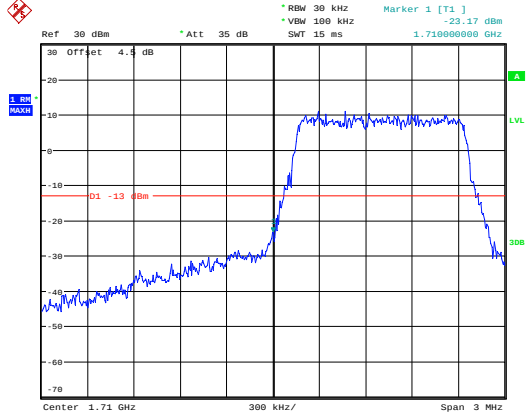
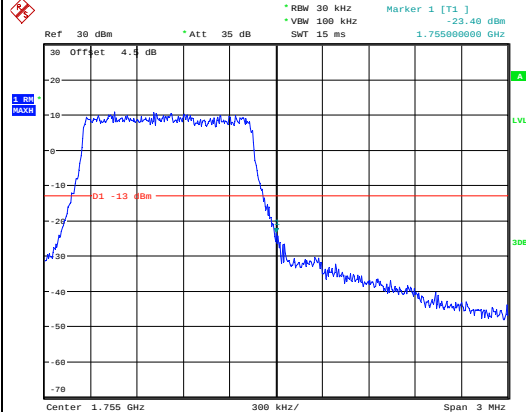
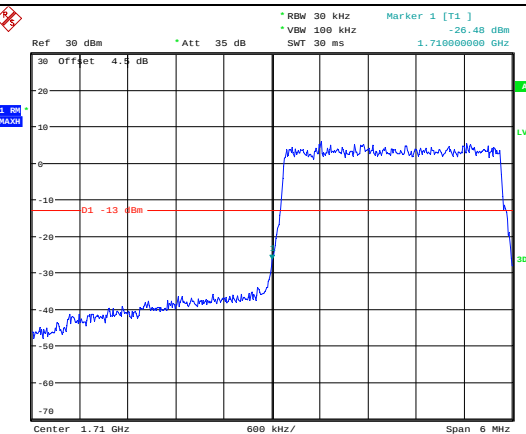
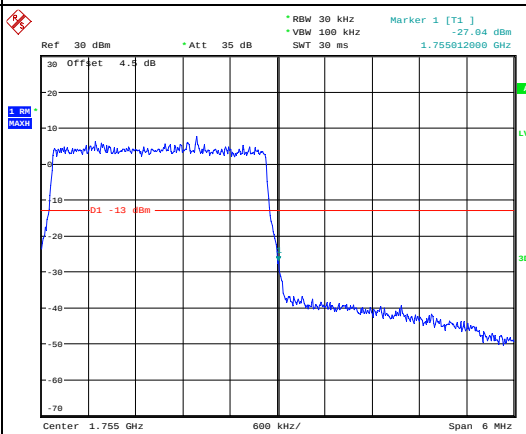
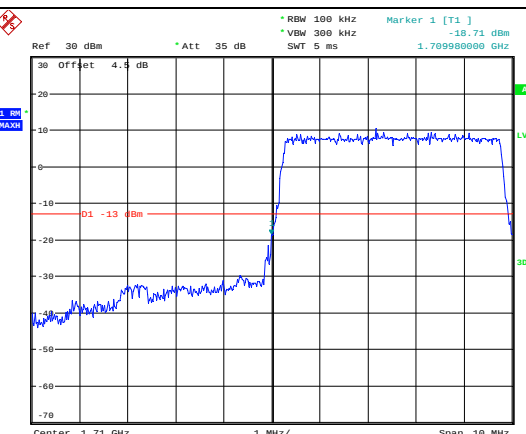
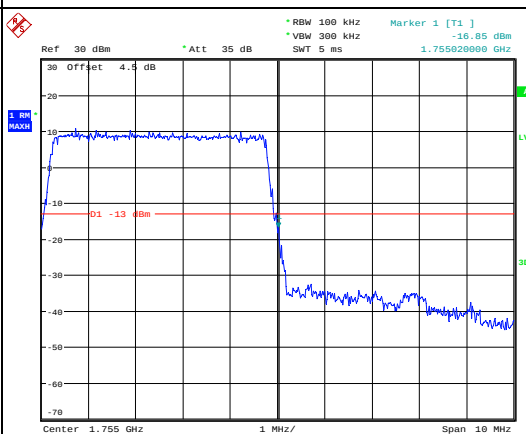
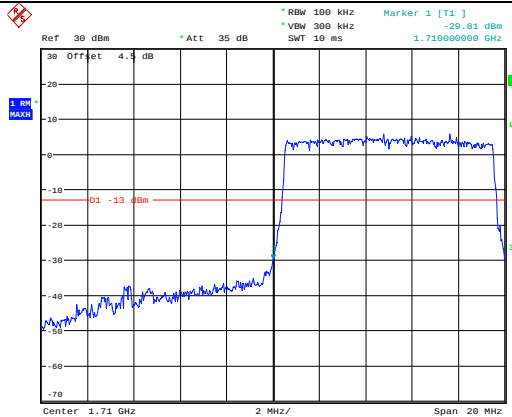
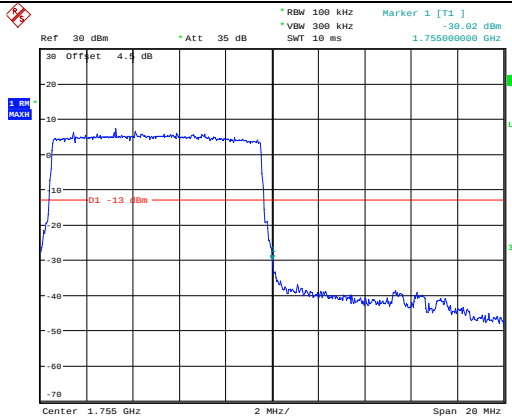
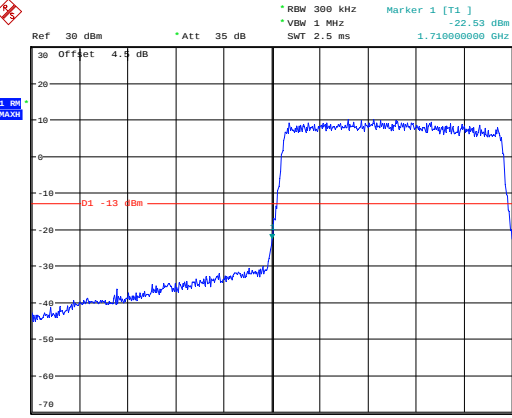
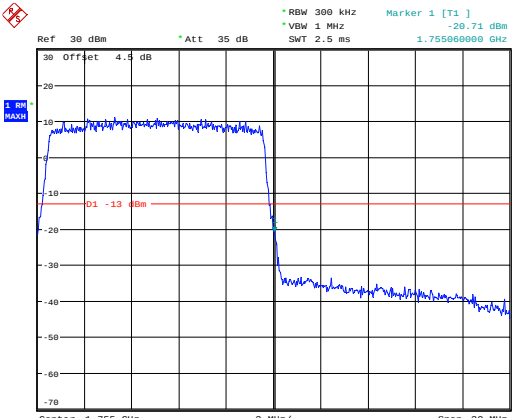
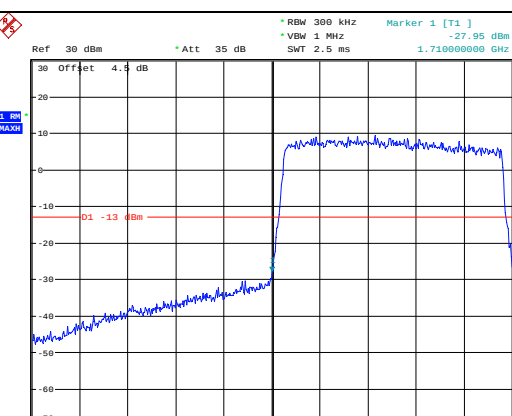
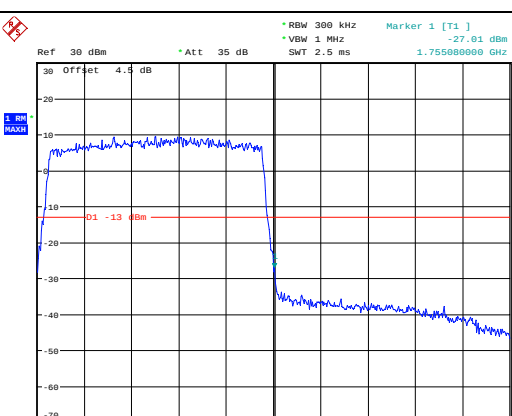


Out of band emission, Band Edge

Mode	Lowest	Highest
16QAM 1.4MHz	 Ref 30 dBm *Att 35 dB *RBW 30 kHz Marker 1 [T1] -23.17 dBm *VBW 100 kHz SWT 15 ms 1.710000000 GHz 30 Offset 4.5 dB 1.71 GHz 300 kHz/ Span 3 MHz Date: 29.JUN.2022 19:22:05	 Ref 30 dBm *Att 35 dB *RBW 30 kHz Marker 1 [T1] -27.04 dBm *VBW 100 kHz SWT 15 ms 1.755000000 GHz 30 Offset 4.5 dB 1.755 GHz 300 kHz/ Span 3 MHz Date: 29.JUN.2022 19:22:41
16QAM 3MHz	 Ref 30 dBm *Att 35 dB *RBW 30 kHz Marker 1 [T1] -25.49 dBm *VBW 100 kHz SWT 30 ms 1.710000000 GHz 30 Offset 4.5 dB 1.71 GHz 600 kHz/ Span 6 MHz Date: 29.JUN.2022 19:23:23	 Ref 30 dBm *Att 35 dB *RBW 30 kHz Marker 1 [T1] -16.85 dBm *VBW 100 kHz SWT 30 ms 1.755012000 GHz 30 Offset 4.5 dB 1.755 GHz 600 kHz/ Span 6 MHz Date: 29.JUN.2022 19:23:56
16QAM 5MHz	 Ref 30 dBm *Att 35 dB *RBW 100 kHz Marker 1 [T1] -18.71 dBm *VBW 300 kHz SWT 5 ms 1.709980000 GHz 30 Offset 4.5 dB 1.71 GHz 1 MHz/ Span 10 MHz Date: 29.JUN.2022 19:24:35	 Ref 30 dBm *Att 35 dB *RBW 100 kHz Marker 1 [T1] -16.85 dBm *VBW 300 kHz SWT 5 ms 1.755020000 GHz 30 Offset 4.5 dB 1.755 GHz 1 MHz/ Span 10 MHz Date: 29.JUN.2022 19:25:11

Out of band emission, Band Edge

Mode	Lowest	Highest
16QAM 10MHz	 Ref 30 dBm * Att 35 dB RBW 300 kHz Marker 1 [T1] VBW 300 kHz -29.81 dBm SWT 10 ms 1.71000000 GHz Center 1.71 GHz 2 MHz/ Span 20 MHz Date: 29.JUN.2022 19:25:51	 Ref 30 dBm * Att 35 dB RBW 300 kHz Marker 1 [T1] VBW 300 kHz -30.02 dBm SWT 10 ms 1.75500000 GHz Center 1.755 GHz 2 MHz/ Span 20 MHz Date: 29.JUN.2022 19:26:22
16QAM 15MHz	 Ref 30 dBm * Att 35 dB RBW 300 kHz Marker 1 [T1] VBW 1 MHz -27.53 dBm SWT 2.5 ms 1.71000000 GHz Center 1.71 GHz 3 MHz/ Span 30 MHz Date: 29.JUN.2022 19:27:00	 Ref 30 dBm * Att 35 dB RBW 300 kHz Marker 1 [T1] VBW 1 MHz -29.71 dBm SWT 2.5 ms 1.75500000 GHz Center 1.755 GHz 3 MHz/ Span 30 MHz Date: 29.JUN.2022 19:27:36
16QAM 20MHz	 Ref 30 dBm * Att 35 dB RBW 300 kHz Marker 1 [T1] VBW 1 MHz -27.95 dBm SWT 2.5 ms 1.71000000 GHz Center 1.71 GHz 4 MHz/ Span 40 MHz Date: 29.JUN.2022 19:28:14	 Ref 30 dBm * Att 35 dB RBW 300 kHz Marker 1 [T1] VBW 1 MHz -27.01 dBm SWT 2.5 ms 1.75500000 GHz Center 1.755 GHz 4 MHz/ Span 40 MHz Date: 29.JUN.2022 19:28:49

4.11 Antenna Port Test Data and Results for Module A LTE Band 5

Serial Number:	CR22050041-RF-S1	Test Date:	2022/6/1-2022/7/15
Test Site:	RF	Test Mode:	Transmitting
Tester:	Ada Yan	Test Result:	Pass

Environmental Conditions:

Temperature: (°C)	25.1	Relative Humidity: (%)	60	ATM Pressure: (kPa)	100.1
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Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSV40	101474	2021-07-22	2023-07-21
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	144976	2021-07-22	2022-07-21
BACL	TEMP&HUMI Test Chamber	BTH-150	30026	2021-07-22	2022-07-21
UNI-T	Multimeter	UT39A+	C210582554	2021-09-30	2022-09-29
Unknown	Coaxial tee connector	Unknown	2204006	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 5▲:

Antenna Gain G_T (dBi):	-5.58	Antenna Gain G_T (dBd):	-7.73	Path Loss L_C (dB):	0
Operation Voltage(V_{DC}):					
Lowest:	3.5	Normal:	3.85	Highest:	4.4

Test Frequency For Each Mode:

Operation Bandwidth	Lowest Frequency (MHz)	Middle Frequency (MHz)	Highest Frequency (MHz)
1.4MHz	824.7	836.5	848.3
3MHz	825.5	836.5	847.5
5MHz	826.5	836.5	846.5
10MHz	829	836.5	844

Test Data:**FCC§2.1046;§ 22.913 (a)****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	21.23	21.49	20.64	13.76	38.45
	RB1#3	21.12	21.46	20.42		
	RB1#5	21.09	21.45	20.22		
	RB3#0	20.97	21.35	20.43		
	RB3#3	21.04	21.38	20.25		
	RB6#0	21.00	21.38	20.34		
1.4MHz 16QAM	RB1#0	20.10	20.61	19.69	13.01	38.45
	RB1#3	20.23	20.65	19.62		
	RB1#5	20.26	20.74	19.54		
	RB3#0	20.13	20.50	19.63		
	RB3#3	20.20	20.54	19.53		
	RB6#0	20.12	20.54	19.59		
3MHz QPSK	RB1#0	21.14	21.51	20.79	13.82	38.45
	RB1#8	21.22	21.55	20.69		
	RB1#14	20.99	21.44	20.26		
	RB6#0	21.07	21.47	20.66		
	RB6#9	21.10	21.47	20.41		
	RB15#0	21.08	21.46	20.56		
3MHz 16QAM	RB1#0	20.16	20.47	19.91	13.02	38.45
	RB1#8	20.41	20.75	19.85		
	RB1#14	20.25	20.64	19.46		
	RB6#0	20.17	20.62	19.82		
	RB6#9	20.22	20.66	19.59		
	RB15#0	20.22	20.58	19.71		
5MHz QPSK	RB1#0	21.08	21.39	20.66	13.84	38.45
	RB1#13	21.23	21.57	20.79		
	RB1#24	20.98	21.27	20.16		
	RB15#0	21.11	21.47	20.69		
	RB15#10	21.07	21.46	20.57		
	RB25#0	21.07	21.45	20.60		
5MHz 16QAM	RB1#0	20.01	20.36	19.83	13.08	38.45
	RB1#13	20.45	20.81	20.02		
	RB1#24	20.15	20.44	19.44		
	RB15#0	20.28	20.59	19.82		
	RB15#10	20.21	20.57	19.76		
	RB25#0	20.20	20.56	19.78		
10MHz QPSK	RB1#0	20.52	20.62	20.63	13.84	38.45

	RB1#25	21.34	21.57	20.92		
	RB1#49	20.71	20.42	19.76		
	RB25#0	20.93	21.25	20.80		
	RB25#25	21.12	21.17	20.51		
	RB50#0	21.01	21.21	20.63		
10MHz 16QAM	RB1#0	19.48	19.74	19.71	13.12	38.45
	RB1#25	20.53	20.85	20.04		
	RB1#49	19.95	19.58	18.96		
	RB25#0	20.04	20.37	19.92		
	RB25#25	20.24	20.32	19.63		
	RB50#0	20.11	20.33	19.76		
Note: ERP= Conducted Power(dBm) - L _C (dB) + G _T (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	4.52	4.67	4.58	13
	RB50#0	4.64	4.93	4.81	13
10MHz 16QAM	RB1#0	5.30	5.77	5.65	13
	RB50#0	5.74	5.97	5.83	13
Result:					Pass

FCC §2.1049, §22.905: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	1.102	1.096	1.344	1.326	1.320
1.4MHz 16QAM	1.114	1.102	1.108	1.326	1.308	1.320
3MHz QPSK	2.707	2.707	2.683	2.952	2.964	2.964
3MHz 16QAM	2.683	2.695	2.707	2.976	2.952	2.964
5MHz QPSK	4.531	4.531	4.511	5.000	5.040	5.080
5MHz 16QAM	4.511	4.511	4.511	5.020	5.020	5.040
10MHz QPSK	8.942	8.981	8.942	9.760	9.840	9.800
10MHz 16QAM	8.942	8.942	8.942	9.720	9.720	9.720
Note: The test plots please refer to the Plots of Occupied Bandwidth						

FCC §2.1051, §22.917(a):Spurious Emissions at Antenna Terminal

Result:	Pass, Please refer to the test plots of Spurious Emissions at Antenna Terminal.
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FCC §2.1051, §22.917(a):Out of band emission, Band Edge

Result:	Pass, Please refer to the test plots of Out of band emission, Band Edge.
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FCC §2.1055, §22.355: Frequency Stability

Test Mode:	10 MHz QPSK		Test Channel:	836.5	MHz
Test Item	Temperature (°C)	Voltage (V _{DC})	Frequency Error		Limit
			(Hz)	(ppm)	(ppm)
Frequency Stability vs. Temperature	-30	3.85	-1	-0.001	2.5
	-20	3.85	-6	-0.007	2.5
	-10	3.85	5	0.006	2.5
	0	3.85	8	0.010	2.5
	10	3.85	-6	-0.007	2.5
	20	3.85	-2	-0.002	2.5
	30	3.85	-6	-0.007	2.5
	40	3.85	-5	-0.006	2.5
	50	3.85	7	0.008	2.5
Frequency Stability vs. Voltage	20	3.5	-8	-0.010	2.5
	20	4.4	6	0.007	2.5
Result:				Pass	

Test Mode:	10 MHz 16QAM		Test Channel:	836.5	MHz
Test Item	Temperature (°C)	Voltage (V _{DC})	Frequency Error		Limit
			(Hz)	(ppm)	(ppm)
Frequency Stability vs. Temperature	-30	3.85	0	0.000	2.5
	-20	3.85	-6	-0.007	2.5
	-10	3.85	-7	-0.008	2.5
	0	3.85	5	0.006	2.5
	10	3.85	-4	-0.005	2.5
	20	3.85	0	0.000	2.5
	30	3.85	7	0.008	2.5
	40	3.85	-7	-0.008	2.5
	50	3.85	3	0.004	2.5
Frequency Stability vs. Voltage	20	3.5	5	0.006	2.5
	20	4.4	2	0.002	2.5
Result:				Pass	

Test Plots:

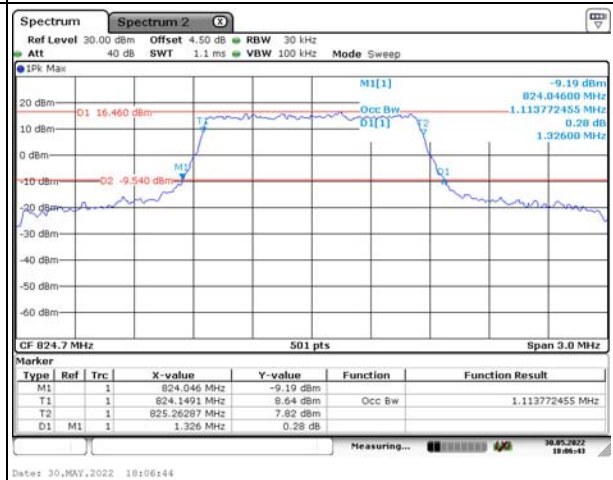
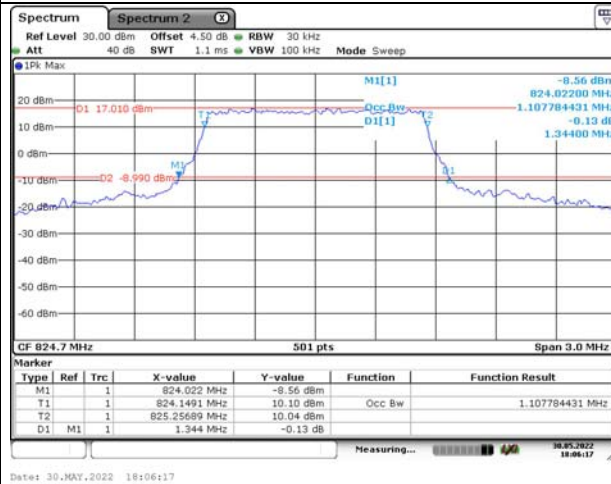
Occupied Bandwidth

Channel

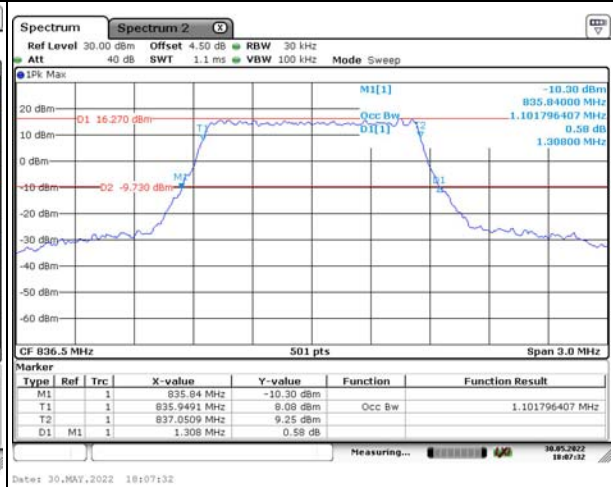
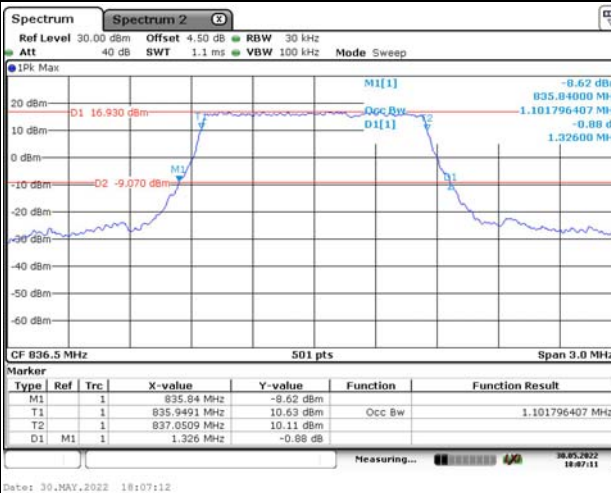
1.4MHz Bandwidth QPSK

1.4MHz Bandwidth 16QAM

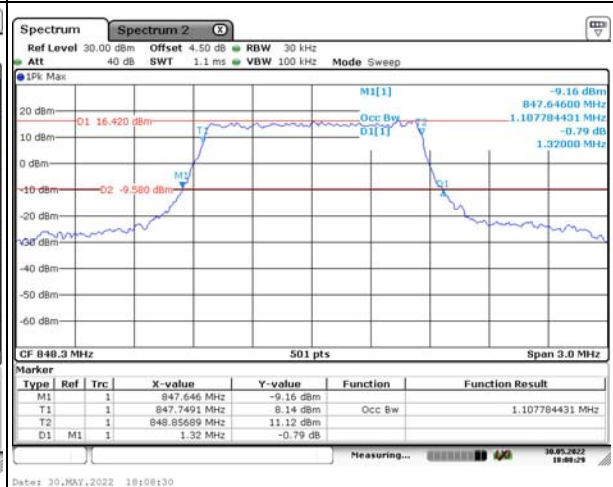
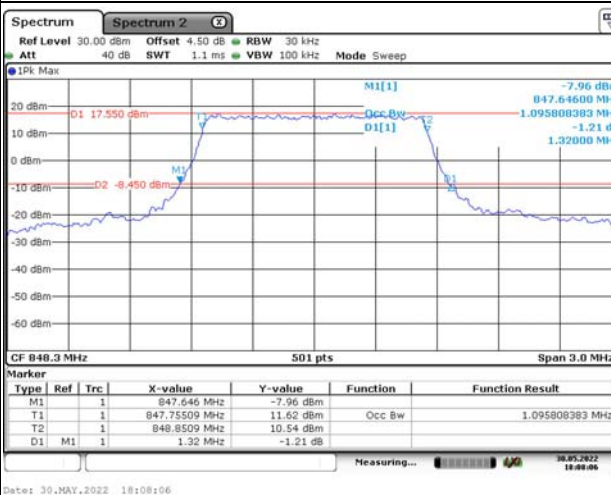
Lowest



Middle



Highest



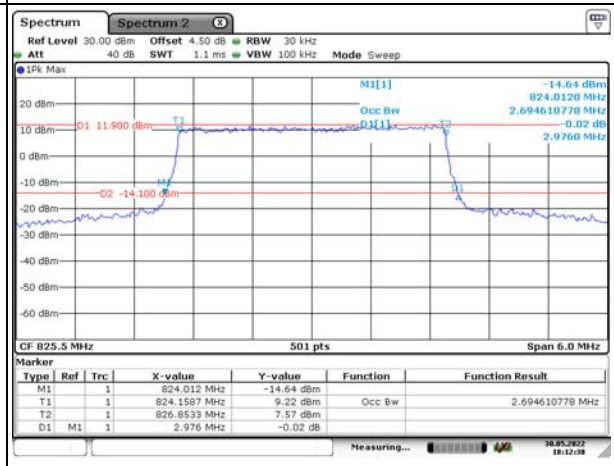
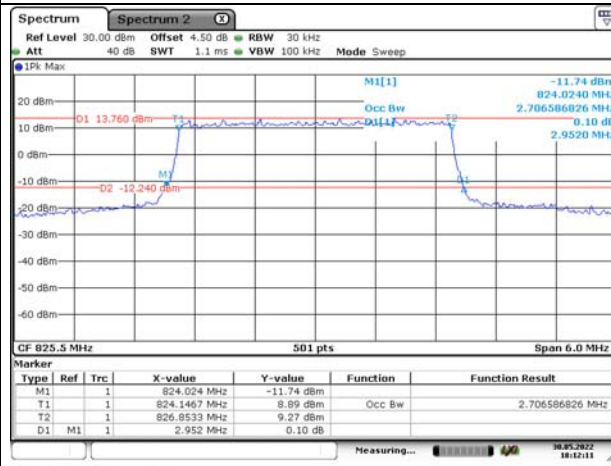
Occupied Bandwidth

Channel

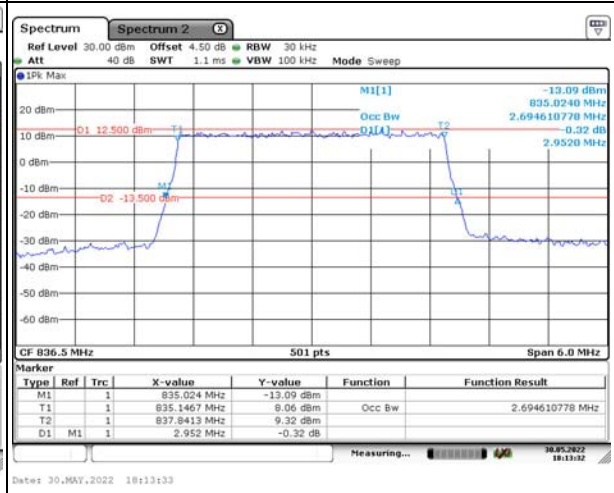
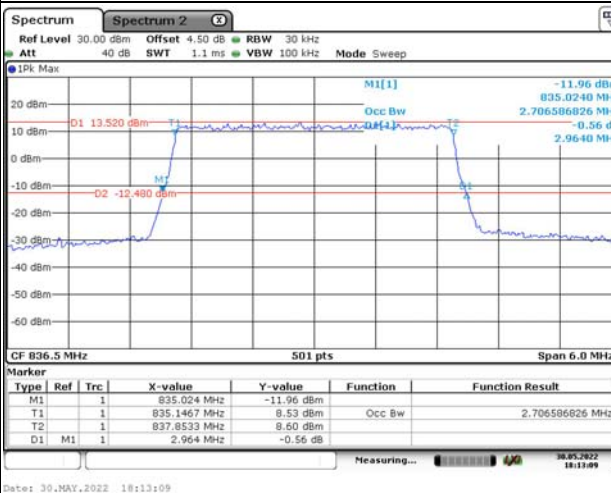
3MHz Bandwidth QPSK

3MHz Bandwidth 16QAM

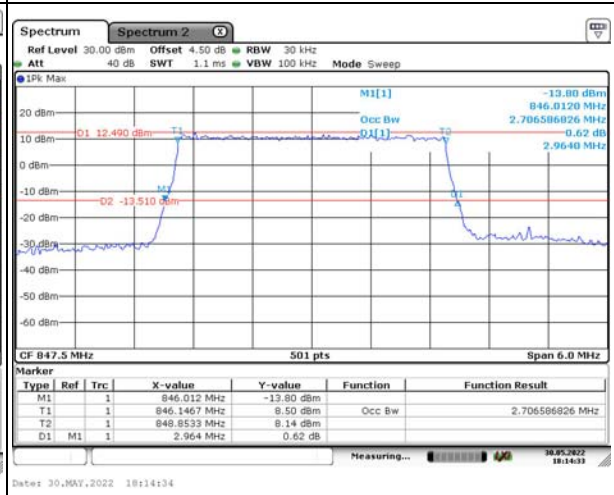
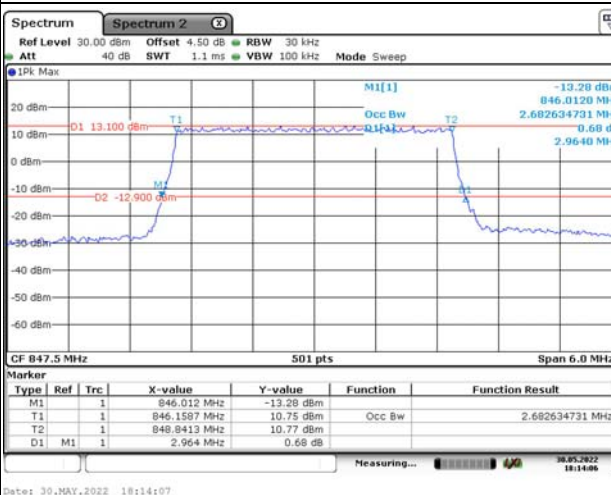
Lowest



Middle



Highest



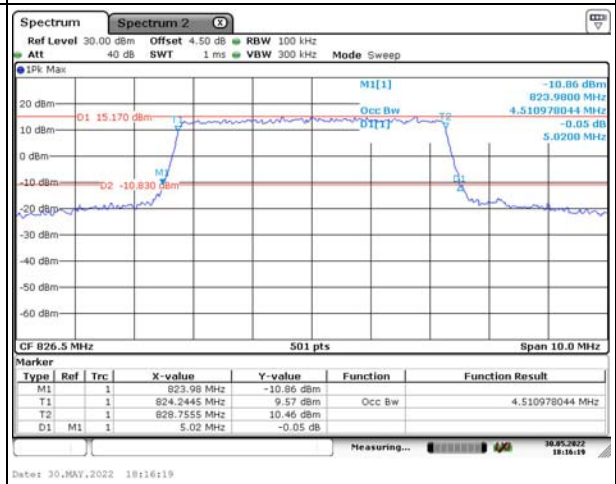
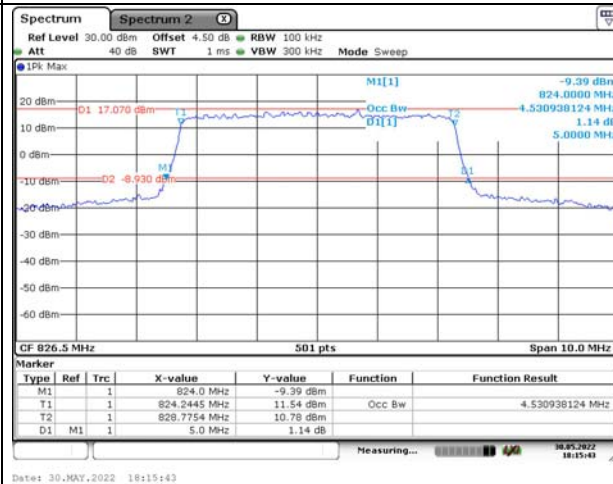
Occupied Bandwidth

Channel

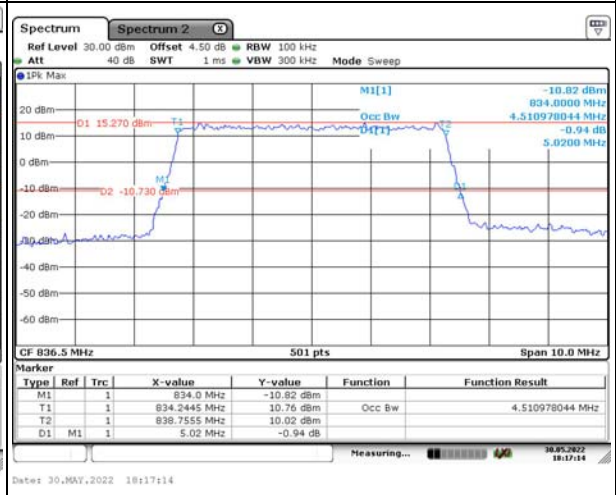
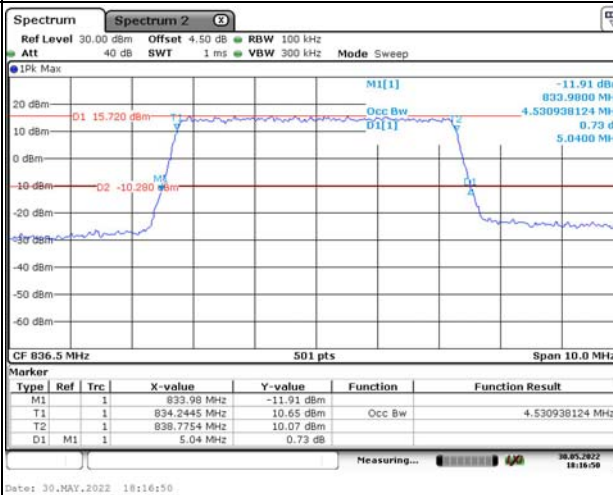
5MHz Bandwidth QPSK

5MHz Bandwidth 16QAM

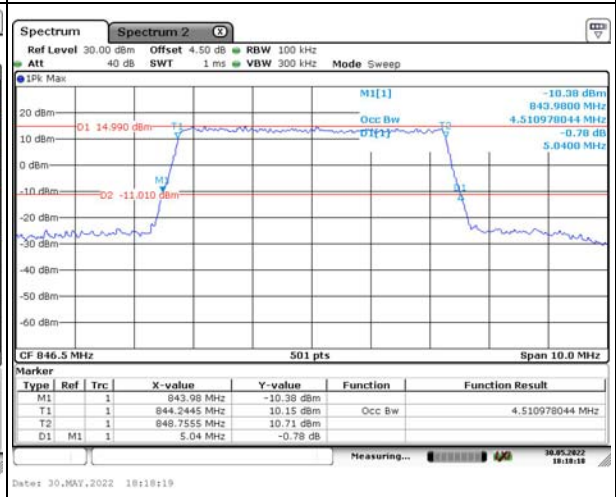
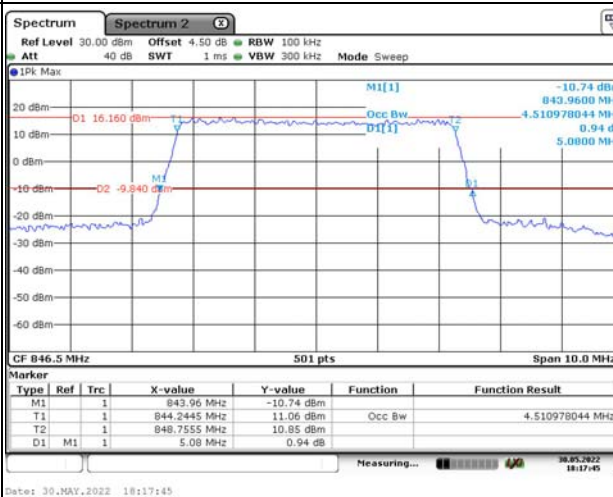
Lowest



Middle



Highest



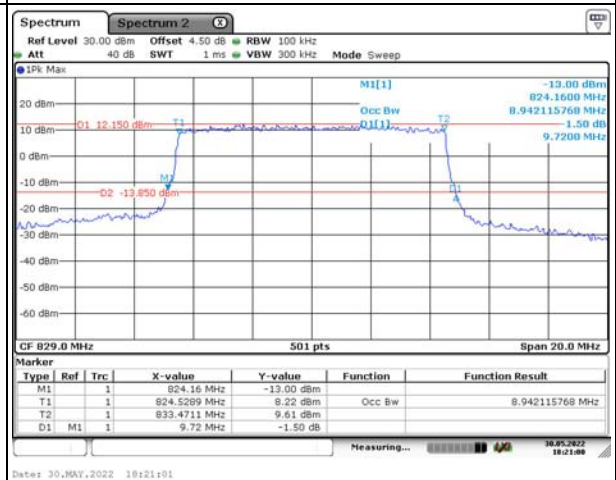
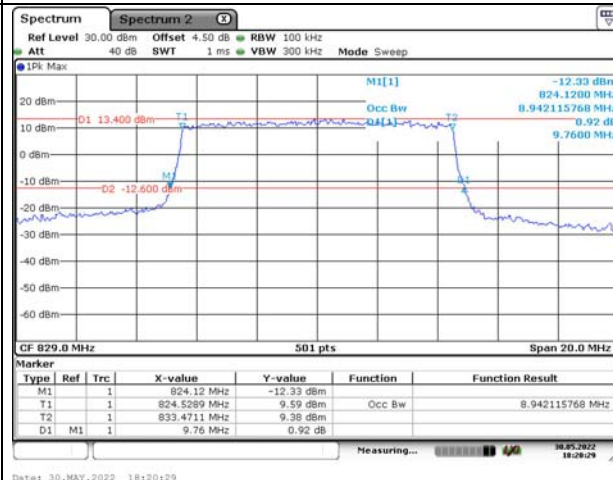
Occupied Bandwidth

Channel

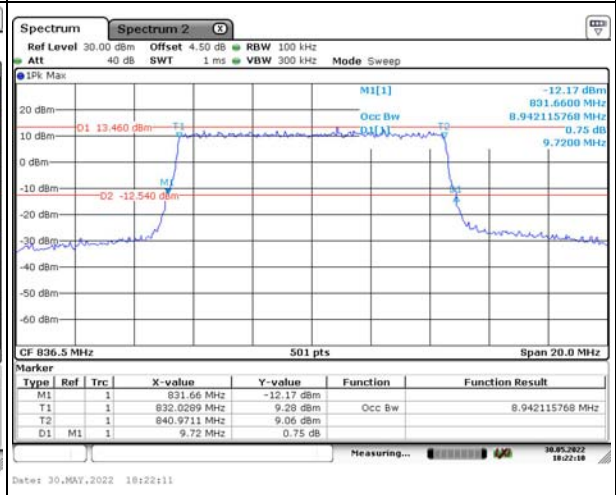
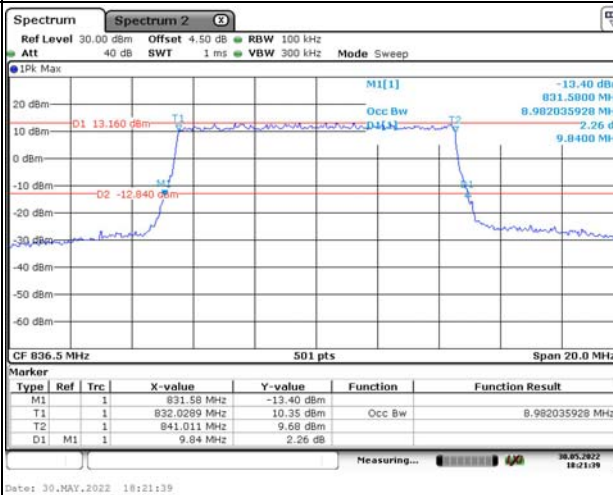
10MHz Bandwidth QPSK

10MHz Bandwidth 16QAM

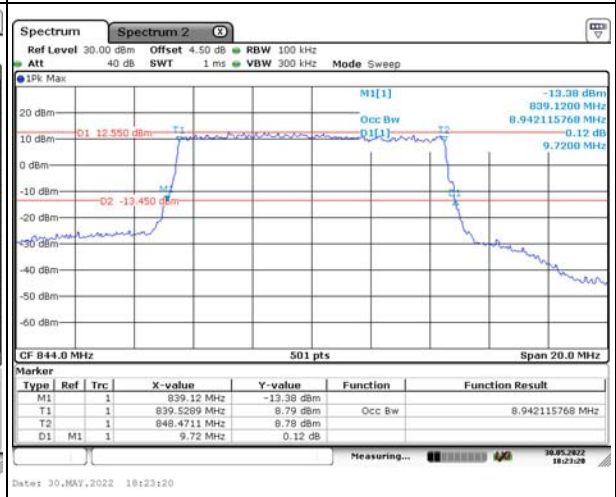
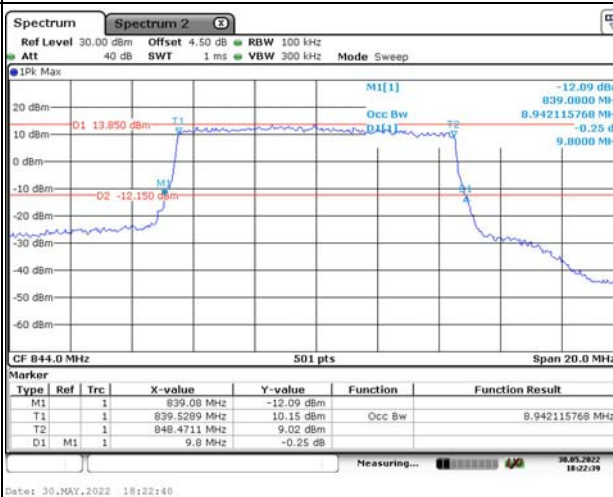
Lowest



Middle



Highest

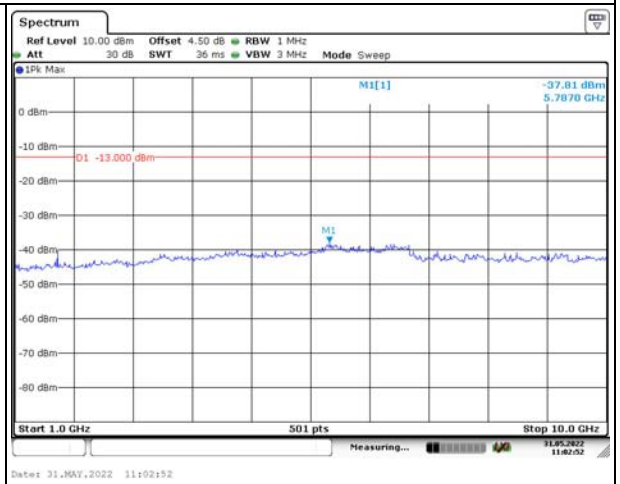
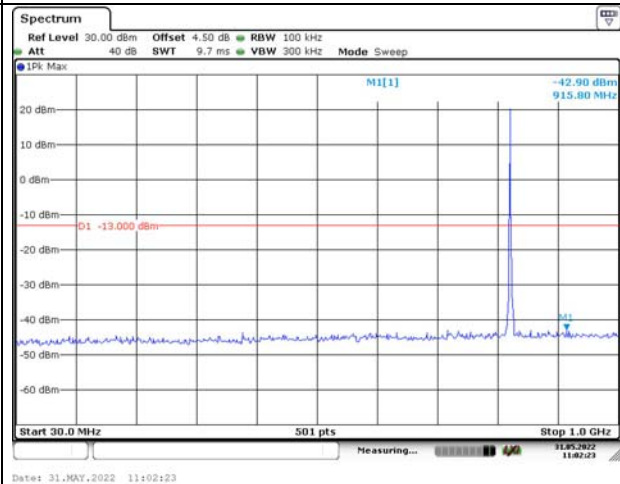


Spurious Emissions at Antenna Terminal

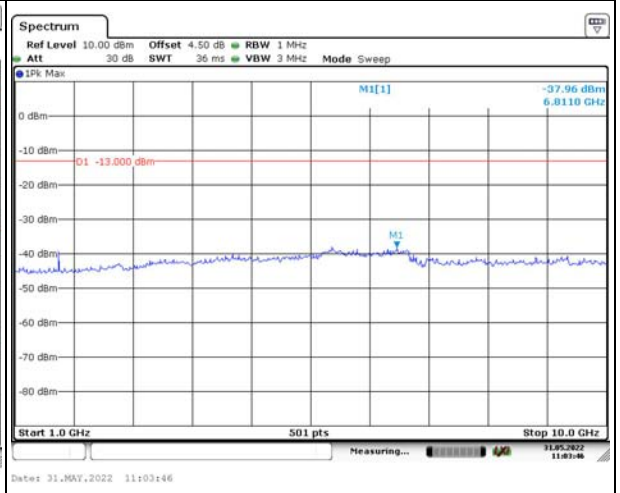
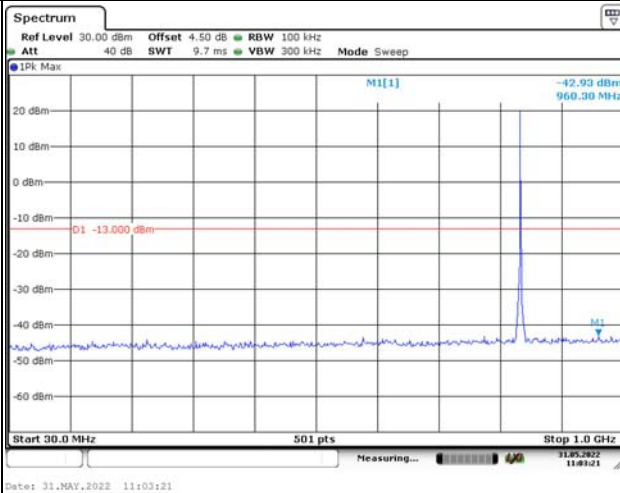
Channel

1.4MHz Bandwidth QPSK

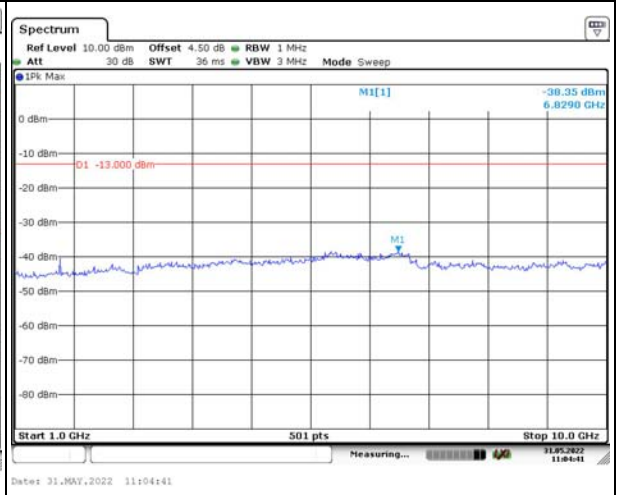
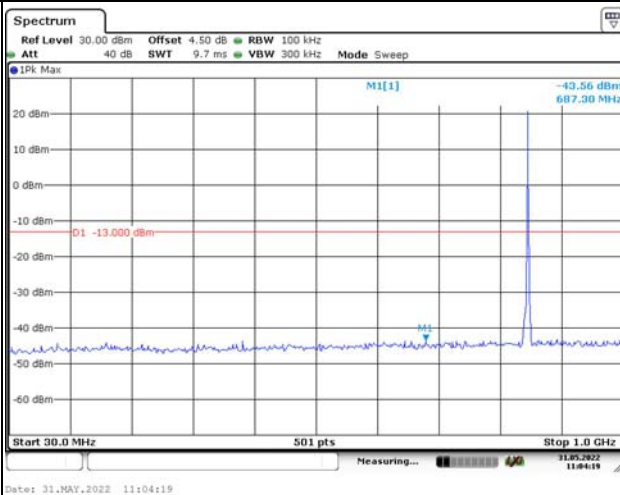
Lowest



Middle



Highest

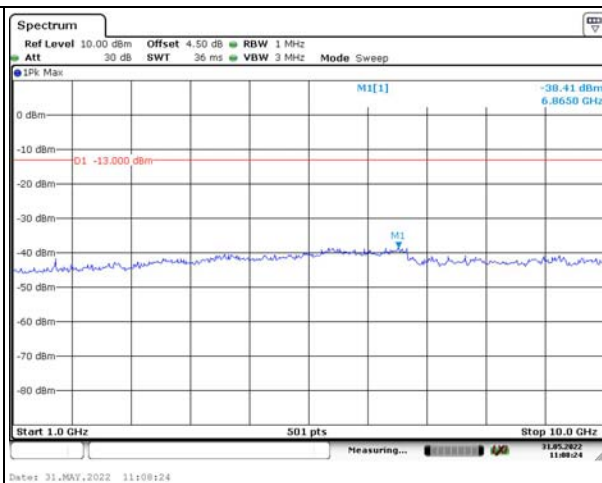
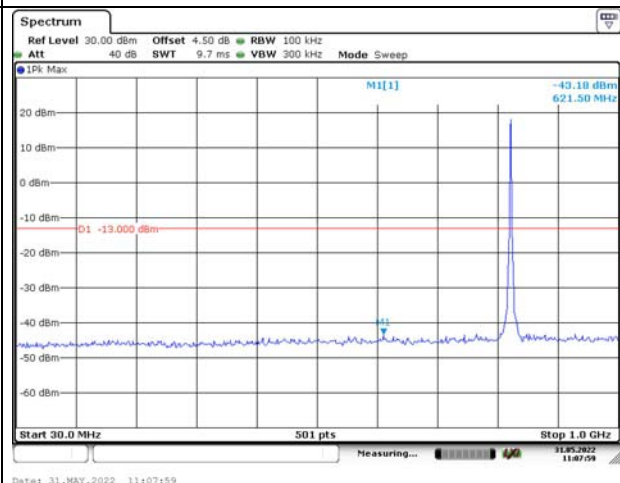


Spurious Emissions at Antenna Terminal

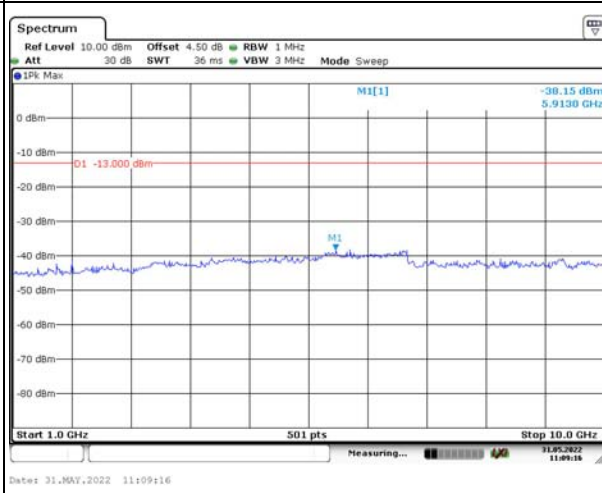
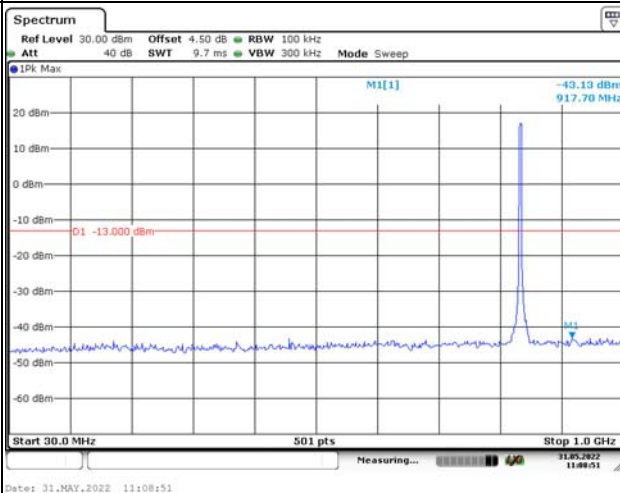
Channel

3MHz Bandwidth QPSK

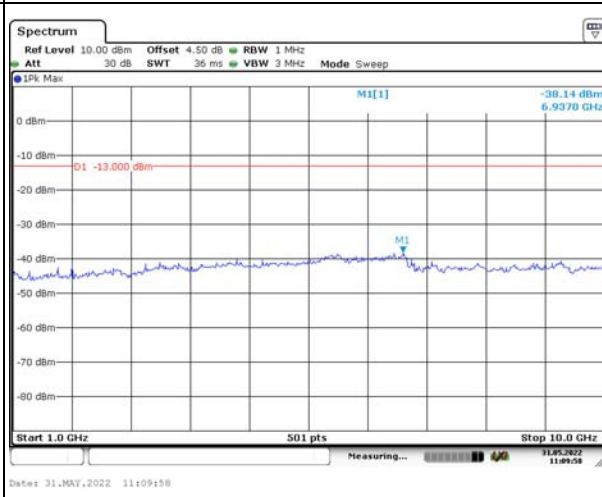
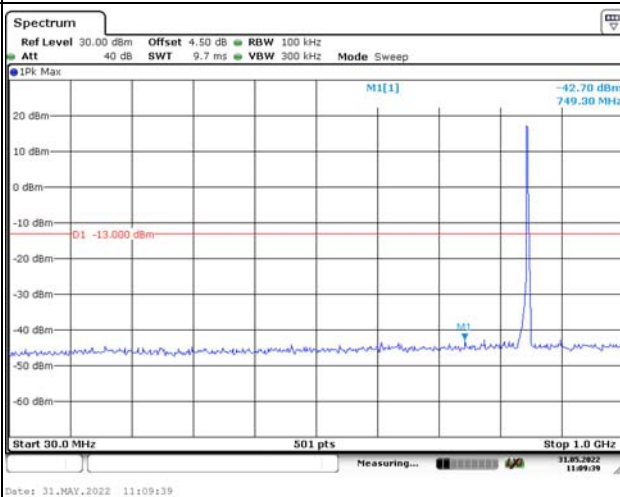
Lowest



Middle



Highest

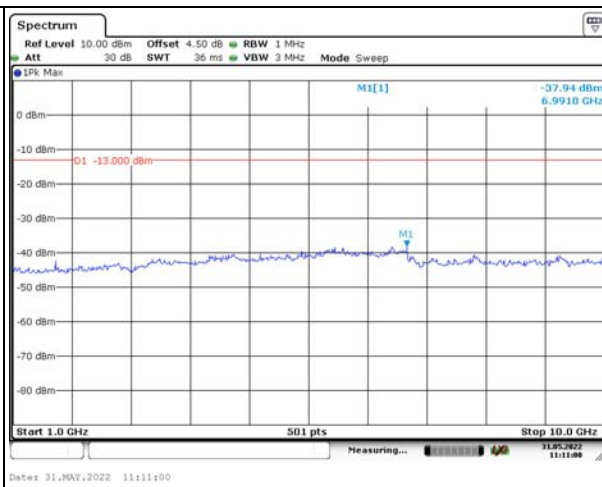
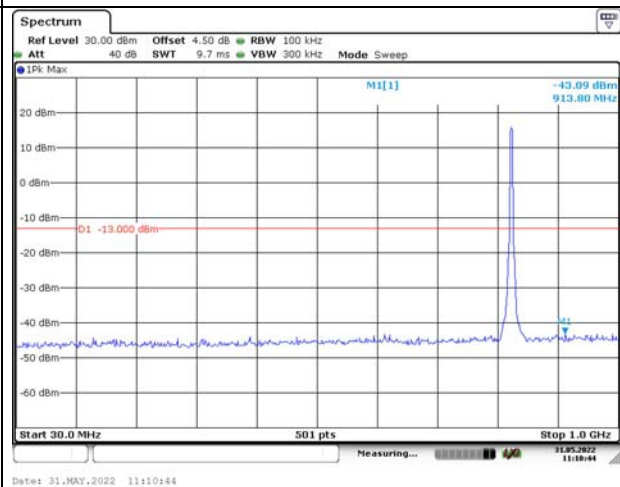


Spurious Emissions at Antenna Terminal

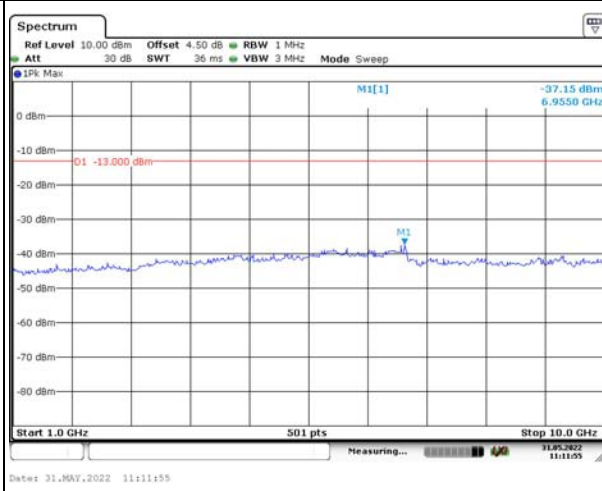
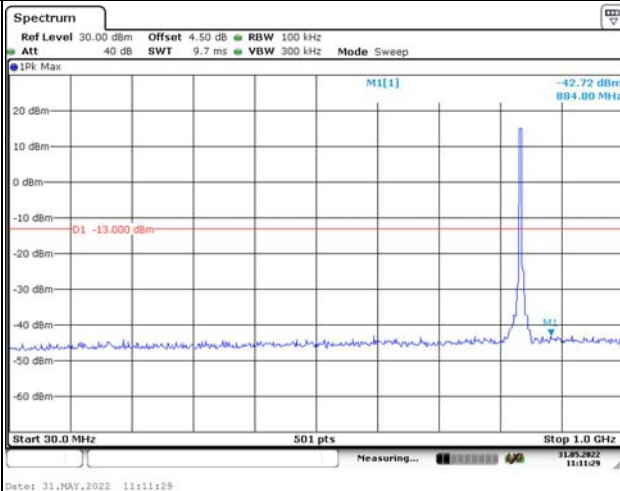
Channel

5MHz Bandwidth QPSK

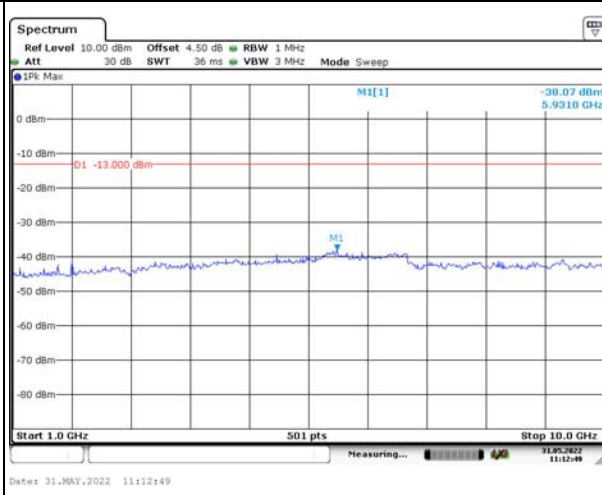
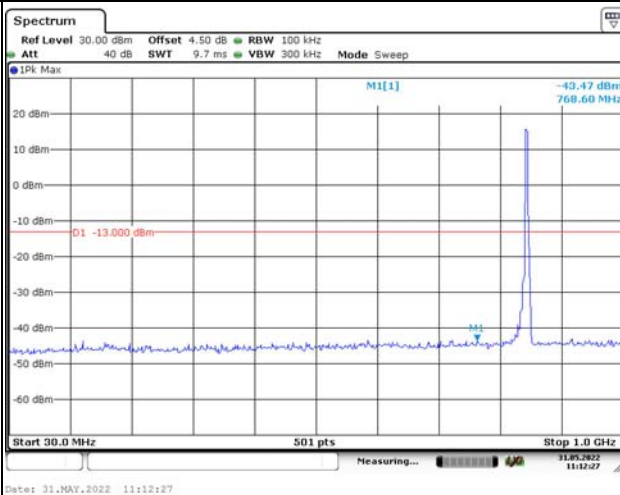
Lowest



Middle



Highest

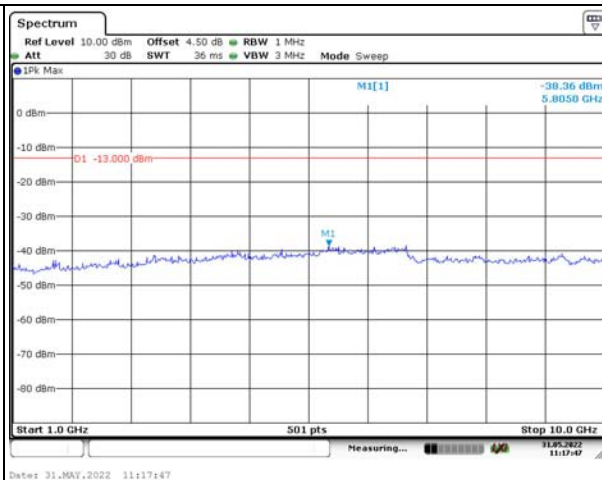
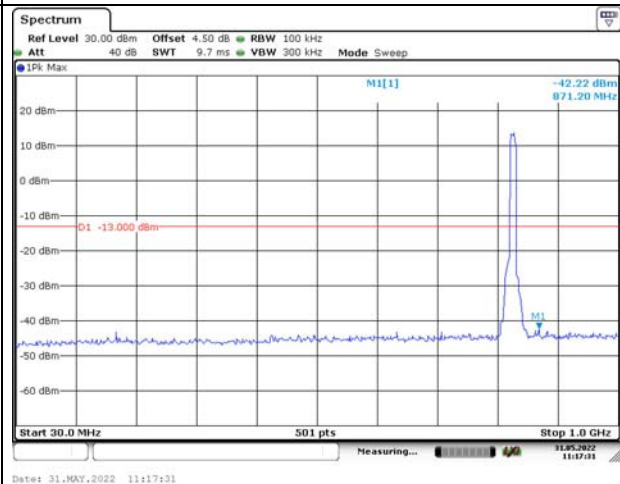


Spurious Emissions at Antenna Terminal

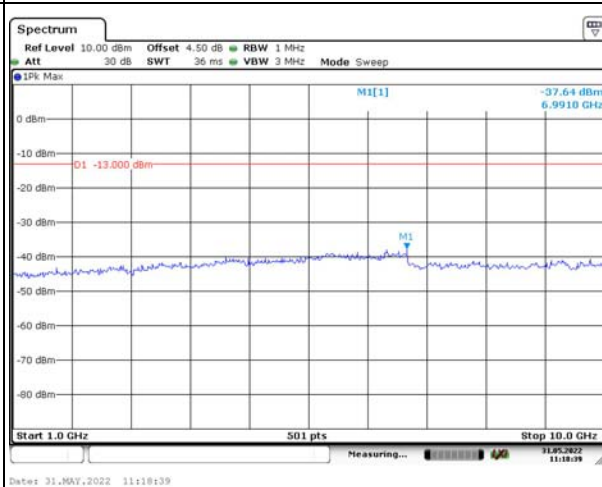
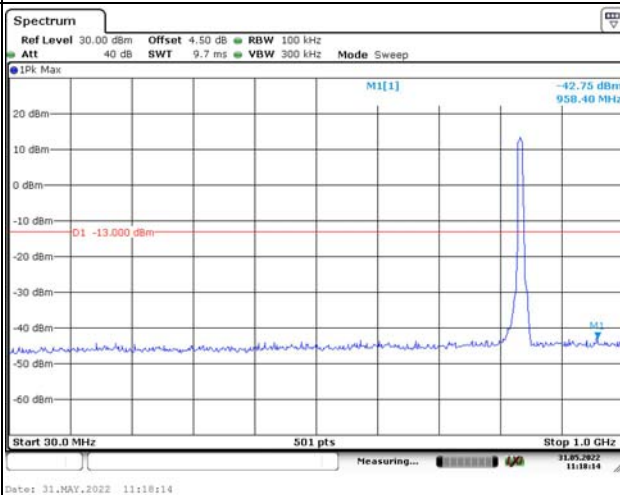
Channel

10MHz Bandwidth QPSK

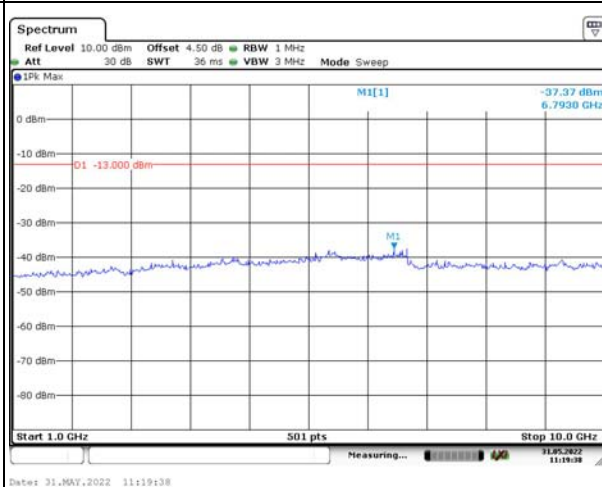
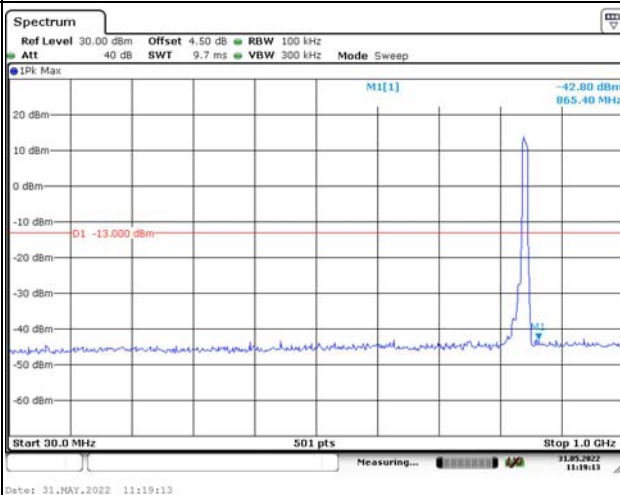
Lowest



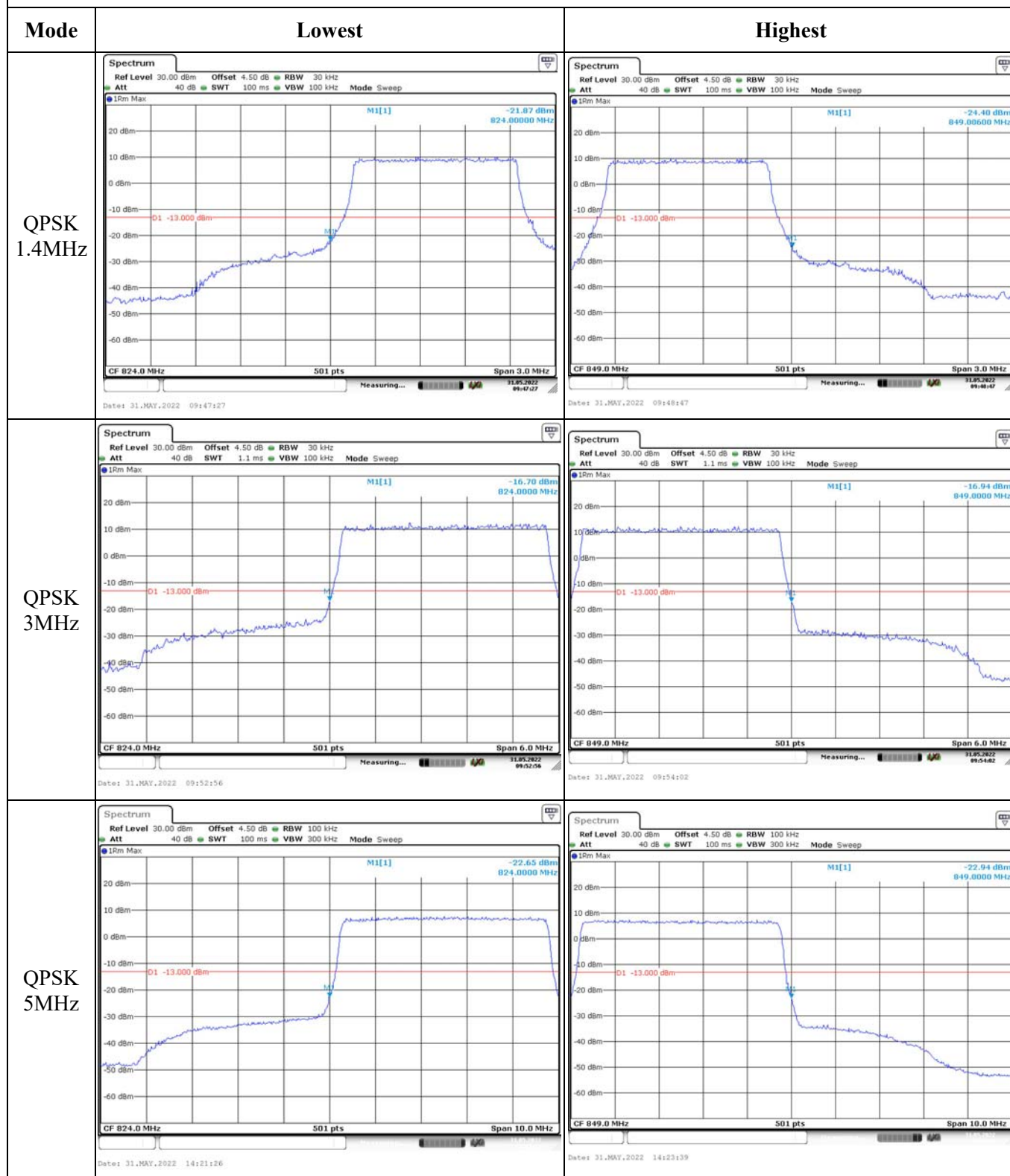
Middle



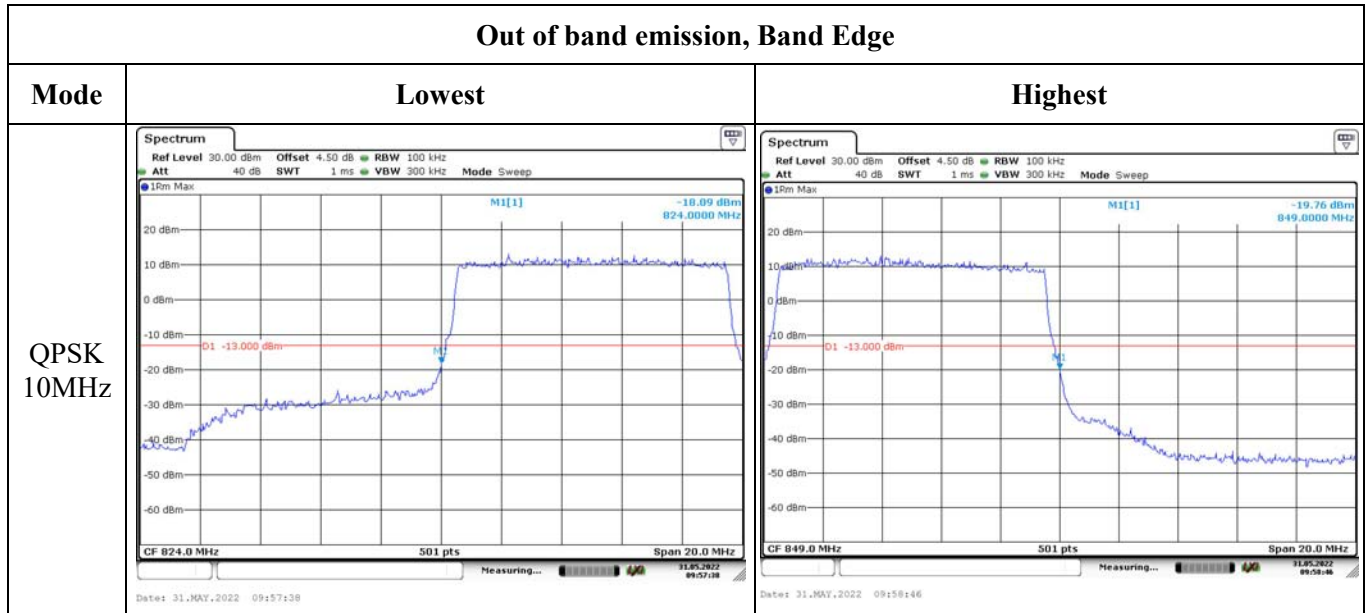
Highest



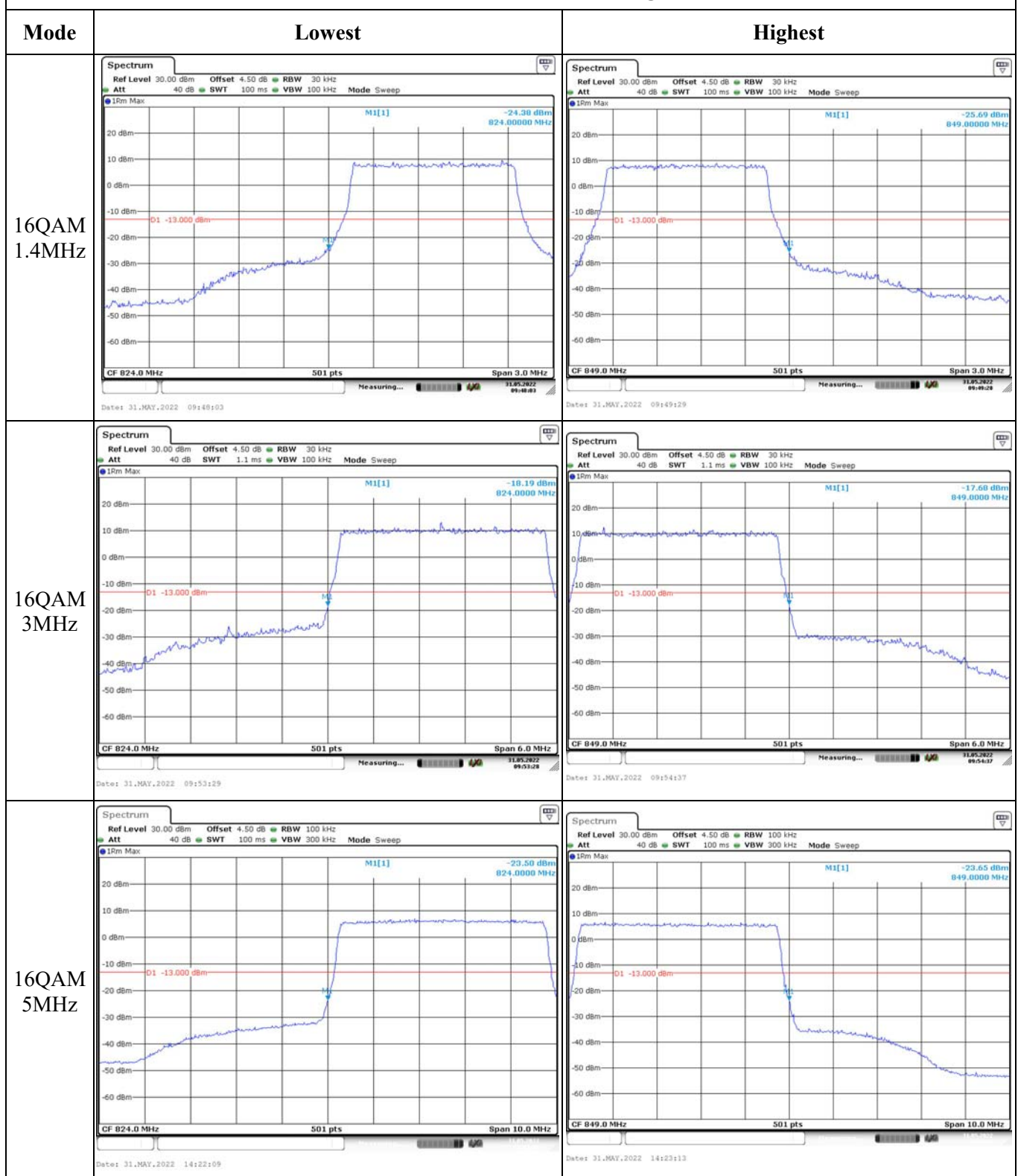
Out of band emission, Band Edge



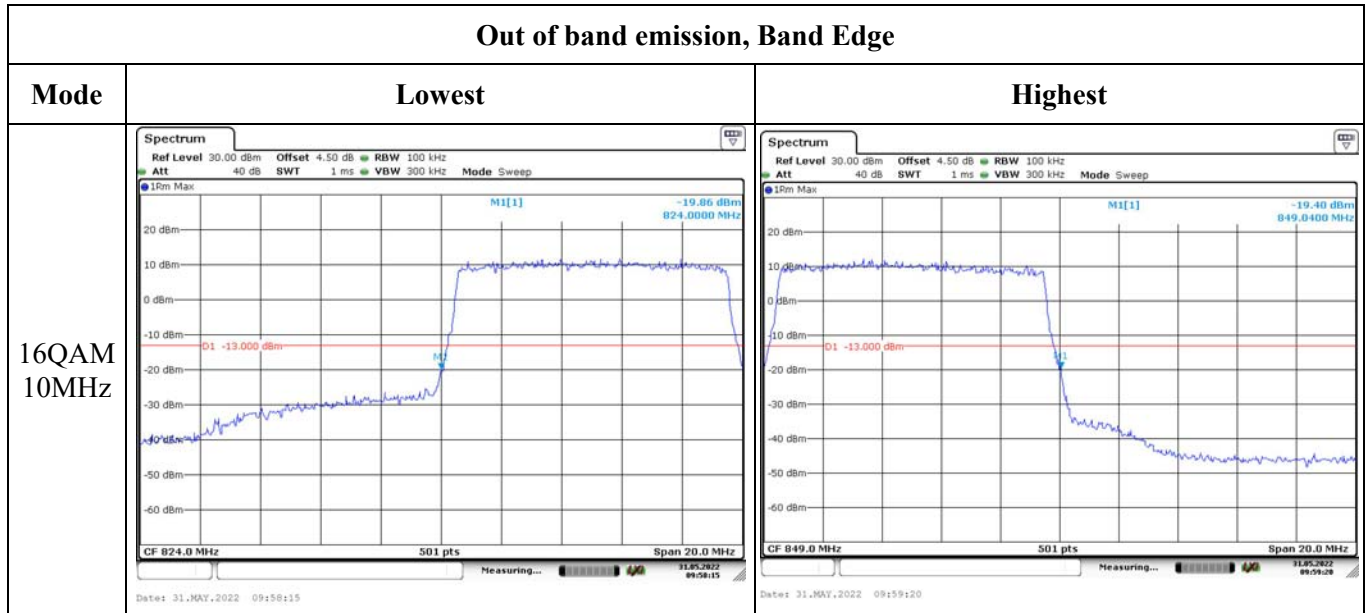
Out of band emission, Band Edge



Out of band emission, Band Edge



Out of band emission, Band Edge



4.12 Antenna Port Test Data and Results for Module B LTE Band 5

Serial Number:	CR22050041-RF-S1	Test Date:	2022/6/29-2022/7/16
Test Site:	RF	Test Mode:	Transmitting
Tester:	Ada Yan	Test Result:	Pass

Environmental Conditions:

Temperature: (°C)	26.6	Relative Humidity: (%)	43	ATM Pressure: (kPa)	100.2
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Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSU26	200256	2021-07-22	2023-07-21
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	144976	2021-07-22	2022-07-21
BACL	TEMP&HUMI Test Chamber	BTH-150	30026	2021-07-22	2022-07-21
UNI-T	Multimeter	UT39A+	C210582554	2021-09-30	2022-09-29
Unknown	Coaxial tee connector	Unknown	2204006	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 5▲:

Antenna Gain G_T (dBi):	-7.47	Antenna Gain G_T (dBd):	-9.62	Path Loss L_C (dB):	0
Operation Voltage(V_{DC}):					
Lowest:	3.5	Normal:	3.85	Highest:	4.4

Test Frequency For Each Mode:

Operation Bandwidth	Lowest Frequency (MHz)	Middle Frequency (MHz)	Highest Frequency (MHz)
1.4MHz	824.7	836.5	848.3
3MHz	825.5	836.5	847.5
5MHz	826.5	836.5	846.5
10MHz	829	836.5	844

Test Data:**FCC§2.1046;§ 22.913 (a)****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	22.52	22.90	22.70	13.48	38.45
	RB1#3	22.84	23.10	22.50		
	RB1#5	22.47	22.84	22.49		
	RB3#0	22.56	22.81	22.75		
	RB3#3	22.57	22.77	22.57		
	RB6#0	21.59	21.81	22.13		
1.4MHz 16QAM	RB1#0	21.47	21.90	21.91	12.5	38.45
	RB1#3	21.53	22.12	21.96		
	RB1#5	21.50	21.96	21.76		
	RB3#0	21.77	21.82	21.86		
	RB3#3	21.85	21.90	21.72		
	RB6#0	20.28	20.58	20.55		
3MHz QPSK	RB1#0	22.63	22.73	22.52	13.25	38.45
	RB1#8	22.67	22.87	22.61		
	RB1#14	22.66	22.86	22.43		
	RB6#0	21.72	21.83	22.24		
	RB6#9	21.71	21.82	21.71		
	RB15#0	21.69	21.78	21.65		
3MHz 16QAM	RB1#0	22.22	21.90	21.99	12.69	38.45
	RB1#8	22.31	21.97	21.97		
	RB1#14	22.04	21.54	21.85		
	RB6#0	20.99	20.44	20.52		
	RB6#9	20.81	20.52	20.62		
	RB15#0	20.73	20.66	20.61		
5MHz QPSK	RB1#0	22.50	22.54	22.13	12.93	38.45
	RB1#13	22.55	22.48	22.26		
	RB1#24	22.54	22.53	21.61		
	RB15#0	21.70	21.73	22.05		
	RB15#10	21.72	21.85	21.60		
	RB25#0	21.71	21.72	21.40		
5MHz 16QAM	RB1#0	21.06	21.38	21.14	11.9	38.45
	RB1#13	21.36	21.18	21.52		
	RB1#24	21.09	21.04	20.93		
	RB15#0	20.59	20.68	20.93		
	RB15#10	20.49	20.50	20.43		
	RB25#0	20.53	20.67	20.42		
10MHz QPSK	RB1#0	21.79	21.86	21.72	13.08	38.45

	RB1#25	22.35	22.70	21.95		
	RB1#49	21.86	21.43	20.95		
	RB25#0	21.98	22.13	21.82		
	RB25#25	21.54	21.67	21.57		
	RB50#0	21.58	21.63	21.60		
10MHz 16QAM	RB1#0	21.10	20.95	20.61	12.34	38.45
	RB1#25	21.96	21.95	21.06		
	RB1#49	21.48	20.66	20.09		
	RB25#0	20.80	21.25	21.03		
	RB25#25	20.58	20.66	20.71		
	RB50#0	20.51	20.63	20.51		
Note: ERP= Conducted Power(dBm) - L _C (dB) + G _T (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	4.58	4.62	4.58	13
	RB50#0	5.26	5.38	5.19	13
10MHz 16QAM	RB1#0	5.51	5.61	5.54	13
	RB50#0	6.09	6.28	6.22	13
Result:					Pass

FCC §2.1049, §2.2905: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	1.104	1.098	1.110	1.320	1.308	1.290
1.4MHz 16QAM	1.104	1.092	1.104	1.290	1.278	1.314
3MHz QPSK	2.700	2.700	2.688	2.928	2.940	2.964
3MHz 16QAM	2.700	2.688	2.688	2.940	2.952	2.940
5MHz QPSK	4.520	4.520	4.520	5.000	4.980	5.020
5MHz 16QAM	4.520	4.520	4.520	5.000	5.020	5.060
10MHz QPSK	8.960	8.960	8.960	9.760	9.680	9.600
10MHz 16QAM	8.960	8.960	8.920	9.640	9.720	9.600
Note: The test plots please refer to the Plots of Occupied Bandwidth						

FCC §2.1051, §22.917(a):Spurious Emissions at Antenna Terminal

Result:	Pass, Please refer to the test plots of Spurious Emissions at Antenna Terminal.
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FCC §2.1051, §22.917(a):Out of band emission, Band Edge

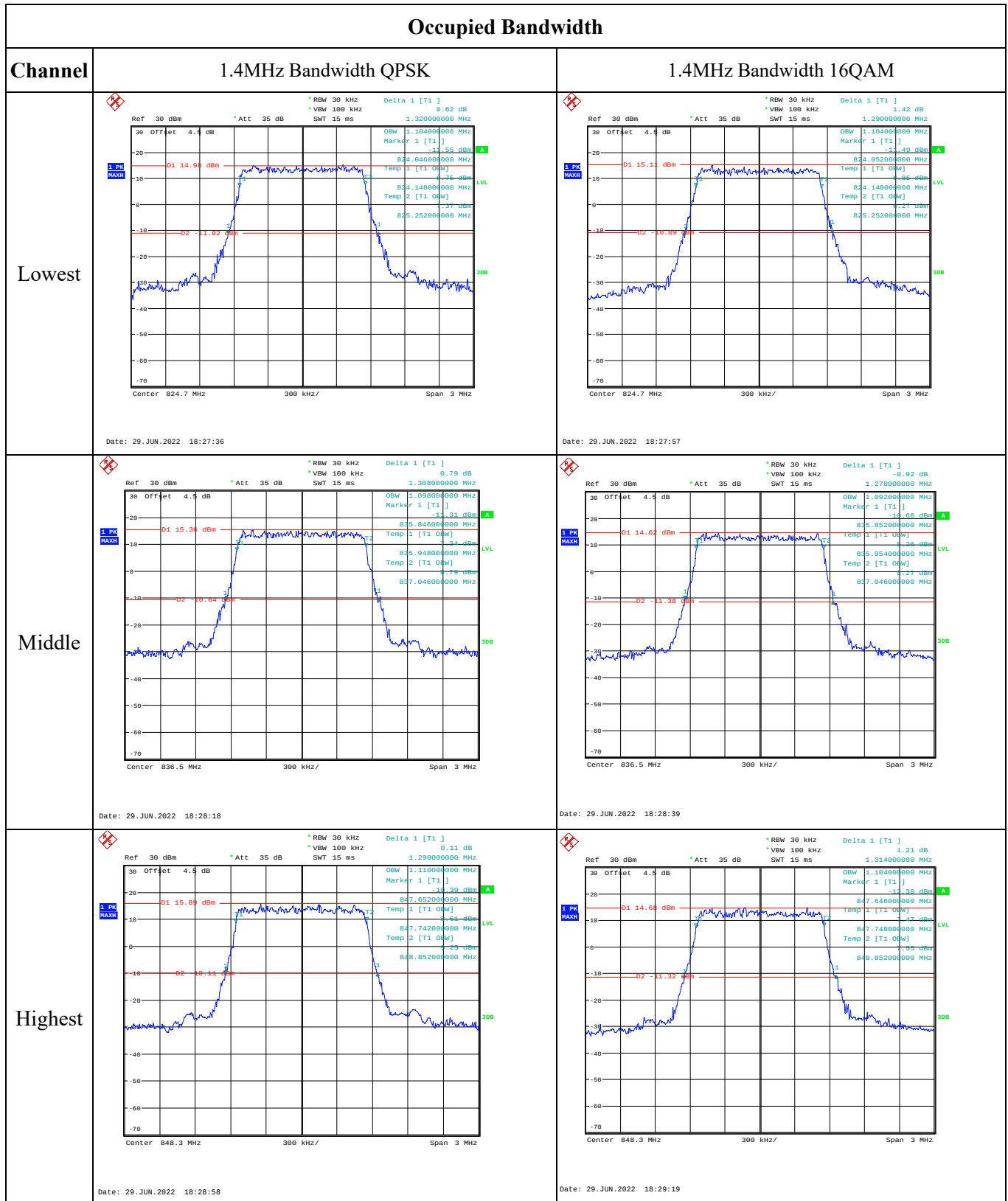
Result:	Pass, Please refer to the test plots of Out of band emission, Band Edge.
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FCC §2.1055, §22.355: Frequency Stability

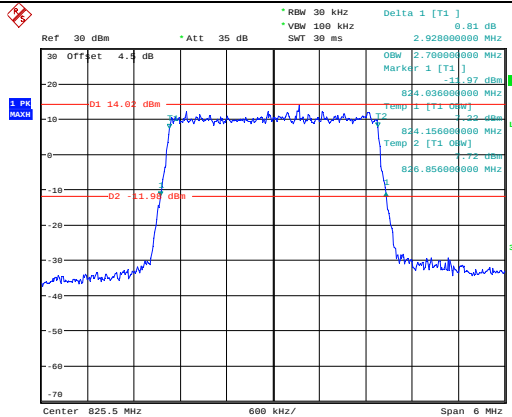
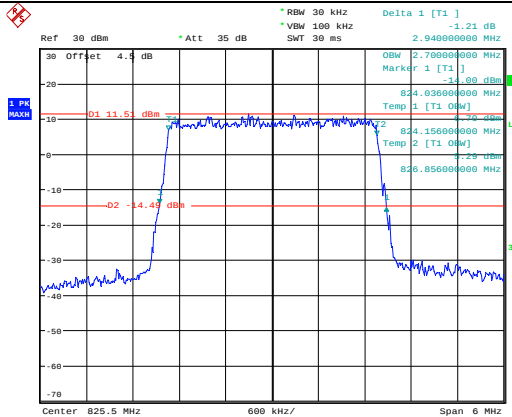
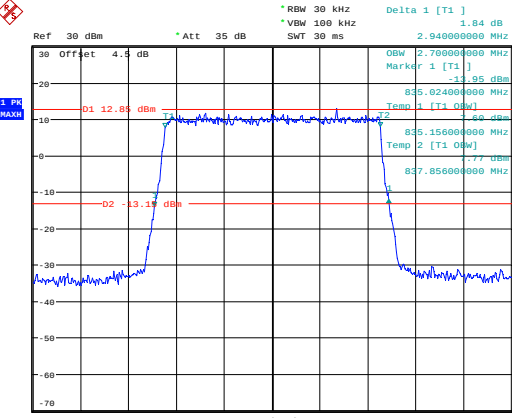
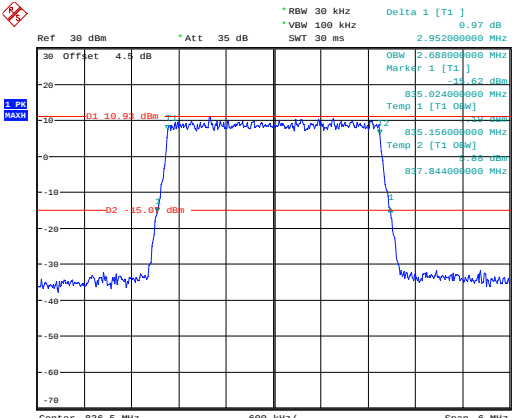
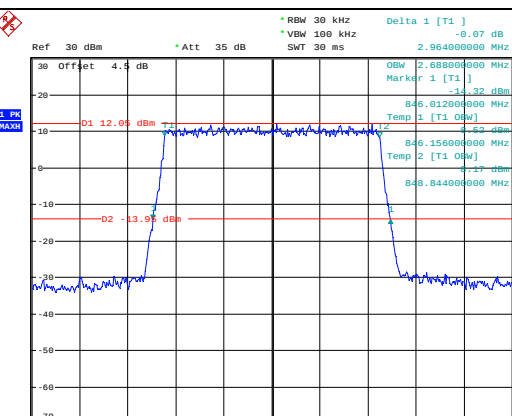
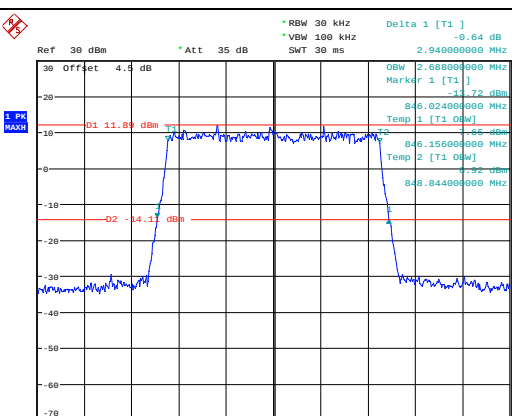
Test Mode:	10 MHz QPSK		Test Channel:	836.5	MHz
Test Item	Temperature (°C)	Voltage (V _{DC})	Frequency Error		Limit
			(Hz)	(ppm)	(ppm)
Frequency Stability vs. Temperature	-30	3.85	2	0.002	2.5
	-20	3.85	-9	-0.011	2.5
	-10	3.85	3	0.004	2.5
	0	3.85	1	0.001	2.5
	10	3.85	-7	-0.008	2.5
	20	3.85	0	0.000	2.5
	30	3.85	4	0.005	2.5
	40	3.85	-7	-0.008	2.5
	50	3.85	4	0.005	2.5
Frequency Stability vs. Voltage	20	3.5	14	0.017	2.5
	20	4.4	5	0.006	2.5
				Result:	Pass

Test Mode:	10 MHz 16QAM		Test Channel:	836.5	MHz
Test Item	Temperature (°C)	Voltage (V _{DC})	Frequency Error		Limit
			(Hz)	(ppm)	(ppm)
Frequency Stability vs. Temperature	-30	3.85	-1	-0.001	2.5
	-20	3.85	6	0.007	2.5
	-10	3.85	-8	-0.010	2.5
	0	3.85	2	0.002	2.5
	10	3.85	-3	-0.004	2.5
	20	3.85	0	0.000	2.5
	30	3.85	-8	-0.010	2.5
	40	3.85	-7	-0.008	2.5
	50	3.85	1	0.001	2.5
Frequency Stability vs. Voltage	20	3.5	4	0.005	2.5
	20	4.4	-2	-0.002	2.5
				Result:	Pass

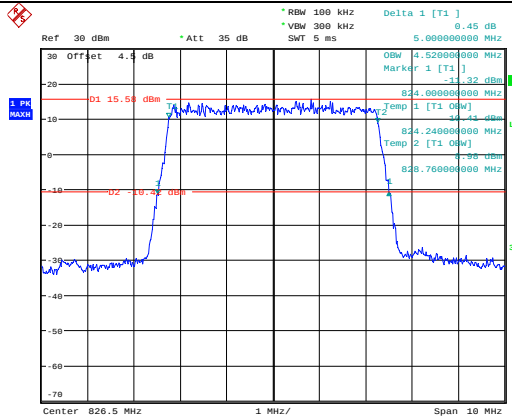
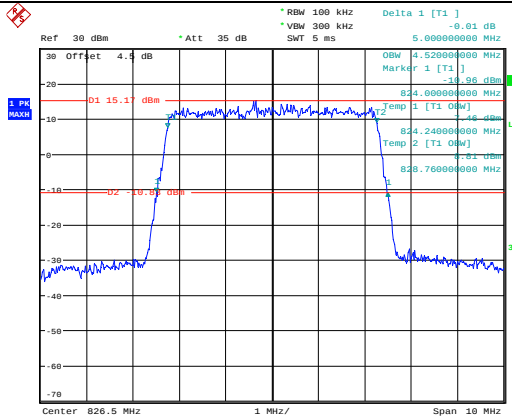
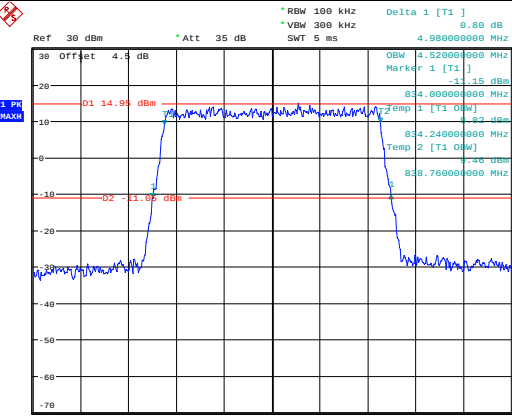
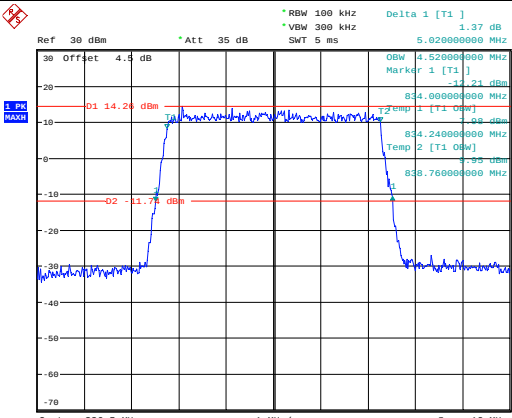
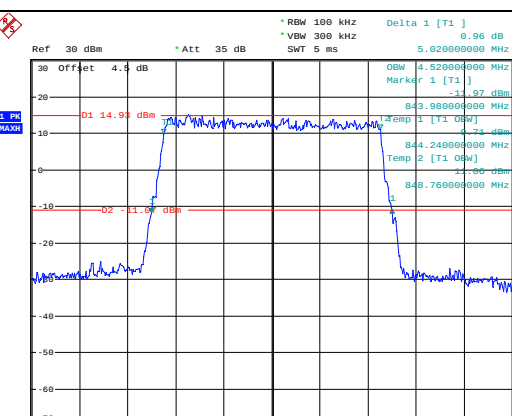
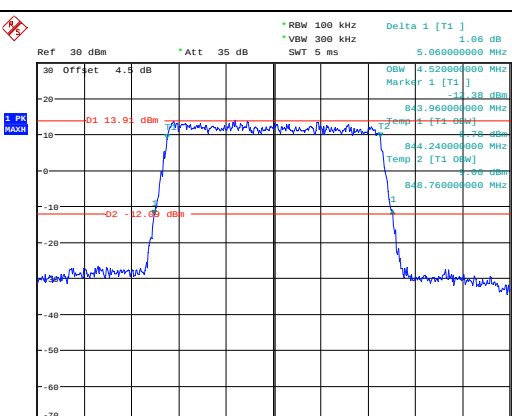
Test Plots:



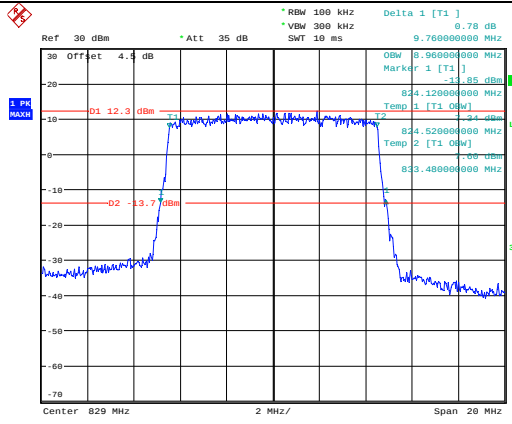
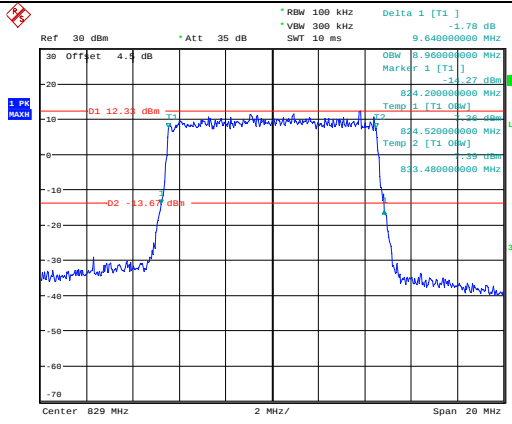
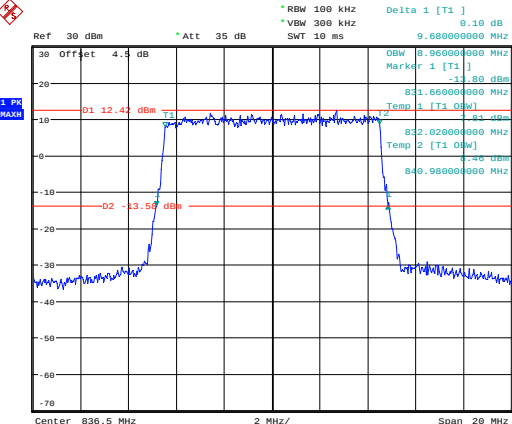
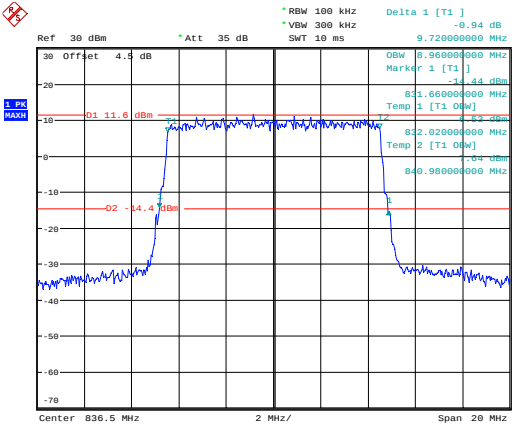
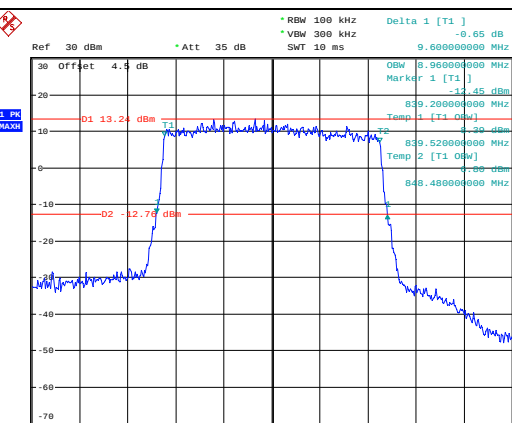
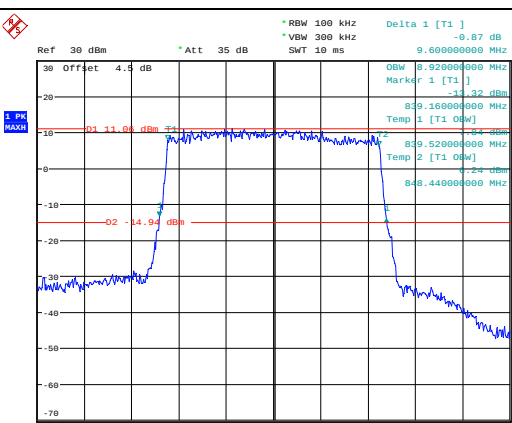
Occupied Bandwidth

Channel	3MHz Bandwidth QPSK	3MHz Bandwidth 16QAM
Lowest	 Ref 30 dBm * Att 35 dB RBW 30 kHz VBW 100 kHz SWT 30 ms Delta 1 [T1] 0.81 dB Marker 1 [T1] -1.97 dBm Temp 1 [T1] 0.81 dB Temp 2 [T1] 0.81 dB LVL 30dB 300 Center 825.5 MHz 600 kHz/ Span 6 MHz Date: 29 JUN.2022 18:29:43	 Ref 30 dBm * Att 35 dB RBW 30 kHz VBW 100 kHz SWT 30 ms Delta 1 [T1] -1.21 dB Marker 1 [T1] -13.60 dBm Temp 1 [T1] 0.81 dB Temp 2 [T1] 0.81 dB LVL 30dB 300 Center 825.5 MHz 600 kHz/ Span 6 MHz Date: 29 JUN.2022 18:30:00
Middle	 Ref 30 dBm * Att 35 dB RBW 30 kHz VBW 100 kHz SWT 30 ms Delta 1 [T1] 1.84 dB Marker 1 [T1] -13.13 dBm Temp 1 [T1] 0.81 dB Temp 2 [T1] 0.81 dB LVL 30dB 300 Center 836.5 MHz 600 kHz/ Span 6 MHz Date: 29 JUN.2022 18:30:22	 Ref 30 dBm * Att 35 dB RBW 30 kHz VBW 100 kHz SWT 30 ms Delta 1 [T1] -0.97 dB Marker 1 [T1] -15.07 dBm Temp 1 [T1] 0.81 dB Temp 2 [T1] 0.81 dB LVL 30dB 300 Center 836.5 MHz 600 kHz/ Span 6 MHz Date: 29 JUN.2022 18:30:43
Highest	 Ref 30 dBm * Att 35 dB RBW 30 kHz VBW 100 kHz SWT 30 ms Delta 1 [T1] -0.07 dB Marker 1 [T1] -13.95 dBm Temp 1 [T1] 0.81 dB Temp 2 [T1] 0.81 dB LVL 30dB 300 Center 847.5 MHz 600 kHz/ Span 6 MHz Date: 29 JUN.2022 18:31:04	 Ref 30 dBm * Att 35 dB RBW 30 kHz VBW 100 kHz SWT 30 ms Delta 1 [T1] -0.64 dB Marker 1 [T1] -14.11 dBm Temp 1 [T1] 0.81 dB Temp 2 [T1] 0.81 dB LVL 30dB 300 Center 847.5 MHz 600 kHz/ Span 6 MHz Date: 29 JUN.2022 18:31:25

Occupied Bandwidth

Channel	5MHz Bandwidth QPSK	5MHz Bandwidth 16QAM
Lowest	 Ref 30 dBm * Att 35 dB RBW 100 kHz Delta 1 [T1] 0.45 dB VBW 300 kHz SWT 5 ms Marker 1 [T1] 15.58 dBm Temp 1 [T1] 15.58 dBm Temp 2 [T1] 10.42 dBm Center 826.5 MHz 1 MHz/ Span 10 MHz Date: 29 JUN.2022 18:31:50	 Ref 30 dBm * Att 35 dB RBW 100 kHz Delta 1 [T1] -0.01 dB VBW 300 kHz SWT 5 ms Marker 1 [T1] 15.17 dBm Temp 1 [T1] 15.17 dBm Temp 2 [T1] 10.53 dBm Center 826.5 MHz 1 MHz/ Span 10 MHz Date: 29 JUN.2022 18:32:11
Middle	 Ref 30 dBm * Att 35 dB RBW 100 kHz Delta 1 [T1] 0.80 dB VBW 300 kHz SWT 5 ms Marker 1 [T1] 14.95 dBm Temp 1 [T1] 14.95 dBm Temp 2 [T1] 11.08 dBm Center 836.5 MHz 1 MHz/ Span 10 MHz Date: 29 JUN.2022 18:32:32	 Ref 30 dBm * Att 35 dB RBW 100 kHz Delta 1 [T1] 1.37 dB VBW 300 kHz SWT 5 ms Marker 1 [T1] 14.24 dBm Temp 1 [T1] 14.24 dBm Temp 2 [T1] 11.74 dBm Center 836.5 MHz 1 MHz/ Span 10 MHz Date: 29 JUN.2022 18:32:53
Highest	 Ref 30 dBm * Att 35 dB RBW 100 kHz Delta 1 [T1] 0.96 dB VBW 300 kHz SWT 5 ms Marker 1 [T1] 14.93 dBm Temp 1 [T1] 14.93 dBm Temp 2 [T1] 11.09 dBm Center 846.5 MHz 1 MHz/ Span 10 MHz Date: 29 JUN.2022 18:33:15	 Ref 30 dBm * Att 35 dB RBW 100 kHz Delta 1 [T1] 1.06 dB VBW 300 kHz SWT 5 ms Marker 1 [T1] 13.91 dBm Temp 1 [T1] 13.91 dBm Temp 2 [T1] 12.09 dBm Center 846.5 MHz 1 MHz/ Span 10 MHz Date: 29 JUN.2022 18:33:38

Occupied Bandwidth

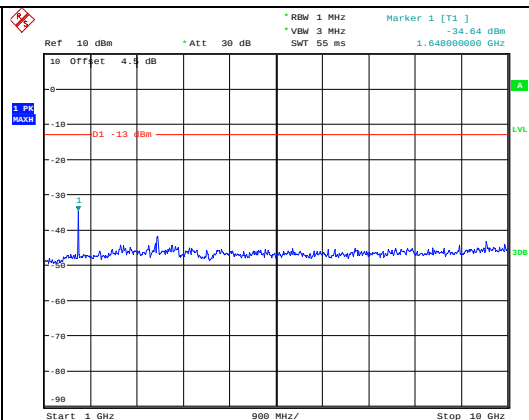
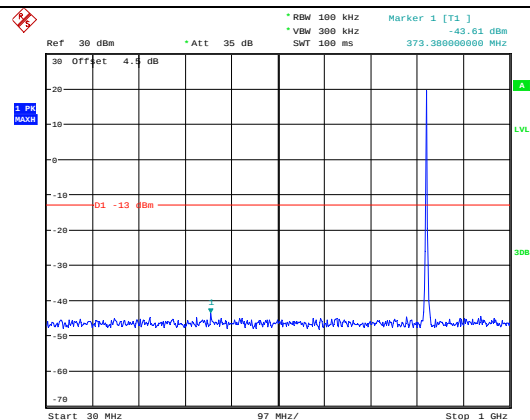
Channel	10MHz Bandwidth QPSK	10MHz Bandwidth 16QAM
Lowest	 Ref 30 dBm * Att 35 dB RBW 100 kHz VBW 300 kHz SWT 10 ms Delta 1 [T1] 0.78 dB Marker 1 [T1] 824.120000000 MHz Temp 1 [T1] 12.3 dBm Temp 2 [T1] 13.7 dBm Date: 29 JUN. 2022 18:34:03	 Ref 30 dBm * Att 35 dB RBW 100 kHz VBW 300 kHz SWT 10 ms Delta 1 [T1] -1.78 dB Marker 1 [T1] 824.200000000 MHz Temp 1 [T1] 12.3 dBm Temp 2 [T1] 13.7 dBm Date: 29 JUN. 2022 18:34:25
Middle	 Ref 30 dBm * Att 35 dB RBW 100 kHz VBW 300 kHz SWT 10 ms Delta 1 [T1] 0.10 dB Marker 1 [T1] 831.600000000 MHz Temp 1 [T1] 12.4 dBm Temp 2 [T1] 13.5 dBm Date: 29 JUN. 2022 18:34:48	 Ref 30 dBm * Att 35 dB RBW 100 kHz VBW 300 kHz SWT 10 ms Delta 1 [T1] -0.94 dB Marker 1 [T1] 831.600000000 MHz Temp 1 [T1] 11.6 dBm Temp 2 [T1] 14.4 dBm Date: 29 JUN. 2022 18:35:10
Highest	 Ref 30 dBm * Att 35 dB RBW 100 kHz VBW 300 kHz SWT 10 ms Delta 1 [T1] -0.65 dB Marker 1 [T1] 839.200000000 MHz Temp 1 [T1] 12.2 dBm Temp 2 [T1] 12.7 dBm Date: 29 JUN. 2022 18:35:36	 Ref 30 dBm * Att 35 dB RBW 100 kHz VBW 300 kHz SWT 10 ms Delta 1 [T1] -0.87 dB Marker 1 [T1] 839.160000000 MHz Temp 1 [T1] 11.6 dBm Temp 2 [T1] 14.9 dBm Date: 29 JUN. 2022 18:35:58

Spurious Emissions at Antenna Terminal

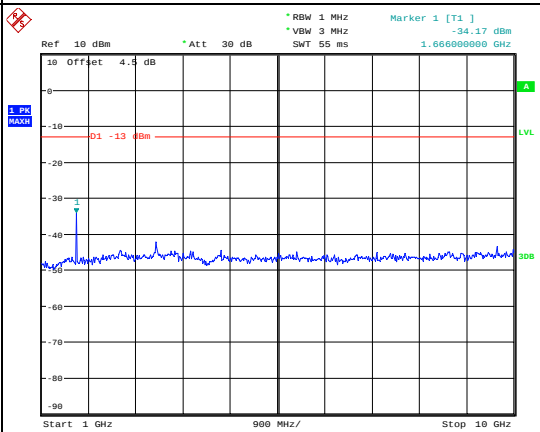
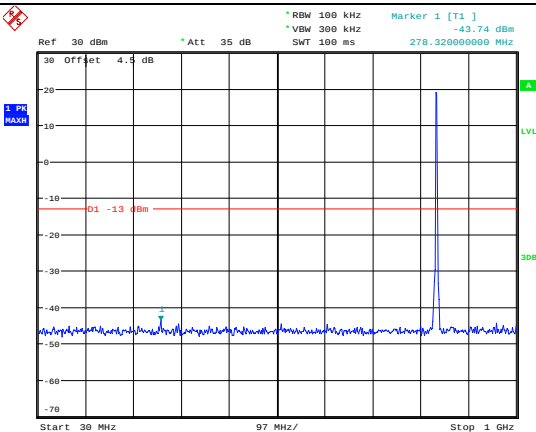
Channel

1.4MHz Bandwidth QPSK

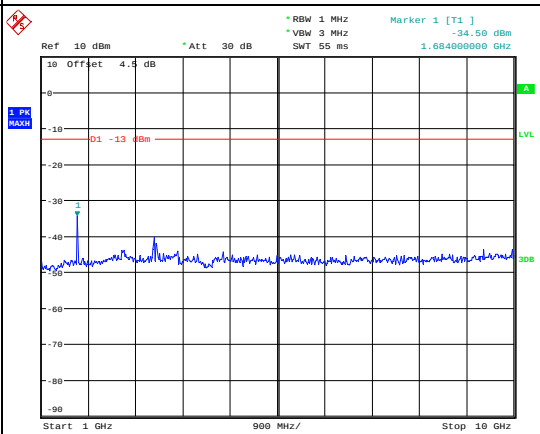
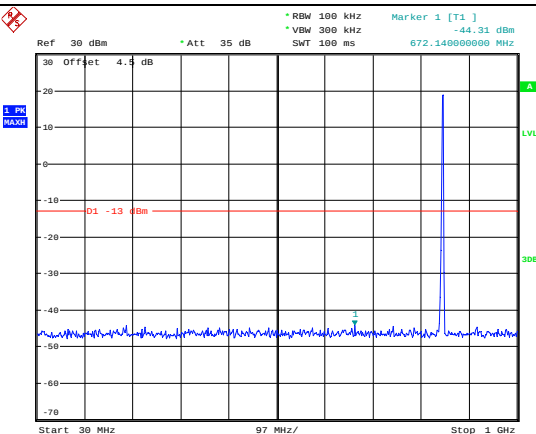
Lowest



Middle



Highest

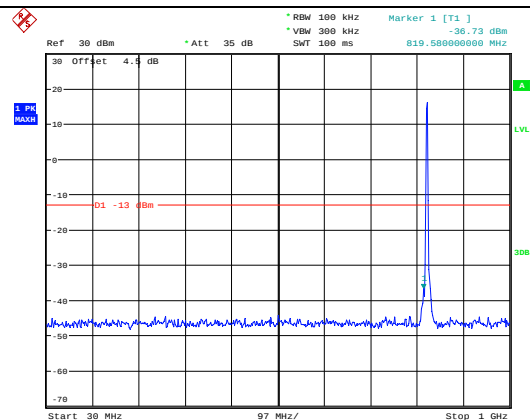


Spurious Emissions at Antenna Terminal

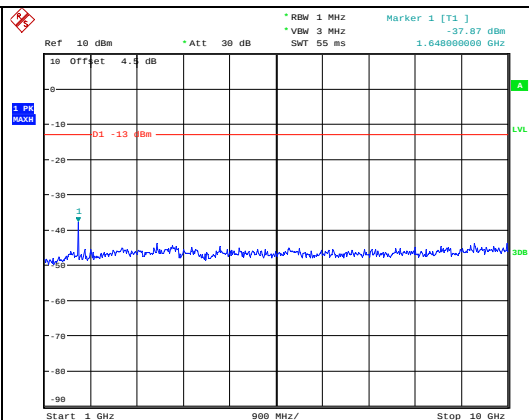
Channel

3MHz Bandwidth QPSK

Lowest

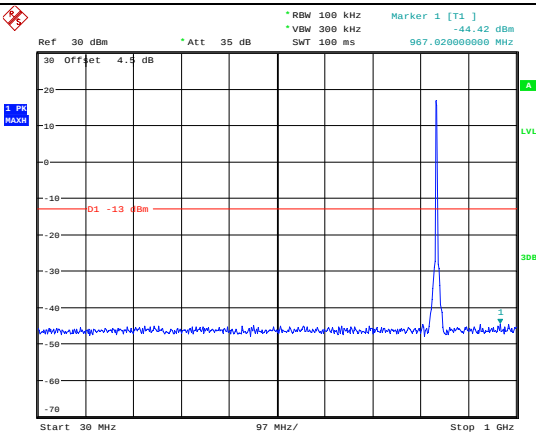


Date: 29.JUN.2022 17:42:08

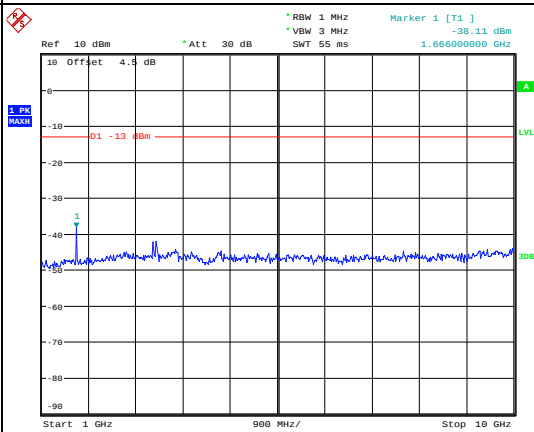


Date: 29.JUN.2022 17:42:21

Middle

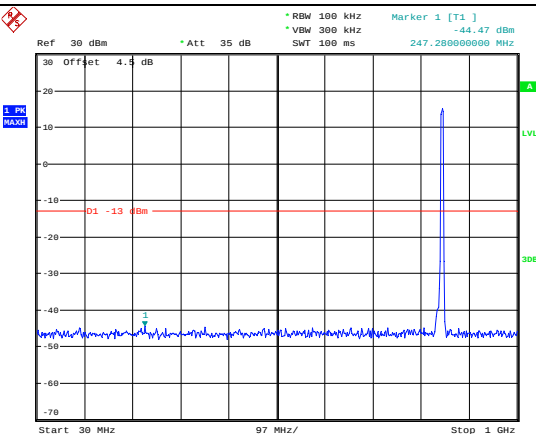


Date: 29.JUN.2022 17:42:40

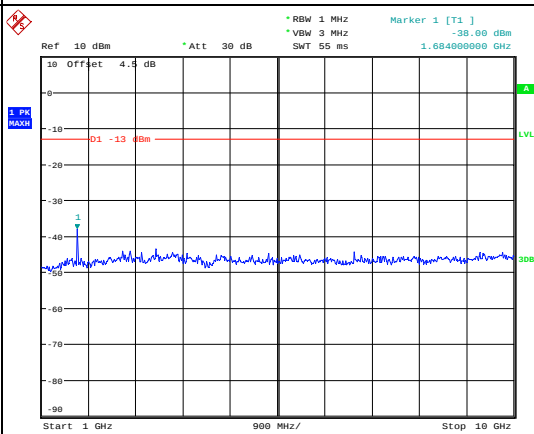


Date: 29.JUN.2022 17:42:53

Highest



Date: 29.JUN.2022 17:43:09



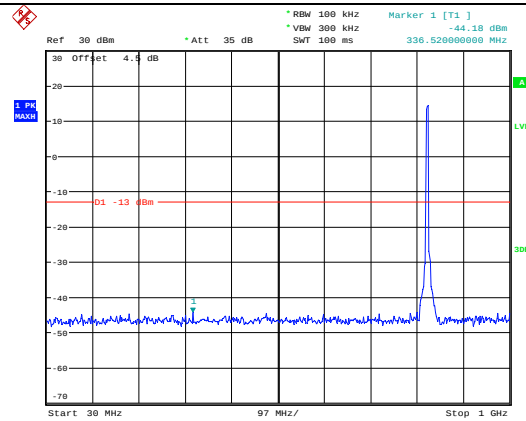
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Spurious Emissions at Antenna Terminal

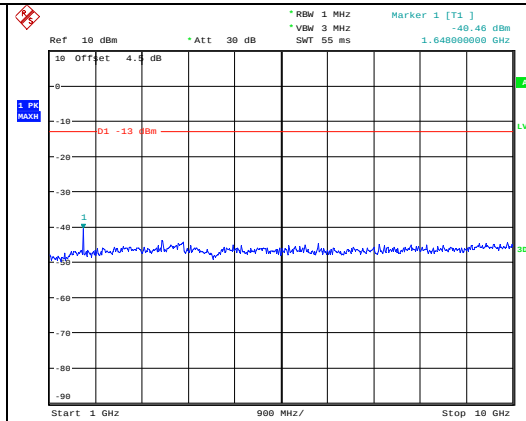
Channel

5MHz Bandwidth QPSK

Lowest

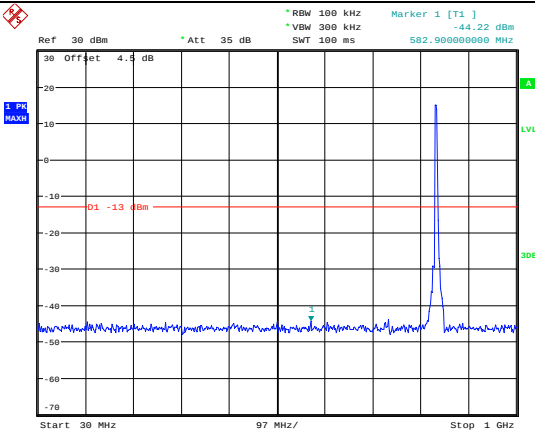


Date: 29.JUN.2022 17:45:10

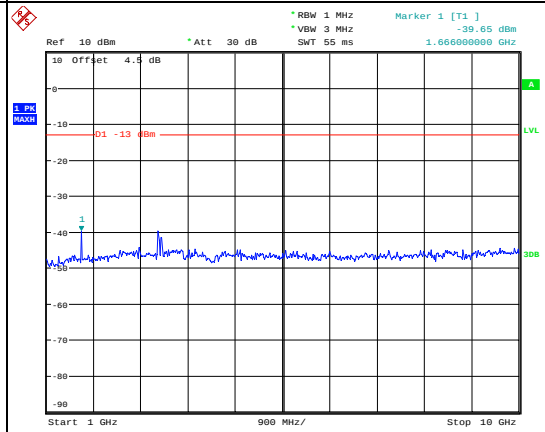


Date: 29.JUN.2022 17:45:22

Middle

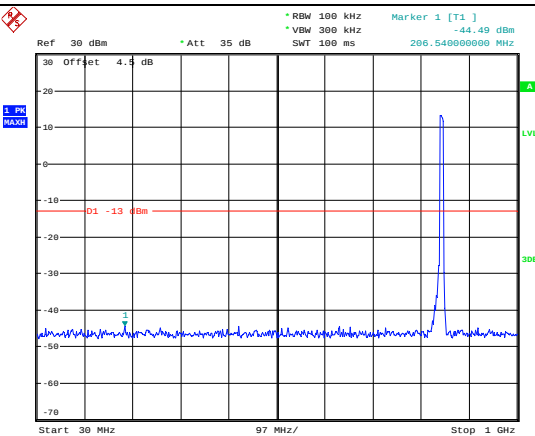


Date: 29.JUN.2022 17:45:42

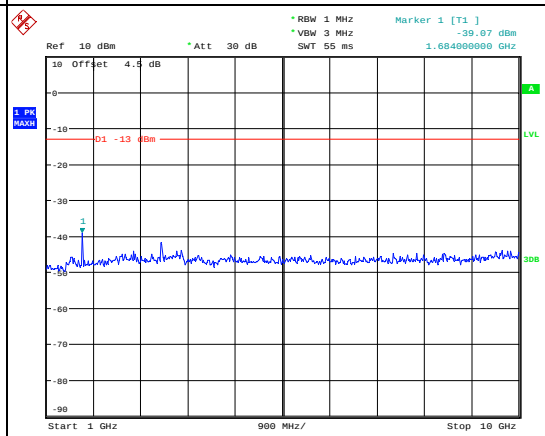


Date: 29.JUN.2022 17:45:54

Highest



Date: 29.JUN.2022 17:46:11



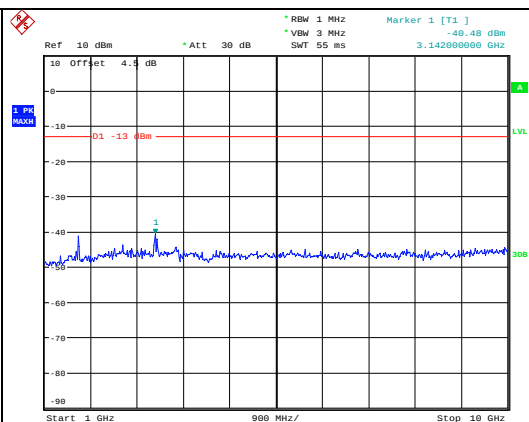
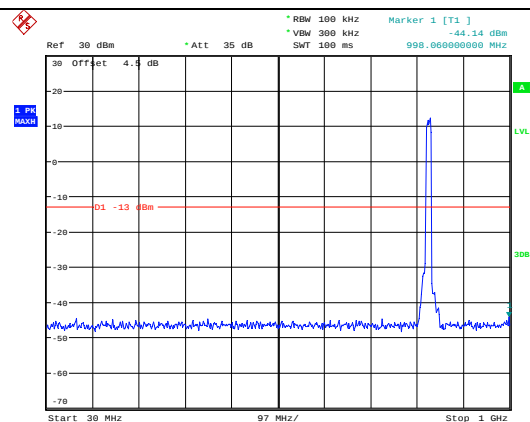
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Spurious Emissions at Antenna Terminal

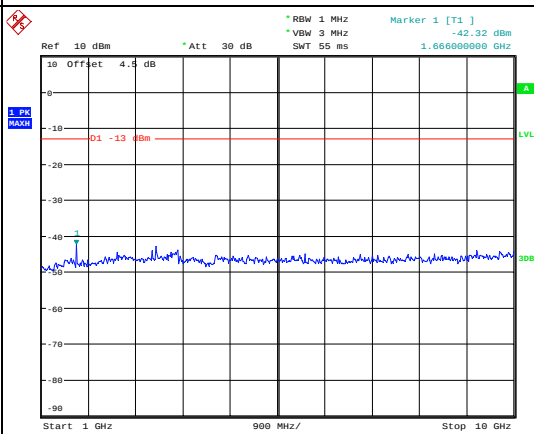
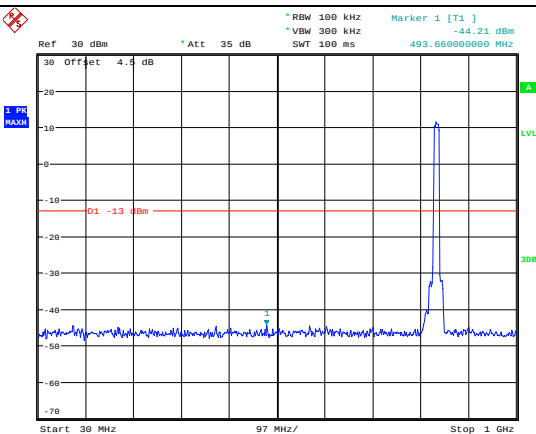
Channel

10MHz Bandwidth QPSK

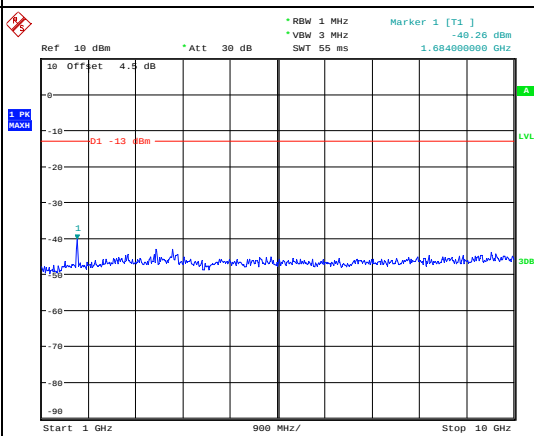
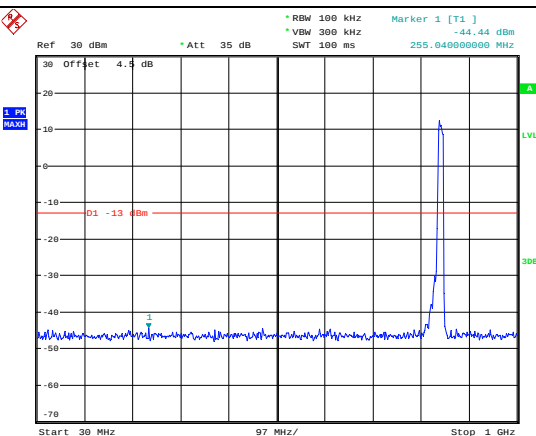
Lowest



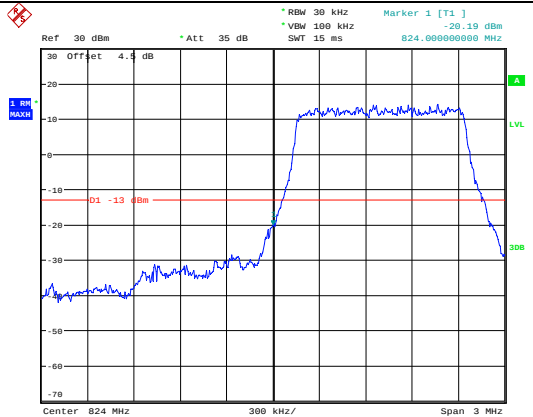
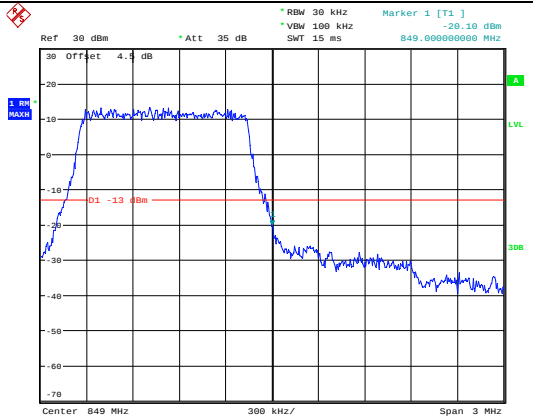
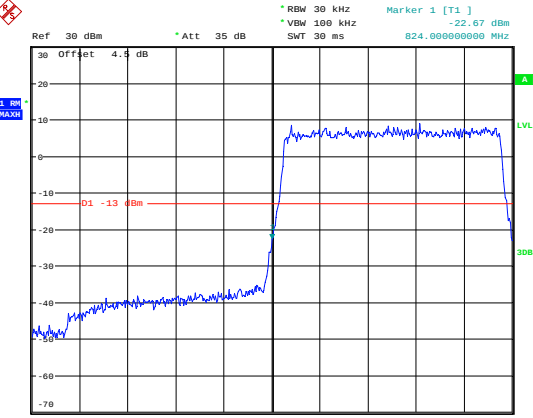
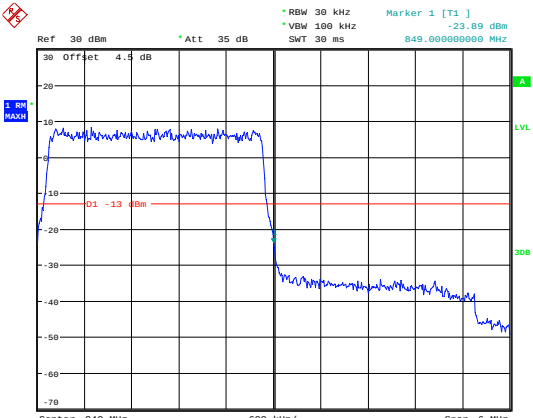
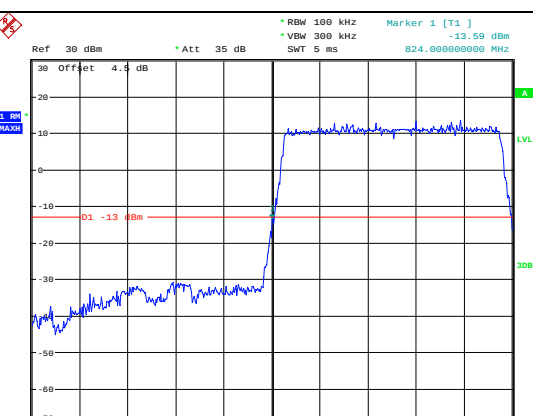
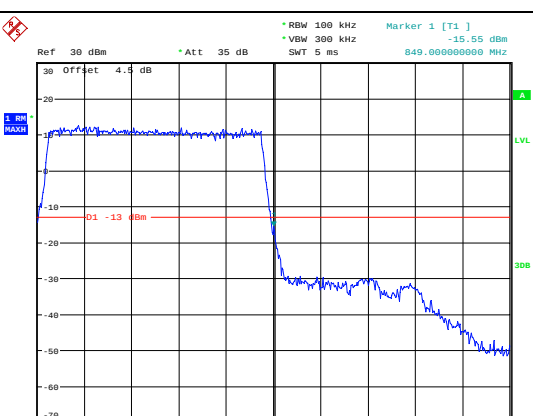
Middle



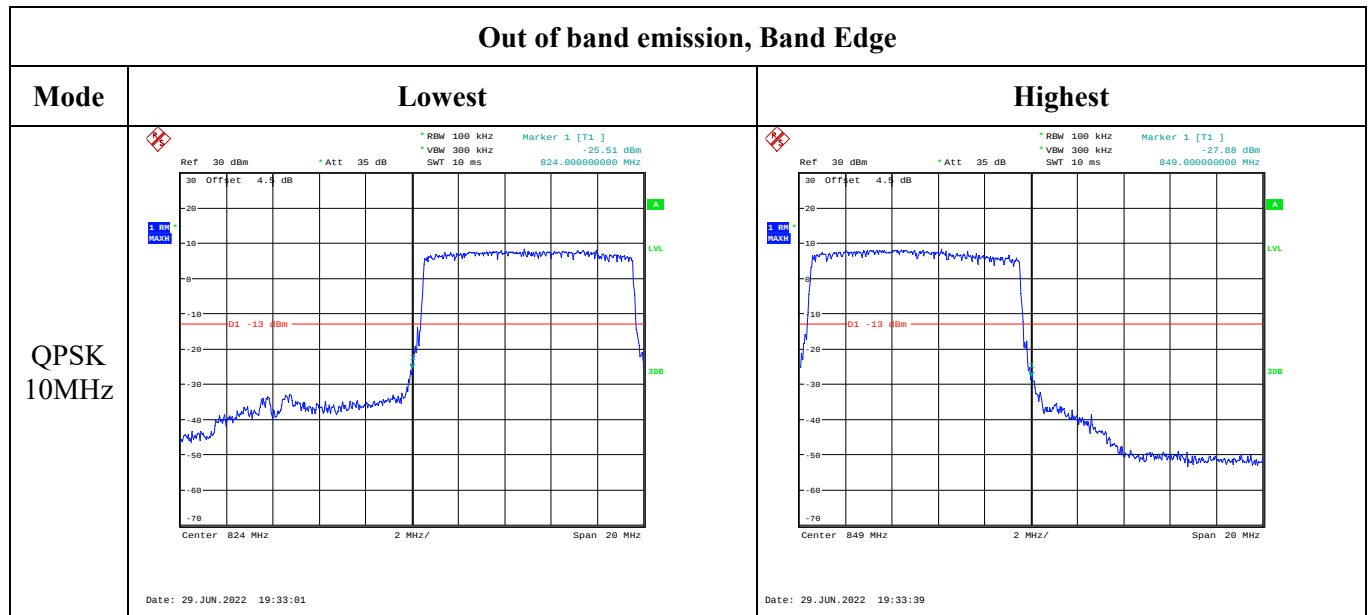
Highest



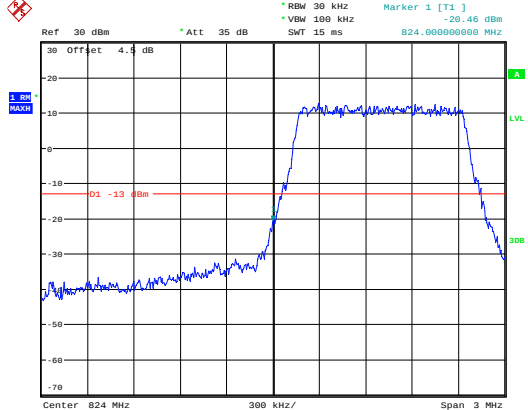
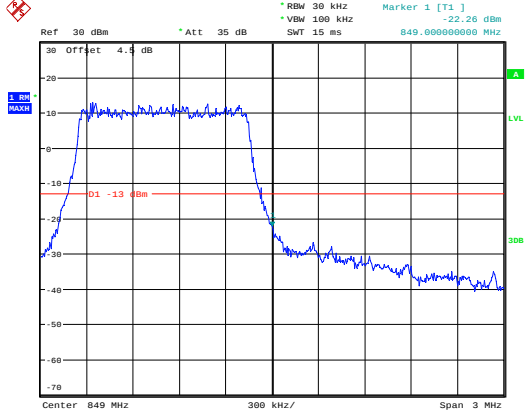
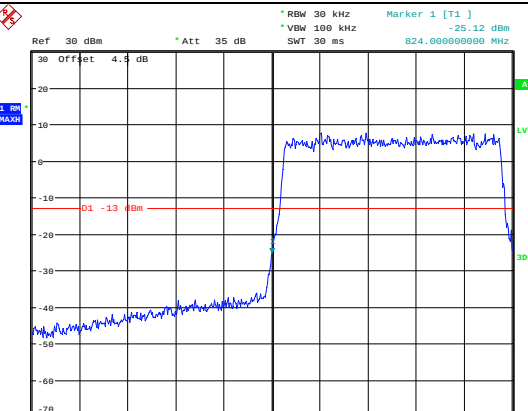
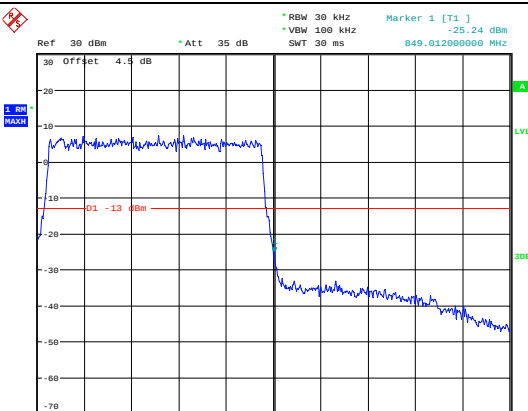
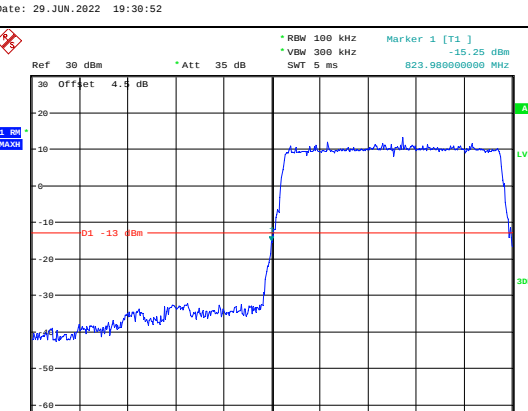
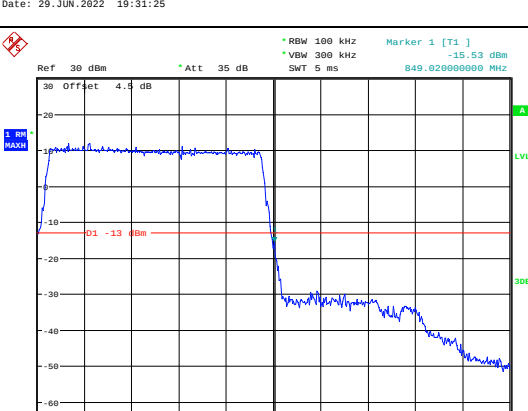
Out of band emission, Band Edge

Mode	Lowest	Highest
QPSK 1.4MHz	 Ref 30 dBm * Att 35 dB RBW 30 kHz Marker 1 [T1] -20.19 dBm VBW 100 kHz SWT 15 ms 824.00000000 MHz Center 824 MHz 300 kHz/ Span 3 MHz Date: 29.JUN.2022 19:29:17	 Ref 30 dBm * Att 35 dB RBW 30 kHz Marker 1 [T1] -20.10 dBm VBW 100 kHz SWT 15 ms 849.00000000 MHz Center 849 MHz 300 kHz/ Span 3 MHz Date: 29.JUN.2022 19:30:01
QPSK 3MHz	 Ref 30 dBm * Att 35 dB RBW 30 kHz Marker 1 [T1] -22.67 dBm VBW 100 kHz SWT 30 ms 824.00000000 MHz Center 824 MHz 600 kHz/ Span 6 MHz Date: 29.JUN.2022 19:30:36	 Ref 30 dBm * Att 35 dB RBW 30 kHz Marker 1 [T1] -23.89 dBm VBW 100 kHz SWT 30 ms 849.00000000 MHz Center 849 MHz 600 kHz/ Span 6 MHz Date: 29.JUN.2022 19:31:09
QPSK 5MHz	 Ref 30 dBm * Att 35 dB RBW 100 kHz Marker 1 [T1] -13.59 dBm VBW 300 kHz SWT 5 ms 824.00000000 MHz Center 824 MHz 1 MHz/ Span 10 MHz Date: 29.JUN.2022 19:31:45	 Ref 30 dBm * Att 35 dB RBW 100 kHz Marker 1 [T1] -15.55 dBm VBW 300 kHz SWT 5 ms 849.00000000 MHz Center 849 MHz 1 MHz/ Span 10 MHz Date: 29.JUN.2022 19:32:21

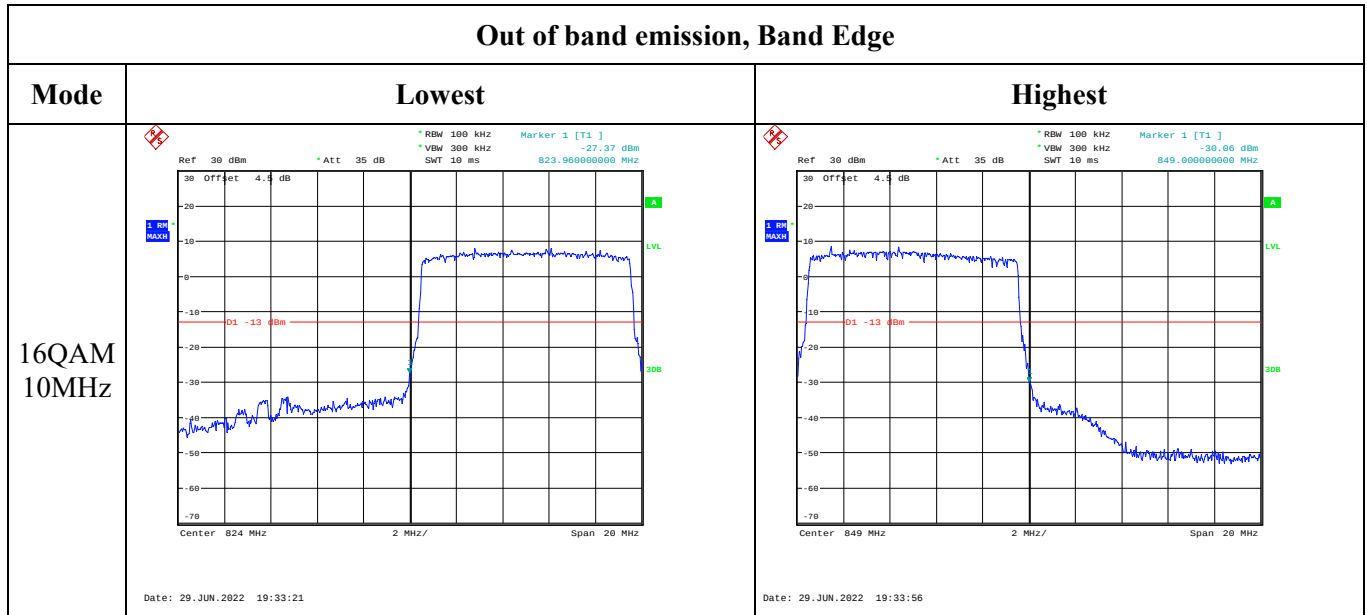
Out of band emission, Band Edge



Out of band emission, Band Edge

Mode	Lowest	Highest
16QAM 1.4MHz	 Ref 30 dBm *Att 35 dB *RBW 30 kHz Marker 1 [T1] -20.46 dBm *VBW 100 kHz SWT 15 ms 824.00000000 MHz 30 Offset 4.5 dB 1.4 MHz MAX 01 -13 dBm Center 824 MHz 300 kHz/ Span 3 MHz Date: 29.JUN.2022 19:29:40	 Ref 30 dBm *Att 35 dB *RBW 30 kHz Marker 1 [T1] -22.26 dBm *VBW 100 kHz SWT 15 ms 849.00000000 MHz 30 Offset 4.5 dB 1.4 MHz MAX 01 -13 dBm Center 849 MHz 300 kHz/ Span 3 MHz Date: 29.JUN.2022 19:30:17
16QAM 3MHz	 Ref 30 dBm *Att 35 dB *RBW 30 kHz Marker 1 [T1] -25.12 dBm *VBW 100 kHz SWT 30 ms 824.00000000 MHz 30 Offset 4.5 dB 3 MHz MAX 01 -13 dBm Center 824 MHz 600 kHz/ Span 6 MHz Date: 29.JUN.2022 19:30:52	 Ref 30 dBm *Att 35 dB *RBW 30 kHz Marker 1 [T1] -25.12 dBm *VBW 100 kHz SWT 30 ms 849.012000000 MHz 30 Offset 4.5 dB 3 MHz MAX 01 -13 dBm Center 849 MHz 600 kHz/ Span 6 MHz Date: 29.JUN.2022 19:31:25
16QAM 5MHz	 Ref 30 dBm *Att 35 dB *RBW 100 kHz Marker 1 [T1] -15.25 dBm *VBW 300 kHz SWT 5 ms 823.980000000 MHz 30 Offset 4.5 dB 5 MHz MAX 01 -13 dBm Center 824 MHz 1 MHz/ Span 10 MHz Date: 29.JUN.2022 19:32:04	 Ref 30 dBm *Att 35 dB *RBW 100 kHz Marker 1 [T1] -15.93 dBm *VBW 300 kHz SWT 5 ms 849.020000000 MHz 30 Offset 4.5 dB 5 MHz MAX 01 -13 dBm Center 849 MHz 1 MHz/ Span 10 MHz Date: 29.JUN.2022 19:32:40

Out of band emission, Band Edge



4.13 Antenna Port Test Data and Results for Module A LTE Band 7

Serial Number:	CR22050041-RF-S1	Test Date:	2022/6/1-2022/7/15
Test Site:	RF	Test Mode:	Transmitting
Tester:	Ada Yan	Test Result:	Pass

Environmental Conditions:

Temperature: (°C)	25.1	Relative Humidity: (%)	60	ATM Pressure: (kPa)	100.1
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Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSV40	101474	2021-07-22	2023-07-21
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	144976	2021-07-22	2022-07-21
BACL	TEMP&HUMI Test Chamber	BTH-150	30026	2021-07-22	2022-07-21
UNI-T	Multimeter	UT39A+	C210582554	2021-09-30	2022-09-29
Unknown	Coaxial tee connector	Unknown	2204006	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 7▲:

Antenna Gain G_T (dBi):	-0.16	Path Loss L_C (dB):	0
Operation Voltage(V_{DC}):			
Lowest:	3.5	Normal:	3.85
		Highest:	4.4

Test Frequency For Each Mode:

Operation Bandwidth	Lowest Frequency (MHz)	Middle Frequency (MHz)	Highest Frequency (MHz)
5MHz	2502.5	2535	2567.5
10MHz	2505	2535	2565
15MHz	2507.5	2535	2562.5
20MHz	2510	2535	2560

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	18.03	18.20	18.42	18.26	33
	RB1#13	18.16	18.28	18.24		
	RB1#24	18.07	18.23	18.22		
	RB15#0	17.34	17.49	17.50		
	RB15#10	17.23	17.41	17.50		
	RB25#0	17.30	17.50	17.59		
5MHz 16QAM	RB1#0	17.38	16.98	17.74	17.96	33
	RB1#13	16.90	16.77	18.12		
	RB1#24	16.98	16.54	17.86		
	RB15#0	16.28	16.46	16.45		
	RB15#10	16.29	16.36	16.32		
	RB25#0	16.43	16.52	16.42		
10MHz QPSK	RB1#0	17.84	18.52	18.60	18.68	33
	RB1#25	18.54	18.73	18.84		
	RB1#49	18.31	18.52	18.53		
	RB25#0	17.24	17.58	17.58		
	RB25#25	17.22	17.46	17.53		
	RB50#0	17.18	17.60	17.59		
10MHz 16QAM	RB1#0	17.09	18.13	18.07	18.18	33
	RB1#25	17.20	18.09	18.11		
	RB1#49	17.25	17.77	18.34		
	RB25#0	16.48	16.75	16.78		
	RB25#25	16.32	16.59	16.38		
	RB50#0	16.41	16.59	16.58		
15MHz QPSK	RB1#0	18.21	18.75	18.66	18.62	33
	RB1#38	18.21	18.50	18.78		
	RB1#74	18.37	18.56	18.57		
	RB36#0	17.33	17.68	17.62		
	RB36#39	17.56	17.47	17.59		
	RB75#0	17.33	17.59	17.67		
15MHz 16QAM	RB1#0	17.68	18.11	18.19	18.71	33
	RB1#38	17.60	17.87	18.87		
	RB1#74	17.45	17.95	18.08		
	RB36#0	16.30	16.64	16.74		
	RB36#39	16.64	16.55	16.49		
	RB75#0	16.50	16.59	16.73		
20MHz QPSK	RB1#0	18.00	18.47	18.64	18.88	33

	RB1#50	18.80	18.50	19.04		
	RB1#99	18.39	18.31	18.83		
	RB50#0	17.42	17.69	17.57		
	RB50#50	17.50	17.48	17.59		
	RB100#0	17.49	17.65	17.59		
20MHz 16QAM	RB1#0	18.16	17.71	17.52	19.09	33
	RB1#50	19.25	18.26	17.68		
	RB1#99	19.10	17.25	17.63		
	RB50#0	16.24	16.81	16.63		
	RB50#50	16.57	16.65	16.66		
	RB100#0	16.49	16.74	16.60		
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	4.32	4.64	4.06	13
	RB100#0	4.93	5.04	4.26	13
20MHz 16QAM	RB1#0	5.74	6.00	5.25	13
	RB100#0	6.12	6.17	5.48	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	4.531	4.531	4.531	5.040	5.040	5.100
5MHz 16QAM	4.531	4.511	4.531	5.020	5.020	5.060
10MHz QPSK	8.942	8.942	8.942	9.800	9.680	10.640
10MHz 16QAM	8.942	8.942	8.981	9.720	9.720	11.320
15MHz QPSK	13.533	13.473	13.473	15.420	14.880	14.820
15MHz 16QAM	13.533	13.473	13.473	18.660	14.820	14.820
20MHz QPSK	17.884	17.884	17.964	19.360	19.440	19.520
20MHz 16QAM	17.884	17.964	17.964	19.520	19.440	19.440
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.
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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.
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FCC §2.1055, §27.54: Frequency Stability

Test Mode:	20M QPSK	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (°C)	Voltage (V _{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.85	2500.548	2500.00	2569.459	2570
	-20	3.85	2500.544	2500.00	2569.462	2570
	-10	3.85	2500.545	2500.00	2569.458	2570
	0	3.85	2500.543	2500.00	2569.464	2570
	10	3.85	2500.549	2500.00	2569.457	2570
	20	3.85	2500.543	2500.00	2569.457	2570
	30	3.85	2500.540	2500.00	2569.452	2570
	40	3.85	2500.541	2500.00	2569.454	2570
Frequency Stability vs. Voltage	20	3.5	2500.539	2500.00	2569.457	2570
	20	4.4	2500.537	2500.00	2569.456	2570
Result:					Pass	

Test Mode:	20M 16QAM	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (°C)	Voltage (V _{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.85	2500.547	2500.00	2569.459	2570
	-20	3.85	2500.546	2500.00	2569.462	2570
	-10	3.85	2500.549	2500.00	2569.458	2570
	0	3.85	2500.543	2500.00	2569.457	2570
	10	3.85	2500.552	2500.00	2569.465	2570
	20	3.85	2500.543	2500.00	2569.457	2570
	30	3.85	2500.540	2500.00	2569.453	2570
	40	3.85	2500.541	2500.00	2569.450	2570
Frequency Stability vs. Voltage	20	3.5	2500.538	2500.00	2569.448	2570
	20	4.4	2500.539	2500.00	2569.451	2570
Result:					Pass	

Test Plots:

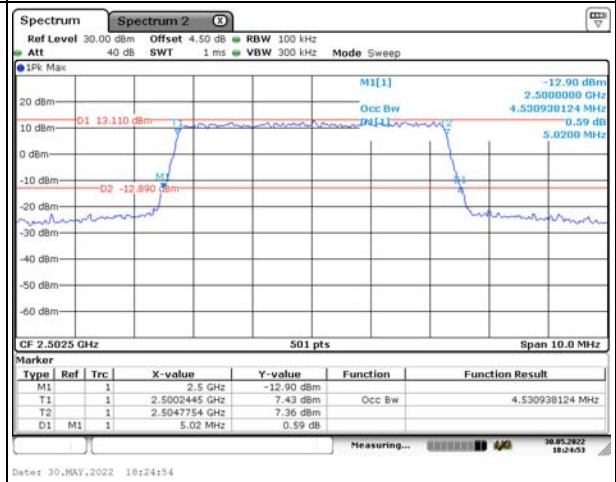
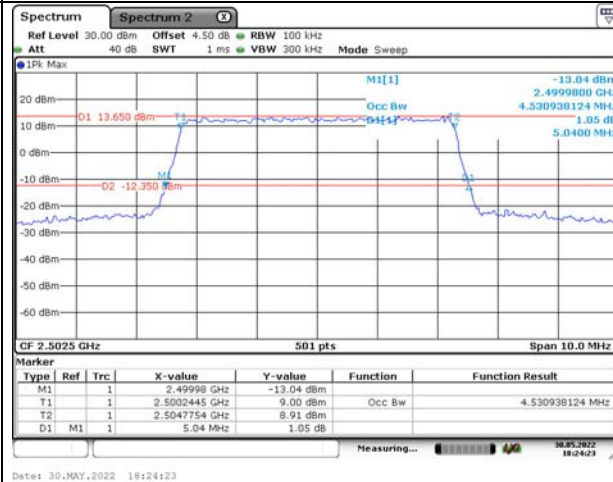
Occupied Bandwidth

Channel

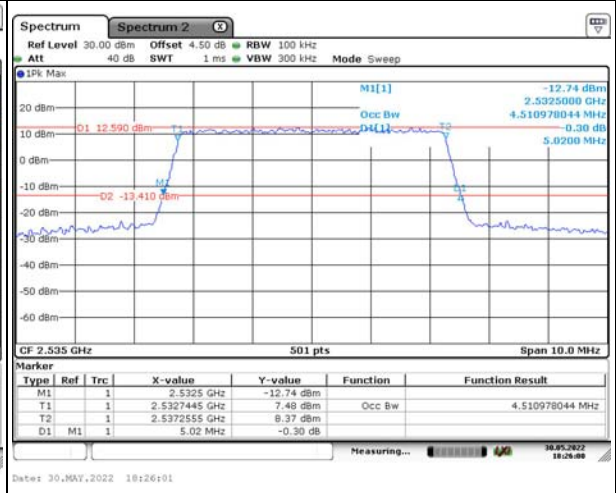
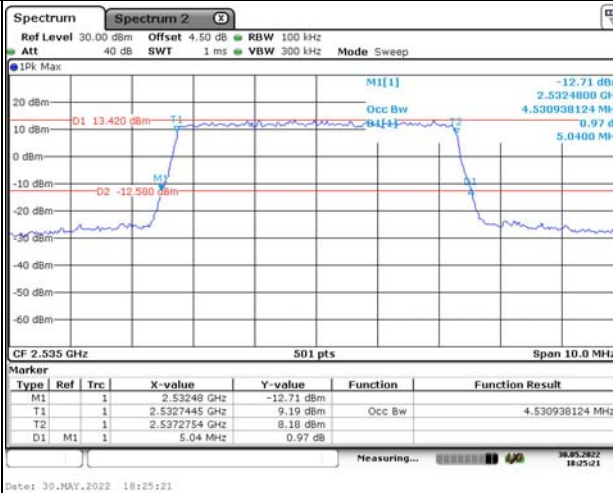
5MHz Bandwidth QPSK

5MHz Bandwidth 16QAM

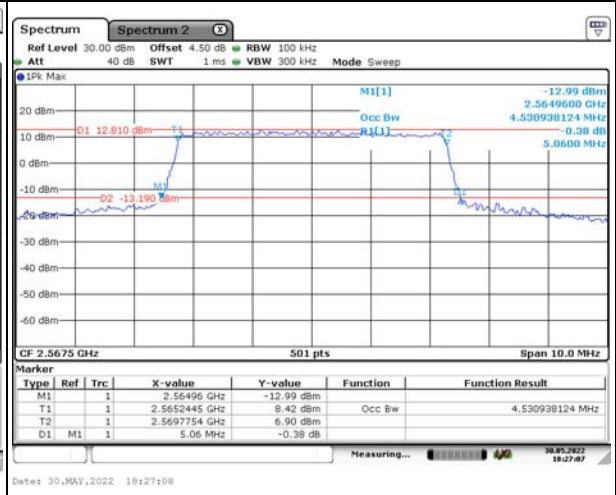
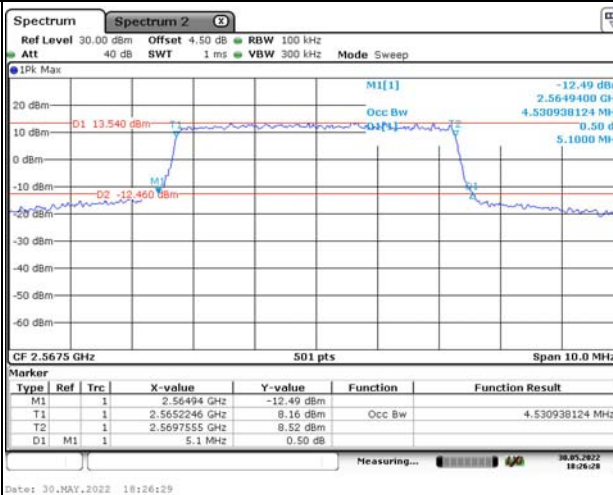
Lowest



Middle



Highest



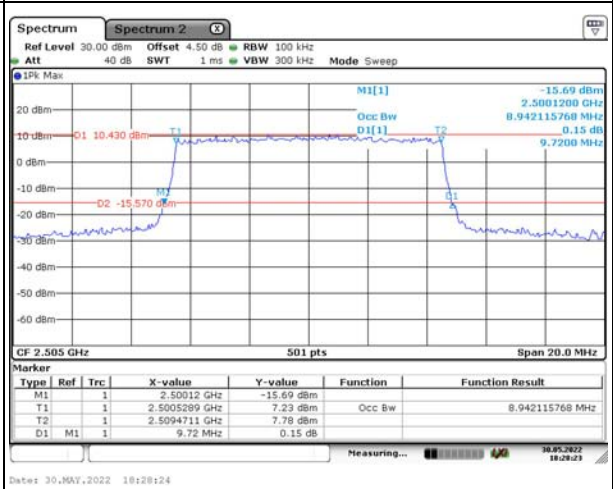
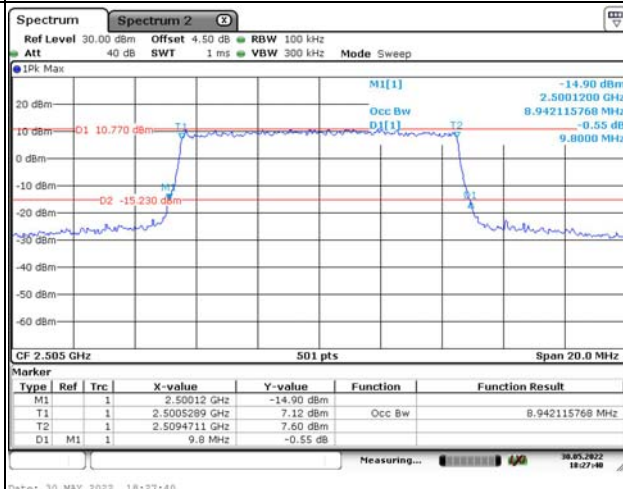
Occupied Bandwidth

Channel

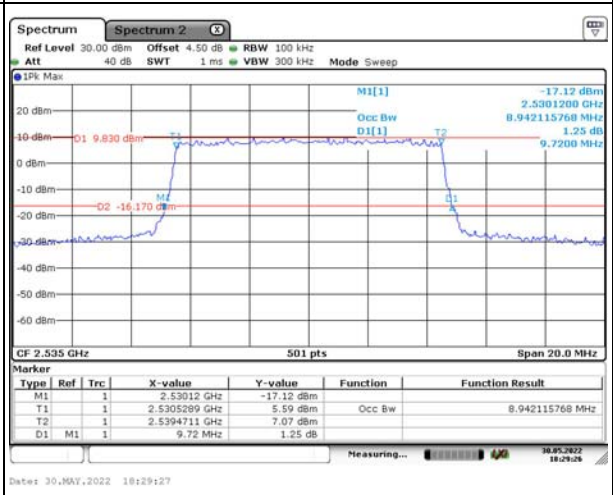
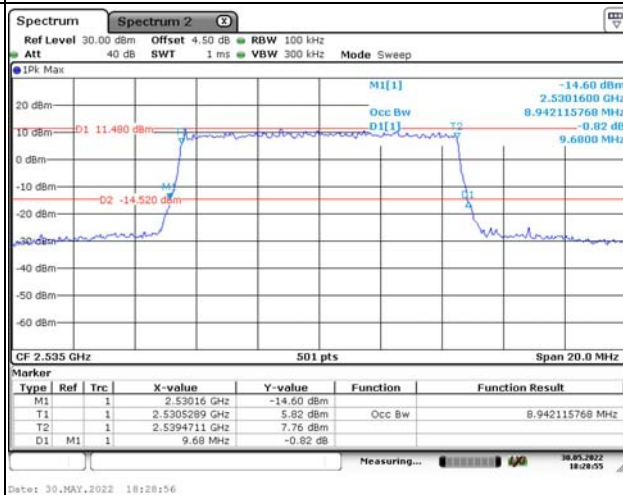
10MHz Bandwidth QPSK

10MHz Bandwidth 16QAM

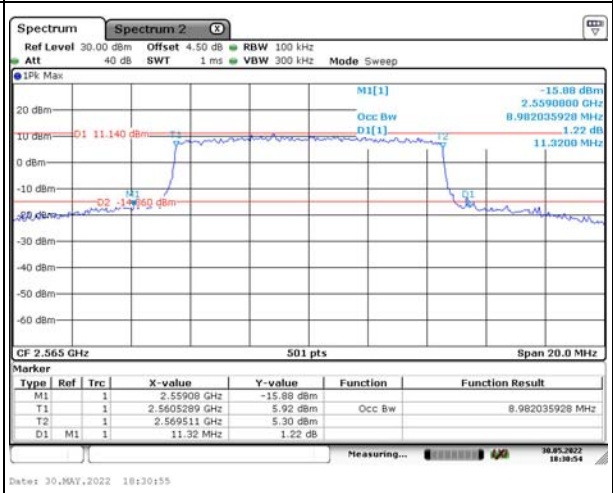
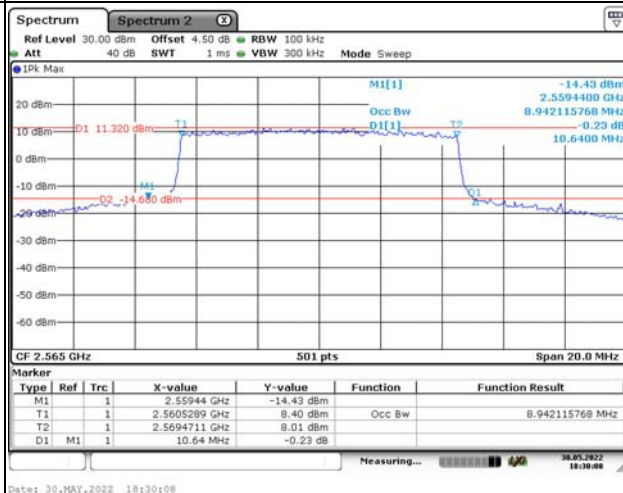
Lowest



Middle



Highest



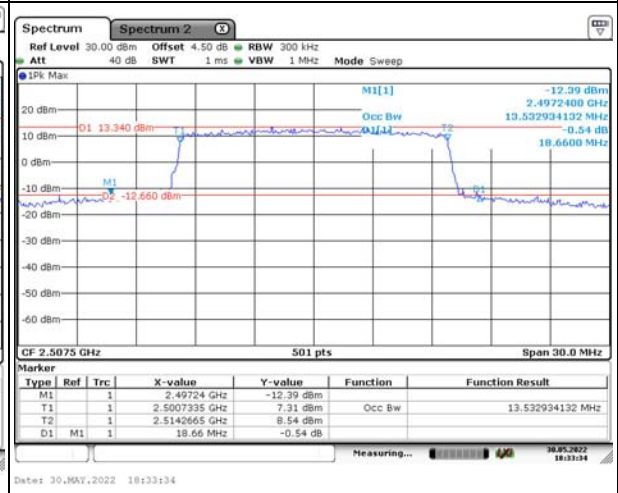
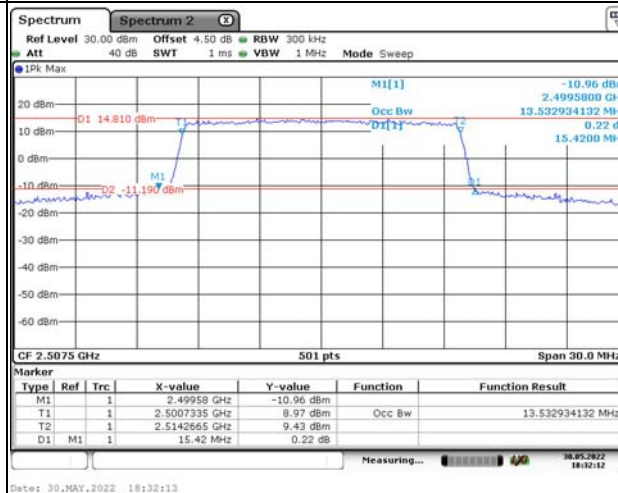
Occupied Bandwidth

Channel

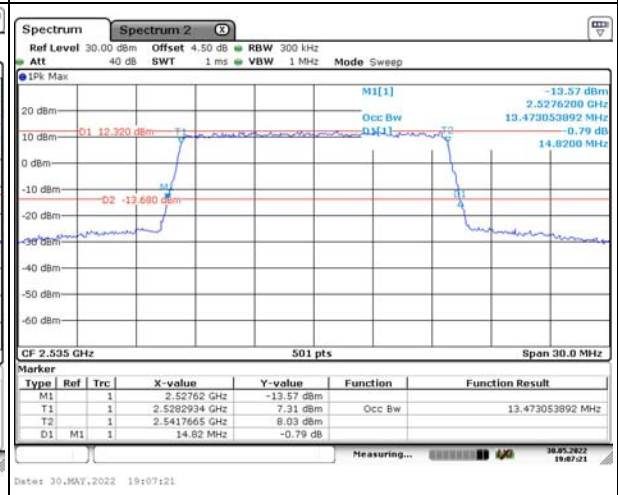
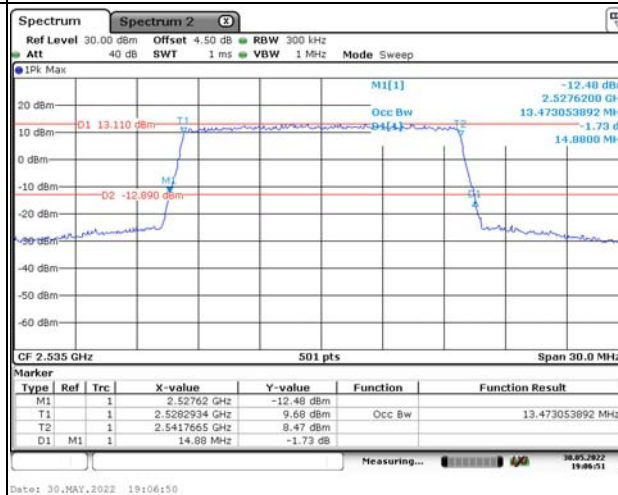
15MHz Bandwidth QPSK

15MHz Bandwidth 16QAM

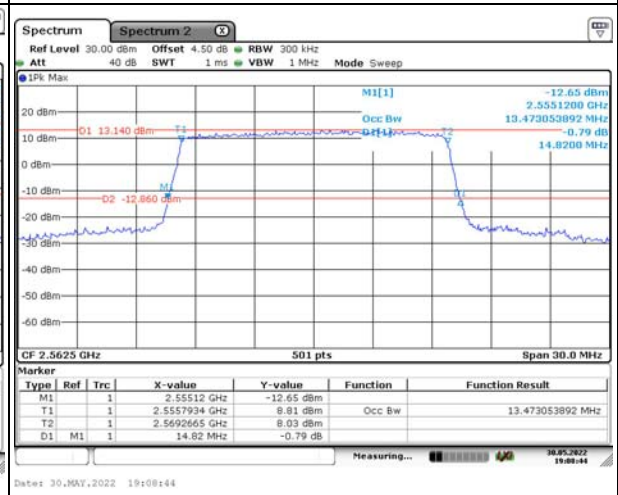
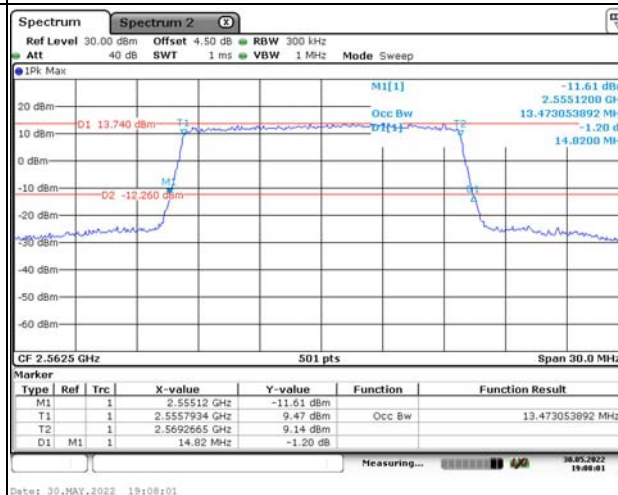
Lowest



Middle



Highest



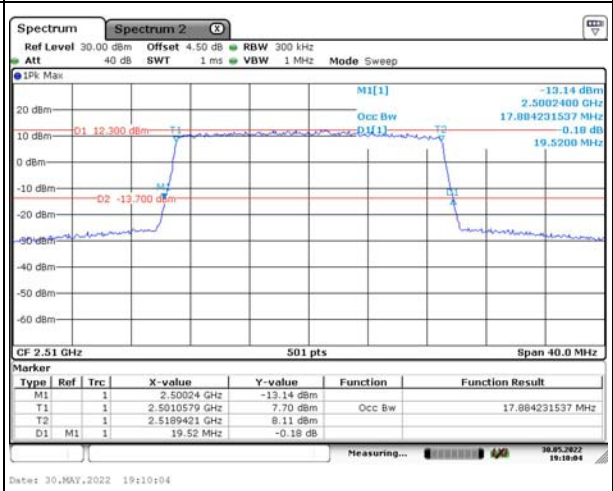
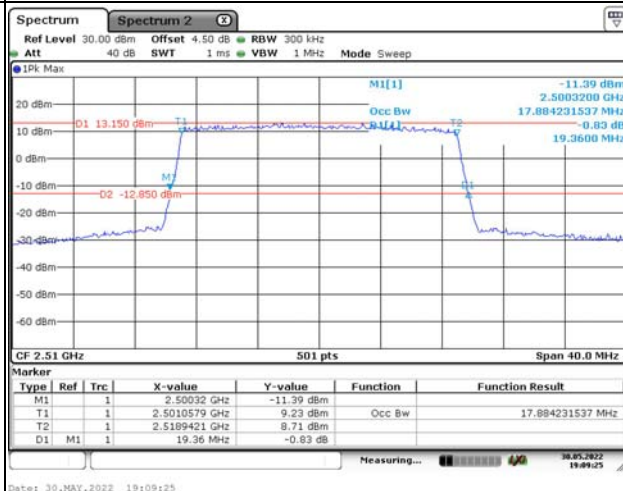
Occupied Bandwidth

Channel

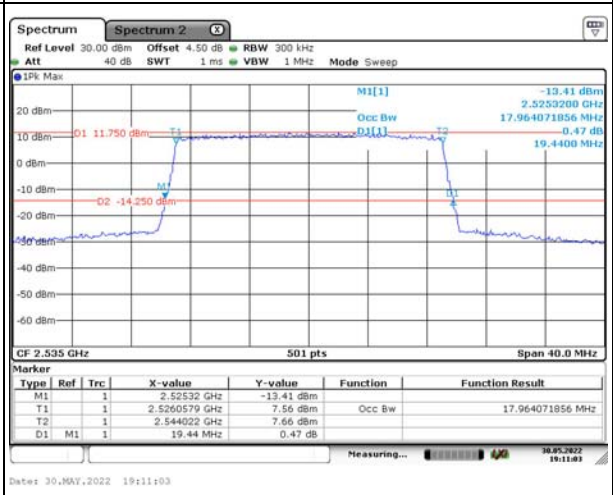
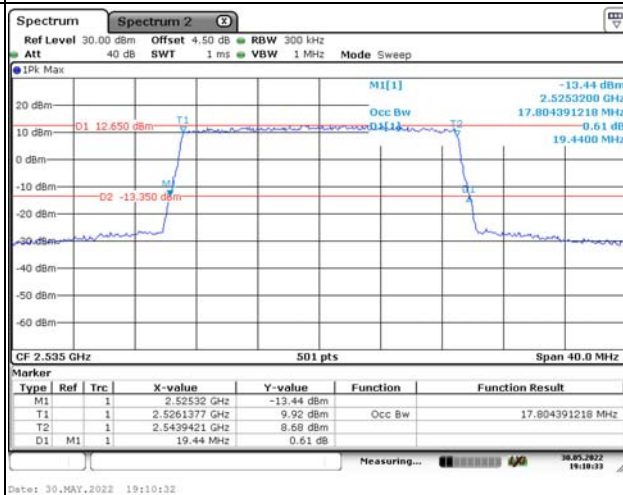
20MHz Bandwidth QPSK

20MHz Bandwidth 16QAM

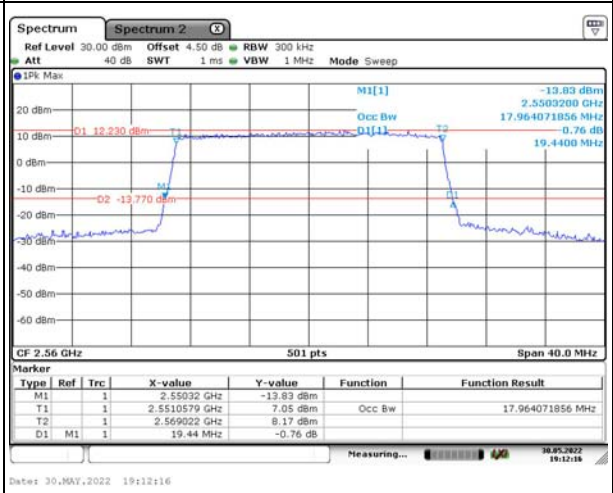
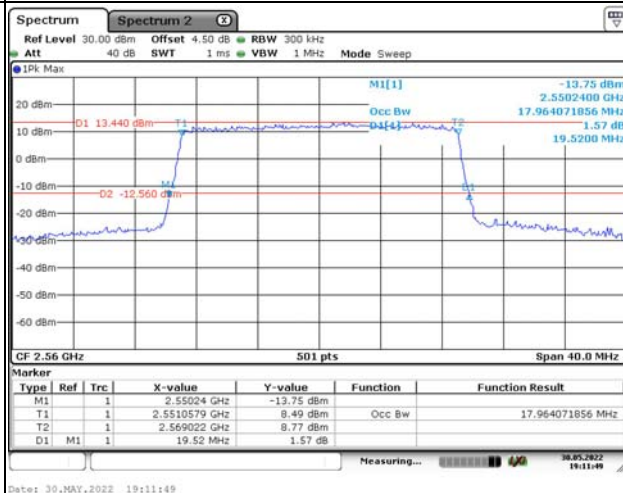
Lowest



Middle



Highest

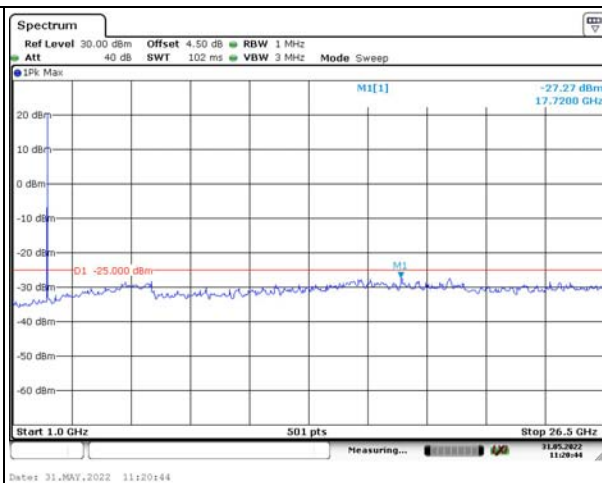
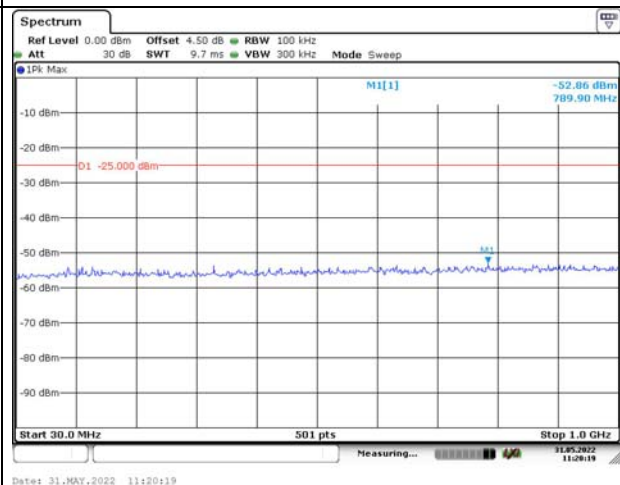


Spurious Emissions at Antenna Terminal

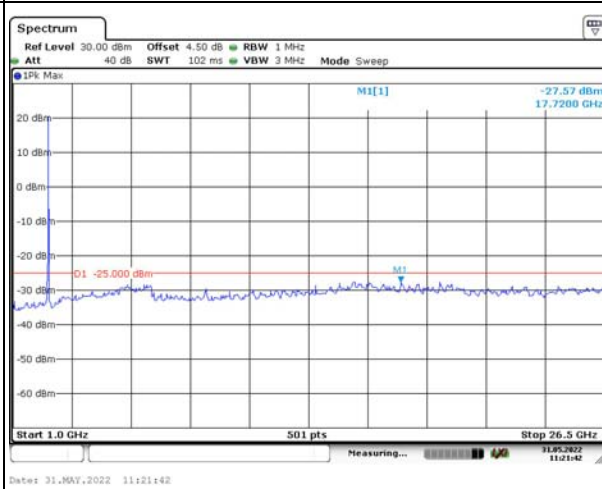
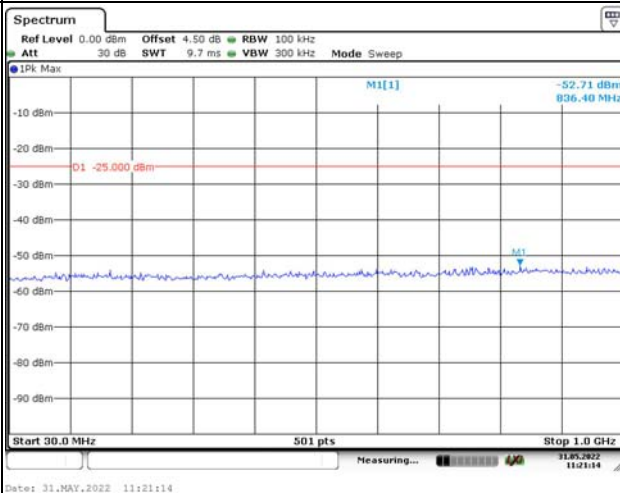
Channel

5MHz Bandwidth QPSK

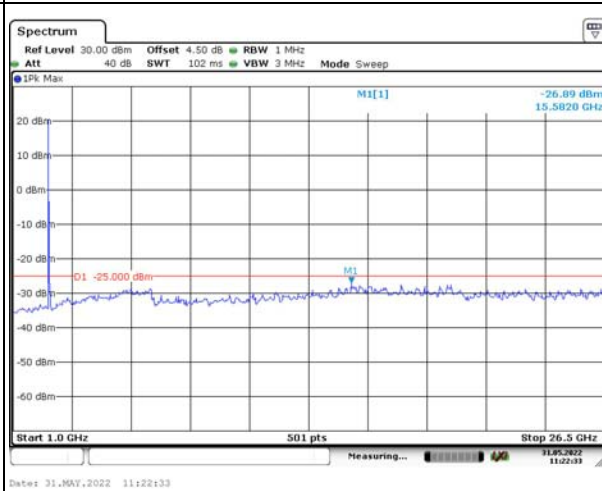
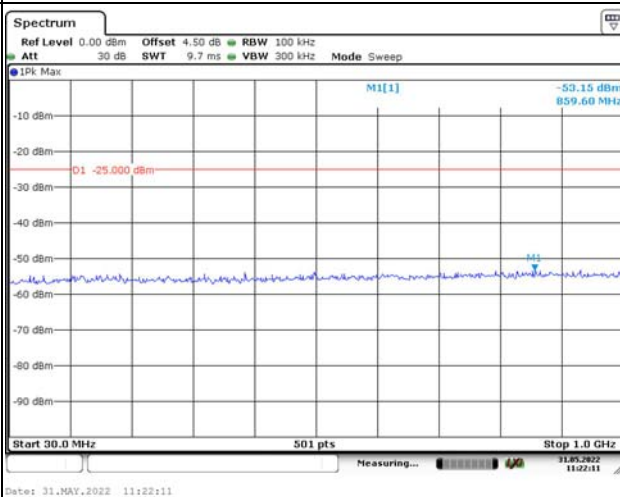
Lowest



Middle



Highest

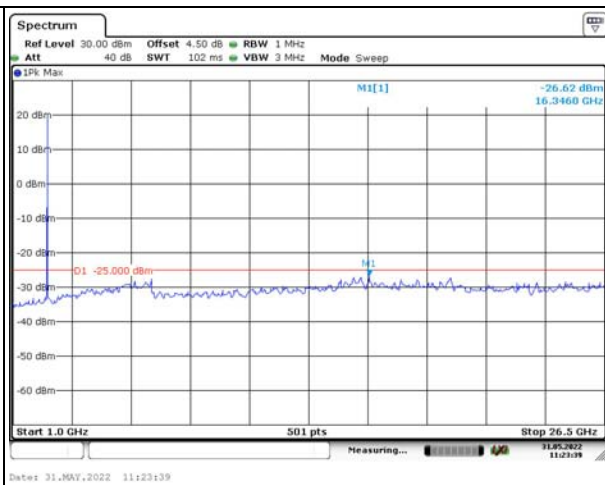
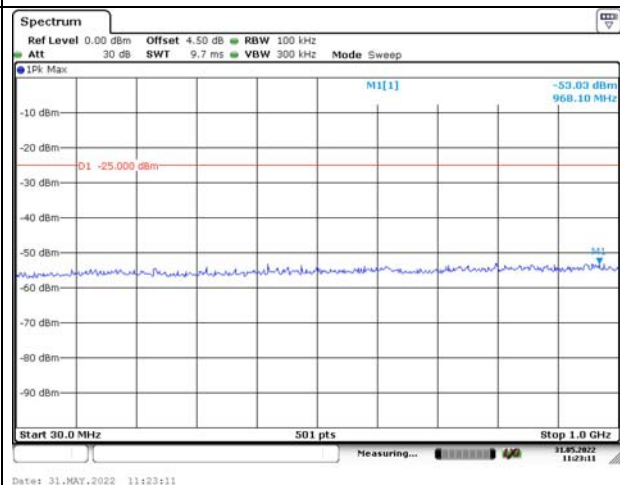


Spurious Emissions at Antenna Terminal

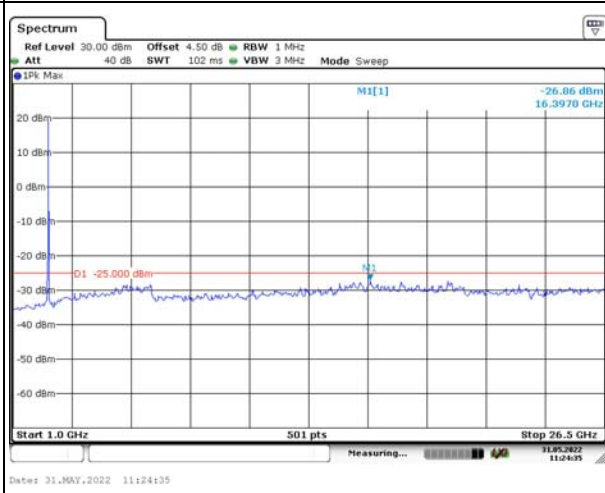
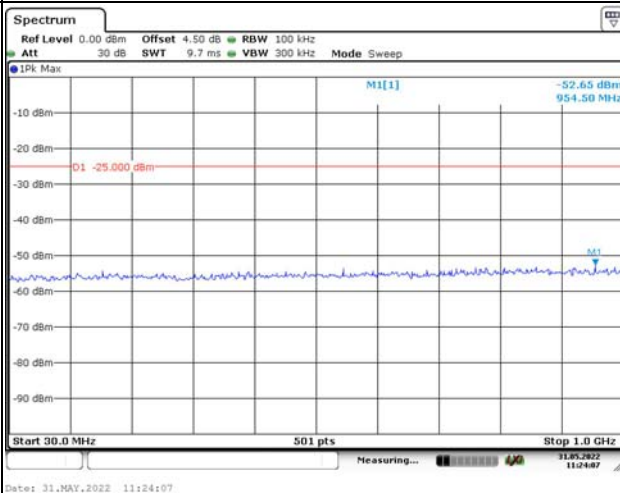
Channel

10MHz Bandwidth QPSK

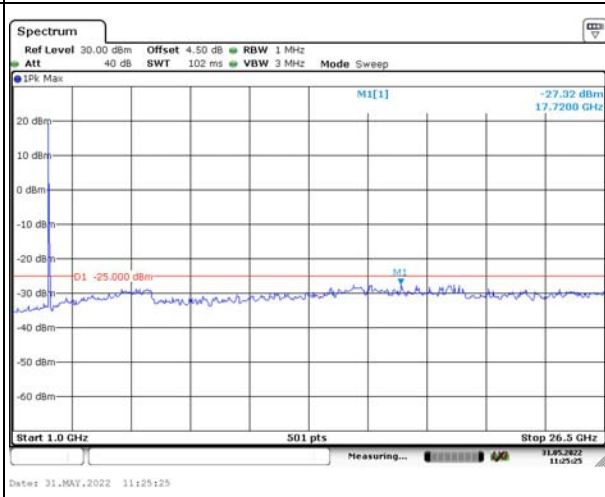
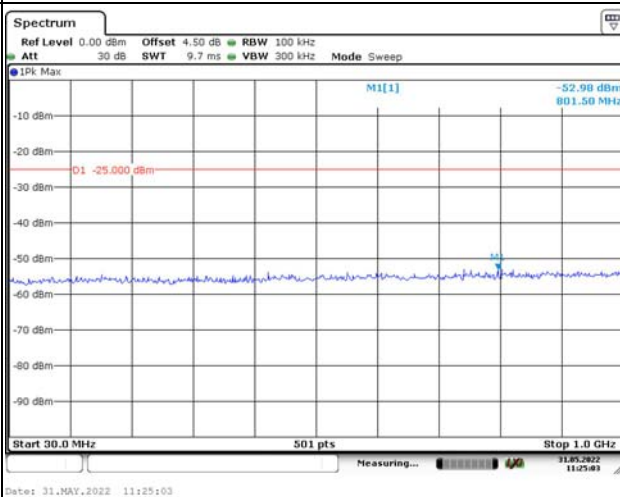
Lowest



Middle



Highest

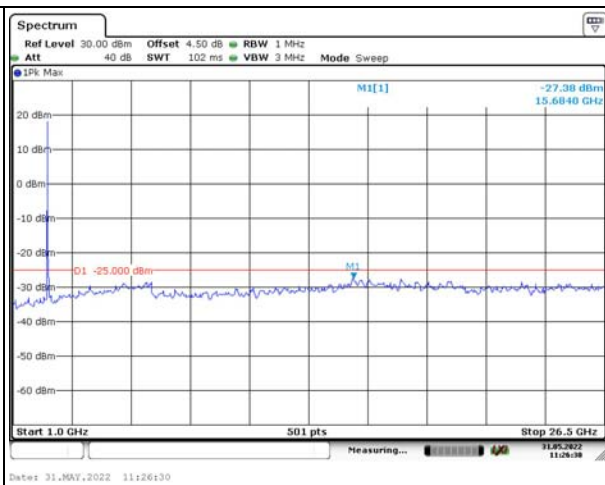
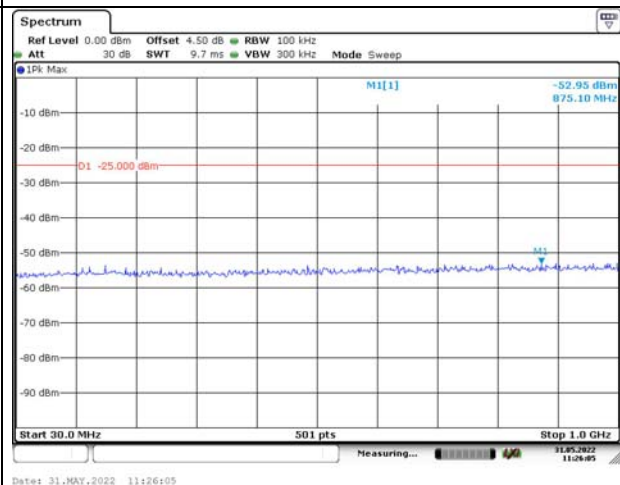


Spurious Emissions at Antenna Terminal

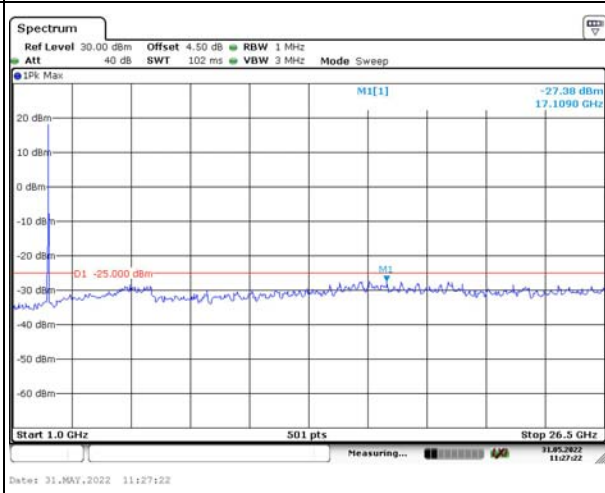
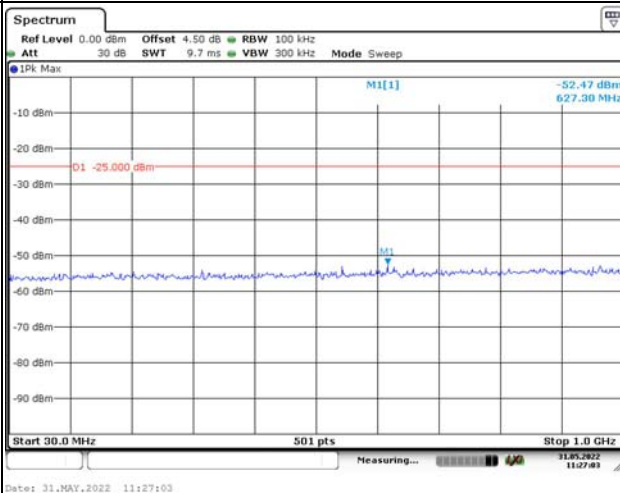
Channel

15MHz Bandwidth QPSK

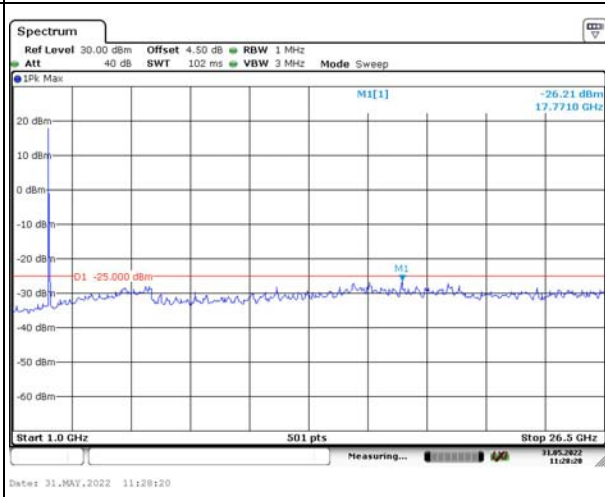
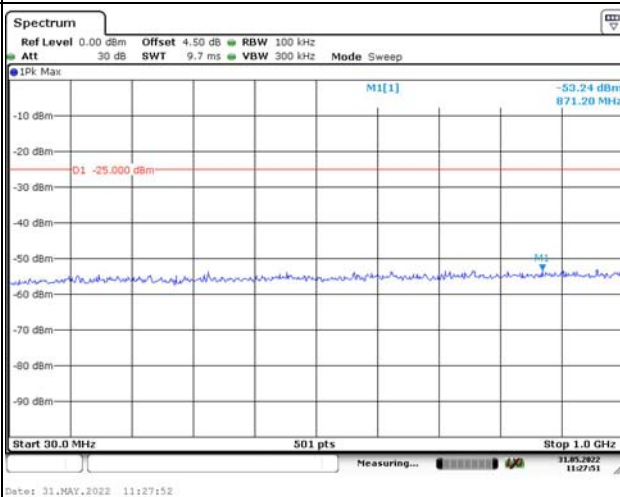
Lowest



Middle



Highest

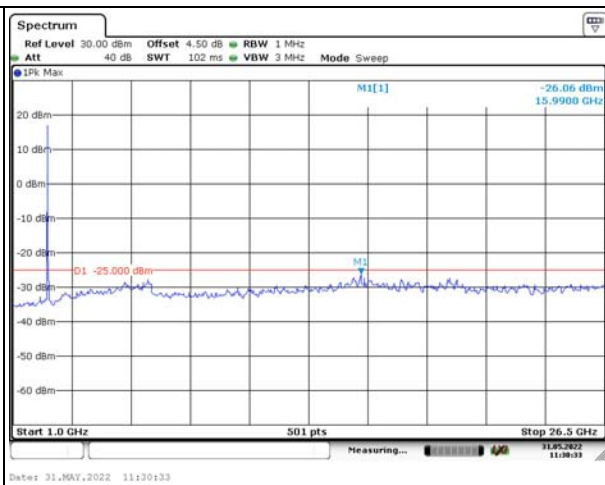
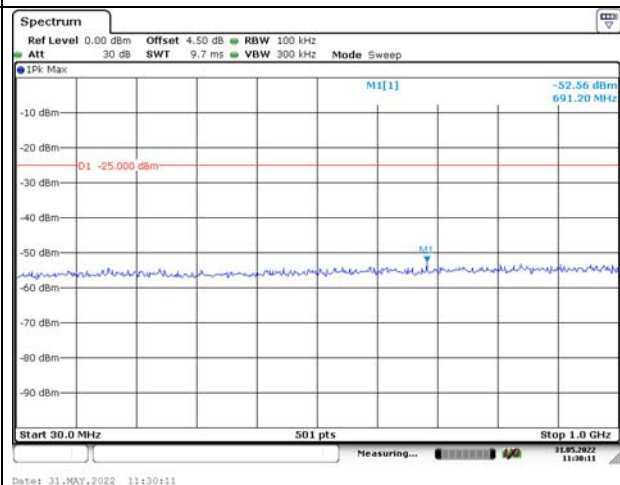


Spurious Emissions at Antenna Terminal

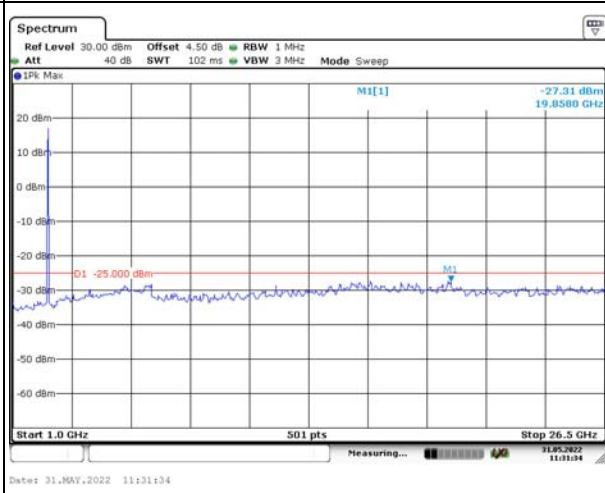
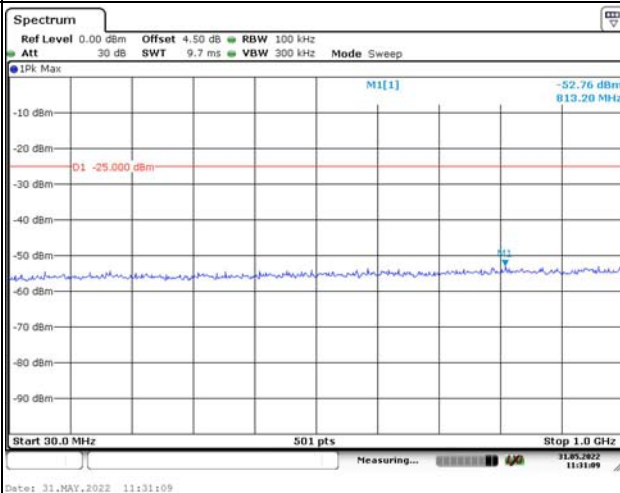
Channel

20MHz Bandwidth QPSK

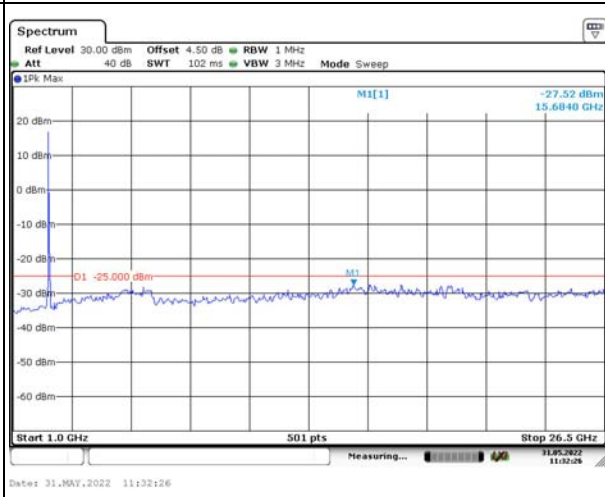
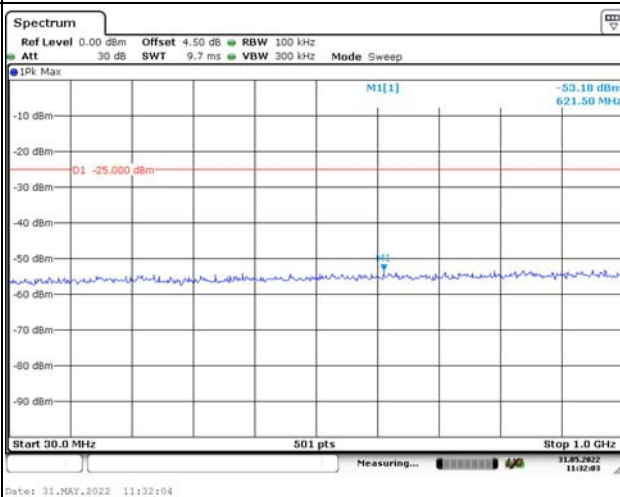
Lowest



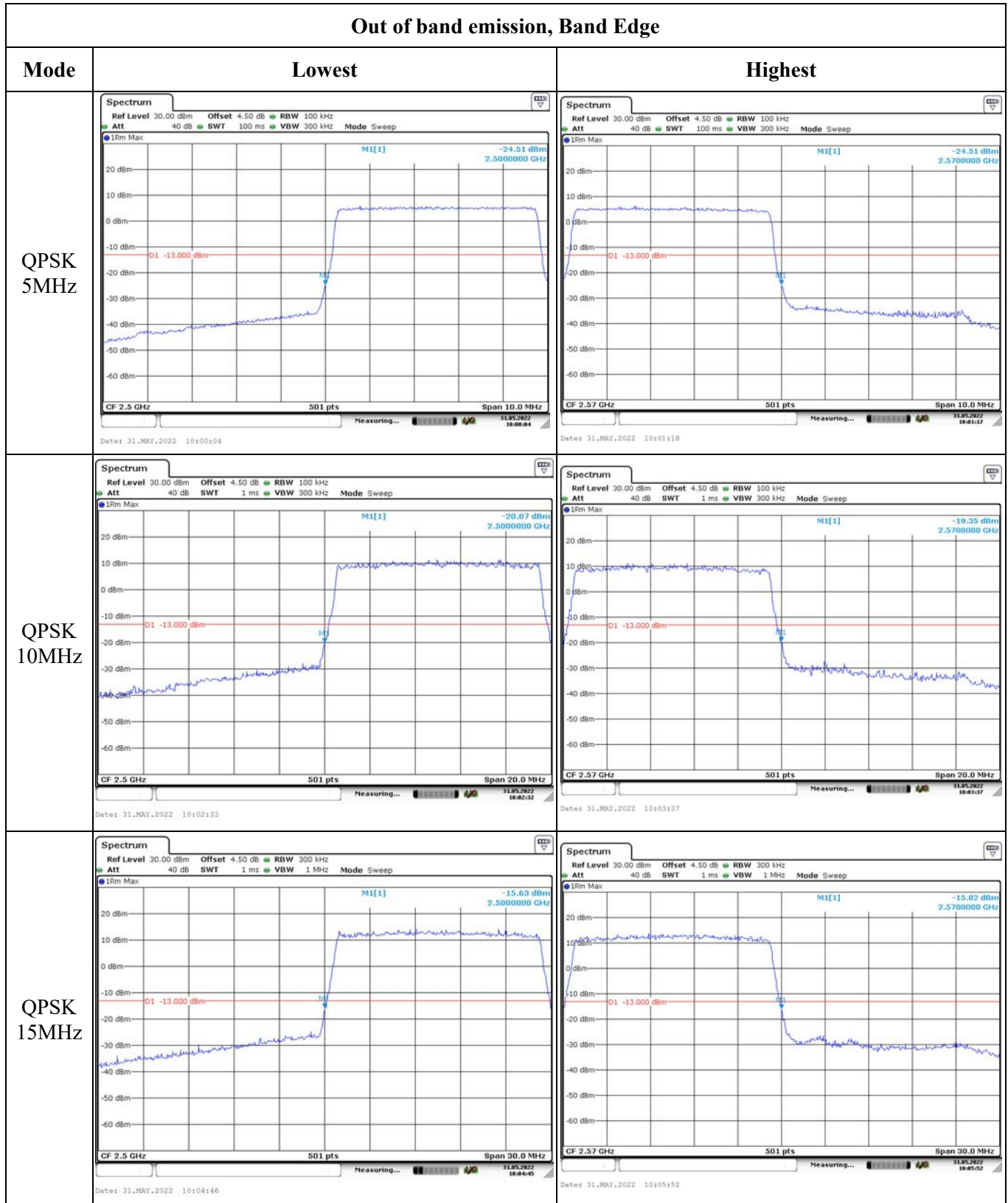
Middle



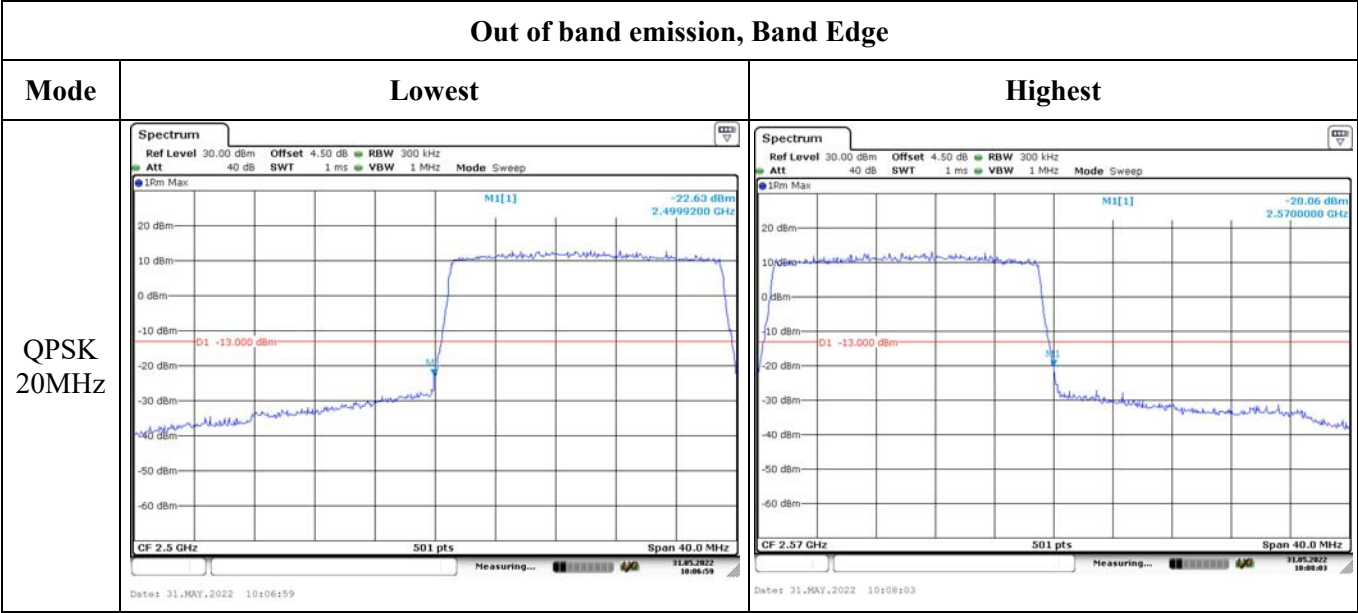
Highest



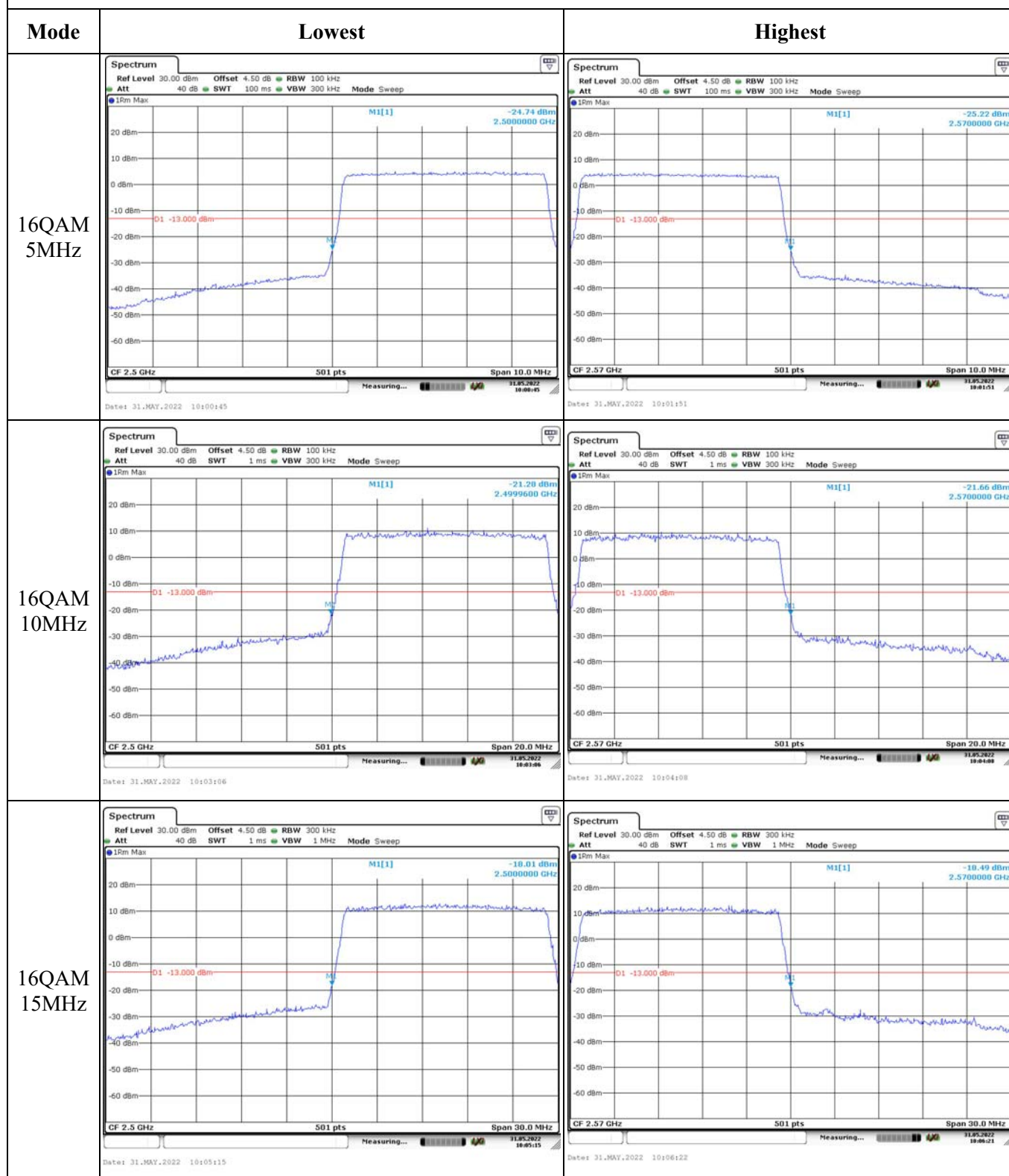
Out of band emission, Band Edge



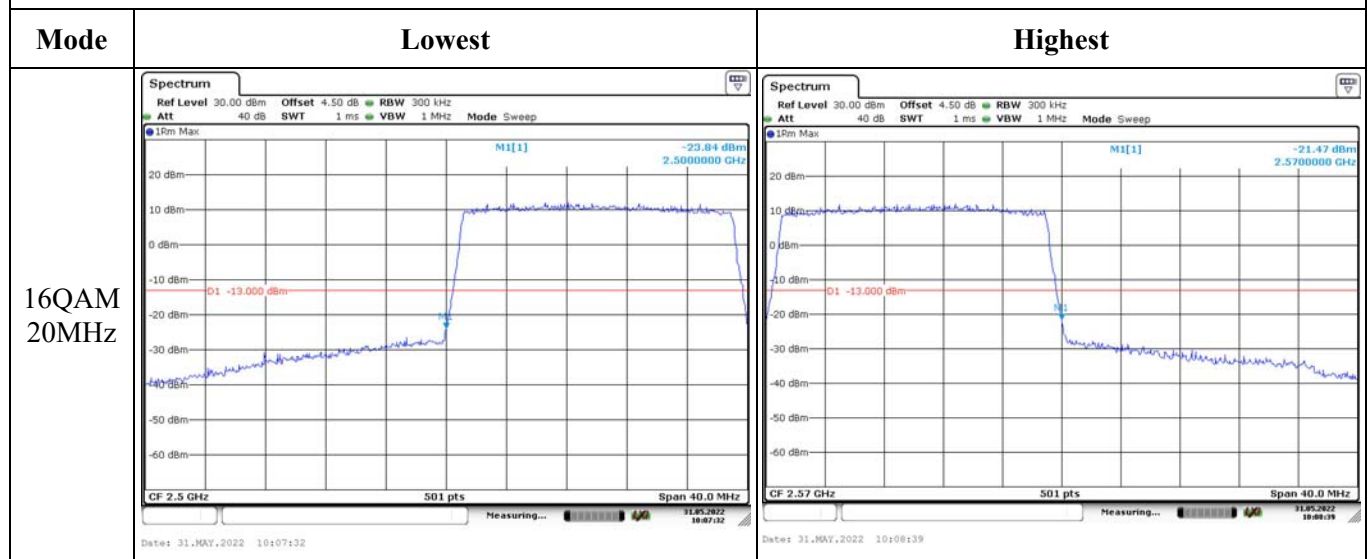
Out of band emission, Band Edge



Out of band emission, Band Edge



Out of band emission, Band Edge



4.14 Antenna Port Test Data and Results for Module B LTE Band 7

Serial Number:	CR22050041-RF-S1	Test Date:	2022/6/29-2022/7/16
Test Site:	RF	Test Mode:	Transmitting
Tester:	Ada Yan	Test Result:	Pass

Environmental Conditions:

Temperature: (°C)	26.6	Relative Humidity: (%)	43	ATM Pressure: (kPa)	100.2
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Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSU26	200256	2021-07-22	2023-07-21
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	144976	2021-07-22	2022-07-21
BACL	TEMP&HUMI Test Chamber	BTH-150	30026	2021-07-22	2022-07-21
UNI-T	Multimeter	UT39A+	C210582554	2021-09-30	2022-09-29
Unknown	Coaxial tee connector	Unknown	2204006	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 7▲:

Antenna Gain G_T (dBi):	-3.57	Path Loss L_C (dB):	0
Operation Voltage(V_{DC}):			
Lowest:	3.5	Normal:	3.85
		Highest:	4.4

Test Frequency For Each Mode:

Operation Bandwidth	Lowest Frequency (MHz)	Middle Frequency (MHz)	Highest Frequency (MHz)
5MHz	2502.5	2535	2567.5
10MHz	2505	2535	2565
15MHz	2507.5	2535	2562.5
20MHz	2510	2535	2560

Test Data:**FCC§2.1046;§ 27.50(h)(2)****RF Output Power:**

Test Bandwidth & Modulation	Resource Block & RB offset	Conducted Average Output Power(dBm)			Maximum EIRP (dBm)	EIRP Limit (dBm)
		Lowest Channel	Middle Channel	Highest Channel		
5MHz QPSK	RB1#0	19.25	19.14	18.45	15.87	33
	RB1#13	19.44	19.16	18.42		
	RB1#24	19.38	18.81	18.40		
	RB15#0	18.66	18.42	17.70		
	RB15#10	18.78	18.27	17.46		
	RB25#0	18.66	18.34	17.54		
5MHz 16QAM	RB1#0	18.36	18.73	17.31	15.42	33
	RB1#13	18.35	18.99	17.07		
	RB1#24	18.33	18.57	17.19		
	RB15#0	17.66	17.33	16.75		
	RB15#10	17.66	17.26	16.34		
	RB25#0	17.62	17.16	16.59		
10MHz QPSK	RB1#0	19.59	19.48	18.80	16.71	33
	RB1#25	20.28	19.22	18.71		
	RB1#49	19.73	18.48	18.58		
	RB25#0	18.75	18.76	17.85		
	RB25#25	18.82	18.31	17.70		
	RB50#0	18.73	18.47	17.78		
10MHz 16QAM	RB1#0	18.84	19.05	18.11	16.48	33
	RB1#25	20.04	18.85	17.59		
	RB1#49	20.05	17.90	17.45		
	RB25#0	17.84	17.75	17.01		
	RB25#25	18.00	17.12	16.66		
	RB50#0	17.69	17.54	16.73		
15MHz QPSK	RB1#0	19.70	19.47	18.63	16.45	33
	RB1#38	20.02	19.17	18.48		
	RB1#74	19.86	18.72	18.49		
	RB36#0	18.78	18.52	17.79		
	RB36#39	18.90	18.17	17.63		
	RB75#0	18.74	18.47	17.68		
15MHz 16QAM	RB1#0	19.09	19.21	17.73	16.56	33
	RB1#38	20.13	18.96	17.83		
	RB1#74	20.12	18.16	17.25		
	RB36#0	17.79	17.52	16.83		
	RB36#39	17.81	17.03	16.43		
	RB75#0	17.66	17.50	16.65		
20MHz QPSK	RB1#0	19.42	19.32	18.94	16.35	33

	RB1#50	19.92	19.38	19.14		
	RB1#99	19.54	18.82	18.50		
	RB50#0	18.74	18.58	17.96		
	RB50#50	18.81	18.20	17.66		
	RB100#0	18.73	18.51	17.80		
20MHz 16QAM	RB1#0	18.72	18.60	18.71	16.32	33
	RB1#50	19.89	17.92	19.35		
	RB1#99	19.40	17.66	18.41		
	RB50#0	17.76	17.65	16.95		
	RB50#50	17.78	17.19	16.63		
	RB100#0	17.69	17.48	16.79		
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	4.94	4.90	4.90	13
	RB100#0	5.35	5.42	5.26	13
20MHz 16QAM	RB1#0	5.93	5.77	5.80	13
	RB100#0	6.25	6.25	6.22	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	4.520	4.520	4.520	5.020	5.000	4.960
5MHz 16QAM	4.520	4.520	4.520	4.980	4.980	5.020
10MHz QPSK	8.960	8.960	8.960	9.760	9.640	9.640
10MHz 16QAM	8.960	8.960	8.920	9.720	9.640	9.600
15MHz QPSK	13.560	13.440	13.440	14.820	14.760	14.760
15MHz 16QAM	13.560	13.500	13.440	14.820	14.700	14.580
20MHz QPSK	18.000	17.920	17.840	19.280	19.440	19.280
20MHz 16QAM	17.920	17.920	17.840	19.360	19.280	19.200
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.
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FCC §2.1051, § 27.53:Out of band emission, Band Edge

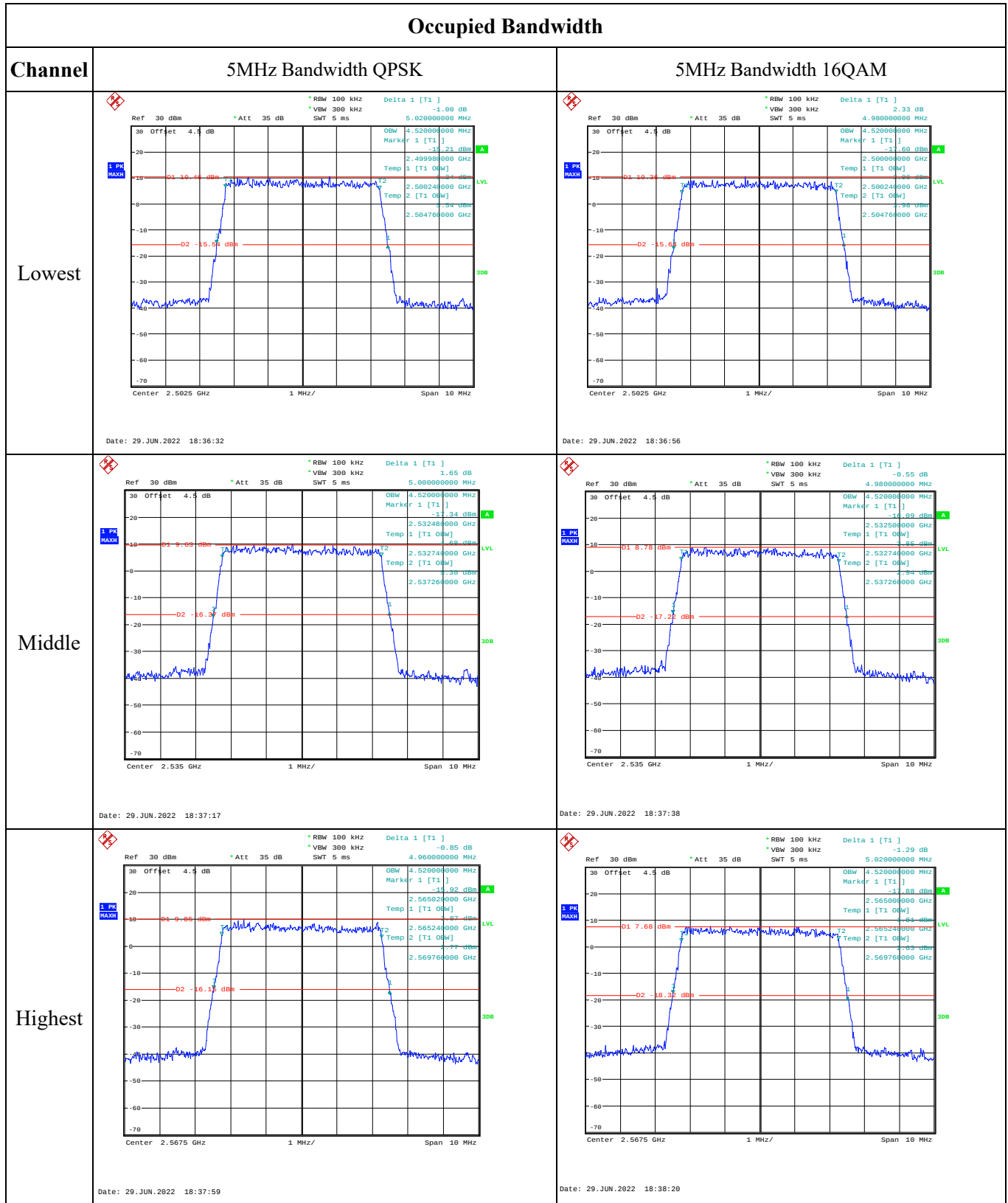
Result:	Pass, Please refer to the test plots of Out of band emission, Band Edge.
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FCC §2.1055, §27.54: Frequency Stability

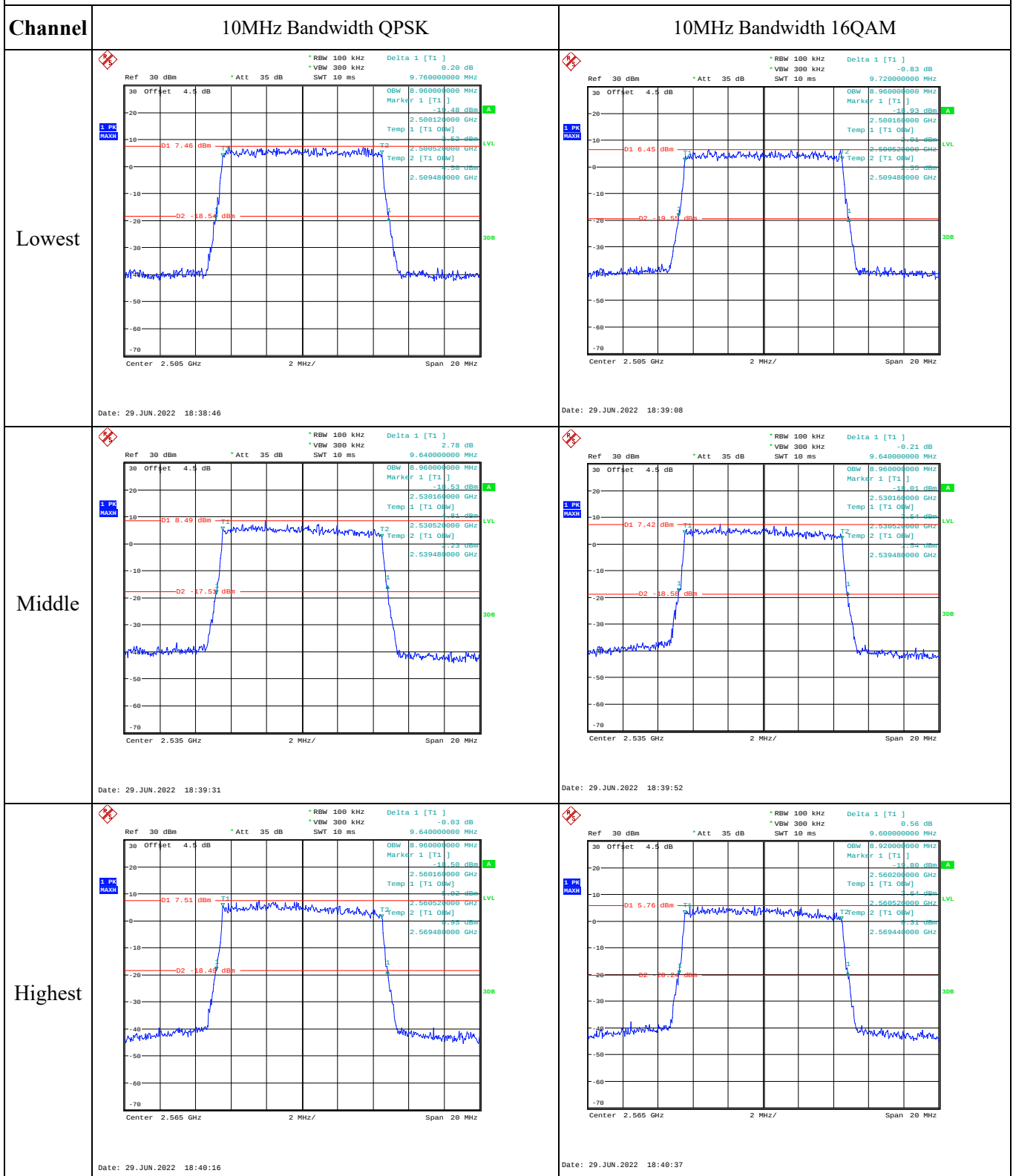
Test Mode:	20M QPSK	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (°C)	Voltage (V _{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.85	2500.519	2500.00	2569.458	2570
	-20	3.85	2500.515	2500.00	2569.456	2570
	-10	3.85	2500.514	2500.00	2569.455	2570
	0	3.85	2500.513	2500.00	2569.463	2570
	10	3.85	2500.519	2500.00	2569.461	2570
	20	3.85	2500.513	2500.00	2569.455	2570
	30	3.85	2500.510	2500.00	2569.452	2570
	40	3.85	2500.505	2500.00	2569.450	2570
Frequency Stability vs. Voltage	20	3.5	2500.513	2500.00	2569.447	2570
	20	4.4	2500.503	2500.00	2569.449	2570
Result:					Pass	

Test Mode:	20M 16QAM	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (°C)	Voltage (V _{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.85	2500.518	2500.00	2569.458	2570
	-20	3.85	2500.515	2500.00	2569.463	2570
	-10	3.85	2500.516	2500.00	2569.461	2570
	0	3.85	2500.522	2500.00	2569.459	2570
	10	3.85	2500.521	2500.00	2569.457	2570
	20	3.85	2500.513	2500.00	2569.455	2570
	30	3.85	2500.510	2500.00	2569.451	2570
	40	3.85	2500.513	2500.00	2569.452	2570
Frequency Stability vs. Voltage	20	3.5	2500.510	2500.00	2569.450	2570
	20	4.4	2500.512	2500.00	2569.447	2570
Result:					Pass	

Test Plots:



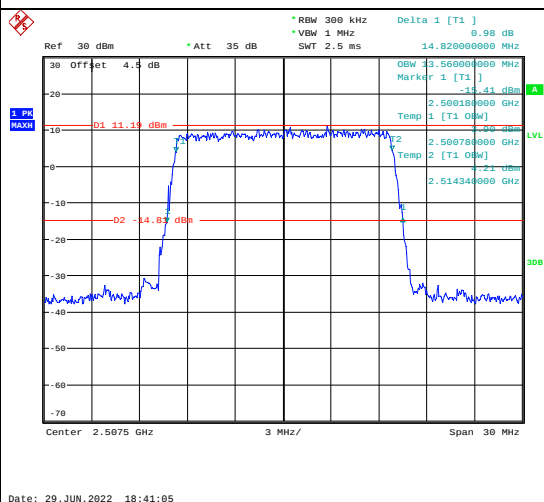
Occupied Bandwidth



Channel

15MHz Bandwidth 16QAM

Lowest



RBW 300 kHz
 VBW 1 MHz
 SMT 2.5 ms
 Delta 1 [T1]
 Ref 30 dBm
 Att 35 dB
 14.820000000 MHz

30 Offset 4.5 dB
 -20
 -10
 0
 -10
 -20
 -30
 -40
 -50
 -60
 -70

01 -0.88 dBm
 02 -16.12 dBm
 1
 2

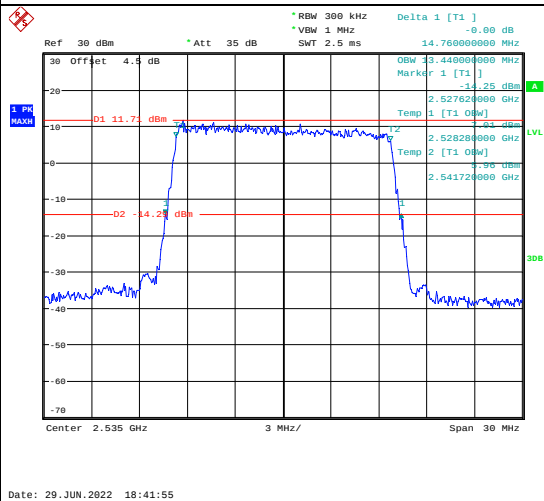
1.560000000 MHz
 Marker 1 [T1]
 -14.53 dBm
 2.500100000 GHz
 Temp 1 [T1 dBm]
 2.500700000 GHz
 Temp 2 [T1 dBm]
 2.508700000 GHz
 -94 dBm
 2.514340000 GHz

1.98 MHz
 30 dBm
 300 dBm

Center 2.5675 GHz
 3 MHz/
 Span 30 MHz

Date: 29 JUN 2022 18:41:29

Middle



* RBW 300 kHz
 * VBW 1 MHz
 SMT 2.5 ms
 Delta 1 [T1]
 -1.03 dB
 14.7080000000 MHz

Ref 30 dBm
 Att 35 dB

30 Offset 4.5 dB
 -10
 -20
 -30
 -40
 -50
 -60
 -70

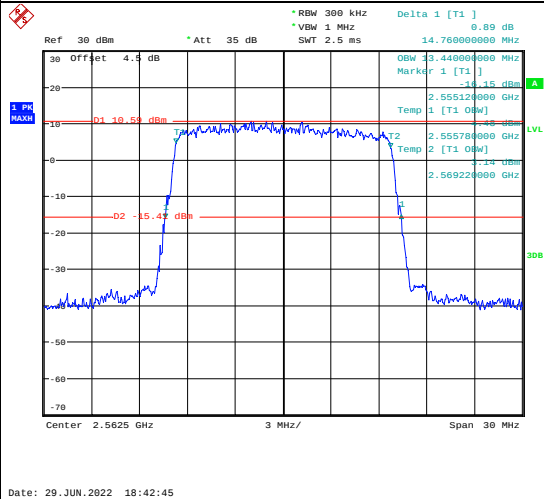
DBW 13.5000000000 MHz
 Marker 1 [T1]
 -15.32 dBm
 Temp 1 [T1 DBW]
 2.5276200000 GHz
 1 [T1 DBW]
 -0.03 dBm
 Temp 2 [T1 DBW]
 2.5282200000 GHz
 2 [T1 DBW]
 -0.66 dBm
 2.5417200000 GHz

D1 -9.99 dBm
 D2 -16.07 dBm

Center 2.535 GHz
 3 MHz/
 Span 30 MHz

Date: 29 JUN 2022 18:42:19

Highest



Ref 30 dBm *Att 35 dB *RBW 300 kHz Delta 1 [T1] -4.66 dB
 *VBW 1 MHz *SWT 2.5 ms 14.580000000 MHz

30 Offset 4.5 dB
 20 OSW 13.448000000 MHz
 Marker 1 [T1]
 -14.59 dBm
 Temp 1 [T1 OSW]
 -0.01 dBm
 10 T2 2.555780000 GHz
 Temp 2 [T1 OSW]
 -0.91 dBm
 -20 2.569220000 GHz
 -30
 -40
 -50
 -60
 -70

Center 2.5625 GHz 3 MHz/ Span 30 MHz

1 PA MAX

300

29 JUN 2022 18:43:06

Occupied Bandwidth

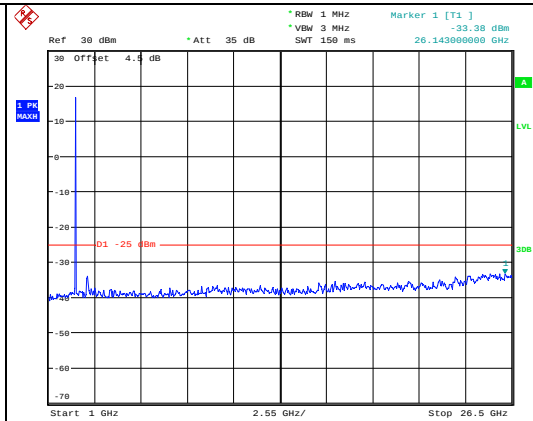
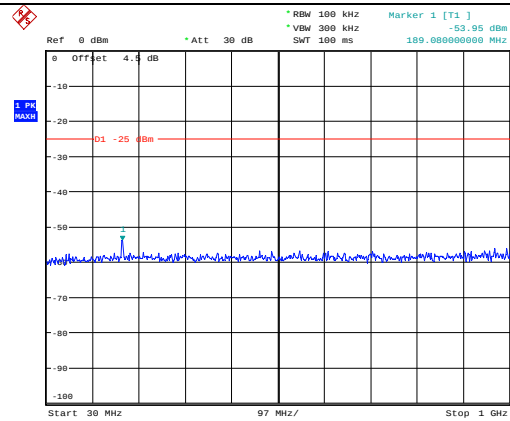
Channel	20MHz Bandwidth QPSK	20MHz Bandwidth 16QAM
Lowest	Ref: 30 dBm, Offset: 4.5 dB, Att: 35 dB, RBW: 300 kHz, VBW: 1 MHz, SWT: 2.5 ms, Delta 1 [T1]: 0.15 dB, Delta 2 [T2]: -16.08 dB, Delta 3 [T3]: -16.08 dB, Marker 1 [T1]: 19.280000000 MHz, Marker 2 [T2]: 19.440000000 MHz, Temp 1 [T1]: 2.500484000 GHz, Temp 2 [T2]: 2.501044000 GHz, Temp 3 [T3]: 2.519044000 GHz, Center: 2.51 GHz, Span: 40 MHz, Date: 29 JUN 2022 18:43:37	Ref: 30 dBm, Offset: 4.5 dB, Att: 35 dB, RBW: 300 kHz, VBW: 1 MHz, SWT: 2.5 ms, Delta 1 [T1]: 1.83 dB, Delta 2 [T2]: -16.44 dB, Delta 3 [T3]: -16.44 dB, Marker 1 [T1]: 19.360000000 MHz, Marker 2 [T2]: 19.440000000 MHz, Temp 1 [T1]: 2.500484000 GHz, Temp 2 [T2]: 2.501124000 GHz, Temp 3 [T3]: 2.519044000 GHz, Center: 2.51 GHz, Span: 40 MHz, Date: 29 JUN 2022 18:44:01
Middle	Ref: 30 dBm, Offset: 4.5 dB, Att: 35 dB, RBW: 300 kHz, VBW: 1 MHz, SWT: 2.5 ms, Delta 1 [T1]: 1.26 dB, Delta 2 [T2]: -16.08 dB, Delta 3 [T3]: -16.08 dB, Marker 1 [T1]: 19.440000000 MHz, Marker 2 [T2]: 19.520000000 MHz, Temp 1 [T1]: 2.525244000 GHz, Temp 2 [T2]: 2.526044000 GHz, Temp 3 [T3]: 2.543964000 GHz, Center: 2.535 GHz, Span: 40 MHz, Date: 29 JUN 2022 18:44:27	Ref: 30 dBm, Offset: 4.5 dB, Att: 35 dB, RBW: 300 kHz, VBW: 1 MHz, SWT: 2.5 ms, Delta 1 [T1]: -0.16 dB, Delta 2 [T2]: -16.04 dB, Delta 3 [T3]: -16.04 dB, Marker 1 [T1]: 19.520000000 MHz, Marker 2 [T2]: 19.600000000 MHz, Temp 1 [T1]: 2.525244000 GHz, Temp 2 [T2]: 2.526044000 GHz, Temp 3 [T3]: 2.543964000 GHz, Center: 2.535 GHz, Span: 40 MHz, Date: 29 JUN 2022 18:44:51
Highest	Ref: 30 dBm, Offset: 4.5 dB, Att: 35 dB, RBW: 300 kHz, VBW: 1 MHz, SWT: 2.5 ms, Delta 1 [T1]: 1.37 dB, Delta 2 [T2]: -16.83 dB, Delta 3 [T3]: -16.83 dB, Marker 1 [T1]: 19.520000000 MHz, Marker 2 [T2]: 19.600000000 MHz, Temp 1 [T1]: 2.551124000 GHz, Temp 2 [T2]: 2.551124000 GHz, Temp 3 [T3]: 2.568964000 GHz, Center: 2.56 GHz, Span: 40 MHz, Date: 29 JUN 2022 18:45:17	Ref: 30 dBm, Offset: 4.5 dB, Att: 35 dB, RBW: 300 kHz, VBW: 1 MHz, SWT: 2.5 ms, Delta 1 [T1]: -2.88 dB, Delta 2 [T2]: -16.05 dB, Delta 3 [T3]: -16.05 dB, Marker 1 [T1]: 19.600000000 MHz, Marker 2 [T2]: 19.680000000 MHz, Temp 1 [T1]: 2.551124000 GHz, Temp 2 [T2]: 2.551124000 GHz, Temp 3 [T3]: 2.568964000 GHz, Center: 2.56 GHz, Span: 40 MHz, Date: 29 JUN 2022 18:45:42

Spurious Emissions at Antenna Terminal

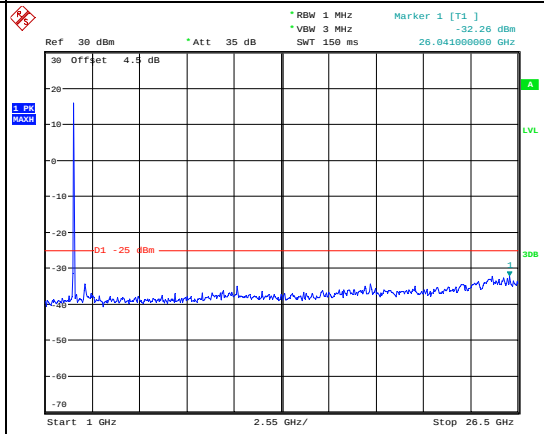
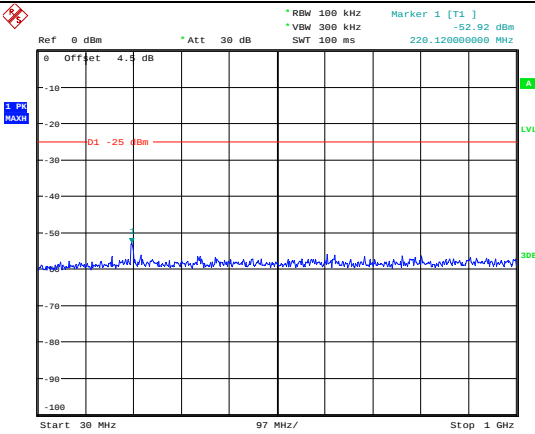
Channel

5MHz Bandwidth QPSK

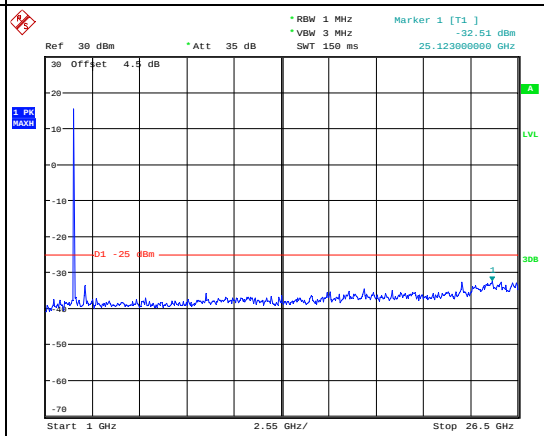
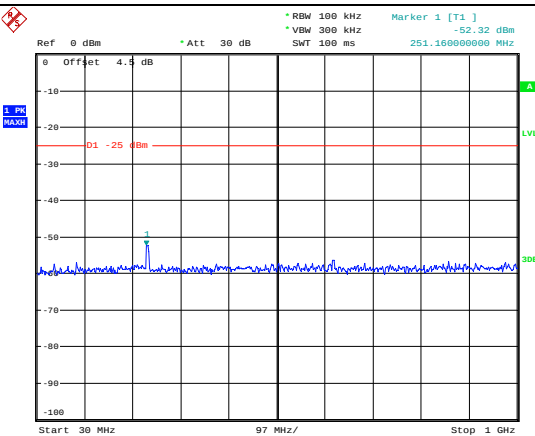
Lowest



Middle



Highest

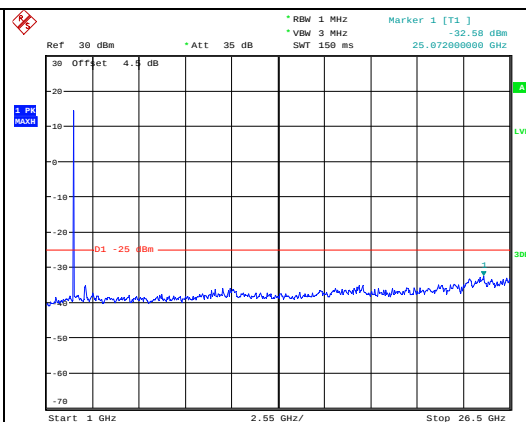
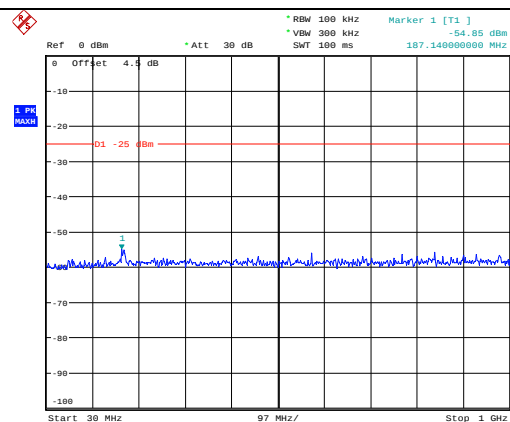


Spurious Emissions at Antenna Terminal

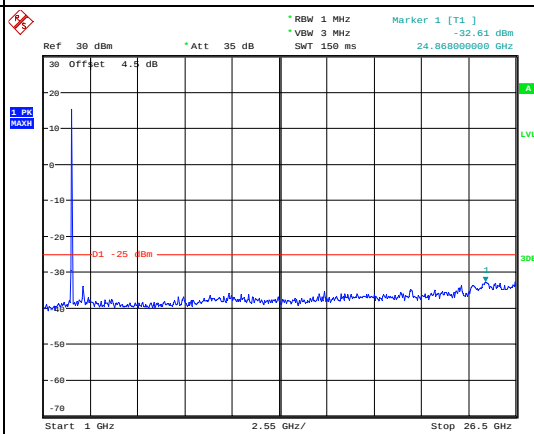
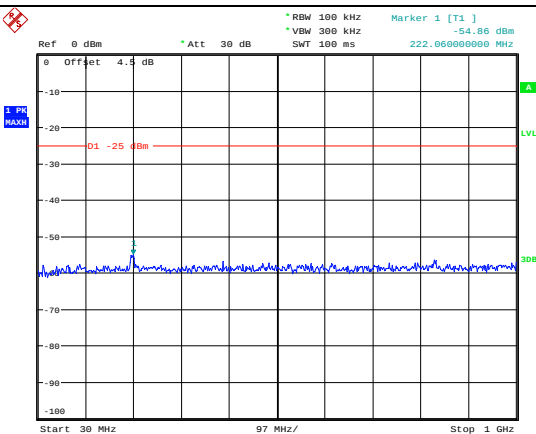
Channel

10MHz Bandwidth QPSK

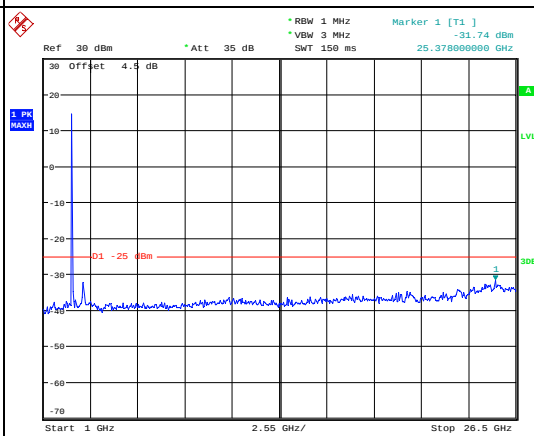
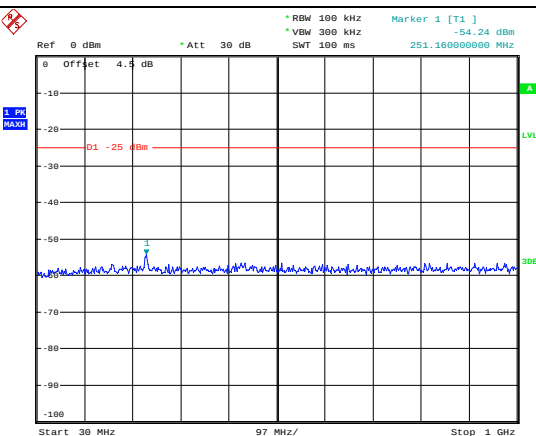
Lowest



Middle



Highest

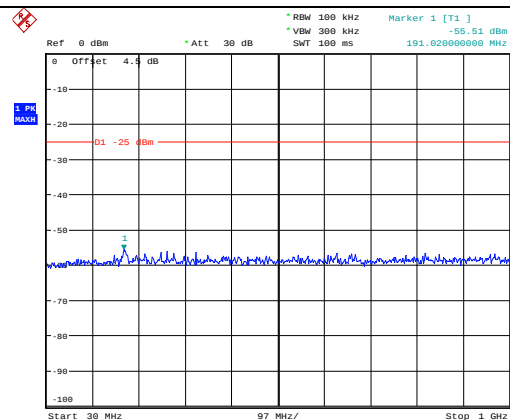


Spurious Emissions at Antenna Terminal

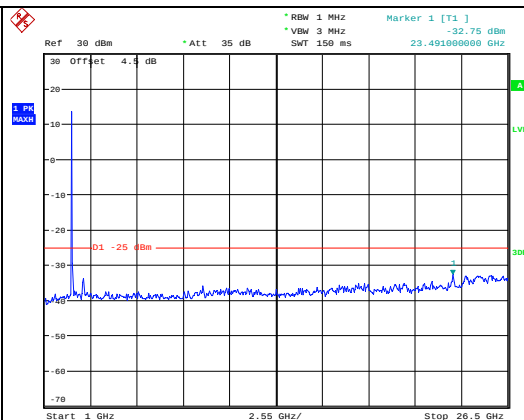
Channel

15MHz Bandwidth QPSK

Lowest

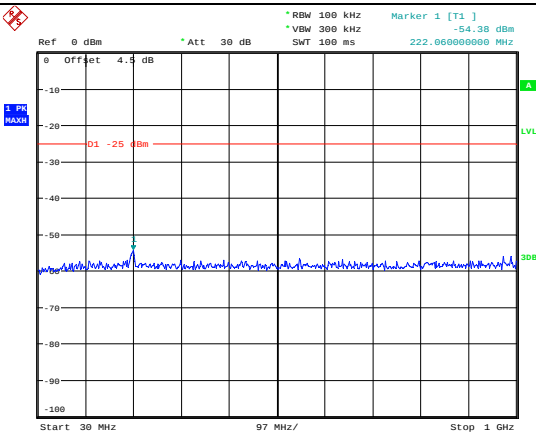


Date: 29.JUN.2022 17:51:35

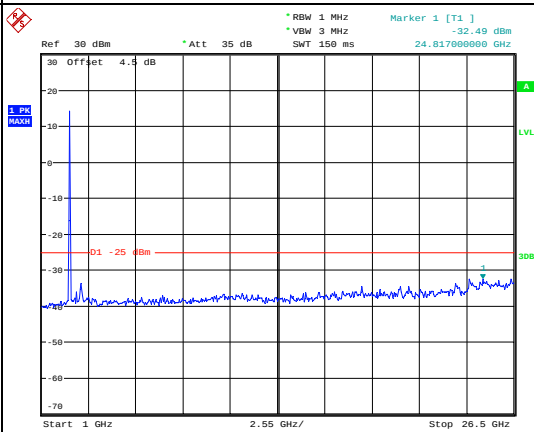


Date: 29.JUN.2022 17:51:47

Middle

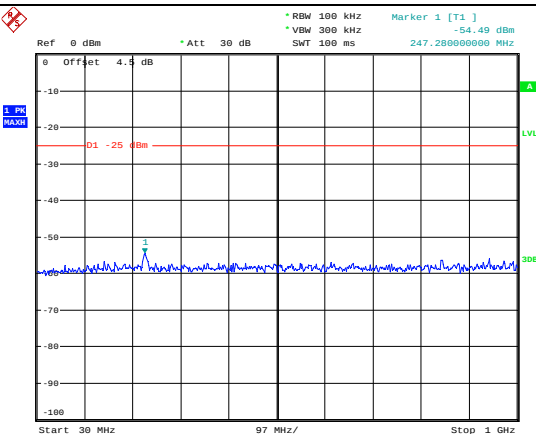


Date: 29.JUN.2022 17:52:10

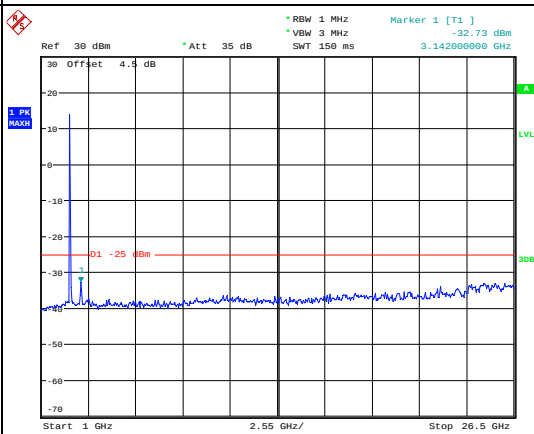


Date: 29.JUN.2022 17:52:23

Highest



Date: 29.JUN.2022 17:52:45



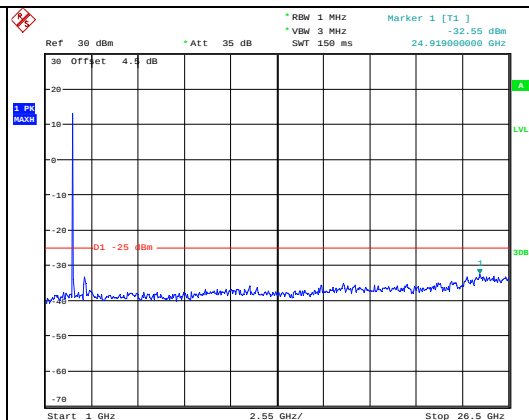
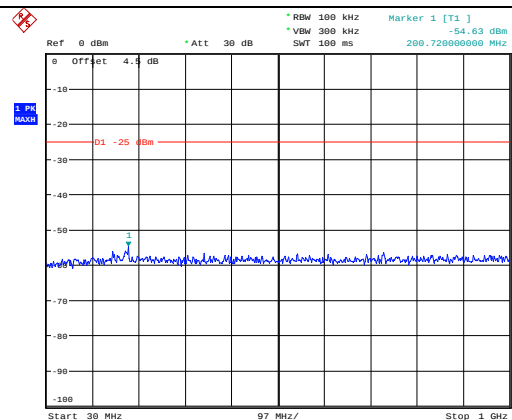
Date: 29.JUN.2022 17:52:58

Spurious Emissions at Antenna Terminal

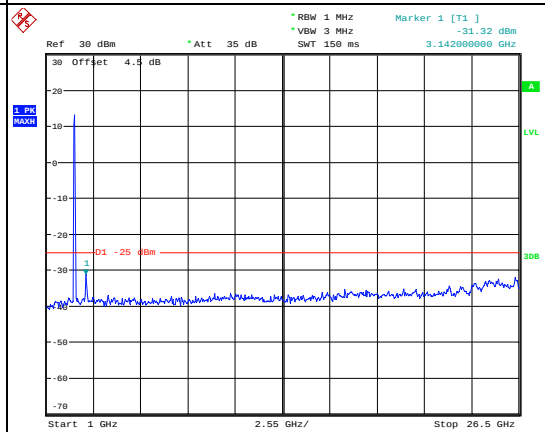
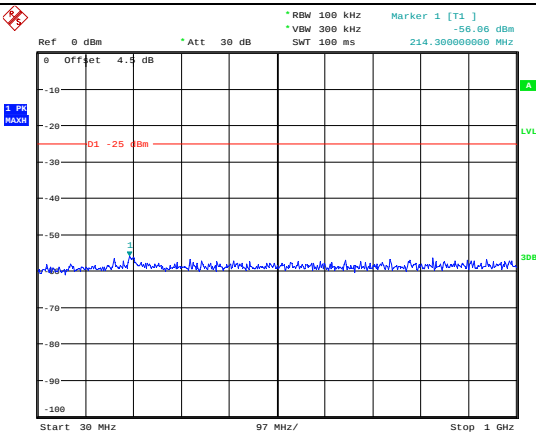
Channel

20MHz Bandwidth QPSK

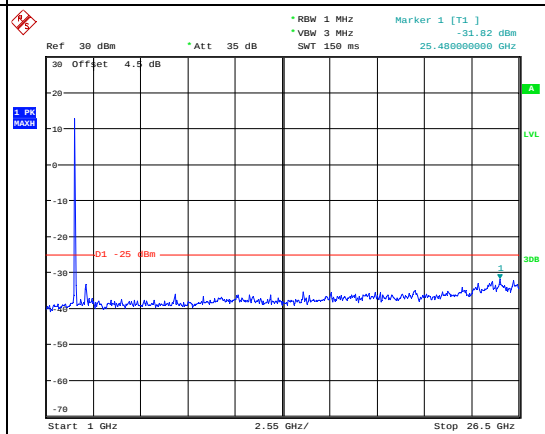
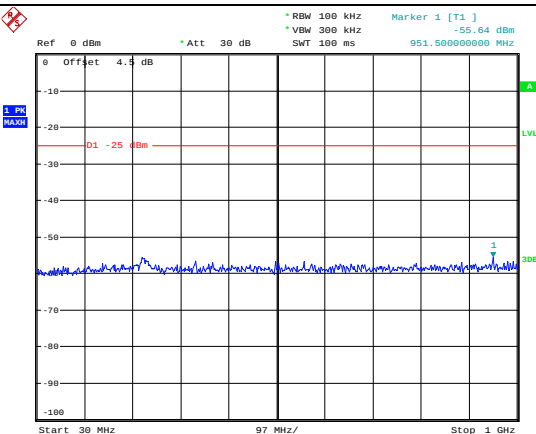
Lowest



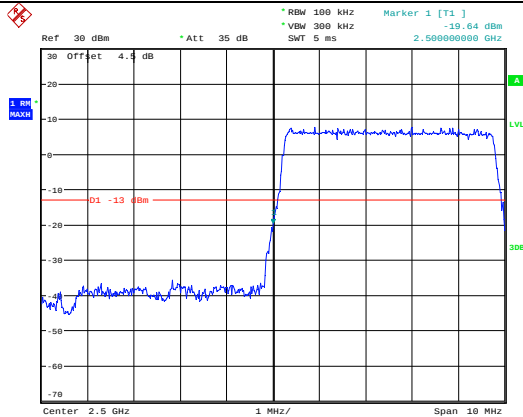
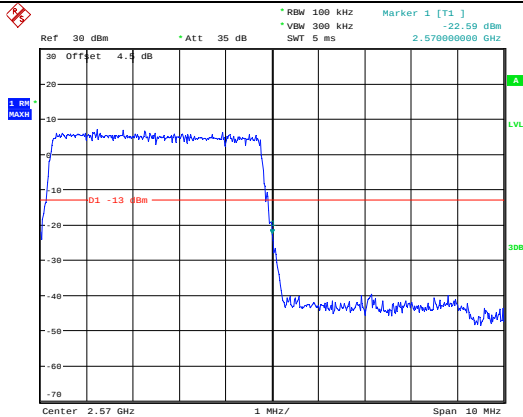
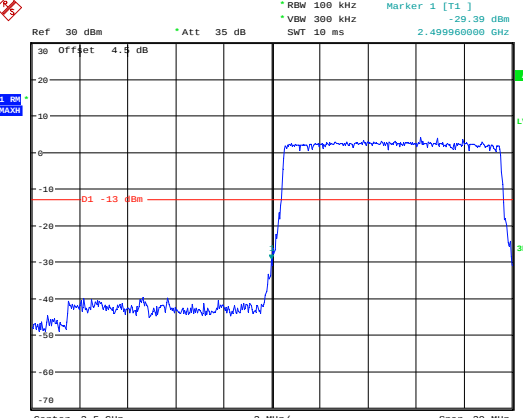
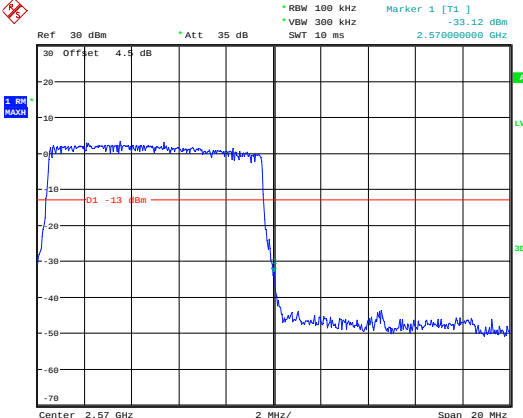
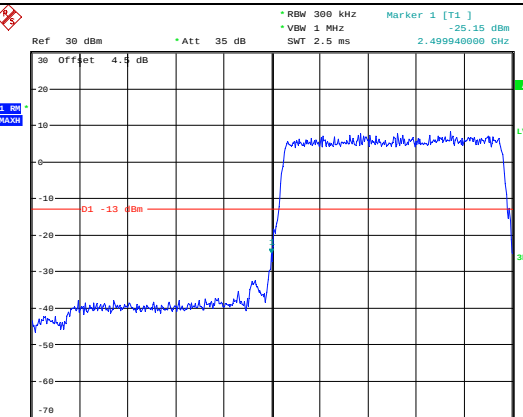
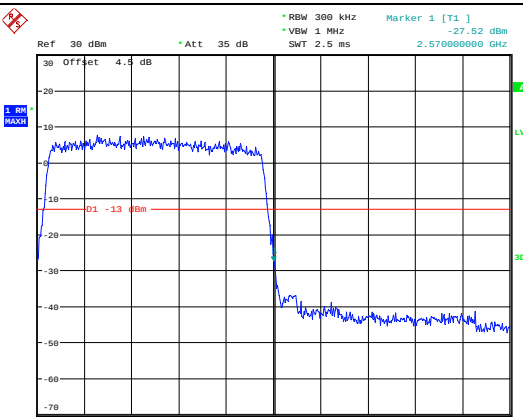
Middle



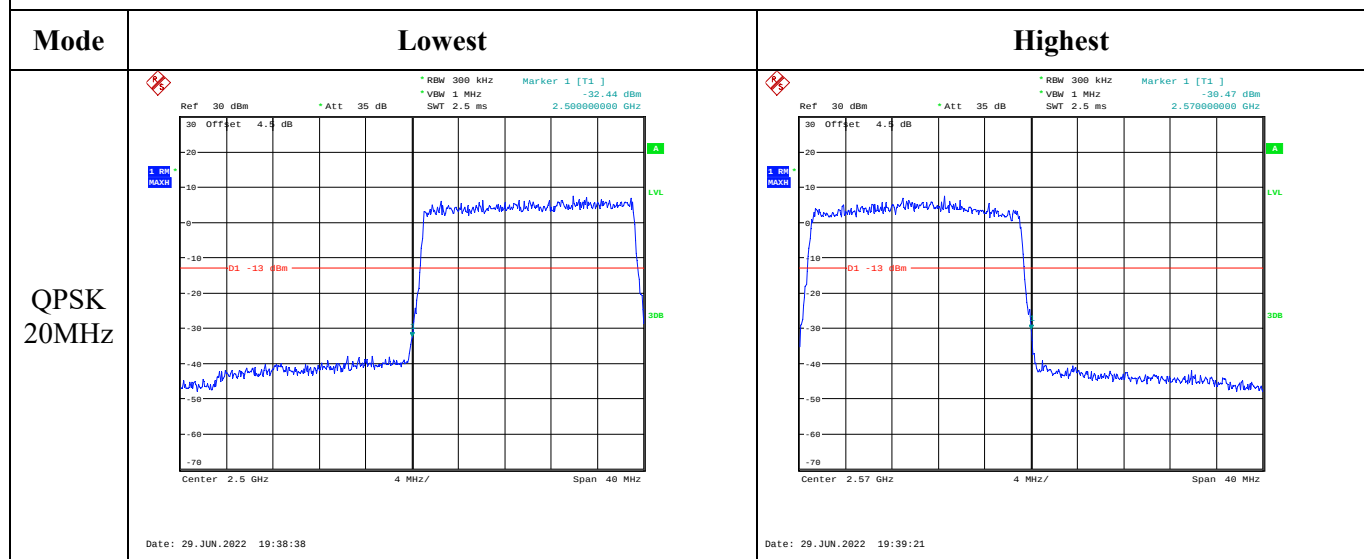
Highest



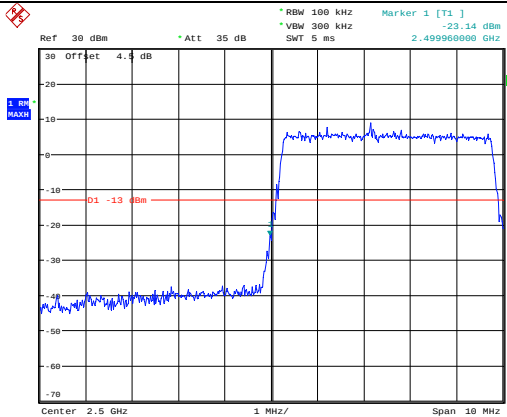
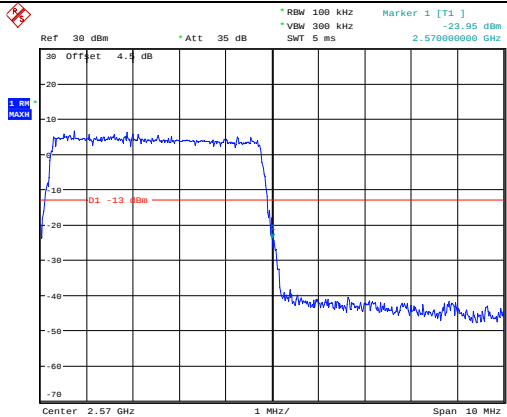
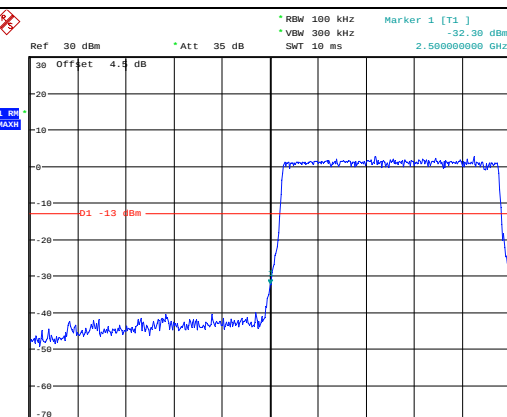
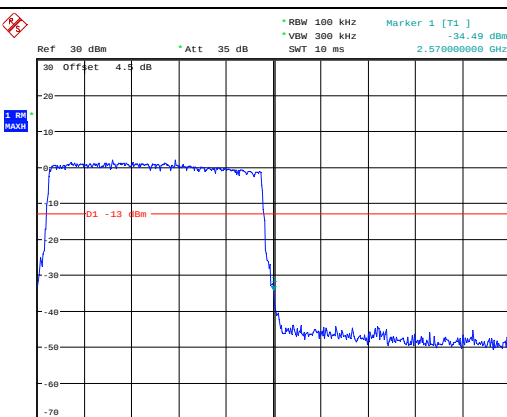
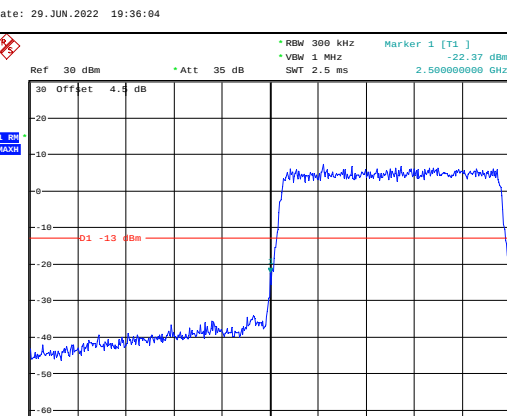
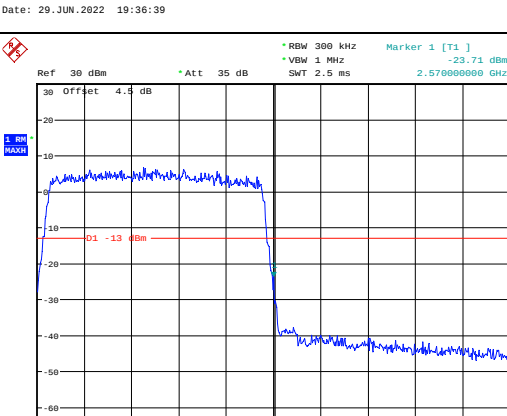
Out of band emission, Band Edge

Mode	Lowest	Highest
QPSK 5MHz	 Ref 30 dBm * Att 35 dB RBW 100 kHz Marker 1 [T1] VBW 300 kHz -19.64 dBm SWT 5 ms 2.50000000 GHz Center 2.5 GHz 1 MHz/ Span 10 MHz Date: 29.JUN.2022 19:34:31	 Ref 30 dBm * Att 35 dB RBW 100 kHz Marker 1 [T1] VBW 300 kHz -22.59 dBm SWT 5 ms 2.57000000 GHz Center 2.57 GHz 1 MHz/ Span 10 MHz Date: 29.JUN.2022 19:35:04
QPSK 10MHz	 Ref 30 dBm * Att 35 dB RBW 100 kHz Marker 1 [T1] VBW 300 kHz -25.39 dBm SWT 10 ms 2.49990000 GHz Center 2.5 GHz 2 MHz/ Span 20 MHz Date: 29.JUN.2022 19:35:47	 Ref 30 dBm * Att 35 dB RBW 100 kHz Marker 1 [T1] VBW 300 kHz -33.12 dBm SWT 10 ms 2.57000000 GHz Center 2.57 GHz 2 MHz/ Span 20 MHz Date: 29.JUN.2022 19:36:22
QPSK 15MHz	 Ref 30 dBm * Att 35 dB RBW 300 kHz Marker 1 [T1] VBW 1 MHz -25.15 dBm SWT 2.5 ms 2.49994000 GHz Center 2.5 GHz 3 MHz/ Span 30 MHz Date: 29.JUN.2022 19:37:06	 Ref 30 dBm * Att 35 dB RBW 300 kHz Marker 1 [T1] VBW 1 MHz -27.52 dBm SWT 2.5 ms 2.57000000 GHz Center 2.57 GHz 3 MHz/ Span 30 MHz Date: 29.JUN.2022 19:37:49

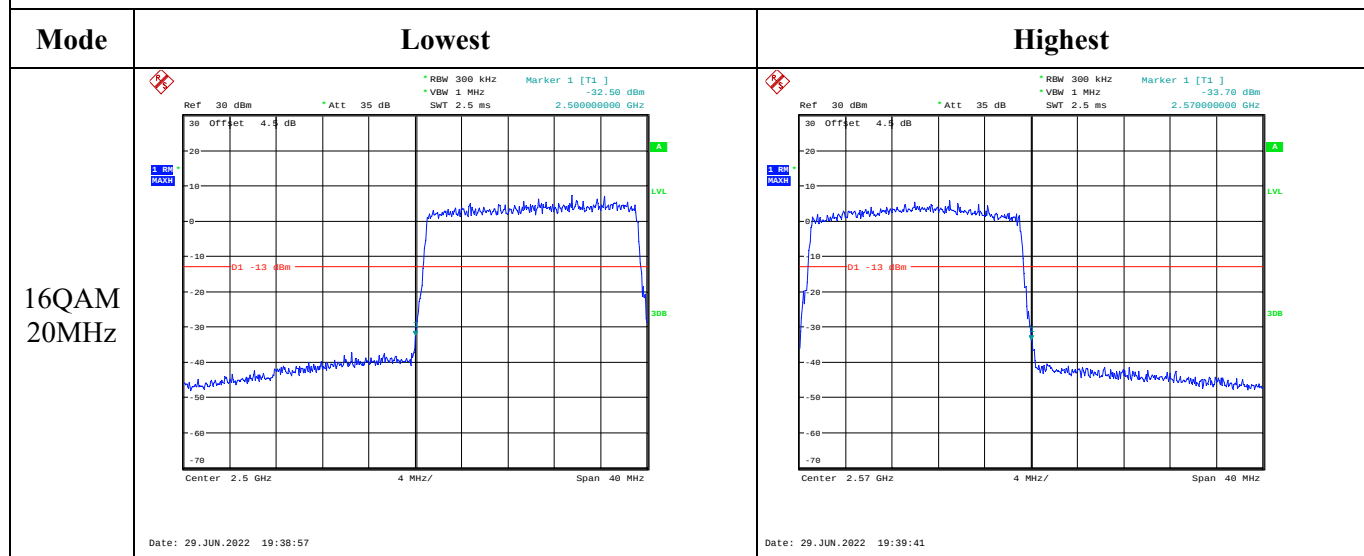
Out of band emission, Band Edge



Out of band emission, Band Edge

Mode	Lowest	Highest
16QAM 5MHz	 Ref 30 dBm * Att 35 dB RBW 100 kHz Marker 1 [T1] -23.14 dBm VBW 300 kHz SWT 5 ms Center 2.5 GHz 1 MHz/ Span 10 MHz Date: 29 JUN.2022 19:34:47	 Ref 30 dBm * Att 35 dB RBW 100 kHz Marker 1 [T1] -23.95 dBm VBW 300 kHz SWT 5 ms Center 2.57 GHz 1 MHz/ Span 10 MHz Date: 29 JUN.2022 19:35:24
16QAM 10MHz	 Ref 30 dBm * Att 35 dB RBW 100 kHz Marker 1 [T1] -32.30 dBm VBW 300 kHz SWT 10 ms Center 2.5 GHz 2 MHz/ Span 20 MHz Date: 29 JUN.2022 19:36:04	 Ref 30 dBm * Att 35 dB RBW 100 kHz Marker 1 [T1] -34.49 dBm VBW 300 kHz SWT 10 ms Center 2.57 GHz 2 MHz/ Span 20 MHz Date: 29 JUN.2022 19:36:39
16QAM 15MHz	 Ref 30 dBm * Att 35 dB RBW 300 kHz Marker 1 [T1] -22.37 dBm VBW 1 MHz SWT 2.5 ms Center 2.5 GHz 3 MHz/ Span 30 MHz Date: 29 JUN.2022 19:37:25	 Ref 30 dBm * Att 35 dB RBW 300 kHz Marker 1 [T1] -23.71 dBm VBW 1 MHz SWT 2.5 ms Center 2.57 GHz 3 MHz/ Span 30 MHz Date: 29 JUN.2022 19:38:11

Out of band emission, Band Edge



4.15 Antenna Port Test Data and Results for Module A LTE Band 12

Serial Number:	CR22050041-RF-S1	Test Date:	2022/6/1-2022/7/15
Test Site:	RF	Test Mode:	Transmitting
Tester:	Ada Yan	Test Result:	Pass

Environmental Conditions:

Temperature: (°C)	25.1	Relative Humidity: (%)	60	ATM Pressure: (kPa)	100.1
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Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSV40	101474	2021-07-22	2023-07-21
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	144976	2021-07-22	2022-07-21
BACL	TEMP&HUMI Test Chamber	BTH-150	30026	2021-07-22	2022-07-21
UNI-T	Multimeter	UT39A+	C210582554	2021-09-30	2022-09-29
Unknown	Coaxial tee connector	Unknown	2204006	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 G_T (dBi):	-4.5	Antenna Gain G_T (dBd):	-6.65	Path Loss L_C (dB):	0
Operation Voltage(V_{DC}):					
Lowest:	3.5	Normal:	3.85	Highest:	4.4

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	22.66	22.42	22.28	16.28	34.77
	RB1#3	22.93	22.64	22.54		
	RB1#5	22.86	22.57	22.36		
	RB3#0	22.56	22.30	22.37		
	RB3#3	22.65	22.43	22.38		
	RB6#0	21.46	21.36	21.36		
1.4MHz 16QAM	RB1#0	21.71	21.55	21.37	15.28	34.77
	RB1#3	21.76	21.51	21.57		
	RB1#5	21.93	21.54	21.48		
	RB3#0	21.48	21.20	21.09		
	RB3#3	21.73	21.37	21.33		
	RB6#0	20.62	20.19	20.25		
3MHz QPSK	RB1#0	22.69	22.33	22.17	16.64	34.77
	RB1#8	22.97	22.38	22.47		
	RB1#14	22.88	22.39	23.29		
	RB6#0	21.63	21.28	21.34		
	RB6#9	21.73	21.56	21.40		
	RB15#0	21.62	21.35	21.33		
3MHz 16QAM	RB1#0	21.32	21.39	21.15	15.03	34.77
	RB1#8	21.68	21.32	21.64		
	RB1#14	21.46	21.60	21.56		
	RB6#0	20.62	20.20	20.25		
	RB6#9	20.67	20.68	20.31		
	RB15#0	20.60	20.30	20.30		
5MHz QPSK	RB1#0	22.40	22.10	22.24	16.33	34.77
	RB1#13	22.63	22.98	22.25		
	RB1#24	22.11	22.29	22.54		
	RB15#0	21.78	21.31	21.30		
	RB15#10	21.67	21.47	21.32		
	RB25#0	21.71	21.35	21.31		
5MHz 16QAM	RB1#0	21.53	21.15	21.32	15.46	34.77
	RB1#13	22.02	22.11	21.33		
	RB1#24	21.16	21.50	21.58		
	RB15#0	20.73	20.27	20.29		
	RB15#10	20.65	20.52	20.28		
	RB25#0	20.61	20.28	20.27		
10MHz QPSK	RB1#0	22.61	21.95	22.13	16.41	34.77

	RB1#25	22.31	23.04	22.64		
	RB1#49	23.06	21.60	22.41		
	RB25#0	21.52	21.43	21.72		
	RB25#25	21.32	21.37	21.34		
	RB50#0	21.43	21.35	21.40		
10MHz 16QAM	RB1#0	21.49	21.02	21.19	15.55	34.77
	RB1#25	21.30	22.20	21.84		
	RB1#49	21.29	20.65	21.57		
	RB25#0	20.48	20.35	20.39		
	RB25#25	20.28	20.35	20.26		
	RB50#0	20.32	20.27	20.33		
Note: ERP= Conducted Power(dBm) - L _C (dB) + G _T (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	4.87	5.07	4.78	13
	RB50#0	5.48	4.93	5.25	13
10MHz 16QAM	RB1#0	6.09	6.14	5.83	13
	RB50#0	6.52	6.17	6.35	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	1.296	1.308
1.4MHz 16QAM	1.102	1.096	1.102	1.320	1.314	1.314
3MHz QPSK	2.683	2.695	2.695	2.940	2.940	2.940
3MHz 16QAM	2.683	2.695	2.695	2.964	2.952	2.952
5MHz QPSK	4.511	4.491	4.531	5.000	5.000	5.060
5MHz 16QAM	4.511	4.491	4.531	5.020	5.000	5.040
10MHz QPSK	8.981	8.862	8.981	9.760	9.680	9.680
10MHz 16QAM	8.981	8.901	8.942	9.760	9.640	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.
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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.
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FCC §2.1055, §27.54: Frequency Stability

Test Mode:	10M QPSK	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (°C)	Voltage (V _{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.85	699.546	699.00	715.518	716.00
	-20	3.85	699.547	699.00	715.519	716.00
	-10	3.85	699.544	699.00	715.522	716.00
	0	3.85	699.549	699.00	715.518	716.00
	10	3.85	699.545	699.00	715.517	716.00
	20	3.85	699.543	699.00	715.515	716.00
	30	3.85	699.540	699.00	715.512	716.00
	40	3.85	699.541	699.00	715.511	716.00
Frequency Stability vs. Voltage	20	3.5	699.538	699.00	715.512	716.00
	20	4.4	699.539	699.00	715.509	716.00
Result:					Pass	

Test Mode:	10M 16QAM	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (°C)	Voltage (V _{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.85	699.548	699.00	715.492	716.00
	-20	3.85	699.546	699.00	715.488	716.00
	-10	3.85	699.547	699.00	715.487	716.00
	0	3.85	699.551	699.00	715.494	716.00
	10	3.85	699.547	699.00	715.489	716.00
	20	3.85	699.543	699.00	715.486	716.00
	30	3.85	699.541	699.00	715.481	716.00
	40	3.85	699.538	699.00	715.483	716.00
Frequency Stability vs. Voltage	20	3.5	699.537	699.00	715.485	716.00
	20	4.4	699.543	699.00	715.486	716.00
Result:					Pass	