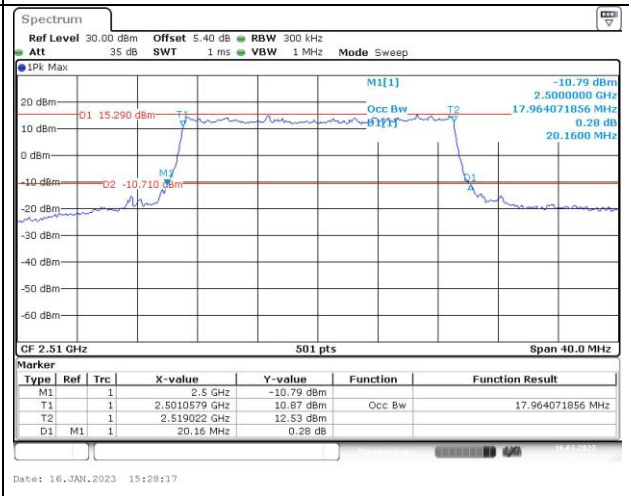
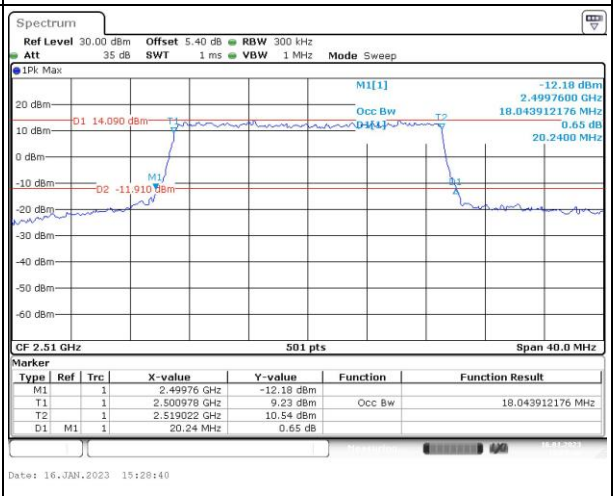
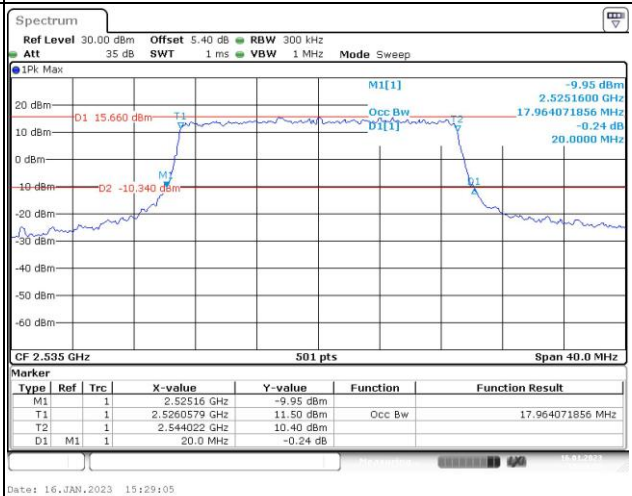
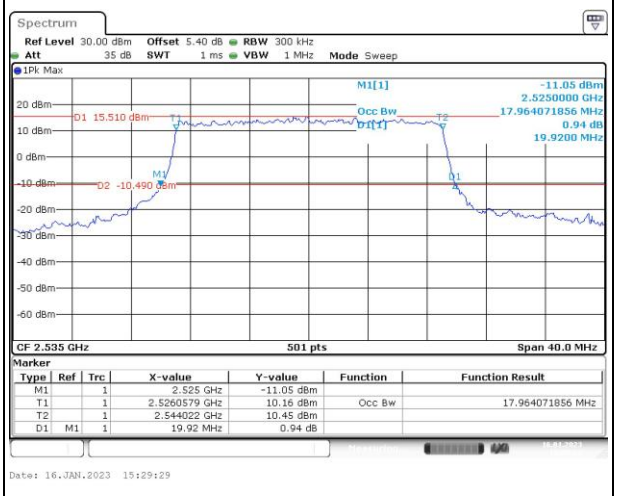
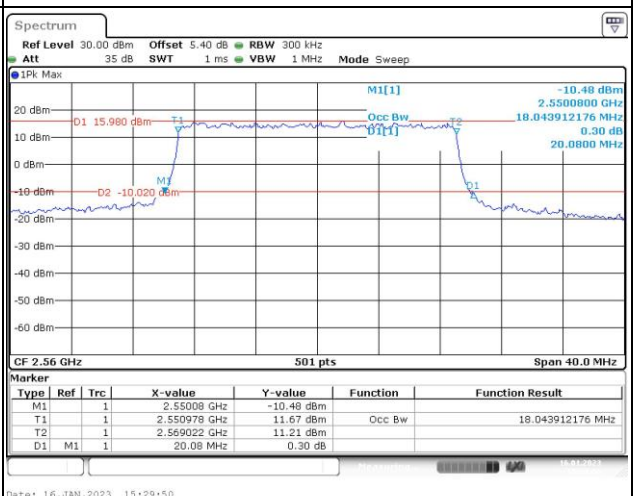
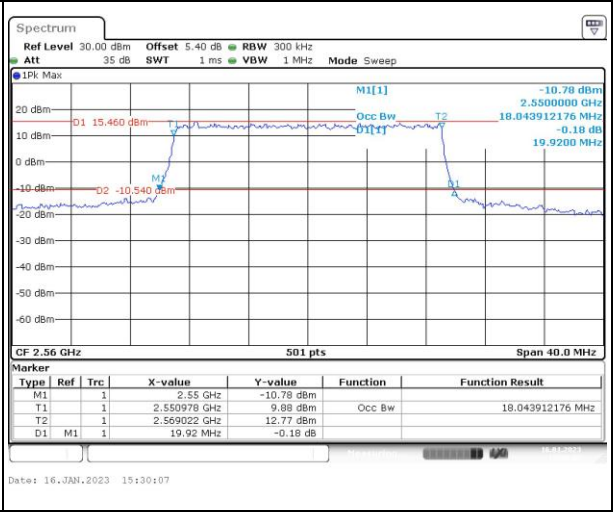
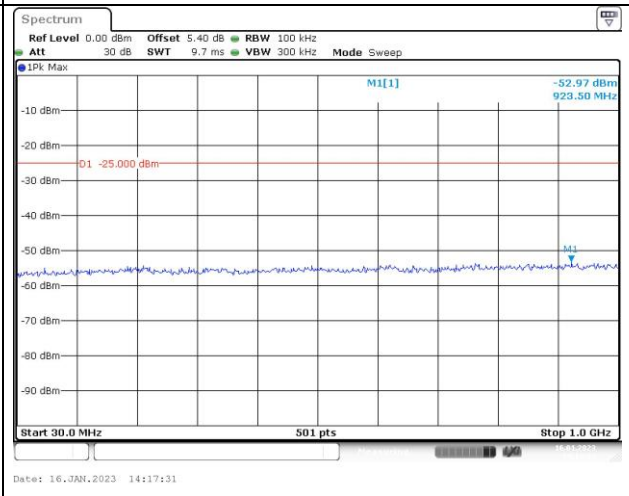
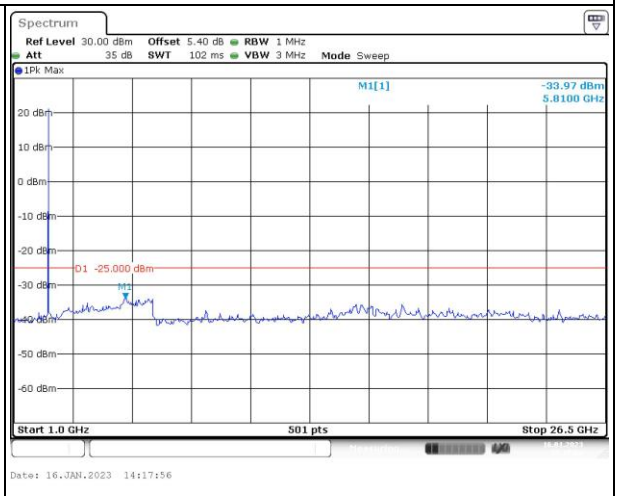
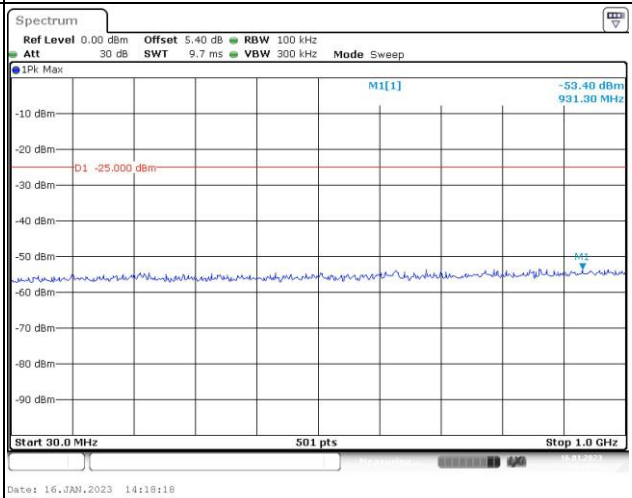
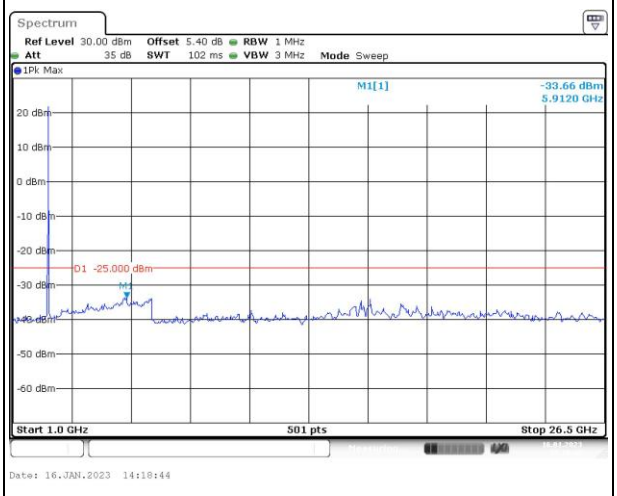
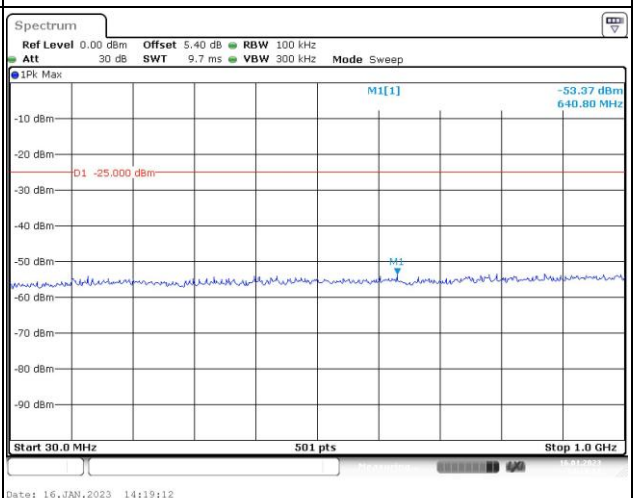
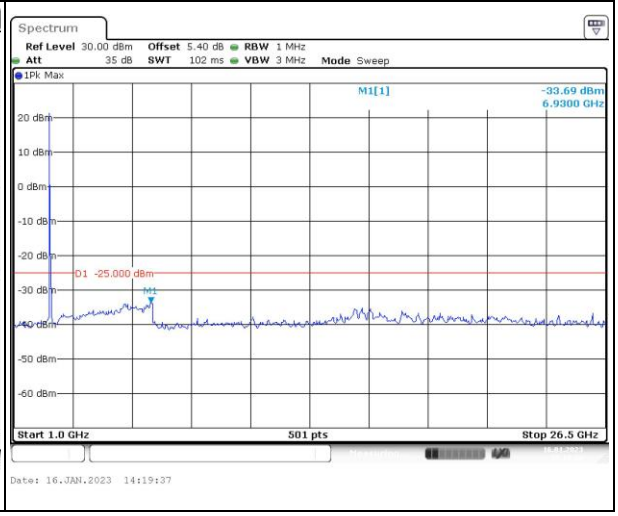
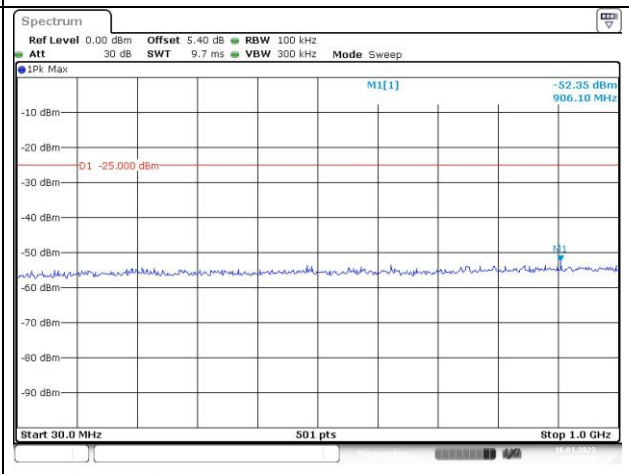
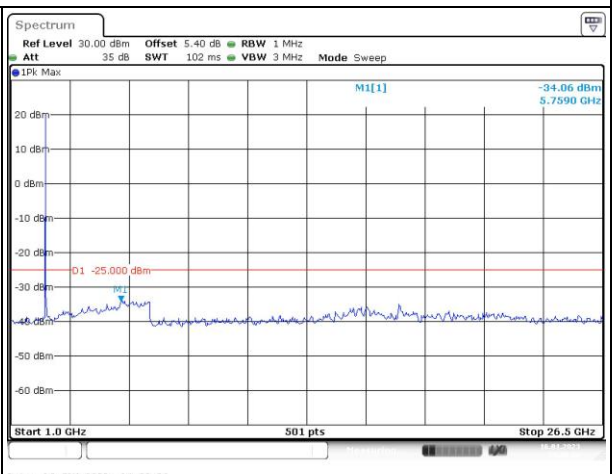
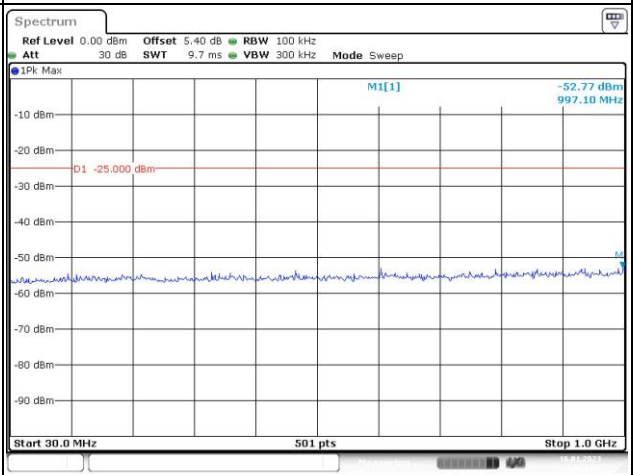
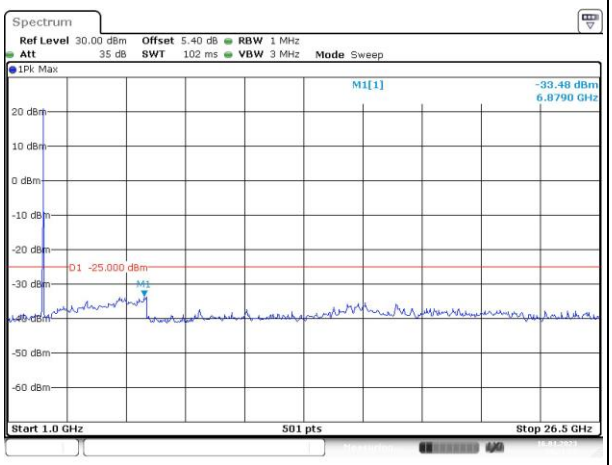
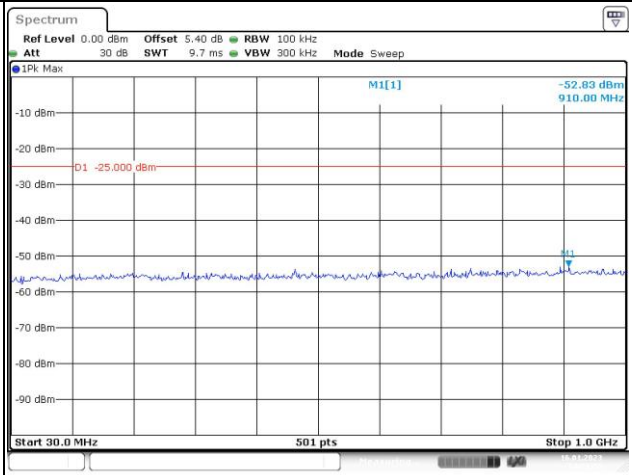
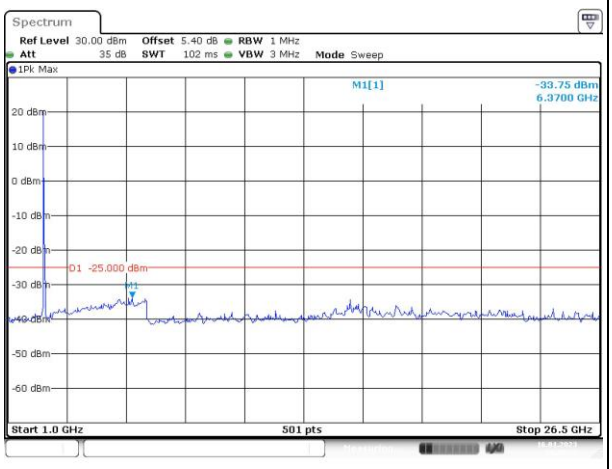
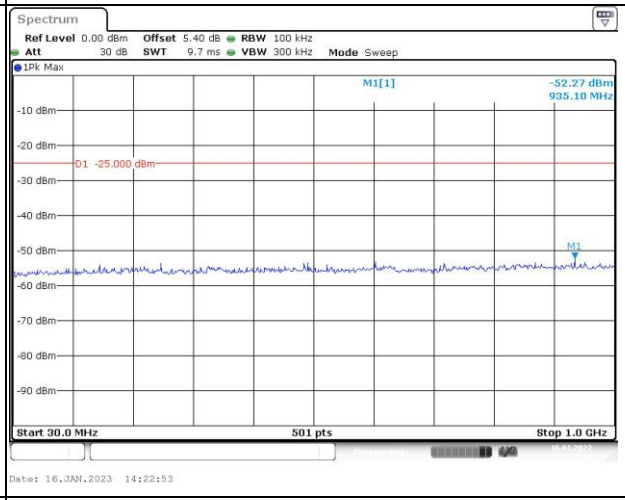
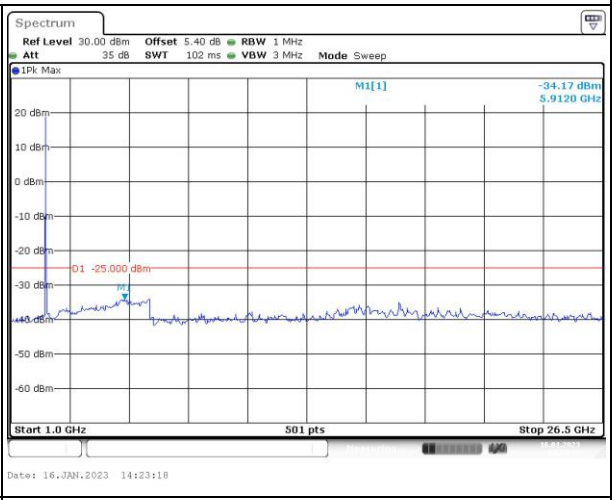
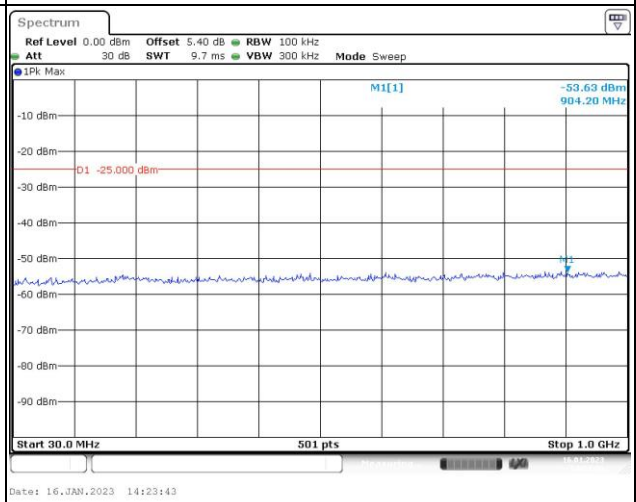
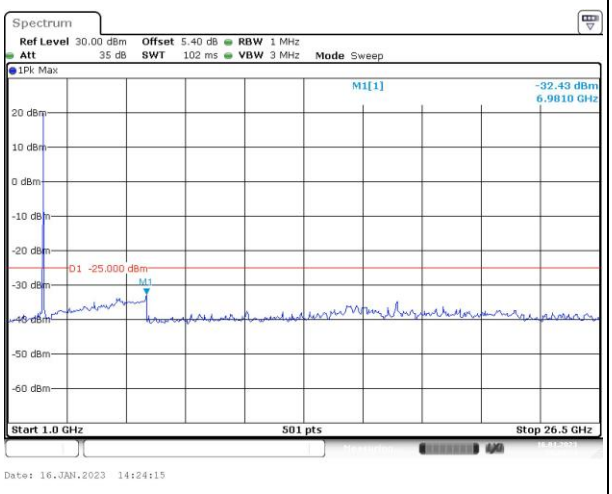
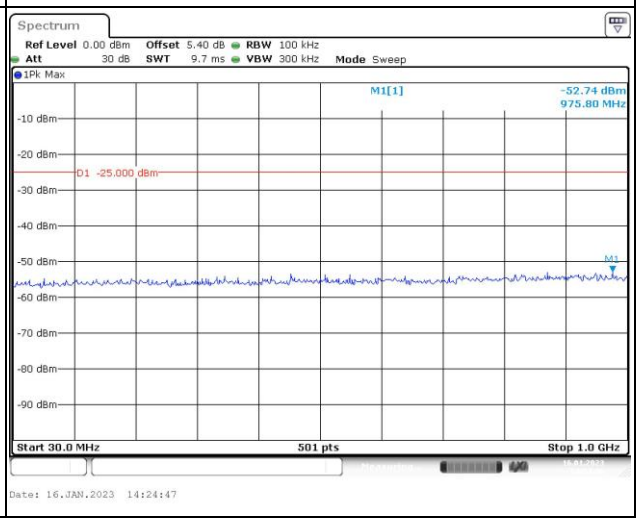
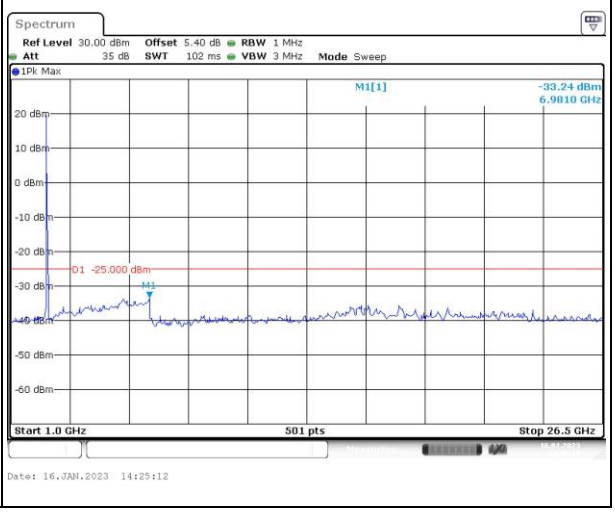
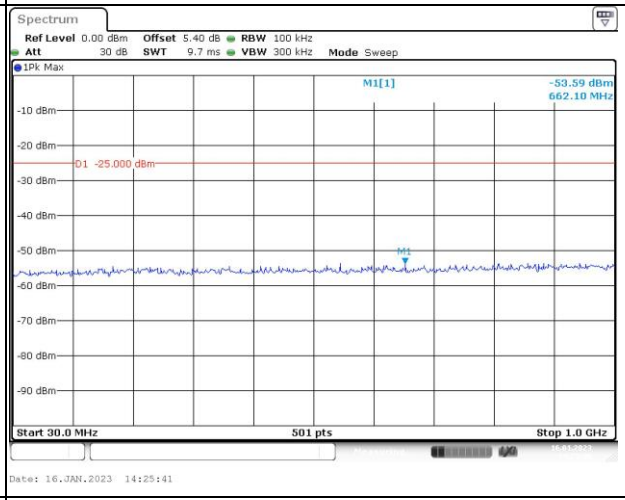
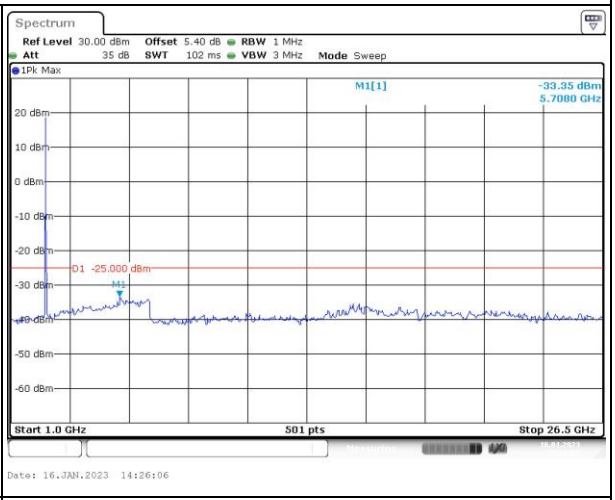
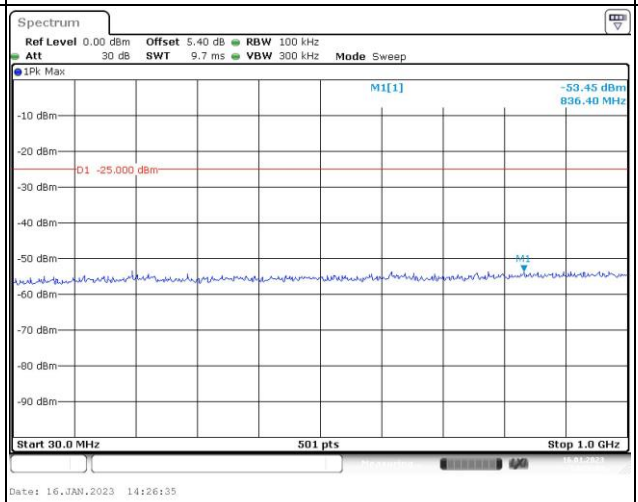
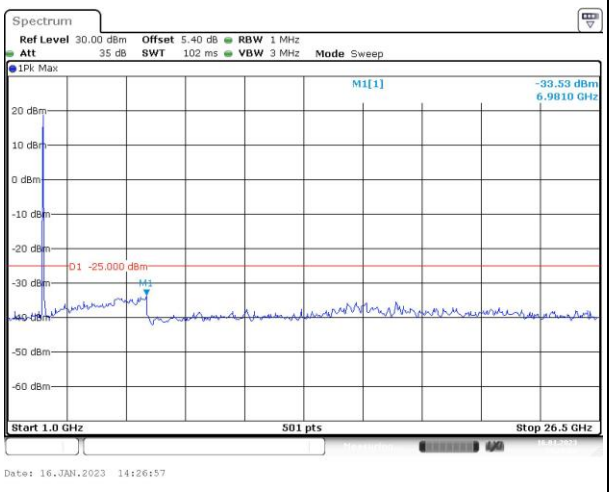
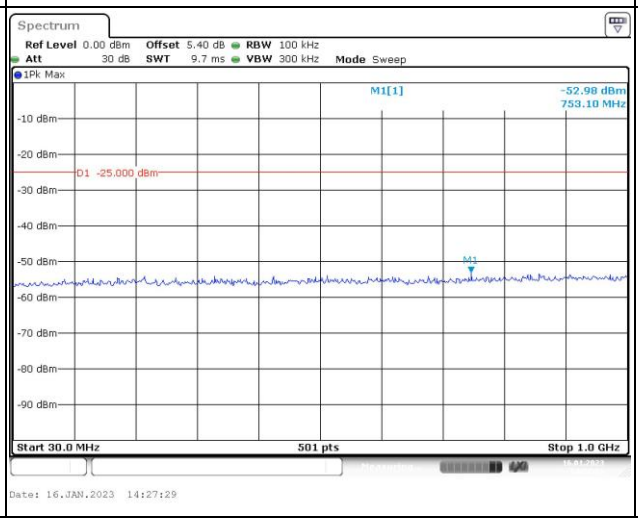
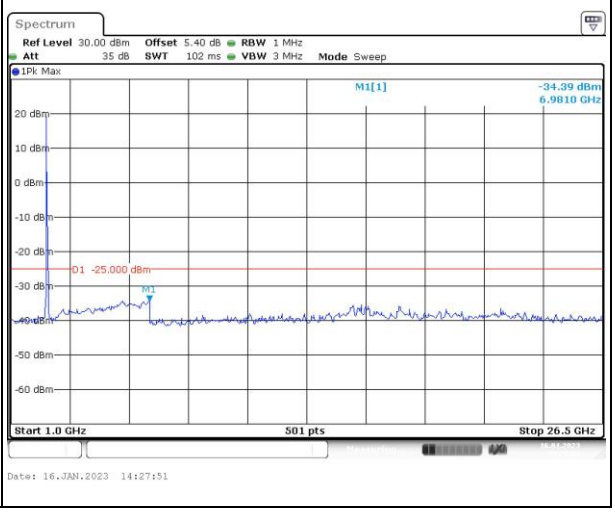
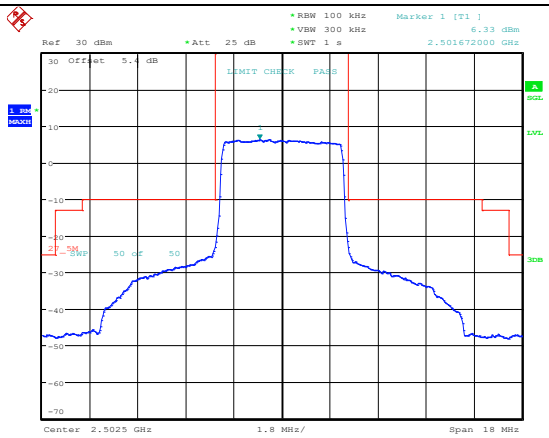
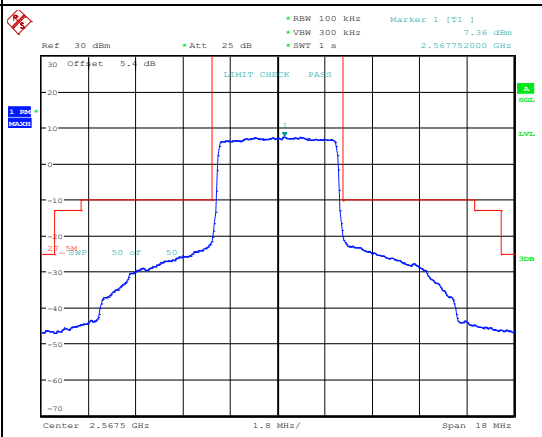
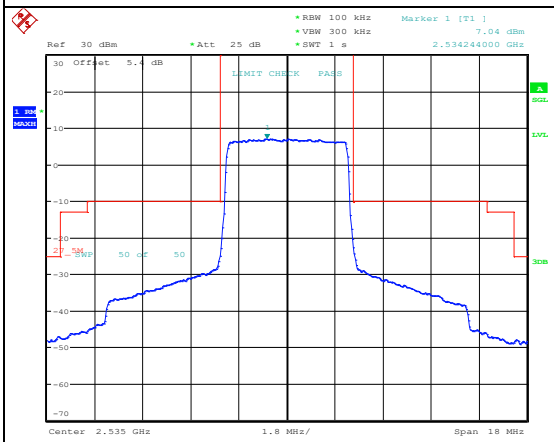
Occupied Bandwidth		
Channel	20MHz Bandwidth QPSK	20MHz Bandwidth 16QAM
Lowest		
Middle		
Highest		

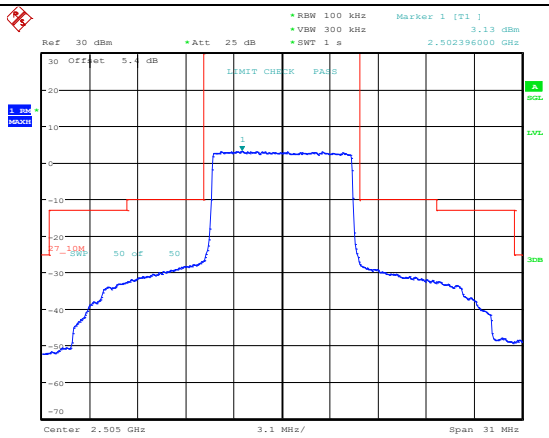
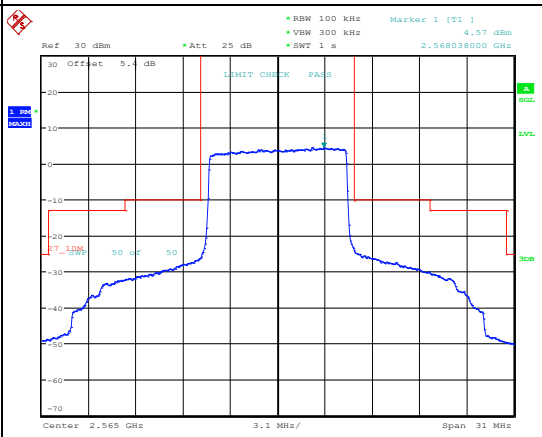
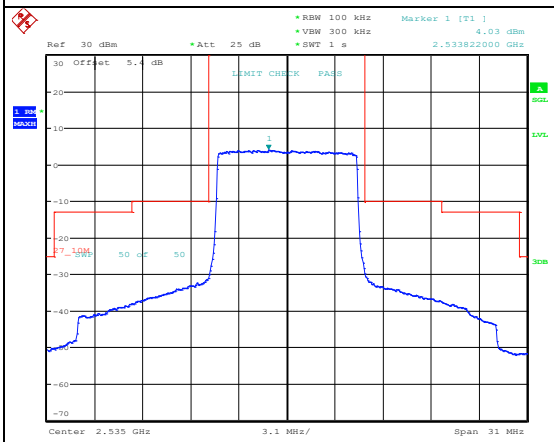
Spurious Emissions at Antenna Terminal		
Channel	**5MHz Bandwidth QPSK**	
Lowest		
Middle		
Highest		

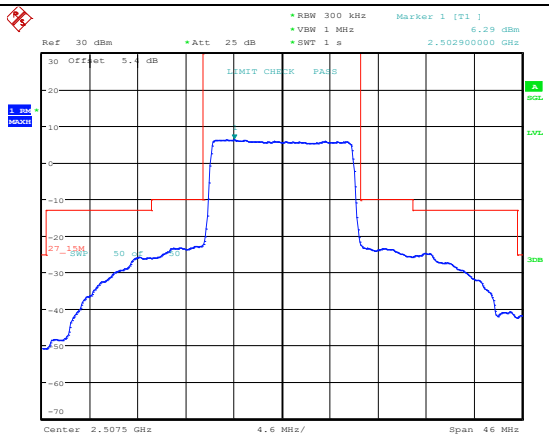
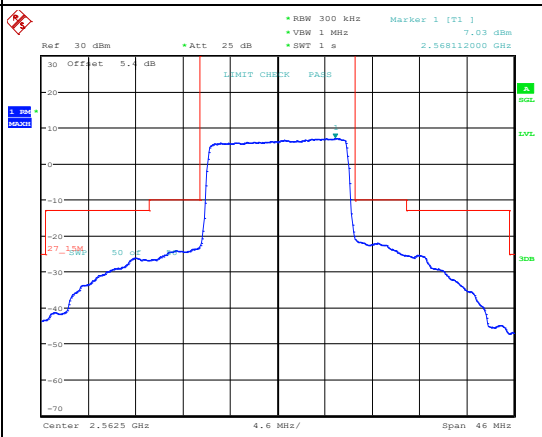
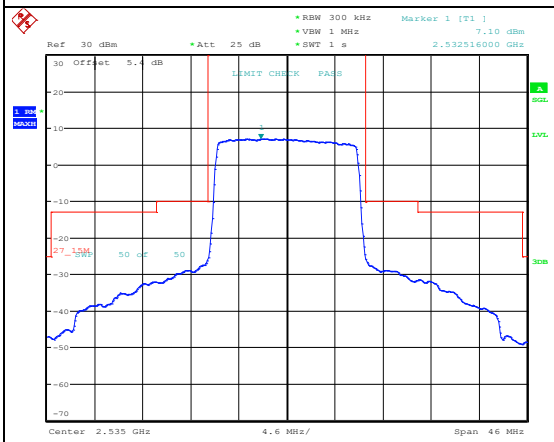
Spurious Emissions at Antenna Terminal		
Channel	**10MHz Bandwidth QPSK**	
Lowest		
Middle		
Highest		

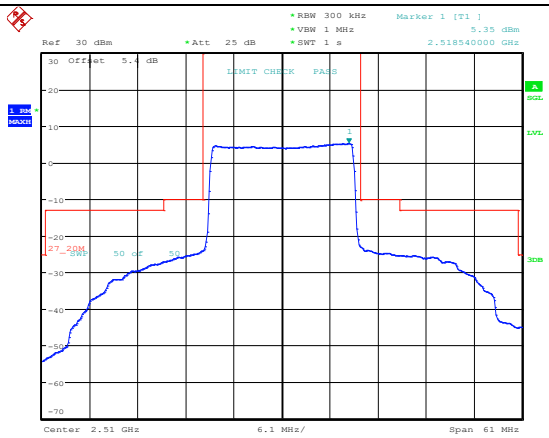
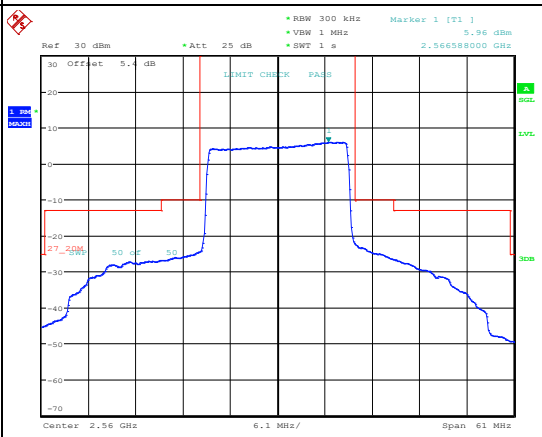
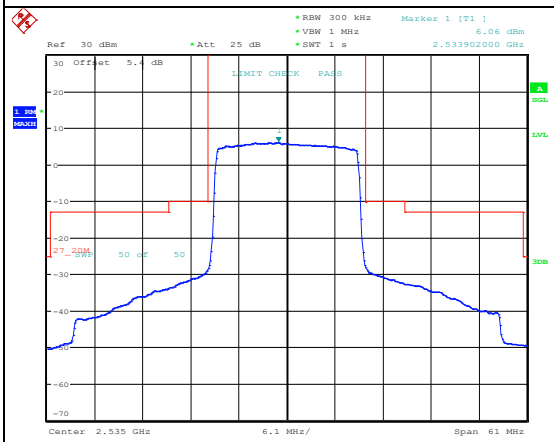
Spurious Emissions at Antenna Terminal		
Channel	**15MHz Bandwidth QPSK**	
Lowest		
Middle		
Highest		

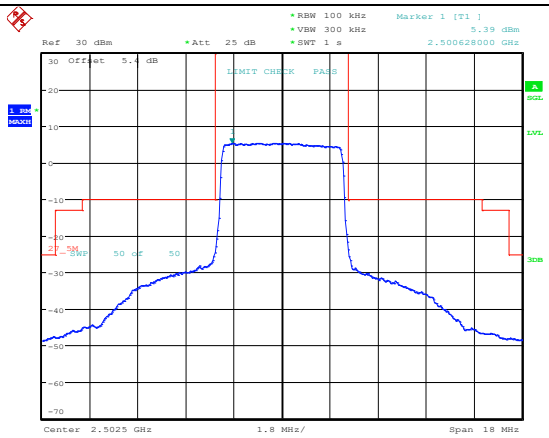
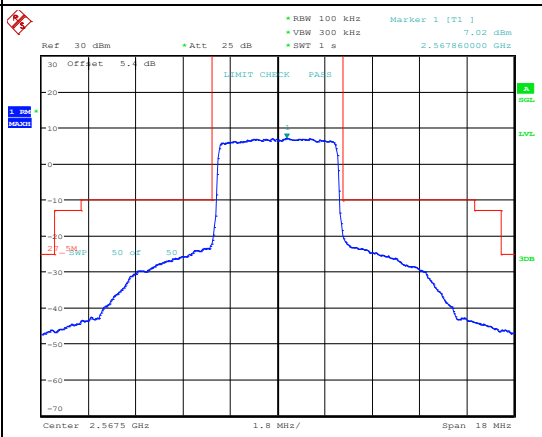
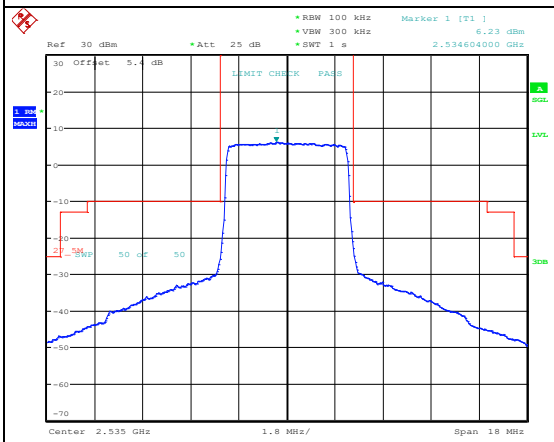
Spurious Emissions at Antenna Terminal		
Channel	**20MHz Bandwidth QPSK**	
Lowest		
Middle		
Highest		

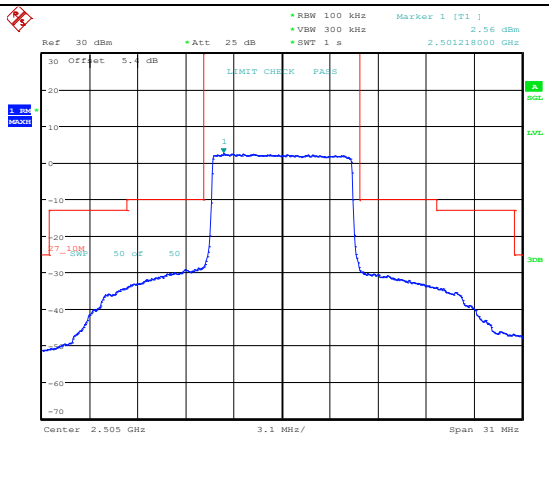
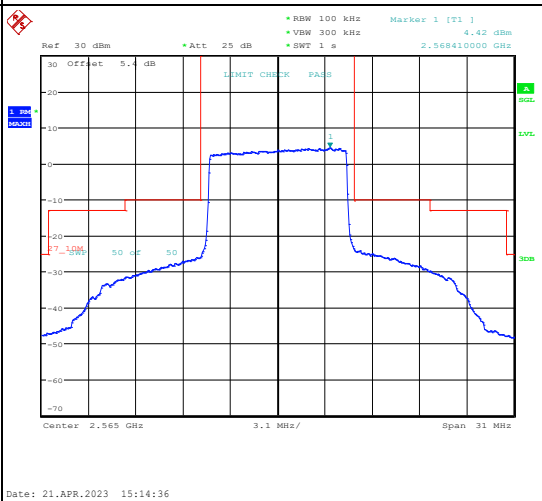
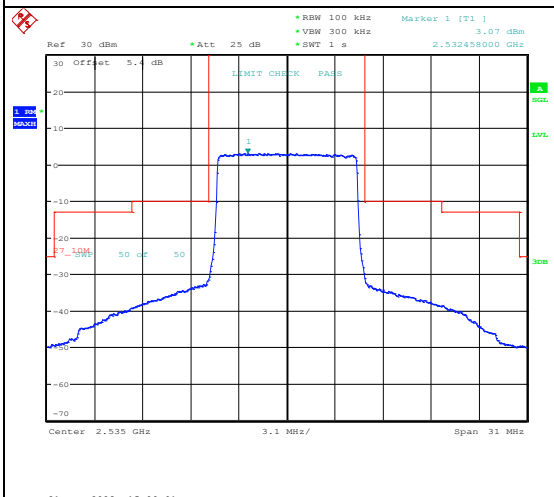
Out of band emission, Band Edge		
Mode	**Lowest**	**Highest**
QPSK 5MHz	 Date: 21.APR.2023 14:48:28	 Date: 21.APR.2023 14:51:07
	Middle	
	 Date: 21.APR.2023 14:42:56	

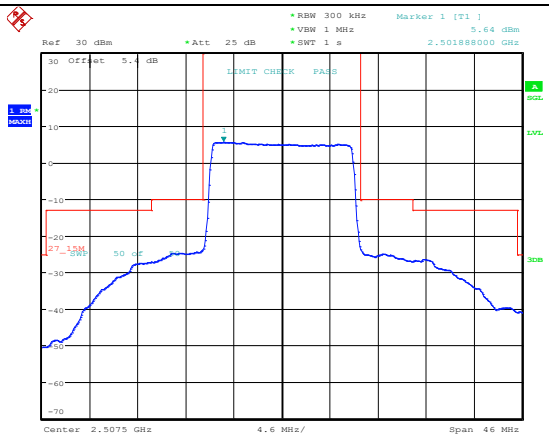
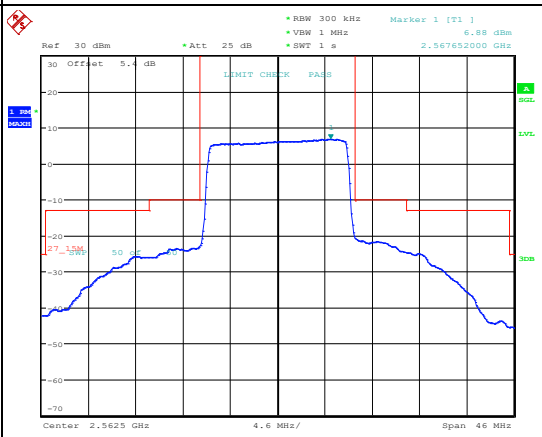
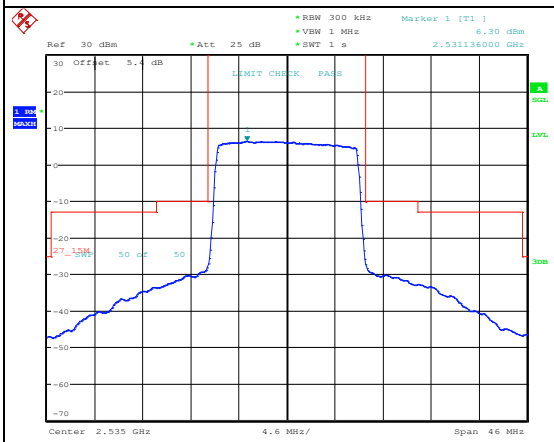
Out of band emission, Band Edge		
Mode	**Lowest**	**Highest**
QPSK 10MHz		
	Middle	
		

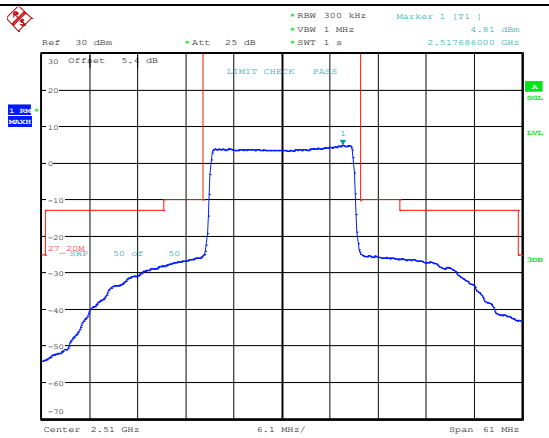
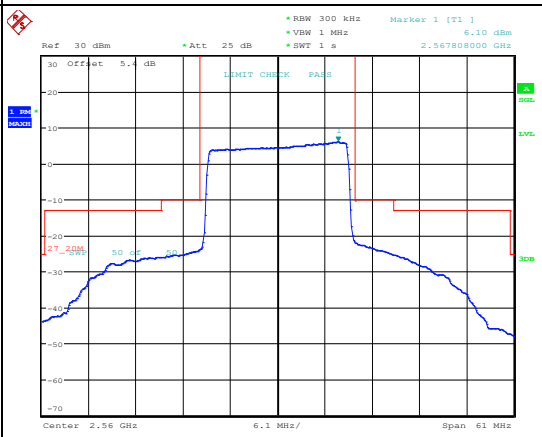
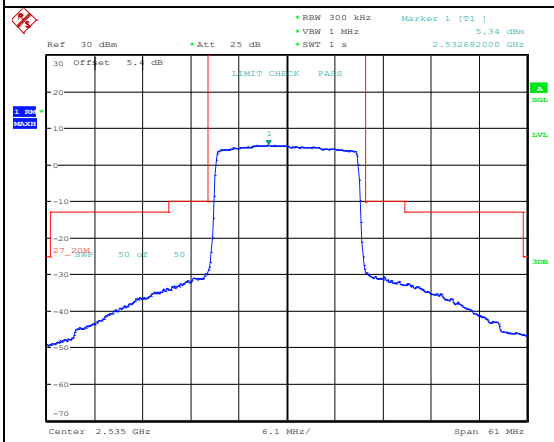
Out of band emission, Band Edge		
Mode	**Lowest**	**Highest**
QPSK 15MHz	 Date: 21.APR.2023 15:19:28	 Date: 21.APR.2023 15:29:39
	Middle	
	 Date: 21.APR.2023 15:26:40	

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

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

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

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

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

4.10 Antenna Port Test Data and Results for LTE Band 12

Serial Number:	1XBG-2	Test Date:	2023/1/13~2023/1/18
Test Site:	RF	Test Mode:	Transmitting
Tester:	George Chen	Test Result:	**Pass**

Environmental Conditions:					
Temperature: (℃)	18.3~24.6	Relative Humidity: (%)	42~58	ATM Pressure: (kPa)	100.6~102.3

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	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	2022-04-06	2023-04-05
BACL	TEMP&HUMI Test Chamber	BTH-150-40	30174	2022-09-29	2023-09-28
UNI-T	Multimeter	UT39A+	C210582554	N/A	N/A
ZHAOXIN	DC Power Supply	RXN-6010D	21R6010D0912386	2022-07-15	2023-07-14

** 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	22.36	22.43	22.54	18.08	34.77
	RB1#3	22.41	22.45	22.53		
	RB1#5	22.41	22.46	22.49		
	RB3#0	22.51	22.56	22.63		
	RB3#3	22.5	22.46	22.51		
	RB6#0	21.5	21.47	21.58		
1.4MHz 16QAM	RB1#0	22.26	20.96	21.95	17.78	34.77
	RB1#3	22.33	20.91	21.91		
	RB1#5	22.25	20.96	22.05		
	RB3#0	21.43	21.27	21.6		
	RB3#3	21.31	21.27	21.64		
	RB6#0	20.51	20.52	20.84		
3MHz QPSK	RB1#0	22.38	22.37	22.54	18.06	34.77
	RB1#8	22.45	22.36	22.61		
	RB1#14	22.52	22.41	22.53		
	RB6#0	21.58	21.52	21.62		
	RB6#9	21.5	21.51	21.5		
	RB15#0	21.39	21.39	21.64		
3MHz 16QAM	RB1#0	22.27	21.09	21.9	17.81	34.77
	RB1#8	22.36	21.02	21.88		
	RB1#14	22.33	21.1	21.9		
	RB6#0	20.56	20.69	20.63		
	RB6#9	20.59	20.76	20.68		
	RB15#0	20.56	20.5	20.69		
5MHz QPSK	RB1#0	22.42	22.34	22.48	18	34.77
	RB1#13	22.5	22.32	22.55		
	RB1#24	22.47	22.43	22.49		
	RB15#0	21.43	21.45	21.58		
	RB15#10	21.49	21.51	21.55		
	RB25#0	21.55	21.54	21.5		
5MHz 16QAM	RB1#0	21.59	21.02	20.62	17.1	34.77
	RB1#13	21.65	21.01	20.64		
	RB1#24	21.6	21.04	20.63		
	RB15#0	20.39	20.5	20.67		
	RB15#10	20.45	20.57	20.74		
	RB25#0	20.56	20.37	20.73		
10MHz QPSK	RB1#0	22.43	22.5	22.29	18	34.77

	RB1#25	22.55	22.39	22.26		
	RB1#49	22.53	22.55	22.5		
	RB25#0	21.53	21.48	21.45		
	RB25#25	21.5	21.51	21.61		
	RB50#0	21.46	21.51	21.57		
10MHz 16QAM	RB1#0	21.53	20.9	21.45	17.21	34.77
	RB1#25	21.56	20.9	21.62		
	RB1#49	21.51	20.98	21.76		
	RB25#0	20.56	20.64	20.46		
	RB25#25	20.62	20.75	20.65		
	RB50#0	20.49	20.48	20.65		

Note:
ERP= Conducted Power(dBm) - L_C(dB) + G_T(dBd)
G_T(dBd)=G_T(dBi)-2.15

Result:	**Pass**

Peak-to-average Ratio(PAR)

Test Bandwidth & Modulation	Resource Block & RB offset	Peak-to-average Ratio(dB)			Limit (dB)
		Lowest Channel	Middle Channel	Highest Channel	
10MHz QPSK	RB1#0	4.84	4.58	5.68	13
	RB50#0	5.42	5.51	5.04	13
10MHz 16QAM	RB1#0	5.86	5.48	6.64	13
	RB50#0	6.26	6.38	6	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	1.096	1.314	1.32	1.284
1.4MHz 16QAM	1.096	1.108	1.108	1.29	1.332	1.278
3MHz QPSK	2.695	2.695	2.695	3	3.024	3
3MHz 16QAM	2.683	2.695	2.695	3.036	3.072	3.012
5MHz QPSK	4.511	4.551	4.511	5.02	5.7	4.98
5MHz 16QAM	4.531	4.591	4.511	5.1	5.5	5.14
10MHz QPSK	8.982	8.982	8.902	9.8	9.96	9.6
10MHz 16QAM	8.982	8.982	8.902	9.8	10.08	9.72

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.**

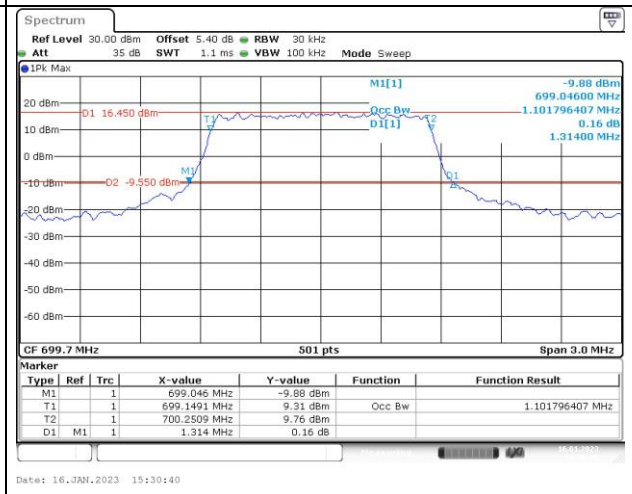
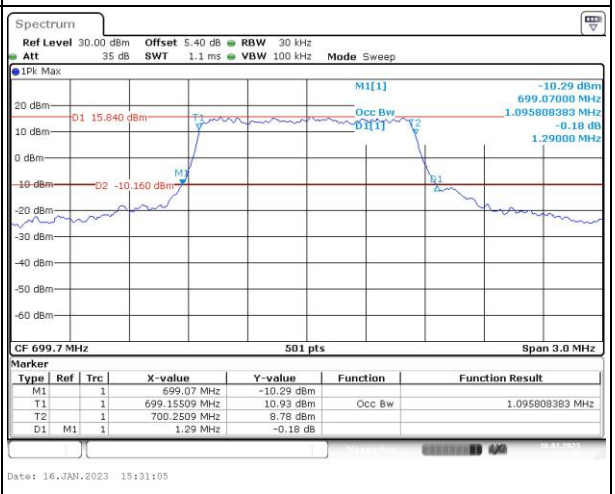
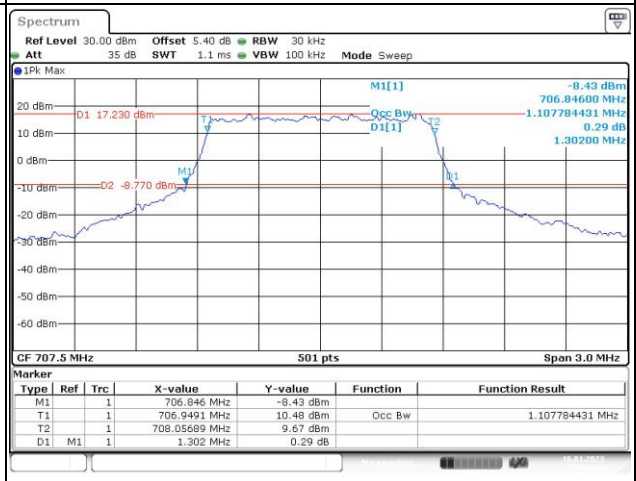
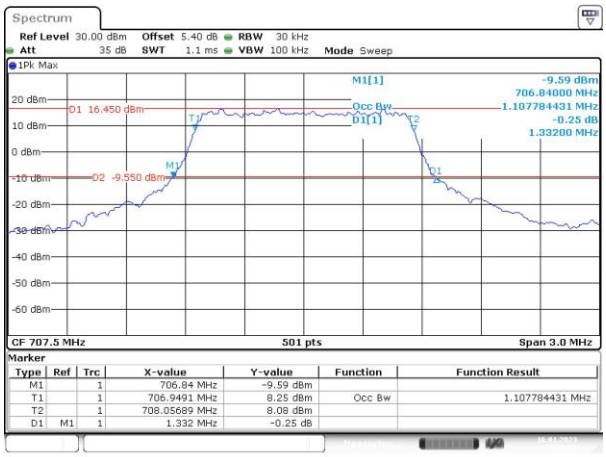
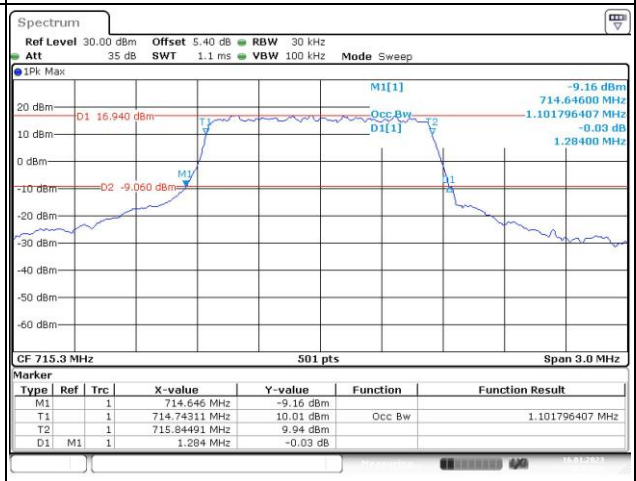
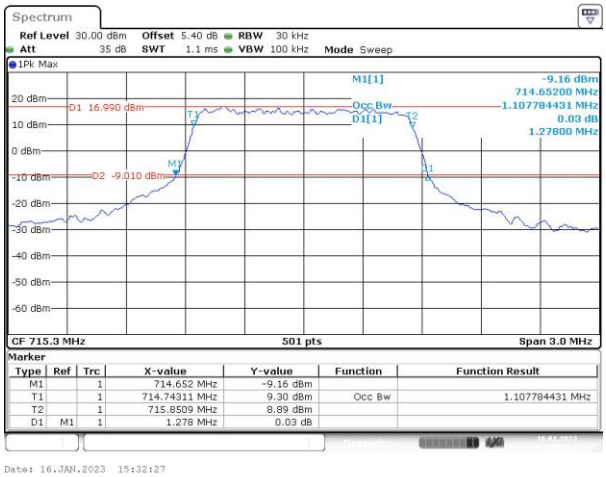
FCC §2.1051, §27.53:Out of band emission, Band Edge	
Result:	**Pass, Please refer to the test plots of Out of band emission, Band Edge.**

FCC §2.1055, §27.54: Frequency Stability

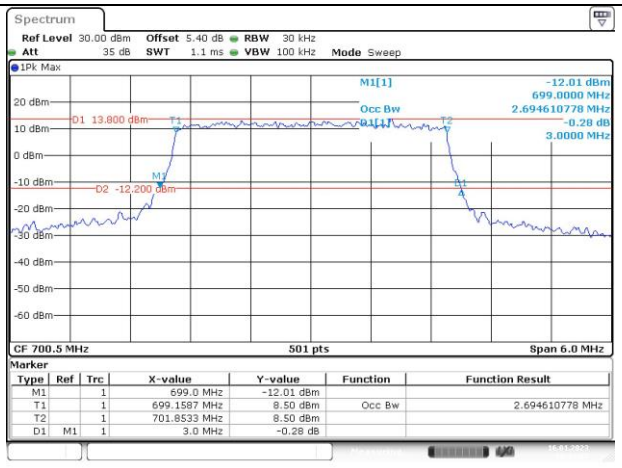
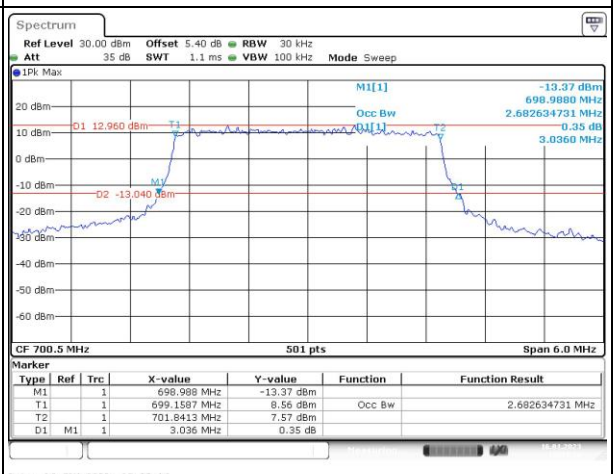
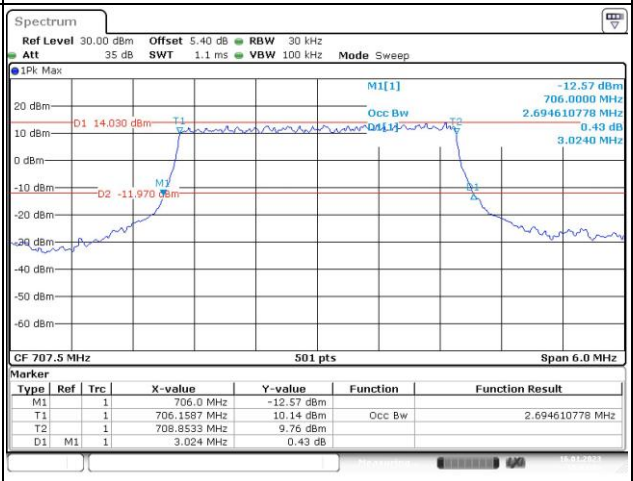
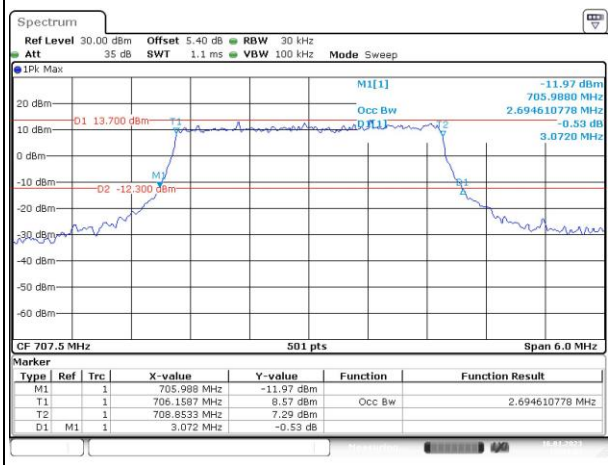
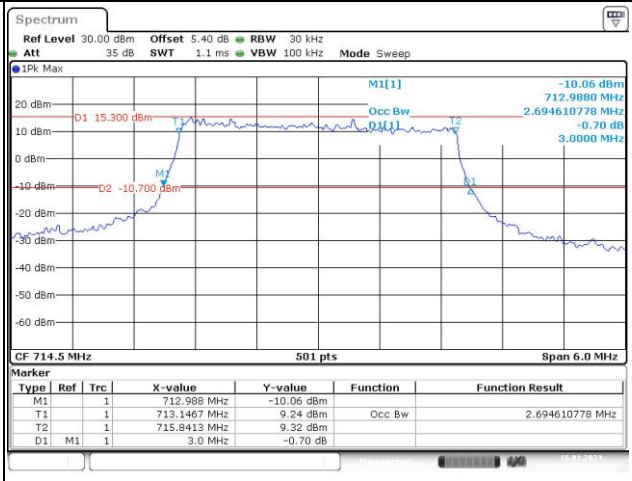
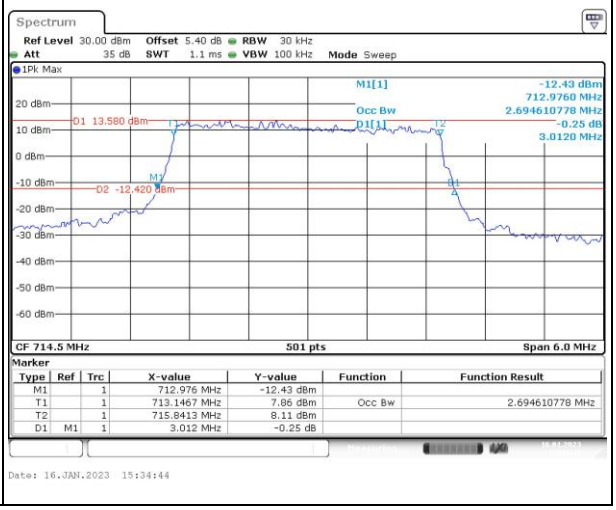
Test Mode:	10M QPSK	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (℃)	Voltage (V_{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	7.4	699.416	699.00	715.410	716.00
	-20	7.4	699.445	699.00	715.413	716.00
	-10	7.4	699.441	699.00	715.424	716.00
	0	7.4	699.403	699.00	715.467	716.00
	10	7.4	699.481	699.00	715.456	716.00
	20	7.4	699.489	699.00	715.471	716.00
	30	7.4	699.471	699.00	715.475	716.00
	40	7.4	699.450	699.00	715.438	716.00
	50	7.4	699.418	699.00	715.473	716.00
Frequency Stability vs. Voltage	20	6.95	699.490	699.00	715.445	716.00
	20	8.4	699.410	699.00	715.476	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	7.4	699.497	699.00	715.464	716.00
	-20	7.4	699.427	699.00	715.428	716.00
	-10	7.4	699.498	699.00	715.470	716.00
	0	7.4	699.488	699.00	715.403	716.00
	10	7.4	699.471	699.00	715.467	716.00
	20	7.4	699.489	699.00	715.471	716.00
	30	7.4	699.432	699.00	715.406	716.00
	40	7.4	699.404	699.00	715.494	716.00
	50	7.4	699.431	699.00	715.493	716.00
Frequency Stability vs. Voltage	20	6.95	699.453	699.00	715.482	716.00
	20	8.4	699.415	699.00	715.414	716.00
					Result:	**Pass**

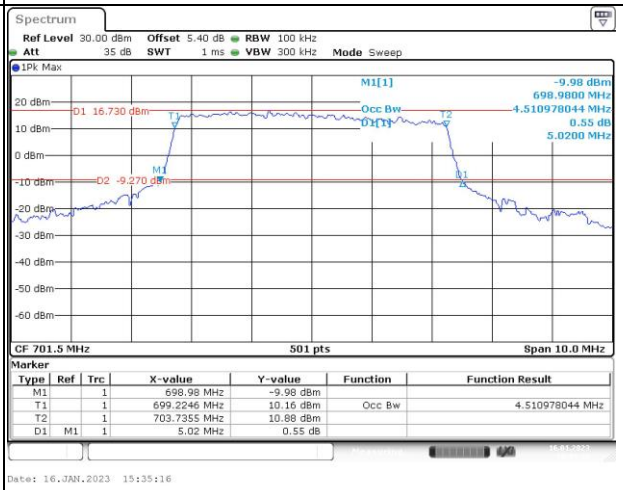
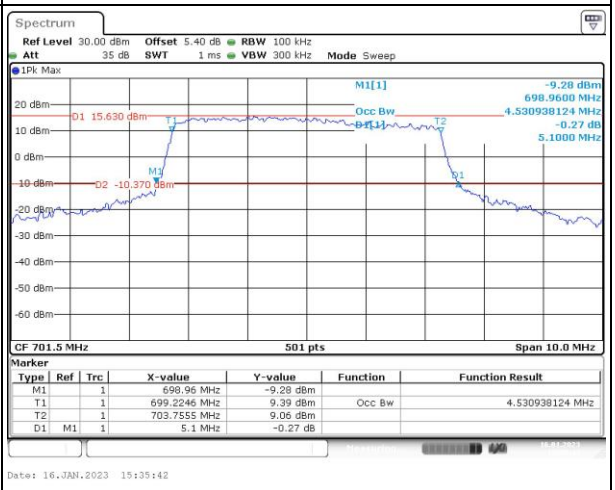
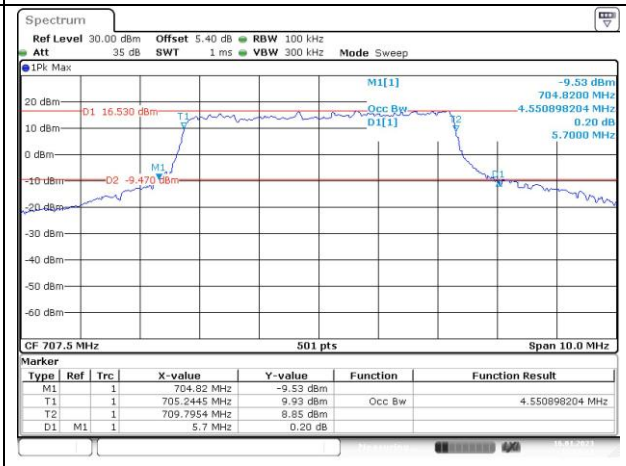
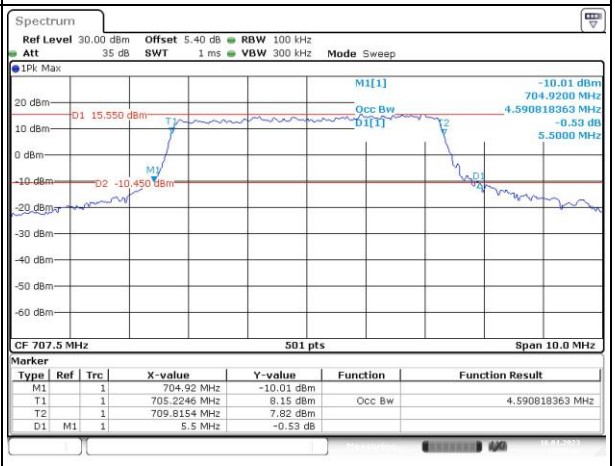
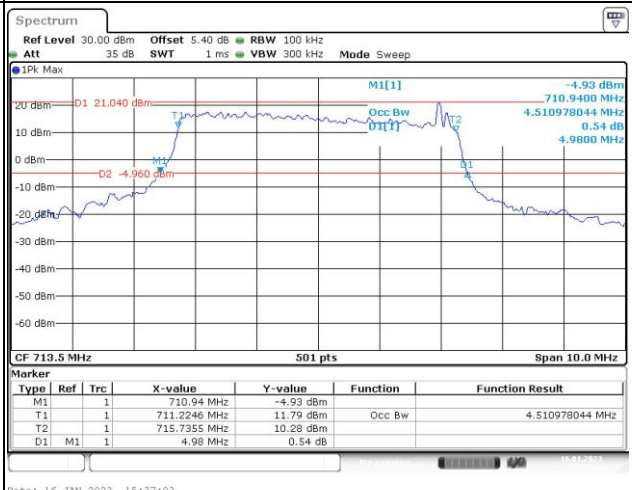
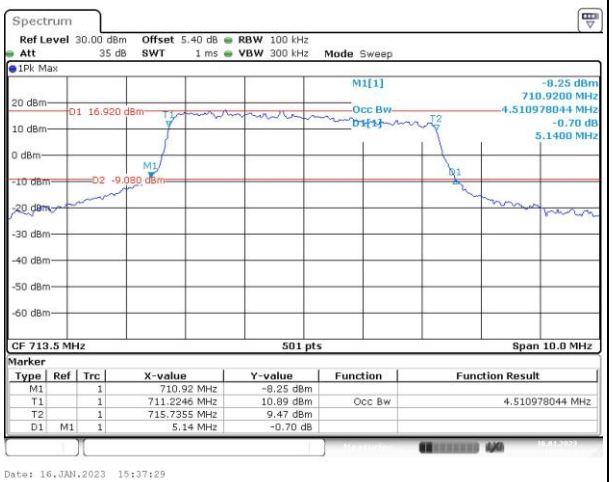
Test Plots(Note: The 5.4dB is the Insertion loss of the RF cable, Power Splitter and DC Block, which was offset into the Spectrum Analyzer)**:**

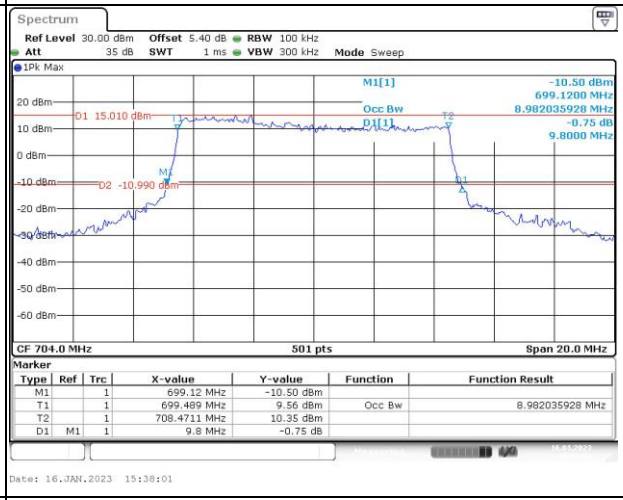
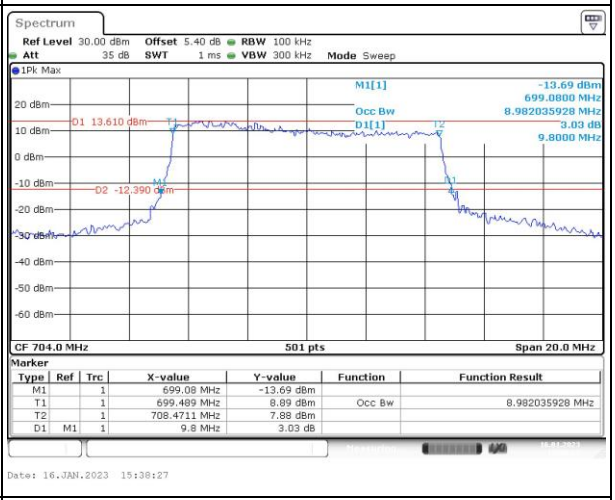
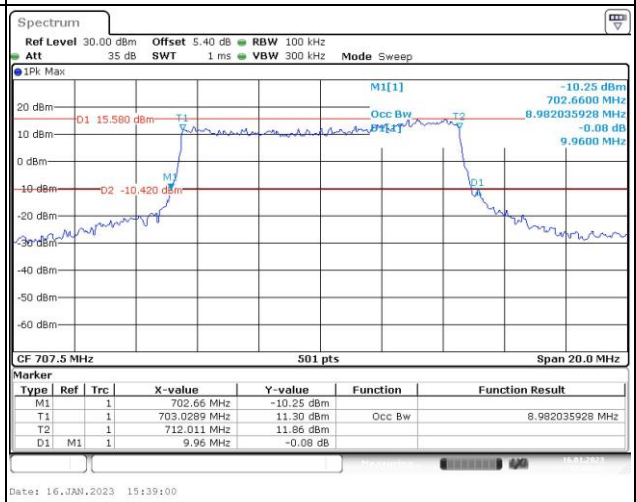
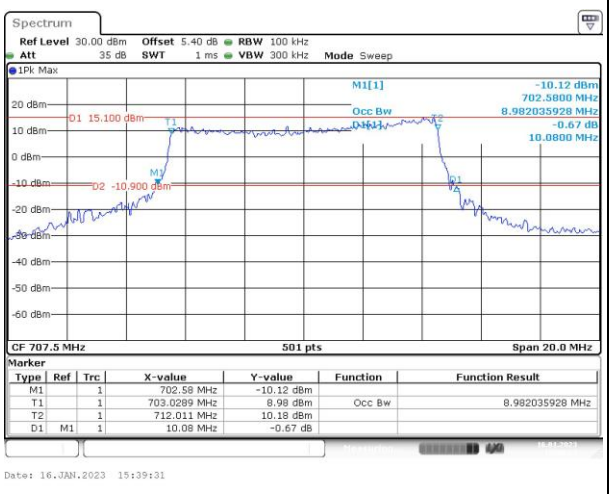
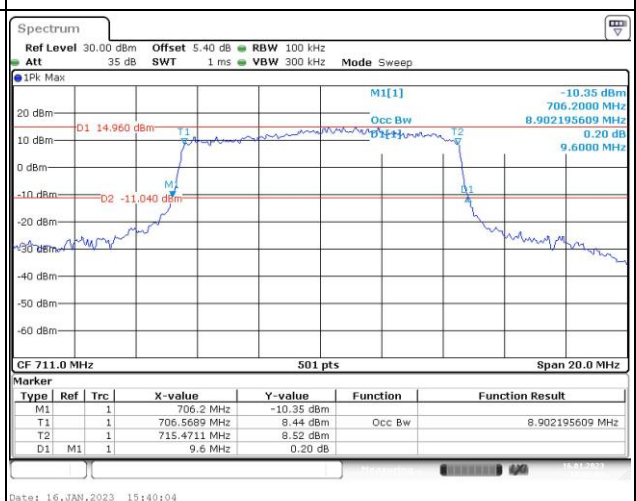
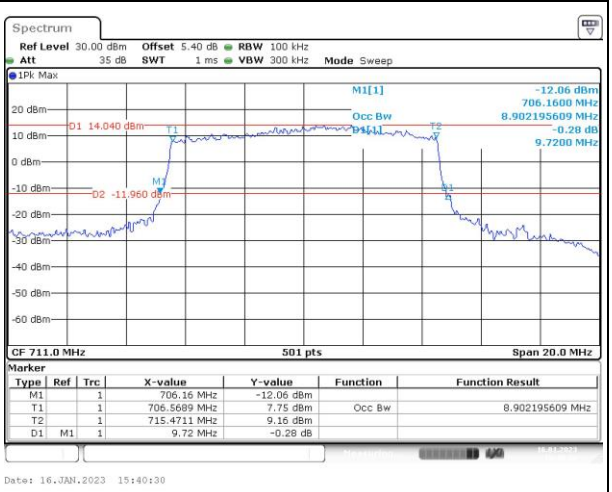
Occupied Bandwidth		
Channel	1.4MHz Bandwidth QPSK	1.4MHz Bandwidth 16QAM
Lowest		
Middle		
Highest		

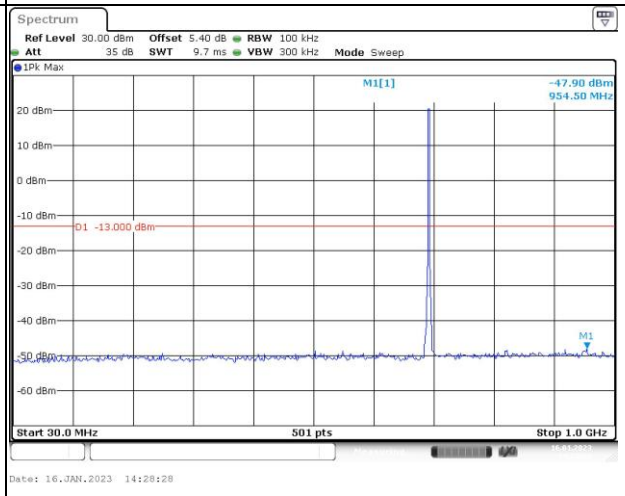
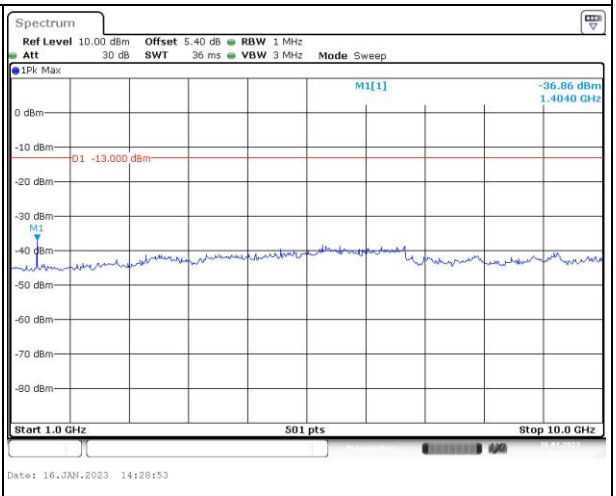
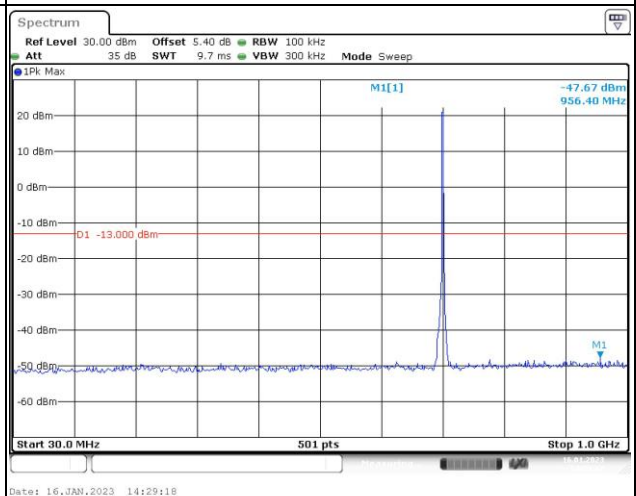
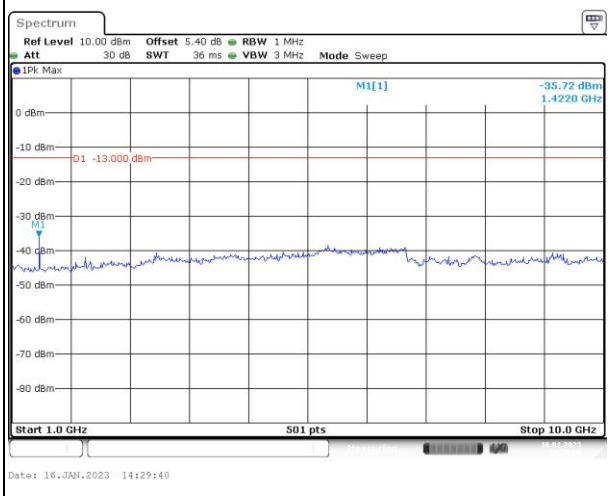
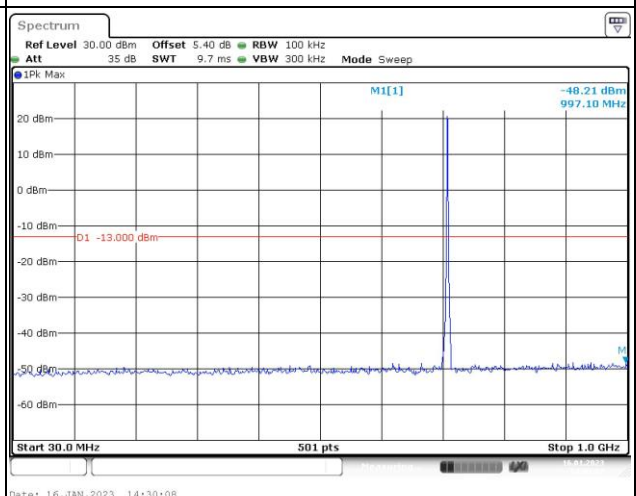
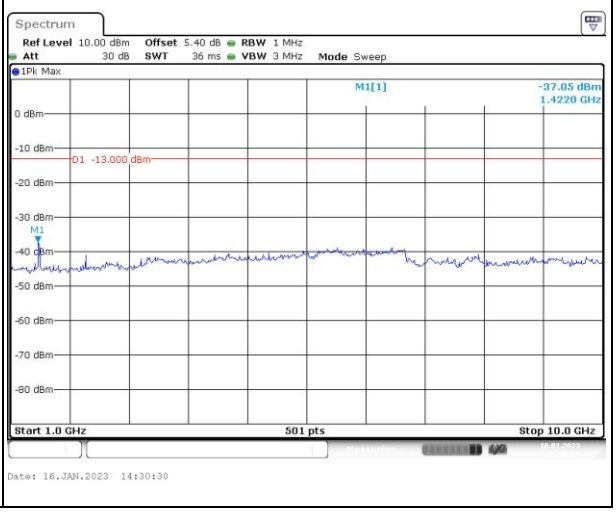
Occupied Bandwidth

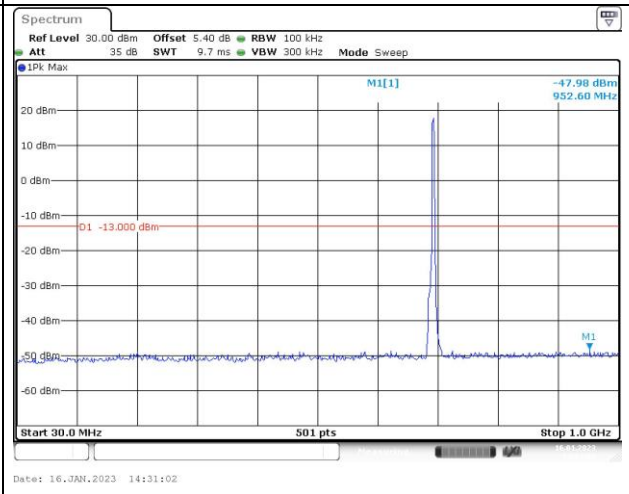
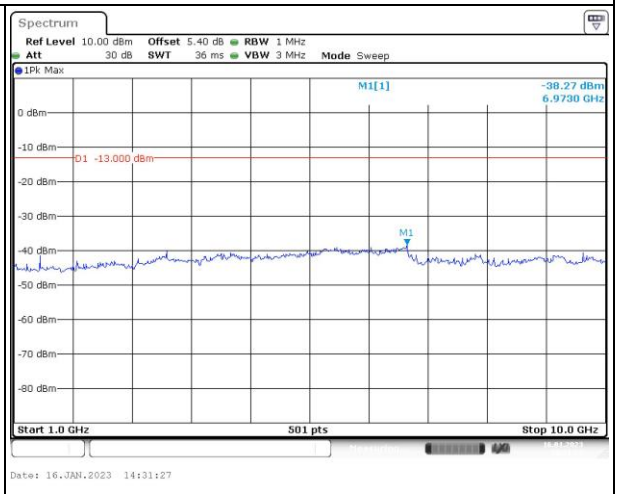
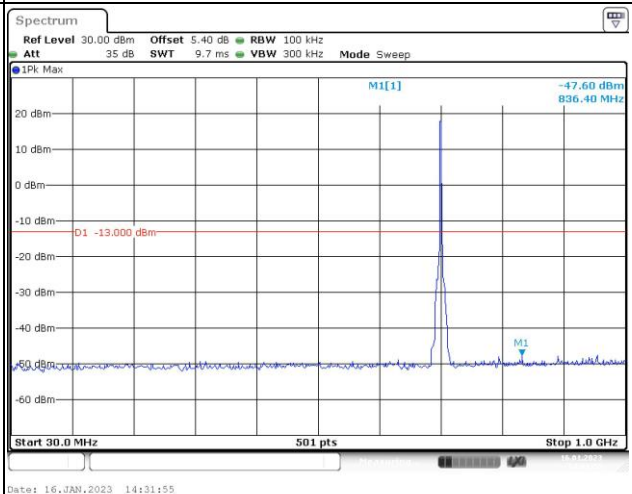
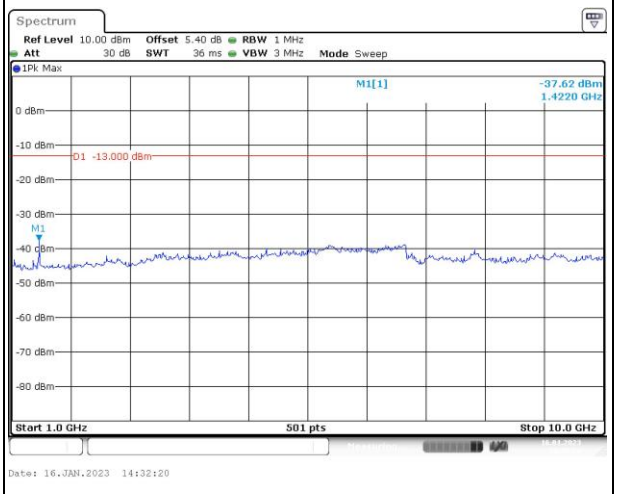
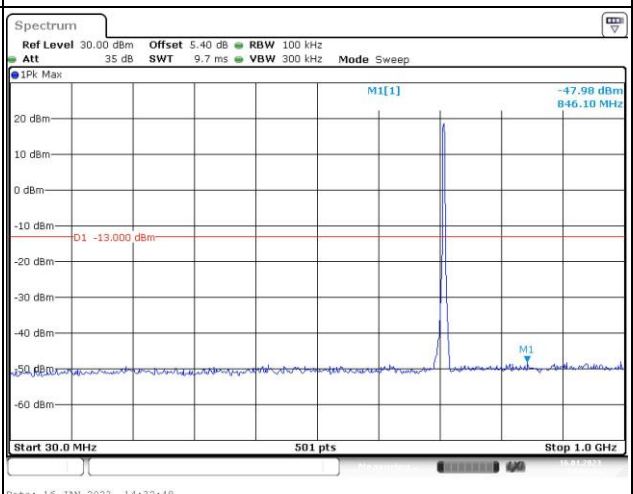
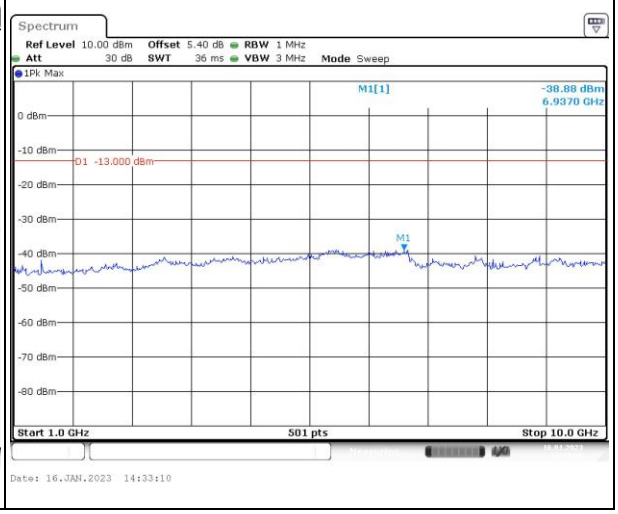
Channel	3MHz Bandwidth QPSK	3MHz Bandwidth 16QAM
Lowest		
Middle		
Highest		

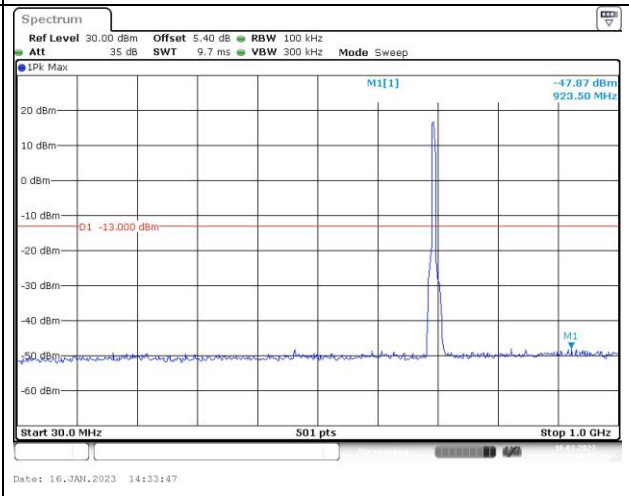
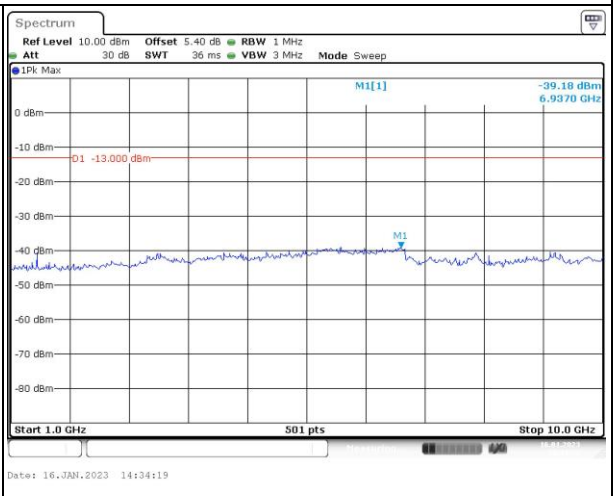
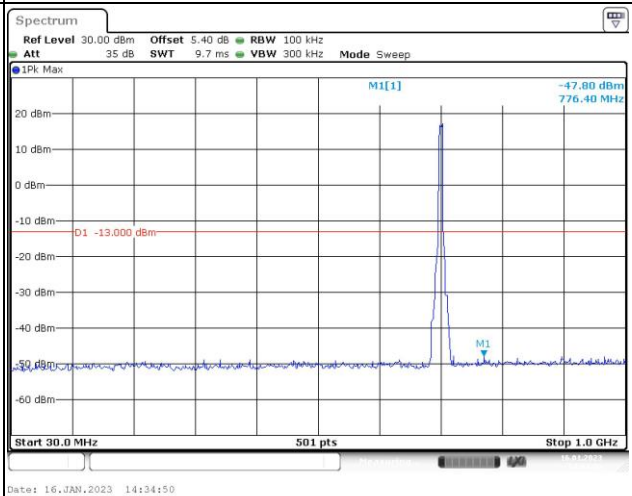
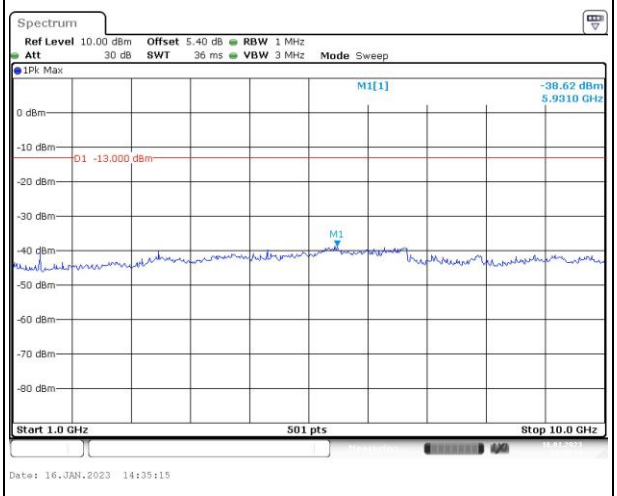
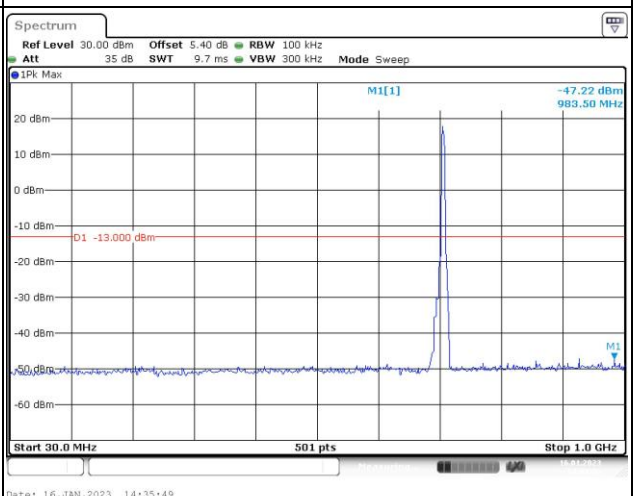
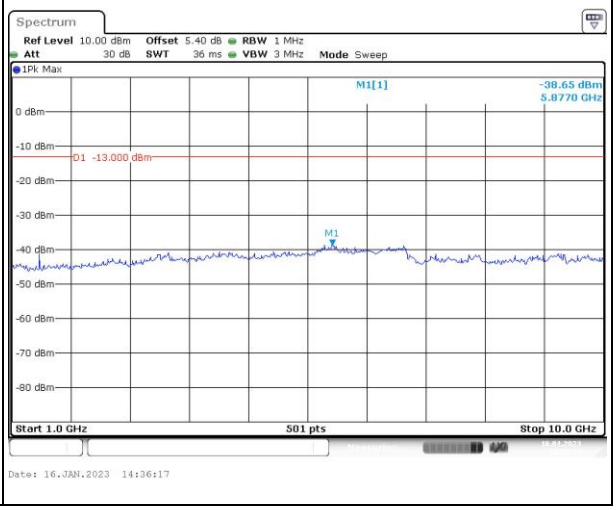
Occupied Bandwidth

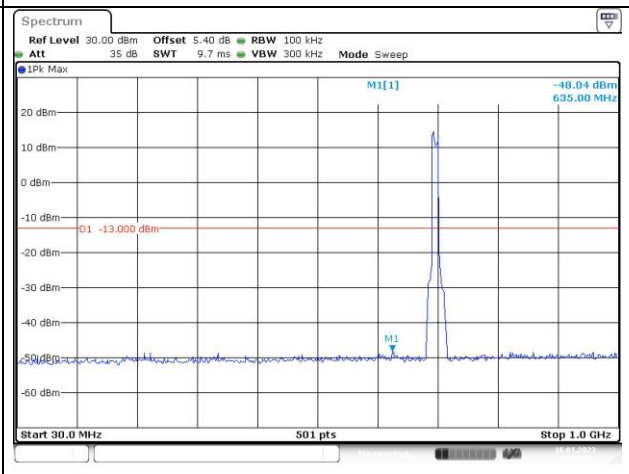
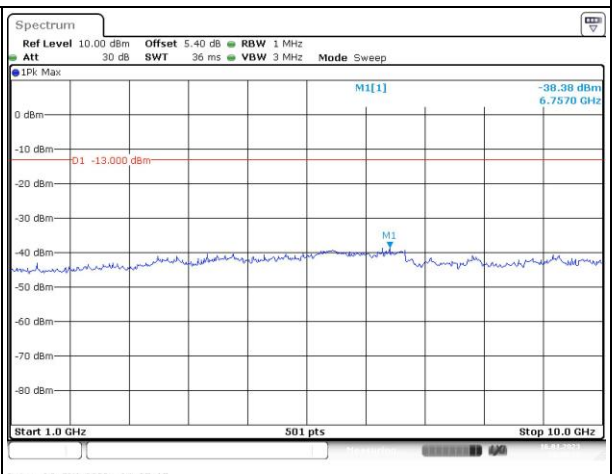
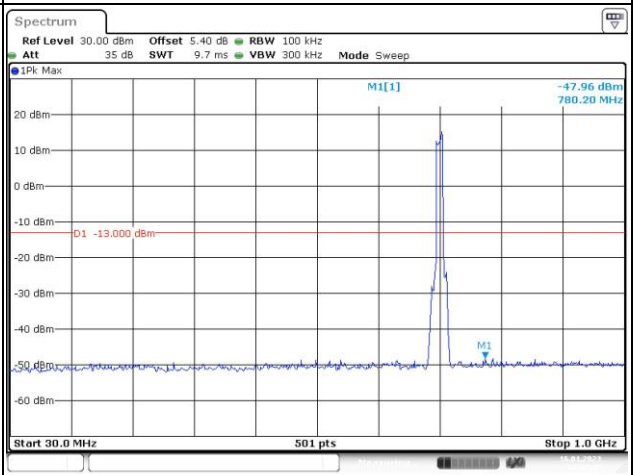
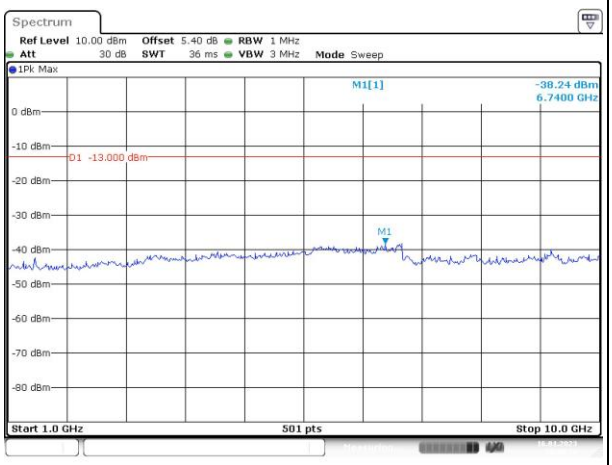
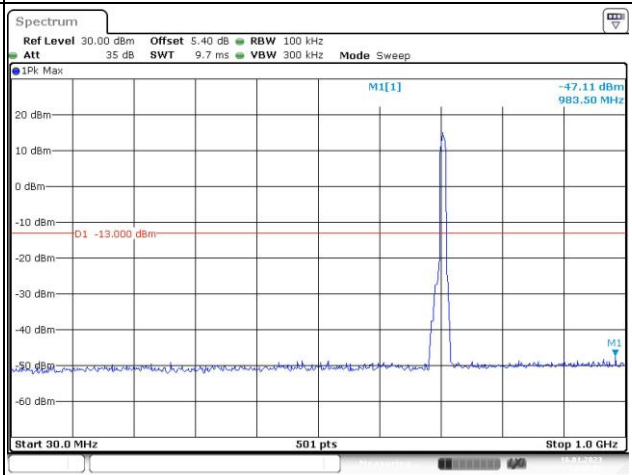
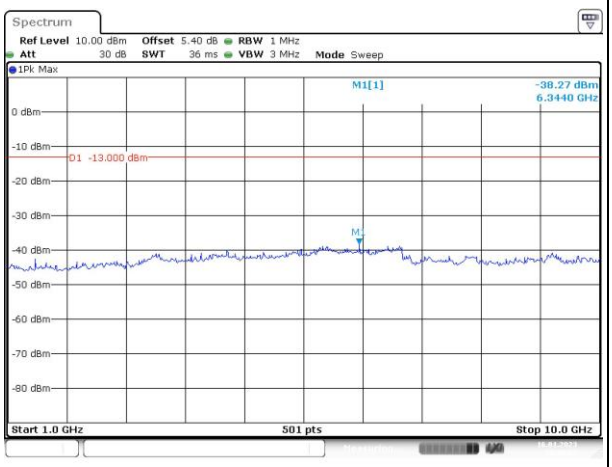
Channel	5MHz Bandwidth QPSK	5MHz Bandwidth 16QAM
Lowest		
Middle		
Highest		

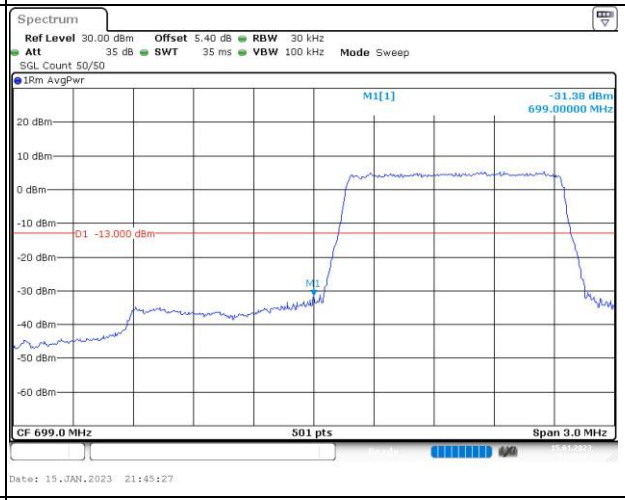
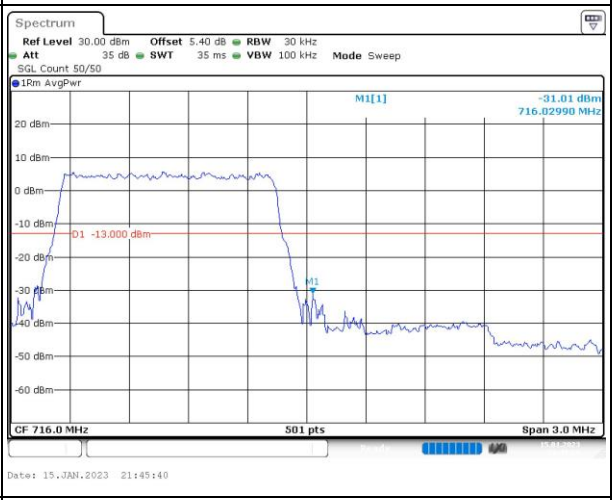
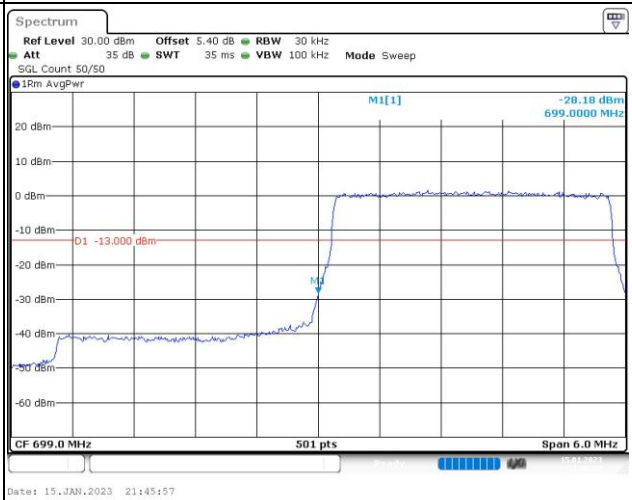
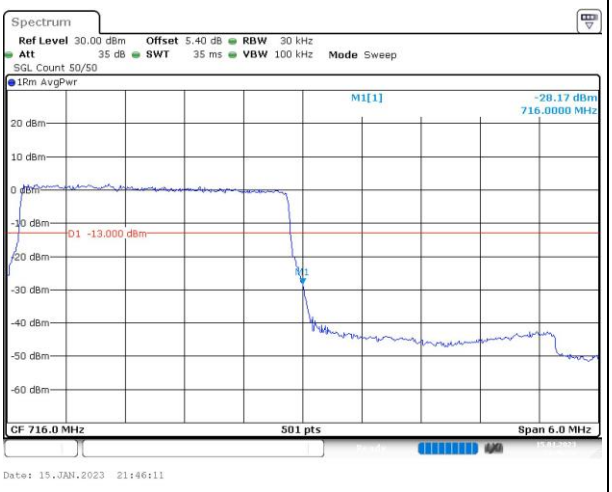
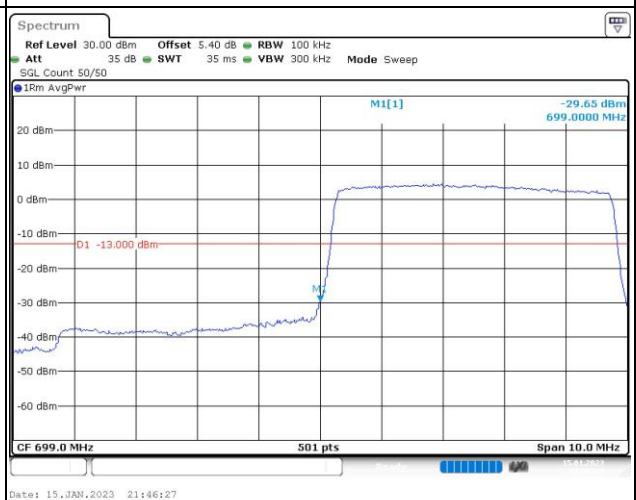
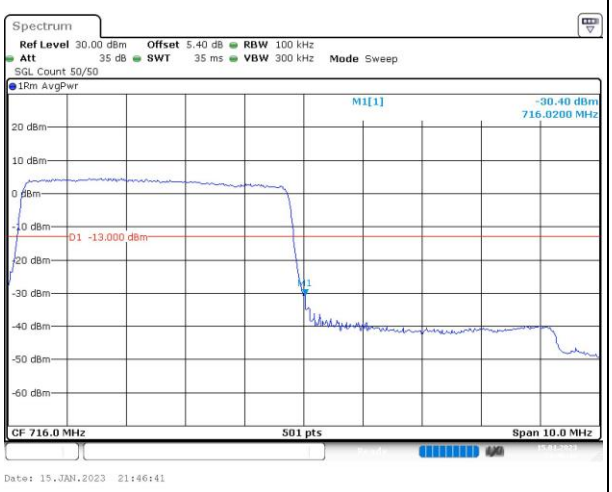
Occupied Bandwidth		
Channel	10MHz Bandwidth QPSK	10MHz Bandwidth 16QAM
Lowest		
Middle		
Highest		

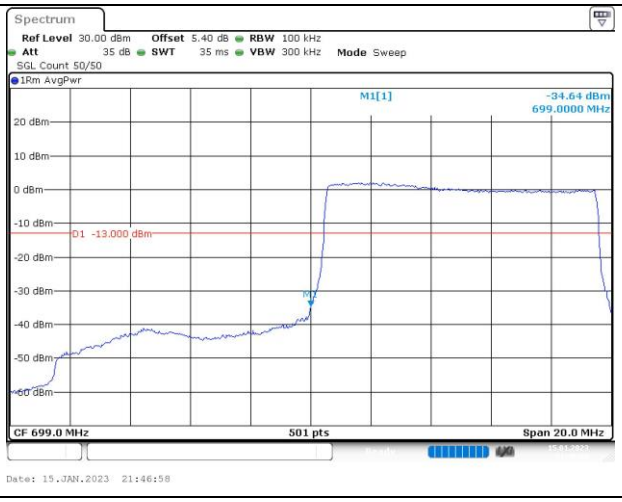
Spurious Emissions at Antenna Terminal		
Channel	**1.4MHz Bandwidth QPSK**	
Lowest		
Middle		
Highest		

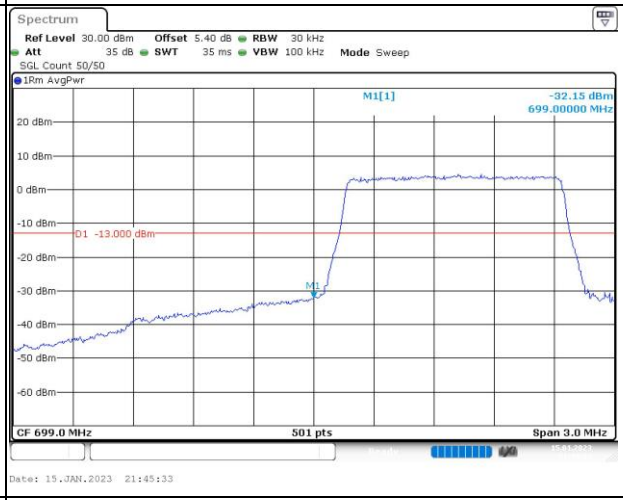
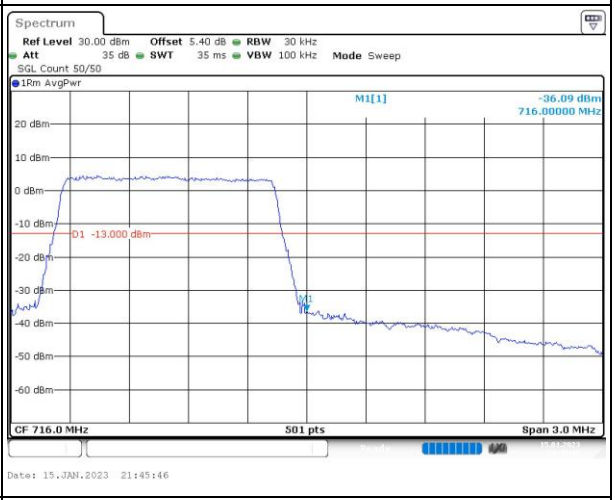
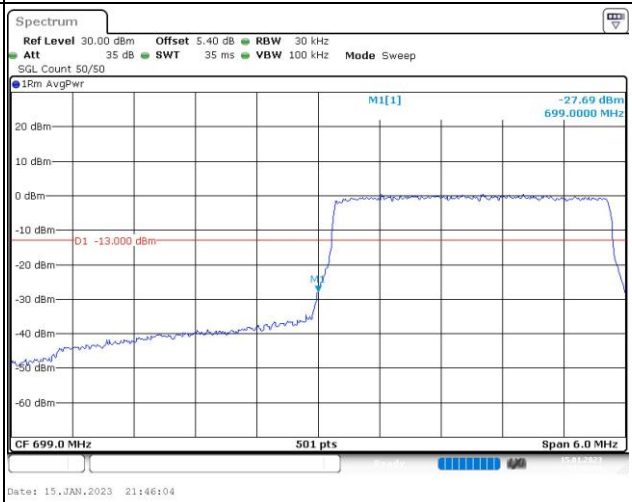
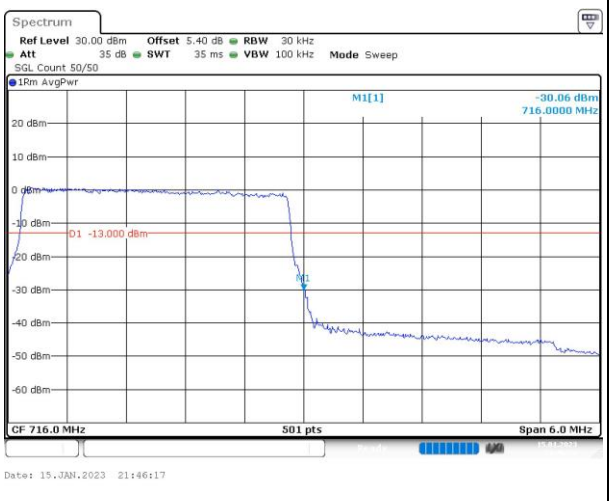
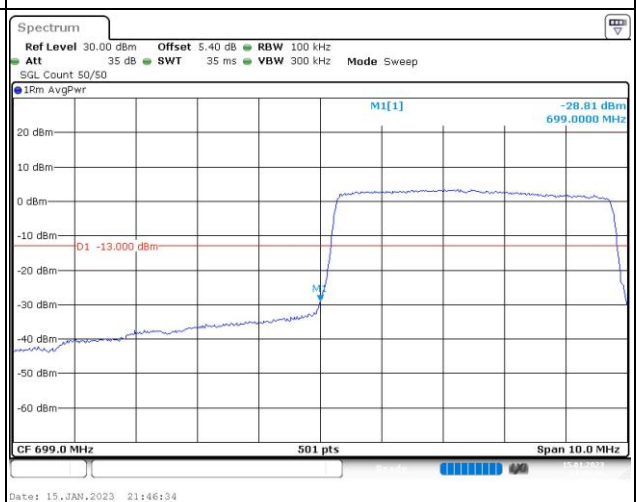
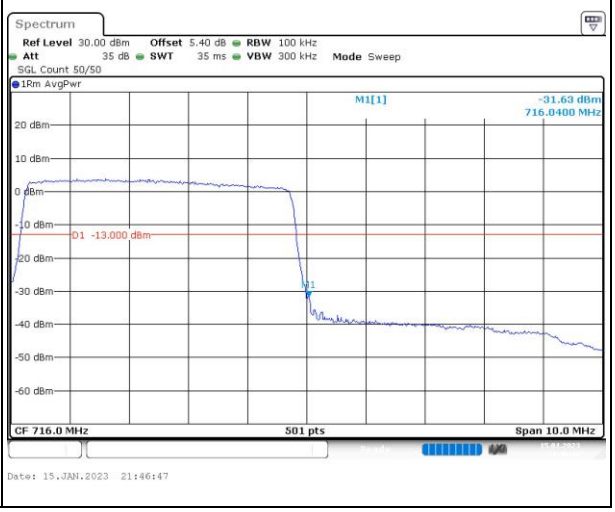
Spurious Emissions at Antenna Terminal		
Channel	**3MHz Bandwidth QPSK**	
Lowest		
Middle		
Highest		

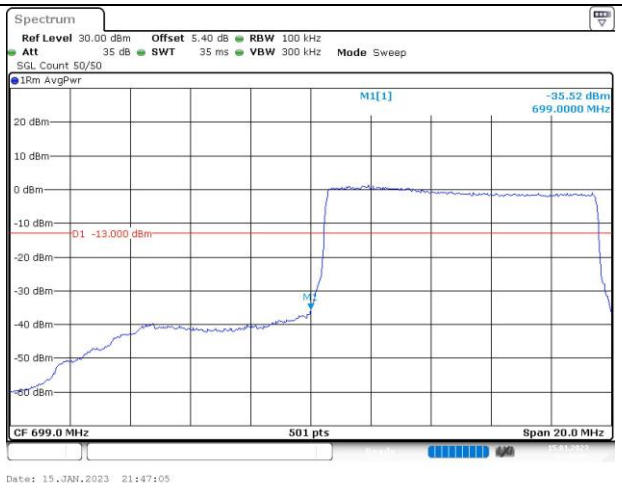
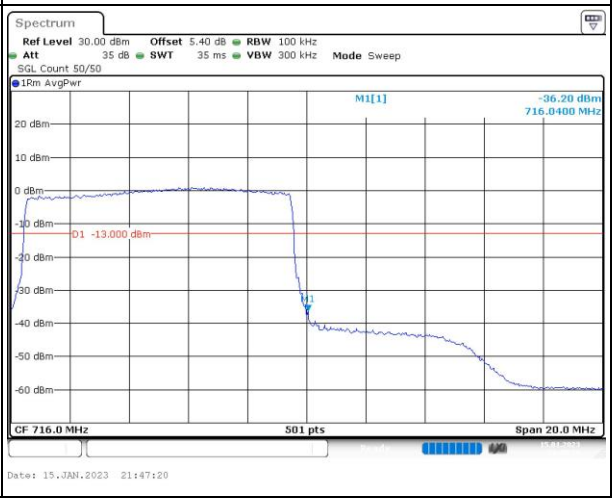
Spurious Emissions at Antenna Terminal		
Channel	**5MHz Bandwidth QPSK**	
Lowest		
Middle		
Highest		

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 17

Serial Number:	1XBG-2	Test Date:	2023/1/13~2023/1/18
Test Site:	RF	Test Mode:	Transmitting
Tester:	George Chen	Test Result:	**Pass**

Environmental Conditions:					
Temperature: (℃)	18.3~24.6	Relative Humidity: (%)	42~58	ATM Pressure: (kPa)	100.6~102.3

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	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	2022-04-06	2023-04-05
BACL	TEMP&HUMI Test Chamber	BTH-150-40	30174	2022-09-29	2023-09-28
UNI-T	Multimeter	UT39A+	C210582554	N/A	N/A
ZHAOXIN	DC Power Supply	RXN-6010D	21R6010D0912386	2022-07-15	2023-07-14

** 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)
5MHz	706.5	710	713.5
10MHz	709	710	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		
5MHz QPSK	RB1#0	22.44	22.24	22.43	17.95	34.77
	RB1#13	22.41	22.37	22.5		
	RB1#24	22.46	22.37	22.48		
	RB15#0	21.53	21.42	21.46		
	RB15#10	21.51	21.38	21.48		
	RB25#0	21.51	21.45	21.52		
5MHz 16QAM	RB1#0	21.41	20.92	20.59	16.91	34.77
	RB1#13	21.32	21.01	20.64		
	RB1#24	21.46	21.07	20.7		
	RB15#0	20.42	20.67	20.64		
	RB15#10	20.41	20.69	20.68		
	RB25#0	20.51	20.55	20.74		
10MHz QPSK	RB1#0	22.49	22.39	22.35	18.1	34.77
	RB1#25	22.48	22.46	22.39		
	RB1#49	22.65	22.58	22.53		
	RB25#0	21.37	21.37	21.42		
	RB25#25	21.52	21.52	21.56		
	RB50#0	21.37	21.5	21.53		
10MHz 16QAM	RB1#0	21.44	20.95	21.48	17.17	34.77
	RB1#25	21.46	21.01	21.59		
	RB1#49	21.72	21.02	21.72		
	RB25#0	20.51	20.64	20.45		
	RB25#25	20.74	20.74	20.64		
	RB50#0	20.56	20.59	20.65		

Note:
ERP= Conducted Power(dBm) - L_C(dB) + G_T(dBd)
G_T(dBd)=G_T(dBi)-2.15

Result:	**Pass**