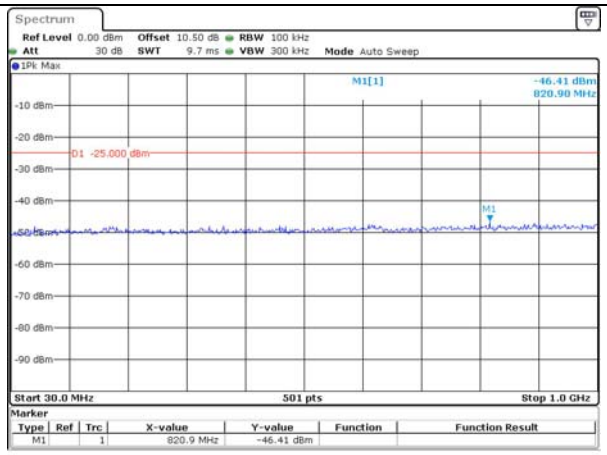
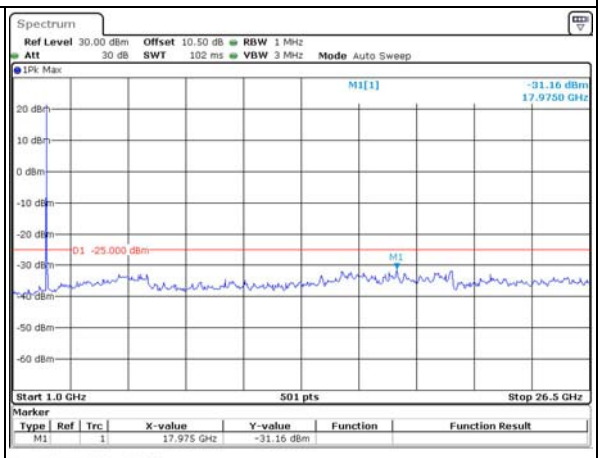
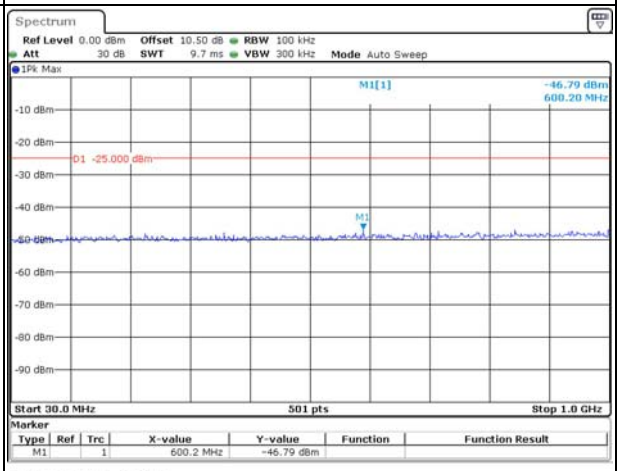
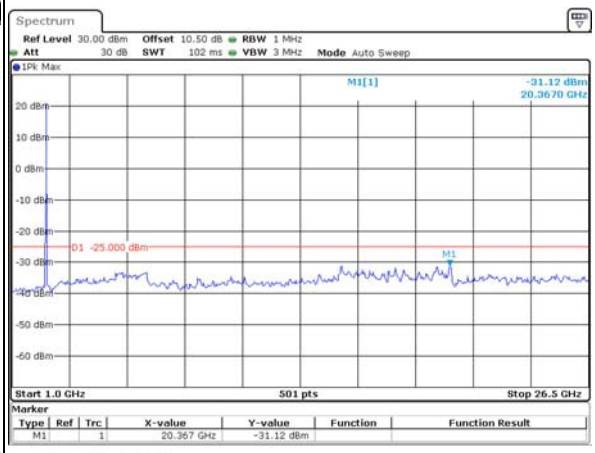
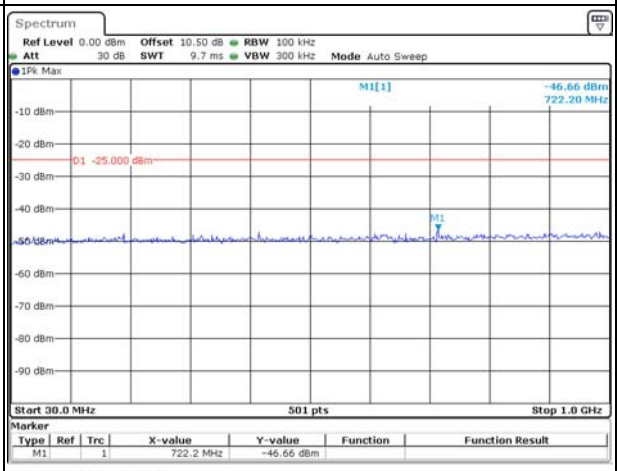
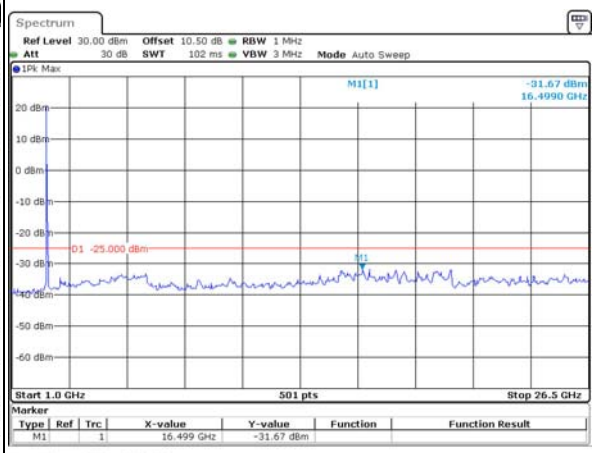
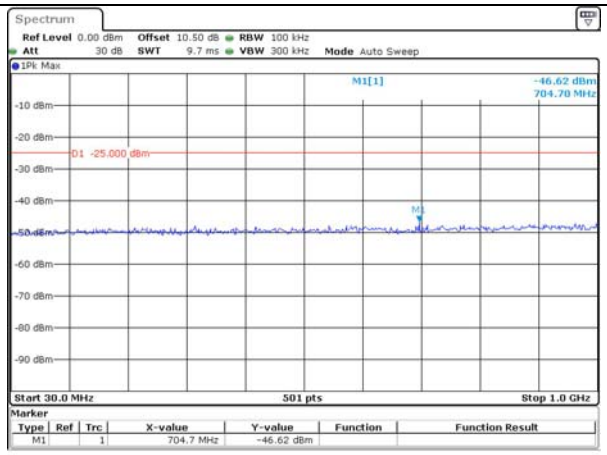
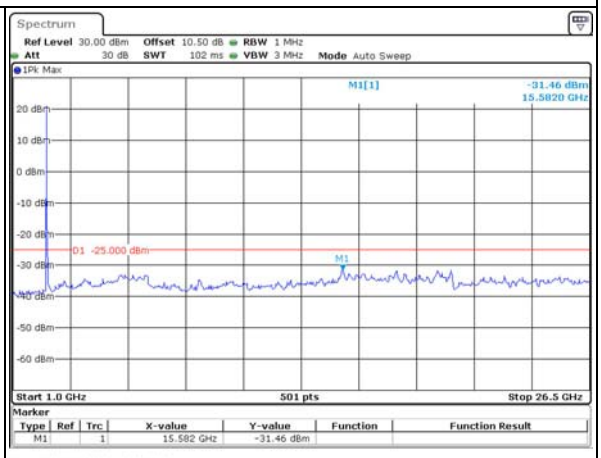
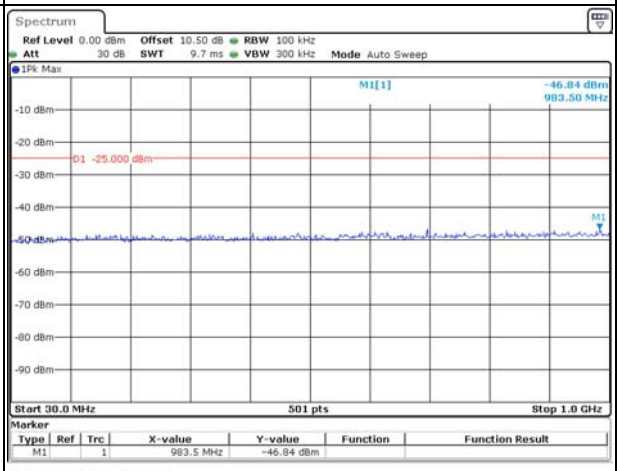
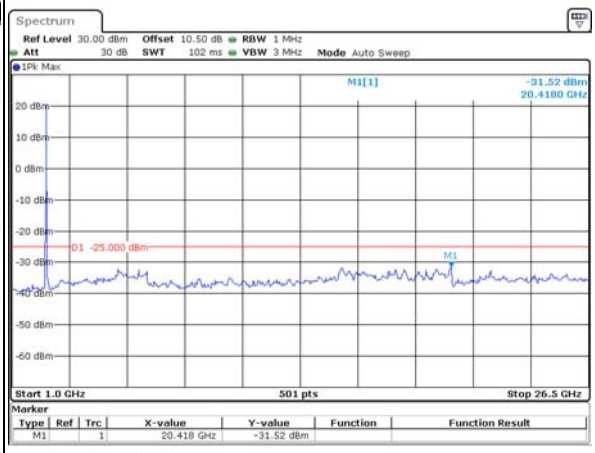
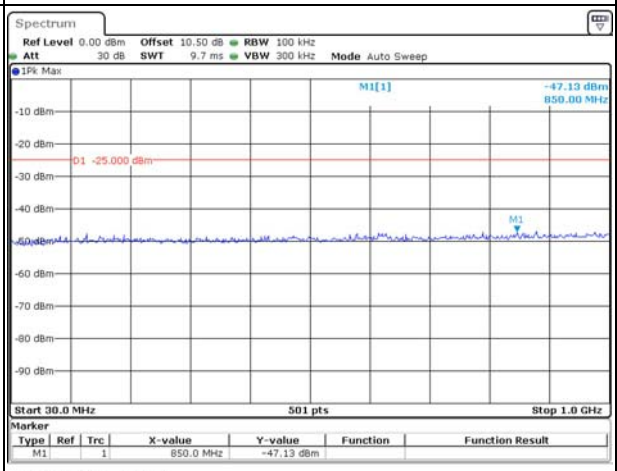
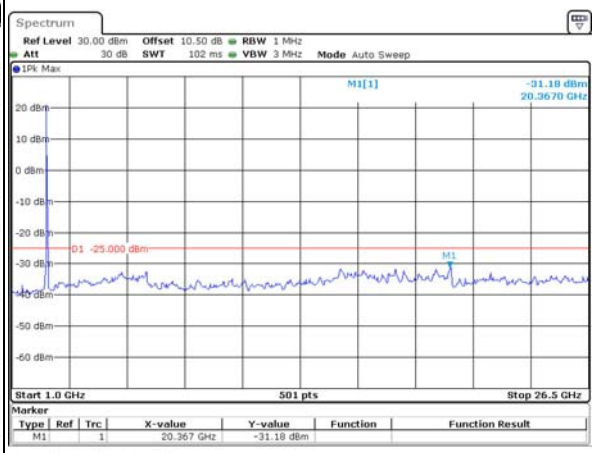
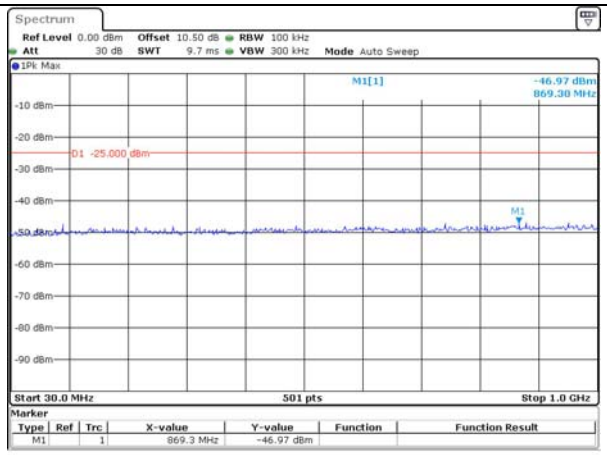
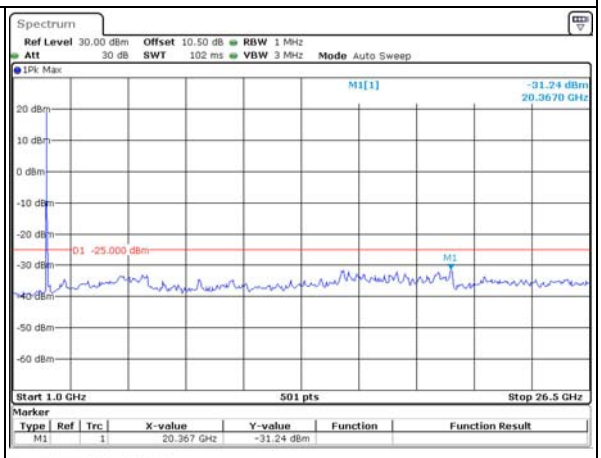
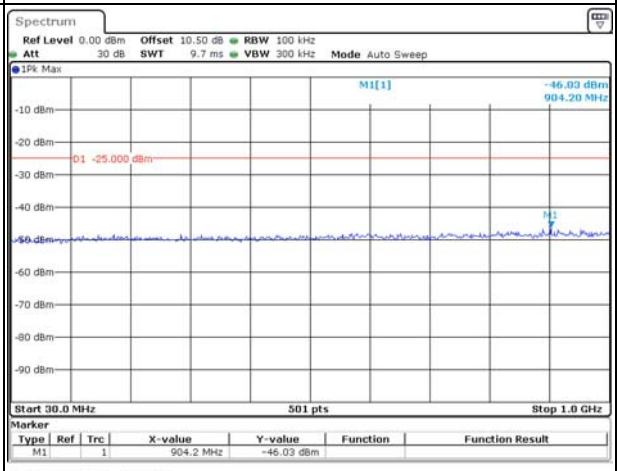
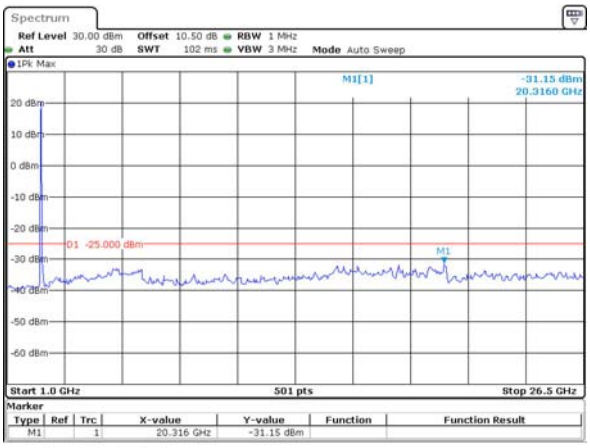
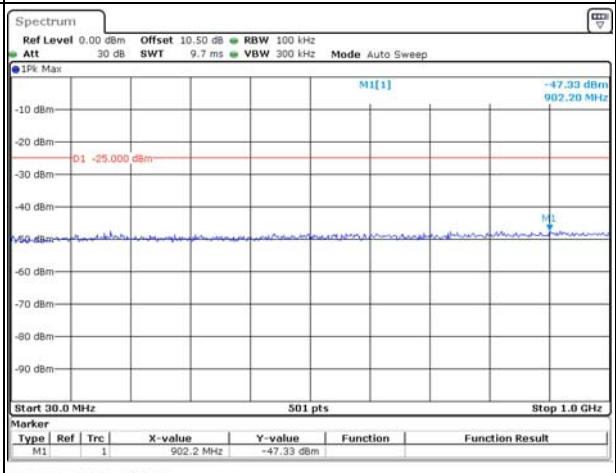
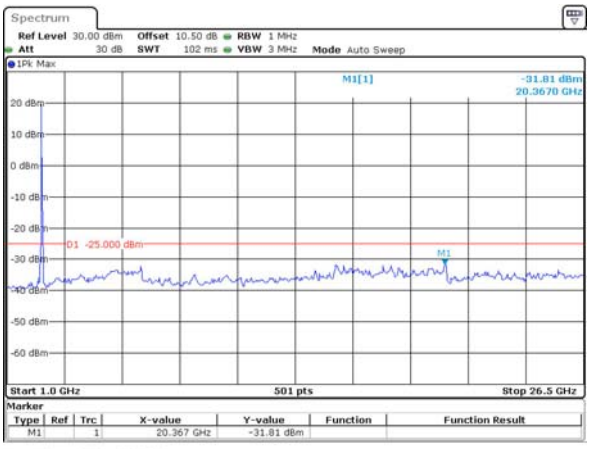
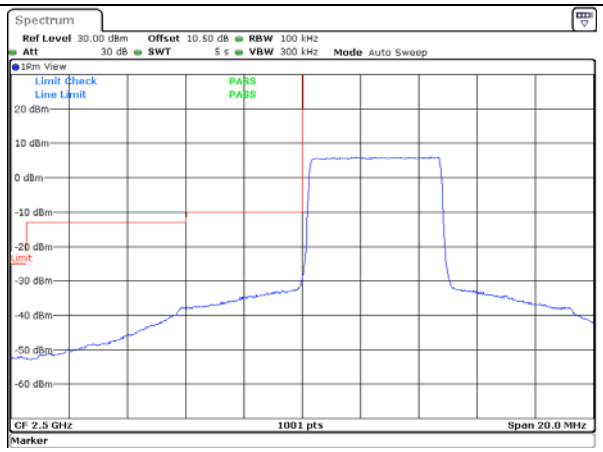
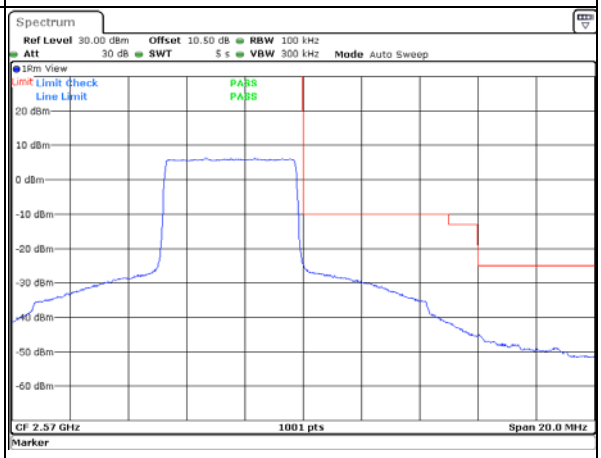
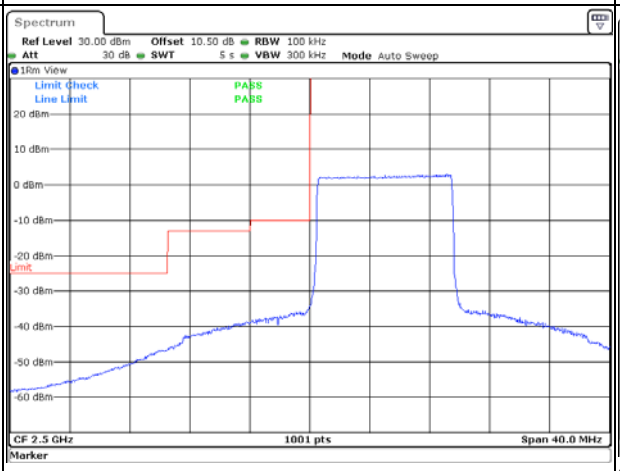
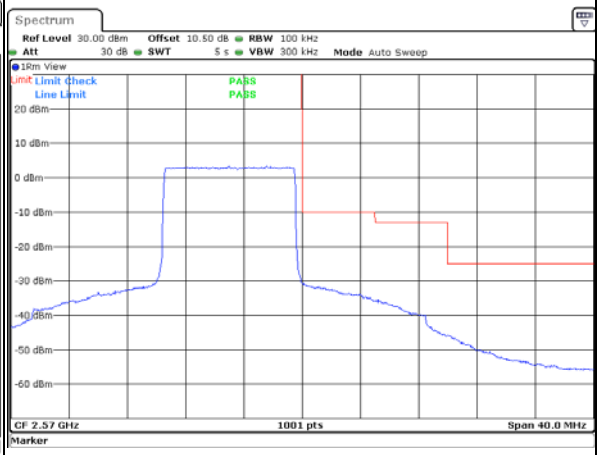
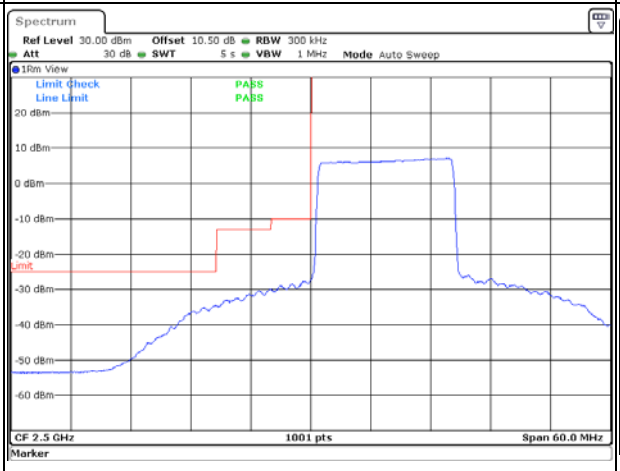
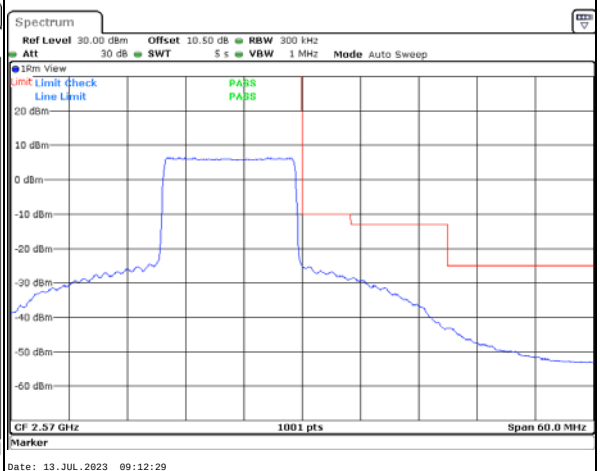
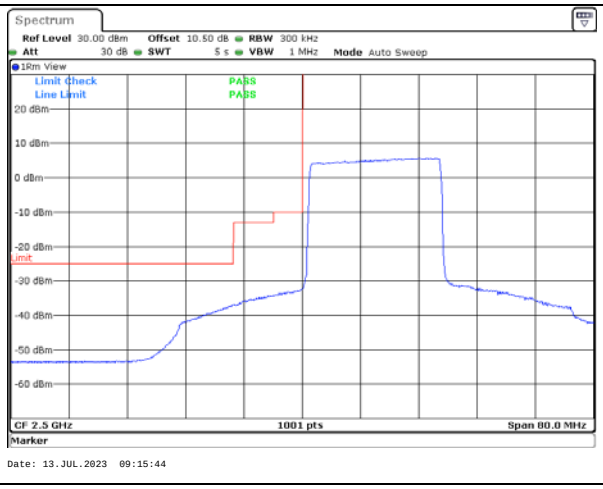
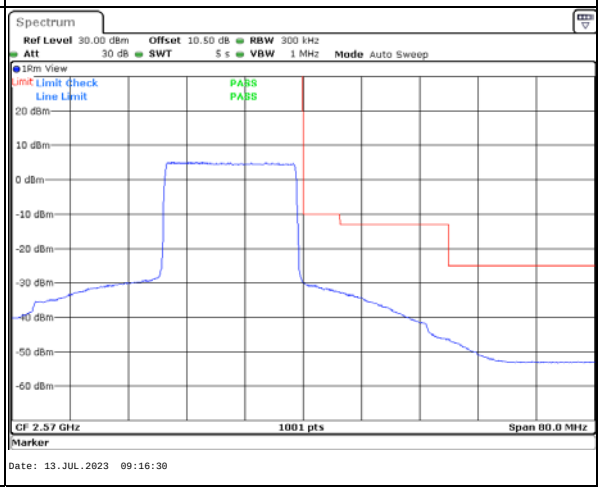
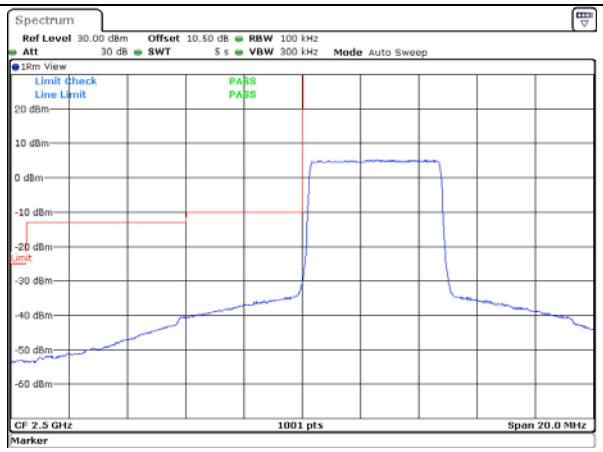
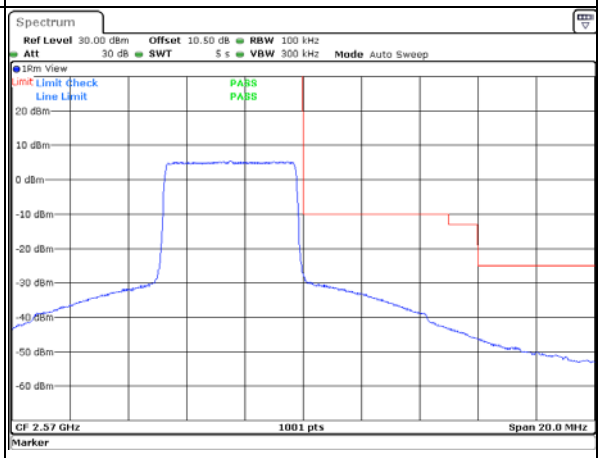
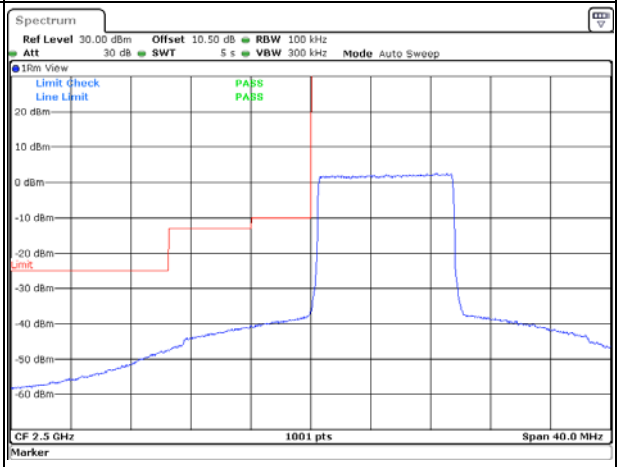
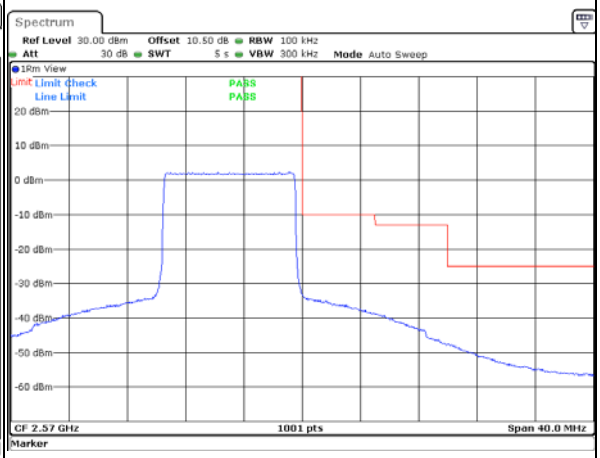
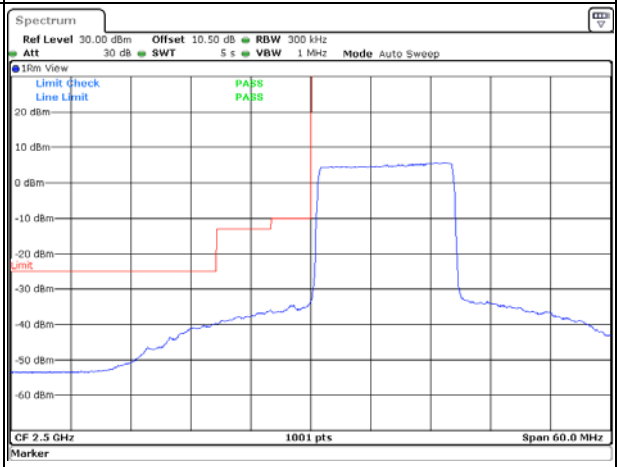
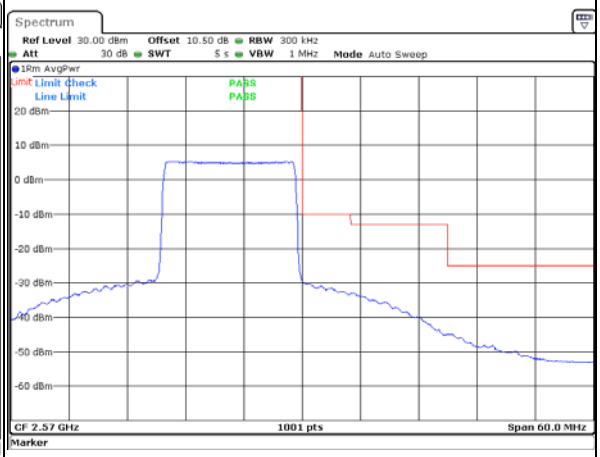
Spurious Emissions at Antenna Terminal		
Channel	**10MHz Bandwidth QPSK**	
Lowest		
Middle		
Highest		

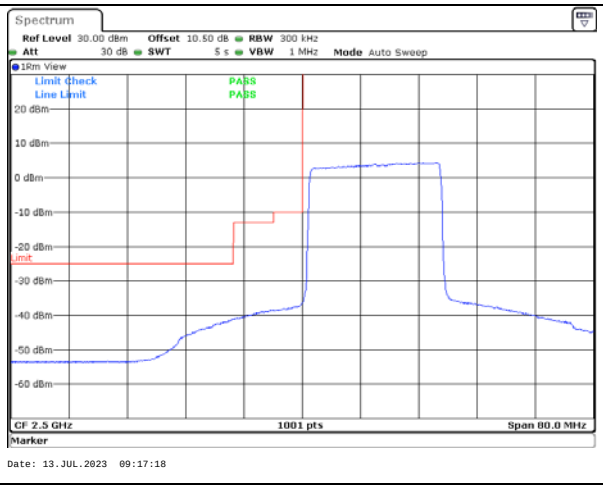
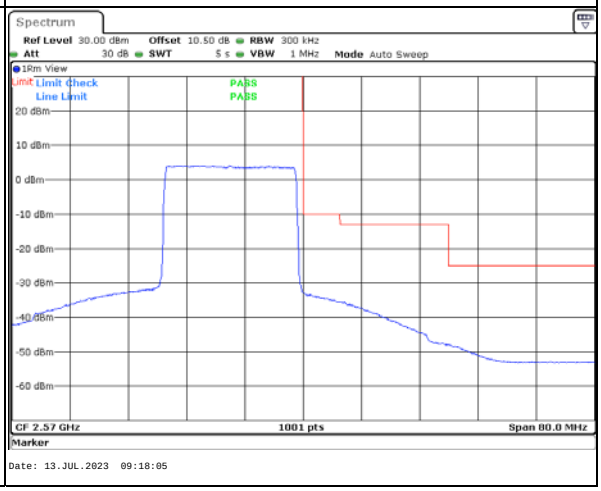
Spurious Emissions at Antenna Terminal		
Channel	**15MHz Bandwidth QPSK**	
Lowest		
Middle		
Highest		

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		

4.10 Antenna Port Test Data and Results for LTE Band 12

Serial Number:	27XL-1	Test Date:	2023/7/12~2023/7/13
Test Site:	RF	Test Mode:	Transmitting
Tester:	Arthur Su	Test Result:	**Pass**

Environmental Conditions:					
Temperature: (℃)	25.9~26.1	Relative Humidity: (%)	56~60	ATM Pressure: (kPa)	100.2~100.3

Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSV40	101943	2023/3/31	2024/3/30
R&S	Wideband Radio Communication Tester	CMW500	143458	2023/3/31	2024/3/30
zhuoxiang	Coaxial Cable	SMA-178	211001	Each time	N/A
YINSAIGE	Coaxial Cable	SS402	SJ0100001	Each time	N/A
BACL	TEMP&HUMI Test Chamber	BTH-150-40	30174	2023/3/31	2024/3/30
UNI-T	Multimeter	UT39A+	C210582554	2022/9/29	2023/9/28
ZHAOXIN	DC Power Supply	RXN-6010D	21R6010D0912386	N/A	N/A
eastsheep	Coaxial Attenuator	2W-SMA-JK-18G	21060301	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).*

Test Frequency For Each Mode:

Operation Bandwidth	Lowest Frequency (MHz)	Middle Frequency (MHz)	Highest Frequency (MHz)
1.4MHz	699.7	707.5	715.3
3MHz	700.5	707.5	714.5
5MHz	701.5	707.5	713.5
10MHz	704	707.5	711

Test Data:

FCC§2.1046;§ 27.50(c) (10)

RF Output Power:

Test Bandwidth & Modulation	Resource Block & RB offset	Conducted Average Output Power(dBm)			Maximum ERP (dBm)	ERP Limit (dBm)
		Lowest Channel	Middle Channel	Highest Channel		
1.4MHz QPSK	RB1#0	22.23	21.87	21.7	17.05	34.77
	RB1#3	21.98	21.83	22.25		
	RB1#5	22.4	21.92	22.24		
	RB3#0	22.06	22.02	22.07		
	RB3#3	21.73	21.62	22.17		
	RB6#0	22.01	22.15	21.67		
1.4MHz 16QAM	RB1#0	21.71	22.09	21.91	16.97	34.77
	RB1#3	22.15	21.89	22		
	RB1#5	21.72	21.87	21.74		
	RB3#0	22.3	22.13	21.89		
	RB3#3	22.32	21.97	21.99		
	RB6#0	22.07	21.97	22.1		
3MHz QPSK	RB1#0	21.04	21.02	20.78	15.94	34.77
	RB1#8	21.19	21.14	21.12		
	RB1#14	20.69	21.1	20.89		
	RB6#0	21.29	20.9	21.11		
	RB6#9	21.17	20.9	21.14		
	RB15#0	20.81	20.84	21.16		
3MHz 16QAM	RB1#0	21.4	21.17	21.14	16.06	34.77
	RB1#8	21.2	20.95	21.41		
	RB1#14	21.08	20.97	21		
	RB6#0	21.21	20.9	20.83		
	RB6#9	21.27	21.05	21.25		
	RB15#0	21.07	21.17	21.12		
5MHz QPSK	RB1#0	21.3	21.36	21.35	16.2	34.77
	RB1#13	21.49	21.27	21.29		
	RB1#24	21.52	21.54	21.54		
	RB15#0	20.99	21.27	21.35		
	RB15#10	21.54	21.3	21.27		
	RB25#0	21.05	21.55	21.47		
5MHz 16QAM	RB1#0	21.25	21.18	21.63	16.35	34.77
	RB1#13	21.7	21.35	21.69		
	RB1#24	21.1	21.1	21		
	RB15#0	21.38	21.47	21.57		
	RB15#10	21.21	21.32	21.61		
	RB25#0	21.3	21.28	21.37		
10MHz QPSK	RB1#0	21.18	21.71	21.16	16.36	34.77
	RB1#25	21.57	21.31	21.59		
	RB1#49	21.13	21.65	21.25		

	RB25#0	21.12	21.65	21.71		
	RB25#25	21.5	21.12	20.92		
	RB50#0	21.3	21.19	21.31		
10MHz 16QAM	RB1#0	21.25	21.63	21.54	16.28	34.77
	RB1#25	21.3	21.31	21.19		
	RB1#49	21.24	21.43	21.28		
	RB25#0	21.47	21.16	21.02		
	RB25#25	21.23	21.05	21.44		
	RB50#0	21.31	21.57	21.63		

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

Result:	**Pass**

Peak-to-average Ratio(PAR)

Test Bandwidth & Modulation	Resource Block & RB offset	Peak-to-average Ratio(dB)			Limit (dB)
		Lowest Channel	Middle Channel	Highest Channel	
10MHz QPSK	RB1#0	4.55	4.84	4.7	13
	RB50#0	5.19	5.1	5.04	13
10MHz 16QAM	RB1#0	5.33	5.59	5.62	13
	RB50#0	6.17	6.12	6.12	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	1.096	1.102	1.296	1.314	1.284
1.4MHz 16QAM	1.096	1.096	1.09	1.314	1.284	1.29
3MHz QPSK	2.683	2.683	2.683	2.88	2.868	2.868
3MHz 16QAM	2.683	2.683	2.683	2.88	2.88	2.928
5MHz QPSK	4.511	4.511	4.531	5.24	5.22	5.22
5MHz 16QAM	4.551	4.551	4.531	5.22	5.26	5.14
10MHz QPSK	8.942	8.942	8.982	9.88	9.92	9.88
10MHz 16QAM	8.942	8.942	8.942	9.92	9.88	9.8

Note: The test plots please refer to the Plots of Occupied Bandwidth

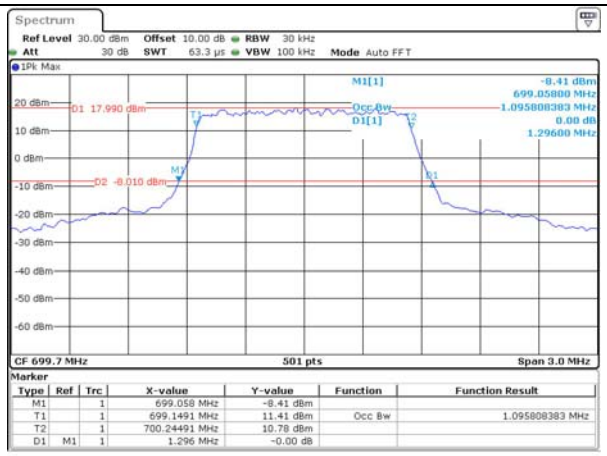
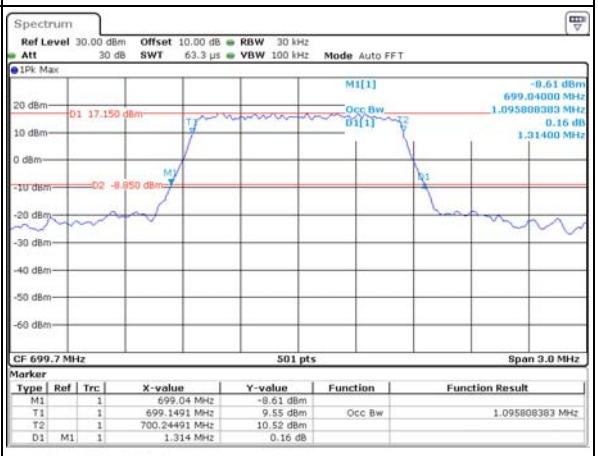
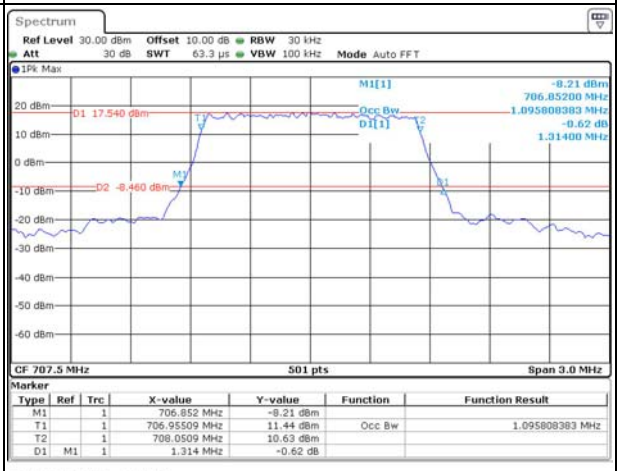
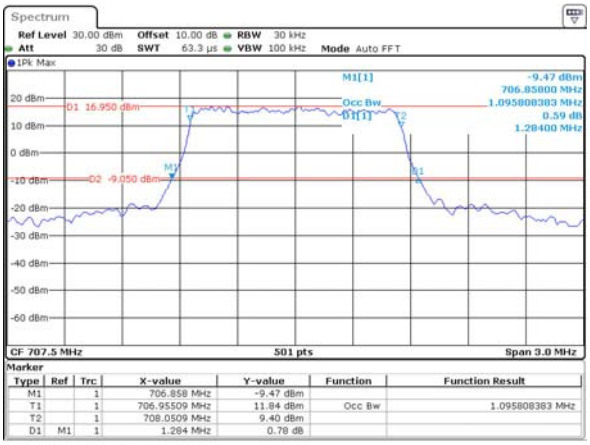
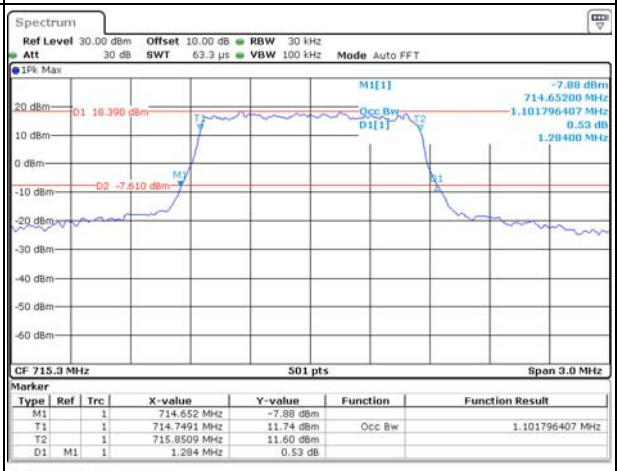
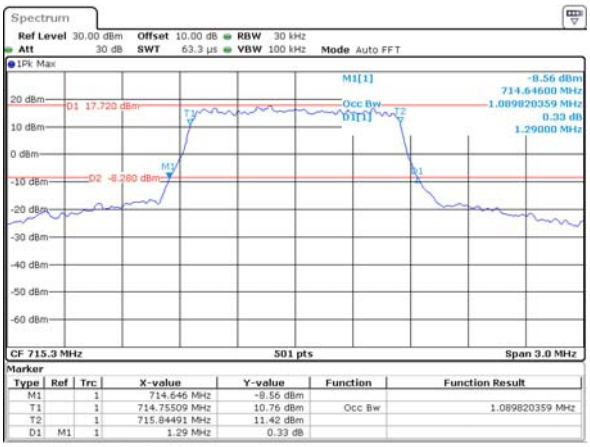
FCC §2.1051, §27.53:Spurious Emissions at Antenna Terminal	
Result:	**Pass, Please refer to the test plots of Spurious Emissions at Antenna Terminal.**

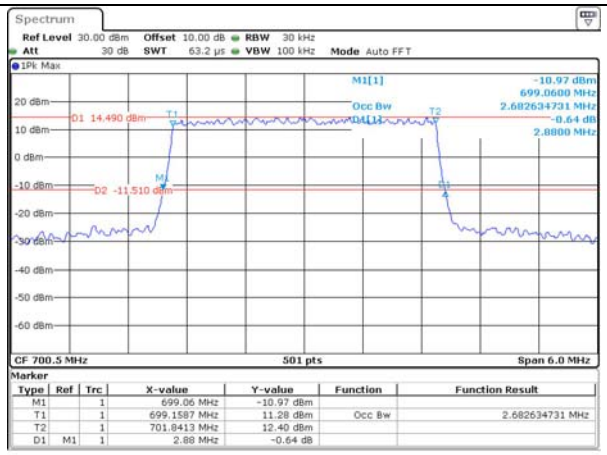
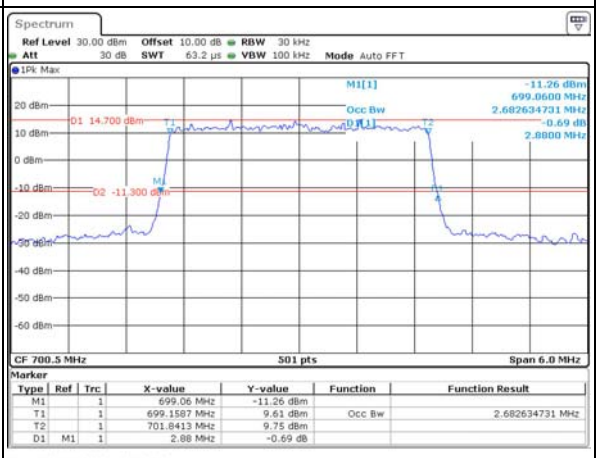
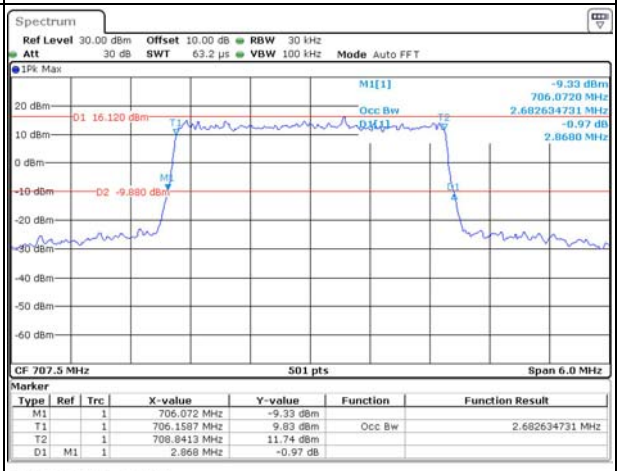
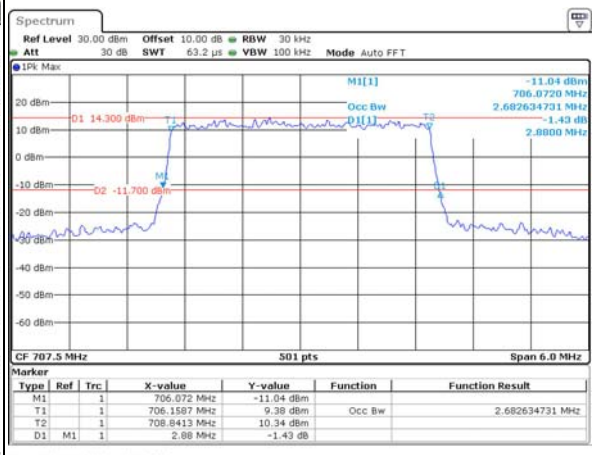
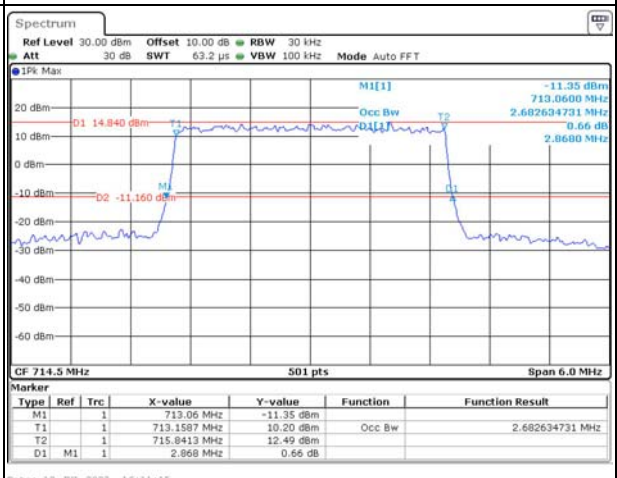
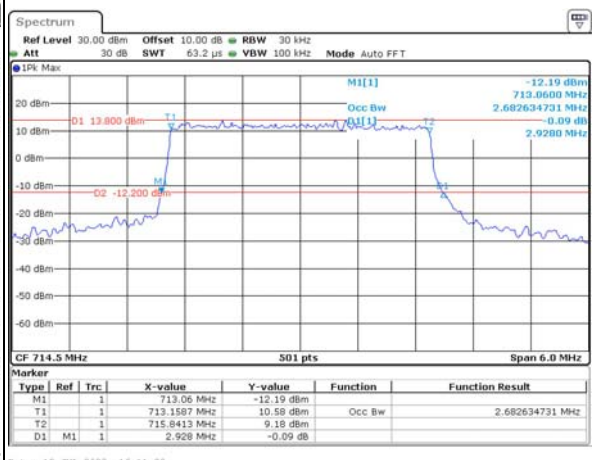
FCC §2.1051, §27.53:Out of band emission, Band Edge	
Result:	**Pass, Please refer to the test plots of Out of band emission, Band Edge.**

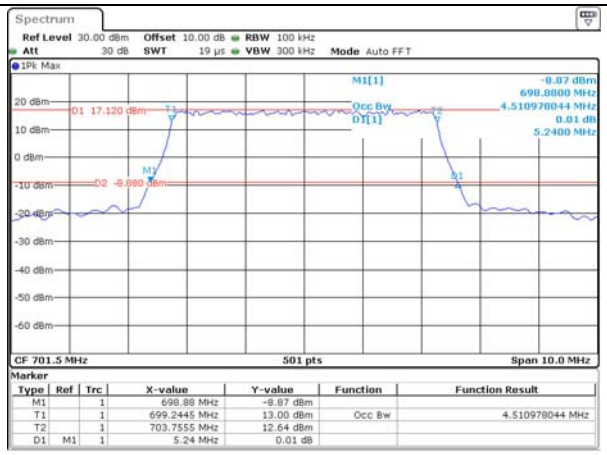
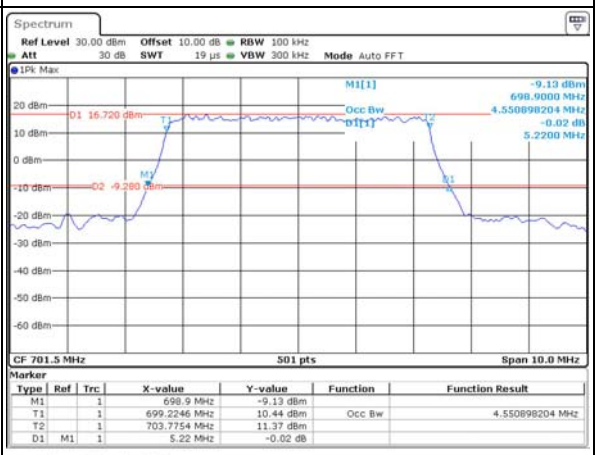
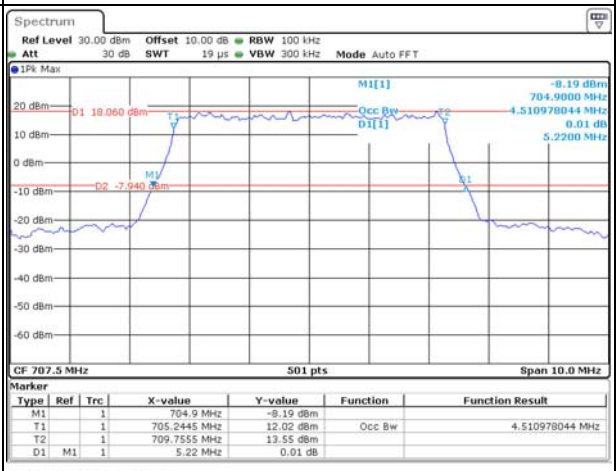
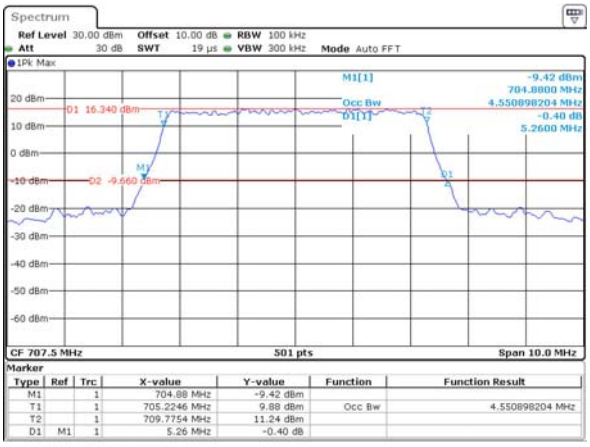
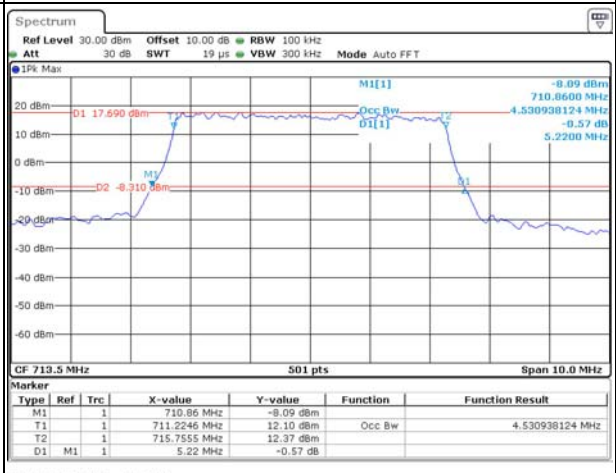
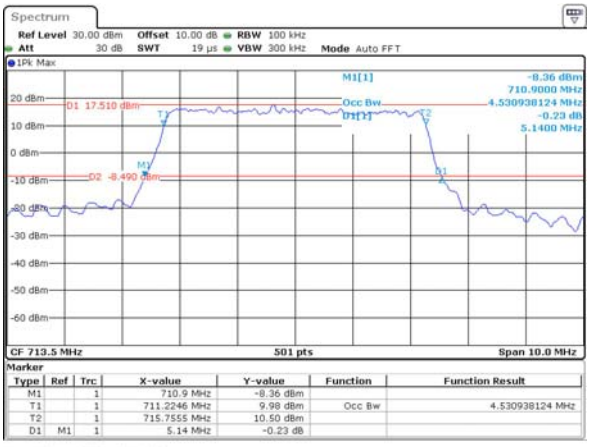
FCC §2.1055, §27.54: Frequency Stability						
Test Mode:	10M QPSK	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (℃)	Voltage (V_{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.85	699.018	699.00	715.978	716.00
	-20	3.85	699.012	699.00	715.988	716.00
	-10	3.85	699.015	699.00	715.988	716.00
	0	3.85	699.018	699.00	715.981	716.00
	10	3.85	699.017	699.00	715.986	716.00
	20	3.85	699.022	699.00	715.981	716.00
	30	3.85	699.014	699.00	715.983	716.00
	40	3.85	699.022	699.00	715.989	716.00
	50	3.85	699.016	699.00	715.989	716.00
Frequency Stability vs. Voltage	20	3.5	699.020	699.00	715.978	716.00
	20	4.4	699.018	699.00	715.987	716.00
					Result:	**Pass**

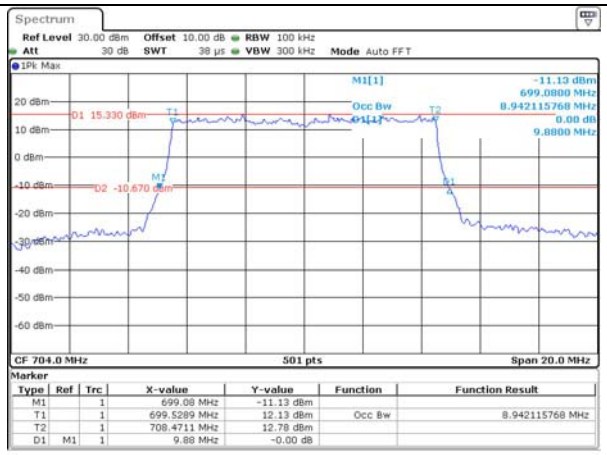
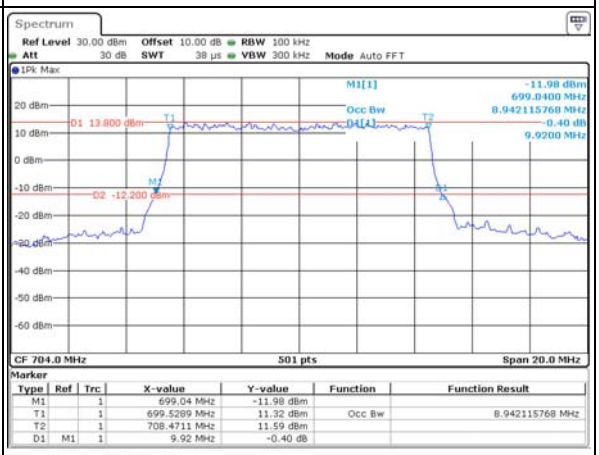
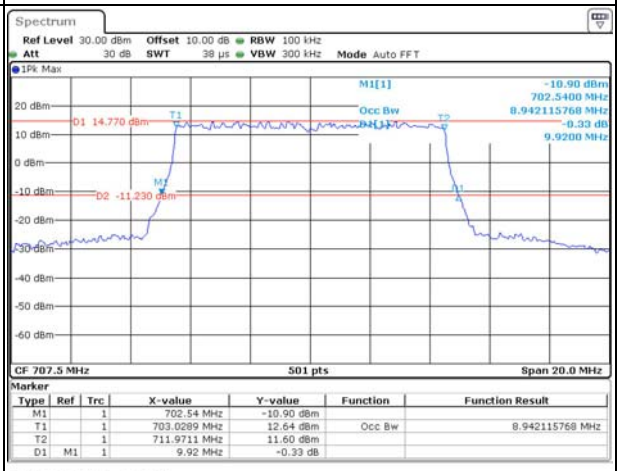
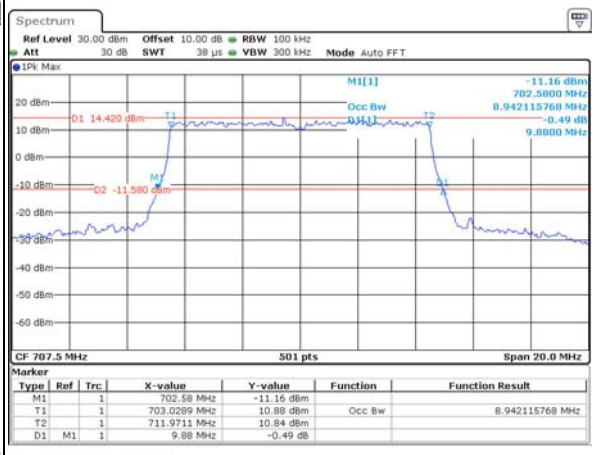
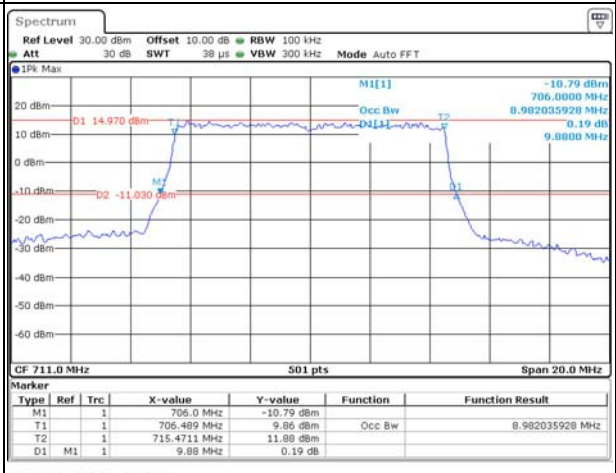
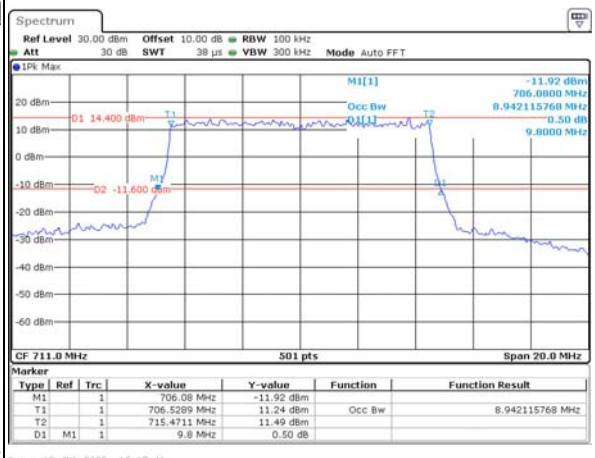
Test Mode:	10M 16QAM	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (℃)	Voltage (V_{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.85	699.023	699.00	715.984	716.00
	-20	3.85	699.020	699.00	715.979	716.00
	-10	3.85	699.016	699.00	715.985	716.00
	0	3.85	699.023	699.00	715.987	716.00
	10	3.85	699.019	699.00	715.982	716.00
	20	3.85	699.016	699.00	715.980	716.00
	30	3.85	699.020	699.00	715.979	716.00
	40	3.85	699.011	699.00	715.987	716.00
	50	3.85	699.023	699.00	715.988	716.00
Frequency Stability vs. Voltage	20	3.5	699.021	699.00	715.983	716.00
	20	4.4	699.020	699.00	715.982	716.00
					Result:	**Pass**

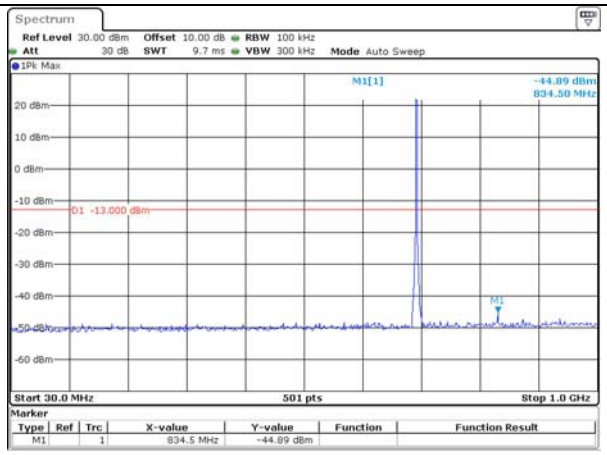
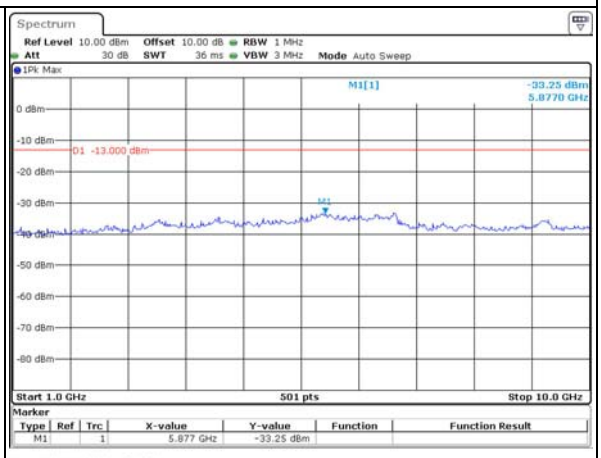
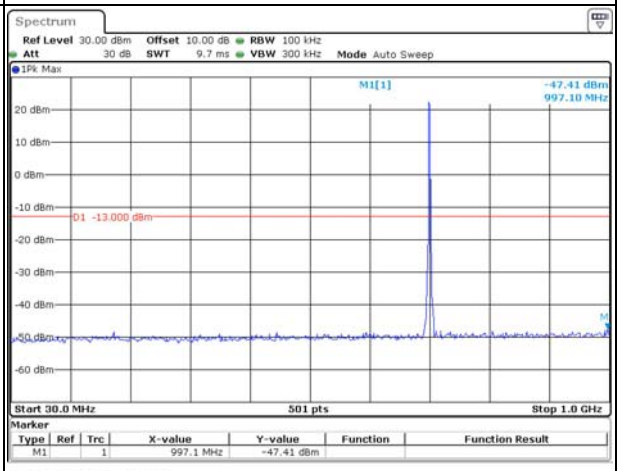
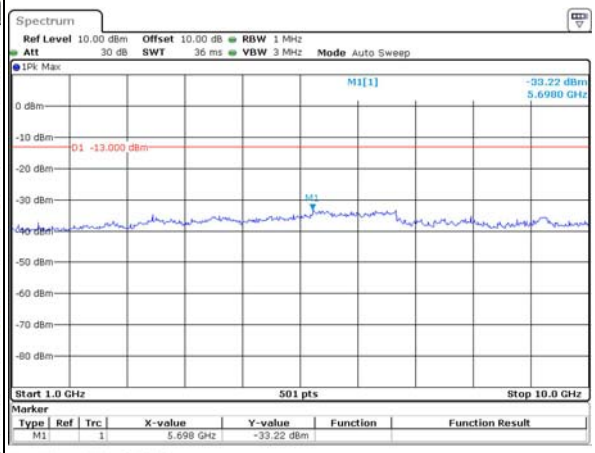
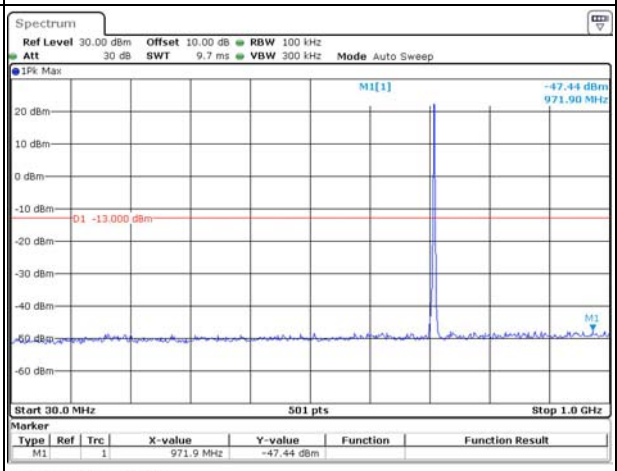
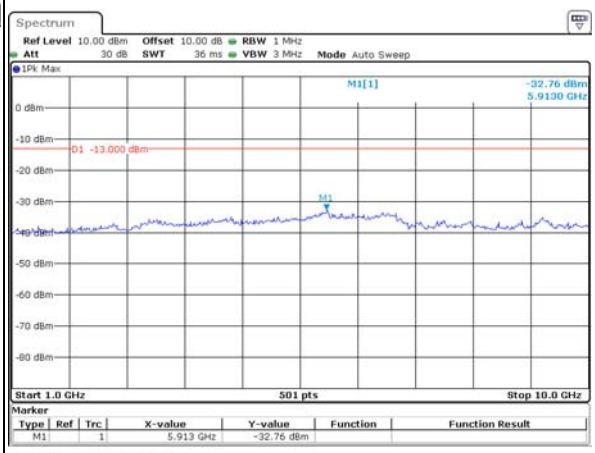
Test Plots(Note: The 10 dB is the Insertion loss of the RF cable and Power Splitter, which was offset into the Spectrum Analyzer):

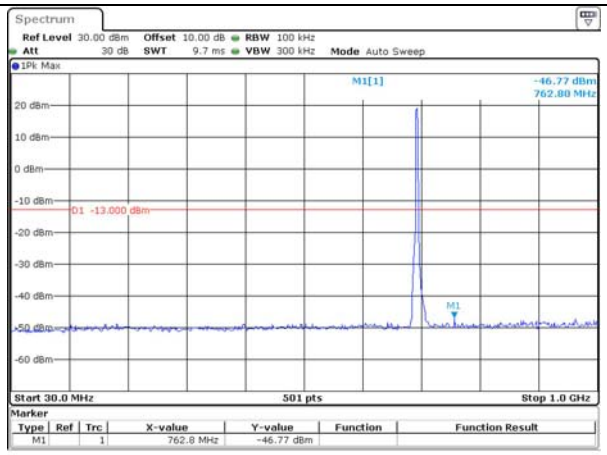
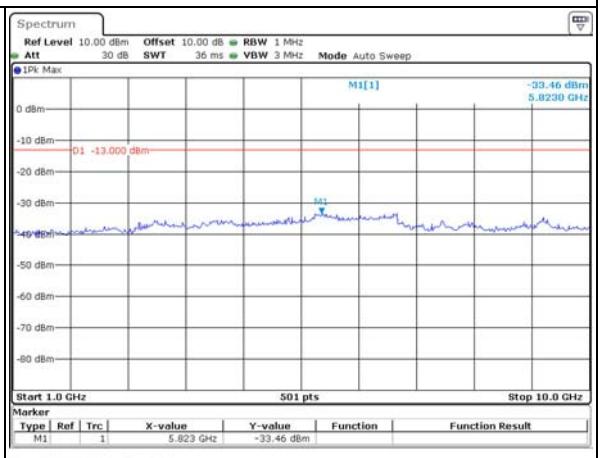
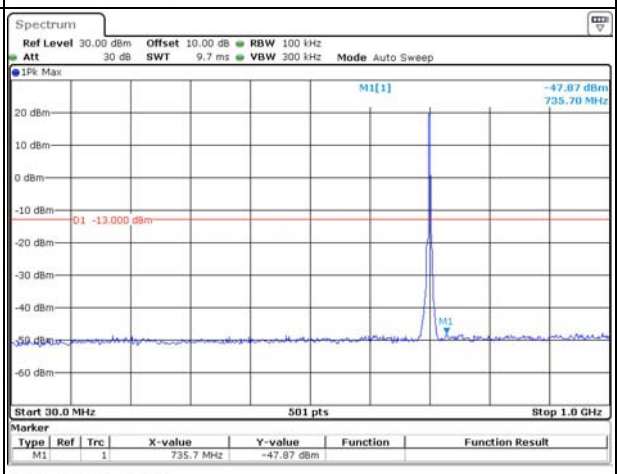
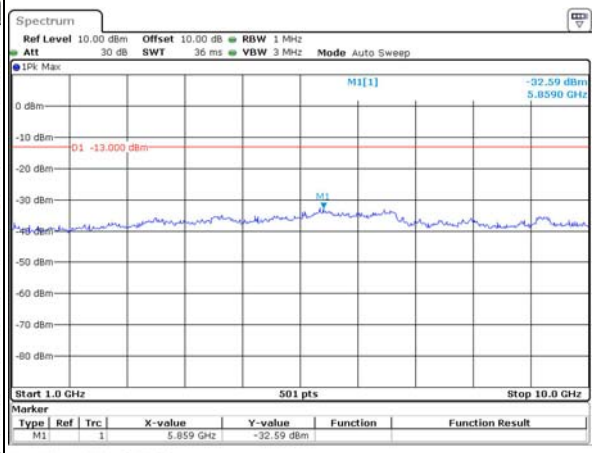
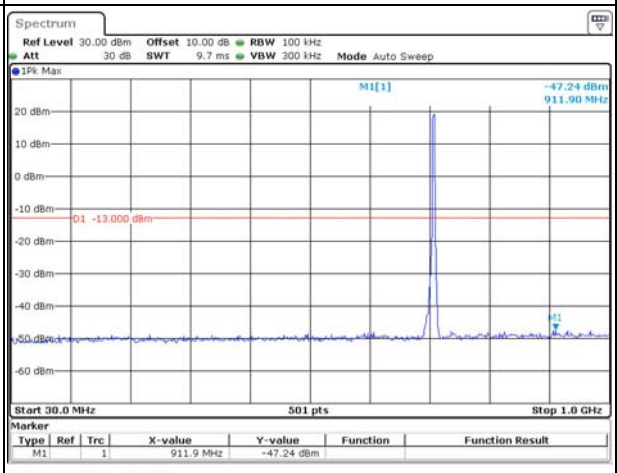
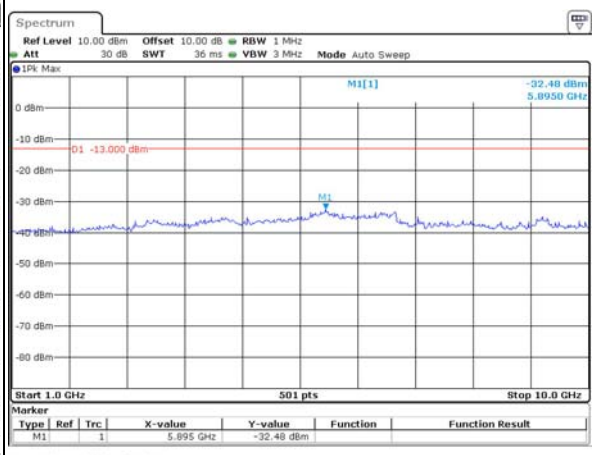
Occupied Bandwidth		
Channel	1.4MHz Bandwidth QPSK	1.4MHz Bandwidth 16QAM
Lowest		
Middle		
Highest		

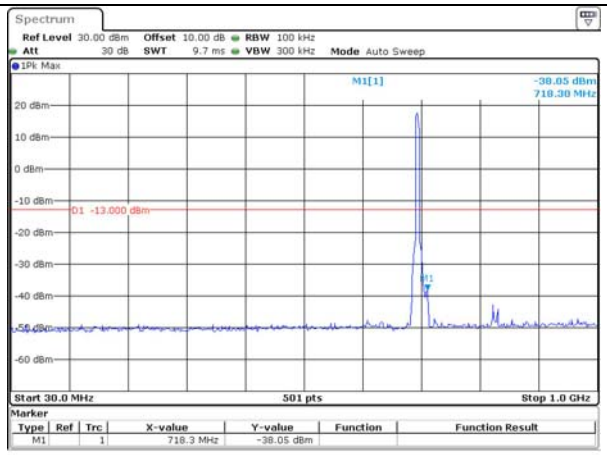
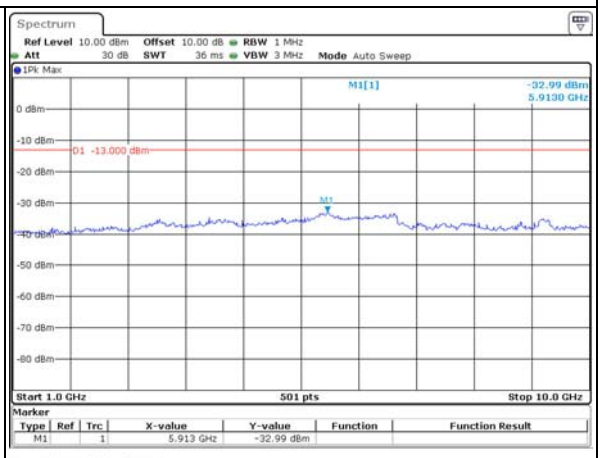
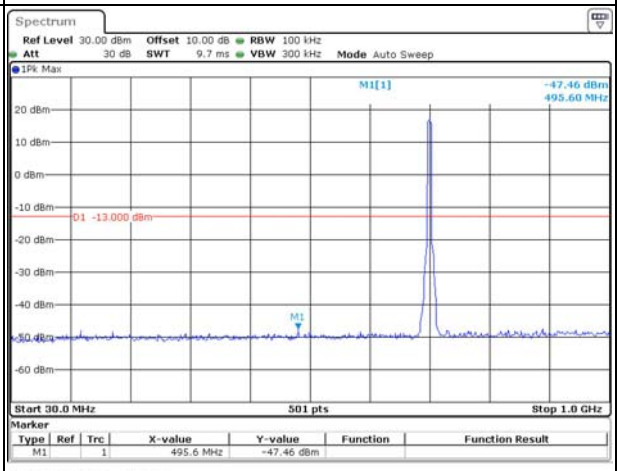
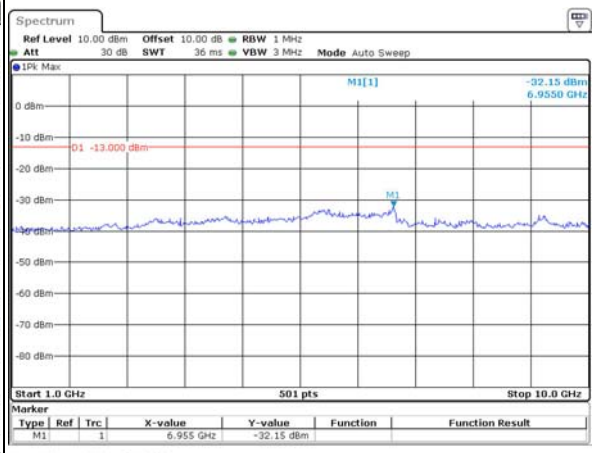
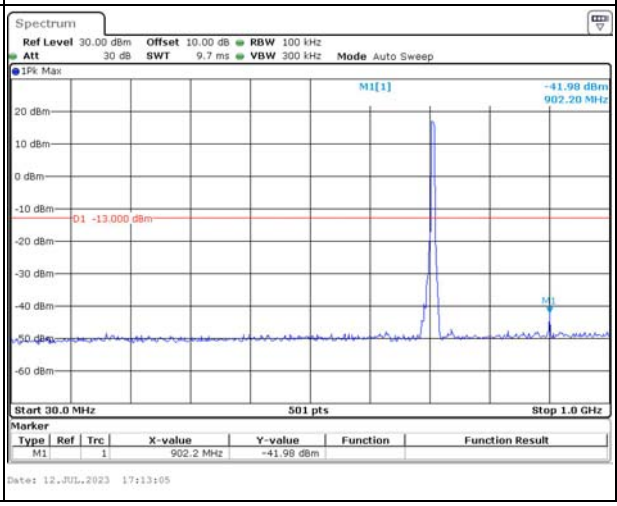
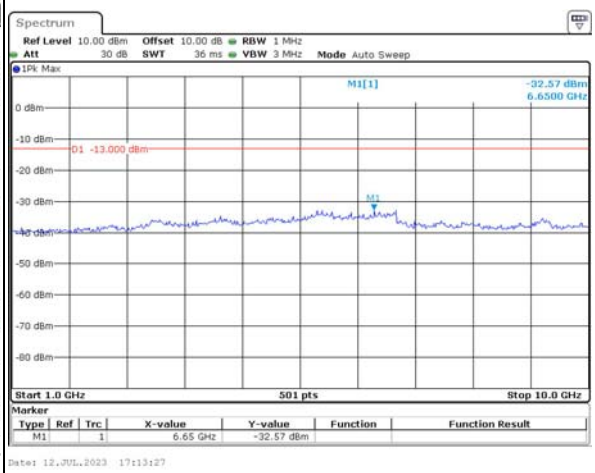
Occupied Bandwidth		
Channel	3MHz Bandwidth QPSK	3MHz Bandwidth 16QAM
Lowest		
Middle		
Highest		

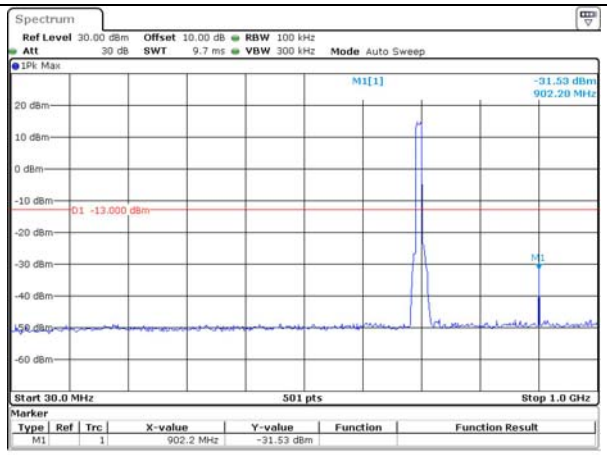
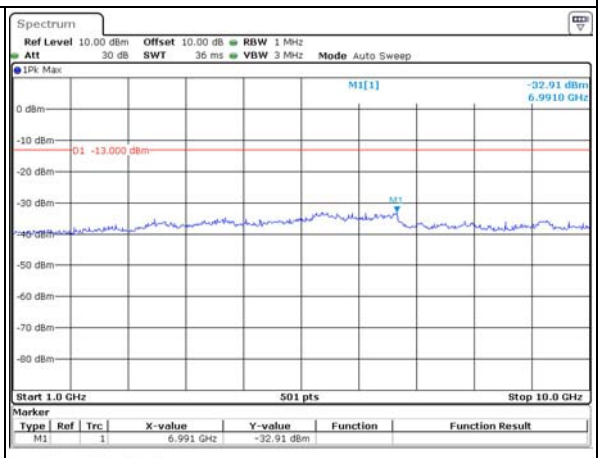
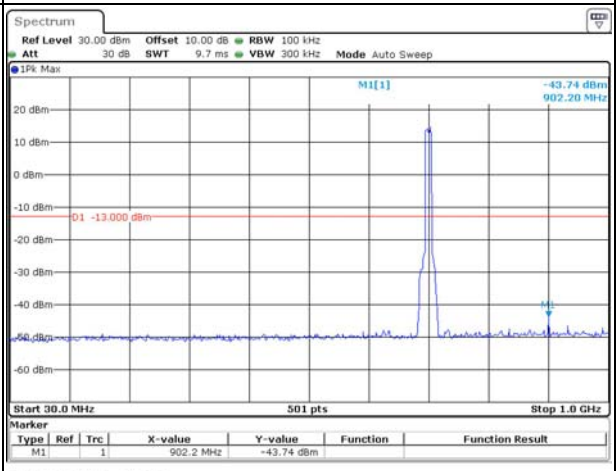
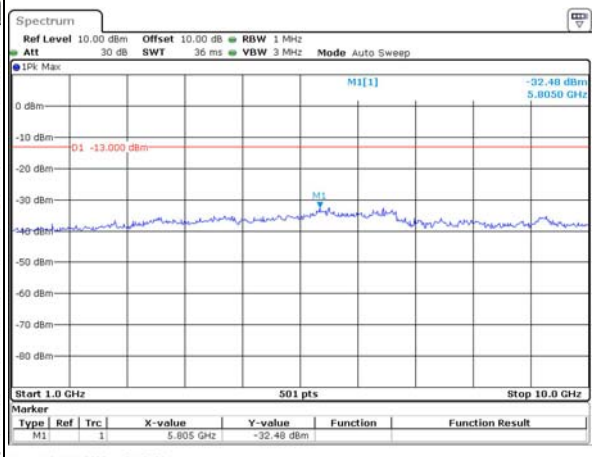
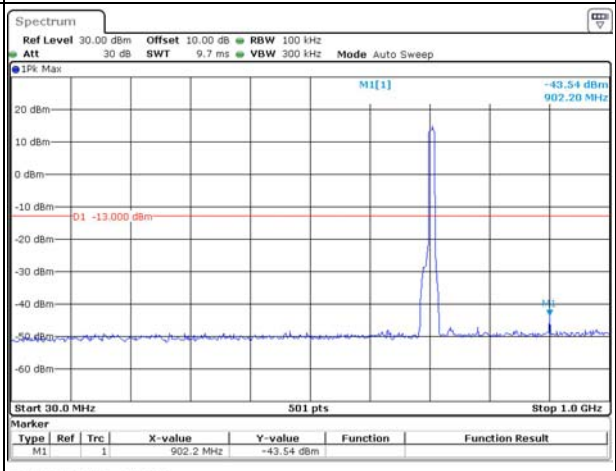
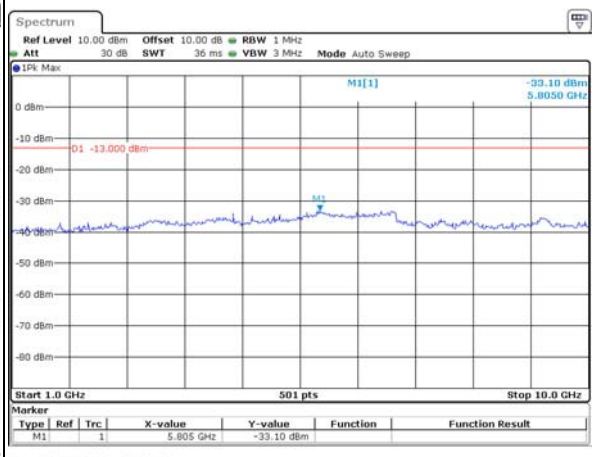
Occupied Bandwidth		
Channel	5MHz Bandwidth QPSK	5MHz Bandwidth 16QAM
Lowest		
Middle		
Highest		

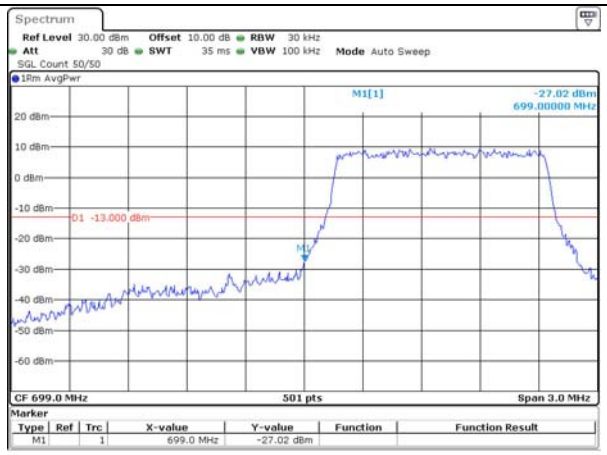
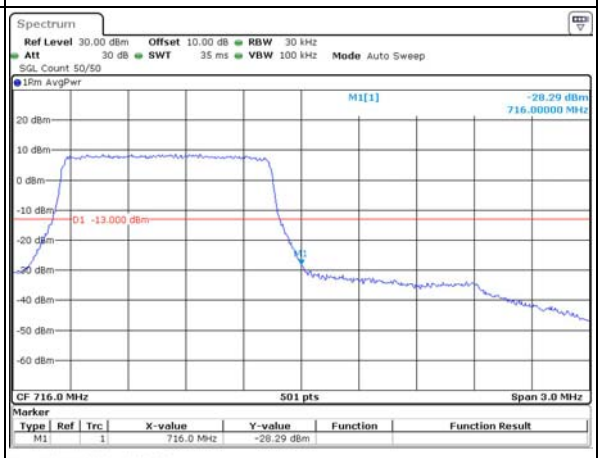
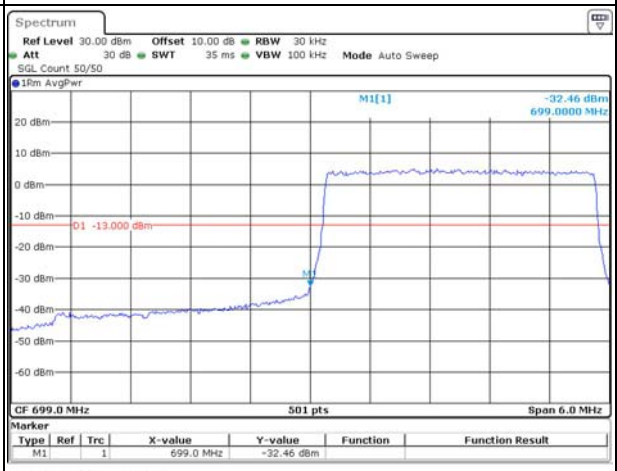
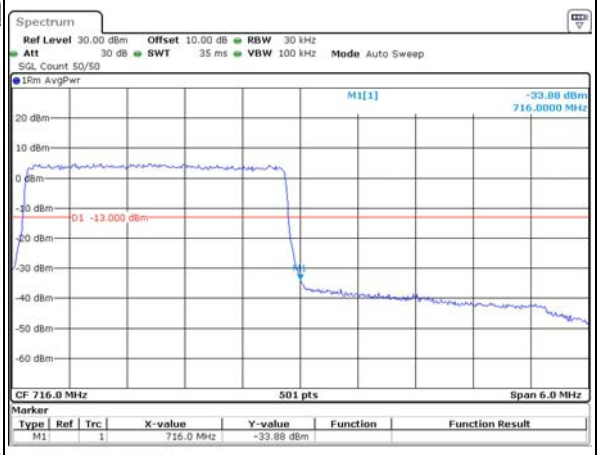
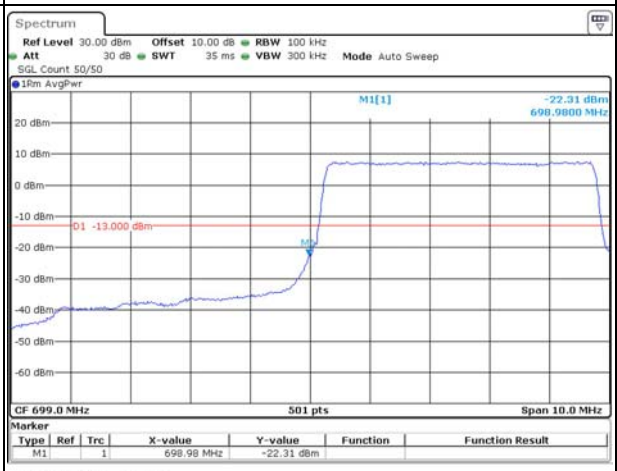
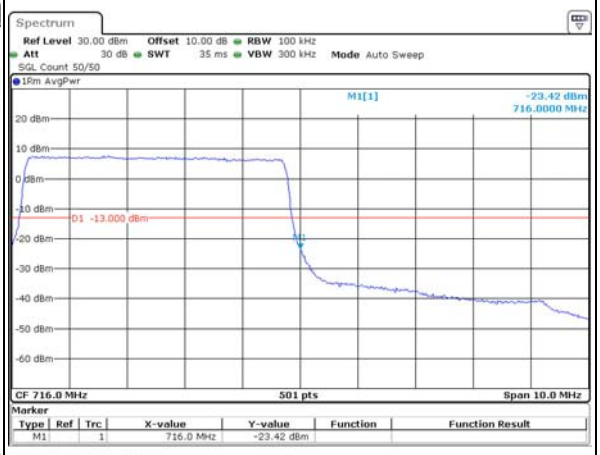
Occupied Bandwidth		
Channel	10MHz Bandwidth QPSK	10MHz Bandwidth 16QAM
Lowest		
Middle		
Highest		

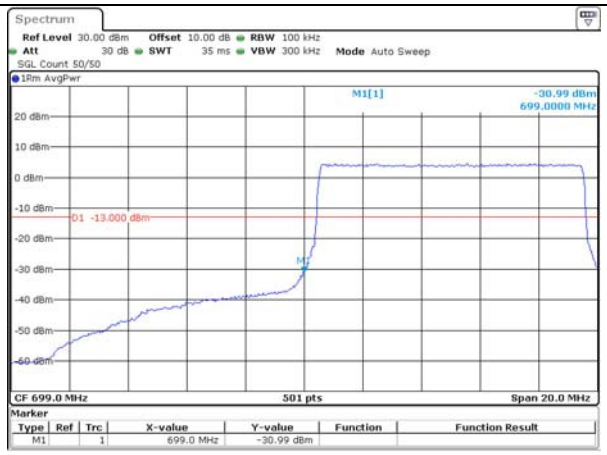
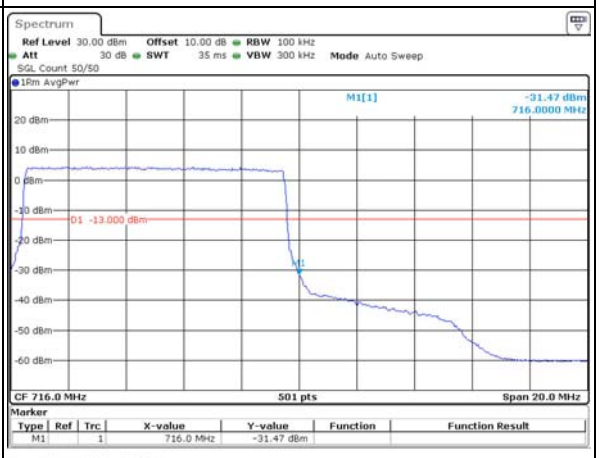
Spurious Emissions at Antenna Terminal		
Channel	**1.4MHz Bandwidth QPSK**	
Lowest		
Middle		
Highest		

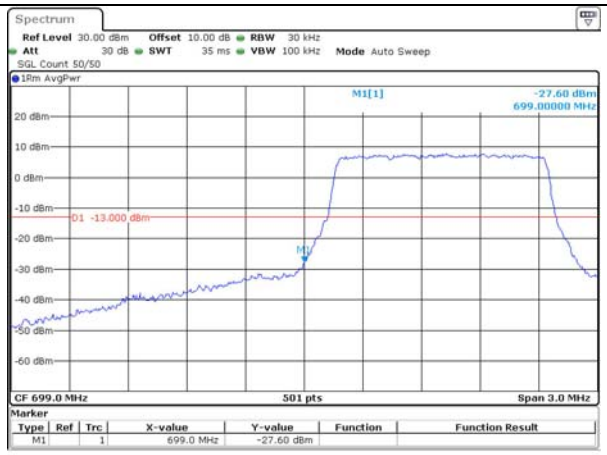
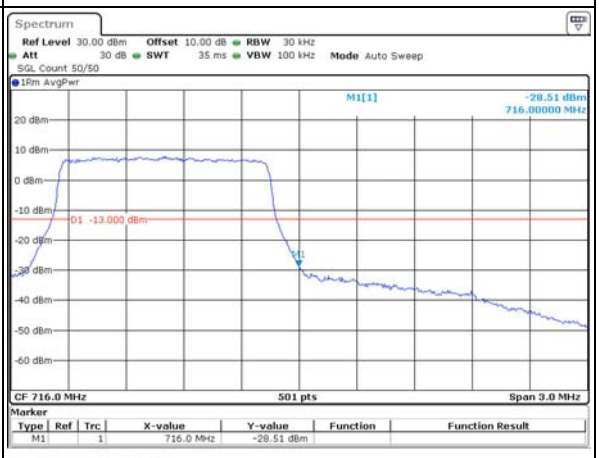
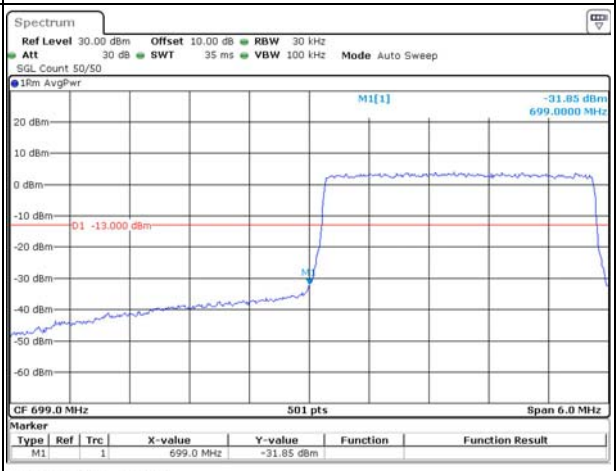
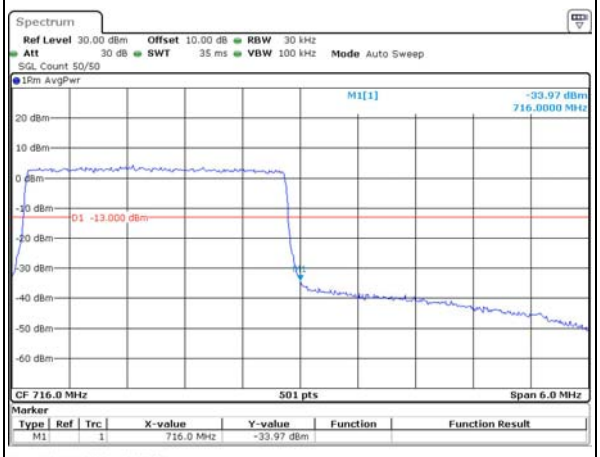
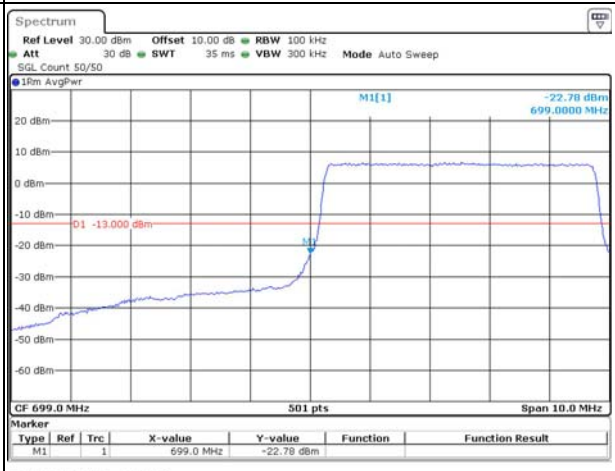
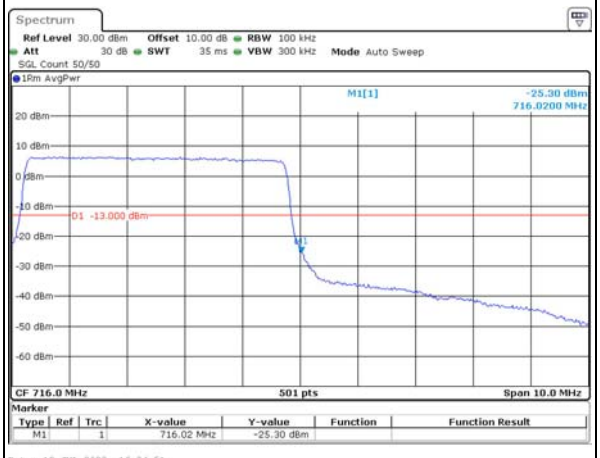
Spurious Emissions at Antenna Terminal		
Channel	**3MHz Bandwidth QPSK**	
Lowest		
Middle		
Highest		

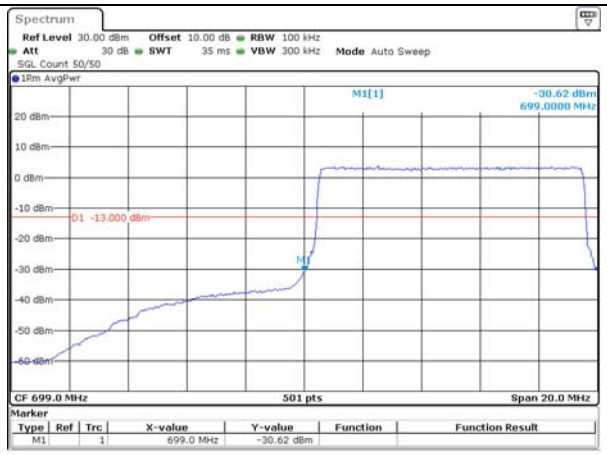
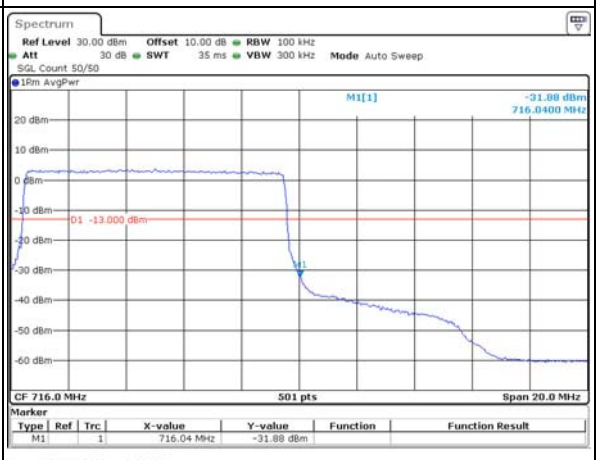
Spurious Emissions at Antenna Terminal		
Channel	**5MHz Bandwidth QPSK**	
Lowest		
Middle		
Highest		

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

Out of band emission, Band Edge		
Mode	**Lowest**	**Highest**
QPSK 1.4MHz		
QPSK 3MHz		
QPSK 5MHz		

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

Out of band emission, Band Edge		
Mode	**Lowest**	**Highest**
16QAM 1.4MHz		
16QAM 3MHz		
16QAM 5MHz		

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

4.11 Antenna Port Test Data and Results for LTE Band 17

Serial Number:	27XL-1	Test Date:	2023/7/12~2023/7/13
Test Site:	RF	Test Mode:	Transmitting
Tester:	Arthur Su	Test Result:	**Pass**

Environmental Conditions:					
Temperature: (℃)	25.9~26.1	Relative Humidity: (%)	56~60	ATM Pressure: (kPa)	100.2~100.3

Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSV40	101943	2023/3/31	2024/3/30
R&S	Wideband Radio Communication Tester	CMW500	143458	2023/3/31	2024/3/30
zhuoxiang	Coaxial Cable	SMA-178	211001	Each time	N/A
YINSAIGE	Coaxial Cable	SS402	SJ0100001	Each time	N/A
BACL	TEMP&HUMI Test Chamber	BTH-150-40	30174	2023/3/31	2024/3/30
UNI-T	Multimeter	UT39A+	C210582554	2022/9/29	2023/9/28
ZHAOXIN	DC Power Supply	RXN-6010D	21R6010D0912386	N/A	N/A
eastsheep	Coaxial Attenuator	2W-SMA-JK-18G	21060301	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).*

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	21.44	21.39	20.88	16.1	34.77
	RB1#13	21.18	21.15	21.42		
	RB1#24	21.14	21.25	21.28		
	RB15#0	20.93	21.2	21.15		
	RB15#10	21.15	21.11	21.45		
	RB25#0	21.24	21.29	21.26		
5MHz 16QAM	RB1#0	21.15	21.1	21.27	16	34.77
	RB1#13	21.03	21.17	20.97		
	RB1#24	21.07	21.17	21.11		
	RB15#0	21.17	21.03	21.06		
	RB15#10	21.03	21.35	21.04		
	RB25#0	21.13	21.3	21.18		
10MHz QPSK	RB1#0	21.56	21.36	21.29	16.5	34.77
	RB1#25	21.74	21.28	21.69		
	RB1#49	21.3	21.55	21.58		
	RB25#0	21.5	21.51	21.66		
	RB25#25	21.3	21.28	21.23		
	RB50#0	21.46	21.85	21.23		
10MHz 16QAM	RB1#0	21.81	21.58	21.27	16.54	34.77
	RB1#25	21.65	21.48	21.67		
	RB1#49	21.51	21.65	21.48		
	RB25#0	21.71	21.16	21.57		
	RB25#25	21.57	21.87	21.89		
	RB50#0	21.41	21.17	21.57		

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

Result:	**Pass**

Peak-to-average Ratio(PAR)

Test Bandwidth & Modulation	Resource Block & RB offset	Peak-to-average Ratio(dB)			Limit (dB)
		Lowest Channel	Middle Channel	Highest Channel	
10MHz QPSK	RB1#0	4.58	4.72	4.55	13
	RB50#0	5.01	5.07	4.96	13
10MHz 16QAM	RB1#0	5.33	5.62	5.65	13
	RB50#0	6.03	6	6.06	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	4.511	4.551	4.531	5.18	5.24	5.2
5MHz 16QAM	4.551	4.511	4.531	5.26	5.16	5.2
10MHz QPSK	8.942	8.942	8.982	9.84	9.92	9.88
10MHz 16QAM	8.942	8.982	8.942	9.92	9.84	9.76
Note: The test plots please refer to the Plots of Occupied Bandwidth						

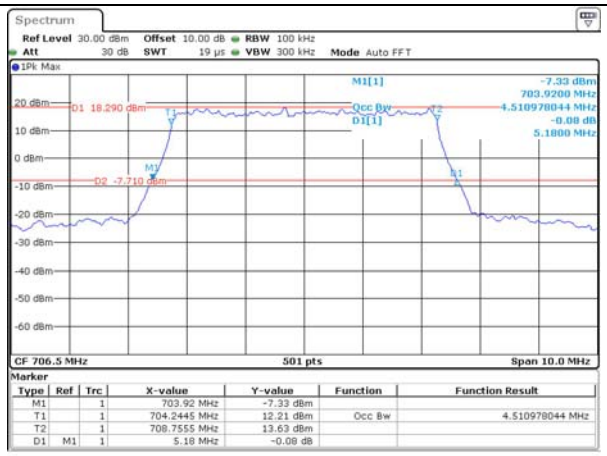
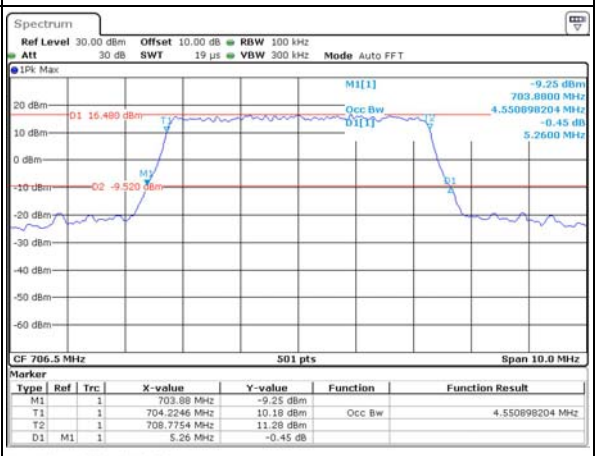
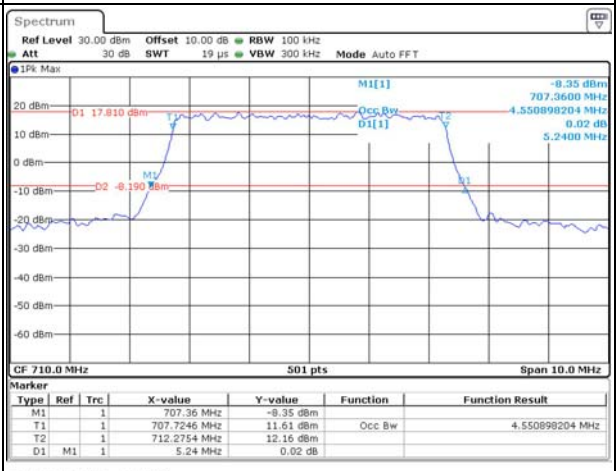
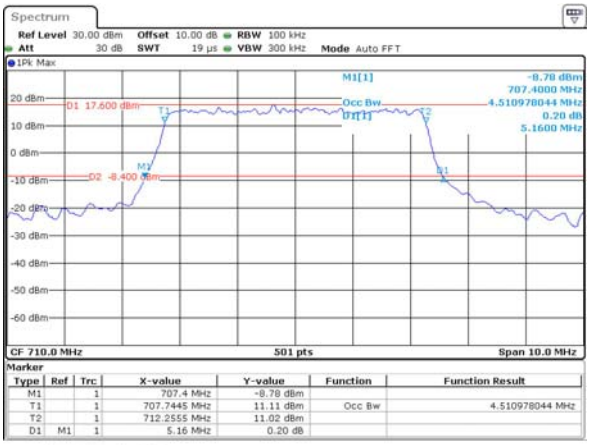
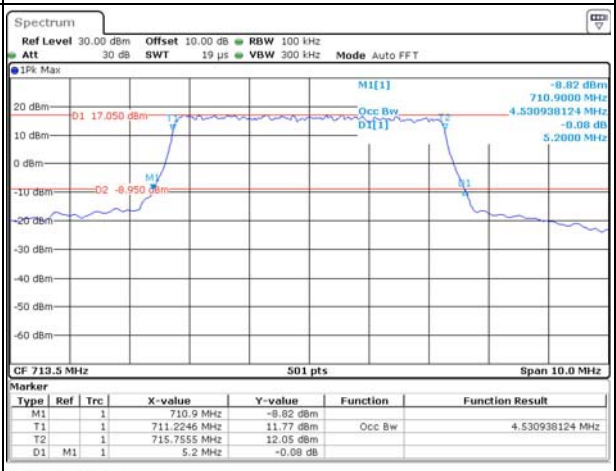
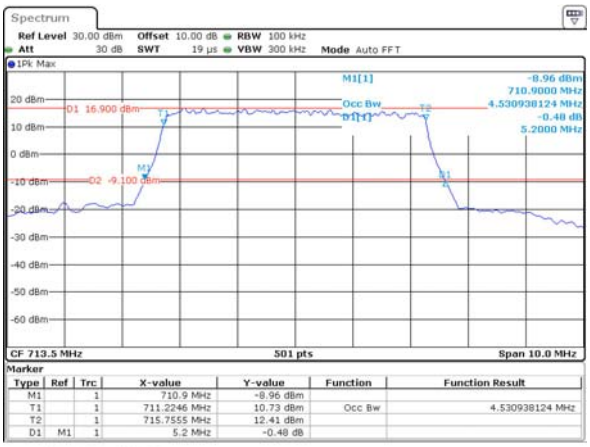
FCC §2.1051, §27.53:Spurious Emissions at Antenna Terminal	
Result:	**Pass, Please refer to the test plots of Spurious Emissions at Antenna Terminal.**

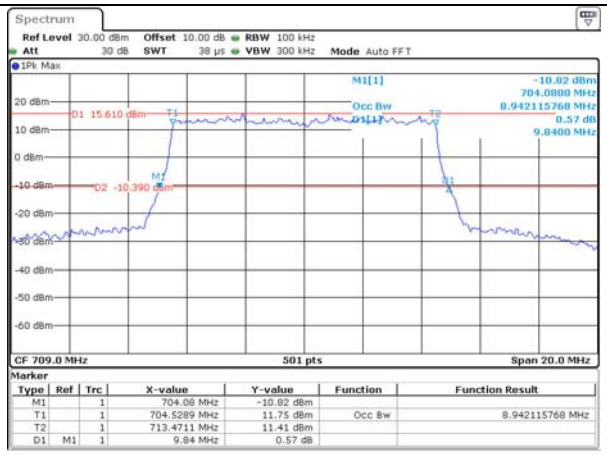
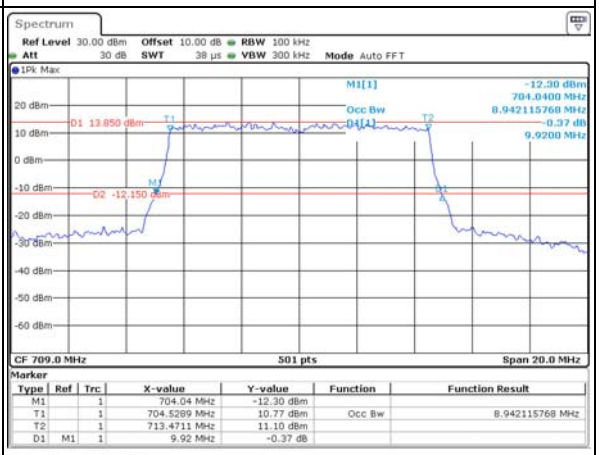
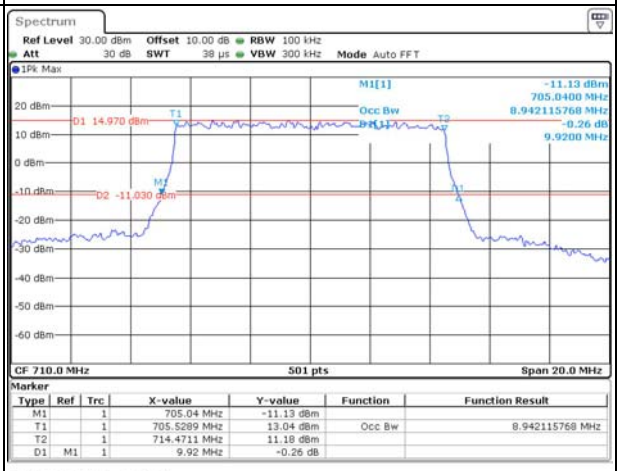
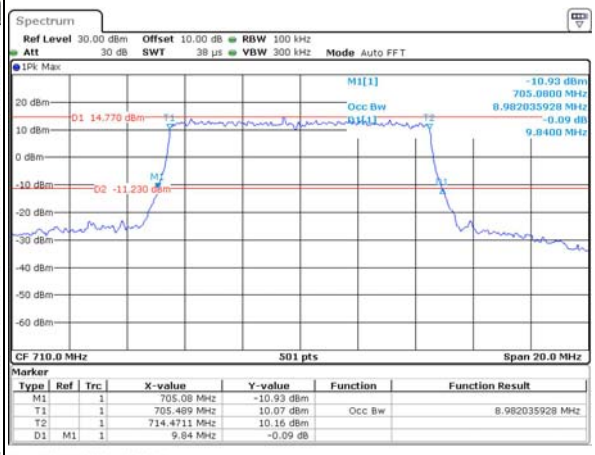
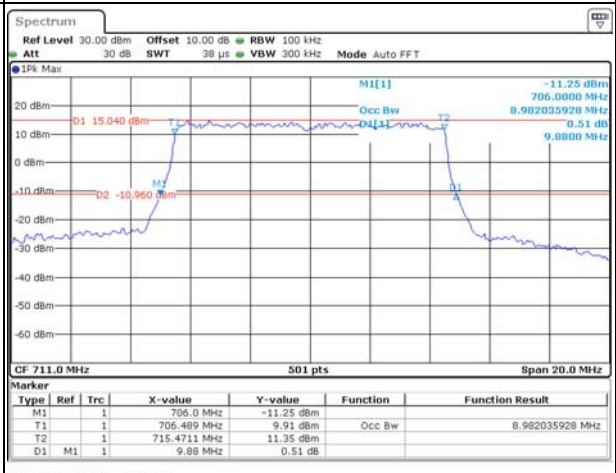
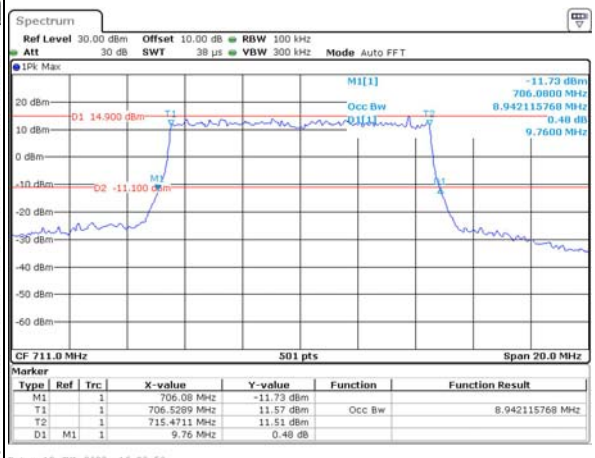
FCC §2.1051, §27.53:Out of band emission, Band Edge	
Result:	**Pass, Please refer to the test plots of Out of band emission, Band Edge.**

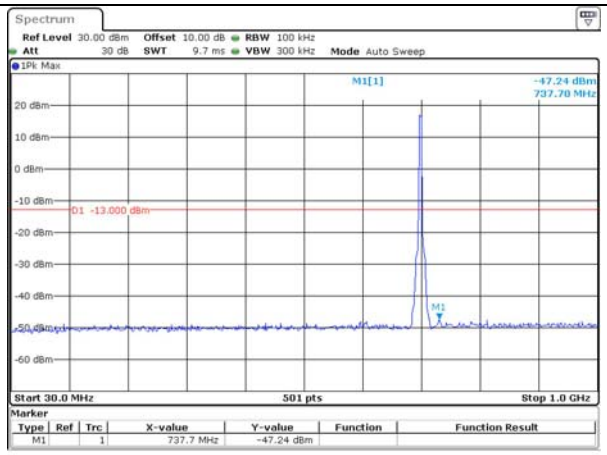
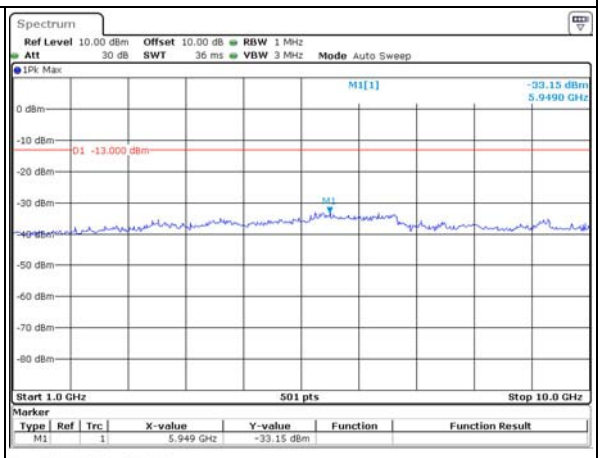
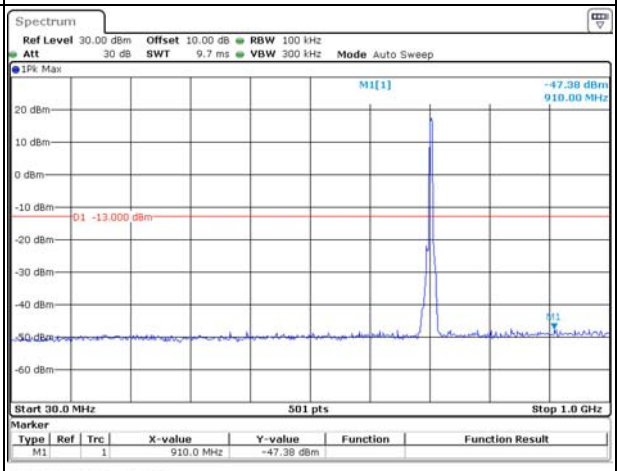
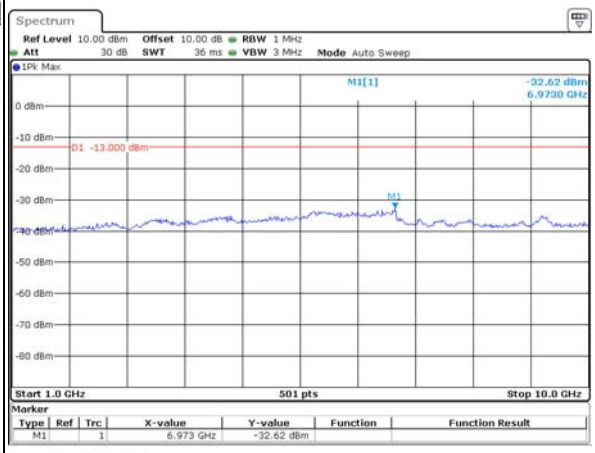
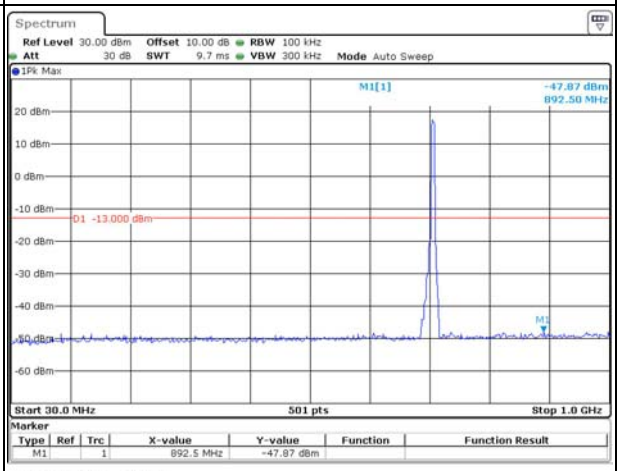
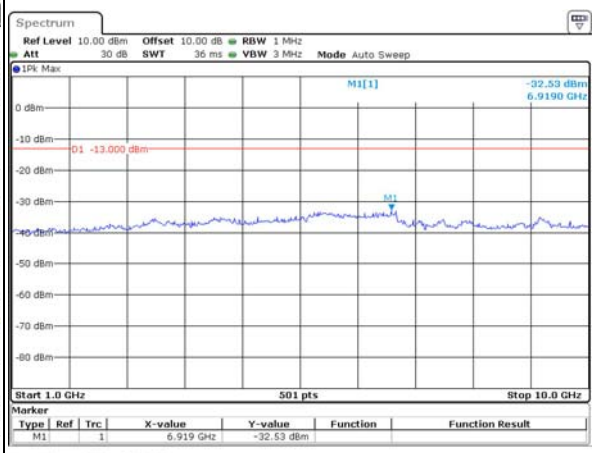
FCC §2.1055, §27.54: Frequency Stability						
Test Mode:	10M QPSK	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (℃)	Voltage (V_{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.85	704.022	704.00	715.979	716.00
	-20	3.85	704.013	704.00	715.986	716.00
	-10	3.85	704.016	704.00	715.989	716.00
	0	3.85	704.014	704.00	715.988	716.00
	10	3.85	704.018	704.00	715.985	716.00
	20	3.85	704.015	704.00	715.983	716.00
	30	3.85	704.011	704.00	715.978	716.00
	40	3.85	704.015	704.00	715.980	716.00
	50	3.85	704.017	704.00	715.981	716.00
Frequency Stability vs. Voltage	20	3.5	704.015	704.00	715.977	716.00
	20	4.4	704.014	704.00	715.981	716.00
					Result:	**Pass**

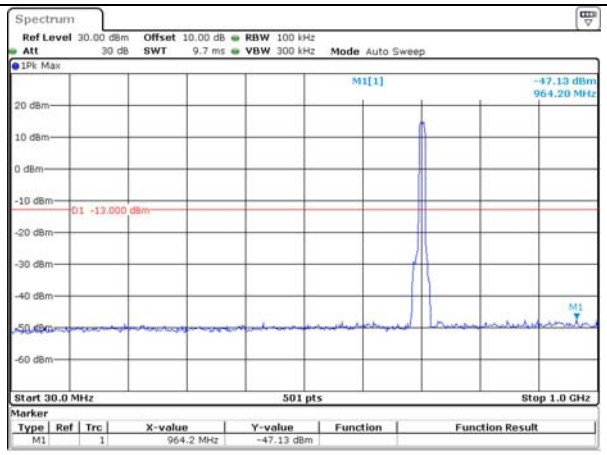
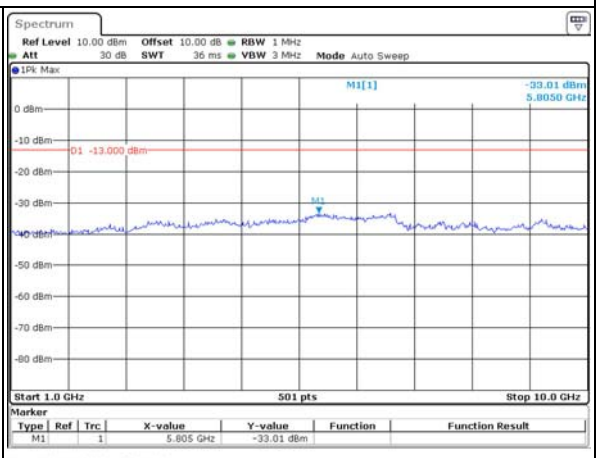
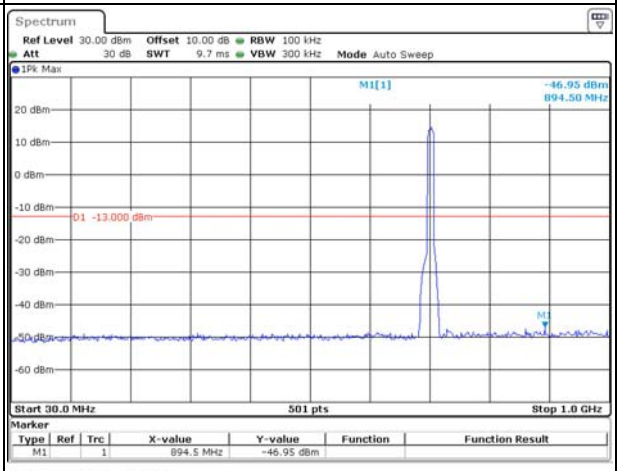
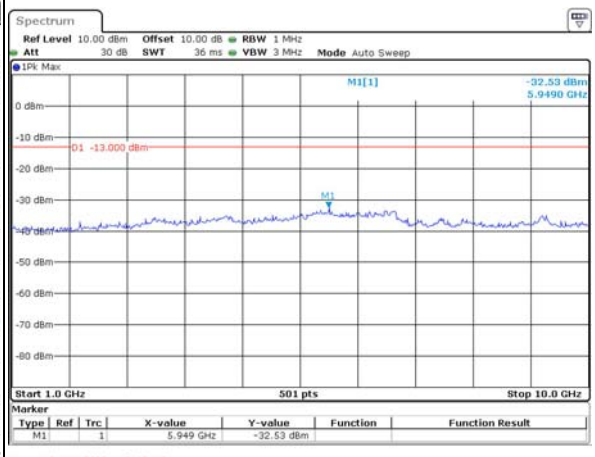
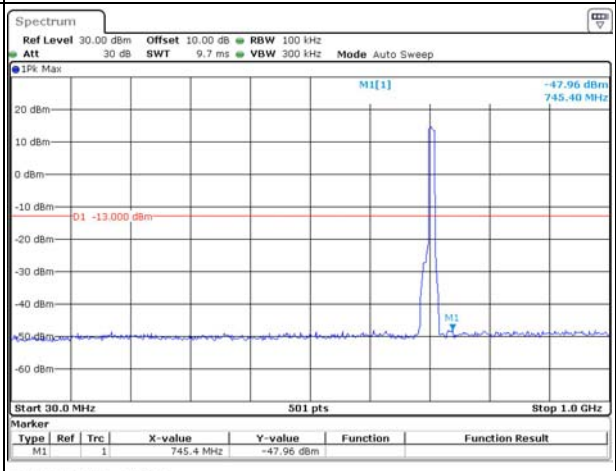
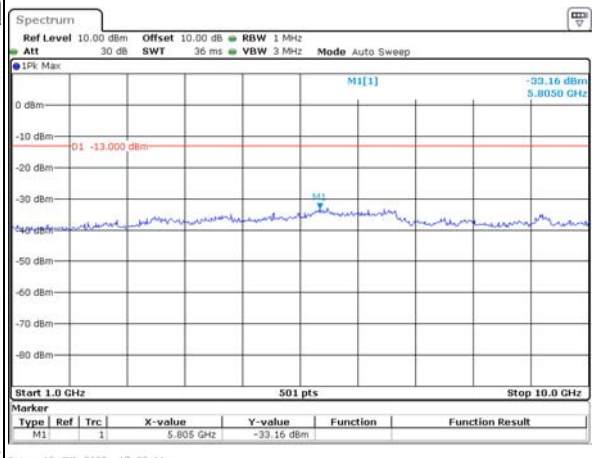
Test Mode:	10M 16QAM	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (℃)	Voltage (V_{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.85	704.013	704.00	715.983	716.00
	-20	3.85	704.018	704.00	715.988	716.00
	-10	3.85	704.019	704.00	715.983	716.00
	0	3.85	704.019	704.00	715.988	716.00
	10	3.85	704.014	704.00	715.989	716.00
	20	3.85	704.014	704.00	715.979	716.00
	30	3.85	704.011	704.00	715.980	716.00
	40	3.85	704.020	704.00	715.985	716.00
	50	3.85	704.023	704.00	715.987	716.00
Frequency Stability vs. Voltage	20	3.5	704.018	704.00	715.980	716.00
	20	4.4	704.016	704.00	715.985	716.00
					Result:	**Pass**

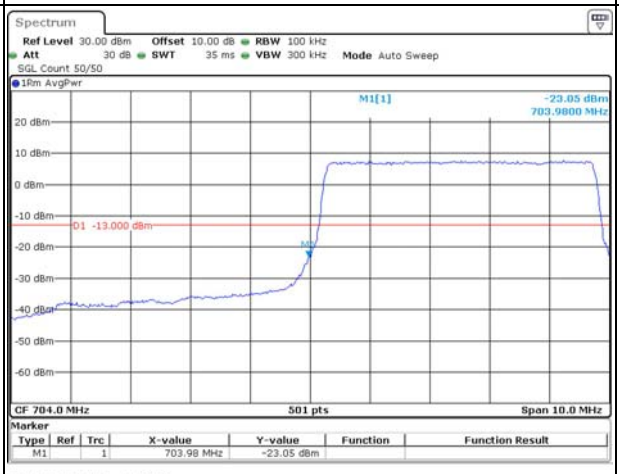
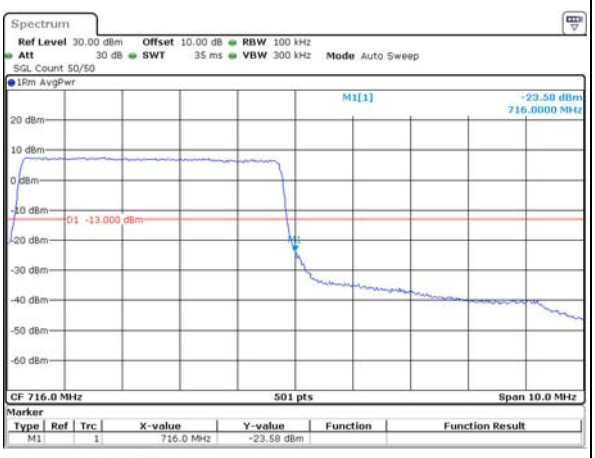
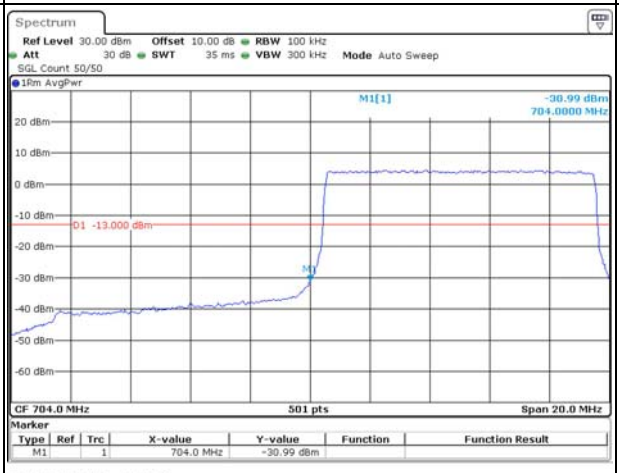
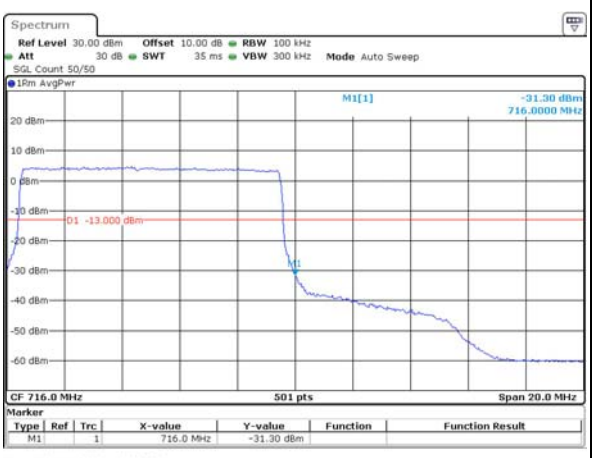
Test Plots(Note: The 10 dB is the Insertion loss of the RF cable and Power Splitter, which was offset into the Spectrum Analyzer):

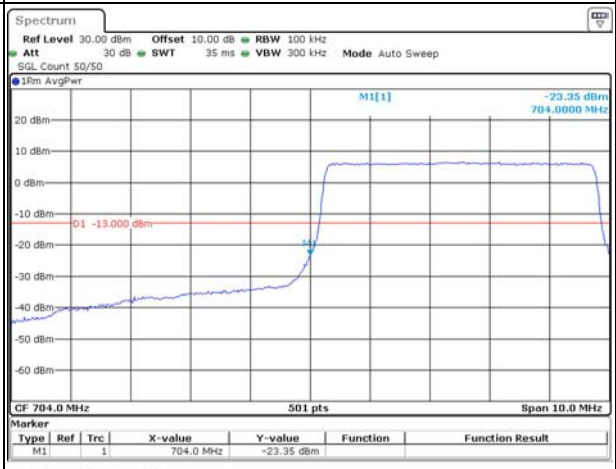
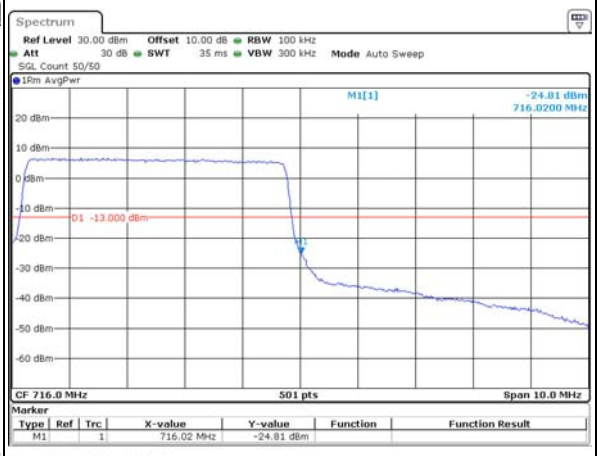
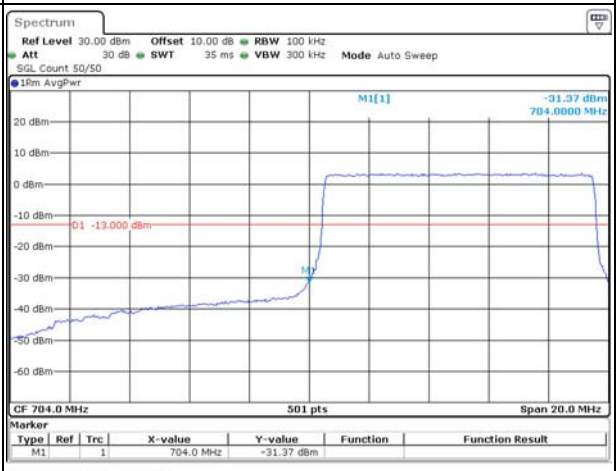
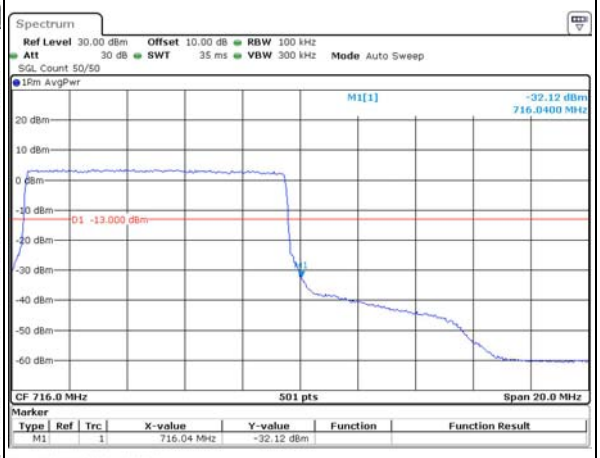
Occupied Bandwidth		
Channel	5MHz Bandwidth QPSK	5MHz Bandwidth 16QAM
Lowest		
Middle		
Highest		

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

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 66

Serial Number:	27XL-1	Test Date:	2023/7/12~2023/7/13
Test Site:	RF	Test Mode:	Transmitting
Tester:	Arthur Su	Test Result:	**Pass**

Environmental Conditions:					
Temperature: (℃)	25.9~26.1	Relative Humidity: (%)	56~60	ATM Pressure: (kPa)	100.2~100.3

Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSV40	101943	2023/3/31	2024/3/30
R&S	Wideband Radio Communication Tester	CMW500	143458	2023/3/31	2024/3/30
zhuoxiang	Coaxial Cable	SMA-178	211001	Each time	N/A
YINSAIGE	Coaxial Cable	SS402	SJ0100001	Each time	N/A
BACL	TEMP&HUMI Test Chamber	BTH-150-40	30174	2023/3/31	2024/3/30
UNI-T	Multimeter	UT39A+	C210582554	2022/9/29	2023/9/28
ZHAOXIN	DC Power Supply	RXN-6010D	21R6010D0912386	N/A	N/A
eastsheep	Coaxial Attenuator	2W-SMA-JK-18G	21060301	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).*

Test Frequency For Each Mode:

Operation Bandwidth	Lowest Frequency (MHz)	Middle Frequency (MHz)	Highest Frequency (MHz)
1.4MHz	1710.7	1745	1779.3
3MHz	1711.5	1745	1778.5
5MHz	1712.5	1745	1777.5
10MHz	1715	1745	1775
15MHz	1717.5	1745	1772.5
20MHz	1720	1745	1770

Test Data:

FCC§2.1046;§ 27.50(d)(4)

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		
1.4MHz QPSK	RB1#0	23.42	23.38	23.49	21.18	30
	RB1#3	23.64	23.61	23.68		
	RB1#5	23.45	23.37	23.48		
	RB3#0	23.54	23.51	23.55		
	RB3#3	23.58	23.47	23.58		
	RB6#0	22.49	22.51	22.55		
1.4MHz 16QAM	RB1#0	22.45	22.39	22.59	20.3	30
	RB1#3	22.64	22.56	22.8		
	RB1#5	22.47	22.4	22.6		
	RB3#0	22.61	22.63	22.57		
	RB3#3	22.66	22.7	22.57		
	RB6#0	21.49	21.57	21.61		
3MHz QPSK	RB1#0	23.51	23.43	23.51	21.01	30
	RB1#8	23.47	23.42	23.51		
	RB1#14	23.5	23.41	23.49		
	RB6#0	22.37	22.41	22.44		
	RB6#9	22.42	22.41	22.45		
	RB15#0	22.43	22.44	22.47		
3MHz 16QAM	RB1#0	22.52	23	22.67	20.5	30
	RB1#8	22.49	22.92	22.63		
	RB1#14	22.48	22.9	22.63		
	RB6#0	21.4	21.52	21.52		
	RB6#9	21.43	21.5	21.54		
	RB15#0	21.55	21.55	21.53		
5MHz QPSK	RB1#0	23.39	23.38	23.48	21.05	30
	RB1#13	23.52	23.44	23.55		
	RB1#24	23.41	23.33	23.43		
	RB15#0	22.51	22.49	22.55		
	RB15#10	22.48	22.46	22.5		
	RB25#0	22.48	22.45	22.5		
5MHz 16QAM	RB1#0	22.48	22.23	22.72	20.35	30
	RB1#13	22.6	22.35	22.85		
	RB1#24	22.48	22.26	22.73		
	RB15#0	21.59	21.57	21.62		
	RB15#10	21.6	21.57	21.55		
	RB25#0	21.57	21.58	21.58		
10MHz QPSK	RB1#0	23.52	23.5	23.52	21.2	30
	RB1#25	23.7	23.64	23.66		
	RB1#49	23.48	23.52	23.52		

	RB25#0	22.56	22.53	22.6		
	RB25#25	22.54	22.5	22.58		
	RB50#0	22.58	22.55	22.58		
10MHz 16QAM	RB1#0	22.62	22.45	23.13	20.77	30
	RB1#25	22.82	22.62	23.27		
	RB1#49	22.63	22.48	23.1		
	RB25#0	21.64	21.69	21.74		
	RB25#25	21.65	21.7	21.7		
	RB50#0	21.67	21.67	21.68		
15MHz QPSK	RB1#0	23.46	23.44	23.47	21.09	30
	RB1#38	23.54	23.56	23.59		
	RB1#74	23.44	23.45	23.5		
	RB36#0	22.55	22.62	22.66		
	RB36#39	22.58	22.59	22.64		
	RB75#0	22.57	22.63	22.64		
15MHz 16QAM	RB1#0	22.59	22.83	23.06	20.69	30
	RB1#38	22.69	22.92	23.19		
	RB1#74	22.59	22.86	23.08		
	RB36#0	21.63	21.63	21.71		
	RB36#39	21.65	21.62	21.7		
	RB75#0	21.64	21.64	21.69		
20MHz QPSK	RB1#0	22.88	22.88	22.79	20.93	30
	RB1#50	23.18	22.89	22.84		
	RB1#99	22.84	23.43	22.88		
	RB50#0	22.84	23.03	23.1		
	RB50#50	23.26	22.9	23.17		
	RB100#0	23.22	23.02	23.07		
20MHz 16QAM	RB1#0	23.11	23.05	22.97	20.77	30
	RB1#50	22.93	22.82	23.13		
	RB1#99	22.9	22.85	23.05		
	RB50#0	23.04	23.21	22.93		
	RB50#50	23.14	23.27	23.17		
	RB100#0	23.14	22.96	22.71		
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	5.48	5.01	5.19	13
	RB100#0	5.51	5.25	5.39	13
20MHz 16QAM	RB1#0	6.41	6.64	5.42	13
	RB100#0	6.41	6.2	6.38	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	1.108	1.09	1.096	1.326	1.296	1.308
1.4MHz 16QAM	1.102	1.096	1.096	1.326	1.32	1.284
3MHz QPSK	2.683	2.683	2.695	2.88	2.868	2.88
3MHz 16QAM	2.683	2.683	2.683	2.88	2.88	2.88
5MHz QPSK	4.531	4.551	4.511	5.58	5.22	5.22
5MHz 16QAM	4.531	4.511	4.551	5.26	5.18	5.24
10MHz QPSK	8.982	8.982	8.942	9.96	10	9.88
10MHz 16QAM	8.982	8.942	8.942	9.92	9.8	9.88
15MHz QPSK	13.533	13.533	13.533	15.18	15.24	15.18
15MHz 16QAM	13.533	13.533	13.533	15.06	15.12	15.06
20MHz QPSK	17.964	18.044	17.964	19.76	20	19.6
20MHz 16QAM	17.964	17.964	18.044	19.68	19.68	19.6
Note: The test plots please refer to the Plots of Occupied Bandwidth						

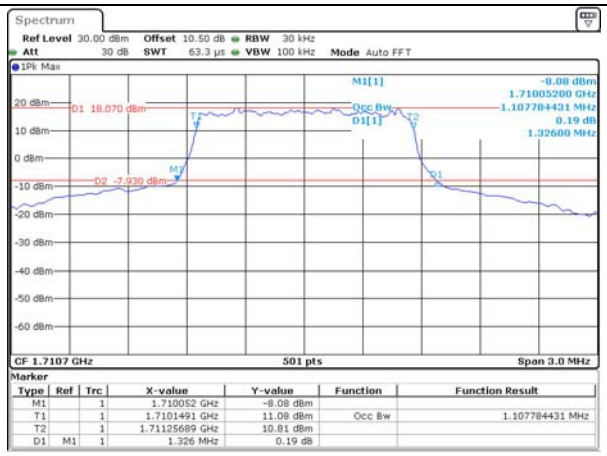
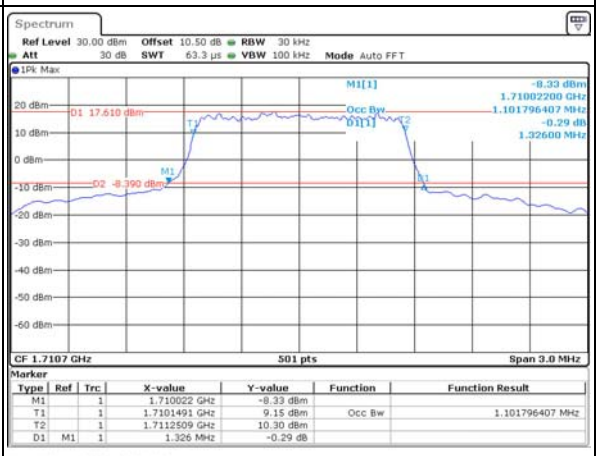
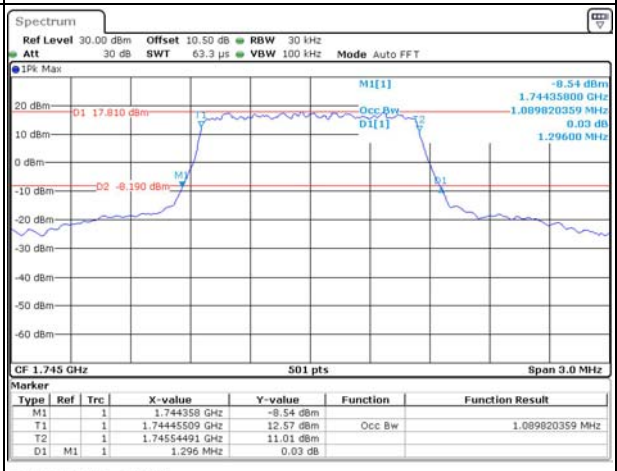
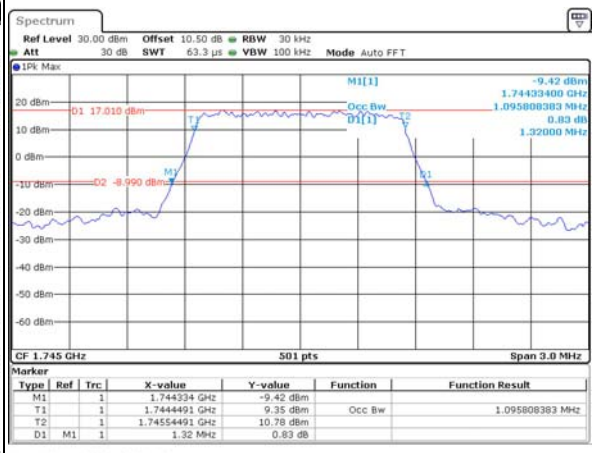
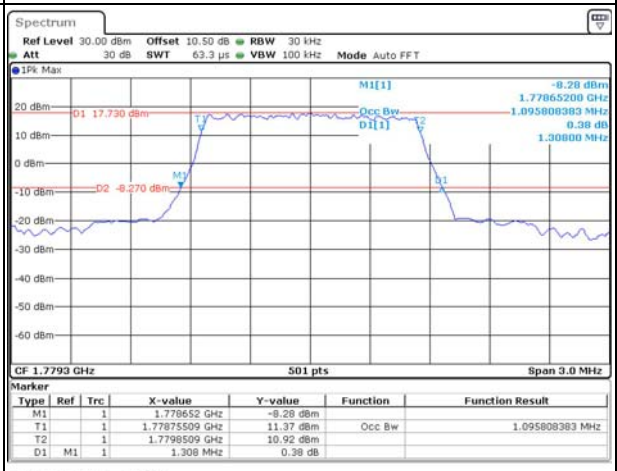
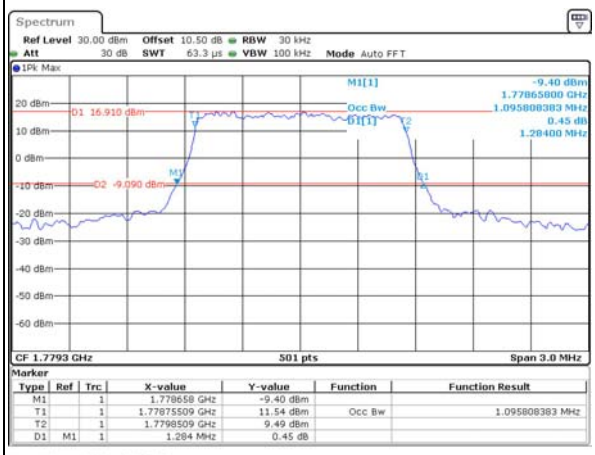
FCC §2.1051, § 27.53:Spurious Emissions at Antenna Terminal	
Result:	**Pass, Please refer to the test plots of Spurious Emissions at Antenna Terminal.**

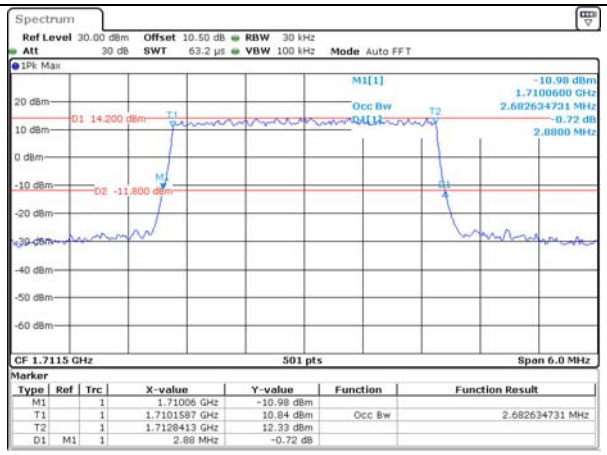
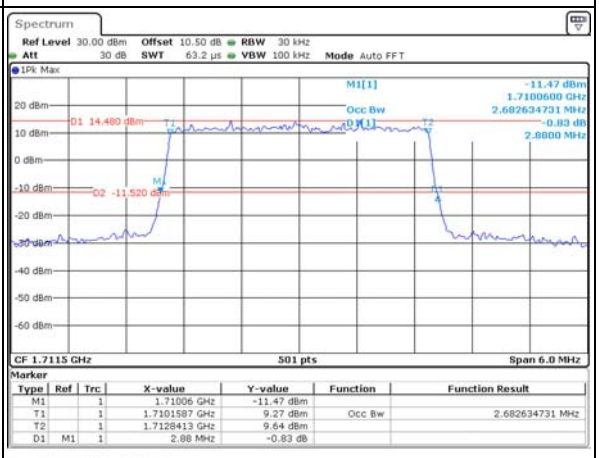
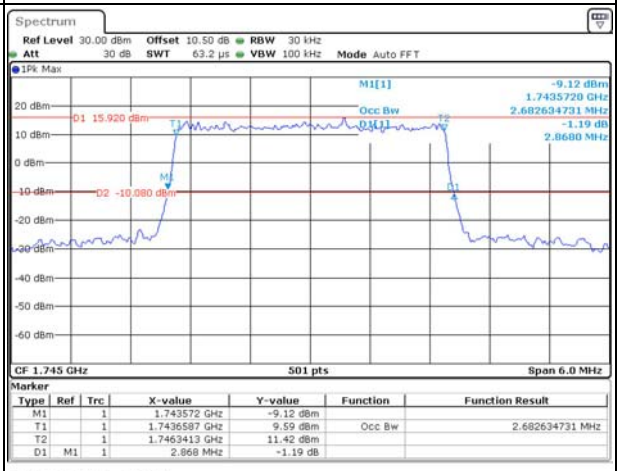
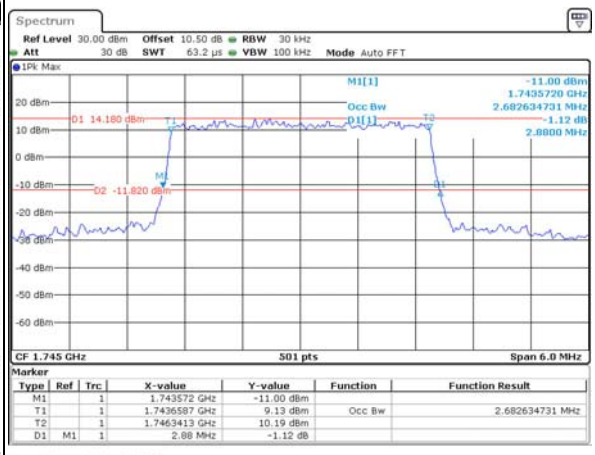
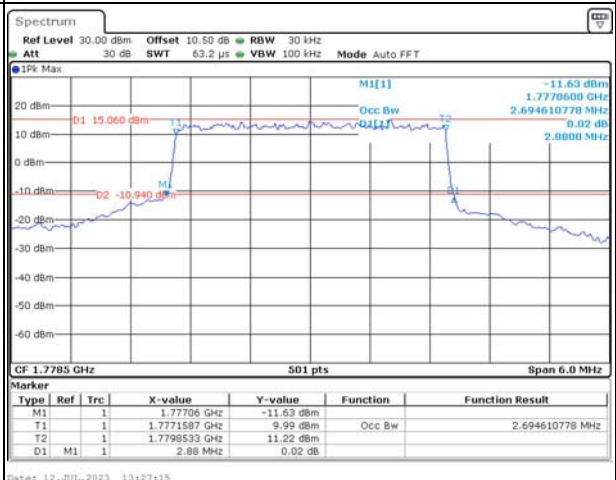
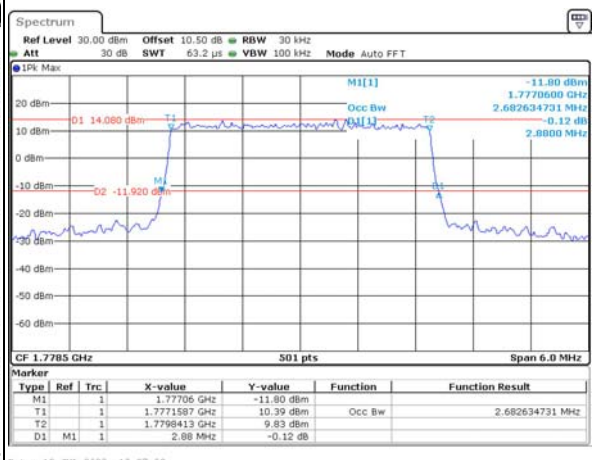
FCC §2.1051, § 27.53:Out of band emission, Band Edge	
Result:	**Pass, Please refer to the test plots of Out of band emission, Band Edge.**

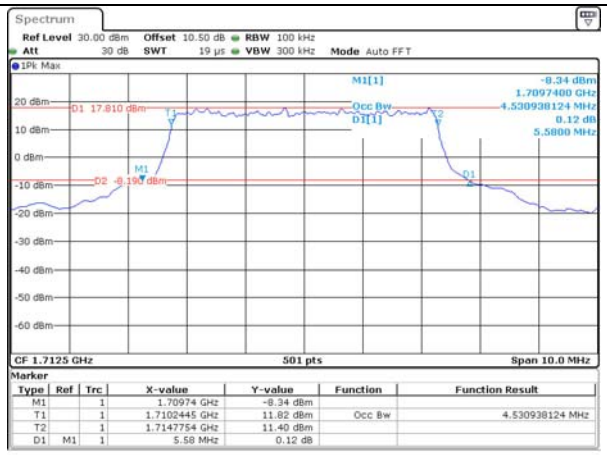
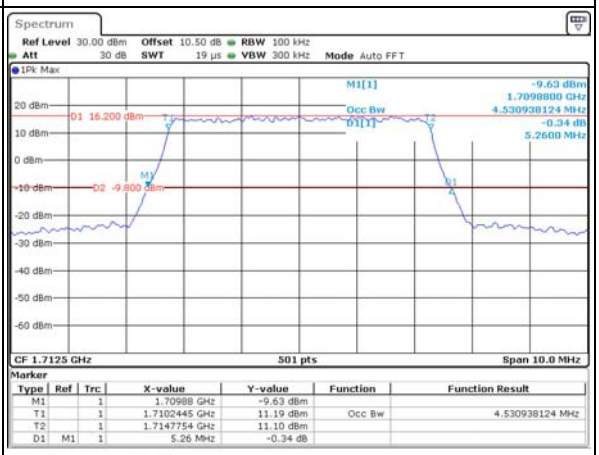
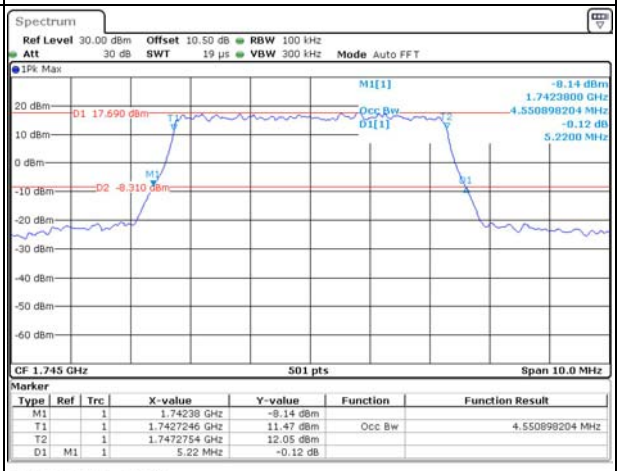
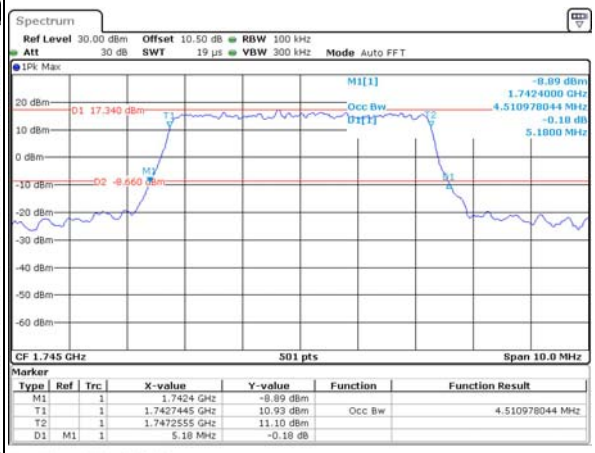
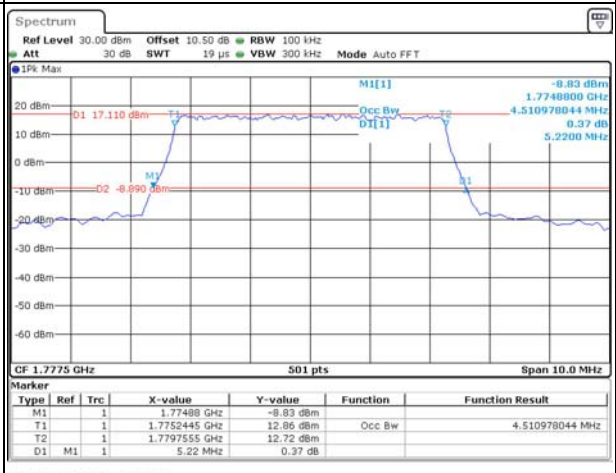
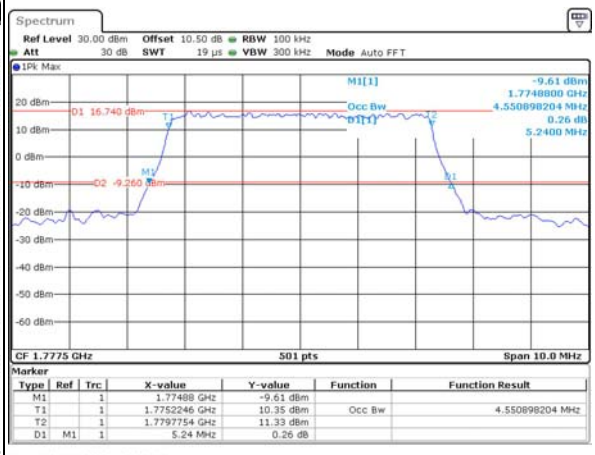
FCC §2.1055, §27.54: Frequency Stability						
Test Mode:	20M QPSK	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (℃)	Voltage (V_{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.85	1710.021	1710.00	1779.984	1780
	-20	3.85	1710.020	1710.00	1779.979	1780
	-10	3.85	1710.018	1710.00	1779.985	1780
	0	3.85	1710.018	1710.00	1779.983	1780
	10	3.85	1710.011	1710.00	1779.979	1780
	20	3.85	1710.013	1710.00	1779.984	1780
	30	3.85	1710.022	1710.00	1779.978	1780
	40	3.85	1710.011	1710.00	1779.986	1780
	50	3.85	1710.017	1710.00	1779.989	1780
Frequency Stability vs. Voltage	20	3.5	1710.011	1710.00	1779.989	1780
	20	4.4	1710.012	1710.00	1779.985	1780
					Result:	**Pass**

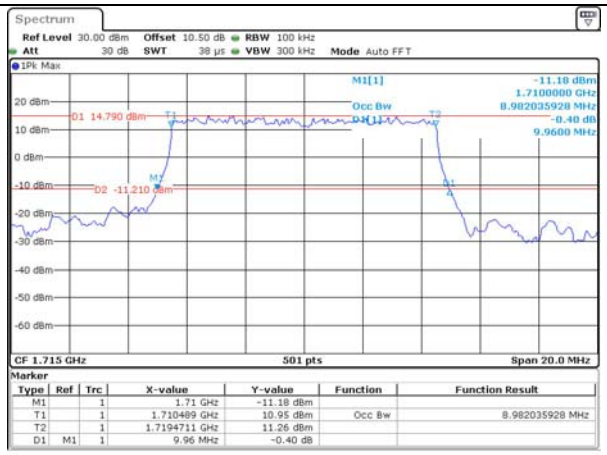
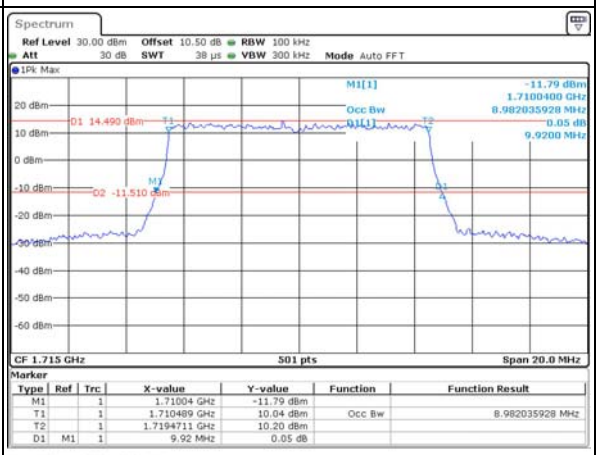
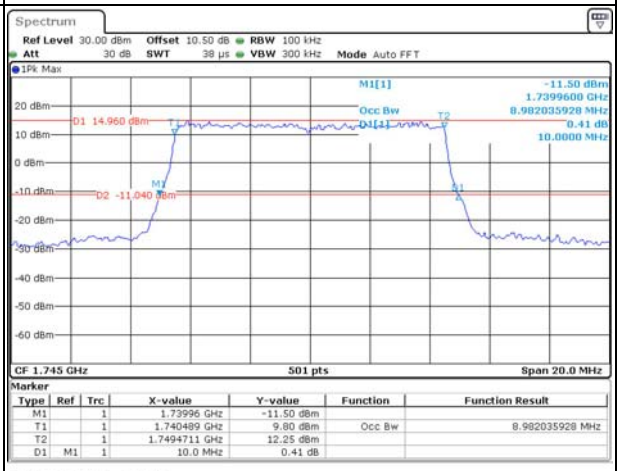
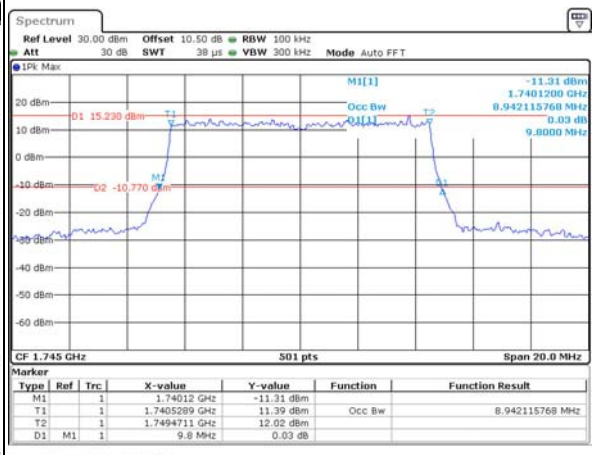
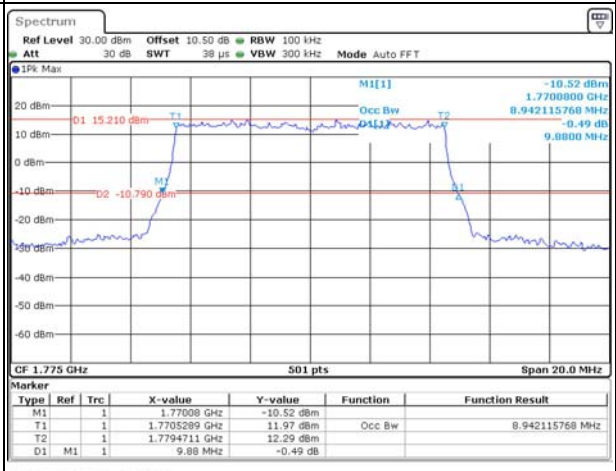
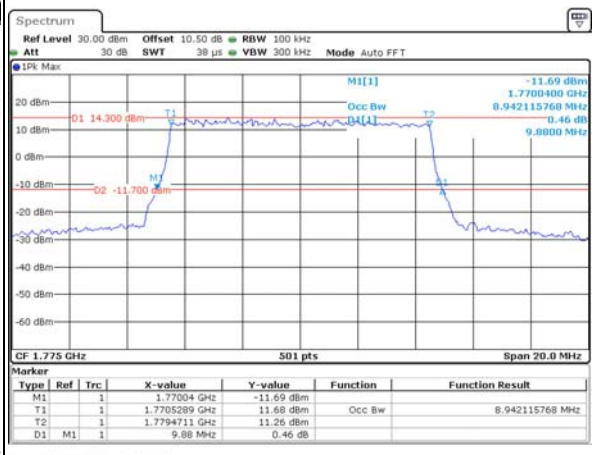
Test Mode:	20M 16QAM	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (℃)	Voltage (V_{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.85	1710.016	1710.00	1779.978	1780
	-20	3.85	1710.017	1710.00	1779.983	1780
	-10	3.85	1710.019	1710.00	1779.985	1780
	0	3.85	1710.017	1710.00	1779.978	1780
	10	3.85	1710.021	1710.00	1779.977	1780
	20	3.85	1710.012	1710.00	1779.983	1780
	30	3.85	1710.020	1710.00	1779.983	1780
	40	3.85	1710.016	1710.00	1779.978	1780
	50	3.85	1710.023	1710.00	1779.982	1780
Frequency Stability vs. Voltage	20	3.5	1710.022	1710.00	1779.985	1780
	20	4.4	1710.011	1710.00	1779.979	1780
					Result:	**Pass**

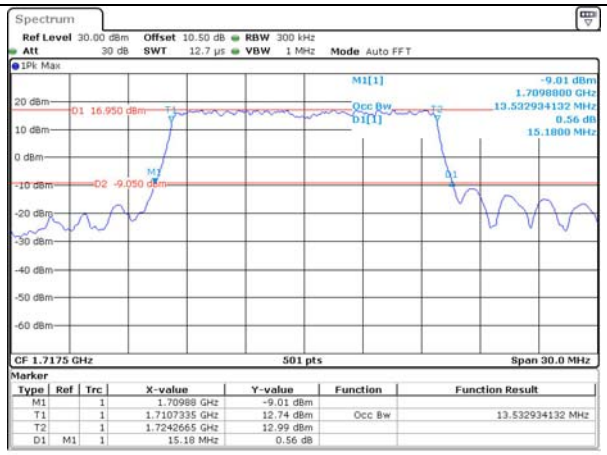
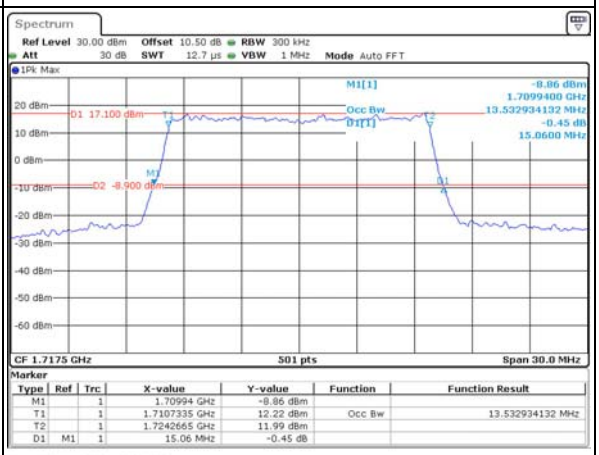
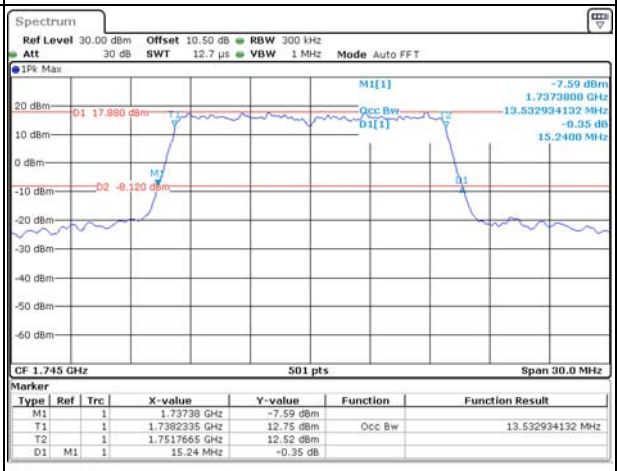
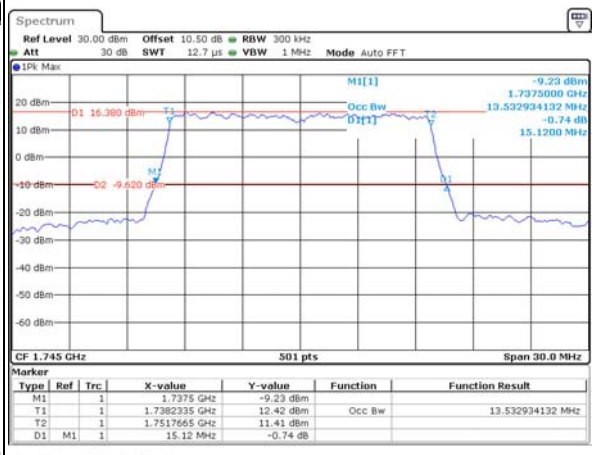
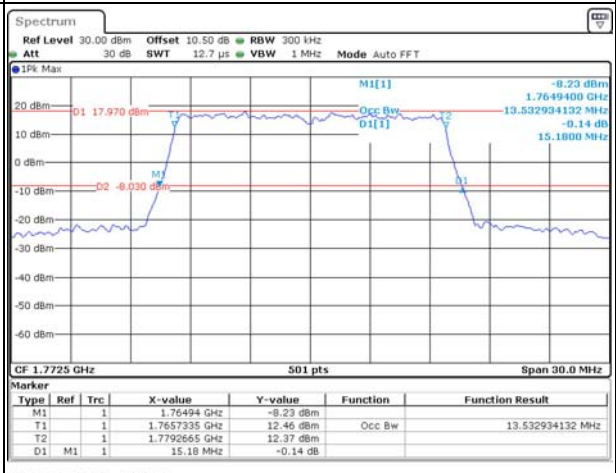
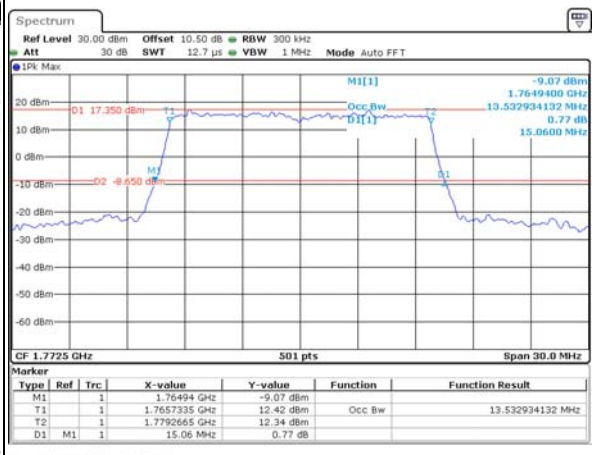
Test Plots(Note: The 10.5 dB is the Insertion loss of the RF cable and Power Splitter, which was offset into the Spectrum Analyzer):

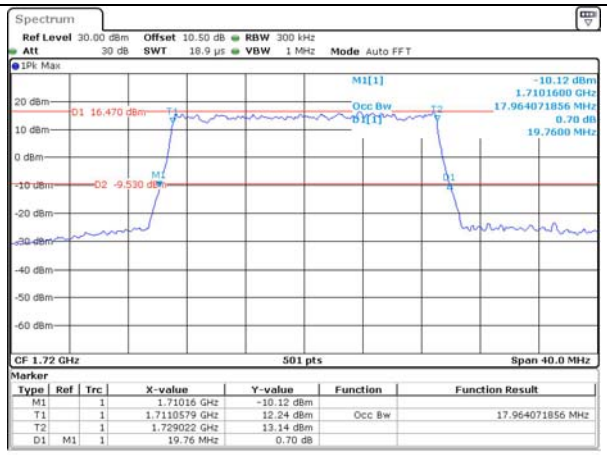
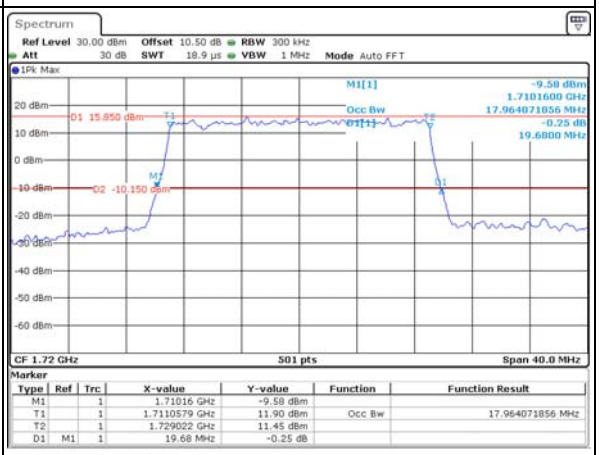
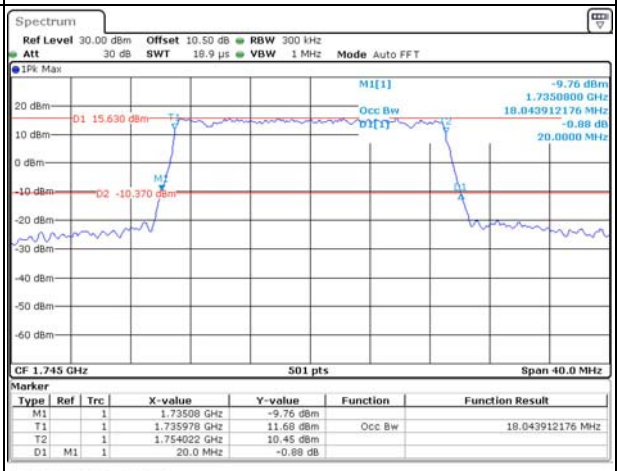
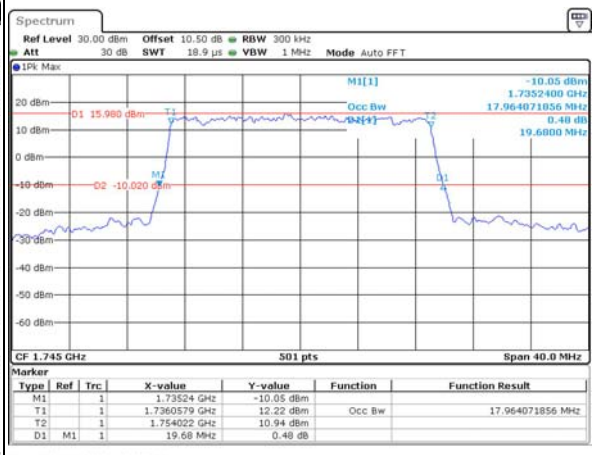
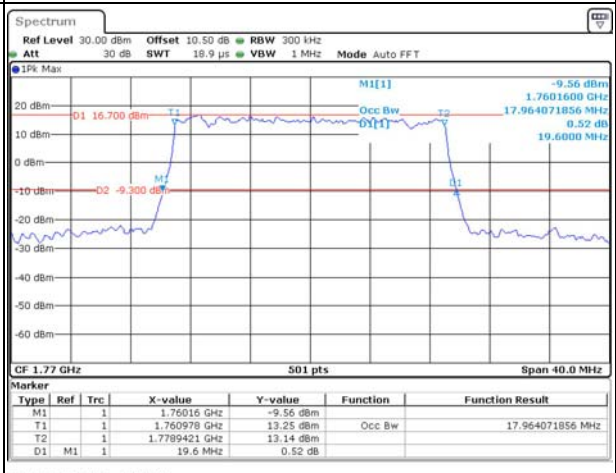
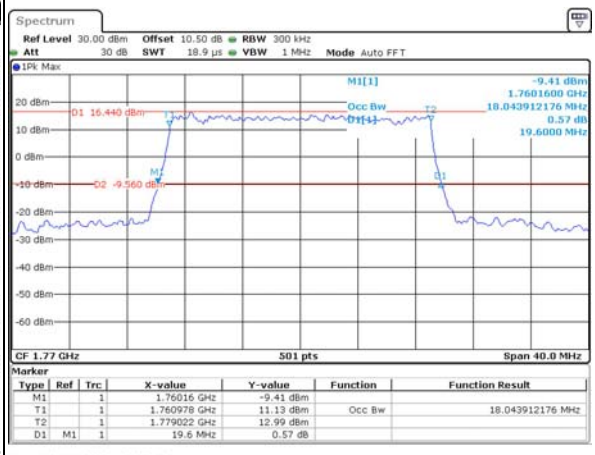
Occupied Bandwidth		
Channel	1.4MHz Bandwidth QPSK	1.4MHz Bandwidth 16QAM
Lowest		
Middle		
Highest		

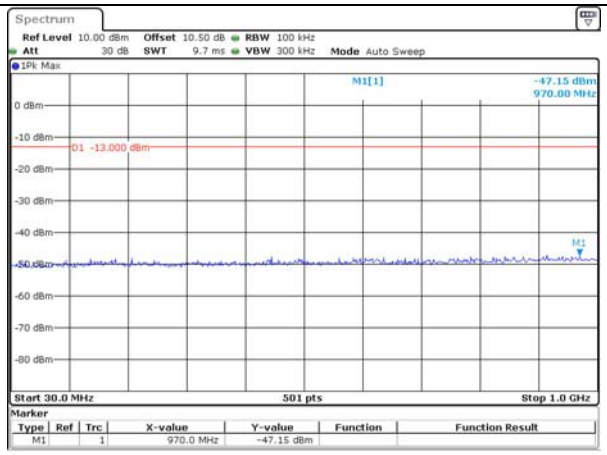
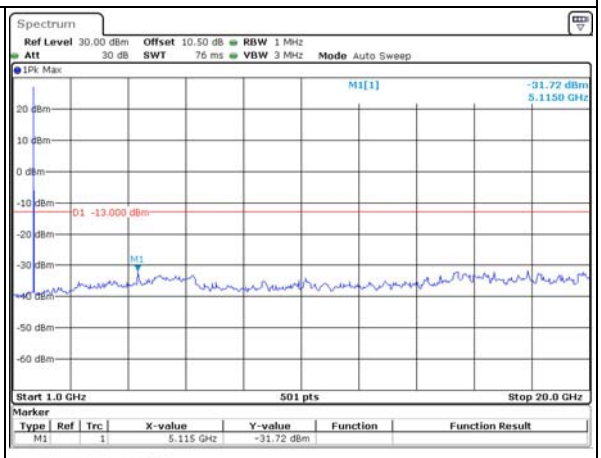
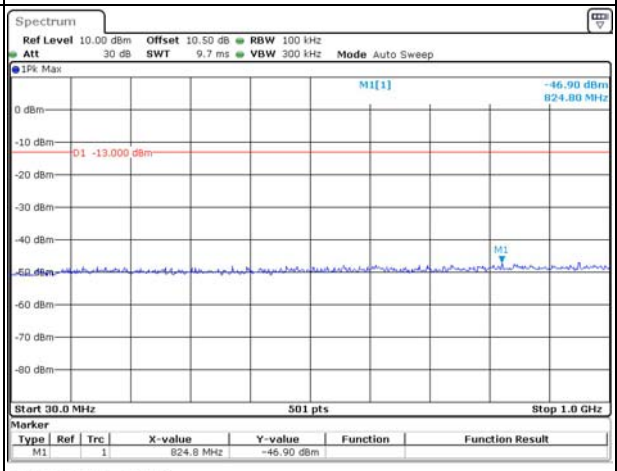
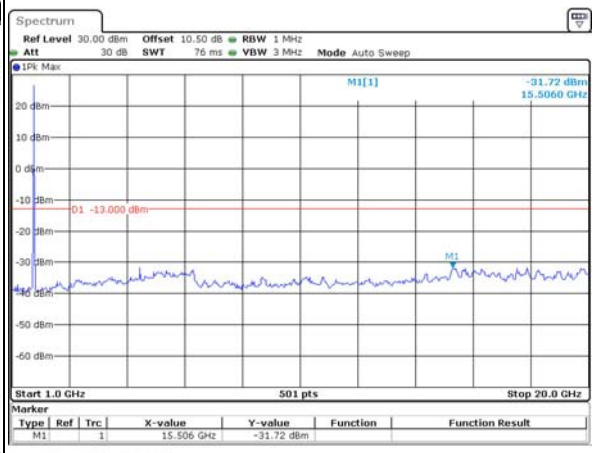
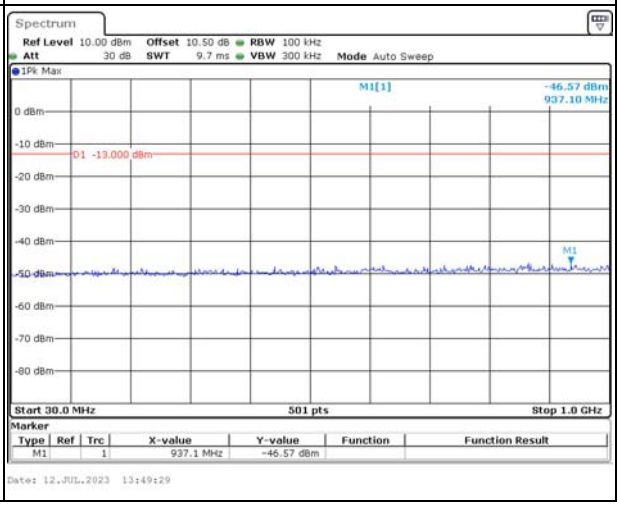
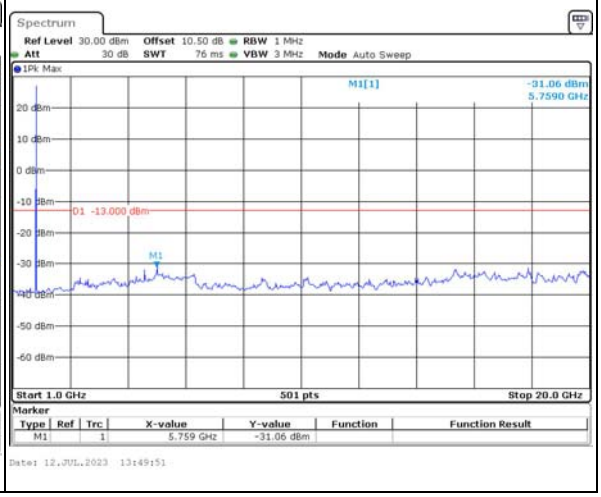
Occupied Bandwidth		
Channel	3MHz Bandwidth QPSK	3MHz Bandwidth 16QAM
Lowest		
Middle		
Highest		

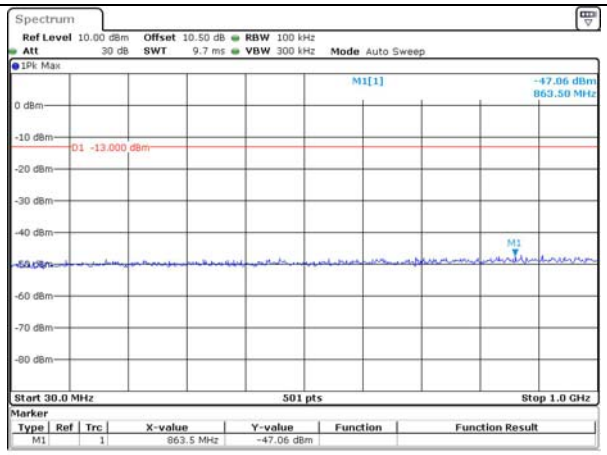
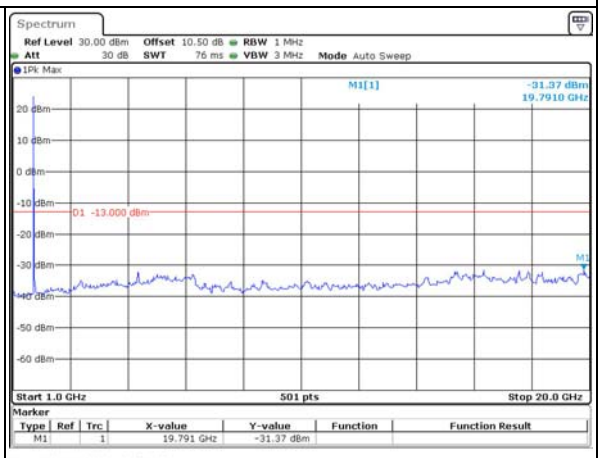
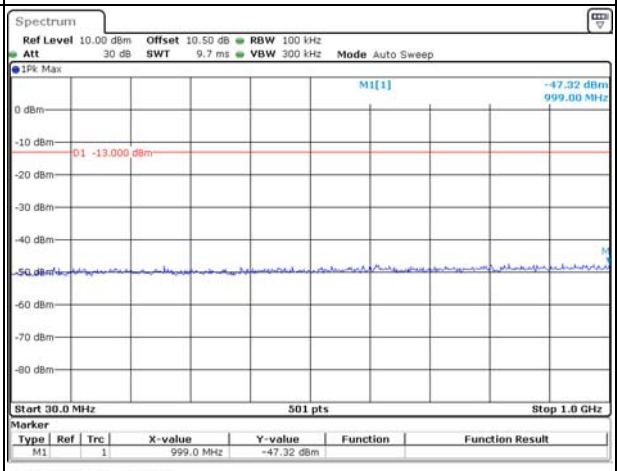
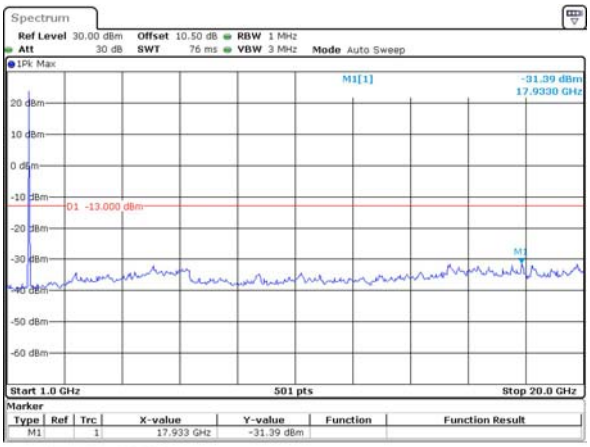
Occupied Bandwidth		
Channel	5MHz Bandwidth QPSK	5MHz Bandwidth 16QAM
Lowest		
Middle		
Highest		

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

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	**1.4MHz Bandwidth QPSK**	
Lowest		
Middle		
Highest		

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