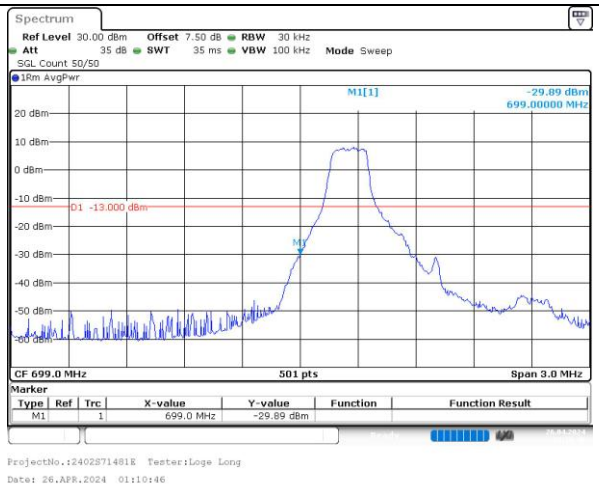
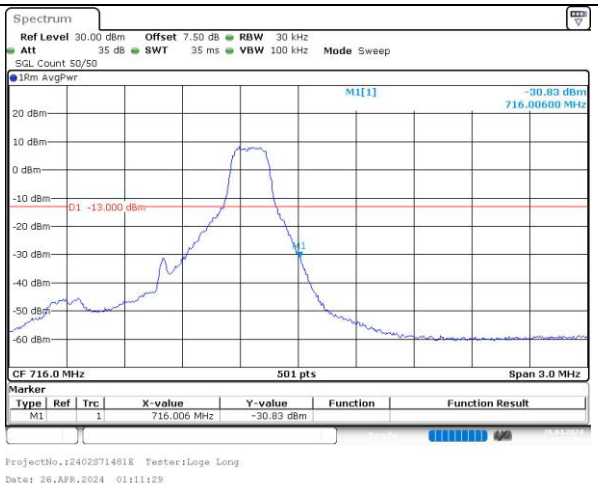
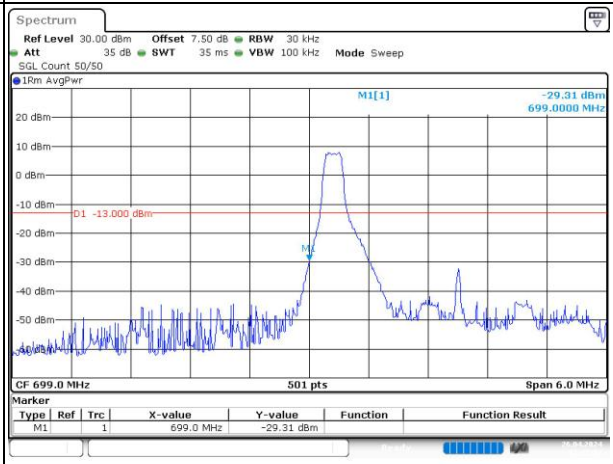
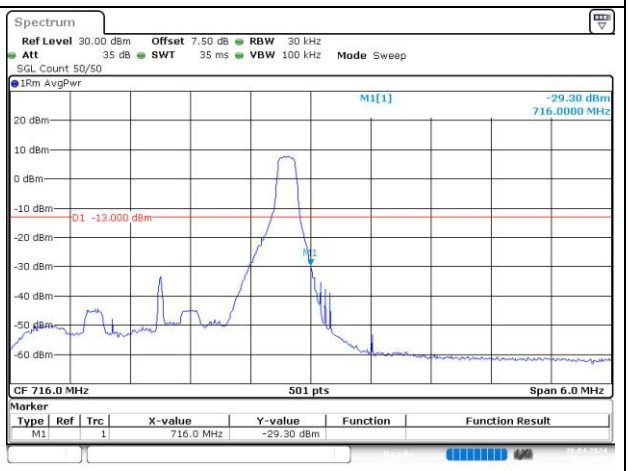
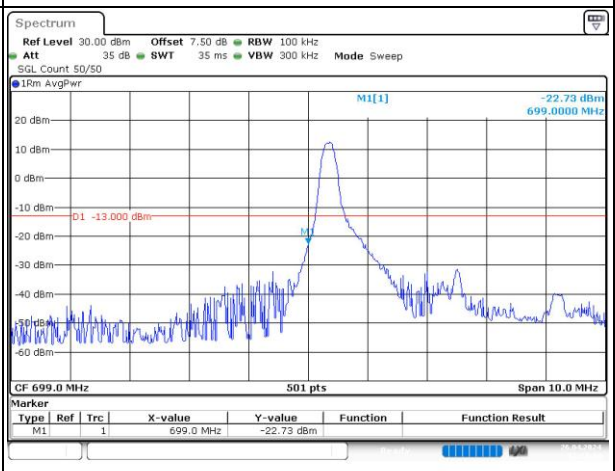
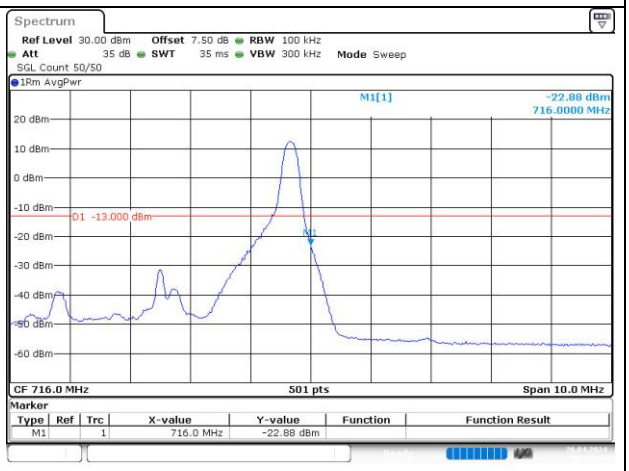
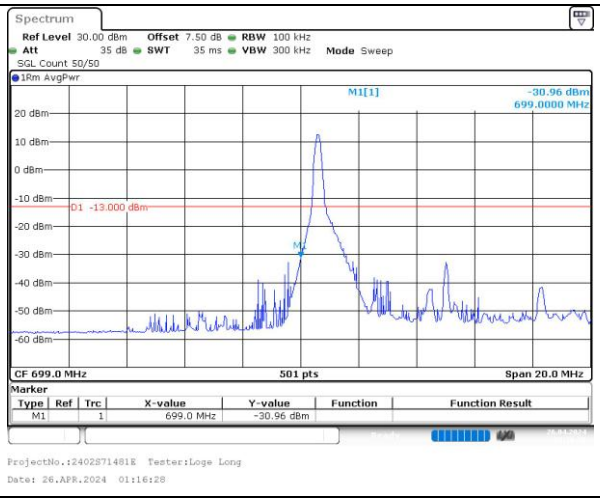
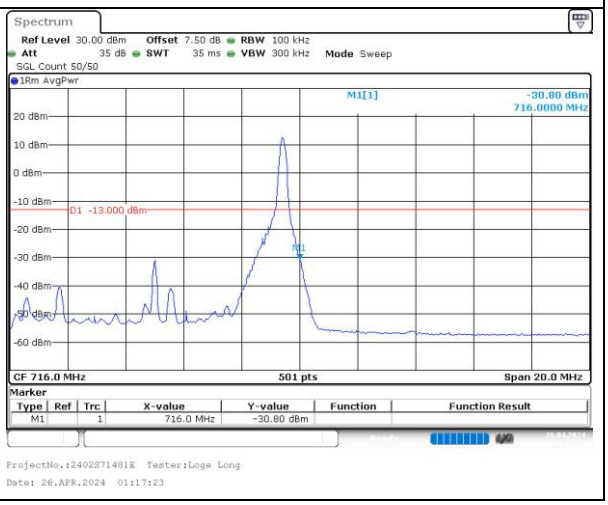
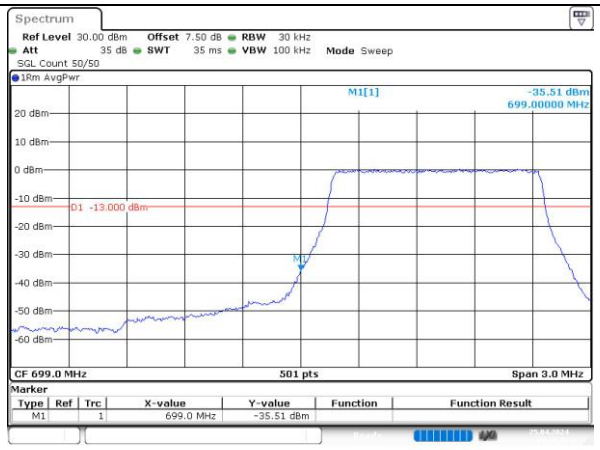
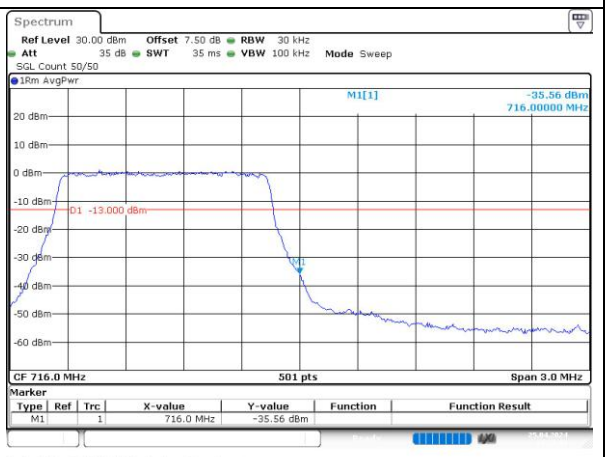
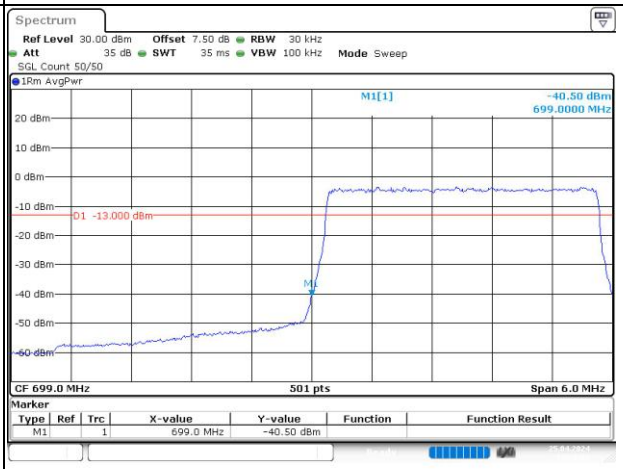
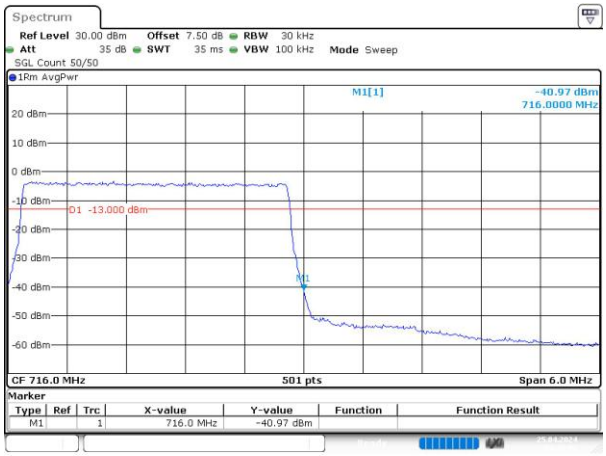
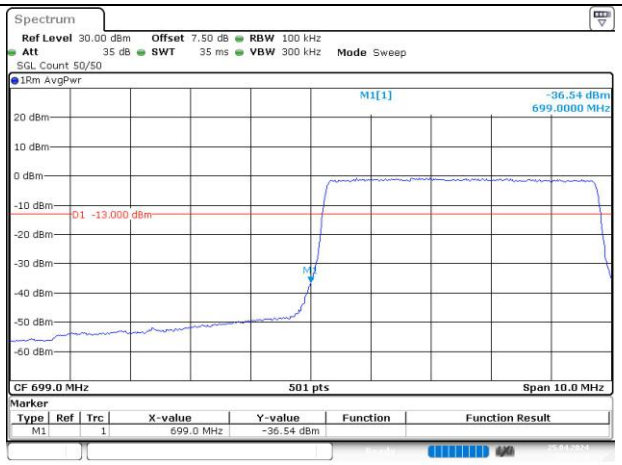
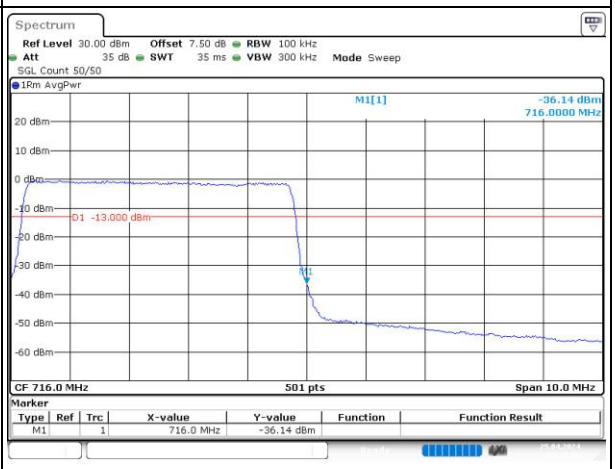
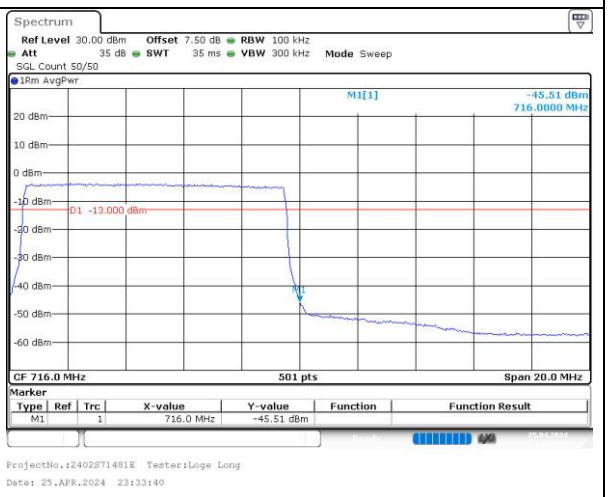
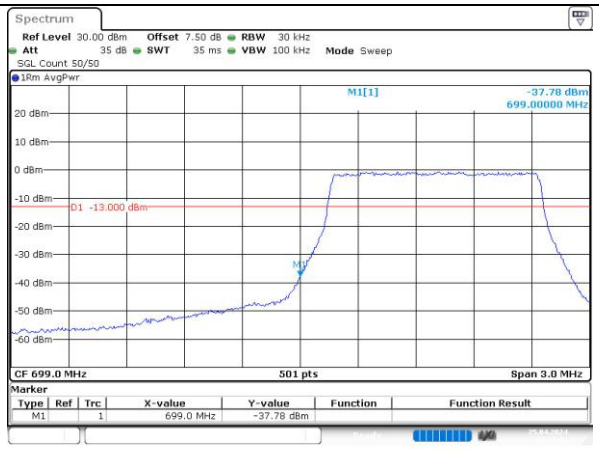
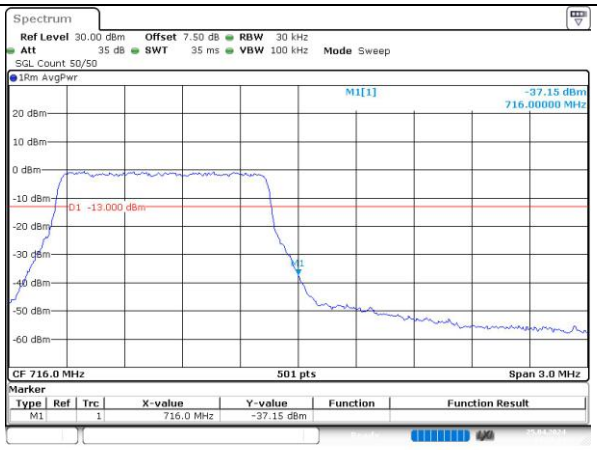
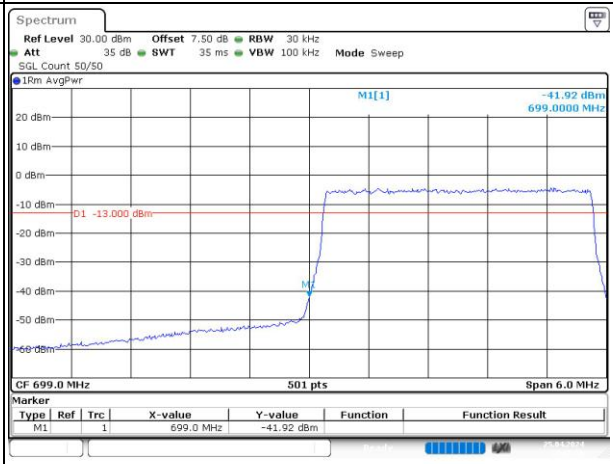
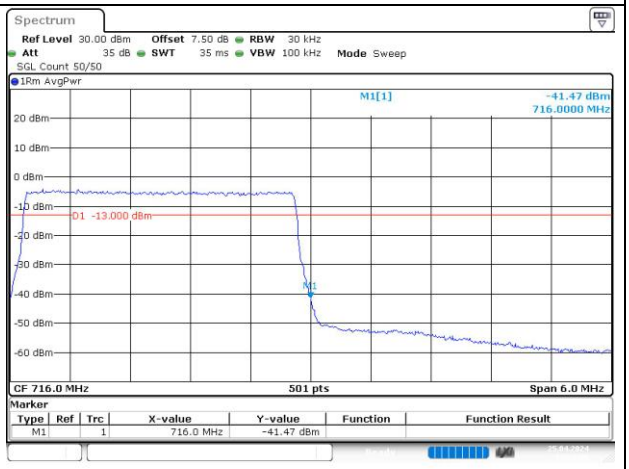
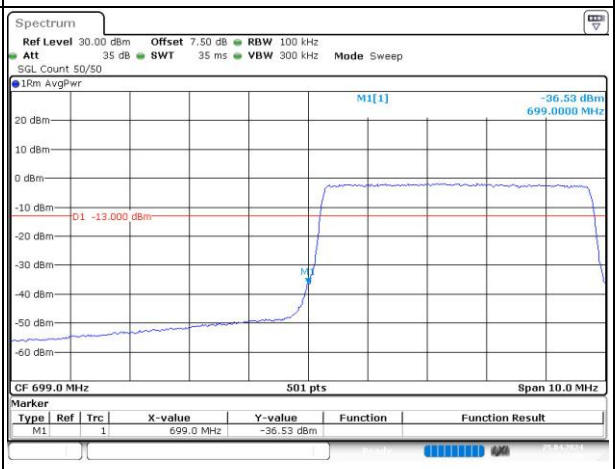
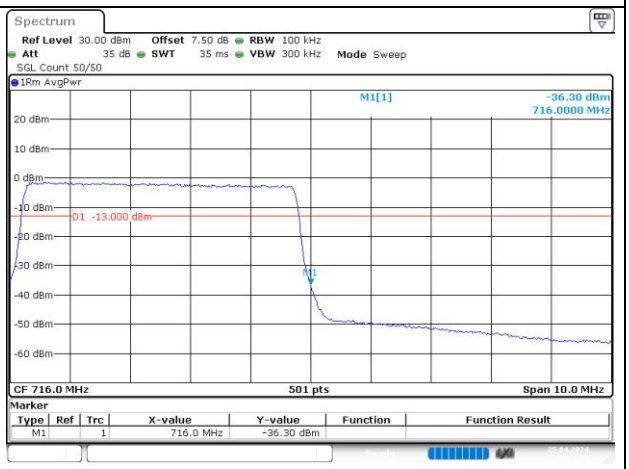
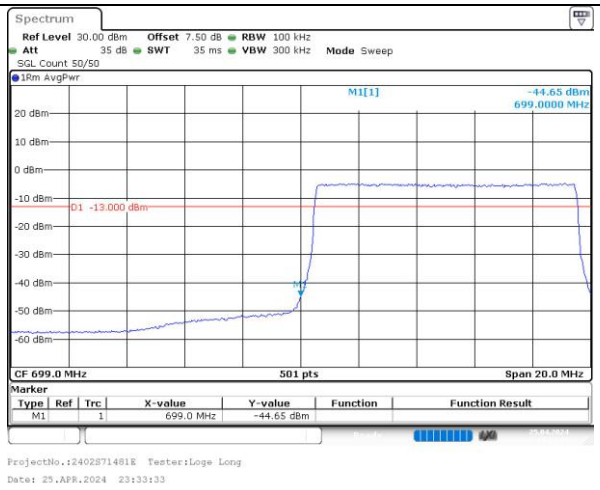
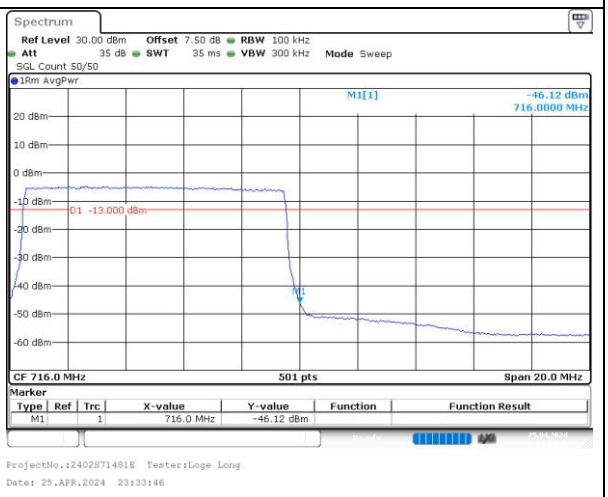
Out of band emission, Band Edge		
Mode	**Lowest-RB 1#0**	**Highest-RB 1#Max**
16QAM 1.4MHz		
16QAM 3MHz		
16QAM 5MHz		

Out of band emission, Band Edge		
Mode	**Lowest-RB 1#0**	**Highest-RB 1#Max**
16QAM 10MHz		

Out of band emission, Band Edge		
Mode	**Lowest-Full RB**	**Highest-Full RB**
QPSK 1.4MHz		
QPSK 3MHz		
QPSK 5MHz		

Out of band emission, Band Edge		
Mode	**Lowest-Full RB**	**Highest-Full RB**
QPSK 10MHz		

Out of band emission, Band Edge		
Mode	**Lowest-Full RB**	**Highest-Full RB**
16QAM 1.4MHz		
16QAM 3MHz		
16QAM 5MHz		

Out of band emission, Band Edge		
Mode	**Lowest-Full RB**	**Highest-Full RB**
16QAM 10MHz		

5.11 Antenna Port Test Data and Results for LTE Band 13

Serial Number:	OSEB119574-2	Test Date:	2024/4/25~2024/4/26
Test Site:	RF	Test Mode:	Transmitting
Tester:	Karl Liang,Loge Long	Test Result:	**Pass**

Environmental Conditions:					
Temperature: (℃)	25.5~25.6	Relative Humidity: (%)	66~70	ATM Pressure: (kPa)	100.6~100.9

Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSV40	101461	2023/11/27	2024/11/26
Micro-Coax	Coaxial Cable	UFB205A	323308-024	2024/1/2	2025/1/1
Eastsheep	Coaxial Attenuator	5W-N-JK-6G-10dB	F-08-EM502	2023/9/10	2024/9/9
Minl-Clrcuits	Coaxial Power Splitters & Combiner	ZFRSC-183-S+	SF448201614	2024/2/25	2025/2/24
R&S	Wideband Radio Communication Tester	CMW500	144976	2023/10/18	2024/10/17
BACL	TEMP&HUMI Test Chamber	BTH-150-40	30173	2023/10/18	2024/10/17
All-sun	Clamp Meter	EM305A	8348897	2023/8/3	2024/8/2
TDK-Lambda	DC Power Supply	Z+60-14	F-08-EM038-1	N/A	N/A

** Statement of Traceability: Bay Area Compliance Laboratories Corp. (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:

FCC §2.1046; § 27.50(c) (10)

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	15.72	/	15.69	7.75	34.77
	RB1#13	15.73	/	15.7		
	RB1#24	15.69	/	15.7		
	RB15#0	14.74	/	14.71		
	RB15#10	14.71	/	14.64		
	RB25#0	14.74	/	14.67		
5MHz 16QAM	RB1#0	15.07	/	14.63	7.09	34.77
	RB1#13	15.02	/	14.59		
	RB1#24	15.02	/	14.65		
	RB15#0	13.68	/	13.72		
	RB15#10	13.68	/	13.66		
	RB25#0	13.71	/	13.73		
10MHz QPSK	RB1#0	/	15.6	/	7.65	34.77
	RB1#25	/	15.63	/		
	RB1#49	/	15.59	/		
	RB25#0	/	14.64	/		
	RB25#25	/	14.65	/		
	RB50#0	/	14.66	/		
10MHz 16QAM	RB1#0	/	15.3	/	7.32	34.77
	RB1#25	/	15.26	/		
	RB1#49	/	15.29	/		
	RB25#0	/	13.68	/		
	RB25#25	/	13.73	/		
	RB50#0	/	13.7	/		

Note:
ERP= Conducted Power(dBm) - L_C(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	/	5.59	/	13
	RB50#0	/	5.3	/	13
10MHz 16QAM	RB1#0	/	6.12	/	13
	RB50#0	/	6.2	/	13
				Result:	**Pass**

FCC §2.1049, §27.53:Occupied Bandwidth						
Operation Mode	99% Occupied Bandwidth (MHz)			26 dB Occupied Bandwidth (MHz)		
	Low Channel	Middle channel	High Channel	Low Channel	Middle Channel	High Channel
5MHz QPSK	4.531	/	4.511	7.38	/	4.98
5MHz 16QAM	4.551	/	4.491	6.78	/	4.96
10MHz QPSK	/	8.942	/	/	9.68	/
10MHz 16QAM	/	8.942	/	/	9.6	/
Note: The test plots please refer to the Plots of Occupied Bandwidth						

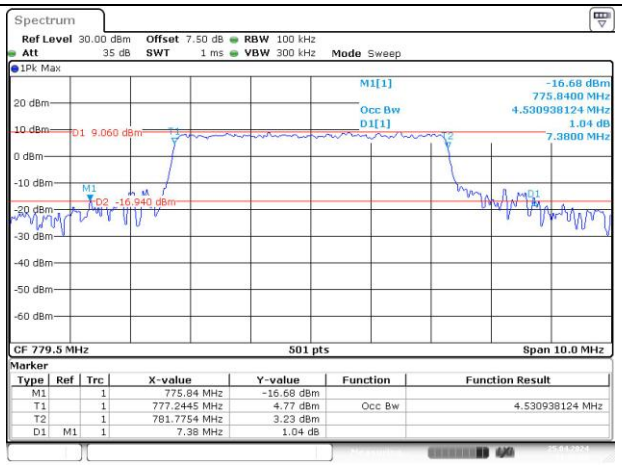
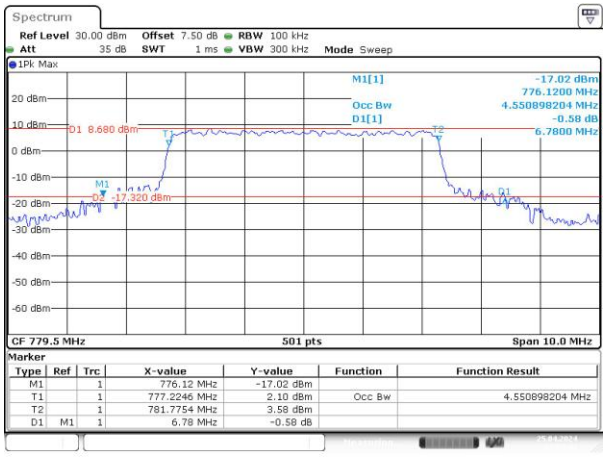
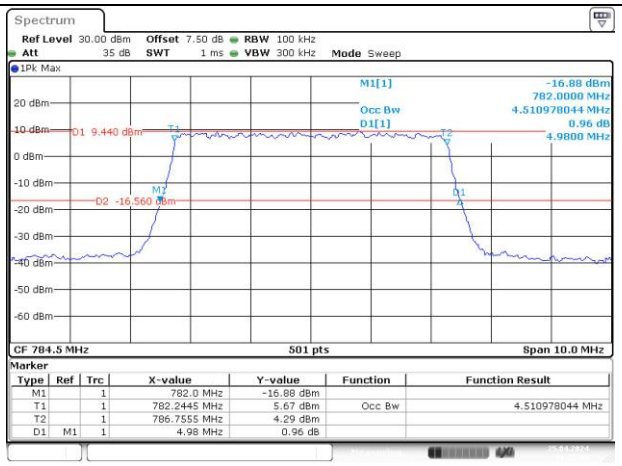
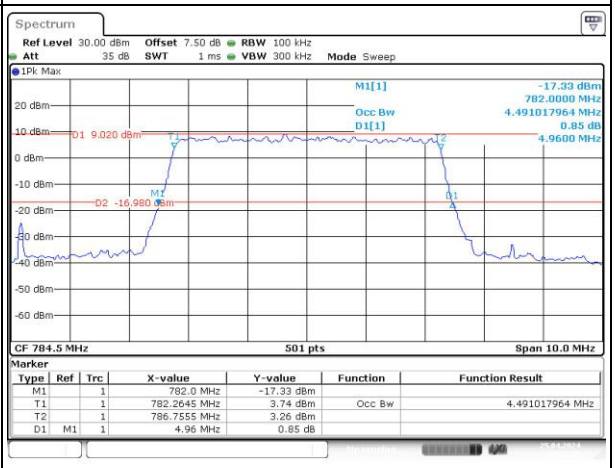
FCC §2.1051, §27.53:Spurious Emissions at Antenna Terminal	
Result:	**Pass, Please refer to the test plots of Spurious Emissions at Antenna Terminal.**

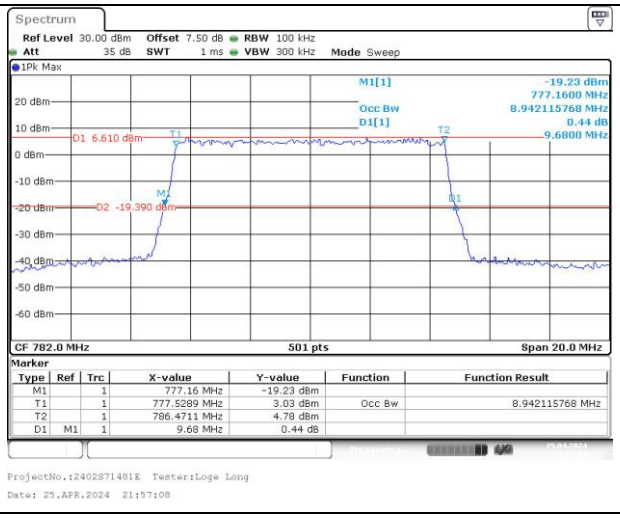
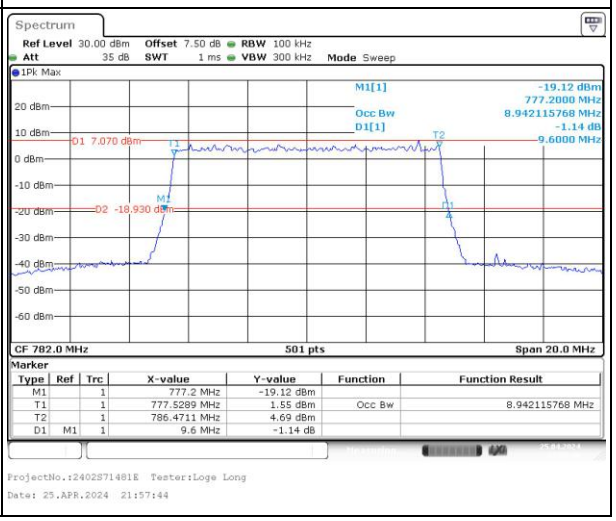
FCC §2.1051, §27.53:Out of band emission, Band Edge	
Result:	**Pass, Please refer to the test plots of Out of band emission, Band Edge.**

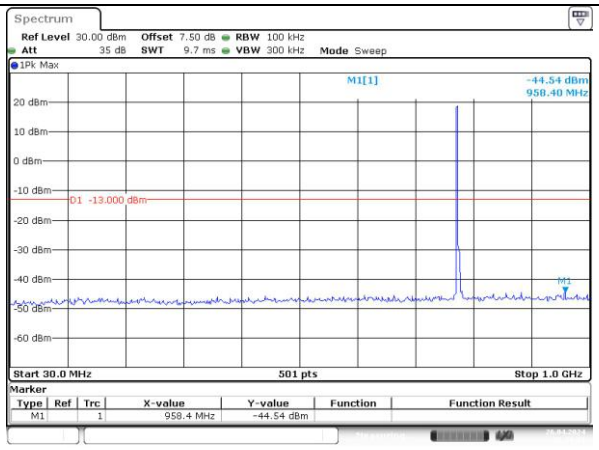
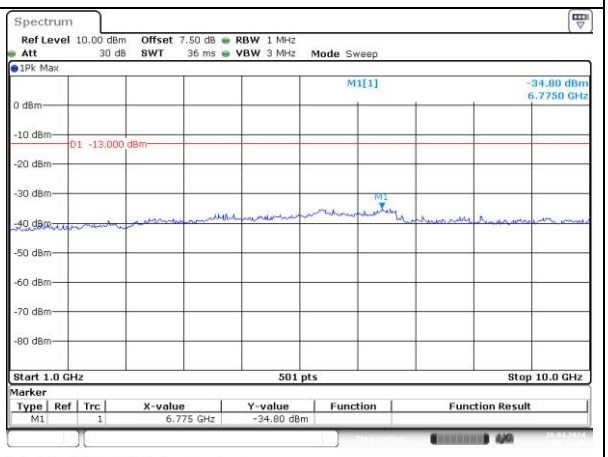
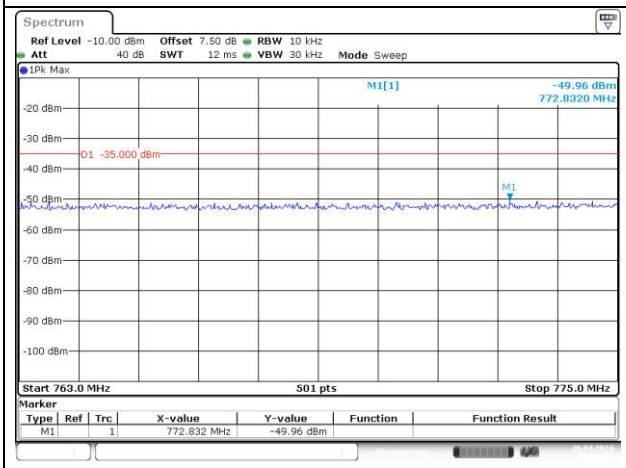
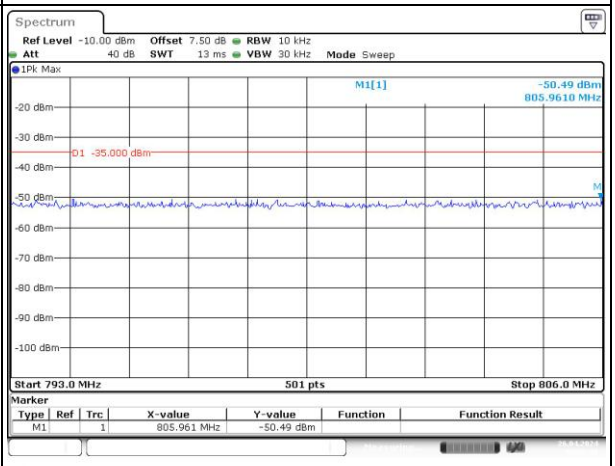
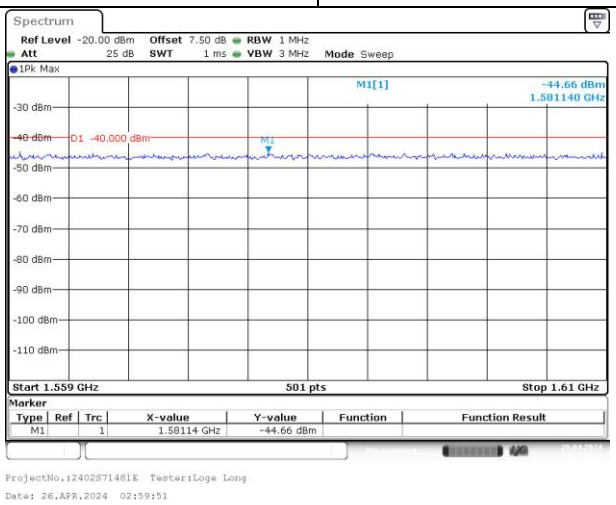
FCC §2.1055, §27.54: Frequency Stability						
Test Mode:	10M QPSK	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (℃)	Voltage (V_{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.91	777.511	777.00	786.462	787.00
	-20	3.91	777.520	777.00	786.465	787.00
	-10	3.91	777.511	777.00	786.465	787.00
	0	3.91	777.517	777.00	786.456	787.00
	10	3.91	777.523	777.00	786.450	787.00
	20	3.91	777.529	777.00	786.471	787.00
	30	3.91	777.538	777.00	786.498	787.00
	40	3.91	777.550	777.00	786.486	787.00
	50	3.91	777.535	777.00	786.474	787.00
Frequency Stability vs. Voltage	20	3.45	777.553	777.00	786.477	787.00
	20	4.5	777.535	777.00	786.477	787.00
					Result:	**Pass**

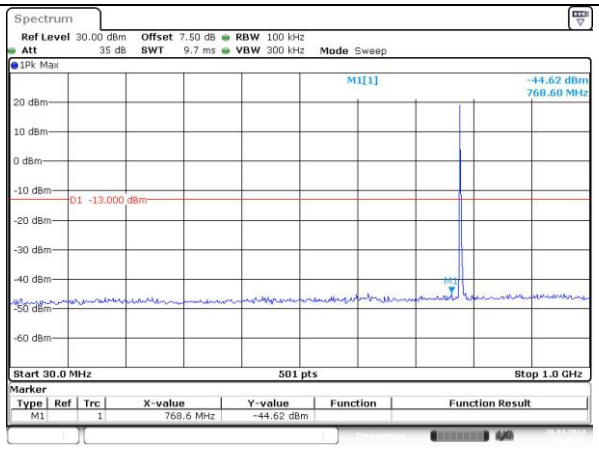
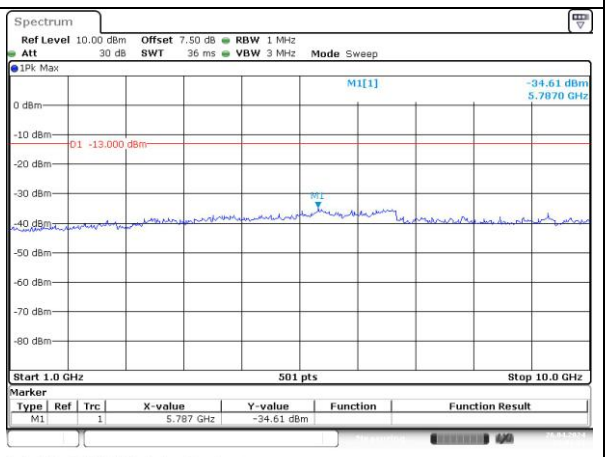
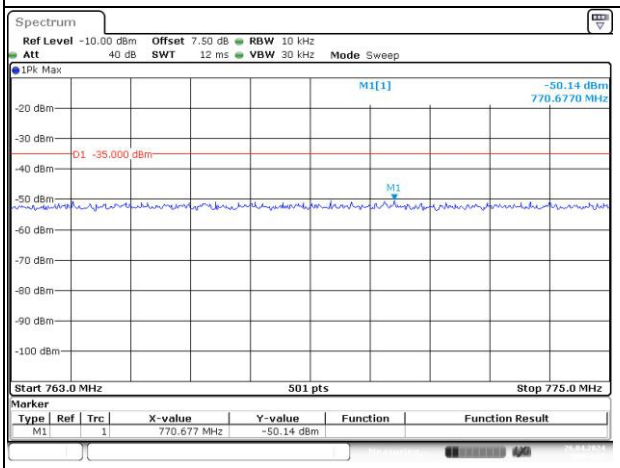
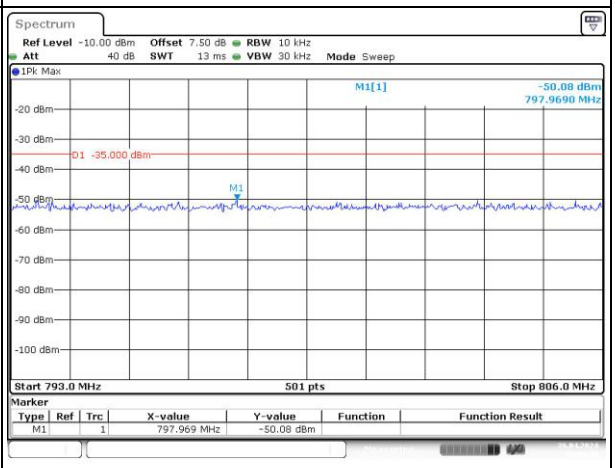
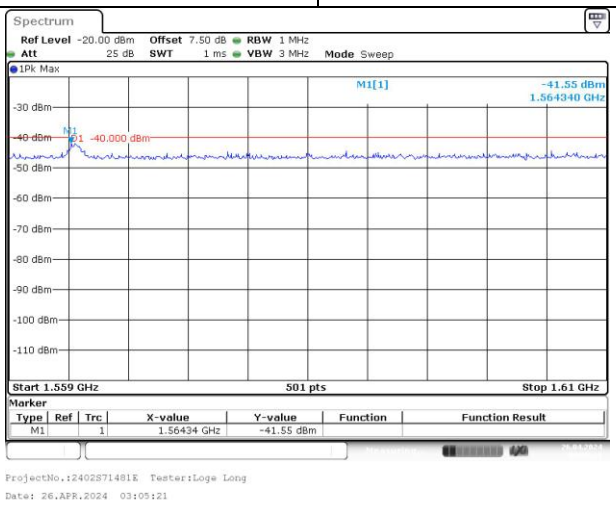
Test Mode:	10M 16QAM	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (℃)	Voltage (V_{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.91	777.499	777.00	786.453	787.00
	-20	3.91	777.526	777.00	786.444	787.00
	-10	3.91	777.514	777.00	786.450	787.00
	0	3.91	777.520	777.00	786.453	787.00
	10	3.91	777.523	777.00	786.459	787.00
	20	3.91	777.529	777.00	786.471	787.00
	30	3.91	777.556	777.00	786.486	787.00
	40	3.91	777.556	777.00	786.495	787.00
	50	3.91	777.538	777.00	786.480	787.00
Frequency Stability vs. Voltage	20	3.45	777.544	777.00	786.495	787.00
	20	4.5	777.544	777.00	786.495	787.00
					Result:	**Pass**

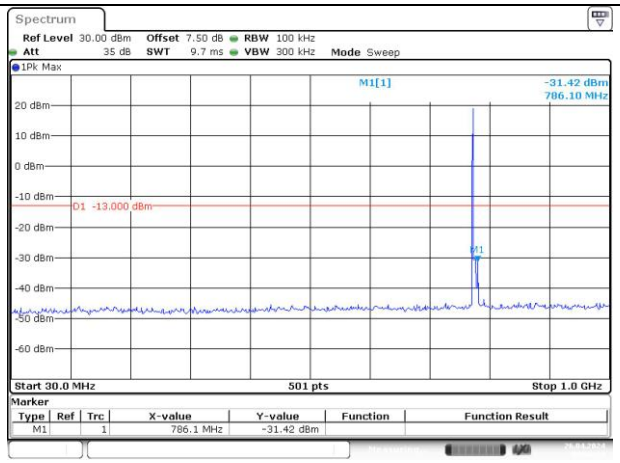
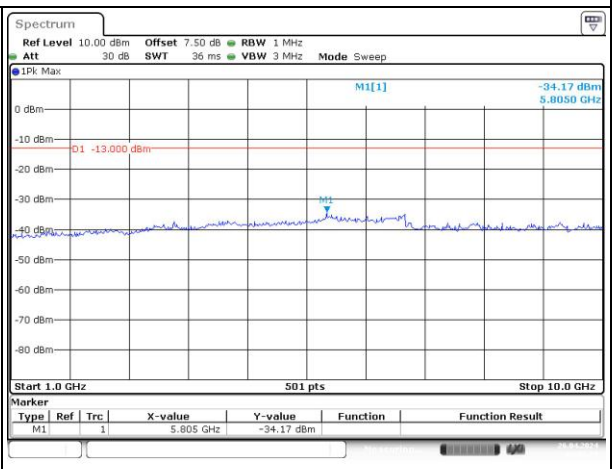
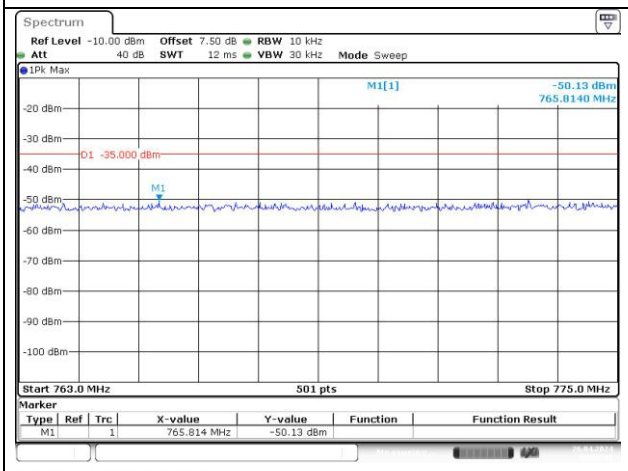
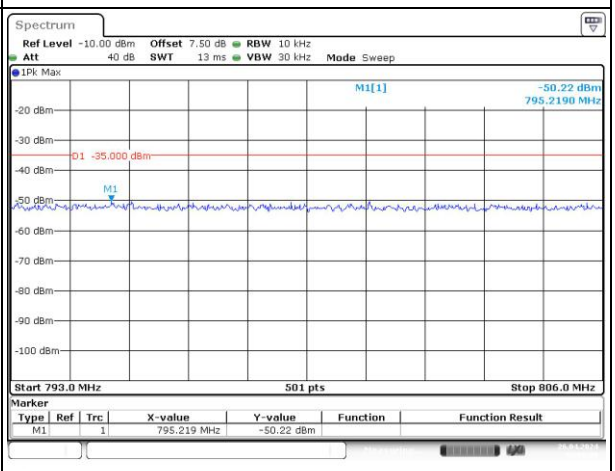
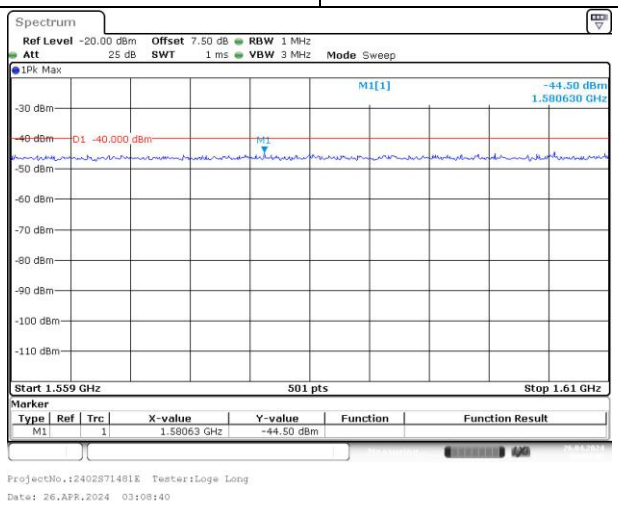
Test Plots:

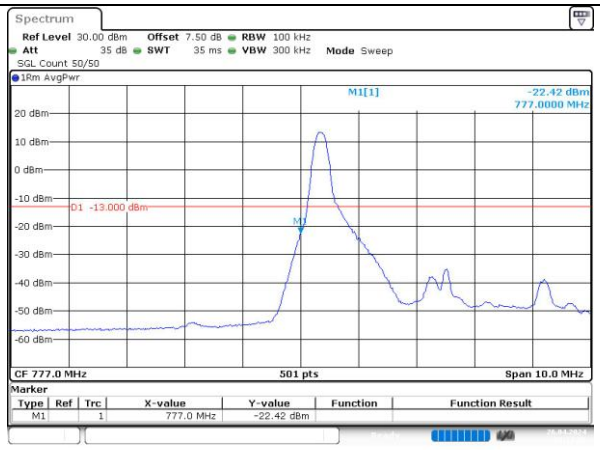
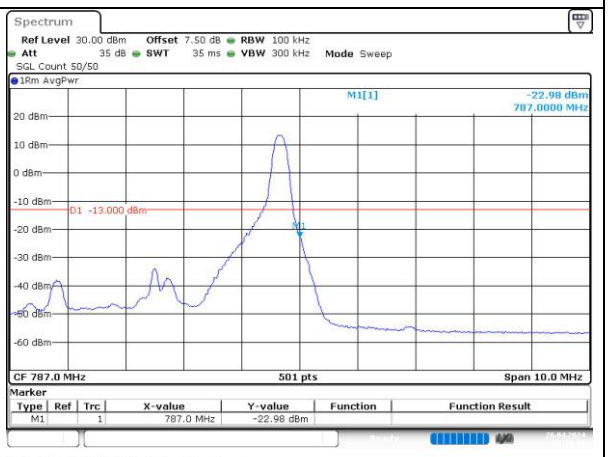
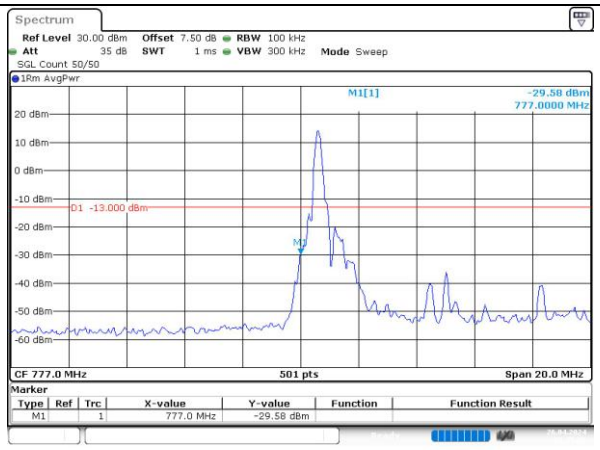
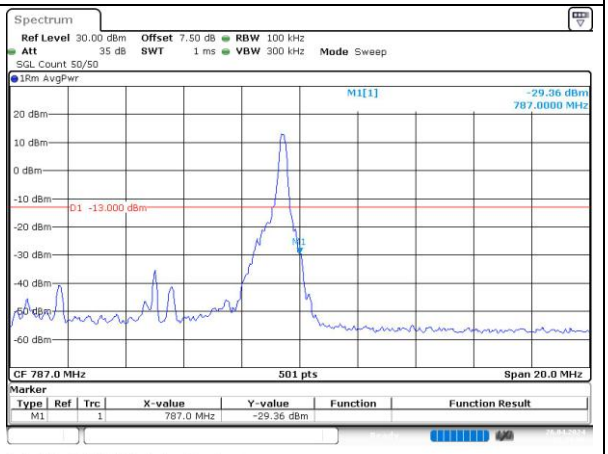
Occupied Bandwidth		
Channel	5MHz Bandwidth QPSK	5MHz Bandwidth 16QAM
Lowest		
Highest		

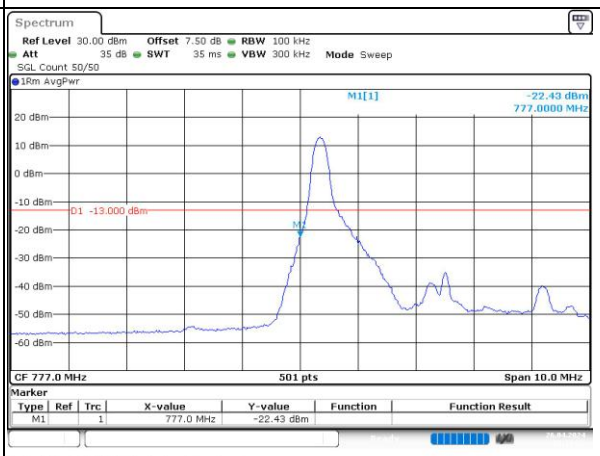
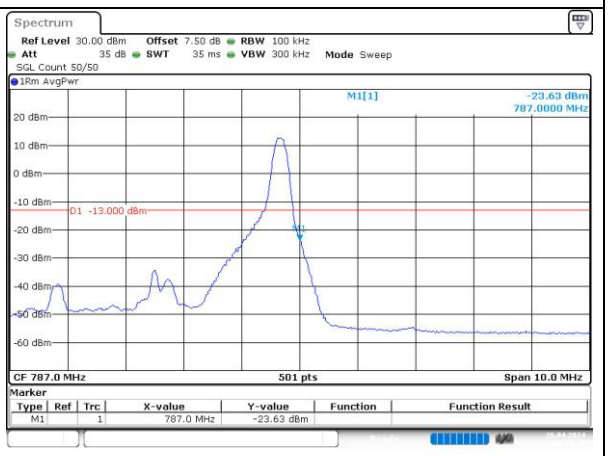
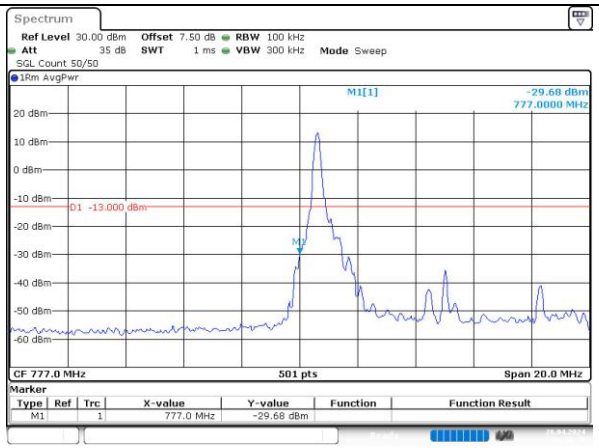
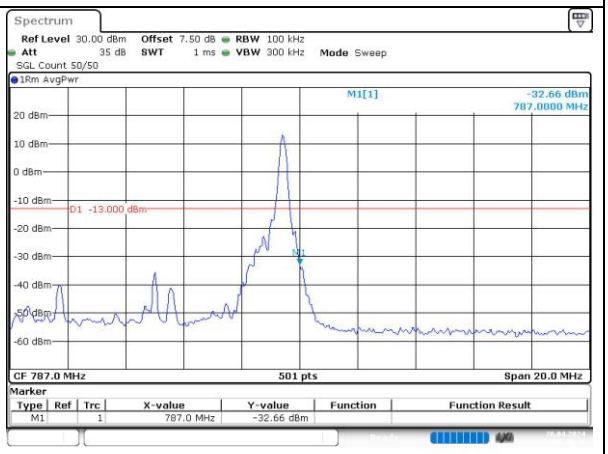
Occupied Bandwidth		
Channel	10MHz Bandwidth QPSK	10MHz Bandwidth 16QAM
Middle		

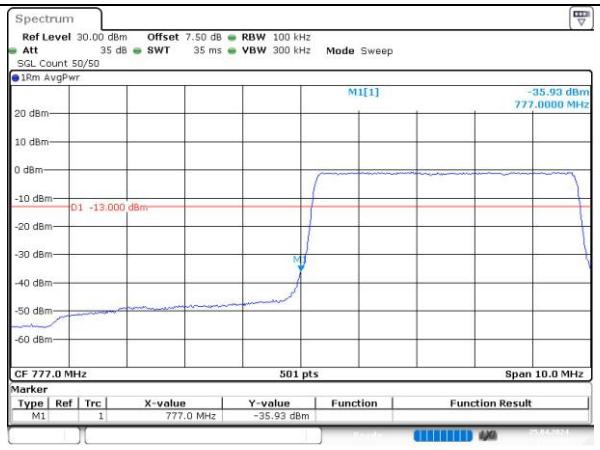
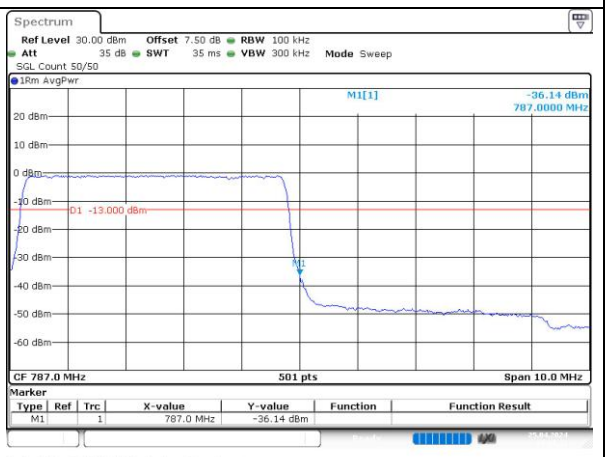
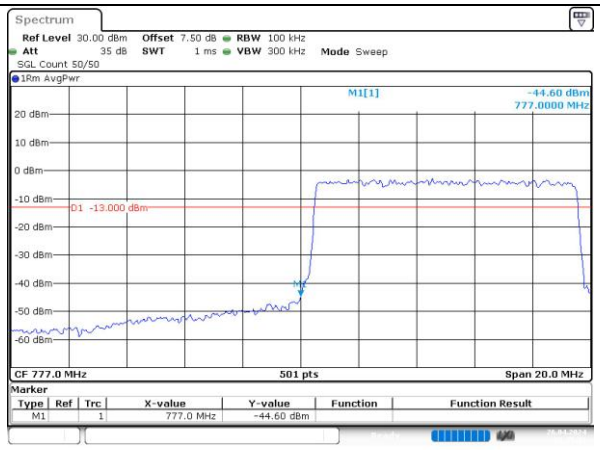
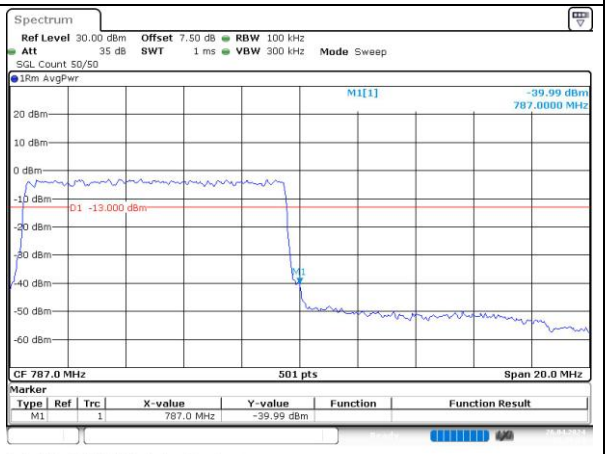
Spurious Emissions at Antenna Terminal	
Channel	**5MHz Bandwidth QPSK**
Lowest	    

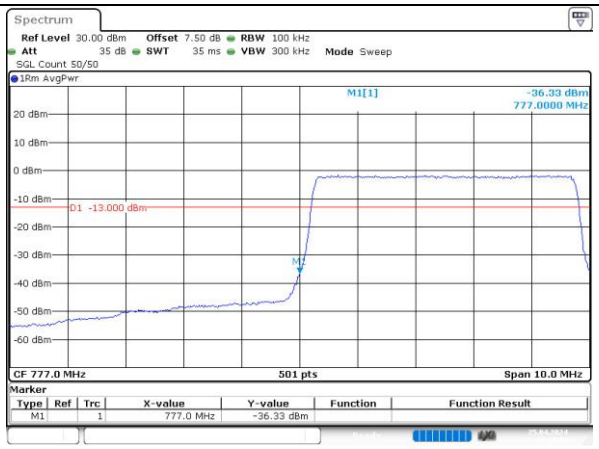
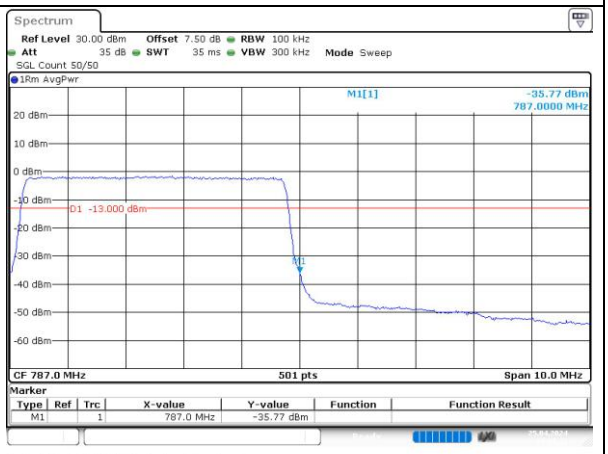
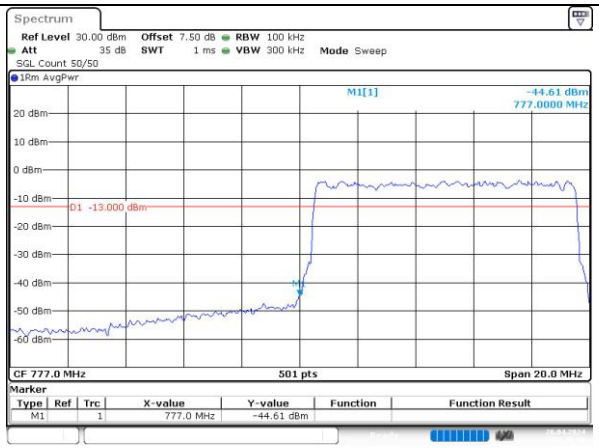
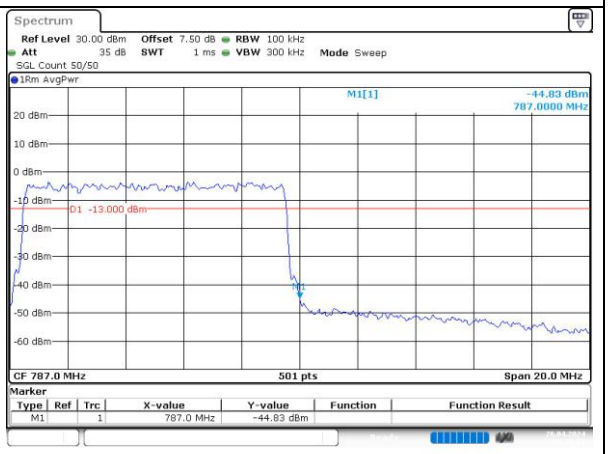
Spurious Emissions at Antenna Terminal	
Channel	**5MHz Bandwidth QPSK**
Highest	    

Spurious Emissions at Antenna Terminal	
Channel	**10MHz Bandwidth QPSK**
Middle	    

Out of band emission, Band Edge		
Mode	**Lowest-RB 1#0**	**Highest-RB 1#Max**
QPSK 5MHz		
QPSK 10MHz		

Out of band emission, Band Edge		
Mode	**Lowest-RB 1#0**	**Highest-RB 1#Max**
16QAM 5MHz		
16QAM 10MHz		

Out of band emission, Band Edge		
Mode	**Lowest-Full RB**	**Highest-Full RB**
QPSK 5MHz		
QPSK 10MHz		

Out of band emission, Band Edge		
Mode	**Lowest-Full RB**	**Highest-Full RB**
16QAM 5MHz		
16QAM 10MHz		

5.12 Antenna Port Test Data and Results for LTE Band 17

Serial Number:	OSEB119574-2	Test Date:	2024/4/25~2024/4/26
Test Site:	RF	Test Mode:	Transmitting
Tester:	Karl Liang,Loge Long	Test Result:	**Pass**

Environmental Conditions:					
Temperature: (℃)	25.6	Relative Humidity: (%)	66~70	ATM Pressure: (kPa)	100.6~100.9

Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSV40	101461	2023/11/27	2024/11/26
Micro-Coax	Coaxial Cable	UFB205A	323308-024	2024/1/2	2025/1/1
Eastsheep	Coaxial Attenuator	5W-N-JK-6G-10dB	F-08-EM502	2023/9/10	2024/9/9
Minl-Clrcuits	Coaxial Power Splitters & Combiner	ZFRSC-183-S+	SF448201614	2024/2/25	2025/2/24
R&S	Wideband Radio Communication Tester	CMW500	144976	2023/10/18	2024/10/17
BACL	TEMP&HUMI Test Chamber	BTH-150-40	30173	2023/10/18	2024/10/17
All-sun	Clamp Meter	EM305A	8348897	2023/8/3	2024/8/2
TDK-Lambda	DC Power Supply	Z+60-14	F-08-EM038-1	N/A	N/A

** Statement of Traceability: Bay Area Compliance Laboratories Corp. (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	706.5	710	713.5
10MHz	709	710	711

Test Data:

FCC §2.1046; § 27.50(c) (10)

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	15.5	15.36	15.62	8.44	34.77
	RB1#13	15.47	15.46	15.56		
	RB1#24	15.55	15.5	15.58		
	RB15#0	14.51	14.51	14.65		
	RB15#10	14.58	14.5	14.57		
	RB25#0	14.53	14.52	14.6		
5MHz 16QAM	RB1#0	14.89	14.61	14.46	7.44	34.77
	RB1#13	14.84	14.59	14.43		
	RB1#24	14.9	14.62	14.5		
	RB15#0	13.46	13.53	13.68		
	RB15#10	13.52	13.49	13.5		
	RB25#0	13.53	13.55	13.66		
10MHz QPSK	RB1#0	15.23	15.45	15.35	8.35	34.77
	RB1#25	15.42	15.46	15.52		
	RB1#49	15.39	15.47	15.53		
	RB25#0	14.39	14.44	14.47		
	RB25#25	14.47	14.42	14.41		
	RB50#0	14.47	14.43	14.47		
10MHz 16QAM	RB1#0	15.09	14.68	14.55	7.51	34.77
	RB1#25	15.05	14.57	14.57		
	RB1#49	15.1	14.69	14.63		
	RB25#0	13.45	13.46	13.58		
	RB25#25	13.49	13.41	13.55		
	RB50#0	13.44	13.43	13.5		

Note:
ERP= Conducted Power(dBm) - L_C(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	5.88	6.20	6.12	13
	RB50#0	5.42	5.45	5.42	13
10MHz 16QAM	RB1#0	6.41	7.07	7.04	13
	RB50#0	6.38	6.35	6.35	13
				Result:	**Pass**

FCC §2.1049, §27.53:Occupied Bandwidth						
Operation Mode	99% Occupied Bandwidth (MHz)			26 dB Occupied Bandwidth (MHz)		
	Low Channel	Middle channel	High Channel	Low Channel	Middle Channel	High Channel
5MHz QPSK	4.511	4.511	4.571	4.98	4.96	7.62
5MHz 16QAM	4.531	4.511	4.531	4.98	5	6.22
10MHz QPSK	8.942	8.942	8.942	9.6	9.64	9.68
10MHz 16QAM	8.942	8.942	8.982	9.68	9.92	9.6
Note: The test plots please refer to the Plots of Occupied Bandwidth						

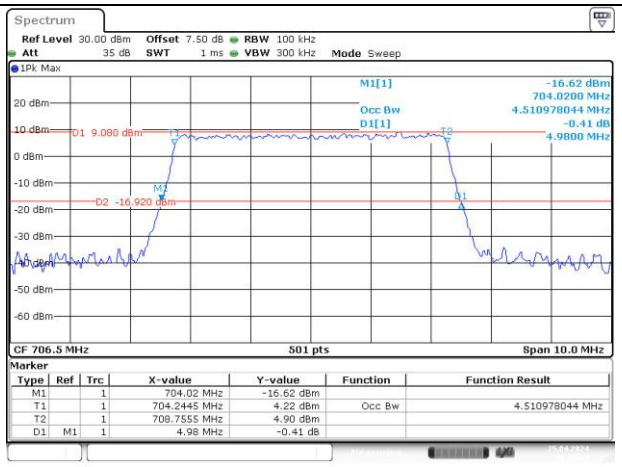
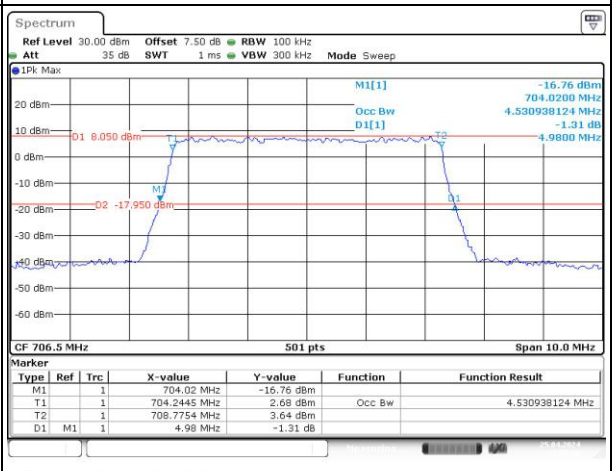
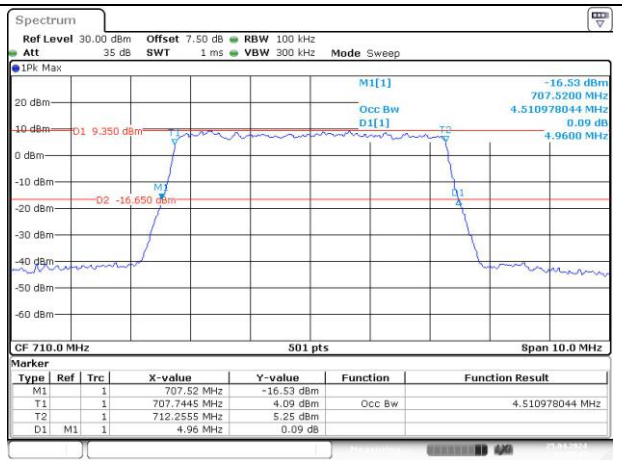
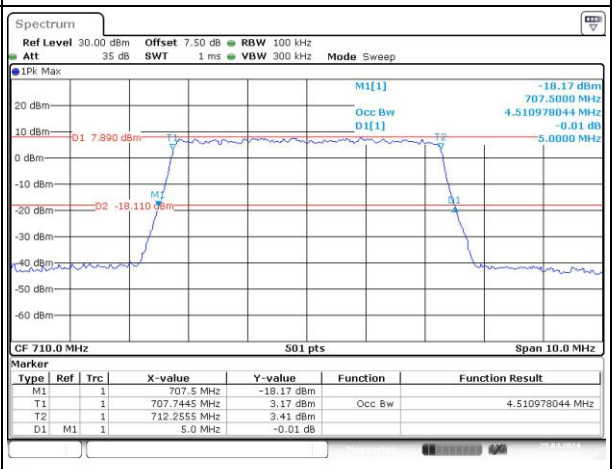
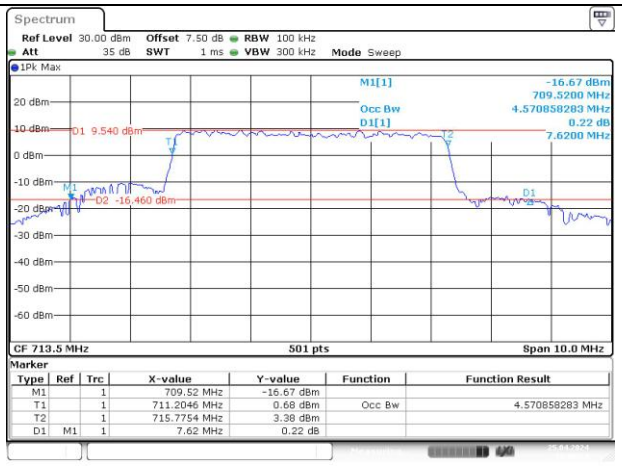
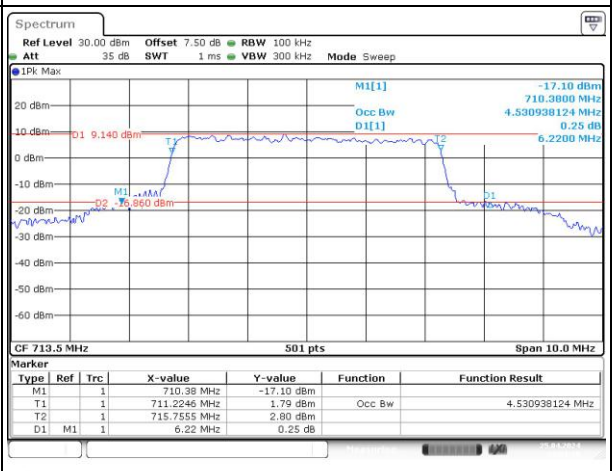
FCC §2.1051, §27.53:Spurious Emissions at Antenna Terminal	
Result:	**Pass, Please refer to the test plots of Spurious Emissions at Antenna Terminal.**

FCC §2.1051, §27.53:Out of band emission, Band Edge	
Result:	**Pass, Please refer to the test plots of Out of band emission, Band Edge.**

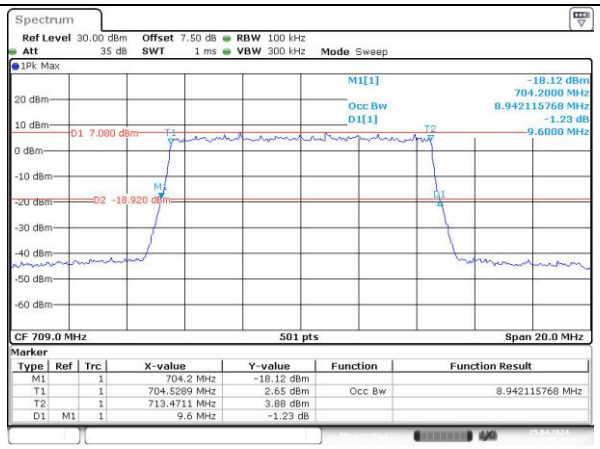
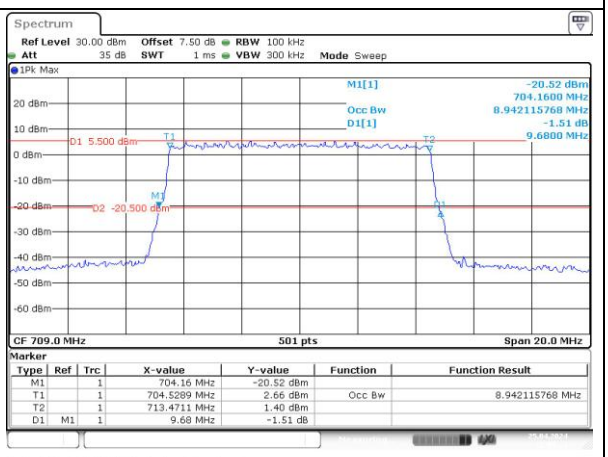
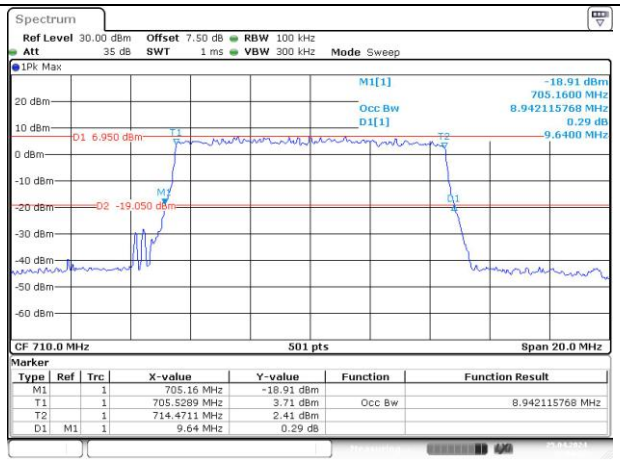
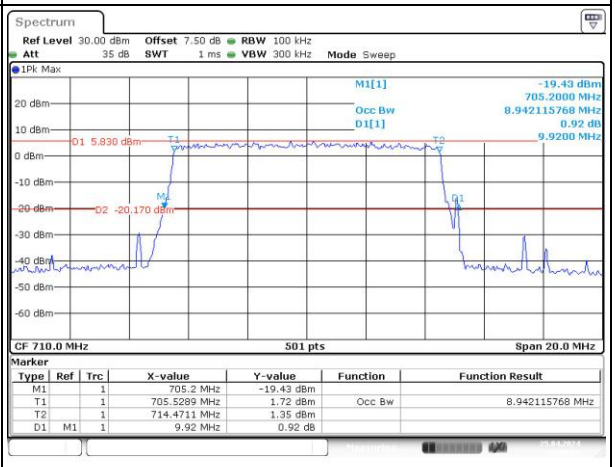
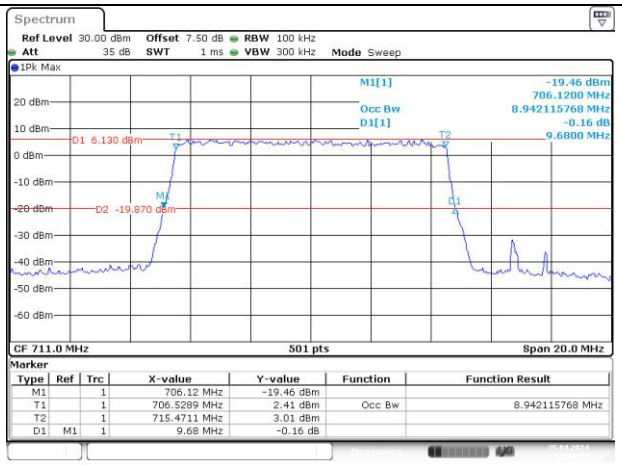
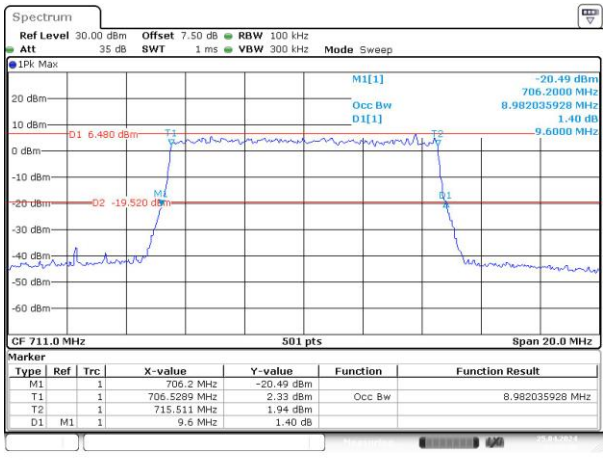
FCC §2.1055, §27.54: Frequency Stability						
Test Mode:	10M QPSK	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (℃)	Voltage (V_{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.91	704.496	704.00	715.459	716.00
	-20	3.91	704.526	704.00	715.456	716.00
	-10	3.91	704.511	704.00	715.462	716.00
	0	3.91	704.520	704.00	715.456	716.00
	10	3.91	704.520	704.00	715.459	716.00
	20	3.91	704.529	704.00	715.471	716.00
	30	3.91	704.532	704.00	715.492	716.00
	40	3.91	704.532	704.00	715.498	716.00
	50	3.91	704.553	704.00	715.480	716.00
Frequency Stability vs. Voltage	20	3.45	704.556	704.00	715.483	716.00
	20	4.5	704.553	704.00	715.477	716.00
					Result:	**Pass**

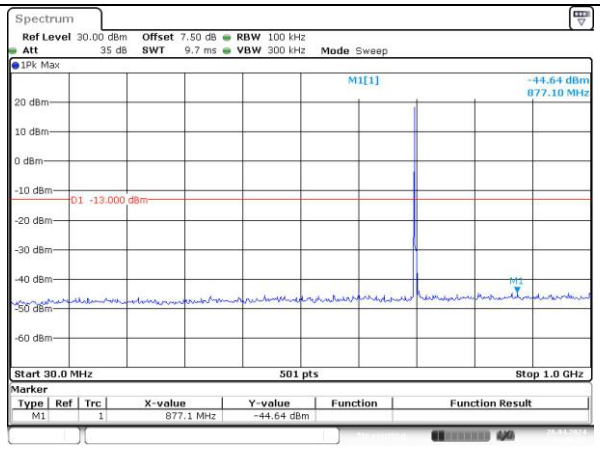
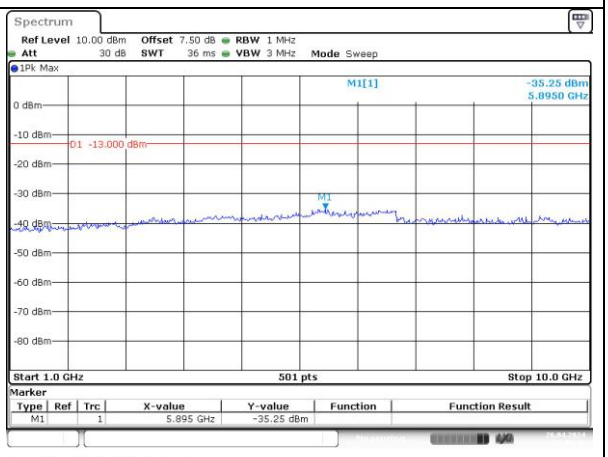
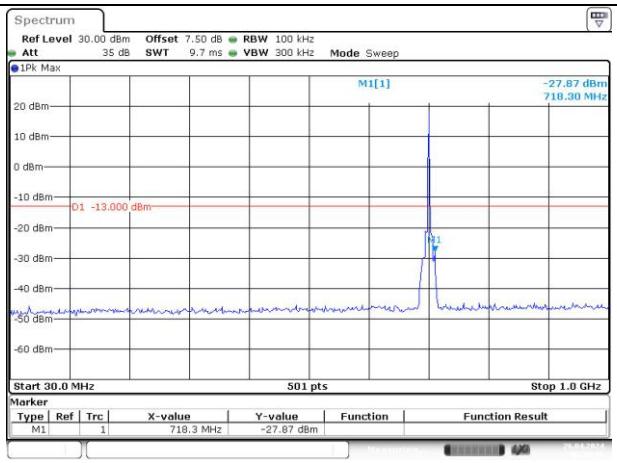
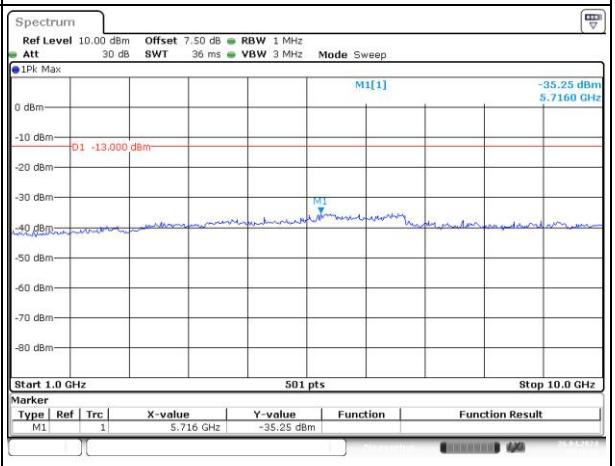
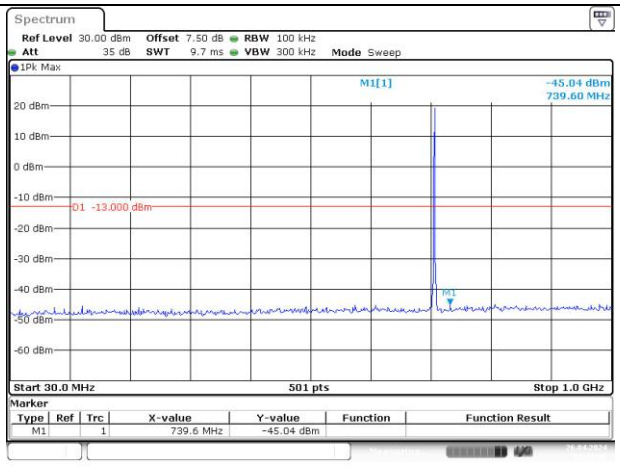
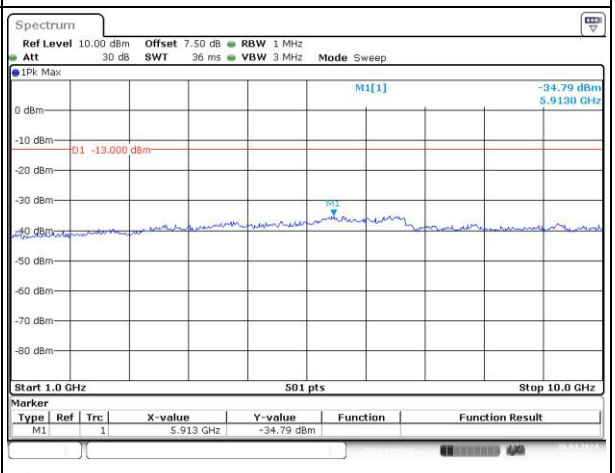
Test Mode:	10M 16QAM	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (℃)	Voltage (V_{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.91	704.520	704.00	715.505	716.00
	-20	3.91	704.517	704.00	715.493	716.00
	-10	3.91	704.505	704.00	715.493	716.00
	0	3.91	704.505	704.00	715.496	716.00
	10	3.91	704.523	704.00	715.508	716.00
	20	3.91	704.529	704.00	715.511	716.00
	30	3.91	704.538	704.00	715.514	716.00
	40	3.91	704.556	704.00	715.532	716.00
	50	3.91	704.532	704.00	715.514	716.00
Frequency Stability vs. Voltage	20	3.45	704.550	704.00	715.514	716.00
	20	4.5	704.547	704.00	715.514	716.00
					Result:	**Pass**

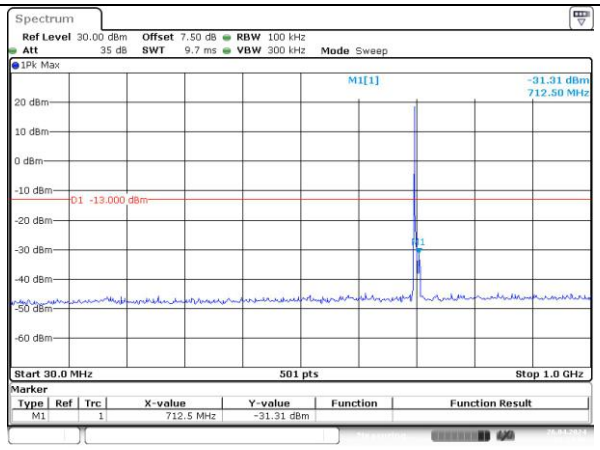
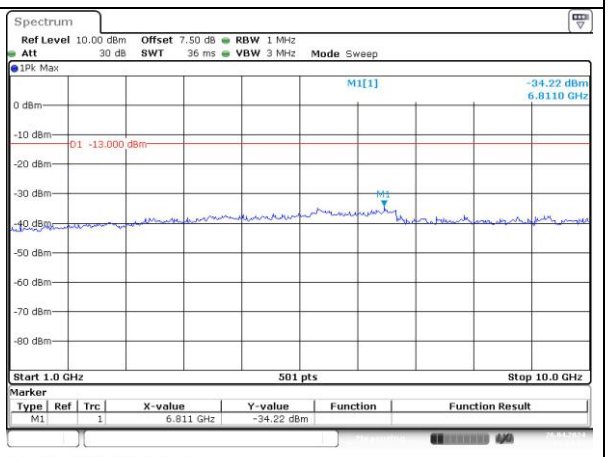
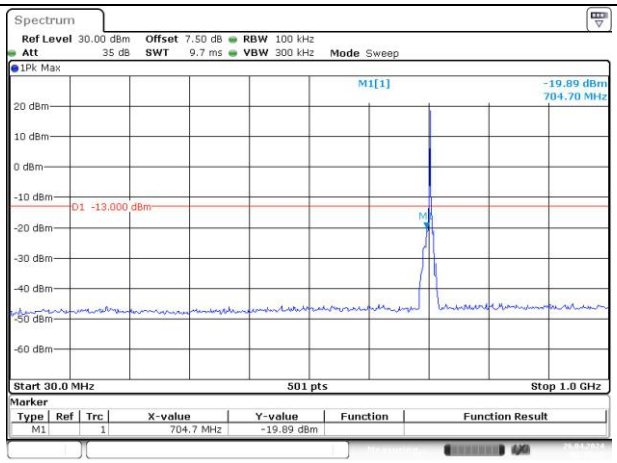
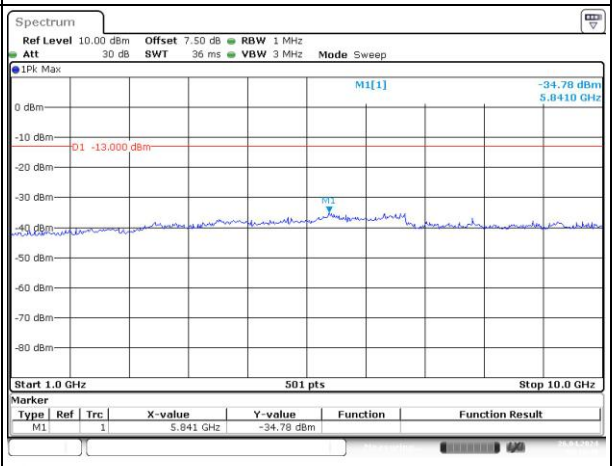
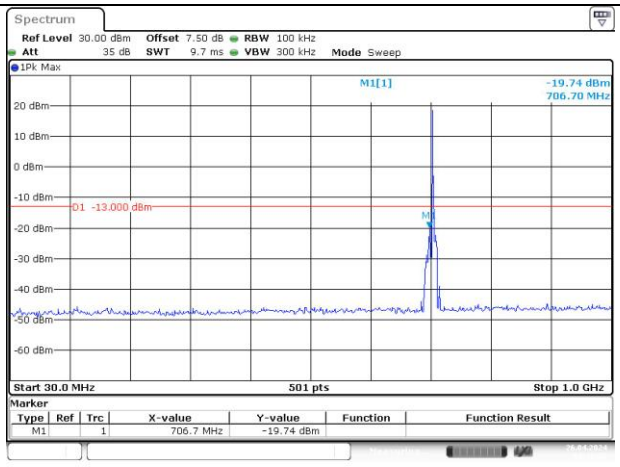
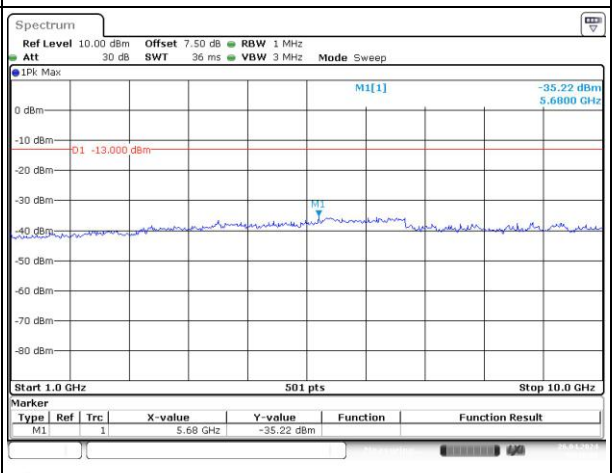
Test Plots:

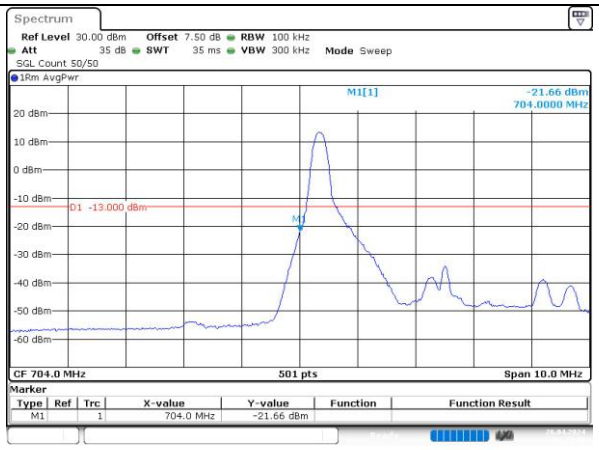
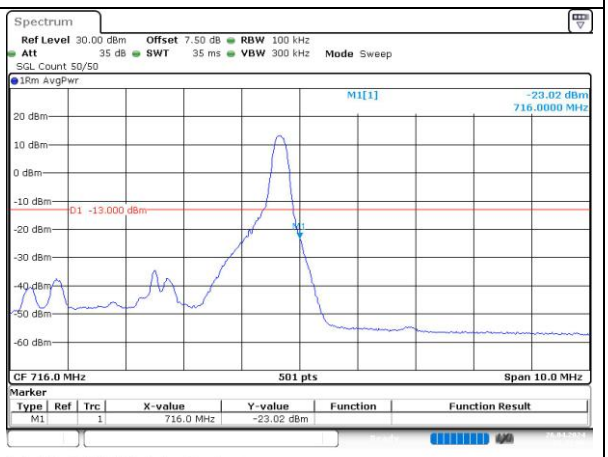
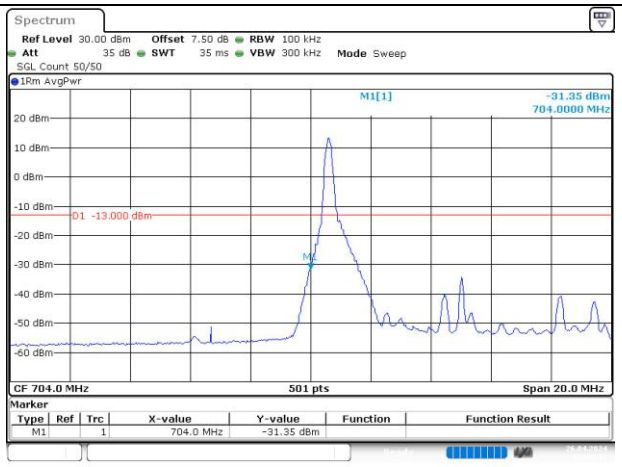
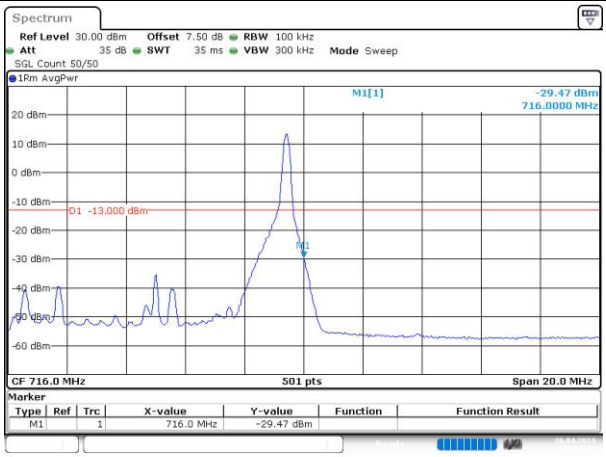
Occupied Bandwidth		
Channel	5MHz Bandwidth QPSK	5MHz Bandwidth 16QAM
Lowest		
Middle		
Highest		

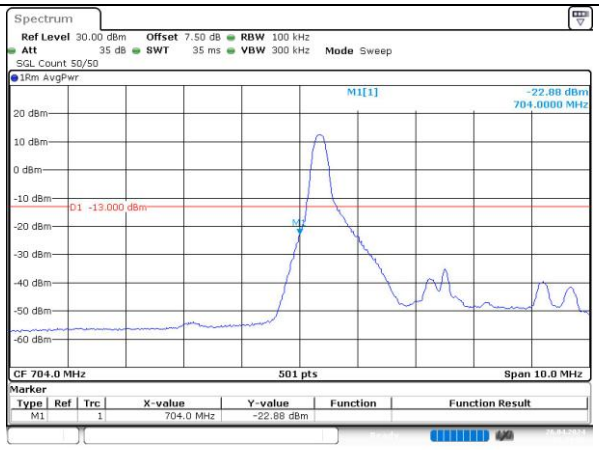
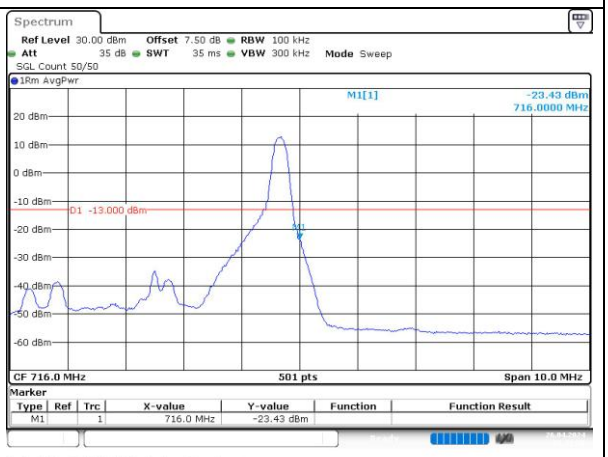
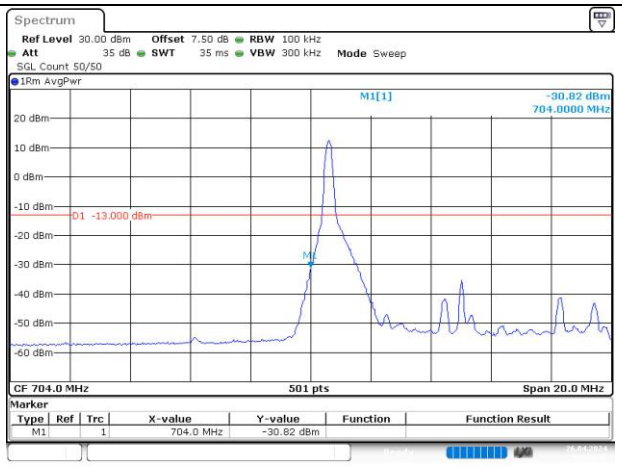
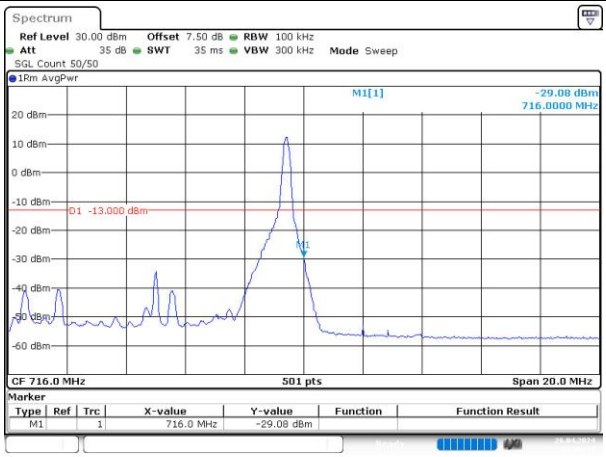
Occupied Bandwidth

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

Spurious Emissions at Antenna Terminal		
Channel	**5MHz Bandwidth QPSK**	
Lowest		
Middle		
Highest		

Spurious Emissions at Antenna Terminal		
Channel	**10MHz Bandwidth QPSK**	
Lowest		
Middle		
Highest		

Out of band emission, Band Edge		
Mode	**Lowest-RB 1#0**	**Highest-RB 1#Max**
QPSK 5MHz		
QPSK 10MHz		

Out of band emission, Band Edge		
Mode	**Lowest-RB 1#0**	**Highest-RB 1#Max**
16QAM 5MHz		
16QAM 10MHz