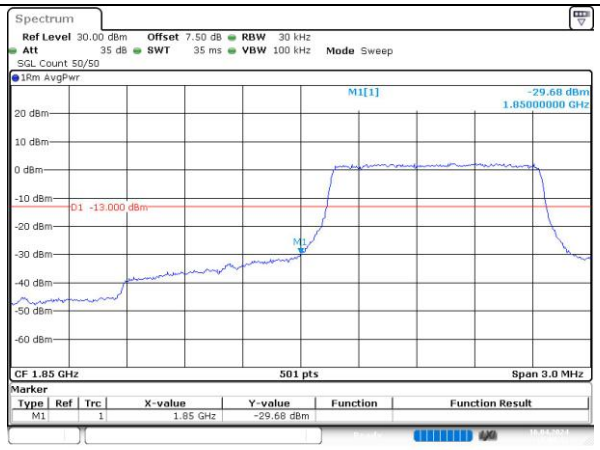
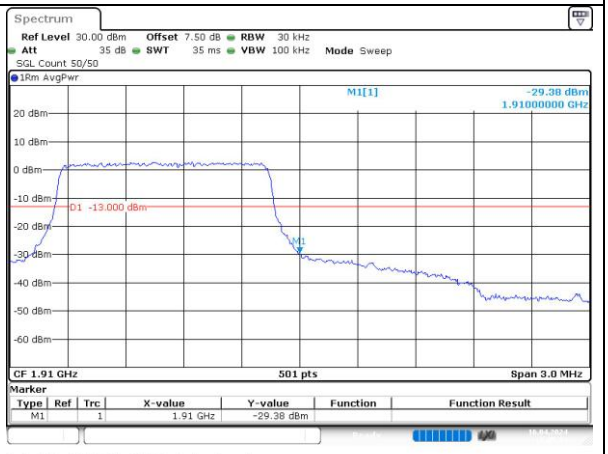
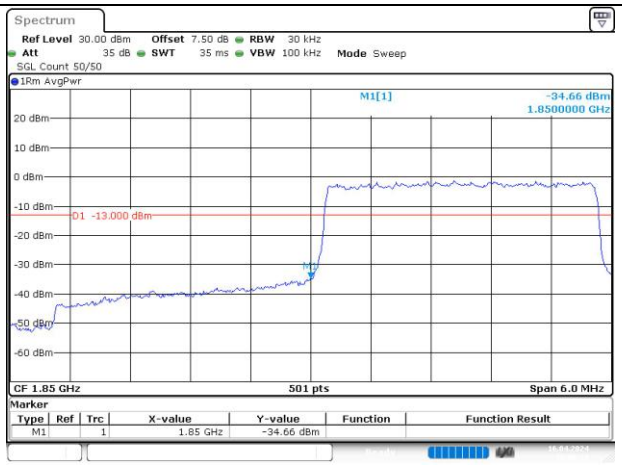
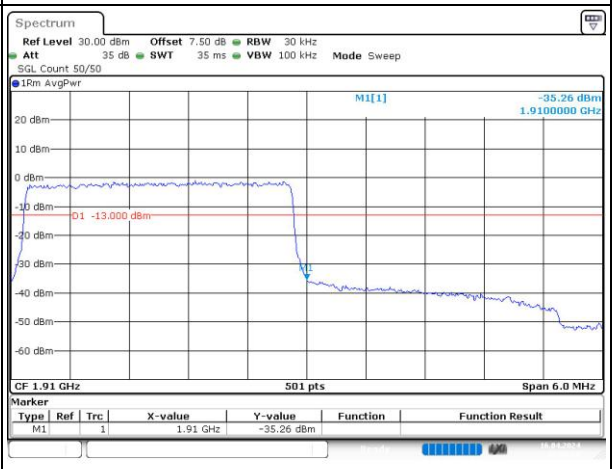
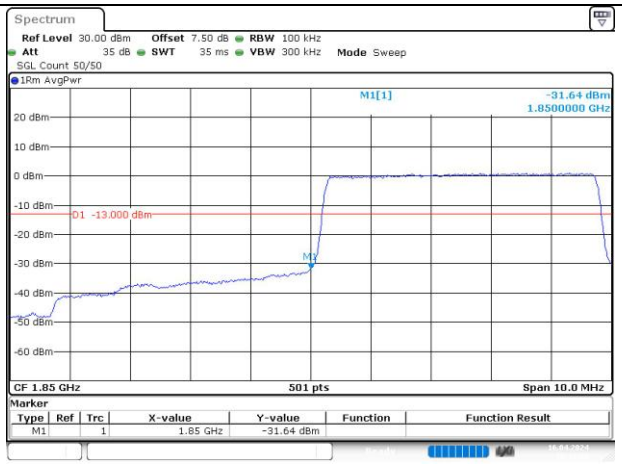
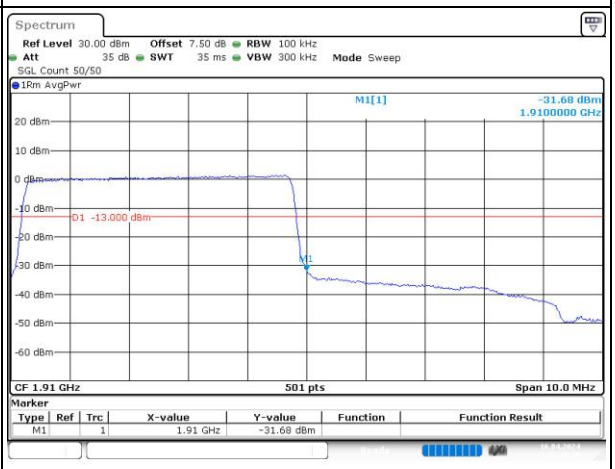
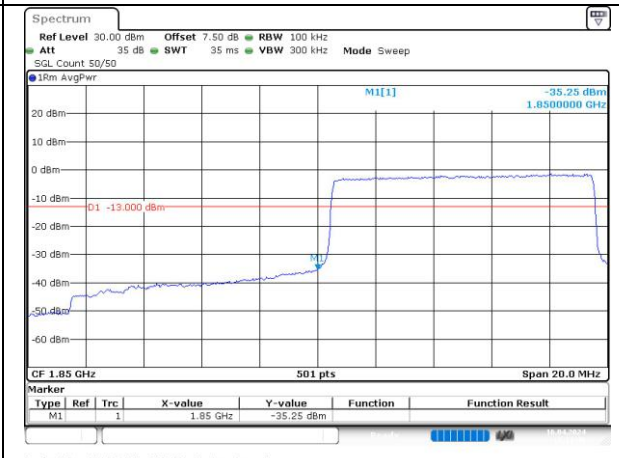
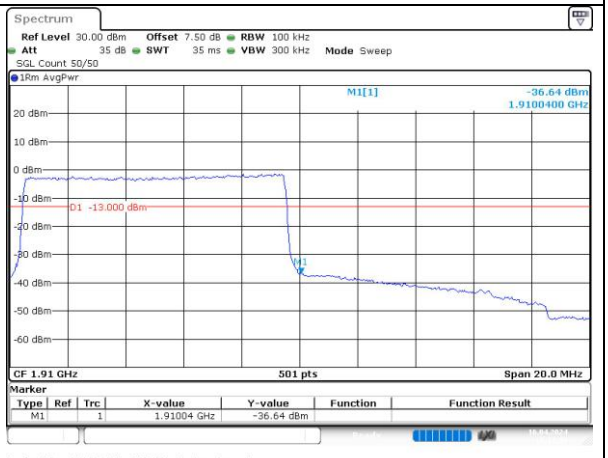
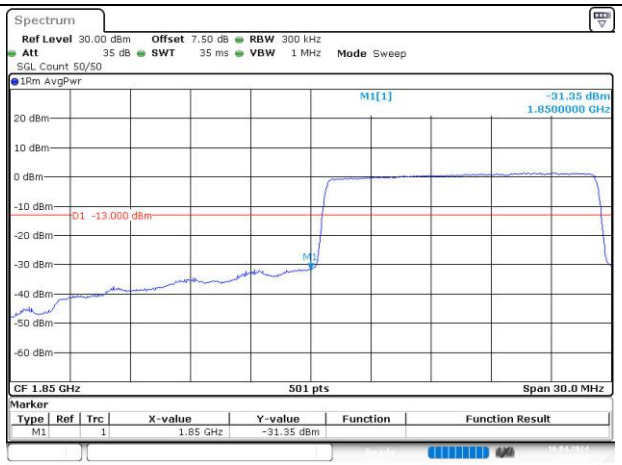
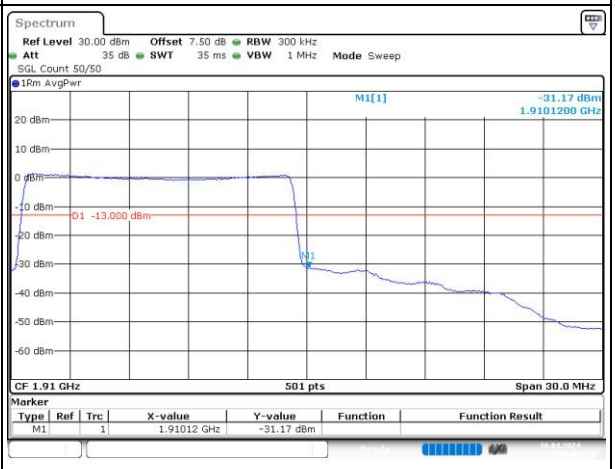
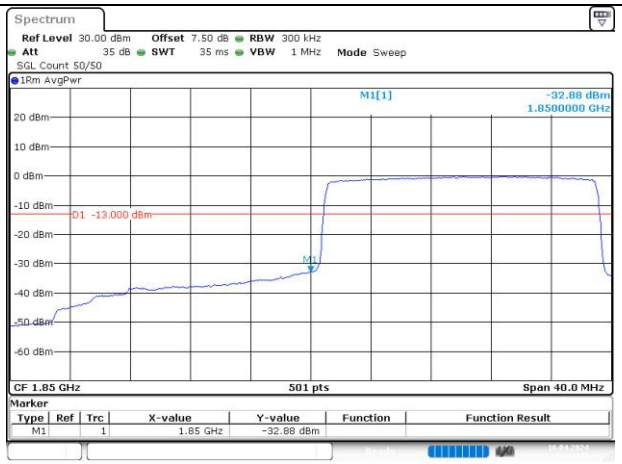
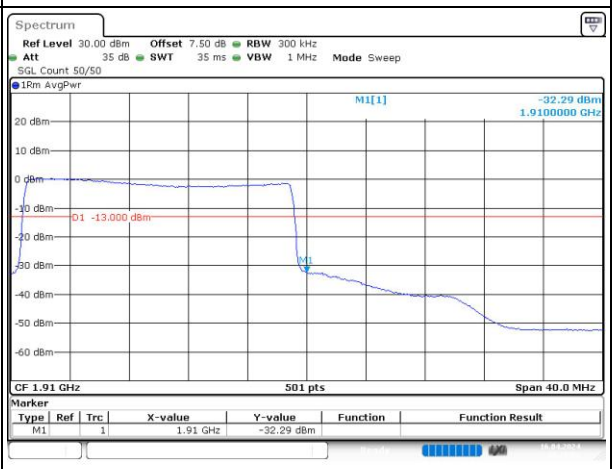
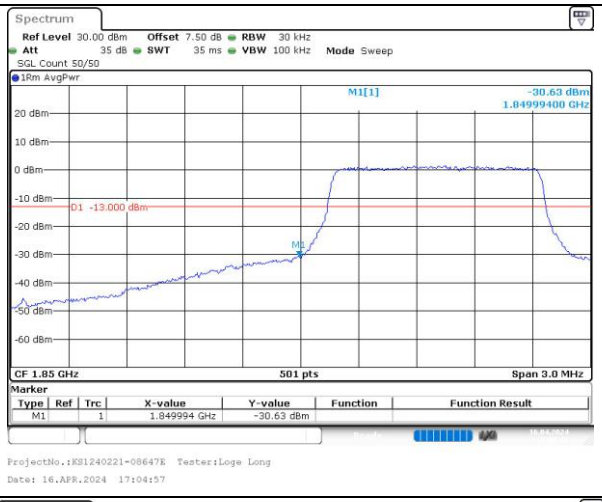
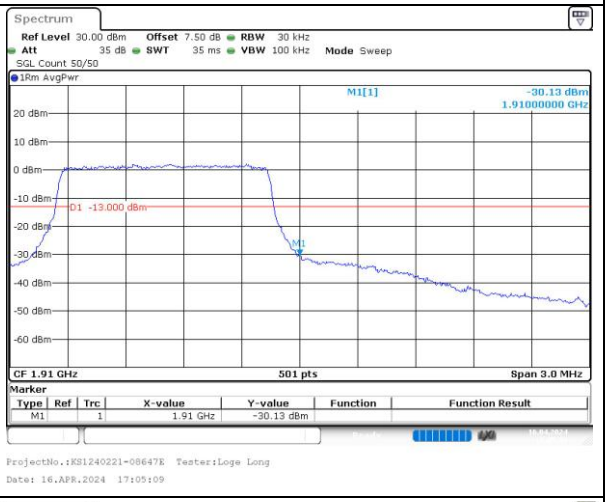
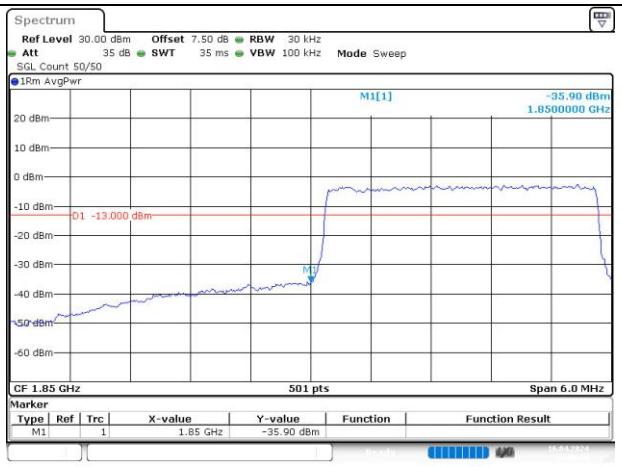
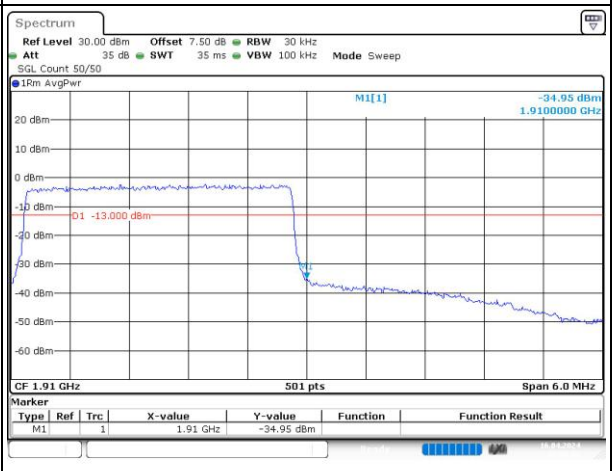
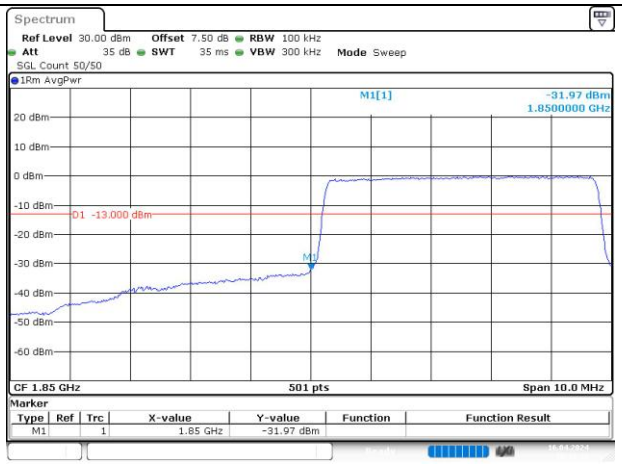
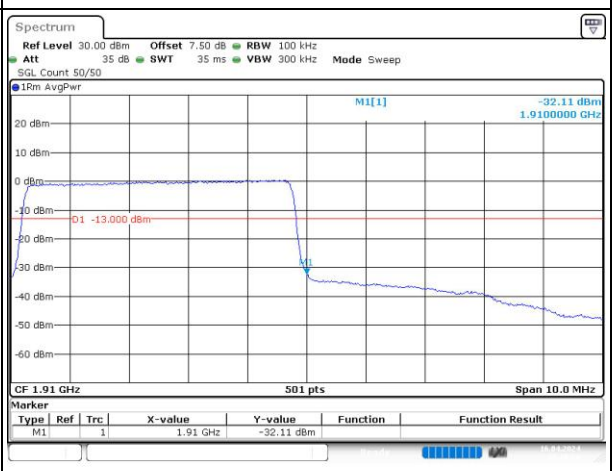
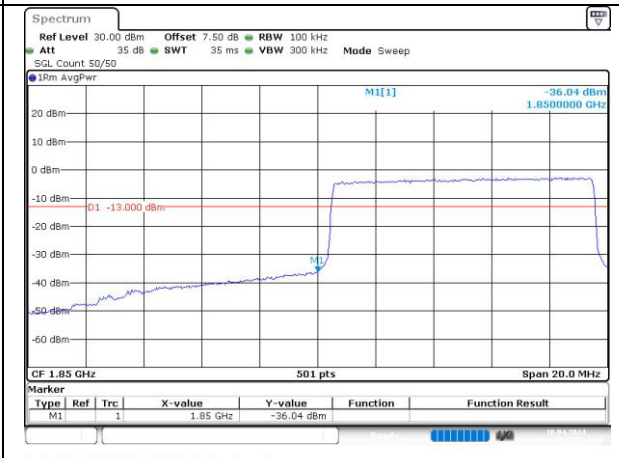
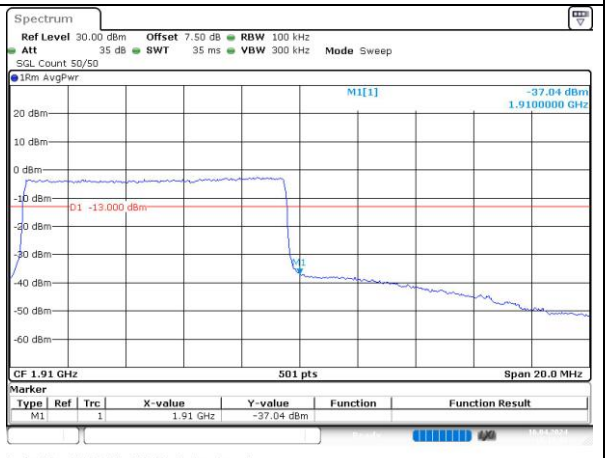
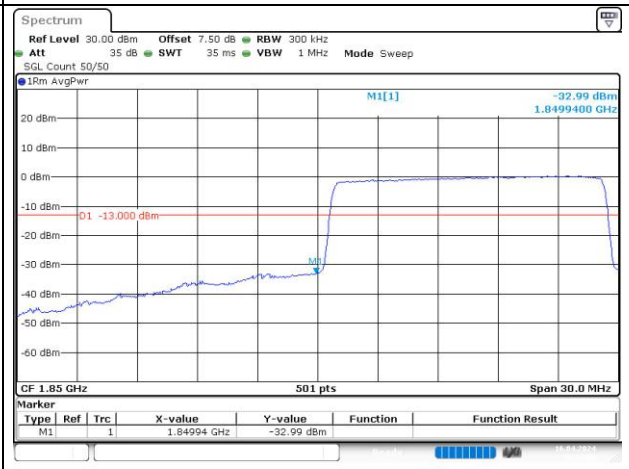
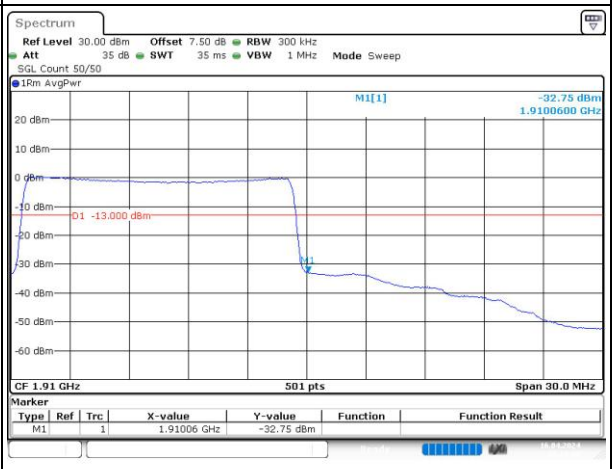
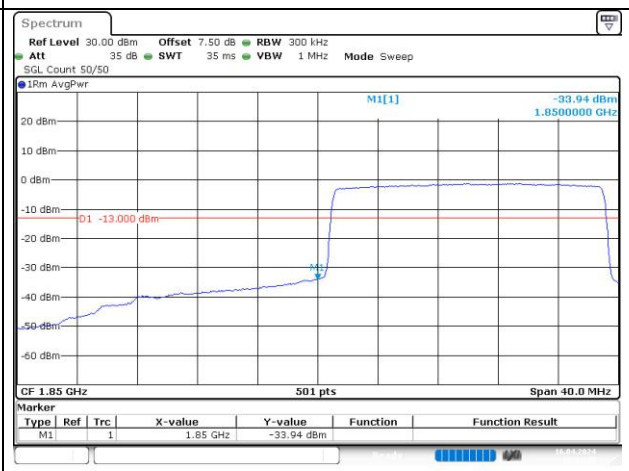
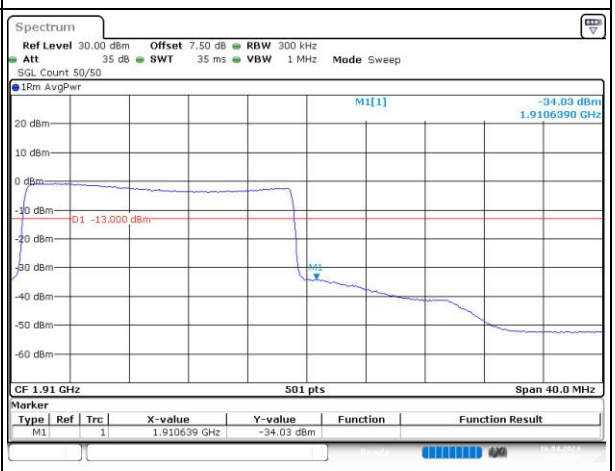
Out of band emission, Band Edge		
Mode	**Lowest-Full RB**	**Highest-Full RB**
QPSK 1.4MHz		
QPSK 3MHz		
QPSK 5MHz		

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		

5.6 Antenna Port Test Data and Results for LTE Band 4

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	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	22.74	22.36	22.34	24.59	30
	RB1#3	22.87	22.60	22.47		
	RB1#5	22.71	22.39	22.34		
	RB3#0	22.76	22.37	22.47		
	RB3#3	22.73	22.35	22.41		
	RB6#0	21.79	21.45	21.47		
1.4MHz 16QAM	RB1#0	21.77	21.28	21.31	23.68	30
	RB1#3	21.96	21.47	21.48		
	RB1#5	21.76	21.29	21.32		
	RB3#0	21.67	21.40	21.59		
	RB3#3	21.70	21.37	21.53		
	RB6#0	20.75	20.34	20.37		
3MHz QPSK	RB1#0	22.69	20.41	22.45	24.41	30
	RB1#8	22.64	22.35	22.36		
	RB1#14	22.61	22.35	22.28		
	RB6#0	21.63	21.36	21.40		
	RB6#9	21.59	21.36	21.34		
	RB15#0	21.66	21.31	21.38		
3MHz 16QAM	RB1#0	21.67	21.78	21.53	23.5	30
	RB1#8	21.63	21.74	21.45		
	RB1#14	21.55	21.71	21.42		
	RB6#0	20.59	20.38	20.39		
	RB6#9	20.54	20.33	20.38		
	RB15#0	20.71	20.37	20.33		
5MHz QPSK	RB1#0	22.58	22.24	22.21	24.37	30
	RB1#13	22.65	22.30	22.36		
	RB1#24	22.48	22.08	22.15		
	RB15#0	21.61	21.30	21.35		
	RB15#10	21.55	21.26	21.36		
	RB25#0	21.57	21.21	21.29		
5MHz 16QAM	RB1#0	21.81	21.22	21.08	23.62	30
	RB1#13	21.90	21.33	21.17		
	RB1#24	21.75	21.18	21.03		
	RB15#0	20.59	20.29	20.38		
	RB15#10	20.55	20.28	20.33		
	RB25#0	20.55	20.23	20.33		
10MHz QPSK	RB1#0	22.70	22.37	22.41	24.42	30
	RB1#25	22.68	22.51	22.49		
	RB1#49	22.34	22.35	22.32		

	RB25#0	21.46	21.34	21.38		
	RB25#25	21.26	21.27	21.41		
	RB50#0	21.29	21.30	21.37		
10MHz 16QAM	RB1#0	21.33	21.88	21.42	23.6	30
	RB1#25	21.71	21.88	21.63		
	RB1#49	21.52	21.74	21.45		
	RB25#0	20.70	20.40	20.37		
	RB25#25	20.66	20.32	20.45		
	RB50#0	20.62	20.33	20.38		
15MHz QPSK	RB1#0	22.68	22.55	22.41	24.4	30
	RB1#38	22.65	22.45	22.43		
	RB1#74	22.47	22.24	22.27		
	RB36#0	21.76	21.53	21.60		
	RB36#39	21.70	21.49	21.47		
	RB75#0	21.72	21.49	21.51		
15MHz 16QAM	RB1#0	22.15	21.55	21.56	23.92	30
	RB1#38	22.20	21.51	21.66		
	RB1#74	21.85	21.22	21.62		
	RB36#0	20.74	20.52	20.44		
	RB36#39	20.68	20.41	20.35		
	RB75#0	20.72	20.45	20.43		
20MHz QPSK	RB1#0	22.48	22.37	22.24	24.46	30
	RB1#50	22.74	22.56	22.62		
	RB1#99	22.20	22.20	22.25		
	RB50#0	21.65	21.47	21.49		
	RB50#50	21.58	21.29	21.31		
	RB100#0	21.66	21.41	21.47		
20MHz 16QAM	RB1#0	22.02	21.66	21.33	24.01	30
	RB1#50	22.29	21.81	21.68		
	RB1#99	21.70	21.37	21.41		
	RB50#0	20.70	20.45	20.45		
	RB50#50	20.60	20.27	20.33		
	RB100#0	20.70	20.44	20.47		
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	4.38	4.61	3.54	13
	RB100#0	4.00	3.65	3.57	13
20MHz 16QAM	RB1#0	5.36	5.22	4.43	13
	RB100#0	5.68	5.36	5.25	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	1.102	1.320	1.320	1.308
1.4MHz 16QAM	1.096	1.096	1.102	1.290	1.290	1.314
3MHz QPSK	2.695	2.695	2.695	2.892	2.880	2.880
3MHz 16QAM	2.683	2.683	2.683	2.880	2.892	2.880
5MHz QPSK	4.491	4.531	4.511	4.900	4.920	5.480
5MHz 16QAM	4.511	4.491	4.531	4.960	4.940	4.960
10MHz QPSK	8.942	8.942	8.942	9.640	9.680	9.640
10MHz 16QAM	8.942	8.942	8.942	9.640	9.680	9.600
15MHz QPSK	13.473	13.473	13.473	14.820	14.760	14.760
15MHz 16QAM	13.473	13.473	13.533	14.760	14.700	14.700
20MHz QPSK	17.964	17.964	17.884	19.520	19.200	19.280
20MHz 16QAM	17.964	17.964	17.964	19.360	19.360	20.240
Note: The test plots please refer to the Plots of Occupied Bandwidth						

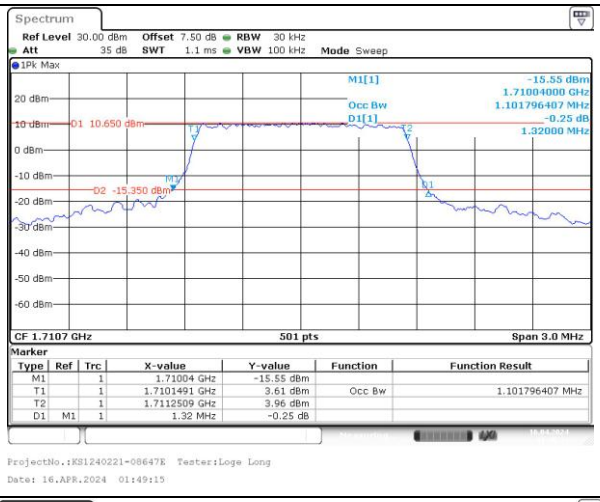
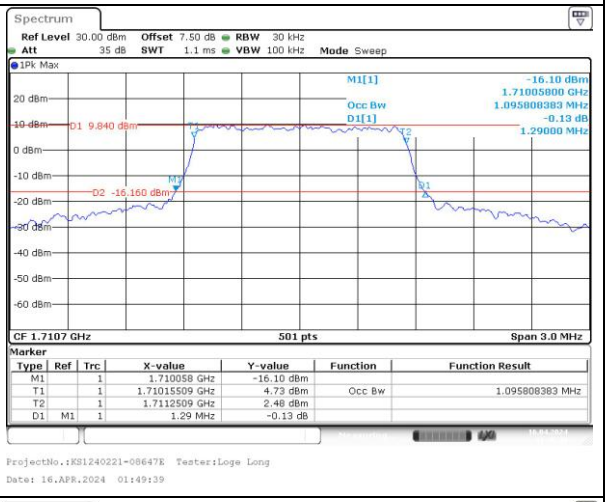
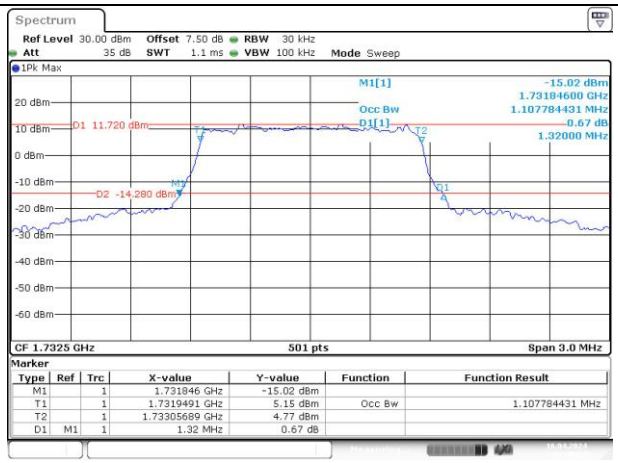
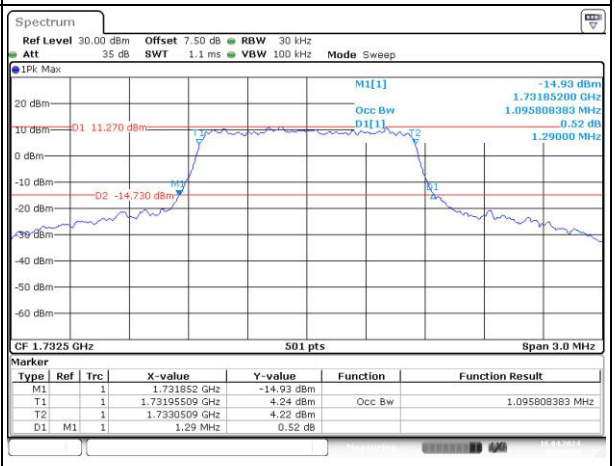
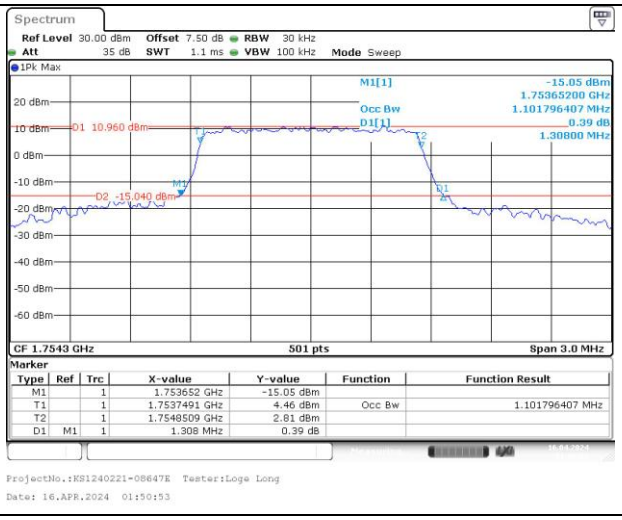
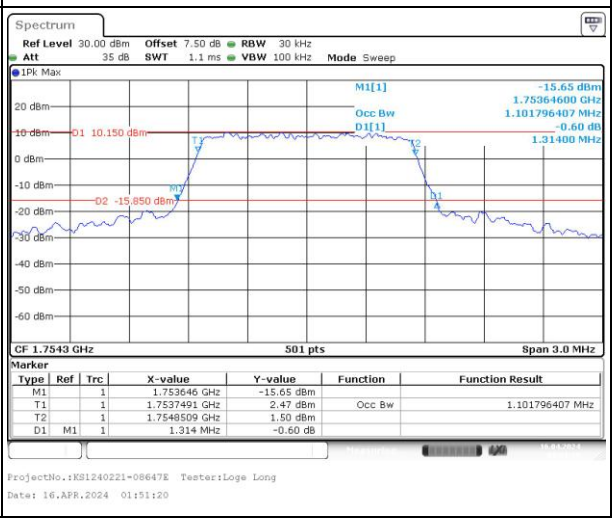
FCC §2.1051, §27.53:Spurious Emissions at Antenna Terminal	
Result:	**Pass, Please refer to the test plots of Spurious Emissions at Antenna Terminal.**

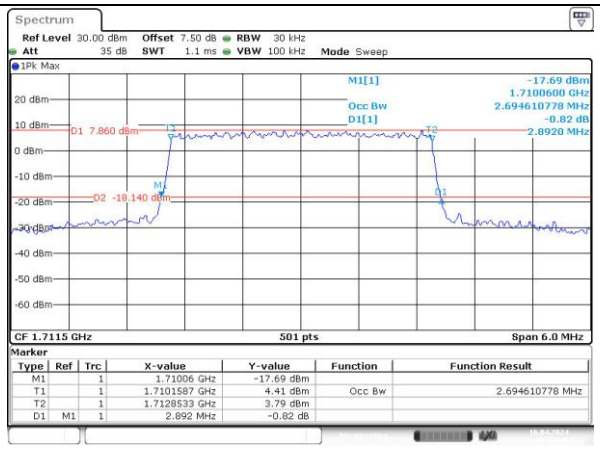
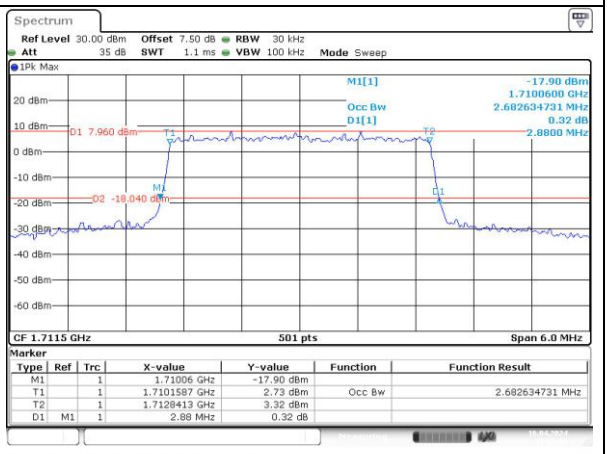
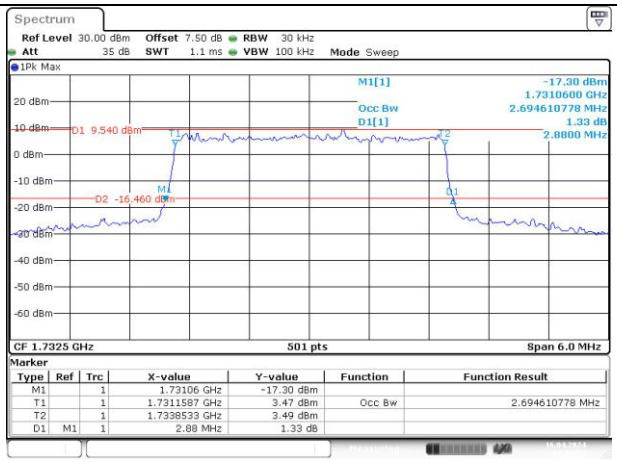
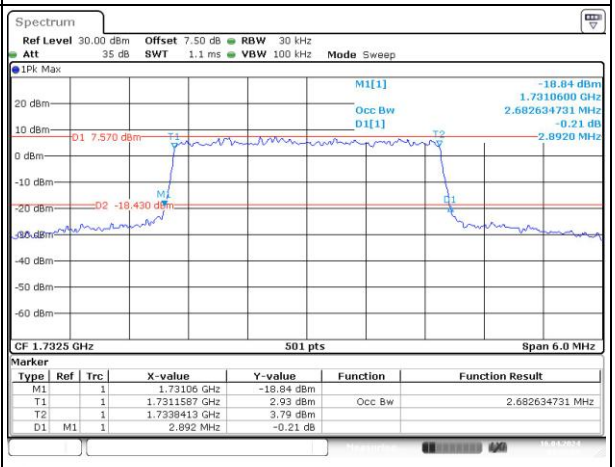
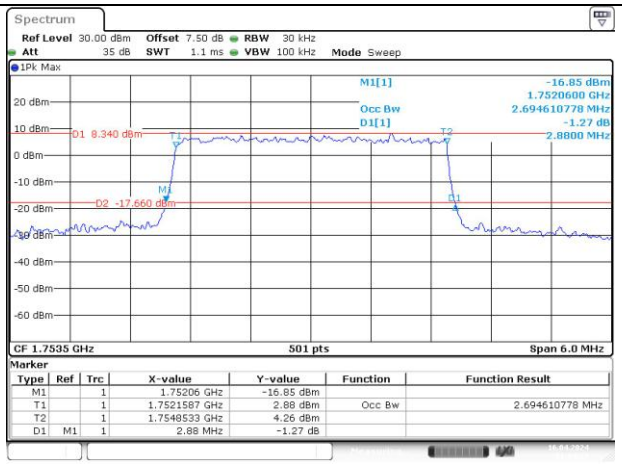
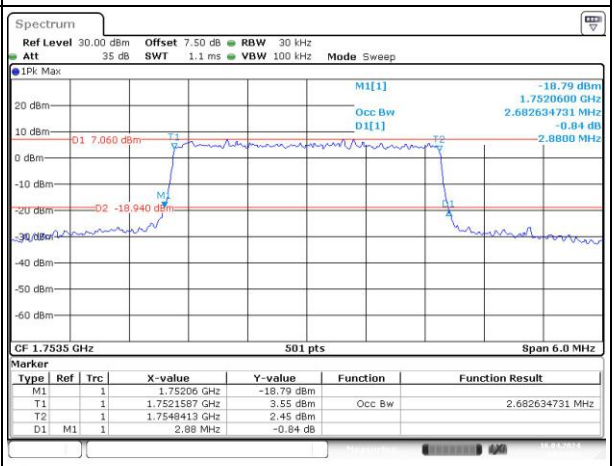
FCC §2.1051, §27.53:Out of band emission, Band Edge	
Result:	**Pass, Please refer to the test plots of Out of band emission, Band Edge.**

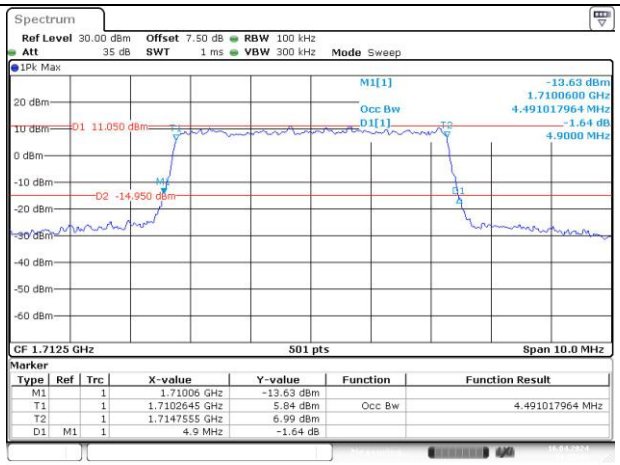
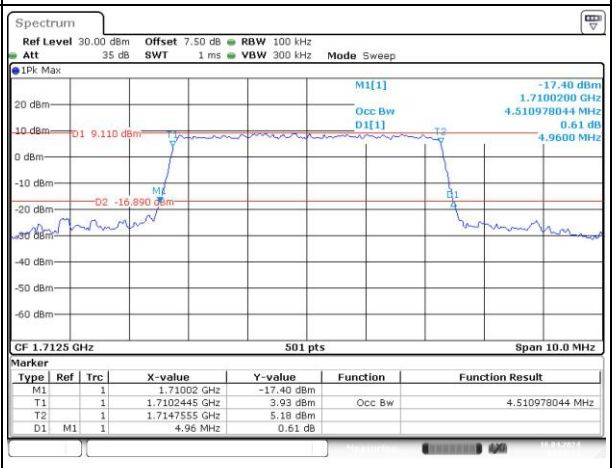
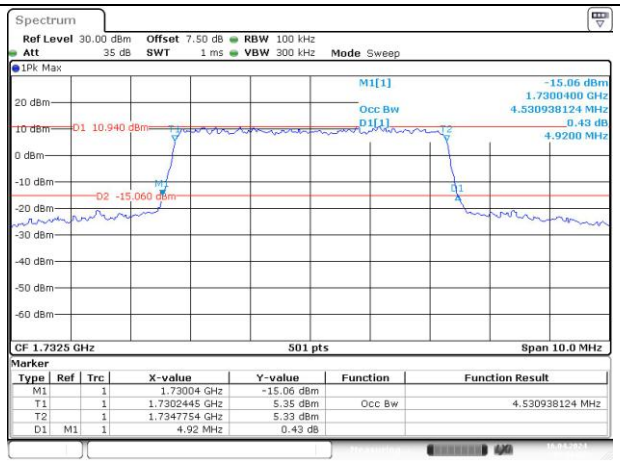
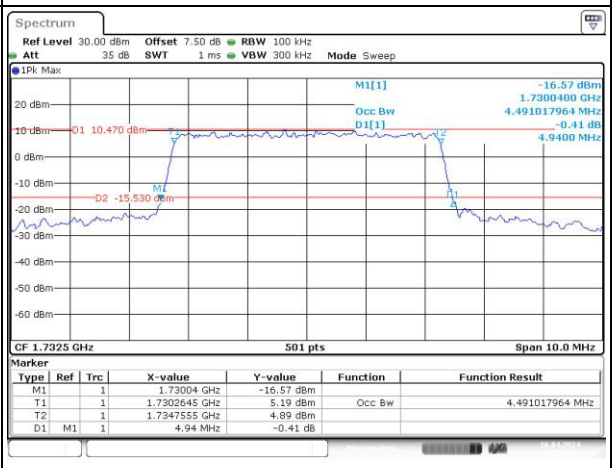
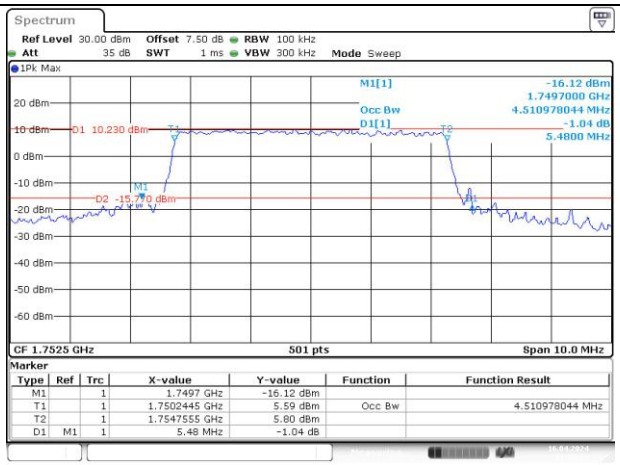
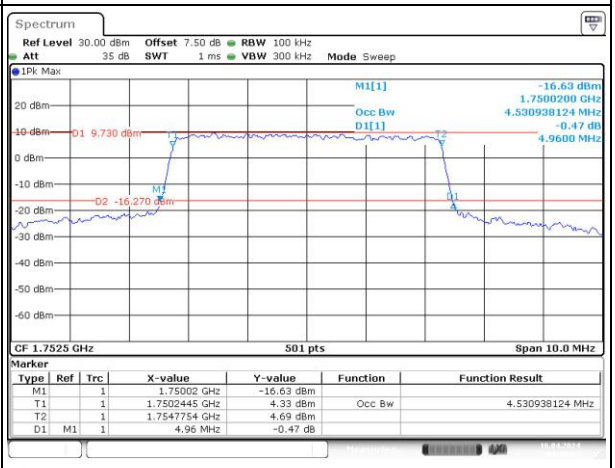
FCC §2.1055, §27.54: Frequency Stability						
Test Mode:	20M QPSK	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (℃)	Voltage (V_{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.8	1711.031	1710.00	1753.933	1755
	-20	3.8	1711.052	1710.00	1753.930	1755
	-10	3.8	1711.046	1710.00	1753.924	1755
	0	3.8	1711.031	1710.00	1753.921	1755
	10	3.8	1711.049	1710.00	1753.933	1755
	20	3.8	1711.058	1710.00	1753.942	1755
	30	3.8	1711.064	1710.00	1753.957	1755
	40	3.8	1711.082	1710.00	1753.957	1755
	50	3.8	1711.061	1710.00	1753.951	1755
Frequency Stability vs. Voltage	20	3.4	1711.082	1710.00	1753.945	1755
	20	4.35	1711.061	1710.00	1753.948	1755
					Result:	**Pass**

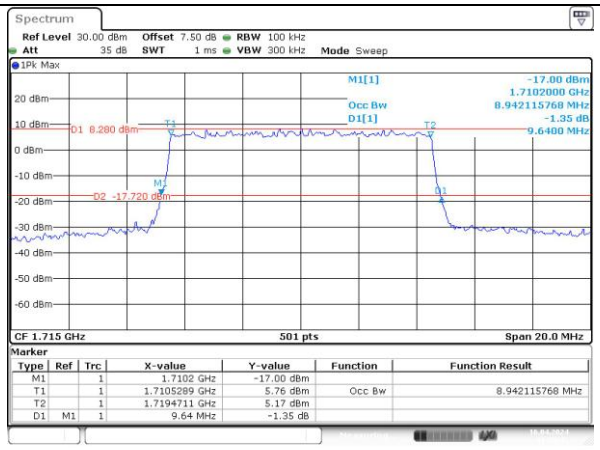
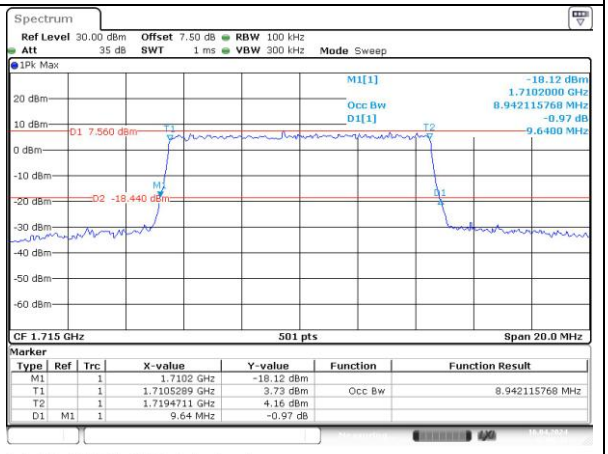
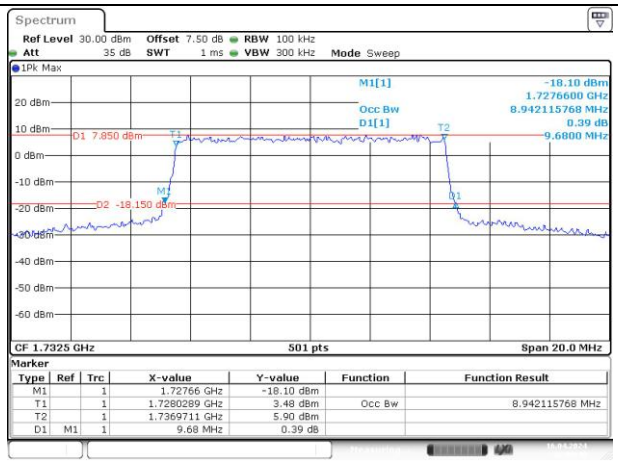
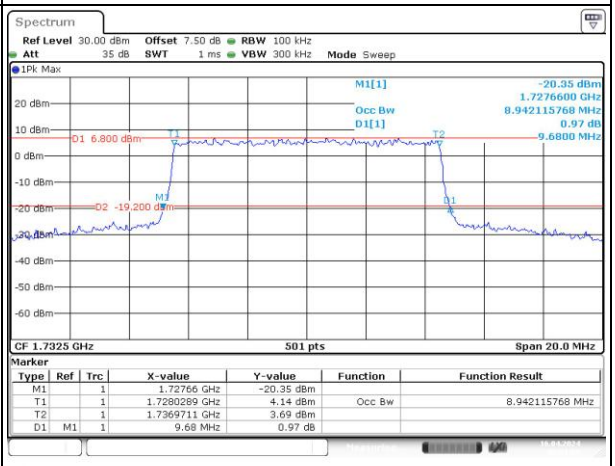
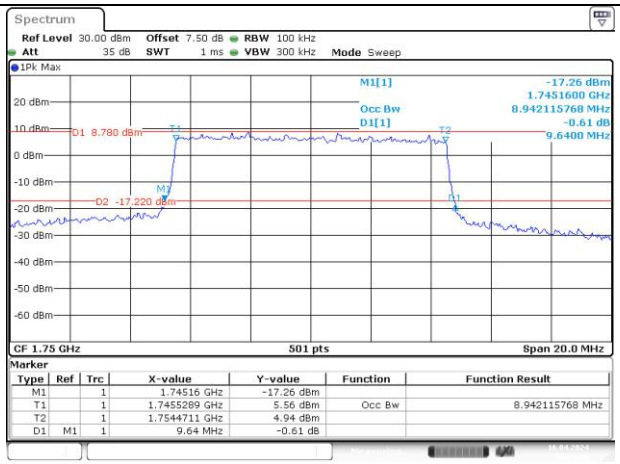
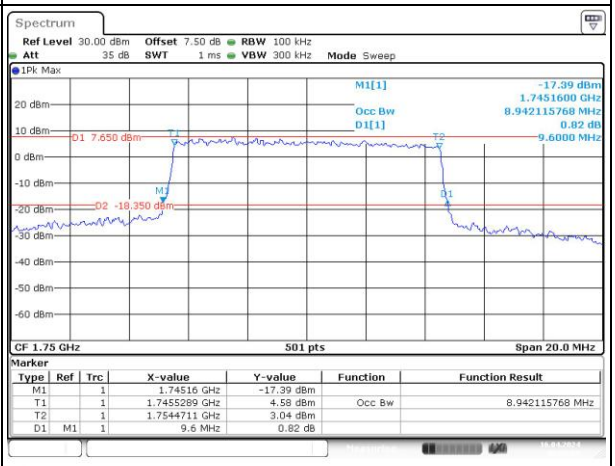
Test Mode:	20M 16QAM	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (℃)	Voltage (V_{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.8	1711.043	1710.00	1753.939	1755
	-20	3.8	1711.046	1710.00	1753.924	1755
	-10	3.8	1711.034	1710.00	1753.918	1755
	0	3.8	1711.049	1710.00	1753.921	1755
	10	3.8	1711.040	1710.00	1753.939	1755
	20	3.8	1711.058	1710.00	1753.942	1755
	30	3.8	1711.085	1710.00	1753.945	1755
	40	3.8	1711.064	1710.00	1753.951	1755
	50	3.8	1711.064	1710.00	1753.963	1755
Frequency Stability vs. Voltage	20	3.4	1711.079	1710.00	1753.966	1755
	20	4.35	1711.064	1710.00	1753.954	1755
					Result:	**Pass**

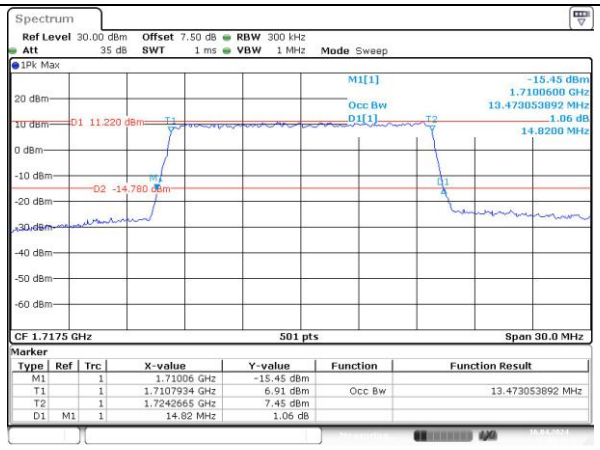
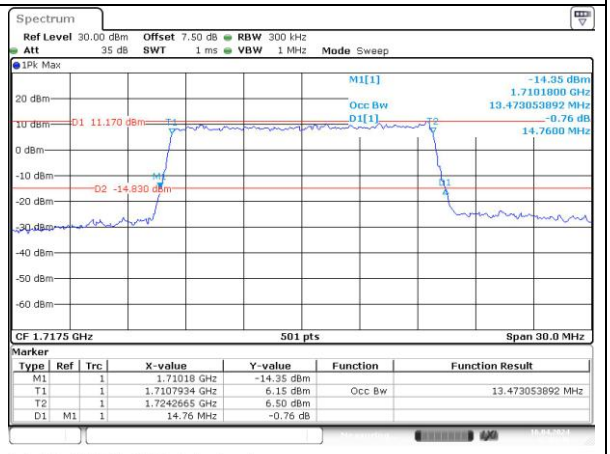
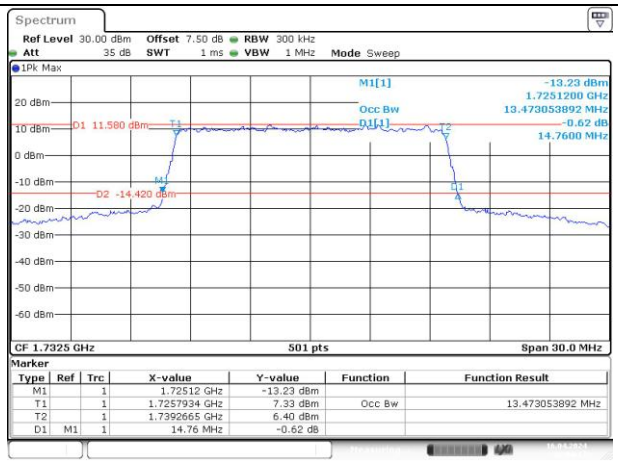
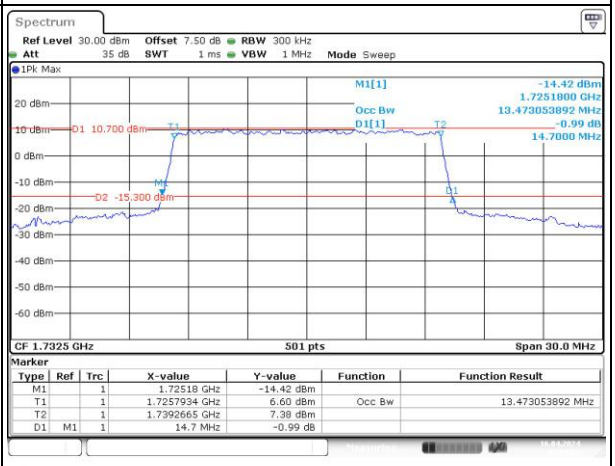
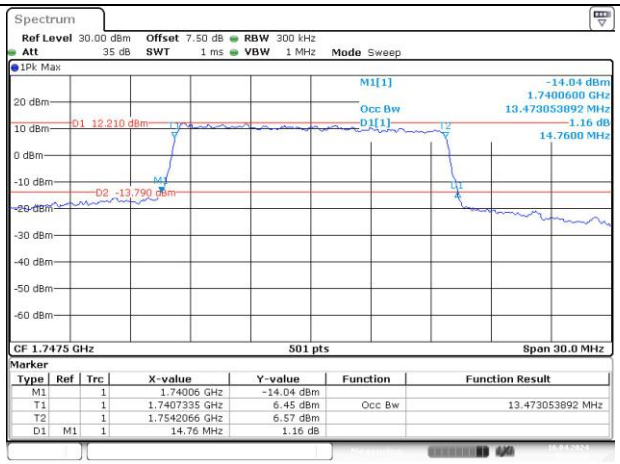
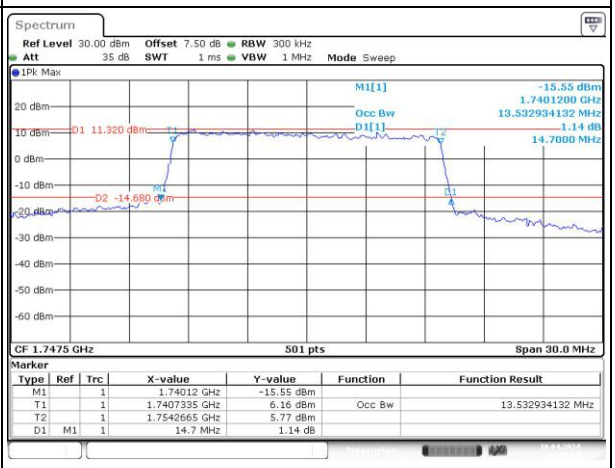
Test Plots:

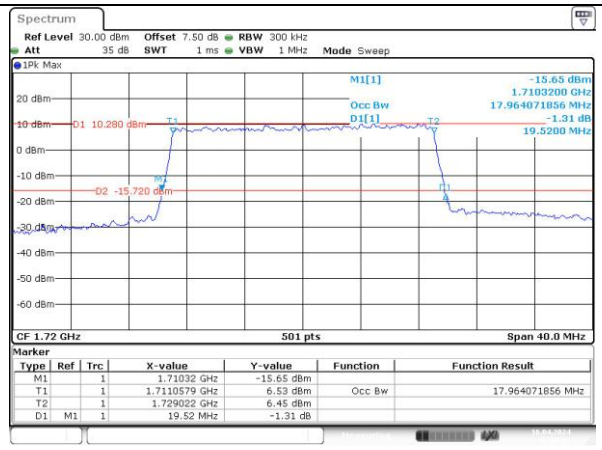
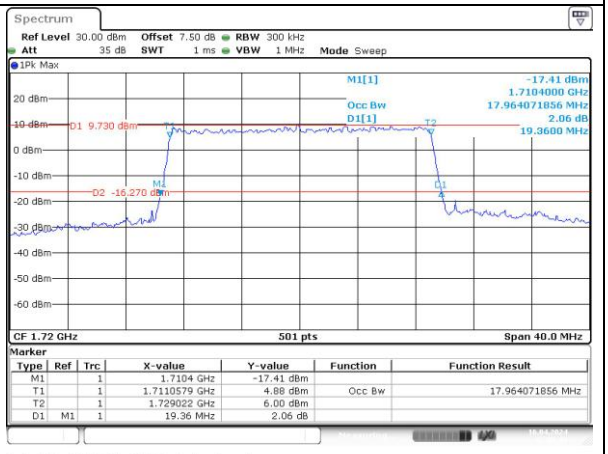
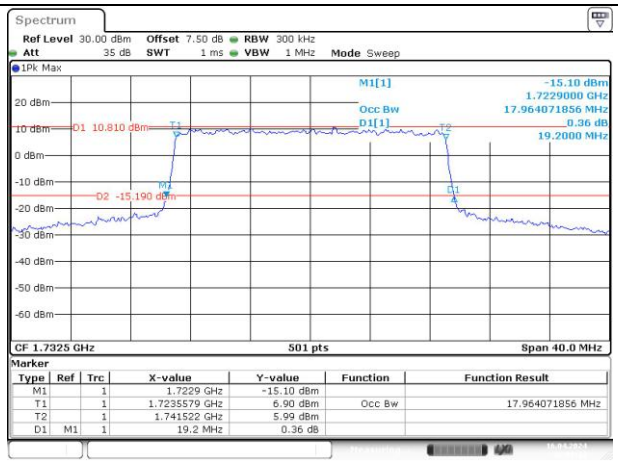
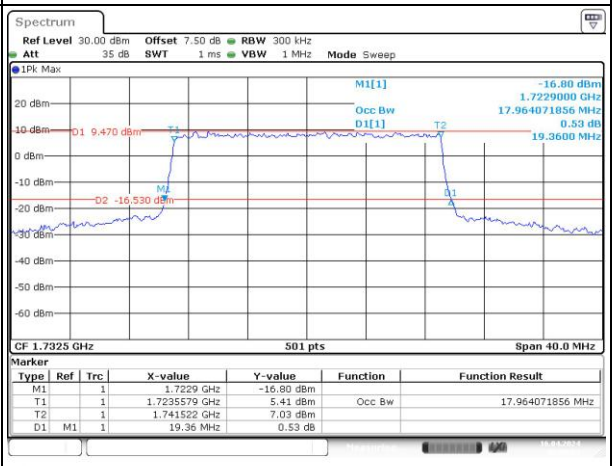
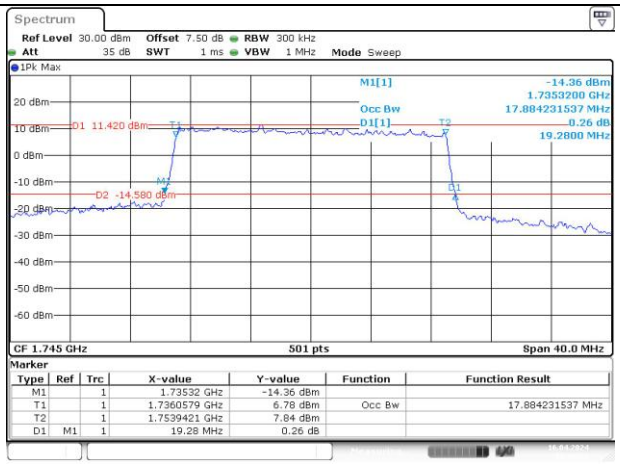
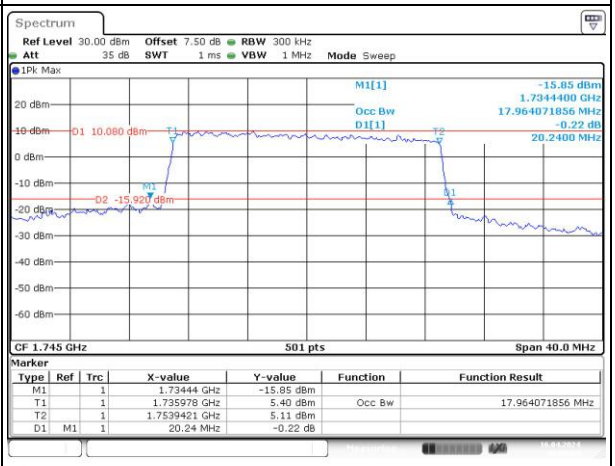
Occupied Bandwidth		
Channel	1.4MHz Bandwidth QPSK	1.4MHz Bandwidth 16QAM
Lowest		
Middle		
Highest		

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		

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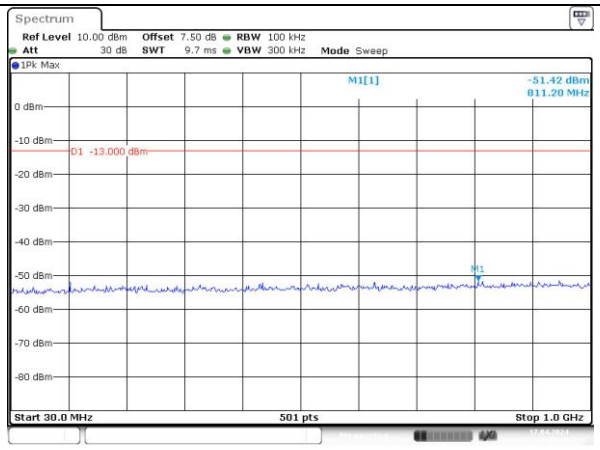
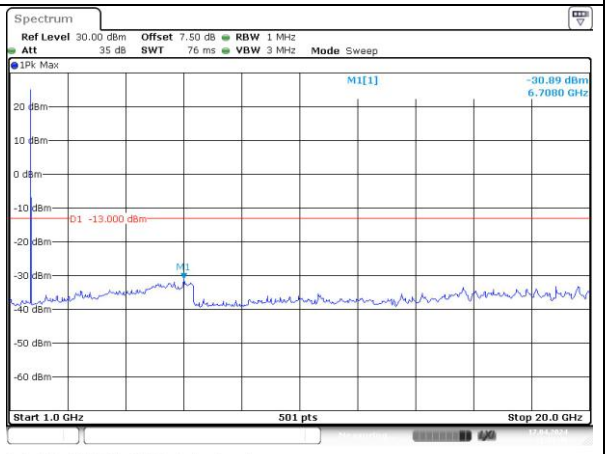
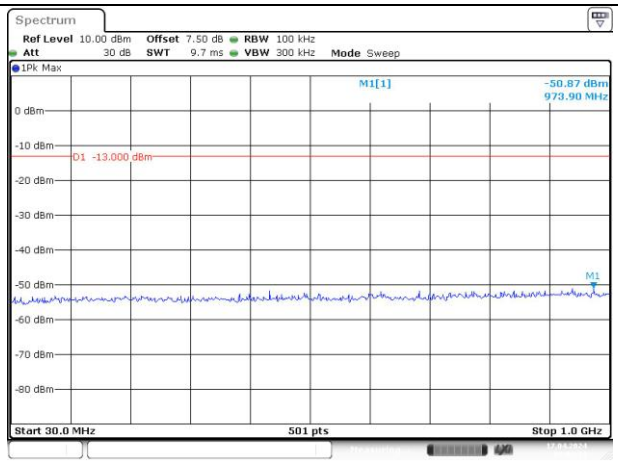
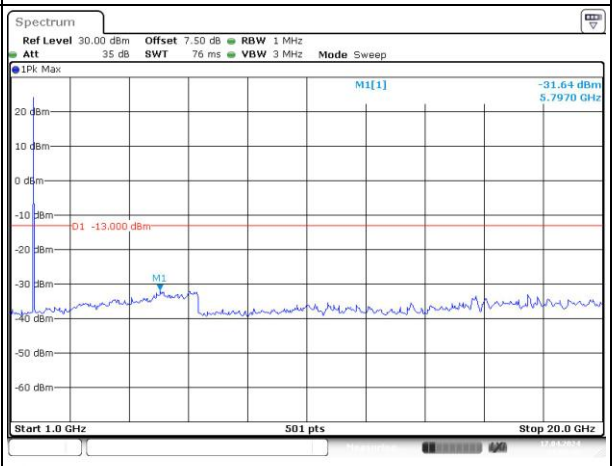
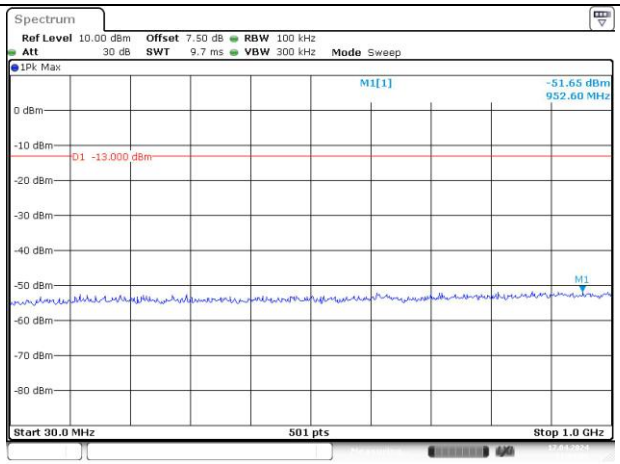
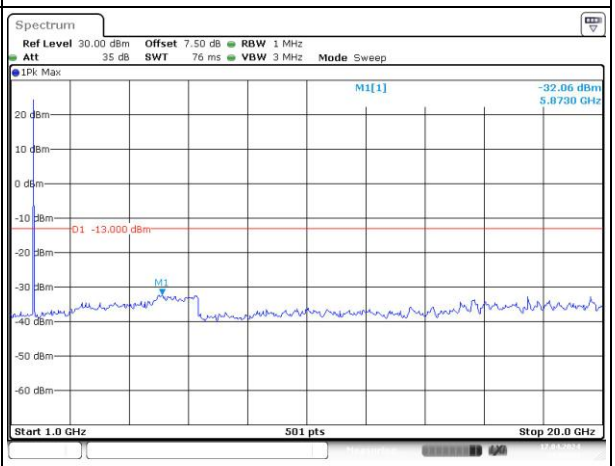
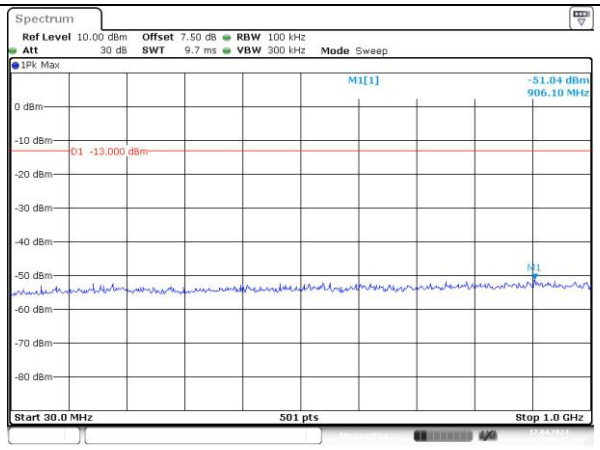
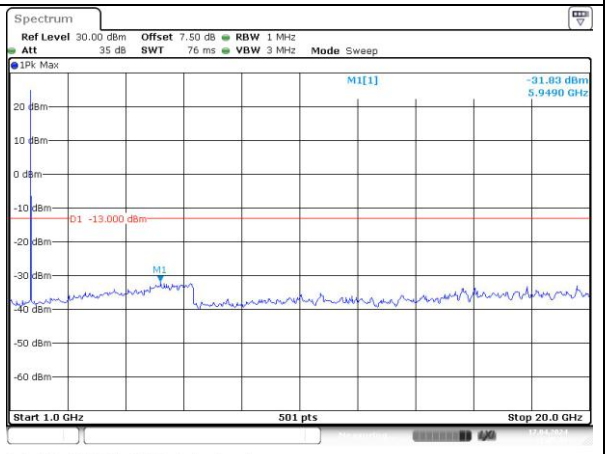
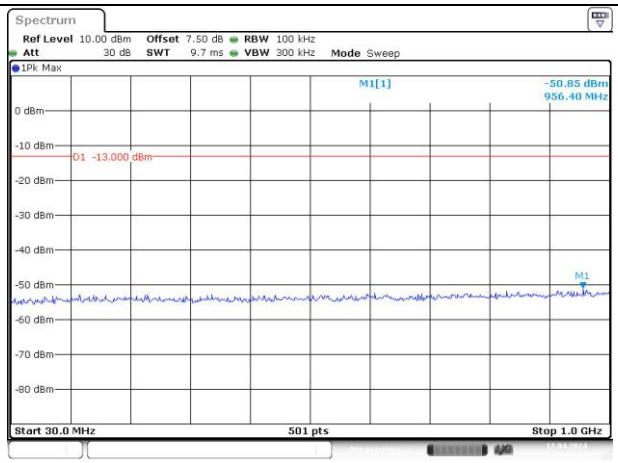
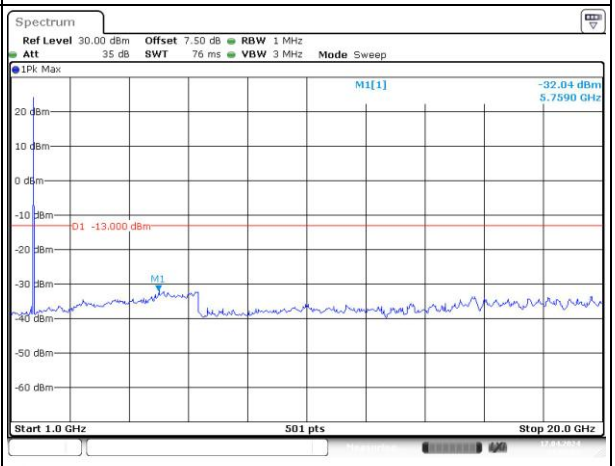
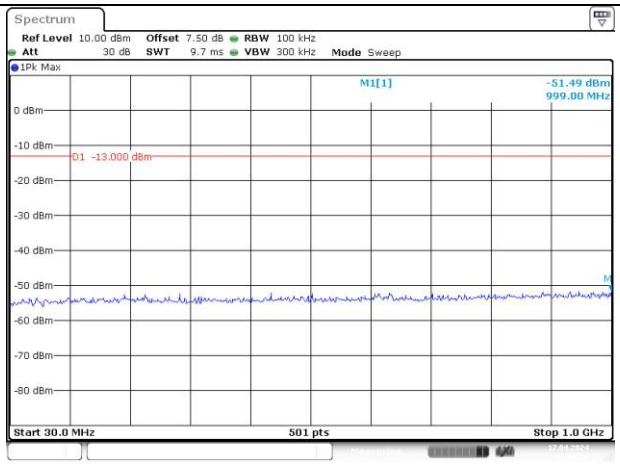
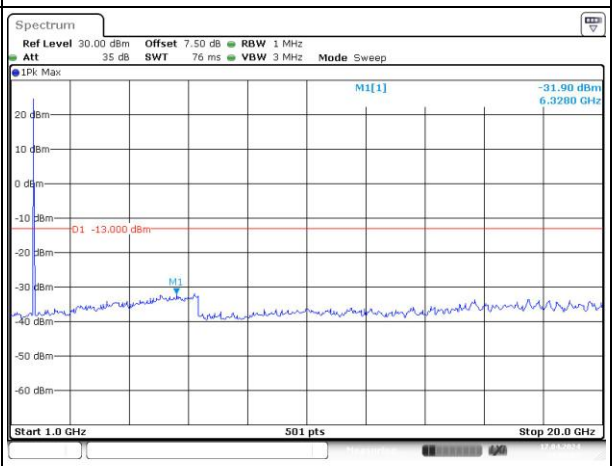
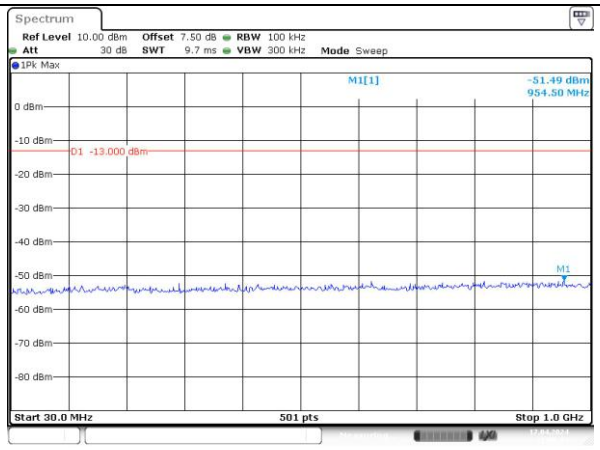
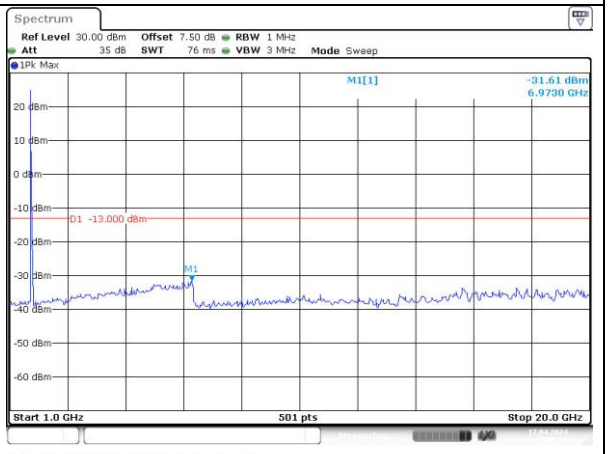
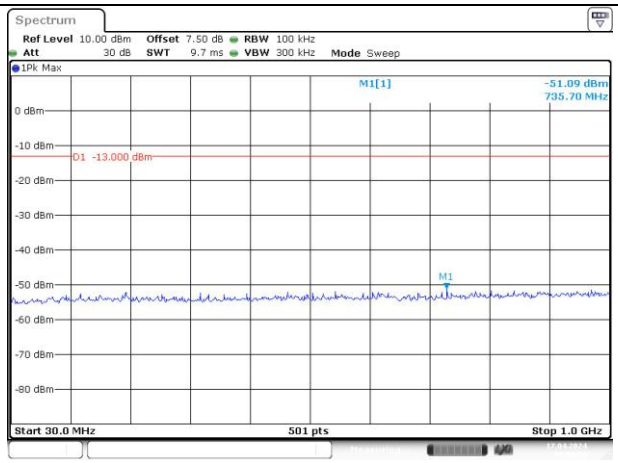
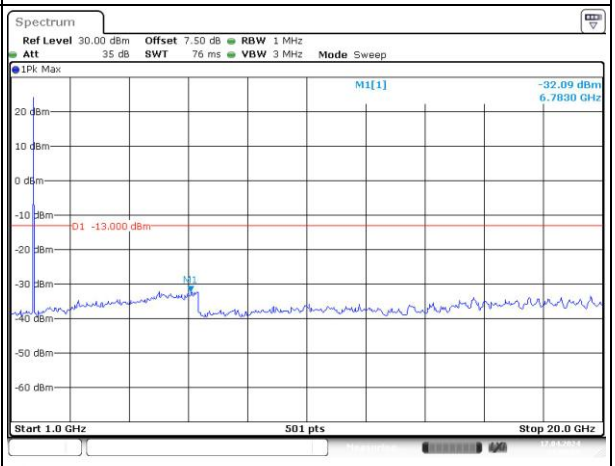
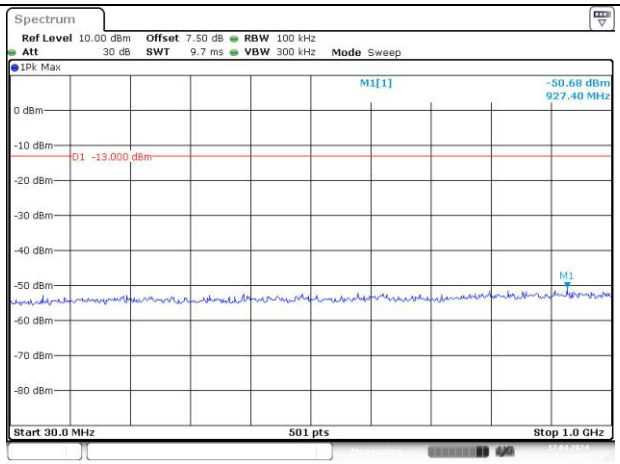
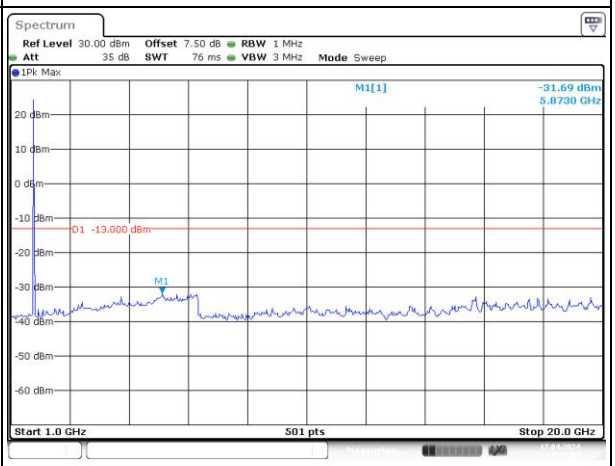
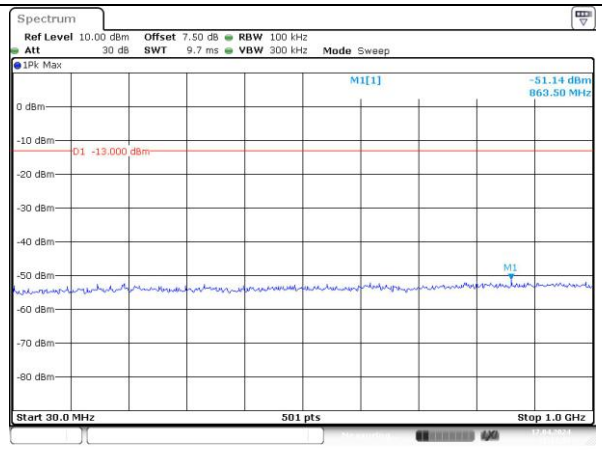
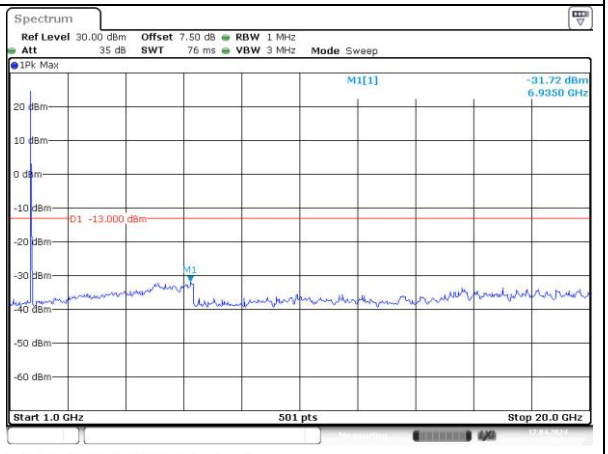
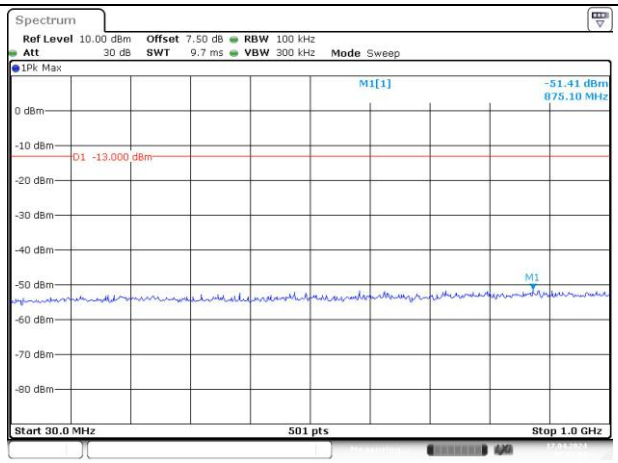
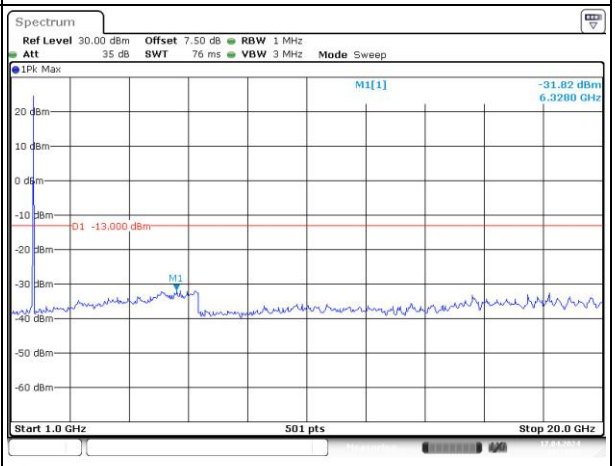
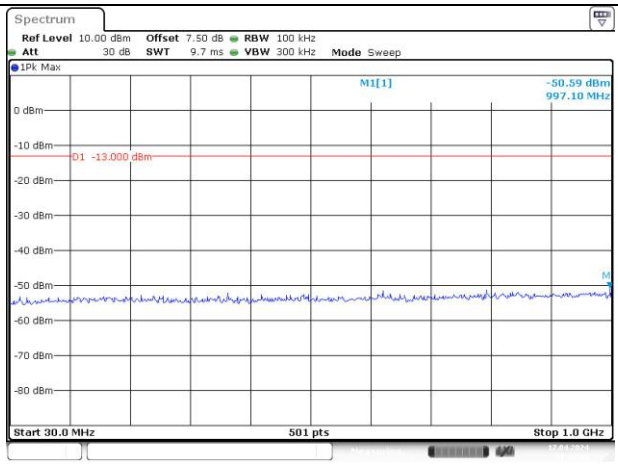
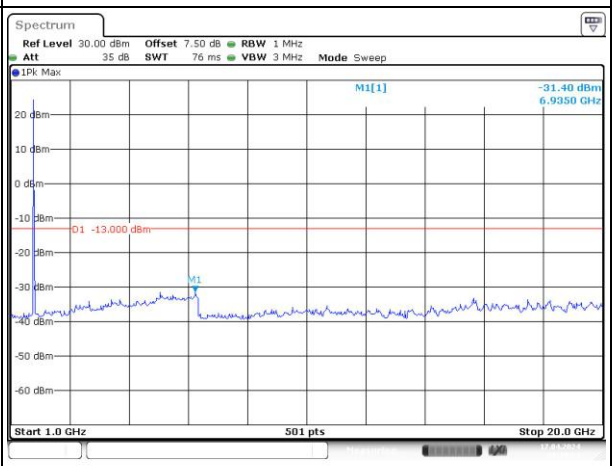
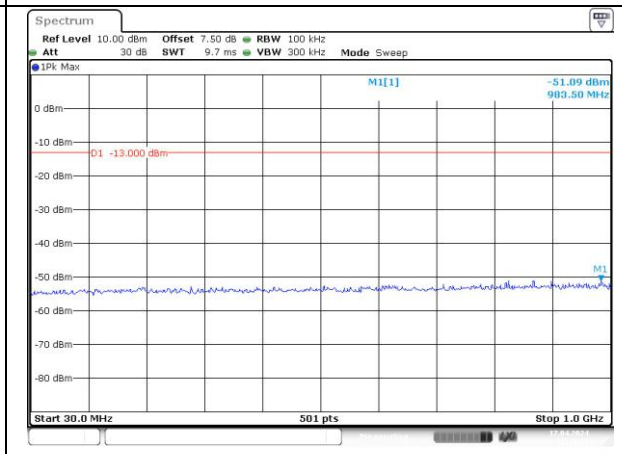
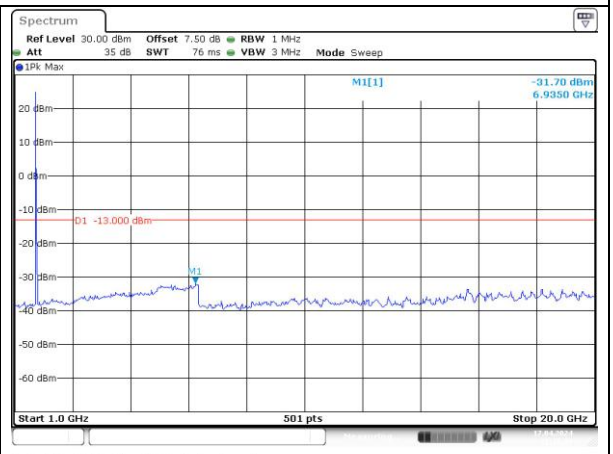
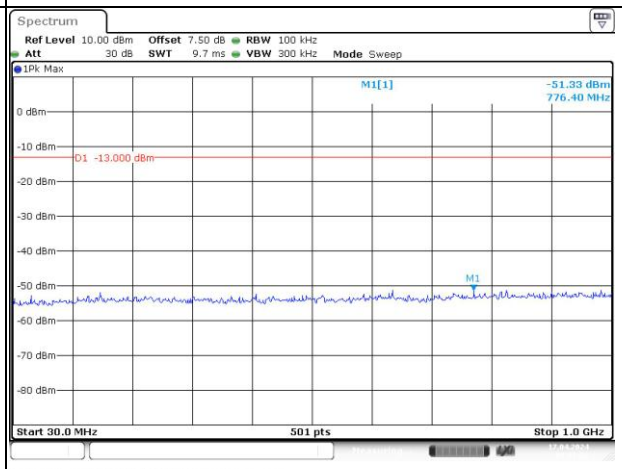
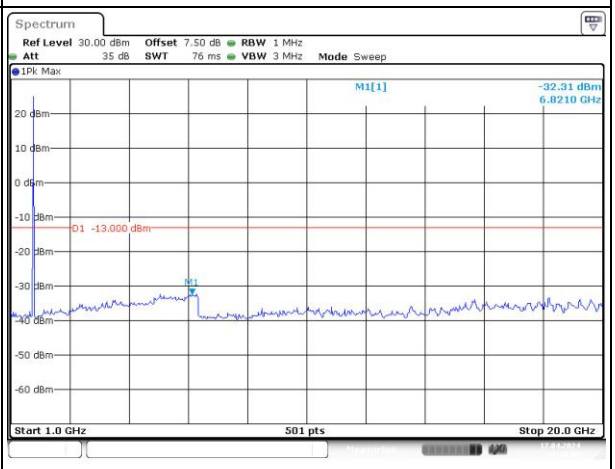
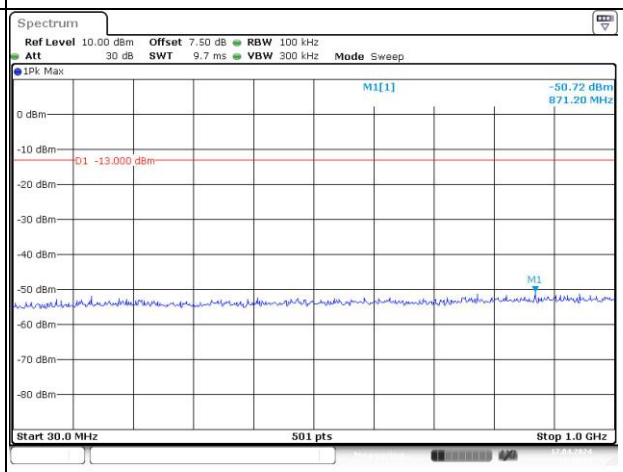
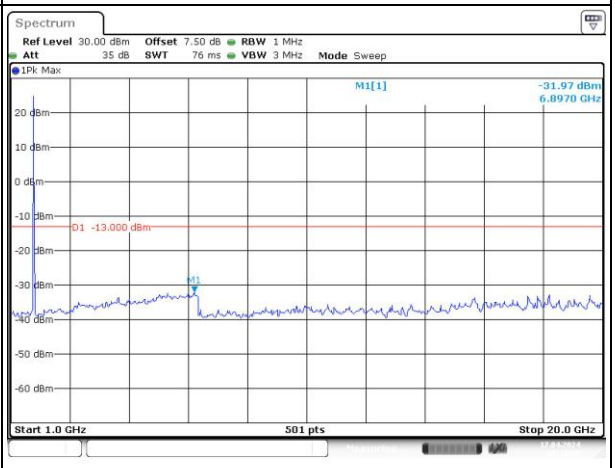
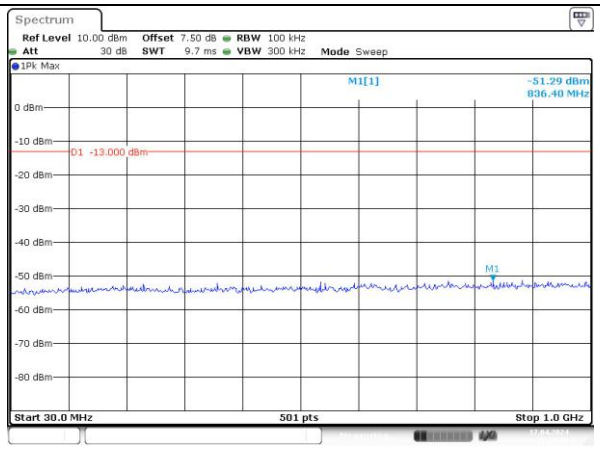
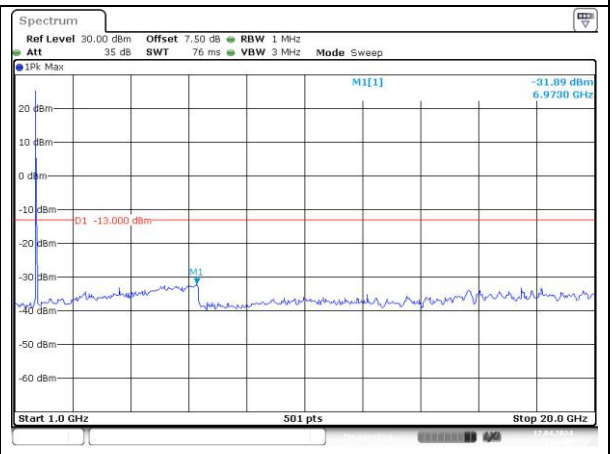
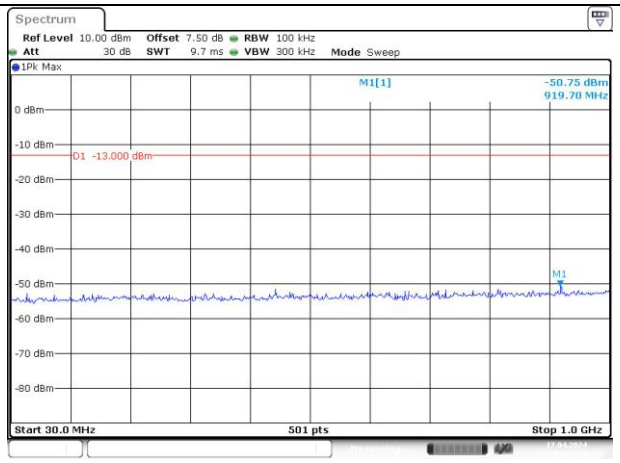
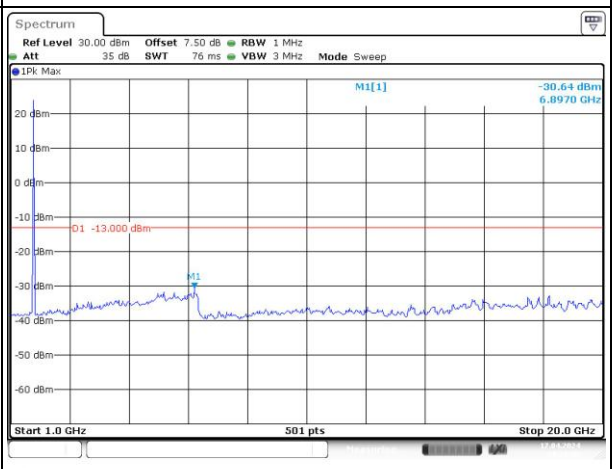
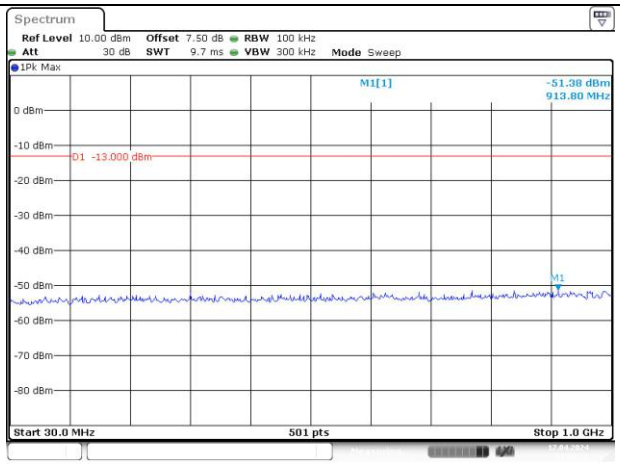
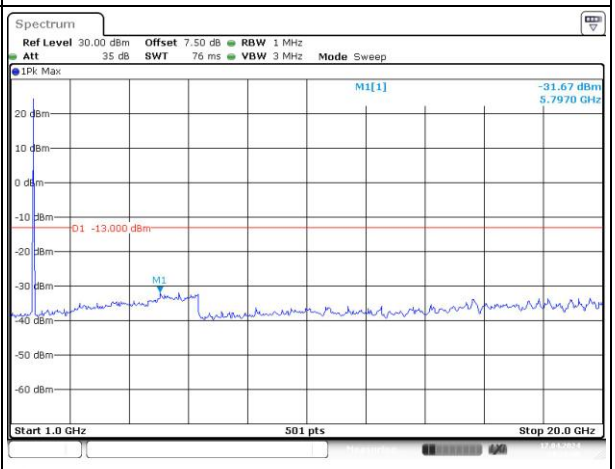
Spurious Emissions at Antenna Terminal		
Channel	**1.4MHz Bandwidth QPSK**	
Lowest		
Middle		
Highest		

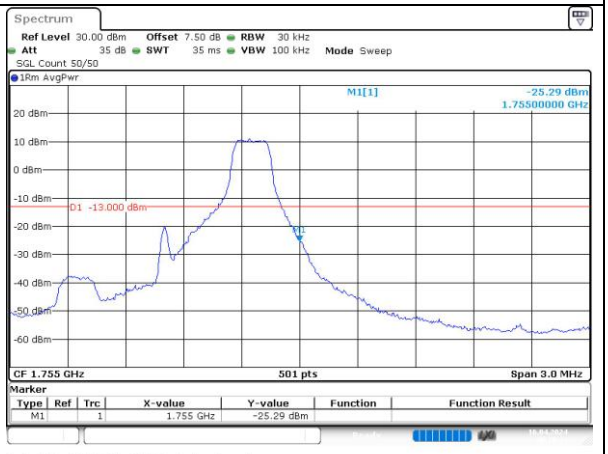
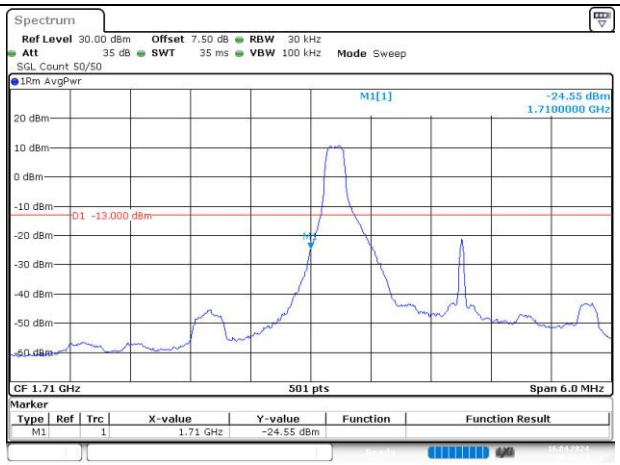
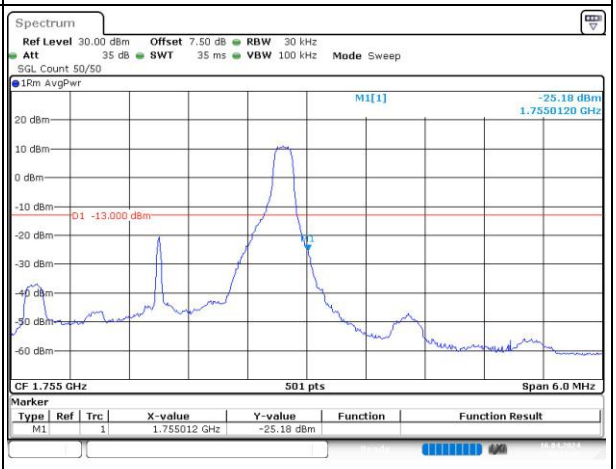
Spurious Emissions at Antenna Terminal		
Channel	**3MHz Bandwidth QPSK**	
Lowest		
Middle		
Highest		

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

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

Spurious Emissions at Antenna Terminal		
Channel	**15MHz Bandwidth QPSK**	
Lowest		
Middle		
Highest		

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 1.4MHz		
QPSK 3MHz		
QPSK 5MHz