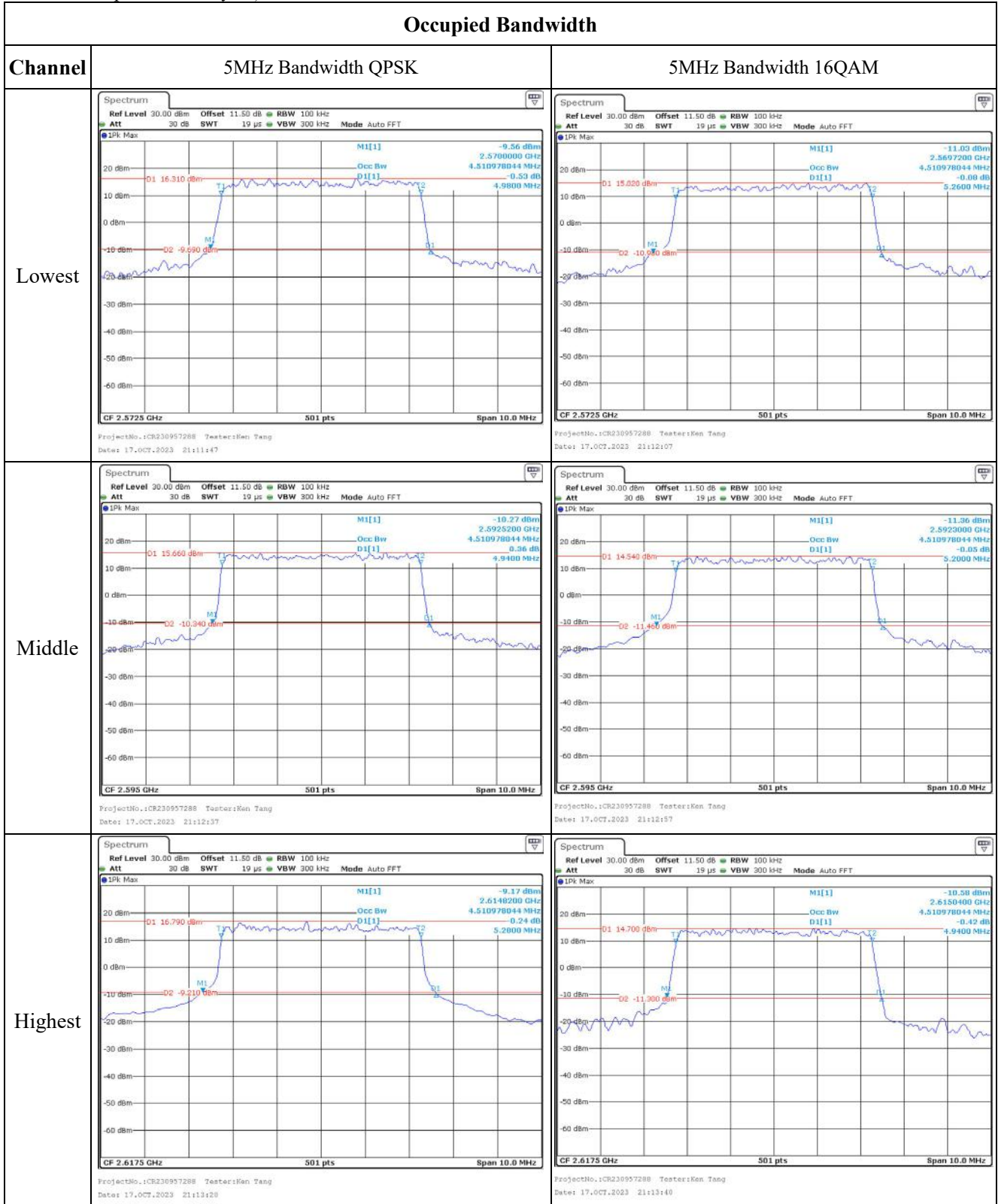


**FCC §2.1055, §27.54: Frequency Stability**

Test Mode:	20M QPSK	Test Channel: Lowest for Lower Edge, Highest for Upper Edge				
Test Item	Temperature (°C)	Voltage (V <sub>DC</sub> )	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.87	2570.012	2570.00	2619.990	2620
	-20	3.87	2570.008	2570.00	2619.987	2620
	-10	3.87	2570.023	2570.00	2619.985	2620
	0	3.87	2570.029	2570.00	2619.975	2620
	10	3.87	2570.025	2570.00	2619.978	2620
	20	3.87	2570.020	2570.00	2619.977	2620
	30	3.87	2570.010	2570.00	2619.978	2620
	40	3.87	2570.008	2570.00	2619.983	2620
Frequency Stability vs. Voltage	20	3.29	2570.011	2570.00	2619.983	2620
	20	4.45	2570.025	2570.00	2619.976	2620
					<b>Result:</b>	<b>Pass</b>

Test Mode:	20M 16QAM	Test Channel: Lowest for Lower Edge, Highest for Upper Edge				
Test Item	Temperature (°C)	Voltage (V <sub>DC</sub> )	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.87	2570.027	2570.00	2619.979	2620
	-20	3.87	2570.006	2570.00	2619.988	2620
	-10	3.87	2570.011	2570.00	2619.993	2620
	0	3.87	2570.024	2570.00	2619.973	2620
	10	3.87	2570.006	2570.00	2619.979	2620
	20	3.87	2570.023	2570.00	2619.996	2620
	30	3.87	2570.018	2570.00	2619.996	2620
	40	3.87	2570.001	2570.00	2619.997	2620
Frequency Stability vs. Voltage	20	3.29	2570.027	2570.00	2619.982	2620
	20	4.45	2570.005	2570.00	2619.976	2620
					<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.:CR230957288 Testeri:Ken Tang Date: 17.OCT.2023 21:15:46</p>	<p>ProjectNo.:CR230957288 Testeri:Ken Tang Date: 17.OCT.2023 21:16:19</p>
Middle	<p>ProjectNo.:CR230957288 Testeri:Ken Tang Date: 17.OCT.2023 21:16:52</p>	<p>ProjectNo.:CR230957288 Testeri:Ken Tang Date: 17.OCT.2023 21:17:21</p>
Highest	<p>ProjectNo.:CR230957288 Testeri:Ken Tang Date: 17.OCT.2023 21:17:45</p>	<p>ProjectNo.:CR230957288 Testeri:Ken Tang Date: 17.OCT.2023 21:18:05</p>

Occupied Bandwidth

Channel	15MHz Bandwidth QPSK	15MHz Bandwidth 16QAM
Lowest	<p>ProjectNo.:CR230957288 Testeri:Ken Tang Date: 17.OCT.2023 21:20:08</p>	<p>ProjectNo.:CR230957288 Testeri:Ken Tang Date: 17.OCT.2023 21:20:28</p>
Middle	<p>ProjectNo.:CR230957288 Testeri:Ken Tang Date: 17.OCT.2023 21:21:04</p>	<p>ProjectNo.:CR230957288 Testeri:Ken Tang Date: 17.OCT.2023 21:21:27</p>
Highest	<p>ProjectNo.:CR230957288 Testeri:Ken Tang Date: 17.OCT.2023 21:21:54</p>	<p>ProjectNo.:CR230957288 Testeri:Ken Tang Date: 17.OCT.2023 21:22:16</p>

Occupied Bandwidth

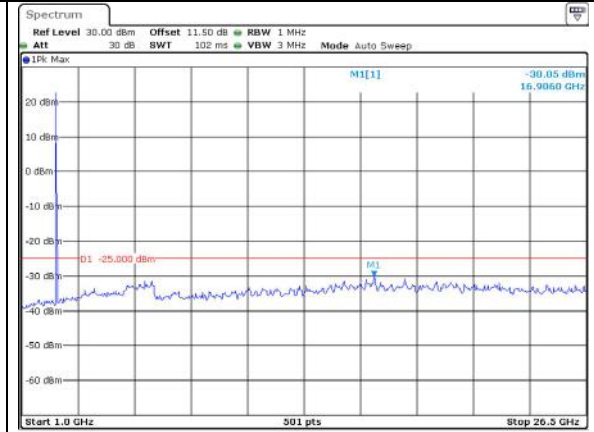
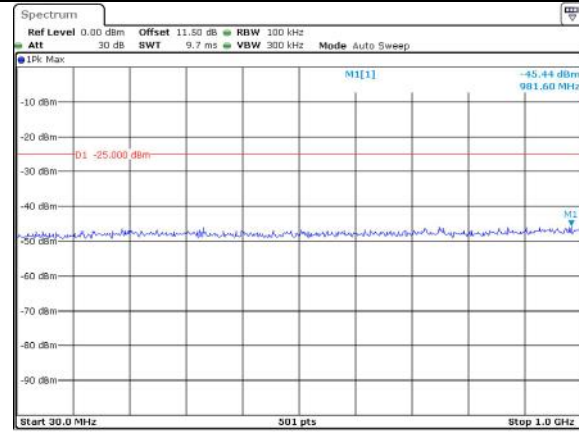
Channel	20MHz Bandwidth QPSK	20MHz Bandwidth 16QAM
Lowest	<p>ProjectNo.:CR230957288 Testator:Ken Tang Date: 17.OCT.2023 21:24:17</p>	<p>ProjectNo.:CR230957288 Testator:Ken Tang Date: 17.OCT.2023 21:24:59</p>
Middle	<p>ProjectNo.:CR230957288 Testator:Ken Tang Date: 17.OCT.2023 21:25:41</p>	<p>ProjectNo.:CR230957288 Testator:Ken Tang Date: 17.OCT.2023 21:26:17</p>
Highest	<p>ProjectNo.:CR230957288 Testator:Ken Tang Date: 17.OCT.2023 21:26:58</p>	<p>ProjectNo.:CR230957288 Testator:Ken Tang Date: 17.OCT.2023 21:27:28</p>

Spurious Emissions at Antenna Terminal

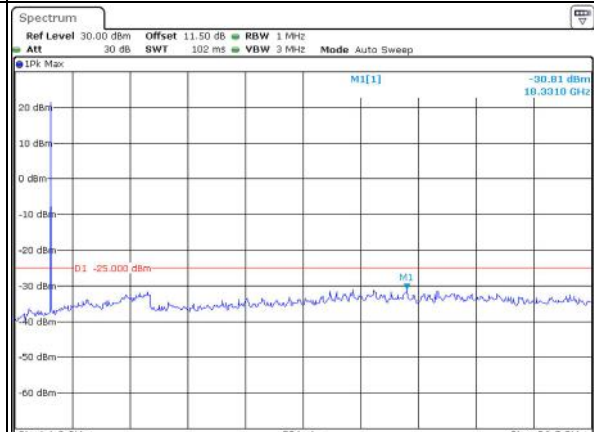
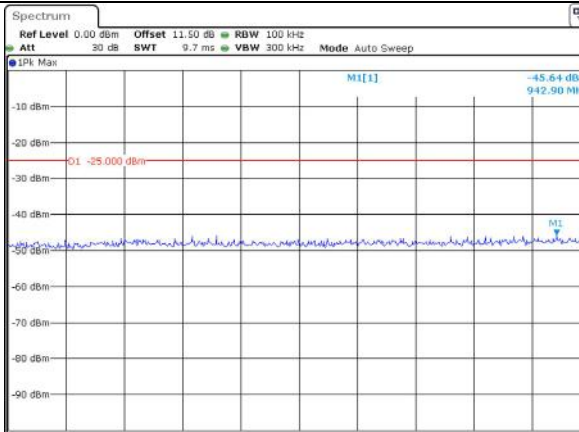
Channel

5MHz Bandwidth QPSK

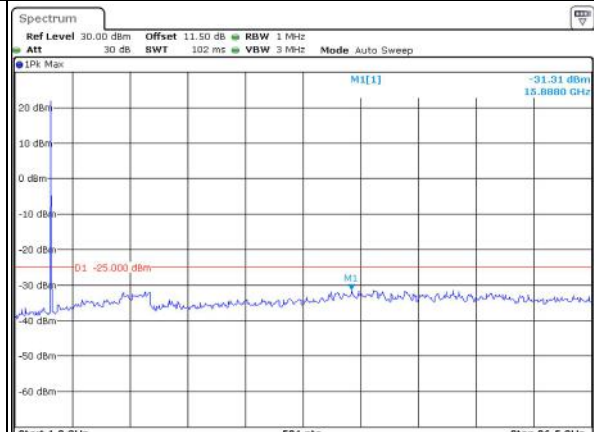
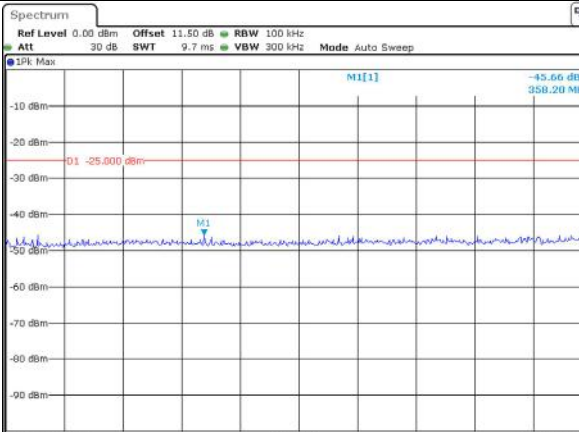
Lowest



Middle



Highest



Spurious Emissions at Antenna Terminal

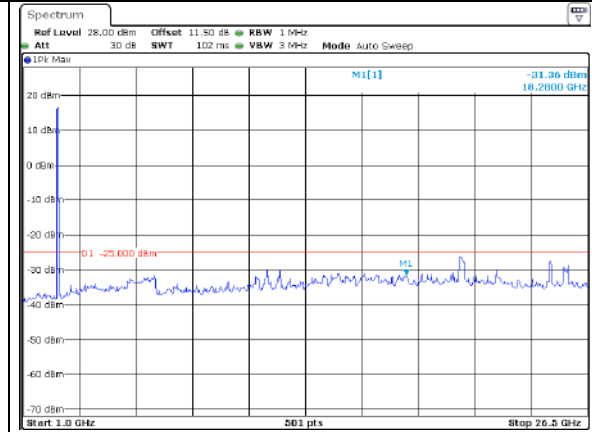
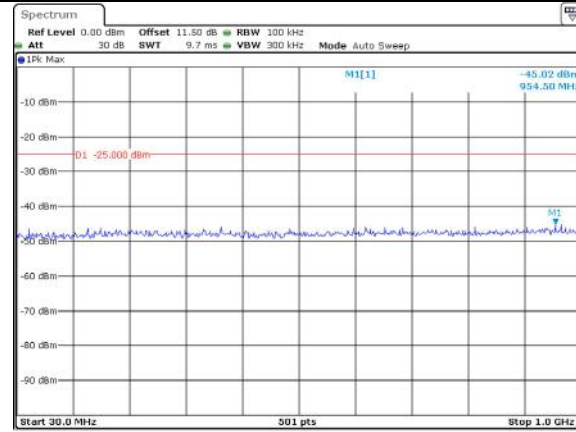
Channel	10MHz Bandwidth QPSK	
Lowest	<p>Ref Level 0.00 dBm Offset 11.50 dB RBW 100 kHz Att 30 dB SWT 9.7 ms VBW 300 kHz Mode Auto Sweep</p> <p>1Pk Max M1[1] -44.99 dBm 987.40 MHz</p> <p>D1 -25.000 dBm</p> <p>Start 30.0 MHz 501 pts Stop 1.0 GHz</p> <p>ProjectNo.:CR230957288 Tester:Ken Tang Date: 17.OCT.2023 23:33:09</p>	<p>Ref Level 28.00 dBm Offset 11.50 dB RBW 1 MHz Att 30 dB SWT 102 ms VBW 3 MHz Mode Auto Sweep</p> <p>1Pk Max M1[1] -31.67 dBm 20.3160 GHz</p> <p>D1 -25.000 dBm</p> <p>Start 1.0 GHz 501 pts Stop 26.5 GHz</p> <p>ProjectNo.:CR230957288 Tester:Ken Tang Date: 6.NOV.2023 19:00:41</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>1Pk Max M1[1] -45.13 dBm 979.70 MHz</p> <p>D1 -25.000 dBm</p> <p>Start 30.0 MHz 501 pts Stop 1.0 GHz</p> <p>ProjectNo.:CR230957288 Tester:Ken Tang Date: 17.OCT.2023 23:33:54</p>	<p>Ref Level 28.00 dBm Offset 11.50 dB RBW 1 MHz Att 30 dB SWT 102 ms VBW 3 MHz Mode Auto Sweep</p> <p>1Pk Max M1[1] -32.26 dBm 15.5310 GHz</p> <p>D1 -25.000 dBm</p> <p>Start 1.0 GHz 501 pts Stop 26.5 GHz</p> <p>ProjectNo.:CR230957288 Tester:Ken Tang Date: 6.NOV.2023 19:00:00</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>1Pk Max M1[1] -45.73 dBm 350.40 MHz</p> <p>D1 -25.000 dBm</p> <p>Start 30.0 MHz 501 pts Stop 1.0 GHz</p> <p>ProjectNo.:CR230957288 Tester:Ken Tang Date: 17.OCT.2023 23:35:08</p>	<p>Ref Level 28.00 dBm Offset 11.50 dB RBW 1 MHz Att 30 dB SWT 102 ms VBW 3 MHz Mode Auto Sweep</p> <p>1Pk Max M1[1] -31.59 dBm 15.5310 GHz</p> <p>D1 -25.000 dBm</p> <p>Start 1.0 GHz 501 pts Stop 26.5 GHz</p> <p>ProjectNo.:CR230957288 Tester:Ken Tang Date: 6.NOV.2023 19:02:14</p>

Spurious Emissions at Antenna Terminal

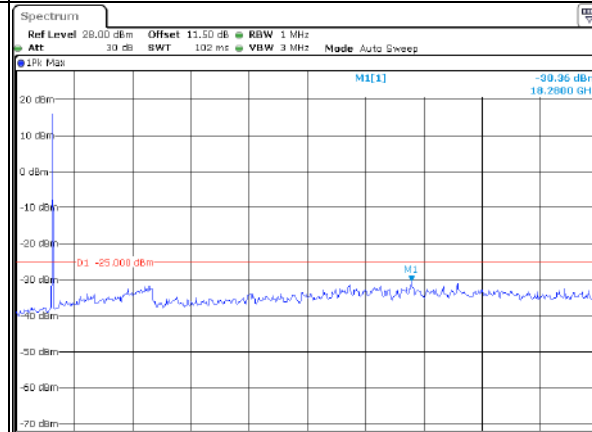
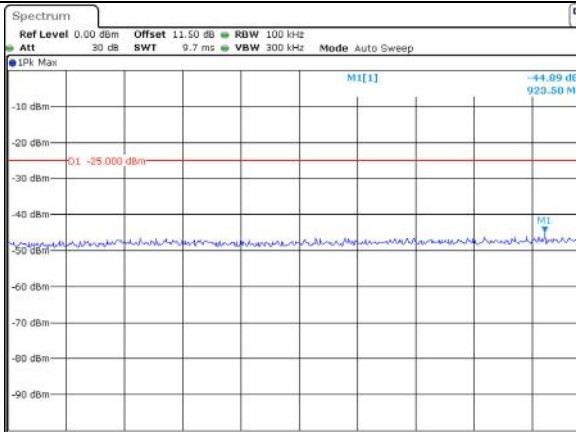
Channel

15MHz Bandwidth QPSK

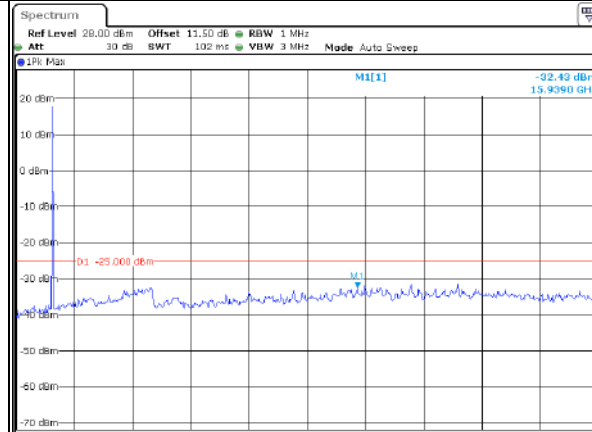
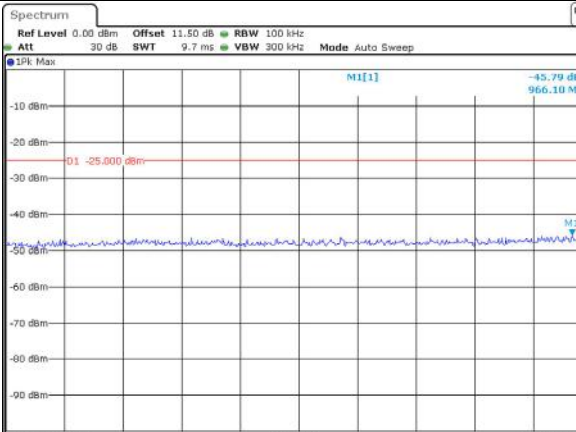
Lowest



Middle



Highest



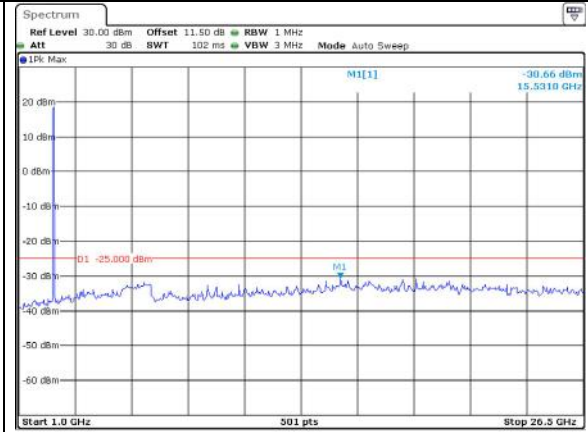
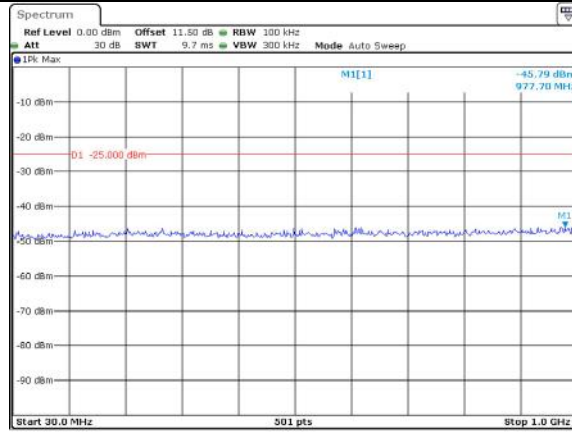


Spurious Emissions at Antenna Terminal

Channel

20MHz Bandwidth QPSK

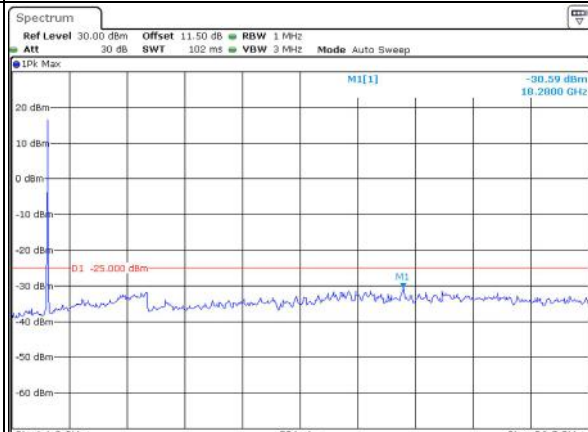
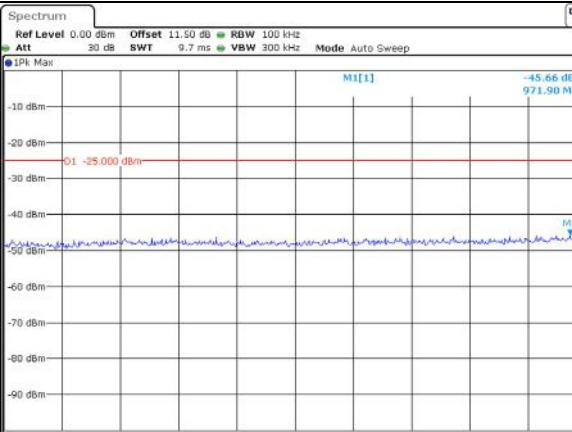
Lowest



ProjectNo.:CR230957288 Tester:Ken Tang  
Date: 17.OCT.2023 23:42:39

ProjectNo.:CR230957288 Tester:Ken Tang  
Date: 17.OCT.2023 23:42:59

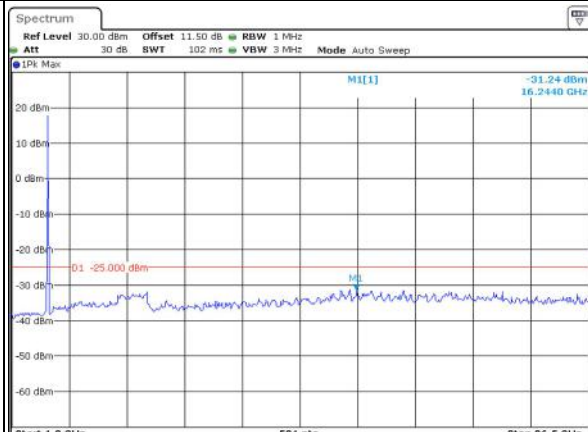
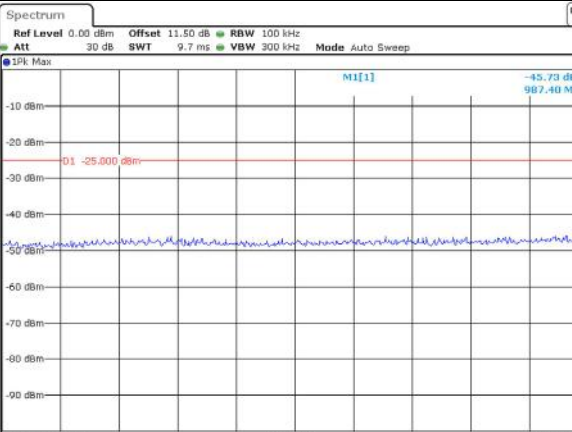
Middle



ProjectNo.:CR230957288 Tester:Ken Tang  
Date: 17.OCT.2023 23:43:31

ProjectNo.:CR230957288 Tester:Ken Tang  
Date: 17.OCT.2023 23:44:00

Highest



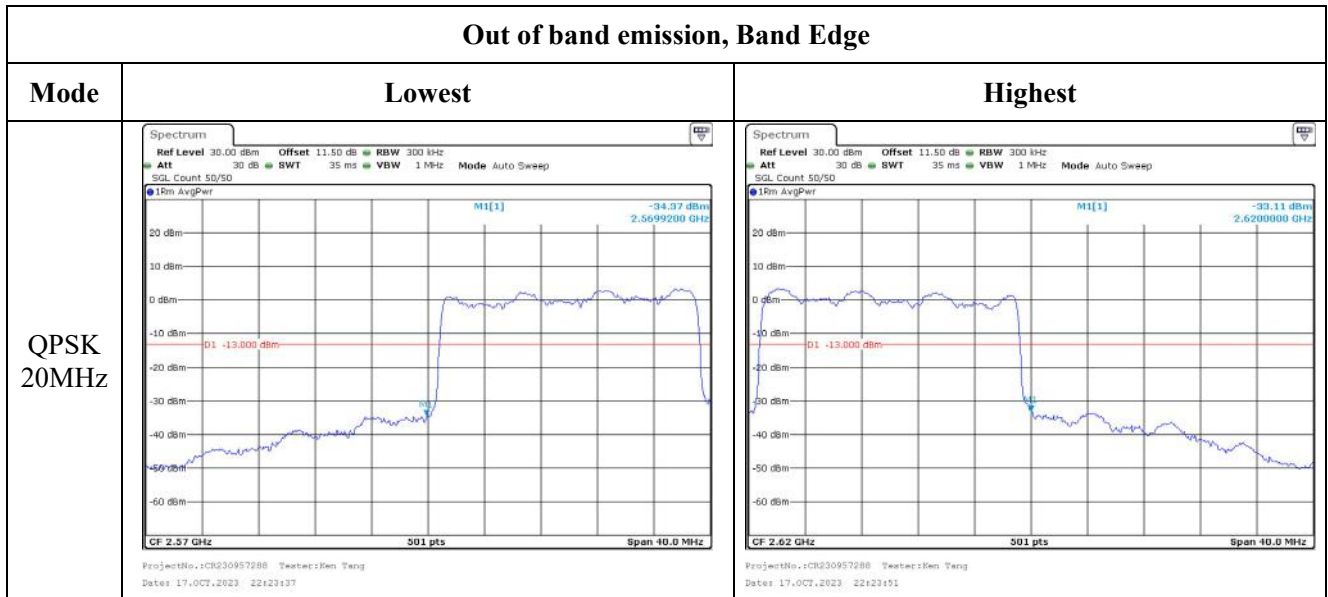
ProjectNo.:CR230957288 Tester:Ken Tang  
Date: 17.OCT.2023 23:44:28

ProjectNo.:CR230957288 Tester:Ken Tang  
Date: 17.OCT.2023 23:44:48

Out of band emission, Band Edge

Mode	Lowest	Highest
QPSK 5MHz	<p>ProjectNo.:CR230957288 Tester:Ken Tang Date: 17.OCT.2023 22:20:18</p>	<p>ProjectNo.:CR230957288 Tester:Ken Tang Date: 17.OCT.2023 22:20:32</p>
QPSK 10MHz	<p>ProjectNo.:CR230957288 Tester:Ken Tang Date: 17.OCT.2023 22:21:21</p>	<p>ProjectNo.:CR230957288 Tester:Ken Tang Date: 17.OCT.2023 22:21:36</p>
QPSK 15MHz	<p>ProjectNo.:CR230957288 Tester:Ken Tang Date: 17.OCT.2023 22:22:24</p>	<p>ProjectNo.:CR230957288 Tester:Ken Tang Date: 17.OCT.2023 22:22:39</p>

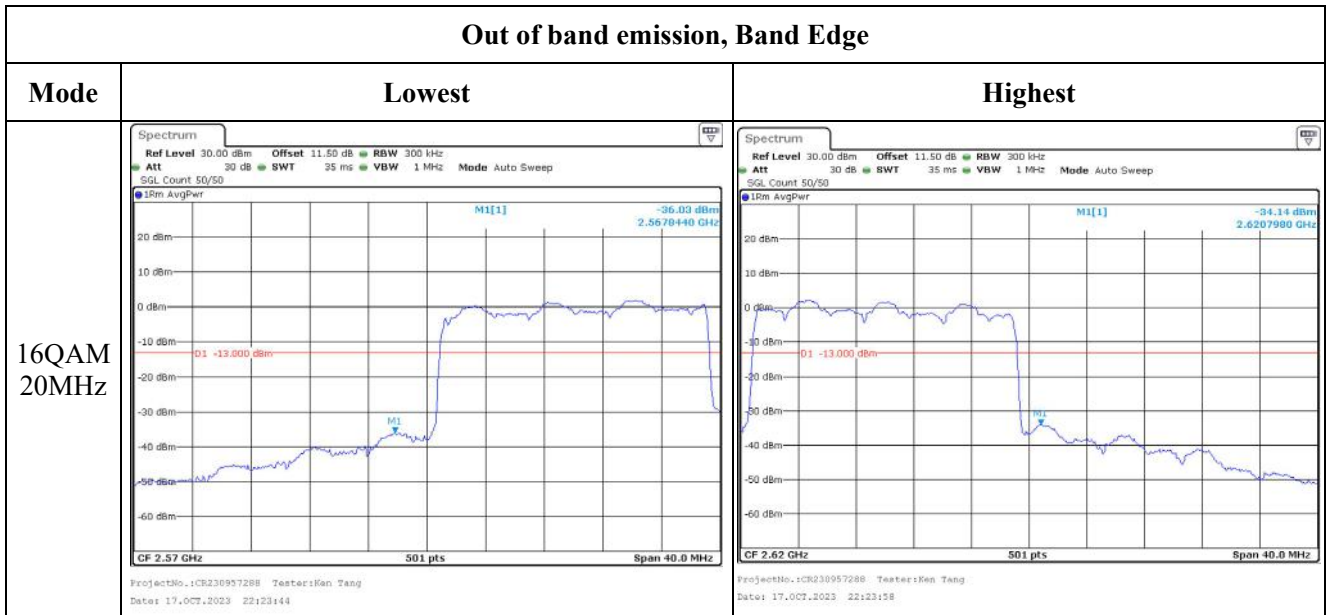
Out of band emission, Band Edge



Out of band emission, Band Edge

Mode	Lowest	Highest
16QAM 5MHz	<p>ProjectNo.:CR230957288 Tester:Ken Tang Date: 17_OCT_2023 22:20:29</p>	<p>ProjectNo.:CR230957288 Tester:Ken Tang Date: 17_OCT_2023 22:20:39</p>
16QAM 10MHz	<p>ProjectNo.:CR230957288 Tester:Ken Tang Date: 17_OCT_2023 22:21:28</p>	<p>ProjectNo.:CR230957288 Tester:Ken Tang Date: 17_OCT_2023 22:21:43</p>
16QAM 15MHz	<p>ProjectNo.:CR230957288 Tester:Ken Tang Date: 17_OCT_2023 22:22:31</p>	<p>ProjectNo.:CR230957288 Tester:Ken Tang Date: 17_OCT_2023 22:22:45</p>

Out of band emission, Band Edge



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

Serial Number:	2BUF-5	Test Date:	2023/10/18-2023/11/08
Test Site:	RF	Test Mode:	Transmitting
Tester:	Ken Tang	Test Result:	Pass

**Environmental Conditions:**

Temperature: (°C)	25.6-25.8	Relative Humidity: (%)	49-50	ATM Pressure: (kPa)	101.3-101.5
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**Test Equipment List and Details:**

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

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

**Test Frequency for Each Mode:**

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

**Test Data:**

(Note:Uplink Downlink configuration 3 was tested)

FCC§2.1046;§ 27.50(a)(3)						
LTE Band 40 Lower:						
RF Output Power:						
Test Bandwidth & Modulation	Resource Block & RB offset	Conducted Average Output Power(dBm)			Maximum EIRP (dBm)	Limit (dBm)
		Lowest Channel	Middle Channel	Highest Channel		
5MHz QPSK	RB1#0	16.25	/	16.51	14.8	24
	RB1#13	16.38	/	16.63		
	RB1#24	16.25	/	16.47		
	RB15#0	15.31	/	15.57		
	RB15#10	15.28	/	15.53		
	RB25#0	15.31	/	15.54		
5MHz 16QAM	RB1#0	15.54	/	15.56	13.88	24
	RB1#13	15.66	/	15.71		
	RB1#24	15.5	/	15.55		
	RB15#0	14.35	/	14.63		
	RB15#10	14.36	/	14.63		
	RB25#0	14.33	/	14.65		
10MHz QPSK	RB1#0	/	16.43	/	14.73	24
	RB1#25	/	16.56	/		
	RB1#49	/	16.43	/		
	RB25#0	/	15.49	/		
	RB25#25	/	15.48	/		
	RB50#0	/	15.49	/		
10MHz 16QAM	RB1#0	/	15.47	/	13.75	24
	RB1#25	/	15.58	/		
	RB1#49	/	15.44	/		
	RB25#0	/	14.5	/		
	RB25#25	/	14.47	/		
	RB50#0	/	14.61	/		

Note:  
For 5MHz mode, the channel power is equal to the test result in dBm/5MHz.  
For 10MHz mode, the channel power is sum of 10MHz bandwidth, the result is less than 24dBm, so in any 5MHz bandwidth, it's will not exceed limit  
EIRP=Conducted Power(dBm) - Lc(dB) + Gt(dBi)  
EIRP PSD=Conducted PSD(dBm/5MHz) - Lc(dB) + Gt(dBi)

<b>LTE Band 40 Upper:</b>						
<b>RF Output Power:</b>						
Test Bandwidth & Modulation	Resource Block & RB offset	Conducted Average Output Power(dBm)			Maximum EIRP (dBm)	EIRP Limit (dBm)
		Lowest Channel	Middle Channel	Highest Channel		
5MHz QPSK	RB1#0	16.38	/	16.64	15.33	24
	RB1#13	16.65	/	16.95		
	RB1#24	16.32	/	16.57		
	RB15#0	15.35	/	15.64		
	RB15#10	15.3	/	15.6		
	RB25#0	15.38	/	15.65		
5MHz 16QAM	RB1#0	15.32	/	15.78	14.44	24
	RB1#13	15.52	/	16.06		
	RB1#24	15.28	/	15.69		
	RB15#0	14.48	/	14.74		
	RB15#10	14.44	/	14.69		
	RB25#0	14.42	/	14.73		
10MHz QPSK	RB1#0	/	15.89	/	14.27	24
	RB1#25	/	15.69	/		
	RB1#49	/	15.33	/		
	RB25#0	/	15.42	/		
	RB25#25	/	15.23	/		
	RB50#0	/	15.73	/		
10MHz 16QAM	RB1#0	/	14.89	/	13.27	24
	RB1#25	/	14.76	/		
	RB1#49	/	14.7	/		
	RB25#0	/	14.58	/		
	RB25#25	/	14.4	/		
	RB50#0	/	14.44	/		
Note: For 5MHz mode, the channel power is equal to the test result in dBm/5MHz. For 10MHz mode, the channel power is sum of 10MHz bandwidth, the result is less than 24dBm, so in any 5MHz bandwidth, it's will not exceed limit $EIRP = \text{Conducted Power(dBm)} - Lc(\text{dB}) + G_T(\text{dBi})$ $EIRP \text{ PSD} = \text{Conducted PSD(dBm/5MHz)} - Lc(\text{dB}) + G_T(\text{dBi})$					<b>Result:</b>	<b>Pass</b>



**Duty Cycle**

Operation Band	Modulation	Bandwidth	Ton (ms)	Ton+off (ms)	Duty Cycle (%)	Limit (%)
LTE Band 40 Lower	QPSK	5M	3	10	30.00	38
		10M	3	10	30.00	38
	16QAM	5M	3	10	30.00	38
		10M	3	10	30.00	38
LTE Band 40 Upper	QPSK	5M	3	10	30.00	38
		10M	3	10	30.00	38
	16QAM	5M	3	10	30.00	38
		10M	3	10	30.00	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	5.100	/	5.200
5MHz 16QAM	4.511	/	4.531	5.120	/	5.260
10MHz QPSK	/	8.942	/	/	9.920	/
10MHz 16QAM	/	8.942	/	/	9.840	/

**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	4.511	/	4.511	5.260	/	5.200
5MHz 16QAM	4.511	/	4.511	5.180	/	5.160
10MHz QPSK	/	8.942	/	/	9.840	/
10MHz 16QAM	/	8.942	/	/	9.680	/

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>						
<b>LTE Band 40 Lower:</b>						
Test Mode:	10M QPSK	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (°C)	Voltage (V <sub>DC</sub> )	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.87	2305.022	2305.000	2314.983	2315.000
	-20	3.87	2305.009	2305.000	2314.975	2315.000
	-10	3.87	2305.024	2305.000	2314.982	2315.000
	0	3.87	2305.006	2305.000	2314.970	2315.000
	10	3.87	2305.029	2305.000	2314.987	2315.000
	20	3.87	2305.028	2305.000	2314.979	2315.000
	30	3.87	2305.015	2305.000	2314.985	2315.000
	40	3.87	2305.002	2305.000	2314.998	2315.000
Frequency Stability vs. Voltage	20	3.45	2305.018	2305.000	2314.997	2315.000
	20	4.4	2305.016	2305.000	2314.974	2315.000
					<b>Result:</b>	<b>Pass</b>

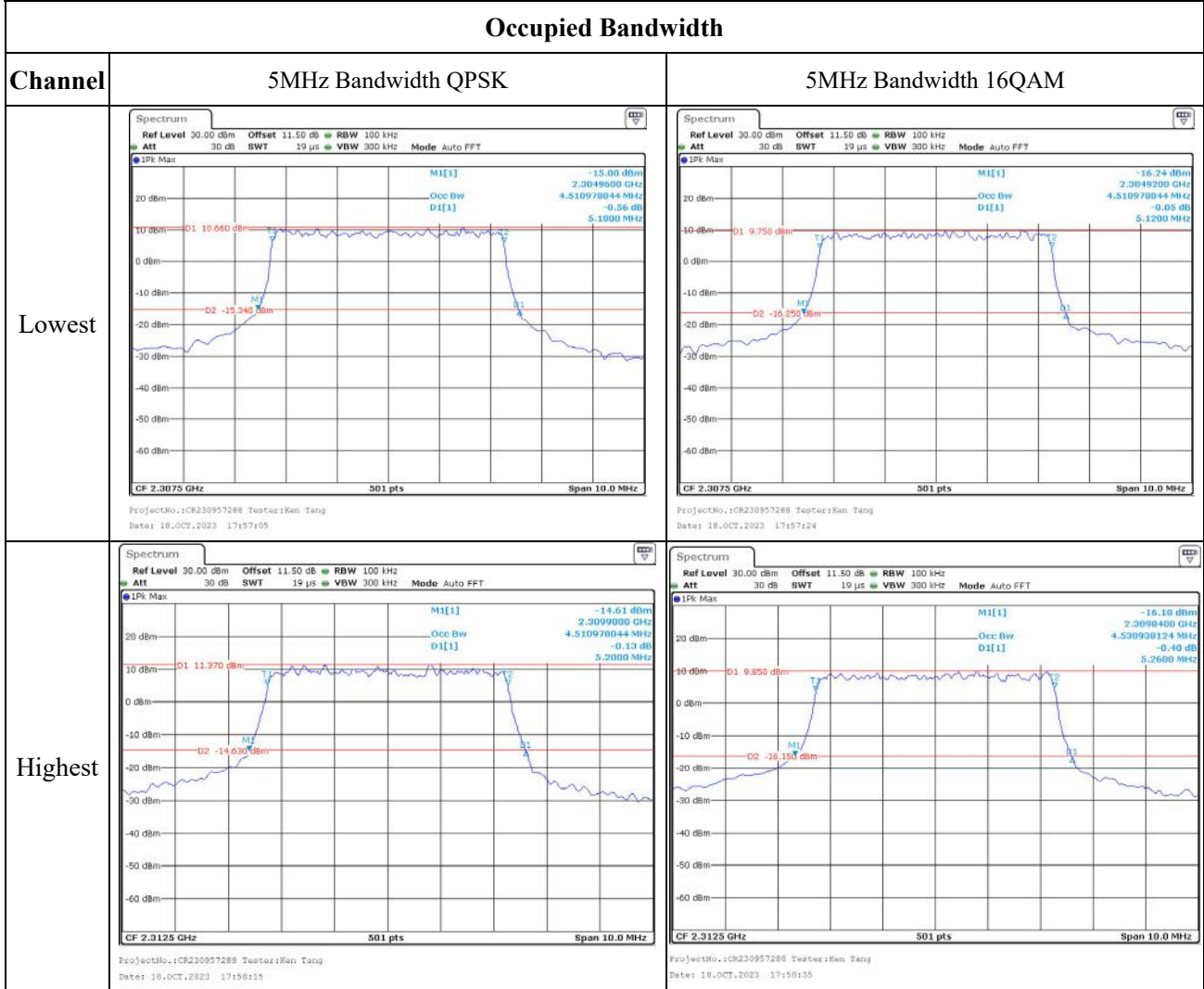
Test Mode:	10M 16QAM	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (°C)	Voltage (V <sub>DC</sub> )	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.87	2305.029	2305.000	2314.984	2315.000
	-20	3.87	2305.009	2305.000	2314.996	2315.000
	-10	3.87	2305.011	2305.000	2314.990	2315.000
	0	3.87	2305.013	2305.000	2314.972	2315.000
	10	3.87	2305.002	2305.000	2314.999	2315.000
	20	3.87	2305.029	2305.000	2314.986	2315.000
	30	3.87	2305.016	2305.000	2314.981	2315.000
	40	3.87	2305.028	2305.000	2314.989	2315.000
Frequency Stability vs. Voltage	20	3.45	2305.002	2305.000	2314.978	2315.000
	20	4.4	2305.007	2305.000	2314.986	2315.000
					<b>Result:</b>	<b>Pass</b>

<b>LTE Band 40 Upper:</b>						
Test Mode:	10M QPSK	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (°C)	Voltage (V <sub>DC</sub> )	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.87	2350.024	2350.000	2359.989	2360.000
	-20	3.87	2350.006	2350.000	2359.983	2360.000
	-10	3.87	2350.027	2350.000	2359.971	2360.000
	0	3.87	2350.010	2350.000	2359.970	2360.000

	10	3.87	2350.010	2350.000	2359.992	2360.000
	20	3.87	2350.011	2350.000	2359.975	2360.000
	30	3.87	2350.220	2350.000	2359.978	2360.000
	40	3.87	2350.015	2350.000	2359.979	2360.000
	50	3.87	2350.025	2350.000	2359.998	2360.000
Frequency Stability vs. Voltage	20	3.29	2350.013	2350.000	2359.978	2360.000
	20	4.45	2350.019	2350.000	2359.985	2360.000
					<b>Result:</b>	<b>Pass</b>

Test Mode:	10M 16QAM	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (°C)	Voltage (V <sub>DC</sub> )	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.87	2350.027	2350.000	2359.971	2360.000
	-20	3.87	2350.022	2350.000	2359.981	2360.000
	-10	3.87	2350.025	2350.000	2359.983	2360.000
	0	3.87	2350.018	2350.000	2359.981	2360.000
	10	3.87	2350.013	2350.000	2359.999	2360.000
	20	3.87	2350.013	2350.000	2359.975	2360.000
	30	3.87	2350.025	2350.000	2359.992	2360.000
	40	3.87	2350.009	2350.000	2359.988	2360.000
	50	3.87	2350.003	2350.000	2359.975	2360.000
Frequency Stability vs. Voltage	20	3.29	2350.008	2350.000	2359.993	2360.000
	20	4.45	2350.013	2350.000	2359.980	2360.000
					<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**

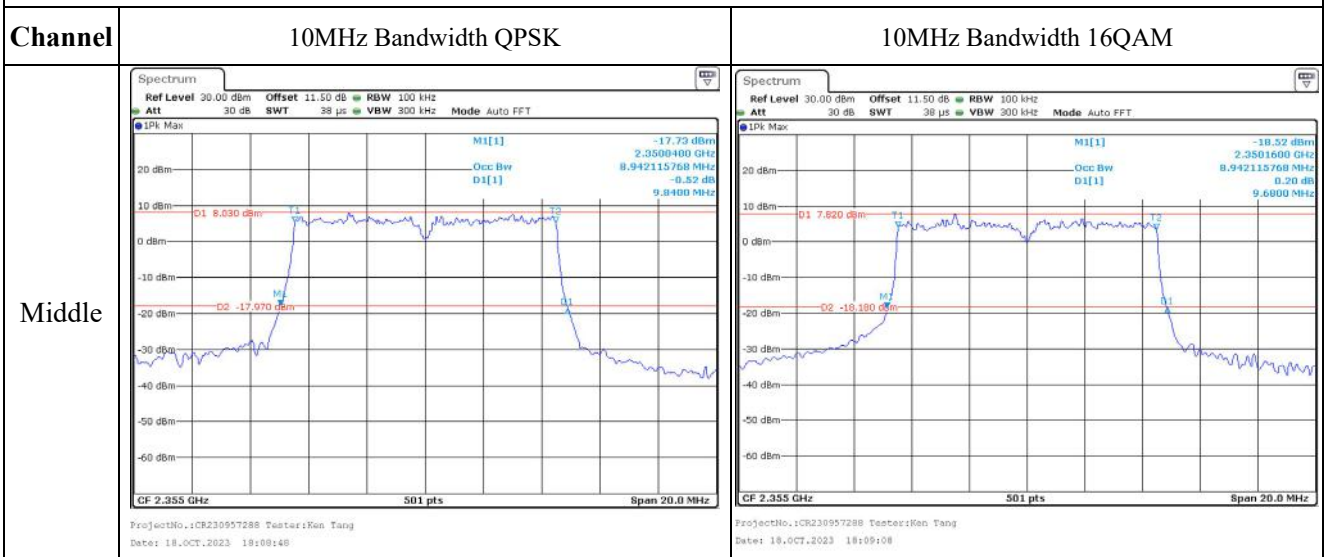
Channel	10MHz Bandwidth QPSK	10MHz Bandwidth 16QAM
Middle	<p>ProjectNo.:CR230957288 Tester:Ken Tang Date: 18.OCT.2023 17:58:57</p>	<p>ProjectNo.:CR230957288 Tester:Ken Tang Date: 18.OCT.2023 17:59:19</p>

2350-2360 MHz:

**Occupied Bandwidth**

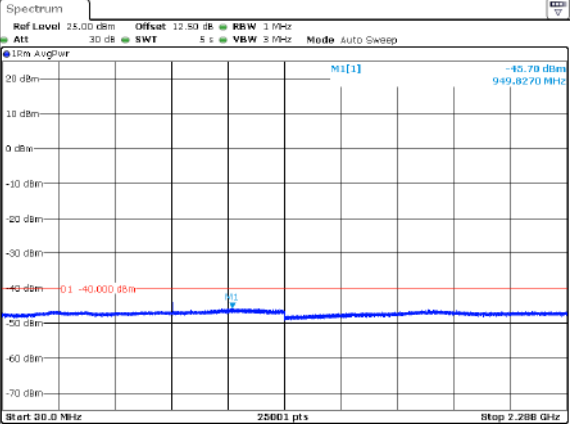
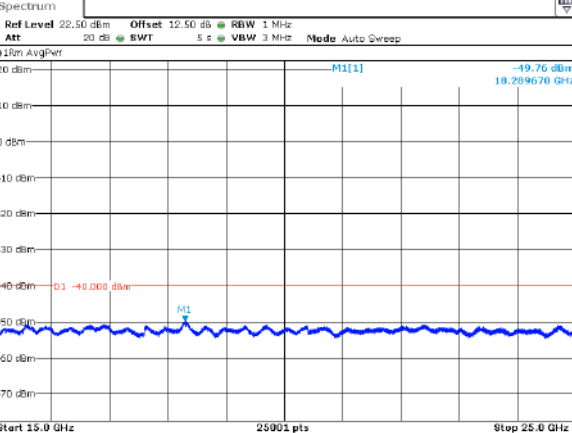
Channel	5MHz Bandwidth QPSK	5MHz Bandwidth 16QAM
Lowest	<p>ProjectNo.:CR230957288 Tester:Ken Tang Date: 18.OCT.2023 18:06:43</p>	<p>ProjectNo.:CR230957288 Tester:Ken Tang Date: 18.OCT.2023 18:06:59</p>
Highest	<p>ProjectNo.:CR230957288 Tester:Ken Tang Date: 18.OCT.2023 18:08:03</p>	<p>ProjectNo.:CR230957288 Tester:Ken Tang Date: 18.OCT.2023 18:08:23</p>

Occupied Bandwidth



2305-2315 MHz:

### Spurious Emissions at Antenna Terminal

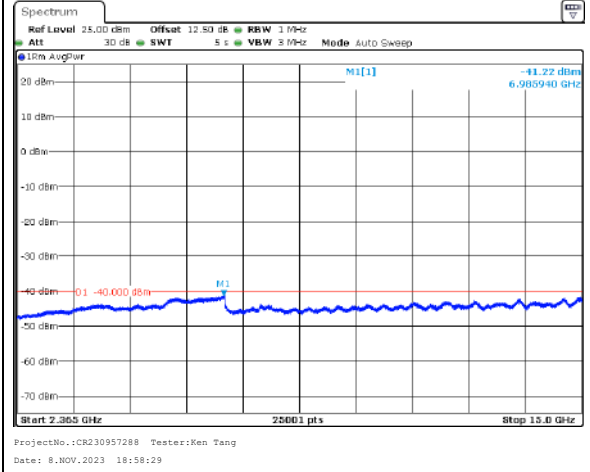
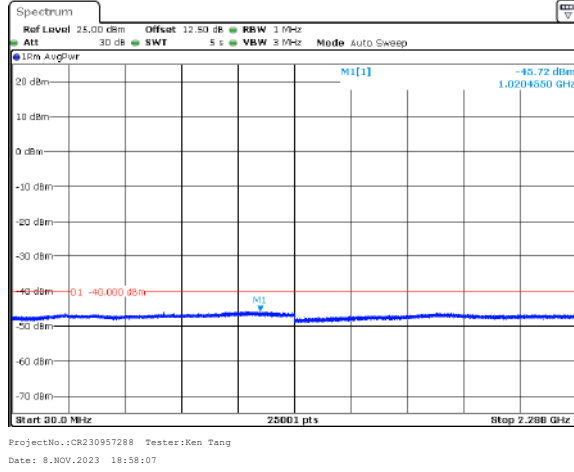
Channel	5MHz Bandwidth QPSK
	 <p>ProjectNo.:CR230957288 Tester:Ken Tang Date: 8.NOV.2023 18:54:40</p>
Lowest	 <p>ProjectNo.:CR230957288 Tester:Ken Tang Date: 8.NOV.2023 18:55:01</p>



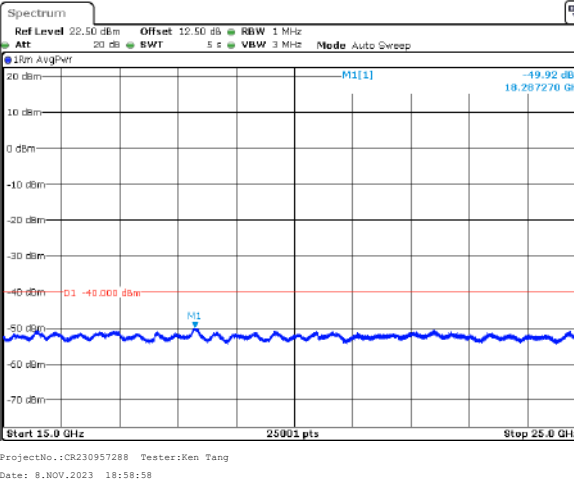
Spurious Emissions at Antenna Terminal

Channel

5MHz Bandwidth QPSK



Highest



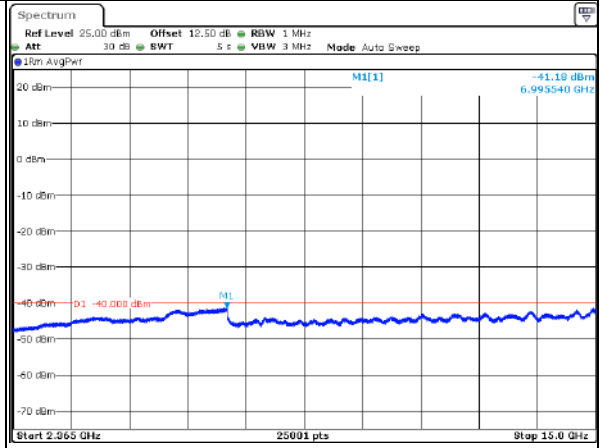
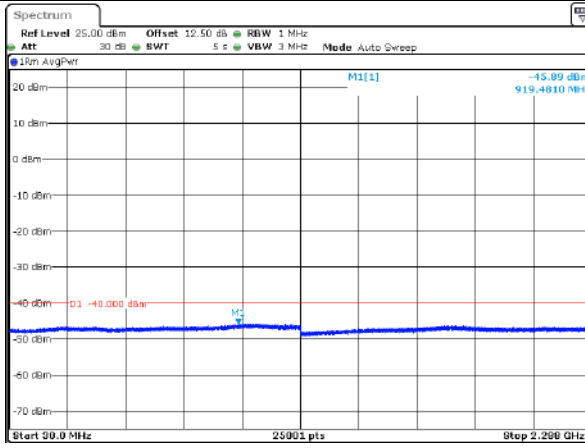
/

### Spurious Emissions at Antenna Terminal

Channel

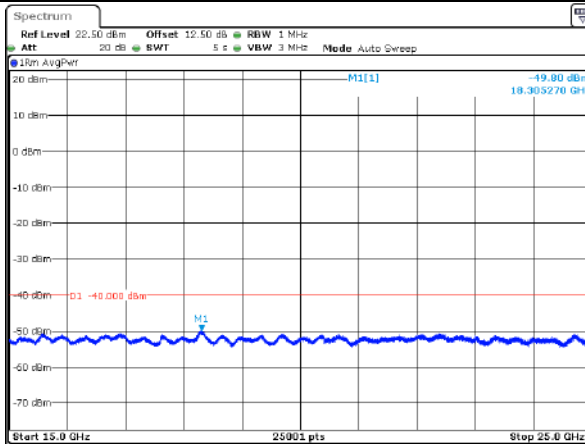
10MHz Bandwidth QPSK

Middle



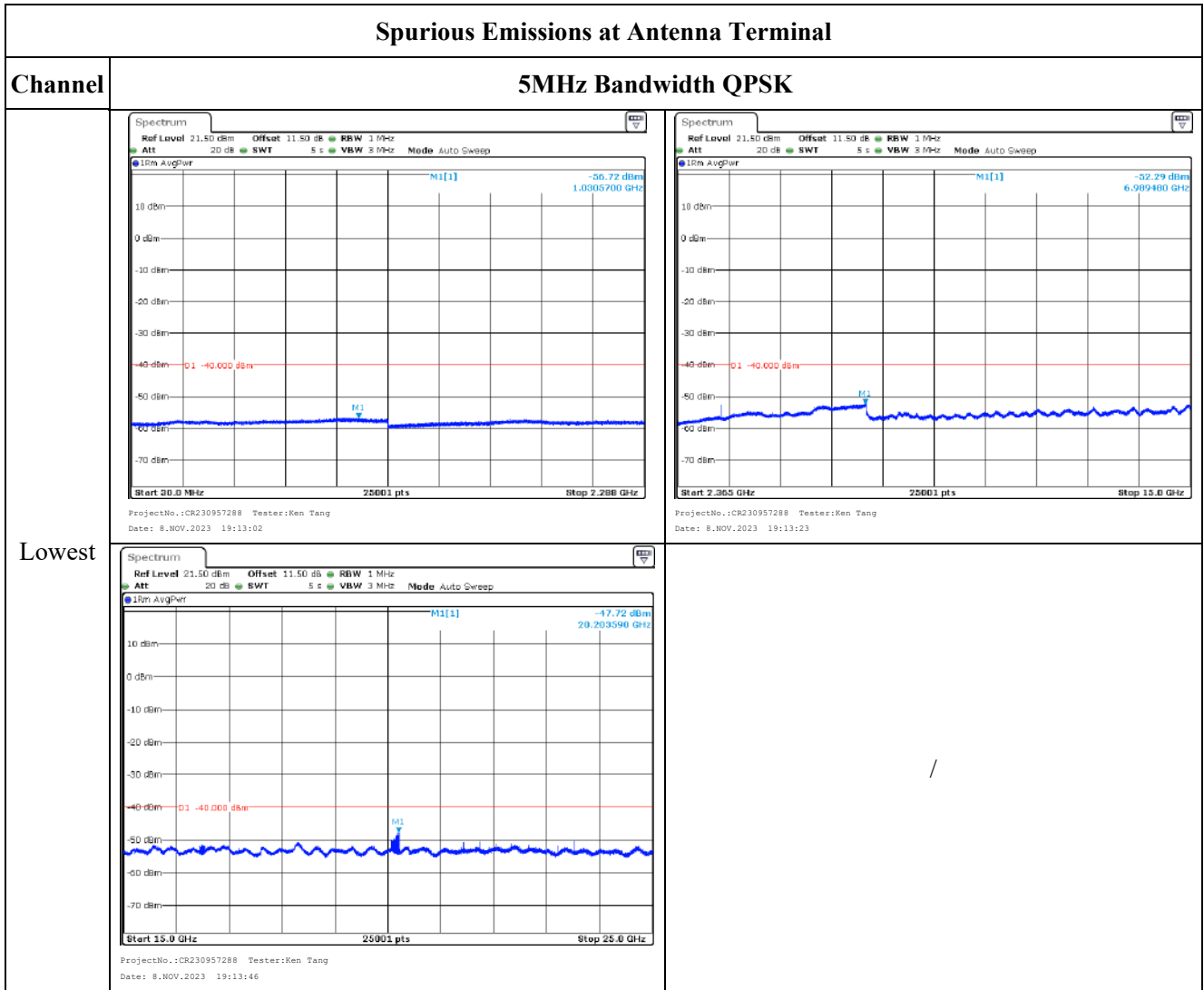
ProjectNo.:CR230957288 Tester:Ken Tang  
Date: 8.NOV.2023 18:59:23

ProjectNo.:CR230957288 Tester:Ken Tang  
Date: 8.NOV.2023 18:59:45



ProjectNo.:CR230957288 Tester:Ken Tang  
Date: 8.NOV.2023 19:00:11

2350-2360 MHz:



Spurious Emissions at Antenna Terminal

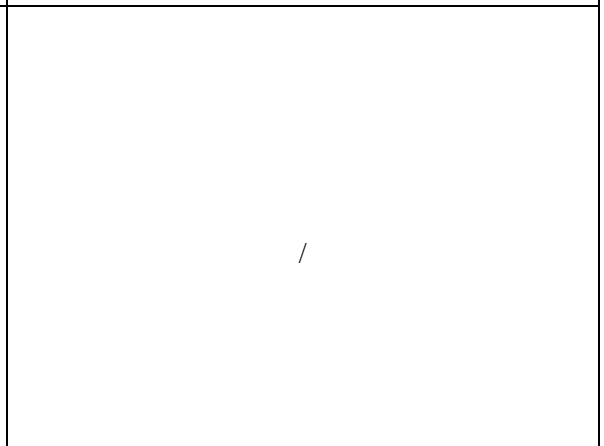
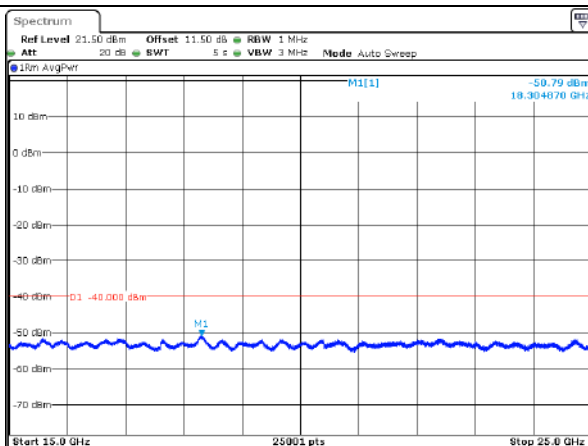
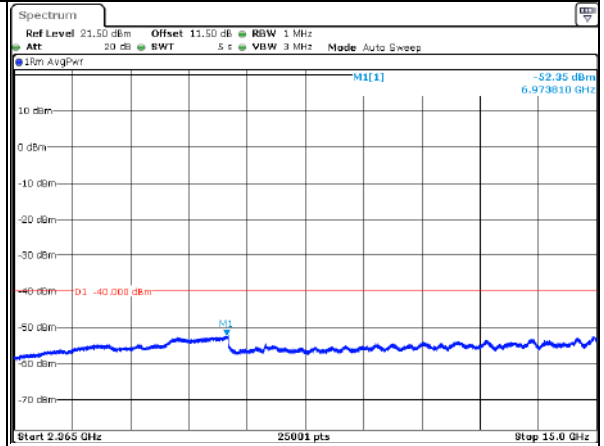
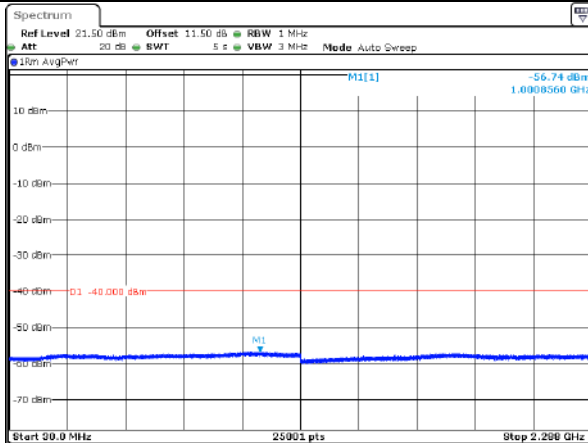
Channel	5MHz Bandwidth QPSK	
	<p>ProjectNo.:CR230957288 Tester:Ken Tang Date: 8.NOV.2023 19:15:13</p>	<p>ProjectNo.:CR230957288 Tester:Ken Tang Date: 8.NOV.2023 19:15:34</p>
Highest	<p>ProjectNo.:CR230957288 Tester:Ken Tang Date: 8.NOV.2023 19:15:55</p>	/

Spurious Emissions at Antenna Terminal

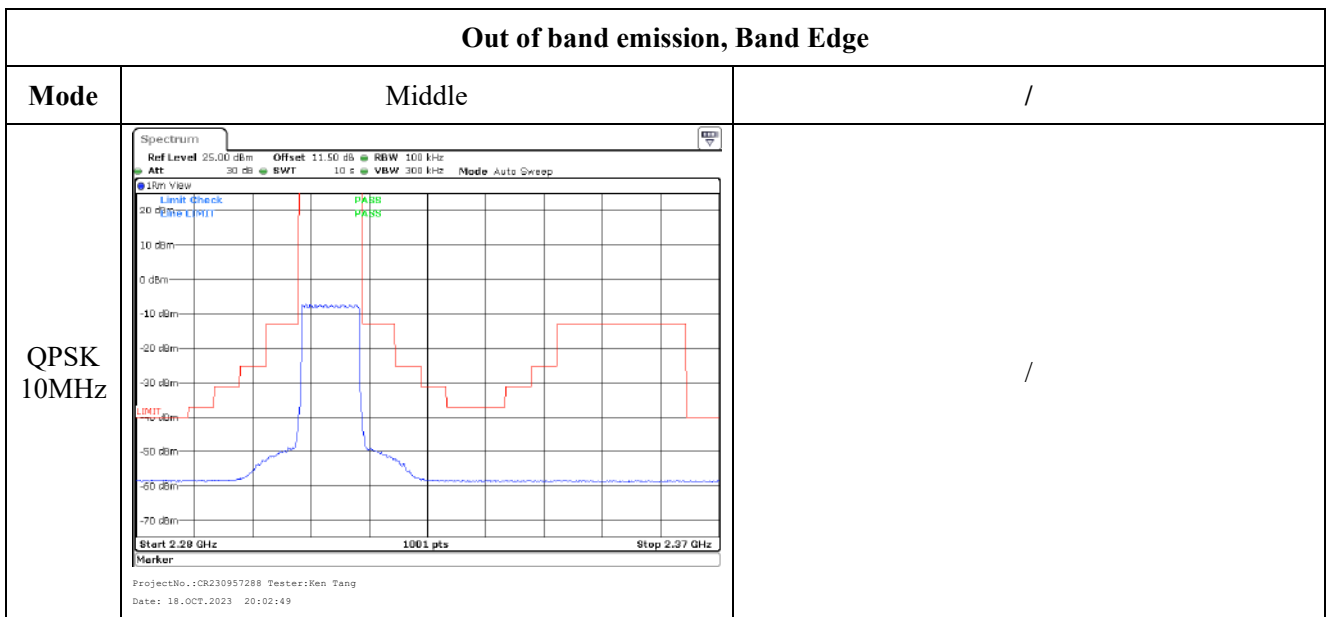
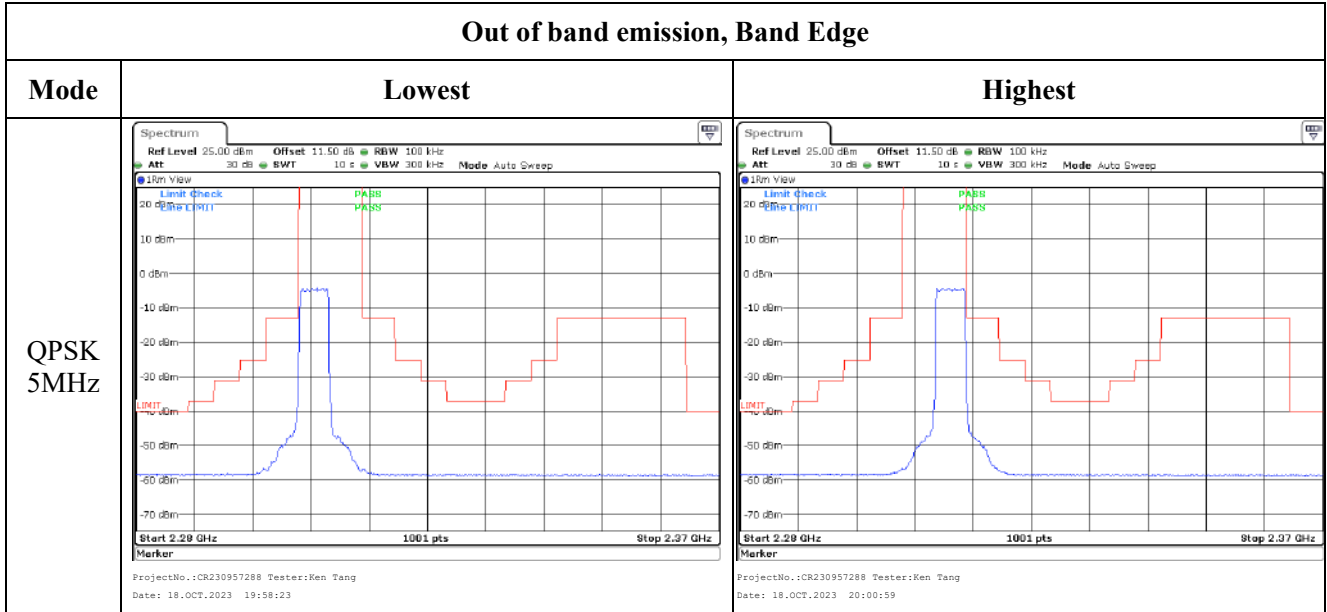
Channel

10MHz Bandwidth QPSK

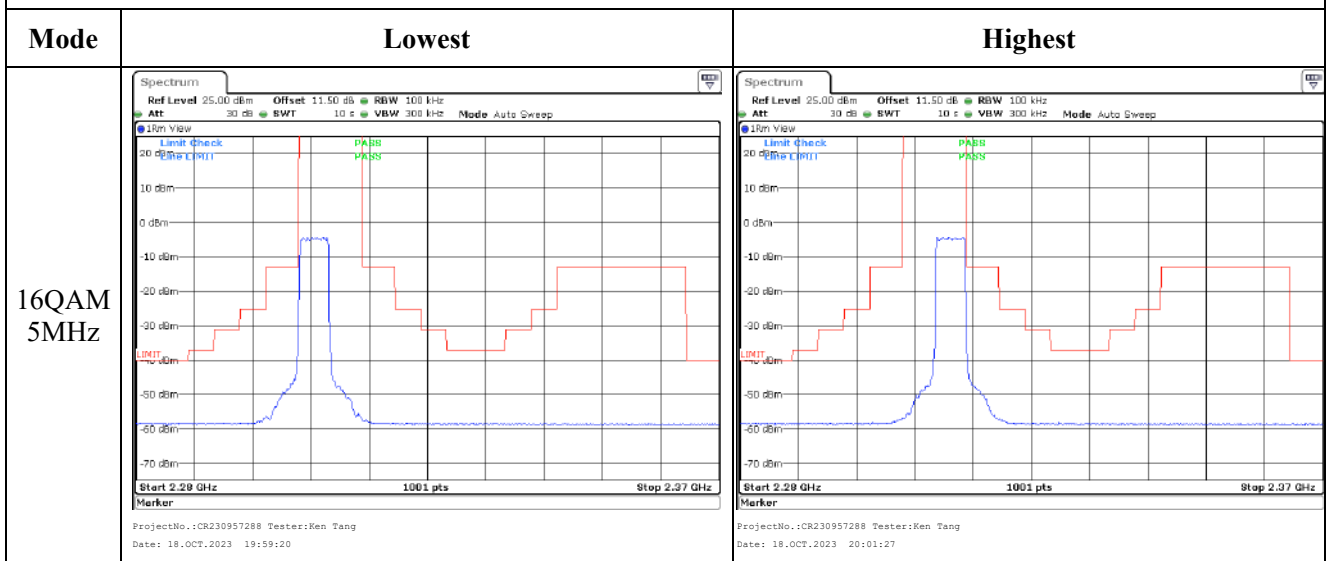
Middle



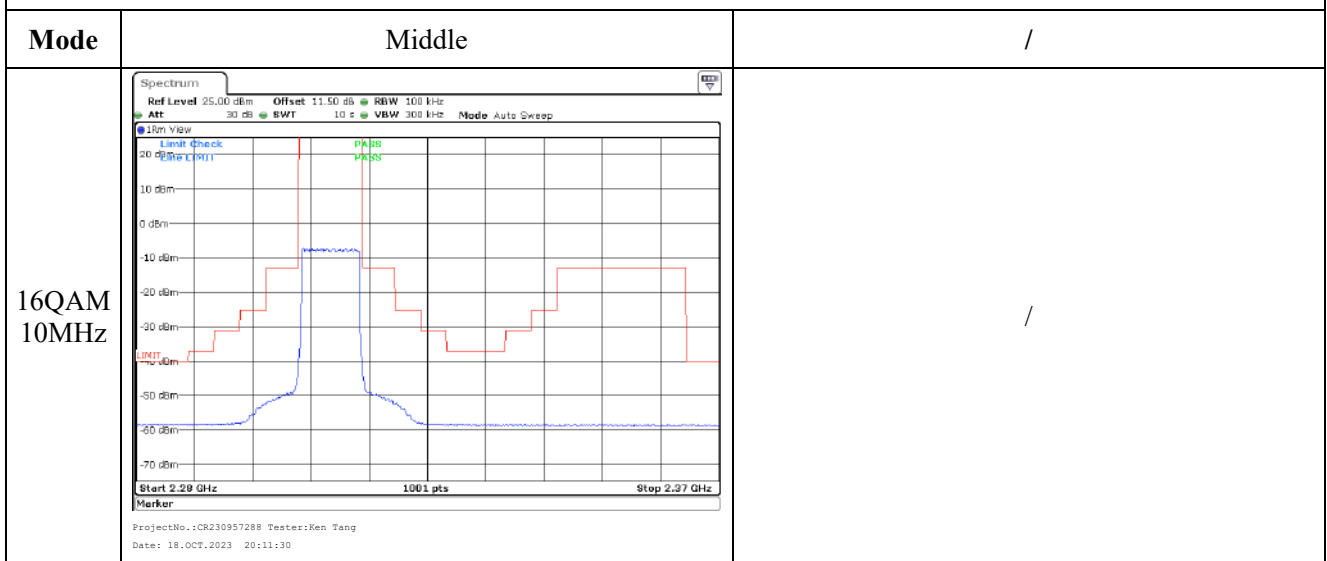
2305-2315 MHz:



Out of band emission, Band Edge

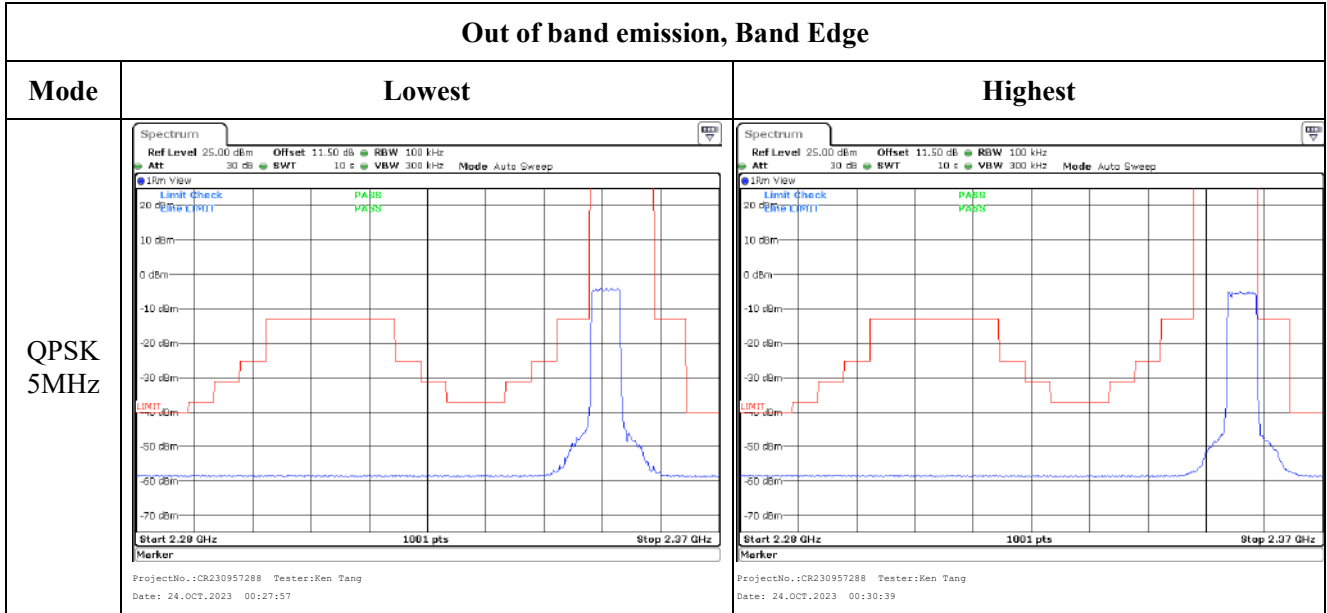


Out of band emission, Band Edge

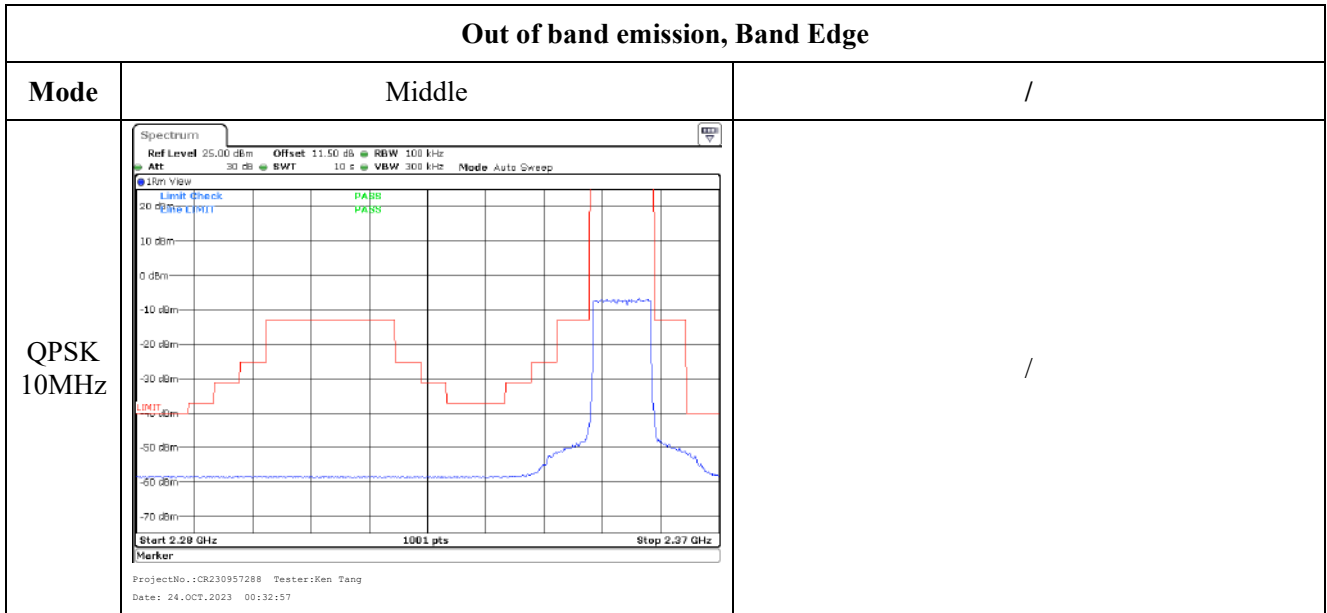


2350-2360 MHz:

**Out of band emission, Band Edge**

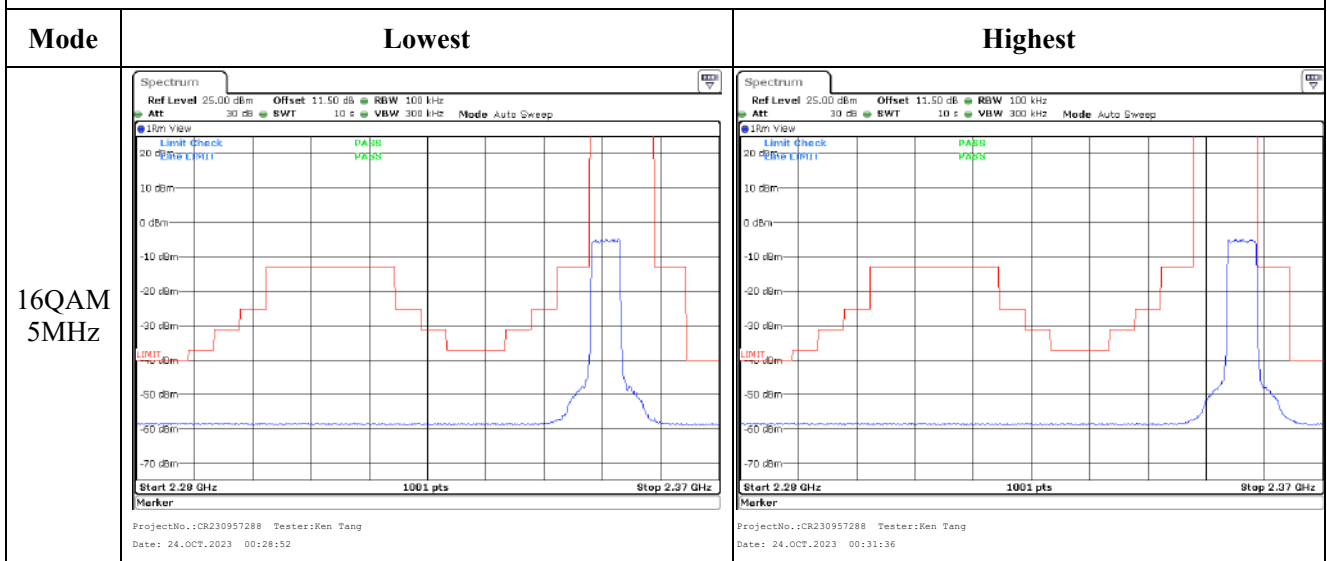


**Out of band emission, Band Edge**

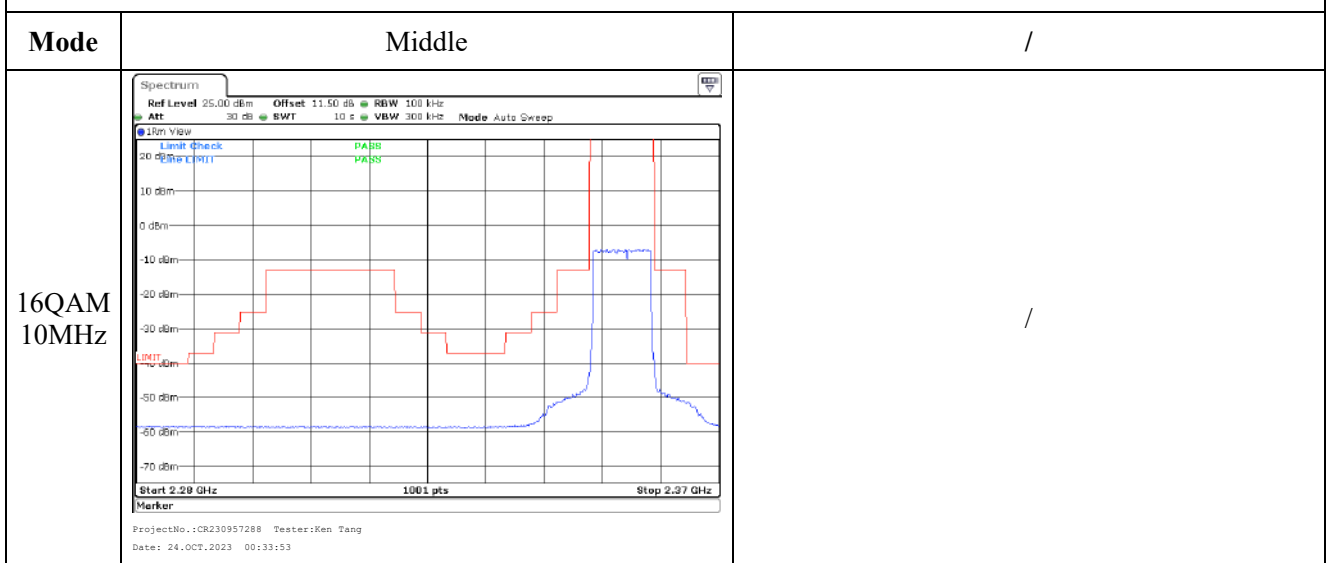




Out of band emission, Band Edge

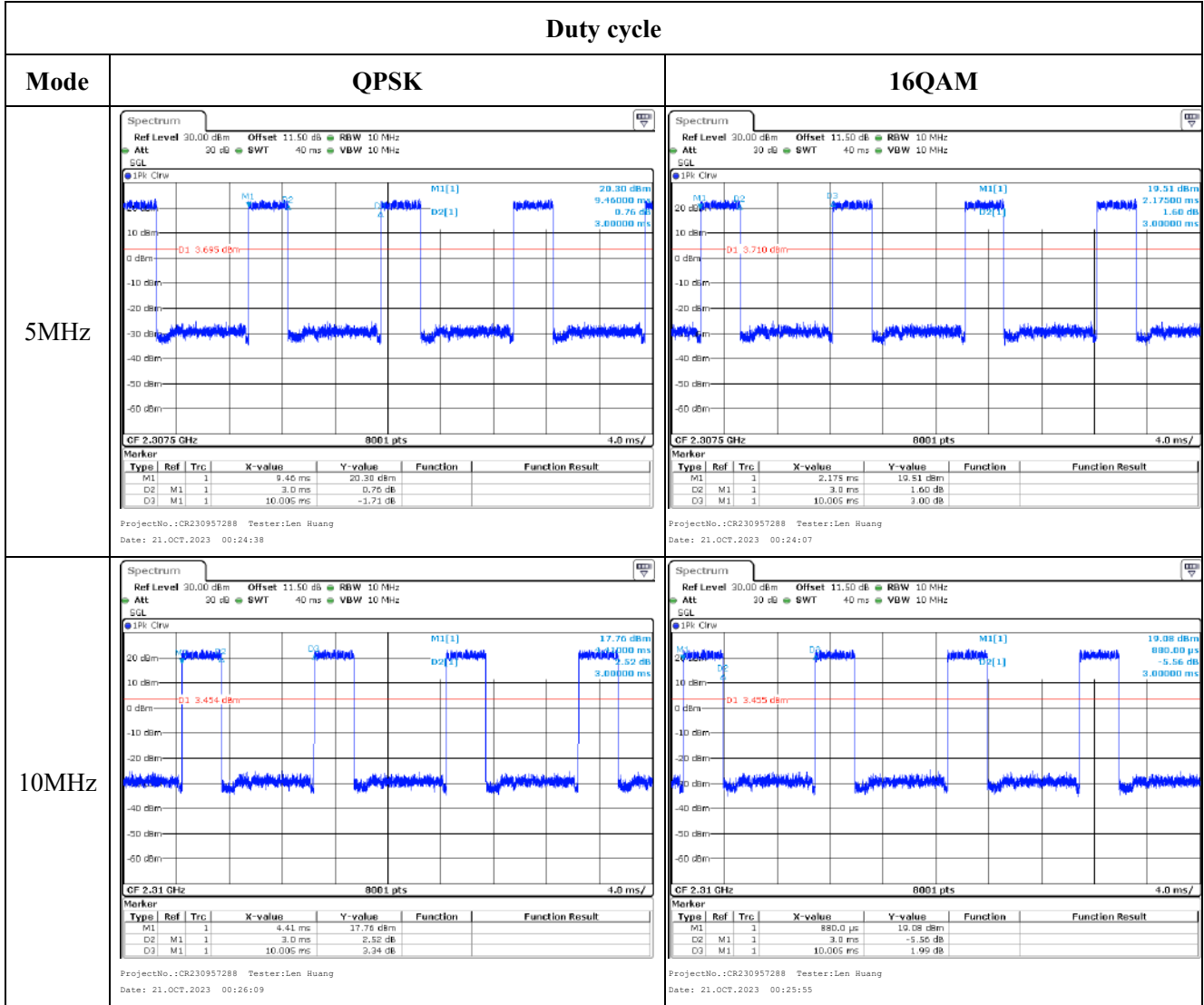


Out of band emission, Band Edge

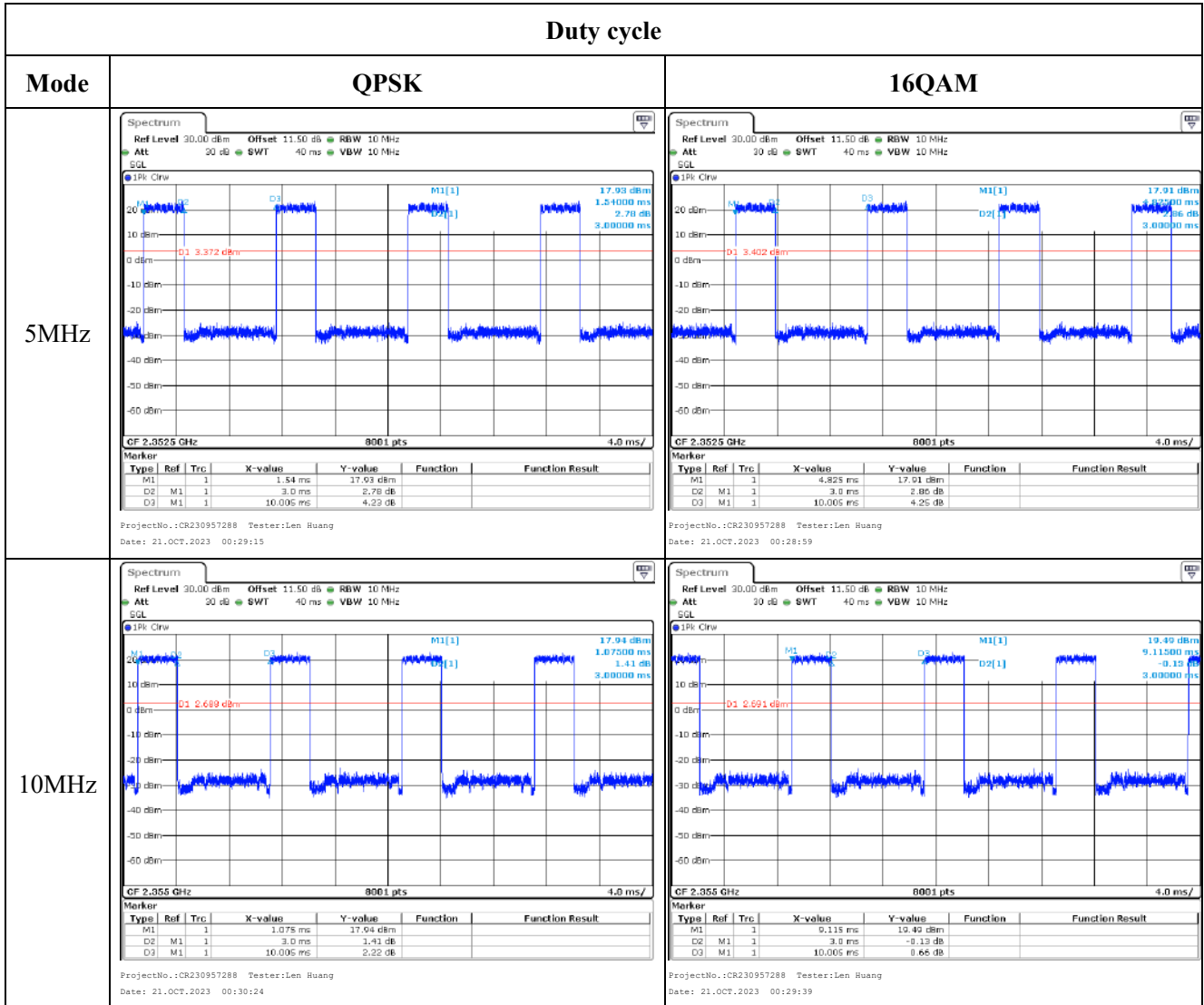


2305-2315 MHz:

Duty cycle



2350-2360 MHz:



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

Serial Number:	2BUF-5	Test Date:	2023/10/18~2023/11/7
Test Site:	RF	Test Mode:	Transmitting
Tester:	Ken Tang	Test Result:	Pass

**Environmental Conditions:**

Temperature: (°C)	25.6	Relative Humidity: (%)	49	ATM Pressure: (kPa)	101.3
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**Test Equipment List and Details:**

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

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

**Test Frequency for Each Mode:**

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

**Test Data:**

FCC§2.1046;§ 27.50(h)(2)						
RF Output Power:						
Test Bandwidth & Modulation	Resource Block & RB offset	Conducted Average Output Power(dBm)			Maximum EIRP (dBm)	EIRP Limit (dBm)
		Lowest Channel	Middle Channel	Highest Channel		
5MHz QPSK	RB1#0	15.01	14.65	14.5	14.58	33
	RB1#13	15.09	14.76	14.43		
	RB1#24	14.94	14.62	14.29		
	RB15#0	13.89	13.62	13.41		
	RB15#10	14.06	13.69	13.31		
	RB25#0	14.01	13.65	13.34		
5MHz 16QAM	RB1#0	14.21	13.64	13.42	13.81	33
	RB1#13	14.32	13.76	13.53		
	RB1#24	14.17	13.63	13.36		
	RB15#0	12.91	12.57	12.43		
	RB15#10	13.13	12.6	12.28		
	RB25#0	12.98	12.67	12.4		
10MHz QPSK	RB1#0	15.11	14.74	14.52	14.84	33
	RB1#25	15.35	15.04	14.77		
	RB1#49	15.04	14.68	14.41		
	RB25#0	13.84	13.67	13.57		
	RB25#25	14.23	13.73	13.29		
	RB50#0	14.03	13.71	13.41		
10MHz 16QAM	RB1#0	14.14	13.98	13.42	14	33
	RB1#25	14.51	14.25	13.71		
	RB1#49	14.15	13.93	13.28		
	RB25#0	12.88	12.67	12.56		
	RB25#25	13.25	12.71	12.3		
	RB50#0	13.09	12.7	12.41		
15MHz QPSK	RB1#0	15.10	15.27	15.22	14.82	33
	RB1#38	15.27	15.33	15.32		
	RB1#74	15.05	15.04	15.0		
	RB36#0	14.02	13.99	14.14		
	RB36#39	14.34	14.06	14.15		
	RB75#0	14.15	14.16	14.11		
15MHz 16QAM	RB1#0	14.49	14.28	14.34	14.09	33
	RB1#38	14.59	14.38	14.60		
	RB1#74	14.29	14.24	14.31		
	RB36#0	12.93	13.13	13.19		
	RB36#39	13.24	13.42	13.42		
	RB75#0	13.19	13.0	13.17		
20MHz QPSK	RB1#0	15.15	15.27	15.40	15.09	33

	RB1#50	15.48	15.45	15.60		
	RB1#99	15.12	15.20	15.15		
	RB50#0	13.92	14.06	14.05		
	RB50#50	14.4	14.44	14.53		
	RB100#0	14.05	14	14.1		
20MHz 16QAM	RB1#0	14.17	14.37	14.4	14.12	33
	RB1#50	14.54	14.63	14.62		
	RB1#99	14.24	14.21	14.21		
	RB50#0	12.91	13.01	12.92		
	RB50#50	13.27	13.53	13.4		
	RB100#0	13.11	13.25	13.34		
Note: EIRP=Conducted Power(dBm) - Lc(dB) + Gr(dBi)						
					<b>Result:</b>	<b>Pass</b>

<b>Peak-to-average Ratio(PAR)</b>					
Test Bandwidth & Modulation	Resource Block & RB offset	Peak-to-average Ratio(dB)			Limit (dB)
		Lowest Channel	Middle Channel	Highest Channel	
20MHz QPSK	RB1#0	8.61	8.52	8.55	13
	RB100#0	8.52	8.55	8.67	13
20MHz 16QAM	RB1#0	8.52	8.58	8.64	13
	RB100#0	8.61	8.52	8.52	13
<b>Result:</b>					<b>Pass</b>

<b>FCC §2.1049, §27.53:Occupied Bandwidth</b>						
Operation Mode	99% Occupied Bandwidth (MHz)			26 dB Occupied Bandwidth (MHz)		
	Low Channel	Middle channel	High Channel	Low Channel	Middle Channel	High Channel
5MHz QPSK	4.491	4.511	4.491	4.940	4.900	5.000
5MHz 16QAM	4.491	4.511	4.491	4.980	5.140	4.960
10MHz QPSK	8.942	8.942	8.942	9.520	9.560	9.520
10MHz 16QAM	8.982	8.942	8.942	9.480	9.520	9.600
15MHz QPSK	13.353	13.473	13.473	14.460	14.700	14.460
15MHz 16QAM	13.473	13.533	13.533	14.520	15.180	15.420
20MHz QPSK	17.804	17.884	17.884	19.200	19.120	19.040
20MHz 16QAM	17.804	17.884	17.964	19.200	19.200	19.120
Note: The test plots please refer to the Plots of Occupied Bandwidth						

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

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

<b>FCC §2.1055, §27.54: Frequency Stability</b>						
Test Mode:	20M QPSK	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (°C)	Voltage (V <sub>DC</sub> )	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.87	2496.014	2496.00	2689.987	2690
	-20	3.87	2496.016	2496.00	2689.982	2690
	-10	3.87	2496.002	2496.00	2689.999	2690
	0	3.87	2496.005	2496.00	2689.974	2690
	10	3.87	2496.004	2496.00	2689.974	2690
	20	3.87	2496.003	2496.00	2689.994	2690
	30	3.87	2496.001	2496.00	2689.991	2690
	40	3.87	2496.008	2496.00	2689.990	2690
	50	3.87	2496.018	2496.00	2689.984	2690
Frequency Stability vs. Voltage	20	3.29	2496.019	2496.00	2689.985	2690
	20	4.45	2496.015	2496.00	2689.984	2690
					<b>Result:</b>	<b>Pass</b>

Test Mode:	20M 16QAM	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (°C)	Voltage (V <sub>DC</sub> )	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.87	2496.014	2496.00	2689.995	2690
	-20	3.87	2496.018	2496.00	2689.997	2690
	-10	3.87	2496.010	2496.00	2689.995	2690
	0	3.87	2496.003	2496.00	2689.999	2690
	10	3.87	2496.008	2496.00	2689.988	2690
	20	3.87	2496.004	2496.00	2689.999	2690
	30	3.87	2496.008	2496.00	2689.995	2690
	40	3.87	2496.018	2496.00	2689.995	2690
	50	3.87	2496.020	2496.00	2689.982	2690
Frequency Stability vs. Voltage	20	3.29	2496.020	2496.00	2689.985	2690
	20	4.45	2496.014	2496.00	2689.984	2690
					<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.:CR230957288 Tester:Ken Tang Date: 18.OCT.2023 00:19:57</p>	<p>ProjectNo.:CR230957288 Tester:Ken Tang Date: 18.OCT.2023 00:19:13</p>
<b>Middle</b>	<p>ProjectNo.:CR230957288 Tester:Ken Tang Date: 18.OCT.2023 00:19:31</p>	<p>ProjectNo.:CR230957288 Tester:Ken Tang Date: 18.OCT.2023 00:19:53</p>
<b>Highest</b>	<p>ProjectNo.:CR230957288 Tester:Ken Tang Date: 18.OCT.2023 00:20:08</p>	<p>ProjectNo.:CR230957288 Tester:Ken Tang Date: 18.OCT.2023 00:20:30</p>



Occupied Bandwidth

Channel	10MHz Bandwidth QPSK	10MHz Bandwidth 16QAM
Lowest	<p>ProjectNo.:CR230957288 Testter:Ken Tang Date: 18.OCT.2023 00:23:57</p>	<p>ProjectNo.:CR230957288 Testter:Ken Tang Date: 18.OCT.2023 00:23:17</p>
Middle	<p>ProjectNo.:CR230957288 Testter:Ken Tang Date: 18.OCT.2023 00:23:57</p>	<p>ProjectNo.:CR230957288 Testter:Ken Tang Date: 18.OCT.2023 00:23:57</p>
Highest	<p>ProjectNo.:CR230957288 Testter:Ken Tang Date: 18.OCT.2023 00:24:17</p>	<p>ProjectNo.:CR230957288 Testter:Ken Tang Date: 18.OCT.2023 00:24:17</p>

Occupied Bandwidth

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

Occupied Bandwidth

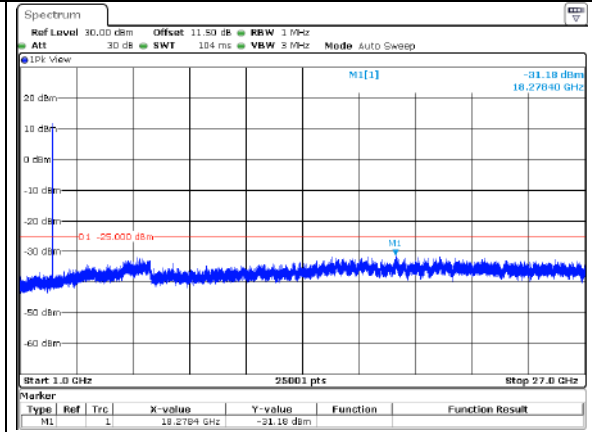
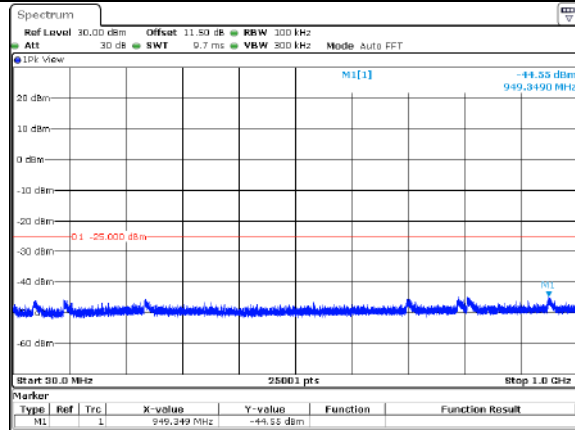
Channel	20MHz Bandwidth QPSK	20MHz Bandwidth 16QAM
Lowest	<p>ProjectNo.:CR230957288 Testeri:Ken Tang Date: 18.OCT.2023 00:30:32</p>	<p>ProjectNo.:CR230957288 Testeri:Ken Tang Date: 18.OCT.2023 00:31:00</p>
Middle	<p>ProjectNo.:CR230957288 Testeri:Ken Tang Date: 18.OCT.2023 00:31:27</p>	<p>ProjectNo.:CR230957288 Testeri:Ken Tang Date: 18.OCT.2023 00:31:59</p>
Highest	<p>ProjectNo.:CR230957288 Testeri:Ken Tang Date: 18.OCT.2023 00:32:23</p>	<p>ProjectNo.:CR230957288 Testeri:Ken Tang Date: 18.OCT.2023 00:32:49</p>

### Spurious Emissions at Antenna Terminal

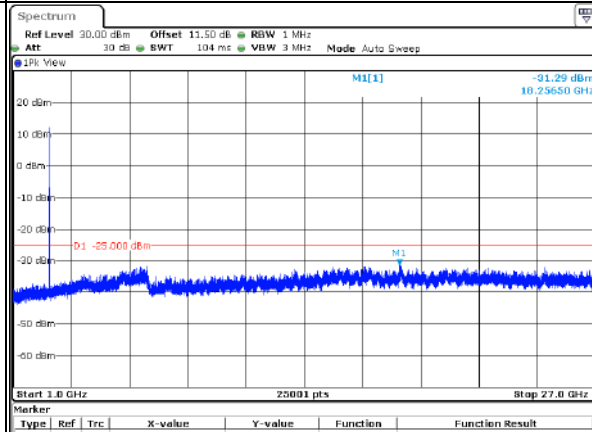
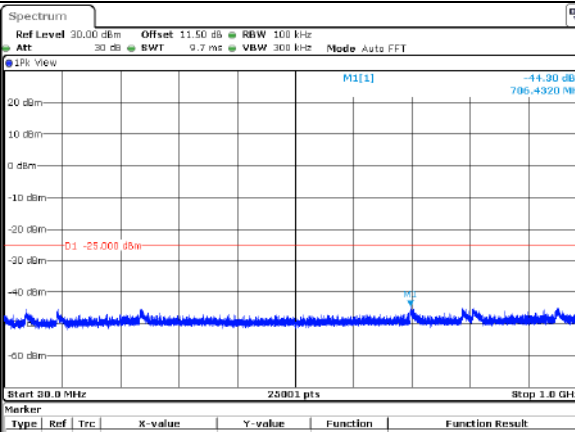
Channel

5MHz Bandwidth QPSK

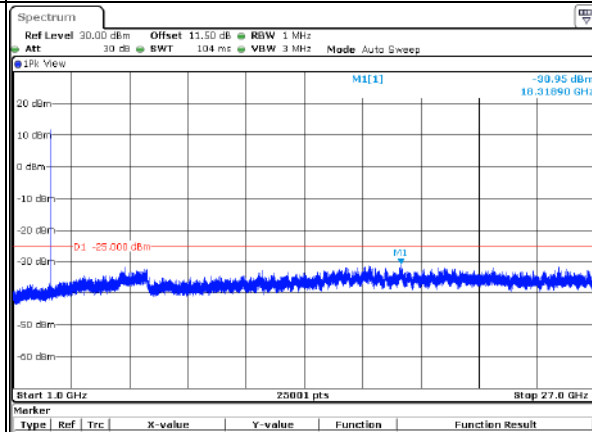
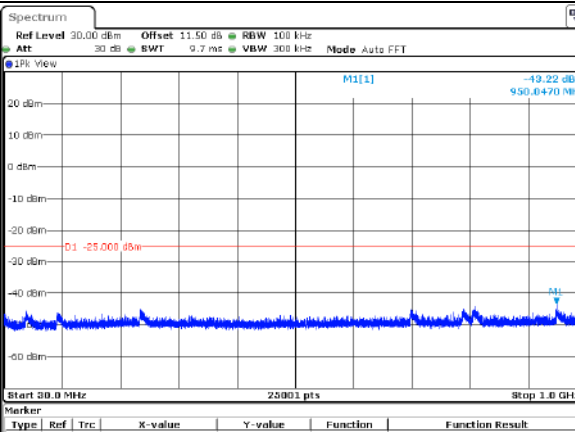
Lowest



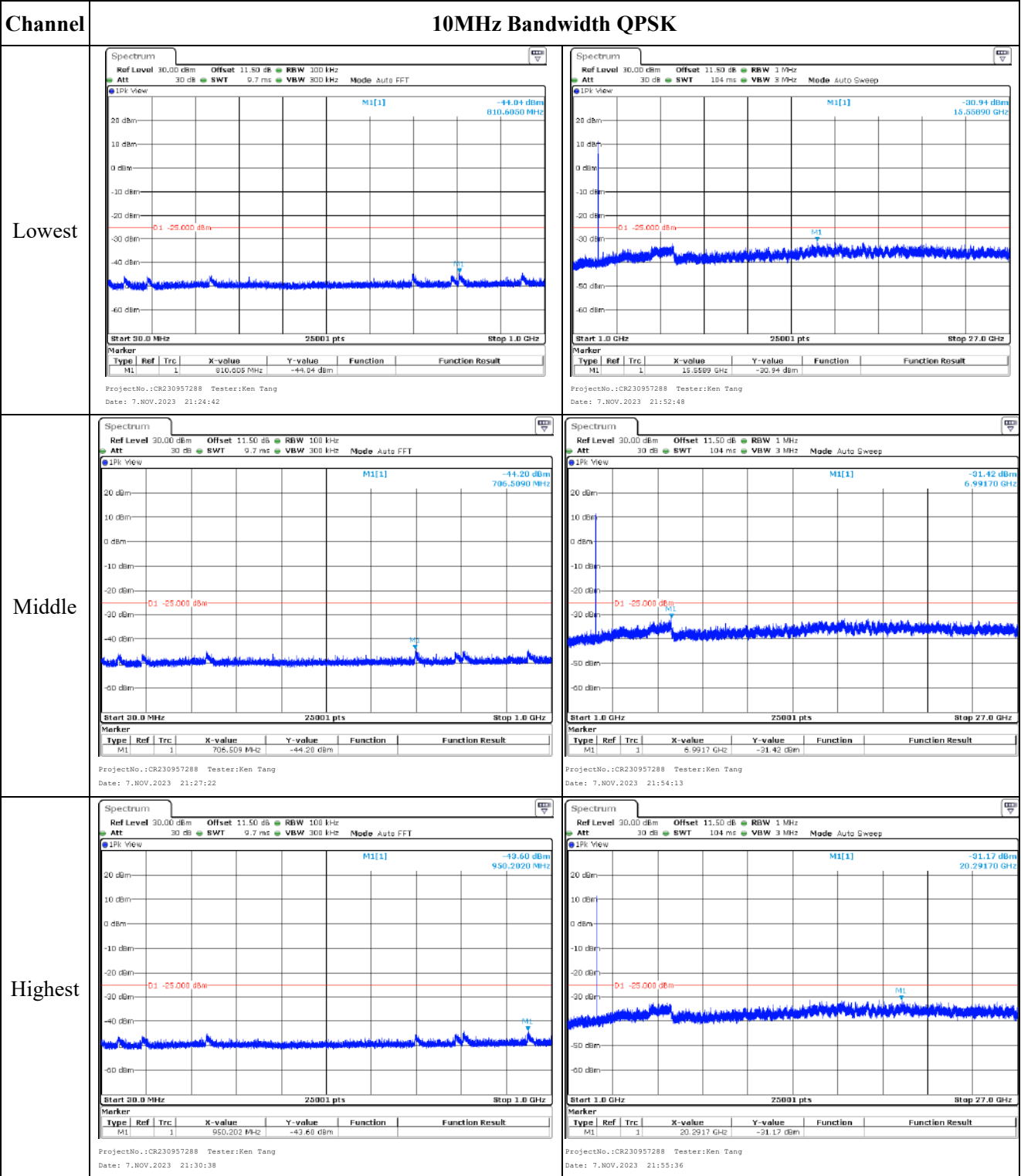
Middle



Highest



### Spurious Emissions at Antenna Terminal

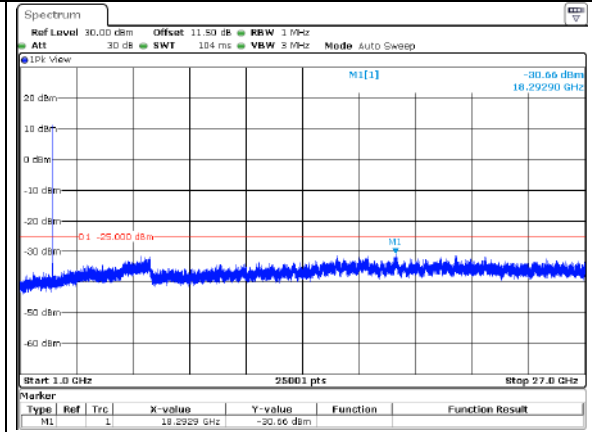
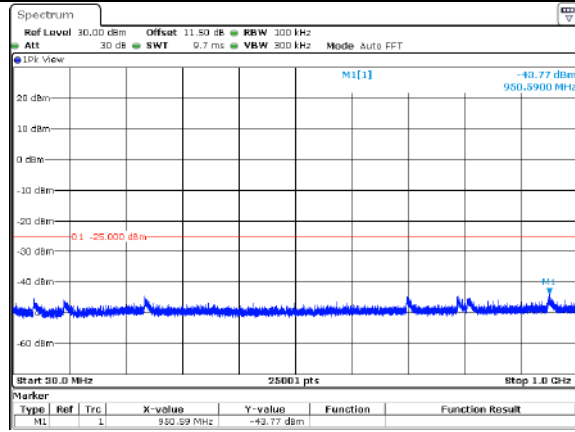


### Spurious Emissions at Antenna Terminal

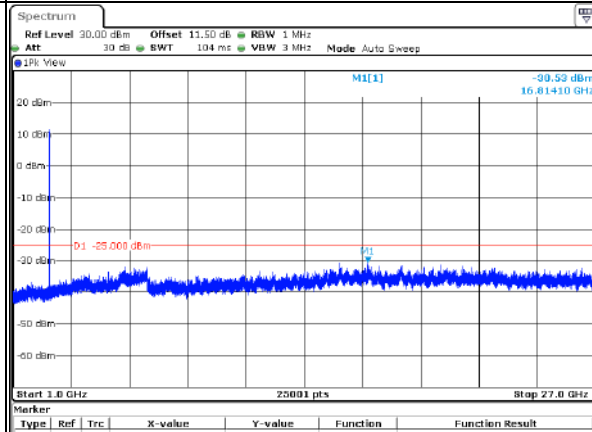
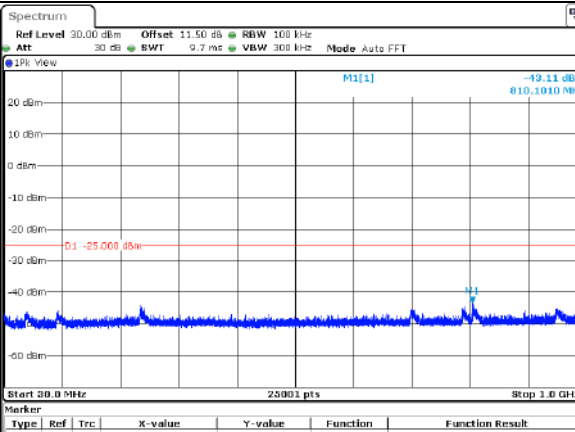
Channel

15MHz Bandwidth QPSK

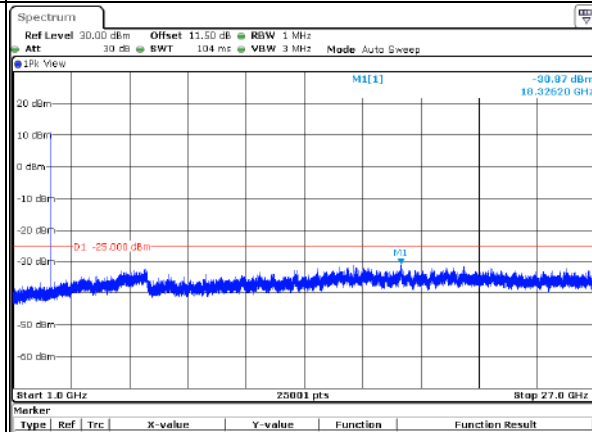
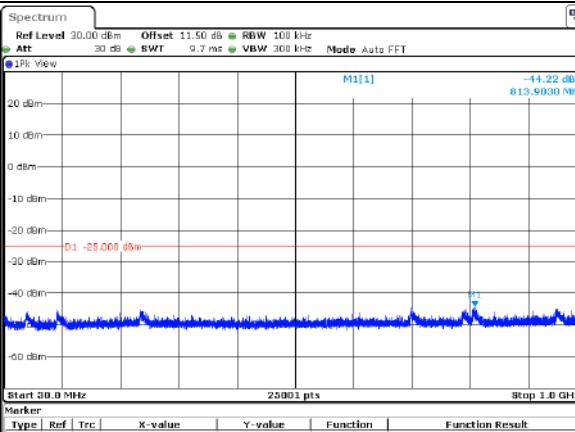
Lowest



Middle



Highest

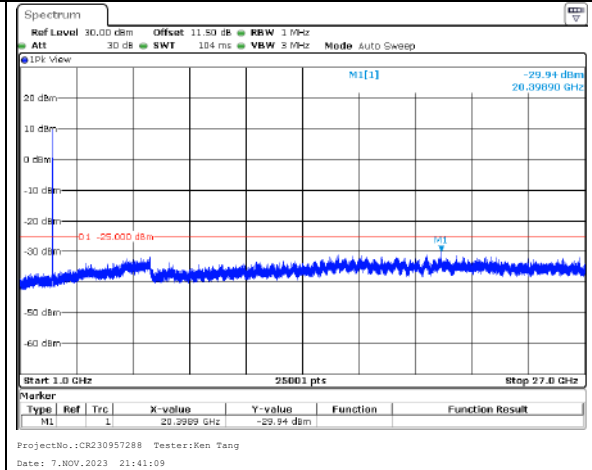
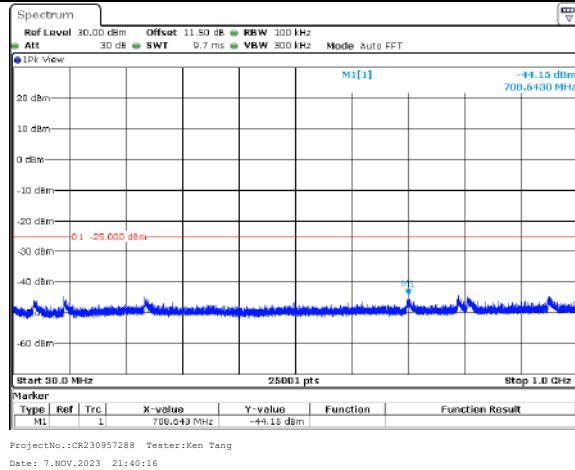


### Spurious Emissions at Antenna Terminal

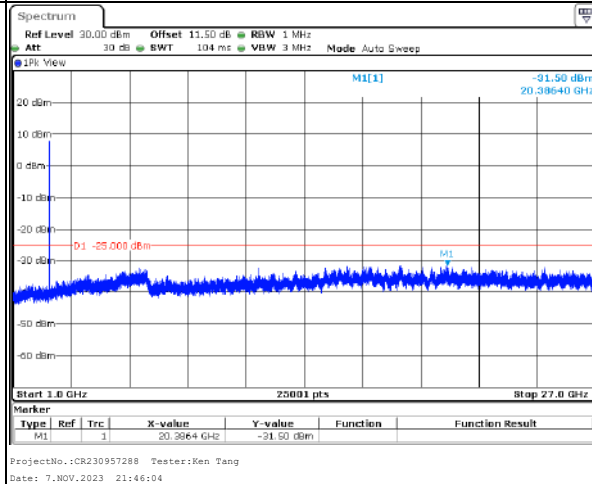
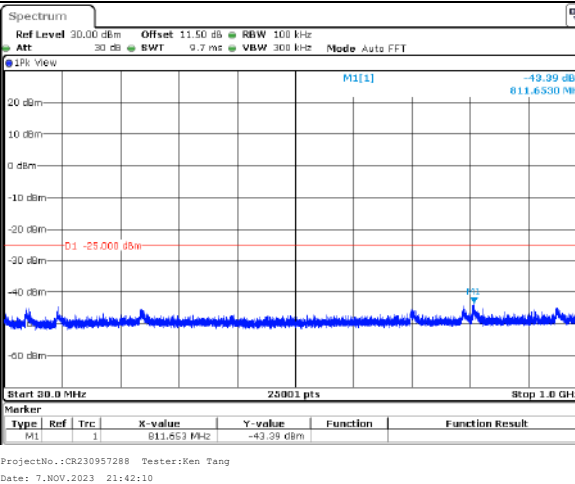
Channel

20MHz Bandwidth QPSK

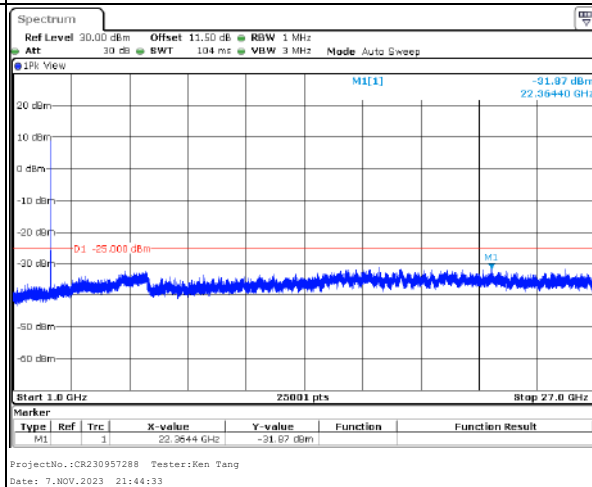
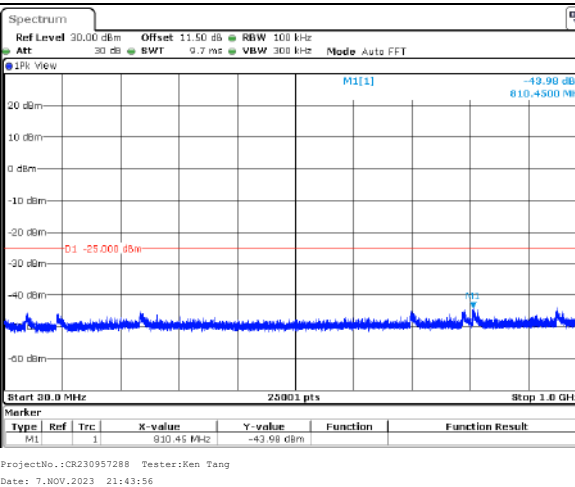
Lowest



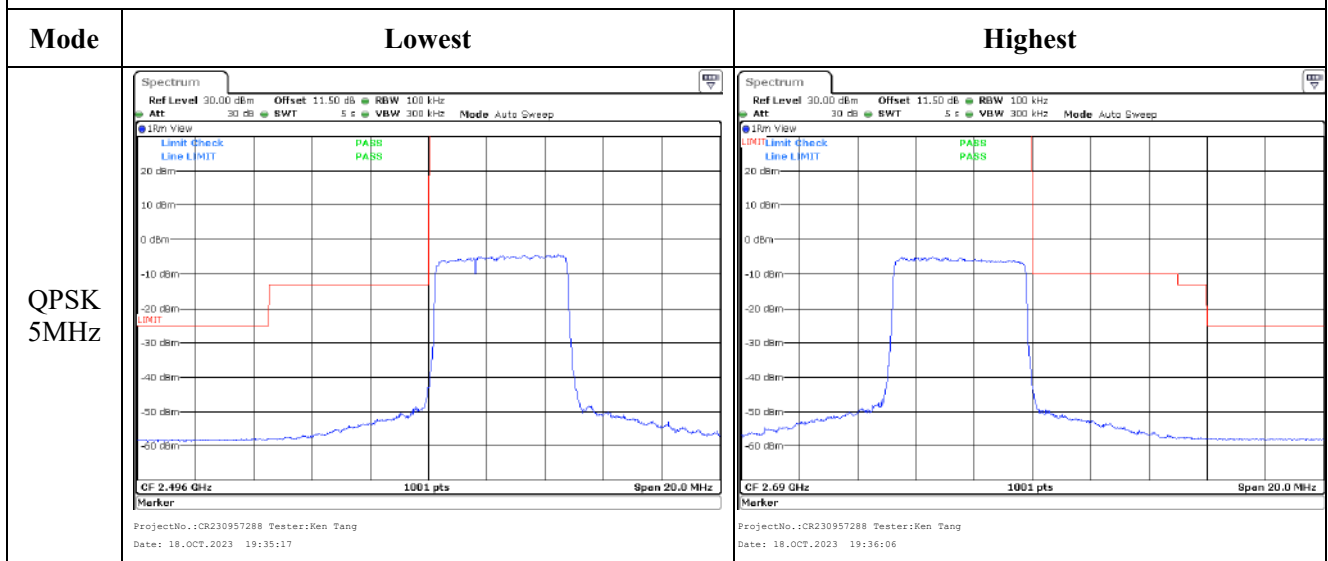
Middle



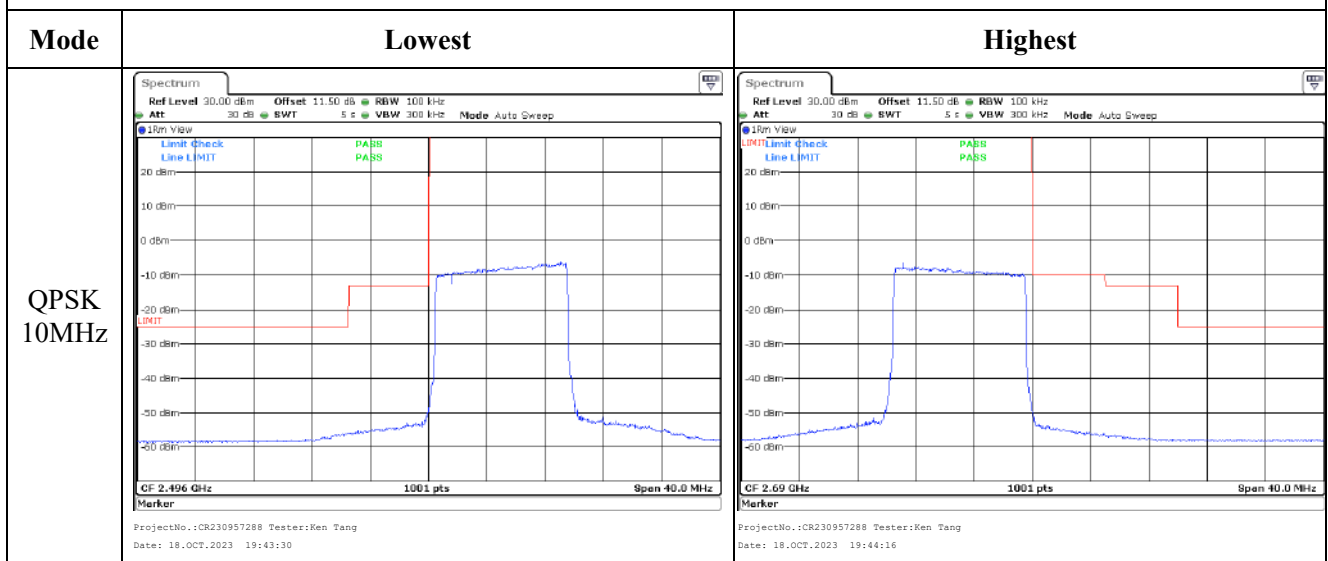
Highest



Out of band emission, Band Edge

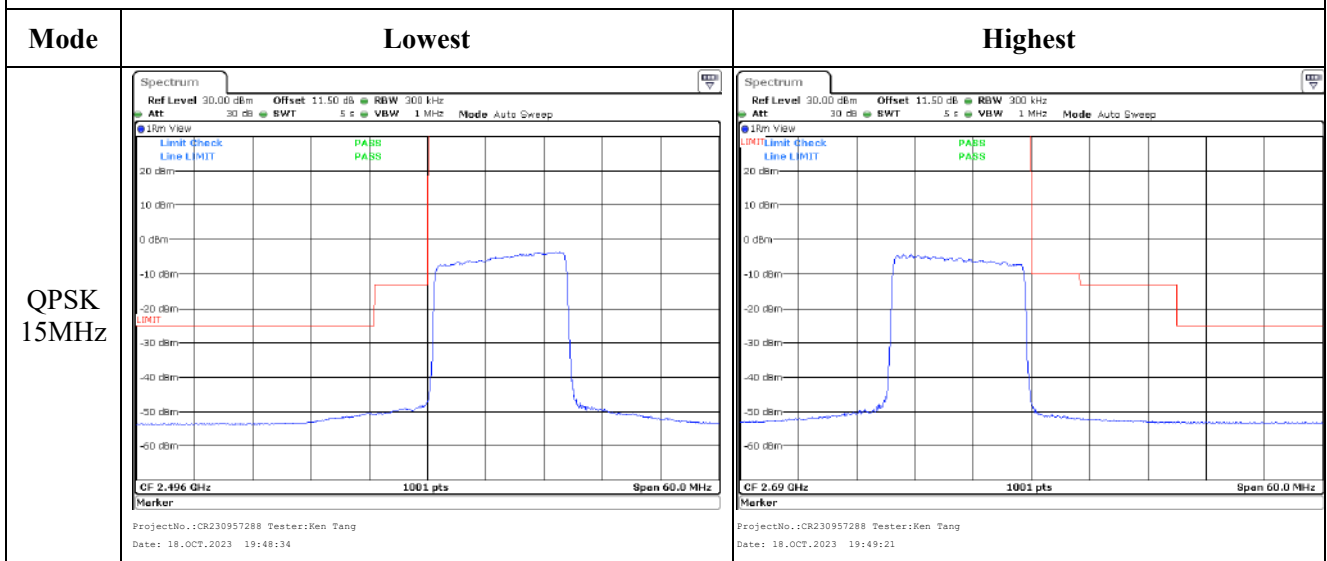


Out of band emission, Band Edge

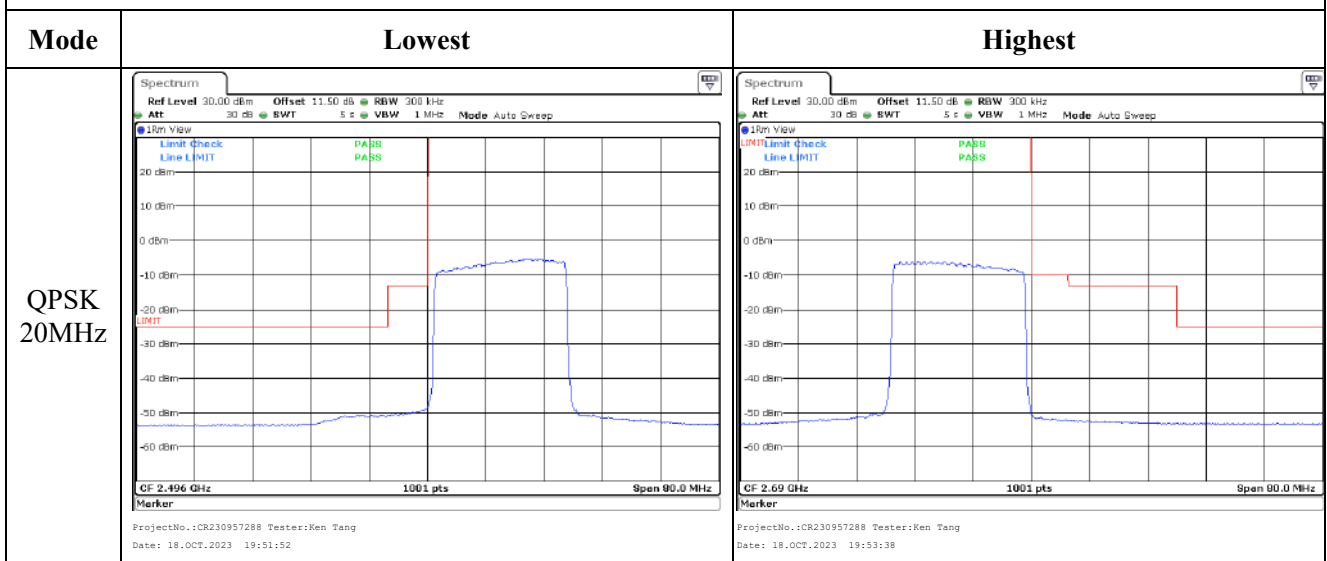




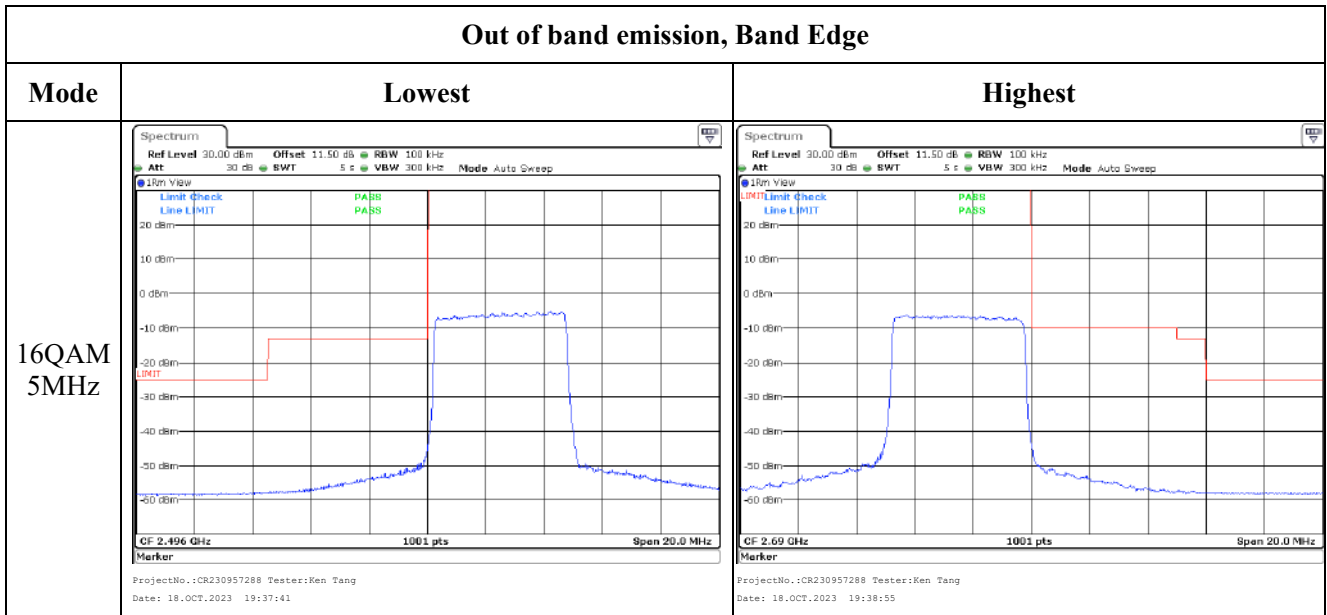
Out of band emission, Band Edge



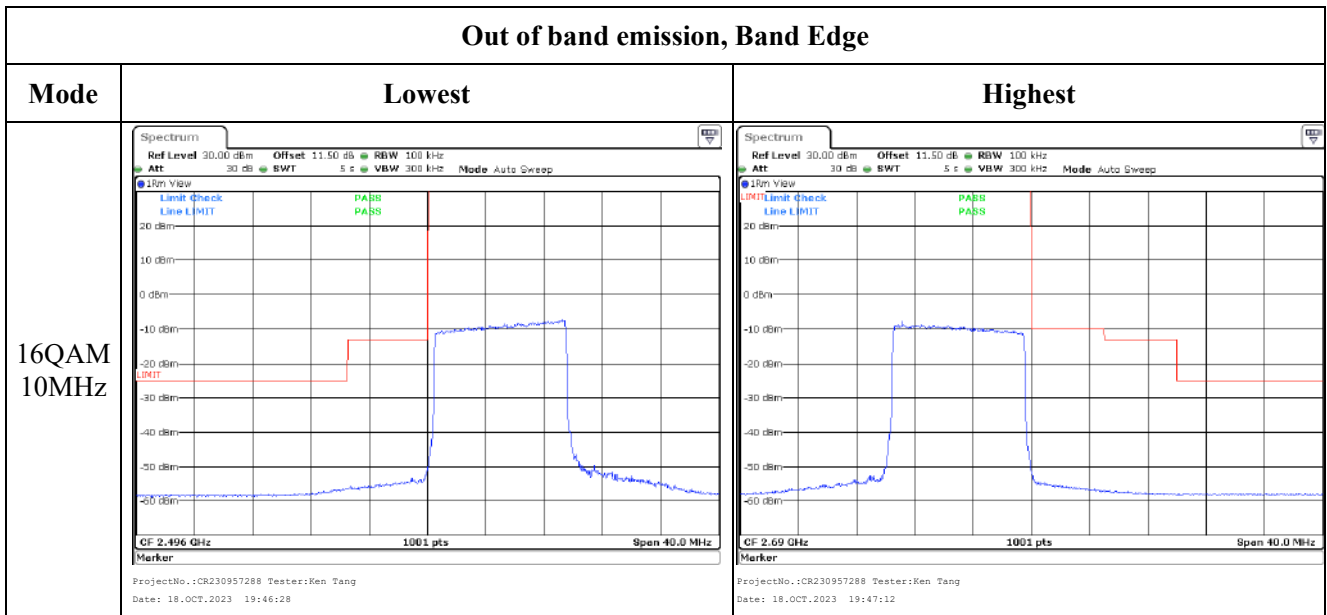
Out of band emission, Band Edge

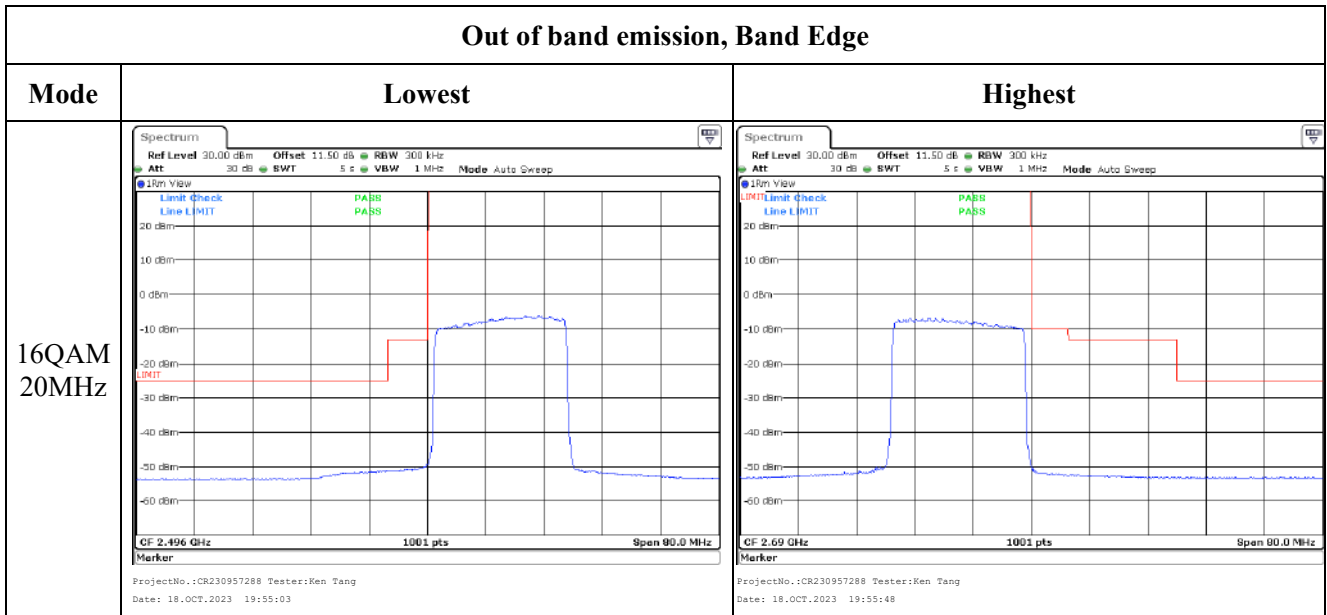
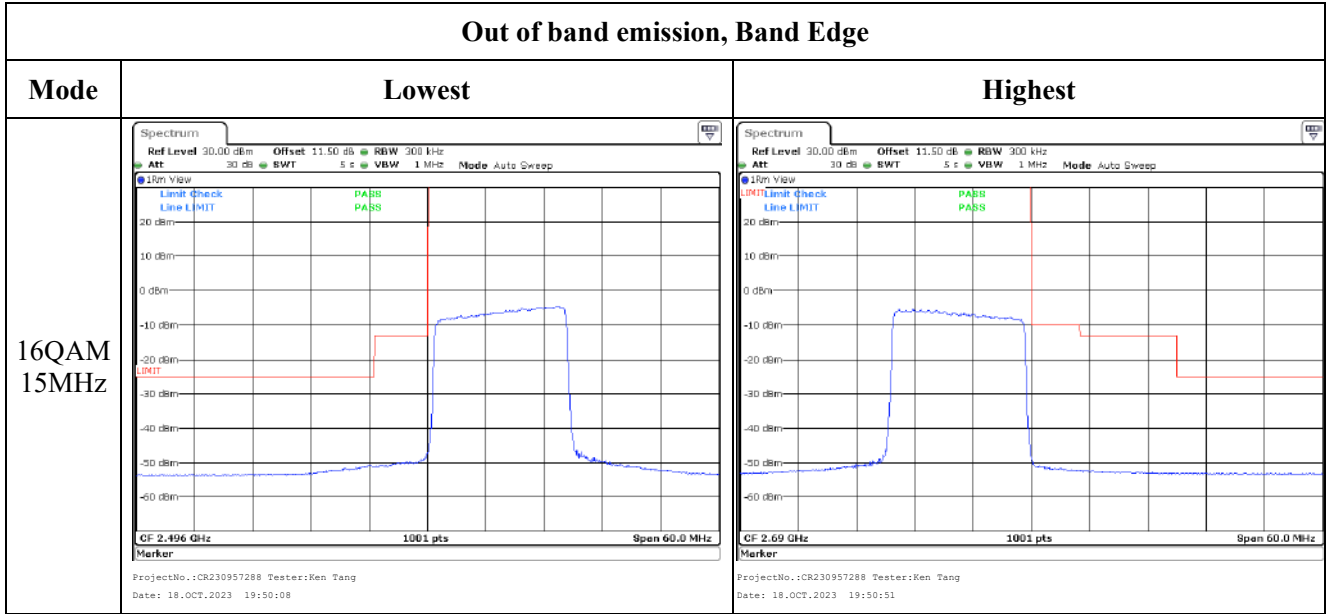


Out of band emission, Band Edge



Out of band emission, Band Edge





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

Serial Number:	2BUF-5	Test Date:	2023/10/17
Test Site:	RF	Test Mode:	Transmitting
Tester:	Ken Tang	Test Result:	Pass

**Environmental Conditions:**

Temperature: (°C)	25.6	Relative Humidity: (%)	48	ATM Pressure: (kPa)	101.2
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**Test Equipment List and Details:**

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

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

**Test Frequency for Each Mode:**

Operation Bandwidth	Lowest Frequency (MHz)	Middle Frequency (MHz)	Highest Frequency (MHz)
1.4MHz	1710.7	1745	1779.3
3MHz	1711.5	1745	1778.5
5MHz	1712.5	1745	1777.5
10MHz	1715	1745	1775
15MHz	1717.5	1745	1772.5
20MHz	1720	1745	1770

<b>Test Data:</b>						
<b>FCC§2.1046;§ 27.50(d)(4)</b>						
<b>RF Output Power:</b>						
Test Bandwidth & Modulation	Resource Block & RB offset	Conducted Average Output Power(dBm)			Maximum EIRP (dBm)	EIRP Limit (dBm)
		Lowest Channel	Middle Channel	Highest Channel		
1.4MHz QPSK	RB1#0	15.1	15.34	15.39	13.93	30
	RB1#3	15.32	15.53	15.47		
	RB1#5	15.1	15.32	15.44		
	RB3#0	15.15	15.48	15.48		
	RB3#3	15.2	15.42	15.58		
	RB6#0	14.15	14.53	14.51		
1.4MHz 16QAM	RB1#0	14.11	14.41	14.54	13.1	30
	RB1#3	14.32	14.59	14.75		
	RB1#5	14.13	14.37	14.58		
	RB3#0	14.24	14.63	14.48		
	RB3#3	14.24	14.66	14.53		
	RB6#0	13.14	13.49	13.57		
3MHz QPSK	RB1#0	15.14	15.36	15.43	13.82	30
	RB1#8	15.21	15.33	15.47		
	RB1#14	15.11	15.29	15.37		
	RB6#0	14.09	14.44	14.44		
	RB6#9	14.11	14.41	14.41		
	RB15#0	14.14	14.45	14.48		
3MHz 16QAM	RB1#0	14.18	15	14.57	13.36	30
	RB1#8	14.16	15.01	14.64		
	RB1#14	14.1	14.94	14.57		
	RB6#0	13.06	13.48	13.45		
	RB6#9	13.06	13.46	13.48		
	RB15#0	13.18	13.47	13.4		
5MHz QPSK	RB1#0	15.03	15.32	15.31	13.82	30
	RB1#13	15.15	15.44	15.47		
	RB1#24	15	15.28	15.33		
	RB15#0	14.16	14.48	14.5		
	RB15#10	14.16	14.4	14.44		
	RB25#0	14.14	14.38	14.44		
5MHz 16QAM	RB1#0	14.14	14.27	14.64	13.1	30
	RB1#13	14.23	14.38	14.75		
	RB1#24	14.1	14.27	14.63		
	RB15#0	13.1	13.51	13.46		
	RB15#10	13.14	13.41	13.4		
	RB25#0	13.1	13.45	13.39		
10MHz QPSK	RB1#0	15.15	15.37	15.39	13.89	30

	RB1#25	15.18	15.45	15.54		
	RB1#49	15.1	15.33	15.37		
	RB25#0	14.13	14.46	14.51		
	RB25#25	14.09	14.38	14.31		
	RB50#0	14.12	14.42	14.42		
10MHz 16QAM	RB1#0	14.14	14.48	14.48	13.05	30
	RB1#25	14.28	14.7	14.53		
	RB1#49	14.05	14.54	14.42		
	RB25#0	13.19	13.47	13.6		
	RB25#25	13.18	13.39	13.4		
	RB50#0	13.12	13.4	13.45		
15MHz QPSK	RB1#0	15.31	15.37	15.17	13.72	30
	RB1#38	15.20	15.21	15.21		
	RB1#74	15.18	15.13	15.33		
	RB36#0	14.20	14.22	14.40		
	RB36#39	14.22	14.10	14.20		
	RB75#0	14.2	14.27	14.20		
15MHz 16QAM	RB1#0	14.31	14.42	14.24	13.8	30
	RB1#38	14.55	14.31	14.51		
	RB1#74	14.35	14.30	14.15		
	RB36#0	13.25	13.32	13.4		
	RB36#39	15.45	15.38	15.40		
	RB75#0	15.19	15.35	15.18		
20MHz QPSK	RB1#0	15.38	15.15	15.18	13.73	30
	RB1#50	14.14	14.18	14.29		
	RB1#99	14.2	14.11	14.37		
	RB50#0	14.29	14.20	14.14		
	RB50#50	14.32	14.41	14.21		
	RB100#0	14.37	14.42	14.29		
20MHz 16QAM	RB1#0	14.13	14.05	14.32	12.89	30
	RB1#50	13.4	13.46	13.35		
	RB1#99	14.4	14.31	14.29		
	RB50#0	14.21	14.43	14.23		
	RB50#50	14.49	14.54	14.5		
	RB100#0	14.14	14.19	14.34		
Note: EIRP=Conducted Power(dBm) - Lc(dB) + Gr(dBi)						
					<b>Result:</b>	<b>Pass</b>

<b>Peak-to-average Ratio(PAR)</b>					
Test Bandwidth & Modulation	Resource Block & RB offset	Peak-to-average Ratio(dB)			Limit (dB)
		Lowest Channel	Middle Channel	Highest Channel	
20MHz QPSK	RB1#0	6.29	5.91	6.2	13
	RB100#0	4.29	4.26	4.23	13
20MHz 16QAM	RB1#0	6.58	6.17	6.12	13
	RB100#0	5.83	5.83	5.83	13
<b>Result:</b>					<b>Pass</b>

<b>FCC §2.1049, §27.53:Occupied Bandwidth</b>						
Operation Mode	99% Occupied Bandwidth (MHz)			26 dB Occupied Bandwidth (MHz)		
	Low Channel	Middle channel	High Channel	Low Channel	Middle Channel	High Channel
1.4MHz QPSK	1.102	1.102	1.096	1.320	1.290	1.302
1.4MHz 16QAM	1.090	1.096	1.096	1.290	1.296	1.326
3MHz QPSK	2.683	2.683	2.683	2.892	2.868	2.880
3MHz 16QAM	2.683	2.683	2.683	2.868	2.892	2.880
5MHz QPSK	4.511	4.551	4.531	5.200	5.220	5.220
5MHz 16QAM	4.531	4.511	4.531	5.200	5.180	5.180
10MHz QPSK	8.942	8.982	8.942	9.960	9.920	9.800
10MHz 16QAM	8.942	8.942	8.942	9.840	9.960	9.840
15MHz QPSK	13.533	13.533	13.473	15.120	15.300	15.060
15MHz 16QAM	13.533	13.533	13.533	15.000	15.120	15.060
20MHz QPSK	18.044	17.964	17.884	19.840	19.600	19.520
20MHz 16QAM	17.964	18.044	17.964	19.760	19.760	19.680

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

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

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

FCC §2.1055, §27.54: Frequency Stability						
Test Mode:	20M QPSK	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (°C)	Voltage (V <sub>DC</sub> )	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.87	1710.015	1710.00	1779.996	1780
	-20	3.87	1710.010	1710.00	1779.994	1780
	-10	3.87	1710.020	1710.00	1779.993	1780
	0	3.87	1710.024	1710.00	1779.998	1780
	10	3.87	1710.017	1710.00	1779.991	1780
	20	3.87	1710.009	1710.00	1779.987	1780
	30	3.87	1710.001	1710.00	1779.974	1780
	40	3.87	1710.021	1710.00	1779.999	1780
	50	3.87	1710.016	1710.00	1779.970	1780
Frequency Stability vs. Voltage	20	3.29	1710.008	1710.00	1779.984	1780
	20	4.45	1710.025	1710.00	1779.982	1780
					<b>Result:</b>	<b>Pass</b>

Test Mode:	20M 16QAM	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (°C)	Voltage (V <sub>DC</sub> )	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.87	1710.012	1710.00	1779.992	1780
	-20	3.87	1710.001	1710.00	1779.971	1780
	-10	3.87	1710.010	1710.00	1779.989	1780
	0	3.87	1710.023	1710.00	1779.994	1780
	10	3.87	1710.021	1710.00	1779.997	1780
	20	3.87	1710.001	1710.00	1779.985	1780
	30	3.87	1710.021	1710.00	1779.988	1780
	40	3.87	1710.009	1710.00	1779.987	1780
	50	3.87	1710.020	1710.00	1779.994	1780
Frequency Stability vs. Voltage	20	3.29	1710.026	1710.00	1779.991	1780
	20	4.45	1710.110	1710.00	1779.369	1780
					<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>1.4MHz Bandwidth QPSK</b>	<b>1.4MHz Bandwidth 16QAM</b>
Lowest		
Middle		
Highest		

Occupied Bandwidth

Channel	3MHz Bandwidth QPSK	3MHz Bandwidth 16QAM
Lowest	<p>ProjectNo.:CR230957288 Tester:Ken Tang Date: 17.OCT.2023 21:30:59</p>	<p>ProjectNo.:CR230957288 Tester:Ken Tang Date: 17.OCT.2023 21:31:24</p>
Middle	<p>ProjectNo.:CR230957288 Tester:Ken Tang Date: 17.OCT.2023 21:31:51</p>	<p>ProjectNo.:CR230957288 Tester:Ken Tang Date: 17.OCT.2023 21:32:11</p>
Highest	<p>ProjectNo.:CR230957288 Tester:Ken Tang Date: 17.OCT.2023 21:32:44</p>	<p>ProjectNo.:CR230957288 Tester:Ken Tang Date: 17.OCT.2023 21:33:10</p>

Occupied Bandwidth

Channel	5MHz Bandwidth QPSK	5MHz Bandwidth 16QAM
Lowest	<p>ProjectNo.:CR230957288 Testter:Ken Tang Date: 17.OCT.2023 21:34:29</p>	<p>ProjectNo.:CR230957288 Testter:Ken Tang Date: 17.OCT.2023 21:34:54</p>
Middle	<p>ProjectNo.:CR230957288 Testter:Ken Tang Date: 17.OCT.2023 21:35:21</p>	<p>ProjectNo.:CR230957288 Testter:Ken Tang Date: 17.OCT.2023 21:36:06</p>
Highest	<p>ProjectNo.:CR230957288 Testter:Ken Tang Date: 17.OCT.2023 21:36:48</p>	<p>ProjectNo.:CR230957288 Testter:Ken Tang Date: 17.OCT.2023 21:37:03</p>

Occupied Bandwidth

Channel	10MHz Bandwidth QPSK	10MHz Bandwidth 16QAM
Lowest	<p>ProjectNo.:CR230957288 Tester:Ken Tang Date: 17.OCT.2023 21:38:27</p>	<p>ProjectNo.:CR230957288 Tester:Ken Tang Date: 17.OCT.2023 21:39:03</p>
Middle	<p>ProjectNo.:CR230957288 Tester:Ken Tang Date: 17.OCT.2023 21:39:33</p>	<p>ProjectNo.:CR230957288 Tester:Ken Tang Date: 17.OCT.2023 21:40:02</p>
Highest	<p>ProjectNo.:CR230957288 Tester:Ken Tang Date: 17.OCT.2023 21:40:23</p>	<p>ProjectNo.:CR230957288 Tester:Ken Tang Date: 17.OCT.2023 21:40:51</p>

Occupied Bandwidth

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

Occupied Bandwidth

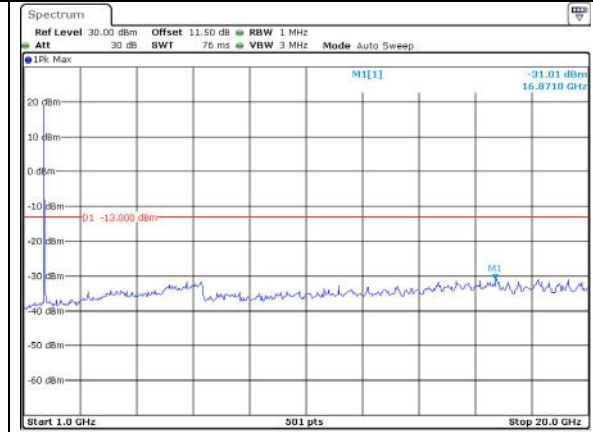
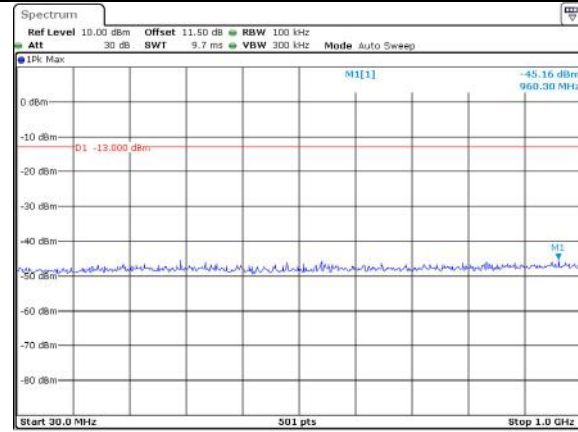
Channel	20MHz Bandwidth QPSK	20MHz Bandwidth 16QAM
Lowest	<p>ProjectNo.:CR230957288 Testter:Ken Tang Date: 17.OCT.2023 21:46:16</p>	<p>ProjectNo.:CR230957288 Testter:Ken Tang Date: 17.OCT.2023 21:46:52</p>
Middle	<p>ProjectNo.:CR230957288 Testter:Ken Tang Date: 17.OCT.2023 21:47:34</p>	<p>ProjectNo.:CR230957288 Testter:Ken Tang Date: 17.OCT.2023 21:48:13</p>
Highest	<p>ProjectNo.:CR230957288 Testter:Ken Tang Date: 17.OCT.2023 21:48:55</p>	<p>ProjectNo.:CR230957288 Testter:Ken Tang Date: 17.OCT.2023 21:49:28</p>

Spurious Emissions at Antenna Terminal

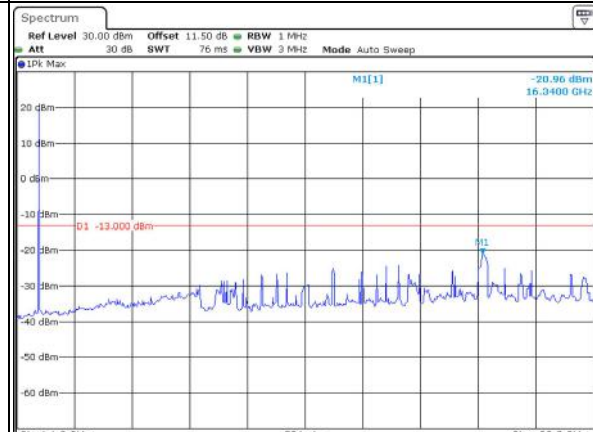
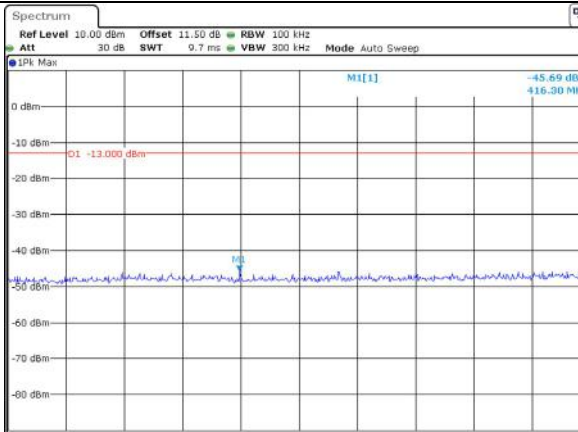
Channel

1.4MHz Bandwidth QPSK

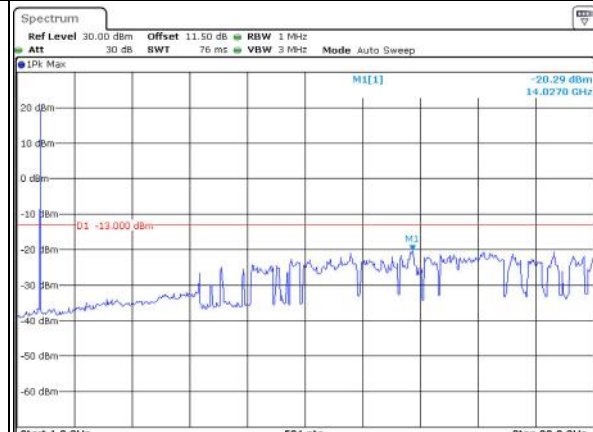
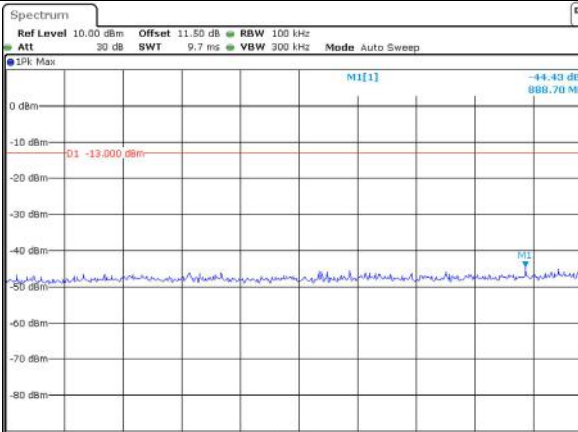
Lowest



Middle



Highest



Spurious Emissions at Antenna Terminal

Channel	3MHz Bandwidth QPSK	
Lowest	<p>Ref Level 10.00 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] -45.69 dBm 939.00 MHz</p> <p>D1 -13.000 dBm</p> <p>Start 30.0 MHz 501 pts Stop 1.0 GHz</p> <p>ProjectNo.:CR230957288 Tester:Ken Tang Date: 17.OCT.2023 23:49:13</p>	<p>Ref Level 30.00 dBm Offset 11.50 dB RBW 1 MHz Att 30 dB SWT 76 ms VBW 3 MHz Mode Auto Sweep</p> <p>IPk Max M1[1] -25.34 dBm 16.7200 GHz</p> <p>D1 -13.000 dBm</p> <p>Start 1.0 GHz 501 pts Stop 20.0 GHz</p> <p>ProjectNo.:CR230957288 Tester:Ken Tang Date: 17.OCT.2023 23:49:33</p>
Middle	<p>Ref Level 10.00 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] -45.87 dBm 995.20 MHz</p> <p>D1 -13.000 dBm</p> <p>Start 30.0 MHz 501 pts Stop 1.0 GHz</p> <p>ProjectNo.:CR230957288 Tester:Ken Tang Date: 17.OCT.2023 23:50:02</p>	<p>Ref Level 30.00 dBm Offset 11.50 dB RBW 1 MHz Att 30 dB SWT 76 ms VBW 3 MHz Mode Auto Sweep</p> <p>IPk Max M1[1] -31.39 dBm 18.6160 GHz</p> <p>D1 -13.000 dBm</p> <p>Start 1.0 GHz 501 pts Stop 20.0 GHz</p> <p>ProjectNo.:CR230957288 Tester:Ken Tang Date: 17.OCT.2023 23:50:25</p>
Highest	<p>Ref Level 10.00 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] -45.25 dBm 937.10 MHz</p> <p>D1 -13.000 dBm</p> <p>Start 30.0 MHz 501 pts Stop 1.0 GHz</p> <p>ProjectNo.:CR230957288 Tester:Ken Tang Date: 17.OCT.2023 23:50:53</p>	<p>Ref Level 30.00 dBm Offset 11.50 dB RBW 1 MHz Att 30 dB SWT 76 ms VBW 3 MHz Mode Auto Sweep</p> <p>IPk Max M1[1] -22.79 dBm 18.6540 GHz</p> <p>D1 -13.000 dBm</p> <p>Start 1.0 GHz 501 pts Stop 20.0 GHz</p> <p>ProjectNo.:CR230957288 Tester:Ken Tang Date: 17.OCT.2023 23:51:28</p>

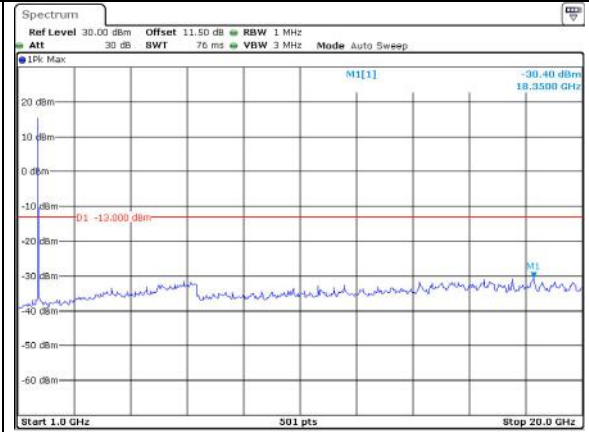
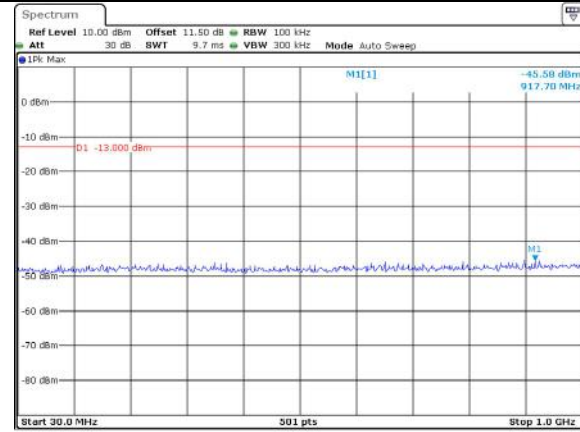


Spurious Emissions at Antenna Terminal

Channel

5MHz Bandwidth QPSK

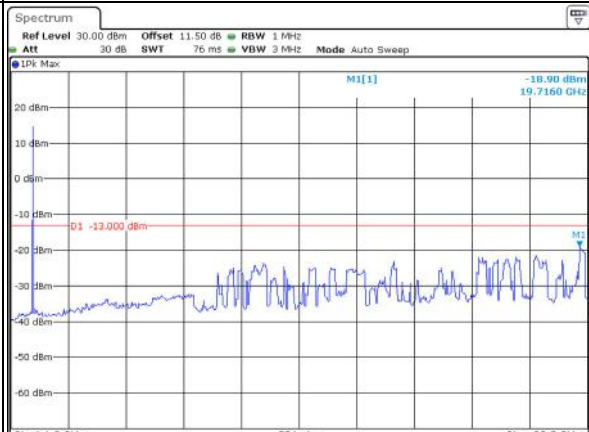
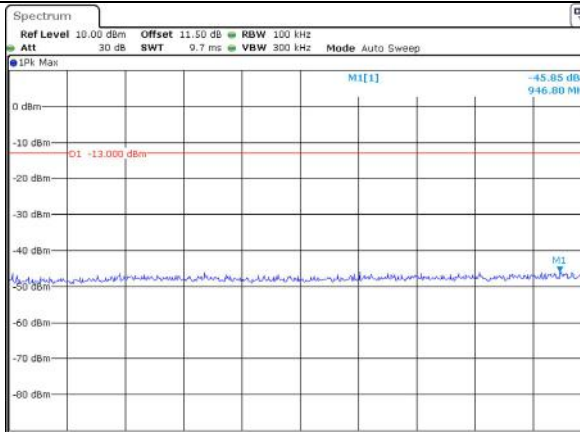
Lowest



ProjectNo.:CR230957288 Testeri:Ken Tang  
Date: 17.OCT.2023 23:52:24

ProjectNo.:CR230957288 Testeri:Ken Tang  
Date: 17.OCT.2023 23:52:53

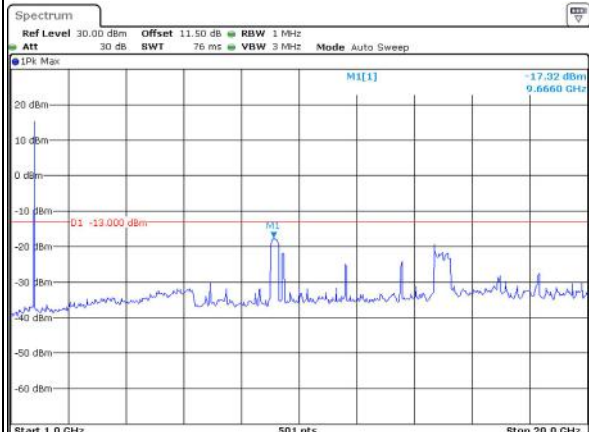
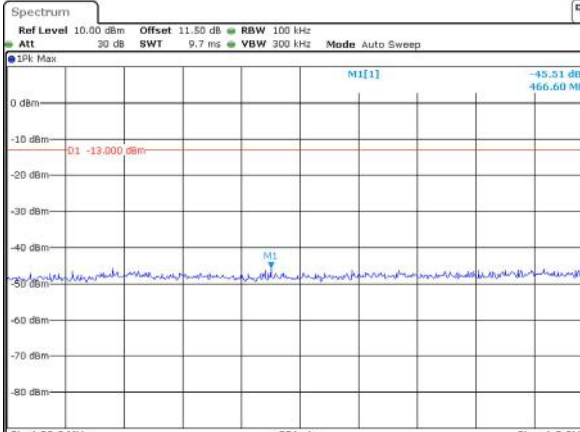
Middle



ProjectNo.:CR230957288 Testeri:Ken Tang  
Date: 17.OCT.2023 23:53:25

ProjectNo.:CR230957288 Testeri:Ken Tang  
Date: 17.OCT.2023 23:53:48

Highest



ProjectNo.:CR230957288 Testeri:Ken Tang  
Date: 17.OCT.2023 23:54:16

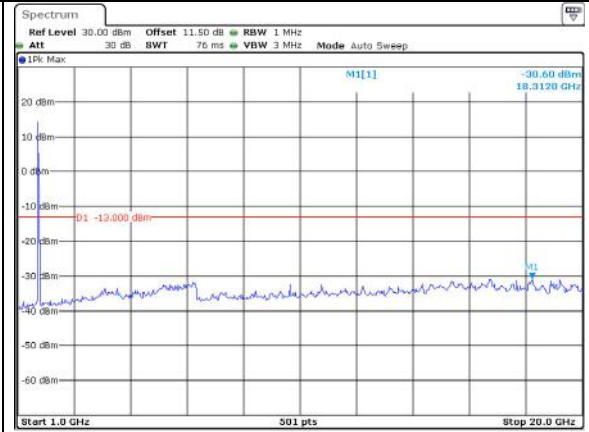
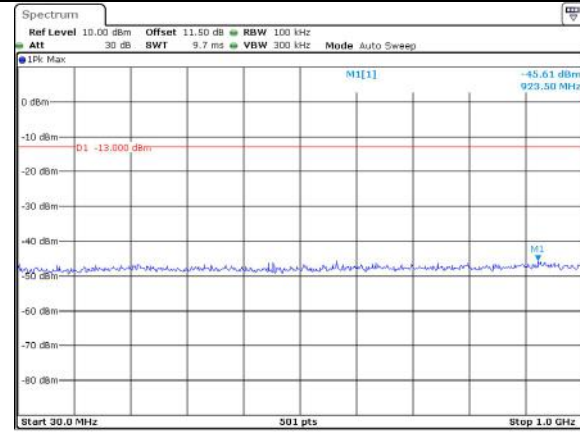
ProjectNo.:CR230957288 Testeri:Ken Tang  
Date: 17.OCT.2023 23:54:48

Spurious Emissions at Antenna Terminal

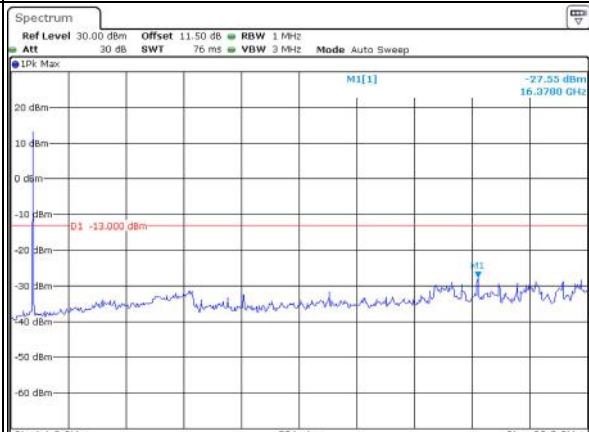
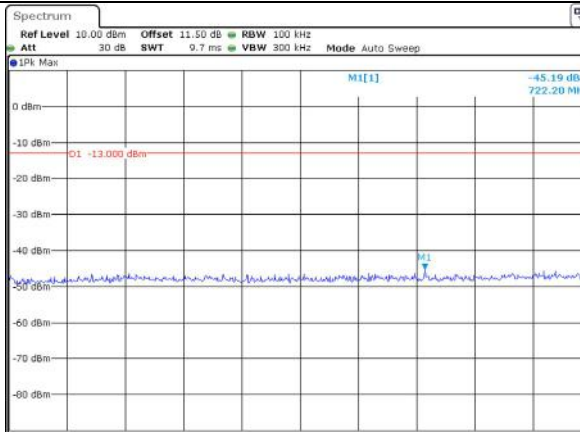
Channel

10MHz Bandwidth QPSK

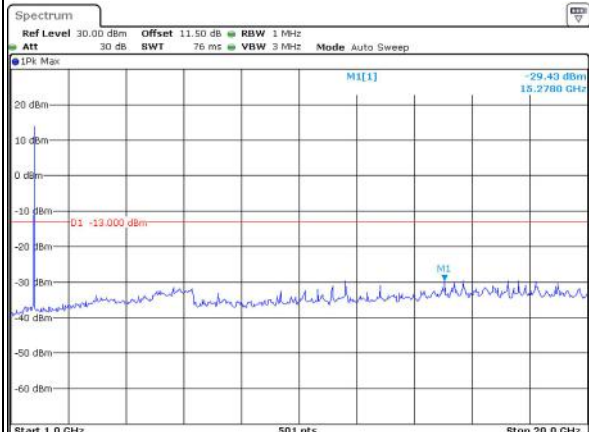
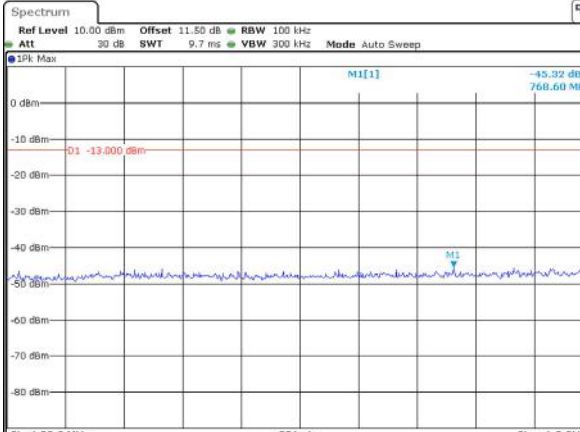
Lowest



Middle



Highest

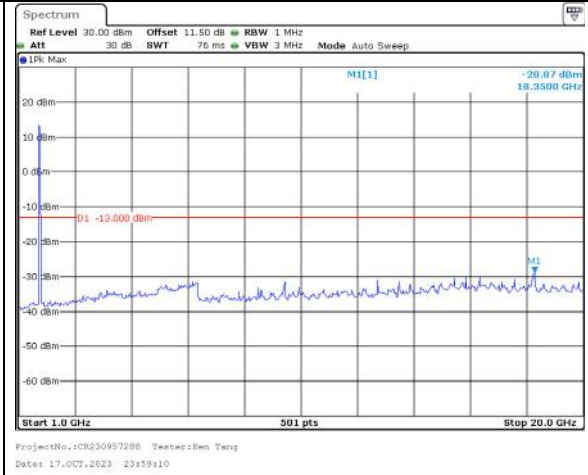
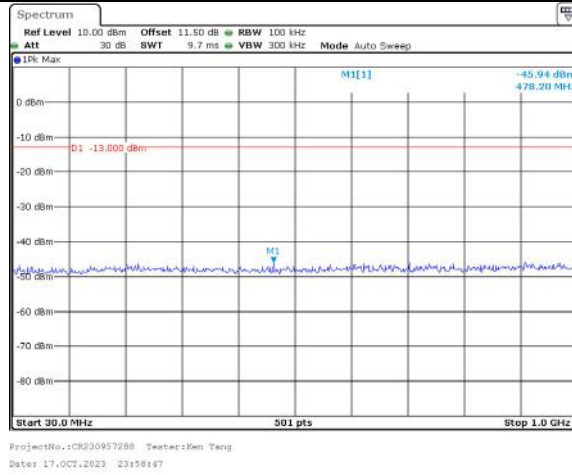


**Spurious Emissions at Antenna Terminal**

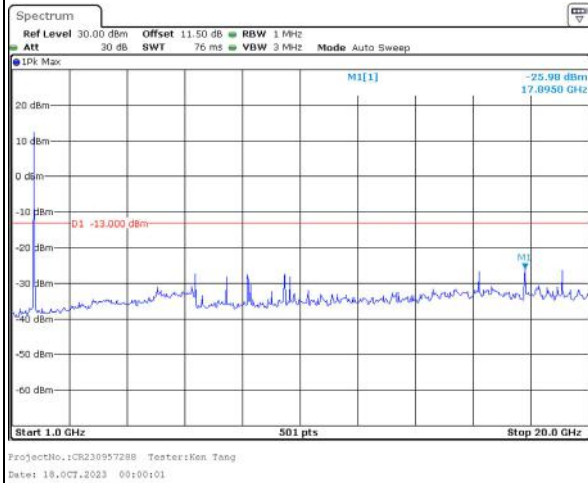
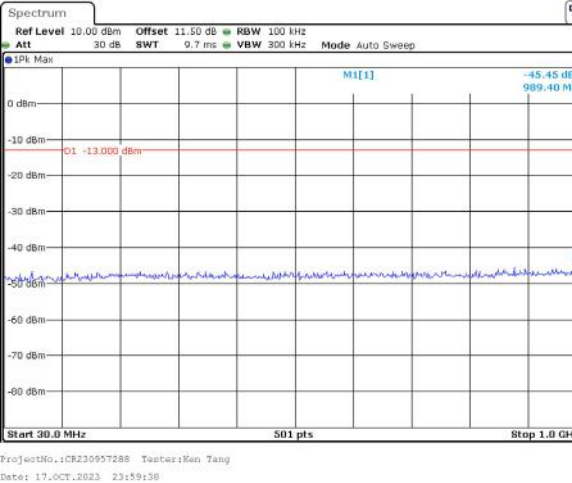
**Channel**

**15MHz Bandwidth QPSK**

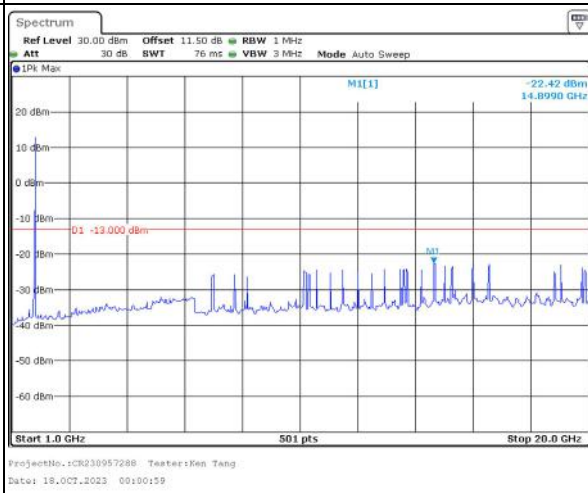
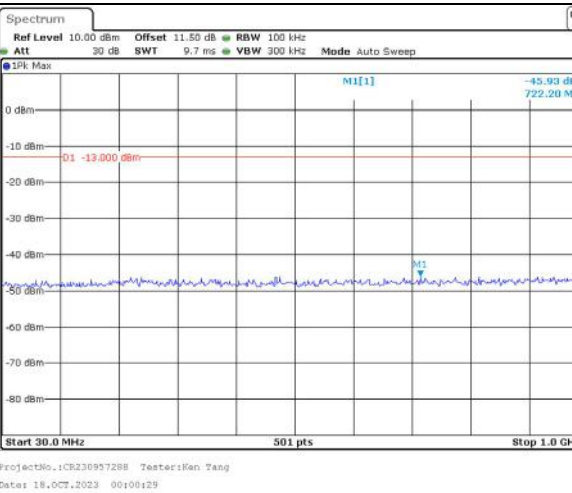
Lowest



Middle



Highest

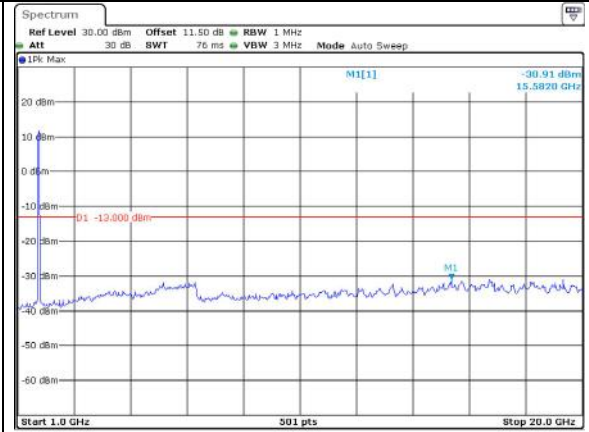
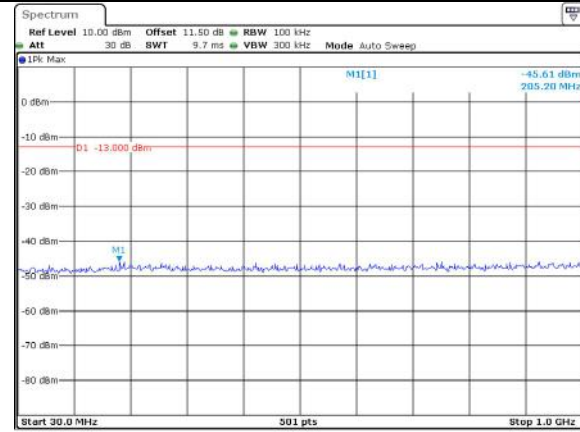


Spurious Emissions at Antenna Terminal

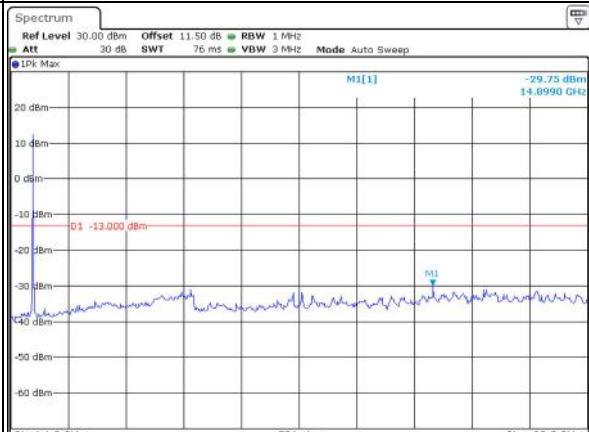
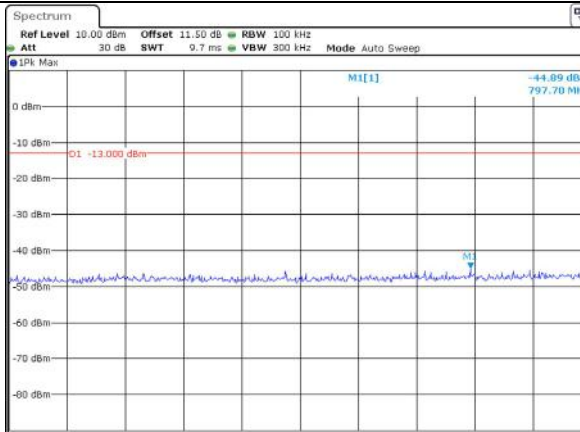
Channel

20MHz Bandwidth QPSK

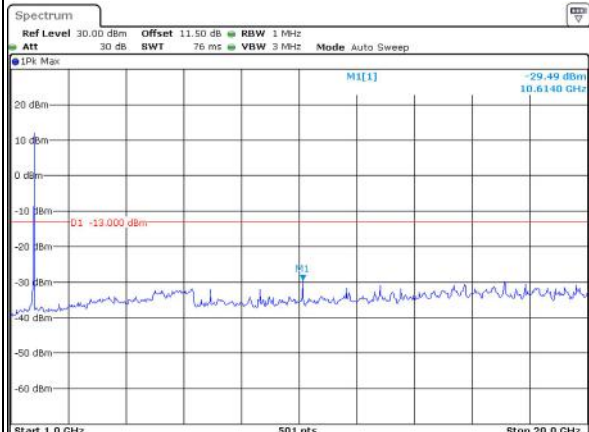
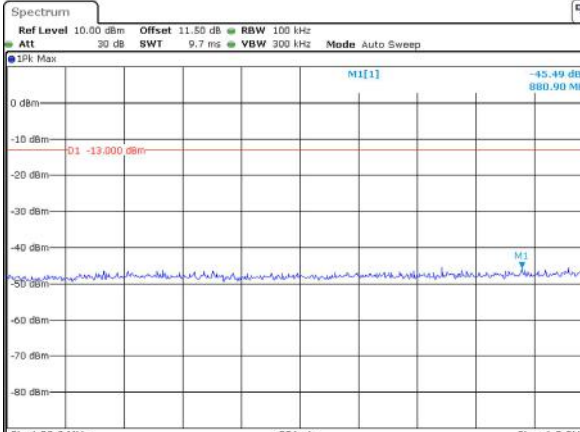
Lowest



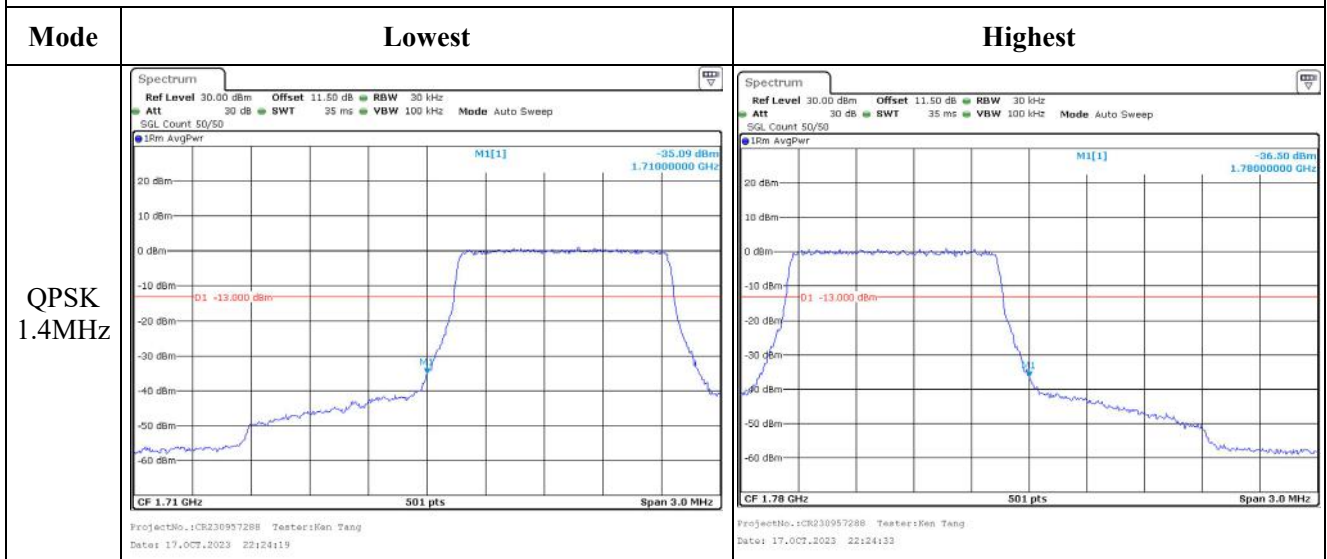
Middle



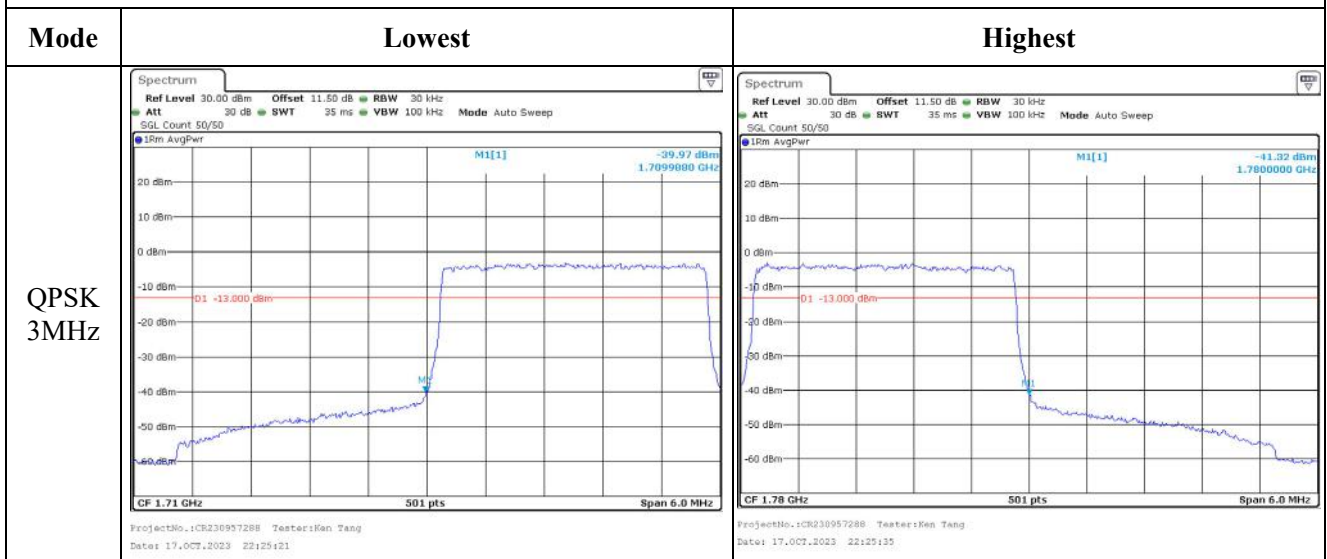
Highest



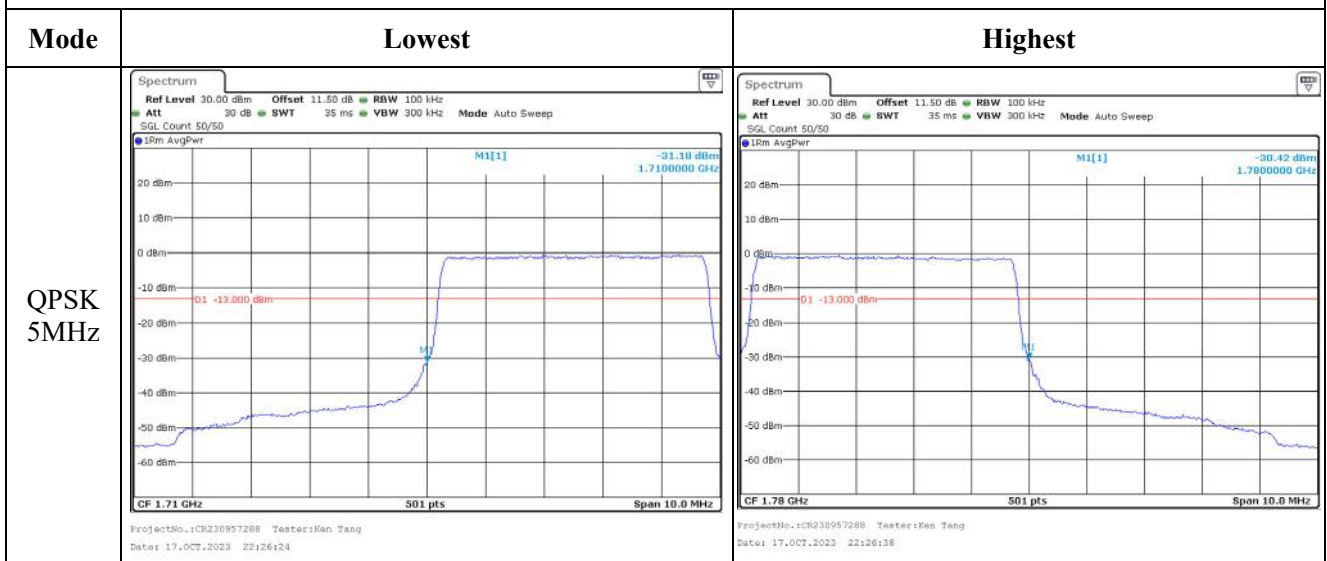
Out of band emission, Band Edge



Out of band emission, Band Edge



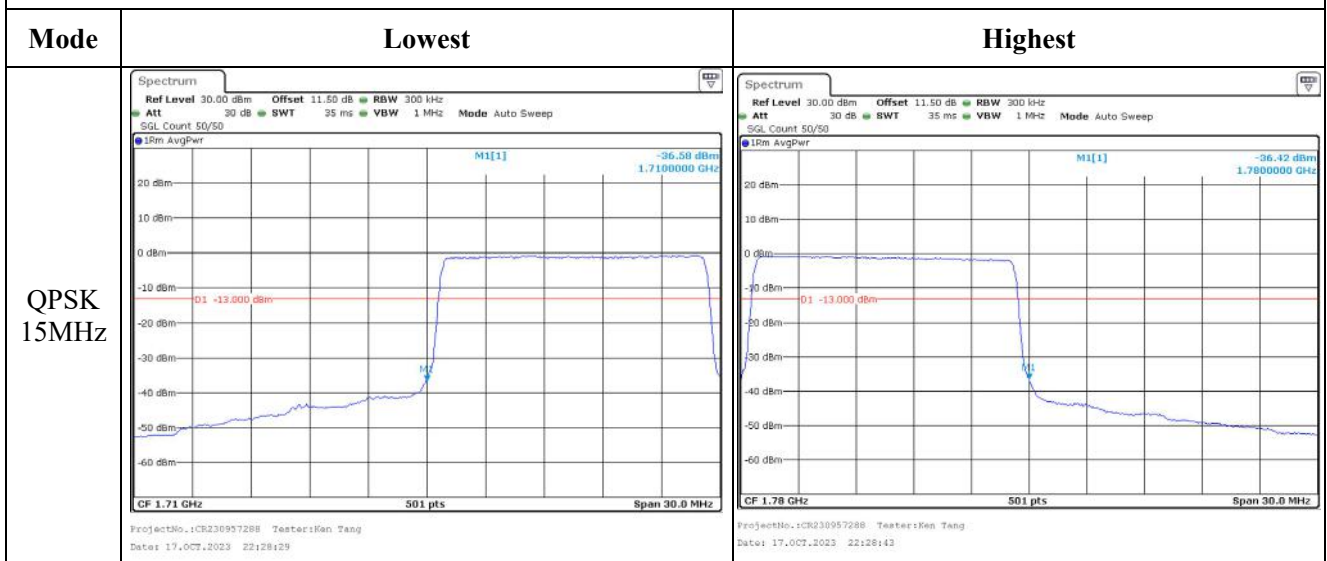
Out of band emission, Band Edge



Out of band emission, Band Edge



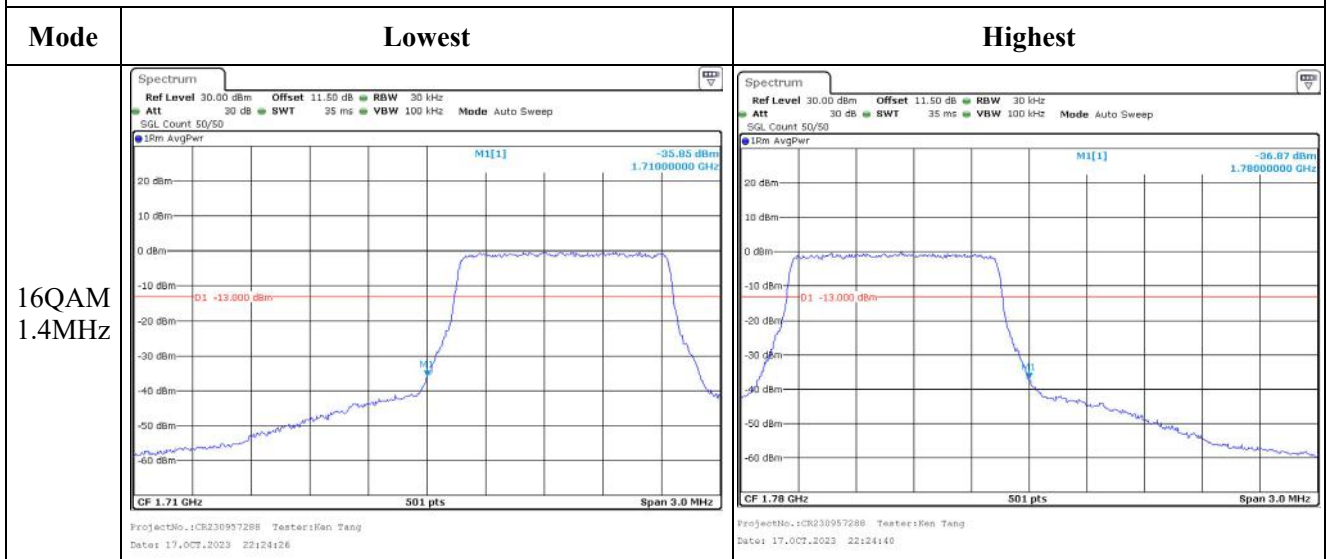
Out of band emission, Band Edge



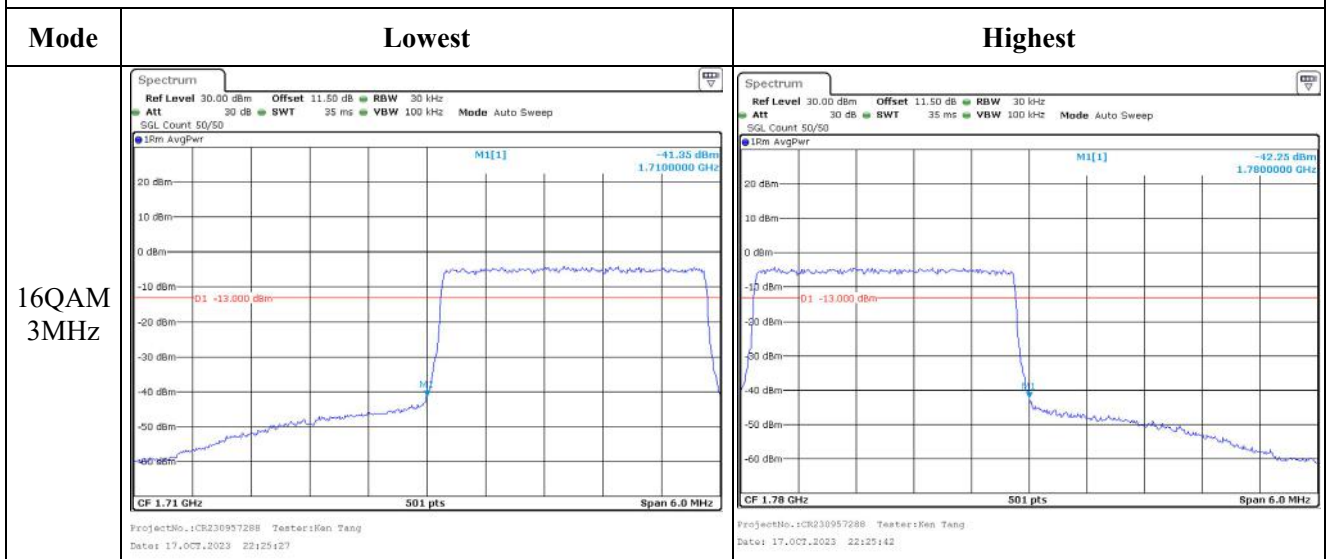
Out of band emission, Band Edge



Out of band emission, Band Edge

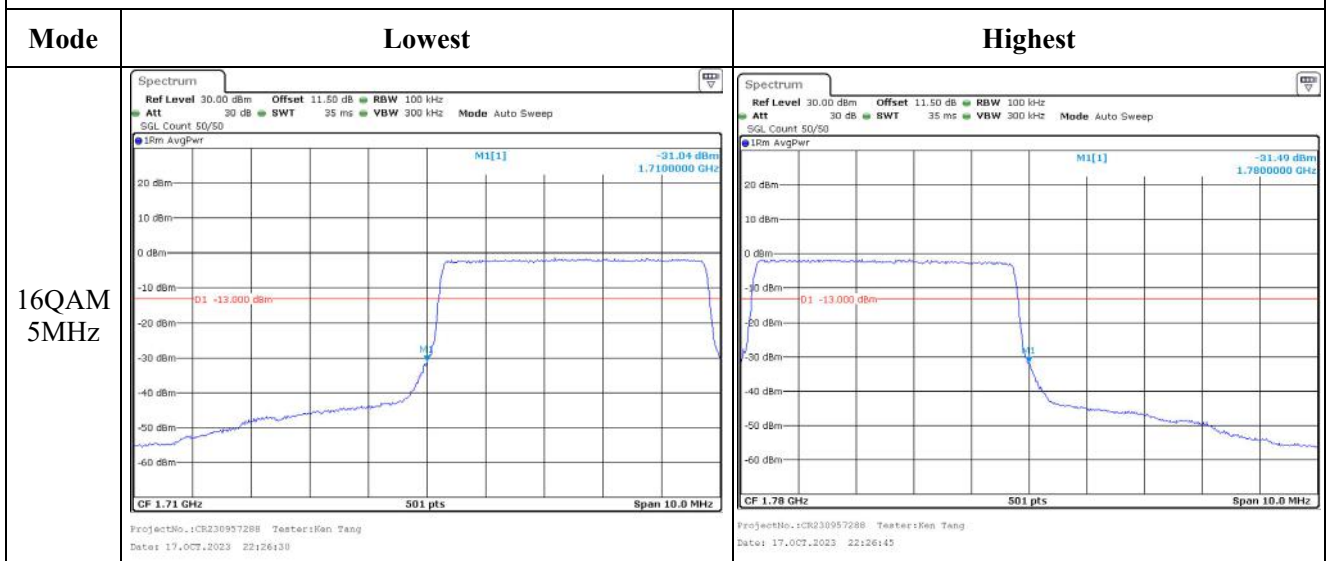


Out of band emission, Band Edge





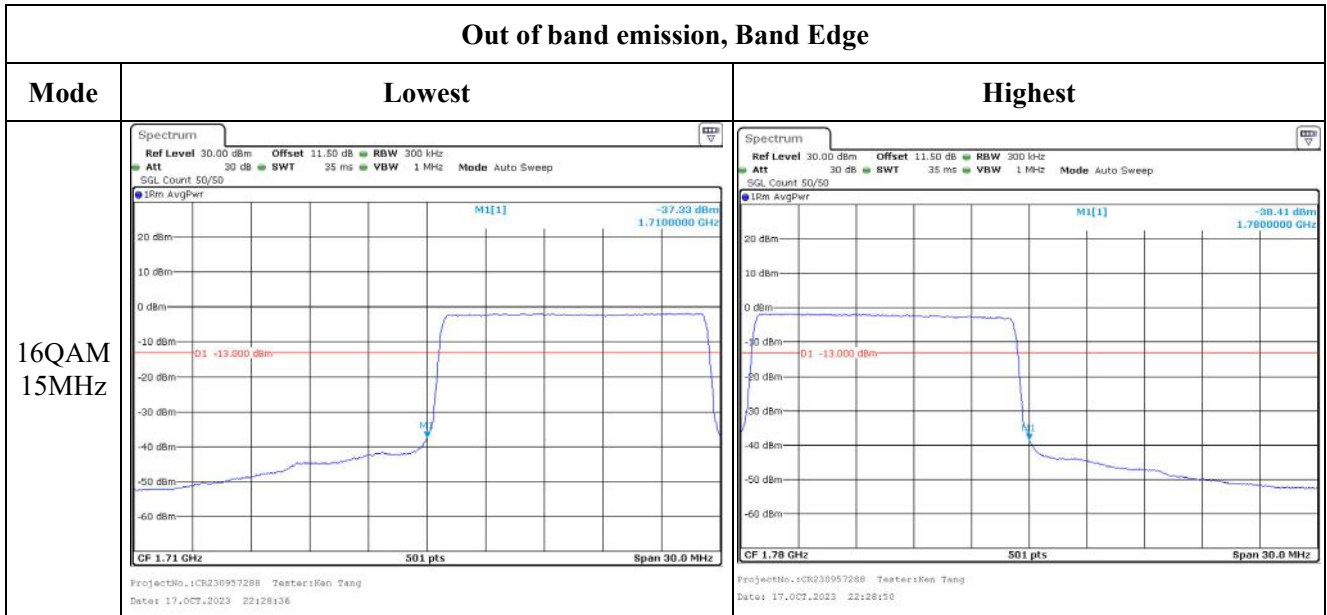
Out of band emission, Band Edge



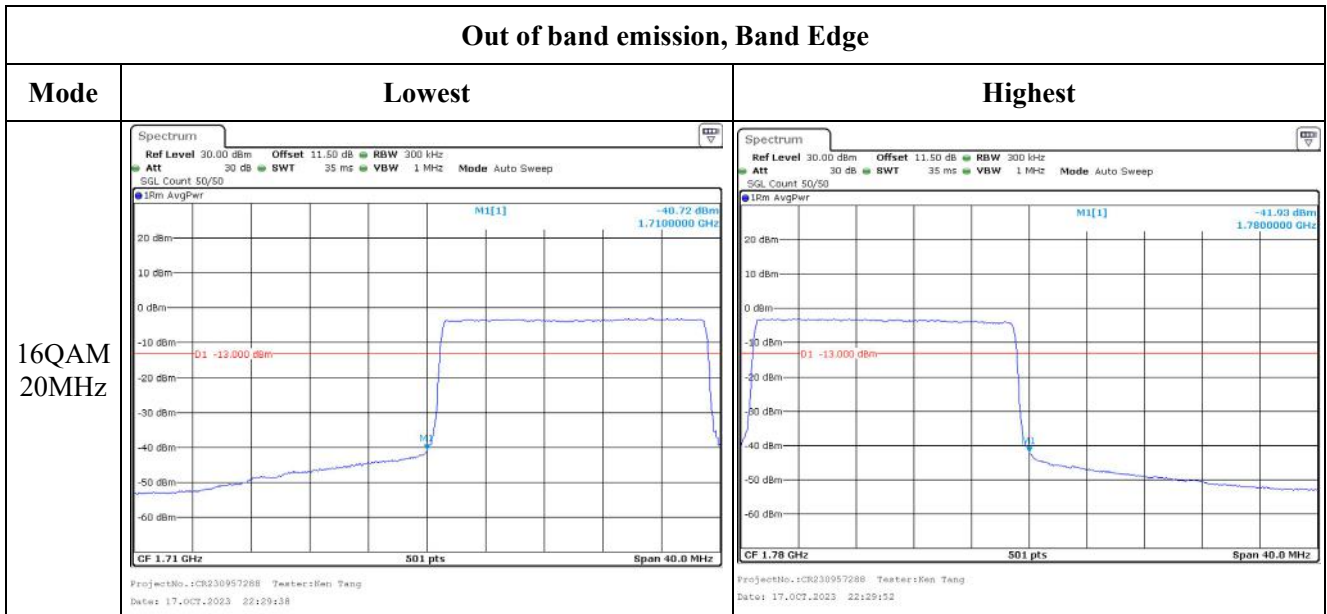
Out of band emission, Band Edge



Out of band emission, Band Edge



Out of band emission, Band Edge



**4.19 Radiated Spurious Emissions**

Serial Number:	2BUF-1	Test Date:	2023/10/21~2023/10/27
Test Site:	966-1, 966-2	Test Mode:	Transmitting
Tester:	Carl Xue, Mack Huang	Test Result:	Pass

**Environmental Conditions:**

Temperature: (°C)	25.4~26.3	Relative Humidity: (%)	56~67	ATM Pressure: (kPa)	100.8~101.4
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**Test Equipment List and Details:**

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
<b>Below 1GHz</b>					
Sunol Sciences	Antenna	JB6	A082520-6	2023/9/18	2026/9/17
R&S	EMI Test Receiver	ESR3	102724	2023/3/31	2024/3/30
TIMES MICROWAVE	Coaxial Cable	LMR-600-UltraFlex	C-0470-02	2023/7/16	2024/7/15
TIMES MICROWAVE	Coaxial Cable	LMR-600-UltraFlex	C-0780-01	2023/7/16	2024/7/15
Sonoma	Amplifier	310N	186165	2023/7/16	2024/7/15
EMCO	Adjustable Dipole Antenna	3121C	9109-756	N/A	N/A
MICRO-COAX	Coaxial Cable	UFA210B-0-0720- 300300	99G1448	2023/7/16	2024/7/15
Agilent	Signal Generator	E8247C	MY43321352	2022/11/18	2023/11/17
<b>Above 1GHz</b>					
AH	Double Ridge Guide	SAS-571	1394	2023/2/22	2025/2/23
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)			
GSM 850 Frequency:824.2MHz								
721.83	H	20.83	-52.05	0.00	0.50	-52.55	-13.00	39.55
665.80	V	20.94	-49.60	0.00	0.50	-50.10	-13.00	37.10
1648.400	H	57.05	-47.28	8.68	0.80	-39.40	-13.00	26.40
1648.400	V	55.53	-48.88	8.68	0.80	-41.00	-13.00	28.00
2472.600	H	48.60	-52.18	9.38	1.00	-43.80	-13.00	30.80
2472.600	V	47.95	-52.78	9.38	1.00	-44.40	-13.00	31.40
3296.800	H	36.81	-59.87	10.32	1.15	-50.70	-13.00	37.70
3296.800	V	36.27	-60.17	10.32	1.15	-51.00	-13.00	38.00
GSM 850 Frequency:836.6MHz								
696.68	H	20.65	-52.69	0.00	0.55	-53.24	-13.00	40.24
704.18	V	20.77	-49.06	0.00	0.55	-49.61	-13.00	36.61
1673.200	H	57.85	-46.46	8.71	0.85	-38.60	-13.00	25.60
1673.200	V	56.15	-48.26	8.71	0.85	-40.40	-13.00	27.40
2509.800	H	49.20	-51.41	9.42	1.01	-43.00	-13.00	30.00
2509.800	V	48.61	-52.01	9.42	1.01	-43.60	-13.00	30.60
3346.400	H	37.79	-59.38	10.34	1.16	-50.20	-13.00	37.20
3346.400	V	37.15	-59.88	10.34	1.16	-50.70	-13.00	37.70
GSM 850 Frequency:848.8MHz								
716.79	H	20.70	-52.28	0.00	0.50	-52.78	-13.00	39.78
724.20	V	20.84	-48.55	0.00	0.51	-49.06	-13.00	36.06
1697.600	H	58.65	-45.64	8.74	0.90	-37.80	-13.00	24.80
1697.600	V	57.28	-47.14	8.74	0.90	-39.30	-13.00	26.30
2546.400	H	49.47	-50.86	9.47	1.01	-42.40	-13.00	29.40
2546.400	V	49.22	-51.06	9.47	1.01	-42.60	-13.00	29.60
3395.200	H	39.32	-58.37	10.36	1.19	-49.20	-13.00	36.20
3395.200	V	38.89	-58.77	10.36	1.19	-49.60	-13.00	36.60

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

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
GSM 1900 Frequency:1850.2MHz								
159.22	H	39.68	-71.95	0.00	0.23	-72.18	-13.00	59.18
44.58	V	36.65	-59.11	-20.35	0.12	-79.58	-13.00	66.58
3700.400	H	37.87	-59.45	10.60	1.25	-50.10	-13.00	37.10
3700.400	V	38.55	-58.75	10.60	1.25	-49.40	-13.00	36.40
5550.600	H	36.61	-56.65	11.44	1.49	-46.70	-13.00	33.70
5550.600	V	36.85	-56.25	11.44	1.49	-46.30	-13.00	33.30
GSM 1900 Frequency:1880MHz								
160.90	H	39.94	-71.70	0.00	0.24	-71.94	-13.00	58.94
91.17	V	37.01	-72.05	0.00	0.18	-72.23	-13.00	59.23
3760.000	H	37.79	-58.62	10.66	1.24	-49.20	-13.00	36.20
3760.000	V	38.27	-58.02	10.66	1.24	-48.60	-13.00	35.60
5640.000	H	37.36	-56.09	11.33	1.54	-46.30	-13.00	33.30
5640.000	V	37.54	-55.79	11.33	1.54	-46.00	-13.00	33.00
GSM 1900 Frequency:1909.8MHz								
157.56	H	39.65	-72.04	0.00	0.23	-72.27	-13.00	59.27
45.21	V	36.63	-59.88	-19.59	0.12	-79.59	-13.00	66.59
3819.600	H	38.63	-57.23	10.72	1.29	-47.80	-13.00	34.80
3819.600	V	39.29	-56.43	10.72	1.29	-47.00	-13.00	34.00
5729.400	H	38.95	-54.53	11.22	1.59	-44.90	-13.00	31.90
5729.400	V	39.13	-54.23	11.22	1.59	-44.60	-13.00	31.60

**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								
159.78	H	40.17	-71.44	0.00	0.23	-71.67	-13.00	58.67
45.09	V	36.96	-59.43	-19.71	0.12	-79.26	-13.00	66.26
3704.800	H	37.51	-59.75	10.60	1.25	-50.40	-13.00	37.40
3704.800	V	38.18	-59.05	10.60	1.25	-49.70	-13.00	36.70
5557.200	H	35.94	-57.34	11.43	1.49	-47.40	-13.00	34.40
5557.200	V	36.19	-56.94	11.43	1.49	-47.00	-13.00	34.00
WCDMA Band II, Frequency:1880 MHz								
162.60	H	39.84	-71.88	0.00	0.24	-72.12	-13.00	59.12
45.24	V	37.07	-59.47	-19.56	0.12	-79.15	-13.00	66.15
3760.000	H	37.49	-58.92	10.66	1.24	-49.50	-13.00	36.50
3760.000	V	37.87	-58.42	10.66	1.24	-49.00	-13.00	36.00
5640.000	H	36.66	-56.79	11.33	1.54	-47.00	-13.00	34.00
5640.000	V	36.74	-56.59	11.33	1.54	-46.80	-13.00	33.80
WCDMA Band II, Frequency:1907.6MHz								
161.47	H	40.22	-71.45	0.00	0.24	-71.69	-13.00	58.69
91.49	V	37.14	-71.85	0.00	0.18	-72.03	-13.00	59.03
3815.200	H	37.72	-58.13	10.72	1.29	-48.70	-13.00	35.70
3815.200	V	38.06	-57.63	10.72	1.29	-48.20	-13.00	35.20
5722.800	H	37.74	-55.75	11.23	1.58	-46.10	-13.00	33.10
5722.800	V	37.80	-55.55	11.23	1.58	-45.90	-13.00	32.90

**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				
161.47	H	39.74	-71.93	0.00	0.24	-72.17	-13.00	59.17
90.79	V	36.82	-72.33	0.00	0.18	-72.51	-13.00	59.51
3424.800	H	37.17	-60.60	10.37	1.17	-51.40	-13.00	38.40
3424.800	V	37.94	-59.80	10.37	1.17	-50.60	-13.00	37.60
5137.200	H	35.10	-58.52	11.28	1.46	-48.70	-13.00	35.70
5137.200	V	36.18	-57.32	11.28	1.46	-47.50	-13.00	34.50
Frequency:			1732.6	MHz				
160.34	H	39.72	-71.90	0.00	0.23	-72.13	-13.00	59.13
91.75	V	36.74	-72.19	0.00	0.18	-72.37	-13.00	59.37
3465.200	H	37.47	-60.34	10.39	1.15	-51.10	-13.00	38.10
3465.200	V	38.33	-59.44	10.39	1.15	-50.20	-13.00	37.20
5197.800	H	36.05	-58.08	11.32	1.44	-48.20	-13.00	35.20
5197.800	V	36.80	-57.18	11.32	1.44	-47.30	-13.00	34.30
Frequency:			1752.6	MHz				
158.11	H	39.65	-72.02	0.00	0.23	-72.25	-13.00	59.25
45.21	V	37.46	-59.05	-19.59	0.12	-78.76	-13.00	65.76
3505.200	H	38.60	-59.23	10.41	1.18	-50.00	-13.00	37.00
3505.200	V	39.54	-58.23	10.41	1.18	-49.00	-13.00	36.00
5257.800	H	37.15	-56.58	11.35	1.47	-46.70	-13.00	33.70
5257.800	V	37.73	-55.78	11.35	1.47	-45.90	-13.00	32.90

**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								
724.43	H	20.76	-52.07	0.00	0.51	-52.58	-13.00	39.58
726.80	V	21.08	-48.26	0.00	0.52	-48.78	-13.00	35.78
1652.800	H	57.86	-46.47	8.68	0.81	-38.60	-13.00	25.60
1652.800	V	56.34	-48.07	8.68	0.81	-40.20	-13.00	27.20
2479.200	H	49.68	-51.08	9.39	1.01	-42.70	-13.00	29.70
2479.200	V	49.15	-51.58	9.39	1.01	-43.20	-13.00	30.20
3305.600	H	37.16	-59.57	10.32	1.15	-50.40	-13.00	37.40
3305.600	V	36.43	-60.07	10.32	1.15	-50.90	-13.00	37.90
WCDMA Band 5 Frequency:836.6MHz								
684.94	H	20.89	-52.51	0.00	0.53	-53.04	-13.00	40.04
709.20	V	20.81	-48.91	0.00	0.52	-49.43	-13.00	36.43
1673.200	H	58.55	-45.76	8.71	0.85	-37.90	-13.00	24.90
1673.200	V	57.45	-46.96	8.71	0.85	-39.10	-13.00	26.10
2509.800	H	50.00	-50.61	9.42	1.01	-42.20	-13.00	29.20
2509.800	V	49.31	-51.31	9.42	1.01	-42.90	-13.00	29.90
3346.400	H	38.29	-58.88	10.34	1.16	-49.70	-13.00	36.70
3346.400	V	37.55	-59.48	10.34	1.16	-50.30	-13.00	37.30
WCDMA Band 5 Frequency:846.6MHz								
719.37	H	20.92	-52.01	0.00	0.49	-52.50	-13.00	39.50
687.18	V	20.73	-49.42	0.00	0.53	-49.95	-13.00	36.95
1693.200	H	59.26	-45.04	8.73	0.89	-37.20	-13.00	24.20
1693.200	V	57.88	-46.54	8.73	0.89	-38.70	-13.00	25.70
2539.800	H	50.63	-49.75	9.46	1.01	-41.30	-13.00	28.30
2539.800	V	49.99	-50.35	9.46	1.01	-41.90	-13.00	28.90
3386.400	H	39.52	-58.07	10.35	1.18	-48.90	-13.00	35.90
3386.400	V	39.07	-58.47	10.35	1.18	-49.30	-13.00	36.30



**LTE Bands:**

(The Worst modulation and bandwidth was below)

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

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
QPSK, 1.4MHz, Frequency:1850.7 MHz								
170.79	H	40.46	-71.62	0.00	0.24	-71.86	-13.00	58.86
91.81	V	37.26	-71.65	0.00	0.18	-71.83	-13.00	58.83
3701.400	H	39.06	-58.25	10.60	1.25	-48.90	-13.00	35.90
3701.400	V	38.44	-58.85	10.60	1.25	-49.50	-13.00	36.50
5552.100	H	39.12	-54.15	11.44	1.49	-44.20	-13.00	31.20
5552.100	V	36.75	-56.35	11.44	1.49	-46.40	-13.00	33.40
QPSK, 1.4MHz, Frequency:1880 MHz								
160.90	H	39.79	-71.85	0.00	0.24	-72.09	-13.00	59.09
45.05	V	36.75	-59.60	-19.75	0.12	-79.47	-13.00	66.47
3760.000	H	38.79	-57.62	10.66	1.24	-48.20	-13.00	35.20
3760.000	V	38.17	-58.12	10.66	1.24	-48.70	-13.00	35.70
5640.000	H	39.86	-53.59	11.33	1.54	-43.80	-13.00	30.80
5640.000	V	37.54	-55.79	11.33	1.54	-46.00	-13.00	33.00
QPSK, 1.4MHz, Frequency:1909.3 MHz								
158.11	H	39.62	-72.05	0.00	0.23	-72.28	-13.00	59.28
91.11	V	36.72	-72.35	0.00	0.18	-72.53	-13.00	59.53
3818.600	H	39.13	-56.73	10.72	1.29	-47.30	-13.00	34.30
3818.600	V	38.48	-57.23	10.72	1.29	-47.80	-13.00	34.80
5727.900	H	41.64	-51.84	11.23	1.59	-42.20	-13.00	29.20
5727.900	V	39.92	-53.44	11.23	1.59	-43.80	-13.00	30.80

**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					
160.34	H	39.83	-71.79	0.00	0.23	-72.02	-13.00	59.02
45.05	V	37.12	-59.23	-19.75	0.12	-79.10	-13.00	66.10
3421.400	H	37.86	-59.90	10.37	1.17	-50.70	-13.00	37.70
3421.400	V	38.73	-59.00	10.37	1.17	-49.80	-13.00	36.80
5132.100	H	36.36	-57.21	11.28	1.47	-47.40	-13.00	34.40
5132.100	V	36.15	-57.31	11.28	1.47	-47.50	-13.00	34.50
1.4MHz QPSK, Frequency:			1732.5 MHz					
162.04	H	39.72	-71.97	0.00	0.24	-72.21	-13.00	59.21
90.47	V	36.72	-72.50	0.00	0.18	-72.68	-13.00	59.68
3465.000	H	38.17	-59.64	10.39	1.15	-50.40	-13.00	37.40
3465.000	V	39.13	-58.64	10.39	1.15	-49.40	-13.00	36.40
5197.500	H	37.25	-56.88	11.32	1.44	-47.00	-13.00	34.00
5197.500	V	37.00	-56.98	11.32	1.44	-47.10	-13.00	34.10
1.4MHz QPSK, Frequency:			1754.3 MHz					
161.47	H	39.68	-71.99	0.00	0.24	-72.23	-13.00	59.23
91.75	V	36.87	-72.06	0.00	0.18	-72.24	-13.00	59.24
3508.600	H	39.30	-58.52	10.41	1.19	-49.30	-13.00	36.30
3508.600	V	40.24	-57.52	10.41	1.19	-48.30	-13.00	35.30
5262.900	H	37.91	-55.79	11.36	1.47	-45.90	-13.00	32.90
5262.900	V	37.38	-56.09	11.36	1.47	-46.20	-13.00	33.20

**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								
729.15	H	20.93	-51.80	0.00	0.53	-52.33	-13.00	39.33
721.88	V	20.76	-48.68	0.00	0.50	-49.18	-13.00	36.18
1649.400	H	67.05	-37.28	8.68	0.80	-29.40	-13.00	16.40
1649.400	V	65.73	-38.68	8.68	0.80	-30.80	-13.00	17.80
2474.100	H	57.60	-43.18	9.38	1.00	-34.80	-13.00	21.80
2474.100	V	56.95	-43.78	9.38	1.00	-35.40	-13.00	22.40
3298.800	H	38.01	-58.67	10.32	1.15	-49.50	-13.00	36.50
3298.800	V	37.57	-58.87	10.32	1.15	-49.70	-13.00	36.70
QPSK, 1.4MHz, Frequency: 836.5 MHz								
713.99	H	20.84	-52.20	0.00	0.50	-52.70	-13.00	39.70
724.41	V	20.92	-48.47	0.00	0.51	-48.98	-13.00	35.98
1673.000	H	67.85	-36.46	8.71	0.85	-28.60	-13.00	15.60
1673.000	V	66.45	-37.96	8.71	0.85	-30.10	-13.00	17.10
2509.500	H	57.80	-42.81	9.42	1.01	-34.40	-13.00	21.40
2509.500	V	57.51	-43.11	9.42	1.01	-34.70	-13.00	21.70
3346.000	H	39.08	-58.08	10.34	1.16	-48.90	-13.00	35.90
3346.000	V	38.74	-58.28	10.34	1.16	-49.10	-13.00	36.10
QPSK, 1.4MHz, Frequency: 848.3 MHz								
694.26	H	21.07	-52.28	0.00	0.55	-52.83	-13.00	39.83
716.84	V	20.72	-48.83	0.00	0.50	-49.33	-13.00	36.33
1696.600	H	68.74	-35.55	8.74	0.89	-27.70	-13.00	14.70
1696.600	V	67.37	-37.05	8.74	0.89	-29.20	-13.00	16.20
2544.900	H	58.68	-41.66	9.47	1.01	-33.20	-13.00	20.20
2544.900	V	58.04	-42.26	9.47	1.01	-33.80	-13.00	20.80
3393.200	H	40.50	-57.17	10.36	1.19	-48.00	-13.00	35.00
3393.200	V	40.16	-57.47	10.36	1.19	-48.30	-13.00	35.30

**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								
155.91	H	39.80	-71.94	0.00	0.23	-72.17	-25.00	47.17
45.21	V	37.10	-59.41	-19.59	0.12	-79.12	-25.00	54.12
5005.000	H	36.53	-56.43	11.20	1.47	-46.70	-25.00	21.70
5005.000	V	36.29	-56.53	11.20	1.47	-46.80	-25.00	21.80
7507.500	H	40.44	-49.35	10.90	1.95	-40.40	-25.00	15.40
7507.500	V	40.14	-50.15	10.90	1.95	-41.20	-25.00	16.20
5MHz QPSK, Frequency: 2535 MHz								
159.78	H	39.66	-71.95	0.00	0.23	-72.18	-25.00	47.18
92.13	V	36.99	-71.85	0.00	0.18	-72.03	-25.00	47.03
5070.000	H	37.42	-55.77	11.24	1.47	-46.00	-25.00	21.00
5070.000	V	37.12	-55.97	11.24	1.47	-46.20	-25.00	21.20
7605.000	H	40.60	-48.87	10.88	2.01	-40.00	-25.00	15.00
7605.000	V	40.62	-49.57	10.88	2.01	-40.70	-25.00	15.70
5MHz QPSK, Frequency: 2567.5 MHz								
154.28	H	39.53	-72.27	0.00	0.23	-72.50	-25.00	47.50
91.17	V	36.83	-72.23	0.00	0.18	-72.41	-25.00	47.41
5135.000	H	38.59	-55.01	11.28	1.47	-45.20	-25.00	20.20
5135.000	V	38.18	-55.31	11.28	1.47	-45.50	-25.00	20.50
7702.500	H	41.73	-47.79	10.86	1.97	-38.90	-25.00	13.90
7702.500	V	41.59	-48.59	10.86	1.97	-39.70	-25.00	14.70

**LTE Band 12:**

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
1.4MHz QPSK, Frequency: 699.7 MHz								
554.82	H	20.62	-54.13	0.00	0.49	-54.62	-13.00	41.62
572.75	V	20.71	-50.98	0.00	0.46	-51.44	-13.00	38.44
1399.400	H	65.99	-37.71	8.22	0.71	-30.20	-13.00	17.20
1399.400	V	64.44	-39.31	8.22	0.71	-31.80	-13.00	18.80
2099.100	H	57.93	-43.95	9.16	0.91	-35.70	-13.00	22.70
2099.100	V	56.48	-45.35	9.16	0.91	-37.10	-13.00	24.10
2798.800	H	46.89	-53.04	9.88	1.04	-44.20	-13.00	31.20
2798.800	V	47.76	-52.04	9.88	1.04	-43.20	-13.00	30.20
1.4MHz QPSK, Frequency: 707.5 MHz								
485.67	H	20.58	-55.54	0.00	0.43	-55.97	-13.00	42.97
547.25	V	20.65	-51.00	0.00	0.47	-51.47	-13.00	38.47
1415.000	H	66.63	-37.04	8.26	0.72	-29.50	-13.00	16.50
1415.000	V	65.08	-38.64	8.26	0.72	-31.10	-13.00	18.10
2122.500	H	58.74	-43.25	9.17	0.92	-35.00	-13.00	22.00
2122.500	V	57.32	-44.65	9.17	0.92	-36.40	-13.00	23.40
2830.000	H	47.33	-52.47	9.93	1.06	-43.60	-13.00	30.60
2830.000	V	48.36	-51.37	9.93	1.06	-42.50	-13.00	29.50
1.4MHz QPSK, Frequency: 715.3 MHz								
629.39	H	20.72	-52.98	0.00	0.48	-53.46	-13.00	40.46
504.89	V	20.64	-50.95	0.00	0.45	-51.40	-13.00	38.40
1430.600	H	67.55	-36.08	8.31	0.73	-28.50	-13.00	15.50
1430.600	V	66.01	-37.68	8.31	0.73	-30.10	-13.00	17.10
2145.900	H	59.94	-42.16	9.19	0.93	-33.90	-13.00	20.90
2145.900	V	58.65	-43.46	9.19	0.93	-35.20	-13.00	22.20
2861.200	H	48.04	-51.61	9.98	1.07	-42.70	-13.00	29.70
2861.200	V	49.16	-50.51	9.98	1.07	-41.60	-13.00	28.60

**LTE Band 13:**

Frequency (MHz)	Polar (H/V)	Receiver Reading (dB $\mu$ V)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
5MHz QPSK, Frequency:			779.5	MHz				
680.20	H	20.75	-52.68	0.00	0.52	-53.20	-13.00	40.20
663.31	V	20.81	-49.77	0.00	0.50	-50.27	-13.00	37.27
1559.000	H	50.52	-53.47	8.57	0.80	-45.70	-40.00	5.70
1559.000	V	48.98	-55.07	8.57	0.80	-47.30	-40.00	7.30
2338.500	H	53.56	-48.03	9.30	0.97	-39.70	-13.00	26.70
2338.500	V	52.03	-49.33	9.30	0.97	-41.00	-13.00	28.00
3118.000	H	37.97	-59.52	10.25	1.13	-50.40	-13.00	37.40
3118.000	V	37.63	-59.72	10.25	1.13	-50.60	-13.00	37.60
5MHz QPSK, Frequency:			784.5	MHz				
576.94	H	20.82	-53.49	0.00	0.46	-53.95	-13.00	40.95
704.01	V	20.95	-48.88	0.00	0.55	-49.43	-13.00	36.43
1569.000	H	51.91	-52.17	8.58	0.81	-44.40	-40.00	4.40
1569.000	V	50.26	-53.87	8.58	0.81	-46.10	-40.00	6.10
2353.500	H	54.81	-46.64	9.31	0.97	-38.30	-13.00	25.30
2353.500	V	53.78	-47.44	9.31	0.97	-39.10	-13.00	26.10
3138.000	H	39.18	-58.22	10.26	1.14	-49.10	-13.00	36.10
3138.000	V	38.81	-58.42	10.26	1.14	-49.30	-13.00	36.30

**LTE Band 17:**

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
5MHz QPSK, Frequency:			706.5	MHz				
496.26	H	20.68	-55.23	0.00	0.45	-55.68	-13.00	42.68
522.17	V	20.63	-50.98	0.00	0.41	-51.39	-13.00	38.39
1413.000	H	53.93	-49.74	8.26	0.72	-42.20	-13.00	29.20
1413.000	V	52.38	-51.34	8.26	0.72	-43.80	-13.00	30.80
2119.500	H	55.42	-46.55	9.17	0.92	-38.30	-13.00	25.30
2119.500	V	53.90	-48.05	9.17	0.92	-39.80	-13.00	26.80
2826.000	H	45.95	-53.86	9.92	1.06	-45.00	-13.00	32.00
2826.000	V	46.68	-53.06	9.92	1.06	-44.20	-13.00	31.20
5MHz QPSK, Frequency:			710	MHz				
585.08	H	20.64	-53.51	0.00	0.46	-53.97	-13.00	40.97
595.05	V	20.58	-51.14	0.00	0.51	-51.65	-13.00	38.65
1420.000	H	54.41	-49.25	8.28	0.73	-41.70	-13.00	28.70
1420.000	V	52.86	-50.85	8.28	0.73	-43.30	-13.00	30.30
2130.000	H	56.36	-45.66	9.18	0.92	-37.40	-13.00	24.40
2130.000	V	54.85	-47.16	9.18	0.92	-38.90	-13.00	25.90
2840.000	H	46.57	-53.18	9.94	1.06	-44.30	-13.00	31.30
2840.000	V	47.33	-52.38	9.94	1.06	-43.50	-13.00	30.50
5MHz QPSK, Frequency:			713.5	MHz				
547.41	H	20.53	-54.37	0.00	0.47	-54.84	-13.00	41.84
618.43	V	20.57	-50.83	0.00	0.49	-51.32	-13.00	38.32
1427.000	H	55.47	-48.17	8.30	0.73	-40.60	-13.00	27.60
1427.000	V	53.92	-49.77	8.30	0.73	-42.20	-13.00	29.20
2140.500	H	57.42	-44.65	9.18	0.93	-36.40	-13.00	23.40
2140.500	V	56.13	-45.95	9.18	0.93	-37.70	-13.00	24.70
2854.000	H	47.29	-52.40	9.97	1.07	-43.50	-13.00	30.50
2854.000	V	48.18	-51.50	9.97	1.07	-42.60	-13.00	29.60

**LTE Band 25:**

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: 1850.7 MHz								
160.90	H	39.75	-71.89	0.00	0.24	-72.13	-13.00	59.13
91.81	V	36.86	-72.05	0.00	0.18	-72.23	-13.00	59.23
3701.400	H	39.97	-57.35	10.60	1.25	-48.00	-13.00	35.00
3701.400	V	39.25	-58.05	10.60	1.25	-48.70	-13.00	35.70
5552.100	H	40.11	-53.15	11.44	1.49	-43.20	-13.00	30.20
5552.100	V	37.55	-55.55	11.44	1.49	-45.60	-13.00	32.60
1.4MHz QPSK, Frequency: 1882.5 MHz								
159.78	H	39.84	-71.77	0.00	0.23	-72.00	-13.00	59.00
45.05	V	36.81	-59.54	-19.75	0.12	-79.41	-13.00	66.41
3765.000	H	39.71	-56.62	10.67	1.25	-47.20	-13.00	34.20
3765.000	V	38.79	-57.42	10.67	1.25	-48.00	-13.00	35.00
5647.500	H	40.98	-52.47	11.32	1.55	-42.70	-13.00	29.70
5647.500	V	38.56	-54.77	11.32	1.55	-45.00	-13.00	32.00
1.4MHz QPSK, Frequency: 1914.3 MHz								
162.04	H	39.60	-72.09	0.00	0.24	-72.33	-13.00	59.33
45.21	V	36.95	-59.56	-19.59	0.12	-79.27	-13.00	66.27
3828.600	H	40.15	-55.75	10.73	1.28	-46.30	-13.00	33.30
3828.600	V	39.22	-56.55	10.73	1.28	-47.10	-13.00	34.10
5742.900	H	42.47	-51.01	11.21	1.60	-41.40	-13.00	28.40
5742.900	V	39.85	-53.51	11.21	1.60	-43.90	-13.00	30.90



**LTE Band 26:**

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
1.4MHz QPSK, Frequency:			814.7	MHz				
661.40	H	20.75	-52.78	0.00	0.51	-53.29	-13.00	40.29
718.87	V	20.86	-48.65	0.00	0.49	-49.14	-13.00	36.14
1629.400	H	67.70	-36.65	8.66	0.81	-28.80	-13.00	15.80
1629.400	V	66.26	-38.15	8.66	0.81	-30.30	-13.00	17.30
2444.100	H	57.42	-43.47	9.37	1.00	-35.10	-13.00	22.10
2444.100	V	56.48	-44.27	9.37	1.00	-35.90	-13.00	22.90
3258.800	H	38.23	-58.63	10.30	1.17	-49.50	-13.00	36.50
3258.800	V	38.88	-57.73	10.30	1.17	-48.60	-13.00	35.60
1.4MHz QPSK, Frequency:			831.5	MHz				
716.89	H	21.10	-51.88	0.00	0.50	-52.38	-13.00	39.38
713.85	V	20.94	-48.68	0.00	0.50	-49.18	-13.00	36.18
1663.000	H	68.65	-35.67	8.70	0.83	-27.80	-13.00	14.80
1663.000	V	67.34	-37.07	8.70	0.83	-29.20	-13.00	16.20
2494.500	H	58.11	-42.59	9.40	1.01	-34.20	-13.00	21.20
2494.500	V	57.52	-43.19	9.40	1.01	-34.80	-13.00	21.80
3326.000	H	39.08	-57.87	10.33	1.16	-48.70	-13.00	35.70
3326.000	V	39.80	-56.97	10.33	1.16	-47.80	-13.00	34.80
1.4MHz QPSK, Frequency:			848.3	MHz				
721.93	H	20.92	-51.96	0.00	0.50	-52.46	-13.00	39.46
679.86	V	20.80	-49.48	0.00	0.52	-50.00	-13.00	37.00
1696.600	H	69.34	-34.95	8.74	0.89	-27.10	-13.00	14.10
1696.600	V	68.07	-36.35	8.74	0.89	-28.50	-13.00	15.50
2544.900	H	58.58	-41.76	9.47	1.01	-33.30	-13.00	20.30
2544.900	V	57.94	-42.36	9.47	1.01	-33.90	-13.00	20.90
3393.200	H	40.30	-57.37	10.36	1.19	-48.20	-13.00	35.20
3393.200	V	41.26	-56.37	10.36	1.19	-47.20	-13.00	34.20

**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				
159.78	H	40.58	-71.03	0.00	0.23	-71.26	-25.00	46.26
45.21	V	37.23	-59.28	-19.59	0.12	-78.99	-25.00	53.99
5145.000	H	43.73	-49.95	11.29	1.44	-40.10	-25.00	15.10
5145.000	V	43.22	-50.35	11.29	1.44	-40.50	-25.00	15.50
7717.500	H	41.84	-47.67	10.86	1.99	-38.80	-25.00	13.80
7717.500	V	41.66	-48.47	10.86	1.99	-39.60	-25.00	14.60
5MHz QPSK, Frequency:			2595	MHz				
156.46	H	39.71	-72.01	0.00	0.23	-72.24	-25.00	47.24
90.85	V	36.87	-72.26	0.00	0.18	-72.44	-25.00	47.44
5190.000	H	44.60	-49.47	11.31	1.44	-39.60	-25.00	14.60
5190.000	V	44.05	-49.87	11.31	1.44	-40.00	-25.00	15.00
7785.000	H	42.44	-47.05	10.84	1.99	-38.20	-25.00	13.20
7785.000	V	41.97	-47.95	10.84	1.99	-39.10	-25.00	14.10
5MHz QPSK, Frequency:			2617.5	MHz				
161.47	H	40.50	-71.17	0.00	0.24	-71.41	-25.00	46.41
91.81	V	36.91	-72.00	0.00	0.18	-72.18	-25.00	47.18
5235.000	H	45.52	-48.38	11.34	1.46	-38.50	-25.00	13.50
5235.000	V	44.93	-48.78	11.34	1.46	-38.90	-25.00	13.90
7852.500	H	43.19	-46.00	10.83	2.03	-37.20	-25.00	12.20
7852.500	V	42.68	-46.90	10.83	2.03	-38.10	-25.00	13.10

**LTE Band 40 Lower (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: 2307.5 MHz								
159.22	H	40.19	-71.44	0.00	0.23	-71.67	-40.00	31.67
92.46	V	36.93	-71.83	0.00	0.18	-72.01	-40.00	32.01
4615.000	H	40.03	-55.33	10.74	1.41	-46.00	-40.00	6.00
4615.000	V	39.59	-55.63	10.74	1.41	-46.30	-40.00	6.30
6922.500	H	37.28	-53.74	11.22	1.88	-44.40	-40.00	4.40
6922.500	V	36.75	-54.14	11.22	1.88	-44.80	-40.00	4.80
5MHz QPSK, Frequency: 2312.5 MHz								
155.36	H	39.65	-72.11	0.00	0.23	-72.34	-40.00	32.34
91.49	V	36.86	-72.13	0.00	0.18	-72.31	-40.00	32.31
4625.000	H	40.85	-54.44	10.75	1.41	-45.10	-40.00	5.10
4625.000	V	40.43	-54.74	10.75	1.41	-45.40	-40.00	5.40
6937.500	H	37.97	-53.01	11.21	1.90	-43.70	-40.00	3.70
6937.500	V	37.53	-53.31	11.21	1.90	-44.00	-40.00	4.00

**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								
160.34	H	39.82	-71.80	0.00	0.23	-72.03	-40.00	32.03
91.81	V	37.44	-71.47	0.00	0.18	-71.65	-40.00	31.65
4705.000	H	39.14	-55.64	10.85	1.41	-46.20	-40.00	6.20
4705.000	V	38.96	-55.84	10.85	1.41	-46.40	-40.00	6.40
7057.500	H	36.86	-53.15	11.17	1.92	-43.90	-40.00	3.90
7057.500	V	36.35	-53.55	11.17	1.92	-44.30	-40.00	4.30
5MHz QPSK, Frequency: 2357.5 MHz								
158.66	H	39.65	-72.00	0.00	0.23	-72.23	-40.00	32.23
91.17	V	37.20	-71.86	0.00	0.18	-72.04	-40.00	32.04
4715.000	H	39.86	-54.85	10.86	1.41	-45.40	-40.00	5.40
4715.000	V	39.66	-55.05	10.86	1.41	-45.60	-40.00	5.60
7072.500	H	37.15	-52.65	11.16	1.91	-43.40	-40.00	3.40
7072.500	V	36.66	-53.05	11.16	1.91	-43.80	-40.00	3.80

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

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
QPSK, 5MHz, Frequency: 2498.5 MHz								
160.34	H	40.57	-71.05	0.00	0.23	-71.28	-25.00	46.28
45.21	V	36.85	-59.66	-19.59	0.12	-79.37	-25.00	54.37
4997.000	H	46.34	-46.60	11.20	1.48	-36.88	-25.00	11.88
4997.000	V	46.14	-46.66	11.20	1.48	-36.94	-25.00	11.94
7495.500	H	42.12	-47.67	10.90	1.94	-38.71	-25.00	13.71
7495.500	V	41.83	-48.46	10.90	1.94	-39.50	-25.00	14.50
QPSK, 5MHz, Frequency: 2593 MHz								
158.11	H	40.16	-71.51	0.00	0.23	-71.74	-25.00	46.74
44.58	V	36.92	-58.84	-20.35	0.12	-79.31	-25.00	54.31
5186.000	H	48.10	-45.93	11.31	1.44	-36.06	-25.00	11.06
5186.000	V	47.55	-46.34	11.31	1.44	-36.47	-25.00	11.47
7779.000	H	42.84	-46.65	10.84	1.99	-37.80	-25.00	12.80
7779.000	V	42.27	-47.67	10.84	1.99	-38.82	-25.00	13.82
QPSK, 5MHz, Frequency: 2687.5 MHz								
159.22	H	39.99	-71.64	0.00	0.23	-71.87	-25.00	46.87
91.81	V	36.94	-71.97	0.00	0.18	-72.15	-25.00	47.15
5375.000	H	48.72	-44.79	11.43	1.49	-34.85	-25.00	9.85
5375.000	V	47.66	-45.84	11.43	1.49	-35.90	-25.00	10.90
8062.500	H	43.00	-45.22	10.81	2.12	-36.53	-25.00	11.53
8062.500	V	42.75	-45.97	10.81	2.12	-37.28	-25.00	12.28

**LTE Band 66:**

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
1.4MHz QPSK, Frequency:			1710.7	MHz				
160.93	H	40.44	-71.20	0.00	0.24	-71.44	-13.00	58.44
92.13	V	36.93	-71.91	0.00	0.18	-72.09	-13.00	59.09
3421.400	H	38.46	-59.30	10.37	1.17	-50.10	-13.00	37.10
3421.400	V	38.53	-59.20	10.37	1.17	-50.00	-13.00	37.00
5132.100	H	36.66	-56.91	11.28	1.47	-47.10	-13.00	34.10
5132.100	V	36.45	-57.01	11.28	1.47	-47.20	-13.00	34.20
1.4MHz QPSK, Frequency:			1745	MHz				
157.03	H	40.02	-71.68	0.00	0.23	-71.91	-13.00	58.91
91.17	V	37.27	-71.79	0.00	0.18	-71.97	-13.00	58.97
3490.000	H	38.91	-58.93	10.40	1.17	-49.70	-13.00	36.70
3490.000	V	38.95	-58.83	10.40	1.17	-49.60	-13.00	36.60
5235.000	H	37.32	-56.58	11.34	1.46	-46.70	-13.00	33.70
5235.000	V	36.93	-56.78	11.34	1.46	-46.90	-13.00	33.90
1.4MHz QPSK, Frequency:			1779.3	MHz				
159.81	H	39.73	-71.88	0.00	0.23	-72.11	-13.00	59.11
45.21	V	37.19	-59.32	-19.59	0.12	-79.03	-13.00	66.03
3558.600	H	40.13	-57.54	10.46	1.22	-48.30	-13.00	35.30
3558.600	V	39.83	-57.74	10.46	1.22	-48.50	-13.00	35.50
5337.900	H	38.04	-55.43	11.40	1.47	-45.50	-13.00	32.50
5337.900	V	37.60	-55.73	11.40	1.47	-45.80	-13.00	32.80

**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 CR230957288-EXP EUT EXTERNAL PHOTOGRAPHS and CR230957288-INP EUT INTERNAL PHOTOGRAPHS

## **6. TEST SETUP PHOTOGRAPHS**

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Please refer to the attachment CR230957288-00E-TSP TEST SETUP PHOTOGRAPHS.

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