

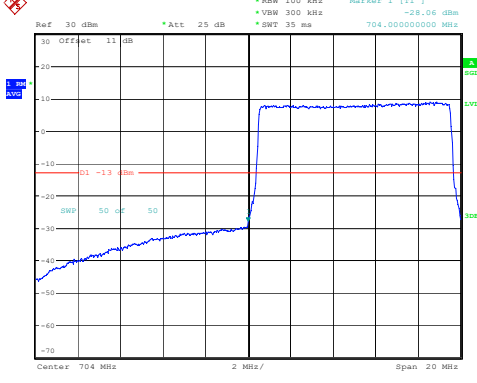
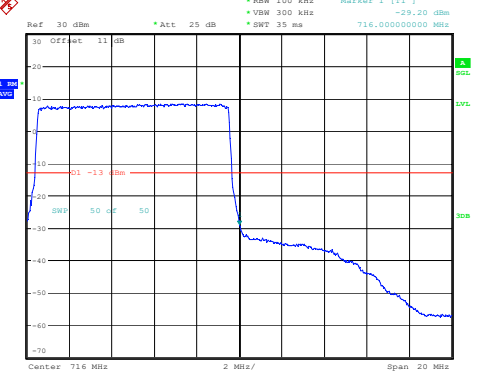
Spurious Emissions at Antenna Terminal

Channel	10MHz Bandwidth QPSK	
Lowest	<p>Ref 30 dBm *Att 25 dB *RBW 100 kHz *VSW 300 kHz *SWT 100 ms Marker 1 [F1] -45.47 dBm 612.000000000 MHz</p> <p>Start 30 MHz 97 MHz/ Stop 1 GHz</p> <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 10:50:17</p>	<p>Ref 10 dBm *Att 30 dB *RBW 1 MHz *VSW 3 MHz *SWT 55 ms Marker 1 [F1] -37.09 dBm 3.520000000 GHz</p> <p>Start 1 GHz 900 MHz/ Stop 10 GHz</p> <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 10:50:27</p>
Middle	<p>Ref 30 dBm *Att 25 dB *RBW 100 kHz *VSW 300 kHz *SWT 100 ms Marker 1 [F1] -44.68 dBm 72.680000000 MHz</p> <p>Start 30 MHz 97 MHz/ Stop 1 GHz</p> <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 10:50:39</p>	<p>Ref 10 dBm *Att 30 dB *RBW 1 MHz *VSW 3 MHz *SWT 55 ms Marker 1 [F1] -36.73 dBm 3.574000000 GHz</p> <p>Start 1 GHz 900 MHz/ Stop 10 GHz</p> <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 10:50:53</p>
Highest	<p>Ref 30 dBm *Att 25 dB *RBW 100 kHz *VSW 300 kHz *SWT 100 ms Marker 1 [F1] -44.42 dBm 829.280000000 MHz</p> <p>Start 30 MHz 97 MHz/ Stop 1 GHz</p> <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 10:51:08</p>	<p>Ref 10 dBm *Att 30 dB *RBW 1 MHz *VSW 3 MHz *SWT 55 ms Marker 1 [F1] -36.70 dBm 3.520000000 GHz</p> <p>Start 1 GHz 900 MHz/ Stop 10 GHz</p> <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 10:51:18</p>

Out of band emission, Band Edge

Mode	Lowest	Highest
QPSK 5MHz	<p>ProjectNo.:CR231061121-RF Tester:Rod Luo Date: 17.NOV.2023 09:41:31</p>	<p>ProjectNo.:CR231061121-RF Tester:Rod Luo Date: 17.NOV.2023 09:41:45</p>
QPSK 10MHz	<p>ProjectNo.:CR231061121-RF Tester:Rod Luo Date: 17.NOV.2023 09:42:02</p>	<p>ProjectNo.:CR231061121-RF Tester:Rod Luo Date: 17.NOV.2023 09:42:17</p>
16QAM 5MHz	<p>ProjectNo.:CR231061121-RF Tester:Rod Luo Date: 17.NOV.2023 09:41:38</p>	<p>ProjectNo.:CR231061121-RF Tester:Rod Luo Date: 17.NOV.2023 09:41:51</p>

Out of band emission, Band Edge

Mode	Lowest	Highest
16QAM 10MHz	 <p>ProjectNo.:CR231061121-RF Tester:Rod Luo Date: 17.NOV.2023 09:42:10</p>	 <p>ProjectNo.:CR231061121-RF Tester:Rod Luo Date: 17.NOV.2023 09:42:24</p>

**4.13 Antenna Port Test Data and Results for LTE Band 25**

Serial Number:	2CFR-2	Test Date:	2023/11/07-2023/11/27
Test Site:	RF	Test Mode:	Transmitting
Tester:	Rod Luo	Test Result:	Pass

**Environmental Conditions:**

Temperature: (°C)	26.5-28	Relative Humidity: (%)	48-52	ATM Pressure: (kPa)	101.3-101.5
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**Test Equipment List and Details:**

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSU26	200120	2023/3/31	2024/3/30
zhuoxiang	Coaxial Cable	SMA-178	211002	Each time	N/A
Minl-Circuits	Power Splitter	ZFRSC-183-S+	S F448201619	Each time	N/A
R&S	Wideband Radio Communication Tester	CMW500	143458	2023/3/31	2024/3/30
BACL	TEMP&HUMI Test Chamber	BTH-150-40	30174	2023/3/31	2024/3/30
UNI-T	Multimeter	UT39A+	C210582554	2023/9/28	2024/9/27
ZHAOXIN	DC Power Supply	RXN-6010D	21R6010D0912386	N/A	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).

**Test Frequency For Each Mode:**

Operation Bandwidth	Lowest Frequency (MHz)	Middle Frequency (MHz)	Highest Frequency (MHz)
1.4MHz	1850.7	1882.5	1914.3
3MHz	1851.5	1882.5	1913.5
5MHz	1852.5	1882.5	1912.5
10MHz	1855	1882.5	1910
15MHz	1857.5	1882.5	1907.5
20MHz	1860	1882.5	1905

**Test Data:**

<b>FCC§2.1046;§ 24.232</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	17.8	17.96	17.44	16.82	33
	RB1#3	17.92	18.12	17.53		
	RB1#5	17.89	17.93	17.28		
	RB3#0	17.9	18.05	17.52		
	RB3#3	17.92	18.02	17.44		
	RB6#0	16.97	17.11	16.51		
1.4MHz 16QAM	RB1#0	16.93	17.14	16.89	16.02	33
	RB1#3	17.17	17.32	17.01		
	RB1#5	17.01	17.12	16.79		
	RB3#0	17.16	17.11	17.17		
	RB3#3	17.18	17.11	17.29		
	RB6#0	15.95	16.07	16.26		
3MHz QPSK	RB1#0	17.86	18.17	18.35	17.05	33
	RB1#8	18.14	18.32	18.11		
	RB1#14	18.12	18.22	18.03		
	RB6#0	17.03	17.36	17.61		
	RB6#9	17.23	17.41	17.23		
	RB15#0	17.16	17.4	17.41		
3MHz 16QAM	RB1#0	17	17.25	17.59	16.29	33
	RB1#8	17.31	17.41	17.34		
	RB1#14	17.31	17.32	17.02		
	RB6#0	16.01	16.23	16.56		
	RB6#9	16.23	16.28	16.2		
	RB15#0	16.08	16.39	16.5		
5MHz QPSK	RB1#0	17.53	17.79	18.52	17.22	33
	RB1#13	18.29	18.38	18.48		
	RB1#24	17.94	17.93	17.56		
	RB15#0	17.09	17.33	17.68		
	RB15#10	17.28	17.39	17.27		
	RB25#0	17.15	17.32	17.43		
5MHz 16QAM	RB1#0	16.85	16.96	17.48	16.34	33
	RB1#13	17.64	17.55	17.43		
	RB1#24	17.32	17.1	16.54		
	RB15#0	16.05	16.27	16.78		
	RB15#10	16.26	16.34	16.37		
	RB25#0	16.14	16.26	16.56		

10MHz QPSK	RB1#0	17.88	17.96	19.06	17.76	33
	RB1#25	18.5	18.29	18.87		
	RB1#49	18.85	18.78	18.28		
	RB25#0	17.29	17.29	18.26		
	RB25#25	17.81	17.71	17.81		
	RB50#0	17.57	17.51	18.03		
10MHz 16QAM	RB1#0	16.96	17.06	18.77	17.47	33
	RB1#25	17.64	17.39	18.51		
	RB1#49	17.98	17.89	18		
	RB25#0	16.37	16.29	17.35		
	RB25#25	16.9	16.71	16.9		
	RB50#0	16.63	16.45	17.1		
15MHz QPSK	RB1#0	18.17	18.21	18.71	17.41	33
	RB1#38	18.57	18.26	18.43		
	RB1#74	18.47	18.55	17.44		
	RB36#0	17.54	17.38	17.72		
	RB36#39	17.67	17.62	17.14		
	RB75#0	17.6	17.49	17.43		
15MHz 16QAM	RB1#0	17.31	17.69	18.3	17.00	33
	RB1#38	17.72	17.75	18.04		
	RB1#74	17.65	18.02	17.03		
	RB36#0	16.59	16.26	16.81		
	RB36#39	16.72	16.52	16.22		
	RB75#0	16.65	16.38	16.53		
20MHz QPSK	RB1#0	18.85	18.97	19.43	18.13	33
	RB1#50	18.68	18.19	18.5		
	RB1#99	18.75	19.06	17.89		
	RB50#0	18.06	17.68	17.97		
	RB50#50	17.92	17.9	17.46		
	RB100#0	17.98	17.77	17.71		
20MHz 16QAM	RB1#0	18.13	18.61	18.71	17.41	33
	RB1#50	18	17.85	17.82		
	RB1#99	18.02	18.7	17.15		
	RB50#0	16.99	16.59	17.05		
	RB50#50	16.85	16.8	16.53		
	RB100#0	16.91	16.69	16.82		

Note: EIRP=Conducted Power(dBm) - Lc(dB) + G<sub>T</sub>(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	5.01	5.07	4.96	13
	RB100#0	5.22	5.39	5.33	13
20MHz 16QAM	RB1#0	5.86	5.36	5.71	13
	RB100#0	6.06	6.23	6.17	13
<b>Result:</b>					<b>Pass</b>

<b>FCC §2.1049, §24.238: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	1.110	1.104	1.104	1.260	1.254	1.260
1.4MHz 16QAM	1.098	1.110	1.116	1.254	1.260	1.266
3MHz QPSK	2.700	2.700	2.700	3.000	3.000	3.012
3MHz 16QAM	2.700	2.700	2.700	3.012	3.000	3.024
5MHz QPSK	4.520	4.520	4.520	5.000	5.000	4.980
5MHz 16QAM	4.540	4.540	4.520	5.020	5.020	4.980
10MHz QPSK	8.960	8.960	9.000	9.680	9.800	9.760
10MHz 16QAM	8.960	8.960	8.960	9.760	9.920	9.760
15MHz QPSK	13.500	13.620	13.560	15.060	15.120	15.060
15MHz 16QAM	13.560	13.560	13.620	15.180	15.120	15.120
20MHz QPSK	18.000	18.080	18.000	19.680	19.920	19.520
20MHz 16QAM	18.080	18.000	18.000	19.680	19.760	19.680

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

<b>FCC §2.1051, § 24.238 (a):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, § 24.238 (a):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, §24.235: 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	3.85	1850.115	1850.000	1914.878	1915.000
	-20	3.85	1850.096	1850.000	1914.977	1915.000
	-10	3.85	1850.136	1850.000	1914.877	1915.000
	0	3.85	1850.005	1850.000	1914.909	1915.000
	10	3.85	1850.119	1850.000	1914.943	1915.000
	20	3.85	1850.003	1850.000	1914.945	1915.000
	30	3.85	1850.098	1850.000	1914.873	1915.000
	40	3.85	1850.112	1850.000	1914.967	1915.000
	50	3.85	1850.092	1850.000	1914.912	1915.000
Frequency Stability vs. Voltage	20	3.5	1850.056	1850.000	1914.864	1915.000
	20	4.4	1850.130	1850.000	1914.861	1915.000
					<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	3.85	1850.035	1850.000	1914.928	1915.000
	-20	3.85	1850.087	1850.000	1914.988	1915.000
	-10	3.85	1850.070	1850.000	1914.995	1915.000
	0	3.85	1850.104	1850.000	1914.976	1915.000
	10	3.85	1850.074	1850.000	1914.879	1915.000
	20	3.85	1850.133	1850.000	1914.952	1915.000
	30	3.85	1850.041	1850.000	1914.884	1915.000
	40	3.85	1850.090	1850.000	1914.995	1915.000
	50	3.85	1850.114	1850.000	1914.888	1915.000
Frequency Stability vs. Voltage	20	3.5	1850.014	1850.000	1914.977	1915.000
	20	4.4	1850.009	1850.000	1914.855	1915.000
					<b>Result:</b>	<b>Pass</b>



**Test Plots** (Note: The 11dB is the Insertion loss of the RF cable and Power Splitter, which was offset into the Spectrum Analyzer):

<b>Occupied Bandwidth</b>		
<b>Channel</b>	<b>1.4MHz Bandwidth QPSK</b>	<b>1.4MHz Bandwidth 16QAM</b>
<b>Lowest</b>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:08:49</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:09:03</p>
<b>Middle</b>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:09:17</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:09:31</p>
<b>Highest</b>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:09:49</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:10:03</p>

Occupied Bandwidth

Channel	3MHz Bandwidth QPSK	3MHz Bandwidth 16QAM
Lowest	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:10:52</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:11:06</p>
Middle	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:11:21</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:11:35</p>
Highest	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:11:49</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:12:03</p>

Occupied Bandwidth

Channel	5MHz Bandwidth QPSK	5MHz Bandwidth 16QAM
Lowest	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:12:23</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:12:41</p>
Middle	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:12:55</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:13:09</p>
Highest	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:13:27</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:13:45</p>

Occupied Bandwidth

Channel	10MHz Bandwidth QPSK	10MHz Bandwidth 16QAM
Lowest	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:14:06</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:14:23</p>
Middle	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:14:41</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:14:58</p>
Highest	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:15:16</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:15:34</p>

Occupied Bandwidth

Channel	15MHz Bandwidth QPSK	15MHz Bandwidth 16QAM
Lowest	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:15:54</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:16:13</p>
Middle	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:16:34</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:16:53</p>
Highest	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:17:13</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:17:33</p>

Occupied Bandwidth

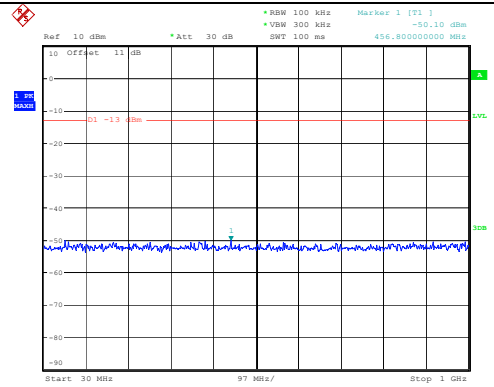
Channel	20MHz Bandwidth QPSK	20MHz Bandwidth 16QAM
Lowest	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:17:53</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:18:10</p>
Middle	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:18:30</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:18:46</p>
Highest	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:19:06</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:19:26</p>

Spurious Emissions at Antenna Terminal

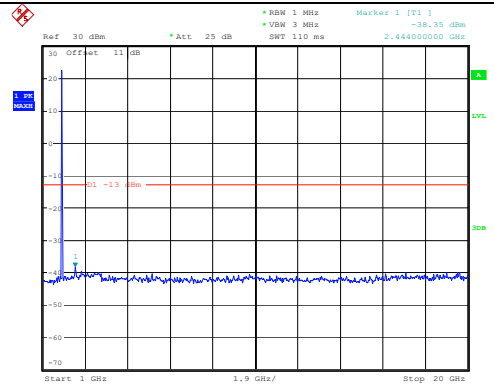
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1.4MHz Bandwidth QPSK

Lowest

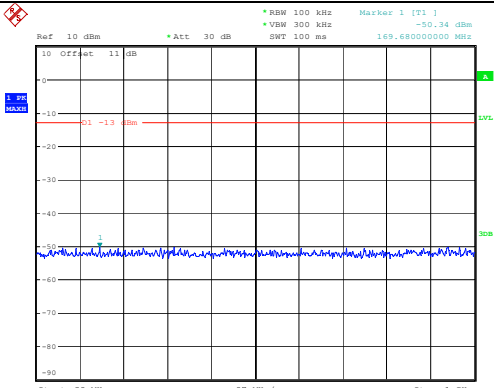


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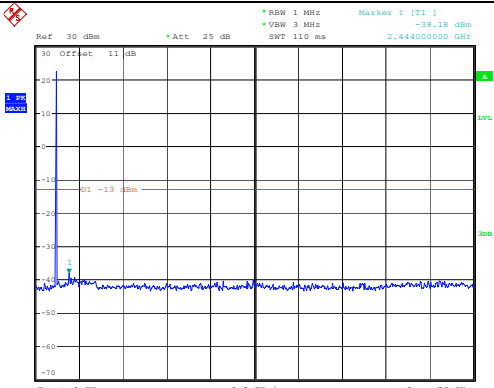


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Middle

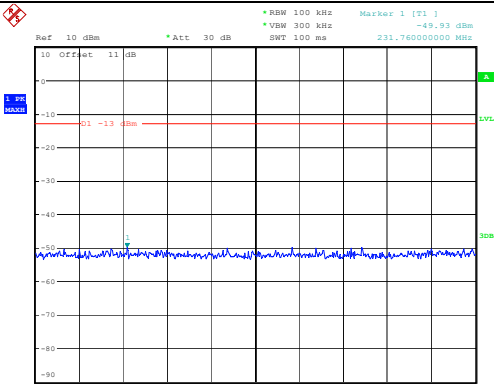


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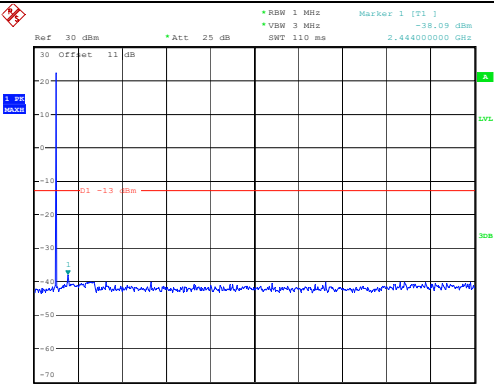


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Date: 7.NOV.2023 11:38:15

Highest



ProjectNo.:CR231061121 Tester:Rod Luo  
Date: 7.NOV.2023 11:38:31



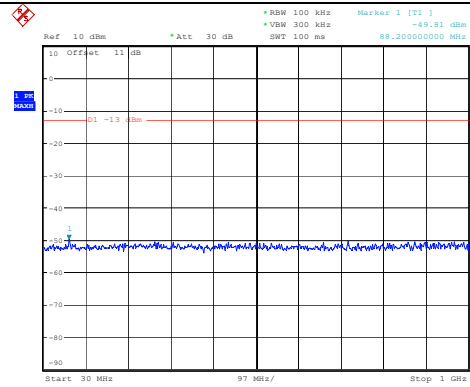
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Spurious Emissions at Antenna Terminal

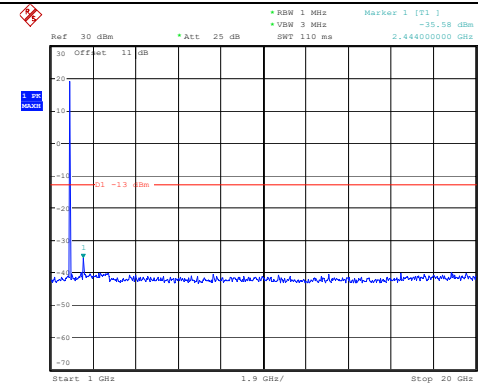
Channel

3MHz Bandwidth QPSK

Lowest

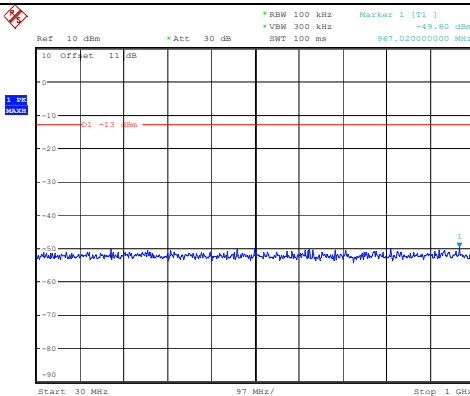


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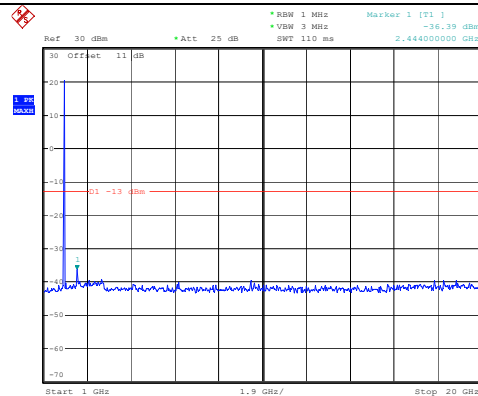


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Middle

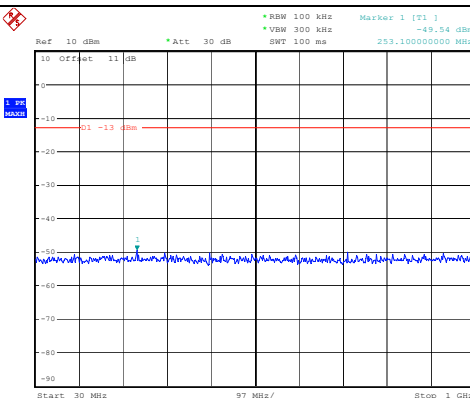


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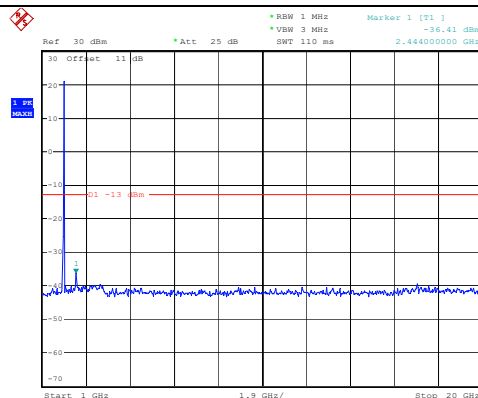


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Date: 7.NOV.2023 11:39:34

Highest



ProjectNo.:CR231061121 Tester:Rod Luo  
Date: 7.NOV.2023 11:39:46



ProjectNo.:CR231061121 Tester:Rod Luo  
Date: 7.NOV.2023 11:39:56

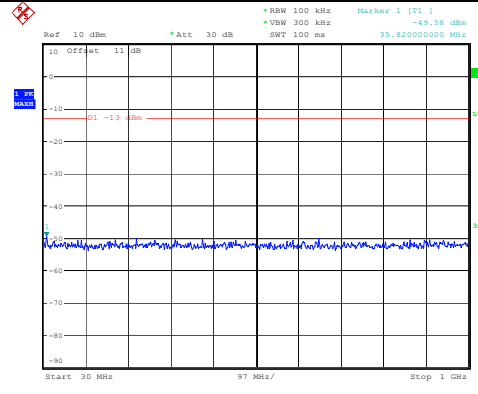


Spurious Emissions at Antenna Terminal

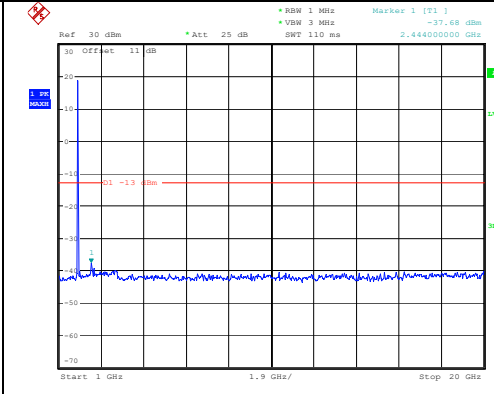
Channel

5MHz Bandwidth QPSK

Lowest

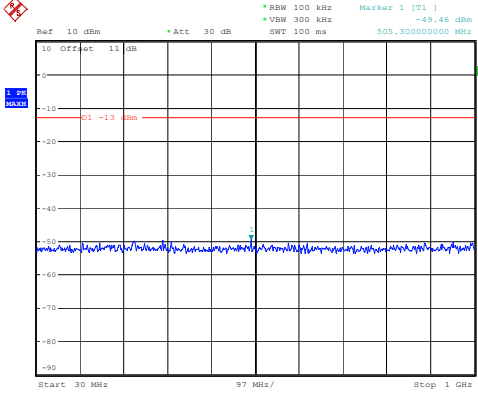


ProjectNo.:CR231061121 Tester:Rod Luo  
Date: 7.NOV.2023 11:40:13

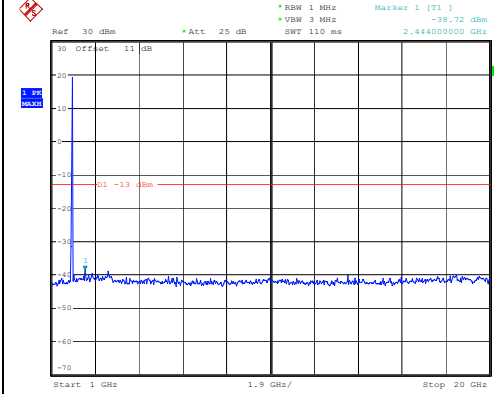


ProjectNo.:CR231061121 Tester:Rod Luo  
Date: 7.NOV.2023 11:40:23

Middle

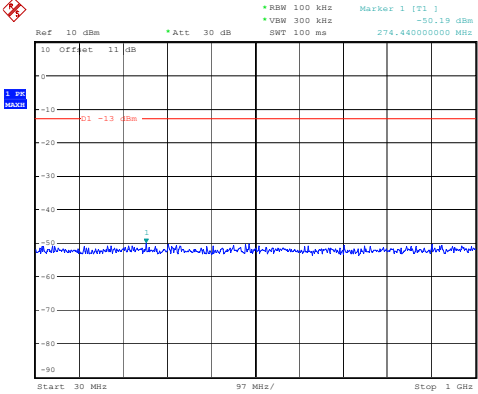


ProjectNo.:CR231061121 Tester:Rod Luo  
Date: 7.NOV.2023 11:40:35

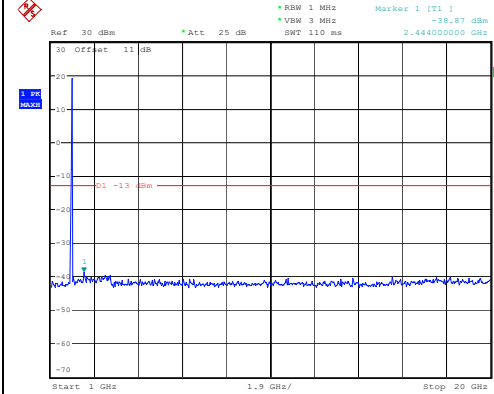


ProjectNo.:CR231061121 Tester:Rod Luo  
Date: 7.NOV.2023 11:40:46

Highest



ProjectNo.:CR231061121 Tester:Rod Luo  
Date: 7.NOV.2023 11:40:58



ProjectNo.:CR231061121 Tester:Rod Luo  
Date: 7.NOV.2023 11:41:08

Spurious Emissions at Antenna Terminal

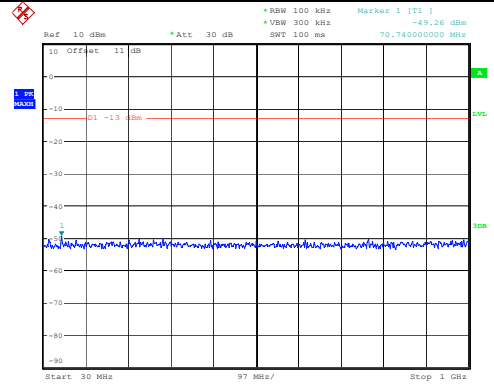
Channel	10 MHz Bandwidth QPSK	
Lowest	<p>Ref 10 dBm *Att 30 dB *RBW 100 kHz Marker 1 [T1] -49.75 dBm *VSW 300 kHz *SWT 100 ms 567.360000000 MHz</p> <p>Start 30 MHz 97 MHz/ Stop 1 GHz</p> <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 11:41:24</p>	<p>Ref 30 dBm *Att 25 dB *RBW 1 MHz Marker 1 [T1] -37.09 dBm *VSW 3 MHz *SWT 110 ms 2.444000000 GHz</p> <p>Start 1 GHz 1.9 GHz/ Stop 20 GHz</p> <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 11:41:35</p>
Middle	<p>Ref 10 dBm *Att 30 dB *RBW 100 kHz Marker 1 [T1] -49.27 dBm *VSW 300 kHz *SWT 100 ms 222.060000000 MHz</p> <p>Start 30 MHz 97 MHz/ Stop 1 GHz</p> <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 11:41:47</p>	<p>Ref 30 dBm *Att 25 dB *RBW 1 MHz Marker 1 [T1] -38.62 dBm *VSW 3 MHz *SWT 110 ms 3.090000000 GHz</p> <p>Start 1 GHz 1.9 GHz/ Stop 20 GHz</p> <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 11:41:57</p>
Highest	<p>Ref 10 dBm *Att 30 dB *RBW 100 kHz Marker 1 [T1] -50.12 dBm *VSW 300 kHz *SWT 100 ms 222.760000000 MHz</p> <p>Start 30 MHz 97 MHz/ Stop 1 GHz</p> <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 11:42:10</p>	<p>Ref 30 dBm *Att 25 dB *RBW 1 MHz Marker 1 [T1] -38.05 dBm *VSW 3 MHz *SWT 110 ms 2.444000000 GHz</p> <p>Start 1 GHz 1.9 GHz/ Stop 20 GHz</p> <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 11:42:20</p>

Spurious Emissions at Antenna Terminal

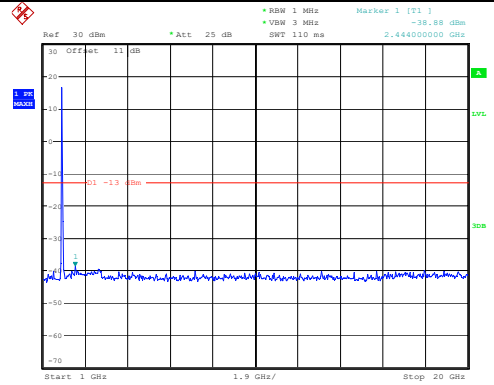
Channel

15MHz Bandwidth QPSK

Lowest

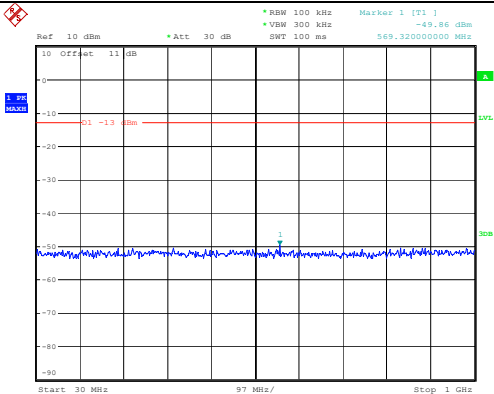


ProjectNo.:CR231061121 Tester:Rod Luo  
Date: 7.NOV.2023 11:42:39

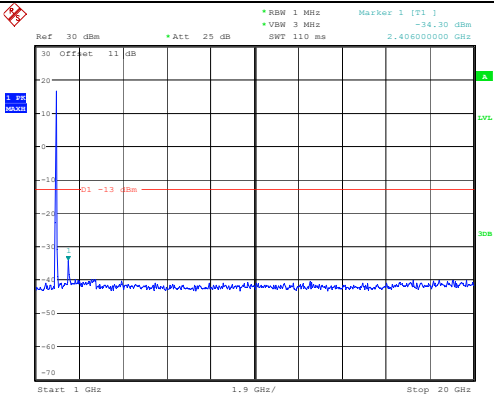


ProjectNo.:CR231061121 Tester:Rod Luo  
Date: 7.NOV.2023 11:42:49

Middle

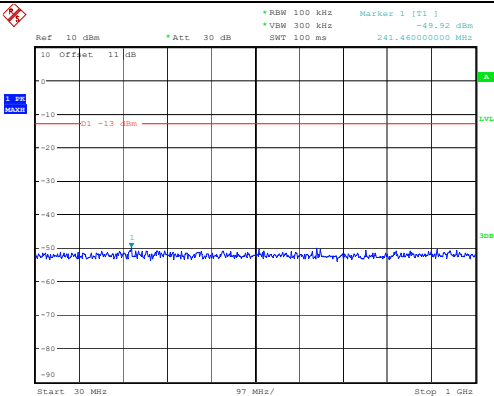


ProjectNo.:CR231061121 Tester:Rod Luo  
Date: 7.NOV.2023 11:43:02

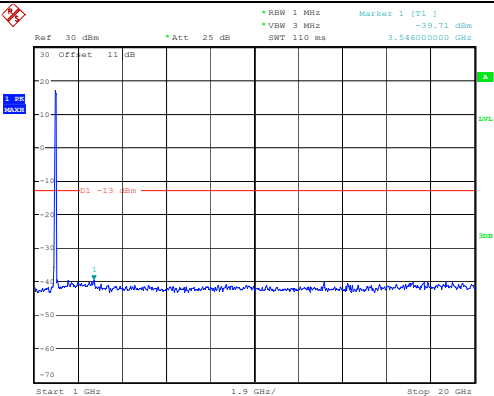


ProjectNo.:CR231061121 Tester:Rod Luo  
Date: 7.NOV.2023 11:43:12

Highest



ProjectNo.:CR231061121 Tester:Rod Luo  
Date: 7.NOV.2023 11:43:25



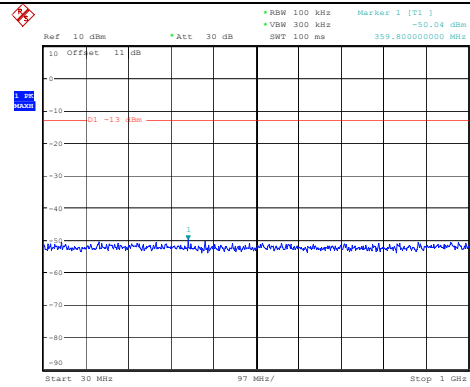
ProjectNo.:CR231061121 Tester:Rod Luo  
Date: 7.NOV.2023 11:43:35

Spurious Emissions at Antenna Terminal

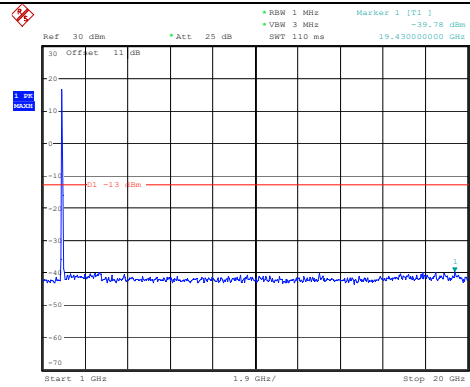
Channel

20MHz Bandwidth QPSK

Lowest

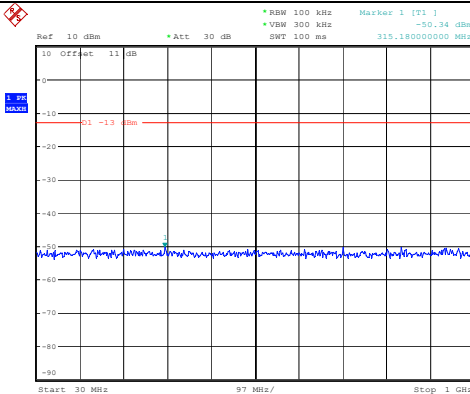


ProjectNo.:CR231061121 Tester:Rod Luo  
 Date: 7.NOV.2023 11:43:51

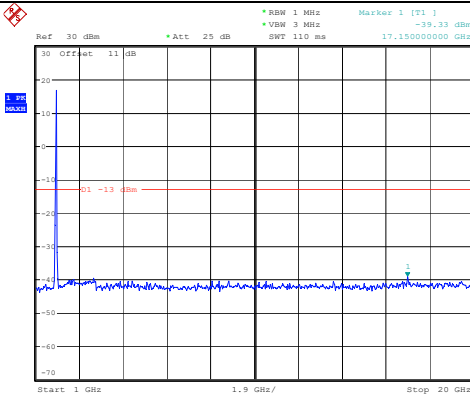


ProjectNo.:CR231061121 Tester:Rod Luo  
 Date: 7.NOV.2023 11:44:01

Middle

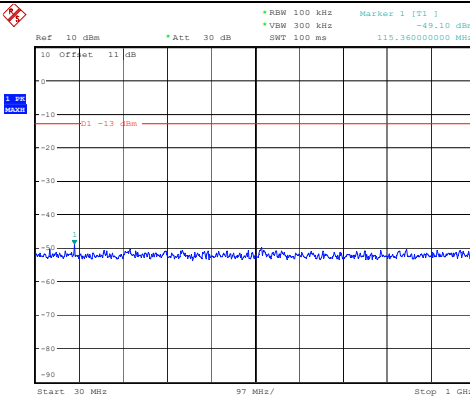


ProjectNo.:CR231061121 Tester:Rod Luo  
 Date: 7.NOV.2023 11:44:14

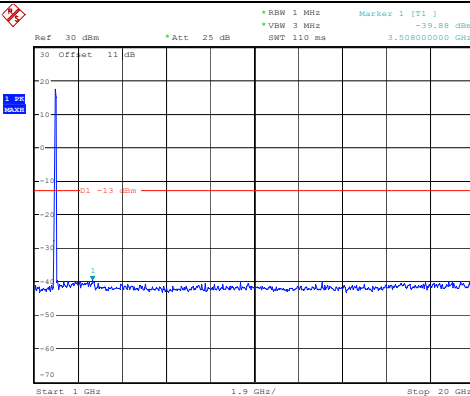


ProjectNo.:CR231061121 Tester:Rod Luo  
 Date: 7.NOV.2023 11:44:24

Highest

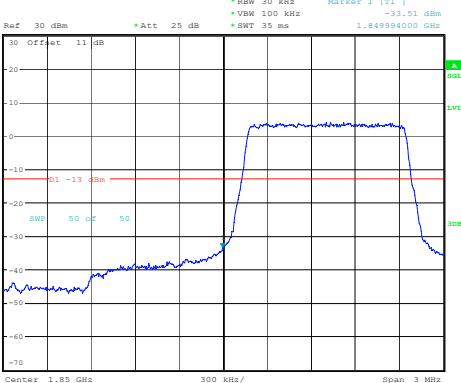
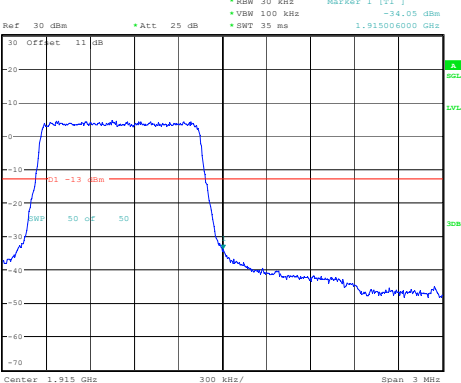
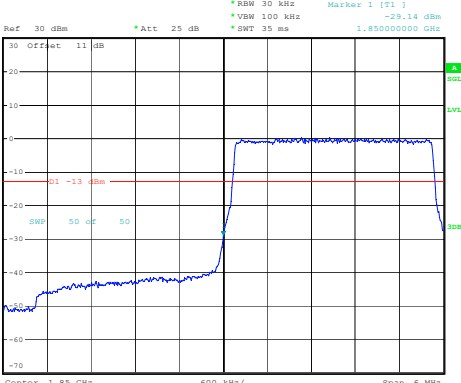
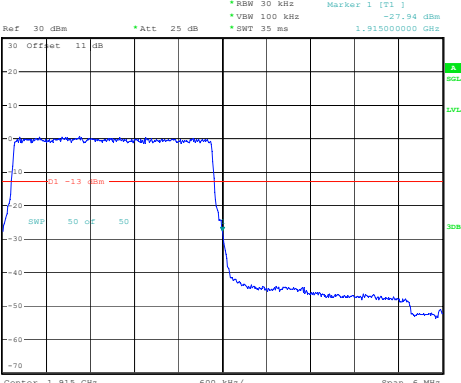


ProjectNo.:CR231061121 Tester:Rod Luo  
 Date: 7.NOV.2023 11:44:36



ProjectNo.:CR231061121 Tester:Rod Luo  
 Date: 7.NOV.2023 11:44:50

Out of band emission, Band Edge

Mode	Lowest	Highest
<p>QPSK 1.4MHz</p>	 <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 11:12:31</p>	 <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 27.NOV.2023 14:55:08</p>
<p>QPSK 3MHz</p>	 <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 11:13:11</p>	 <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 11:13:25</p>

Out of band emission, Band Edge

Mode	Lowest	Highest
QPSK 5MHz	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 11:13:42</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 11:13:55</p>
QPSK 10MHz	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 11:14:13</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 11:14:28</p>

Out of band emission, Band Edge

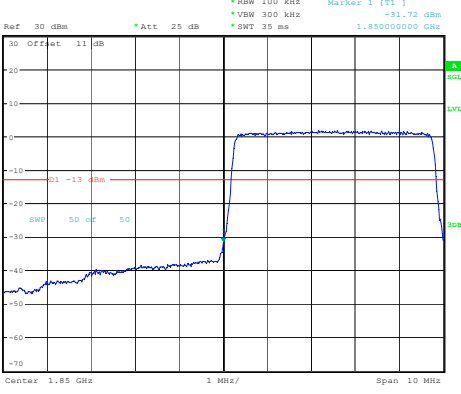
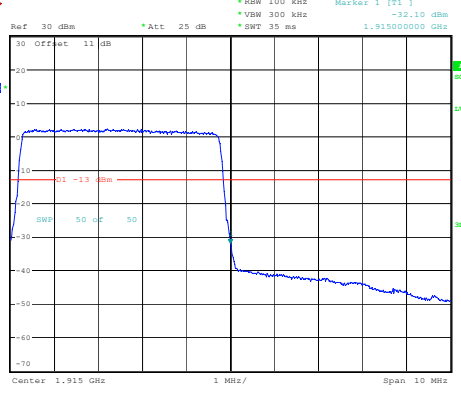
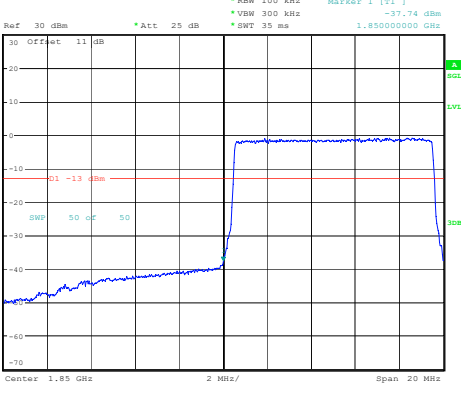
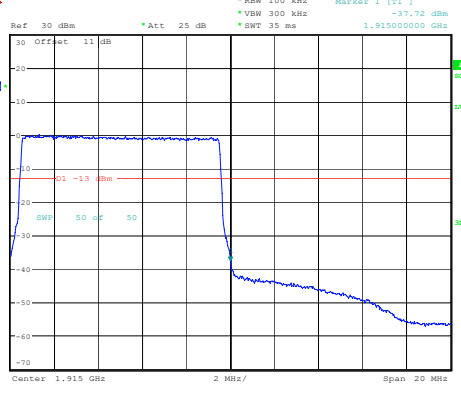
Mode	Lowest	Highest
<p>QPSK 15MHz</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 11:14:46</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 11:14:58</p>
<p>QPSK 20MHz</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 11:15:15</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 11:15:27</p>

Out of band emission, Band Edge

Mode	Lowest	Highest
16QAM 1.4MHz	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 11:12:37</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 11:13:02</p>
16QAM 3MHz	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 11:13:17</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 11:13:32</p>



Out of band emission, Band Edge

Mode	Lowest	Highest
16QAM 5MHz	 <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 11:13:48</p>	 <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 11:14:02</p>
16QAM 10MHz	 <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 11:14:20</p>	 <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 11:14:36</p>

Out of band emission, Band Edge

Mode	Lowest	Highest
16QAM 15MHz	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 11:14:51</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 11:15:04</p>
16QAM 20MHz	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 11:15:21</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 11:15:33</p>

**4.14 Antenna Port Test Data and Results for LTE Band 26**

Serial Number:	2CFR-2	Test Date:	2023/11/8
Test Site:	RF	Test Mode:	Transmitting
Tester:	Rod Luo	Test Result:	Pass

**Environmental Conditions:**

Temperature: (°C)	25.6	Relative Humidity: (%)	43	ATM Pressure: (kPa)	101
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**Test Equipment List and Details:**

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSU26	200120	2023/3/31	2024/3/30
zhuoxiang	Coaxial Cable	SMA-178	211002	Each time	N/A
Minl-Circuits	Power Splitter	ZFRSC-183-S+	S F448201619	Each time	N/A
R&S	Wideband Radio Communication Tester	CMW500	143458	2023/3/31	2024/3/30
BACL	TEMP&HUMI Test Chamber	BTH-150-40	30174	2023/3/31	2024/3/30
UNI-T	Multimeter	UT39A+	C210582554	2023/9/28	2024/9/27
ZHAOXIN	DC Power Supply	RXN-6010D	21R6010D0912386	N/A	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).

**Test Frequency for Each Mode:**

Operation Bandwidth	Lowest Frequency For 90S (MHz)	Highest Frequency For 90S (MHz)	Channel Cross 90S and 22H	Lowest Frequency For 22H (MHz)	Middle Frequency For 22H (MHz)	Highest Frequency For 22H (MHz)
1.4MHz	814.7	823.3	824	824.7	831.5	848.3
3MHz	815.5	822.5	824	825.5	831.5	847.5
5MHz	816.5	821.5	824	826.5	831.5	846.5
10MHz	819	/	824	829	831.5	844
15MHz	821.5	/	824	831.5	836.5	841.5

Note: 15MHz bandwidth 821.5MHz cross Rules 90S and 22H.

**4.14.1 Test Data for Part 90S:****FCC§2.1046; § 90.635****RF Output Power:**

Test Bandwidth & Modulation	Resource Block & RB offset	Conducted Average Output Power(dBm)			Maximum ERP (dBm)	ERP Limit (dBm)
		Lowest Channel For 90S	Highest Channel For 90S	Cross Channel		
1.4MHz QPSK	RB1#0	23.9	24.03	24.24	17.12	50
	RB1#3	23.86	24.01	24.27		
	RB1#5	23.89	23.99	24.27		
	RB3#0	23.48	23.28	23.66		
	RB3#3	23.46	23.35	23.66		
	RB6#0	21.39	21.33	21.59		
1.4MHz 16QAM	RB1#0	22.55	23.45	23.79	16.77	50
	RB1#3	22.56	23.32	23.92		
	RB1#5	22.57	23.44	23.74		
	RB3#0	22.51	22.4	22.69		
	RB3#3	22.51	22.34	22.71		
	RB6#0	21.66	21.52	21.84		
3MHz QPSK	RB1#0	24	23.8	24.07	17.00	50
	RB1#8	24.01	23.8	24.15		
	RB1#14	24.05	23.83	24.09		
	RB6#0	21.45	21.28	21.72		
	RB6#9	21.53	21.36	21.62		
	RB15#0	21.41	21.43	21.65		
3MHz 16QAM	RB1#0	23.3	23.34	22.82	16.20	50
	RB1#8	23.27	23.23	22.84		
	RB1#14	23.35	23.22	22.86		
	RB6#0	21.68	21.4	21.87		
	RB6#9	21.71	21.31	21.89		
	RB15#0	21.48	21.41	21.74		
5MHz QPSK	RB1#0	23.9	23.82	24.15	17.00	50
	RB1#13	23.99	23.75	24.1		
	RB1#24	23.97	23.73	24.01		
	RB15#0	21.45	21.42	21.74		
	RB15#10	21.42	21.35	21.65		
	RB25#0	21.61	21.35	21.73		
5MHz 16QAM	RB1#0	22.68	22.14	23.22	16.10	50
	RB1#13	22.69	22.07	23.21		
	RB1#24	22.67	22.02	23.25		
	RB15#0	21.33	21.53	21.67		
	RB15#10	21.43	21.43	21.62		
	RB25#0	21.5	21.56	21.8		
10MHz QPSK	RB1#0	23.97	/	24.18	17.03	50

	RB1#25	23.98	/	24.18		
	RB1#49	23.83	/	24.02		
	RB25#0	21.95	/	22.18		
	RB25#25	21.91	/	22.06		
	RB50#0	22.04	/	22.2		
10MHz 16QAM	RB1#0	23.74	/	22.73	16.59	50
	RB1#25	23.65	/	22.77		
	RB1#49	23.6	/	22.57		
	RB25#0	22.17	/	22.44		
	RB25#25	22	/	22.33		
	RB50#0	22.06	/	22.27		
15MHz QPSK	RB1#0	24.08	/	24.08	16.93	50
	RB1#38	24	/	24		
	RB1#74	23.78	/	23.78		
	RB36#0	22.2	/	22.2		
	RB36#39	22.1	/	22.1		
	RB75#0	22.09	/	22.09		
15MHz 16QAM	RB1#0	23.4	/	23.4	16.25	50
	RB1#38	23.27	/	23.27		
	RB1#74	23.12	/	23.12		
	RB36#0	22.35	/	22.35		
	RB36#39	22.26	/	22.26		
	RB75#0	22.24	/	22.24		

Note:

ERP= Conducted Power(dBm) - Lc(dB) + Gr(dBd)

Gr(dBd)=Gr(dBi)-2.15

**Result:****Pass****FCC §2.1049, §90.209: Occupied Bandwidth**

Operation Mode	99% Occupied Bandwidth (MHz)			26 dB Occupied Bandwidth (MHz)		
	Lowest For 90S	Highest For 90S	Cross	Lowest For 90S	Highest For 90S	Cross
1.4MHz QPSK	1.104	1.104	1.104	1.260	1.260	1.260
1.4MHz 16QAM	1.104	1.098	1.092	1.266	1.248	1.254
3MHz QPSK	2.700	2.700	2.700	3.000	2.988	3.000
3MHz 16QAM	2.700	2.700	2.687	3.012	3.012	3.024
5MHz QPSK	4.520	4.520	4.520	5.000	5.000	4.980
5MHz 16QAM	4.540	4.520	4.560	5.000	4.980	5.020
10MHz QPSK	8.960	/	8.960	9.720	/	9.800
10MHz 16QAM	9.000	/	8.960	9.840	/	9.840
15MHz QPSK	13.560	/	13.560	15.060	/	15.120
15MHz 16QAM	13.560	/	13.620	15.060	/	15.120

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

**FCC §2.1051, §90.691: Spurious Emissions at Antenna Terminal****Result:****Pass, please refer to the test plots of Spurious Emissions at Antenna Terminal.**

**FCC §2.1051, §90.691: Out of band emission, Band Edge****Result:** Pass, please refer to the test plots of Out of band emission, Band Edge.**FCC §2.1055, §90.213: Frequency Stability**

Test Modulation:	15 MHz QPSK		Test Channel:	821.5	MHz
Test Item	Temperature (°C)	Voltage (V <sub>DC</sub> )	Frequency Error		Limit
			(Hz)	(ppm)	(ppm)
Frequency Stability vs. Temperature	-30	3.85	103.569	0.126	2.5
	-20	3.85	98.127	0.119	2.5
	-10	3.85	99.021	0.121	2.5
	0	3.85	104.304	0.127	2.5
	10	3.85	100.802	0.123	2.5
	20	3.85	95.792	0.117	2.5
	30	3.85	108.108	0.132	2.5
	40	3.85	105.864	0.129	2.5
	50	3.85	99.915	0.122	2.5
Frequency Stability vs. Voltage	20	3.5	103.287	0.126	2.5
	20	4.4	107.399	0.131	2.5
<b>Result:</b>				<b>Pass</b>	

**FCC §2.1055, §90.213: Frequency Stability**

Test Modulation:	15 MHz 16QAM		Test Channel:	821.5	MHz
Test Item	Temperature (°C)	Voltage (V <sub>DC</sub> )	Frequency Error		Limit
			(Hz)	(ppm)	(ppm)
Frequency Stability vs. Temperature	-30	3.85	116.834	0.142	2.5
	-20	3.85	109.630	0.133	2.5
	-10	3.85	109.116	0.133	2.5
	0	3.85	102.318	0.125	2.5
	10	3.85	117.091	0.143	2.5
	20	3.85	104.076	0.127	2.5
	30	3.85	101.930	0.124	2.5
	40	3.85	102.001	0.124	2.5
	50	3.85	113.446	0.138	2.5
Frequency Stability vs. Voltage	20	3.5	107.836	0.131	2.5
	20	4.4	115.175	0.140	2.5
<b>Result:</b>				<b>Pass</b>	

4.14.2 Test Plots for Part 90S:

(Note: The 10.5dB is the Insertion loss of the RF cable, Power Splitter and DC Block, which was offset into the Spectrum Analyzer):

Occupied Bandwidth

Channel	1.4MHz Bandwidth QPSK	1.4MHz Bandwidth 16QAM
Lowest For 90S	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 09:17:33</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 09:19:19</p>
Highest For 90S	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 09:20:09</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 09:20:26</p>
Cross Channel	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 13:33:26</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 13:33:42</p>

**Occupied Bandwidth**

Channel	3MHz Bandwidth QPSK	3MHz Bandwidth 16QAM
Lowest For 90S	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 09:20:43</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 09:21:00</p>
Highest For 90S	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 09:21:46</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 09:22:00</p>
Cross Channel	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 13:35:03</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 13:35:17</p>



Occupied Bandwidth

Channel	5MHz Bandwidth QPSK	5MHz Bandwidth 16QAM
Lowest For 90S	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 09:22:21</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 09:22:38</p>
Highest For 90S	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 09:23:29</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 09:23:43</p>
Cross Channel	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 13:36:40</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 13:36:54</p>

Occupied Bandwidth

Channel	10MHz Bandwidth QPSK	10MHz Bandwidth 16QAM
<p>Lowest For 90S</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 09:24:01</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 09:24:15</p>
<p>Cross Channel</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 13:38:21</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 13:38:37</p>

Occupied Bandwidth

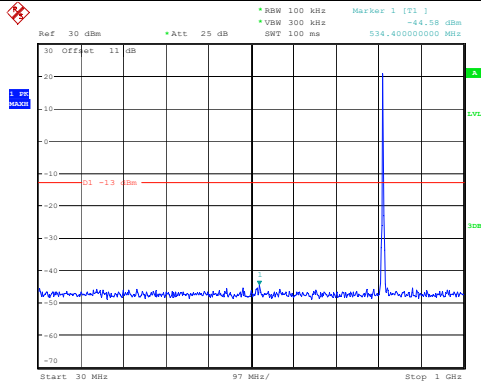
Channel	15MHz Bandwidth QPSK	15MHz Bandwidth 16QAM
Middle For 90S	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 13:39:34</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 13:39:48</p>
Cross Channel	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 13:40:05</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 13:40:21</p>

**Spurious Emissions at Antenna Terminal**

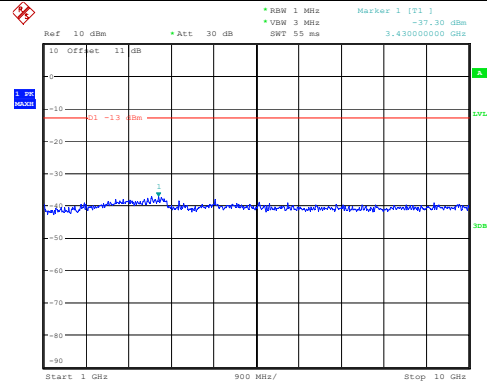
**Channel**

**1.4MHz Bandwidth QPSK**

**Lowest For 90S**

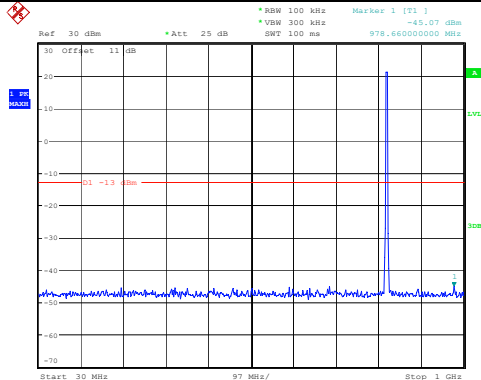


ProjectNo.:CR231061121 Tester:Rod Luo  
 Date: 8.NOV.2023 09:39:34

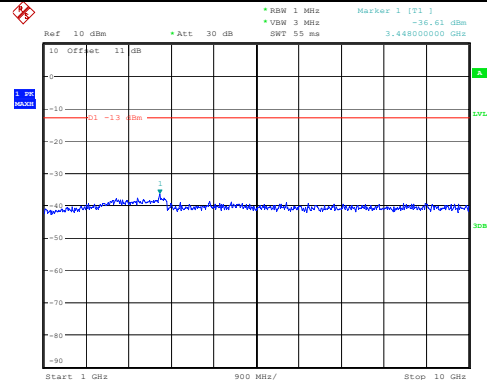


ProjectNo.:CR231061121 Tester:Rod Luo  
 Date: 8.NOV.2023 09:39:45

**Highest For 90S**

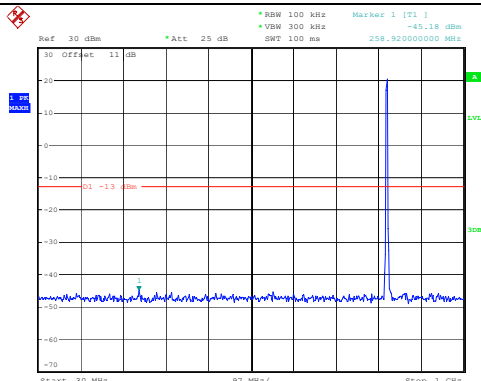


ProjectNo.:CR231061121 Tester:Rod Luo  
 Date: 8.NOV.2023 09:40:20

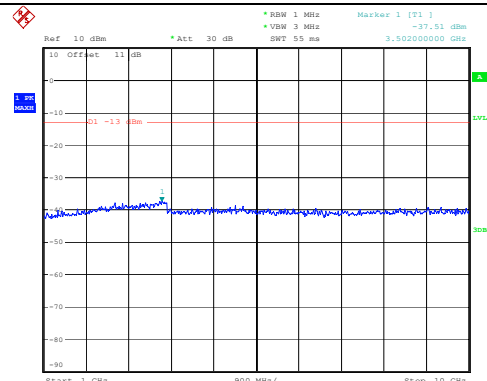


ProjectNo.:CR231061121 Tester:Rod Luo  
 Date: 8.NOV.2023 09:40:30

**Cross Channel**



ProjectNo.:CR231061121 Tester:Rod Luo  
 Date: 8.NOV.2023 13:42:29



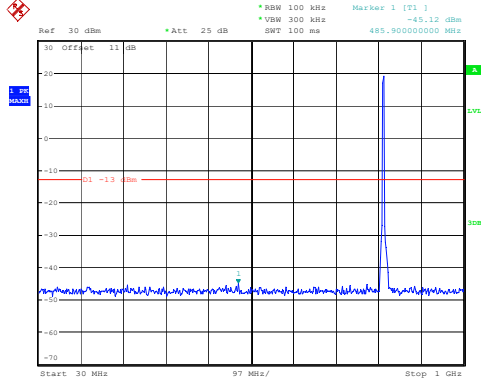
ProjectNo.:CR231061121 Tester:Rod Luo  
 Date: 8.NOV.2023 13:42:40

Spurious Emissions at Antenna Terminal

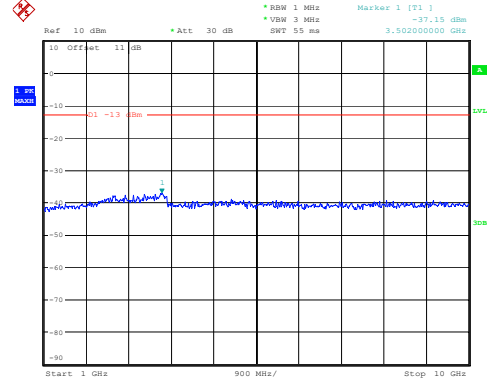
Channel

3MHz Bandwidth QPSK

Lowest For 90S

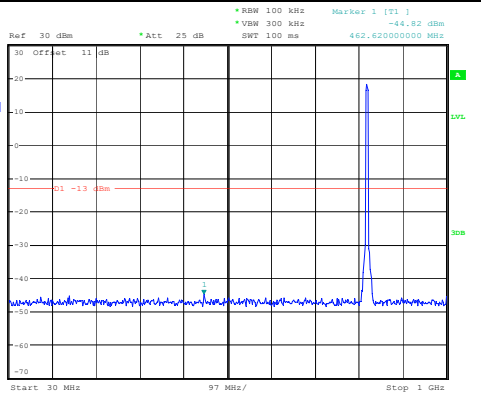


ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 09:40:49

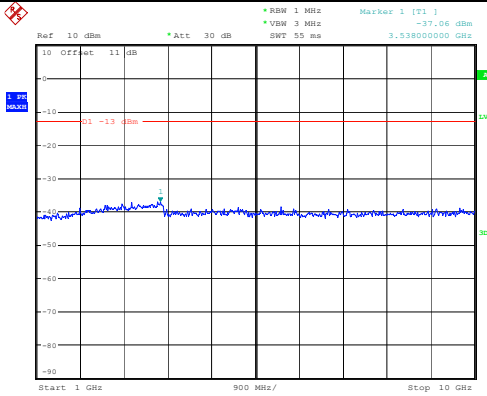


ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 09:40:59

Highest For 90S

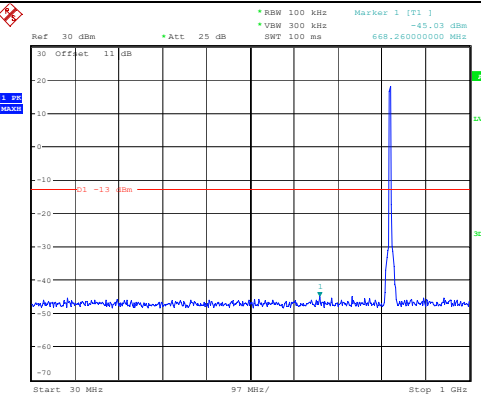


ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 09:41:37

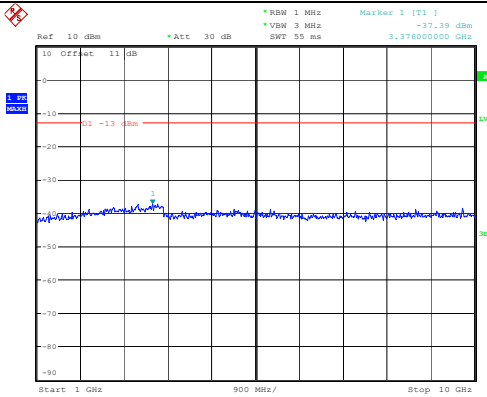


ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 09:41:51

Cross Channel



ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 13:43:45



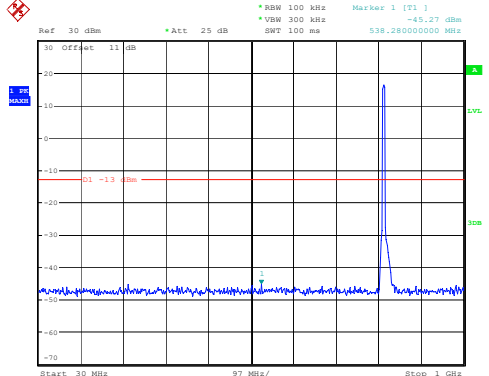
ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 13:43:55

Spurious Emissions at Antenna Terminal

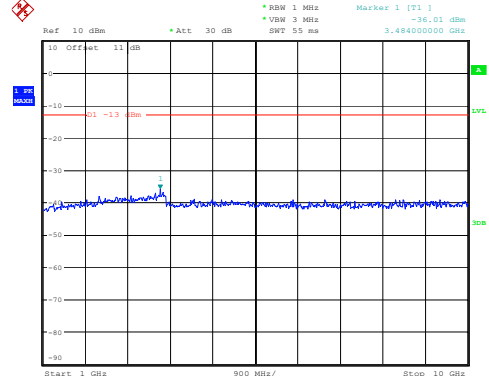
Channel

5MHz Bandwidth QPSK

Lowest For 90S

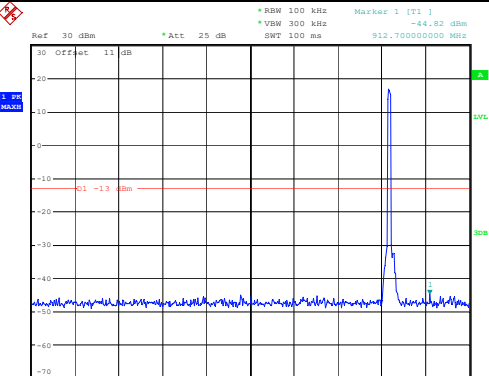


ProjectNo.:CR231061121 Tester:Rod Luo  
Date: 8.NOV.2023 09:42:06

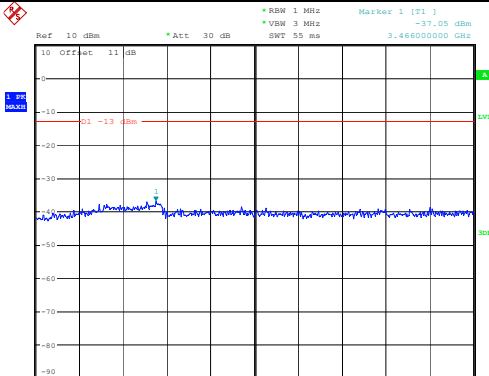


ProjectNo.:CR231061121 Tester:Rod Luo  
Date: 8.NOV.2023 09:42:17

Highest For 90S

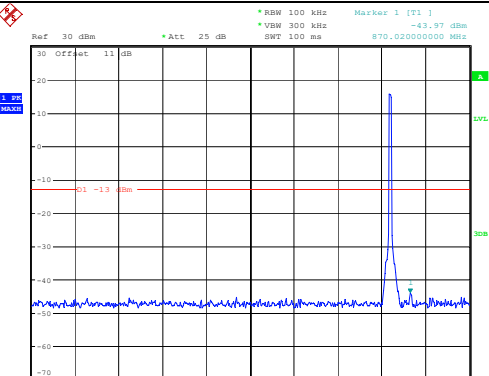


ProjectNo.:CR231061121 Tester:Rod Luo  
Date: 8.NOV.2023 09:42:55

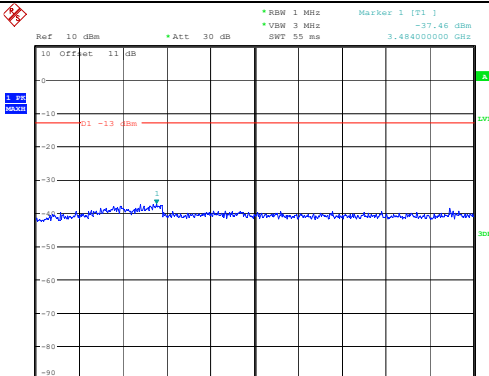


ProjectNo.:CR231061121 Tester:Rod Luo  
Date: 8.NOV.2023 09:43:06

Cross Channel



ProjectNo.:CR231061121 Tester:Rod Luo  
Date: 8.NOV.2023 13:45:02



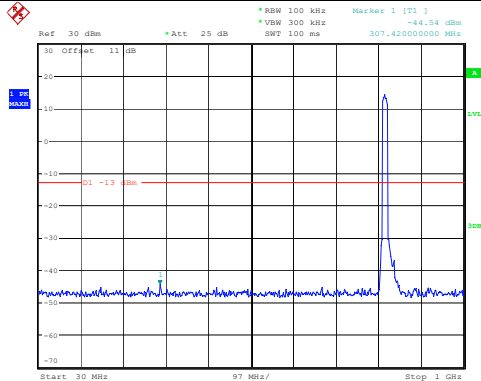
ProjectNo.:CR231061121 Tester:Rod Luo  
Date: 8.NOV.2023 13:45:12

Spurious Emissions at Antenna Terminal

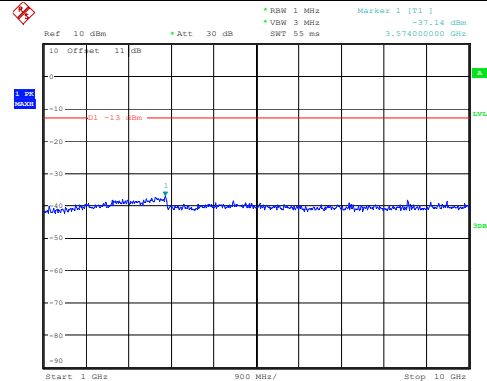
Channel

10MHz Bandwidth QPSK

Lowest For 90S

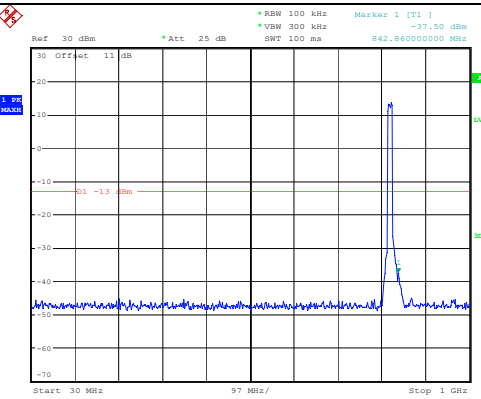


ProjectNo.:CR231061121 Tester:Rod Luo  
Date: 8.NOV.2023 09:43:24

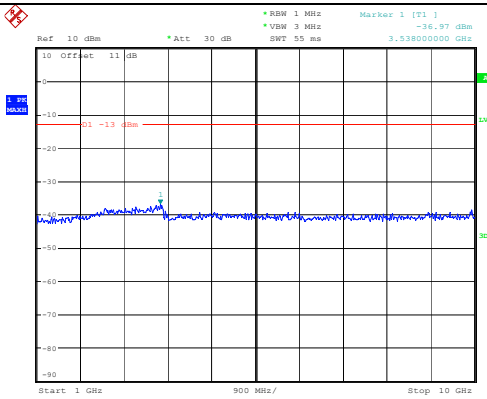


ProjectNo.:CR231061121 Tester:Rod Luo  
Date: 8.NOV.2023 09:43:38

Cross Channel



ProjectNo.:CR231061121 Tester:Rod Luo  
Date: 8.NOV.2023 13:46:13



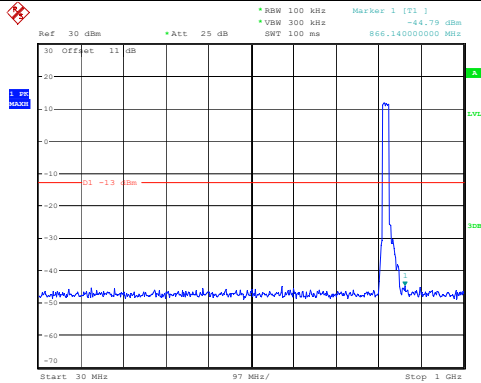
ProjectNo.:CR231061121 Tester:Rod Luo  
Date: 8.NOV.2023 13:46:23

**Spurious Emissions at Antenna Terminal**

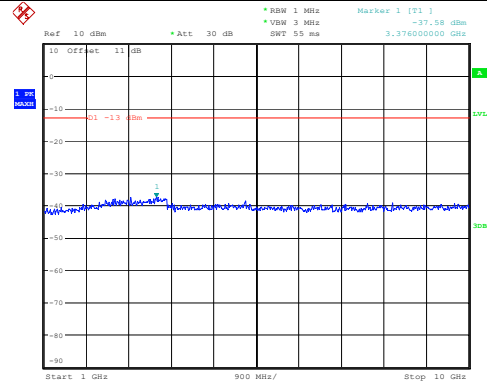
**Channel**

**15MHz Bandwidth QPSK**

**Lowest For 90S**

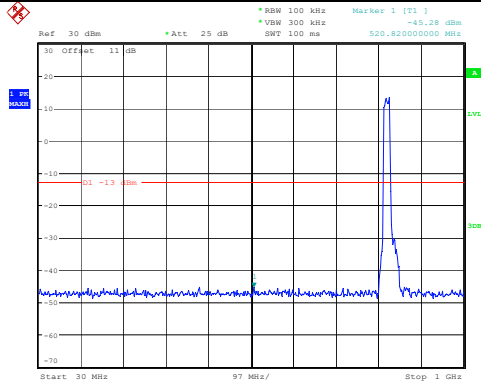


ProjectNo.:CR231061121 Tester:Rod Luo  
Date: 8.NOV.2023 13:47:02

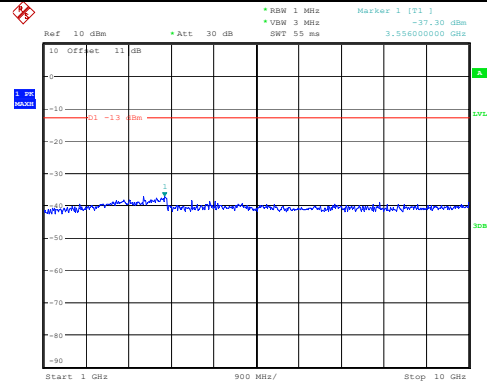


ProjectNo.:CR231061121 Tester:Rod Luo  
Date: 8.NOV.2023 13:47:12

**Cross Channel**



ProjectNo.:CR231061121 Tester:Rod Luo  
Date: 8.NOV.2023 13:47:28



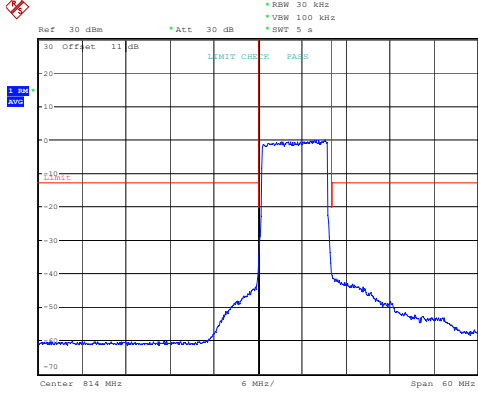
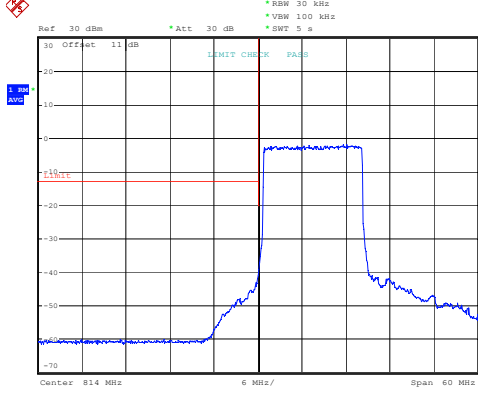
ProjectNo.:CR231061121 Tester:Rod Luo  
Date: 8.NOV.2023 13:47:38



Out of band emission, Band Edge

Mode	Lowest	Highest
<p>QPSK 1.4MHz For 90S</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 11:32:56</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 11:34:05</p>
<p>QPSK 3MHz For 90S</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 11:31:38</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 11:29:47</p>
<p>QPSK 5MHz For 90S</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 11:35:56</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 11:37:26</p>

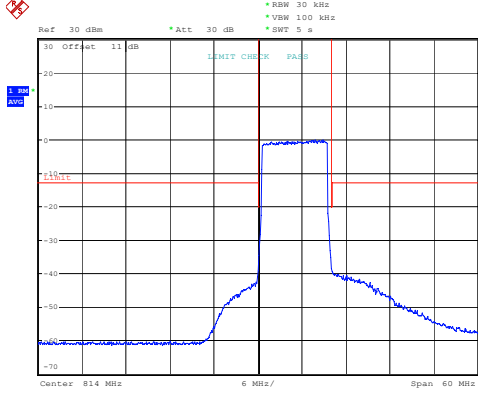
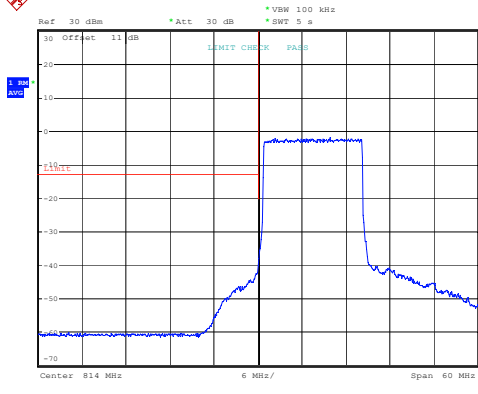
**Out of band emission, Band Edge**

Mode	
<p>QPSK 10MHz For 90S</p>	 <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 11:42:50</p>
<p>QPSK 15MHz Across 90S and 22H</p>	 <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 11:46:13</p>

Out of band emission, Band Edge

Mode	Lowest	Highest
<p>16QAM 1.4MHz For 90S</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 11:32:25</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 11:33:36</p>
<p>16QAM 3MHz For 90S</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 11:31:04</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 11:28:58</p>
<p>16QAM 5MHz For 90S</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 11:35:16</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 11:38:00</p>

**Out of band emission, Band Edge**

Mode	
<p>16QAM 10MHz For 90S</p>	 <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 11:43:33</p>
<p>16QAM 15MHz Across 90S and 22H</p>	 <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 11:45:34</p>

## 4.14.3 Test Data for Part 22H:

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 Frequency For 22H	Middle Frequency For 22H	Highest Frequency For 22H		
1.4MHz QPSK	RB1#0	23.88	23.65	23.87	16.73	38.45
	RB1#3	23.73	23.83	23.83		
	RB1#5	23.75	23.77	23.86		
	RB3#0	23.45	23.33	23.27		
	RB3#3	23.41	23.29	23.24		
	RB6#0	21.38	21.35	21.3		
1.4MHz 16QAM	RB1#0	22.54	23.12	23.76	16.61	38.45
	RB1#3	22.53	23.16	23.66		
	RB1#5	22.56	23.14	23.73		
	RB3#0	22.55	22.26	22.15		
	RB3#3	22.52	22.19	22.23		
	RB6#0	21.63	21.34	21.51		
3MHz QPSK	RB1#0	24.04	23.75	23.77	16.89	38.45
	RB1#8	23.97	23.76	23.75		
	RB1#14	23.97	23.78	23.74		
	RB6#0	21.31	21.15	21.25		
	RB6#9	21.3	21.35	21.16		
	RB15#0	21.36	21.37	21.26		
3MHz 16QAM	RB1#0	22.91	22.12	23.09	15.94	38.45
	RB1#8	22.97	22.29	22.94		
	RB1#14	22.89	22.23	22.95		
	RB6#0	21.61	21.24	21.35		
	RB6#9	21.57	21.41	21.36		
	RB15#0	21.37	21.46	21.36		
5MHz QPSK	RB1#0	24	23.6	23.75	16.85	38.45
	RB1#13	23.86	23.71	23.83		
	RB1#24	23.88	23.66	23.76		
	RB15#0	21.44	21.17	21.37		
	RB15#10	21.3	21.47	21.34		
	RB25#0	21.44	21.43	21.23		
5MHz 16QAM	RB1#0	22.84	22.76	22.49	15.69	38.45
	RB1#13	22.81	22.83	22.46		
	RB1#24	22.75	22.74	22.49		
	RB15#0	21.31	21.17	21.34		
	RB15#10	21.22	21.39	21.44		
	RB25#0	21.32	21.51	21.26		

10MHz QPSK	RB1#0	23.93	23.8	23.81	16.78	38.45
	RB1#25	23.88	23.81	23.78		
	RB1#49	23.67	23.82	23.77		
	RB25#0	21.83	21.67	21.76		
	RB25#25	21.82	21.7	21.81		
	RB50#0	21.88	21.89	21.83		
10MHz 16QAM	RB1#0	23.66	22.31	23.26	16.51	38.45
	RB1#25	23.47	22.38	23.16		
	RB1#49	23.44	22.22	23.29		
	RB25#0	21.99	21.91	21.84		
	RB25#25	21.75	21.94	21.95		
	RB50#0	21.91	21.95	21.87		
15MHz QPSK	RB1#0	24.08	23.66	23.74	16.93	38.45
	RB1#38	23.84	23.61	23.74		
	RB1#74	23.93	23.65	23.78		
	RB36#0	21.9	21.69	21.76		
	RB36#39	21.57	21.91	21.79		
	RB75#0	21.82	21.82	21.85		
15MHz 16QAM	RB1#0	23.07	22.93	23.05	15.99	38.45
	RB1#38	22.87	22.93	23.07		
	RB1#74	22.96	22.88	23.14		
	RB36#0	21.96	21.83	21.83		
	RB36#39	21.86	21.85	21.82		
	RB75#0	21.74	21.88	21.85		

Note:

ERP= Conducted Power(dBm) - Lc(dB) + Gr(dBd)

Gr(dBd)=Gr(dBi)-2.15

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

Test Bandwidth & Modulation	Resource Block & RB offset	Peak-to-average Ratio(dB)			Limit (dB)
		Lowest Frequency For 22H	Middle Frequency For 22H	Highest Frequency For 22H	
15MHz QPSK	RB1#0	7.13	7.37	7.70	13
	RB75#0	8.69	6.78	6.83	13
15MHz 16QAM	RB1#0	9.17	7.91	8.47	13
	RB75#0	8.81	9.27	6.51	13
				<b>Result:</b>	<b>Pass</b>

<b>FCC §2.1049, §22.905: Occupied Bandwidth</b>						
Operation Mode	99% Occupied Bandwidth (MHz)			26 dB Occupied Bandwidth (MHz)		
	Lowest For 22H	Middle For 22H	Highest For 22H	Lowest For 22H	Middle For 22H	Highest For 22H
1.4MHz QPSK	1.104	1.104	1.104	1.254	1.260	1.260
1.4MHz 16QAM	1.104	1.116	1.098	1.260	1.254	1.248
3MHz QPSK	2.700	2.687	2.700	3.024	3.012	2.988
3MHz 16QAM	2.687	2.687	2.700	3.012	3.036	3.000
5MHz QPSK	4.520	4.520	4.520	5.000	4.960	5.000
5MHz 16QAM	4.540	4.520	4.520	5.020	5.000	5.000
10MHz QPSK	8.960	8.960	8.960	9.760	9.760	9.720
10MHz 16QAM	8.960	8.960	8.960	9.800	9.840	9.800
15MHz QPSK	13.500	13.560	13.560	15.000	15.060	15.060
15MHz 16QAM	13.560	13.560	13.560	15.120	14.940	15.060

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 Modulation:	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	3.85	100.444	0.121	2.5
	-20	3.85	105.060	0.126	2.5
	-10	3.85	100.000	0.120	2.5
	0	3.85	96.306	0.116	2.5
	10	3.85	103.782	0.125	2.5
	20	3.85	99.447	0.120	2.5
	30	3.85	98.973	0.119	2.5
	40	3.85	98.172	0.118	2.5
Frequency Stability vs. Voltage	20	3.5	103.007	0.124	2.5
	20	4.4	105.285	0.127	2.5
				<b>Result:</b>	<b>Pass</b>

<b>FCC §2.1055, §22.355: Frequency Stability</b>					
Test Modulation:	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	3.85	99.545	0.120	2.5
	-20	3.85	99.765	0.120	2.5
	-10	3.85	98.400	0.118	2.5
	0	3.85	98.319	0.118	2.5
	10	3.85	102.105	0.123	2.5
	20	3.85	105.122	0.126	2.5
	30	3.85	99.260	0.119	2.5
	40	3.85	108.861	0.131	2.5
Frequency Stability vs. Voltage	20	3.5	97.845	0.118	2.5
	20	4.4	105.565	0.127	2.5
				<b>Result:</b>	<b>Pass</b>



**4.14.4 Test Plots for Part 22H:**

(Note: The 11dB is the Insertion loss of the RF cable, Power Splitter and DC Block, which was offset into the Spectrum Analyzer):

<b>Occupied Bandwidth</b>		
<b>Channel</b>	<b>1.4MHz Bandwidth QPSK</b>	<b>1.4MHz Bandwidth 16QAM</b>
<b>Lowest For 22H</b>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 10:01:06</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 10:01:26</p>
<b>Middle For 22H</b>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 10:01:43</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 10:02:02</p>
<b>Highest For 22H</b>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 10:02:19</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 10:02:32</p>

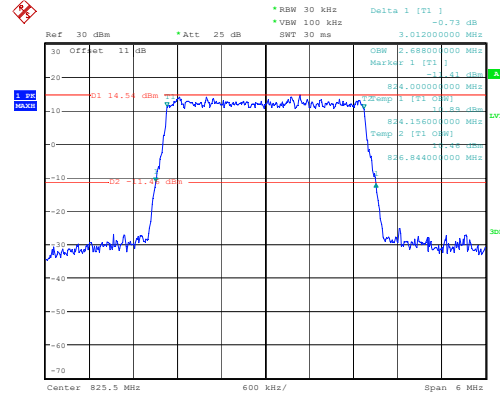
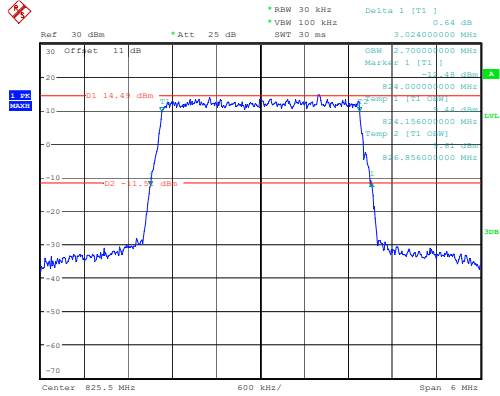
**Occupied Bandwidth**

**Channel**

**3MHz Bandwidth QPSK**

**3MHz Bandwidth 16QAM**

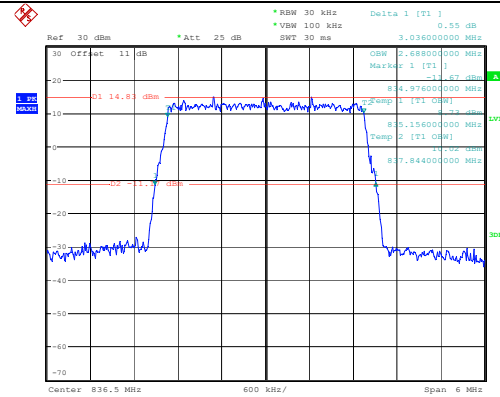
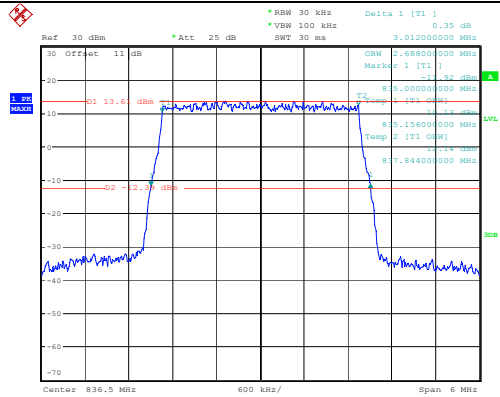
Lowest  
For 22H



ProjectNo.:CR231061121 Tester:Rod Luo  
Date: 8.NOV.2023 10:02:49

ProjectNo.:CR231061121 Tester:Rod Luo  
Date: 8.NOV.2023 10:03:02

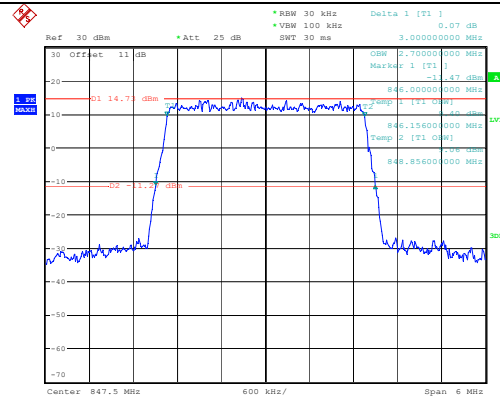
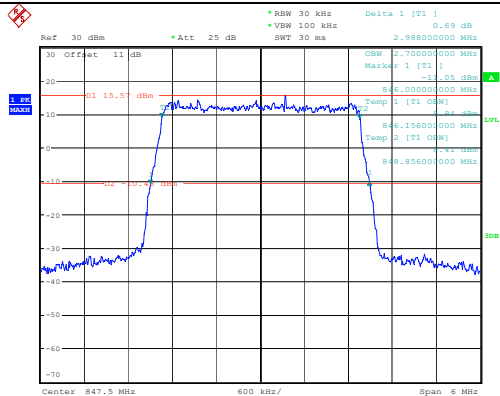
Middle  
For 22H



ProjectNo.:CR231061121 Tester:Rod Luo  
Date: 8.NOV.2023 10:03:16

ProjectNo.:CR231061121 Tester:Rod Luo  
Date: 8.NOV.2023 10:03:33

Highest  
For 22H



ProjectNo.:CR231061121 Tester:Rod Luo  
Date: 8.NOV.2023 10:03:46

ProjectNo.:CR231061121 Tester:Rod Luo  
Date: 8.NOV.2023 10:04:03

### Occupied Bandwidth

Channel	5MHz Bandwidth QPSK	5MHz Bandwidth 16QAM
Lowest For 22H	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 10:04:26</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 10:04:42</p>
Middle For 22H	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 10:04:59</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 10:05:16</p>
Highest For 22H	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 10:05:33</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 10:05:49</p>

Occupied Bandwidth

Channel	10MHz Bandwidth QPSK	10MHz Bandwidth 16QAM
Lowest For 22H	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 10:06:12</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 10:06:28</p>
Middle For 22H	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 10:06:45</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 10:07:05</p>
Highest For 22H	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 10:07:22</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 10:07:38</p>

Occupied Bandwidth

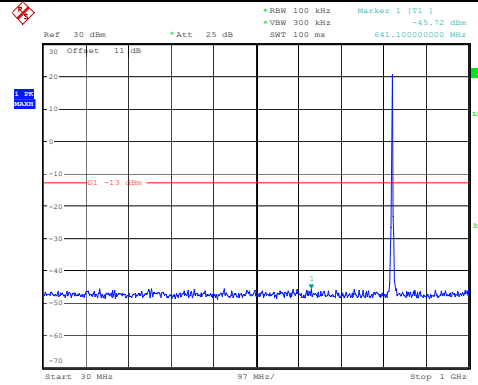
Channel	15MHz Bandwidth QPSK	15MHz Bandwidth 16QAM
Lowest For 22H	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 10:07:55</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 10:08:12</p>
Middle For 22H	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 10:08:26</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 10:08:42</p>
Highest For 22H	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 10:08:59</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 10:09:16</p>

Spurious Emissions at Antenna Terminal

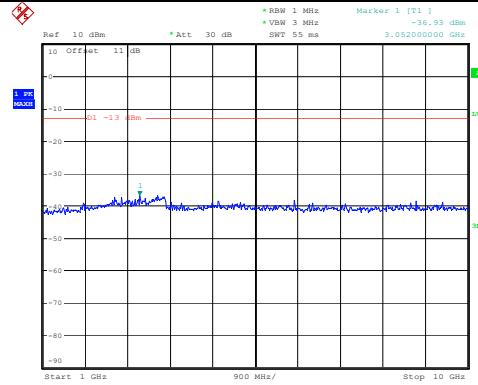
Channel

1.4MHz Bandwidth QPSK

Lowest For 22H

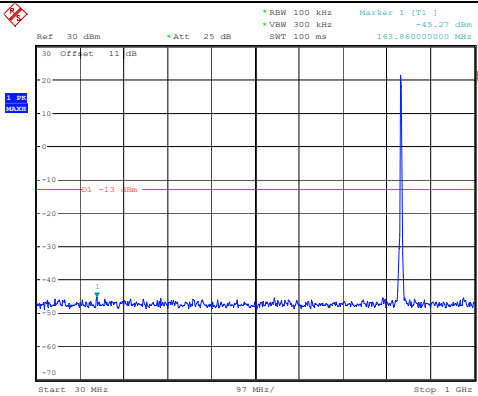


ProjectNo.:CR231061121 Tester:Rod Luo  
Date: 8.NOV.2023 10:16:55

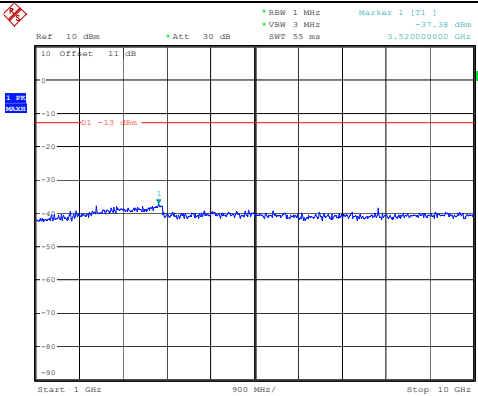


ProjectNo.:CR231061121 Tester:Rod Luo  
Date: 8.NOV.2023 10:17:05

Middle For 22H

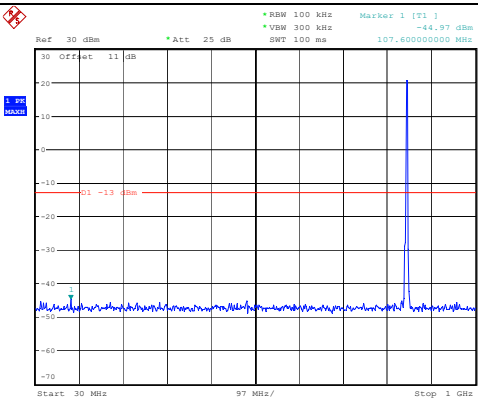


ProjectNo.:CR231061121 Tester:Rod Luo  
Date: 8.NOV.2023 10:17:18

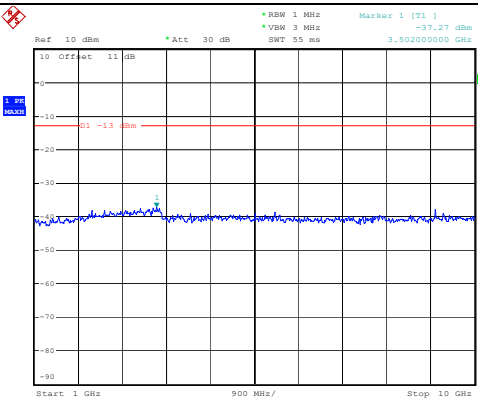


ProjectNo.:CR231061121 Tester:Rod Luo  
Date: 8.NOV.2023 10:17:28

Highest For 22H



ProjectNo.:CR231061121 Tester:Rod Luo  
Date: 8.NOV.2023 10:17:48



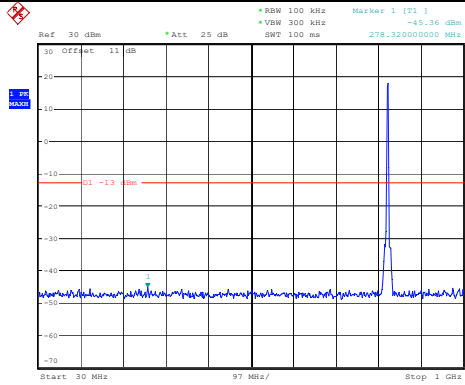
ProjectNo.:CR231061121 Tester:Rod Luo  
Date: 8.NOV.2023 10:17:51

Spurious Emissions at Antenna Terminal

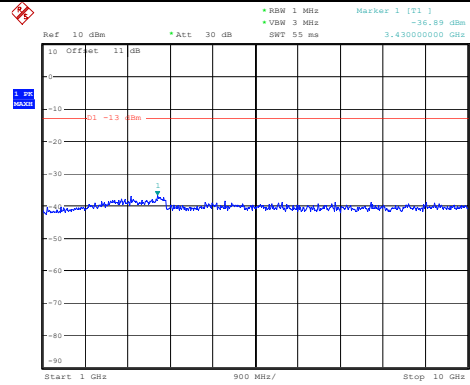
Channel

3MHz Bandwidth QPSK

Lowest For 22H

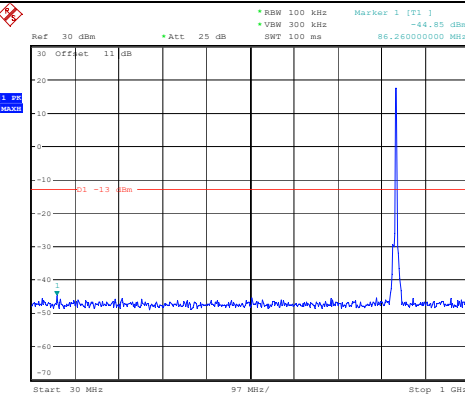


ProjectNo.:CR231061121 Tester:Rod Luo  
Date: 8.NOV.2023 10:18:06

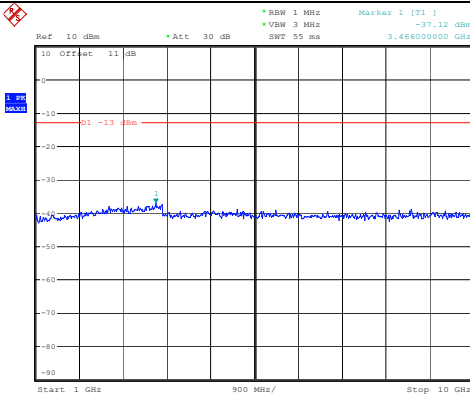


ProjectNo.:CR231061121 Tester:Rod Luo  
Date: 8.NOV.2023 10:18:20

Middle For 22H

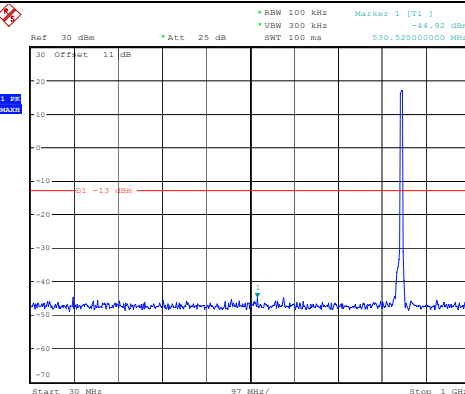


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Date: 8.NOV.2023 10:18:32

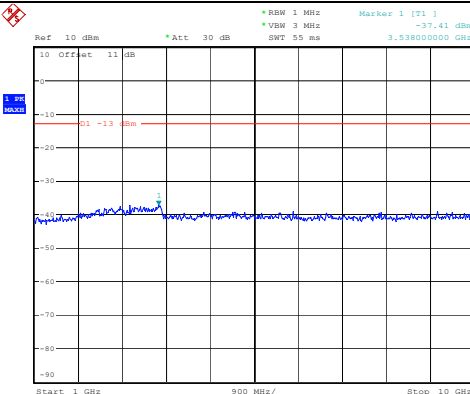


ProjectNo.:CR231061121 Tester:Rod Luo  
Date: 8.NOV.2023 10:18:42

Highest For 22H

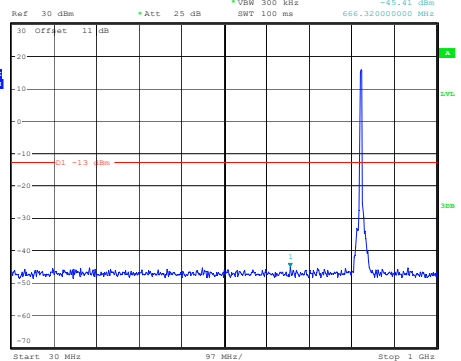
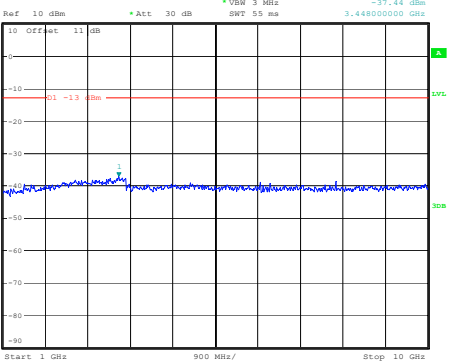
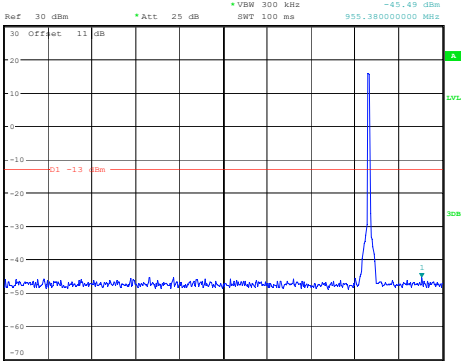
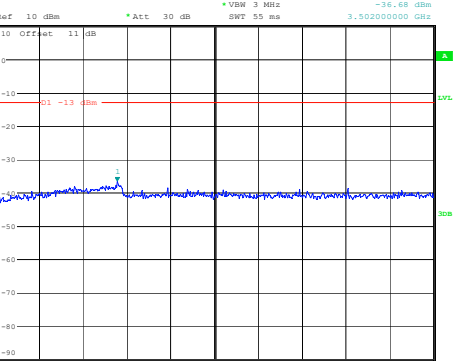
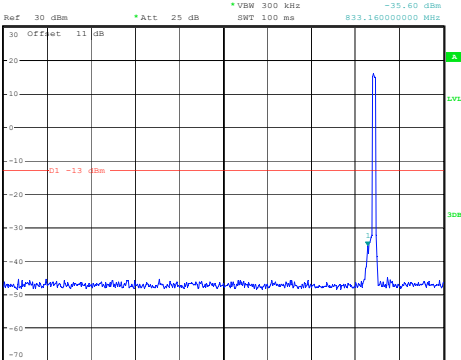
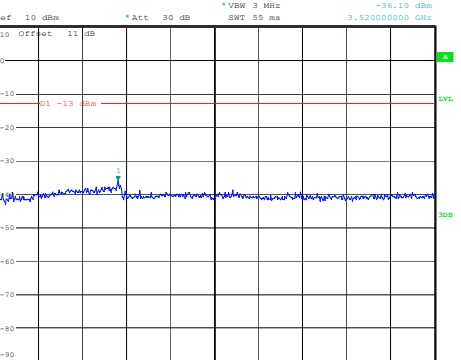


ProjectNo.:CR231061121 Tester:Rod Luo  
Date: 8.NOV.2023 10:18:55



ProjectNo.:CR231061121 Tester:Rod Luo  
Date: 8.NOV.2023 10:19:05

Spurious Emissions at Antenna Terminal

Channel	5MHz Bandwidth QPSK	
<p>Lowest For 22H</p>	 <p>Ref 30 dBm *Att 25 dB *RBW 100 kHz *VSW 300 kHz *SWT 100 ms Marker 1 [T1] -45.41 dBm 666.320000000 MHz</p> <p>Start 30 MHz 97 MHz/ Stop 1 GHz</p> <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 10:19:24</p>	 <p>Ref 10 dBm *Att 30 dB *RBW 1 MHz *VSW 3 MHz *SWT 55 ms Marker 1 [T1] -37.44 dBm 3.448000000 GHz</p> <p>Start 1 GHz 900 MHz/ Stop 10 GHz</p> <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 10:19:34</p>
<p>Middle For 22H</p>	 <p>Ref 30 dBm *Att 25 dB *RBW 100 kHz *VSW 300 kHz *SWT 100 ms Marker 1 [T1] -45.49 dBm 955.380000000 MHz</p> <p>Start 30 MHz 97 MHz/ Stop 1 GHz</p> <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 10:19:47</p>	 <p>Ref 10 dBm *Att 30 dB *RBW 1 MHz *VSW 3 MHz *SWT 55 ms Marker 1 [T1] -36.68 dBm 3.520000000 GHz</p> <p>Start 1 GHz 900 MHz/ Stop 10 GHz</p> <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 10:19:57</p>
<p>Highest For 22H</p>	 <p>Ref 30 dBm *Att 25 dB *RBW 100 kHz *VSW 300 kHz *SWT 100 ms Marker 1 [T1] -35.60 dBm 833.160000000 MHz</p> <p>Start 30 MHz 97 MHz/ Stop 1 GHz</p> <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 10:20:12</p>	 <p>Ref 10 dBm *Att 30 dB *RBW 1 MHz *VSW 3 MHz *SWT 55 ms Marker 1 [T1] -36.10 dBm 3.520000000 GHz</p> <p>Start 1 GHz 900 MHz/ Stop 10 GHz</p> <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 10:20:23</p>

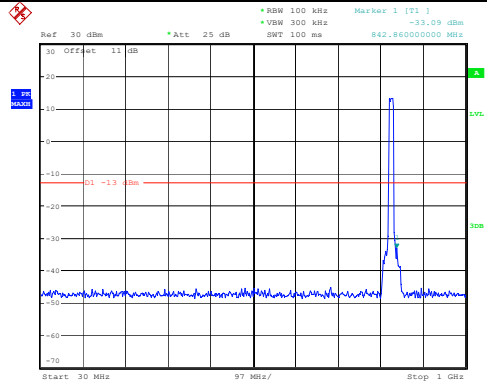


Spurious Emissions at Antenna Terminal

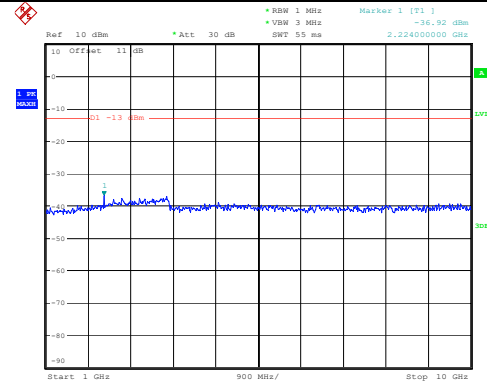
Channel

10MHz Bandwidth QPSK

Lowest For 22H

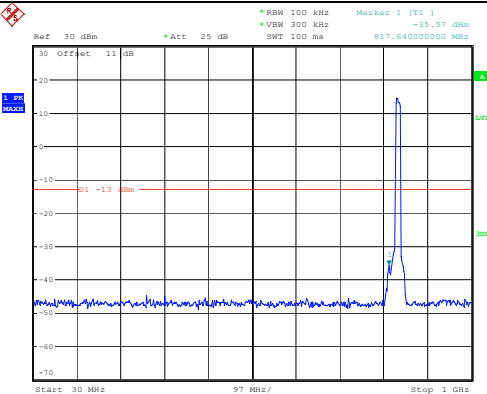


ProjectNo.:CR231061121 Tester:Rod Luo  
Date: 8.NOV.2023 10:20:41

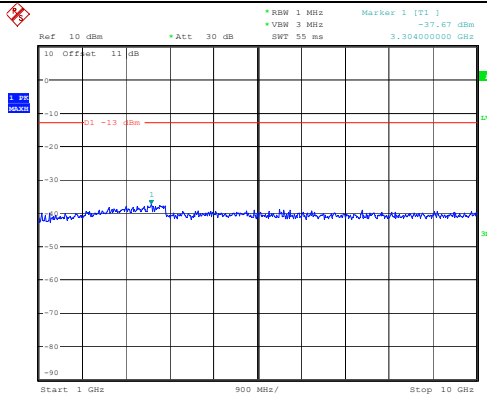


ProjectNo.:CR231061121 Tester:Rod Luo  
Date: 8.NOV.2023 10:20:52

Middle For 22H

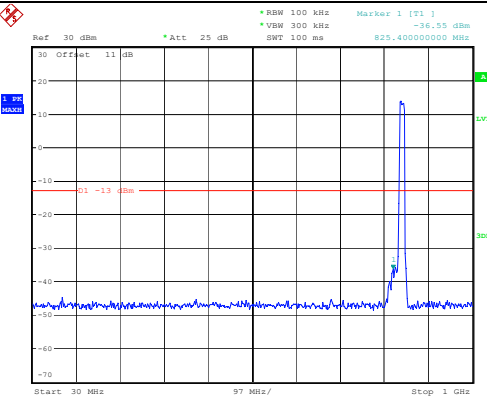


ProjectNo.:CR231061121 Tester:Rod Luo  
Date: 8.NOV.2023 10:21:07

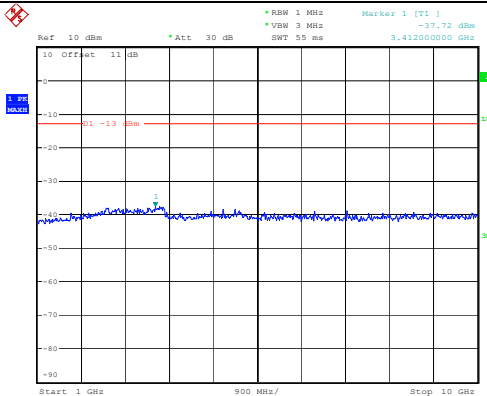


ProjectNo.:CR231061121 Tester:Rod Luo  
Date: 8.NOV.2023 10:21:17

Highest For 22H



ProjectNo.:CR231061121 Tester:Rod Luo  
Date: 8.NOV.2023 10:21:33



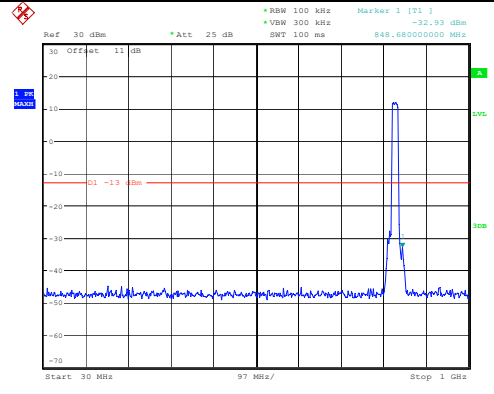
ProjectNo.:CR231061121 Tester:Rod Luo  
Date: 8.NOV.2023 10:21:43

Spurious Emissions at Antenna Terminal

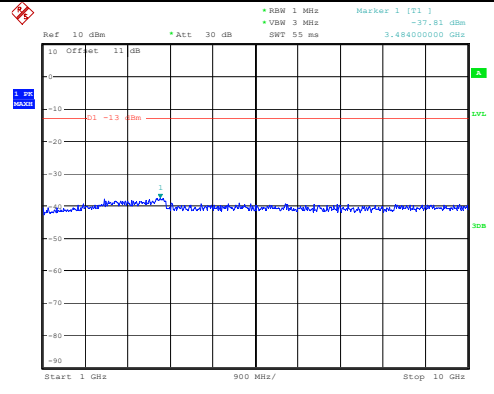
Channel

15MHz Bandwidth QPSK

Lowest For 22H

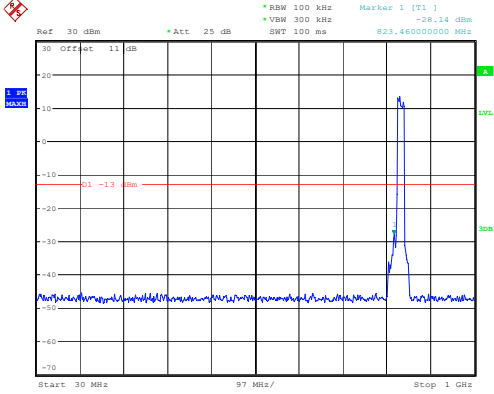


ProjectNo.:CR231061121 Tester:Rod Luo  
Date: 8.NOV.2023 10:21:59

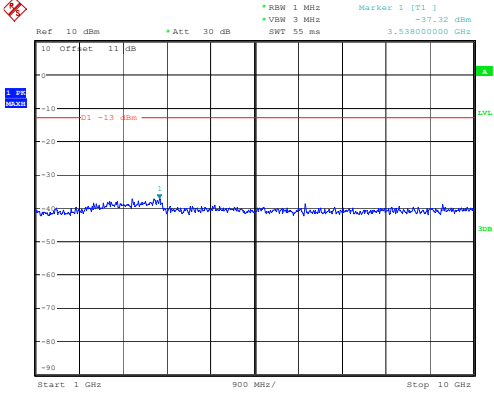


ProjectNo.:CR231061121 Tester:Rod Luo  
Date: 8.NOV.2023 10:22:09

Middle For 22H

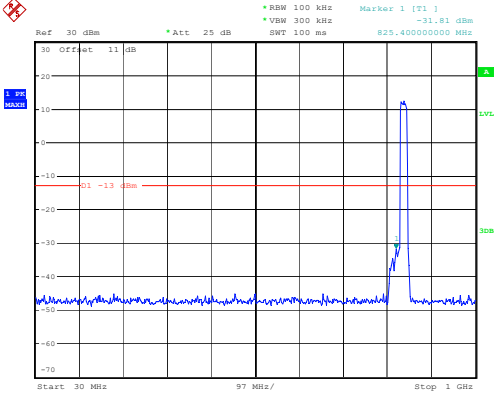


ProjectNo.:CR231061121 Tester:Rod Luo  
Date: 8.NOV.2023 10:22:25

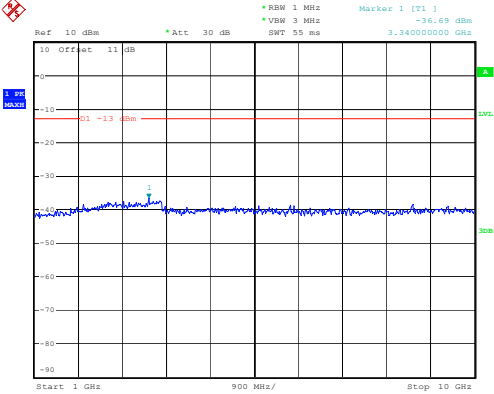


ProjectNo.:CR231061121 Tester:Rod Luo  
Date: 8.NOV.2023 10:22:35

Highest For 22H



ProjectNo.:CR231061121 Tester:Rod Luo  
Date: 8.NOV.2023 10:22:47

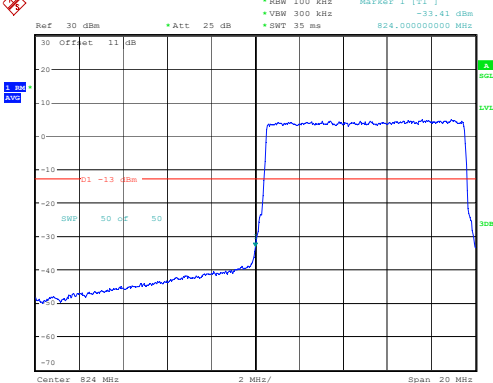
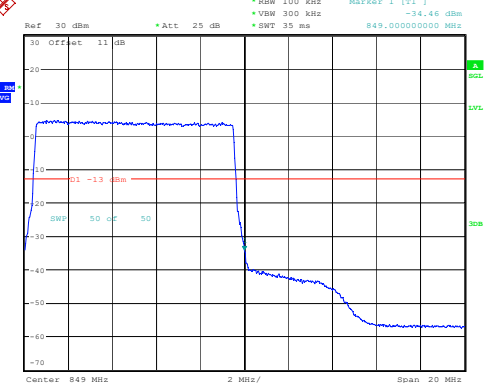
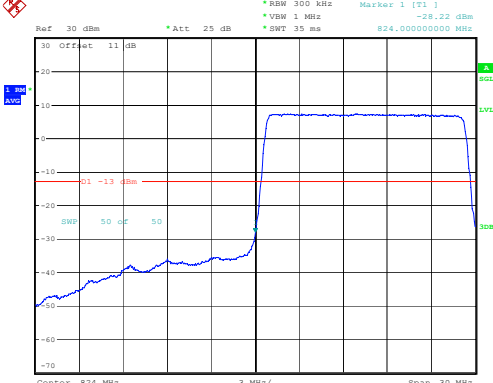
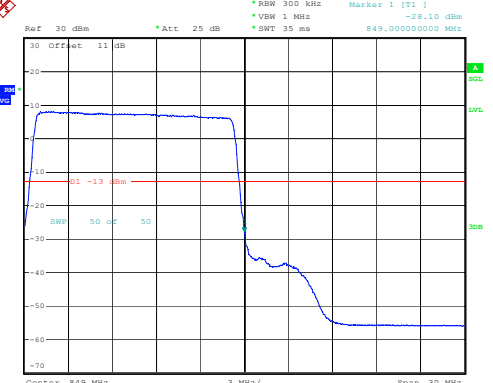


ProjectNo.:CR231061121 Tester:Rod Luo  
Date: 8.NOV.2023 10:23:01

Out of band emission, Band Edge

Mode	Lowest	Highest
<p>QPSK 1.4MHz For 22H</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 10:13:01</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 10:13:13</p>
<p>QPSK 3MHz For 22H</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 10:13:30</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 10:13:43</p>
<p>QPSK 5MHz For 22H</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 10:13:59</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 10:14:13</p>

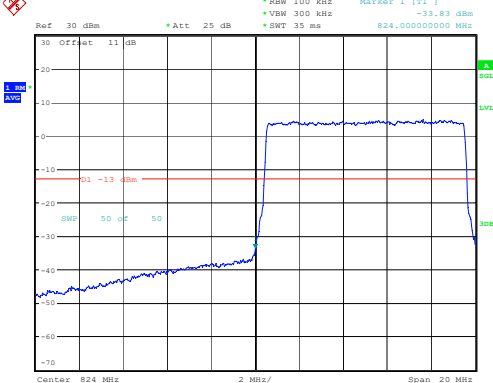
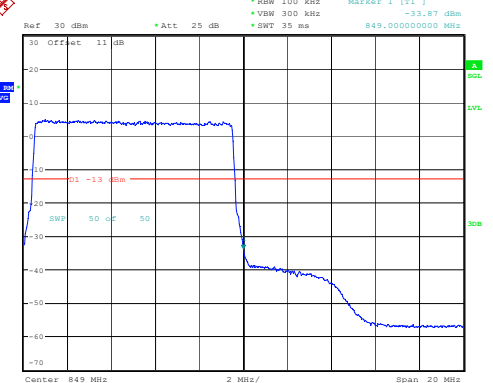
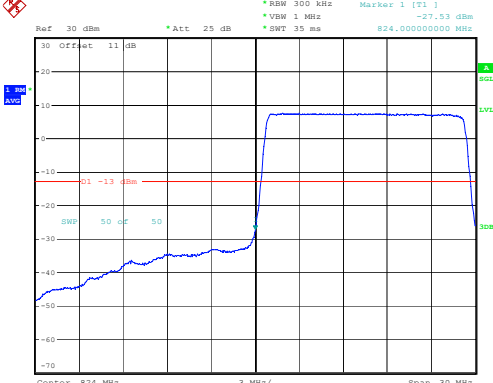
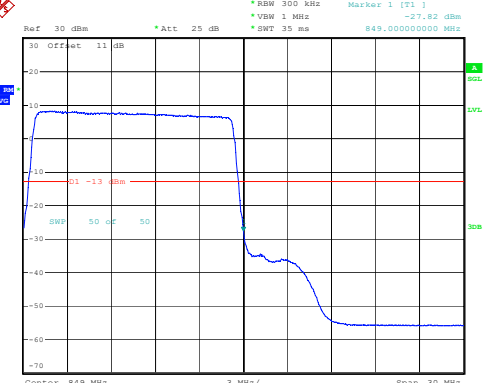
Out of band emission, Band Edge

Mode	Lowest	Highest
<p>QPSK 10MHz For 22H</p>	 <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 10:14:30</p>	 <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 10:14:45</p>
<p>QPSK 15MHz For 22H</p>	 <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 10:15:06</p>	 <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 10:15:18</p>

Out of band emission, Band Edge

Mode	Lowest	Highest
16QAM 1.4MHz For 22H	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 10:13:07</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 10:13:20</p>
16QAM 3MHz For 22H	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 10:13:36</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 10:13:49</p>
16QAM 5MHz For 22H	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 10:14:06</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 10:14:19</p>

Out of band emission, Band Edge

Mode	Lowest	Highest
16QAM 10MHz For 22H	 <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 10:14:37</p>	 <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 10:14:53</p>
16QAM 15MHz For 22H	 <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 10:15:12</p>	 <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 8.NOV.2023 10:15:24</p>

**4.15 Antenna Port Test Data and Results for LTE Band 38**

Serial Number:	2CFR-2	Test Date:	2023/11/7
Test Site:	RF	Test Mode:	Transmitting
Tester:	Rod Luo	Test Result:	Pass

**Environmental Conditions:**

Temperature: (°C)	26.5	Relative Humidity: (%)	48	ATM Pressure: (kPa)	101.3
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**Test Equipment List and Details:**

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSU26	200120	2023/3/31	2024/3/30
zhuoxiang	Coaxial Cable	SMA-178	211002	Each time	N/A
Minl-Circuits	Power Splitter	ZFRSC-183-S+	S F448201619	Each time	N/A
R&S	Wideband Radio Communication Tester	CMW500	143458	2023/3/31	2024/3/30
BACL	TEMP&HUMI Test Chamber	BTH-150-40	30174	2023/3/31	2024/3/30
UNI-T	Multimeter	UT39A+	C210582554	2023/9/28	2024/9/27
ZHAOXIN	DC Power Supply	RXN-6010D	21R6010D0912386	N/A	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).

**Test Frequency For Each Mode:**

Operation Bandwidth	Lowest Frequency (MHz)	Middle Frequency (MHz)	Highest Frequency (MHz)
5MHz	2572.5	2595	2617.5
10MHz	2575	2595	2615
15MHz	2577.5	2595	2612.5
20MHz	2580	2595	2610

**Test Data:**

FCC§2.1046;§ 27.50(h)(2)						
RF Output Power:						
Test Bandwidth & Modulation	Resource Block & RB offset	Conducted Average Output Power(dBm)			Maximum EIRP (dBm)	EIRP Limit (dBm)
		Lowest Channel	Middle Channel	Highest Channel		
5MHz QPSK	RB1#0	18.46	17.76	18.05	18.54	33
	RB1#13	18.74	18.11	18.51		
	RB1#24	18.05	17.49	17.97		
	RB15#0	17.58	16.99	17.5		
	RB15#10	17.42	16.9	17.48		
	RB25#0	17.47	16.9	17.45		
5MHz 16QAM	RB1#0	17.32	16.76	17.39	17.68	33
	RB1#13	17.63	17.13	17.88		
	RB1#24	16.92	16.51	17.33		
	RB15#0	16.54	16.12	16.66		
	RB15#10	16.38	16.03	16.62		
	RB25#0	16.5	16.06	16.55		
10MHz QPSK	RB1#0	18.67	18.19	18.11	18.47	33
	RB1#25	18.48	18.1	18.23		
	RB1#49	18.41	18.2	18.46		
	RB25#0	17.51	17.14	17.18		
	RB25#25	17.37	17.14	17.37		
	RB50#0	17.45	17.13	17.27		
10MHz 16QAM	RB1#0	17.42	17.23	17.26	17.42	33
	RB1#25	17.32	17.14	17.37		
	RB1#49	17.17	17.25	17.62		
	RB25#0	16.56	16.28	16.49		
	RB25#25	16.42	16.28	16.64		
	RB50#0	16.46	16.27	16.52		
15MHz QPSK	RB1#0	19.16	18.69	18.47	18.96	33
	RB1#38	18.54	18.09	18.25		
	RB1#74	18.09	17.96	18.26		
	RB36#0	17.85	17.4	17.38		
	RB36#39	17.26	17.01	17.25		
	RB75#0	17.56	17.2	17.3		
15MHz 16QAM	RB1#0	18.01	17.88	17.58	17.81	33
	RB1#38	17.4	17.25	17.39		
	RB1#74	16.92	17.15	17.37		
	RB36#0	16.8	16.55	16.55		
	RB36#39	16.2	16.16	16.41		
	RB75#0	16.53	16.29	16.43		



20MHz QPSK	RB1#0	19.46	19.4	19.22	19.26	33
	RB1#50	18.24	18.13	18.18		
	RB1#99	17.97	18.37	18.79		
	RB50#0	17.9	17.7	17.68		
	RB50#50	17.12	17.16	17.45		
	RB100#0	17.51	17.42	17.54		
20MHz 16QAM	RB1#0	18.36	18.61	18.2	18.41	33
	RB1#50	17.16	17.29	17.19		
	RB1#99	16.86	17.58	17.77		
	RB50#0	16.91	16.82	16.82		
	RB50#50	16.13	16.27	16.57		
	RB100#0	16.48	16.51	16.67		
Note: EIRP=Conducted Power(dBm) - Lc(dB) + Gr(dBi)						
					<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		
20MHz QPSK	RB1#0	9.25	9.39	8.99	13	
	RB100#0	9.13	9.22	9.19	13	
20MHz 16QAM	RB1#0	10.17	10.35	9.86	13	
	RB100#0	9.86	9.86	9.88	13	
					<b>Result:</b>	<b>Pass</b>

FCC §2.1049, §27.53:Occupied Bandwidth						
Operation Mode	99% Occupied Bandwidth (MHz)			26 dB Occupied Bandwidth (MHz)		
	Low Channel	Middle channel	High Channel	Low Channel	Middle Channel	High Channel
5MHz QPSK	4.520	4.520	4.520	5.000	5.060	5.080
5MHz 16QAM	4.520	4.500	4.520	5.140	5.060	5.100
10MHz QPSK	8.960	8.960	8.960	9.800	9.760	9.760
10MHz 16QAM	8.960	8.960	8.960	9.720	10.080	9.720
15MHz QPSK	13.500	13.500	13.620	16.080	15.480	15.660
15MHz 16QAM	13.620	13.620	13.620	15.300	16.440	15.600
20MHz QPSK	18.000	18.000	18.000	20.320	19.840	19.840
20MHz 16QAM	18.080	18.000	18.000	19.920	19.680	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>

<b>FCC §2.1055, §27.54: Frequency Stability</b>						
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	3.85	2570.062	2570.00	2619.994	2620
	-20	3.85	2570.038	2570.00	2619.947	2620
	-10	3.85	2570.111	2570.00	2619.869	2620
	0	3.85	2570.142	2570.00	2619.908	2620
	10	3.85	2570.062	2570.00	2619.866	2620
	20	3.85	2570.072	2570.00	2619.903	2620
	30	3.85	2570.117	2570.00	2619.898	2620
	40	3.85	2570.141	2570.00	2619.940	2620
	50	3.85	2570.001	2570.00	2619.868	2620
Frequency Stability vs. Voltage	20	3.5	2570.004	2570.00	2619.995	2620
	20	4.4	2570.047	2570.00	2619.871	2620
					<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	3.85	2570.078	2570.00	2619.905	2620
	-20	3.85	2570.045	2570.00	2619.881	2620
	-10	3.85	2570.062	2570.00	2619.932	2620
	0	3.85	2570.105	2570.00	2619.988	2620
	10	3.85	2570.032	2570.00	2619.978	2620
	20	3.85	2570.105	2570.00	2619.982	2620
	30	3.85	2570.115	2570.00	2619.994	2620
	40	3.85	2570.109	2570.00	2619.873	2620
	50	3.85	2570.069	2570.00	2619.868	2620
Frequency Stability vs. Voltage	20	3.5	2570.088	2570.00	2619.944	2620
	20	4.4	2570.109	2570.00	2619.909	2620
					<b>Result:</b>	<b>Pass</b>

**Test Plots**(Note: The 11dB is the Insertion loss of the RF cable, Power Splitter and DC Block, which was offset into the Spectrum Analyzer):

**Occupied Bandwidth**

Channel	5MHz Bandwidth QPSK	5MHz Bandwidth 16QAM
Lowest	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:20:35</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:21:08</p>
Middle	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:21:35</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:21:55</p>
Highest	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:22:16</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:22:37</p>

Occupied Bandwidth

Channel	10MHz Bandwidth QPSK	10MHz Bandwidth 16QAM
Lowest	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:23:04</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:23:27</p>
Middle	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:23:45</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:24:09</p>
Highest	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:24:27</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:24:44</p>

Occupied Bandwidth

Channel	15MHz Bandwidth QPSK	15MHz Bandwidth 16QAM
Lowest	<p>Ref 30 dBm *Att 25 dB *RSW 300 kHz Delta 1 [T1] 0.78 dB          *VSW 1 MHz          SWT 2.5 ms 16.08000000 MHz          OSW 15.50000000 MHz          Marker 1 [T1] 13.5 dBm          Temp 1 [T1] OSW          2.56950000 GHz          Temp 2 [T1] OSW          2.57078000 GHz          2.58428000 GHz</p> <p>Center 2.5775 GHz 3 MHz/ Span 30 MHz</p> <p>ProjectNo.:CR231061121 Tester:Rod Luo          Date: 7.NOV.2023 10:25:16</p>	<p>Ref 30 dBm *Att 25 dB *RSW 300 kHz Delta 1 [T1] 0.19 dB          *VSW 1 MHz          SWT 2.5 ms 15.30000000 MHz          OSW 15.62000000 MHz          Marker 1 [T1] 12.4 dBm          Temp 1 [T1] OSW          2.56994000 GHz          Temp 2 [T1] OSW          2.57072000 GHz          2.58434000 GHz</p> <p>Center 2.5775 GHz 3 MHz/ Span 30 MHz</p> <p>ProjectNo.:CR231061121 Tester:Rod Luo          Date: 7.NOV.2023 10:25:42</p>
Middle	<p>Ref 30 dBm *Att 25 dB *RSW 300 kHz Delta 1 [T1] 1.79 dB          *VSW 1 MHz          SWT 2.5 ms 15.48000000 MHz          OSW 15.50000000 MHz          Marker 1 [T1] 13.6 dBm          Temp 1 [T1] OSW          2.58744000 GHz          Temp 2 [T1] OSW          2.58828000 GHz          2.60178000 GHz</p> <p>Center 2.595 GHz 3 MHz/ Span 30 MHz</p> <p>ProjectNo.:CR231061121 Tester:Rod Luo          Date: 7.NOV.2023 10:26:08</p>	<p>Ref 30 dBm *Att 25 dB *RSW 300 kHz Delta 1 [T1] 0.38 dB          *VSW 1 MHz          SWT 2.5 ms 16.44000000 MHz          OSW 15.62000000 MHz          Marker 1 [T1] 12.9 dBm          Temp 1 [T1] OSW          2.58696000 GHz          Temp 2 [T1] OSW          2.58828000 GHz          2.60184000 GHz</p> <p>Center 2.595 GHz 3 MHz/ Span 30 MHz</p> <p>ProjectNo.:CR231061121 Tester:Rod Luo          Date: 7.NOV.2023 10:26:31</p>
Highest	<p>Ref 30 dBm *Att 25 dB *RSW 300 kHz Delta 1 [T1] 0.17 dB          *VSW 1 MHz          SWT 2.5 ms 15.66000000 MHz          OSW 15.62000000 MHz          Marker 1 [T1] 14.0 dBm          Temp 1 [T1] OSW          2.60448000 GHz          Temp 2 [T1] OSW          2.60272000 GHz          2.61934000 GHz</p> <p>Center 2.6125 GHz 3 MHz/ Span 30 MHz</p> <p>ProjectNo.:CR231061121 Tester:Rod Luo          Date: 7.NOV.2023 10:26:57</p>	<p>Ref 30 dBm *Att 25 dB *RSW 300 kHz Delta 1 [T1] 1.02 dB          *VSW 1 MHz          SWT 2.5 ms 15.60000000 MHz          OSW 15.62000000 MHz          Marker 1 [T1] 13.3 dBm          Temp 1 [T1] OSW          2.60494000 GHz          Temp 2 [T1] OSW          2.60272000 GHz          2.61934000 GHz</p> <p>Center 2.6125 GHz 3 MHz/ Span 30 MHz</p> <p>ProjectNo.:CR231061121 Tester:Rod Luo          Date: 7.NOV.2023 10:27:23</p>

Occupied Bandwidth

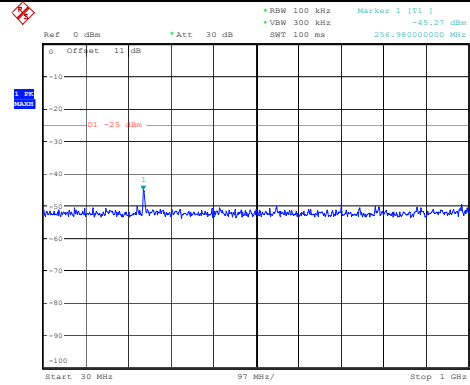
Channel	20MHz Bandwidth QPSK	20MHz Bandwidth 16QAM
Lowest	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:27:59</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:28:22</p>
Middle	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:28:45</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:29:07</p>
Highest	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:29:31</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:29:53</p>

### Spurious Emissions at Antenna Terminal

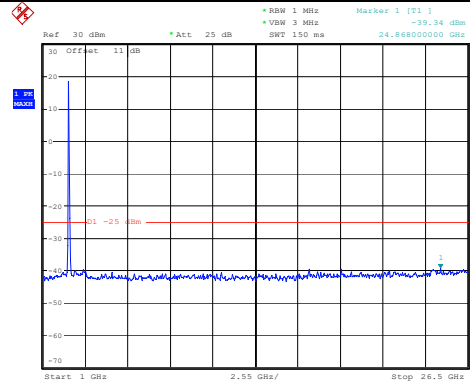
Channel

5MHz Bandwidth QPSK

Lowest

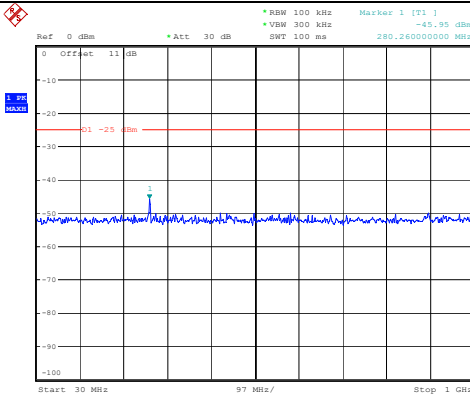


ProjectNo.:CR231061121 Tester:Rod Luo  
 Date: 7.NOV.2023 11:45:22

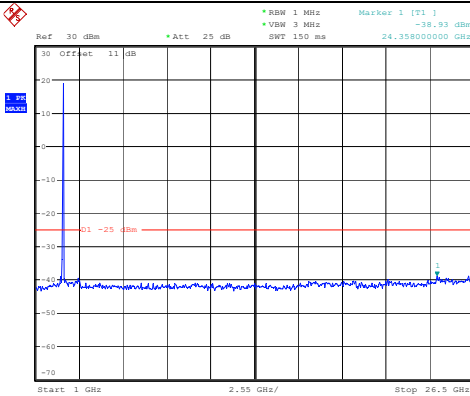


ProjectNo.:CR231061121 Tester:Rod Luo  
 Date: 7.NOV.2023 11:45:32

Middle

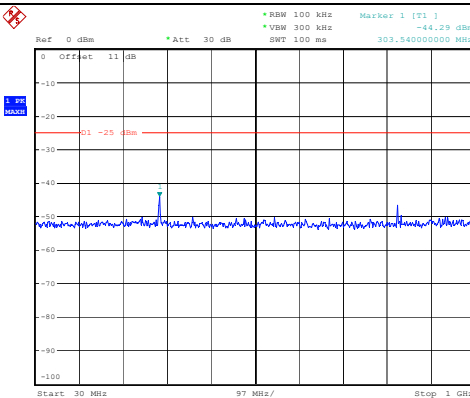


ProjectNo.:CR231061121 Tester:Rod Luo  
 Date: 7.NOV.2023 11:45:48

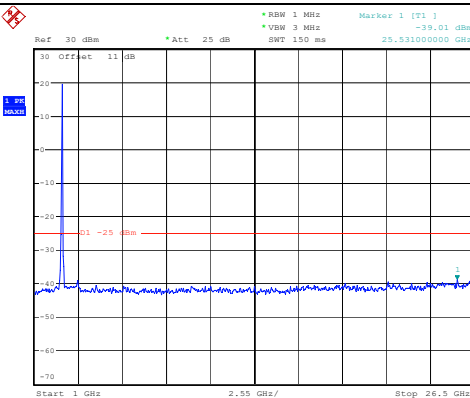


ProjectNo.:CR231061121 Tester:Rod Luo  
 Date: 7.NOV.2023 11:45:58

Highest



ProjectNo.:CR231061121 Tester:Rod Luo  
 Date: 7.NOV.2023 11:46:10



ProjectNo.:CR231061121 Tester:Rod Luo  
 Date: 7.NOV.2023 11:46:21

Spurious Emissions at Antenna Terminal

Channel	10MHz Bandwidth QPSK	
Lowest	<p>Ref 0 dBm *Att 30 dB *RBW 100 kHz *VSW 300 kHz *SWT 100 ms Marker 1 [T1] -46.18 dBm 244.74000000 MHz</p> <p>Start 30 MHz 97 MHz/ Stop 1 GHz</p> <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 11:46:40</p>	<p>Ref 30 dBm *Att 25 dB *RBW 1 MHz *VSW 3 MHz *SWT 150 ms Marker 1 [T1] -38.90 dBm 26.29600000 GHz</p> <p>Start 1 GHz 2.55 GHz/ Stop 26.5 GHz</p> <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 11:46:50</p>
Middle	<p>Ref 0 dBm *Att 30 dB *RBW 100 kHz *VSW 300 kHz *SWT 100 ms Marker 1 [T1] -47.42 dBm 284.14000000 MHz</p> <p>Start 30 MHz 97 MHz/ Stop 1 GHz</p> <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 11:47:03</p>	<p>Ref 30 dBm *Att 25 dB *RBW 1 MHz *VSW 3 MHz *SWT 150 ms Marker 1 [T1] -38.65 dBm 24.46000000 GHz</p> <p>Start 1 GHz 2.55 GHz/ Stop 26.5 GHz</p> <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 11:47:13</p>
Highest	<p>Ref 0 dBm *Att 30 dB *RBW 100 kHz *VSW 300 kHz *SWT 100 ms Marker 1 [T1] -47.26 dBm 299.66000000 MHz</p> <p>Start 30 MHz 97 MHz/ Stop 1 GHz</p> <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 11:47:26</p>	<p>Ref 30 dBm *Att 25 dB *RBW 1 MHz *VSW 3 MHz *SWT 150 ms Marker 1 [T1] -35.76 dBm 2.47900000 GHz</p> <p>Start 1 GHz 2.55 GHz/ Stop 26.5 GHz</p> <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 11:47:36</p>

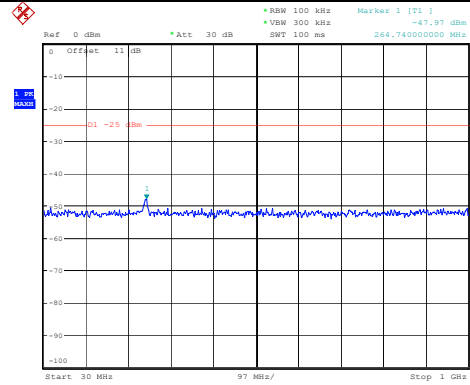


Spurious Emissions at Antenna Terminal

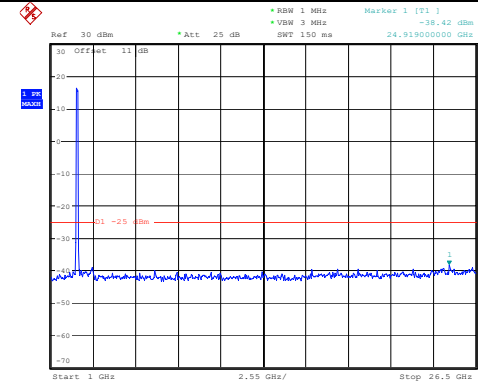
Channel

15MHz Bandwidth QPSK

Lowest

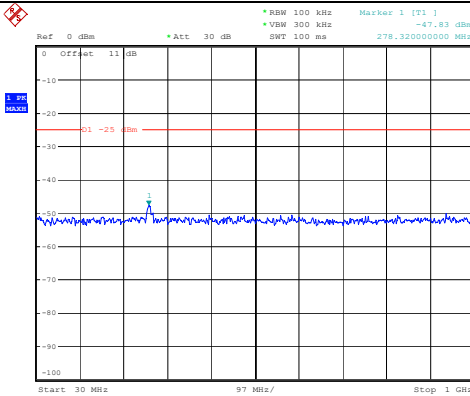


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Date: 7.NOV.2023 11:47:52

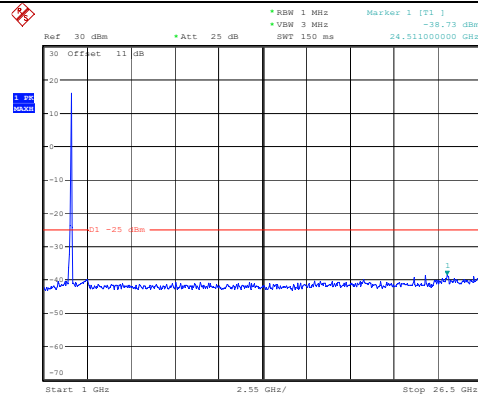


ProjectNo.:CR231061121 Tester:Rod Luo  
Date: 7.NOV.2023 11:48:02

Middle

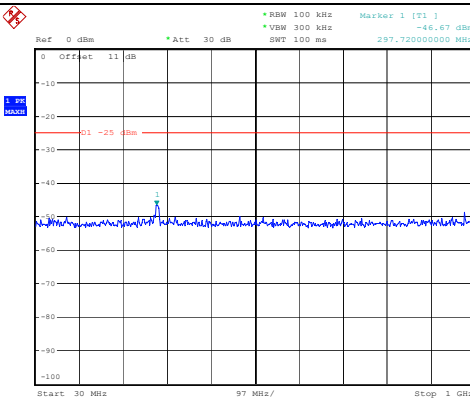


ProjectNo.:CR231061121 Tester:Rod Luo  
Date: 7.NOV.2023 11:48:15

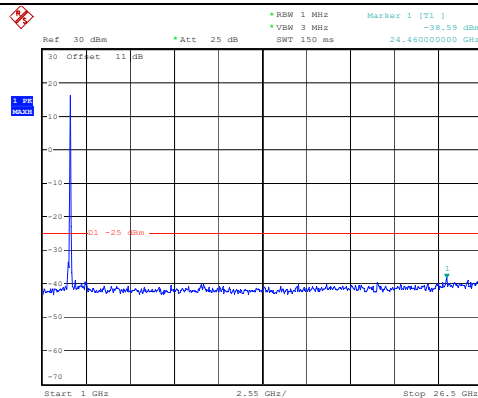


ProjectNo.:CR231061121 Tester:Rod Luo  
Date: 7.NOV.2023 11:48:25

Highest



ProjectNo.:CR231061121 Tester:Rod Luo  
Date: 7.NOV.2023 11:48:41



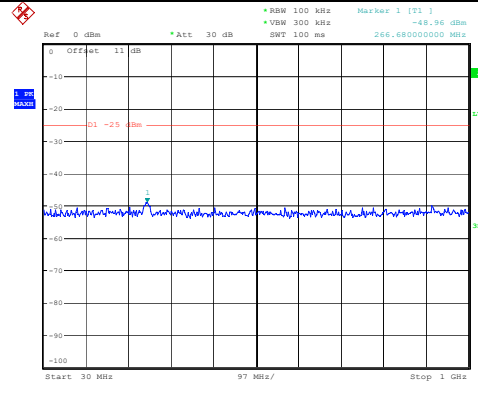
ProjectNo.:CR231061121 Tester:Rod Luo  
Date: 7.NOV.2023 11:48:51

Spurious Emissions at Antenna Terminal

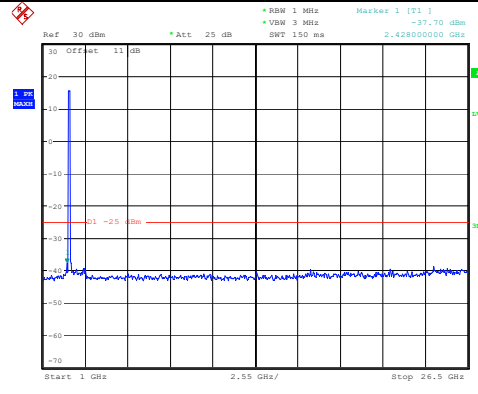
Channel

20MHz Bandwidth QPSK

Lowest

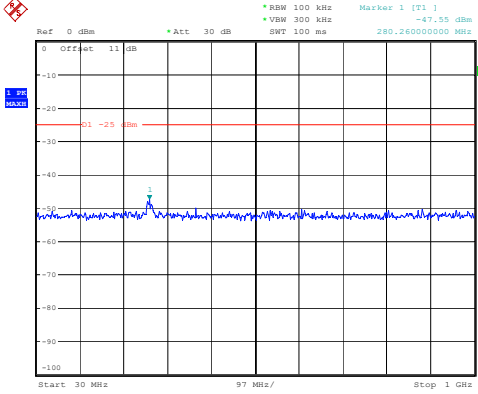


ProjectNo.:CR231061121 Tester:Rod Luo  
 Date: 7.NOV.2023 11:50:43

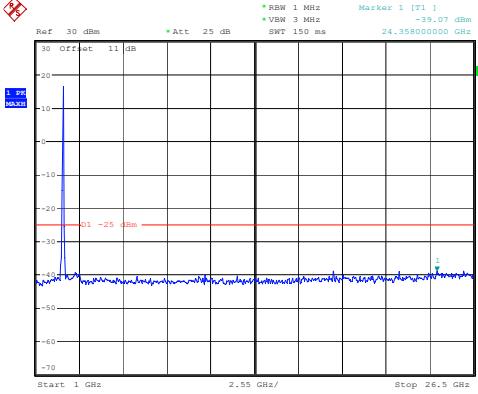


ProjectNo.:CR231061121 Tester:Rod Luo  
 Date: 7.NOV.2023 11:50:53

Middle

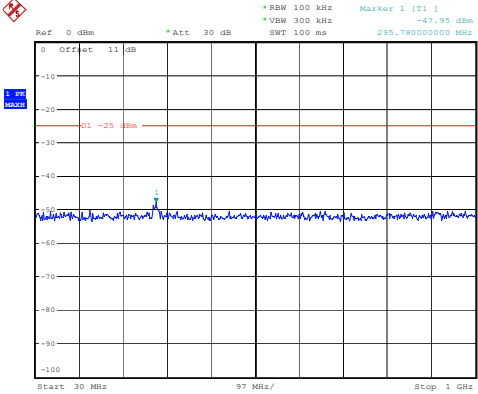


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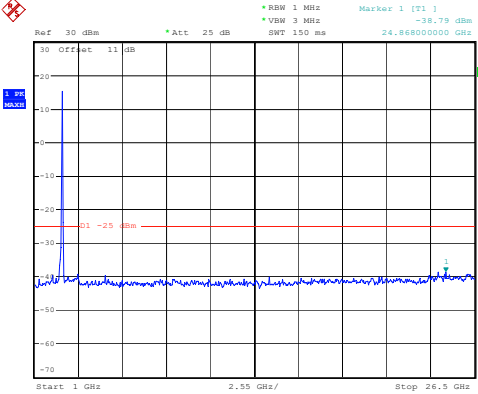


ProjectNo.:CR231061121 Tester:Rod Luo  
 Date: 7.NOV.2023 11:51:19

Highest



ProjectNo.:CR231061121 Tester:Rod Luo  
 Date: 7.NOV.2023 11:51:34

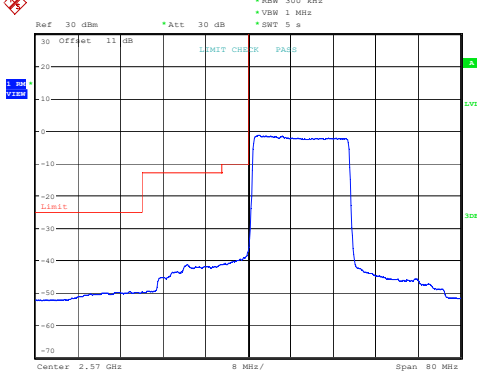
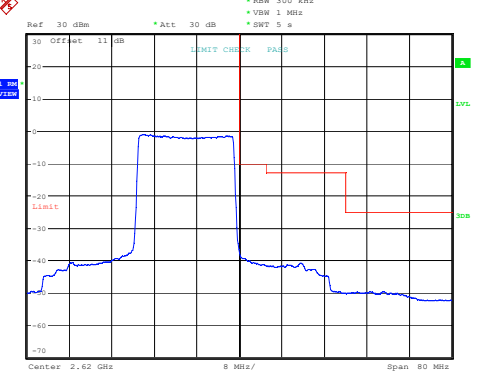


ProjectNo.:CR231061121 Tester:Rod Luo  
 Date: 7.NOV.2023 11:51:45

Out of band emission, Band Edge

Mode	Lowest	Highest
QPSK 5MHz	<p>Ref 30 dBm *Att 30 dB *RBW 100 kHz *VBW 300 kHz *SWT 5 s</p> <p>Center 2.57 GHz 2 MHz/ Span 20 MHz</p> <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 13:29:24</p>	<p>Ref 30 dBm *Att 30 dB *RBW 100 kHz *VBW 300 kHz *SWT 5 s</p> <p>Center 2.62 GHz 2 MHz/ Span 20 MHz</p> <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 13:31:56</p>
QPSK 10MHz	<p>Ref 30 dBm *Att 30 dB *RBW 100 kHz *VBW 300 kHz *SWT 5 s</p> <p>Center 2.57 GHz 4 MHz/ Span 40 MHz</p> <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 13:34:08</p>	<p>Ref 30 dBm *Att 30 dB *RBW 100 kHz *VBW 300 kHz *SWT 5 s</p> <p>Center 2.62 GHz 4 MHz/ Span 40 MHz</p> <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 13:36:07</p>
QPSK 15MHz	<p>Ref 30 dBm *Att 30 dB *RBW 300 kHz *VBW 1 MHz *SWT 5 s</p> <p>Center 2.57 GHz 6 MHz/ Span 60 MHz</p> <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 13:38:08</p>	<p>Ref 30 dBm *Att 30 dB *RBW 300 kHz *VBW 1 MHz *SWT 5 s</p> <p>Center 2.62 GHz 6 MHz/ Span 60 MHz</p> <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 13:39:45</p>

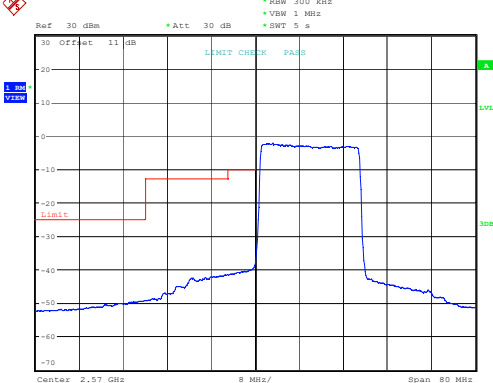
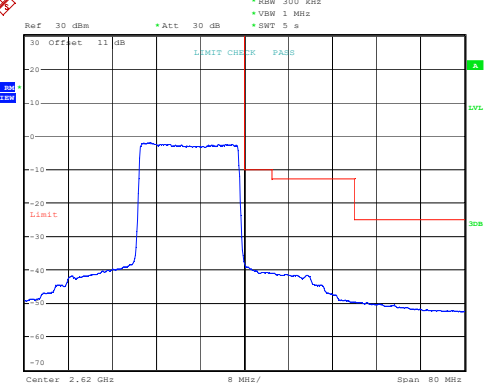
Out of band emission, Band Edge

Mode	Lowest	Highest
<p>QPSK 20MHz</p>	 <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 13:41:44</p>	 <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 13:45:57</p>

Out of band emission, Band Edge

Mode	Lowest	Highest
16QAM 5MHz	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 13:31:02</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 13:32:56</p>
16QAM 10MHz	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 13:34:55</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 13:36:54</p>
16QAM 15MHz	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 13:38:59</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 13:40:32</p>

Out of band emission, Band Edge

Mode	Lowest	Highest
<p>16QAM 20MHz</p>	 <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 13:42:29</p>	 <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 13:46:43</p>

**4.16 Antenna Port Test Data and Results for LTE Band 40**

Serial Number:	2CFR-2	Test Date:	2023/11/7~2023/11/27
Test Site:	RF	Test Mode:	Transmitting
Tester:	Rod Luo	Test Result:	Pass

**Environmental Conditions:**

Temperature: (°C)	26.5-28	Relative Humidity: (%)	48-52	ATM Pressure: (kPa)	101.3-101.5
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**Test Equipment List and Details:**

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSU26	200120	2023/3/31	2024/3/30
zhuoxiang	Coaxial Cable	SMA-178	211002	Each time	N/A
Minl-Circuits	Power Splitter	ZFRSC-183-S+	S F448201619	Each time	N/A
R&S	Wideband Radio Communication Tester	CMW500	143458	2023/3/31	2024/3/30
BACL	TEMP&HUMI Test Chamber	BTH-150-40	30174	2023/3/31	2024/3/30
UNI-T	Multimeter	UT39A+	C210582554	2023/9/28	2024/9/27
ZHAOXIN	DC Power Supply	RXN-6010D	21R6010D0912386	N/A	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).

**Test Frequency for Each Mode:**

Operation Bandwidth	Lowest Frequency (MHz)	Middle Frequency (MHz)	Highest Frequency (MHz)
5MHz	2307.5	/	2312.5
10MHz	/	2310	/
5MHz	2352.5	/	2357.5
10MHz	/	2355	/

**Test Data:**

(Note:Uplink Downlink configuration 3 was tested)

**FCC§2.1046;§ 27.50(a)(3)****LTE Band 40 Lower:****RF Output Power:**

Test Bandwidth & Modulation	Resource Block & RB offset	Conducted Average Output Power(dBm)			Maximum EIRP (dBm)	Limit (dBm)
		Lowest Channel	Middle Channel	Highest Channel		
5MHz QPSK	RB1#0	16.06	/	16.56	16.73	24
	RB1#13	16.77	/	17.53		
	RB1#24	16.42	/	17.3		
	RB15#0	15.64	/	16.26		
	RB15#10	15.78	/	16.56		
	RB25#0	15.69	/	16.4		
5MHz 16QAM	RB1#0	15.45	/	15.83	15.95	24
	RB1#13	16.16	/	16.75		
	RB1#24	15.8	/	16.55		
	RB15#0	14.59	/	15.32		
	RB15#10	14.74	/	15.6		
	RB25#0	15.15	/	15.38		
10MHz QPSK	RB1#0	/	16.16	/	17.2	24
	RB1#25	/	17.03	/		
	RB1#49	/	18	/		
	RB25#0	/	15.66	/		
	RB25#25	/	16.63	/		
	RB50#0	/	16.17	/		
10MHz 16QAM	RB1#0	/	15.22	/	16.27	24
	RB1#25	/	16.09	/		
	RB1#49	/	17.07	/		
	RB25#0	/	14.76	/		
	RB25#25	/	15.73	/		
	RB50#0	/	15.21	/		

## Note:

For 5MHz mode, the channel power is equal to the test result in dBm/5MHz.

For 10MHz mode, the channel power is sum of 10MHz bandwidth, the result is less than 24dBm, so in any 5MHz bandwidth, it's will not exceed limit

EIRP=Conducted Power(dBm) - Lc(dB) + Gt(dBi)

EIRP PSD=Conducted PSD(dBm/5MHz) - Lc(dB) + Gt(dBi)



<b>LTE Band 40 Upper:</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		
5MHz QPSK	RB1#0	16.76	/	16.74	16.43	24
	RB1#13	17.2	/	17.23		
	RB1#24	16.6	/	16.64		
	RB15#0	16.16	/	16.1		
	RB15#10	16.1	/	16.08		
	RB25#0	16.11	/	16.05		
5MHz 16QAM	RB1#0	16.18	/	15.83	15.81	24
	RB1#13	16.61	/	16.33		
	RB1#24	15.98	/	15.72		
	RB15#0	15.43	/	15.26		
	RB15#10	15.33	/	15.22		
	RB25#0	15.28	/	15.23		
10MHz QPSK	RB1#0	/	17.14	/	16.56	24
	RB1#25	/	17.27	/		
	RB1#49	/	17.36	/		
	RB25#0	/	16.24	/		
	RB25#25	/	16.37	/		
	RB50#0	/	16.3	/		
10MHz 16QAM	RB1#0	/	16.06	/	15.52	24
	RB1#25	/	16.19	/		
	RB1#49	/	16.32	/		
	RB25#0	/	15.45	/		
	RB25#25	/	15.57	/		
	RB50#0	/	15.48	/		
Note: For 5MHz mode, the channel power is equal to the test result in dBm/5MHz. For 10MHz mode, the channel power is sum of 10MHz bandwidth, the result is less than 24dBm, so in any 5MHz bandwidth, it's will not exceed limit $EIRP = \text{Conducted Power(dBm)} - Lc(\text{dB}) + G_T(\text{dBi})$ $EIRP \text{ PSD} = \text{Conducted PSD(dBm/5MHz)} - Lc(\text{dB}) + G_T(\text{dBi})$						
					<b>Result:</b>	<b>Pass</b>

**Duty Cycle**

Operation Band	Modulation	Bandwidth	Ton (ms)	Ton+off (ms)	Duty Cycle (%)	Limit (%)
LTE Band 40 Lower	QPSK	5M	2.995	10.000	29.95	38
		10M	2.995	10.005	29.94	38
	16QAM	5M	3.005	10.010	30.02	38
		10M	2.995	10.000	29.95	38
LTE Band 40 Upper	QPSK	5M	2.995	10.005	29.94	38
		10M	3.000	10.005	29.99	38
	16QAM	5M	3.000	10.005	29.99	38
		10M	3.000	10.005	29.99	38
					<b>Result:</b>	<b>Pass</b>

**FCC §2.1049, §27.53:Occupied Bandwidth****LTE Band 40 Lower:**

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	4.50	/	4.52	5.18	/	5.00
5MHz 16QAM	4.50	/	4.50	5.12	/	5.18
10MHz QPSK	/	8.96	/	/	9.80	/
10MHz 16QAM	/	8.96	/	/	9.72	/

**LTE Band 40 Upper:**

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	4.52	/	4.52	5.04	/	5.06
5MHz 16QAM	4.52	/	4.52	5.10	/	5.10
10MHz QPSK	/	9.00	/	/	9.84	/
10MHz 16QAM	/	9.00	/	/	9.76	/

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

**FCC §2.1051, § 27.53:Spurious Emissions at Antenna Terminal**

<b>Result:</b>	<b>Pass, Please refer to the test plots of Spurious Emissions at Antenna Terminal.</b>
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**FCC §2.1051, § 27.53:Out of band emission, Band Edge**

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

<b>LTE Band 40 Lower:</b>						
Test Mode:	10M 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	3.85	2305.112	2305.000	2314.873	2315.000
	-20	3.85	2305.023	2305.000	2314.868	2315.000
	-10	3.85	2305.127	2305.000	2314.907	2315.000
	0	3.85	2305.066	2305.000	2314.860	2315.000
	10	3.85	2305.135	2305.000	2314.974	2315.000
	20	3.85	2305.106	2305.000	2314.873	2315.000
	30	3.85	2305.024	2305.000	2314.866	2315.000
	40	3.85	2305.074	2305.000	2314.975	2315.000
	50	3.85	2305.007	2305.000	2314.950	2315.000
Frequency Stability vs. Voltage	20	3.5	2305.034	2305.000	2314.924	2315.000
	20	4.4	2305.049	2305.000	2314.861	2315.000
					<b>Result:</b>	<b>Pass</b>

Test Mode:	10M 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	3.85	2305.024	2305.000	2314.925	2315.000
	-20	3.85	2305.085	2305.000	2314.855	2315.000
	-10	3.85	2305.053	2305.000	2314.873	2315.000
	0	3.85	2305.135	2305.000	2314.947	2315.000
	10	3.85	2305.060	2305.000	2314.881	2315.000
	20	3.85	2305.037	2305.000	2314.988	2315.000
	30	3.85	2305.048	2305.000	2314.897	2315.000
	40	3.85	2305.118	2305.000	2314.992	2315.000
	50	3.85	2305.063	2305.000	2314.888	2315.000
Frequency Stability vs. Voltage	20	3.5	2305.038	2305.000	2314.940	2315.000
	20	4.4	2305.081	2305.000	2314.896	2315.000
					<b>Result:</b>	<b>Pass</b>

<b>LTE Band 40 Upper:</b>						
Test Mode:	10M 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	3.85	2350.086	2350.000	2359.857	2360.000
	-20	3.85	2350.148	2350.000	2359.957	2360.000
	-10	3.85	2350.116	2350.000	2359.937	2360.000
	0	3.85	2350.131	2350.000	2359.996	2360.000
	10	3.85	2350.130	2350.000	2359.853	2360.000
	20	3.85	2350.020	2350.000	2359.976	2360.000
	30	3.85	2350.049	2350.000	2359.908	2360.000
	40	3.85	2350.052	2350.000	2359.958	2360.000
	50	3.85	2350.056	2350.000	2359.950	2360.000
Frequency Stability vs. Voltage	20	3.5	2350.029	2350.000	2359.914	2360.000
	20	4.4	2350.020	2350.000	2359.922	2360.000
					<b>Result:</b>	<b>Pass</b>

Test Mode:	10M 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	3.85	2350.098	2350.000	2359.870	2360.000
	-20	3.85	2350.113	2350.000	2359.914	2360.000
	-10	3.85	2350.097	2350.000	2359.874	2360.000
	0	3.85	2350.088	2350.000	2359.856	2360.000
	10	3.85	2350.050	2350.000	2359.944	2360.000
	20	3.85	2350.027	2350.000	2359.932	2360.000
	30	3.85	2350.073	2350.000	2359.964	2360.000
	40	3.85	2350.128	2350.000	2359.897	2360.000
	50	3.85	2350.027	2350.000	2359.929	2360.000
Frequency Stability vs. Voltage	20	3.5	2350.031	2350.000	2359.939	2360.000
	20	4.4	2350.040	2350.000	2359.873	2360.000
					<b>Result:</b>	<b>Pass</b>

**Test Plots** (Note: The 11 dB is the Insertion loss of the RF cable and Power Splitter, which was offset into the Spectrum Analyzer):  
2305-2315 MHz:

<b>Occupied Bandwidth</b>		
<b>Channel</b>	<b>5MHz Bandwidth QPSK</b>	<b>5MHz Bandwidth 16QAM</b>
<b>Lowest</b>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 14:22:58</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 14:23:24</p>
<b>Highest</b>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 14:24:46</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 14:25:12</p>

Occupied Bandwidth

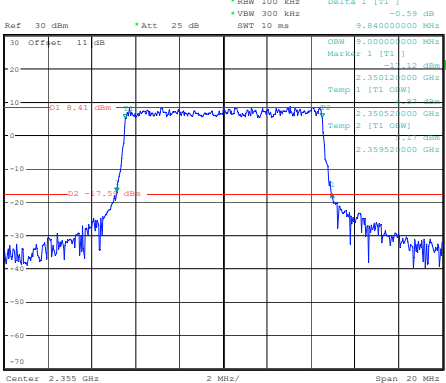
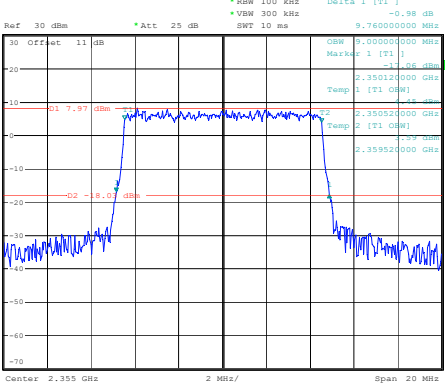
Channel	10MHz Bandwidth QPSK	10MHz Bandwidth 16QAM
Middle	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 14:25:35</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 14:25:58</p>

2350-2360 MHz:

Occupied Bandwidth

Channel	5MHz Bandwidth QPSK	5MHz Bandwidth 16QAM
Lowest	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 14:53:17</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 14:53:42</p>
Highest	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 14:55:08</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 14:55:34</p>

**Occupied Bandwidth**

Channel	10MHz Bandwidth QPSK	10MHz Bandwidth 16QAM
Middle	 <p>                     Ref 30 dBm *Att 25 dB *RBW 100 kHz Delta 1 [T1] -0.50 dB                      *VBW 300 kHz OBSW 9.840000000 MHz                      Marker 1 [T1] -12 dBm                      Temp 1 [T1 OBSW] 2.350120000 GHz                      Temp 2 [T1 OBSW] 2.359520000 GHz                      Center 2.355 GHz 2 MHz/ Span 20 MHz                 </p> <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 14:56:00</p>	 <p>                     Ref 30 dBm *Att 25 dB *RBW 100 kHz Delta 1 [T1] -0.50 dB                      *VBW 300 kHz OBSW 9.760000000 MHz                      Marker 1 [T1] -12 dBm                      Temp 1 [T1 OBSW] 2.350120000 GHz                      Temp 2 [T1 OBSW] 2.359520000 GHz                      Center 2.355 GHz 2 MHz/ Span 20 MHz                 </p> <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 14:56:19</p>



2305-2315 MHz:

Spurious Emissions at Antenna Terminal

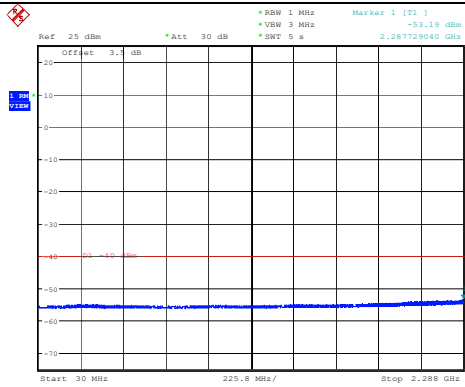
Channel	5MHz Bandwidth QPSK	
Lowest	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 27.NOV.2023 15:22:02</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 27.NOV.2023 15:22:43</p>
	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 27.NOV.2023 15:23:25</p>	

Spurious Emissions at Antenna Terminal

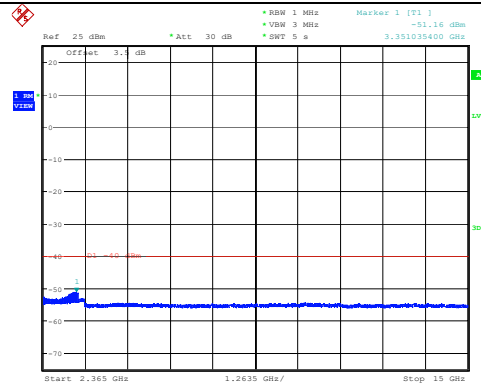
Channel

5MHz Bandwidth QPSK

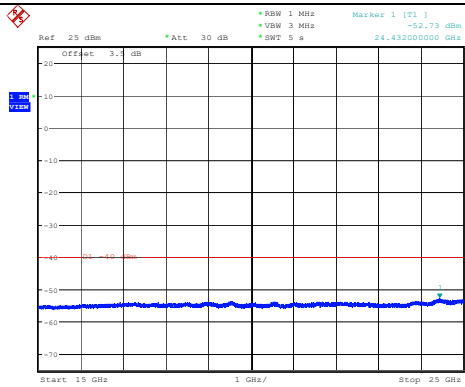
Highest



ProjectNo.:CR231061121 Tester:Rod Luo  
Date: 27.NOV.2023 15:27:38



ProjectNo.:CR231061121 Tester:Rod Luo  
Date: 27.NOV.2023 15:28:02

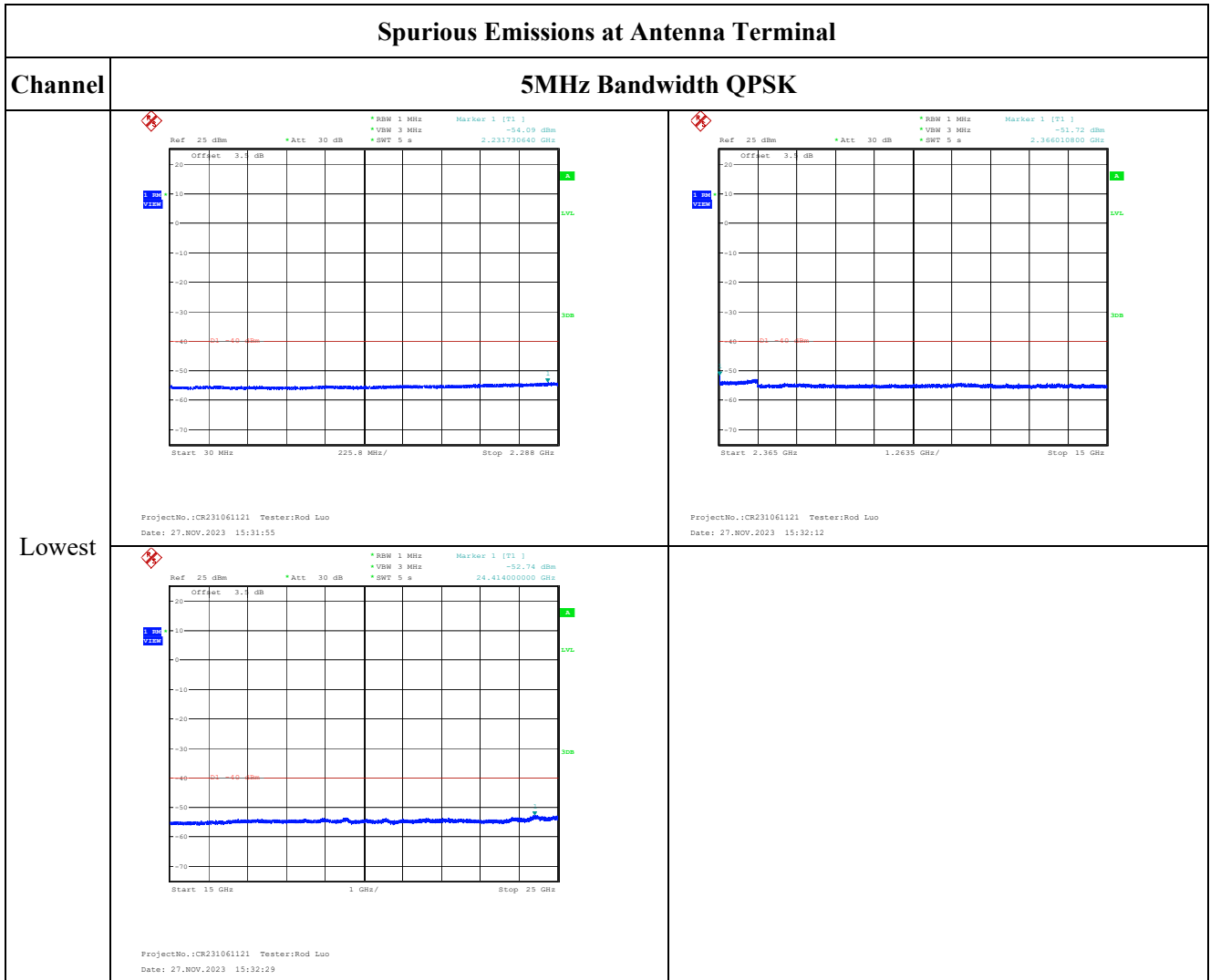


ProjectNo.:CR231061121 Tester:Rod Luo  
Date: 27.NOV.2023 15:28:19

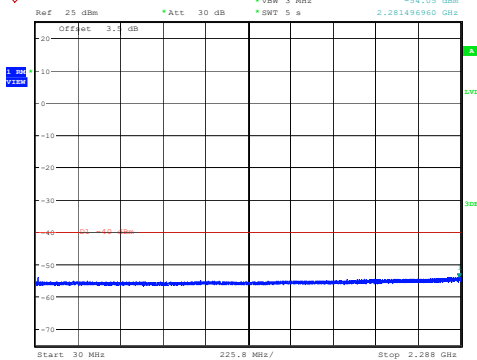
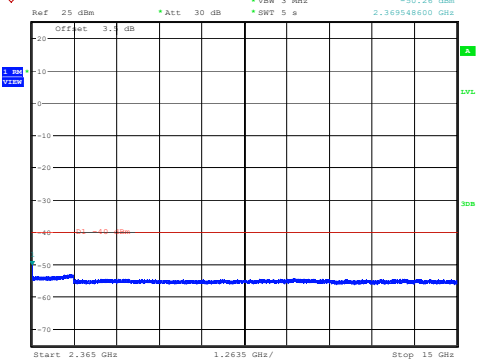
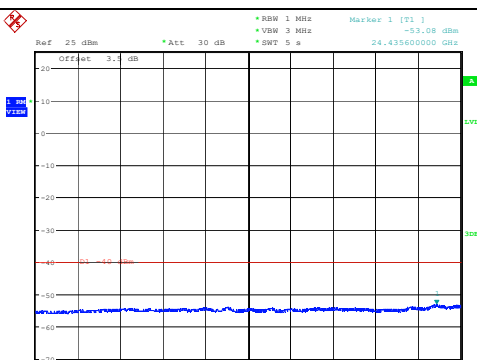
### Spurious Emissions at Antenna Terminal

Channel	10MHz Bandwidth QPSK	
Middle	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 27.NOV.2023 15:29:21</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 27.NOV.2023 15:29:46</p>
	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 27.NOV.2023 15:30:03</p>	

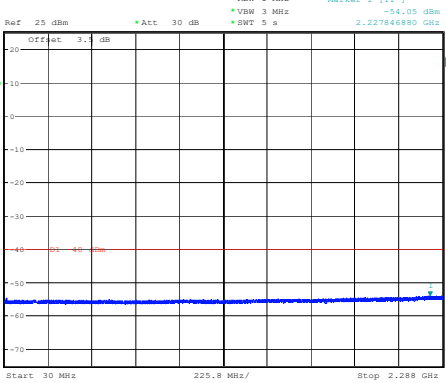
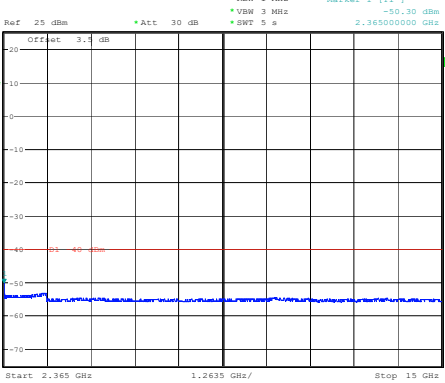
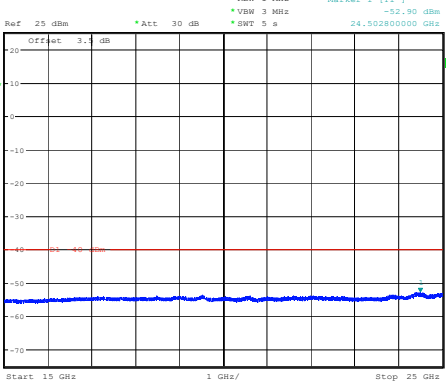
2350-2360 MHz:



Spurious Emissions at Antenna Terminal

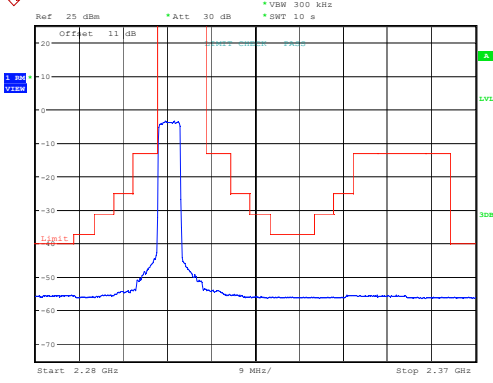
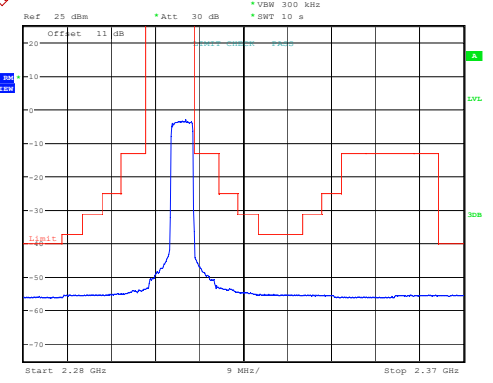
Channel	5MHz Bandwidth QPSK	
Highest	 <p>Ref: 25 dBm, Offset: 3.0 dB, Att: 30 dB, RBW: 1 MHz, VBW: 3 MHz, SWT: 5 s, Marker 1 [T1]: -54.05 dBm, 2.281496960 GHz</p> <p>Start: 30 MHz, Stop: 2.288 GHz</p> <p>ProjectNo.: CR231061121, Tester: Rod Luo, Date: 27.NOV.2023 15:39:00</p>	 <p>Ref: 25 dBm, Offset: 3.0 dB, Att: 30 dB, RBW: 1 MHz, VBW: 3 MHz, SWT: 5 s, Marker 1 [T1]: -50.26 dBm, 2.369548600 GHz</p> <p>Start: 2.365 GHz, Stop: 15 GHz</p> <p>ProjectNo.: CR231061121, Tester: Rod Luo, Date: 27.NOV.2023 15:39:18</p>
	 <p>Ref: 25 dBm, Offset: 3.0 dB, Att: 30 dB, RBW: 1 MHz, VBW: 3 MHz, SWT: 5 s, Marker 1 [T1]: -53.08 dBm, 24.435600000 GHz</p> <p>Start: 13 GHz, Stop: 25 GHz</p> <p>ProjectNo.: CR231061121, Tester: Rod Luo, Date: 27.NOV.2023 15:39:56</p>	

### Spurious Emissions at Antenna Terminal

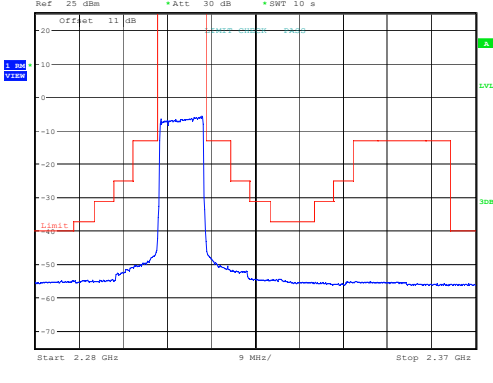
Channel	10MHz Bandwidth QPSK	
Middle	 <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 27.NOV.2023 15:36:44</p>	 <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 27.NOV.2023 15:37:23</p>
	 <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 27.NOV.2023 15:37:46</p>	

2305-2315 MHz:

**Out of band emission, Band Edge**

Mode	Lowest	Highest
<p>QPSK 5MHz</p>	 <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 13:58:45</p>	 <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 14:01:02</p>

**Out of band emission, Band Edge**

Mode	Middle	/
<p>QPSK 10MHz</p>	 <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 14:05:28</p>	<p>/</p>

Out of band emission, Band Edge

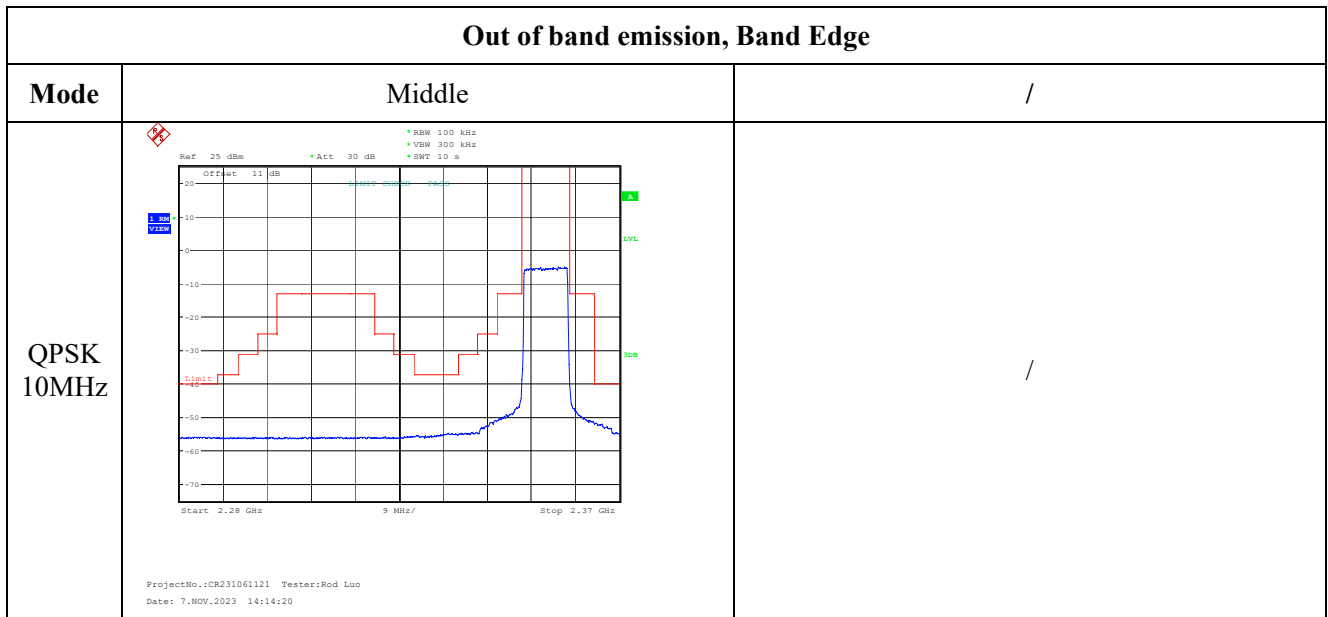
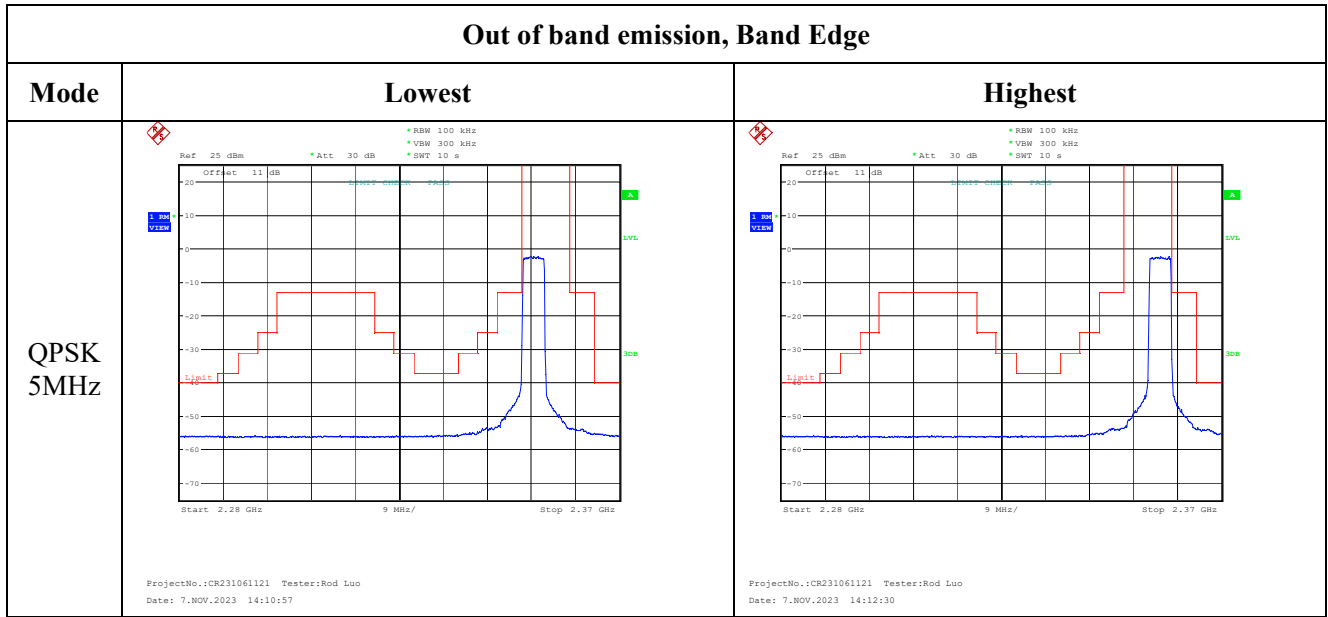
Mode	Lowest	Highest
16QAM 5MHz		

Out of band emission, Band Edge

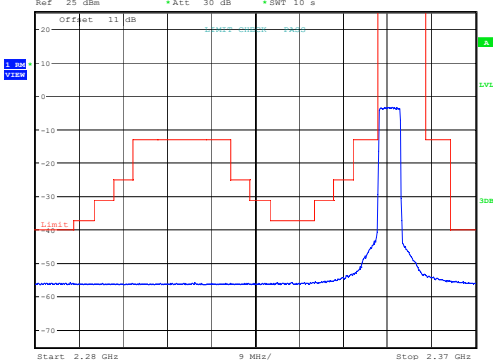
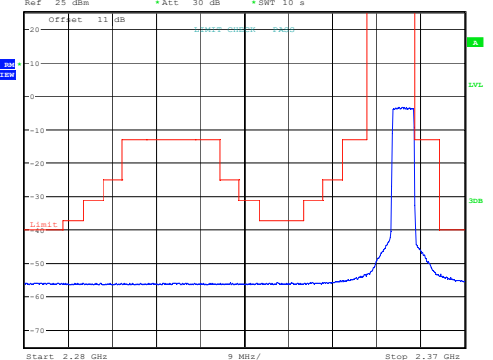
Mode	Middle	/
16QAM 10MHz		/



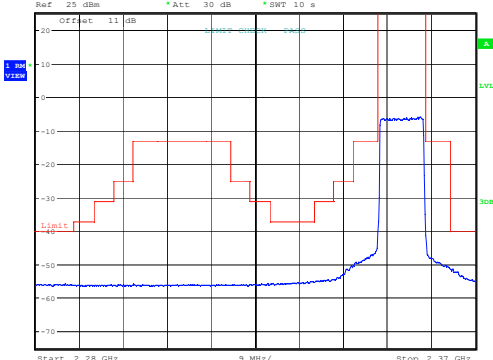
2350-2360 MHz:



Out of band emission, Band Edge

Mode	Lowest	Highest
16QAM 5MHz	 <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 14:11:43</p>	 <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 14:13:18</p>

Out of band emission, Band Edge

Mode	Middle	/
16QAM 10MHz	 <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 14:15:05</p>	/

2305-2315 MHz:

Duty cycle

Mode	QPSK	16QAM
5MHz	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 13:52:34</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 13:52:08</p>
10MHz	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 13:53:31</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 13:53:06</p>

2350-2360 MHz:

Duty cycle		
Mode	QPSK	16QAM
5MHz	<p>Ref 30 dBm *Att 30 dB *VSW 10 MHz SWT 40 ms Delta 3 [T1] 1.77 dB Maskoff: 1 [T1] 1.86 dBm Delta 2 [T1] 1.90 dBm Delta 1 [T1] 3.919 dBm Center 2.3525 GHz 4 ms/ ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 13:54:38</p>	<p>Ref 30 dBm *Att 30 dB *VSW 10 MHz SWT 40 ms Delta 3 [T1] -0.71 dB Maskoff: 1 [T1] 1.93 dBm Delta 2 [T1] 1.70 dBm Delta 1 [T1] 3.19 dBm Center 2.3525 GHz 4 ms/ ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 13:54:11</p>
10MHz	<p>Ref 30 dBm *Att 30 dB *VSW 10 MHz SWT 40 ms Delta 3 [T1] 1.40 dB Maskoff: 1 [T1] 1.78 dBm Delta 2 [T1] 1.34 dBm Delta 1 [T1] 2.367 dBm Center 2.355 GHz 4 ms/ ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 13:55:30</p>	<p>Ref 30 dBm *Att 30 dB *VSW 10 MHz SWT 40 ms Delta 3 [T1] 1.23 dB Maskoff: 1 [T1] 1.39 dBm Delta 2 [T1] 1.47 dBm Delta 1 [T1] 2.704 dBm Center 2.355 GHz 4 ms/ ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 13:55:09</p>

**4.17 Antenna Port Test Data and Results for LTE Band 41**

Serial Number:	2CFR-2	Test Date:	2023/11/07-2023/11/27
Test Site:	RF	Test Mode:	Transmitting
Tester:	Rod Luo	Test Result:	Pass

**Environmental Conditions:**

Temperature: (°C)	26.5	Relative Humidity: (%)	48	ATM Pressure: (kPa)	101.3
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**Test Equipment List and Details:**

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSU26	200120	2023/3/31	2024/3/30
R&S	Spectrum Analyzer	FSV40-N	102259	2023/4/18	2024/4/17
zhuoxiang	Coaxial Cable	SMA-178	211002	Each time	N/A
Minl-Circuits	Power Splitter	ZFRSC-183-S+	S F448201619	Each time	N/A
R&S	Wideband Radio Communication Tester	CMW500	143458	2023/3/31	2024/3/30
BACL	TEMP&HUMI Test Chamber	BTH-150-40	30174	2023/3/31	2024/3/30
UNI-T	Multimeter	UT39A+	C210582554	2023/9/28	2024/9/27
ZHAOXIN	DC Power Supply	RXN-6010D	21R6010D0912386	N/A	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).

**Test Frequency for Each Mode:**

Operation Bandwidth	Lowest Frequency (MHz)	Middle Frequency (MHz)	Highest Frequency (MHz)
5MHz	2498.5	2593	2687.5
10MHz	2501	2593	2685
15MHz	2503.5	2593	2682.5
20MHz	2506	2593	2680

**Test Data:**

FCC§2.1046;§ 27.50(h)(2)						
RF Output Power:						
Test Bandwidth & Modulation	Resource Block & RB offset	Conducted Average Output Power(dBm)			Maximum EIRP (dBm)	EIRP Limit (dBm)
		Lowest Channel	Middle Channel	Highest Channel		
5MHz QPSK	RB1#0	18.01	17.85	18.66	18.81	33
	RB1#13	18.35	18.22	19.01		
	RB1#24	17.7	17.59	18.38		
	RB15#0	17.33	17.09	17.82		
	RB15#10	17.22	16.99	17.72		
	RB25#0	17.23	17	17.73		
5MHz 16QAM	RB1#0	17.1	17.04	17.54	17.72	33
	RB1#13	17.46	17.41	17.92		
	RB1#24	16.8	16.8	17.28		
	RB15#0	16.48	16.25	16.67		
	RB15#10	16.36	16.15	16.57		
	RB25#0	16.41	16.11	16.67		
10MHz QPSK	RB1#0	18.69	18.25	19.11	18.93	33
	RB1#25	18.64	18.21	19.02		
	RB1#49	18.78	18.24	19.13		
	RB25#0	17.57	17.28	17.95		
	RB25#25	17.61	17.28	17.95		
	RB50#0	17.58	17.27	17.95		
10MHz 16QAM	RB1#0	17.58	17.44	17.82	17.66	33
	RB1#25	17.57	17.38	17.83		
	RB1#49	17.72	17.41	17.86		
	RB25#0	16.75	16.39	16.95		
	RB25#25	16.8	16.38	16.95		
	RB50#0	16.76	16.38	16.92		
15MHz QPSK	RB1#0	18.88	18.7	19.44	19.24	33
	RB1#38	18.48	18.24	19.14		
	RB1#74	18.59	17.92	18.87		
	RB36#0	17.63	17.51	18.26		
	RB36#39	17.49	17.1	17.91		
	RB75#0	17.54	17.3	18.08		
15MHz 16QAM	RB1#0	17.91	17.63	18.5	18.3	33
	RB1#38	17.57	17.14	18.24		
	RB1#74	17.67	16.84	17.94		
	RB36#0	16.76	16.58	17.26		
	RB36#39	16.62	16.16	16.93		
	RB75#0	16.65	16.4	17.04		

20MHz QPSK	RB1#0	19.15	19.35	19.65	19.45	33
	RB1#50	18.35	18.33	18.94		
	RB1#99	18.96	18.22	18.96		
	RB50#0	17.78	17.83	18.35		
	RB50#50	17.74	17.24	17.99		
	RB100#0	17.74	17.52	18.14		
20MHz 16QAM	RB1#0	18.08	18.58	18.57	18.38	33
	RB1#50	17.32	17.49	18.02		
	RB1#99	17.93	17.43	17.91		
	RB50#0	16.83	16.96	17.39		
	RB50#50	16.8	16.37	17.04		
	RB100#0	16.74	16.63	17.2		
Note: EIRP=Conducted Power(dBm) - Lc(dB) + Gr(dBi)						
					<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		
20MHz QPSK	RB1#0	9.07	9.83	9.28	13	
	RB100#0	9.16	9.19	9.3	13	
20MHz 16QAM	RB1#0	9.83	10.35	10	13	
	RB100#0	9.91	9.48	10.06	13	
					<b>Result:</b>	<b>Pass</b>

FCC §2.1049, §27.53:Occupied Bandwidth						
Operation Mode	99% Occupied Bandwidth (MHz)			26 dB Occupied Bandwidth (MHz)		
	Low Channel	Middle channel	High Channel	Low Channel	Middle Channel	High Channel
5MHz QPSK	4.520	4.520	4.520	5.060	5.080	4.980
5MHz 16QAM	4.520	4.520	4.520	5.180	5.080	5.080
10MHz QPSK	8.960	9.000	9.000	9.800	9.760	9.800
10MHz 16QAM	8.960	8.960	8.960	9.800	9.760	9.800
15MHz QPSK	13.620	13.560	13.500	15.600	15.480	15.780
15MHz 16QAM	13.620	13.560	13.560	16.680	15.360	15.540
20MHz QPSK	18.000	17.920	18.000	19.760	20.240	19.760
20MHz 16QAM	18.000	18.080	18.000	20.080	20.000	19.600
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>

<b>FCC §2.1055, §27.54: Frequency Stability</b>						
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	3.85	2496.060	2496.00	2689.892	2690
	-20	3.85	2496.114	2496.00	2689.921	2690
	-10	3.85	2496.126	2496.00	2689.906	2690
	0	3.85	2496.126	2496.00	2689.994	2690
	10	3.85	2496.126	2496.00	2689.987	2690
	20	3.85	2496.082	2496.00	2689.966	2690
	30	3.85	2496.020	2496.00	2689.938	2690
	40	3.85	2496.147	2496.00	2689.899	2690
	50	3.85	2496.055	2496.00	2689.980	2690
Frequency Stability vs. Voltage	20	3.5	2496.076	2496.00	2689.858	2690
	20	4.4	2496.090	2496.00	2689.926	2690
					<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	3.85	2496.134	2496.00	2689.932	2690
	-20	3.85	2496.029	2496.00	2689.928	2690
	-10	3.85	2496.002	2496.00	2689.947	2690
	0	3.85	2496.066	2496.00	2689.984	2690
	10	3.85	2496.133	2496.00	2689.984	2690
	20	3.85	2496.001	2496.00	2689.968	2690
	30	3.85	2496.073	2496.00	2689.953	2690
	40	3.85	2496.083	2496.00	2689.971	2690
	50	3.85	2496.148	2496.00	2689.994	2690
Frequency Stability vs. Voltage	20	3.5	2496.082	2496.00	2689.880	2690
	20	4.4	2496.127	2496.00	2689.874	2690
					<b>Result:</b>	<b>Pass</b>



**Test Plots** (Note: The 11 dB is the Insertion loss of the RF cable and Power Splitter, which was offset into the Spectrum Analyzer):

<b>Occupied Bandwidth</b>		
<b>Channel</b>	<b>5MHz Bandwidth QPSK</b>	<b>5MHz Bandwidth 16QAM</b>
<b>Lowest</b>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:30:28</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:30:52</p>
<b>Middle</b>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:31:13</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:31:36</p>
<b>Highest</b>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:31:57</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:32:21</p>

Occupied Bandwidth

Channel	10MHz Bandwidth QPSK	10MHz Bandwidth 16QAM
Lowest	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:33:38</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:34:08</p>
Middle	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:34:29</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:34:47</p>
Highest	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:35:01</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:35:19</p>

Occupied Bandwidth

Channel	15MHz Bandwidth QPSK	15MHz Bandwidth 16QAM
Lowest	<p>Ref 30 dBm *Att 25 dB *RSW 300 kHz Delta 1 [T1] 0.38 dB            *VSW 1 MHz *Marker 1 [T1] 13.74 dBm            SWT 2.5 ms 15.60000000 MHz            Center 2.5035 GHz 3 MHz/ Span 30 MHz</p>	<p>Ref 30 dBm *Att 25 dB *RSW 300 kHz Delta 1 [T1] 0.68 dB            *VSW 1 MHz *Marker 1 [T1] 13.57 dBm            SWT 2.5 ms 16.68000000 MHz            Center 2.5035 GHz 3 MHz/ Span 30 MHz</p>
Middle	<p>Ref 30 dBm *Att 25 dB *RSW 300 kHz Delta 1 [T1] 1.79 dB            *VSW 1 MHz *Marker 1 [T1] 13.71 dBm            SWT 2.5 ms 15.48000000 MHz            Center 2.593 GHz 3 MHz/ Span 30 MHz</p>	<p>Ref 30 dBm *Att 25 dB *RSW 300 kHz Delta 1 [T1] 1.85 dB            *VSW 1 MHz *Marker 1 [T1] 13.08 dBm            SWT 2.5 ms 15.36000000 MHz            Center 2.593 GHz 3 MHz/ Span 30 MHz</p>
Highest	<p>Ref 30 dBm *Att 25 dB *RSW 300 kHz Delta 1 [T1] 0.63 dB            *VSW 1 MHz *Marker 1 [T1] 13.77 dBm            SWT 2.5 ms 15.78000000 MHz            Center 2.6825 GHz 3 MHz/ Span 30 MHz</p>	<p>Ref 30 dBm *Att 25 dB *RSW 300 kHz Delta 1 [T1] 1.85 dB            *VSW 1 MHz *Marker 1 [T1] 12.84 dBm            SWT 2.5 ms 15.54000000 MHz            Center 2.6825 GHz 3 MHz/ Span 30 MHz</p>

Occupied Bandwidth

Channel	20MHz Bandwidth QPSK	20MHz Bandwidth 16QAM
Lowest	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:39:49</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:40:18</p>
Middle	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:40:42</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:41:07</p>
Highest	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:41:30</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:41:53</p>

### Spurious Emissions at Antenna Terminal

Channel	5MHz Bandwidth QPSK																									
Lowest	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 11:52:04</p>	<table border="1"> <thead> <tr> <th>Marker</th> <th>Type</th> <th>Ref</th> <th>Trc</th> <th>X-value</th> <th>Y-value</th> <th>Function</th> <th>Function Result</th> </tr> </thead> <tbody> <tr> <td>M1</td> <td>1</td> <td></td> <td></td> <td>2.404 GHz</td> <td>-37.34 dBm</td> <td></td> <td></td> </tr> <tr> <td>M2</td> <td>1</td> <td></td> <td></td> <td>15.56 GHz</td> <td>-30.66 dBm</td> <td></td> <td></td> </tr> </tbody> </table> <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 27.NOV.2023 18:33:02</p>	Marker	Type	Ref	Trc	X-value	Y-value	Function	Function Result	M1	1			2.404 GHz	-37.34 dBm			M2	1			15.56 GHz	-30.66 dBm		
Marker	Type	Ref	Trc	X-value	Y-value	Function	Function Result																			
M1	1			2.404 GHz	-37.34 dBm																					
M2	1			15.56 GHz	-30.66 dBm																					
Middle	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 11:52:17</p>	<table border="1"> <thead> <tr> <th>Marker</th> <th>Type</th> <th>Ref</th> <th>Trc</th> <th>X-value</th> <th>Y-value</th> <th>Function</th> <th>Function Result</th> </tr> </thead> <tbody> <tr> <td>M1</td> <td>1</td> <td></td> <td></td> <td>1.104 GHz</td> <td>-36.20 dBm</td> <td></td> <td></td> </tr> <tr> <td>M2</td> <td>1</td> <td></td> <td></td> <td>20.396 GHz</td> <td>-31.01 dBm</td> <td></td> <td></td> </tr> </tbody> </table> <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 27.NOV.2023 18:33:34</p>	Marker	Type	Ref	Trc	X-value	Y-value	Function	Function Result	M1	1			1.104 GHz	-36.20 dBm			M2	1			20.396 GHz	-31.01 dBm		
Marker	Type	Ref	Trc	X-value	Y-value	Function	Function Result																			
M1	1			1.104 GHz	-36.20 dBm																					
M2	1			20.396 GHz	-31.01 dBm																					
Highest	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 11:52:50</p>	<table border="1"> <thead> <tr> <th>Marker</th> <th>Type</th> <th>Ref</th> <th>Trc</th> <th>X-value</th> <th>Y-value</th> <th>Function</th> <th>Function Result</th> </tr> </thead> <tbody> <tr> <td>M1</td> <td>1</td> <td></td> <td></td> <td>1.52 GHz</td> <td>-37.35 dBm</td> <td></td> <td></td> </tr> <tr> <td>M2</td> <td>1</td> <td></td> <td></td> <td>20.396 GHz</td> <td>-30.78 dBm</td> <td></td> <td></td> </tr> </tbody> </table> <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 27.NOV.2023 18:33:55</p>	Marker	Type	Ref	Trc	X-value	Y-value	Function	Function Result	M1	1			1.52 GHz	-37.35 dBm			M2	1			20.396 GHz	-30.78 dBm		
Marker	Type	Ref	Trc	X-value	Y-value	Function	Function Result																			
M1	1			1.52 GHz	-37.35 dBm																					
M2	1			20.396 GHz	-30.78 dBm																					

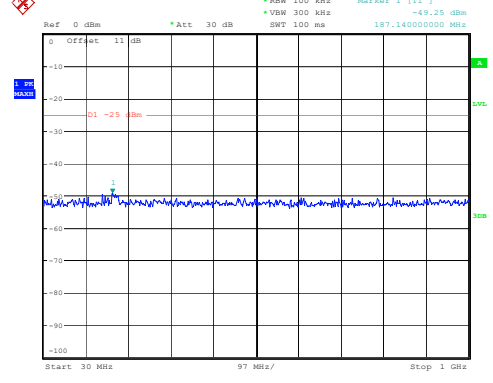
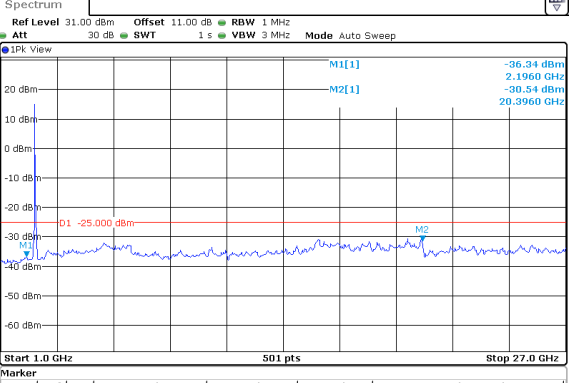
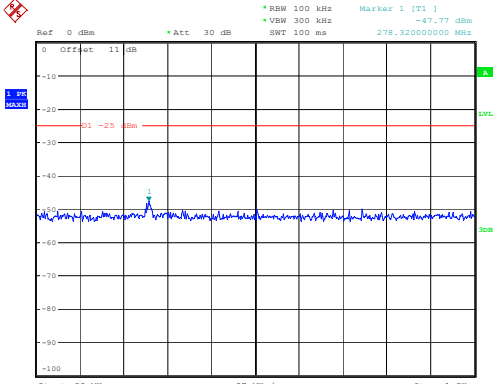
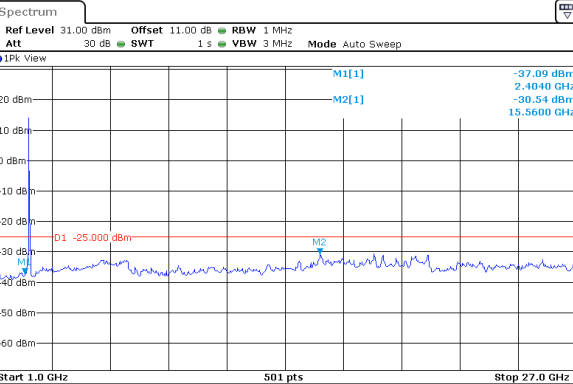
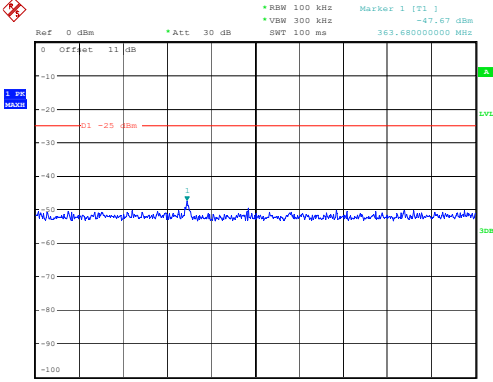
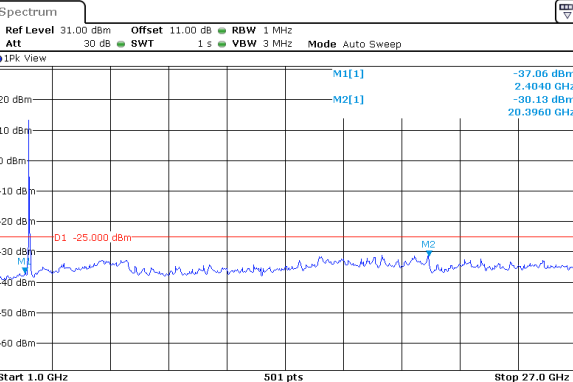
### Spurious Emissions at Antenna Terminal

Channel	10MHz Bandwidth QPSK																									
Lowest	<p>Ref Level 0 dBm *Att 30 dB *RBW 100 kHz *VSW 300 kHz *SWT 100 ms Marker 1 [T1] -47.56 dBm 187.140000000 MHz</p> <p>Start 30 MHz 97 MHz/ Stop 1 GHz</p> <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 11:54:03</p>	<p>Spectrum Ref Level 31.00 dBm Offset 11.00 dB RBW 1 MHz Att 30 dB SWT 1 s VBW 3 MHz Mode Auto Sweep</p> <p>Start 1.0 GHz 501 pts Stop 27.0 GHz</p> <table border="1"> <thead> <tr> <th>Marker</th> <th>Type</th> <th>Ref</th> <th>Trc</th> <th>X-value</th> <th>Y-value</th> <th>Function</th> <th>Function Result</th> </tr> </thead> <tbody> <tr> <td>M1</td> <td>1</td> <td></td> <td></td> <td>2.404 GHz</td> <td>-36.70 dBm</td> <td></td> <td></td> </tr> <tr> <td>M2</td> <td>1</td> <td></td> <td></td> <td>20.396 GHz</td> <td>-30.42 dBm</td> <td></td> <td></td> </tr> </tbody> </table> <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 27.NOV.2023 18:34:54</p>	Marker	Type	Ref	Trc	X-value	Y-value	Function	Function Result	M1	1			2.404 GHz	-36.70 dBm			M2	1			20.396 GHz	-30.42 dBm		
Marker	Type	Ref	Trc	X-value	Y-value	Function	Function Result																			
M1	1			2.404 GHz	-36.70 dBm																					
M2	1			20.396 GHz	-30.42 dBm																					
Middle	<p>Ref Level 0 dBm *Att 30 dB *RBW 100 kHz *VSW 300 kHz *SWT 100 ms Marker 1 [T1] -46.81 dBm 276.380000000 MHz</p> <p>Start 30 MHz 97 MHz/ Stop 1 GHz</p> <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 11:54:26</p>	<p>Spectrum Ref Level 31.00 dBm Offset 11.00 dB RBW 1 MHz Att 30 dB SWT 1 s VBW 3 MHz Mode Auto Sweep</p> <p>Start 1.0 GHz 501 pts Stop 27.0 GHz</p> <table border="1"> <thead> <tr> <th>Marker</th> <th>Type</th> <th>Ref</th> <th>Trc</th> <th>X-value</th> <th>Y-value</th> <th>Function</th> <th>Function Result</th> </tr> </thead> <tbody> <tr> <td>M1</td> <td>1</td> <td></td> <td></td> <td>2.404 GHz</td> <td>-37.35 dBm</td> <td></td> <td></td> </tr> <tr> <td>M2</td> <td>1</td> <td></td> <td></td> <td>20.396 GHz</td> <td>-29.90 dBm</td> <td></td> <td></td> </tr> </tbody> </table> <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 27.NOV.2023 18:35:27</p>	Marker	Type	Ref	Trc	X-value	Y-value	Function	Function Result	M1	1			2.404 GHz	-37.35 dBm			M2	1			20.396 GHz	-29.90 dBm		
Marker	Type	Ref	Trc	X-value	Y-value	Function	Function Result																			
M1	1			2.404 GHz	-37.35 dBm																					
M2	1			20.396 GHz	-29.90 dBm																					
Highest	<p>Ref Level 0 dBm *Att 30 dB *RBW 100 kHz *VSW 300 kHz *SWT 100 ms Marker 1 [T1] -47.36 dBm 367.560000000 MHz</p> <p>Start 30 MHz 97 MHz/ Stop 1 GHz</p> <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 11:54:49</p>	<p>Spectrum Ref Level 31.00 dBm Offset 11.00 dB RBW 1 MHz Att 30 dB SWT 1 s VBW 3 MHz Mode Auto Sweep</p> <p>Start 1.0 GHz 501 pts Stop 27.0 GHz</p> <table border="1"> <thead> <tr> <th>Marker</th> <th>Type</th> <th>Ref</th> <th>Trc</th> <th>X-value</th> <th>Y-value</th> <th>Function</th> <th>Function Result</th> </tr> </thead> <tbody> <tr> <td>M1</td> <td>1</td> <td></td> <td></td> <td>2.404 GHz</td> <td>-38.00 dBm</td> <td></td> <td></td> </tr> <tr> <td>M2</td> <td>1</td> <td></td> <td></td> <td>17.952 GHz</td> <td>-30.34 dBm</td> <td></td> <td></td> </tr> </tbody> </table> <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 27.NOV.2023 18:35:59</p>	Marker	Type	Ref	Trc	X-value	Y-value	Function	Function Result	M1	1			2.404 GHz	-38.00 dBm			M2	1			17.952 GHz	-30.34 dBm		
Marker	Type	Ref	Trc	X-value	Y-value	Function	Function Result																			
M1	1			2.404 GHz	-38.00 dBm																					
M2	1			17.952 GHz	-30.34 dBm																					

### Spurious Emissions at Antenna Terminal

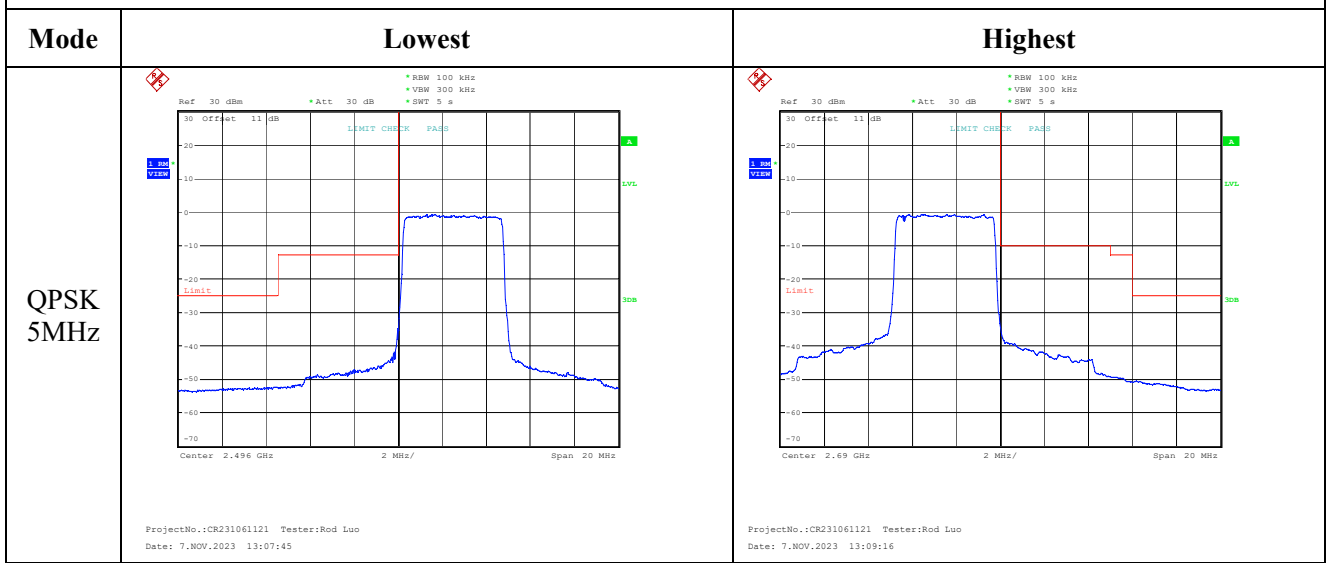
Channel	15MHz Bandwidth QPSK																									
Lowest	<p>Ref 0 dBm *Att 30 dB *RBW 100 kHz *VSW 300 kHz *SWT 100 ms *Marker 1 [F1] -48.30 dBm 189.08000000 MHz</p> <p>Start 30 MHz 97 MHz/ Stop 1 GHz</p> <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 11:56:10</p>	<p>Spectrum Ref Level 31.00 dBm Offset 11.00 dB RBW 1 MHz Att 30 dB SWT 1 s VBW 3 MHz Mode Auto Sweep</p> <p>Start 1.0 GHz 501 pts Stop 27.0 GHz</p> <table border="1"> <thead> <tr> <th>Marker</th> <th>Type</th> <th>Ref</th> <th>Trc</th> <th>X-value</th> <th>Y-value</th> <th>Function</th> <th>Function Result</th> </tr> </thead> <tbody> <tr> <td>M1</td> <td>1</td> <td></td> <td></td> <td>1.312 GHz</td> <td>-37.13 dBm</td> <td></td> <td></td> </tr> <tr> <td>M2</td> <td>1</td> <td></td> <td></td> <td>15.56 GHz</td> <td>-31.55 dBm</td> <td></td> <td></td> </tr> </tbody> </table> <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 27.NOV.2023 18:36:17</p>	Marker	Type	Ref	Trc	X-value	Y-value	Function	Function Result	M1	1			1.312 GHz	-37.13 dBm			M2	1			15.56 GHz	-31.55 dBm		
Marker	Type	Ref	Trc	X-value	Y-value	Function	Function Result																			
M1	1			1.312 GHz	-37.13 dBm																					
M2	1			15.56 GHz	-31.55 dBm																					
Middle	<p>Ref 0 dBm *Att 30 dB *RBW 100 kHz *VSW 300 kHz *SWT 100 ms *Marker 1 [F1] -47.59 dBm 278.32000000 MHz</p> <p>Start 30 MHz 97 MHz/ Stop 1 GHz</p> <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 11:56:13</p>	<p>Spectrum Ref Level 31.00 dBm Offset 11.00 dB RBW 1 MHz Att 30 dB SWT 1 s VBW 3 MHz Mode Auto Sweep</p> <p>Start 1.0 GHz 501 pts Stop 27.0 GHz</p> <table border="1"> <thead> <tr> <th>Marker</th> <th>Type</th> <th>Ref</th> <th>Trc</th> <th>X-value</th> <th>Y-value</th> <th>Function</th> <th>Function Result</th> </tr> </thead> <tbody> <tr> <td>M1</td> <td>1</td> <td></td> <td></td> <td>2.404 GHz</td> <td>-36.34 dBm</td> <td></td> <td></td> </tr> <tr> <td>M2</td> <td>1</td> <td></td> <td></td> <td>20.344 GHz</td> <td>-30.59 dBm</td> <td></td> <td></td> </tr> </tbody> </table> <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 27.NOV.2023 18:36:17</p>	Marker	Type	Ref	Trc	X-value	Y-value	Function	Function Result	M1	1			2.404 GHz	-36.34 dBm			M2	1			20.344 GHz	-30.59 dBm		
Marker	Type	Ref	Trc	X-value	Y-value	Function	Function Result																			
M1	1			2.404 GHz	-36.34 dBm																					
M2	1			20.344 GHz	-30.59 dBm																					
Highest	<p>Ref 0 dBm *Att 30 dB *RBW 100 kHz *VSW 300 kHz *SWT 100 ms *Marker 1 [F1] -48.30 dBm 367.56000000 MHz</p> <p>Start 30 MHz 97 MHz/ Stop 1 GHz</p> <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 11:56:16</p>	<p>Spectrum Ref Level 31.00 dBm Offset 11.00 dB RBW 1 MHz Att 30 dB SWT 1 s VBW 3 MHz Mode Auto Sweep</p> <p>Start 1.0 GHz 501 pts Stop 27.0 GHz</p> <table border="1"> <thead> <tr> <th>Marker</th> <th>Type</th> <th>Ref</th> <th>Trc</th> <th>X-value</th> <th>Y-value</th> <th>Function</th> <th>Function Result</th> </tr> </thead> <tbody> <tr> <td>M1</td> <td>1</td> <td></td> <td></td> <td>2.404 GHz</td> <td>-37.51 dBm</td> <td></td> <td></td> </tr> <tr> <td>M2</td> <td>1</td> <td></td> <td></td> <td>20.344 GHz</td> <td>-30.78 dBm</td> <td></td> <td></td> </tr> </tbody> </table> <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 27.NOV.2023 18:36:18</p>	Marker	Type	Ref	Trc	X-value	Y-value	Function	Function Result	M1	1			2.404 GHz	-37.51 dBm			M2	1			20.344 GHz	-30.78 dBm		
Marker	Type	Ref	Trc	X-value	Y-value	Function	Function Result																			
M1	1			2.404 GHz	-37.51 dBm																					
M2	1			20.344 GHz	-30.78 dBm																					

Spurious Emissions at Antenna Terminal

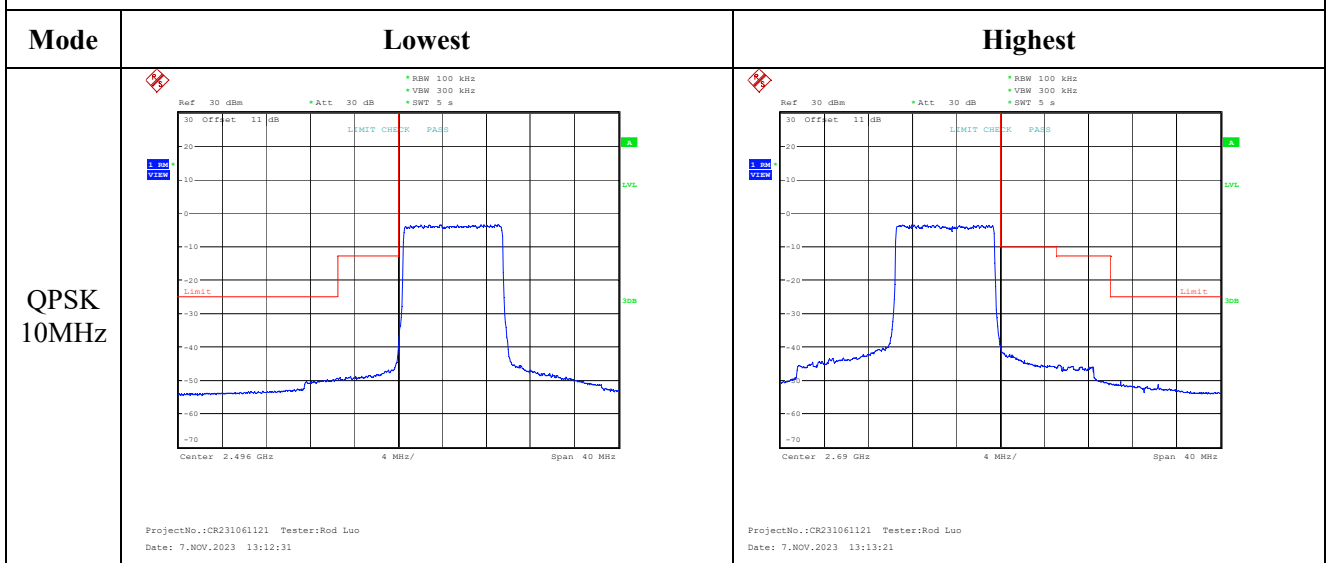
Channel	20MHz Bandwidth QPSK																									
Lowest	 <p>Ref 0 dBm *Att 30 dB *RBW 100 kHz *VSW 300 kHz *Marker 1 [F1] -49.25 dBm            *SWT 100 ms 187.14000000 MHz</p> <p>Start 30 MHz 97 MHz/ Stop 1 GHz</p> <p>ProjectNo.:CR231061121 Tester:Rod Luo            Date: 7.NOV.2023 11:57:59</p>	 <p>Spectrum Ref Level 31.00 dBm Offset 11.00 dB RBW 1 MHz            Att 30 dB SWT 1 s VBW 3 MHz Mode Auto Sweep</p> <p>IPK View</p> <p>Start 1.0 GHz 501 pts Stop 27.0 GHz</p> <table border="1"> <thead> <tr> <th>Marker</th> <th>Type</th> <th>Ref</th> <th>Trc</th> <th>X-value</th> <th>Y-value</th> <th>Function</th> <th>Function Result</th> </tr> </thead> <tbody> <tr> <td>M1</td> <td>1</td> <td></td> <td></td> <td>2.196 GHz</td> <td>-36.34 dBm</td> <td></td> <td></td> </tr> <tr> <td>M2</td> <td>1</td> <td></td> <td></td> <td>20.396 GHz</td> <td>-30.54 dBm</td> <td></td> <td></td> </tr> </tbody> </table> <p>ProjectNo.:CR231061121 Tester:Rod Luo            Date: 27.NOV.2023 18:37:40</p>	Marker	Type	Ref	Trc	X-value	Y-value	Function	Function Result	M1	1			2.196 GHz	-36.34 dBm			M2	1			20.396 GHz	-30.54 dBm		
Marker	Type	Ref	Trc	X-value	Y-value	Function	Function Result																			
M1	1			2.196 GHz	-36.34 dBm																					
M2	1			20.396 GHz	-30.54 dBm																					
Middle	 <p>Ref 0 dBm *Att 30 dB *RBW 100 kHz *VSW 300 kHz *Marker 1 [F1] -47.77 dBm            *SWT 100 ms 278.32000000 MHz</p> <p>Start 30 MHz 97 MHz/ Stop 1 GHz</p> <p>ProjectNo.:CR231061121 Tester:Rod Luo            Date: 7.NOV.2023 11:58:21</p>	 <p>Spectrum Ref Level 31.00 dBm Offset 11.00 dB RBW 1 MHz            Att 30 dB SWT 1 s VBW 3 MHz Mode Auto Sweep</p> <p>IPK View</p> <p>Start 1.0 GHz 501 pts Stop 27.0 GHz</p> <table border="1"> <thead> <tr> <th>Marker</th> <th>Type</th> <th>Ref</th> <th>Trc</th> <th>X-value</th> <th>Y-value</th> <th>Function</th> <th>Function Result</th> </tr> </thead> <tbody> <tr> <td>M1</td> <td>1</td> <td></td> <td></td> <td>2.404 GHz</td> <td>-37.09 dBm</td> <td></td> <td></td> </tr> <tr> <td>M2</td> <td>1</td> <td></td> <td></td> <td>15.56 GHz</td> <td>-30.54 dBm</td> <td></td> <td></td> </tr> </tbody> </table> <p>ProjectNo.:CR231061121 Tester:Rod Luo            Date: 27.NOV.2023 18:38:01</p>	Marker	Type	Ref	Trc	X-value	Y-value	Function	Function Result	M1	1			2.404 GHz	-37.09 dBm			M2	1			15.56 GHz	-30.54 dBm		
Marker	Type	Ref	Trc	X-value	Y-value	Function	Function Result																			
M1	1			2.404 GHz	-37.09 dBm																					
M2	1			15.56 GHz	-30.54 dBm																					
Highest	 <p>Ref 0 dBm *Att 30 dB *RBW 100 kHz *VSW 300 kHz *Marker 1 [F1] -47.67 dBm            *SWT 100 ms 363.68000000 MHz</p> <p>Start 30 MHz 97 MHz/ Stop 1 GHz</p> <p>ProjectNo.:CR231061121 Tester:Rod Luo            Date: 7.NOV.2023 11:58:47</p>	 <p>Spectrum Ref Level 31.00 dBm Offset 11.00 dB RBW 1 MHz            Att 30 dB SWT 1 s VBW 3 MHz Mode Auto Sweep</p> <p>IPK View</p> <p>Start 1.0 GHz 501 pts Stop 27.0 GHz</p> <table border="1"> <thead> <tr> <th>Marker</th> <th>Type</th> <th>Ref</th> <th>Trc</th> <th>X-value</th> <th>Y-value</th> <th>Function</th> <th>Function Result</th> </tr> </thead> <tbody> <tr> <td>M1</td> <td>1</td> <td></td> <td></td> <td>2.404 GHz</td> <td>-37.06 dBm</td> <td></td> <td></td> </tr> <tr> <td>M2</td> <td>1</td> <td></td> <td></td> <td>20.396 GHz</td> <td>-30.13 dBm</td> <td></td> <td></td> </tr> </tbody> </table> <p>ProjectNo.:CR231061121 Tester:Rod Luo            Date: 27.NOV.2023 18:38:21</p>	Marker	Type	Ref	Trc	X-value	Y-value	Function	Function Result	M1	1			2.404 GHz	-37.06 dBm			M2	1			20.396 GHz	-30.13 dBm		
Marker	Type	Ref	Trc	X-value	Y-value	Function	Function Result																			
M1	1			2.404 GHz	-37.06 dBm																					
M2	1			20.396 GHz	-30.13 dBm																					



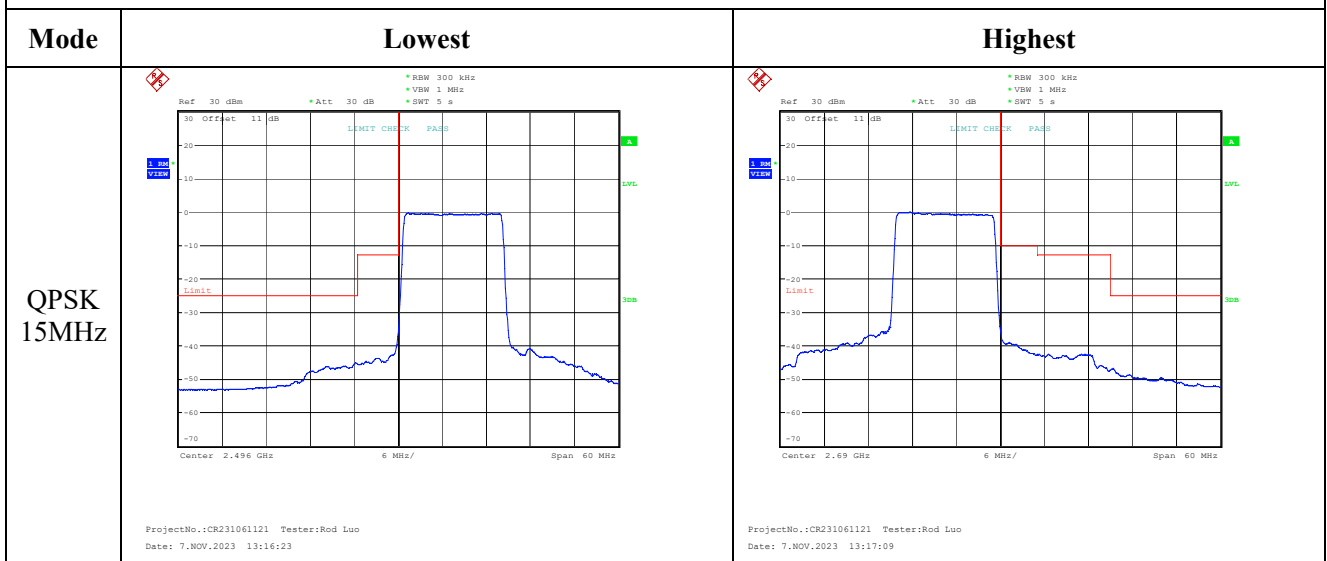
Out of band emission, Band Edge



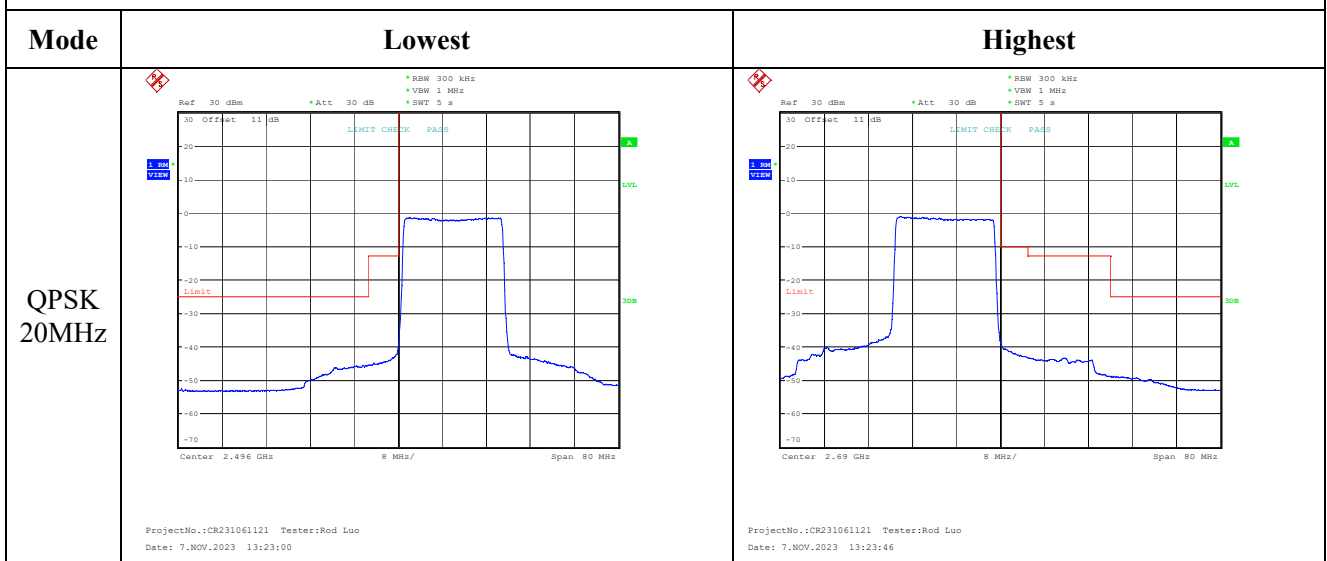
Out of band emission, Band Edge



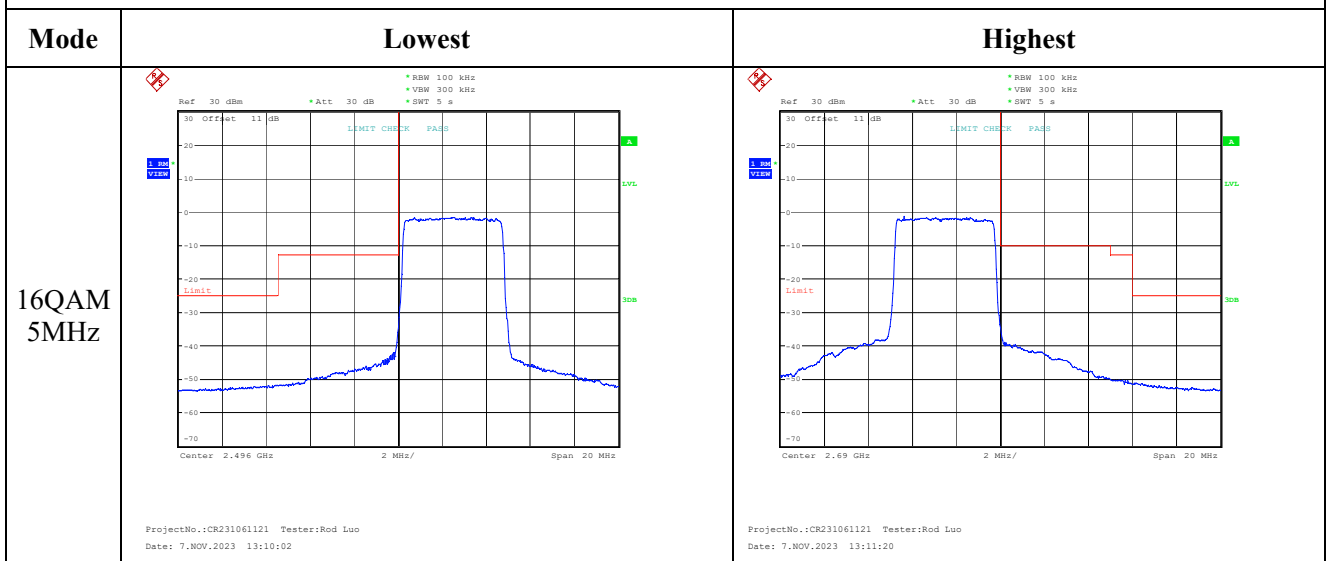
Out of band emission, Band Edge



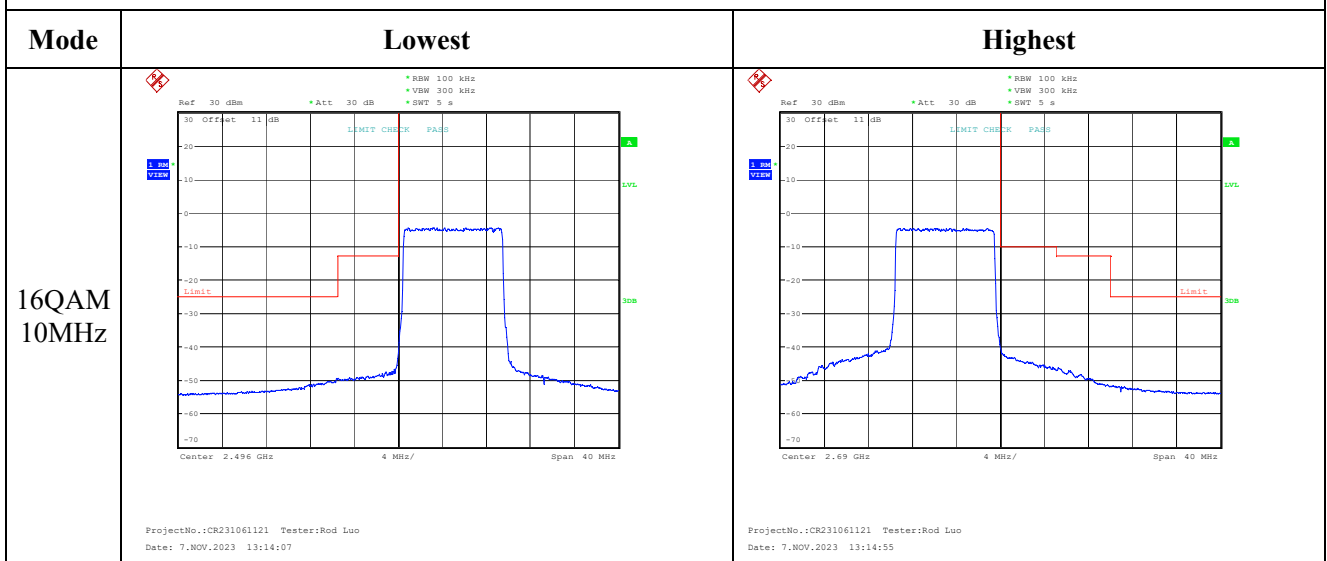
Out of band emission, Band Edge



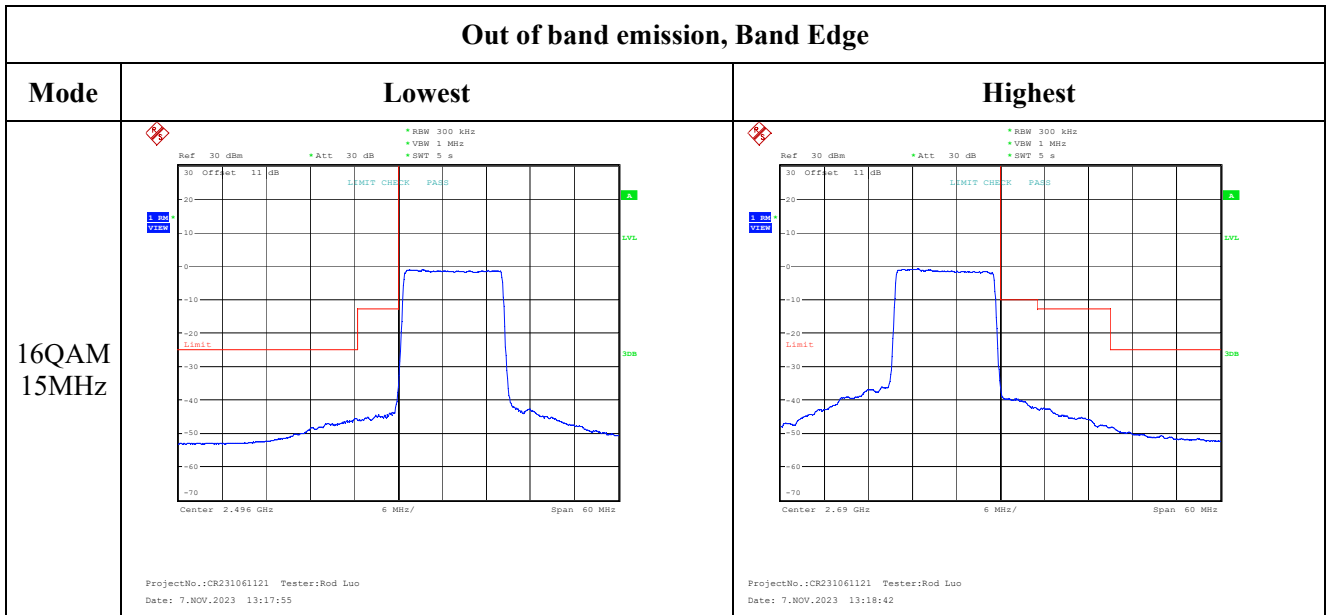
Out of band emission, Band Edge



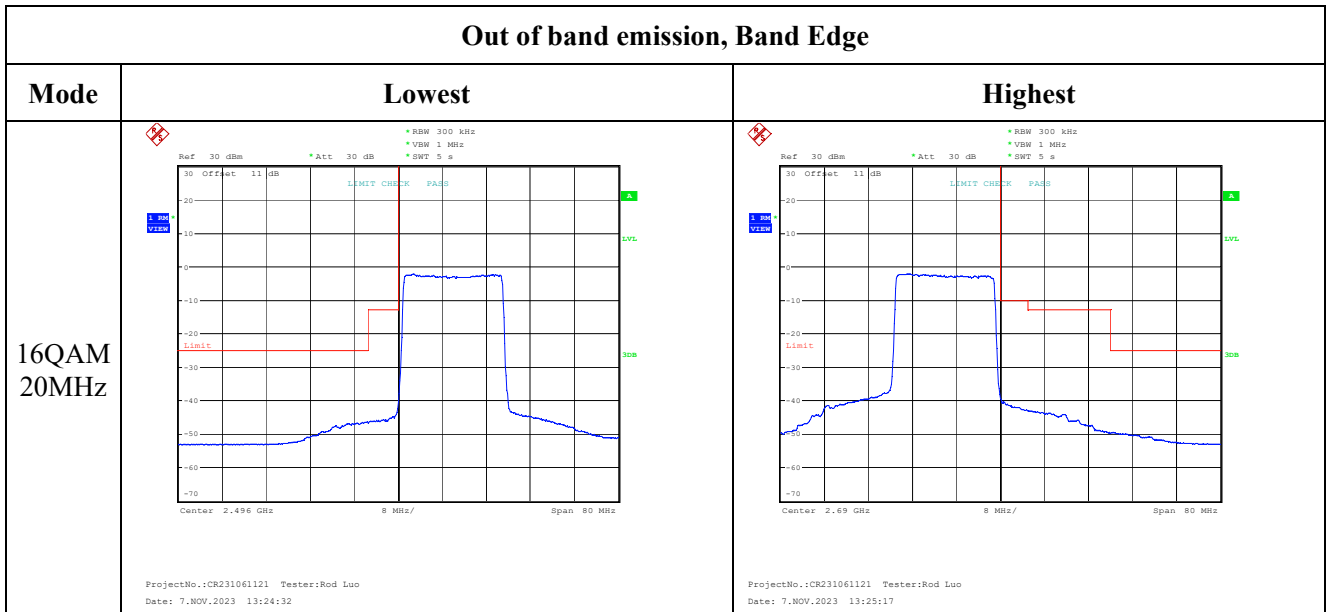
Out of band emission, Band Edge



Out of band emission, Band Edge



Out of band emission, Band Edge



**4.18 Antenna Port Test Data and Results for LTE Band 66**

Serial Number:	2CFR-2	Test Date:	2023/11/7
Test Site:	RF	Test Mode:	Transmitting
Tester:	Rod Luo	Test Result:	Pass

**Environmental Conditions:**

Temperature: (°C)	26.5	Relative Humidity: (%)	48	ATM Pressure: (kPa)	101.3
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**Test Equipment List and Details:**

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSU26	200120	2023/3/31	2024/3/30
zhuoxiang	Coaxial Cable	SMA-178	211002	Each time	N/A
Minl-Circuits	Power Splitter	ZFRSC-183-S+	S F448201619	Each time	N/A
R&S	Wideband Radio Communication Tester	CMW500	143458	2023/3/31	2024/3/30
BACL	TEMP&HUMI Test Chamber	BTH-150-40	30174	2023/3/31	2024/3/30
UNI-T	Multimeter	UT39A+	C210582554	2023/9/28	2024/9/27
ZHAOXIN	DC Power Supply	RXN-6010D	21R6010D0912386	N/A	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).

**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:**

FCC§2.1046;§ 27.50(d)(4)						
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		
1.4MHz QPSK	RB1#0	17.33	17.6	16.88	16.37	30
	RB1#3	17.65	17.77	16.97		
	RB1#5	17.47	17.57	16.75		
	RB3#0	17.5	17.71	16.95		
	RB3#3	17.55	17.7	16.86		
	RB6#0	16.45	16.77	15.99		
1.4MHz 16QAM	RB1#0	16.33	16.68	16.1	15.61	30
	RB1#3	16.61	16.88	16.22		
	RB1#5	16.52	16.68	15.97		
	RB3#0	16.66	17.01	16.08		
	RB3#3	16.7	17	16.01		
	RB6#0	15.62	15.88	15.04		
3MHz QPSK	RB1#0	17.44	17.6	17.01	16.31	30
	RB1#8	17.71	17.7	16.97		
	RB1#14	17.66	17.55	16.7		
	RB6#0	16.51	16.77	16.18		
	RB6#9	16.67	16.75	15.99		
	RB15#0	16.62	16.78	16.12		
3MHz 16QAM	RB1#0	16.53	16.71	16.22	15.42	30
	RB1#8	16.82	16.82	16.15		
	RB1#14	16.78	16.69	16.02		
	RB6#0	15.65	15.82	15.28		
	RB6#9	15.82	15.8	15.08		
	RB15#0	15.69	15.94	15.29		
5MHz QPSK	RB1#0	17.17	17.26	16.97	16.49	30
	RB1#13	17.89	17.75	17.24		
	RB1#24	17.44	17.23	16.48		
	RB15#0	16.58	16.72	16.25		
	RB15#10	16.71	16.71	16.1		
	RB25#0	16.6	16.66	16.13		
5MHz 16QAM	RB1#0	16.38	16.42	15.95	15.74	30
	RB1#13	17.14	16.93	16.26		
	RB1#24	16.71	16.41	15.49		
	RB15#0	15.65	15.83	15.31		
	RB15#10	15.81	15.82	15.15		
	RB25#0	15.7	15.79	15.2		

10MHz QPSK	RB1#0	17.32	17.56	17.47	16.66	30
	RB1#25	17.71	17.72	17.3		
	RB1#49	18.04	18.06	17.29		
	RB25#0	16.67	16.77	16.62		
	RB25#25	16.93	17.02	16.49		
	RB50#0	16.81	16.9	16.56		
10MHz 16QAM	RB1#0	16.45	16.6	17.15	15.81	30
	RB1#25	16.93	16.82	17.06		
	RB1#49	17.21	17.11	16.96		
	RB25#0	15.67	15.96	15.63		
	RB25#25	15.93	16.21	15.53		
	RB50#0	15.79	16.02	15.55		
15MHz QPSK	RB1#0	17.62	17.81	17.28	16.53	30
	RB1#38	17.54	17.72	16.96		
	RB1#74	17.9	17.93	16.55		
	RB36#0	16.83	16.95	16.28		
	RB36#39	16.9	16.96	15.92		
	RB75#0	16.85	16.9	16.1		
15MHz 16QAM	RB1#0	16.76	17.26	16.93	15.95	30
	RB1#38	16.77	17.23	16.66		
	RB1#74	17.06	17.35	16.22		
	RB36#0	15.82	15.98	15.27		
	RB36#39	15.9	15.99	14.92		
	RB75#0	15.84	15.97	15.1		
20MHz QPSK	RB1#0	18.07	18.47	17.97	17.07	30
	RB1#50	17.58	17.67	17.16		
	RB1#99	18.25	18.46	17.04		
	RB50#0	16.92	17.19	16.57		
	RB50#50	16.99	17.19	16.22		
	RB100#0	16.95	17.18	16.38		
20MHz 16QAM	RB1#0	17.26	18.03	17.26	16.63	30
	RB1#50	16.89	17.38	16.51		
	RB1#99	17.48	18.03	16.35		
	RB50#0	15.93	16.29	15.53		
	RB50#50	15.99	16.28	15.17		
	RB100#0	15.95	16.28	15.37		

Note: EIRP=Conducted Power(dBm) - Lc(dB) + Gr(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	5.51	5.62	5.86	13
	RB100#0	5.62	5.62	5.62	13
20MHz 16QAM	RB1#0	6.03	6.32	6.9	13
	RB100#0	6.46	6.43	6.43	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	1.104	1.104	1.104	1.254	1.260	1.266
1.4MHz 16QAM	1.110	1.092	1.098	1.260	1.260	1.254
3MHz QPSK	2.700	2.700	2.700	3.012	3.012	2.976
3MHz 16QAM	2.687	2.700	2.700	3.000	3.012	3.012
5MHz QPSK	4.520	4.500	4.520	5.000	4.980	5.000
5MHz 16QAM	4.520	4.520	4.520	5.000	5.060	4.960
10MHz QPSK	8.960	8.960	8.960	9.800	9.800	9.720
10MHz 16QAM	9.000	8.960	8.960	9.800	9.840	9.840
15MHz QPSK	13.500	13.560	13.560	15.000	15.240	15.060
15MHz 16QAM	13.560	13.560	13.500	15.180	15.120	15.060
20MHz QPSK	18.080	18.000	18.080	19.600	19.680	19.520
20MHz 16QAM	18.000	18.000	18.000	19.760	19.840	19.680

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	3.85	1710.042	1710.00	1779.877	1780
	-20	3.85	1710.112	1710.00	1779.964	1780
	-10	3.85	1710.137	1710.00	1779.953	1780
	0	3.85	1710.029	1710.00	1779.857	1780
	10	3.85	1710.072	1710.00	1779.852	1780
	20	3.85	1710.117	1710.00	1779.946	1780
	30	3.85	1710.010	1710.00	1779.935	1780
	40	3.85	1710.024	1710.00	1779.980	1780
	50	3.85	1710.000	1710.00	1779.932	1780
Frequency Stability vs. Voltage	20	3.5	1710.085	1710.00	1779.953	1780
	20	4.4	1710.073	1710.00	1779.865	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	3.85	1710.028	1710.00	1779.886	1780
	-20	3.85	1710.065	1710.00	1779.997	1780
	-10	3.85	1710.023	1710.00	1779.893	1780
	0	3.85	1710.145	1710.00	1779.976	1780
	10	3.85	1710.097	1710.00	1779.866	1780
	20	3.85	1710.038	1710.00	1779.986	1780
	30	3.85	1710.005	1710.00	1779.936	1780
	40	3.85	1710.084	1710.00	1779.953	1780
	50	3.85	1710.142	1710.00	1779.906	1780
Frequency Stability vs. Voltage	20	3.5	1710.141	1710.00	1779.991	1780
	20	4.4	1710.079	1710.00	1779.911	1780
					<b>Result:</b>	<b>Pass</b>

**Test Plots** (Note: The 11 dB is the Insertion loss of the RF cable and Power Splitter, which was offset into the Spectrum Analyzer):

<b>Occupied Bandwidth</b>		
<b>Channel</b>	<b>1.4MHz Bandwidth QPSK</b>	<b>1.4MHz Bandwidth 16QAM</b>
<b>Lowest</b>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:43:03</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:43:20</p>
<b>Middle</b>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:43:35</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:43:49</p>
<b>Highest</b>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:44:03</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:44:17</p>

Occupied Bandwidth

Channel	3MHz Bandwidth QPSK	3MHz Bandwidth 16QAM
Lowest	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:44:35</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:44:51</p>
Middle	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:45:09</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:45:23</p>
Highest	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:45:37</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:45:51</p>

Occupied Bandwidth

Channel	5MHz Bandwidth QPSK	5MHz Bandwidth 16QAM
Lowest	<p>Ref 30 dBm *Att 25 dB *RSW 100 kHz *VSW 300 kHz Delta 1 [T1] -1.15 dB                      SWT 5 ms 5.00000000 MHz                      OSW 5.52000000 MHz                      Marker 1 [T1] -1.15 dB                      1.71000000 GHz Temp 1 [T1 OSW]                      1.71024000 GHz Temp 2 [T1 OSW]                      1.71476000 GHz</p> <p>Center 1.7125 GHz 1 MHz/ Span 10 MHz</p> <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:46:09</p>	<p>Ref 30 dBm *Att 25 dB *RSW 100 kHz *VSW 300 kHz Delta 1 [T1] -0.82 dB                      SWT 5 ms 5.00000000 MHz                      OSW 5.52000000 MHz                      Marker 1 [T1] -0.82 dB                      1.71000000 GHz Temp 1 [T1 OSW]                      1.71024000 GHz Temp 2 [T1 OSW]                      1.71476000 GHz</p> <p>Center 1.7125 GHz 1 MHz/ Span 10 MHz</p> <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:46:27</p>
Middle	<p>Ref 30 dBm *Att 25 dB *RSW 100 kHz *VSW 300 kHz Delta 1 [T1] -1.18 dB                      SWT 5 ms 4.98000000 MHz                      OSW 5.50000000 MHz                      Marker 1 [T1] -1.18 dB                      1.74250000 GHz Temp 1 [T1 OSW]                      1.74274000 GHz Temp 2 [T1 OSW]                      1.74726000 GHz</p> <p>Center 1.745 GHz 1 MHz/ Span 10 MHz</p> <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:46:44</p>	<p>Ref 30 dBm *Att 25 dB *RSW 100 kHz *VSW 300 kHz Delta 1 [T1] -0.48 dB                      SWT 5 ms 5.06000000 MHz                      OSW 5.52000000 MHz                      Marker 1 [T1] -0.48 dB                      1.74246000 GHz Temp 1 [T1 OSW]                      1.74274000 GHz Temp 2 [T1 OSW]                      1.74726000 GHz</p> <p>Center 1.745 GHz 1 MHz/ Span 10 MHz</p> <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:46:59</p>
Highest	<p>Ref 30 dBm *Att 25 dB *RSW 100 kHz *VSW 300 kHz Delta 1 [T1] -0.76 dB                      SWT 5 ms 5.00000000 MHz                      OSW 5.52000000 MHz                      Marker 1 [T1] -0.76 dB                      1.77488000 GHz Temp 1 [T1 OSW]                      1.77524000 GHz Temp 2 [T1 OSW]                      1.77976000 GHz</p> <p>Center 1.7775 GHz 1 MHz/ Span 10 MHz</p> <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:47:16</p>	<p>Ref 30 dBm *Att 25 dB *RSW 100 kHz *VSW 300 kHz Delta 1 [T1] -0.58 dB                      SWT 5 ms 4.96000000 MHz                      OSW 5.52000000 MHz                      Marker 1 [T1] -0.58 dB                      1.77502000 GHz Temp 1 [T1 OSW]                      1.77524000 GHz Temp 2 [T1 OSW]                      1.77976000 GHz</p> <p>Center 1.7775 GHz 1 MHz/ Span 10 MHz</p> <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:47:34</p>

Occupied Bandwidth

Channel	10MHz Bandwidth QPSK	10MHz Bandwidth 16QAM
Lowest	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:47:55</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:48:12</p>
Middle	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:48:27</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:48:41</p>
Highest	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:48:59</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:49:16</p>

Occupied Bandwidth

Channel	15MHz Bandwidth QPSK	15MHz Bandwidth 16QAM
Lowest	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:49:37</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:49:53</p>
Middle	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:50:10</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:50:26</p>
Highest	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:50:43</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:51:00</p>

Occupied Bandwidth

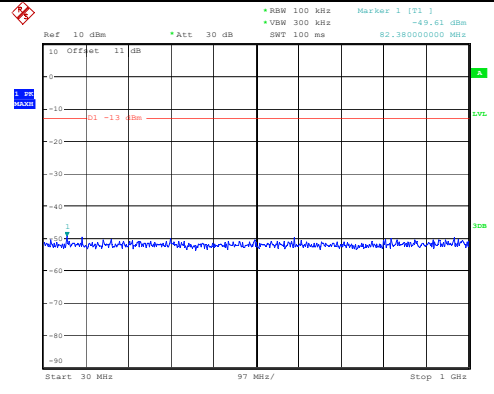
Channel	20MHz Bandwidth QPSK	20MHz Bandwidth 16QAM
Lowest	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:51:20</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:51:36</p>
Middle	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:51:53</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:52:13</p>
Highest	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:52:30</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 10:52:50</p>

Spurious Emissions at Antenna Terminal

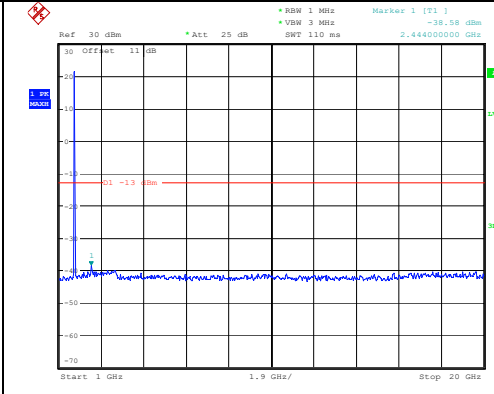
Channel

1.4MHz Bandwidth QPSK

Lowest

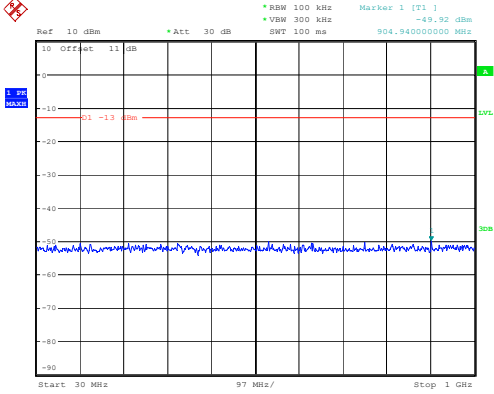


ProjectNo.:CR231061121 Tester:Rod Luo  
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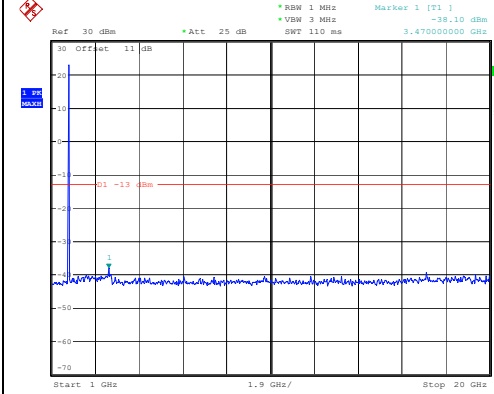


ProjectNo.:CR231061121 Tester:Rod Luo  
 Date: 7.NOV.2023 11:59:55

Middle

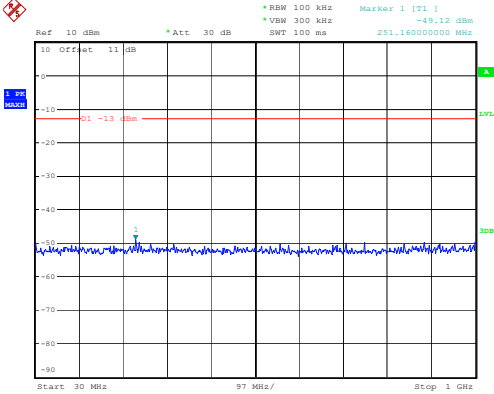


ProjectNo.:CR231061121 Tester:Rod Luo  
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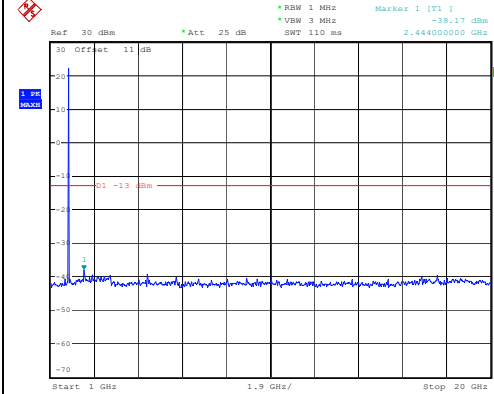


ProjectNo.:CR231061121 Tester:Rod Luo  
 Date: 7.NOV.2023 12:00:17

Highest



ProjectNo.:CR231061121 Tester:Rod Luo  
 Date: 7.NOV.2023 12:00:30



ProjectNo.:CR231061121 Tester:Rod Luo  
 Date: 7.NOV.2023 12:00:40



Spurious Emissions at Antenna Terminal

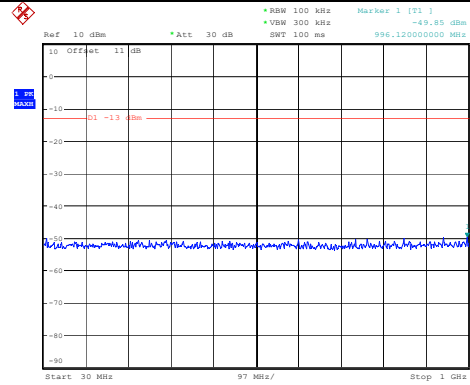
Channel	3MHz Bandwidth QPSK	
Lowest	<p>Ref 10 dBm *Att 30 dB *RBW 100 kHz Marker 1 [T1] -50.08 dBm *VSW 300 kHz SWT 100 ms 134.76000000 MHz</p> <p>Start 30 MHz 97 MHz/ Stop 1 GHz</p> <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 12:00:56</p>	<p>Ref 30 dBm *Att 25 dB *RBW 1 MHz Marker 1 [T1] -38.67 dBm *VSW 3 MHz SWT 110 ms 2.444000000 GHz</p> <p>Start 1 GHz 1.9 GHz/ Stop 20 GHz</p> <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 12:01:06</p>
Middle	<p>Ref 10 dBm *Att 30 dB *RBW 100 kHz Marker 1 [T1] -49.85 dBm *VSW 300 kHz SWT 100 ms 235.64000000 MHz</p> <p>Start 30 MHz 97 MHz/ Stop 1 GHz</p> <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 12:01:18</p>	<p>Ref 30 dBm *Att 25 dB *RBW 1 MHz Marker 1 [T1] -39.07 dBm *VSW 3 MHz SWT 110 ms 5.180000000 GHz</p> <p>Start 1 GHz 1.9 GHz/ Stop 20 GHz</p> <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 12:01:32</p>
Highest	<p>Ref 10 dBm *Att 30 dB *RBW 100 kHz Marker 1 [T1] -49.22 dBm *VSW 300 kHz SWT 100 ms 159.98000000 MHz</p> <p>Start 30 MHz 97 MHz/ Stop 1 GHz</p> <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 12:01:44</p>	<p>Ref 30 dBm *Att 25 dB *RBW 1 MHz Marker 1 [T1] -39.59 dBm *VSW 3 MHz SWT 110 ms 2.520000000 GHz</p> <p>Start 1 GHz 1.9 GHz/ Stop 20 GHz</p> <p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 12:01:54</p>

Spurious Emissions at Antenna Terminal

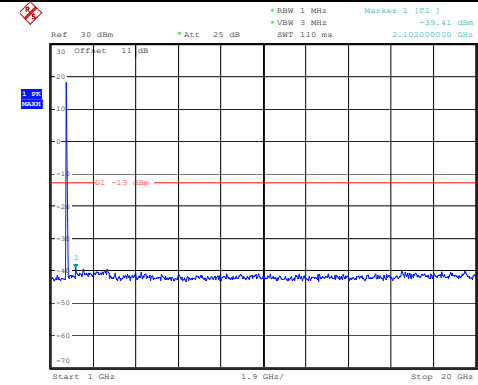
Channel

5MHz Bandwidth QPSK

Lowest

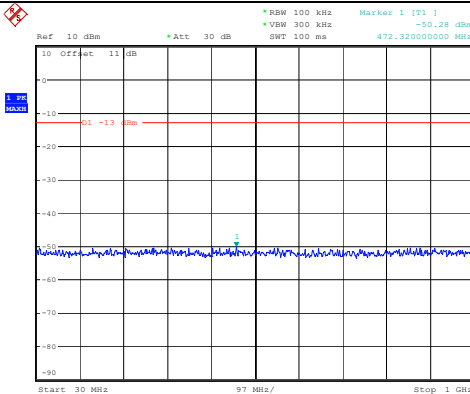


ProjectNo.:CR231061121 Tester:Rod Luo  
Date: 7.NOV.2023 12:02:10

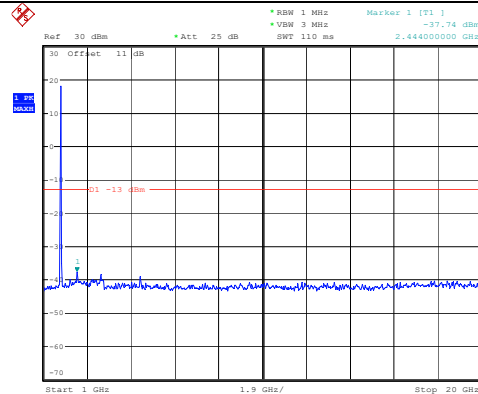


ProjectNo.:CR231061121 Tester:Rod Luo  
Date: 7.NOV.2023 12:02:20

Middle

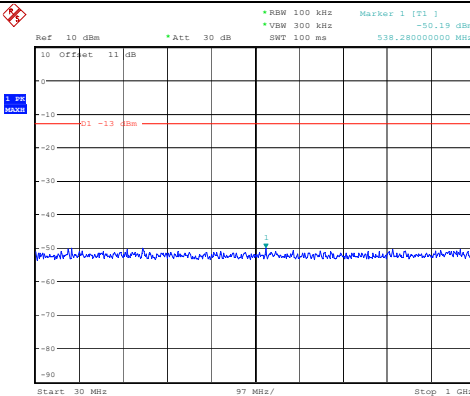


ProjectNo.:CR231061121 Tester:Rod Luo  
Date: 7.NOV.2023 12:02:36

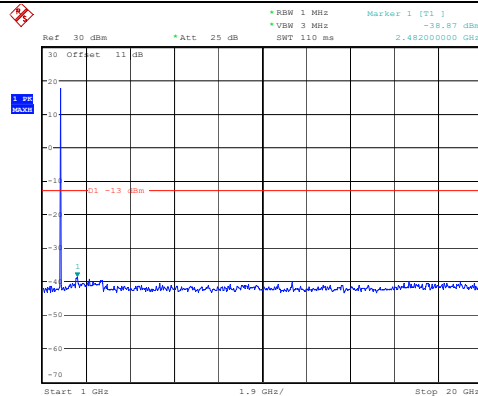


ProjectNo.:CR231061121 Tester:Rod Luo  
Date: 7.NOV.2023 12:02:46

Highest



ProjectNo.:CR231061121 Tester:Rod Luo  
Date: 7.NOV.2023 12:02:58



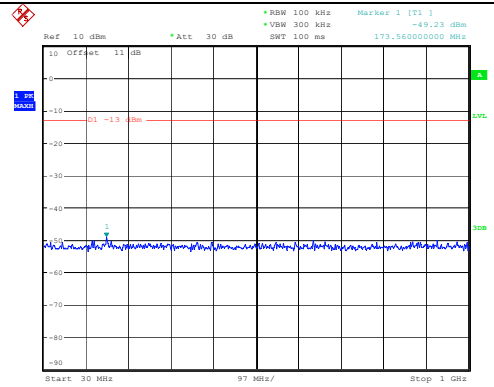
ProjectNo.:CR231061121 Tester:Rod Luo  
Date: 7.NOV.2023 12:03:09

Spurious Emissions at Antenna Terminal

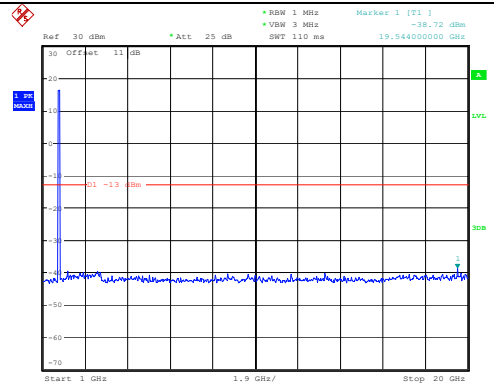
Channel

10MHz Bandwidth QPSK

Lowest

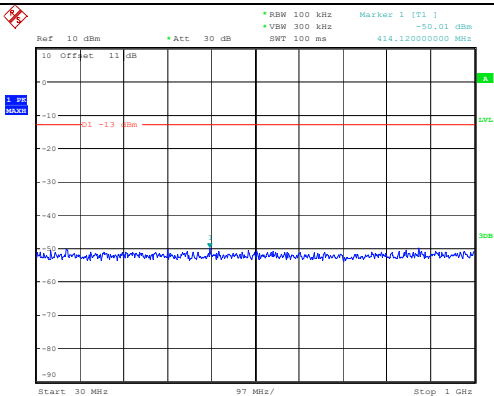


ProjectNo.:CR231061121 Tester:Rod Luo  
Date: 7.NOV.2023 12:03:27

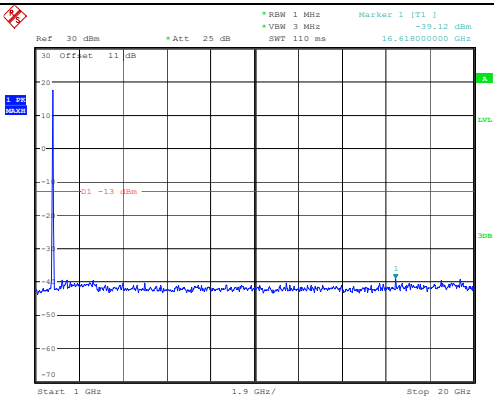


ProjectNo.:CR231061121 Tester:Rod Luo  
Date: 7.NOV.2023 12:03:37

Middle

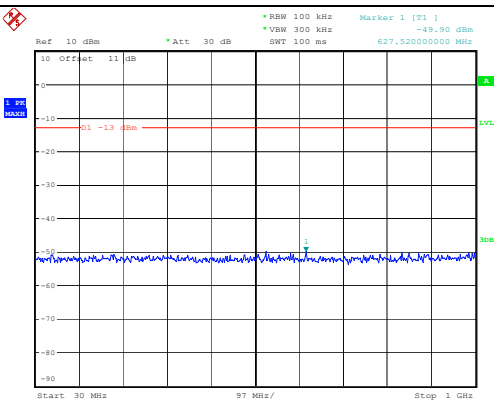


ProjectNo.:CR231061121 Tester:Rod Luo  
Date: 7.NOV.2023 12:03:50

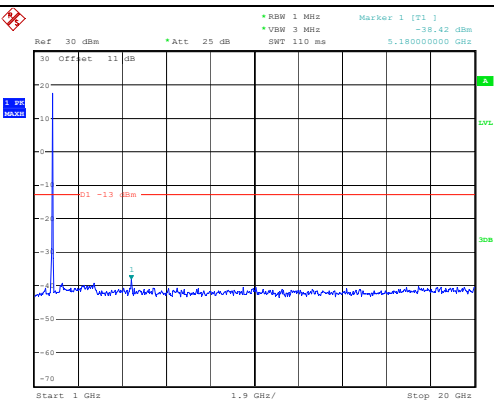


ProjectNo.:CR231061121 Tester:Rod Luo  
Date: 7.NOV.2023 12:04:00

Highest



ProjectNo.:CR231061121 Tester:Rod Luo  
Date: 7.NOV.2023 12:04:16



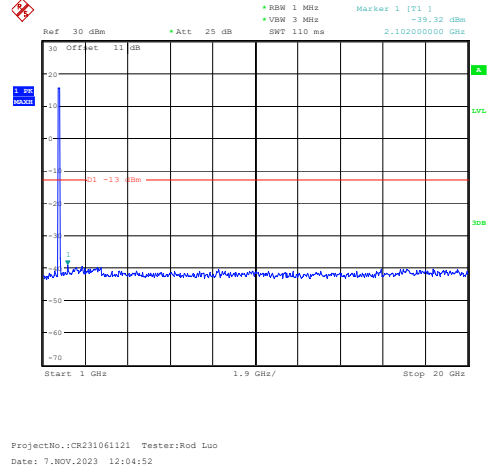
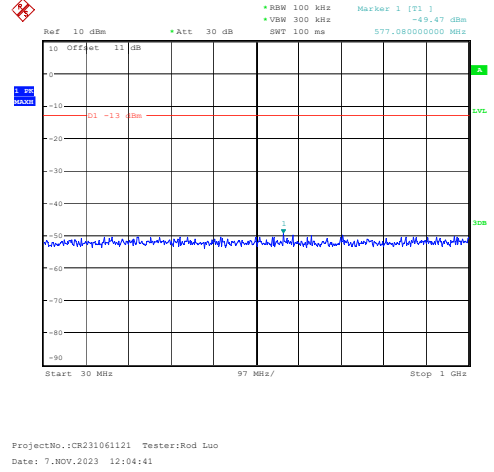
ProjectNo.:CR231061121 Tester:Rod Luo  
Date: 7.NOV.2023 12:04:26

### Spurious Emissions at Antenna Terminal

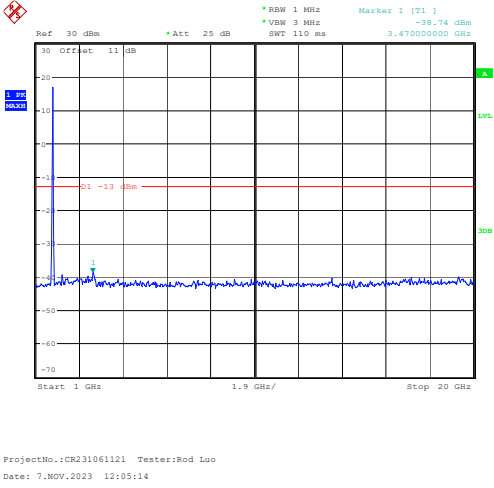
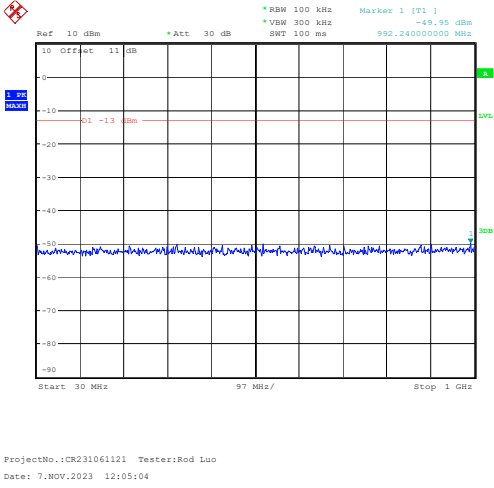
Channel

15MHz Bandwidth QPSK

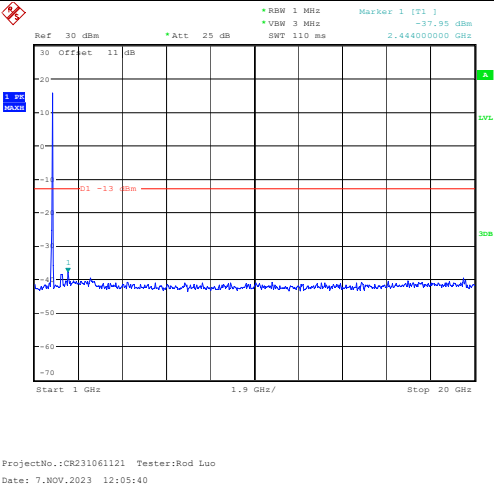
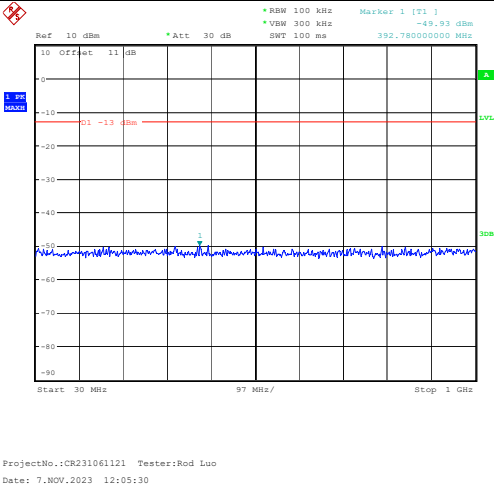
Lowest



Middle



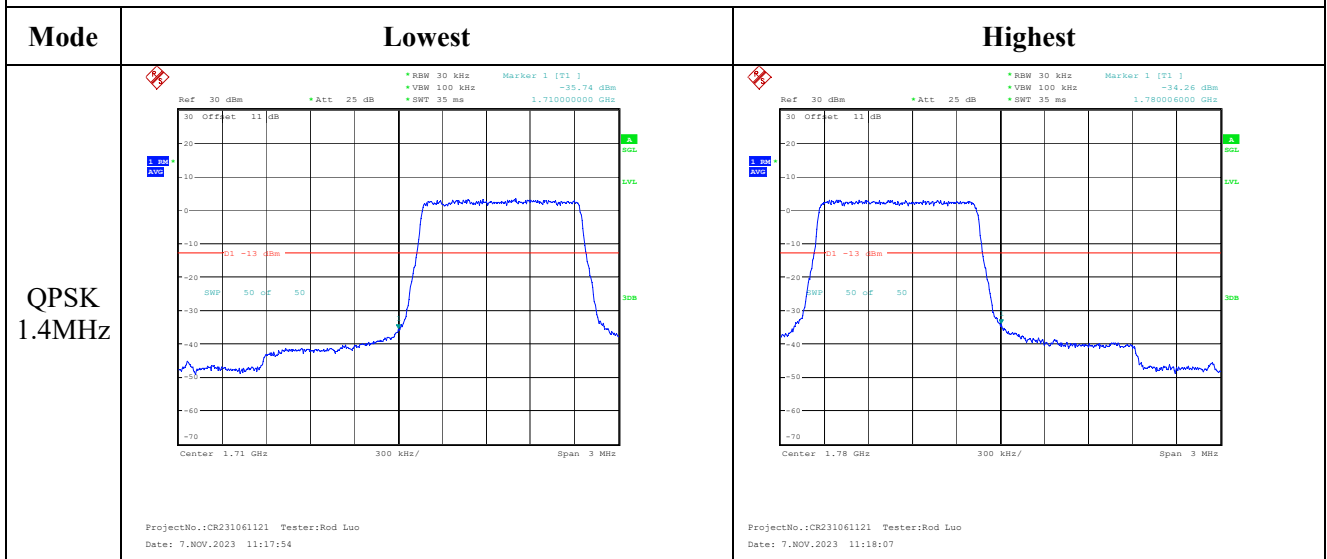
Highest



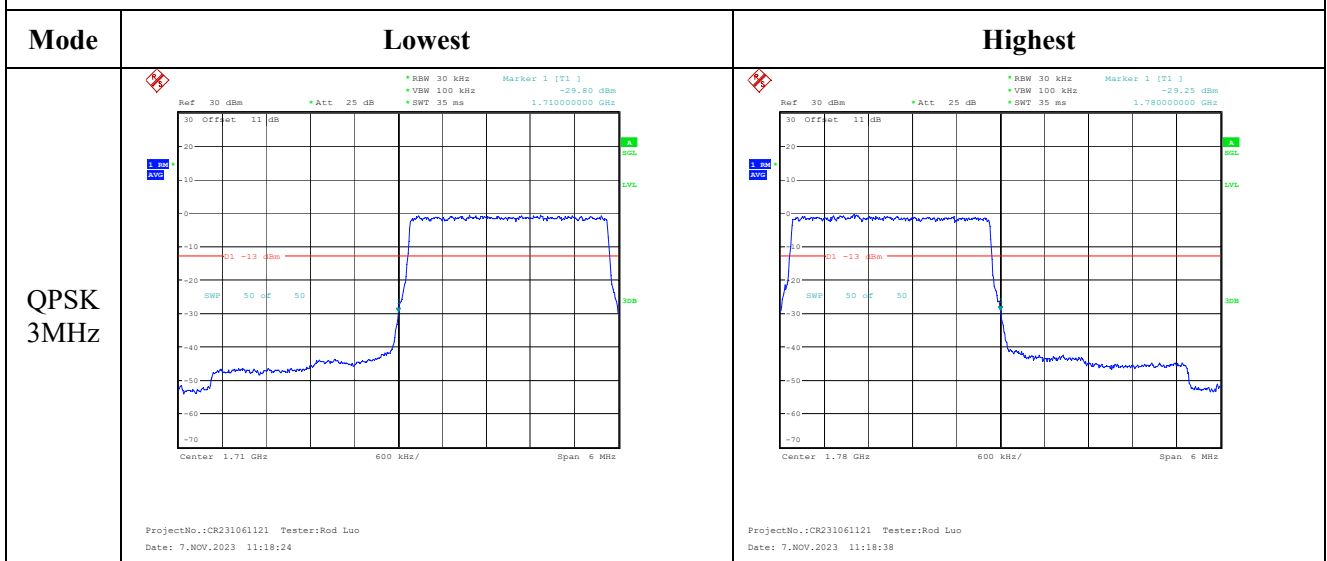
Spurious Emissions at Antenna Terminal

Channel	20MHz Bandwidth QPSK	
Lowest	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 12:05:59</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 12:06:09</p>
Middle	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 12:06:25</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 12:06:35</p>
Highest	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 12:06:51</p>	<p>ProjectNo.:CR231061121 Tester:Rod Luo Date: 7.NOV.2023 12:07:01</p>

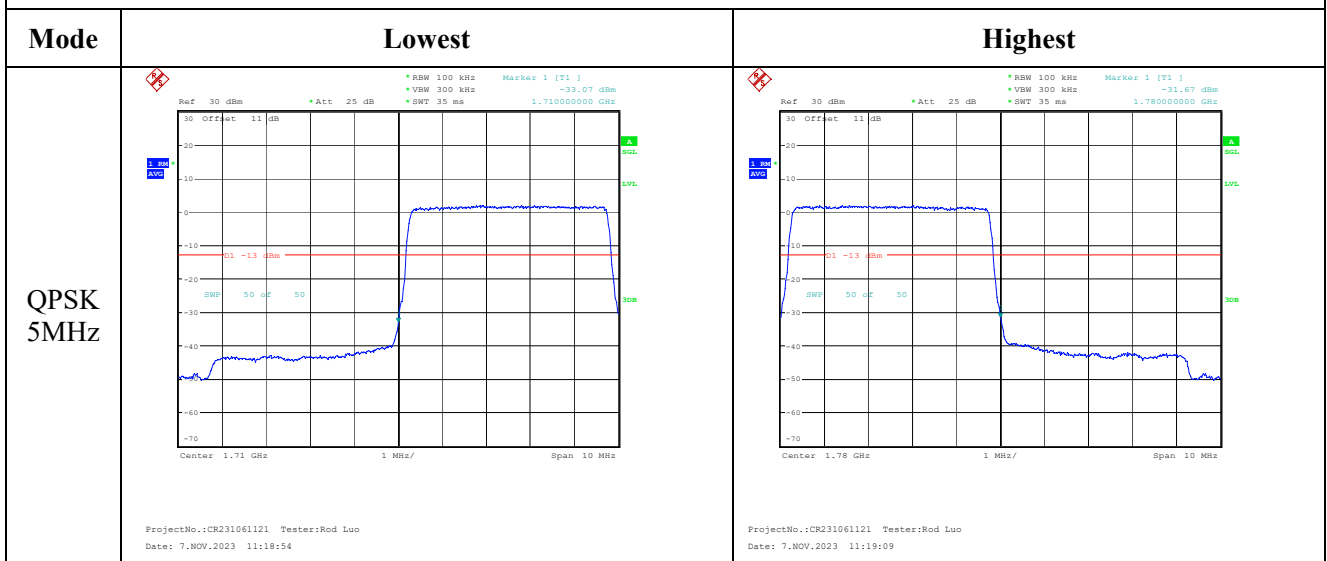
Out of band emission, Band Edge



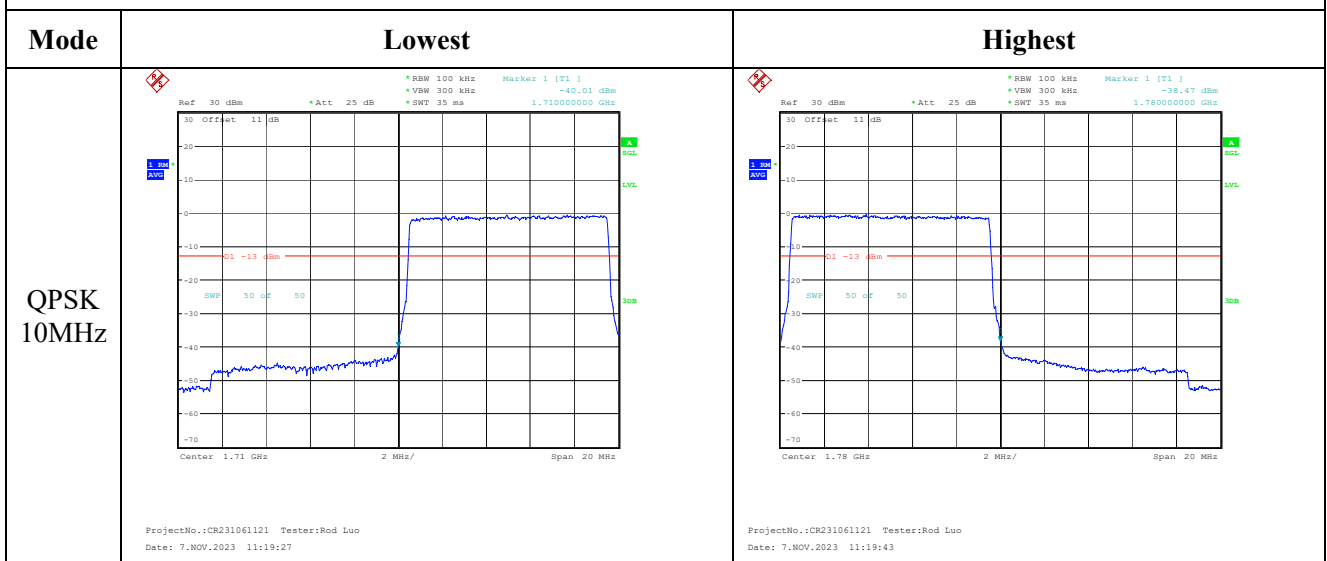
Out of band emission, Band Edge



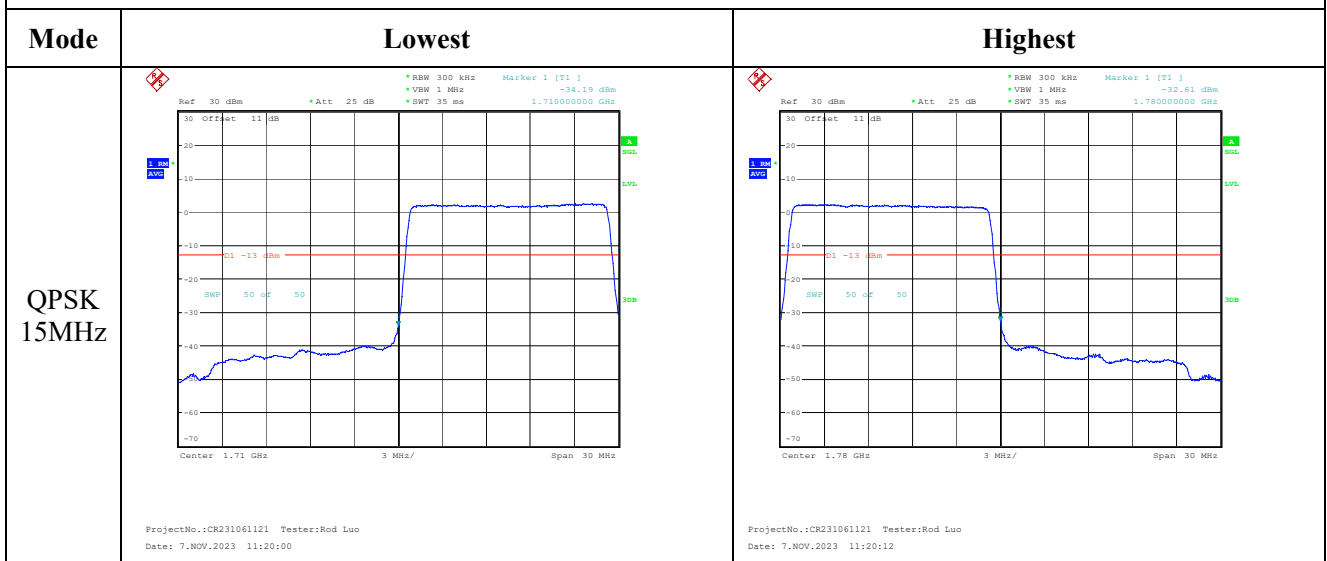
Out of band emission, Band Edge



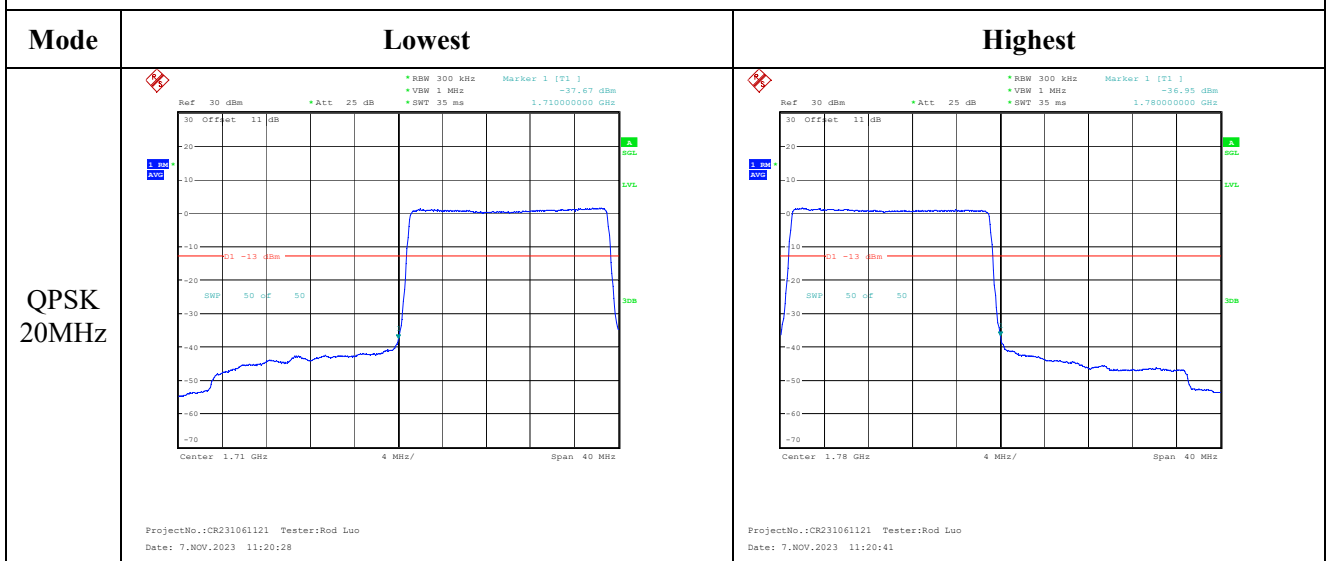
Out of band emission, Band Edge



Out of band emission, Band Edge

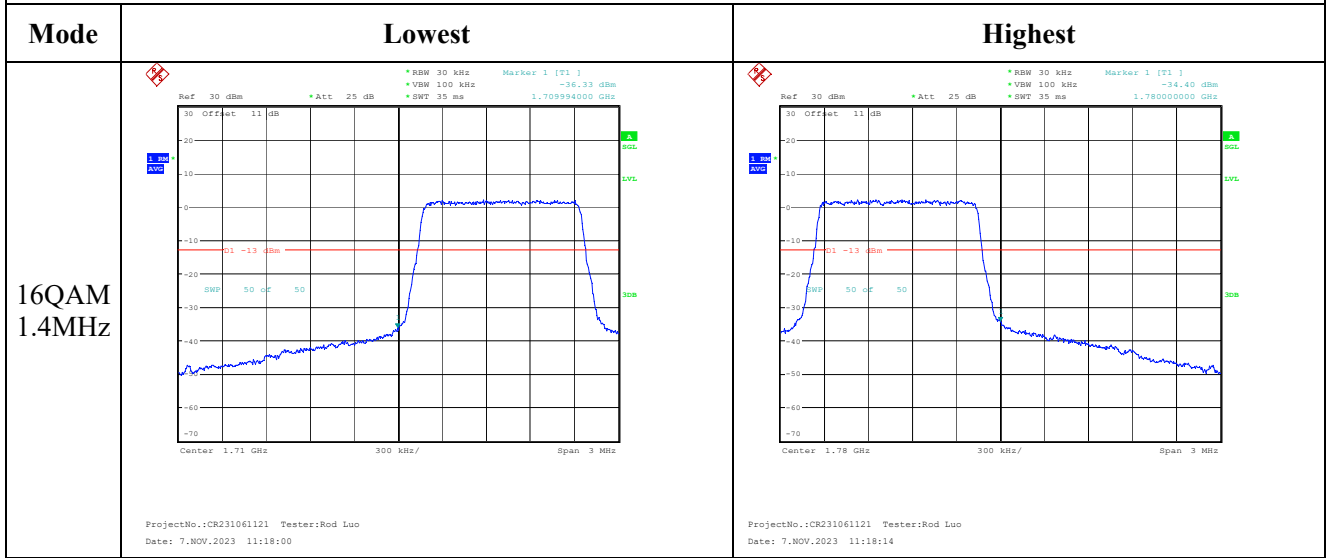


Out of band emission, Band Edge

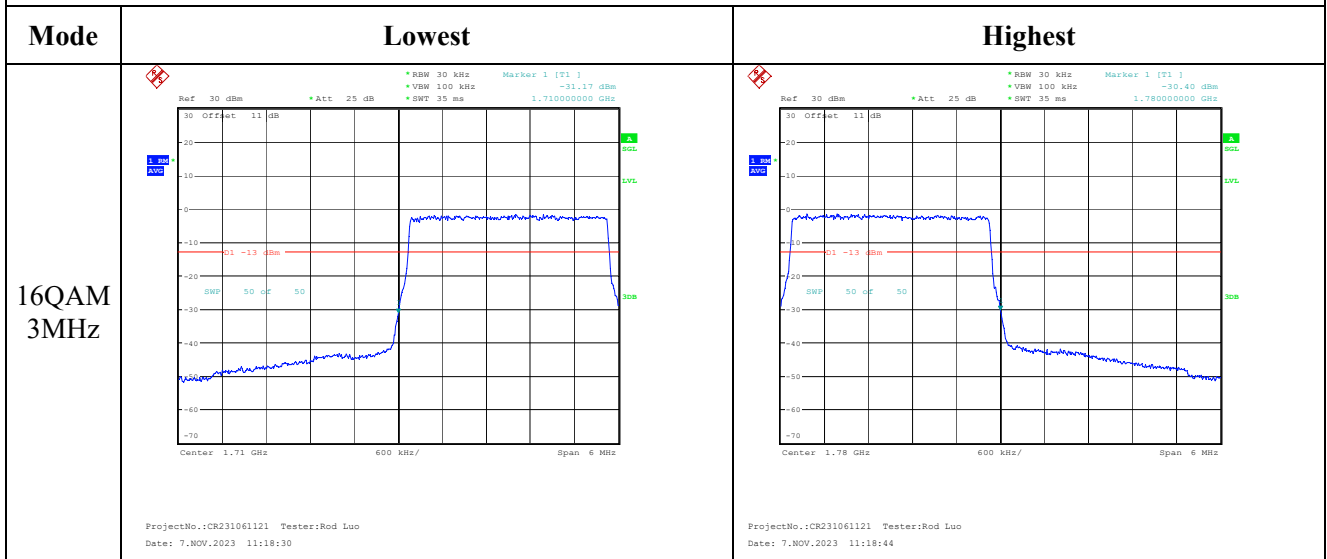




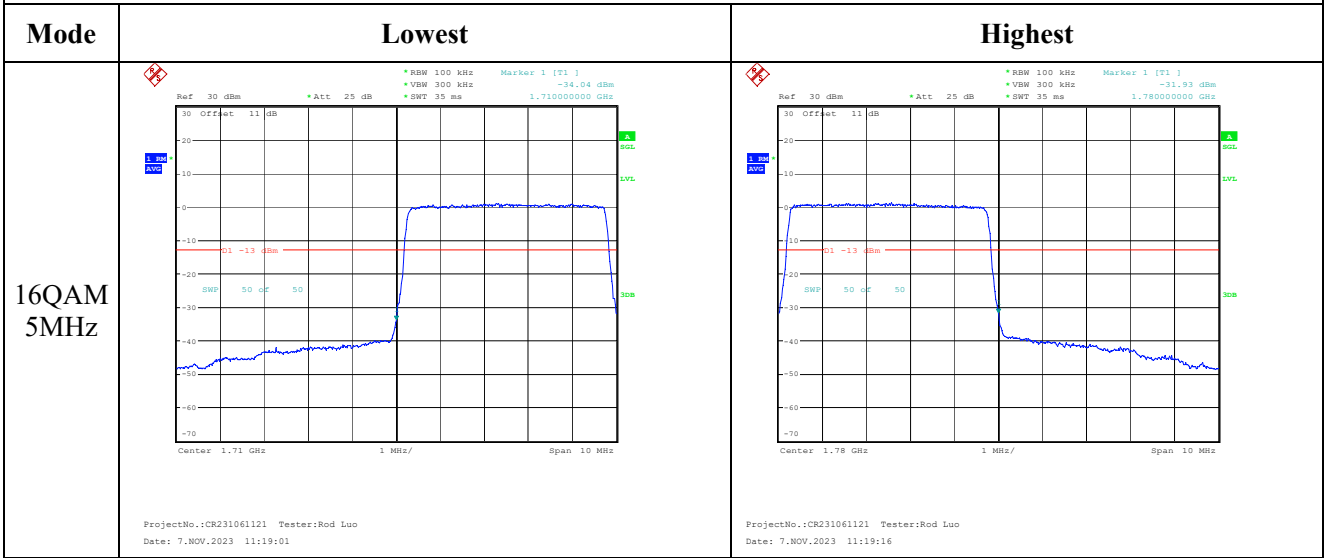
Out of band emission, Band Edge



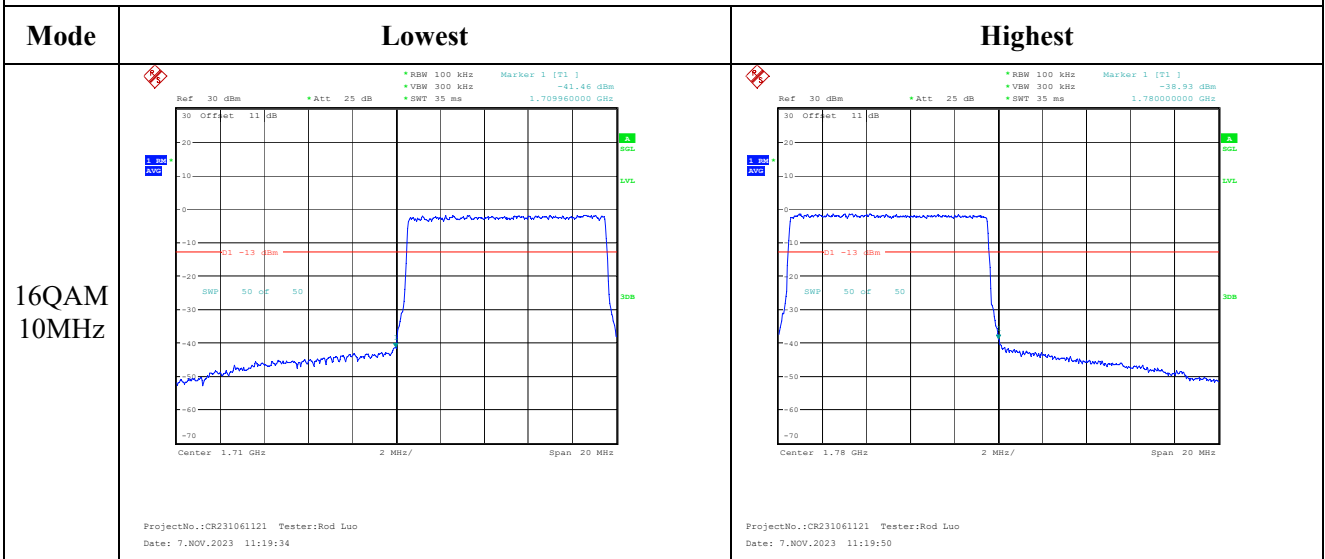
Out of band emission, Band Edge



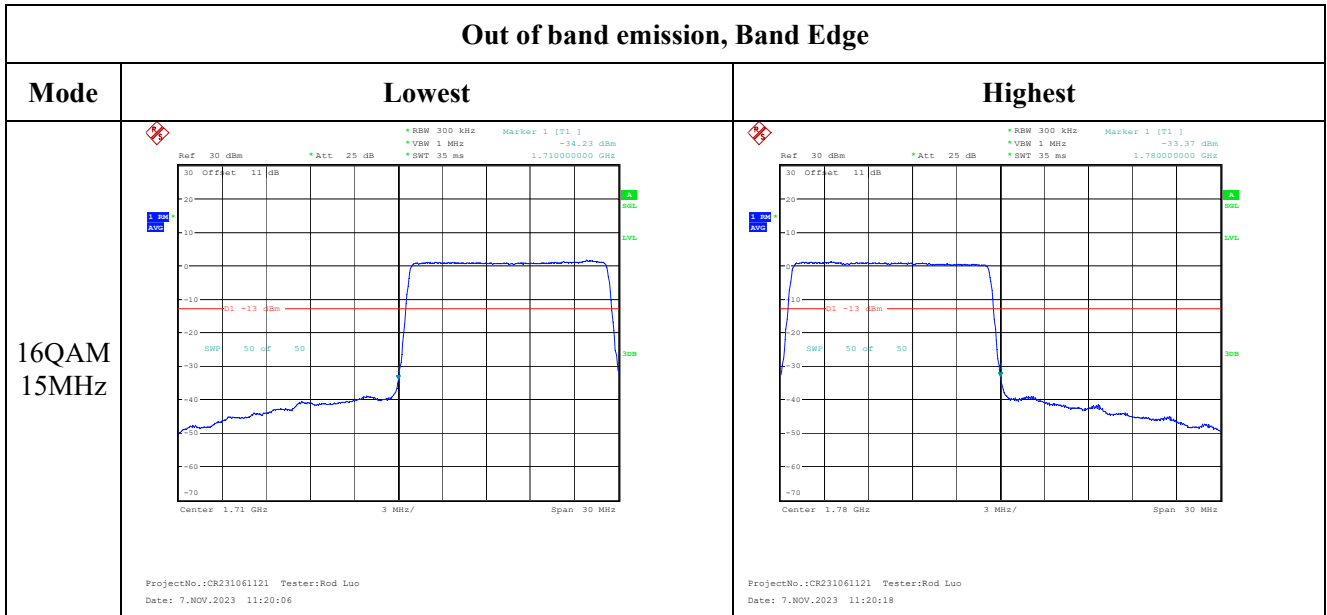
Out of band emission, Band Edge



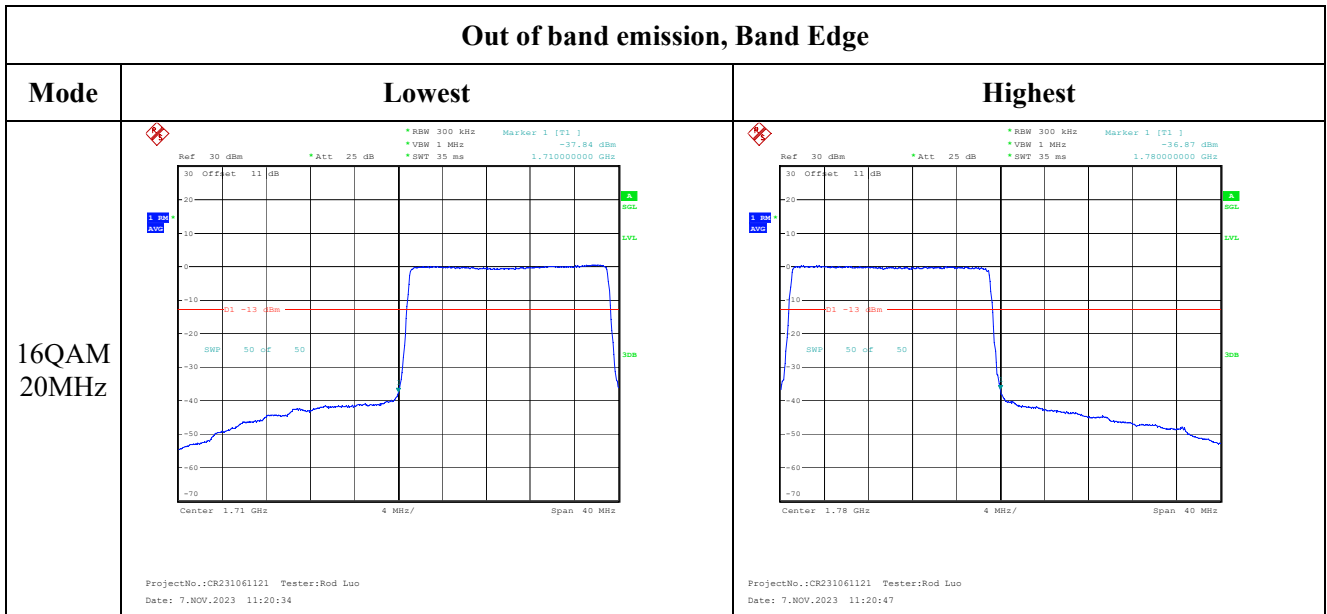
Out of band emission, Band Edge



Out of band emission, Band Edge



Out of band emission, Band Edge



**4.19 Radiated Spurious Emissions**

Serial Number:	2CFR-1	Test Date:	2023/11/21 for below 1GHz 2023/11/11 for above 1GHz
Test Site:	966-1	Test Mode:	Transmitting
Tester:	Carl Xue, Mack Huang	Test Result:	Pass

**Environmental Conditions:**

Temperature: (°C)	25.1~25.3	Relative Humidity: (%)	24~47	ATM Pressure: (kPa)	101.3~101.4
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**Test Equipment List and Details:**

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
<b>Below 1GHz</b>					
Sunol Sciences	Antenna	JB6	A082520-6	2023/9/18	2026/9/17
R&S	EMI Test Receiver	ESR3	102724	2023/3/31	2024/3/30
TIMES MICROWAVE	Coaxial Cable	LMR-600-UltraFlex	C-0470-02	2023/7/16	2024/7/15
TIMES MICROWAVE	Coaxial Cable	LMR-600-UltraFlex	C-0780-01	2023/7/16	2024/7/15
Sonoma	Amplifier	310N	186165	2023/7/16	2024/7/15
EMCO	Adjustable Dipole Antenna	3121C	9109-756	N/A	N/A
MICRO-COAX	Coaxial Cable	UFA210B-0-0720-300300	99G1448	2023/7/16	2024/7/15
Agilent	Signal Generator	E8247C	MY43321352	2023/11/17	2024/11/16
<b>Above 1GHz</b>					
AH	Double Ridge	SAS-571	1394	2023/2/22	2026/2/21
R&S	Spectrum Analyzer	FSV40	101591	2023/3/31	2024/3/30
MICRO-COAX	Coaxial Cable	UFA210A-1-1200-70U300	217423-008	2023/8/6	2024/8/5
MICRO-COAX	Coaxial Cable	UFA210A-1-2362-300300	235780-001	2023/8/6	2024/8/5
Mini	Pre-amplifier	ZVA-183-S+	5969001149	2023/11/8	2024/11/7
AH	Double Ridge Guide Horn Antenna	SAS-571	1396	2021/10/18	2024/10/17
MICRO-COAX	Coaxial Cable	UFA210B-0-0720-300300	99G1448	2023/7/16	2024/7/15
Agilent	Signal Generator	E8247C	MY43321352	2022/11/18	2023/11/17
PASTERNAK	Horn Antenna	PE9852/2F-20	112002	2021/2/5	2024/2/4
PASTERNAK	Horn Antenna	PE9852/2F-20	112001	2021/2/5	2024/2/4
Quinstar	Preamplifier	QLW-18405536-JO	15964001005	2023/9/15	2024/9/14
PASTERNAK	Horn Antenna	PE9850/2F-20	072001	2021/2/5	2024/2/4
PASTERNAK	Horn Antenna	PE9850/2F-20	072002	2021/2/5	2024/2/4
MICRO-COAX	Coaxial Cable	UFB142A-1-2362-200200	235772-001	2023/8/6	2024/8/5

*\* 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.

After pre-scan in the X, Y and Z axes of orientation, the worst case is below:

**Cellular Band (30MHz-10GHz)**

Frequency (MHz)	Polar (H/V)	Receiver Reading (dB $\mu$ V)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
Frequency:			824.2	MHz				
706.70	H	20.86	-52.32	0.00	0.54	-52.86	-13.00	39.86
716.87	V	20.71	-48.84	0.00	0.50	-49.34	-13.00	36.34
1648.400	H	47.85	-56.48	8.68	0.80	-48.6	-13.00	35.60
1648.400	V	46.83	-57.58	8.68	0.80	-49.7	-13.00	36.70
2472.600	H	45.50	-55.28	9.38	1.00	-46.9	-13.00	33.90
2472.600	V	45.15	-55.58	9.38	1.00	-47.2	-13.00	34.20
3296.800	H	39.91	-56.77	10.32	1.15	-47.6	-13.00	34.60
3296.800	V	39.37	-57.07	10.32	1.15	-47.9	-13.00	34.90
Frequency:			836.6	MHz				
721.71	H	20.63	-52.25	0.00	0.50	-52.75	-13.00	39.75
706.90	V	20.76	-49.01	0.00	0.54	-49.55	-13.00	36.55
673.200	H	48.45	-55.86	8.71	0.85	-48	-13.00	35.00
1673.200	V	47.35	-57.06	8.71	0.85	-49.2	-13.00	36.20
2509.800	H	46.10	-54.51	9.42	1.01	-46.1	-13.00	33.10
2509.800	V	45.81	-54.81	9.42	1.01	-46.4	-13.00	33.40
3346.400	H	40.79	-56.38	10.34	1.16	-47.2	-13.00	34.20
3346.400	V	40.25	-56.78	10.34	1.16	-47.6	-13.00	34.60
Frequency:			848.8	MHz				
654.28	H	20.97	-52.60	0.00	0.52	-53.12	-13.00	40.12
701.96	V	20.83	-49.05	0.00	0.55	-49.60	-13.00	36.60
1697.600	H	50.75	-53.54	8.74	0.90	-45.7	-13.00	32.70
1697.600	V	49.68	-54.74	8.74	0.90	-46.9	-13.00	33.90
2546.400	H	47.17	-53.16	9.47	1.01	-44.7	-13.00	31.70
2546.400	V	47.72	-52.56	9.47	1.01	-44.1	-13.00	31.10
3395.200	H	41.72	-55.97	10.36	1.19	-46.8	-13.00	33.80
3395.200	V	41.29	-56.37	10.36	1.19	-47.2	-13.00	34.20

**PCS Band (30MHz-20GHz)**

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)			
Frequency:			1850.2	MHz				
91.81	H	38.68	-74.23	0.00	0.18	-74.41	-13.00	61.41
59.64	V	41.86	-63.98	-10.47	0.14	-74.59	-13.00	61.59
3700.400	H	38.37	-58.95	10.60	1.25	-49.6	-13.00	36.60
3700.400	V	37.95	-59.35	10.60	1.25	-50	-13.00	37.00
5550.600	H	37.51	-55.75	11.44	1.49	-45.8	-13.00	32.80
5550.600	V	36.65	-56.45	11.44	1.49	-46.5	-13.00	33.50
Frequency:			1880	MHz				
103.43	H	38.32	-74.00	0.00	0.19	-74.19	-13.00	61.19
60.06	V	42.36	-63.63	-10.27	0.14	-74.04	-13.00	61.04
3760.000	H	38.89	-57.52	10.66	1.24	-48.1	-13.00	35.10
3760.000	V	38.27	-58.02	10.66	1.24	-48.6	-13.00	35.60
5640.000	H	38.26	-55.19	11.33	1.54	-45.4	-13.00	32.40
5640.000	V	37.24	-56.09	11.33	1.54	-46.3	-13.00	33.30
Frequency:			1909.8	MHz				
93.43	H	38.61	-74.19	0.00	0.18	-74.37	-13.00	61.37
59.85	V	42.16	-63.78	-10.37	0.14	-74.29	-13.00	61.29
3819.600	H	39.43	-56.43	10.72	1.29	-47	-13.00	34.00
3819.600	V	38.79	-56.93	10.72	1.29	-47.5	-13.00	34.50
5729.400	H	39.15	-54.33	11.22	1.59	-44.7	-13.00	31.70
5729.400	V	38.33	-55.03	11.22	1.59	-45.4	-13.00	32.40

**WCDMA Band 2(30MHz-20GHz):**

Frequency (MHz)	Polar (H/V)	Receiver Reading (dB $\mu$ V)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
Frequency:			1852.4	MHz				
103.80	H	38.81	-73.51	0.00	0.19	-73.70	-13.00	60.70
59.44	V	42.42	-63.32	-10.56	0.14	-74.02	-13.00	61.02
3704.800	H	37.21	-60.05	10.60	1.25	-50.7	-13.00	37.70
3704.800	V	36.98	-60.25	10.60	1.25	-50.9	-13.00	37.90
5557.200	H	37.14	-56.14	11.43	1.49	-46.2	-13.00	33.20
5557.200	V	36.99	-56.14	11.43	1.49	-46.2	-13.00	33.20
Frequency:			1880	MHz				
104.90	H	38.62	-73.68	0.00	0.19	-73.87	-13.00	60.87
55.41	V	42.25	-61.57	-12.41	0.13	-74.11	-13.00	61.11
3760.000	H	37.49	-58.92	10.66	1.24	-49.5	-13.00	36.50
3760.000	V	37.07	-59.22	10.66	1.24	-49.8	-13.00	36.80
5640.000	H	36.86	-56.59	11.33	1.54	-46.8	-13.00	33.80
5640.000	V	36.94	-56.39	11.33	1.54	-46.6	-13.00	33.60
Frequency:			1907.6	MHz				
105.27	H	38.76	-73.54	0.00	0.19	-73.73	-13.00	60.73
60.49	V	41.82	-64.02	-10.04	0.14	-74.20	-13.00	61.20
3815.200	H	36.82	-59.03	10.72	1.29	-49.6	-13.00	36.60
3815.200	V	36.16	-59.53	10.72	1.29	-50.1	-13.00	37.10
5722.800	H	37.74	-55.75	11.23	1.58	-46.1	-13.00	33.10
5722.800	V	37.30	-56.05	11.23	1.58	-46.4	-13.00	33.40

**WCDMA Band 4(30MHz-20GHz):**

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)			
Frequency:			1712.4	MHz				
104.17	H	39.04	-73.27	0.00	0.19	-73.46	-13.00	60.46
59.85	V	42.32	-63.62	-10.37	0.14	-74.13	-13.00	61.13
3424.800	H	37.47	-60.30	10.37	1.17	-51.1	-13.00	38.10
3424.800	V	37.34	-60.40	10.37	1.17	-51.2	-13.00	38.20
5137.200	H	36.50	-57.12	11.28	1.46	-47.3	-13.00	34.30
5137.200	V	37.28	-56.22	11.28	1.46	-46.4	-13.00	33.40
Frequency:			1732.6	MHz				
106.11	H	38.36	-73.92	0.00	0.19	-74.11	-13.00	61.11
59.64	V	42.19	-63.65	-10.47	0.14	-74.26	-13.00	61.26
3465.200	H	37.77	-60.04	10.39	1.15	-50.8	-13.00	37.80
3465.200	V	37.93	-59.84	10.39	1.15	-50.6	-13.00	37.60
5197.800	H	37.45	-56.68	11.32	1.44	-46.8	-13.00	33.80
5197.800	V	38.10	-55.88	11.32	1.44	-46	-13.00	33.00
Frequency:			1752.6	MHz				
103.08	H	38.28	-74.05	0.00	0.19	-74.24	-13.00	61.24
59.02	V	41.95	-63.59	-10.75	0.14	-74.48	-13.00	61.48
3505.200	H	38.30	-59.53	10.41	1.18	-50.3	-13.00	37.30
3505.200	V	38.24	-59.53	10.41	1.18	-50.3	-13.00	37.30
5257.800	H	37.65	-56.08	11.35	1.47	-46.2	-13.00	33.20
5257.800	V	38.13	-55.38	11.35	1.47	-45.5	-13.00	32.50



**WCDMA Band 5(30MHz-10GHz):**

Frequency (MHz)	Polar (H/V)	Receiver Reading (dB $\mu$ V)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
Frequency:			826.4	MHz				
719.42	H	20.85	-52.08	0.00	0.49	-52.57	-13.00	39.57
547.09	V	21.08	-50.57	0.00	0.47	-51.04	-13.00	38.04
1652.800	H	46.06	-58.27	8.68	0.81	-50.4	-13.00	37.40
1652.800	V	45.14	-59.27	8.68	0.81	-51.4	-13.00	38.40
2479.200	H	40.18	-60.58	9.39	1.01	-52.2	-13.00	39.20
2479.200	V	40.65	-60.08	9.39	1.01	-51.7	-13.00	38.70
3305.600	H	35.96	-60.77	10.32	1.15	-51.6	-13.00	38.60
3305.600	V	35.53	-60.97	10.32	1.15	-51.8	-13.00	38.80
Frequency:			836.6	MHz				
711.90	H	20.92	-52.16	0.00	0.51	-52.67	-13.00	39.67
713.98	V	20.89	-48.73	0.00	0.50	-49.23	-13.00	36.23
1673.200	H	46.45	-57.86	8.71	0.85	-50	-13.00	37.00
1673.200	V	45.35	-59.06	8.71	0.85	-51.2	-13.00	38.20
2509.800	H	39.80	-60.81	9.42	1.01	-52.4	-13.00	39.40
2509.800	V	40.41	-60.21	9.42	1.01	-51.8	-13.00	38.80
3346.400	H	36.49	-60.68	10.34	1.16	-51.5	-13.00	38.50
3346.400	V	36.35	-60.68	10.34	1.16	-51.5	-13.00	38.50
Frequency:			846.6	MHz				
704.45	H	20.79	-52.44	0.00	0.55	-52.99	-13.00	39.99
694.25	V	20.83	-49.19	0.00	0.55	-49.74	-13.00	36.74
1693.200	H	46.86	-57.44	8.73	0.89	-49.6	-13.00	36.60
1693.200	V	45.88	-58.54	8.73	0.89	-50.7	-13.00	37.70
2539.800	H	39.83	-60.55	9.46	1.01	-52.1	-13.00	39.10
2539.800	V	40.49	-59.85	9.46	1.01	-51.4	-13.00	38.40
3386.400	H	37.52	-60.07	10.35	1.18	-50.9	-13.00	37.90
3386.400	V	37.47	-60.07	10.35	1.18	-50.9	-13.00	37.90

**LTE Bands:**

(The Worst modulation and bandwidth was below)

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

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, 1.4MHz, Frequency:1850.7 MHz								
105.27	H	39.07	-73.23	0.00	0.19	-73.42	-13.00	60.42
57.99	V	42.72	-62.33	-11.22	0.14	-73.69	-13.00	60.69
3701.400	H	37.06	-60.25	10.60	1.25	-50.9	-13.00	37.90
3701.400	V	37.74	-59.55	10.60	1.25	-50.2	-13.00	37.20
5552.100	H	36.42	-56.85	11.44	1.49	-46.9	-13.00	33.90
5552.100	V	35.85	-57.25	11.44	1.49	-47.3	-13.00	34.30
QPSK, 1.4MHz, Frequency:1880 MHz								
105.27	H	39.07	-73.23	0.00	0.19	-73.42	-13.00	60.42
57.99	V	42.72	-62.33	-11.22	0.14	-73.69	-13.00	60.69
3760.000	H	36.89	-59.52	10.66	1.24	-50.1	-13.00	37.10
3760.000	V	37.17	-59.12	10.66	1.24	-49.7	-13.00	36.70
5640.000	H	37.16	-56.29	11.33	1.54	-46.5	-13.00	33.50
5640.000	V	36.44	-56.89	11.33	1.54	-47.1	-13.00	34.10
QPSK, 1.4MHz, Frequency:1909.3 MHz								
104.15	H	38.68	-73.63	0.00	0.19	-73.82	-13.00	60.82
58.40	V	42.63	-62.62	-11.04	0.14	-73.80	-13.00	60.80
3818.600	H	36.63	-59.23	10.72	1.29	-49.8	-13.00	36.80
3818.600	V	37.08	-58.63	10.72	1.29	-49.2	-13.00	36.20
5727.900	H	38.24	-55.24	11.23	1.59	-45.6	-13.00	32.60
5727.900	V	37.42	-55.94	11.23	1.59	-46.3	-13.00	33.30

**LTE Band 4(30MHz-20GHz):**

Frequency (MHz)	Polar (H/V)	Receiver Reading (dB $\mu$ V)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
1.4MHz QPSK, Frequency:			1710.7 MHz					
105.62	H	38.53	-73.76	0.00	0.19	-73.95	-13.00	60.95
57.59	V	42.18	-62.68	-11.41	0.14	-74.23	-13.00	61.23
3421.400	H	37.46	-60.30	10.37	1.17	-51.1	-13.00	38.10
3421.400	V	37.43	-60.30	10.37	1.17	-51.1	-13.00	38.10
5132.100	H	39.46	-54.11	11.28	1.47	-44.3	-13.00	31.30
5132.100	V	39.25	-54.21	11.28	1.47	-44.4	-13.00	31.40
1.4MHz QPSK, Frequency:			1732.5 MHz					
103.80	H	38.94	-73.38	0.00	0.19	-73.57	-13.00	60.57
61.55	V	42.55	-62.93	-9.48	0.14	-72.55	-13.00	59.55
3465.000	H	37.77	-60.04	10.39	1.15	-50.8	-13.00	37.80
3465.000	V	37.93	-59.84	10.39	1.15	-50.6	-13.00	37.60
5197.500	H	40.45	-53.68	11.32	1.44	-43.8	-13.00	30.80
5197.500	V	40.10	-53.88	11.32	1.44	-44	-13.00	31.00
1.4MHz QPSK, Frequency:			1754.3 MHz					
104.90	H	38.83	-73.47	0.00	0.19	-73.66	-13.00	60.66
58.20	V	41.83	-63.32	-11.13	0.14	-74.59	-13.00	61.59
3508.600	H	38.40	-59.42	10.41	1.19	-50.2	-13.00	37.20
3508.600	V	38.24	-59.52	10.41	1.19	-50.3	-13.00	37.30
5262.900	H	40.91	-52.79	11.36	1.47	-42.9	-13.00	29.90
5262.900	V	40.28	-53.19	11.36	1.47	-43.3	-13.00	30.30

**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, 1.4MHz, Frequency: 824.7 MHz								
689.77	H	20.70	-52.68	0.00	0.54	-53.22	-13.00	40.22
716.68	V	20.85	-48.71	0.00	0.50	-49.21	-13.00	36.21
1649.400	H	49.85	-54.48	8.68	0.80	-46.6	-13.00	33.60
1649.400	V	48.93	-55.48	8.68	0.80	-47.6	-13.00	34.60
2474.100	H	45.10	-55.68	9.38	1.00	-47.3	-13.00	34.30
2474.100	V	45.85	-54.88	9.38	1.00	-46.5	-13.00	33.50
3298.800	H	35.71	-60.97	10.32	1.15	-51.8	-13.00	38.80
3298.800	V	35.37	-61.07	10.32	1.15	-51.9	-13.00	38.90
QPSK, 1.4MHz, Frequency: 836.5 MHz								
704.42	H	20.89	-52.34	0.00	0.55	-52.89	-13.00	39.89
729.34	V	21.15	-48.13	0.00	0.53	-48.66	-13.00	35.66
1673.000	H	50.35	-53.96	8.71	0.85	-46.1	-13.00	33.10
1673.000	V	49.35	-55.06	8.71	0.85	-47.2	-13.00	34.20
2509.500	H	45.40	-55.21	9.42	1.01	-46.8	-13.00	33.80
2509.500	V	46.11	-54.51	9.42	1.01	-46.1	-13.00	33.10
3346.000	H	36.68	-60.48	10.34	1.16	-51.3	-13.00	38.30
3346.000	V	36.44	-60.58	10.34	1.16	-51.4	-13.00	38.40
QPSK, 1.4MHz, Frequency: 848.3 MHz								
724.49	H	20.96	-51.87	0.00	0.51	-52.38	-13.00	39.38
699.32	V	20.93	-49.00	0.00	0.55	-49.55	-13.00	36.55
1696.600	H	51.14	-53.15	8.74	0.89	-45.3	-13.00	32.30
1696.600	V	50.17	-54.25	8.74	0.89	-46.4	-13.00	33.40
2544.900	H	45.68	-54.66	9.47	1.01	-46.2	-13.00	33.20
2544.900	V	46.44	-53.86	9.47	1.01	-45.4	-13.00	32.40
3393.200	H	38.20	-59.47	10.36	1.19	-50.3	-13.00	37.30
3393.200	V	38.06	-59.57	10.36	1.19	-50.4	-13.00	37.40

**LTE Band 7(30MHz-26.5GHz):**

Frequency (MHz)	Polar (H/V)	Receiver Reading (dB $\mu$ V)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
5MHz QPSK, Frequency: 2502.5 MHz								
104.53	H	38.99	-73.32	0.00	0.19	-73.51	-25.00	48.51
61.13	V	41.86	-63.77	-9.70	0.14	-73.61	-25.00	48.61
5005.000	H	34.73	-58.23	11.20	1.47	-48.5	-25.00	23.50
5005.000	V	35.69	-57.13	11.20	1.47	-47.4	-25.00	22.40
7507.500	H	39.64	-50.15	10.90	1.95	-41.2	-25.00	16.20
7507.500	V	39.54	-50.75	10.90	1.95	-41.8	-25.00	16.80
5MHz QPSK, Frequency: 2535 MHz								
104.17	H	38.93	-73.38	0.00	0.19	-73.57	-25.00	48.57
57.19	V	42.29	-62.38	-11.59	0.14	-74.11	-25.00	49.11
5070.000	H	35.52	-57.67	11.24	1.47	-47.9	-25.00	22.90
5070.000	V	36.32	-56.77	11.24	1.47	-47	-25.00	22.00
7605.000	H	40.00	-49.47	10.88	2.01	-40.6	-25.00	15.60
7605.000	V	40.12	-50.07	10.88	2.01	-41.2	-25.00	16.20
5MHz QPSK, Frequency: 2567.5 MHz								
103.44	H	38.79	-73.53	0.00	0.19	-73.72	-25.00	48.72
58.02	V	41.92	-63.14	-11.21	0.14	-74.49	-25.00	49.49
5135.000	H	36.39	-57.21	11.28	1.47	-47.4	-25.00	22.40
5135.000	V	37.18	-56.31	11.28	1.47	-46.5	-25.00	21.50
7702.500	H	40.73	-48.79	10.86	1.97	-39.9	-25.00	14.90
7702.500	V	40.79	-49.39	10.86	1.97	-40.5	-25.00	15.50

**LTE Band 12:**

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)			
1.4MHz QPSK, Frequency:			699.7	MHz				
603.80	H	20.53	-53.31	0.00	0.50	-53.81	-13.00	40.81
578.79	V	20.64	-51.06	0.00	0.46	-51.52	-13.00	38.52
1399.400	H	43.69	-60.01	8.22	0.71	-52.5	-13.00	39.50
1399.400	V	42.54	-61.21	8.22	0.71	-53.7	-13.00	40.70
2099.100	H	46.53	-55.35	9.16	0.91	-47.1	-13.00	34.10
2099.100	V	45.48	-56.35	9.16	0.91	-48.1	-13.00	35.10
2798.800	H	38.39	-61.54	9.88	1.04	-52.7	-13.00	39.70
2798.800	V	38.96	-60.84	9.88	1.04	-52	-13.00	39.00
1.4MHz QPSK, Frequency:			707.5	MHz				
497.99	H	20.68	-55.19	0.00	0.45	-55.64	-13.00	42.64
504.88	V	20.60	-50.99	0.00	0.45	-51.44	-13.00	38.44
1415.000	H	44.13	-59.54	8.26	0.72	-52	-13.00	39.00
1415.000	V	42.98	-60.74	8.26	0.72	-53.2	-13.00	40.20
2122.500	H	47.04	-54.95	9.17	0.92	-46.7	-13.00	33.70
2122.500	V	46.02	-55.95	9.17	0.92	-47.7	-13.00	34.70
2830.000	H	38.63	-61.17	9.93	1.06	-52.3	-13.00	39.30
2830.000	V	39.26	-60.47	9.93	1.06	-51.6	-13.00	38.60
1.4MHz QPSK, Frequency:			715.3	MHz				
543.57	H	20.74	-54.23	0.00	0.47	-54.70	-13.00	41.70
621.35	V	20.71	-50.63	0.00	0.49	-51.12	-13.00	38.12
1430.600	H	44.65	-58.98	8.31	0.73	-51.4	-13.00	38.40
1430.600	V	42.51	-61.18	8.31	0.73	-53.6	-13.00	40.60
2145.900	H	47.84	-54.26	9.19	0.93	-46	-13.00	33.00
2145.900	V	46.85	-55.26	9.19	0.93	-47	-13.00	34.00
2861.200	H	39.14	-60.51	9.98	1.07	-51.6	-13.00	38.60
2861.200	V	39.96	-59.71	9.98	1.07	-50.8	-13.00	37.80

**LTE Band 13:**

Frequency (MHz)	Polar (H/V)	Receiver Reading (dB $\mu$ V)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
5MHz QPSK, Frequency:			779.5	MHz				
543.57	H	20.74	-54.23	0.00	0.47	-54.70	-13.00	41.70
621.35	V	20.71	-50.63	0.00	0.49	-51.12	-13.00	38.12
1559.000	H	42.42	-61.57	8.57	0.80	-53.8	-40.00	13.80
1559.000	V	42.48	-61.57	8.57	0.80	-53.8	-40.00	13.80
2338.500	H	41.46	-60.13	9.30	0.97	-51.8	-13.00	38.80
2338.500	V	40.73	-60.63	9.30	0.97	-52.3	-13.00	39.30
3118.000	H	35.87	-61.62	10.25	1.13	-52.5	-13.00	39.50
3118.000	V	36.33	-61.02	10.25	1.13	-51.9	-13.00	38.90
5MHz QPSK, Frequency:			784.5	MHz				
724.10	H	20.96	-51.87	0.00	0.51	-52.38	-13.00	39.38
685.64	V	20.83	-49.35	0.00	0.53	-49.88	-13.00	36.88
1569.000	H	43.21	-60.87	8.58	0.81	-53.1	-40.00	13.10
1569.000	V	43.16	-60.97	8.58	0.81	-53.2	-40.00	13.20
2353.500	H	42.41	-59.04	9.31	0.97	-50.7	-13.00	37.70
2353.500	V	41.98	-59.24	9.31	0.97	-50.9	-13.00	37.90
3138.000	H	36.48	-60.92	10.26	1.14	-51.8	-13.00	38.80
3138.000	V	37.01	-60.22	10.26	1.14	-51.1	-13.00	38.10

**LTE Band 17:**

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)			
5MHz QPSK, Frequency:			706.5	MHz				
580.70	H	20.77	-53.47	0.00	0.46	-53.93	-13.00	40.93
574.73	V	20.69	-51.00	0.00	0.46	-51.46	-13.00	38.46
1413.000	H	43.23	-60.44	8.26	0.72	-52.9	-13.00	39.90
1413.000	V	42.18	-61.54	8.26	0.72	-54	-13.00	41.00
2119.500	H	46.72	-55.25	9.17	0.92	-47	-13.00	34.00
2119.500	V	45.70	-56.25	9.17	0.92	-48	-13.00	35.00
2826.000	H	38.85	-60.96	9.92	1.06	-52.1	-13.00	39.10
2826.000	V	38.58	-61.16	9.92	1.06	-52.3	-13.00	39.30
5MHz QPSK, Frequency:			710	MHz				
622.84	H	20.73	-53.01	0.00	0.48	-53.49	-13.00	40.49
464.15	V	20.62	-52.38	0.00	0.42	-52.80	-13.00	39.80
1420.000	H	43.51	-60.15	8.28	0.73	-52.6	-13.00	39.60
1420.000	V	42.56	-61.15	8.28	0.73	-53.6	-13.00	40.60
2130.000	H	47.36	-54.66	9.18	0.92	-46.4	-13.00	33.40
2130.000	V	46.35	-55.66	9.18	0.92	-47.4	-13.00	34.40
2840.000	H	39.07	-60.68	9.94	1.06	-51.8	-13.00	38.80
2840.000	V	38.83	-60.88	9.94	1.06	-52	-13.00	39.00
5MHz QPSK, Frequency:			713.5	MHz				
556.79	H	20.66	-54.05	0.00	0.48	-54.53	-13.00	41.53
519.21	V	20.71	-50.90	0.00	0.41	-51.31	-13.00	38.31
1427.000	H	44.17	-59.47	8.30	0.73	-51.9	-13.00	38.90
1427.000	V	43.12	-60.57	8.30	0.73	-53	-13.00	40.00
2140.500	H	48.02	-54.05	9.18	0.93	-45.8	-13.00	32.80
2140.500	V	47.03	-55.05	9.18	0.93	-46.8	-13.00	33.80
2854.000	H	39.79	-59.90	9.97	1.07	-51	-13.00	38.00
2854.000	V	39.58	-60.10	9.97	1.07	-51.2	-13.00	38.20



**LTE Band 25:**

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)			
1.4MHz QPSK, Frequency: 1850.7 MHz								
101.64	H	38.58	-73.77	0.00	0.19	-73.96	-13.00	60.96
60.49	V	41.87	-63.97	-10.04	0.14	-74.15	-13.00	61.15
3700.800	H	37.17	-60.15	10.60	1.25	-50.8	-13.00	37.80
3700.800	V	37.65	-59.65	10.60	1.25	-50.3	-13.00	37.30
5551.200	H	36.51	-56.75	11.44	1.49	-46.8	-13.00	33.80
5551.200	V	35.75	-57.35	11.44	1.49	-47.4	-13.00	34.40
1.4MHz QPSK, Frequency: 1882.5 MHz								
62.47	H	38.30	-65.56	-8.99	0.14	-74.69	-13.00	61.69
61.13	V	41.80	-63.83	-9.70	0.14	-73.67	-13.00	60.67
3765.000	H	31.52	-64.81	10.67	1.25	-50.2	-13.00	37.20
3765.000	V	31.44	-64.77	10.67	1.25	-49.8	-13.00	36.80
5647.500	H	35.16	-58.29	11.32	1.55	-46.5	-13.00	33.50
5647.500	V	34.55	-58.78	11.32	1.55	-47	-13.00	34.00
1.4MHz QPSK, Frequency: 1914.3 MHz								
105.64	H	38.23	-74.06	0.00	0.19	-74.25	-13.00	61.25
56.79	V	42.06	-62.42	-11.78	0.14	-74.34	-13.00	61.34
3828.600	H	33.39	-62.51	10.73	1.28	-49.7	-13.00	36.70
3828.600	V	33.10	-62.67	10.73	1.28	-49.2	-13.00	36.20
5742.900	H	34.87	-58.61	11.21	1.60	-45.8	-13.00	32.80
5742.900	V	34.75	-58.61	11.21	1.60	-46.4	-13.00	33.40

**LTE Band 26:**

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)			
1.4MHz QPSK, Frequency:			814.7	MHz				
719.20	H	21.14	-51.79	0.00	0.49	-52.28	-13.00	39.28
691.78	V	20.76	-49.31	0.00	0.54	-49.85	-13.00	36.85
1629.400	H	47.10	-57.25	8.66	0.81	-49.4	-13.00	36.40
1629.400	V	46.16	-58.25	8.66	0.81	-50.4	-13.00	37.40
2444.100	H	44.52	-56.37	9.37	1.00	-48	-13.00	35.00
2444.100	V	44.98	-55.77	9.37	1.00	-47.4	-13.00	34.40
3258.800	H	35.63	-61.23	10.30	1.17	-52.1	-13.00	39.10
3258.800	V	36.18	-60.43	10.30	1.17	-51.3	-13.00	38.30
1.4MHz QPSK, Frequency:			831.5	MHz				
701.77	H	20.94	-52.34	0.00	0.55	-52.89	-13.00	39.89
578.77	V	20.85	-50.85	0.00	0.46	-51.31	-13.00	38.31
1663.000	H	47.55	-56.77	8.70	0.83	-48.9	-13.00	35.90
1663.000	V	46.44	-57.97	8.70	0.83	-50.1	-13.00	37.10
2494.500	H	44.81	-55.89	9.40	1.01	-47.5	-13.00	34.50
2494.500	V	45.72	-54.99	9.40	1.01	-46.6	-13.00	33.60
3326.000	H	35.88	-61.07	10.33	1.16	-51.9	-13.00	38.90
3326.000	V	36.60	-60.17	10.33	1.16	-51	-13.00	38.00
1.4MHz QPSK, Frequency:			848.3	MHz				
665.85	H	21.03	-52.47	0.00	0.50	-52.97	-13.00	39.97
711.65	V	20.87	-48.80	0.00	0.51	-49.31	-13.00	36.31
1696.600	H	48.14	-56.15	8.74	0.89	-48.3	-13.00	35.30
1696.600	V	47.17	-57.25	8.74	0.89	-49.4	-13.00	36.40
2544.900	H	44.98	-55.36	9.47	1.01	-46.9	-13.00	33.90
2544.900	V	45.64	-54.66	9.47	1.01	-46.2	-13.00	33.20
3393.200	H	37.30	-60.37	10.36	1.19	-51.2	-13.00	38.20
3393.200	V	37.96	-59.67	10.36	1.19	-50.5	-13.00	37.50

**LTE Band 38 (30MHz-26.5GHz):**

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)			
5MHz QPSK, Frequency: 2572.5 MHz								
92.46	H	38.86	-74.01	0.00	0.18	-74.19	-25.00	49.19
60.06	V	41.84	-64.15	-10.27	0.14	-74.56	-25.00	49.56
5145.000	H	36.53	-57.15	11.29	1.44	-47.3	-25.00	22.30
5145.000	V	37.32	-56.25	11.29	1.44	-46.4	-25.00	21.40
7717.500	H	40.74	-48.77	10.86	1.99	-39.9	-25.00	14.90
7717.500	V	40.66	-49.47	10.86	1.99	-40.6	-25.00	15.60
5MHz QPSK, Frequency: 2595 MHz								
103.47	H	38.46	-73.86	0.00	0.19	-74.05	-25.00	49.05
60.91	V	42.15	-63.55	-9.82	0.14	-73.51	-25.00	48.51
5190.000	H	37.30	-56.77	11.31	1.44	-46.9	-25.00	21.90
5190.000	V	38.05	-55.87	11.31	1.44	-46	-25.00	21.00
7785.000	H	41.24	-48.25	10.84	1.99	-39.4	-25.00	14.40
7785.000	V	40.97	-48.95	10.84	1.99	-40.1	-25.00	15.10
5MHz QPSK, Frequency: 2617.5 MHz								
103.83	H	38.58	-73.74	0.00	0.19	-73.93	-25.00	48.93
59.65	V	42.28	-63.56	-10.46	0.14	-74.16	-25.00	49.16
5235.000	H	37.42	-56.48	11.34	1.46	-46.6	-25.00	21.60
5235.000	V	38.13	-55.58	11.34	1.46	-45.7	-25.00	20.70
7852.500	H	41.59	-47.60	10.83	2.03	-38.8	-25.00	13.80
7852.500	V	41.18	-48.40	10.83	2.03	-39.6	-25.00	14.60

**LTE Band 40 Lower (30MHz-25GHz):**

Frequency (MHz)	Polar (H/V)	Receiver Reading (dB $\mu$ V)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
5MHz QPSK, Frequency: 2307.5 MHz								
103.44	H	38.72	-73.60	0.00	0.19	-73.79	-40.00	33.79
60.91	V	42.06	-63.64	-9.82	0.14	-73.60	-40.00	33.60
4615.000	H	39.03	-56.33	10.74	1.41	-47	-40.00	7.00
4615.000	V	38.79	-56.43	10.74	1.41	-47.1	-40.00	7.10
6922.500	H	37.58	-53.44	11.22	1.88	-44.1	-40.00	4.10
6922.500	V	36.95	-53.94	11.22	1.88	-44.6	-40.00	4.60
5MHz QPSK, Frequency: 2312.5 MHz								
104.90	H	38.56	-73.74	0.00	0.19	-73.93	-40.00	33.93
59.86	V	41.85	-64.09	-10.36	0.14	-74.59	-40.00	34.59
4625.000	H	39.45	-55.84	10.75	1.41	-46.5	-40.00	6.50
4625.000	V	39.23	-55.94	10.75	1.41	-46.6	-40.00	6.60
6937.500	H	38.27	-52.71	11.21	1.90	-43.4	-40.00	3.40
6937.500	V	37.73	-53.11	11.21	1.90	-43.8	-40.00	3.80

**LTE Band 40 Upper (30MHz-25GHz):**

Frequency (MHz)	Polar (H/V)	Receiver Reading (dB $\mu$ V)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
5MHz QPSK, Frequency: 2352.5 MHz								
92.14	H	38.61	-74.28	0.00	0.18	-74.46	-40.00	34.46
60.49	V	41.77	-64.07	-10.04	0.14	-74.25	-40.00	34.25
4705.000	H	37.94	-56.84	10.85	1.41	-47.4	-40.00	7.40
4705.000	V	38.06	-56.74	10.85	1.41	-47.3	-40.00	7.30
7057.500	H	36.36	-53.65	11.17	1.92	-44.4	-40.00	4.40
7057.500	V	36.65	-53.25	11.17	1.92	-44	-40.00	4.00
5MHz QPSK, Frequency: 2357.5 MHz								
105.27	H	37.96	-74.34	0.00	0.19	-74.53	-40.00	34.53
55.22	V	42.04	-61.69	-12.50	0.13	-74.32	-40.00	34.32
4715.000	H	38.76	-55.95	10.86	1.41	-46.5	-40.00	6.50
4715.000	V	38.86	-55.85	10.86	1.41	-46.4	-40.00	6.40
7072.500	H	36.95	-52.85	11.16	1.91	-43.6	-40.00	3.60
7072.500	V	37.06	-52.65	11.16	1.91	-43.4	-40.00	3.40

**LTE Band 41 (30MHz-27GHz):**

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, 5MHz, Frequency: 2498.5 MHz								
91.50	H	38.30	-74.63	0.00	0.18	-74.81	-25.00	49.81
60.70	V	41.97	-63.80	-9.93	0.14	-73.87	-25.00	48.87
4997.000	H	35.54	-57.40	11.20	1.48	-47.9	-25.00	22.90
4997.000	V	36.64	-56.16	11.20	1.48	-46.7	-25.00	21.70
7495.500	H	40.12	-49.67	10.90	1.94	-40.5	-25.00	15.50
7495.500	V	39.93	-50.36	10.90	1.94	-41.4	-25.00	16.40
QPSK, 5MHz, Frequency: 2593 MHz								
92.47	H	38.43	-74.44	0.00	0.18	-74.62	-25.00	49.62
61.34	V	42.39	-63.16	-9.59	0.14	-72.89	-25.00	47.89
5186.000	H	37.10	-56.93	11.31	1.44	-47.1	-25.00	22.10
5186.000	V	37.75	-56.14	11.31	1.44	-46.3	-25.00	21.30
7779.000	H	40.84	-48.65	10.84	1.99	-39.8	-25.00	14.80
7779.000	V	40.47	-49.47	10.84	1.99	-40.6	-25.00	15.60
QPSK, 5MHz, Frequency: 2687.5 MHz								
103.80	H	38.12	-74.20	0.00	0.19	-74.39	-25.00	49.39
59.44	V	42.25	-63.49	-10.56	0.14	-74.19	-25.00	49.19
5375.000	H	37.42	-56.09	11.43	1.49	-46.1	-25.00	21.10
5375.000	V	37.66	-55.84	11.43	1.49	-45.6	-25.00	20.60
8062.500	H	40.70	-47.52	10.81	2.12	-39	-25.00	14.00
8062.500	V	40.35	-48.37	10.81	2.12	-39.8	-25.00	14.80

**LTE Band 66:**

Frequency (MHz)	Polar (H/V)	Receiver Reading (dB $\mu$ V)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
1.4MHz QPSK, Frequency:			1710.7 MHz					
104.17	H	38.29	-74.02	0.00	0.19	-74.21	-13.00	61.21
60.28	V	42.04	-63.87	-10.15	0.14	-74.16	-13.00	61.16
3421.400	H	38.06	-59.70	10.37	1.17	-50.5	-13.00	37.50
3421.400	V	37.93	-59.80	10.37	1.17	-50.6	-13.00	37.60
5132.100	H	39.76	-53.81	11.28	1.47	-44	-13.00	31.00
5132.100	V	39.45	-54.01	11.28	1.47	-44.2	-13.00	31.20
1.4MHz QPSK, Frequency:			1745 MHz					
102.72	H	38.48	-73.85	0.00	0.19	-74.04	-13.00	61.04
59.23	V	42.23	-63.41	-10.65	0.14	-74.20	-13.00	61.20
3490.000	H	38.41	-59.43	10.40	1.17	-50.2	-13.00	37.20
3490.000	V	38.15	-59.63	10.40	1.17	-50.4	-13.00	37.40
5235.000	H	40.42	-53.48	11.34	1.46	-43.6	-13.00	30.60
5235.000	V	40.03	-53.68	11.34	1.46	-43.8	-13.00	30.80
1.4MHz QPSK, Frequency:			1779.3 MHz					
104.53	H	37.95	-74.36	0.00	0.19	-74.55	-13.00	61.55
60.49	V	41.87	-63.97	-10.04	0.14	-74.15	-13.00	61.15
3558.600	H	39.03	-58.64	10.46	1.22	-49.4	-13.00	36.40
3558.600	V	38.73	-58.84	10.46	1.22	-49.6	-13.00	36.60
5337.900	H	41.24	-52.23	11.40	1.47	-42.3	-13.00	29.30
5337.900	V	40.80	-52.53	11.40	1.47	-42.6	-13.00	29.60

**Note:**

- 1) The unit of Antenna Gain is dBd for frequency below 1GHz, and the unit of Antenna Gain is dBi for frequency above 1GHz.
- 2) Absolute Level = Substituted Level - Cable loss + Antenna Gain
- 3) Margin = Limit-Absolute Level

## **5. EUT PHOTOGRAPHS**

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Please refer to the attachment CR231061121-EXP EUT EXTERNAL PHOTOGRAPHS and CR231061121-INP EUT INTERNAL PHOTOGRAPHS



## **6. TEST SETUP PHOTOGRAPHS**

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Please refer to the attachment CR231061121-00E-TSP TEST SETUP PHOTOGRAPHS.

**==== END OF REPORT =====**