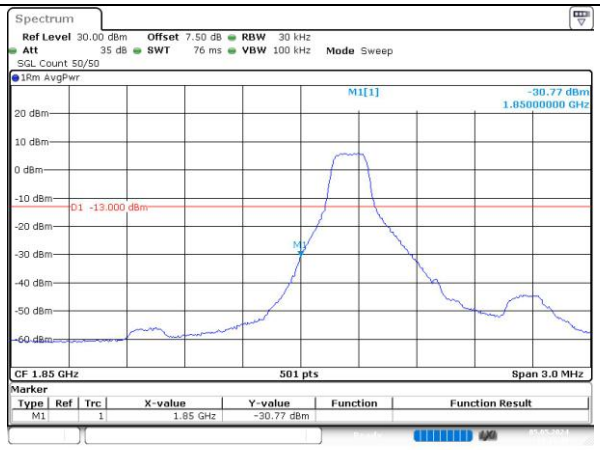
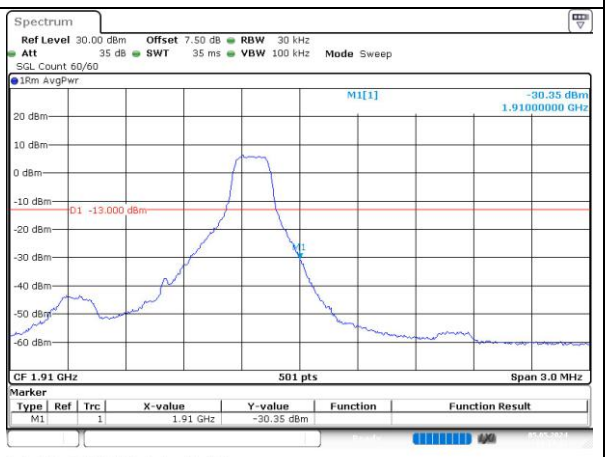
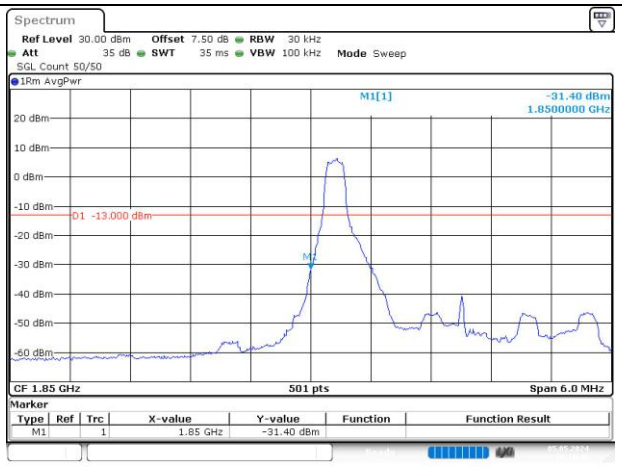
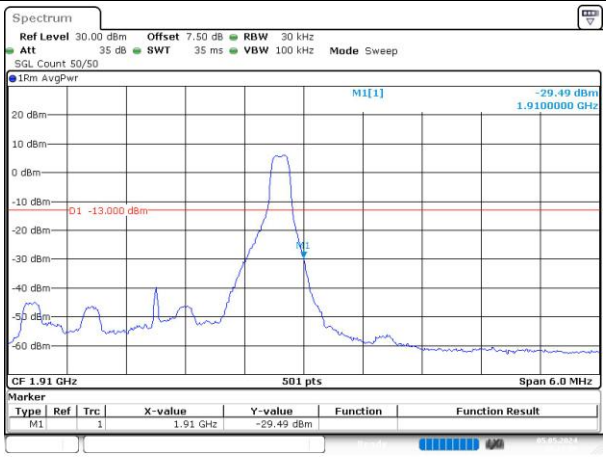
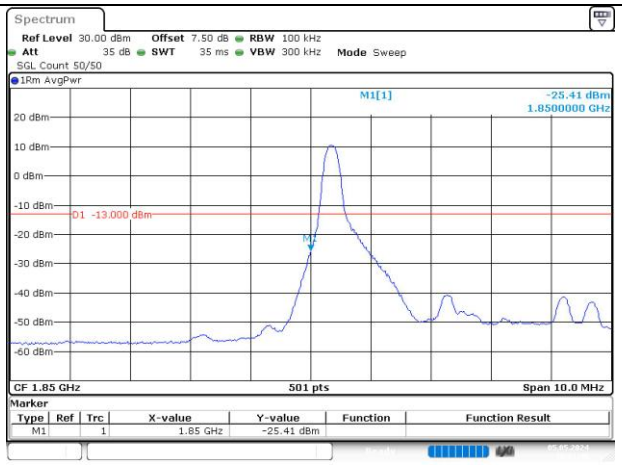
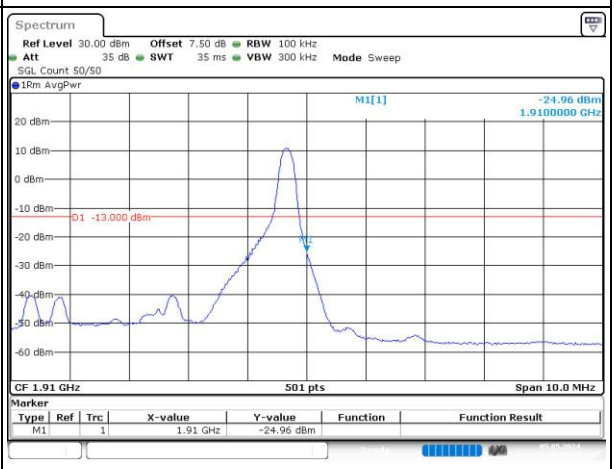
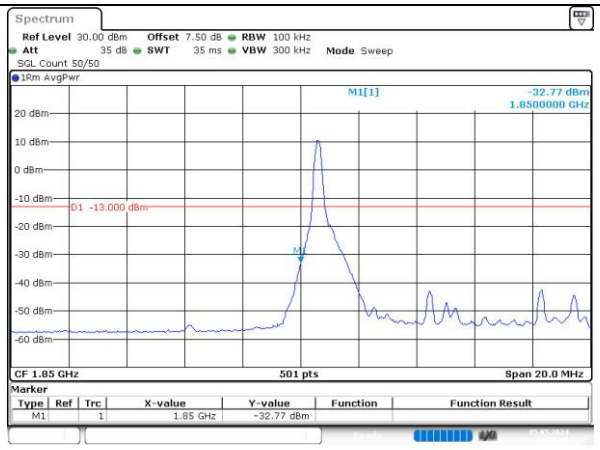
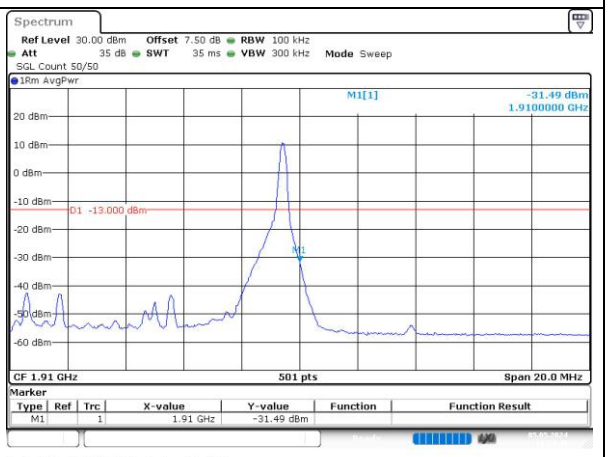
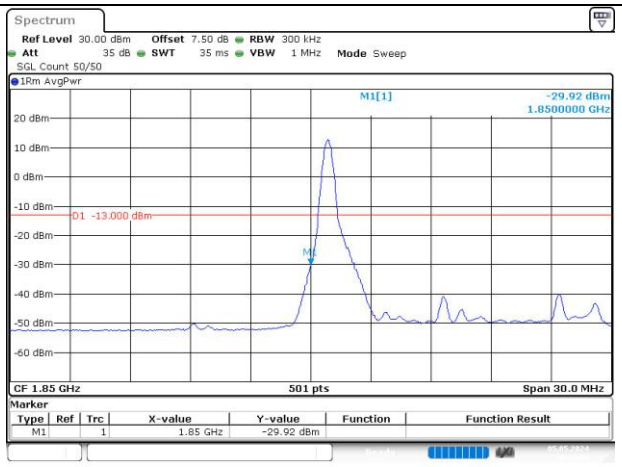
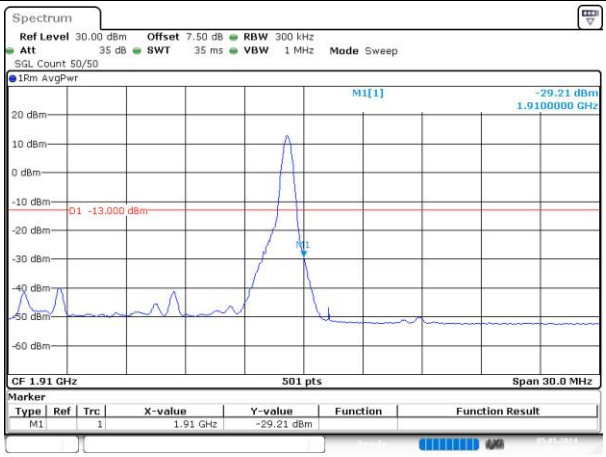
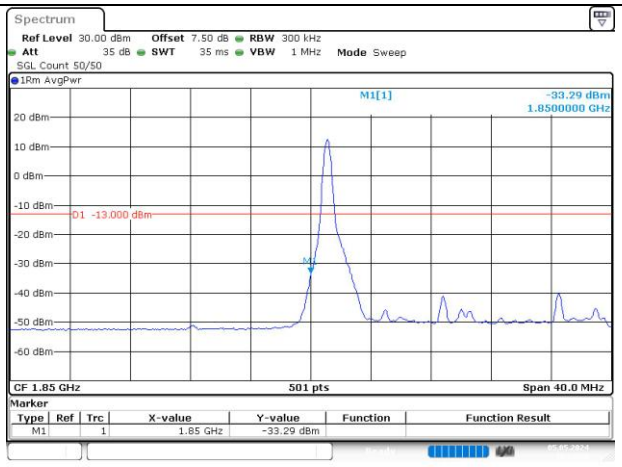
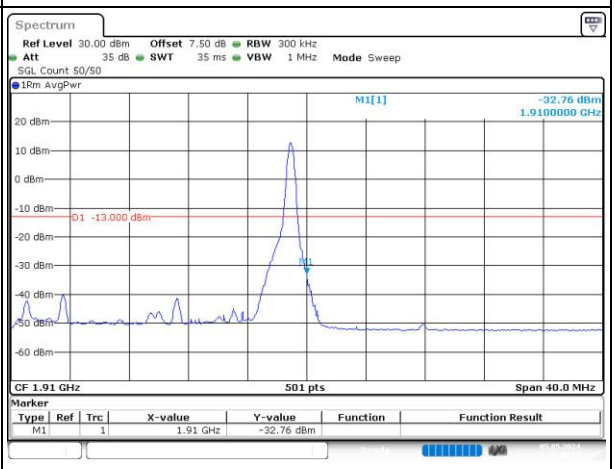
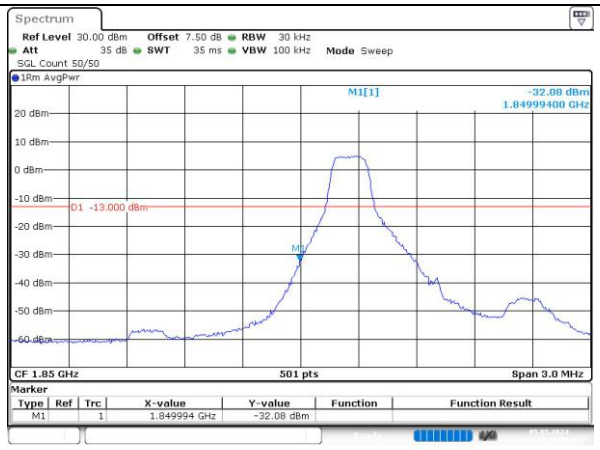
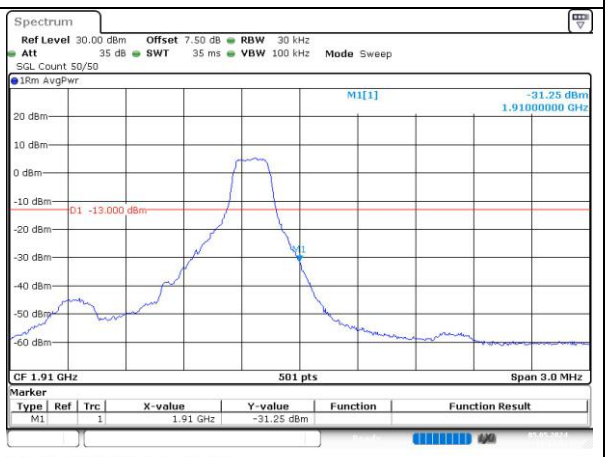
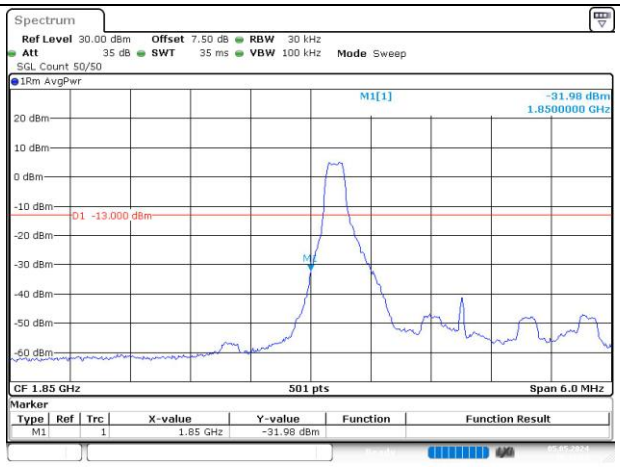
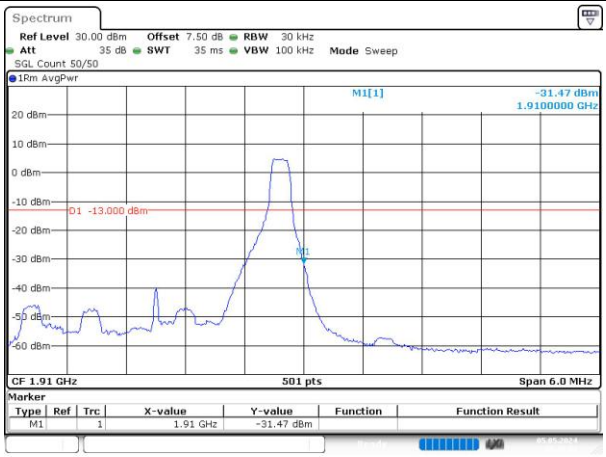
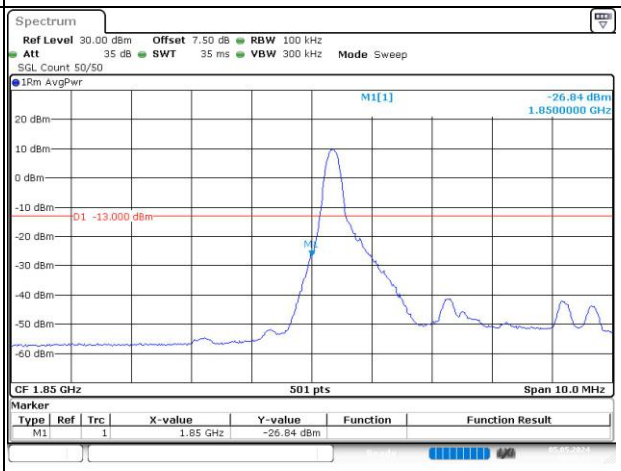
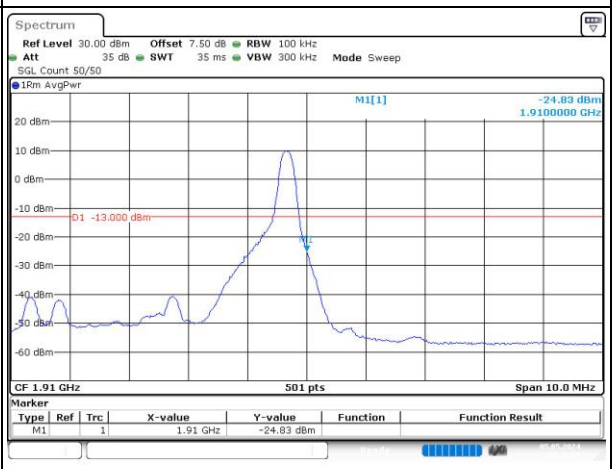
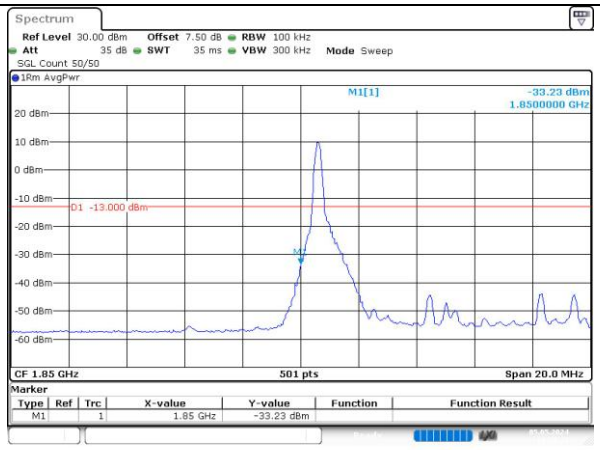
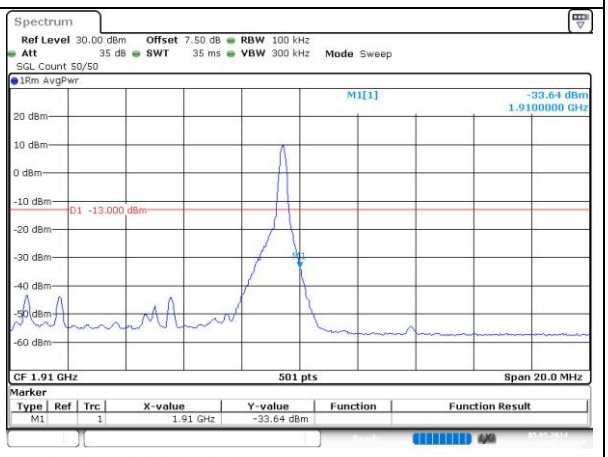
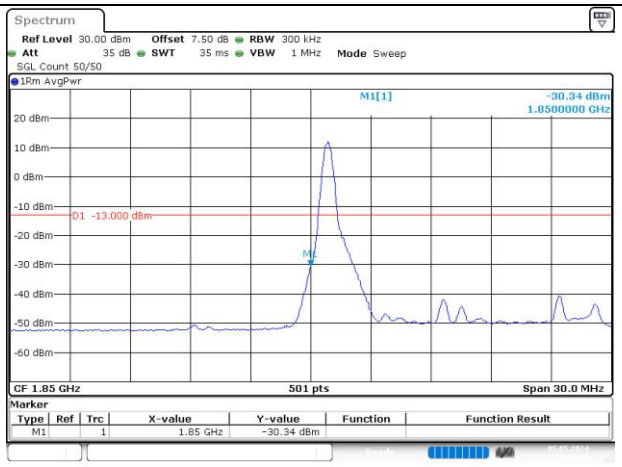
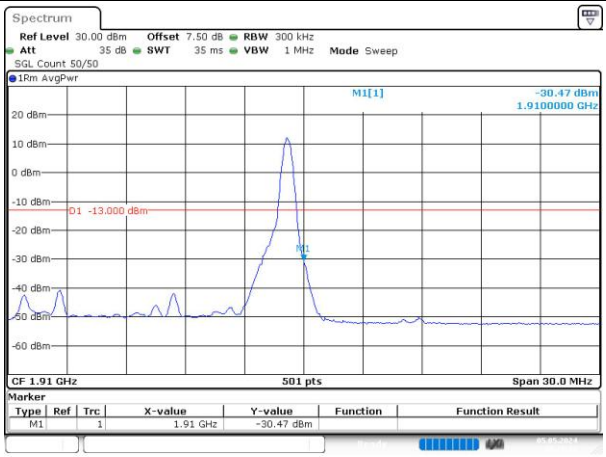
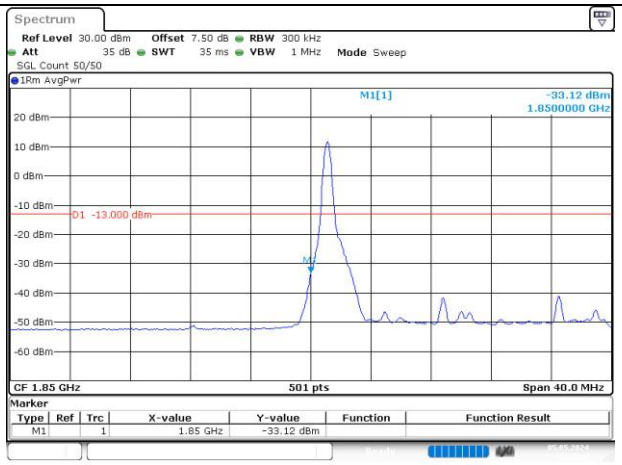
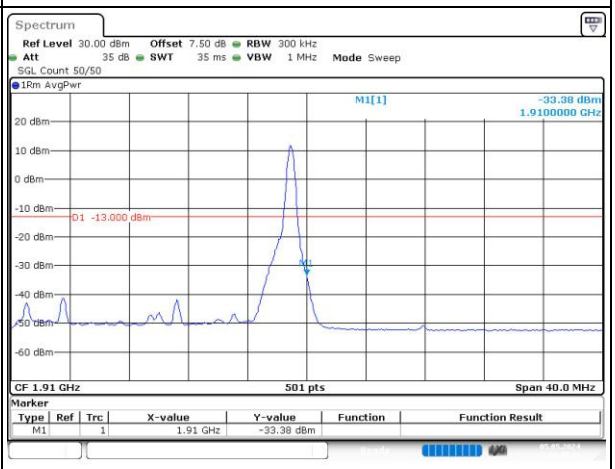
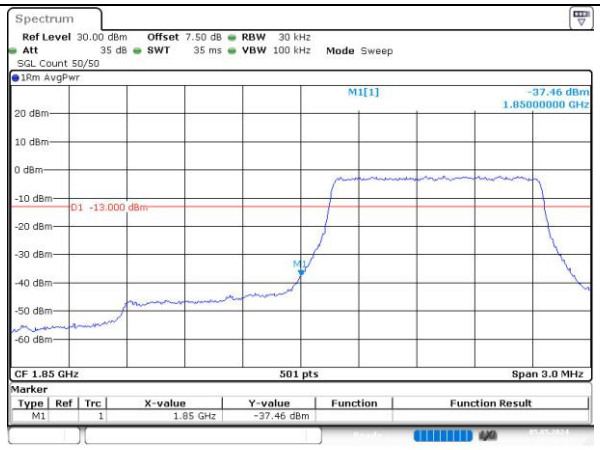
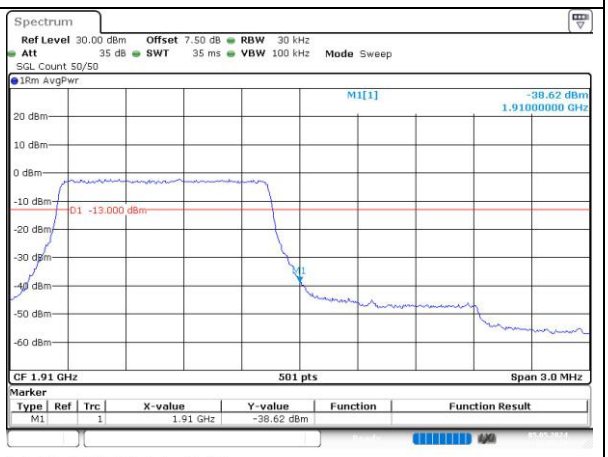
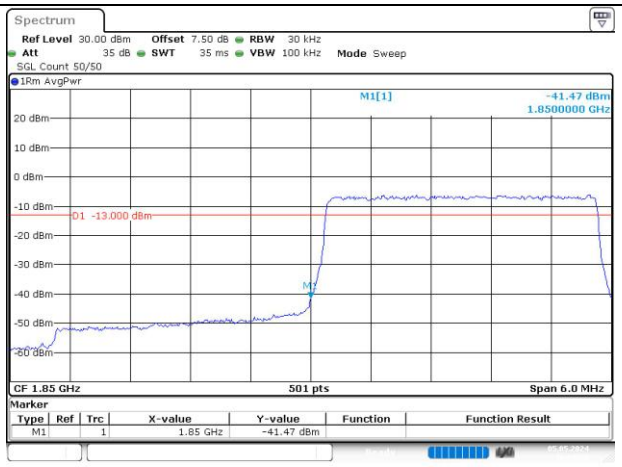
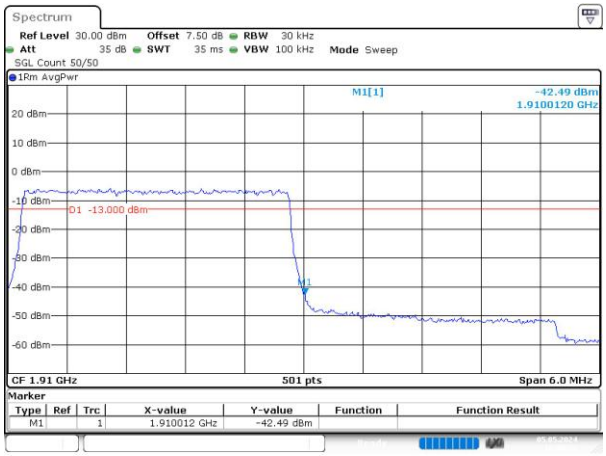
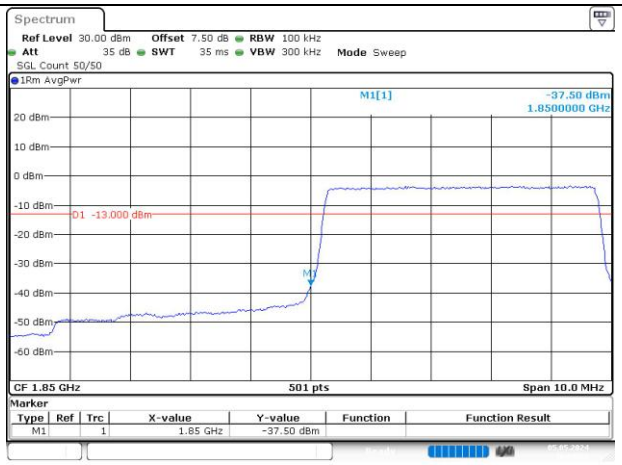
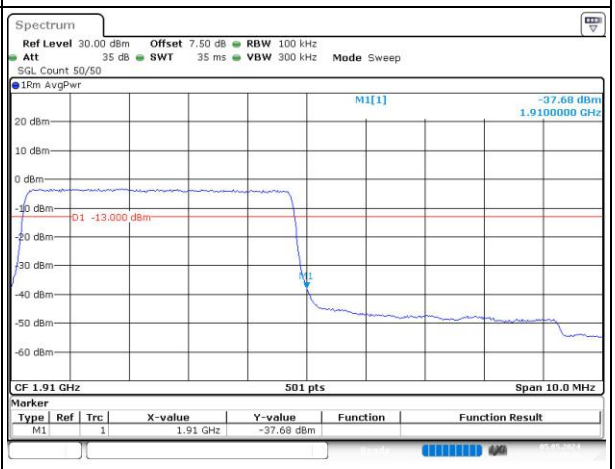
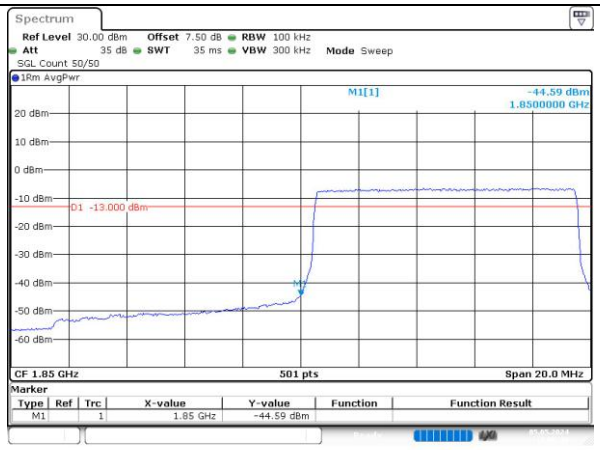
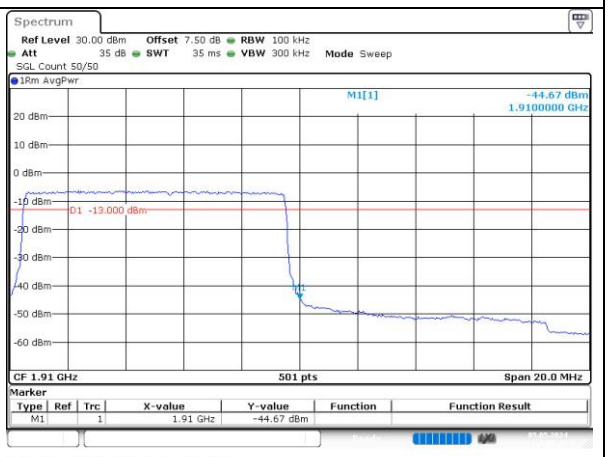
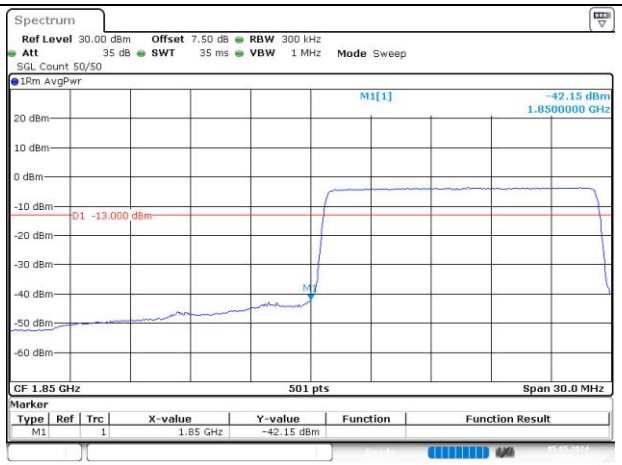
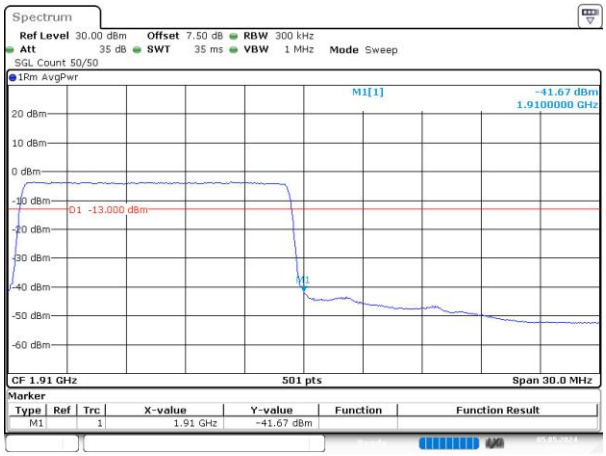
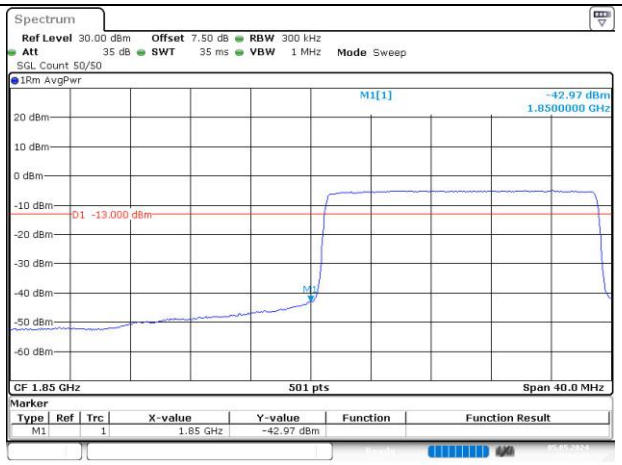
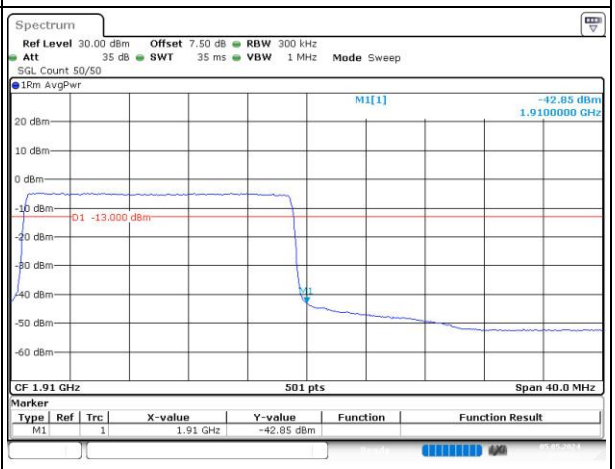
Out of band emission, Band Edge		
Mode	**Lowest-RB 1#0**	**Highest-RB 1#Max**
QPSK 1.4MHz		
QPSK 3MHz		
QPSK 5MHz		

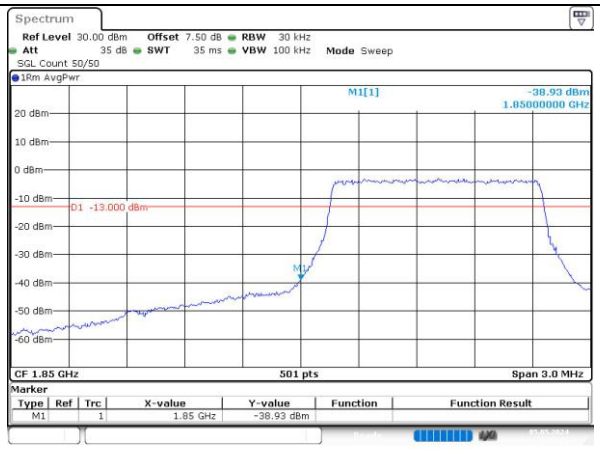
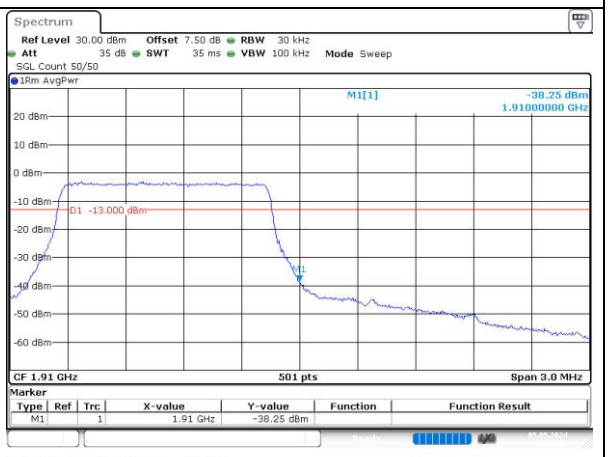
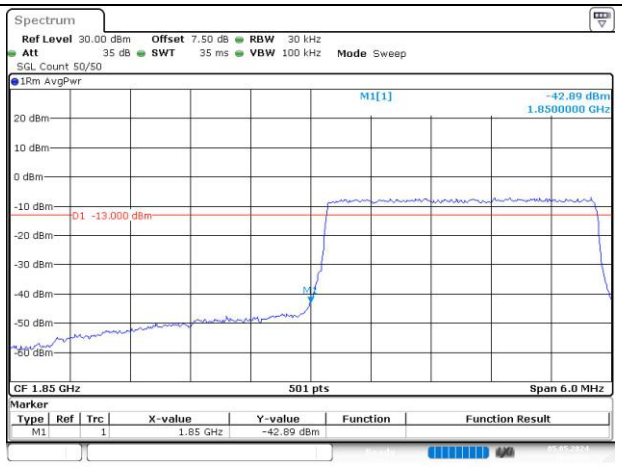
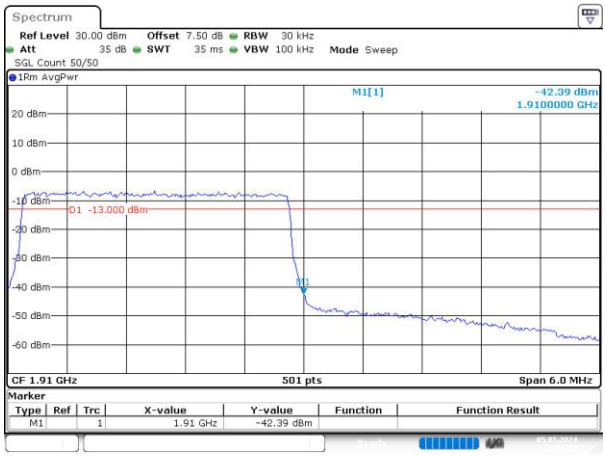
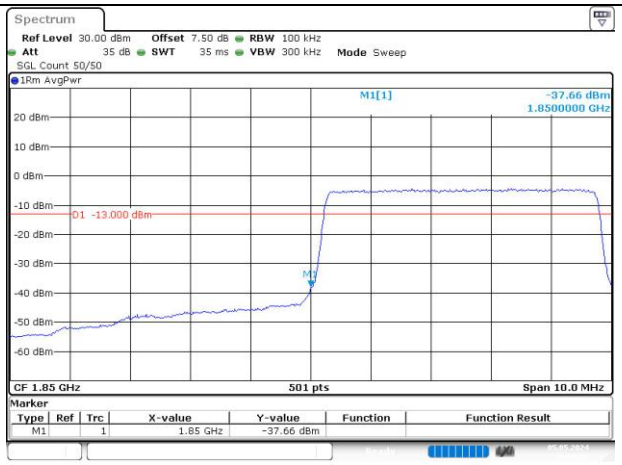
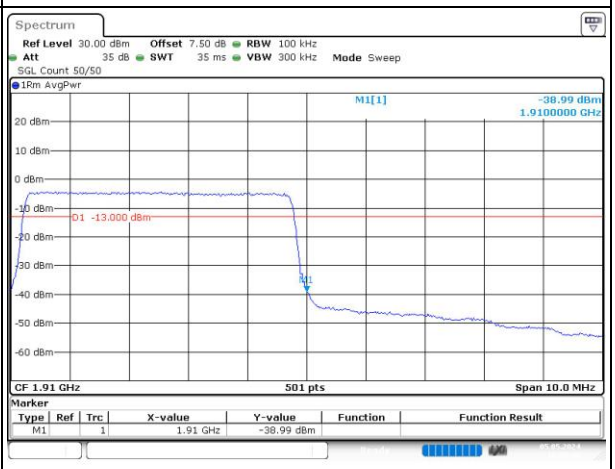
Out of band emission, Band Edge		
Mode	**Lowest-RB 1#0**	**Highest-RB 1#Max**
QPSK 10MHz		
QPSK 15MHz		
QPSK 20MHz		

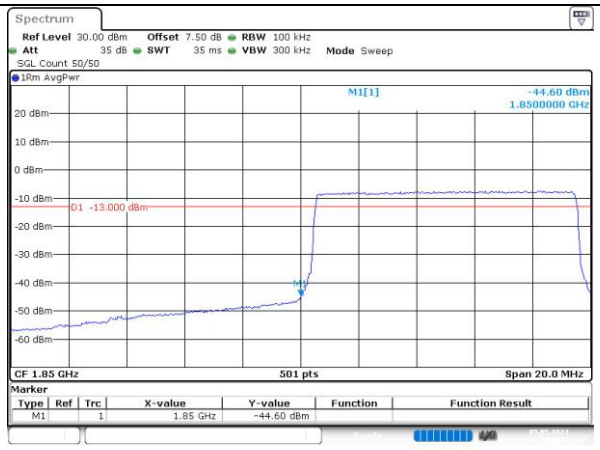
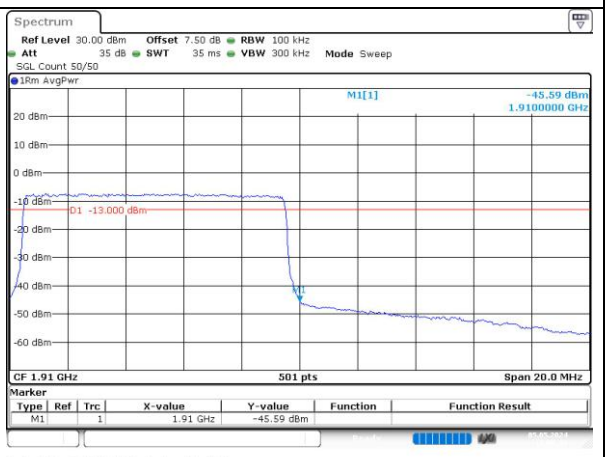
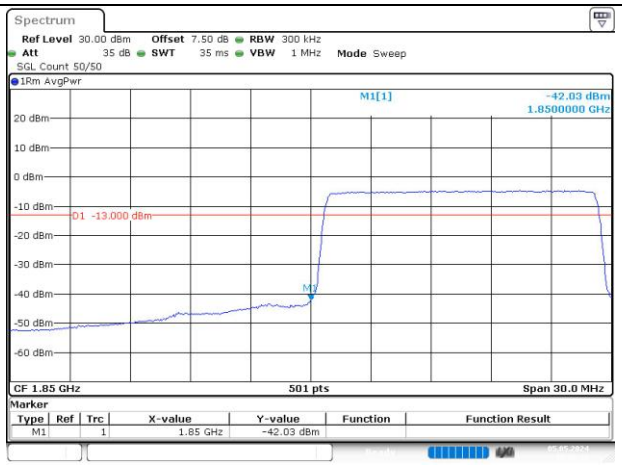
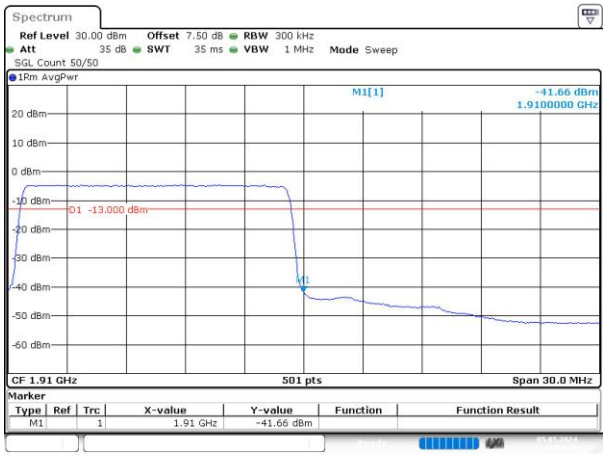
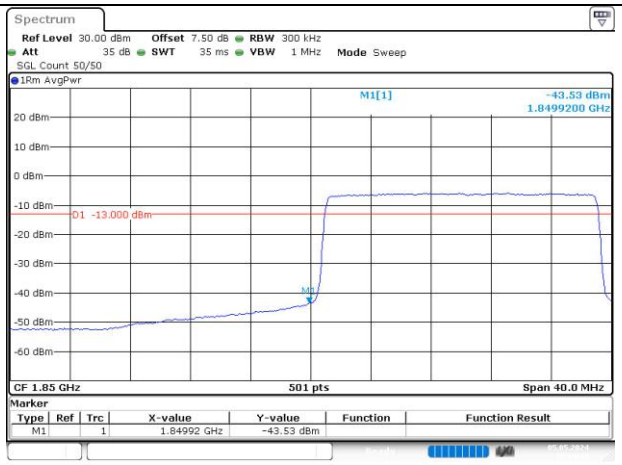
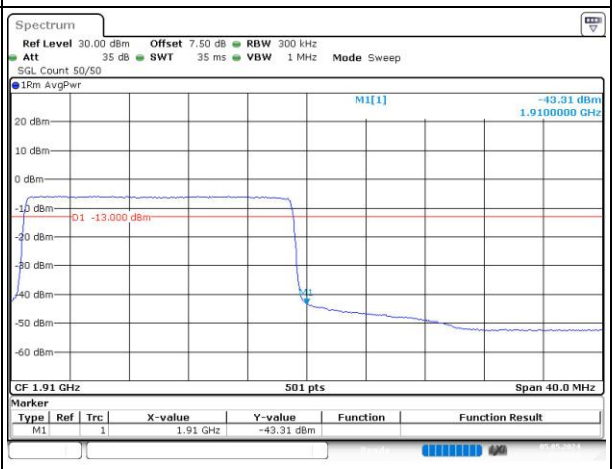
Out of band emission, Band Edge		
Mode	**Lowest-RB 1#0**	**Highest-RB 1#Max**
16QAM 1.4MHz		
16QAM 3MHz		
16QAM 5MHz		

Out of band emission, Band Edge		
Mode	**Lowest-RB 1#0**	**Highest-RB 1#Max**
16QAM 10MHz		
16QAM 15MHz		
16QAM 20MHz		

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		
QPSK 15MHz		
QPSK 20MHz		

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		
16QAM 15MHz		
16QAM 20MHz		

5.7 Antenna Port Test Data and Results for LTE Band 4

Serial Number:	OSEB119574-2	Test Date:	2024/5/5
Test Site:	RF	Test Mode:	Transmitting
Tester:	Karl Liang,Loge Long	Test Result:	**Pass**

Environmental Conditions:					
Temperature: (℃)	24.5	Relative Humidity: (%)	64	ATM Pressure: (kPa)	100.3

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	1710.7	1732.5	1754.3
3MHz	1711.5	1732.5	1753.5
5MHz	1712.5	1732.5	1752.5
10MHz	1715	1732.5	1750
15MHz	1717.5	1732.5	1747.5
20MHz	1720	1732.5	1745

Test Data:

FCC §2.1046; § 27.50(d)(4)

RF Output Power:

Test Bandwidth & Modulation	Resource Block & RB offset	Conducted Average Output Power(dBm)			Maximum EIRP (dBm)	EIRP Limit (dBm)
		Lowest Channel	Middle Channel	Highest Channel		
1.4MHz QPSK	RB1#0	13.67	13.66	13.57	13.4	30
	RB1#3	13.66	13.65	13.58		
	RB1#5	13.65	13.63	13.57		
	RB3#0	13.66	13.7	13.58		
	RB3#3	13.67	13.67	13.6		
	RB6#0	12.66	12.69	12.57		
1.4MHz 16QAM	RB1#0	12.8	12.67	12.55	12.5	30
	RB1#3	12.78	12.68	12.6		
	RB1#5	12.77	12.66	12.57		
	RB3#0	12.65	12.76	12.74		
	RB3#3	12.64	12.72	12.78		
	RB6#0	11.67	11.59	11.59		
3MHz QPSK	RB1#0	13.61	13.67	13.59	13.4	30
	RB1#8	13.62	13.7	13.55		
	RB1#14	13.59	13.63	13.57		
	RB6#0	12.68	12.71	12.56		
	RB6#9	12.67	12.66	12.58		
	RB15#0	12.63	12.64	12.59		
3MHz 16QAM	RB1#0	13.23	12.82	12.57	12.94	30
	RB1#8	13.23	12.78	12.53		
	RB1#14	13.24	12.75	12.55		
	RB6#0	11.71	11.69	11.52		
	RB6#9	11.69	11.68	11.51		
	RB15#0	11.69	11.59	11.61		
5MHz QPSK	RB1#0	13.71	13.75	13.66	13.45	30
	RB1#13	13.72	13.72	13.64		
	RB1#24	13.66	13.73	13.62		
	RB15#0	12.69	12.68	12.62		
	RB15#10	12.67	12.69	12.59		
	RB25#0	12.68	12.69	12.62		
5MHz 16QAM	RB1#0	12.78	12.59	12.91	12.61	30
	RB1#13	12.77	12.6	12.88		
	RB1#24	12.71	12.6	12.87		
	RB15#0	11.68	11.71	11.57		
	RB15#10	11.67	11.69	11.54		
	RB25#0	11.68	11.72	11.58		

10MHz QPSK	RB1#0	13.62	13.71	13.65	13.41	30
	RB1#25	13.63	13.68	13.63		
	RB1#49	13.6	13.65	13.58		
	RB25#0	12.6	12.7	12.61		
	RB25#25	12.65	12.65	12.62		
	RB50#0	12.64	12.69	12.64		
10MHz 16QAM	RB1#0	13.22	12.84	12.61	12.96	30
	RB1#25	13.26	12.83	12.61		
	RB1#49	13.19	12.73	12.57		
	RB25#0	11.65	11.72	11.7		
	RB25#25	11.71	11.68	11.7		
	RB50#0	11.63	11.68	11.63		
15MHz QPSK	RB1#0	13.63	13.6	13.59	13.33	30
	RB1#38	13.62	13.62	13.54		
	RB1#74	13.58	13.56	13.5		
	RB36#0	12.62	12.66	12.65		
	RB36#39	12.67	12.63	12.61		
	RB75#0	12.65	12.67	12.6		
15MHz 16QAM	RB1#0	12.75	13.03	13.21	12.91	30
	RB1#38	12.75	13.06	13.2		
	RB1#74	12.69	12.96	13.12		
	RB36#0	11.64	11.66	11.67		
	RB36#39	11.67	11.59	11.58		
	RB75#0	11.63	11.65	11.6		
20MHz QPSK	RB1#0	13.64	13.65	13.65	13.44	30
	RB1#50	13.71	13.74	13.64		
	RB1#99	13.69	13.63	13.48		
	RB50#0	12.63	12.69	12.67		
	RB50#50	12.68	12.68	12.64		
	RB100#0	12.66	12.69	12.63		
20MHz 16QAM	RB1#0	12.91	12.84	13.14	12.88	30
	RB1#50	12.98	12.93	13.18		
	RB1#99	12.96	12.83	13.04		
	RB50#0	11.59	11.67	11.65		
	RB50#50	11.63	11.62	11.6		
	RB100#0	11.64	11.67	11.63		
Note: EIRP=Conducted Power(dBm) - L_C(dB) + G_T(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	5.88	6.09	6.23	13
	RB100#0	4.32	4.38	4.38	13
20MHz 16QAM	RB1#0	6.26	6.67	7.33	13
	RB100#0	5.91	5.91	5.91	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	1.108	1.12	1.332	1.302	1.608
1.4MHz 16QAM	1.096	1.096	1.114	1.29	1.302	1.494
3MHz QPSK	2.695	2.683	2.695	2.904	2.904	2.892
3MHz 16QAM	2.683	2.683	2.683	2.916	2.892	2.952
5MHz QPSK	4.511	4.491	4.511	4.98	4.94	5
5MHz 16QAM	4.531	4.531	4.491	4.98	5	4.96
10MHz QPSK	8.942	8.942	8.942	9.68	9.72	9.6
10MHz 16QAM	8.942	8.942	8.942	9.68	9.56	9.68
15MHz QPSK	13.473	13.473	13.473	14.88	14.88	14.82
15MHz 16QAM	13.473	13.473	13.533	14.76	14.76	17.76
20MHz QPSK	17.964	17.964	17.964	19.28	19.36	19.76
20MHz 16QAM	17.964	17.964	17.964	19.36	19.44	19.36
Note: The test plots please refer to the Plots of Occupied Bandwidth						

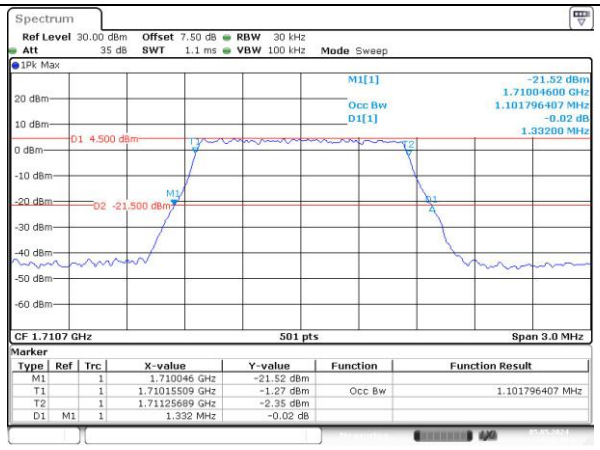
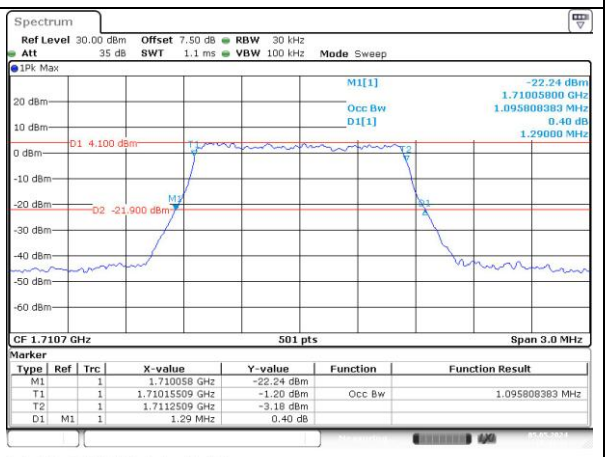
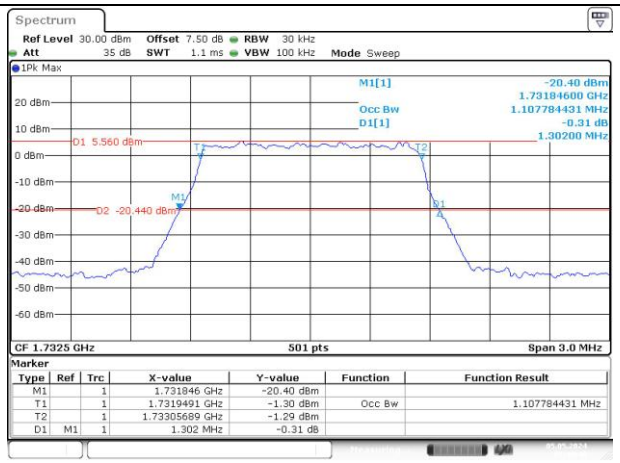
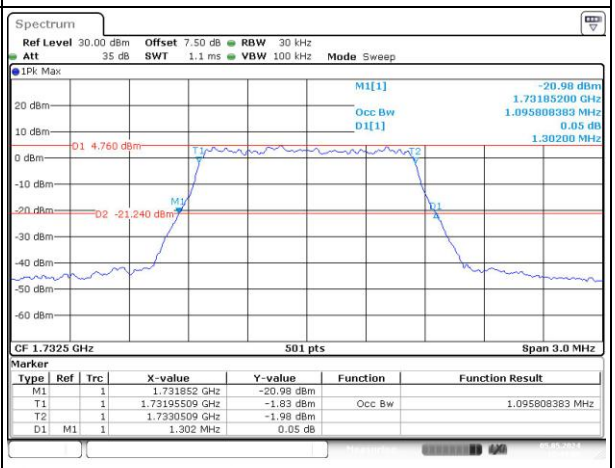
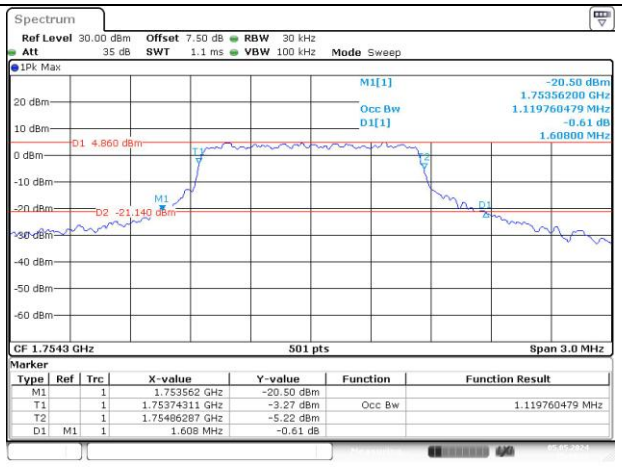
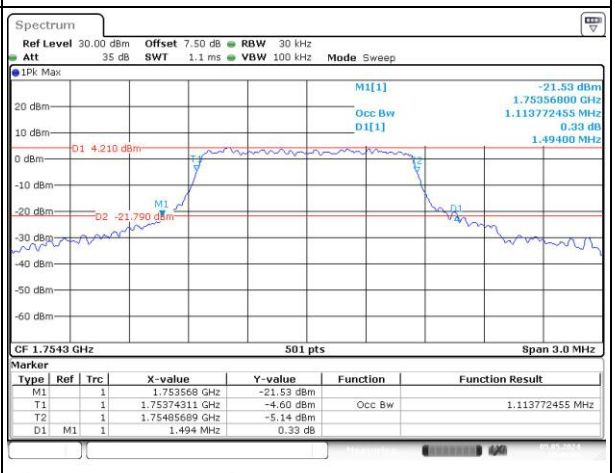
FCC §2.1051, §27.53:Spurious Emissions at Antenna Terminal	
Result:	**Pass, Please refer to the test plots of Spurious Emissions at Antenna Terminal.**

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.**

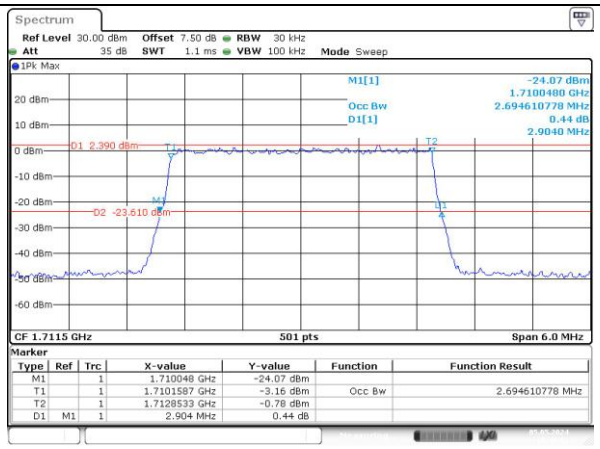
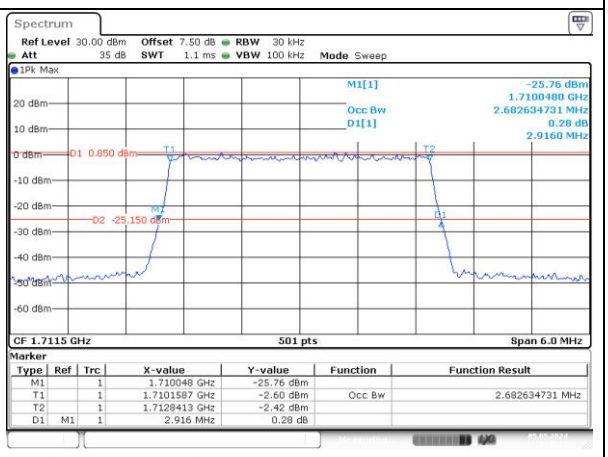
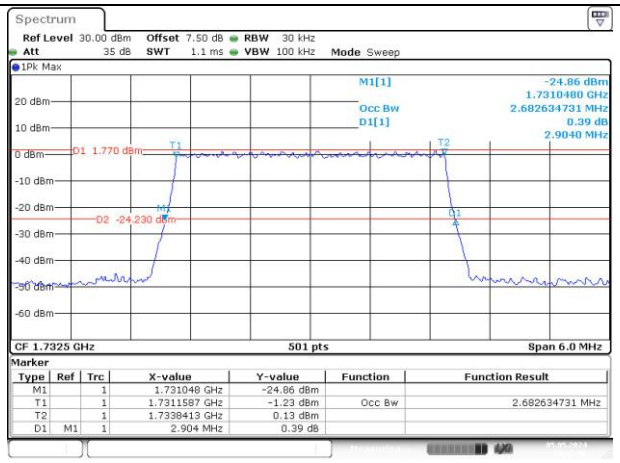
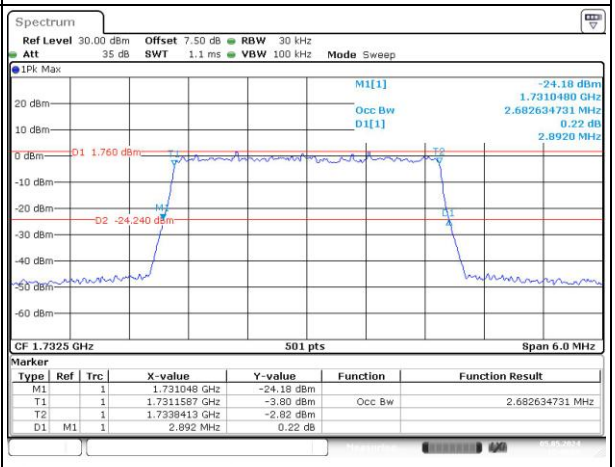
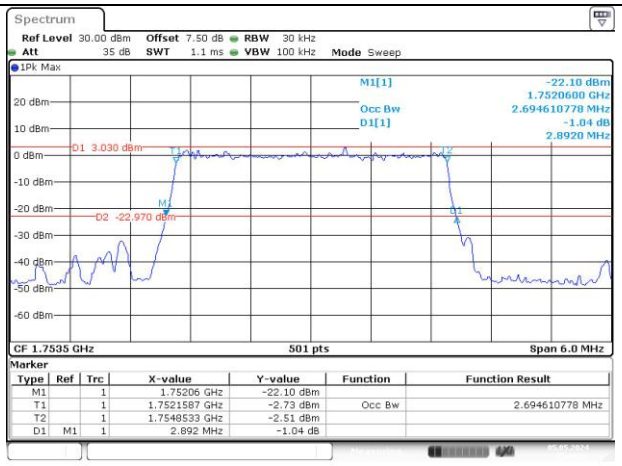
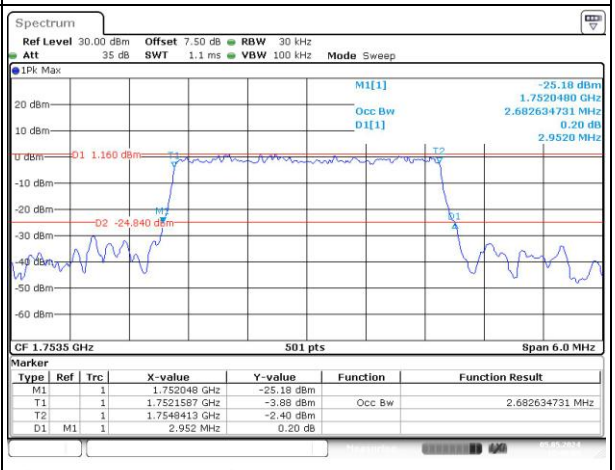
FCC §2.1055, §27.54: Frequency Stability						
Test Mode:	20M QPSK	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (℃)	Voltage (V_{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.91	1711.022	1710.00	1754.016	1755
	-20	3.91	1711.031	1710.00	1754.007	1755
	-10	3.91	1711.046	1710.00	1754.016	1755
	0	3.91	1711.055	1710.00	1754.013	1755
	10	3.91	1711.031	1710.00	1754.004	1755
	20	3.91	1711.058	1710.00	1754.022	1755
	30	3.91	1711.064	1710.00	1754.043	1755
	40	3.91	1711.085	1710.00	1754.037	1755
	50	3.91	1711.073	1710.00	1754.028	1755
Frequency Stability vs. Voltage	20	3.45	1711.085	1710.00	1754.046	1755
	20	4.5	1711.067	1710.00	1754.040	1755
					Result:	**Pass**

Test Mode:	20M 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	1711.016	1710.00	1754.001	1755
	-20	3.91	1711.049	1710.00	1753.998	1755
	-10	3.91	1711.049	1710.00	1754.013	1755
	0	3.91	1711.055	1710.00	1754.004	1755
	10	3.91	1711.037	1710.00	1754.001	1755
	20	3.91	1711.058	1710.00	1754.022	1755
	30	3.91	1711.076	1710.00	1754.046	1755
	40	3.91	1711.085	1710.00	1754.046	1755
	50	3.91	1711.085	1710.00	1754.031	1755
Frequency Stability vs. Voltage	20	3.45	1711.076	1710.00	1754.037	1755
	20	4.5	1711.085	1710.00	1754.040	1755
					Result:	**Pass**

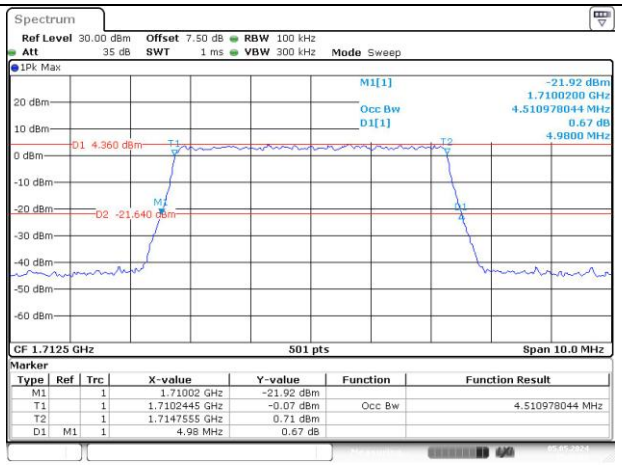
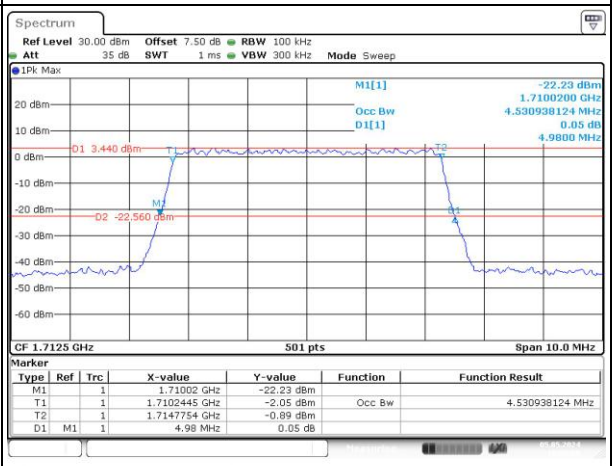
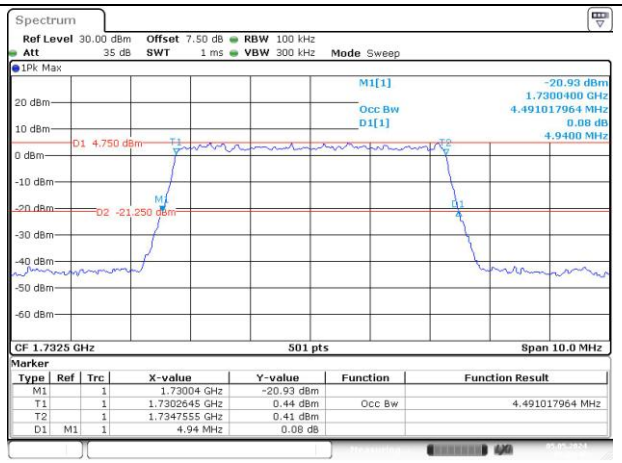
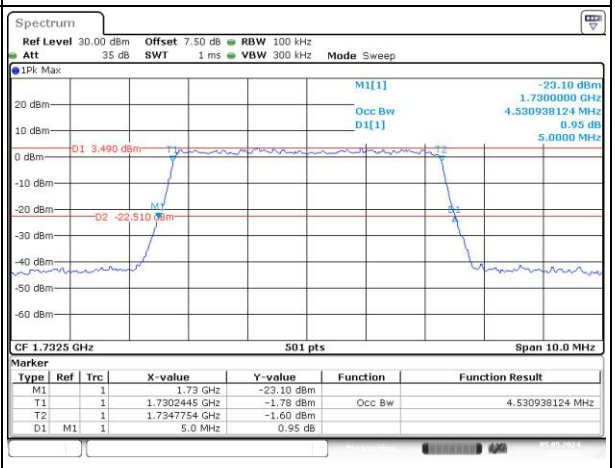
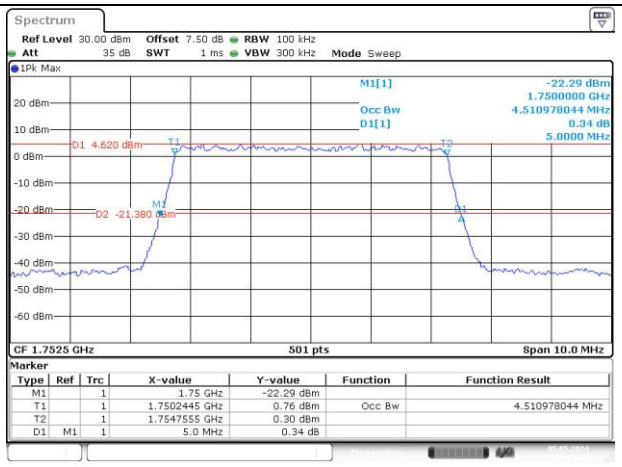
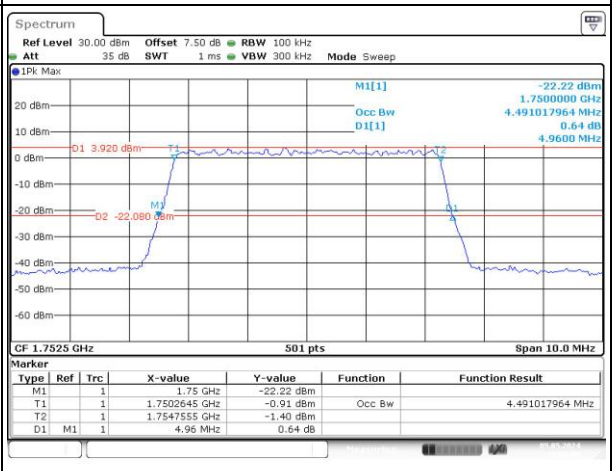
Test Plots:

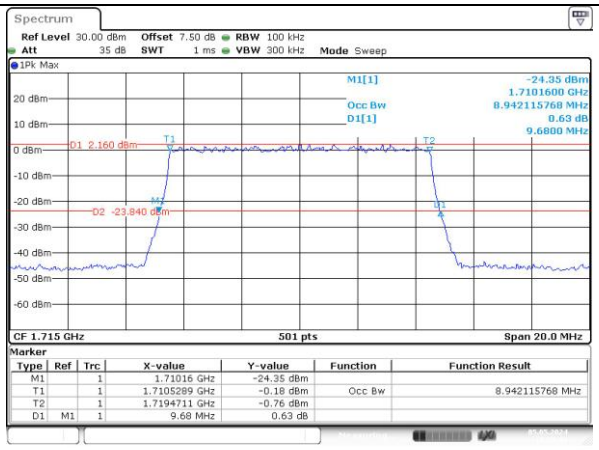
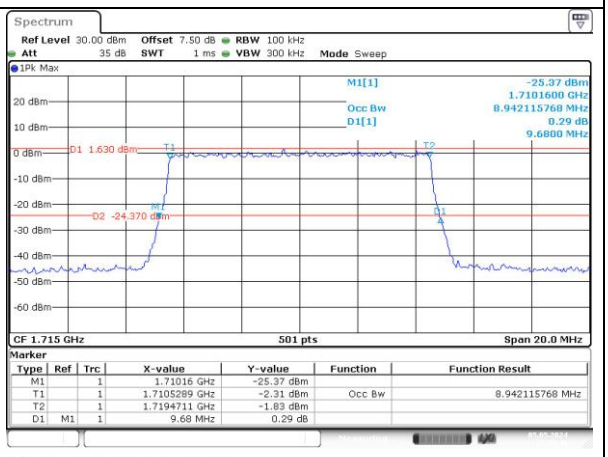
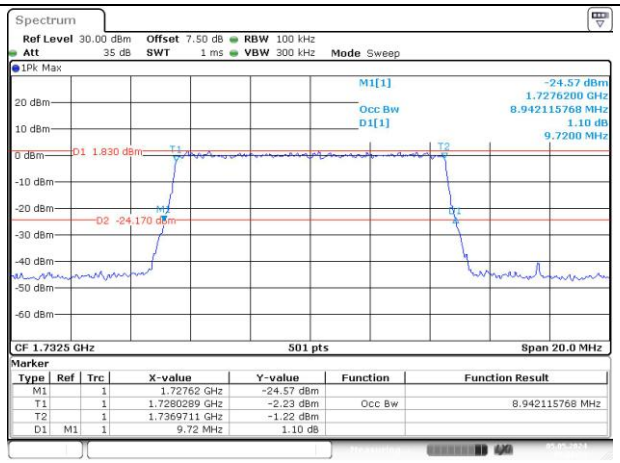
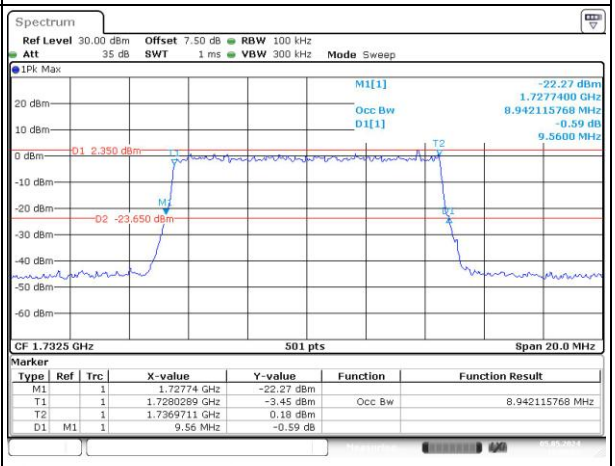
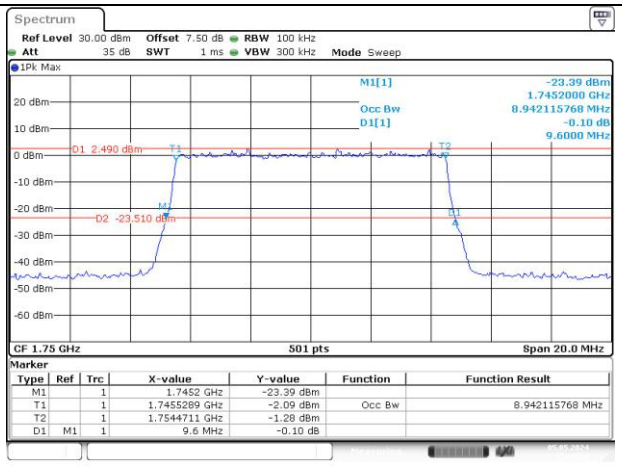
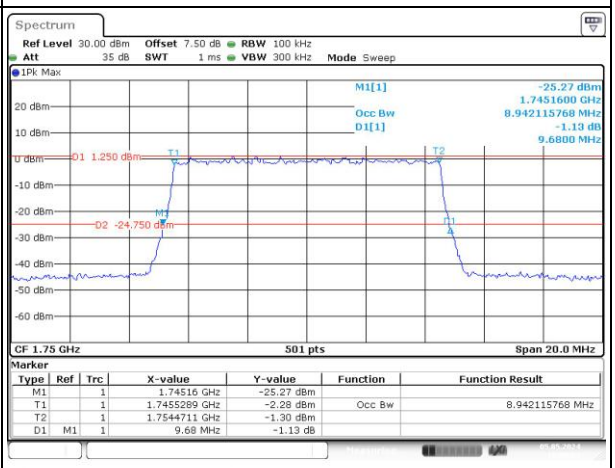
Occupied Bandwidth		
Channel	1.4MHz Bandwidth QPSK	1.4MHz Bandwidth 16QAM
Lowest		
Middle		
Highest		

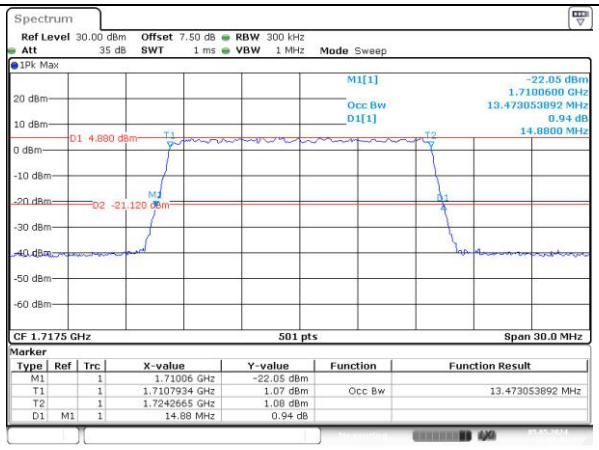
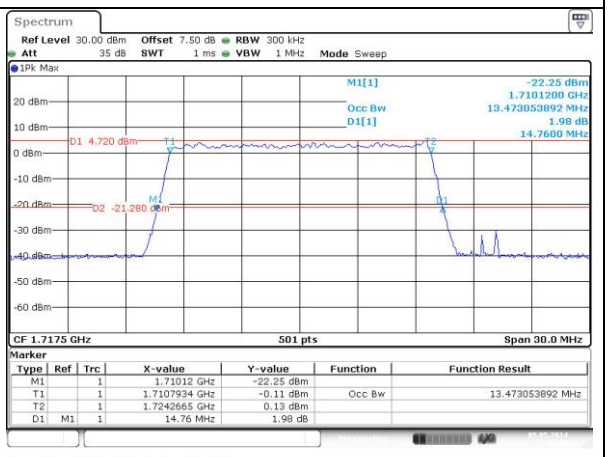
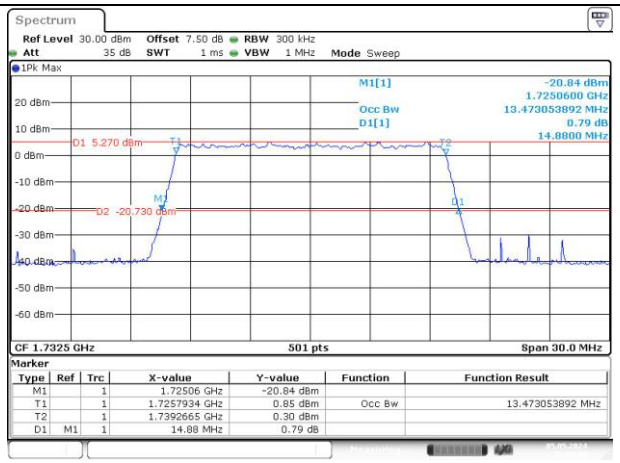
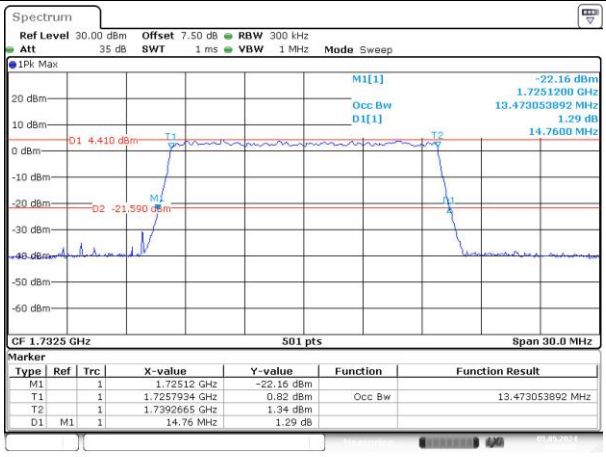
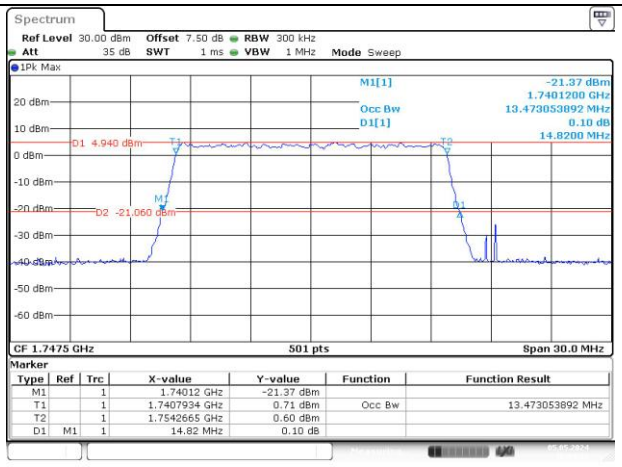
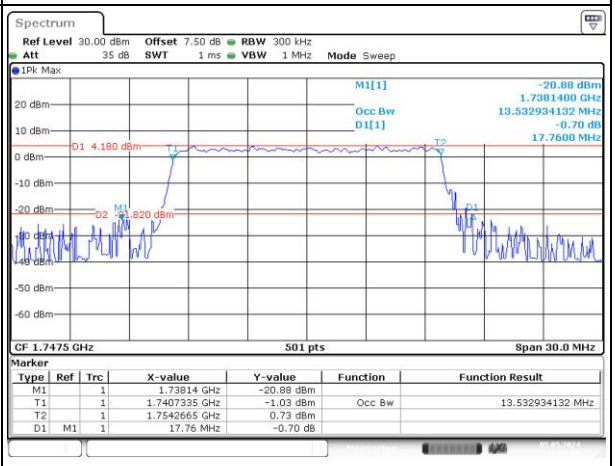
Occupied Bandwidth

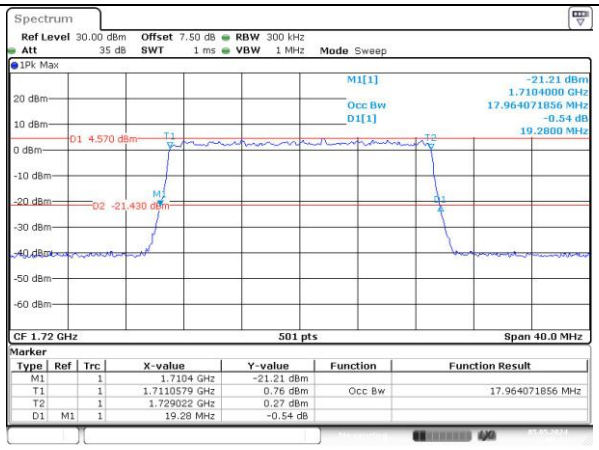
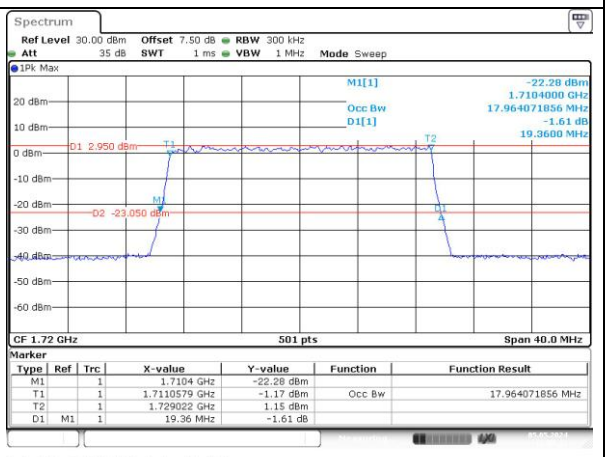
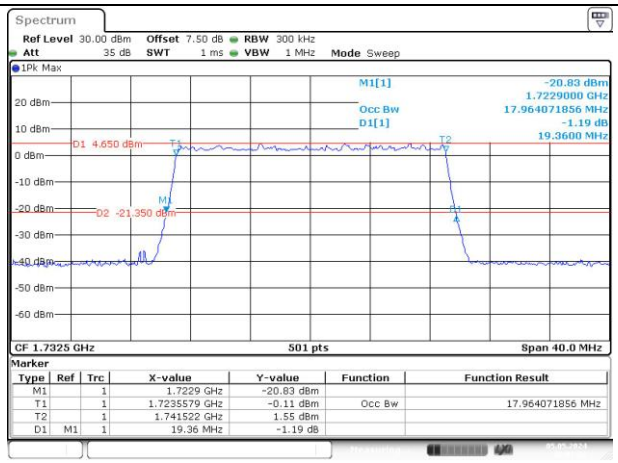
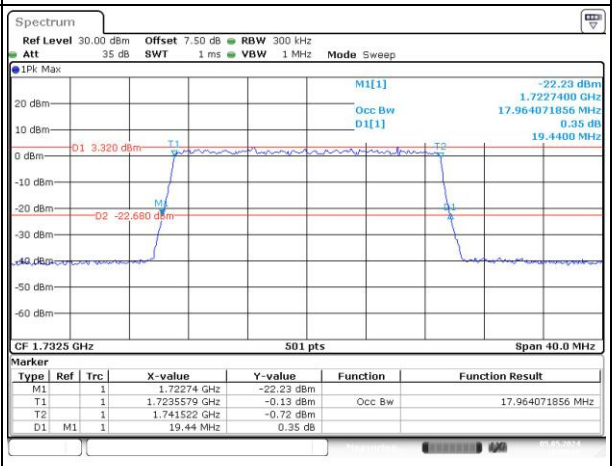
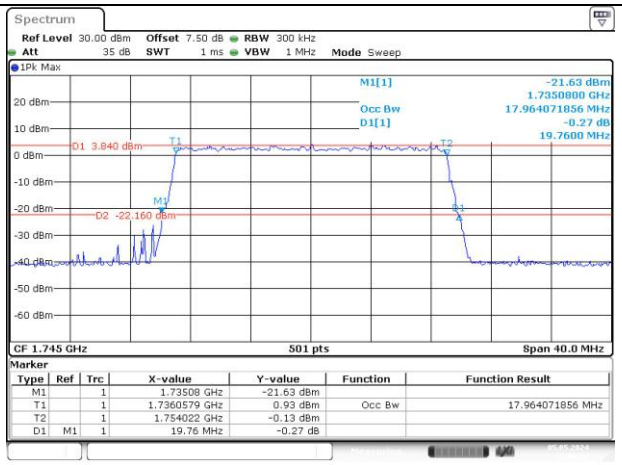
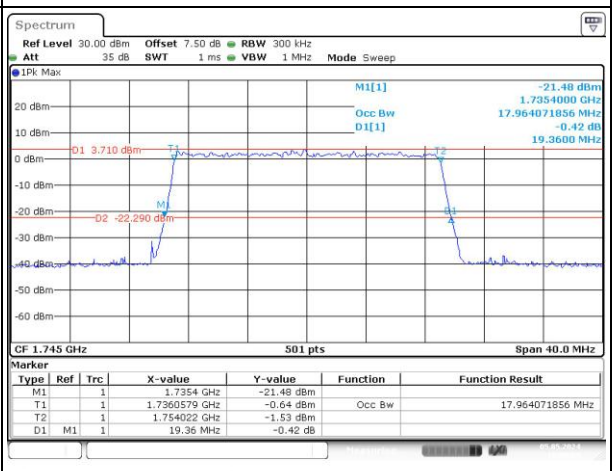
Channel	3MHz Bandwidth QPSK	3MHz Bandwidth 16QAM
Lowest		
Middle		
Highest		

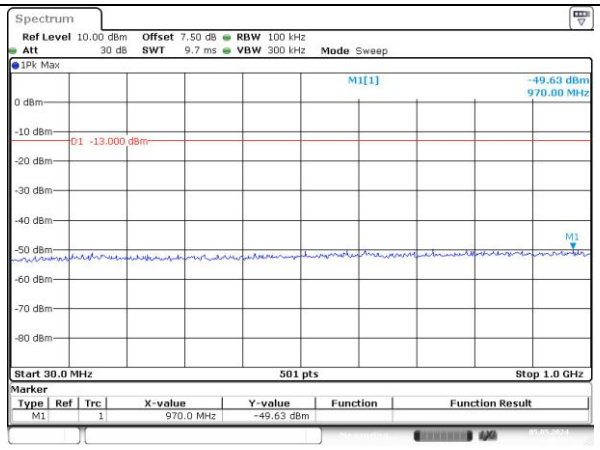
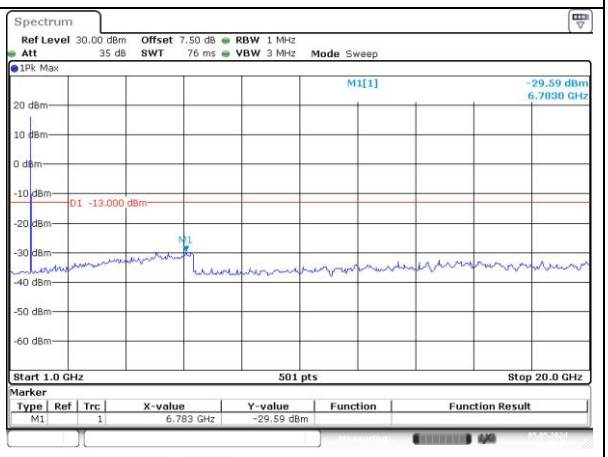
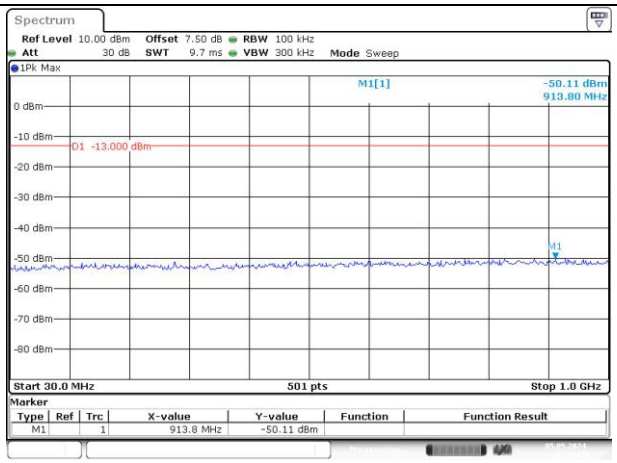
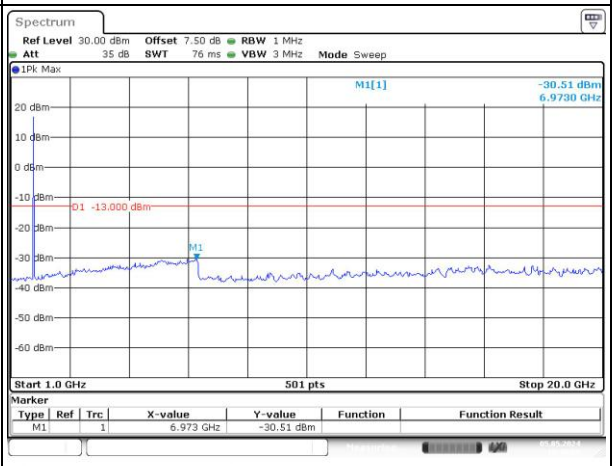
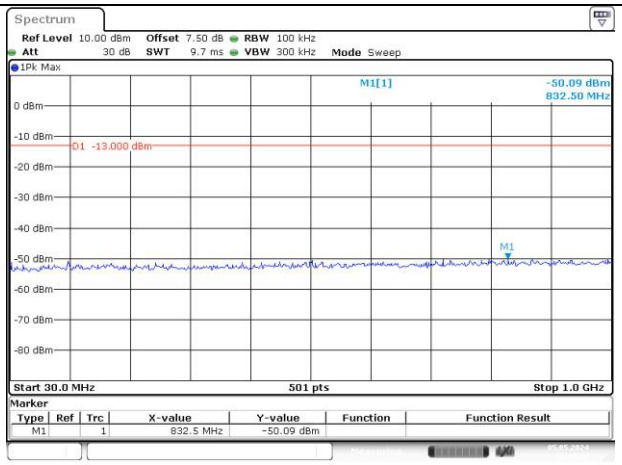
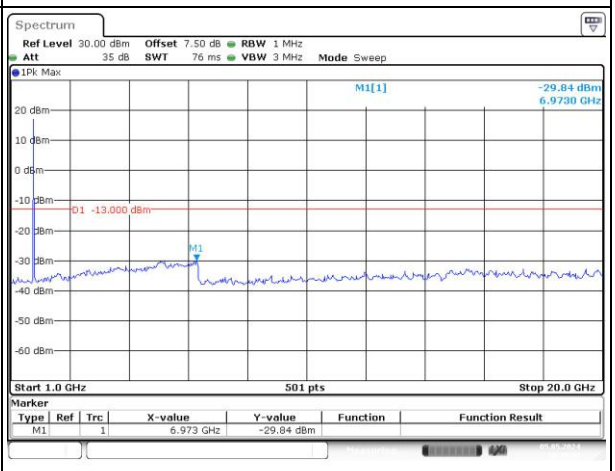
Occupied Bandwidth

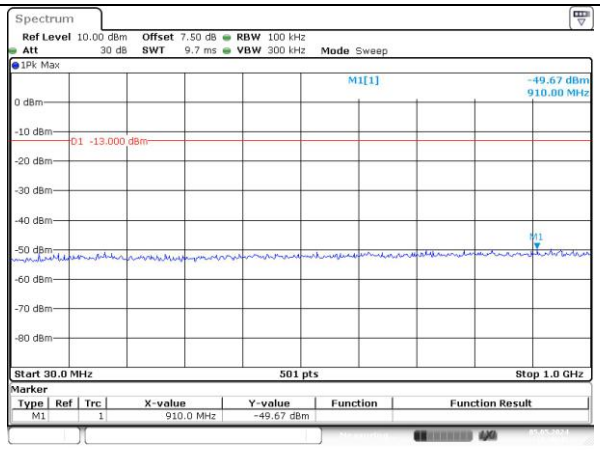
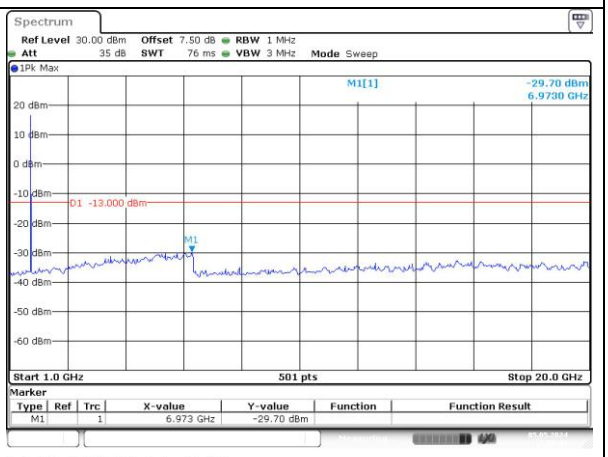
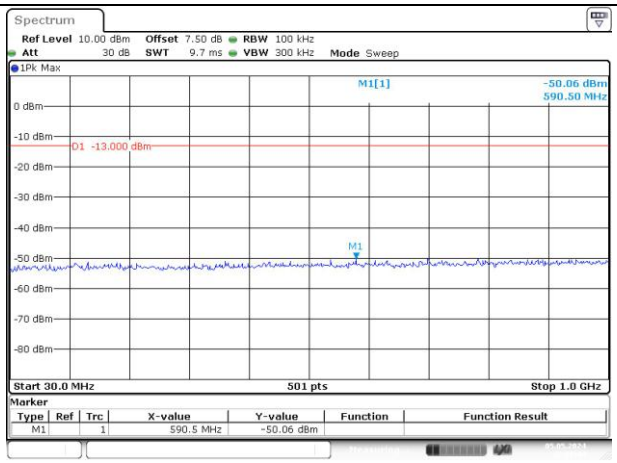
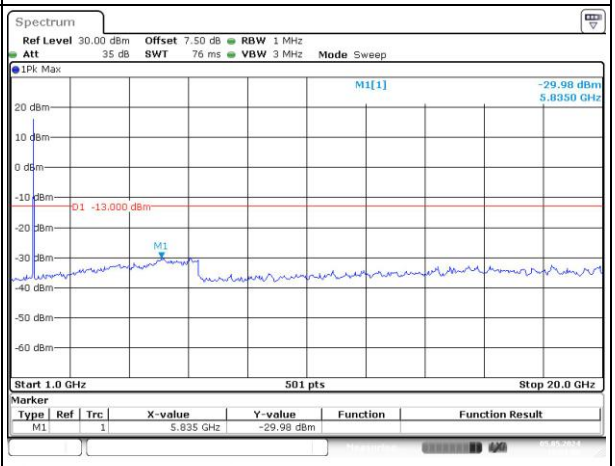
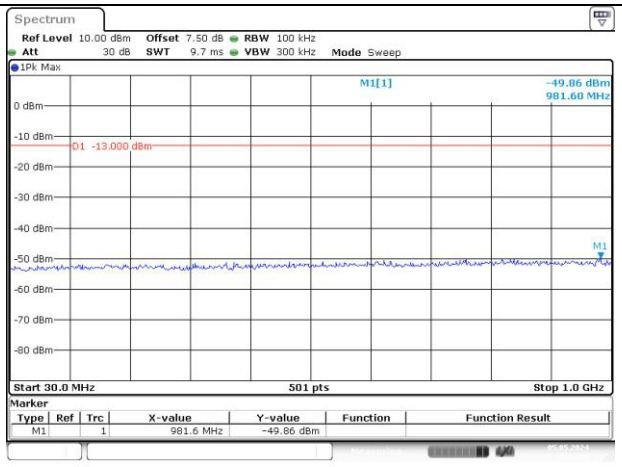
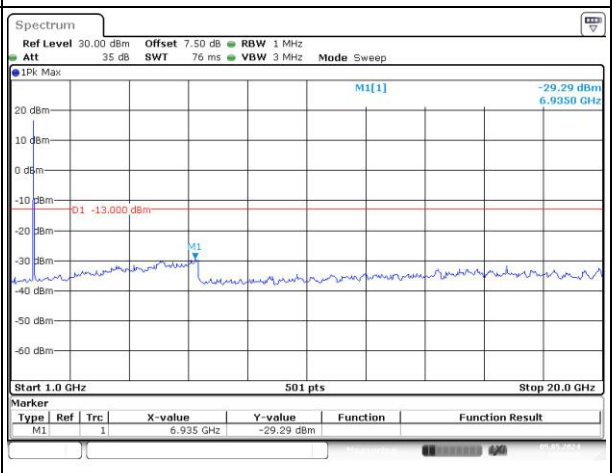
Channel	5MHz Bandwidth QPSK	5MHz Bandwidth 16QAM
Lowest		
Middle		
Highest		

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

Occupied Bandwidth		
Channel	15MHz Bandwidth QPSK	15MHz Bandwidth 16QAM
Lowest		
Middle		
Highest		

Occupied Bandwidth		
Channel	20MHz Bandwidth QPSK	20MHz Bandwidth 16QAM
Lowest		
Middle		
Highest		

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

Spurious Emissions at Antenna Terminal		
Channel	**3MHz Bandwidth QPSK**	
Lowest		
Middle		
Highest