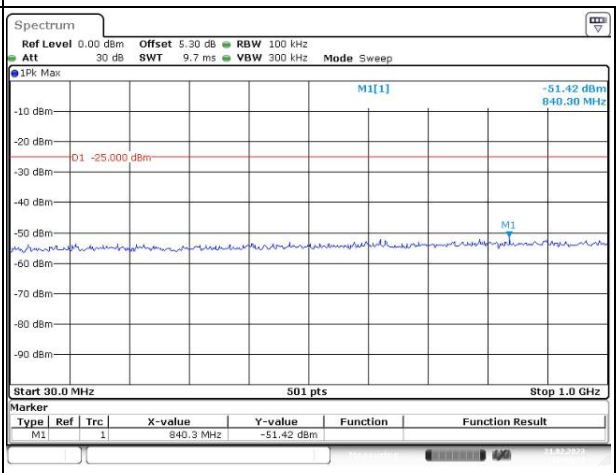
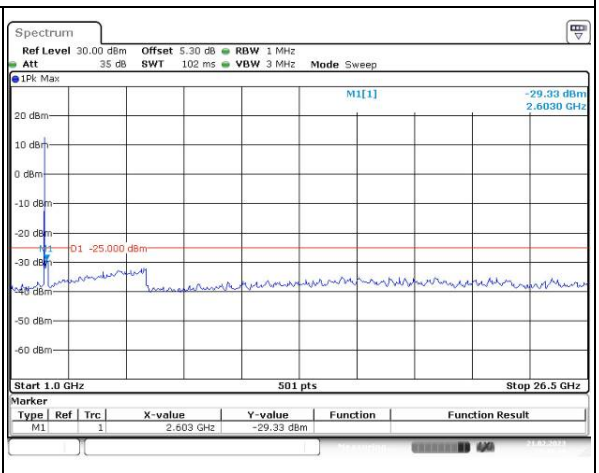
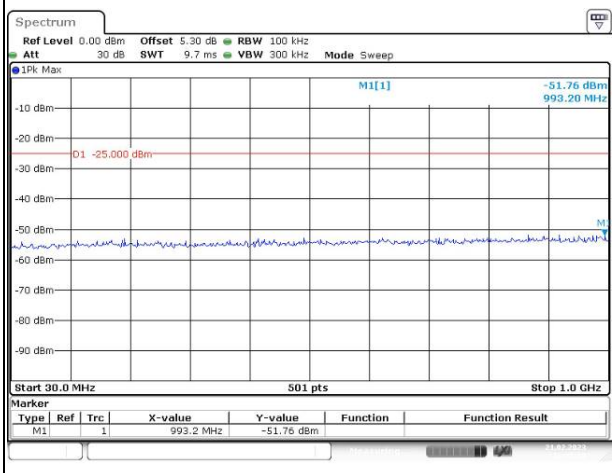
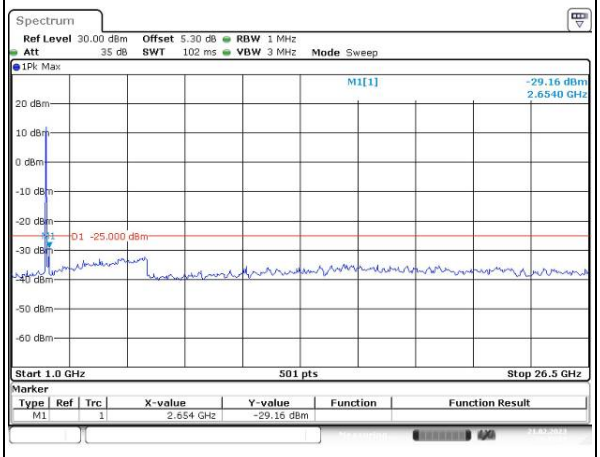
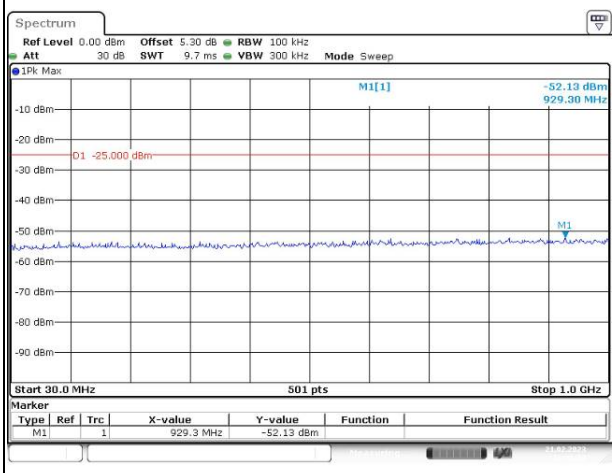
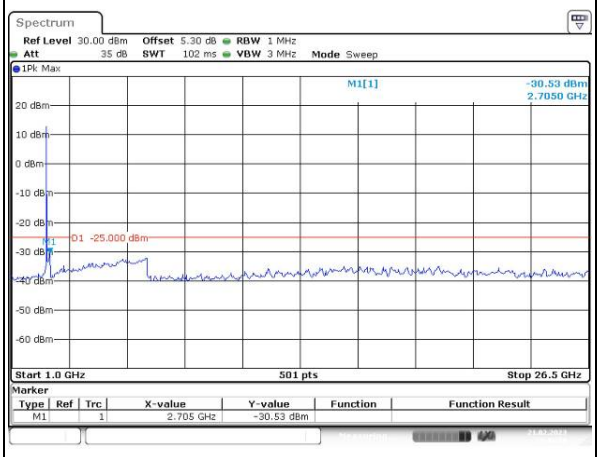
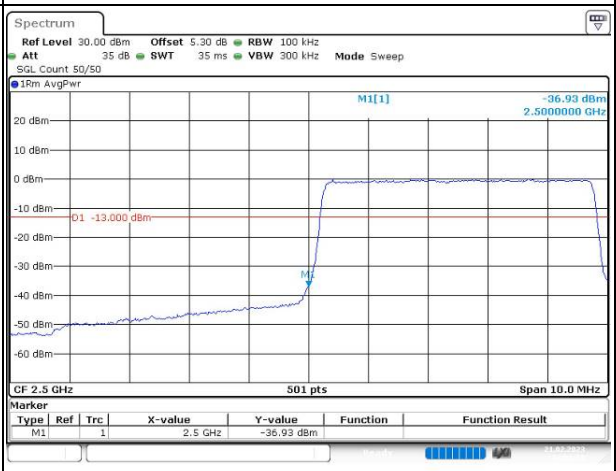
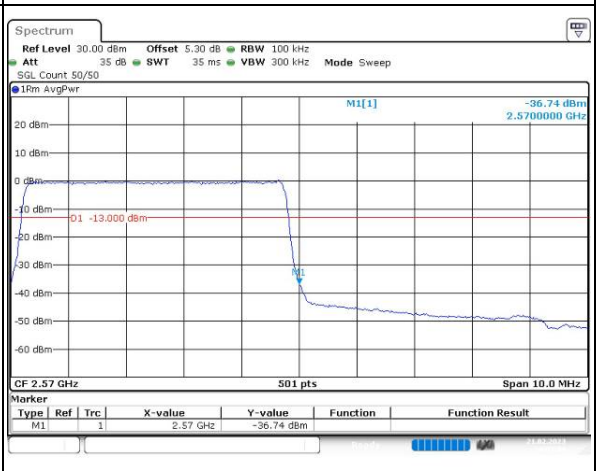
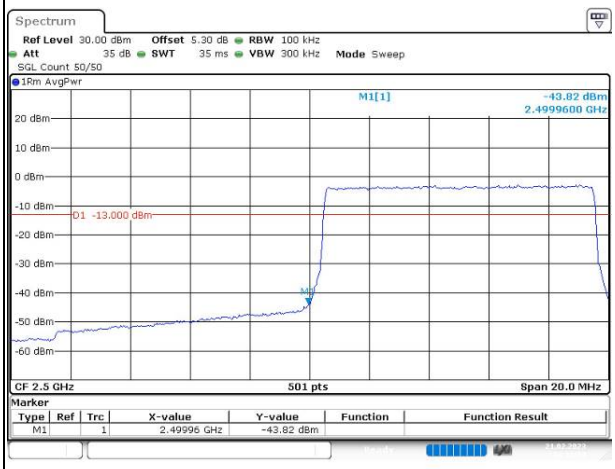
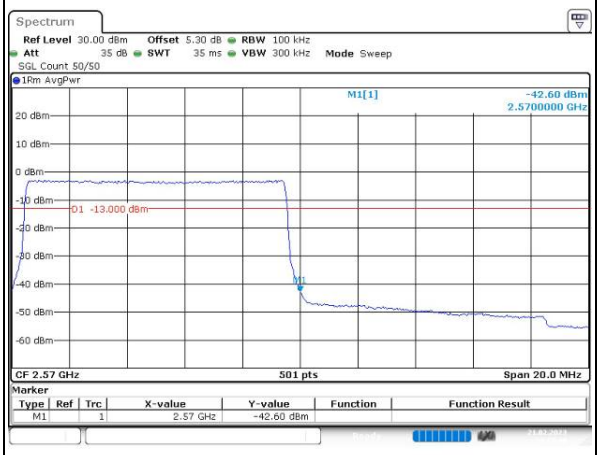
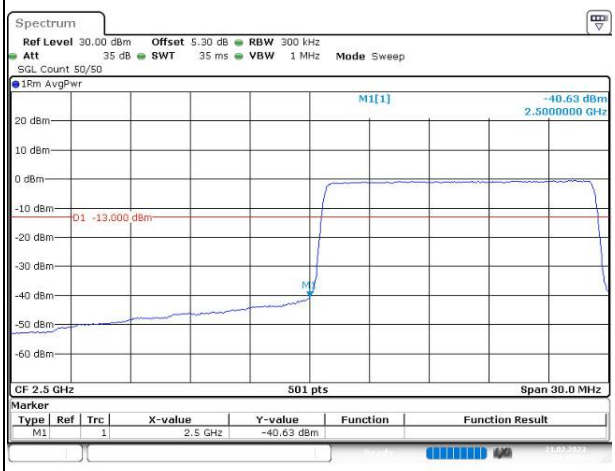
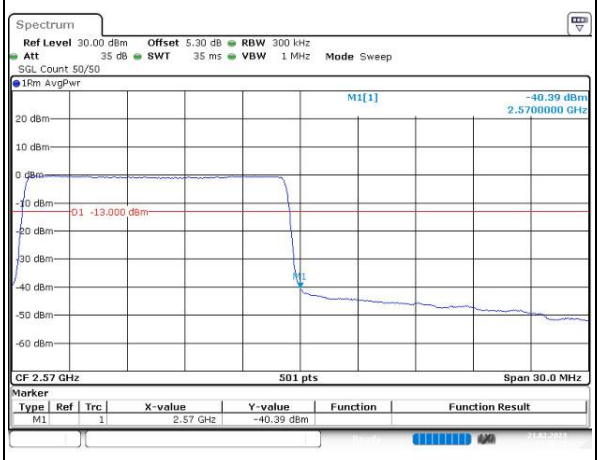
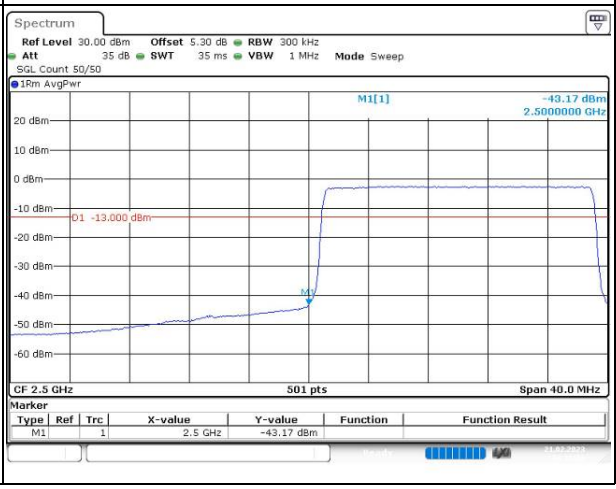
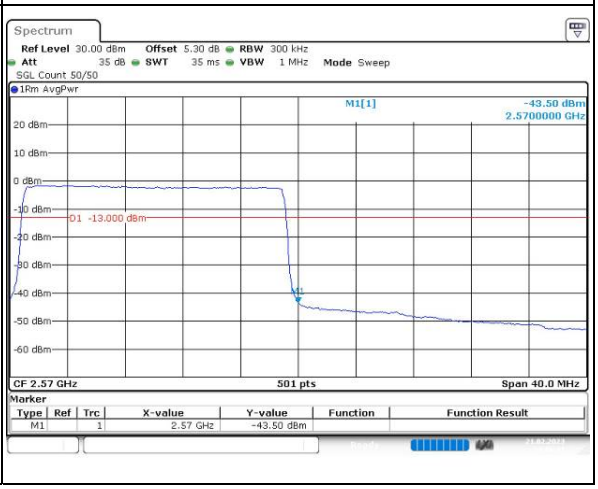
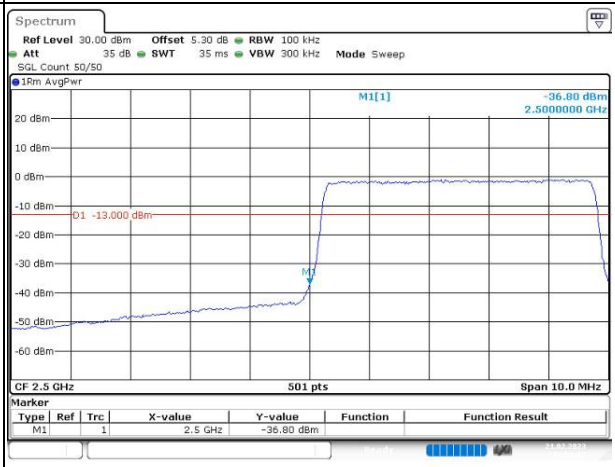
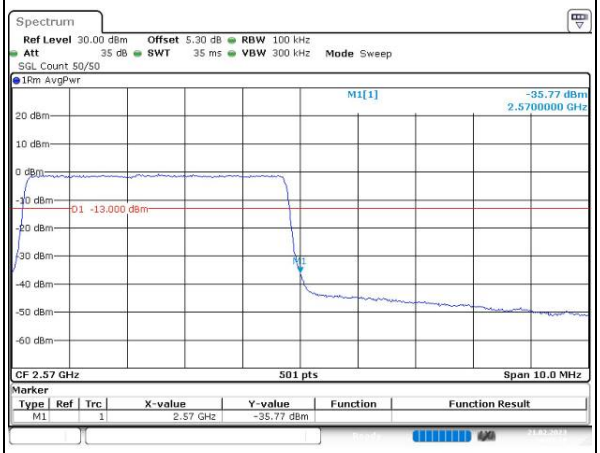
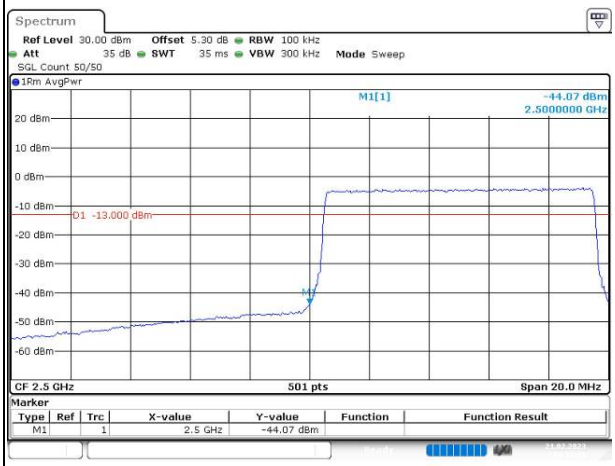
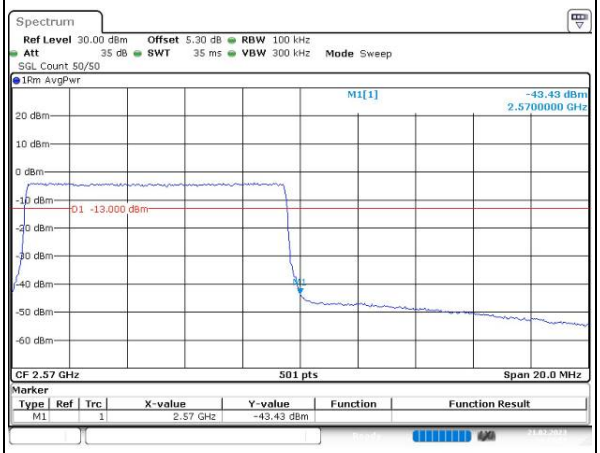
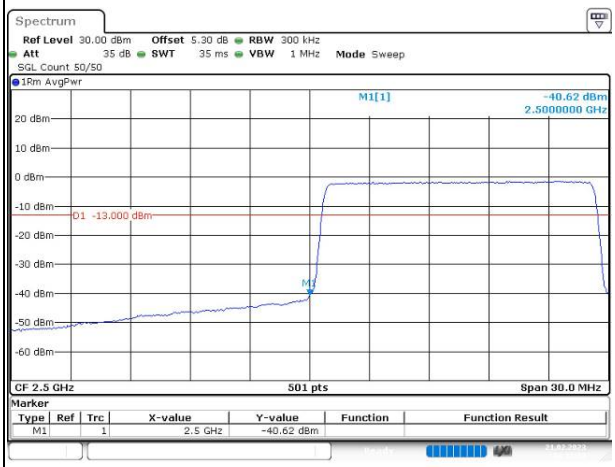
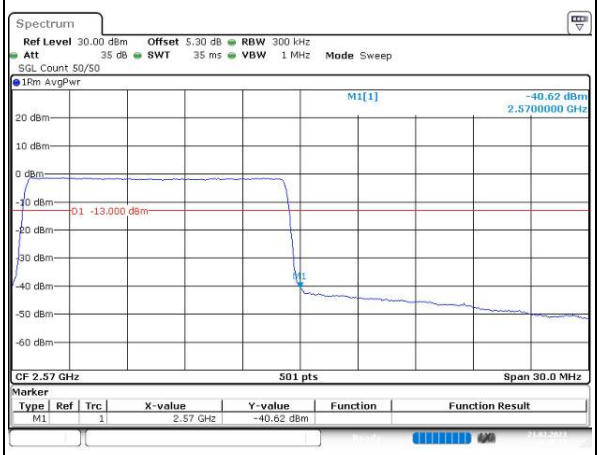
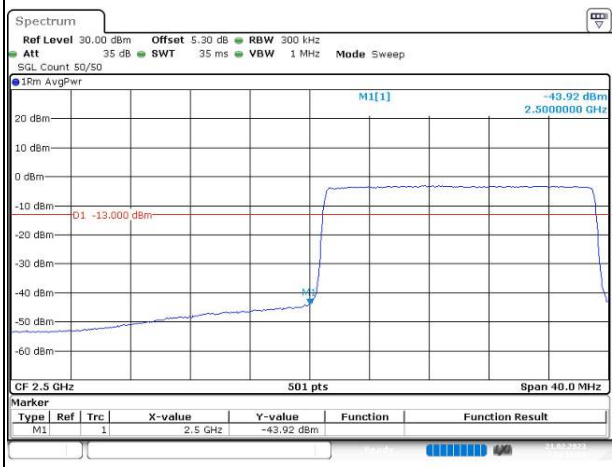
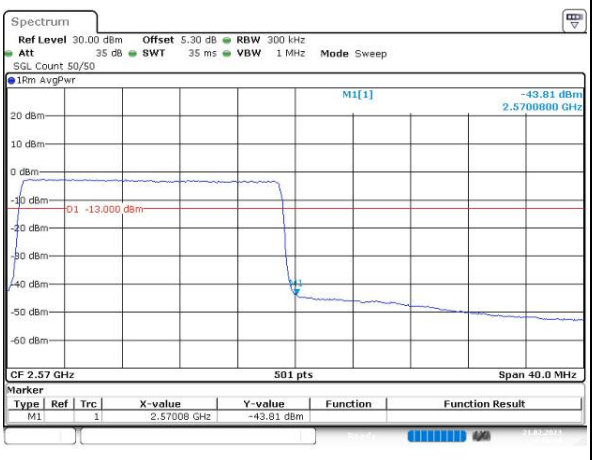
Spurious Emissions at Antenna Terminal		
Channel	**20MHz Bandwidth QPSK**	
Lowest		
Middle		
Highest		

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 38

Serial Number:	1WPX	Test Date:	2023/02/21~2023/02/23
Test Site:	RF	Test Mode:	Transmitting
Tester:	George	Test Result:	**Pass**

Environmental Conditions:					
Temperature: (℃)	22.8~24.6	Relative Humidity: (%)	37~49	ATM Pressure: (kPa)	100.8~101.6

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
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	2022/7/15	2023/7/14
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)
5MHz	2572.5	2595	2617.5
10MHz	2575	2595	2615
15MHz	2577.5	2595	2612.5
20MHz	2580	2595	2610

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	20.72	20.72	20.79	20.41	33
	RB1#13	20.85	20.84	20.91		
	RB1#24	20.73	20.7	20.73		
	RB15#0	19.77	19.77	19.81		
	RB15#10	19.77	19.73	19.82		
	RB25#0	19.79	19.75	19.82		
5MHz 16QAM	RB1#0	19.79	19.94	19.72	19.54	33
	RB1#13	19.93	20.04	19.9		
	RB1#24	19.77	19.94	19.71		
	RB15#0	18.85	18.86	18.82		
	RB15#10	18.87	18.83	18.78		
	RB25#0	18.86	18.75	18.89		
10MHz QPSK	RB1#0	20.83	20.78	20.77	20.69	33
	RB1#25	21.15	21.08	21.19		
	RB1#49	20.83	20.78	20.79		
	RB25#0	19.84	19.85	19.8		
	RB25#25	19.8	19.73	19.88		
	RB50#0	19.81	19.77	19.83		
10MHz 16QAM	RB1#0	19.9	19.99	19.68	19.79	33
	RB1#25	20.21	20.29	20.07		
	RB1#49	19.89	19.97	19.73		
	RB25#0	18.89	18.86	18.93		
	RB25#25	18.9	18.79	18.94		
	RB50#0	18.89	18.81	18.89		
15MHz QPSK	RB1#0	20.72	20.74	20.67	20.35	33
	RB1#38	20.84	20.85	20.84		
	RB1#74	20.73	20.71	20.73		
	RB36#0	19.84	19.82	19.75		
	RB36#39	19.79	19.75	19.84		
	RB75#0	19.83	19.78	19.81		
15MHz 16QAM	RB1#0	19.94	19.67	19.89	19.57	33
	RB1#38	20.03	19.75	20.07		
	RB1#74	19.93	19.65	19.98		
	RB36#0	18.84	18.79	18.82		
	RB36#39	18.81	18.72	18.92		
	RB75#0	18.81	18.82	18.82		
20MHz QPSK	RB1#0	20.55	20.52	20.6	20.62	33
	RB1#50	21.06	21.01	21.12		
	RB1#99	20.57	20.5	20.68		

	RB50#0	19.78	19.82	19.72		
	RB50#50	19.72	19.69	19.78		
	RB100#0	19.76	19.78	19.79		
20MHz 16QAM	RB1#0	19.62	19.5	19.81	19.82	33
	RB1#50	20.16	20.02	20.32		
	RB1#99	19.62	19.47	19.94		
	RB50#0	18.83	18.9	18.79		
	RB50#50	18.76	18.78	18.85		
	RB100#0	18.79	18.81	18.9		
Note: EIRP=Conducted Power(dBm) - L_C(dB) + G_T(dBi)						
					Result:	**Pass**

Peak-to-average Ratio(PAR)

Test Bandwidth & Modulation	Resource Block & RB offset	Peak-to-average Ratio(dB)			Limit (dB)
		Lowest Channel	Middle Channel	Highest Channel	
20MHz QPSK	RB1#0	9.28	9.62	9.91	13
	RB100#0	8.49	8.58	7.88	13
20MHz 16QAM	RB1#0	10.06	10.35	10.41	13
	RB100#0	9.65	10	10.06	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	4.491	4.511	4.511	4.98	4.96	4.88
5MHz 16QAM	4.511	4.511	4.511	4.94	5.04	4.96
10MHz QPSK	8.942	8.942	8.942	9.68	9.64	9.68
10MHz 16QAM	8.942	8.942	8.942	9.56	9.72	9.52
15MHz QPSK	13.473	13.533	13.533	15.48	15.6	15.36
15MHz 16QAM	13.533	13.533	13.533	15.84	16.86	15.66
20MHz QPSK	17.884	17.964	17.964	19.68	19.6	19.6
20MHz 16QAM	17.884	17.884	17.964	19.6	19.36	20.4
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.**

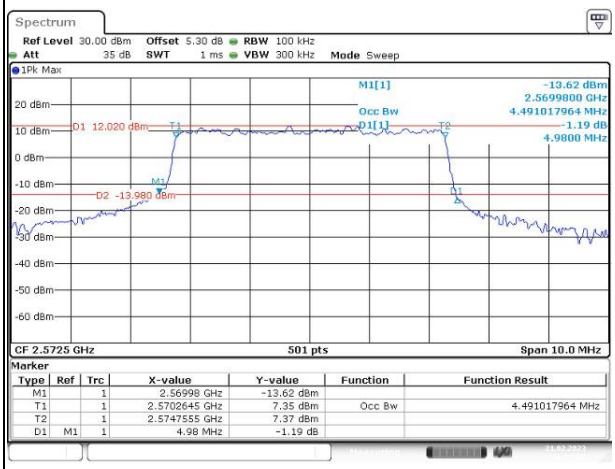
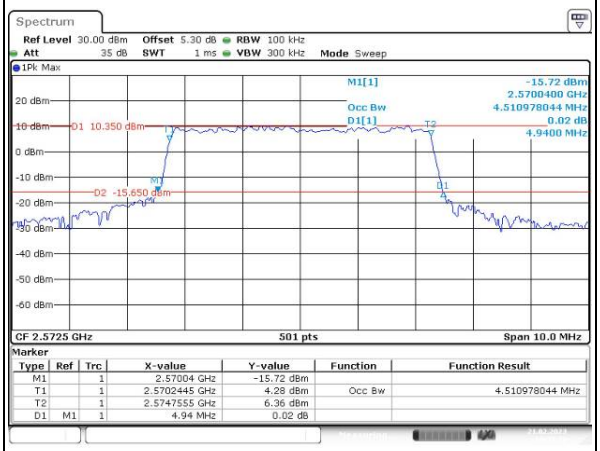
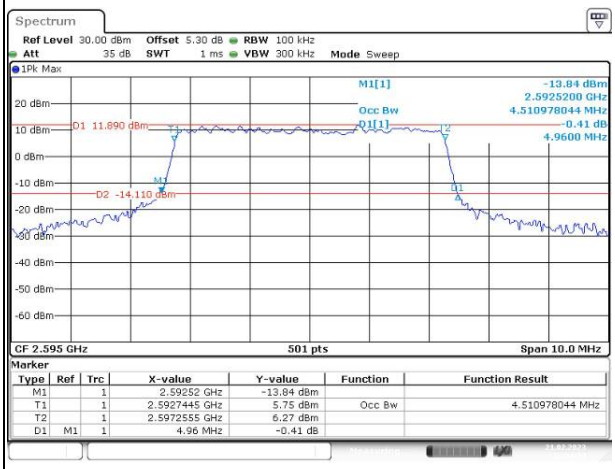
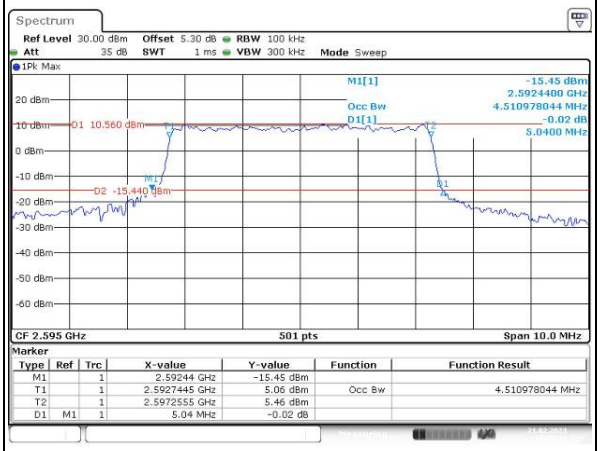
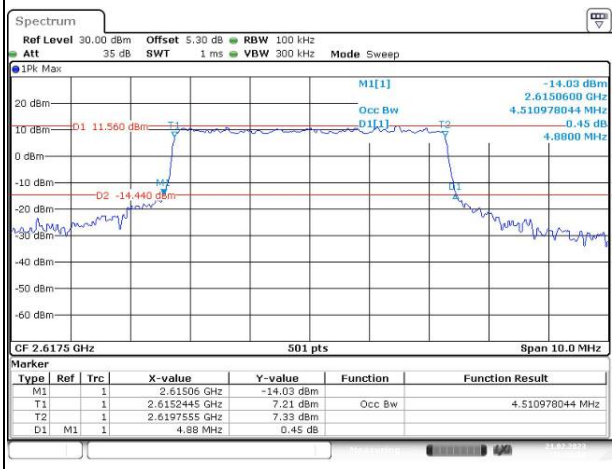
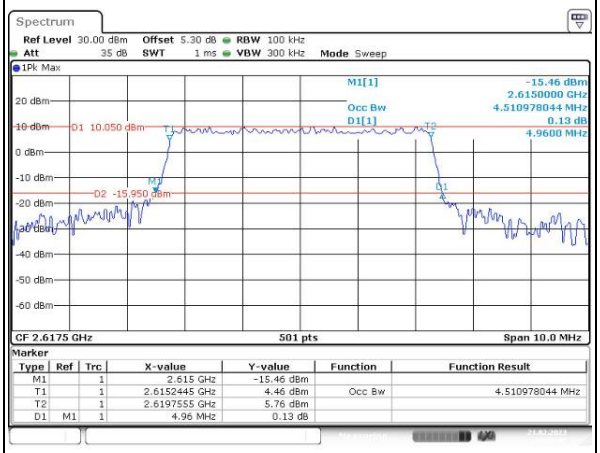
FCC §2.1051, § 27.53:Out of band emission, Band Edge	
Result:	**Pass, Please refer to the test plots of Out of band emission, Band Edge.**

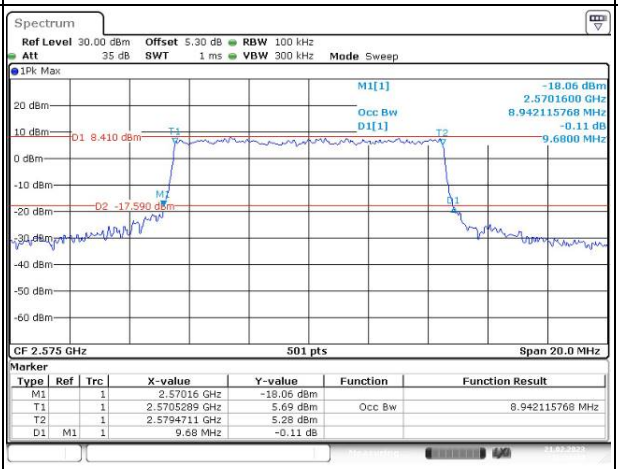
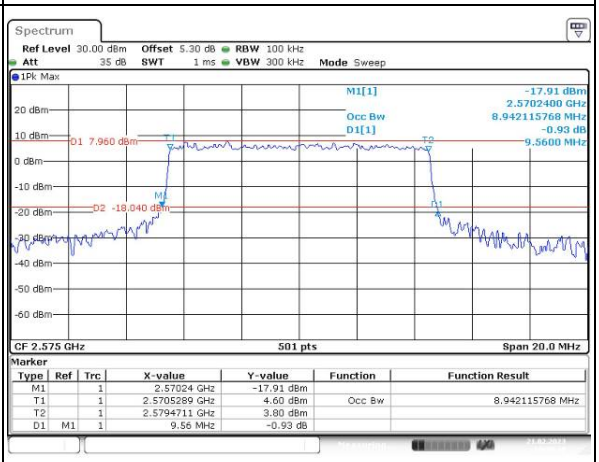
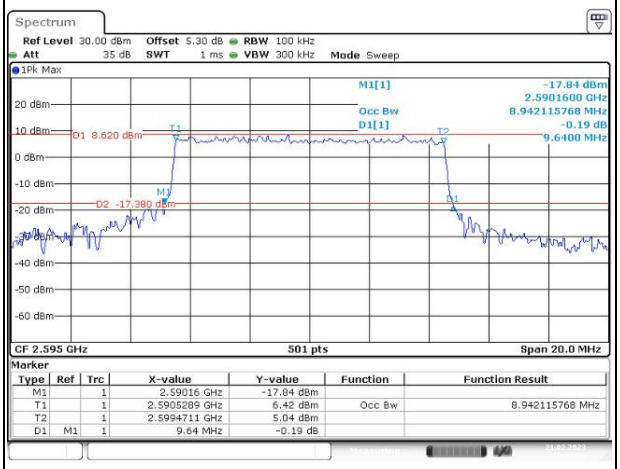
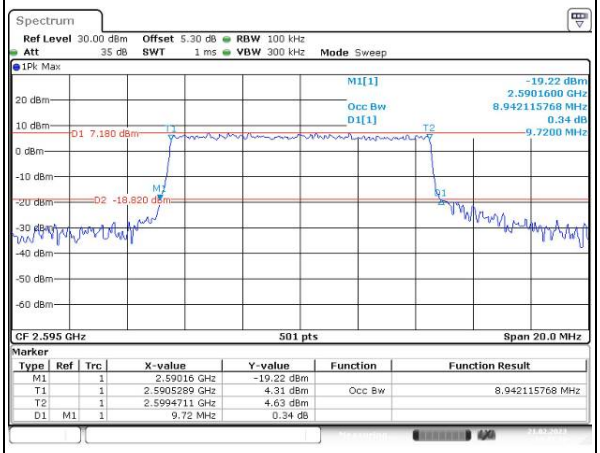
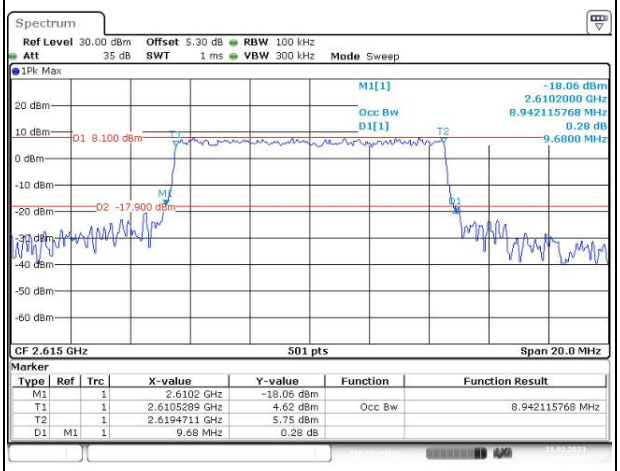
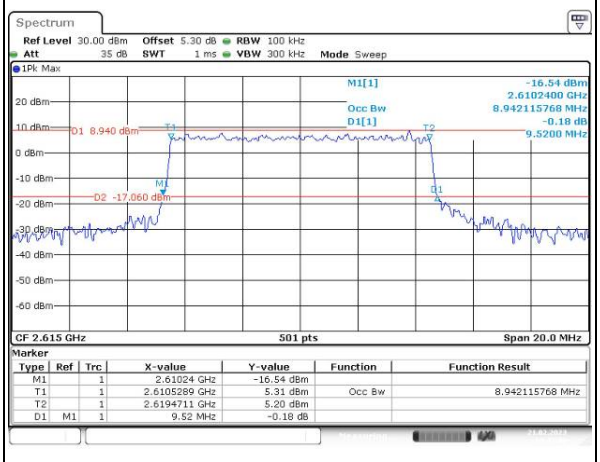
FCC §2.1055, §27.54: Frequency Stability

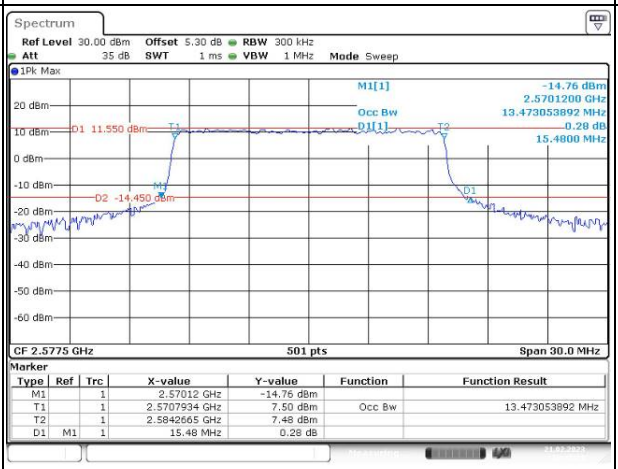
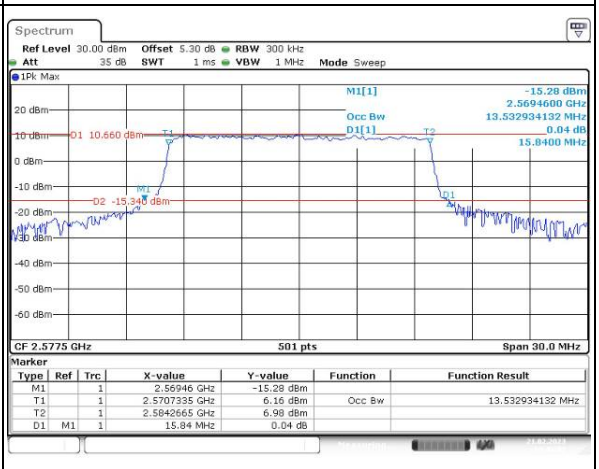
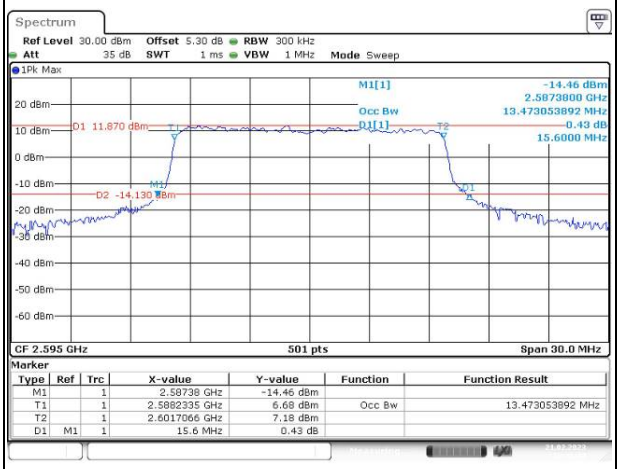
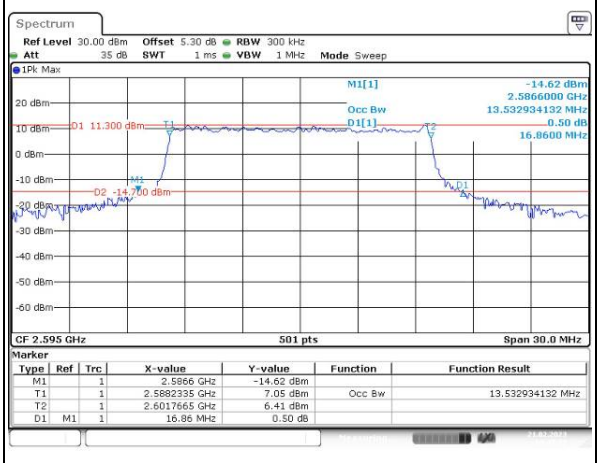
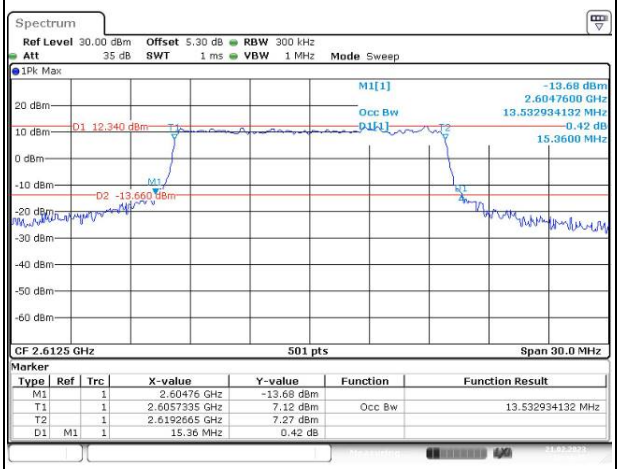
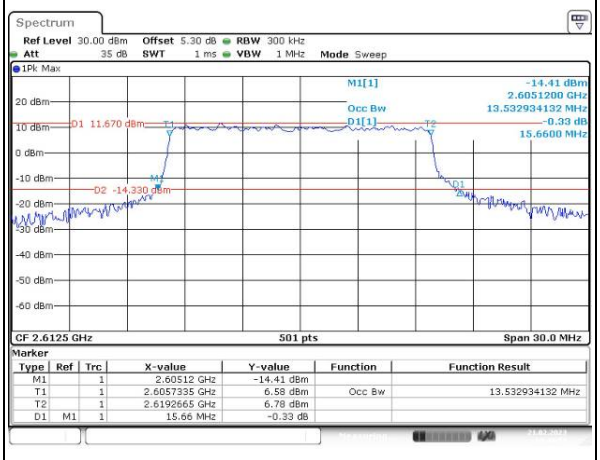
Test Mode:	20M QPSK	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (℃)	Voltage (V_{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.85	2570.3072	2570.00	2619.6022	2620
	-20	3.85	2570.3014	2570.00	2619.6069	2620
	-10	3.85	2570.3085	2570.00	2619.6014	2620
	0	3.85	2570.3077	2570.00	2619.6022	2620
	10	3.85	2570.3097	2570.00	2619.6057	2620
	20	3.85	2570.3058	2570.00	2619.6022	2620
	30	3.85	2570.3074	2570.00	2619.6025	2620
	40	3.85	2570.3003	2570.00	2619.6026	2620
	50	3.85	2570.3094	2570.00	2619.6037	2620
Frequency Stability vs. Voltage	20	3.45	2570.3055	2570.00	2619.6068	2620
	20	4.4	2570.3052	2570.00	2619.6004	2620
					Result:	**Pass**

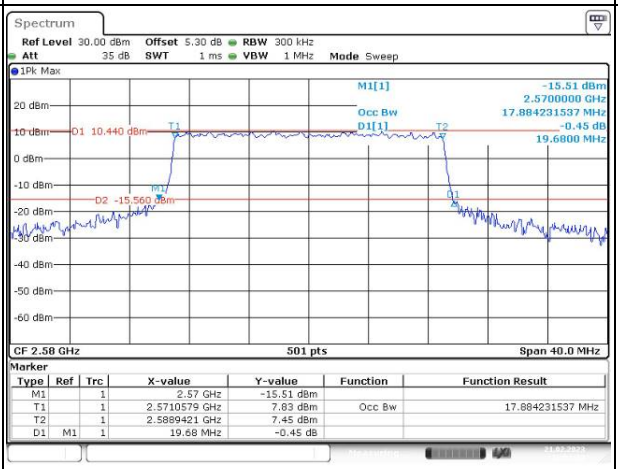
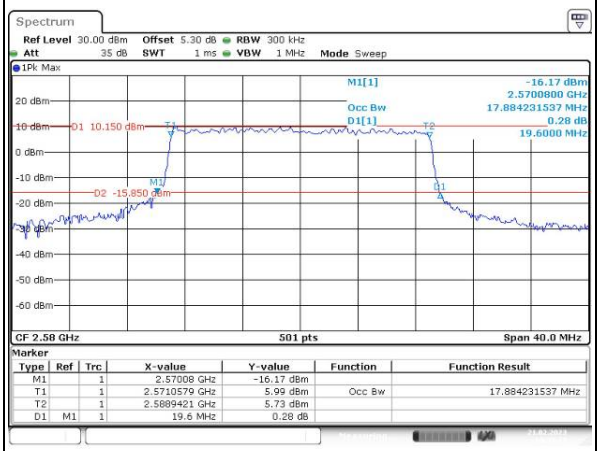
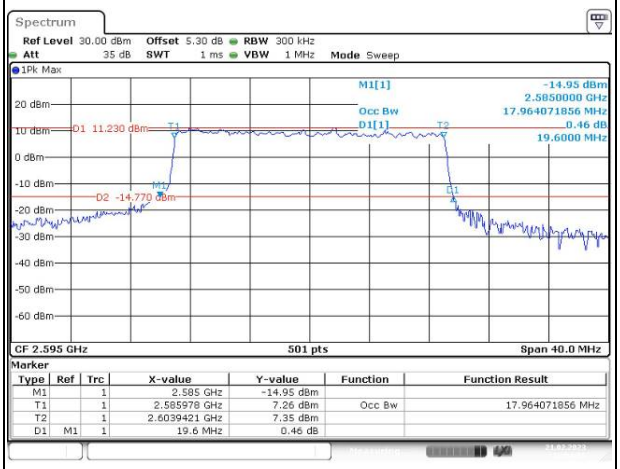
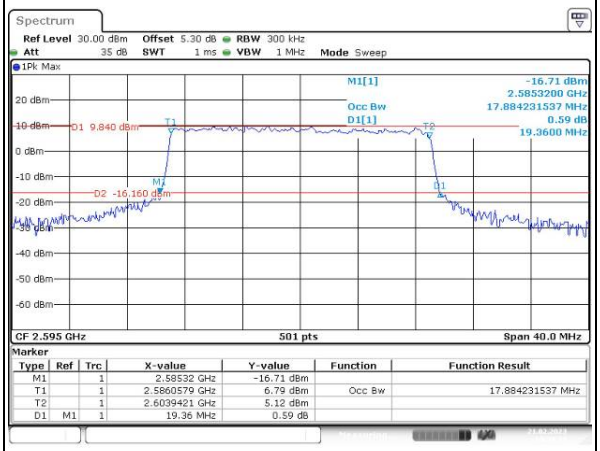
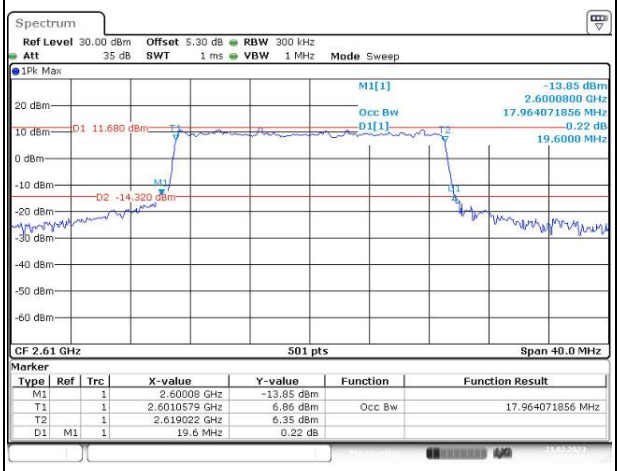
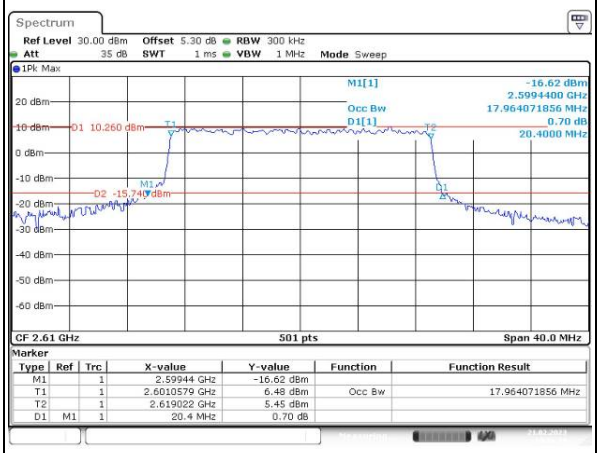
Test Mode:	20M 16QAM	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (℃)	Voltage (V_{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.85	2570.3012	2570.00	2619.6078	2620
	-20	3.85	2570.3049	2570.00	2619.6017	2620
	-10	3.85	2570.3026	2570.00	2619.6036	2620
	0	3.85	2570.3092	2570.00	2619.6050	2620
	10	3.85	2570.3053	2570.00	2619.6070	2620
	20	3.85	2570.3058	2570.00	2619.6022	2620
	30	3.85	2570.3097	2570.00	2619.6016	2620
	40	3.85	2570.3031	2570.00	2619.6035	2620
	50	3.85	2570.3085	2570.00	2619.6031	2620
Frequency Stability vs. Voltage	20	3.45	2570.3029	2570.00	2619.6039	2620
	20	4.4	2570.3072	2570.00	2619.6066	2620
					Result:	**Pass**

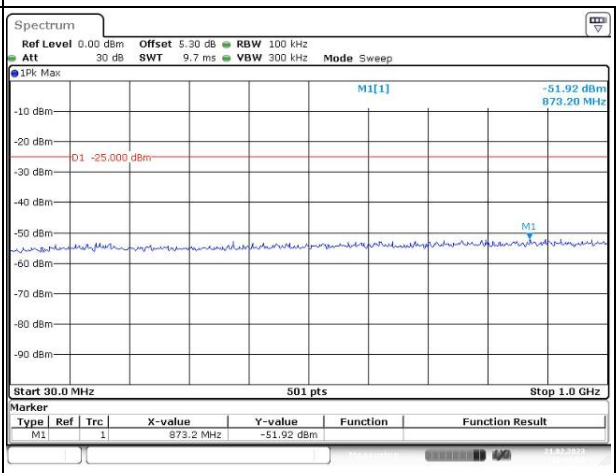
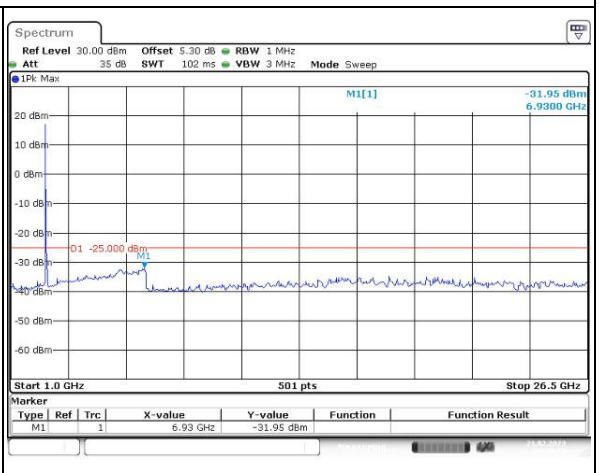
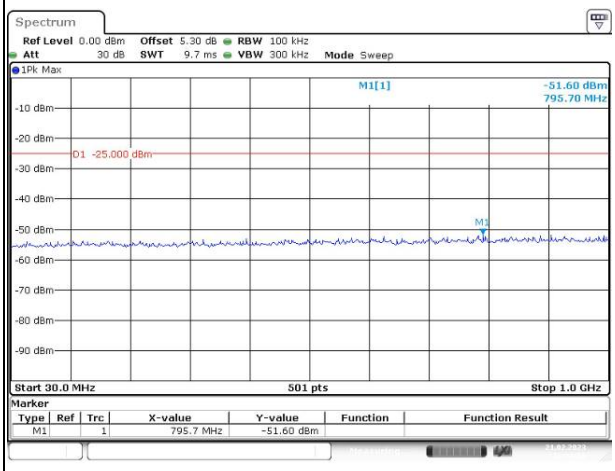
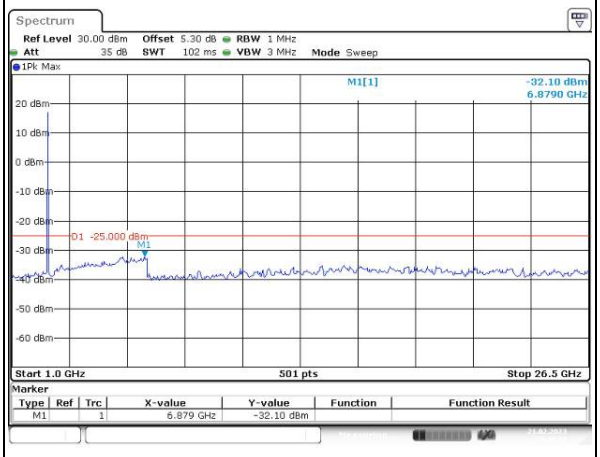
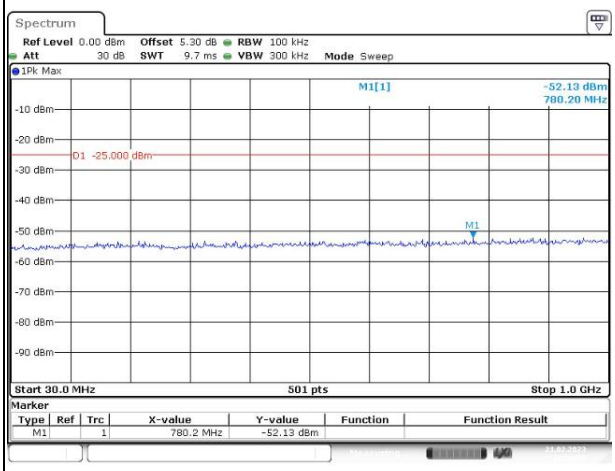
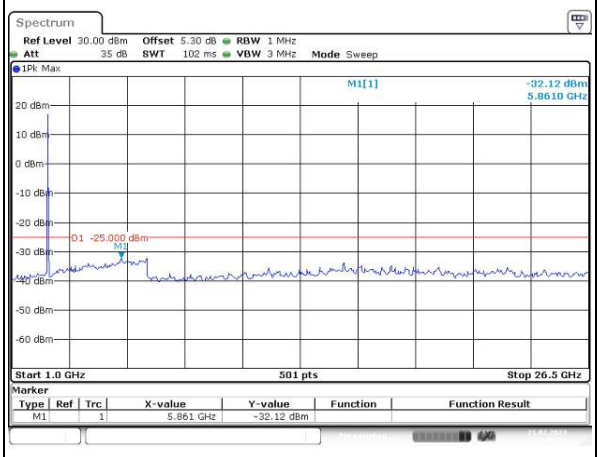
Test Plots(Note: The 5.3dB is the Insertion loss of the RF cable, Power Splitter and DC Block, which was offset into the Spectrum Analyzer)**:**

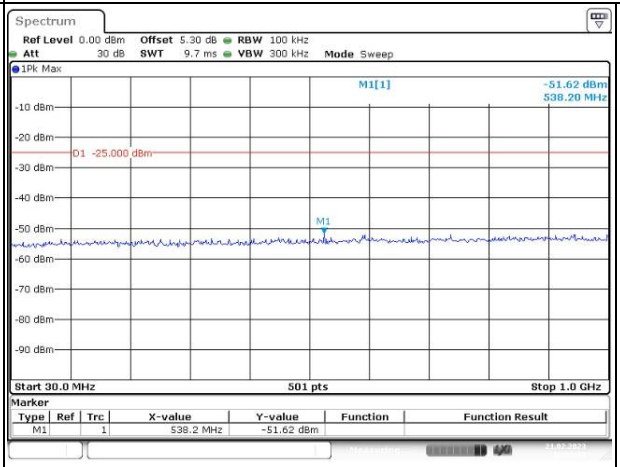
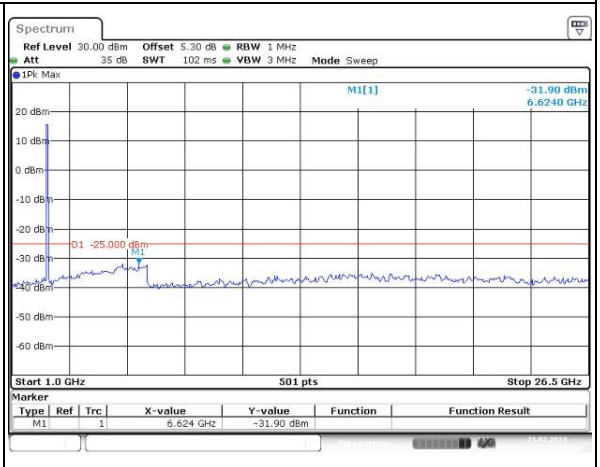
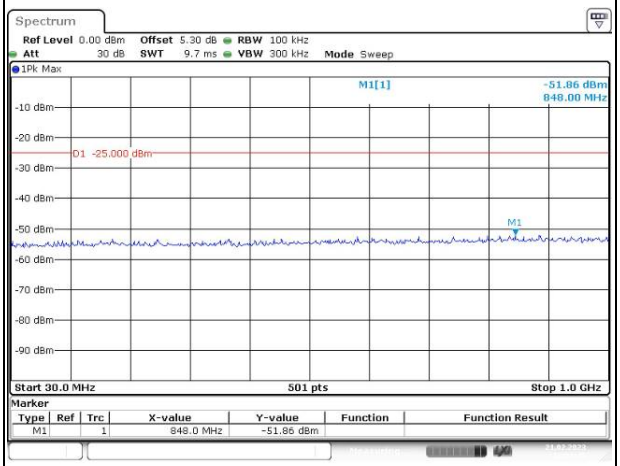
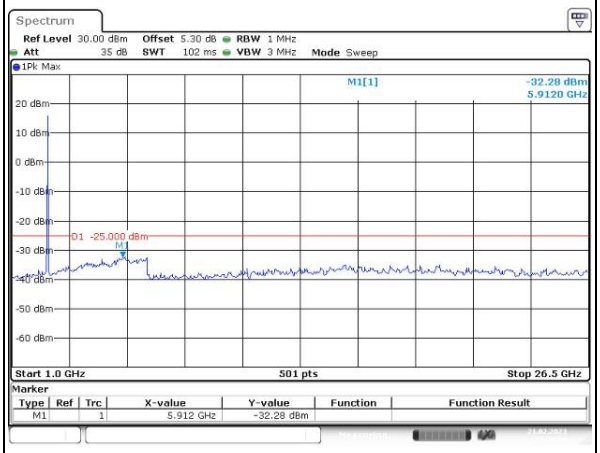
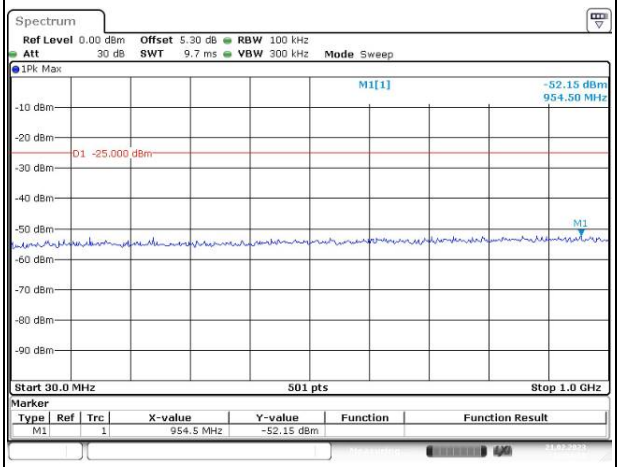
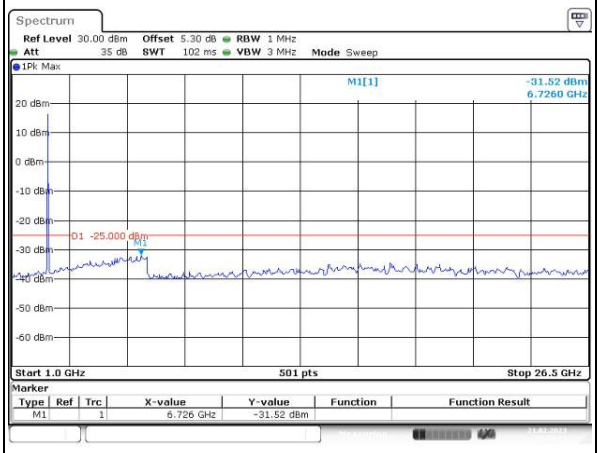
Occupied Bandwidth		
Channel	5MHz Bandwidth QPSK	5MHz Bandwidth 16QAM
Lowest		
Middle		
Highest		

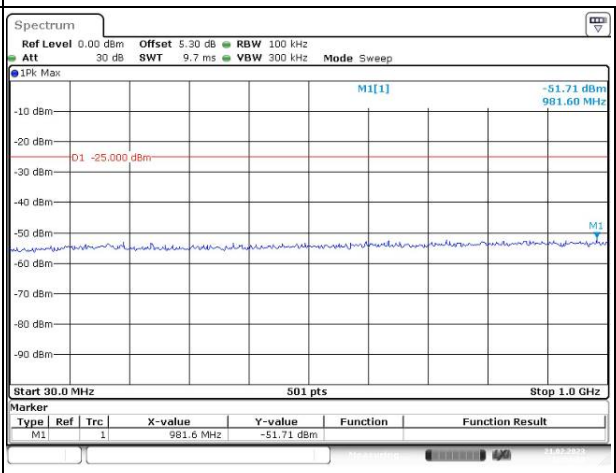
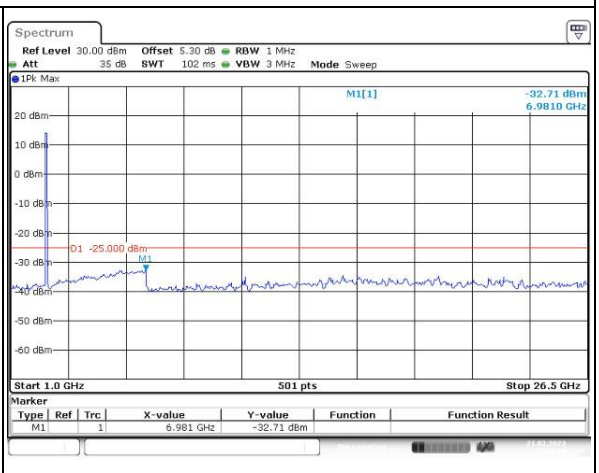
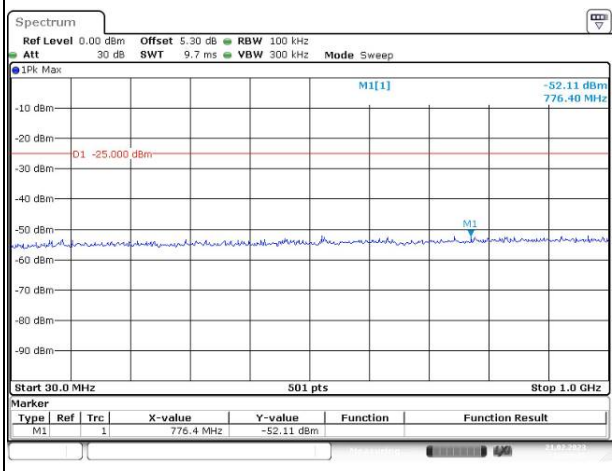
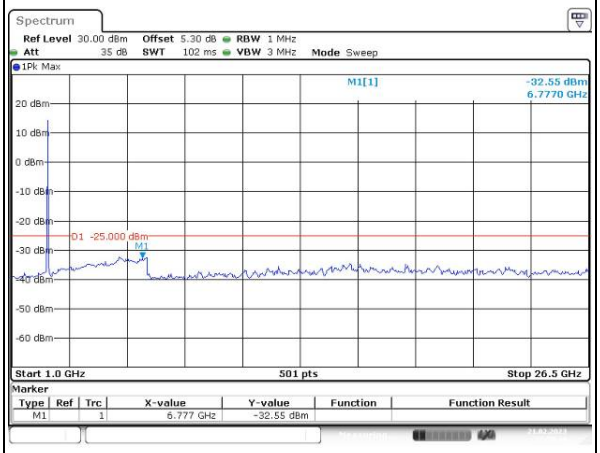
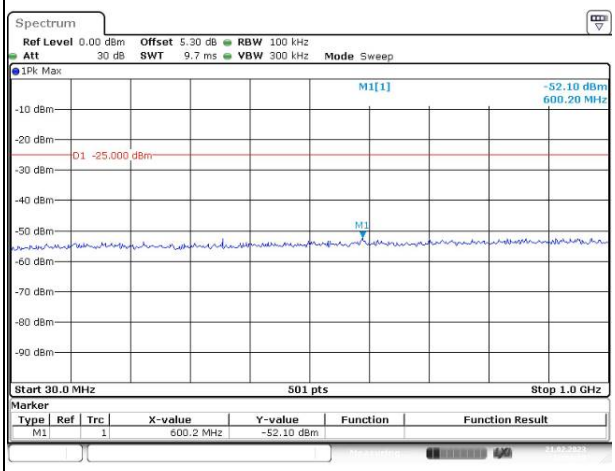
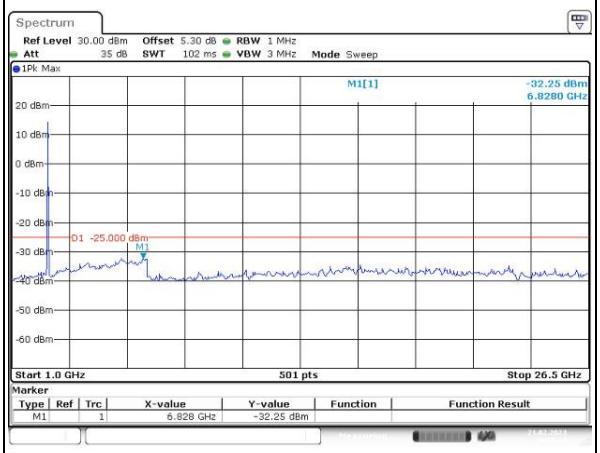
Occupied Bandwidth		
Channel	10MHz Bandwidth QPSK	10MHz Bandwidth 16QAM
Lowest		
Middle		
Highest		

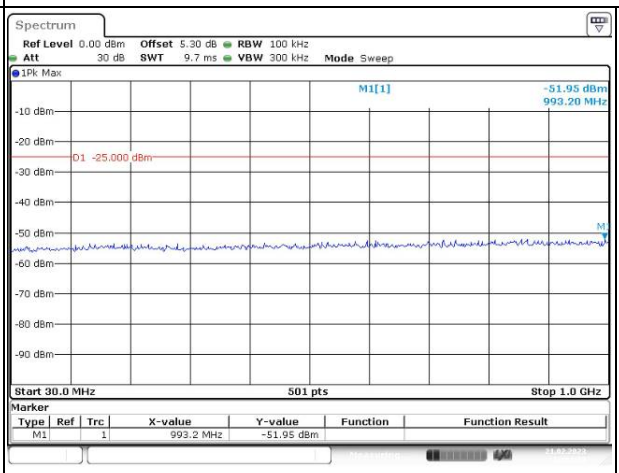
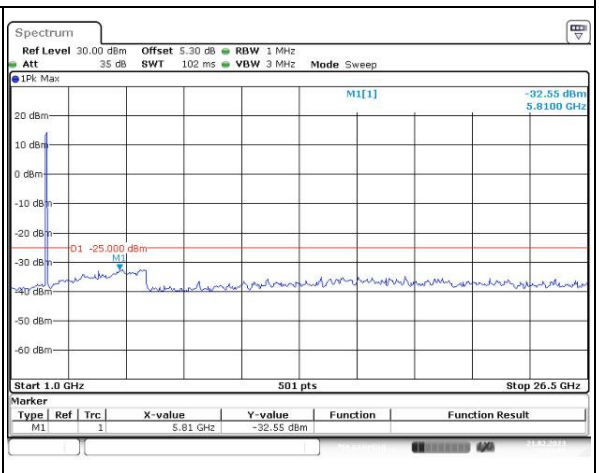
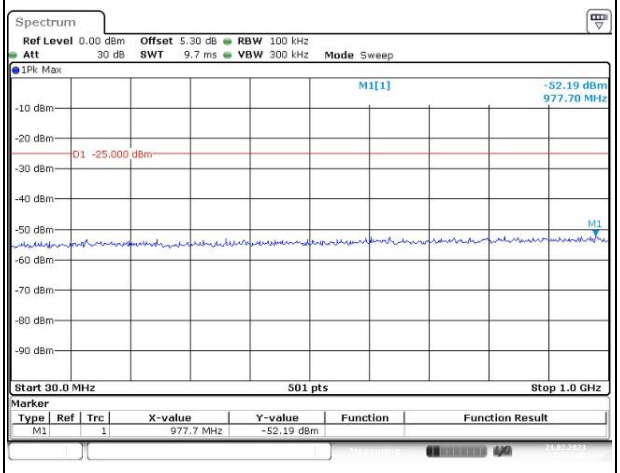
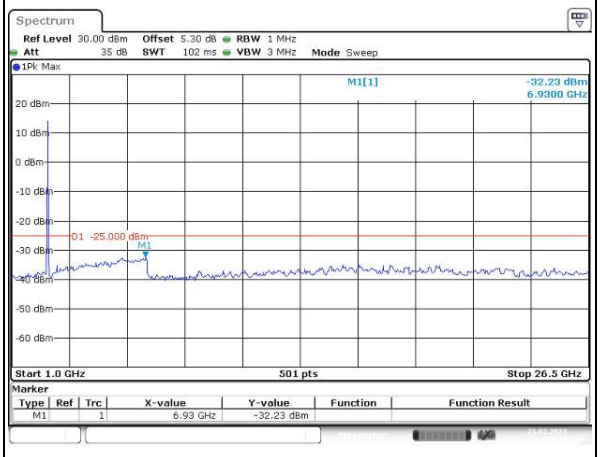
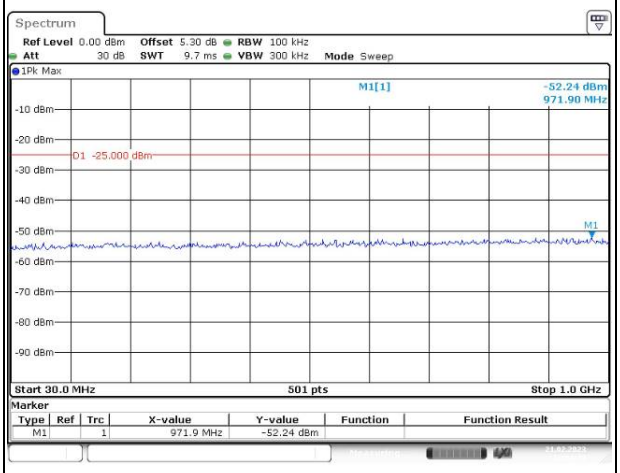
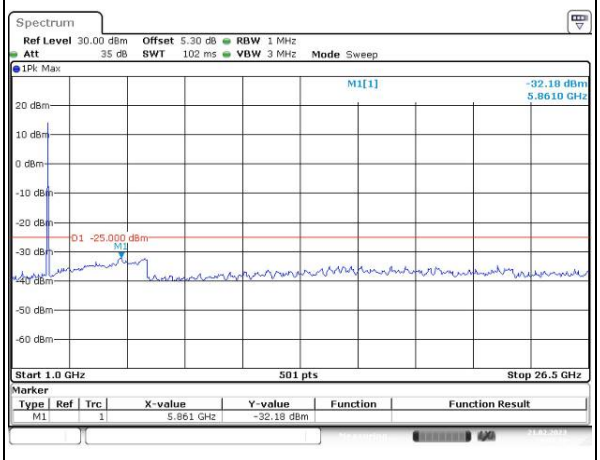
Occupied Bandwidth		
Channel	15MHz Bandwidth QPSK	15MHz Bandwidth 16QAM
Lowest		
Middle		
Highest		

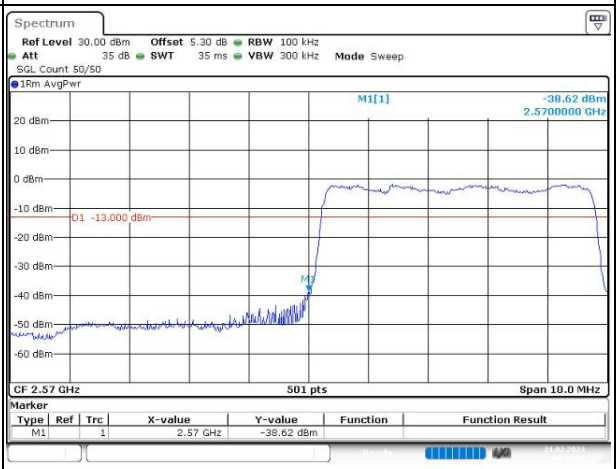
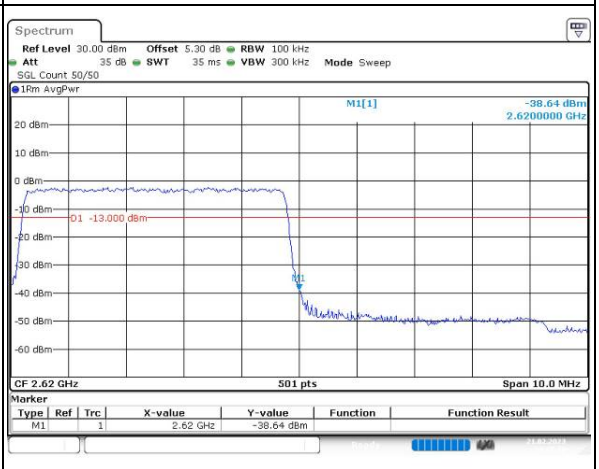
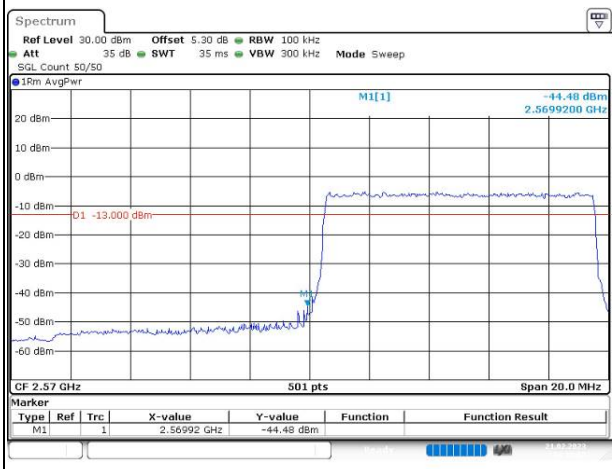
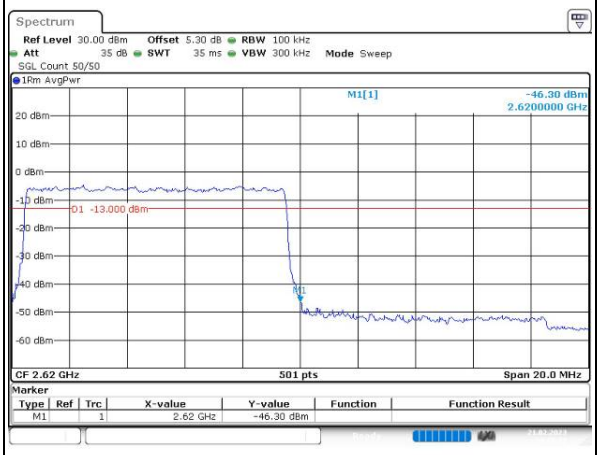
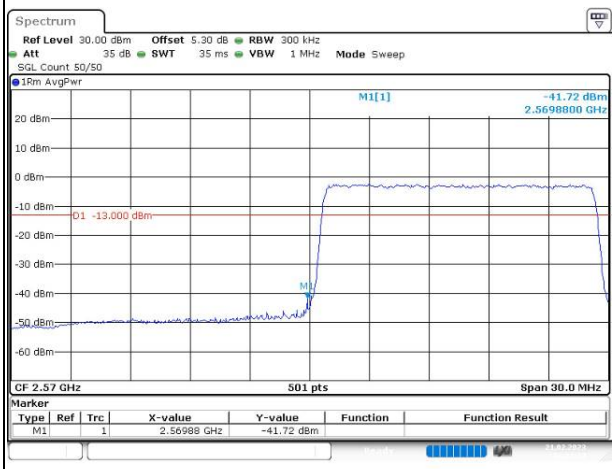
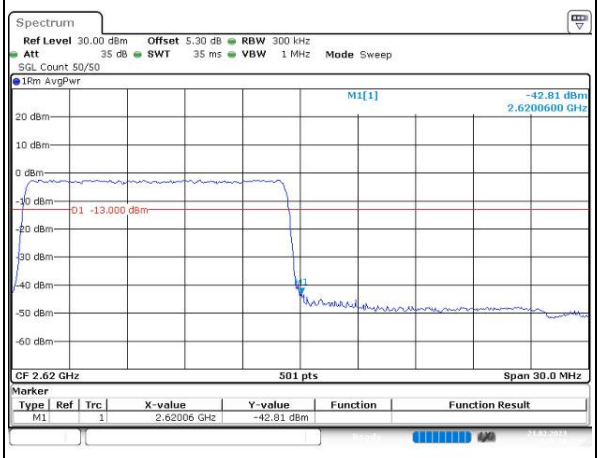
Occupied Bandwidth		
Channel	20MHz Bandwidth QPSK	20MHz Bandwidth 16QAM
Lowest		
Middle		
Highest		

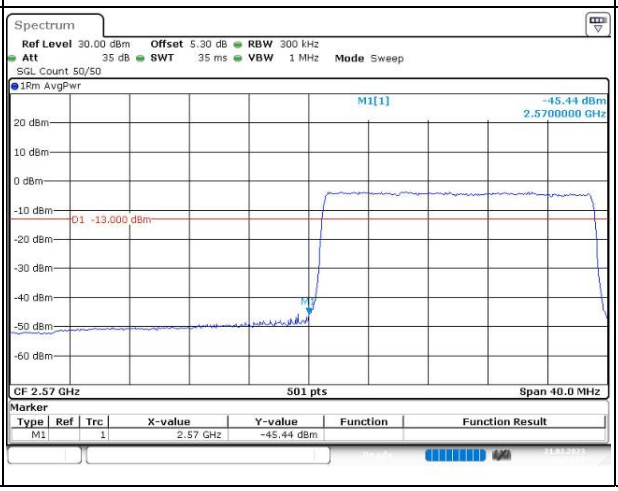
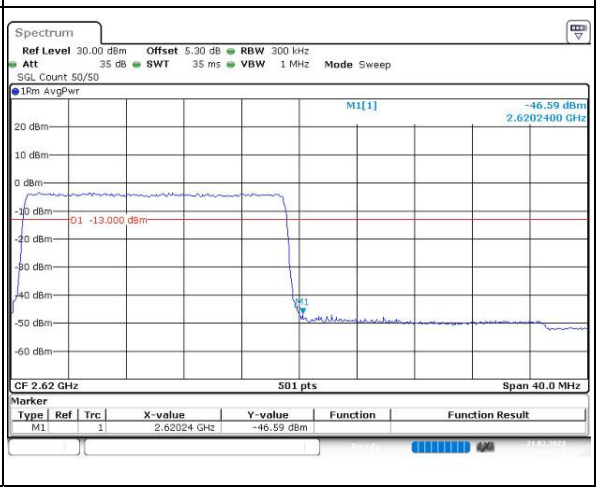
Spurious Emissions at Antenna Terminal		
Channel	**5MHz Bandwidth QPSK**	
Lowest		
Middle		
Highest		

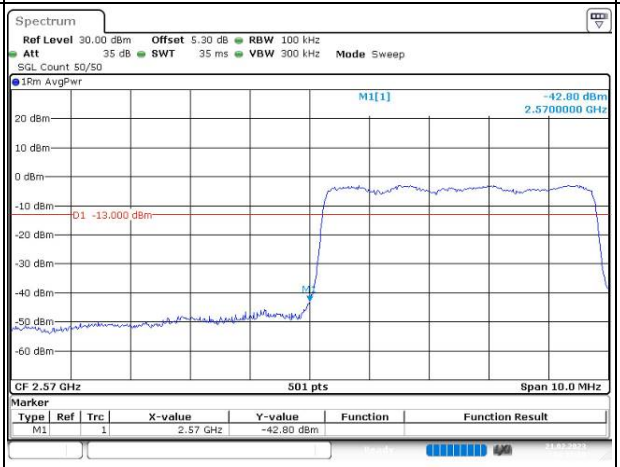
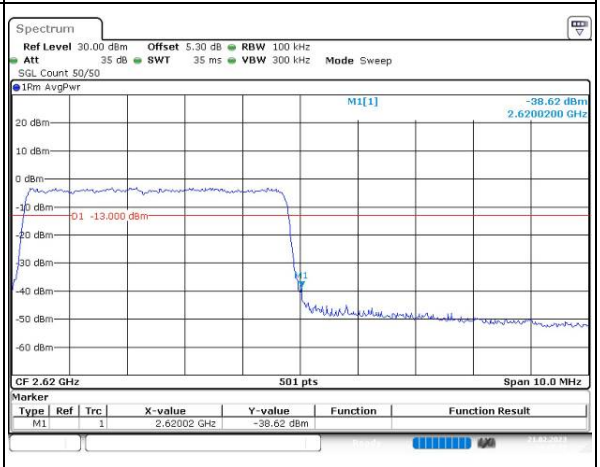
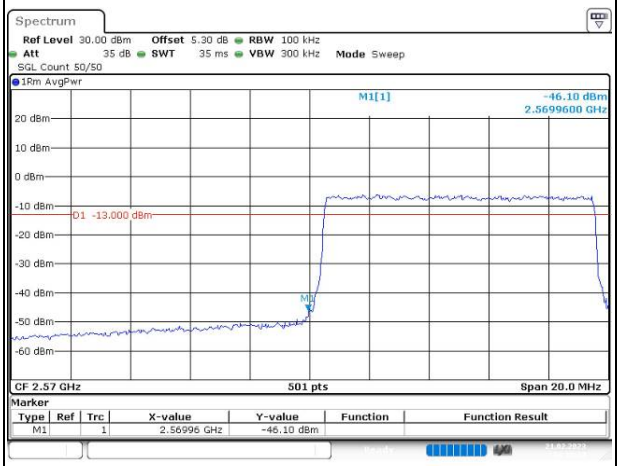
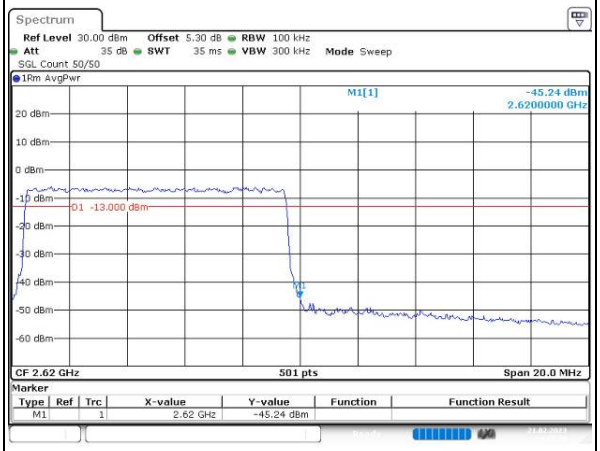
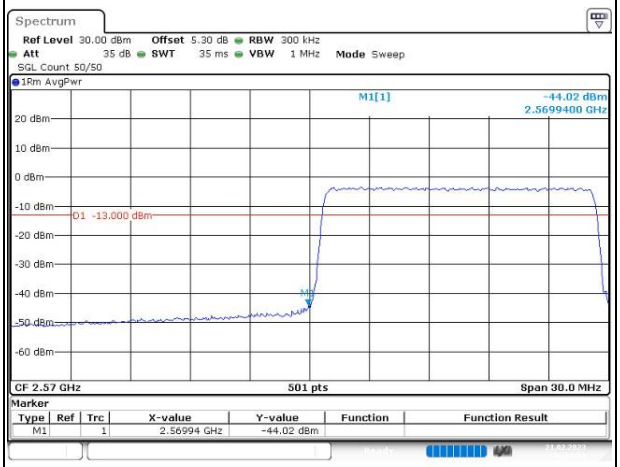
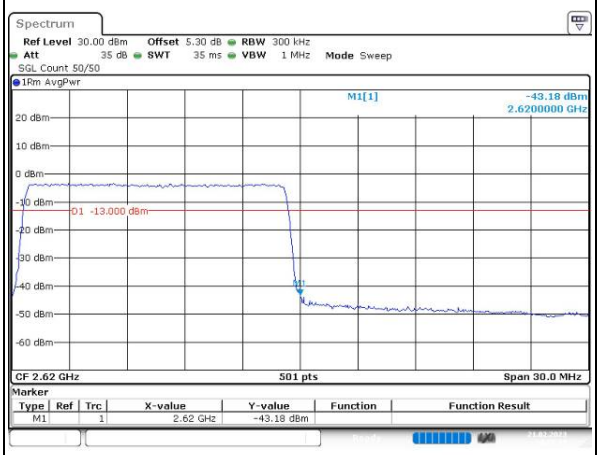
Spurious Emissions at Antenna Terminal		
Channel	**10MHz Bandwidth QPSK**	
Lowest		
Middle		
Highest		

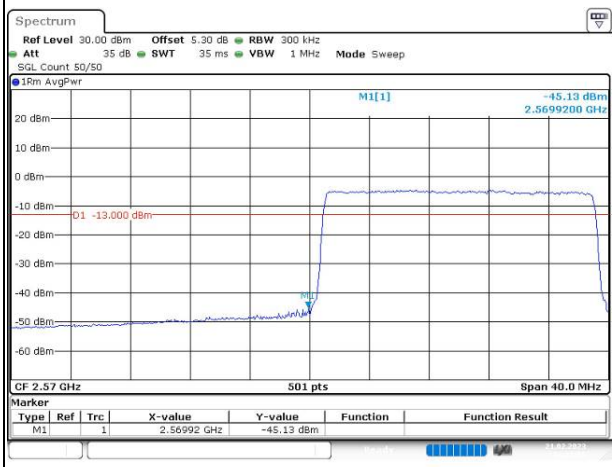
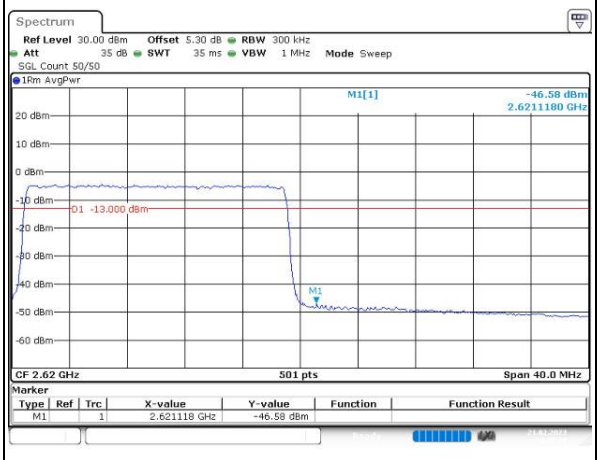
Spurious Emissions at Antenna Terminal		
Channel	**15MHz Bandwidth QPSK**	
Lowest		
Middle		
Highest		

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		

4.11 Antenna Port Test Data and Results for LTE Band 41

Serial Number:	1WPX	Test Date:	2023/02/21~2023/02/23
Test Site:	RF	Test Mode:	Transmitting
Tester:	George	Test Result:	**Pass**

Environmental Conditions:					
Temperature: (℃)	22.8~24.6	Relative Humidity: (%)	37~49	ATM Pressure: (kPa)	100.8~101.6

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
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	2022/7/15	2023/7/14
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)
5MHz	2537.5	2595	2652.5
10MHz	2540	2595	2650
15MHz	2542.5	2595	2647.5
20MHz	2545	2595	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	19.82	19.91	19.69	19.49	33
	RB1#13	19.94	19.99	19.81		
	RB1#24	19.8	19.89	19.69		
	RB15#0	18.9	18.99	18.79		
	RB15#10	18.91	18.97	18.8		
	RB25#0	18.93	19	18.79		
5MHz 16QAM	RB1#0	18.93	19.21	18.72	18.79	33
	RB1#13	19.07	19.29	18.86		
	RB1#24	18.93	19.18	18.72		
	RB15#0	17.93	18.04	17.73		
	RB15#10	17.94	18.02	17.73		
	RB25#0	17.94	17.98	17.82		
10MHz QPSK	RB1#0	19.89	19.99	19.71	19.81	33
	RB1#25	20.23	20.31	20.05		
	RB1#49	19.91	19.98	19.76		
	RB25#0	18.91	19.08	18.81		
	RB25#25	18.97	18.99	18.84		
	RB50#0	18.93	19.03	18.82		
10MHz 16QAM	RB1#0	18.82	19.12	19.02	18.92	33
	RB1#25	19.17	19.42	19.31		
	RB1#49	18.91	19.13	19.05		
	RB25#0	17.97	18.1	17.8		
	RB25#25	18	18.01	17.84		
	RB50#0	17.95	18.04	17.82		
15MHz QPSK	RB1#0	19.83	19.91	19.69	19.52	33
	RB1#38	19.94	20.02	19.83		
	RB1#74	19.82	19.86	19.71		
	RB36#0	18.93	19.01	18.82		
	RB36#39	19.01	18.95	18.85		
	RB75#0	18.95	18.97	18.8		
15MHz 16QAM	RB1#0	18.82	19.2	18.96	18.7	33
	RB1#38	18.95	19.2	19.05		
	RB1#74	18.86	19.13	18.99		
	RB36#0	17.86	18.02	17.78		
	RB36#39	17.93	17.99	17.81		
	RB75#0	17.91	17.96	17.75		
20MHz QPSK	RB1#0	19.62	19.83	19.51	19.84	33
	RB1#50	20.17	20.34	20.04		
	RB1#99	19.71	19.79	19.54		

	RB50#0	18.83	19.04	18.73		
	RB50#50	19.02	18.9	18.8		
	RB100#0	18.96	18.96	18.77		
20MHz 16QAM	RB1#0	18.72	19.08	18.64	19.07	33
	RB1#50	19.2	19.57	19.12		
	RB1#99	18.74	19.04	18.68		
	RB50#0	17.88	18.06	17.7		
	RB50#50	18.1	17.89	17.77		
	RB100#0	17.93	17.95	17.77		
Note: EIRP=Conducted Power(dBm) - L_C(dB) + G_T(dBi)						
					Result:	**Pass**

Peak-to-average Ratio(PAR)

Test Bandwidth & Modulation	Resource Block & RB offset	Peak-to-average Ratio(dB)			Limit (dB)
		Lowest Channel	Middle Channel	Highest Channel	
20MHz QPSK	RB1#0	8.75	9.62	9.83	13
	RB100#0	8.26	7.88	8.55	13
20MHz 16QAM	RB1#0	10.2	10.41	9.65	13
	RB100#0	10	10	9.62	13
				Result:	**Pass**

FCC §2.1049, §27.53:Occupied Bandwidth

Operation Mode	99% Occupied Bandwidth (MHz)			26 dB Occupied Bandwidth (MHz)		
	Low Channel	Middle channel	High Channel	Low Channel	Middle Channel	High Channel
5MHz QPSK	4.511	4.511	4.491	4.92	5.16	4.96
5MHz 16QAM	4.511	4.511	4.491	5.14	4.92	5.02
10MHz QPSK	8.942	8.942	8.982	9.68	9.6	9.68
10MHz 16QAM	8.942	8.942	8.942	9.56	10	9.52
15MHz QPSK	13.473	13.473	13.473	15.36	15.48	15.24
15MHz 16QAM	13.593	13.533	13.533	15.9	16.68	15.42
20MHz QPSK	17.964	17.964	17.964	19.52	20.48	19.6
20MHz 16QAM	17.964	17.884	17.964	20.64	19.28	19.6
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.**

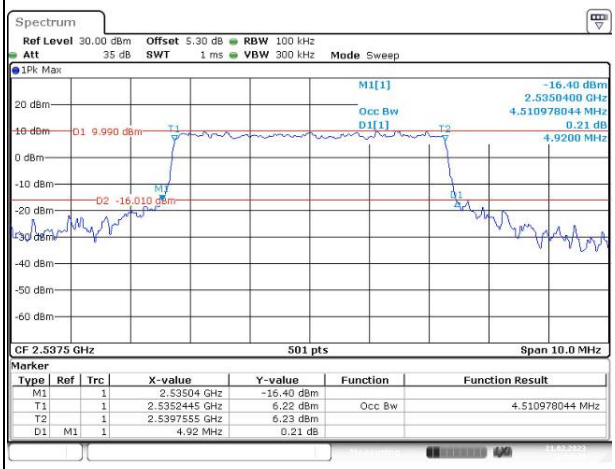
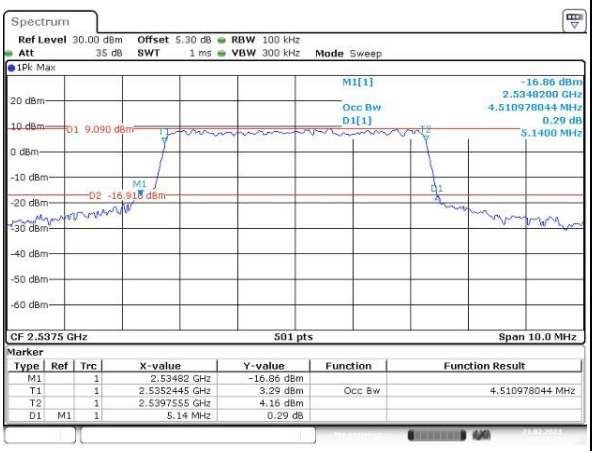
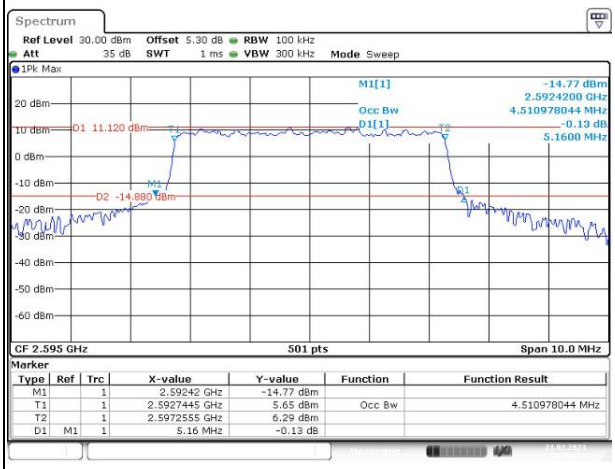
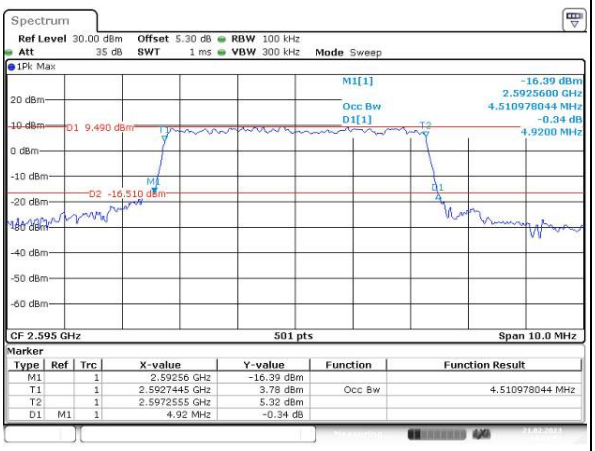
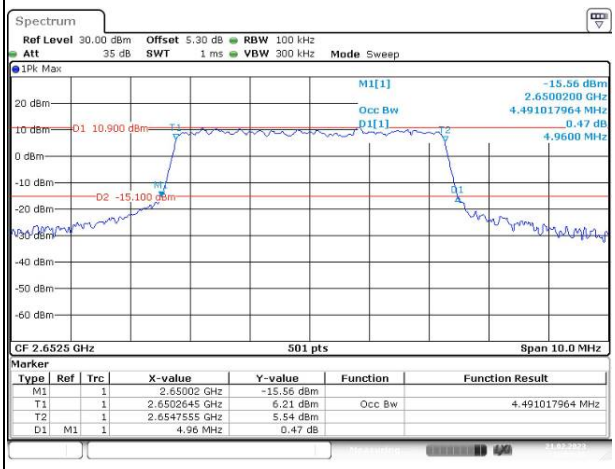
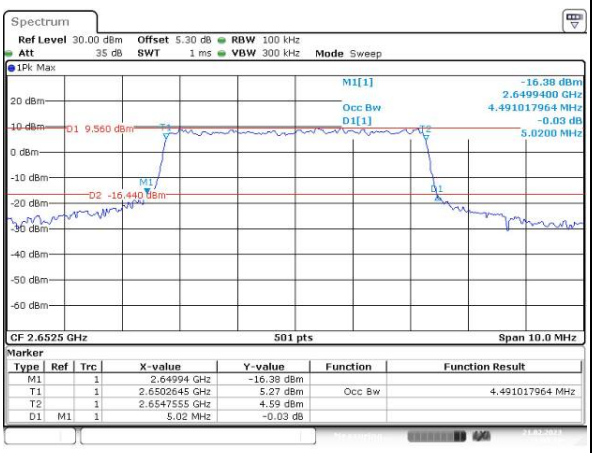
FCC §2.1051, § 27.53:Out of band emission, Band Edge	
Result:	**Pass, Please refer to the test plots of Out of band emission, Band Edge.**

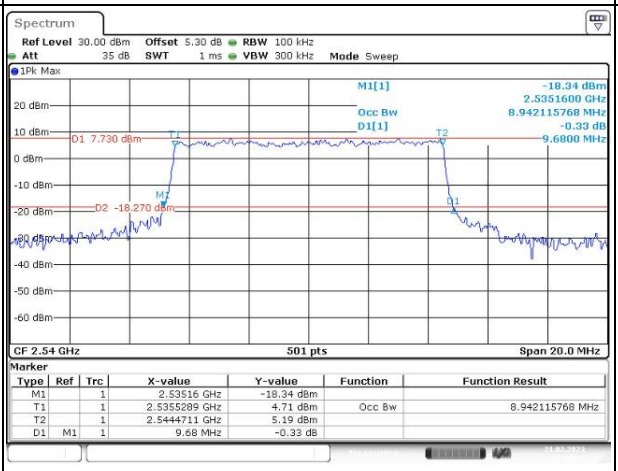
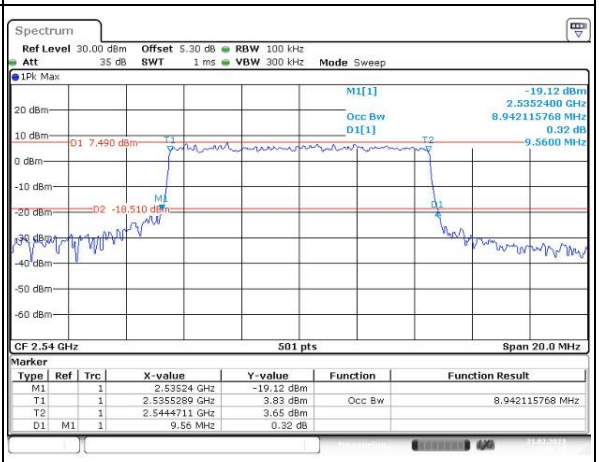
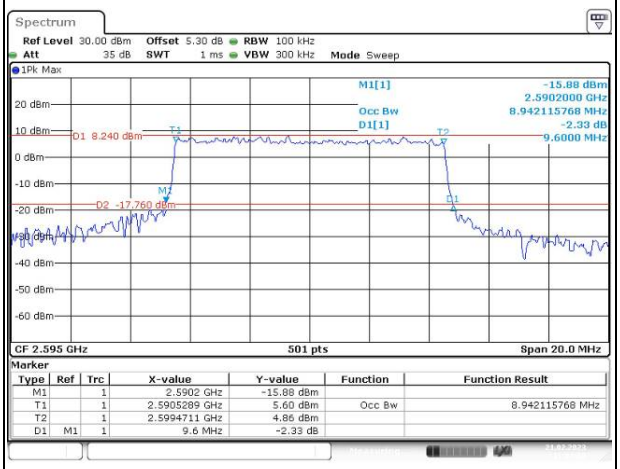
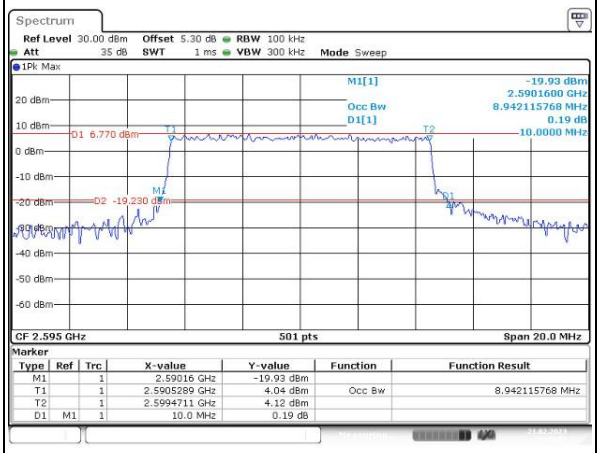
FCC §2.1055, §27.54: Frequency Stability

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	3.85	2535.3031	2535.00	2654.6040	2655
	-20	3.85	2535.3056	2535.00	2654.6089	2655
	-10	3.85	2535.3003	2535.00	2654.6055	2655
	0	3.85	2535.3033	2535.00	2654.6088	2655
	10	3.85	2535.3035	2535.00	2654.6022	2655
	20	3.85	2535.3058	2535.00	2654.6022	2655
	30	3.85	2535.3086	2535.00	2654.6080	2655
	40	3.85	2535.3033	2535.00	2654.6074	2655
	50	3.85	2535.3046	2535.00	2654.6038	2655
Frequency Stability vs. Voltage	20	3.45	2535.3049	2535.00	2654.6015	2655
	20	4.4	2535.3025	2535.00	2654.6036	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	3.85	2535.3073	2535.00	2654.6090	2655
	-20	3.85	2535.3001	2535.00	2654.6035	2655
	-10	3.85	2535.3046	2535.00	2654.6054	2655
	0	3.85	2535.3008	2535.00	2654.6053	2655
	10	3.85	2535.3013	2535.00	2654.6049	2655
	20	3.85	2535.3058	2535.00	2654.6022	2655
	30	3.85	2535.3020	2535.00	2654.6058	2655
	40	3.85	2535.3013	2535.00	2654.6095	2655
	50	3.85	2535.3038	2535.00	2654.6085	2655
Frequency Stability vs. Voltage	20	3.45	2535.3014	2535.00	2654.6017	2655
	20	4.4	2535.3072	2535.00	2654.6036	2655
					Result:	**Pass**

Test Plots(Note: The 5.3dB 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