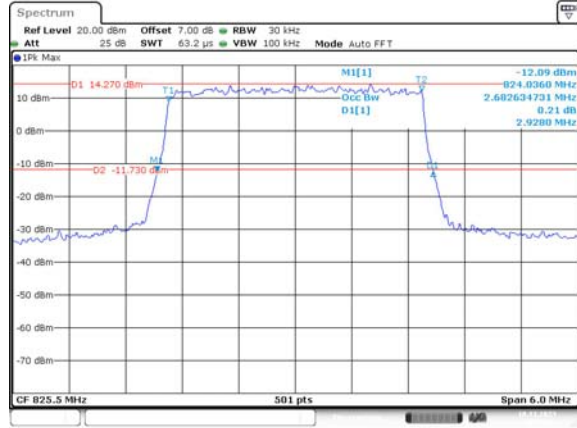
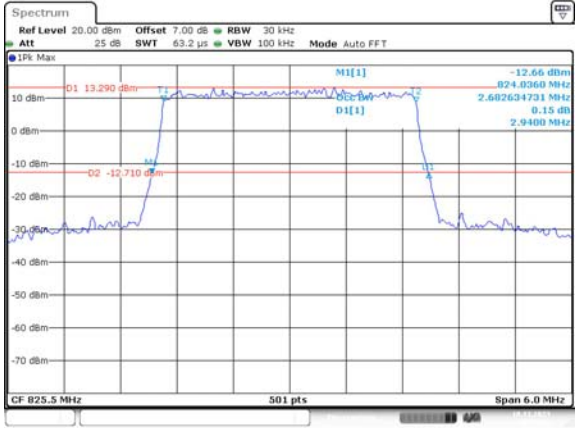
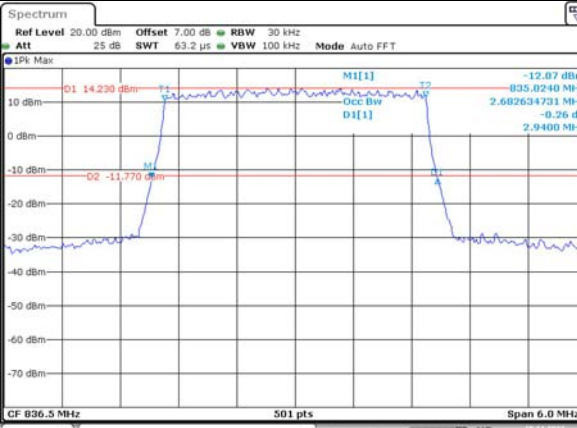
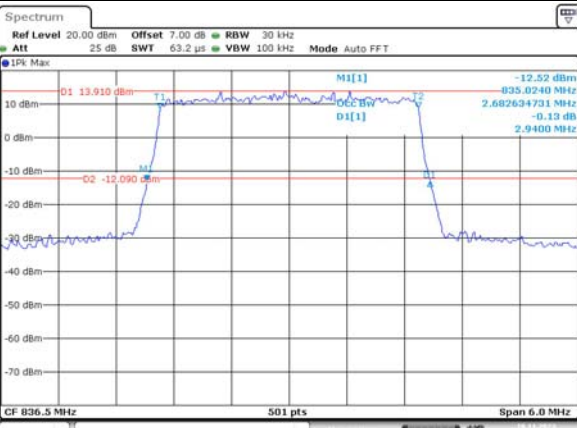
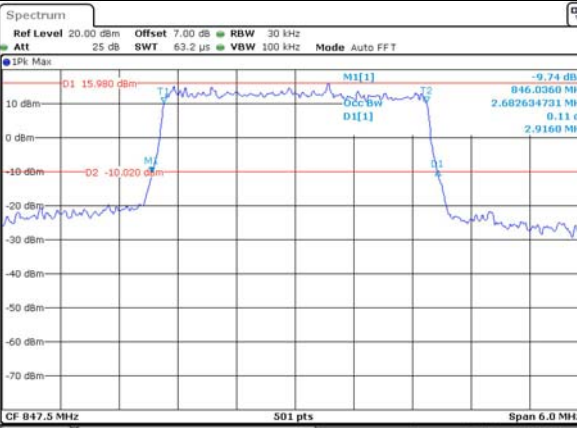
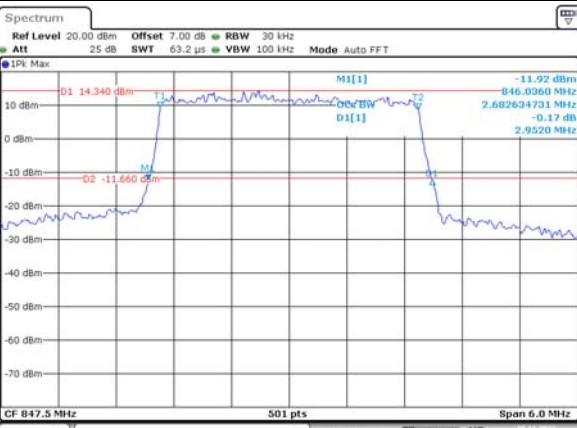


Occupied Bandwidth

Channel	3MHz Bandwidth QPSK	3MHz Bandwidth 16QAM
Lowest	 ProjectNo.:CR231061510-RF Testers:Claire Liu Date: 10.NOV.2023 17:15:34	 ProjectNo.:CR231061510-RF Testers:Claire Liu Date: 10.NOV.2023 17:15:51
Middle	 ProjectNo.:CR231061510-RF Testers:Claire Liu Date: 10.NOV.2023 17:16:12	 ProjectNo.:CR231061510-RF Testers:Claire Liu Date: 10.NOV.2023 17:16:29
Highest	 ProjectNo.:CR231061510-RF Testers:Claire Liu Date: 10.NOV.2023 17:16:50	 ProjectNo.:CR231061510-RF Testers:Claire Liu Date: 10.NOV.2023 17:17:04

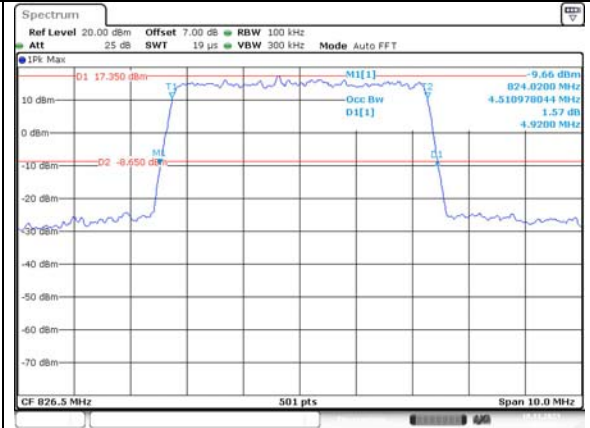
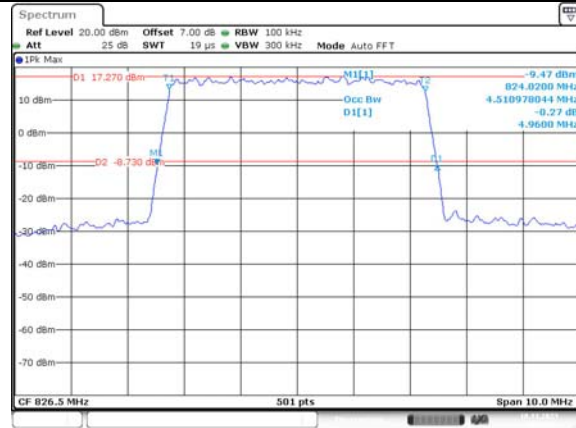
Occupied Bandwidth

Channel

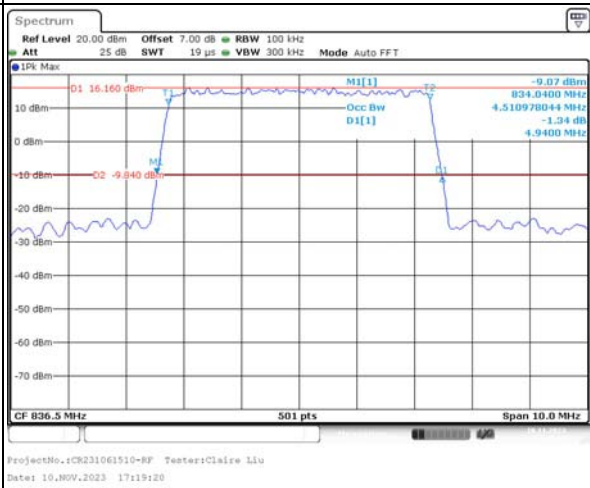
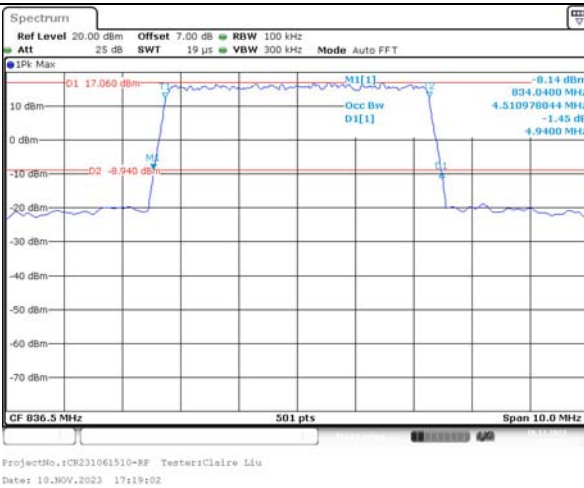
5MHz Bandwidth QPSK

5MHz Bandwidth 16QAM

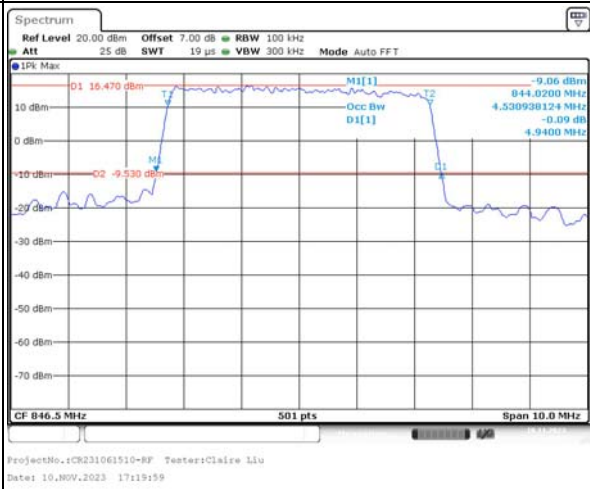
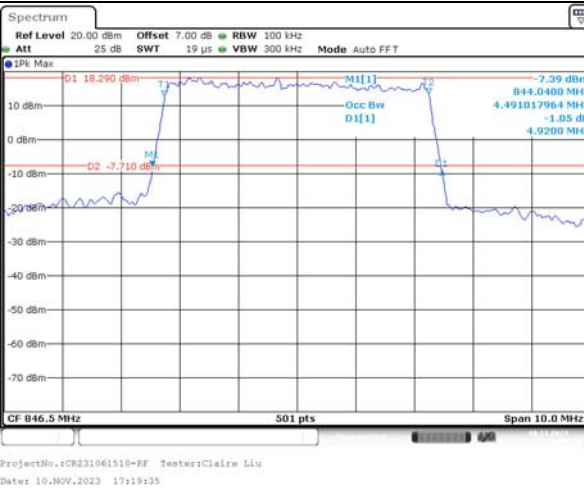
Lowest



Middle



Highest



Occupied Bandwidth

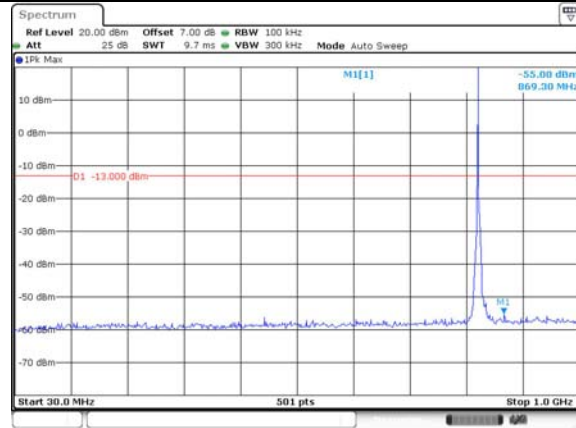
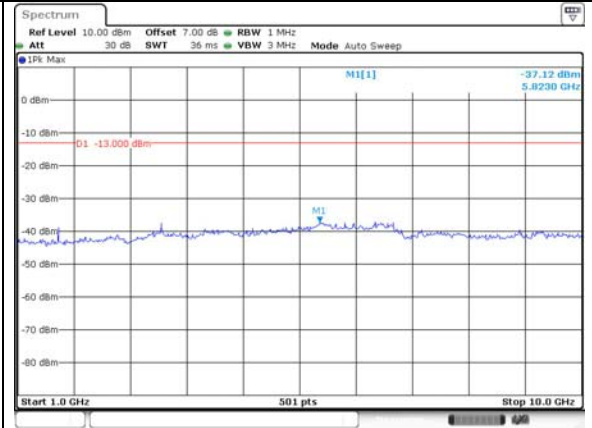
Channel	10MHz Bandwidth QPSK	10MHz Bandwidth 16QAM
Lowest	ProjectNo.:CR231061510-RF Testers:Claire Liu Date: 10.NOV.2023 17:21:33	ProjectNo.:CR231061510-RF Testers:Claire Liu Date: 10.NOV.2023 17:21:54
Middle	ProjectNo.:CR231061510-RF Testers:Claire Liu Date: 10.NOV.2023 17:22:16	ProjectNo.:CR231061510-RF Testers:Claire Liu Date: 10.NOV.2023 17:22:43
Highest	ProjectNo.:CR231061510-RF Testers:Claire Liu Date: 10.NOV.2023 17:23:05	ProjectNo.:CR231061510-RF Testers:Claire Liu Date: 10.NOV.2023 17:23:22

Spurious Emissions at Antenna Terminal

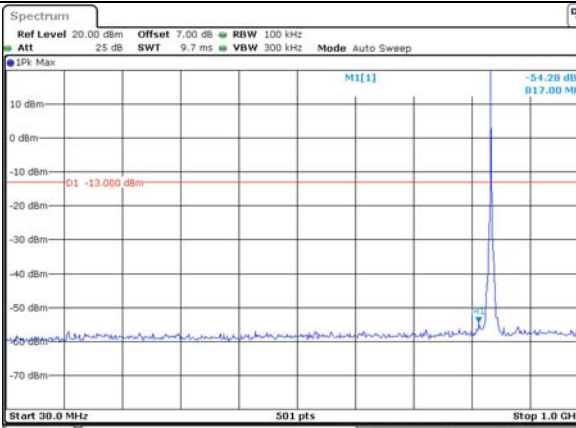
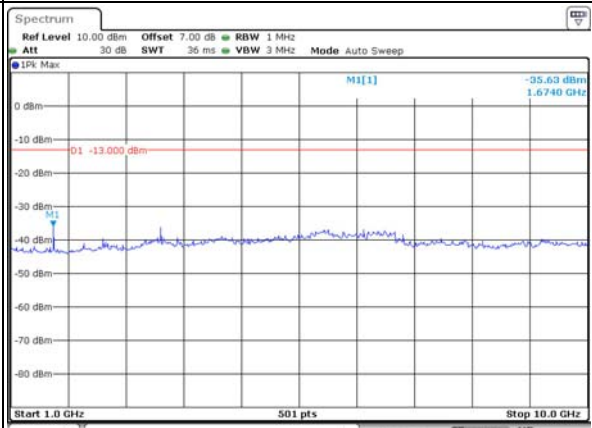
Channel

1.4MHz Bandwidth QPSK

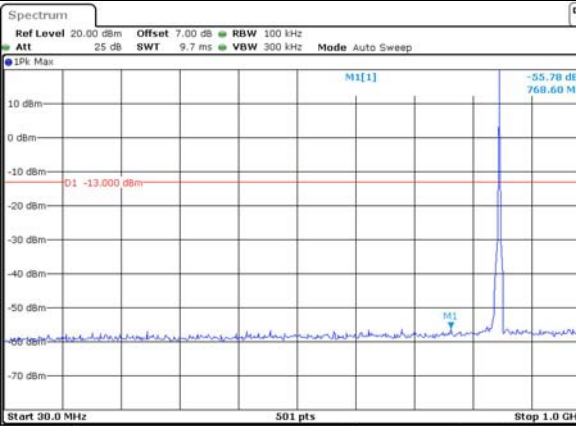
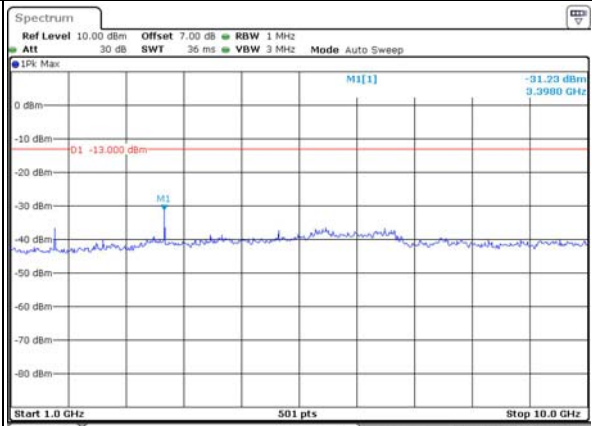
Lowest

ProjectNo.:CR231061510-RF Testers:Claire Liu
Date: 13.NOV.2023 09:11:52ProjectNo.:CR231061510-RF Testers:Claire Liu
Date: 13.NOV.2023 09:12:11

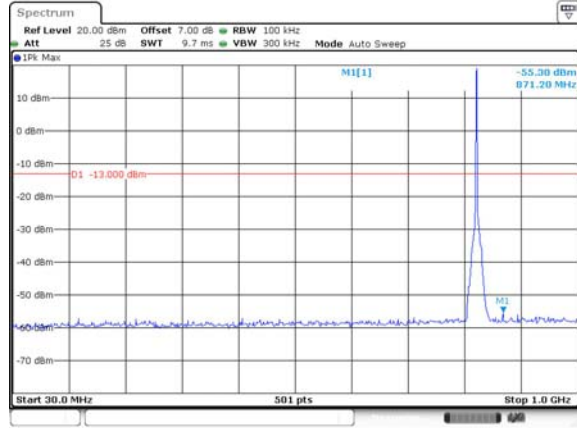
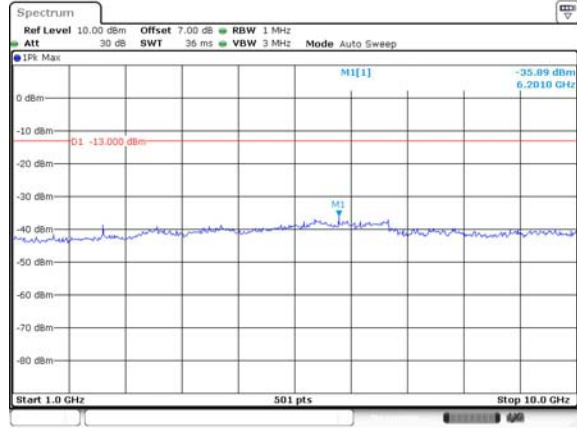
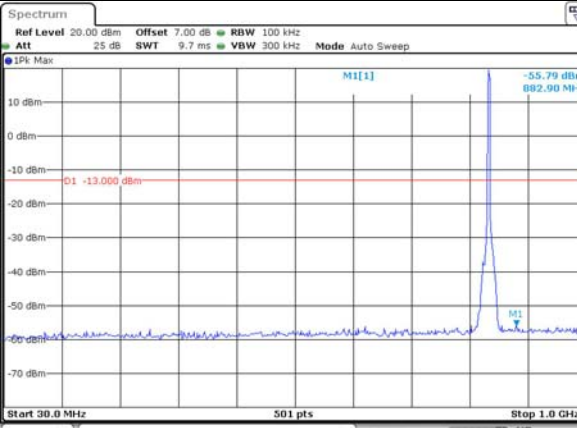
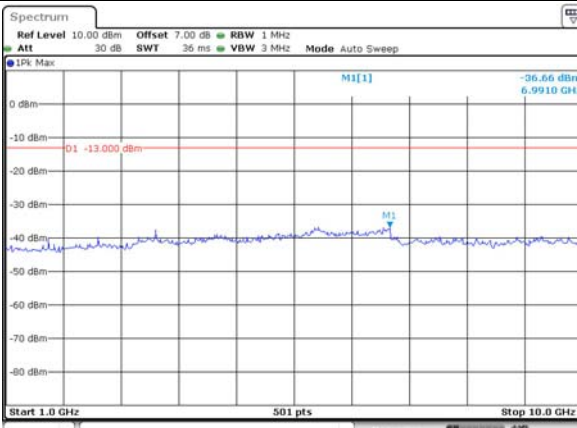
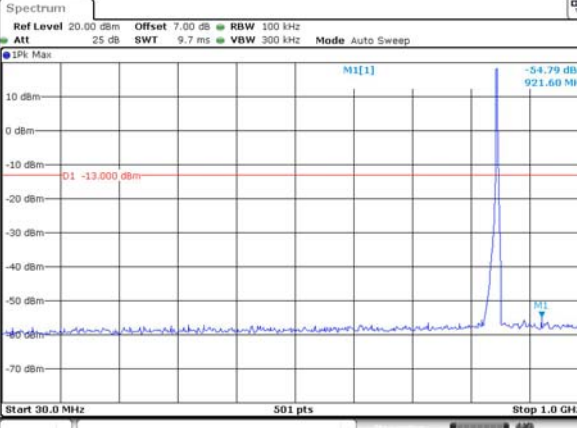
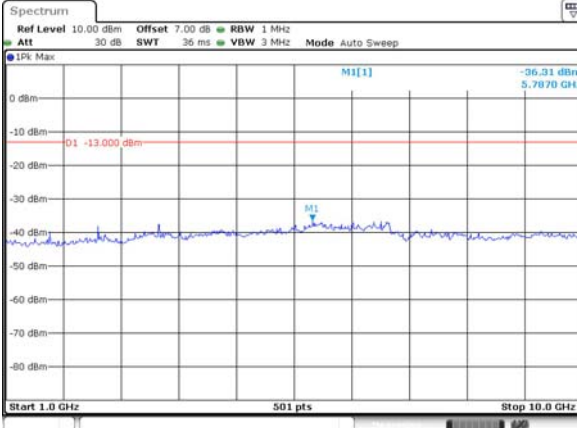
Middle

ProjectNo.:CR231061510-RF Testers:Claire Liu
Date: 13.NOV.2023 09:12:44ProjectNo.:CR231061510-RF Testers:Claire Liu
Date: 13.NOV.2023 09:13:09

Highest

ProjectNo.:CR231061510-RF Testers:Claire Liu
Date: 13.NOV.2023 09:13:38ProjectNo.:CR231061510-RF Testers:Claire Liu
Date: 13.NOV.2023 09:13:57

Spurious Emissions at Antenna Terminal

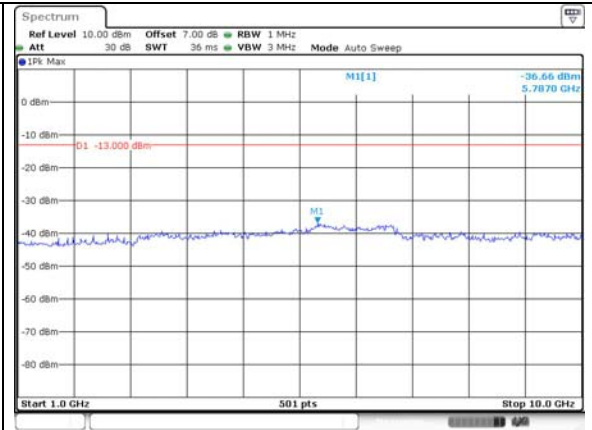
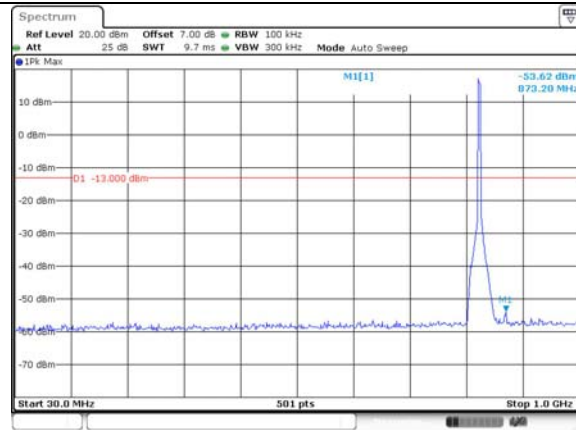
Channel	3MHz Bandwidth QPSK	
Lowest		
	ProjectNo.:CR231061510-RF Testers:Claire Liu Date: 13.NOV.2023 09:15:09	ProjectNo.:CR231061510-RF Testers:Claire Liu Date: 13.NOV.2023 09:15:31
Middle		
	ProjectNo.:CR231061510-RF Testers:Claire Liu Date: 13.NOV.2023 09:16:07	ProjectNo.:CR231061510-RF Testers:Claire Liu Date: 13.NOV.2023 09:16:29
Highest		
	ProjectNo.:CR231061510-RF Testers:Claire Liu Date: 13.NOV.2023 09:16:55	ProjectNo.:CR231061510-RF Testers:Claire Liu Date: 13.NOV.2023 09:17:23

Spurious Emissions at Antenna Terminal

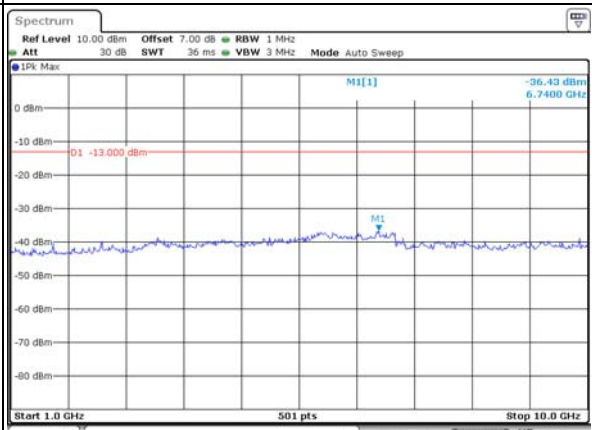
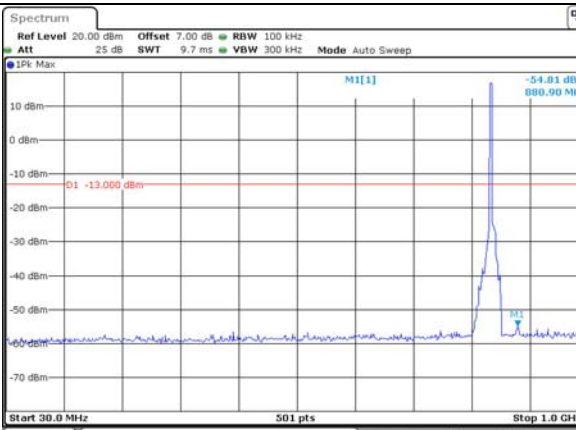
Channel

5MHz Bandwidth QPSK

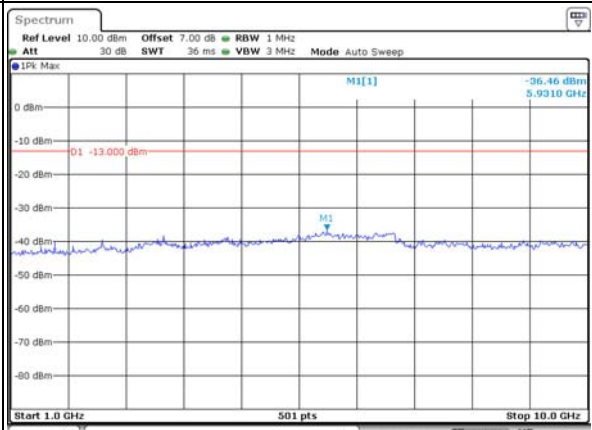
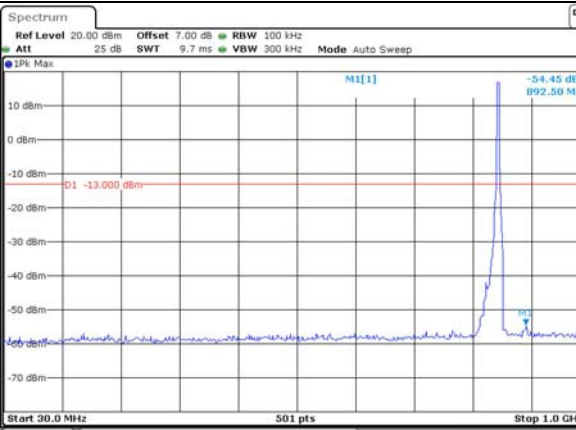
Lowest



Middle



Highest

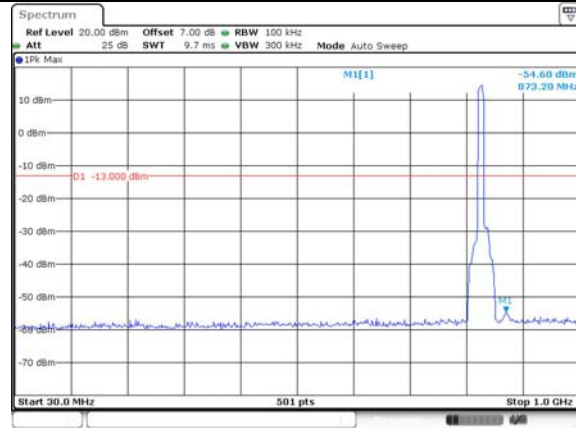


Spurious Emissions at Antenna Terminal

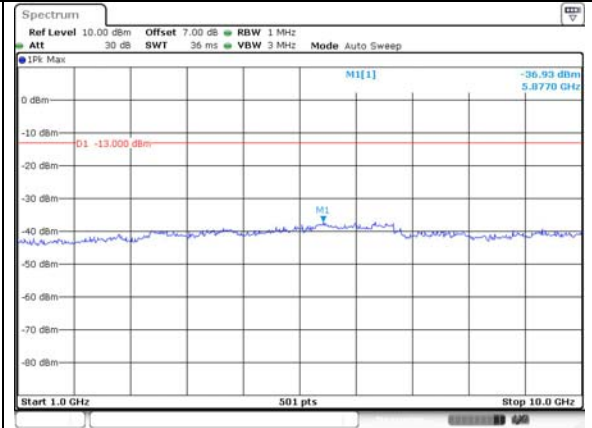
Channel

10MHz Bandwidth QPSK

Lowest

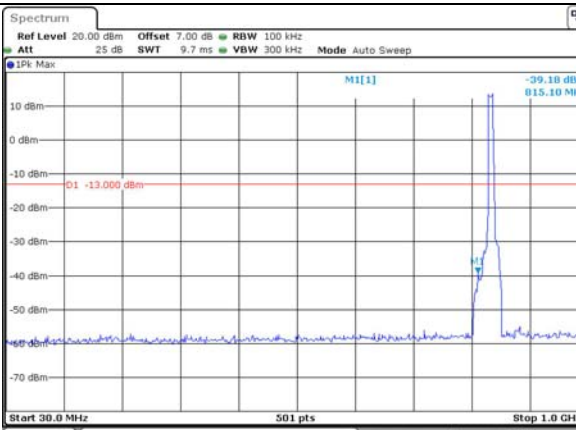


ProjectNo.:CR231061510-RF Testers:Claire Liu
Date: 13.NOV.2023 09:23:45

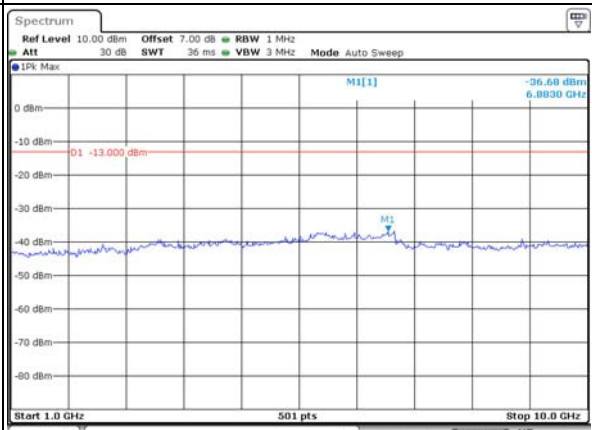


ProjectNo.:CR231061510-RF Testers:Claire Liu
Date: 13.NOV.2023 09:24:11

Middle

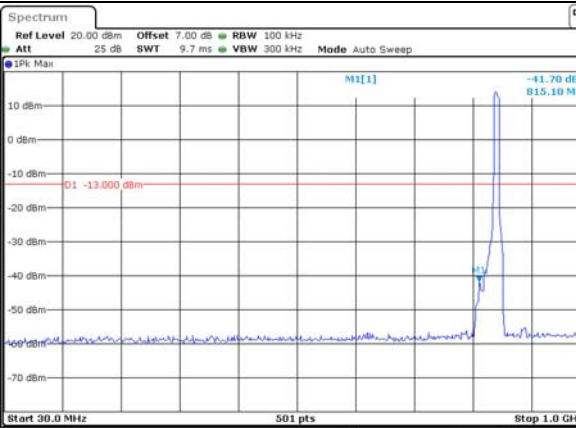


ProjectNo.:CR231061510-RF Testers:Claire Liu
Date: 13.NOV.2023 09:24:35

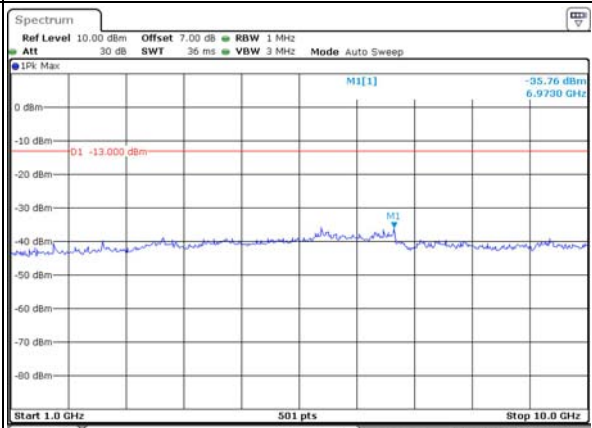


ProjectNo.:CR231061510-RF Testers:Claire Liu
Date: 13.NOV.2023 09:24:57

Highest

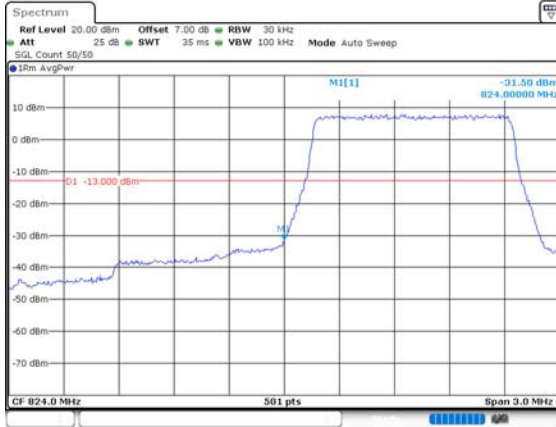
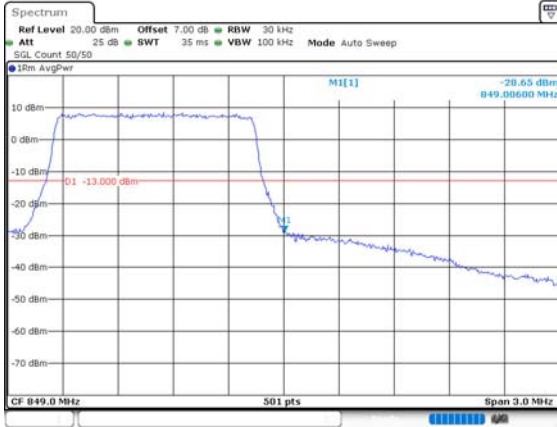
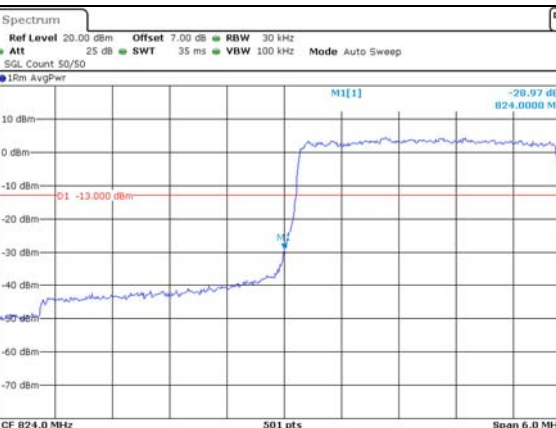
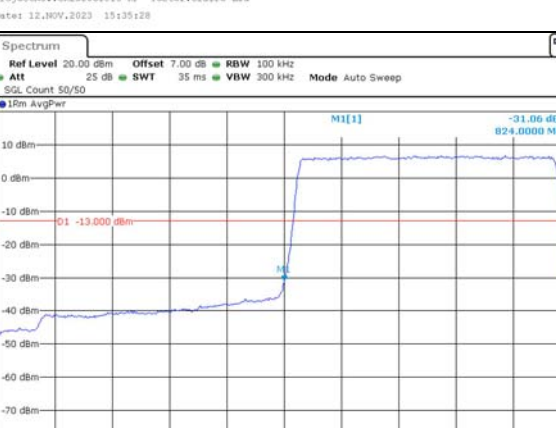


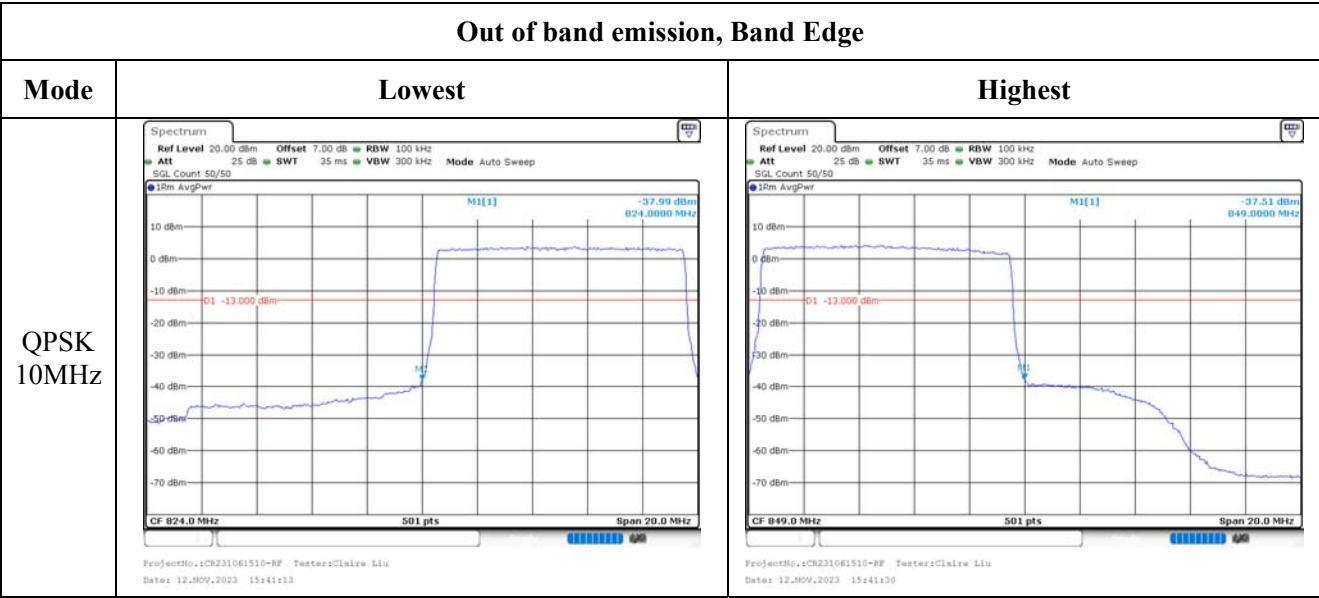
ProjectNo.:CR231061510-RF Testers:Claire Liu
Date: 13.NOV.2023 09:25:24



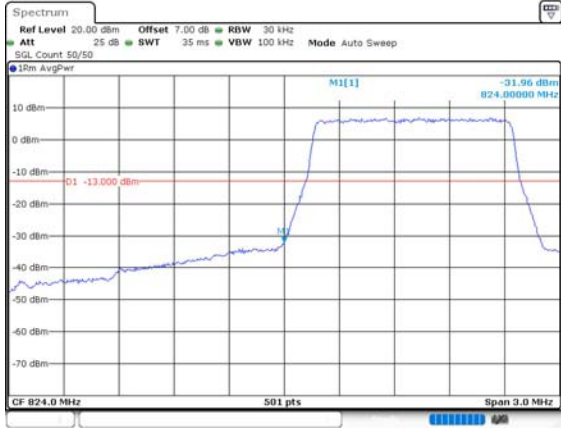
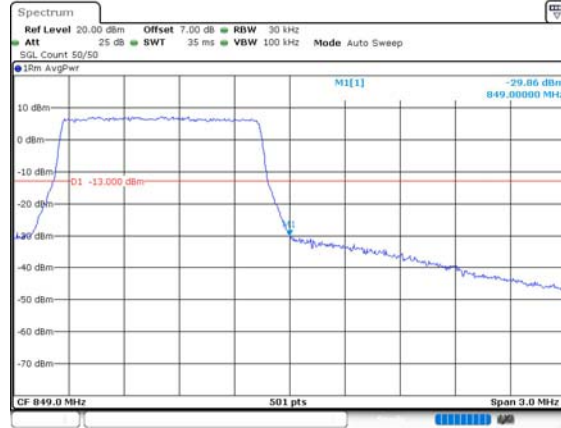
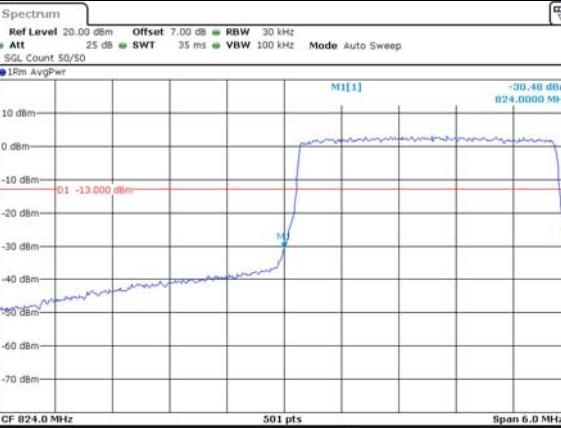
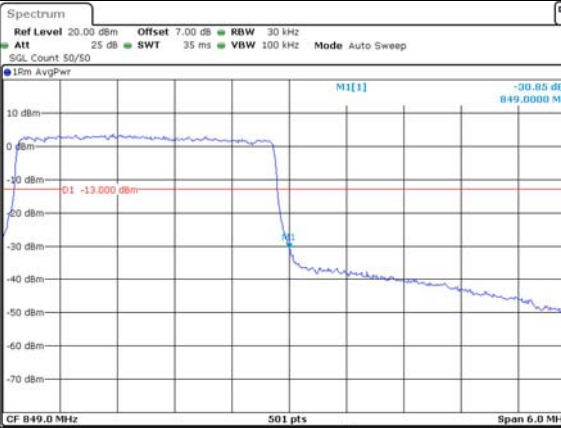
ProjectNo.:CR231061510-RF Testers:Claire Liu
Date: 13.NOV.2023 09:25:43

Out of band emission, Band Edge

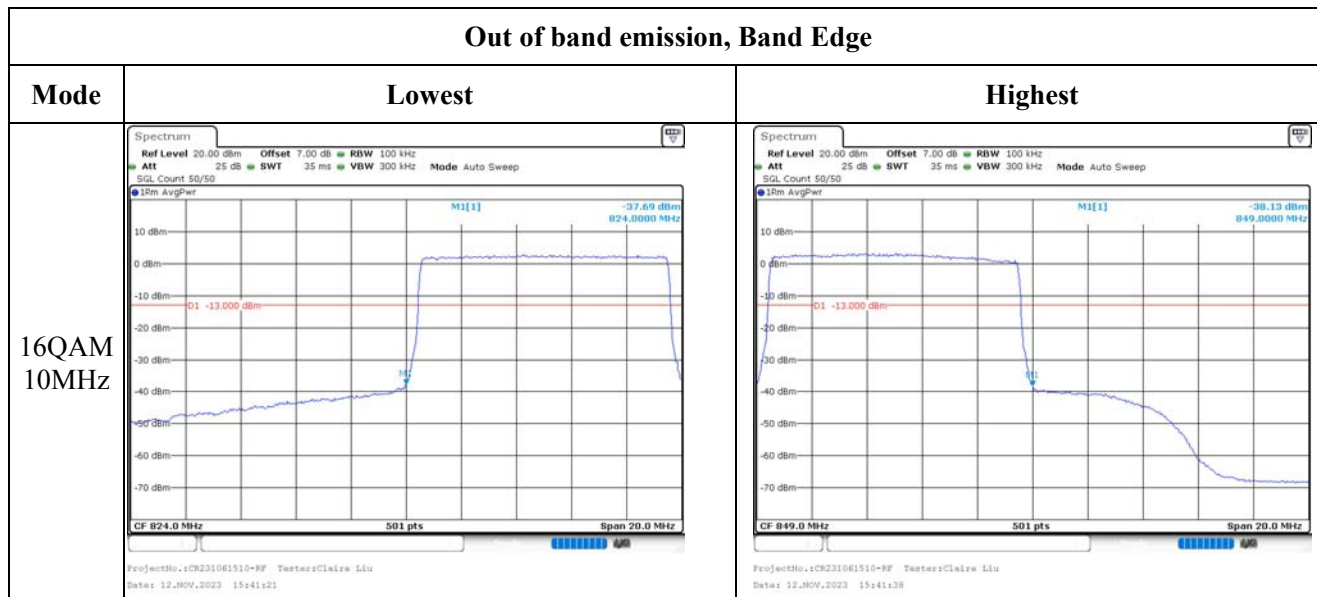
Mode	Lowest	Highest
QPSK 1.4MHz	 ProjectNo.:CR231061510-RF Testter:Clairu Liu Date: 12.NOV.2023 15:34:24	 ProjectNo.:CR231061510-RF Testter:Clairu Liu Date: 12.NOV.2023 15:34:38
QPSK 3MHz	 ProjectNo.:CR231061510-RF Testter:Clairu Liu Date: 12.NOV.2023 15:35:28	 ProjectNo.:CR231061510-RF Testter:Clairu Liu Date: 12.NOV.2023 15:35:43
QPSK 5MHz	 ProjectNo.:CR231061510-RF Testter:Clairu Liu Date: 12.NOV.2023 15:39:03	 ProjectNo.:CR231061510-RF Testter:Clairu Liu Date: 12.NOV.2023 15:39:18



Out of band emission, Band Edge

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

Out of band emission, Band Edge



4.9 Antenna Port Test Data and Results for LTE Band 7

Serial Number:	2CIM-1	Test Date:	2023/11/12~2023/12/9
Test Site:	RF	Test Mode:	Transmitting
Tester:	Claire Liu	Test Result:	Pass

Environmental Conditions:

Temperature: (°C)	24.7~25.5	Relative Humidity: (%)	53~62	ATM Pressure: (kPa)	100.1~102
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Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSV40	101590	2022/11/25	2023/11/24
zhuoxiang	Coaxial Cable	SMA-178	211002	Each time	N/A
Minl-Circuits	Power Splitter	ZFRSC-183-S+	S F448201619	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	2023/9/28	2024/9/27
ZHAOXIN	DC Power Supply	RXN-6010D	21R6010D0912386	2023/9/28	2024/9/27
R&S	Spectrum Analyzer	FSV40	101590	2023/11/16	2024/11/15

* 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	2502.5	2535	2567.5
10MHz	2505	2535	2565
15MHz	2507.5	2535	2562.5
20MHz	2510	2535	2560

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	15.43	15.25	15.08	14.65	33
	RB1#13	15.53	15.35	15.2		
	RB1#24	15.38	15.26	15.1		
	RB15#0	14.33	14.19	14.1		
	RB15#10	14.45	14.31	14.08		
	RB25#0	14.42	14.24	14.06		
5MHz 16QAM	RB1#0	14.3	14.51	14.17	13.76	33
	RB1#13	14.4	14.64	14.3		
	RB1#24	14.3	14.54	14.16		
	RB15#0	13.45	13.18	13.14		
	RB15#10	13.58	13.29	13.13		
	RB25#0	13.55	13.26	13.12		
10MHz QPSK	RB1#0	15.45	15.3	15.14	14.64	33
	RB1#25	15.52	15.36	15.2		
	RB1#49	15.49	15.32	15.18		
	RB25#0	14.34	14.2	14.18		
	RB25#25	14.46	14.36	14.16		
	RB50#0	14.45	14.29	14.2		
10MHz 16QAM	RB1#0	14.63	14.35	14.8	13.95	33
	RB1#25	14.64	14.38	14.83		
	RB1#49	14.63	14.31	14.83		
	RB25#0	13.43	13.3	13.27		
	RB25#25	13.57	13.49	13.26		
	RB50#0	13.49	13.35	13.24		
15MHz QPSK	RB1#0	15.39	15.23	15.13	14.63	33
	RB1#38	15.51	15.36	15.26		
	RB1#74	15.38	15.25	15.24		
	RB36#0	14.34	14.19	14.17		
	RB36#39	14.42	14.33	14.16		
	RB75#0	14.39	14.26	14.19		
15MHz 16QAM	RB1#0	14.87	14.91	14.3	14.12	33
	RB1#38	14.98	15	14.39		
	RB1#74	14.85	14.92	14.34		
	RB36#0	13.34	13.2	13.21		
	RB36#39	13.43	13.36	13.19		
	RB75#0	13.38	13.29	13.19		
20MHz QPSK	RB1#0	15.27	15.21	15.07	14.58	33
	RB1#50	15.46	15.4	15.27		
	RB1#99	15.3	15.22	15.2		
	RB50#0	14.29	14.14	14.23		

	RB50#50	14.38	14.37	14.1		
	RB100#0	14.35	14.26	14.18		
20MHz 16QAM	RB1#0	14.91	14.54	14.31	14.24	33
	RB1#50	15.12	14.73	14.5		
	RB1#99	14.92	14.51	14.37		
	RB50#0	13.3	13.13	13.23		
	RB50#50	13.42	13.36	13.14		
	RB100#0	13.38	13.33	13.2		
Note: EIRP=Conducted Power(dBm) - Lc(dB) + Gr(dBi)						
					Result:	Pass

Peak-to-average Ratio(PAR)					
Test Bandwidth & Modulation	Resource Block & RB offset	Peak-to-average Ratio(dB)			Limit (dB)
		Lowest Channel	Middle Channel	Highest Channel	
20MHz QPSK	RB1#0	6.2	6.38	5.91	13
	RB100#0	4.29	4.38	4.41	13
20MHz 16QAM	RB1#0	6.87	7.51	6.32	13
	RB100#0	6.12	6	6	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	4.491	4.940	4.531	4.940	4.511	4.940
5MHz 16QAM	4.531	4.960	4.491	4.920	4.531	4.960
10MHz QPSK	8.942	9.600	8.982	9.680	8.942	9.600
10MHz 16QAM	8.942	9.640	8.942	9.560	8.942	9.680
15MHz QPSK	13.473	14.640	13.473	14.580	13.413	14.580
15MHz 16QAM	13.473	14.580	13.473	14.580	13.533	14.520
20MHz QPSK	17.804	19.120	17.884	19.360	17.884	19.200
20MHz 16QAM	17.884	19.280	17.884	19.200	17.964	19.360
Note: The test plots please refer to the Plots of Occupied Bandwidth						

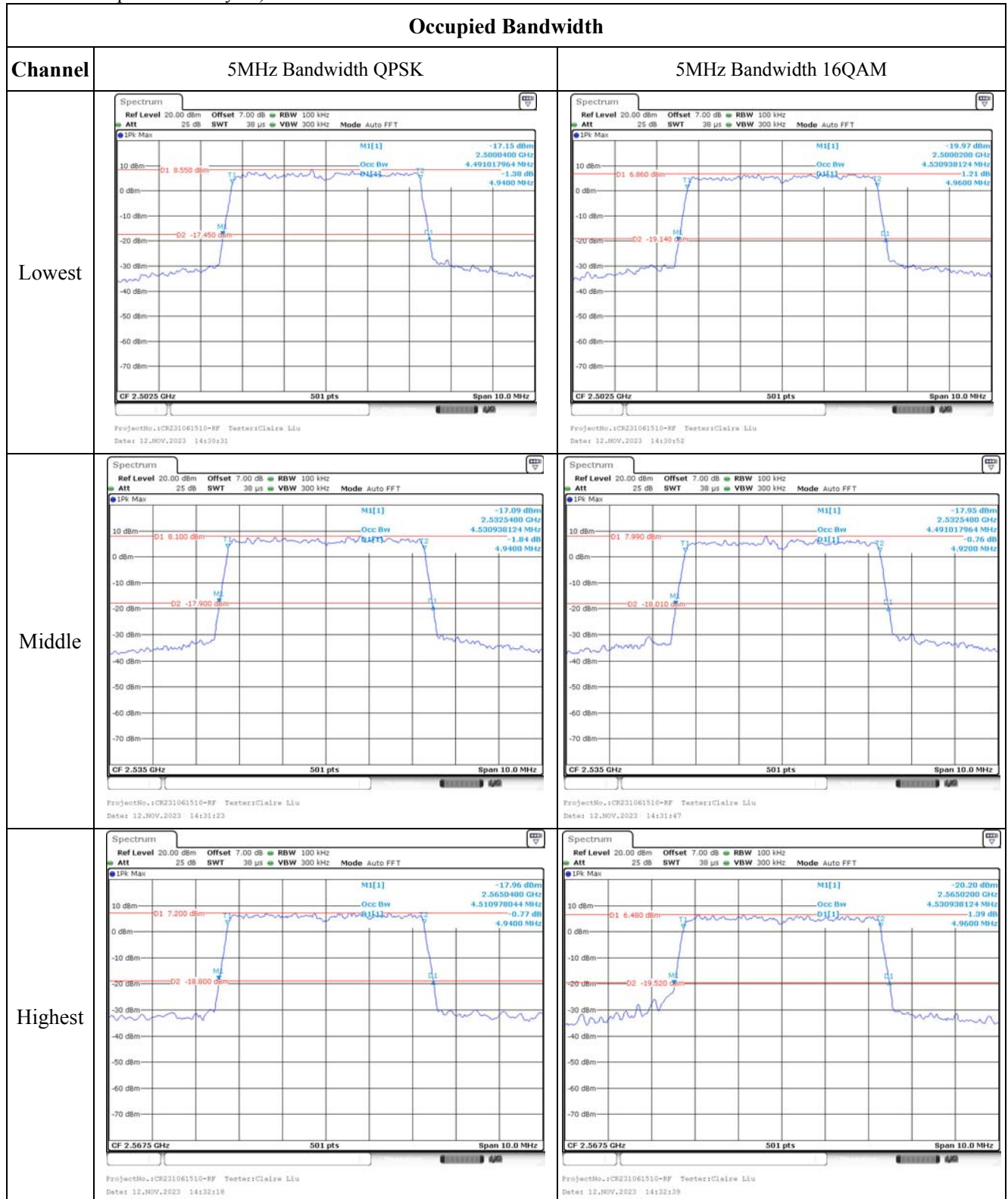
Spurious Emissions at Antenna Terminal	
Result:	Pass, Please refer to the test plots of Spurious Emissions at Antenna Terminal.

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

Frequency Stability						
Test Mode:	20M QPSK	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (°C)	Voltage (V _{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.91	2500.573	2500.00	2569.512	2570
	-20	3.91	2500.518	2500.00	2569.555	2570
	-10	3.91	2500.525	2500.00	2569.583	2570
	0	3.91	2500.574	2500.00	2569.555	2570
	10	3.91	2500.498	2500.00	2569.584	2570
	20	3.91	2500.480	2500.00	2569.600	2570
	30	3.91	2500.484	2500.00	2569.591	2570
	40	3.91	2500.554	2500.00	2569.529	2570
	50	3.91	2500.516	2500.00	2569.516	2570
Frequency Stability vs. Voltage	20	3.45	2500.497	2500.00	2569.544	2570
	20	4.5	2500.522	2500.00	2569.560	2570
					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	3.91	2500.343	2500.00	2569.626	2570
	-20	3.91	2500.328	2500.00	2569.671	2570
	-10	3.91	2500.333	2500.00	2569.629	2570
	0	3.91	2500.360	2500.00	2569.668	2570
	10	3.91	2500.370	2500.00	2569.672	2570
	20	3.91	2500.320	2500.00	2569.680	2570
	30	3.91	2500.379	2500.00	2569.603	2570
	40	3.91	2500.322	2500.00	2569.617	2570
	50	3.91	2500.380	2500.00	2569.616	2570
Frequency Stability vs. Voltage	20	3.45	2500.346	2500.00	2569.626	2570
	20	4.5	2500.395	2500.00	2569.649	2570
					Result:	Pass

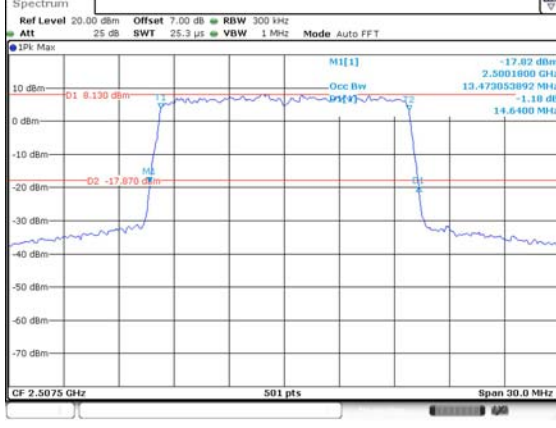
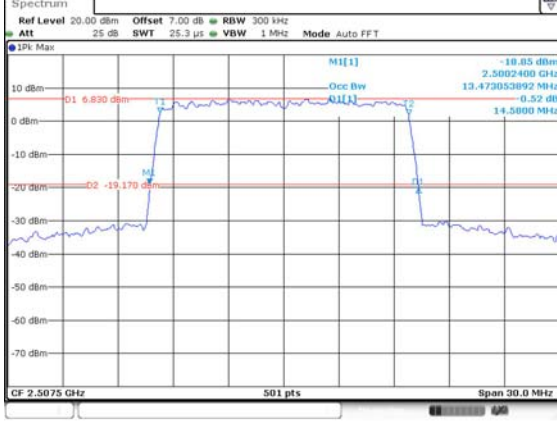
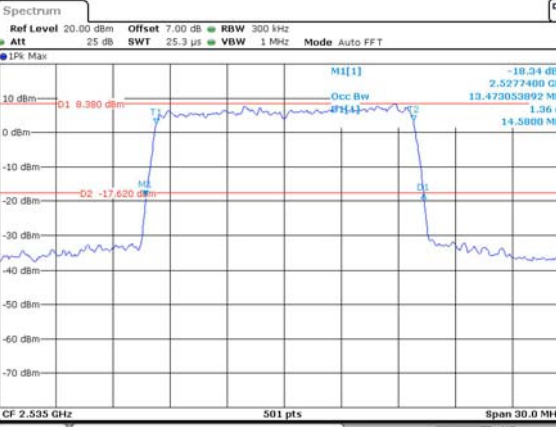
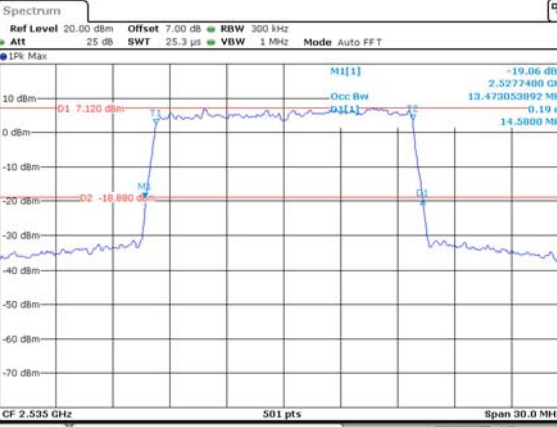
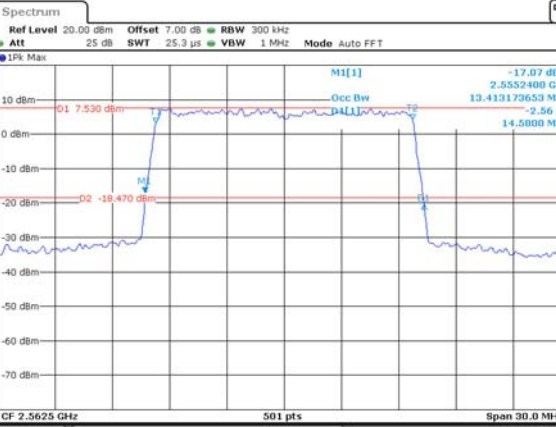
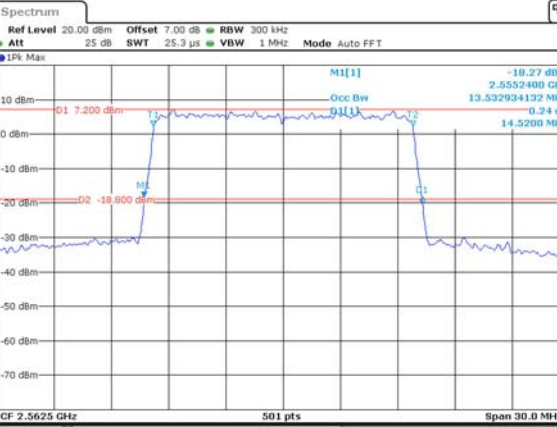
Test Plots(Note: The 7.0dB is the Insertion loss of the RF cable, Power Splitter and DC Block, which was offset into the Spectrum Analyzer):



Occupied Bandwidth

Channel	10MHz Bandwidth QPSK	10MHz Bandwidth 16QAM
Lowest		
Middle		
Highest		

Occupied Bandwidth

Channel	15MHz Bandwidth QPSK	15MHz Bandwidth 16QAM
Lowest	 ProjectNo.:CR231061510-RF Tester:Clairw Liu Date: 12.NOV.2023 14:37:06	 ProjectNo.:CR231061510-RF Tester:Clairw Liu Date: 12.NOV.2023 14:37:37
Middle	 ProjectNo.:CR231061510-RF Tester:Clairw Liu Date: 12.NOV.2023 14:38:10	 ProjectNo.:CR231061510-RF Tester:Clairw Liu Date: 12.NOV.2023 14:38:44
Highest	 ProjectNo.:CR231061510-RF Tester:Clairw Liu Date: 12.NOV.2023 14:39:16	 ProjectNo.:CR231061510-RF Tester:Clairw Liu Date: 12.NOV.2023 14:39:47

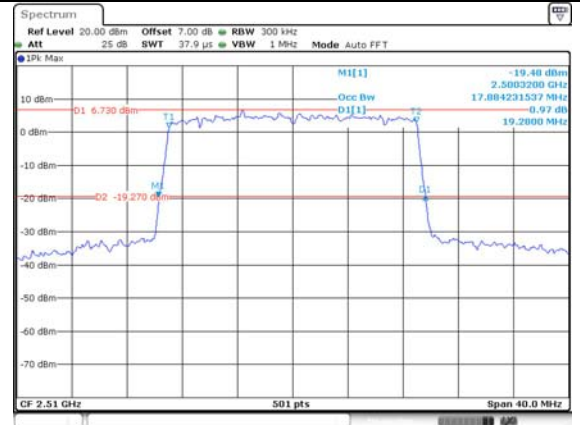
Occupied Bandwidth

Channel

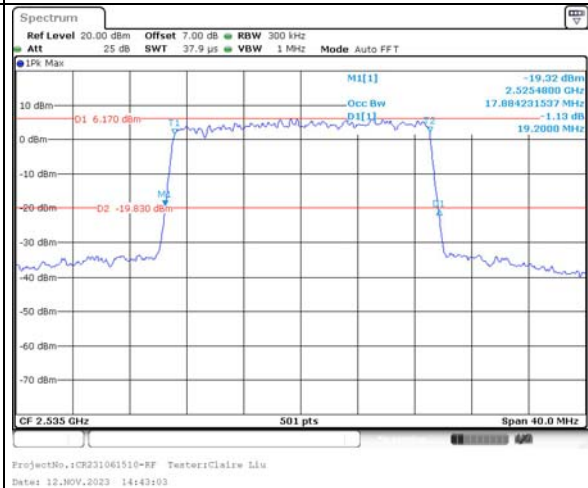
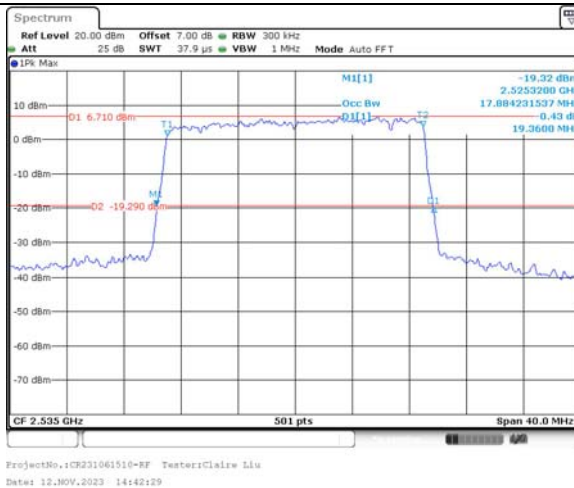
20MHz Bandwidth QPSK

20MHz Bandwidth 16QAM

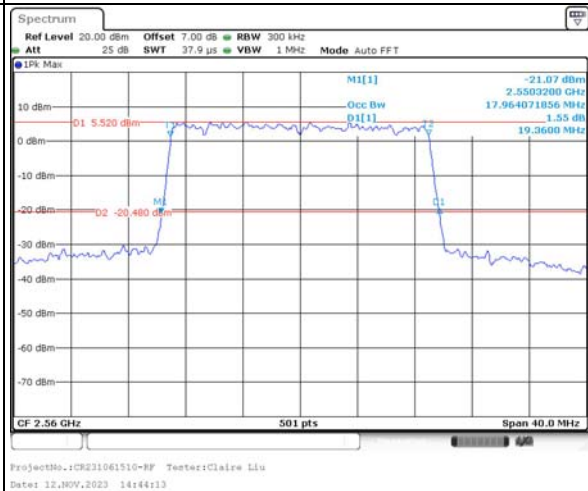
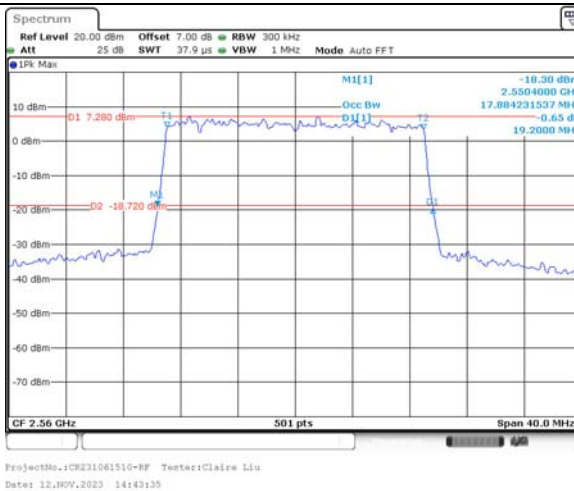
Lowest



Middle



Highest

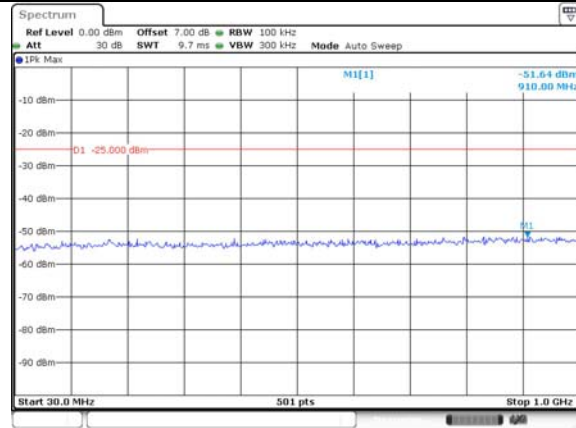


Spurious Emissions at Antenna Terminal

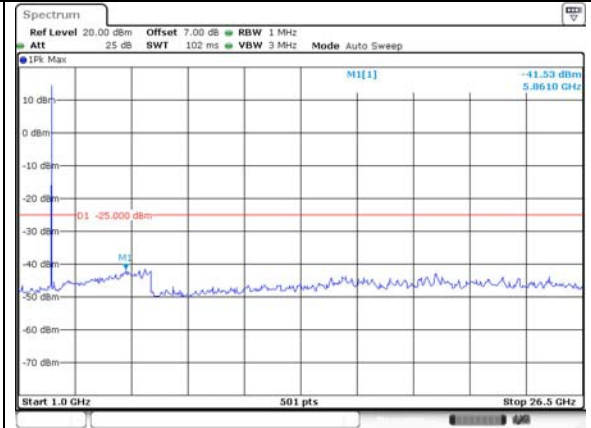
Channel

5MHz Bandwidth QPSK

Lowest

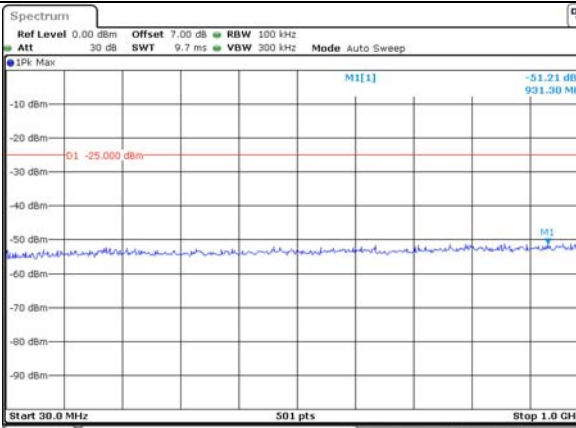


ProjectNo.:CR231061510-RF Testers:Claire Liu
Date: 13.NOV.2023 09:27:54

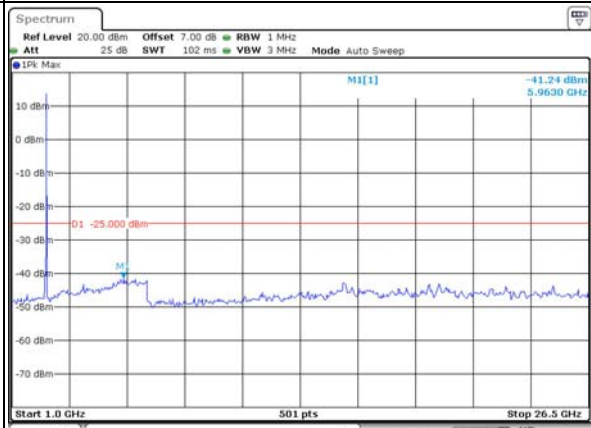


ProjectNo.:CR231061510-RF Testers:Claire Liu
Date: 13.NOV.2023 09:28:19

Middle

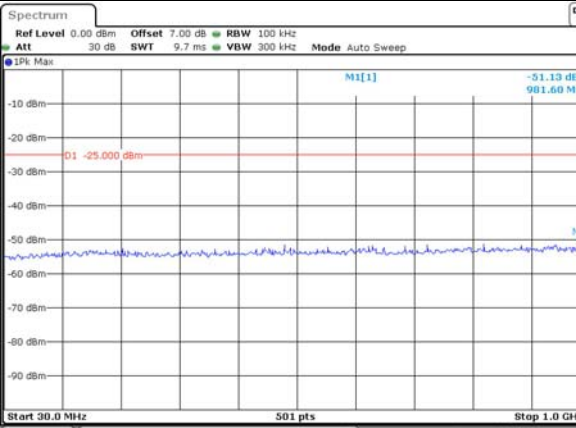


ProjectNo.:CR231061510-RF Testers:Claire Liu
Date: 13.NOV.2023 09:28:51

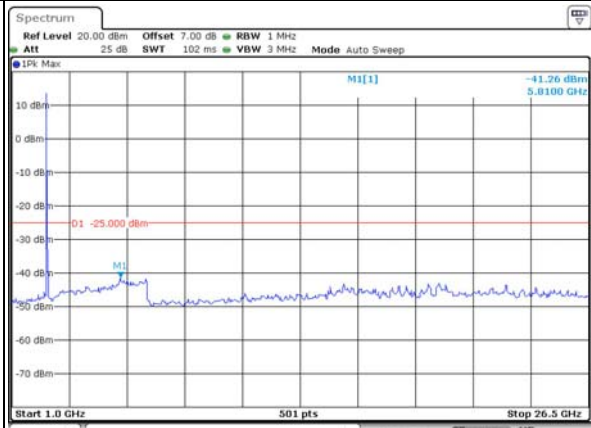


ProjectNo.:CR231061510-RF Testers:Claire Liu
Date: 13.NOV.2023 09:29:20

Highest



ProjectNo.:CR231061510-RF Testers:Claire Liu
Date: 13.NOV.2023 09:29:43



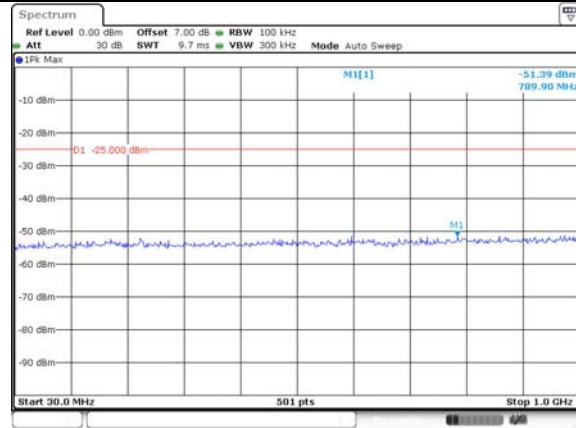
ProjectNo.:CR231061510-RF Testers:Claire Liu
Date: 13.NOV.2023 09:30:08

Spurious Emissions at Antenna Terminal

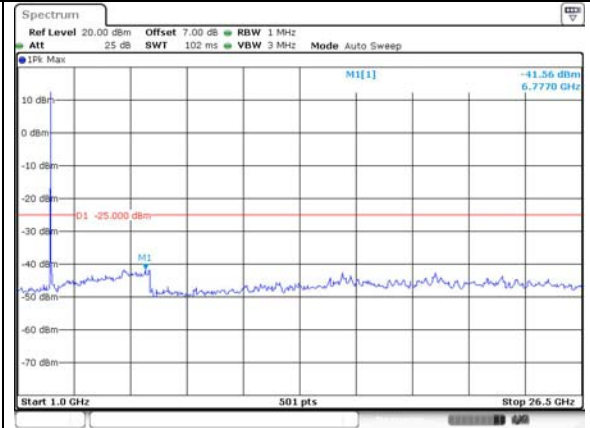
Channel

10MHz Bandwidth QPSK

Lowest

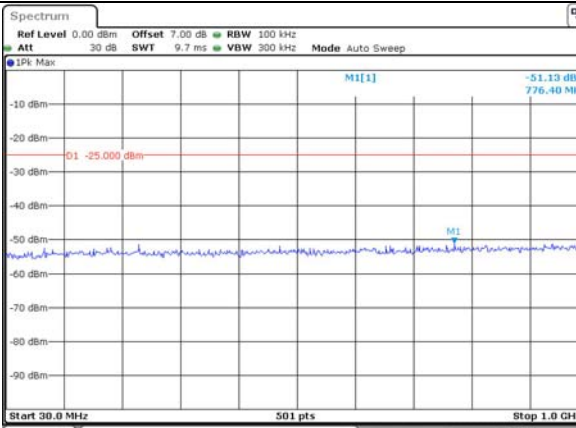


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Date: 13.NOV.2023 09:31:47

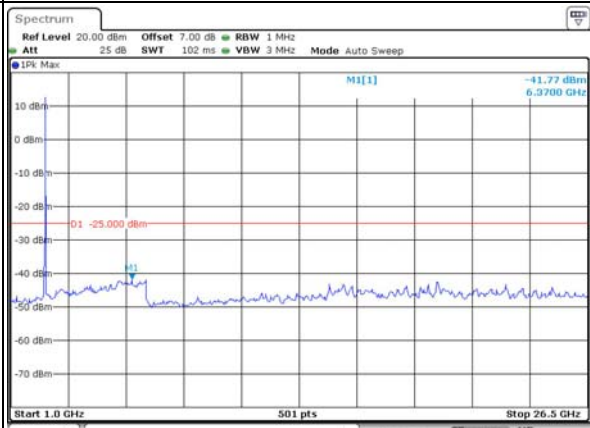


ProjectNo.:CR231061510-RF Testers:Claire Liu
Date: 13.NOV.2023 09:32:12

Middle

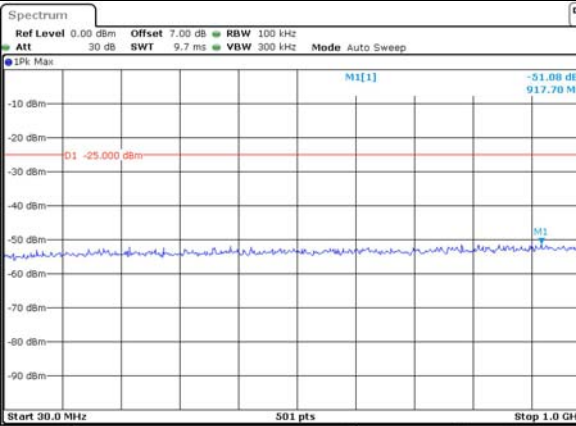


ProjectNo.:CR231061510-RF Testers:Claire Liu
Date: 13.NOV.2023 09:32:42

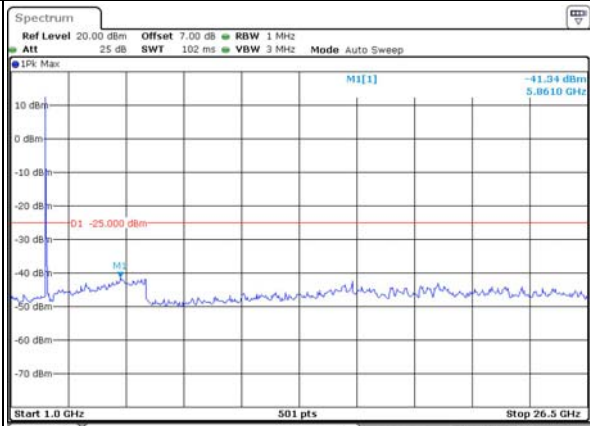


ProjectNo.:CR231061510-RF Testers:Claire Liu
Date: 13.NOV.2023 09:33:04

Highest



ProjectNo.:CR231061510-RF Testers:Claire Liu
Date: 13.NOV.2023 09:33:34



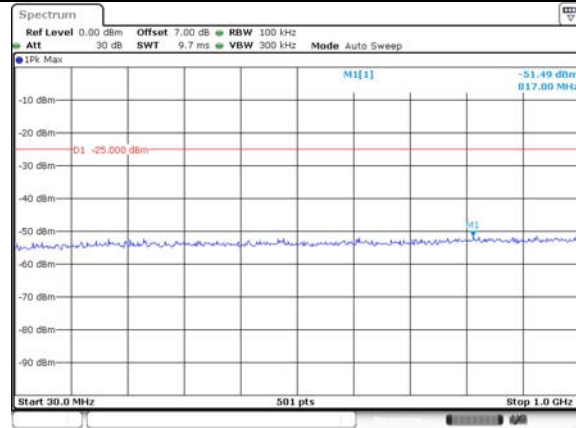
ProjectNo.:CR231061510-RF Testers:Claire Liu
Date: 13.NOV.2023 09:34:06

Spurious Emissions at Antenna Terminal

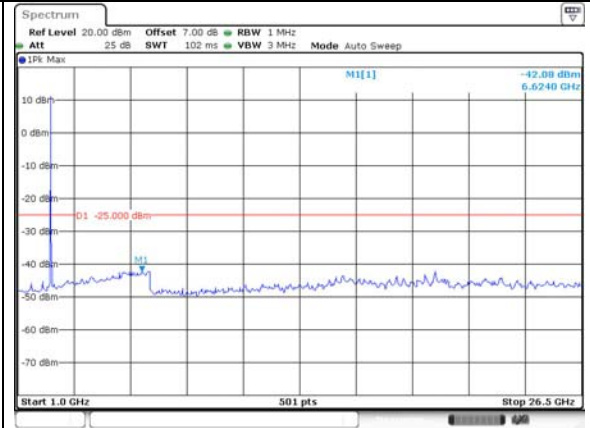
Channel

15MHz Bandwidth QPSK

Lowest

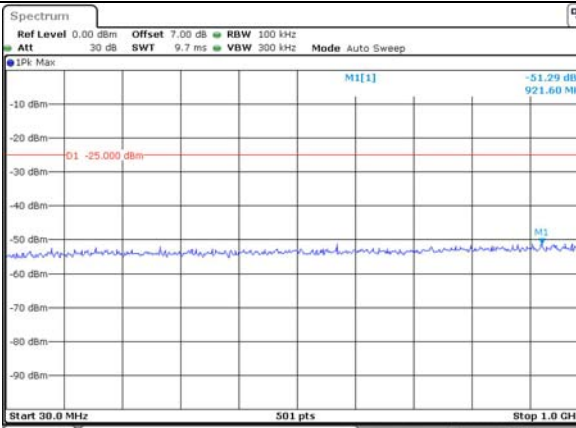


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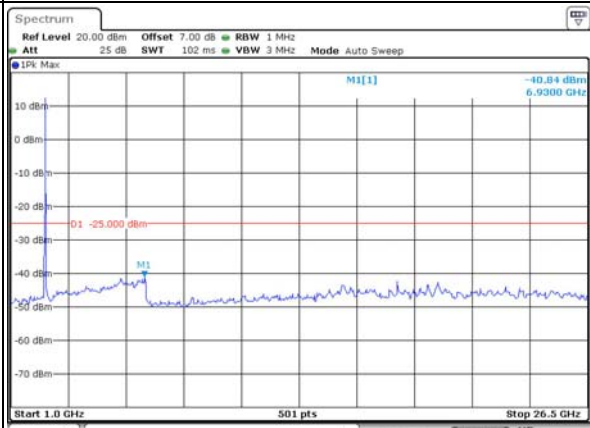


ProjectNo.:CR231061510-RF Testers:Claire Liu
Date: 13.NOV.2023 09:16:16

Middle

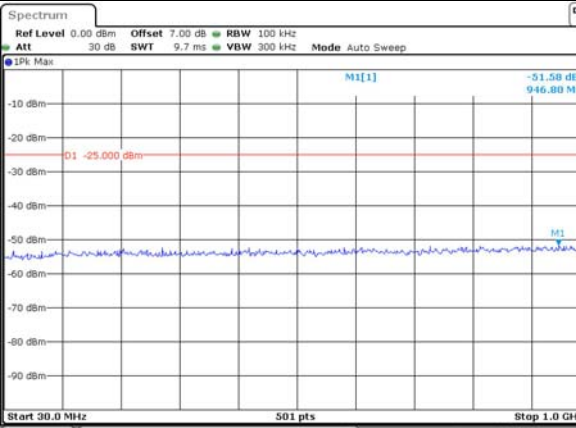


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Date: 13.NOV.2023 09:17:09

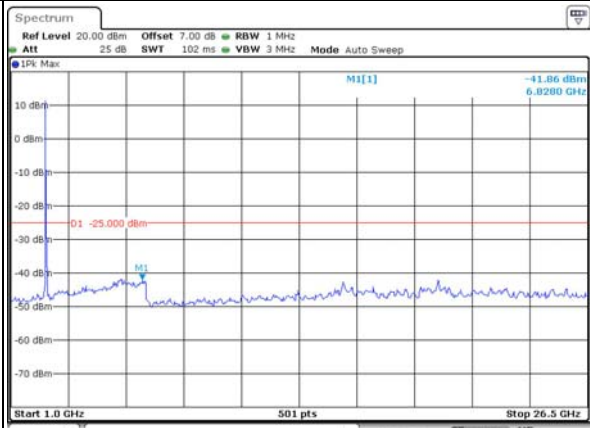


ProjectNo.:CR231061510-RF Testers:Claire Liu
Date: 13.NOV.2023 09:17:14

Highest



ProjectNo.:CR231061510-RF Testers:Claire Liu
Date: 13.NOV.2023 09:18:03



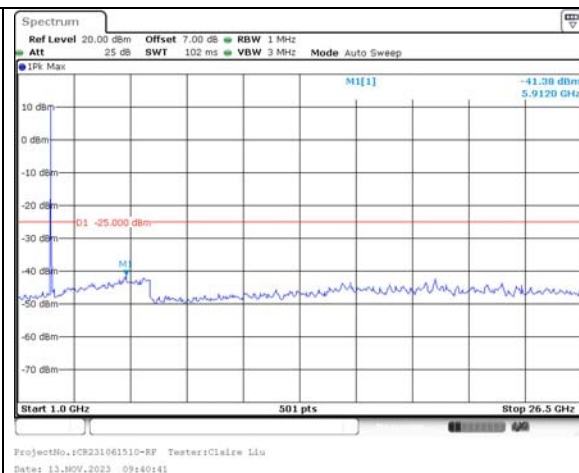
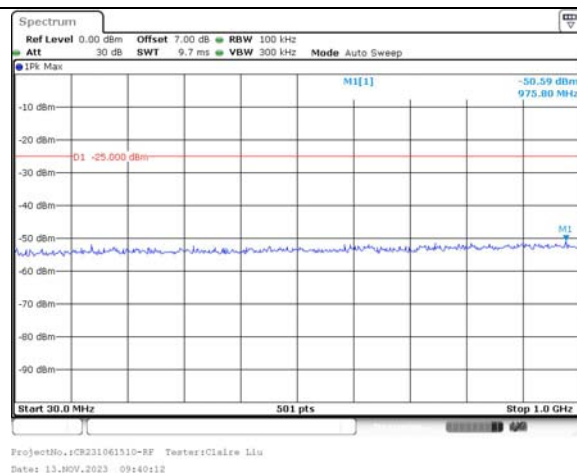
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Date: 13.NOV.2023 09:18:16

Spurious Emissions at Antenna Terminal

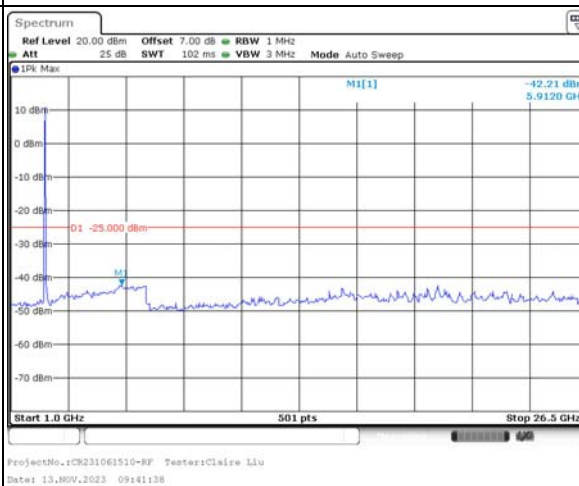
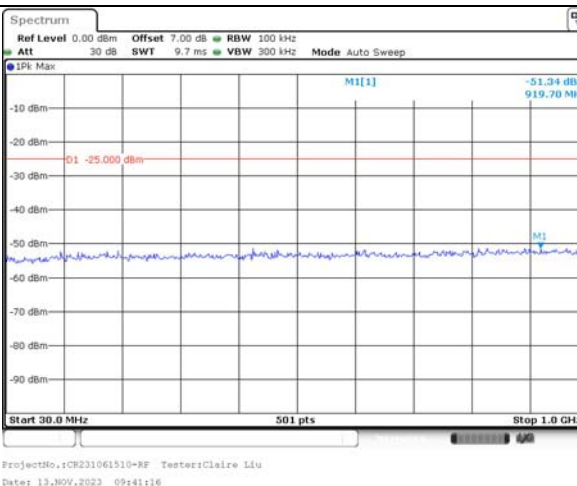
Channel

20MHz Bandwidth QPSK

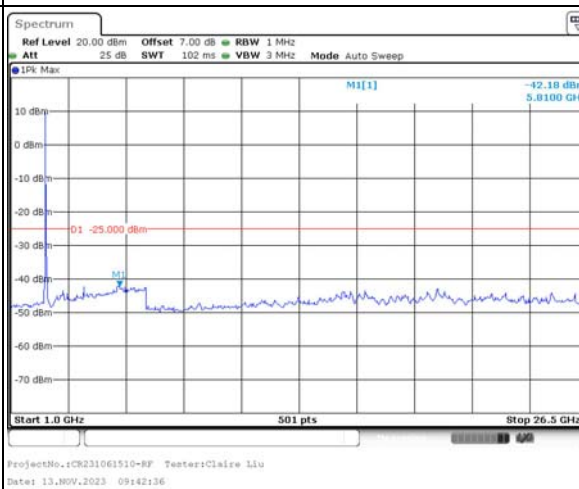
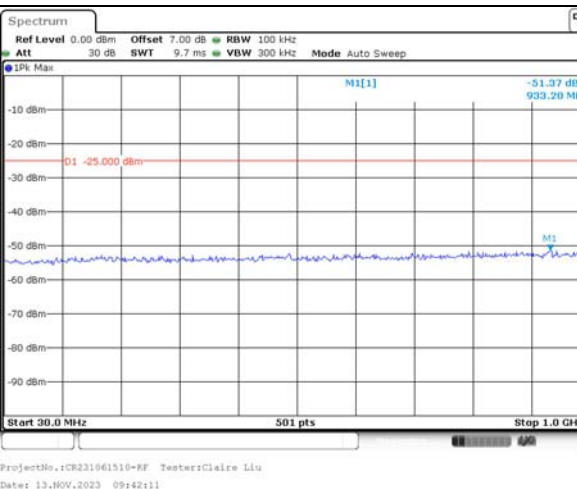
Lowest



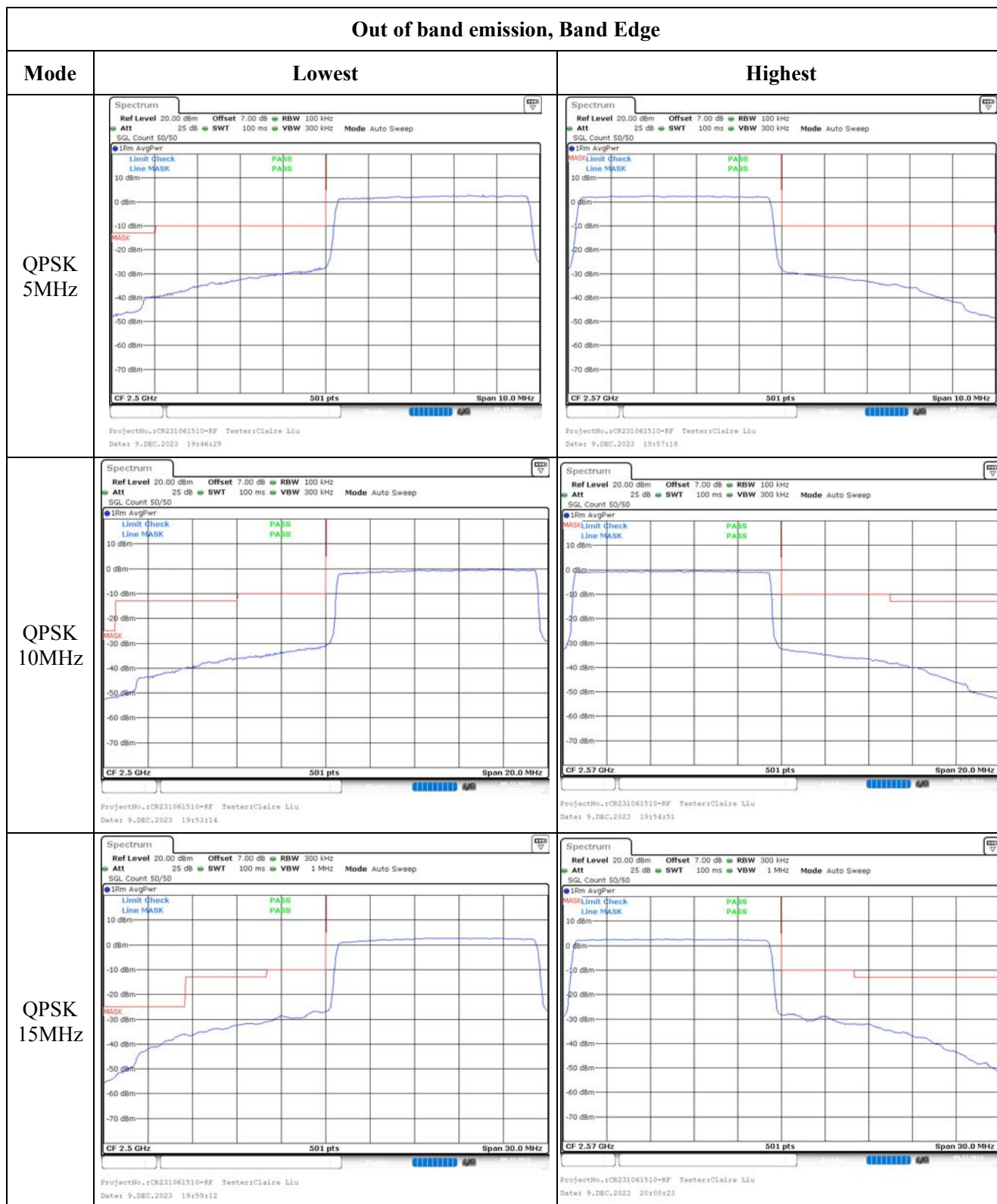
Middle

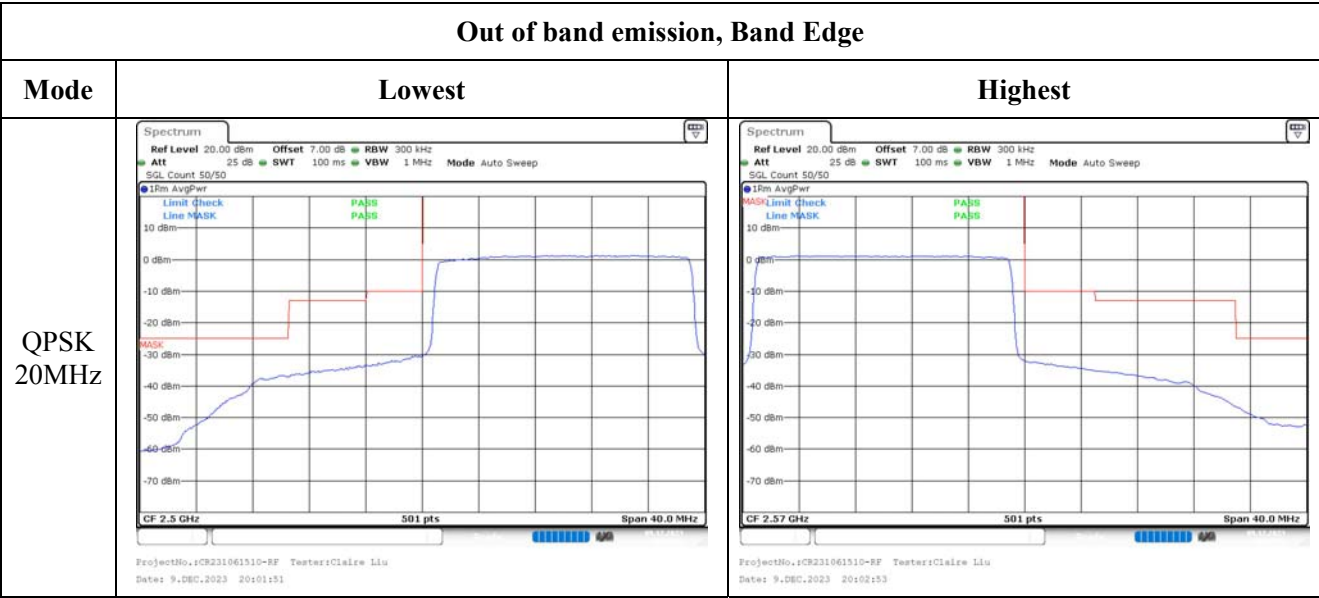


Highest

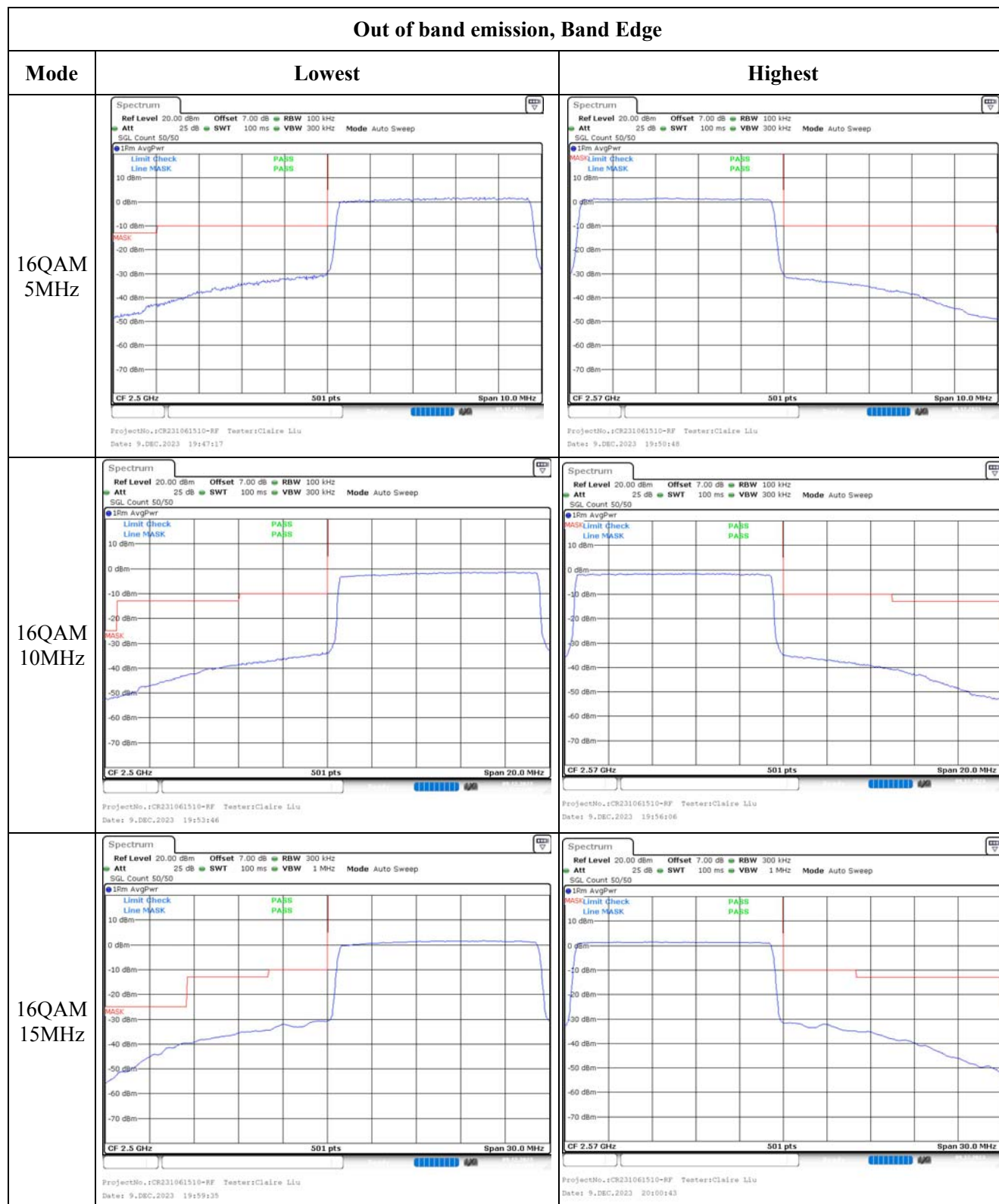


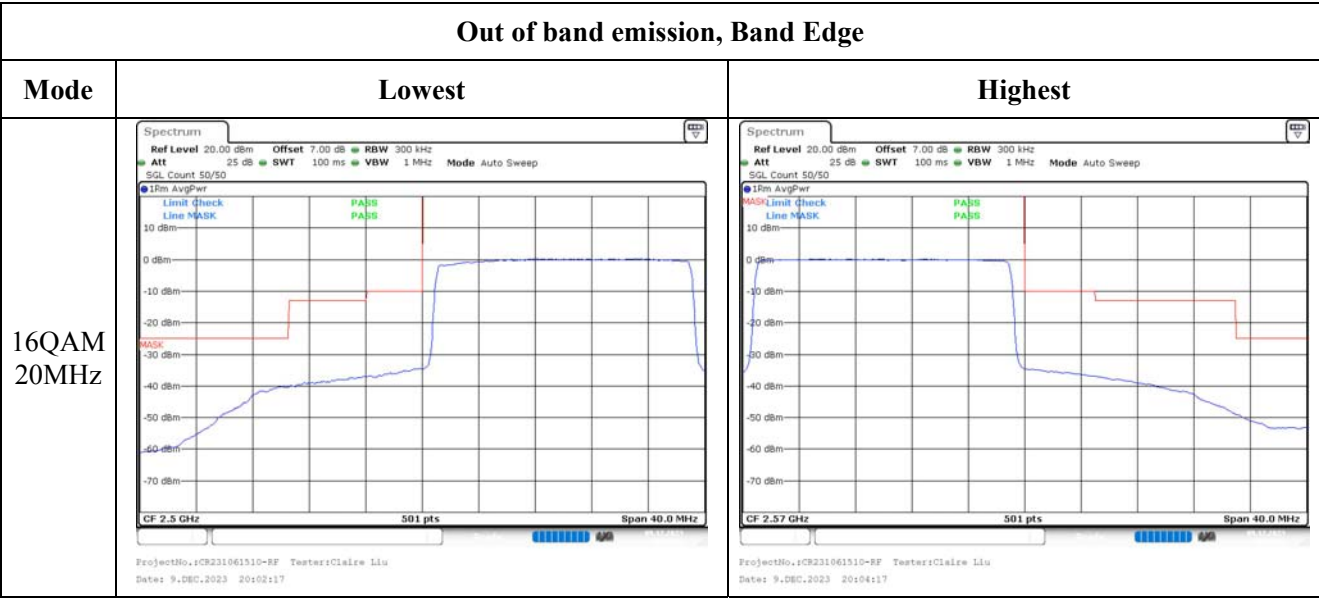
Out of band emission, Band Edge





Out of band emission, Band Edge





4.10 Antenna Port Test Data and Results for LTE Band 12

Serial Number:	2CIM-1	Test Date:	2023/11/12~2023/12/9
Test Site:	RF	Test Mode:	Transmitting
Tester:	Claire Liu	Test Result:	Pass

Environmental Conditions:

Temperature: (°C)	24.7~25.5	Relative Humidity: (%)	53~62	ATM Pressure: (kPa)	100.1~102
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Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSV40	101590	2022/11/25	2023/11/24
zhuoxiang	Coaxial Cable	SMA-178	211002	Each time	N/A
Minl-Circuits	Power Splitter	ZFRSC-183-S+	S F448201619	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	2023/9/28	2024/9/27
ZHAOXIN	DC Power Supply	RXN-6010D	21R6010D0912386	2023/9/28	2024/9/27
R&S	Spectrum Analyzer	FSV40	101590	2023/11/16	2024/11/15

* 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	23.23	23.1	23.03	12.77	34.77
	RB1#3	23.28	23.18	23.09		
	RB1#5	23.2	23.09	23.04		
	RB3#0	23.37	23.25	23.19		
	RB3#3	23.37	23.26	23.18		
	RB6#0	22.37	22.33	22.22		
1.4MHz 16QAM	RB1#0	22.19	22.17	22.13	11.87	34.77
	RB1#3	22.29	22.18	22.23		
	RB1#5	22.26	22.13	22.15		
	RB3#0	22.42	22.47	22.1		
	RB3#3	22.41	22.47	22.1		
	RB6#0	21.37	21.44	21.29		
3MHz QPSK	RB1#0	23.06	23.08	22.95	12.58	34.77
	RB1#8	23.18	23.15	23.03		
	RB1#14	23.07	22.98	22.92		
	RB6#0	22.28	22.25	22.1		
	RB6#9	22.29	22.2	22.16		
	RB15#0	22.3	22.2	22.12		
3MHz 16QAM	RB1#0	22.68	22.17	21.94	12.12	34.77
	RB1#8	22.72	22.28	22.01		
	RB1#14	22.56	22.18	21.94		
	RB6#0	21.47	21.29	21.18		
	RB6#9	21.43	21.33	21.13		
	RB15#0	21.43	21.28	21.21		
5MHz QPSK	RB1#0	23.31	23.28	23.14	12.84	34.77
	RB1#13	23.44	23.36	23.28		
	RB1#24	23.32	23.25	23.14		
	RB15#0	22.4	22.22	22.25		
	RB15#10	22.36	22.34	22.2		
	RB25#0	22.35	22.29	22.23		
5MHz 16QAM	RB1#0	22.18	22.61	22.21	12.11	34.77
	RB1#13	22.35	22.71	22.32		
	RB1#24	22.23	22.55	22.17		
	RB15#0	21.54	21.29	21.4		
	RB15#10	21.46	21.34	21.26		
	RB25#0	21.53	21.36	21.33		
10MHz QPSK	RB1#0	23.4	23.33	23.32	12.8	34.77
	RB1#25	23.4	23.4	23.35		
	RB1#49	23.32	23.31	23.31		

10MHz 16QAM	RB25#0	22.4	22.18	22.25	12.43	34.77
	RB25#25	22.46	22.27	22.16		
	RB50#0	22.46	22.25	22.18		
	RB1#0	22.88	22.52	22.37		
	RB1#25	23.03	22.53	22.3		
	RB1#49	22.92	22.43	22.26		
	RB25#0	21.46	21.36	21.39		
	RB25#25	21.6	21.33	21.32		
	RB50#0	21.48	21.37	21.29		

Note:

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

Test Bandwidth & Modulation	Resource Block & RB offset	Peak-to-average Ratio(dB)			Limit (dB)
		Lowest Channel	Middle Channel	Highest Channel	
10MHz QPSK	RB1#0	4.43	4.84	4.84	13
	RB50#0	5.36	5.22	5.16	13
10MHz 16QAM	RB1#0	5.33	5.8	5.62	13
	RB50#0	6.32	6.26	6.17	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	1.278	1.096	1.278	1.102	1.296
1.4MHz 16QAM	1.096	1.284	1.102	1.302	1.096	1.272
3MHz QPSK	2.683	2.928	2.671	2.916	2.683	2.928
3MHz 16QAM	2.683	2.940	2.671	2.940	2.683	2.952
5MHz QPSK	4.491	4.920	4.511	4.920	4.511	4.940
5MHz 16QAM	4.511	4.960	4.491	4.940	4.531	4.920
10MHz QPSK	8.942	9.640	8.942	9.640	8.942	9.600
10MHz 16QAM	8.942	9.760	8.942	9.560	8.942	9.600

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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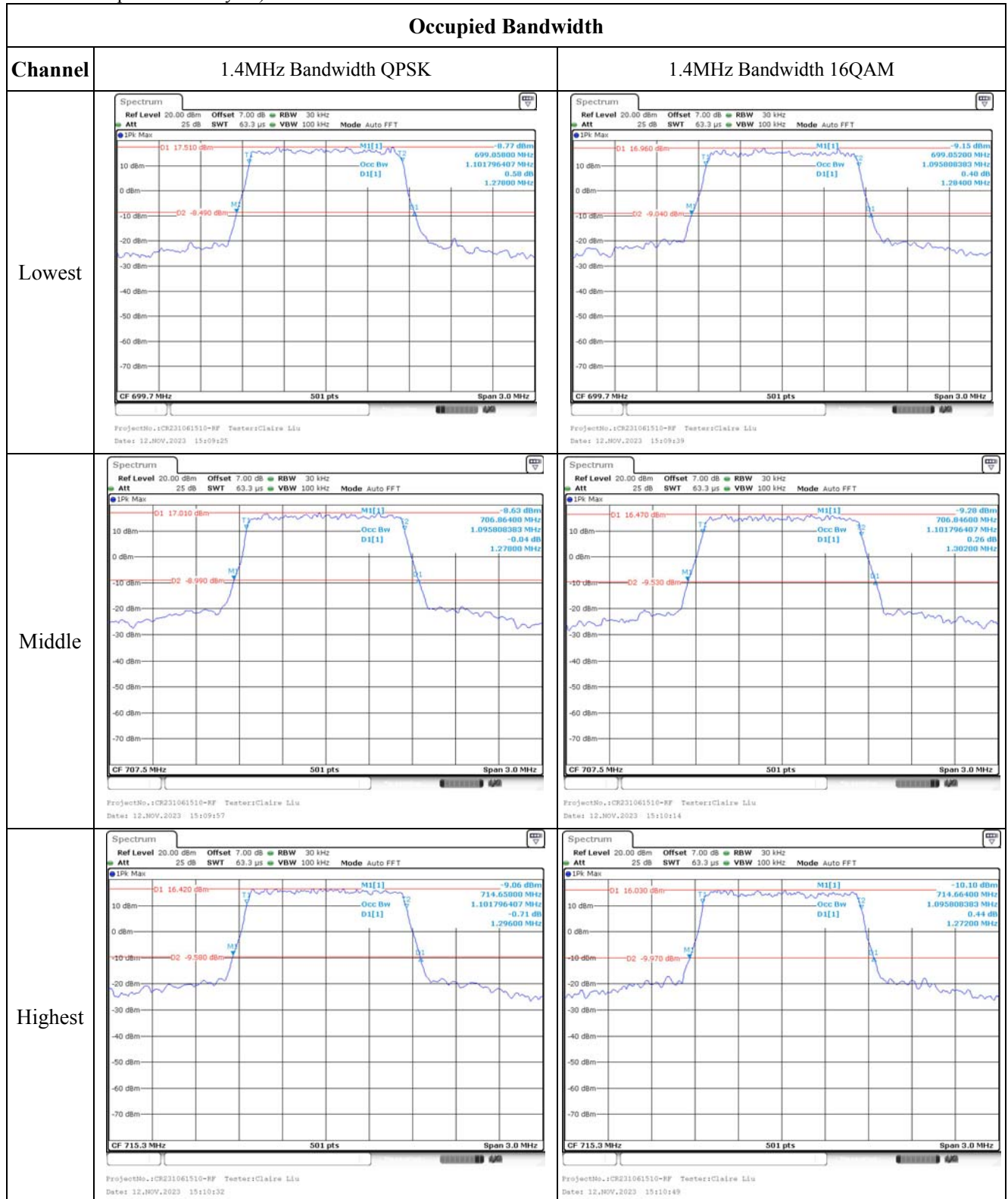
Out of band emission, Band Edge

Result:	Pass, Please refer to the test plots of Out of band emission, Band Edge.
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Frequency Stability						
Test Mode:	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	3.91	699.169	699.00	715.789	716.00
	-20	3.91	699.184	699.00	715.705	716.00
	-10	3.91	699.165	699.00	715.775	716.00
	0	3.91	699.252	699.00	715.796	716.00
	10	3.91	699.259	699.00	715.776	716.00
	20	3.91	699.160	699.00	715.800	716.00
	30	3.91	699.221	699.00	715.773	716.00
	40	3.91	699.230	699.00	715.713	716.00
	50	3.91	699.222	699.00	715.765	716.00
Frequency Stability vs. Voltage	20	3.45	699.240	699.00	715.775	716.00
	20	4.5	699.244	699.00	715.800	716.00
					Result:	Pass

Test Mode:	10M 16QAM	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (°C)	Voltage (V _{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.91	699.182	699.00	715.744	716.00
	-20	3.91	699.214	699.00	715.754	716.00
	-10	3.91	699.228	699.00	715.724	716.00
	0	3.91	699.257	699.00	715.702	716.00
	10	3.91	699.255	699.00	715.747	716.00
	20	3.91	699.160	699.00	715.800	716.00
	30	3.91	699.231	699.00	715.723	716.00
	40	3.91	699.227	699.00	715.791	716.00
	50	3.91	699.169	699.00	715.728	716.00
Frequency Stability vs. Voltage	20	3.45	699.224	699.00	715.707	716.00
	20	4.5	699.198	699.00	715.700	716.00
					Result:	Pass

Test Plots(Note: The 7.0dB is the Insertion loss of the RF cable, Power Splitter and DC Block, which was offset into the Spectrum Analyzer):



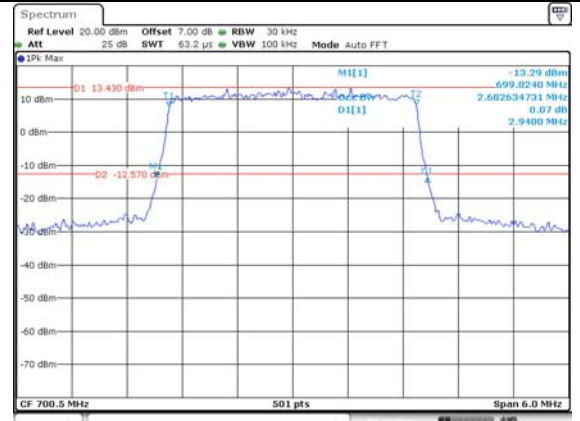
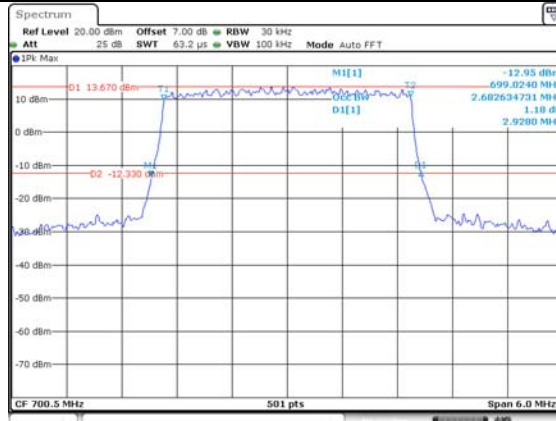
Occupied Bandwidth

Channel

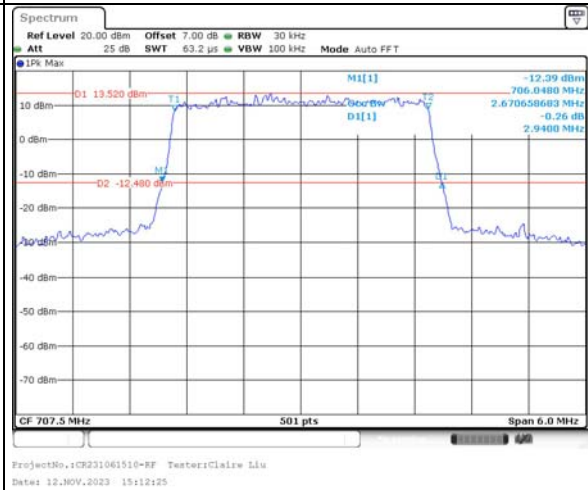
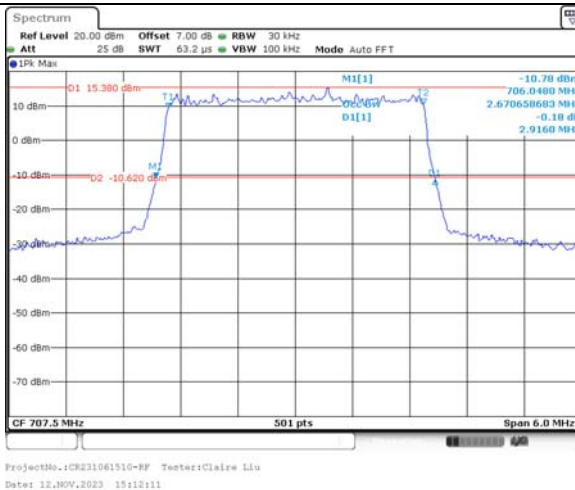
3MHz Bandwidth QPSK

3MHz Bandwidth 16QAM

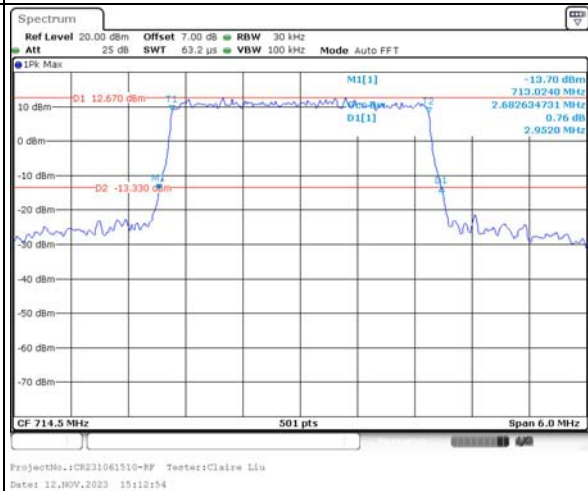
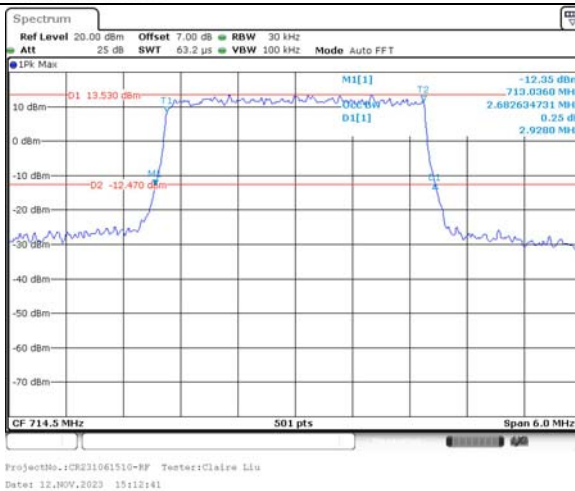
Lowest



Middle



Highest



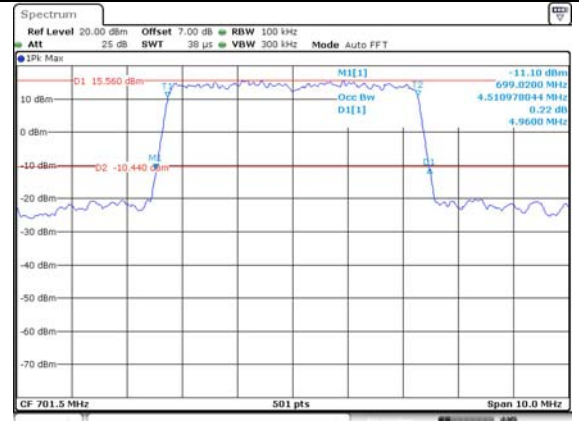
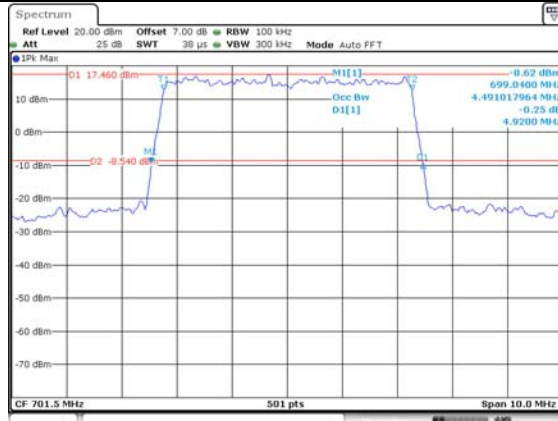
Occupied Bandwidth

Channel

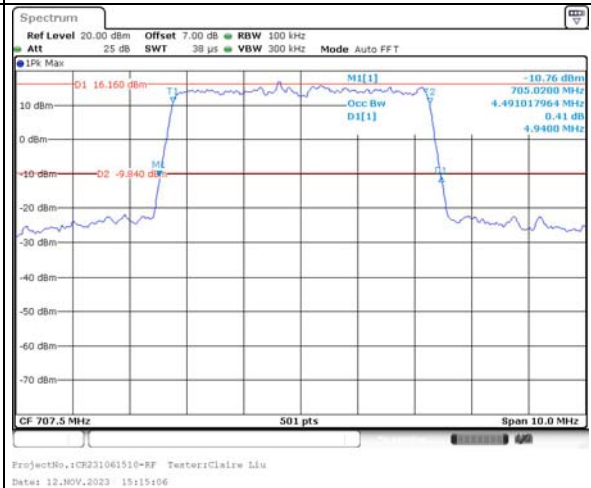
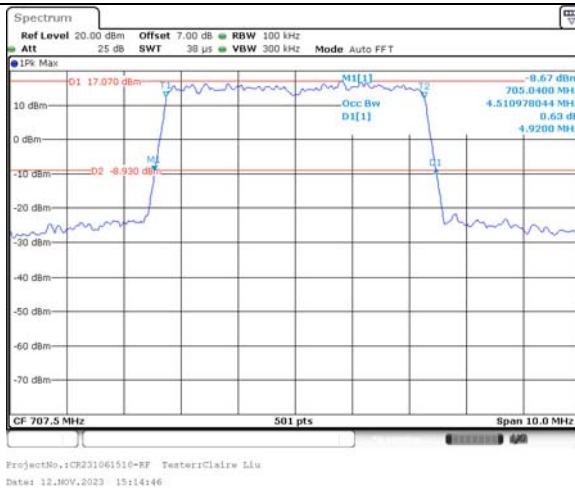
5MHz Bandwidth QPSK

5MHz Bandwidth 16QAM

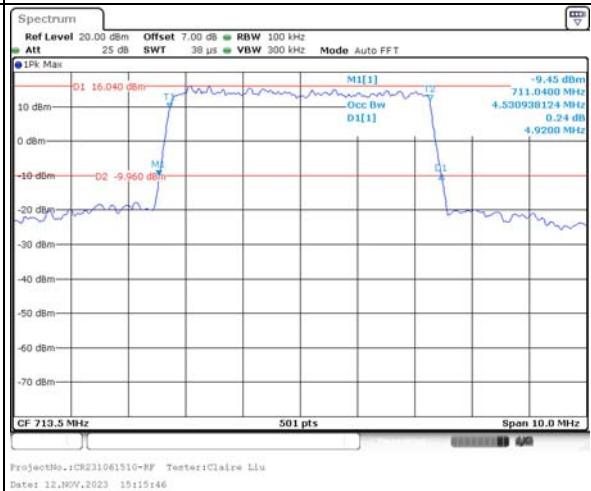
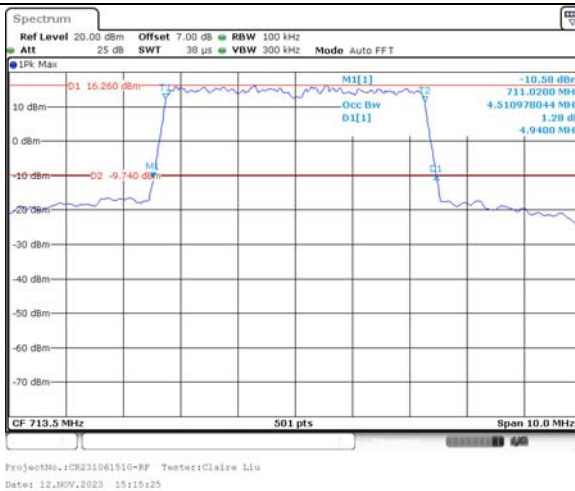
Lowest



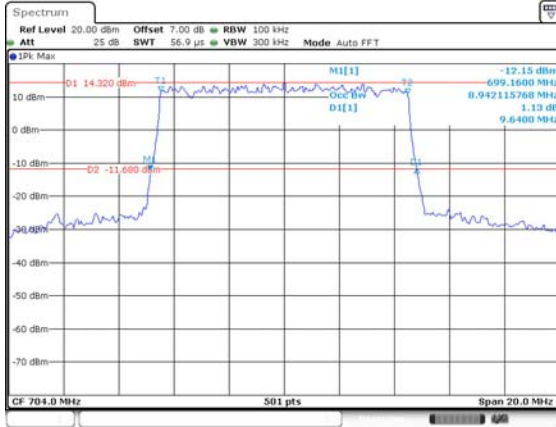
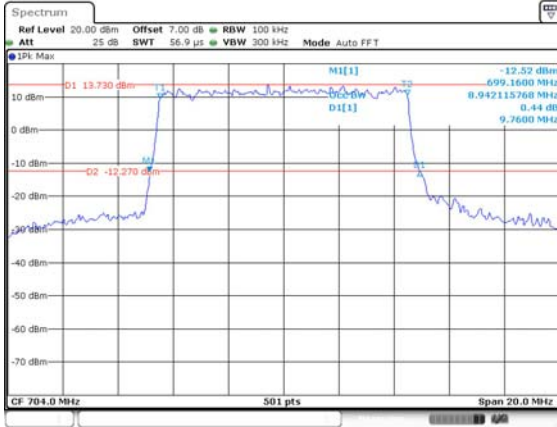
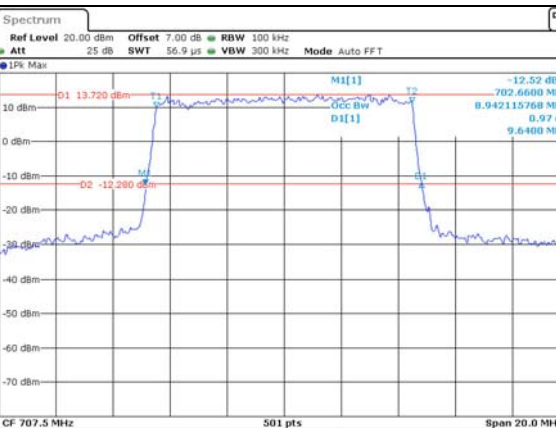
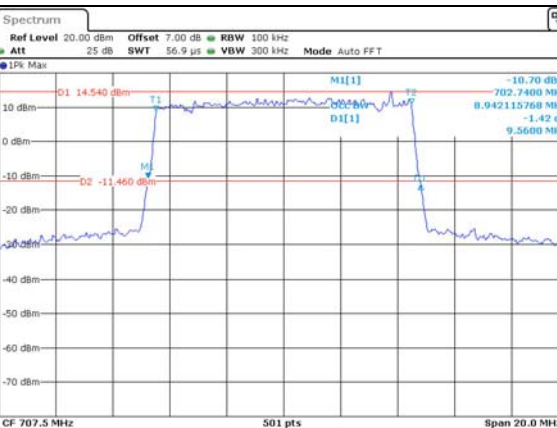
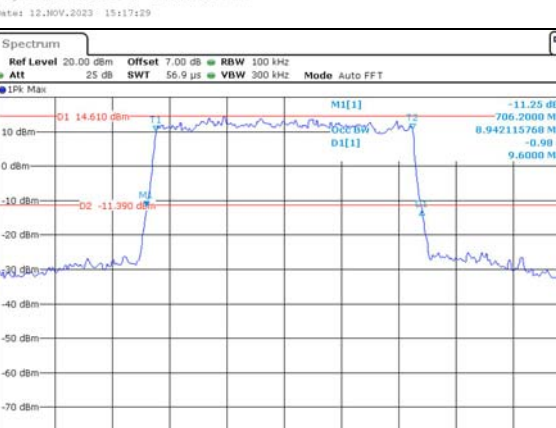
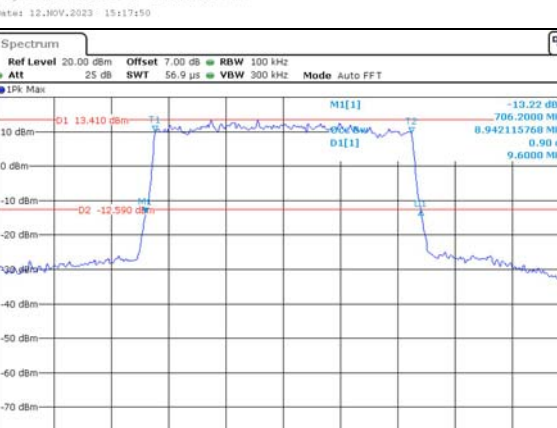
Middle



Highest



Occupied Bandwidth

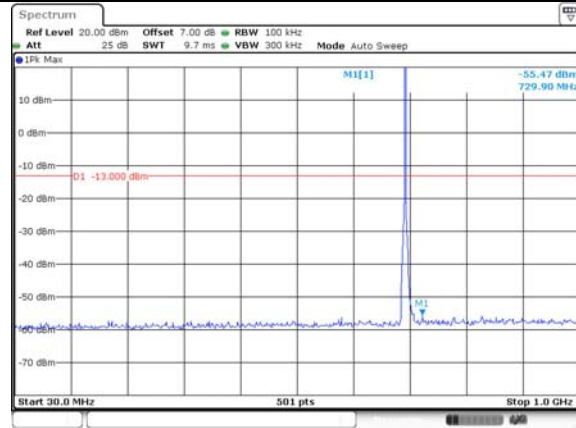
Channel	10MHz Bandwidth QPSK	10MHz Bandwidth 16QAM
Lowest	 ProjectNo.:CR231061510-RF Testers:Clairw Liu Date: 12.NOV.2023 15:16:34	 ProjectNo.:CR231061510-RF Testers:Clairw Liu Date: 12.NOV.2023 15:17:01
Middle	 ProjectNo.:CR231061510-RF Testers:Clairw Liu Date: 12.NOV.2023 15:17:29	 ProjectNo.:CR231061510-RF Testers:Clairw Liu Date: 12.NOV.2023 15:17:50
Highest	 ProjectNo.:CR231061510-RF Testers:Clairw Liu Date: 12.NOV.2023 15:18:15	 ProjectNo.:CR231061510-RF Testers:Clairw Liu Date: 12.NOV.2023 15:18:36

Spurious Emissions at Antenna Terminal

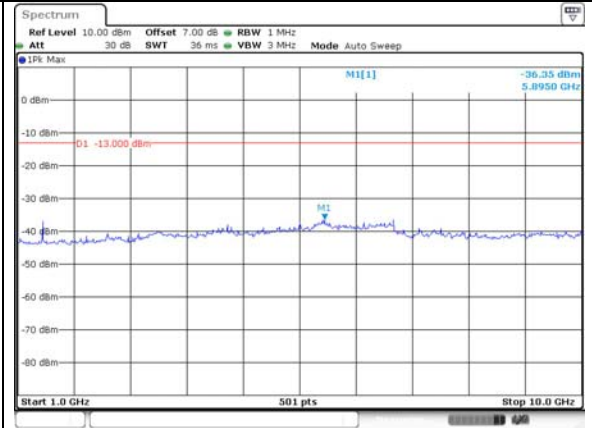
Channel

1.4MHz Bandwidth QPSK

Lowest

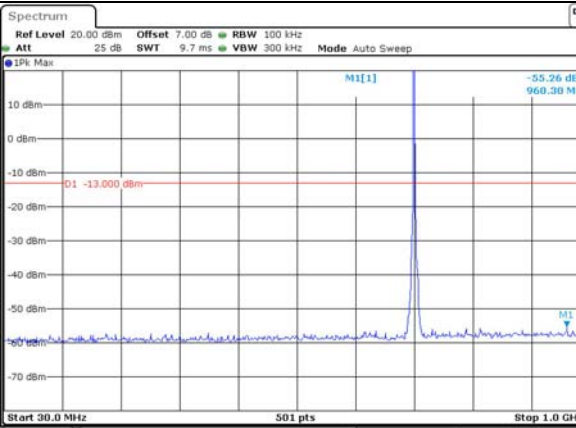


ProjectNo.:CR231061510-RF Testers:Claire Liu
Date: 13.NOV.2023 09:47:12

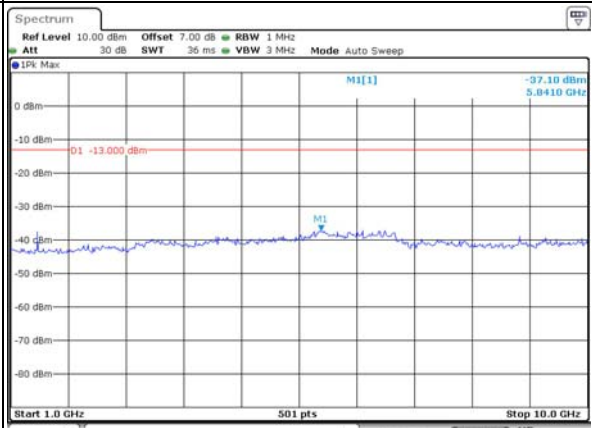


ProjectNo.:CR231061510-RF Testers:Claire Liu
Date: 13.NOV.2023 09:47:37

Middle

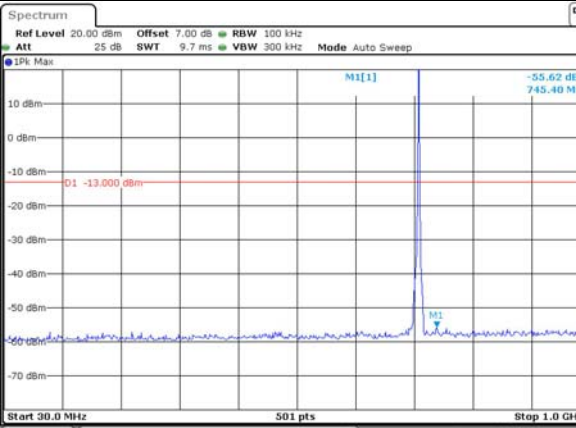


ProjectNo.:CR231061510-RF Testers:Claire Liu
Date: 13.NOV.2023 09:48:03

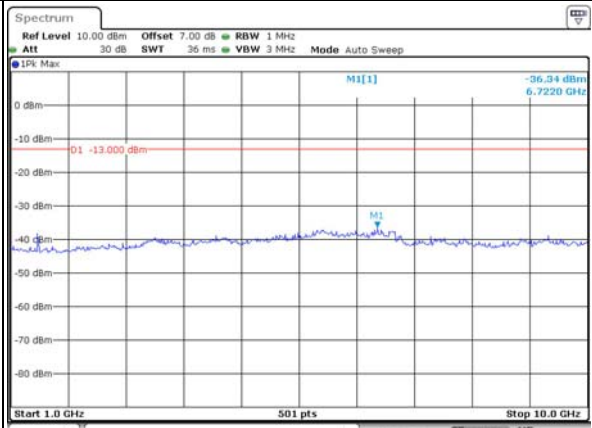


ProjectNo.:CR231061510-RF Testers:Claire Liu
Date: 13.NOV.2023 09:48:28

Highest



ProjectNo.:CR231061510-RF Testers:Claire Liu
Date: 13.NOV.2023 09:48:57



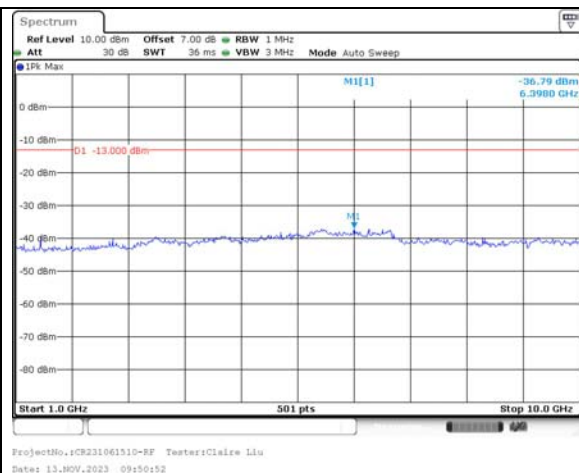
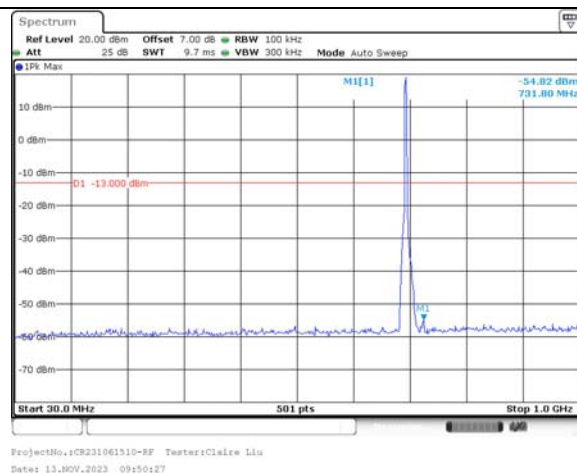
ProjectNo.:CR231061510-RF Testers:Claire Liu
Date: 13.NOV.2023 09:49:29

Spurious Emissions at Antenna Terminal

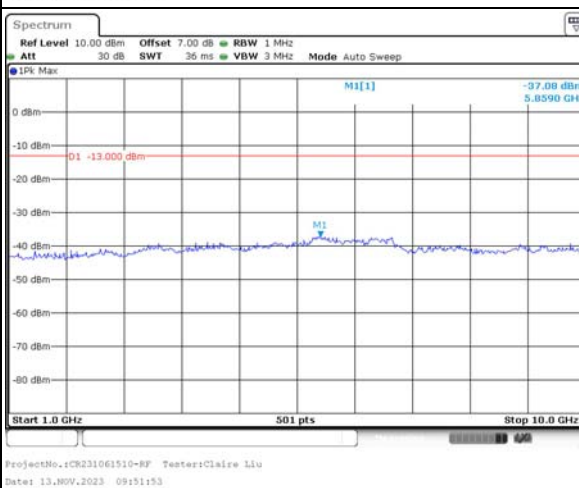
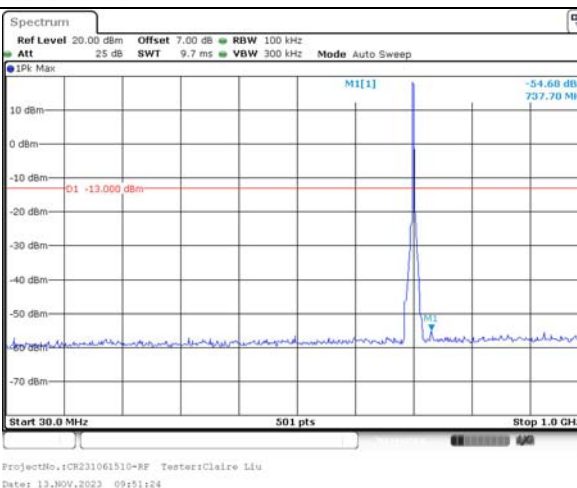
Channel

3MHz Bandwidth QPSK

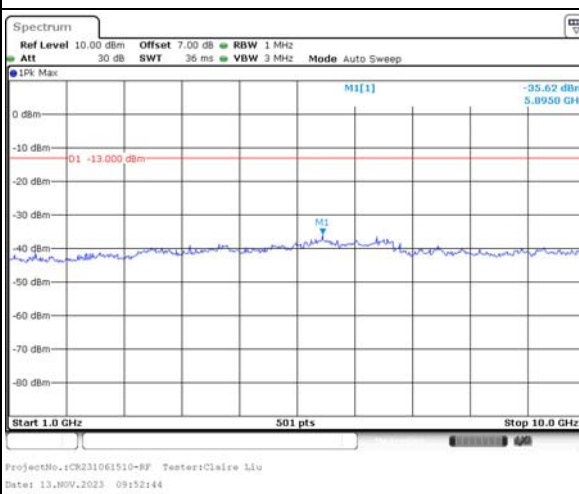
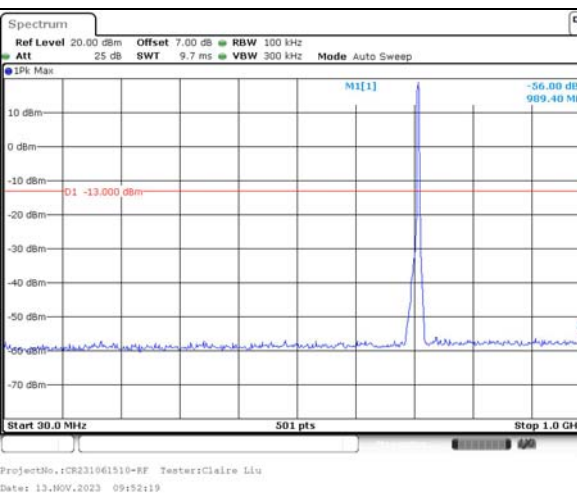
Lowest



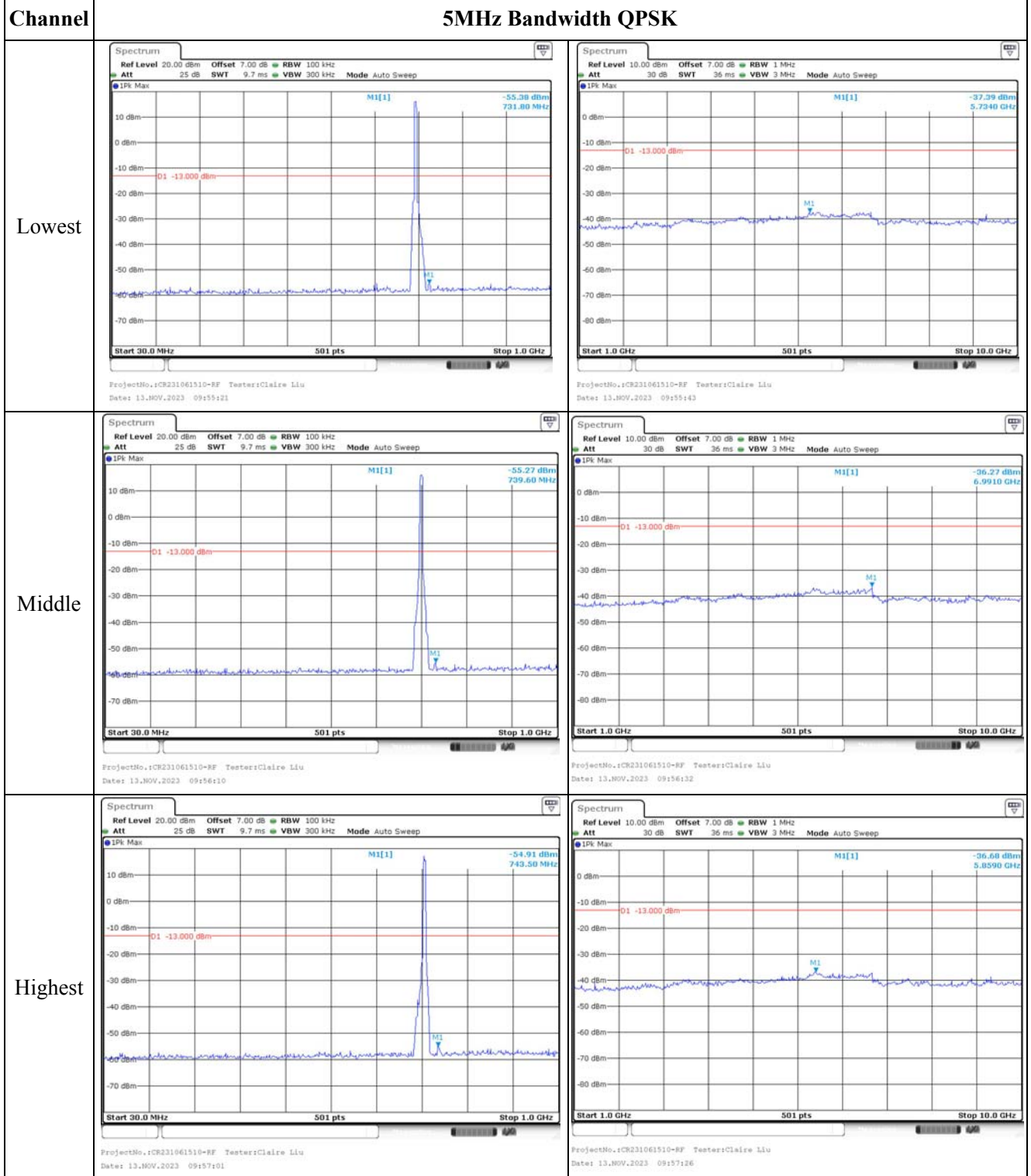
Middle



Highest



Spurious Emissions at Antenna Terminal

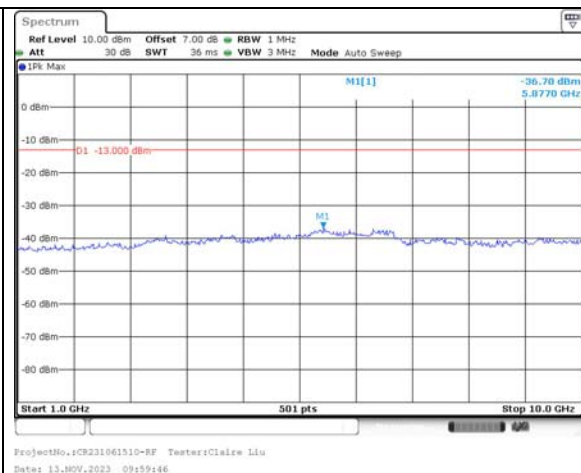
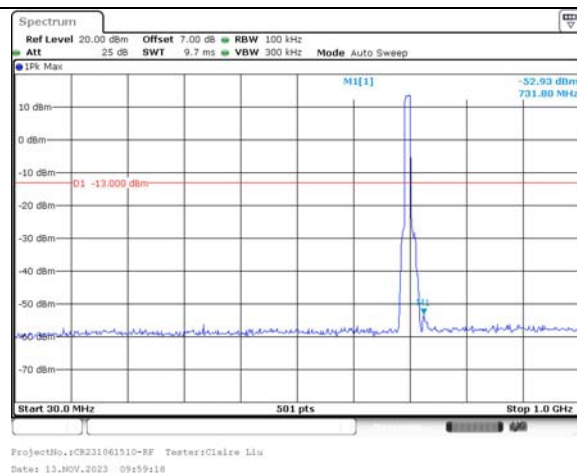


Spurious Emissions at Antenna Terminal

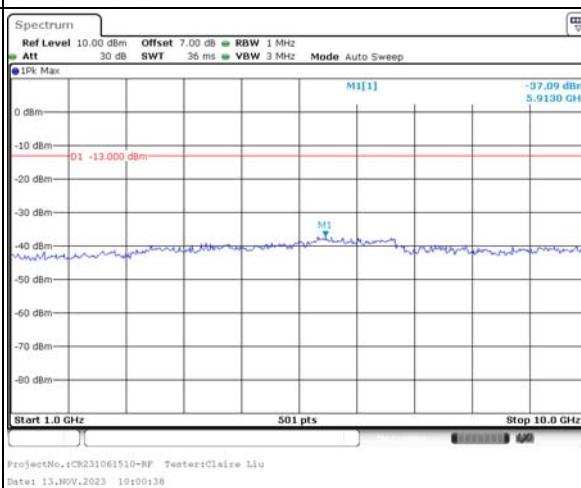
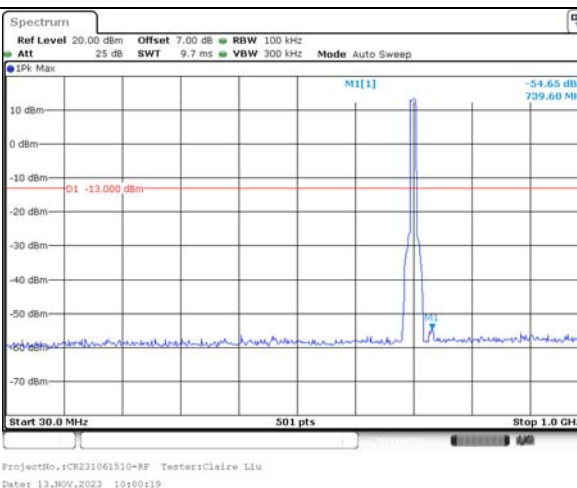
Channel

10MHz Bandwidth QPSK

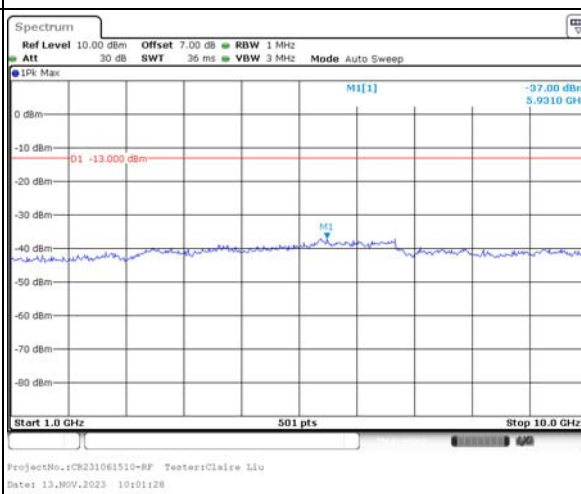
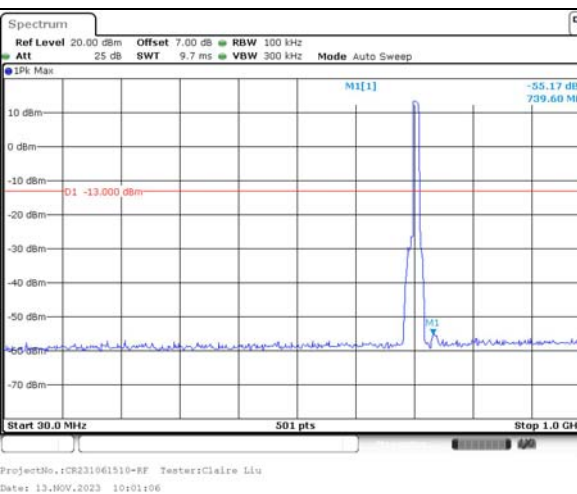
Lowest



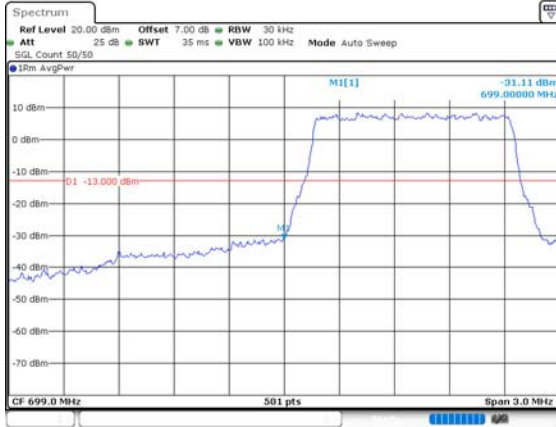
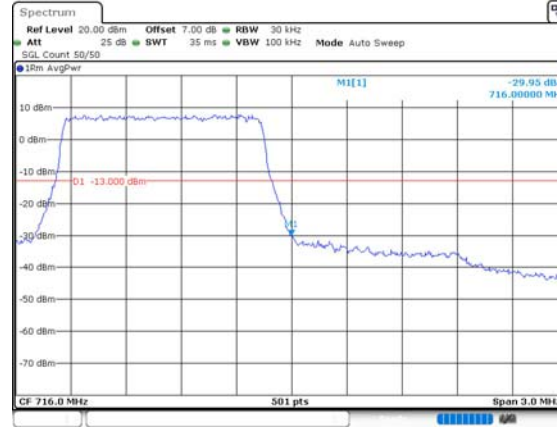
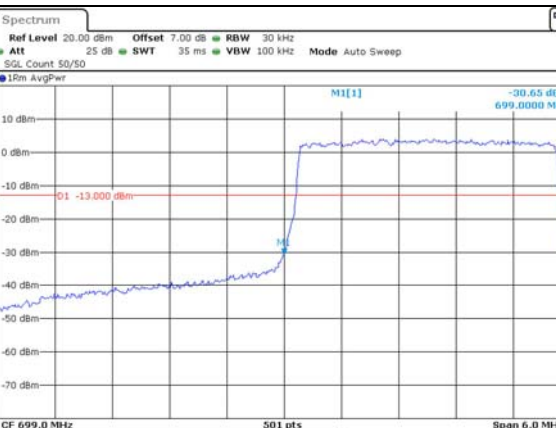
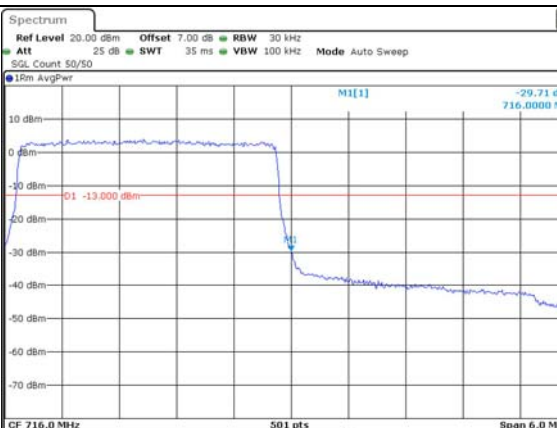
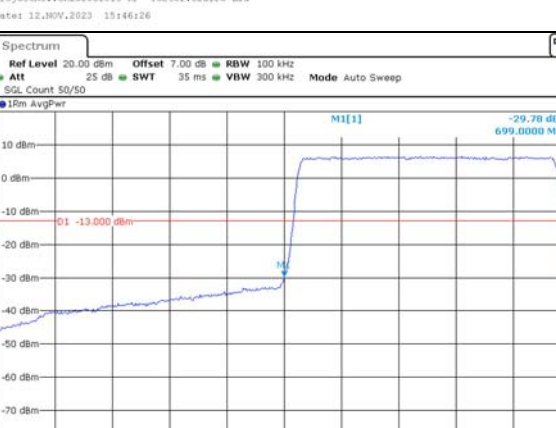
Middle



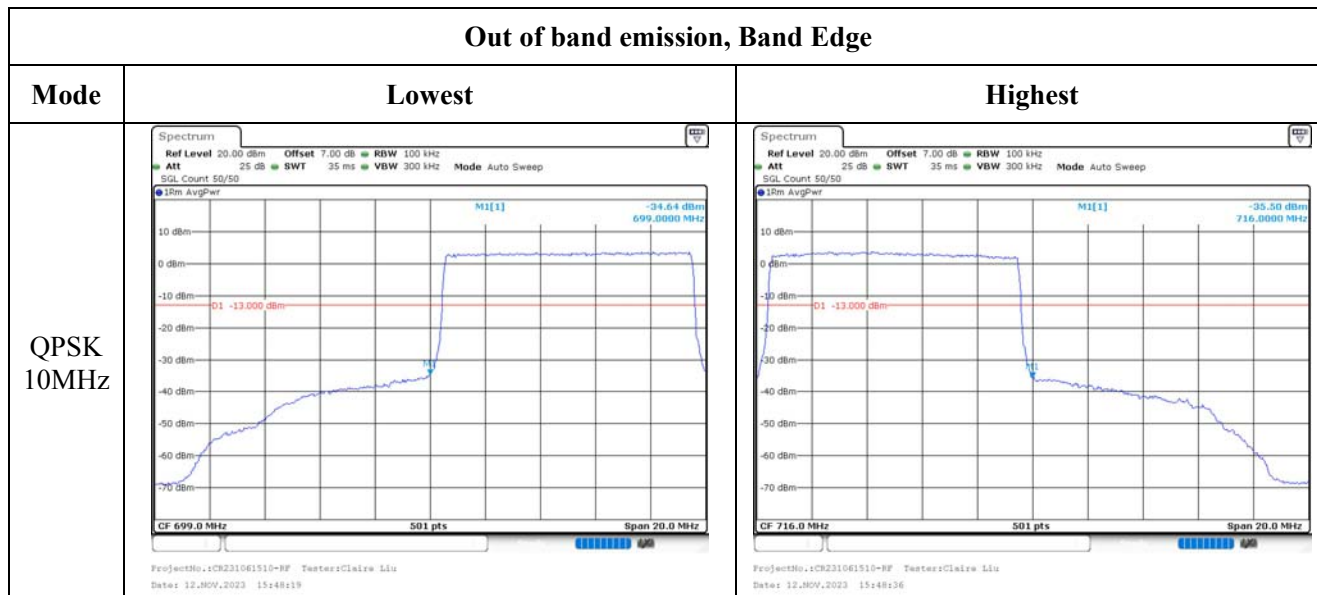
Highest



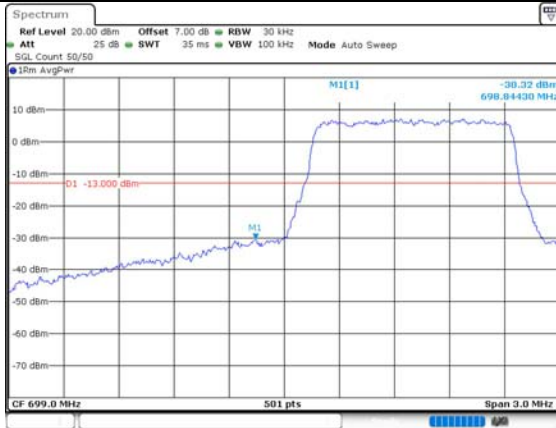
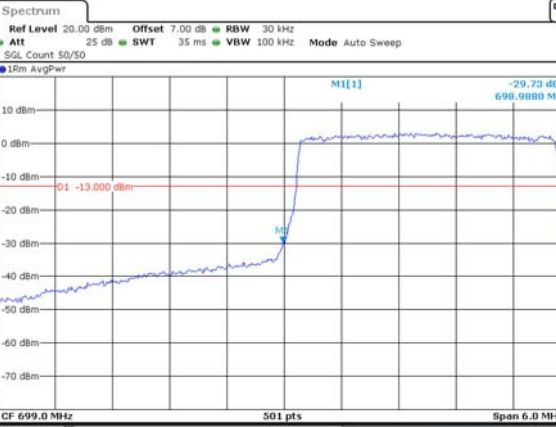
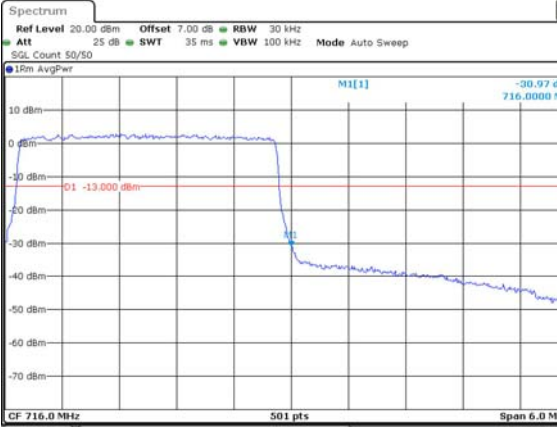
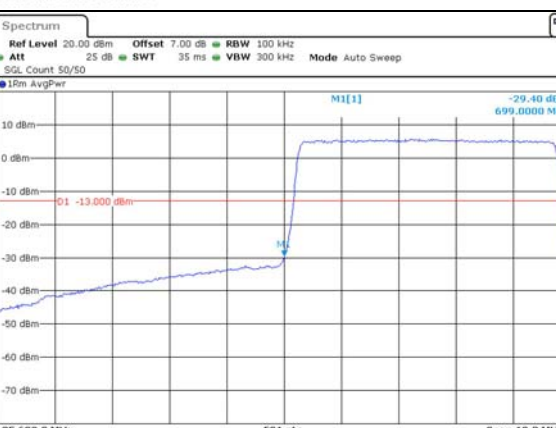
Out of band emission, Band Edge

Mode	Lowest	Highest
QPSK 1.4MHz	 ProjectNo.:CR231061510-RF Testter:Clairu Liu Date: 12.NOV.2023 15:45:32	 ProjectNo.:CR231061510-RF Testter:Clairu Liu Date: 12.NOV.2023 15:45:46
QPSK 3MHz	 ProjectNo.:CR231061510-RF Testter:Clairu Liu Date: 12.NOV.2023 15:46:26	 ProjectNo.:CR231061510-RF Testter:Clairu Liu Date: 12.NOV.2023 15:46:41
QPSK 5MHz	 ProjectNo.:CR231061510-RF Testter:Clairu Liu Date: 12.NOV.2023 15:47:21	 ProjectNo.:CR231061510-RF Testter:Clairu Liu Date: 12.NOV.2023 15:47:37

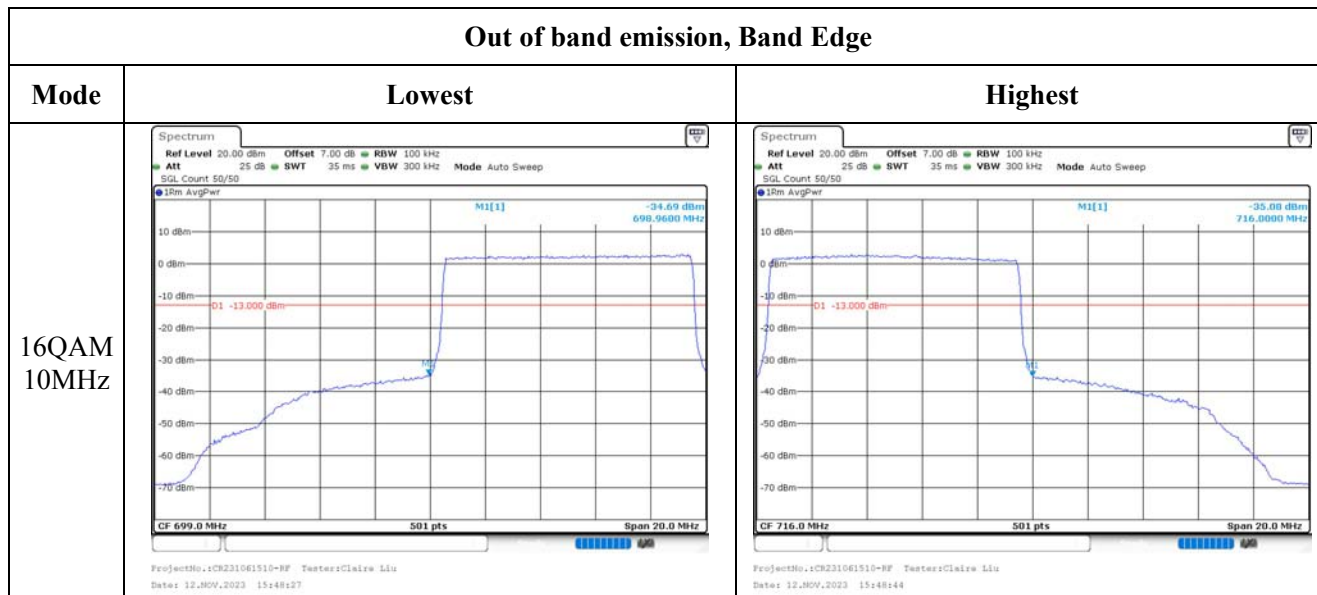
Out of band emission, Band Edge



Out of band emission, Band Edge

Mode	Lowest	Highest
16QAM 1.4MHz	 ProjectNo.:CR231061510-RF Tester:Clairu Liu Date: 12.NOV.2023 15:45:39	 ProjectNo.:CR231061510-RF Tester:Clairu Liu Date: 12.NOV.2023 15:45:53
16QAM 3MHz	 ProjectNo.:CR231061510-RF Tester:Clairu Liu Date: 12.NOV.2023 15:46:33	 ProjectNo.:CR231061510-RF Tester:Clairu Liu Date: 12.NOV.2023 15:46:47
16QAM 5MHz	 ProjectNo.:CR231061510-RF Tester:Clairu Liu Date: 12.NOV.2023 15:47:29	 ProjectNo.:CR231061510-RF Tester:Clairu Liu Date: 12.NOV.2023 15:47:44

Out of band emission, Band Edge



4.11 Antenna Port Test Data and Results for LTE Band 13

Serial Number:	2CIM-1	Test Date:	2023/11/12~2023/12/9
Test Site:	RF	Test Mode:	Transmitting
Tester:	Claire Liu	Test Result:	Pass

Environmental Conditions:

Temperature: (°C)	24.7~25.5	Relative Humidity: (%)	53~62	ATM Pressure: (kPa)	100.1~102
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Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSV40	101590	2022/11/25	2023/11/24
zhuoxiang	Coaxial Cable	SMA-178	211002	Each time	N/A
Minl-Circuits	Power Splitter	ZFRSC-183-S+	S F448201619	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	2023/9/28	2024/9/27
ZHAOXIN	DC Power Supply	RXN-6010D	21R6010D0912386	2023/9/28	2024/9/27
R&S	Spectrum Analyzer	FSV40	101590	2023/11/16	2024/11/15

* 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	23.5	23.56	23.57	13.16	34.77
	RB1#13	23.76	23.73	23.72		
	RB1#24	23.6	23.57	23.6		
	RB15#0	22.57	22.61	22.6		
	RB15#10	22.6	22.59	22.66		
	RB25#0	22.51	22.57	22.59		
5MHz 16QAM	RB1#0	22.48	22.32	22.76	12.37	34.77
	RB1#13	22.69	22.5	22.97		
	RB1#24	22.6	22.42	22.84		
	RB15#0	21.57	21.62	21.57		
	RB15#10	21.55	21.56	21.65		
	RB25#0	21.56	21.65	21.66		
10MHz QPSK	RB1#0	/	23.74	/	13.26	34.77
	RB1#25	/	23.82	/		
	RB1#49	/	23.86	/		
	RB25#0	/	22.67	/		
	RB25#25	/	22.75	/		
	RB50#0	/	22.72	/		
10MHz 16QAM	RB1#0	/	23.11	/	12.75	34.77
	RB1#25	/	23.22	/		
	RB1#49	/	23.35	/		
	RB25#0	/	21.71	/		
	RB25#25	/	21.78	/		
	RB50#0	/	21.69	/		

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	/	3.65	/	13
	RB50#0	/	4.58	/	13
10MHz 16QAM	RB1#0	/	4.49	/	13
	RB50#0	/	5.54	/	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	4.491	4.920	4.511	4.920	4.511	4.920
5MHz 16QAM	4.511	4.940	4.511	4.920	4.511	4.940
10MHz QPSK	/	8.942	/	/	9.720	/
10MHz 16QAM	/	8.942	/	/	9.600	/

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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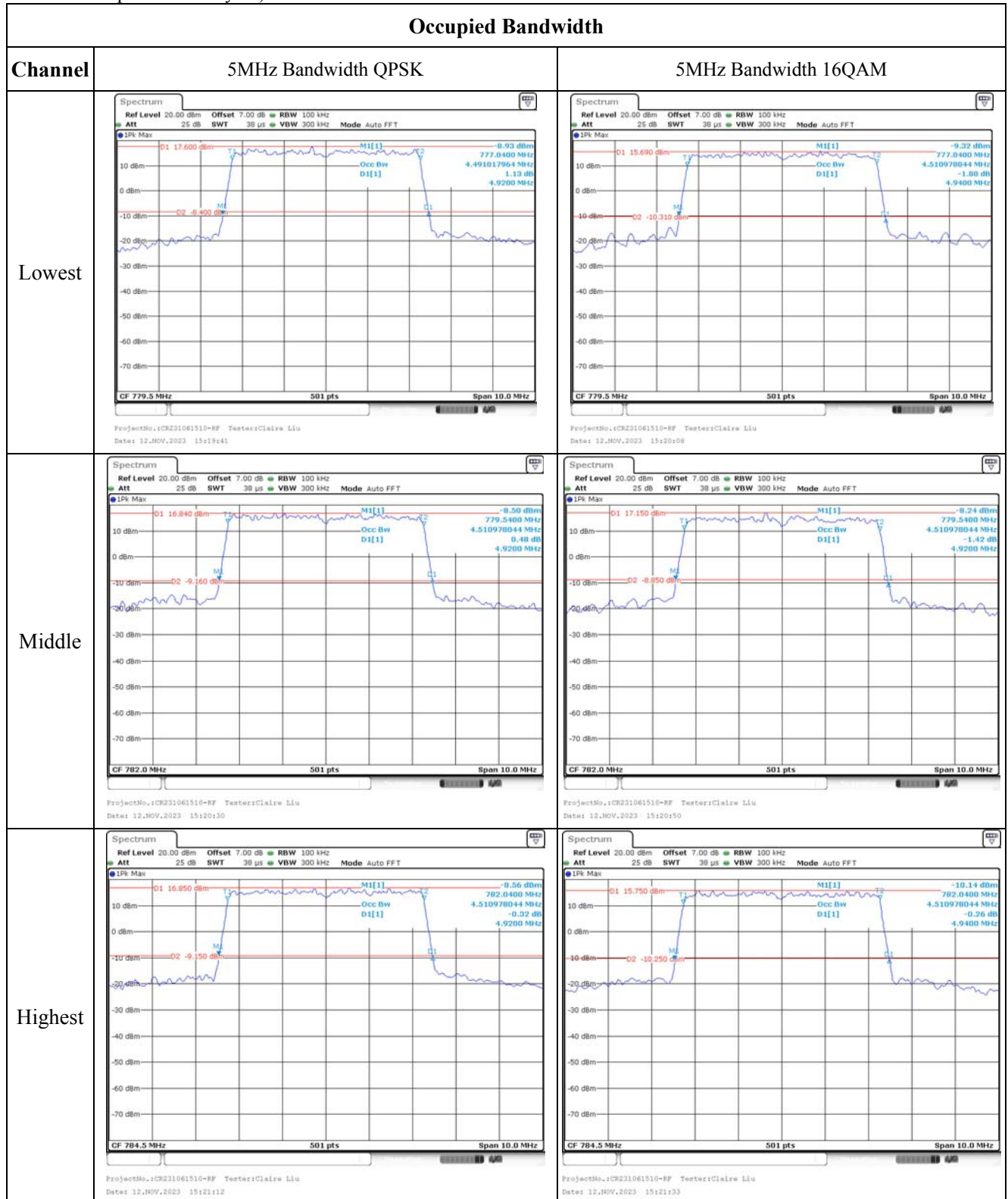
Frequency Stability

Test Mode:	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	3.91	777.293	777.00	786.795	787.00
	-20	3.91	777.252	777.00	786.795	787.00
	-10	3.91	777.241	777.00	786.797	787.00
	0	3.91	777.252	777.00	786.794	787.00
	10	3.91	777.282	777.00	786.796	787.00
	20	3.91	777.200	777.00	786.795	787.00
	30	3.91	777.300	777.00	786.799	787.00
	40	3.91	777.235	777.00	786.798	787.00
	50	3.91	777.255	777.00	786.798	787.00
Frequency Stability vs. Voltage	20	3.45	777.268	777.00	786.793	787.00
	20	4.5	777.235	777.00	786.794	787.00
					Result:	Pass

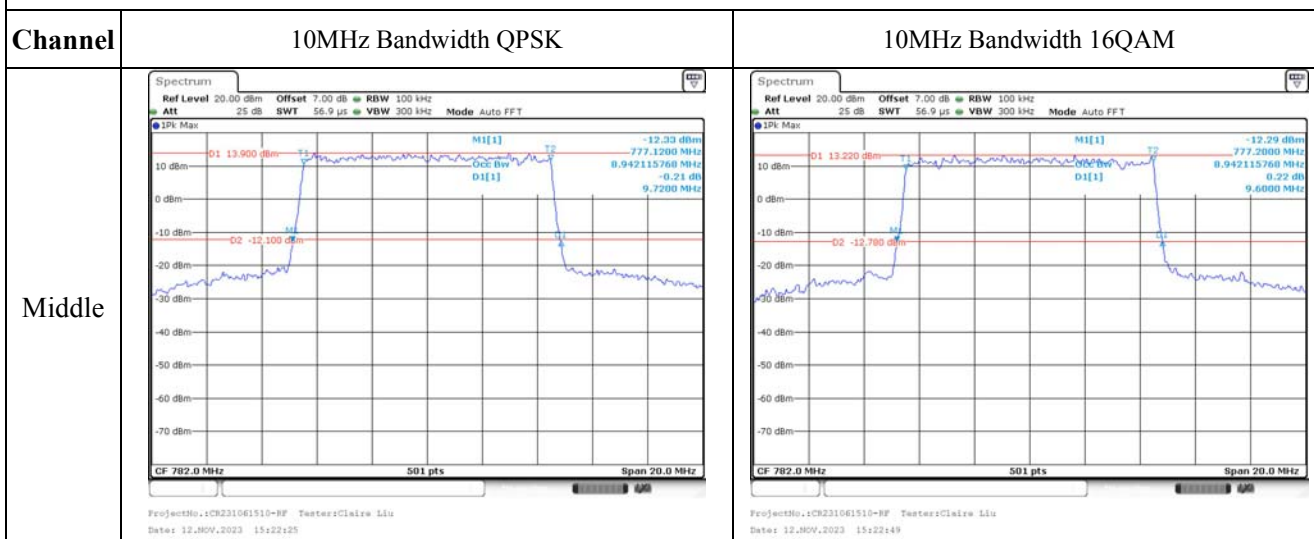
Test Mode:	10M 16QAM	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (°C)	Voltage (V _{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.91	777.276	777.00	786.797	787.00
	-20	3.91	777.255	777.00	786.799	787.00
	-10	3.91	777.263	777.00	786.794	787.00

	0	3.91	777.299	777.00	786.800	787.00
	10	3.91	777.292	777.00	786.796	787.00
	20	3.91	777.200	777.00	786.794	787.00
	30	3.91	777.264	777.00	786.794	787.00
	40	3.91	777.250	777.00	786.800	787.00
	50	3.91	777.267	777.00	786.794	787.00
Frequency Stability vs. Voltage	20	3.45	777.221	777.00	786.799	787.00
	20	4.5	777.257	777.00	786.799	787.00
					Result:	Pass

Test Plots(Note: The 7.0dB is the Insertion loss of the RF cable, Power Splitter and DC Block, which was offset into the Spectrum Analyzer):



Occupied Bandwidth

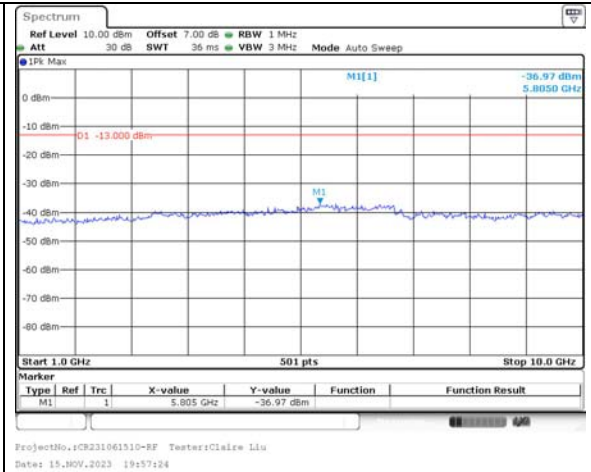
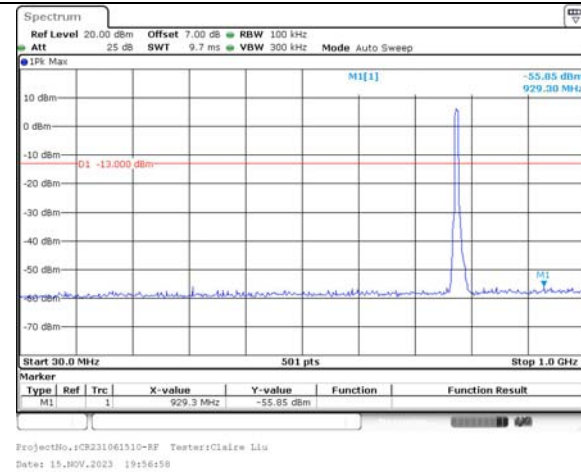


Spurious Emissions at Antenna Terminal

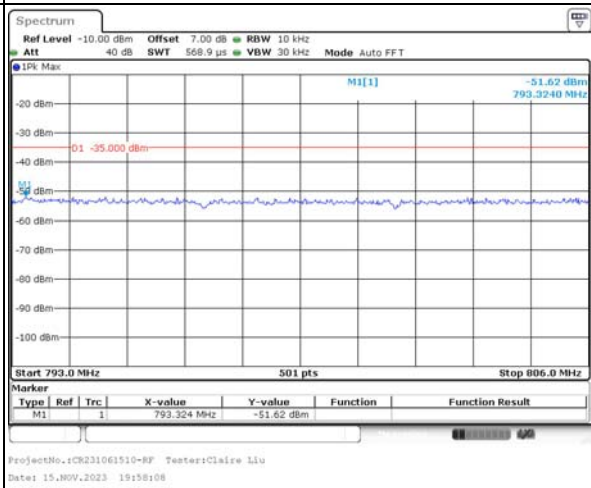
Channel

5MHz Bandwidth QPSK

Lowest



Lowest



Lowest

