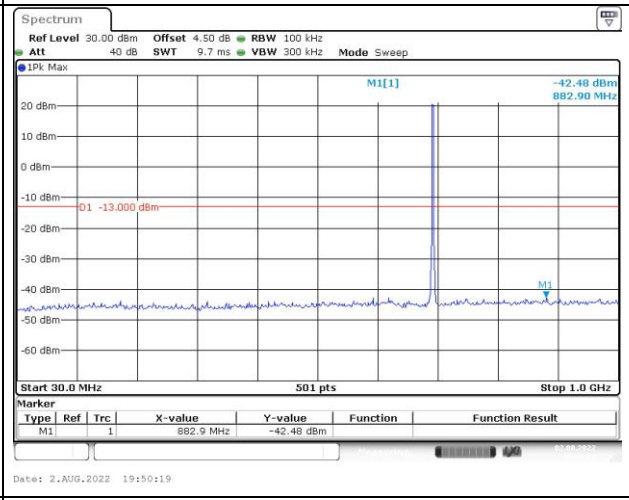
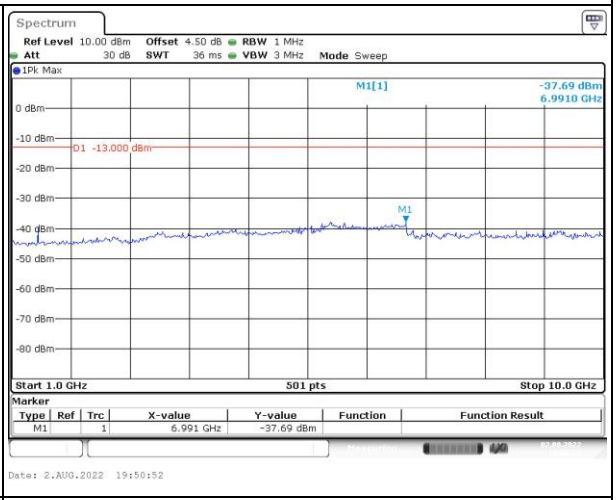
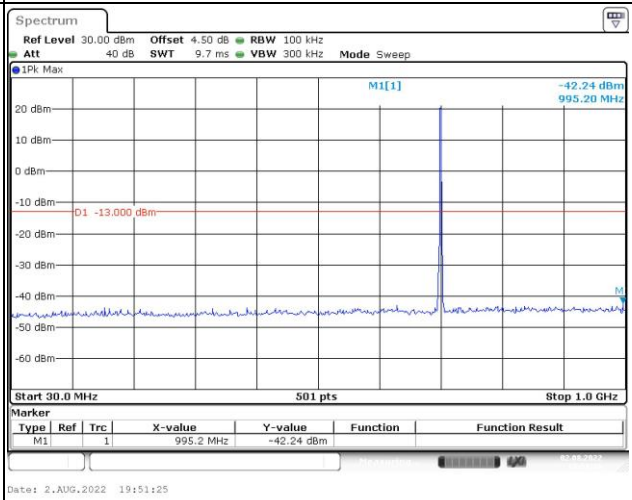
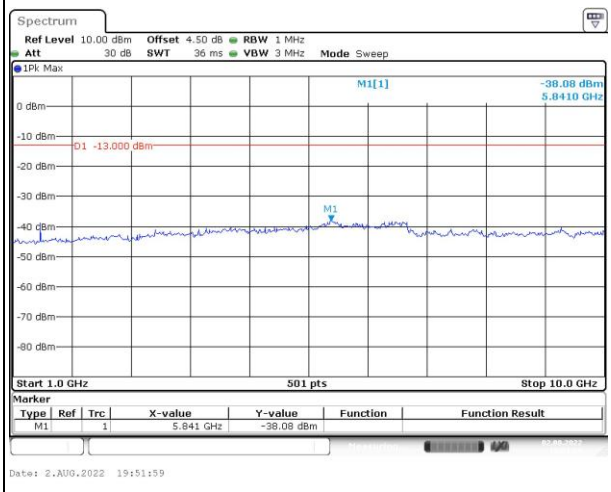
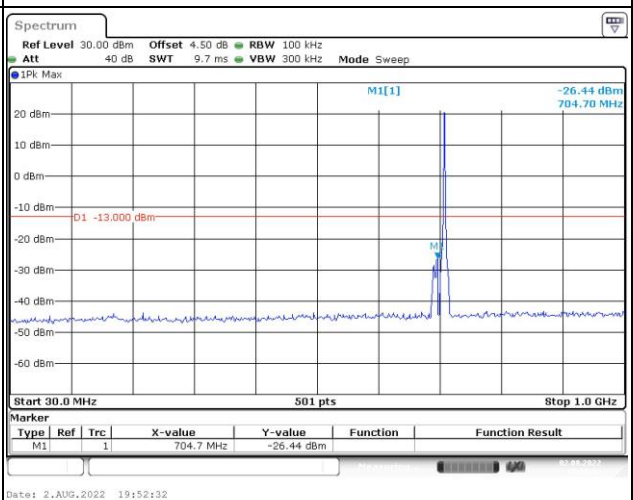
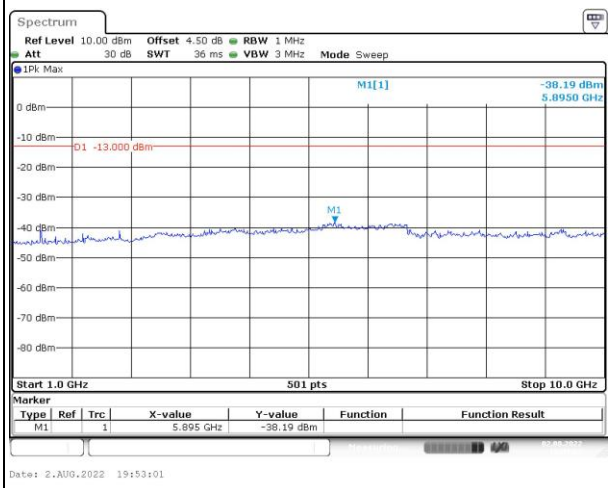
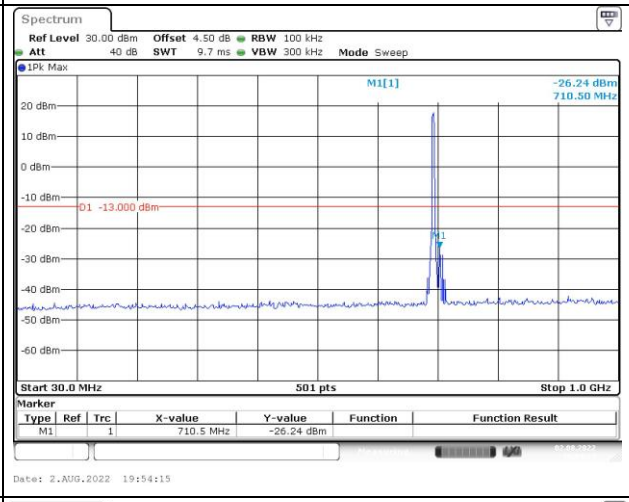
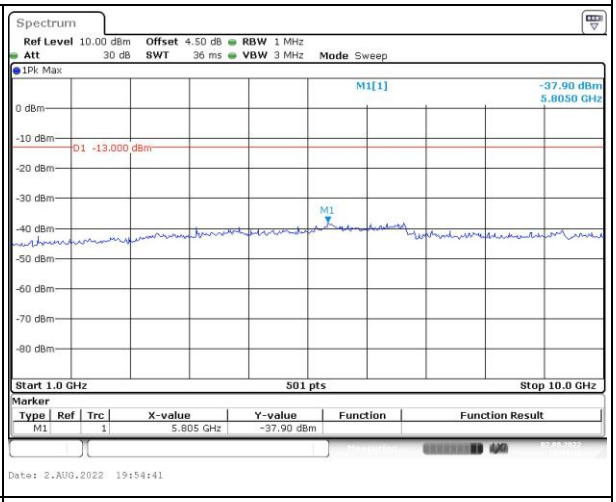
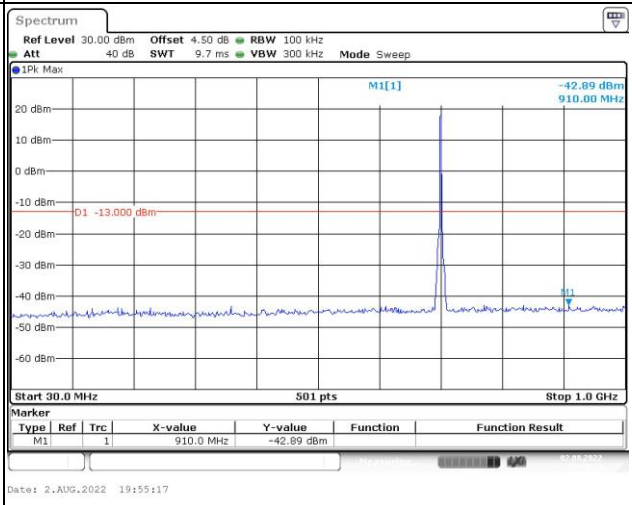
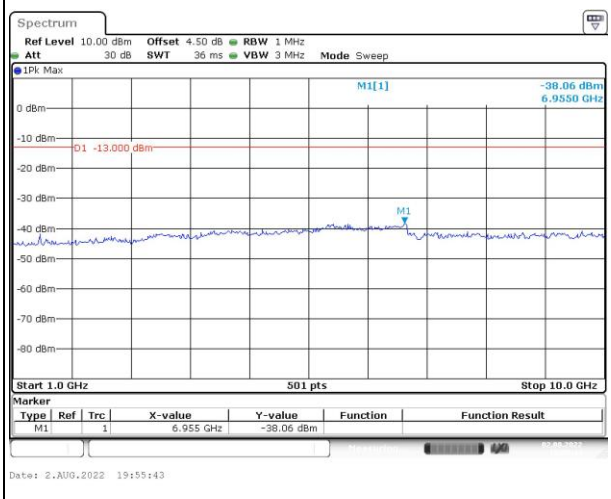
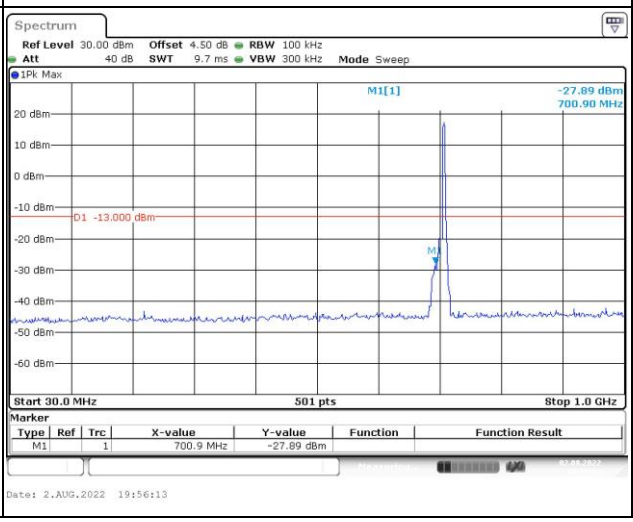
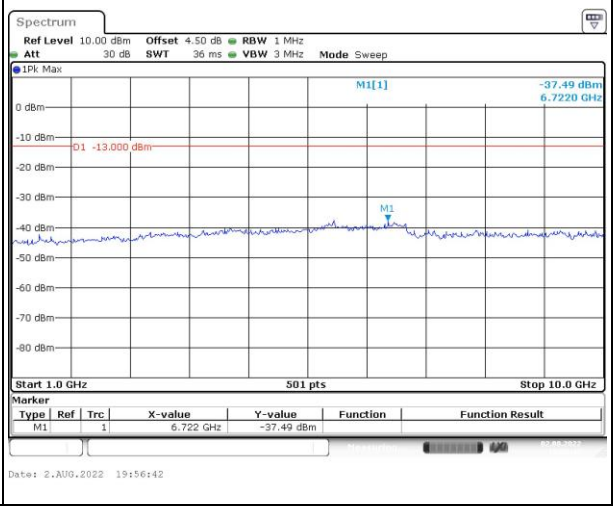
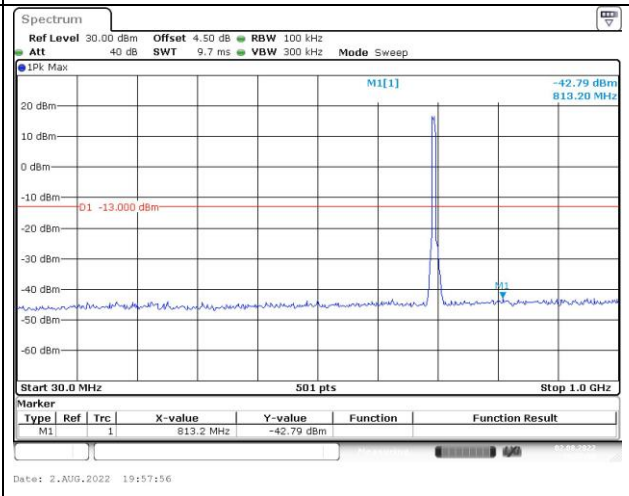
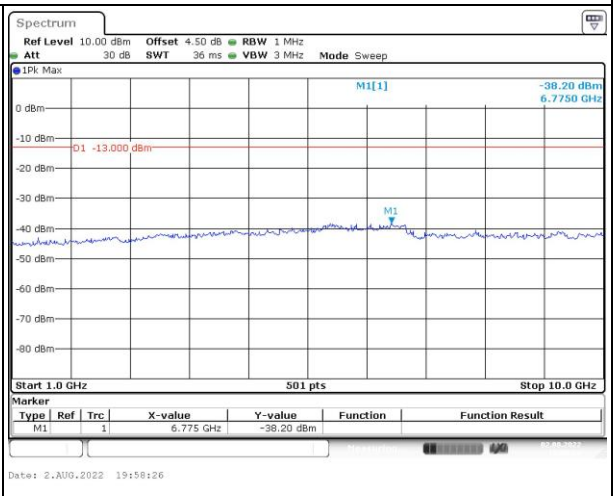
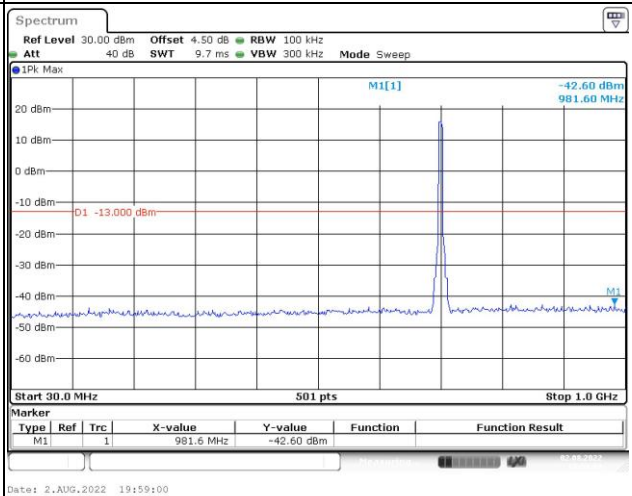
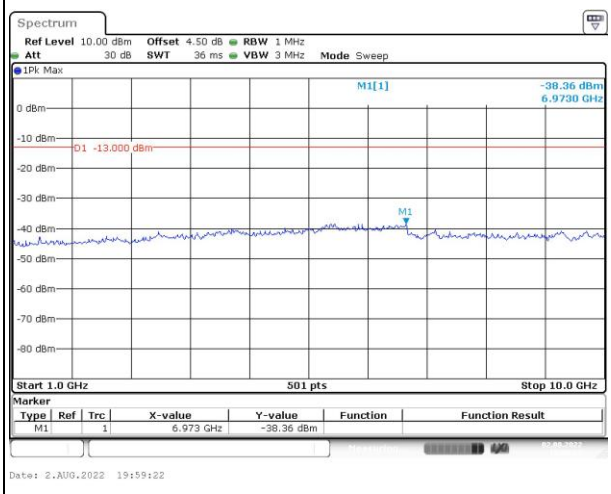
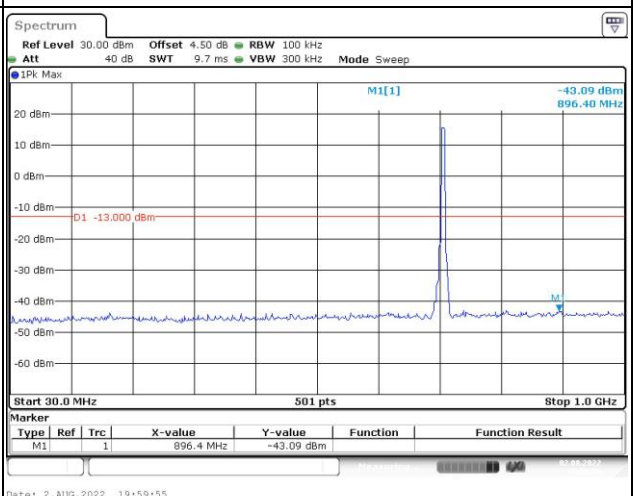
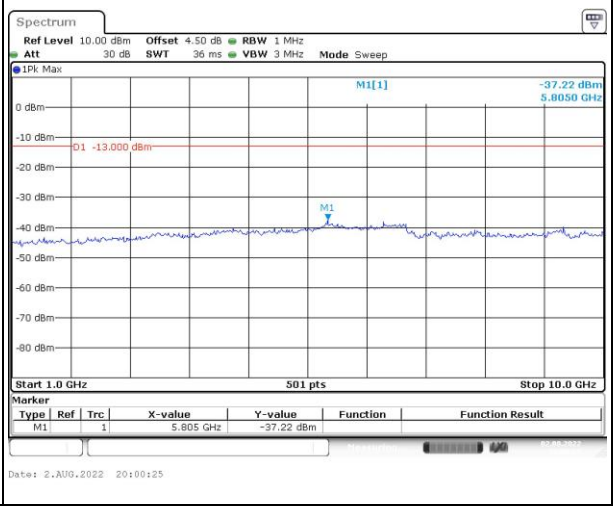
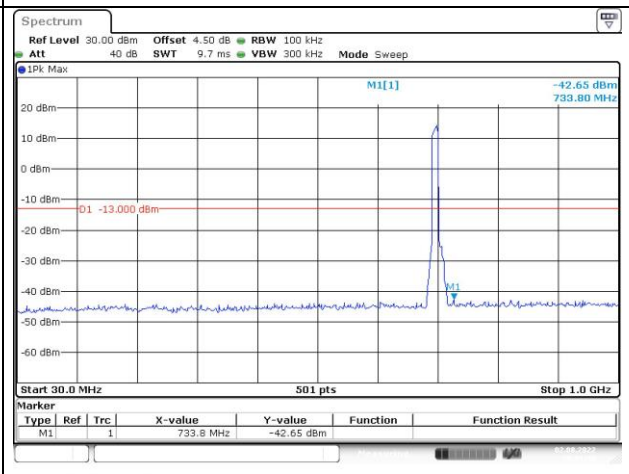
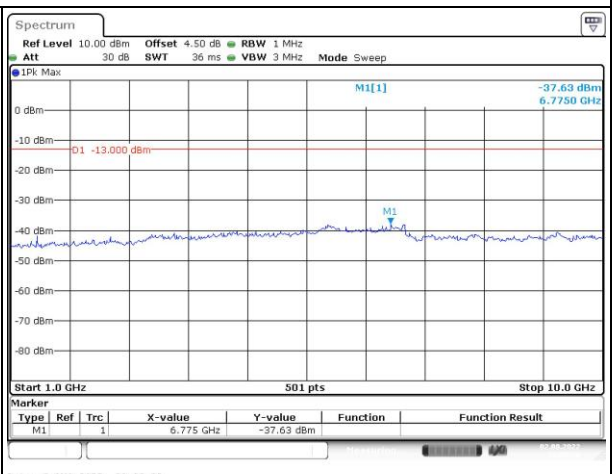
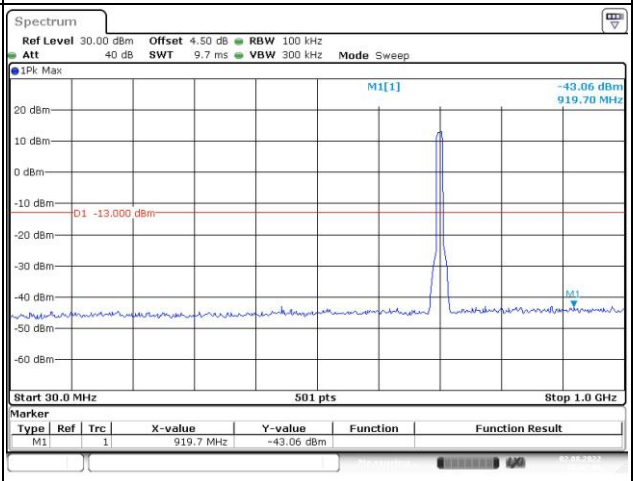
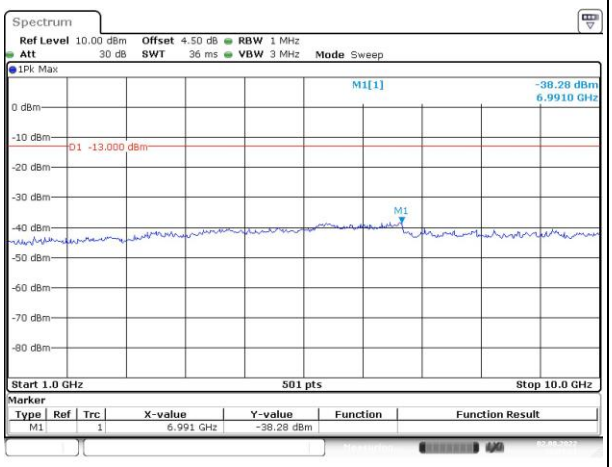
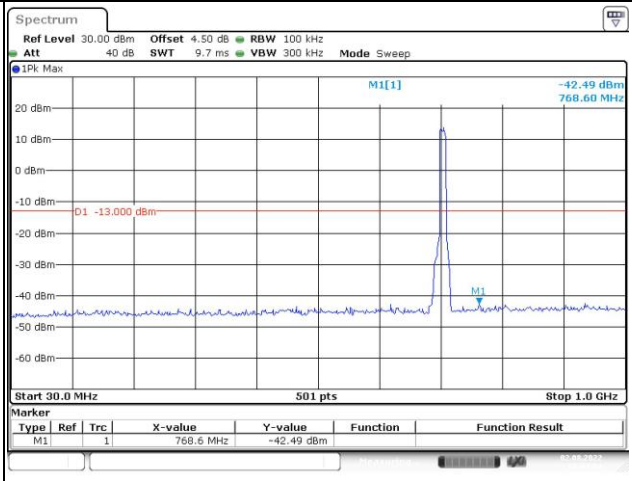
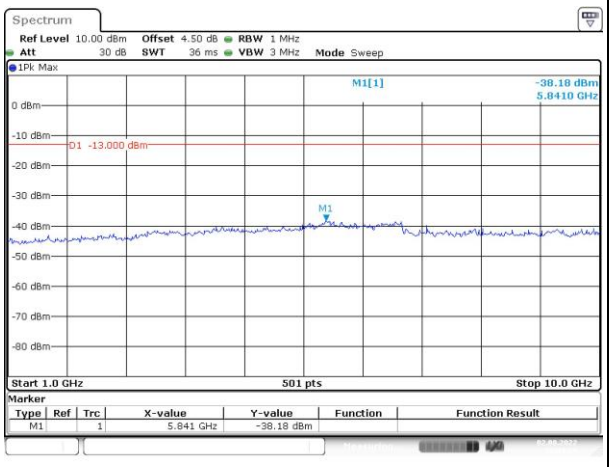
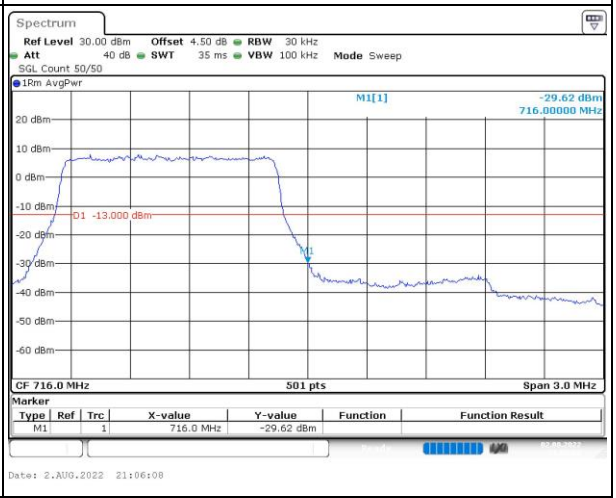
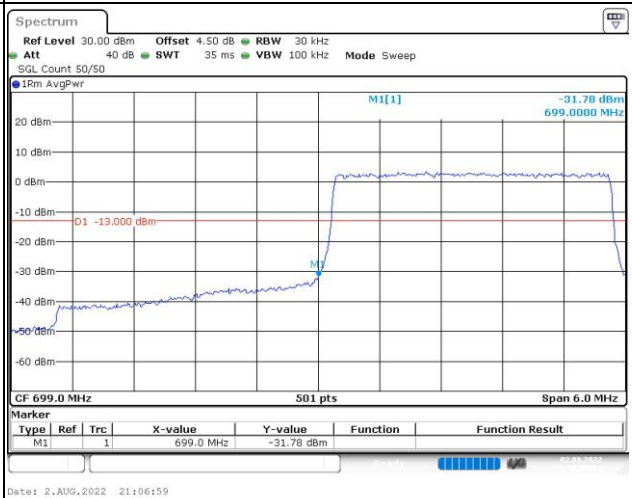
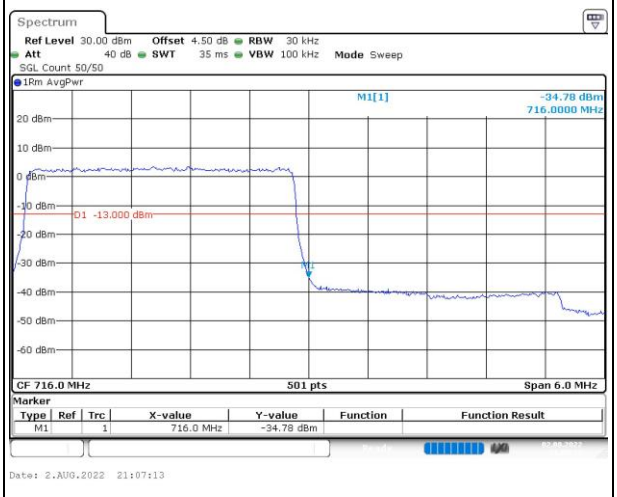
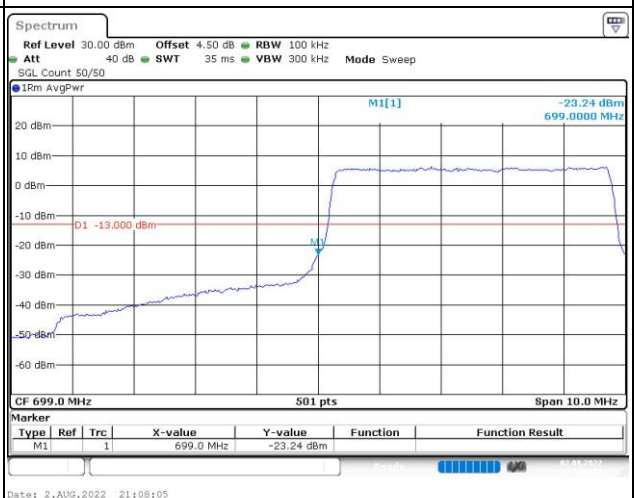
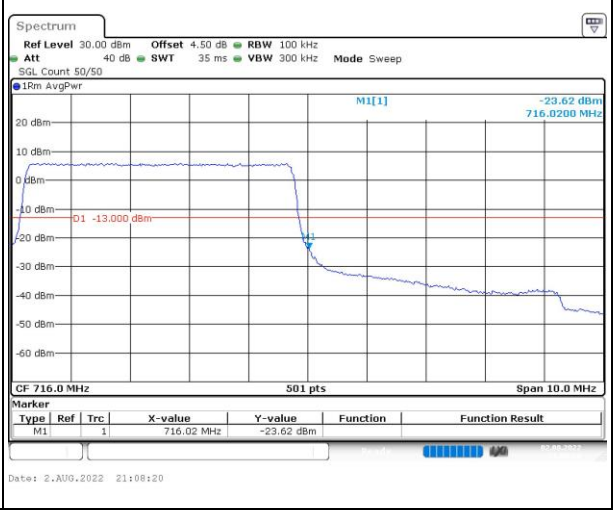
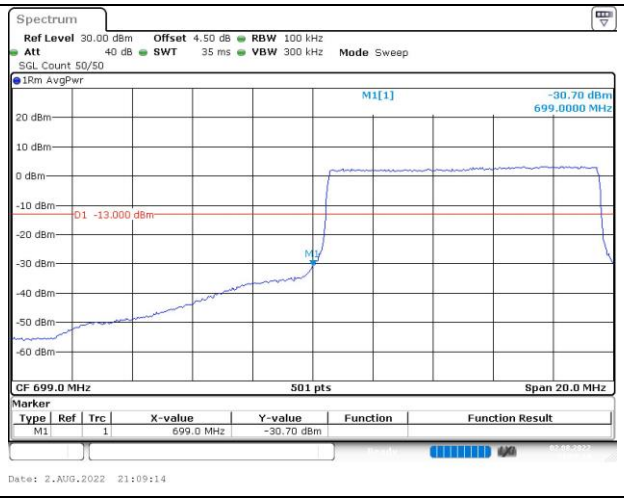
Spurious Emissions at Antenna Terminal		
Channel	**1.4MHz Bandwidth QPSK**	
Lowest		
Middle		
Highest		

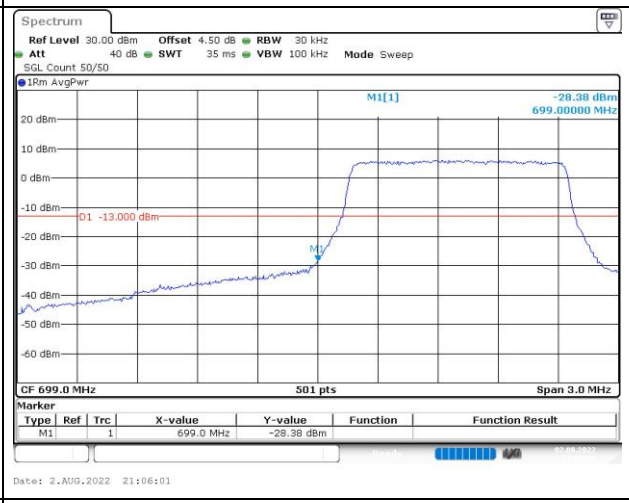
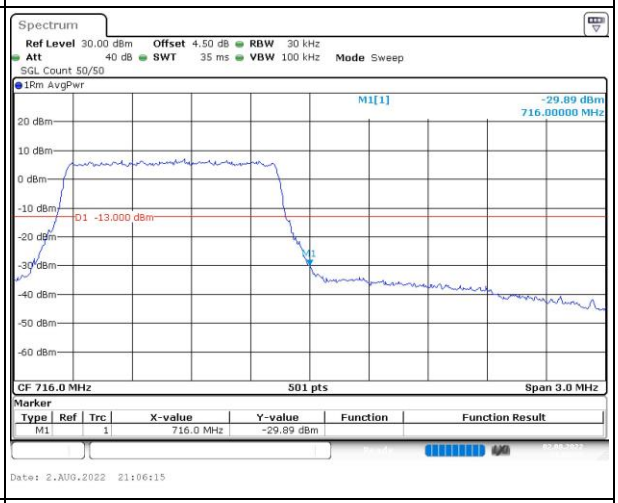
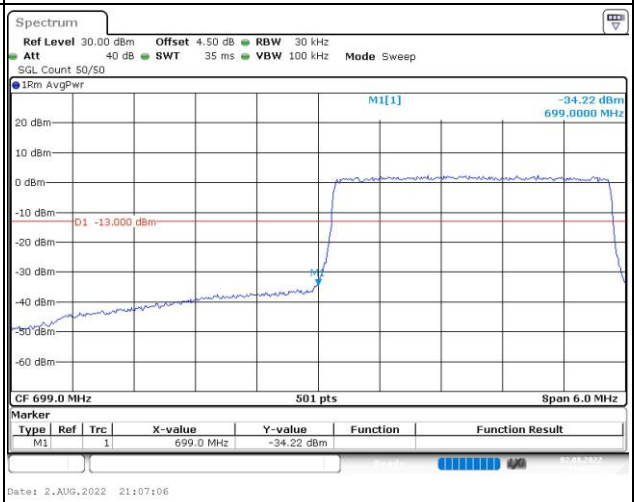
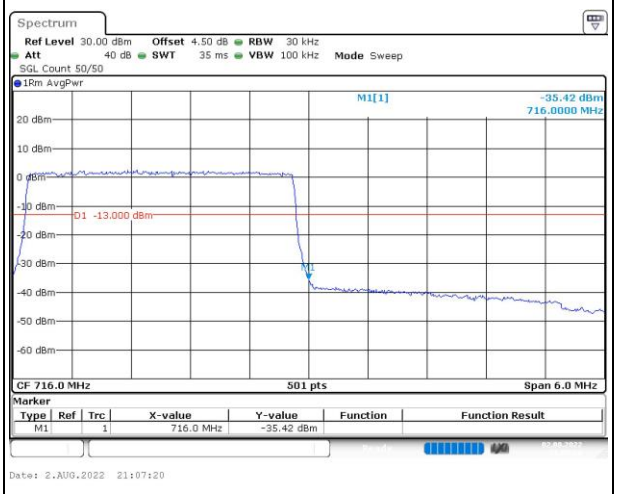
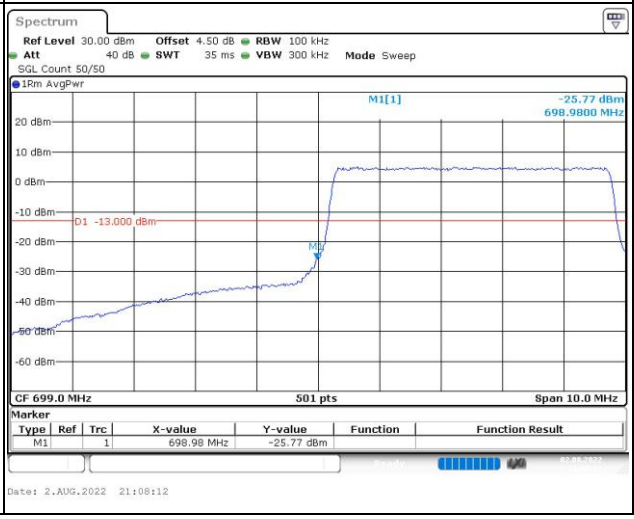
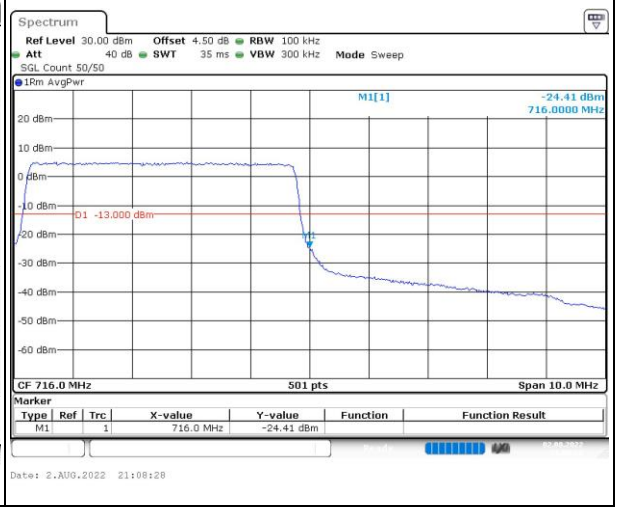
Spurious Emissions at Antenna Terminal		
Channel	**3MHz Bandwidth QPSK**	
Lowest		
Middle		
Highest		

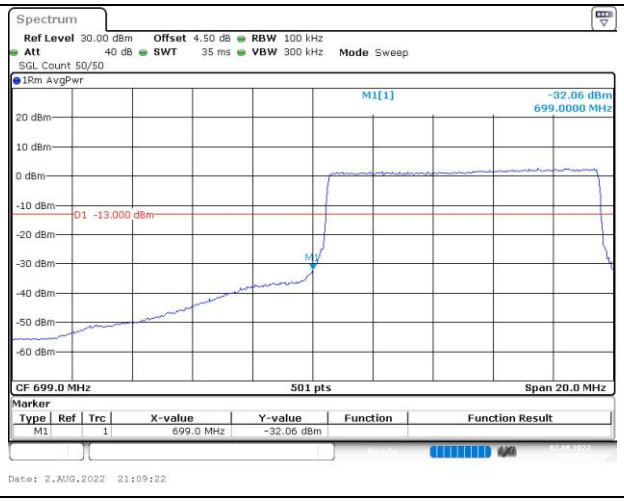
Spurious Emissions at Antenna Terminal		
Channel	**5MHz Bandwidth QPSK**	
Lowest		
Middle		
Highest		

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

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

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

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

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

4.11 Antenna Port Test Data and Results for LTE Band 66

Serial Number:	CR22070025-RF-S1	Test Date:	2022-08-02
Test Site:	RF	Test Mode:	Transmitting
Tester:	George Chen	Test Result:	**Pass**

Environmental Conditions:					
Temperature: (℃)	25.3~25.9	Relative Humidity: (%)	52~62	ATM Pressure: (kPa)	100.1~100.6

Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSV40	101474	2022-07-15	2023-07-14
zhuoxiang	Coaxial Cable	SMA-178	211002	Each time	N/A
Mini-Circuits	DC Block	BLK-18-S+	1554404	Each time	N/A
Weinschel	Coaxial Attenuators	53-20-34	LN751	Each time	N/A
Unknown	Coaxial tee connector	Unknown	2204006	Each time	N/A
R&S	Wideband Radio Communication Tester	CMW500	149218	2022-07-15	2023-07-14
UNI-T	Multimeter	UT39A+	C210582554	2021-09-30	2022-09-29
BACL	TEMP&HUMI Test Chamber	BTH-150-40	30174	2022-04-06	2023-04-05
ZHAOXIN	DC Power Supply	RXN-6010D	21R6010D0912386	N/A	N/A

** Statement of Traceability: China Certification ICT Co., Ltd (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).*

EUT Information@ LTE Band 66▲:					
Antenna Gain G_T (dBi):	0			Path Loss L_C (dB):	0.3
Operation Voltage(V_{DC}):					
Lowest:	3.3	Normal:	3.8	Highest:	4.2

Test Frequency For Each Mode:

Operation Bandwidth	Lowest Frequency (MHz)	Middle Frequency (MHz)	Highest Frequency (MHz)
1.4MHz	1710.7	1745	1779.3
3MHz	1711.5	1745	1778.5
5MHz	1712.5	1745	1777.5
10MHz	1715	1745	1775
15MHz	1717.5	1745	1772.5
20MHz	1720	1745	1770

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	23.82	23.8	23.93	23.85	30
	RB1#3	23.99	24.03	24.11		
	RB1#5	23.86	23.82	23.91		
	RB3#0	24.05	23.95	24.15		
	RB3#3	24.07	24.02	24.01		
	RB6#0	22.92	22.9	23.04		
1.4MHz 16QAM	RB1#0	23.04	22.92	23.01	23.13	30
	RB1#3	23.22	23.13	23.19		
	RB1#5	23.03	22.95	23.05		
	RB3#0	23.11	23.14	23.43		
	RB3#3	23.08	23.1	23.43		
	RB6#0	22.01	21.92	22.13		
3MHz QPSK	RB1#0	23.87	23.92	24.02	23.74	30
	RB1#8	23.85	23.93	24.04		
	RB1#14	23.91	23.96	24.03		
	RB6#0	22.92	22.86	22.97		
	RB6#9	22.86	22.89	22.99		
	RB15#0	23	23.02	23.18		
3MHz 16QAM	RB1#0	23.52	23.12	23.19	23.22	30
	RB1#8	23.49	23.12	23.14		
	RB1#14	23.48	23.14	23.12		
	RB6#0	22.02	22.02	22.06		
	RB6#9	22.01	22.06	22		
	RB15#0	22.06	22.02	22.23		
5MHz QPSK	RB1#0	23.8	23.78	23.86	23.71	30
	RB1#13	23.93	23.94	24.01		
	RB1#24	23.85	23.84	23.95		
	RB15#0	23.01	23.08	23.15		
	RB15#10	23	23	23.12		
	RB25#0	22.98	22.98	23.14		
5MHz 16QAM	RB1#0	23.24	22.97	22.88	22.98	30
	RB1#13	23.28	23.08	22.99		
	RB1#24	23.15	22.99	22.94		
	RB15#0	22.04	22.15	22.29		
	RB15#10	22.01	22.09	22.23		
	RB25#0	22.05	22.11	22.3		

10MHz QPSK	RB1#0	23.89	23.84	23.98	23.86	30
	RB1#25	24.09	24.07	24.16		
	RB1#49	23.99	23.95	24.02		
	RB25#0	23.02	23.08	23.18		
	RB25#25	23.01	23.06	23.14		
	RB50#0	23.08	23.1	23.21		
10MHz 16QAM	RB1#0	22.98	23.58	23.21	23.41	30
	RB1#25	23.08	23.71	23.38		
	RB1#49	22.98	23.49	23.25		
	RB25#0	22.18	22.21	22.25		
	RB25#25	22.1	22.17	22.29		
	RB50#0	22.1	22.16	22.29		
15MHz QPSK	RB1#0	23.79	23.8	23.89	23.76	30
	RB1#38	24.01	23.92	24.06		
	RB1#74	23.93	23.88	23.98		
	RB36#0	23.08	23.06	23.12		
	RB36#39	23.15	23.1	23.19		
	RB75#0	23.14	23.15	23.17		
15MHz 16QAM	RB1#0	23.3	23.51	23.1	23.27	30
	RB1#38	23.33	23.57	23.23		
	RB1#74	23.31	23.44	23.22		
	RB36#0	22.03	22.09	22.15		
	RB36#39	22.04	22.07	22.17		
	RB75#0	22.02	22.12	22.21		
20MHz QPSK	RB1#0	23.58	23.66	23.67	23.87	30
	RB1#50	24.11	23.96	24.17		
	RB1#99	23.69	23.71	23.81		
	RB50#0	22.97	23.02	23.05		
	RB50#50	22.97	22.99	23.05		
	RB100#0	23.01	23.04	23.04		
20MHz 16QAM	RB1#0	23.25	23.12	22.92	23.27	30
	RB1#50	23.57	23.44	23.45		
	RB1#99	23.33	23.07	23.09		
	RB50#0	22.02	22.07	22.13		
	RB50#50	22	22.04	22.16		
	RB100#0	22.05	22.12	22.13		
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	3.77	3.48	2.96	13
	RB100#0	4.99	4.64	4.58	13
20MHz 16QAM	RB1#0	4.78	4.46	3.97	13
	RB100#0	6.03	5.62	5.62	13
				Result:	**Pass**

FCC §2.1049, §27.53:Occupied Bandwidth						
Operation Mode	99% Occupied Bandwidth (MHz)			26 dB Occupied Bandwidth (MHz)		
	Low Channel	Middle channel	High Channel	Low Channel	Middle Channel	High Channel
1.4MHz QPSK	1.102	1.102	1.102	1.32	1.302	1.314
1.4MHz 16QAM	1.096	1.096	1.108	1.29	1.29	1.332
3MHz QPSK	2.695	2.695	2.683	2.868	2.88	2.904
3MHz 16QAM	2.683	2.683	2.683	2.892	2.892	2.88
5MHz QPSK	4.511	4.531	4.531	5.2	5.16	5.24
5MHz 16QAM	4.551	4.551	4.511	5.22	5.26	5.18
10MHz QPSK	8.942	8.982	8.942	9.92	10.08	9.92
10MHz 16QAM	8.942	8.942	8.942	9.92	9.8	9.8
15MHz QPSK	13.533	13.593	13.533	15.42	15.3	15.18
15MHz 16QAM	13.533	13.593	13.533	15.24	15.18	15.18
20MHz QPSK	17.964	17.964	17.964	20.0	19.6	19.68
20MHz 16QAM	17.964	17.964	18.044	19.68	19.84	19.76
Note: The test plots please refer to the Plots of Occupied Bandwidth						

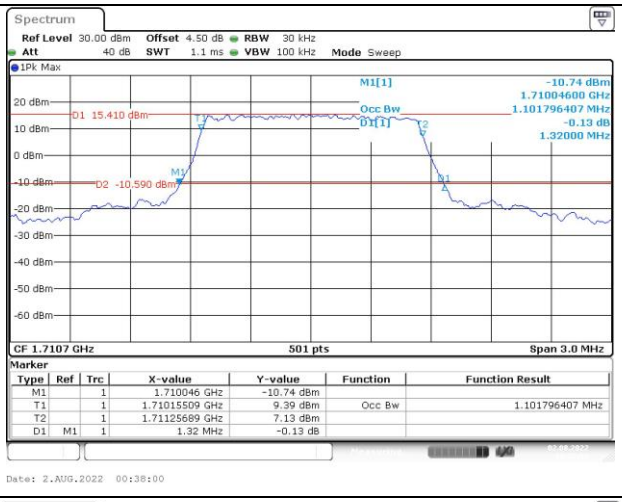
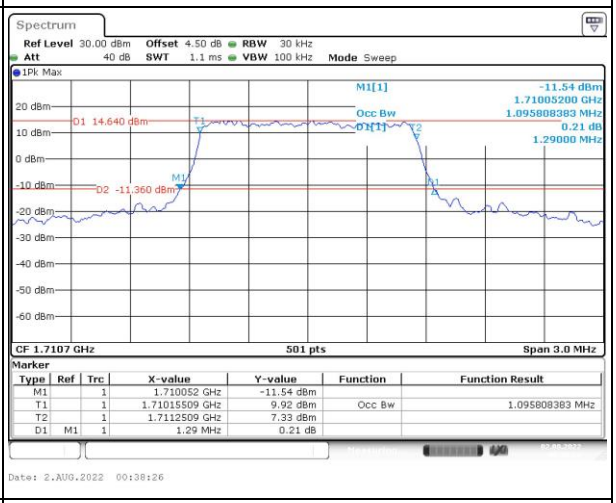
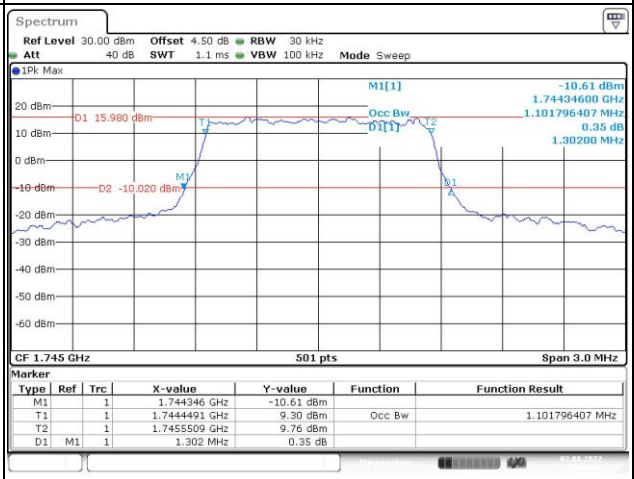
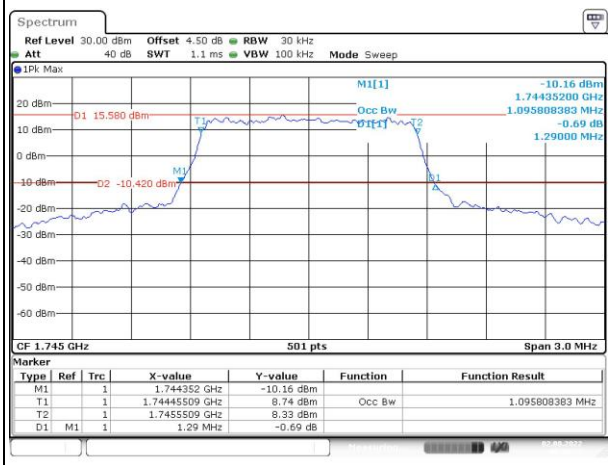
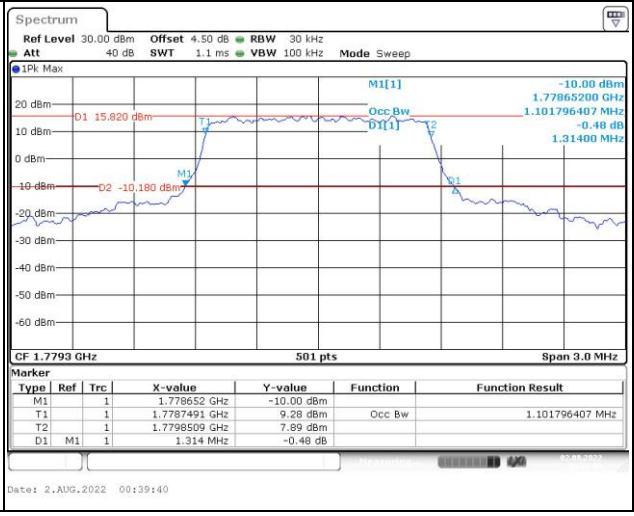
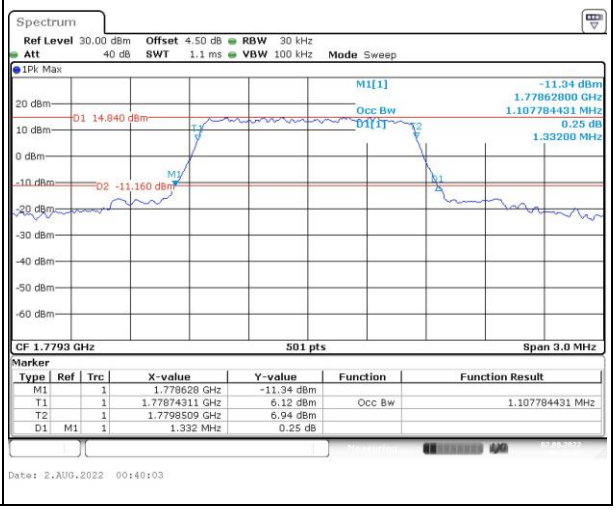
FCC §2.1051, §27.53:Spurious Emissions at Antenna Terminal	
Result:	**Pass, Please refer to the test plots of Spurious Emissions at Antenna Terminal.**

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.**

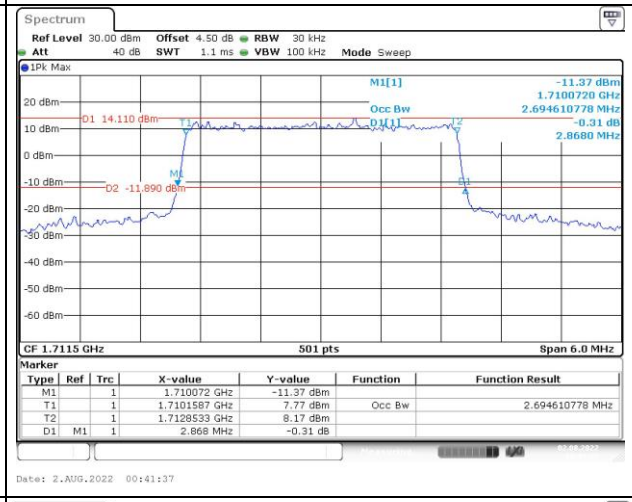
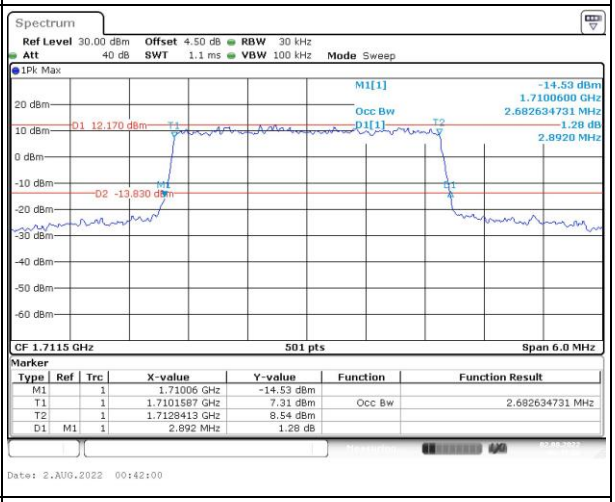
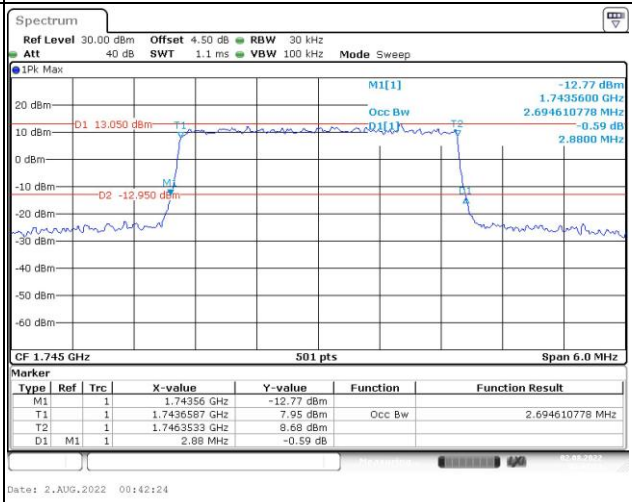
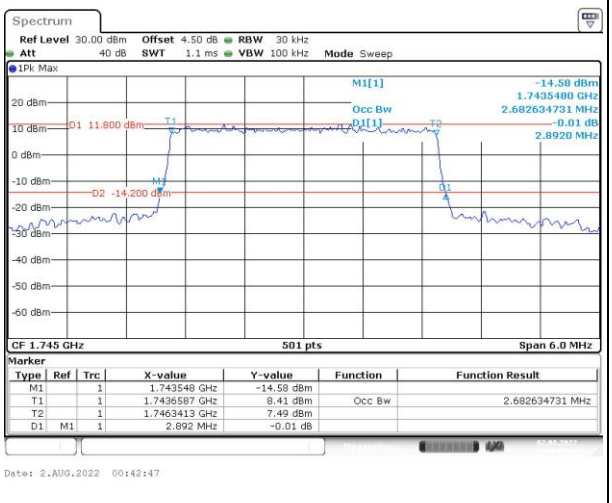
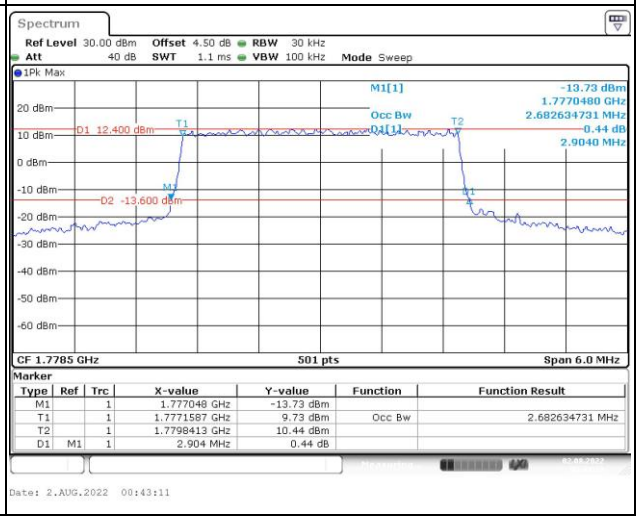
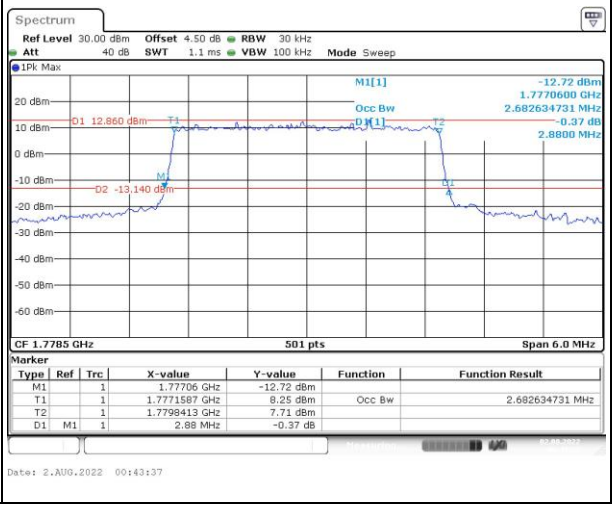
FCC §2.1055, §27.54: Frequency Stability						
Test Mode:	20M QPSK	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (℃)	Voltage (V_{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.8	1710.8653	1710.00	1779.6334	1780
	-20	3.8	1710.4584	1710.00	1779.6233	1780
	-10	3.8	1710.4586	1710.00	1779.6231	1780
	0	3.8	1710.4583	1710.00	1779.6233	1780
	10	3.8	1710.4581	1710.00	1779.6232	1780
	20	3.8	1710.4583	1710.00	1779.6236	1780
	30	3.8	1710.4585	1710.00	1779.6237	1780
	40	3.8	1710.4583	1710.00	1779.6238	1780
	50	3.8	1710.4582	1710.00	1779.6239	1780
Frequency Stability vs. Voltage	20	3.3	1710.4583	1710.00	1779.6230	1780
	20	4.2	1710.4581	1710.00	1779.6237	1780
					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	1710.4583	1710.00	1779.6335	1780
	-20	3.8	1710.4583	1710.00	1779.6231	1780
	-10	3.8	1710.4911	1710.00	1779.6233	1780
	0	3.8	1710.4583	1710.00	1779.6235	1780
	10	3.8	1710.4585	1710.00	1779.6236	1780
	20	3.8	1710.4583	1710.00	1779.6234	1780
	30	3.8	1710.4585	1710.00	1779.6233	1780
	40	3.8	1710.4586	1710.00	1779.6231	1780
	50	3.8	1710.4588	1710.00	1779.6233	1780
Frequency Stability vs. Voltage	20	3.3	1710.4586	1710.00	1779.6234	1780
	20	4.2	1710.4584	1710.00	1779.6235	1780
					Result:	**Pass**

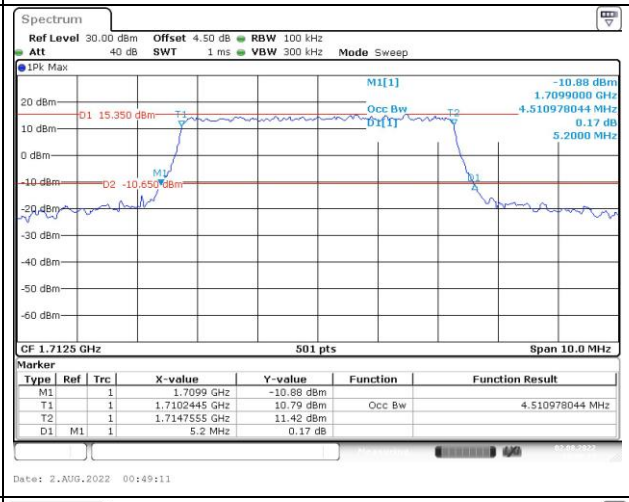
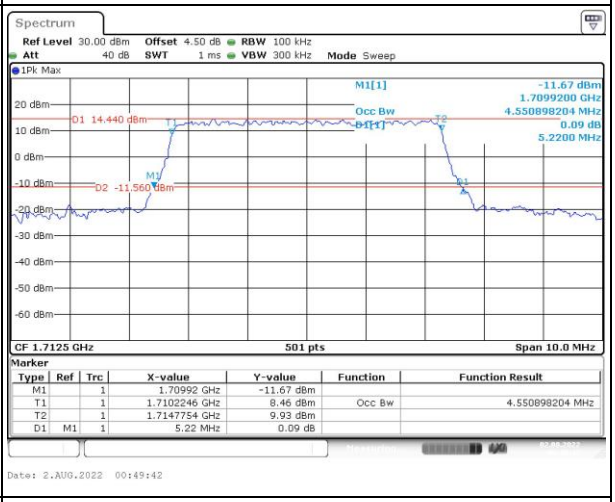
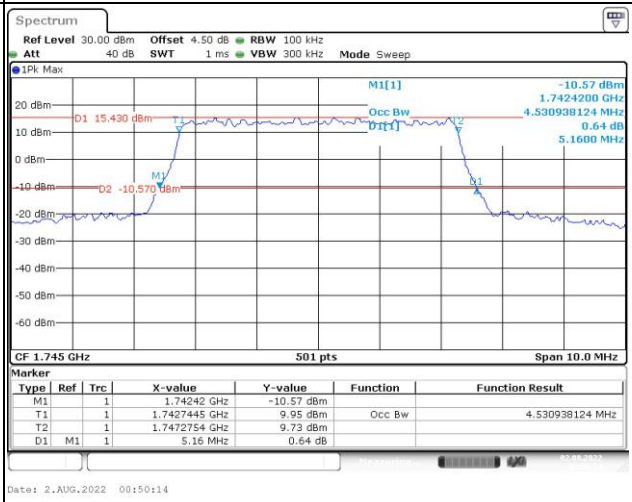
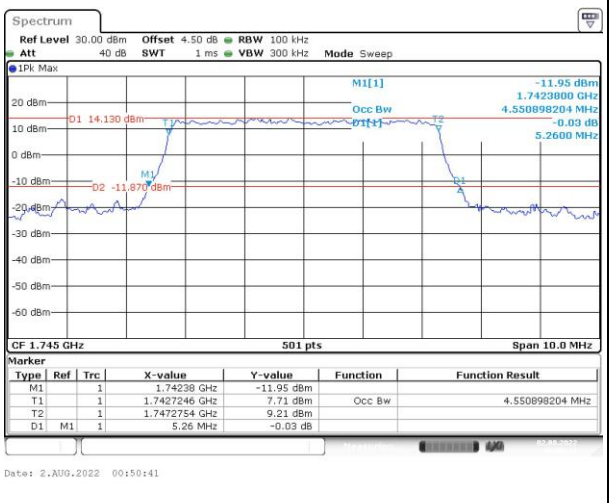
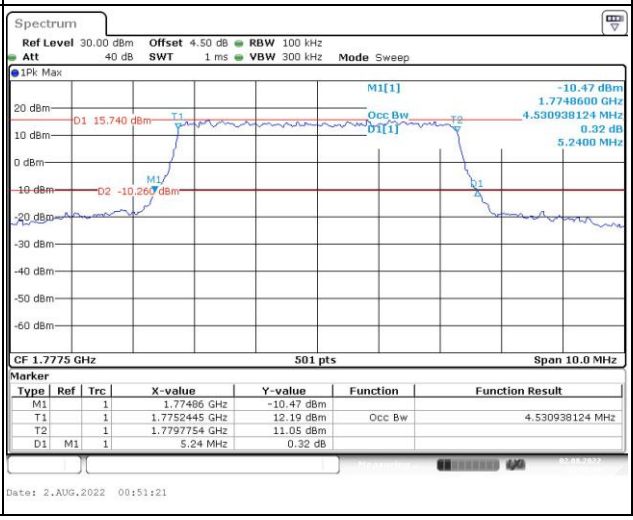
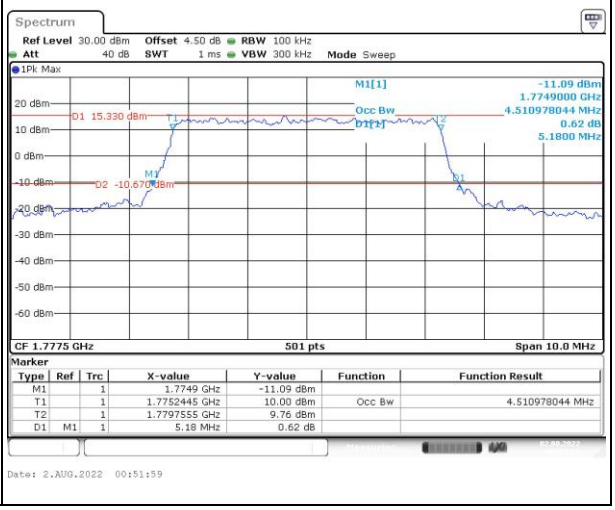
Test Plots:

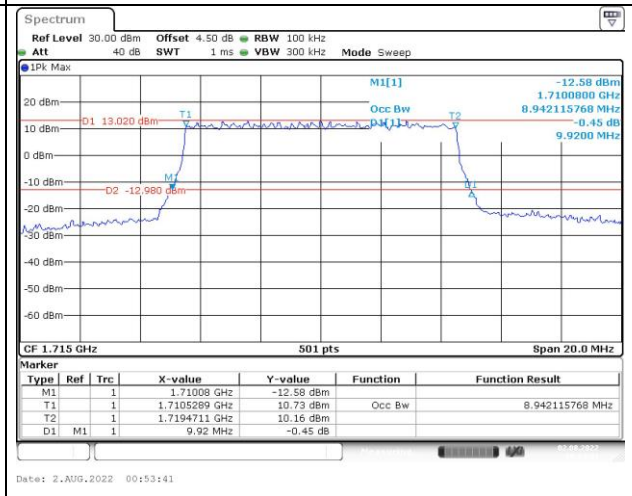
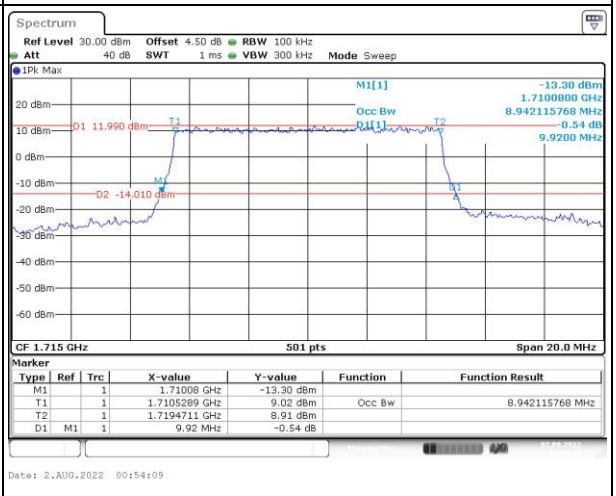
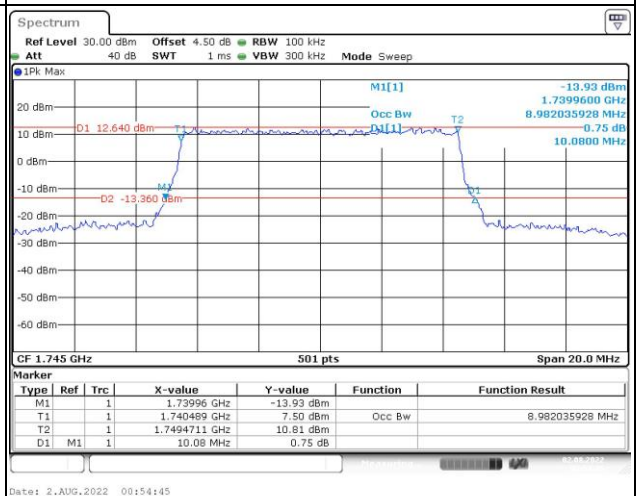
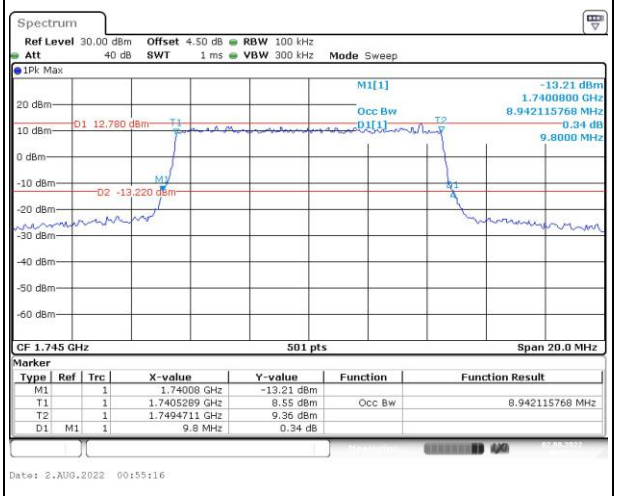
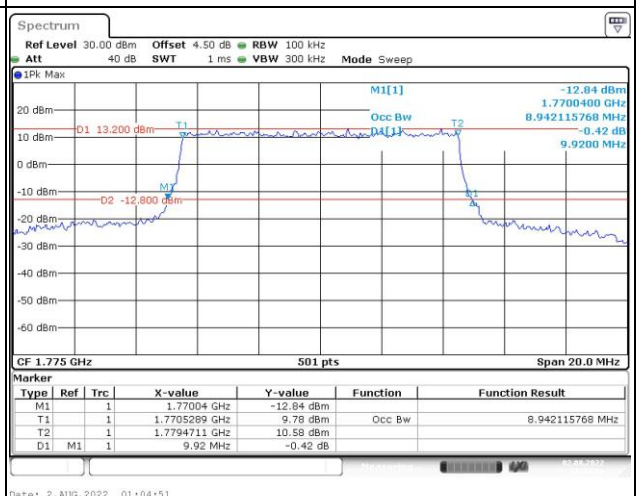
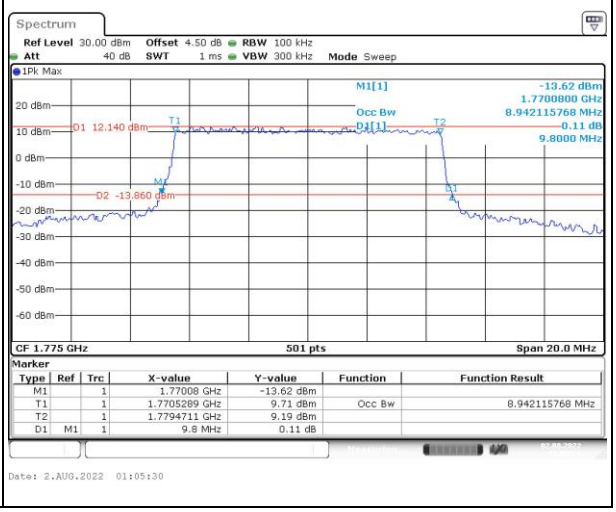
Occupied Bandwidth		
Channel	1.4MHz Bandwidth QPSK	1.4MHz Bandwidth 16QAM
Lowest		
Middle		
Highest		

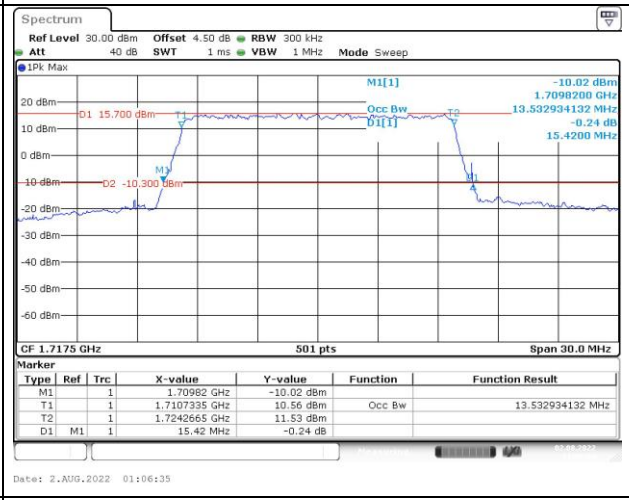
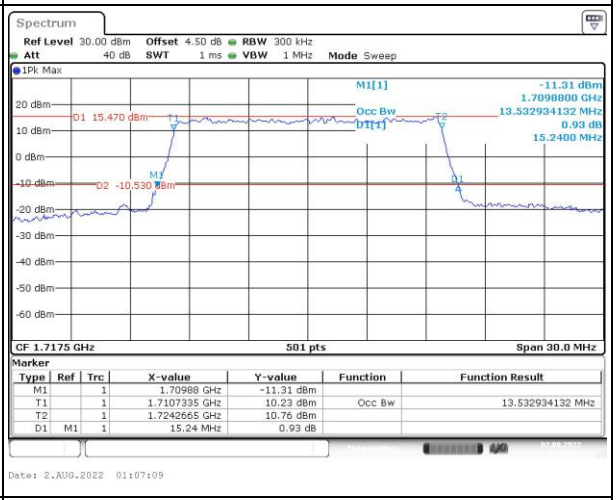
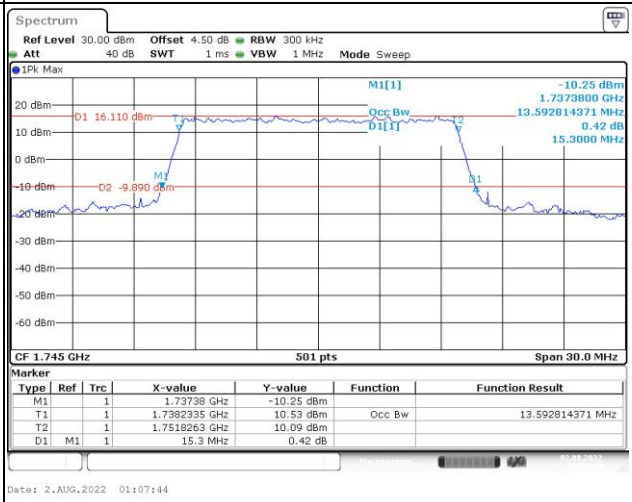
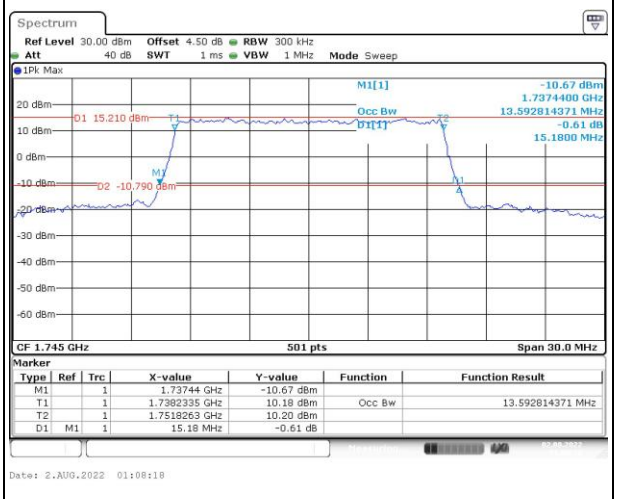
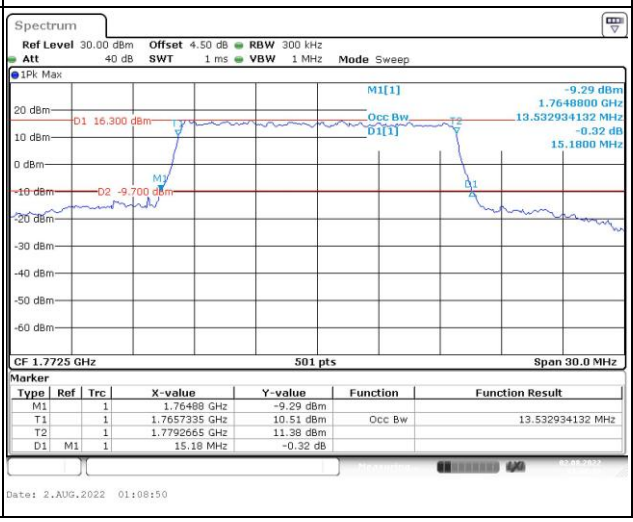
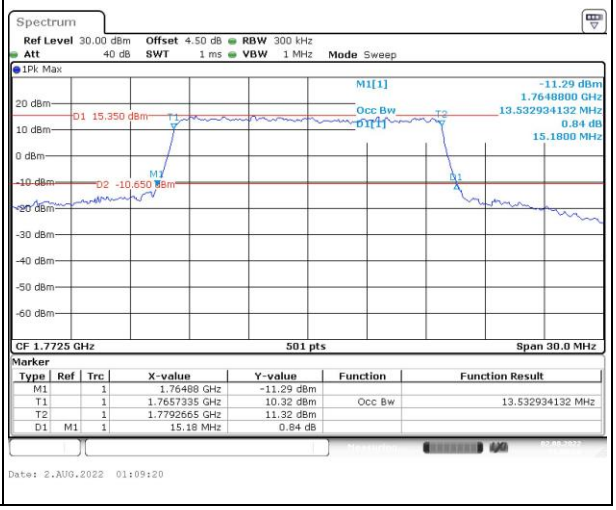
Occupied Bandwidth

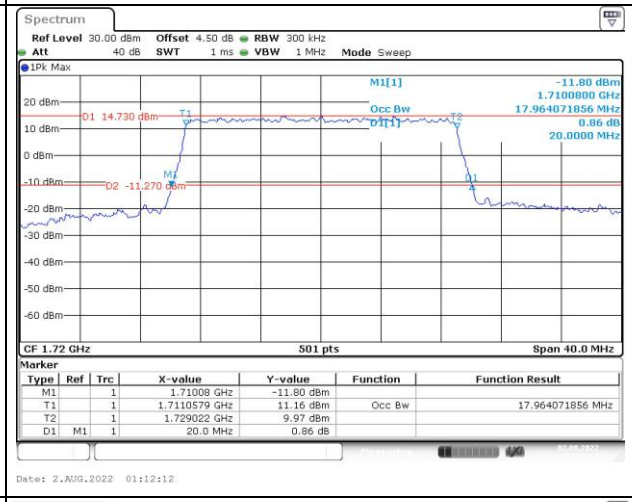
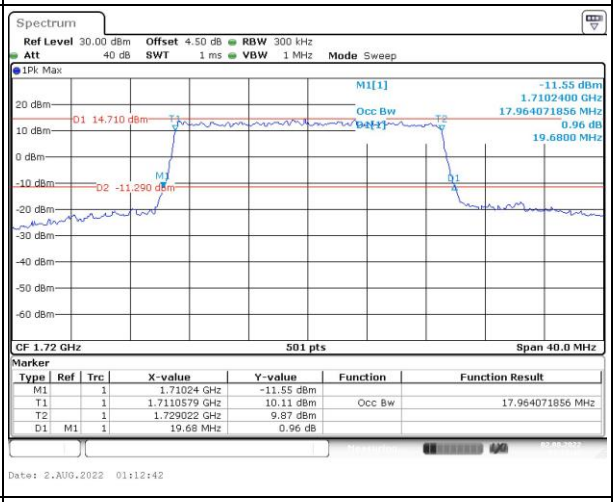
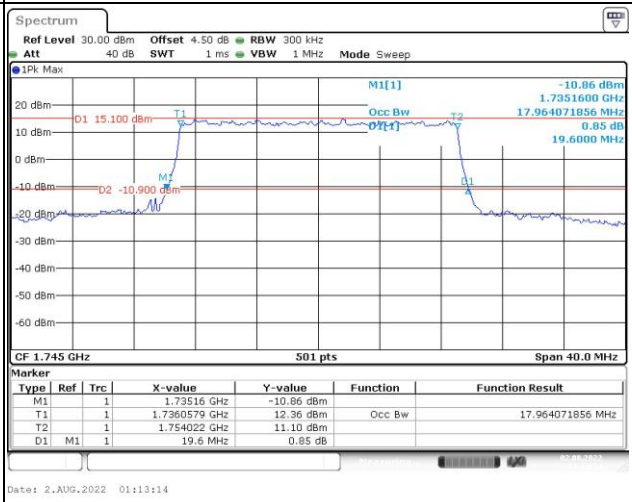
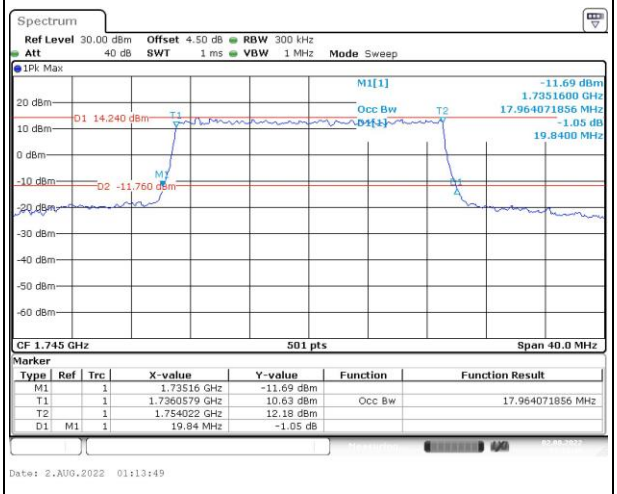
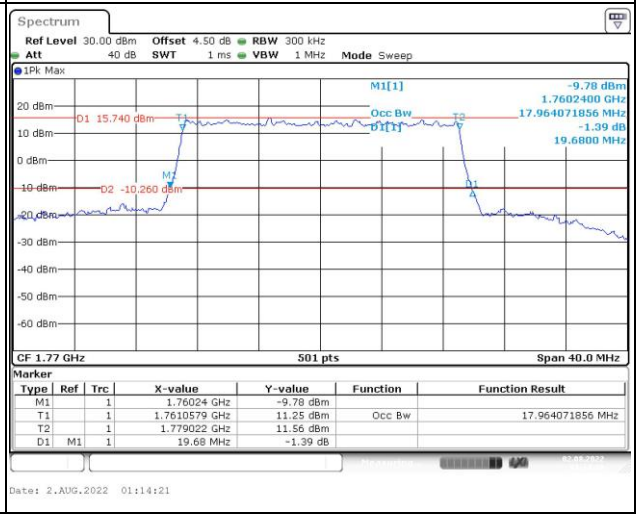
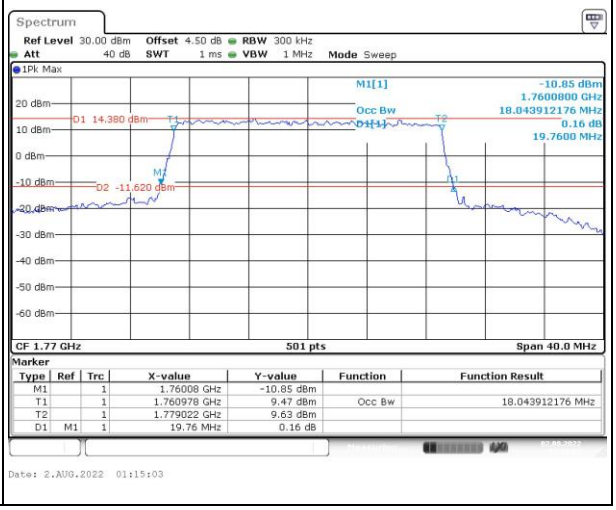
Channel	3MHz Bandwidth QPSK	3MHz Bandwidth 16QAM
Lowest		
Middle		
Highest		

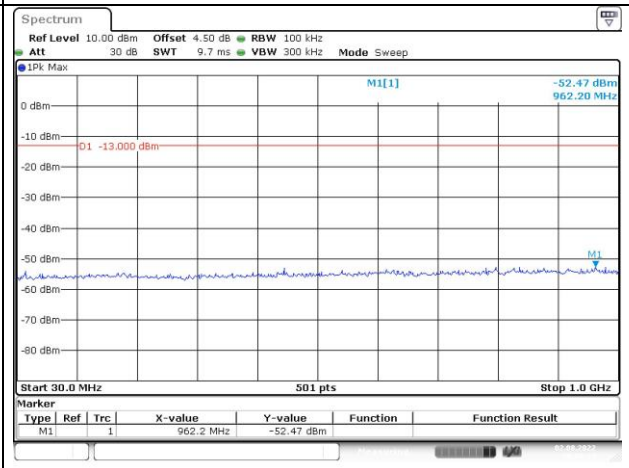
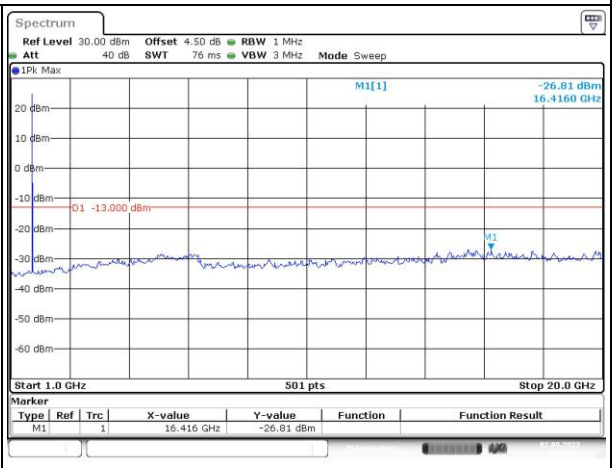
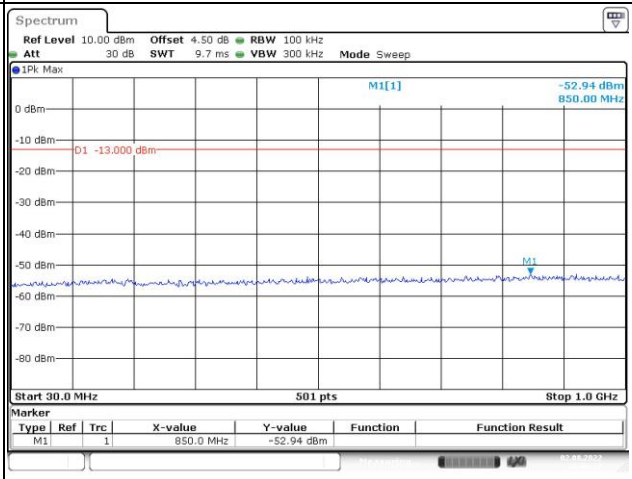
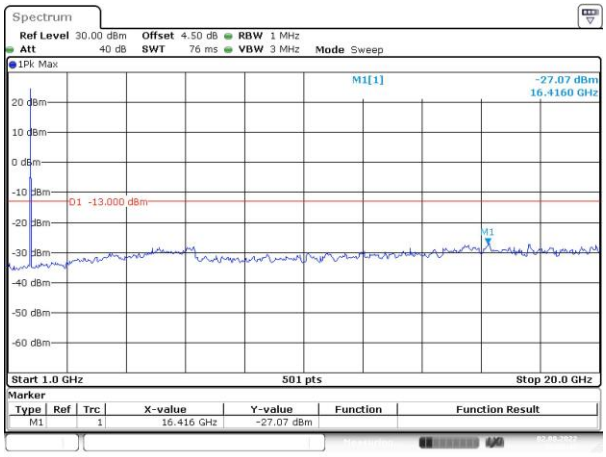
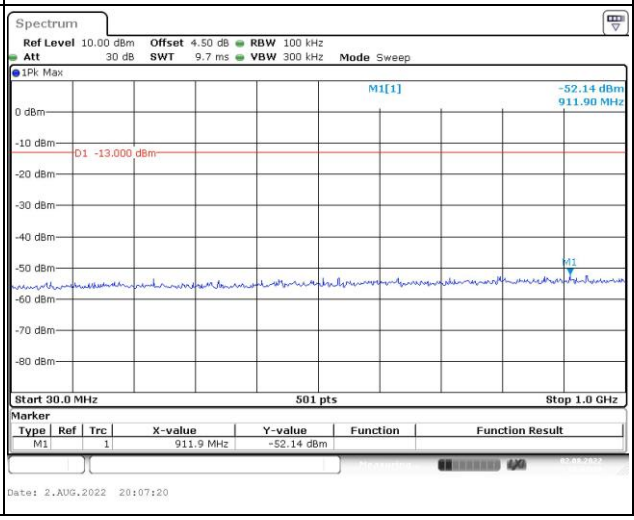
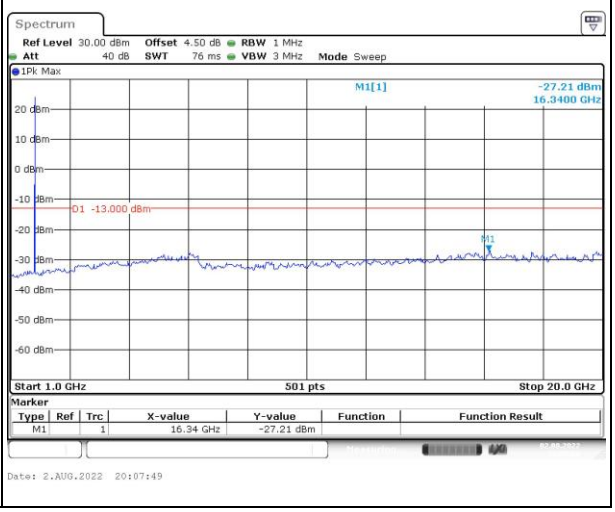
Occupied Bandwidth

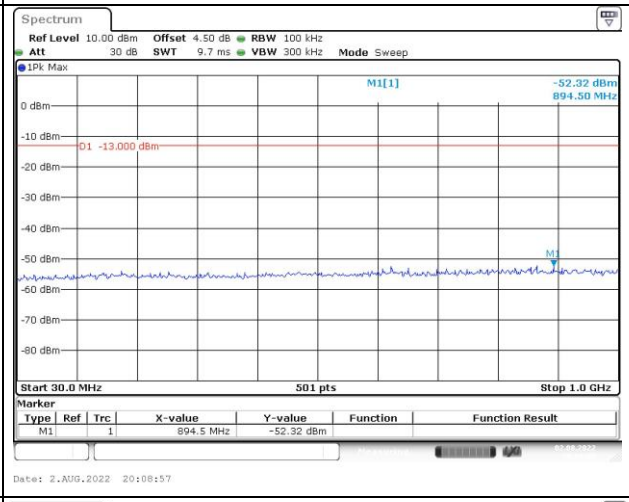
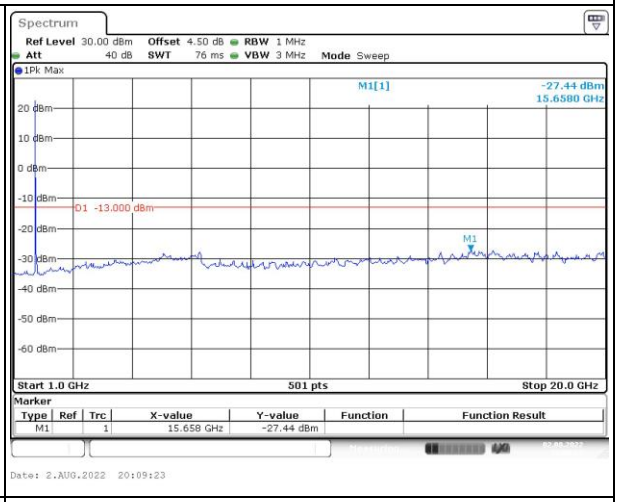
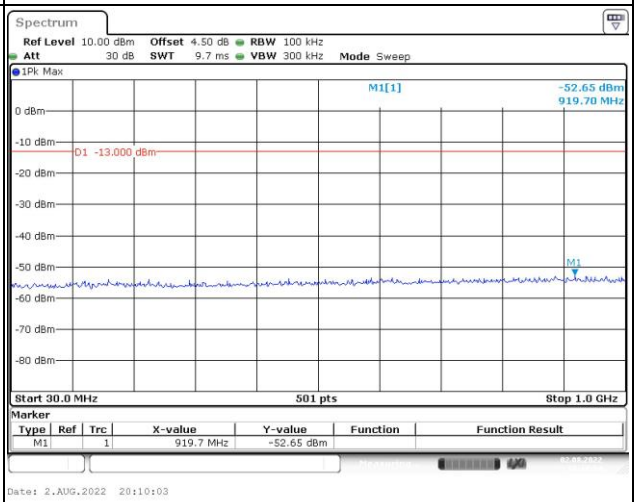
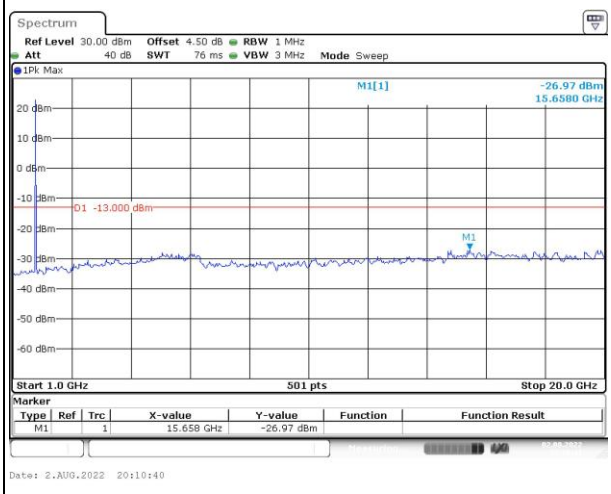
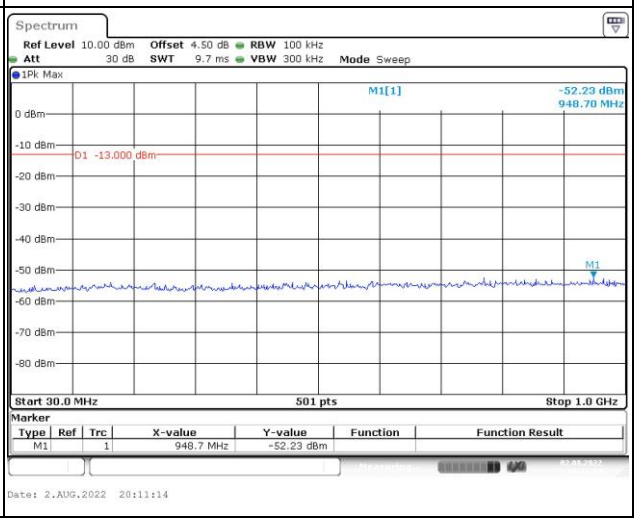
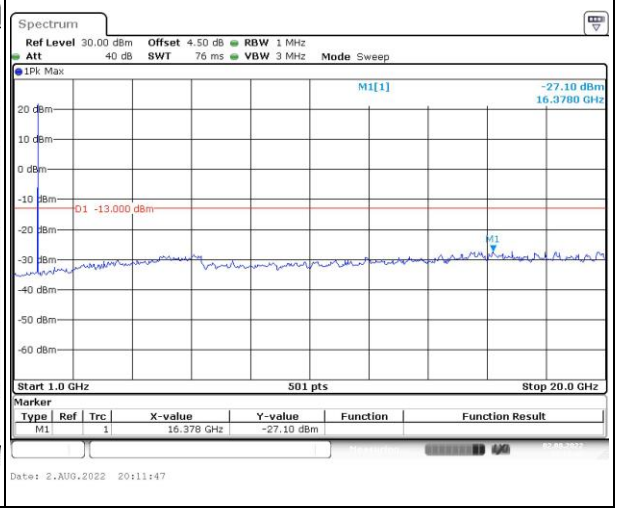
Channel	5MHz Bandwidth QPSK	5MHz Bandwidth 16QAM
Lowest		
Middle		
Highest		

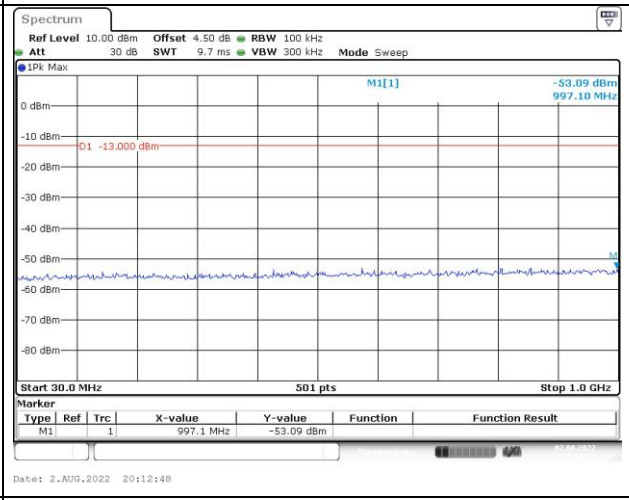
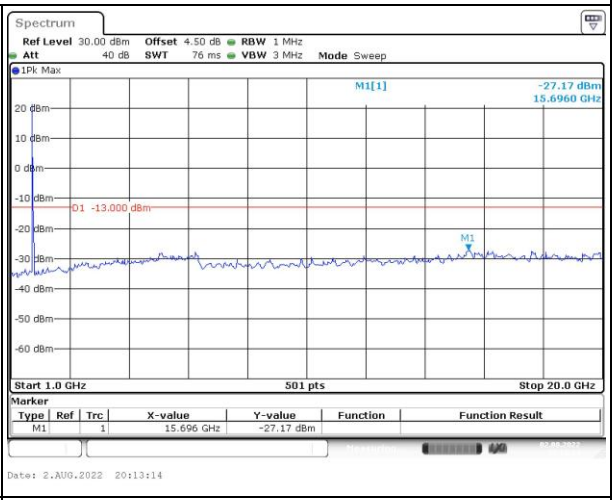
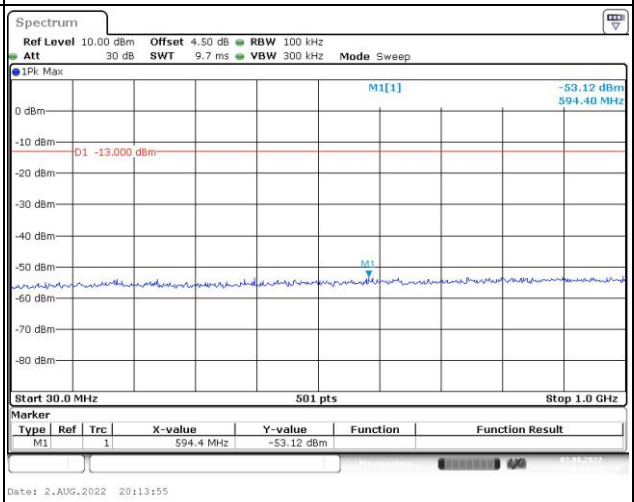
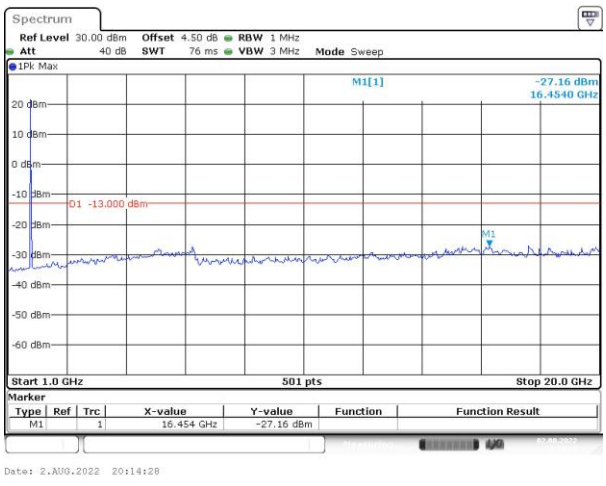
Occupied Bandwidth		
Channel	10MHz Bandwidth QPSK	10MHz Bandwidth 16QAM
Lowest		
Middle		
Highest		

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		

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