

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		

4.8 Antenna Port Test Data and Results for LTE Band 5:

Serial Number:	CR21090060-RF-S1/2	Test Date:	2021/9/29~2021/10/21
Test Site:	RF	Test Mode:	Transmitting
Tester:	Le qiao	Test Result:	Pass

Environmental Conditions:

Temperature: (°C)	25.9~28.1	Relative Humidity: (%)	51~60	ATM Pressure: (kPa)	100.2~100.4
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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
ZHAOXIN	DC Power Supply	RXN-6010D	21R60	N/A	N/A
R&S	Wideband Radio Communication Tester	CMW500	149218	2021/7/22	2022/7/21
Mini-Circuits	DC Block	BLK-18-S+	1554403	2021/8/8	2022/8/7
BACL	TEMP&HUMI Test Chamber	BTH-150	30026	2021/7/22	2022/7/22
UNI-T	Multimeter	UT39A+	C210582554	2021/8/30	2022/8/30
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 5▲:

Antenna Gain (dBi):	1	Antenna Gain (dBd):	-1.15	Cable Loss (dB):	0.2
Operation Voltage(V _{DC}):					
Lowest:	3.5	Normal:	3.8	Highest:	4.3

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	22.49	22.38	22.31	21.17	38.45
	RB1#3	22.41	22.45	22.33		
	RB1#5	22.4	22.41	22.34		
	RB3#0	22.52	22.49	22.41		
	RB3#3	22.41	22.48	22.43		
	RB6#0	21.41	21.67	21.32		
1.4MHz 16QAM	RB1#0	21.8	22.11	21.35	20.78	38.45
	RB1#3	21.87	22.12	21.04		
	RB1#5	21.84	22.13	21.08		
	RB3#0	21.37	21.49	21.82		
	RB3#3	21.25	21.4	21.37		
	RB6#0	20.49	20.6	20.92		
3MHz QPSK	RB1#0	22.32	22.41	22.39	21.13	38.45
	RB1#8	22.33	22.43	22.42		
	RB1#14	22.33	22.48	22.37		
	RB6#0	21.43	21.53	21.68		
	RB6#9	21.73	21.57	21.35		
	RB15#0	21.39	21.6	21.68		
3MHz 16QAM	RB1#0	21.43	22.09	21.33	20.79	38.45
	RB1#8	21.3	22.14	21.3		
	RB1#14	21.71	22.14	21.03		
	RB6#0	20.55	20.72	20.92		
	RB6#9	20.75	20.5	20.93		
	RB15#0	20.55	20.61	20.68		
5MHz QPSK	RB1#0	22.35	22.41	22.38	21.21	38.45
	RB1#13	22.31	22.56	22.29		
	RB1#24	22.26	22.41	22.33		
	RB15#0	21.4	21.39	21.37		
	RB15#10	21.64	21.59	21.73		
	RB25#0	21.62	21.61	21.77		
5MHz 16QAM	RB1#0	20.49	21.61	21.01	20.33	38.45
	RB1#13	20.77	21.68	21.25		
	RB1#24	20.64	21.61	21.09		
	RB15#0	20.51	20.64	20.76		
	RB15#10	20.68	20.5	20.72		
	RB25#0	20.74	20.61	20.65		
10MHz QPSK	RB1#0	22.45	22.49	22.29	21.23	38.45
	RB1#25	22.39	22.57	22.4		
	RB1#49	22.43	22.58	22.33		

	RB25#0	21.72	21.42	21.62		
	RB25#25	21.43	21.68	21.74		
	RB50#0	21.28	21.62	21.34		
10MHz 16QAM	RB1#0	21.66	21.59	20.95	20.5	38.45
	RB1#25	21.66	21.71	20.93		
	RB1#49	21.75	21.85	20.92		
	RB25#0	20.67	20.79	20.78		
	RB25#25	20.72	20.57	20.84		
	RB50#0	20.65	20.7	20.71		
					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	5.51	5.86	5.19	13	
	RB50#0	5.39	5.62	5.33	13	
10MHz 16QAM	RB1#0	6.03	6.2	6.32	13	
	RB50#0	6.23	6.67	6.32	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	1.102	1.102	1.102	1.248	1.26	1.26
1.4MHz 16QAM	1.102	1.09	1.102	1.26	1.254	1.26
3MHz QPSK	2.695	2.695	2.683	2.976	2.988	3.024
3MHz 16QAM	2.695	2.683	2.695	3.012	3.012	3.012
5MHz QPSK	4.511	4.511	4.511	5	5.02	4.98
5MHz 16QAM	4.511	4.531	4.531	5	5.04	5
10MHz QPSK	8.942	8.981	8.942	9.72	9.72	9.76
10MHz 16QAM	8.942	8.981	8.942	9.8	9.84	9.84
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.

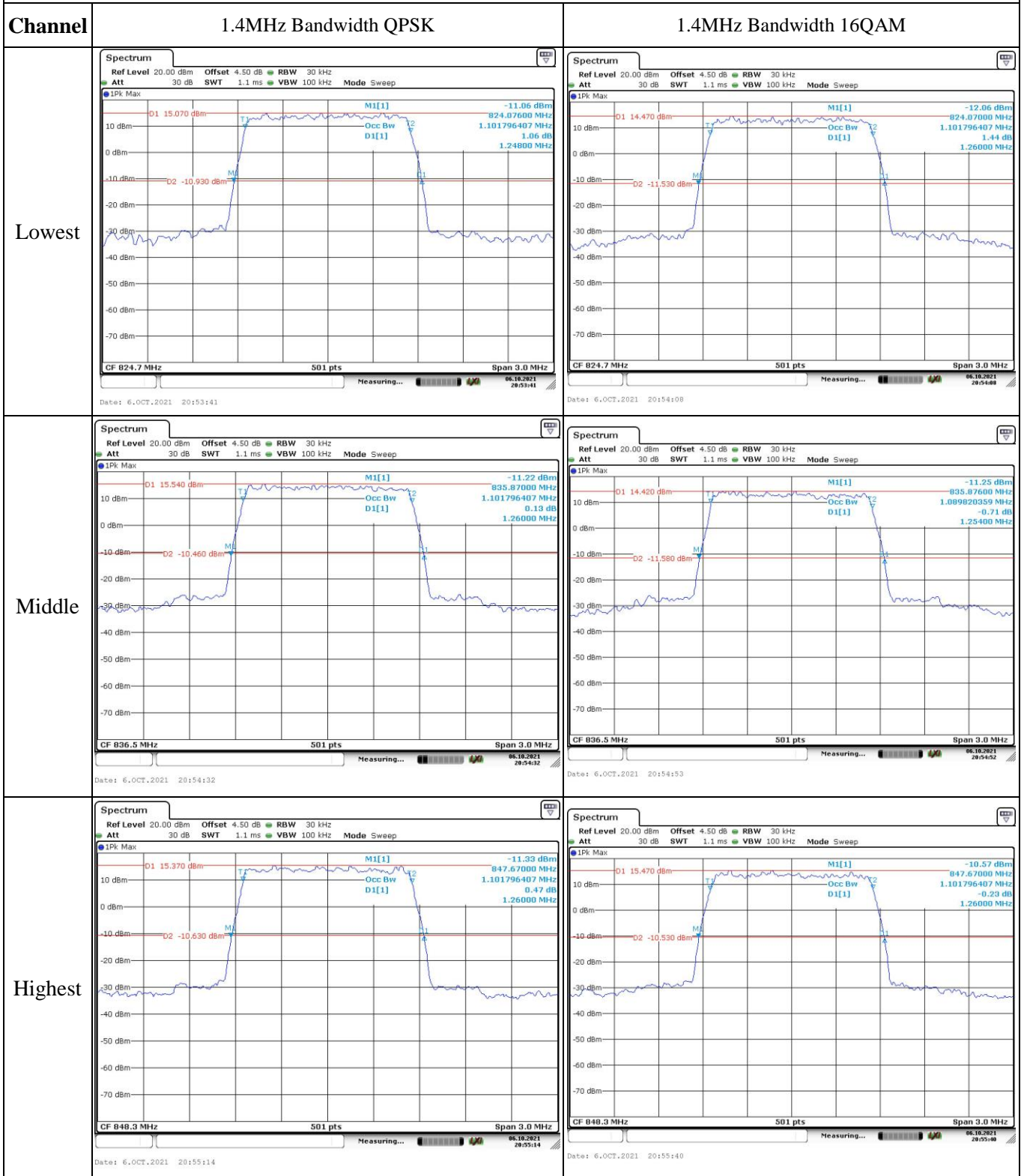
FCC §2.1051, §22.917(a):Out of band emission, Band Edge	
Result:	Pass, Please refer to the test plots of Out of band emission, Band Edge.

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	3.8	0.04	0.00	Pass
	-20	3.8	6.61	0.01	Pass
	-10	3.8	-6.95	-0.01	Pass
	0	3.8	5.5	0.01	Pass
	10	3.8	-8.86	-0.01	Pass
	20	3.8	-8.56	-0.01	Pass
	30	3.8	6.71	0.01	Pass
	40	3.8	6.01	0.01	Pass
	50	3.8	-8.19	-0.01	Pass
Frequency Stability vs. Voltage	20	3.5	-7.41	-0.01	Pass
	20	4.3	8.27	0.01	Pass
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	3.8	-2.53	0.00	Pass
	-20	3.8	-6.59	-0.01	Pass
	-10	3.8	-6.61	-0.01	Pass
	0	3.8	-5.59	-0.01	Pass
	10	3.8	-7.53	-0.01	Pass
	20	3.8	-6.98	-0.01	Pass
	30	3.8	5.35	0.01	Pass
	40	3.8	-8.4	-0.01	Pass
	50	3.8	8.53	0.01	Pass
Frequency Stability vs. Voltage	20	3.5	-6.52	-0.01	Pass
	20	4.3	7.39	0.01	Pass
Result:				Pass	

Test Plots:

Occupied Bandwidth



Occupied Bandwidth

Channel	3MHz Bandwidth QPSK	3MHz Bandwidth 16QAM
Lowest	<p>CF 825.5 MHz 501 pts Span 6.0 MHz</p> <p>Date: 6.OCT.2021 20:56:13</p>	<p>CF 825.5 MHz 501 pts Span 6.0 MHz</p> <p>Date: 6.OCT.2021 20:56:40</p>
Middle	<p>CF 836.5 MHz 501 pts Span 6.0 MHz</p> <p>Date: 6.OCT.2021 20:57:01</p>	<p>CF 836.5 MHz 501 pts Span 6.0 MHz</p> <p>Date: 6.OCT.2021 20:57:24</p>
Highest	<p>CF 847.5 MHz 501 pts Span 6.0 MHz</p> <p>Date: 6.OCT.2021 20:57:49</p>	<p>CF 847.5 MHz 501 pts Span 6.0 MHz</p> <p>Date: 6.OCT.2021 20:58:12</p>

Occupied Bandwidth

Channel	5MHz Bandwidth QPSK	5MHz Bandwidth 16QAM
Lowest	<p>Ref Level 20.00 dBm Offset 4.50 dB RBW 100 kHz Att 30 dB SWT 1 ms VBW 300 kHz Mode Sweep</p> <p>D1 15.140 dBm M1[1] -11.52 dBm 824.0000 MHz Occ Bw 4.510978044 MHz 0.15 dB D1[1] 0.15 dB 5.0000 MHz</p> <p>CF 826.5 MHz 501 pts Span 10.0 MHz</p> <p>Date: 6.OCT.2021 20:58:42</p>	<p>Ref Level 20.00 dBm Offset 4.50 dB RBW 100 kHz Att 30 dB SWT 1 ms VBW 300 kHz Mode Sweep</p> <p>D1 14.130 dBm M1[1] -12.71 dBm 824.0000 MHz Occ Bw 4.510978044 MHz 1.56 dB D1[1] 1.56 dB 5.0000 MHz</p> <p>CF 826.5 MHz 501 pts Span 10.0 MHz</p> <p>Date: 6.OCT.2021 20:59:11</p>
Middle	<p>Ref Level 20.00 dBm Offset 4.50 dB RBW 100 kHz Att 30 dB SWT 1 ms VBW 300 kHz Mode Sweep</p> <p>D1 14.580 dBm M1[1] -11.03 dBm 834.0000 MHz Occ Bw 4.510978044 MHz -0.44 dB D1[1] -0.44 dB 5.0200 MHz</p> <p>CF 836.5 MHz 501 pts Span 10.0 MHz</p> <p>Date: 6.OCT.2021 20:59:36</p>	<p>Ref Level 20.00 dBm Offset 4.50 dB RBW 100 kHz Att 30 dB SWT 1 ms VBW 300 kHz Mode Sweep</p> <p>D1 13.450 dBm M1[1] -12.31 dBm 834.0000 MHz Occ Bw 4.530938124 MHz -1.01 dB D1[1] -1.01 dB 5.0400 MHz</p> <p>CF 836.5 MHz 501 pts Span 10.0 MHz</p> <p>Date: 6.OCT.2021 21:00:08</p>
Highest	<p>Ref Level 20.00 dBm Offset 4.50 dB RBW 100 kHz Att 30 dB SWT 1 ms VBW 300 kHz Mode Sweep</p> <p>D1 15.680 dBm M1[1] -9.74 dBm 844.0200 MHz Occ Bw 4.510978044 MHz -1.15 dB D1[1] -1.15 dB 4.9800 MHz</p> <p>CF 846.5 MHz 501 pts Span 10.0 MHz</p> <p>Date: 6.OCT.2021 21:00:36</p>	<p>Ref Level 20.00 dBm Offset 4.50 dB RBW 100 kHz Att 30 dB SWT 1 ms VBW 300 kHz Mode Sweep</p> <p>D1 13.790 dBm M1[1] -13.02 dBm 843.9800 MHz Occ Bw 4.530938124 MHz 1.10 dB D1[1] 1.10 dB 5.0000 MHz</p> <p>CF 846.5 MHz 501 pts Span 10.0 MHz</p> <p>Date: 6.OCT.2021 21:01:02</p>

Occupied Bandwidth

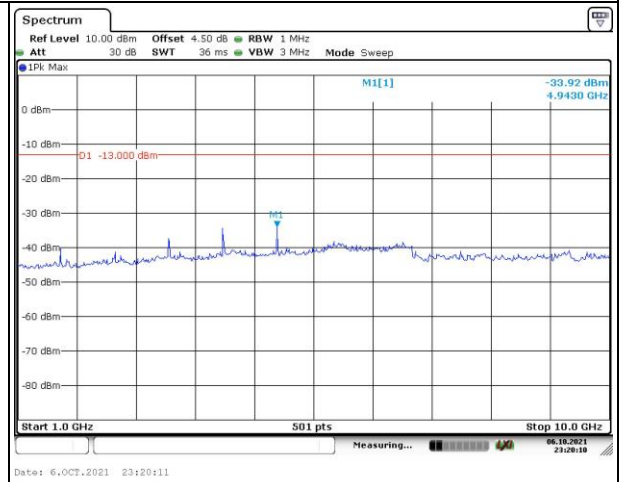
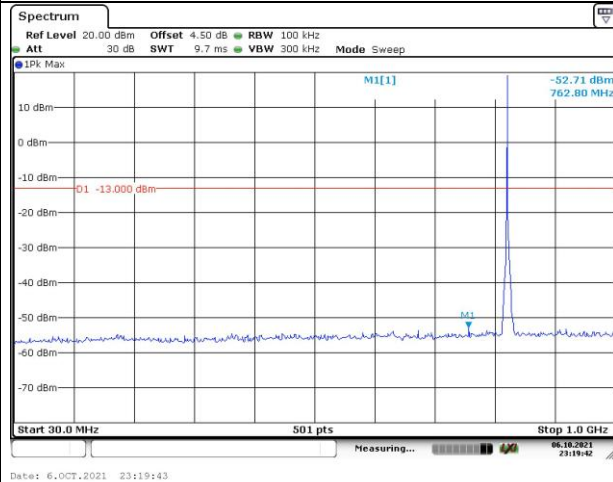
Channel	10MHz Bandwidth QPSK	10MHz Bandwidth 16QAM
Lowest		
Middle		
Highest		

Spurious Emissions at Antenna Terminal

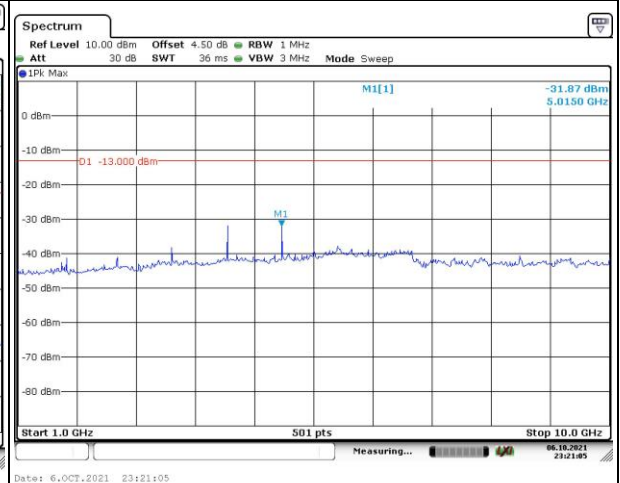
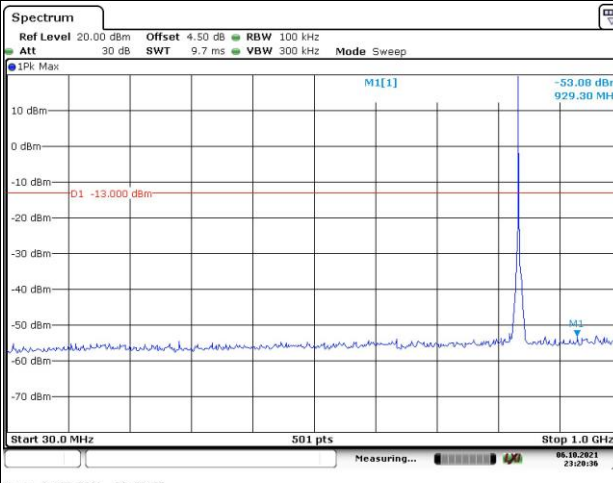
Channel

1.4MHz Bandwidth QPSK

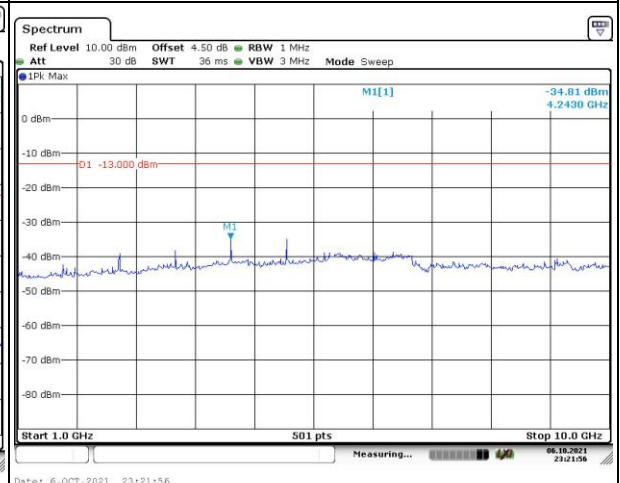
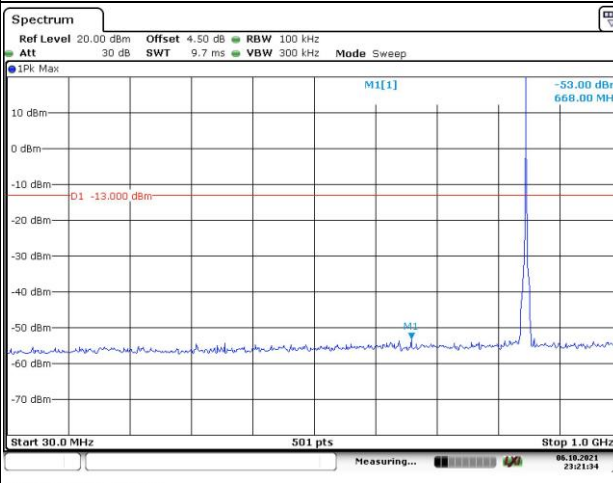
Lowest



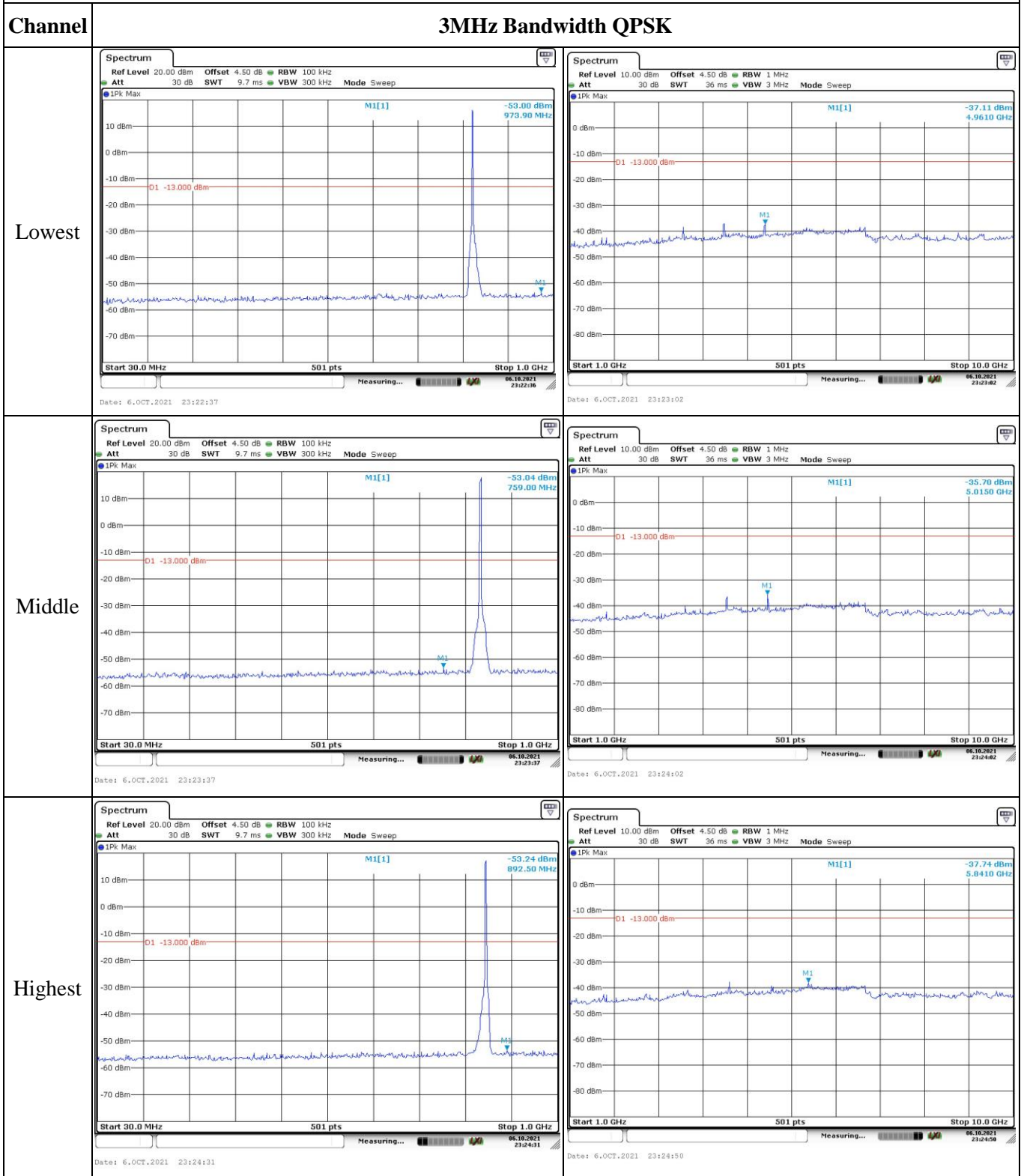
Middle



Highest



Spurious Emissions at Antenna Terminal

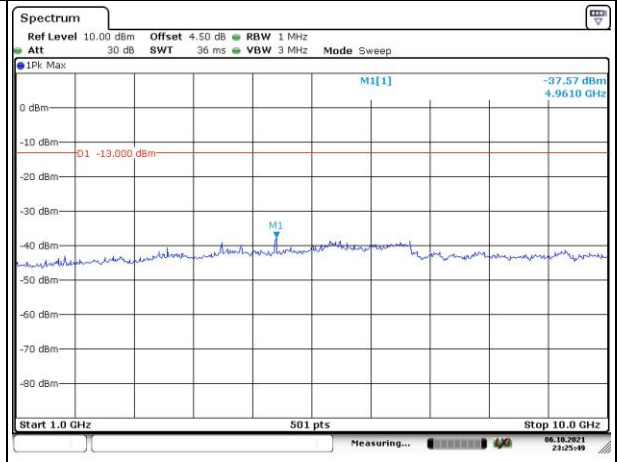
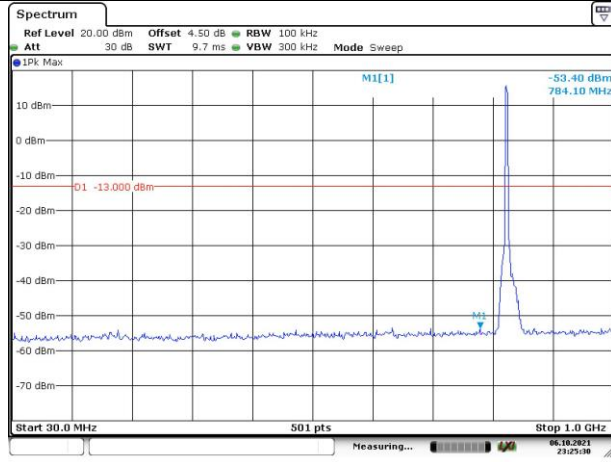


Spurious Emissions at Antenna Terminal

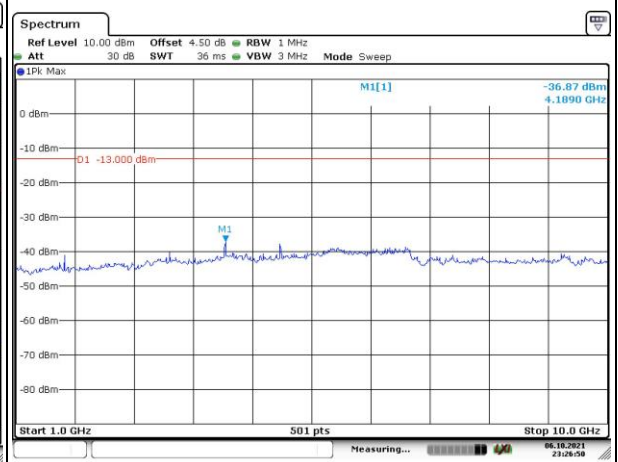
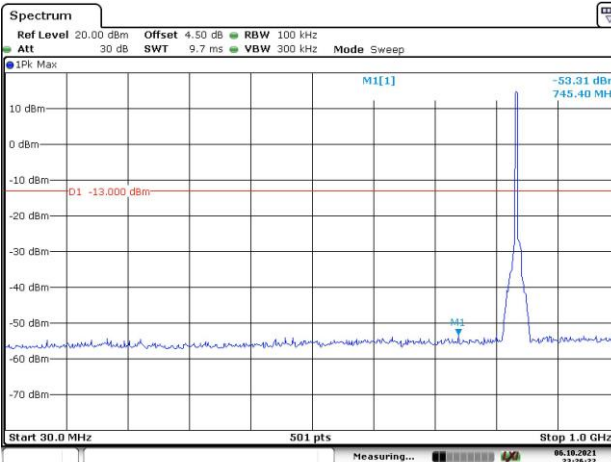
Channel

5MHz Bandwidth QPSK

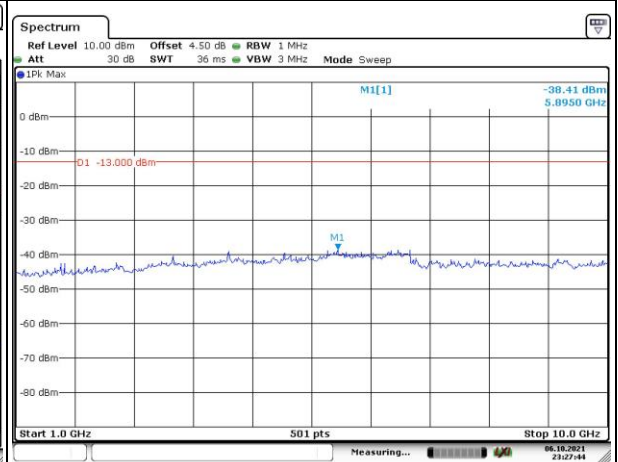
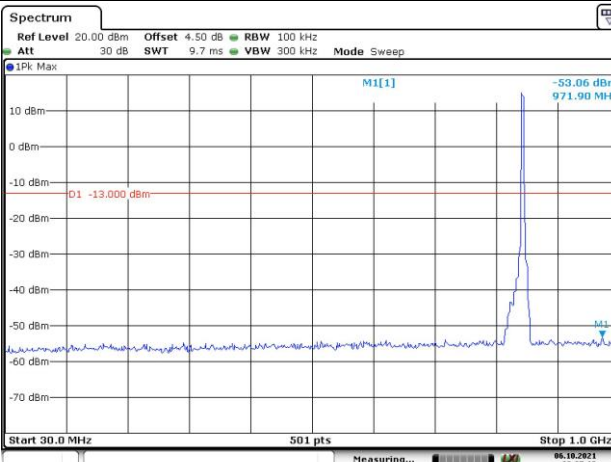
Lowest



Middle



Highest

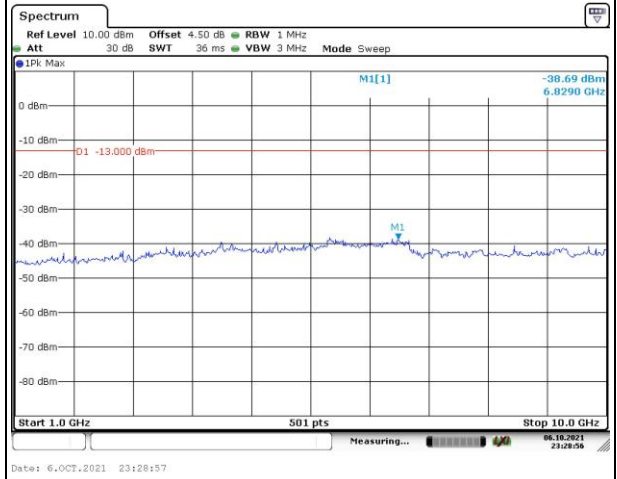
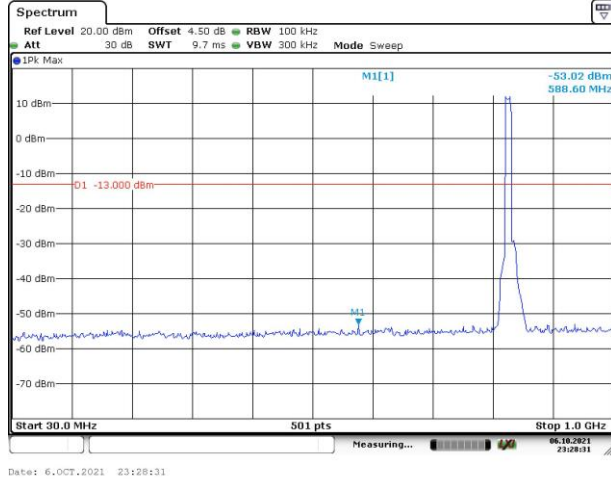


Spurious Emissions at Antenna Terminal

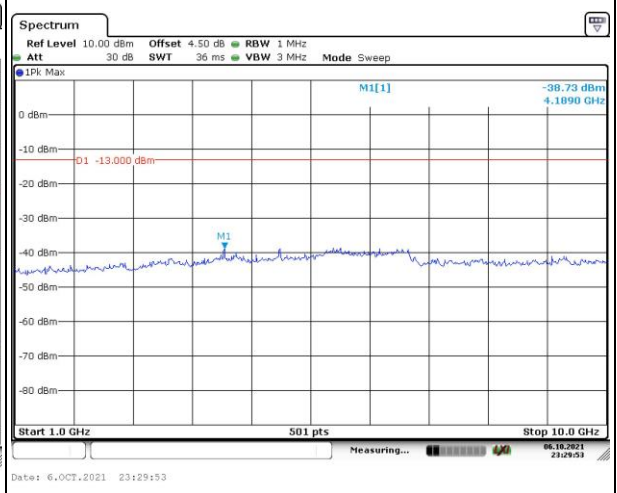
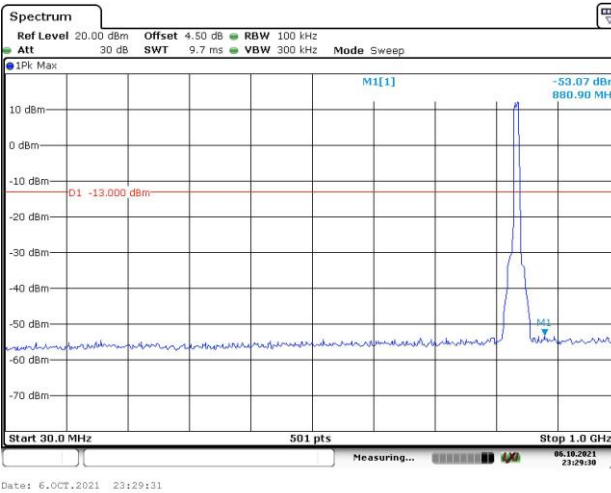
Channel

10MHz Bandwidth QPSK

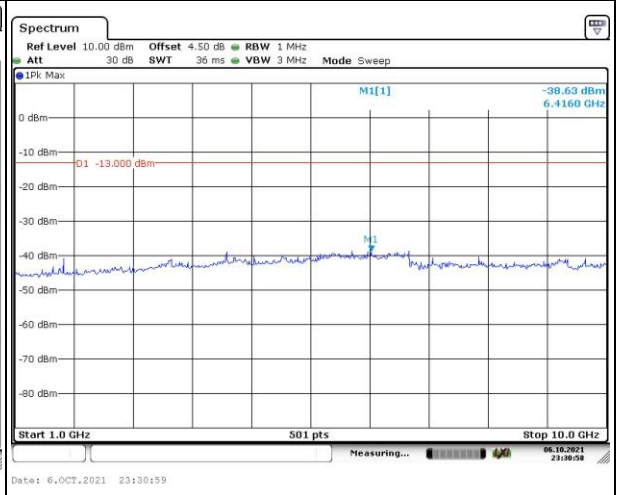
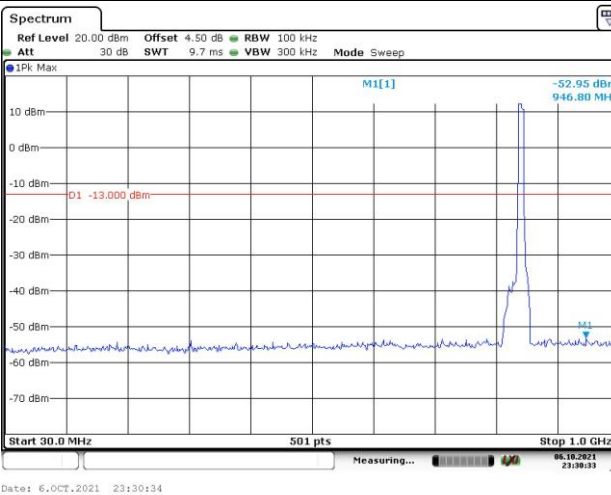
Lowest



Middle



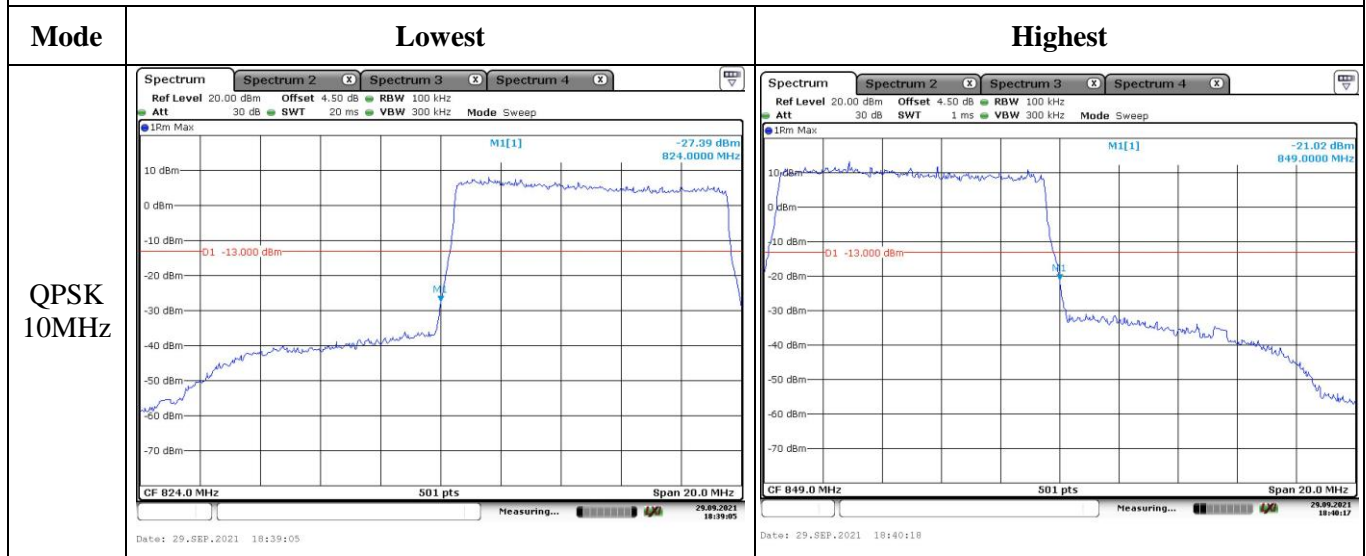
Highest



Out of band emission, Band Edge

Mode	Lowest	Highest
QPSK 1.4MHz		
QPSK 3MHz		
QPSK 5MHz		

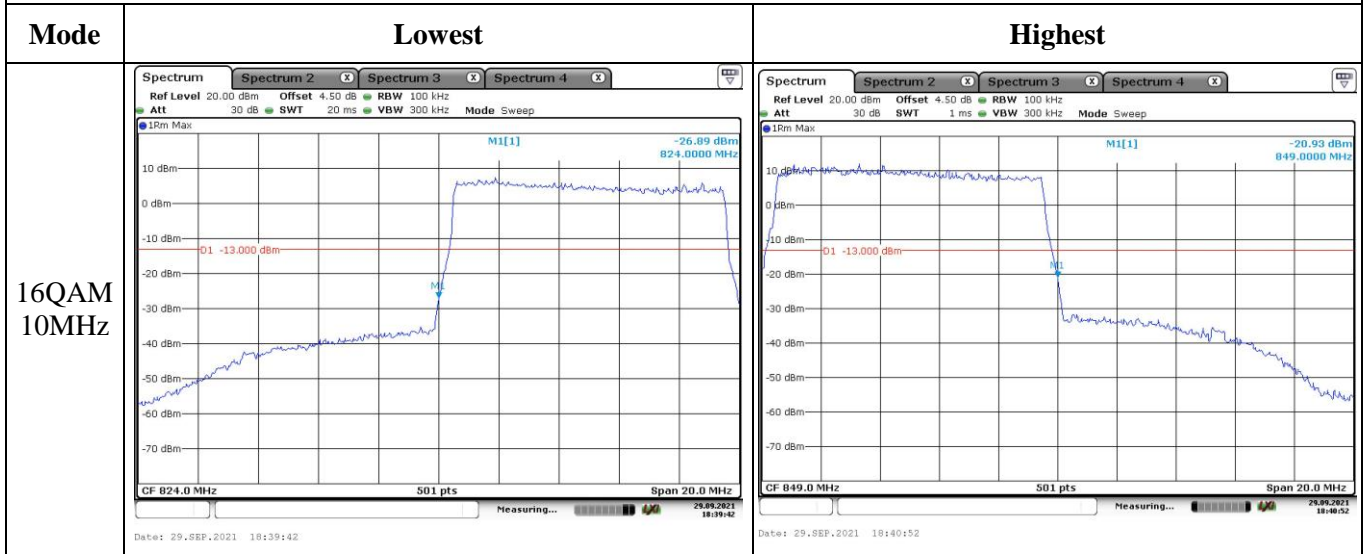
Out of band emission, Band Edge



Out of band emission, Band Edge

Mode	Lowest	Highest
16QAM 1.4MHz	<p>Ref Level 20.00 dBm Offset 4.50 dB RBW 30 kHz Att 30 dB SWT 1.1 ms VBW 100 kHz Mode Sweep</p> <p>M1[1] -27.63 dBm 824.0000 MHz</p> <p>D1 -13.000 dBm</p> <p>CF 824.0 MHz 501 pts Span 3.0 MHz</p> <p>Date: 29_SEP.2021 18:32:35</p>	<p>Ref Level 20.00 dBm Offset 4.50 dB RBW 30 kHz Att 30 dB SWT 1.1 ms VBW 100 kHz Mode Sweep</p> <p>M1[1] -28.12 dBm 849.0000 MHz</p> <p>D1 -13.000 dBm</p> <p>CF 849.0 MHz 501 pts Span 3.0 MHz</p> <p>Date: 29_SEP.2021 18:33:18</p>
16QAM 3MHz	<p>Ref Level 20.00 dBm Offset 4.50 dB RBW 30 kHz Att 30 dB SWT 20 ms VBW 100 kHz Mode Sweep</p> <p>M1[1] -19.34 dBm 824.0000 MHz</p> <p>D1 -13.000 dBm</p> <p>CF 824.0 MHz 501 pts Span 6.0 MHz</p> <p>Date: 29_SEP.2021 18:34:29</p>	<p>Ref Level 20.00 dBm Offset 4.50 dB RBW 30 kHz Att 30 dB SWT 20 ms VBW 100 kHz Mode Sweep</p> <p>M1[1] -18.53 dBm 849.0000 MHz</p> <p>D1 -13.000 dBm</p> <p>CF 849.0 MHz 501 pts Span 6.0 MHz</p> <p>Date: 29_SEP.2021 18:35:14</p>
16QAM 5MHz	<p>Ref Level 20.00 dBm Offset 4.50 dB RBW 100 kHz Att 30 dB SWT 1 ms VBW 300 kHz Mode Sweep</p> <p>M1[1] -14.05 dBm 824.0000 MHz</p> <p>D1 -13.000 dBm</p> <p>CF 824.0 MHz 501 pts Span 10.0 MHz</p> <p>Date: 29_SEP.2021 18:36:53</p>	<p>Ref Level 20.00 dBm Offset 4.50 dB RBW 100 kHz Att 30 dB SWT 20 ms VBW 300 kHz Mode Sweep</p> <p>M1[1] -19.62 dBm 849.0000 MHz</p> <p>D1 -13.000 dBm</p> <p>CF 849.0 MHz 501 pts Span 10.0 MHz</p> <p>Date: 29_SEP.2021 18:38:05</p>

Out of band emission, Band Edge



4.9 Antenna Port Test Data and Results for LTE Band 7:

Serial Number:	CR21090060-RF-S1/2	Test Date:	2021/9/29~2021/10/21
Test Site:	RF	Test Mode:	Transmitting
Tester:	Le qiao	Test Result:	Pass

Environmental Conditions:

Temperature: (°C)	25.9~28.1	Relative Humidity: (%)	51~60	ATM Pressure: (kPa)	100.2~100.4
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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
R&S	Wideband Radio Communication Tester	CMW500	149218	2021/7/22	2022/7/21
Mini-Circuits	DC Block	BLK-18-S+	1554403	2021/8/8	2022/8/7
ZHAOXIN	DC Power Supply	RXN-6010D	21R60	N/A	N/A
BACL	TEMP&HUMI Test Chamber	BTH-150	30026	2021/7/22	2022/7/22
UNI-T	Multimeter	UT39A+	C210582554	2021/8/30	2022/8/30
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 7▲:

Antenna Gain (dBi):	1	Cable Loss (dB):	0.6
Operation Voltage(V _{DC}):			
Lowest:	3.5	Normal:	3.8
		Highest:	4.3

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	21.89	21.76	21.78	22.29	33
	RB1#13	21.84	21.8	21.59		
	RB1#24	21.83	21.78	21.68		
	RB15#0	20.87	20.78	20.83		
	RB15#10	20.73	20.81	20.84		
	RB25#0	20.87	20.77	20.81		
5MHz 16QAM	RB1#0	20.07	20.71	20.46	21.33	33
	RB1#13	20.04	20.93	20.38		
	RB1#24	20.03	20.82	20.4		
	RB15#0	19.93	19.73	19.91		
	RB15#10	20.34	19.79	19.88		
	RB25#0	20.42	19.9	19.74		
10MHz QPSK	RB1#0	21.7	21.78	21.83	22.44	33
	RB1#25	21.76	21.73	22.04		
	RB1#49	21.82	21.77	21.87		
	RB25#0	20.77	20.82	20.85		
	RB25#25	20.87	20.8	20.85		
	RB50#0	20.81	20.87	20.96		
10MHz 16QAM	RB1#0	20.95	21	20.28	21.45	33
	RB1#25	20.96	20.99	20.48		
	RB1#49	21.05	21.02	20.29		
	RB25#0	20.29	20.37	19.96		
	RB25#25	19.94	20.02	19.96		
	RB50#0	20.04	20	20.02		
15MHz QPSK	RB1#0	21.76	21.78	21.7	22.21	33
	RB1#38	21.77	21.73	21.64		
	RB1#74	21.81	21.79	21.72		
	RB36#0	20.77	20.71	20.79		
	RB36#39	20.83	20.86	20.76		
	RB75#0	20.81	20.77	20.82		
15MHz 16QAM	RB1#0	21.23	21.16	21.18	21.95	33
	RB1#38	21.23	21.16	21.55		
	RB1#74	21.24	21.04	21.51		
	RB36#0	19.97	19.9	19.86		
	RB36#39	20.03	20	19.86		
	RB75#0	20.01	19.88	19.79		
20MHz QPSK	RB1#0	21.81	21.86	21.84	22.29	33
	RB1#50	21.83	21.85	21.83		
	RB1#99	21.85	21.87	21.89		

	RB50#0	20.82	20.88	20.87		
	RB50#50	20.72	20.78	20.92		
	RB100#0	20.76	20.92	20.78		
20MHz 16QAM	RB1#0	20.68	21.45	20.96	21.85	33
	RB1#50	20.71	21.42	21.04		
	RB1#99	20.69	21.4	20.99		
	RB50#0	19.94	19.94	19.91		
	RB50#50	19.94	19.88	20.08		
	RB100#0	19.8	19.9	19.82		
					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	4.17	5.42	4.75	13	
	RB100#0	4.9	5.19	5.16	13	
20MHz 16QAM	RB1#0	5.25	6.03	5.88	13	
	RB100#0	5.83	6.03	6.14	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	4.511	4.511	5	5.02	5
5MHz 16QAM	4.511	4.551	4.551	5.02	5	5.02
10MHz QPSK	8.981	8.942	8.942	9.8	9.8	9.8
10MHz 16QAM	8.942	8.981	8.942	9.8	9.8	9.84
15MHz QPSK	13.473	13.473	13.533	15.06	15.12	15.12
15MHz 16QAM	13.533	13.533	13.533	15.06	15.12	15.06
20MHz QPSK	17.964	17.964	18.044	19.68	19.68	19.84
20MHz 16QAM	17.964	18.044	17.964	19.76	19.84	19.76
Note: The test plots please refer to the Plots of Occupied Bandwidth						

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

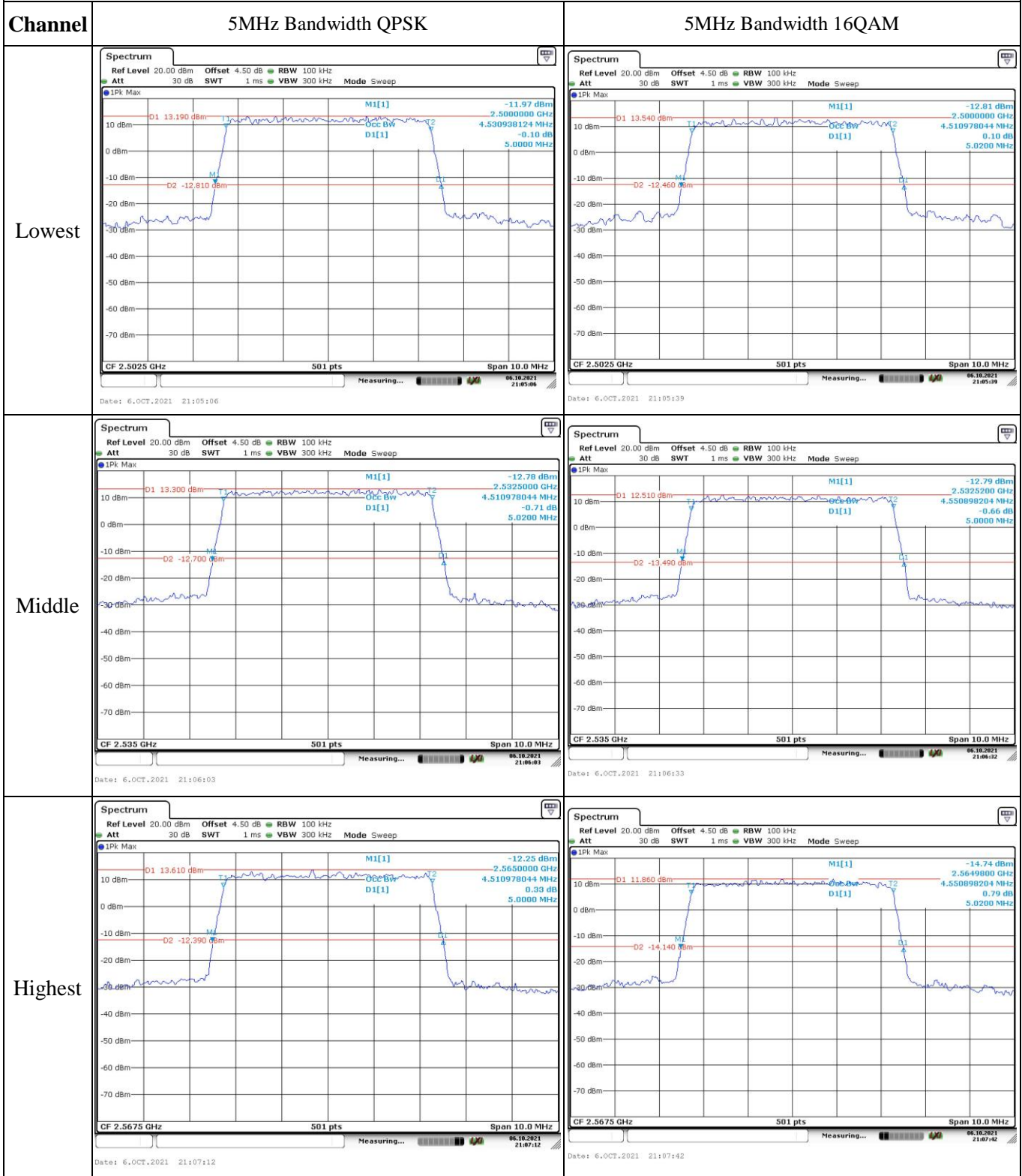
FCC §2.1051, §27.53:Out of band emission, Band Edge	
Result:	Pass, Please refer to the test plots of Out of band emission, Band Edge.

FCC §2.1055, §27.54: Frequency Stability						
Test Mode:	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	2500.3292	2500.00	2569.3416	2570
	-20	3.8	2500.6584	2500.00	2569.7531	2570
	-10	3.8	2500.3292	2500.00	2569.5062	2570
	0	3.8	2500.4115	2500.00	2569.9177	2570
	10	3.8	2500.3292	2500.00	2569.5885	2570
	20	3.8	2500.5289	2500.00	2569.511	2570
	30	3.8	2500.1646	2500.00	2569.8354	2570
	40	3.8	2500.6584	2500.00	2569.7531	2570
Frequency Stability vs. Voltage	20	3.5	2500.1646	2500.00	2569.4239	2570
	20	4.3	2500.0823	2500.00	2569.8354	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	3.8	2500.4115	2500.00	2569.9177	2570
	-20	3.8	2500.1646	2500.00	2569.4239	2570
	-10	3.8	2500.1646	2500.00	2569.9177	2570
	0	3.8	2500.7407	2500.00	2569.9177	2570
	10	3.8	2500.4115	2500.00	2569.2593	2570
	20	3.8	2500.5289	2500.00	2569.4711	2570
	30	3.8	2500.3292	2500.00	2569.5062	2570
	40	3.8	2500.1646	2500.00	2569.5885	2570
Frequency Stability vs. Voltage	20	3.5	2500.1646	2500.00	2569.6708	2570
	20	4.3	2500.3292	2500.00	2569.5062	2570
					Result:	Pass

Test Plots:

Occupied Bandwidth



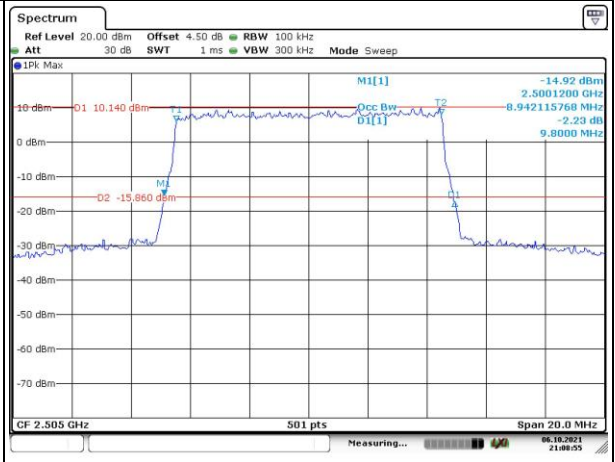
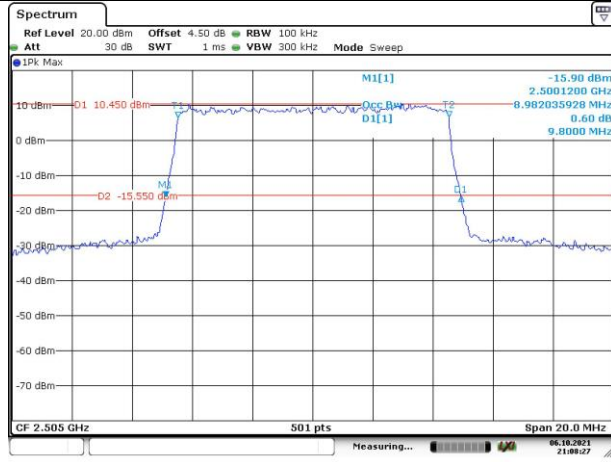
Occupied Bandwidth

Channel

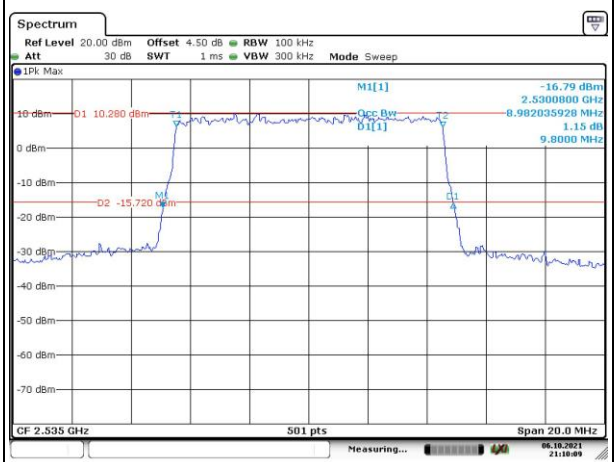
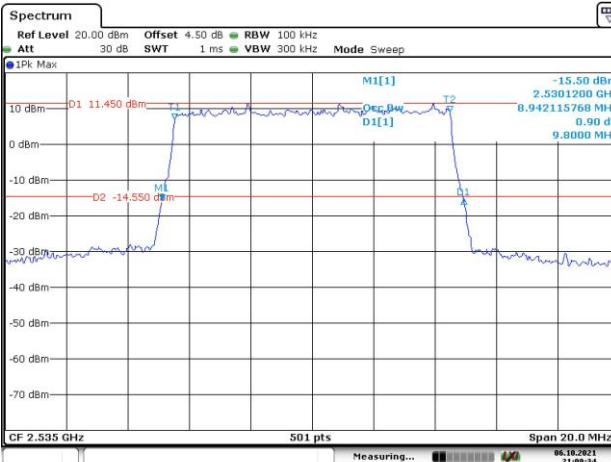
10MHz Bandwidth QPSK

10MHz Bandwidth 16QAM

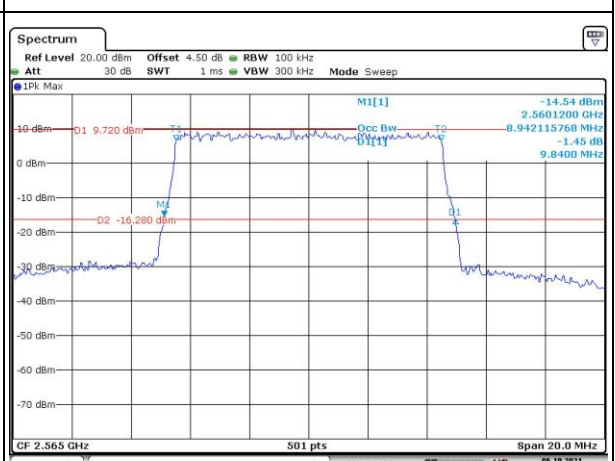
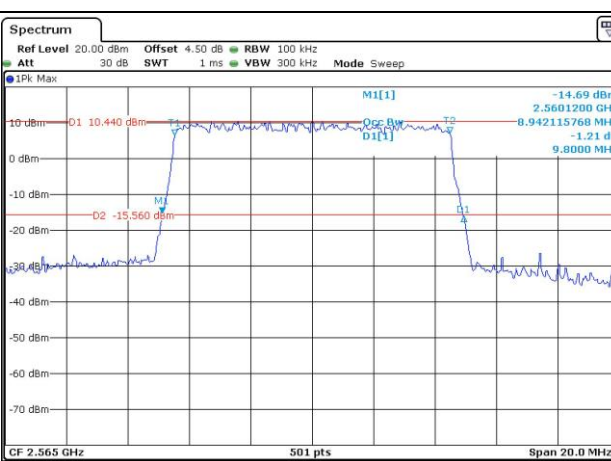
Lowest



Middle



Highest



Occupied Bandwidth

Channel	15MHz Bandwidth QPSK	15MHz Bandwidth 16QAM
Lowest	<p>Ref Level 20.00 dBm Offset 4.50 dB RBW 300 kHz Att 30 dB SWT 1 ms VBW 1 MHz Mode Sweep</p> <p>CF 2.5075 GHz 501 pts Span 30.0 MHz</p> <p>Date: 6.OCT.2021 21:12:03</p>	<p>Ref Level 20.00 dBm Offset 4.50 dB RBW 300 kHz Att 30 dB SWT 1 ms VBW 1 MHz Mode Sweep</p> <p>CF 2.5075 GHz 501 pts Span 30.0 MHz</p> <p>Date: 6.OCT.2021 21:12:36</p>
Middle	<p>Ref Level 20.00 dBm Offset 4.50 dB RBW 300 kHz Att 30 dB SWT 1 ms VBW 1 MHz Mode Sweep</p> <p>CF 2.535 GHz 501 pts Span 30.0 MHz</p> <p>Date: 6.OCT.2021 21:13:07</p>	<p>Ref Level 20.00 dBm Offset 4.50 dB RBW 300 kHz Att 30 dB SWT 1 ms VBW 1 MHz Mode Sweep</p> <p>CF 2.535 GHz 501 pts Span 30.0 MHz</p> <p>Date: 6.OCT.2021 21:13:40</p>
Highest	<p>Ref Level 20.00 dBm Offset 4.50 dB RBW 300 kHz Att 30 dB SWT 1 ms VBW 1 MHz Mode Sweep</p> <p>CF 2.5625 GHz 501 pts Span 30.0 MHz</p> <p>Date: 6.OCT.2021 21:14:11</p>	<p>Ref Level 20.00 dBm Offset 4.50 dB RBW 300 kHz Att 30 dB SWT 1 ms VBW 1 MHz Mode Sweep</p> <p>CF 2.5625 GHz 501 pts Span 30.0 MHz</p> <p>Date: 6.OCT.2021 21:14:44</p>

Occupied Bandwidth

Channel	20MHz Bandwidth QPSK	20MHz Bandwidth 16QAM
Lowest	<p>Spectrum Ref Level 20.00 dBm Offset 4.50 dB RBW 300 kHz Att 30 dB SWT 1 ms VBW 1 MHz Mode Sweep IPk Max D1 12.670 dBm D2 -13.330 dBm M1[1] -14.03 dBm 2.5000800 GHz 17.964071856 MHz 1.64 dB 19.6800 MHz CF 2.51 GHz 501 pts Span 40.0 MHz Date: 6.OCT.2021 21:15:31</p>	<p>Spectrum Ref Level 20.00 dBm Offset 4.50 dB RBW 300 kHz Att 30 dB SWT 1 ms VBW 1 MHz Mode Sweep IPk Max D1 11.870 dBm D2 -14.130 dBm M1[1] -13.74 dBm 2.5000800 GHz 17.964071856 MHz 0.06 dB 19.7600 MHz CF 2.51 GHz 501 pts Span 40.0 MHz Date: 6.OCT.2021 21:16:07</p>
Middle	<p>Spectrum Ref Level 20.00 dBm Offset 4.50 dB RBW 300 kHz Att 30 dB SWT 1 ms VBW 1 MHz Mode Sweep IPk Max D1 13.770 dBm D2 -12.230 dBm M1[1] -12.38 dBm 2.5252400 GHz 17.964071856 MHz -0.19 dB 19.6800 MHz CF 2.535 GHz 501 pts Span 40.0 MHz Date: 6.OCT.2021 21:16:41</p>	<p>Spectrum Ref Level 20.00 dBm Offset 4.50 dB RBW 300 kHz Att 30 dB SWT 1 ms VBW 1 MHz Mode Sweep IPk Max D1 12.130 dBm D2 -13.870 dBm M1[1] -14.20 dBm 2.5250800 GHz 18.043912176 MHz 0.75 dB 19.8400 MHz CF 2.535 GHz 501 pts Span 40.0 MHz Date: 6.OCT.2021 21:17:11</p>
Highest	<p>Spectrum Ref Level 20.00 dBm Offset 4.50 dB RBW 300 kHz Att 30 dB SWT 1 ms VBW 1 MHz Mode Sweep IPk Max D1 12.870 dBm D2 -13.130 dBm M1[1] -13.15 dBm 2.5500800 GHz 18.043912176 MHz -1.13 dB 19.8400 MHz CF 2.56 GHz 501 pts Span 40.0 MHz Date: 6.OCT.2021 21:17:45</p>	<p>Spectrum Ref Level 20.00 dBm Offset 4.50 dB RBW 300 kHz Att 30 dB SWT 1 ms VBW 1 MHz Mode Sweep IPk Max D1 12.740 dBm D2 -13.260 dBm M1[1] -12.61 dBm 2.5501600 GHz 17.964071856 MHz -0.95 dB 19.7600 MHz CF 2.56 GHz 501 pts Span 40.0 MHz Date: 6.OCT.2021 21:18:18</p>