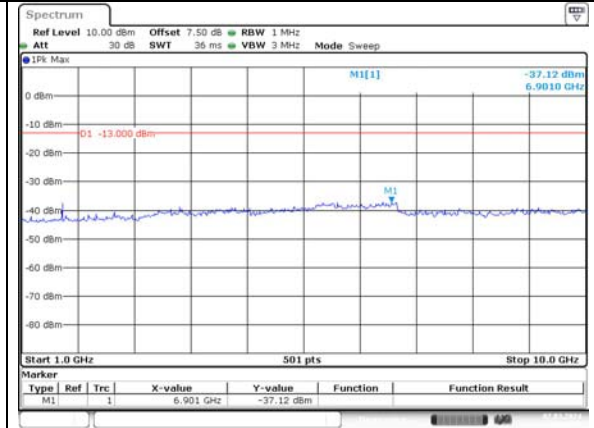
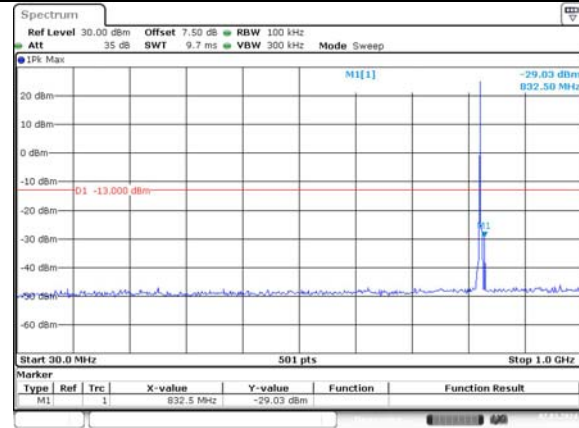


Spurious Emissions at Antenna Terminal

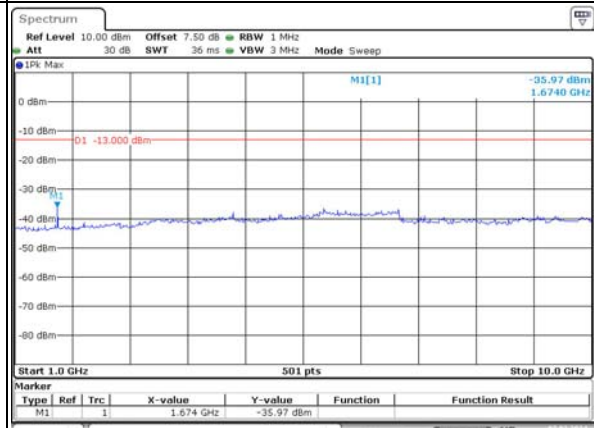
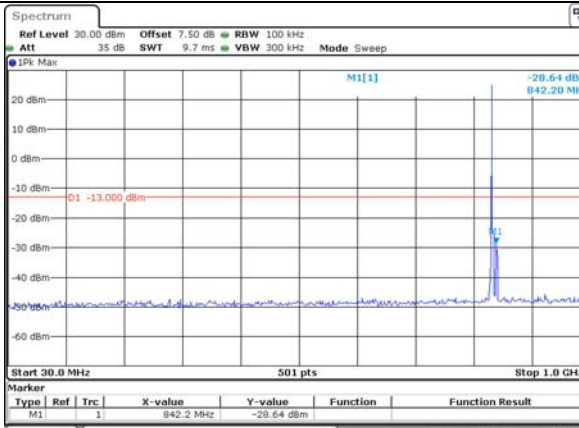
Channel

5MHz Bandwidth QPSK

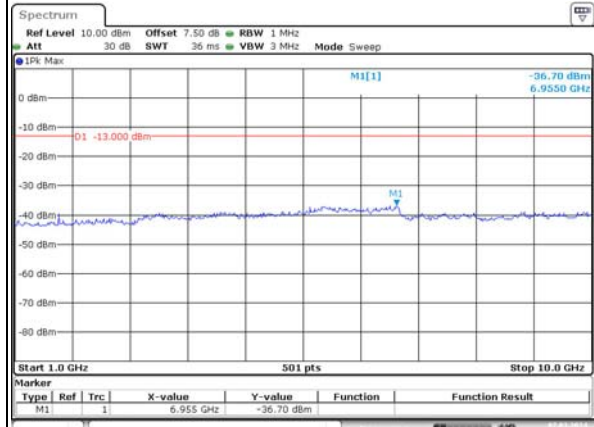
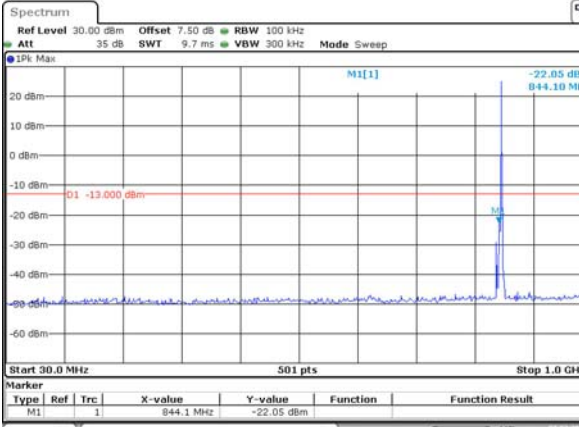
Lowest



Middle



Highest

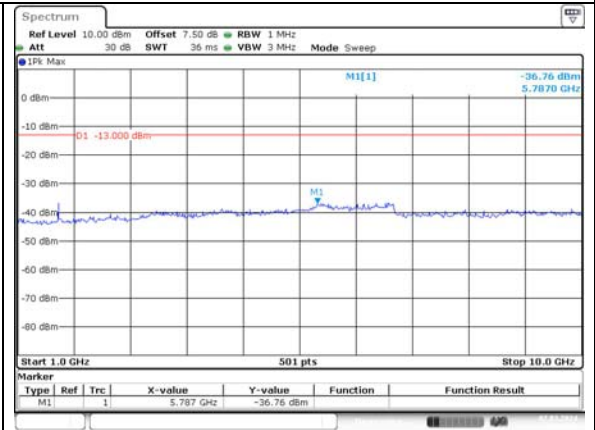
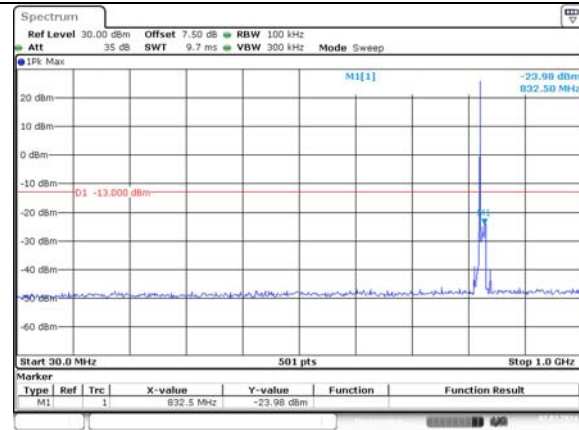


Spurious Emissions at Antenna Terminal

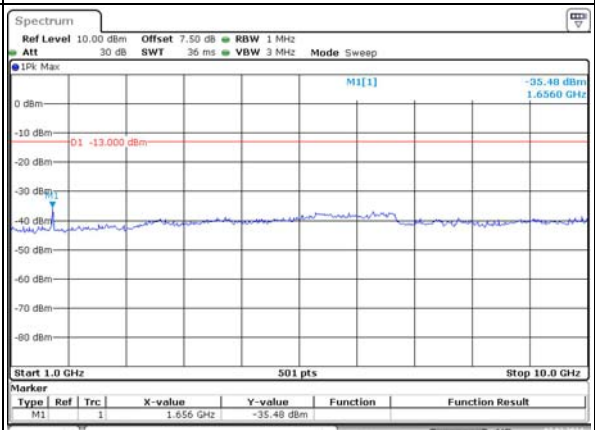
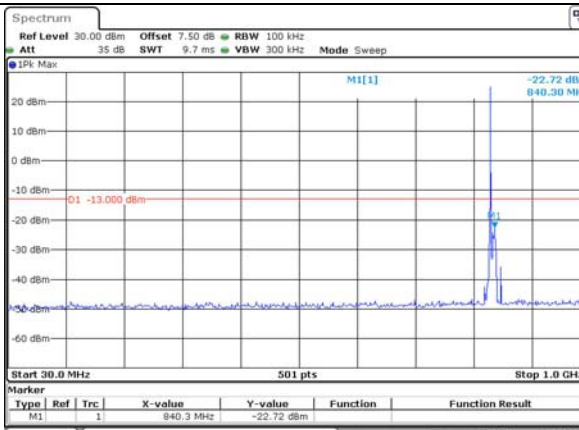
Channel

10MHz Bandwidth QPSK

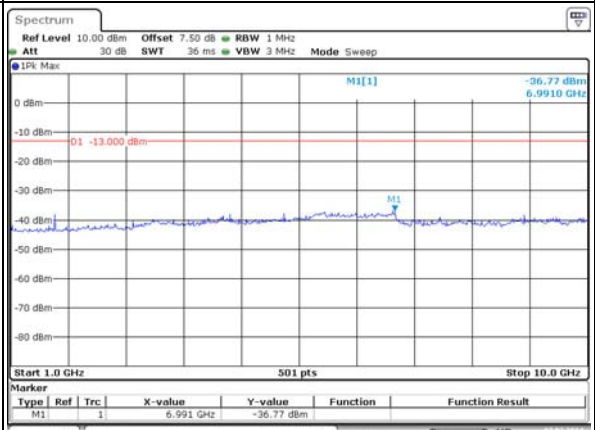
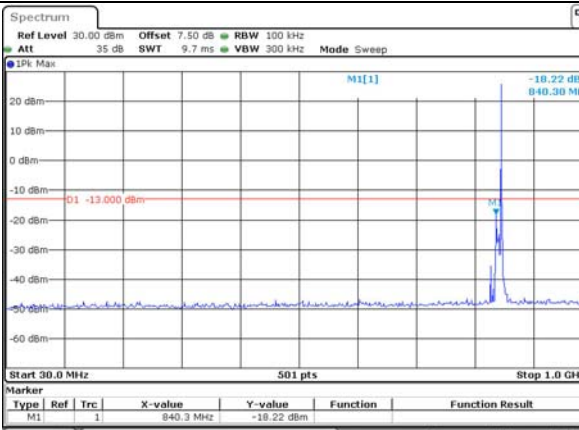
Lowest



Middle

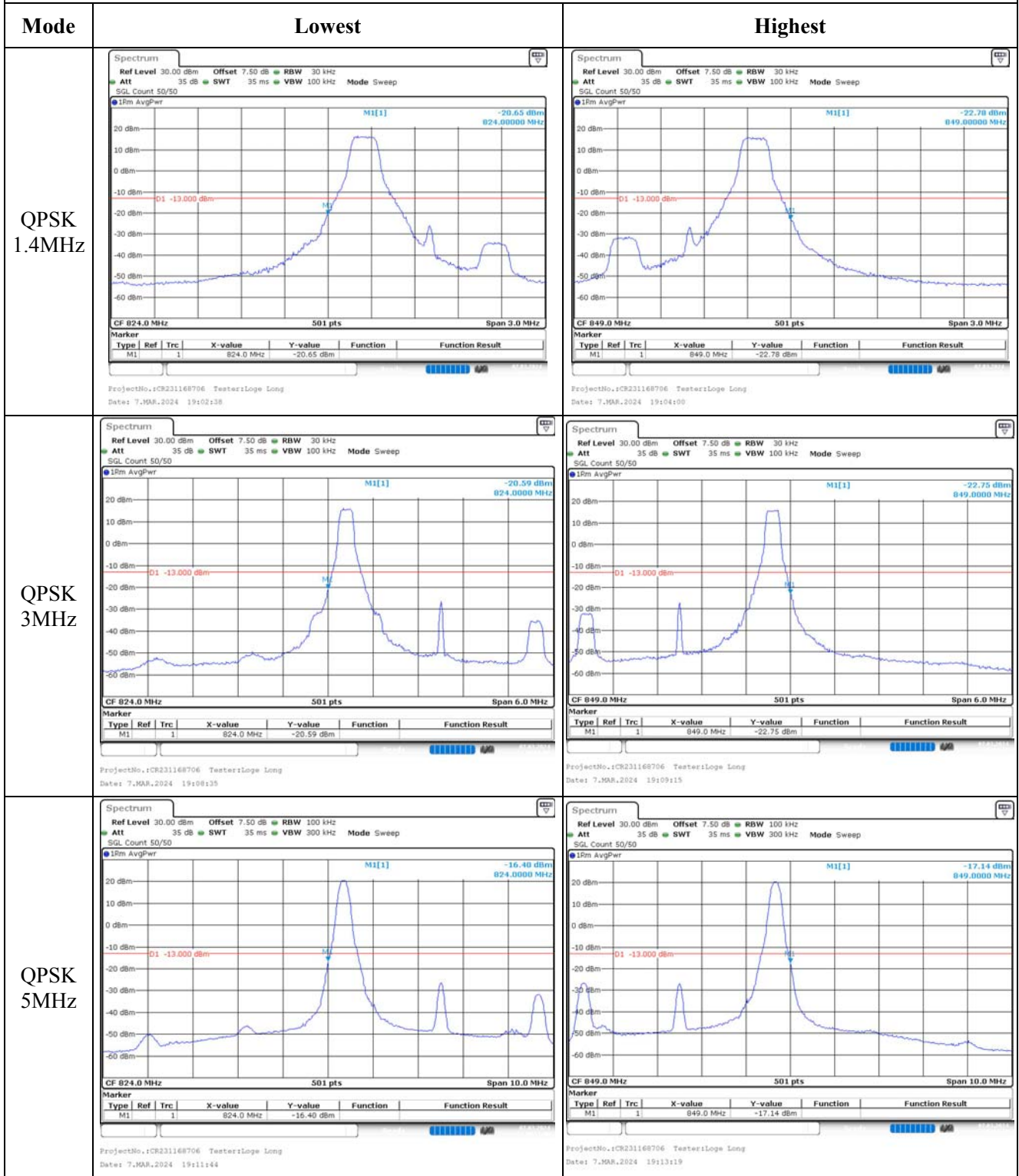


Highest

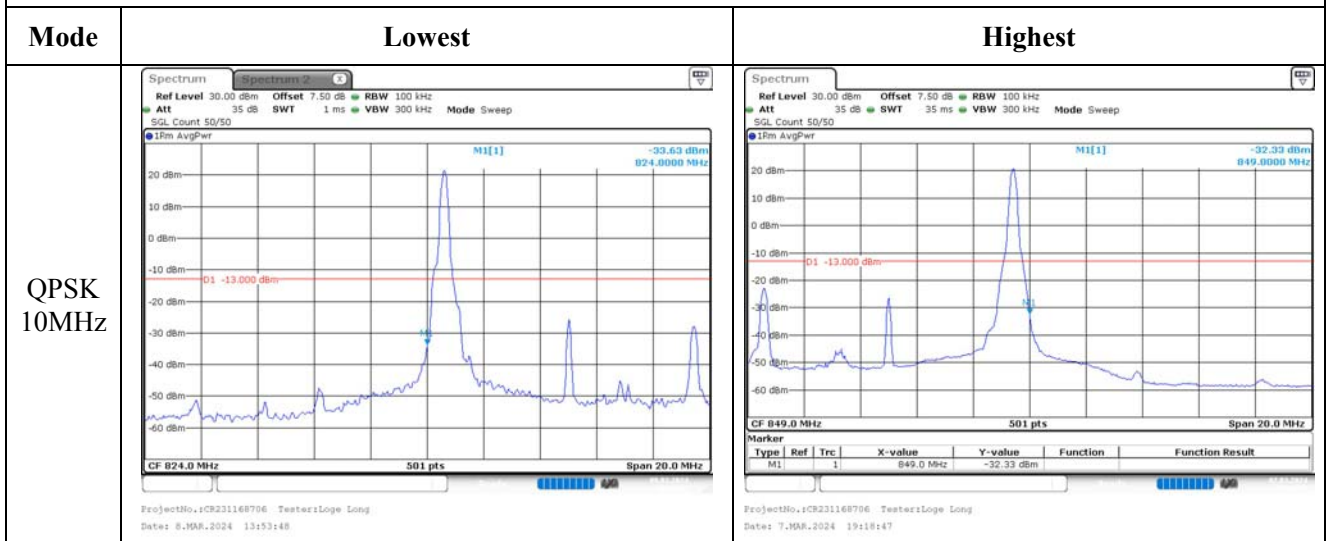


1RB:

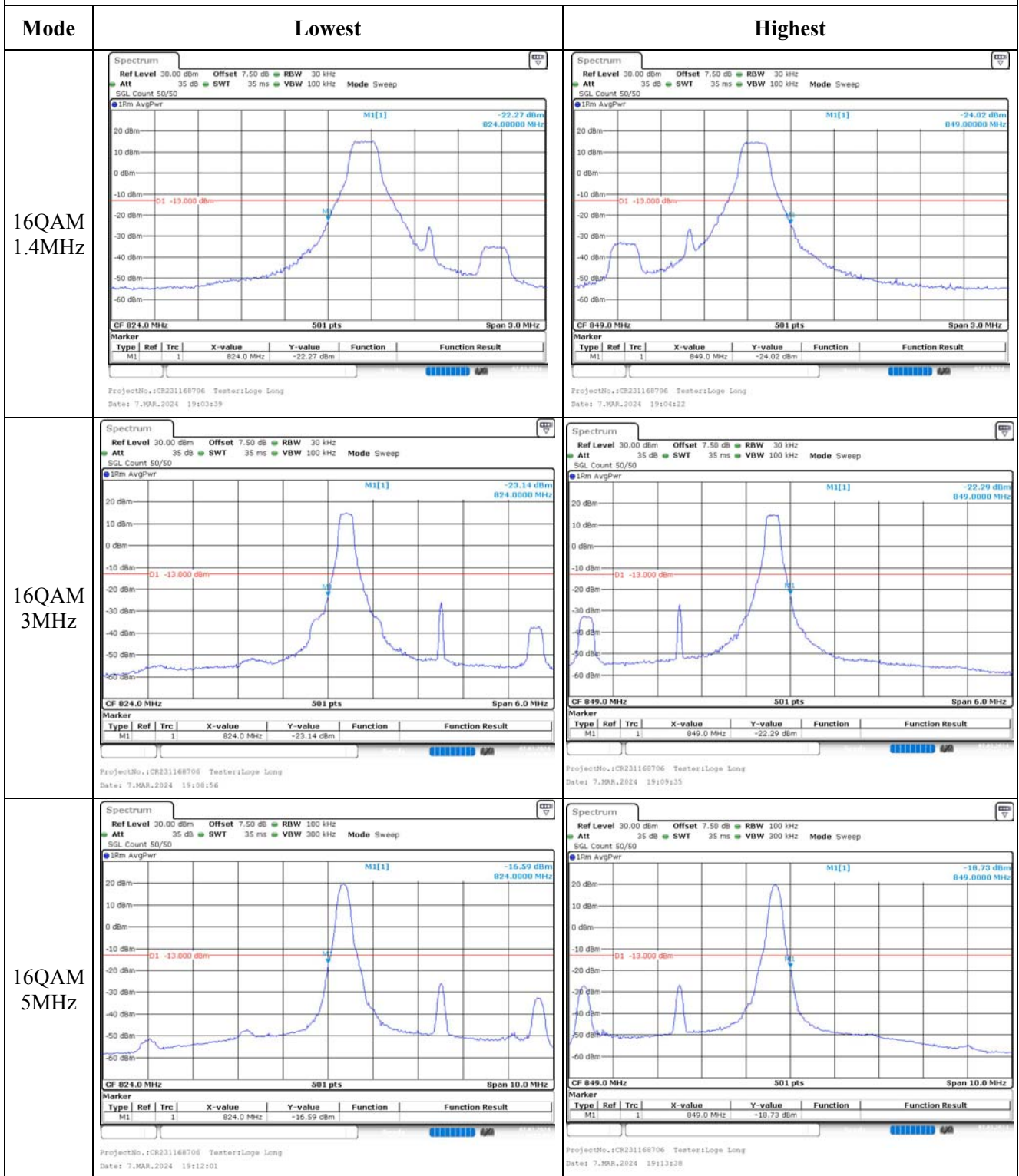
Out of band emission, Band Edge



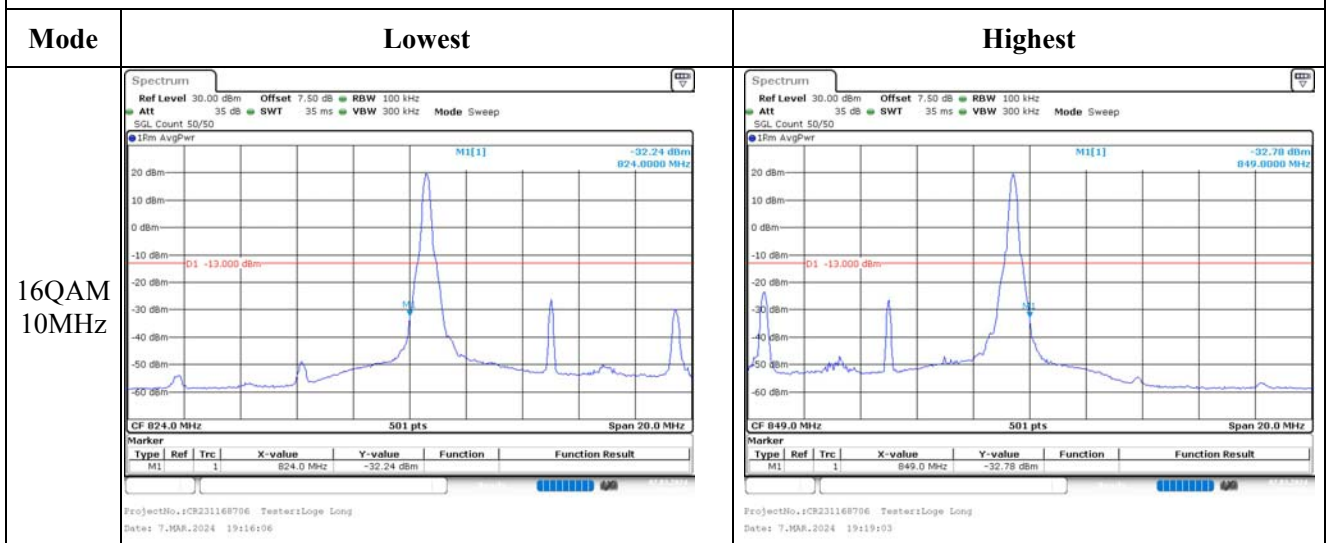
Out of band emission, Band Edge



Out of band emission, Band Edge



Out of band emission, Band Edge

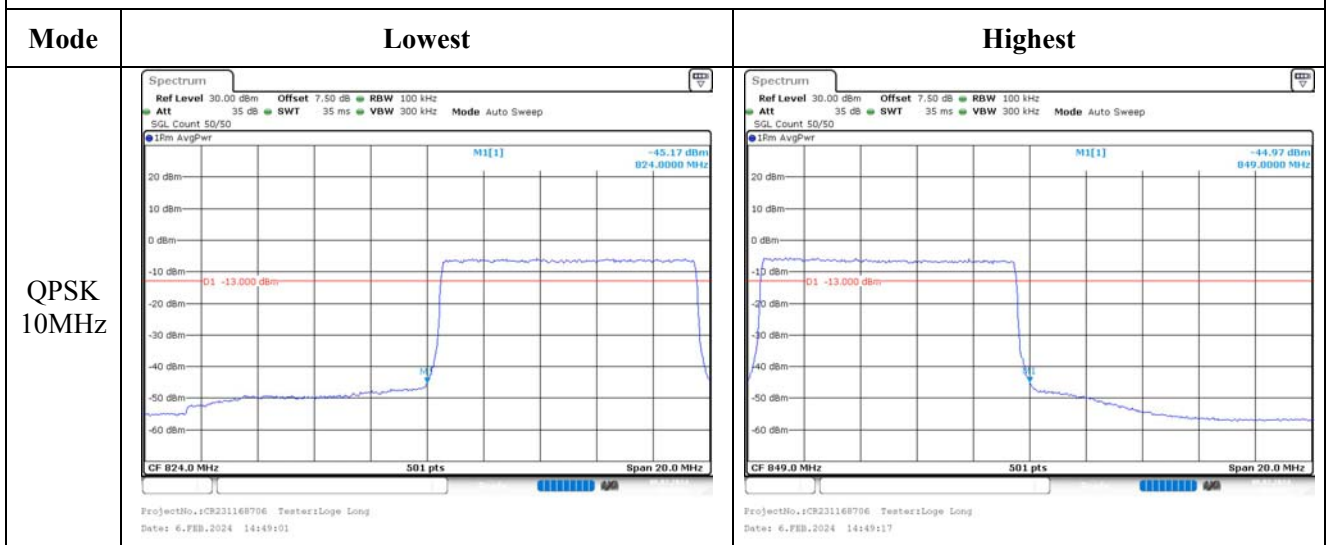


Full RB:

Out of band emission, Band Edge

Mode	Lowest	Highest
QPSK 1.4MHz		
QPSK 3MHz		
QPSK 5MHz		

Out of band emission, Band Edge



Out of band emission, Band Edge

Mode	Lowest	Highest
16QAM 1.4MHz		
16QAM 3MHz		
16QAM 5MHz		

Out of band emission, Band Edge



4.7 Antenna Port Test Data and Results for LTE Band 12

Serial Number:	2DYI-2	Test Date:	2023/12/29-2024/3/7
Test Site:	RF	Test Mode:	Transmitting
Tester:	One Luo, Loge Long	Test Result:	Pass

Environmental Conditions:

Temperature: (°C)	21.5-25.2	Relative Humidity: (%)	52-65	ATM Pressure: (kPa)	100.9-101.4
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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	699.7	707.5	715.3
3MHz	700.5	707.5	714.5
5MHz	701.5	707.5	713.5
10MHz	704	707.5	711

Test Data:**RF Output Power**

Test Bandwidth & Modulation	Resource Block & RB offset	Conducted Average Output Power(dBm)			Maximum ERP (dBm)	ERP Limit (dBm)
		Lowest Channel	Middle Channel	Highest Channel		
1.4MHz QPSK	RB1#0	23.81	23.84	23.97	19.26	34.77
	RB1#3	23.96	23.89	24.04		
	RB1#5	23.89	23.77	23.94		
	RB3#0	23.66	23.81	23.79		
	RB3#3	23.72	23.75	23.85		
	RB6#0	22.68	22.84	22.78		
1.4MHz 16QAM	RB1#0	22.69	22.67	22.94	18.33	34.77
	RB1#3	22.94	22.79	23.11		
	RB1#5	22.87	22.91	23.04		
	RB3#0	22.7	22.72	22.82		
	RB3#3	22.83	22.85	22.73		
	RB6#0	21.9	21.75	21.87		
3MHz QPSK	RB1#0	22.98	22.97	22.91	18.24	34.77
	RB1#8	22.98	23	23.02		
	RB1#14	23	22.85	22.89		
	RB6#0	21.84	22	21.87		
	RB6#9	21.82	21.97	21.94		
	RB15#0	21.9	21.99	21.94		
3MHz 16QAM	RB1#0	21.81	21.83	21.92	17.14	34.77
	RB1#8	21.83	21.86	21.87		
	RB1#14	21.83	21.8	21.84		
	RB6#0	20.74	20.8	21.04		
	RB6#9	20.79	20.94	20.86		
	RB15#0	20.81	20.92	20.96		
5MHz QPSK	RB1#0	22.83	22.86	22.8	18.26	34.77
	RB1#13	22.99	23.04	22.88		
	RB1#24	22.95	22.85	22.8		
	RB15#0	21.94	22.02	21.94		
	RB15#10	21.99	22.05	21.94		
	RB25#0	22.04	22.01	21.91		
5MHz 16QAM	RB1#0	21.92	21.75	21.96	17.29	34.77
	RB1#13	21.82	21.9	22.07		
	RB1#24	21.81	21.7	21.82		
	RB15#0	20.89	20.97	20.89		
	RB15#10	20.91	20.93	20.97		
	RB25#0	20.89	20.92	20.88		
10MHz QPSK	RB1#0	23.08	22.99	22.84	18.38	34.77
	RB1#25	23.16	23.16	22.89		
	RB1#49	23.1	22.99	22.82		

	RB25#0	21.81	21.83	21.87		
	RB25#25	21.97	21.88	21.85		
	RB50#0	21.97	21.9	21.86		
10MHz 16QAM	RB1#0	21.96	21.6	21.75	17.2	34.77
	RB1#25	21.97	21.95	21.98		
	RB1#49	21.98	21.84	21.9		
	RB25#0	20.81	20.92	20.97		
	RB25#25	21.05	20.9	20.89		
	RB50#0	20.94	20.98	20.93		

Note:

ERP= Conducted Power(dBm) - L_c(dB) + G_r(dBd)G_r(dBd)=G_r(dBi)-2.15**Result:****Pass****Peak-to-average Ratio(PAR)**

Test Bandwidth & Modulation	Resource Block & RB offset	Peak-to-average Ratio(dB)			Limit (dB)
		Lowest Channel	Middle Channel	Highest Channel	
10MHz QPSK	RB1#0	4.55	4.58	4.58	13
	RB50#0	4.9	4.99	4.93	13
10MHz 16QAM	RB1#0	5.51	5.59	5.54	13
	RB50#0	5.91	5.94	5.97	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	1.108	1.102	1.102	1.32	1.338	1.314
1.4MHz 16QAM	1.102	1.102	1.114	1.332	1.302	1.32
3MHz QPSK	2.683	2.683	2.695	2.964	2.952	2.976
3MHz 16QAM	2.683	2.683	2.695	2.952	2.952	2.964
5MHz QPSK	4.531	4.511	4.511	5.02	5.02	5.02
5MHz 16QAM	4.511	4.511	4.511	5	5	5.06
10MHz QPSK	8.942	8.942	8.942	9.68	9.84	9.68
10MHz 16QAM	8.942	8.982	8.942	9.84	9.76	9.76

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

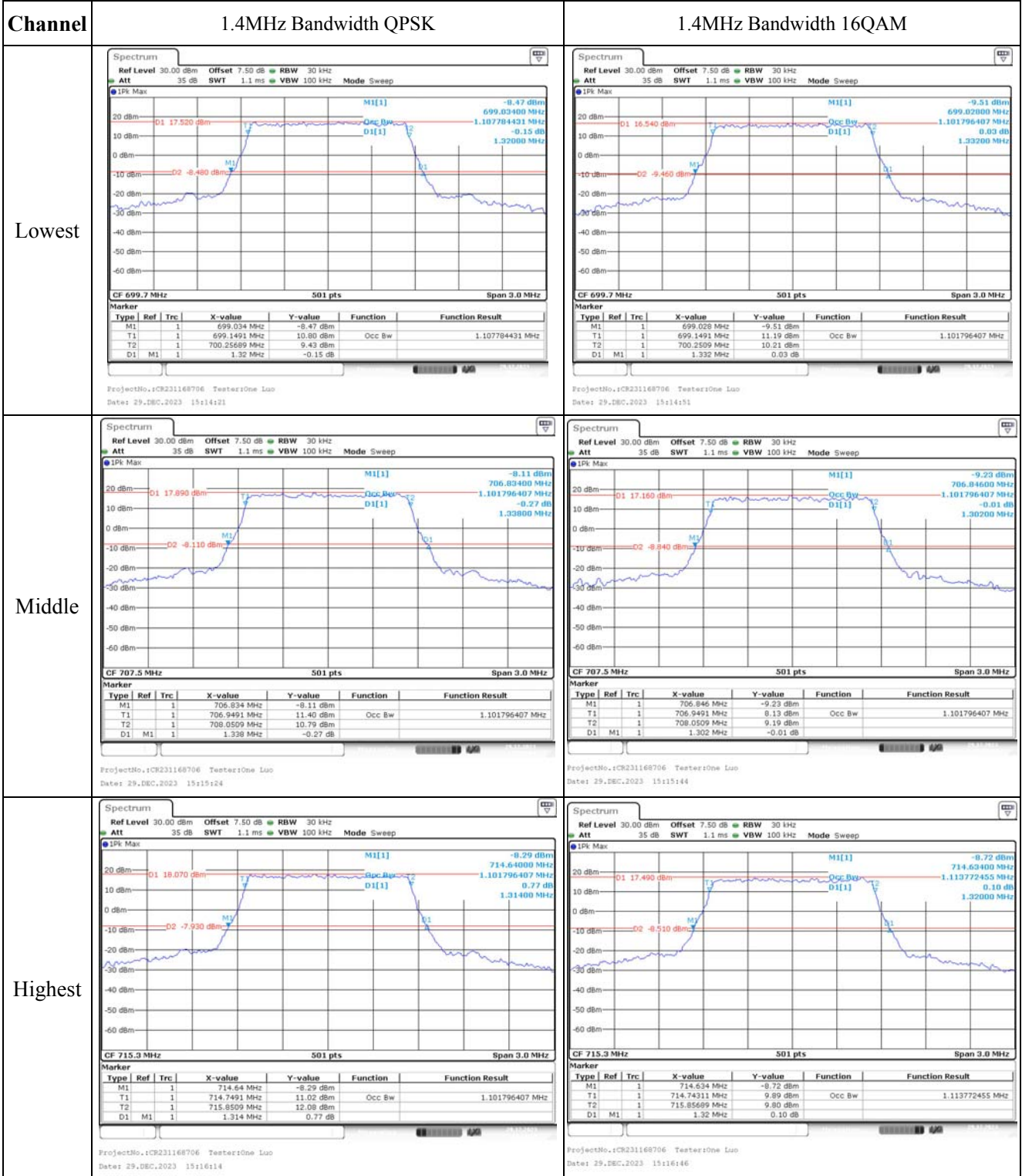
Spurious Emissions at Antenna Terminal**Result:** Pass, Please refer to the test plots of Spurious Emissions at Antenna Terminal.**Out of band emission, Band Edge****Result:** Pass, Please refer to the test plots of Out of band emission, Band Edge.

Frequency Stability						
Test Mode:	10M QPSK	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (°C)	Voltage (V _{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.6	699.518	699.00	715.437	716.00
	-20	3.6	699.540	699.00	715.467	716.00
	-10	3.6	699.533	699.00	715.409	716.00
	0	3.6	699.512	699.00	715.472	716.00
	10	3.6	699.581	699.00	715.490	716.00
	20	3.6	699.529	699.00	715.471	716.00
	30	3.6	699.520	699.00	715.473	716.00
	40	3.6	699.523	699.00	715.412	716.00
Frequency Stability vs. Voltage	20	3.45	699.600	699.00	715.445	716.00
	20	4.12	699.572	699.00	715.463	716.00
					Result:	Pass

Frequency Stability						
Test Mode:	10M 16QAM	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (°C)	Voltage (V _{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.6	699.582	699.00	715.452	716.00
	-20	3.6	699.518	699.00	715.482	716.00
	-10	3.6	699.506	699.00	715.483	716.00
	0	3.6	699.518	699.00	715.471	716.00
	10	3.6	699.568	699.00	715.479	716.00
	20	3.6	699.529	699.00	715.471	716.00
	30	3.6	699.530	699.00	715.499	716.00
	40	3.6	699.579	699.00	715.480	716.00
Frequency Stability vs. Voltage	20	3.45	699.519	699.00	715.434	716.00
	20	4.12	699.583	699.00	715.478	716.00
					Result:	Pass

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

Occupied Bandwidth



Occupied Bandwidth

Channel	3MHz Bandwidth QPSK	3MHz Bandwidth 16QAM																																																																						
Lowest	<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>699.024 MHz</td> <td>-11.52 dBm</td> <td></td> <td></td> </tr> <tr> <td>T1</td> <td>1</td> <td></td> <td>699.1587 MHz</td> <td>11.40 dBm</td> <td>Occ Bw</td> <td>2.682634731 MHz</td> </tr> <tr> <td>T2</td> <td>1</td> <td></td> <td>701.8413 MHz</td> <td>11.63 dBm</td> <td></td> <td></td> </tr> <tr> <td>D1</td> <td>M1</td> <td>1</td> <td>2.964 MHz</td> <td>0.42 dB</td> <td></td> <td></td> </tr> </tbody> </table>	Type	Ref	Trc	X-value	Y-value	Function	Function Result	M1	1		699.024 MHz	-11.52 dBm			T1	1		699.1587 MHz	11.40 dBm	Occ Bw	2.682634731 MHz	T2	1		701.8413 MHz	11.63 dBm			D1	M1	1	2.964 MHz	0.42 dB			<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>699.024 MHz</td> <td>-12.87 dBm</td> <td></td> <td></td> </tr> <tr> <td>T1</td> <td>1</td> <td></td> <td>699.1587 MHz</td> <td>9.62 dBm</td> <td>Occ Bw</td> <td>2.682634731 MHz</td> </tr> <tr> <td>T2</td> <td>1</td> <td></td> <td>701.8413 MHz</td> <td>10.48 dBm</td> <td></td> <td></td> </tr> <tr> <td>D1</td> <td>M1</td> <td>1</td> <td>2.952 MHz</td> <td>0.13 dB</td> <td></td> <td></td> </tr> </tbody> </table>	Type	Ref	Trc	X-value	Y-value	Function	Function Result	M1	1		699.024 MHz	-12.87 dBm			T1	1		699.1587 MHz	9.62 dBm	Occ Bw	2.682634731 MHz	T2	1		701.8413 MHz	10.48 dBm			D1	M1	1	2.952 MHz	0.13 dB		
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M1	1		713.012 MHz	-12.14 dBm																																																																				
T1	1		713.1467 MHz	10.05 dBm	Occ Bw	2.694610778 MHz																																																																		
T2	1		715.8413 MHz	11.41 dBm																																																																				
D1	M1	1	2.964 MHz	-0.17 dB																																																																				

Occupied Bandwidth

Channel	5MHz Bandwidth QPSK	5MHz Bandwidth 16QAM																																																																						
Lowest	<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>699.0 MHz</td> <td>-9.59 dBm</td> <td></td> <td></td> </tr> <tr> <td>T1</td> <td>1</td> <td></td> <td>699.2445 MHz</td> <td>12.29 dBm</td> <td>Occ Bw</td> <td>4.530938124 MHz</td> </tr> <tr> <td>T2</td> <td>1</td> <td></td> <td>703.7754 MHz</td> <td>12.22 dBm</td> <td></td> <td></td> </tr> <tr> <td>D1</td> <td>M1</td> <td>1</td> <td>5.02 MHz</td> <td>-0.21 dB</td> <td></td> <td></td> </tr> </tbody> </table> <p>ProjectNo.:CR231168706 Tester:One Luo Date: 29.DEC.2023 15:22:57</p>	Type	Ref	Trc	X-value	Y-value	Function	Function Result	M1	1		699.0 MHz	-9.59 dBm			T1	1		699.2445 MHz	12.29 dBm	Occ Bw	4.530938124 MHz	T2	1		703.7754 MHz	12.22 dBm			D1	M1	1	5.02 MHz	-0.21 dB			<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>699.0 MHz</td> <td>-9.60 dBm</td> <td></td> <td></td> </tr> <tr> <td>T1</td> <td>1</td> <td></td> <td>699.2445 MHz</td> <td>11.23 dBm</td> <td>Occ Bw</td> <td>4.510978044 MHz</td> </tr> <tr> <td>T2</td> <td>1</td> <td></td> <td>703.7555 MHz</td> <td>11.50 dBm</td> <td></td> <td></td> </tr> <tr> <td>D1</td> <td>M1</td> <td>1</td> <td>5.0 MHz</td> <td>0.42 dB</td> <td></td> <td></td> </tr> </tbody> </table> <p>ProjectNo.:CR231168706 Tester:One Luo Date: 29.DEC.2023 15:23:28</p>	Type	Ref	Trc	X-value	Y-value	Function	Function Result	M1	1		699.0 MHz	-9.60 dBm			T1	1		699.2445 MHz	11.23 dBm	Occ Bw	4.510978044 MHz	T2	1		703.7555 MHz	11.50 dBm			D1	M1	1	5.0 MHz	0.42 dB		
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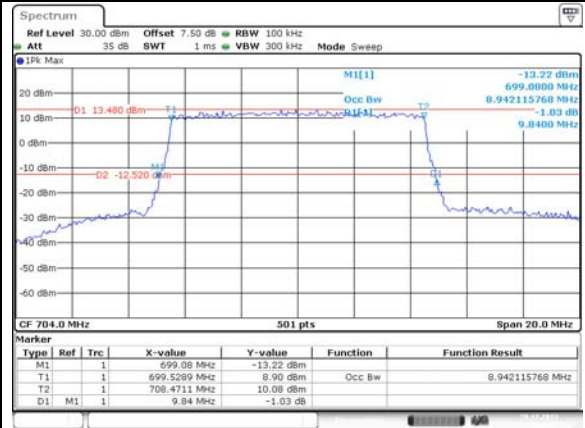
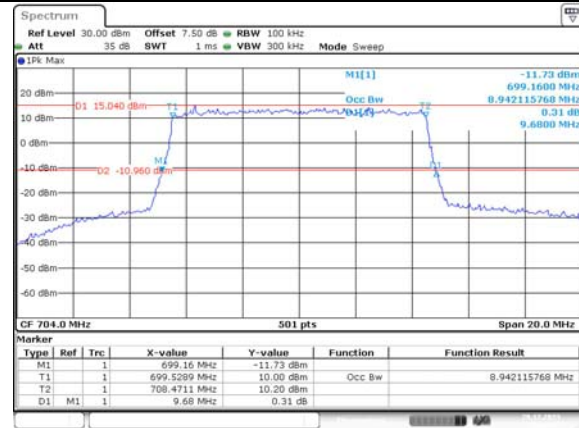
Occupied Bandwidth

Channel

10MHz Bandwidth QPSK

10MHz Bandwidth 16QAM

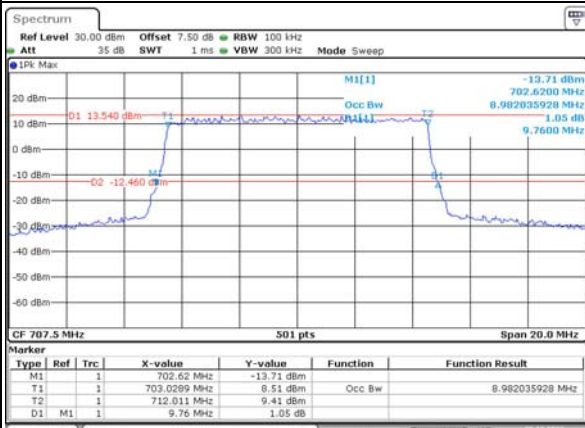
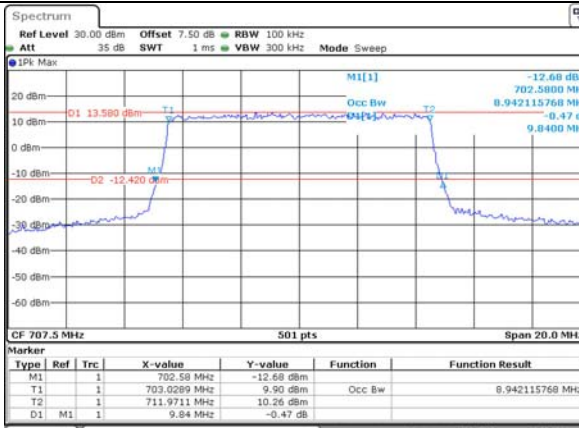
Lowest



ProjectNo.:CR231168706 Testers:One Luo
Date: 29.Dec.2023 15:27:02

ProjectNo.:CR231168706 Testers:One Luo
Date: 29.Dec.2023 15:27:35

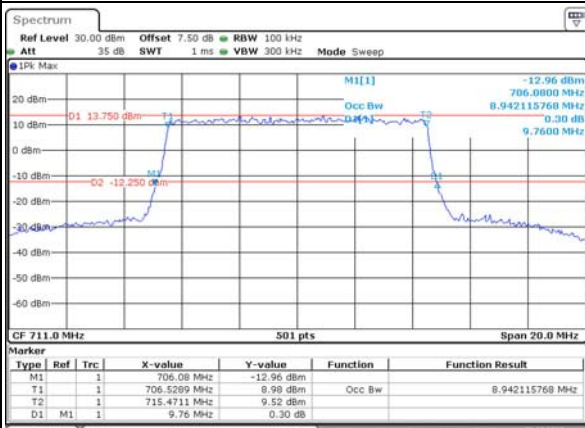
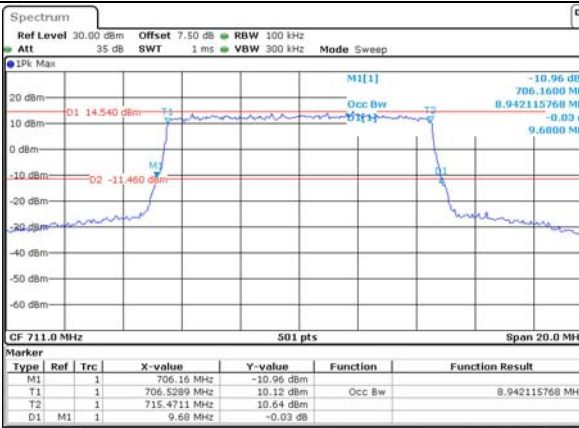
Middle



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Date: 29.Dec.2023 15:28:29

Highest

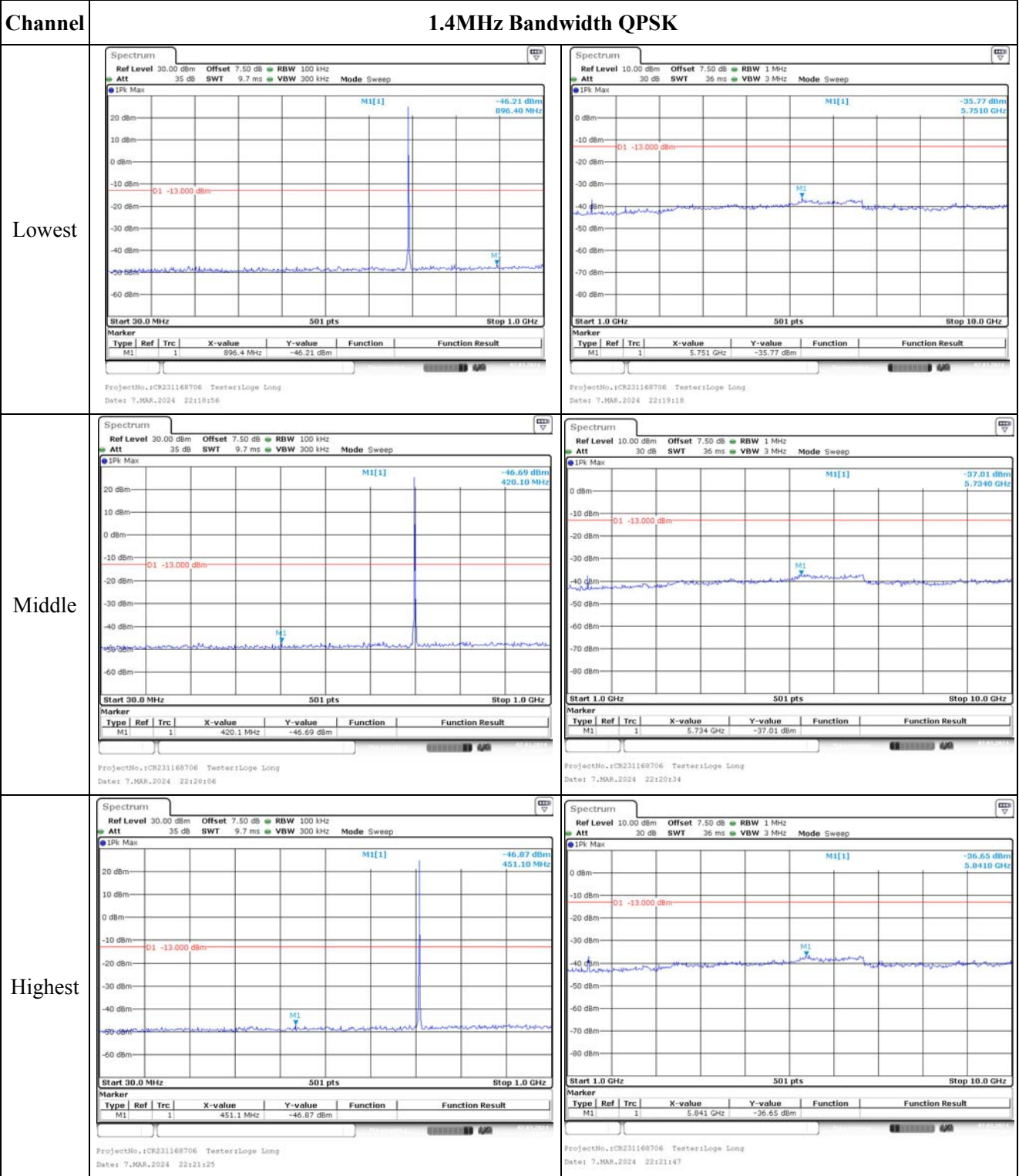


ProjectNo.:CR231168706 Testers:One Luo
Date: 29.Dec.2023 15:29:03

ProjectNo.:CR231168706 Testers:One Luo
Date: 29.Dec.2023 15:29:36

1RB:

Spurious Emissions at Antenna Terminal

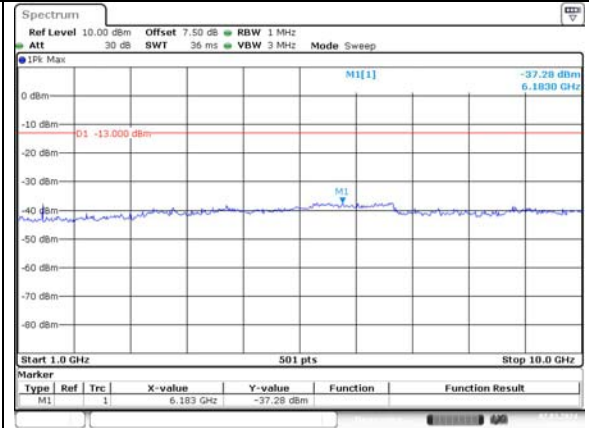
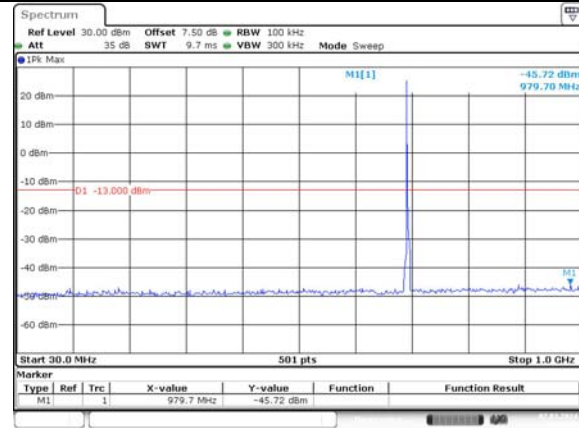


Spurious Emissions at Antenna Terminal

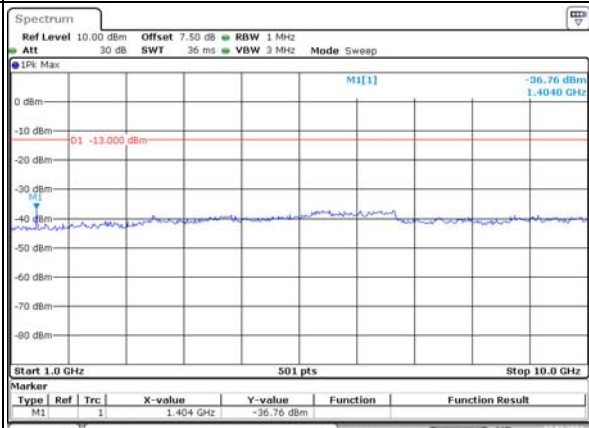
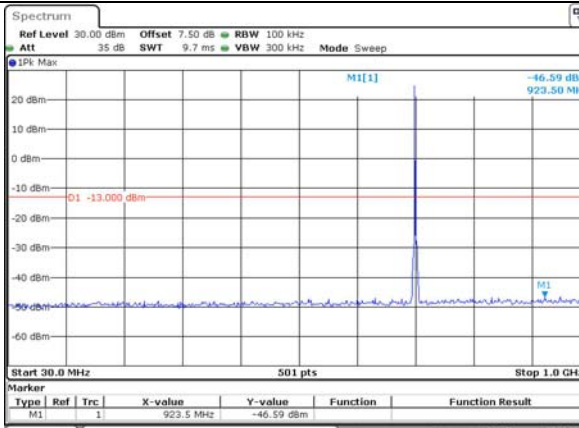
Channel

3MHz Bandwidth QPSK

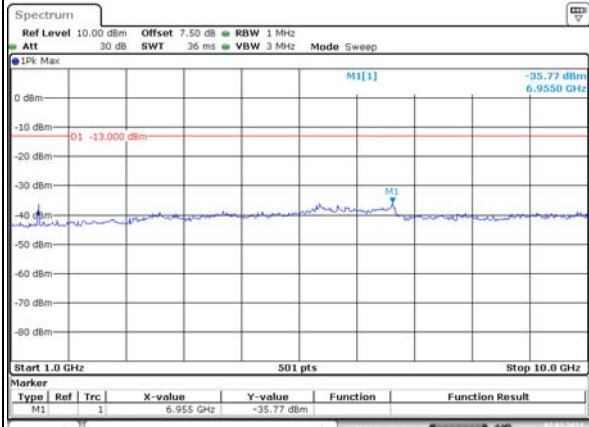
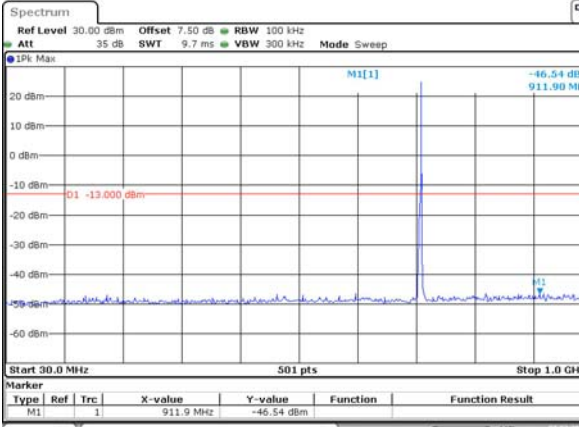
Lowest



Middle



Highest

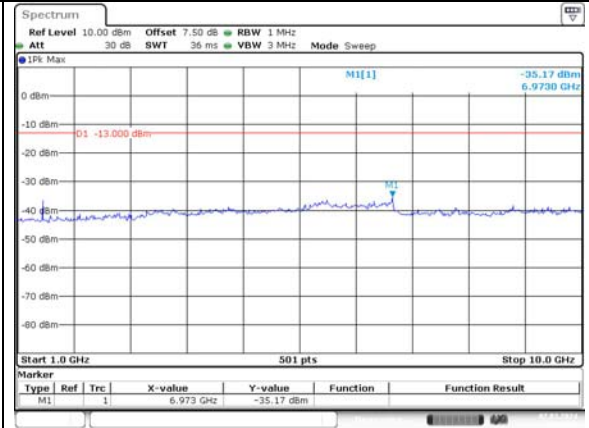
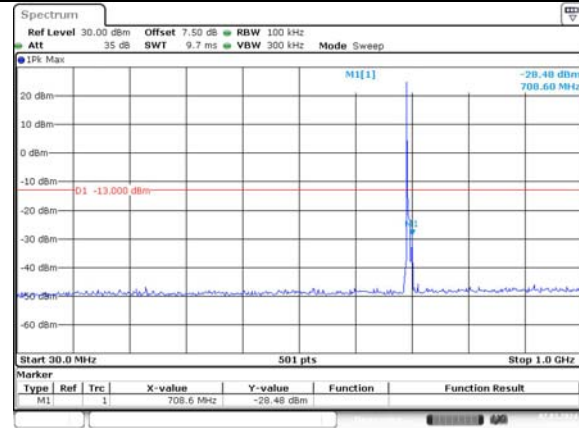


Spurious Emissions at Antenna Terminal

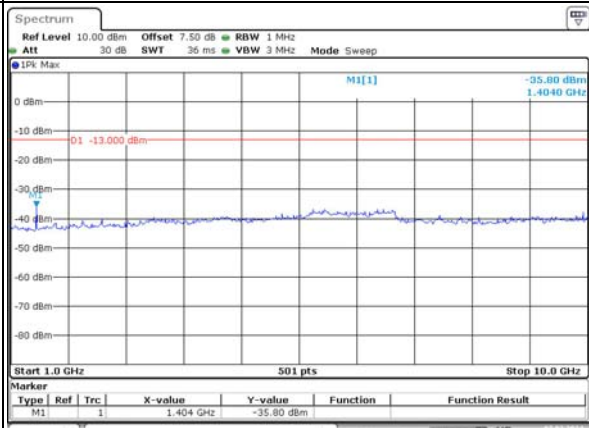
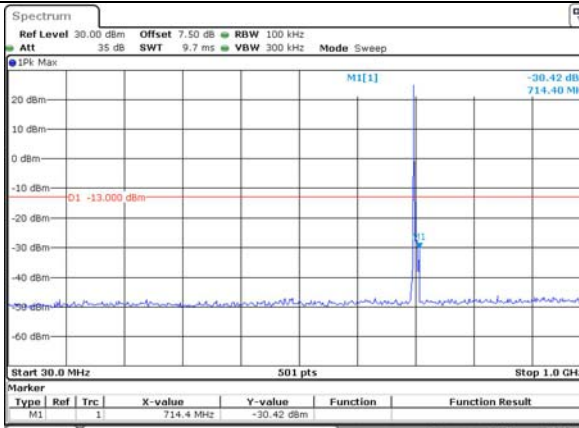
Channel

5MHz Bandwidth QPSK

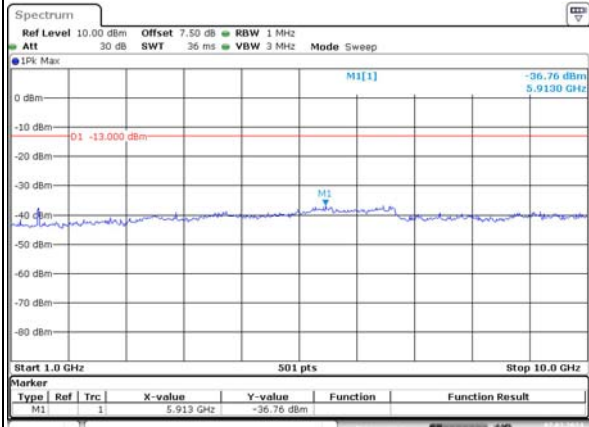
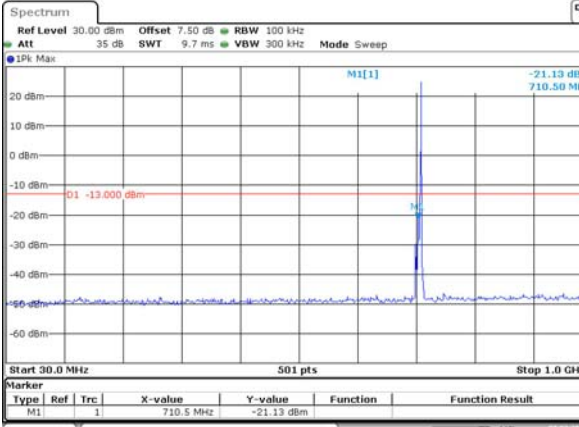
Lowest



Middle



Highest

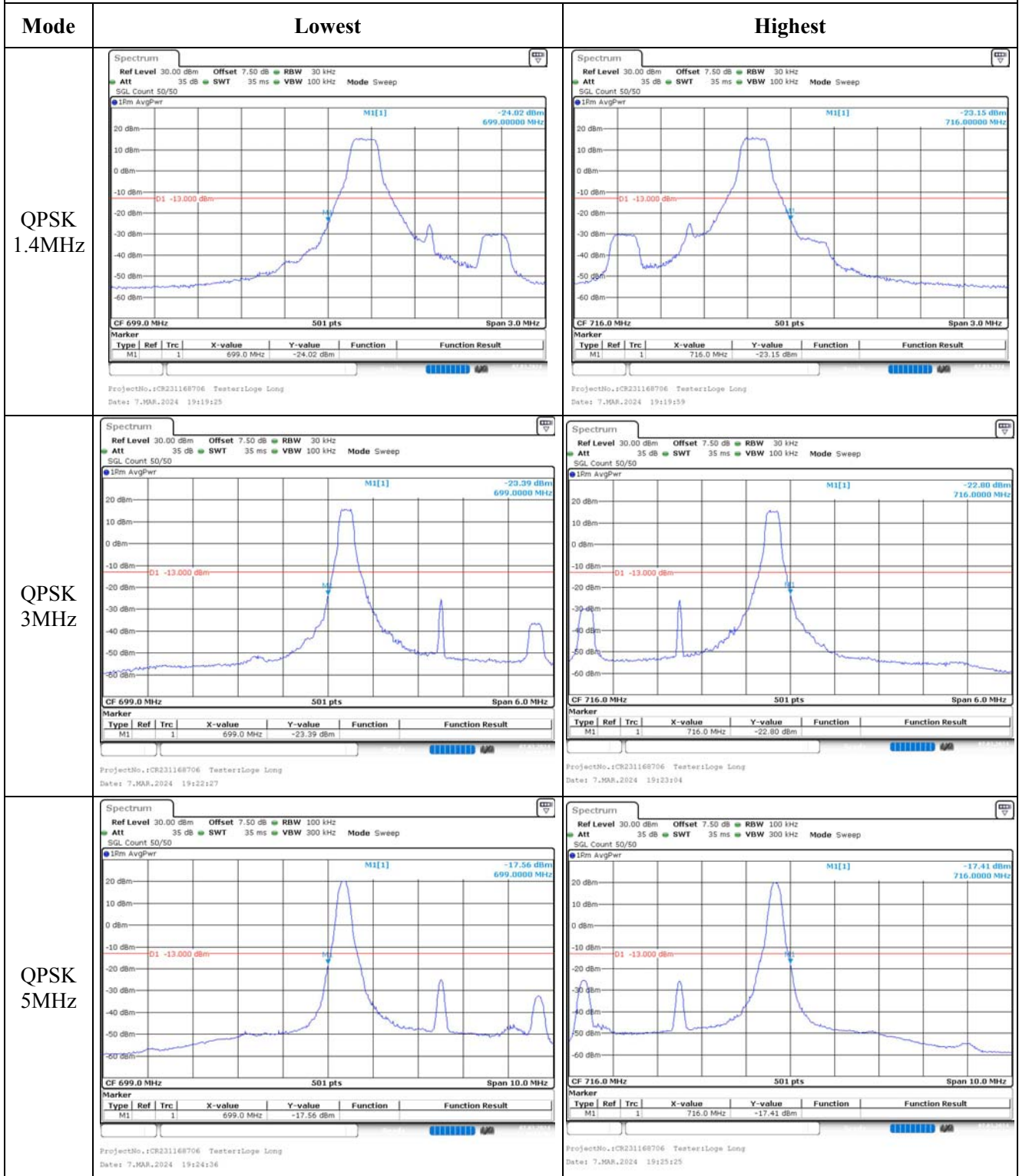


Spurious Emissions at Antenna Terminal

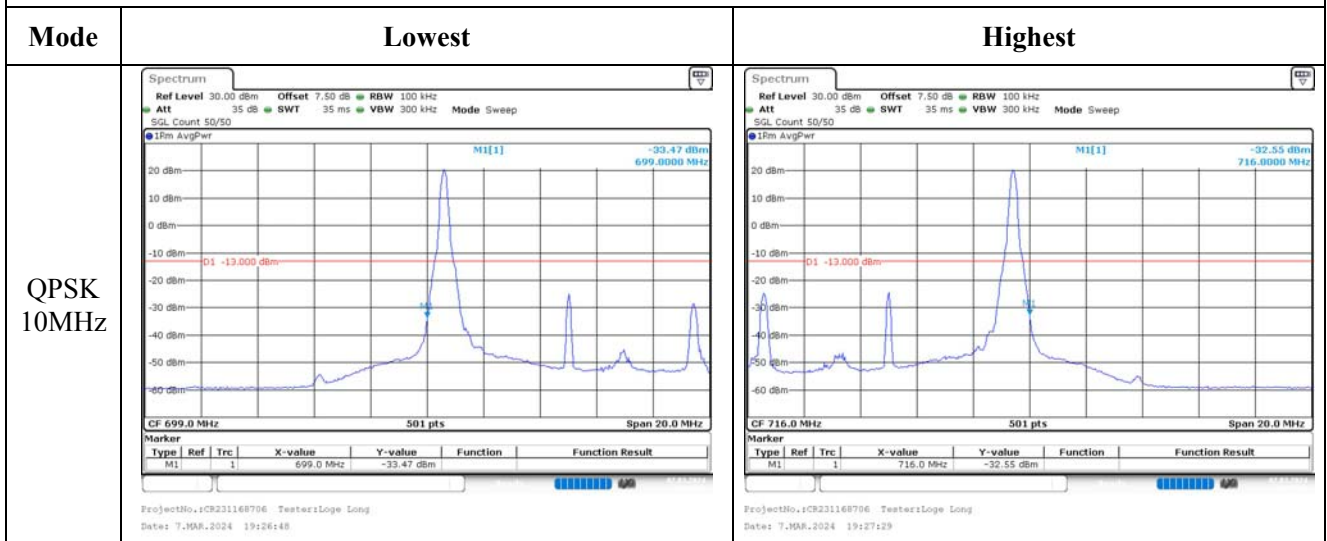
Channel	10MHz Bandwidth QPSK																																	
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M1			1	706.7 MHz	-19.44 dBm																													
Marker	Type	Ref	Trc	X-value	Y-value	Function	Function Result																											
M1			1	1.422 GHz	-36.49 dBm																													

1RB:

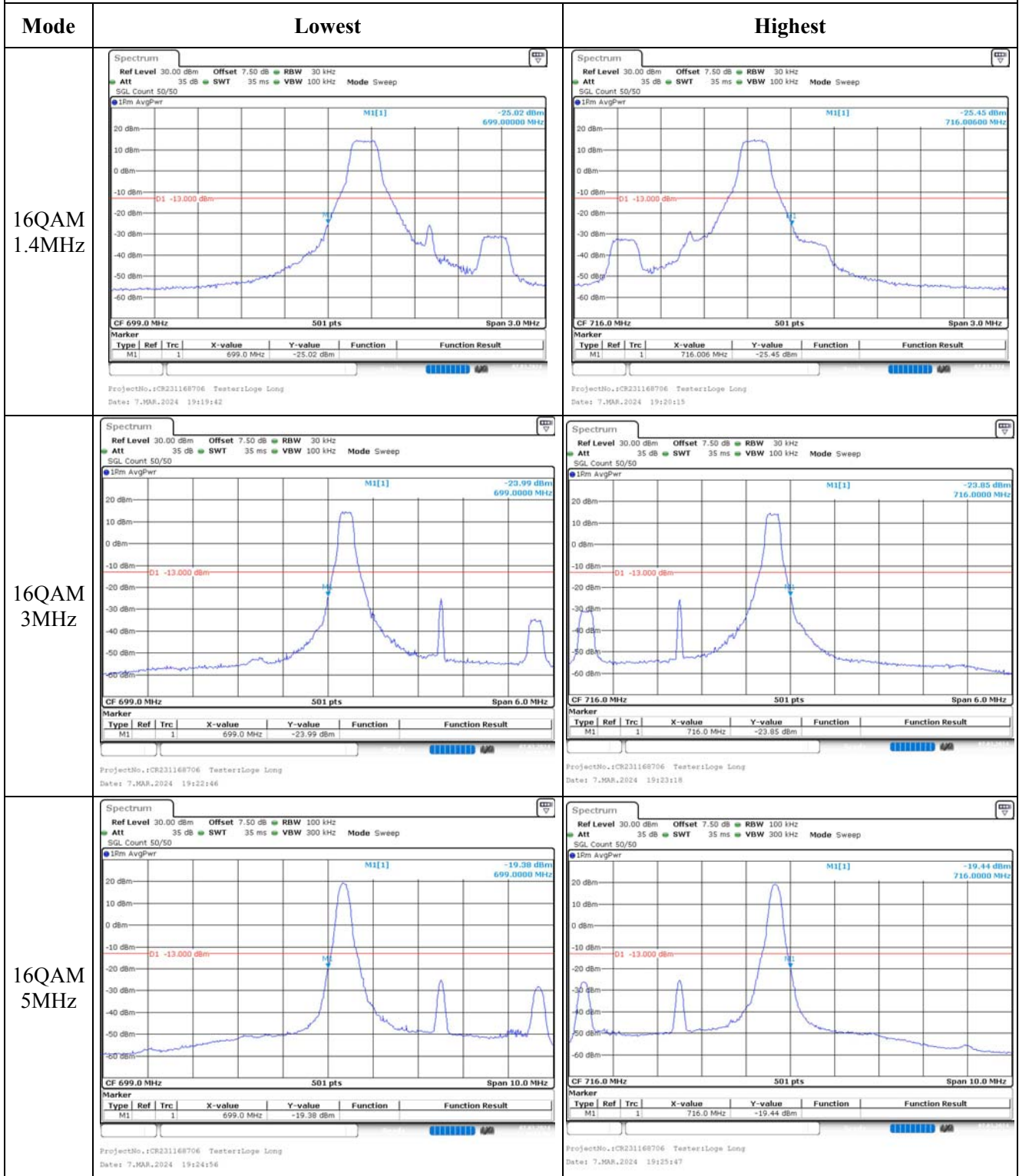
Out of band emission, Band Edge



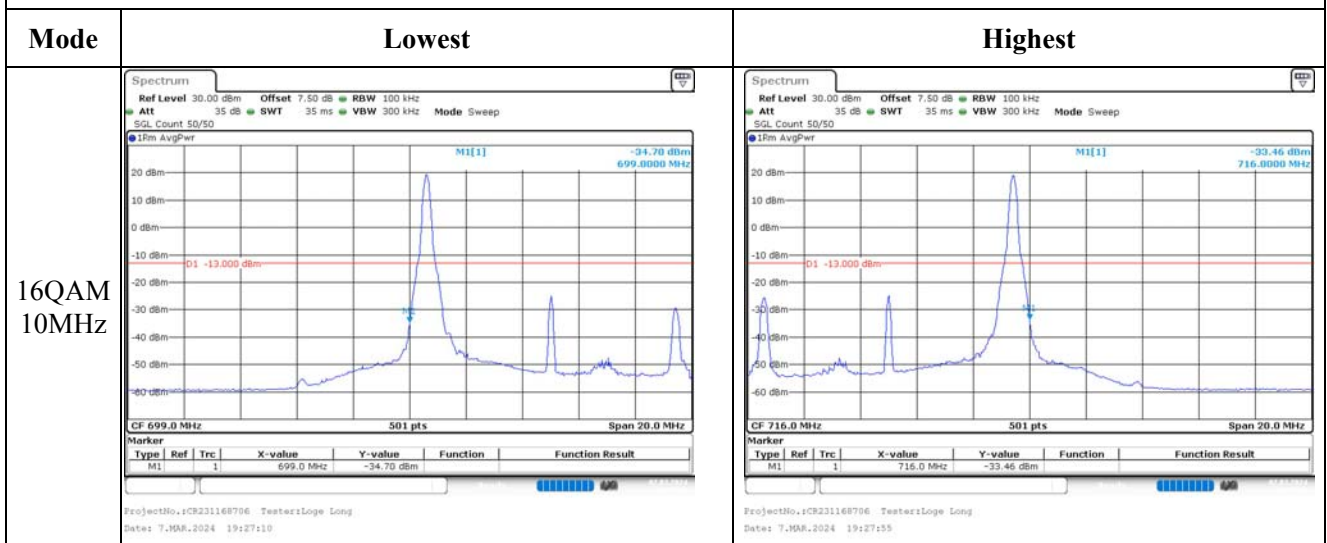
Out of band emission, Band Edge



Out of band emission, Band Edge

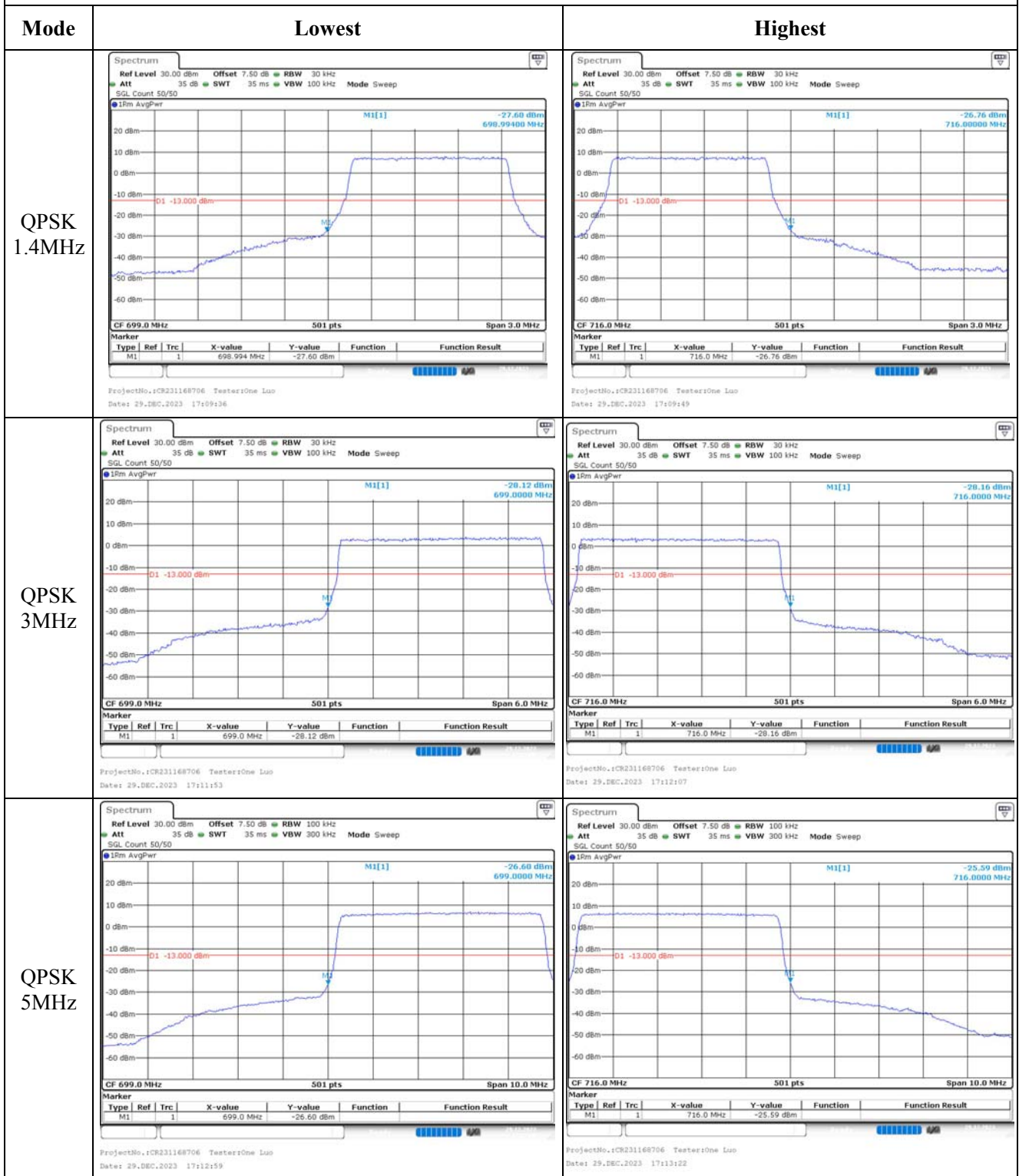


Out of band emission, Band Edge

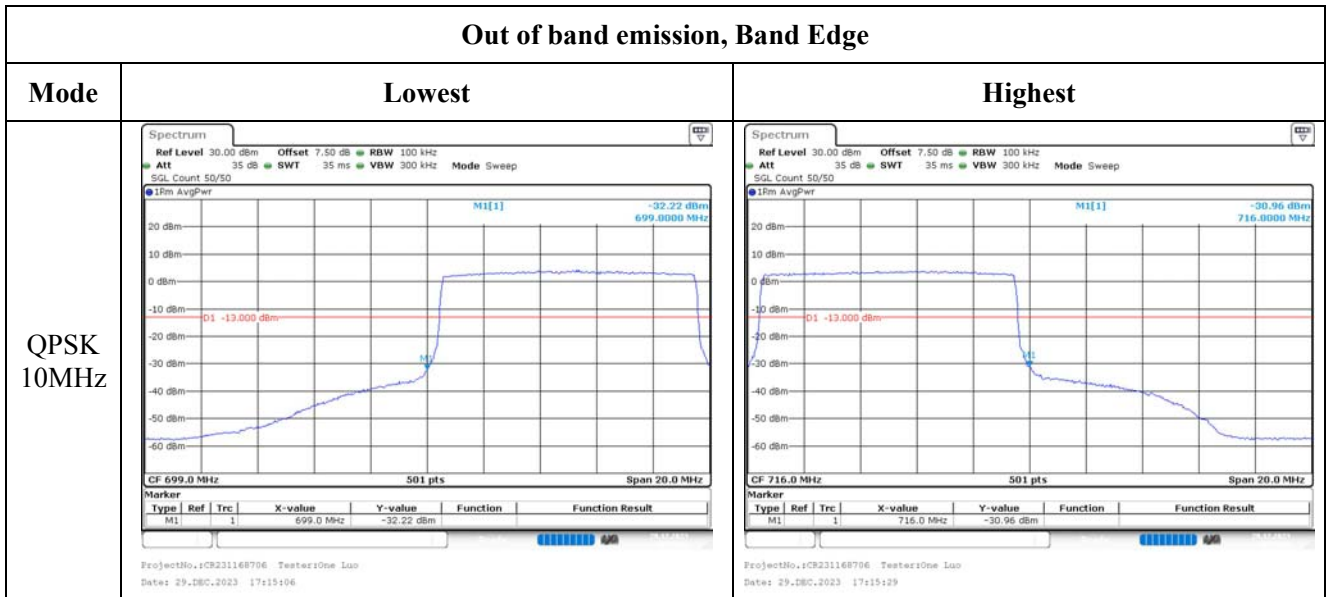


Full RB:

Out of band emission, Band Edge



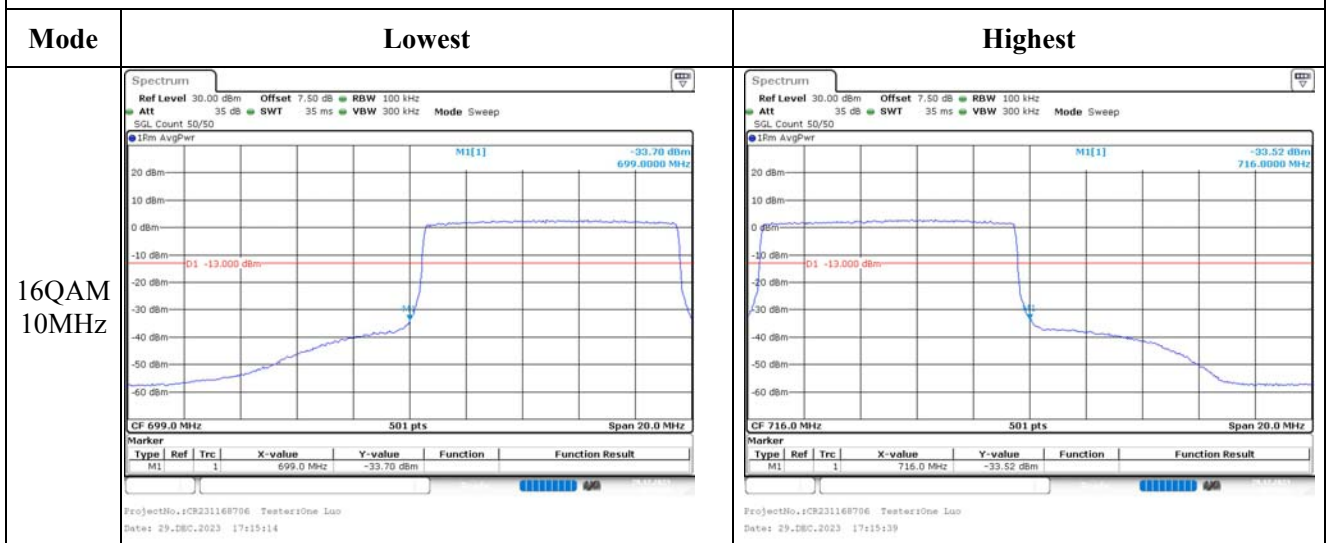
Out of band emission, Band Edge



Out of band emission, Band Edge

Mode	Lowest	Highest
16QAM 1.4MHz		
16QAM 3MHz		
16QAM 5MHz		

Out of band emission, Band Edge



4.8 Antenna Port Test Data and Results for LTE Band 13

Serial Number:	2DYI-2	Test Date:	2023/12/29~2024/3/11
Test Site:	RF	Test Mode:	Transmitting
Tester:	One Luo, Loge Long	Test Result:	Pass

Environmental Conditions:

Temperature: (°C)	21.3~25.2	Relative Humidity: (%)	28~65	ATM Pressure: (kPa)	100.9~101.4
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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	779.5	/	784.5
10MHz	/	782	/

Test Data:

RF Output Power						
Test Bandwidth & Modulation	Resource Block & RB offset	Conducted Average Output Power(dBm)			Maximum ERP (dBm)	ERP Limit (dBm)
		Lowest Channel	Middle Channel	Highest Channel		
5MHz QPSK	RB1#0	22.79	/	23.13	17.63	34.77
	RB1#13	22.97	/	23.2		
	RB1#24	23	/	23.28		
	RB15#0	22.09	/	22.21		
	RB15#10	22.11	/	22.22		
	RB25#0	22.18	/	22.25		
5MHz 16QAM	RB1#0	21.98	/	22.19	16.71	34.77
	RB1#13	22.14	/	22.25		
	RB1#24	22.09	/	22.36		
	RB15#0	21.17	/	21.19		
	RB15#10	21.15	/	21.24		
	RB25#0	21.17	/	21.16		
10MHz QPSK	RB1#0	/	23.15	/	17.61	34.77
	RB1#25	/	23.21	/		
	RB1#49	/	23.26	/		
	RB25#0	/	22.11	/		
	RB25#25	/	22.2	/		
	RB50#0	/	22.19	/		
10MHz 16QAM	RB1#0	/	22.03	/	16.44	34.77
	RB1#25	/	21.96	/		
	RB1#49	/	22.09	/		
	RB25#0	/	21.13	/		
	RB25#25	/	21.2	/		
	RB50#0	/	21.19	/		

Note:
 $ERP = \text{Conducted Power(dBm)} - L_c(\text{dB}) + G_T(\text{dBd})$
 $G_T(\text{dBd}) = G_T(\text{dBi}) - 2.15$

Result:**Pass**

Peak-to-average Ratio(PAR)					
Test Bandwidth & Modulation	Resource Block & RB offset	Peak-to-average Ratio(dB)			Limit (dB)
		Lowest Channel	Middle Channel	Highest Channel	
10MHz QPSK	RB1#0	/	4.17	/	13
	RB50#0	/	4.72	/	13
10MHz 16QAM	RB1#0	/	5.28	/	13
	RB50#0	/	5.8	/	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	/	4.511	5.02	/	5.04
5MHz 16QAM	4.531	/	4.511	5.02	/	5.04
10MHz QPSK	/	8.942	/	/	9.72	/
10MHz 16QAM	/	8.942	/	/	9.72	/

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.

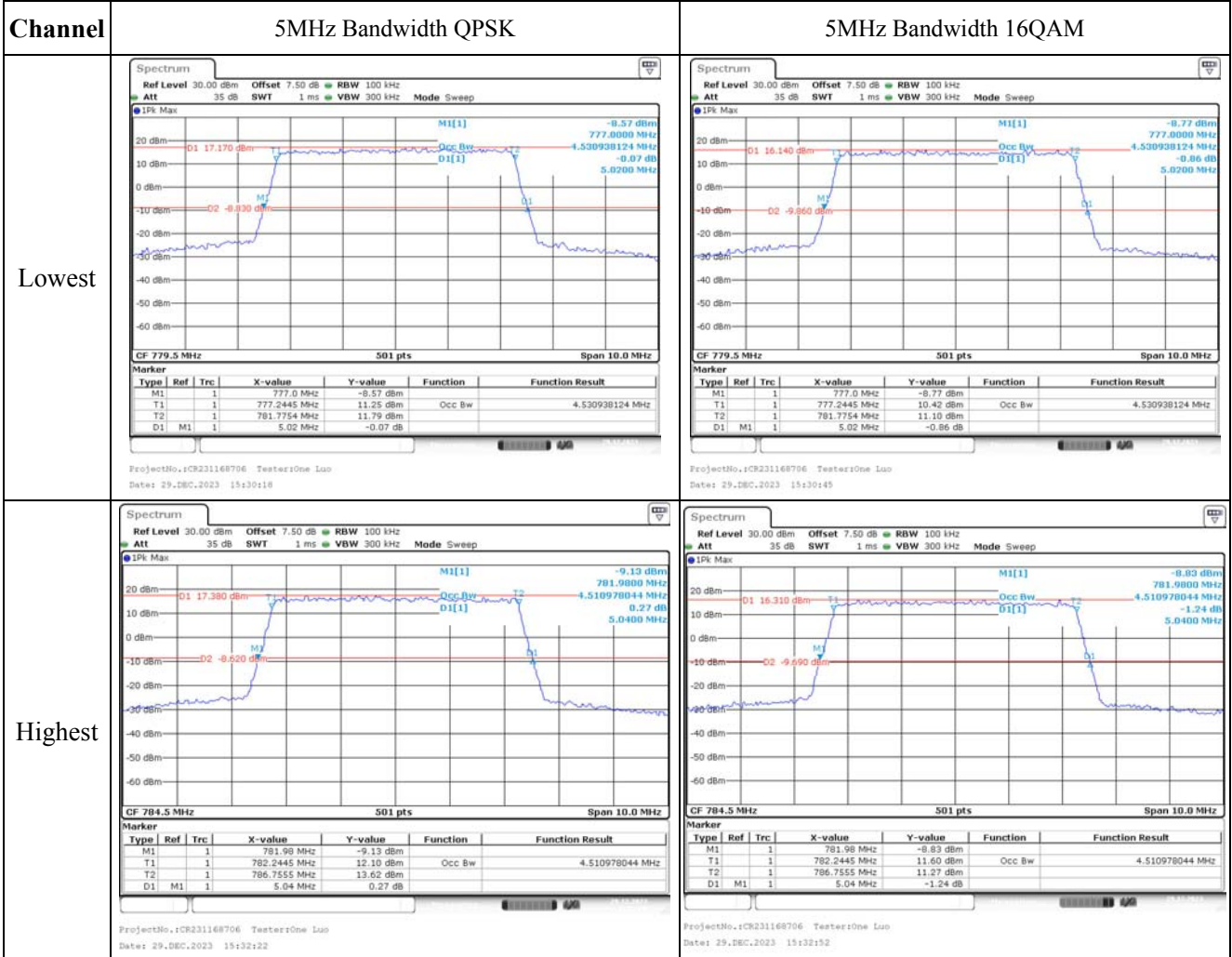
Out of band emission, Band Edge	
Result:	Pass, Please refer to the test plots of Out of band emission, Band Edge.

Frequency Stability						
Test Mode:	10M QPSK	Test Channel: Lowest for Lower Edge, Highest for Upper Edge				
Test Item	Temperature (°C)	Voltage (V _{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.6	777.293	777.00	786.771	787.00
	-20	3.6	777.267	777.00	786.796	787.00
	-10	3.6	777.275	777.00	786.763	787.00
	0	3.6	777.234	777.00	786.758	787.00
	10	3.6	777.278	777.00	786.749	787.00
	20	3.6	777.245	777.00	786.756	787.00
	30	3.6	777.286	777.00	786.722	787.00
	40	3.6	777.250	777.00	786.789	787.00
Frequency Stability vs. Voltage	20	3.45	777.237	777.00	786.737	787.00
	20	4.12	777.244	777.00	786.734	787.00
Result:					Pass	

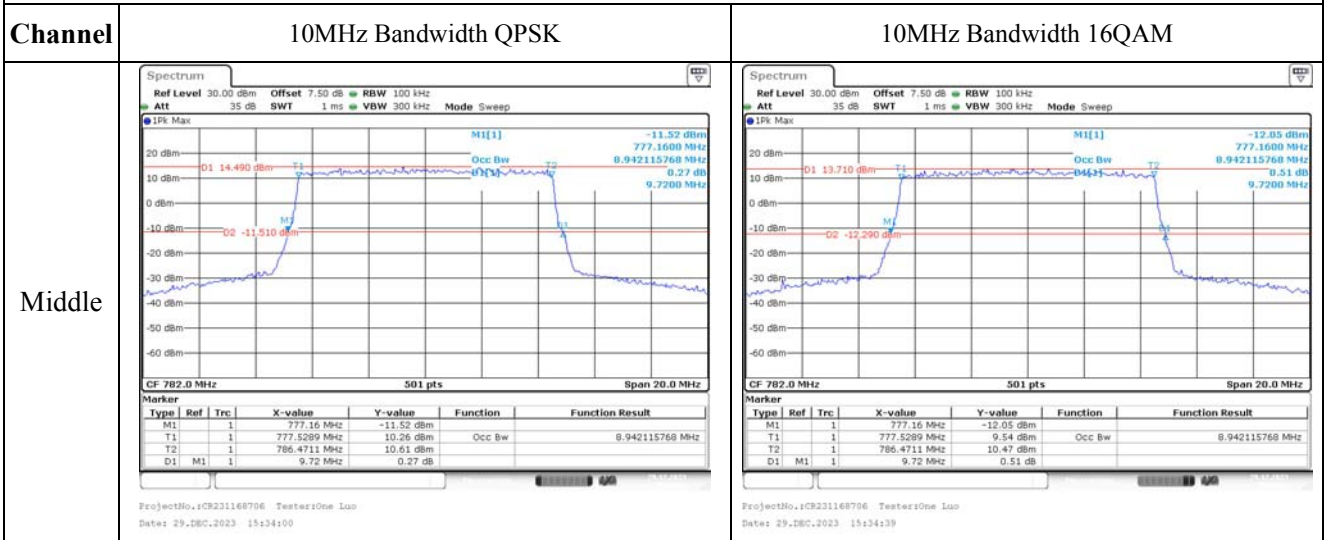
Test Mode:	10M 16QAM	Test Channel: Lowest for Lower Edge, Highest for Upper Edge				
Test Item	Temperature (°C)	Voltage (V _{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.6	777.290	777.00	786.740	787.00
	-20	3.6	777.286	777.00	786.727	787.00
	-10	3.6	777.287	777.00	786.738	787.00
	0	3.6	777.243	777.00	786.798	787.00
	10	3.6	777.281	777.00	786.774	787.00
	20	3.6	777.245	777.00	786.756	787.00
	30	3.6	777.220	777.00	786.733	787.00
	40	3.6	777.217	777.00	786.798	787.00
	50	3.6	777.224	777.00	786.720	787.00
Frequency Stability vs. Voltage	20	3.45	777.268	777.00	786.793	787.00
	20	4.12	777.251	777.00	786.721	787.00
					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



1RB:

Spurious Emissions at Antenna Terminal

Channel	5MHz Bandwidth QPSK																																	
Lowest	<p>Ref Level 30.00 dBm Offset 7.50 dB RBW 100 kHz Att 35 dB SWT 9.7 ms VBW 300 kHz Mode Sweep</p> <p>Start 30.0 MHz 501 pts Stop 1.0 GHz</p> <table border="1"> <thead> <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> </thead> <tbody> <tr> <td>M1</td> <td></td> <td></td> <td>1</td> <td>786.1 MHz</td> <td>-31.74 dBm</td> <td></td> <td></td> </tr> </tbody> </table> <p>ProjectNo.:CR231168706 Testeri:Loge Long Date: 7.MAR.2024 22:37:47</p>	Marker	Type	Ref	Trc	X-value	Y-value	Function	Function Result	M1			1	786.1 MHz	-31.74 dBm			<p>Ref Level 10.00 dBm Offset 7.50 dB RBW 1 MHz Att 30 dB SWT 36 ms VBW 3 MHz Mode Sweep</p> <p>Start 1.0 GHz 501 pts Stop 10.0 GHz</p> <table border="1"> <thead> <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> </thead> <tbody> <tr> <td>M1</td> <td></td> <td></td> <td>1</td> <td>5.805 GHz</td> <td>-36.48 dBm</td> <td></td> <td></td> </tr> </tbody> </table> <p>ProjectNo.:CR231168706 Testeri:Loge Long Date: 7.MAR.2024 22:38:09</p>	Marker	Type	Ref	Trc	X-value	Y-value	Function	Function Result	M1			1	5.805 GHz	-36.48 dBm		
Marker	Type	Ref	Trc	X-value	Y-value	Function	Function Result																											
M1			1	786.1 MHz	-31.74 dBm																													
Marker	Type	Ref	Trc	X-value	Y-value	Function	Function Result																											
M1			1	5.805 GHz	-36.48 dBm																													
Lowest	<p>Ref Level -10.00 dBm Offset 7.50 dB RBW 10 kHz Att 40 dB SWT 12 ms VBW 30 kHz Mode Sweep</p> <p>Start 763.0 MHz 501 pts Stop 775.0 MHz</p> <table border="1"> <thead> <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> </thead> <tbody> <tr> <td>M1</td> <td></td> <td></td> <td>1</td> <td>774.988 MHz</td> <td>-47.64 dBm</td> <td></td> <td></td> </tr> </tbody> </table> <p>ProjectNo.:CR231168706 Testeri:Loge Long Date: 7.MAR.2024 22:38:27</p>	Marker	Type	Ref	Trc	X-value	Y-value	Function	Function Result	M1			1	774.988 MHz	-47.64 dBm			<p>Ref Level -10.00 dBm Offset 7.50 dB RBW 10 kHz Att 40 dB SWT 13 ms VBW 30 kHz Mode Sweep</p> <p>Start 793.0 MHz 501 pts Stop 806.0 MHz</p> <table border="1"> <thead> <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> </thead> <tbody> <tr> <td>M1</td> <td></td> <td></td> <td>1</td> <td>800.46 MHz</td> <td>-52.33 dBm</td> <td></td> <td></td> </tr> </tbody> </table> <p>ProjectNo.:CR231168706 Testeri:Loge Long Date: 7.MAR.2024 22:38:08</p>	Marker	Type	Ref	Trc	X-value	Y-value	Function	Function Result	M1			1	800.46 MHz	-52.33 dBm		
Marker	Type	Ref	Trc	X-value	Y-value	Function	Function Result																											
M1			1	774.988 MHz	-47.64 dBm																													
Marker	Type	Ref	Trc	X-value	Y-value	Function	Function Result																											
M1			1	800.46 MHz	-52.33 dBm																													
Lowest	<p>Ref Level -20.00 dBm Offset 7.50 dB RBW 1 MHz Att 25 dB SWT 1 ms VBW 3 MHz Mode Sweep</p> <p>Start 1.539 GHz 501 pts Stop 1.61 GHz</p> <table border="1"> <thead> <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> </thead> <tbody> <tr> <td>M1</td> <td></td> <td></td> <td>1</td> <td>1.60018 GHz</td> <td>-46.15 dBm</td> <td></td> <td></td> </tr> </tbody> </table> <p>ProjectNo.:CR231168706 Testeri:Loge Long Date: 7.MAR.2024 22:42:23</p>	Marker	Type	Ref	Trc	X-value	Y-value	Function	Function Result	M1			1	1.60018 GHz	-46.15 dBm			/																
Marker	Type	Ref	Trc	X-value	Y-value	Function	Function Result																											
M1			1	1.60018 GHz	-46.15 dBm																													

Spurious Emissions at Antenna Terminal

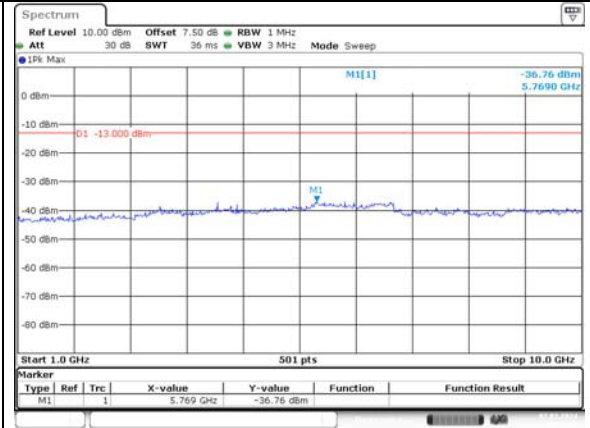
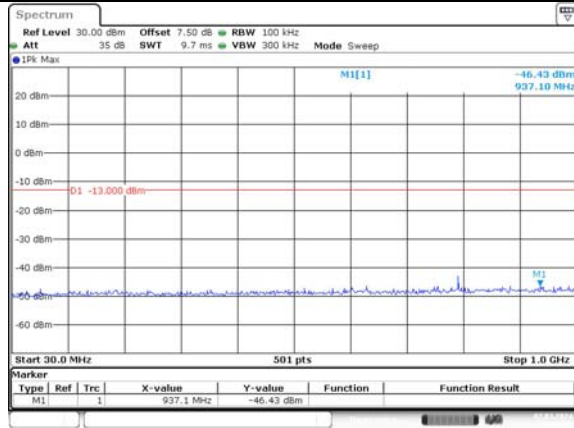
Channel	5MHz Bandwidth QPSK	
Highest	<p>ProjectNo.:CR231168706 Testers:Loge Long Date: 11.MAR.2024 15:05:03</p>	<p>ProjectNo.:CR231168706 Testers:Loge Long Date: 7.MAR.2024 22:45:32</p>
Highest	<p>ProjectNo.:CR231168706 Testers:Loge Long Date: 7.MAR.2024 22:45:57</p>	<p>ProjectNo.:CR231168706 Testers:Loge Long Date: 7.MAR.2024 22:46:19</p>
Highest	<p>ProjectNo.:CR231168706 Testers:Loge Long Date: 7.MAR.2024 22:46:44</p>	

Spurious Emissions at Antenna Terminal

Channel

10MHz Bandwidth QPSK

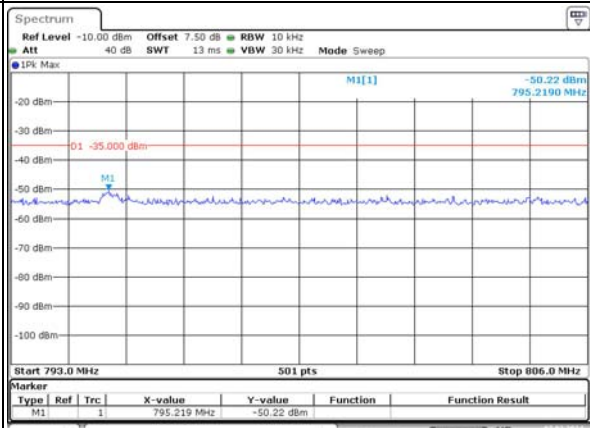
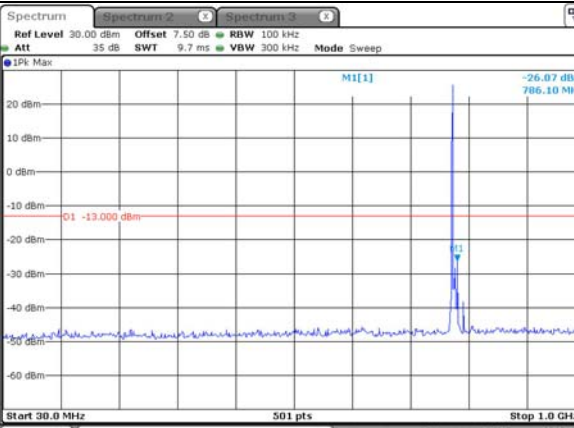
Middle



ProjectNo.:CR231168706 Testeri:Loge Long
Date: 7.MAR.2024 22:48:43

ProjectNo.:CR231168706 Testeri:Loge Long
Date: 7.MAR.2024 22:49:08

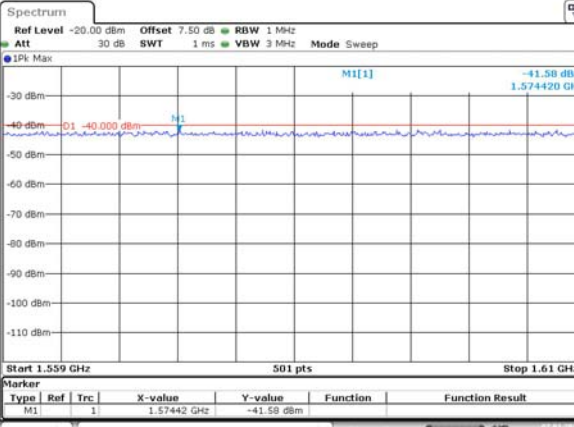
Middle



ProjectNo.:CR231168706 Testeri:Loge Long
Date: 11.MAR.2024 15:05:48

ProjectNo.:CR231168706 Testeri:Loge Long
Date: 7.MAR.2024 22:50:01

Middle

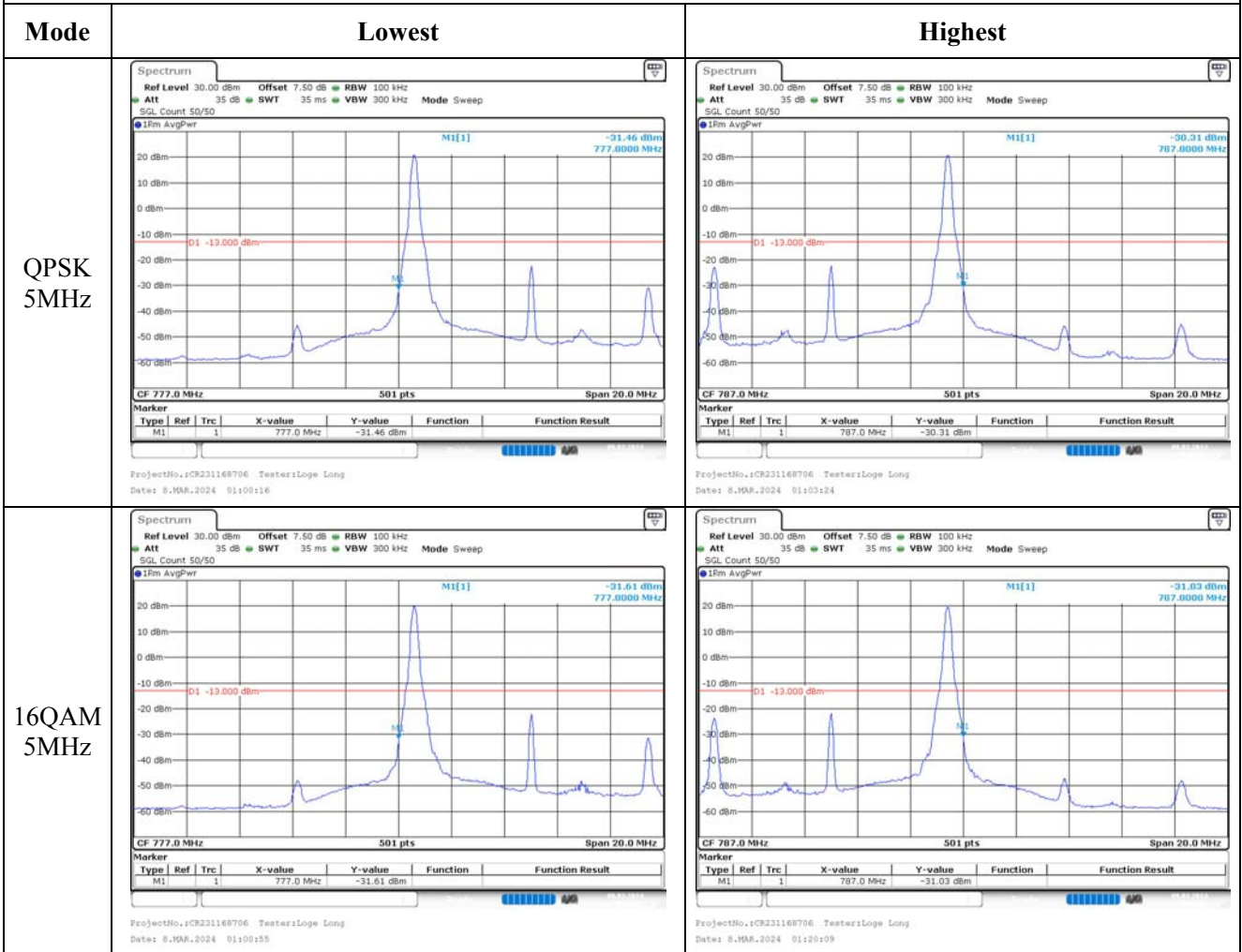


ProjectNo.:CR231168706 Testeri:Loge Long
Date: 7.MAR.2024 22:50:23

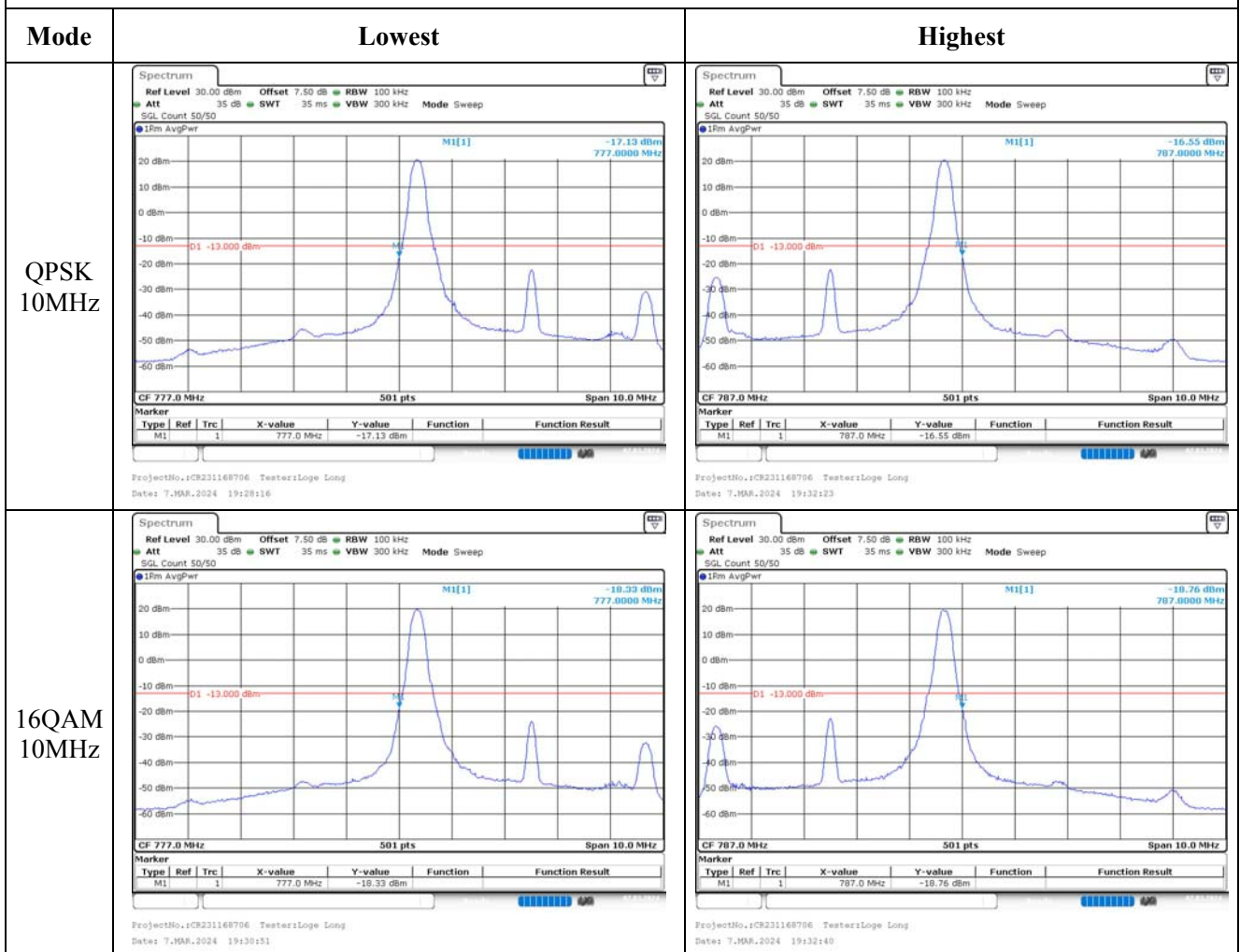
/

1RB:

Out of band emission, Band Edge

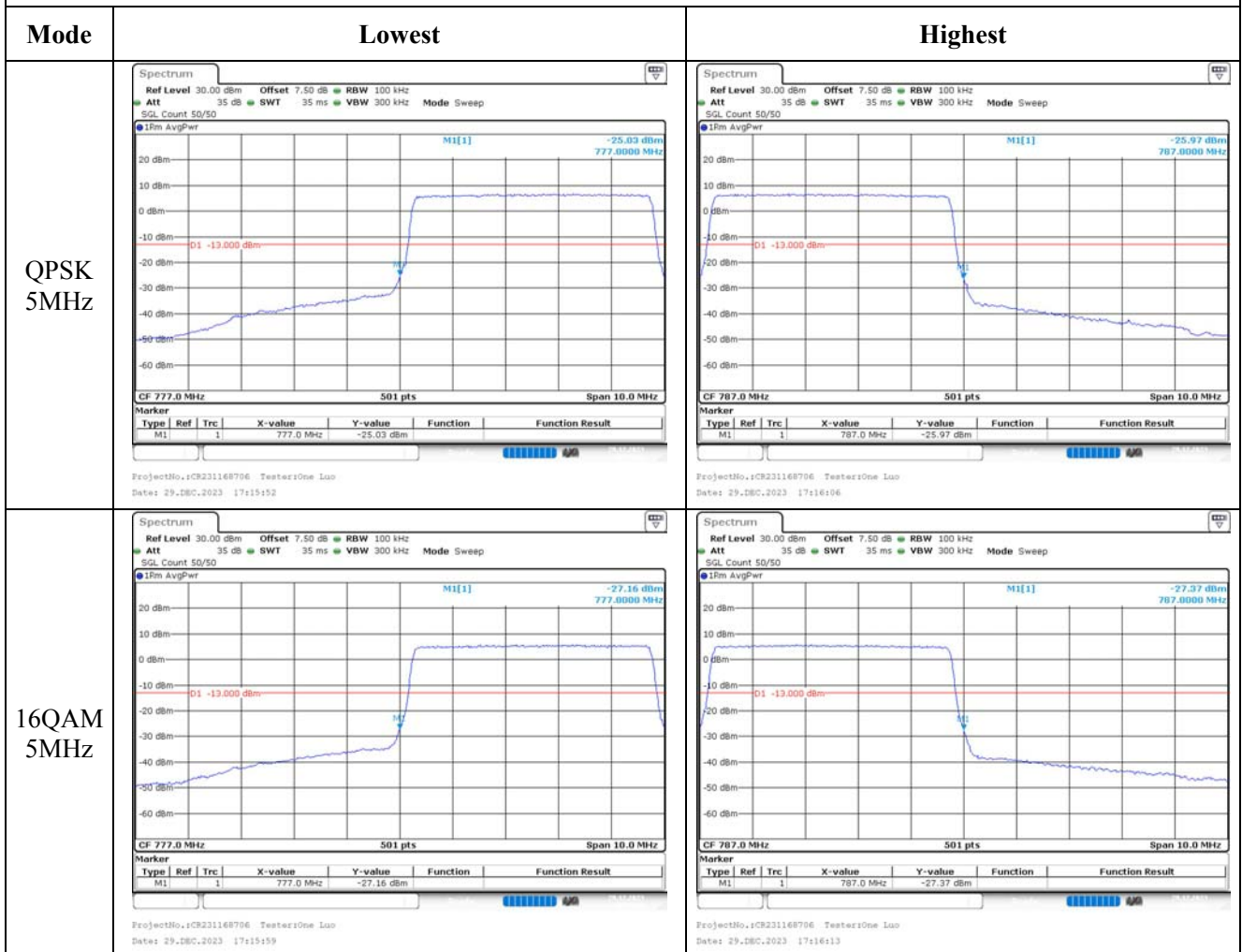


Out of band emission, Band Edge

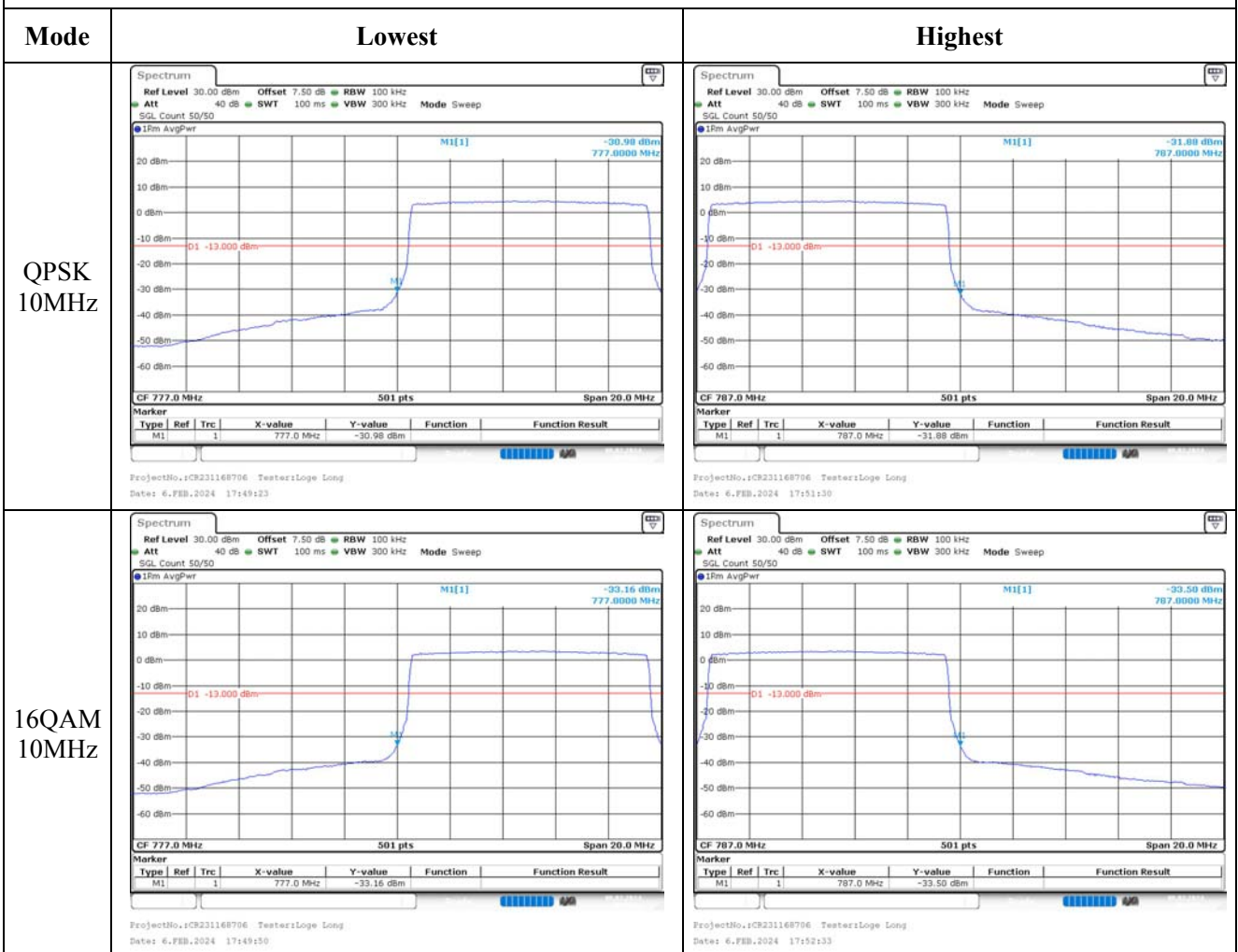


Full RB:

Out of band emission, Band Edge



Out of band emission, Band Edge



4.9 Antenna Port Test Data and Results for LTE Band 14

Serial Number:	2DYI-2	Test Date:	2023/12/29~2024/3/8
Test Site:	RF	Test Mode:	Transmitting
Tester:	One Luo, Loge Long	Test Result:	Pass

Environmental Conditions:

Temperature: (°C)	21.3~25.2	Relative Humidity: (%)	28~56	ATM Pressure: (kPa)	100.9~101.4
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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	790.5	/	795.5
10MHz	/	793	/

Test Data:

RF Output Power						
Test Bandwidth & Modulation	Resource Block & RB offset	Conducted Average Output Power(dBm)			Maximum ERP (dBm)	ERP Limit (dBm)
		Lowest Channel	Middle Channel	Highest Channel		
5MHz QPSK	RB1#0	23.39	/	23.38	17.81	34.77
	RB1#13	23.45	/	23.46		
	RB1#24	23.47	/	23.25		
	RB15#0	22.52	/	22.5		
	RB15#10	22.56	/	22.52		
	RB25#0	22.52	/	22.51		
5MHz 16QAM	RB1#0	22.4	/	22.59	16.96	34.77
	RB1#13	22.6	/	22.48		
	RB1#24	22.62	/	22.47		
	RB15#0	21.47	/	21.44		
	RB15#10	21.48	/	21.47		
	RB25#0	21.49	/	21.48		
10MHz QPSK	RB1#0	/	23.48	/	17.82	34.77
	RB1#25	/	23.48	/		
	RB1#49	/	23.37	/		
	RB25#0	/	22.47	/		
	RB25#25	/	22.49	/		
	RB50#0	/	22.51	/		
10MHz 16QAM	RB1#0	/	22.51	/	17	34.77
	RB1#25	/	22.66	/		
	RB1#49	/	22.34	/		
	RB25#0	/	21.46	/		
	RB25#25	/	21.48	/		
	RB50#0	/	21.48	/		

Note:

ERP= Conducted Power(dBm) - Lc(dB) + Gr(dBd)

Gr(dBd)=Gr(dBi)-2.15

Result:**Pass**

Peak-to-average Ratio(PAR)					
Test Bandwidth & Modulation	Resource Block & RB offset	Peak-to-average Ratio(dB)			Limit (dB)
		Lowest Channel	Middle Channel	Highest Channel	
10MHz QPSK	RB1#0	/	4.32	/	13
	RB50#0	/	4.58	/	13
10MHz 16QAM	RB1#0	/	5.33	/	13
	RB50#0	/	5.68	/	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	/	4.511	5.06	/	5.04
5MHz 16QAM	4.491	/	4.511	5.06	/	5.02
10MHz QPSK	/	8.942	/	/	9.68	/
10MHz 16QAM	/	8.942	/	/	9.72	/

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

Spurious Emissions at Antenna Terminal

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

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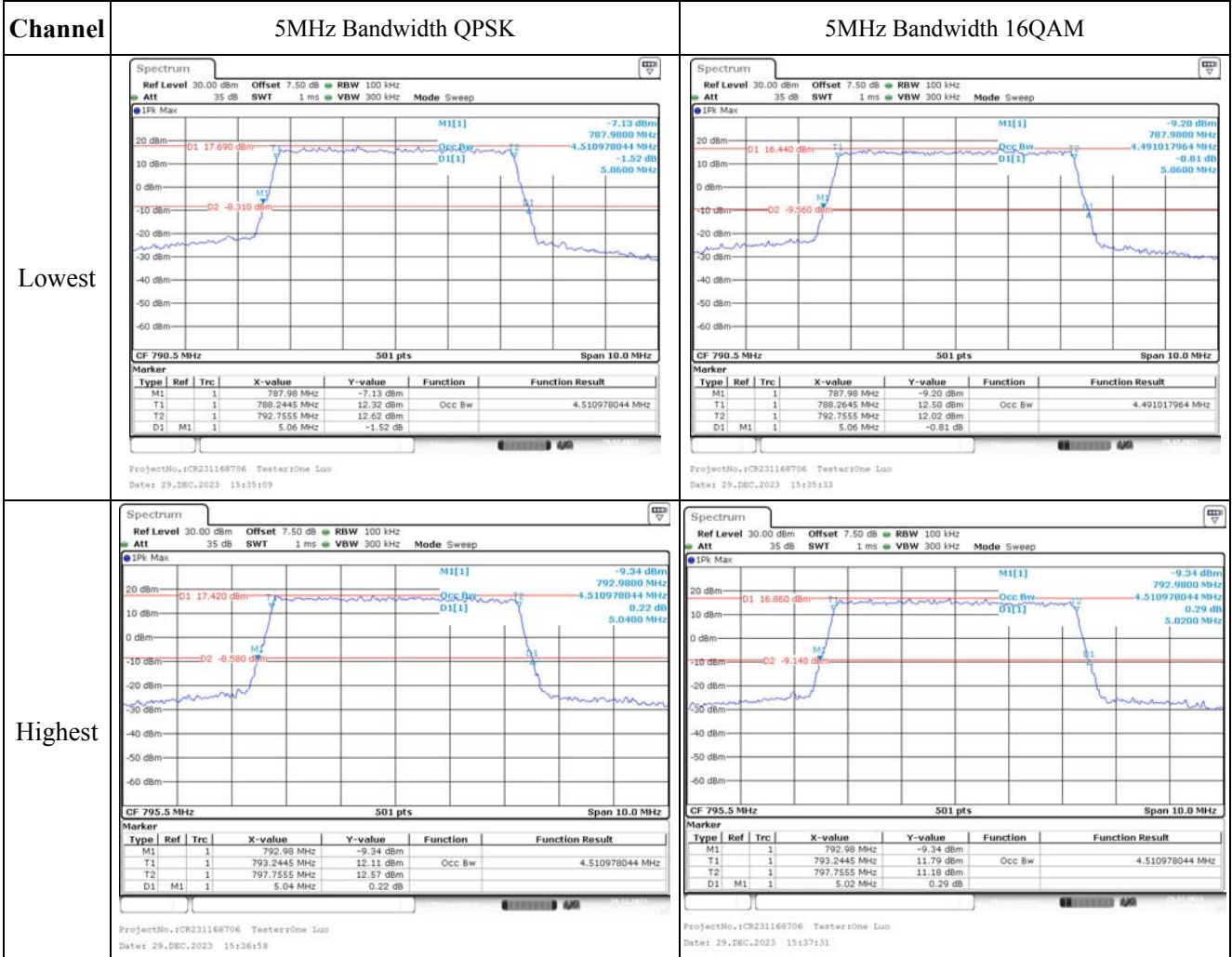
Frequency Stability

Test Modulation:	10 MHz QPSK		Test Channel:	793	MHz
Test Item	Temperature (°C)	Voltage (V _{DC})	Frequency Error		Limit
			(Hz)	(ppm)	(ppm)
Frequency Stability vs. Temperature	-30	3.6	-1.37	-0.002	2.5
	-20	3.6	-7.53	-0.009	2.5
	-10	3.6	-7.8	-0.010	2.5
	0	3.6	8.82	0.011	2.5
	10	3.6	-7.19	-0.009	2.5
	20	3.6	6.69	0.008	2.5
	30	3.6	-7.11	-0.009	2.5
	40	3.6	-9.97	-0.013	2.5
Frequency Stability vs. Voltage	20	3.45	6.12	0.008	2.5
	20	4.12	7.05	0.009	2.5
Result:				Pass	

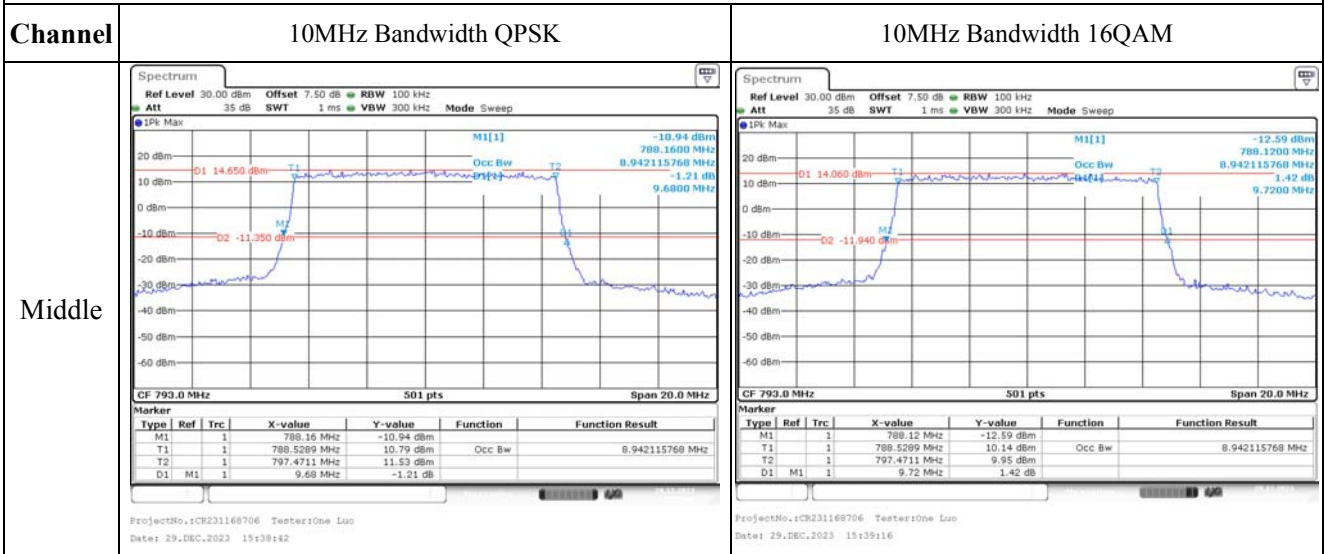
Test Modulation:	10 MHz 16QAM		Test Channel:	793	MHz
Test Item	Temperature (°C)	Voltage (V _{bc})	Frequency Error		Limit
			(Hz)	(ppm)	(ppm)
Frequency Stability vs. Temperature	-30	3.6	-1.23	-0.002	2.5
	-20	3.6	-5.79	-0.007	2.5
	-10	3.6	-7.69	-0.010	2.5
	0	3.6	-9.71	-0.012	2.5
	10	3.6	-7.72	-0.010	2.5
	20	3.6	5.04	0.006	2.5
	30	3.6	-8.52	-0.011	2.5
	40	3.6	-5.96	-0.008	2.5
	50	3.6	-5.35	-0.007	2.5
Frequency Stability vs. Voltage	20	3.45	-6.8	-0.009	2.5
	20	4.12	9.26	0.012	2.5
				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

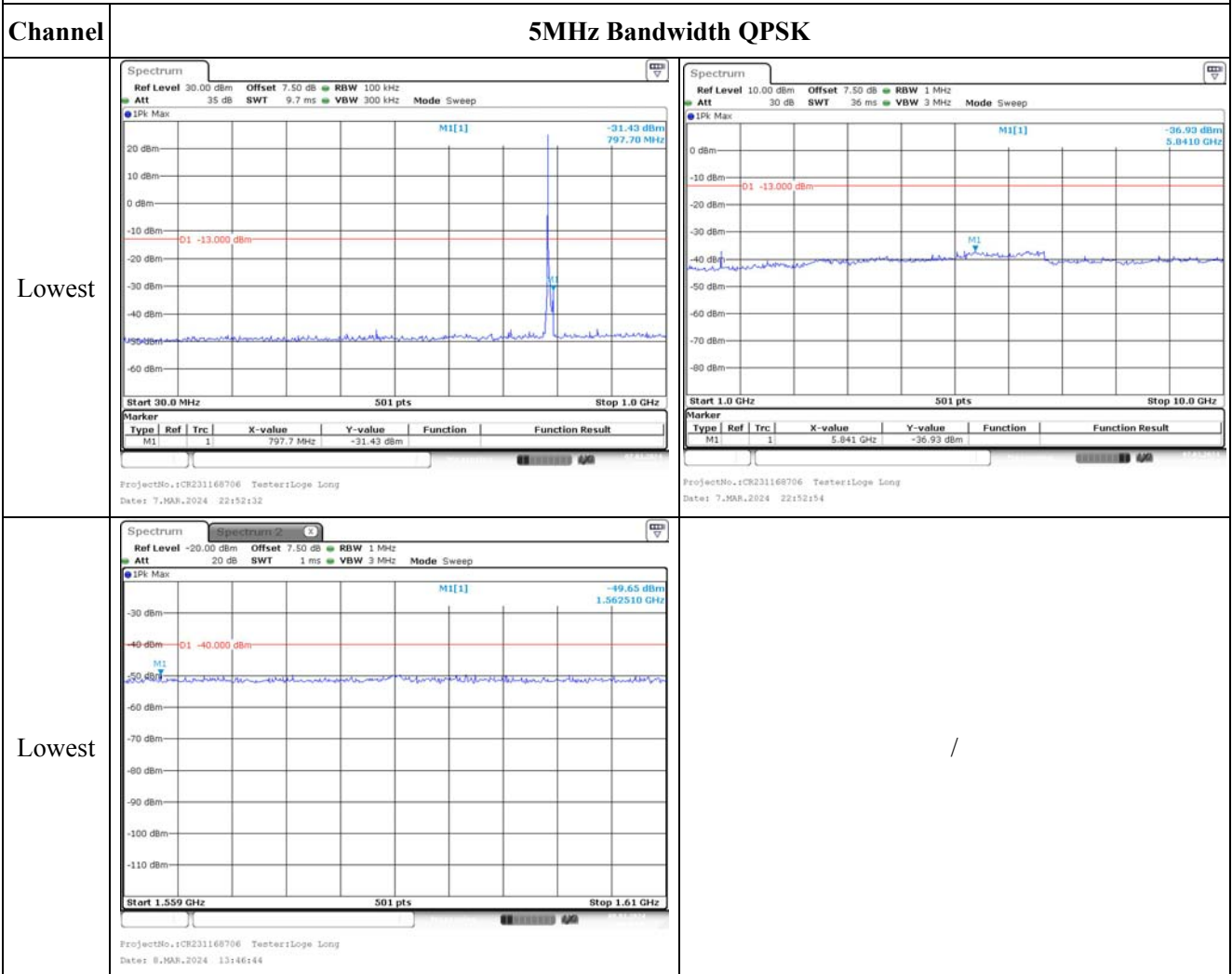


Occupied Bandwidth



1RB:

Spurious Emissions at Antenna Terminal

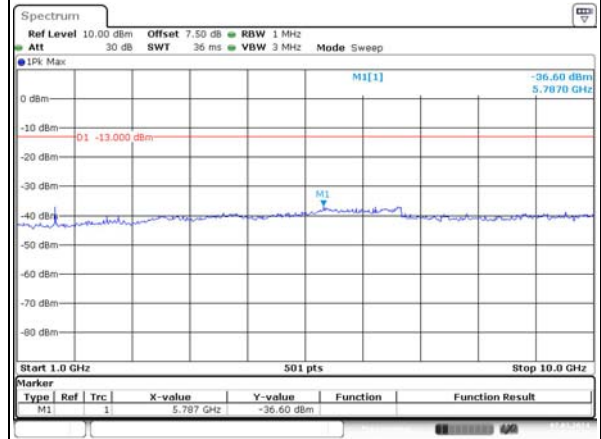
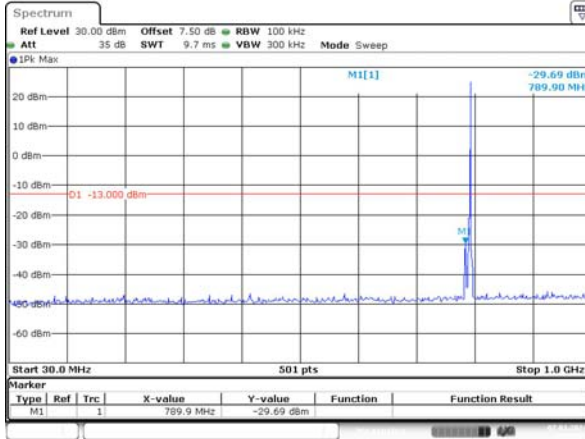


Spurious Emissions at Antenna Terminal

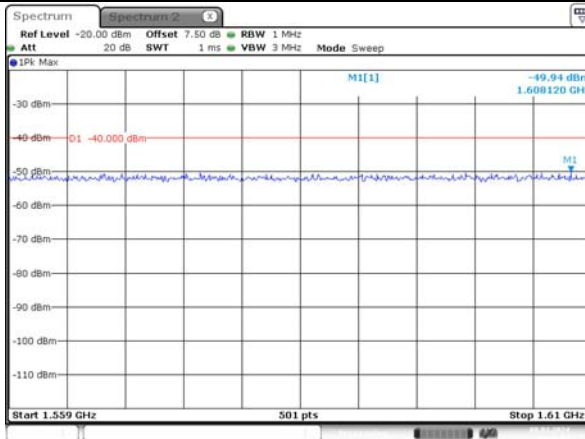
Channel

5MHz Bandwidth QPSK

Highest



Highest



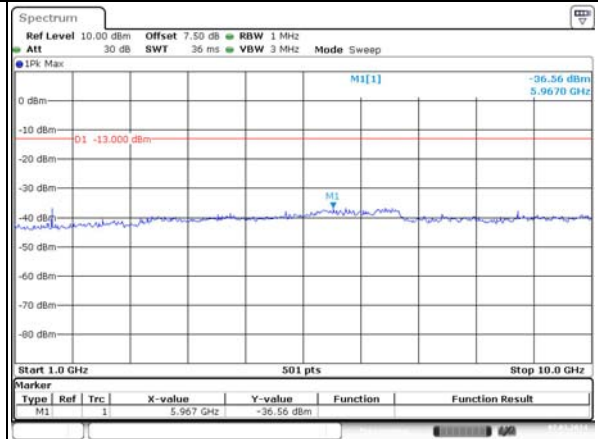
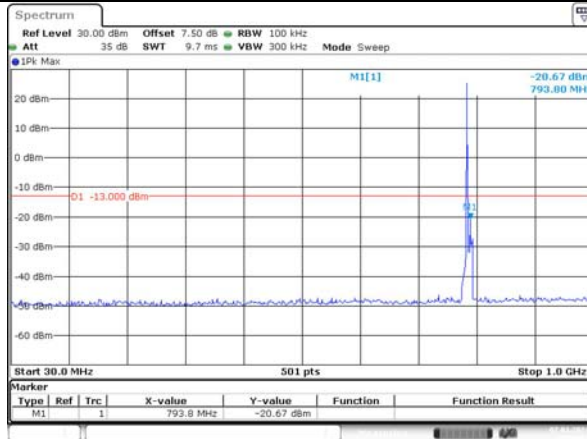
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Spurious Emissions at Antenna Terminal

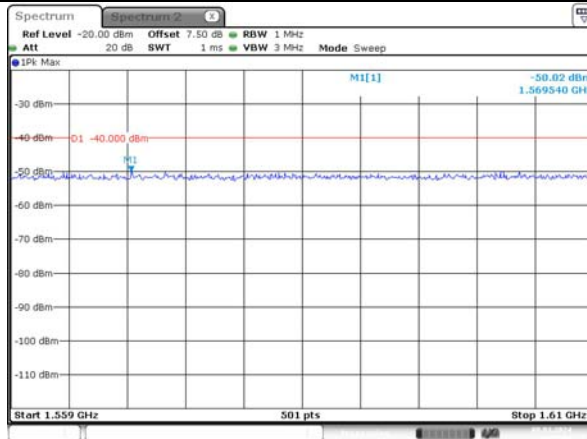
Channel

10MHz Bandwidth QPSK

Middle



Middle



/

1RB:

Out of band emission, Band Edge

