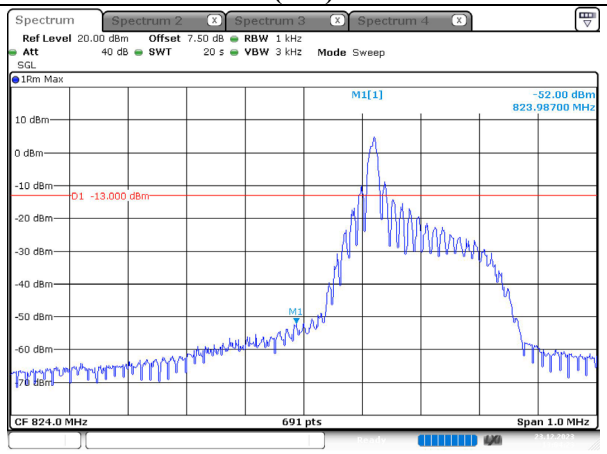
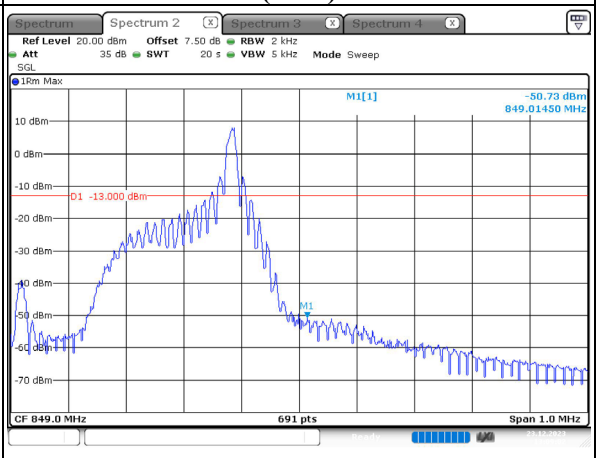
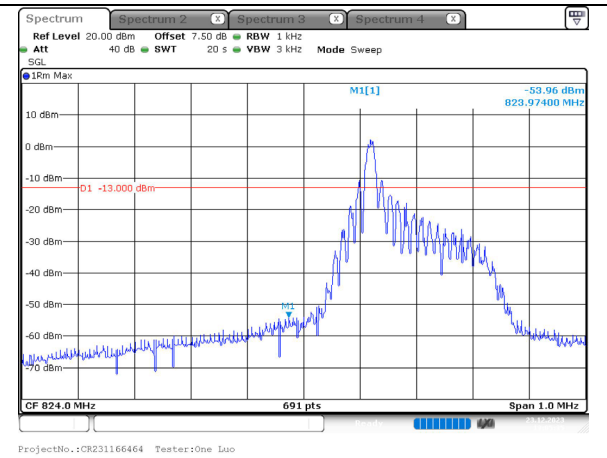
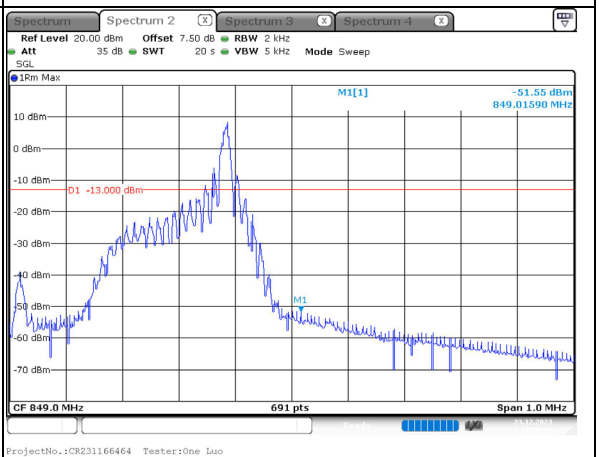
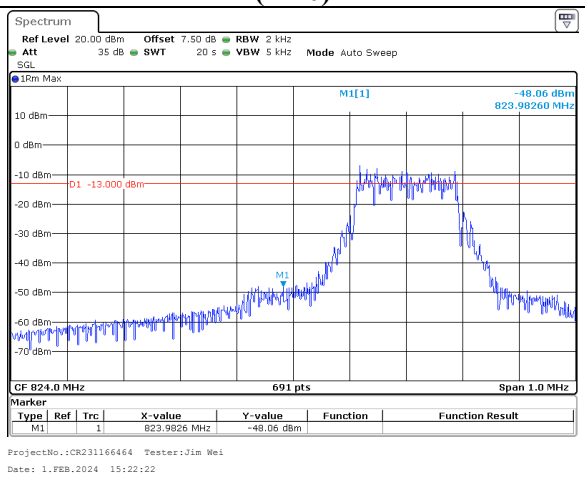
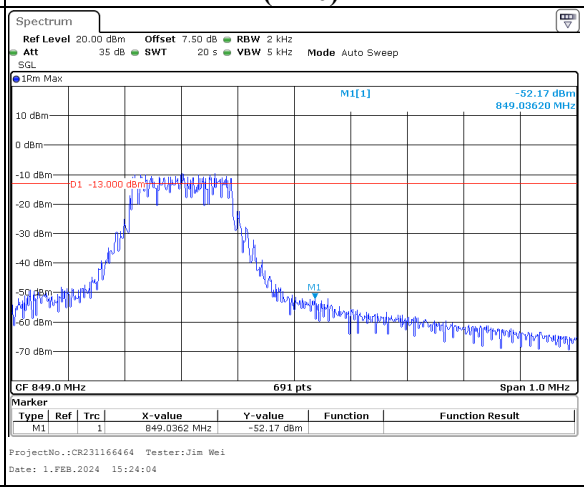
Out of band emission, Band Edge		
Mode	**Lowest (1#0)**	**Highest (1#11)**
BPSK 15kHz		
QPSK 15kHz		

Out of band emission, Band Edge		
Mode	**Lowest (12#0)**	**Highest (12#0)**
QPSK 15kHz		

4.4 Antenna Port Test Data and Results for LTE Band 12

Serial Number:	2DHS-3	Test Date:	2023-12-21~2024-2-1
Test Site:	RF	Test Mode:	Transmitting
Tester:	One Luo, Jim Wei	Test Result:	**Pass**

Environmental Conditions:					
Temperature: (℃)	17.8~25.3	Relative Humidity: (%)	26~42	ATM Pressure: (kPa)	100.8~102.1

Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSV40	101474	2023-07-15	2024-07-14
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	Functional radio communication tester	CMW290	101742	2023-06-08	2024-06-07
BACL	TEMP&HUMI Test Chamber	BTH-150-40	30174	2023-09-29	2024-09-28
UNI-T	Multimeter	UT39A+	C210582554	N/A	N/A
ZHAOXIN	DC Power Supply	RXN-6010D	21R6010D0912386	2023-07-15	2024-07-14

** 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:

Sub-carrier Spacing	Lowest Frequency (MHz)	Middle Frequency (MHz)	Highest Frequency (MHz)
3.75kHz	699.8	707.5	715.8
15kHz	699.8	707.5	715.8

Test Data:

FCC§2.1046;§ 27.50(d)(4)						
RF Output Power:						
Modulation & Sub-carrier Spacing	Resource Block & RB offset	Conducted Average Output Power(dBm)			Maximum ERP (dBm)	ERP Limit (dBm)
		Lowest Channel	Middle Channel	Highest Channel		
BPSK&3.75kHz	RB1#0	20.13	20.15	20.56	21.81	34.77
	RB1#47	20	20.13	20.47		
BPSK&15kHz	RB1#0	20.88	20.18	20.27		
	RB1#11	20.85	20.16	20.27		
QPSK&3.75kHz	RB1#0	20.11	20.22	20.59		
	RB1#47	20.02	20.13	20.58		
QPSK&15kHz	RB1#0	20.96	20.24	20.31		
	RB1#11	20.93	20.18	20.27		
	RB12#0	19.02	18.22	18.45		
Note: ERP=Conducted Power(dBm) - L_C(dB) + G_T(dBd)						
					Result:	**Pass**

Peak-to-average Ratio(PAR)						
Modulation	Sub-carrier Spacing (kHz)	Resource Block & RB offset	Peak-to-average Ratio(dB)			Limit (dB)
			Lowest Channel	Middle Channel	Highest Channel	
BPSK	3.75	RB1#0	2.42	2.64	2.51	13
	15	RB1#11	2.15	2.31	2.52	13
QPSK	3.75	RB1#0	2.35	2.42	2.35	13
	15	RB1#0	2.46	2.35	2.36	13
		RB12#0	2.21	2.78	2.64	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
BPSK 3.75k 1#0	0.056	0.055	0.055	0.045	0.043	0.039
QPSK 3.75k 1#0	0.065	0.064	0.064	0.045	0.045	0.045
BPSK 15k 1#0	0.120	0.122	0.120	0.109	0.107	0.106
QPSK 15k 1#0	0.120	0.117	0.117	0.120	0.119	0.119
QPSK 15k 12#0	0.184	0.184	0.185	0.243	0.252	0.255
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.**

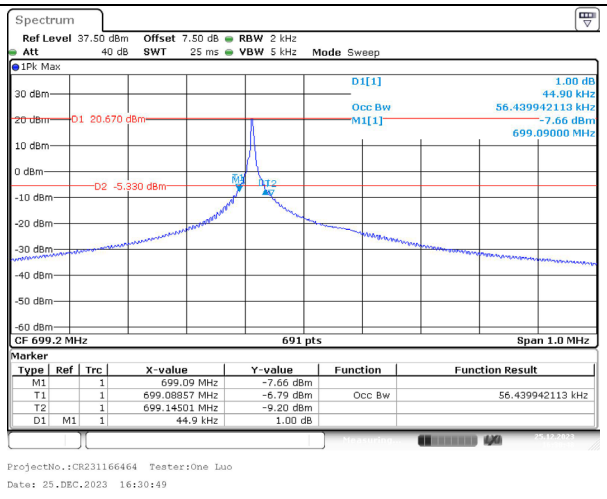
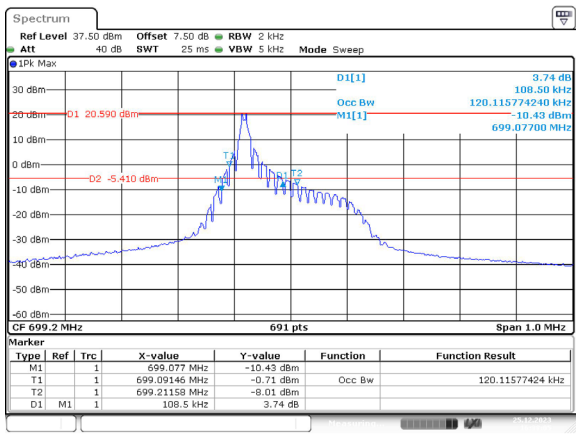
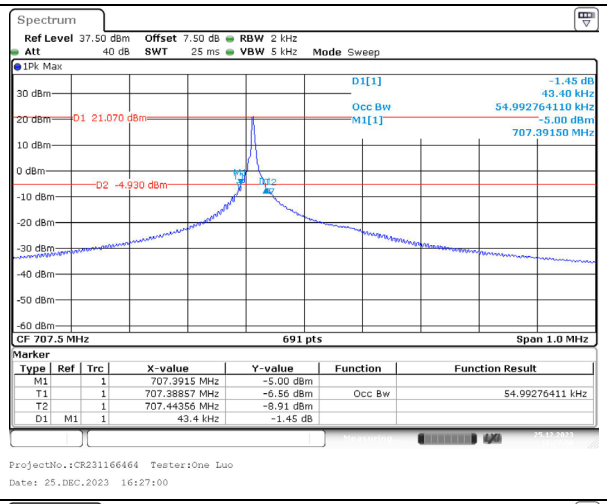
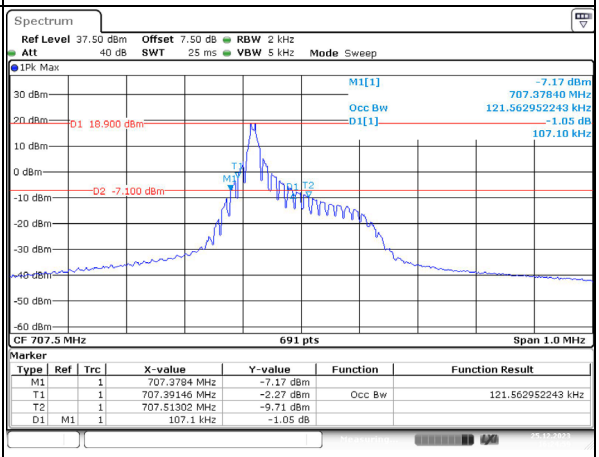
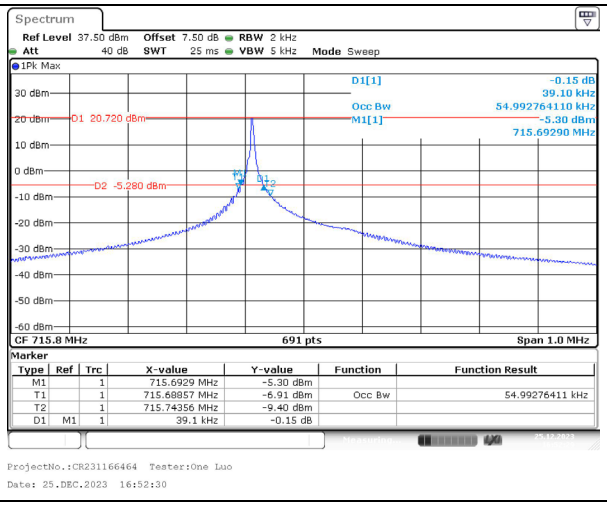
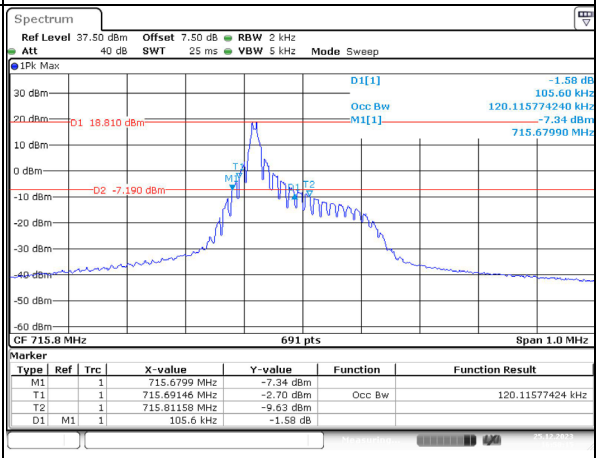
FCC §2.1051, § 27.53:Out of band emission, Band Edge	
Result:	**Pass, Please refer to the test plots of Out of band emission, Band Edge.**

FCC §2.1055, §27.54: Frequency Stability

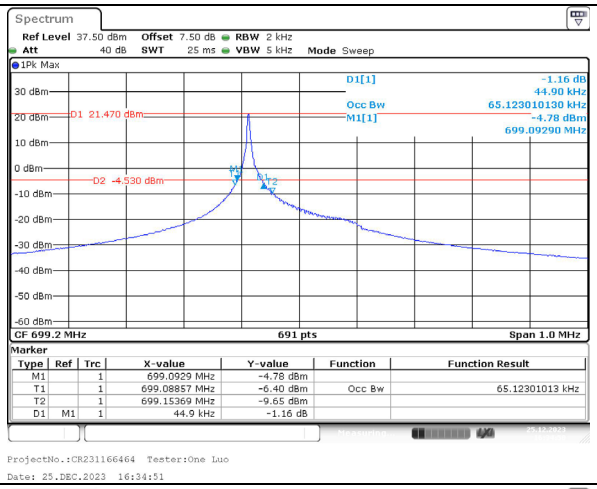
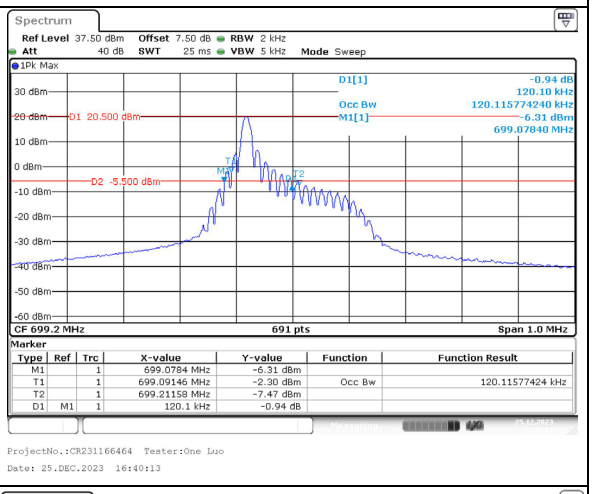
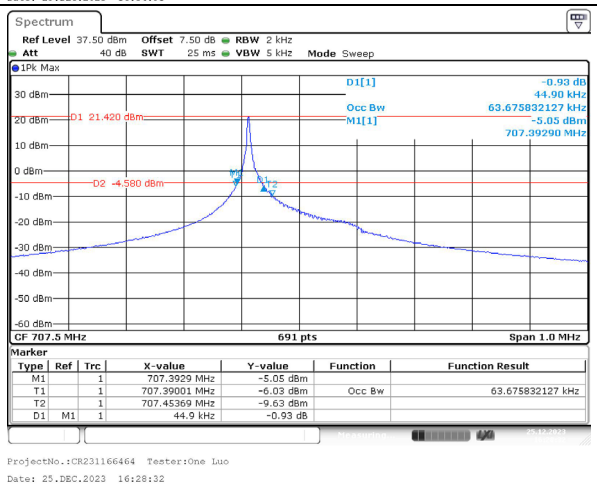
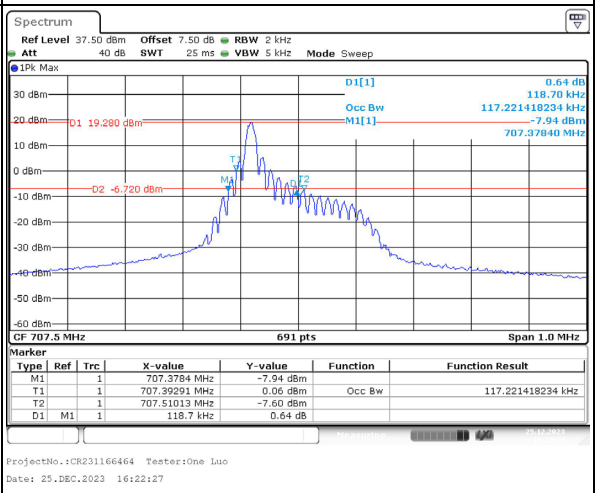
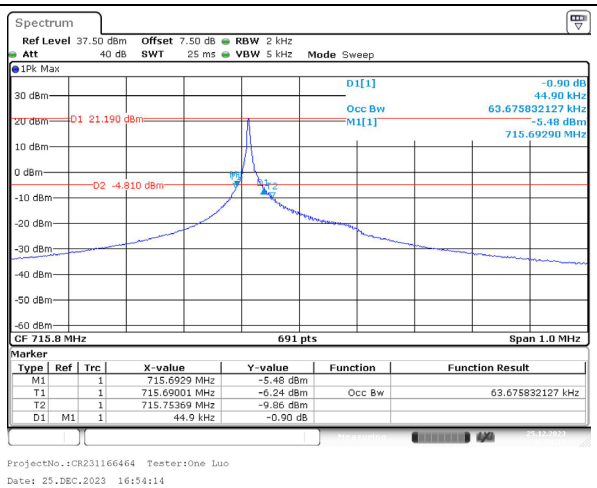
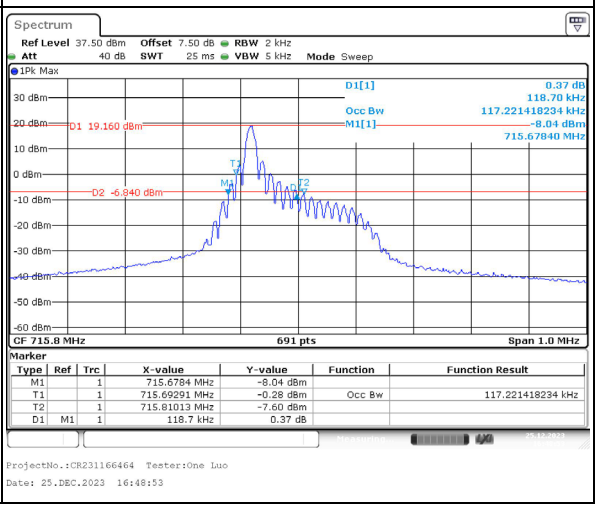
Test Mode:	BPSK 15kHz RB1#0	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (℃)	Voltage (V_{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.7	699.088	699.00	715.860	716
	-20	3.7	699.005	699.00	715.849	716
	-10	3.7	699.013	699.00	715.838	716
	0	3.7	699.084	699.00	715.861	716
	10	3.7	699.040	699.00	715.859	716
	20	3.7	699.091	699.00	715.812	716
	30	3.7	699.037	699.00	715.817	716
	40	3.7	699.039	699.00	715.889	716
	50	3.7	699.064	699.00	715.832	716
Frequency Stability vs. Voltage	20	3.2	699.098	699.00	715.876	716
	20	4.2	699.028	699.00	715.875	716
					Result:	**Pass**

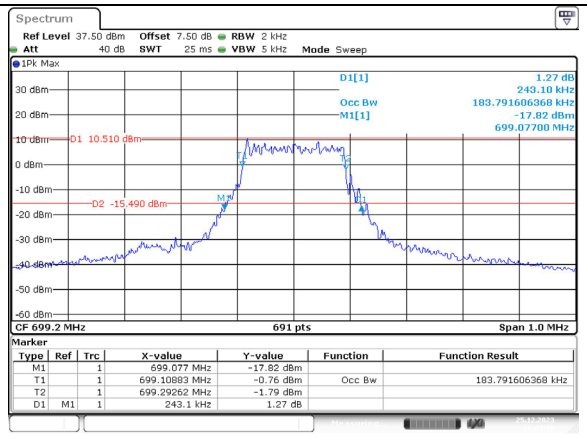
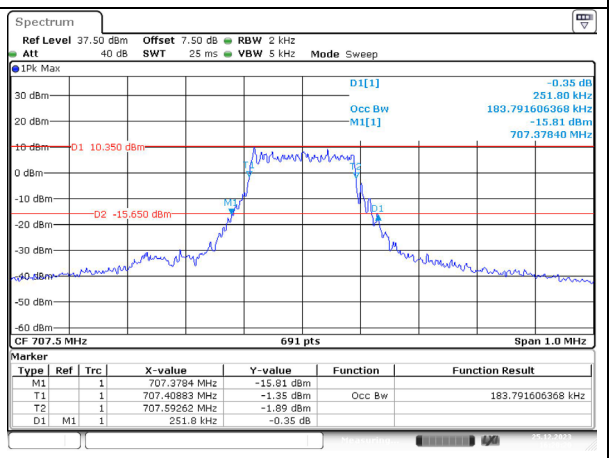
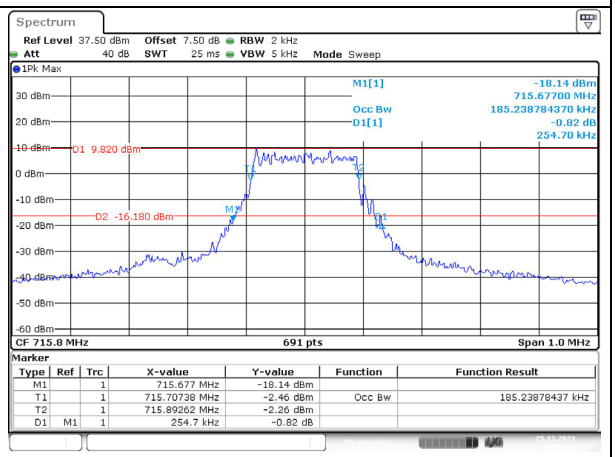
Test Mode:	QPSK 15kHz RB12#0	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (℃)	Voltage (V_{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.7	699.117	699.00	715.822	716
	-20	3.7	699.130	699.00	715.851	716
	-10	3.7	699.103	699.00	715.833	716
	0	3.7	699.141	699.00	715.807	716
	10	3.7	699.164	699.00	715.826	716
	20	3.7	699.109	699.00	715.893	716
	30	3.7	699.192	699.00	715.876	716
	40	3.7	699.103	699.00	715.826	716
	50	3.7	699.123	699.00	715.853	716
Frequency Stability vs. Voltage	20	3.2	699.196	699.00	715.876	716
	20	4.2	699.153	699.00	715.850	716
					Result:	**Pass**

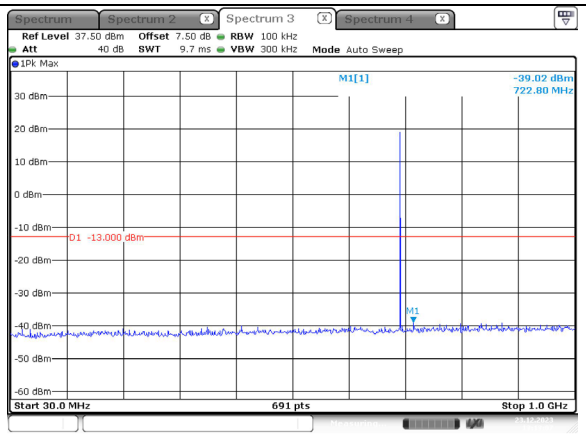
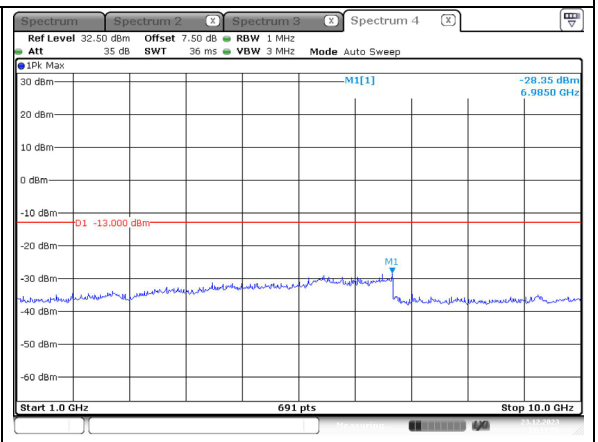
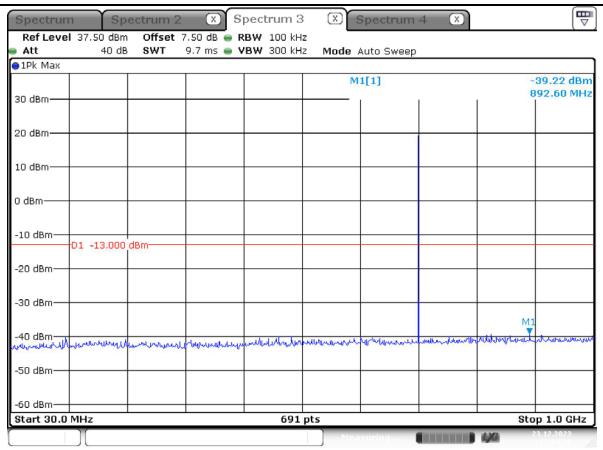
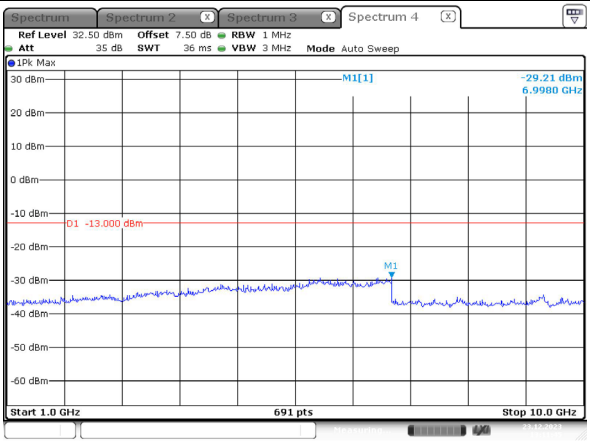
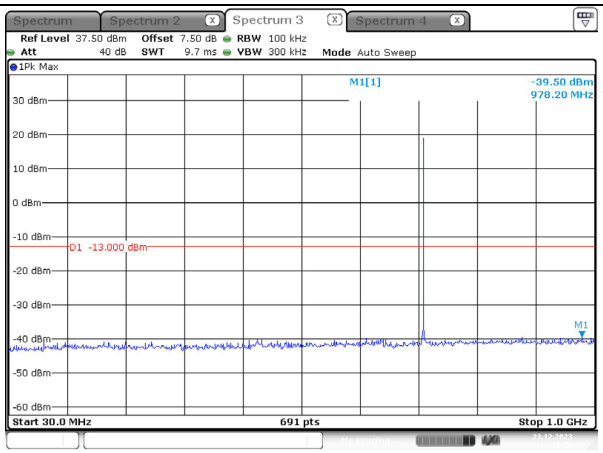
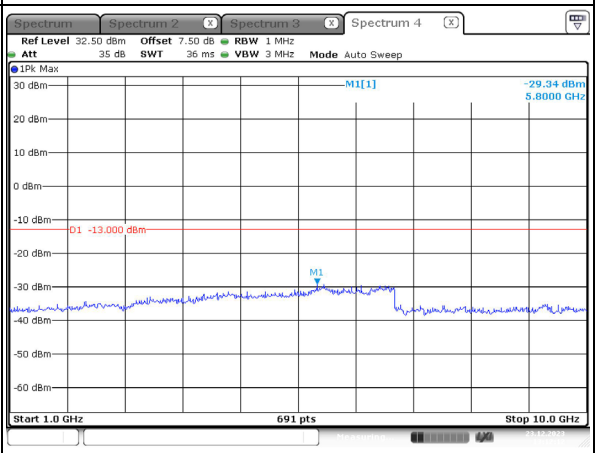
Test Plots(Note: The 7.5dB is the Insertion loss of the RF cable, Power Splitter and DC Block, which was offset into the Spectrum Analyzer)**:**

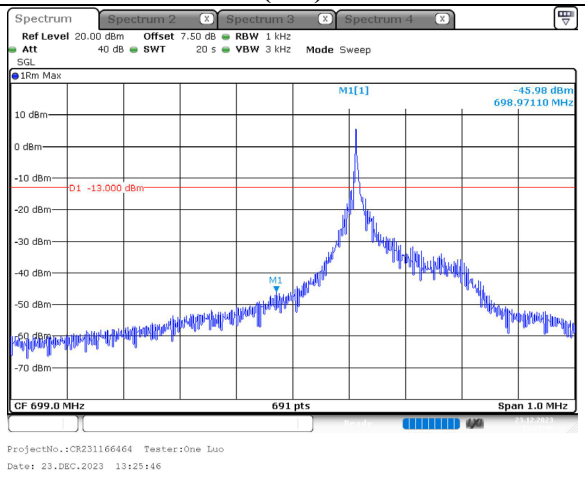
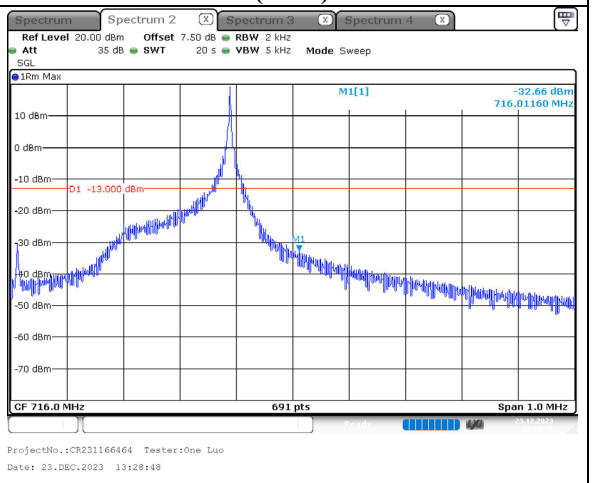
Occupied Bandwidth		
Channel	BPSK 3.75 kHz RB1#0	BPSK 15 kHz RB1#0
Lowest		
Middle		
Highest		

Occupied Bandwidth

Channel	QPSK 3.75 kHz RB1#0	QPSK 15 kHz RB1#0
Lowest		
Middle		
Highest		

Occupied Bandwidth	
Channel	QPSK 15 kHz RB12#0
Lowest	
Middle	
Highest	

Spurious Emissions at Antenna Terminal		
Channel	**(Worst: BPSK 3.75K 1#0 was tested)**	
Lowest		
Middle		
Highest		

Out of band emission, Band Edge		
Mode	**Lowest (1#0)**	**Highest (1#47)**
BPSK 3.75kHz		
QPSK 3.75kHz