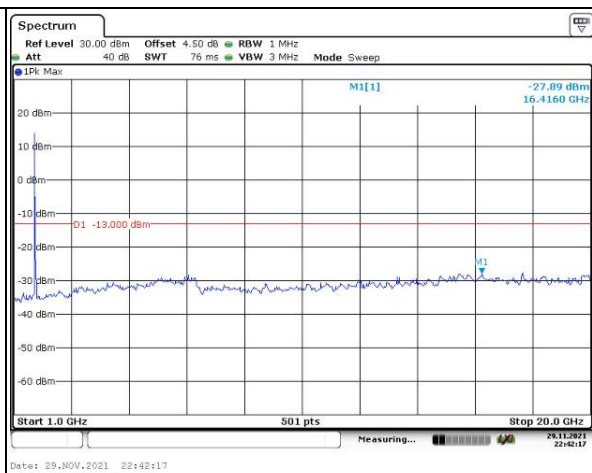
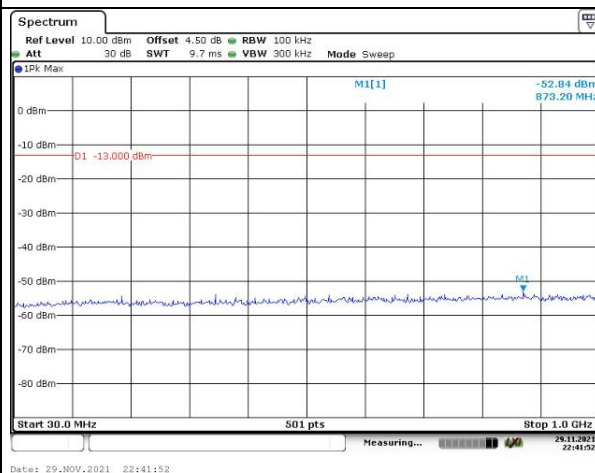


Spurious Emissions at Antenna Terminal

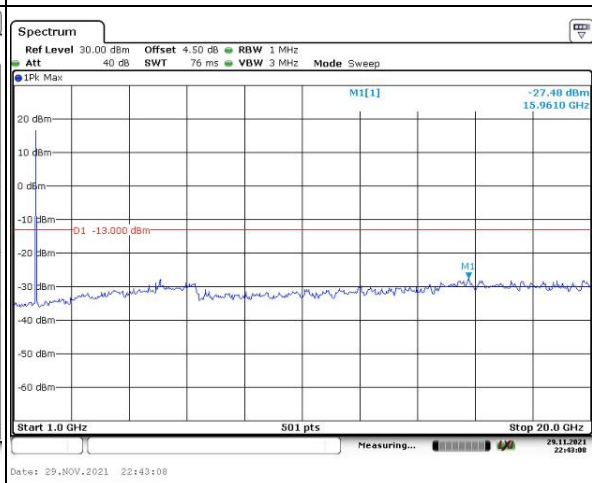
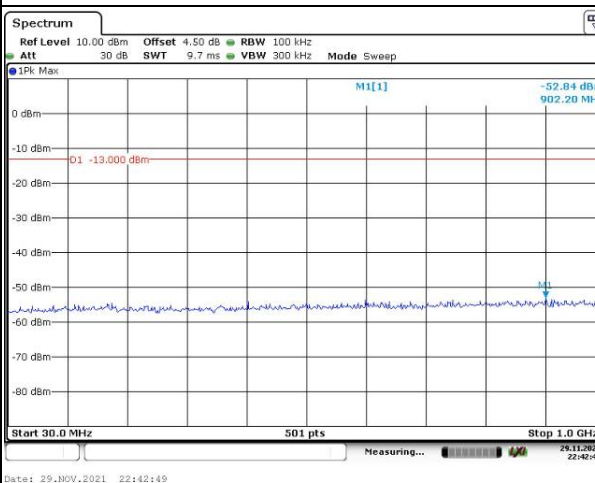
Channel

5MHz Bandwidth QPSK

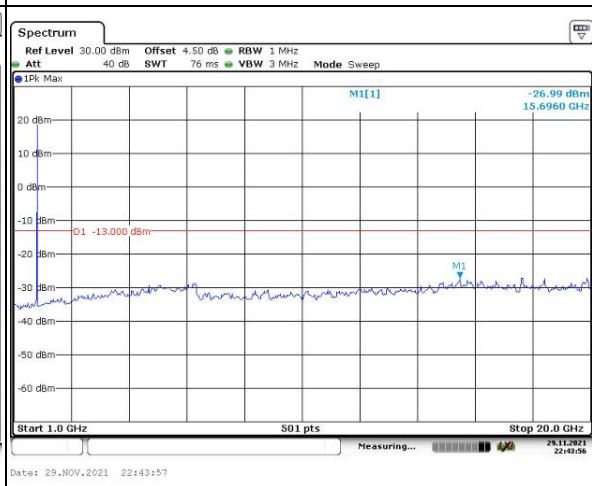
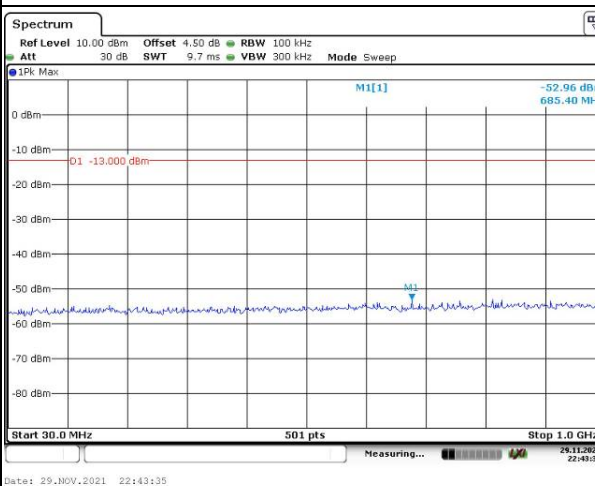
Lowest



Middle



Highest

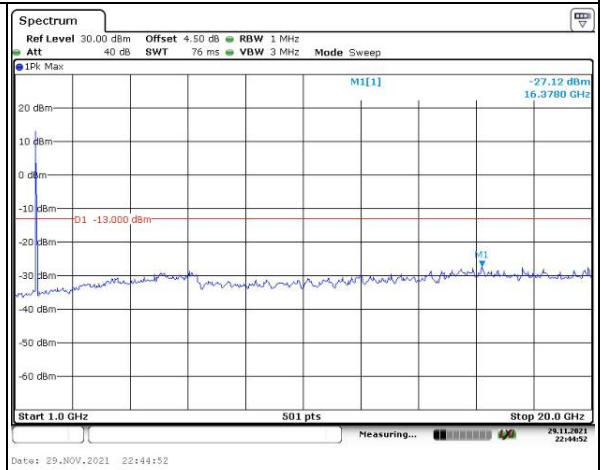
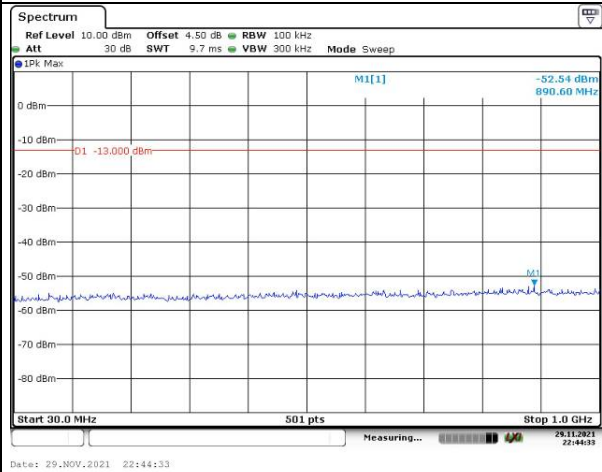


Spurious Emissions at Antenna Terminal

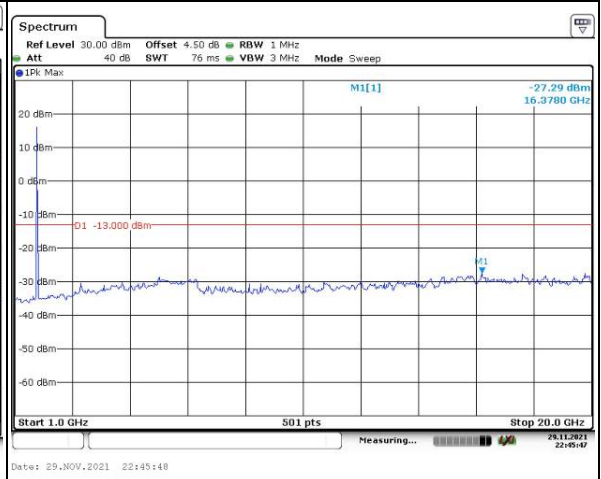
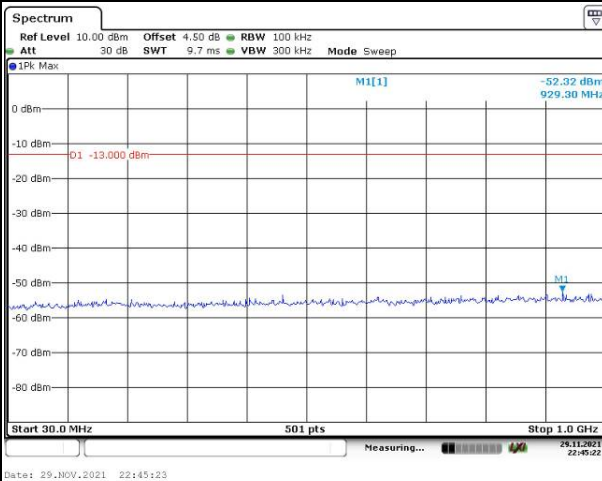
Channel

10MHz Bandwidth QPSK

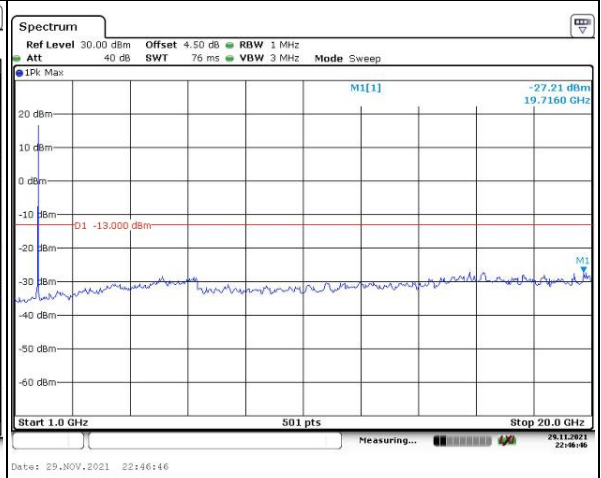
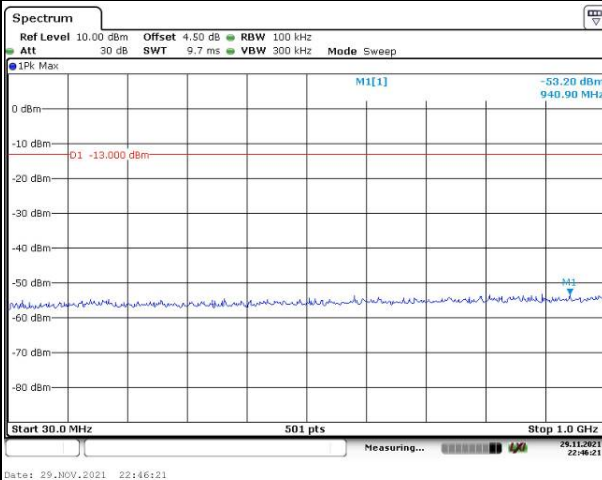
Lowest



Middle



Highest

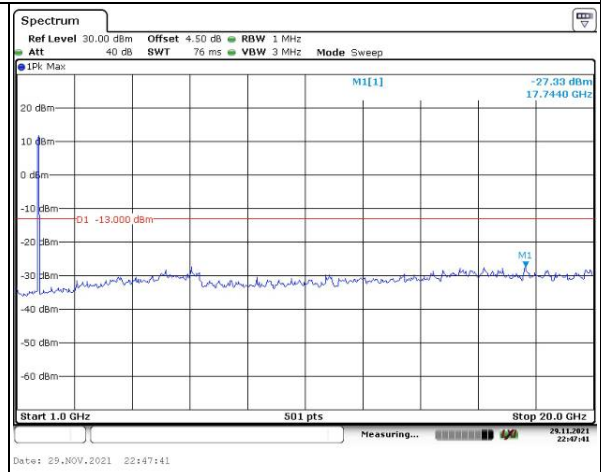
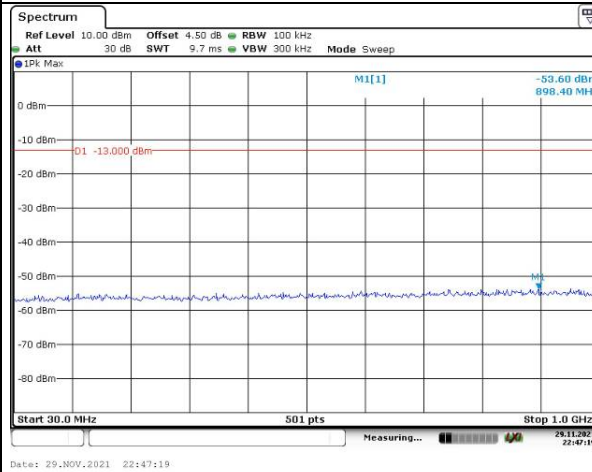


Spurious Emissions at Antenna Terminal

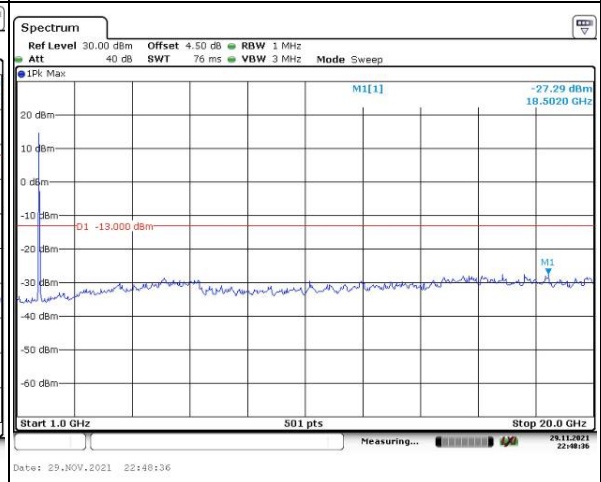
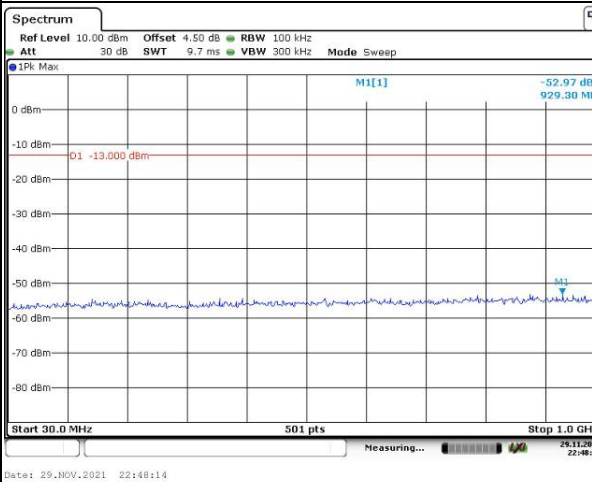
Channel

15MHz Bandwidth QPSK

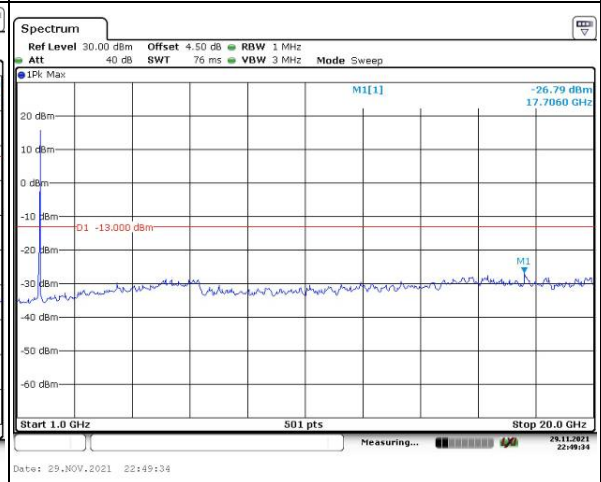
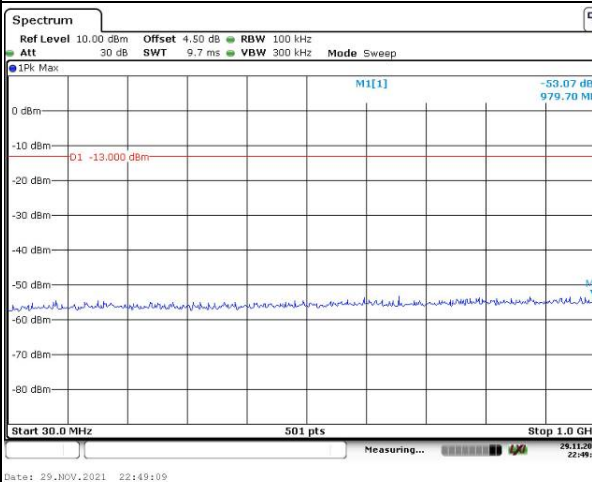
Lowest



Middle



Highest

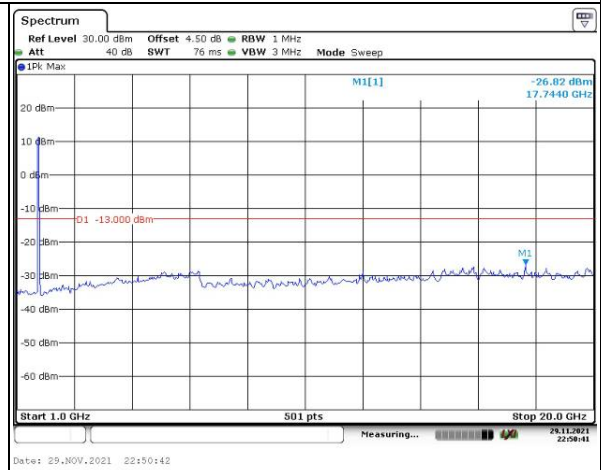
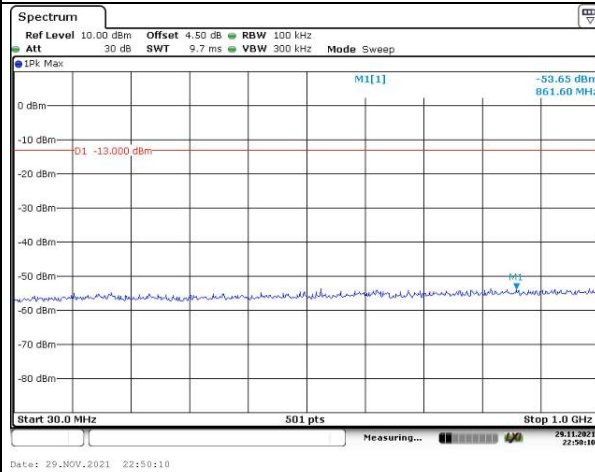


Spurious Emissions at Antenna Terminal

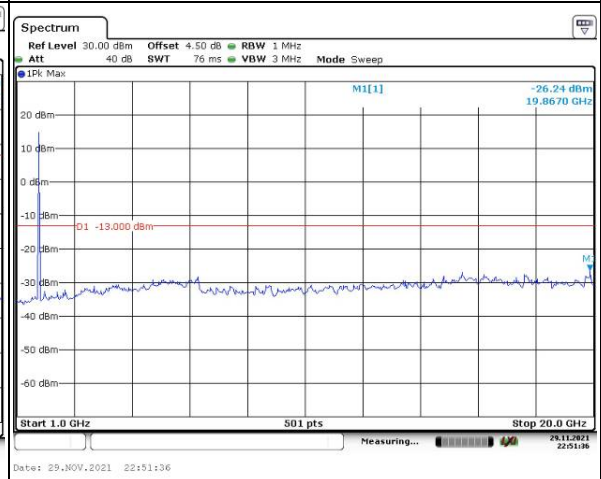
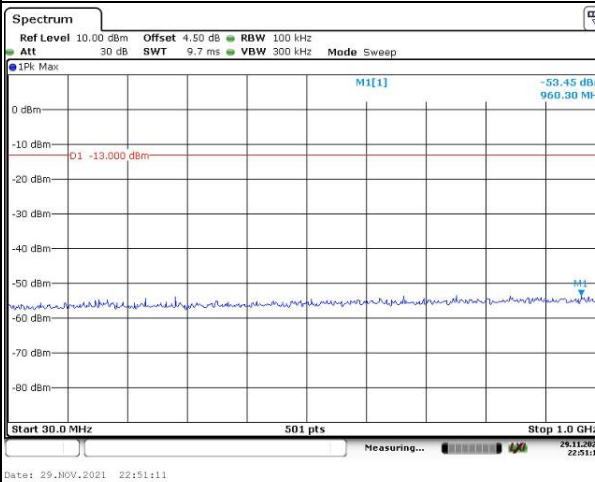
Channel

20MHz Bandwidth QPSK

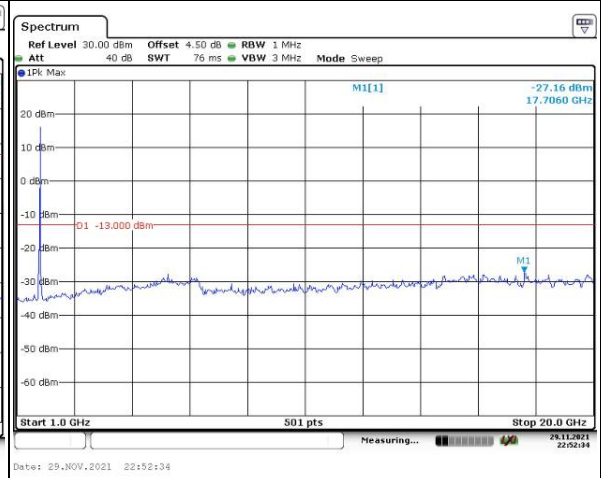
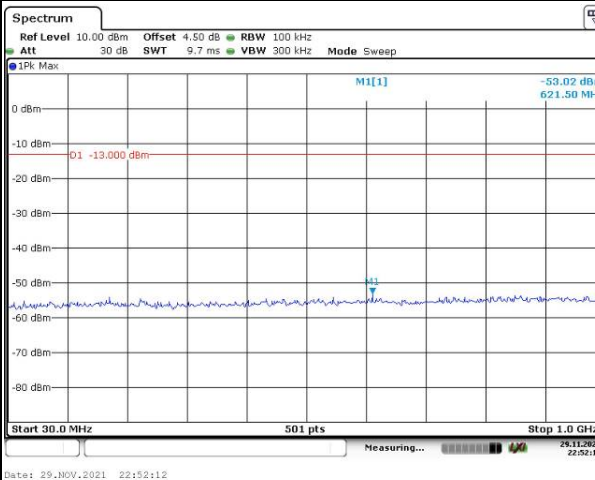
Lowest



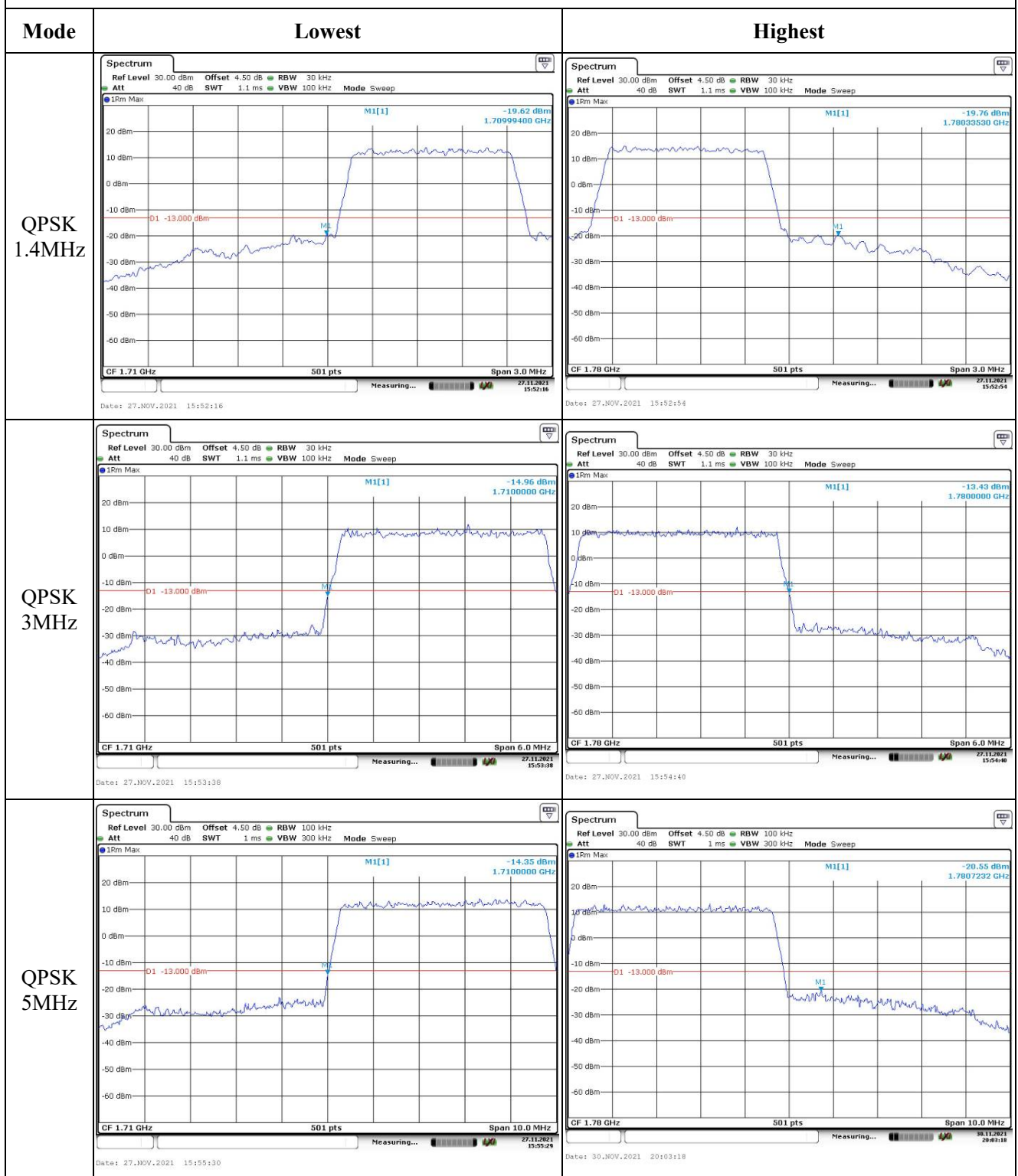
Middle



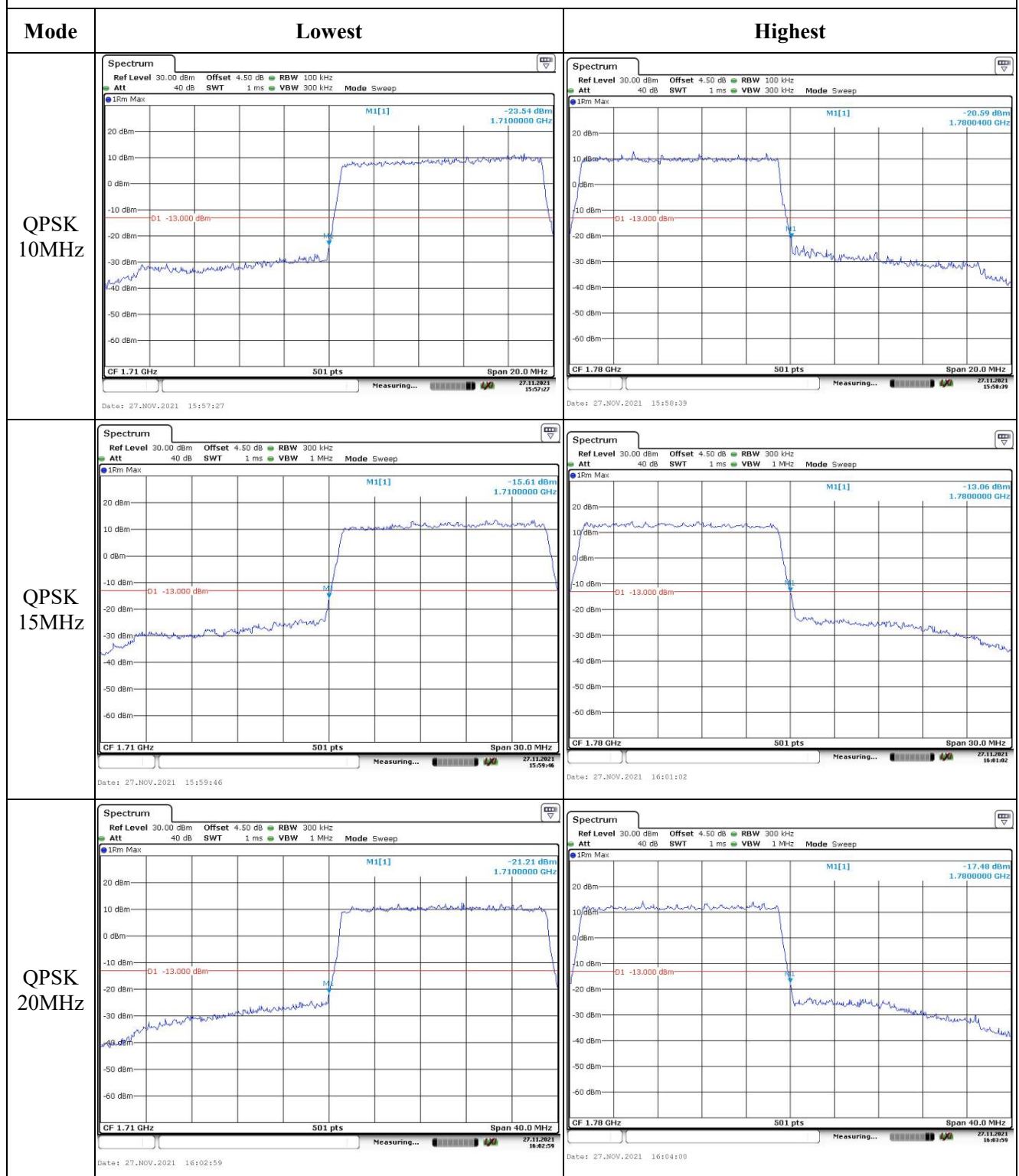
Highest



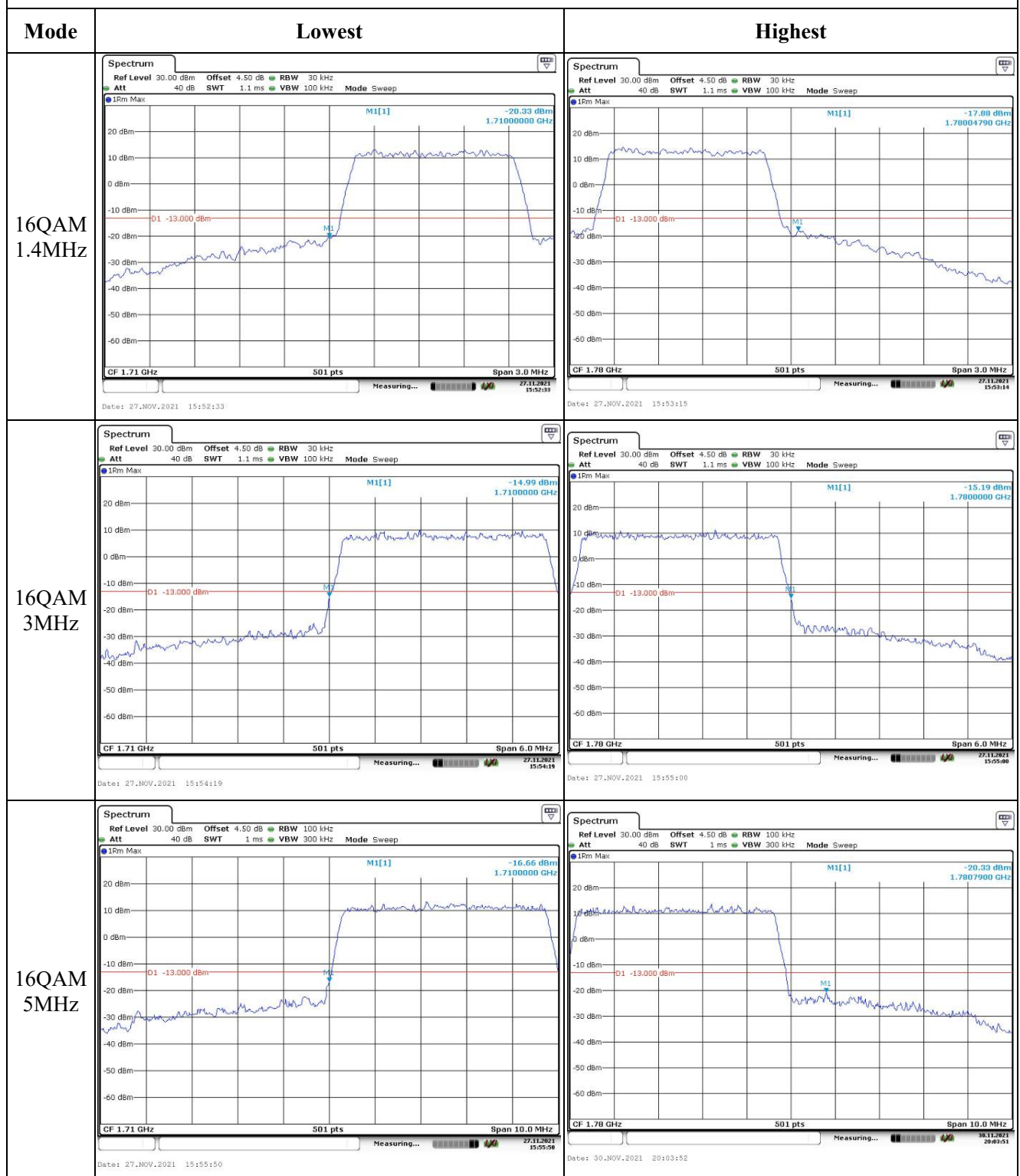
Out of band emission, Band Edge



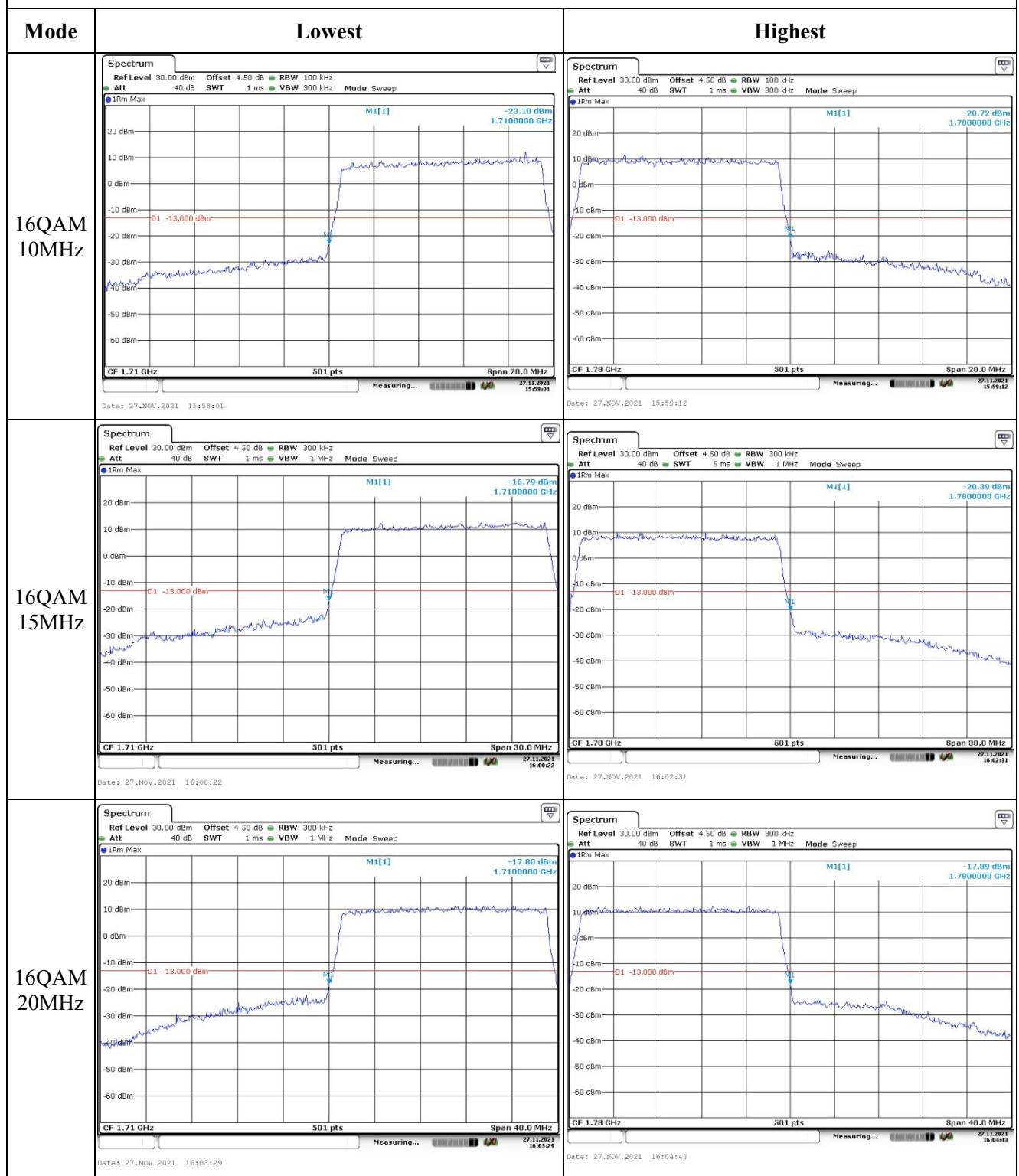
Out of band emission, Band Edge



Out of band emission, Band Edge



Out of band emission, Band Edge



4.12 Antenna Port Test Data and Results for LTE Band 71:

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

Environmental Conditions:

Temperature: (°C)	22.1~22.9	Relative Humidity: (%)	40~66	ATM Pressure: (kPa)	101.4~101.7
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Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	Spectrum Analyzer	101474	2021/7/22	2022/7/21
zhuoxiang	Coaxial Cable	SMA-178	211001	Each time	N/A
Mini-Circuits	DC Block	BLK-18-S+	1554403	Each time	N/A
R&S	Universal Radio Communication Tester	CMU200	110 825	2021/7/22	2022/7/21
Weinschel	Coaxial Attenuators	53-20-34	LN751	Each time	N/A
R&S	Wideband Radio Communication Tester	CMW500	149218	2021/7/22	2022/7/21
BACL	TEMP&HUMI Test Chamber	BTH-150	30026	2021/7/22	2022/7/22
UNI-T	Multimeter	UT39A+	C210582554	2021/9/30	2022/9/30
E-Microwave	Two-way Splitter	ODP-1-6	OE0120176	Each Time	N/A

* Statement of Traceability: China Certification ICT Co., Ltd (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

EUT Information@ LTE Band 71▲:

Antenna Gain (dBi):	3	Antenna Gain (dBd):	0.85	Cable Loss (dB):	0.1
Operation Voltage(V _{DC}):					
Lowest:	3.5	Normal:	3.8	Highest:	4.35

Test Frequency For Each Mode:

Operation Bandwidth	Lowest Frequency (MHz)	Middle Frequency (MHz)	Highest Frequency (MHz)
5MHz	665.5	680.5	695.5
10MHz	668	680.5	693
15MHz	670.5	680.5	690.5
20MHz	673	680.5	688

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	21.19	20.95	20.94	22.43	34.77
	RB1#13	21.04	21.07	21.01		
	RB1#24	21.26	21.00	21.63		
	RB15#0	21.07	21.07	21.64		
	RB15#10	21.09	21.12	21.68		
	RB25#0	20.33	20.19	20.06		
5MHz 16QAM	RB1#0	20.24	20.17	20.03	23.15	34.77
	RB1#13	22.21	22.23	22.35		
	RB1#24	22.08	22.30	22.40		
	RB15#0	22.12	22.33	22.34		
	RB15#10	21.23	21.35	21.25		
	RB25#0	21.44	21.31	21.18		
10MHz QPSK	RB1#0	21.17	21.24	21.19	23.49	34.77
	RB1#25	22.50	22.48	22.45		
	RB1#49	22.18	22.48	22.37		
	RB25#0	22.50	22.69	22.00		
	RB25#25	22.43	22.72	21.94		
	RB50#0	22.64	22.74	22.07		
10MHz 16QAM	RB1#0	21.47	21.66	21.50	24.46	34.77
	RB1#25	21.50	21.65	21.64		
	RB1#49	21.38	21.55	21.41		
	RB25#0	23.29	23.55	23.35		
	RB25#25	23.27	23.64	23.27		
	RB50#0	23.30	23.71	23.30		
15MHz QPSK	RB1#0	21.43	21.46	21.59	24.26	34.77
	RB1#38	23.29	23.35	23.39		
	RB1#74	23.33	23.47	23.40		
	RB36#0	23.45	23.51	23.41		
	RB36#39	21.39	21.40	21.48		
	RB75#0	21.46	21.42	21.38		
15MHz 16QAM	RB1#0	21.43	21.46	21.59	24.26	34.77
	RB1#38	23.29	23.35	23.39		
	RB1#74	23.33	23.47	23.40		
	RB36#0	23.45	23.51	23.41		
	RB36#39	22.27	22.40	22.22		
	RB75#0	21.35	21.55	21.71		

20MHz QPSK	RB1#0	23.27	23.36	23.61	24.39	34.77
	RB1#50	23.20	23.43	23.58		
	RB1#99	23.26	23.45	23.64		
	RB50#0	22.39	22.48	22.50		
	RB50#50	22.50	22.48	22.45		
	RB100#0	22.18	22.48	22.37		
20MHz 16QAM	RB1#0	22.50	22.69	22.00	23.92	34.77
	RB1#50	22.43	22.72	21.94		
	RB1#99	21.38	21.93	21.88		
	RB50#0	22.80	23.05	22.29		
	RB50#50	22.78	23.13	22.20		
	RB100#0	22.79	23.17	22.31		

Note: ERP=Conducted Power(dBm) - Cable loss(dB) + Antenna Gain(dBd)

Result:**Pass****Peak-to-average Ratio(PAR)**

Test Bandwidth & Modulation	Resource Block & RB offset	Peak-to-average Ratio(dB)			Limit (dB)
		Lowest Channel	Middle Channel	Highest Channel	
20MHz QPSK	RB1#0	5.13	5.48	5.62	13
	RB100#0	5.28	5.52	5.42	13
20MHz 16QAM	RB1#0	5.25	5.42	5.3	13
	RB100#0	5.22	5.48	5.54	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	4.53	4.531	4.97	4.978	4.961
5MHz 16QAM	4.511	4.53	4.531	5.004	4.933	4.97
10MHz QPSK	8.982	8.982	8.942	9.791	9.724	9.76
10MHz 16QAM	8.982	8.982	8.942	9.78	9.753	9.789
15MHz QPSK	13.533	13.533	13.473	15.003	15.057	14.943
15MHz 16QAM	13.533	13.533	13.473	14.97	14.937	14.997
20MHz QPSK	17.964	17.964	17.964	19.497	19.519	19.555
20MHz 16QAM	17.964	17.964	17.964	19.555	19.577	19.533

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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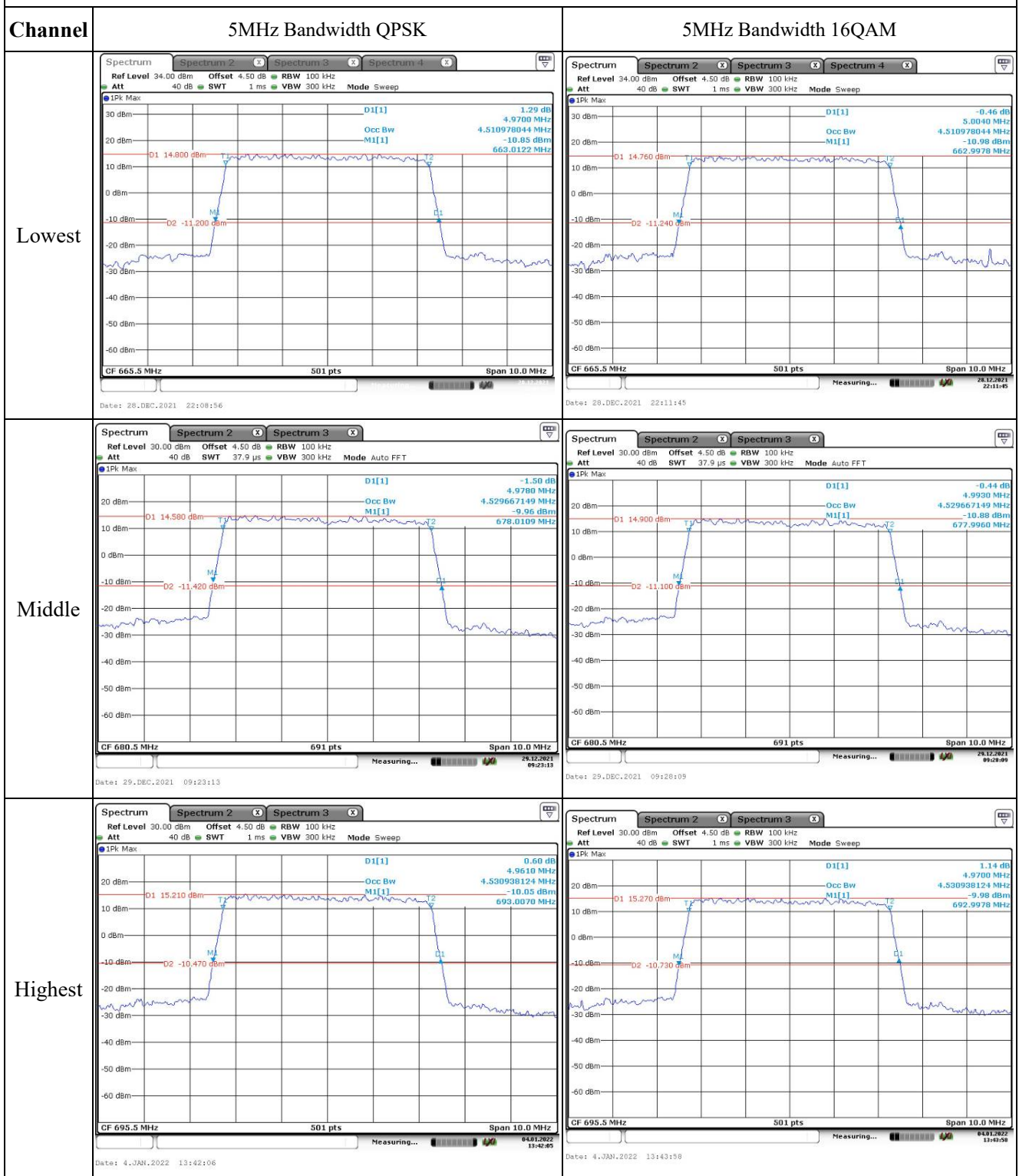
FCC §2.1055, §27.54: Frequency Stability

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	3.8	663.412	663.00	687.514	698.00
	-20	3.8	663.411	663.00	687.513	698.00
	-10	3.8	663.412	663.00	687.513	698.00
	0	3.8	663.411	663.00	687.515	698.00
	10	3.8	663.416	663.00	687.513	698.00
	20	3.8	663.412	663.00	687.513	698.00
	30	3.8	663.417	663.00	687.517	698.00
	40	3.8	663.412	663.00	687.513	698.00
	50	3.8	663.418	663.00	687.516	698.00
Frequency Stability vs. Voltage	20	3.5	663.412	663.00	687.513	698.00
	20	4.35	663.419	663.00	687.518	698.00
Result:					Pass	

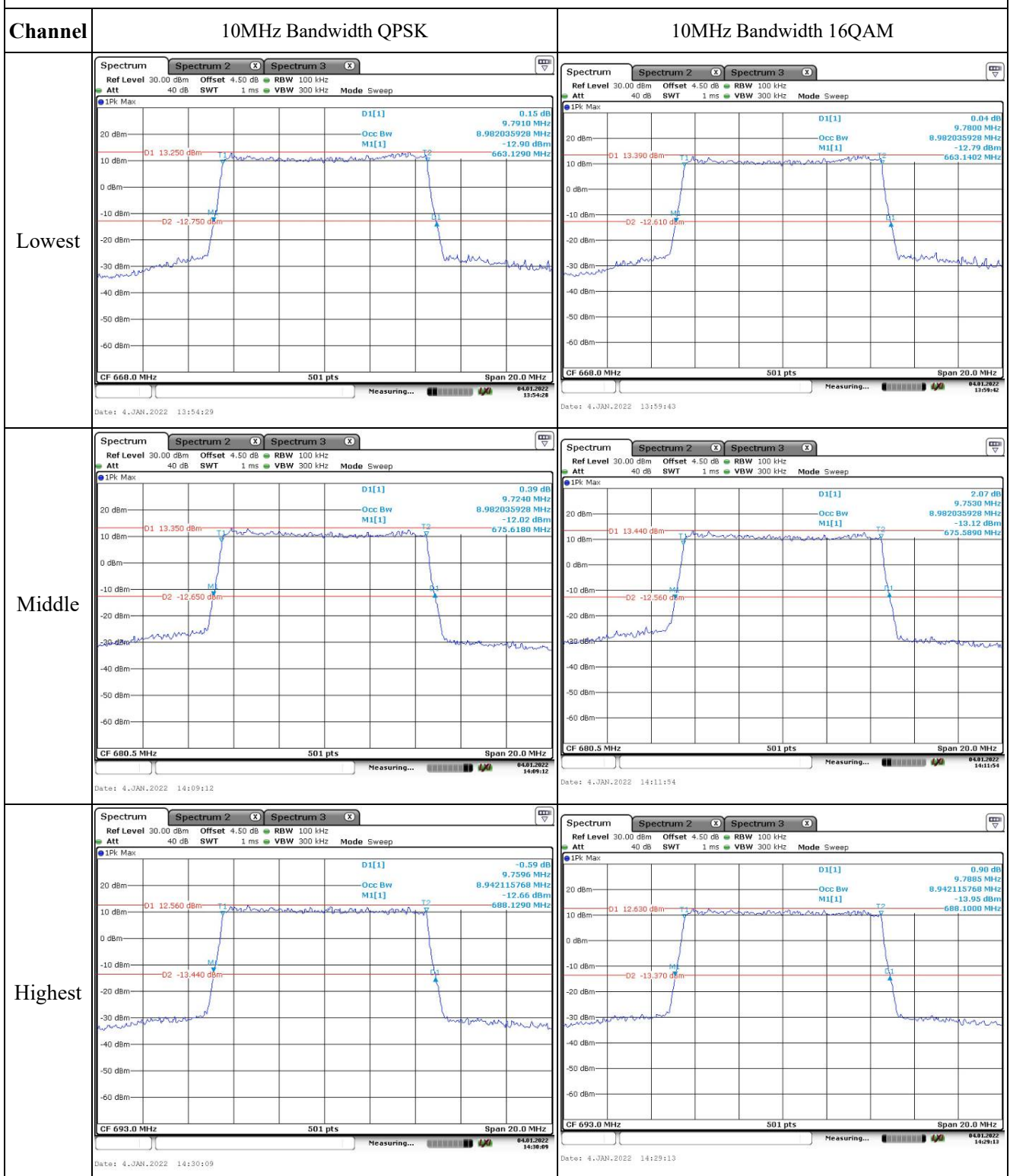
Test Mode:	20M 16QAM	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (°C)	Voltage (V _{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.8	663.412	663.00	687.514	698.00
	-20	3.8	663.412	663.00	687.515	698.00
	-10	3.8	663.412	663.00	687.514	698.00
	0	3.8	663.412	663.00	687.518	698.00
	10	3.8	663.412	663.00	687.514	698.00
	20	3.8	663.412	663.00	687.514	698.00
	30	3.8	663.412	663.00	687.514	698.00
	40	3.8	663.412	663.00	687.514	698.00
	50	3.8	663.412	663.00	687.512	698.00
Frequency Stability vs. Voltage	20	3.5	663.412	663.00	687.514	698.00
	20	4.35	663.412	663.00	687.513	698.00
Result:					Pass	

Test Plots:

Occupied Bandwidth



Occupied Bandwidth



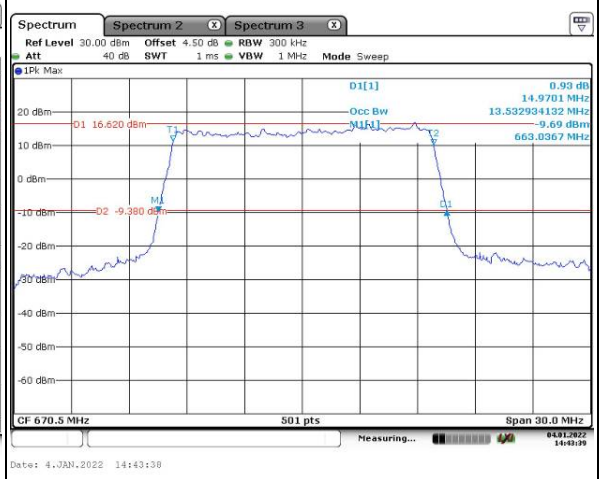
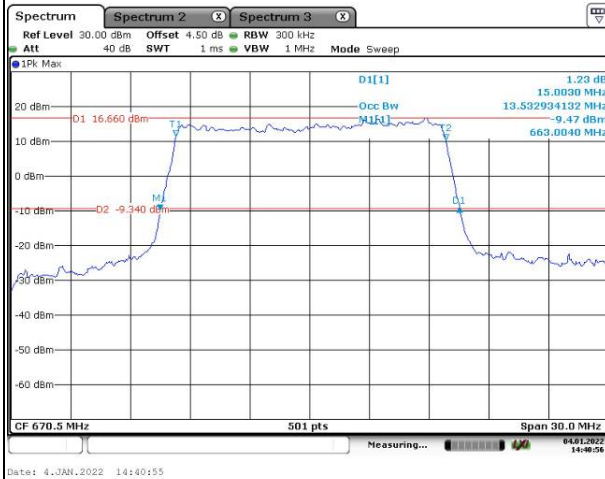
Occupied Bandwidth

Channel

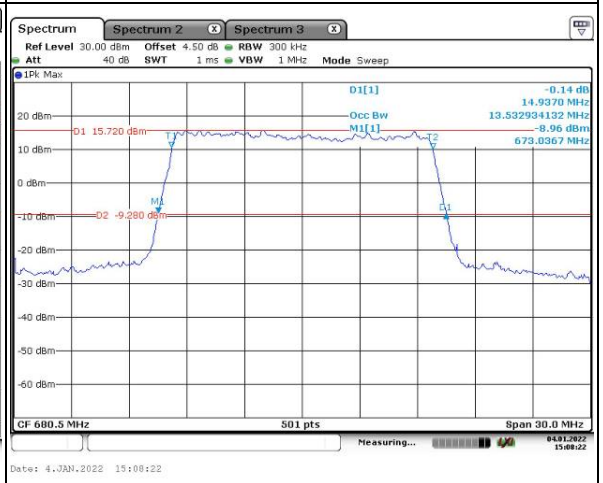
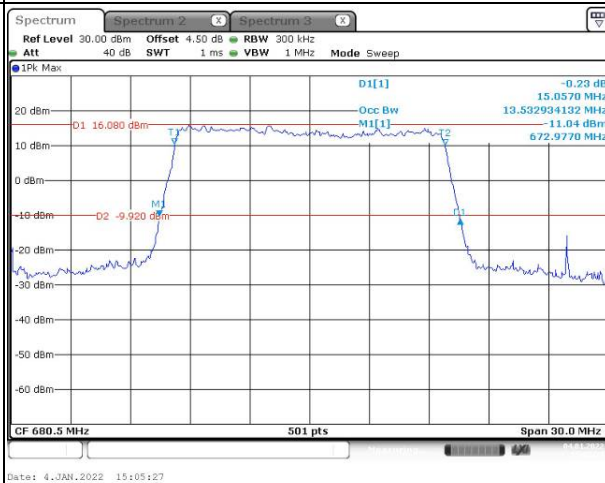
15MHz Bandwidth QPSK

15MHz Bandwidth 16QAM

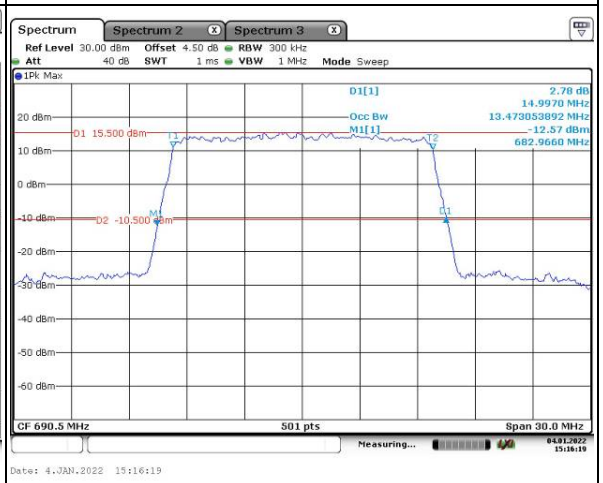
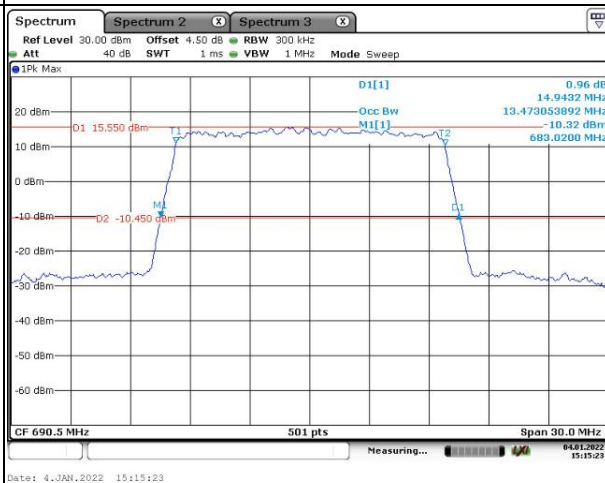
Lowest



Middle



Highest



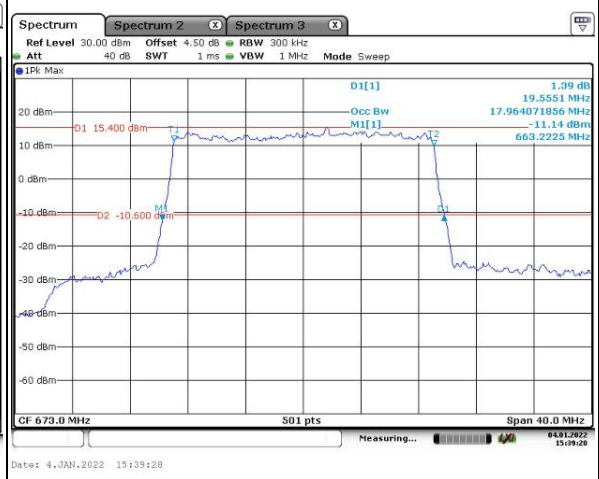
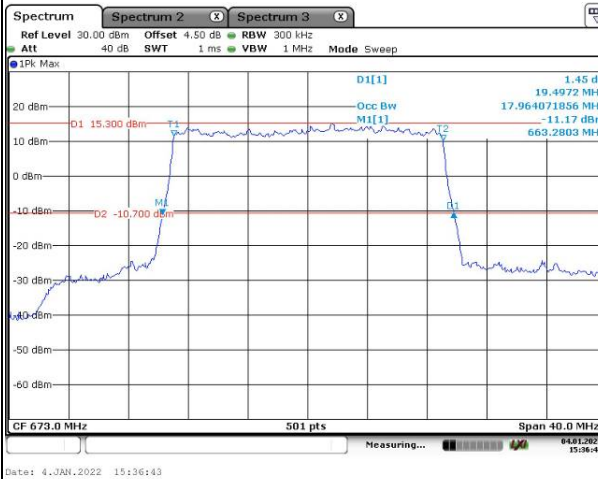
Occupied Bandwidth

Channel

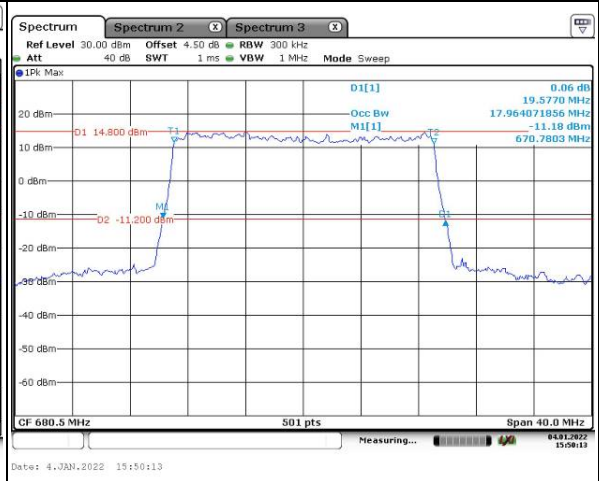
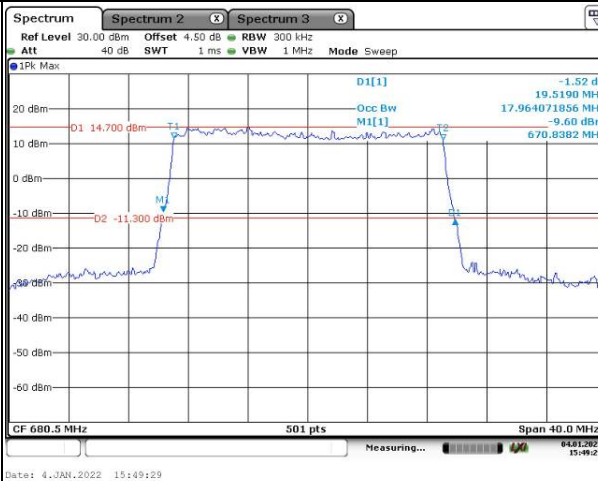
20MHz Bandwidth QPSK

20MHz Bandwidth 16QAM

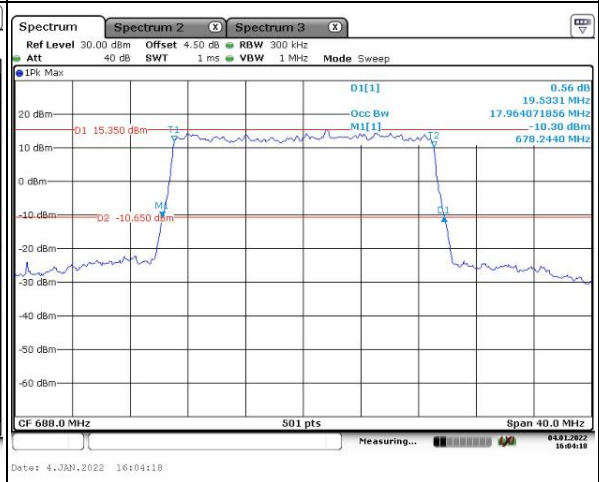
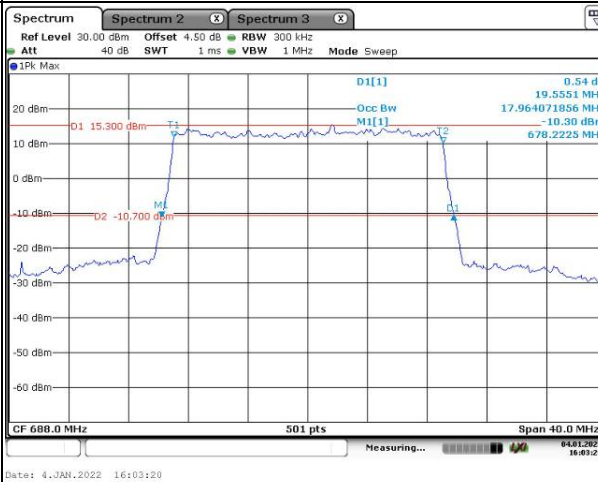
Lowest



Middle



Highest

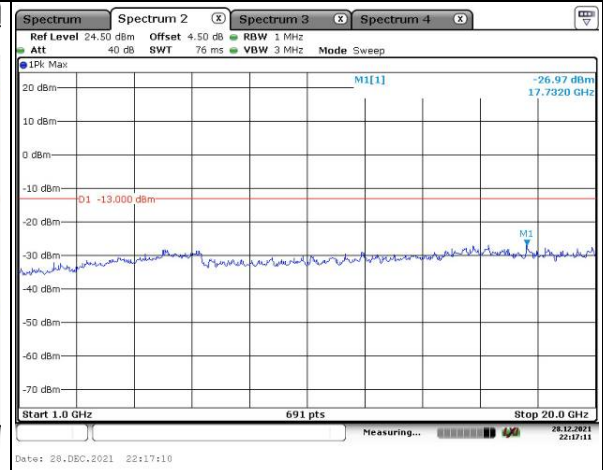
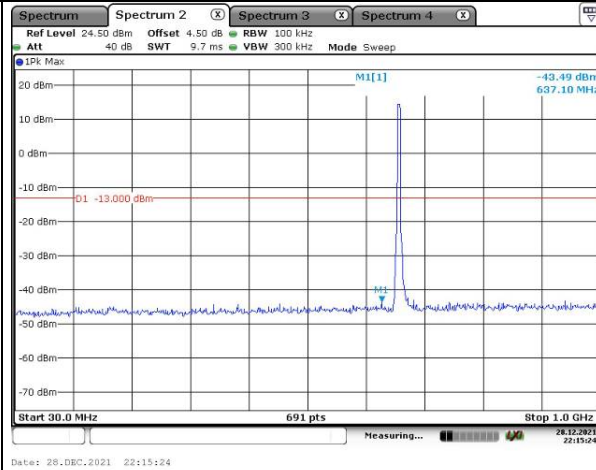


Spurious Emissions at Antenna Terminal

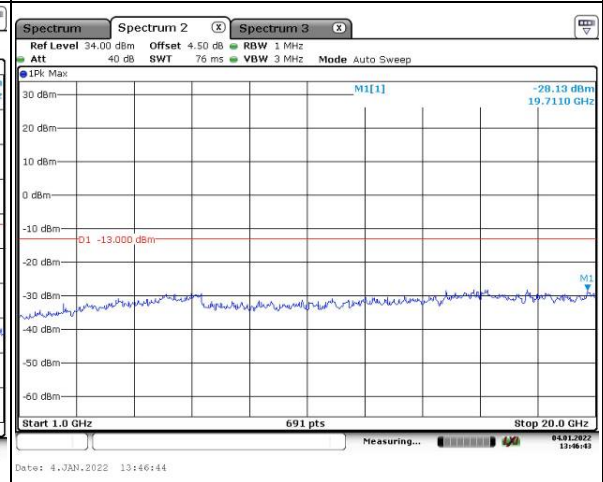
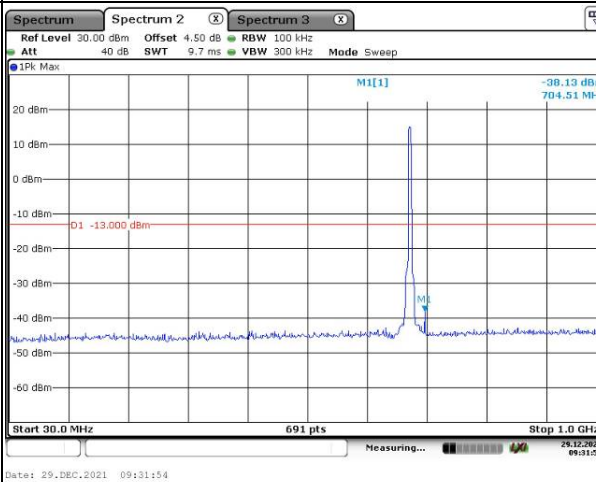
Channel

5MHz Bandwidth QPSK

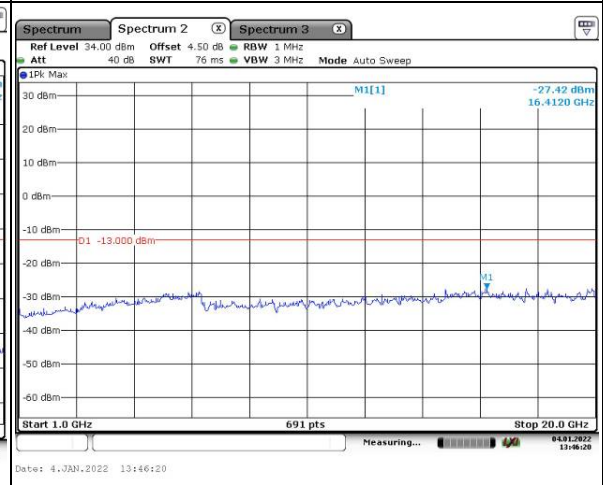
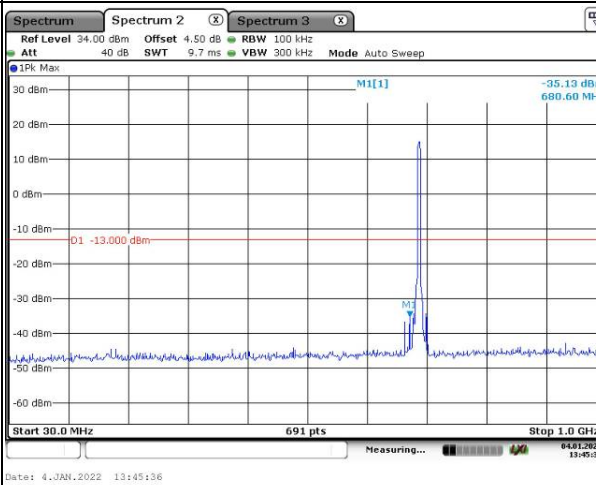
Lowest



Middle



Highest

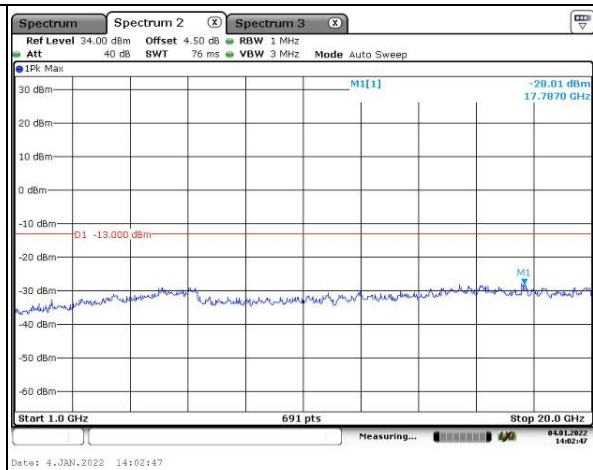
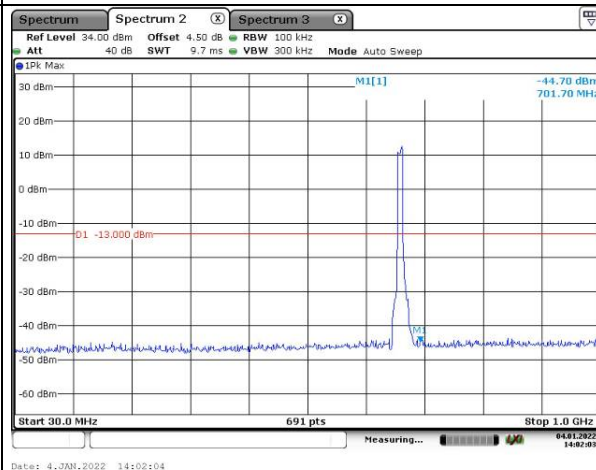


Spurious Emissions at Antenna Terminal

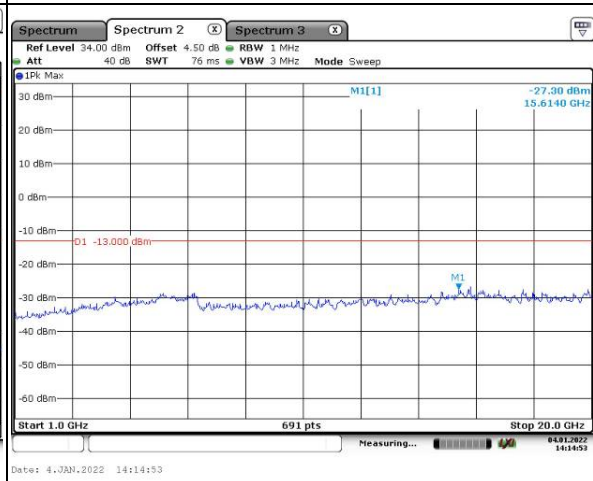
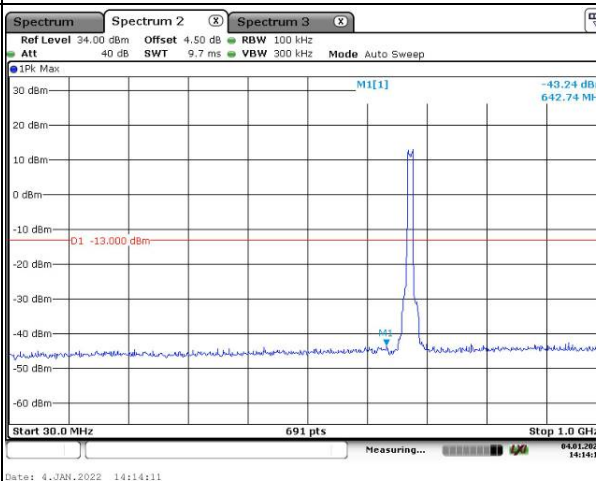
Channel

10MHz Bandwidth QPSK

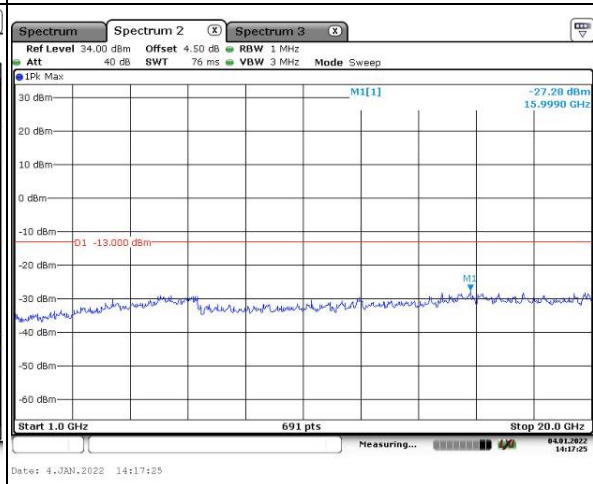
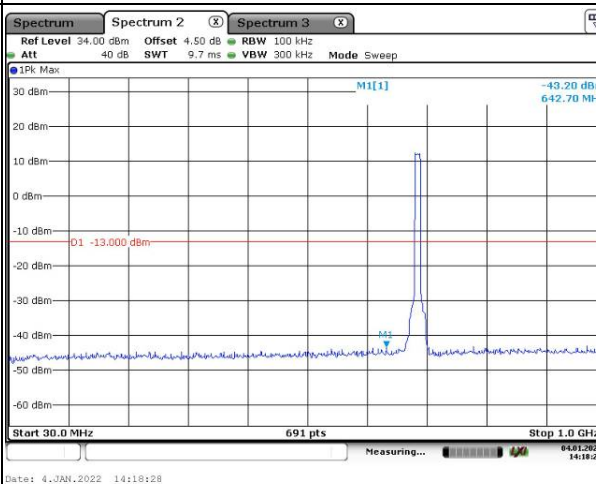
Lowest



Middle



Highest

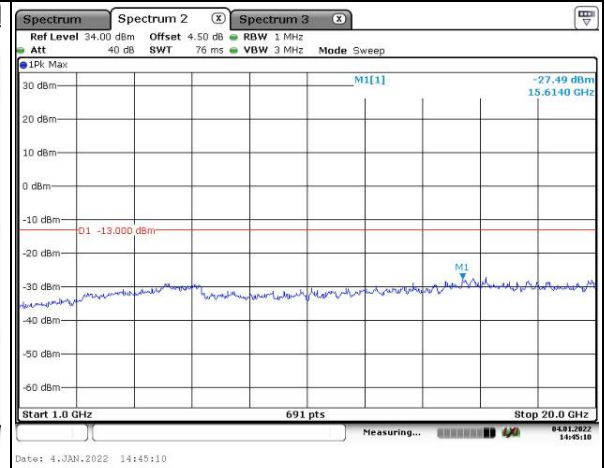
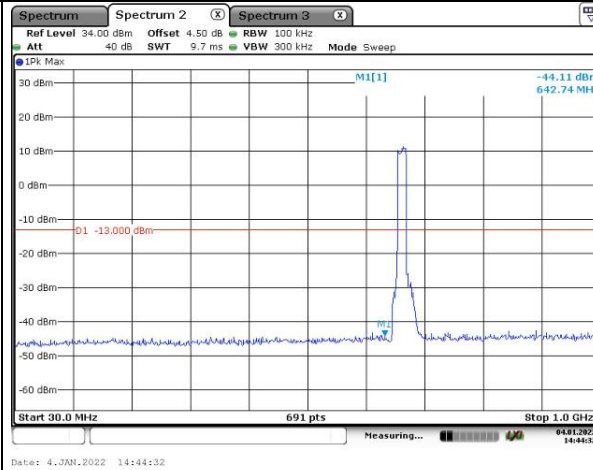


Spurious Emissions at Antenna Terminal

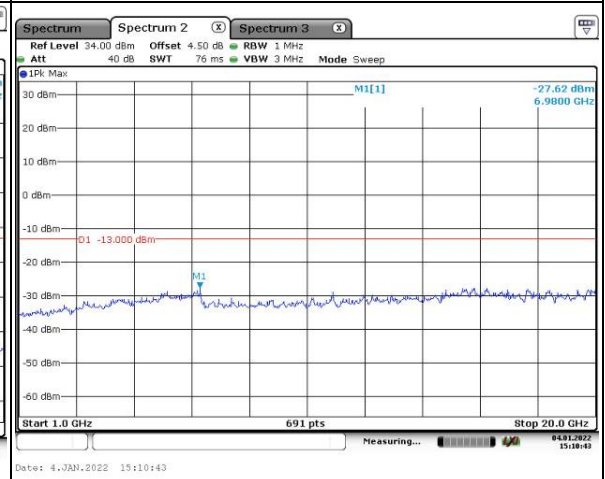
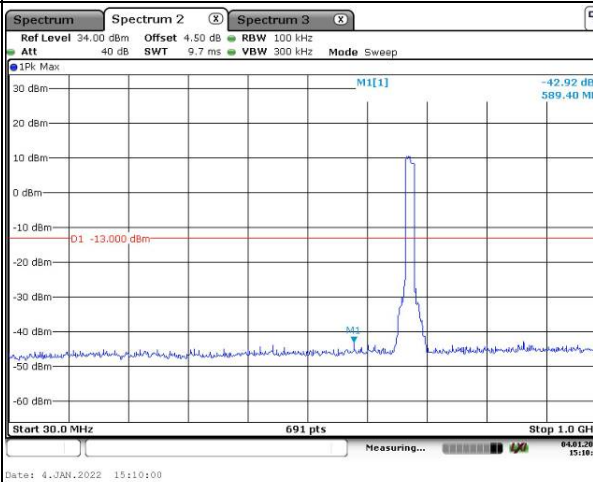
Channel

15MHz Bandwidth QPSK

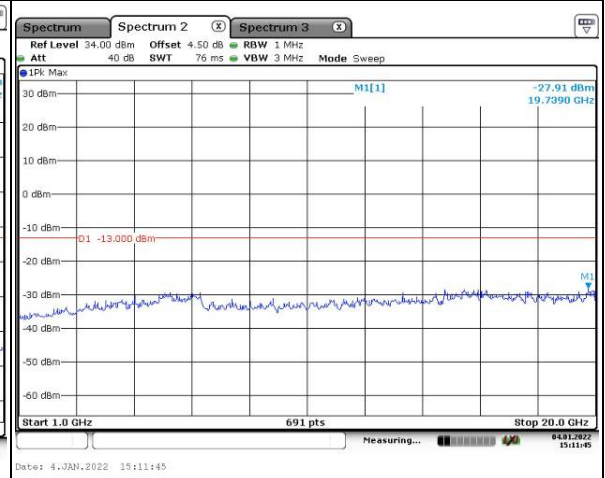
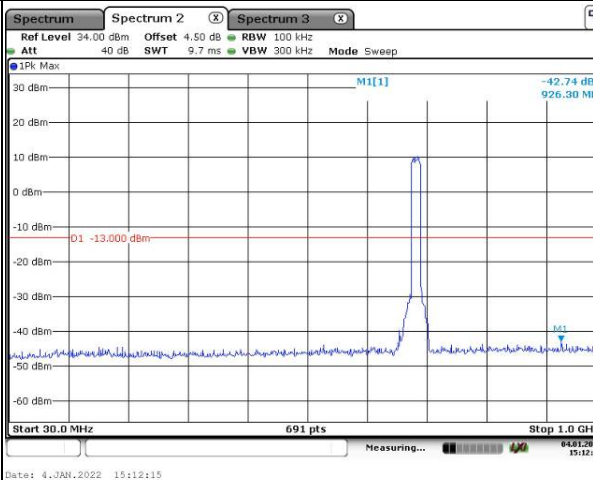
Lowest



Middle



Highest

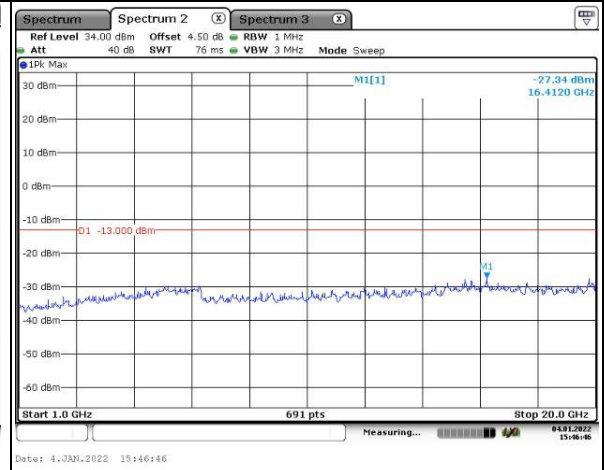
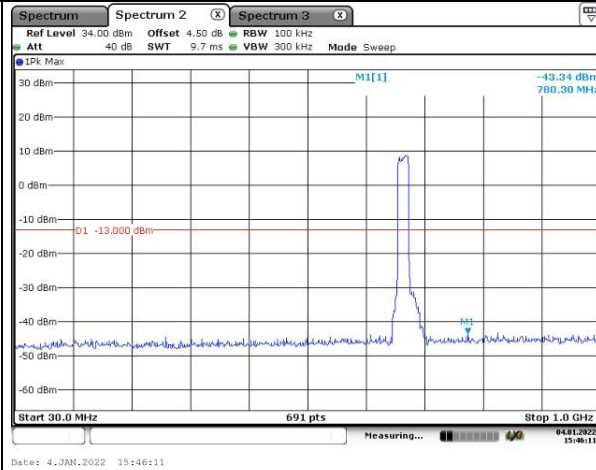


Spurious Emissions at Antenna Terminal

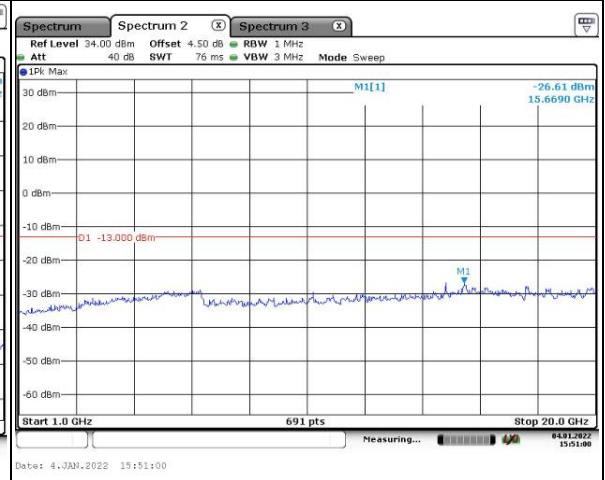
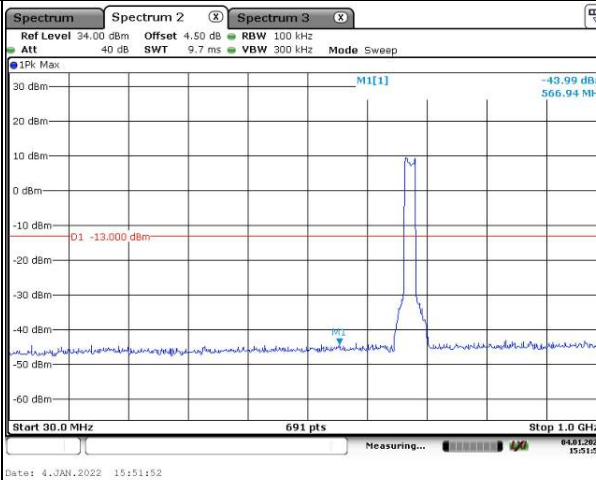
Channel

20MHz Bandwidth QPSK

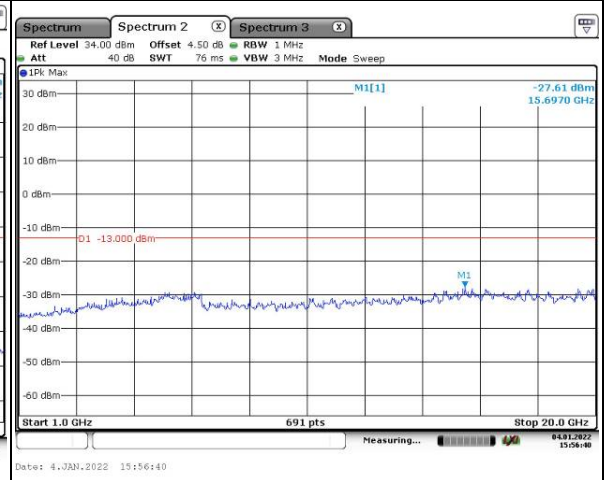
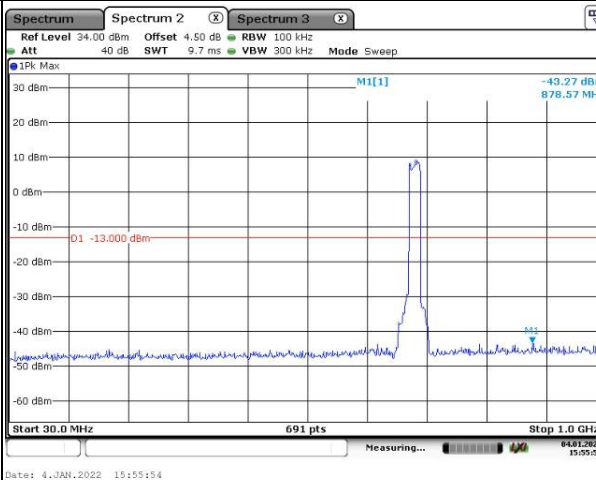
Lowest



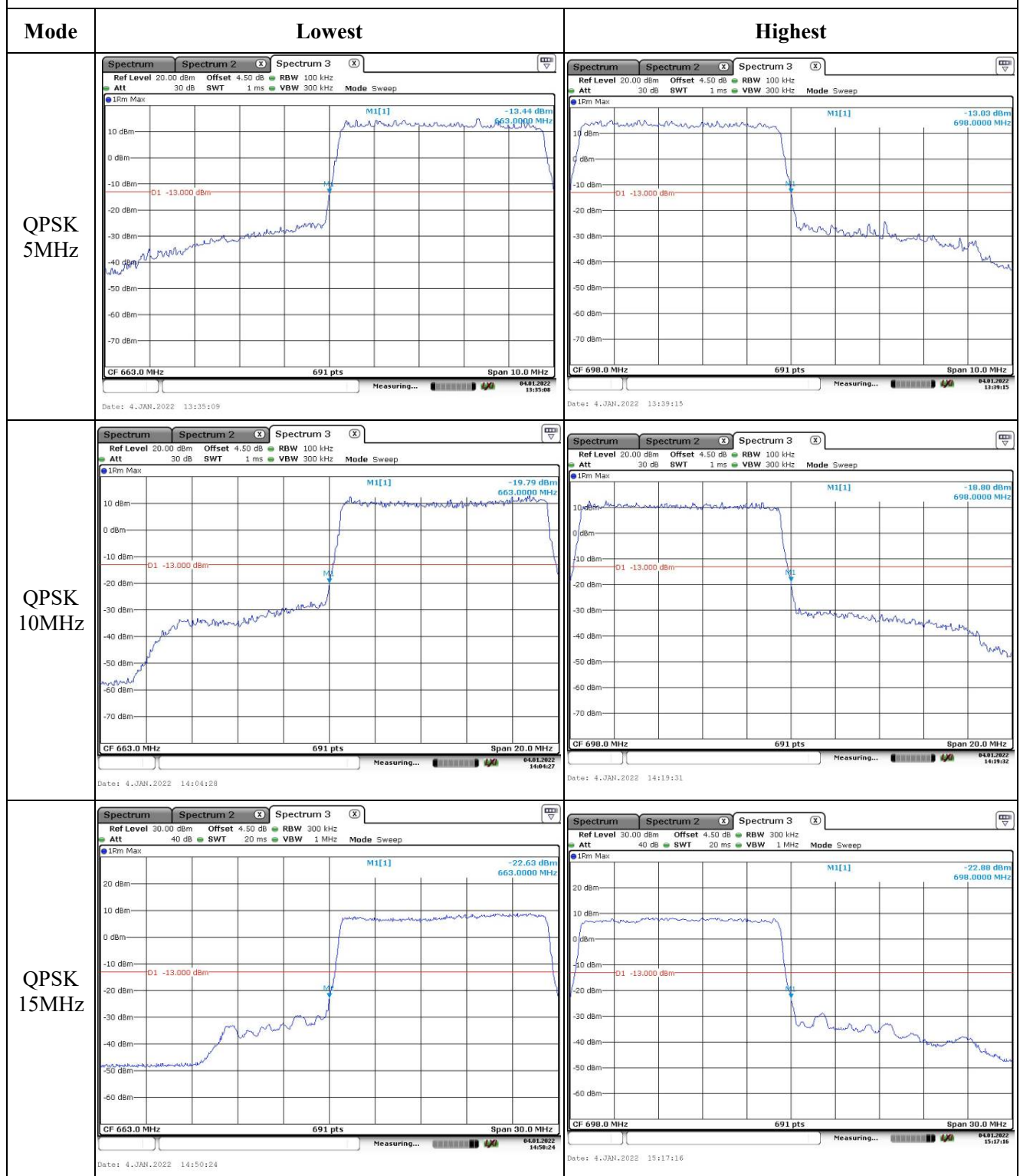
Middle



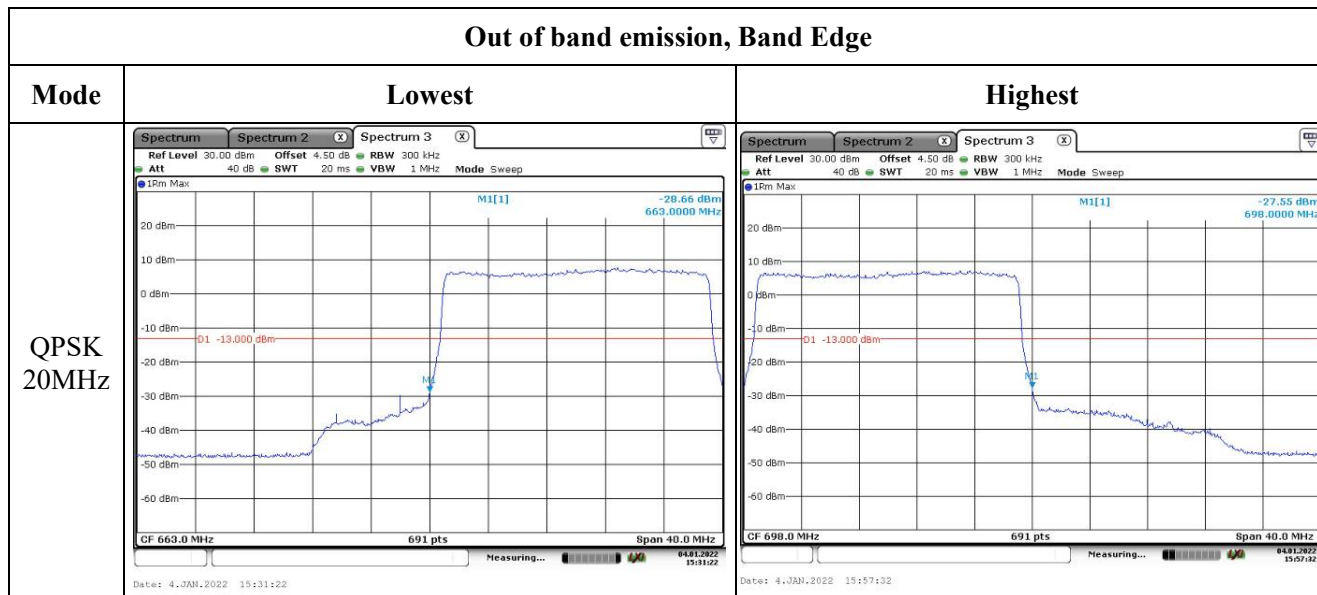
Highest



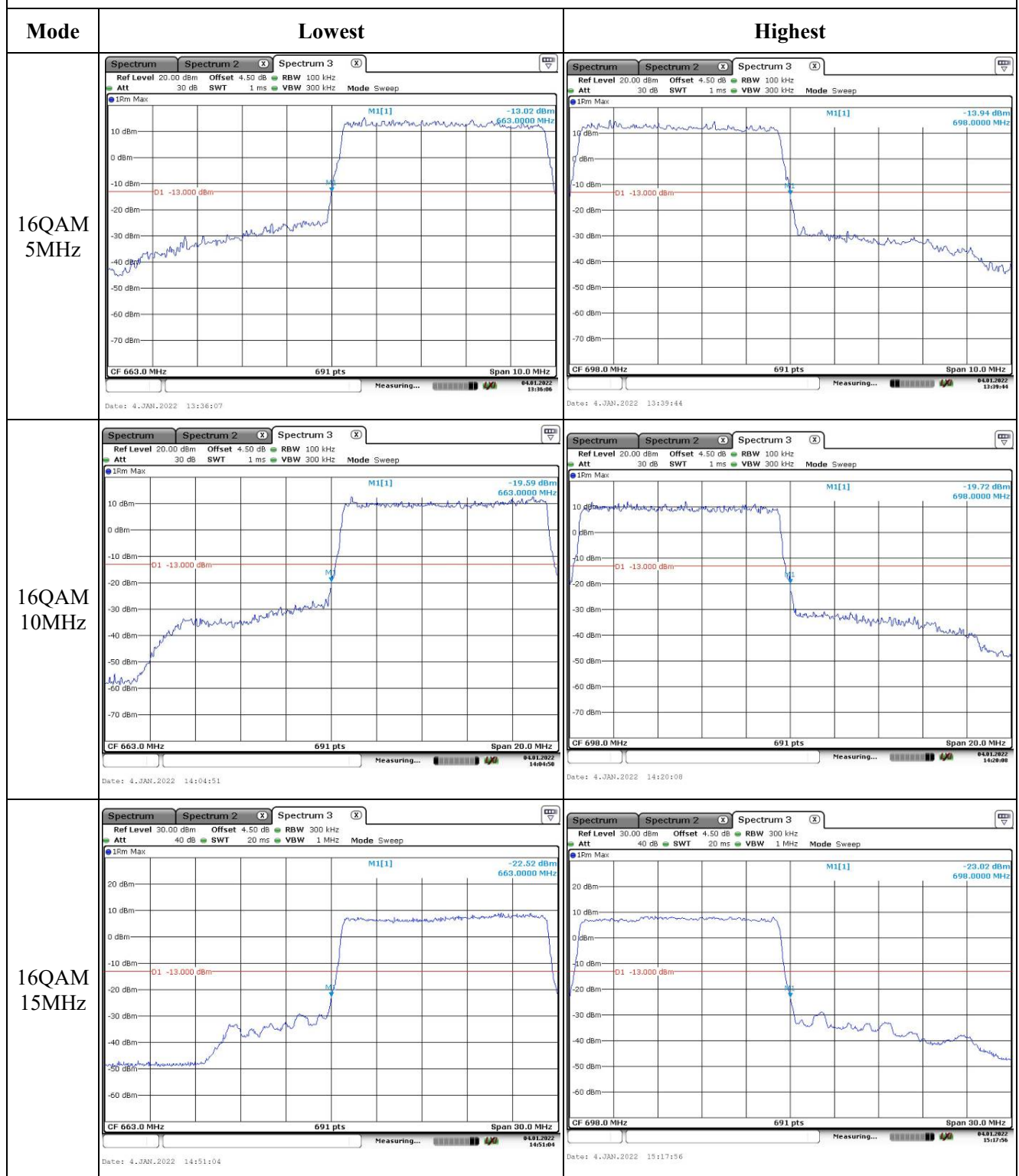
Out of band emission, Band Edge



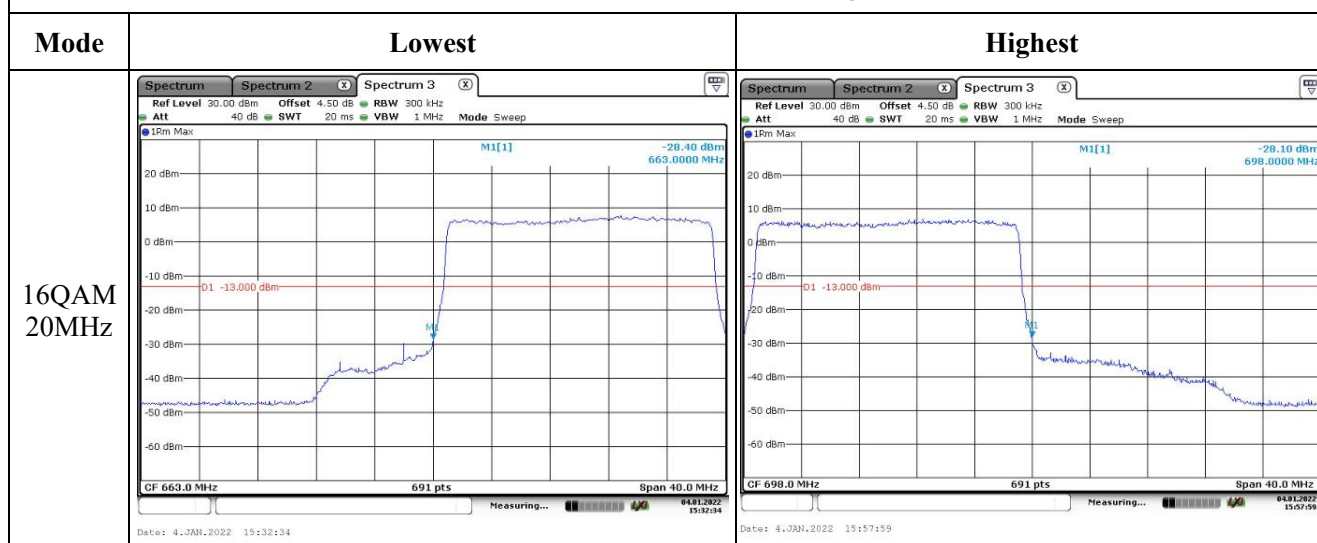
Out of band emission, Band Edge



Out of band emission, Band Edge



Out of band emission, Band Edge



4.13 Radiated Spurious Emissions

Serial Number:	CR21110024-RF-S4	Test Date:	2021-11-25~2021-11-26
Test Site:	966-2, 966-1	Test Mode:	Transmitting
Tester:	Great Qiao, Carl Liang	Test Result:	Pass

Environmental Conditions:

Temperature: (°C)	19.9~21.7	Relative Humidity: (%)	52~55	ATM Pressure: (kPa)	101.4
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Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Sunol Sciences	Antenna	JB6	A082520-5	2020-10-19	2023-10-18
R&S	EMI Test Receiver	ESR3	102724	2021-07-22	2022-07-21
TIMES MICROWAVE	Coaxial Cable	LMR-600-UltraFlex	C-0470-02	2021-07-18	2022-07-17
TIMES MICROWAVE	Coaxial Cable	LMR-600-UltraFlex	C-0780-01	2021-07-18	2022-07-17
Sonoma	Amplifier	310N	186165	2021-07-18	2022-07-17
EMCO	Adjustable Dipole Antenna	3121C	9109-753	N/A	N/A
MICRO-COAX	Coaxial Cable	UFA210B-0-0720-300300	99G1448	2021-07-25	2022-07-24
Agilent	Signal Generator	E8247C	MY43321350	2021-04-25	2022-04-24
ETS-Lindgren	Horn Antenna	3115	9912-5985	2020-10-13	2023-10-12
PASTERNAK	Horn Antenna	PE9852/2F-20	112002	2021-02-05	2024-02-04
R&S	Spectrum Analyzer	FSV40	101591	2021-07-22	2022-07-21
MICRO-COAX	Coaxial Cable	UFA210A-1-1200-70U300	217423-008	2021-08-08	2022-08-07
MICRO-COAX	Coaxial Cable	UFA210A-1-2362-300300	235780-001	2021-08-08	2022-08-07
MICRO-COAX	Coaxial Cable	UFB142A-1-2362-200200	235772-001	2021-08-08	2022-08-07
Mini	Pre-amplifier	ZVA-183-S+	5969001149	2021-11-10	2022-11-09
AH	Preamplifier	PAM-1840VH	190	2021-11-20	2022-11-19
AH	Double Ridge Guide Horn Antenna	SAS-571	1396	2021-10-18	2023-10-17
PASTERNAK	Horn Antenna	PE9852/2F-20	112001	2021-02-05	2024-02-04
MICRO-COAX	Coaxial Cable	UFA210B-0-0720-300300	99G1448	2021-07-25	2022-07-24
Mini Circuits	High Pass Filter	VHF-6010+	31119	2021-08-08	2022-08-07
Mini Circuits	High Pass Filter	VHF-3100+	31251	2021-08-08	2022-08-07

* 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 Data:

Please refer to the below table and plots.

Note: The device can be mounted in multiple orientations, test was performed with X,Y, Z Axis, the worst orientation was photographed and it's data was recorded.

Cellular Band (PART 22H)**30 MHz-10 GHz:**

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
GSM 850 Frequency:824.2MHz								
1648.40	H	51.86	-52.47	8.68	0.80	-44.59	-13.00	31.59
1648.40	V	46.58	-57.83	8.68	0.80	-49.95	-13.00	36.95
2472.60	H	47.70	-53.08	9.38	1.00	-44.70	-13.00	31.70
2472.60	V	45.27	-55.46	9.38	1.00	-47.08	-13.00	34.08
3296.80	H	45.63	-51.05	10.32	1.15	-41.88	-13.00	28.88
3296.80	V	45.46	-50.98	10.32	1.15	-41.81	-13.00	28.81
4121.00	H	45.21	-50.79	10.83	1.27	-41.23	-13.00	28.23
4121.00	V	48.95	-47.02	10.83	1.27	-37.46	-13.00	24.46
678.90	H	34.39	-70.26	0.00	0.52	-70.78	-13.00	57.78
51.80	V	36.70	-65.39	-14.07	0.13	-79.59	-13.00	66.59
GSM 850 Frequency:836.6MHz								
1673.20	H	45.91	-58.40	8.71	0.85	-50.54	-13.00	37.54
1673.20	V	42.56	-61.85	8.71	0.85	-53.99	-13.00	40.99
2509.80	H	49.15	-51.46	9.42	1.01	-43.05	-13.00	30.05
2509.80	V	45.74	-54.88	9.42	1.01	-46.47	-13.00	33.47
3346.40	H	44.36	-52.81	10.34	1.16	-43.63	-13.00	30.63
3346.40	V	46.35	-50.68	10.34	1.16	-41.50	-13.00	28.50
4183.00	H	45.79	-50.16	10.79	1.32	-40.69	-13.00	27.69
4183.00	V	47.86	-48.06	10.79	1.32	-38.59	-13.00	25.59
527.60	H	31.06	-75.23	0.00	0.44	-75.67	-13.00	62.67
51.80	V	36.90	-65.19	-14.07	0.13	-79.39	-13.00	66.39
GSM 850 Frequency:848.8MHz								
1697.60	H	51.79	-52.50	8.74	0.90	-44.66	-13.00	31.66
1697.60	V	45.69	-58.73	8.74	0.90	-50.89	-13.00	37.89
2546.40	H	51.39	-48.94	9.47	1.01	-40.48	-13.00	27.48
2546.40	V	47.89	-52.39	9.47	1.01	-43.93	-13.00	30.93
3395.20	H	46.07	-51.62	10.36	1.19	-42.45	-13.00	29.45
3395.20	V	45.47	-52.19	10.36	1.19	-43.02	-13.00	30.02
4244.00	H	45.44	-50.65	10.75	1.30	-41.20	-13.00	28.20
4244.00	V	48.68	-47.34	10.75	1.30	-37.89	-13.00	24.89
210.40	H	31.57	-81.11	0.00	0.26	-81.37	-13.00	68.37
51.80	V	36.21	-65.88	-14.07	0.13	-80.08	-13.00	67.08

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
WCDMA Band 5 Frequency:826.4 MHz								
1652.80	H	35.36	-68.97	8.68	0.81	-61.10	-13.00	48.10
1652.80	V	34.73	-69.68	8.68	0.81	-61.81	-13.00	48.81
2479.20	H	34.01	-66.75	9.39	1.01	-58.37	-13.00	45.37
2479.20	V	33.29	-67.44	9.39	1.01	-59.06	-13.00	46.06
3305.60	H	35.67	-61.06	10.32	1.15	-51.89	-13.00	38.89
3305.60	V	35.55	-60.95	10.32	1.15	-51.78	-13.00	38.78
175.30	H	31.18	-81.10	0.00	0.25	-81.35	-13.00	68.35
65.80	V	36.54	-67.50	-7.23	0.15	-74.88	-13.00	61.88
WCDMA Band 5 Frequency:836.6MHz								
1673.20	H	34.69	-69.62	8.71	0.85	-61.76	-13.00	48.76
1673.20	V	34.62	-69.79	8.71	0.85	-61.93	-13.00	48.93
2509.80	H	33.64	-66.97	9.42	1.01	-58.56	-13.00	45.56
2509.80	V	34.91	-65.71	9.42	1.01	-57.30	-13.00	44.30
3346.40	H	34.89	-62.28	10.34	1.16	-53.10	-13.00	40.10
3346.40	V	35.71	-61.32	10.34	1.16	-52.14	-13.00	39.14
255.30	H	31.55	-80.22	0.00	0.30	-80.52	-13.00	67.52
65.80	V	36.75	-67.29	-7.23	0.15	-74.67	-13.00	61.67
WCDMA Band 5 Frequency:846.6MHz								
1693.20	H	35.26	-69.04	8.73	0.89	-61.20	-13.00	48.20
1693.20	V	35.20	-69.22	8.73	0.89	-61.38	-13.00	48.38
2539.80	H	34.02	-66.36	9.46	1.01	-57.91	-13.00	44.91
2539.80	V	34.17	-66.17	9.46	1.01	-57.72	-13.00	44.72
3386.40	H	35.68	-61.91	10.35	1.18	-52.74	-13.00	39.74
3386.40	V	34.52	-63.02	10.35	1.18	-53.85	-13.00	40.85
456.00	H	31.75	-76.14	0.00	0.42	-76.56	-13.00	63.56
65.80	V	37.29	-66.75	-7.23	0.15	-74.13	-13.00	61.13

PCS Band (PART 24E)**30 MHz-20 GHz:**

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
GSM 1900 Frequency:1850.2MHz								
3700.40	H	51.27	-46.05	10.60	1.25	-36.70	-13.00	23.70
3700.40	V	41.35	-55.95	10.60	1.25	-46.60	-13.00	33.60
5550.60	H	51.93	-41.33	11.44	1.49	-31.38	-13.00	18.38
5550.60	V	52.26	-40.84	11.44	1.49	-30.89	-13.00	17.89
7400.80	H	49.28	-39.93	10.96	2.07	-31.04	-13.00	18.04
7400.80	V	49.42	-40.56	10.96	2.07	-31.67	-13.00	18.67
719.90	H	31.97	-72.19	0.00	0.49	-72.68	-13.00	59.68
65.80	V	36.98	-67.06	-7.23	0.15	-74.44	-13.00	61.44
GSM 1900 Frequency:1880MHz								
3760.00	H	46.53	-49.88	10.66	1.24	-40.46	-13.00	27.46
3760.00	V	44.06	-52.23	10.66	1.24	-42.81	-13.00	29.81
5640.00	H	52.92	-40.53	11.33	1.54	-30.74	-13.00	17.74
5640.00	V	50.29	-43.04	11.33	1.54	-33.25	-13.00	20.25
7520.00	H	49.35	-40.40	10.90	1.96	-31.46	-13.00	18.46
7520.00	V	50.45	-39.83	10.90	1.96	-30.89	-13.00	17.89
36.30	H	31.75	-47.44	-24.62	0.11	-72.17	-13.00	59.17
65.80	V	36.33	-67.71	-7.23	0.15	-75.09	-13.00	62.09
GSM 1900 Frequency:1909.8MHz								
3819.60	H	44.76	-51.10	10.72	1.29	-41.67	-13.00	28.67
3819.60	V	43.28	-52.44	10.72	1.29	-43.01	-13.00	30.01
5729.40	H	54.48	-39.00	11.22	1.59	-29.37	-13.00	16.37
5729.40	V	54.03	-39.33	11.22	1.59	-29.70	-13.00	16.70
7639.20	H	50.71	-38.78	10.87	2.05	-29.96	-13.00	16.96
7639.20	V	50.76	-39.43	10.87	2.05	-30.61	-13.00	17.61
833.70	H	30.63	-70.68	0.00	0.64	-71.32	-13.00	58.32
65.80	V	36.76	-67.28	-7.23	0.15	-74.66	-13.00	61.66

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
WCDMA Band II, Frequency:1852.4 MHz								
3704.80	H	37.41	-59.85	10.60	1.25	-50.50	-13.00	37.50
3704.80	V	38.56	-58.67	10.60	1.25	-49.32	-13.00	36.32
5557.20	H	35.29	-57.99	11.43	1.49	-48.05	-13.00	35.05
5557.20	V	35.76	-57.37	11.43	1.49	-47.43	-13.00	34.43
36.30	H	31.18	-48.01	-24.62	0.11	-72.74	-13.00	59.74
65.80	V	35.72	-68.32	-7.23	0.15	-75.70	-13.00	62.70
WCDMA Band II, Frequency:1880 MHz								
3760.00	H	37.46	-58.95	10.66	1.24	-49.53	-13.00	36.53
3760.00	V	36.95	-59.34	10.66	1.24	-49.92	-13.00	36.92
5640.00	H	35.84	-57.61	11.33	1.54	-47.82	-13.00	34.82
5640.00	V	35.12	-58.21	11.33	1.54	-48.42	-13.00	35.42
666.60	H	31.09	-73.59	0.00	0.50	-74.09	-13.00	61.09
65.80	V	35.87	-68.17	-7.23	0.15	-75.55	-13.00	62.55
WCDMA Band II, Frequency:1907.6MHz								
3815.20	H	36.49	-59.36	10.72	1.29	-49.93	-13.00	36.93
3815.20	V	36.51	-59.18	10.72	1.29	-49.75	-13.00	36.75
5722.80	H	34.78	-58.71	11.23	1.58	-49.06	-13.00	36.06
5722.80	V	35.22	-58.13	11.23	1.58	-48.48	-13.00	35.48
183.70	H	31.16	-81.40	0.00	0.25	-81.65	-13.00	68.65
65.80	V	36.58	-67.46	-7.23	0.15	-74.84	-13.00	61.84

AWS Band(Part 27)**30 MHz-20 GHz:**

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
WCDMA Band IV, Frequency:1712.4 MHz								
3424.80	H	36.85	-60.92	10.37	1.17	-51.72	-13.00	38.72
3424.80	V	35.84	-61.90	10.37	1.17	-52.70	-13.00	39.70
5137.20	H	34.18	-59.44	11.28	1.46	-49.62	-13.00	36.62
5137.20	V	34.79	-58.71	11.28	1.46	-48.89	-13.00	35.89
802.80	H	31.75	-70.50	0.00	0.57	-71.07	-13.00	58.07
65.80	V	35.87	-68.17	-7.23	0.15	-75.55	-13.00	62.55
WCDMA Band IV, Frequency:1732.6 MHz								
3465.20	H	37.48	-60.33	10.39	1.15	-51.09	-13.00	38.09
3465.20	V	36.91	-60.86	10.39	1.15	-51.62	-13.00	38.62
5197.80	H	34.62	-59.51	11.32	1.44	-49.63	-13.00	36.63
5197.80	V	34.55	-59.43	11.32	1.44	-49.55	-13.00	36.55
385.90	H	31.41	-78.01	0.00	0.38	-78.39	-13.00	65.39
65.80	V	35.95	-68.09	-7.23	0.15	-75.47	-13.00	62.47
WCDMA Band IV, Frequency:1752.6MHz								
3505.20	H	36.65	-61.18	10.41	1.18	-51.95	-13.00	38.95
3505.20	V	35.48	-62.29	10.41	1.18	-53.06	-13.00	40.06
5257.80	H	35.96	-57.77	11.35	1.47	-47.89	-13.00	34.89
5257.80	V	35.22	-58.29	11.35	1.47	-48.41	-13.00	35.41
275.00	H	31.86	-79.45	0.00	0.32	-79.77	-13.00	66.77
69.72	V	37.51	-65.20	-5.15	0.15	-70.50	-13.00	57.50

LTE Bands:**LTE Band 2 (30MHz-20GHz):**

LTE Band 2 (GSM 1800)								
Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
QPSK,Frequency:1850.7 MHz								
3701.40	H	36.11	-61.20	10.60	1.25	-51.85	-13.00	38.85
3701.40	V	35.26	-62.03	10.60	1.25	-52.68	-13.00	39.68
5552.10	H	35.72	-57.55	11.44	1.49	-47.60	-13.00	34.60
5552.10	V	35.47	-57.63	11.44	1.49	-47.68	-13.00	34.68
338.10	H	31.61	-78.53	0.00	0.36	-78.89	-13.00	65.89
31.70	V	36.55	-45.08	-25.52	0.10	-70.70	-13.00	57.70
QPSK,Frequency:1880 MHz								
3760.00	H	36.63	-59.78	10.66	1.24	-50.36	-13.00	37.36
3760.00	V	35.92	-60.37	10.66	1.24	-50.95	-13.00	37.95
5640.00	H	35.29	-58.16	11.33	1.54	-48.37	-13.00	35.37
5640.00	V	35.27	-58.06	11.33	1.54	-48.27	-13.00	35.27
729.80	H	30.58	-73.35	0.00	0.53	-73.88	-13.00	60.88
65.80	V	36.31	-67.73	-7.23	0.15	-75.11	-13.00	62.11
QPSK,Frequency:1909.3 MHz								
3818.60	H	35.24	-60.62	10.72	1.29	-51.19	-13.00	38.19
3818.60	V	35.26	-60.45	10.72	1.29	-51.02	-13.00	38.02
5727.90	H	34.77	-58.71	11.23	1.59	-49.07	-13.00	36.07
5727.90	V	34.44	-58.92	11.23	1.59	-49.28	-13.00	36.28
277.80	H	31.79	-79.45	0.00	0.32	-79.77	-13.00	66.77
65.80	V	35.81	-68.23	-7.23	0.15	-75.61	-13.00	62.61

LTE Band 4 (30MHz-20GHz):

DTE Band 1 (Common Freqs):								
Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
QPSK,Frequency:1710.7 MHz								
3421.40	H	35.96	-61.80	10.37	1.17	-52.60	-13.00	39.60
3421.40	V	35.26	-62.47	10.37	1.17	-53.27	-13.00	40.27
5132.10	H	34.64	-58.93	11.28	1.47	-49.12	-13.00	36.12
5132.10	V	34.36	-59.10	11.28	1.47	-49.29	-13.00	36.29
202.00	H	30.67	-82.18	0.00	0.26	-82.44	-13.00	69.44
65.80	V	36.37	-67.67	-7.23	0.15	-75.05	-13.00	62.05
QPSK,Frequency:1732.5 MHz								
3465.00	H	35.17	-62.64	10.39	1.15	-53.40	-13.00	40.40
3465.00	V	35.62	-62.14	10.39	1.15	-52.90	-13.00	39.90
5197.50	H	35.13	-59.00	11.32	1.44	-49.12	-13.00	36.12
5197.50	V	35.71	-58.27	11.32	1.44	-48.39	-13.00	35.39
245.50	H	31.49	-80.50	0.00	0.30	-80.80	-13.00	67.80
65.80	V	36.05	-67.99	-7.23	0.15	-75.37	-13.00	62.37
QPSK,Frequency:1754.3 MHz								
3505.20	H	35.19	-62.64	10.41	1.18	-53.41	-13.00	40.41
3505.20	V	35.63	-62.14	10.41	1.18	-52.91	-13.00	39.91
5257.80	H	34.82	-58.91	11.35	1.47	-49.03	-13.00	36.03
5257.80	V	34.58	-58.93	11.35	1.47	-49.05	-13.00	36.05
790.10	H	31.33	-71.23	0.00	0.61	-71.84	-13.00	58.84
31.79	V	35.96	-45.76	-25.48	0.10	-71.34	-13.00	58.34

LTE Band 5(30MHz-10GHz):

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
QPSK, Frequency: 824.7 MHz								
1649.40	H	37.48	-66.85	8.68	0.80	-58.97	-13.00	45.97
1649.40	V	36.12	-68.29	8.68	0.80	-60.41	-13.00	47.41
2474.10	H	36.35	-64.43	9.38	1.00	-56.05	-13.00	43.05
2474.10	V	35.49	-65.24	9.38	1.00	-56.86	-13.00	43.86
3298.80	H	35.93	-60.75	10.32	1.15	-51.58	-13.00	38.58
3298.80	V	36.57	-59.87	10.32	1.15	-50.70	-13.00	37.70
216.00	H	30.52	-82.05	0.00	0.27	-82.32	-13.00	69.32
65.80	V	36.57	-67.47	-7.23	0.15	-74.85	-13.00	61.85
QPSK, Frequency: 836.5 MHz								
1673.00	H	36.44	-67.87	8.71	0.85	-60.01	-13.00	47.01
1673.00	V	35.53	-68.88	8.71	0.85	-61.02	-13.00	48.02
2509.50	H	34.72	-65.89	9.42	1.01	-57.48	-13.00	44.48
2509.50	V	34.66	-65.96	9.42	1.01	-57.55	-13.00	44.55
3346.00	H	34.12	-63.04	10.34	1.16	-53.86	-13.00	40.86
3346.00	V	34.92	-62.10	10.34	1.16	-52.92	-13.00	39.92
206.20	H	33.42	-79.35	0.00	0.26	-79.61	-13.00	66.61
31.70	V	36.26	-45.37	-25.52	0.10	-70.99	-13.00	57.99
QPSK, Frequency: 848.3 MHz								
1696.60	H	36.51	-67.78	8.74	0.89	-59.93	-13.00	46.93
1696.60	V	35.78	-68.64	8.74	0.89	-60.79	-13.00	47.79
2544.90	H	34.86	-65.48	9.47	1.01	-57.02	-13.00	44.02
2544.90	V	36.23	-64.07	9.47	1.01	-55.61	-13.00	42.61
3393.20	H	35.19	-62.48	10.36	1.19	-53.31	-13.00	40.31
3393.20	V	35.15	-62.48	10.36	1.19	-53.31	-13.00	40.31
349.40	H	31.44	-78.53	0.00	0.36	-78.89	-13.00	65.89
65.80	V	36.31	-67.73	-7.23	0.15	-75.11	-13.00	62.11

LTE Band 12 (30MHz-10GHz):

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
QPSK, Frequency: 699.7 MHz								
1399.40	H	36.45	-67.25	8.22	0.71	-59.74	-13.00	46.74
1399.40	V	35.94	-67.81	8.22	0.71	-60.30	-13.00	47.30
2099.10	H	36.83	-65.05	9.16	0.91	-56.80	-13.00	43.80
2099.10	V	36.21	-65.62	9.16	0.91	-57.37	-13.00	44.37
2798.80	H	36.19	-63.74	9.88	1.04	-54.90	-13.00	41.90
2798.80	V	36.55	-63.25	9.88	1.04	-54.41	-13.00	41.41
570.80	H	31.59	-73.82	0.00	0.46	-74.28	-13.00	61.28
65.80	V	36.65	-67.39	-7.23	0.15	-74.77	-13.00	61.77
QPSK, Frequency:707.5 MHz								
1415.00	H	36.94	-66.73	8.26	0.72	-59.19	-13.00	46.19
1415.00	V	35.42	-68.30	8.26	0.72	-60.76	-13.00	47.76
2122.50	H	35.42	-66.57	9.17	0.92	-58.32	-13.00	45.32
2122.50	V	34.52	-67.45	9.17	0.92	-59.20	-13.00	46.20
2830.00	H	35.76	-64.04	9.93	1.06	-55.17	-13.00	42.17
2830.00	V	35.49	-64.24	9.93	1.06	-55.37	-13.00	42.37
457.40	H	30.97	-76.89	0.00	0.42	-77.31	-13.00	64.31
31.70	V	37.95	-43.68	-25.52	0.10	-69.30	-13.00	56.30
QPSK, Frequency: 715.3 MHz								
1430.60	H	36.73	-66.90	8.31	0.73	-59.32	-13.00	46.32
1430.60	V	36.27	-67.42	8.31	0.73	-59.84	-13.00	46.84
2145.90	H	36.03	-66.07	9.19	0.93	-57.81	-13.00	44.81
2145.90	V	35.33	-66.78	9.19	0.93	-58.52	-13.00	45.52
2861.20	H	35.88	-63.77	9.98	1.07	-54.86	-13.00	41.86
2861.20	V	35.47	-64.20	9.98	1.07	-55.29	-13.00	42.29
225.80	H	30.95	-81.43	0.00	0.28	-81.71	-13.00	68.71
65.80	V	37.23	-66.81	-7.23	0.15	-74.19	-13.00	61.19

Note: LTE Band 17 was in the range of Band 12, and the output power less than Band 12, so the Band 17 test was reduced.