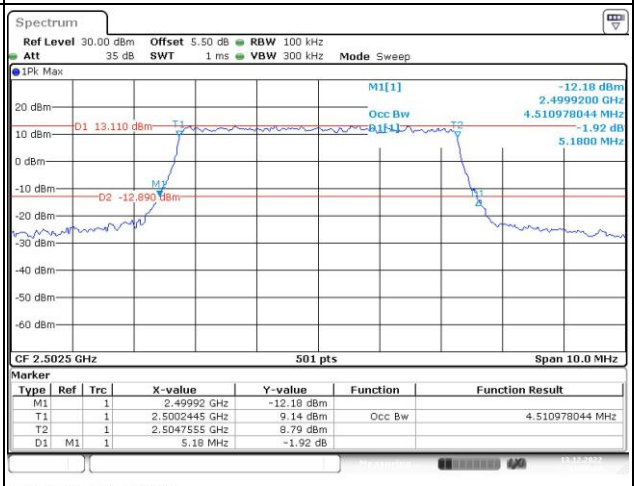
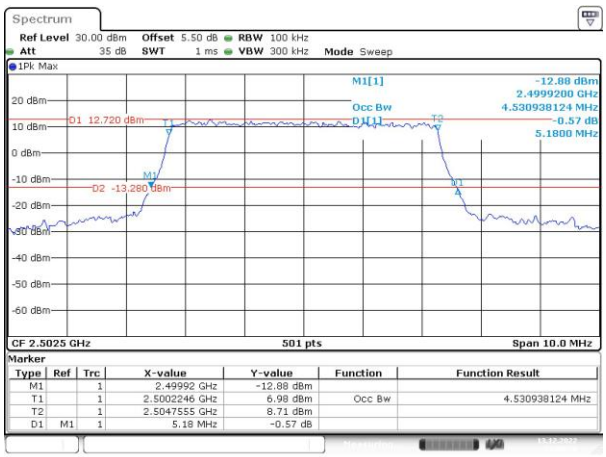
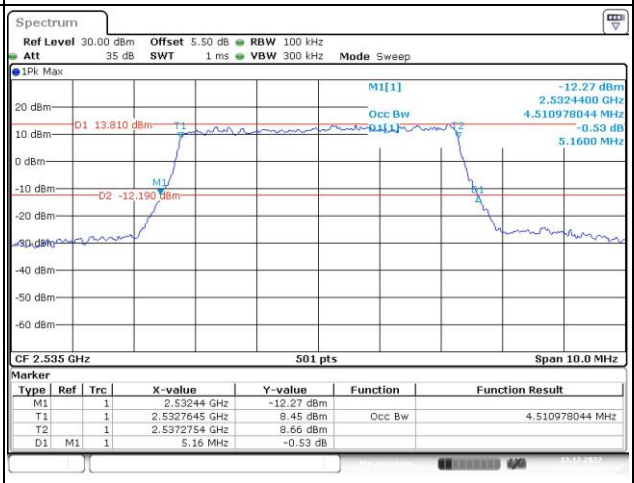
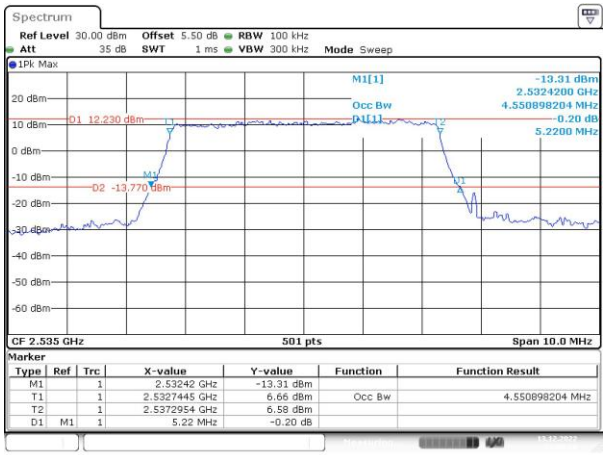
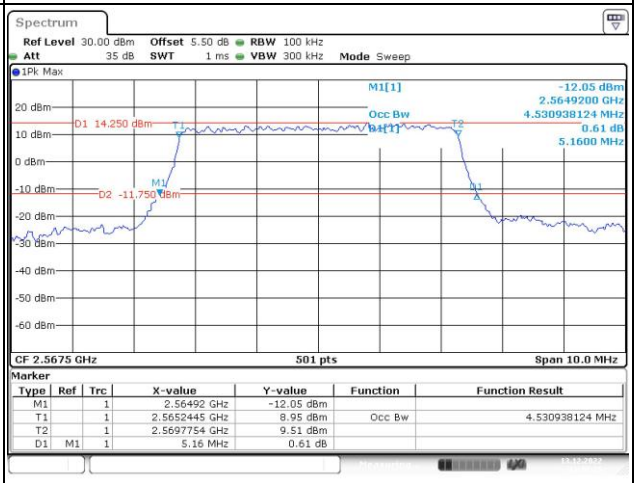
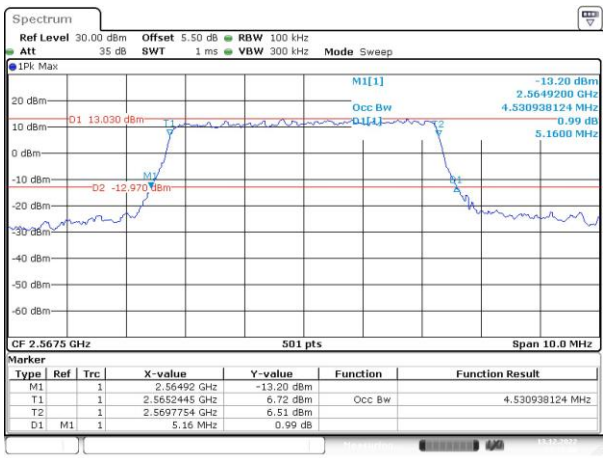
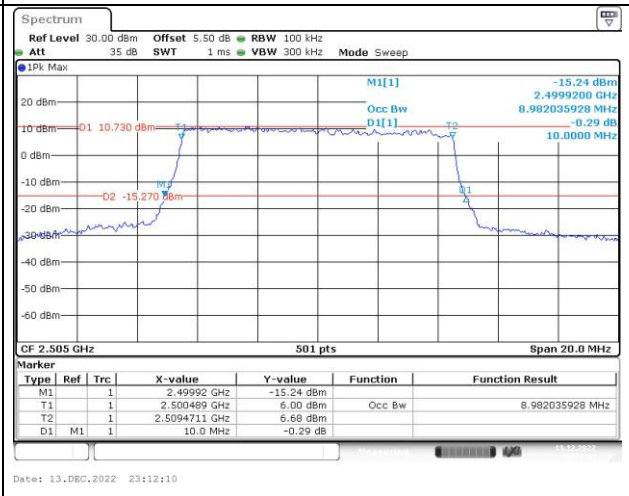
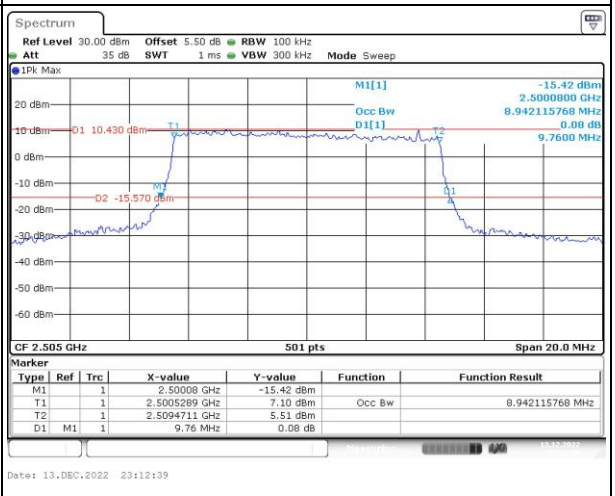
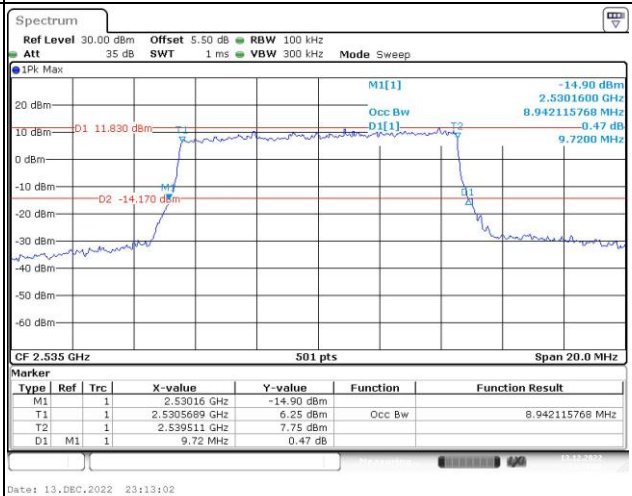
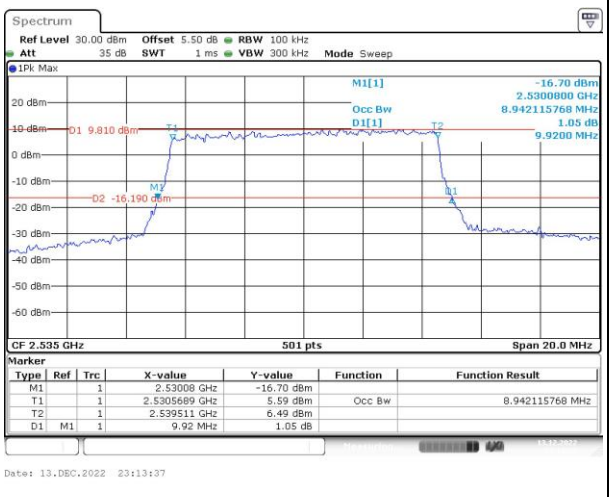
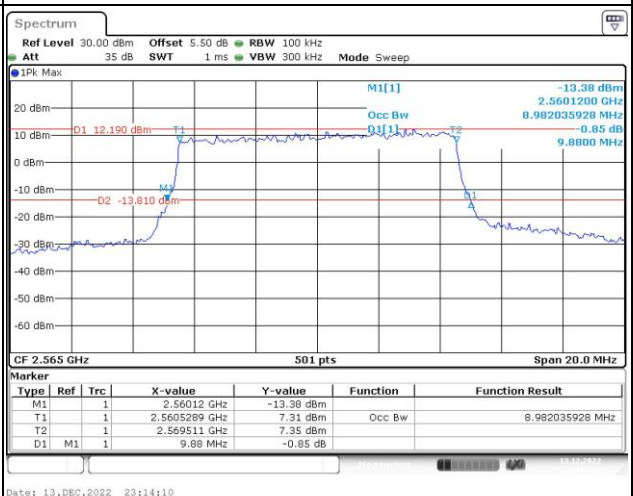
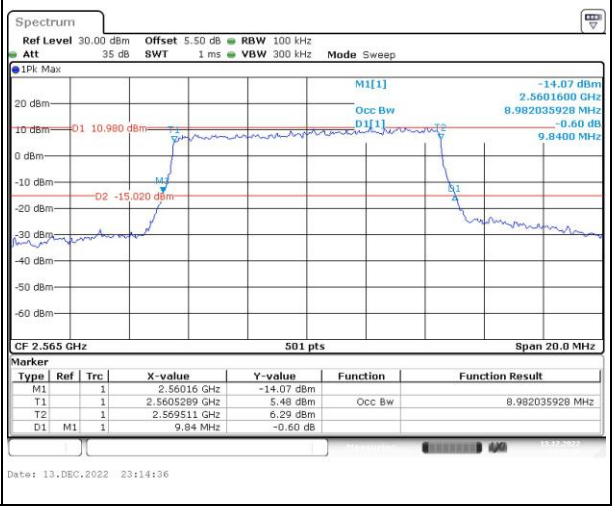
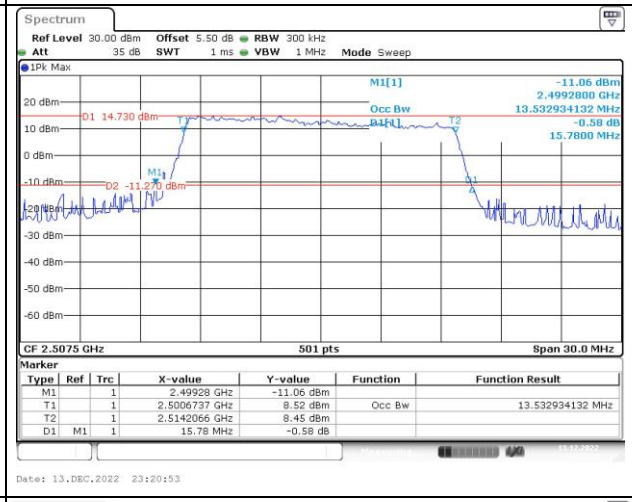
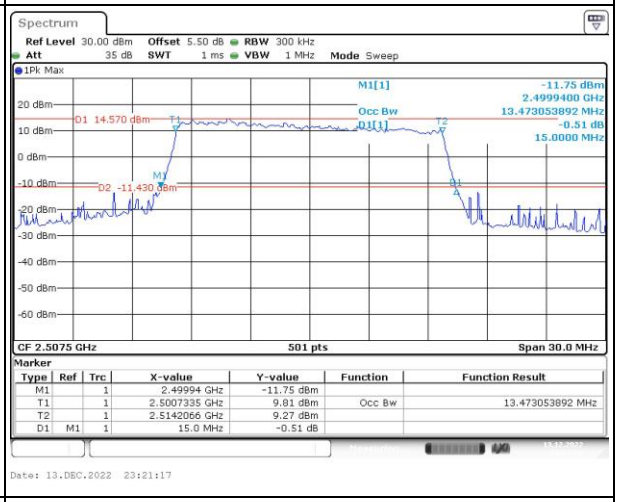
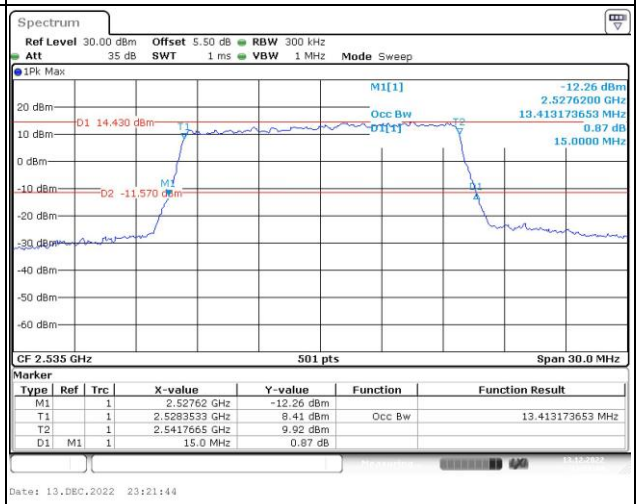
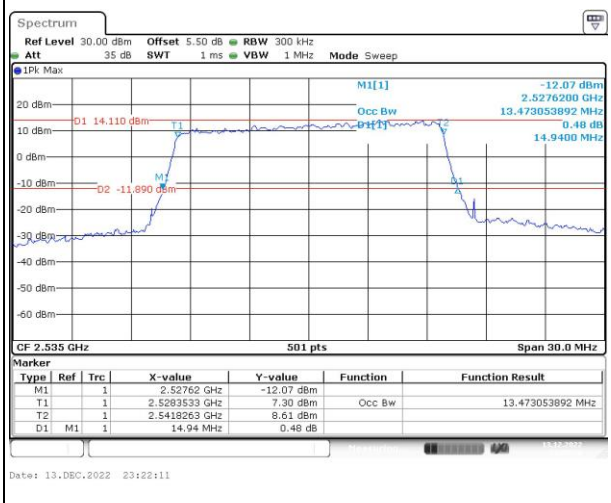
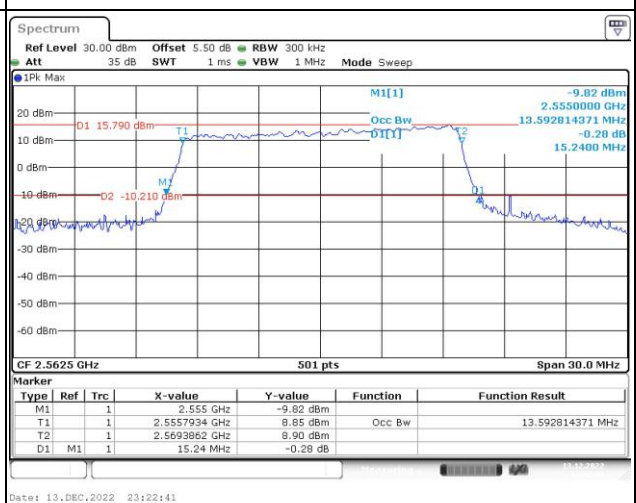
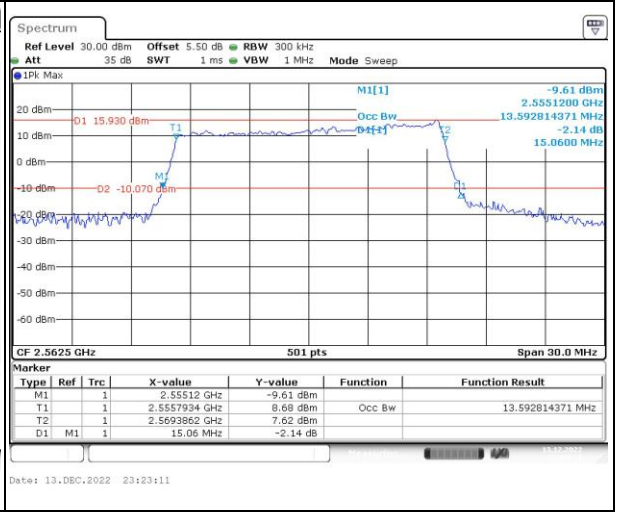
Test Plots(Note: The 5.5dB is the Insertion loss of the RF cable, Power Splitter and DC Block, which was offset into the Spectrum Analyzer)**:**

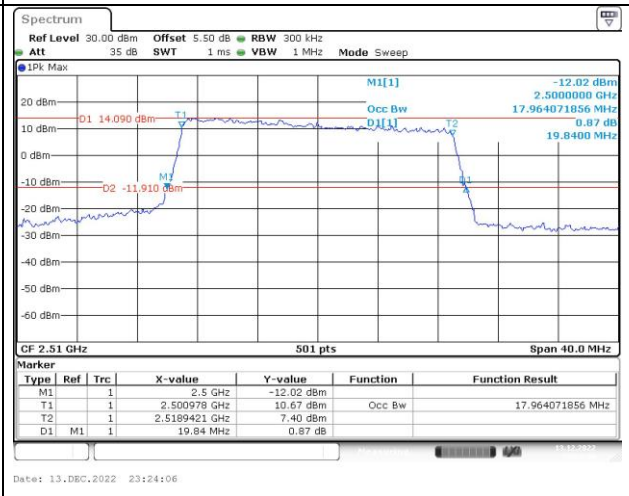
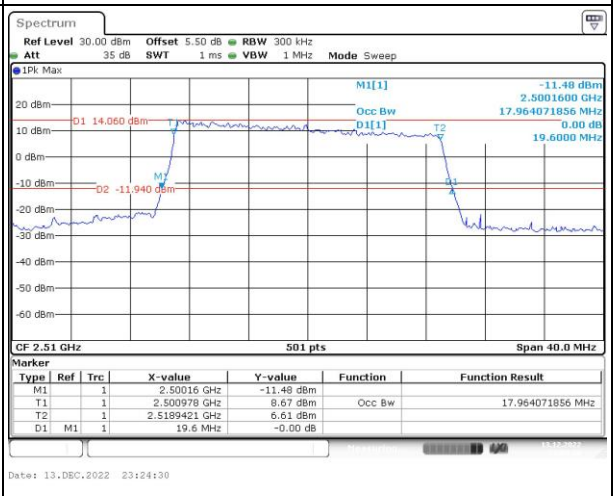
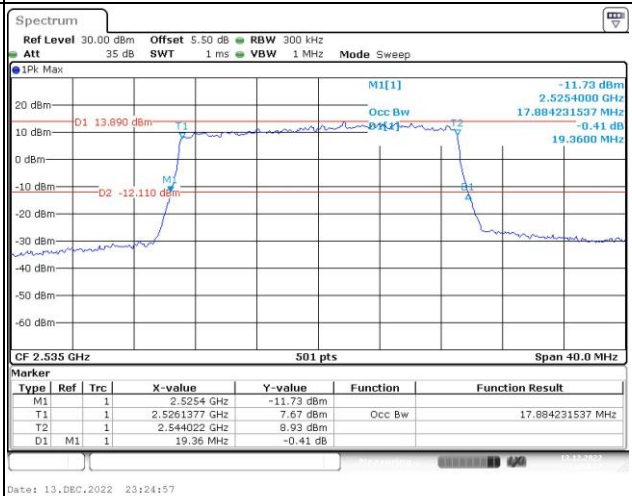
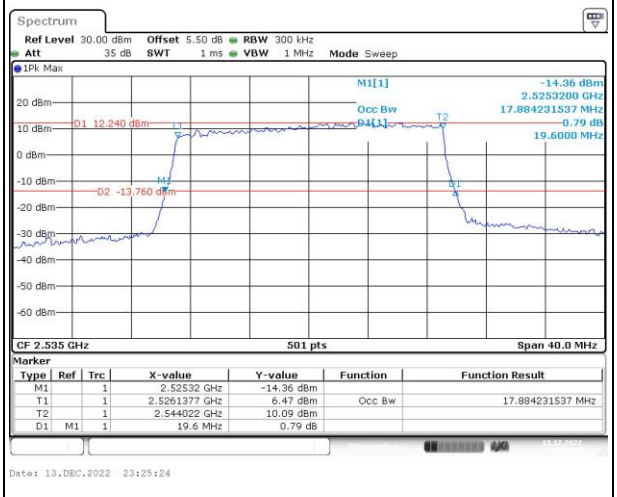
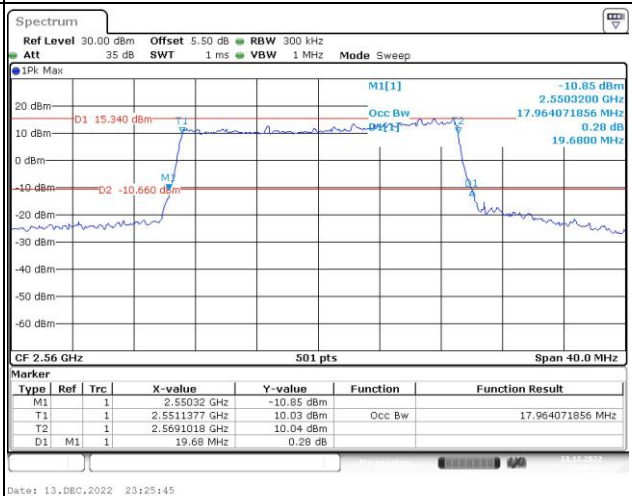
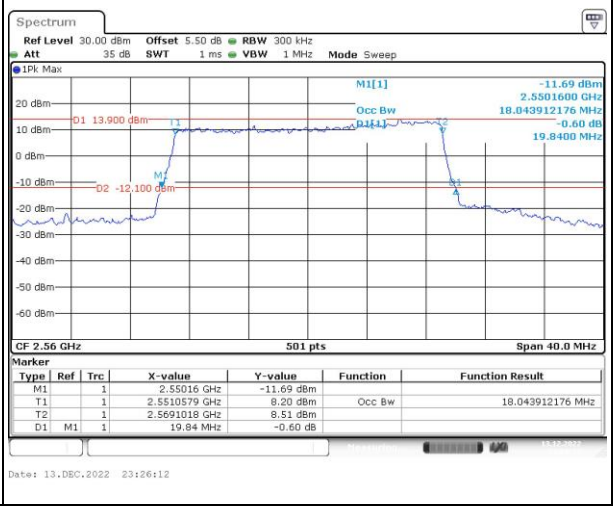
Occupied Bandwidth		
Channel	5MHz Bandwidth QPSK	5MHz Bandwidth 16QAM
Lowest		
Middle		
Highest		

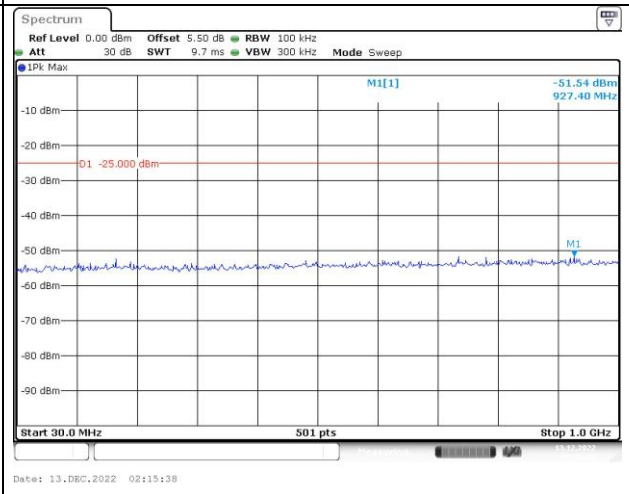
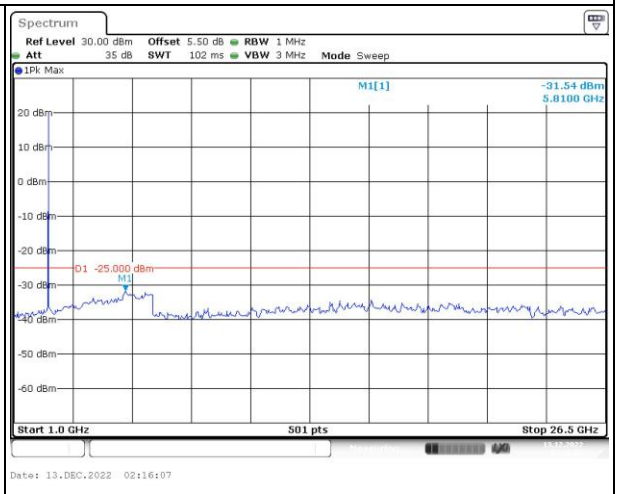
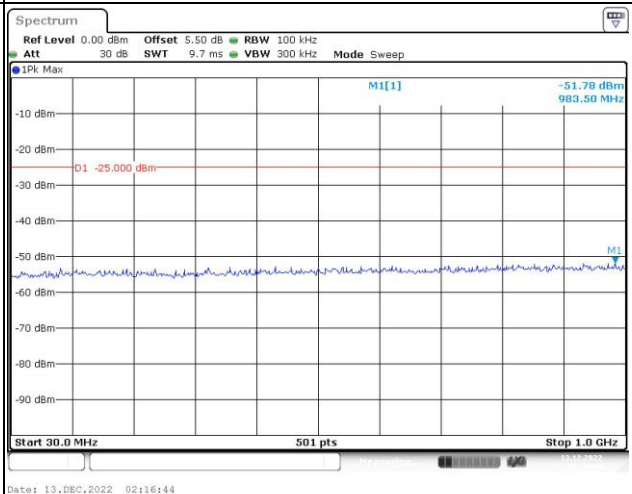
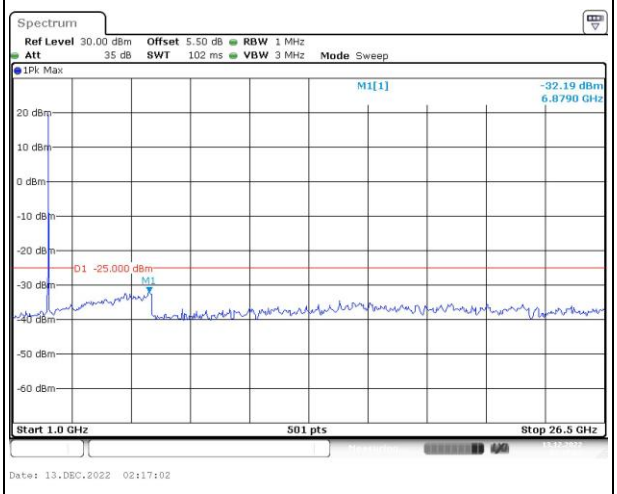
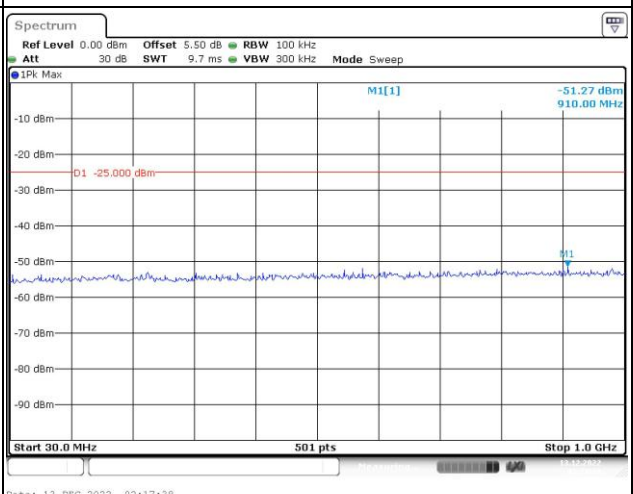
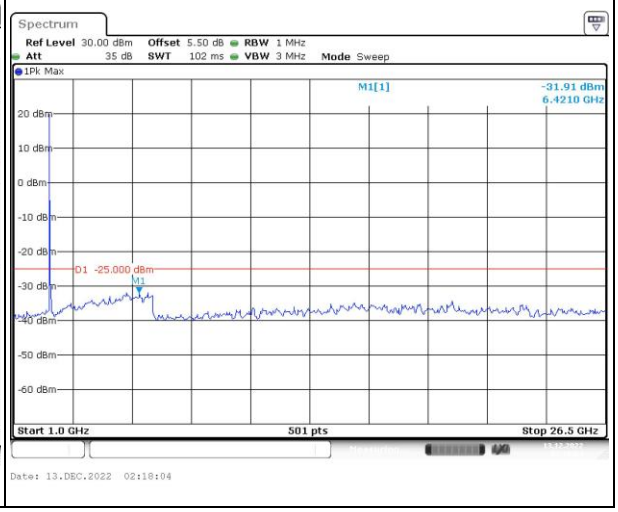
Occupied Bandwidth

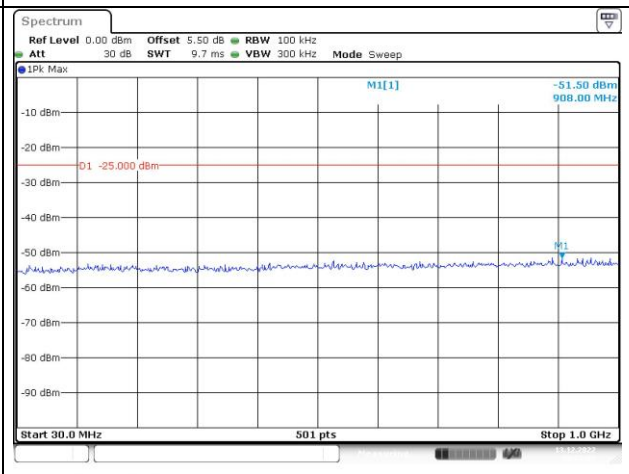
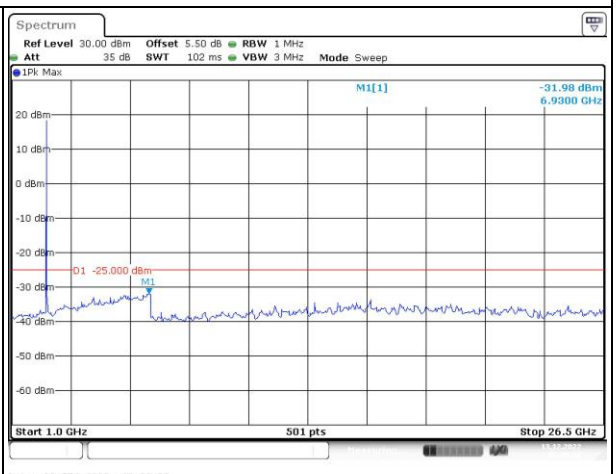
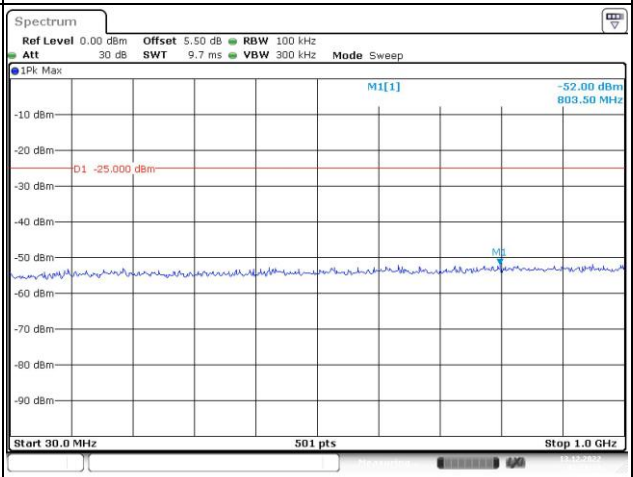
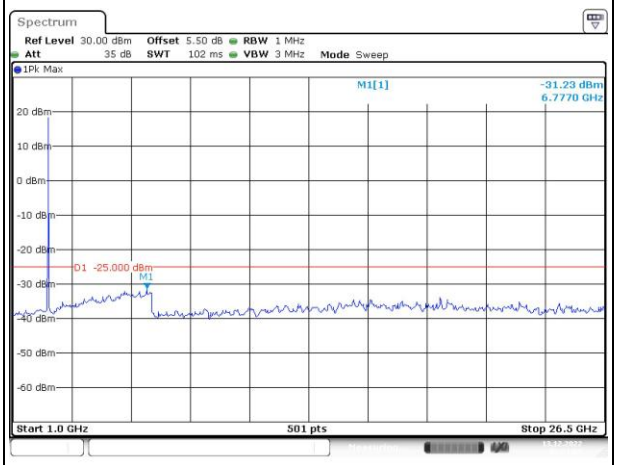
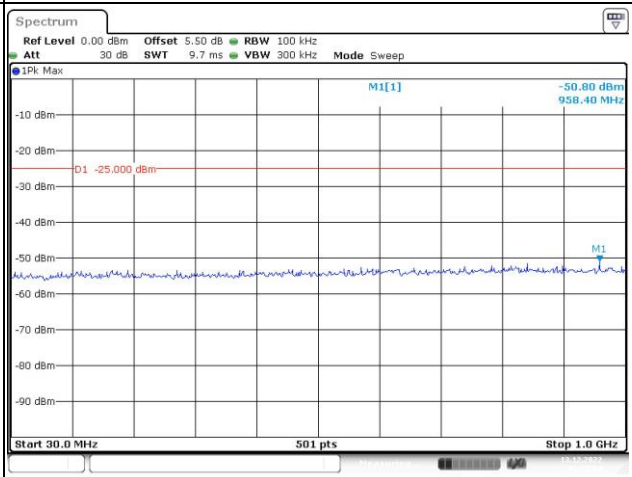
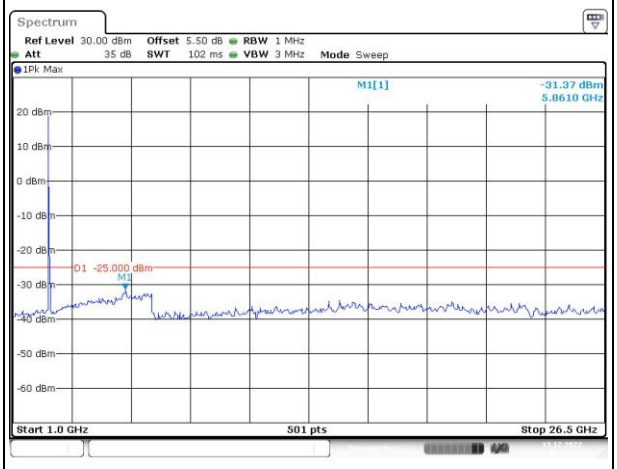
Channel	10MHz Bandwidth QPSK	10MHz Bandwidth 16QAM
Lowest		
Middle		
Highest		

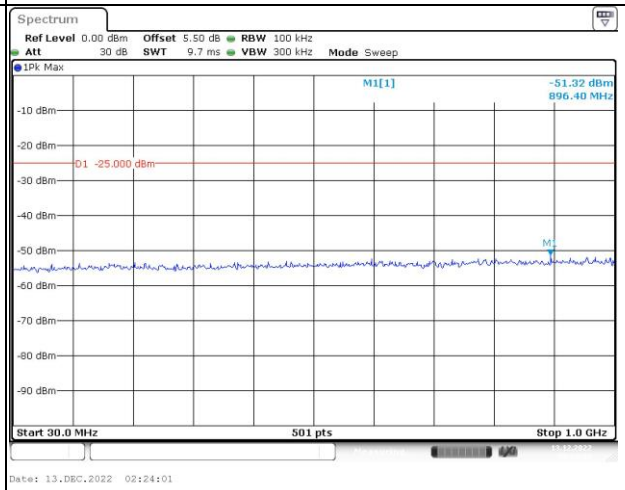
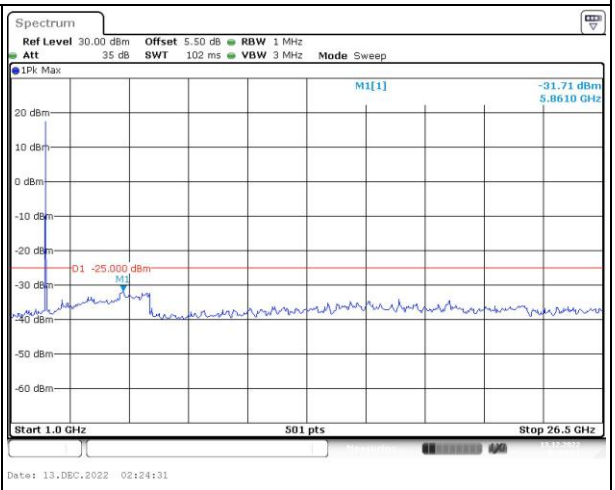
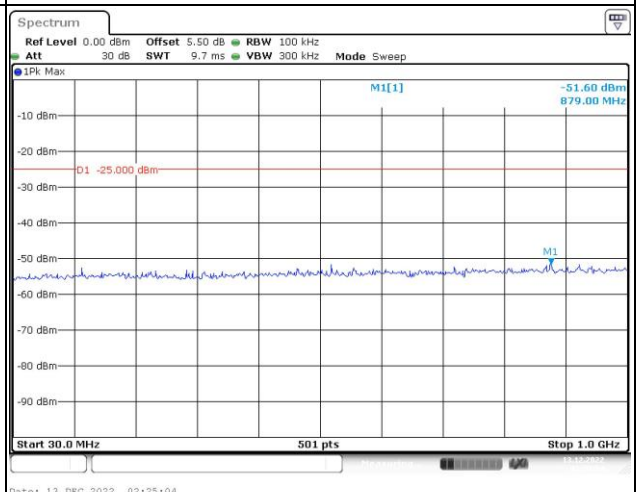
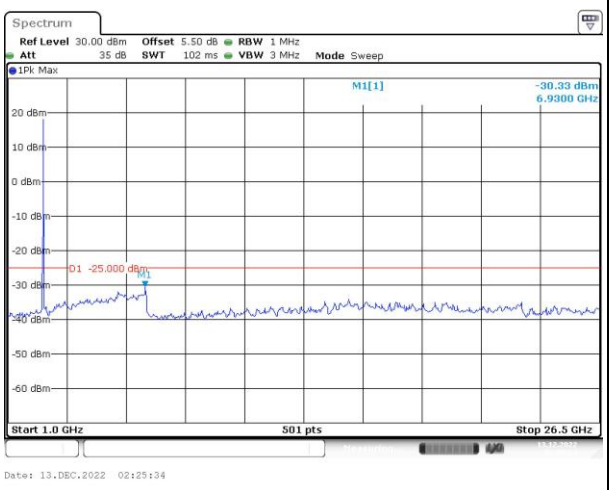
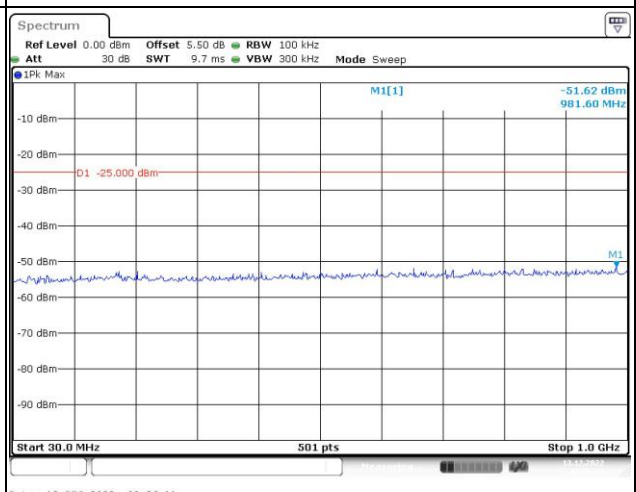
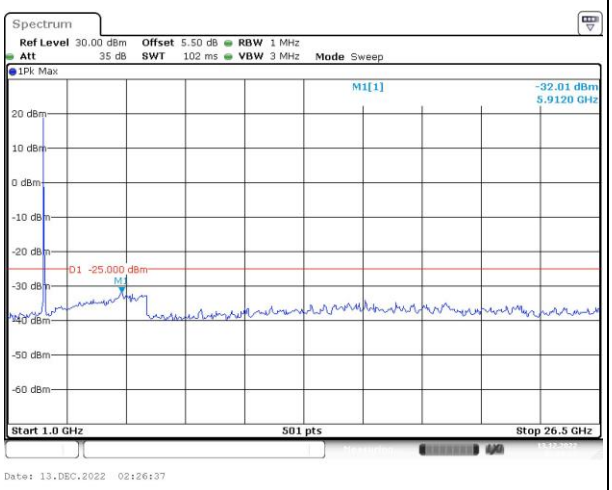
Occupied Bandwidth		
Channel	15MHz Bandwidth QPSK	15MHz Bandwidth 16QAM
Lowest		
Middle		
Highest		

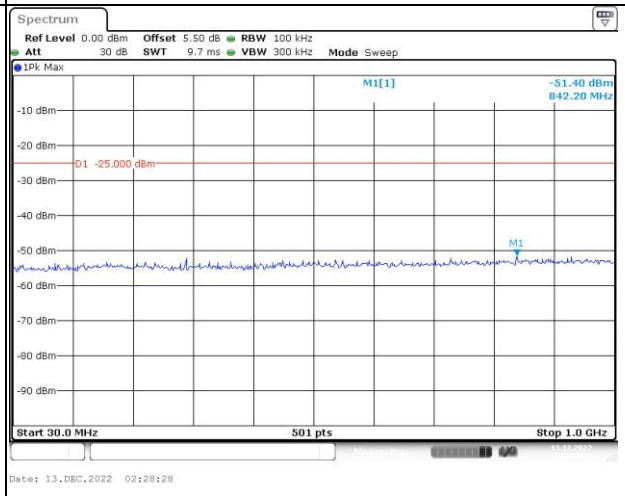
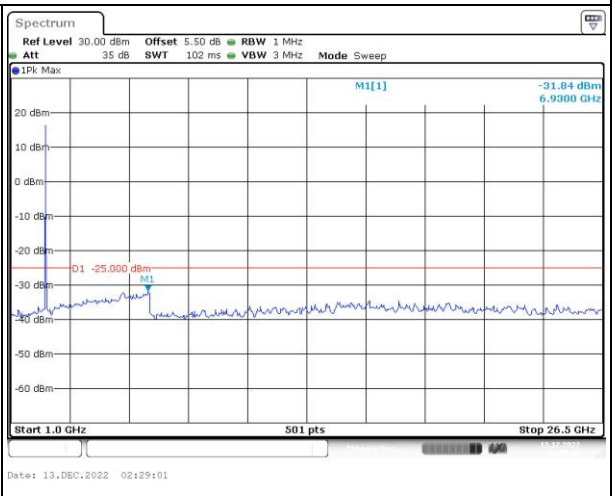
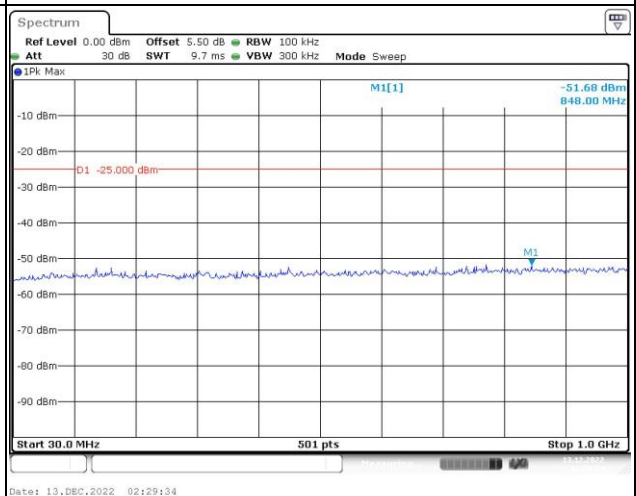
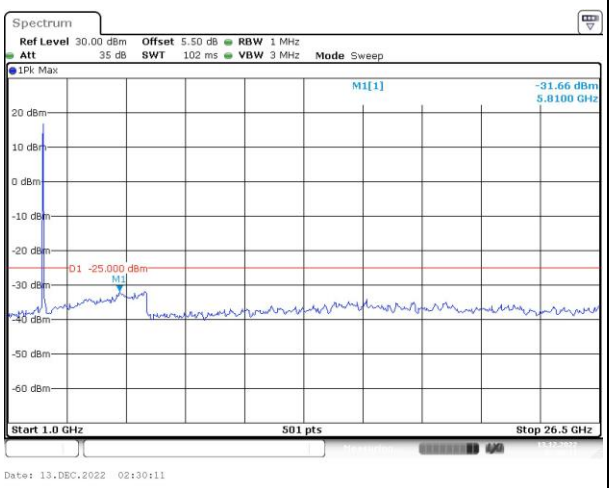
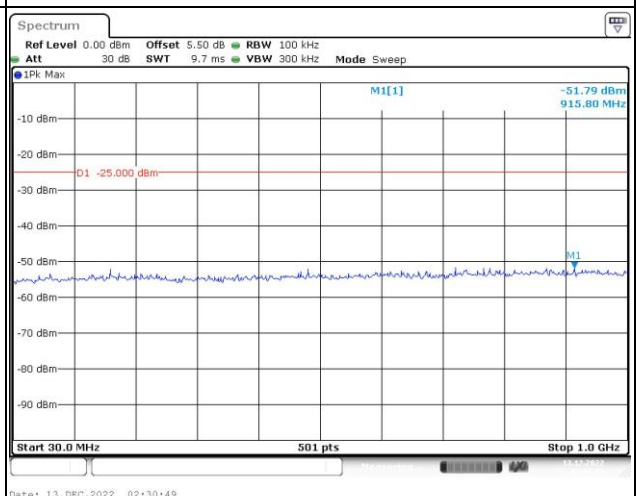
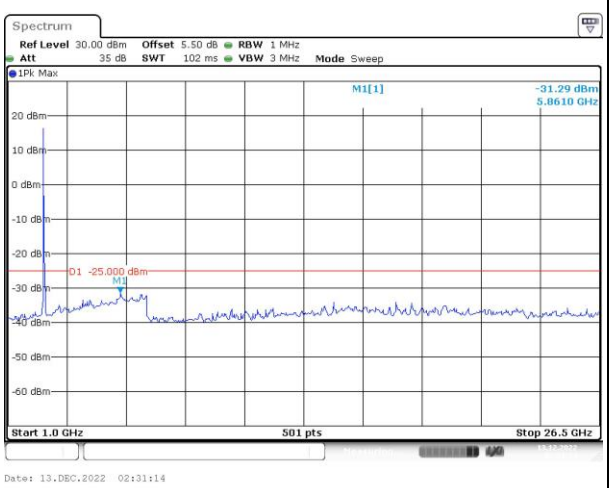
Occupied Bandwidth

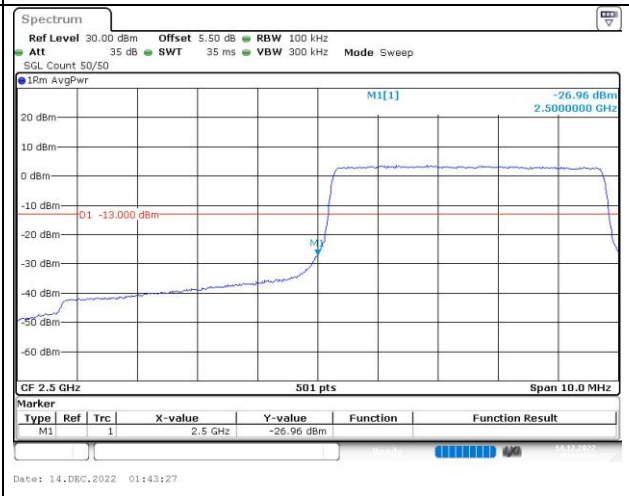
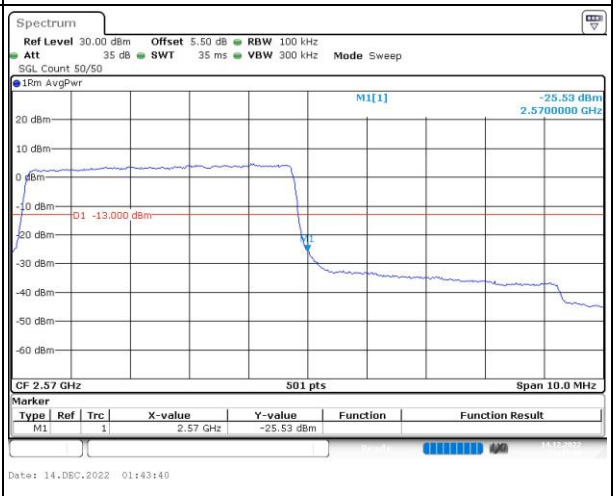
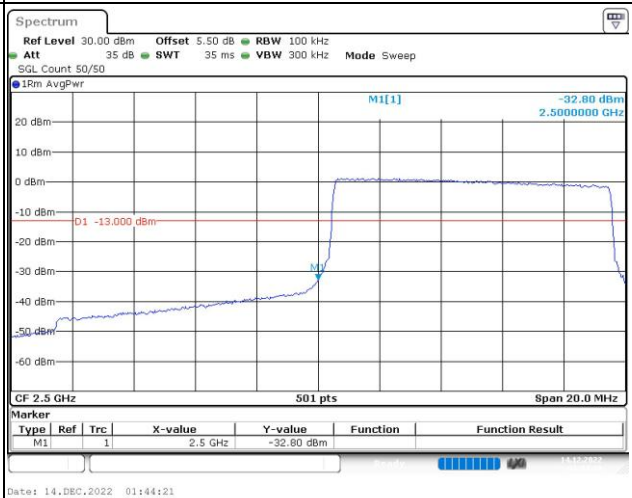
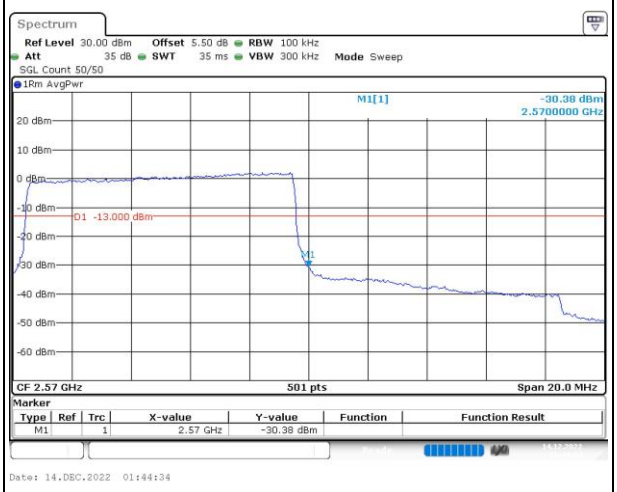
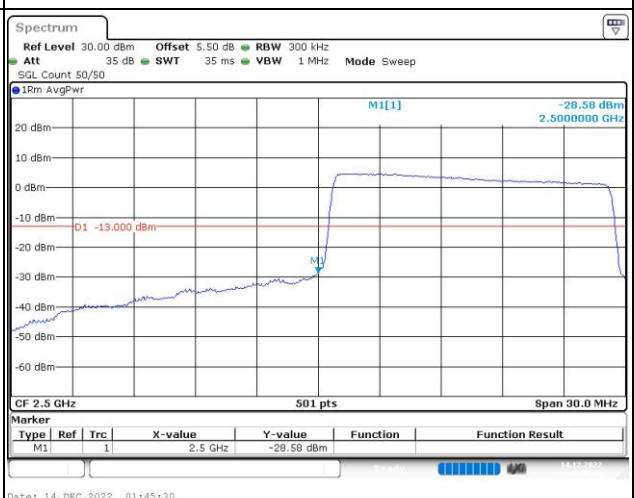
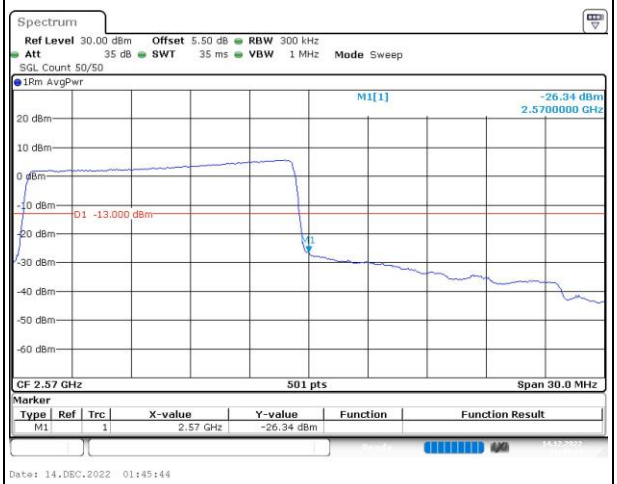
Channel	20MHz Bandwidth QPSK	20MHz Bandwidth 16QAM
Lowest		
Middle		
Highest		

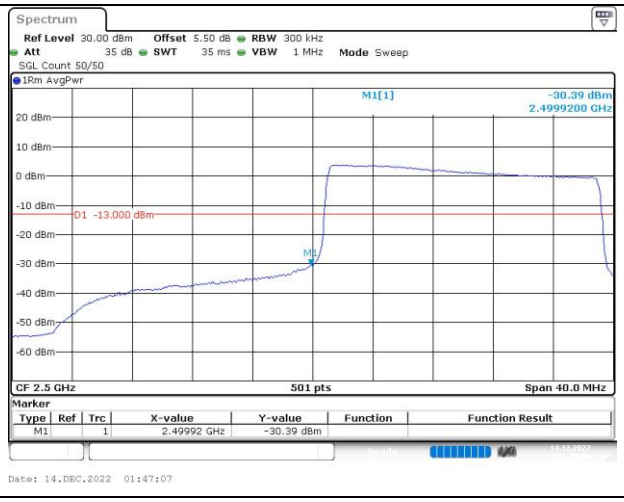
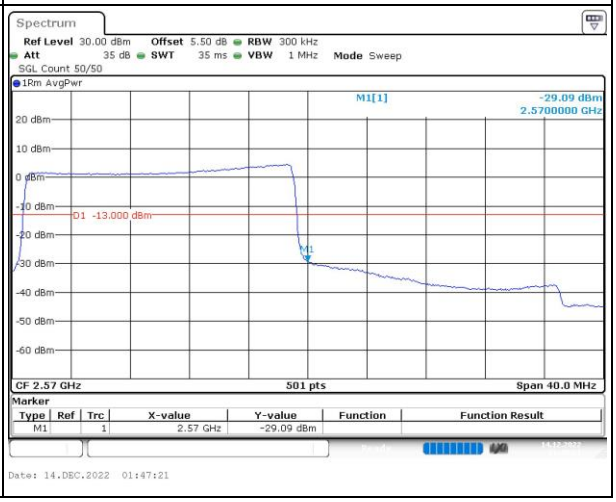
Spurious Emissions at Antenna Terminal		
Channel	**5MHz Bandwidth QPSK**	
Lowest		
Middle		
Highest		

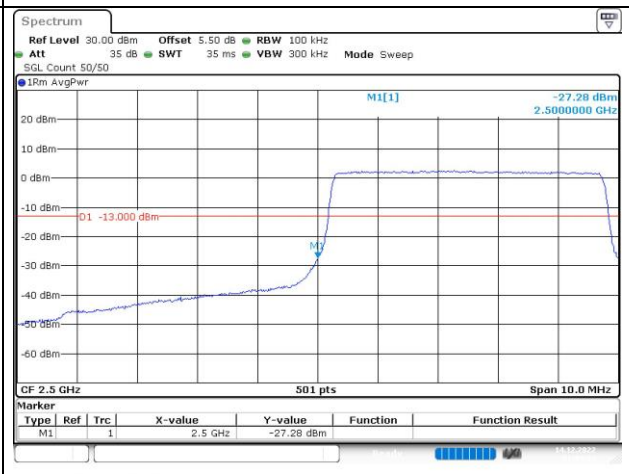
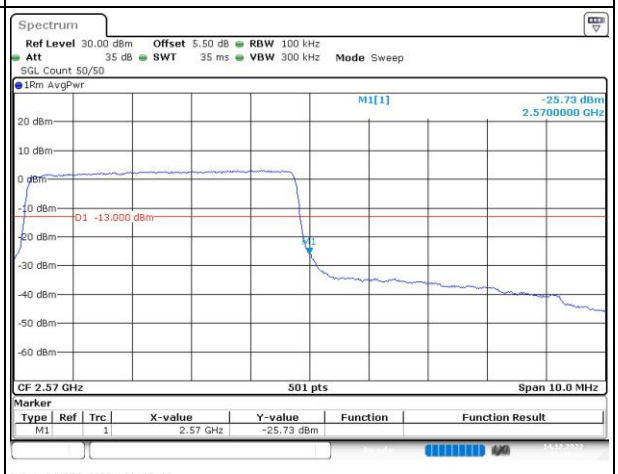
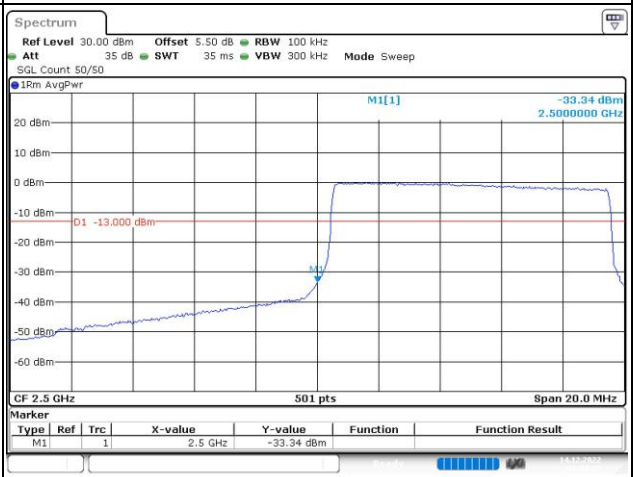
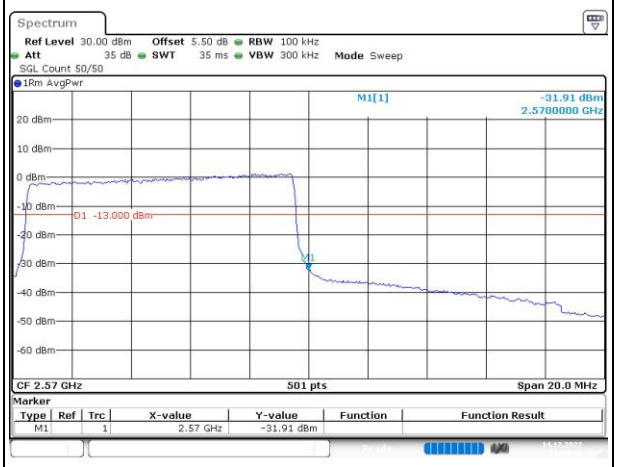
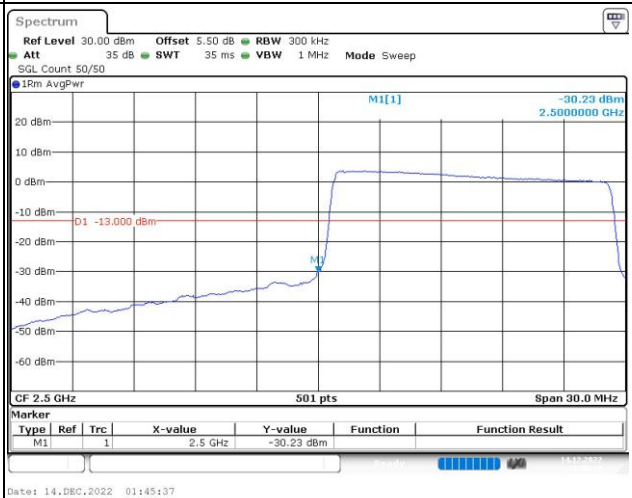
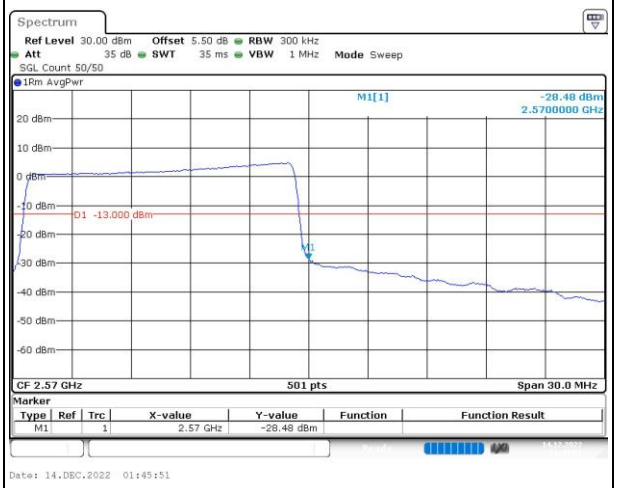
Spurious Emissions at Antenna Terminal		
Channel	**10MHz Bandwidth QPSK**	
Lowest		
Middle		
Highest		

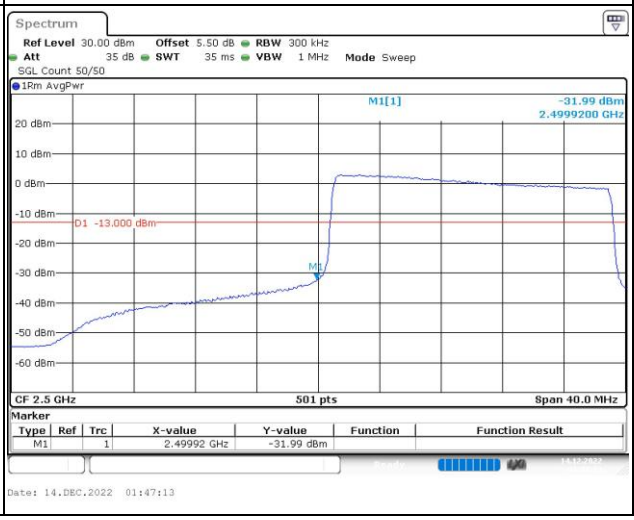
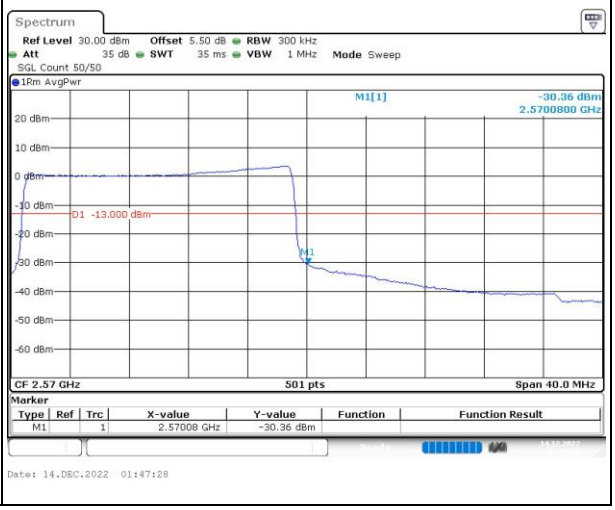
Spurious Emissions at Antenna Terminal		
Channel	**15MHz Bandwidth QPSK**	
Lowest		
Middle		
Highest		

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

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

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

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

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

4.10 Antenna Port Test Data and Results for LTE Band 12

Serial Number:	1TSA	Test Date:	2022/12/13~2022/12/20
Test Site:	RF	Test Mode:	Transmitting
Tester:	George chen	Test Result:	**Pass**

Environmental Conditions:					
Temperature: (℃)	21.2~24.3	Relative Humidity: (%)	36~49	ATM Pressure: (kPa)	100.6~101.8

Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSV40	101474	2022/7/15	2023/7/14
zhuoxiang	Coaxial Cable	SMA-178	211001	Each time	N/A
YINSAIGE	Coaxial Cable	SS402	SJ0100001	Each time	N/A
Mini-Circuits	DC Block	BLK-18-S+	1554403	Each time	N/A
Weinschel	Power Splitter	1515	RA914	Each time	N/A
R&S	Wideband Radio Communication Tester	CMW500	149218	2022/4/6	2023/4/5
BACL	TEMP&HUMI Test Chamber	BTH-150-40	30174	2022/4/6	2023/4/5
UNI-T	Multimeter	UT39A+	C210582554	2022/9/29	2023/9/28
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).*

Test Frequency For Each Mode:

Operation Bandwidth	Lowest Frequency (MHz)	Middle Frequency (MHz)	Highest Frequency (MHz)
1.4MHz	699.7	707.5	715.3
3MHz	700.5	707.5	714.5
5MHz	701.5	707.5	713.5
10MHz	704	707.5	711

Test Data:

FCC §2.1046; § 27.50(c) (10)						
RF Output Power:						
Test Bandwidth & Modulation	Resource Block & RB offset	Conducted Average Output Power(dBm)			Maximum ERP (dBm)	ERP Limit (dBm)
		Lowest Channel	Middle Channel	Highest Channel		
1.4MHz QPSK	RB1#0	23.28	23.29	23.31	21.46	34.77
	RB1#3	23.51	23.51	23.44		
	RB1#5	23.33	23.31	23.34		
	RB3#0	23.29	23.24	23.18		
	RB3#3	23.31	23.27	23.19		
	RB6#0	22.33	22.39	22.43		
1.4MHz 16QAM	RB1#0	22.35	22.24	22.17	20.5	34.77
	RB1#3	22.55	22.36	22.31		
	RB1#5	22.37	22.27	22.16		
	RB3#0	22.25	22.33	22.36		
	RB3#3	22.26	22.32	22.32		
	RB6#0	21.34	21.21	21.25		
3MHz QPSK	RB1#0	23.41	23.36	23.34	21.4	34.77
	RB1#8	23.41	23.39	23.41		
	RB1#14	23.38	23.35	23.45		
	RB6#0	22.37	22.4	22.38		
	RB6#9	22.4	22.38	22.43		
	RB15#0	22.39	22.38	22.35		
3MHz 16QAM	RB1#0	22.37	22.78	22.4	20.73	34.77
	RB1#8	22.34	22.73	22.46		
	RB1#14	22.31	22.74	22.42		
	RB6#0	21.24	21.33	21.31		
	RB6#9	21.2	21.31	21.36		
	RB15#0	21.38	21.39	21.24		
5MHz QPSK	RB1#0	23.22	23.25	23.2	21.34	34.77
	RB1#13	23.38	23.39	23.38		
	RB1#24	23.3	23.26	23.36		
	RB15#0	22.44	22.39	22.4		
	RB15#10	22.4	22.45	22.41		
	RB25#0	22.35	22.35	22.38		
5MHz 16QAM	RB1#0	22.3	22.11	22.44	20.56	34.77
	RB1#13	22.4	22.23	22.61		
	RB1#24	22.35	22.09	22.48		
	RB15#0	21.45	21.4	21.38		
	RB15#10	21.39	21.39	21.35		
	RB25#0	21.36	21.4	21.33		

10MHz QPSK	RB1#0	23.33	23.27	23.28	21.47	34.77
	RB1#25	23.49	23.52	23.43		
	RB1#49	23.45	23.38	23.46		
	RB25#0	22.42	22.31	22.33		
	RB25#25	22.43	22.34	22.36		
	RB50#0	22.4	22.36	22.35		
10MHz 16QAM	RB1#0	22.27	22.76	22.37	20.8	34.77
	RB1#25	22.45	22.85	22.57		
	RB1#49	22.35	22.81	22.44		
	RB25#0	21.47	21.36	21.3		
	RB25#25	21.47	21.37	21.32		
	RB50#0	21.42	21.27	21.3		
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	3.36	3.94	3.16	13
	RB50#0	4.38	4.41	4.32	13
10MHz 16QAM	RB1#0	4.23	4.81	4.2	13
	RB50#0	5.39	5.36	5.39	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	1.296	1.332	1.326
1.4MHz 16QAM	1.102	1.108	1.096	1.302	1.314	1.29
3MHz QPSK	2.683	2.683	2.683	2.892	2.88	2.88
3MHz 16QAM	2.683	2.683	2.683	2.88	2.892	2.88
5MHz QPSK	4.511	4.531	4.531	5.14	5.22	5.26
5MHz 16QAM	4.551	4.531	4.551	5.24	5.16	5.18
10MHz QPSK	9.022	8.942	8.982	10.16	9.84	10.48
10MHz 16QAM	8.982	8.942	8.982	10.16	9.92	10
Note: The test plots please refer to the Plots of Occupied Bandwidth						

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

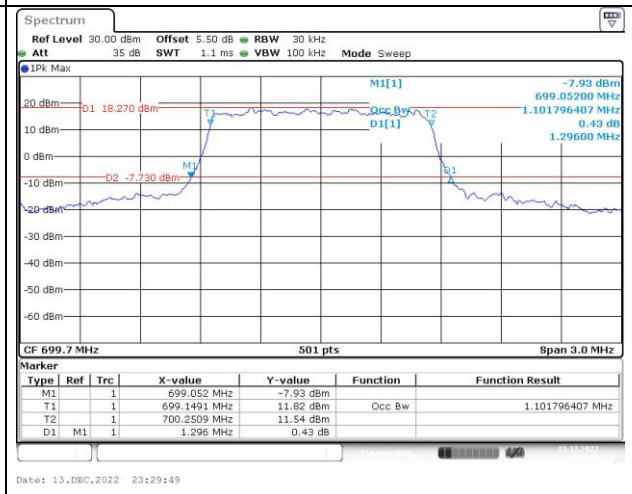
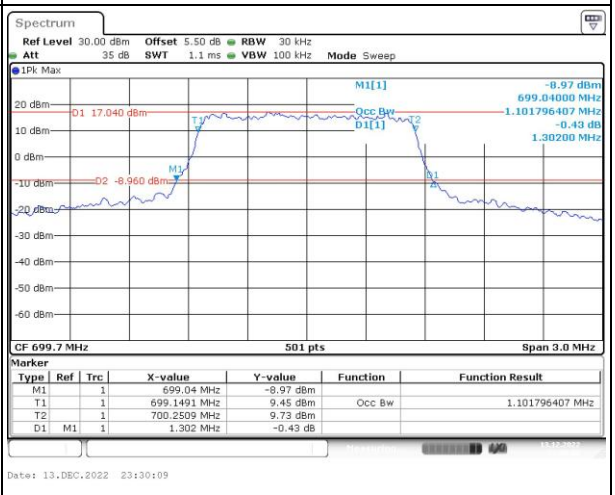
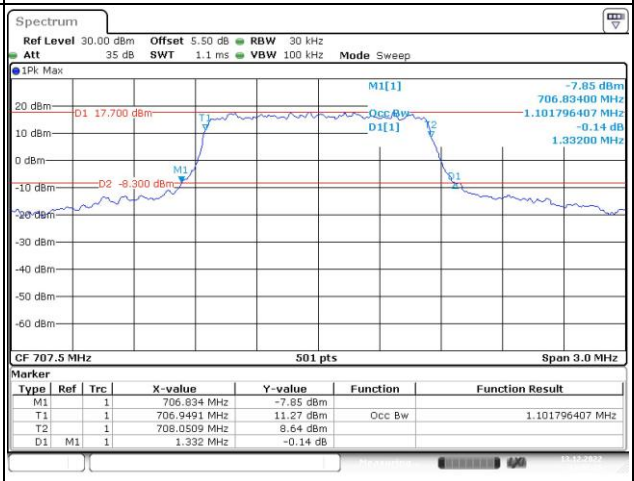
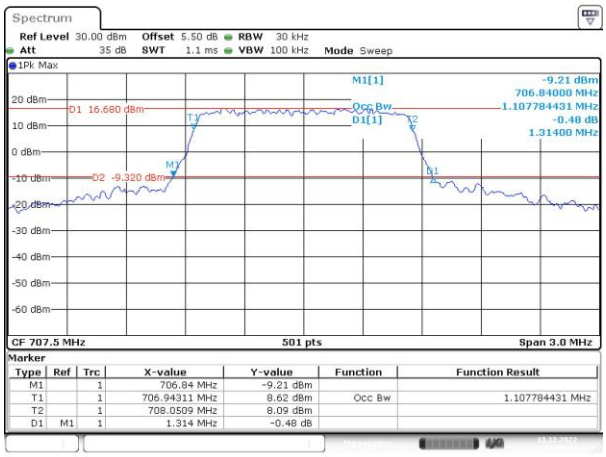
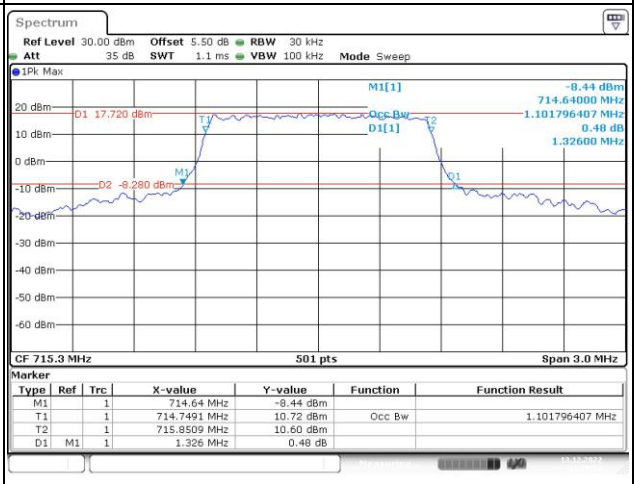
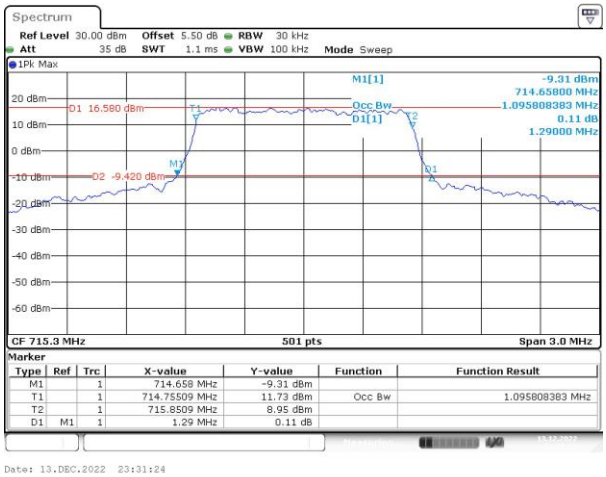
FCC §2.1051, §27.53:Out of band emission, Band Edge	
Result:	**Pass, Please refer to the test plots of Out of band emission, Band Edge.**

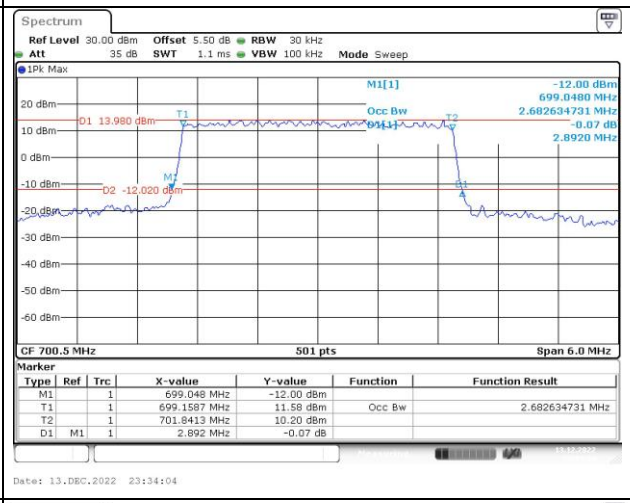
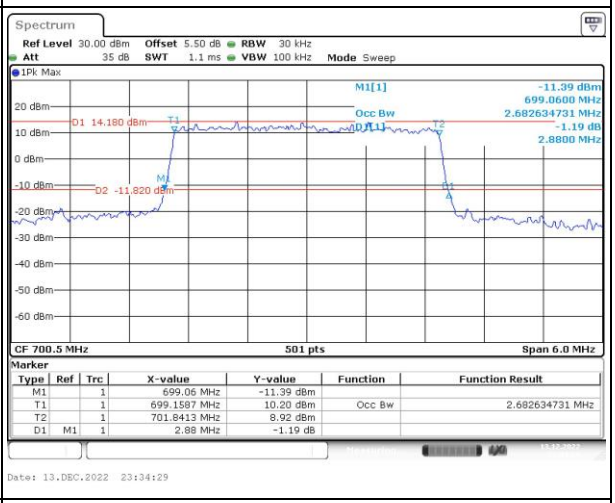
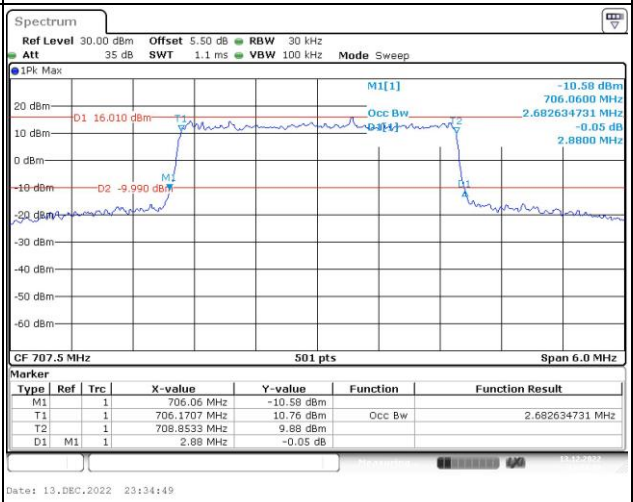
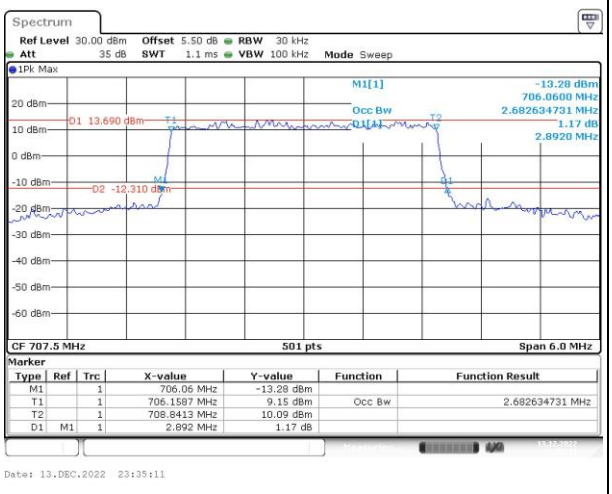
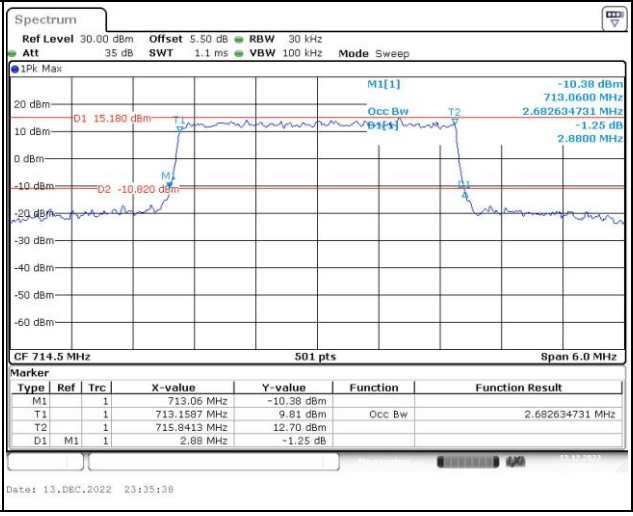
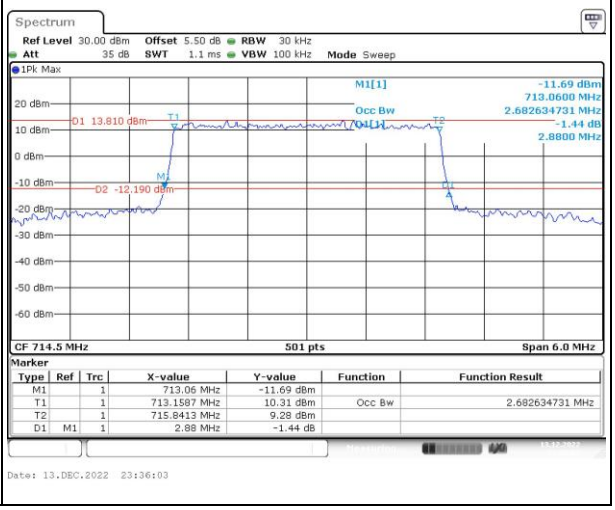
FCC §2.1055, §27.54: Frequency Stability

Test Mode:	10M QPSK	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (℃)	Voltage (V_{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.7	699.546	699.00	715.457	716.00
	-20	3.7	699.478	699.00	715.437	716.00
	-10	3.7	699.478	699.00	715.435	716.00
	0	3.7	699.506	699.00	715.475	716.00
	10	3.7	699.487	699.00	715.443	716.00
	20	3.7	699.489	699.00	715.471	716.00
	30	3.7	699.545	699.00	715.477	716.00
	40	3.7	699.546	699.00	715.437	716.00
	50	3.7	699.475	699.00	715.509	716.00
Frequency Stability vs. Voltage	20	3.3	699.497	699.00	715.442	716.00
	20	4.2	699.505	699.00	715.466	716.00
					Result:	**Pass**

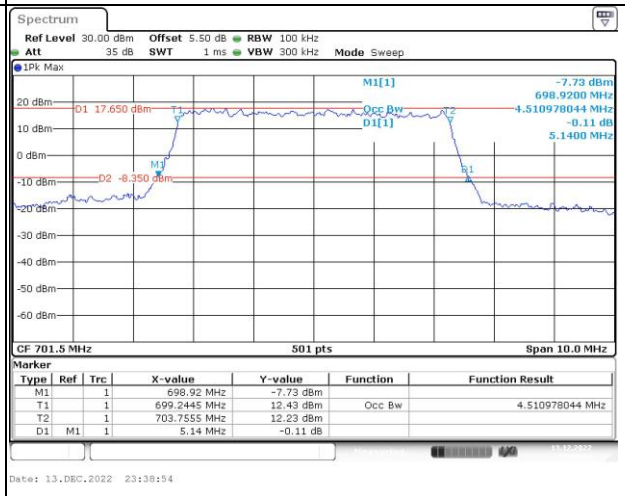
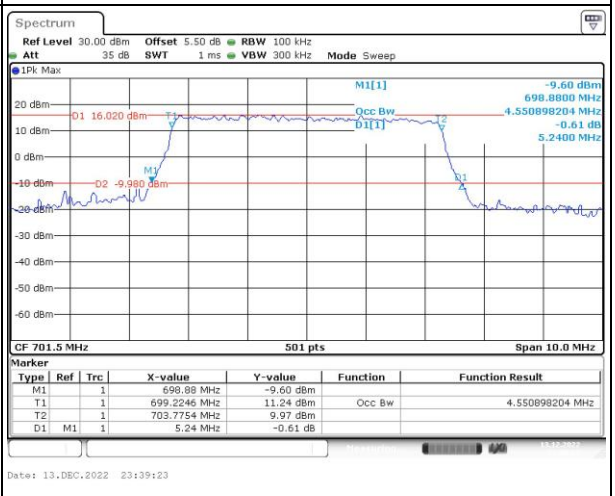
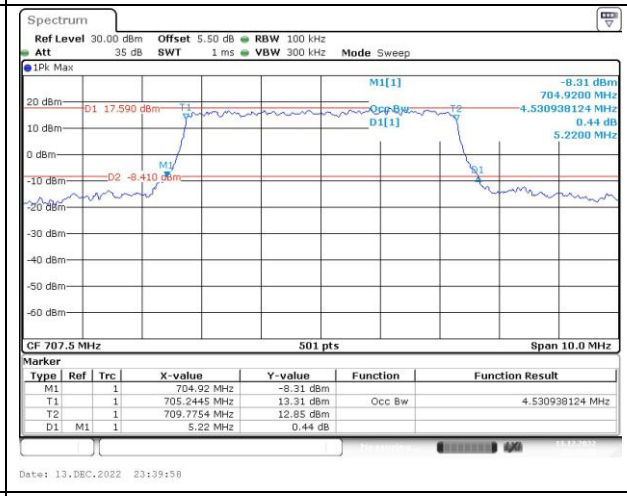
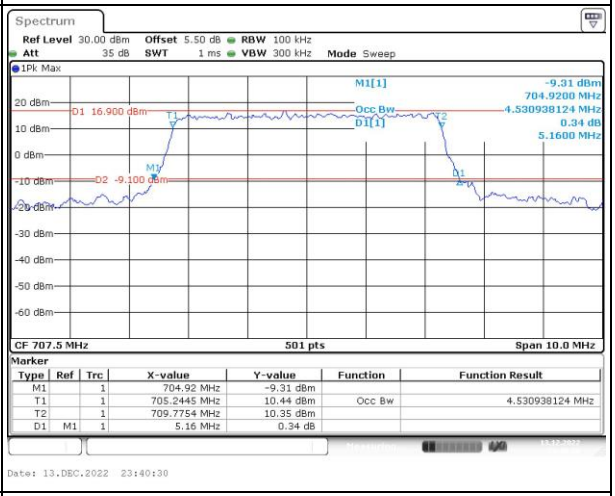
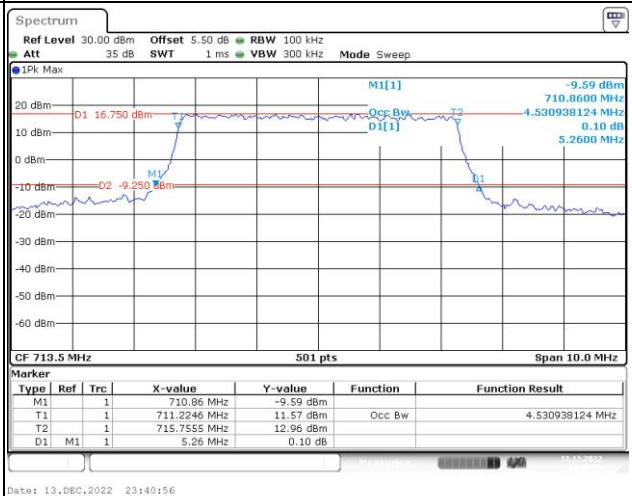
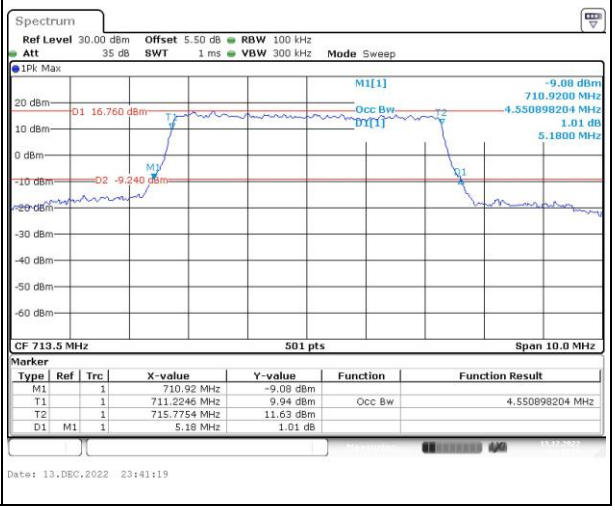
Test Mode:	10M 16QAM	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (℃)	Voltage (V_{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.7	699.564	699.00	715.426	716.00
	-20	3.7	699.542	699.00	715.514	716.00
	-10	3.7	699.517	699.00	715.468	716.00
	0	3.7	699.531	699.00	715.499	716.00
	10	3.7	699.575	699.00	715.462	716.00
	20	3.7	699.529	699.00	715.471	716.00
	30	3.7	699.556	699.00	715.513	716.00
	40	3.7	699.516	699.00	715.514	716.00
	50	3.7	699.525	699.00	715.518	716.00
Frequency Stability vs. Voltage	20	3.3	699.528	699.00	715.483	716.00
	20	4.2	699.524	699.00	715.517	716.00
					Result:	**Pass**

Test Plots(Note: The 5.5dB is the Insertion loss of the RF cable, Power Splitter and DC Block, which was offset into the Spectrum Analyzer)**:**

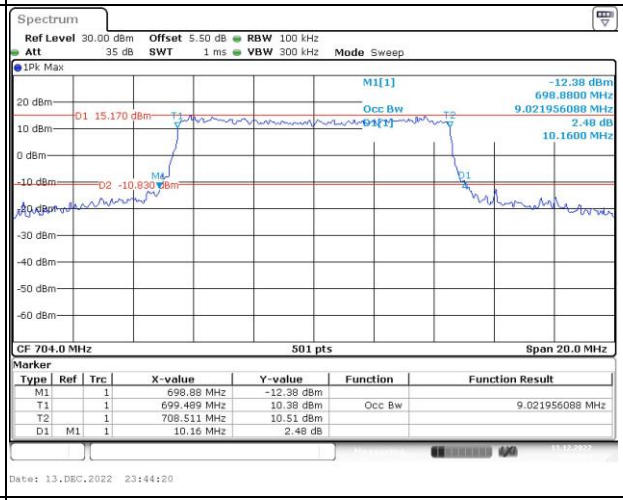
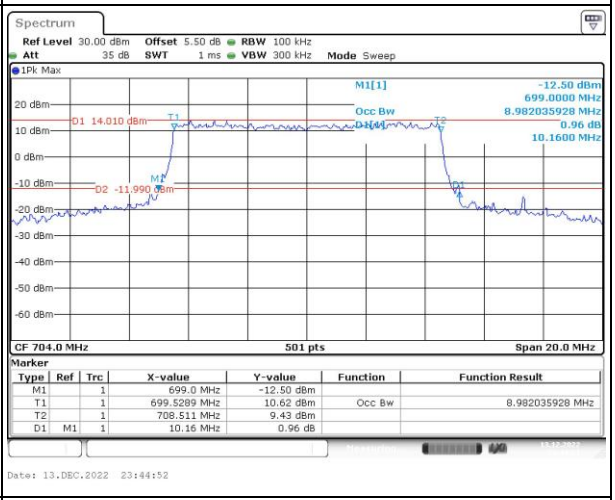
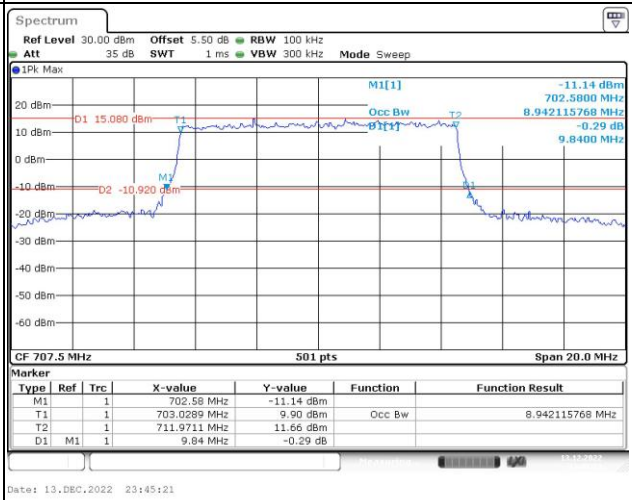
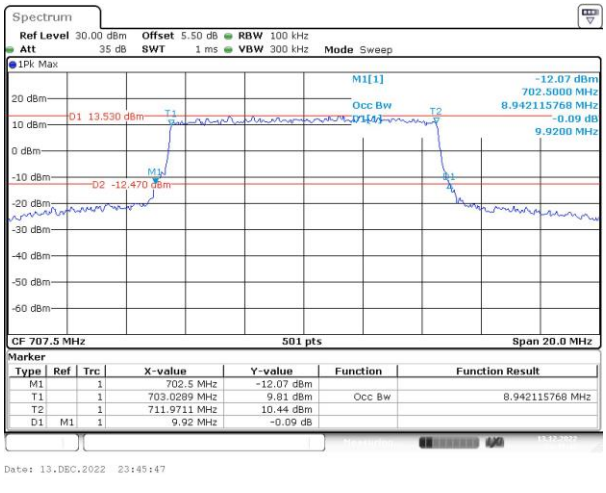
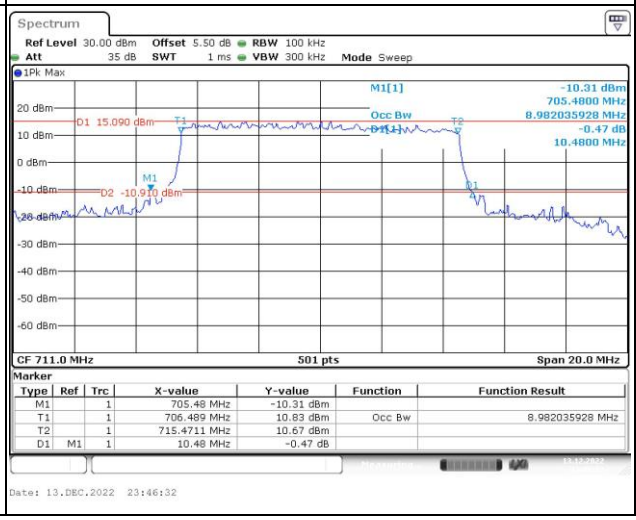
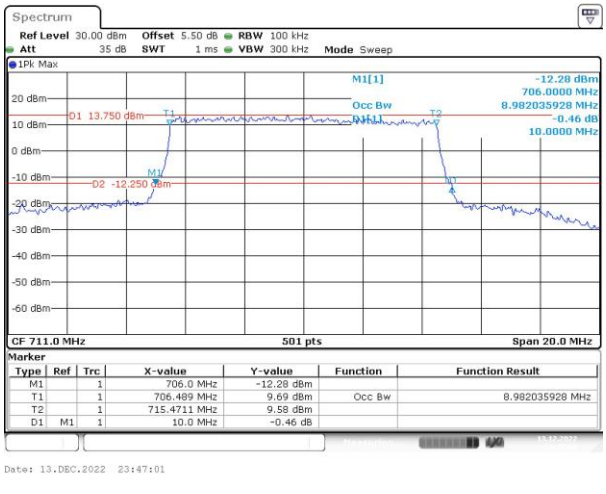
Occupied Bandwidth		
Channel	1.4MHz Bandwidth QPSK	1.4MHz Bandwidth 16QAM
Lowest		
Middle		
Highest		

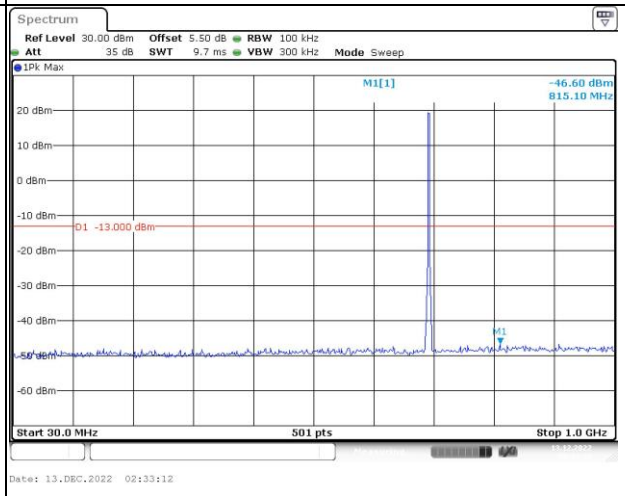
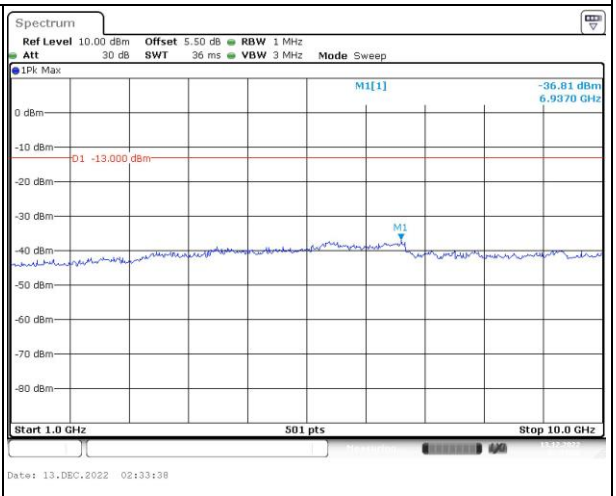
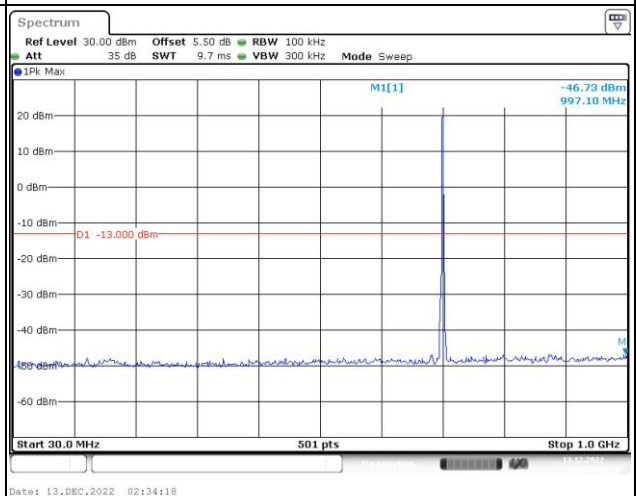
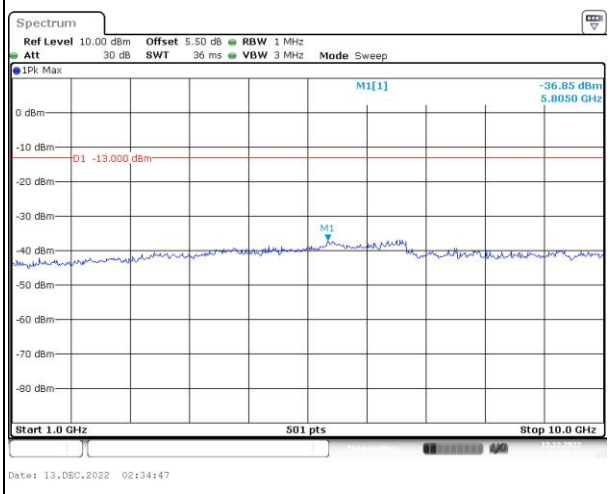
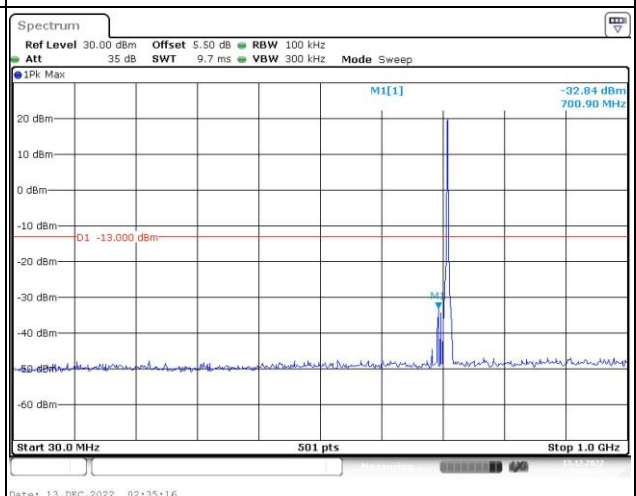
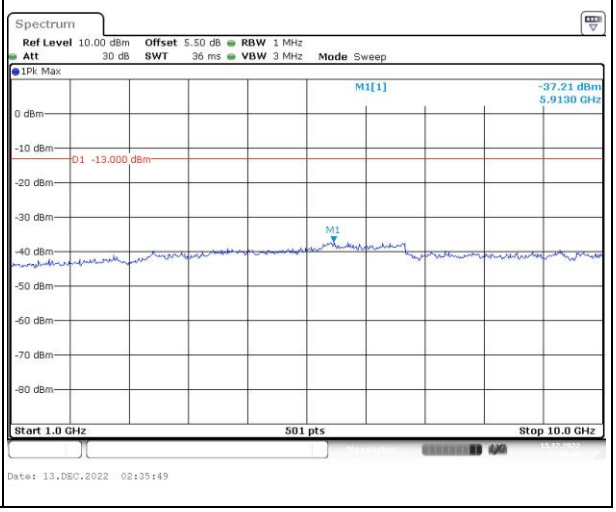
Occupied Bandwidth		
Channel	3MHz Bandwidth QPSK	3MHz Bandwidth 16QAM
Lowest		
Middle		
Highest		

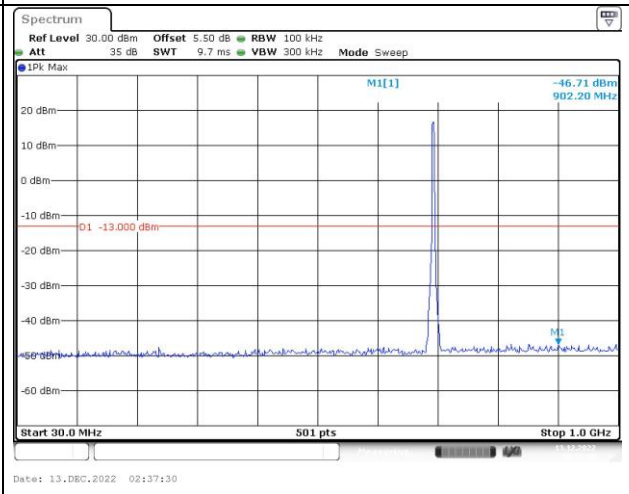
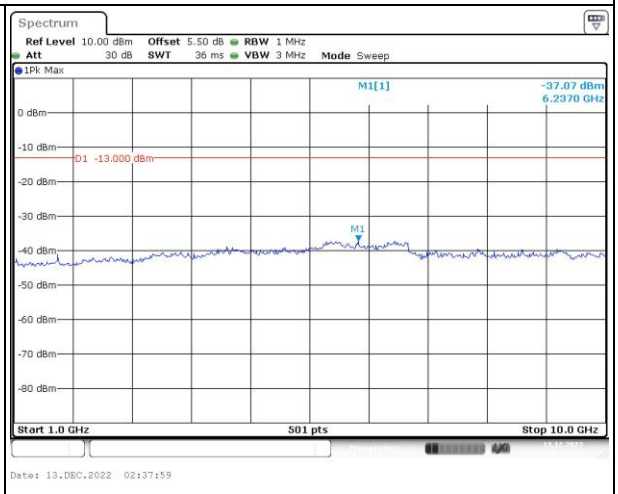
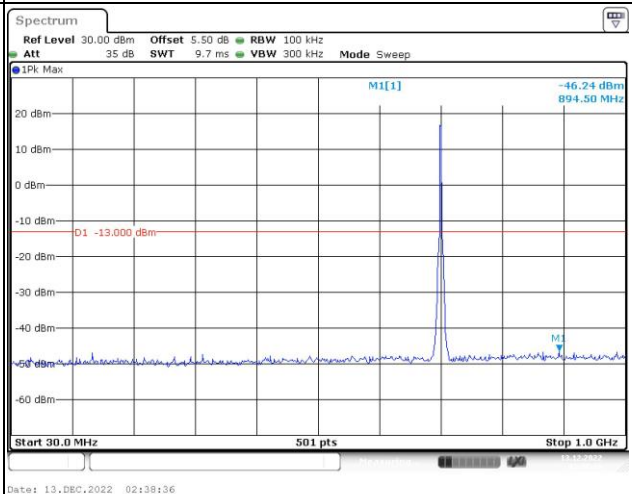
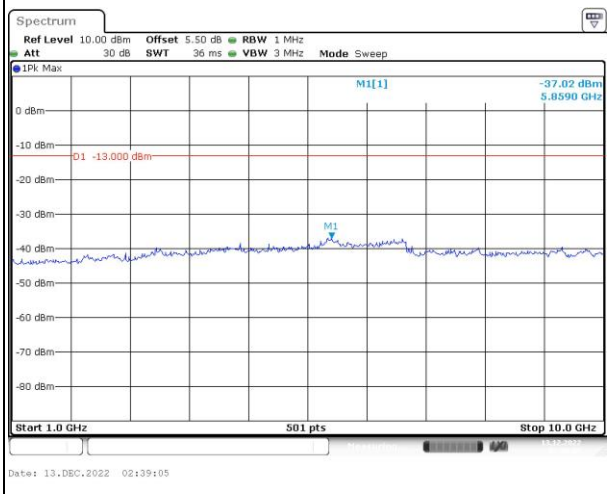
Occupied Bandwidth

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

Occupied Bandwidth

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

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

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