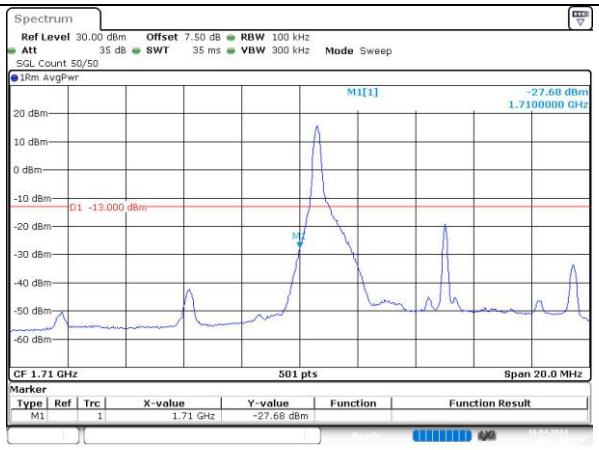
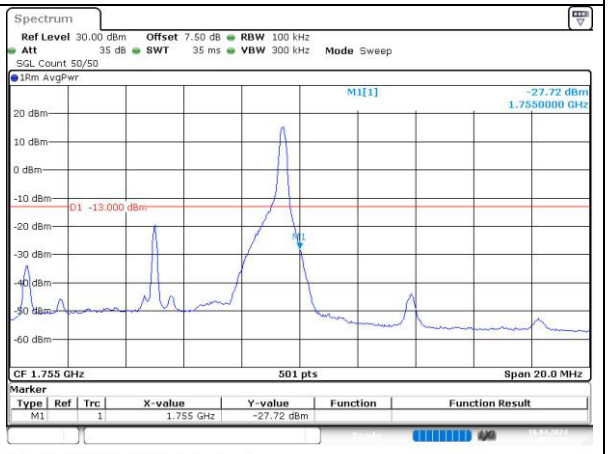
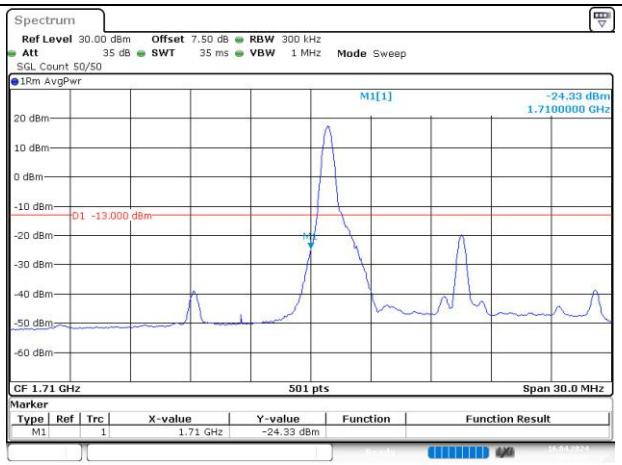
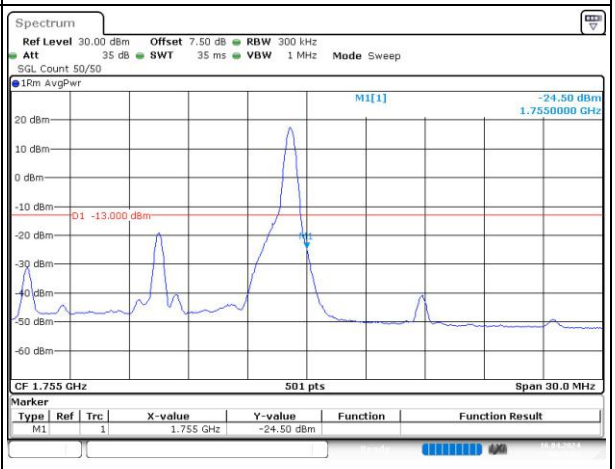
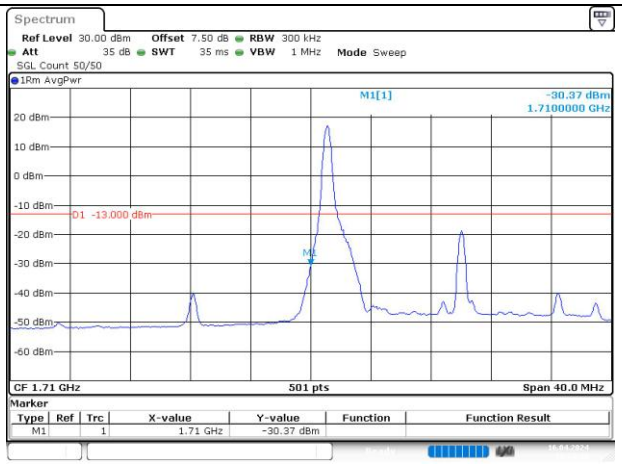
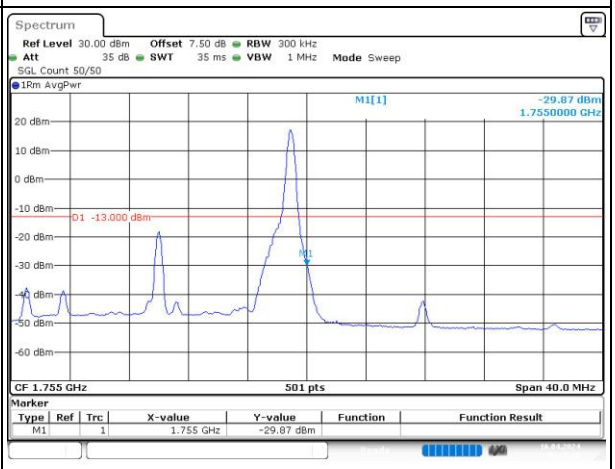
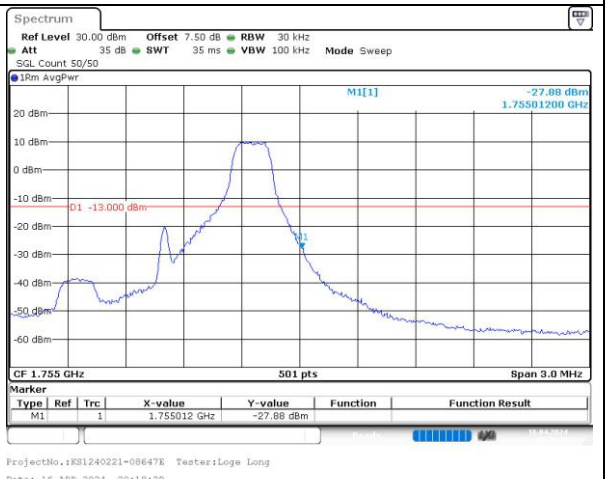
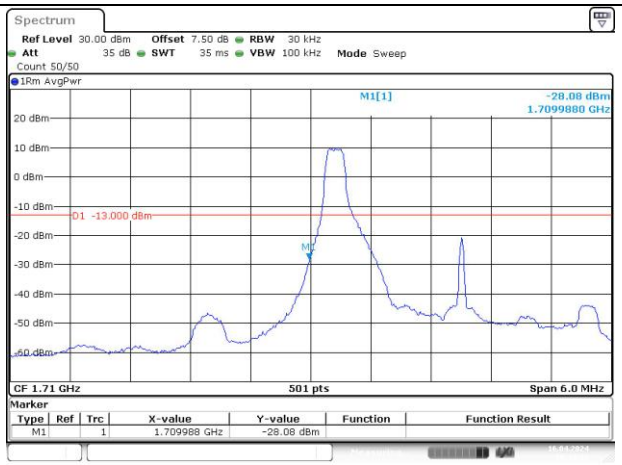
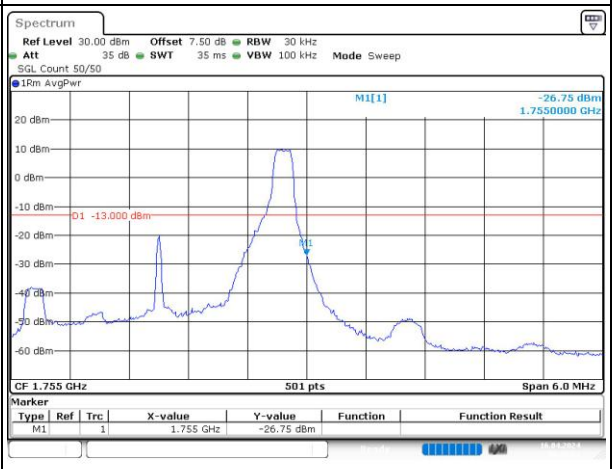
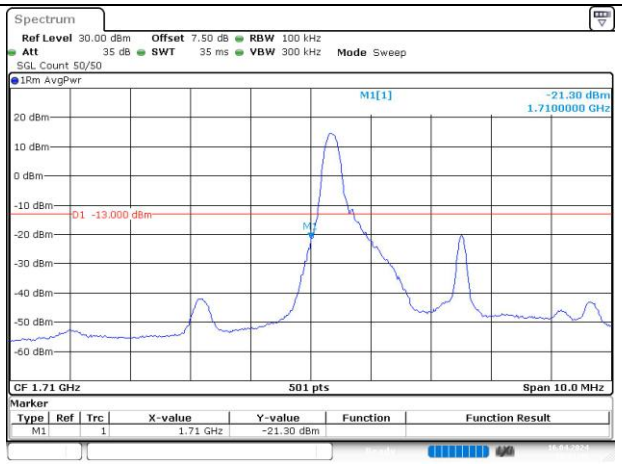
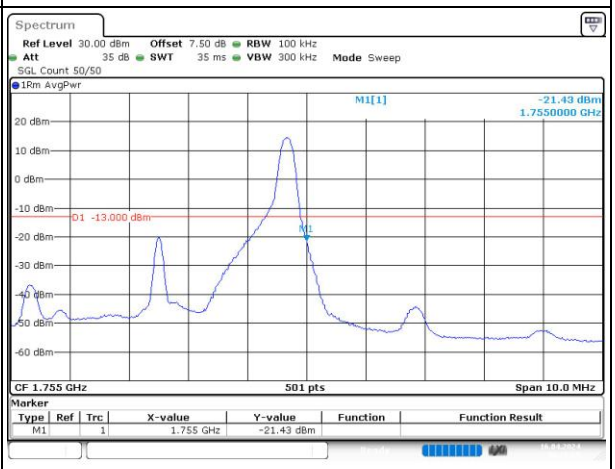
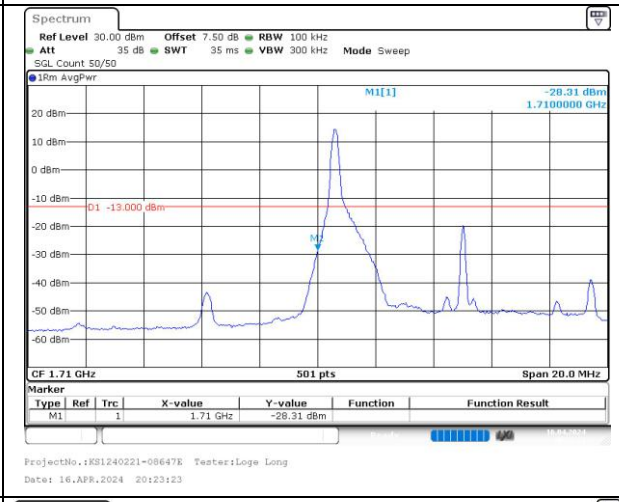
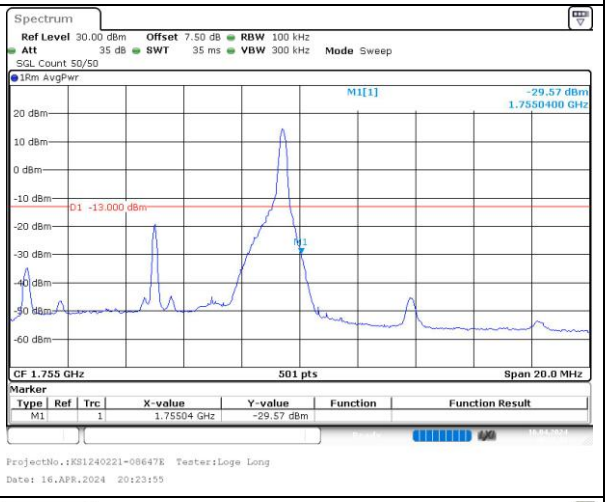
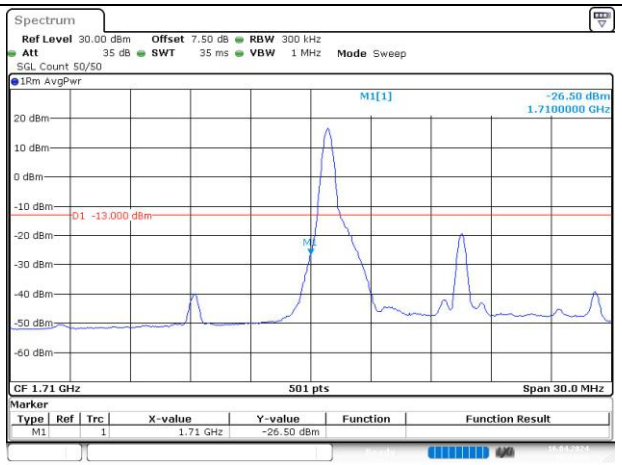
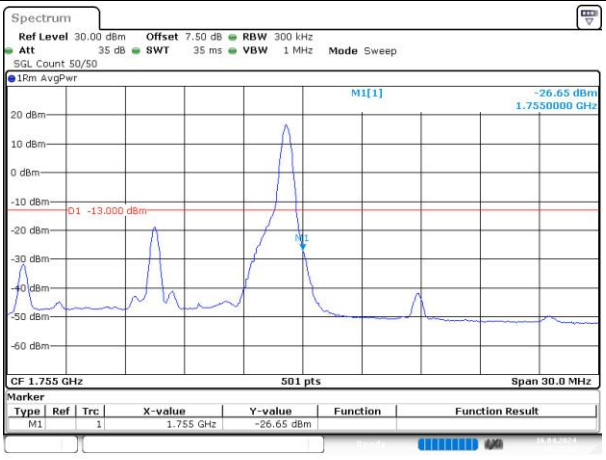
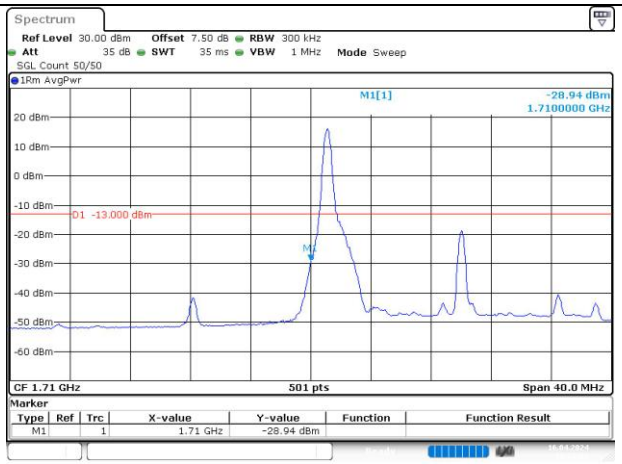
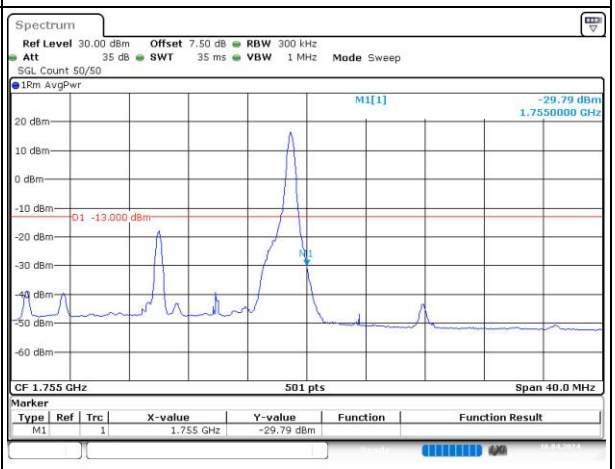
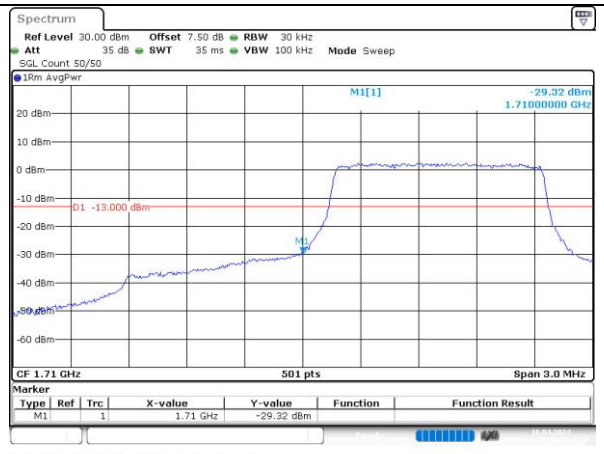
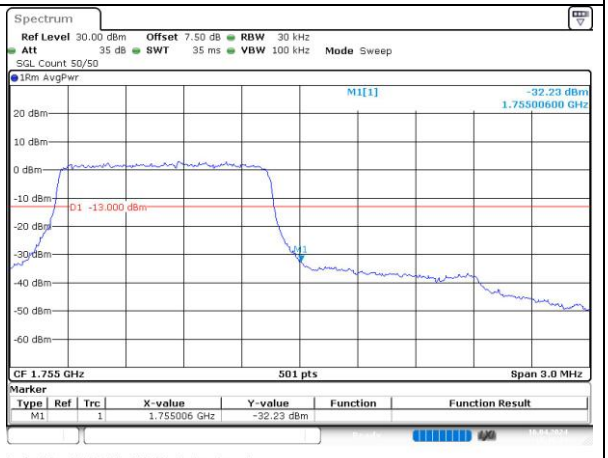
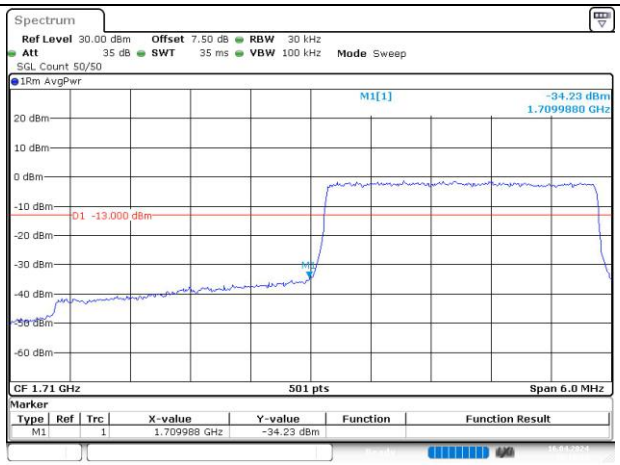
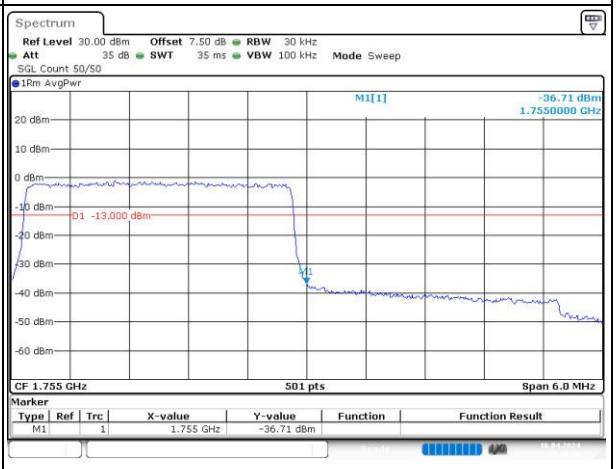
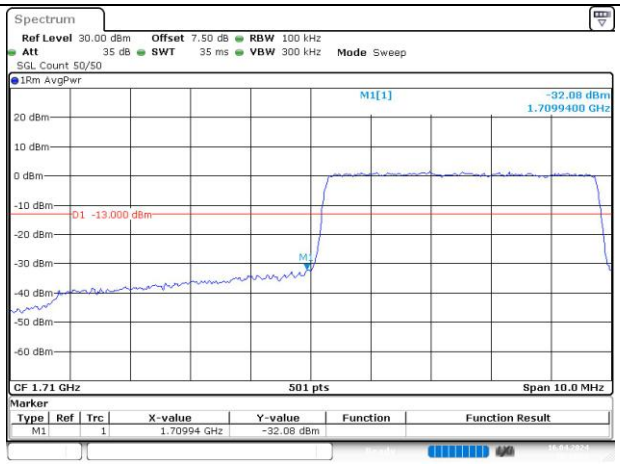
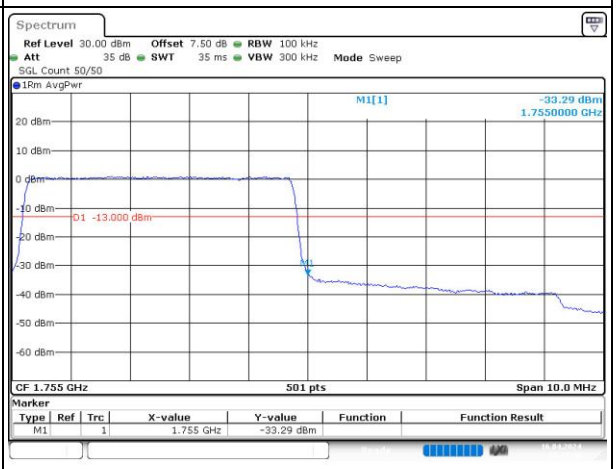
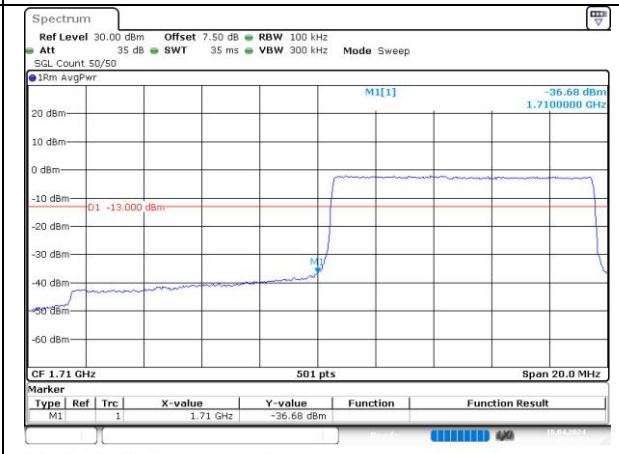
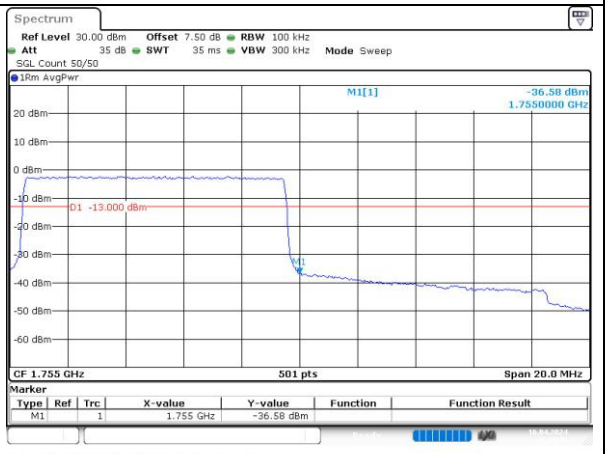
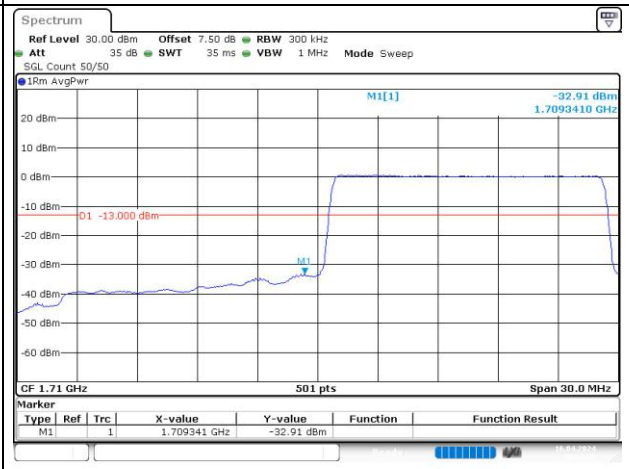
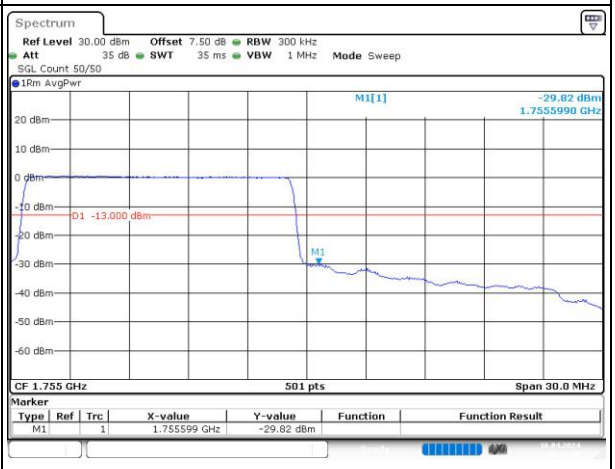
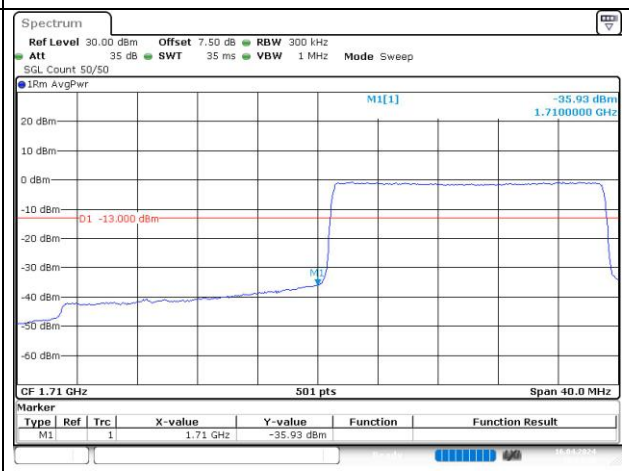
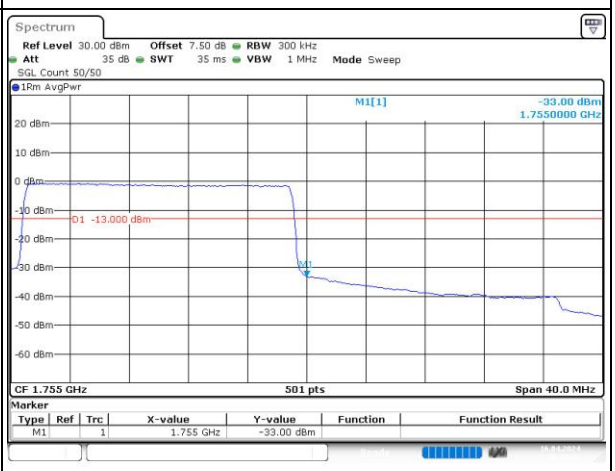
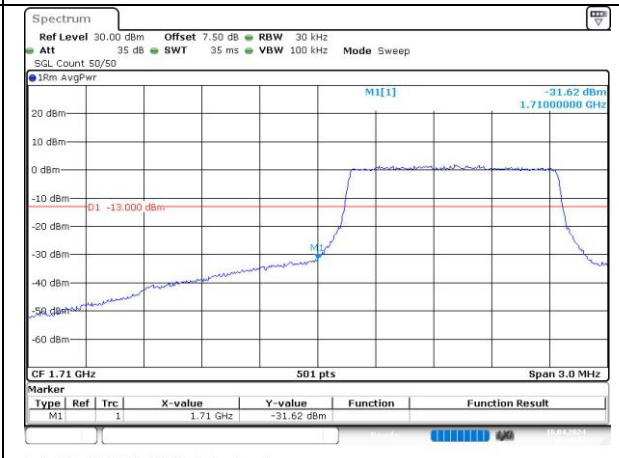
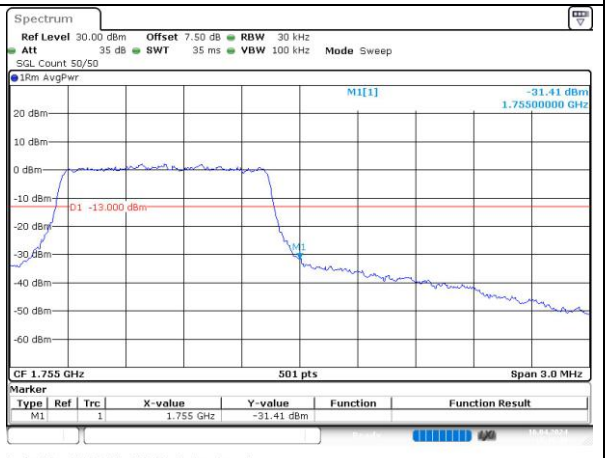
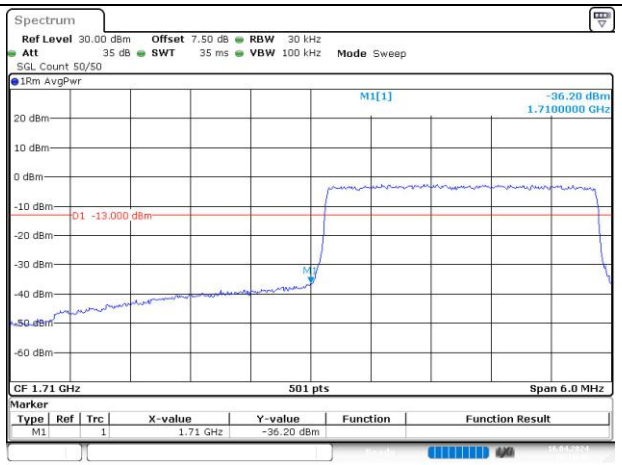
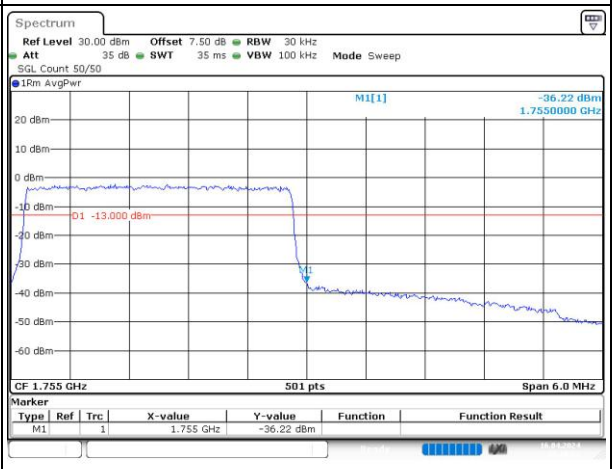
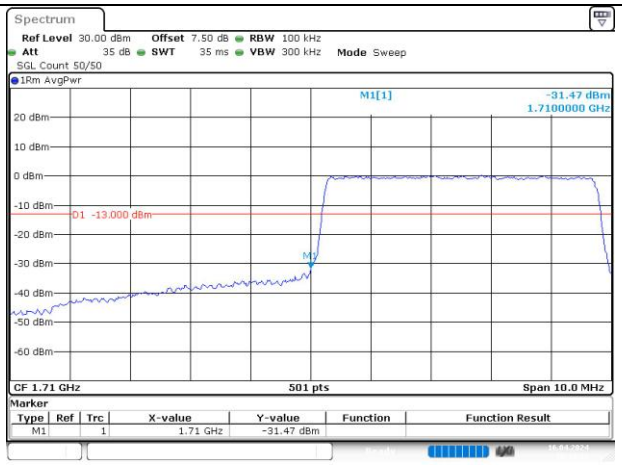
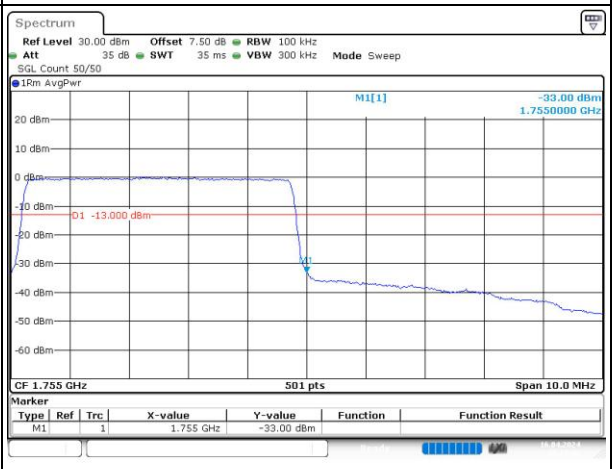
Out of band emission, Band Edge		
Mode	**Lowest-RB 1#0**	**Highest-RB 1#Max**
QPSK 10MHz		
QPSK 15MHz		
QPSK 20MHz		

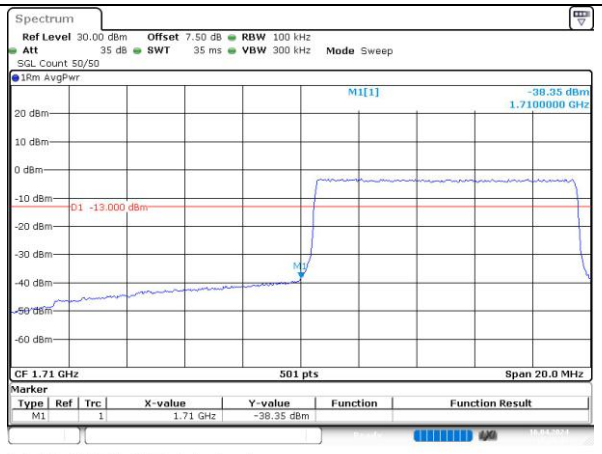
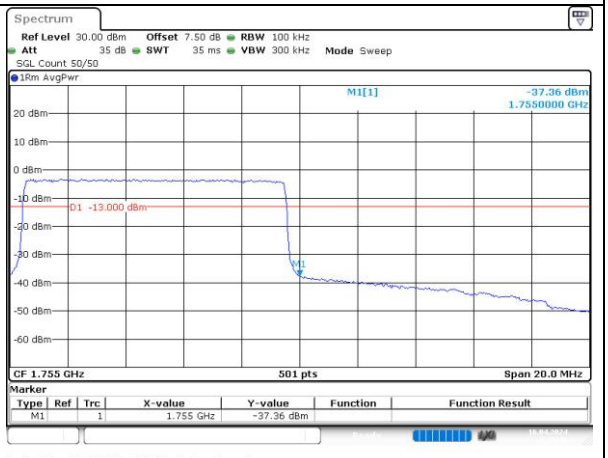
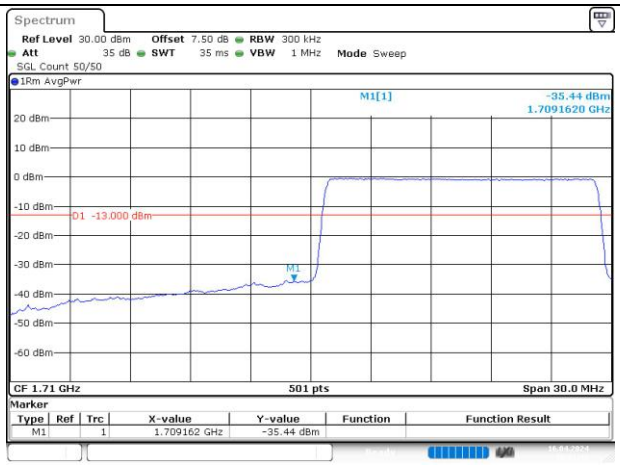
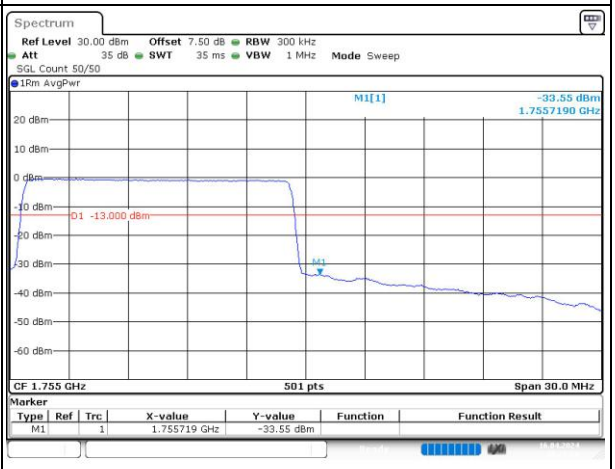
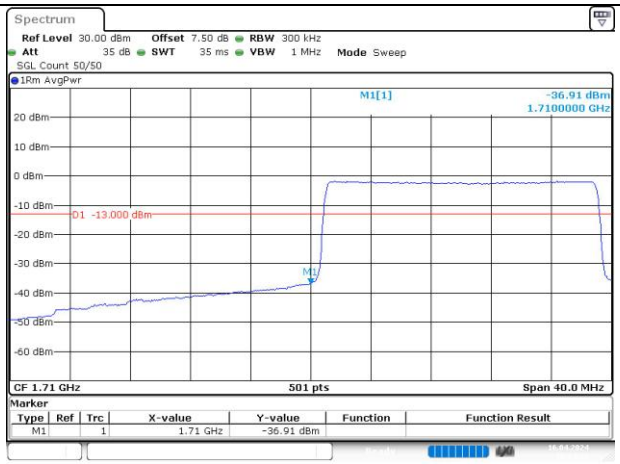
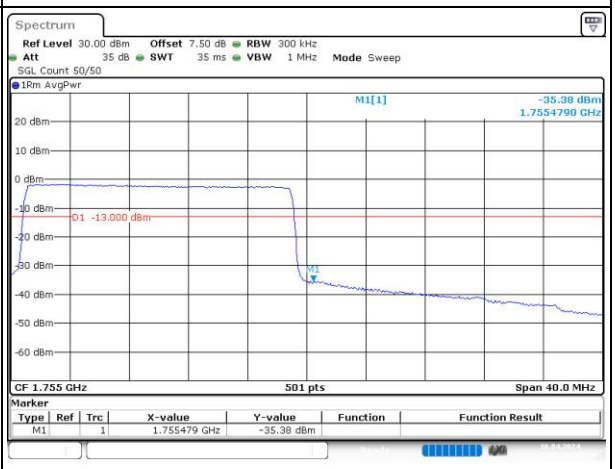
Out of band emission, Band Edge		
Mode	**Lowest-RB 1#0**	**Highest-RB 1#Max**
16QAM 1.4MHz		
16QAM 3MHz		
16QAM 5MHz		

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 5

Serial Number:	2HV7-2	Test Date:	2024/4/16~2024/4/19
Test Site:	RF	Test Mode:	Transmitting
Tester:	Loge Long	Test Result:	**Pass**

Environmental Conditions:					
Temperature: (℃)	26.4~28.1	Relative Humidity: (%)	46~61	ATM Pressure: (kPa)	100.1~100.5

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
Minl-Clrcuits	Coaxial Power Splitters & Combiner	ZFRSC-183-S+	SF448201614	2024/2/25	2025/2/24
R&S	Wideband Radio Communication Tester	CMW500	110479	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
Micro-Coax	Coaxial Cable	UFB205A	323308-024	2024/1/2	2025/1/1
TDK-Lambda	DC Power Supply	Z+60-14	F-08-EM038-1	N/A	N/A

Test Frequency For Each Mode:

Operation Bandwidth	Lowest Frequency (MHz)	Middle Frequency (MHz)	Highest Frequency (MHz)
1.4MHz	824.7	836.5	848.3
3MHz	825.5	836.5	847.5
5MHz	826.5	836.5	846.5
10MHz	829	836.5	844

Test Data:

FCC §2.1046; § 22.913 (a)

RF Output Power:

Test Bandwidth & Modulation	Resource Block & RB offset	Conducted Average Output Power(dBm)			Maximum ERP (dBm)	ERP Limit (dBm)
		Lowest Channel	Middle Channel	Highest Channel		
1.4MHz QPSK	RB1#0	23.25	23.24	23.24	20.81	38.45
	RB1#3	23.48	23.46	23.39		
	RB1#5	23.28	23.25	23.26		
	RB3#0	23.37	23.35	23.31		
	RB3#3	23.37	23.38	23.50		
	RB6#0	22.33	22.30	22.26		
1.4MHz 16QAM	RB1#0	22.36	22.29	22.24	19.92	38.45
	RB1#3	22.61	22.47	22.43		
	RB1#5	22.42	22.31	22.30		
	RB3#0	22.30	22.48	22.49		
	RB3#3	22.38	22.46	22.54		
	RB6#0	21.39	21.29	21.36		
3MHz QPSK	RB1#0	23.34	23.29	23.26	20.66	38.45
	RB1#8	23.35	23.27	23.27		
	RB1#14	23.32	23.25	23.25		
	RB6#0	22.27	22.28	22.22		
	RB6#9	22.29	22.29	22.29		
	RB15#0	22.31	22.35	22.29		
3MHz 16QAM	RB1#0	22.32	22.94	22.40	20.25	38.45
	RB1#8	22.34	22.88	22.36		
	RB1#14	22.32	22.84	22.45		
	RB6#0	21.25	21.38	21.27		
	RB6#9	21.28	21.38	21.37		
	RB15#0	21.43	21.40	21.29		
5MHz QPSK	RB1#0	23.18	23.22	23.14	20.67	38.45
	RB1#13	23.36	23.31	23.26		
	RB1#24	23.22	23.17	23.19		
	RB15#0	22.36	22.28	22.37		
	RB15#10	22.32	22.38	22.21		
	RB25#0	22.32	22.30	22.23		
5MHz 16QAM	RB1#0	22.47	22.30	22.04	19.94	38.45
	RB1#13	22.63	22.39	22.13		
	RB1#24	22.54	22.27	22.10		
	RB15#0	21.39	21.35	21.42		
	RB15#10	21.31	21.42	21.30		
	RB25#0	21.35	21.38	21.35		
10MHz QPSK	RB1#0	23.28	23.29	23.19	20.8	38.45
	RB1#25	23.48	23.49	23.36		
	RB1#49	23.28	23.24	23.25		

	RB25#0	22.50	22.29	22.33		
	RB25#25	22.33	22.43	22.18		
	RB50#0	22.41	22.40	22.27		
10MHz 16QAM	RB1#0	22.39	22.30	22.75	20.19	38.45
	RB1#25	22.63	22.44	22.88		
	RB1#49	22.45	22.21	22.80		
	RB25#0	21.58	21.45	21.42		
	RB25#25	21.42	21.56	21.27		
	RB50#0	21.47	21.46	21.34		
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	4.12	5.36	4.75	13
	RB50#0	5.33	5.33	5.22	13
10MHz 16QAM	RB1#0	5.10	5.94	5.59	13
	RB50#0	6.20	6.23	6.12	13
				Result:	**Pass**

FCC §2.1049, §22.905: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	1.096	1.108	1.096	1.308	1.290	1.302
1.4MHz 16QAM	1.090	1.096	1.102	1.284	1.296	1.326
3MHz QPSK	2.683	2.683	2.695	2.904	2.868	2.880
3MHz 16QAM	2.683	2.671	2.683	2.868	2.880	2.880
5MHz QPSK	4.511	4.491	4.511	4.960	4.920	4.960
5MHz 16QAM	4.511	4.511	4.511	4.920	4.960	4.940
10MHz QPSK	8.942	8.942	8.942	9.600	9.640	9.640
10MHz 16QAM	8.942	8.942	8.942	9.640	9.640	9.600
Note: The test plots please refer to the Plots of Occupied Bandwidth						

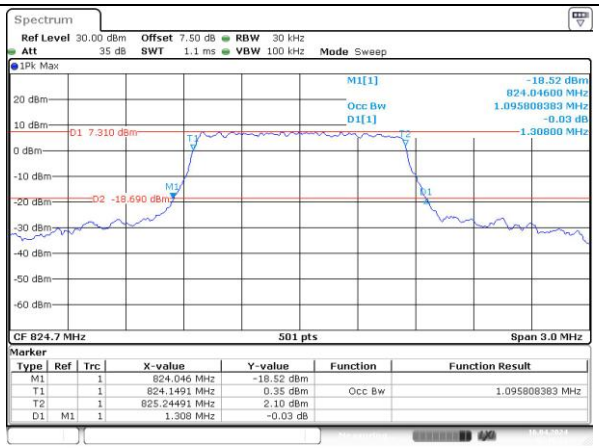
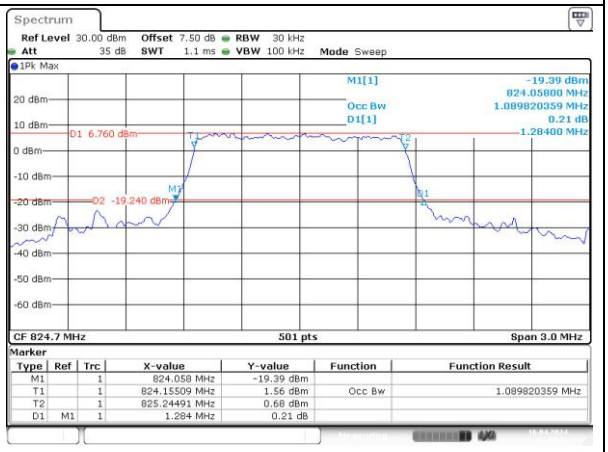
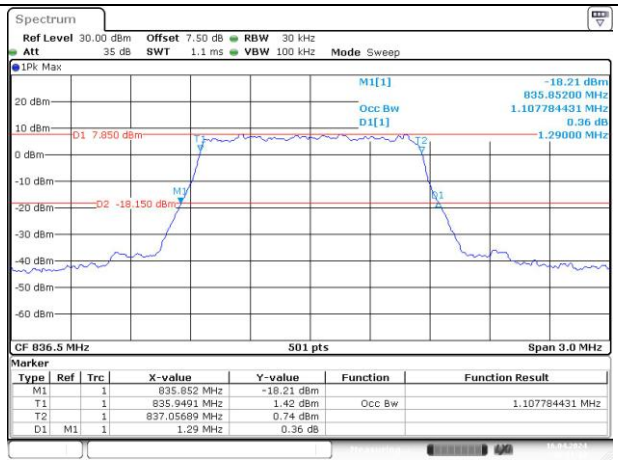
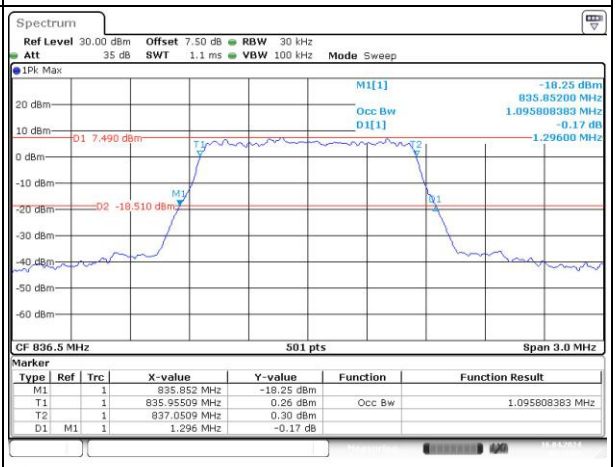
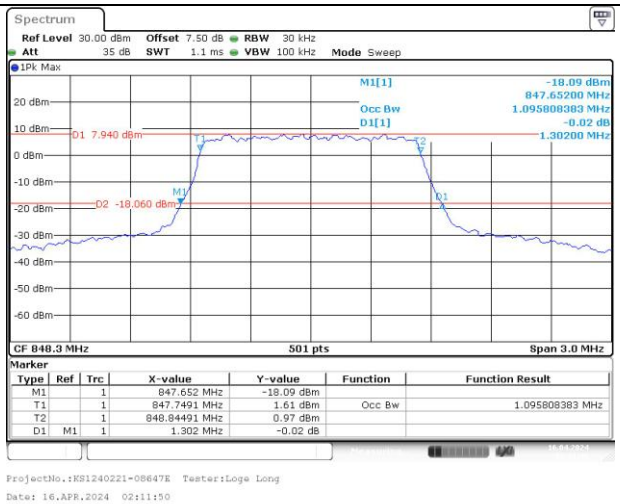
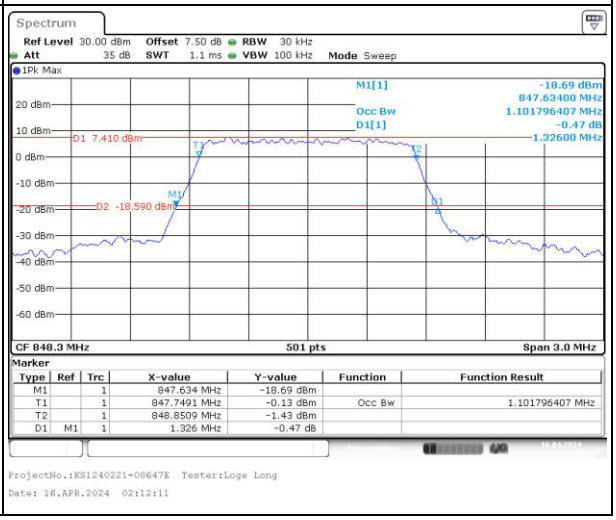
FCC §2.1051, §22.917(a):Spurious Emissions at Antenna Terminal	
Result:	**Pass, Please refer to the test plots of Spurious Emissions at Antenna Terminal.**

FCC §2.1051, §22.917(a):Out of band emission, Band Edge	
Result:	**Pass, Please refer to the test plots of Out of band emission, Band Edge.**

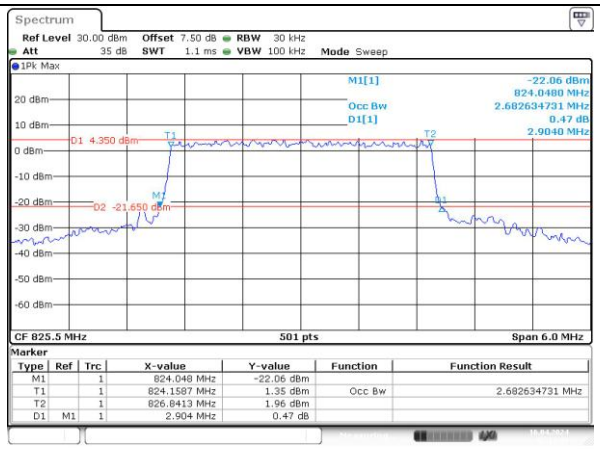
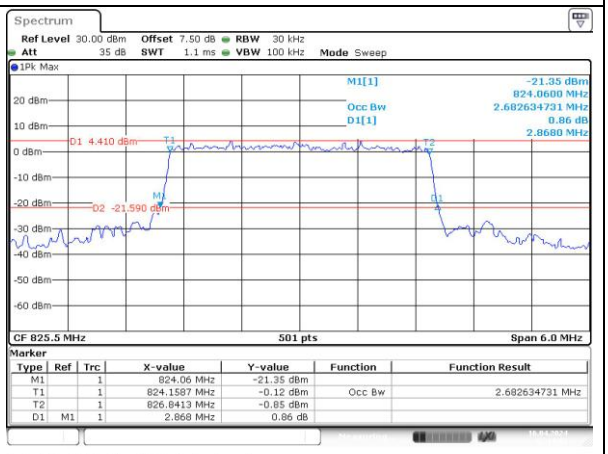
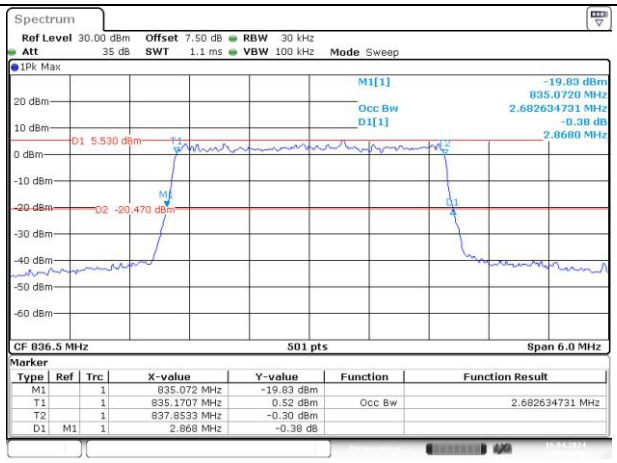
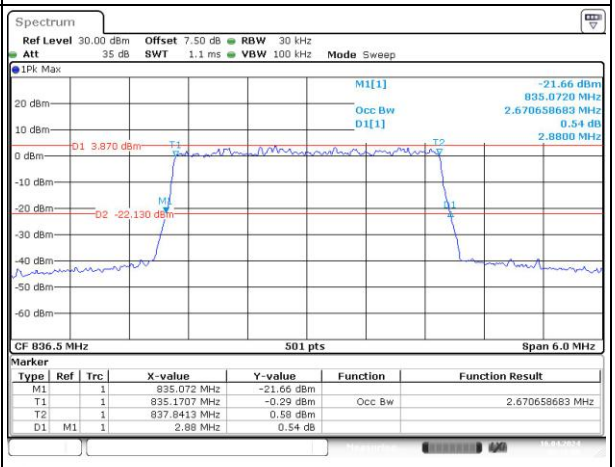
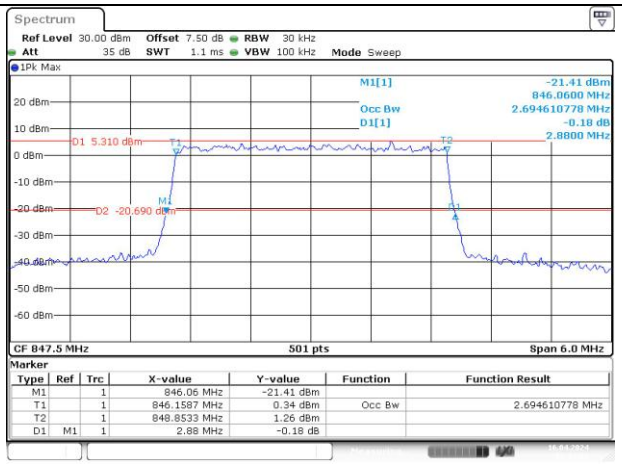
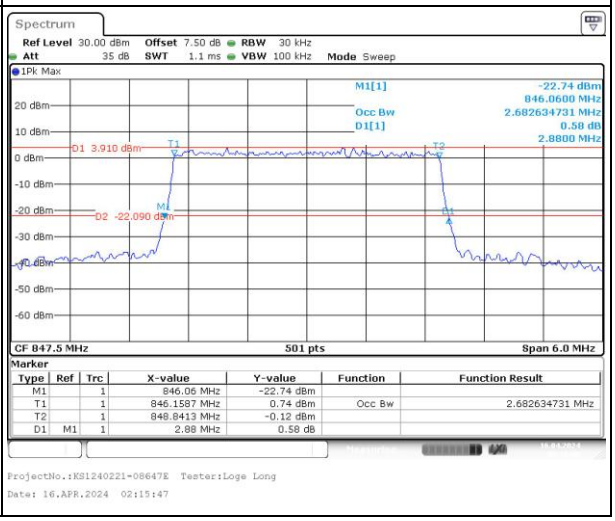
FCC §2.1055, §22.355: Frequency Stability					
Test Modulation:	10 MHz QPSK		Test Channel:	836.5	MHz
Test Item	Temperature (℃)	Voltage (V_{DC})	Frequency Error		Limit
			(Hz)	(ppm)	(ppm)
Frequency Stability vs. Temperature	-30	3.8	5.03	0.006	2.5
	-20	3.8	9.80	0.012	2.5
	-10	3.8	6.06	0.007	2.5
	0	3.8	-5.50	-0.007	2.5
	10	3.8	-6.97	-0.008	2.5
	20	3.8	-9.58	-0.011	2.5
	30	3.8	-6.62	-0.008	2.5
	40	3.8	-8.73	-0.010	2.5
	50	3.8	-7.05	-0.008	2.5
Frequency Stability vs. Voltage	20	3.4	8.99	0.011	2.5
	20	4.35	-7.17	-0.009	2.5
				Result:	**Pass**

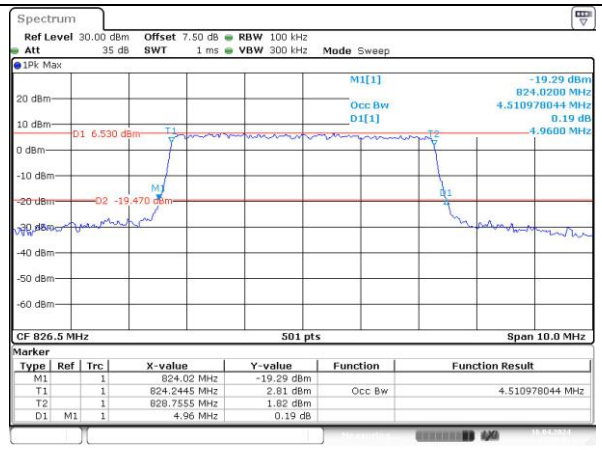
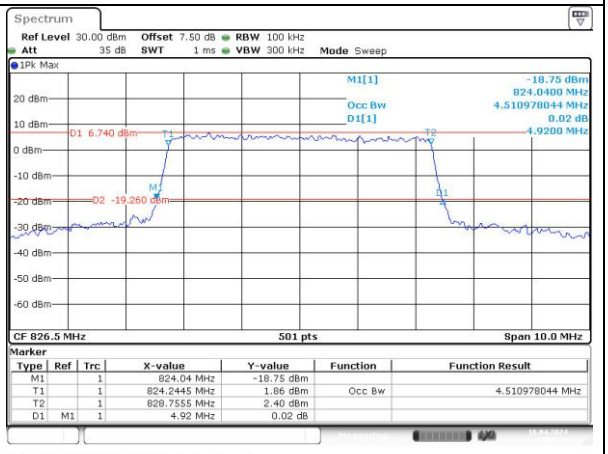
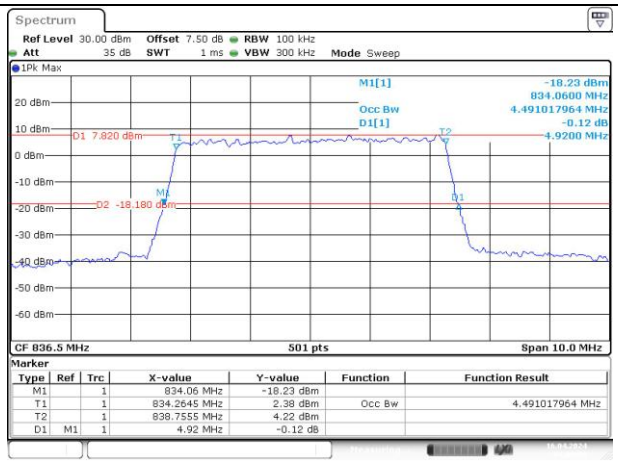
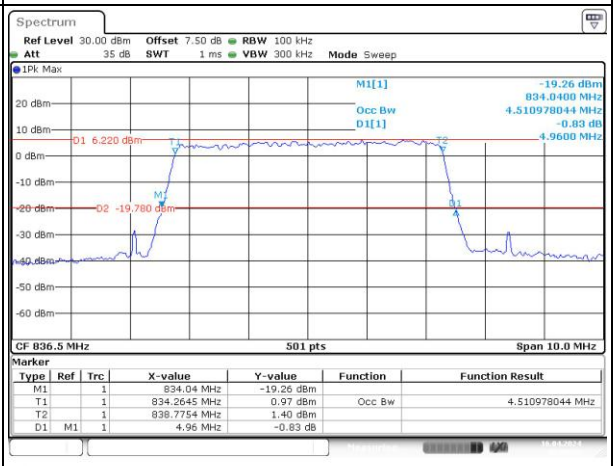
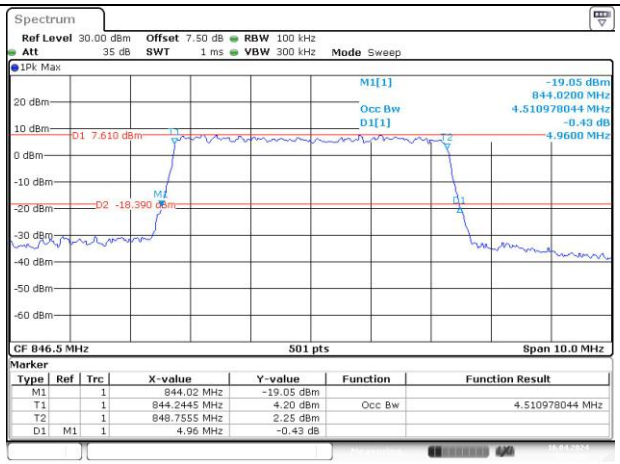
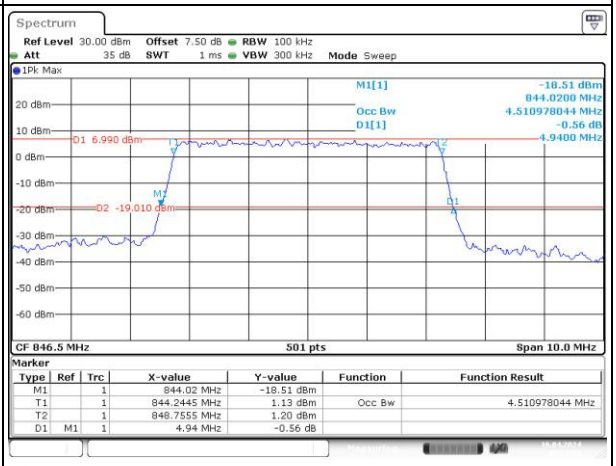
Test Modulation:	10 MHz 16QAM		Test Channel:	836.5	MHz
Test Item	Temperature (℃)	Voltage (V_{DC})	Frequency Error		Limit
			(Hz)	(ppm)	(ppm)
Frequency Stability vs. Temperature	-30	3.8	7.54	0.009	2.5
	-20	3.8	-6.94	-0.008	2.5
	-10	3.8	9.33	0.011	2.5
	0	3.8	-8.59	-0.010	2.5
	10	3.8	8.10	0.010	2.5
	20	3.8	-7.40	-0.009	2.5
	30	3.8	6.43	0.008	2.5
	40	3.8	-6.17	-0.007	2.5
	50	3.8	-6.44	-0.008	2.5
Frequency Stability vs. Voltage	20	3.4	6.34	0.008	2.5
	20	4.35	-6.89	-0.008	2.5
				Result:	**Pass**

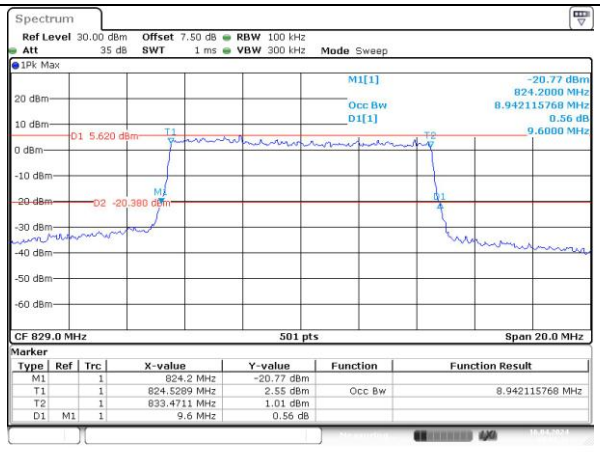
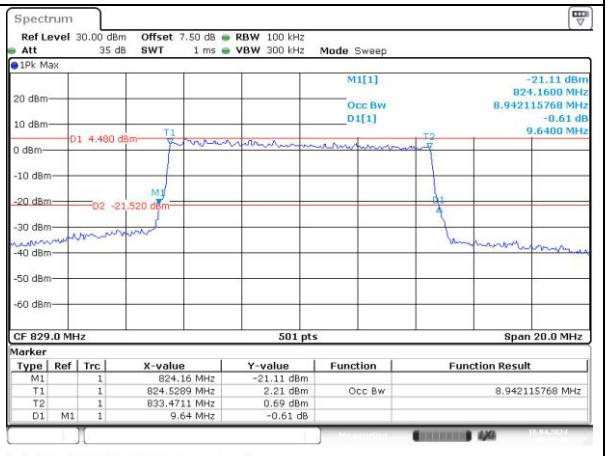
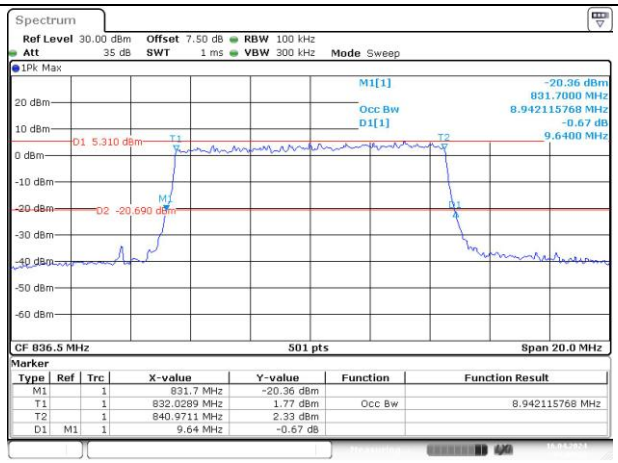
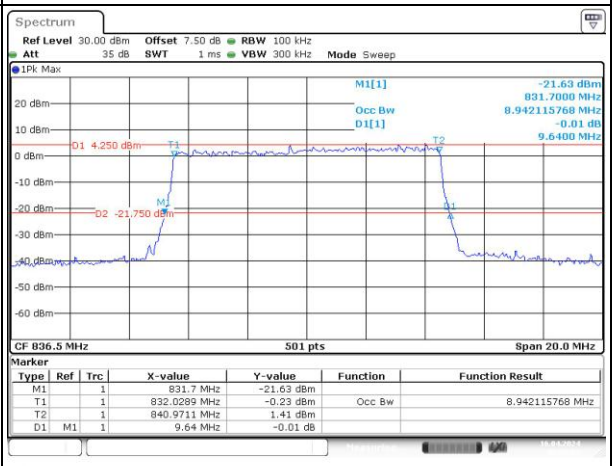
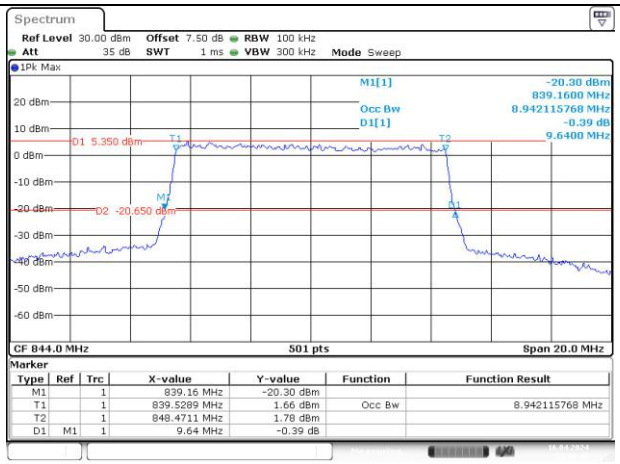
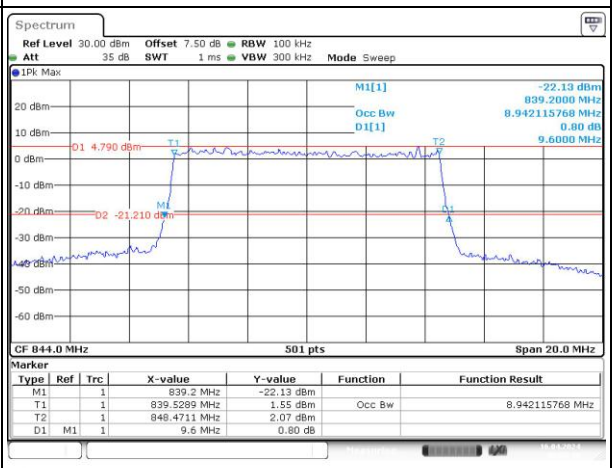
Test Plots:

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

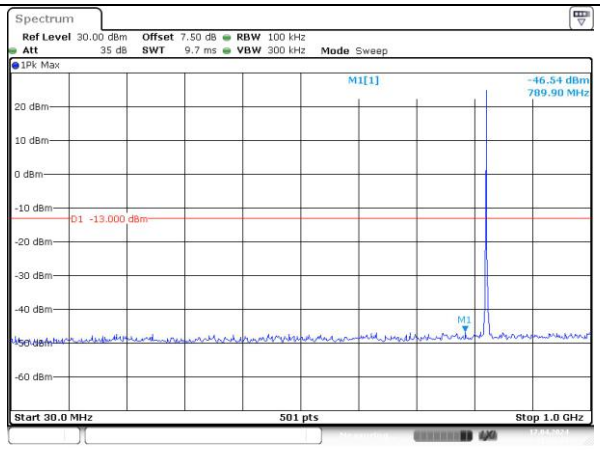
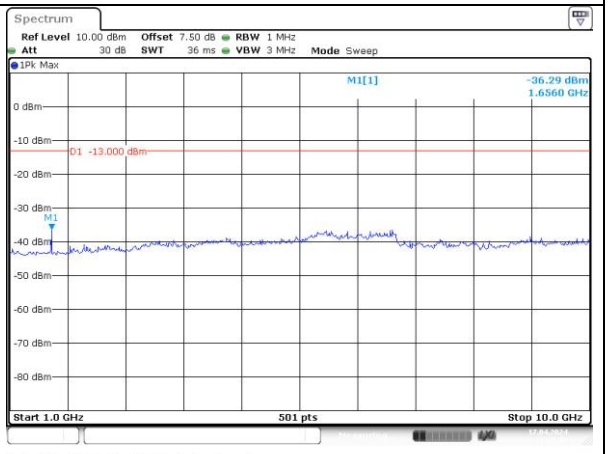
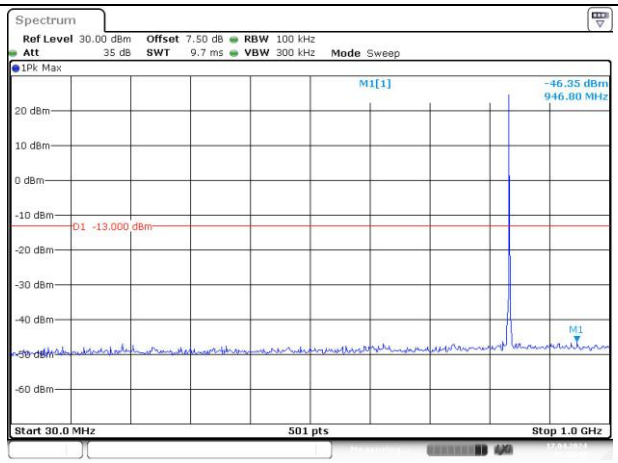
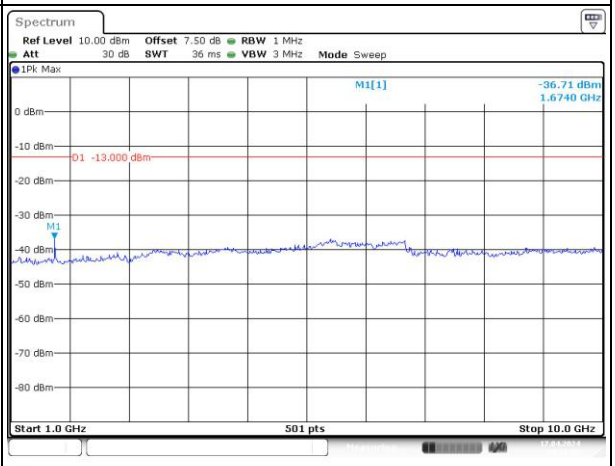
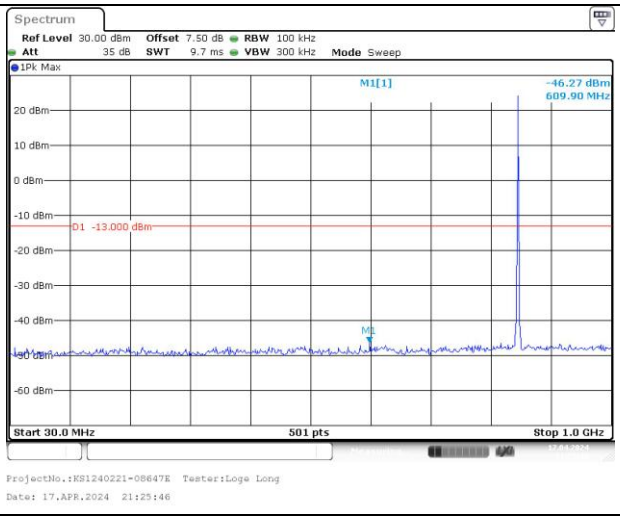
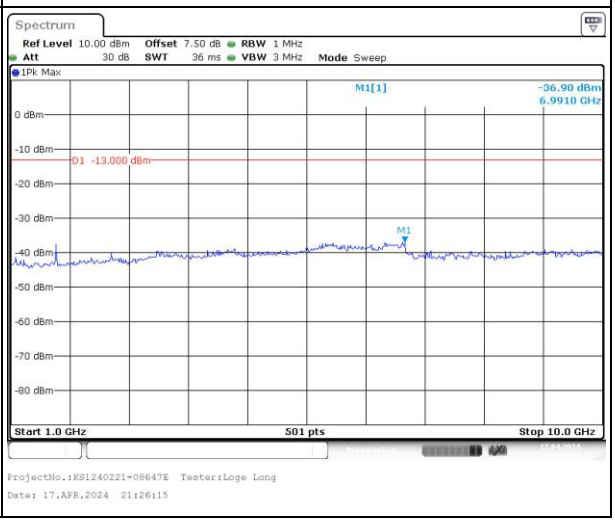
Occupied Bandwidth

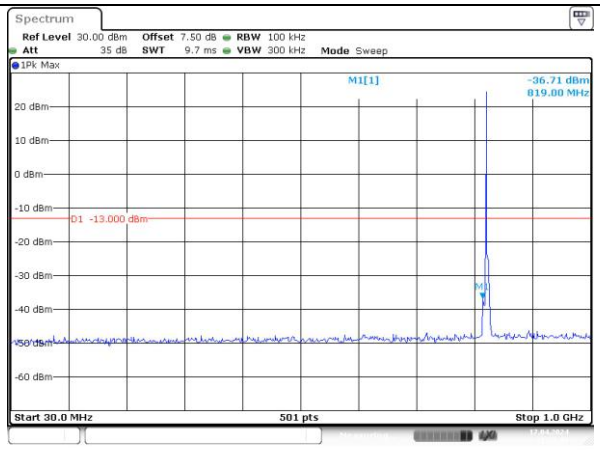
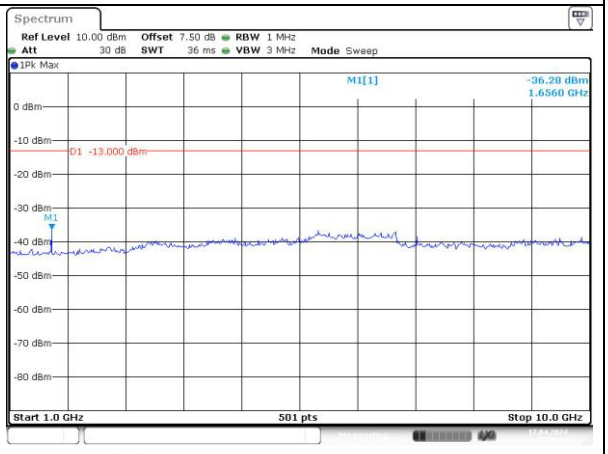
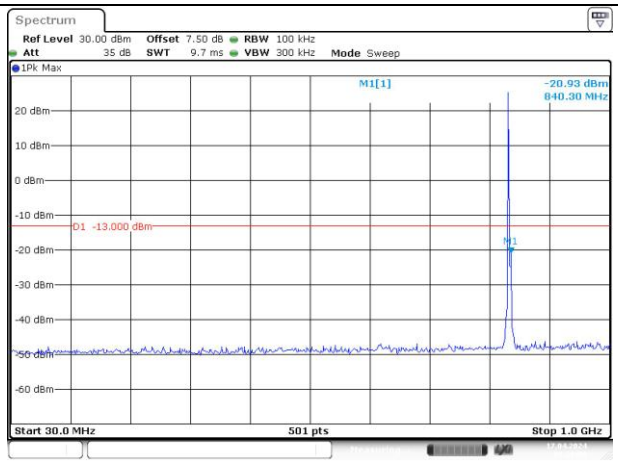
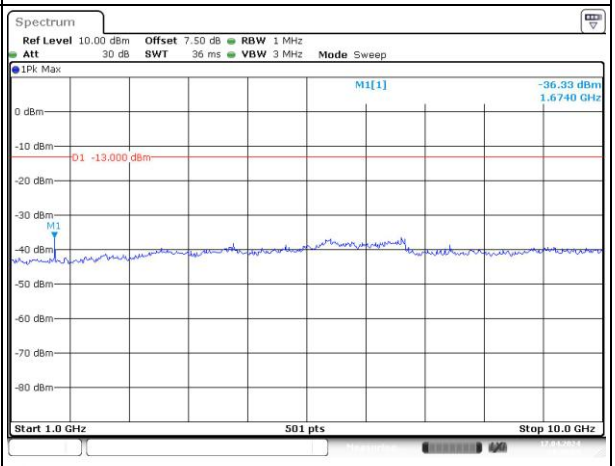
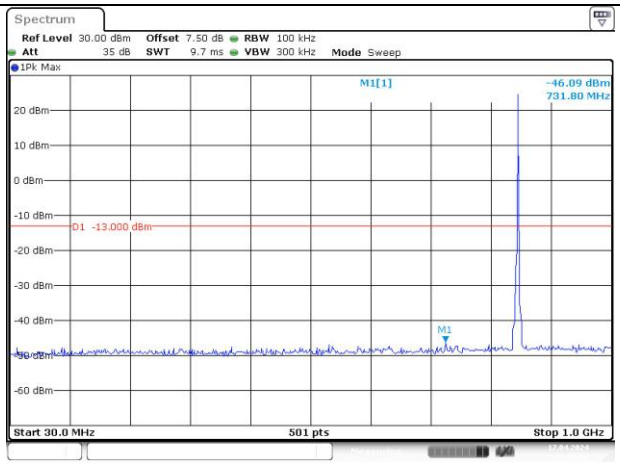
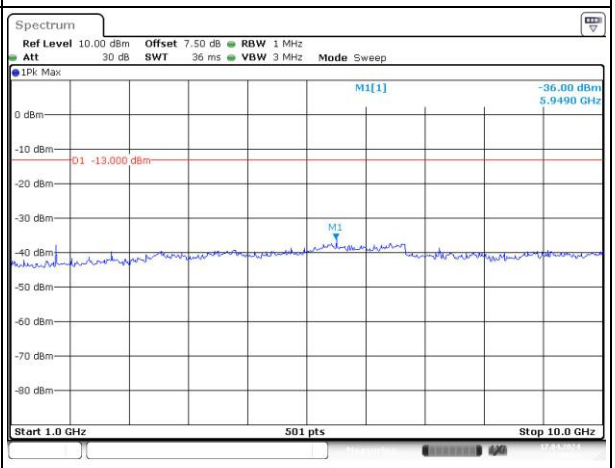
Channel	3MHz Bandwidth QPSK	3MHz Bandwidth 16QAM
Lowest		
Middle		
Highest		

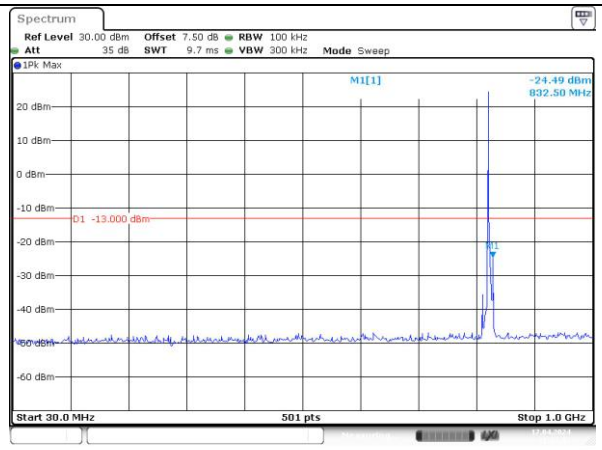
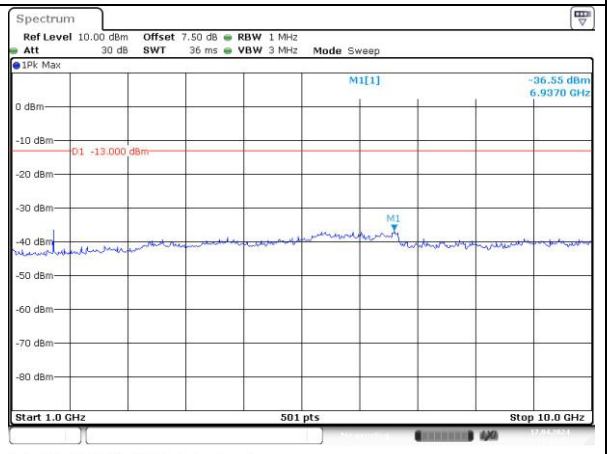
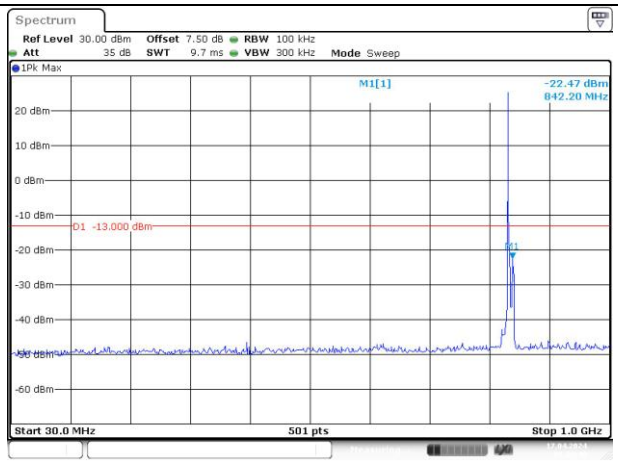
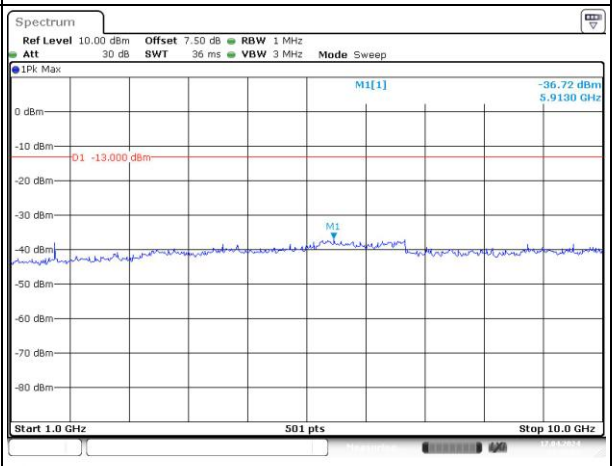
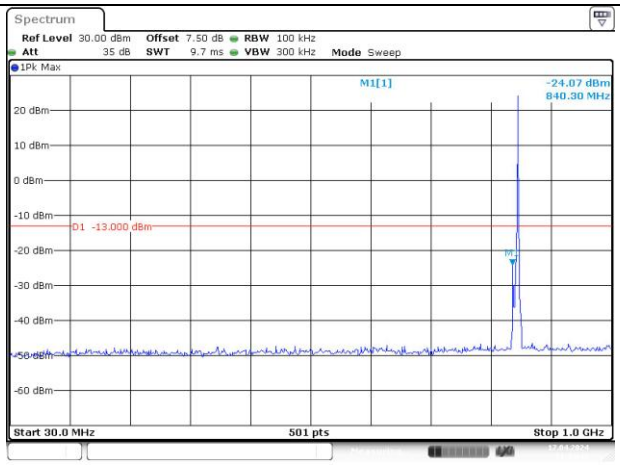
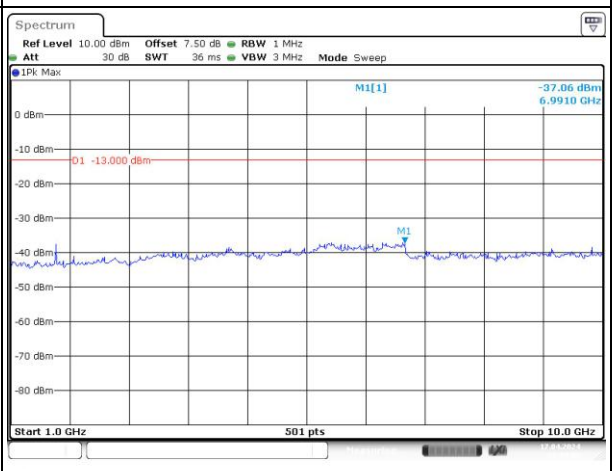
Occupied Bandwidth		
Channel	5MHz Bandwidth QPSK	5MHz Bandwidth 16QAM
Lowest		
Middle		
Highest		

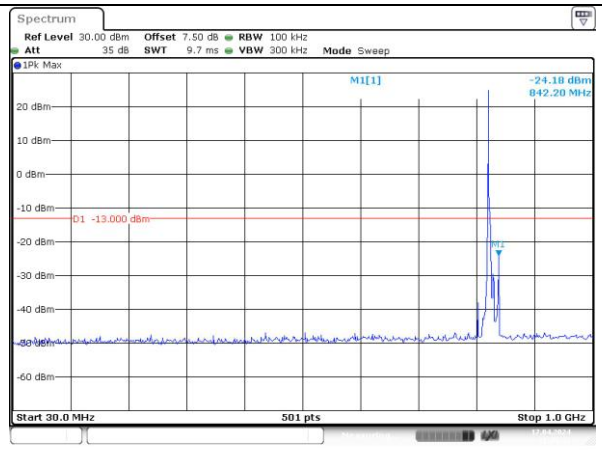
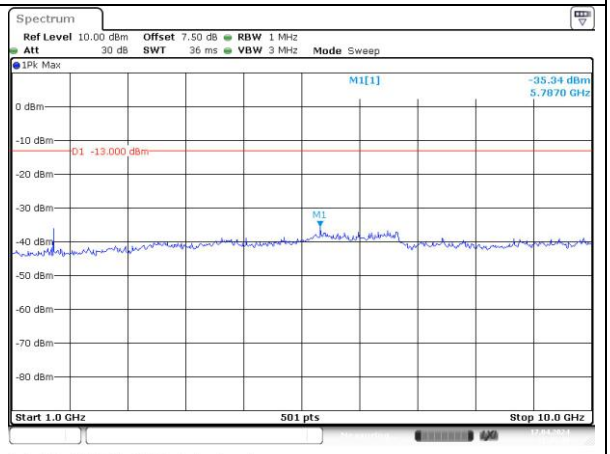
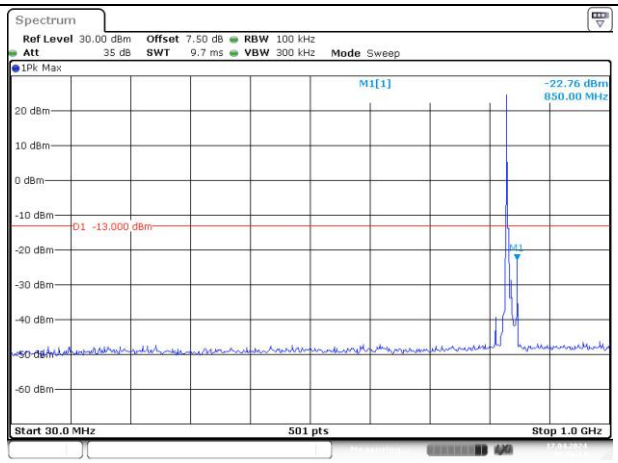
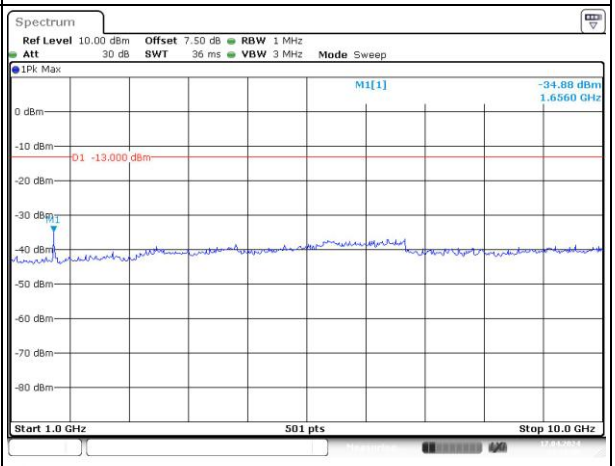
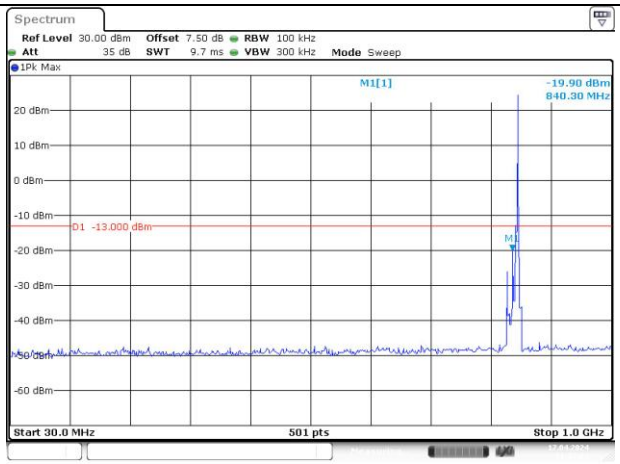
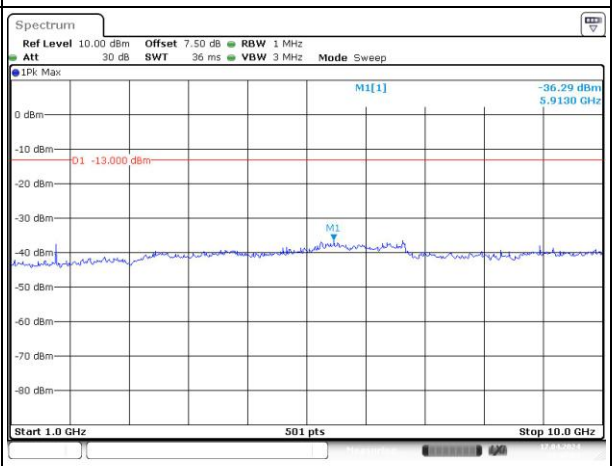
Occupied Bandwidth		
Channel	10MHz Bandwidth QPSK	10MHz Bandwidth 16QAM
Lowest		
Middle		
Highest		

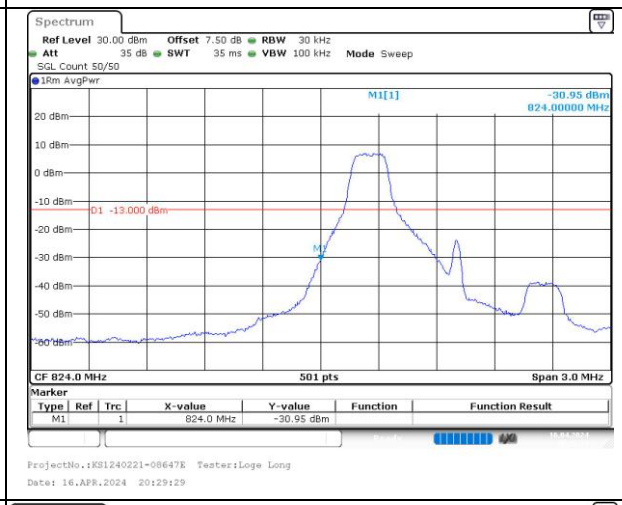
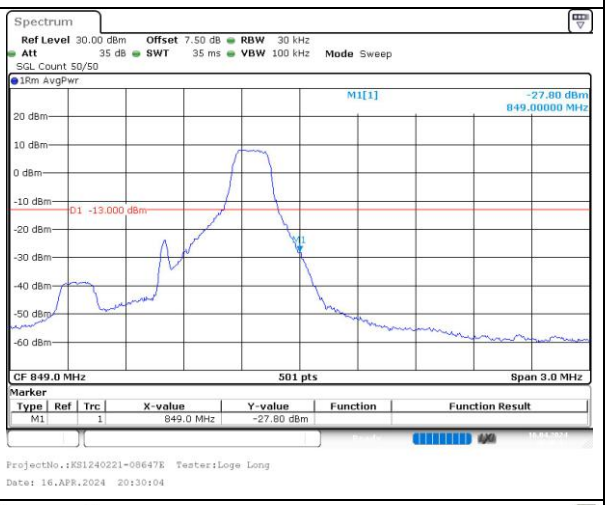
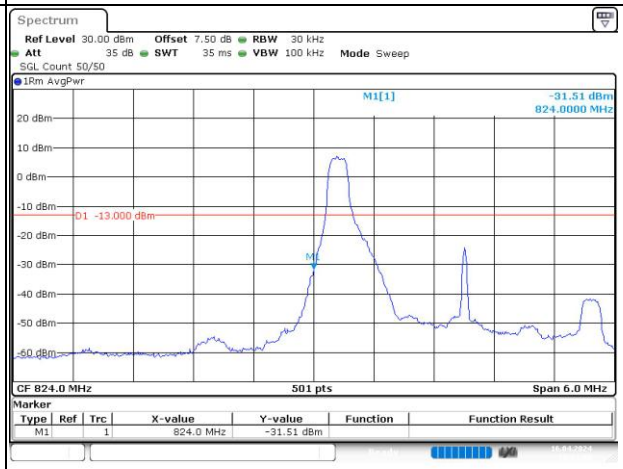
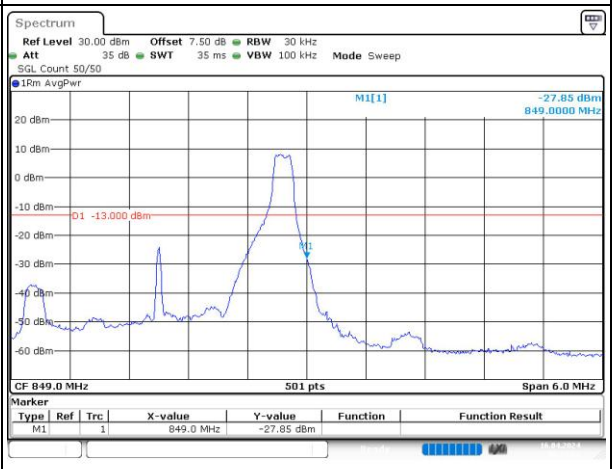
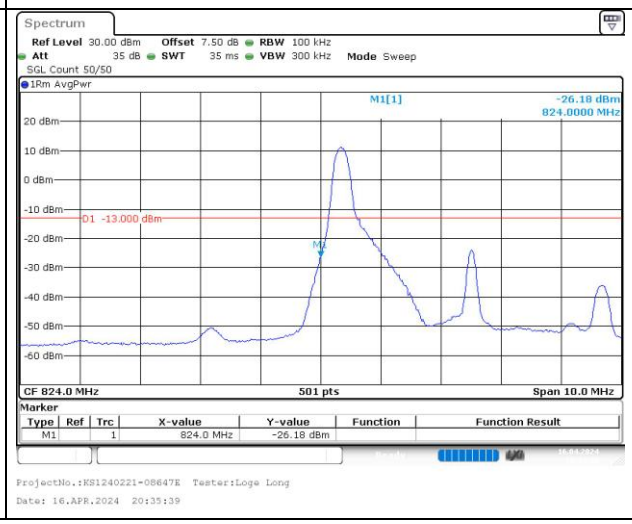
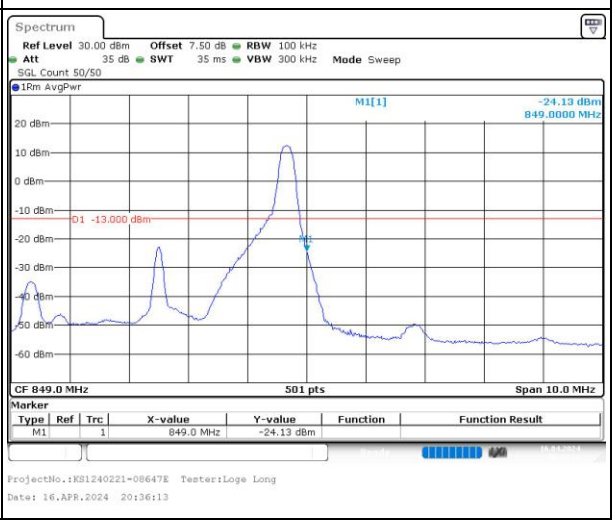
1RB:

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