

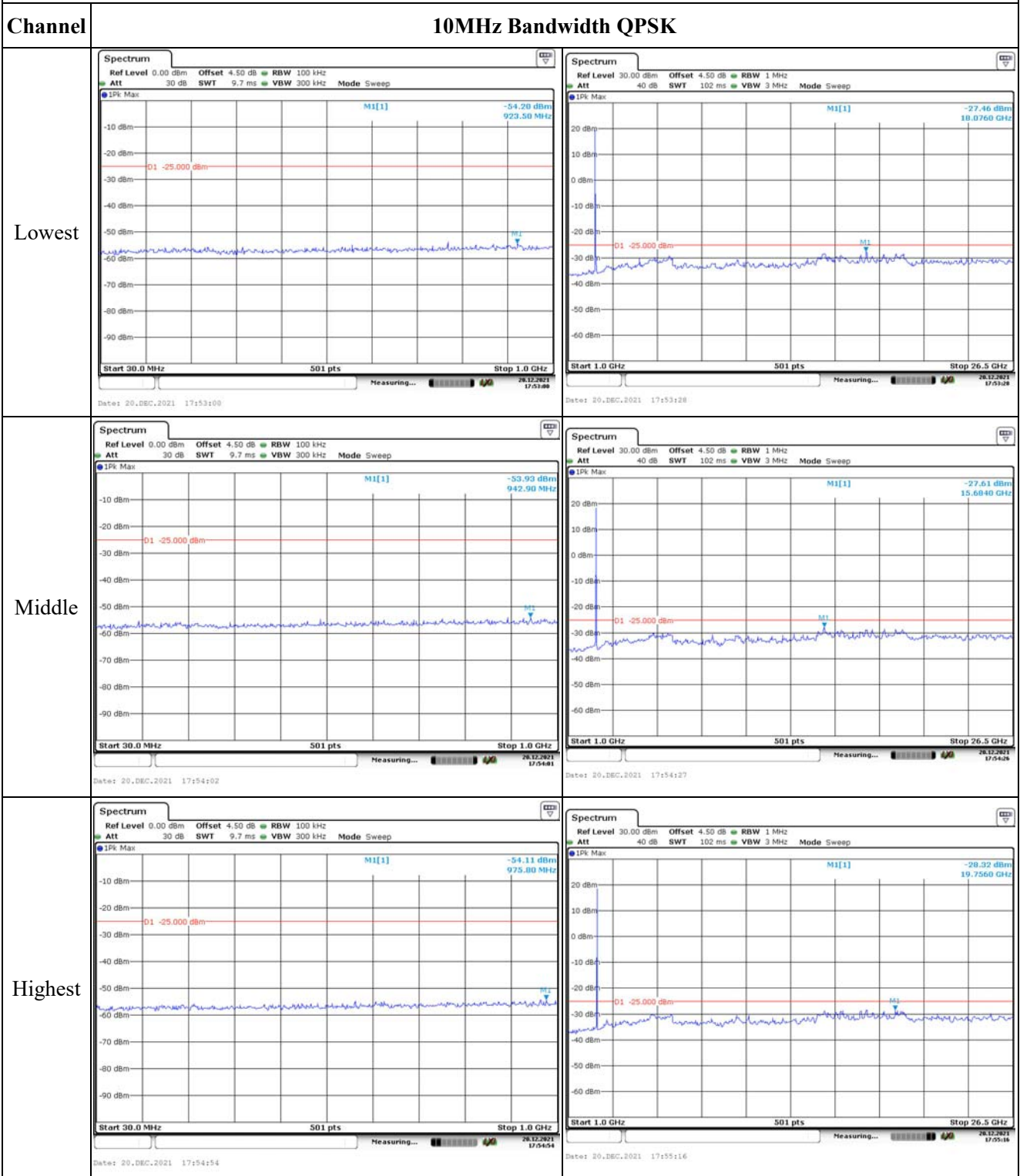
Occupied Bandwidth

Channel	20MHz Bandwidth QPSK	20MHz Bandwidth 16QAM
Lowest		
Middle		
Highest		

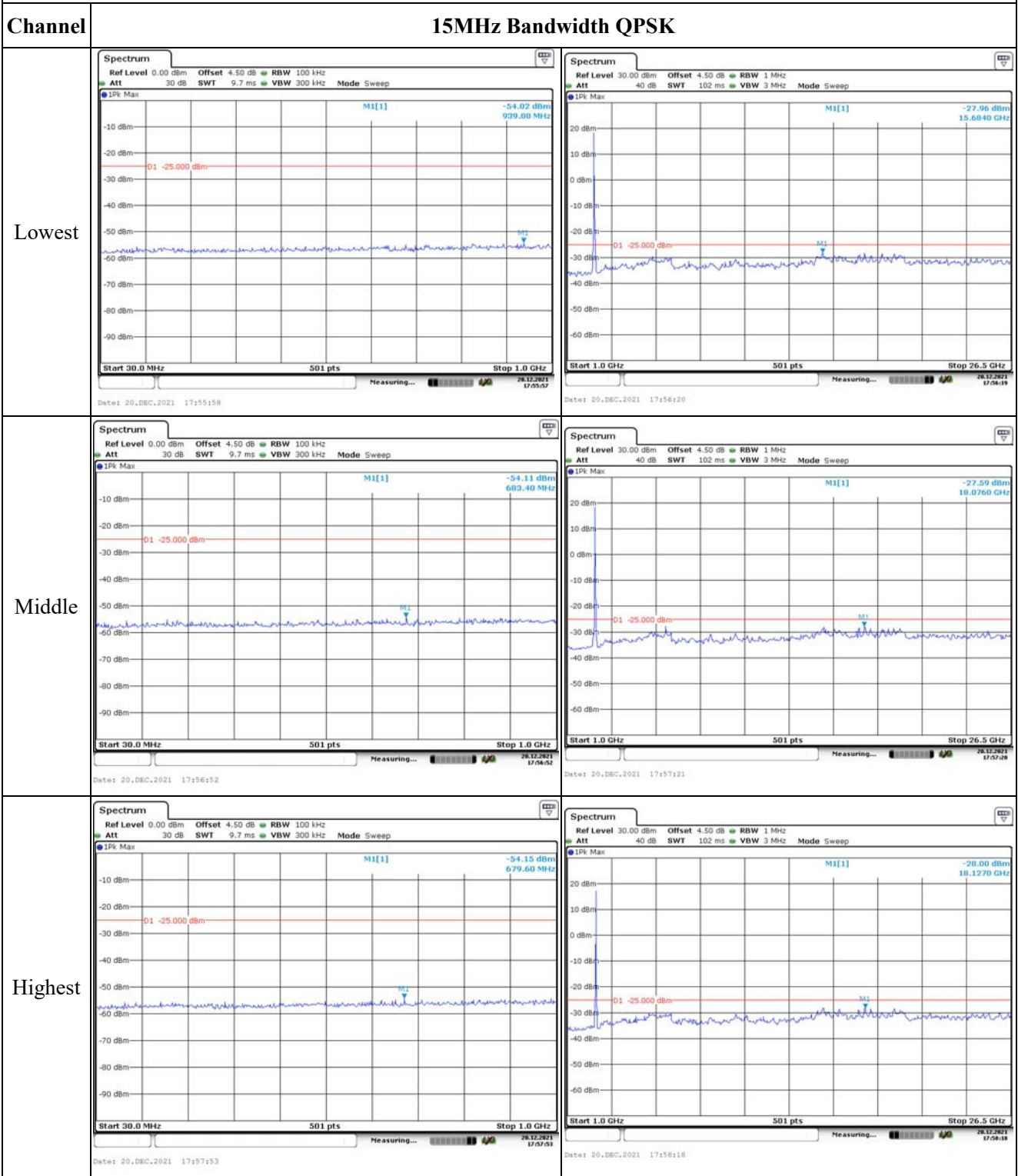
Spurious Emissions at Antenna Terminal

Channel	5MHz Bandwidth QPSK	
Lowest	<p>Spectrum plot showing spurious emissions for the lowest channel. The plot covers a frequency range from 30.0 MHz to 1.0 GHz. The y-axis represents power density in dBm, ranging from -90 to 0. A red horizontal line indicates a reference level at -25.000 dBm. A significant peak is observed at 973.90 MHz with a power level of -53.56 dBm. The plot includes parameters: Ref Level 0.00 dBm, Offset 4.50 dB, RBW 100 kHz, Att 30 dB, SWT 9.7 ms, VBW 300 kHz, Mode Sweep. The date is 20.DEC.2021 17:50:25.</p>	<p>Spectrum plot showing spurious emissions for the lowest channel. The plot covers a frequency range from 1.0 GHz to 26.5 GHz. The y-axis represents power density in dBm, ranging from -60 to 20. A red horizontal line indicates a reference level at -25.000 dBm. A significant peak is observed at 15.6390 GHz with a power level of -28.02 dBm. The plot includes parameters: Ref Level 30.00 dBm, Offset 4.50 dB, RBW 1 MHz, Att 40 dB, SWT 102 ms, VBW 3 MHz, Mode Sweep. The date is 20.DEC.2021 17:50:50.</p>
Middle	<p>Spectrum plot showing spurious emissions for the middle channel. The plot covers a frequency range from 30.0 MHz to 1.0 GHz. The y-axis represents power density in dBm, ranging from -90 to 0. A red horizontal line indicates a reference level at -25.000 dBm. A significant peak is observed at 882.90 MHz with a power level of -54.70 dBm. The plot includes parameters: Ref Level 0.00 dBm, Offset 4.50 dB, RBW 100 kHz, Att 30 dB, SWT 9.7 ms, VBW 300 kHz, Mode Sweep. The date is 20.DEC.2021 17:51:13.</p>	<p>Spectrum plot showing spurious emissions for the middle channel. The plot covers a frequency range from 1.0 GHz to 26.5 GHz. The y-axis represents power density in dBm, ranging from -60 to 20. A red horizontal line indicates a reference level at -25.000 dBm. A significant peak is observed at 18.0760 GHz with a power level of -28.01 dBm. The plot includes parameters: Ref Level 30.00 dBm, Offset 4.50 dB, RBW 1 MHz, Att 40 dB, SWT 102 ms, VBW 3 MHz, Mode Sweep. The date is 20.DEC.2021 17:51:32.</p>
Highest	<p>Spectrum plot showing spurious emissions for the highest channel. The plot covers a frequency range from 30.0 MHz to 1.0 GHz. The y-axis represents power density in dBm, ranging from -90 to 0. A red horizontal line indicates a reference level at -25.000 dBm. A significant peak is observed at 828.70 MHz with a power level of -53.99 dBm. The plot includes parameters: Ref Level 0.00 dBm, Offset 4.50 dB, RBW 100 kHz, Att 30 dB, SWT 9.7 ms, VBW 300 kHz, Mode Sweep. The date is 20.DEC.2021 17:52:04.</p>	<p>Spectrum plot showing spurious emissions for the highest channel. The plot covers a frequency range from 1.0 GHz to 26.5 GHz. The y-axis represents power density in dBm, ranging from -60 to 20. A red horizontal line indicates a reference level at -25.000 dBm. A significant peak is observed at 15.6840 GHz with a power level of -27.43 dBm. The plot includes parameters: Ref Level 30.00 dBm, Offset 4.50 dB, RBW 1 MHz, Att 40 dB, SWT 102 ms, VBW 3 MHz, Mode Sweep. The date is 20.DEC.2021 17:52:26.</p>

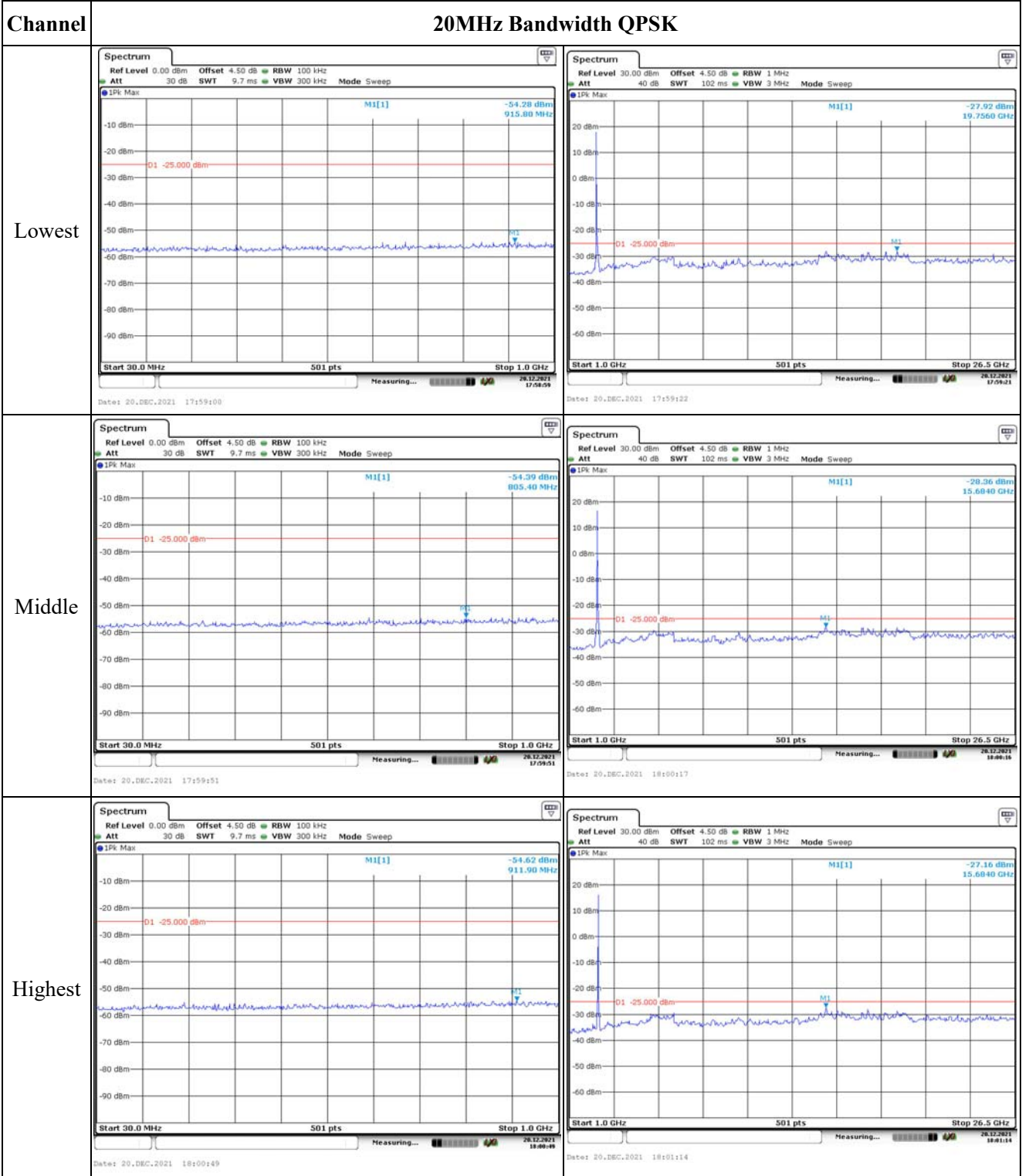
Spurious Emissions at Antenna Terminal



### Spurious Emissions at Antenna Terminal



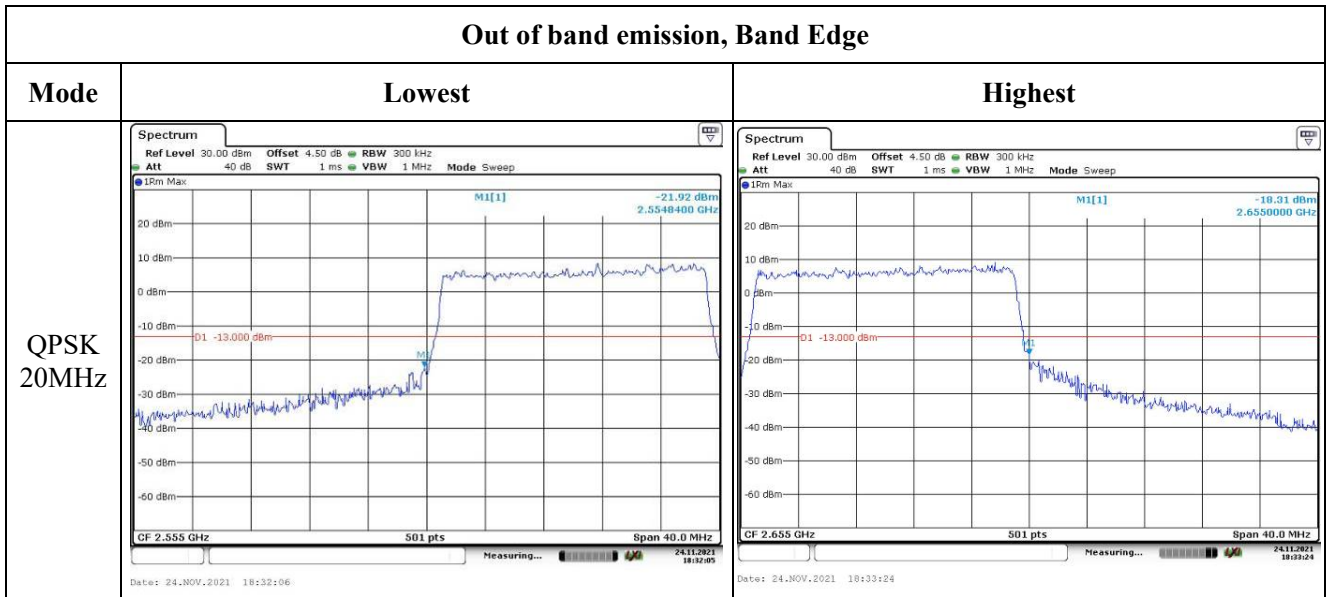
Spurious Emissions at Antenna Terminal



Out of band emission, Band Edge

Mode	Lowest	Highest
QPSK 5MHz	<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] -15.62 dBm 2.5549900 GHz D1 -13.000 dBm CF 2.555 GHz 501 pts Span 10.0 MHz Date: 24.NOV.2021 18:24:26</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] -14.77 dBm 2.6550000 GHz D1 -13.000 dBm CF 2.655 GHz 501 pts Span 10.0 MHz Date: 24.NOV.2021 18:25:44</p>
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] -21.96 dBm 2.5548400 GHz D1 -13.000 dBm CF 2.555 GHz 501 pts Span 20.0 MHz Date: 24.NOV.2021 18:26:47</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] -20.50 dBm 2.6550000 GHz D1 -13.000 dBm CF 2.655 GHz 501 pts Span 20.0 MHz Date: 24.NOV.2021 18:28:15</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] -15.87 dBm 2.5549400 GHz D1 -13.000 dBm CF 2.555 GHz 501 pts Span 30.0 MHz Date: 24.NOV.2021 18:29:32</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] -17.91 dBm 2.6550000 GHz D1 -13.000 dBm CF 2.655 GHz 501 pts Span 30.0 MHz Date: 24.NOV.2021 18:30:41</p>

Out of band emission, Band Edge

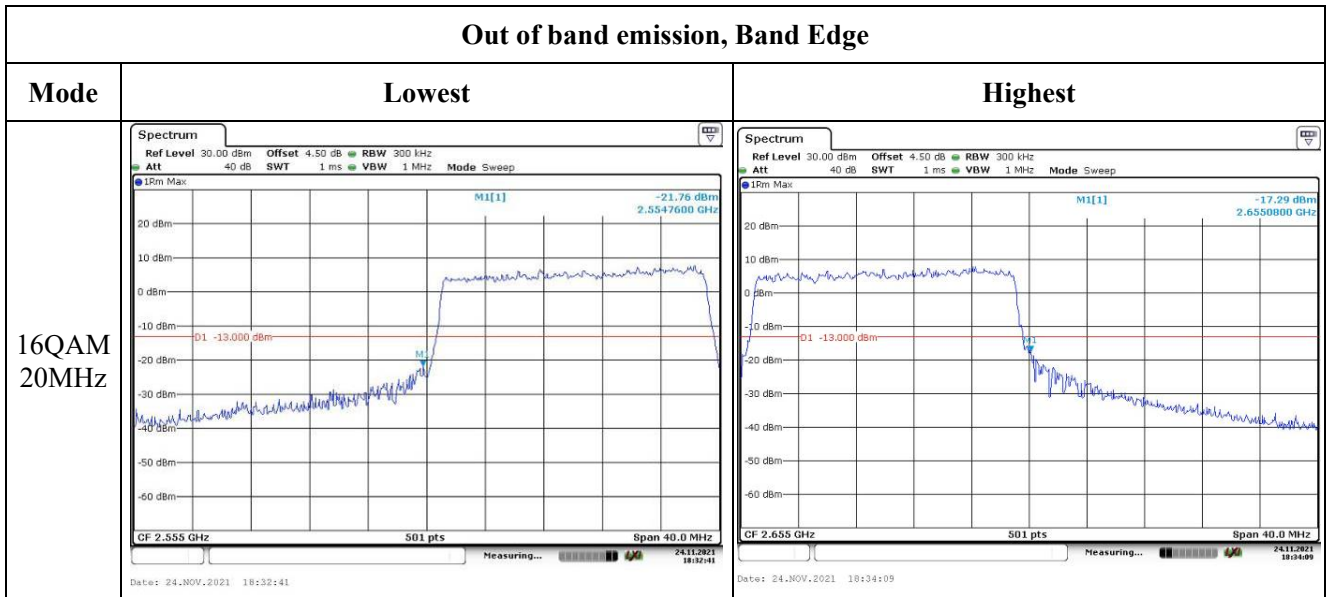


Out of band emission, Band Edge

Mode	Lowest	Highest
16QAM 5MHz	<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] -22.42 dBm 2.5550000 GHz D1 -13.000 dBm CF 2.555 GHz 501 pts Span 10.0 MHz Date: 24.NOV.2021 18:25:01</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] -18.38 dBm 2.6550000 GHz D1 -13.000 dBm CF 2.655 GHz 501 pts Span 10.0 MHz Date: 24.NOV.2021 18:26:13</p>
16QAM 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] -25.70 dBm 2.5549600 GHz D1 -13.000 dBm CF 2.555 GHz 501 pts Span 20.0 MHz Date: 24.NOV.2021 18:27:31</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] -26.43 dBm 2.6550000 GHz D1 -13.000 dBm CF 2.655 GHz 501 pts Span 20.0 MHz Date: 24.NOV.2021 18:28:51</p>
16QAM 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] -19.24 dBm 2.5550000 GHz D1 -13.000 dBm CF 2.555 GHz 501 pts Span 30.0 MHz Date: 24.NOV.2021 18:30:04</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] -16.74 dBm 2.6550000 GHz D1 -13.000 dBm CF 2.655 GHz 501 pts Span 30.0 MHz Date: 24.NOV.2021 18:31:20</p>



Out of band emission, Band Edge



**4.13 Antenna Port Test Data and Results for LTE Band 66:**

Serial Number:	CR21110014-RF-S1	Test Date:	2021/11/24
Test Site:	RF	Test Mode:	Transmitting
Tester:	LE Qiao	Test Result:	Pass

**Environmental Conditions:**

Temperature: (°C)	22.1	Relative Humidity: (%)	41	ATM Pressure: (kPa)	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	FSV40	101474	2021/7/22	2022/7/21
zhuoxiang	Coaxial Cable	SMA-178	211001	Each time	N/A
Mini-Circuits	DC Block	BLK-18-S+	1554403	Each time	N/A
Weinschel	Coaxial Attenuators	53-20-34	LN751	Each time	N/A
R&S	Wideband Radio Communication Tester	CMW500	149218	2021/7/22	2022/7/21
BACL	TEMP&HUMI Test Chamber	BTH-150	30026	2021/7/22	2022/7/22
UNI-T	Multimeter	UT39A+	C210582554	2021/9/30	2022/9/30
E-Microwave	Two-way 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 66▲:**

Antenna Gain (dBi):	1	Cable Loss (dB):	0
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	1710.7	1745	1779.3
3MHz	1711.5	1745	1778.5
5MHz	1712.5	1745	1777.5
10MHz	1715	1745	1775
15MHz	1717.5	1745	1772.5
20MHz	1720	1745	1770

**Test Data:**

<b>FCC§2.1046;§ 27.50(d)(4)</b>						
<b>RF Output Power:</b>						
Test Bandwidth & Modulation	Resource Block & RB offset	Conducted Average Output Power(dBm)			Maximum EIRP (dBm)	EIRP Limit (dBm)
		Lowest Channel	Middle Channel	Highest Channel		
1.4MHz QPSK	RB1#0	21.34	21.21	20.70	22.49	30
	RB1#3	21.31	21.19	20.70		
	RB1#5	21.32	21.17	20.68		
	RB3#0	21.49	21.16	20.83		
	RB3#3	21.47	21.01	20.87		
	RB6#0	20.37	19.98	19.88		
1.4MHz 16QAM	RB1#0	20.17	20.95	20.53	21.96	30
	RB1#3	20.14	20.96	20.51		
	RB1#5	20.20	20.91	20.54		
	RB3#0	20.57	20.29	19.75		
	RB3#3	20.55	20.28	19.76		
	RB6#0	19.71	19.17	19.89		
3MHz QPSK	RB1#0	21.33	21.06	20.50	22.33	30
	RB1#8	21.23	21.03	20.45		
	RB1#14	21.25	21.06	20.43		
	RB6#0	20.33	19.89	19.60		
	RB6#9	20.32	19.80	19.55		
	RB15#0	20.35	19.88	19.66		
3MHz 16QAM	RB1#0	21.16	20.11	20.05	22.16	30
	RB1#8	21.11	20.04	20.11		
	RB1#14	21.08	20.00	19.97		
	RB6#0	19.42	19.29	19.98		
	RB6#9	19.39	19.27	19.96		
	RB15#0	19.38	19.08	19.96		
5MHz QPSK	RB1#0	21.17	21.01	20.66	22.19	30
	RB1#13	21.13	21.03	20.59		
	RB1#24	21.19	21.19	20.54		
	RB15#0	20.18	19.92	19.65		
	RB15#10	20.19	19.85	19.56		
	RB25#0	20.17	19.90	19.70		
5MHz 16QAM	RB1#0	19.56	20.10	19.37	21.1	30
	RB1#13	19.46	20.09	19.42		
	RB1#24	19.40	20.05	19.42		
	RB15#0	19.51	19.96	19.81		
	RB15#10	19.40	19.95	19.79		
	RB25#0	19.51	19.98	19.71		

10MHz QPSK	RB1#0	21.24	20.80	20.74	22.24	30
	RB1#25	21.15	20.88	20.66		
	RB1#49	21.13	20.86	20.68		
	RB25#0	20.14	19.96	19.73		
	RB25#25	20.10	19.75	19.60		
	RB50#0	20.31	19.75	19.72		
10MHz 16QAM	RB1#0	20.75	20.55	19.23	21.75	30
	RB1#25	20.65	20.53	19.22		
	RB1#49	20.58	20.54	19.56		
	RB25#0	19.38	19.14	19.01		
	RB25#25	19.25	19.09	19.02		
	RB50#0	19.33	19.11	18.90		
15MHz QPSK	RB1#0	21.16	20.80	20.72	22.16	30
	RB1#38	21.06	20.74	20.70		
	RB1#74	21.06	20.79	20.68		
	RB36#0	20.20	19.78	19.70		
	RB36#39	20.11	19.90	19.69		
	RB75#0	20.17	19.92	19.78		
15MHz 16QAM	RB1#0	20.66	20.55	20.17	21.66	30
	RB1#38	20.56	20.50	20.16		
	RB1#74	20.53	20.55	20.14		
	RB36#0	19.28	19.06	19.89		
	RB36#39	19.21	19.02	19.88		
	RB75#0	19.22	19.00	19.56		
20MHz QPSK	RB1#0	21.41	20.75	20.71	22.41	30
	RB1#50	21.33	20.70	20.82		
	RB1#99	21.30	20.79	20.78		
	RB50#0	20.16	19.95	19.74		
	RB50#50	20.17	19.92	19.79		
	RB100#0	20.17	19.88	19.65		
20MHz 16QAM	RB1#0	20.20	20.56	20.64	21.64	30
	RB1#50	20.17	20.44	20.48		
	RB1#99	20.10	20.53	20.42		
	RB50#0	19.36	19.99	19.98		
	RB50#50	19.98	19.98	19.89		
	RB100#0	19.22	19.56	19.90		

Note: EIRP=Conducted Power(dBm) - Cable loss(dB) + Antenna Gain(dBi)

**Result:**

**Pass**

<b>Peak-to-average Ratio(PAR)</b>					
Test Bandwidth & Modulation	Resource Block & RB offset	Peak-to-average Ratio(dB)			Limit (dB)
		Lowest Channel	Middle Channel	Highest Channel	
20MHz QPSK	RB1#0	5.04	3.51	4.32	13
	RB100#0	5.33	4.35	4.26	13
20MHz 16QAM	RB1#0	6.49	3.94	5.28	13
	RB100#0	6.14	5.30	5.30	13
<b>Result:</b>					<b>Pass</b>

<b>FCC §2.1049, §27.53: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	1.114	1.102	1.314	1.674	1.602
1.4MHz 16QAM	1.108	1.114	1.102	1.266	1.458	1.278
3MHz QPSK	2.707	2.707	2.707	3.000	3.024	3.036
3MHz 16QAM	2.695	2.695	2.695	3.012	3.012	3.036
5MHz QPSK	4.511	4.511	4.511	5.000	5.000	5.020
5MHz 16QAM	4.511	4.551	4.551	5.000	5.020	5.020
10MHz QPSK	8.981	8.942	8.942	9.720	9.880	9.760
10MHz 16QAM	8.981	8.942	8.942	9.880	9.840	9.760
15MHz QPSK	13.533	13.533	13.533	15.000	15.060	15.060
15MHz 16QAM	13.533	13.593	13.533	15.000	15.180	15.060
20MHz QPSK	18.044	18.044	17.964	19.760	19.680	19.600
20MHz 16QAM	17.964	18.124	17.964	19.760	19.920	19.840

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

<b>FCC §2.1051, § 27.53: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, § 27.53: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>

**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 <sub>DC</sub> )	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.7	1710.528	1710.00	1779.471	1780
	-20	3.7	1710.527	1710.00	1779.477	1780
	-10	3.7	1710.525	1710.00	1779.472	1780
	0	3.7	1710.524	1710.00	1779.473	1780
	10	3.7	1710.523	1710.00	1779.478	1780
	20	3.7	1710.529	1710.00	1779.471	1780
	30	3.7	1710.528	1710.00	1779.473	1780
	40	3.7	1710.525	1710.00	1779.472	1780
	50	3.7	1710.525	1710.00	1779.474	1780
Frequency Stability vs. Voltage	20	3.5	1710.526	1710.00	1779.475	1780
	20	4.2	1710.525	1710.00	1779.471	1780
					<b>Result:</b>	<b>Pass</b>

Test Mode:	20M 16QAM	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (°C)	Voltage (V <sub>DC</sub> )	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.7	1710.528	1710.00	1779.471	1780
	-20	3.7	1710.527	1710.00	1779.472	1780
	-10	3.7	1710.526	1710.00	1779.473	1780
	0	3.7	1710.521	1710.00	1779.474	1780
	10	3.7	1710.528	1710.00	1779.477	1780
	20	3.7	1710.529	1710.00	1779.471	1780
	30	3.7	1710.522	1710.00	1779.477	1780
	40	3.7	1710.527	1710.00	1779.475	1780
	50	3.7	1710.526	1710.00	1779.474	1780
Frequency Stability vs. Voltage	20	3.5	1710.527	1710.00	1779.473	1780
	20	4.2	1710.526	1710.00	1779.471	1780
					<b>Result:</b>	<b>Pass</b>

Test Plots:

Occupied Bandwidth

Channel	1.4MHz Bandwidth QPSK	1.4MHz Bandwidth 16QAM
Lowest	<p>                     Spectrum                      Ref Level 30.00 dBm Offset 4.50 dB RBW 30 kHz                      Att 40 dB SWT 1.1 ms VBW 100 kHz Mode Sweep                      1Pk Max                      M1[1] -15.00 dBm                      Occ Bw 1.71007000 GHz                      D1[1] 1.101796407 MHz                      D1 11.460 dBm                      D2 -14.540 dBm                      1.31400 MHz                      CF 1.7107 GHz 501 pts Span 3.0 MHz                      Date: 24.NOV.2021 19:31:56                 </p>	<p>                     Spectrum                      Ref Level 30.00 dBm Offset 4.50 dB RBW 30 kHz                      Att 40 dB SWT 1.1 ms VBW 100 kHz Mode Sweep                      1Pk Max                      M1[1] -14.84 dBm                      Occ Bw 1.71007000 GHz                      D1[1] 1.107784451 MHz                      D1 11.210 dBm                      D2 -14.790 dBm                      1.26600 MHz                      CF 1.7107 GHz 501 pts Span 3.0 MHz                      Date: 24.NOV.2021 19:32:16                 </p>
Middle	<p>                     Spectrum                      Ref Level 30.00 dBm Offset 4.50 dB RBW 30 kHz                      Att 40 dB SWT 1.1 ms VBW 100 kHz Mode Sweep                      1Pk Max                      M1[1] -12.47 dBm                      Occ Bw 1.74433400 GHz                      D1[1] 1.113772455 MHz                      D1 13.480 dBm                      D2 -13.520 dBm                      1.67400 MHz                      CF 1.745 GHz 501 pts Span 3.0 MHz                      Date: 24.NOV.2021 19:32:48                 </p>	<p>                     Spectrum                      Ref Level 30.00 dBm Offset 4.50 dB RBW 30 kHz                      Att 40 dB SWT 1.1 ms VBW 100 kHz Mode Sweep                      1Pk Max                      M1[1] -13.75 dBm                      Occ Bw 1.74482200 GHz                      D1[1] 1.113772455 MHz                      D1 12.100 dBm                      D2 -13.900 dBm                      1.45800 MHz                      CF 1.745 GHz 501 pts Span 3.0 MHz                      Date: 24.NOV.2021 19:33:06                 </p>
Highest	<p>                     Spectrum                      Ref Level 30.00 dBm Offset 4.50 dB RBW 30 kHz                      Att 40 dB SWT 1.1 ms VBW 100 kHz Mode Sweep                      1Pk Max                      M1[1] -12.64 dBm                      Occ Bw 1.77858600 GHz                      D1[1] 1.101796407 MHz                      D1 12.940 dBm                      D2 -13.060 dBm                      1.60200 MHz                      CF 1.7793 GHz 501 pts Span 3.0 MHz                      Date: 24.NOV.2021 19:33:30                 </p>	<p>                     Spectrum                      Ref Level 30.00 dBm Offset 4.50 dB RBW 30 kHz                      Att 40 dB SWT 1.1 ms VBW 100 kHz Mode Sweep                      1Pk Max                      M1[1] -13.22 dBm                      Occ Bw 1.77865200 GHz                      D1[1] 1.101796407 MHz                      D1 12.610 dBm                      D2 -13.390 dBm                      1.27800 MHz                      CF 1.7793 GHz 501 pts Span 3.0 MHz                      Date: 24.NOV.2021 19:33:51                 </p>

Occupied Bandwidth

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



Occupied Bandwidth

Channel	5MHz Bandwidth QPSK	5MHz Bandwidth 16QAM
Lowest	<p>Ref Level 30.00 dBm Offset 4.50 dB RBW 100 kHz Att 40 dB SWT 1 ms VBW 300 kHz Mode Sweep 1Pk Max M1[1] -14.17 dBm Occ Bw 4.510978044 MHz D1[1] -0.76 dB 5.0000 MHz CF 1.7125 GHz 501 pts Span 10.0 MHz Date: 24.NOV.2021 19:36:46</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 1Pk Max M1[1] -15.19 dBm Occ Bw 4.510978044 MHz D1[1] -0.73 dB 5.0000 MHz CF 1.7125 GHz 501 pts Span 10.0 MHz Date: 24.NOV.2021 19:37:22</p>
Middle	<p>Ref Level 30.00 dBm Offset 4.50 dB RBW 100 kHz Att 40 dB SWT 1 ms VBW 300 kHz Mode Sweep 1Pk Max M1[1] -14.58 dBm Occ Bw 4.510978044 MHz D1[1] 1.56 dB 5.0000 MHz CF 1.745 GHz 501 pts Span 10.0 MHz Date: 24.NOV.2021 19:37:43</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 1Pk Max M1[1] -14.49 dBm Occ Bw 4.550898204 MHz D1[1] 0.16 dB 5.0200 MHz CF 1.745 GHz 501 pts Span 10.0 MHz Date: 24.NOV.2021 19:38:10</p>
Highest	<p>Ref Level 30.00 dBm Offset 4.50 dB RBW 100 kHz Att 40 dB SWT 1 ms VBW 300 kHz Mode Sweep 1Pk Max M1[1] -14.53 dBm Occ Bw 4.510978044 MHz D1[1] 1.97 dB 5.0200 MHz CF 1.7775 GHz 501 pts Span 10.0 MHz Date: 24.NOV.2021 19:38:44</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 1Pk Max M1[1] -14.11 dBm Occ Bw 4.550898204 MHz D1[1] -0.84 dB 5.0200 MHz CF 1.7775 GHz 501 pts Span 10.0 MHz Date: 24.NOV.2021 19:39:14</p>

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	<p>Ref Level 30.00 dBm Offset 4.50 dB RBW 300 kHz Att 40 dB SWT 1 ms VBW 1 MHz Mode Sweep 1Pk Max -13.61 dBm M1[1] 1.7102400 GHz Occ Bw 18.043912176 MHz D1[1] -1.50 dB 11.660 dBm 19.7600 MHz CF 1.72 GHz 501 pts Span 40.0 MHz Date: 24.NOV.2021 19:47:02</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 1Pk Max -15.32 dBm M1[1] 1.7102400 GHz Occ Bw 17.964071856 MHz D1[1] -0.29 dB 10.600 dBm 19.7600 MHz CF 1.72 GHz 501 pts Span 40.0 MHz Date: 24.NOV.2021 19:47:02</p>
Middle	<p>Ref Level 30.00 dBm Offset 4.50 dB RBW 300 kHz Att 40 dB SWT 1 ms VBW 1 MHz Mode Sweep 1Pk Max -14.77 dBm M1[1] 1.7351600 GHz Occ Bw 18.043912176 MHz D1[1] 1.00 dB 11.590 dBm 19.6800 MHz CF 1.745 GHz 501 pts Span 40.0 MHz Date: 24.NOV.2021 19:47:57</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 1Pk Max -14.77 dBm M1[1] 1.7350000 GHz Occ Bw 18.123752495 MHz D1[1] 0.85 dB 11.030 dBm 19.9200 MHz CF 1.745 GHz 501 pts Span 40.0 MHz Date: 24.NOV.2021 19:48:20</p>
Highest	<p>Ref Level 30.00 dBm Offset 4.50 dB RBW 300 kHz Att 40 dB SWT 1 ms VBW 1 MHz Mode Sweep 1Pk Max -13.52 dBm M1[1] 1.7602400 GHz Occ Bw 17.964071856 MHz D1[1] 0.30 dB 12.570 dBm 19.6000 MHz CF 1.77 GHz 501 pts Span 40.0 MHz Date: 24.NOV.2021 19:48:51</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 1Pk Max -14.55 dBm M1[1] 1.7600000 GHz Occ Bw 17.964071856 MHz D1[1] -0.58 dB 11.400 dBm 19.8400 MHz CF 1.77 GHz 501 pts Span 40.0 MHz Date: 24.NOV.2021 19:49:21</p>

Spurious Emissions at Antenna Terminal

Channel	1.4MHz Bandwidth QPSK	
Lowest	<p>Ref Level 10.00 dBm Offset 4.50 dB RBW 100 kHz Att 30 dB SWT 9.7 ms VBW 300 kHz Mode Sweep</p> <p>1PK Max M1[1] -53.05 dBm 971.20 MHz</p> <p>Start 30.0 MHz 501 pts Stop 1.0 GHz</p> <p>Date: 24.NOV.2021 22:54:25</p>	<p>Ref Level 30.00 dBm Offset 4.50 dB RBW 1 MHz Att 40 dB SWT 76 ms VBW 3 MHz Mode Sweep</p> <p>1PK Max M1[1] -27.47 dBm 19.4120 GHz</p> <p>Start 1.0 GHz 501 pts Stop 20.0 GHz</p> <p>Date: 24.NOV.2021 22:54:47</p>
Middle	<p>Ref Level 10.00 dBm Offset 4.50 dB RBW 100 kHz Att 30 dB SWT 9.7 ms VBW 300 kHz Mode Sweep</p> <p>1PK Max M1[1] -53.23 dBm 811.20 MHz</p> <p>Start 30.0 MHz 501 pts Stop 1.0 GHz</p> <p>Date: 24.NOV.2021 22:55:22</p>	<p>Ref Level 30.00 dBm Offset 4.50 dB RBW 1 MHz Att 40 dB SWT 76 ms VBW 3 MHz Mode Sweep</p> <p>1PK Max M1[1] -27.47 dBm 15.7710 GHz</p> <p>Start 1.0 GHz 501 pts Stop 20.0 GHz</p> <p>Date: 24.NOV.2021 22:55:51</p>
Highest	<p>Ref Level 10.00 dBm Offset 4.50 dB RBW 100 kHz Att 30 dB SWT 9.7 ms VBW 300 kHz Mode Sweep</p> <p>1PK Max M1[1] -52.93 dBm 944.80 MHz</p> <p>Start 30.0 MHz 501 pts Stop 1.0 GHz</p> <p>Date: 24.NOV.2021 22:56:20</p>	<p>Ref Level 30.00 dBm Offset 4.50 dB RBW 1 MHz Att 40 dB SWT 76 ms VBW 3 MHz Mode Sweep</p> <p>1PK Max M1[1] -27.14 dBm 16.3780 GHz</p> <p>Start 1.0 GHz 501 pts Stop 20.0 GHz</p> <p>Date: 24.NOV.2021 22:56:39</p>

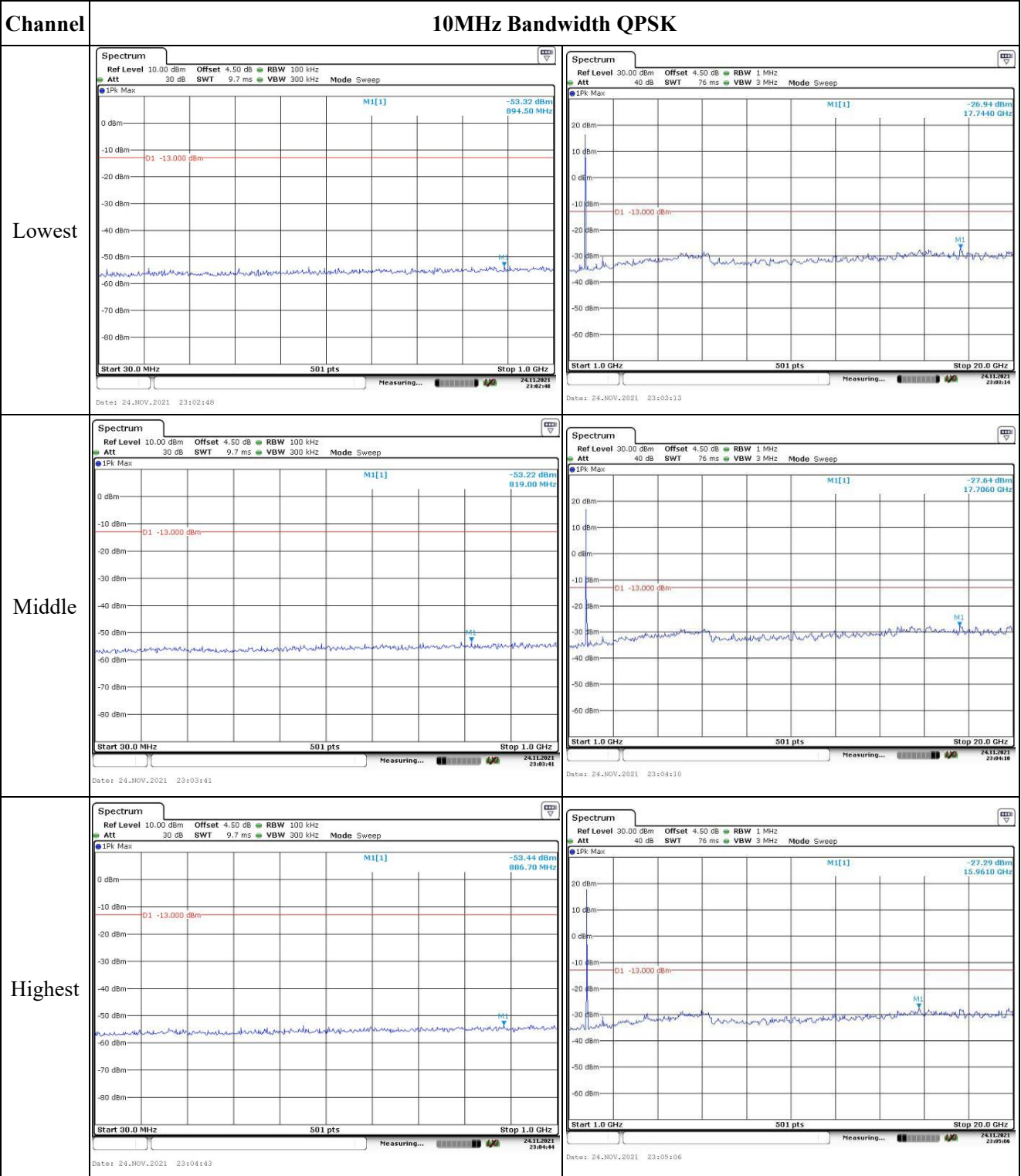
### Spurious Emissions at Antenna Terminal

Channel	3MHz Bandwidth QPSK	
Lowest	<p><b>Spectrum</b>                      Ref Level 10.00 dBm Offset 4.50 dB RBW 100 kHz                      Att 30 dB SWT 9.7 ms VBW 300 kHz Mode Sweep                      1Pk Max M1[1] -53.53 dBm 710.50 MHz                      -13.000 dBm                      Start 30.0 MHz 501 pts Stop 1.0 GHz                      Date: 24.NOV.2021 22:57:17</p>	<p><b>Spectrum</b>                      Ref Level 30.00 dBm Offset 4.50 dB RBW 1 MHz                      Att 40 dB SWT 76 ms VBW 3 MHz Mode Sweep                      1Pk Max M1[1] -27.09 dBm 15.0510 GHz                      -13.000 dBm                      Start 1.0 GHz 501 pts Stop 20.0 GHz                      Date: 24.NOV.2021 22:57:43</p>
Middle	<p><b>Spectrum</b>                      Ref Level 10.00 dBm Offset 4.50 dB RBW 100 kHz                      Att 30 dB SWT 9.7 ms VBW 300 kHz Mode Sweep                      1Pk Max M1[1] -52.99 dBm 950.60 MHz                      -13.000 dBm                      Start 30.0 MHz 501 pts Stop 1.0 GHz                      Date: 24.NOV.2021 22:58:15</p>	<p><b>Spectrum</b>                      Ref Level 30.00 dBm Offset 4.50 dB RBW 1 MHz                      Att 40 dB SWT 76 ms VBW 3 MHz Mode Sweep                      1Pk Max M1[1] -27.09 dBm 19.7160 GHz                      -13.000 dBm                      Start 1.0 GHz 501 pts Stop 20.0 GHz                      Date: 24.NOV.2021 22:58:43</p>
Highest	<p><b>Spectrum</b>                      Ref Level 10.00 dBm Offset 4.50 dB RBW 100 kHz                      Att 30 dB SWT 9.7 ms VBW 300 kHz Mode Sweep                      1Pk Max M1[1] -53.05 dBm 747.30 MHz                      -13.000 dBm                      Start 30.0 MHz 501 pts Stop 1.0 GHz                      Date: 24.NOV.2021 22:59:13</p>	<p><b>Spectrum</b>                      Ref Level 30.00 dBm Offset 4.50 dB RBW 1 MHz                      Att 40 dB SWT 76 ms VBW 3 MHz Mode Sweep                      1Pk Max M1[1] -27.60 dBm 15.6580 GHz                      -13.000 dBm                      Start 1.0 GHz 501 pts Stop 20.0 GHz                      Date: 24.NOV.2021 22:59:32</p>

### Spurious Emissions at Antenna Terminal

Channel	5MHz Bandwidth QPSK	
Lowest	<p>Ref Level 10.00 dBm Offset 4.50 dB RBW 100 kHz Att 30 dB SWT 9.7 ms VBW 300 kHz Mode Sweep</p> <p>1Pk Max M1[1] -53.25 dBm 900.50 MHz</p> <p>Start 30.0 MHz 501 pts Stop 1.0 GHz</p> <p>Date: 24.NOV.2021 23:00:02</p>	<p>Ref Level 30.00 dBm Offset 4.50 dB RBW 1 MHz Att 40 dB SWT 76 ms VBW 3 MHz Mode Sweep</p> <p>1Pk Max M1[1] -27.30 dBm 19.8670 GHz</p> <p>Start 1.0 GHz 501 pts Stop 20.0 GHz</p> <p>Date: 24.NOV.2021 23:00:30</p>
Middle	<p>Ref Level 10.00 dBm Offset 4.50 dB RBW 100 kHz Att 30 dB SWT 9.7 ms VBW 300 kHz Mode Sweep</p> <p>1Pk Max M1[1] -53.41 dBm 894.50 MHz</p> <p>Start 30.0 MHz 501 pts Stop 1.0 GHz</p> <p>Date: 24.NOV.2021 23:00:57</p>	<p>Ref Level 30.00 dBm Offset 4.50 dB RBW 1 MHz Att 40 dB SWT 76 ms VBW 3 MHz Mode Sweep</p> <p>1Pk Max M1[1] -27.29 dBm 17.0610 GHz</p> <p>Start 1.0 GHz 501 pts Stop 20.0 GHz</p> <p>Date: 24.NOV.2021 23:01:19</p>
Highest	<p>Ref Level 10.00 dBm Offset 4.50 dB RBW 100 kHz Att 30 dB SWT 9.7 ms VBW 300 kHz Mode Sweep</p> <p>1Pk Max M1[1] -44.87 dBm 890.60 MHz</p> <p>Start 30.0 MHz 501 pts Stop 1.0 GHz</p> <p>Date: 24.NOV.2021 23:01:55</p>	<p>Ref Level 30.00 dBm Offset 4.50 dB RBW 1 MHz Att 40 dB SWT 76 ms VBW 3 MHz Mode Sweep</p> <p>1Pk Max M1[1] -27.78 dBm 16.3780 GHz</p> <p>Start 1.0 GHz 501 pts Stop 20.0 GHz</p> <p>Date: 24.NOV.2021 23:02:14</p>

Spurious Emissions at Antenna Terminal



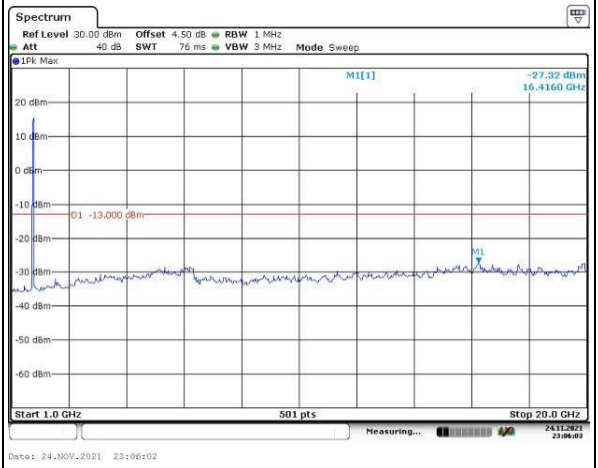
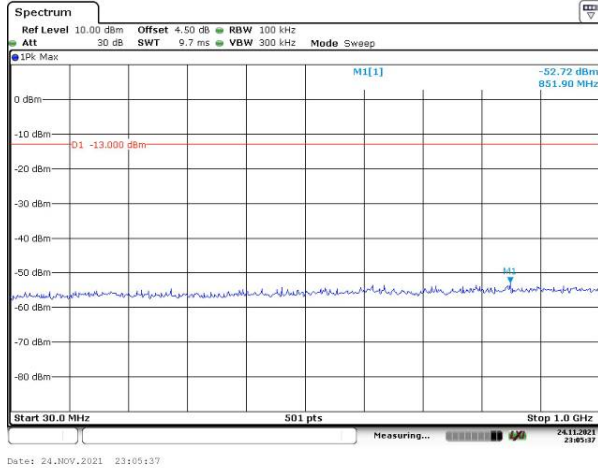


Spurious Emissions at Antenna Terminal

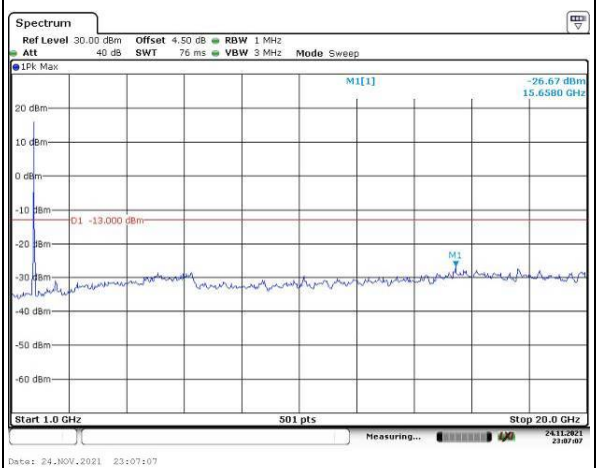
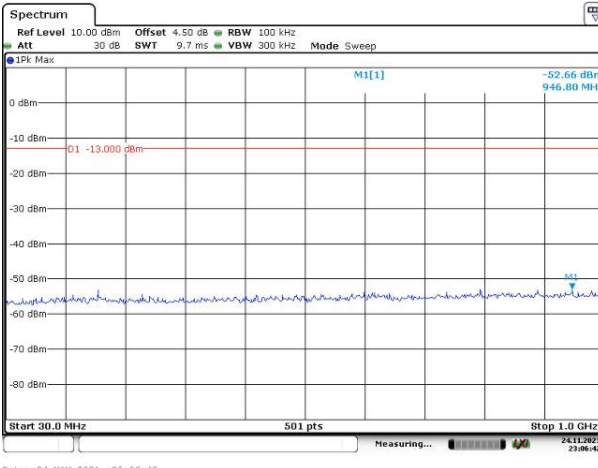
Channel

15MHz Bandwidth QPSK

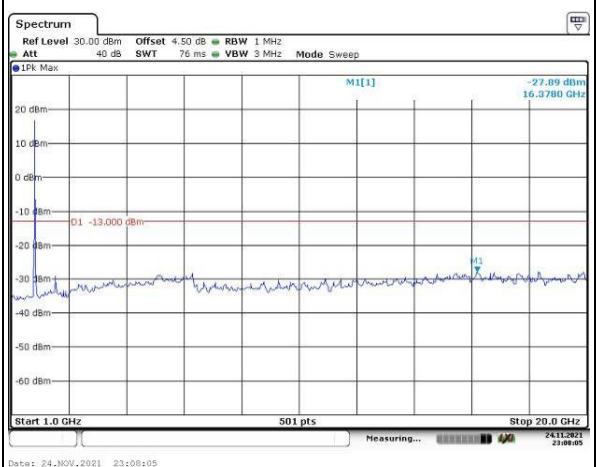
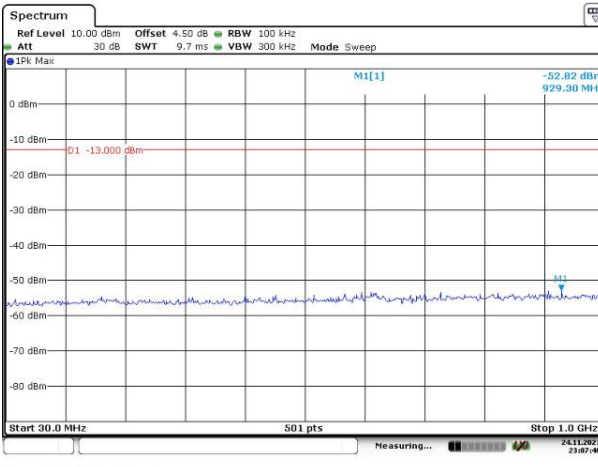
Lowest



Middle



Highest

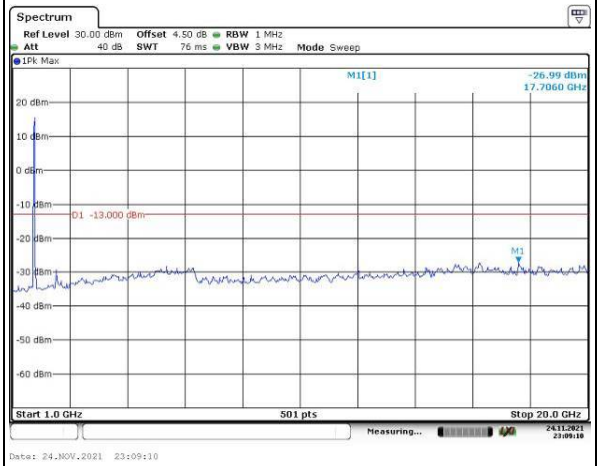
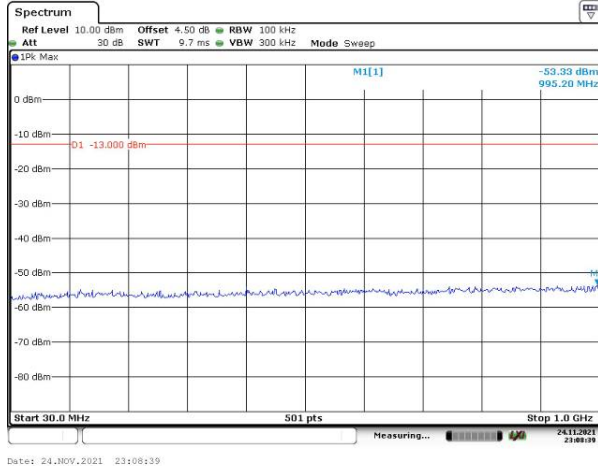


### Spurious Emissions at Antenna Terminal

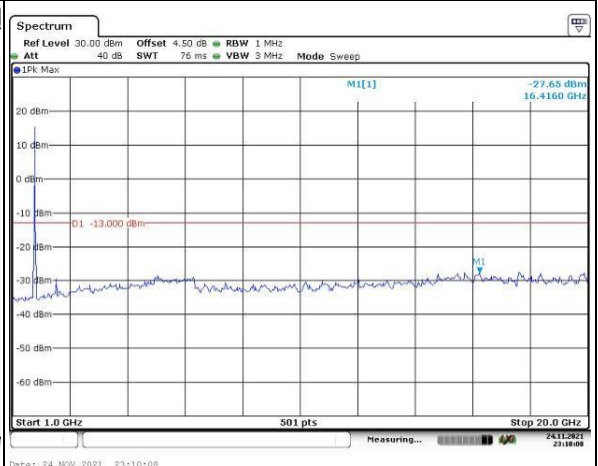
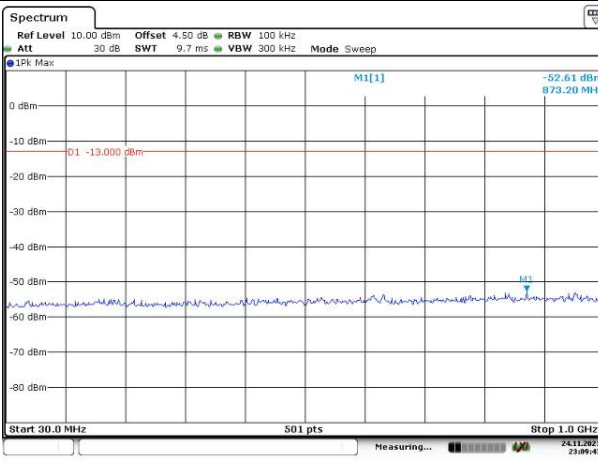
Channel

20MHz Bandwidth QPSK

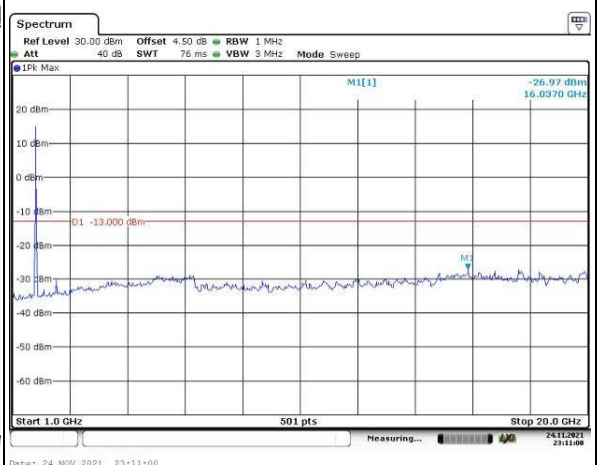
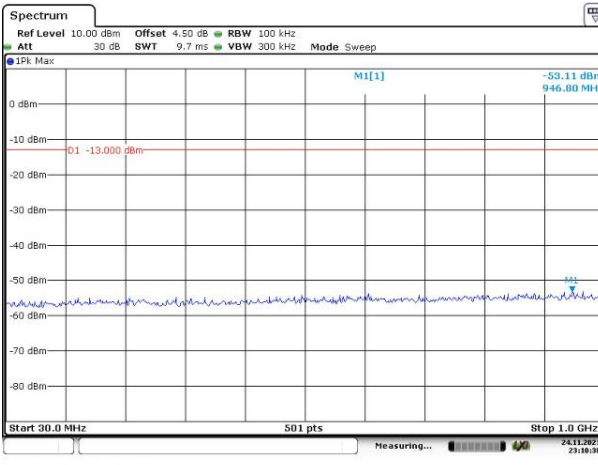
Lowest



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 1Fm Max M1[1] -27.85 dBm 1.70997010 GHz D1 -13.000 dBm CF 1.71 GHz 501 pts Span 3.0 MHz Date: 24.NOV.2021 19:01:07</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 1Fm Max M1[1] -15.21 dBm 1.78000000 GHz D1 -13.000 dBm CF 1.78 GHz 501 pts Span 3.0 MHz Date: 24.NOV.2021 19:01:55</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 1Fm Max M1[1] -17.16 dBm 1.71000000 GHz D1 -13.000 dBm CF 1.71 GHz 501 pts Span 6.0 MHz Date: 24.NOV.2021 19:02:43</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 1Fm Max M1[1] -16.86 dBm 1.78000000 GHz D1 -13.000 dBm CF 1.78 GHz 501 pts Span 6.0 MHz Date: 24.NOV.2021 19:03:36</p>
QPSK 5MHz	<p>Ref Level 30.00 dBm Offset 4.50 dB RBW 100 kHz Att 40 dB SWT 1 ms VBW 300 kHz Mode Sweep 1Fm Max M1[1] -16.34 dBm 1.71000000 GHz D1 -13.000 dBm CF 1.71 GHz 501 pts Span 10.0 MHz Date: 24.NOV.2021 19:04:33</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 1Fm Max M1[1] -14.98 dBm 1.78000000 GHz D1 -13.000 dBm CF 1.78 GHz 501 pts Span 10.0 MHz Date: 24.NOV.2021 19:05:32</p>