

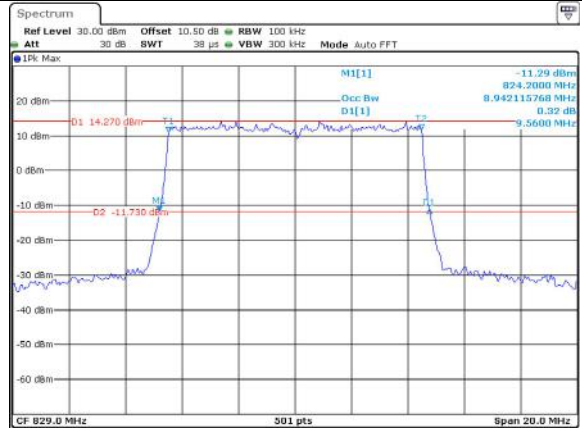
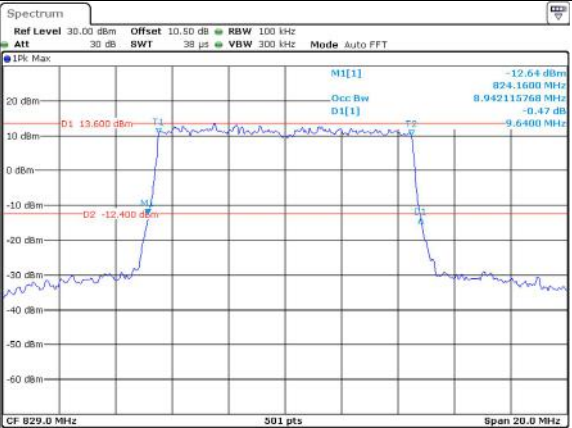
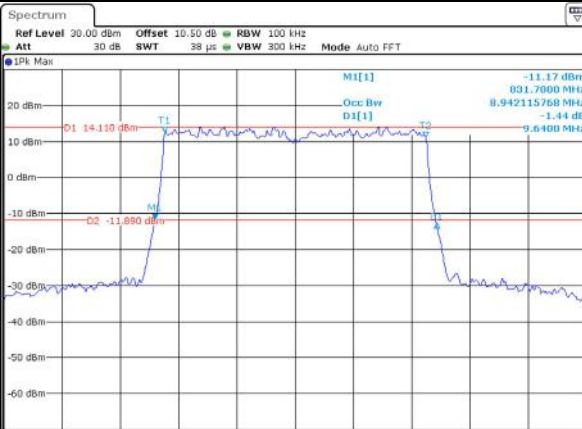
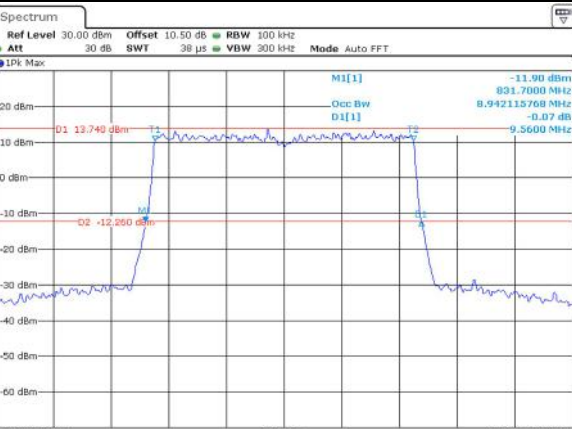
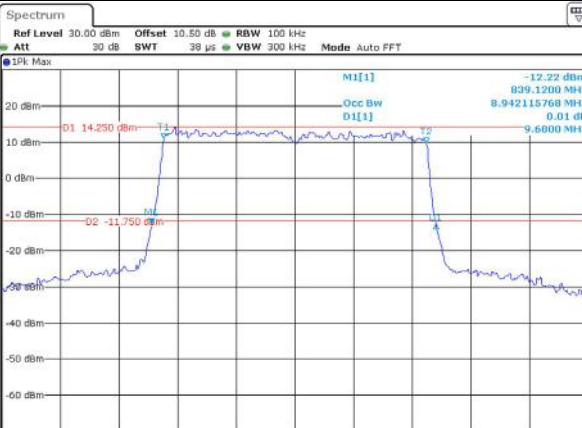
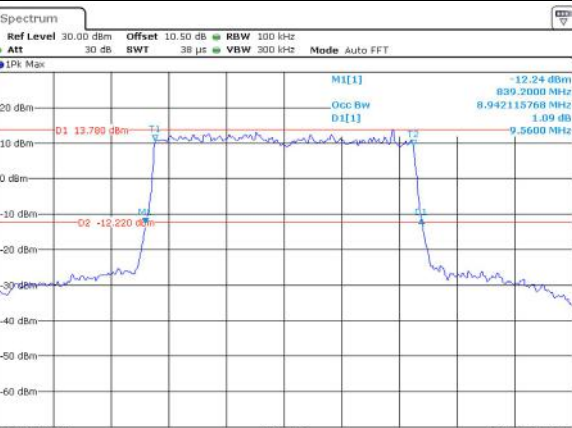
Occupied Bandwidth

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

Occupied Bandwidth

Channel	5MHz Bandwidth QPSK	5MHz Bandwidth 16QAM
Lowest	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23.SEP.2023 14:11:45</p>	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23.SEP.2023 14:11:03</p>
Middle	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23.SEP.2023 14:11:21</p>	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23.SEP.2023 14:11:45</p>
Highest	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23.SEP.2023 14:12:06</p>	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23.SEP.2023 14:12:27</p>

Occupied Bandwidth

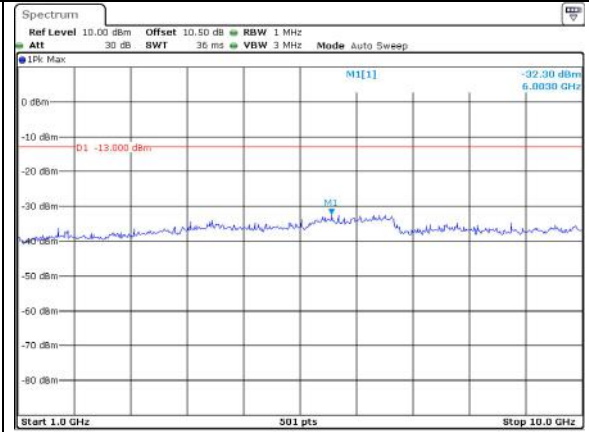
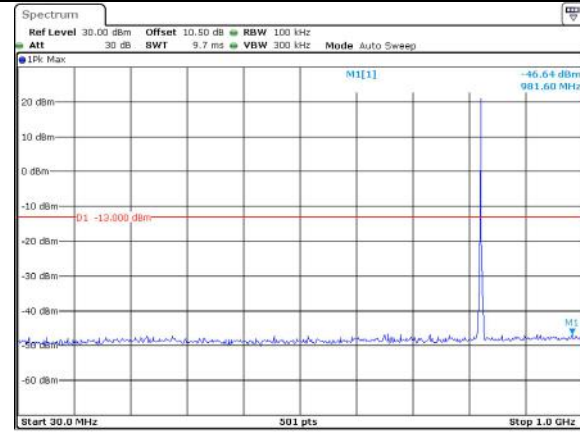
Channel	10MHz Bandwidth QPSK	10MHz Bandwidth 16QAM
Lowest	 <p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23.SEP.2023 14:15:20</p>	 <p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23.SEP.2023 14:15:17</p>
Middle	 <p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23.SEP.2023 14:16:28</p>	 <p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23.SEP.2023 14:16:55</p>
Highest	 <p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23.SEP.2023 14:17:23</p>	 <p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23.SEP.2023 14:17:50</p>

Spurious Emissions at Antenna Terminal

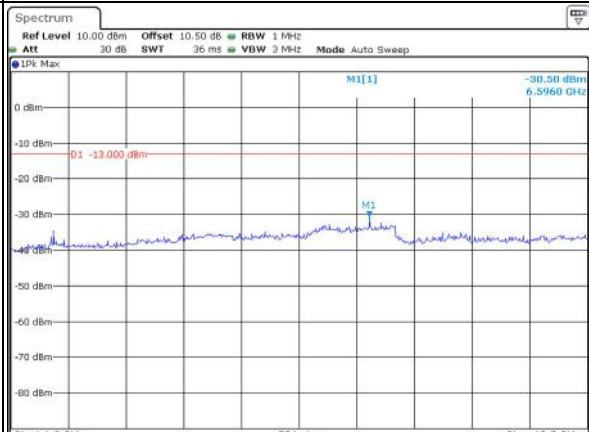
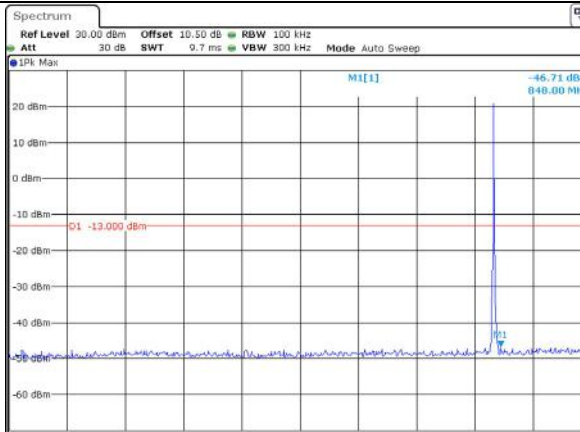
Channel

1.4MHz Bandwidth QPSK

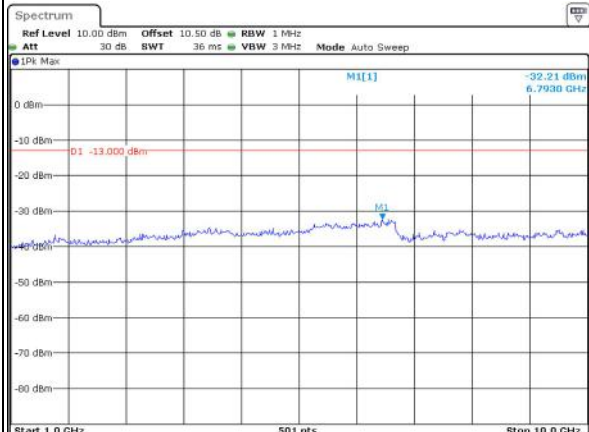
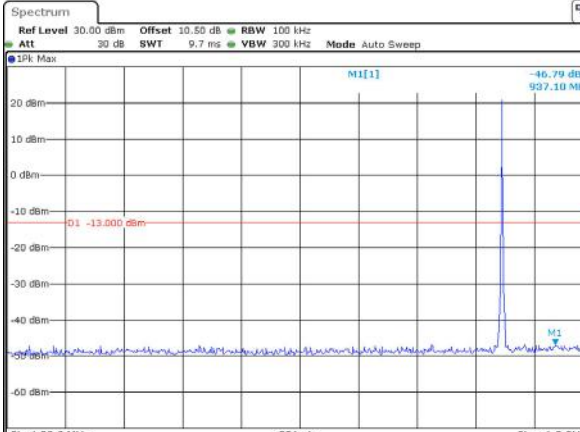
Lowest



Middle



Highest

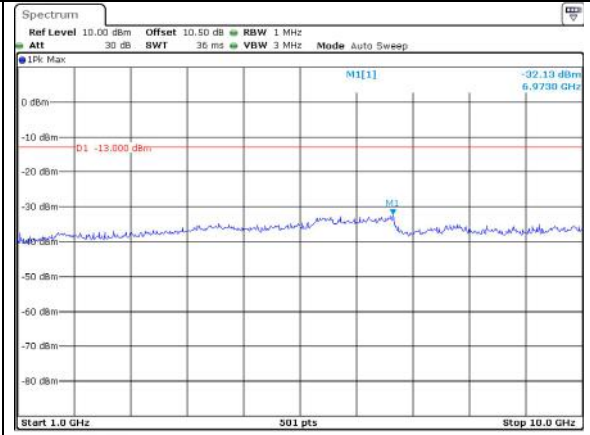
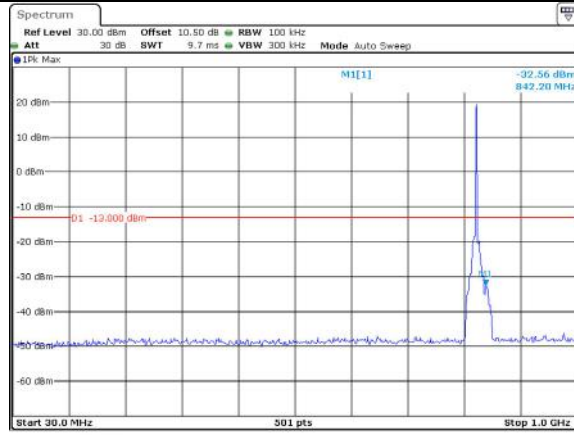


**Spurious Emissions at Antenna Terminal**

**Channel**

**3MHz Bandwidth QPSK**

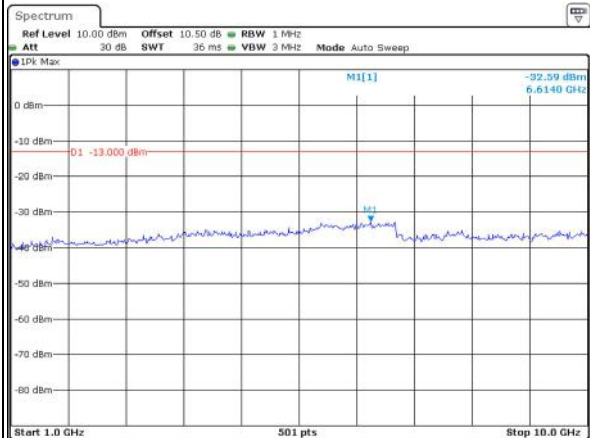
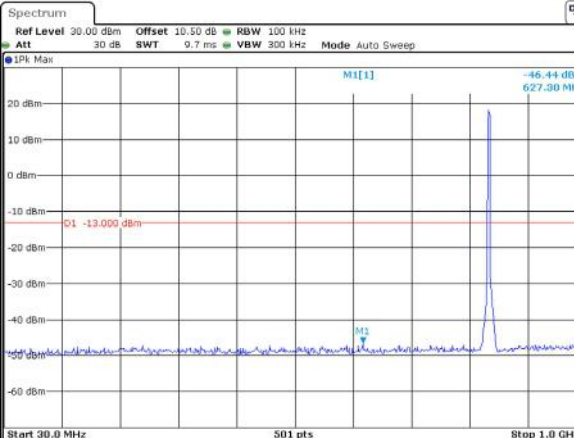
Lowest



ProjectNo.:CR230952608 Tester:Len Huang  
Date: 23\_SEP\_2023 14:31:23

ProjectNo.:CR230952608 Tester:Len Huang  
Date: 23\_SEP\_2023 14:31:49

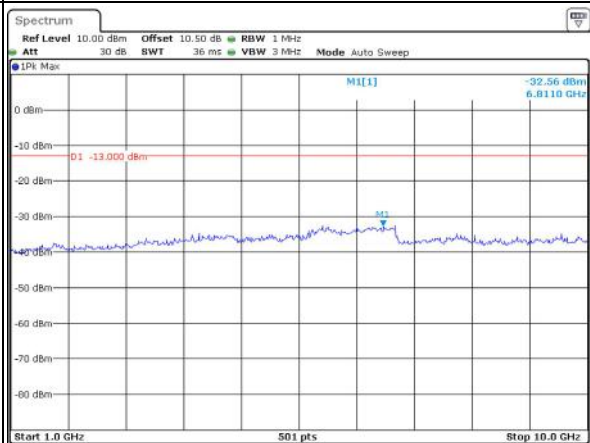
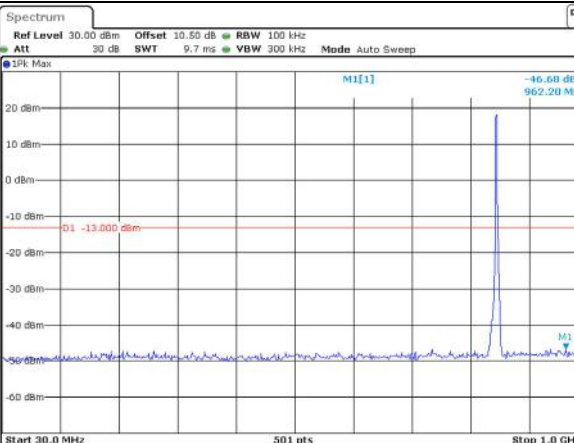
Middle



ProjectNo.:CR230952608 Tester:Len Huang  
Date: 23\_SEP\_2023 14:32:24

ProjectNo.:CR230952608 Tester:Len Huang  
Date: 23\_SEP\_2023 14:32:48

Highest



ProjectNo.:CR230952608 Tester:Len Huang  
Date: 23\_SEP\_2023 14:33:14

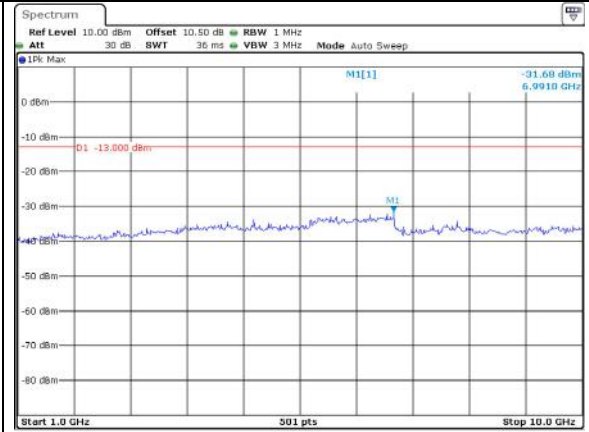
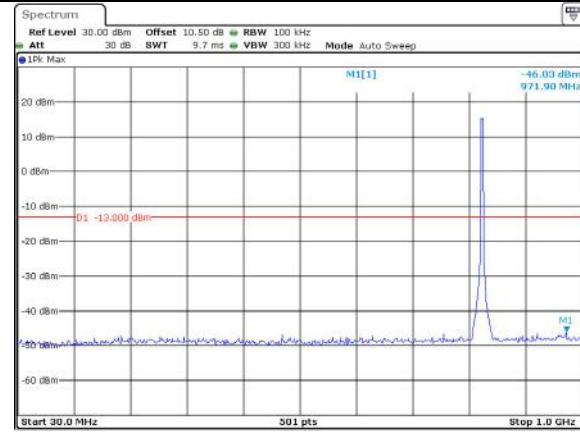
ProjectNo.:CR230952608 Tester:Len Huang  
Date: 23\_SEP\_2023 14:33:40

Spurious Emissions at Antenna Terminal

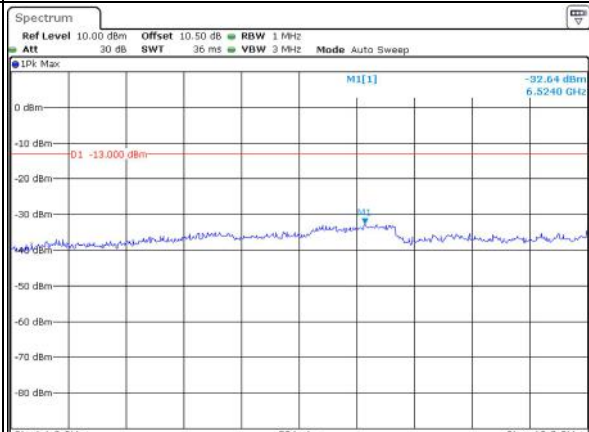
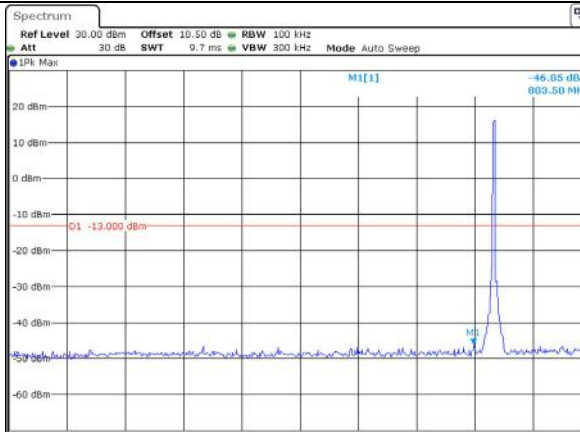
Channel

5MHz Bandwidth QPSK

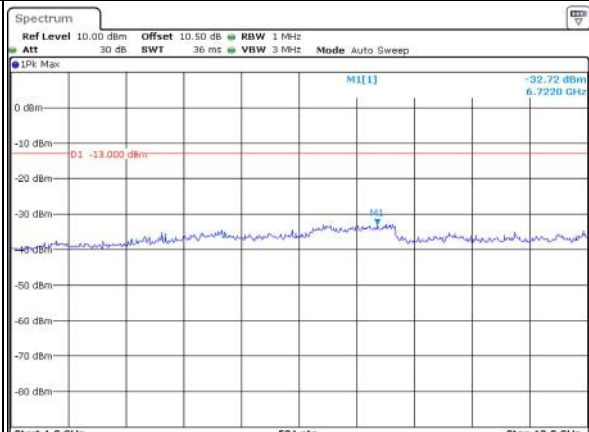
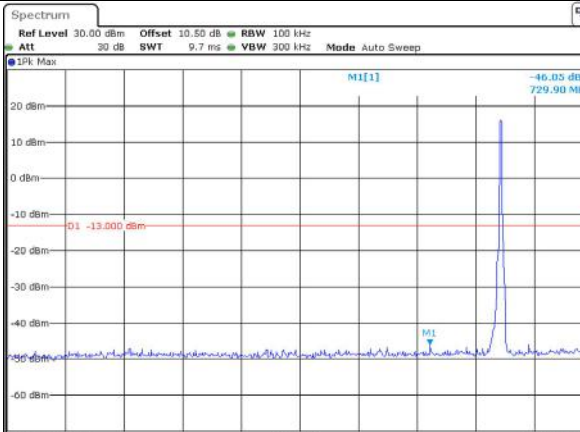
Lowest



Middle



Highest



Spurious Emissions at Antenna Terminal

Channel	10MHz Bandwidth QPSK	
Lowest	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23_SEP.2023 14:38:05</p>	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23_SEP.2023 14:38:28</p>
Middle	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23_SEP.2023 14:39:04</p>	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23_SEP.2023 14:39:34</p>
Highest	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23_SEP.2023 14:40:13</p>	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23_SEP.2023 14:40:42</p>

Out of band emission, Band Edge

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



Out of band emission, Band Edge

Mode	Lowest	Highest
QPSK 10MHz	<p>ProjectNo.:CR230952608 Testee:Len Huang Date: 23_SEP_2023 14:26:29</p>	<p>ProjectNo.:CR230952608 Testee:Len Huang Date: 23_SEP_2023 14:26:42</p>

Out of band emission, Band Edge

Mode	Lowest	Highest
16QAM 1.4MHz	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23_SEP.2023 14:22:10</p>	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23_SEP.2023 14:22:10</p>
16QAM 3MHz	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23_SEP.2023 14:23:48</p>	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23_SEP.2023 14:23:10</p>
16QAM 5MHz	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23_SEP.2023 14:23:54</p>	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23_SEP.2023 14:24:10</p>

Out of band emission, Band Edge

Mode	Lowest	Highest
16QAM 10MHz	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23_SEP_2023 14:26:33</p>	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23_SEP_2023 14:26:51</p>

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

Serial Number:	2B0S-1	Test Date:	2023/9/23-2023/9/26
Test Site:	RF	Test Mode:	Transmitting
Tester:	Len Huang	Test Result:	Pass

**Environmental Conditions:**

Temperature: (°C)	24.5-25.8	Relative Humidity: (%)	46-57	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	FSV40	102259	2023/4/18	2024/4/17
R&S	Wideband Radio	CMW500	143458	2023/3/31	2024/3/30
zhuoxiang	Coaxial Cable	SMA-178	211001	Each time	N/A
YINSAIGE	Coaxial Cable	SS402	SJ0100001	Each time	N/A
BACL	TEMP&HUMI Test Chamber	BTH-150-40	30174	2023/3/31	2024/3/30
UNI-T	Multimeter	UT39A+	C210582554	2022/9/29	2023/9/28
ZHAOXIN	DC Power Supply	RXN-6010D	21R6010D0912386	N/A	N/A
eastsheep	Coaxial Attenuator	2W-SMA-JK-18G	21060301	Each time	N/A

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

**Test Frequency For Each Mode:**

Operation Bandwidth	Lowest Frequency (MHz)	Middle Frequency (MHz)	Highest Frequency (MHz)
5MHz	2502.5	2535	2567.5
10MHz	2505	2535	2565
15MHz	2507.5	2535	2562.5
20MHz	2510	2535	2560

**Test Data:****FCC§2.1046;§ 27.50(h)(2)****RF Output Power:**

Test Bandwidth & Modulation	Resource Block & RB offset	Conducted Average Output Power(dBm)			Maximum EIRP (dBm)	EIRP Limit (dBm)
		Lowest Channel	Middle Channel	Highest Channel		
5MHz QPSK	RB1#0	21.89	21.75	21.66	19.39	33
	RB1#13	22	21.84	21.77		
	RB1#24	21.86	21.68	21.62		
	RB15#0	21.03	20.86	20.82		
	RB15#10	21.09	20.89	20.78		
	RB25#0	20.94	20.83	20.74		
5MHz 16QAM	RB1#0	21.01	21.03	20.72	18.55	33
	RB1#13	21.07	21.16	20.86		
	RB1#24	20.94	20.99	20.69		
	RB15#0	20.09	19.86	19.85		
	RB15#10	20.1	19.81	19.79		
	RB25#0	20.09	19.87	19.79		
10MHz QPSK	RB1#0	22.04	21.85	21.75	19.55	33
	RB1#25	22.16	21.94	21.95		
	RB1#49	21.99	21.81	21.74		
	RB25#0	20.96	20.84	20.84		
	RB25#25	21.01	20.81	20.82		
	RB50#0	21.02	20.85	20.82		
10MHz 16QAM	RB1#0	21.04	21.42	20.9	18.87	33
	RB1#25	21.13	21.48	21.07		
	RB1#49	20.98	21.36	20.89		
	RB25#0	20.09	19.96	19.86		
	RB25#25	20.12	19.91	19.84		
	RB50#0	20.06	19.9	19.84		
15MHz QPSK	RB1#0	22	21.8	21.72	19.43	33
	RB1#38	22.04	21.79	21.77		
	RB1#74	21.76	21.69	21.65		
	RB36#0	21.03	20.92	20.82		
	RB36#39	21.06	20.84	20.82		
	RB75#0	21.08	20.91	20.82		
15MHz 16QAM	RB1#0	21.38	21.36	20.86	18.81	33
	RB1#38	21.42	21.38	20.9		
	RB1#74	21.23	21.26	20.76		
	RB36#0	19.99	19.9	19.77		
	RB36#39	19.99	19.85	19.81		
	RB75#0	20.01	19.88	19.82		
20MHz QPSK	RB1#0	21.85	21.63	21.66	19.49	33

	RB1#50	22.1	22.05	21.94		
	RB1#99	21.57	21.55	21.57		
	RB50#0	21.03	20.92	20.83		
	RB50#50	21.01	20.79	20.76		
	RB100#0	21.01	20.89	20.78		
20MHz 16QAM	RB1#0	21.38	20.94	20.85	19.07	33
	RB1#50	21.68	21.28	21.07		
	RB1#99	21.16	20.84	20.7		
	RB50#0	20.02	19.91	19.81		
	RB50#50	20.01	19.82	19.74		
	RB100#0	20.02	19.96	19.79		

Note: EIRP=Conducted Power(dBm) - Lc(dB) + G<sub>T</sub>(dBi)

**Result:**

**Pass**

### Peak-to-average Ratio(PAR)

Test Bandwidth & Modulation	Resource Block & RB offset	Peak-to-average Ratio(dB)			Limit (dB)
		Lowest Channel	Middle Channel	Highest Channel	
20MHz QPSK	RB1#0	5.13	5.13	5.10	13
	RB100#0	5.19	5.25	5.10	13
20MHz 16QAM	RB1#0	5.91	6.14	5.65	13
	RB100#0	6.12	6.14	6.03	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	4.511	4.511	4.511	5.400	5.440	4.960
5MHz 16QAM	4.511	4.511	4.511	5.400	5.240	4.960
10MHz QPSK	8.942	8.942	8.942	9.640	9.720	9.560
10MHz 16QAM	8.942	8.942	8.942	9.680	9.560	9.640
15MHz QPSK	13.473	13.533	13.473	14.700	14.700	14.700
15MHz 16QAM	13.473	13.533	13.533	14.520	14.640	14.580
20MHz QPSK	17.964	17.964	17.884	19.360	19.200	19.200
20MHz 16QAM	17.964	17.964	17.884	19.520	19.200	19.360

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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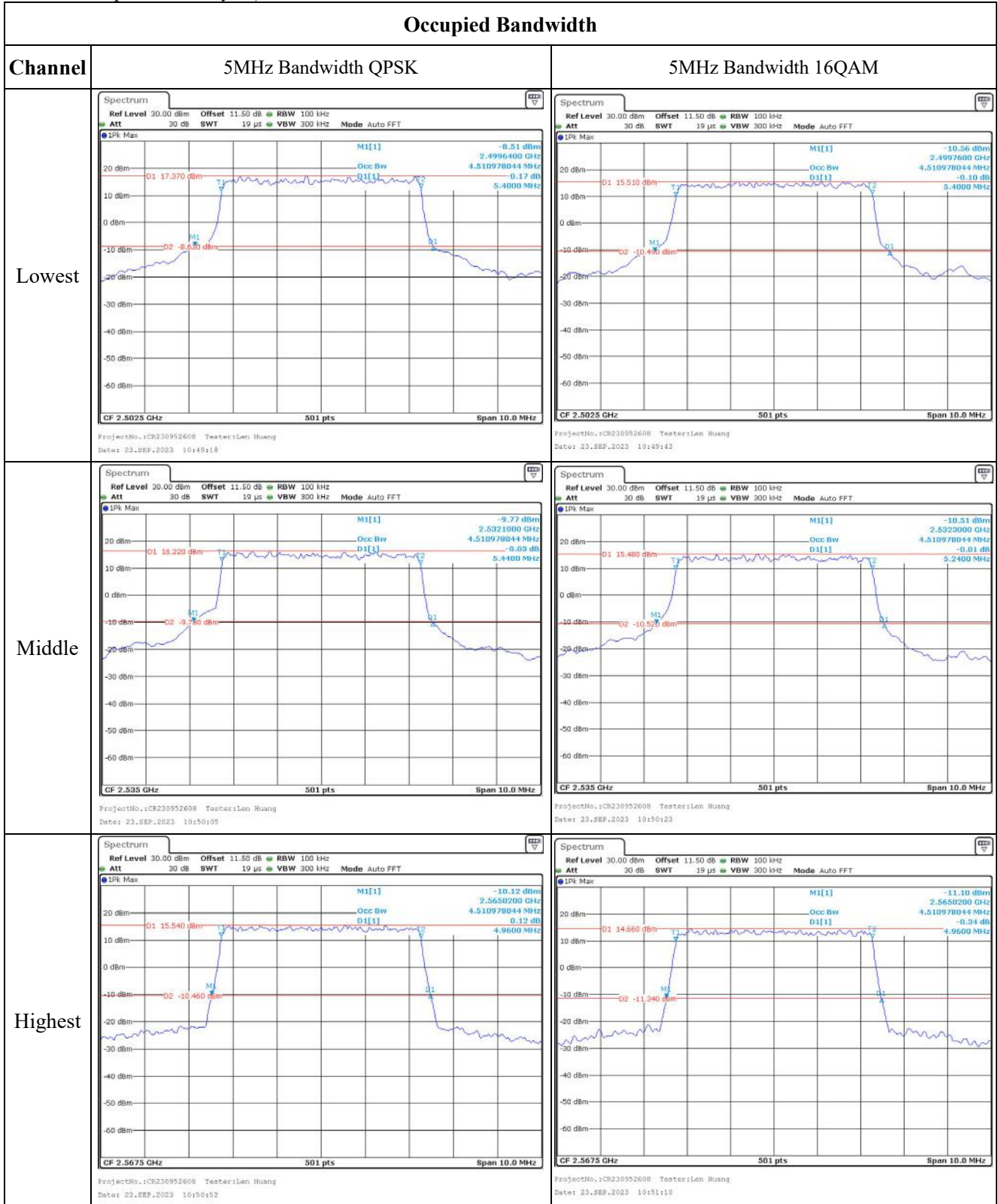
### FCC §2.1051, § 27.53:Out of band emission, Band Edge

<b>Result:</b>	<b>Pass, Please refer to the test plots of Out of band emission, Band Edge.</b>
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<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	7.4	2500.78656	2500.00000	2569.92652	2570.00000
	-20	7.4	2500.83910	2500.00000	2569.93613	2570.00000
	-10	7.4	2500.89147	2500.00000	2569.89991	2570.00000
	0	7.4	2500.40473	2500.00000	2569.91333	2570.00000
	10	7.4	2500.70787	2500.00000	2569.94141	2570.00000
	20	7.4	2500.35021	2500.00000	2569.98199	2570.00000
	30	7.4	2500.26296	2500.00000	2569.94283	2570.00000
	40	7.4	2500.48794	2500.00000	2569.98391	2570.00000
	50	7.4	2500.69863	2500.00000	2569.94392	2570.00000
Frequency Stability vs. Voltage	20	6.8	2500.27759	2500.00000	2569.94040	2570.00000
	20	8.4	2500.68924	2500.00000	2569.98096	2570.00000
					<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	7.4	2500.19703	2500.00000	2569.92536	2570.00000
	-20	7.4	2500.24956	2500.00000	2569.96061	2570.00000
	-10	7.4	2500.30270	2500.00000	2569.91046	2570.00000
	0	7.4	2500.21782	2500.00000	2569.89741	2570.00000
	10	7.4	2500.19308	2500.00000	2569.97273	2570.00000
	20	7.4	2500.30301	2500.00000	2569.97095	2570.00000
	30	7.4	2500.19505	2500.00000	2569.95130	2570.00000
	40	7.4	2500.32182	2500.00000	2569.94828	2570.00000
	50	7.4	2500.39196	2500.00000	2569.92161	2570.00000
Frequency Stability vs. Voltage	20	6.8	2500.16746	2500.00000	2569.93499	2570.00000
	20	8.4	2500.28379	2500.00000	2569.89690	2570.00000
					<b>Result:</b>	<b>Pass</b>

**Test Plots**(Note: The 11.5dB is the Insertion loss of the RF cable, Power Splitter and DC Block, which was offset into the Spectrum Analyzer):





Occupied Bandwidth

Channel	10MHz Bandwidth QPSK	10MHz Bandwidth 16QAM
Lowest	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23.SEP.2023 10:52:11</p>	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23.SEP.2023 10:52:37</p>
Middle	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23.SEP.2023 10:53:15</p>	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23.SEP.2023 10:53:40</p>
Highest	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23.SEP.2023 10:54:10</p>	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23.SEP.2023 10:54:41</p>

Occupied Bandwidth

Channel	15MHz Bandwidth QPSK	15MHz Bandwidth 16QAM
Lowest	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23.SEP.2023 10:56:01</p>	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23.SEP.2023 10:56:22</p>
Middle	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23.SEP.2023 10:56:54</p>	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23.SEP.2023 10:57:22</p>
Highest	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23.SEP.2023 10:57:54</p>	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23.SEP.2023 10:58:21</p>

Occupied Bandwidth

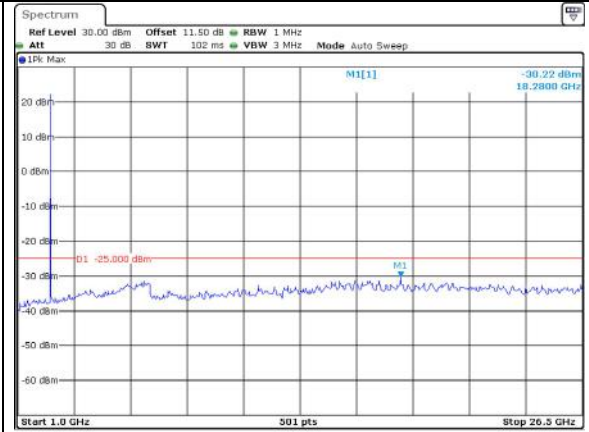
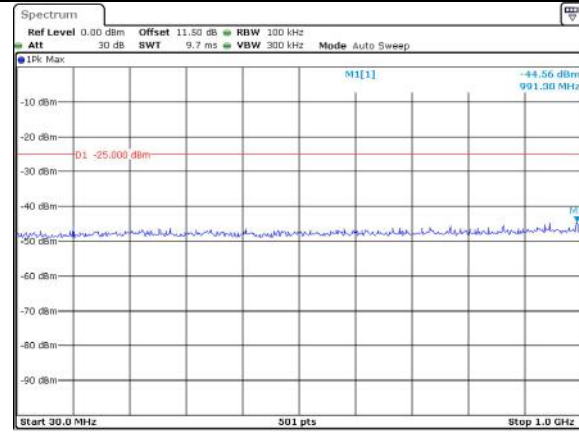
Channel	20MHz Bandwidth QPSK	20MHz Bandwidth 16QAM
Lowest	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23.SEP.2023 10:59:28</p>	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23.SEP.2023 10:59:50</p>
Middle	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23.SEP.2023 11:00:22</p>	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23.SEP.2023 11:00:54</p>
Highest	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23.SEP.2023 11:01:26</p>	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23.SEP.2023 11:01:57</p>

Spurious Emissions at Antenna Terminal

Channel

5MHz Bandwidth QPSK

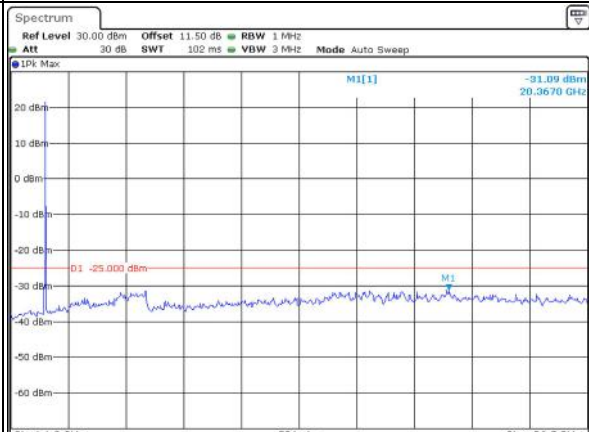
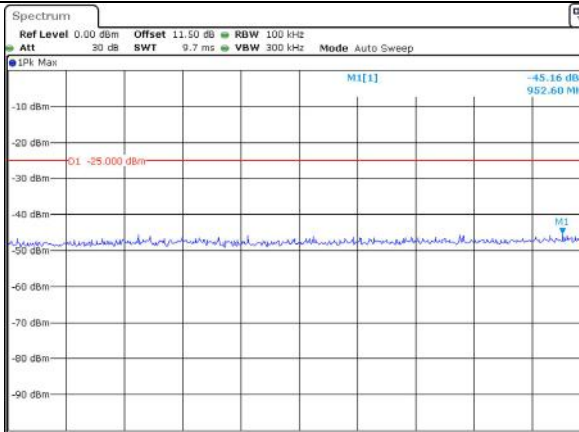
Lowest



ProjectNo.:CR230952608 Tester:Len Huang  
Date: 23.SEP.2023 12:00:43

ProjectNo.:CR230952608 Tester:Len Huang  
Date: 23.SEP.2023 12:01:09

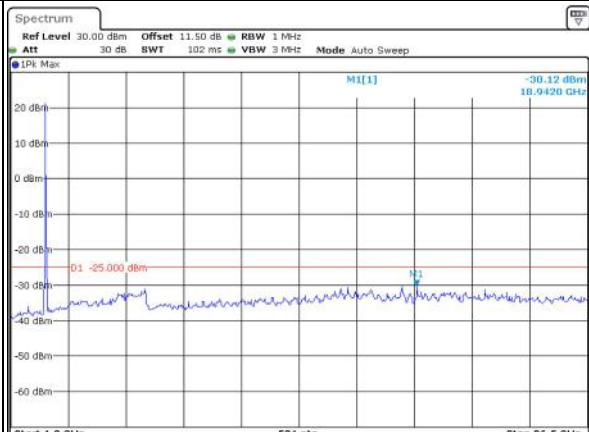
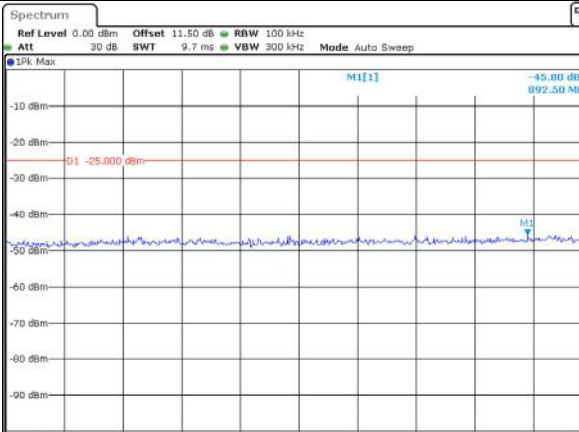
Middle



ProjectNo.:CR230952608 Tester:Len Huang  
Date: 23.SEP.2023 12:01:39

ProjectNo.:CR230952608 Tester:Len Huang  
Date: 23.SEP.2023 12:02:05

Highest



ProjectNo.:CR230952608 Tester:Len Huang  
Date: 23.SEP.2023 12:02:39

ProjectNo.:CR230952608 Tester:Len Huang  
Date: 23.SEP.2023 12:03:08

Spurious Emissions at Antenna Terminal

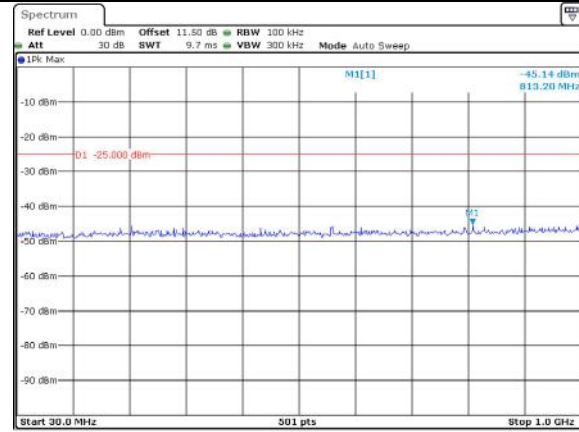
Channel	10MHz Bandwidth QPSK	
Lowest	<p>Ref Level 0.00 dBm Offset 11.50 dB RBW 100 kHz Att 30 dB SWT 9.7 ms VBW 300 kHz Mode Auto Sweep</p> <p>IPk Max M1[1] -45.09 dBm 958.40 MHz</p> <p>D1 -25.000 dBm</p> <p>Start 30.0 MHz 501 pts Stop 1.0 GHz</p> <p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23_SEP.2023 12:05:13</p>	<p>Ref Level 30.00 dBm Offset 11.50 dB RBW 1 MHz Att 30 dB SWT 102 ms VBW 3 MHz Mode Auto Sweep</p> <p>IPk Max M1[1] -31.37 dBm 26.6720 GHz</p> <p>D1 -25.000 dBm</p> <p>Start 1.0 GHz 501 pts Stop 26.5 GHz</p> <p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23_SEP.2023 12:05:35</p>
Middle	<p>Ref Level 0.00 dBm Offset 11.50 dB RBW 100 kHz Att 30 dB SWT 9.7 ms VBW 300 kHz Mode Auto Sweep</p> <p>IPk Max M1[1] -44.72 dBm 971.90 MHz</p> <p>D1 -25.000 dBm</p> <p>Start 30.0 MHz 501 pts Stop 1.0 GHz</p> <p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23_SEP.2023 12:06:07</p>	<p>Ref Level 30.00 dBm Offset 11.50 dB RBW 1 MHz Att 30 dB SWT 102 ms VBW 3 MHz Mode Auto Sweep</p> <p>IPk Max M1[1] -30.76 dBm 19.6540 GHz</p> <p>D1 -25.000 dBm</p> <p>Start 1.0 GHz 501 pts Stop 26.5 GHz</p> <p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23_SEP.2023 12:06:30</p>
Highest	<p>Ref Level 0.00 dBm Offset 11.50 dB RBW 100 kHz Att 30 dB SWT 9.7 ms VBW 300 kHz Mode Auto Sweep</p> <p>IPk Max M1[1] -45.77 dBm 795.70 MHz</p> <p>D1 -25.000 dBm</p> <p>Start 30.0 MHz 501 pts Stop 1.0 GHz</p> <p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23_SEP.2023 12:06:57</p>	<p>Ref Level 30.00 dBm Offset 11.50 dB RBW 1 MHz Att 30 dB SWT 102 ms VBW 3 MHz Mode Auto Sweep</p> <p>IPk Max M1[1] -31.39 dBm 20.2650 GHz</p> <p>D1 -25.000 dBm</p> <p>Start 1.0 GHz 501 pts Stop 26.5 GHz</p> <p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23_SEP.2023 12:07:24</p>

Spurious Emissions at Antenna Terminal

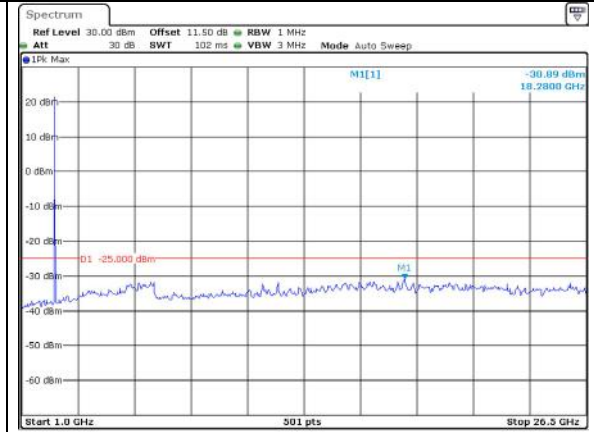
Channel

15MHz Bandwidth QPSK

Lowest

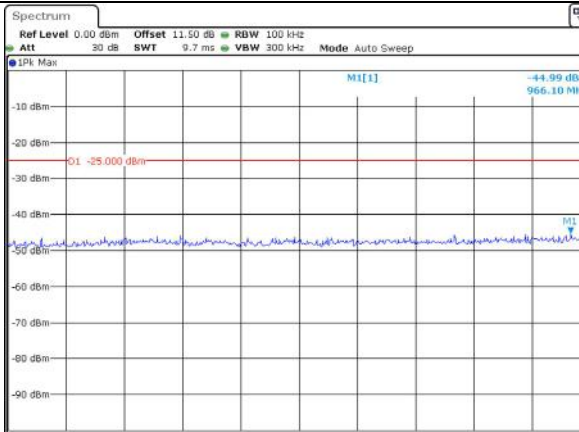


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Date: 23\_SEP.2023 12:09:38

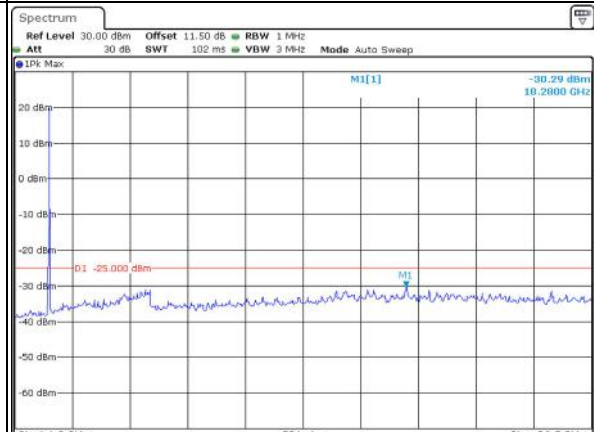


ProjectNo.:CR230952608 Tester:Len Huang  
Date: 23\_SEP.2023 12:10:01

Middle

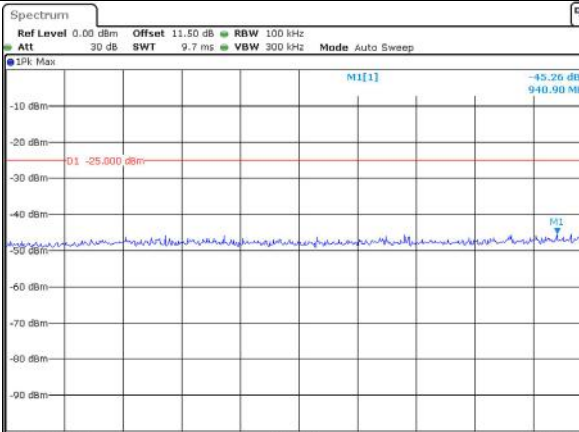


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Date: 23\_SEP.2023 12:10:35

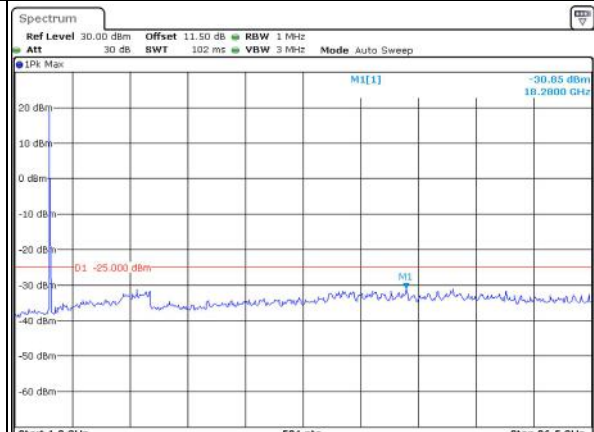


ProjectNo.:CR230952608 Tester:Len Huang  
Date: 23\_SEP.2023 12:11:01

Highest



ProjectNo.:CR230952608 Tester:Len Huang  
Date: 23\_SEP.2023 12:11:32



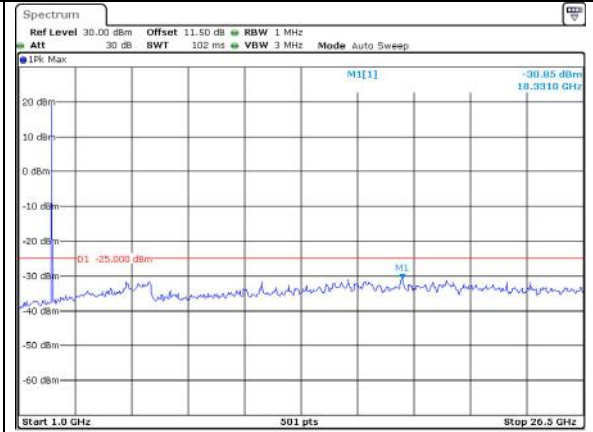
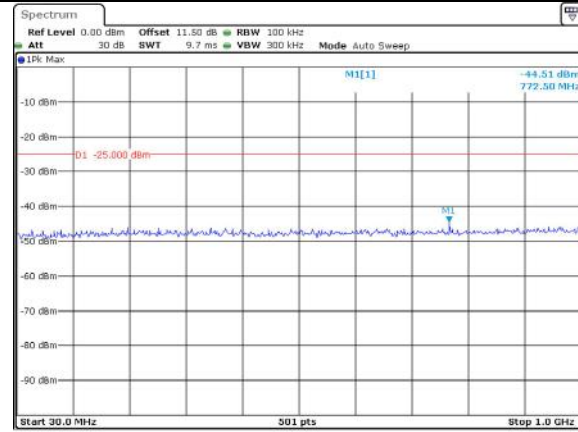
ProjectNo.:CR230952608 Tester:Len Huang  
Date: 23\_SEP.2023 12:11:55

Spurious Emissions at Antenna Terminal

Channel

20MHz Bandwidth QPSK

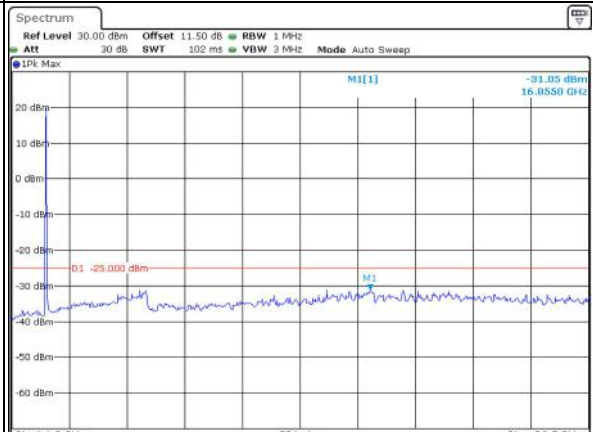
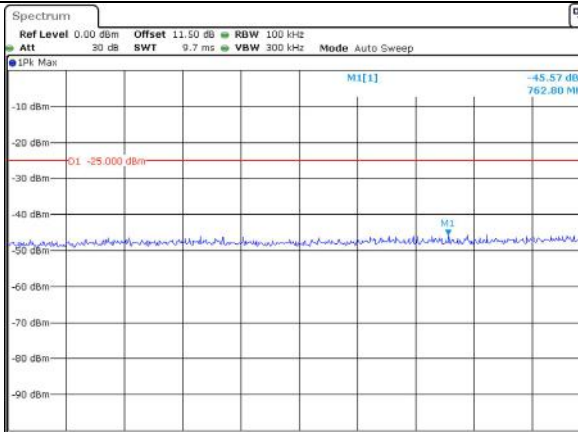
Lowest



ProjectNo.:CR230952608 Tester:Len Huang  
Date: 23\_SEP.2023 12:14:39

ProjectNo.:CR230952608 Tester:Len Huang  
Date: 23\_SEP.2023 12:15:02

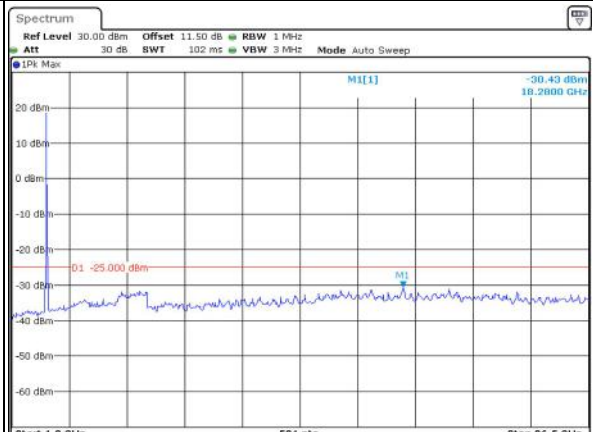
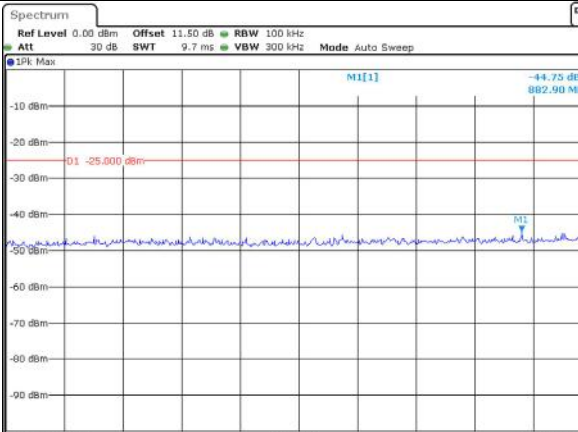
Middle



ProjectNo.:CR230952608 Tester:Len Huang  
Date: 23\_SEP.2023 12:15:36

ProjectNo.:CR230952608 Tester:Len Huang  
Date: 23\_SEP.2023 12:15:59

Highest



ProjectNo.:CR230952608 Tester:Len Huang  
Date: 23\_SEP.2023 12:16:36

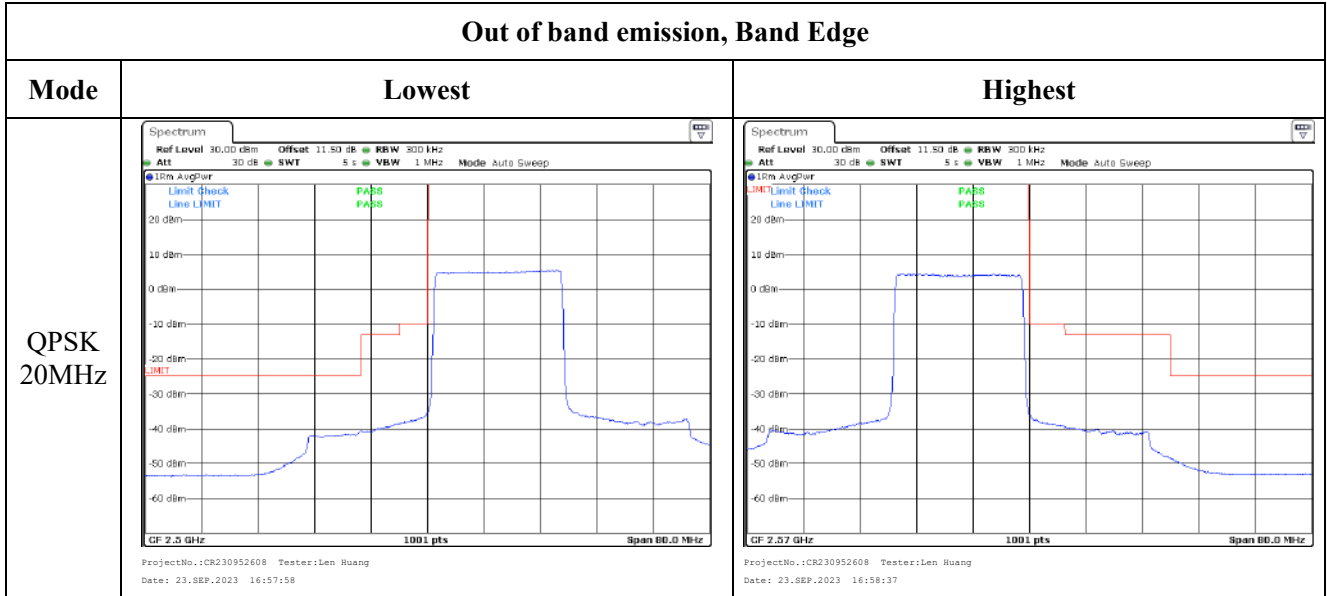
ProjectNo.:CR230952608 Tester:Len Huang  
Date: 23\_SEP.2023 12:16:59

Out of band emission, Band Edge

Mode	Lowest	Highest
QPSK 5MHz	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23_SEP.2023 16:40:07</p>	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23_SEP.2023 16:41:11</p>
QPSK 10MHz	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23_SEP.2023 16:44:19</p>	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23_SEP.2023 16:46:35</p>
QPSK 15MHz	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23_SEP.2023 16:50:19</p>	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23_SEP.2023 16:50:55</p>



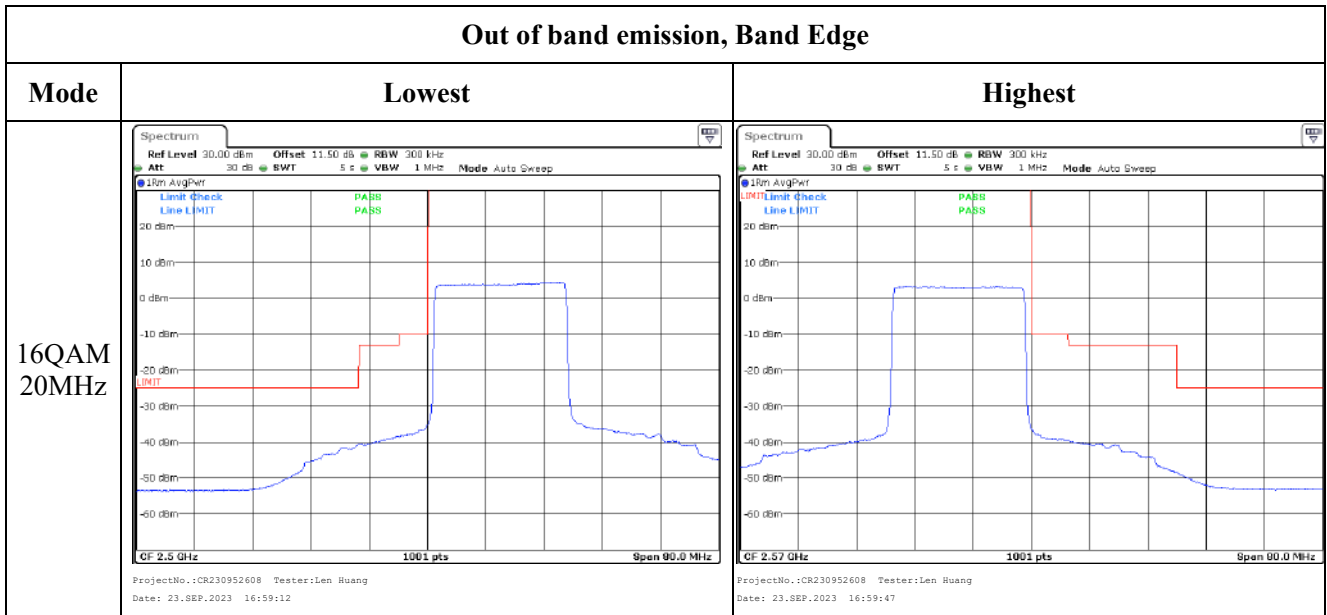
Out of band emission, Band Edge



Out of band emission, Band Edge

Mode	Lowest	Highest
16QAM 5MHz		
16QAM 10MHz		
16QAM 15MHz		

Out of band emission, Band Edge



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

Serial Number:	2B0S-1	Test Date:	2023/9/23-2023/9/26
Test Site:	RF	Test Mode:	Transmitting
Tester:	Len Huang	Test Result:	Pass

**Environmental Conditions:**

Temperature: (°C)	24.5-25.8	Relative Humidity: (%)	46-57	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	FSV40	102259	2023/4/18	2024/4/17
R&S	Wideband Radio	CMW500	143458	2023/3/31	2024/3/30
zhuoxiang	Coaxial Cable	SMA-178	211001	Each time	N/A
YINSAIGE	Coaxial Cable	SS402	SJ0100001	Each time	N/A
BACL	TEMP&HUMI Test Chamber	BTH-150-40	30174	2023/3/31	2024/3/30
UNI-T	Multimeter	UT39A+	C210582554	2022/9/29	2023/9/28
ZHAOXIN	DC Power Supply	RXN-6010D	21R6010D0912386	N/A	N/A
eastsheep	Coaxial Attenuator	2W-SMA-JK-18G	21060301	Each time	N/A

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

**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	21.81	21.71	21.82	20.34	33
	RB1#13	21.94	21.91	21.93		
	RB1#24	21.74	21.72	21.76		
	RB15#0	20.95	20.8	20.89		
	RB15#10	20.86	20.84	20.91		
	RB25#0	20.87	20.81	20.91		
5MHz 16QAM	RB1#0	20.79	20.77	21.06	19.6	33
	RB1#13	20.94	20.96	21.2		
	RB1#24	20.71	20.75	21.01		
	RB15#0	19.86	19.81	19.9		
	RB15#10	19.78	19.81	19.97		
	RB25#0	19.87	19.85	19.87		
10MHz QPSK	RB1#0	22.5	22.35	22.21	21.12	33
	RB1#25	22.72	22.61	22.64		
	RB1#49	22.35	22.2	22.34		
	RB25#0	21.51	21.19	21.38		
	RB25#25	21.35	21.18	21.53		
	RB50#0	21.42	21.13	21.46		
10MHz 16QAM	RB1#0	21.52	21.09	21.23	20.12	33
	RB1#25	21.72	21.41	21.58		
	RB1#49	21.38	21.01	21.15		
	RB25#0	20.49	19.88	20.3		
	RB25#25	20.36	20.08	20.57		
	RB50#0	20.4	20.01	20.43		
15MHz QPSK	RB1#0	22.36	22.28	22.18	20.78	33
	RB1#38	22.38	22.08	22.27		
	RB1#74	22.24	21.83	22.26		
	RB36#0	21.52	20.97	21.37		
	RB36#39	21.43	21	21.45		
	RB75#0	21.49	21.02	21.42		
15MHz 16QAM	RB1#0	21.49	21.03	21.37	19.92	33
	RB1#38	21.52	21.09	21.2		
	RB1#74	21.4	20.98	21.32		
	RB36#0	20.44	20.3	20.26		
	RB36#39	20.35	20.34	20.45		
	RB75#0	20.4	20.3	20.49		
20MHz QPSK	RB1#0	22.31	22.18	21.84	21.09	33

	RB1#50	22.68	22.69	22.4		
	RB1#99	22.19	22.12	22.06		
	RB50#0	21.46	21.27	21.11		
	RB50#50	21.35	21.3	21.46		
	RB100#0	21.42	21.2	21.43		
20MHz 16QAM	RB1#0	21.49	20.79	20.69	20.28	33
	RB1#50	21.88	21.22	21.21		
	RB1#99	21.39	21.15	21.14		
	RB50#0	20.44	20.06	20.3		
	RB50#50	20.35	20.14	20.55		
	RB100#0	20.41	20.12	20.38		

Note: EIRP=Conducted Power(dBm) - L<sub>c</sub>(dB) + G<sub>T</sub>(dBi)

**Result:**

**Pass**

### Peak-to-average Ratio(PAR)

Test Bandwidth & Modulation	Resource Block & RB offset	Peak-to-average Ratio(dB)			Limit (dB)
		Lowest Channel	Middle Channel	Highest Channel	
20MHz QPSK	RB1#0	8.49	8.49	8.90	13
	RB100#0	8.93	8.96	9.01	13
20MHz 16QAM	RB1#0	9.25	9.16	9.65	13
	RB100#0	9.62	9.77	9.8	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	4.511	4.511	4.511	4.900	5.160	4.940
5MHz 16QAM	4.511	4.511	4.491	5.120	5.240	5.000
10MHz QPSK	8.982	8.942	8.942	9.920	9.960	9.760
10MHz 16QAM	8.942	8.942	8.942	9.680	9.800	9.560
15MHz QPSK	13.533	13.533	13.533	14.820	14.460	15.480
15MHz 16QAM	13.593	13.533	13.533	15.720	14.820	14.940
20MHz QPSK	17.964	18.044	17.964	19.680	18.960	19.120
20MHz 16QAM	17.884	18.044	17.964	19.600	19.840	19.440

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

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

**Result:** Pass, Please refer to the test plots of Spurious Emissions at Antenna Terminal.

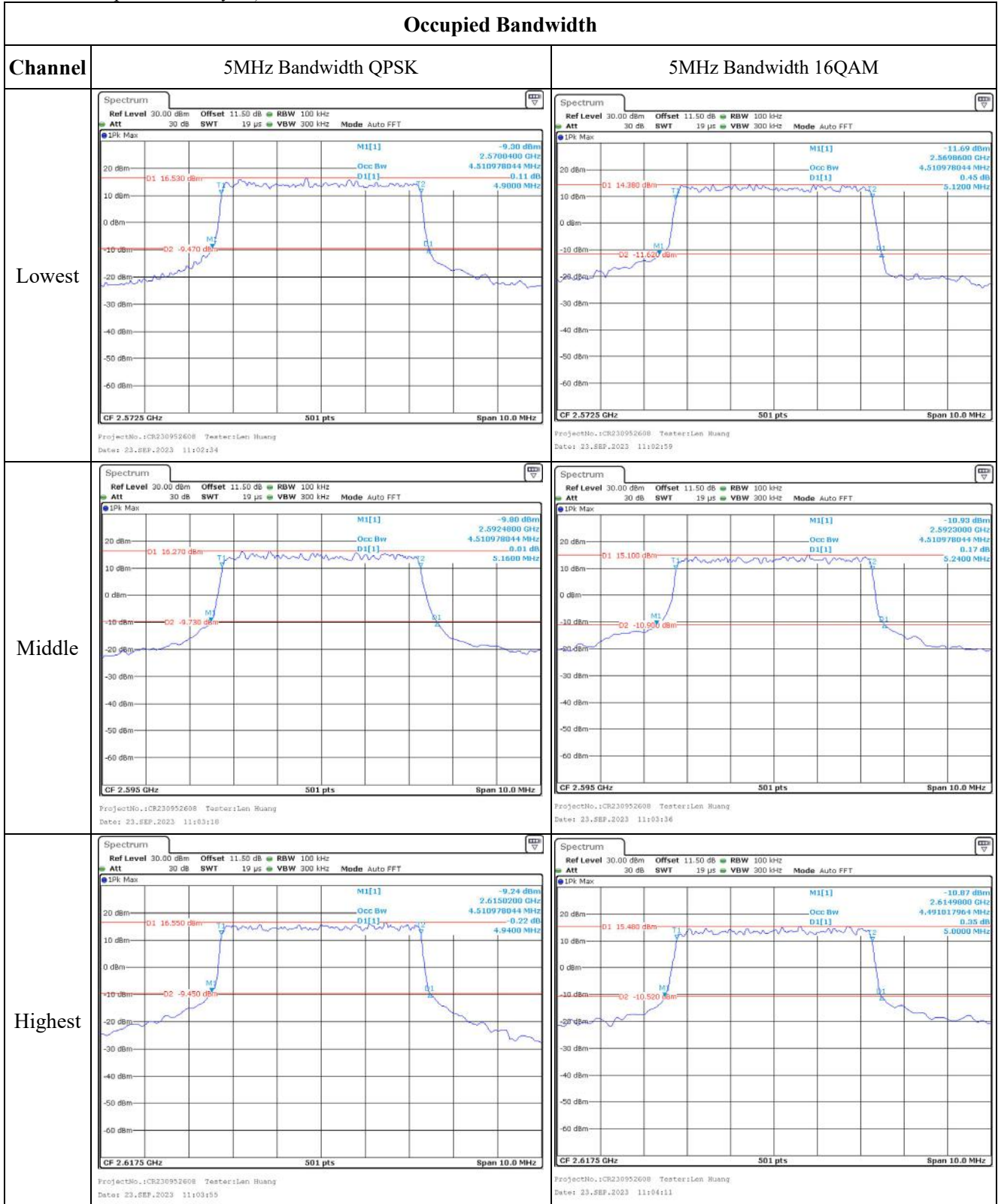
### FCC §2.1051, § 27.53:Out of band emission, Band Edge

**Result:** Pass, Please refer to the test plots of Out of band emission, Band Edge.

<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	7.4	2570.22304	2570.00000	2619.91645	2620.00000
	-20	7.4	2570.48810	2570.00000	2619.96847	2620.00000
	-10	7.4	2570.54841	2570.00000	2619.94045	2620.00000
	0	7.4	2570.58076	2570.00000	2619.94652	2620.00000
	10	7.4	2570.18819	2570.00000	2619.91363	2620.00000
	20	7.4	2570.44256	2570.00000	2619.95680	2620.00000
	30	7.4	2570.29386	2570.00000	2619.97726	2620.00000
	40	7.4	2570.13336	2570.00000	2619.92554	2620.00000
	50	7.4	2570.27313	2570.00000	2619.96172	2620.00000
Frequency Stability vs. Voltage	20	6.8	2570.39081	2570.00000	2619.94577	2620.00000
	20	8.4	2570.17131	2570.00000	2619.96658	2620.00000
					<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	7.4	2570.10658	2570.00000	2619.96213	2620.00000
	-20	7.4	2570.10942	2570.00000	2619.95163	2620.00000
	-10	7.4	2570.14392	2570.00000	2619.94786	2620.00000
	0	7.4	2570.39931	2570.00000	2619.90363	2620.00000
	10	7.4	2570.31937	2570.00000	2619.95027	2620.00000
	20	7.4	2570.22894	2570.00000	2619.92718	2620.00000
	30	7.4	2570.12902	2570.00000	2619.95494	2620.00000
	40	7.4	2570.11236	2570.00000	2619.94765	2620.00000
	50	7.4	2570.17665	2570.00000	2619.98512	2620.00000
Frequency Stability vs. Voltage	20	6.8	2570.18098	2570.00000	2619.93748	2620.00000
	20	8.4	2570.18022	2570.00000	2619.91518	2620.00000
					<b>Result:</b>	<b>Pass</b>

**Test Plots**(Note: The 11.5dB is the Insertion loss of the RF cable, Power Splitter and DC Block, which was offset into the Spectrum Analyzer):





Occupied Bandwidth

Channel	10MHz Bandwidth QPSK	10MHz Bandwidth 16QAM
Lowest	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23.SEP.2023 11:05:07</p>	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23.SEP.2023 11:05:33</p>
Middle	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23.SEP.2023 11:05:56</p>	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23.SEP.2023 11:06:24</p>
Highest	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23.SEP.2023 11:06:47</p>	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23.SEP.2023 11:07:09</p>

Occupied Bandwidth

Channel	15MHz Bandwidth QPSK	15MHz Bandwidth 16QAM
Lowest	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23.SEP.2023 11:09:10</p>	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23.SEP.2023 11:09:14</p>
Middle	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23.SEP.2023 11:09:10</p>	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23.SEP.2023 11:09:11</p>
Highest	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23.SEP.2023 11:09:10</p>	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23.SEP.2023 11:10:12</p>

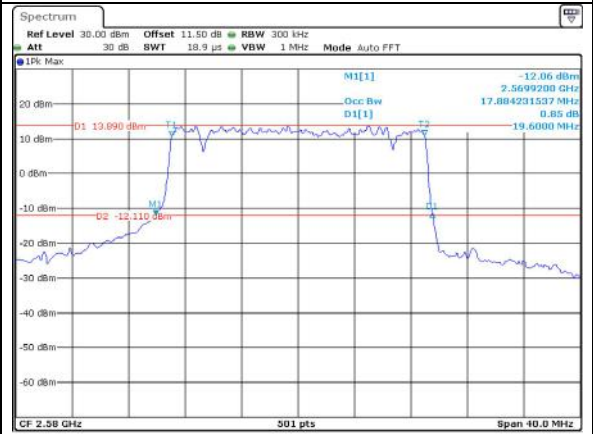
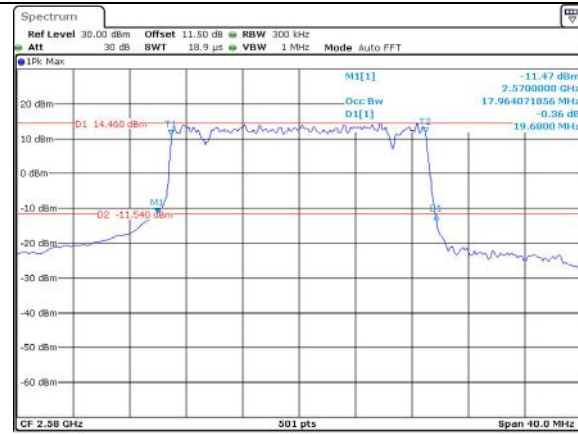
Occupied Bandwidth

Channel

20MHz Bandwidth QPSK

20MHz Bandwidth 16QAM

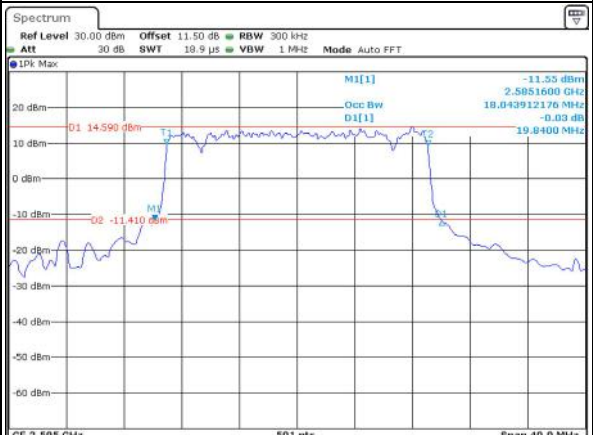
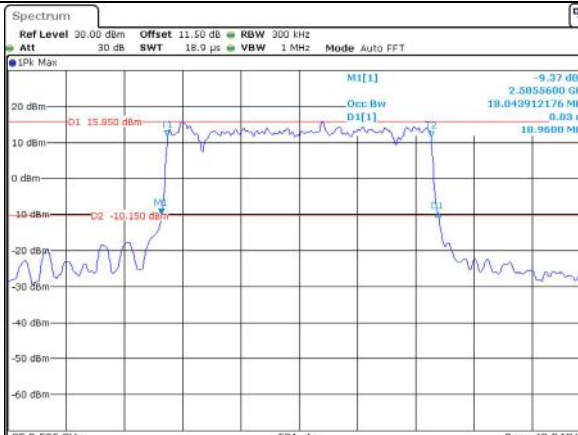
Lowest



ProjectNo.:CR230952608 Tester:Len Huang  
Date: 23,SEP,2023 11:11:09

ProjectNo.:CR230952608 Tester:Len Huang  
Date: 23,SEP,2023 11:11:43

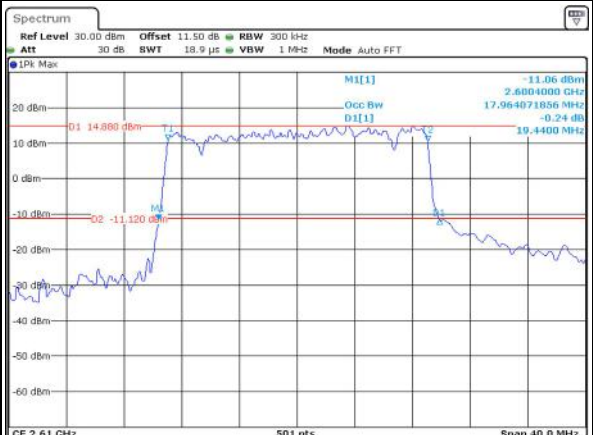
Middle



ProjectNo.:CR230952608 Tester:Len Huang  
Date: 23,SEP,2023 11:12:15

ProjectNo.:CR230952608 Tester:Len Huang  
Date: 23,SEP,2023 11:12:47

Highest



ProjectNo.:CR230952608 Tester:Len Huang  
Date: 23,SEP,2023 11:13:12

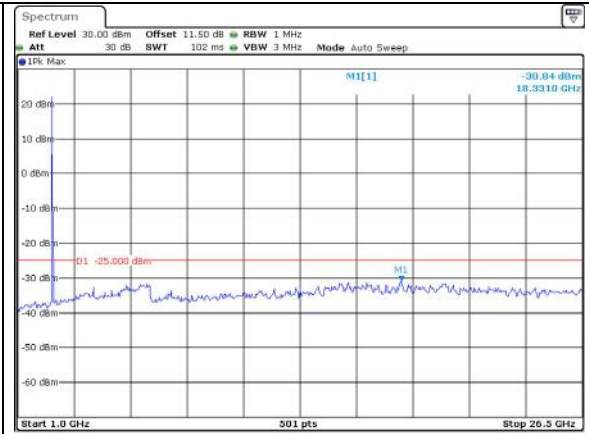
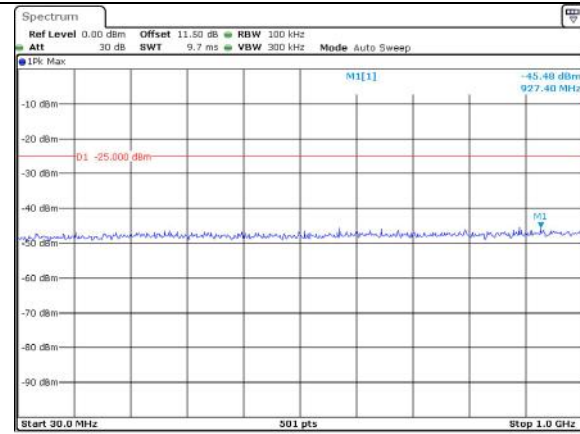
ProjectNo.:CR230952608 Tester:Len Huang  
Date: 23,SEP,2023 11:13:37

### Spurious Emissions at Antenna Terminal

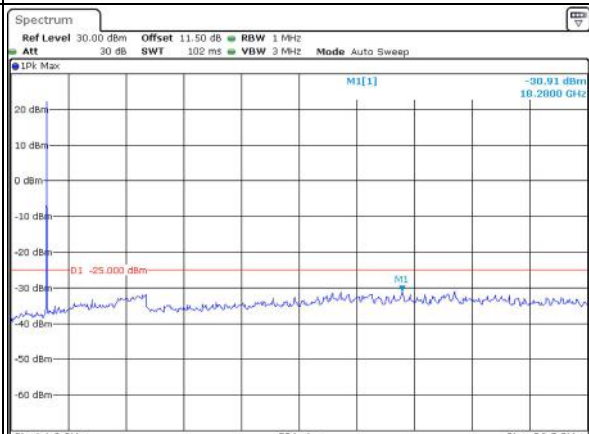
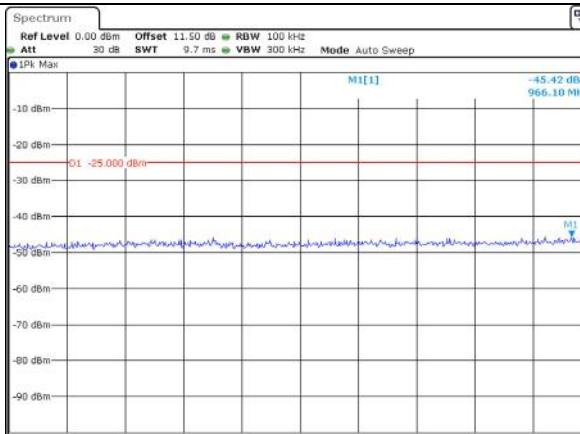
Channel

5MHz Bandwidth QPSK

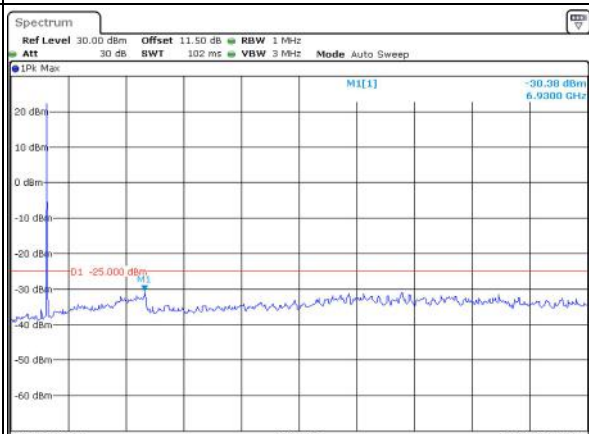
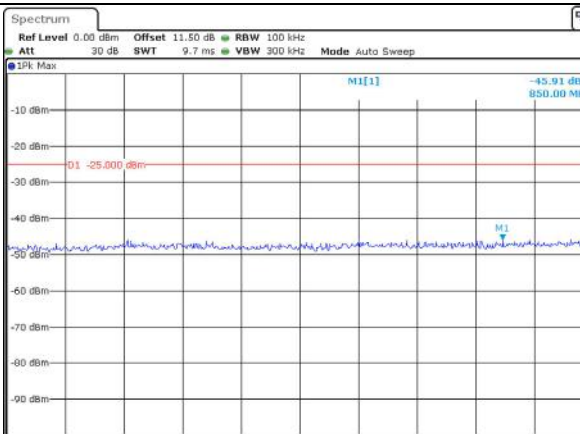
Lowest



Middle



Highest



Spurious Emissions at Antenna Terminal

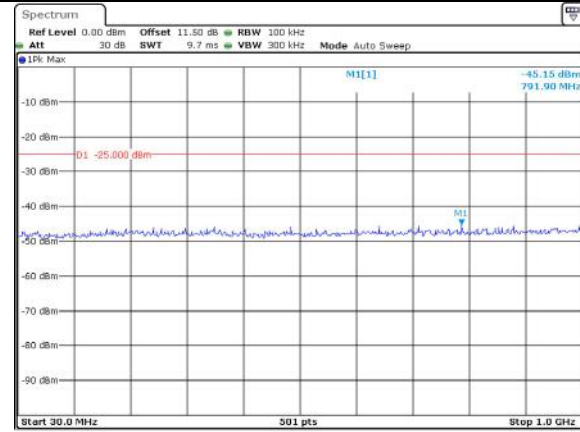
Channel	10MHz Bandwidth QPSK	
Lowest	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23_SEP.2023 12:21:06</p>	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23_SEP.2023 12:21:36</p>
Middle	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23_SEP.2023 12:22:10</p>	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23_SEP.2023 12:22:39</p>
Highest	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23_SEP.2023 12:23:07</p>	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23_SEP.2023 12:23:33</p>

Spurious Emissions at Antenna Terminal

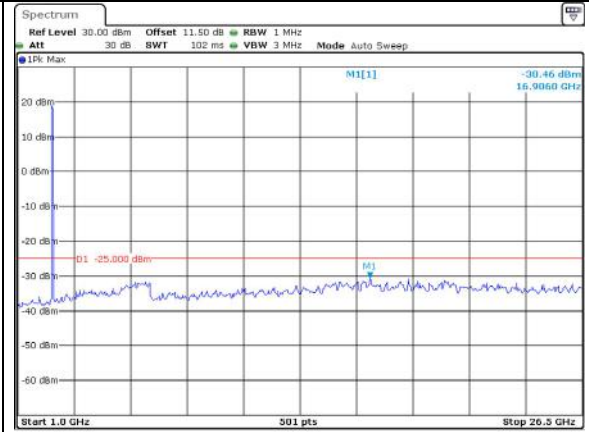
Channel

15MHz Bandwidth QPSK

Lowest

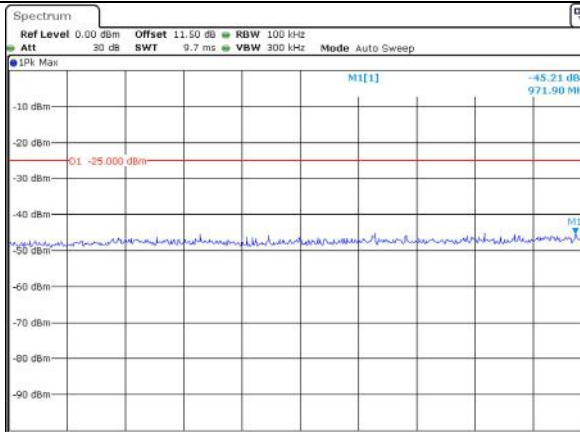


ProjectNo.:CR230952608 Tester:Len Huang  
Date: 23.SEP.2023 12:24:30

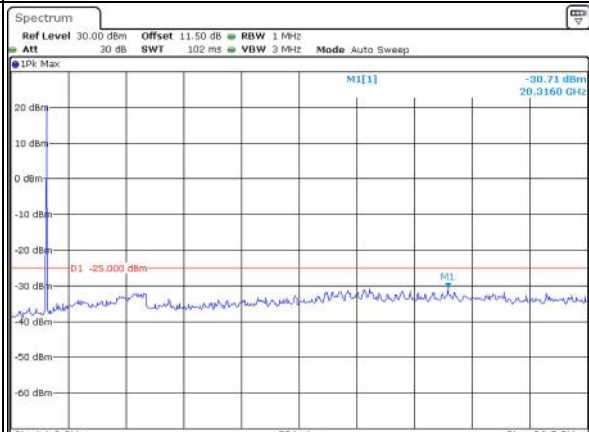


ProjectNo.:CR230952608 Tester:Len Huang  
Date: 23.SEP.2023 12:24:59

Middle

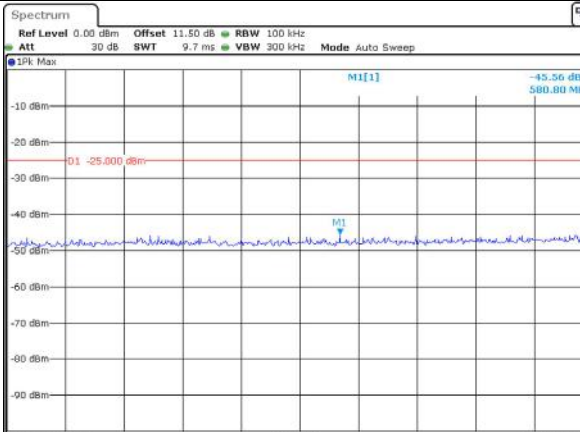


ProjectNo.:CR230952608 Tester:Len Huang  
Date: 23.SEP.2023 12:25:39

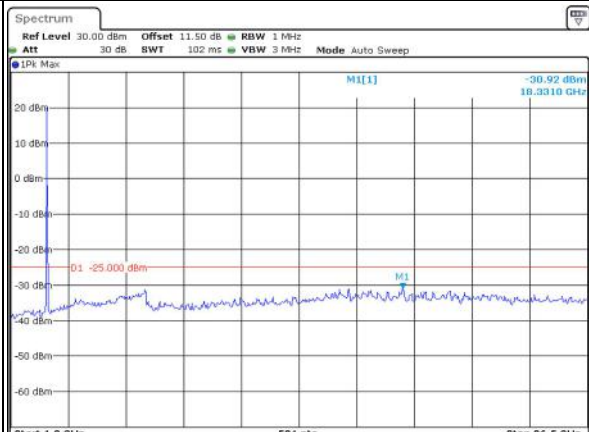


ProjectNo.:CR230952608 Tester:Len Huang  
Date: 23.SEP.2023 12:26:08

Highest



ProjectNo.:CR230952608 Tester:Len Huang  
Date: 23.SEP.2023 12:26:42



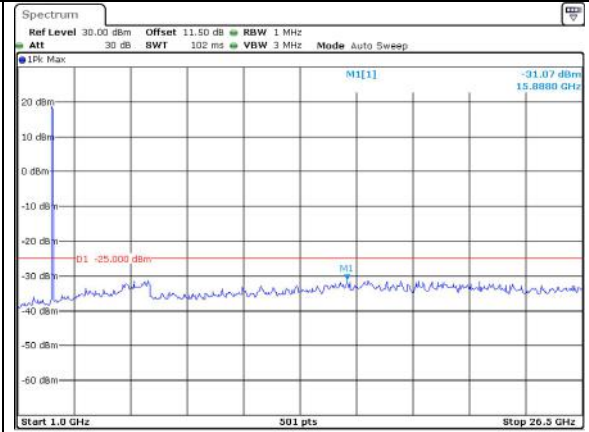
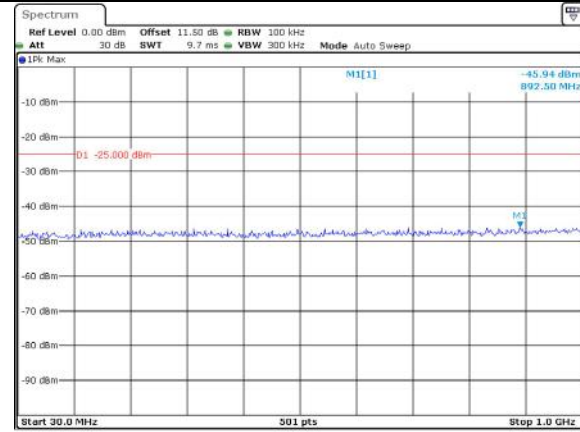
ProjectNo.:CR230952608 Tester:Len Huang  
Date: 23.SEP.2023 12:27:05

Spurious Emissions at Antenna Terminal

Channel

20MHz Bandwidth QPSK

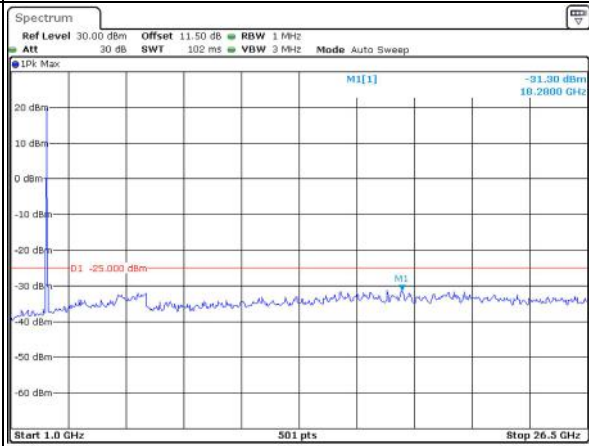
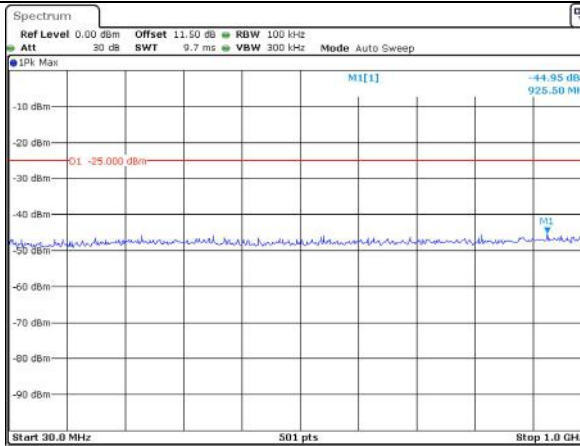
Lowest



ProjectNo.:CR230952608 Tester:Len Huang  
Date: 23.SEP.2023 12:27:59

ProjectNo.:CR230952608 Tester:Len Huang  
Date: 23.SEP.2023 12:28:25

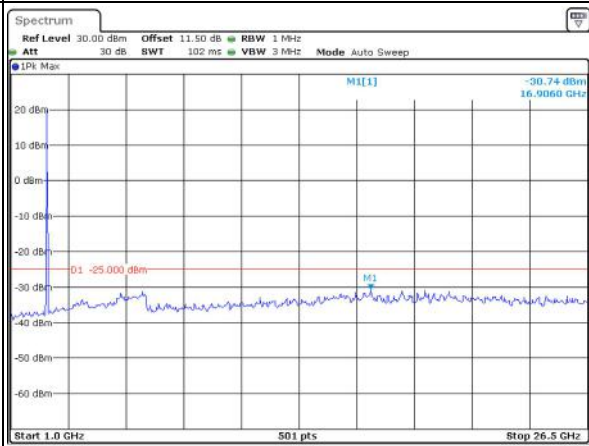
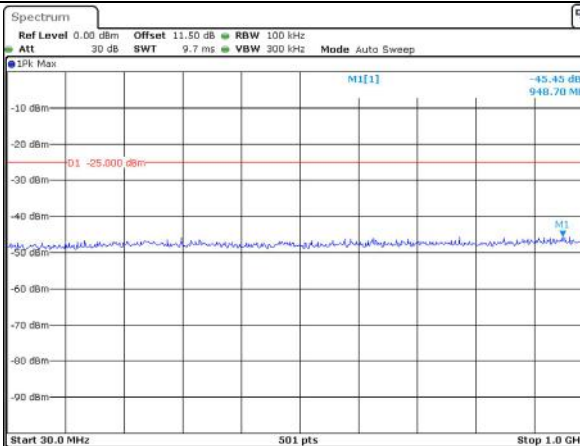
Middle



ProjectNo.:CR230952608 Tester:Len Huang  
Date: 23.SEP.2023 12:28:59

ProjectNo.:CR230952608 Tester:Len Huang  
Date: 23.SEP.2023 12:29:19

Highest



ProjectNo.:CR230952608 Tester:Len Huang  
Date: 23.SEP.2023 12:29:55

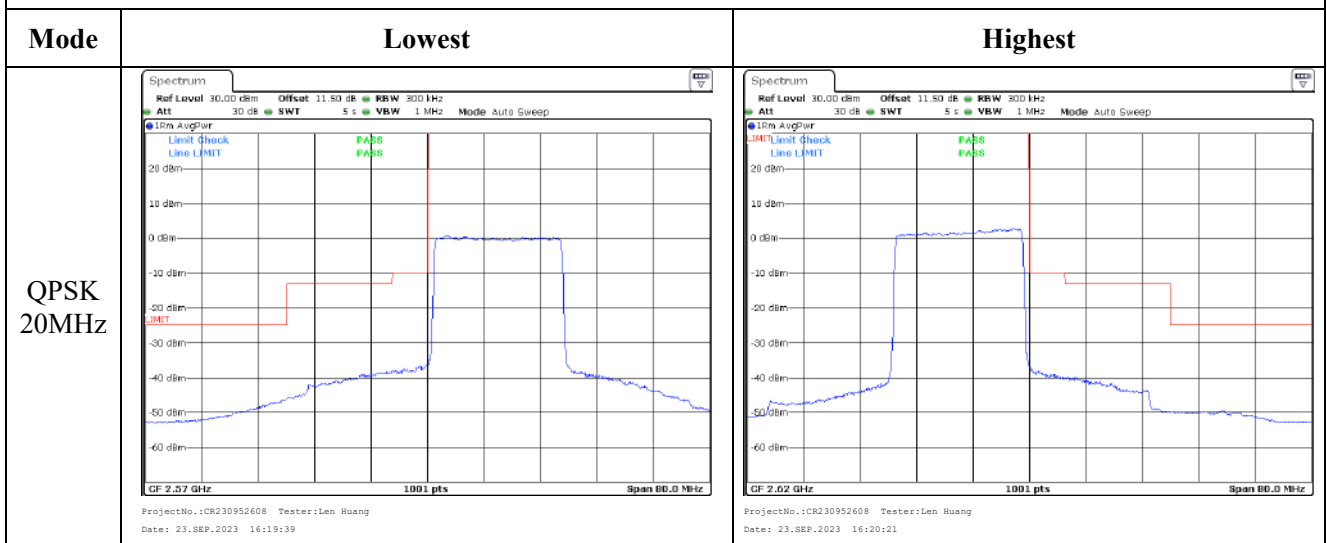
ProjectNo.:CR230952608 Tester:Len Huang  
Date: 23.SEP.2023 12:30:22

Out of band emission, Band Edge

Mode	Lowest	Highest
QPSK 5MHz	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23_SEP.2023 16:09:07</p>	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23_SEP.2023 16:09:54</p>
QPSK 10MHz	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23_SEP.2023 16:13:12</p>	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23_SEP.2023 16:14:05</p>
QPSK 15MHz	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23_SEP.2023 16:16:35</p>	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23_SEP.2023 16:17:10</p>



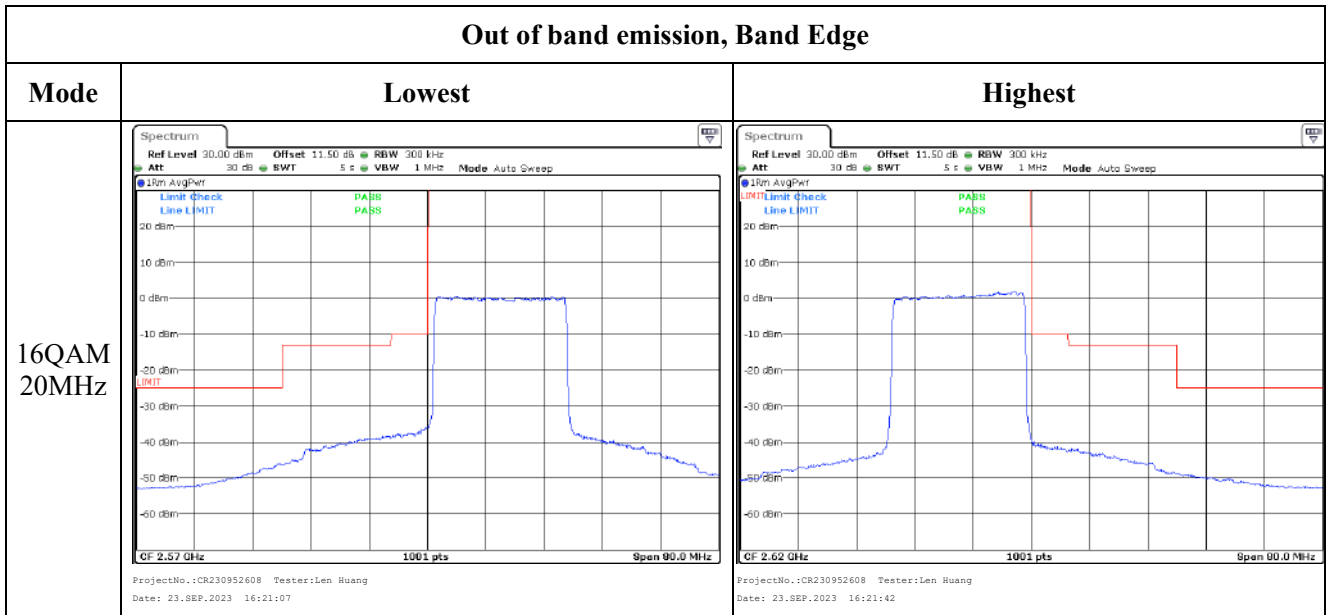
Out of band emission, Band Edge



Out of band emission, Band Edge

Mode	Lowest	Highest
16QAM 5MHz	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23_SEP.2023 16:10:29</p>	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23_SEP.2023 16:12:01</p>
16QAM 10MHz	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23_SEP.2023 16:14:40</p>	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23_SEP.2023 16:15:16</p>
16QAM 15MHz	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23_SEP.2023 16:17:45</p>	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23_SEP.2023 16:18:29</p>

Out of band emission, Band Edge



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

Serial Number:	2B0S-1	Test Date:	2023/9/23-2023/11/07
Test Site:	RF	Test Mode:	Transmitting
Tester:	Len Huang	Test Result:	Pass

**Environmental Conditions:**

Temperature: (°C)	24.5-25.8	Relative Humidity: (%)	46-57	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	FSV40	102259	2023/4/18	2024/4/17
R&S	Wideband Radio	CMW500	143458	2023/3/31	2024/3/30
zhuoxiang	Coaxial Cable	SMA-178	211001	Each time	N/A
YINSAIGE	Coaxial Cable	SS402	SJ0100001	Each time	N/A
BACL	TEMP&HUMI Test Chamber	BTH-150-40	30174	2023/3/31	2024/3/30
UNI-T	Multimeter	UT39A+	C210582554	2022/9/29	2023/9/28
UNI-T	Multimeter	UT39A+	C210582554	2023/9/28	2024/9/27
ZHAOXIN	DC Power Supply	RXN-6010D	21R6010D0912386	N/A	N/A
eastsheep	Coaxial Attenuator	2W-SMA-JK-18G	21060301	Each time	N/A

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

**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	22.5	22.5	22.5	20.69	24
	RB1#13	22.62	22.63	22.6		
	RB1#24	22.49	22.53	22.45		
	RB15#0	21.54	21.56	21.56		
	RB15#10	21.51	21.5	21.56		
	RB25#0	21.55	21.5	21.52		
5MHz 16QAM	RB1#0	21.53	21.69	21.45	19.87	24
	RB1#13	21.7	21.81	21.61		
	RB1#24	21.54	21.74	21.49		
	RB15#0	20.58	20.58	20.48		
	RB15#10	20.57	20.53	20.48		
	RB25#0	20.62	20.54	20.56		
10MHz QPSK	RB1#0	/	22.57	/	20.92	24
	RB1#25	/	22.86	/		
	RB1#49	/	22.76	/		
	RB25#0	/	21.58	/		
	RB25#25	/	21.51	/		
	RB50#0	/	21.56	/		
10MHz 16QAM	RB1#0	/	21.68	/	20.02	24
	RB1#25	/	21.96	/		
	RB1#49	/	21.76	/		
	RB25#0	/	20.64	/		
	RB25#25	/	20.56	/		
	RB50#0	/	20.6	/		

**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

$$\text{EIRP}=\text{Conducted Power(dBm)} - \text{Lc(dB)} + \text{Gt(dBi)}$$

<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	22.75	22.75	22.81	20.50	24
	RB1#13	22.89	22.9	22.9		
	RB1#24	22.78	22.76	22.79		
	RB15#0	21.78	21.82	21.81		
	RB15#10	21.81	21.87	21.86		
	RB25#0	21.84	21.84	21.84		
5MHz 16QAM	RB1#0	21.95	21.74	21.82	19.68	24
	RB1#13	22.08	21.86	21.95		
	RB1#24	21.96	21.77	21.81		
	RB15#0	20.78	20.74	20.83		
	RB15#10	20.86	20.79	20.91		
	RB25#0	20.79	20.85	20.9		
10MHz QPSK	RB1#0	/	22.82	/	20.73	24
	RB1#25	/	23.13	/		
	RB1#49	/	22.87	/		
	RB25#0	/	21.82	/		
	RB25#25	/	21.93	/		
	RB50#0	/	21.84	/		
10MHz 16QAM	RB1#0	/	21.7	/	19.63	24
	RB1#25	/	22.03	/		
	RB1#49	/	21.77	/		
	RB25#0	/	20.88	/		
	RB25#25	/	20.96	/		
	RB50#0	/	20.85	/		
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 $EIRP = \text{Conducted Power(dBm)} - Lc(\text{dB}) + Gt(\text{dBi})$						
					<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	3	10.005	29.99	38
		10M	3	10.005	29.99	38
	16QAM	5M	3	10.005	29.99	38
		10M	3	10.005	29.99	38
LTE Band 40 Upper	QPSK	5M	3	10.005	29.99	38
		10M	3	10.005	29.99	38
	16QAM	5M	3	10.005	29.99	38
		10M	2.995	10.005	29.94	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	4.511	4.511	4.511	5.180	5.220	5.120
5MHz 16QAM	4.531	4.531	4.511	5.220	5.360	5.160
10MHz QPSK	/	8.942	/	/	10.000	/
10MHz 16QAM	/	8.942	/	/	9.760	/

**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	4.531	4.511	4.511	5.480	5.180	5.300
5MHz 16QAM	4.511	4.511	4.531	5.220	5.140	5.260
10MHz QPSK	/	8.942	/	/	9.960	/
10MHz 16QAM	/	8.942	/	/	9.800	/

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

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

**FCC §2.1055, §27.54: Frequency Stability****LTE Band 40 Lower:**

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	7.4	2305.12363	2305.00000	2314.81580	2315.00000
	-20	7.4	2305.61733	2305.00000	2314.47840	2315.00000
	-10	7.4	2305.46965	2305.00000	2314.54002	2315.00000
	0	7.4	2305.25375	2305.00000	2314.09108	2315.00000
	10	7.4	2305.48405	2305.00000	2314.17645	2315.00000
	20	7.4	2305.39589	2305.00000	2314.32652	2315.00000
	30	7.4	2305.15694	2305.00000	2314.14339	2315.00000
	40	7.4	2305.48022	2305.00000	2314.42450	2315.00000
Frequency Stability vs. Voltage	20	6.8	2305.66414	2305.00000	2314.10422	2315.00000
	20	8.4	2305.18310	2305.00000	2314.29072	2315.00000
<b>Result:</b>					<b>Pass</b>	

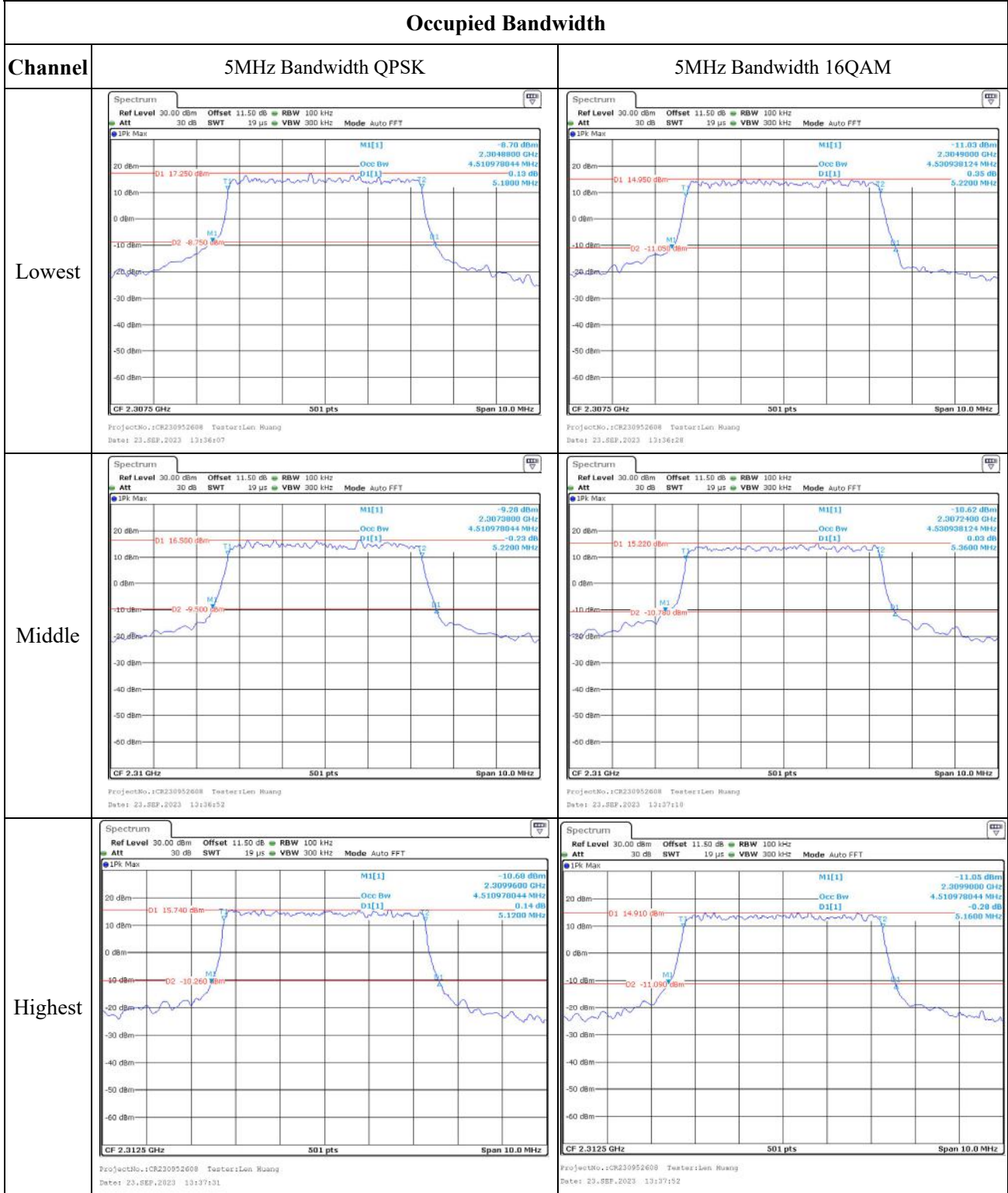
Test Mode:	10M 16QAM	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (°C)	Voltage (V <sub>DC</sub> )	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	7.4	2305.95964	2305.00000	2314.24197	2315.00000
	-20	7.4	2305.94457	2305.00000	2314.60141	2315.00000
	-10	7.4	2305.86756	2305.00000	2314.76605	2315.00000
	0	7.4	2305.03872	2305.00000	2314.89458	2315.00000
	10	7.4	2305.77990	2305.00000	2314.68962	2315.00000
	20	7.4	2305.67642	2305.00000	2314.20226	2315.00000
	30	7.4	2305.35525	2305.00000	2314.38466	2315.00000
	40	7.4	2305.79257	2305.00000	2314.01701	2315.00000
Frequency Stability vs. Voltage	20	6.8	2305.97508	2305.00000	2314.05924	2315.00000
	20	8.4	2305.85738	2305.00000	2314.84480	2315.00000
<b>Result:</b>					<b>Pass</b>	



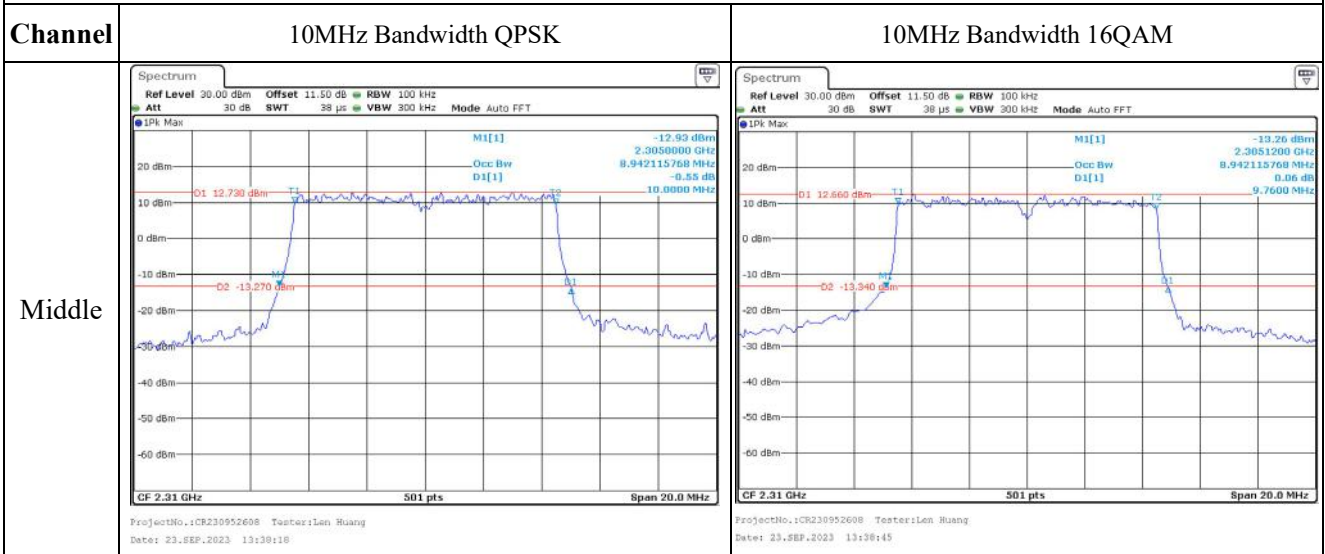
<b>LTE Band 40 Upper:</b>						
Test Mode:	10M QPSK	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (°C)	Voltage (V <sub>DC</sub> )	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	7.4	2350.22448	2350.00000	2359.13551	2360.00000
	-20	7.4	2350.97925	2350.00000	2359.07893	2360.00000
	-10	7.4	2350.73964	2350.00000	2359.49480	2360.00000
	0	7.4	2350.82442	2350.00000	2359.42736	2360.00000
	10	7.4	2350.91697	2350.00000	2359.63843	2360.00000
	20	7.4	2350.98876	2350.00000	2359.69244	2360.00000
	30	7.4	2350.00267	2350.00000	2359.89653	2360.00000
	40	7.4	2350.91707	2350.00000	2359.47194	2360.00000
Frequency Stability vs. Voltage	20	6.8	2350.95346	2350.00000	2359.73227	2360.00000
	20	8.4	2350.44045	2350.00000	2359.15454	2360.00000
	<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	7.4	2350.46646	2350.00000	2359.85052	2360.00000
	-20	7.4	2350.09562	2350.00000	2359.88609	2360.00000
	-10	7.4	2350.96891	2350.00000	2359.73734	2360.00000
	0	7.4	2350.70431	2350.00000	2359.83936	2360.00000
	10	7.4	2350.40173	2350.00000	2359.78227	2360.00000
	20	7.4	2350.90675	2350.00000	2359.89480	2360.00000
	30	7.4	2350.56471	2350.00000	2359.43636	2360.00000
	40	7.4	2350.91676	2350.00000	2359.80101	2360.00000
Frequency Stability vs. Voltage	20	6.8	2350.91567	2350.00000	2359.74493	2360.00000
	20	8.4	2350.78237	2350.00000	2359.82853	2360.00000
	<b>Result:</b>					<b>Pass</b>

**Test Plots** (Note: The 11.5 dB is the Insertion loss of the RF cable and Power Splitter, which was offset into the Spectrum Analyzer):  
2305-2315 MHz:



Occupied Bandwidth

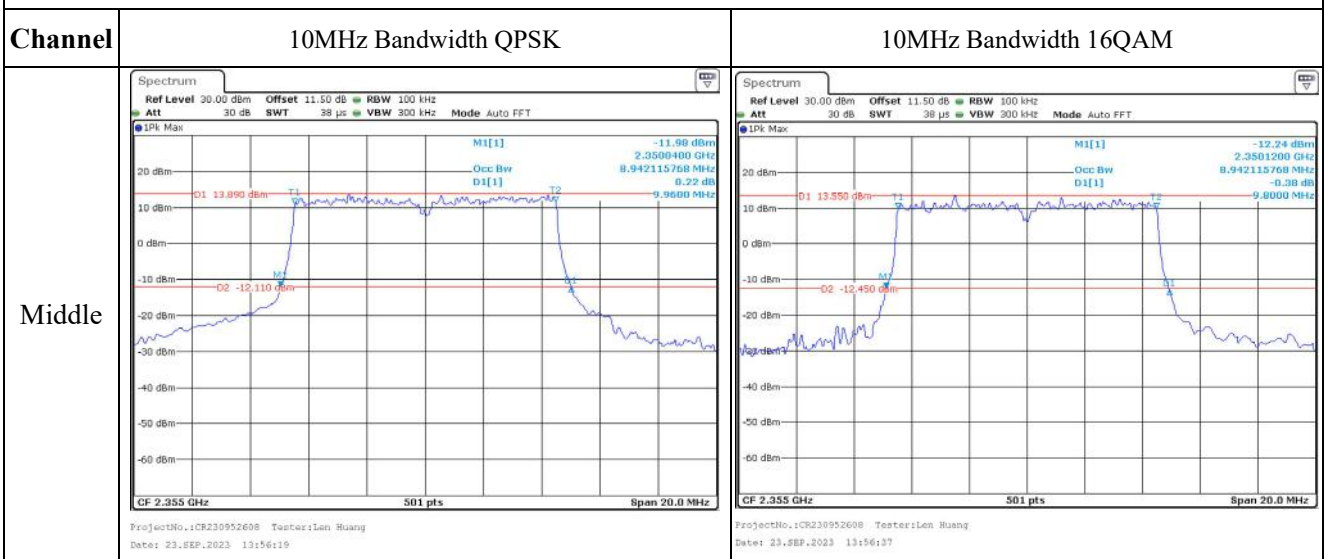


2350-2360 MHz:

Occupied Bandwidth

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

**Occupied Bandwidth**



2305-2315 MHz:

**Spurious Emissions at Antenna Terminal**

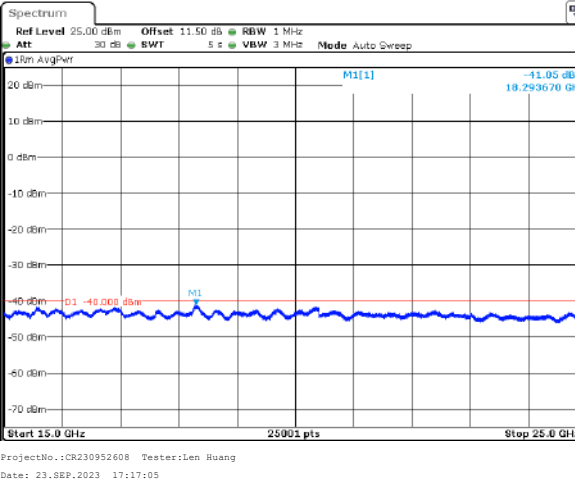
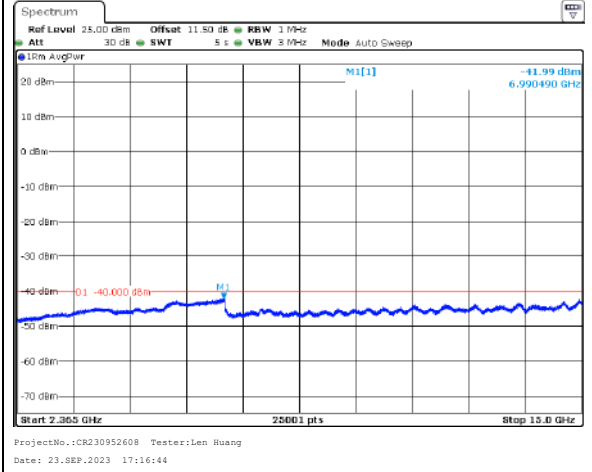
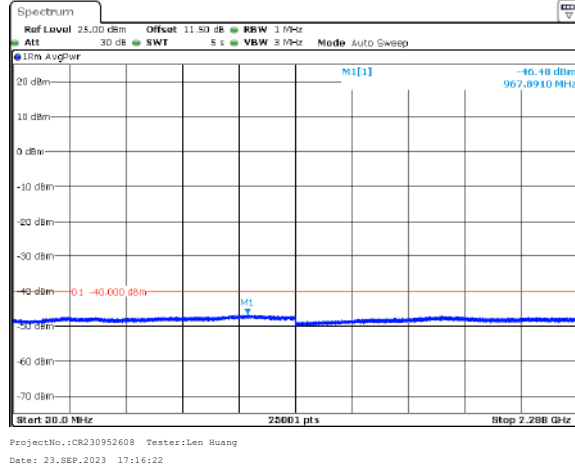
Channel	5MHz Bandwidth QPSK	
Lowest		

Spurious Emissions at Antenna Terminal

Channel

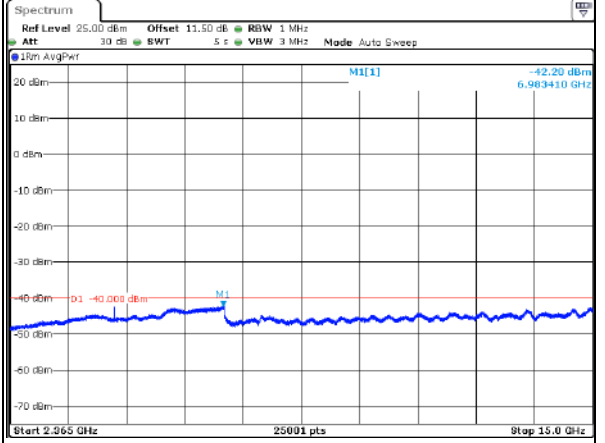
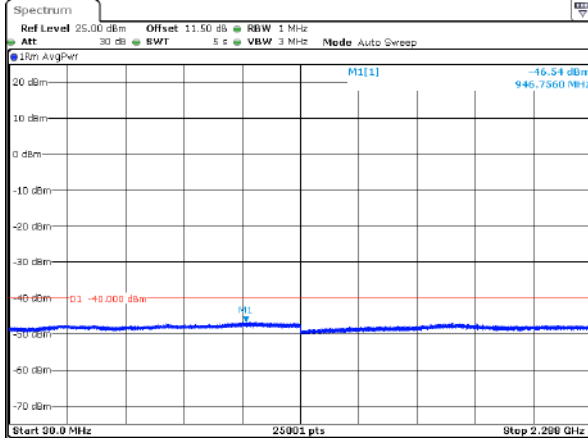
5MHz Bandwidth QPSK

Middle



### Spurious Emissions at Antenna Terminal

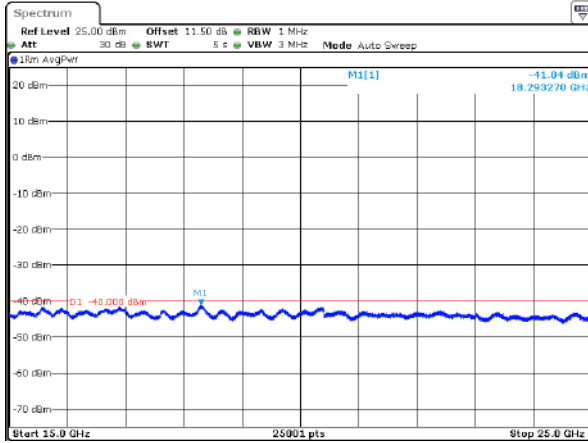
#### 5MHz Bandwidth QPSK



ProjectNo.:CR230952608 Tester:Len Ruang  
Date: 23.SEP.2023 17:17:53

ProjectNo.:CR230952608 Tester:Len Ruang  
Date: 23.SEP.2023 17:18:13

Highest



ProjectNo.:CR230952608 Tester:Len Ruang  
Date: 23.SEP.2023 17:18:35

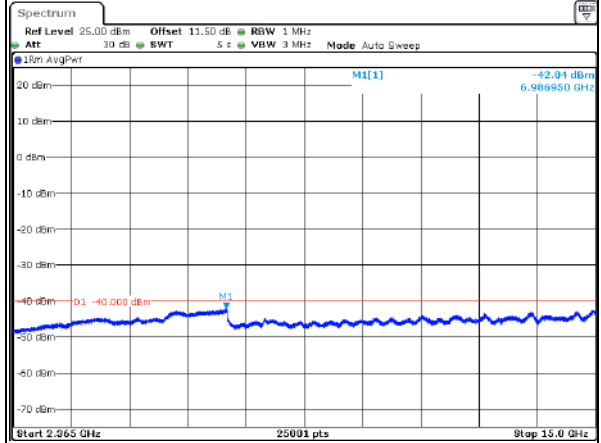
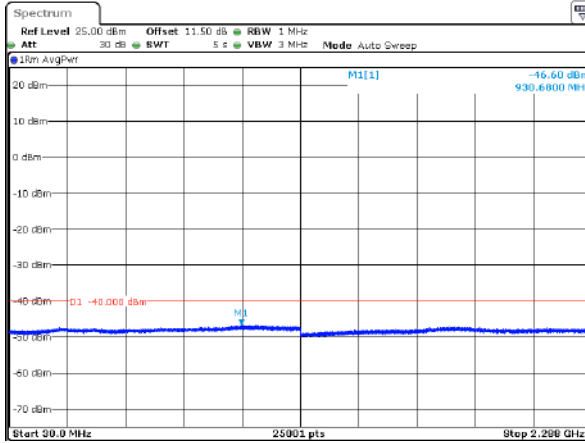


Spurious Emissions at Antenna Terminal

Channel

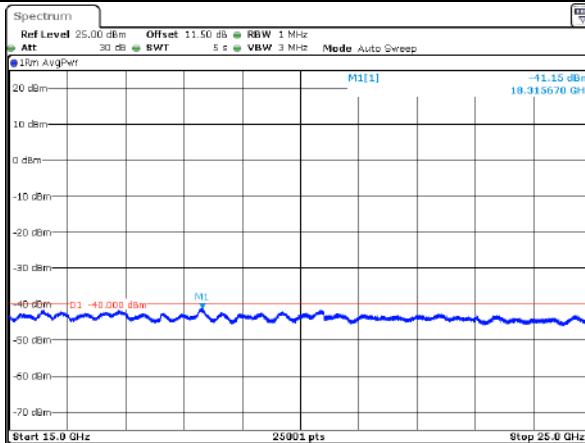
10MHz Bandwidth QPSK

Middle



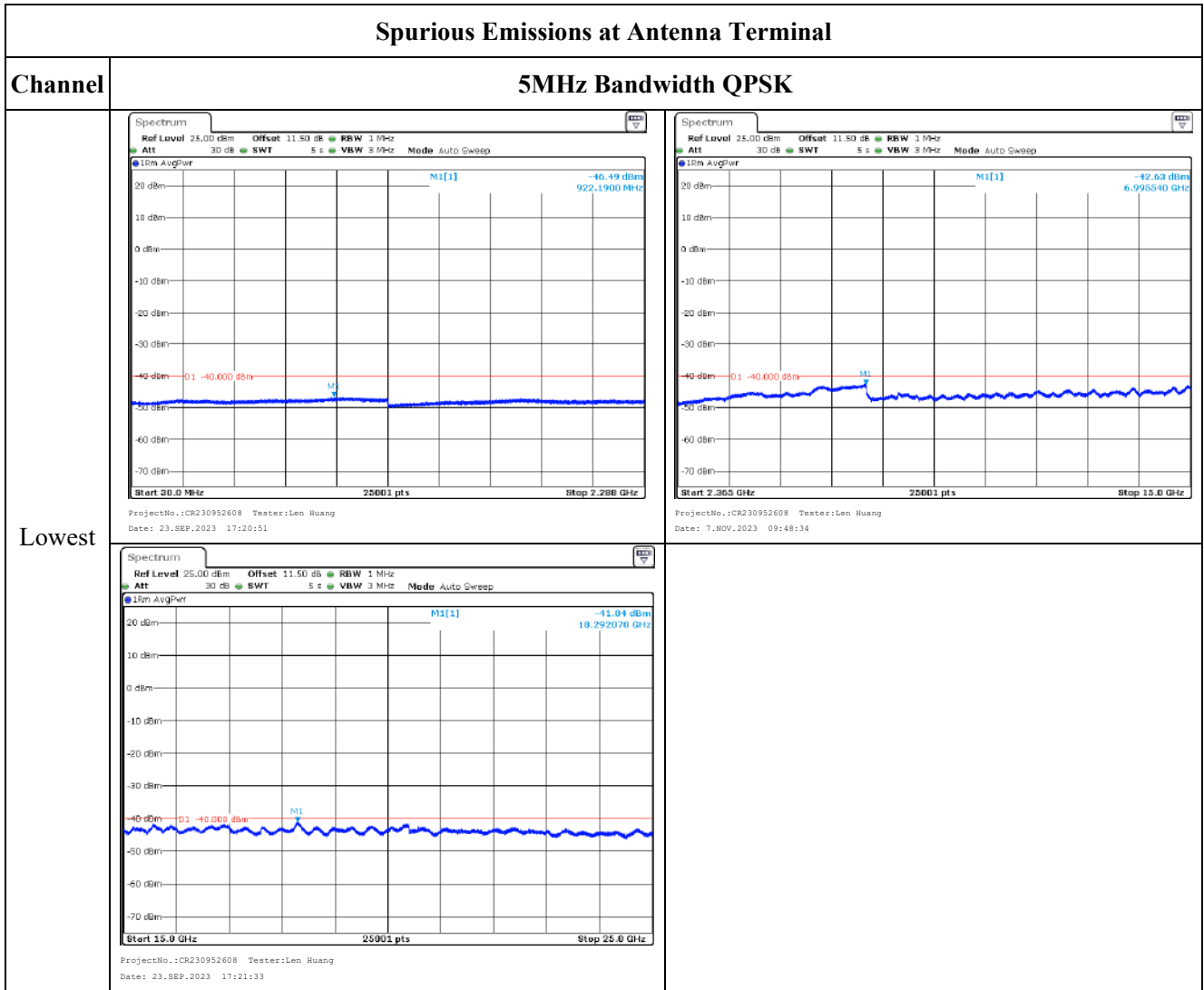
ProjectNo.:CR230952608 Tester:Len Ruang  
Date: 23.SEP.2023 17:19:10

ProjectNo.:CR230952608 Tester:Len Ruang  
Date: 23.SEP.2023 17:19:32



ProjectNo.:CR230952608 Tester:Len Ruang  
Date: 23.SEP.2023 17:19:53

2350-2360 MHz:



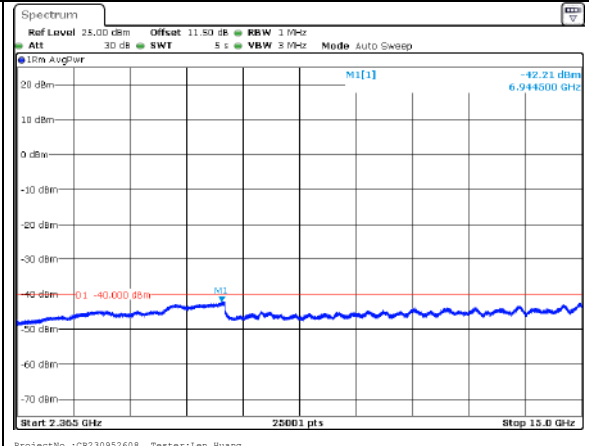
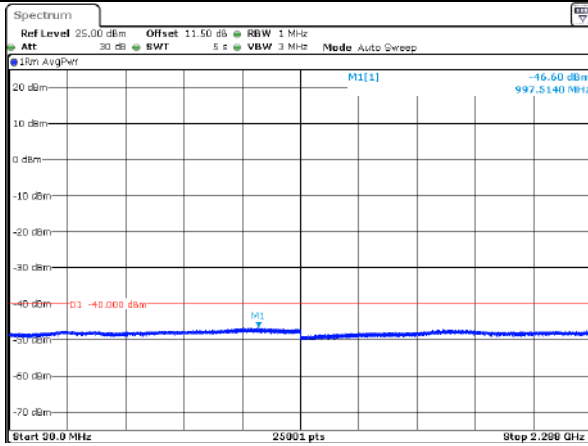
Spurious Emissions at Antenna Terminal

Channel	5MHz Bandwidth QPSK	
Middle	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23.SEP.2023 17:22:11</p>	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 7.NOV.2023 09:48:54</p>
	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23.SEP.2023 17:22:53</p>	

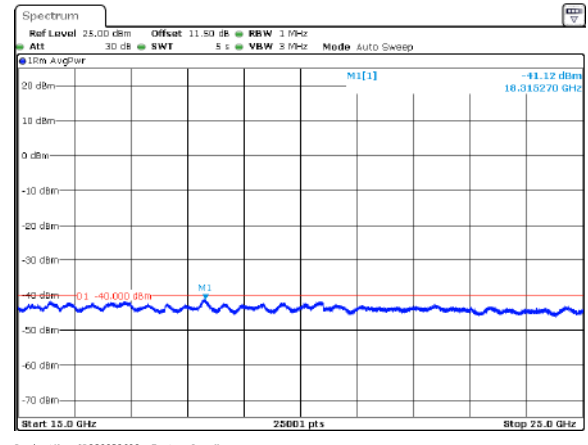
Spurious Emissions at Antenna Terminal

Channel

5MHz Bandwidth QPSK



Highest

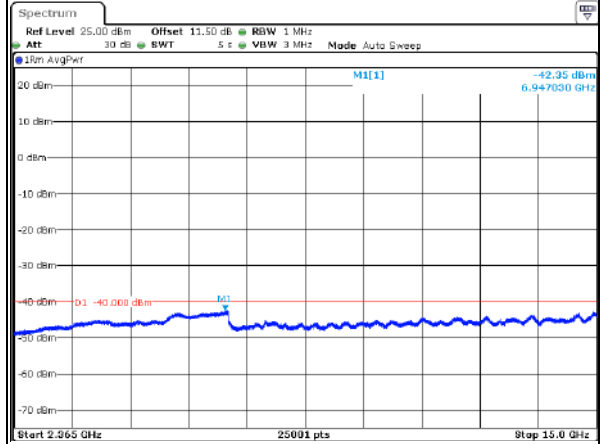
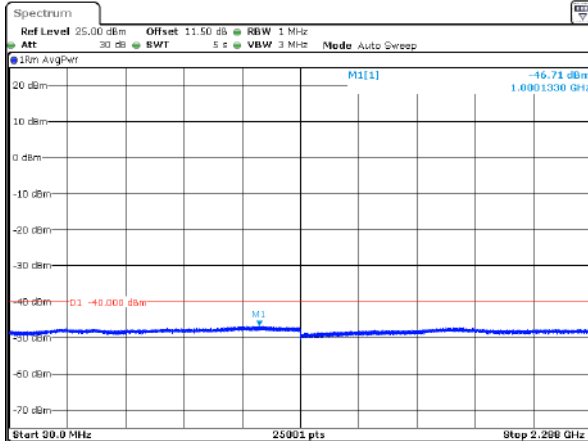


Spurious Emissions at Antenna Terminal

Channel

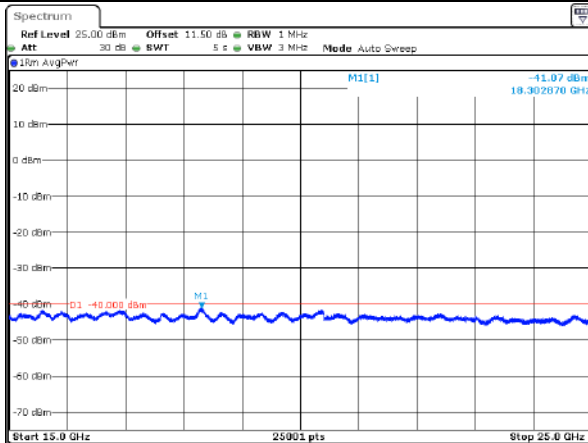
10MHz Bandwidth QPSK

Middle



ProjectNo.:CR230952608 Tester:Len Ruang  
Date: 23.SEP.2023 17:24:55

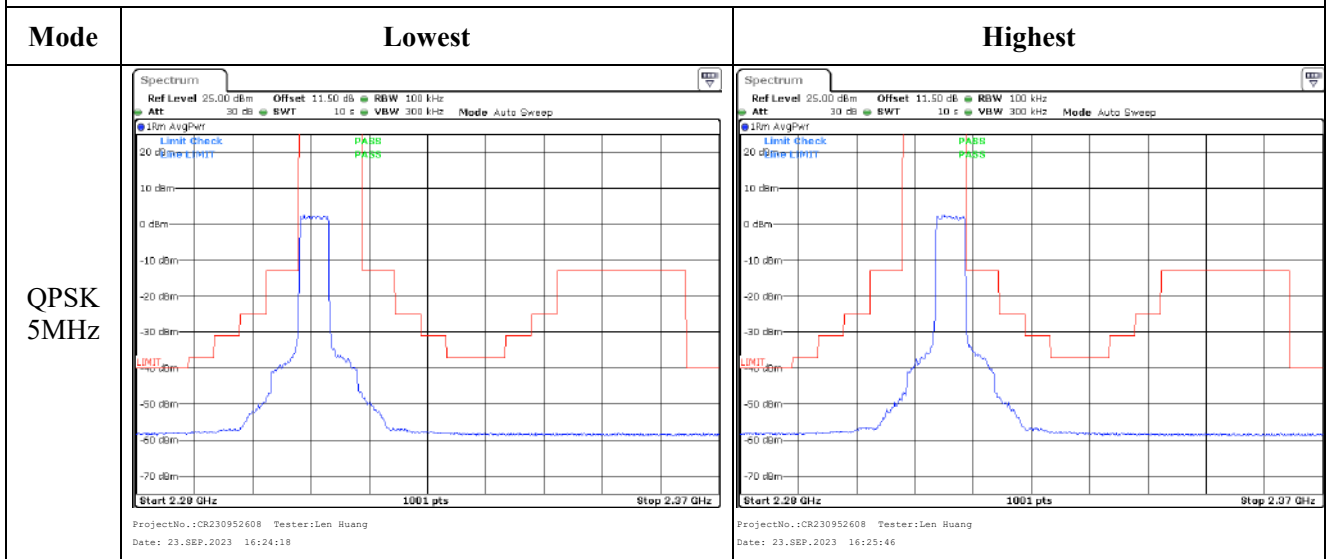
ProjectNo.:CR230952608 Tester:Len Ruang  
Date: 7.NOV.2023 09:49:16



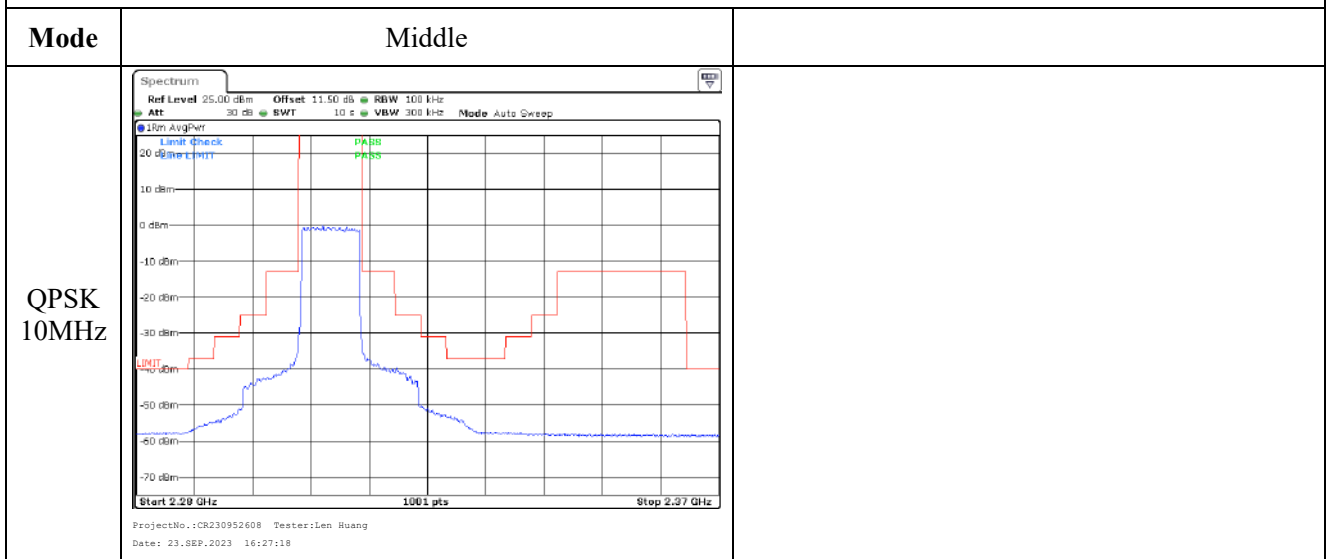
ProjectNo.:CR230952608 Tester:Len Ruang  
Date: 23.SEP.2023 17:25:39

2305-2315 MHz:

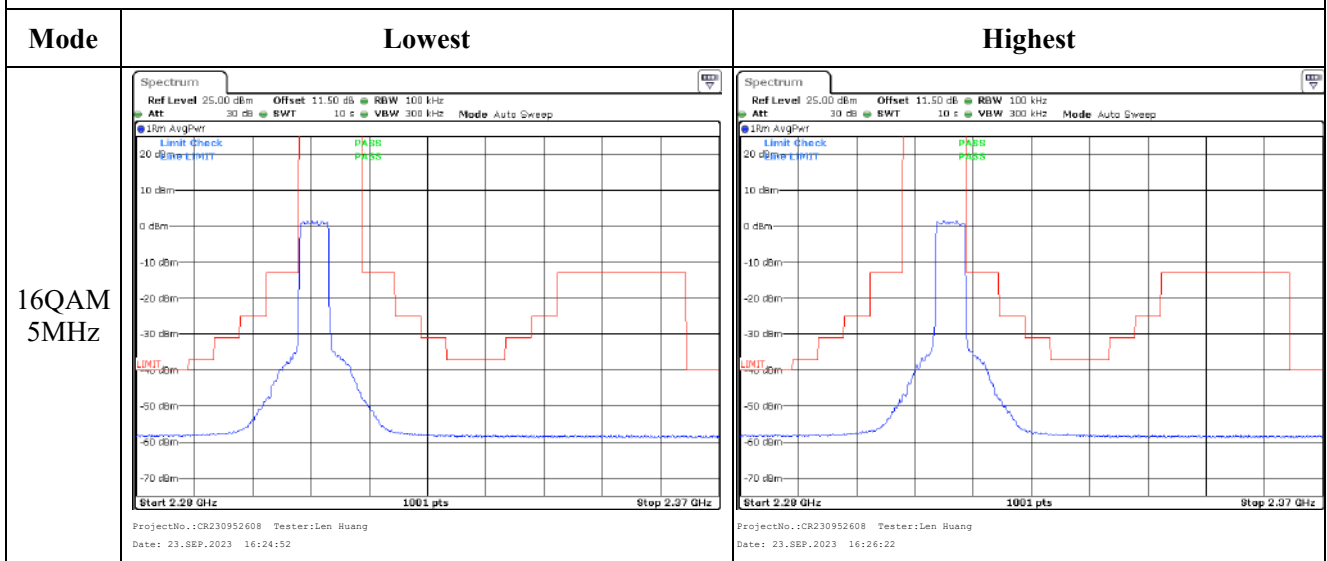
Out of band emission, Band Edge



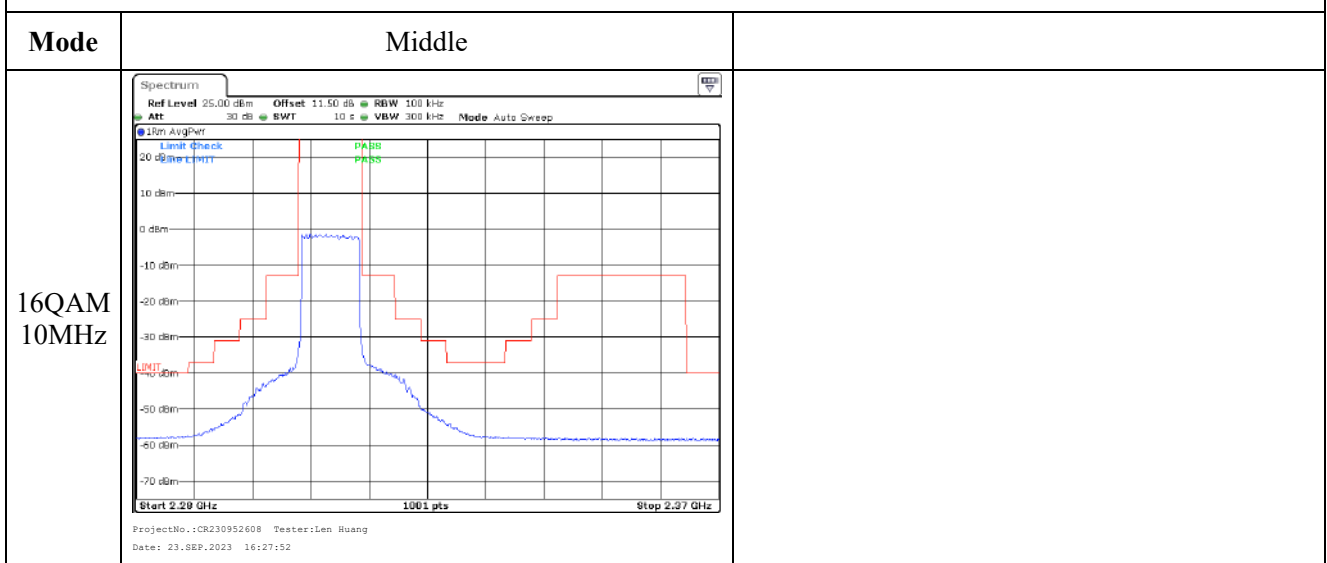
Out of band emission, Band Edge



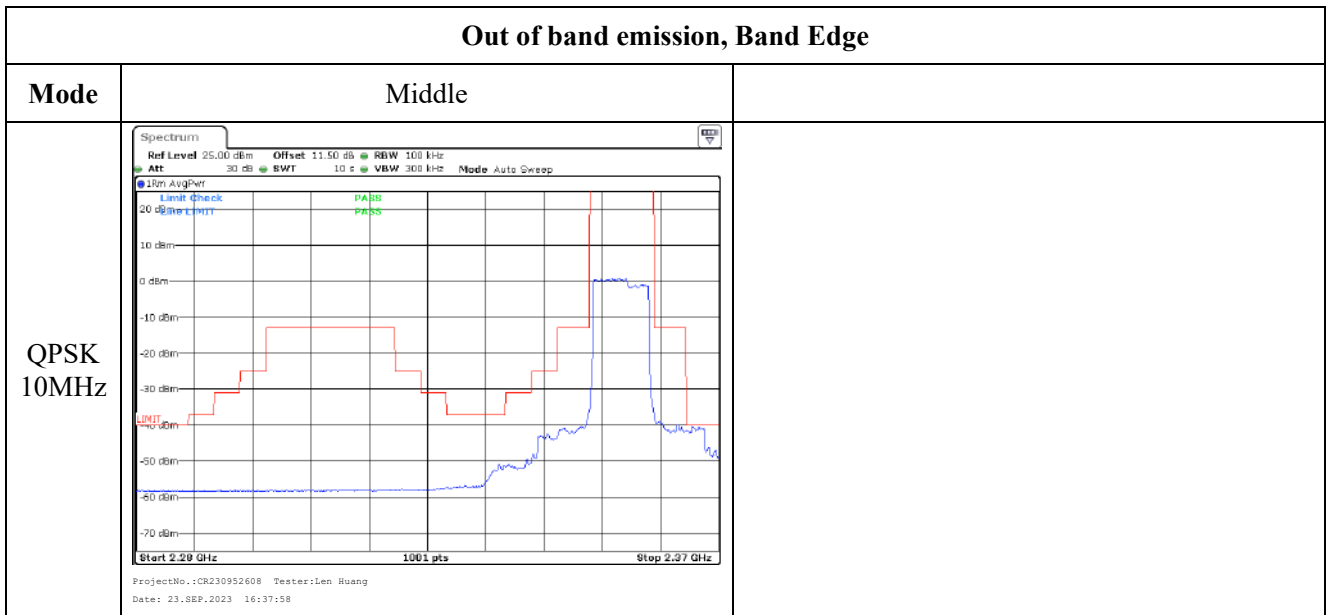
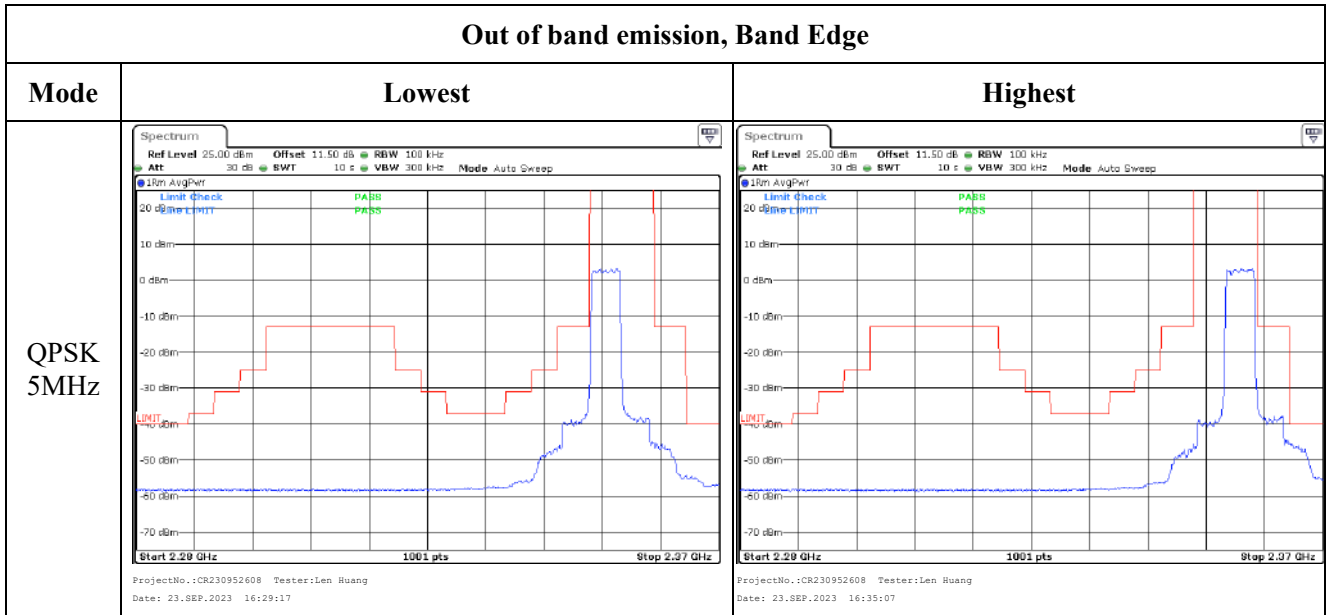
Out of band emission, Band Edge



Out of band emission, Band Edge

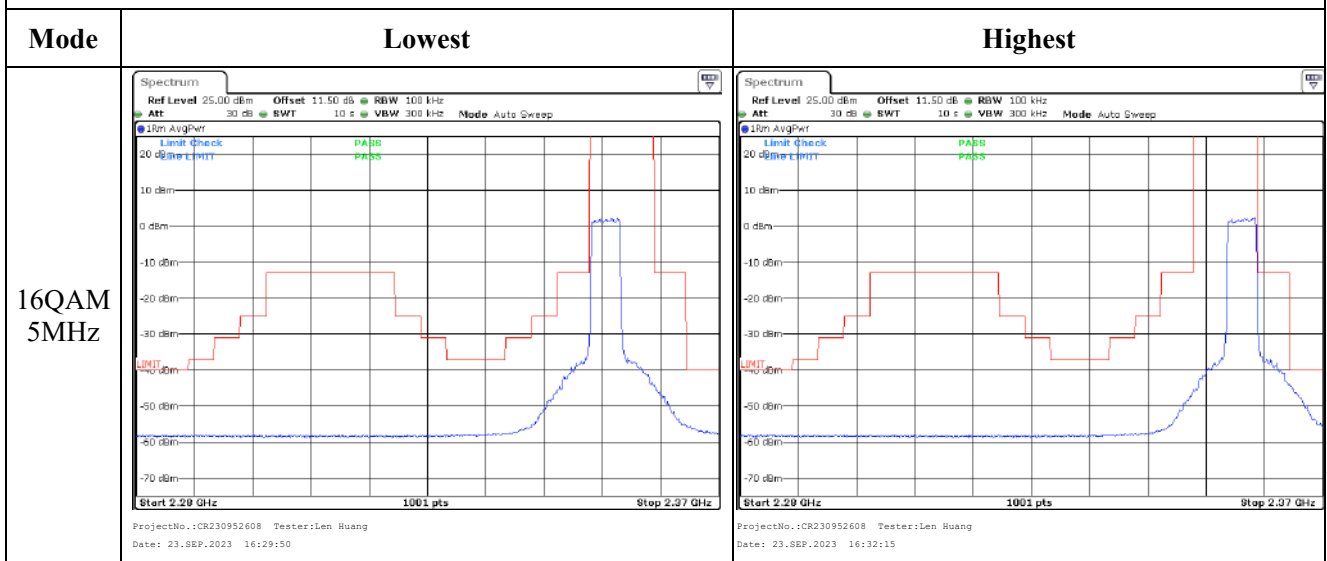


2350-2360 MHz:

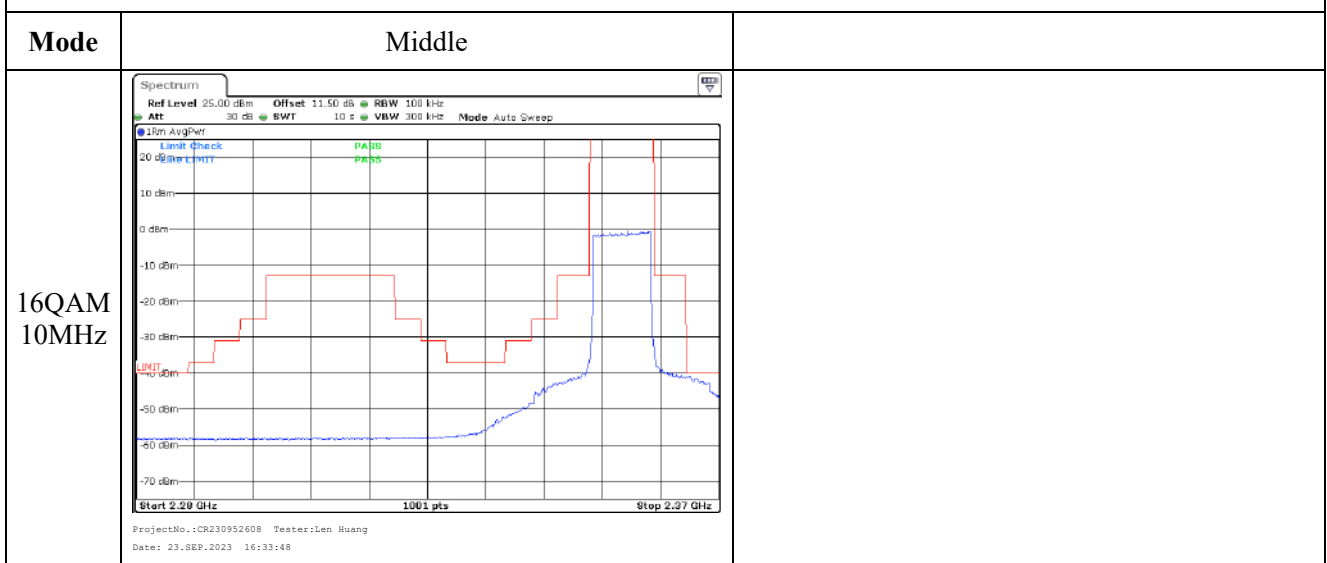




Out of band emission, Band Edge

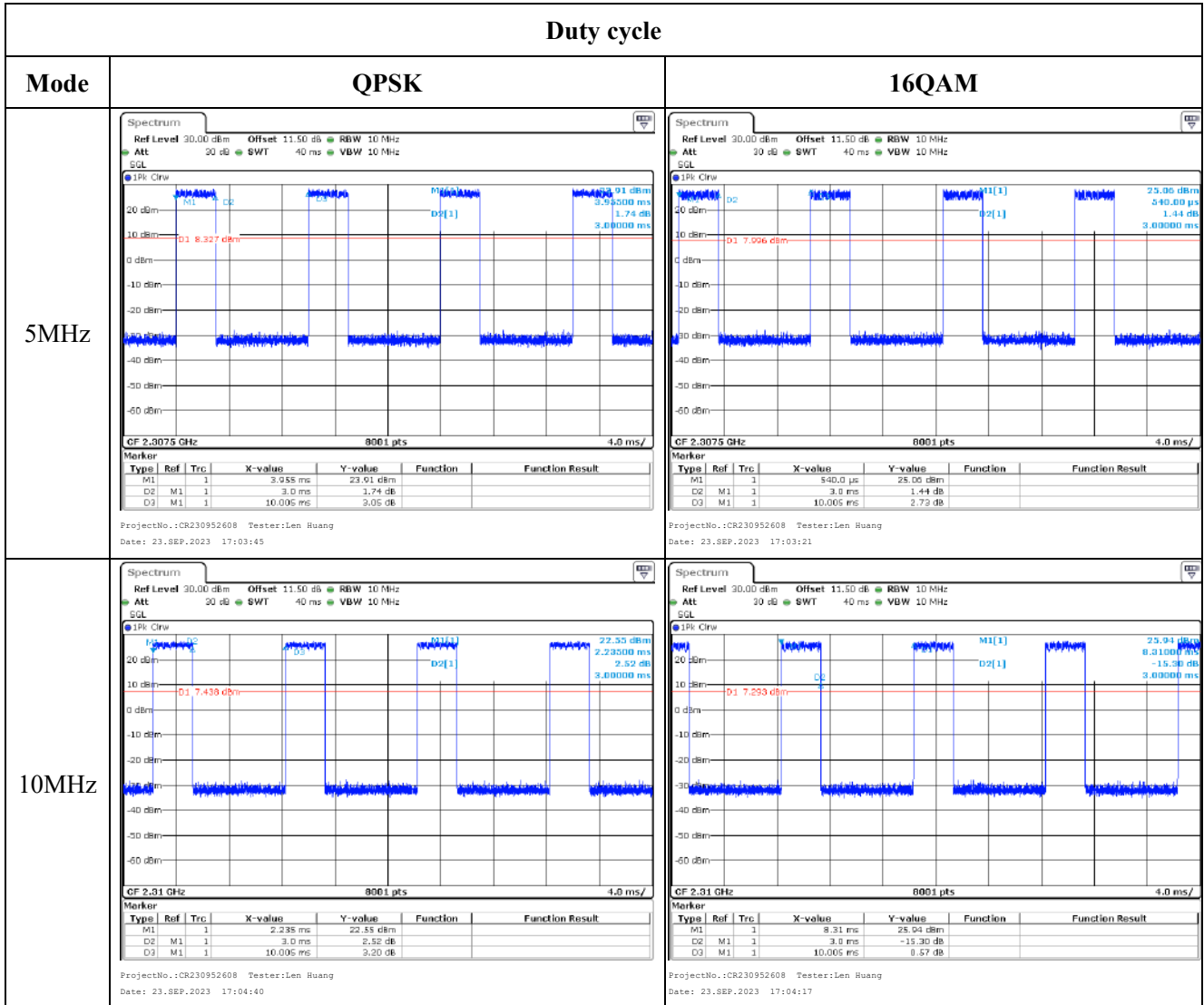


Out of band emission, Band Edge

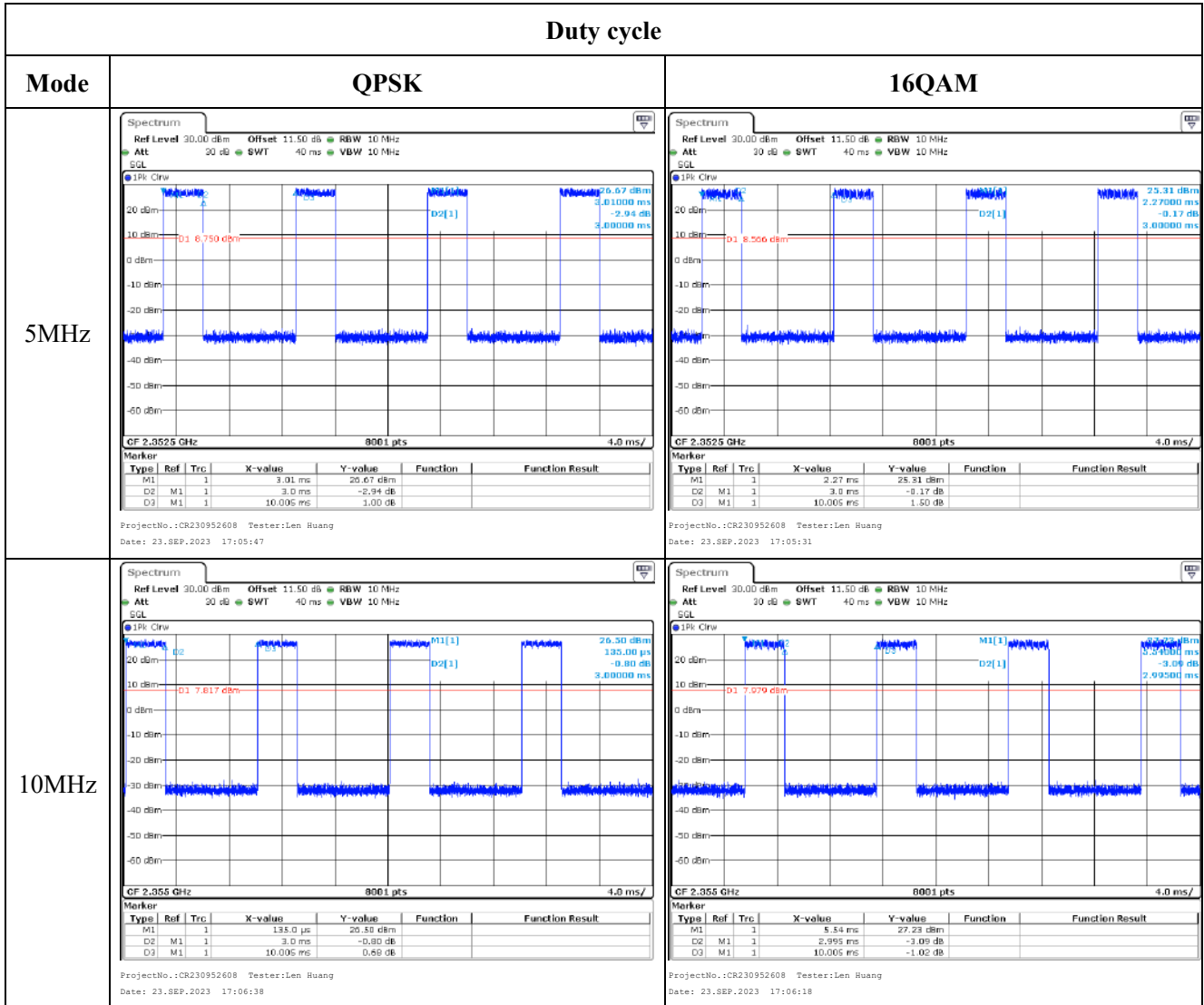


2305-2315 MHz:

Duty cycle



2350-2360 MHz:



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

Serial Number:	2B0S-1	Test Date:	2023/9/23-2023/9/26
Test Site:	RF	Test Mode:	Transmitting
Tester:	Len Huang	Test Result:	Pass

**Environmental Conditions:**

Temperature: (°C)	24.5-25.8	Relative Humidity: (%)	46-57	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	FSV40	102259	2023/4/18	2024/4/17
R&S	Wideband Radio	CMW500	143458	2023/3/31	2024/3/30
zhuoxiang	Coaxial Cable	SMA-178	211001	Each time	N/A
YINSAIGE	Coaxial Cable	SS402	SJ0100001	Each time	N/A
BACL	TEMP&HUMI Test Chamber	BTH-150-40	30174	2023/3/31	2024/3/30
UNI-T	Multimeter	UT39A+	C210582554	2022/9/29	2023/9/28
ZHAOXIN	DC Power Supply	RXN-6010D	21R6010D0912386	N/A	N/A
eastsheep	Coaxial Attenuator	2W-SMA-JK-18G	21060301	Each time	N/A

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

**Test Frequency for Each Mode:**

Operation Bandwidth	Lowest Frequency (MHz)	Middle Frequency (MHz)	Highest Frequency (MHz)
5MHz	2537.5	2595	2652.5
10MHz	2540	2595	2650
15MHz	2542.5	2595	2647.5
20MHz	2545	2595	2645

**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	22.33	22.37	22.46	20.91	33
	RB1#13	22.45	22.49	22.5		
	RB1#24	22.3	22.36	22.42		
	RB15#0	21.3	21.4	21.58		
	RB15#10	21.4	21.46	21.5		
	RB25#0	21.35	21.45	21.5		
5MHz 16QAM	RB1#0	21.39	21.62	21.42	20.1	33
	RB1#13	21.46	21.69	21.53		
	RB1#24	21.35	21.59	21.39		
	RB15#0	20.39	20.44	20.48		
	RB15#10	20.46	20.49	20.41		
	RB25#0	20.43	20.39	20.52		
10MHz QPSK	RB1#0	22.45	22.53	22.52	21.2	33
	RB1#25	22.73	22.79	22.73		
	RB1#49	22.35	22.46	22.45		
	RB25#0	21.28	21.47	21.56		
	RB25#25	21.52	21.55	21.53		
	RB50#0	21.35	21.52	21.57		
10MHz 16QAM	RB1#0	21.36	21.6	21.73	20.35	33
	RB1#25	21.66	21.84	21.94		
	RB1#49	21.38	21.55	21.68		
	RB25#0	20.34	20.52	20.61		
	RB25#25	20.53	20.51	20.46		
	RB50#0	20.41	20.49	20.55		
15MHz QPSK	RB1#0	22.39	22.42	22.41	20.94	33
	RB1#38	22.43	22.53	22.52		
	RB1#74	22.25	22.37	22.36		
	RB36#0	21.37	21.56	21.65		
	RB36#39	21.49	21.52	21.57		
	RB75#0	21.41	21.55	21.62		
15MHz 16QAM	RB1#0	21.29	21.61	21.65	20.12	33
	RB1#38	21.36	21.7	21.71		
	RB1#74	21.19	21.6	21.62		
	RB36#0	20.26	20.52	20.55		
	RB36#39	20.39	20.53	20.48		
	RB75#0	20.4	20.5	20.46		
20MHz QPSK	RB1#0	22.29	22.23	22.28	21.13	33

	RB1#50	22.7	22.72	22.72		
	RB1#99	22.21	22.15	22.2		
	RB50#0	21.2	21.44	21.56		
	RB50#50	21.44	21.49	21.44		
	RB100#0	21.31	21.5	21.47		
20MHz 16QAM	RB1#0	21.51	21.31	21.26	20.35	33
	RB1#50	21.94	21.78	21.72		
	RB1#99	21.31	21.22	21.17		
	RB50#0	20.23	20.4	20.59		
	RB50#50	20.46	20.47	20.49		
	RB100#0	20.32	20.44	20.51		
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	8.96	8.64	8.64	13	
	RB100#0	8.99	8.96	8.87	13	
20MHz 16QAM	RB1#0	9.74	9.39	9.33	13	
	RB100#0	9.80	9.74	9.71	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	4.511	4.511	4.491	4.960	5.340	4.920
5MHz 16QAM	4.491	4.511	4.491	5.100	5.020	5.180
10MHz QPSK	8.942	8.942	8.942	9.640	9.560	9.600
10MHz 16QAM	8.942	8.942	8.942	9.480	10.040	9.520
15MHz QPSK	13.473	13.473	13.533	14.640	14.580	15.060
15MHz 16QAM	13.473	13.533	13.533	14.580	15.900	14.760
20MHz QPSK	17.884	17.884	17.964	19.040	19.200	19.520
20MHz 16QAM	17.964	17.884	17.964	19.200	19.200	19.120
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>	Pass, Please refer to the test plots of Spurious Emissions at Antenna Terminal.

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

FCC §2.1055, §27.54: Frequency Stability						
Test Mode:	20M QPSK	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (°C)	Voltage (V <sub>DC</sub> )	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	7.4	2535.22900	2535.00000	2654.91110	2655.00000
	-20	7.4	2535.28446	2535.00000	2654.93502	2655.00000
	-10	7.4	2535.23305	2535.00000	2654.96025	2655.00000
	0	7.4	2535.19479	2535.00000	2654.94960	2655.00000
	10	7.4	2535.11434	2535.00000	2654.92526	2655.00000
	20	7.4	2535.24796	2535.00000	2654.93313	2655.00000
	30	7.4	2535.12109	2535.00000	2654.91568	2655.00000
	40	7.4	2535.27324	2535.00000	2654.92134	2655.00000
	50	7.4	2535.12656	2535.00000	2654.99385	2655.00000
Frequency Stability vs. Voltage	20	6.8	2535.11786	2535.00000	2654.95809	2655.00000
	20	8.4	2535.18967	2535.00000	2654.94292	2655.00000
					<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	7.4	2535.23326	2535.00000	2654.91634	2655.00000
	-20	7.4	2535.25837	2535.00000	2654.92336	2655.00000
	-10	7.4	2535.23523	2535.00000	2654.90737	2655.00000
	0	7.4	2535.19626	2535.00000	2654.95917	2655.00000
	10	7.4	2535.11264	2535.00000	2654.95989	2655.00000
	20	7.4	2535.14738	2535.00000	2654.95902	2655.00000
	30	7.4	2535.22183	2535.00000	2654.95258	2655.00000
	40	7.4	2535.16661	2535.00000	2654.92860	2655.00000
	50	7.4	2535.11067	2535.00000	2654.94491	2655.00000
Frequency Stability vs. Voltage	20	6.8	2535.13291	2535.00000	2654.95960	2655.00000
	20	8.4	2535.18676	2535.00000	2654.96479	2655.00000
					<b>Result:</b>	<b>Pass</b>

**Test Plots** (Note: The 11.5 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.:CR230952608 Tester:Len Huang Date: 23_SEP.2023 15:17:16</p>	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23_SEP.2023 15:17:34</p>
<b>Middle</b>	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23_SEP.2023 15:17:52</p>	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23_SEP.2023 15:18:10</p>
<b>Highest</b>	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23_SEP.2023 15:18:28</p>	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23_SEP.2023 15:18:46</p>



Occupied Bandwidth

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

Occupied Bandwidth

Channel	15MHz Bandwidth QPSK	15MHz Bandwidth 16QAM
Lowest	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23.SEP.2023 15:22:07</p>	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23.SEP.2023 15:22:33</p>
Middle	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23.SEP.2023 15:22:59</p>	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23.SEP.2023 15:23:22</p>
Highest	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23.SEP.2023 15:23:46</p>	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23.SEP.2023 15:24:18</p>

Occupied Bandwidth

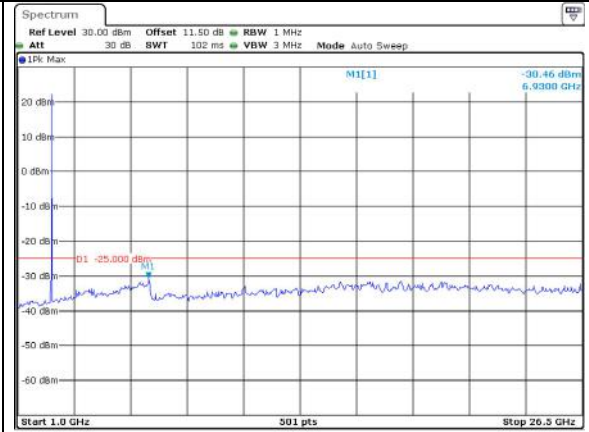
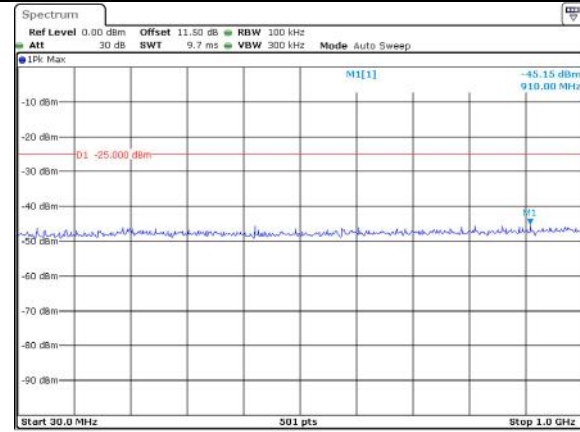
Channel	20MHz Bandwidth QPSK	20MHz Bandwidth 16QAM
Lowest	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23_SEP.2023 15:24:59</p>	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23_SEP.2023 15:25:31</p>
Middle	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23_SEP.2023 15:25:55</p>	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23_SEP.2023 15:26:18</p>
Highest	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23_SEP.2023 15:26:45</p>	<p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23_SEP.2023 15:27:08</p>

Spurious Emissions at Antenna Terminal

Channel

5MHz Bandwidth QPSK

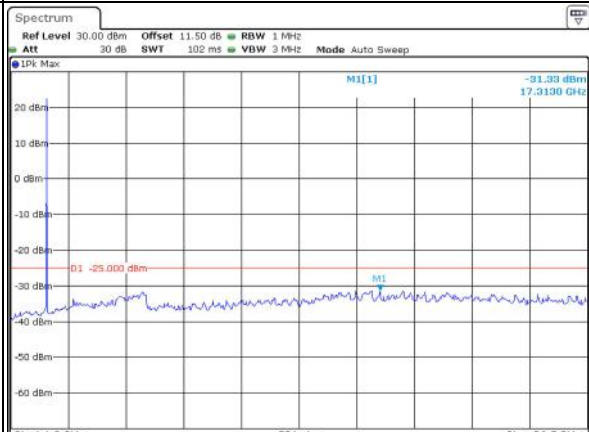
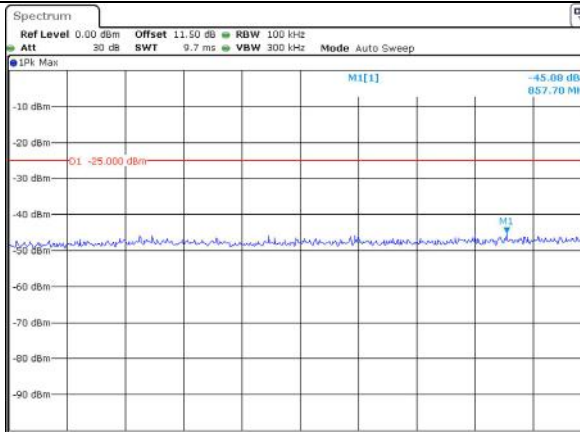
Lowest



ProjectNo.:CR230952608 Tester:Len Huang  
Date: 23.SEP.2023 15:29:56

ProjectNo.:CR230952608 Tester:Len Huang  
Date: 23.SEP.2023 15:29:22

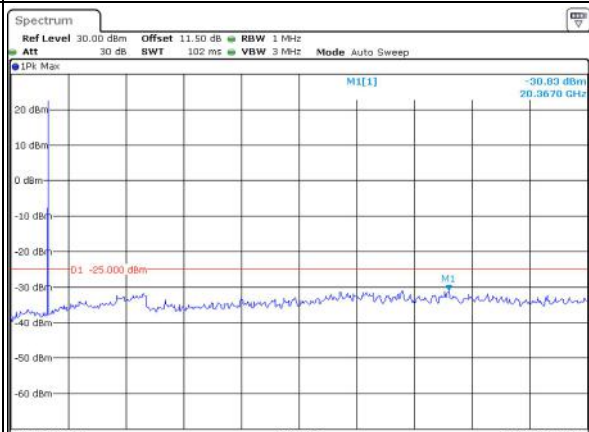
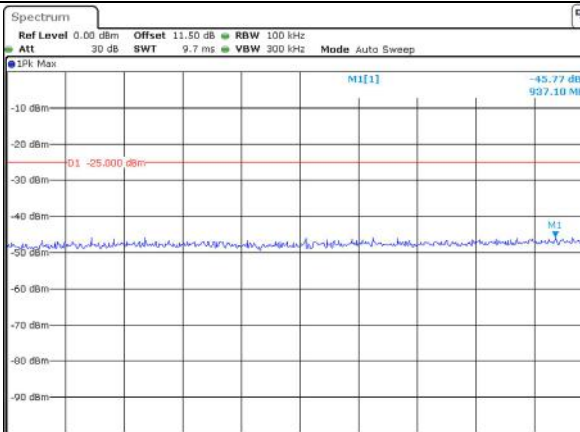
Middle



ProjectNo.:CR230952608 Tester:Len Huang  
Date: 23.SEP.2023 15:30:03

ProjectNo.:CR230952608 Tester:Len Huang  
Date: 23.SEP.2023 15:30:26

Highest



ProjectNo.:CR230952608 Tester:Len Huang  
Date: 23.SEP.2023 15:30:59

ProjectNo.:CR230952608 Tester:Len Huang  
Date: 23.SEP.2023 15:31:31

### Spurious Emissions at Antenna Terminal

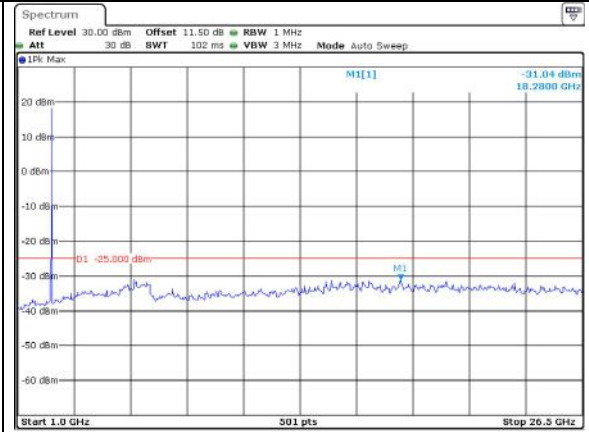
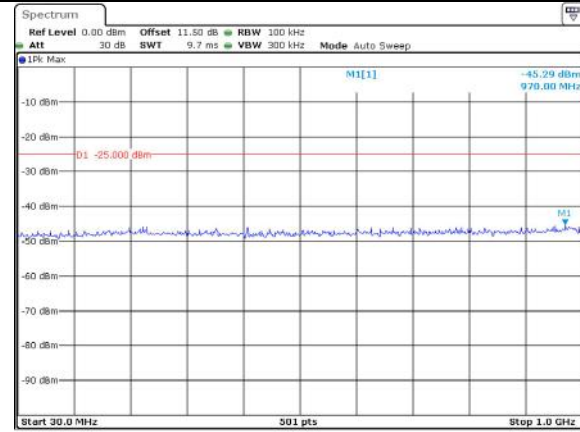
Channel	10MHz Bandwidth QPSK	
Lowest	<p>Ref Level 0.00 dBm Offset 11.50 dB RBW 100 kHz Att 30 dB SWT 9.7 ms VBW 300 kHz Mode Auto Sweep</p> <p>IPk Max M1[1] -45.60 dBm 902.20 MHz</p> <p>D1 -25.000 dBm</p> <p>Start 30.0 MHz 501 pts Stop 1.0 GHz</p> <p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23_SEP.2023 15:32:03</p>	<p>Ref Level 30.00 dBm Offset 11.50 dB RBW 1 MHz Att 30 dB SWT 102 ms VBW 3 MHz Mode Auto Sweep</p> <p>IPk Max M1[1] -30.93 dBm 16.9060 GHz</p> <p>D1 -25.000 dBm</p> <p>Start 1.0 GHz 501 pts Stop 26.5 GHz</p> <p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23_SEP.2023 15:32:29</p>
Middle	<p>Ref Level 0.00 dBm Offset 11.50 dB RBW 100 kHz Att 30 dB SWT 9.7 ms VBW 300 kHz Mode Auto Sweep</p> <p>IPk Max M1[1] -45.26 dBm 979.90 MHz</p> <p>D1 -25.000 dBm</p> <p>Start 30.0 MHz 501 pts Stop 1.0 GHz</p> <p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23_SEP.2023 15:32:55</p>	<p>Ref Level 30.00 dBm Offset 11.50 dB RBW 1 MHz Att 30 dB SWT 102 ms VBW 3 MHz Mode Auto Sweep</p> <p>IPk Max M1[1] -30.24 dBm 18.2800 GHz</p> <p>D1 -25.000 dBm</p> <p>Start 1.0 GHz 501 pts Stop 26.5 GHz</p> <p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23_SEP.2023 15:33:21</p>
Highest	<p>Ref Level 0.00 dBm Offset 11.50 dB RBW 100 kHz Att 30 dB SWT 9.7 ms VBW 300 kHz Mode Auto Sweep</p> <p>IPk Max M1[1] -45.31 dBm 946.80 MHz</p> <p>D1 -25.000 dBm</p> <p>Start 30.0 MHz 501 pts Stop 1.0 GHz</p> <p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23_SEP.2023 15:33:50</p>	<p>Ref Level 30.00 dBm Offset 11.50 dB RBW 1 MHz Att 30 dB SWT 102 ms VBW 3 MHz Mode Auto Sweep</p> <p>IPk Max M1[1] -31.00 dBm 20.4180 GHz</p> <p>D1 -25.000 dBm</p> <p>Start 1.0 GHz 501 pts Stop 26.5 GHz</p> <p>ProjectNo.:CR230952608 Tester:Len Huang Date: 23_SEP.2023 15:34:13</p>

Spurious Emissions at Antenna Terminal

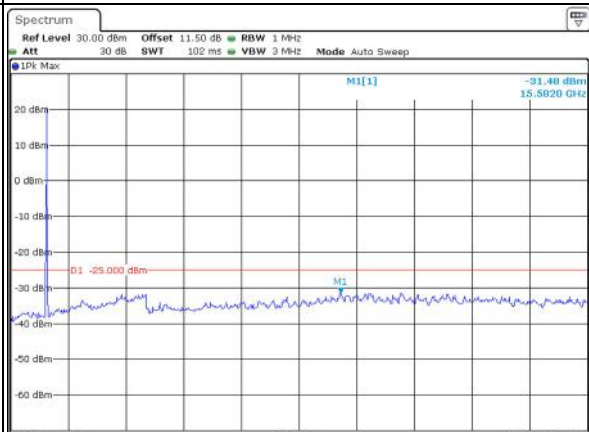
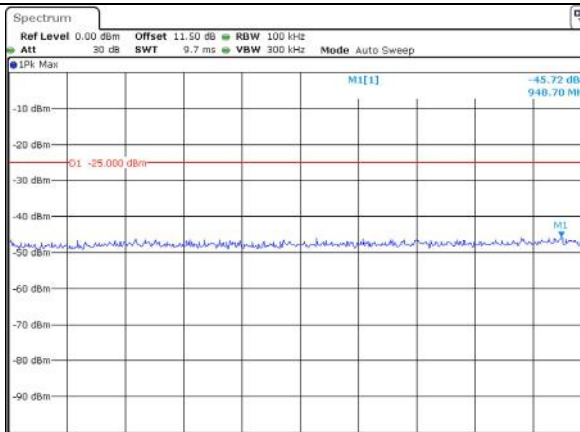
Channel

15MHz Bandwidth QPSK

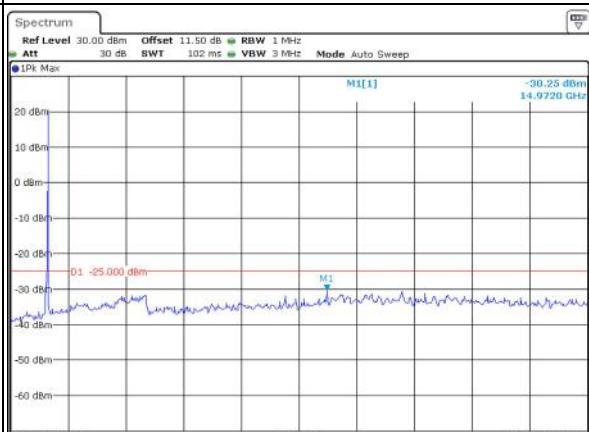
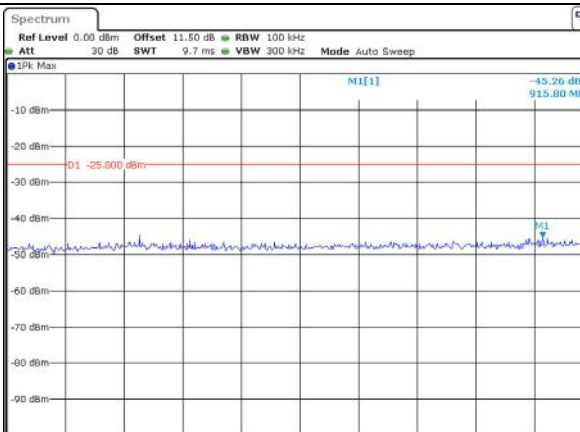
Lowest



Middle



Highest

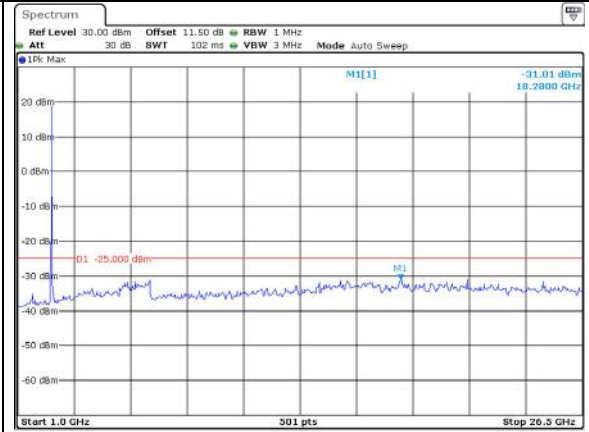
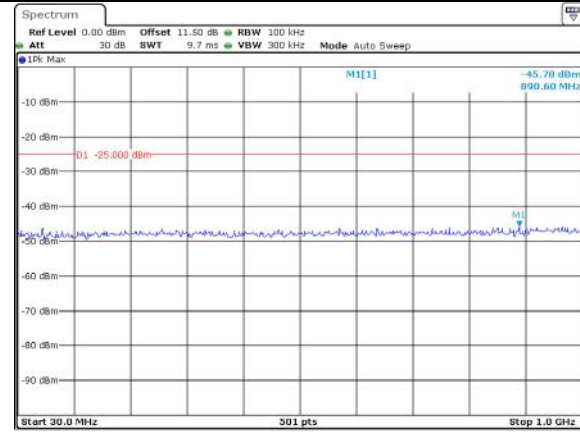


Spurious Emissions at Antenna Terminal

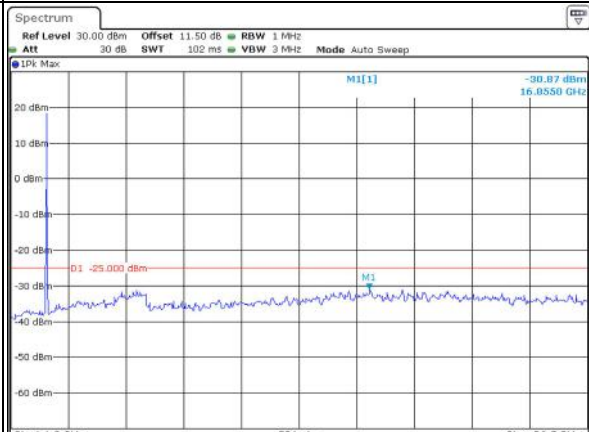
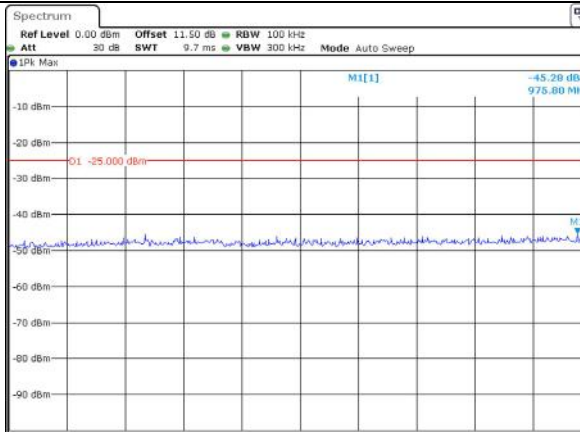
Channel

20MHz Bandwidth QPSK

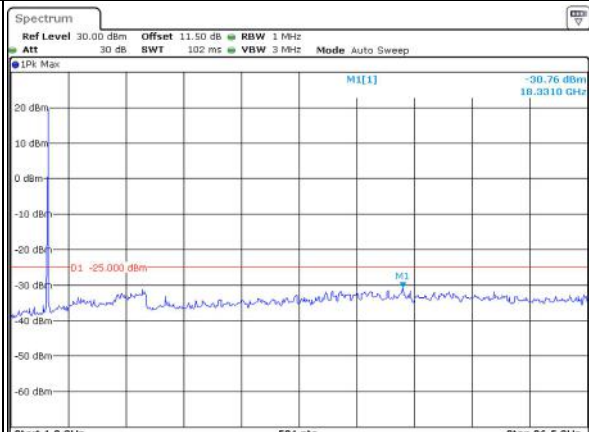
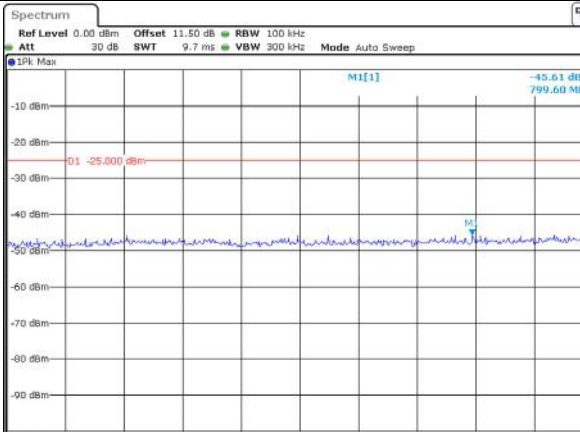
Lowest



Middle



Highest

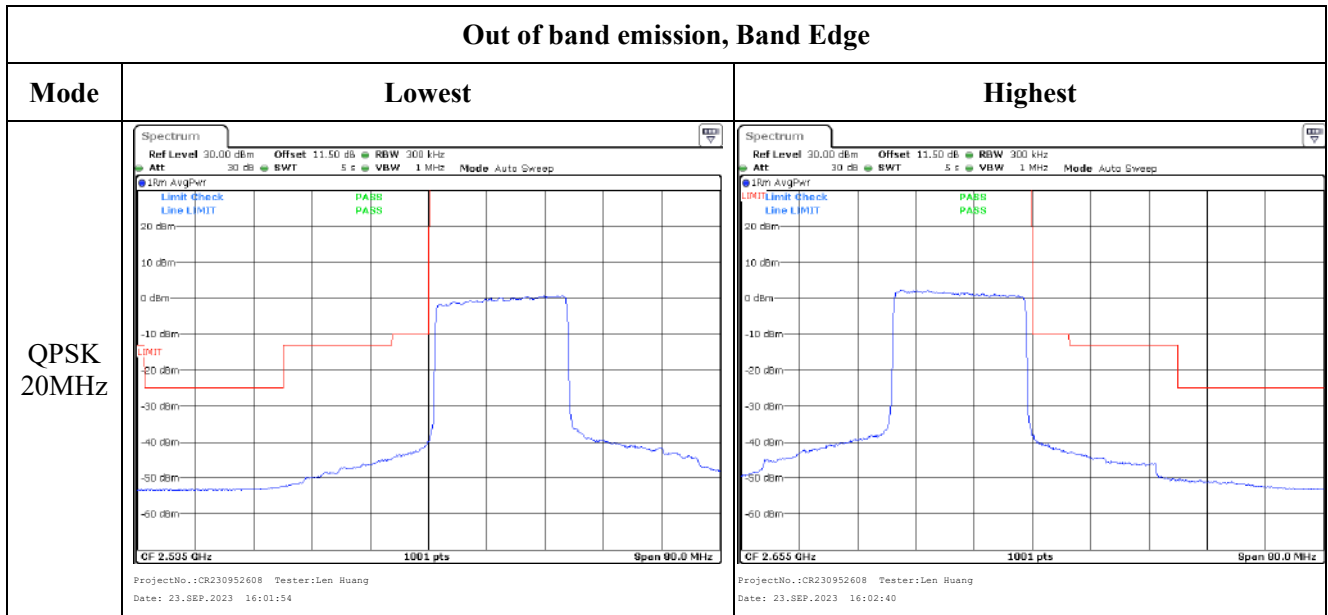


Out of band emission, Band Edge

Mode	Lowest	Highest
QPSK 5MHz	<p>ProjectNo.:CR230952608 Tester:Len Ruang Date: 23_SEP_2023 15:45:39</p>	<p>ProjectNo.:CR230952608 Tester:Len Ruang Date: 23_SEP_2023 15:46:30</p>
QPSK 10MHz	<p>ProjectNo.:CR230952608 Tester:Len Ruang Date: 23_SEP_2023 15:50:51</p>	<p>ProjectNo.:CR230952608 Tester:Len Ruang Date: 23_SEP_2023 15:53:01</p>
QPSK 15MHz	<p>ProjectNo.:CR230952608 Tester:Len Ruang Date: 23_SEP_2023 15:57:36</p>	<p>ProjectNo.:CR230952608 Tester:Len Ruang Date: 23_SEP_2023 15:59:04</p>



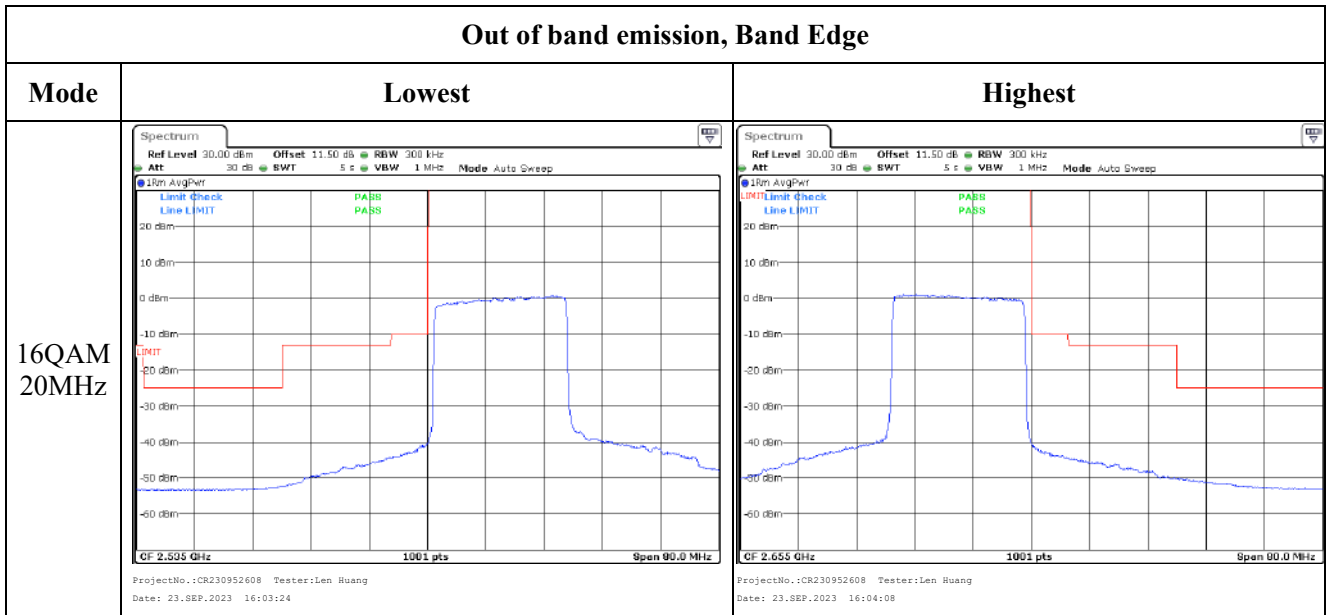
Out of band emission, Band Edge



Out of band emission, Band Edge

Mode	Lowest	Highest
16QAM 5MHz	<p>ProjectNo.: CR230952608 Tester: Len Ruang Date: 23_SEP_2023 15:47:15</p>	<p>ProjectNo.: CR230952608 Tester: Len Ruang Date: 23_SEP_2023 15:48:12</p>
16QAM 10MHz	<p>ProjectNo.: CR230952608 Tester: Len Ruang Date: 23_SEP_2023 15:53:50</p>	<p>ProjectNo.: CR230952608 Tester: Len Ruang Date: 23_SEP_2023 15:54:35</p>
16QAM 15MHz	<p>ProjectNo.: CR230952608 Tester: Len Ruang Date: 23_SEP_2023 15:59:52</p>	<p>ProjectNo.: CR230952608 Tester: Len Ruang Date: 23_SEP_2023 16:00:36</p>

Out of band emission, Band Edge



**4.13 Radiated Spurious Emissions**

Serial Number:	2B0S-2	Test Date:	2023/9/23
Test Site:	966-1, 966-2	Test Mode:	Transmitting
Tester:	Carl Xue, Mack Huang	Test Result:	Pass

**Environmental Conditions:**

Temperature: (°C)	26.2~26.5	Relative Humidity: (%)	60~61	ATM Pressure: (kPa)	100.2
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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	A082520-5	2020/10/19	2023/10/18
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	2022/7/16	2024/7/15
Agilent	Signal Generator	E8247C	MY43321352	2022/11/18	2023/11/17
<b>Above 1GHz</b>					
ETS-Lindgren	Horn Antenna	3115	9912-5985	2020/10/13	2023/10/12
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	2022/11/9	2023/11/8
AH	Double Ridge Guide Horn Antenna	SAS-571	1396	2021/10/18	2024/10/17
MICRO-COAX	Coaxial Cable	UFA210B-0-0720-300300	99G1448	2022/7/16	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 (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
GPRS 850 Frequency:824.2MHz								
721.70	H	21.10	-51.78	0.00	0.50	-52.28	-13.00	39.28
724.26	V	21.12	-48.27	0.00	0.51	-48.78	-13.00	35.78
1648.400	H	63.33	-41.00	8.68	0.80	-33.12	-13.00	20.12
1648.400	V	59.52	-44.89	8.68	0.80	-37.01	-13.00	24.01
2472.600	H	49.84	-50.94	9.38	1.00	-42.56	-13.00	29.56
2472.600	V	48.96	-51.77	9.38	1.00	-43.39	-13.00	30.39
3296.800	H	36.59	-60.09	10.32	1.15	-50.92	-13.00	37.92
3296.800	V	37.11	-59.33	10.32	1.15	-50.16	-13.00	37.16
GPRS 850 Frequency:836.6MHz								
689.59	H	20.90	-52.48	0.00	0.54	-53.02	-13.00	40.02
704.24	V	20.84	-48.99	0.00	0.55	-49.54	-13.00	36.54
1673.200	H	65.51	-38.80	8.71	0.85	-30.94	-13.00	17.94
1673.200	V	62.09	-42.32	8.71	0.85	-34.46	-13.00	21.46
2509.800	H	48.66	-51.95	9.42	1.01	-43.54	-13.00	30.54
2509.800	V	49.94	-50.68	9.42	1.01	-42.27	-13.00	29.27
3346.400	H	35.87	-61.30	10.34	1.16	-52.12	-13.00	39.12
3346.400	V	36.41	-60.62	10.34	1.16	-51.44	-13.00	38.44
GPRS 850 Frequency:848.8MHz								
714.18	H	20.91	-52.12	0.00	0.50	-52.62	-13.00	39.62
709.37	V	20.95	-48.77	0.00	0.52	-49.29	-13.00	36.29
1697.600	H	67.16	-37.13	8.74	0.90	-29.29	-13.00	16.29
1697.600	V	65.75	-38.67	8.74	0.90	-30.83	-13.00	17.83
2546.400	H	46.51	-53.82	9.47	1.01	-45.36	-13.00	32.36
2546.400	V	53.30	-46.98	9.47	1.01	-38.52	-13.00	25.52
3395.200	H	35.45	-62.24	10.36	1.19	-53.07	-13.00	40.07
3395.200	V	36.01	-61.65	10.36	1.19	-52.48	-13.00	39.48

**PCS Band (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)			
GPRS 1900 Frequency:1850.2MHz								
101.28	H	44.03	-68.32	0.00	0.19	-68.51	-13.00	55.51
84.40	V	42.23	-66.68	0.00	0.17	-66.85	-13.00	53.85
3700.400	H	45.54	-51.78	10.60	1.25	-42.43	-13.00	29.43
3700.400	V	45.18	-52.12	10.60	1.25	-42.77	-13.00	29.77
5550.600	H	34.78	-58.48	11.44	1.49	-48.53	-13.00	35.53
5550.600	V	35.02	-58.08	11.44	1.49	-48.13	-13.00	35.13
GPRS 1900 Frequency:1880MHz								
104.90	H	43.87	-68.43	0.00	0.19	-68.62	-13.00	55.62
94.08	V	41.99	-66.40	0.00	0.18	-66.58	-13.00	53.58
3760.000	H	45.22	-51.19	10.66	1.24	-41.77	-13.00	28.77
3760.000	V	46.08	-50.21	10.66	1.24	-40.79	-13.00	27.79
5640.000	H	35.01	-58.44	11.33	1.54	-48.65	-13.00	35.65
5640.000	V	34.58	-58.75	11.33	1.54	-48.96	-13.00	35.96
GPRS 1900 Frequency:1909.8MHz								
103.80	H	44.10	-68.22	0.00	0.19	-68.41	-13.00	55.41
45.24	V	42.33	-54.21	-19.56	0.12	-73.89	-13.00	60.89
3819.600	H	43.50	-52.36	10.72	1.29	-42.93	-13.00	29.93
3819.600	V	46.74	-48.98	10.72	1.29	-39.55	-13.00	26.55
5729.400	H	34.53	-58.95	11.22	1.59	-49.32	-13.00	36.32
5729.400	V	35.63	-57.73	11.22	1.59	-48.10	-13.00	35.10

**WCDMA 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)			
WCDMA Band II, Frequency:1852.4 MHz								
105.64	H	43.91	-68.38	0.00	0.19	-68.57	-13.00	55.57
93.13	V	42.18	-66.43	0.00	0.18	-66.61	-13.00	53.61
3704.800	H	56.55	-40.71	10.60	1.25	-31.36	-13.00	18.36
3704.800	V	54.75	-42.48	10.60	1.25	-33.13	-13.00	20.13
5557.200	H	35.85	-57.43	11.43	1.49	-47.49	-13.00	34.49
5557.200	V	35.73	-57.40	11.43	1.49	-47.46	-13.00	34.46
WCDMA Band II, Frequency:1880 MHz								
103.44	H	44.12	-68.20	0.00	0.19	-68.39	-13.00	55.39
90.22	V	41.84	-67.44	0.00	0.18	-67.62	-13.00	54.62
3760.000	H	55.12	-41.29	10.66	1.24	-31.87	-13.00	18.87
3760.000	V	54.78	-41.51	10.66	1.24	-32.09	-13.00	19.09
5640.000	H	37.56	-55.89	11.33	1.54	-46.10	-13.00	33.10
5640.000	V	35.89	-57.44	11.33	1.54	-47.65	-13.00	34.65
WCDMA Band II, Frequency:1907.6MHz								
100.93	H	43.95	-68.41	0.00	0.19	-68.60	-13.00	55.60
80.93	V	42.10	-66.55	0.00	0.16	-66.71	-13.00	53.71
3815.200	H	56.98	-38.87	10.72	1.29	-29.44	-13.00	16.44
3815.200	V	56.51	-39.18	10.72	1.29	-29.75	-13.00	16.75
5722.800	H	37.82	-55.67	11.23	1.58	-46.02	-13.00	33.02
5722.800	V	34.27	-59.08	11.23	1.58	-49.43	-13.00	36.43

**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				
95.77	H	44.04	-68.61	0.00	0.19	-68.80	-13.00	55.80
80.64	V	41.87	-66.76	0.00	0.16	-66.92	-13.00	53.92
3424.800	H	50.32	-47.45	10.37	1.17	-38.25	-13.00	25.25
3424.800	V	51.72	-46.02	10.37	1.17	-36.82	-13.00	23.82
5137.200	H	36.33	-57.29	11.28	1.46	-47.47	-13.00	34.47
5137.200	V	35.74	-57.76	11.28	1.46	-47.94	-13.00	34.94
Frequency:			1732.6	MHz				
104.90	H	43.83	-68.47	0.00	0.19	-68.66	-13.00	55.66
84.11	V	42.47	-66.42	0.00	0.17	-66.59	-13.00	53.59
3465.200	H	49.87	-47.94	10.39	1.15	-38.70	-13.00	25.70
3465.200	V	50.75	-47.02	10.39	1.15	-37.78	-13.00	24.78
5197.800	H	36.88	-57.25	11.32	1.44	-47.37	-13.00	34.37
5197.800	V	35.81	-58.17	11.32	1.44	-48.29	-13.00	35.29
Frequency:			1752.6	MHz				
102.04	H	44.16	-68.18	0.00	0.19	-68.37	-13.00	55.37
89.89	V	41.93	-67.39	0.00	0.18	-67.57	-13.00	54.57
3505.200	H	50.77	-47.06	10.41	1.18	-37.83	-13.00	24.83
3505.200	V	51.82	-45.95	10.41	1.18	-36.72	-13.00	23.72
5257.800	H	35.21	-58.52	11.35	1.47	-48.64	-13.00	35.64
5257.800	V	35.96	-57.55	11.35	1.47	-47.67	-13.00	34.67



**WCDMA 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)			
WCDMA Band 5 Frequency:826.4 MHz								
711.68	H	20.86	-52.22	0.00	0.51	-52.73	-13.00	39.73
721.95	V	21.20	-48.24	0.00	0.50	-48.74	-13.00	35.74
1652.800	H	49.35	-54.98	8.68	0.81	-47.11	-13.00	34.11
1652.800	V	47.45	-56.96	8.68	0.81	-49.09	-13.00	36.09
2479.200	H	42.59	-58.17	9.39	1.01	-49.79	-13.00	36.79
2479.200	V	41.77	-58.96	9.39	1.01	-50.58	-13.00	37.58
3305.600	H	36.36	-60.37	10.32	1.15	-51.20	-13.00	38.20
3305.600	V	35.77	-60.73	10.32	1.15	-51.56	-13.00	38.56
WCDMA Band 5 Frequency:836.6MHz								
675.25	H	21.06	-52.39	0.00	0.50	-52.89	-13.00	39.89
706.71	V	20.92	-48.85	0.00	0.54	-49.39	-13.00	36.39
1673.200	H	45.27	-59.04	8.71	0.85	-51.18	-13.00	38.18
1673.200	V	46.89	-57.52	8.71	0.85	-49.66	-13.00	36.66
2509.800	H	39.84	-60.77	9.42	1.01	-52.36	-13.00	39.36
2509.800	V	40.75	-59.87	9.42	1.01	-51.46	-13.00	38.46
3346.400	H	36.96	-60.21	10.34	1.16	-51.03	-13.00	38.03
3346.400	V	35.75	-61.28	10.34	1.16	-52.10	-13.00	39.10
WCDMA Band 5 Frequency:846.6MHz								
719.20	H	21.20	-51.73	0.00	0.49	-52.22	-13.00	39.22
716.69	V	20.97	-48.59	0.00	0.50	-49.09	-13.00	36.09
1693.200	H	49.35	-54.95	8.73	0.89	-47.11	-13.00	34.11
1693.200	V	48.86	-55.56	8.73	0.89	-47.72	-13.00	34.72
2539.800	H	40.73	-59.65	9.46	1.01	-51.20	-13.00	38.20
2539.800	V	40.51	-59.83	9.46	1.01	-51.38	-13.00	38.38
3386.400	H	36.99	-60.60	10.35	1.18	-51.43	-13.00	38.43
3386.400	V	35.72	-61.82	10.35	1.18	-52.65	-13.00	39.65

**LTE Bands:**

(The Worst modulation and bandwidth was below)

**LTE 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)			
QPSK, 1.4MHz, Frequency:1850.7 MHz								
99.87	H	43.89	-68.49	0.00	0.19	-68.68	-13.00	55.68
90.85	V	42.34	-66.79	0.00	0.18	-66.97	-13.00	53.97
3701.400	H	55.94	-41.37	10.60	1.25	-32.02	-13.00	19.02
3701.400	V	56.82	-40.47	10.60	1.25	-31.12	-13.00	18.12
5552.100	H	36.24	-57.03	11.44	1.49	-47.08	-13.00	34.08
5552.100	V	35.45	-57.65	11.44	1.49	-47.70	-13.00	34.70
QPSK, 1.4MHz, Frequency:1880 MHz								
102.35	H	43.98	-68.36	0.00	0.19	-68.55	-13.00	55.55
83.82	V	42.19	-66.68	0.00	0.17	-66.85	-13.00	53.85
3760.000	H	50.12	-46.29	10.66	1.24	-36.87	-13.00	23.87
3760.000	V	54.48	-41.81	10.66	1.24	-32.39	-13.00	19.39
5640.000	H	36.24	-57.21	11.33	1.54	-47.42	-13.00	34.42
5640.000	V	34.85	-58.48	11.33	1.54	-48.69	-13.00	35.69
QPSK, 1.4MHz, Frequency:1909.3 MHz								
104.89	H	43.90	-68.40	0.00	0.19	-68.59	-13.00	55.59
80.37	V	42.08	-66.53	0.00	0.16	-66.69	-13.00	53.69
3818.600	H	52.86	-43.00	10.72	1.29	-33.57	-13.00	20.57
3818.600	V	55.55	-40.16	10.72	1.29	-30.73	-13.00	17.73
5727.900	H	34.69	-58.79	11.23	1.59	-49.15	-13.00	36.15
5727.900	V	35.11	-58.25	11.23	1.59	-48.61	-13.00	35.61

**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				
103.08	H	44.23	-68.10	0.00	0.19	-68.29	-13.00	55.29
85.29	V	42.15	-66.83	0.00	0.17	-67.00	-13.00	54.00
3421.400	H	49.06	-48.70	10.37	1.17	-39.50	-13.00	26.50
3421.400	V	51.15	-46.58	10.37	1.17	-37.38	-13.00	24.38
5132.100	H	35.87	-57.70	11.28	1.47	-47.89	-13.00	34.89
5132.100	V	34.64	-58.82	11.28	1.47	-49.01	-13.00	36.01
1.4MHz QPSK, Frequency:			1732.5	MHz				
99.18	H	43.85	-68.57	0.00	0.19	-68.76	-13.00	55.76
84.11	V	42.35	-66.54	0.00	0.17	-66.71	-13.00	53.71
3465.000	H	49.08	-48.73	10.39	1.15	-39.49	-13.00	26.49
3465.000	V	50.94	-46.83	10.39	1.15	-37.59	-13.00	24.59
5197.500	H	36.41	-57.72	11.32	1.44	-47.84	-13.00	34.84
5197.500	V	35.02	-58.96	11.32	1.44	-49.08	-13.00	36.08
1.4MHz QPSK, Frequency:			1754.3	MHz				
100.22	H	43.93	-68.44	0.00	0.19	-68.63	-13.00	55.63
80.64	V	42.04	-66.59	0.00	0.16	-66.75	-13.00	53.75
3508.600	H	51.32	-46.50	10.41	1.19	-37.28	-13.00	24.28
3508.600	V	52.22	-45.54	10.41	1.19	-36.32	-13.00	23.32
5262.900	H	34.56	-59.14	11.36	1.47	-49.25	-13.00	36.25
5262.900	V	35.01	-58.46	11.36	1.47	-48.57	-13.00	35.57

**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								
701.78	H	20.72	-52.56	0.00	0.55	-53.11	-13.00	40.11
638.61	V	20.94	-50.09	0.00	0.52	-50.61	-13.00	37.61
1649.400	H	47.61	-56.72	8.68	0.80	-48.84	-13.00	35.84
1649.400	V	48.80	-55.61	8.68	0.80	-47.73	-13.00	34.73
2474.100	H	40.35	-60.43	9.38	1.00	-52.05	-13.00	39.05
2474.100	V	40.19	-60.54	9.38	1.00	-52.16	-13.00	39.16
3298.800	H	35.54	-61.14	10.32	1.15	-51.97	-13.00	38.97
3298.800	V	34.63	-61.81	10.32	1.15	-52.64	-13.00	39.64
QPSK, 1.4MHz, Frequency: 836.5 MHz								
684.78	H	20.80	-52.60	0.00	0.53	-53.13	-13.00	40.13
714.36	V	21.03	-48.58	0.00	0.50	-49.08	-13.00	36.08
1673.000	H	47.29	-57.02	8.71	0.85	-49.16	-13.00	36.16
1673.000	V	48.77	-55.64	8.71	0.85	-47.78	-13.00	34.78
2509.500	H	38.32	-62.29	9.42	1.01	-53.88	-13.00	40.88
2509.500	V	39.39	-61.23	9.42	1.01	-52.82	-13.00	39.82
3346.000	H	34.85	-62.31	10.34	1.16	-53.13	-13.00	40.13
3346.000	V	35.44	-61.58	10.34	1.16	-52.40	-13.00	39.40
QPSK, 1.4MHz, Frequency: 848.3 MHz								
699.32	H	20.86	-52.46	0.00	0.55	-53.01	-13.00	40.01
721.87	V	20.95	-48.49	0.00	0.50	-48.99	-13.00	35.99
1696.600	H	46.38	-57.91	8.74	0.89	-50.06	-13.00	37.06
1696.600	V	49.40	-55.02	8.74	0.89	-47.17	-13.00	34.17
2544.900	H	38.78	-61.56	9.47	1.01	-53.10	-13.00	40.10
2544.900	V	39.20	-61.10	9.47	1.01	-52.64	-13.00	39.64
3393.200	H	35.55	-62.12	10.36	1.19	-52.95	-13.00	39.95
3393.200	V	34.63	-63.00	10.36	1.19	-53.83	-13.00	40.83

**LTE Band 7(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: 2502.5 MHz								
104.17	H	43.85	-68.46	0.00	0.19	-68.65	-25.00	43.65
84.11	V	42.11	-66.78	0.00	0.17	-66.95	-25.00	41.95
5005.000	H	35.02	-57.94	11.20	1.47	-48.21	-25.00	23.21
5005.000	V	34.68	-58.14	11.20	1.47	-48.41	-25.00	23.41
7507.500	H	35.39	-54.40	10.90	1.95	-45.45	-25.00	20.45
7507.500	V	36.24	-54.05	10.90	1.95	-45.10	-25.00	20.10
5MHz QPSK, Frequency: 2535 MHz								
99.18	H	44.03	-68.39	0.00	0.19	-68.58	-25.00	43.58
90.21	V	41.75	-67.53	0.00	0.18	-67.71	-25.00	42.71
5070.000	H	35.41	-57.78	11.24	1.47	-48.01	-25.00	23.01
5070.000	V	36.02	-57.07	11.24	1.47	-47.30	-25.00	22.30
7605.000	H	35.33	-54.14	10.88	2.01	-45.27	-25.00	20.27
7605.000	V	34.89	-55.30	10.88	2.01	-46.43	-25.00	21.43
5MHz QPSK, Frequency: 2567.5 MHz								
103.08	H	43.80	-68.53	0.00	0.19	-68.72	-25.00	43.72
93.75	V	41.87	-66.60	0.00	0.18	-66.78	-25.00	41.78
5135.000	H	36.20	-57.40	11.28	1.47	-47.59	-25.00	22.59
5135.000	V	35.78	-57.71	11.28	1.47	-47.90	-25.00	22.90
7702.500	H	35.46	-54.06	10.86	1.97	-45.17	-25.00	20.17
7702.500	V	35.08	-55.10	10.86	1.97	-46.21	-25.00	21.21

**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								
100.58	H	44.11	-68.25	0.00	0.19	-68.44	-25.00	43.44
83.81	V	41.86	-67.01	0.00	0.17	-67.18	-25.00	42.18
5145.000	H	34.69	-58.99	11.29	1.44	-49.14	-25.00	24.14
5145.000	V	35.52	-58.05	11.29	1.44	-48.20	-25.00	23.20
7717.500	H	35.43	-54.08	10.86	1.99	-45.21	-25.00	20.21
7717.500	V	36.01	-54.12	10.86	1.99	-45.25	-25.00	20.25
5MHz QPSK, Frequency: 2595 MHz								
103.80	H	43.91	-68.41	0.00	0.19	-68.60	-25.00	43.60
94.08	V	41.81	-66.58	0.00	0.18	-66.76	-25.00	41.76
5190.000	H	36.78	-57.29	11.31	1.44	-47.42	-25.00	22.42
5190.000	V	35.49	-58.43	11.31	1.44	-48.56	-25.00	23.56
7785.000	H	35.66	-53.83	10.84	1.99	-44.98	-25.00	19.98
7785.000	V	36.39	-53.53	10.84	1.99	-44.68	-25.00	19.68
5MHz QPSK, Frequency: 2617.5 MHz								
105.63	H	43.75	-68.54	0.00	0.19	-68.73	-25.00	43.73
92.13	V	41.83	-67.01	0.00	0.18	-67.19	-25.00	42.19
5235.000	H	35.85	-58.05	11.34	1.46	-48.17	-25.00	23.17
5235.000	V	36.33	-57.38	11.34	1.46	-47.50	-25.00	22.50
7852.500	H	35.41	-53.78	10.83	2.03	-44.98	-25.00	19.98
7852.500	V	35.07	-54.51	10.83	2.03	-45.71	-25.00	20.71

**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								
103.08	H	43.97	-68.36	0.00	0.19	-68.55	-40.00	28.55
89.58	V	41.84	-67.46	0.00	0.18	-67.64	-40.00	27.64
4615.000	H	44.26	-51.10	10.74	1.41	-41.77	-40.00	1.77
4615.000	V	42.70	-52.52	10.74	1.41	-43.19	-40.00	3.19
6922.500	H	35.01	-56.01	11.22	1.88	-46.67	-40.00	6.67
6922.500	V	34.68	-56.21	11.22	1.88	-46.87	-40.00	6.87
5MHz QPSK, Frequency: 2312.5 MHz								
100.22	H	44.01	-68.36	0.00	0.19	-68.55	-40.00	28.55
95.74	V	41.91	-66.10	0.00	0.19	-66.29	-40.00	26.29
4625.000	H	44.49	-50.80	10.75	1.41	-41.46	-40.00	1.46
4625.000	V	42.39	-52.78	10.75	1.41	-43.44	-40.00	3.44
6937.500	H	35.02	-55.96	11.21	1.90	-46.65	-40.00	6.65
6937.500	V	34.65	-56.19	11.21	1.90	-46.88	-40.00	6.88

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

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: 2352.5 MHz								
101.28	H	43.87	-68.48	0.00	0.19	-68.67	-40.00	28.67
79.80	V	42.25	-66.21	-0.10	0.16	-66.47	-40.00	26.47
4705.000	H	43.40	-51.38	10.85	1.41	-41.94	-40.00	1.94
4705.000	V	41.12	-53.68	10.85	1.41	-44.24	-40.00	4.24
7057.500	H	35.23	-54.78	11.17	1.92	-45.53	-40.00	5.53
7057.500	V	34.56	-55.34	11.17	1.92	-46.09	-40.00	6.09
5MHz QPSK, Frequency: 2357.5 MHz								
104.16	H	43.90	-68.41	0.00	0.19	-68.60	-40.00	28.60
87.41	V	42.14	-67.00	0.00	0.17	-67.17	-40.00	27.17
4715.000	H	43.87	-50.84	10.86	1.41	-41.39	-40.00	1.39
4715.000	V	40.94	-53.77	10.86	1.41	-44.32	-40.00	4.32
7072.500	H	34.56	-55.24	11.16	1.91	-45.99	-40.00	5.99
7072.500	V	35.37	-54.34	11.16	1.91	-45.09	-40.00	5.09



**LTE Band 41 (30MHz-26.55GHz):**

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: 2537.5 MHz								
99.18	H	43.63	-68.79	0.00	0.19	-68.98	-25.00	43.98
91.17	V	42.07	-66.99	0.00	0.18	-67.17	-25.00	42.17
5074.400	H	39.14	-54.07	11.24	1.48	-44.31	-25.00	19.31
5074.400	V	36.23	-56.88	11.24	1.48	-47.12	-25.00	22.12
7611.600	H	35.44	-54.04	10.88	2.02	-45.18	-25.00	20.18
7611.600	V	35.26	-54.93	10.88	2.02	-46.07	-25.00	21.07
QPSK, 5MHz, Frequency:2595 MHz								
103.80	H	43.76	-68.56	0.00	0.19	-68.75	-25.00	43.75
80.37	V	41.85	-66.76	0.00	0.16	-66.92	-25.00	41.92
5190.000	H	38.14	-55.93	11.31	1.44	-46.06	-25.00	21.06
5190.000	V	35.46	-58.46	11.31	1.44	-48.59	-25.00	23.59
7785.000	H	35.41	-54.08	10.84	1.99	-45.23	-25.00	20.23
7785.000	V	35.22	-54.70	10.84	1.99	-45.85	-25.00	20.85
QPSK, 5MHz, Frequency: 2652.5 MHz								
104.89	H	43.94	-68.36	0.00	0.19	-68.55	-25.00	43.55
95.28	V	41.80	-66.32	0.00	0.19	-66.51	-25.00	41.51
5305.000	H	37.84	-55.60	11.38	1.46	-45.68	-25.00	20.68
5305.000	V	36.54	-56.64	11.38	1.46	-46.72	-25.00	21.72
7957.500	H	36.01	-52.41	10.81	2.09	-43.69	-25.00	18.69
7957.500	V	35.20	-53.67	10.81	2.09	-44.95	-25.00	19.95

## 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 CR230952608-EXP EUT EXTERNAL PHOTOGRAPHS and CR230952608-INP EUT INTERNAL PHOTOGRAPHS

## **6. TEST SETUP PHOTOGRAPHS**

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Please refer to the attachment CR230952608-00E-TSP TEST SETUP PHOTOGRAPHS.

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