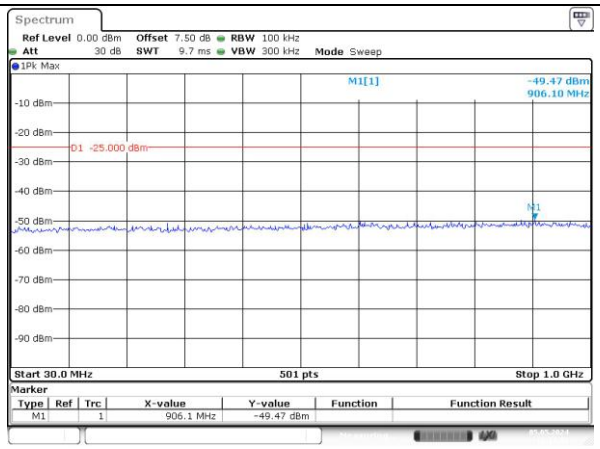
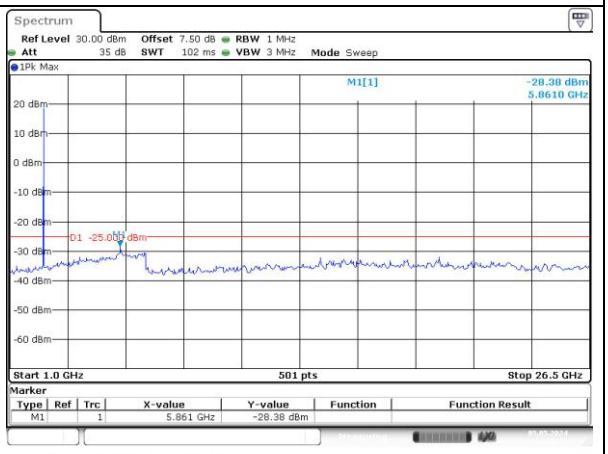
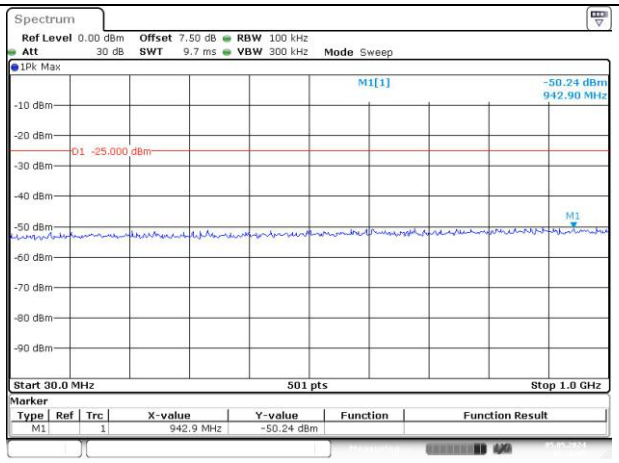
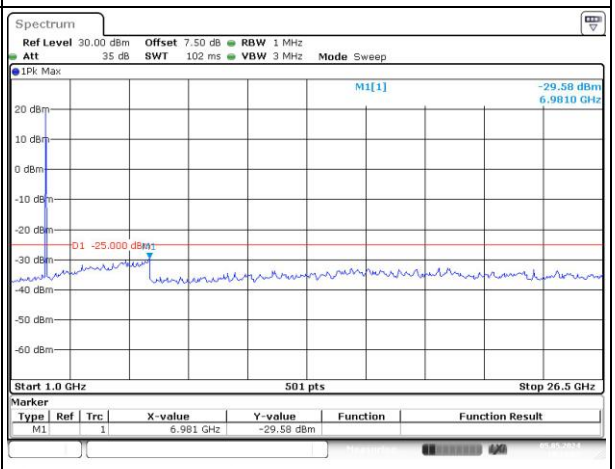
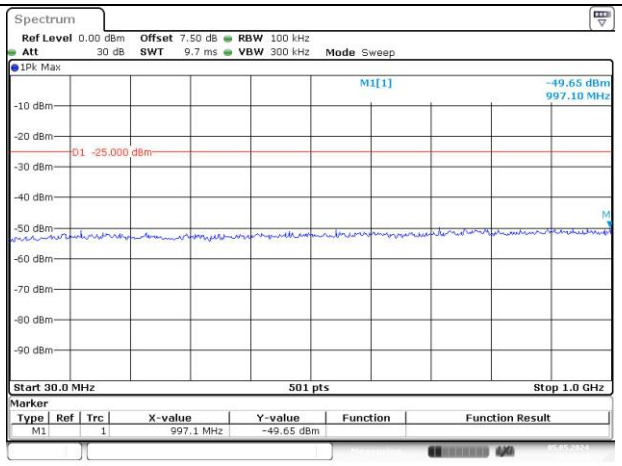
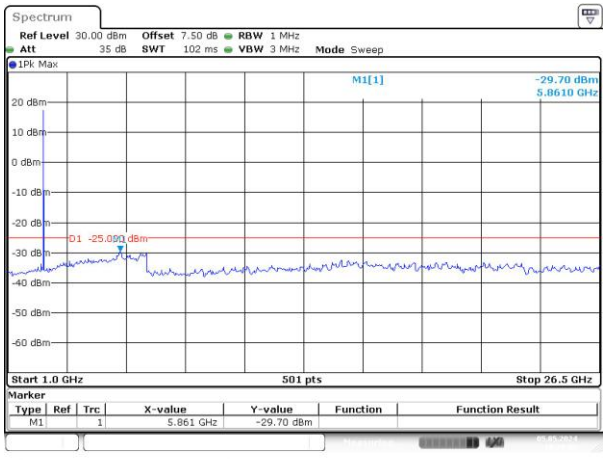
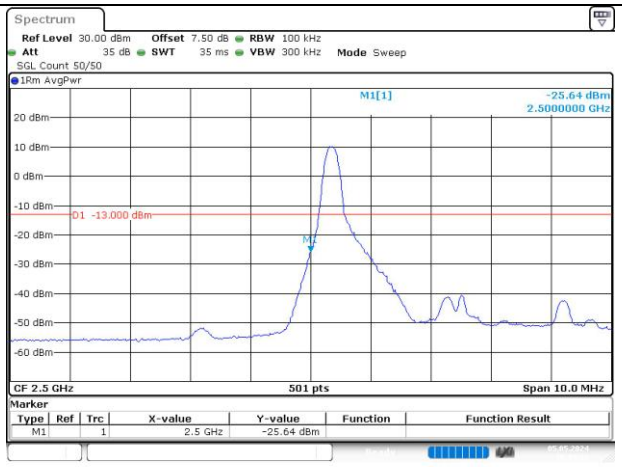
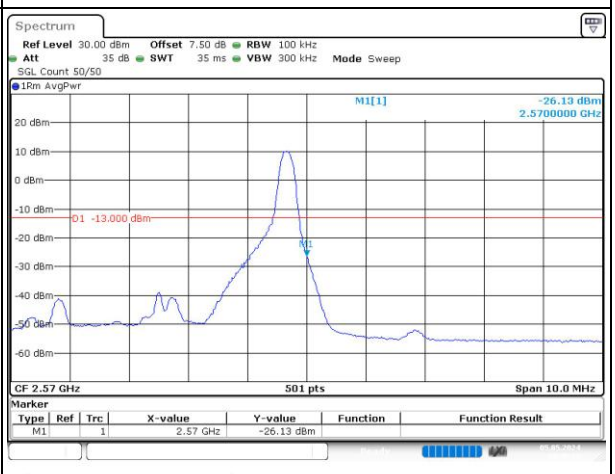
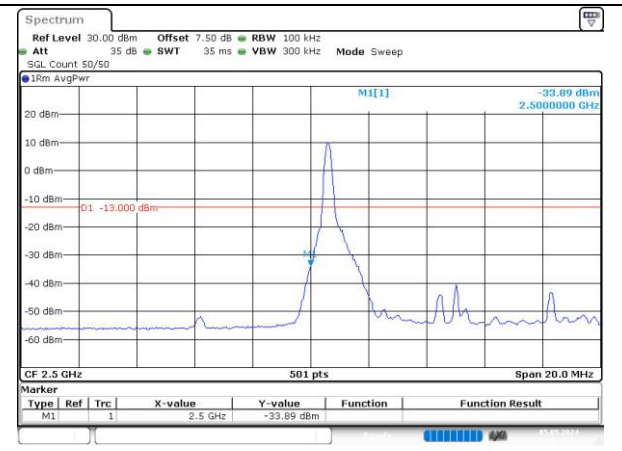
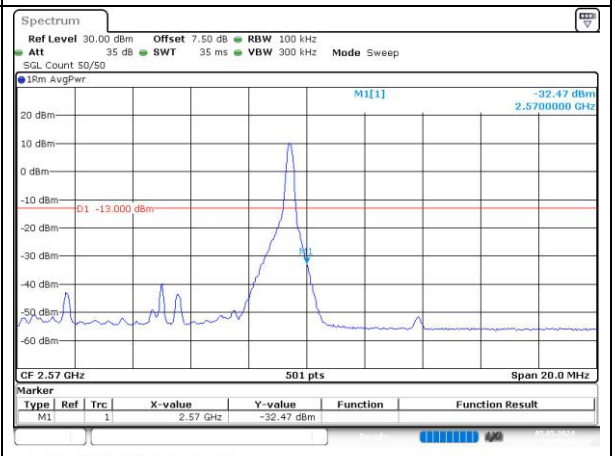
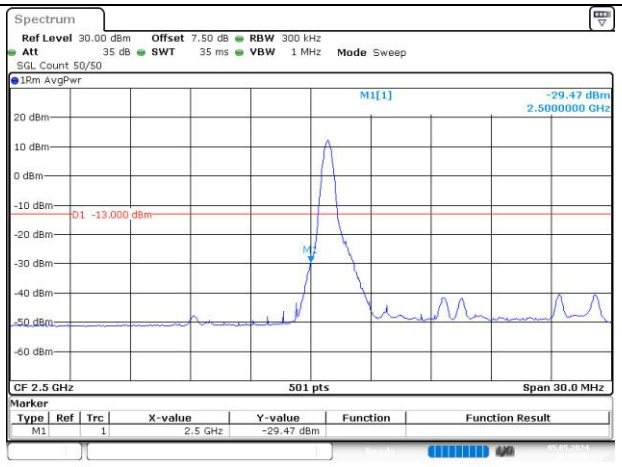
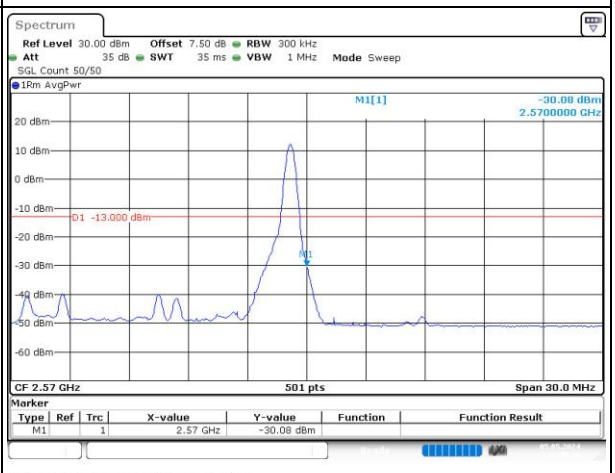
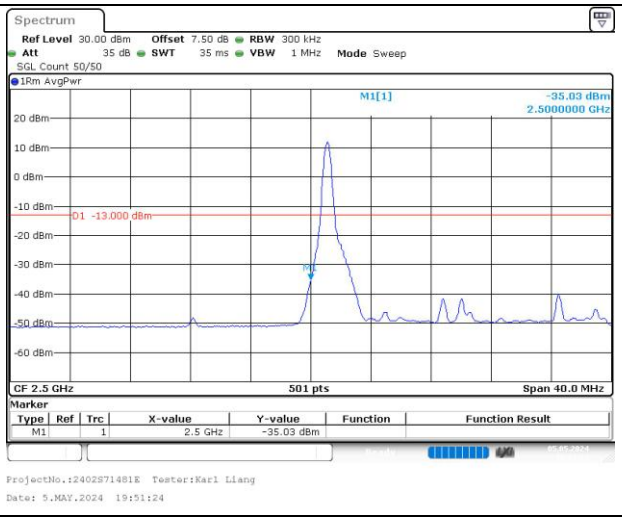
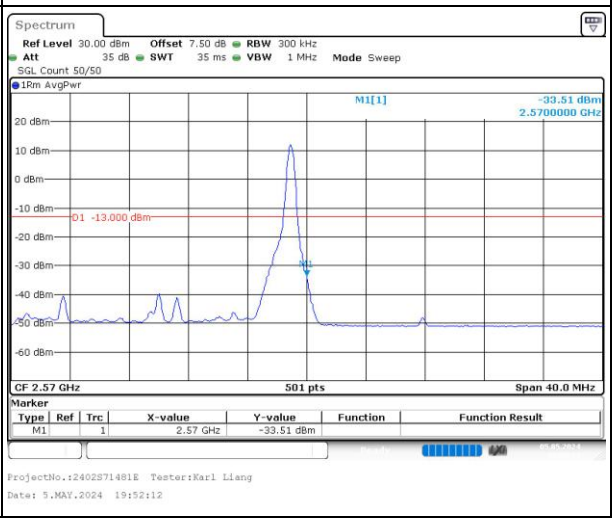
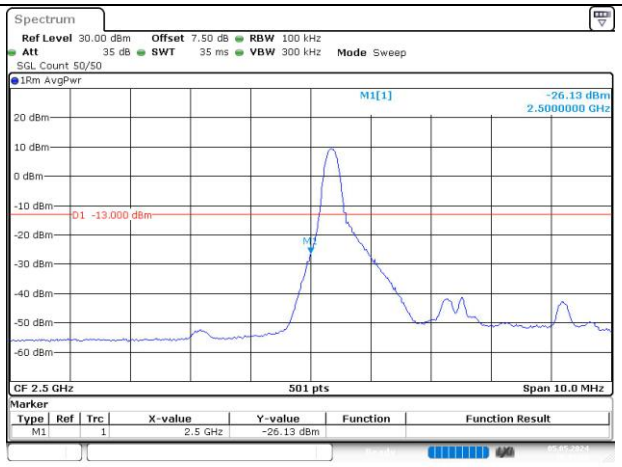
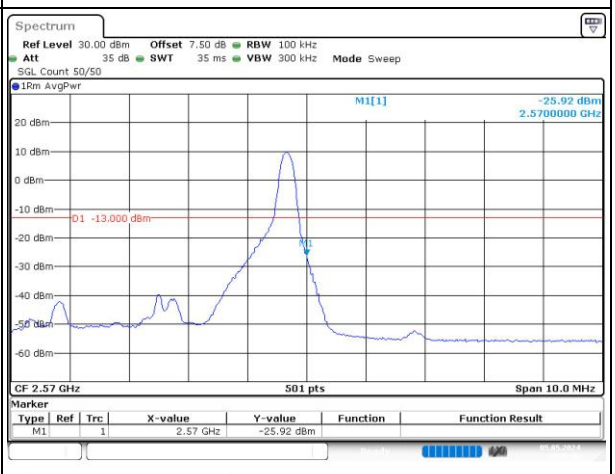
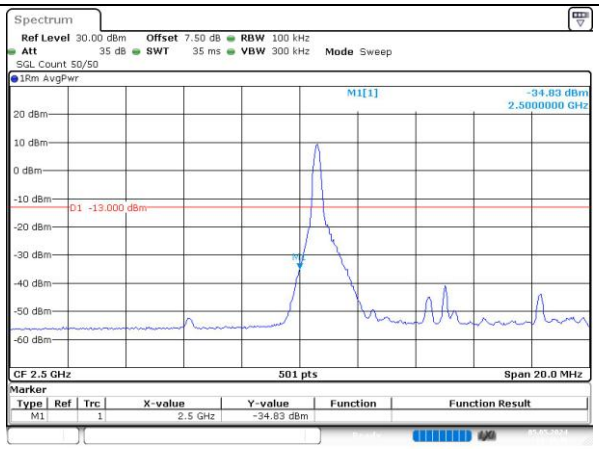
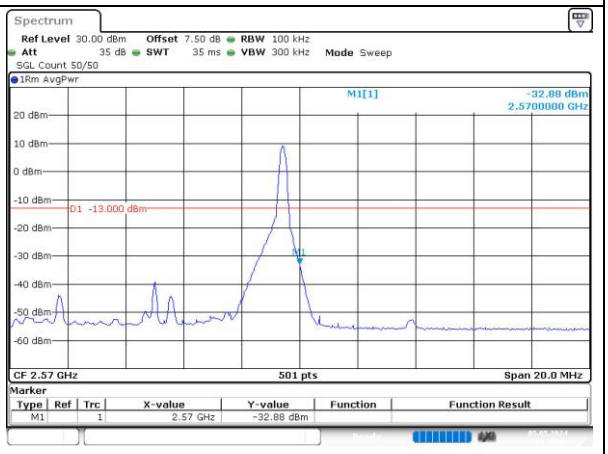
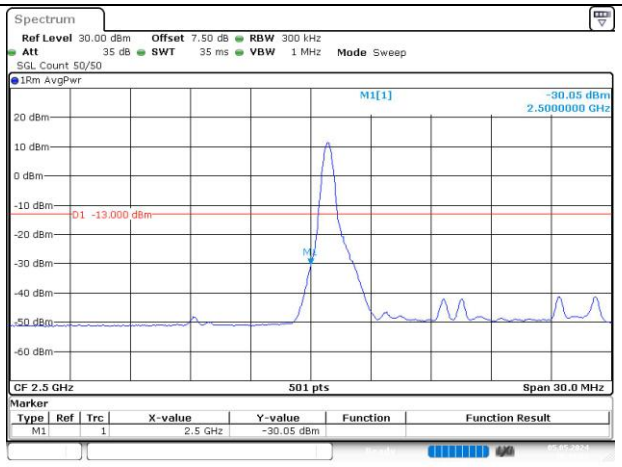
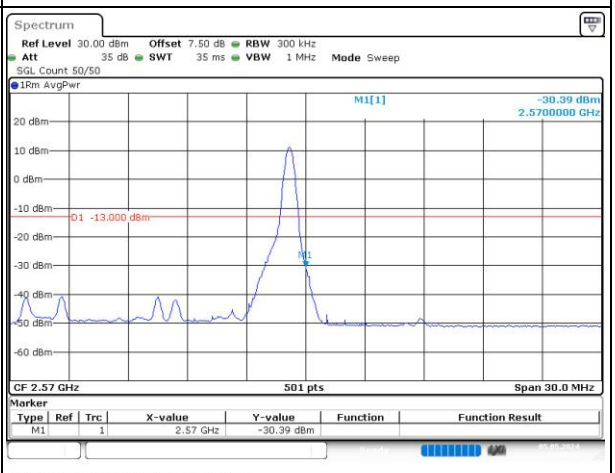
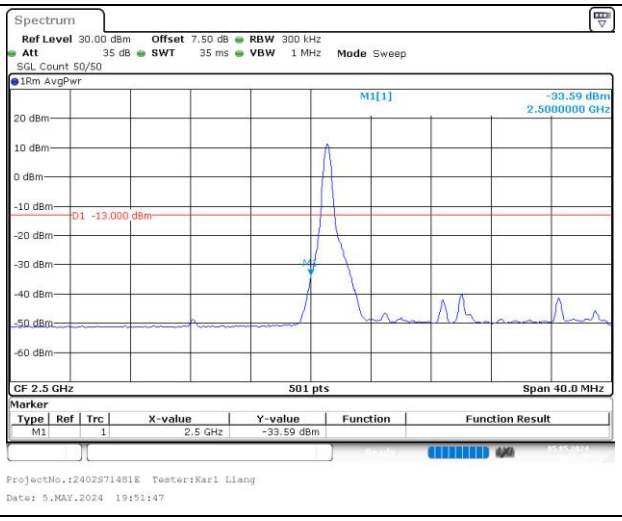
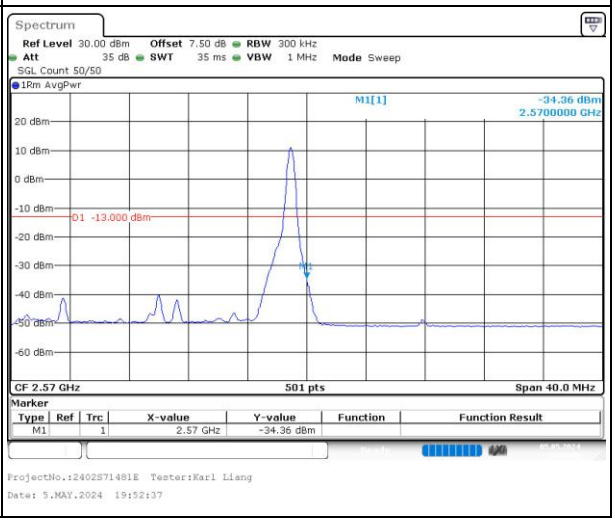
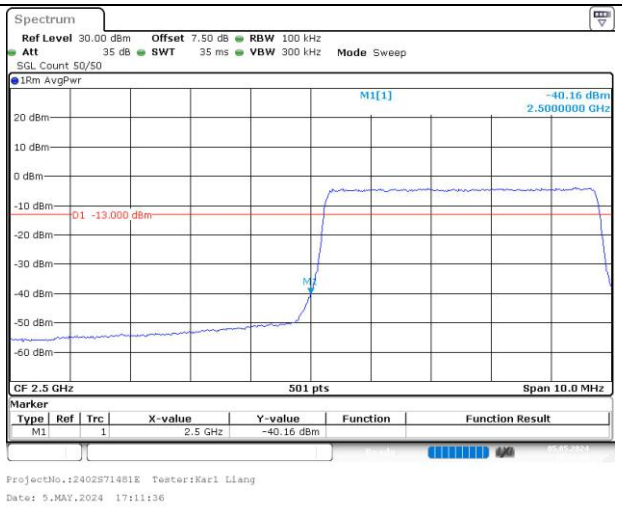
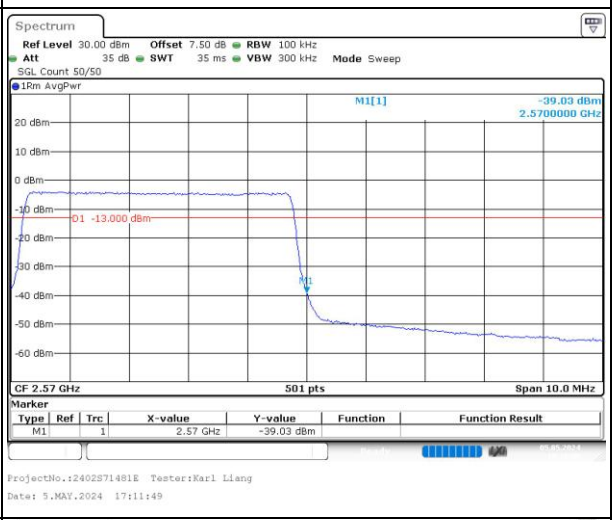
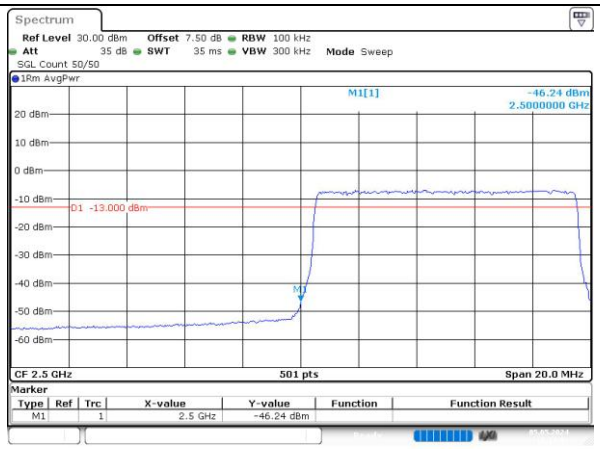
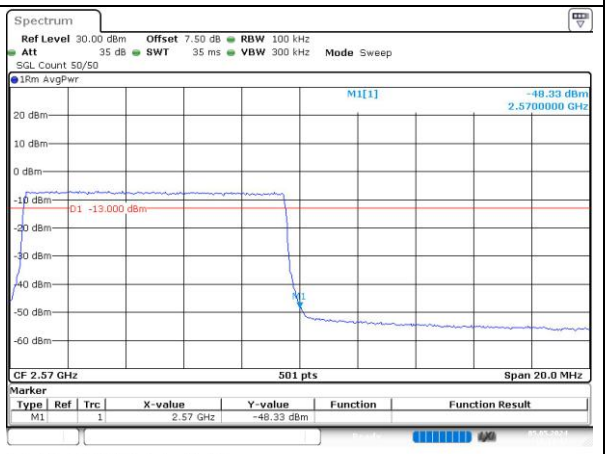
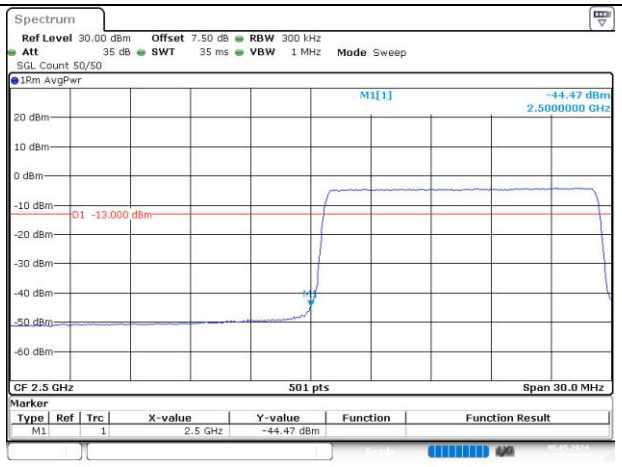
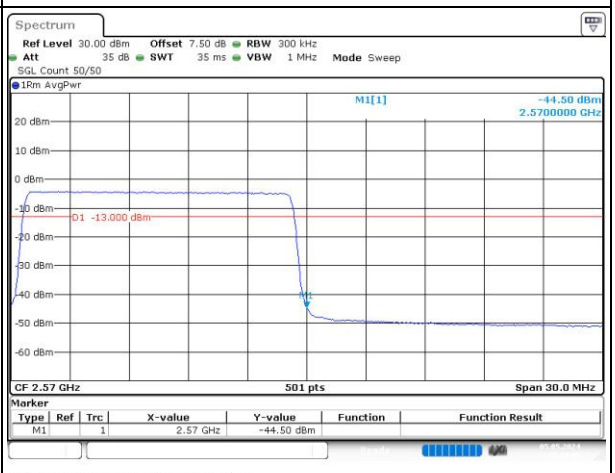
Spurious Emissions at Antenna Terminal		
Channel	**20MHz Bandwidth QPSK**	
Lowest		
Middle		
Highest		

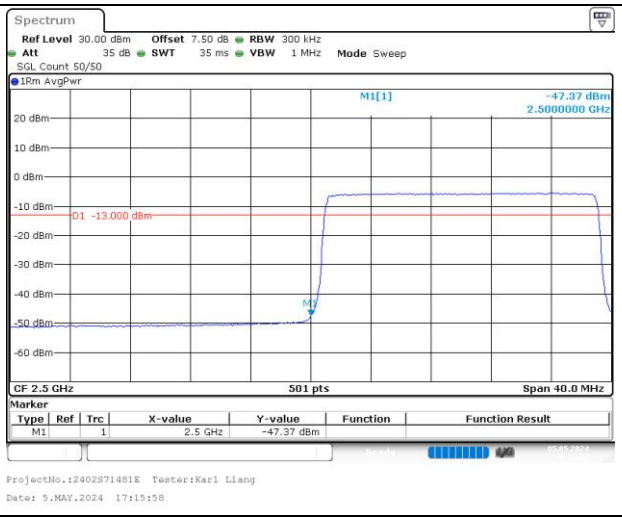
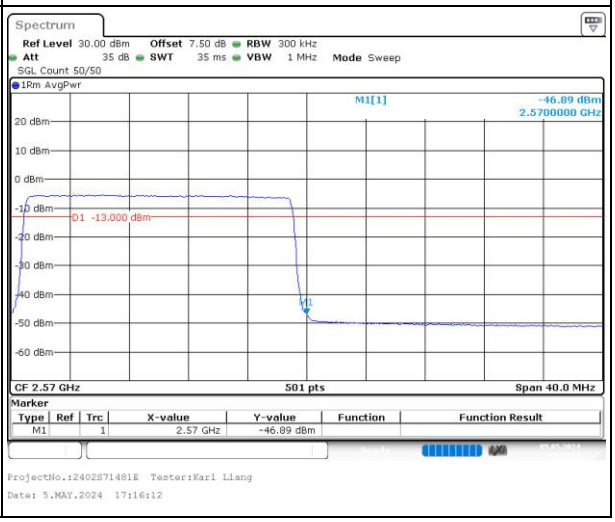
Out of band emission, Band Edge		
Mode	**Lowest-RB 1#0**	**Highest-RB 1#Max**
QPSK 5MHz		
QPSK 10MHz		
QPSK 15MHz		

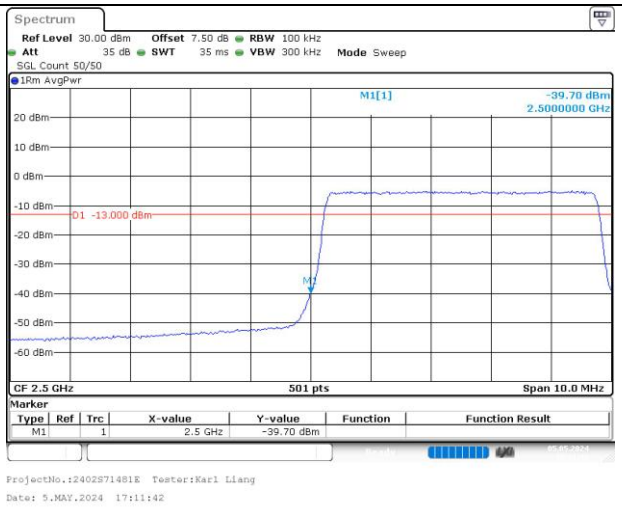
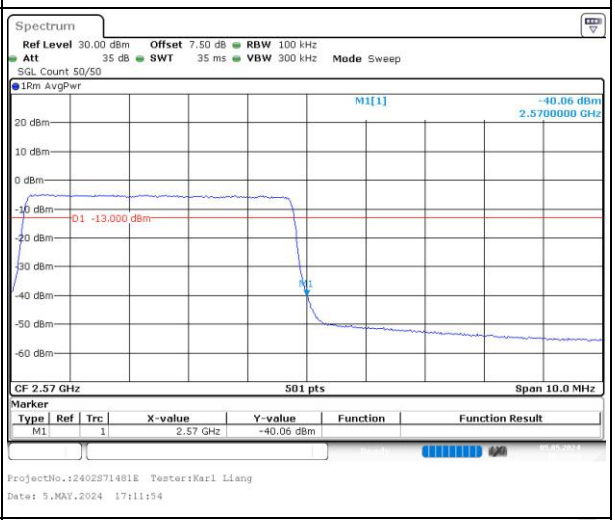
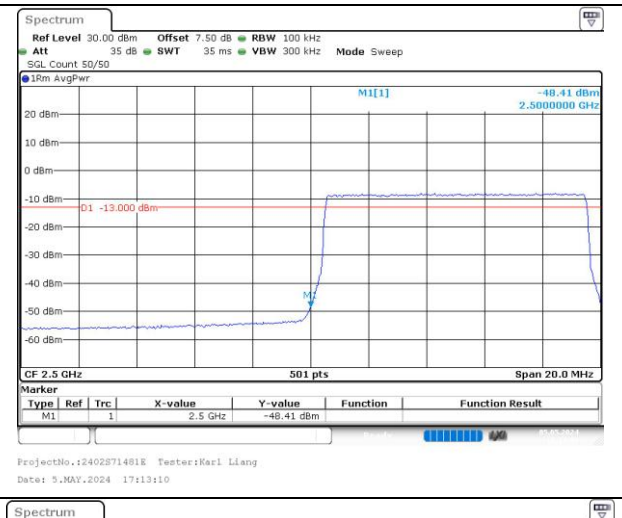
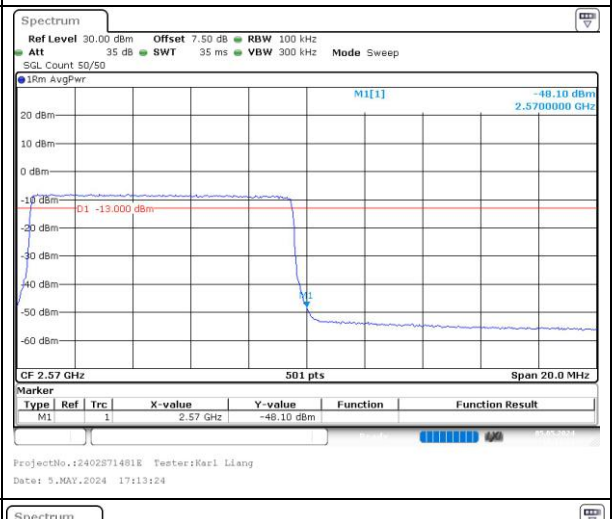
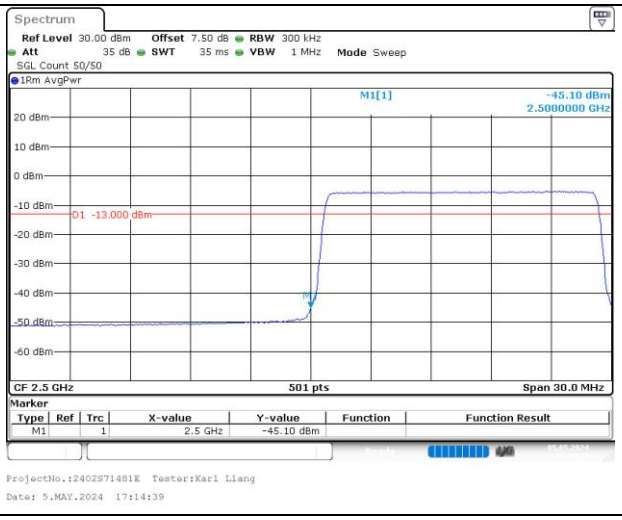
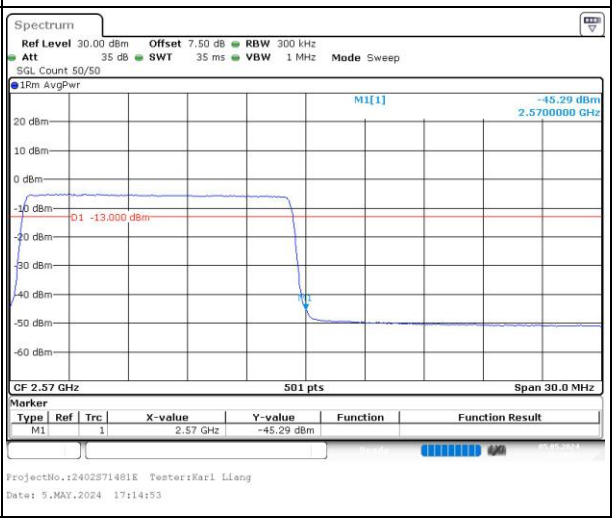
Out of band emission, Band Edge		
Mode	**Lowest-RB 1#0**	**Highest-RB 1#Max**
QPSK 20MHz		

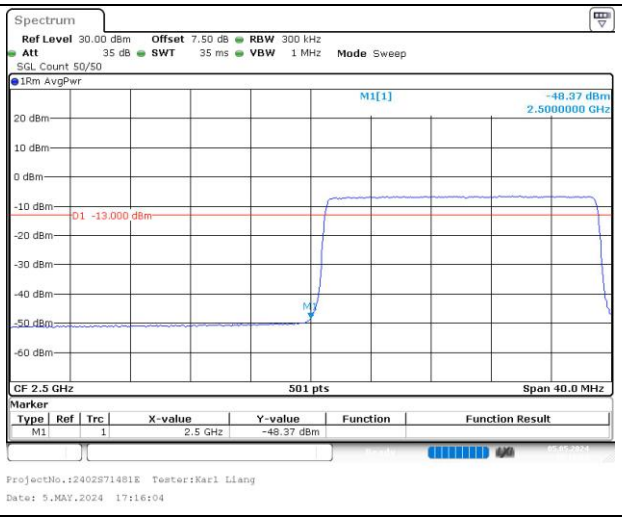
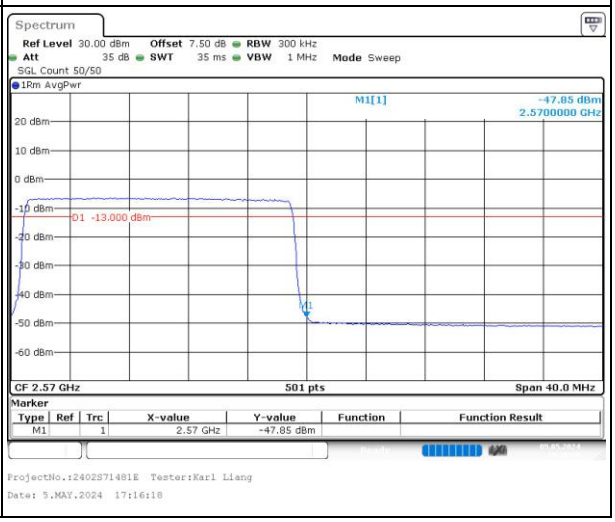
Out of band emission, Band Edge		
Mode	**Lowest-RB 1#0**	**Highest-RB 1#Max**
16QAM 5MHz		
16QAM 10MHz		
16QAM 15MHz		

Out of band emission, Band Edge		
Mode	**Lowest-RB 1#0**	**Highest-RB 1#Max**
16QAM 20MHz		

Out of band emission, Band Edge		
Mode	**Lowest-Full RB**	**Highest-Full RB**
QPSK 5MHz		
QPSK 10MHz		
QPSK 15MHz		

Out of band emission, Band Edge		
Mode	**Lowest-Full RB**	**Highest-Full RB**
QPSK 20MHz		

Out of band emission, Band Edge		
Mode	**Lowest-Full RB**	**Highest-Full RB**
16QAM 5MHz		
16QAM 10MHz		
16QAM 15MHz		

Out of band emission, Band Edge		
Mode	**Lowest-Full RB**	**Highest-Full RB**
16QAM 20MHz		

5.10 Antenna Port Test Data and Results for LTE Band 12

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)
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:

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		
1.4MHz QPSK	RB1#0	15.51	15.43	15.5	8.37	34.77
	RB1#3	15.54	15.48	15.52		
	RB1#5	15.43	15.43	15.54		
	RB3#0	15.51	15.54	15.52		
	RB3#3	15.4	15.47	15.55		
	RB6#0	14.49	14.53	14.62		
1.4MHz 16QAM	RB1#0	14.65	14.51	14.52	7.62	34.77
	RB1#3	14.6	14.57	14.56		
	RB1#5	14.56	14.54	14.56		
	RB3#0	14.5	14.63	14.74		
	RB3#3	14.39	14.6	14.8		
	RB6#0	13.52	13.46	13.64		
3MHz QPSK	RB1#0	15.39	15.45	15.46	8.28	34.77
	RB1#8	15.44	15.46	15.43		
	RB1#14	15.38	15.42	15.46		
	RB6#0	14.5	14.51	14.6		
	RB6#9	14.49	14.5	14.63		
	RB15#0	14.44	14.5	14.56		
3MHz 16QAM	RB1#0	14.66	14.64	15.19	8.01	34.77
	RB1#8	14.61	14.48	15.17		
	RB1#14	14.59	14.51	15.17		
	RB6#0	13.47	13.49	13.66		
	RB6#9	13.5	13.42	13.64		
	RB15#0	13.45	13.51	13.66		
5MHz QPSK	RB1#0	15.6	15.53	15.49	8.42	34.77
	RB1#13	15.49	15.5	15.48		
	RB1#24	15.53	15.55	15.55		
	RB15#0	14.5	14.49	14.67		
	RB15#10	14.4	14.59	14.52		
	RB25#0	14.44	14.5	14.6		
5MHz 16QAM	RB1#0	14.34	14.95	14.74	7.77	34.77
	RB1#13	14.37	14.94	14.6		
	RB1#24	14.48	14.91	14.65		
	RB15#0	13.54	13.46	13.64		
	RB15#10	13.43	13.54	13.54		
	RB25#0	13.51	13.52	13.63		

10MHz QPSK	RB1#0	15.41	15.39	15.48	8.42	34.77
	RB1#25	15.6	15.48	15.49		
	RB1#49	15.46	15.46	15.54		
	RB25#0	14.52	14.51	14.46		
	RB25#25	14.57	14.58	14.48		
	RB50#0	14.59	14.56	14.49		
10MHz 16QAM	RB1#0	14.49	15.08	14.71	7.93	34.77
	RB1#25	14.56	15.11	14.68		
	RB1#49	14.55	15.11	14.75		
	RB25#0	13.64	13.6	13.48		
	RB25#25	13.68	13.62	13.49		
	RB50#0	13.57	13.55	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	5.91	5.83	5.59	13
	RB50#0	5.65	5.54	5.45	13
10MHz 16QAM	RB1#0	6.75	6.96	6.26	13
	RB50#0	6.49	6.43	6.38	13
				Result:	**Pass**

FCC §2.1049, §27.53:Occupied Bandwidth

Operation Mode	99% Occupied Bandwidth (MHz)			26 dB Occupied Bandwidth (MHz)		
	Low Channel	Middle channel	High Channel	Low Channel	Middle Channel	High Channel
1.4MHz QPSK	1.102	1.102	1.102	1.332	1.29	1.296
1.4MHz 16QAM	1.096	1.096	1.102	1.29	1.302	1.326
3MHz QPSK	2.683	2.695	2.683	2.892	2.88	2.916
3MHz 16QAM	2.683	2.683	2.683	2.928	2.892	2.892
5MHz QPSK	4.511	4.511	4.511	4.98	4.98	4.98
5MHz 16QAM	4.491	4.511	4.511	4.94	4.98	5
10MHz QPSK	8.942	8.942	8.942	9.72	9.64	9.68
10MHz 16QAM	8.942	8.942	8.942	9.56	9.64	9.64

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.**

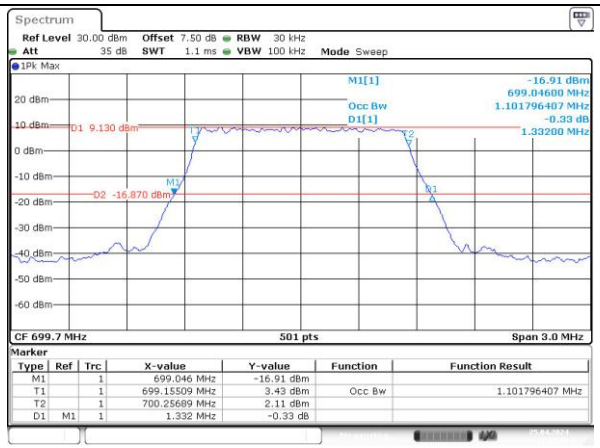
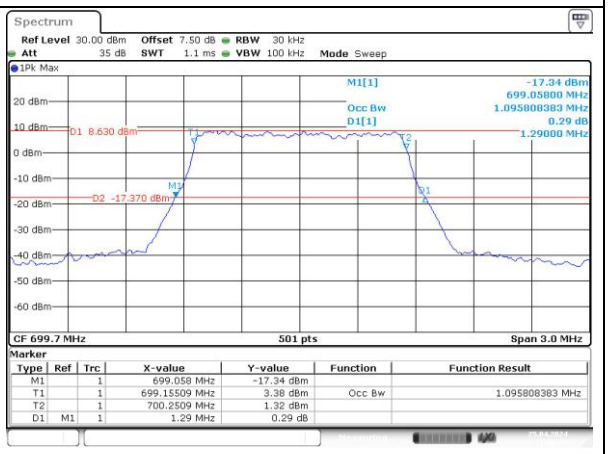
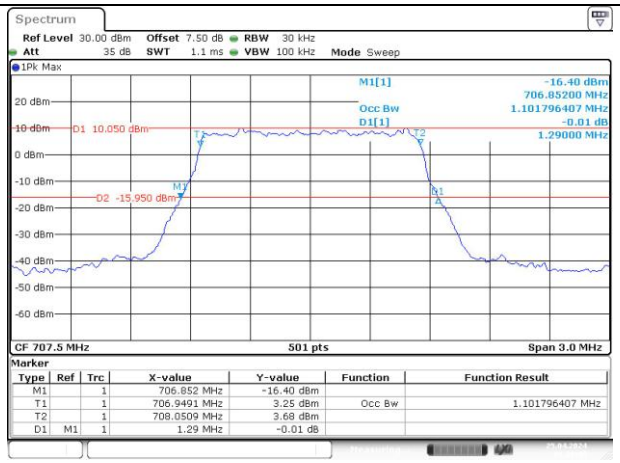
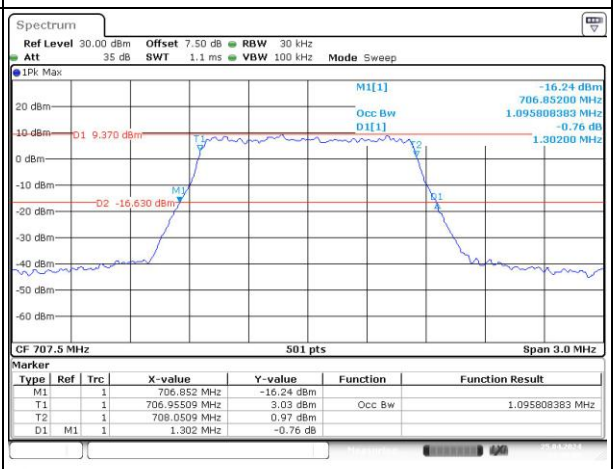
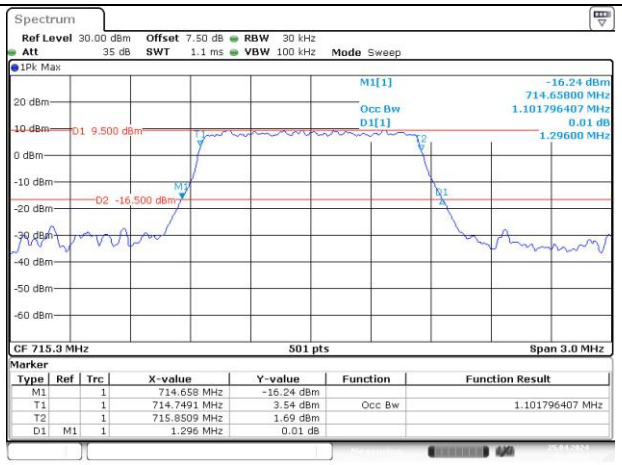
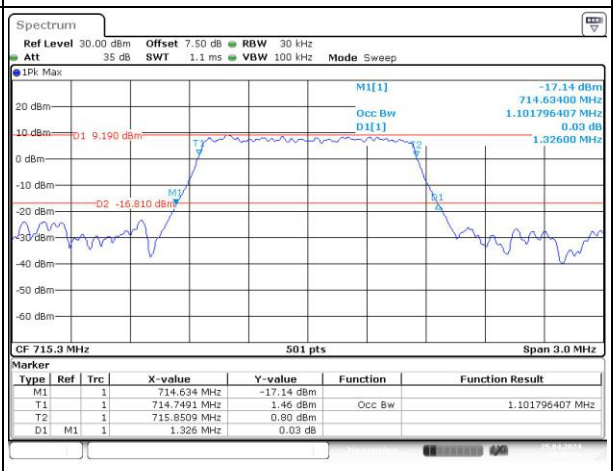
FCC §2.1051, §27.53:Out of band emission, Band Edge	
Result:	**Pass, Please refer to the test plots of Out of band emission, Band Edge.**

FCC §2.1055, §27.54: Frequency Stability

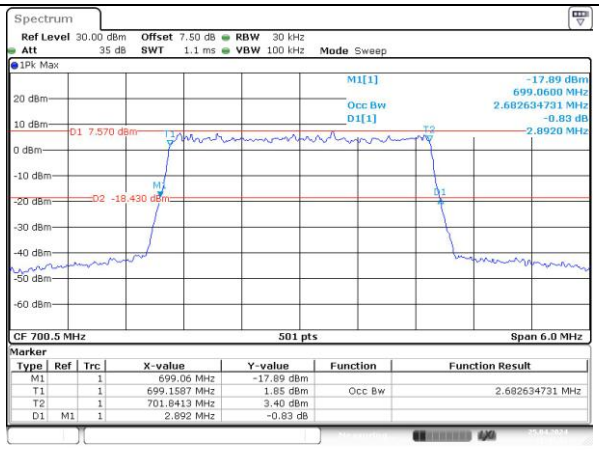
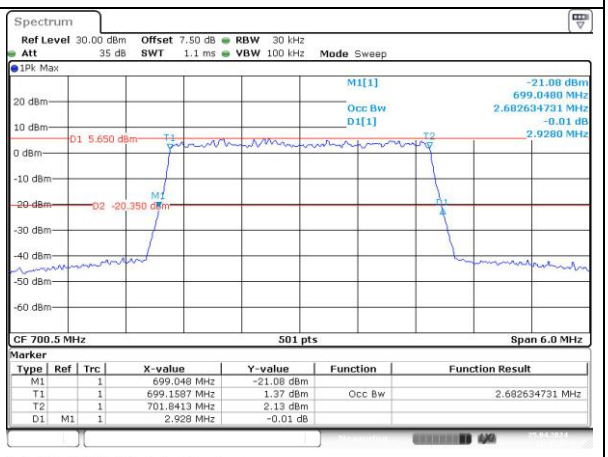
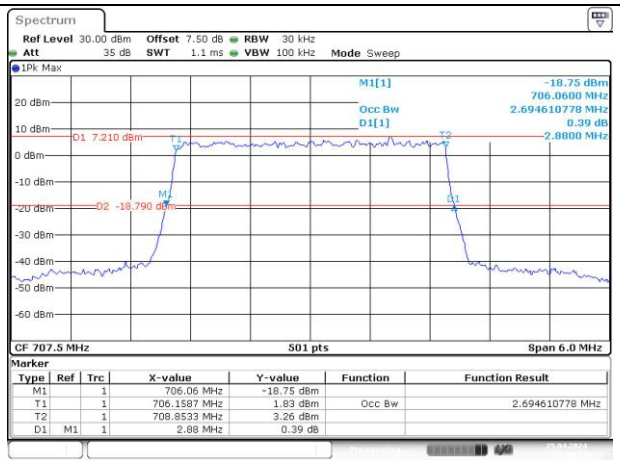
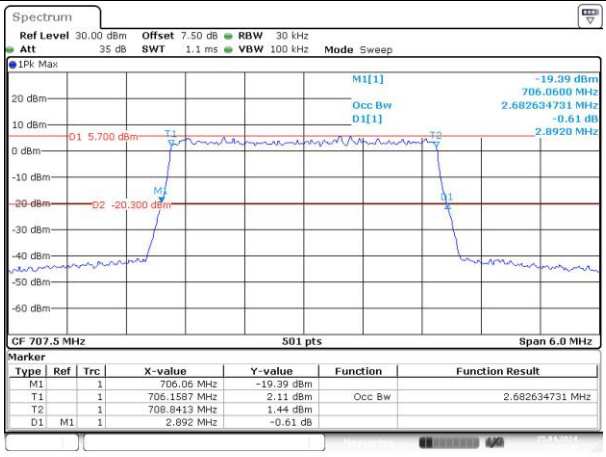
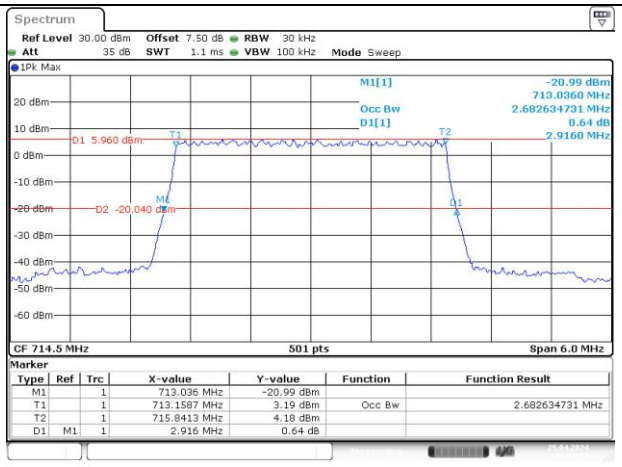
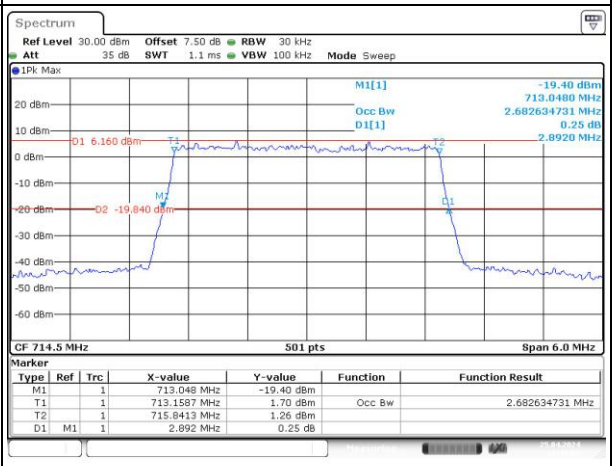
Test Mode:	10M QPSK	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (℃)	Voltage (V_{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.91	699.496	699.00	715.465	716.00
	-20	3.91	699.523	699.00	715.447	716.00
	-10	3.91	699.514	699.00	715.465	716.00
	0	3.91	699.508	699.00	715.465	716.00
	10	3.91	699.514	699.00	715.453	716.00
	20	3.91	699.529	699.00	715.471	716.00
	30	3.91	699.532	699.00	715.489	716.00
	40	3.91	699.535	699.00	715.489	716.00
	50	3.91	699.550	699.00	715.495	716.00
Frequency Stability vs. Voltage	20	3.45	699.544	699.00	715.483	716.00
	20	4.5	699.544	699.00	715.474	716.00
					Result:	**Pass**

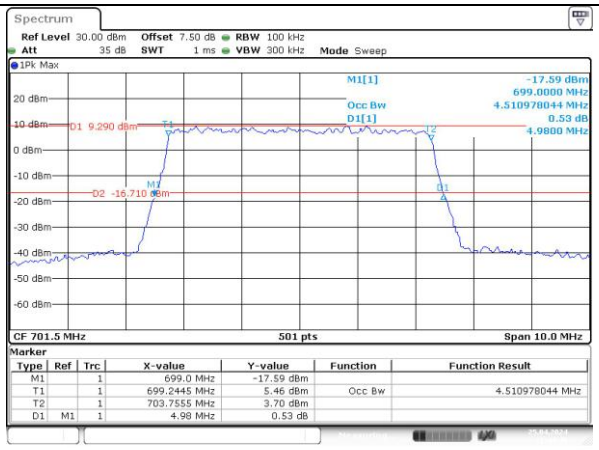
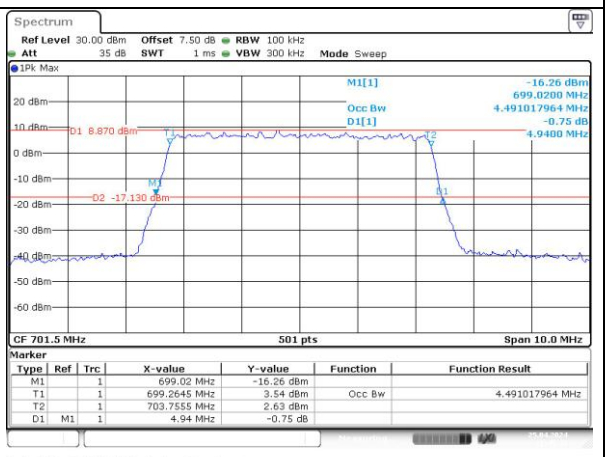
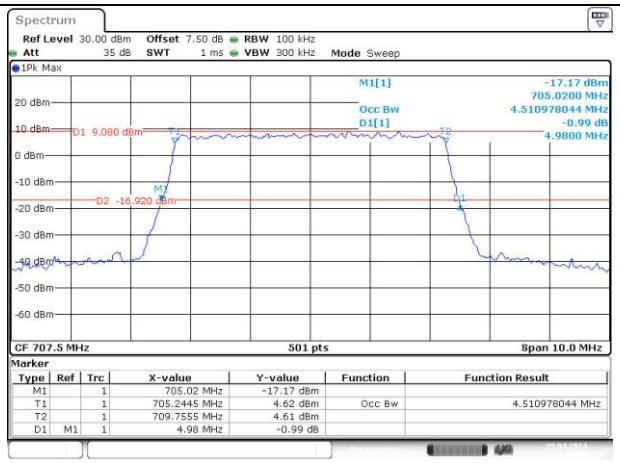
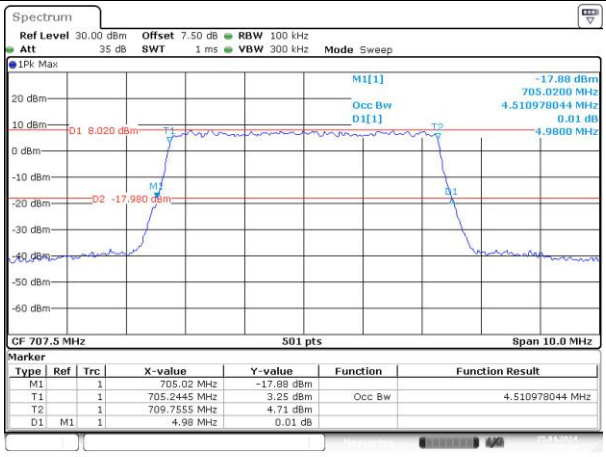
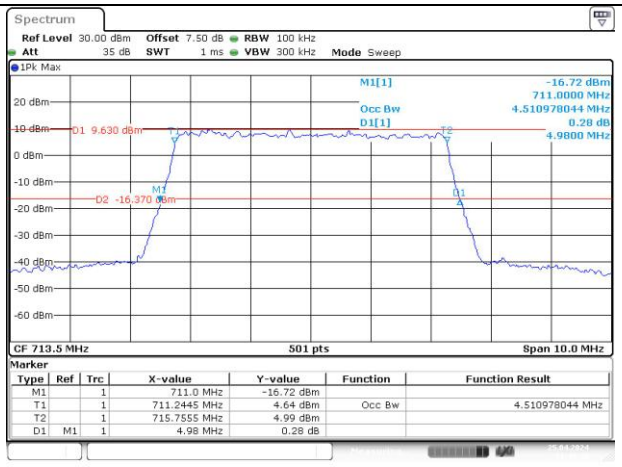
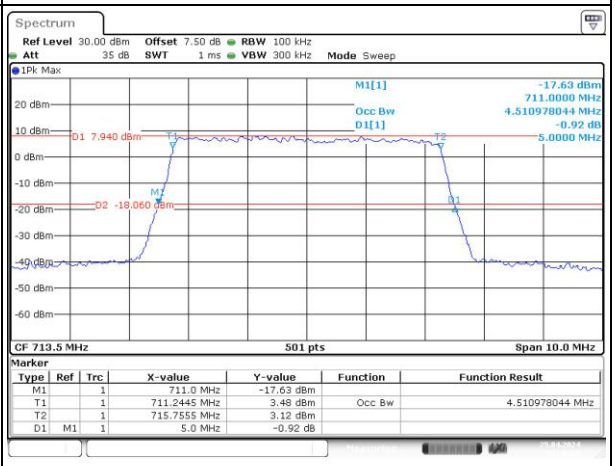
Test Mode:	10M 16QAM	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (℃)	Voltage (V_{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.91	699.514	699.00	715.444	716.00
	-20	3.91	699.502	699.00	715.465	716.00
	-10	3.91	699.511	699.00	715.447	716.00
	0	3.91	699.502	699.00	715.450	716.00
	10	3.91	699.523	699.00	715.468	716.00
	20	3.91	699.529	699.00	715.471	716.00
	30	3.91	699.547	699.00	715.495	716.00
	40	3.91	699.535	699.00	715.498	716.00
	50	3.91	699.556	699.00	715.498	716.00
Frequency Stability vs. Voltage	20	3.45	699.547	699.00	715.489	716.00
	20	4.5	699.547	699.00	715.480	716.00
					Result:	**Pass**

Test Plots:

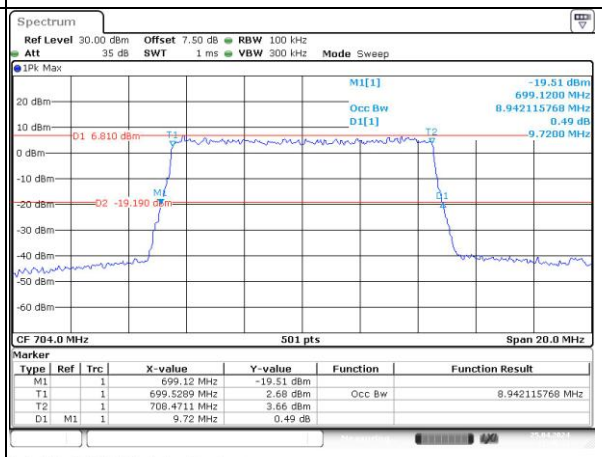
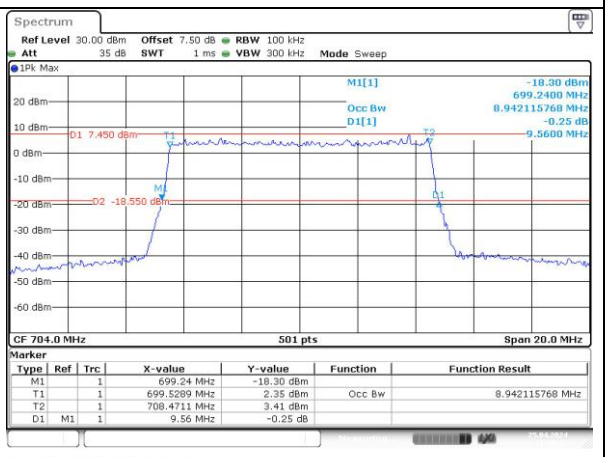
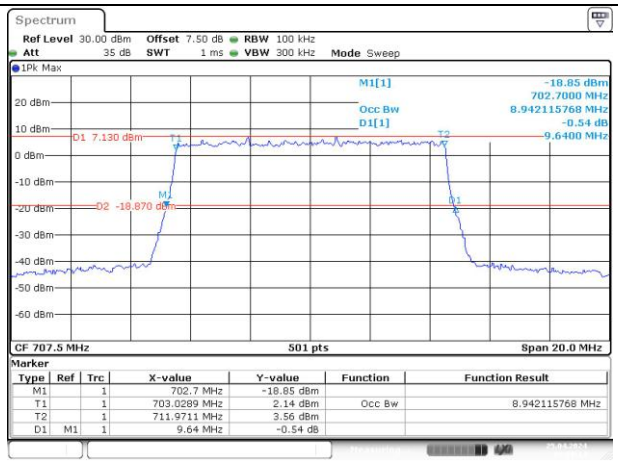
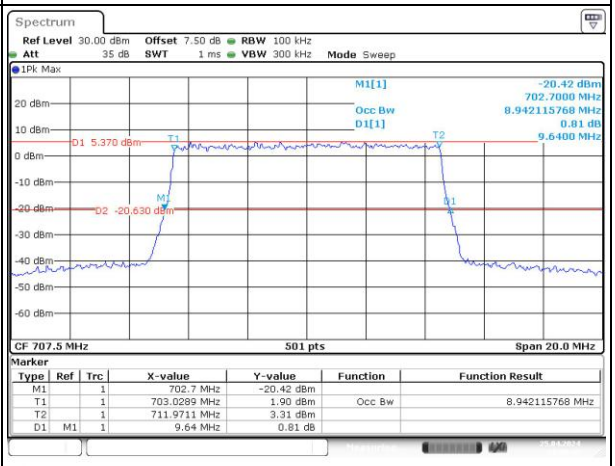
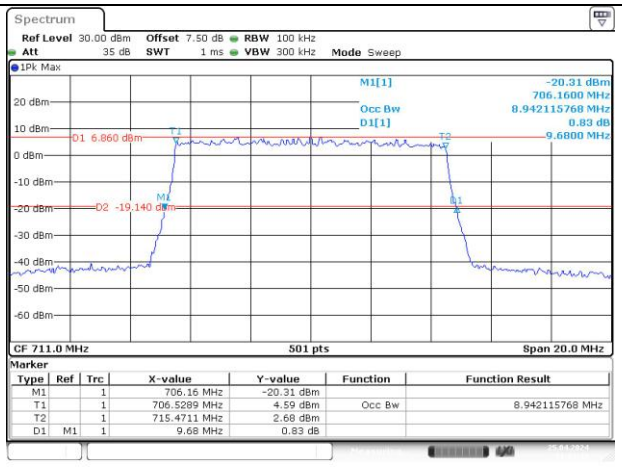
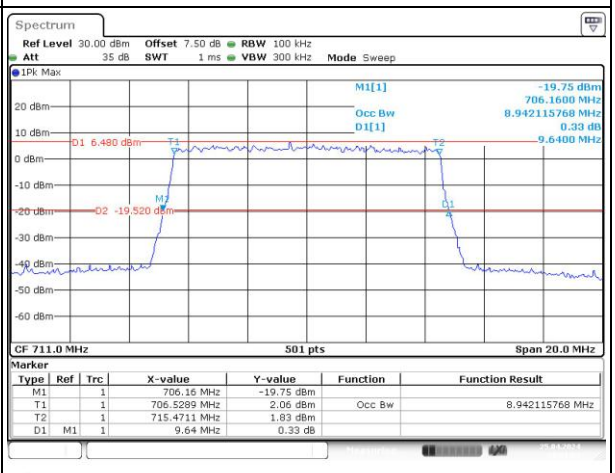
Occupied Bandwidth		
Channel	1.4MHz Bandwidth QPSK	1.4MHz Bandwidth 16QAM
Lowest		
Middle		
Highest		

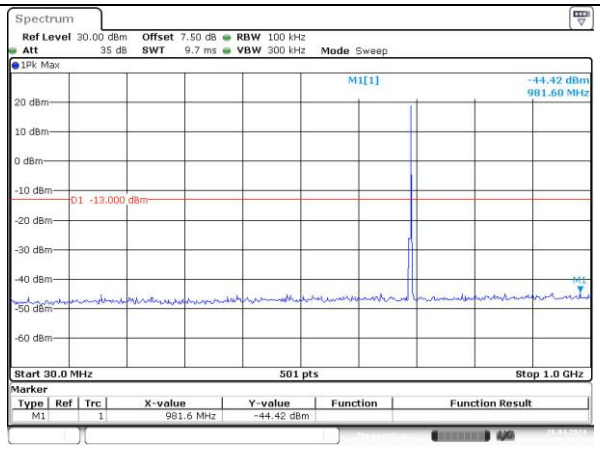
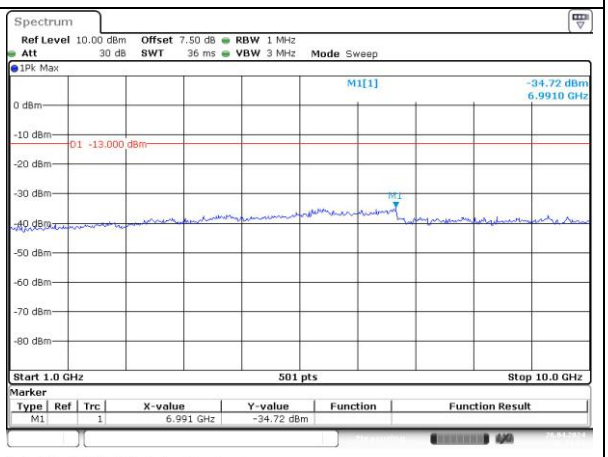
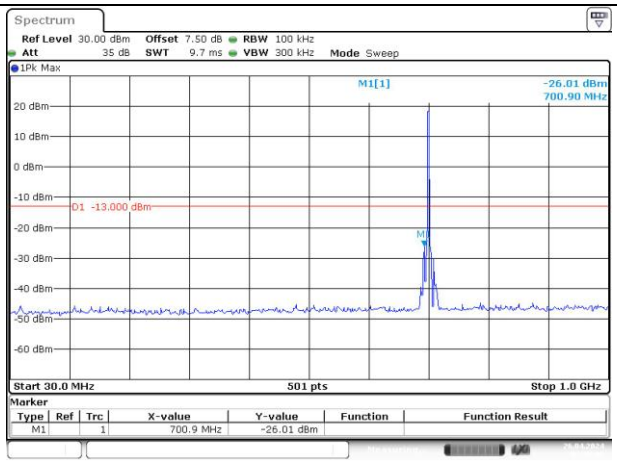
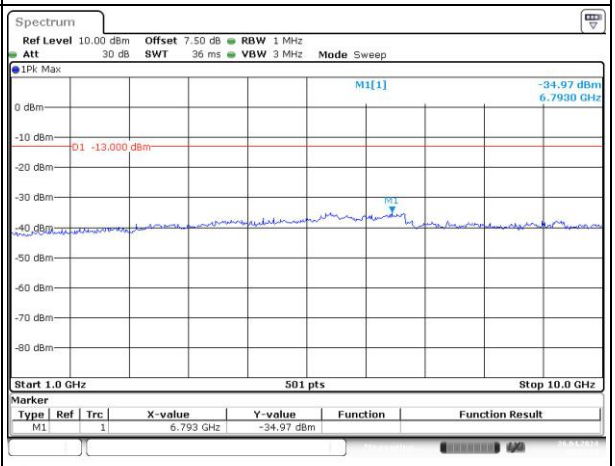
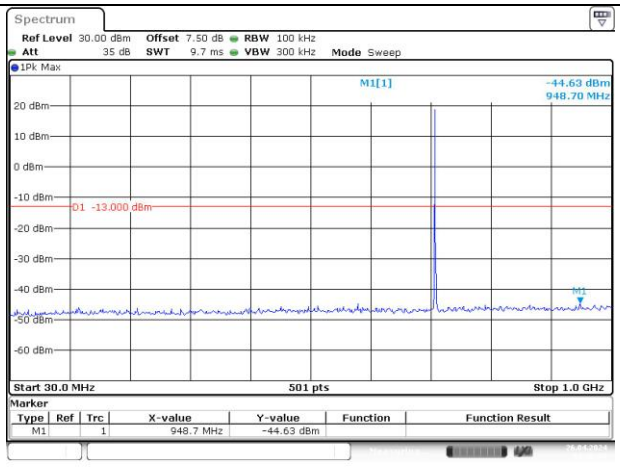
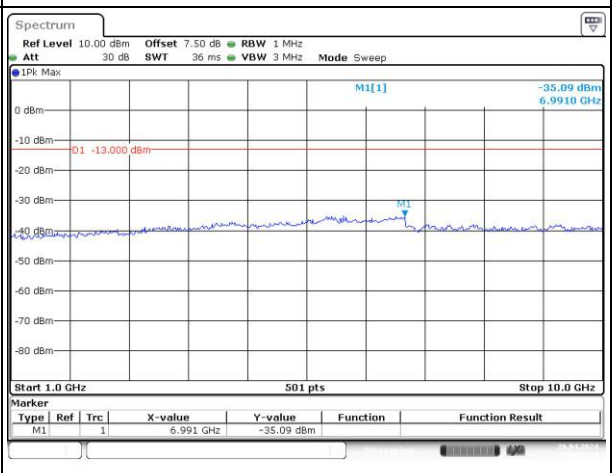
Occupied Bandwidth

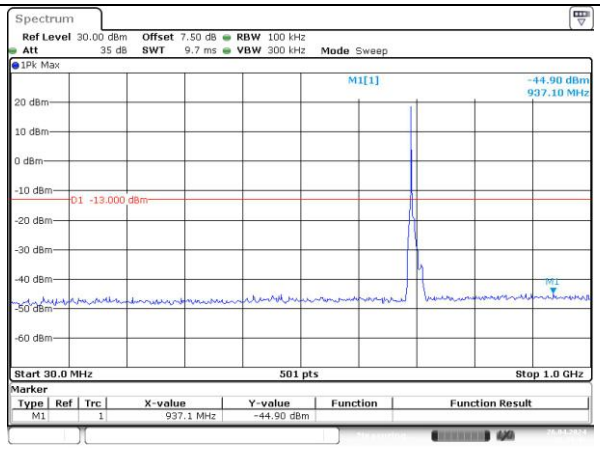
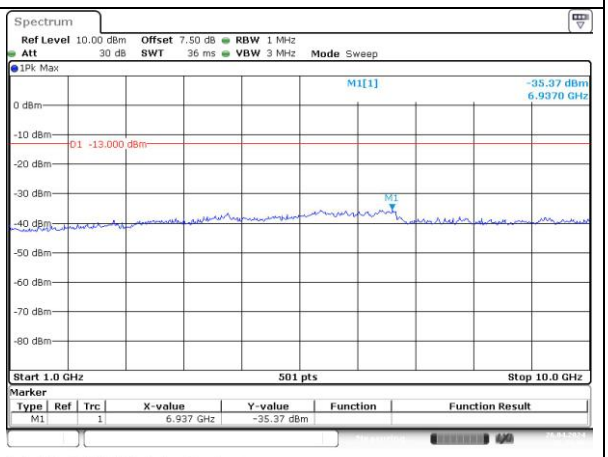
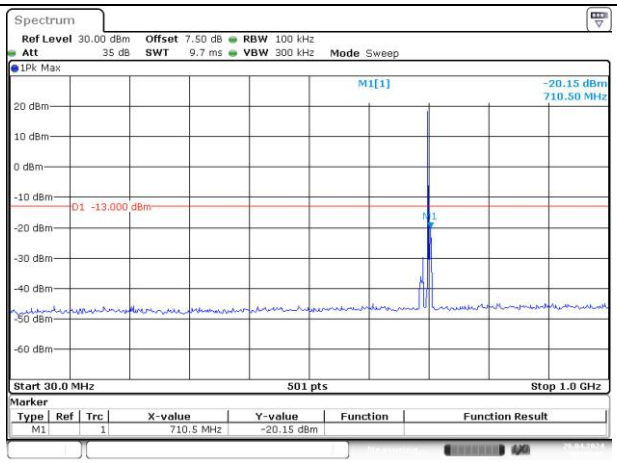
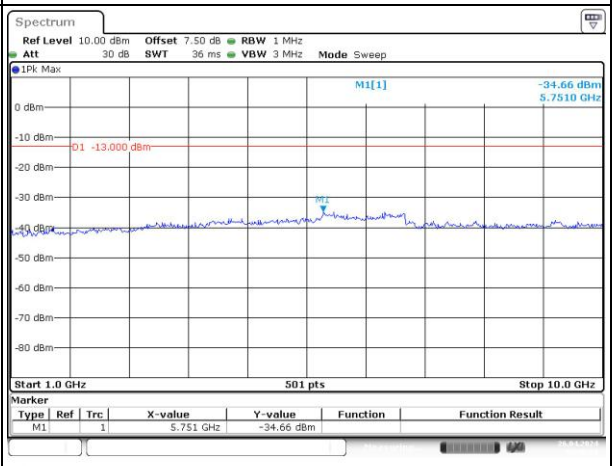
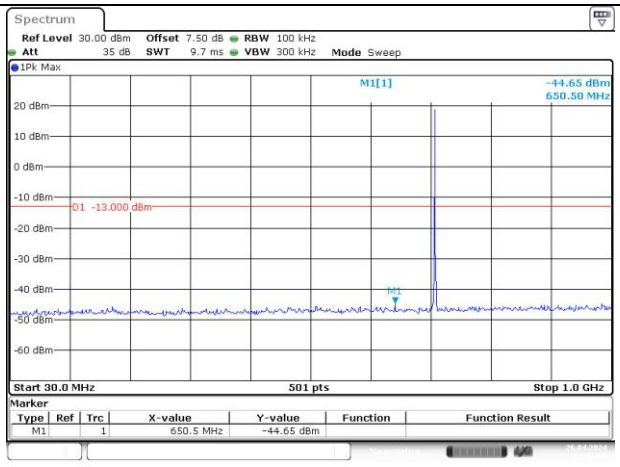
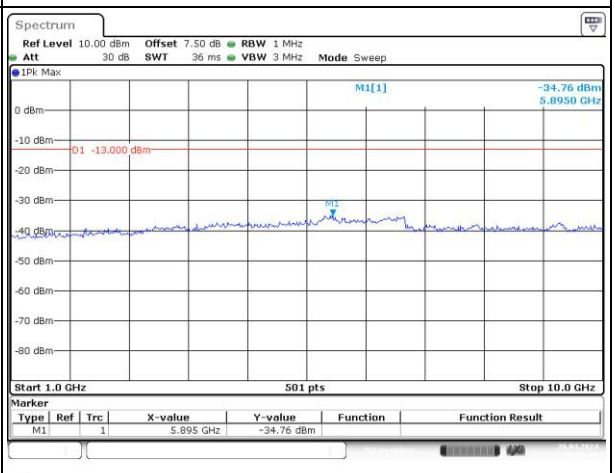
Channel	3MHz Bandwidth QPSK	3MHz Bandwidth 16QAM
Lowest		
Middle		
Highest		

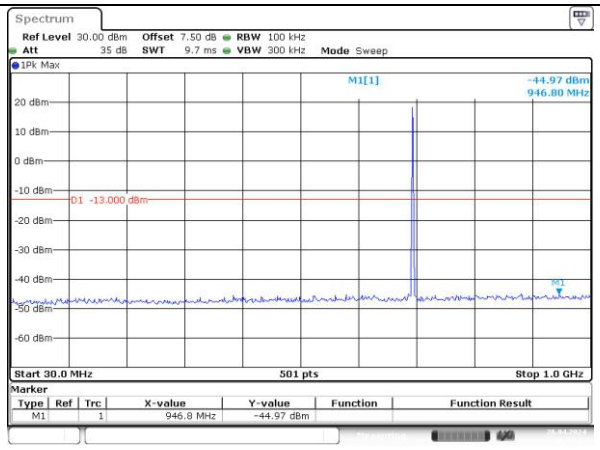
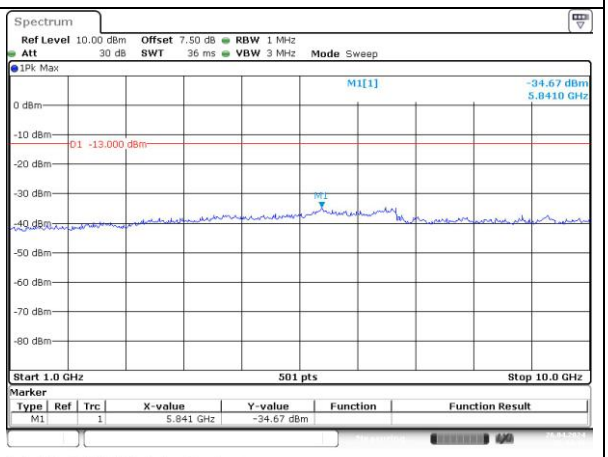
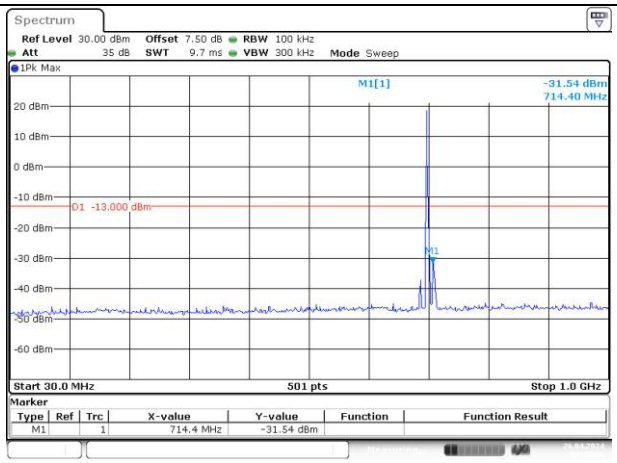
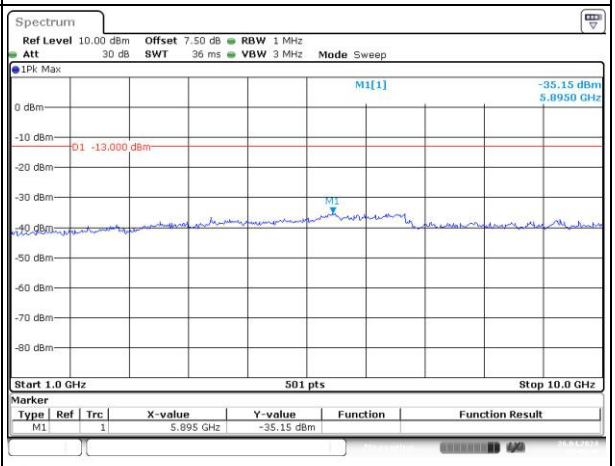
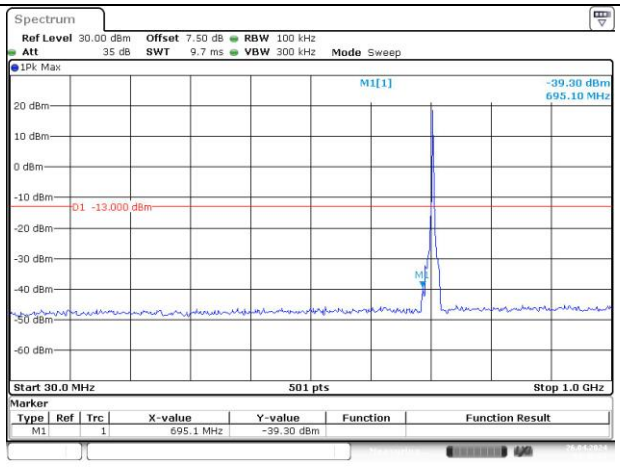
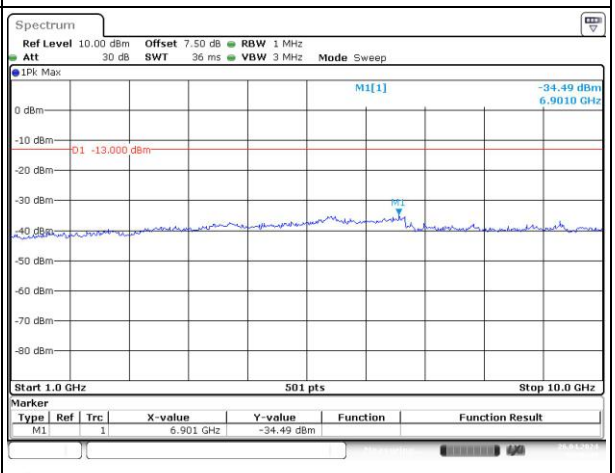
Occupied Bandwidth		
Channel	5MHz Bandwidth QPSK	5MHz Bandwidth 16QAM
Lowest		
Middle		
Highest		

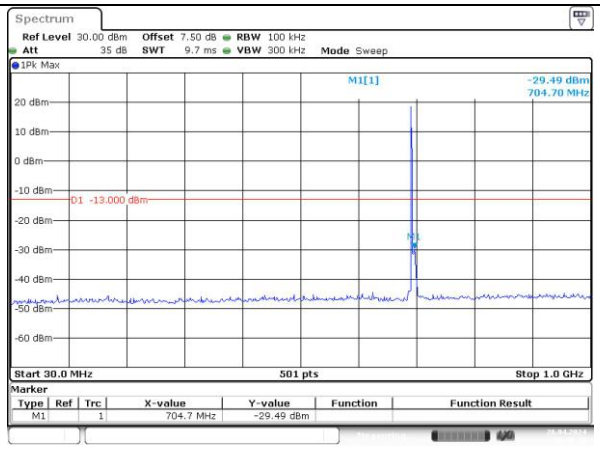
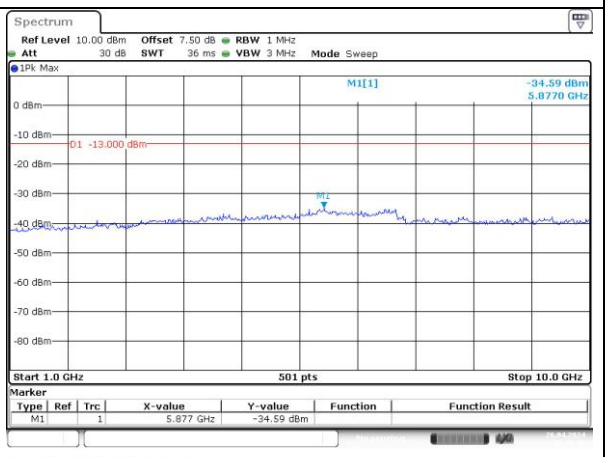
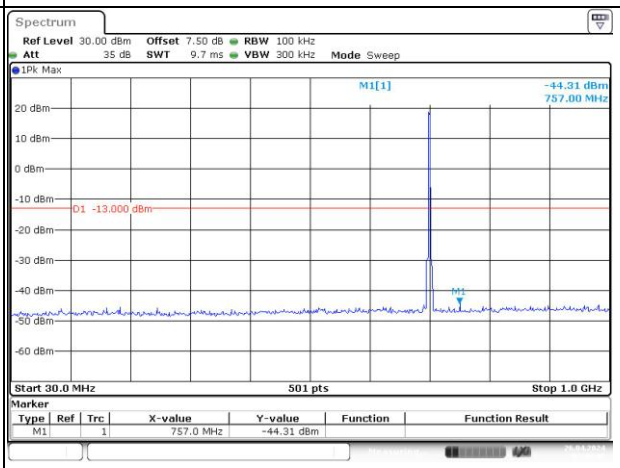
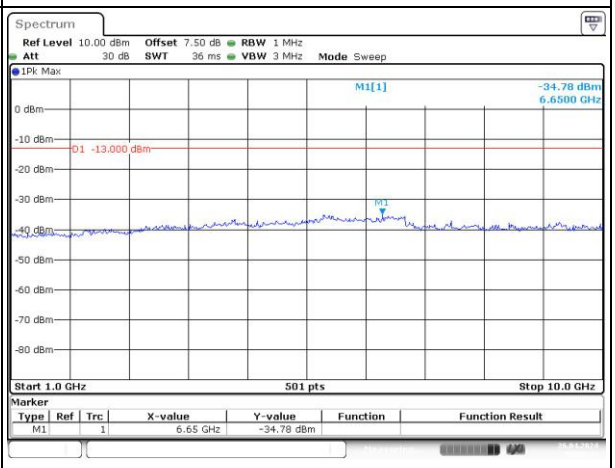
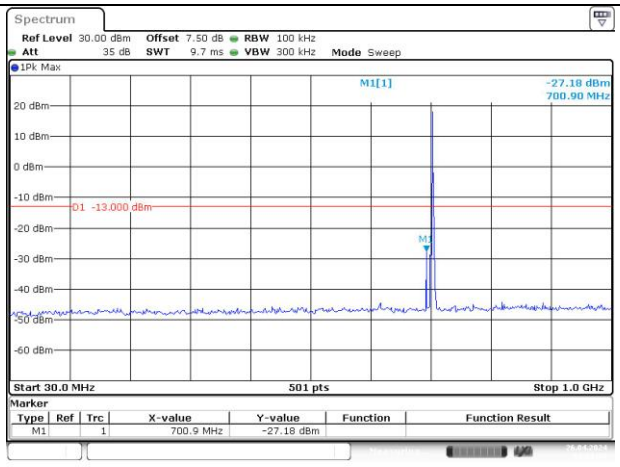
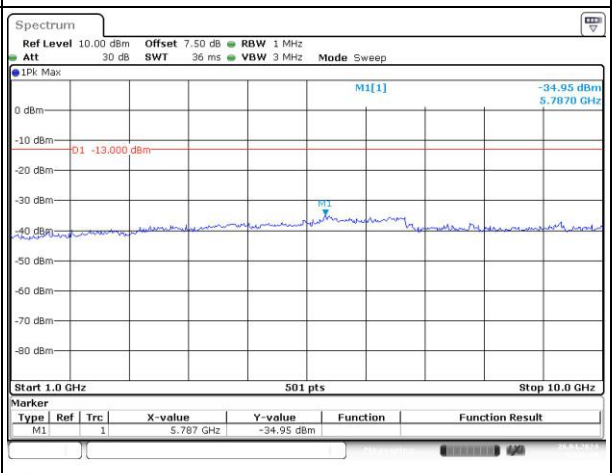
Occupied Bandwidth

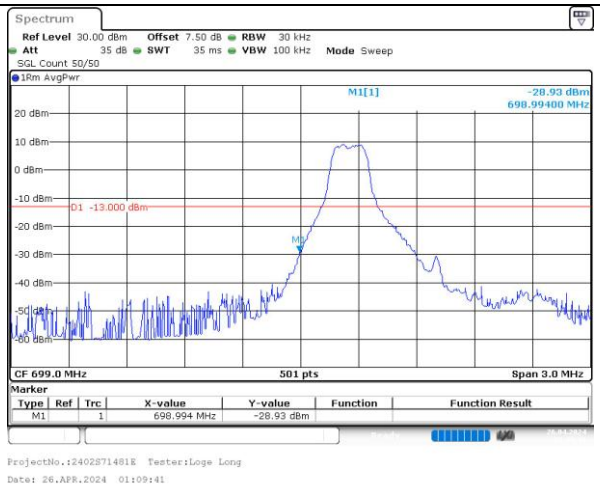
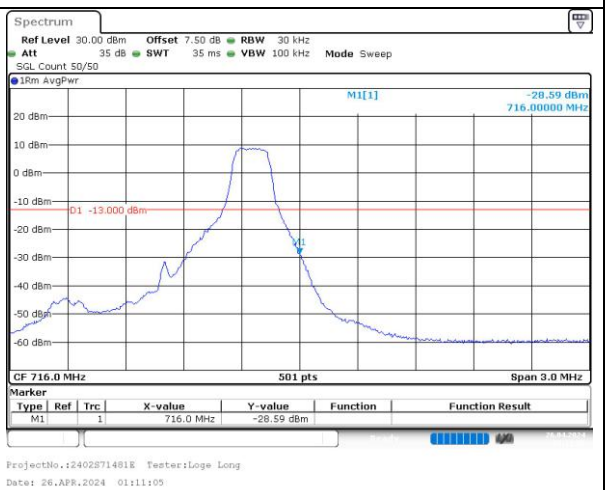
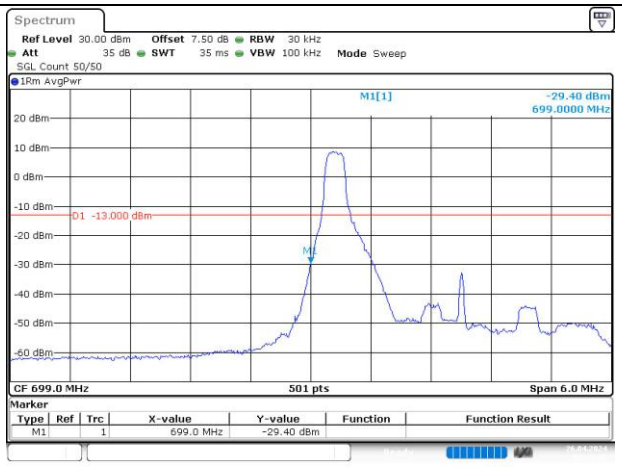
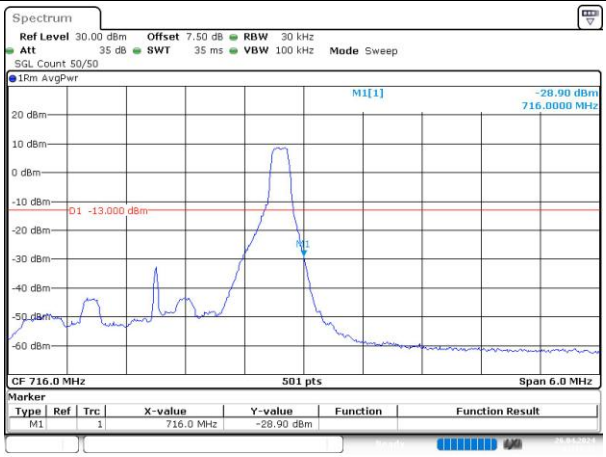
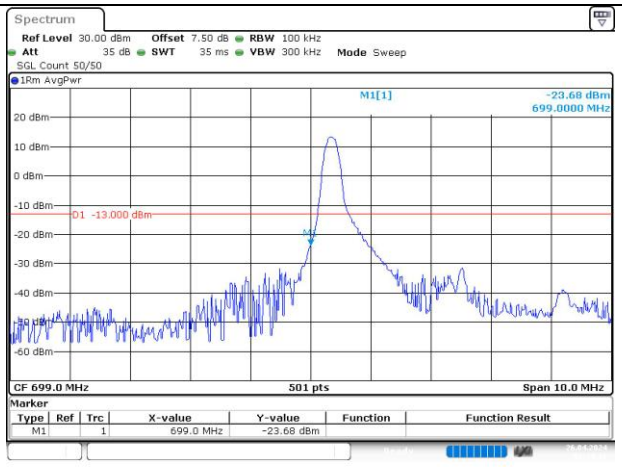
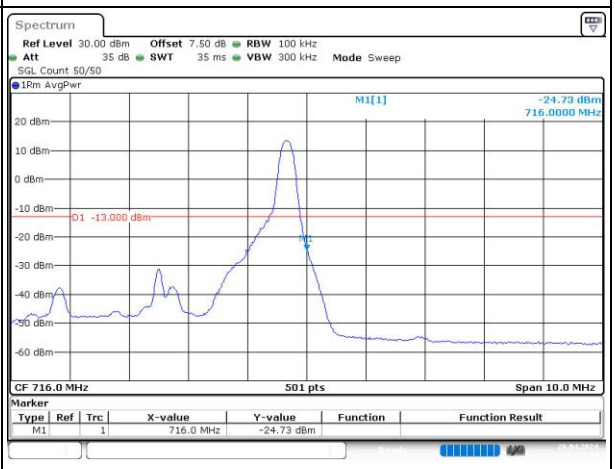
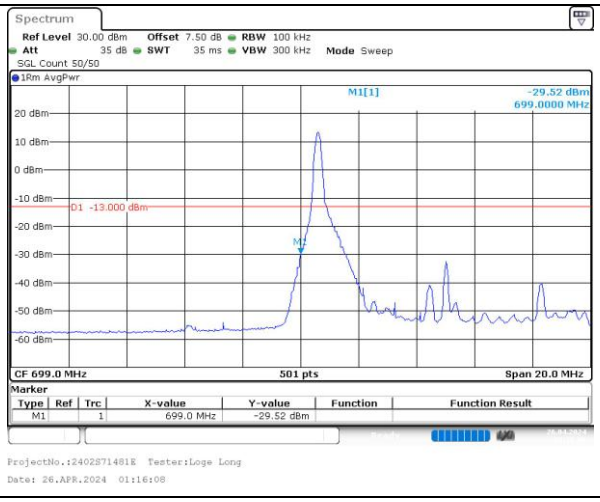
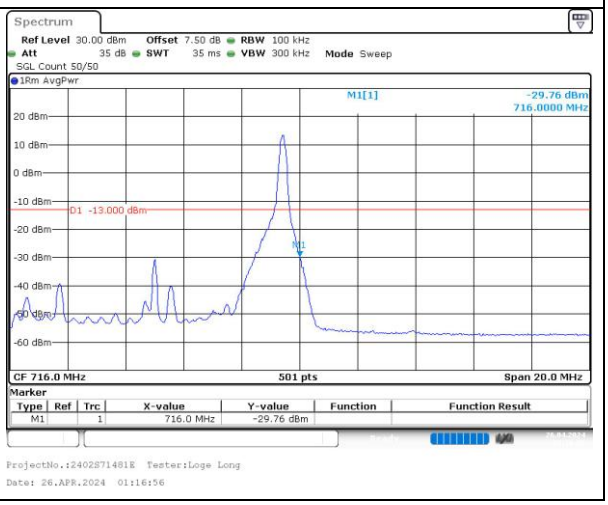
Channel	10MHz Bandwidth QPSK	10MHz Bandwidth 16QAM
Lowest		
Middle		
Highest		

Spurious Emissions at Antenna Terminal		
Channel	**1.4MHz Bandwidth QPSK**	
Lowest		
Middle		
Highest		

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**	
Lowest		
Middle		
Highest		

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

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