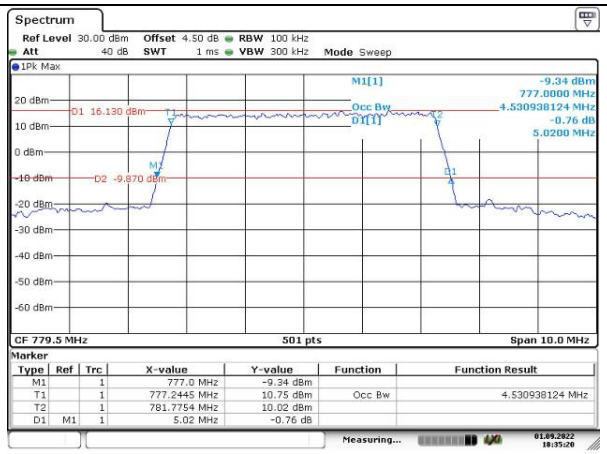
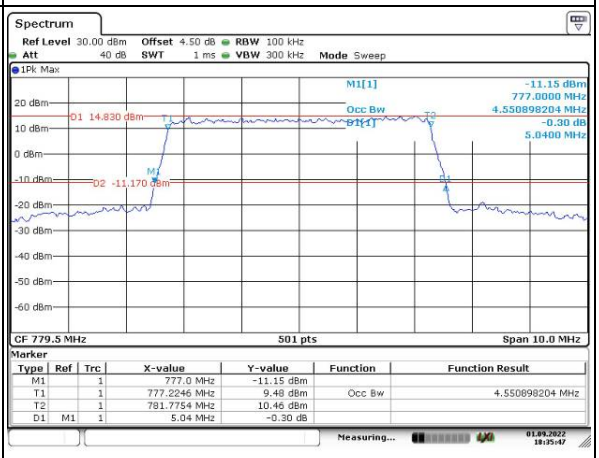
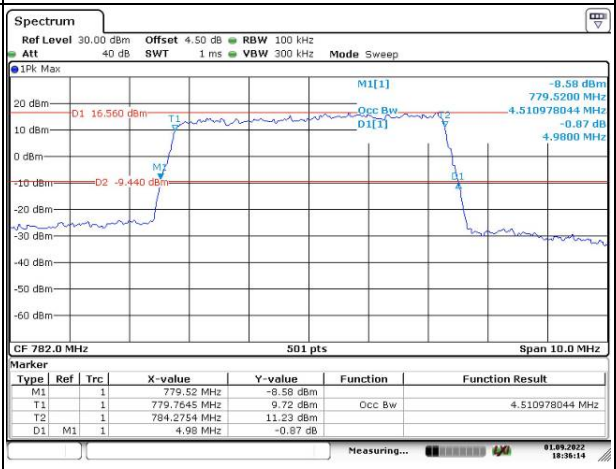
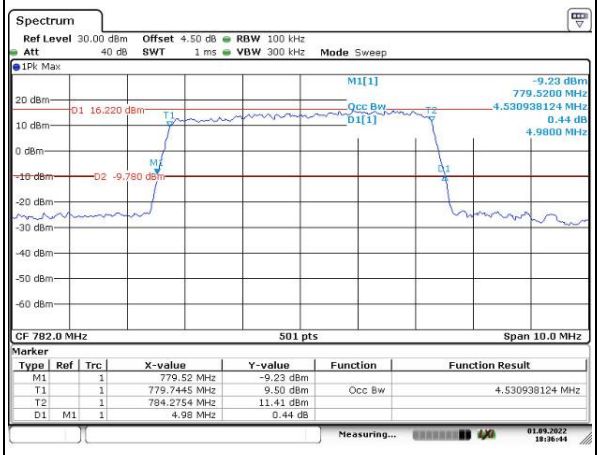
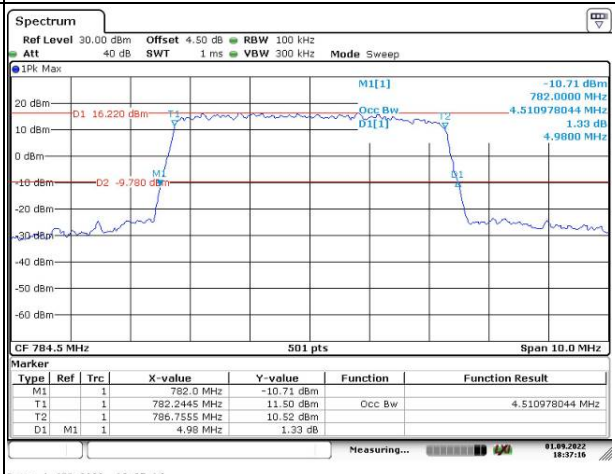
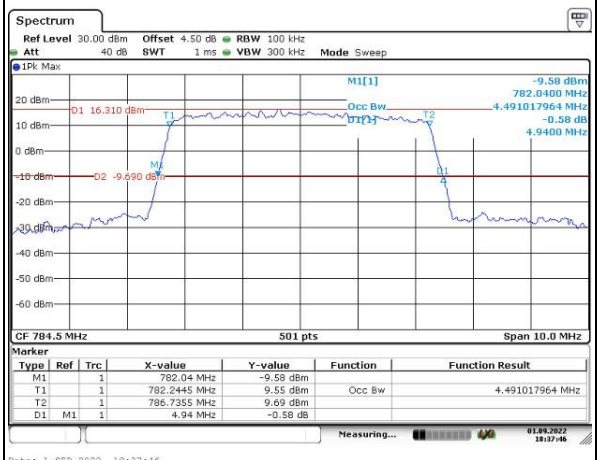
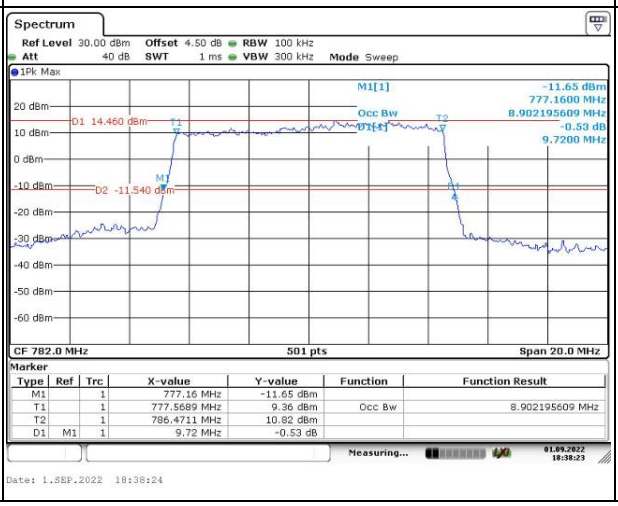
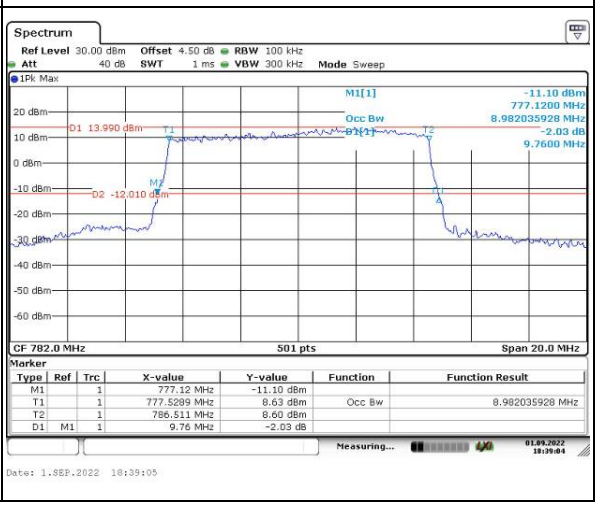
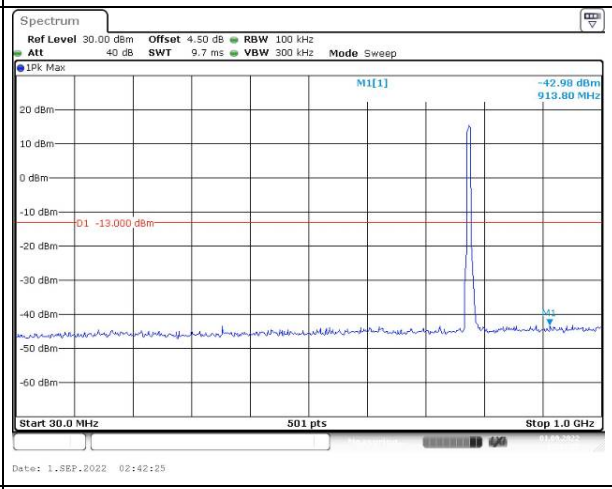
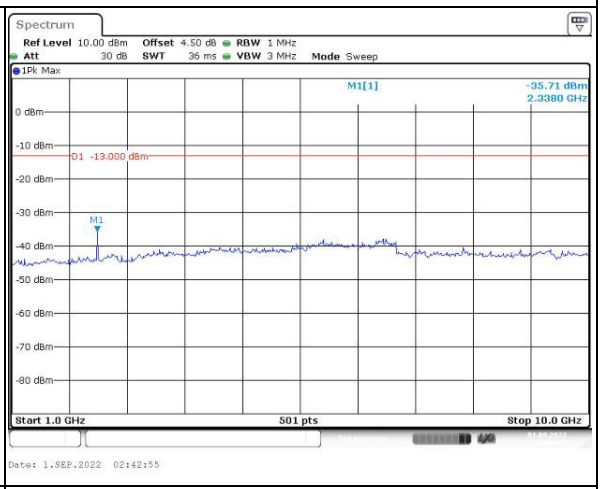
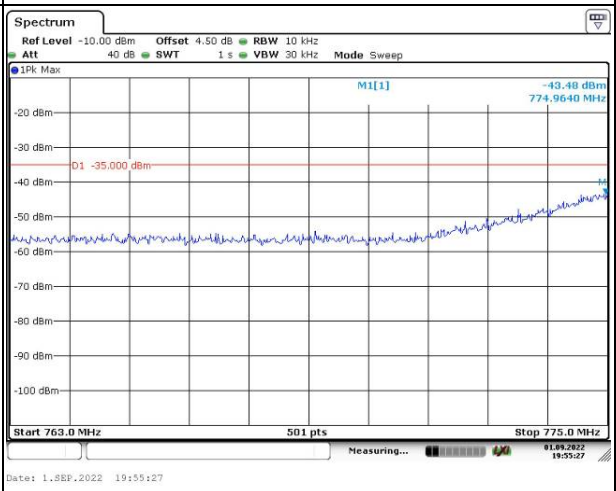
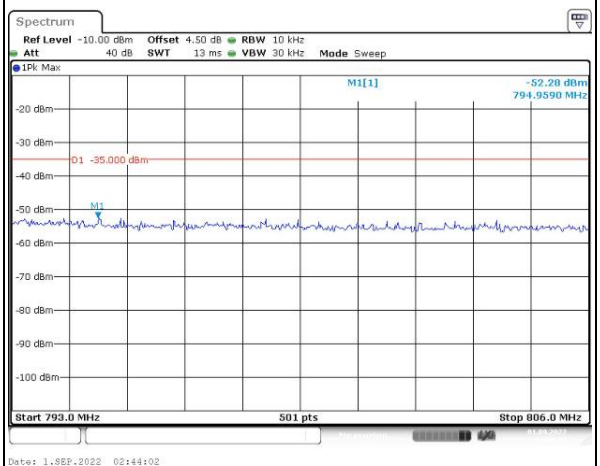
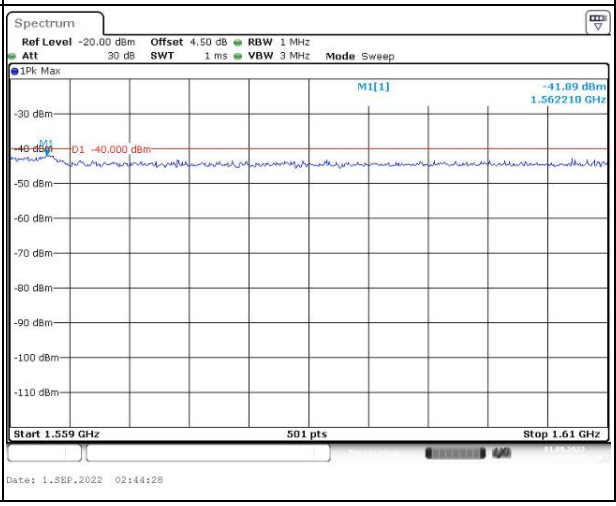
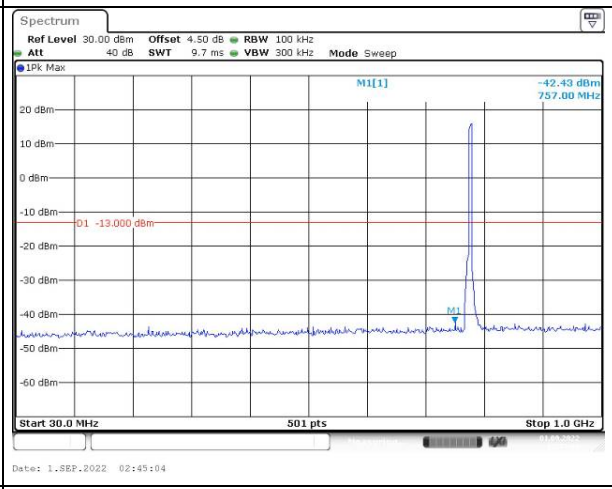
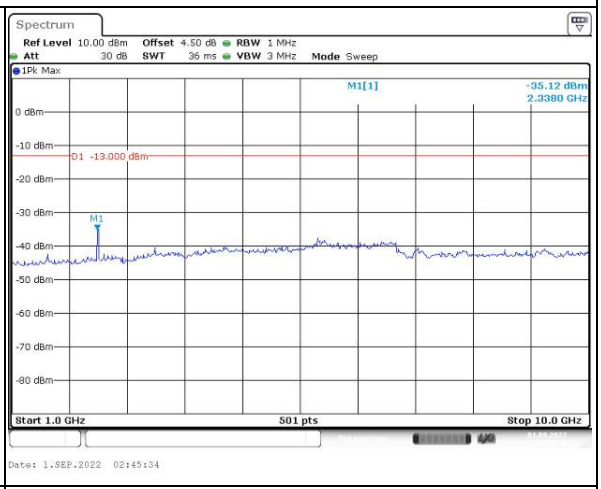
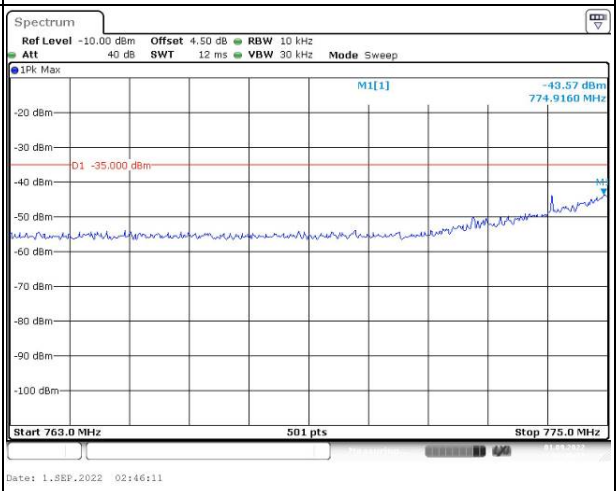
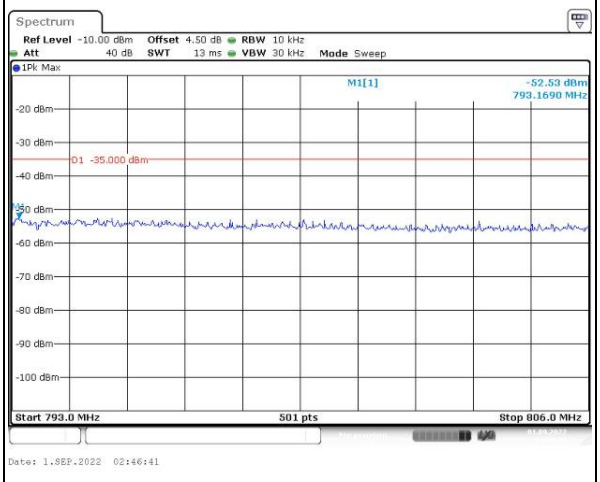
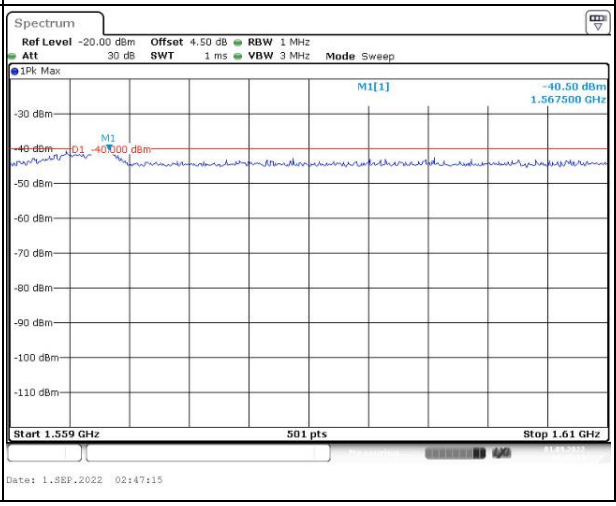
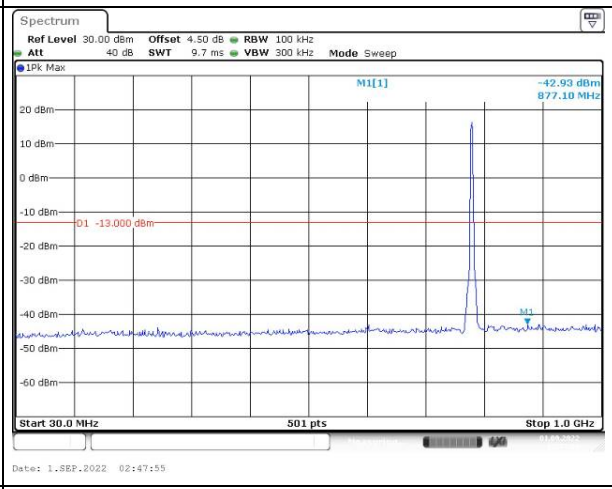
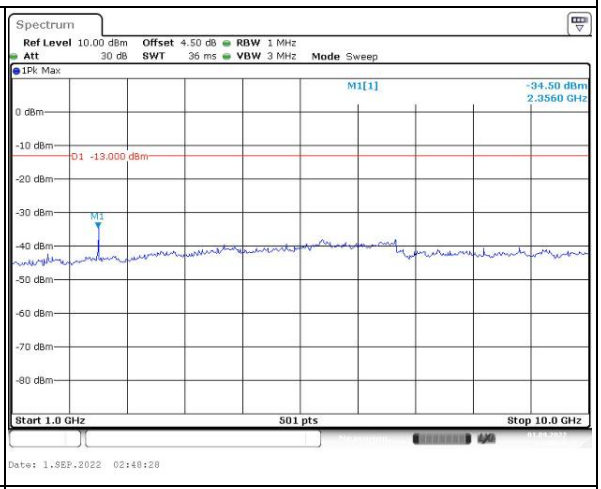
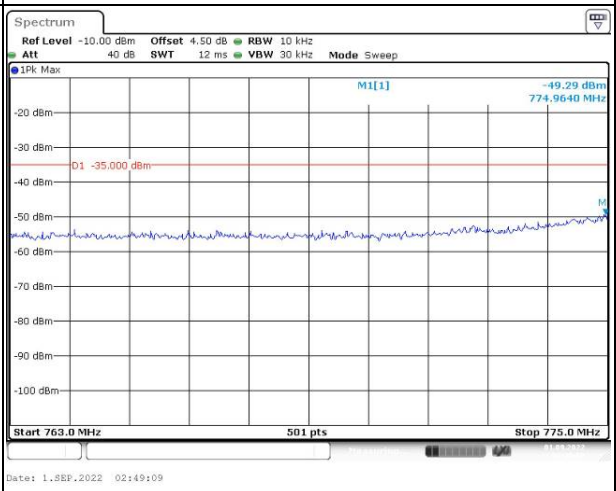
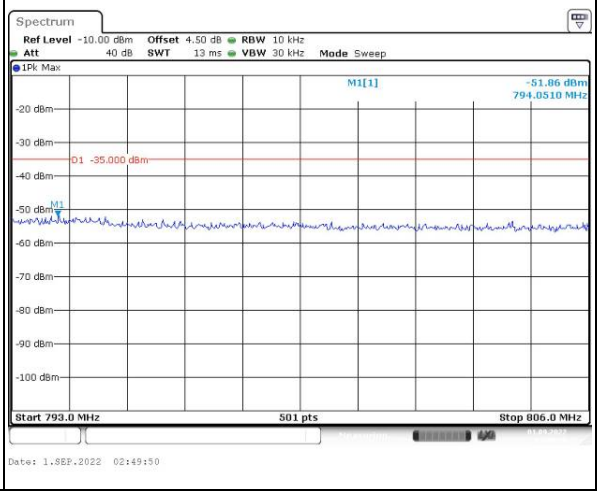
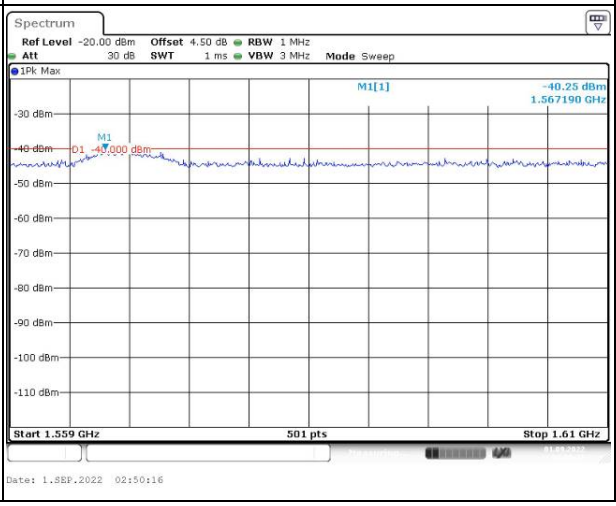
Test Plots:

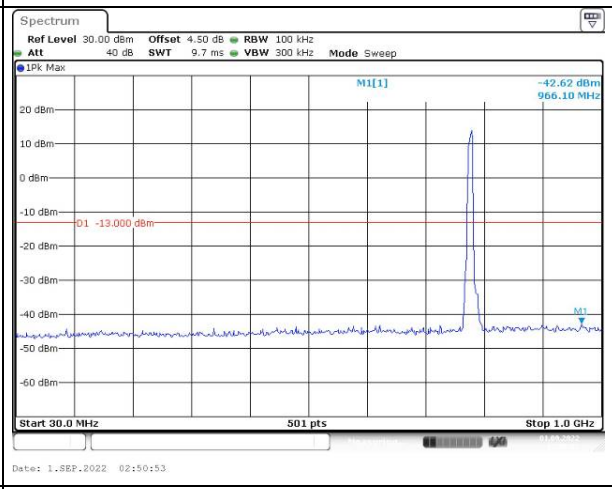
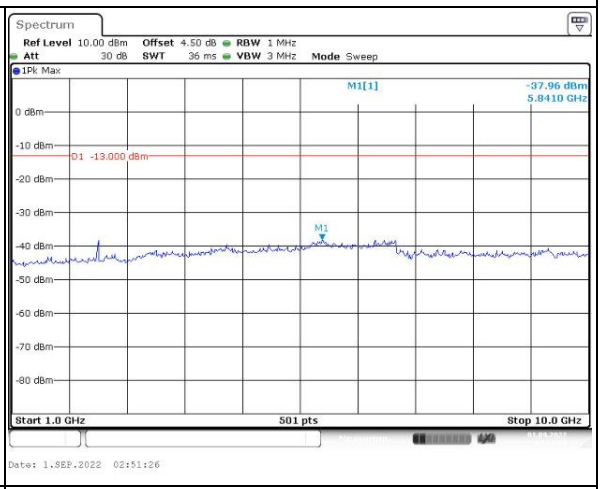
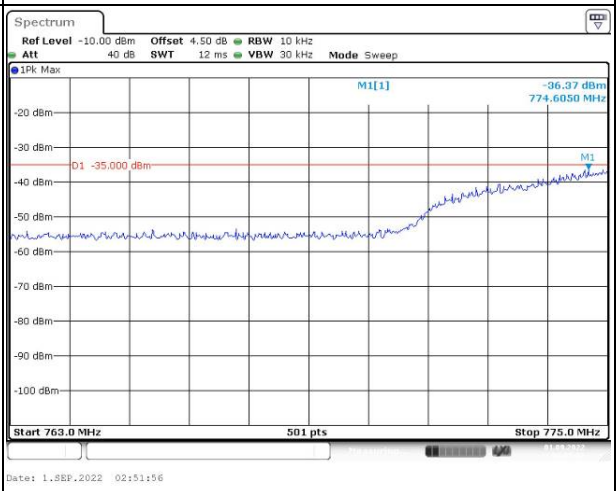
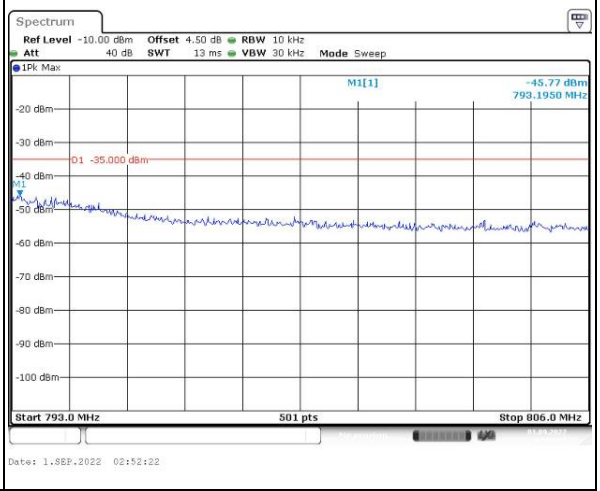
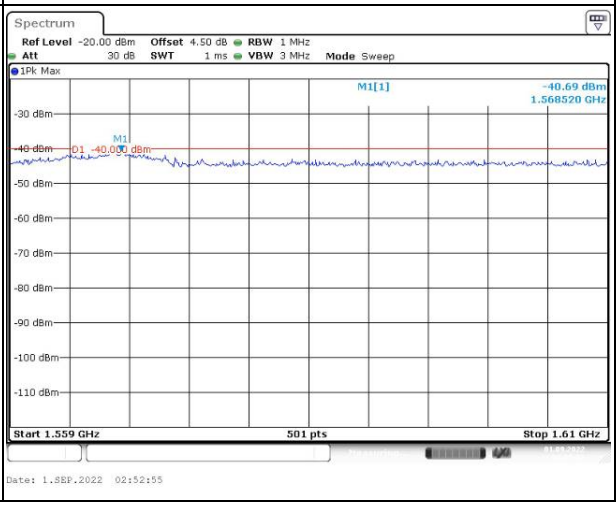
Occupied Bandwidth		
Channel	5MHz Bandwidth QPSK	5MHz Bandwidth 16QAM
Lowest		
Middle		
Highest		

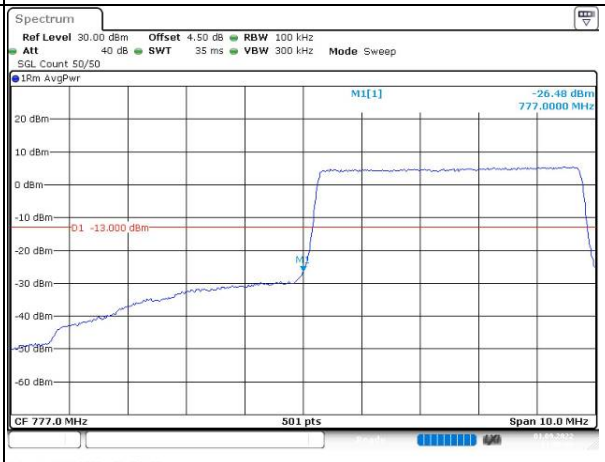
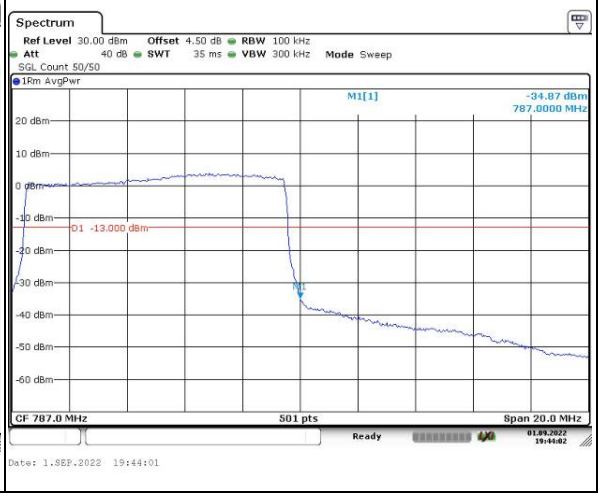
Occupied Bandwidth		
Channel	10MHz Bandwidth QPSK	10MHz Bandwidth 16QAM
Middle		

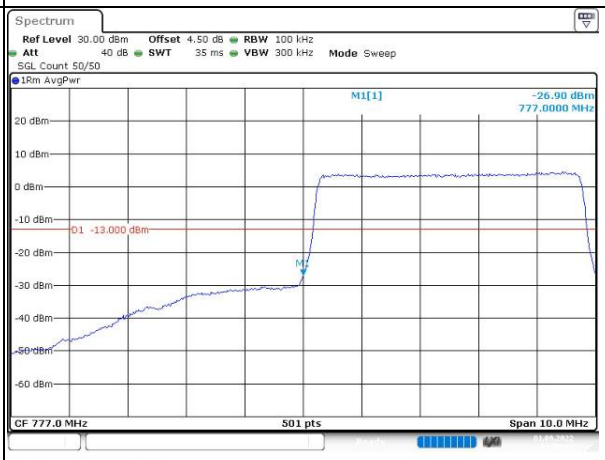
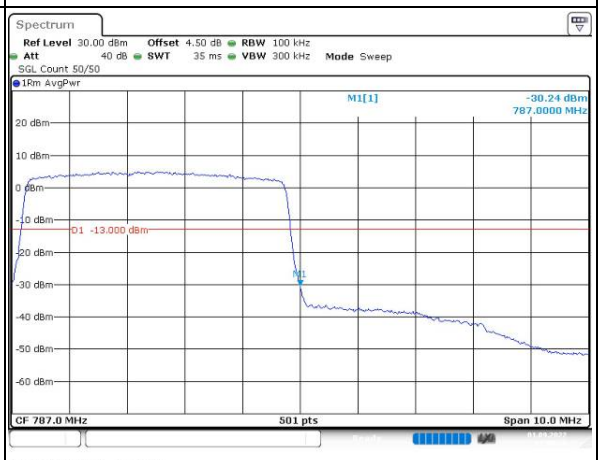
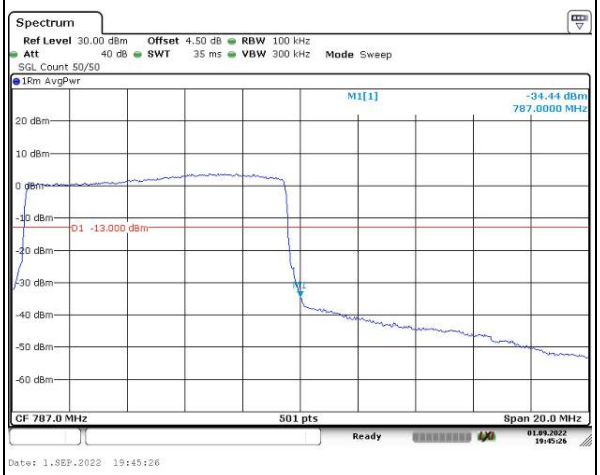
Spurious Emissions at Antenna Terminal		
Channel	**5MHz Bandwidth QPSK**	
Lowest		
Lowest		
Lowest		

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

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

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

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

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

4.11 Antenna Port Test Data and Results for LTE Band 17

Serial Number:	CR22080045-RF-S1	Test Date:	2022-08-31~2022-09-02
Test Site:	RF	Test Mode:	Transmitting
Tester:	George Chen	Test Result:	**Pass**

Environmental Conditions:					
Temperature: (℃)	25.2~25.9	Relative Humidity: (%)	53~61	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	211001	Each time	N/A
Unknown	Coaxial tee connector	Unknown	2204004	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
R&S	Wideband Radio Communication Tester	CMW500	149218	2022-07-15	2023-07-14
BACL	TEMP&HUMI Test Chamber	BTH-150-40	30174	2022-04-06	2023-04-05
UNI-T	Multimeter	UT39A+	C210582554	2021-09-30	2022-09-29
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 17▲:					
Antenna Gain (dBi):	0.21	Antenna Gain (dBd):	-1.94	Path Loss L_C (dB):	0.2
Operation Voltage(V_{DC}):					
Lowest:	3.5	Normal:	3.8	Highest:	4.35

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	22.78	22.7	22.88	20.74	34.77
	RB1#13	22.7	22.65	22.84		
	RB1#24	22.88	22.63	22.8		
	RB15#0	21.74	22.03	22.02		
	RB15#10	22.05	21.96	21.9		
	RB25#0	21.79	21.91	21.88		
5MHz 16QAM	RB1#0	22.12	21.49	20.81	19.98	34.77
	RB1#13	21.58	21.48	20.92		
	RB1#24	21.99	21.4	20.93		
	RB15#0	21.21	20.76	20.94		
	RB15#10	20.81	20.74	20.76		
	RB25#0	21.37	20.67	20.75		
10MHz QPSK	RB1#0	22.66	22.84	22.63	20.84	34.77
	RB1#25	22.85	22.93	22.77		
	RB1#49	22.92	22.98	22.82		
	RB25#0	21.57	21.93	21.95		
	RB25#25	21.73	22.04	22.02		
	RB50#0	21.89	21.91	21.9		
10MHz 16QAM	RB1#0	22.16	21.09	21.56	20.02	34.77
	RB1#25	22.09	21.44	21.91		
	RB1#49	22.02	21.38	21.95		
	RB25#0	21.28	21	20.89		
	RB25#25	20.96	20.97	20.76		
	RB50#0	20.93	20.76	20.82		
Note: ERP=Conducted Power(dBm) - Cable loss(dB) + Antenna Gain(dBd)						
					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	5.39	5.94	5.13	13
	RB50#0	5.25	5.36	5.42	13
10MHz 16QAM	RB1#0	6.41	7.25	5.86	13
	RB50#0	6.29	6.32	6.23	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
5MHz QPSK	4.511	4.511	4.531	5.02	4.94	5.02
5MHz 16QAM	4.531	4.531	4.511	5	5	5.02
10MHz QPSK	8.942	8.942	8.982	9.68	9.72	9.8
10MHz 16QAM	8.942	8.942	8.982	9.72	9.76	9.76
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.**

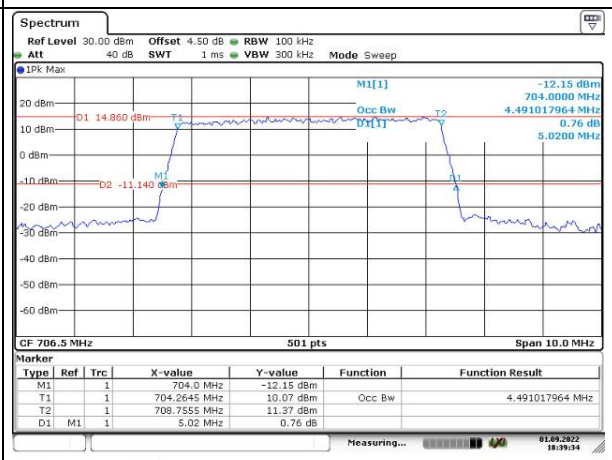
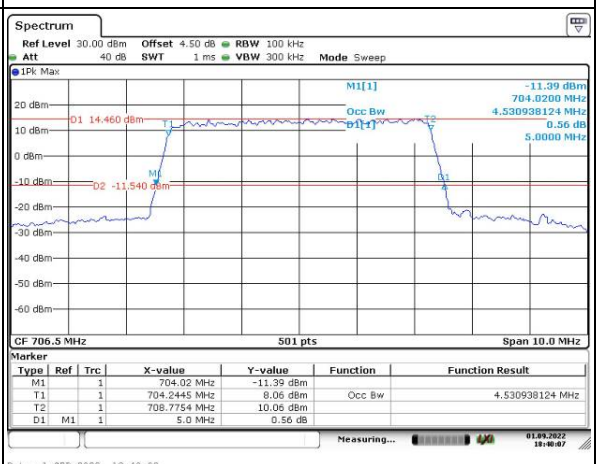
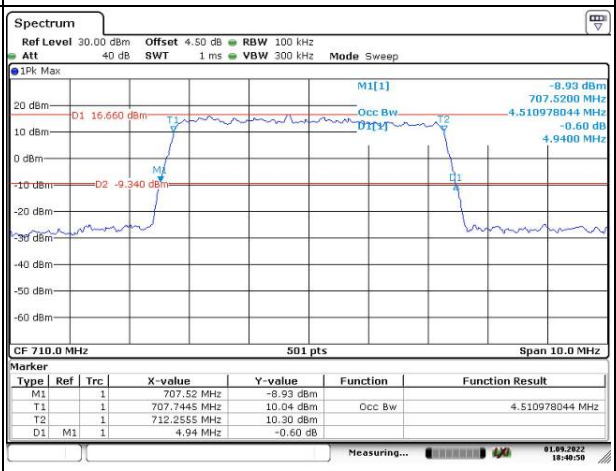
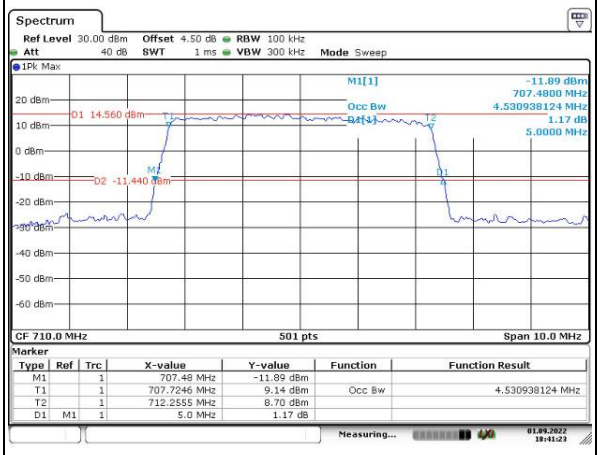
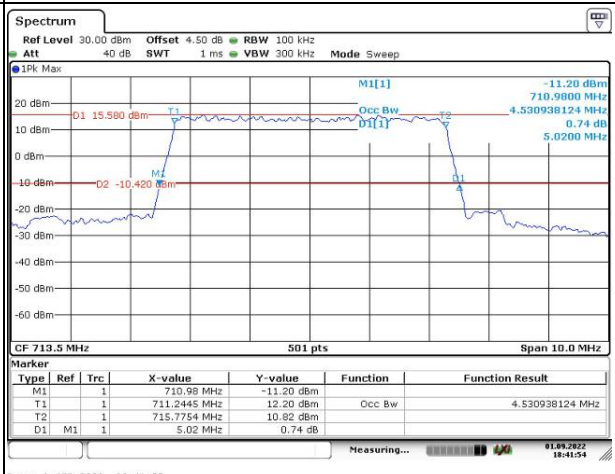
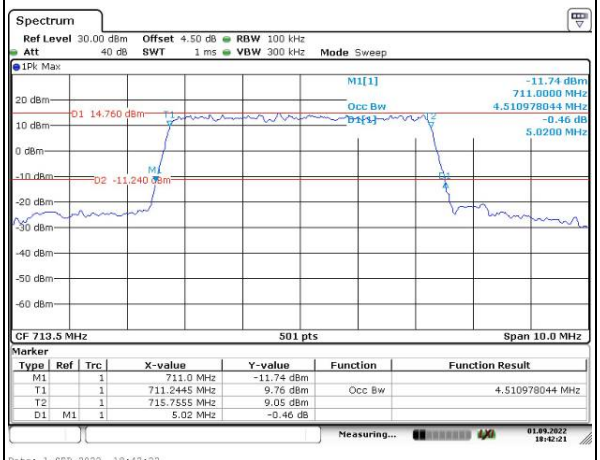
FCC §2.1051, §27.53:Out of band emission, Band Edge	
Result:	**Pass, Please refer to the test plots of Out of band emission, Band Edge.**

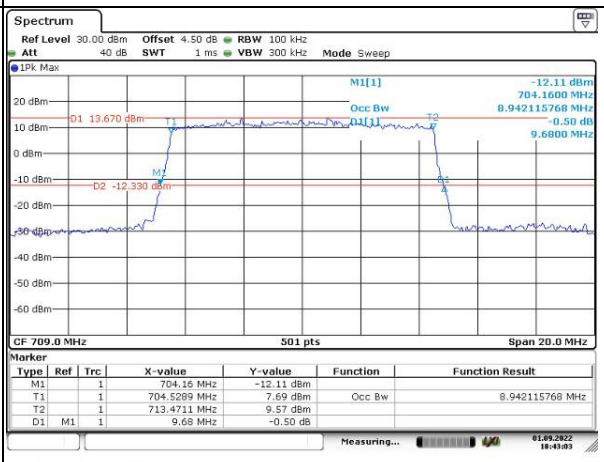
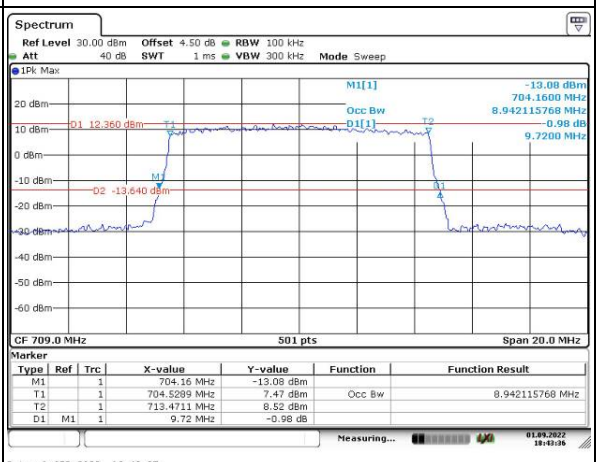
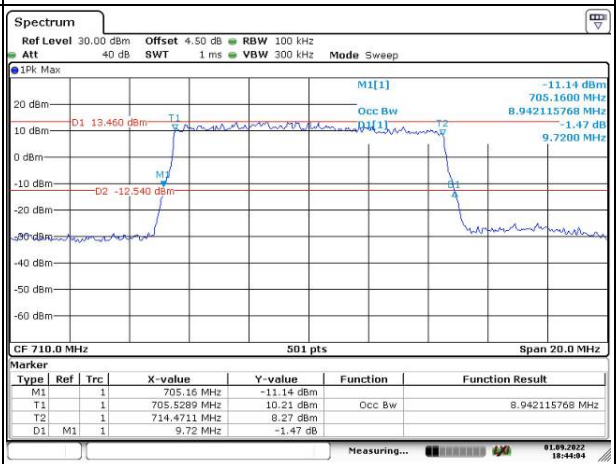
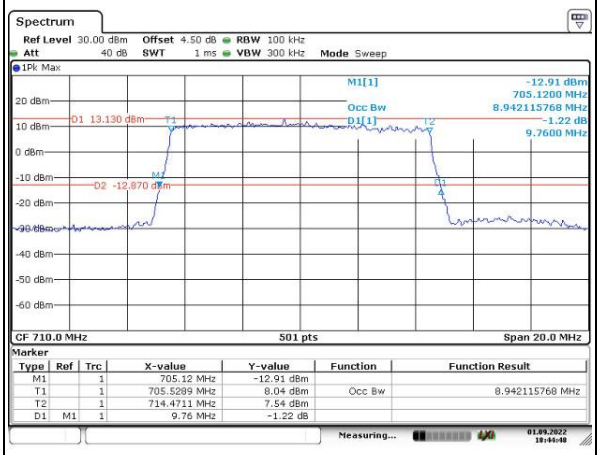
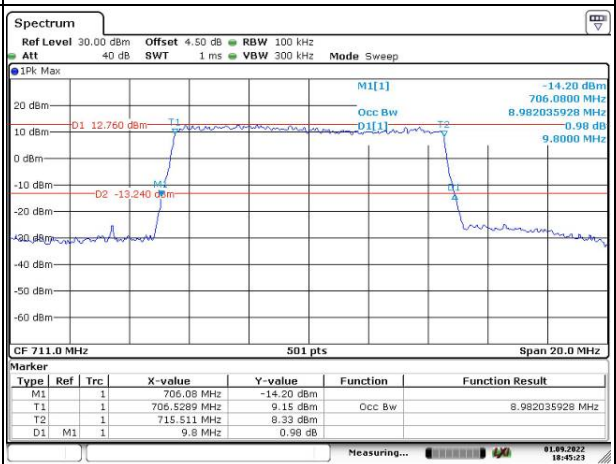
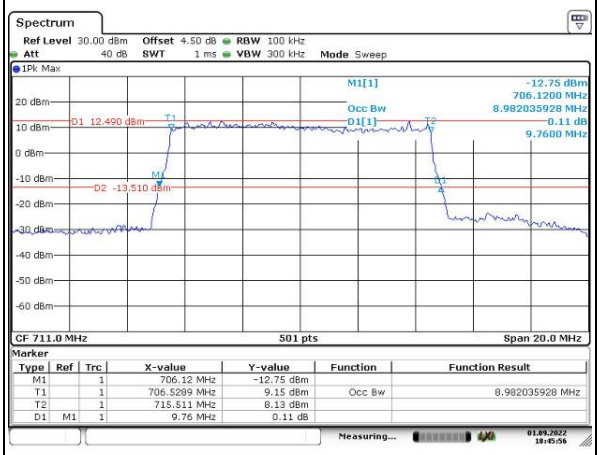
FCC §2.1055, §27.54: Frequency Stability

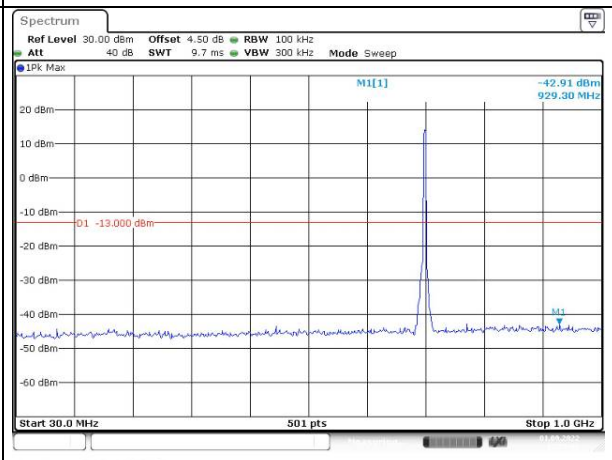
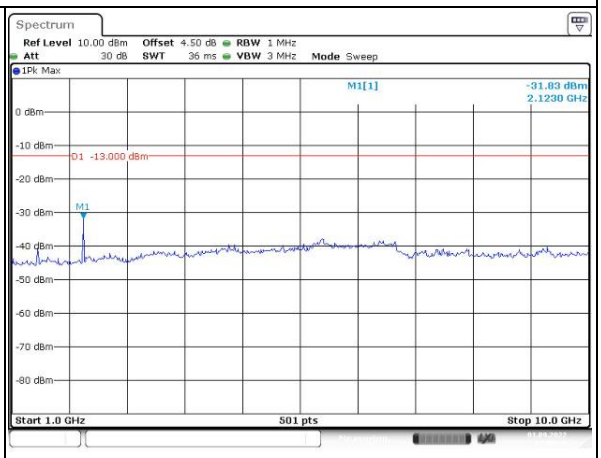
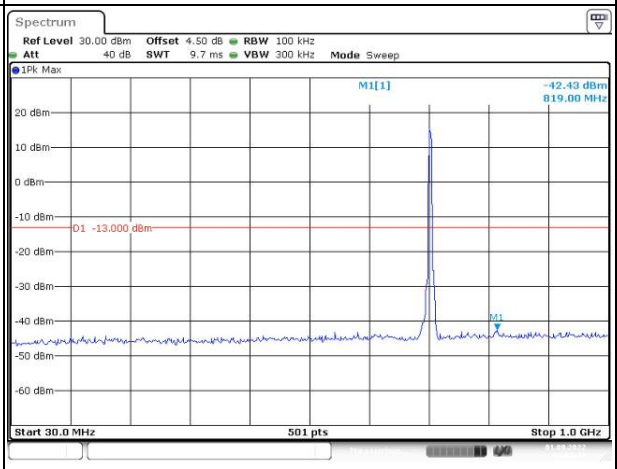
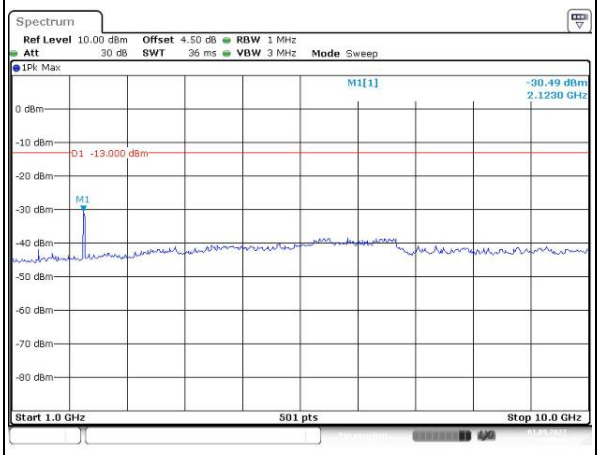
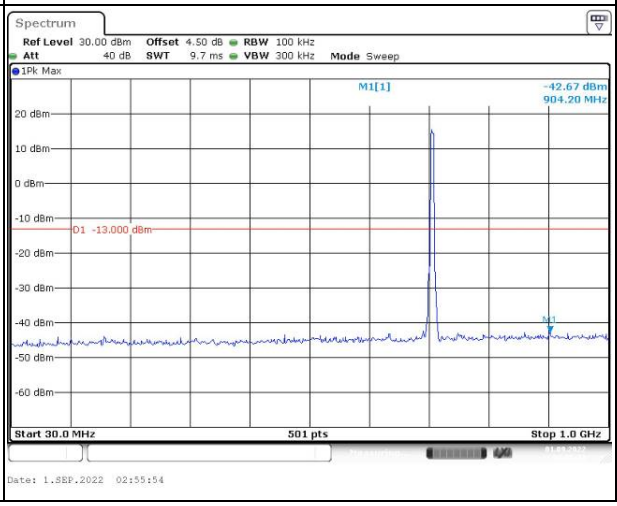
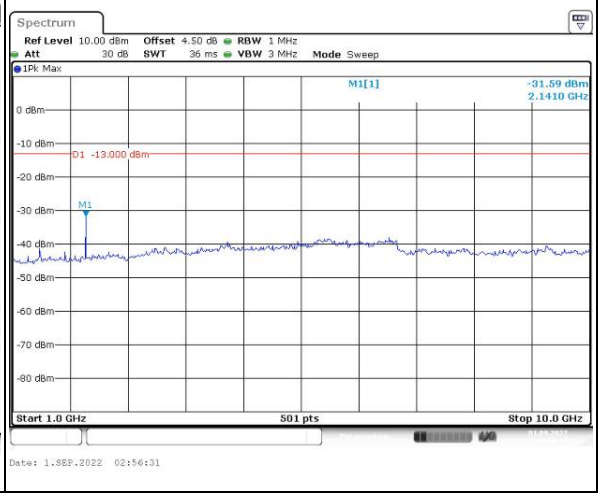
Test Mode:	10M QPSK	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (℃)	Voltage (V_{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.8	704.533	704.00	715.547	716.00
	-20	3.8	704.488	704.00	715.515	716.00
	-10	3.8	704.542	704.00	715.538	716.00
	0	3.8	704.534	704.00	715.494	716.00
	10	3.8	704.553	704.00	715.502	716.00
	20	3.8	704.529	704.00	715.511	716.00
	30	3.8	704.569	704.00	715.538	716.00
	40	3.8	704.574	704.00	715.461	716.00
	50	3.8	704.537	704.00	715.474	716.00
Frequency Stability vs. Voltage	20	3.5	704.557	704.00	715.524	716.00
	20	4.35	704.498	704.00	715.463	716.00
					Result:	**Pass**

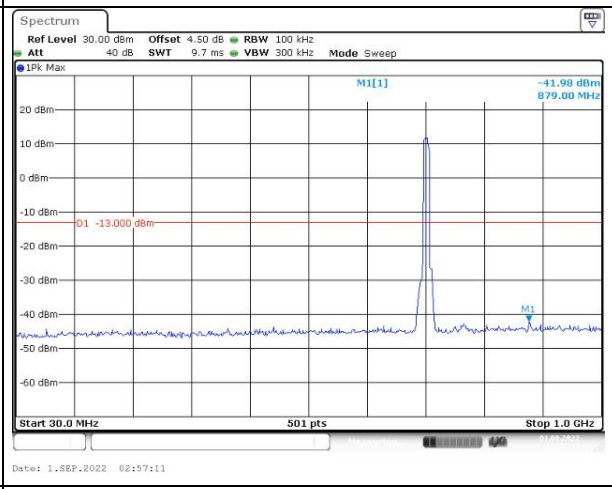
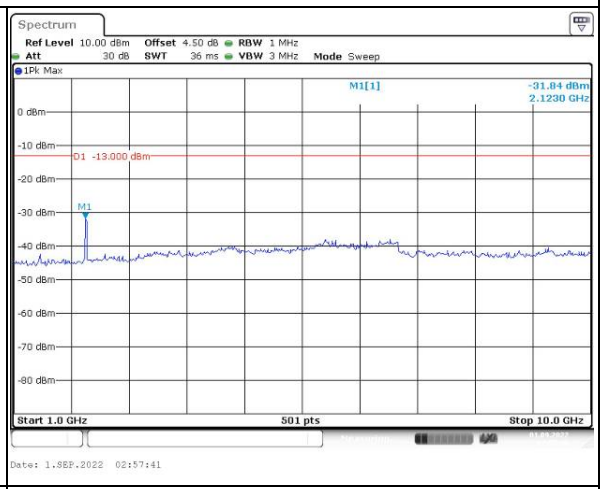
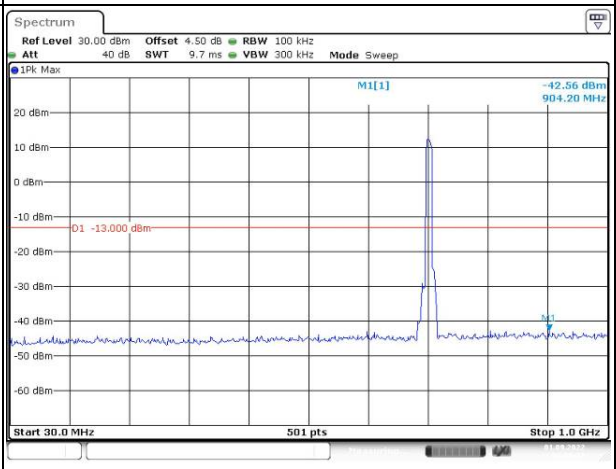
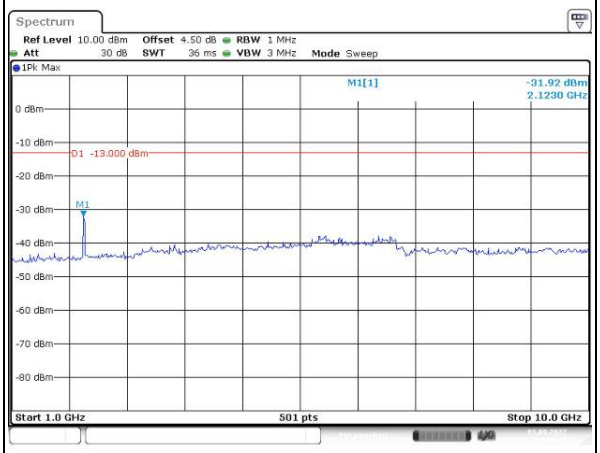
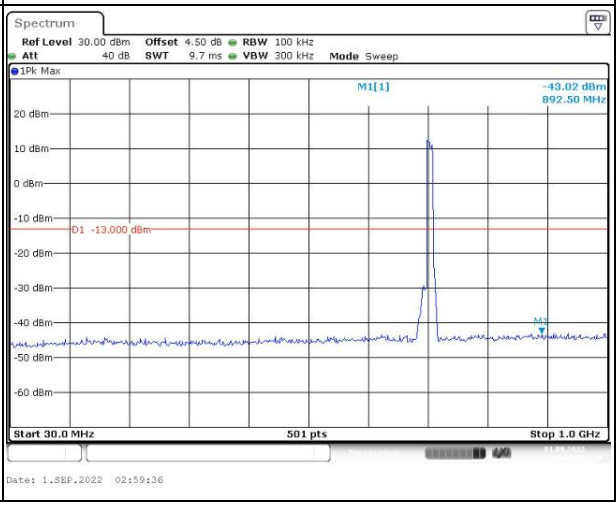
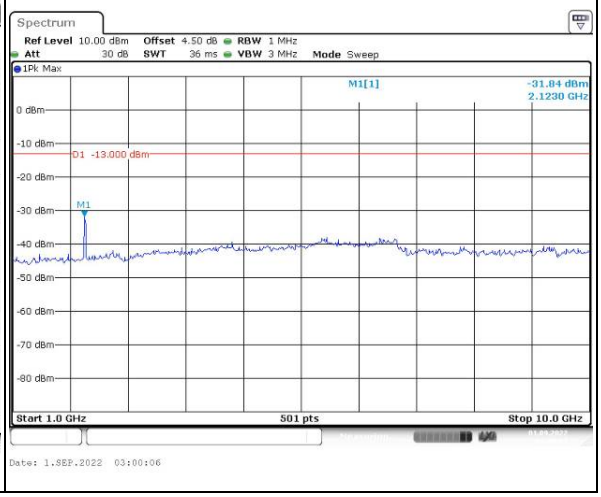
Test Mode:	10M 16QAM	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (℃)	Voltage (V_{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.8	704.565	704.00	715.465	716.00
	-20	3.8	704.572	704.00	715.497	716.00
	-10	3.8	704.505	704.00	715.471	716.00
	0	3.8	704.515	704.00	715.461	716.00
	10	3.8	704.514	704.00	715.518	716.00
	20	3.8	704.529	704.00	715.511	716.00
	30	3.8	704.563	704.00	715.489	716.00
	40	3.8	704.548	704.00	715.510	716.00
	50	3.8	704.490	704.00	715.521	716.00
Frequency Stability vs. Voltage	20	3.5	704.512	704.00	715.543	716.00
	20	4.35	704.562	704.00	715.554	716.00
					Result:	**Pass**

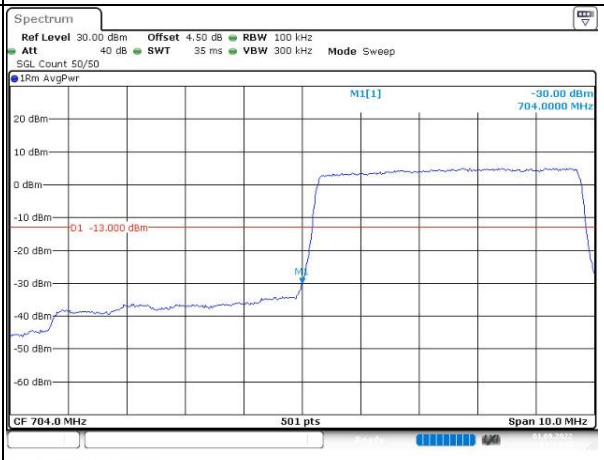
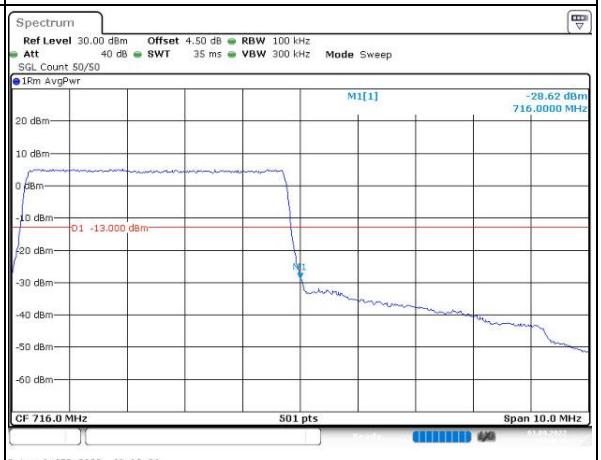
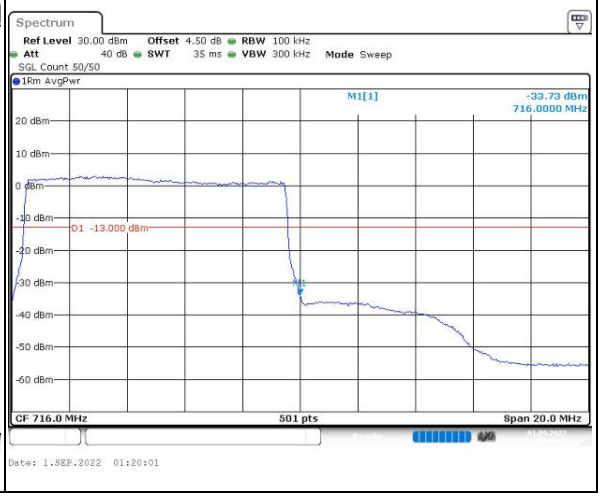
Test Plots:

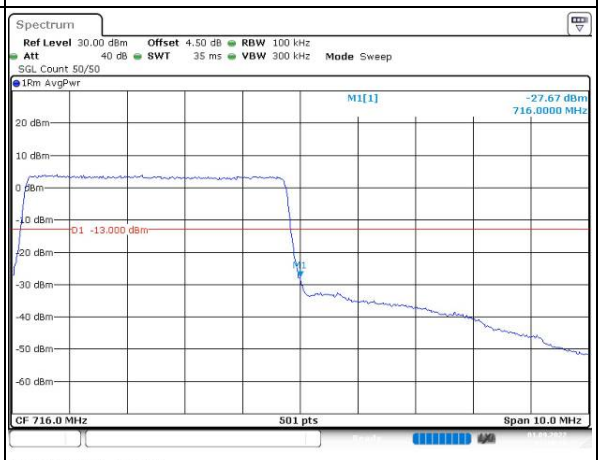
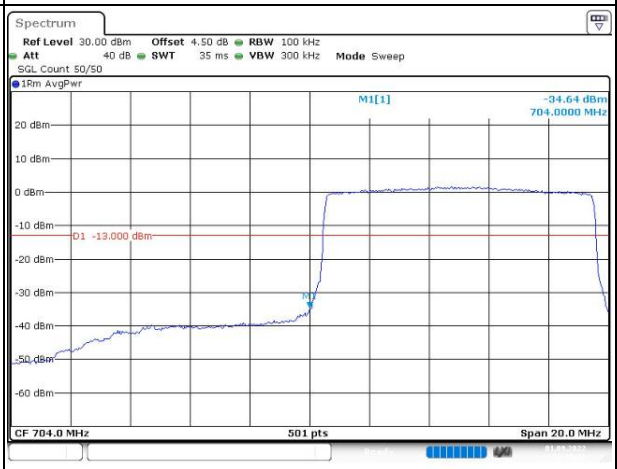
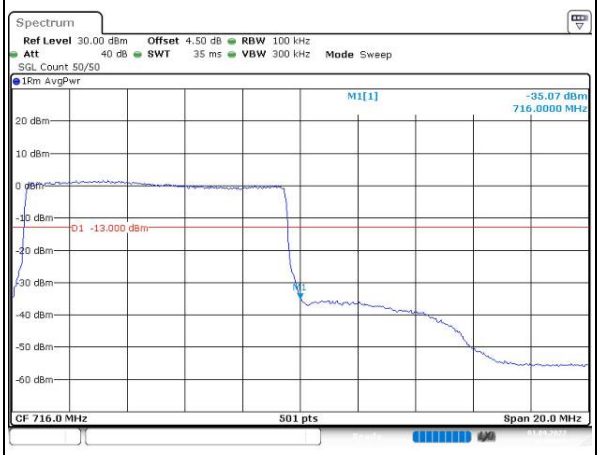
Occupied Bandwidth		
Channel	5MHz Bandwidth QPSK	5MHz Bandwidth 16QAM
Lowest		
Middle		
Highest		

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

Spurious Emissions at Antenna Terminal		
Channel	**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 5MHz		
QPSK 10MHz		

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

4.12 Antenna Port Test Data and Results for LTE Band 41

Serial Number:	CR22080045-RF-S1	Test Date:	2022-08-31~2022-09-20
Test Site:	RF	Test Mode:	Transmitting
Tester:	George Chen	Test Result:	**Pass**

Environmental Conditions:					
Temperature: (℃)	24.1~25.9	Relative Humidity: (%)	53~61	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	211001	Each time	N/A
Unknown	Coaxial tee connector	Unknown	2204004	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
R&S	Wideband Radio Communication Tester	CMW500	149218	2022-07-15	2023-07-14
BACL	TEMP&HUMI Test Chamber	BTH-150-40	30174	2022-04-06	2023-04-05
UNI-T	Multimeter	UT39A+	C210582554	2021-09-30	2022-09-29
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 41▲:					
Antenna Gain (dBi):	0.54			Path Loss L_C (dB):	0.5
Operation Voltage(V_{DC}):					
Lowest:	3.5	Normal:	3.8	Highest:	4.35

Test Frequency For Each Mode:

Operation Bandwidth	Lowest Frequency (MHz)	Middle Frequency (MHz)	Highest Frequency (MHz)
5MHz	2557.5	2605	2652.5
10MHz	2560	2605	2650
15MHz	2562.5	2605	2647.5
20MHz	2565	2605	2645

Test Data:

FCC§2.1046;§ 27.50(h)(2)

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		
5MHz QPSK	RB1#0	22.29	22.59	22.65	22.73	33
	RB1#13	22.21	22.69	22.53		
	RB1#24	22.23	22.69	22.55		
	RB15#0	21.27	21.57	21.59		
	RB15#10	21.29	21.61	21.62		
	RB25#0	21.29	21.57	21.55		
5MHz 16QAM	RB1#0	21.01	21.7	21.82	21.97	33
	RB1#13	21.32	21.89	21.93		
	RB1#24	21.15	21.7	21.77		
	RB15#0	20.64	20.73	20.75		
	RB15#10	20.59	20.78	20.69		
	RB25#0	20.32	20.8	20.88		
10MHz QPSK	RB1#0	22.39	22.53	22.48	22.65	33
	RB1#25	22.27	22.59	22.61		
	RB1#49	22.37	22.57	22.51		
	RB25#0	21.35	21.56	21.54		
	RB25#25	21.35	21.58	21.59		
	RB50#0	21.33	21.54	21.46		
10MHz 16QAM	RB1#0	21	21.81	21.79	22.32	33
	RB1#25	21.21	22.15	21.76		
	RB1#49	21.15	22.28	21.84		
	RB25#0	20.4	20.75	20.88		
	RB25#25	20.41	20.74	20.84		
	RB50#0	20.4	20.69	20.68		
15MHz QPSK	RB1#0	22.4	22.62	22.51	22.74	33
	RB1#38	22.37	22.59	22.37		
	RB1#74	22.39	22.7	22.4		
	RB36#0	21.38	21.53	21.57		
	RB36#39	21.28	21.64	21.7		
	RB75#0	21.26	21.48	21.53		
15MHz 16QAM	RB1#0	21.1	22.22	21.74	22.29	33
	RB1#38	21.19	22.14	21.72		
	RB1#74	21.31	22.25	21.63		
	RB36#0	20.41	20.74	20.7		
	RB36#39	20.5	20.73	20.72		
	RB75#0	20.57	20.62	20.72		
20MHz QPSK	RB1#0	22.26	22.65	22.6	22.77	33
	RB1#50	22.3	22.6	22.67		

	RB1#99	22.44	22.69	22.73		
	RB50#0	21.42	21.71	21.66		
	RB50#50	21.33	21.62	21.61		
	RB100#0	21.48	21.64	21.58		
20MHz 16QAM	RB1#0	21.6	21.27	22.44	22.5	33
	RB1#50	21.64	21.36	22.46		
	RB1#99	21.79	21.28	22.37		
	RB50#0	20.62	20.66	20.75		
	RB50#50	20.72	20.86	20.68		
	RB100#0	20.44	20.72	20.65		
Note: EIRP=Conducted Power(dBm) - Cable loss(dB) + Antenna Gain(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	5.62	8.55	9.25	13
	RB100#0	9.45	9.25	9.45	13
20MHz 16QAM	RB1#0	10.32	10.23	10.03	13
	RB100#0	10.35	10	9.65	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
5MHz QPSK	4.511	4.511	4.511	4.98	5.16	5.08
5MHz 16QAM	4.511	4.511	4.531	5	4.98	5.1
10MHz QPSK	8.982	8.982	8.942	9.8	9.8	9.92
10MHz 16QAM	8.982	8.942	8.942	9.72	9.76	10
15MHz QPSK	13.593	13.473	13.473	16.14	15.48	15.42
15MHz 16QAM	13.533	13.593	13.593	15.54	17.16	15.96
20MHz QPSK	18.044	17.964	17.964	19.68	19.6	19.76
20MHz 16QAM	17.964	17.964	17.964	19.84	20	19.92
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.**

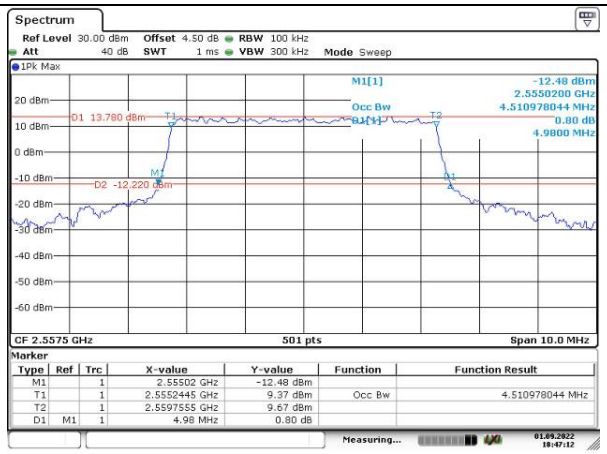
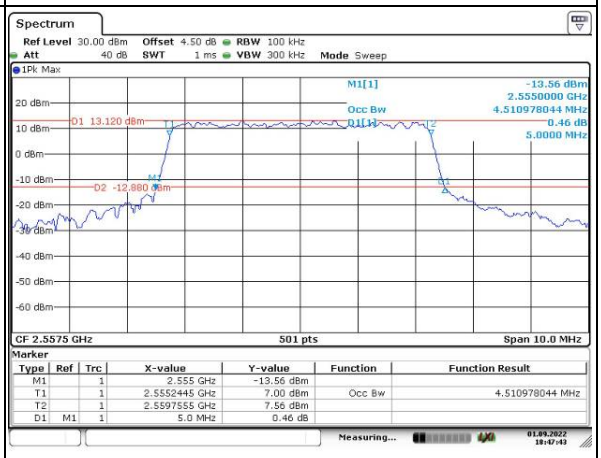
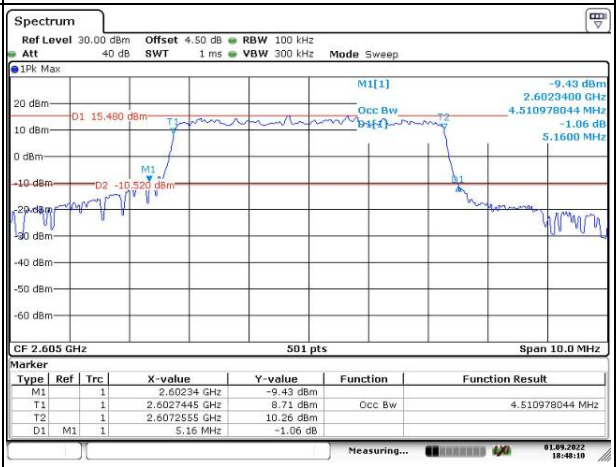
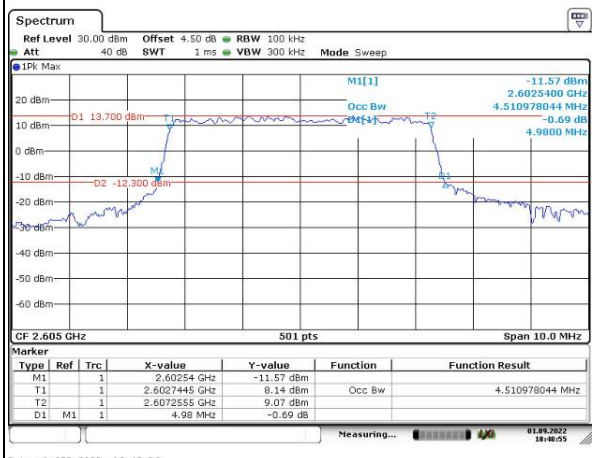
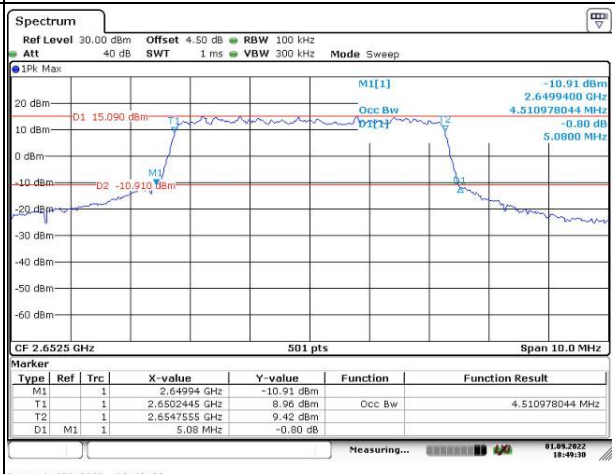
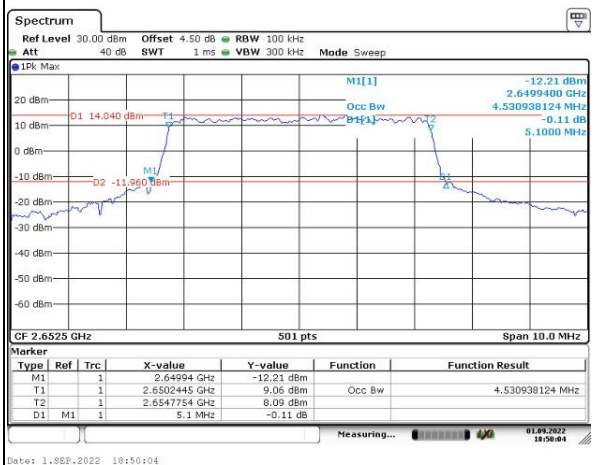
FCC §2.1051, § 27.53:Out of band emission, Band Edge	
Result:	**Pass, Please refer to the test plots of Out of band emission, Band Edge.**

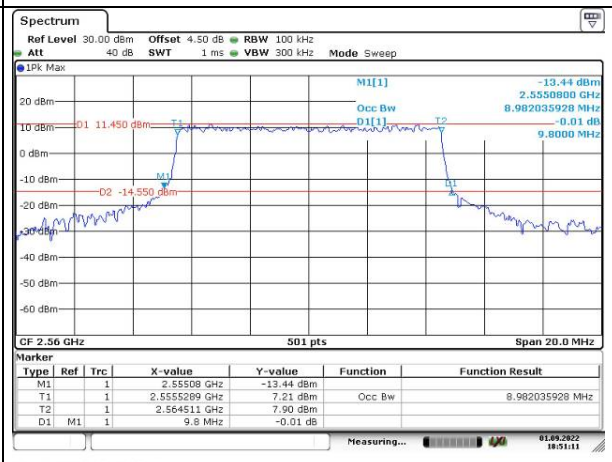
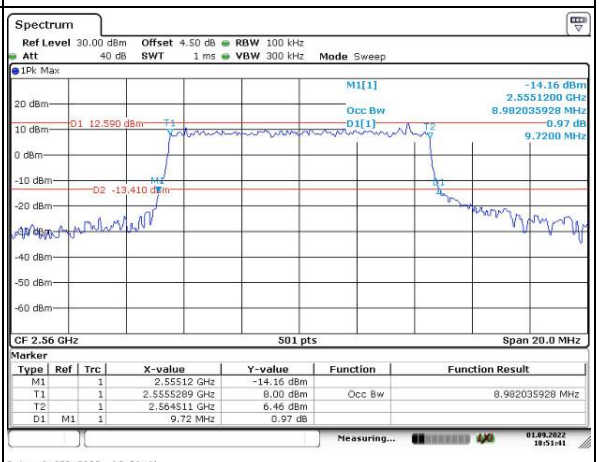
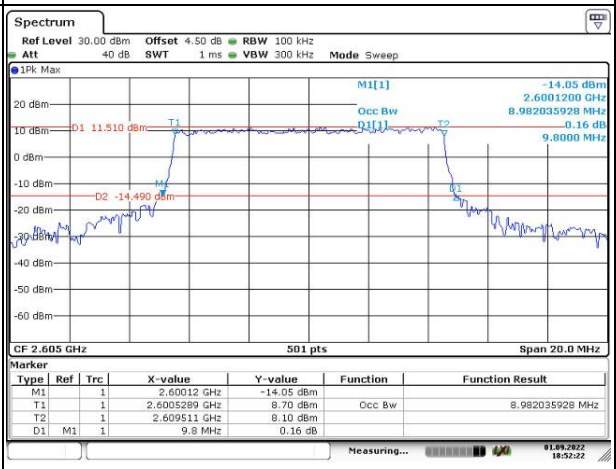
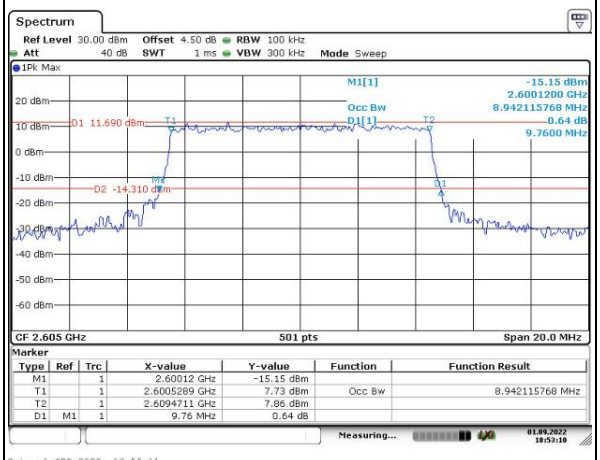
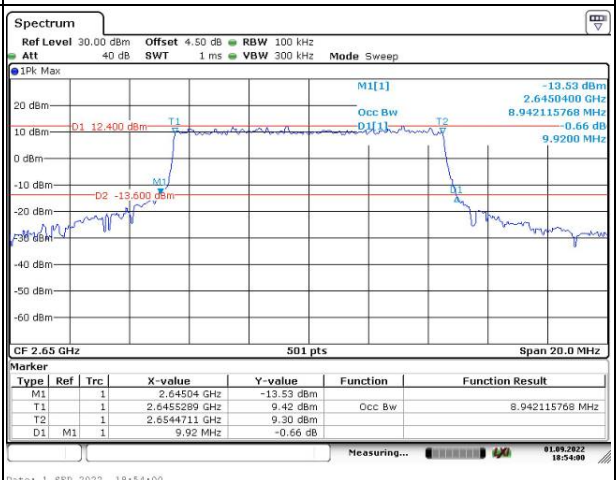
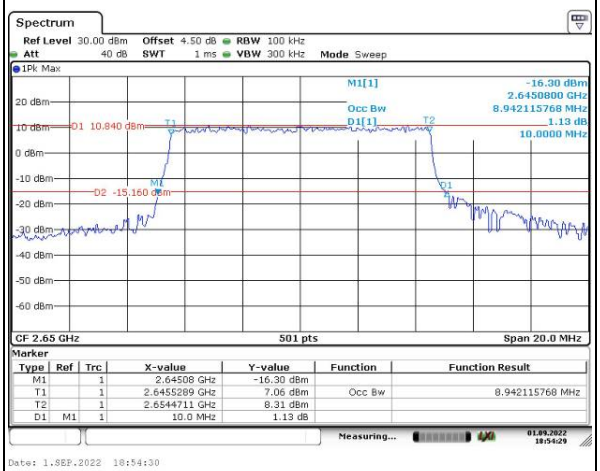
FCC §2.1055, §27.54: Frequency Stability

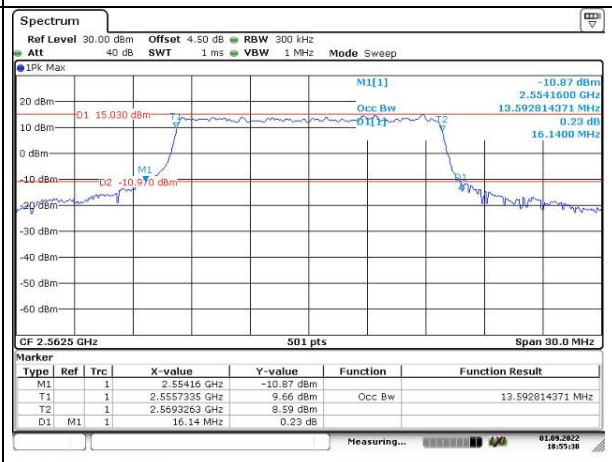
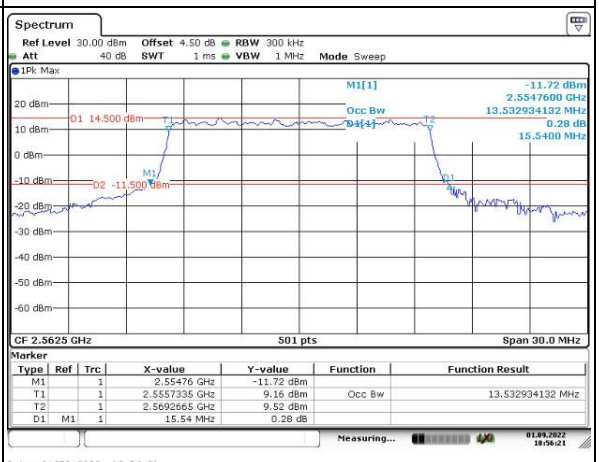
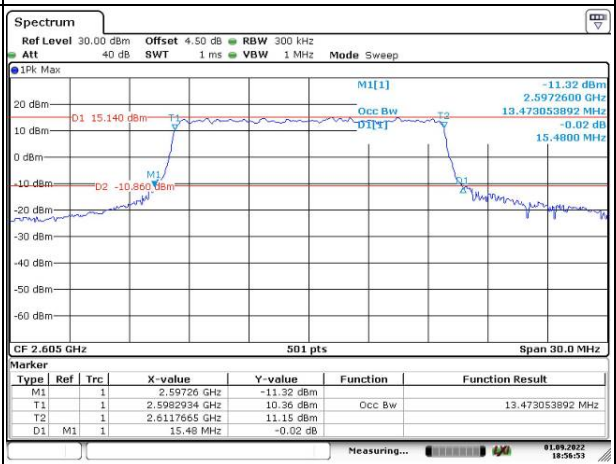
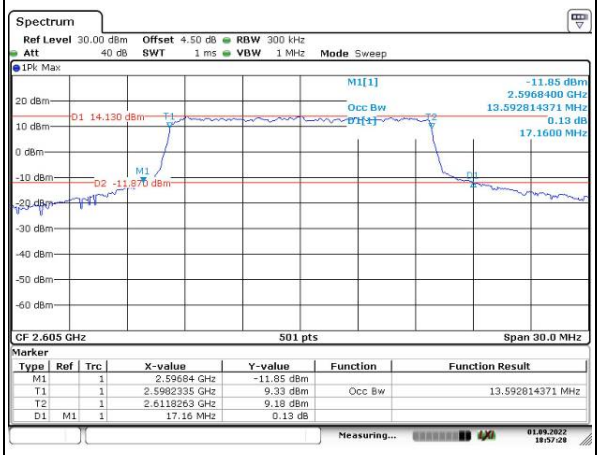
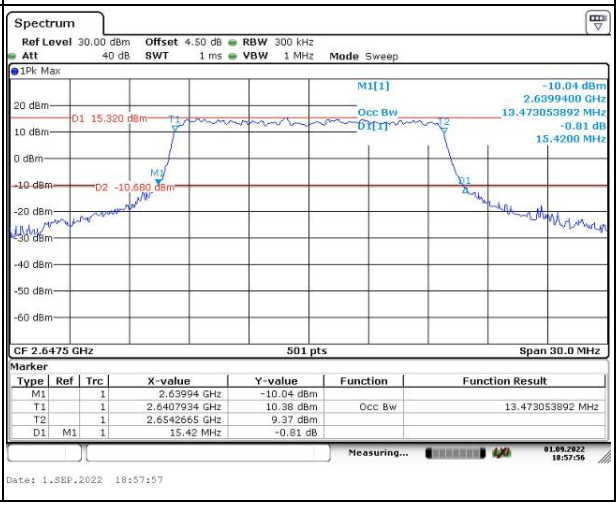
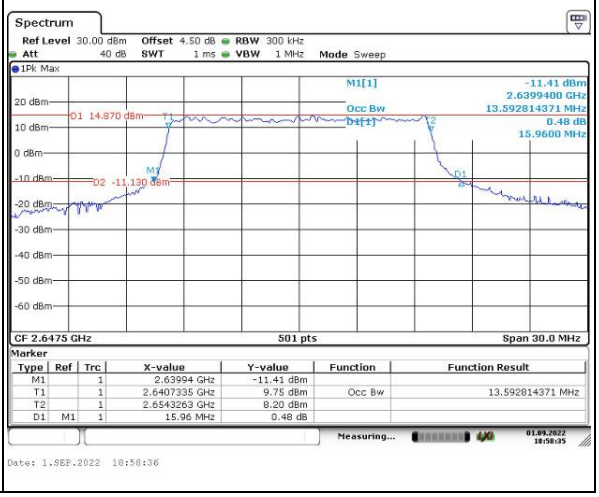
Test Mode:	20M QPSK	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (℃)	Voltage (V_{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.8	2555.955	2555.00	2654.040	2655
	-20	3.8	2555.903	2555.00	2654.088	2655
	-10	3.8	2555.968	2555.00	2654.096	2655
	0	3.8	2555.948	2555.00	2654.060	2655
	10	3.8	2555.921	2555.00	2654.064	2655
	20	3.8	2555.978	2555.00	2654.022	2655
	30	3.8	2555.943	2555.00	2654.050	2655
	40	3.8	2555.966	2555.00	2654.080	2655
	50	3.8	2555.990	2555.00	2654.049	2655
Frequency Stability vs. Voltage	20	3.5	2555.926	2555.00	2654.037	2655
	20	4.35	2555.966	2555.00	2654.084	2655
					Result:	**Pass**

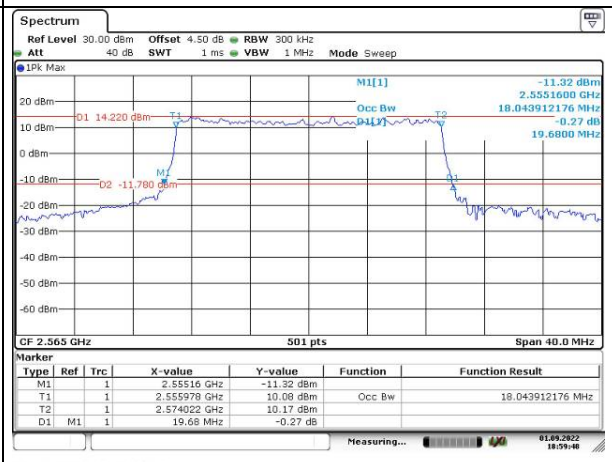
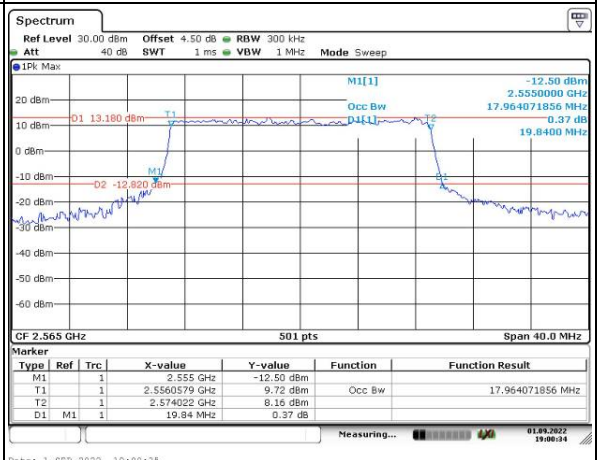
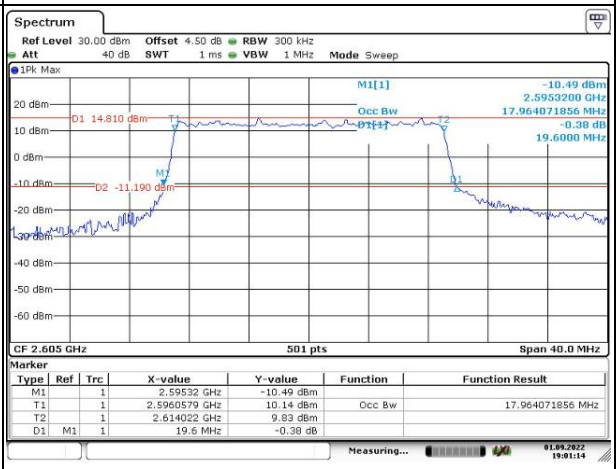
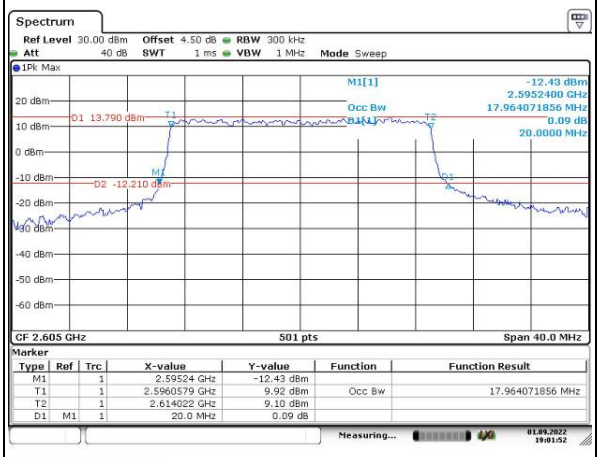
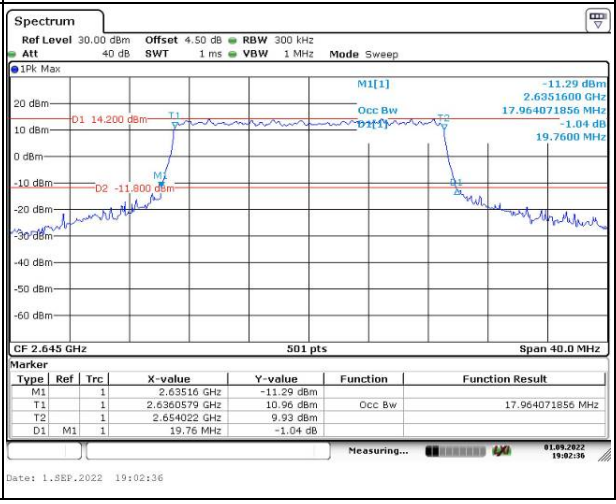
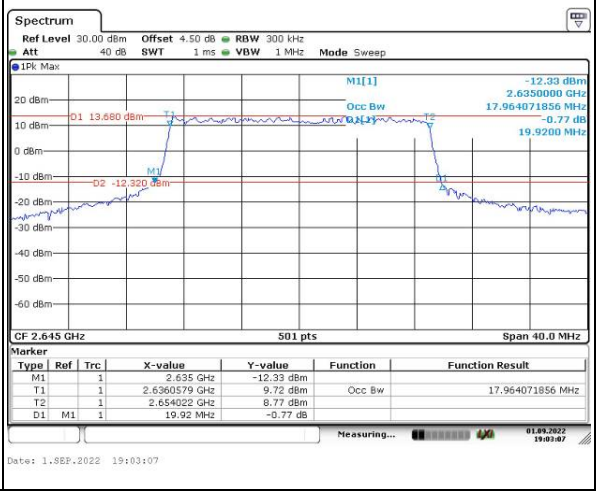
Test Mode:	20M 16QAM	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (℃)	Voltage (V_{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.8	2556.016	2555.00	2654.040	2655
	-20	3.8	2556.083	2555.00	2654.076	2655
	-10	3.8	2556.053	2555.00	2654.073	2655
	0	3.8	2556.065	2555.00	2654.083	2655
	10	3.8	2556.080	2555.00	2654.019	2655
	20	3.8	2556.058	2555.00	2654.022	2655
	30	3.8	2556.022	2555.00	2654.070	2655
	40	3.8	2556.007	2555.00	2654.038	2655
	50	3.8	2556.024	2555.00	2654.000	2655
Frequency Stability vs. Voltage	20	3.5	2556.051	2555.00	2654.034	2655
	20	4.35	2556.001	2555.00	2654.041	2655
					Result:	**Pass**

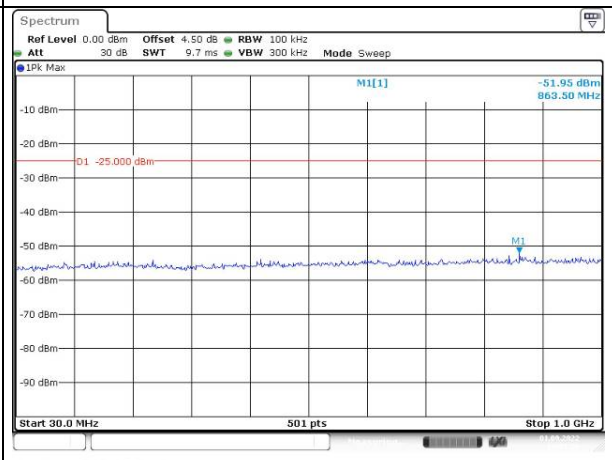
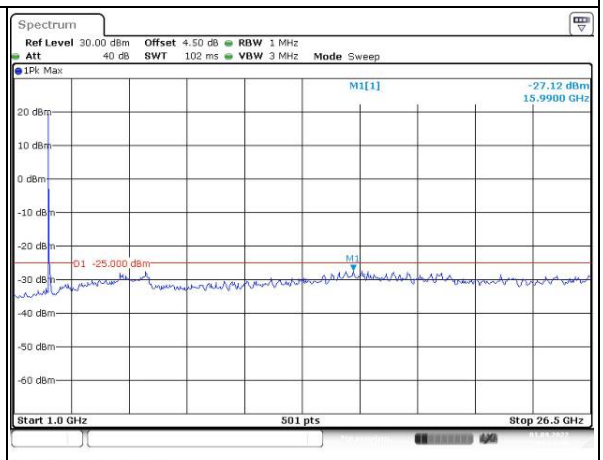
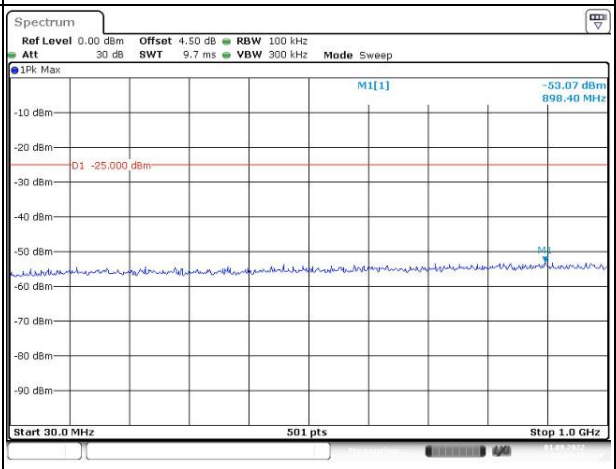
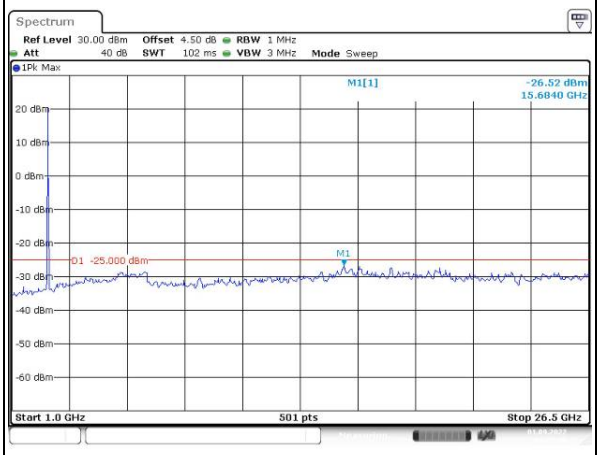
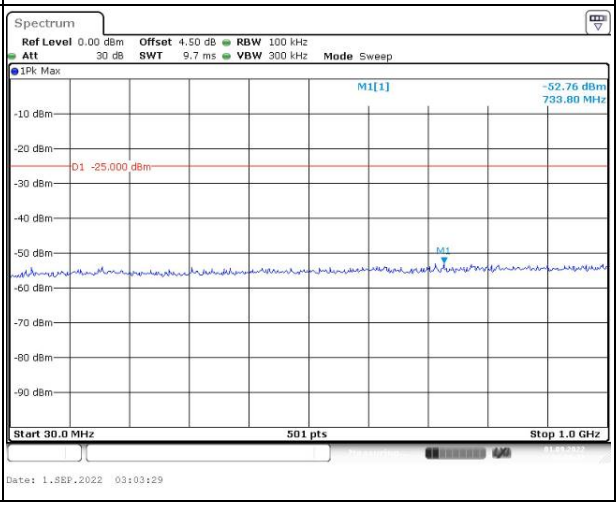
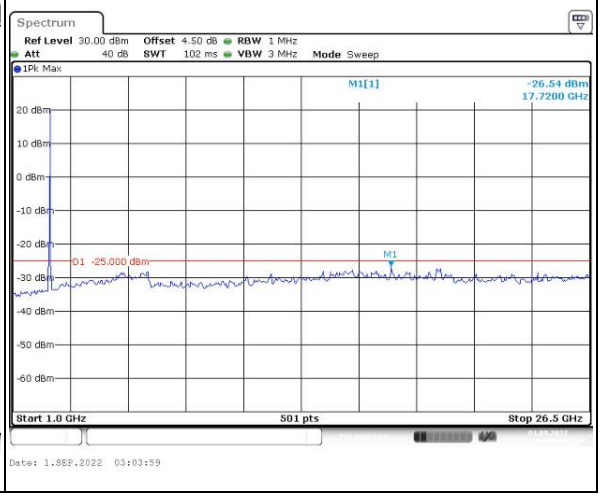
Test Plots:

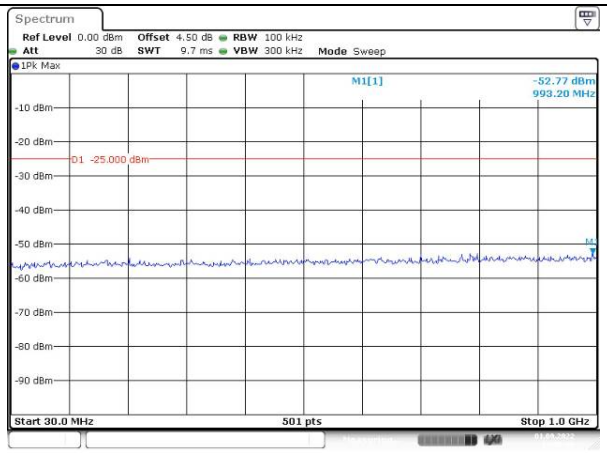
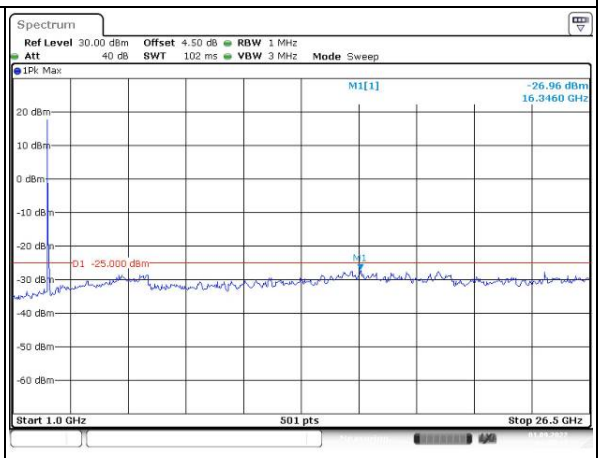
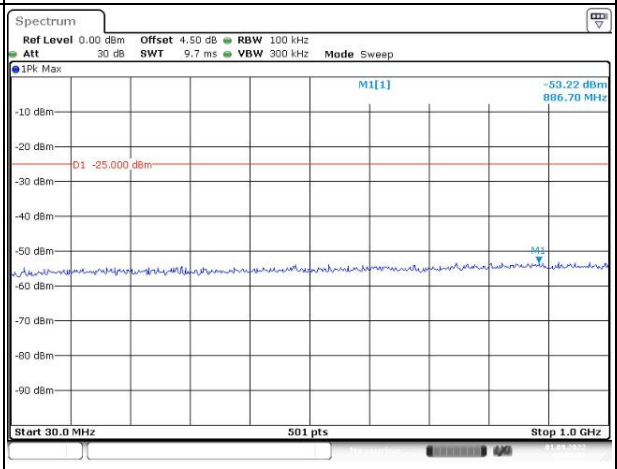
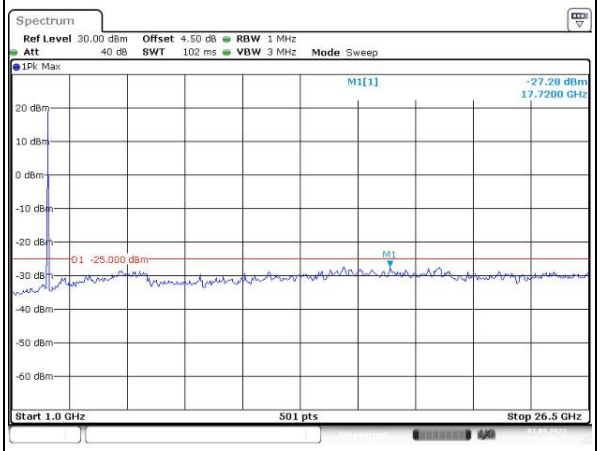
Occupied Bandwidth		
Channel	5MHz Bandwidth QPSK	5MHz Bandwidth 16QAM
Lowest		
Middle		
Highest		

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