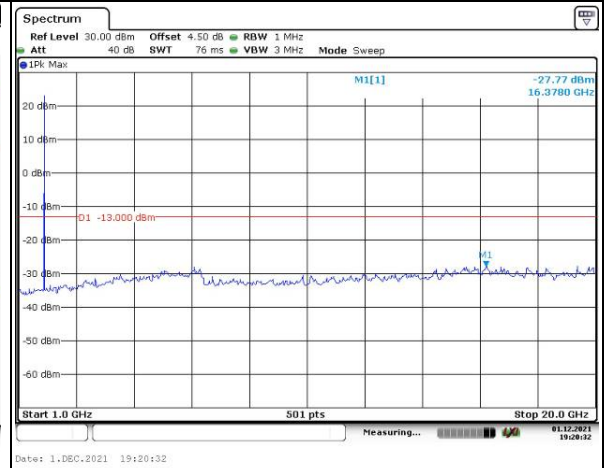
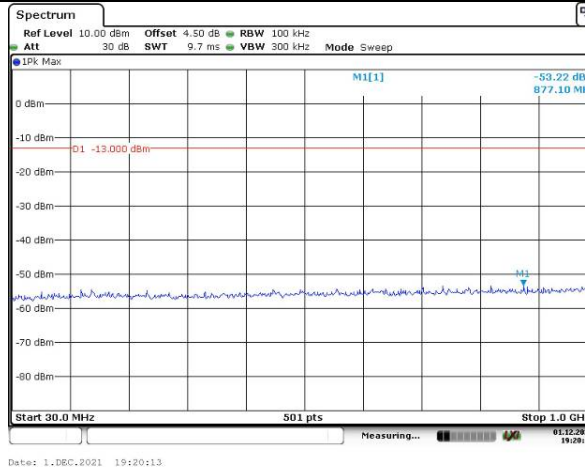


Spurious Emissions at Antenna Terminal

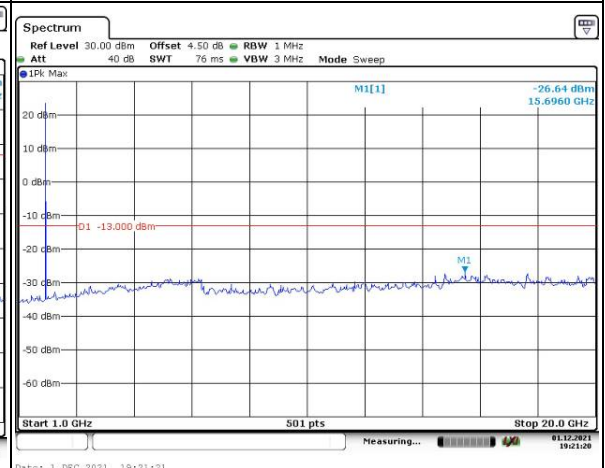
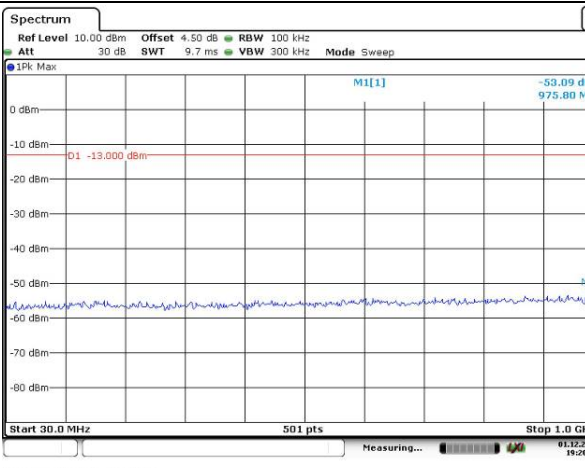
Channel

1.4MHz Bandwidth QPSK

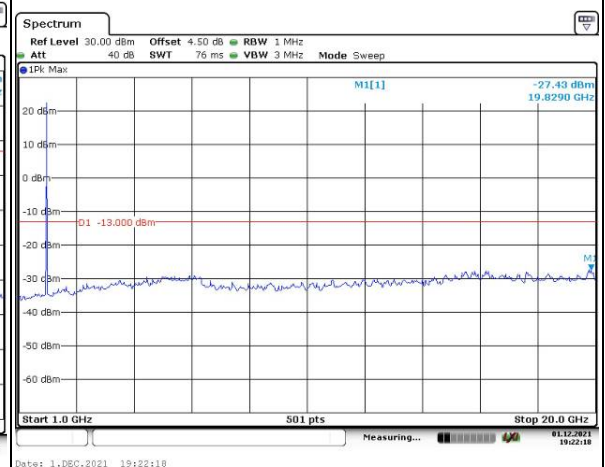
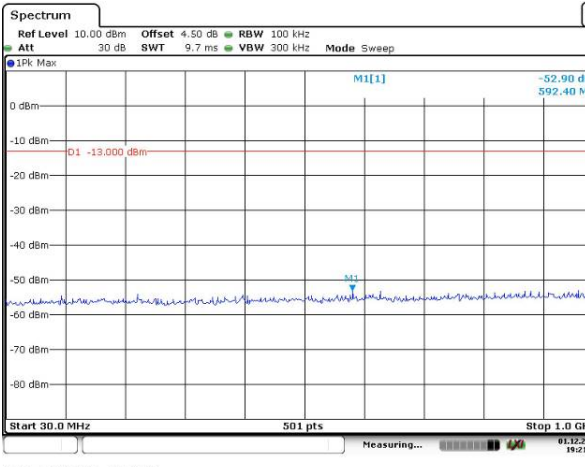
Lowest



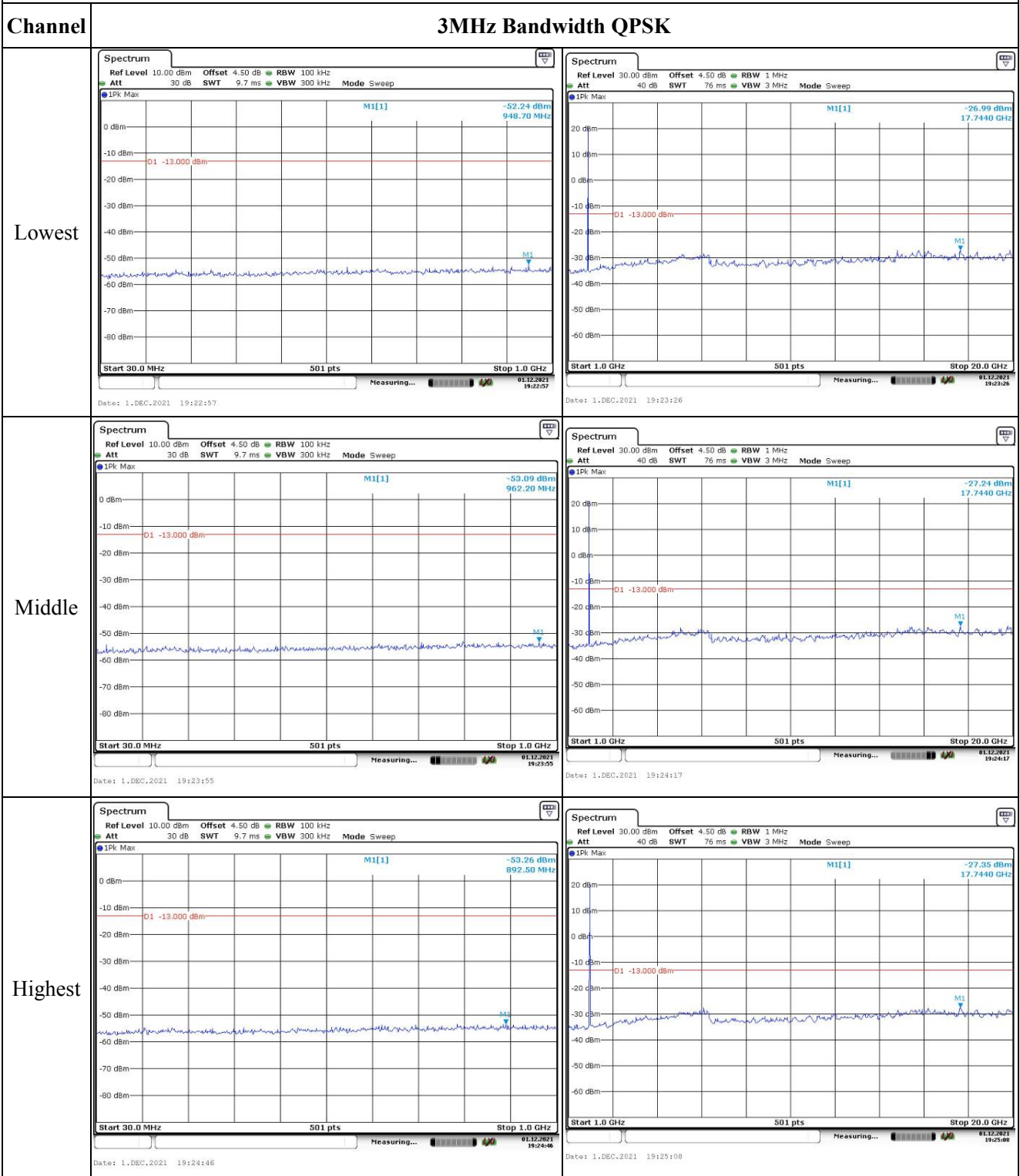
Middle



Highest



### Spurious Emissions at Antenna Terminal

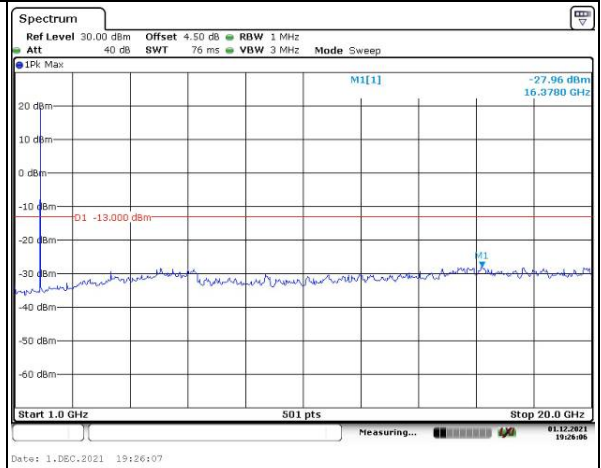
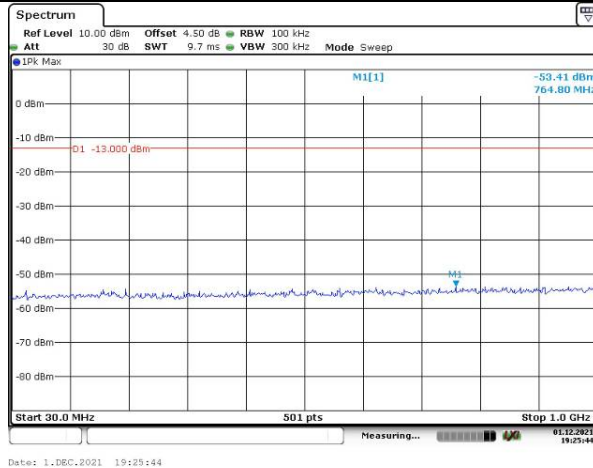


### Spurious Emissions at Antenna Terminal

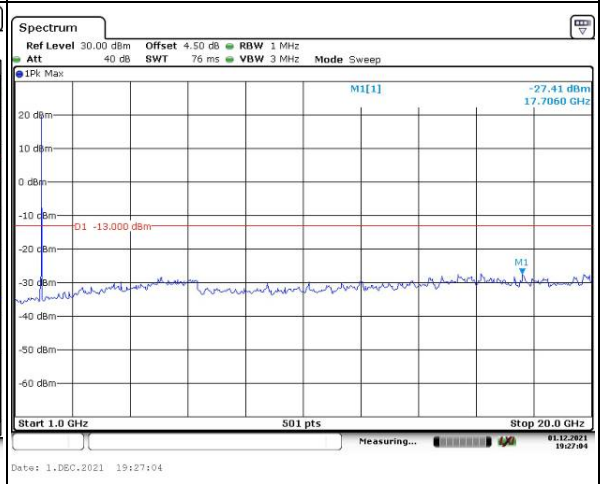
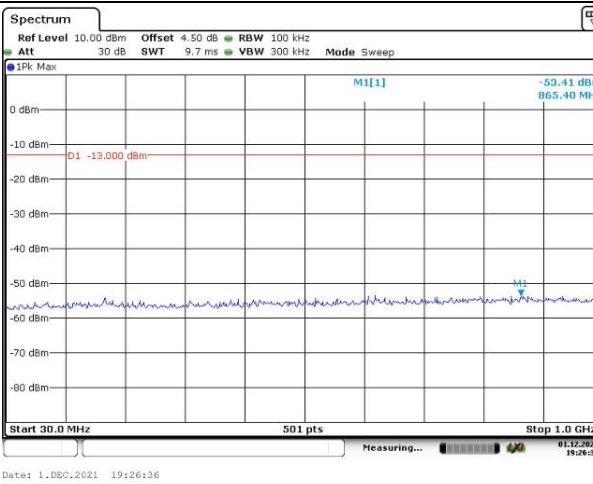
Channel

5MHz Bandwidth QPSK

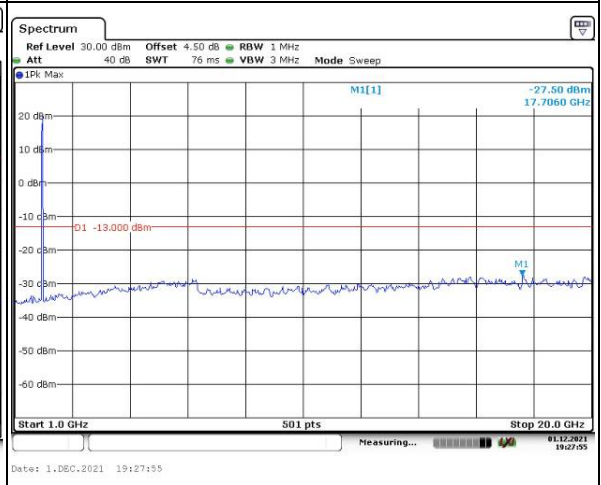
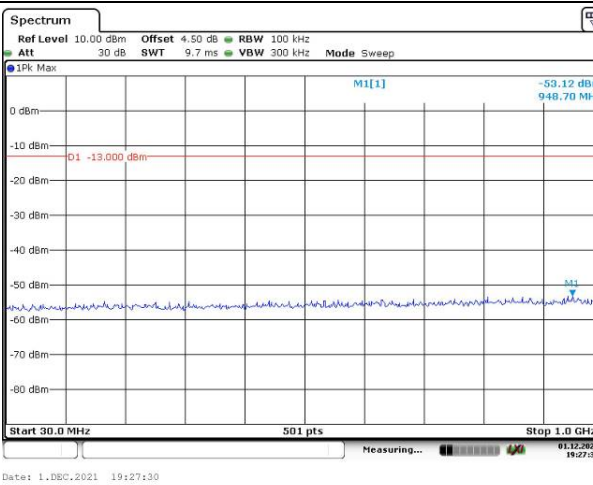
Lowest



Middle



Highest

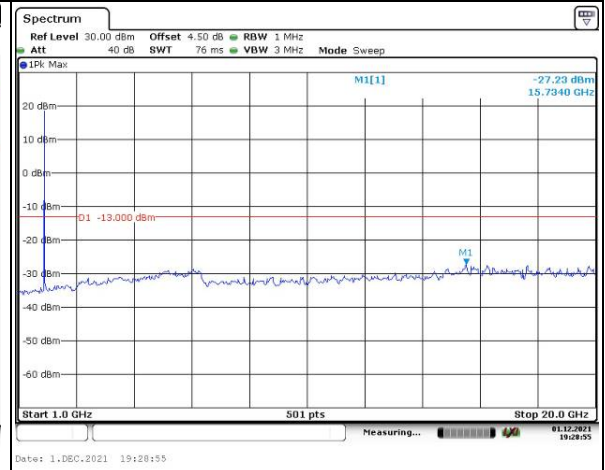
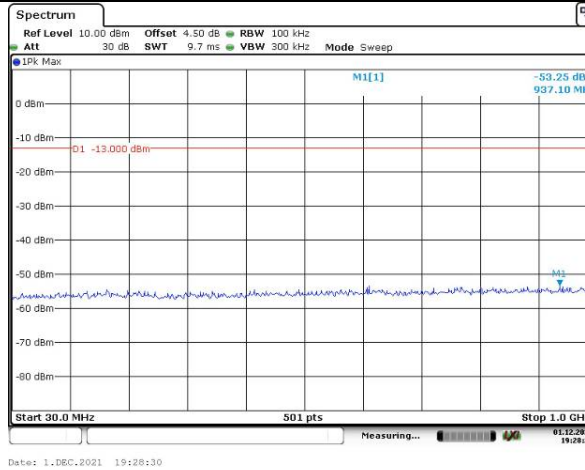


### Spurious Emissions at Antenna Terminal

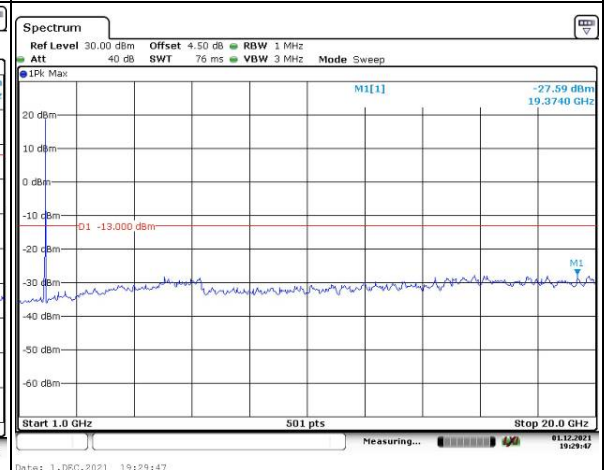
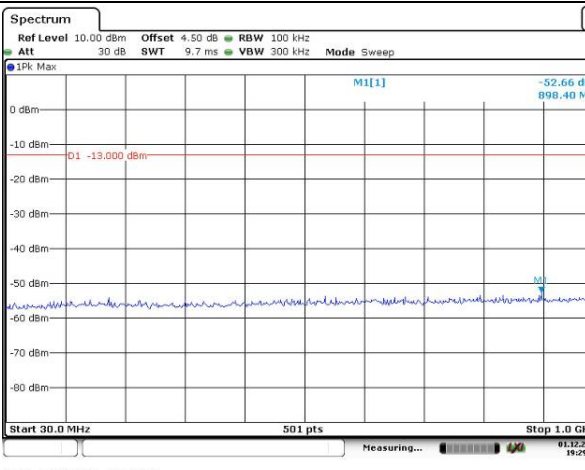
Channel

10MHz Bandwidth QPSK

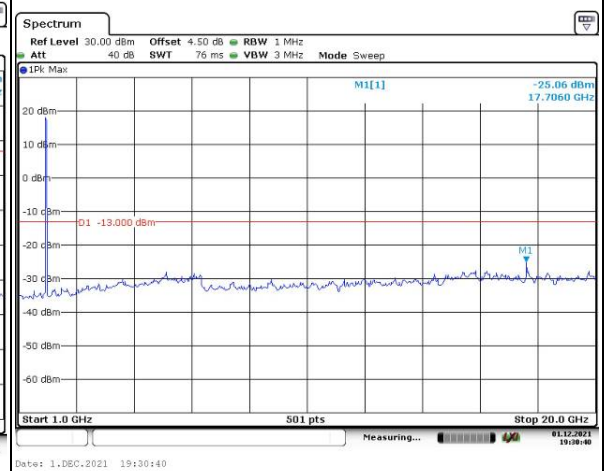
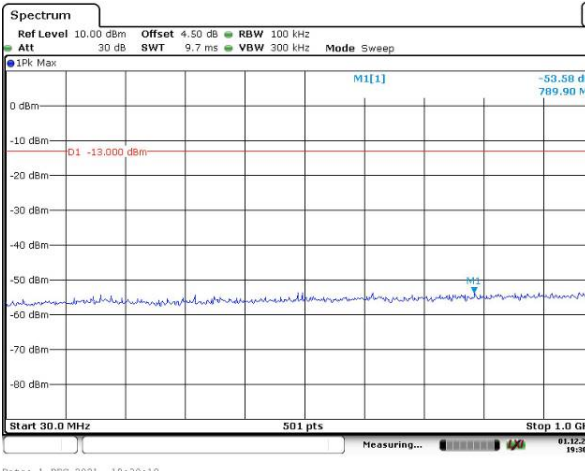
Lowest



Middle



Highest

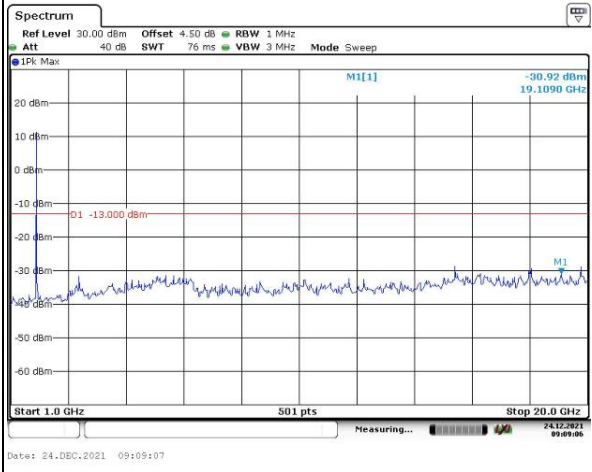
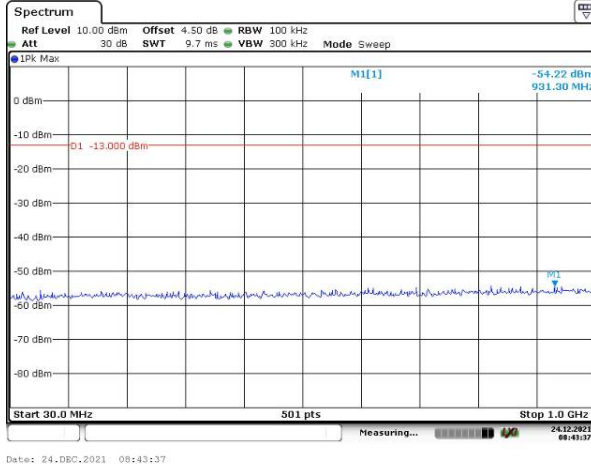


Spurious Emissions at Antenna Terminal

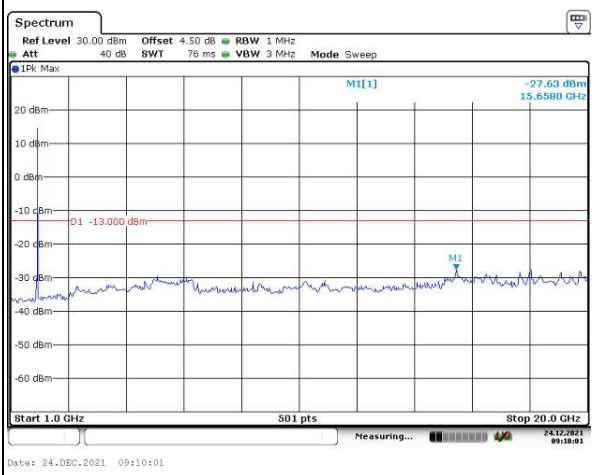
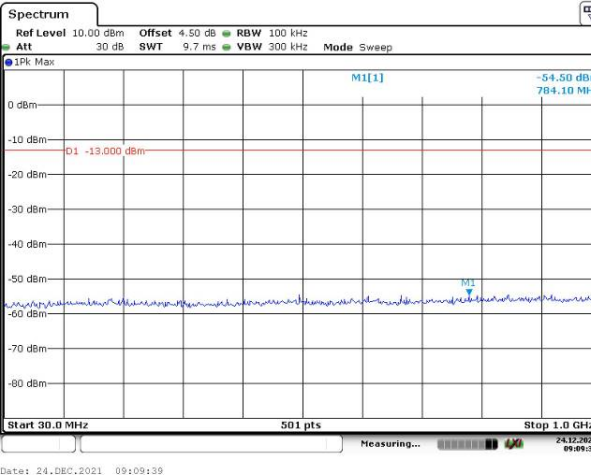
Channel

15MHz Bandwidth QPSK

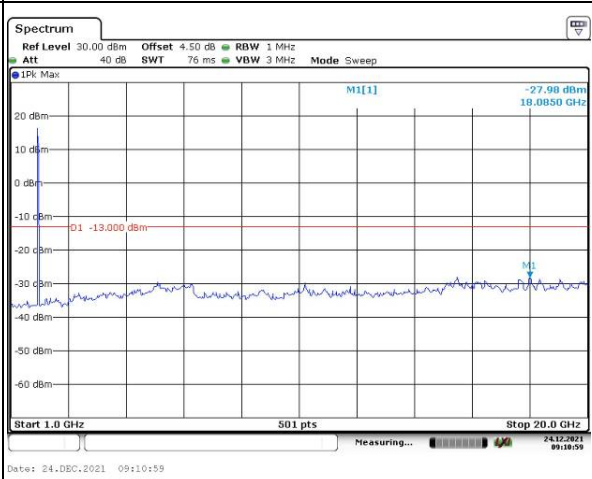
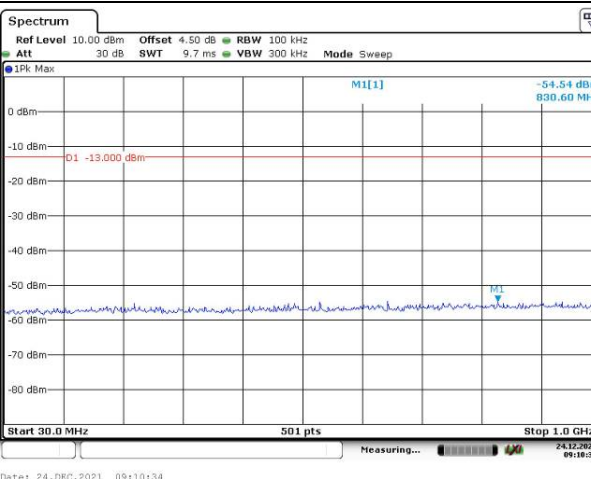
Lowest



Middle



Highest



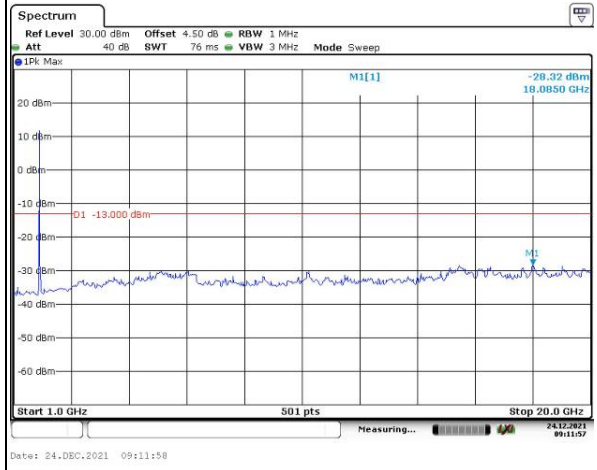
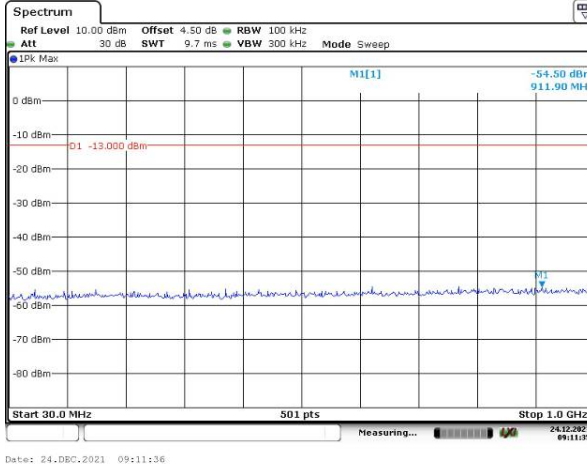


### Spurious Emissions at Antenna Terminal

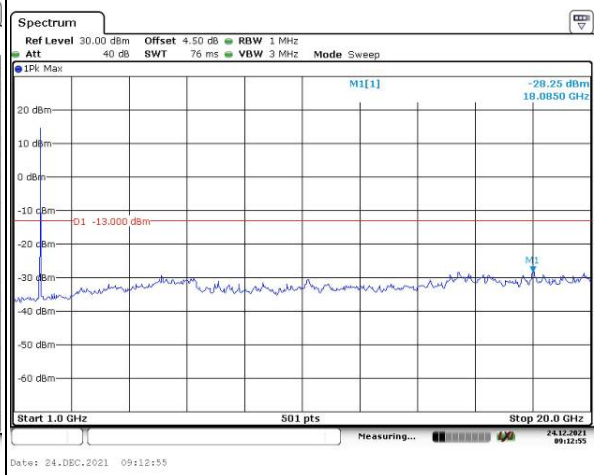
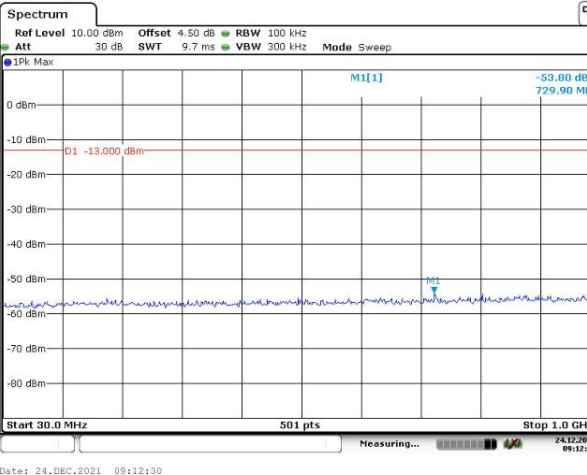
Channel

20MHz Bandwidth QPSK

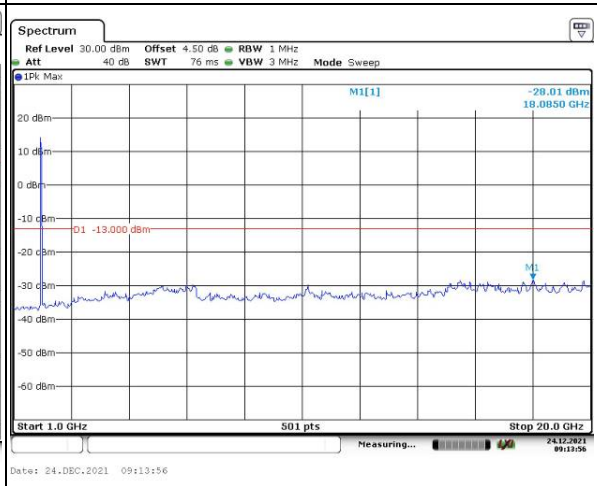
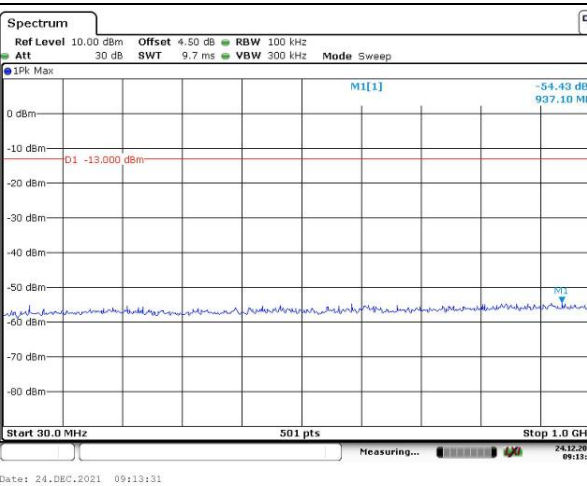
Lowest



Middle



Highest



Out of band emission, Band Edge

Mode	Lowest	Highest
QPSK 1.4MHz	<p>Ref Level 30.00 dBm Offset 4.50 dB RBW 30 kHz Att 40 dB SWT 1.1 ms VBW 100 kHz Mode Sweep</p> <p>1Rm Max M1[1] -15.64 dBm 1.8500000 GHz</p> <p>D1 -13.000 dBm</p> <p>CF 1.85 GHz 501 pts Span 3.0 MHz</p> <p>Date: 1.DEC.2021 17:33:47</p>	<p>Ref Level 30.00 dBm Offset 4.50 dB RBW 30 kHz Att 40 dB SWT 1.1 ms VBW 100 kHz Mode Sweep</p> <p>1Rm Max M1[1] -19.07 dBm 1.91501200 GHz</p> <p>D1 -13.000 dBm</p> <p>CF 1.915 GHz 501 pts Span 3.0 MHz</p> <p>Date: 1.DEC.2021 17:34:25</p>
QPSK 3MHz	<p>Ref Level 30.00 dBm Offset 4.50 dB RBW 30 kHz Att 40 dB SWT 1.1 ms VBW 100 kHz Mode Sweep</p> <p>1Rm Max M1[1] -18.97 dBm 1.8500000 GHz</p> <p>D1 -13.000 dBm</p> <p>CF 1.85 GHz 501 pts Span 6.0 MHz</p> <p>Date: 1.DEC.2021 17:35:13</p>	<p>Ref Level 30.00 dBm Offset 4.50 dB RBW 30 kHz Att 40 dB SWT 1.1 ms VBW 100 kHz Mode Sweep</p> <p>1Rm Max M1[1] -19.04 dBm 1.9150000 GHz</p> <p>D1 -13.000 dBm</p> <p>CF 1.915 GHz 501 pts Span 6.0 MHz</p> <p>Date: 1.DEC.2021 17:36:06</p>
QPSK 5MHz	<p>Ref Level 30.00 dBm Offset 4.50 dB RBW 100 kHz Att 40 dB SWT 20 ms VBW 300 kHz Mode Sweep</p> <p>1Rm Max M1[1] -19.04 dBm 1.8500000 GHz</p> <p>D1 -13.000 dBm</p> <p>CF 1.85 GHz 501 pts Span 10.0 MHz</p> <p>Date: 14.DEC.2021 16:39:44</p>	<p>Ref Level 30.00 dBm Offset 4.50 dB RBW 100 kHz Att 40 dB SWT 1 ms VBW 300 kHz Mode Sweep</p> <p>1Rm Max M1[1] -14.32 dBm 1.9150200 GHz</p> <p>D1 -13.000 dBm</p> <p>CF 1.915 GHz 501 pts Span 10.0 MHz</p> <p>Date: 1.DEC.2021 17:37:59</p>

Out of band emission, Band Edge

Mode	Lowest	Highest
QPSK 10MHz	<p>Ref Level 30.00 dBm Offset 4.50 dB RBW 100 kHz Att 40 dB SWT 1 ms VBW 300 kHz Mode Sweep M1[1] -21.82 dBm 1.8500000 GHz D1 -13.000 dBm CF 1.85 GHz 501 pts Span 20.0 MHz Date: 1.DEC.2021 17:39:06</p>	<p>Ref Level 30.00 dBm Offset 4.50 dB RBW 100 kHz Att 40 dB SWT 1 ms VBW 300 kHz Mode Sweep M1[1] -22.41 dBm 1.9150000 GHz D1 -13.000 dBm CF 1.915 GHz 501 pts Span 20.0 MHz Date: 1.DEC.2021 17:40:04</p>
QPSK 15MHz	<p>Ref Level 30.00 dBm Offset 4.50 dB RBW 300 kHz Att 40 dB SWT 1 ms VBW 1 MHz Mode Sweep M1[1] -16.23 dBm 1.8500000 GHz D1 -13.000 dBm CF 1.85 GHz 501 pts Span 30.0 MHz Date: 1.DEC.2021 17:41:12</p>	<p>Ref Level 30.00 dBm Offset 4.50 dB RBW 300 kHz Att 40 dB SWT 1 ms VBW 1 MHz Mode Sweep M1[1] -17.76 dBm 1.9150000 GHz D1 -13.000 dBm CF 1.915 GHz 501 pts Span 30.0 MHz Date: 1.DEC.2021 17:42:07</p>
QPSK 20MHz	<p>Ref Level 30.00 dBm Offset 4.50 dB RBW 300 kHz Att 40 dB SWT 1 ms VBW 1 MHz Mode Sweep M1[1] -20.59 dBm 1.8500000 GHz D1 -13.000 dBm CF 1.85 GHz 501 pts Span 40.0 MHz Date: 1.DEC.2021 17:43:05</p>	<p>Ref Level 30.00 dBm Offset 4.50 dB RBW 300 kHz Att 40 dB SWT 1 ms VBW 1 MHz Mode Sweep M1[1] -21.57 dBm 1.9150000 GHz D1 -13.000 dBm CF 1.915 GHz 501 pts Span 40.0 MHz Date: 1.DEC.2021 17:44:05</p>



Out of band emission, Band Edge

Mode	Lowest	Highest
16QAM 1.4MHz		
16QAM 3MHz		
16QAM 5MHz		

Out of band emission, Band Edge

Mode	Lowest	Highest
16QAM 10MHz		
16QAM 15MHz		
16QAM 20MHz		

**4.13 Antenna Port Test Data and Results for LTE Band 26:**

Serial Number:	CR21110087-S1	Test Date:	2021/12/01~2021/12/14
Test Site:	RF	Test Mode:	Transmitting
Tester:	Wolf Mo	Test Result:	Pass

**Environmental Conditions:**

Temperature: (°C)	22.3~22.7	Relative Humidity: (%)	31~44	ATM Pressure: (kPa)	101.5~101.9
----------------------	-----------	---------------------------	-------	------------------------	-------------

**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
ZHAOXIN	DC Power Supply	RXN-6010D	21R6010D09	N/A	N/A
Weinschel	Coaxial Attenuators	53-20-34	LN751	Each time	N/A
R&S	Wideband Radio Communication Tester	CMW500	149218	2021/7/22	2022/7/21
BACL	TEMP&HUMI Test Chamber	BTH-150	30026	2021/7/22	2022/7/22
UNI-T	Multimeter	UT39A+	C210582554	2021/9/30	2022/9/30
E-Microwave	Two-way 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 26▲:**

Antenna Gain (dBi):	0	Antenna Gain (dBd):	-2.15	Cable Loss (dB):	0.1
Operation Voltage(V <sub>DC</sub> ):					
Lowest:	3.5	Normal:	3.7	Highest:	4.2

**Test Frequency For Each Mode:**

Operation Bandwidth	Lowest Frequency (MHz)	Middle Frequency (MHz)	Highest Frequency (MHz)
1.4MHz	814.7	831.5	848.3
3MHz	815.5	831.5	847.5
5MHz	816.5	831.5	846.5
10MHz	819	831.5	844
15MHz	821.5	831.5	841.5

**Test Data:****FCC§2.1046;§ 22.913 (a),§ 90.542****RF Output Power:**

Test Bandwidth & Modulation	Resource Block & RB offset	Conducted Average Output Power(dBm)			Maximum ERP (dBm)	ERP Limit (dBm)
		Lowest Channel	Middle Channel	Highest Channel		
1.4MHz QPSK	RB1#0	23.26	23.50	23.22	21.25	38.45
	RB1#3	23.33	23.23	23.34		
	RB1#5	23.16	23.46	23.24		
	RB3#0	23.23	23.46	23.20		
	RB3#3	23.12	23.50	23.24		
	RB6#0	22.17	22.58	22.27		
1.4MHz 16QAM	RB1#0	22.11	22.68	22.34	20.5	38.45
	RB1#3	22.07	22.60	22.31		
	RB1#5	22.55	22.67	21.98		
	RB3#0	22.29	22.75	22.42		
	RB3#3	22.07	22.44	22.26		
	RB6#0	21.38	21.48	21.35		
3MHz QPSK	RB1#0	23.13	23.57	23.31	21.32	38.45
	RB1#8	22.95	23.50	23.09		
	RB1#14	23.13	23.49	23.22		
	RB6#0	22.21	22.50	22.45		
	RB6#9	22.10	22.48	22.32		
	RB15#0	22.09	22.58	22.49		
3MHz 16QAM	RB1#0	22.56	22.92	22.51	20.67	38.45
	RB1#8	22.18	22.35	21.93		
	RB1#14	22.26	22.85	21.99		
	RB6#0	21.30	21.54	21.52		
	RB6#9	21.22	21.63	21.39		
	RB15#0	21.21	21.61	21.47		
5MHz QPSK	RB1#0	23.04	23.53	23.32	21.38	38.45
	RB1#13	23.02	23.34	23.17		
	RB1#24	23.24	23.63	23.23		
	RB15#0	22.06	22.64	22.43		
	RB15#10	22.12	22.56	22.32		
	RB25#0	22.21	22.58	22.42		
5MHz 16QAM	RB1#0	21.61	22.66	22.49	20.45	38.45
	RB1#13	21.23	22.42	21.80		
	RB1#24	21.48	22.70	21.89		
	RB15#0	21.11	21.56	21.55		
	RB15#10	21.18	21.29	21.20		
	RB25#0	21.28	21.44	21.38		
10MHz QPSK	RB1#0	23.38	23.56	23.43	21.35	38.45

	RB1#25	23.14	23.31	23.44			
	RB1#49	23.47	23.60	23.27			
	RB25#0	22.18	22.67	22.61			
	RB25#25	22.37	22.52	22.40			
	RB50#0	22.31	22.53	22.66			
10MHz 16QAM	RB1#0	22.60	22.63	22.53	20.41	38.45	
	RB1#25	22.31	22.55	22.53			
	RB1#49	22.66	22.62	22.36			
	RB25#0	21.06	21.51	21.80			
	RB25#25	21.28	21.37	21.59			
	RB50#0	21.24	21.57	21.51			
15MHz QPSK	RB1#0	23.26	23.63	23.66	21.43	38.45	
	RB1#38	23.30	23.29	23.33			
	RB1#74	23.64	23.68	23.52			
	RB36#0	22.32	22.71	22.68			
	RB36#39	22.58	22.63	22.57			
	RB75#0	22.48	22.61	22.62			
15MHz 16QAM	RB1#0	23.23	22.98	22.95	21.15	38.45	
	RB1#38	22.48	22.55	22.65			
	RB1#74	22.82	23.40	22.77			
	RB36#0	21.35	21.74	21.54			
	RB36#39	21.54	21.45	21.40			
	RB75#0	21.44	21.57	21.55			
Note: ERP=Conducted Power(dBm) - Cable loss(dB) + Antenna Gain(dBd)						<b>Result:</b>	<b>Pass</b>

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	
15MHz QPSK	RB1#0	4.38	4.12	4.03	13
	RB75#0	4.61	4.87	4.78	13
15MHz 16QAM	RB1#0	5.28	5.04	4.96	13
	RB75#0	5.62	5.80	5.59	13
<b>Result:</b>					<b>Pass</b>



<b>FCC §2.1049, §22.905, §90.209: Occupied Bandwidth</b>						
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	1.102	1.102	1.102	1.332	1.326	1.308
1.4MHz 16QAM	1.102	1.096	1.102	1.320	1.302	1.326
3MHz QPSK	2.695	2.695	2.683	2.952	2.952	2.964
3MHz 16QAM	2.695	2.683	2.683	2.988	2.964	2.964
5MHz QPSK	4.531	4.511	4.511	5.060	5.080	5.060
5MHz 16QAM	4.511	4.551	4.551	5.060	5.060	5.080
10MHz QPSK	8.942	8.942	8.981	9.720	9.800	9.800
10MHz 16QAM	8.942	8.942	8.981	9.680	9.760	9.800
15MHz QPSK	13.413	13.533	13.413	14.640	14.760	14.640
15MHz 16QAM	13.473	13.593	13.473	14.640	14.760	14.700

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

<b>FCC §2.1051, §22.917(a), §90.543: Spurious Emissions at Antenna Terminal</b>	
<b>Result:</b>	<b>Pass, Please refer to the test plots of Spurious Emissions at Antenna Terminal.</b>

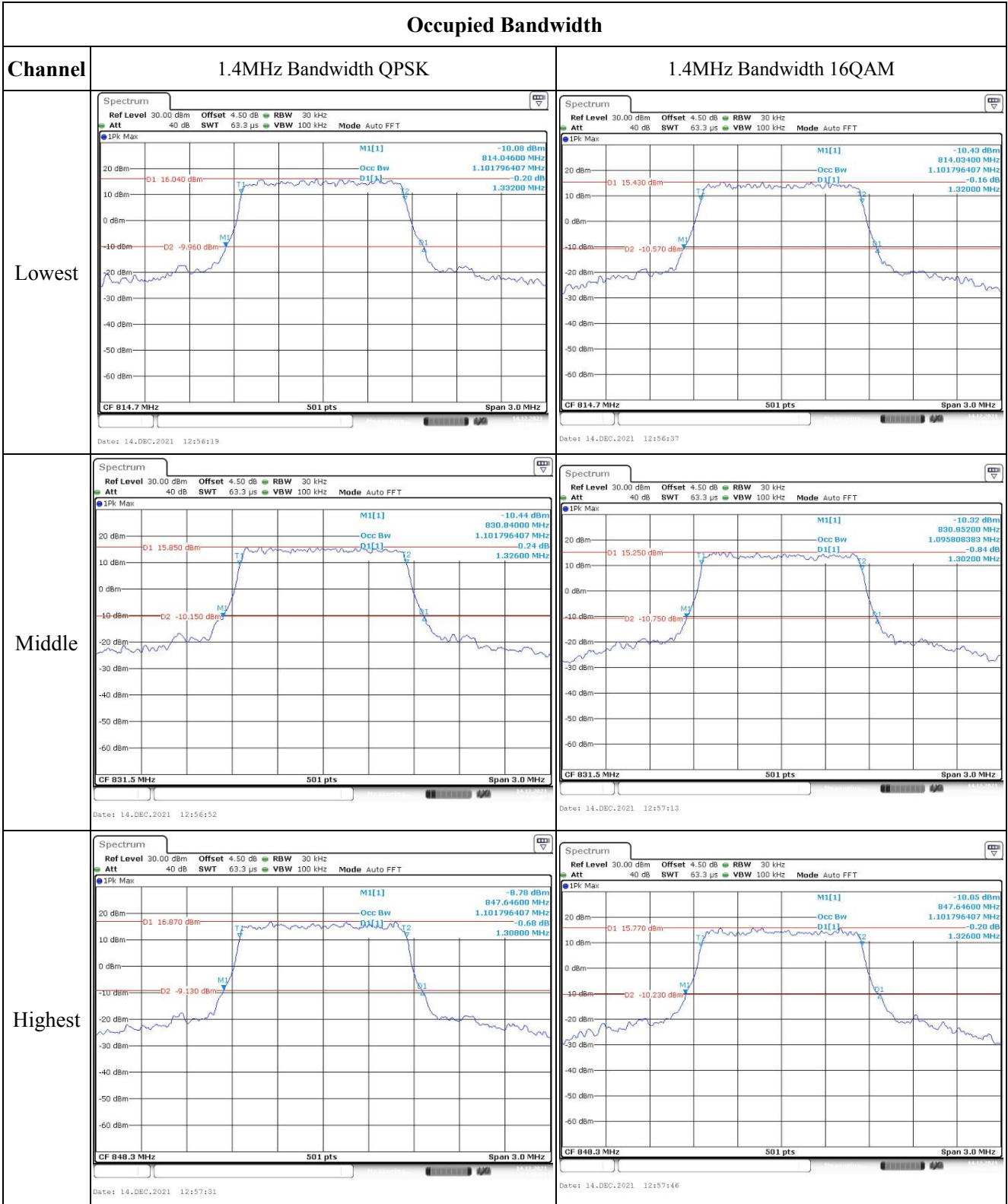
<b>FCC §2.1051, §22.917(a), §90.543: Out of band emission, Band Edge</b>	
<b>Result:</b>	<b>Pass, Please refer to the test plots of Out of band emission, Band Edge.</b>

<b>FCC §2.1055, §22.355, §90.213: Frequency Stability</b>					
Test Mode:	15 MHz QPSK		Test Channel:	831.5	MHz
Test Item	Temperature (°C)	Voltage (V <sub>DC</sub> )	Frequency Error		Limit
			(Hz)	(ppm)	(ppm)
Frequency Stability vs. Temperature	-30	3.7	-0.10	0.000	2.5
	-20	3.7	8.00	0.010	2.5
	-10	3.7	-7.44	-0.009	2.5
	0	3.7	6.91	0.008	2.5
	10	3.7	7.97	0.010	2.5
	20	3.7	6.02	0.007	2.5
	30	3.7	-9.56	-0.011	2.5
	40	3.7	7.94	0.010	2.5
Frequency Stability vs. Voltage	20	3.5	-6.63	-0.008	2.5
	20	4.2	5.70	0.007	2.5
<b>Result:</b>				<b>Pass</b>	

Test Mode:	15 MHz 16QAM		Test Channel:	831.5	MHz
Test Item	Temperature (°C)	Voltage (V <sub>DC</sub> )	Frequency Error		Limit
			(Hz)	(ppm)	(ppm)
Frequency Stability vs. Temperature	-30	3.7	-0.51	-0.001	2.5
	-20	3.7	-7.47	-0.009	2.5
	-10	3.7	8.36	0.010	2.5
	0	3.7	-5.08	-0.006	2.5
	10	3.7	9.49	0.011	2.5
	20	3.7	6.03	0.007	2.5
	30	3.7	5.01	0.006	2.5
	40	3.7	5.41	0.007	2.5
	50	3.7	6.35	0.008	2.5
Frequency Stability vs. Voltage	20	3.5	-8.15	-0.010	2.5
	20	4.2	5.94	0.007	2.5
<b>Result:</b>				<b>Pass</b>	

Test Plots:

Occupied Bandwidth



Occupied Bandwidth

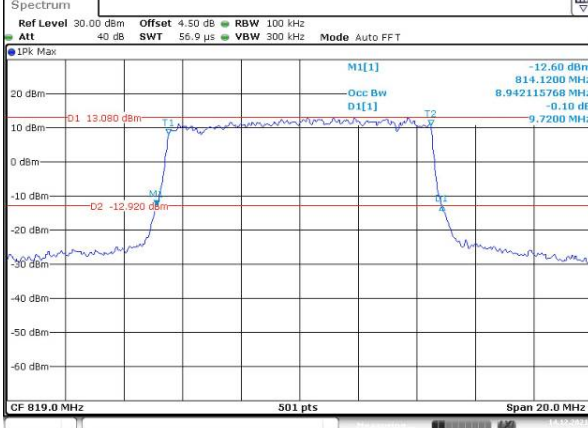
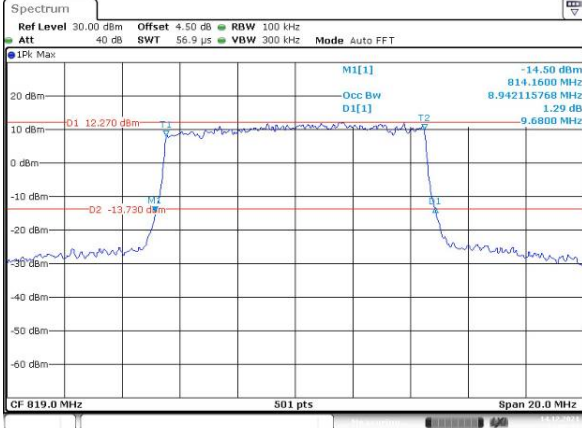
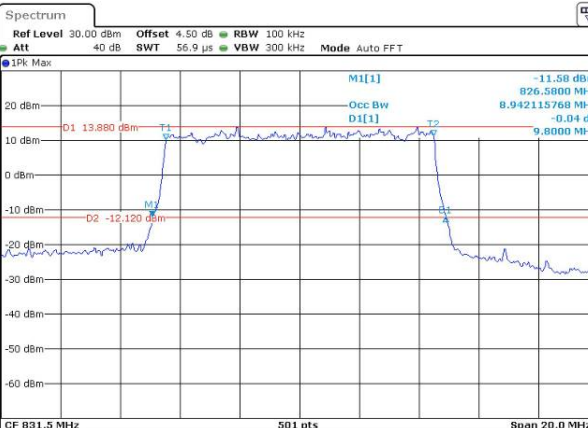
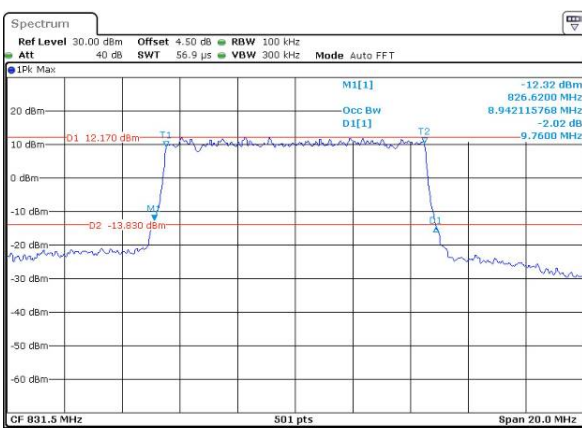
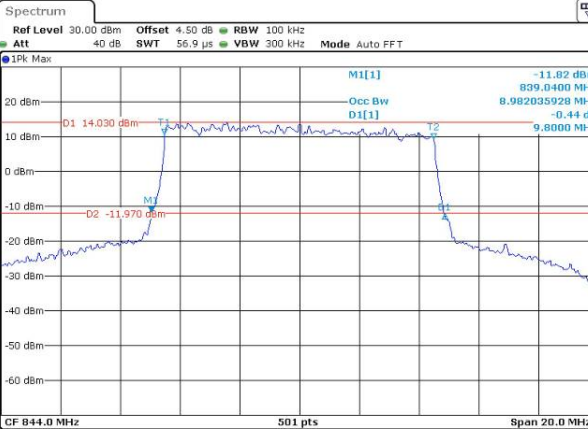
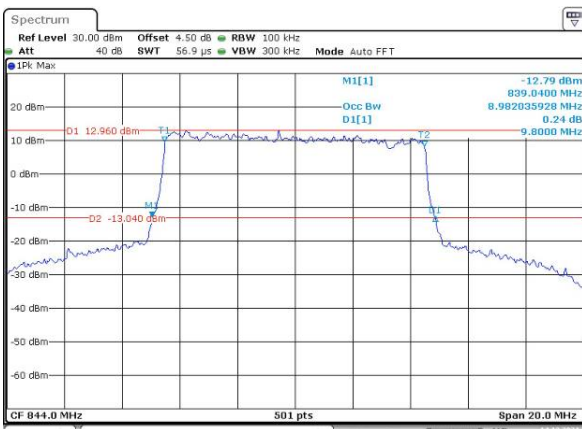
Channel	3MHz Bandwidth QPSK	3MHz Bandwidth 16QAM
Lowest	<p>Ref Level 30.00 dBm Offset 4.50 dB RBW 30 kHz Att 40 dB SWT 63.2 μs VBW 100 kHz Mode Auto FFT</p> <p>1Pk Max</p> <p>M1[1] -12.64 dBm Occ Bw 2.694610778 MHz D1[1] 0.77 dB</p> <p>D1 13.950 dBm D2 -12.050 dBm</p> <p>CF 815.5 MHz 501 pts Span 6.0 MHz</p> <p>Date: 14.DEC.2021 12:58:05</p>	<p>Ref Level 30.00 dBm Offset 4.50 dB RBW 30 kHz Att 40 dB SWT 63.2 μs VBW 100 kHz Mode Auto FFT</p> <p>1Pk Max</p> <p>M1[1] -14.28 dBm Occ Bw 2.694610778 MHz D1[1] -0.11 dB</p> <p>D1 11.990 dBm D2 -14.010 dBm</p> <p>CF 815.5 MHz 501 pts Span 6.0 MHz</p> <p>Date: 14.DEC.2021 12:58:19</p>
Middle	<p>Ref Level 30.00 dBm Offset 4.50 dB RBW 30 kHz Att 40 dB SWT 63.2 μs VBW 100 kHz Mode Auto FFT</p> <p>1Pk Max</p> <p>M1[1] -11.82 dBm Occ Bw 2.694610778 MHz D1[1] -0.66 dB</p> <p>D1 13.760 dBm D2 -12.240 dBm</p> <p>CF 831.5 MHz 501 pts Span 6.0 MHz</p> <p>Date: 14.DEC.2021 12:58:34</p>	<p>Ref Level 30.00 dBm Offset 4.50 dB RBW 30 kHz Att 40 dB SWT 63.2 μs VBW 100 kHz Mode Auto FFT</p> <p>1Pk Max</p> <p>M1[1] -14.14 dBm Occ Bw 2.682634731 MHz D1[1] -0.06 dB</p> <p>D1 12.340 dBm D2 -13.660 dBm</p> <p>CF 831.5 MHz 501 pts Span 6.0 MHz</p> <p>Date: 14.DEC.2021 12:58:49</p>
Highest	<p>Ref Level 30.00 dBm Offset 4.50 dB RBW 30 kHz Att 40 dB SWT 63.2 μs VBW 100 kHz Mode Auto FFT</p> <p>1Pk Max</p> <p>M1[1] -12.62 dBm Occ Bw 2.682634731 MHz D1[1] 0.49 dB</p> <p>D1 13.480 dBm D2 -12.520 dBm</p> <p>CF 847.5 MHz 501 pts Span 6.0 MHz</p> <p>Date: 14.DEC.2021 12:59:07</p>	<p>Ref Level 30.00 dBm Offset 4.50 dB RBW 30 kHz Att 40 dB SWT 63.2 μs VBW 100 kHz Mode Auto FFT</p> <p>1Pk Max</p> <p>M1[1] -12.96 dBm Occ Bw 2.682634731 MHz D1[1] 0.29 dB</p> <p>D1 13.310 dBm D2 -12.690 dBm</p> <p>CF 847.5 MHz 501 pts Span 6.0 MHz</p> <p>Date: 14.DEC.2021 12:59:22</p>

Occupied Bandwidth

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



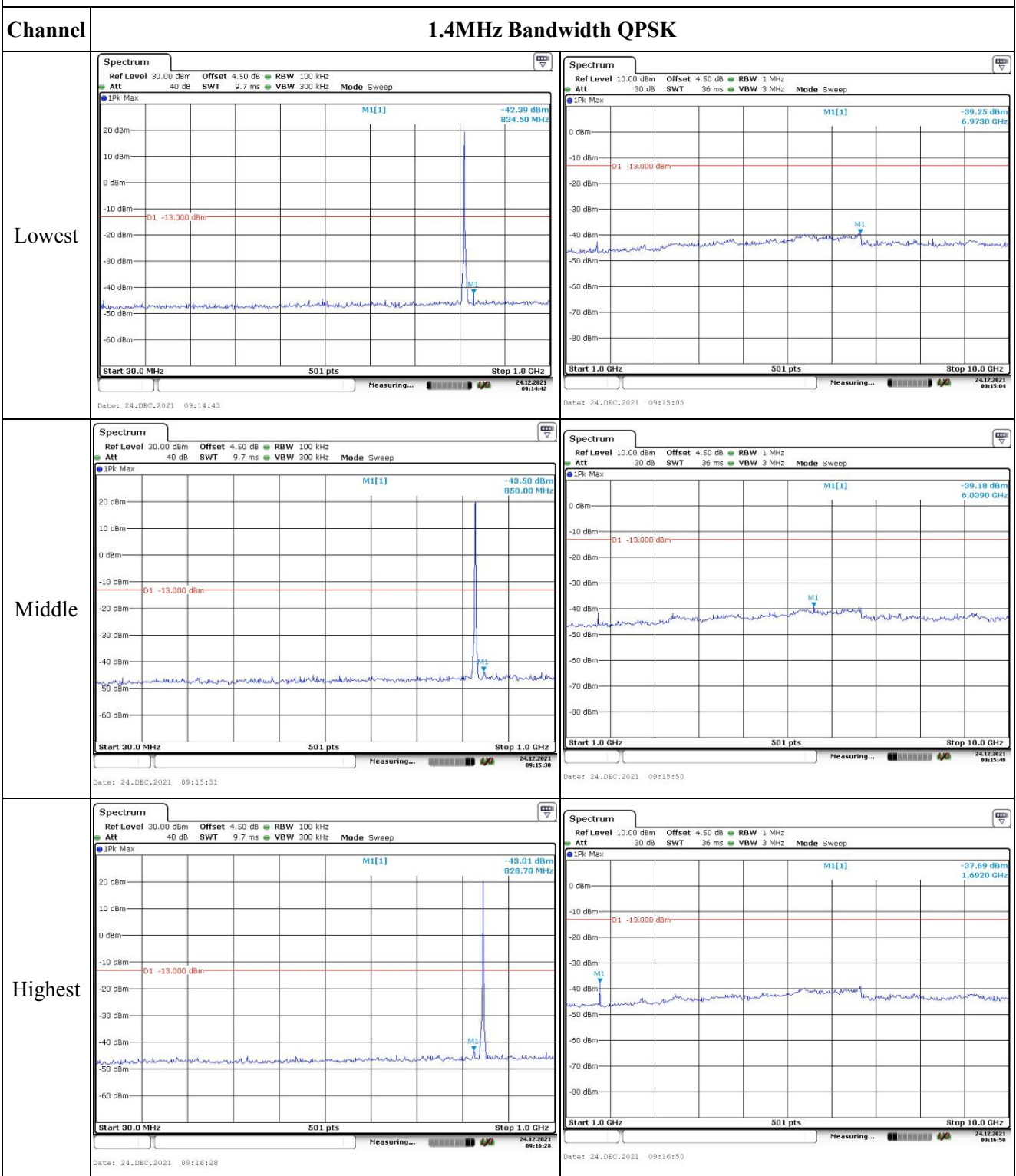
Occupied Bandwidth

Channel	10MHz Bandwidth QPSK	10MHz Bandwidth 16QAM
Lowest	 <p>Spectrum                      Ref Level 30.00 dBm Offset 4.50 dB RBW 100 kHz                      Att 40 dB SWT 56.9 μs VBW 300 kHz Mode Auto FFT                      1Pk Max                      M1[1] -12.60 dBm 814.1200 MHz                      Occ Bw 8.942115768 MHz                      D1[1] -0.10 dB 9.7200 MHz                      D1 13.080 dBm                      D2 -12.920 dBm                      CF 819.0 MHz 501 pts Span 20.0 MHz                      Date: 14.DEC.2021 13:02:14</p>	 <p>Spectrum                      Ref Level 30.00 dBm Offset 4.50 dB RBW 100 kHz                      Att 40 dB SWT 56.9 μs VBW 300 kHz Mode Auto FFT                      1Pk Max                      M1[1] -14.50 dBm 814.1600 MHz                      Occ Bw 8.942115768 MHz                      D1[1] 1.29 dB 9.6800 MHz                      D1 12.270 dBm                      D2 -13.730 dBm                      CF 819.0 MHz 501 pts Span 20.0 MHz                      Date: 14.DEC.2021 13:02:36</p>
Middle	 <p>Spectrum                      Ref Level 30.00 dBm Offset 4.50 dB RBW 100 kHz                      Att 40 dB SWT 56.9 μs VBW 300 kHz Mode Auto FFT                      1Pk Max                      M1[1] -11.58 dBm 826.5800 MHz                      Occ Bw 8.942115768 MHz                      D1[1] -0.04 dB 9.8000 MHz                      D1 13.880 dBm                      D2 -12.120 dBm                      CF 831.5 MHz 501 pts Span 20.0 MHz                      Date: 14.DEC.2021 13:03:02</p>	 <p>Spectrum                      Ref Level 30.00 dBm Offset 4.50 dB RBW 100 kHz                      Att 40 dB SWT 56.9 μs VBW 300 kHz Mode Auto FFT                      1Pk Max                      M1[1] -12.32 dBm 826.6200 MHz                      Occ Bw 8.942115768 MHz                      D1[1] -2.02 dB 9.7600 MHz                      D1 12.170 dBm                      D2 -13.830 dBm                      CF 831.5 MHz 501 pts Span 20.0 MHz                      Date: 14.DEC.2021 13:03:24</p>
Highest	 <p>Spectrum                      Ref Level 30.00 dBm Offset 4.50 dB RBW 100 kHz                      Att 40 dB SWT 56.9 μs VBW 300 kHz Mode Auto FFT                      1Pk Max                      M1[1] -11.92 dBm 839.0400 MHz                      Occ Bw 8.982035928 MHz                      D1[1] -0.44 dB 9.8000 MHz                      D1 14.030 dBm                      D2 -11.970 dBm                      CF 844.0 MHz 501 pts Span 20.0 MHz                      Date: 14.DEC.2021 13:03:53</p>	 <p>Spectrum                      Ref Level 30.00 dBm Offset 4.50 dB RBW 100 kHz                      Att 40 dB SWT 56.9 μs VBW 300 kHz Mode Auto FFT                      1Pk Max                      M1[1] -12.79 dBm 839.0400 MHz                      Occ Bw 8.982035928 MHz                      D1[1] 0.24 dB 9.8000 MHz                      D1 12.960 dBm                      D2 -13.040 dBm                      CF 844.0 MHz 501 pts Span 20.0 MHz                      Date: 14.DEC.2021 13:04:17</p>

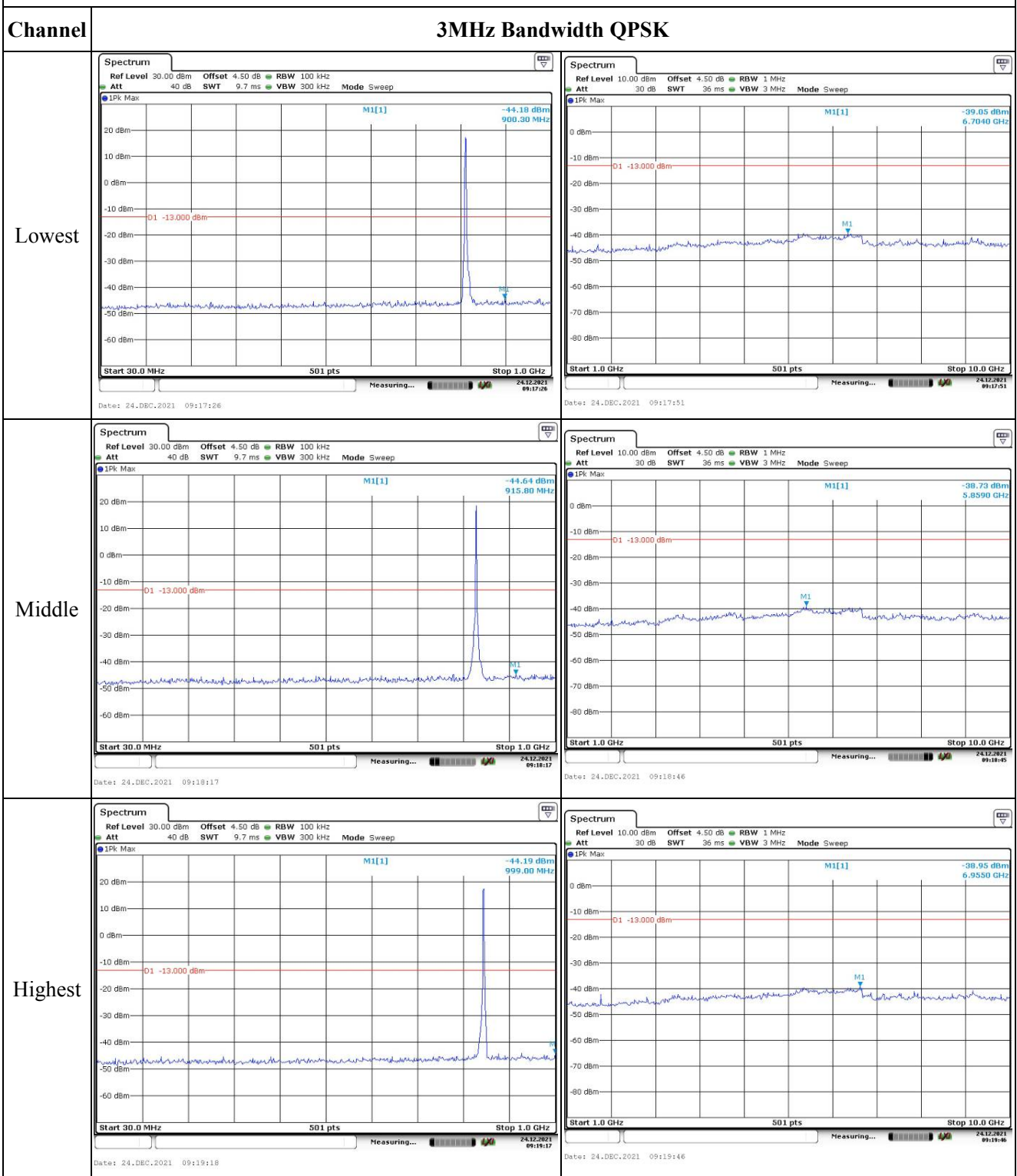
Occupied Bandwidth

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

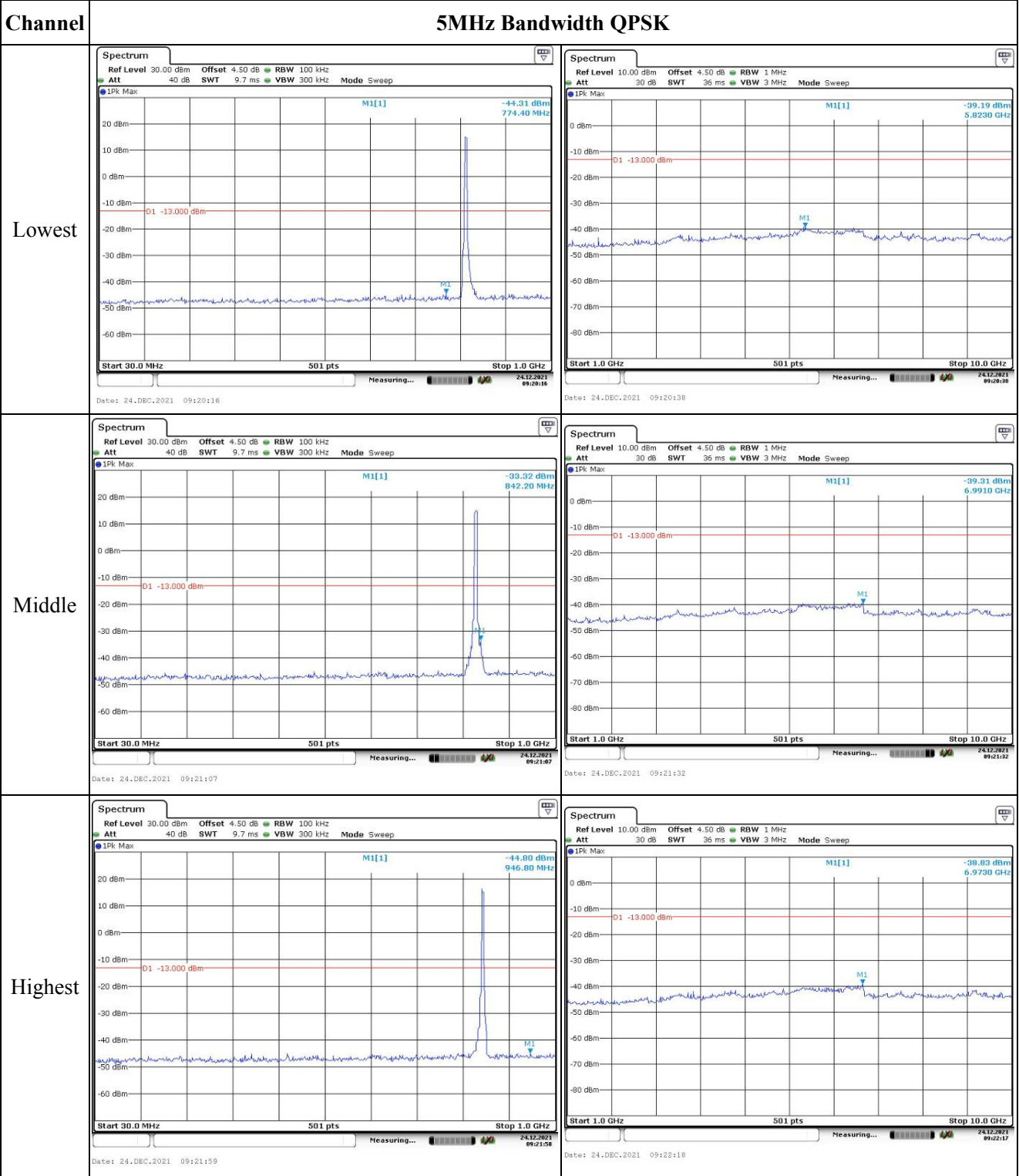
Spurious Emissions at Antenna Terminal



### Spurious Emissions at Antenna Terminal



Spurious Emissions at Antenna Terminal





Spurious Emissions at Antenna Terminal

