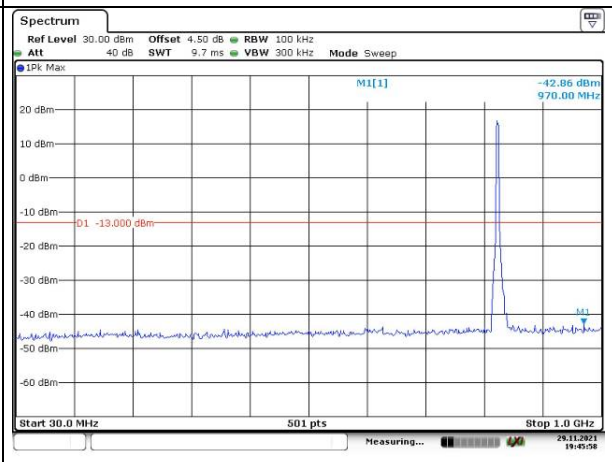
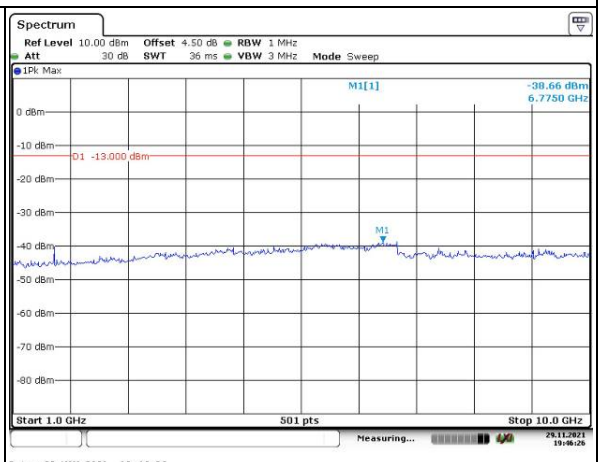
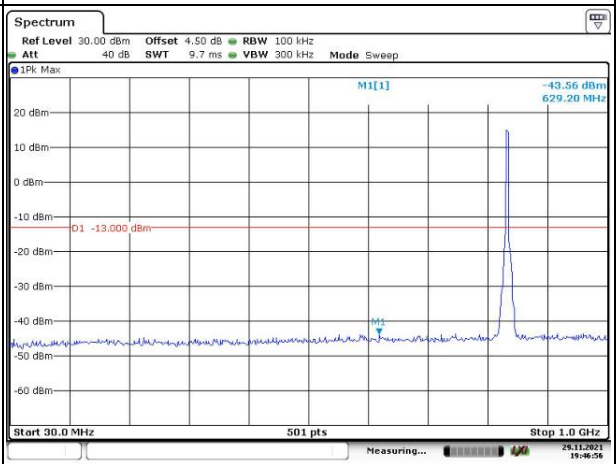
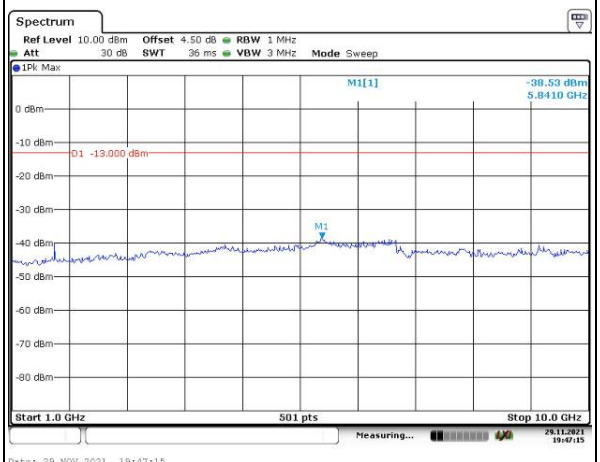
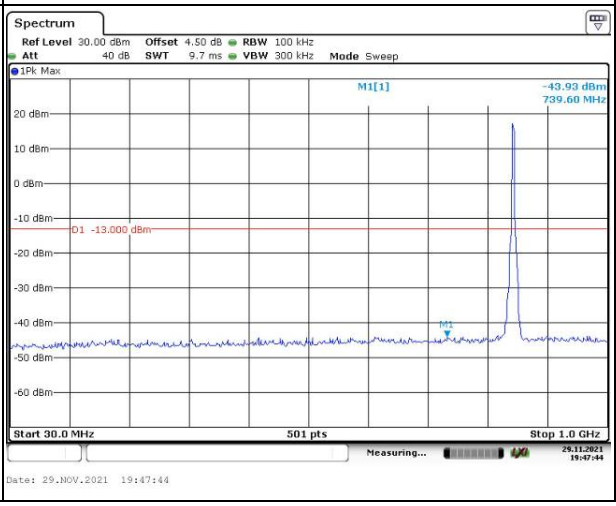
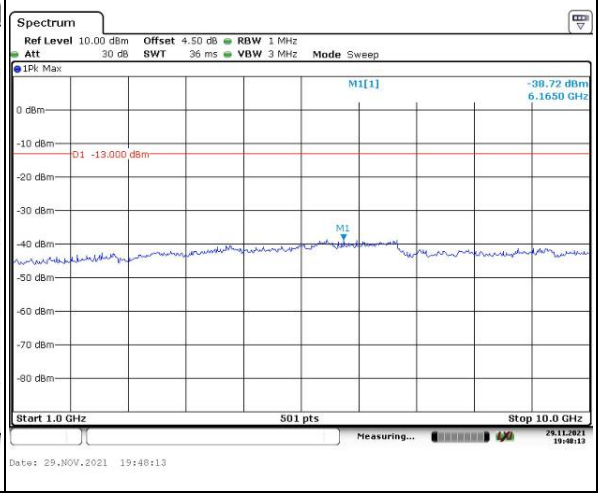
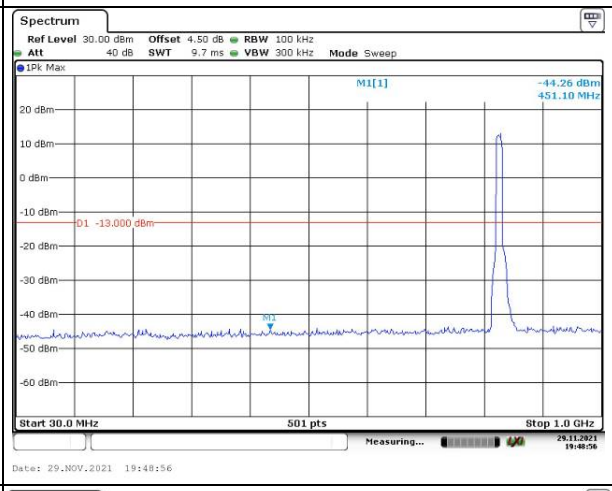
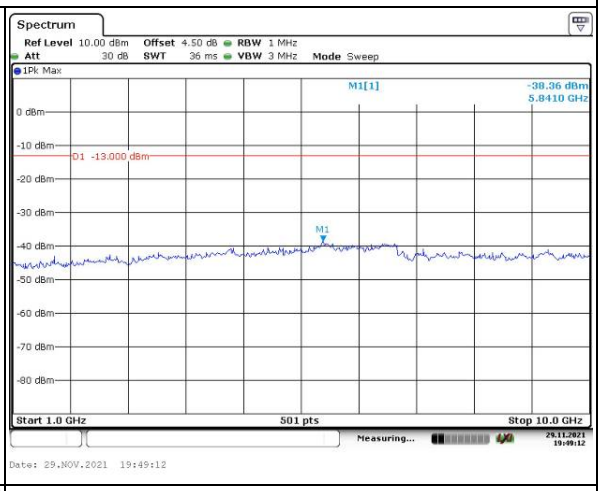
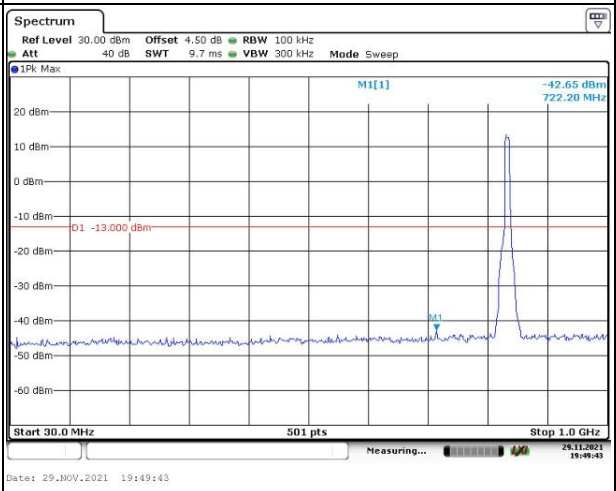
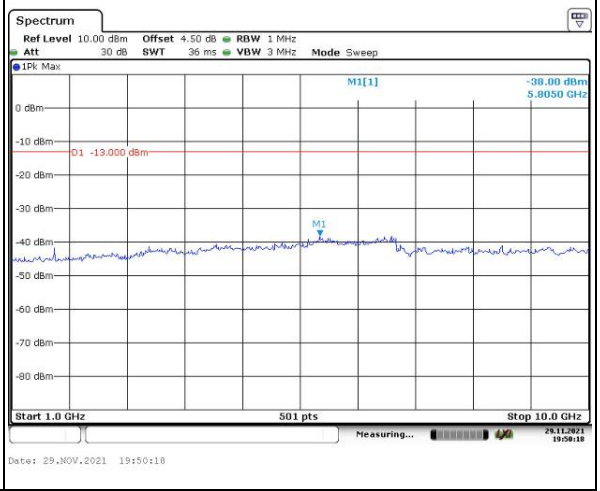
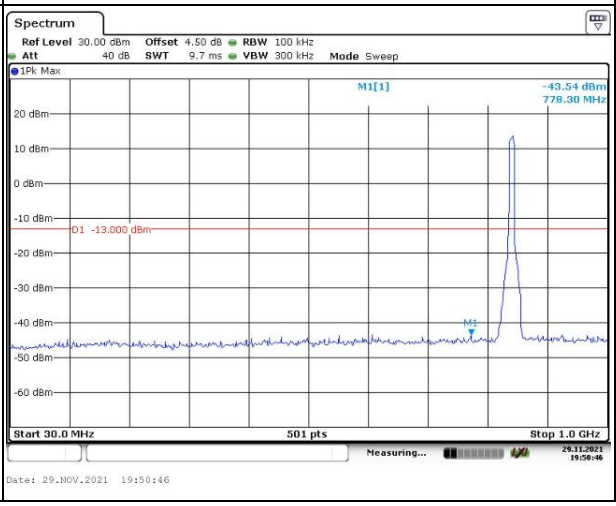
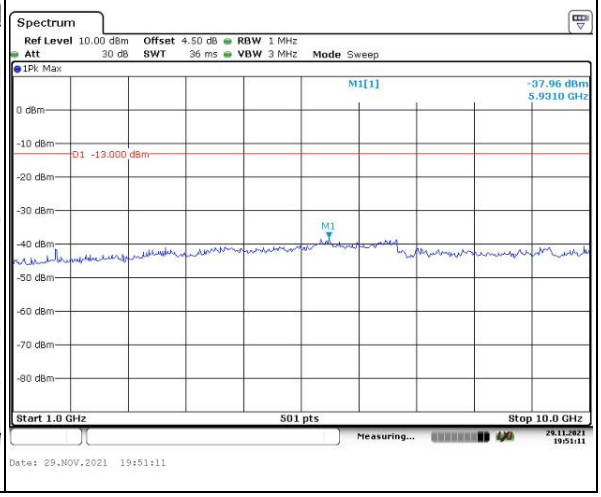
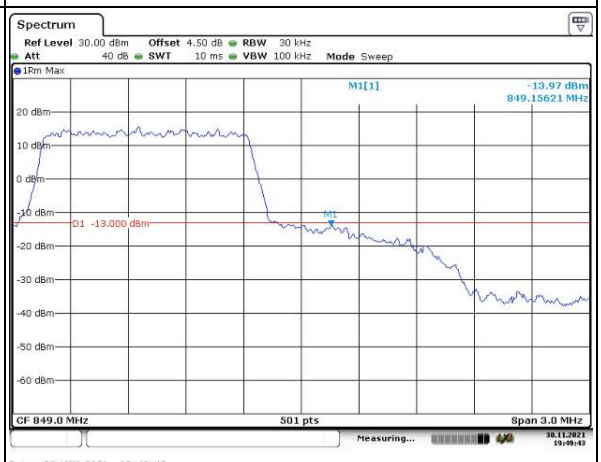
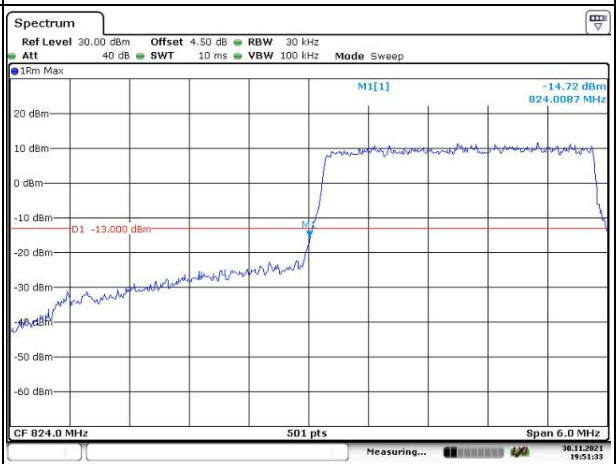
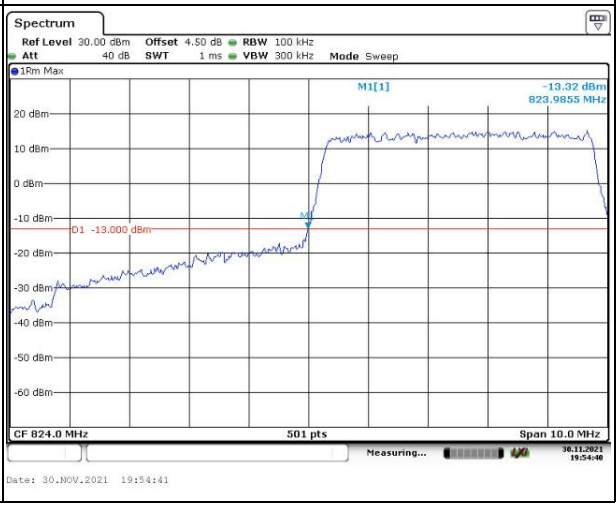
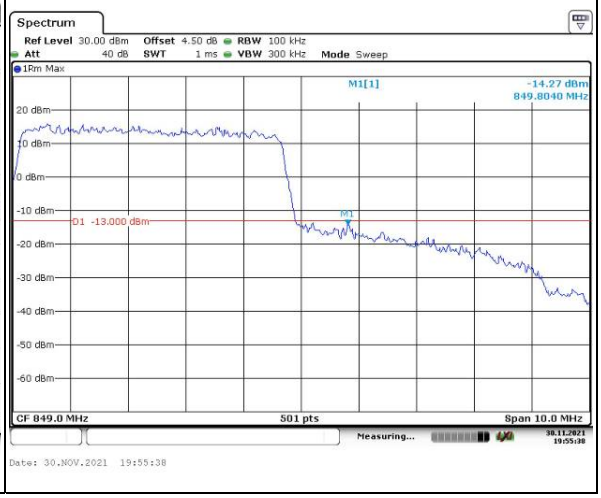
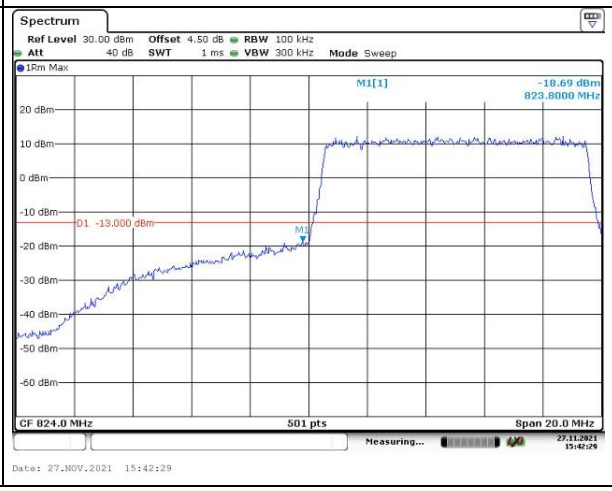
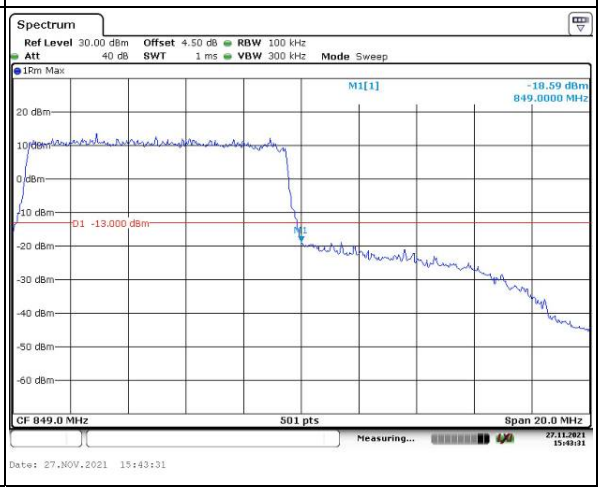
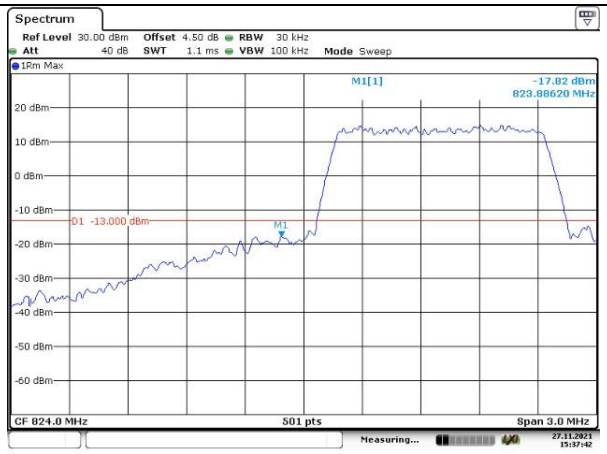
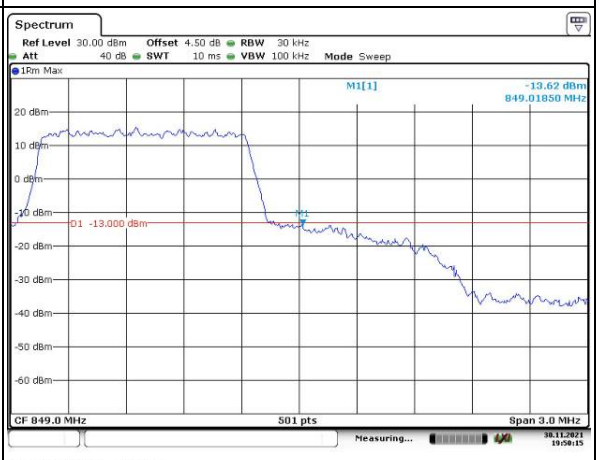
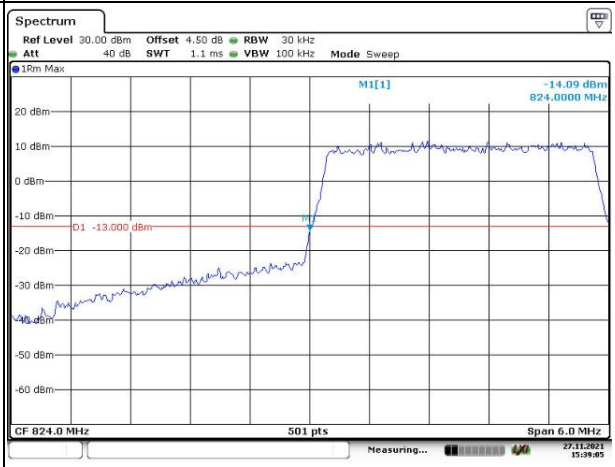
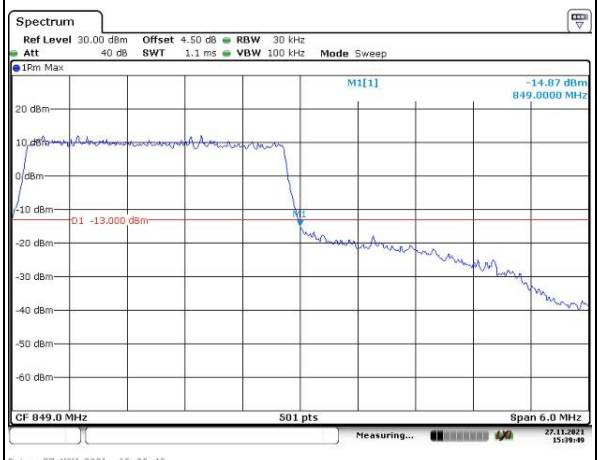
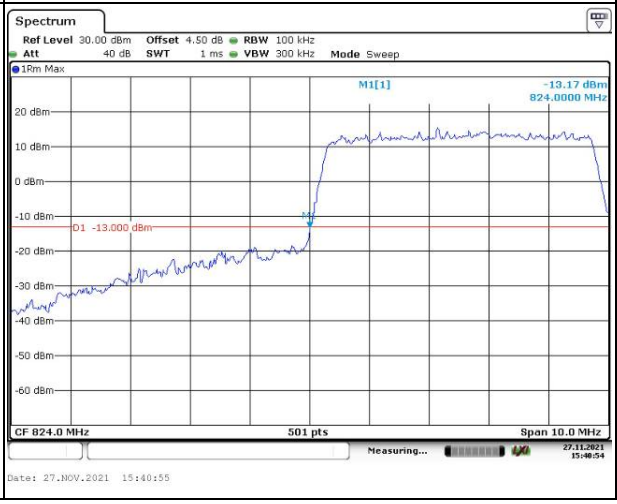
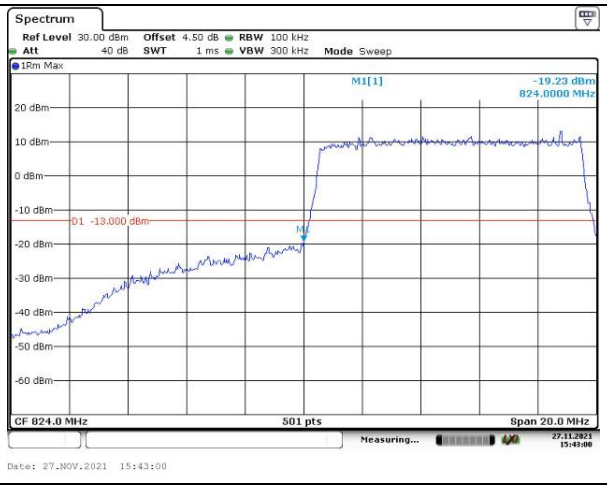
Spurious Emissions at Antenna Terminal		
Channel	**5MHz Bandwidth QPSK**	
Lowest		
Middle		
Highest		

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		

4.9 Antenna Port Test Data and Results for LTE Band 12

Serial Number:	CR21110024-RF-S4	Test Date:	2021-11-27~2022-01-06
Test Site:	RF	Test Mode:	Transmitting
Tester:	Le Qiao	Test Result:	Pass

Environmental Conditions:					
Temperature: (℃)	22.1~22.9	Relative Humidity: (%)	40~66	ATM Pressure: (kPa)	101.4~101.7

Test Equipment List and Details:					
Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	Spectrum Analyzer	101474	2021/7/22	2022/7/21
zhuoxiang	Coaxial Cable	SMA-178	211001	Each time	N/A
Mini-Circuits	DC Block	BLK-18-S+	1554403	Each time	N/A
Weinschel	Coaxial Attenuators	53-20-34	LN751	Each time	N/A
R&S	Wideband Radio Communication Tester	CMW500	149218	2021/7/22	2022/7/21
BACL	TEMP&HUMI Test Chamber	BTH-150	30026	2021/7/22	2022/7/22
UNI-T	Multimeter	UT39A+	C210582554	2021/9/30	2022/9/30
E-Microwave	Two-way Spliter	ODP-1-6	OE0120176	Each Time	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 12▲:					
Antenna Gain (dBi):	3	Antenna Gain (dBd):	0.85	Cable Loss (dB):	0.1
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)
1.4MHz	699.7	707.5	715.3
3MHz	700.5	707.5	714.5
5MHz	701.5	707.5	713.5
10MHz	704	707.5	711

Test Data:

FCC§2.1046;§ 27.50(c) (10)

RF Output Power:

Test Bandwidth & Modulation	Resource Block & RB offset	Conducted Average Output Power(dBm)			Maximum ERP (dBm)	ERP Limit (dBm)
		Lowest Channel	Middle Channel	Highest Channel		
1.4MHz QPSK	RB1#0	23.30	23.05	23.42	24.2	34.77
	RB1#3	23.32	23.01	23.41		
	RB1#5	23.33	23.14	23.45		
	RB3#0	23.28	23.19	23.15		
	RB3#3	23.28	23.24	23.31		
	RB6#0	22.29	22.27	22.17		
1.4MHz 16QAM	RB1#0	22.68	23.07	21.97	23.82	34.77
	RB1#3	22.67	23.02	21.90		
	RB1#5	22.63	22.88	22.00		
	RB3#0	22.08	22.20	22.00		
	RB3#3	22.05	22.24	21.98		
	RB6#0	21.29	21.36	21.28		
3MHz QPSK	RB1#0	23.22	23.03	23.41	24.21	34.77
	RB1#8	23.29	23.19	23.38		
	RB1#14	23.19	23.17	23.46		
	RB6#0	22.25	22.20	22.21		
	RB6#9	22.21	22.21	22.17		
	RB15#0	22.28	22.27	22.31		
3MHz 16QAM	RB1#0	22.45	22.34	21.80	23.21	34.77
	RB1#8	22.38	22.33	21.68		
	RB1#14	22.46	22.38	21.82		
	RB6#0	21.40	21.30	21.33		
	RB6#9	21.22	21.42	21.33		
	RB15#0	21.38	21.26	21.26		
5MHz QPSK	RB1#0	23.20	23.19	23.05	24.04	34.77
	RB1#13	23.15	23.23	23.09		
	RB1#24	23.11	23.26	23.29		
	RB15#0	22.30	22.20	22.26		
	RB15#10	22.26	22.31	22.28		
	RB25#0	22.27	22.36	22.39		
5MHz 16QAM	RB1#0	21.59	21.97	22.11	22.92	34.77
	RB1#13	21.69	21.89	22.17		
	RB1#24	21.62	21.93	22.17		
	RB15#0	21.25	21.05	21.14		
	RB15#10	21.19	21.16	21.20		
	RB25#0	21.26	21.22	21.39		

10MHz QPSK	RB1#0	23.12	23.09	23.13	24.16	34.77
	RB1#25	23.13	23.16	23.23		
	RB1#49	23.19	23.20	23.41		
	RB25#0	22.26	22.19	22.09		
	RB25#25	22.32	22.17	22.34		
	RB50#0	22.16	22.24	22.03		
10MHz 16QAM	RB1#0	22.49	22.74	21.81	23.66	34.77
	RB1#25	22.41	22.83	21.82		
	RB1#49	22.56	22.91	21.97		
	RB25#0	21.09	21.24	21.38		
	RB25#25	21.19	21.21	21.51		
	RB50#0	21.24	21.42	21.11		
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	4.20	3.83	4.72	13
	RB50#0	5.19	5.22	4.67	13
10MHz 16QAM	RB1#0	4.67	4.90	5.71	13
	RB50#0	6.09	6.14	5.83	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	1.096	1.102	1.102	1.254	1.260	1.254
1.4MHz 16QAM	1.108	1.096	1.102	1.260	1.254	1.260
3MHz QPSK	2.695	2.695	2.707	3.000	3.000	3.024
3MHz 16QAM	2.695	2.695	2.695	3.000	3.000	3.048
5MHz QPSK	4.511	4.511	4.531	4.980	5.000	5.020
5MHz 16QAM	4.511	4.531	4.531	5.000	5.020	5.020
10MHz QPSK	9.022	8.942	8.901	9.800	9.720	9.640
10MHz 16QAM	9.022	8.942	8.901	9.760	9.800	9.680
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.**

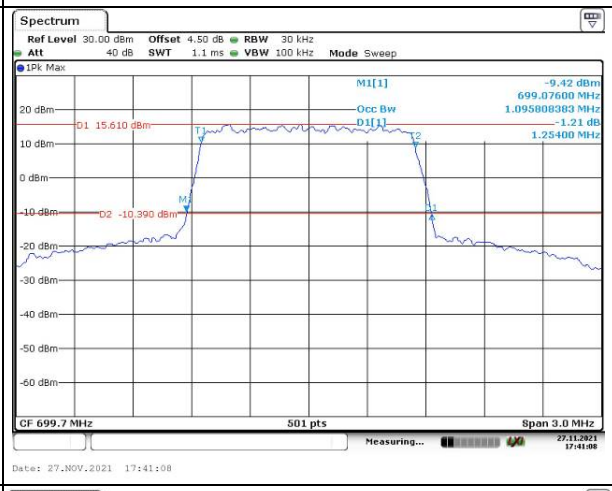
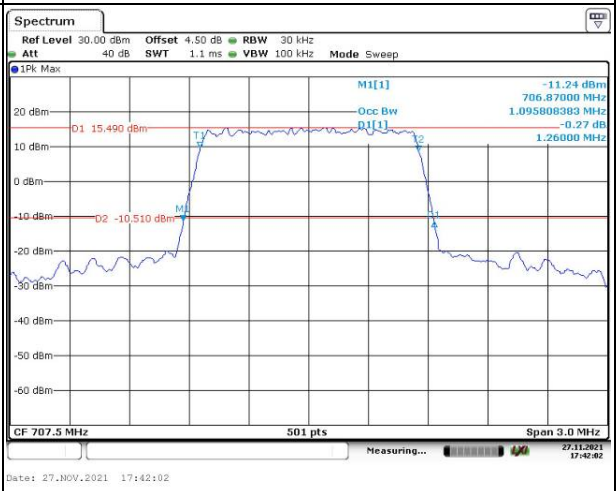
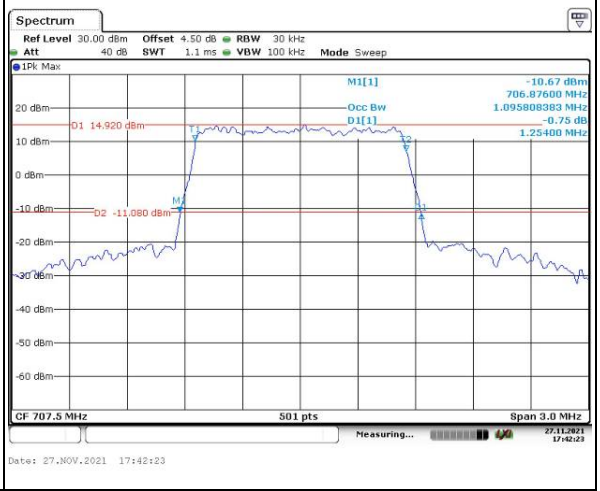
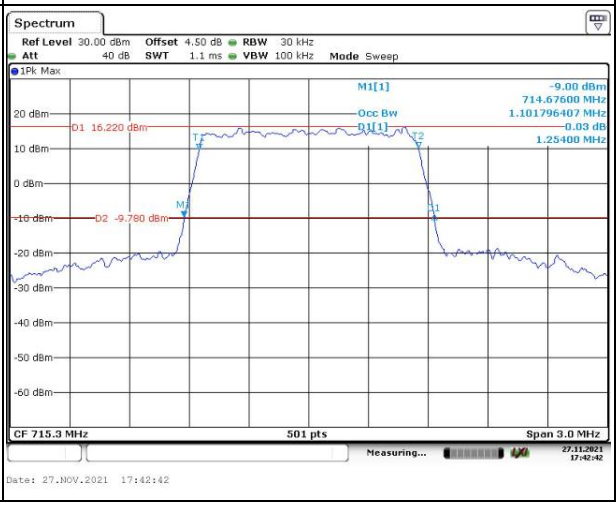
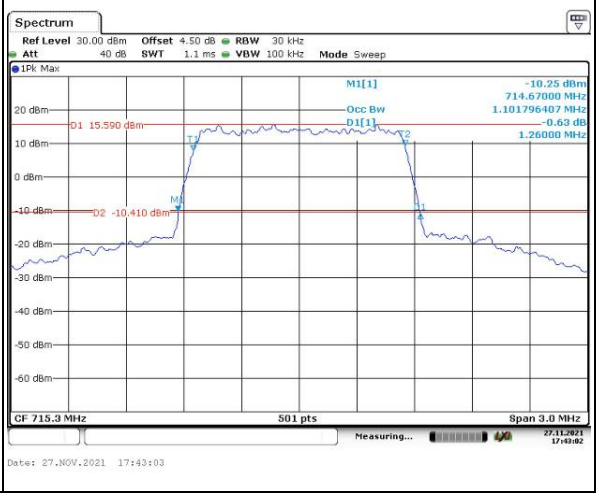
FCC §2.1051, §27.53:Out of band emission, Band Edge	
Result:	**Pass, Please refer to the test plots of Out of band emission, Band Edge.**

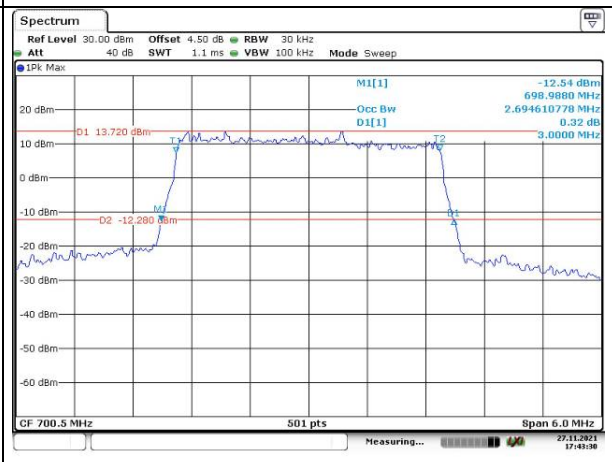
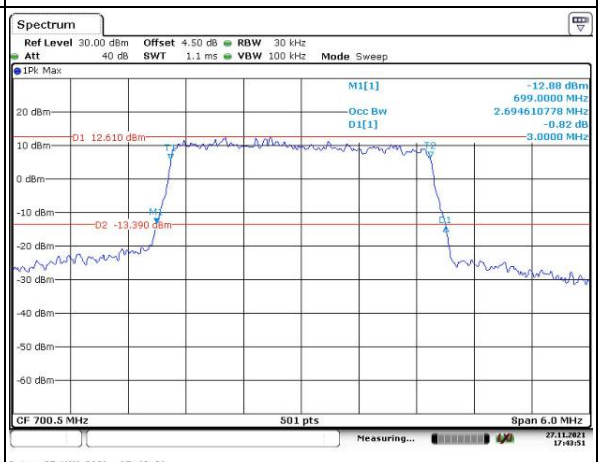
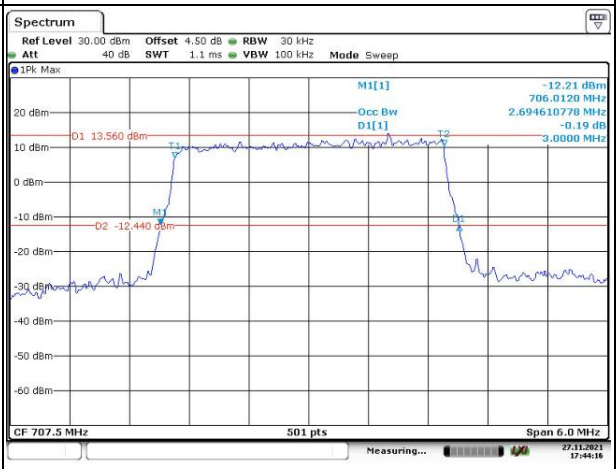
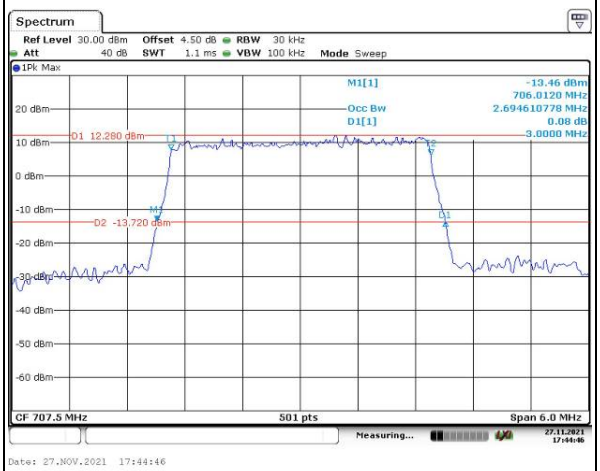
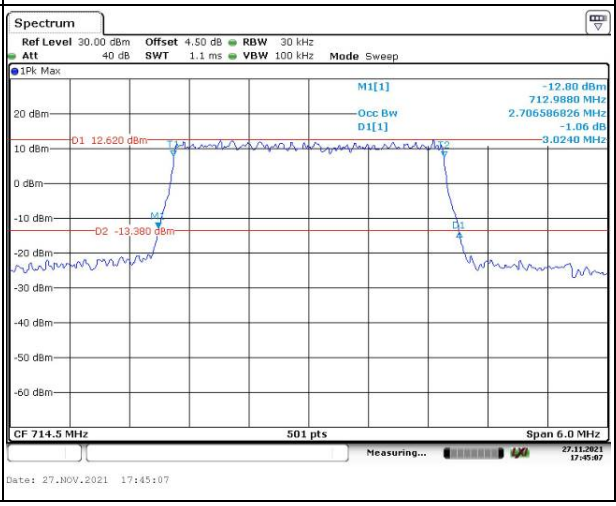
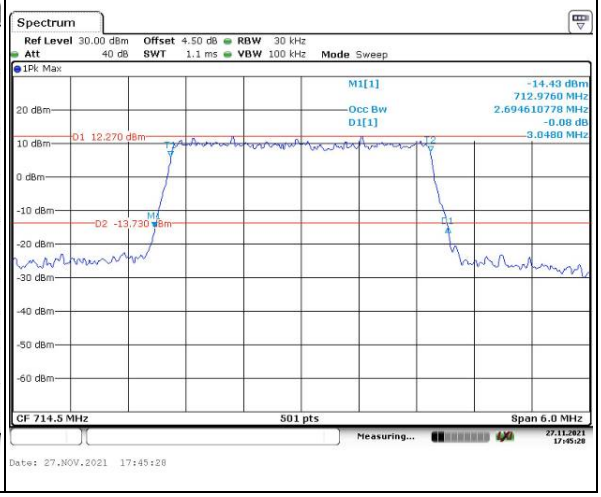
FCC §2.1055, §27.54: Frequency Stability

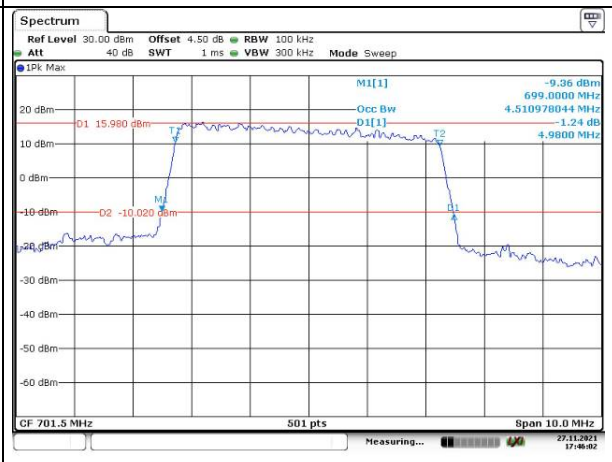
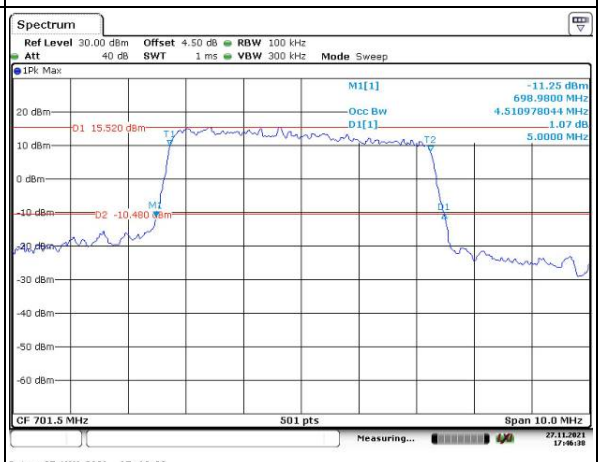
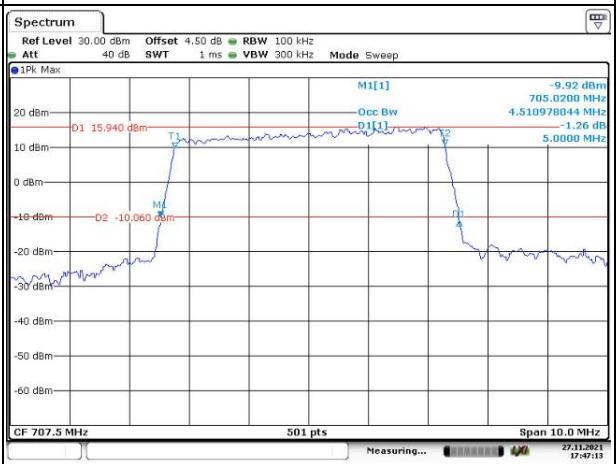
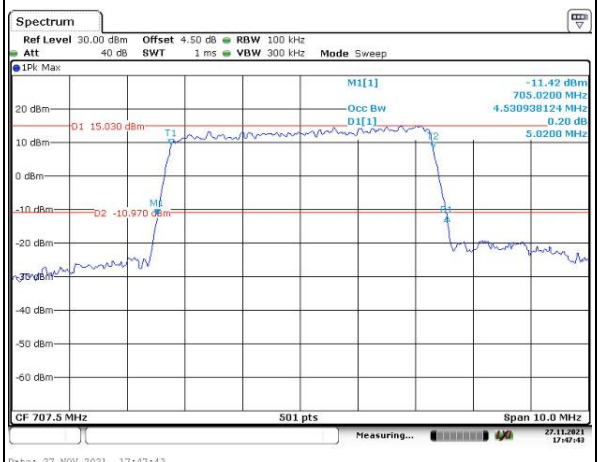
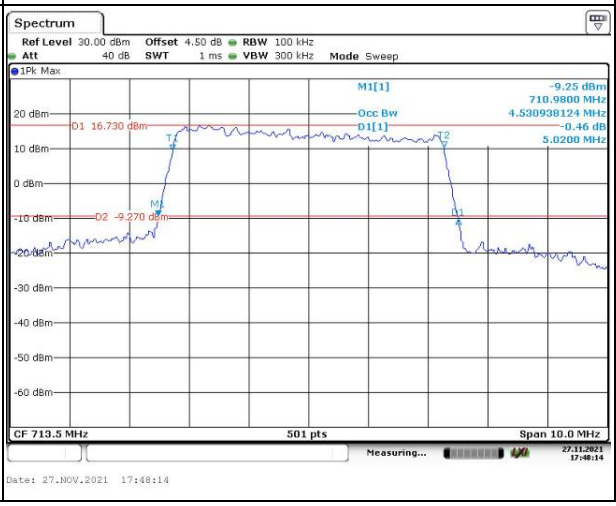
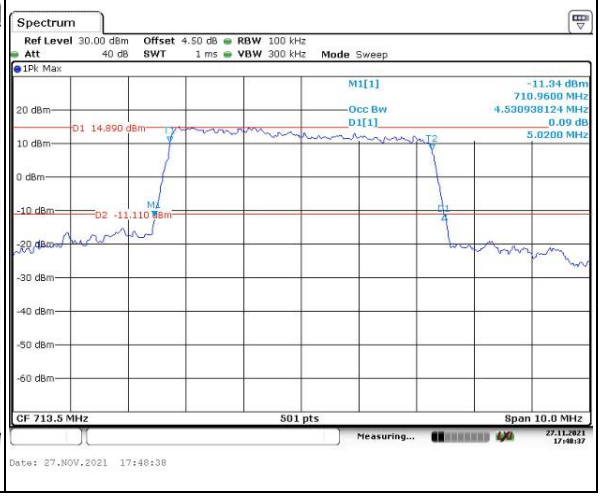
Test Mode:	10M QPSK	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (℃)	Voltage (V_{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.8	699.488	699.00	715.471	716.00
	-20	3.8	699.487	699.00	715.472	716.00
	-10	3.8	699.485	699.00	715.473	716.00
	0	3.8	699.487	699.00	715.473	716.00
	10	3.8	699.483	699.00	715.474	716.00
	20	3.8	699.489	699.00	715.471	716.00
	30	3.8	699.484	699.00	715.475	716.00
	40	3.8	699.483	699.00	715.476	716.00
	50	3.8	699.487	699.00	715.477	716.00
Frequency Stability vs. Voltage	20	3.5	699.485	699.00	715.478	716.00
	20	4.35	699.489	699.00	715.471	716.00
					Result:	**Pass**

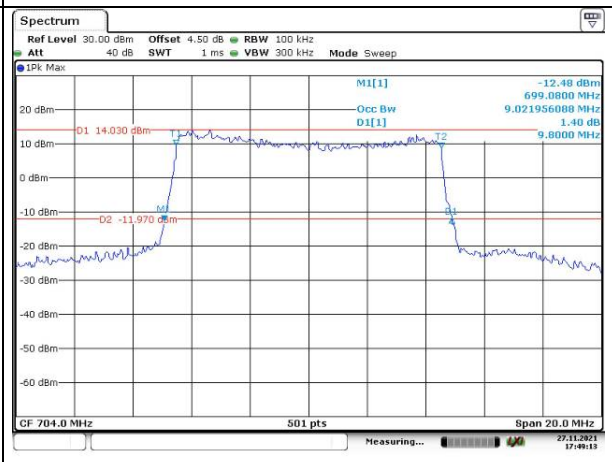
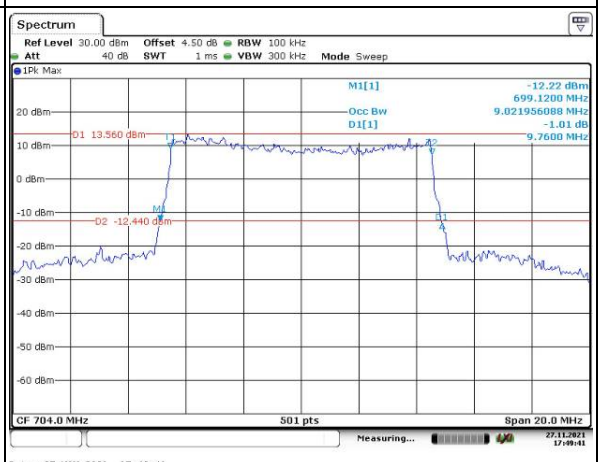
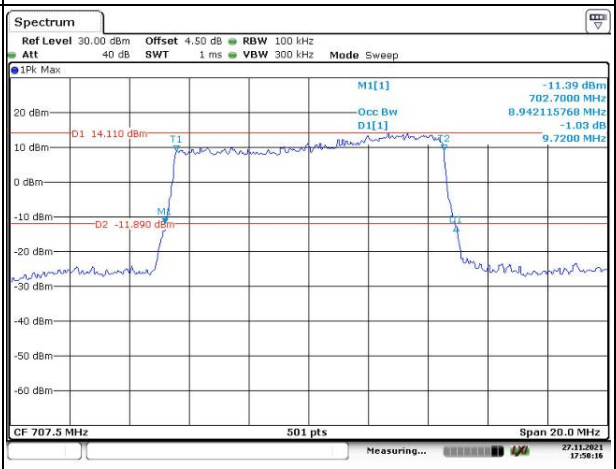
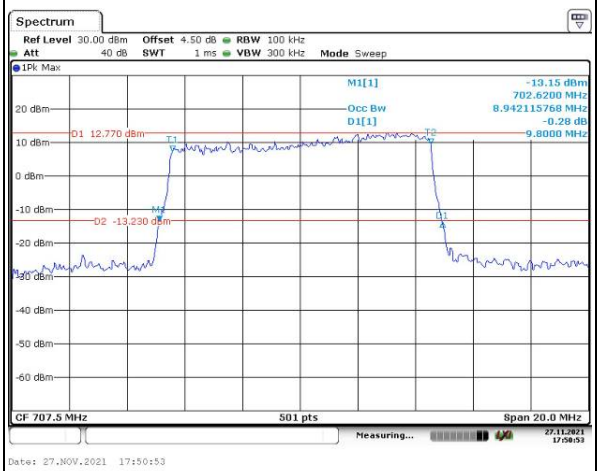
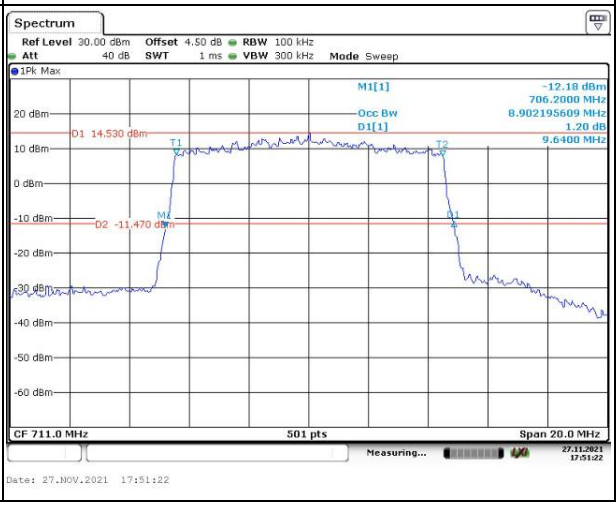
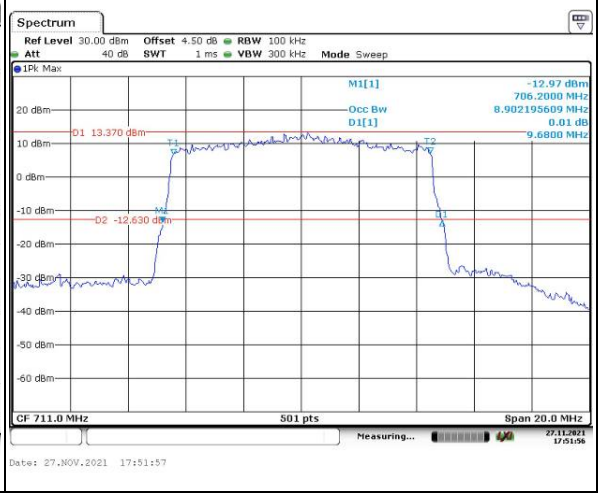
Test Mode:	10M 16QAM	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (℃)	Voltage (V_{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.8	699.483	699.00	715.471	716.00
	-20	3.8	699.484	699.00	715.472	716.00
	-10	3.8	699.482	699.00	715.474	716.00
	0	3.8	699.484	699.00	715.475	716.00
	10	3.8	699.487	699.00	715.476	716.00
	20	3.8	699.489	699.00	715.471	716.00
	30	3.8	699.485	699.00	715.477	716.00
	40	3.8	699.487	699.00	715.476	716.00
	50	3.8	699.485	699.00	715.477	716.00
Frequency Stability vs. Voltage	20	3.5	699.487	699.00	715.478	716.00
	20	4.35	699.489	699.00	715.471	716.00
					Result:	**Pass**

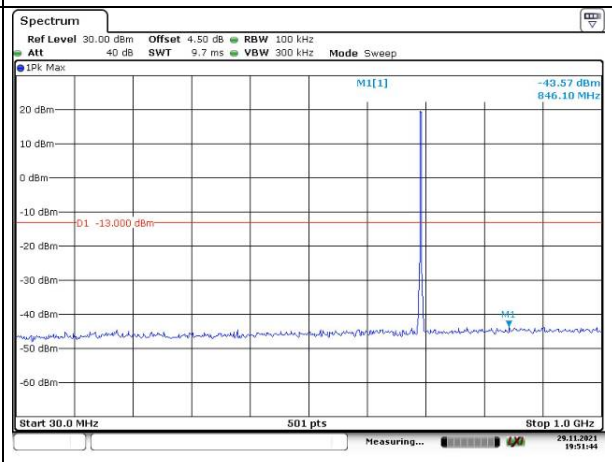
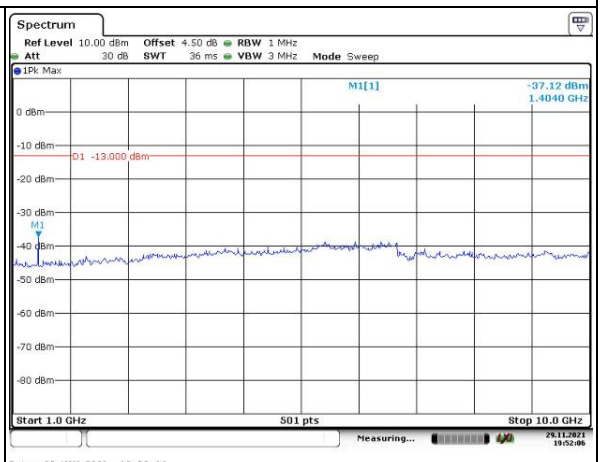
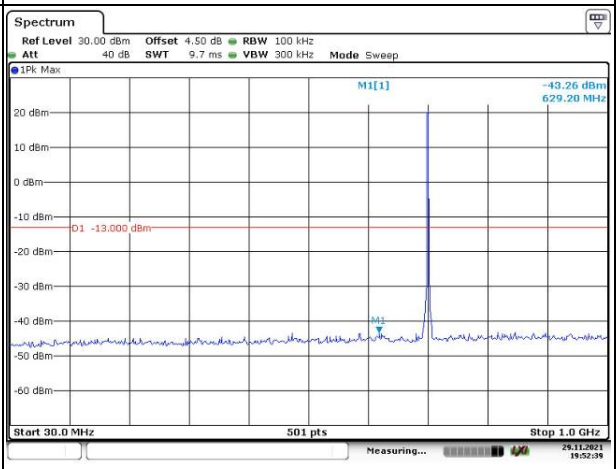
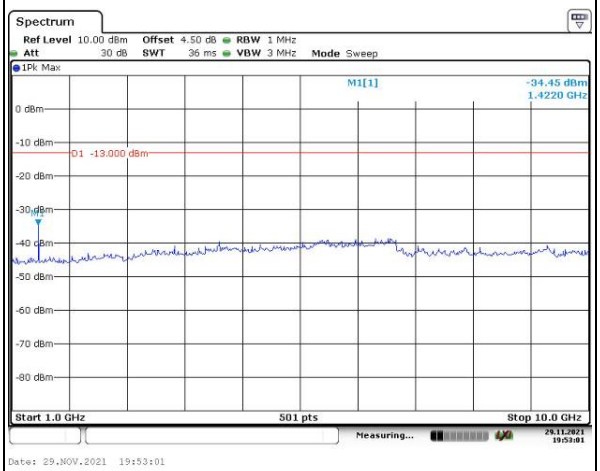
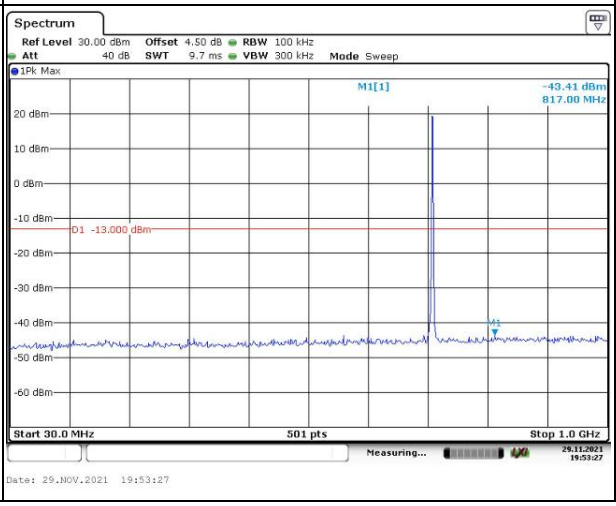
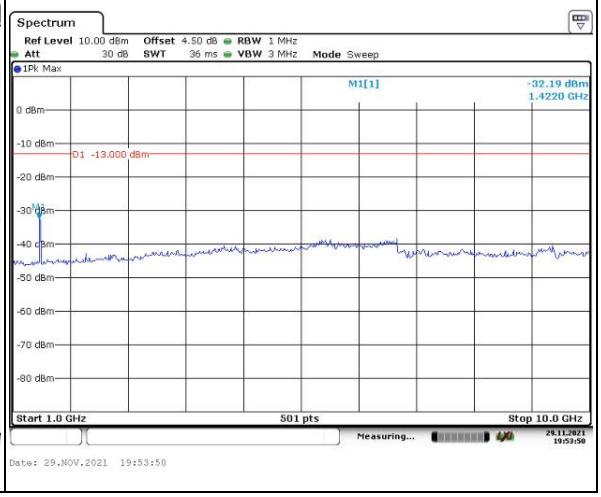
Test Plots:

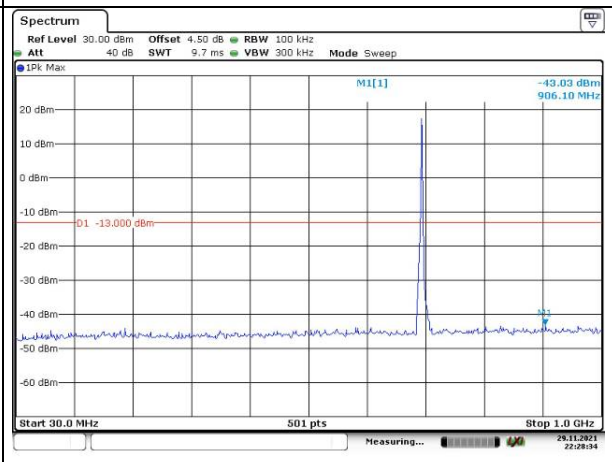
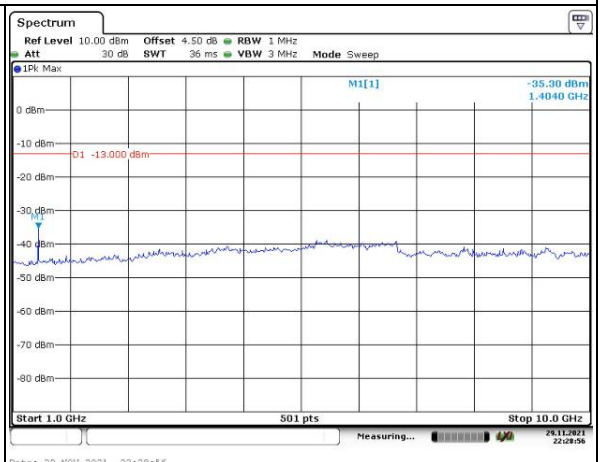
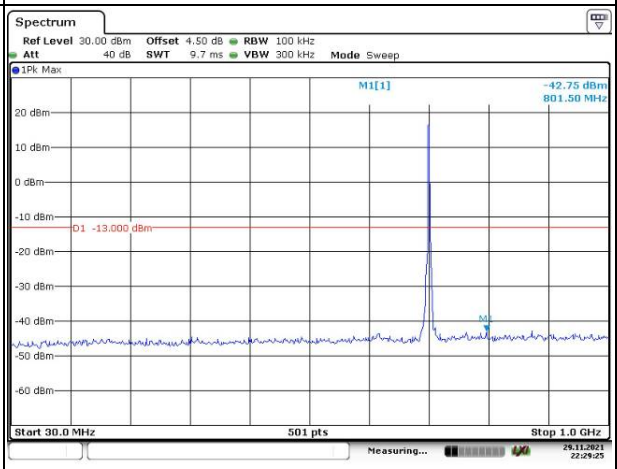
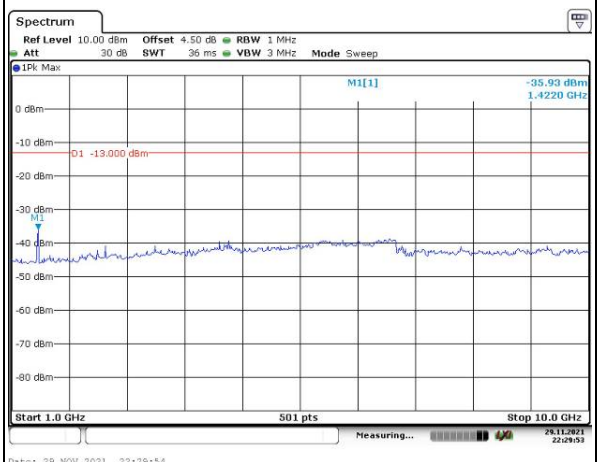
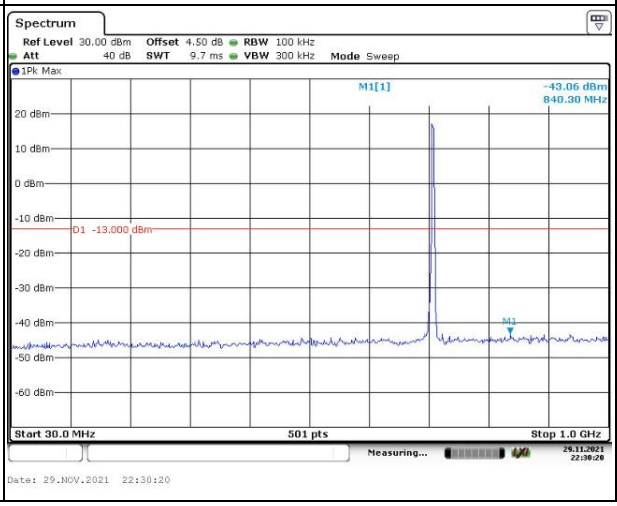
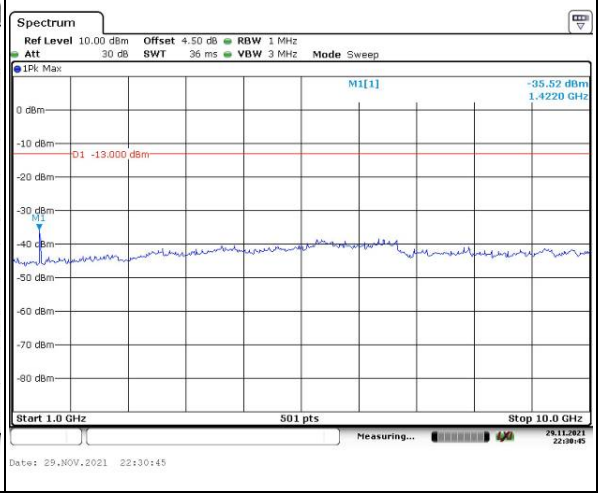
Occupied Bandwidth		
Channel	1.4MHz Bandwidth QPSK	1.4MHz Bandwidth 16QAM
Lowest		
Middle		
Highest		

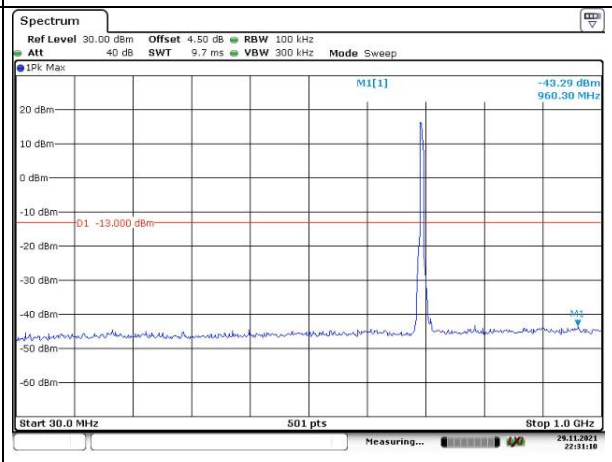
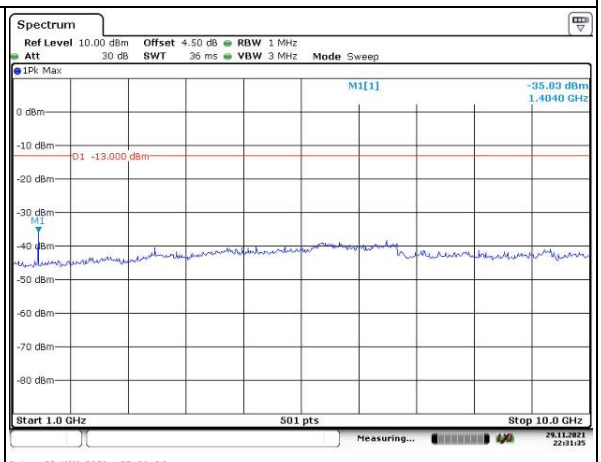
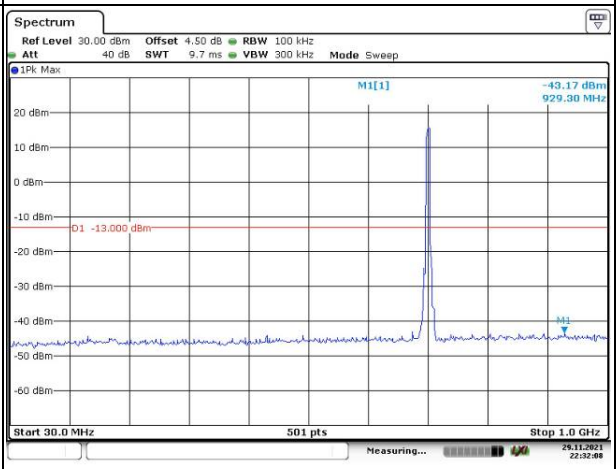
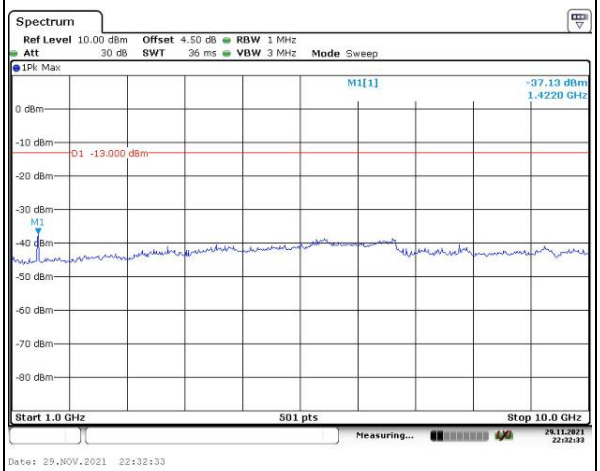
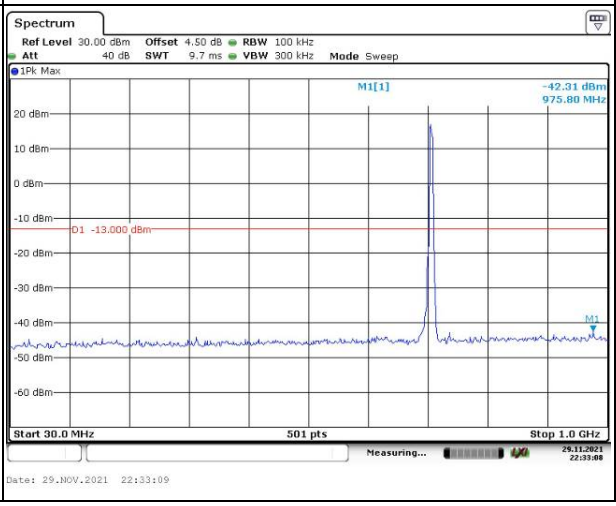
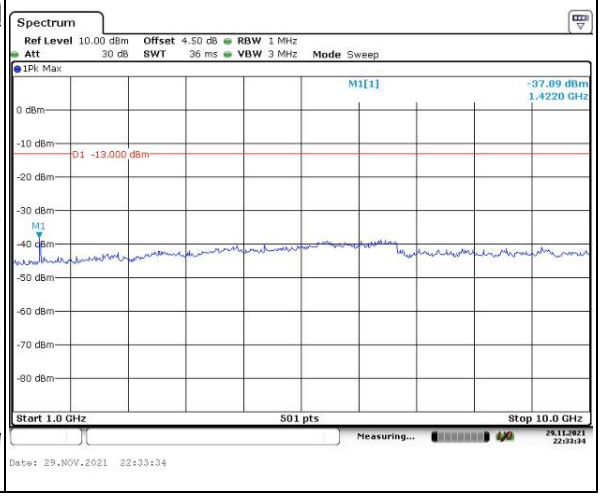
Occupied Bandwidth		
Channel	3MHz Bandwidth QPSK	3MHz Bandwidth 16QAM
Lowest		
Middle		
Highest		

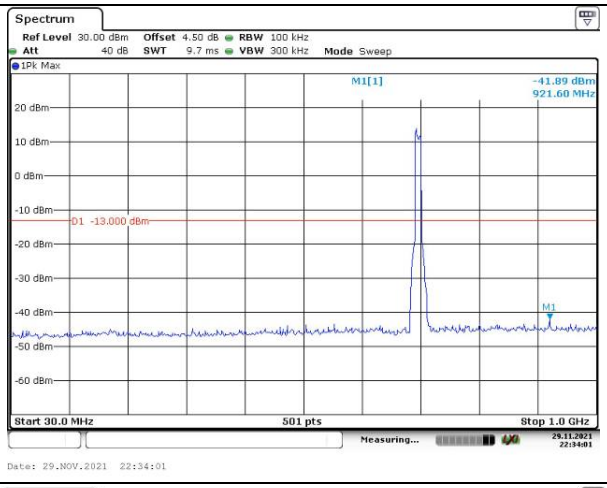
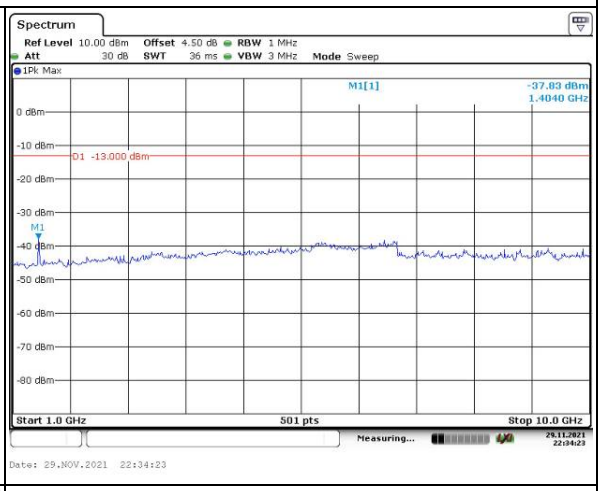
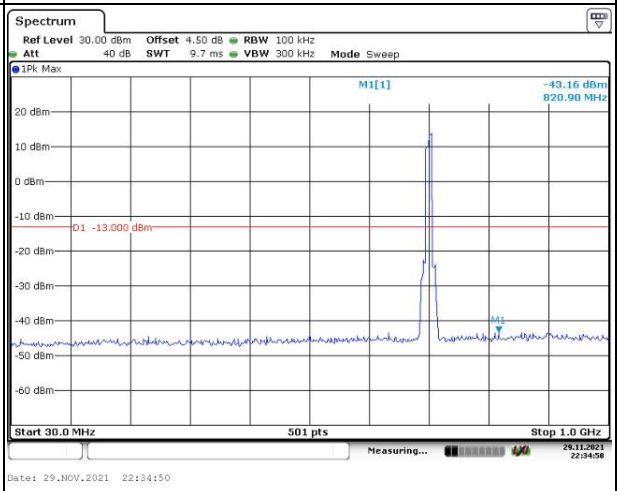
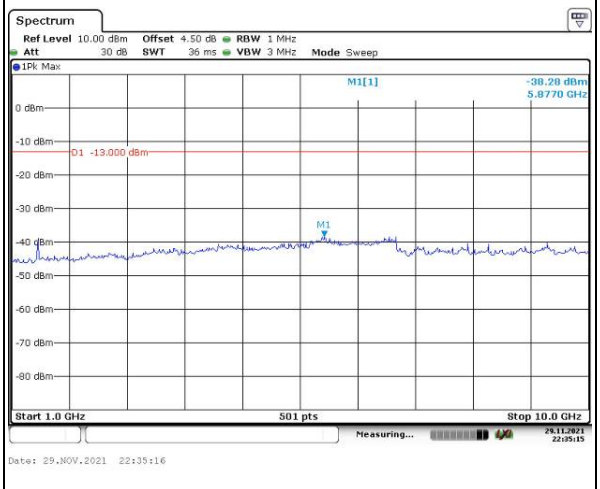
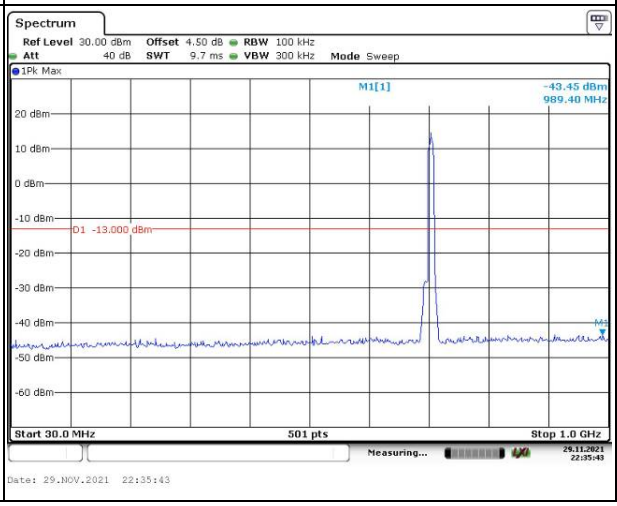
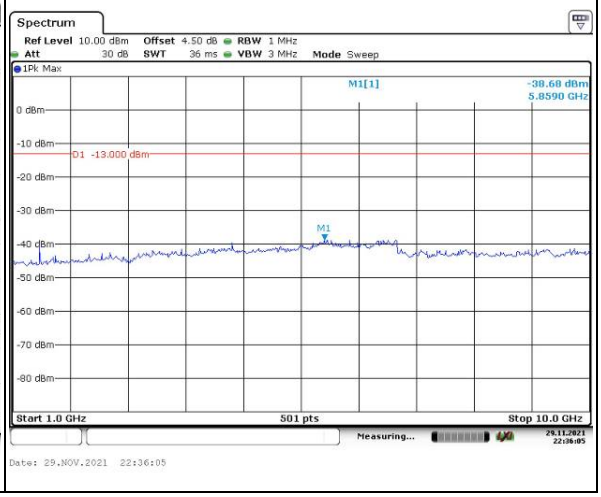
Occupied Bandwidth		
Channel	5MHz Bandwidth QPSK	5MHz Bandwidth 16QAM
Lowest		
Middle		
Highest		

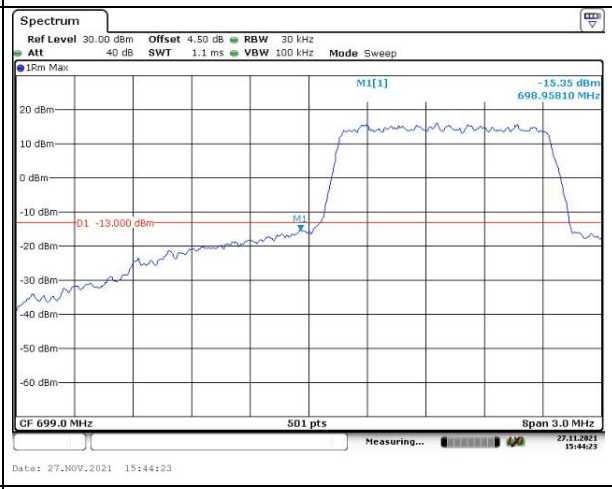
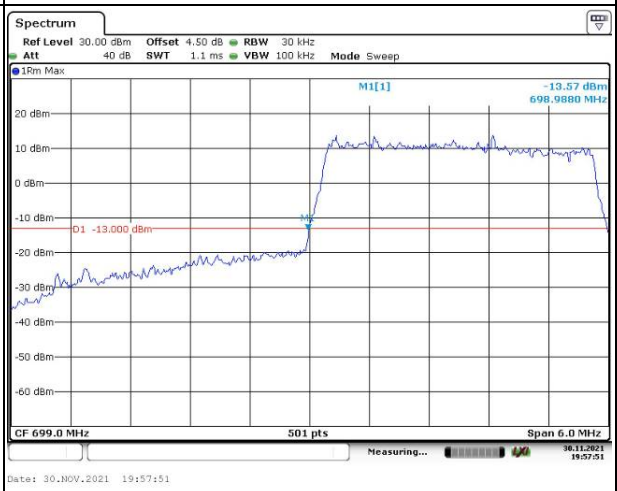
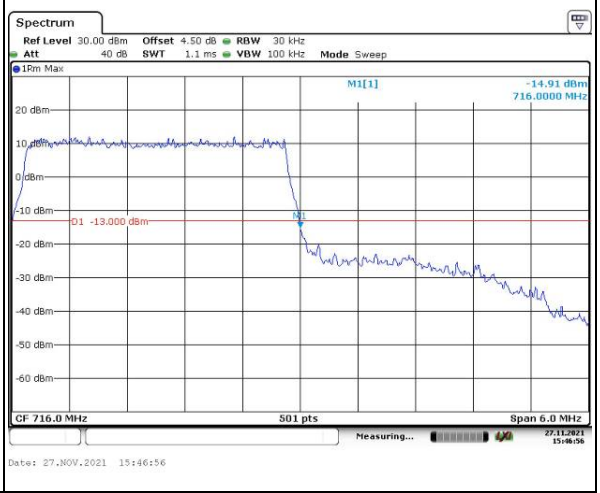
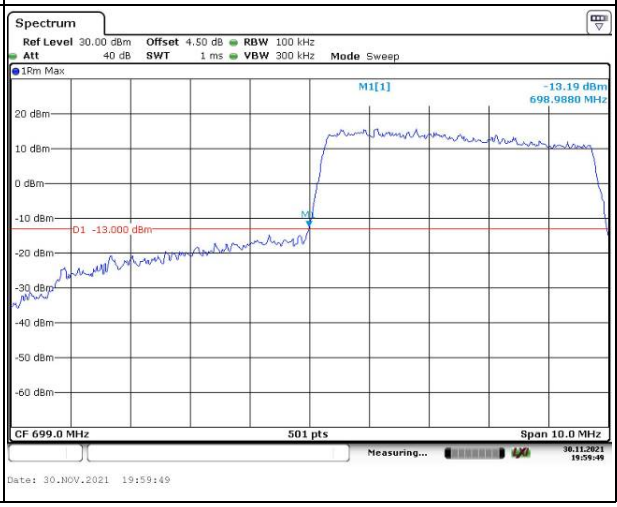
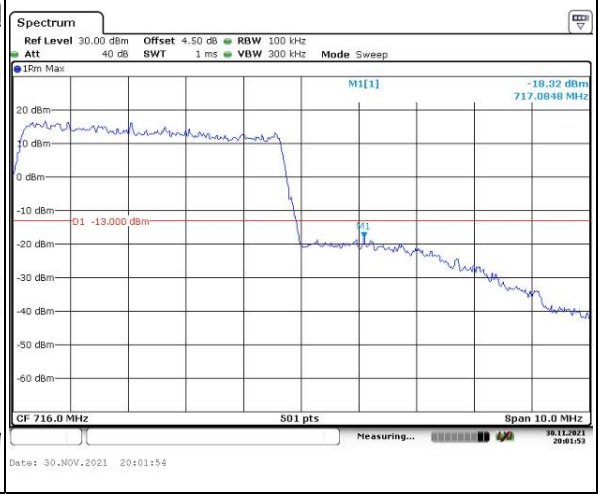
Occupied Bandwidth		
Channel	10MHz Bandwidth QPSK	10MHz Bandwidth 16QAM
Lowest		
Middle		
Highest		

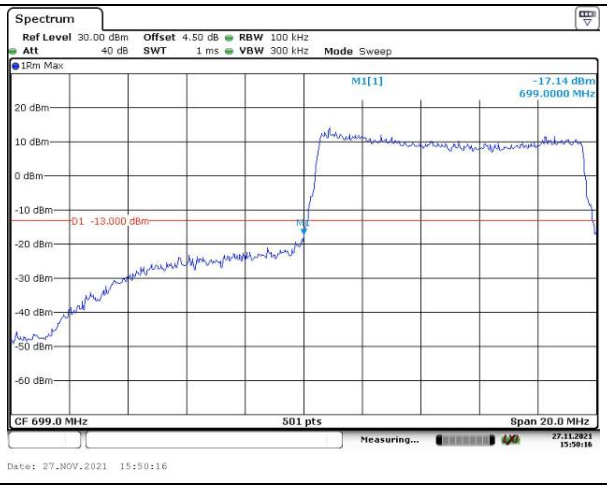
Spurious Emissions at Antenna Terminal		
Channel	**1.4MHz Bandwidth QPSK**	
Lowest		
Middle		
Highest		

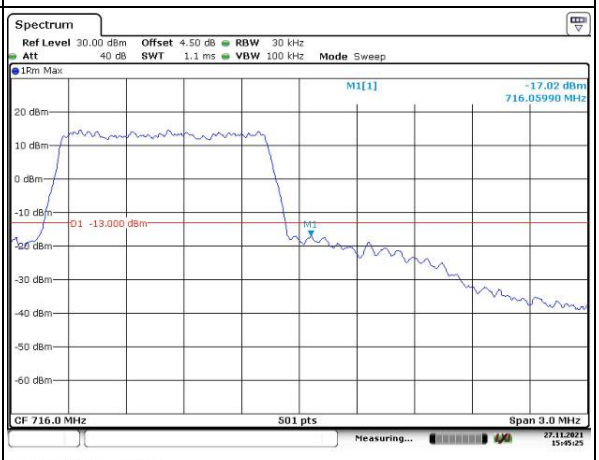
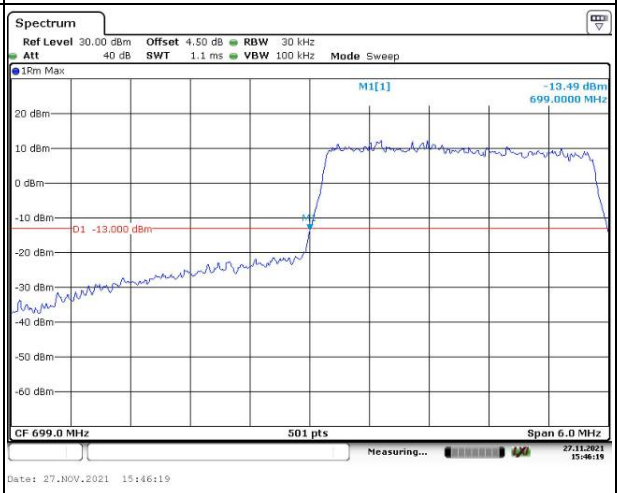
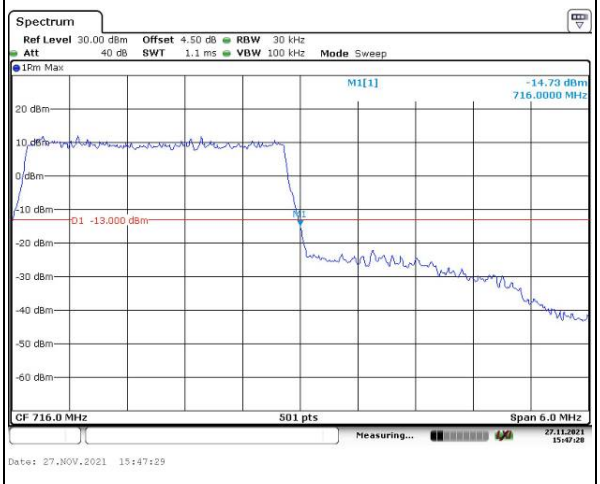
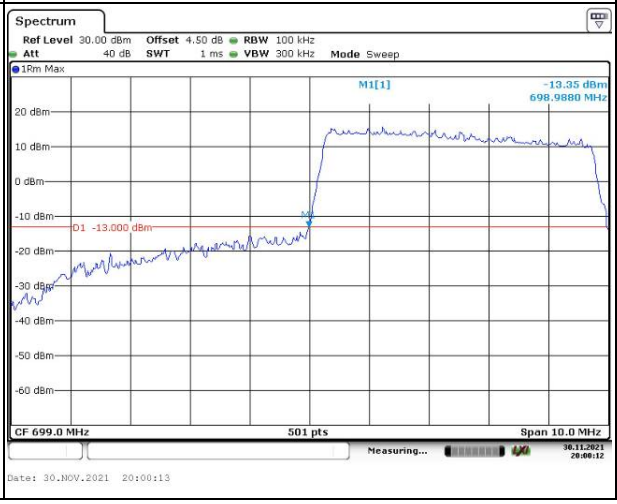
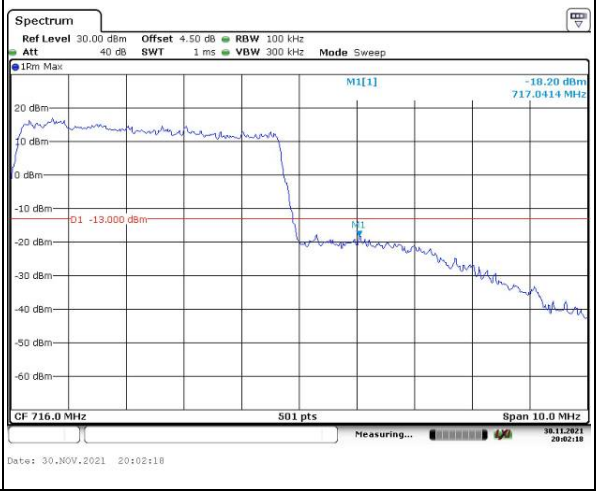
Spurious Emissions at Antenna Terminal		
Channel	**3MHz Bandwidth QPSK**	
Lowest		
Middle		
Highest		

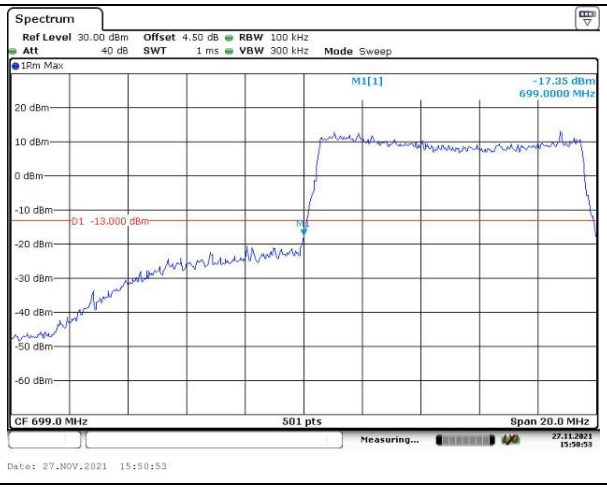
Spurious Emissions at Antenna Terminal		
Channel	**5MHz Bandwidth QPSK**	
Lowest		
Middle		
Highest		

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		

4.10 Antenna Port Test Data and Results for LTE Band 17

Serial Number:	CR21110024-RF	Test Date:	2021/1/5
Test Site:	RF	Test Mode:	Transmitting
Tester:	LE Qiao	Test Result:	**Pass**

Environmental Conditions:					
Temperature: (℃)	24	Relative Humidity: (%)	60	ATM Pressure: (kPa)	100.2

Test Equipment List and Details:					
Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	Spectrum Analyzer	101474	2021/7/22	2022/7/21
zhuoxiang	Coaxial Cable	SMA-178	211001	Each time	N/A
Mini-Circuits	DC Block	BLK-18-S+	1554403	Each time	N/A
Weinschel	Coaxial Attenuators	53-20-34	LN751	Each time	N/A
R&S	Wideband Radio Communication Tester	CMW500	149218	2021/7/22	2022/7/21
BACL	TEMP&HUMI Test Chamber	BTH-150	30026	2021/7/22	2022/7/22
UNI-T	Multimeter	UT39A+	C210582554	2021/9/30	2022/9/30
E-Microwave	Two-way Spliter	ODP-1-6	OE0120176	Each Time	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):	3	Antenna Gain (dBd):	0.85	Cable Loss (dB):	0.1
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	23.14	22.84	22.96	23.89	34.77
	RB1#13	22.88	23.03	23.02		
	RB1#24	23.02	22.91	22.85		
	RB15#0	21.79	21.90	21.79		
	RB15#10	22.34	22.05	22.10		
	RB25#0	21.84	21.93	22.10		
5MHz 16QAM	RB1#0	21.10	22.31	20.83	23.06	34.77
	RB1#13	20.99	21.86	21.09		
	RB1#24	21.42	21.68	20.97		
	RB15#0	21.37	20.95	20.98		
	RB15#10	21.36	20.98	21.43		
	RB25#0	21.37	21.20	21.41		
10MHz QPSK	RB1#0	22.89	22.73	22.90	23.89	34.77
	RB1#25	22.81	23.02	23.14		
	RB1#49	23.02	23.00	23.10		
	RB25#0	21.88	22.34	22.17		
	RB25#25	21.93	21.83	22.21		
	RB50#0	22.26	21.91	21.91		
10MHz 16QAM	RB1#0	22.35	21.97	21.23	23.33	34.77
	RB1#25	22.58	22.11	21.45		
	RB1#49	22.38	22.49	21.54		
	RB25#0	21.26	21.36	21.41		
	RB25#25	21.01	21.18	21.46		
	RB50#0	21.23	21.19	21.06		
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	5.59	5.68	5.36	13
	RB50#0	5.97	6.00	6.00	13
10MHz 16QAM	RB1#0	6.41	6.70	6.20	13
	RB50#0	6.64	6.84	6.81	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	4.531	4.531	4.511	4.980	5.020	5.000
5MHz 16QAM	4.511	4.531	4.551	4.980	5.040	5.040
10MHz QPSK	8.981	8.981	9.022	9.800	9.840	9.880
10MHz 16QAM	8.942	9.022	9.022	9.800	9.880	9.880
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.**

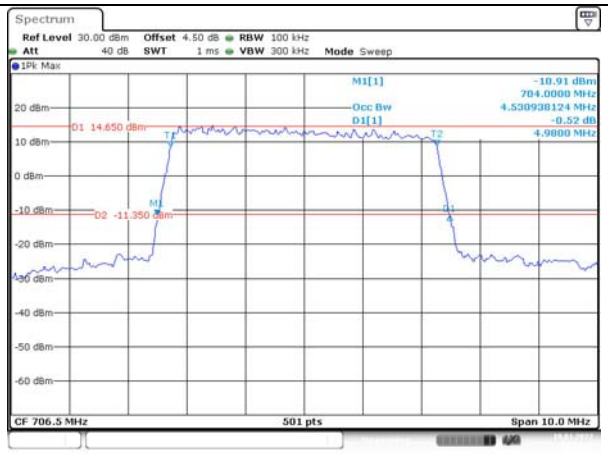
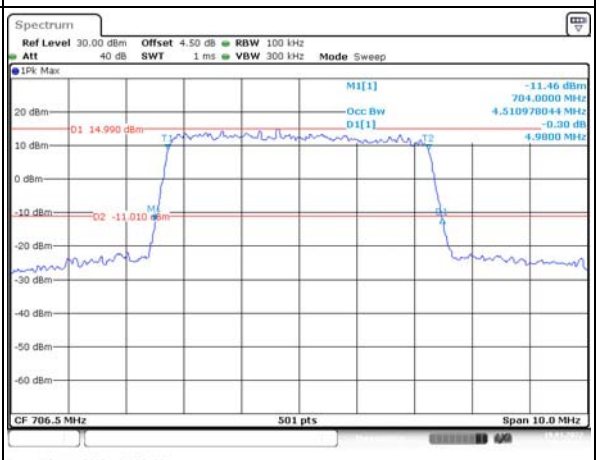
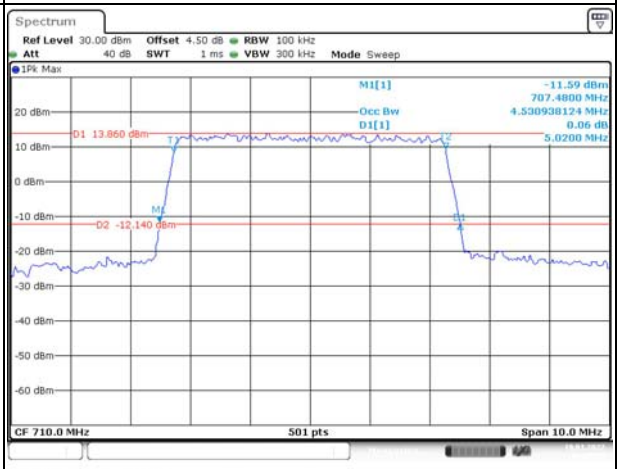
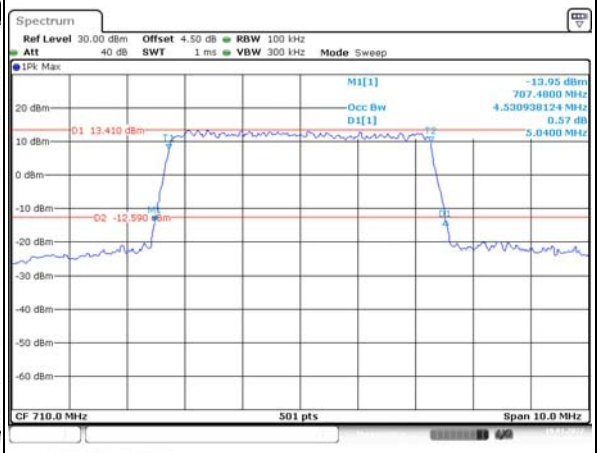
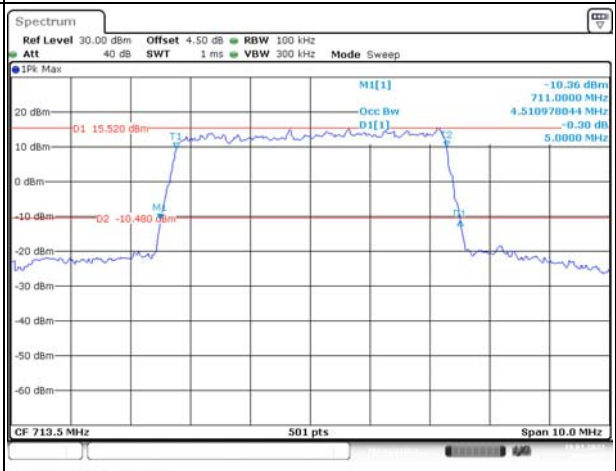
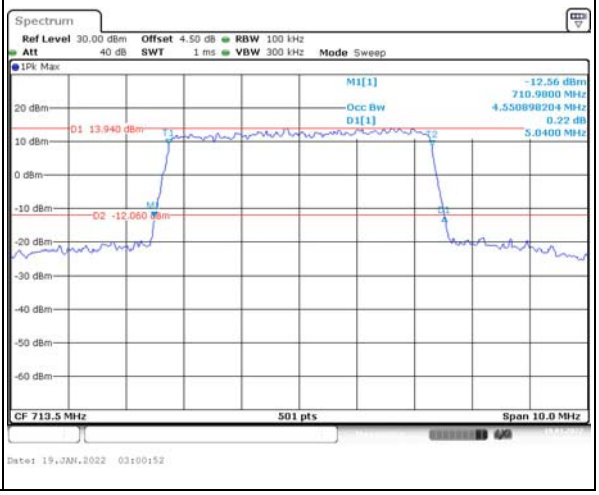
FCC §2.1051, §27.53:Out of band emission, Band Edge	
Result:	**Pass, Please refer to the test plots of Out of band emission, Band Edge.**

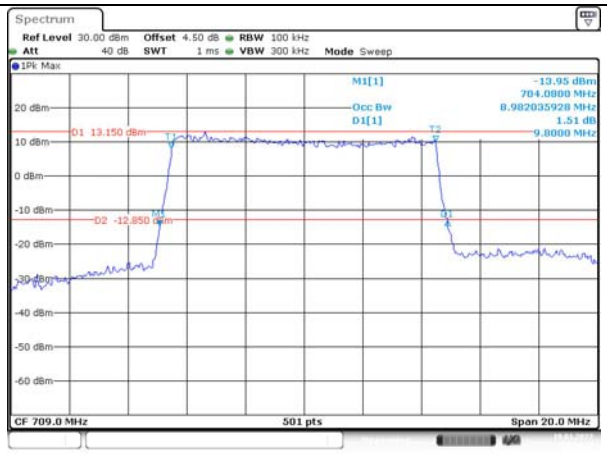
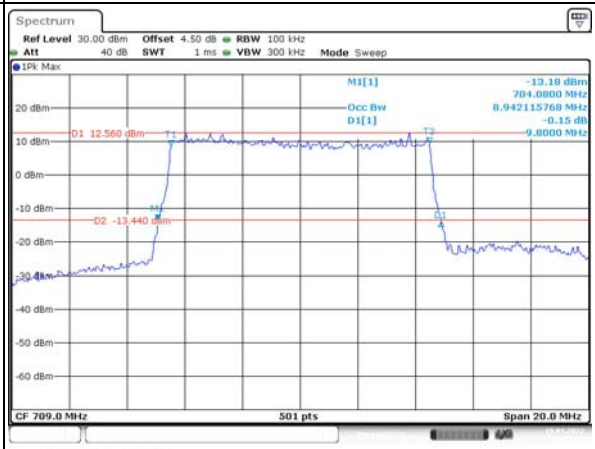
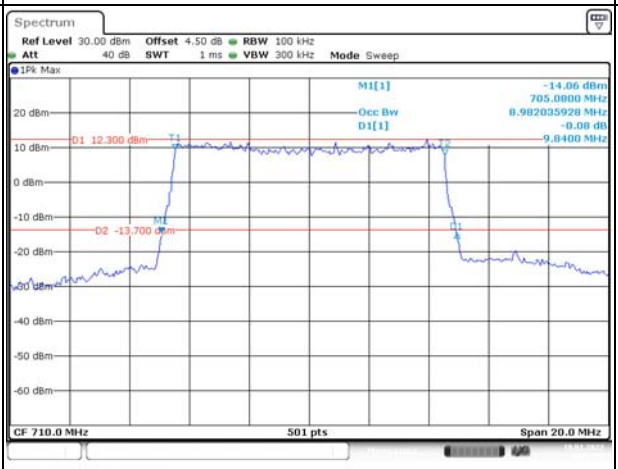
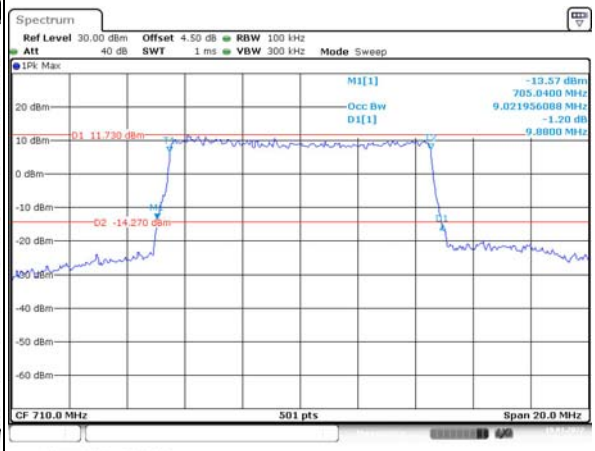
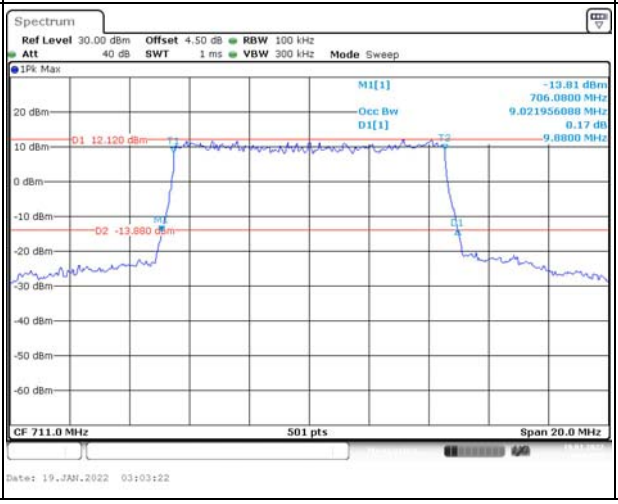
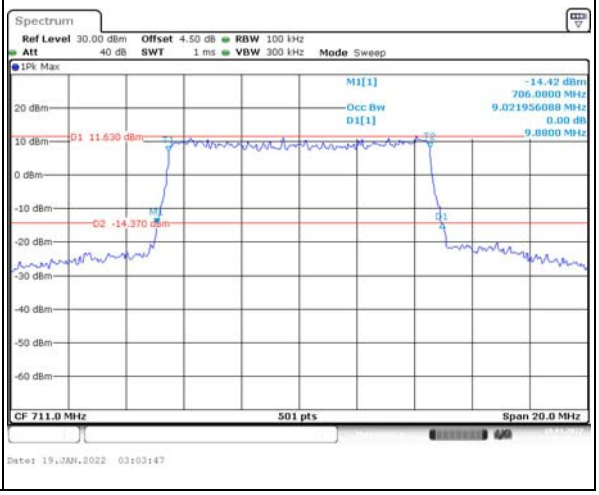
FCC §2.1055, §27.54: Frequency Stability

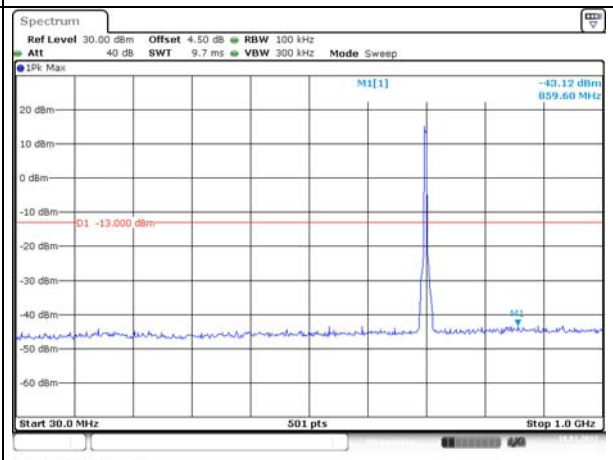
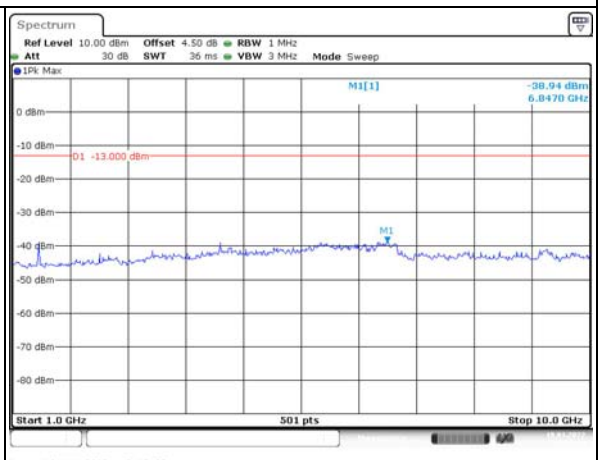
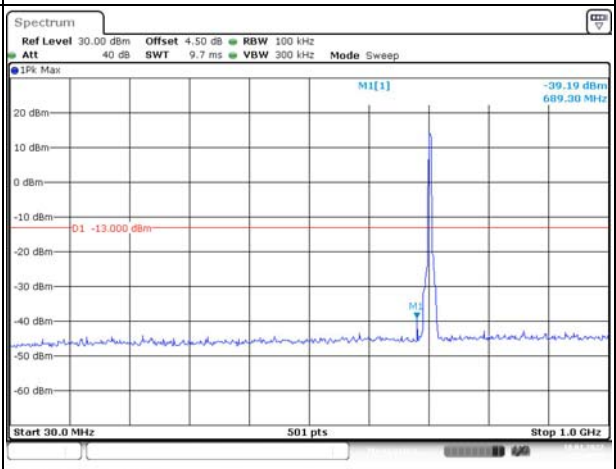
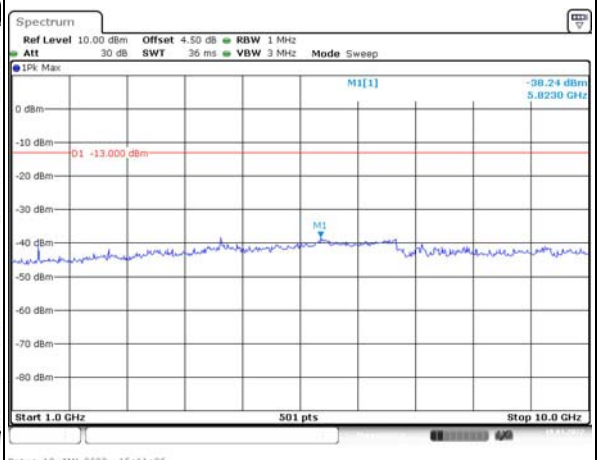
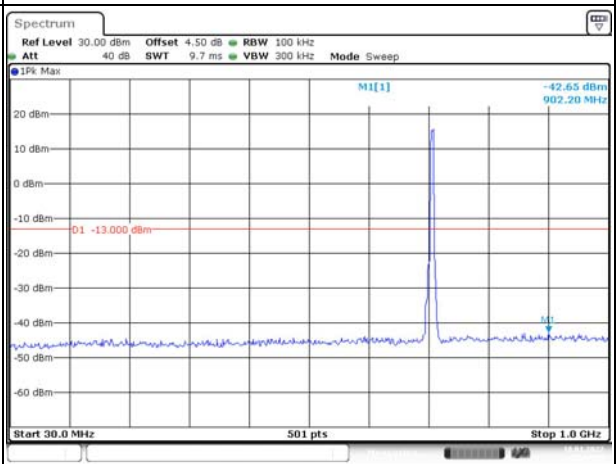
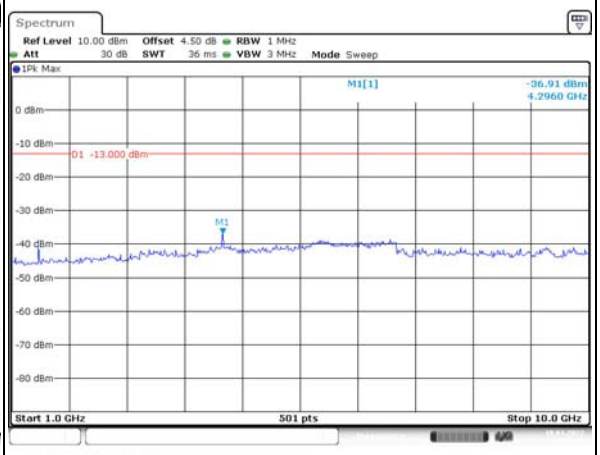
Test Mode:	10M QPSK	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (℃)	Voltage (V_{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.8	704.489	704.00	715.511	716.00
	-20	3.8	704.482	704.00	715.512	716.00
	-10	3.8	704.489	704.00	715.511	716.00
	0	3.8	704.483	704.00	715.513	716.00
	10	3.8	704.487	704.00	715.514	716.00
	20	3.8	704.489	704.00	715.511	716.00
	30	3.8	704.482	704.00	715.515	716.00
	40	3.8	704.489	704.00	715.511	716.00
	50	3.8	704.485	704.00	715.516	716.00
Frequency Stability vs. Voltage	20	3.5	704.489	704.00	715.511	716.00
	20	4.35	704.483	704.00	715.517	716.00
					Result:	**Pass**

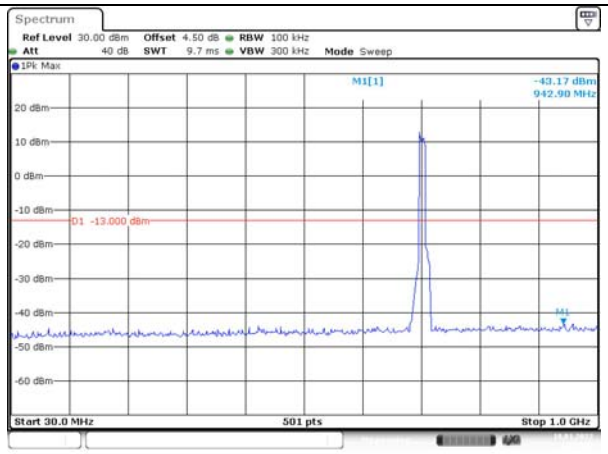
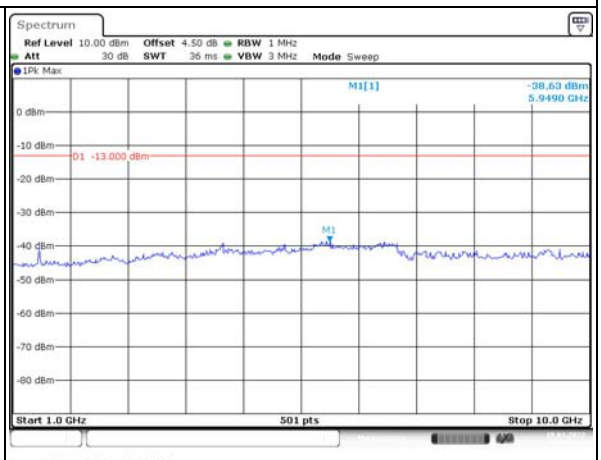
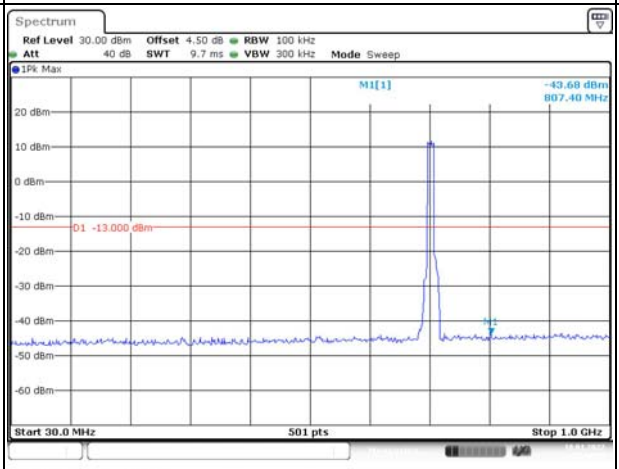
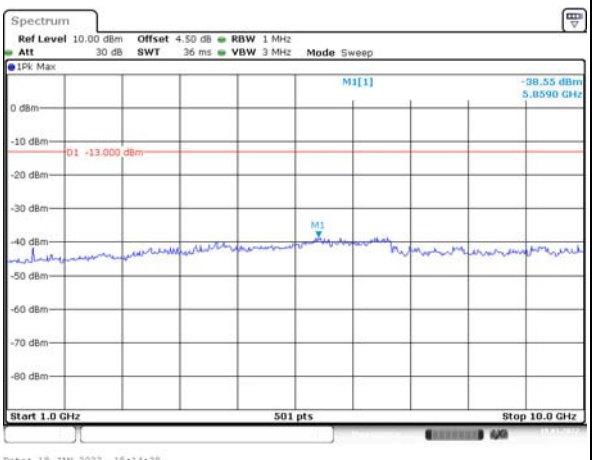
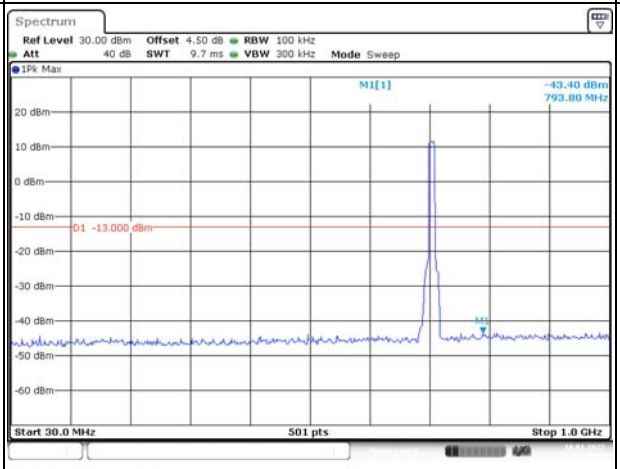
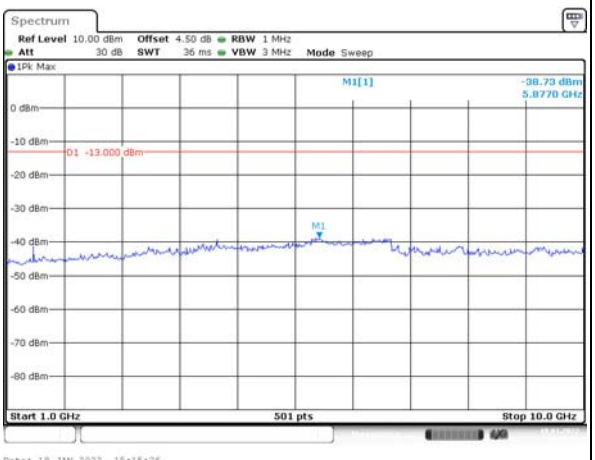
Test Mode:	10M 16QAM	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (℃)	Voltage (V_{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.8	704.489	704.00	715.511	716.00
	-20	3.8	704.485	704.00	715.515	716.00
	-10	3.8	704.489	704.00	715.511	716.00
	0	3.8	704.483	704.00	715.513	716.00
	10	3.8	704.487	704.00	715.512	716.00
	20	3.8	704.489	704.00	715.511	716.00
	30	3.8	704.485	704.00	715.513	716.00
	40	3.8	704.489	704.00	715.511	716.00
	50	3.8	704.486	704.00	715.515	716.00
Frequency Stability vs. Voltage	20	3.5	704.489	704.00	715.511	716.00
	20	4.35	704.481	704.00	715.516	716.00
					Result:	**Pass**

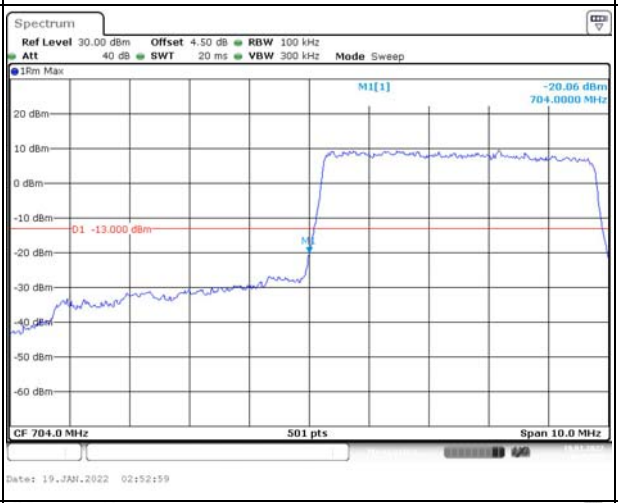
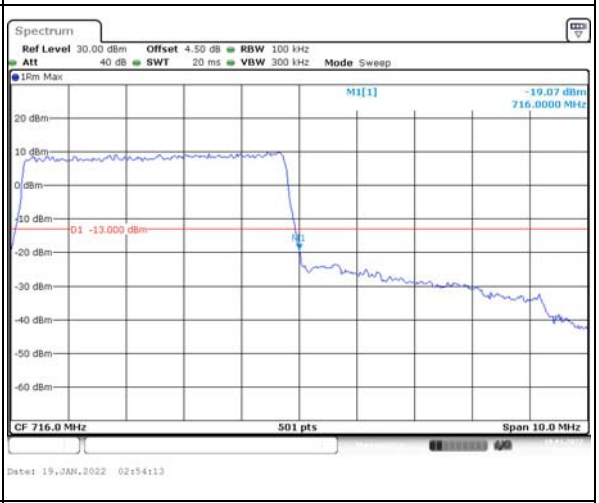
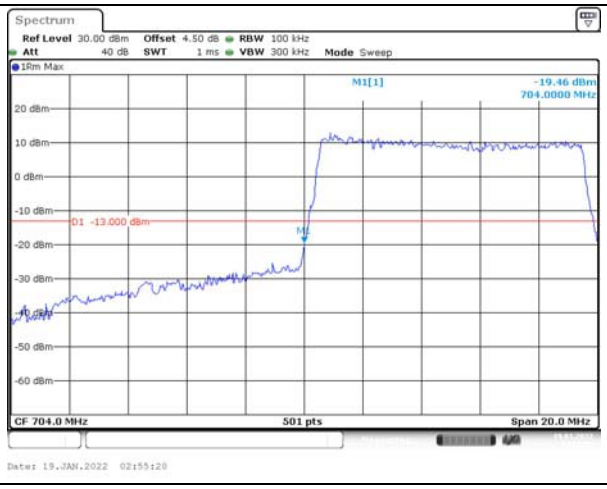
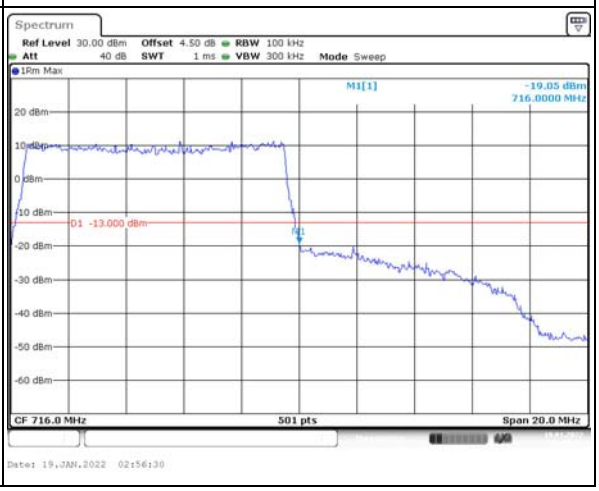
Test Plots:

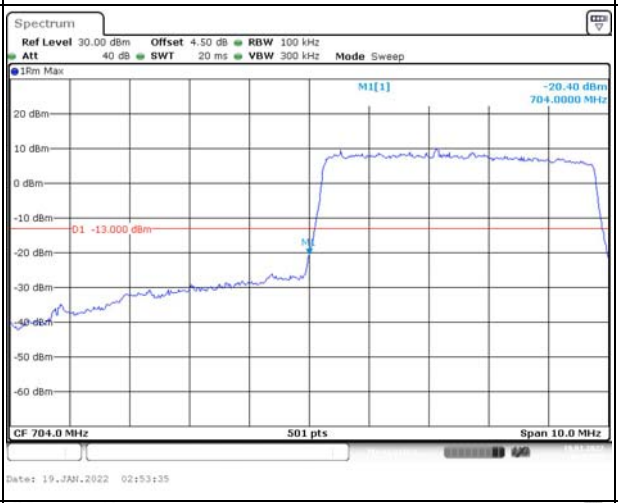
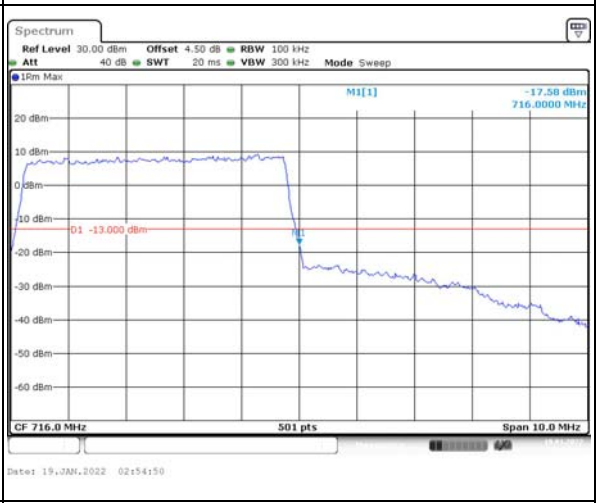
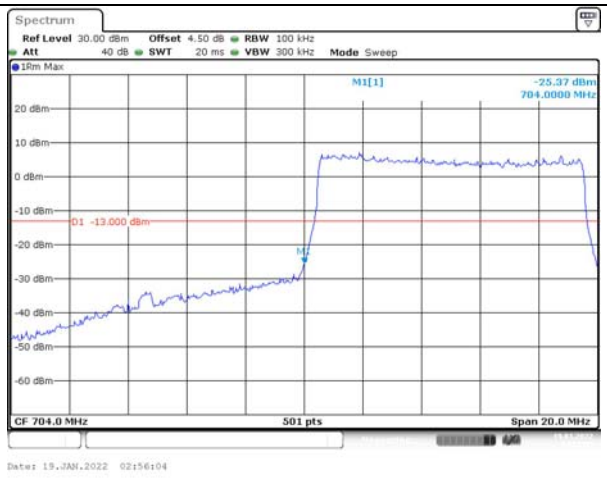
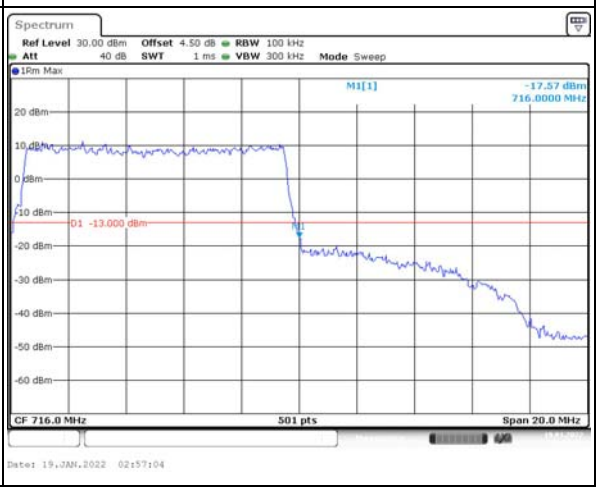
Occupied Bandwidth		
Channel	5MHz Bandwidth QPSK	5MHz Bandwidth 16QAM
Lowest		
Middle		
Highest		

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		

4.10 Antenna Port Test Data and Results for LTE Band 41:

Serial Number:	CR21110024-RF-S4	Test Date:	2021-11-27~2022-01-06
Test Site:	RF	Test Mode:	Transmitting
Tester:	LE Qiao	Test Result:	**Pass**

Environmental Conditions:					
Temperature: (℃)	22.1~22.9	Relative Humidity: (%)	40~66	ATM Pressure: (kPa)	101.4~101.7

Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	Spectrum Analyzer	101474	2021/7/22	2022/7/21
zhuoxiang	Coaxial Cable	SMA-178	211001	Each time	N/A
Mini-Circuits	DC Block	BLK-18-S+	1554403	Each time	N/A
Weinschel	Coaxial Attenuators	53-20-34	LN751	Each time	N/A
R&S	Wideband Radio Communication Tester	CMW500	149218	2021/7/22	2022/7/21
BACL	TEMP&HUMI Test Chamber	BTH-150	30026	2021/7/22	2022/7/22
UNI-T	Multimeter	UT39A+	C210582554	2021/9/30	2022/9/30
E-Microwave	Two-way Spliter	ODP-1-6	OE0120176	Each Time	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):	1			Cable Loss (dB):	0.3
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	22.55	22.54	22.27	23.25	33
	RB1#13	22.41	22.50	22.49		
	RB1#24	22.54	22.52	21.83		
	RB15#0	21.56	21.43	21.28		
	RB15#10	21.64	21.35	21.19		
	RB25#0	21.57	21.38	21.19		
5MHz 16QAM	RB1#0	21.31	21.41	21.70	22.58	33
	RB1#13	21.62	21.88	21.63		
	RB1#24	21.54	21.60	21.59		
	RB15#0	20.88	20.68	20.61		
	RB15#10	20.88	20.71	20.61		
	RB25#0	20.68	20.69	20.63		
10MHz QPSK	RB1#0	22.71	22.31	22.22	23.41	33
	RB1#25	22.61	22.33	22.30		
	RB1#49	22.66	22.34	22.24		
	RB25#0	21.61	21.25	21.19		
	RB25#25	21.54	21.24	21.16		
	RB50#0	21.52	21.26	21.16		
10MHz 16QAM	RB1#0	21.84	21.74	22.12	22.82	33
	RB1#25	21.72	21.77	22.02		
	RB1#49	21.82	21.70	21.77		
	RB25#0	20.70	20.60	20.47		
	RB25#25	20.74	20.58	20.46		
	RB50#0	20.76	20.47	20.29		
15MHz QPSK	RB1#0	22.74	22.32	22.01	23.44	33
	RB1#38	22.60	22.41	22.09		
	RB1#74	22.66	22.37	21.90		
	RB36#0	21.66	21.41	21.22		
	RB36#39	21.46	21.22	21.14		
	RB75#0	21.47	21.28	21.12		
15MHz 16QAM	RB1#0	21.82	21.86	21.44	22.66	33
	RB1#38	21.96	21.65	21.45		
	RB1#74	21.70	21.84	21.35		
	RB36#0	20.74	20.60	20.32		
	RB36#39	20.84	20.49	20.25		
	RB75#0	20.77	20.61	20.31		

20MHz QPSK	RB1#0	22.48	22.42	22.53	23.35	33
	RB1#50	22.61	22.46	22.50		
	RB1#99	22.65	22.60	22.54		
	RB50#0	21.45	21.56	21.43		
	RB50#50	21.56	21.53	21.41		
	RB100#0	21.43	21.57	21.39		
20MHz 16QAM	RB1#0	21.83	21.33	22.24	22.94	33
	RB1#50	21.81	21.38	22.17		
	RB1#99	22.04	21.40	22.21		
	RB50#0	20.86	20.77	20.66		
	RB50#50	20.97	20.77	20.57		
	RB100#0	20.80	20.76	20.61		
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	6.90	5.74	6.43	13
	RB100#0	7.68	6.52	5.91	13
20MHz 16QAM	RB1#0	5.25	6.29	6.43	13
	RB100#0	5.30	5.54	7.48	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	4.940	5.160	5.120
5MHz 16QAM	4.511	4.511	4.511	4.980	4.960	5.120
10MHz QPSK	8.981	8.942	8.942	9.840	9.880	9.920
10MHz 16QAM	8.981	8.942	8.981	9.800	9.800	10.040
15MHz QPSK	13.593	13.473	13.473	16.260	15.180	15.420
15MHz 16QAM	13.533	13.593	13.593	15.540	16.860	16.200
20MHz QPSK	17.964	17.964	17.964	19.600	19.600	19.680
20MHz 16QAM	17.964	17.964	17.964	19.680	19.680	20.000
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	2555.522	2555.00	2654.477	2655
	-20	3.8	2555.521	2555.00	2654.474	2655
	-10	3.8	2555.524	2555.00	2654.475	2655
	0	3.8	2555.528	2555.00	2654.471	2655
	10	3.8	2555.523	2555.00	2654.473	2655
	20	3.8	2555.529	2555.00	2654.471	2655
	30	3.8	2555.527	2555.00	2654.477	2655
	40	3.8	2555.522	2555.00	2654.471	2655
	50	3.8	2555.527	2555.00	2654.475	2655
Frequency Stability vs. Voltage	20	3.5	2555.523	2555.00	2654.476	2655
	20	4.35	2555.529	2555.00	2654.471	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	2555.527	2555.00	2654.472	2655
	-20	3.8	2555.529	2555.00	2654.471	2655
	-10	3.8	2555.528	2555.00	2654.475	2655
	0	3.8	2555.529	2555.00	2654.471	2655
	10	3.8	2555.523	2555.00	2654.477	2655
	20	3.8	2555.529	2555.00	2654.471	2655
	30	3.8	2555.527	2555.00	2654.471	2655
	40	3.8	2555.529	2555.00	2654.473	2655
	50	3.8	2555.528	2555.00	2654.471	2655
Frequency Stability vs. Voltage	20	3.5	2555.529	2555.00	2654.477	2655
	20	4.35	2555.527	2555.00	2654.471	2655
					Result:	**Pass**