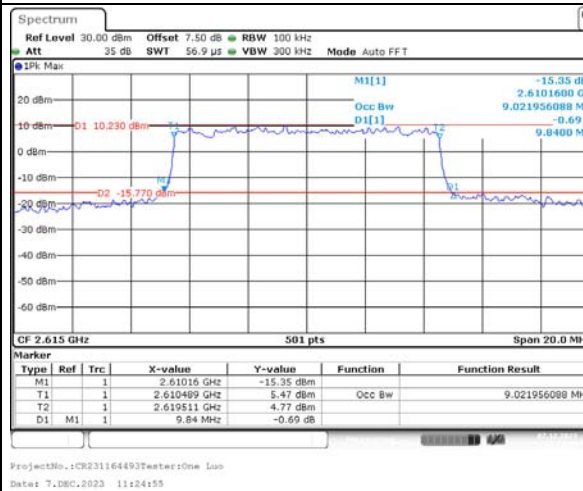
Lowest



Middle



Highest



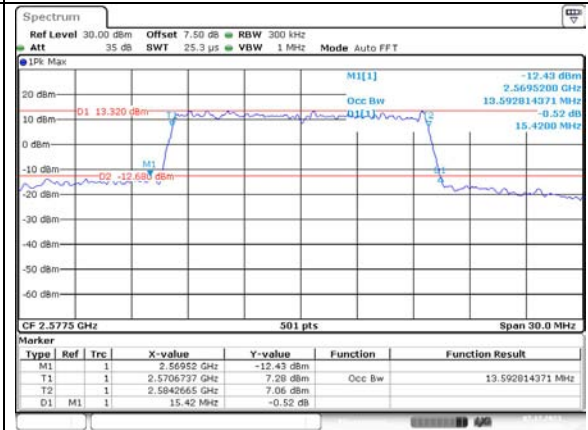
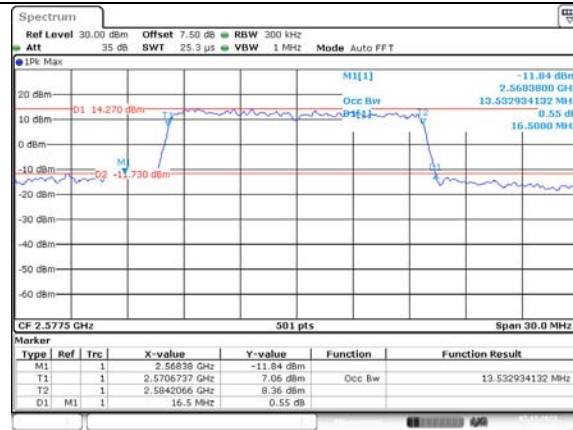
Occupied Bandwidth

Channel

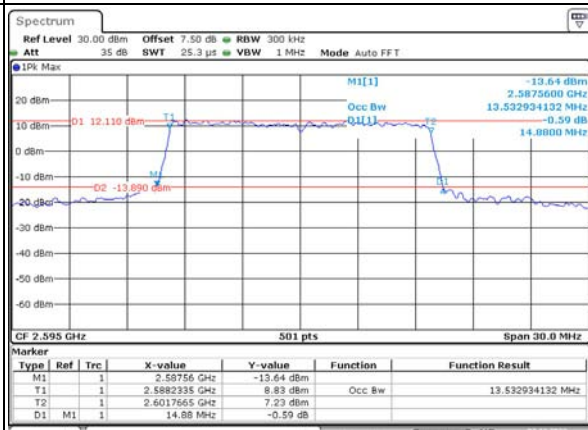
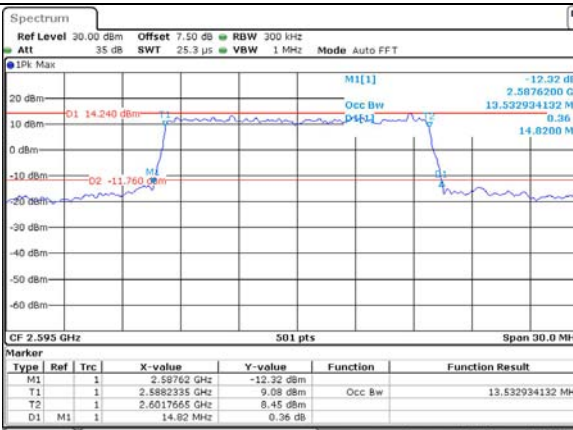
15MHz Bandwidth QPSK

15MHz Bandwidth 16QAM

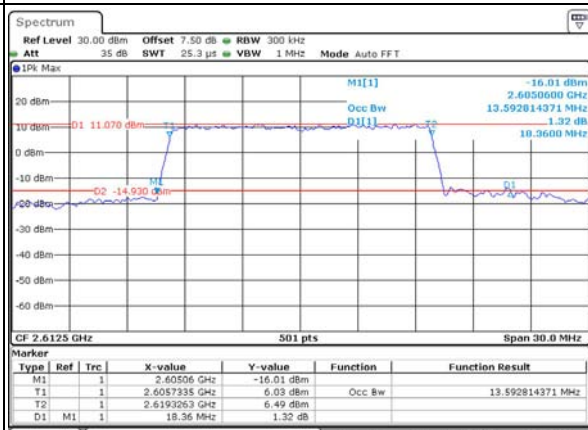
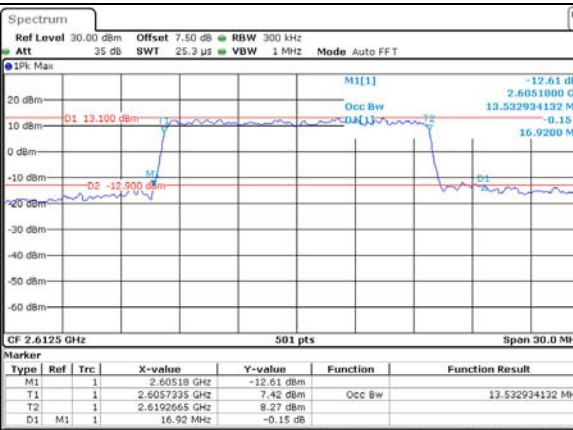
Lowest



Middle



Highest



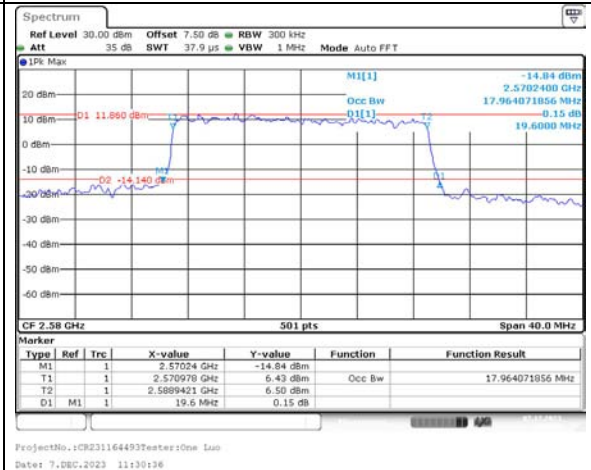
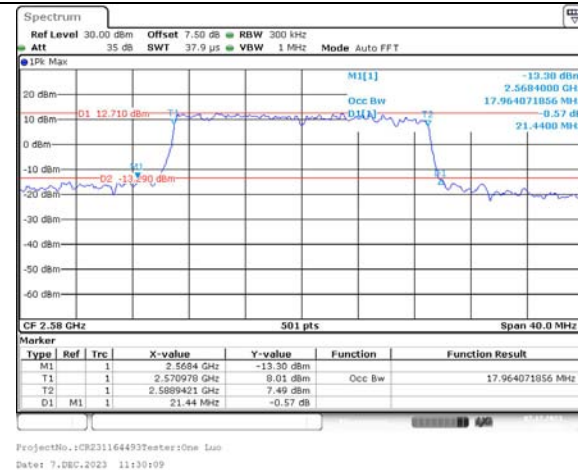
Occupied Bandwidth

Channel

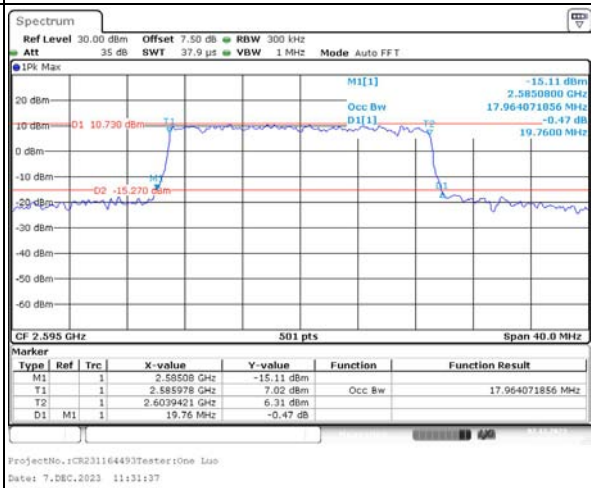
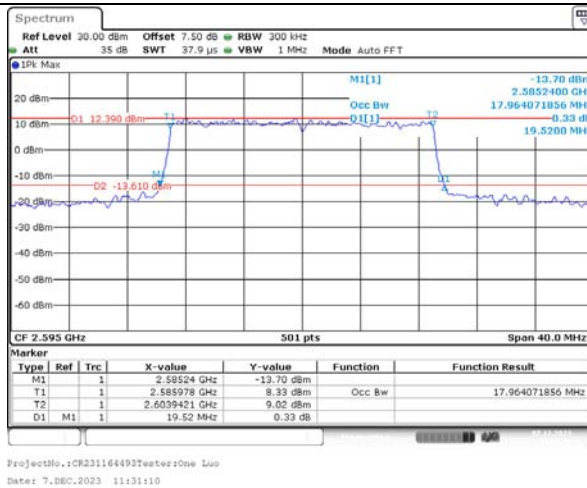
20MHz Bandwidth QPSK

20MHz Bandwidth 16QAM

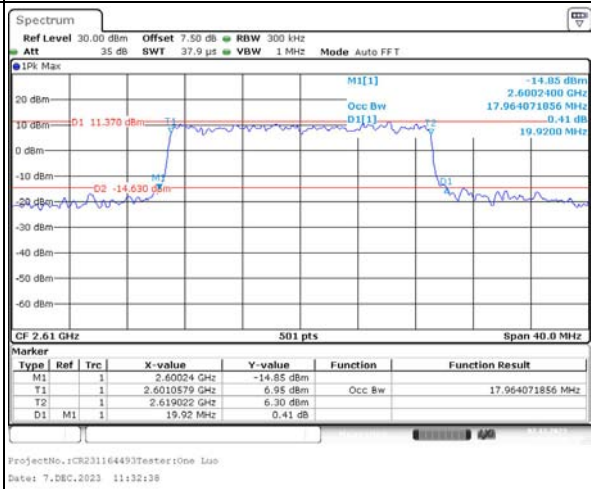
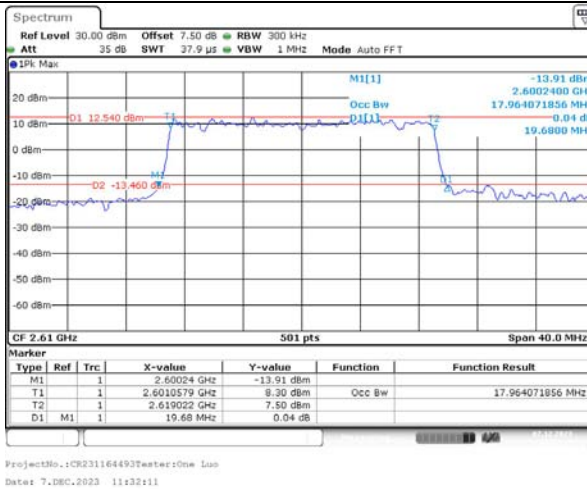
Lowest



Middle



Highest

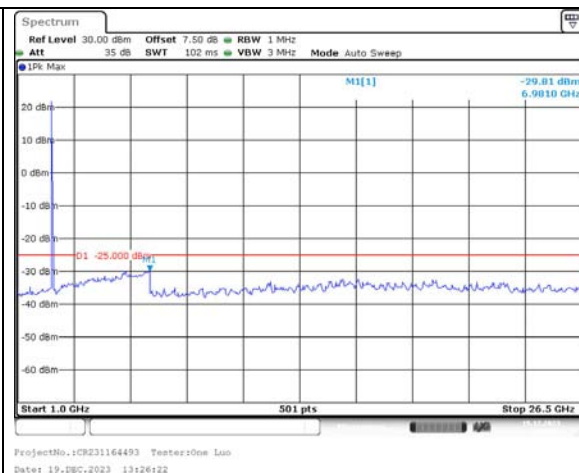
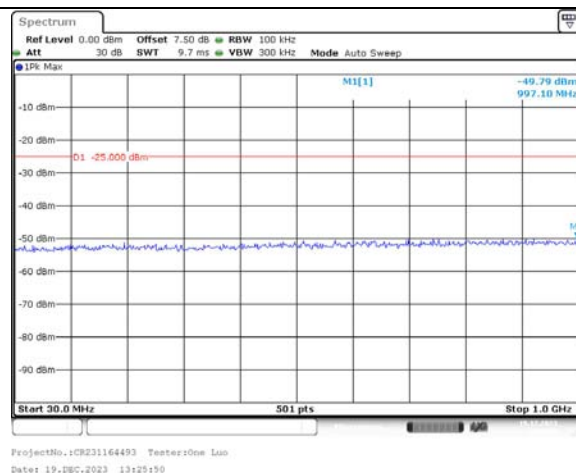


Spurious Emissions at Antenna Terminal

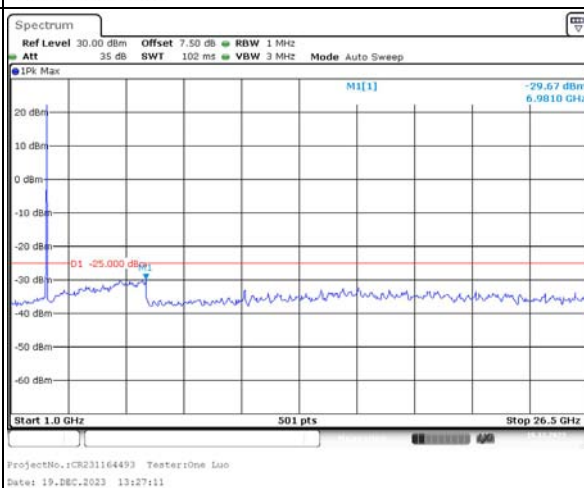
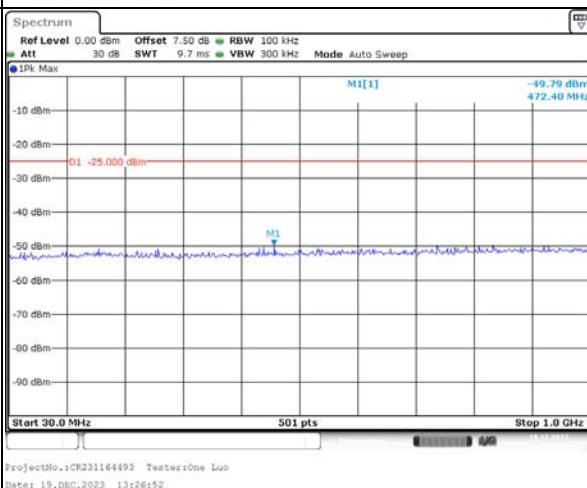
Channel

5MHz Bandwidth QPSK

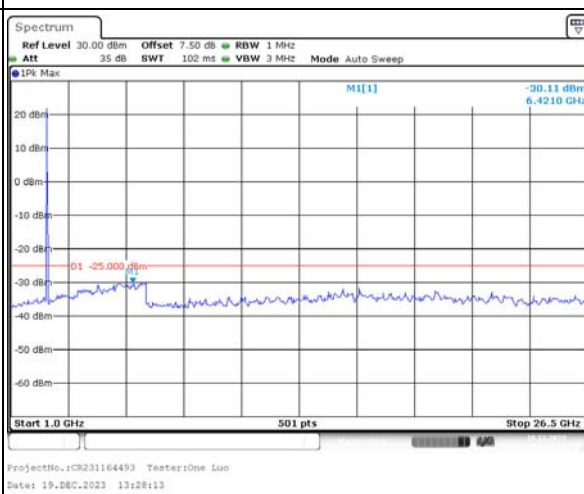
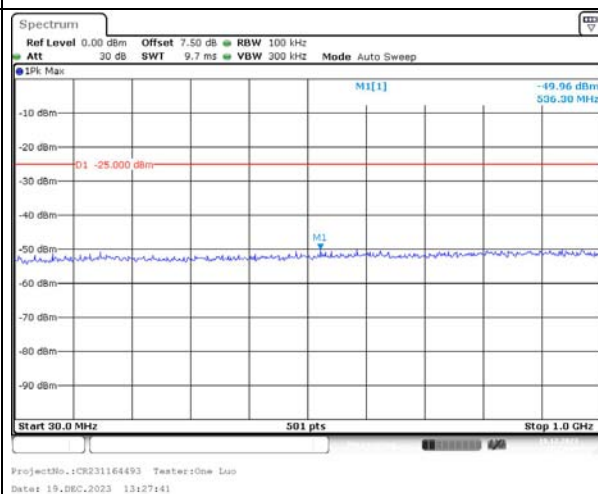
Lowest



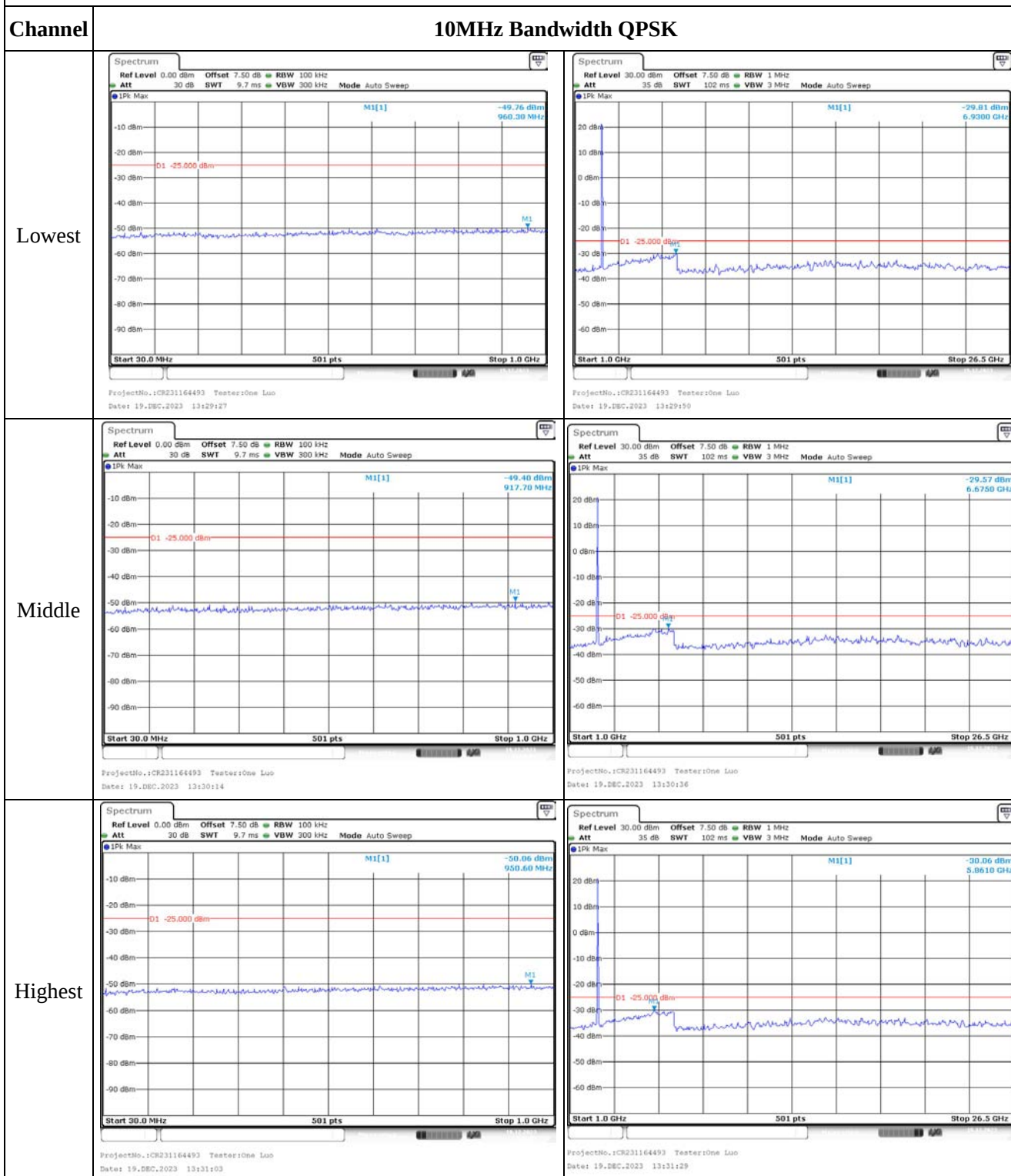
Middle



Highest



Spurious Emissions at Antenna Terminal

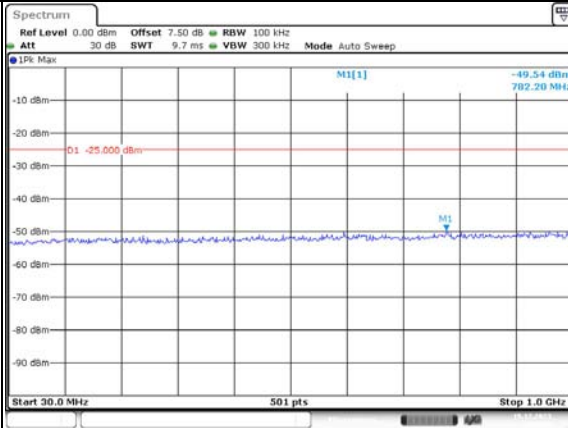


Spurious Emissions at Antenna Terminal

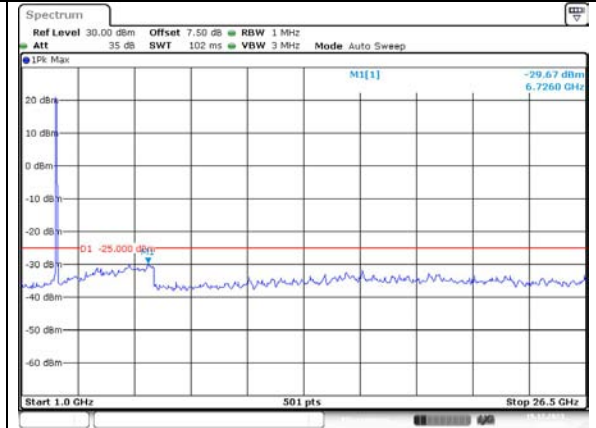
Channel

15MHz Bandwidth QPSK

Lowest

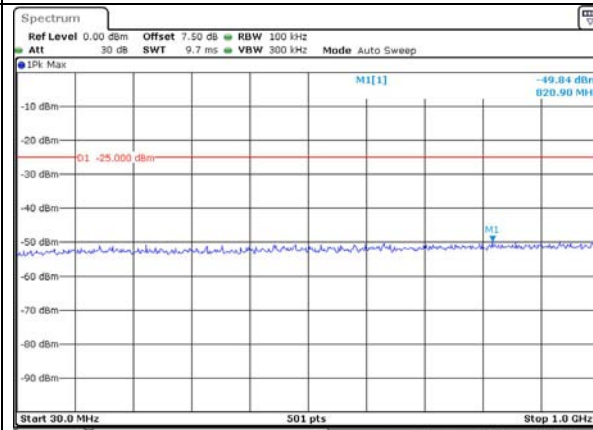


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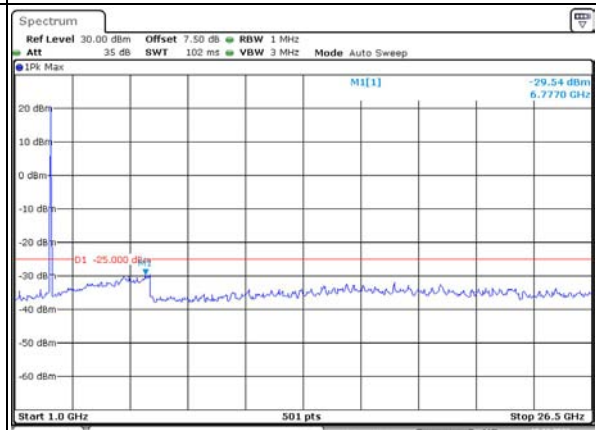


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Date: 19.DEC.2023 13:33:16

Middle

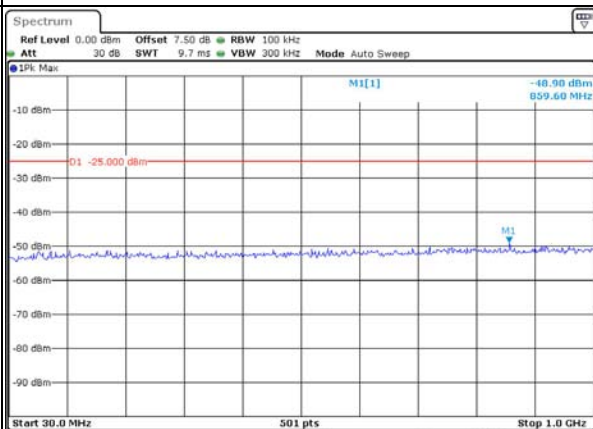


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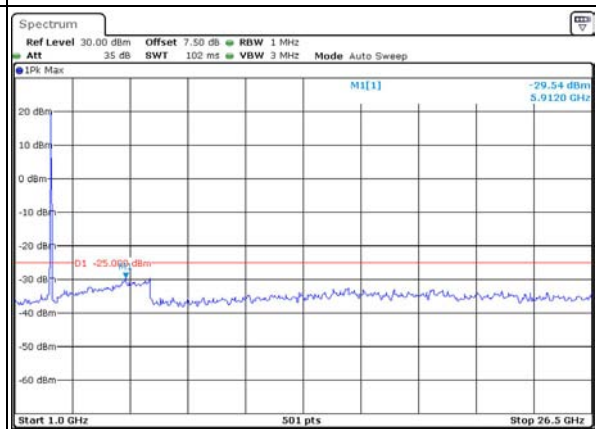


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Highest



ProjectNo.:CR231164493 TestersOne Luo
Date: 19.DEC.2023 13:34:47



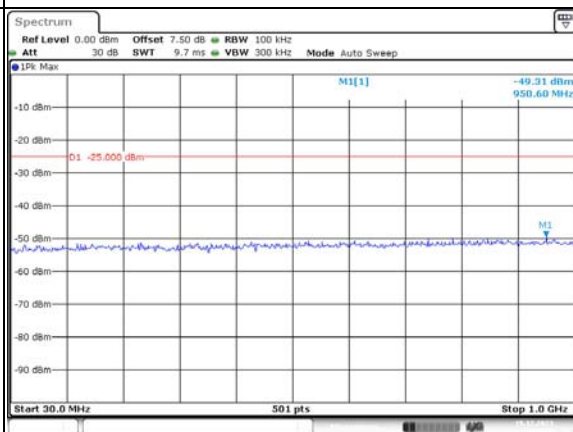
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Spurious Emissions at Antenna Terminal

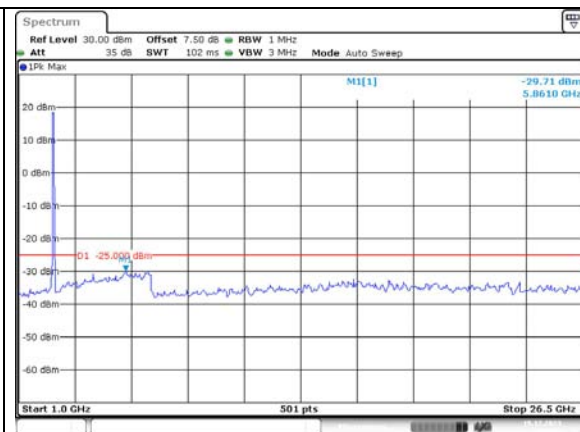
Channel

20MHz Bandwidth QPSK

Lowest

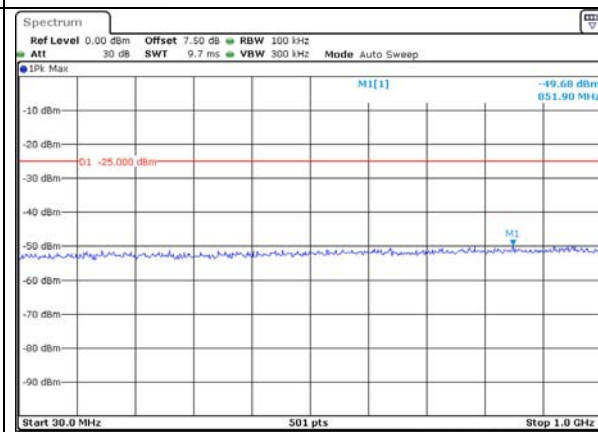


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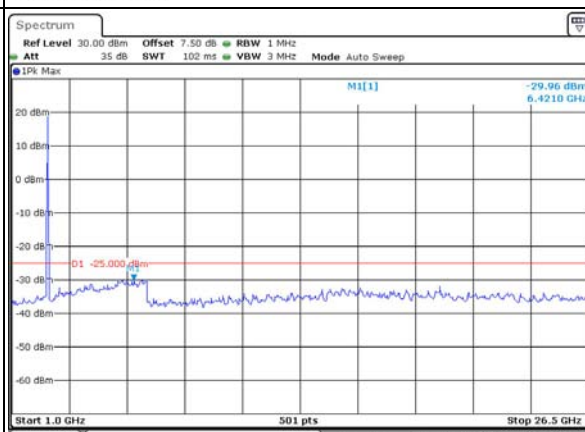


ProjectNo.:CR231164493 TestersOne Luo
Date: 19.DEC.2023 13:38:09

Middle

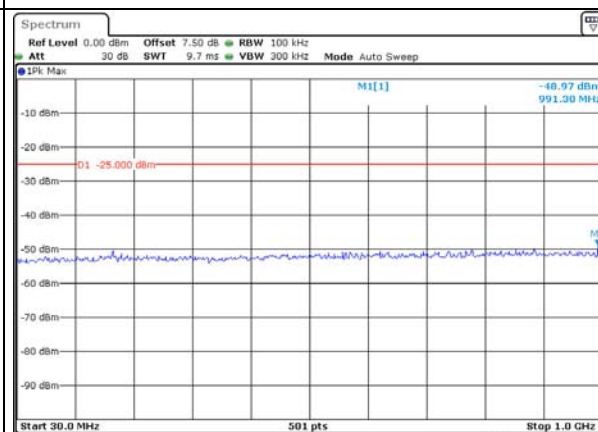


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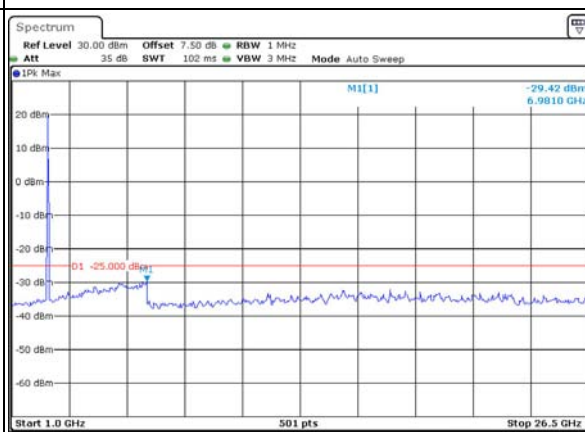


ProjectNo.:CR231164493 TestersOne Luo
Date: 19.DEC.2023 13:39:08

Highest

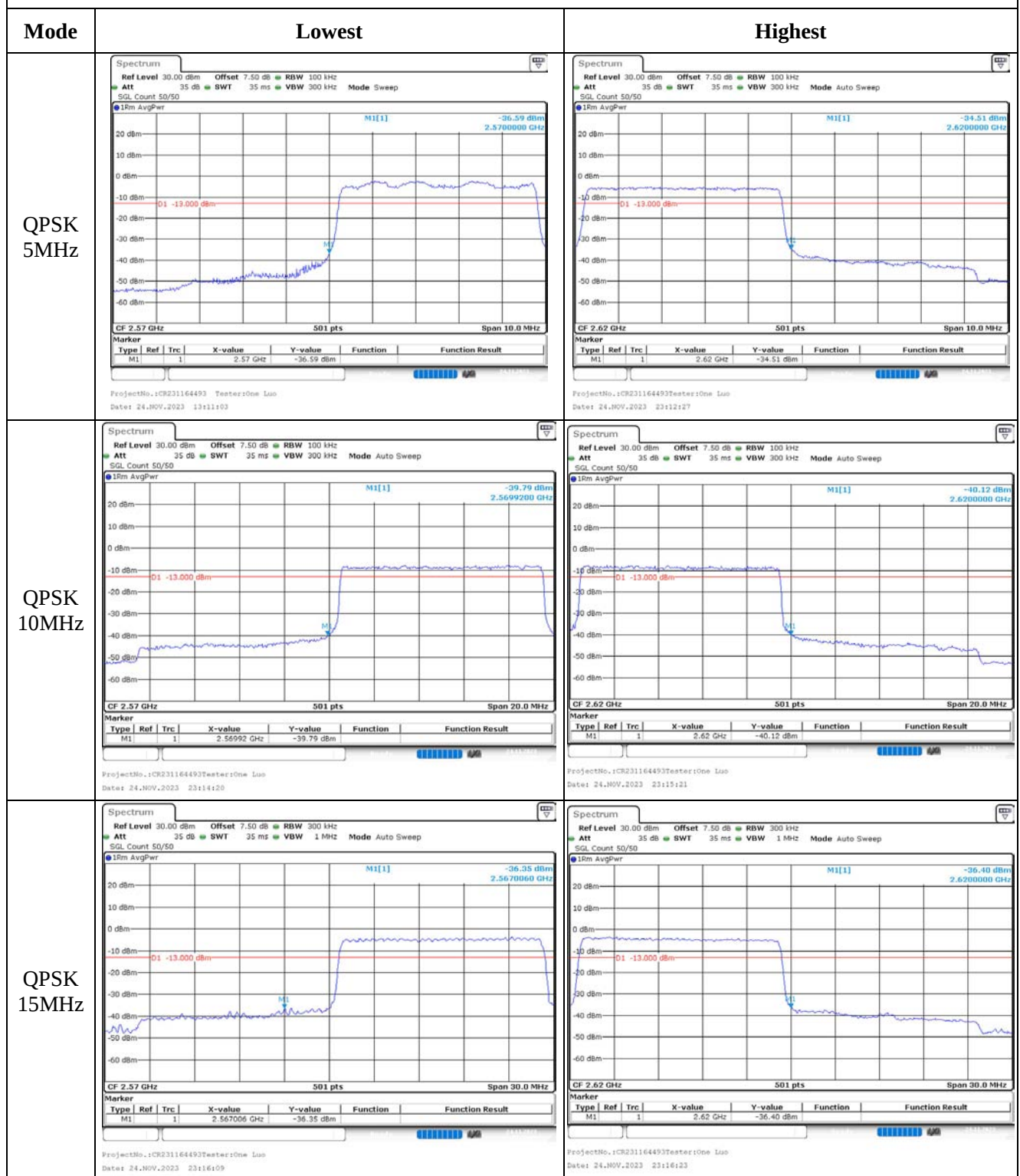


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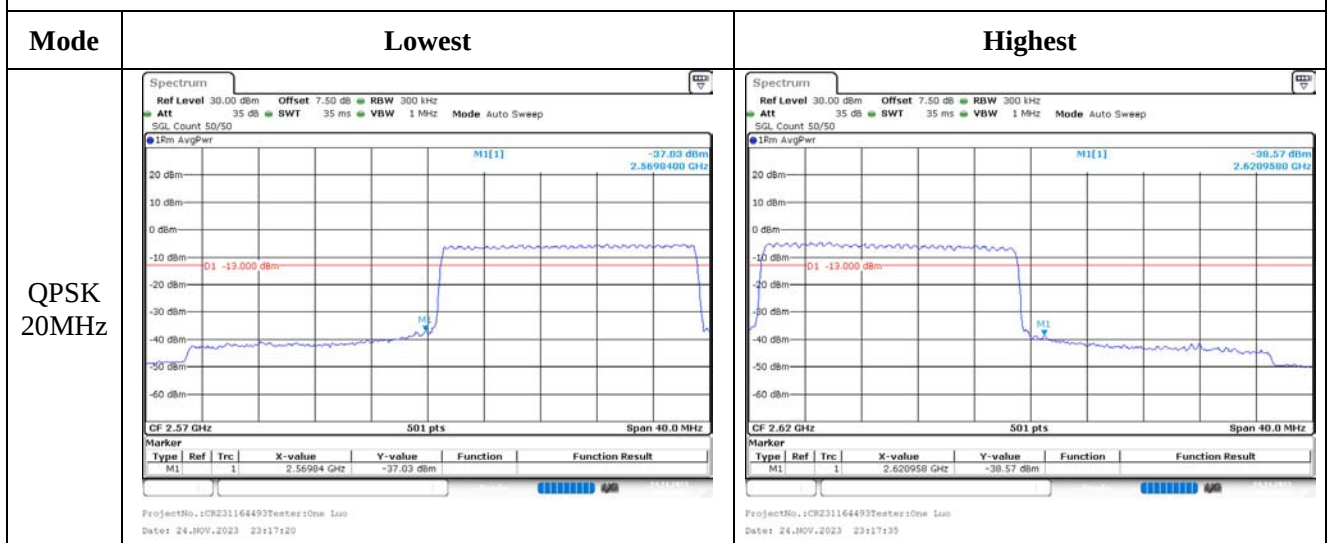


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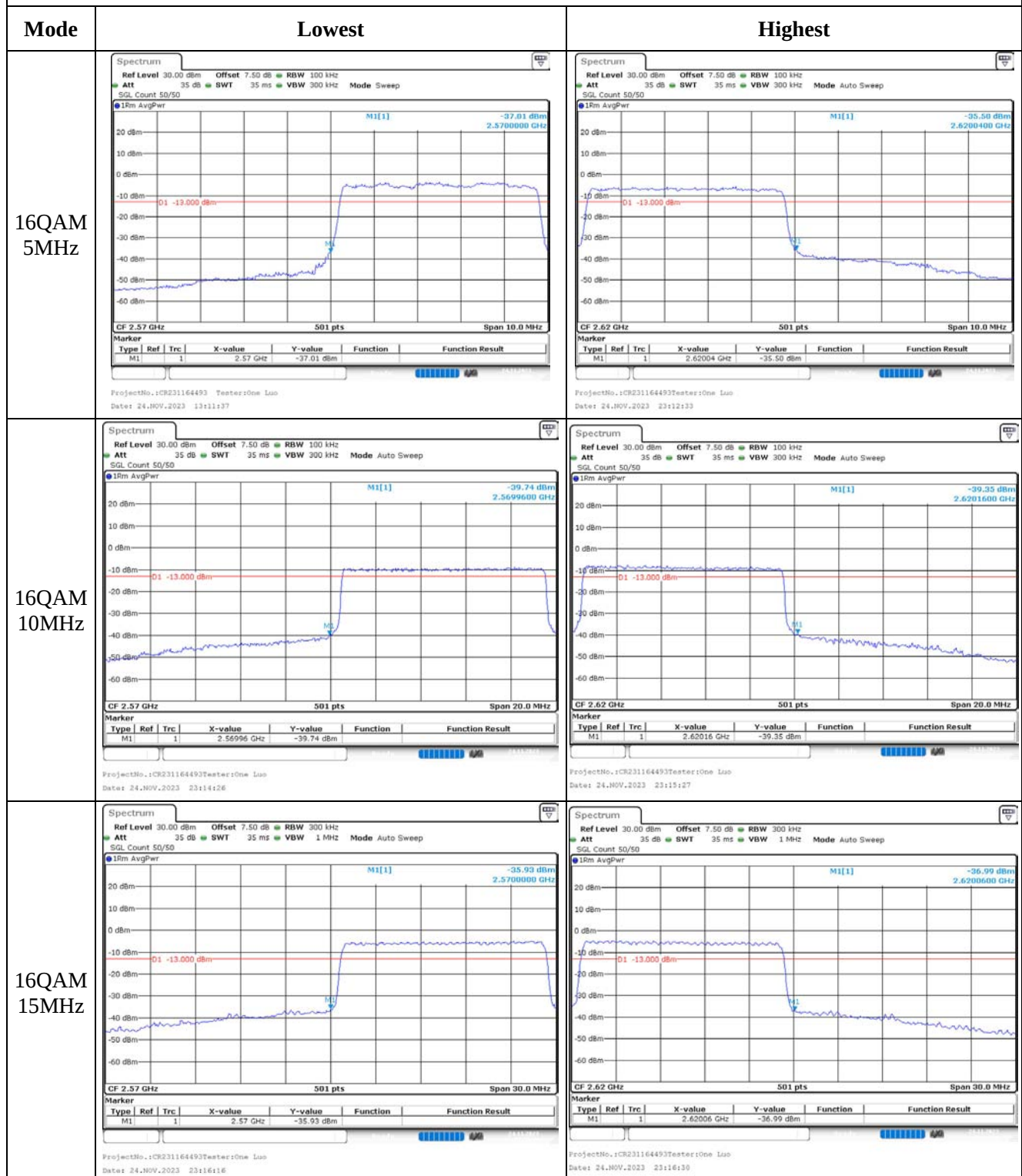
Out of band emission, Band Edge



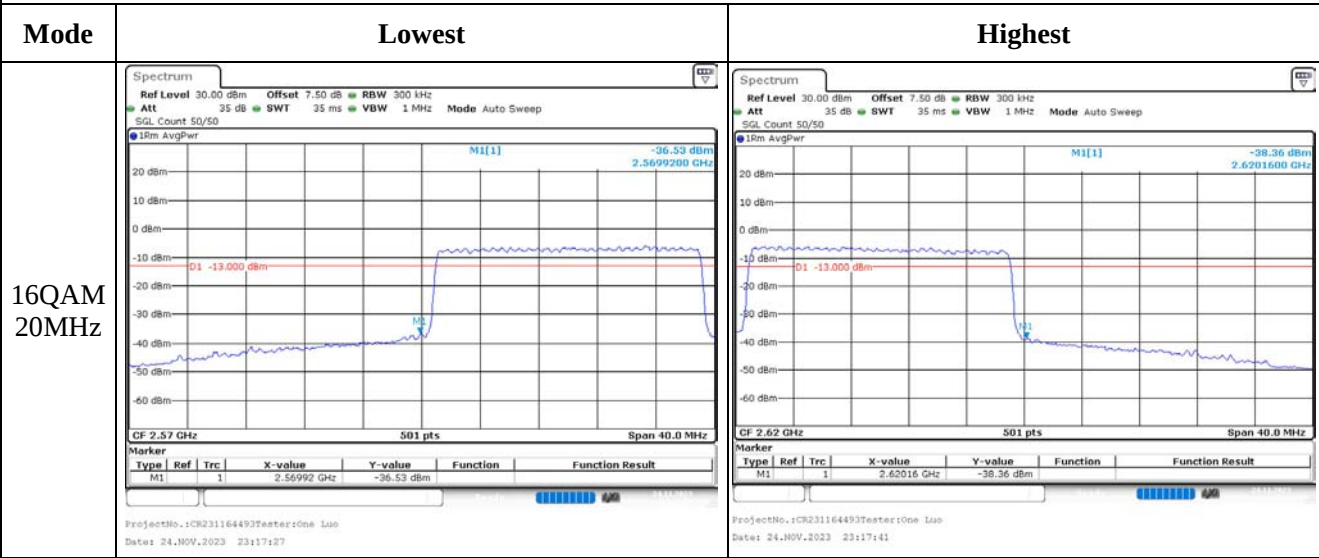
Out of band emission, Band Edge



Out of band emission, Band Edge



Out of band emission, Band Edge



4.13 Antenna Port Test Data and Results for LTE Band 66

Serial Number:	2D1L-2	Test Date:	2023/11/24~2023/12/20
Test Site:	RF	Test Mode:	Transmitting
Tester:	One Luo	Test Result:	Pass

Environmental Conditions:

Temperature: (°C)	22.3~25.8	Relative Humidity: (%)	31~52	ATM Pressure: (kPa)	100.9~101.9
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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	2023/3/31	2024/3/30
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	143458	2023/3/31	2024/3/30
BACL	TEMP&HUMI Test Chamber	BTH-150-40	30174	2023/3/31	2024/3/30
UNI-T	Multimeter	UT39A+	C210582554	2023/9/29	2024/9/28
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:**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	23.65	23.18	23.23	26.24	30
	RB1#3	23.84	23.38	23.4		
	RB1#5	23.62	23.18	23.15		
	RB3#0	23.71	23.26	23.27		
	RB3#3	23.7	23.25	23.21		
	RB6#0	22.72	22.24	22.31		
1.4MHz 16QAM	RB1#0	22.63	22.13	22.27	25.08	30
	RB1#3	22.68	22.33	22.44		
	RB1#5	22.31	22.16	22.3		
	RB3#0	22.39	22.38	22.18		
	RB3#3	22.24	22.36	22.17		
	RB6#0	21.16	21.22	21.31		
3MHz QPSK	RB1#0	23.17	23.23	23.25	25.68	30
	RB1#8	23.16	23.21	23.28		
	RB1#14	23.09	23.18	22.95		
	RB6#0	22.14	22.19	22.21		
	RB6#9	22.16	22.17	22.21		
	RB15#0	22.17	22.18	22.21		
3MHz 16QAM	RB1#0	22.67	22.3	22.19	25.07	30
	RB1#8	22.66	22.31	22.17		
	RB1#14	22.67	22.27	22.19		
	RB6#0	21.18	21.12	21.11		
	RB6#9	21.16	21.22	21.12		
	RB15#0	21.16	21.1	21.21		
5MHz QPSK	RB1#0	23.08	23.15	23.1	25.63	30
	RB1#13	23.22	23.23	23.22		
	RB1#24	23.07	23.12	22.96		
	RB15#0	22.13	22.23	22.27		
	RB15#10	22.18	22.21	22.24		
	RB25#0	22.12	22.18	22.17		
5MHz 16QAM	RB1#0	21.97	22.35	22.14	24.88	30
	RB1#13	22.07	22.48	22.25		
	RB1#24	21.97	22.34	22.15		
	RB15#0	21.14	21.16	21.21		
	RB15#10	21.16	21.16	21.19		
	RB25#0	21.16	21.16	21.15		
10MHz QPSK	RB1#0	23.2	23.21	23.24	25.78	30
	RB1#25	23.31	23.37	23.38		
	RB1#49	23.26	23.2	22.92		
	RB25#0	22.17	22.26	22.32		

	RB25#25	22.26	22.27	22.26		
	RB50#0	22.22	22.31	22.25		
10MHz 16QAM	RB1#0	22.13	22.67	22.32	25.2	30
	RB1#25	22.3	22.8	22.49		
	RB1#49	22.22	22.66	22.33		
	RB25#0	21.2	21.33	21.3		
	RB25#25	21.27	21.29	21.2		
	RB50#0	21.19	21.29	21.21		
15MHz QPSK	RB1#0	23.13	23.22	23.21	25.7	30
	RB1#38	23.22	23.22	23.3		
	RB1#74	23.18	23.17	23.07		
	RB36#0	22.18	22.33	22.36		
	RB36#39	22.31	22.29	22.3		
	RB75#0	22.23	22.35	22.35		
15MHz 16QAM	RB1#0	22.64	22.3	22.52	25.13	30
	RB1#38	22.73	22.35	22.52		
	RB1#74	22.67	22.29	22.47		
	RB36#0	21.16	21.3	21.33		
	RB36#39	21.27	21.28	21.25		
	RB75#0	21.2	21.33	21.26		
20MHz QPSK	RB1#0	22.93	23.07	23.1	25.85	30
	RB1#50	23.37	23.45	23.38		
	RB1#99	23.11	23.1	22.91		
	RB50#0	22.1	22.33	22.3		
	RB50#50	22.19	22.23	22.12		
	RB100#0	22.18	22.27	22.23		
20MHz 16QAM	RB1#0	22.25	22.27	22.48	25.2	30
	RB1#50	22.69	22.55	22.8		
	RB1#99	22.34	22.24	22.49		
	RB50#0	21.04	21.33	21.23		
	RB50#50	21.12	21.19	21.08		
	RB100#0	21.14	21.24	21.17		

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	4.49	4.00	4.12	13
	RB50#0	5.07	4.75	4.46	13
10MHz 16QAM	RB1#0	5.22	4.9	4.84	13
	RB50#0	5.97	5.68	5.48	13
				Result:	Pass

Occupied Bandwidth

Operation Mode	99% Occupied Bandwidth (MHz)			26 dB Occupied Bandwidth (MHz)		
	Low Channel	Middle channel	High Channel	Low Channel	Middle Channel	High Channel
1.4MHz QPSK	1.102	1.102	1.102	1.296	1.32	1.344
1.4MHz 16QAM	1.096	1.102	1.096	1.284	1.32	1.308
3MHz QPSK	2.683	2.683	2.695	2.88	2.88	2.892
3MHz 16QAM	2.683	2.683	2.683	2.88	2.88	2.868
5MHz QPSK	4.511	4.531	4.511	5.22	5.24	5.22
5MHz 16QAM	4.531	4.511	4.551	5.22	5.16	5.22
10MHz QPSK	8.942	8.982	8.982	9.84	9.88	10.04
10MHz 16QAM	8.942	8.982	8.942	9.84	9.92	9.88
15MHz QPSK	13.593	13.473	13.473	14.88	14.82	14.94
15MHz 16QAM	13.533	13.533	13.593	14.76	14.82	14.76
20MHz QPSK	17.964	17.964	17.884	19.92	19.68	19.76
20MHz 16QAM	17.884	17.964	17.964	19.6	19.6	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.
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Out of band emission, Band Edge

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

Test 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	1711.028	1710.00	1778.947	1780
	-20	3.8	1711.037	1710.00	1778.983	1780
	-10	3.8	1711.023	1710.00	1778.976	1780
	0	3.8	1711.097	1710.00	1778.926	1780
	10	3.8	1711.008	1710.00	1778.955	1780
	20	3.8	1711.058	1710.00	1778.942	1780
	30	3.8	1711.072	1710.00	1778.916	1780
	40	3.8	1711.029	1710.00	1778.993	1780
	50	3.8	1711.012	1710.00	1778.988	1780
Frequency Stability vs. Voltage	20	3.2	1711.005	1710.00	1778.955	1780
	20	4.4	1711.095	1710.00	1778.928	1780
Result:					Pass	

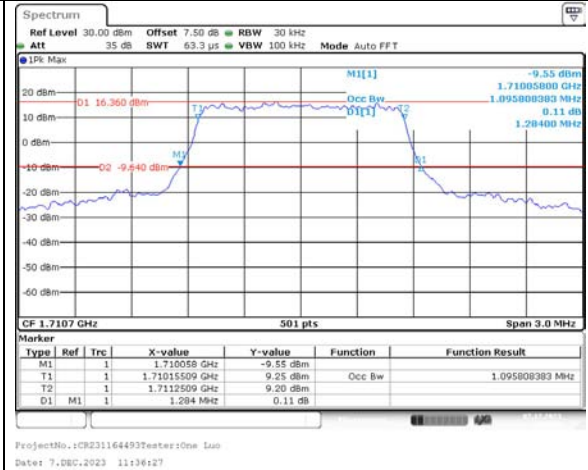
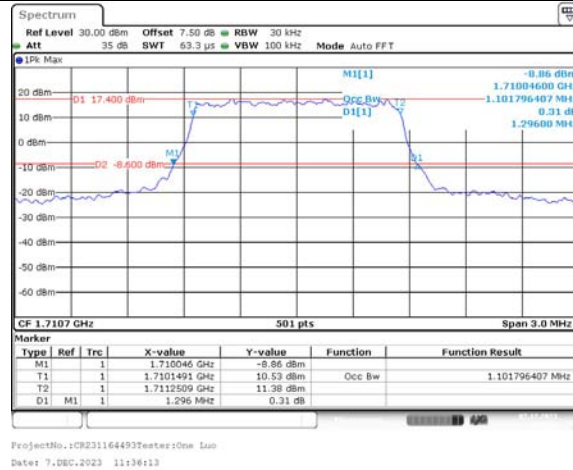
Test Mode:	20M 16QAM	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (°C)	Voltage (V _{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.8	1711.048	1710.00	1778.984	1780
	-20	3.8	1711.047	1710.00	1778.951	1780
	-10	3.8	1711.020	1710.00	1778.936	1780
	0	3.8	1711.070	1710.00	1778.974	1780
	10	3.8	1711.011	1710.00	1778.962	1780
	20	3.8	1711.058	1710.00	1778.942	1780
	30	3.8	1711.037	1710.00	1778.946	1780
	40	3.8	1711.005	1710.00	1778.971	1780
	50	3.8	1711.045	1710.00	1778.941	1780
Frequency Stability vs. Voltage	20	3.2	1711.056	1710.00	1778.974	1780
	20	4.4	1711.098	1710.00	1778.942	1780
					Result:	Pass

Test Plots:

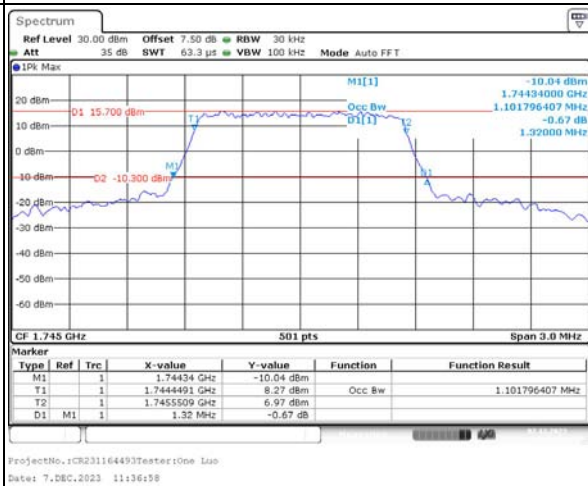
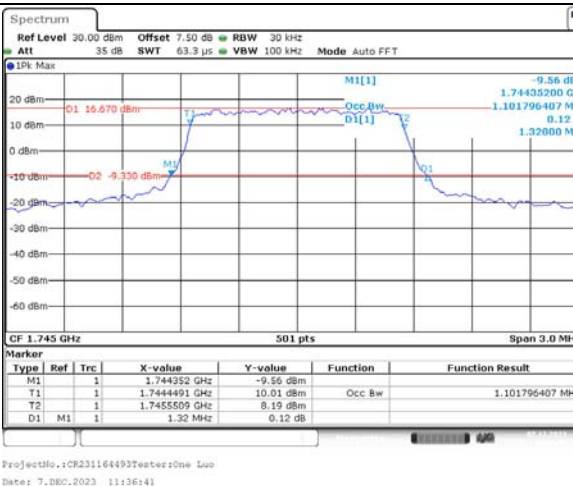
(Note: The 7.5 dB is the Insertion loss of the RF cable and Power Splitter, which was offset into the Spectrum Analyzer.)

Occupied Bandwidth**Channel****1.4MHz Bandwidth QPSK****1.4MHz Bandwidth 16QAM**

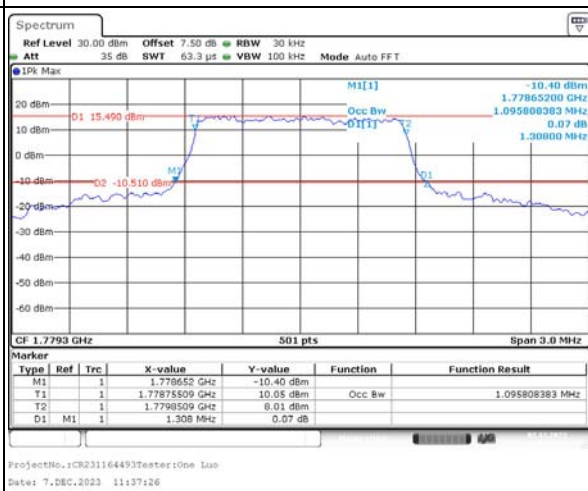
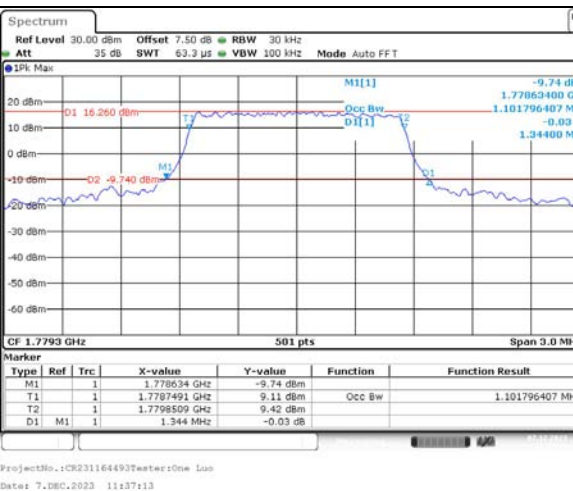
Lowest



Middle



Highest



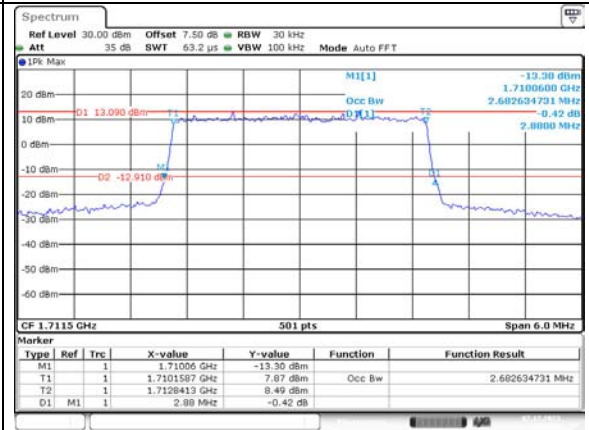
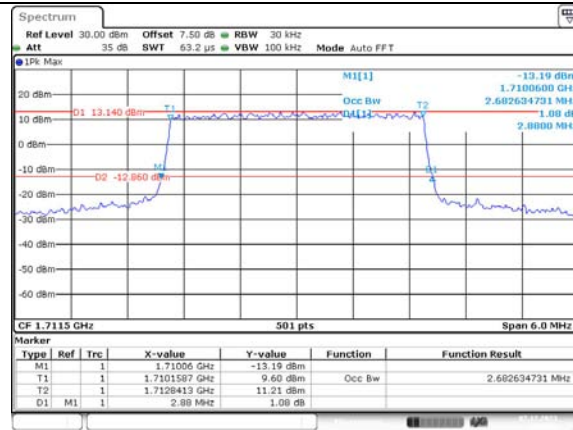
Occupied Bandwidth

Channel

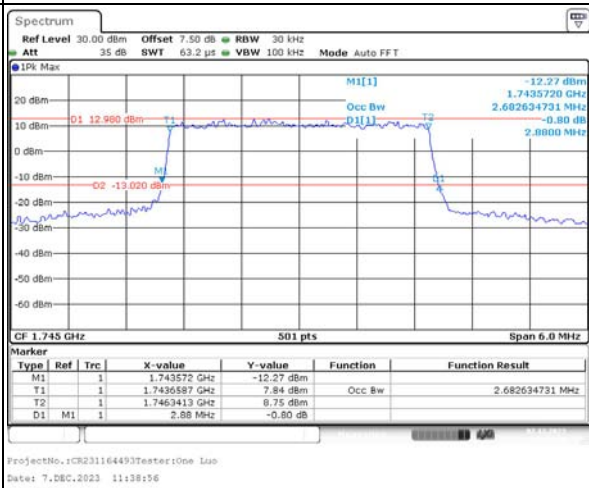
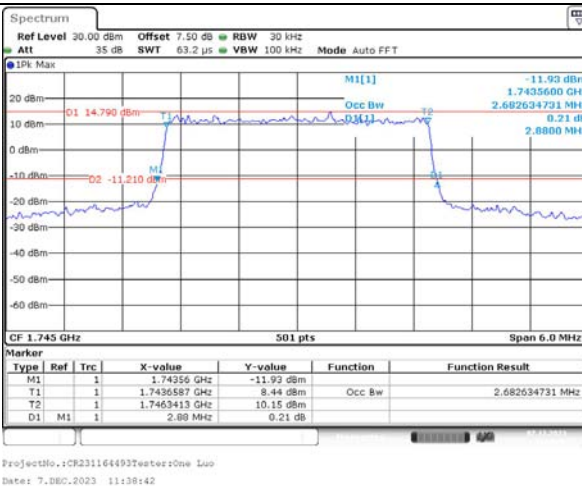
3MHz Bandwidth QPSK

3MHz Bandwidth 16QAM

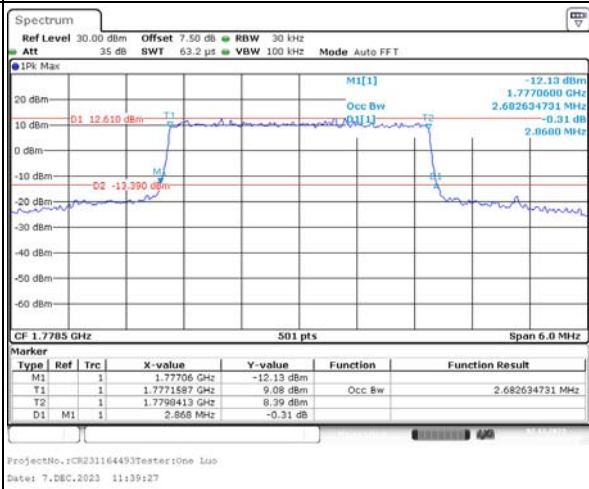
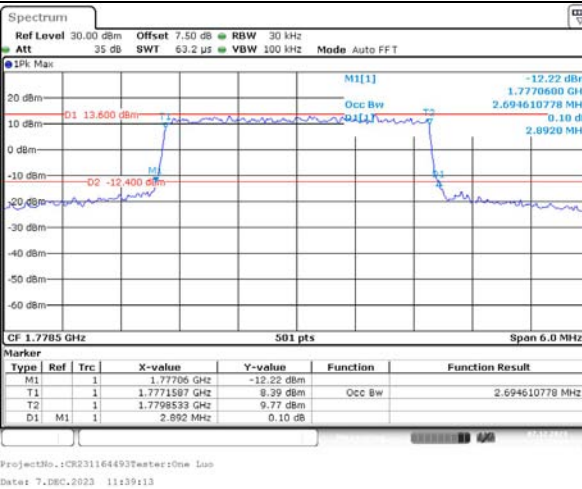
Lowest



Middle



Highest



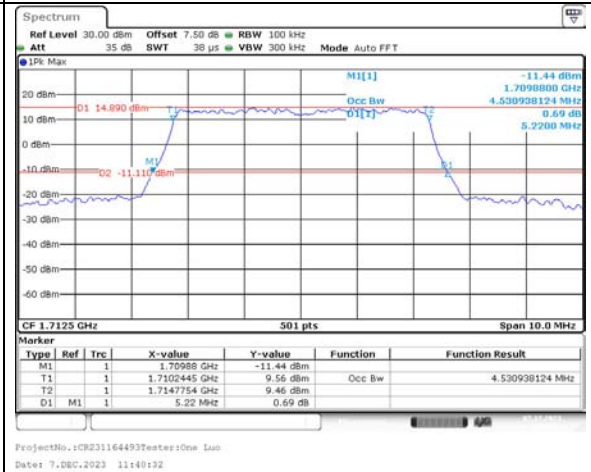
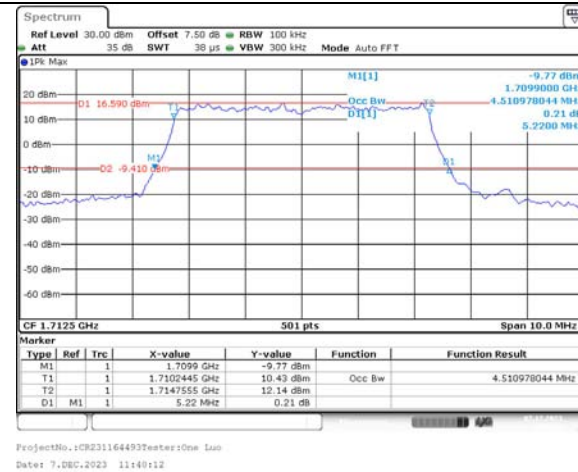
Occupied Bandwidth

Channel

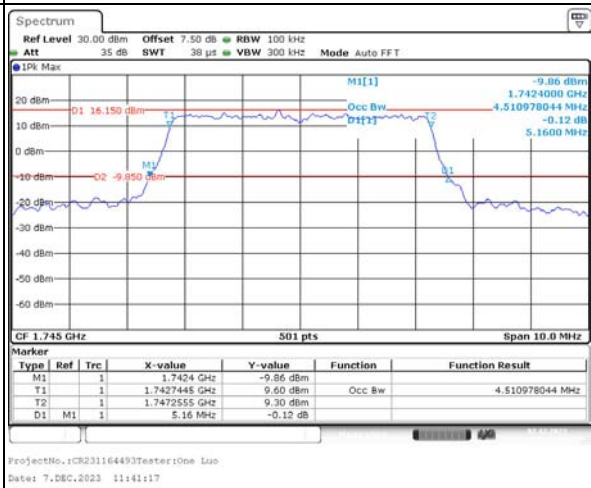
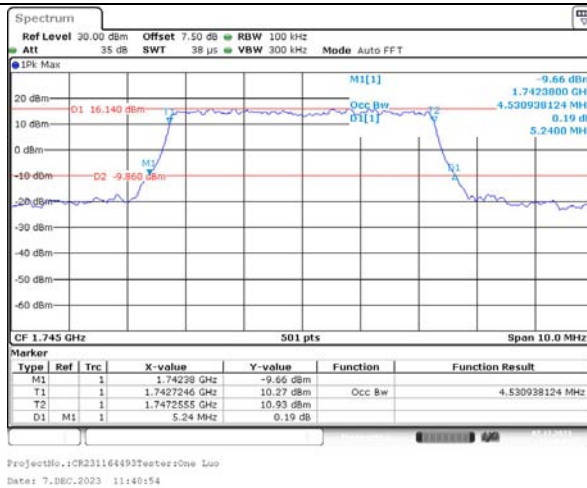
5MHz Bandwidth QPSK

5MHz Bandwidth 16QAM

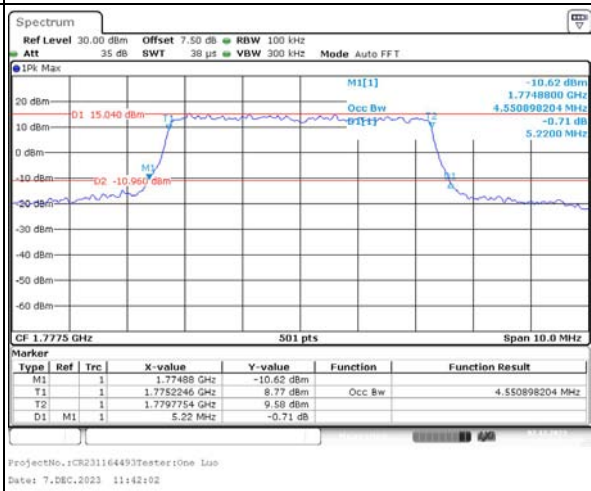
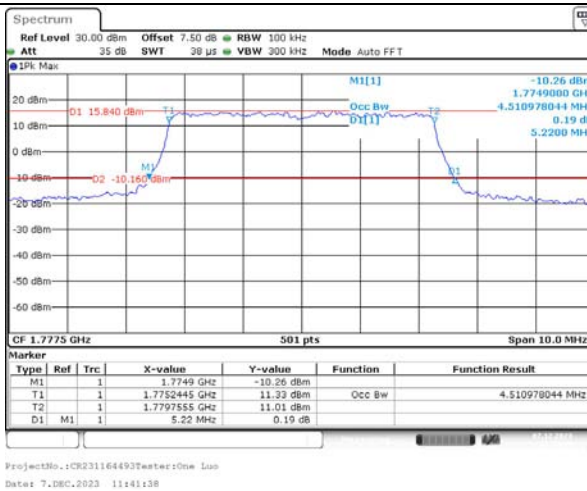
Lowest



Middle



Highest



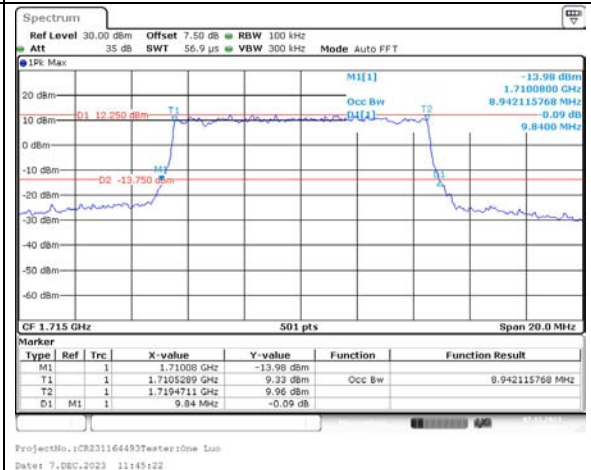
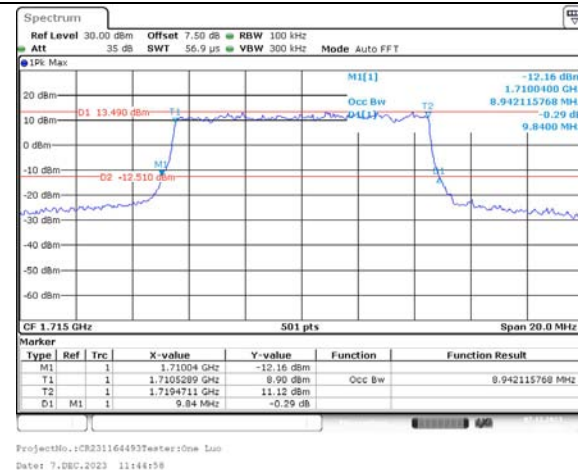
Occupied Bandwidth

Channel

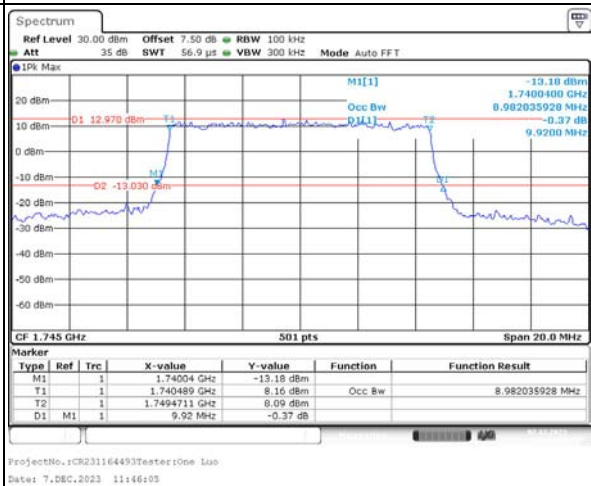
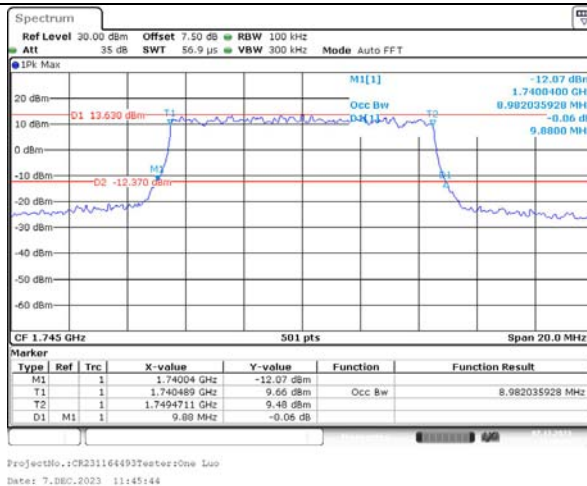
10MHz Bandwidth QPSK

10MHz Bandwidth 16QAM

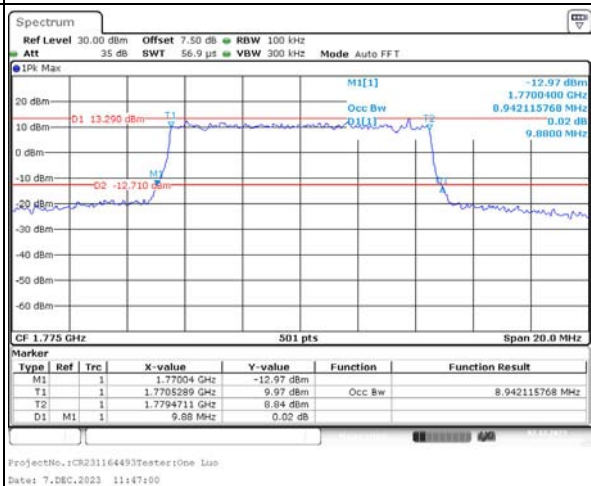
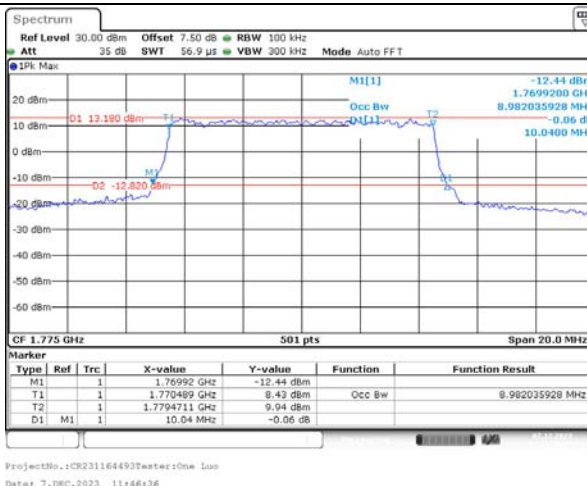
Lowest



Middle



Highest



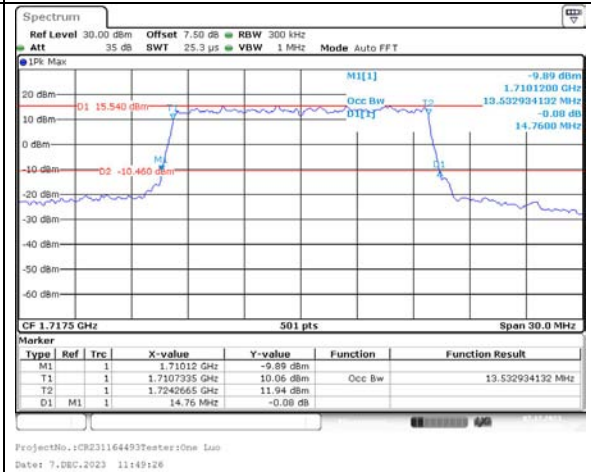
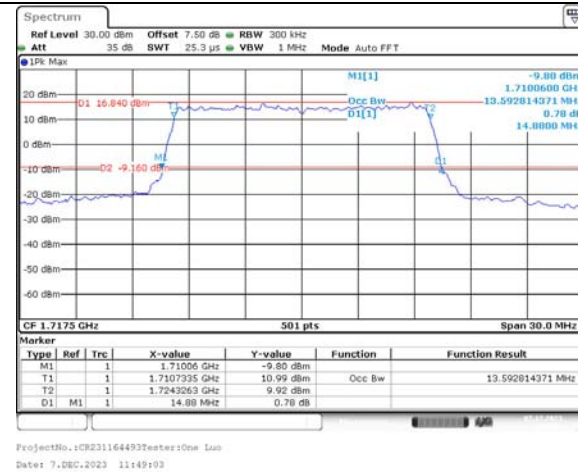
Occupied Bandwidth

Channel

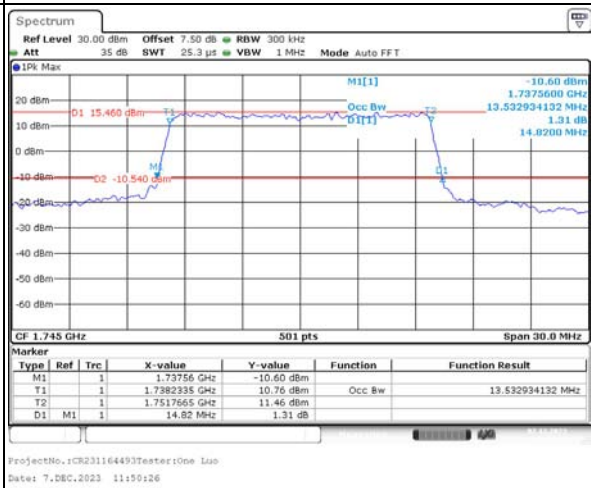
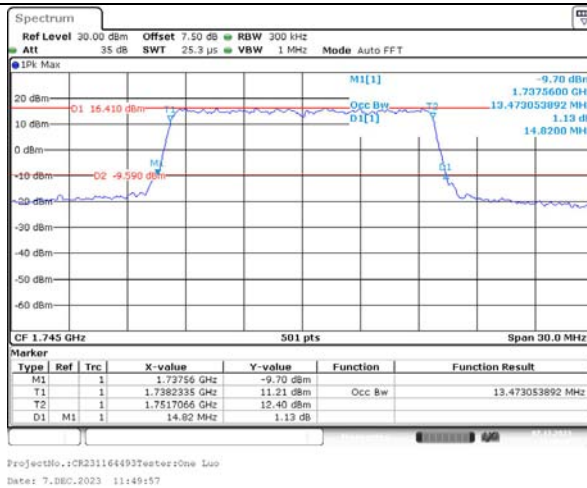
15MHz Bandwidth QPSK

15MHz Bandwidth 16QAM

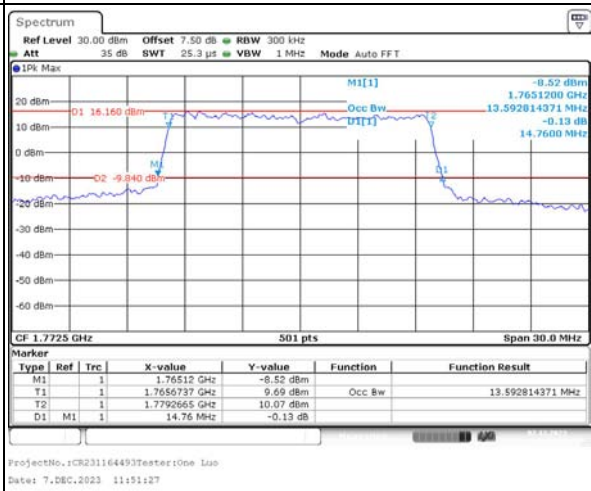
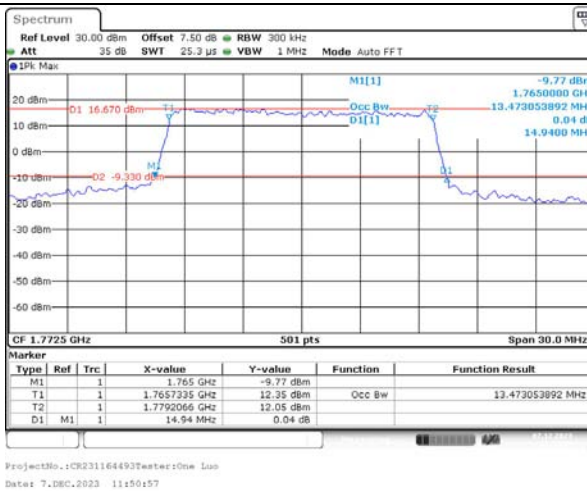
Lowest



Middle



Highest



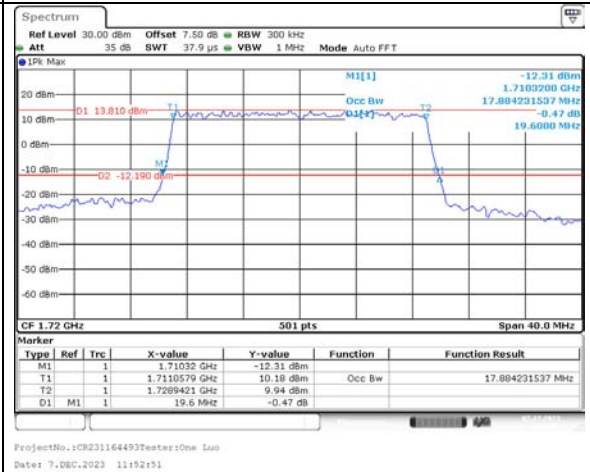
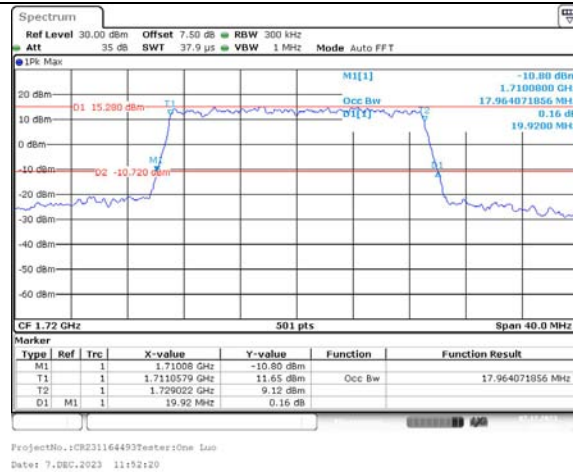
Occupied Bandwidth

Channel

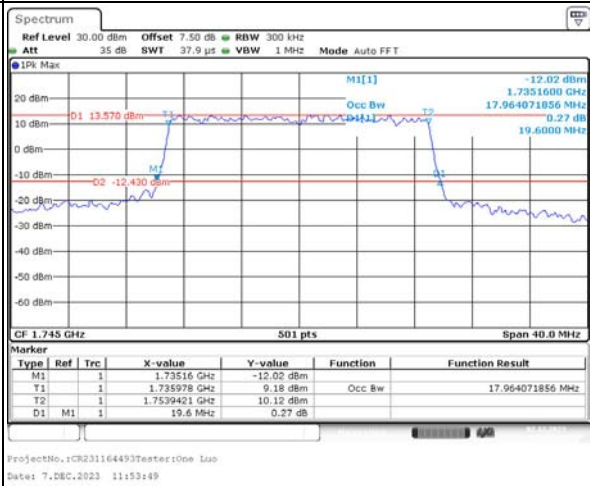
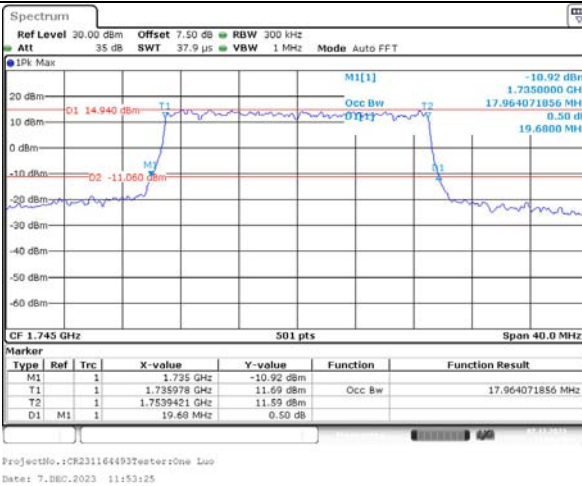
20MHz Bandwidth QPSK

20MHz Bandwidth 16QAM

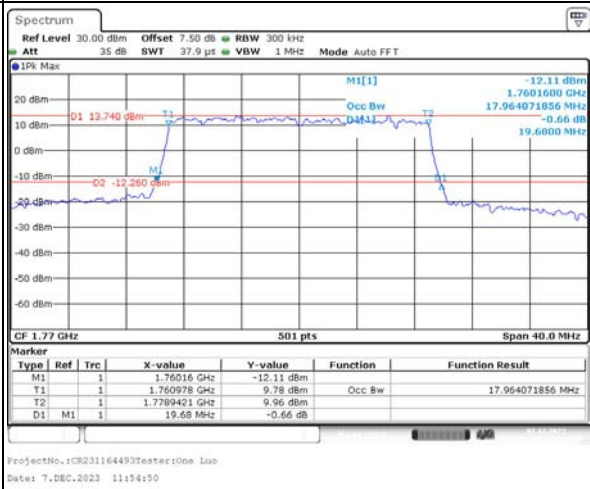
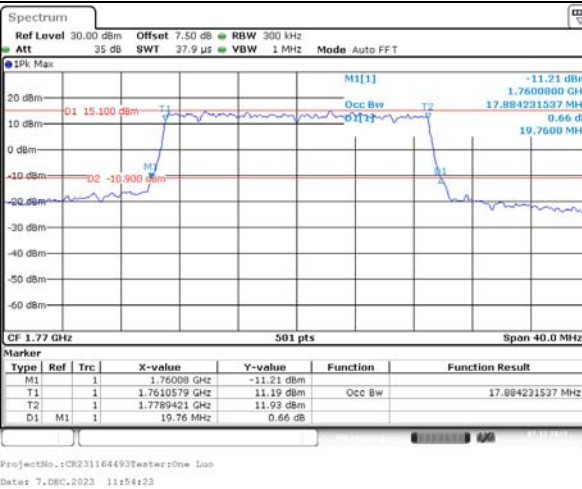
Lowest



Middle



Highest

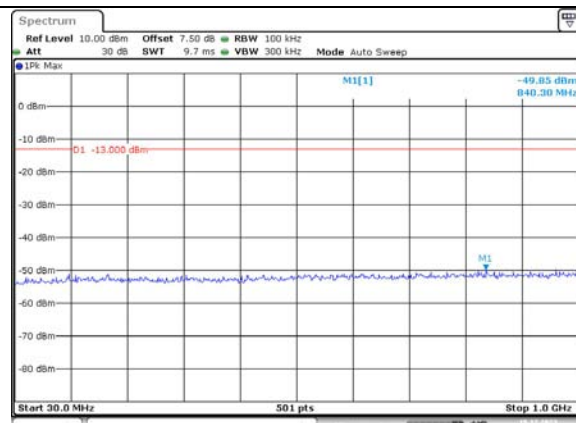


Spurious Emissions at Antenna Terminal

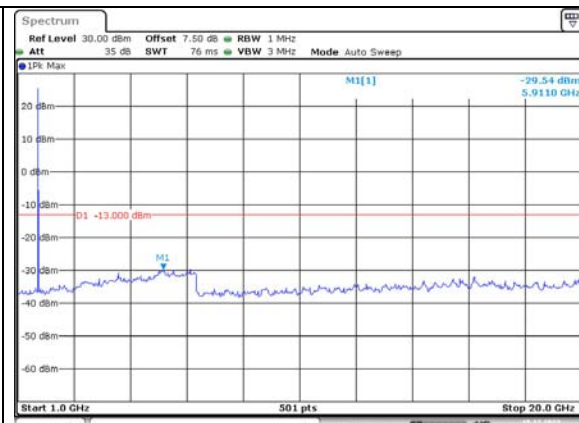
Channel

1.4MHz Bandwidth QPSK

Lowest

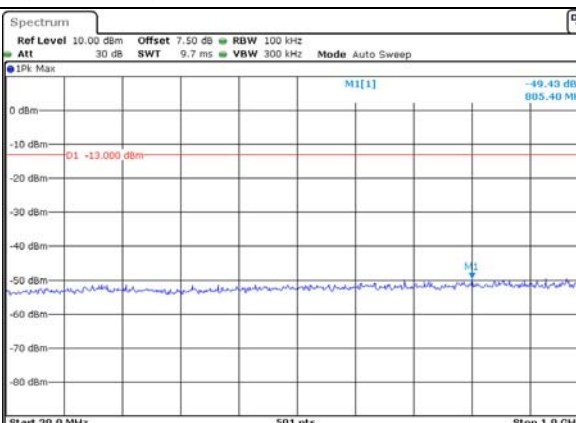


ProjectNo.:CR231164493 Tester:One Luo
Date: 19 DEC.2023 13:44:41

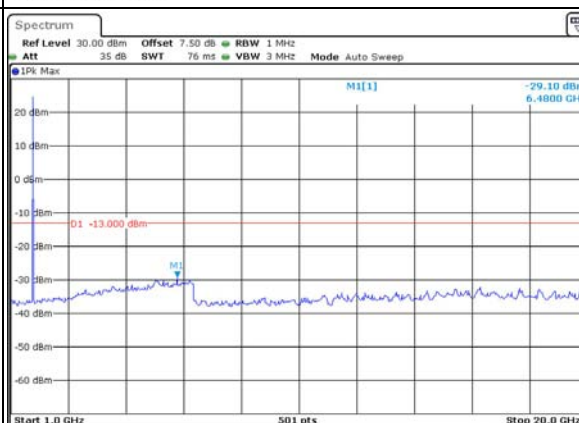


ProjectNo.:CR231164493 Tester:One Luo
Date: 19 DEC.2023 13:45:03

Middle

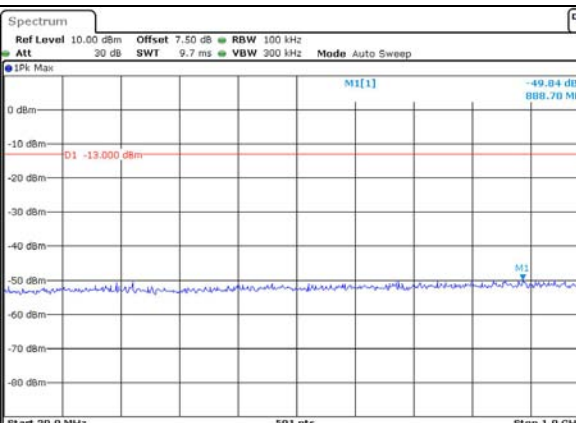


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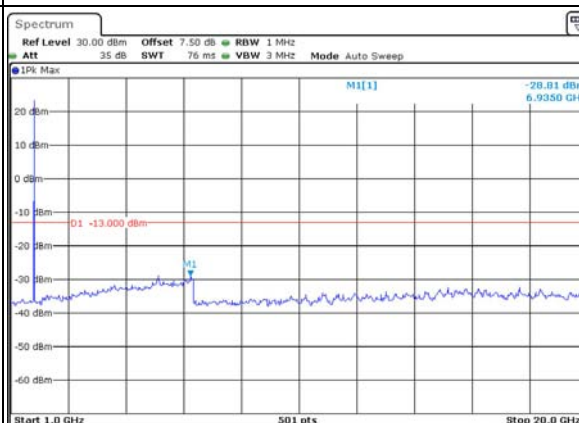


ProjectNo.:CR231164493 Tester:One Luo
Date: 19 DEC.2023 13:45:51

Highest



ProjectNo.:CR231164493 Tester:One Luo
Date: 19 DEC.2023 13:46:20



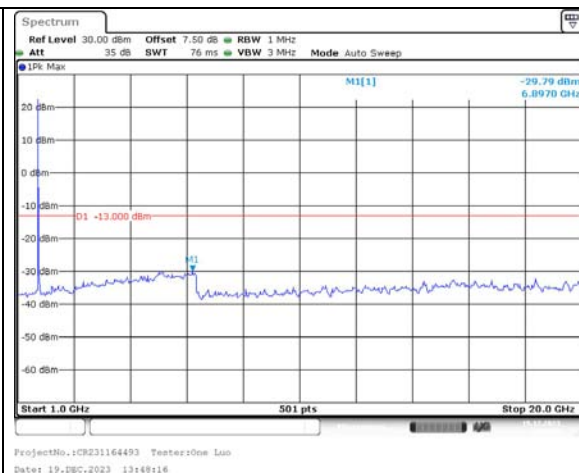
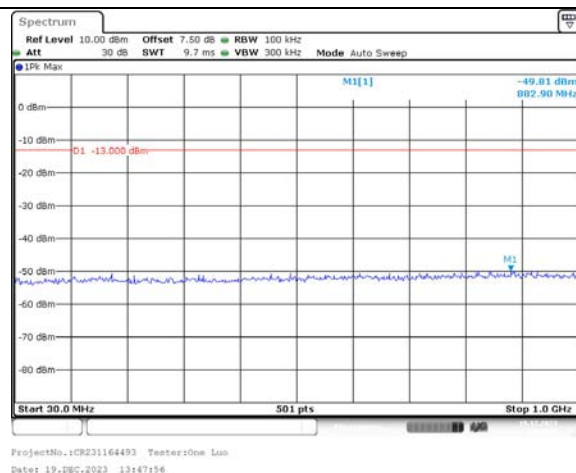
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Spurious Emissions at Antenna Terminal

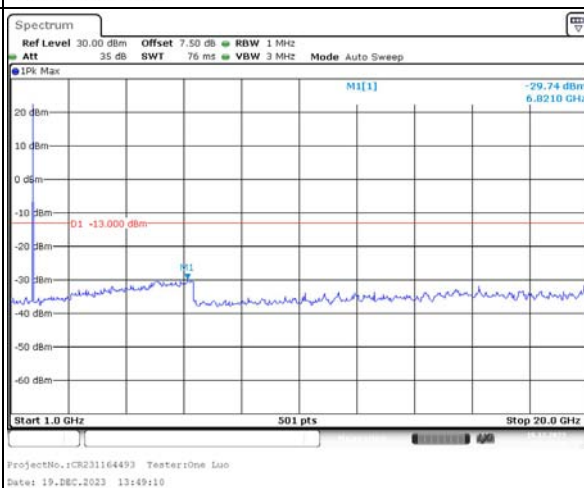
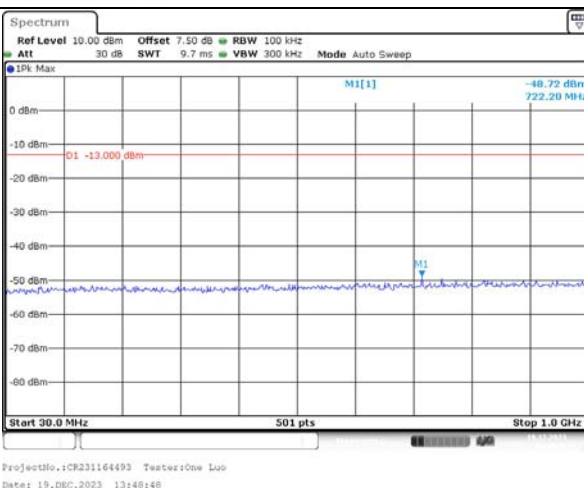
Channel

3MHz Bandwidth QPSK

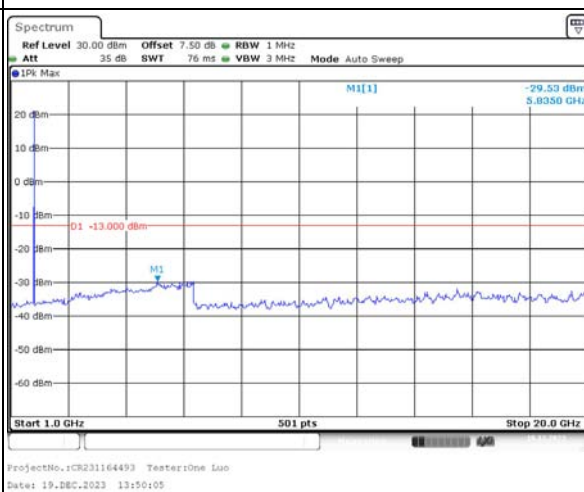
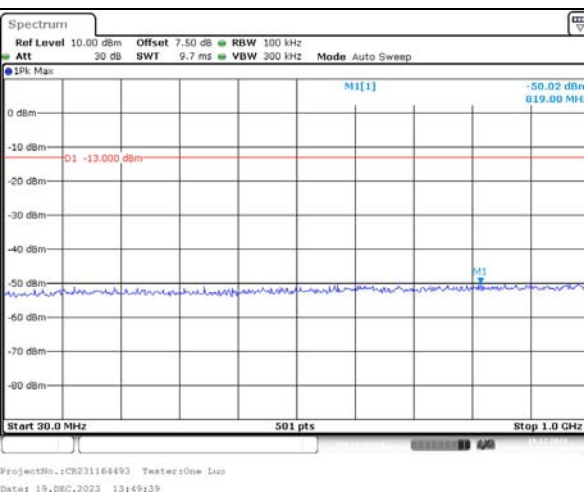
Lowest



Middle



Highest

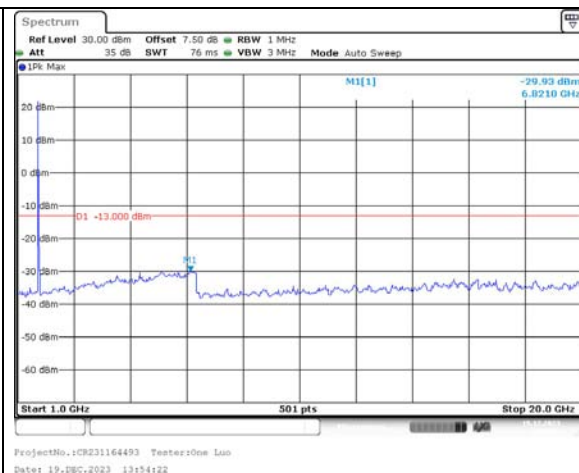
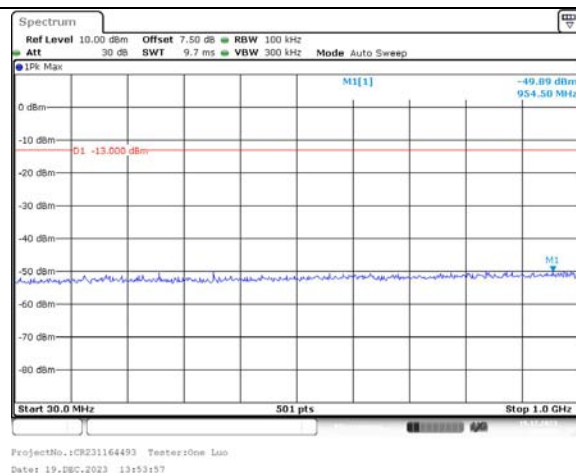


Spurious Emissions at Antenna Terminal

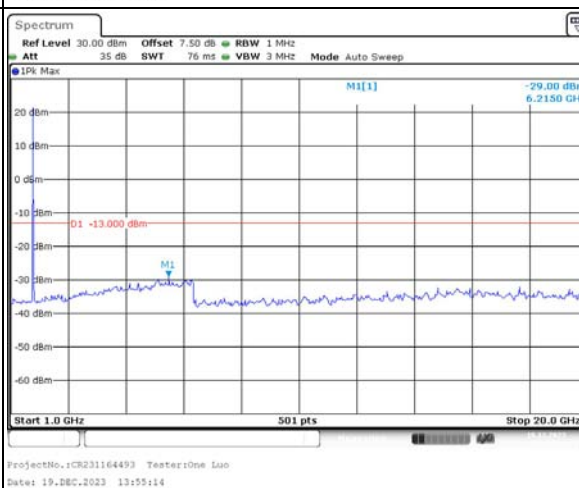
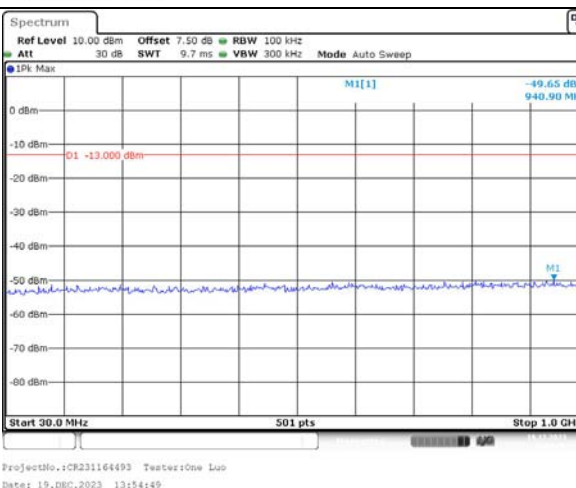
Channel

5MHz Bandwidth QPSK

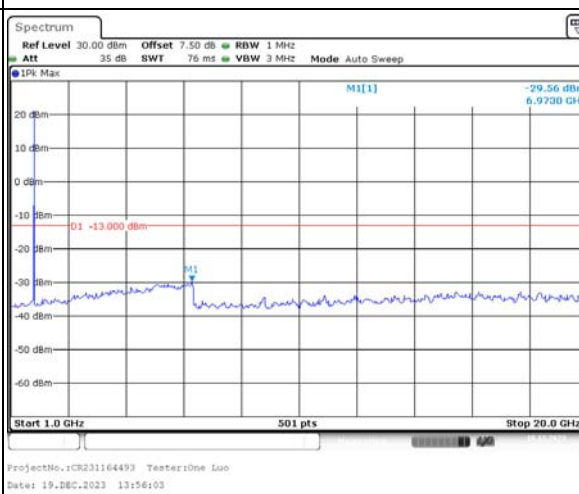
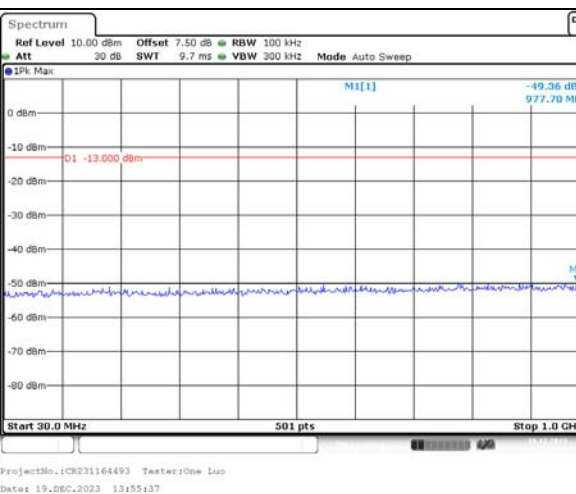
Lowest



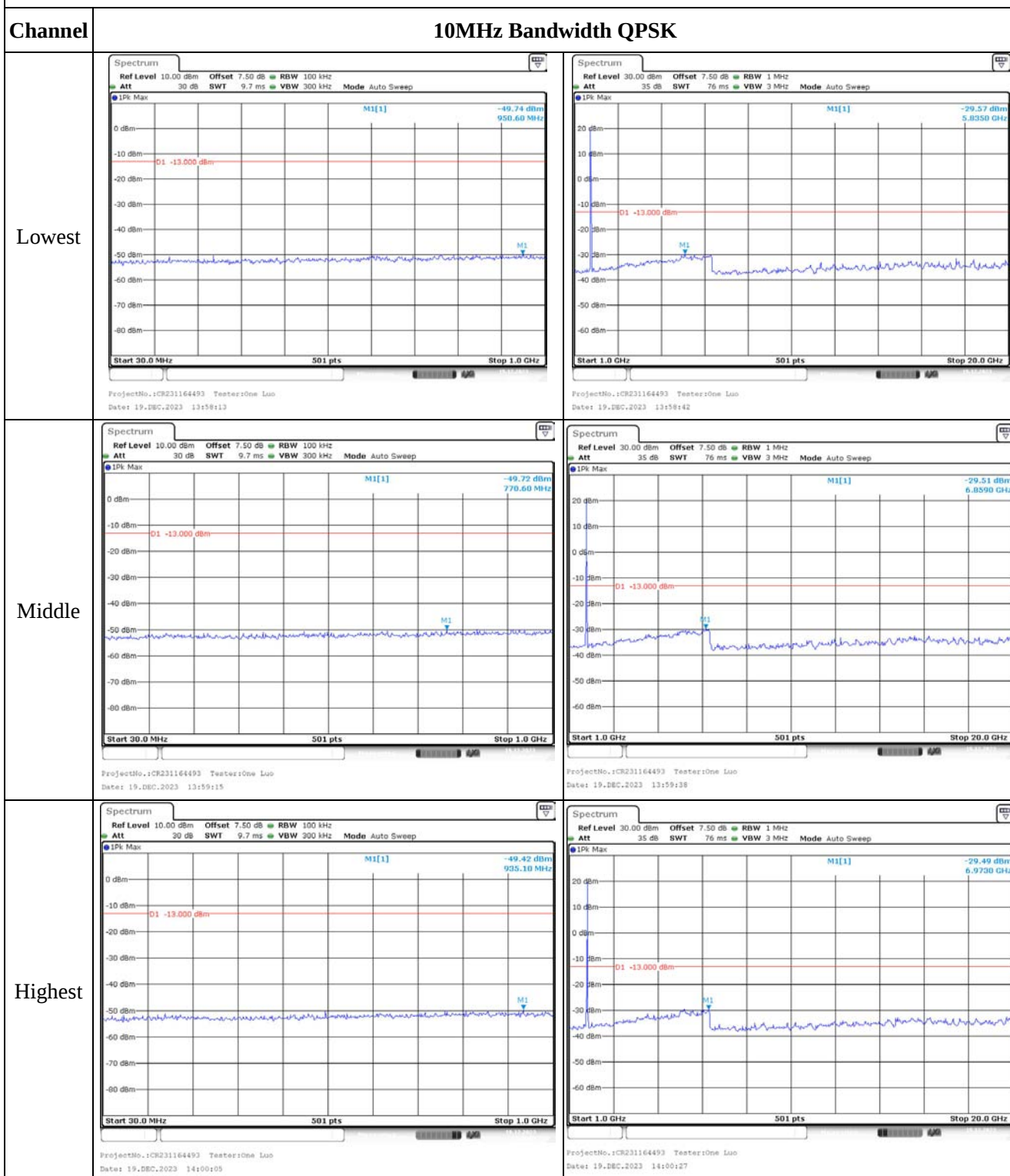
Middle



Highest



Spurious Emissions at Antenna Terminal

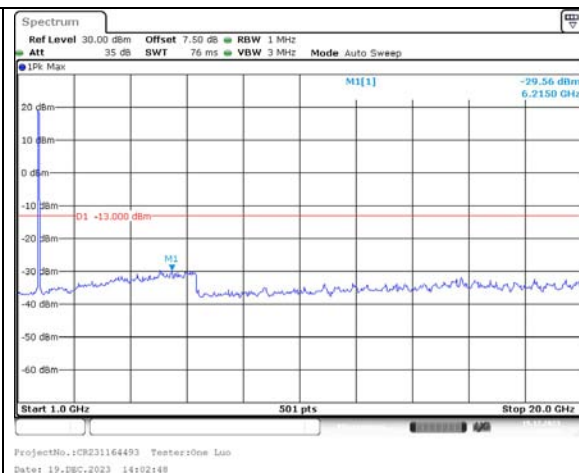
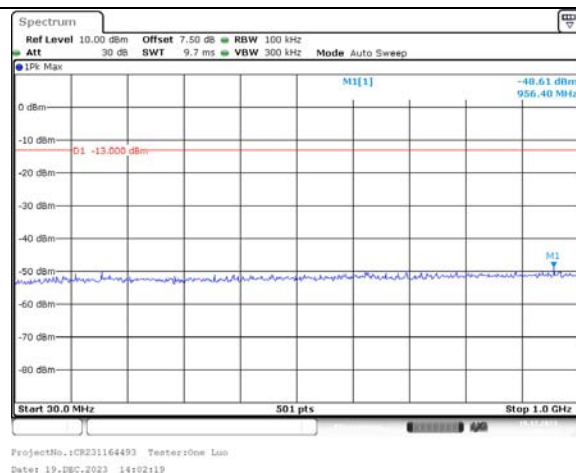


Spurious Emissions at Antenna Terminal

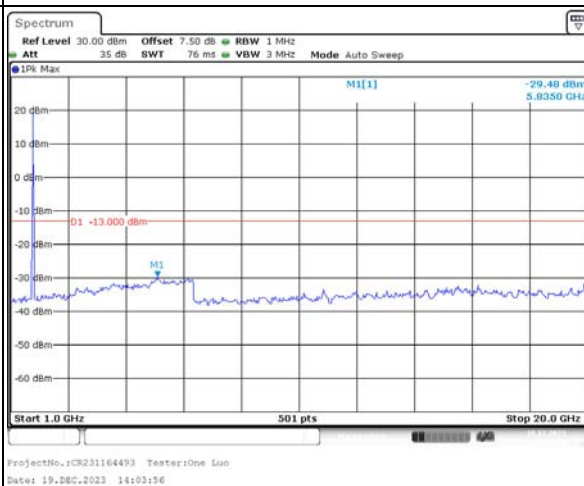
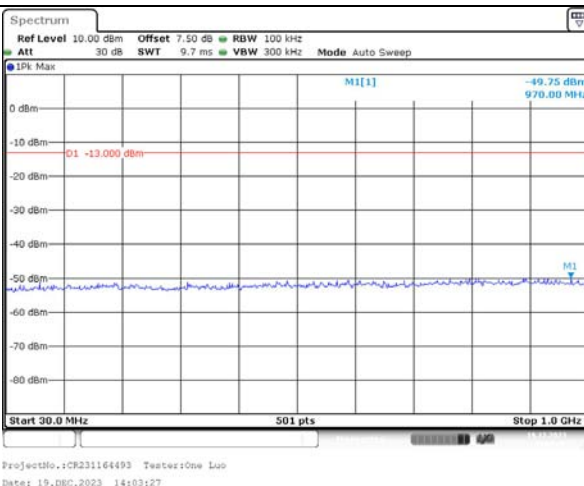
Channel

15MHz Bandwidth QPSK

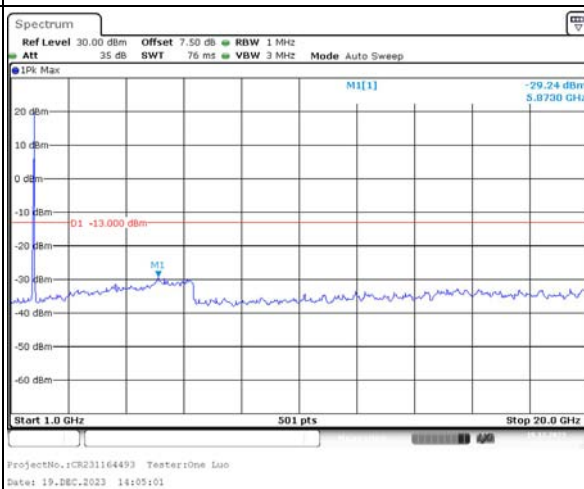
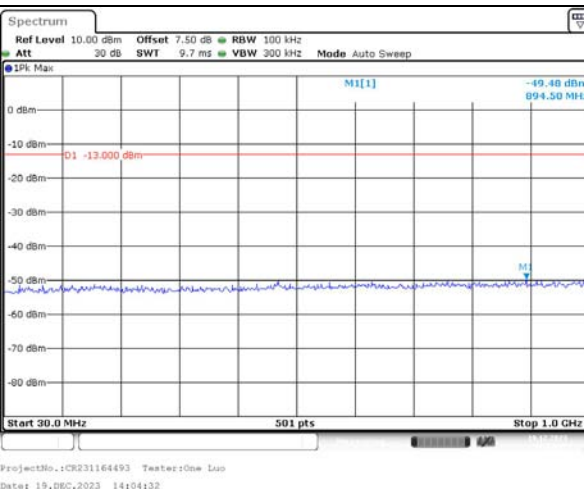
Lowest



Middle



Highest

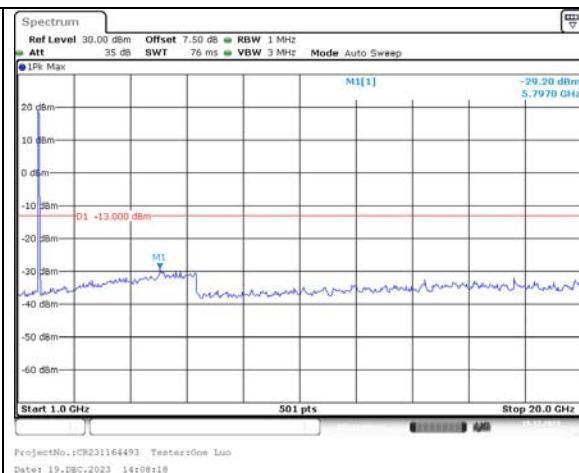
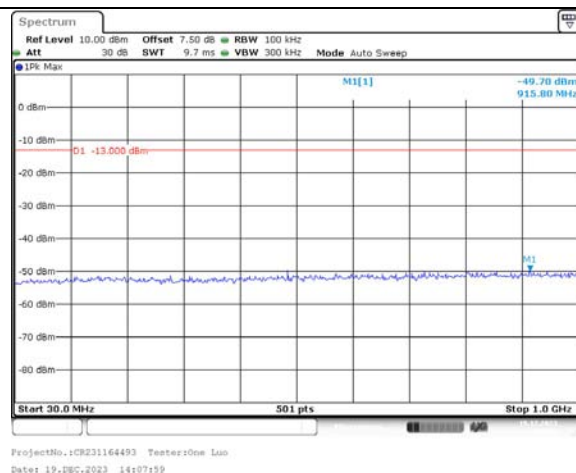


Spurious Emissions at Antenna Terminal

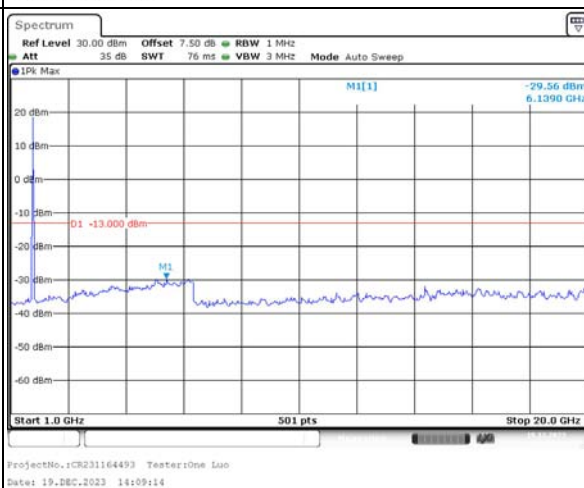
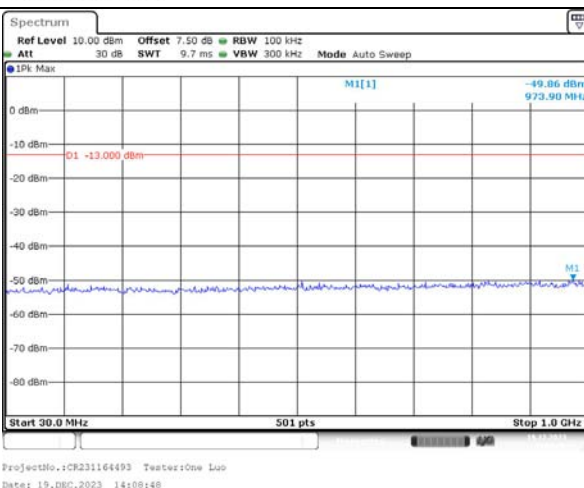
Channel

20MHz Bandwidth QPSK

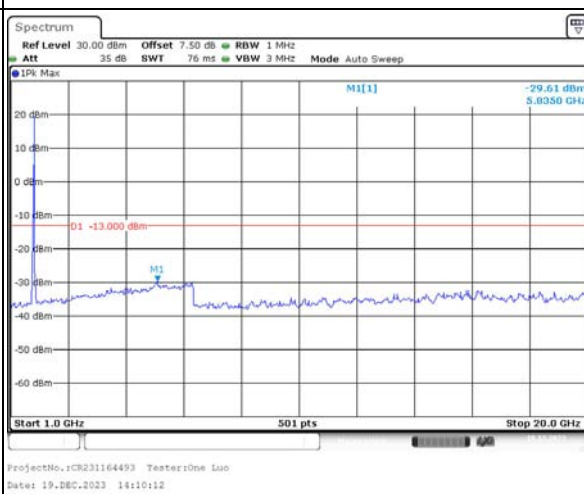
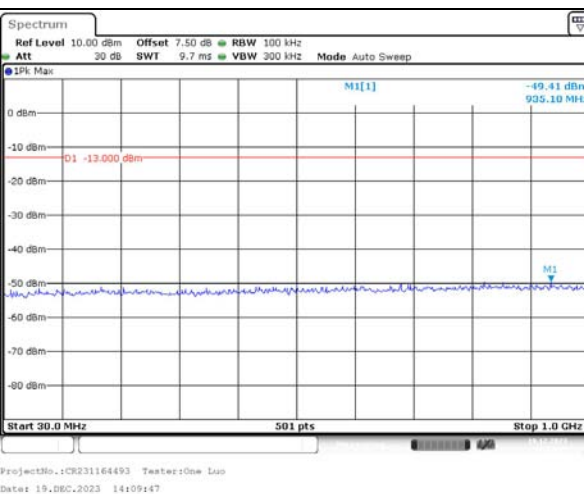
Lowest



Middle



Highest

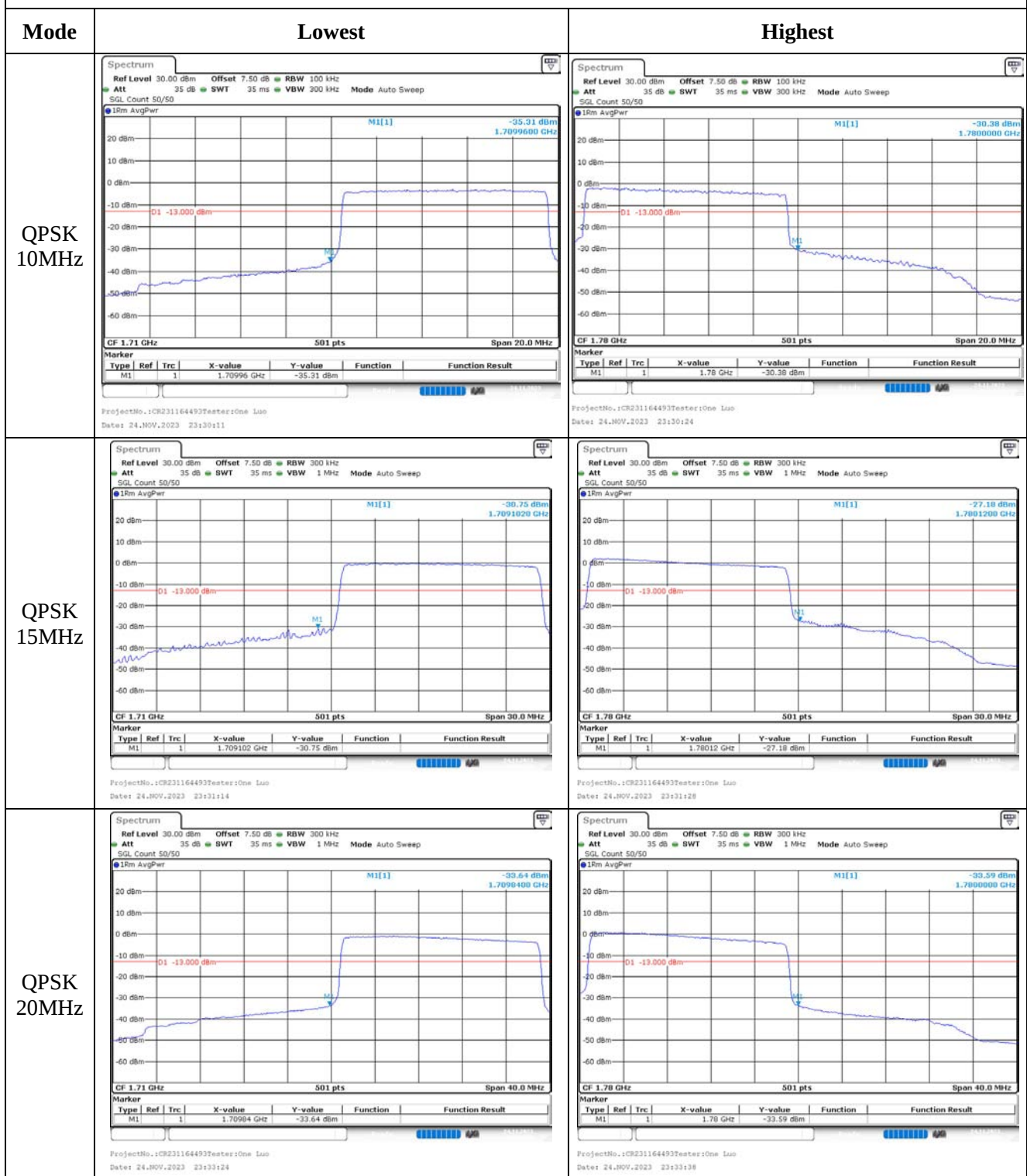


Test Plots for Out of band emission, Band Edge:

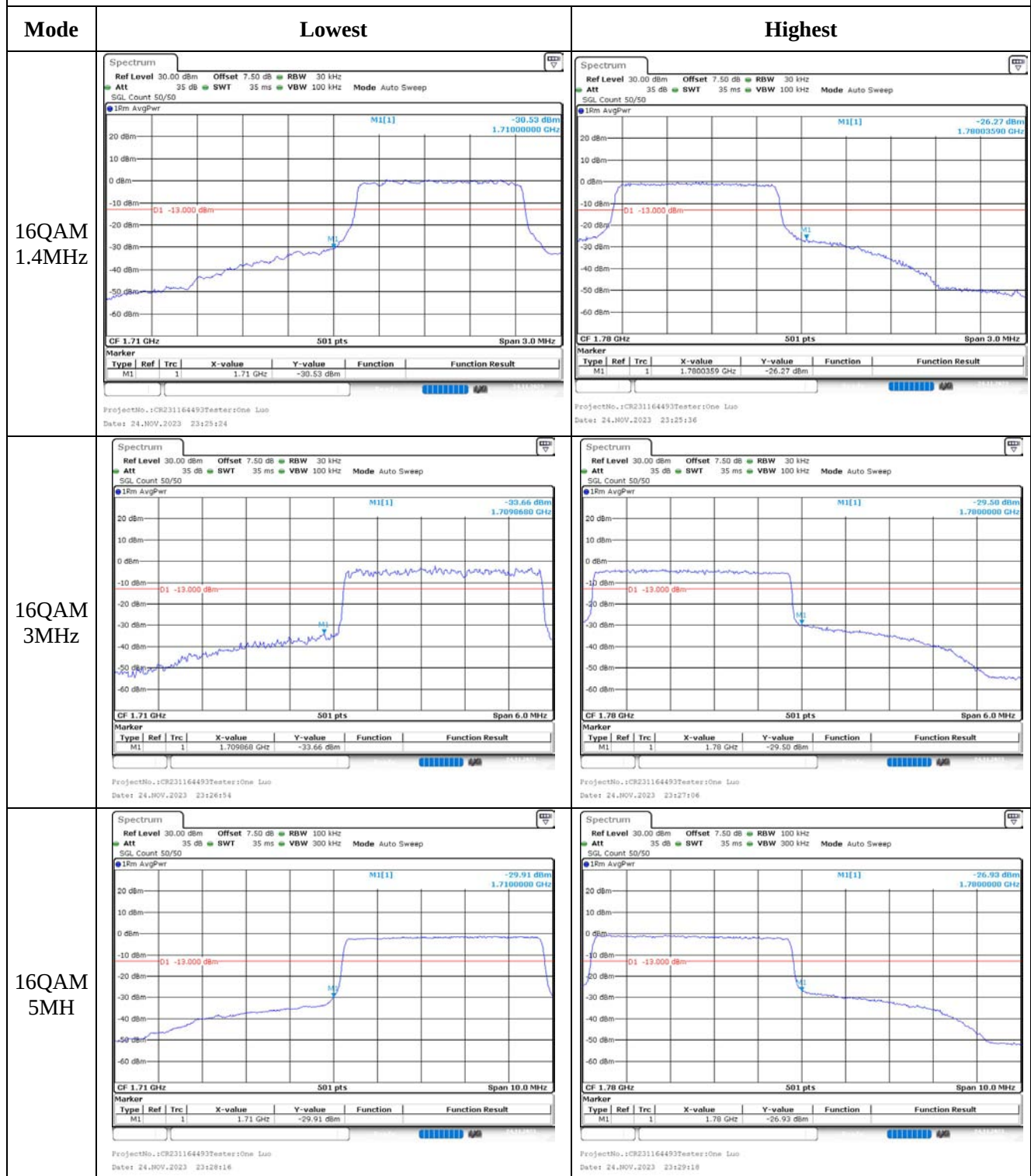
Out of band emission, Band Edge

Mode	Lowest	Highest																																																																																																			
QPSK 1.4MHz	Spectrum Ref Level 30.00 dBm Offset 7.50 dB RBW 30 kHz Att 35 dB SWT 35 ms VBW 100 kHz Mode Auto Sweep SQL Count 50/50 1Rm AvgPwr M1[1] -29.86 dBm 1.7099880 GHz CF 1.71 GHz 501 pts Span 3.0 MHz <table><tr><th>Marker</th><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><tr><td>M1</td><td></td><td>1</td><td></td><td>1.709988 GHz</td><td>-29.86 dBm</td><td></td><td></td></tr></table> ProjectNo.:CR231164493Tester:One Luo Date: 24.NOV.2023 23:25:18 Spectrum Ref Level 30.00 dBm Offset 7.50 dB RBW 30 kHz Att 35 dB SWT 35 ms VBW 100 kHz Mode Auto Sweep SQL Count 50/50 1Rm AvgPwr M1[1] -27.47 dBm 1.7800000 GHz CF 1.78 GHz 501 pts Span 3.0 MHz <table><tr><th>Marker</th><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><tr><td>M1</td><td></td><td>1</td><td></td><td>1.78 GHz</td><td>-27.47 dBm</td><td></td><td></td></tr></table> ProjectNo.:CR231164493Tester:One Luo Date: 24.NOV.2023 23:25:13	Marker	Type	Ref	Trc	X-value	Y-value	Function	Function Result	M1		1		1.709988 GHz	-29.86 dBm			Marker	Type	Ref	Trc	X-value	Y-value	Function	Function Result	M1		1		1.78 GHz	-27.47 dBm			QPSK 3MHz	Spectrum Ref Level 30.00 dBm Offset 7.50 dB RBW 30 kHz Att 35 dB SWT 35 ms VBW 100 kHz Mode Auto Sweep SQL Count 50/50 1Rm AvgPwr M1[1] -32.24 dBm 1.7099880 GHz CF 1.71 GHz 501 pts Span 6.0 MHz <table><tr><th>Marker</th><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><tr><td>M1</td><td></td><td>1</td><td></td><td>1.709988 GHz</td><td>-32.24 dBm</td><td></td><td></td></tr></table> ProjectNo.:CR231164493Tester:One Luo Date: 24.NOV.2023 23:26:48 Spectrum Ref Level 30.00 dBm Offset 7.50 dB RBW 30 kHz Att 35 dB SWT 35 ms VBW 100 kHz Mode Auto Sweep SQL Count 50/50 1Rm AvgPwr M1[1] -30.78 dBm 1.7800000 GHz CF 1.78 GHz 501 pts Span 6.0 MHz <table><tr><th>Marker</th><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><tr><td>M1</td><td></td><td>1</td><td></td><td>1.78 GHz</td><td>-30.78 dBm</td><td></td><td></td></tr></table> ProjectNo.:CR231164493Tester:One Luo Date: 24.NOV.2023 23:27:00	Marker	Type	Ref	Trc	X-value	Y-value	Function	Function Result	M1		1		1.709988 GHz	-32.24 dBm			Marker	Type	Ref	Trc	X-value	Y-value	Function	Function Result	M1		1		1.78 GHz	-30.78 dBm			QPSK 5MHz	Spectrum Ref Level 30.00 dBm Offset 7.50 dB RBW 100 kHz Att 35 dB SWT 35 ms VBW 300 kHz Mode Auto Sweep SQL Count 50/50 1Rm AvgPwr M1[1] -28.49 dBm 1.7100000 GHz CF 1.71 GHz 501 pts Span 10.0 MHz <table><tr><th>Marker</th><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><tr><td>M1</td><td></td><td>1</td><td></td><td>1.71 GHz</td><td>-28.49 dBm</td><td></td><td></td></tr></table> ProjectNo.:CR231164493Tester:One Luo Date: 24.NOV.2023 23:28:10 Spectrum Ref Level 30.00 dBm Offset 7.50 dB RBW 100 kHz Att 35 dB SWT 35 ms VBW 300 kHz Mode Auto Sweep SQL Count 50/50 1Rm AvgPwr M1[1] -27.14 dBm 1.7800200 GHz CF 1.78 GHz 501 pts Span 10.0 MHz <table><tr><th>Marker</th><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><tr><td>M1</td><td></td><td>1</td><td></td><td>1.78002 GHz</td><td>-27.14 dBm</td><td></td><td></td></tr></table> ProjectNo.:CR231164493Tester:One Luo Date: 24.NOV.2023 23:29:12	Marker	Type	Ref	Trc	X-value	Y-value	Function	Function Result	M1		1		1.71 GHz	-28.49 dBm			Marker	Type	Ref	Trc	X-value	Y-value	Function	Function Result	M1		1		1.78002 GHz	-27.14 dBm		
Marker	Type	Ref	Trc	X-value	Y-value	Function	Function Result																																																																																														
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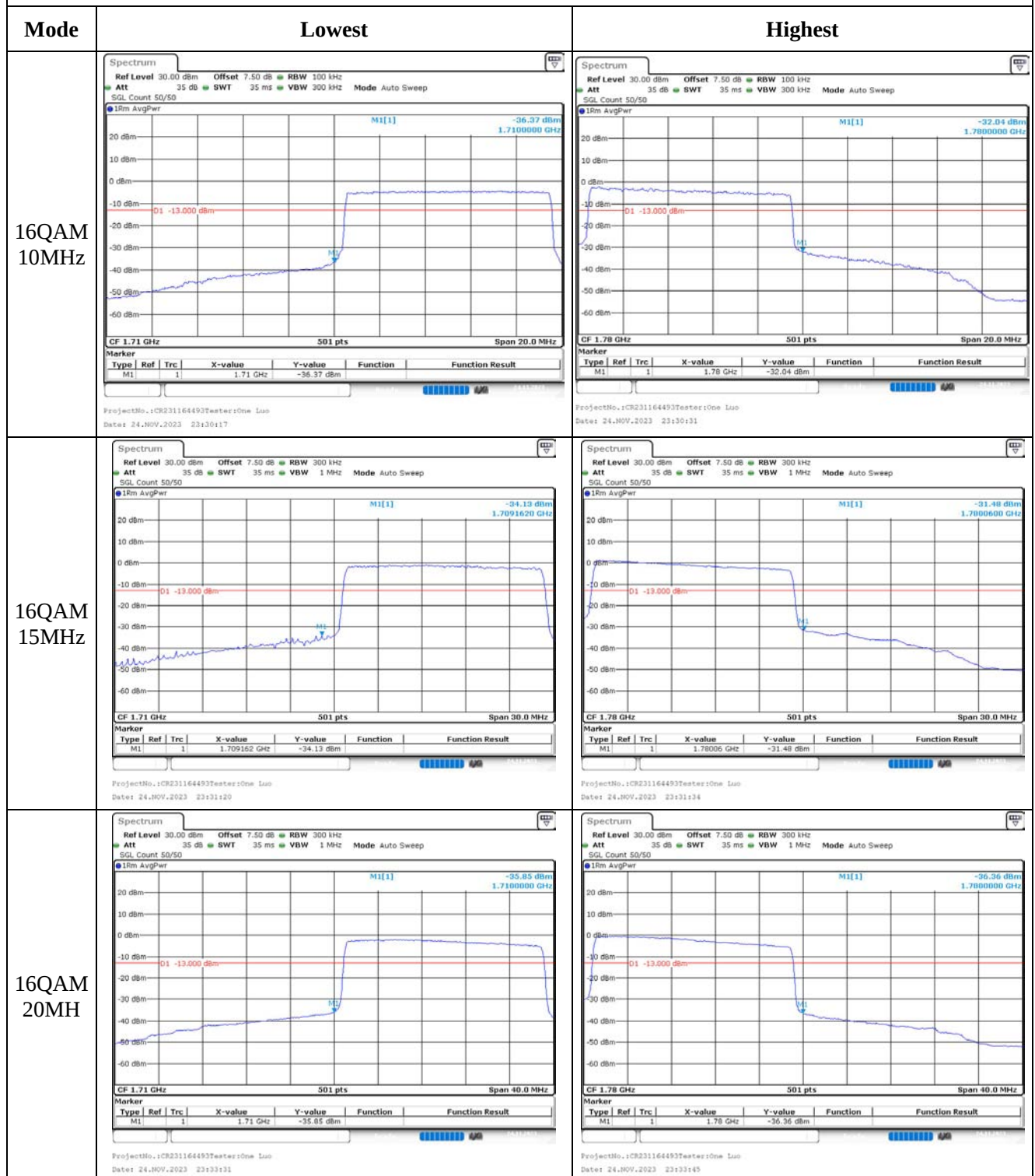
Out of band emission, Band Edge



Out of band emission, Band Edge



Out of band emission, Band Edge



4.14 Radiated Spurious Emissions

Serial Number:	2D1L-1	Test Date:	2023/12/8~2023/12/29
Test Site:	966-2,966-1	Test Mode:	Transmitting
Tester:	Vic Du, Tao Zhu	Test Result:	Pass

Environmental Conditions:

Temperature: (°C)	25.3	Relative Humidity: (%)	45~57	ATM Pressure: (kPa)	101.1~101.6
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Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Sunol Sciences	Antenna	JB6	A082520-6	2023/9/18	2026/9/17
R&S	EMI Test Receiver	ESR3	102724	2023/3/31	2024/3/30
TIMES MICROWAVE	Coaxial Cable	LMR-600-UltraFlex	C-0470-02	2023/7/16	2024/7/15
TIMES MICROWAVE	Coaxial Cable	LMR-600-UltraFlex	C-0780-01	2023/7/16	2024/7/15
Sonoma	Amplifier	310N	186165	2023/7/16	2024/7/15
EMCO	Adjustable Dipole Antenna	3121C	9109-756	N/A	N/A
MICRO-COAX	Coaxial Cable	UFA210B-0-0720-300300	99G1448	2023/7/16	2024/7/15
AH	Double Ridge Guide Horn Antenna	SAS-571	1394	2023/2/22	2026/2/21
R&S	Spectrum Analyzer	FSV40	101591	2023/3/31	2024/3/30
MICRO-COAX	Coaxial Cable	UFA210A-1-1200-70U300	217423-008	2023/8/6	2024/8/5
MICRO-COAX	Coaxial Cable	UFA210A-1-2362-300300	235780-001	2023/8/6	2024/8/5
Mini	Pre-amplifier	ZVA-183-S+	5969001149	2023/11/8	2024/11/7
AH	Double Ridge Guide Horn Antenna	SAS-571	1396	2021/10/18	2024/10/17
MICRO-COAX	Coaxial Cable	UFA210B-0-0720-300300	99G1448	2023/7/16	2024/7/15
Agilent	Signal Generator	E8247C	MY43321352	2023/11/17	2024/11/16
PASTERNAK	Horn Antenna	PE9852/2F-20	112002	2021/2/5	2024/2/4
PASTERNAK	Horn Antenna	PE9852/2F-20	112001	2021/2/5	2024/2/4
Quinstar	Preamplifier	QLW-18405536-JO	15964001005	2023/9/15	2024/9/14
PASTERNAK	Horn Antenna	PE9850/2F-20	072001	2021/2/5	2024/2/4
PASTERNAK	Horn Antenna	PE9850/2F-20	072002	2021/2/5	2024/2/4
MICRO-COAX	Coaxial Cable	UFB142A-1-2362-200200	235772-001	2023/8/6	2024/8/5

*** 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 Data:

Please refer to the below table and plots.

After pre-scan in the X, Y and Z axes of orientation, the worst case is below:

Cellular Band (30MHz-10GHz)

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
GSM 850 Frequency:824.2MHz								
869.09	H	25.97	-43.58	0.00	0.58	-44.16	-13.00	31.16
576.85	V	42.87	-28.83	0.00	0.46	-29.29	-13.00	16.29
1648.400	H	50.97	-53.36	8.68	0.80	-45.48	-13.00	32.48
1648.400	V	54.00	-50.41	8.68	0.80	-42.53	-13.00	29.53
2472.600	H	56.69	-44.09	9.38	1.00	-35.71	-13.00	22.71
2472.600	V	52.56	-48.17	9.38	1.00	-39.79	-13.00	26.79
3296.800	H	45.01	-51.67	10.32	1.15	-42.50	-13.00	29.50
3296.800	V	46.62	-49.82	10.32	1.15	-40.65	-13.00	27.65
GSM 850 Frequency:836.6MHz								
884.46	H	27.30	-41.86	0.00	0.60	-42.46	-13.00	29.46
884.46	V	35.95	-30.43	0.00	0.60	-31.03	-13.00	18.03
1673.200	H	52.90	-51.41	8.71	0.85	-43.55	-13.00	30.55
1673.200	V	56.24	-48.17	8.71	0.85	-40.31	-13.00	27.31
2509.800	H	56.67	-43.94	9.42	1.01	-35.53	-13.00	22.53
2509.800	V	52.81	-47.81	9.42	1.01	-39.40	-13.00	26.40
3346.400	H	48.35	-48.82	10.34	1.16	-39.64	-13.00	26.64
3346.400	V	48.57	-48.46	10.34	1.16	-39.28	-13.00	26.28
GSM 850 Frequency:848.8MHz								
601.64	H	27.43	-46.42	0.00	0.51	-46.93	-13.00	33.93
601.64	V	40.19	-31.51	0.00	0.51	-32.02	-13.00	19.02
1697.600	H	54.93	-49.36	8.74	0.90	-41.52	-13.00	28.52
1697.600	V	57.11	-47.31	8.74	0.90	-39.47	-13.00	26.47
2546.400	H	55.95	-44.38	9.47	1.01	-35.92	-13.00	22.92
2546.400	V	53.54	-46.74	9.47	1.01	-38.28	-13.00	25.28
3395.200	H	45.70	-51.99	10.36	1.19	-42.82	-13.00	29.82
3395.200	V	44.43	-53.23	10.36	1.19	-44.06	-13.00	31.06

PCS Band (30MHz-20GHz)

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
GSM 1900 Frequency:1850.2MHz								
130.15	H	32.77	-79.43	0.00	0.21	-79.64	-13.00	66.64
43.20	V	34.95	-59.02	-22.17	0.12	-81.31	-13.00	68.31
3700.400	H	54.20	-43.12	10.60	1.25	-33.77	-13.00	20.77
3700.400	V	49.59	-47.71	10.60	1.25	-38.36	-13.00	25.36
5550.600	H	49.95	-43.31	11.44	1.49	-33.36	-13.00	20.36
5550.600	V	44.38	-48.72	11.44	1.49	-38.77	-13.00	25.77
GSM 1900 Frequency:1880MHz								
216.28	H	33.54	-79.03	0.00	0.27	-79.30	-13.00	66.30
42.60	V	32.28	-60.91	-22.97	0.12	-84.00	-13.00	71.00
3760.000	H	52.63	-43.78	10.66	1.24	-34.36	-13.00	21.36
3760.000	V	48.97	-47.32	10.66	1.24	-37.90	-13.00	24.90
5640.000	H	49.60	-43.85	11.33	1.54	-34.06	-13.00	21.06
5640.000	V	48.58	-44.75	11.33	1.54	-34.96	-13.00	21.96
GSM 1900 Frequency:1909.8MHz								
283.25	H	32.58	-78.54	0.00	0.32	-78.86	-13.00	65.86
43.81	V	32.93	-61.83	-21.37	0.12	-83.32	-13.00	70.32
3819.600	H	53.28	-42.58	10.72	1.29	-33.15	-13.00	20.15
3819.600	V	46.57	-49.15	10.72	1.29	-39.72	-13.00	26.72
5729.400	H	48.91	-44.57	11.22	1.59	-34.94	-13.00	21.94
5729.400	V	48.16	-45.20	11.22	1.59	-35.57	-13.00	22.57

WCDMA Band 2(30MHz-20GHz):

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
WCDMA Band II, Frequency:1852.4 MHz								
220.88	H	32.81	-79.67	0.00	0.27	-79.94	-13.00	66.94
43.97	V	33.45	-61.51	-21.16	0.12	-82.79	-13.00	69.79
3704.800	H	38.71	-58.55	10.60	1.25	-49.20	-13.00	36.20
3704.800	V	37.61	-59.62	10.60	1.25	-50.27	-13.00	37.27
5557.200	H	38.39	-54.89	11.43	1.49	-44.95	-13.00	31.95
5557.200	V	38.47	-54.66	11.43	1.49	-44.72	-13.00	31.72
WCDMA Band II, Frequency:1880 MHz								
213.28	H	33.59	-79.04	0.00	0.27	-79.31	-13.00	66.31
42.16	V	33.53	-59.08	-23.55	0.12	-82.75	-13.00	69.75
3760.000	H	37.40	-59.01	10.66	1.24	-49.59	-13.00	36.59
3760.000	V	37.31	-58.98	10.66	1.24	-49.56	-13.00	36.56
5640.000	H	38.42	-55.03	11.33	1.54	-45.24	-13.00	32.24
5640.000	V	38.97	-54.36	11.33	1.54	-44.57	-13.00	31.57
WCDMA Band II, Frequency:1907.6MHz								
224.00	H	32.98	-79.43	0.00	0.28	-79.71	-13.00	66.71
42.30	V	33.38	-59.43	-23.36	0.12	-82.91	-13.00	69.91
3815.200	H	37.41	-58.44	10.72	1.29	-49.01	-13.00	36.01
3815.200	V	36.52	-59.17	10.72	1.29	-49.74	-13.00	36.74
5722.800	H	38.96	-54.53	11.23	1.58	-44.88	-13.00	31.88
5722.800	V	38.23	-55.12	11.23	1.58	-45.47	-13.00	32.47

WCDMA Band 4(30MHz-20GHz):

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)	
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)				
Frequency:				1712.4	MHz				
724.26	H	33.43	-70.63	0.00	0.51	-71.14	-13.00	58.14	
43.48	V	35.05	-59.27	-21.81	0.12	-81.20	-13.00	68.20	
3424.800	H	38.29	-59.48	10.37	1.17	-50.28	-13.00	37.28	
3424.800	V	38.01	-59.73	10.37	1.17	-50.53	-13.00	37.53	
5137.200	H	36.98	-56.64	11.28	1.46	-46.82	-13.00	33.82	
5137.200	V	36.44	-57.06	11.28	1.46	-47.24	-13.00	34.24	
Frequency:				1732.6	MHz				
288.26	H	34.58	-76.42	0.00	0.33	-76.75	-13.00	63.75	
45.03	V	33.30	-63.02	-19.78	0.12	-82.92	-13.00	69.92	
3465.200	H	37.52	-60.29	10.39	1.15	-51.05	-13.00	38.05	
3465.200	V	37.82	-59.95	10.39	1.15	-50.71	-13.00	37.71	
5197.800	H	38.06	-56.07	11.32	1.44	-46.19	-13.00	33.19	
5197.800	V	38.03	-55.95	11.32	1.44	-46.07	-13.00	33.07	
Frequency:				1752.6	MHz				
220.11	H	33.85	-78.64	0.00	0.27	-78.91	-13.00	65.91	
44.55	V	33.44	-62.28	-20.39	0.12	-82.79	-13.00	69.79	
3505.200	H	37.84	-59.99	10.41	1.18	-50.76	-13.00	37.76	
3505.200	V	37.64	-60.13	10.41	1.18	-50.90	-13.00	37.90	
5257.800	H	36.91	-56.82	11.35	1.47	-46.94	-13.00	33.94	
5257.800	V	36.51	-57.00	11.35	1.47	-47.12	-13.00	34.12	

WCDMA Band 5(30MHz-10GHz):

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
WCDMA Band 5 Frequency:826.4 MHz								
543.42	H	20.51	-54.46	0.00	0.47	-54.93	-13.00	41.93
620.70	V	21.69	-49.67	0.00	0.49	-50.16	-13.00	37.16
1652.800	H	36.78	-67.55	8.68	0.81	-59.68	-13.00	46.68
1652.800	V	37.50	-66.91	8.68	0.81	-59.04	-13.00	46.04
2479.200	H	36.27	-64.49	9.39	1.01	-56.11	-13.00	43.11
2479.200	V	35.96	-64.77	9.39	1.01	-56.39	-13.00	43.39
3305.600	H	37.07	-59.66	10.32	1.15	-50.49	-13.00	37.49
3305.600	V	35.21	-61.29	10.32	1.15	-52.12	-13.00	39.12
WCDMA Band 5 Frequency:836.6MHz								
603.64	H	20.97	-52.87	0.00	0.50	-53.37	-13.00	40.37
570.74	V	22.08	-49.61	0.00	0.46	-50.07	-13.00	37.07
1673.200	H	39.06	-65.25	8.71	0.85	-57.39	-13.00	44.39
1673.200	V	40.07	-64.34	8.71	0.85	-56.48	-13.00	43.48
2509.800	H	35.86	-64.75	9.42	1.01	-56.34	-13.00	43.34
2509.800	V	36.18	-64.44	9.42	1.01	-56.03	-13.00	43.03
3346.400	H	36.57	-60.60	10.34	1.16	-51.42	-13.00	38.42
3346.400	V	35.78	-61.25	10.34	1.16	-52.07	-13.00	39.07
WCDMA Band 5 Frequency:846.6MHz								
776.81	H	21.04	-50.73	0.00	0.55	-51.28	-13.00	38.28
938.89	V	22.43	-42.94	0.00	0.64	-43.58	-13.00	30.58
1693.200	H	36.45	-67.85	8.73	0.89	-60.01	-13.00	47.01
1693.200	V	36.91	-67.51	8.73	0.89	-59.67	-13.00	46.67
2539.800	H	35.87	-64.51	9.46	1.01	-56.06	-13.00	43.06
2539.800	V	35.83	-64.51	9.46	1.01	-56.06	-13.00	43.06
3386.400	H	36.84	-60.75	10.35	1.18	-51.58	-13.00	38.58
3386.400	V	37.22	-60.32	10.35	1.18	-51.15	-13.00	38.15

LTE Bands:

(The Worst modulation and bandwidth was below)

LTE Band 2(30MHz-20GHz):

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
QPSK, 1.4MHz, Frequency:1850.7 MHz								
195.14	H	36.02	-76.77	0.00	0.26	-77.03	-13.00	64.03
42.01	V	38.73	-53.69	-23.75	0.12	-77.56	-13.00	64.56
3701.400	H	51.16	-46.15	10.60	1.25	-36.80	-13.00	23.80
3701.400	V	49.87	-47.42	10.60	1.25	-38.07	-13.00	25.07
5552.100	H	38.78	-54.49	11.44	1.49	-44.54	-13.00	31.54
5552.100	V	39.39	-53.71	11.44	1.49	-43.76	-13.00	30.76
QPSK, 1.4MHz,Frequency:1880 MHz								
193.10	H	35.02	-77.73	0.00	0.26	-77.99	-13.00	64.99
44.12	V	38.26	-56.90	-20.96	0.12	-77.98	-13.00	64.98
3760.000	H	42.66	-53.75	10.66	1.24	-44.33	-13.00	31.33
3760.000	V	41.72	-54.57	10.66	1.24	-45.15	-13.00	32.15
5640.000	H	41.08	-52.37	11.33	1.54	-42.58	-13.00	29.58
5640.000	V	41.44	-51.89	11.33	1.54	-42.10	-13.00	29.10
QPSK, 1.4MHz,Frequency:1909.3 MHz								
191.08	H	35.40	-77.31	0.00	0.26	-77.57	-13.00	64.57
42.45	V	38.12	-54.88	-23.17	0.12	-78.17	-13.00	65.17
3818.600	H	45.10	-50.76	10.72	1.29	-41.33	-13.00	28.33
3818.600	V	44.08	-51.63	10.72	1.29	-42.20	-13.00	29.20
5727.900	H	42.95	-50.53	11.23	1.59	-40.89	-13.00	27.89
5727.900	V	47.59	-45.77	11.23	1.59	-36.13	-13.00	23.13

LTE Band 4(30MHz-20GHz):

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
1.4MHz QPSK, Frequency: 1710.7 MHz								
213.76	H	34.34	-78.28	0.00	0.27	-78.55	-13.00	65.55
42.60	V	38.75	-54.44	-22.97	0.12	-77.53	-13.00	64.53
3421.400	H	42.65	-55.11	10.37	1.17	-45.91	-13.00	32.91
3421.400	V	41.84	-55.89	10.37	1.17	-46.69	-13.00	33.69
5132.100	H	38.03	-55.54	11.28	1.47	-45.73	-13.00	32.73
5132.100	V	38.76	-54.70	11.28	1.47	-44.89	-13.00	31.89
1.4MHz QPSK, Frequency: 1732.5 MHz								
209.31	H	35.69	-77.02	0.00	0.26	-77.28	-13.00	64.28
40.99	V	39.09	-52.01	-25.10	0.12	-77.23	-13.00	64.23
3465.000	H	42.06	-55.75	10.39	1.15	-46.51	-13.00	33.51
3465.000	V	42.03	-55.74	10.39	1.15	-46.50	-13.00	33.50
5197.500	H	48.95	-45.18	11.32	1.44	-35.30	-13.00	22.30
5197.500	V	55.36	-38.62	11.32	1.44	-28.74	-13.00	15.74
1.4MHz QPSK, Frequency: 1754.3 MHz								
193.11	H	34.87	-77.88	0.00	0.26	-78.14	-13.00	65.14
40.42	V	38.91	-51.45	-25.85	0.11	-77.41	-13.00	64.41
3508.600	H	47.88	-49.94	10.41	1.19	-40.72	-13.00	27.72
3508.600	V	41.29	-56.47	10.41	1.19	-47.25	-13.00	34.25
5262.900	H	42.88	-50.82	11.36	1.47	-40.93	-13.00	27.93
5262.900	V	49.61	-43.86	11.36	1.47	-33.97	-13.00	20.97

LTE Band 5(30MHz-10GHz):

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
QPSK, 1.4MHz, Frequency: 824.7 MHz								
694.42	H	20.68	-52.67	0.00	0.55	-53.22	-13.00	40.22
932.00	V	20.77	-44.73	0.00	0.64	-45.37	-13.00	32.37
1649.400	H	36.92	-67.41	8.68	0.80	-59.53	-13.00	46.53
1649.400	V	37.12	-67.29	8.68	0.80	-59.41	-13.00	46.41
2474.100	H	37.63	-63.15	9.38	1.00	-54.77	-13.00	41.77
2474.100	V	37.02	-63.71	9.38	1.00	-55.33	-13.00	42.33
3298.800	H	35.52	-61.16	10.32	1.15	-51.99	-13.00	38.99
3298.800	V	34.97	-61.47	10.32	1.15	-52.30	-13.00	39.30
QPSK, 1.4MHz, Frequency: 836.5 MHz								
496.28	H	21.25	-54.66	0.00	0.45	-55.11	-13.00	42.11
884.46	V	21.89	-44.49	0.00	0.60	-45.09	-13.00	32.09
1673.000	H	37.67	-66.64	8.71	0.85	-58.78	-13.00	45.78
1673.000	V	38.65	-65.76	8.71	0.85	-57.90	-13.00	44.90
2509.500	H	37.78	-62.83	9.42	1.01	-54.42	-13.00	41.42
2509.500	V	36.61	-64.01	9.42	1.01	-55.60	-13.00	42.60
3346.000	H	36.52	-60.64	10.34	1.16	-51.46	-13.00	38.46
3346.000	V	35.95	-61.07	10.34	1.16	-51.89	-13.00	38.89
QPSK, 1.4MHz, Frequency: 848.3 MHz								
689.57	H	21.11	-52.27	0.00	0.54	-52.81	-13.00	39.81
721.70	V	20.27	-49.18	0.00	0.50	-49.68	-13.00	36.68
1696.600	H	41.39	-62.90	8.74	0.89	-55.05	-13.00	42.05
1696.600	V	42.06	-62.36	8.74	0.89	-54.51	-13.00	41.51
2544.900	H	39.58	-60.76	9.47	1.01	-52.30	-13.00	39.30
2544.900	V	37.98	-62.32	9.47	1.01	-53.86	-13.00	40.86
3393.200	H	37.14	-60.53	10.36	1.19	-51.36	-13.00	38.36
3393.200	V	38.21	-59.42	10.36	1.19	-50.25	-13.00	37.25

LTE Band 7(30MHz-26GHz):

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
5MHz QPSK, Frequency: 2502.5 MHz								
216.02	H	34.16	-78.41	0.00	0.27	-78.68	-25.00	53.68
86.99	V	34.98	-74.12	0.00	0.17	-74.29	-25.00	49.29
5005.000	H	52.74	-40.22	11.20	1.47	-30.49	-25.00	5.49
5005.000	V	51.94	-40.88	11.20	1.47	-31.15	-25.00	6.15
7507.500	H	42.24	-47.55	10.90	1.95	-38.60	-25.00	13.60
7507.500	V	41.16	-49.13	10.90	1.95	-40.18	-25.00	15.18
5MHz QPSK, Frequency: 2535 MHz								
210.79	H	34.21	-78.47	0.00	0.26	-78.73	-25.00	53.73
40.70	V	35.96	-54.77	-25.47	0.12	-80.36	-25.00	55.36
5070.000	H	54.58	-38.61	11.24	1.47	-28.84	-25.00	3.84
5070.000	V	52.72	-40.37	11.24	1.47	-30.60	-25.00	5.60
7605.000	H	41.69	-47.78	10.88	2.01	-38.91	-25.00	13.91
7605.000	V	43.05	-47.14	10.88	2.01	-38.27	-25.00	13.27
5MHz QPSK, Frequency: 2567.5 MHz								
250.26	H	34.80	-77.09	0.00	0.30	-77.39	-25.00	52.39
44.58	V	35.53	-60.23	-20.35	0.12	-80.70	-25.00	55.70
5135.000	H	56.66	-36.94	11.28	1.47	-27.13	-25.00	2.13
5135.000	V	55.98	-37.51	11.28	1.47	-27.70	-25.00	2.70
7702.500	H	42.59	-46.93	10.86	1.97	-38.04	-25.00	13.04
7702.500	V	41.66	-48.52	10.86	1.97	-39.63	-25.00	14.63

LTE Band 12(30MHz-10GHz):

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
1.4MHz QPSK, Frequency: 699.7 MHz								
979.20	H	21.56	-45.27	0.00	0.64	-45.91	-13.00	32.91
595.24	V	20.16	-51.56	0.00	0.51	-52.07	-13.00	39.07
1399.400	H	43.31	-60.39	8.22	0.71	-52.88	-13.00	39.88
1399.400	V	43.82	-59.93	8.22	0.71	-52.42	-13.00	39.42
2099.100	H	36.42	-65.46	9.16	0.91	-57.21	-13.00	44.21
2099.100	V	36.70	-65.13	9.16	0.91	-56.88	-13.00	43.88
2798.800	H	37.10	-62.83	9.88	1.04	-53.99	-13.00	40.99
2798.800	V	36.40	-63.40	9.88	1.04	-54.56	-13.00	41.56
1.4MHz QPSK, Frequency: 707.5 MHz								
821.59	H	20.51	-50.24	0.00	0.55	-50.79	-13.00	37.79
739.63	V	22.33	-46.73	0.00	0.55	-47.28	-13.00	34.28
1415.000	H	43.55	-60.12	8.26	0.72	-52.58	-13.00	39.58
1415.000	V	45.00	-58.72	8.26	0.72	-51.18	-13.00	38.18
2122.500	H	39.40	-62.59	9.17	0.92	-54.34	-13.00	41.34
2122.500	V	38.88	-63.09	9.17	0.92	-54.84	-13.00	41.84
2830.000	H	41.50	-58.30	9.93	1.06	-49.43	-13.00	36.43
2830.000	V	41.05	-58.68	9.93	1.06	-49.81	-13.00	36.81
1.4MHz QPSK, Frequency: 715.3 MHz								
508.43	H	20.72	-54.94	0.00	0.45	-55.39	-13.00	42.39
601.53	V	21.29	-50.41	0.00	0.51	-50.92	-13.00	37.92
1430.600	H	39.62	-64.01	8.31	0.73	-56.43	-13.00	43.43
1430.600	V	38.98	-64.71	8.31	0.73	-57.13	-13.00	44.13
2145.900	H	39.64	-62.46	9.19	0.93	-54.20	-13.00	41.20
2145.900	V	39.91	-62.20	9.19	0.93	-53.94	-13.00	40.94
2861.200	H	42.47	-57.18	9.98	1.07	-48.27	-13.00	35.27
2861.200	V	43.19	-56.48	9.98	1.07	-47.57	-13.00	34.57

LTE Band 17(30MHz-10GHz):

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
5MHz QPSK, Frequency: 706.5 MHz								
562.79	H	20.02	-54.57	0.00	0.46	-55.03	-13.00	42.03
975.45	V	21.30	-43.35	0.00	0.61	-43.96	-13.00	30.96
1413.000	H	41.75	-61.92	8.26	0.72	-54.38	-13.00	41.38
1413.000	V	42.12	-61.60	8.26	0.72	-54.06	-13.00	41.06
2119.500	H	37.42	-64.55	9.17	0.92	-56.30	-13.00	43.30
2119.500	V	37.05	-64.90	9.17	0.92	-56.65	-13.00	43.65
2826.000	H	36.99	-62.82	9.92	1.06	-53.96	-13.00	40.96
2826.000	V	37.56	-62.18	9.92	1.06	-53.32	-13.00	40.32
5MHz QPSK, Frequency: 710 MHz								
881.22	H	20.81	-48.44	0.00	0.59	-49.03	-13.00	36.03
742.23	V	22.11	-46.89	0.00	0.55	-47.44	-13.00	34.44
1420.000	H	40.21	-63.45	8.28	0.73	-55.90	-13.00	42.90
1420.000	V	39.80	-63.91	8.28	0.73	-56.36	-13.00	43.36
2130.000	H	36.52	-65.50	9.18	0.92	-57.24	-13.00	44.24
2130.000	V	36.72	-65.29	9.18	0.92	-57.03	-13.00	44.03
2840.000	H	37.03	-62.72	9.94	1.06	-53.84	-13.00	40.84
2840.000	V	37.40	-62.31	9.94	1.06	-53.43	-13.00	40.43
5MHz QPSK, Frequency: 713.5 MHz								
865.92	H	20.03	-49.60	0.00	0.57	-50.17	-13.00	37.17
899.94	V	20.33	-45.80	0.00	0.63	-46.43	-13.00	33.43
1427.000	H	39.33	-64.31	8.30	0.73	-56.74	-13.00	43.74
1427.000	V	39.73	-63.96	8.30	0.73	-56.39	-13.00	43.39
2140.500	H	37.40	-64.67	9.18	0.93	-56.42	-13.00	43.42
2140.500	V	35.96	-66.12	9.18	0.93	-57.87	-13.00	44.87
2854.000	H	36.75	-62.94	9.97	1.07	-54.04	-13.00	41.04
2854.000	V	37.22	-62.46	9.97	1.07	-53.56	-13.00	40.56

LTE Band 38 (30MHz-26.5GHz):

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
5MHz QPSK, Frequency: 2572.5 MHz								
551.86	H	35.14	-70.66	0.00	0.48	-71.14	-25.00	46.14
42.45	V	33.58	-59.42	-23.17	0.12	-82.71	-25.00	57.71
5145.000	H	42.02	-51.66	11.29	1.44	-41.81	-25.00	16.81
5145.000	V	41.99	-51.58	11.29	1.44	-41.73	-25.00	16.73
7717.500	H	39.98	-49.53	10.86	1.99	-40.66	-25.00	15.66
7717.500	V	39.04	-51.09	10.86	1.99	-42.22	-25.00	17.22
5MHz QPSK, Frequency: 2595 MHz								
373.24	H	34.13	-75.48	0.00	0.37	-75.85	-25.00	50.85
45.87	V	33.26	-63.90	-18.95	0.12	-82.97	-25.00	57.97
5190.000	H	46.12	-47.95	11.31	1.44	-38.08	-25.00	13.08
5190.000	V	45.37	-48.55	11.31	1.44	-38.68	-25.00	13.68
7785.000	H	39.28	-50.21	10.84	1.99	-41.36	-25.00	16.36
7785.000	V	39.82	-50.10	10.84	1.99	-41.25	-25.00	16.25
5MHz QPSK, Frequency: 2617.5 MHz								
450.11	H	34.52	-73.51	0.00	0.43	-73.94	-25.00	48.94
199.82	V	33.24	-76.06	0.00	0.26	-76.32	-25.00	51.32
5235.000	H	48.89	-45.01	11.34	1.46	-35.13	-25.00	10.13
5235.000	V	51.06	-42.65	11.34	1.46	-32.77	-25.00	7.77
7852.500	H	39.42	-49.77	10.83	2.03	-40.97	-25.00	15.97
7852.500	V	39.45	-50.13	10.83	2.03	-41.33	-25.00	16.33

LTE Band 66(30MHz-20GHz):

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
1.4MHz QPSK, Frequency: 1710.7 MHz								
373.56	H	31.13	-78.48	0.00	0.37	-78.85	-13.00	65.85
195.39	V	33.79	-75.62	0.00	0.26	-75.88	-13.00	62.88
3421.400	H	42.88	-54.88	10.37	1.17	-45.68	-13.00	32.68
3421.400	V	41.28	-56.45	10.37	1.17	-47.25	-13.00	34.25
5132.100	H	38.88	-54.69	11.28	1.47	-44.88	-13.00	31.88
5132.100	V	38.95	-54.51	11.28	1.47	-44.70	-13.00	31.70
1.4MHz QPSK, Frequency: 1745 MHz								
217.04	H	31.20	-81.35	0.00	0.27	-81.62	-13.00	68.62
42.57	V	33.38	-59.77	-23.01	0.12	-82.90	-13.00	69.90
3490.000	H	46.47	-51.37	10.40	1.17	-42.14	-13.00	29.14
3490.000	V	42.75	-55.03	10.40	1.17	-45.80	-13.00	32.80
5235.000	H	44.38	-49.52	11.34	1.46	-39.64	-13.00	26.64
5235.000	V	41.53	-52.18	11.34	1.46	-42.30	-13.00	29.30
1.4MHz QPSK, Frequency: 1779.3 MHz								
106.22	H	34.82	-77.46	0.00	0.19	-77.65	-13.00	64.65
45.02	V	33.60	-62.72	-19.78	0.12	-82.62	-13.00	69.62
3558.600	H	47.60	-50.07	10.46	1.22	-40.83	-13.00	27.83
3558.600	V	47.74	-49.83	10.46	1.22	-40.59	-13.00	27.59
5337.900	H	44.17	-49.30	11.40	1.47	-39.37	-13.00	26.37
5337.900	V	45.75	-47.58	11.40	1.47	-37.65	-13.00	24.65

Note:

- 1) The unit of Antenna Gain is dBd for frequency below 1GHz, and the unit of Antenna Gain is dBi for frequency above 1GHz.
- 2) Absolute Level = Substituted Level - Cable loss + Antenna Gain
- 3) Margin = Limit-Absolute Level

5. EUT PHOTOGRAPHS

Please refer to the attachment CR231164493-EXP EUT EXTERNAL PHOTOGRAPHS and
CR231164493-INP EUT INTERNAL PHOTOGRAPHS

6. TEST SETUP PHOTOGRAPHS

Please refer to the attachment CR231164493-00F-TSP TEST SETUP PHOTOGRAPHS.

==== END OF REPORT =====